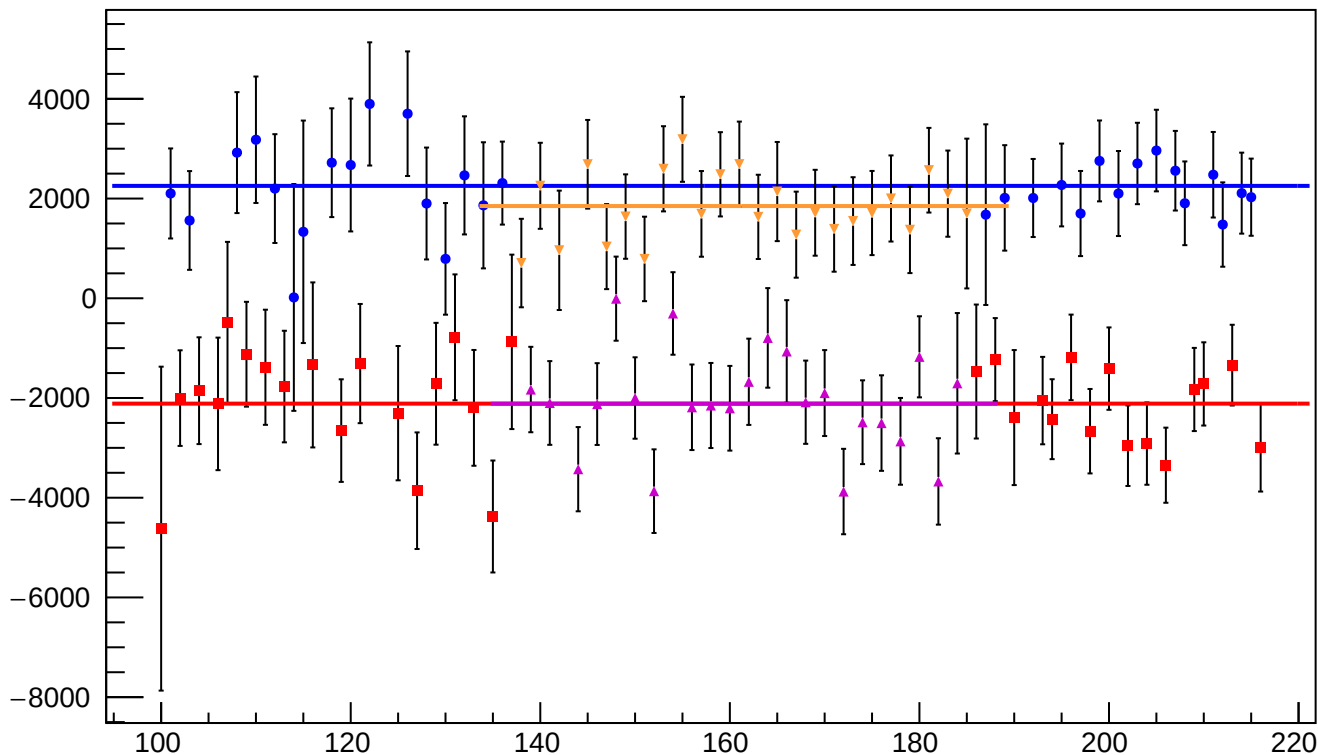


# reg\_asym\_us\_avg\_mean vs Slug



Right In: 2254.176+/-175.883

$\chi^2/\text{NDF}$ : 11.3/30

Left Out: 1849.592+/-180.739

$\chi^2/\text{NDF}$ : 12.8/23

Right Out: -2113.080+/-176.856

$\chi^2/\text{NDF}$ : 22.9/32

Left In: -2114.442+/-182.028

$\chi^2/\text{NDF}$ : 31.1/22

+ sign 2057.393+/-126.050

$\chi^2/\text{NDF}$ : 26.7/54

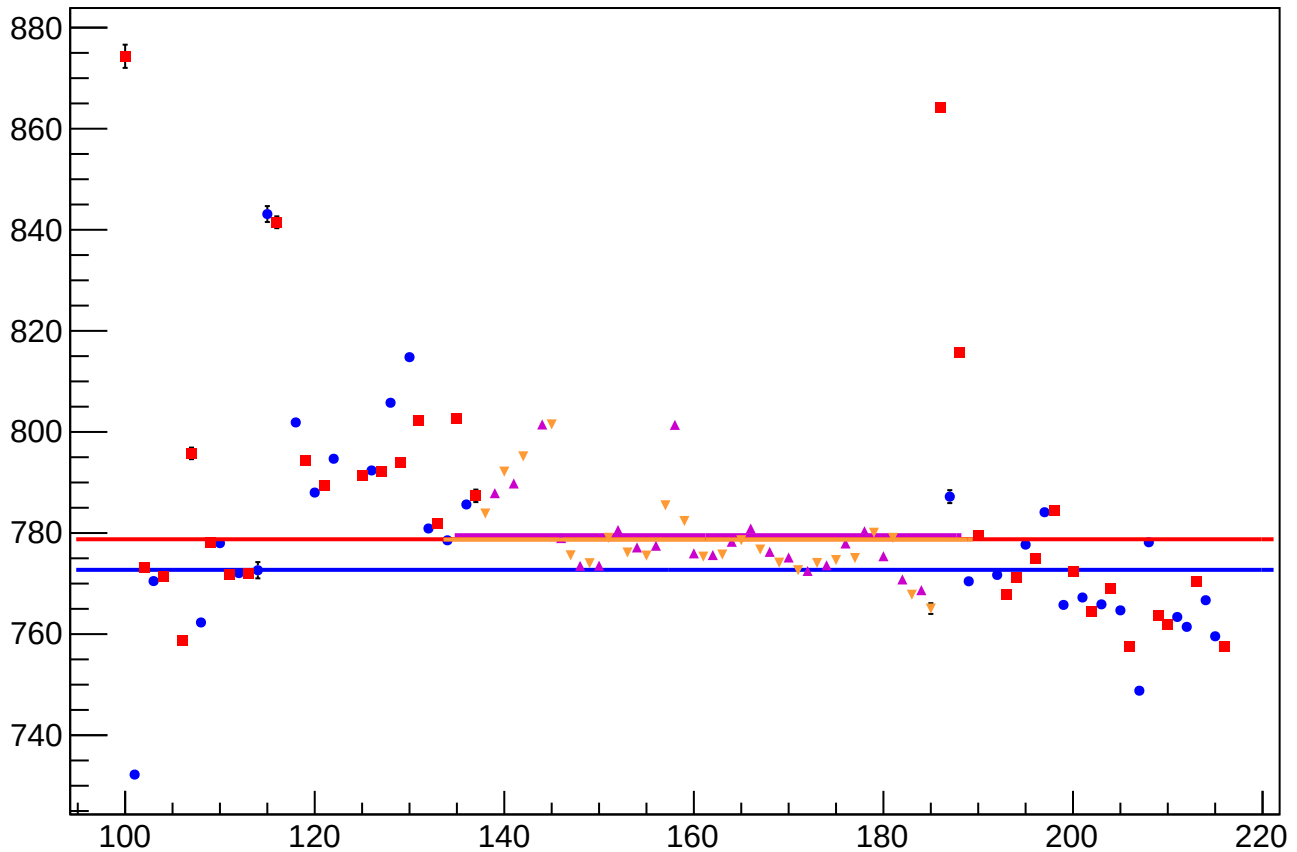
All: -15.059+/-89.411

$\chi^2/\text{NDF}$ : 624.8/110

- sign -2113.741+/-126.845

$\chi^2/\text{NDF}$ : 54.0/55

# reg\_asym\_us\_avg\_rms vs Slug



Right In: 772.718 $\pm$ 0.124  $\chi^2$ /NDF: 18499.0/30

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF:3389.8/23

Right Out: 778.768 $\pm$ 0.125  $\chi^2$ /NDF: 26720.6/32

Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF:4172.9/22

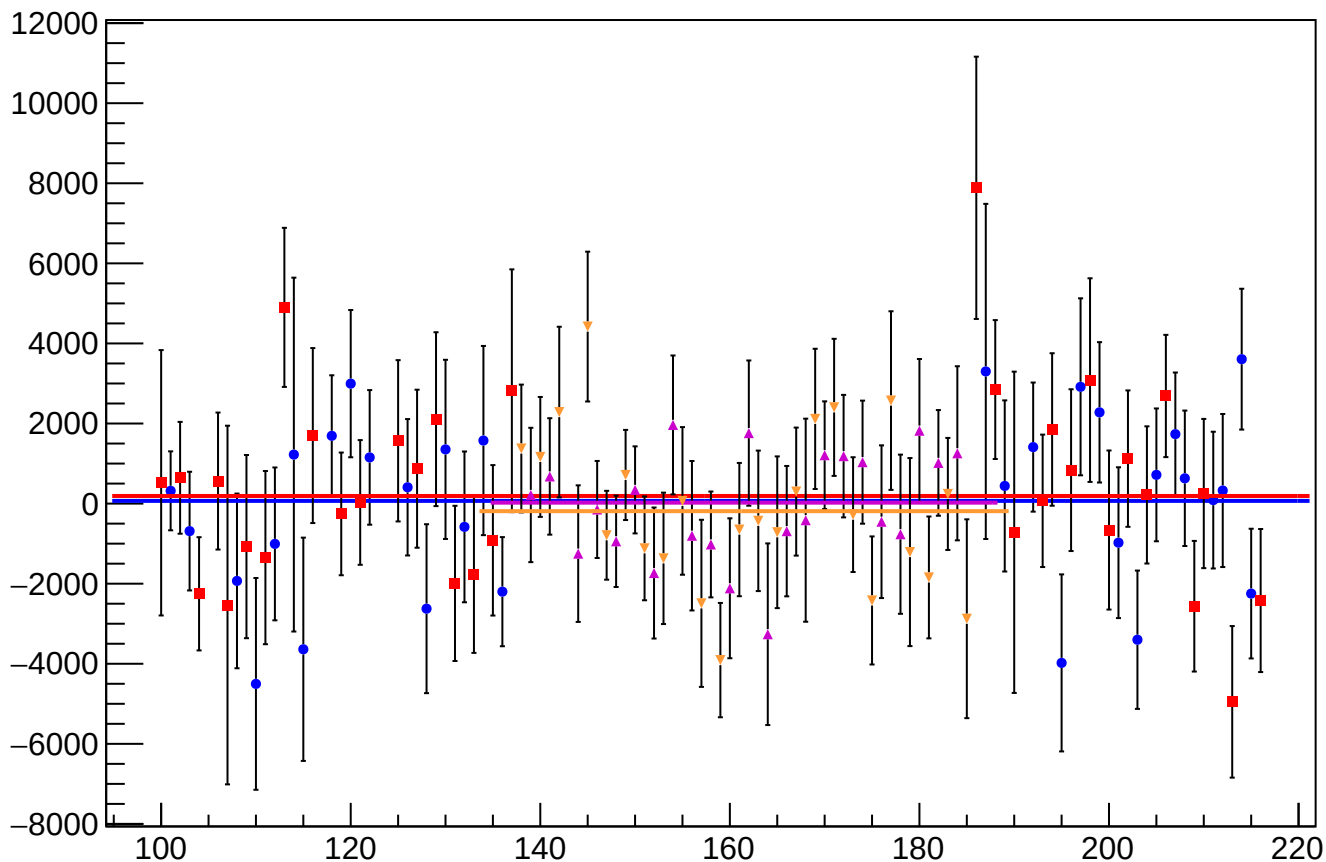
+ sign 775.632 $\pm$ 0.089  $\chi^2$ /NDF: 23017.2/54

All: 777.384 $\pm$ 0.063  $\chi^2$ /NDF: 54709.4/110

- sign 779.160 $\pm$ 0.090  $\chi^2$ /NDF: 30913.7/55



# asym\_us\_avg\_reg\_correction\_mean vs Slug



Right In:  $68.174 \pm 322.471$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $190.510 \pm 333.563$   $\chi^2/\text{NDF}$ : 40.9/32

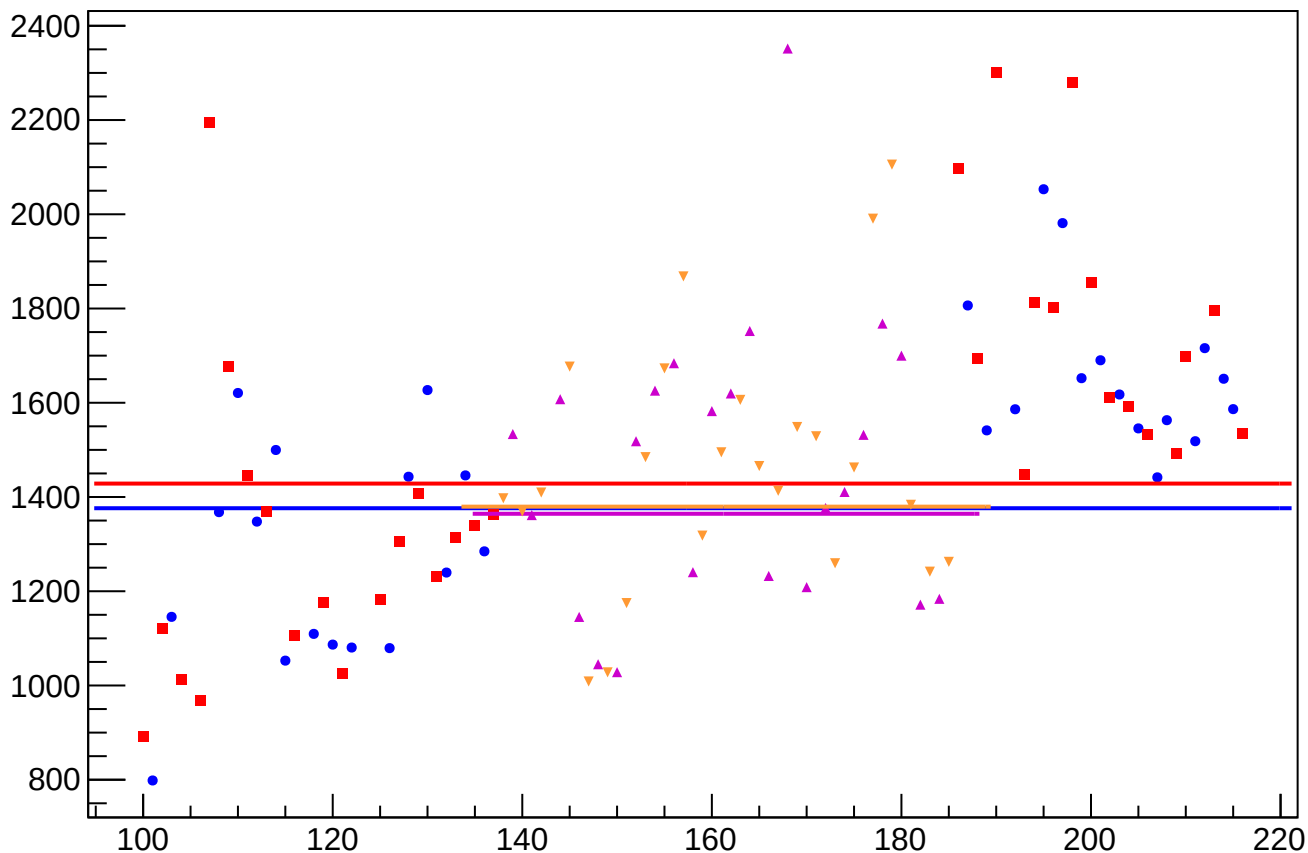
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-58.358 \pm 229.839$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $22.263 \pm 163.653$   $\chi^2/\text{NDF}$ : 120.1/110

- sign  $105.170 \pm 233.075$   $\chi^2/\text{NDF}$ : 54.4/55

# asym\_us\_avg\_reg\_correction\_rms vs Slug



Right In: 1376.192 $\pm$ 0.228  $\chi^2$ /NDF: 1821115.0/30

Left Out: 1379.536 $\pm$ 0.232  $\chi^2$ /NDF:1158468.5/23

Right Out: 1428.483 $\pm$ 0.236  $\chi^2$ /NDF: 1723726.7/32

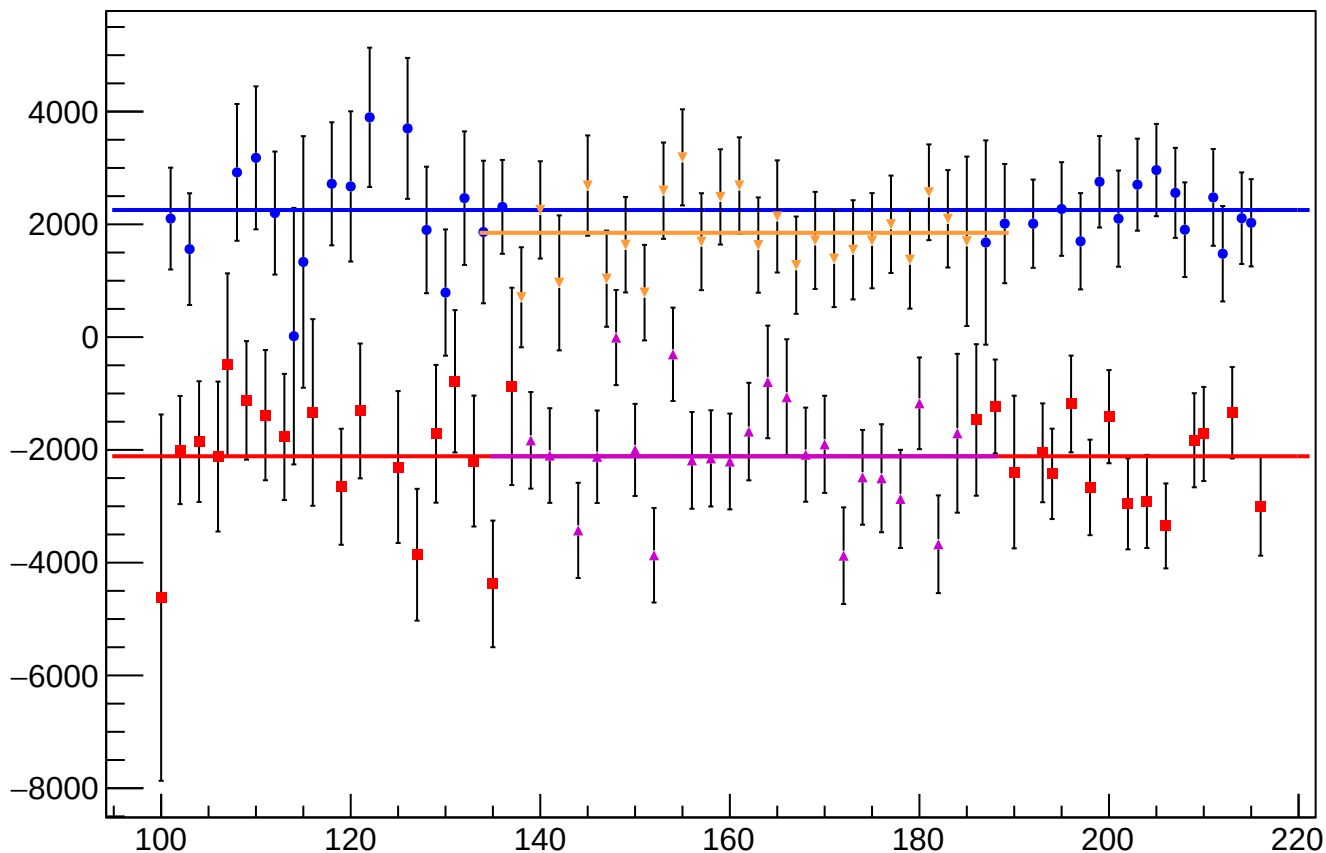
Left In: 1364.412 $\pm$ 0.230  $\chi^2$ /NDF:1312299.5/22

+ sign 1377.837 $\pm$ 0.163  $\chi^2$ /NDF: 2979689.3/54

All: 1386.641 $\pm$ 0.116  $\chi^2$ /NDF: 6059429.6/11

- sign 1395.694 $\pm$ 0.165  $\chi^2$ /NDF: 3073788.5/55

# cor\_asym\_us\_avg\_mean vs Slug



Right In:  $2254.176 \pm 175.883$   $\chi^2/\text{NDF}: 11.3/30$

Left Out:  $1849.592 \pm 180.739$   $\chi^2/\text{NDF}: 12.8/23$

Right Out:  $-2113.080 \pm 176.856$   $\chi^2/\text{NDF}: 22.9/32$

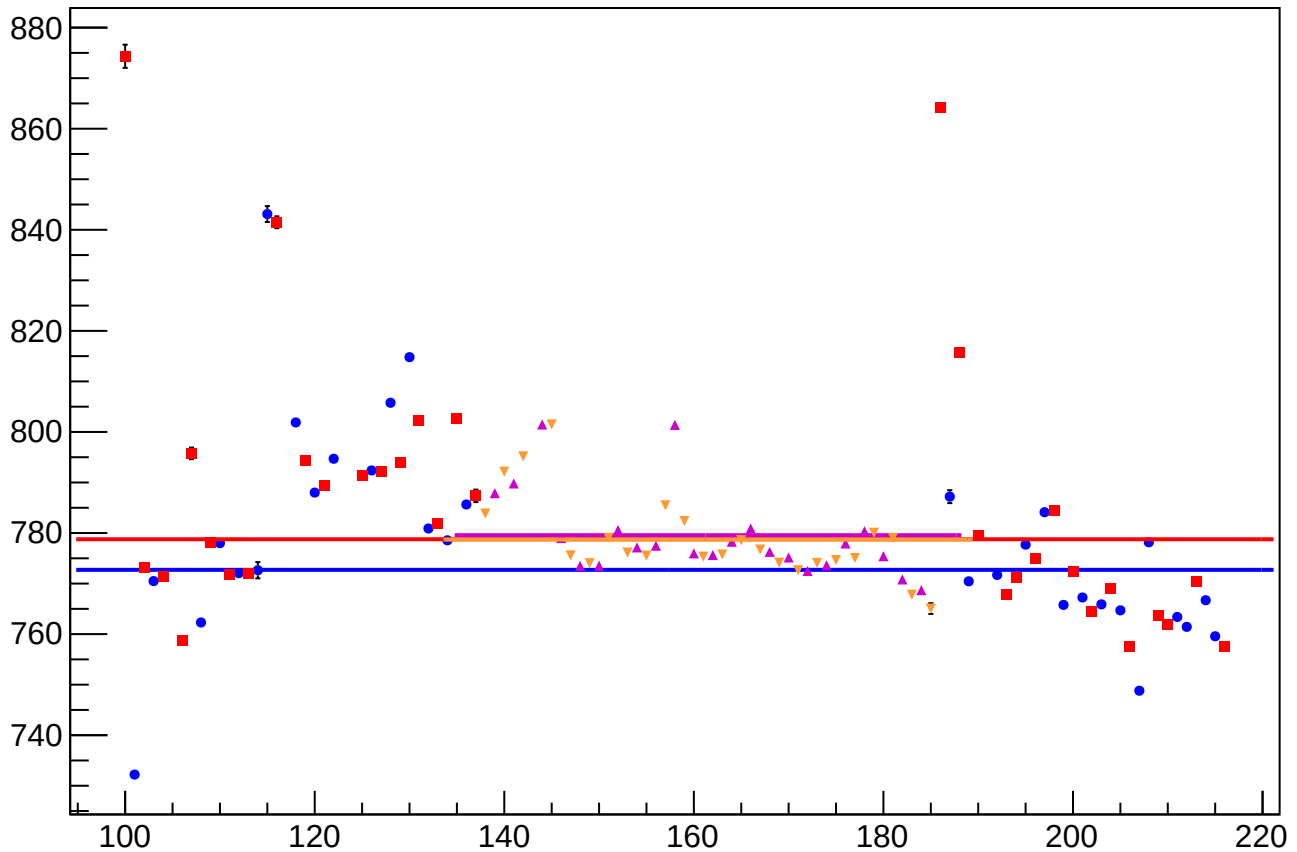
Left In:  $-2114.442 \pm 182.028$   $\chi^2/\text{NDF}: 31.1/22$

+ sign  $2057.393 \pm 126.050$   $\chi^2/\text{NDF}: 26.7/54$

All:  $-15.059 \pm 89.411$   $\chi^2/\text{NDF}: 624.8/110$

- sign  $-2113.741 \pm 126.845$   $\chi^2/\text{NDF}: 54.0/55$

# cor\_asym\_us\_avg\_rms vs Slug



Right In: 772.718 $\pm$ 0.124  $\chi^2$ /NDF: 18499.0/30

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF: 3389.8/23

Right Out: 778.768 $\pm$ 0.125  $\chi^2$ /NDF: 26720.6/32

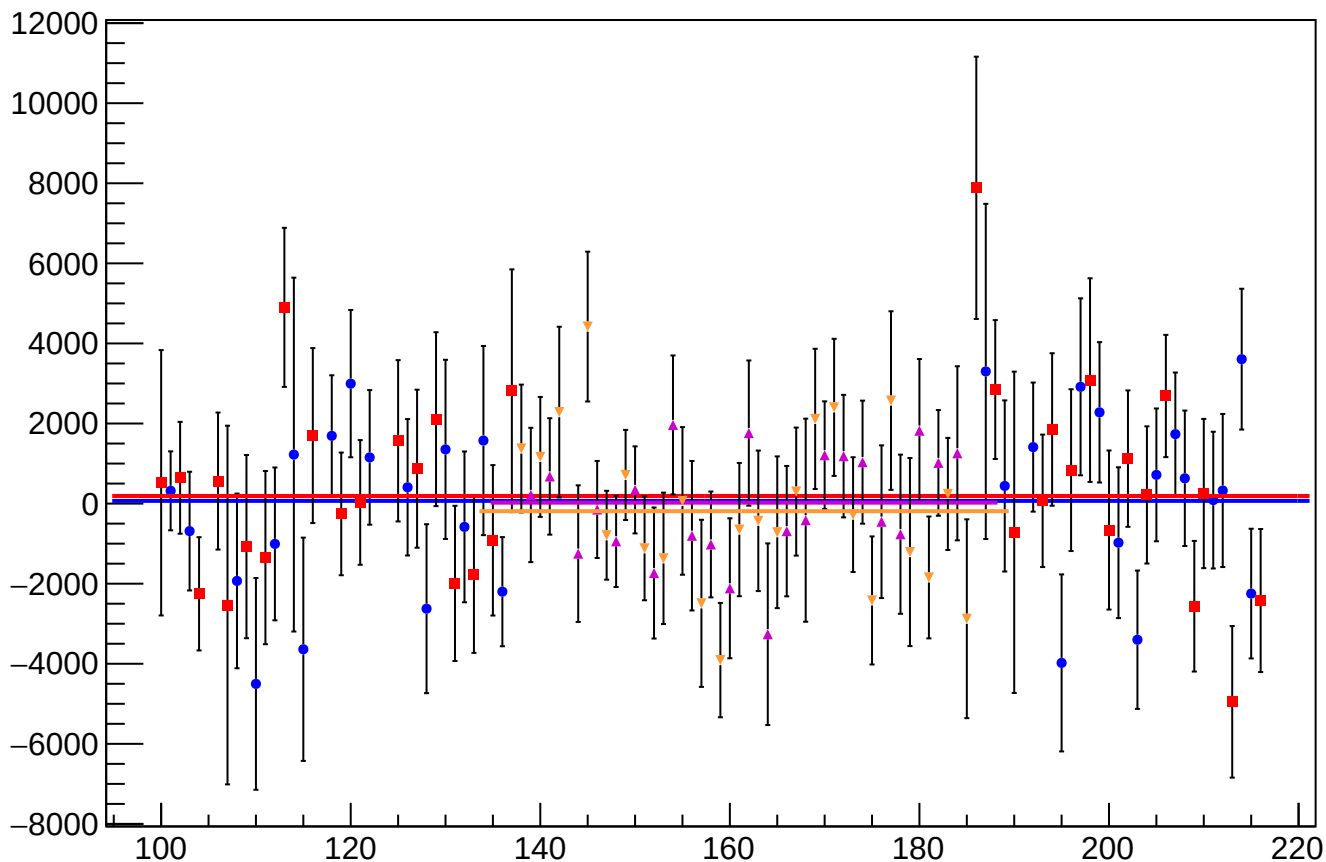
Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF: 4172.9/22

+ sign 775.632 $\pm$ 0.089  $\chi^2$ /NDF: 23017.2/54

All: 777.384 $\pm$ 0.063  $\chi^2$ /NDF: 54709.4/110

- sign 779.160 $\pm$ 0.090  $\chi^2$ /NDF: 30913.7/55

# asym\_us\_avg\_cor\_correction\_mean vs Slug



Right In:  $68.174 \pm 322.471$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $190.510 \pm 333.563$   $\chi^2/\text{NDF}$ : 40.9/32

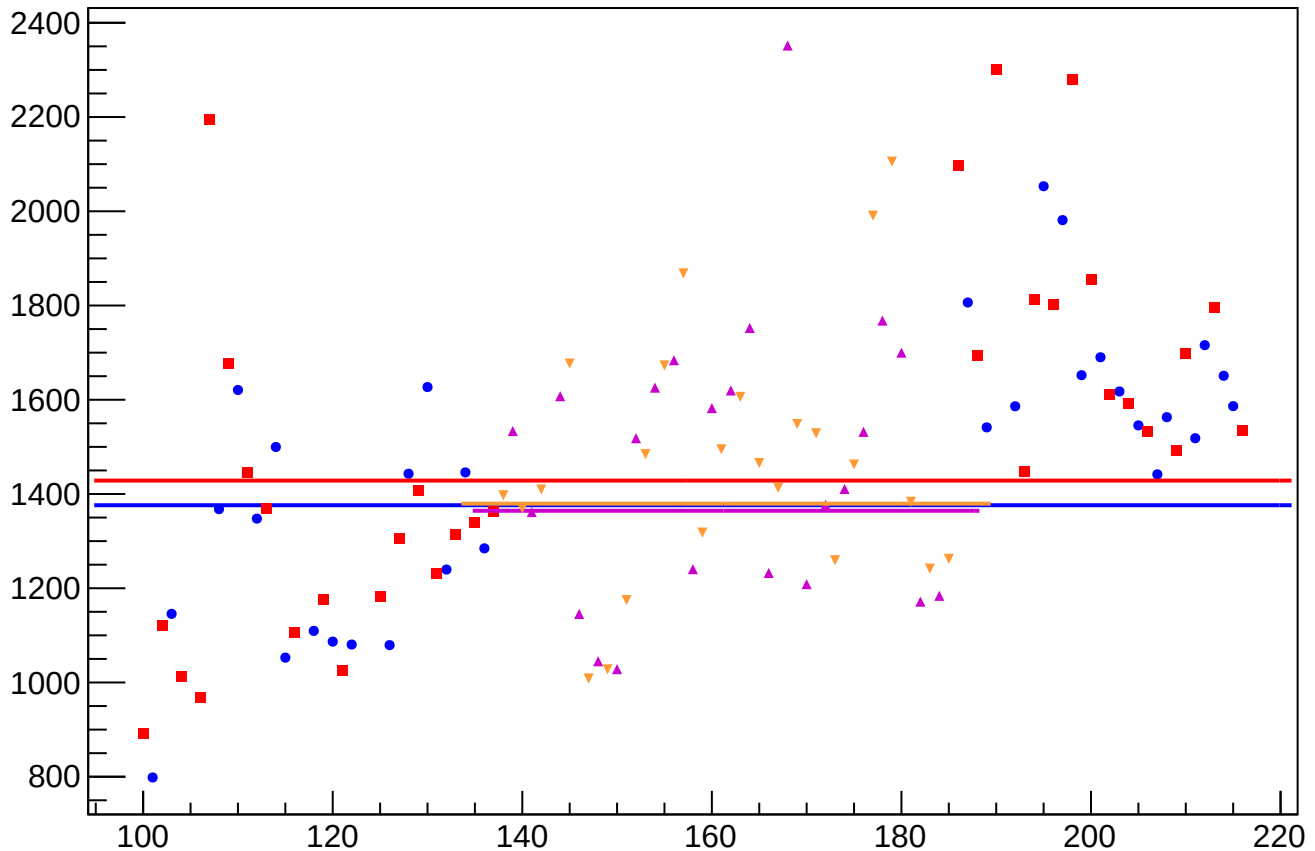
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-58.358 \pm 229.839$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $22.263 \pm 163.653$   $\chi^2/\text{NDF}$ : 120.1/110

- sign  $105.170 \pm 233.075$   $\chi^2/\text{NDF}$ : 54.4/55

# asym\_us\_avg\_cor\_correction\_rms vs Slug



Right In: 1376.192 $\pm$ 0.228  $\chi^2$ /NDF: 1821115.0/30

Left Out: 1379.536 $\pm$ 0.232  $\chi^2$ /NDF: 1158468.5/23

Right Out: 1428.483 $\pm$ 0.236  $\chi^2$ /NDF: 1723726.7/32

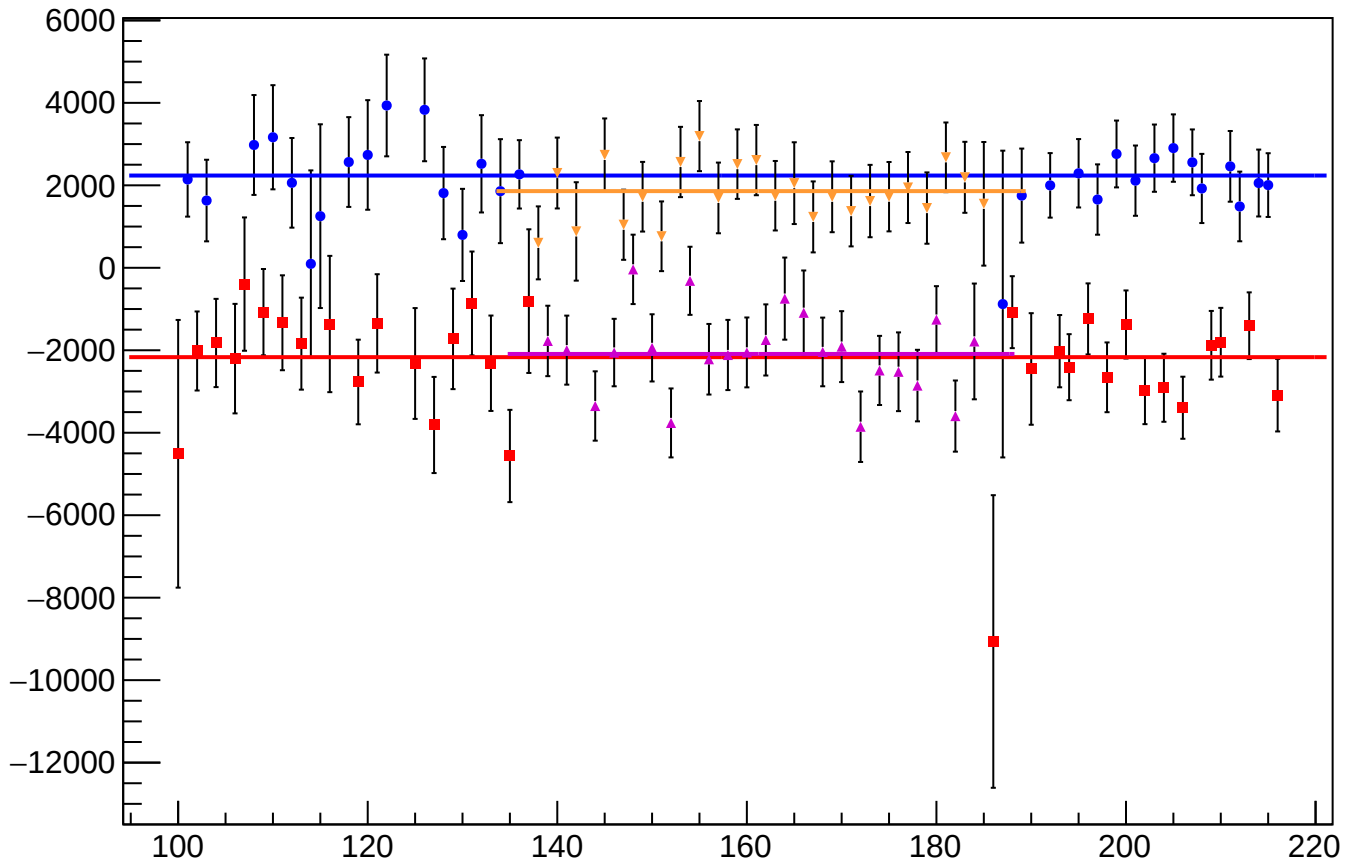
Left In: 1364.412 $\pm$ 0.230  $\chi^2$ /NDF: 1312299.5/22

+ sign 1377.837 $\pm$ 0.163  $\chi^2$ /NDF: 2979689.3/54

All: 1386.641 $\pm$ 0.116  $\chi^2$ /NDF: 6059429.6/11

- sign 1395.694 $\pm$ 0.165  $\chi^2$ /NDF: 3073788.5/55

# overload\_cor\_asym\_us\_avg\_mean vs Slug



Right In: 2237.271 $\pm$ 176.601  $\chi^2$ /NDF: 12.2/30

Left Out: 1859.528 $\pm$ 180.231  $\chi^2$ /NDF:13.5/23

Right Out: -2166.988 $\pm$ 178.321  $\chi^2$ /NDF: 27.7/32

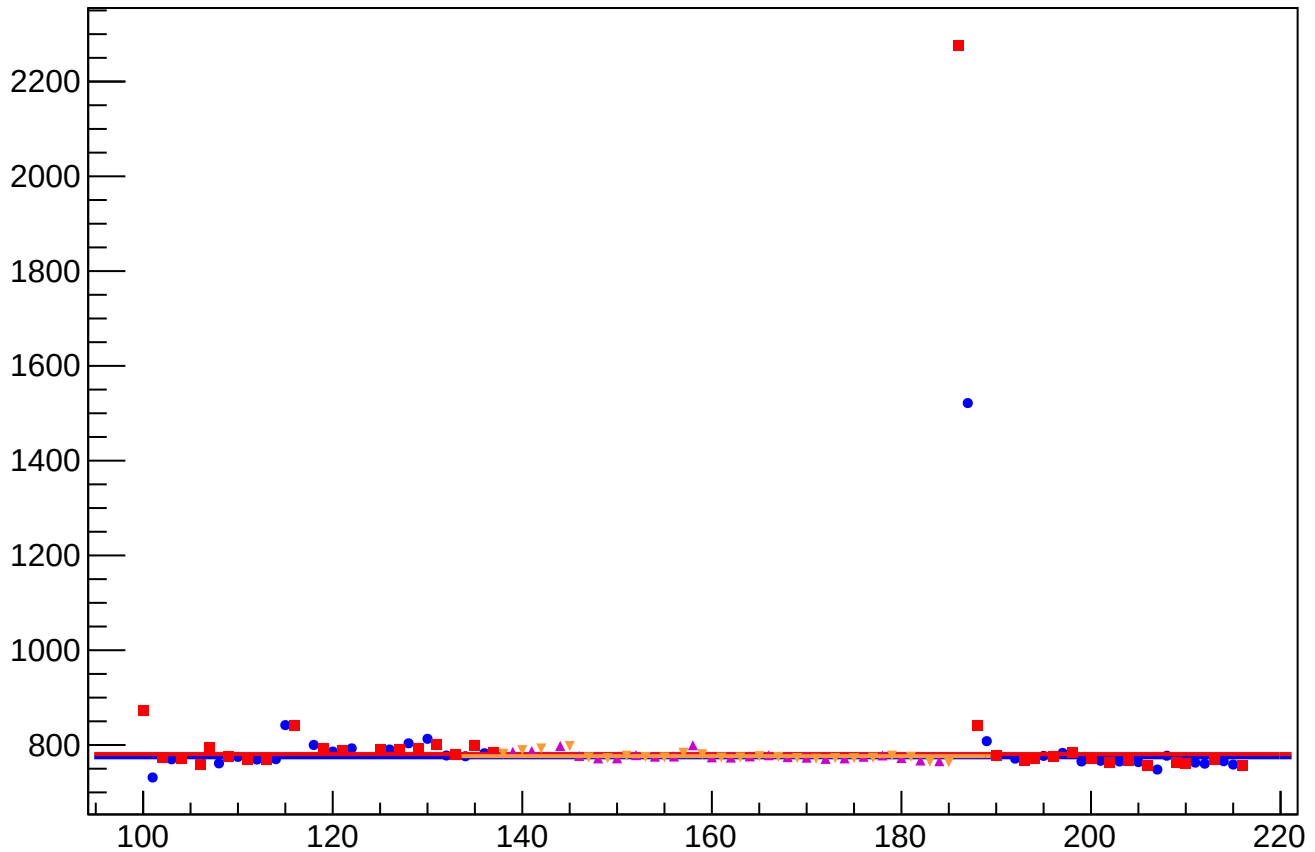
Left In: -2089.493 $\pm$ 181.523  $\chi^2$ /NDF:29.6/22

+ sign 2052.242 $\pm$ 126.139  $\chi^2$ /NDF: 28.0/54

All: -20.692 $\pm$ 89.570  $\chi^2$ /NDF: 630.2/110

- sign -2128.930 $\pm$ 127.209  $\chi^2$ /NDF: 57.4/55

# overload\_cor\_asym\_us\_avg\_rms vs Slug



Right In: 774.039 $\pm$ 0.125  $\chi^2$ /NDF: 100566.0/30

Left Out: 776.523 $\pm$ 0.127  $\chi^2$ /NDF:3137.1/23

Right Out: 780.909 $\pm$ 0.126  $\chi^2$ /NDF: 380632.7/32

Left In: 777.413 $\pm$ 0.128  $\chi^2$ /NDF:4062.1/22

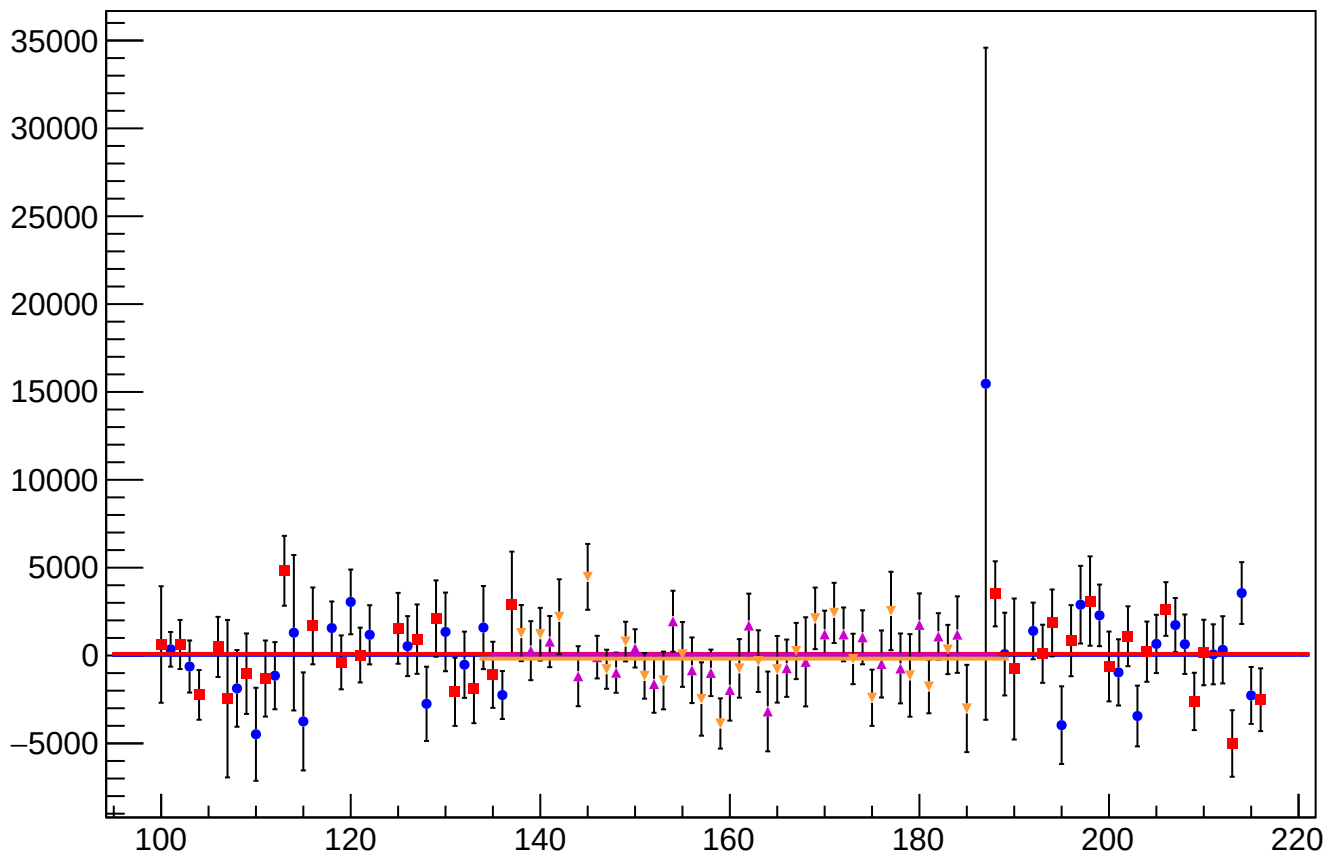
+ sign 775.255 $\pm$ 0.089  $\chi^2$ /NDF: 103897.0/54

All: 777.207 $\pm$ 0.063  $\chi^2$ /NDF: 489935.1/110

- sign 779.192 $\pm$ 0.090  $\chi^2$ /NDF: 385072.4/55



asym\_us\_avg\_overload\_cor\_correction\_mean vs Slug



Right In:  $39.332 \pm 324.246$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-174.932 \pm 327.991$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $91.048 \pm 336.285$   $\chi^2/\text{NDF}$ : 36.5/31

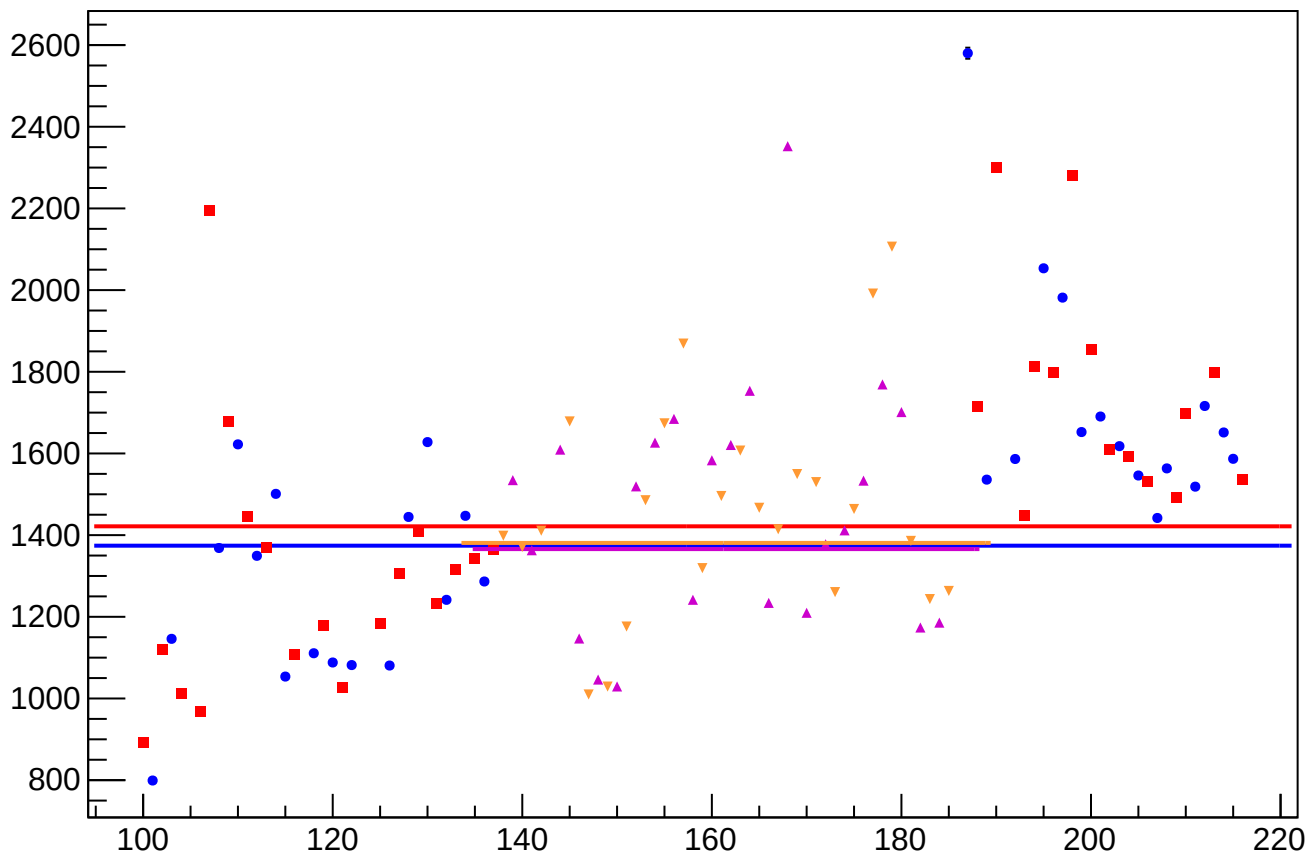
Left In:  $52.820 \pm 326.124$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-66.570 \pm 230.589$   $\chi^2/\text{NDF}$ : 65.6/54

All:  $1.343 \pm 164.283$   $\chi^2/\text{NDF}$ : 115.3/109

- sign  $71.348 \pm 234.114$   $\chi^2/\text{NDF}$ : 49.5/54

asym\_us\_avg\_overload\_cor\_correction\_rms vs Slug



Right In: 1374.166 $\pm$ 0.229  $\chi^2$ /NDF: 1799920.7/30

Left Out: 1380.952 $\pm$ 0.232  $\chi^2$ /NDF: 1155437.6/23

Right Out: 1421.573 $\pm$ 0.238  $\chi^2$ /NDF: 1633577.0/31

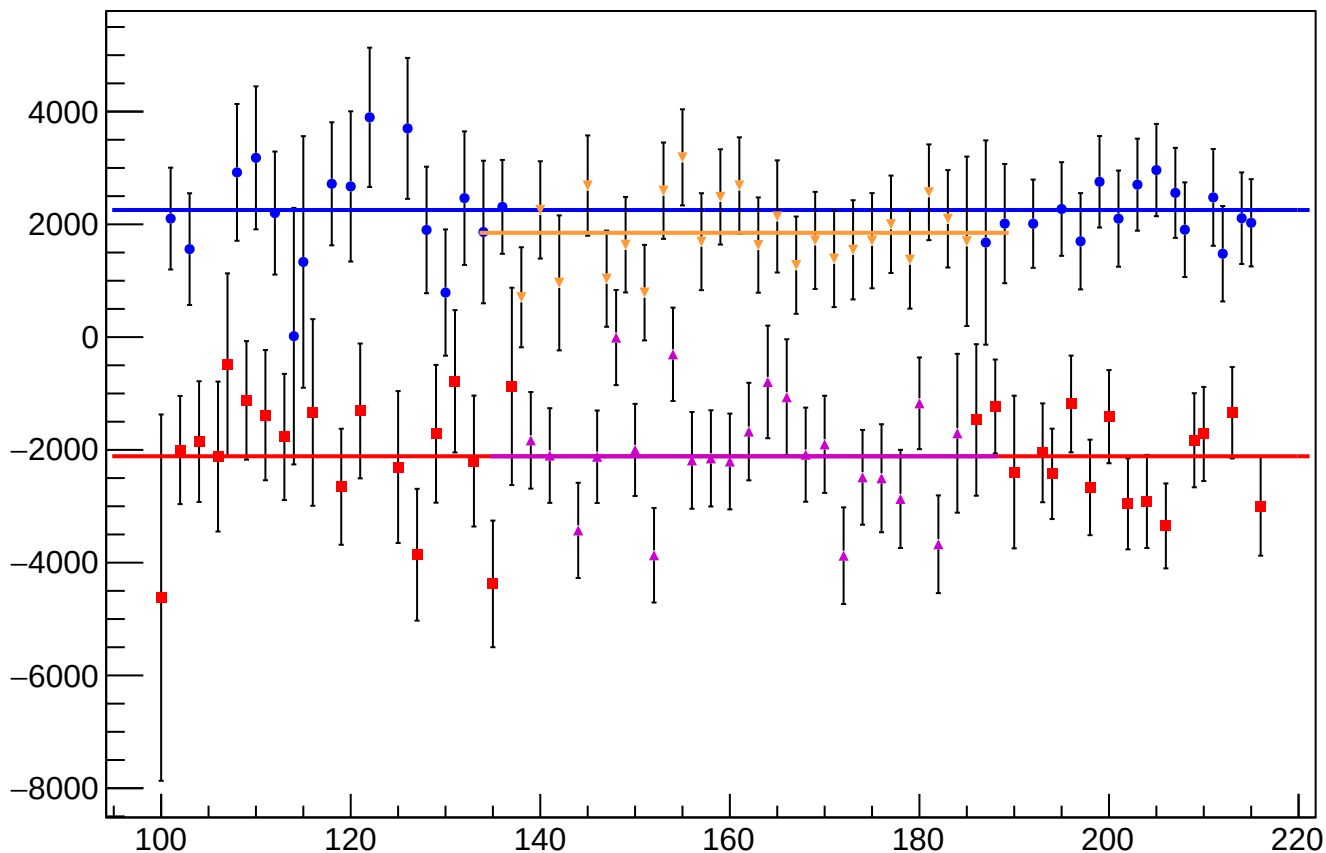
Left In: 1365.811 $\pm$ 0.231  $\chi^2$ /NDF: 1308862.5/22

+ sign 1377.520 $\pm$ 0.163  $\chi^2$ /NDF: 2955791.4/54

All: 1385.062 $\pm$ 0.116  $\chi^2$ /NDF: 5930915.2/10

- sign 1392.837 $\pm$ 0.166  $\chi^2$ /NDF: 2970778.4/54

# eigen\_cor\_asym\_us\_avg\_mean vs Slug



Right In: 2254.176 $\pm$ 175.883  $\chi^2$ /NDF: 11.3/30

Left Out: 1849.592 $\pm$ 180.739  $\chi^2$ /NDF:12.8/23

Right Out: -2113.080 $\pm$ 176.856  $\chi^2$ /NDF: 22.9/32

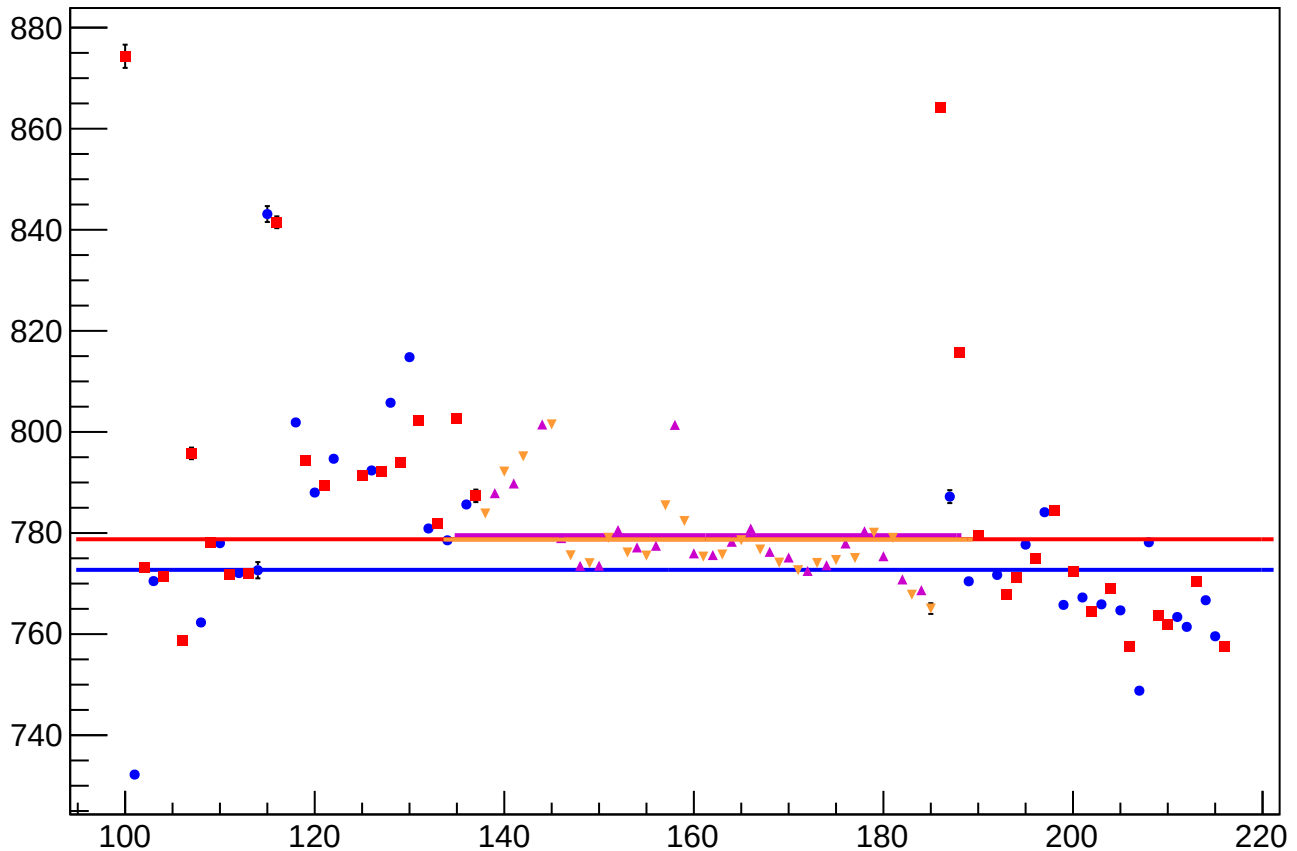
Left In: -2114.442 $\pm$ 182.028  $\chi^2$ /NDF:31.1/22

+ sign 2057.393 $\pm$ 126.050  $\chi^2$ /NDF: 26.7/54

All: -15.059 $\pm$ 89.411  $\chi^2$ /NDF: 624.8/110

- sign -2113.741 $\pm$ 126.845  $\chi^2$ /NDF: 54.0/55

# eigen\_cor\_asym\_us\_avg\_rms vs Slug



Right In: 772.718 $\pm$ 0.124  $\chi^2$ /NDF: 18499.0/30

Left Out: 778.708 $\pm$ 0.128  $\chi^2$ /NDF:3389.8/23

Right Out: 778.768 $\pm$ 0.125  $\chi^2$ /NDF: 26720.6/32

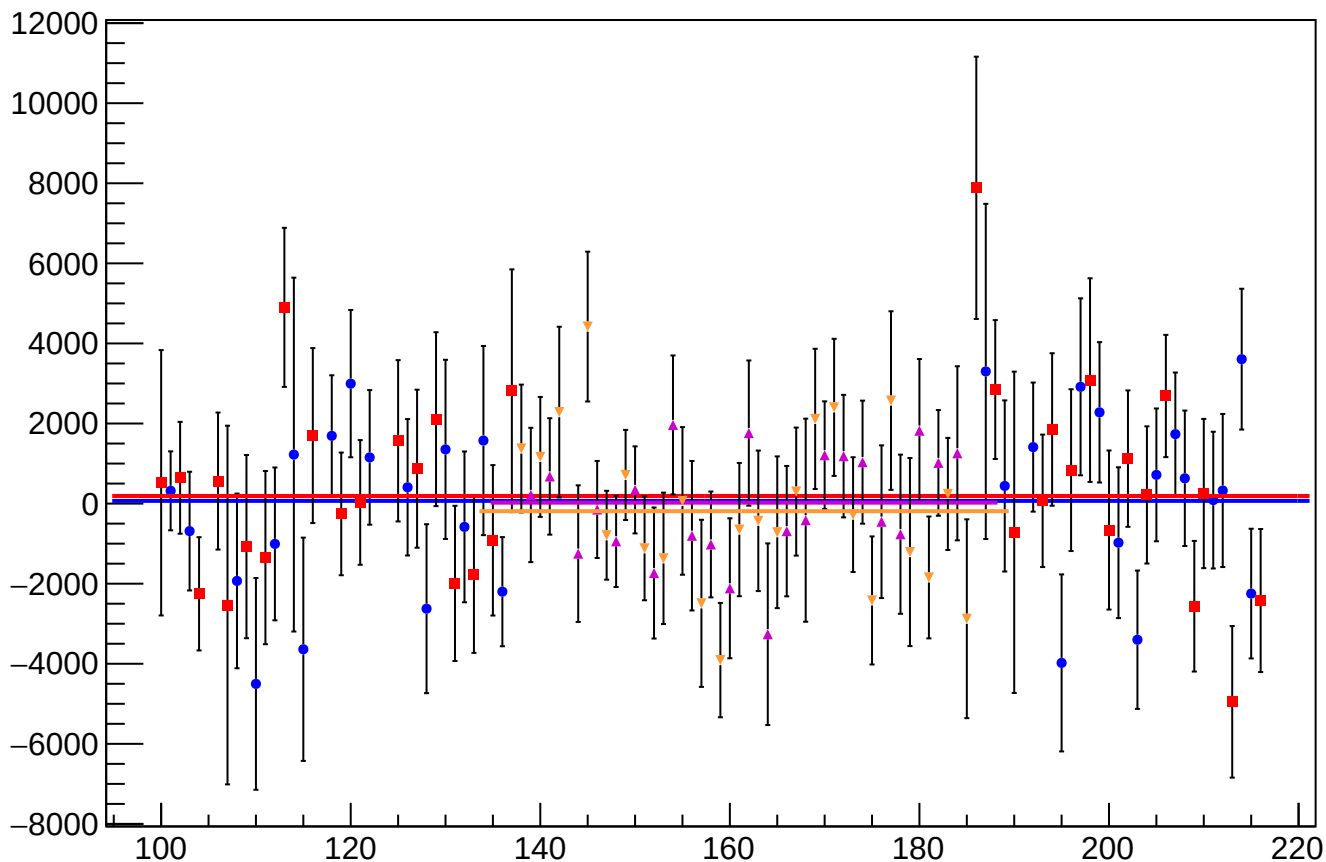
Left In: 779.575 $\pm$ 0.129  $\chi^2$ /NDF:4172.9/22

+ sign 775.632 $\pm$ 0.089  $\chi^2$ /NDF: 23017.2/54

All: 777.384 $\pm$ 0.063  $\chi^2$ /NDF: 54709.4/110

- sign 779.160 $\pm$ 0.090  $\chi^2$ /NDF: 30913.7/55

asym\_us\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $68.174 \pm 322.471$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $-189.006 \pm 327.675$   $\chi^2/\text{NDF}$ : 29.6/23

Right Out:  $190.510 \pm 333.563$   $\chi^2/\text{NDF}$ : 40.9/32

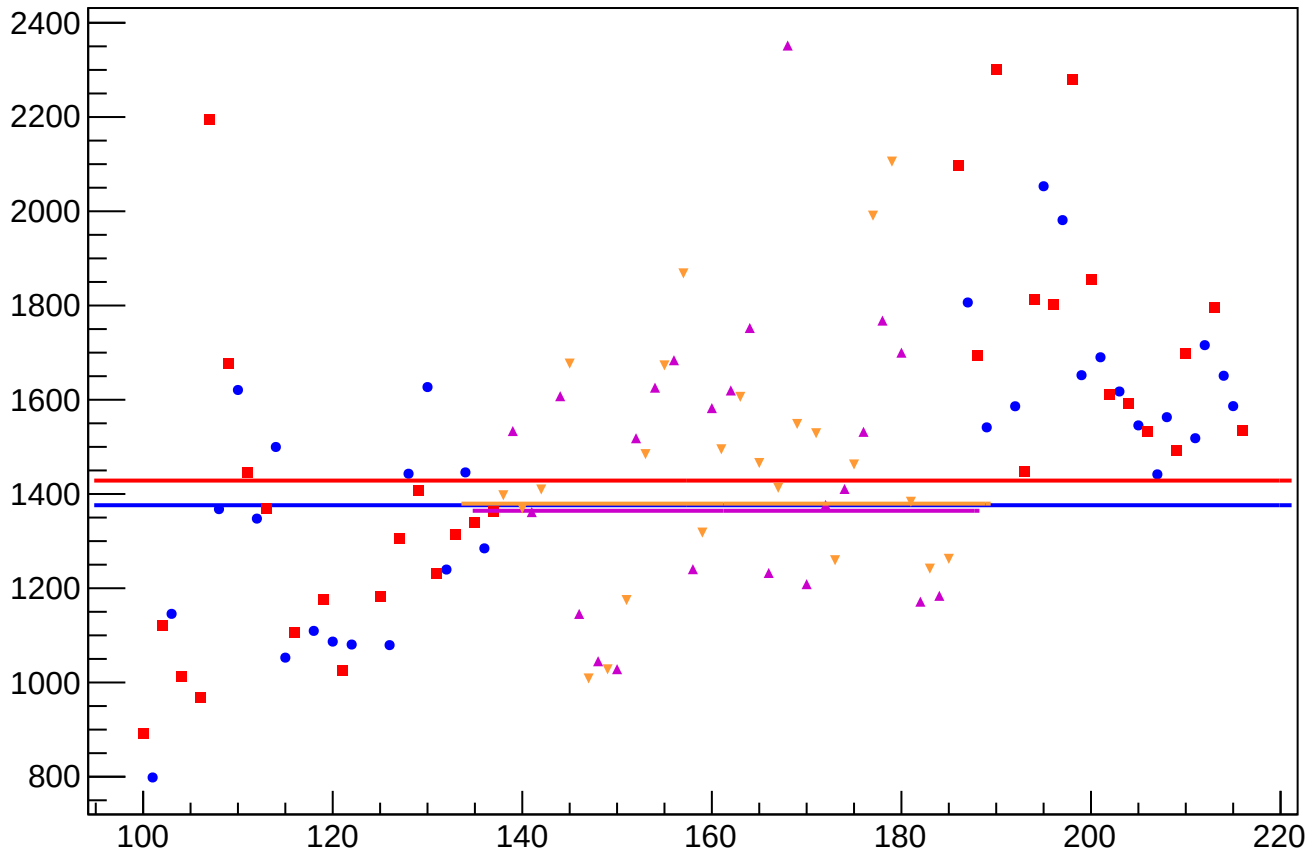
Left In:  $23.750 \pm 325.809$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-58.358 \pm 229.839$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $22.263 \pm 163.653$   $\chi^2/\text{NDF}$ : 120.1/110

- sign  $105.170 \pm 233.075$   $\chi^2/\text{NDF}$ : 54.4/55

asym\_us\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1376.192 $\pm$ 0.228  $\chi^2$ /NDF: 1821115.0/30

Left Out: 1379.536 $\pm$ 0.232  $\chi^2$ /NDF: 1158468.5/23

Right Out: 1428.483 $\pm$ 0.236  $\chi^2$ /NDF: 1723726.7/32

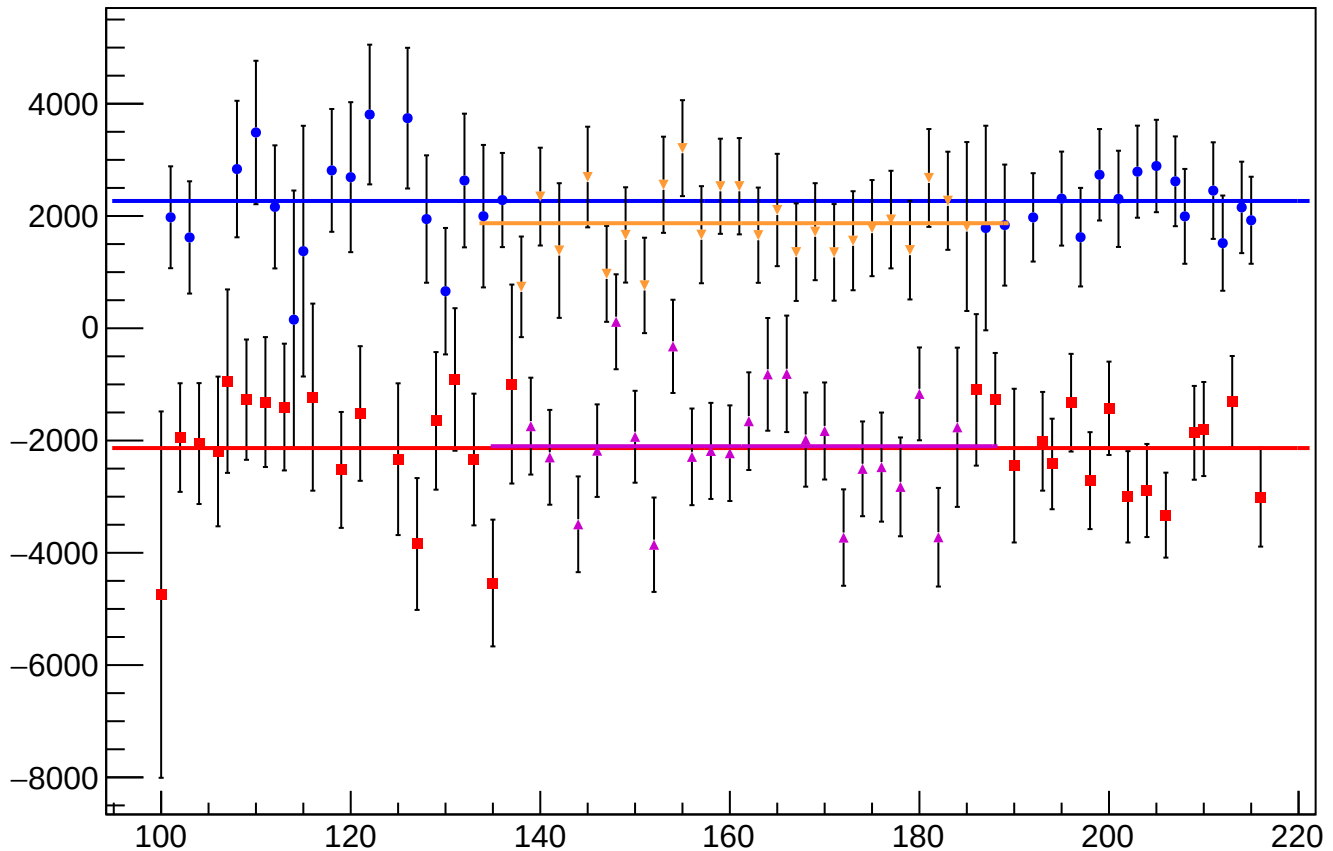
Left In: 1364.412 $\pm$ 0.230  $\chi^2$ /NDF: 1312299.5/22

+ sign 1377.837 $\pm$ 0.163  $\chi^2$ /NDF: 2979689.3/54

All: 1386.641 $\pm$ 0.116  $\chi^2$ /NDF: 6059429.6/11

- sign 1395.694 $\pm$ 0.165  $\chi^2$ /NDF: 3073788.5/55

# dit\_asym\_us\_avg\_mean vs Slug



Right In: 2267.773 $\pm$ 176.995  $\chi^2$ /NDF: 11.8/30

Left Out: 1871.457 $\pm$ 181.976  $\chi^2$ /NDF:12.5/23

Right Out: -2134.107 $\pm$ 177.990  $\chi^2$ /NDF: 22.3/32

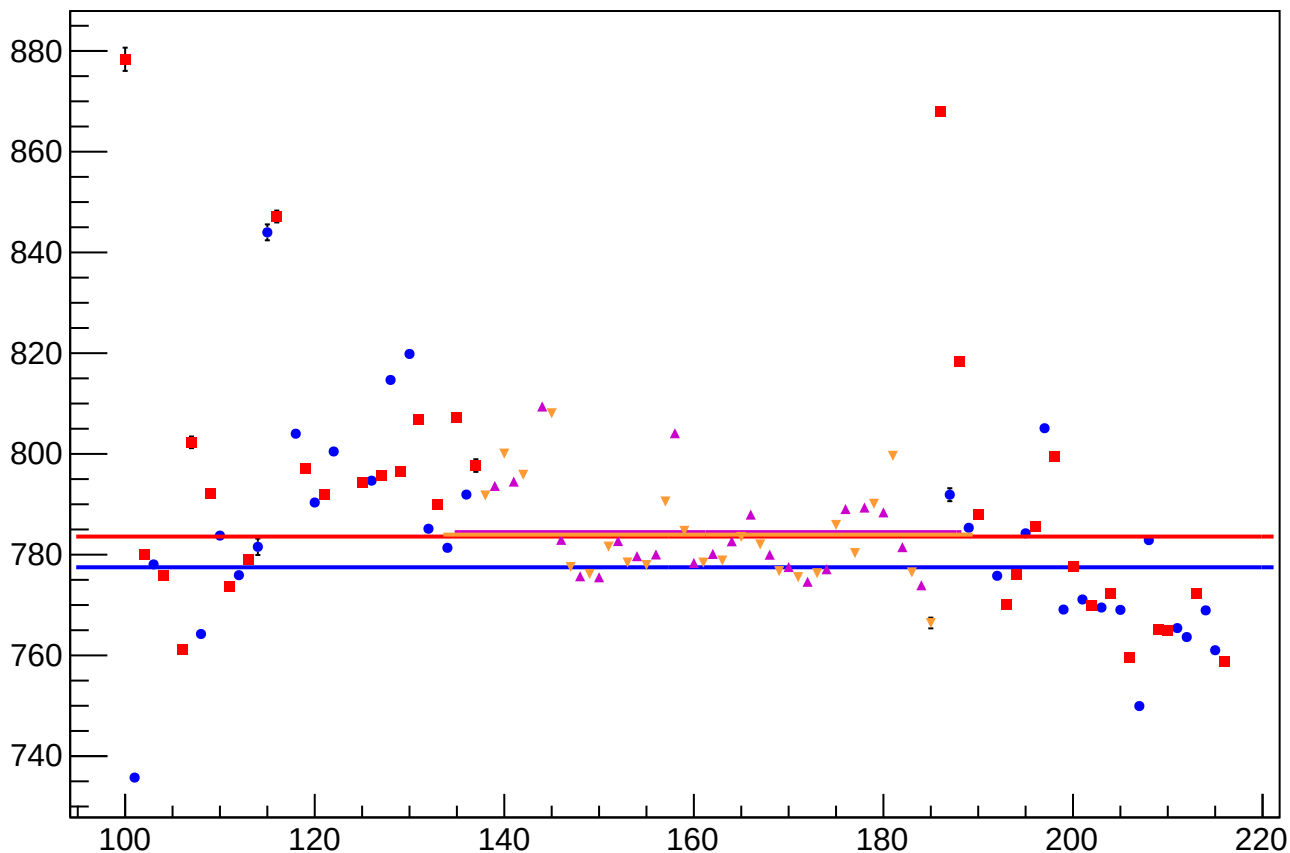
Left In: -2101.047 $\pm$ 183.179  $\chi^2$ /NDF:31.8/22

+ sign 2075.113 $\pm$ 126.879  $\chi^2$ /NDF: 26.7/54

All: -8.720 $\pm$ 89.989  $\chi^2$ /NDF: 623.5/110

- sign -2118.052 $\pm$ 127.653  $\chi^2$ /NDF: 54.1/55

# dit\_asym\_us\_avg\_rms vs Slug



Right In: 777.493 $\pm$ 0.125  $\chi^2$ /NDF: 21969.1/30

Left Out: 783.982 $\pm$ 0.129  $\chi^2$ /NDF: 4928.0/23

Right Out: 783.593 $\pm$ 0.126  $\chi^2$ /NDF: 28229.4/32

Left In: 784.473 $\pm$ 0.130  $\chi^2$ /NDF: 4927.7/22

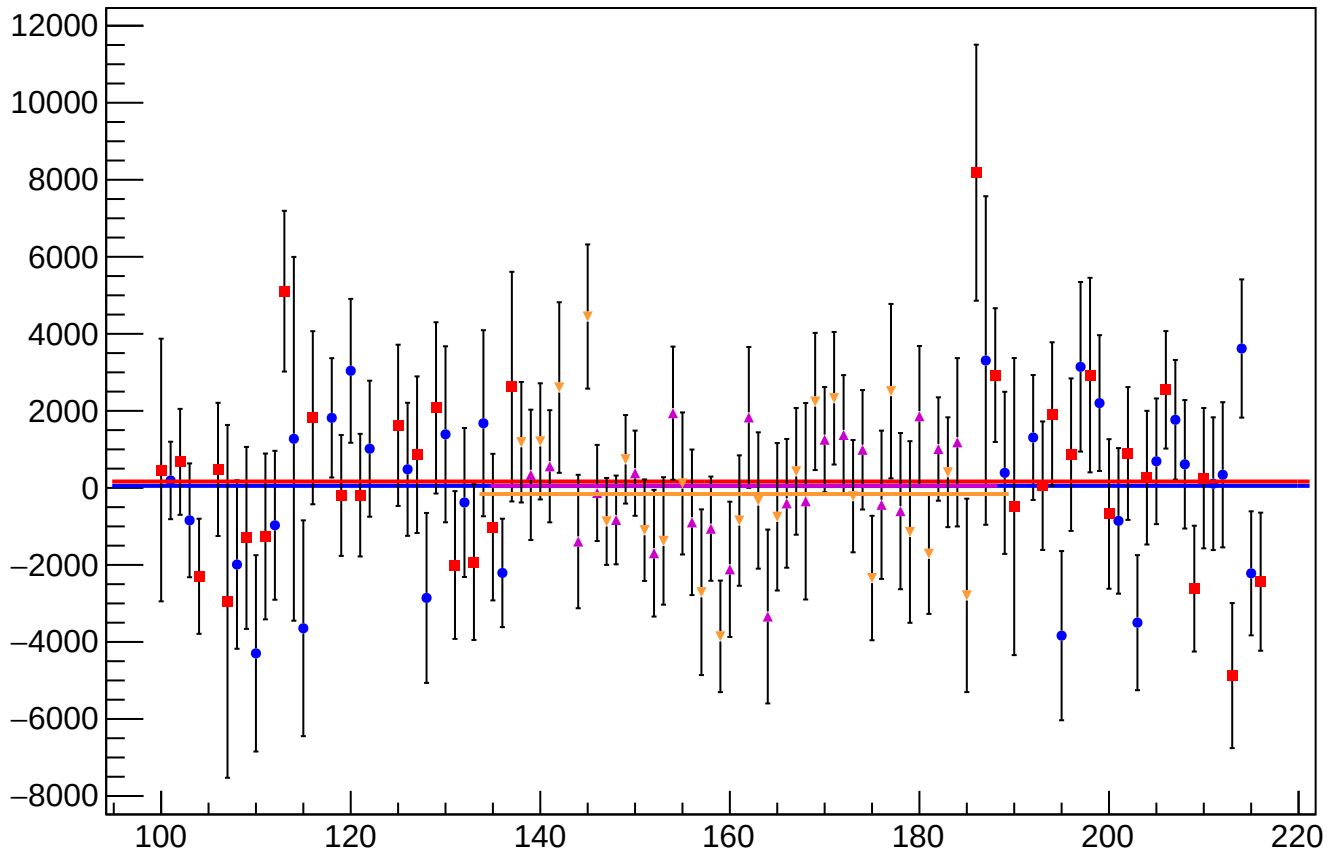
+ sign 780.647 $\pm$ 0.090  $\chi^2$ /NDF: 28203.7/54

All: 782.323 $\pm$ 0.064  $\chi^2$ /NDF: 62086.9/110

- sign 784.020 $\pm$ 0.090  $\chi^2$ /NDF: 33180.9/55



# asym\_us\_avg\_dit\_correction\_mean vs Slug



Right In: 52.668 $\pm$ 325.915  $\chi^2$ /NDF: 35.2/30

Left Out: -159.275 $\pm$ 332.190  $\chi^2$ /NDF:29.1/23

Right Out: 165.852 $\pm$ 336.580  $\chi^2$ /NDF: 40.8/32

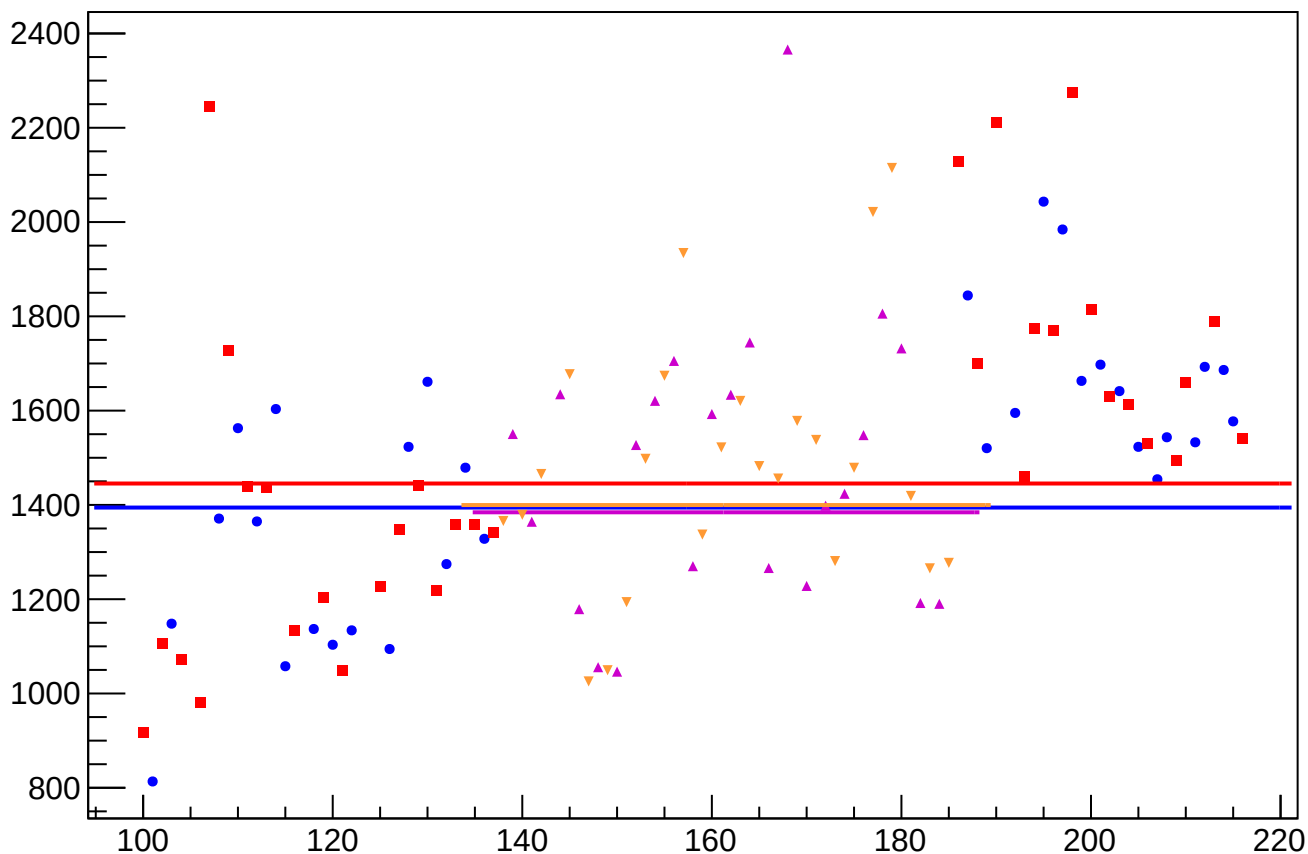
Left In: 51.975 $\pm$ 330.206  $\chi^2$ /NDF:13.4/22

+ sign -51.283 $\pm$ 232.644  $\chi^2$ /NDF: 64.6/54

All: 27.229 $\pm$ 165.578  $\chi^2$ /NDF: 119.0/110

- sign 107.825 $\pm$ 235.712  $\chi^2$ /NDF: 54.2/55

# asym\_us\_avg\_dit\_correction\_rms vs Slug



Right In: 1394.395+/-0.230  $\chi^2$ /NDF: 1710725.4/30

Left Out: 1399.717+/-0.235  $\chi^2$ /NDF:1136350.2/23

Right Out: 1445.402+/-0.238  $\chi^2$ /NDF: 1563193.8/32

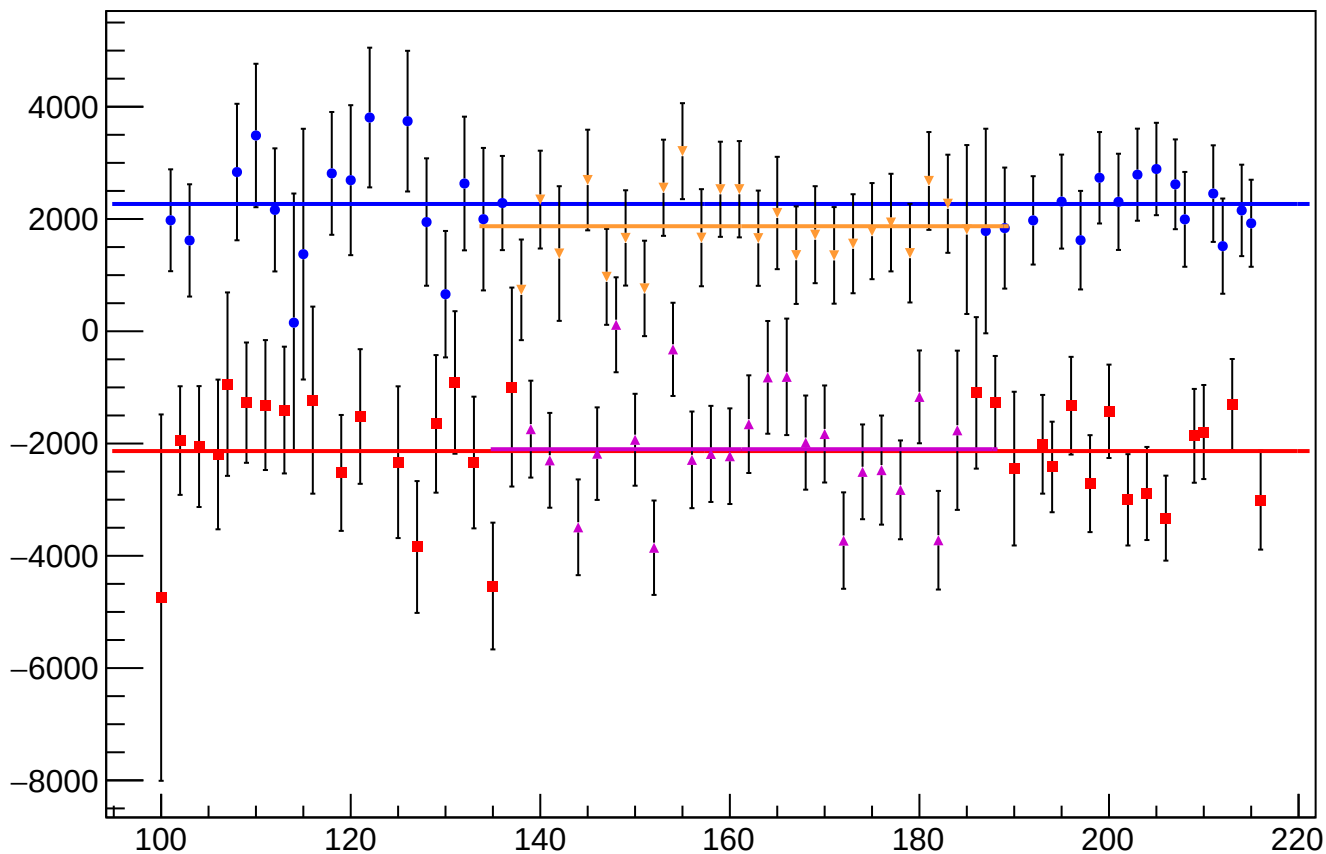
Left In: 1384.333+/-0.233  $\chi^2$ /NDF:1269936.6/22

+ sign 1397.005+/-0.165  $\chi^2$ /NDF: 2847337.2/54

All: 1405.531+/-0.117  $\chi^2$ /NDF: 5719461.2/11

- sign 1414.284+/-0.167  $\chi^2$ /NDF: 2866679.8/55

# eigen\_dit\_asym\_us\_avg\_mean vs Slug



Right In: 2267.774 $\pm$ 176.995  $\chi^2$ /NDF: 11.8/30

Left Out: 1871.455 $\pm$ 181.976  $\chi^2$ /NDF:12.5/23

Right Out: -2134.107 $\pm$ 177.990  $\chi^2$ /NDF: 22.3/32

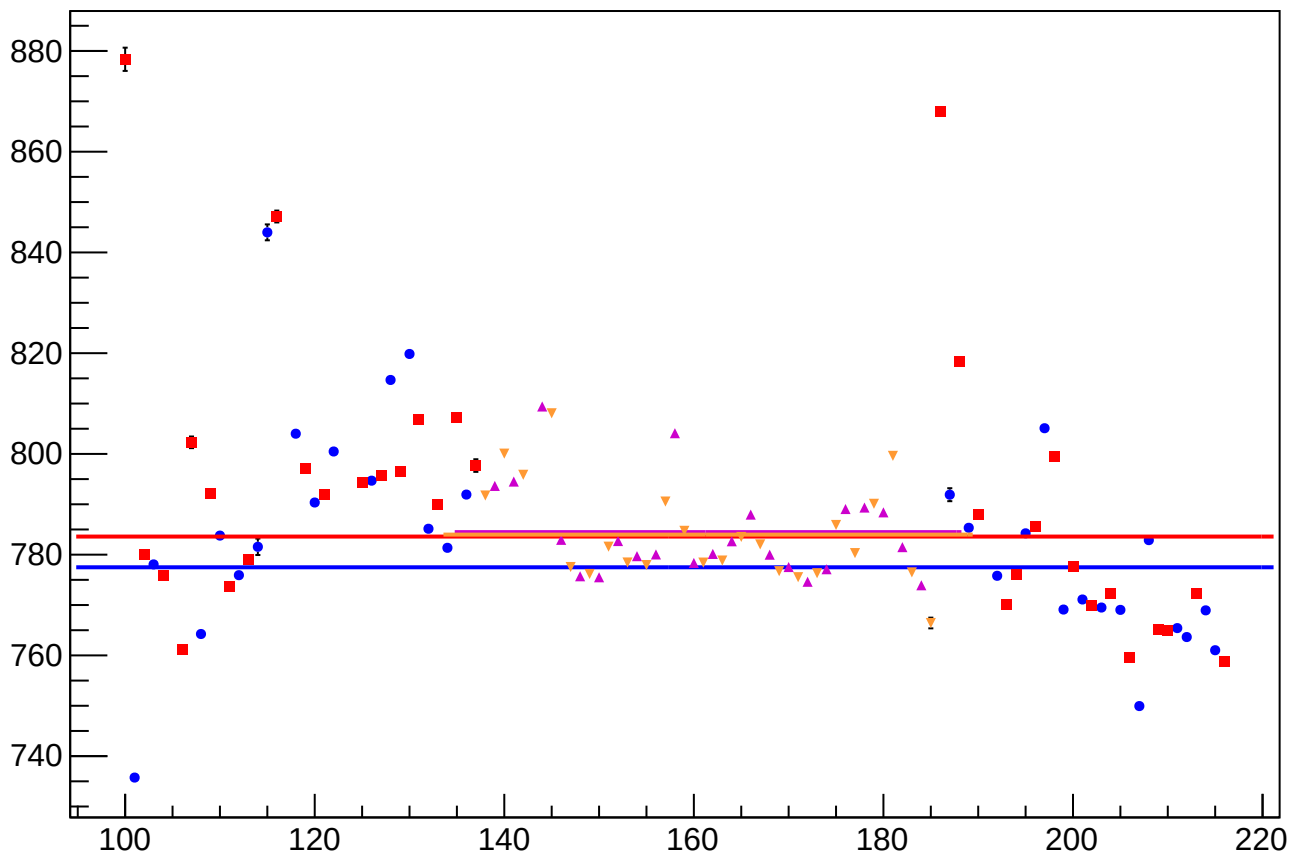
Left In: -2101.047 $\pm$ 183.179  $\chi^2$ /NDF:31.8/22

+ sign 2075.113 $\pm$ 126.879  $\chi^2$ /NDF: 26.7/54

All: -8.721 $\pm$ 89.989  $\chi^2$ /NDF: 623.5/110

- sign -2118.052 $\pm$ 127.653  $\chi^2$ /NDF: 54.1/55

# eigen\_dit\_asym\_us\_avg\_rms vs Slug



Right In:  $777.493 \pm 0.125$   $\chi^2/\text{NDF}$ : 21969.0/30

Left Out:  $783.982 \pm 0.129$   $\chi^2/\text{NDF}$ : 4928.0/23

Right Out:  $783.593 \pm 0.126$   $\chi^2/\text{NDF}$ : 28229.4/32

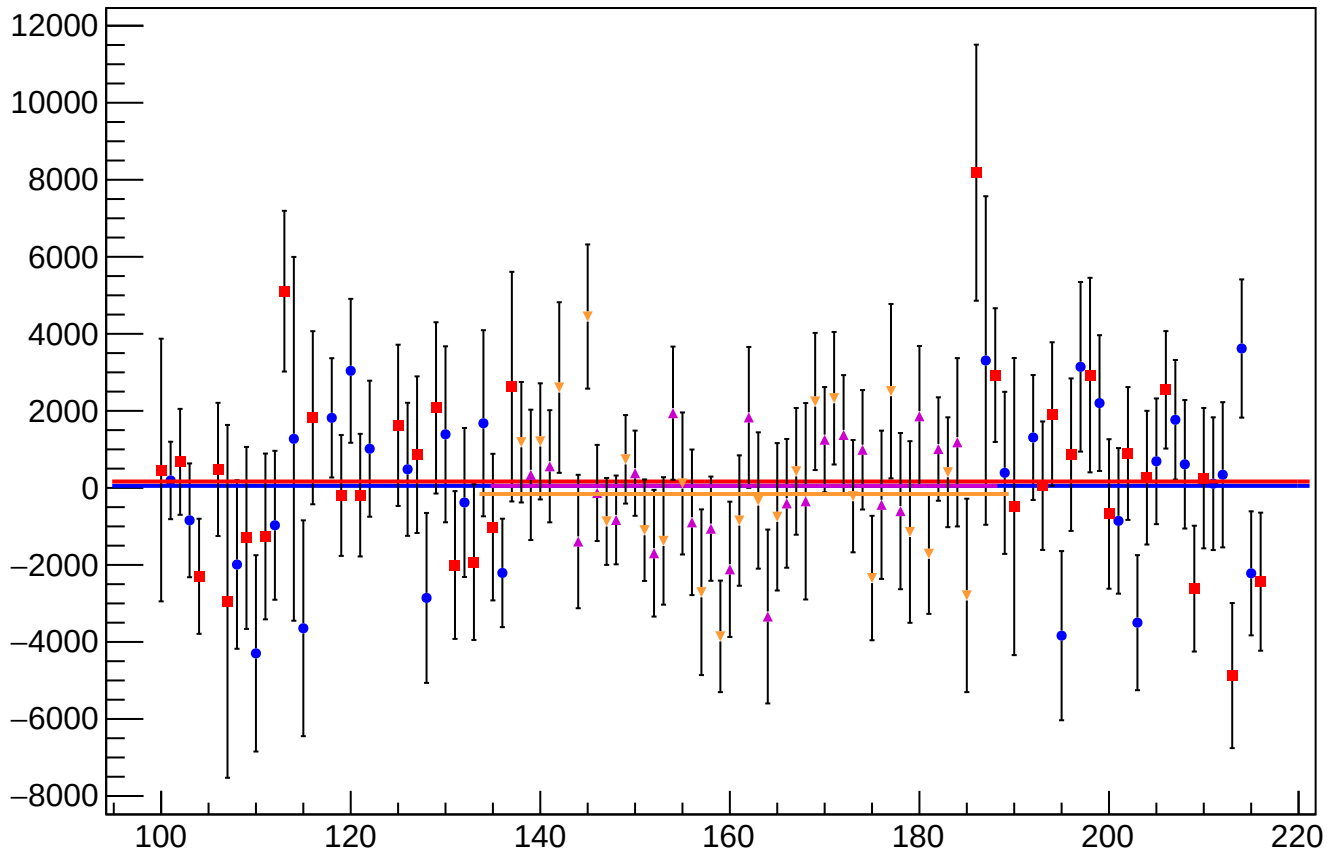
Left In:  $784.473 \pm 0.130$   $\chi^2/\text{NDF}$ : 4927.7/22

+ sign  $780.647 \pm 0.090$   $\chi^2/\text{NDF}$ : 28203.6/54

All:  $782.323 \pm 0.064$   $\chi^2/\text{NDF}$ : 62086.7/110

- sign  $784.020 \pm 0.090$   $\chi^2/\text{NDF}$ : 33180.8/55

asym\_us\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 52.667 $\pm$ 325.915  $\chi^2$ /NDF: 35.2/30

Left Out: -159.278 $\pm$ 332.191  $\chi^2$ /NDF: 29.1/23

Right Out: 165.849 $\pm$ 336.579  $\chi^2$ /NDF: 40.8/32

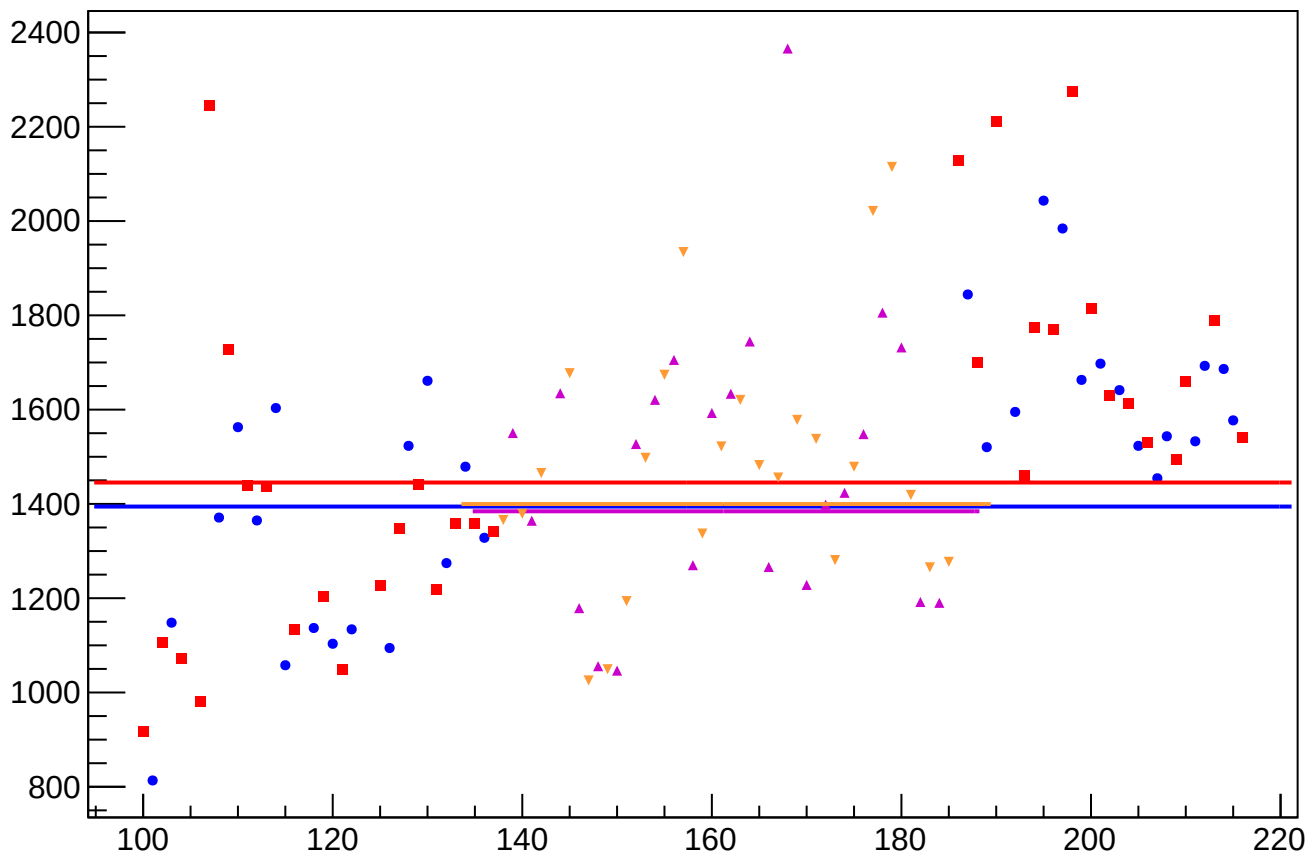
Left In: 51.975 $\pm$ 330.207  $\chi^2$ /NDF: 13.4/22

+ sign -51.284 $\pm$ 232.644  $\chi^2$ /NDF: 64.6/54

All: 27.228 $\pm$ 165.578  $\chi^2$ /NDF: 119.0/110

- sign 107.824 $\pm$ 235.712  $\chi^2$ /NDF: 54.2/55

# asym\_us\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1394.393 $\pm$ 0.230  $\chi^2$ /NDF: 1710747.5/30

Left Out: 1399.720 $\pm$ 0.235  $\chi^2$ /NDF:1136351.3/23

Right Out: 1445.400 $\pm$ 0.238  $\chi^2$ /NDF: 1563215.4/32

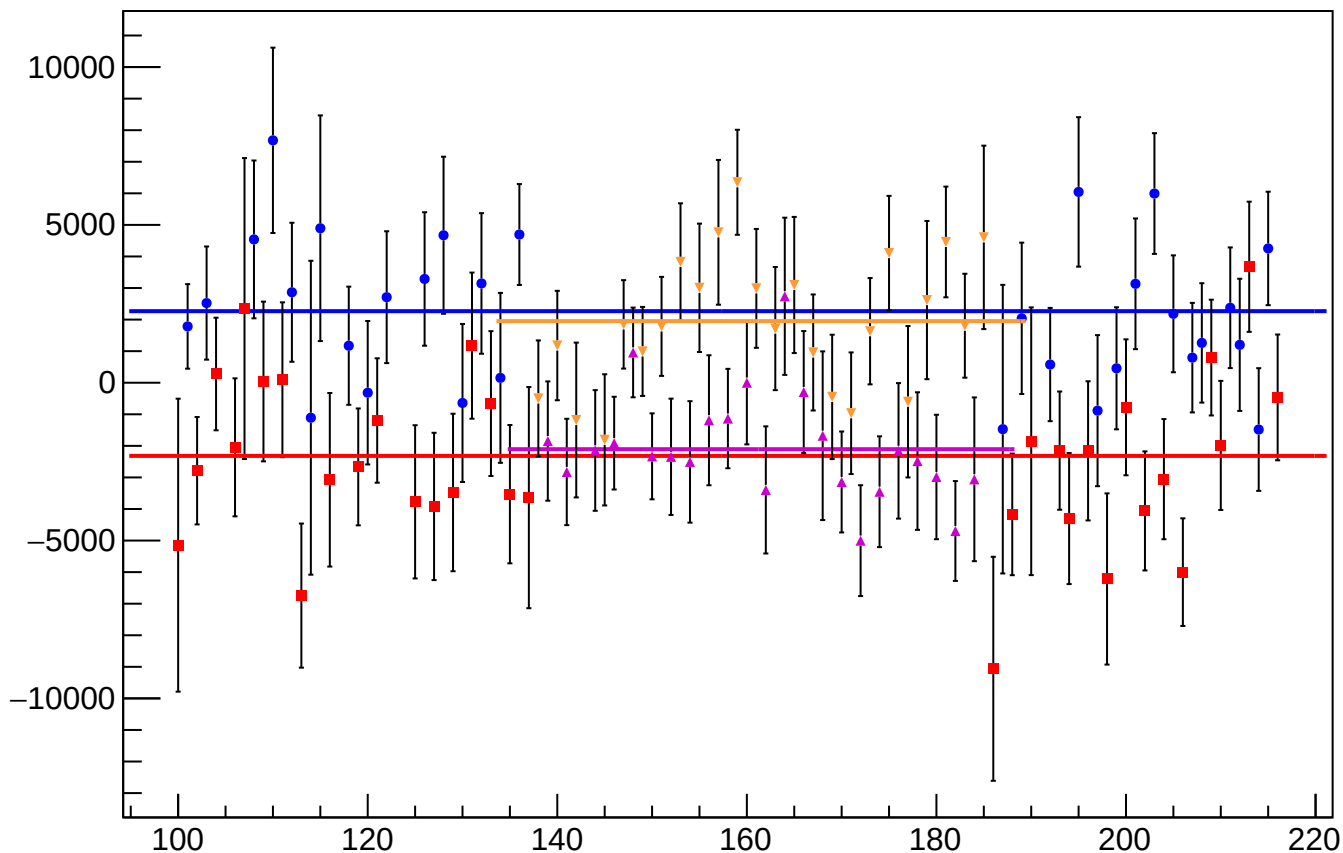
Left In: 1384.336 $\pm$ 0.233  $\chi^2$ /NDF:1269937.1/22

+ sign 1397.006 $\pm$ 0.165  $\chi^2$ /NDF: 2847360.7/54

All: 1405.532 $\pm$ 0.117  $\chi^2$ /NDF: 5719501.7/11

- sign 1414.285 $\pm$ 0.167  $\chi^2$ /NDF: 2866696.9/55

# asym\_us\_avg\_mean vs Slug



Right In: 2267.262 $\pm$ 375.449  $\chi^2$ /NDF: 29.6/30

Left Out: 1952.406 $\pm$ 380.269  $\chi^2$ /NDF: 27.4/23

Right Out: -2317.565 $\pm$ 385.162  $\chi^2$ /NDF: 39.8/32

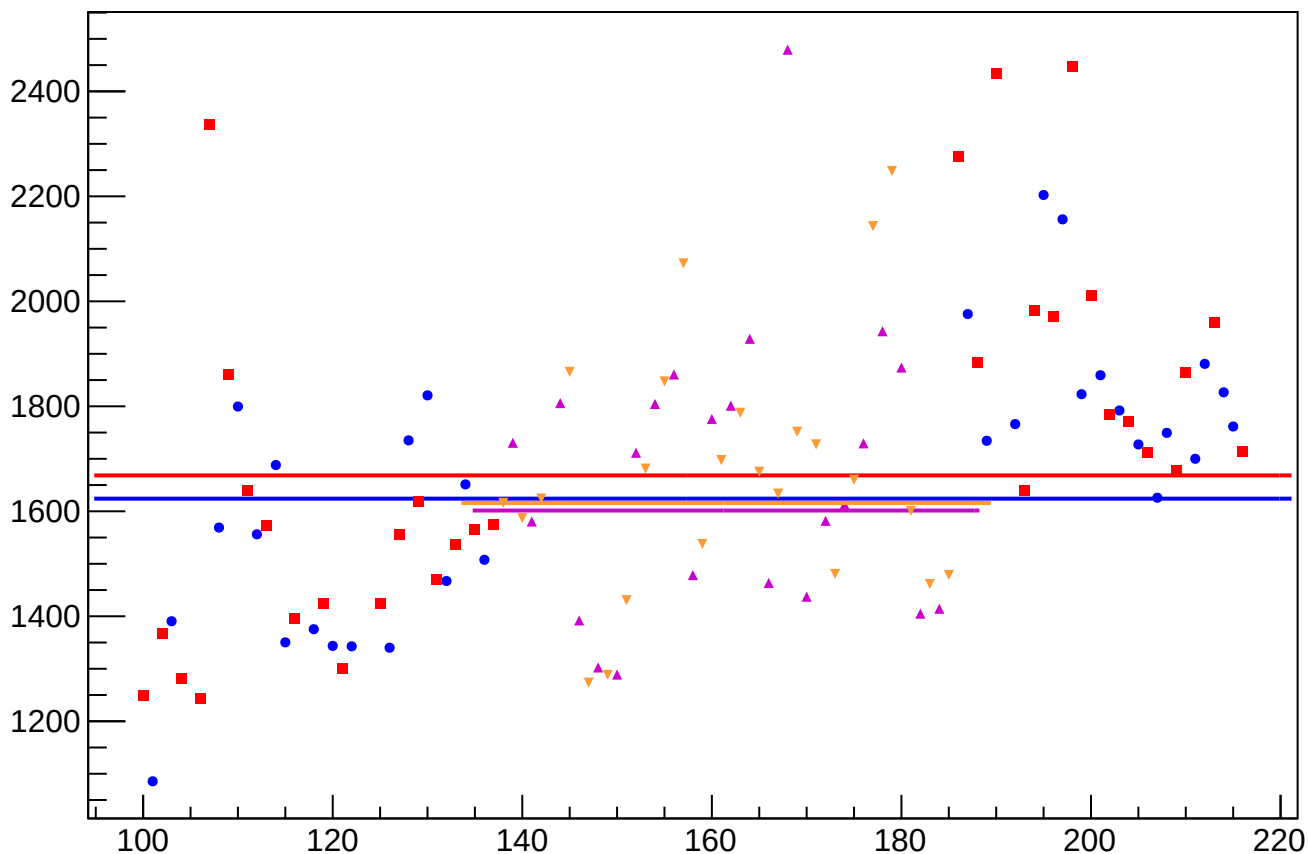
Left In: -2105.415 $\pm$ 379.051  $\chi^2$ /NDF: 18.6/22

+ sign 2111.842 $\pm$ 267.170  $\chi^2$ /NDF: 57.3/54

All: -24.899 $\pm$ 189.968  $\chi^2$ /NDF: 245.3/110

- sign -2209.794 $\pm$ 270.164  $\chi^2$ /NDF: 58.5/55

# asym\_us\_avg\_rms vs Slug



Right In: 1624.076+/-0.265  $\chi^2$ /NDF: 945526.8/30

Left Out: 1615.853+/-0.269  $\chi^2$ /NDF: 694353.3/23

Right Out: 1668.383+/-0.272  $\chi^2$ /NDF: 1000861.9/32

Left In: 1601.496+/-0.268  $\chi^2$ /NDF: 793722.6/22

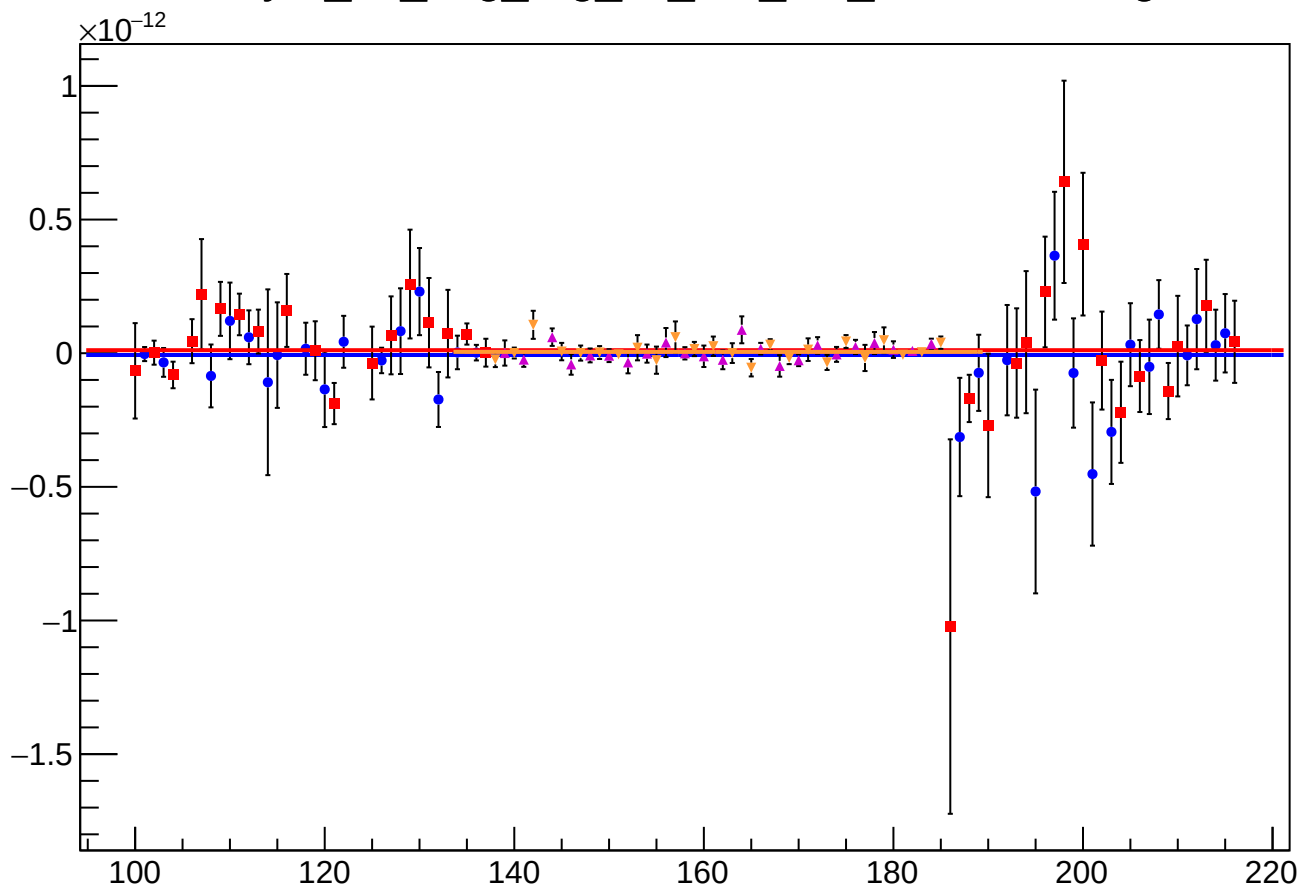
+ sign 1620.017+/-0.189  $\chi^2$ /NDF: 1640353.7/54

All: 1627.131+/-0.134  $\chi^2$ /NDF: 3468444.9/11

- sign 1634.405+/-0.191  $\chi^2$ /NDF: 1825223.7/55



asym\_us\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.0/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.2/32

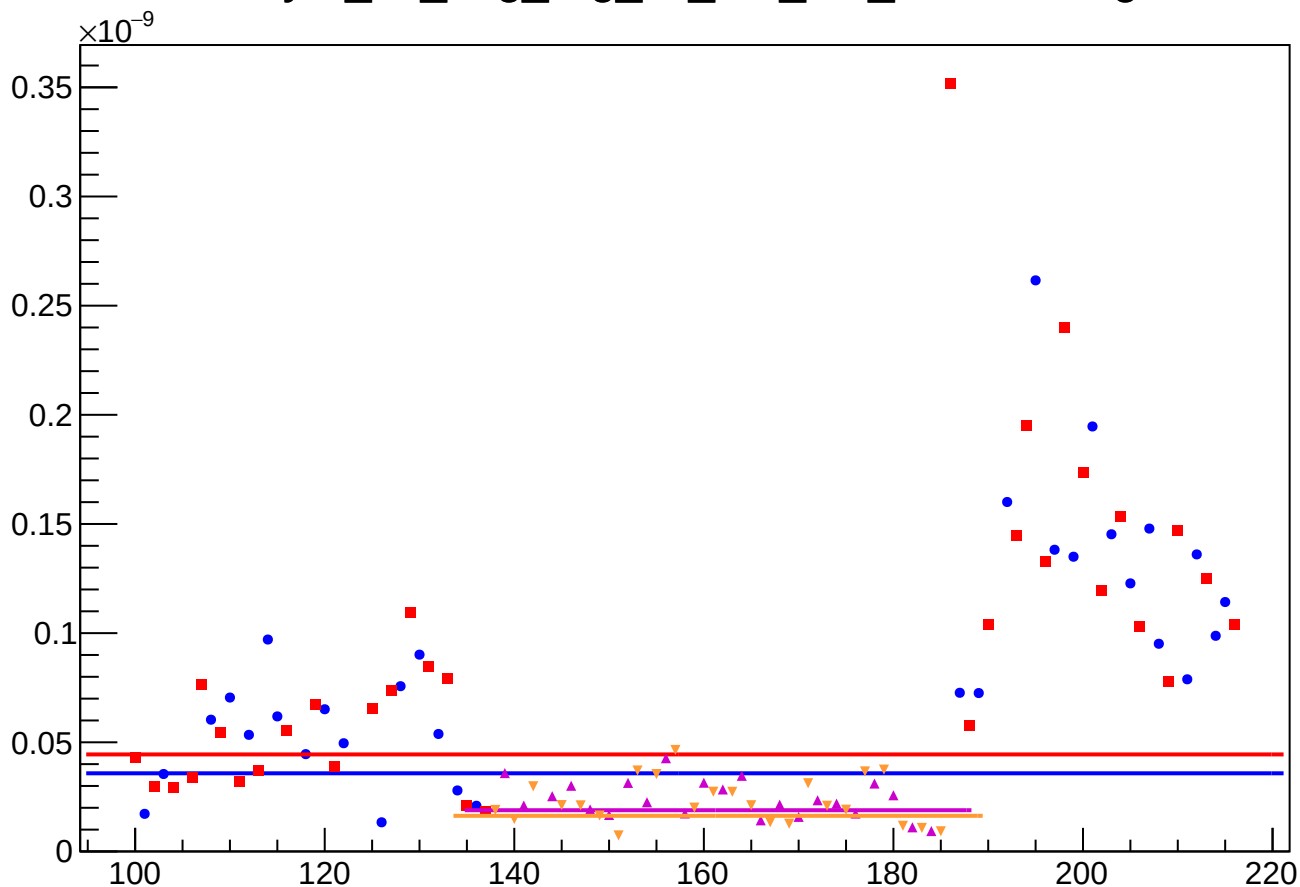
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.0/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 105.7/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.7/55

# asym\_us\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10439951.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4263140.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8339246.5/32

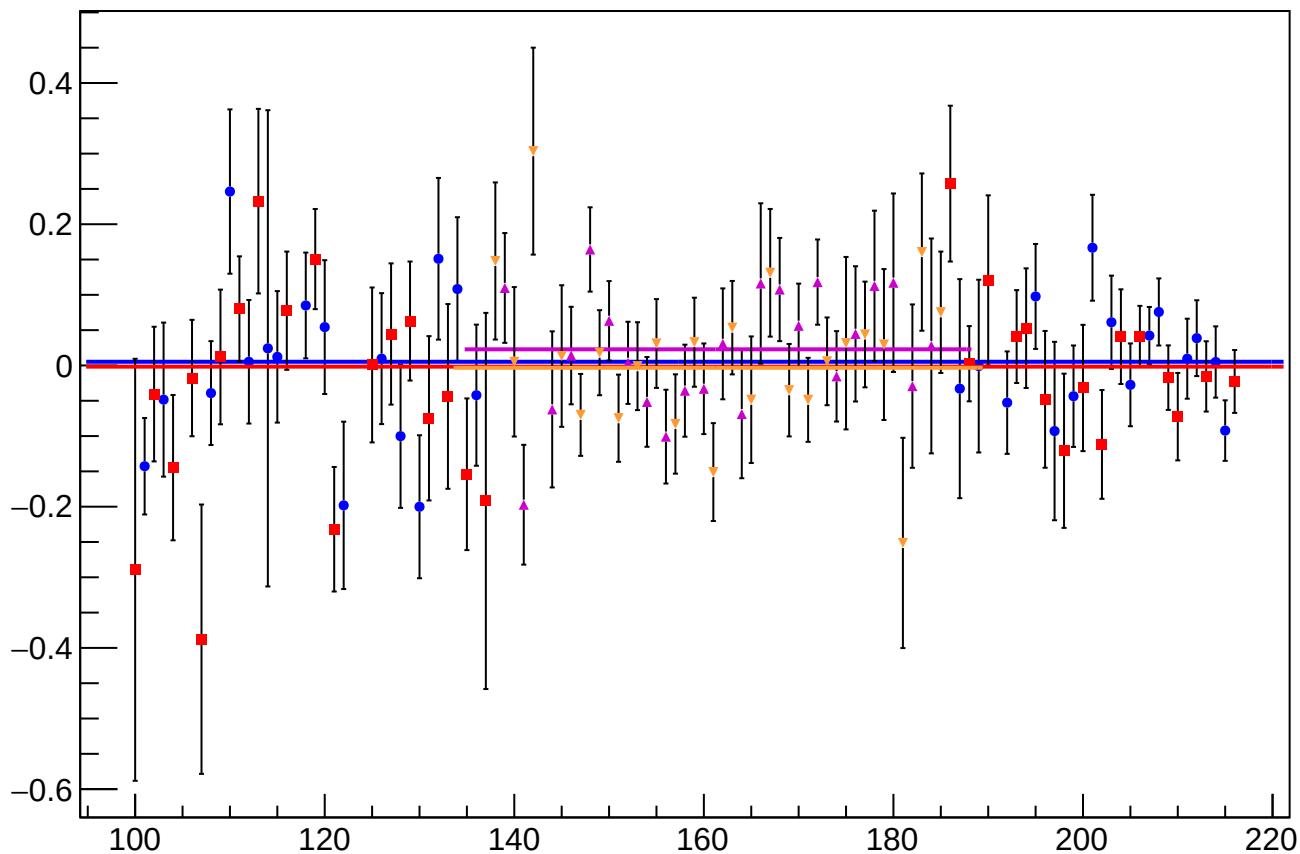
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3256130.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17949018.0/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34009781.9/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15747334.5/55

asym\_us\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.013  $\chi^2$ /NDF: 39.6/30

Left Out: -0.003 $\pm$ 0.015  $\chi^2$ /NDF: 25.9/23

Right Out: -0.002 $\pm$ 0.013  $\chi^2$ /NDF: 41.8/32

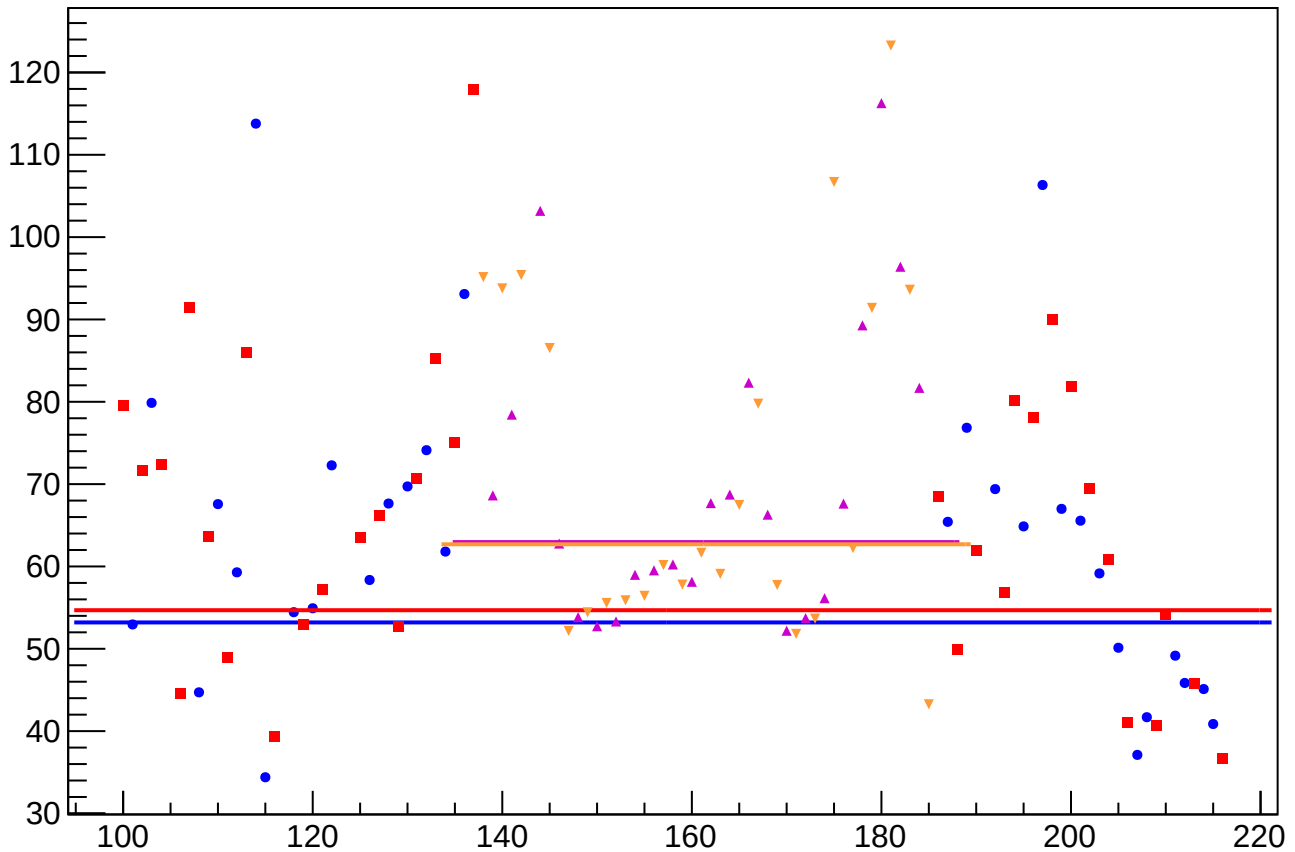
Left In: 0.023 $\pm$ 0.015  $\chi^2$ /NDF: 29.0/22

+ sign 0.002 $\pm$ 0.010  $\chi^2$ /NDF: 65.7/54

All: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 138.2/110

- sign 0.009 $\pm$ 0.010  $\chi^2$ /NDF: 72.2/55

# asym\_us\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 53.201 $\pm$ 0.009  $\chi^2$ /NDF: 2322443.2/30

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939401.0/23

Right Out: 54.686 $\pm$ 0.010  $\chi^2$ /NDF: 2448913.7/32

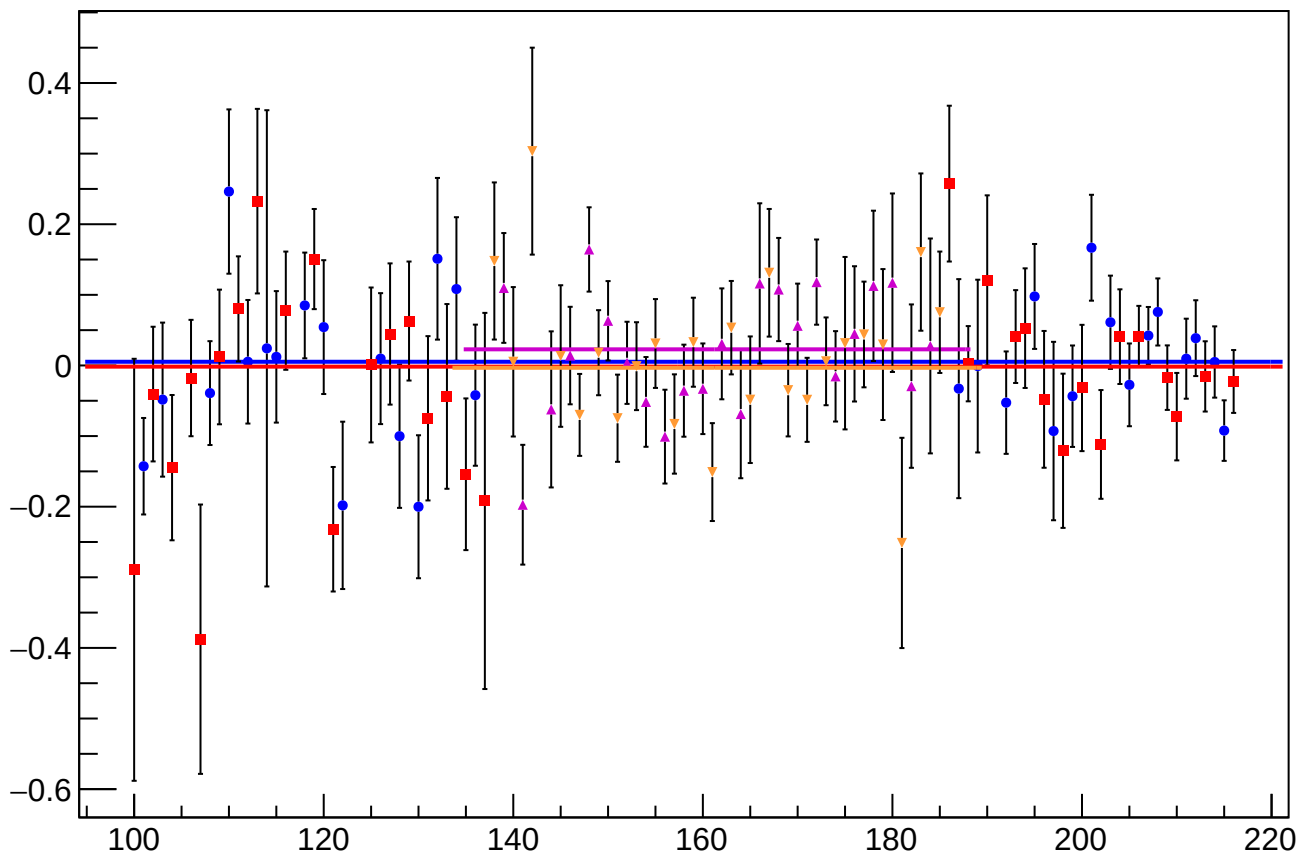
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430426.1/22

+ sign 57.155 $\pm$ 0.007  $\chi^2$ /NDF: 4700141.5/54

All: 57.688 $\pm$ 0.005  $\chi^2$ /NDF: 8916142.8/110

- sign 58.237 $\pm$ 0.007  $\chi^2$ /NDF: 4204472.4/55

asym\_us\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.013$   $\chi^2/\text{NDF}$ : 39.6/30

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $-0.002 \pm 0.013$   $\chi^2/\text{NDF}$ : 41.8/32

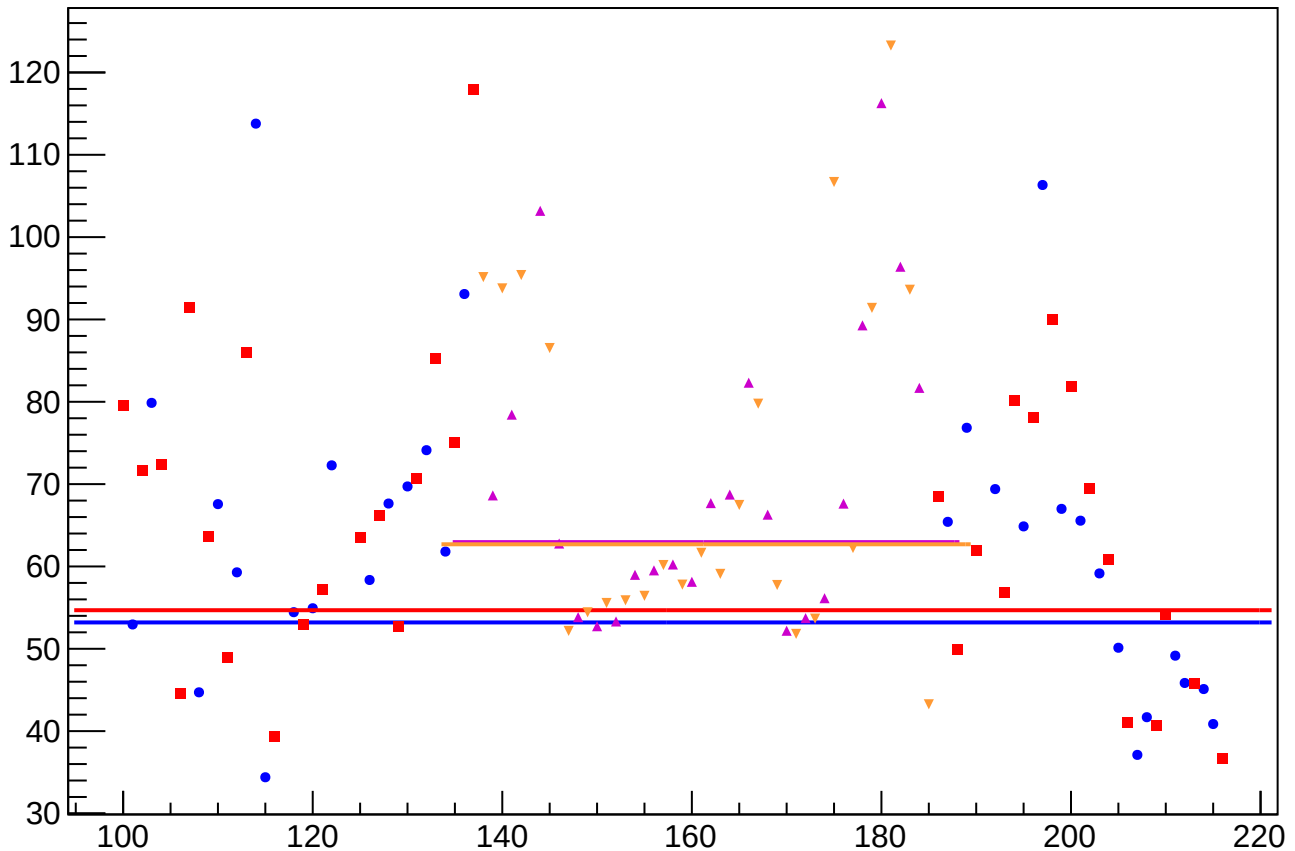
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 65.7/54

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 138.2/110

- sign  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 72.2/55

asym\_us\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 53.201 $\pm$ 0.009  $\chi^2$ /NDF: 2322443.2/30

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939401.0/23

Right Out: 54.686 $\pm$ 0.010  $\chi^2$ /NDF: 2448913.7/32

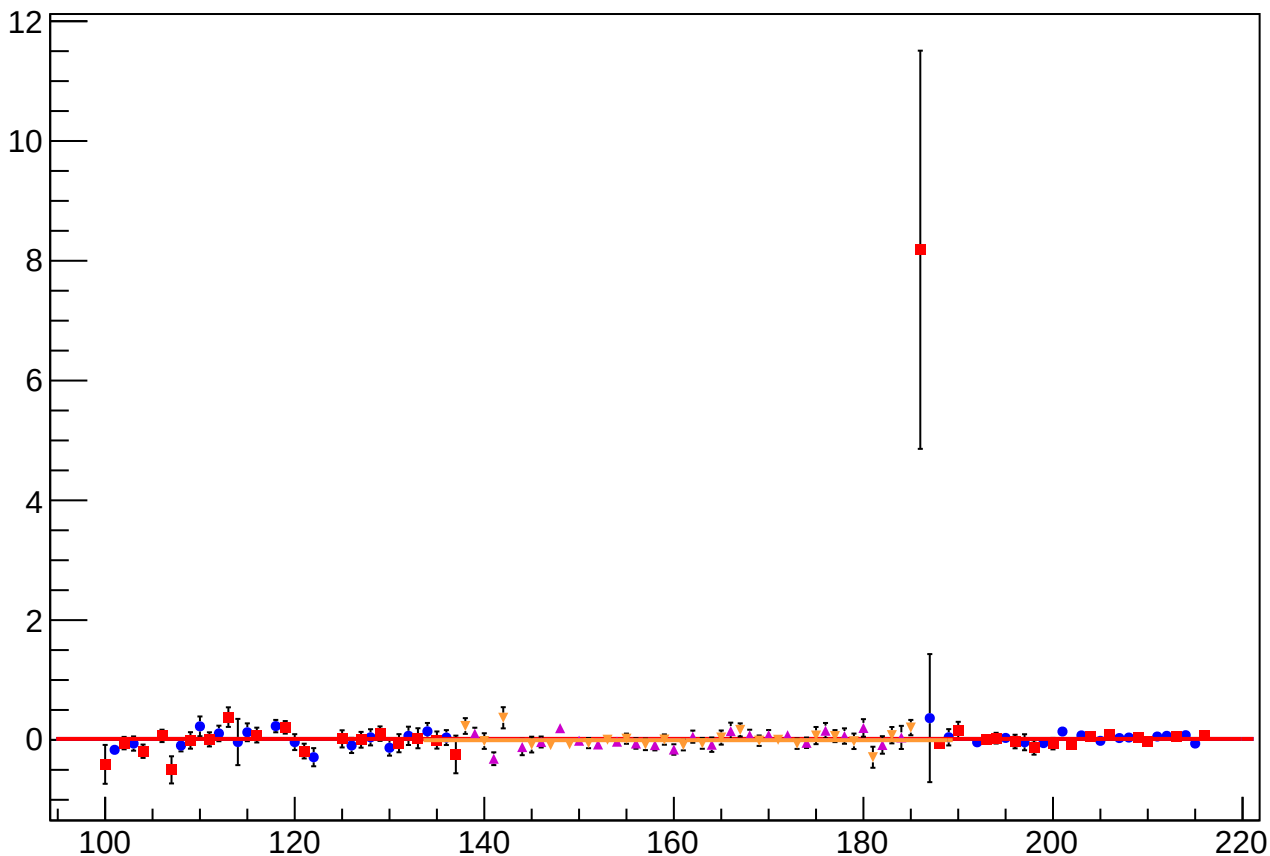
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430426.1/22

+ sign 57.155 $\pm$ 0.007  $\chi^2$ /NDF: 4700141.5/54

All: 57.688 $\pm$ 0.005  $\chi^2$ /NDF: 8916142.8/110

- sign 58.237 $\pm$ 0.007  $\chi^2$ /NDF: 4204472.4/55

asym\_us\_avg\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.016$   $\chi^2/\text{NDF}$ : 29.4/30

Left Out:  $-0.004 \pm 0.021$   $\chi^2/\text{NDF}$ : 21.4/23

Right Out:  $0.017 \pm 0.017$   $\chi^2/\text{NDF}$ : 39.9/32

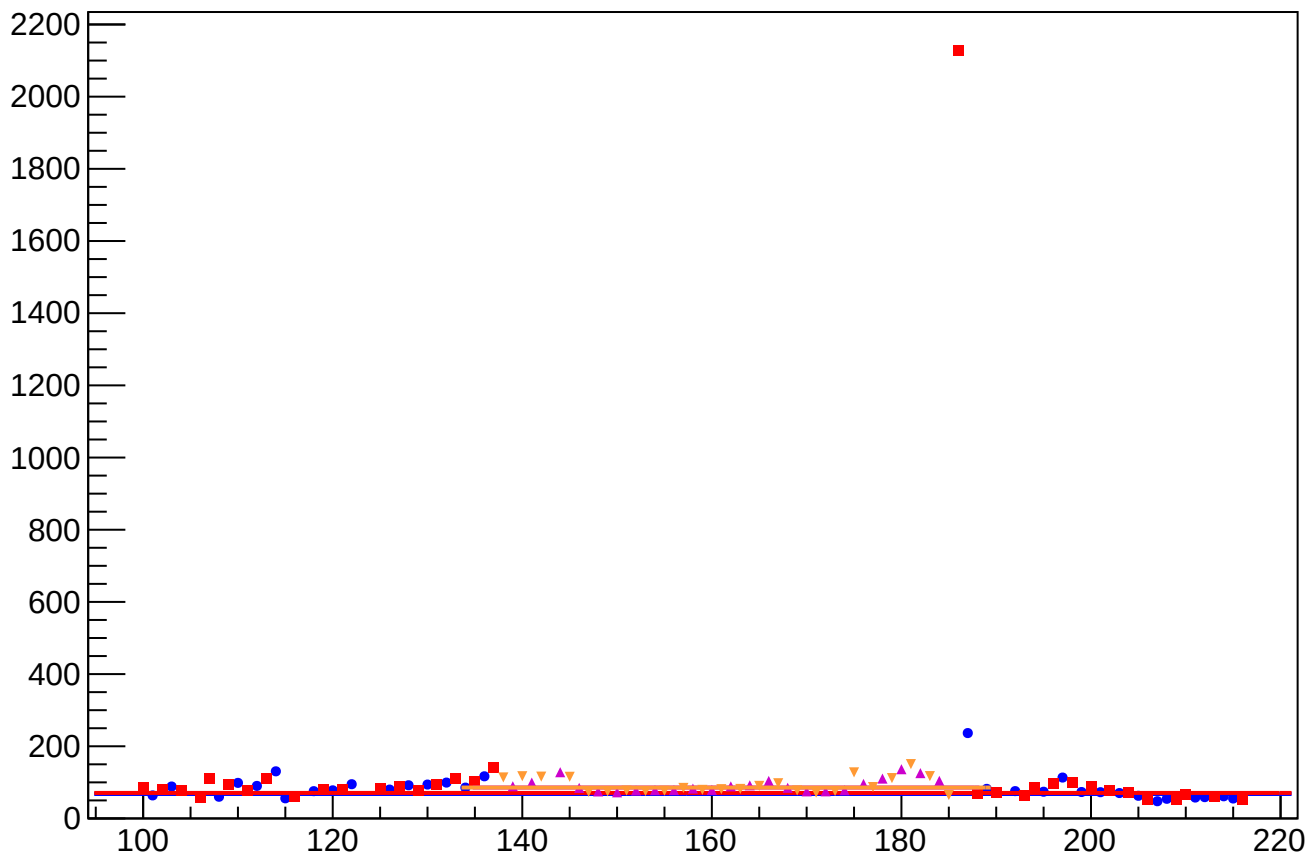
Left In:  $-0.002 \pm 0.021$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $0.008 \pm 0.013$   $\chi^2/\text{NDF}$ : 51.3/54

All:  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 122.2/110

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}$ : 70.9/55

asym\_us\_avg\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 67.835 $\pm$ 0.012  $\chi^2$ /NDF: 1898419.4/30

Left Out: 85.650 $\pm$ 0.015  $\chi^2$ /NDF: 1352748.5/23

Right Out: 70.722 $\pm$ 0.012  $\chi^2$ /NDF: 2506971.4/32

Left In: 85.679 $\pm$ 0.015  $\chi^2$ /NDF: 995870.4/22

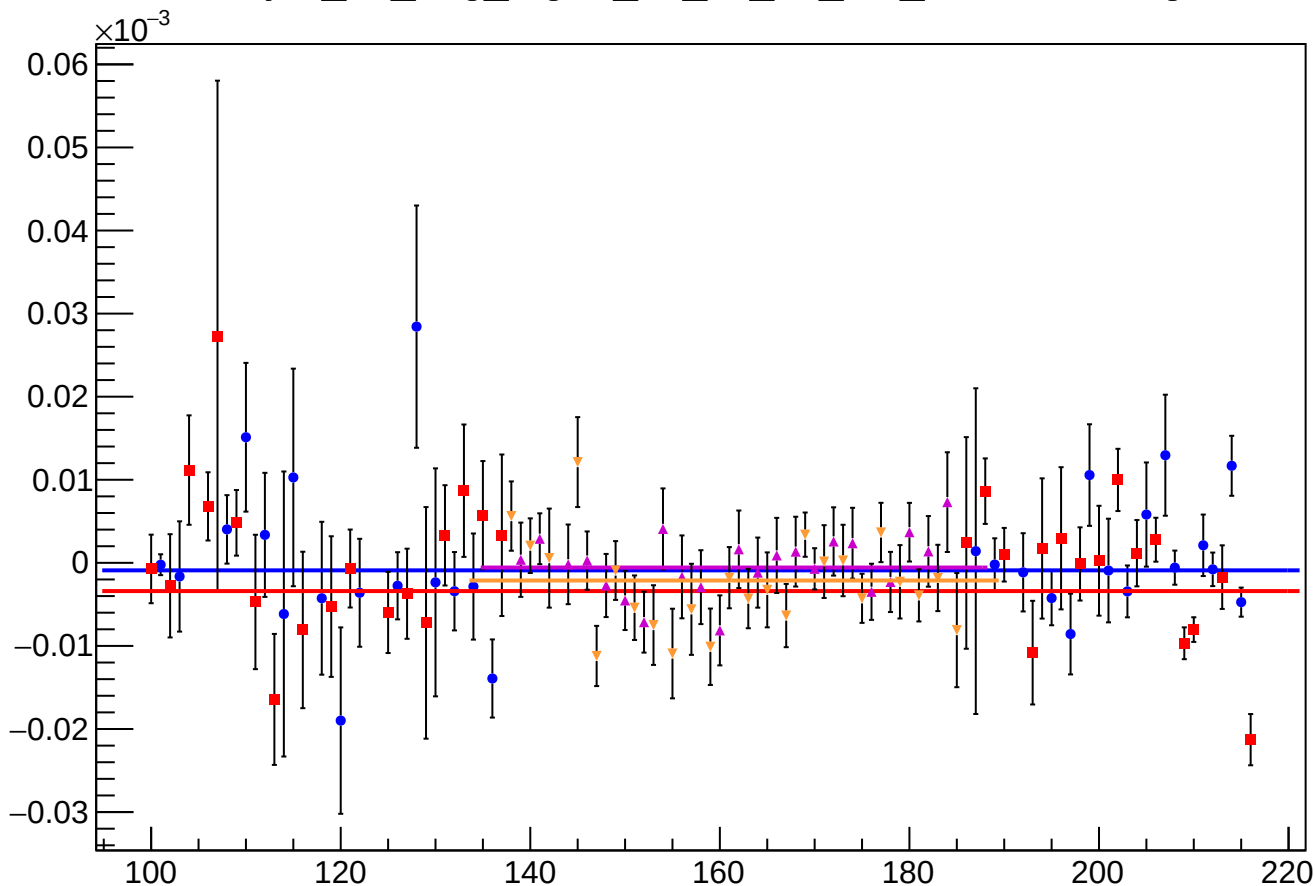
+ sign 74.725 $\pm$ 0.009  $\chi^2$ /NDF: 4161281.4/54

All: 75.740 $\pm$ 0.007  $\chi^2$ /NDF: 8310211.0/110

- sign 76.809 $\pm$ 0.009  $\chi^2$ /NDF: 4123334.9/55



asym\_us\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.5/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.4/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 115.0/32

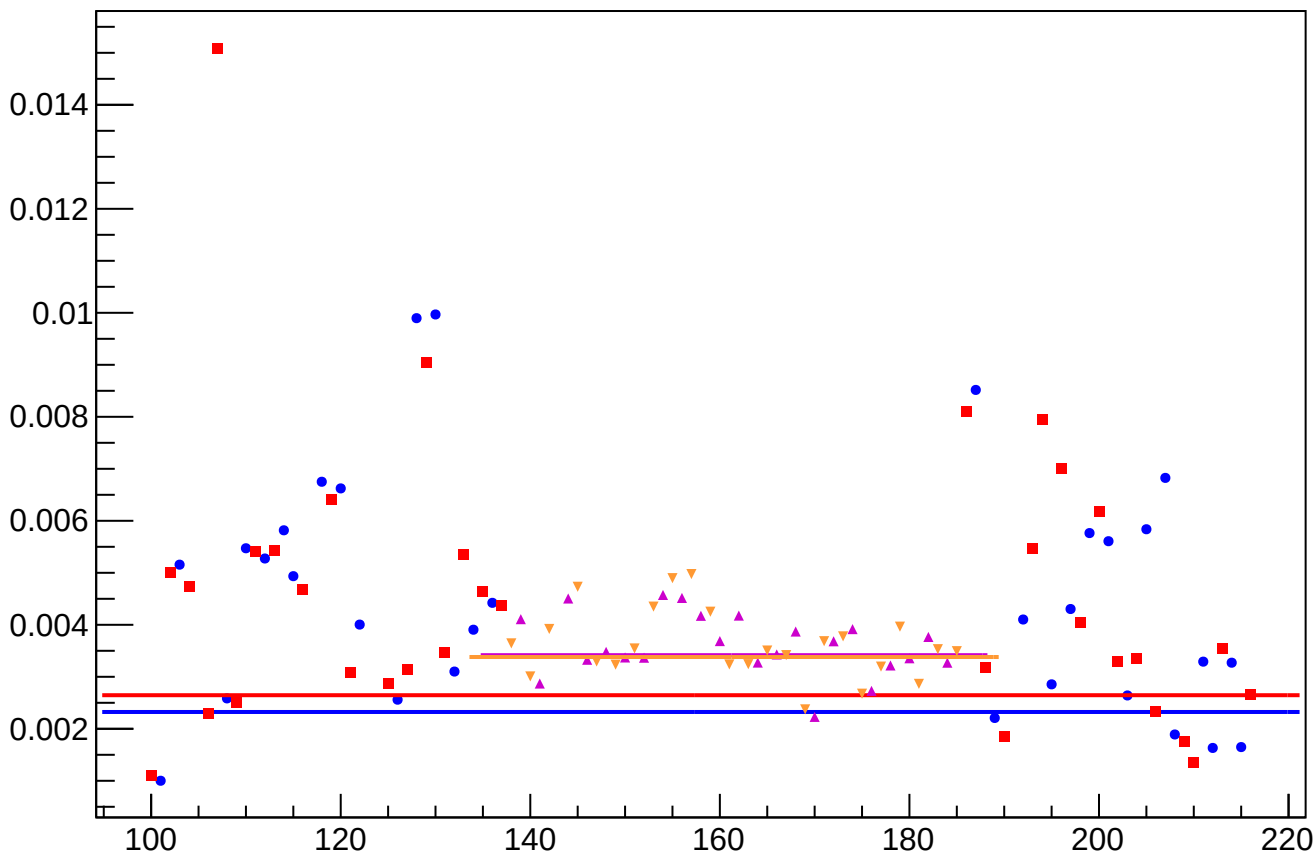
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 90.3/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 229.9/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.4/55

# asym\_us\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10311115.4/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1195636.0/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8293599.4/32

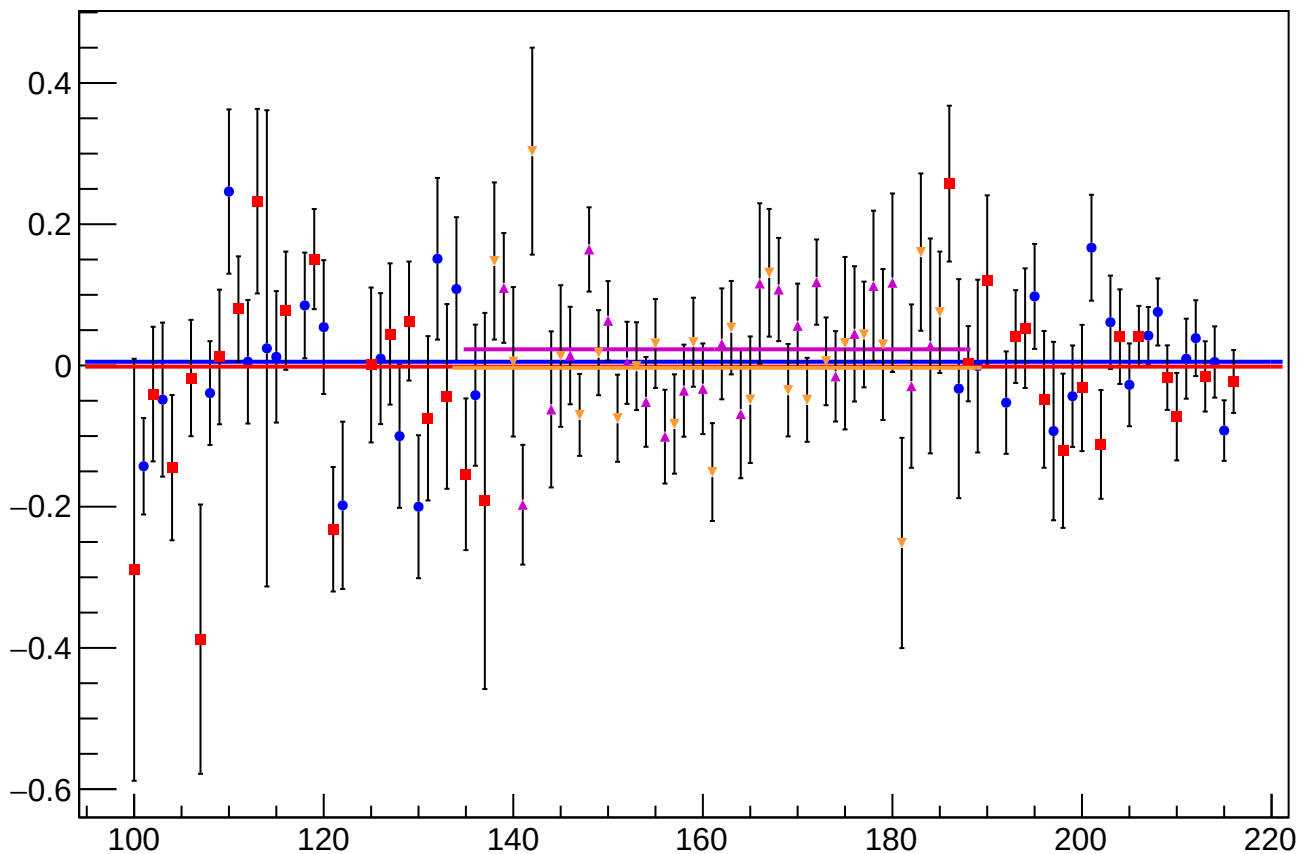
Left In: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1170356.5/22

+ sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13611814.1/54

All: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24309828.0/110

- sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10474126.7/55

asym\_us\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.013$   $\chi^2/\text{NDF}$ : 39.6/30

Left Out:  $-0.003 \pm 0.015$   $\chi^2/\text{NDF}$ : 25.9/23

Right Out:  $-0.002 \pm 0.013$   $\chi^2/\text{NDF}$ : 41.9/32

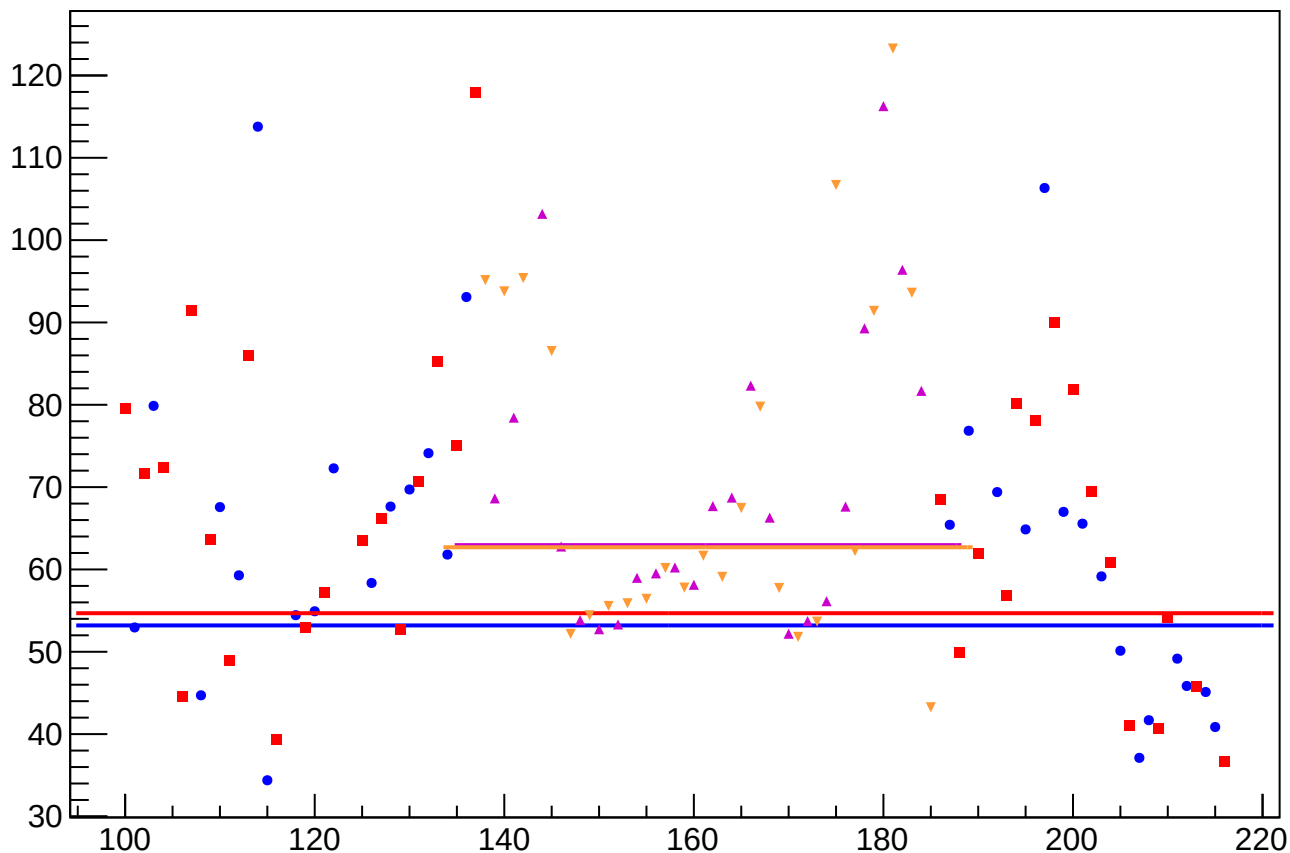
Left In:  $0.023 \pm 0.015$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 65.7/54

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 138.2/110

- sign  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 72.2/55

# asym\_us\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 53.201 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 2322293.6/30

Left Out: 62.694 $\pm$ 0.011  $\chi^2/\text{NDF}$ :1939383.4/23

Right Out: 54.685 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 2448710.6/32

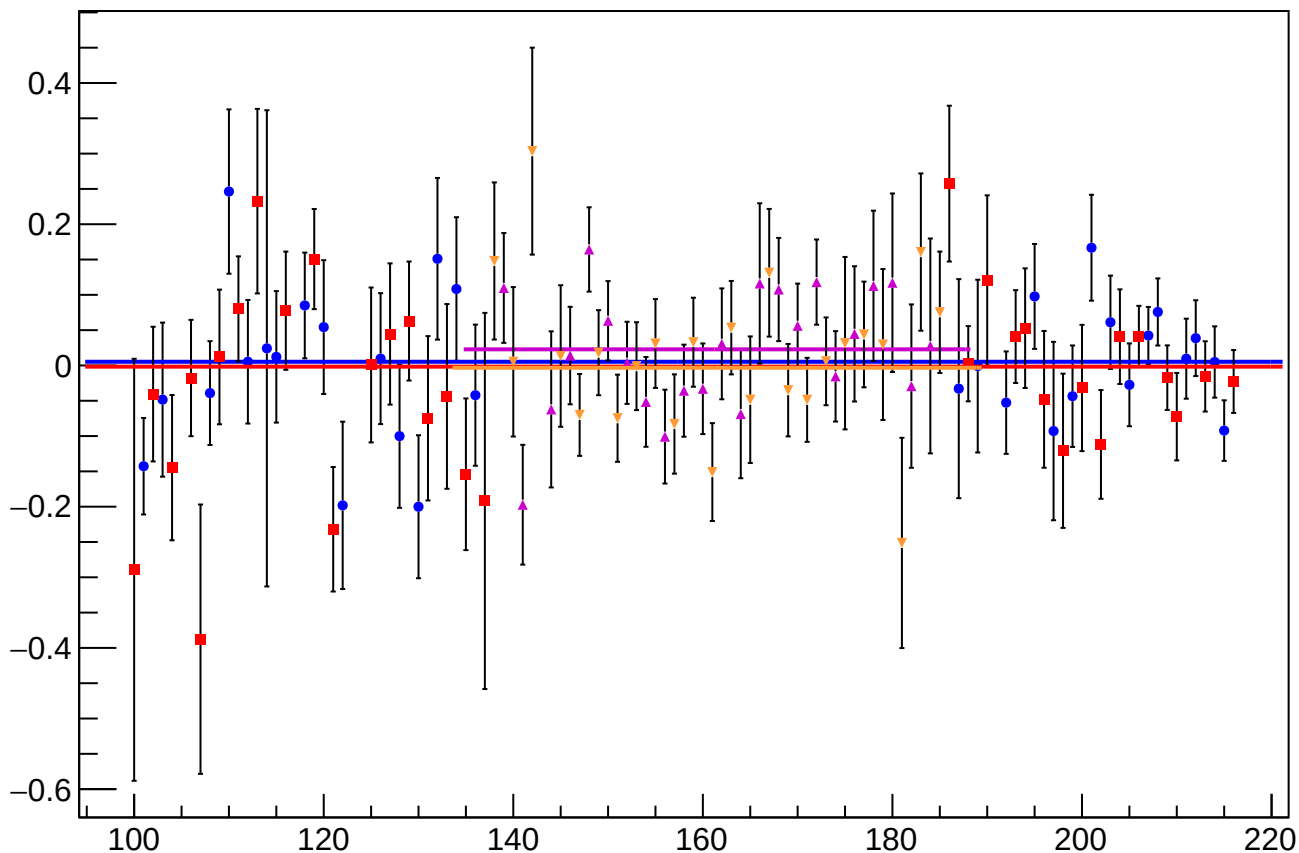
Left In: 62.956 $\pm$ 0.011  $\chi^2/\text{NDF}$ :1430401.4/22

+ sign 57.155 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 4699984.8/54

All: 57.688 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 8915790.1/110

- sign 58.237 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 4204282.9/55

asym\_us\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.013  $\chi^2$ /NDF: 39.6/30

Left Out: -0.003 $\pm$ 0.015  $\chi^2$ /NDF: 25.9/23

Right Out: -0.002 $\pm$ 0.013  $\chi^2$ /NDF: 41.9/32

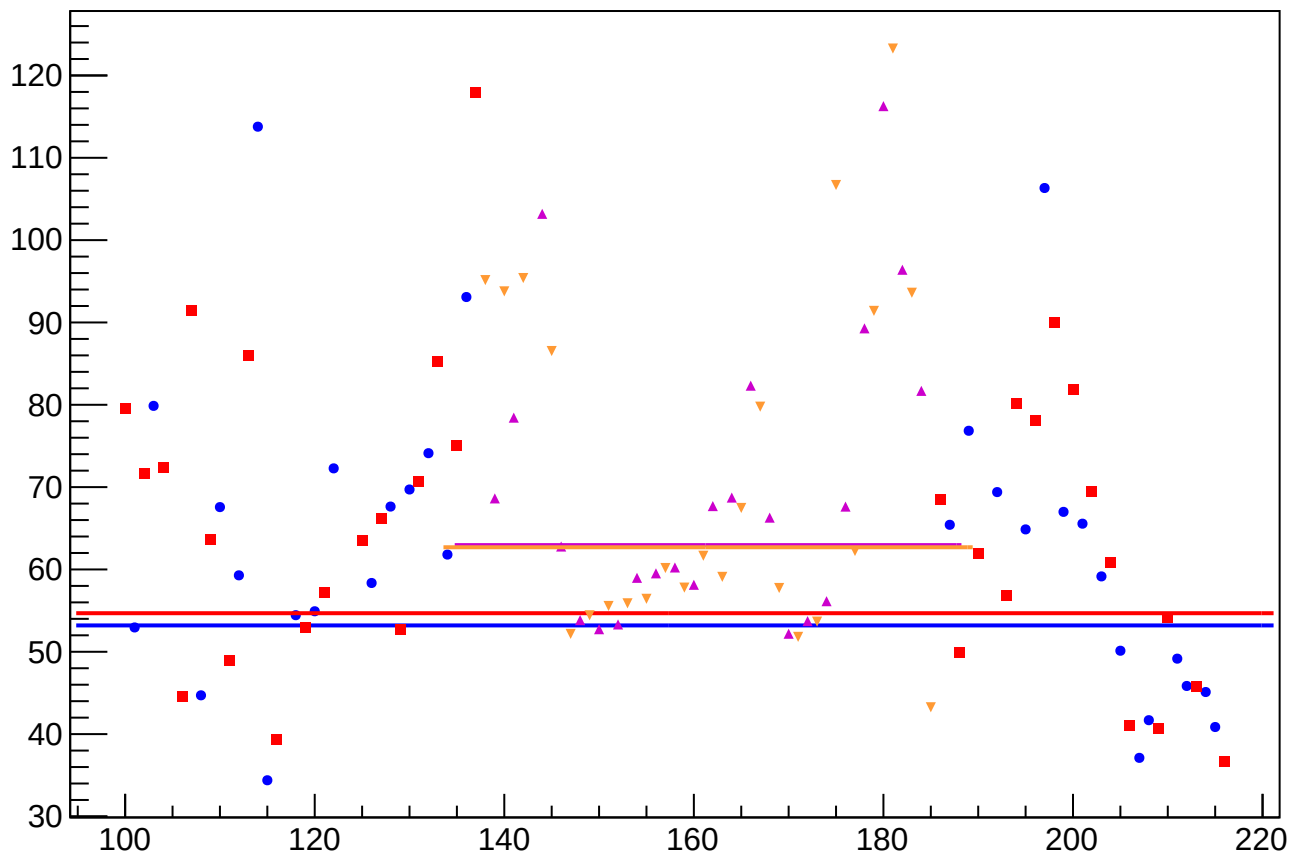
Left In: 0.023 $\pm$ 0.015  $\chi^2$ /NDF: 29.0/22

+ sign 0.002 $\pm$ 0.010  $\chi^2$ /NDF: 65.7/54

All: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 138.2/110

- sign 0.009 $\pm$ 0.010  $\chi^2$ /NDF: 72.2/55

asym\_us\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 53.201 $\pm$ 0.009  $\chi^2$ /NDF: 2322293.6/30

Left Out: 62.694 $\pm$ 0.011  $\chi^2$ /NDF:1939383.4/23

Right Out: 54.685 $\pm$ 0.010  $\chi^2$ /NDF: 2448710.6/32

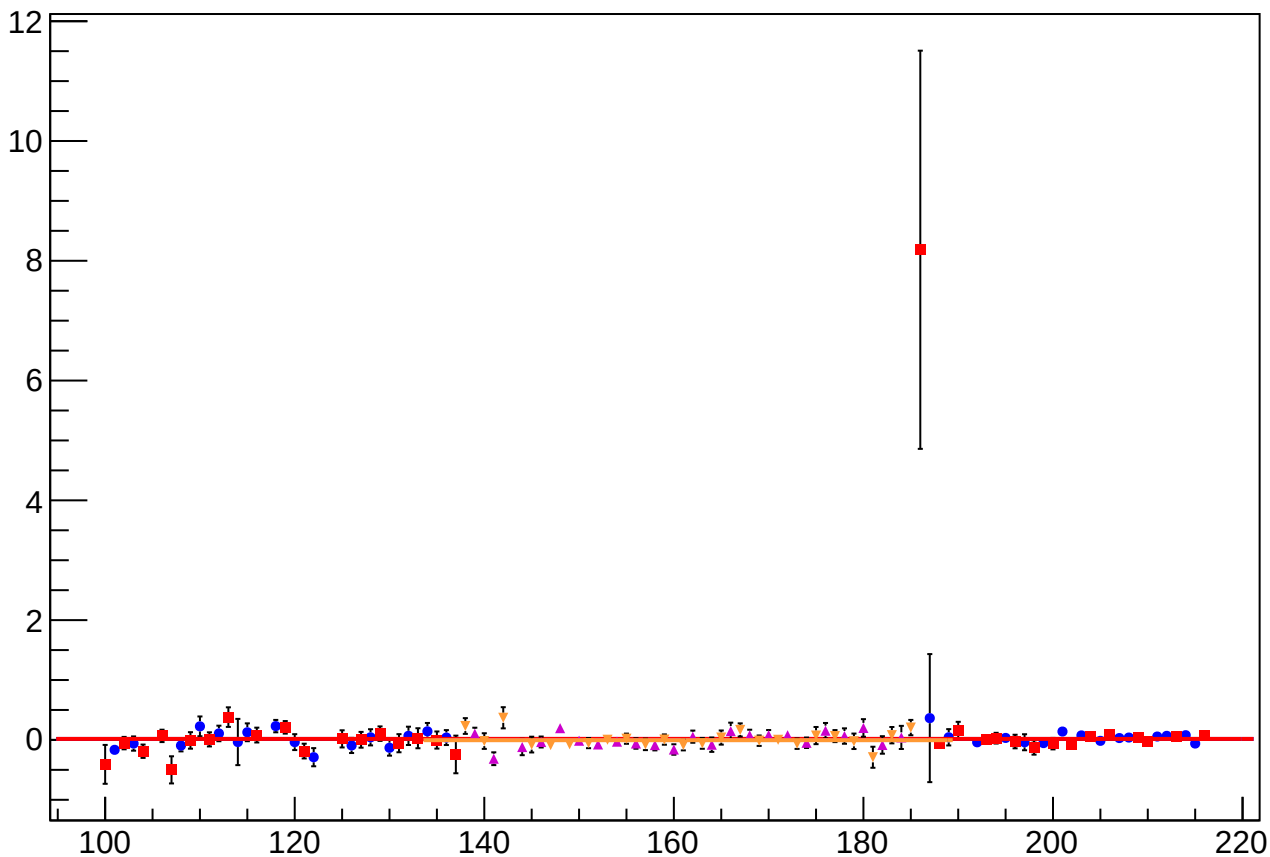
Left In: 62.956 $\pm$ 0.011  $\chi^2$ /NDF:1430401.4/22

+ sign 57.155 $\pm$ 0.007  $\chi^2$ /NDF: 4699984.8/54

All: 57.688 $\pm$ 0.005  $\chi^2$ /NDF: 8915790.1/110

- sign 58.237 $\pm$ 0.007  $\chi^2$ /NDF: 4204282.9/55

asym\_us\_avg\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.016$   $\chi^2/\text{NDF}$ : 29.4/30

Left Out:  $-0.004 \pm 0.021$   $\chi^2/\text{NDF}$ : 21.4/23

Right Out:  $0.017 \pm 0.017$   $\chi^2/\text{NDF}$ : 39.9/32

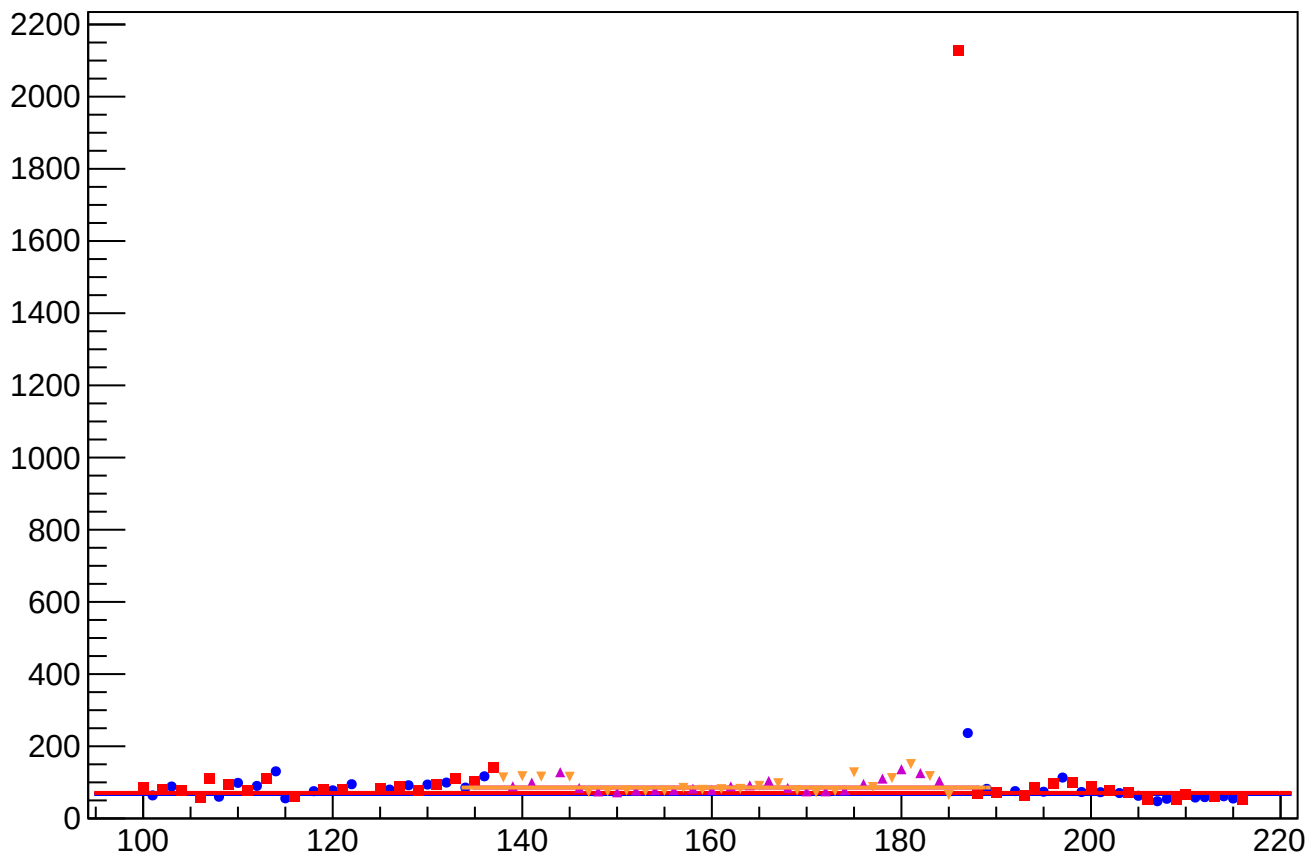
Left In:  $-0.002 \pm 0.021$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $0.008 \pm 0.013$   $\chi^2/\text{NDF}$ : 51.3/54

All:  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 122.2/110

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}$ : 70.9/55

asym\_us\_avg\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 67.835+/-0.012  $\chi^2/\text{NDF}$ : 1898288.9/30

Left Out: 85.651+/-0.015  $\chi^2/\text{NDF}$ : 1352738.9/23

Right Out: 70.722+/-0.012  $\chi^2/\text{NDF}$ : 2506862.0/32

Left In: 85.679+/-0.015  $\chi^2/\text{NDF}$ : 995860.8/22

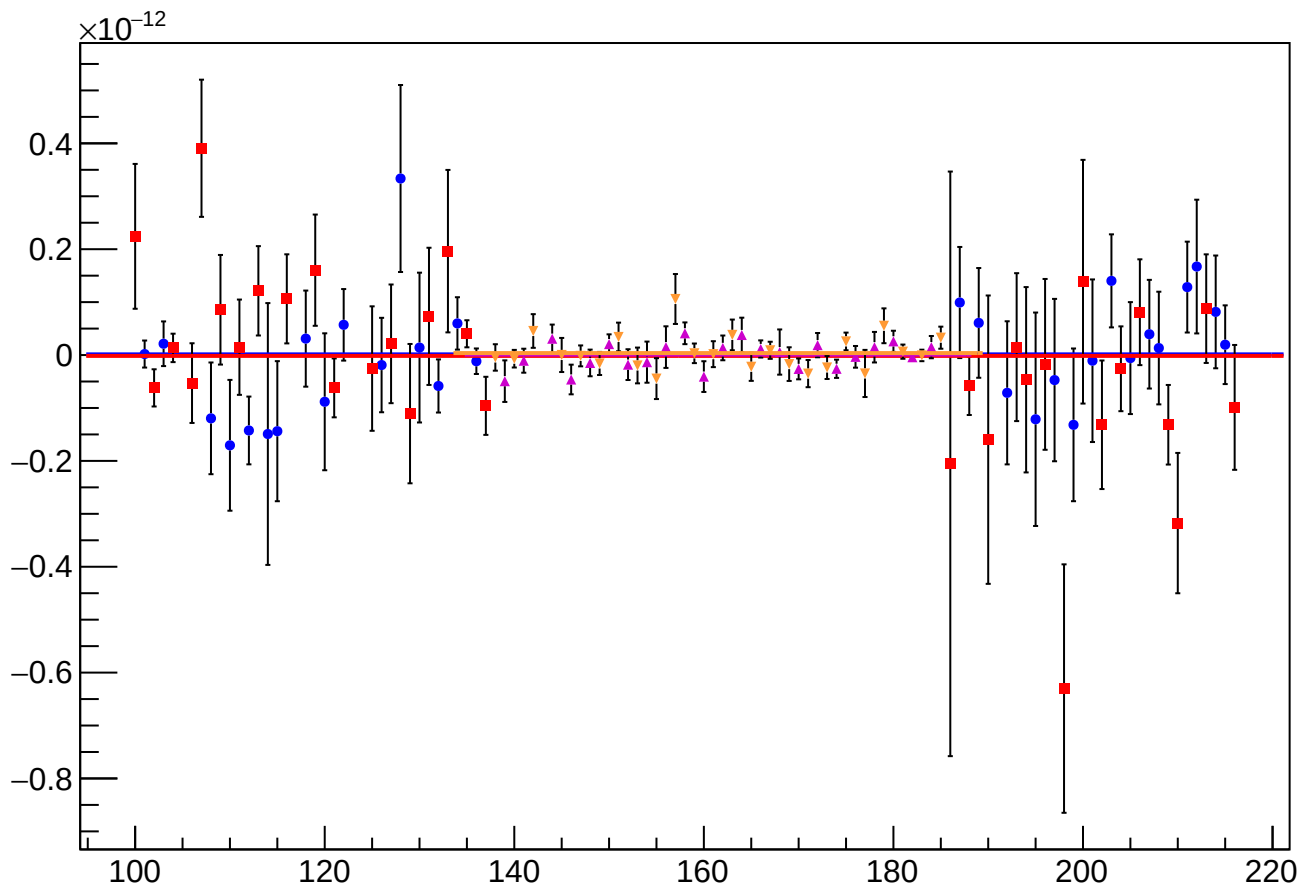
+ sign 74.725+/-0.009  $\chi^2/\text{NDF}$ : 4161139.4/54

All: 75.741+/-0.007  $\chi^2/\text{NDF}$ : 8309971.1/110

- sign 76.809+/-0.009  $\chi^2/\text{NDF}$ : 4123244.0/55



asym\_us\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.0/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.3/32

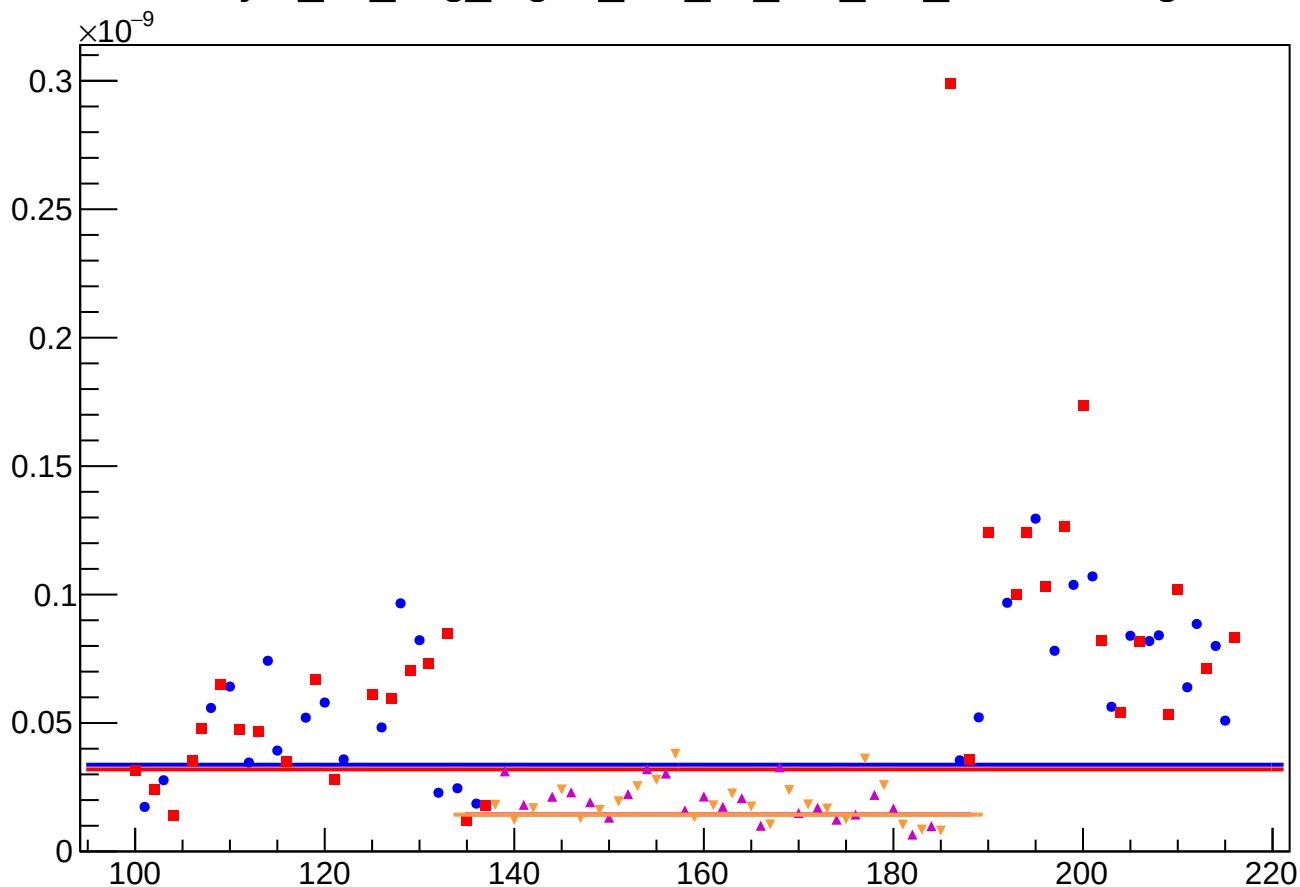
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.1/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.3/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.9/55

asym\_us\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7398999.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3611096.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9374209.8/32

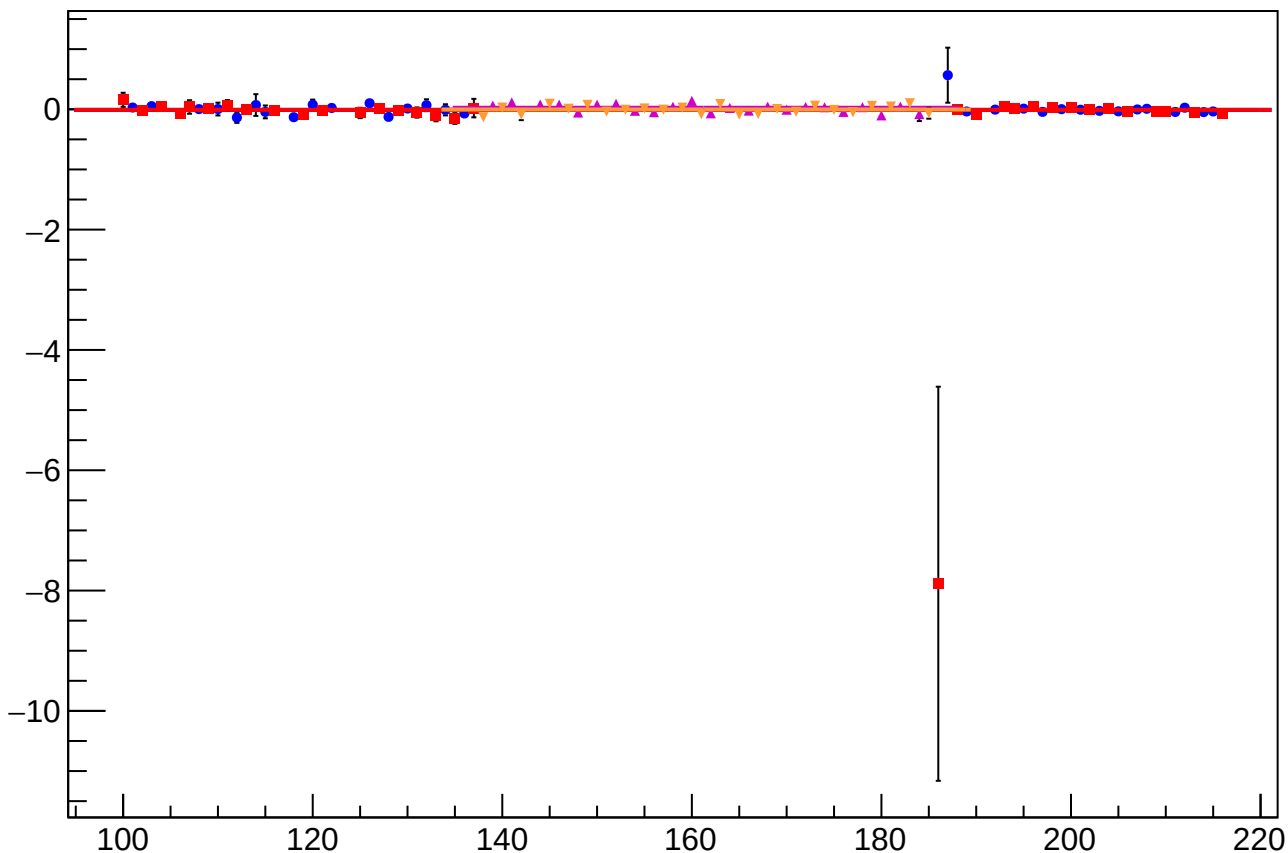
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4256069.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15650988.2/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32963762.8/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17311659.0/55

asym\_us\_avg\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.2/30

Left Out:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.1/23

Right Out:  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 39.1/32

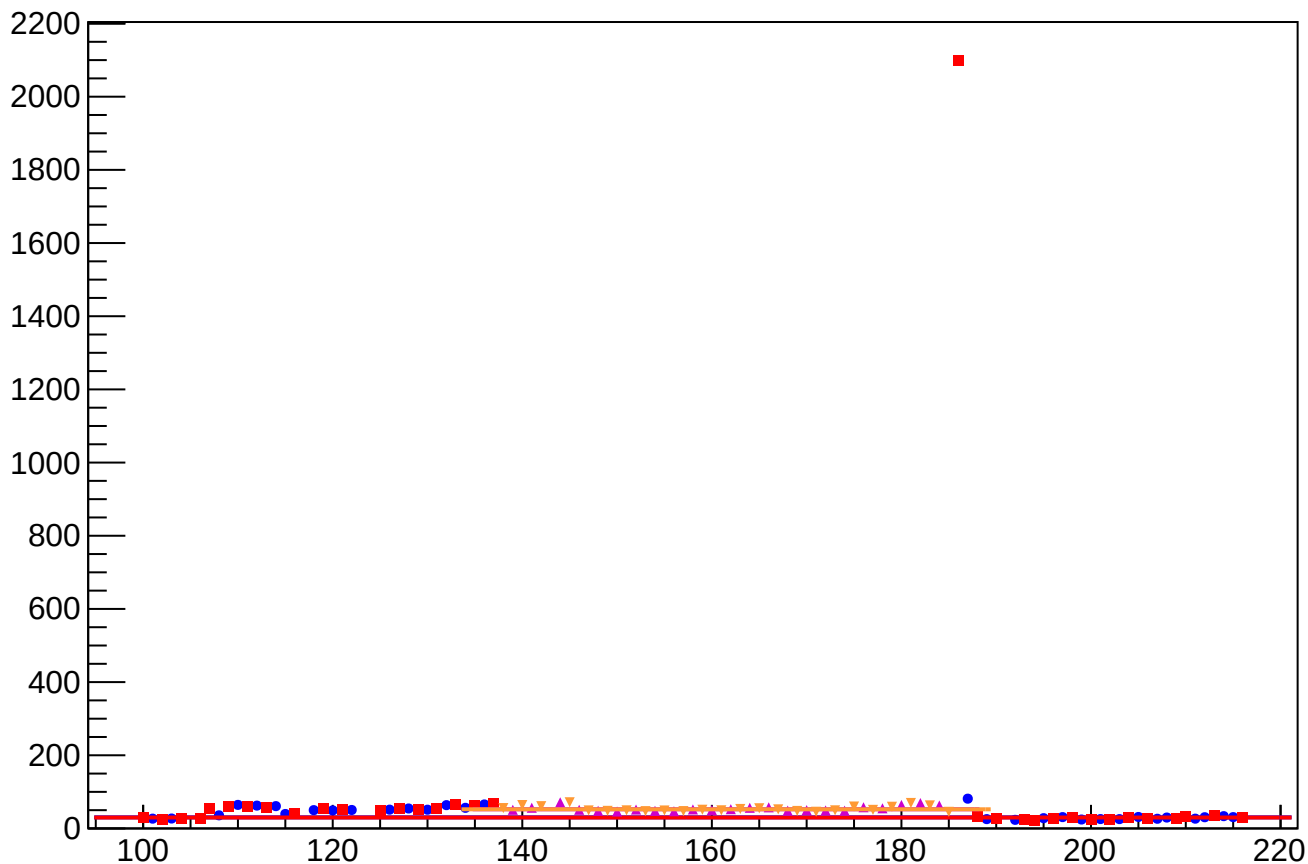
Left In:  $0.025 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-0.008 \pm 0.006$   $\chi^2/\text{NDF}$ : 48.6/54

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 118.5/110

- sign  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 69.0/55

asym\_us\_avg\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 30.368+/-0.005  $\chi^2/\text{NDF}$ : 2881692.5/30

Left Out: 52.367+/-0.009  $\chi^2/\text{NDF}$ : 522031.5/23

Right Out: 29.876+/-0.005  $\chi^2/\text{NDF}$ : 3877272.2/32

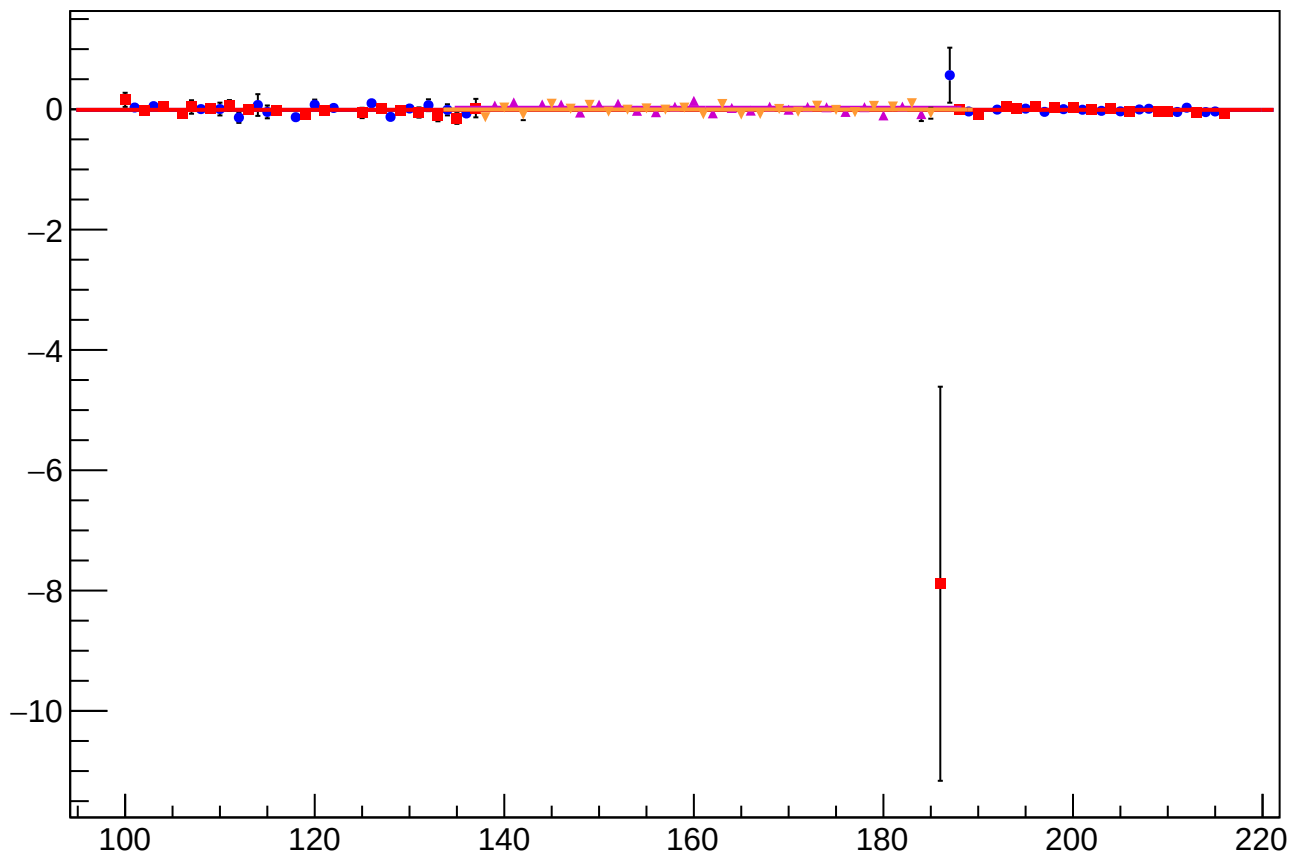
Left In: 52.484+/-0.009  $\chi^2/\text{NDF}$ : 445297.7/22

+ sign 36.189+/-0.005  $\chi^2/\text{NDF}$ : 8016601.8/54

All: 35.967+/-0.003  $\chi^2/\text{NDF}$ : 17178392.3/110

- sign 35.746+/-0.005  $\chi^2/\text{NDF}$ : 9156966.2/55

asym\_us\_avg\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.010 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.2/30

Left Out:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.1/23

Right Out:  $-0.009 \pm 0.007$   $\chi^2/\text{NDF}$ : 39.1/32

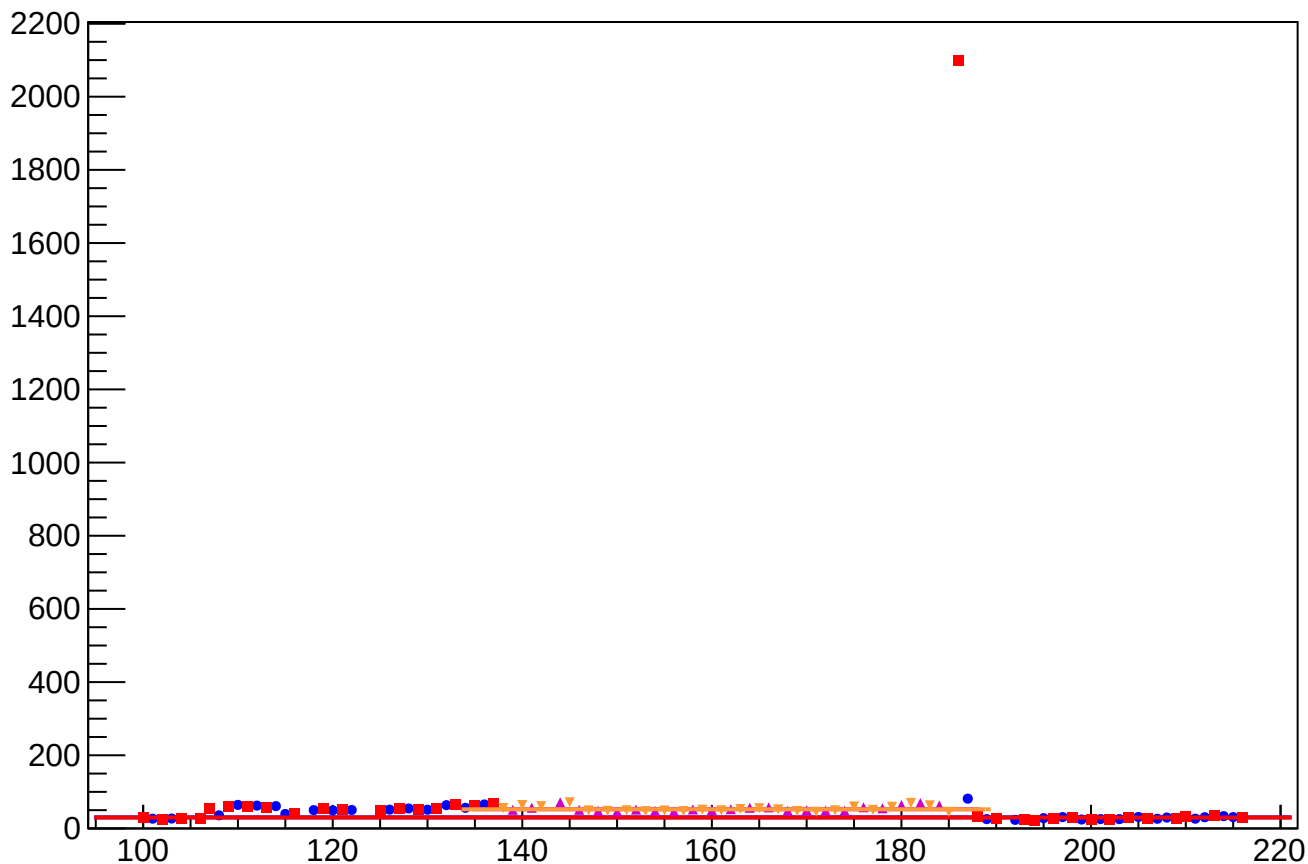
Left In:  $0.025 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/22

+ sign  $-0.008 \pm 0.006$   $\chi^2/\text{NDF}$ : 48.6/54

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 118.5/110

- sign  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 69.0/55

asym\_us\_avg\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.368+/-0.005  $\chi^2/\text{NDF}$ : 2881692.5/30

Left Out: 52.367+/-0.009  $\chi^2/\text{NDF}$ : 522031.5/23

Right Out: 29.876+/-0.005  $\chi^2/\text{NDF}$ : 3877272.2/32

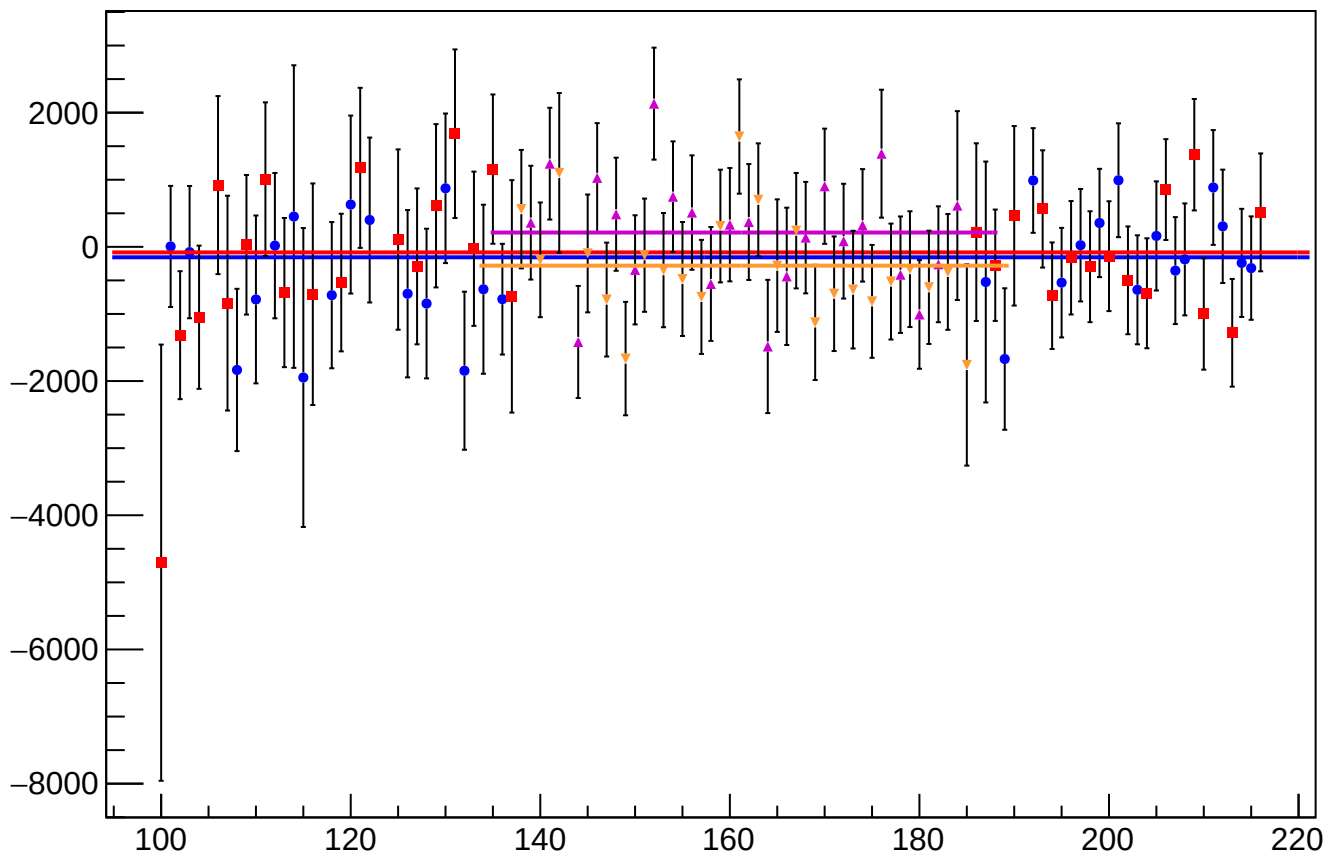
Left In: 52.484+/-0.009  $\chi^2/\text{NDF}$ : 445297.7/22

+ sign 36.189+/-0.005  $\chi^2/\text{NDF}$ : 8016601.8/54

All: 35.967+/-0.003  $\chi^2/\text{NDF}$ : 17178392.3/110

- sign 35.746+/-0.005  $\chi^2/\text{NDF}$ : 9156966.2/55

# reg\_asym\_us\_dd\_mean vs Slug



Right In:  $-155.735 \pm 174.842$   $\chi^2/\text{NDF}$ : 17.1/30

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}$ : 16.1/23

Right Out:  $-82.820 \pm 175.566$   $\chi^2/\text{NDF}$ : 22.6/32

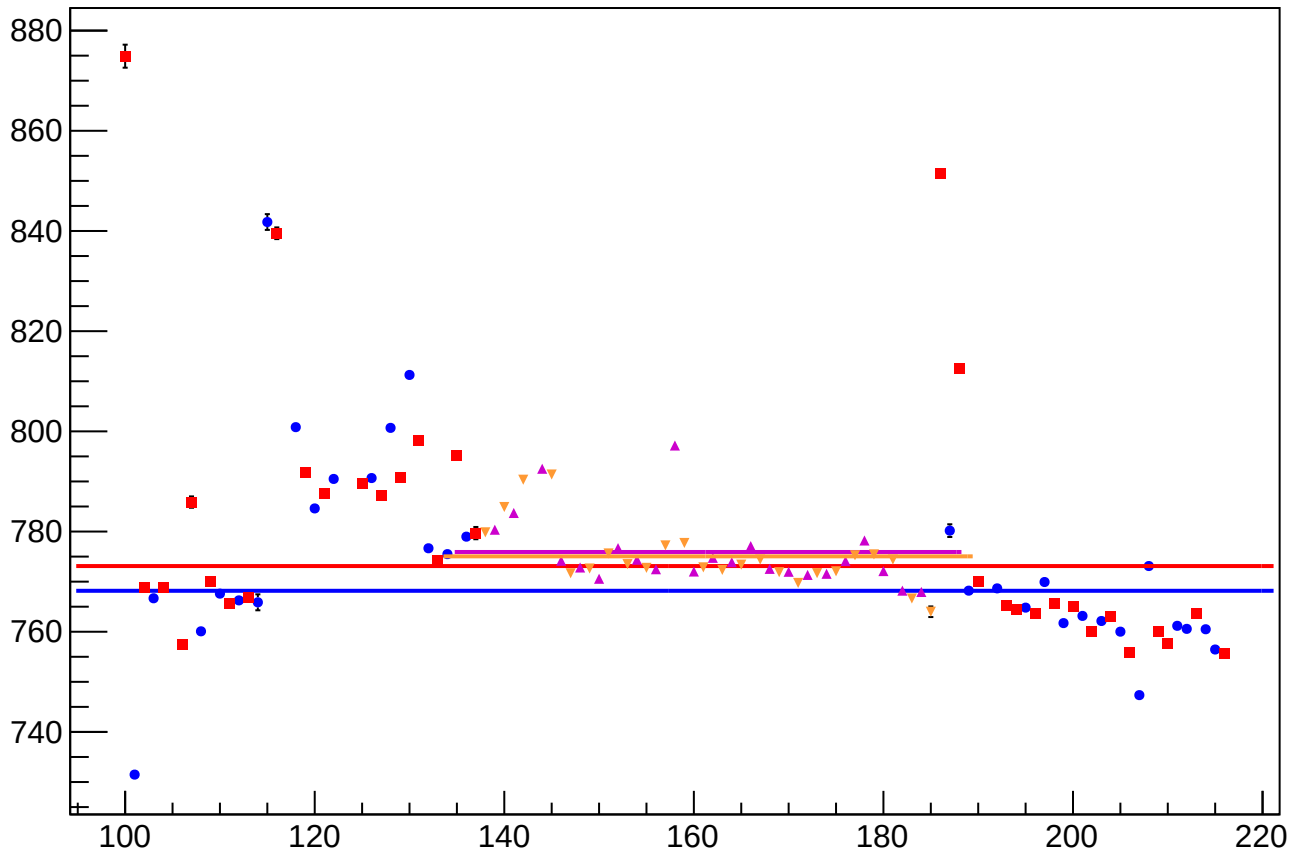
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}$ : 22.4/22

+ sign  $-216.279 \pm 125.375$   $\chi^2/\text{NDF}$ : 33.5/54

All:  $-78.588 \pm 88.901$   $\chi^2/\text{NDF}$ : 82.3/110

- sign  $60.651 \pm 126.078$   $\chi^2/\text{NDF}$ : 46.4/55

# reg\_asym\_us\_dd\_rms vs Slug



Right In: 768.174 $\pm$ 0.124  $\chi^2$ /NDF: 17234.7/30

Left Out: 775.050 $\pm$ 0.127  $\chi^2$ /NDF:1951.3/23

Right Out: 773.112 $\pm$ 0.124  $\chi^2$ /NDF: 26149.5/32

Left In: 775.922 $\pm$ 0.128  $\chi^2$ /NDF:2973.0/22

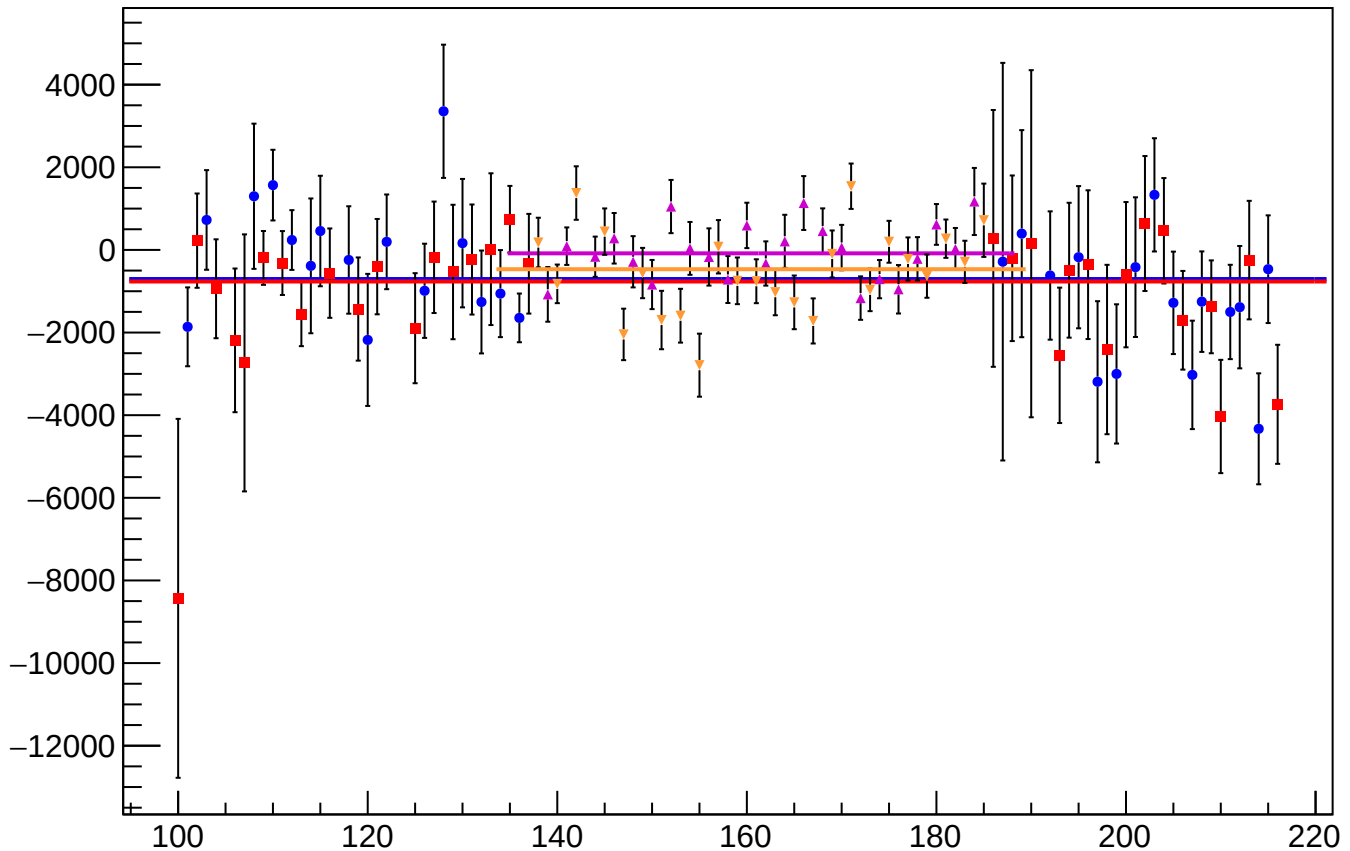
+ sign 771.514 $\pm$ 0.089  $\chi^2$ /NDF: 20688.4/54

All: 772.985 $\pm$ 0.063  $\chi^2$ /NDF: 50612.8/110

- sign 774.473 $\pm$ 0.089  $\chi^2$ /NDF: 29370.6/55



# asym\_us\_dd\_reg\_correction\_mean vs Slug



Right In: -705.011 $\pm$ 219.343  $\chi^2$ /NDF: 42.5/30

Left Out: -467.151 $\pm$ 116.712  $\chi^2$ /NDF: 64.4/23

Right Out: -764.198 $\pm$ 220.988  $\chi^2$ /NDF: 27.2/32

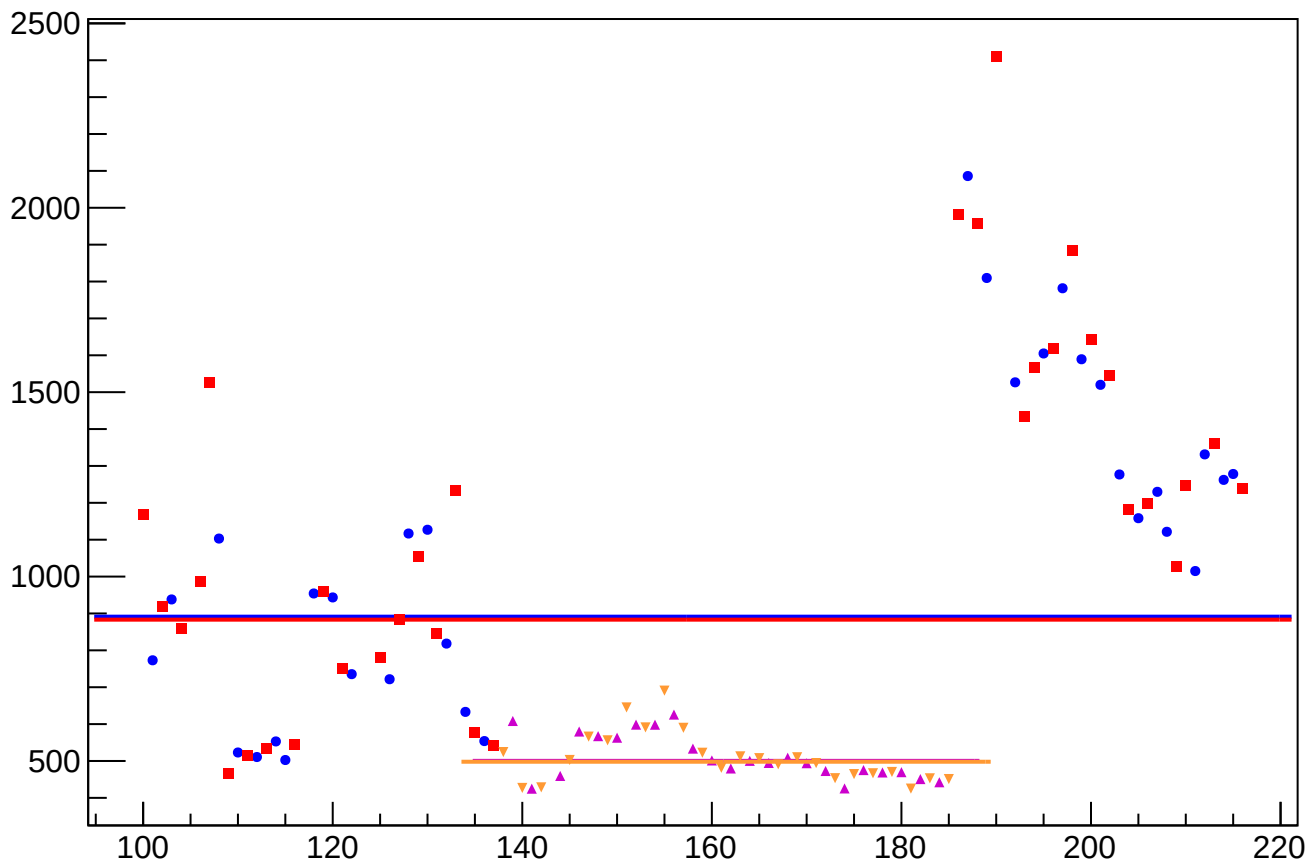
Left In: -83.154 $\pm$ 117.808  $\chi^2$ /NDF: 28.1/22

+ sign -519.636 $\pm$ 103.034  $\chi^2$ /NDF: 107.8/54

All: -378.028 $\pm$ 73.181  $\chi^2$ /NDF: 174.4/110

- sign -233.869 $\pm$ 103.958  $\chi^2$ /NDF: 62.7/55

# asym\_us\_dd\_reg\_correction\_rms vs Slug



Right In: 891.304+/-0.155     $\chi^2/\text{NDF}$ : 5289202.2/30

Left Out: 497.966+/-0.083     $\chi^2/\text{NDF}$ : 526993.3/23

Right Out: 883.196+/-0.156     $\chi^2/\text{NDF}$ : 6509078.5/32

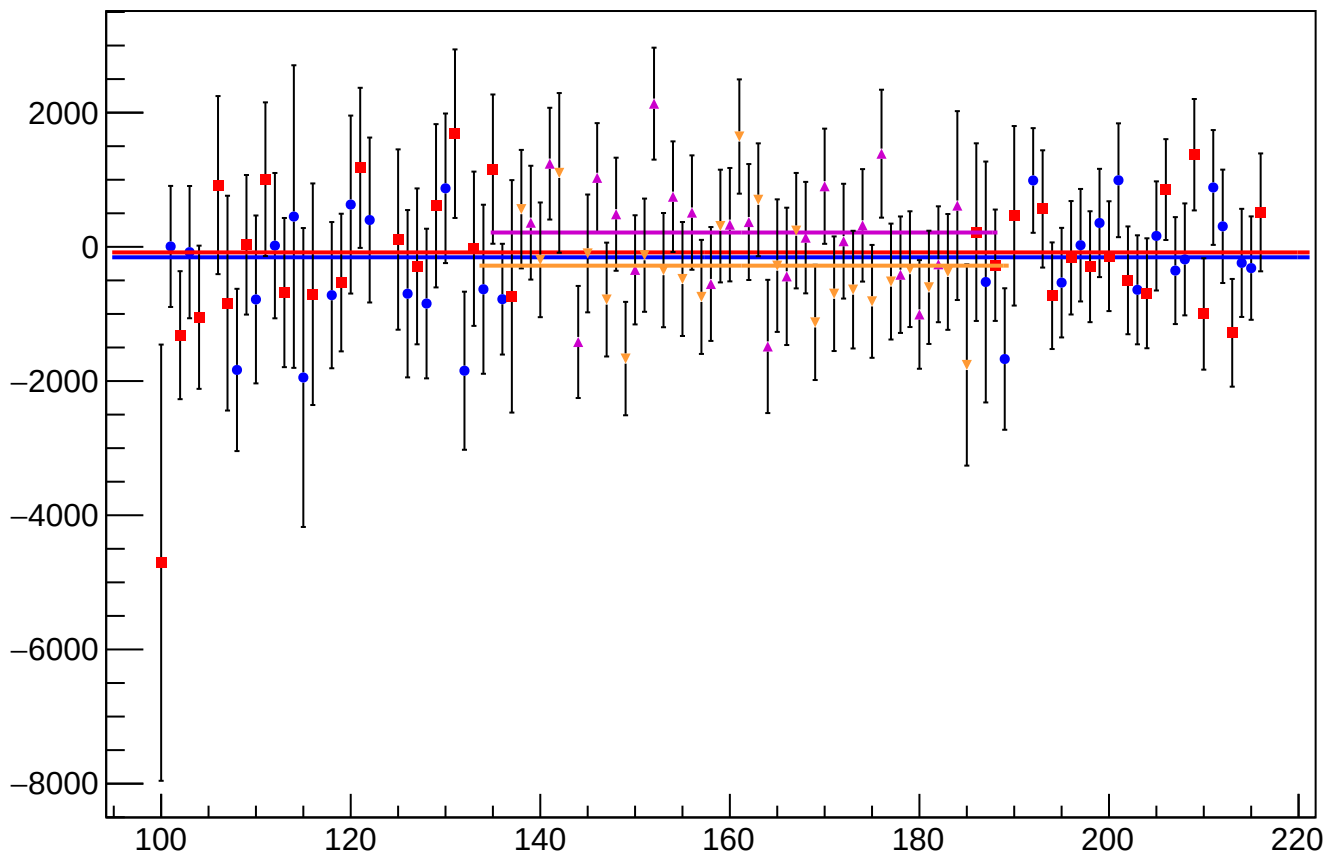
Left In: 500.307+/-0.083     $\chi^2/\text{NDF}$ : 477388.4/22

+ sign 584.758+/-0.073     $\chi^2/\text{NDF}$ : 10828572.9/54

All: 584.898+/-0.052     $\chi^2/\text{NDF}$ : 22490351.5/11

- sign 585.040+/-0.074     $\chi^2/\text{NDF}$ : 11661771.2/55

# cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-155.735 \pm 174.842$   $\chi^2/\text{NDF}: 17.1/30$

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}: 16.1/23$

Right Out:  $-82.820 \pm 175.566$   $\chi^2/\text{NDF}: 22.6/32$

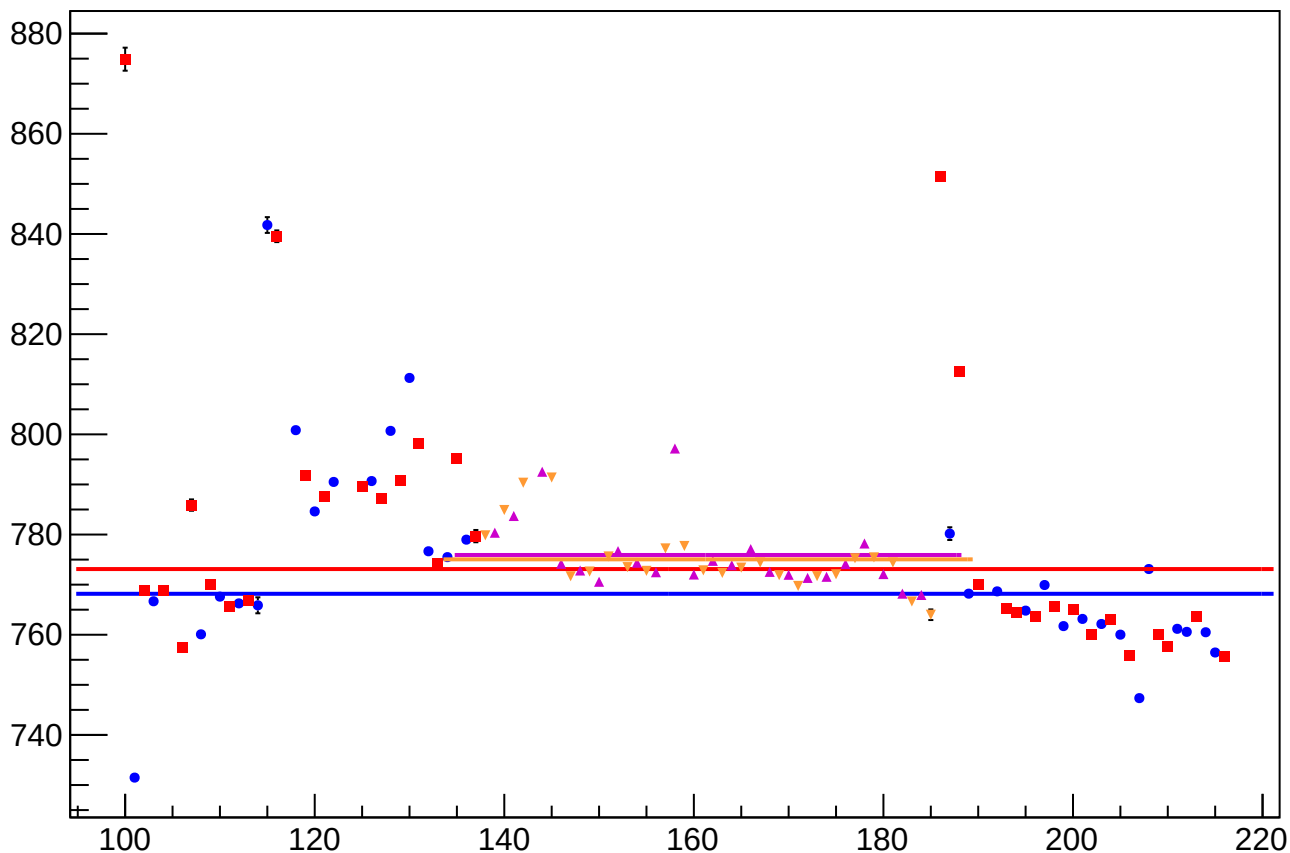
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}: 22.4/22$

+ sign  $-216.279 \pm 125.375$   $\chi^2/\text{NDF}: 33.5/54$

All:  $-78.588 \pm 88.901$   $\chi^2/\text{NDF}: 82.3/110$

- sign  $60.651 \pm 126.078$   $\chi^2/\text{NDF}: 46.4/55$

# cor\_asym\_us\_dd\_rms vs Slug



Right In: 768.174 $\pm$ 0.124  $\chi^2$ /NDF: 17234.7/30

Left Out: 775.050 $\pm$ 0.127  $\chi^2$ /NDF:1951.3/23

Right Out: 773.112 $\pm$ 0.124  $\chi^2$ /NDF: 26149.5/32

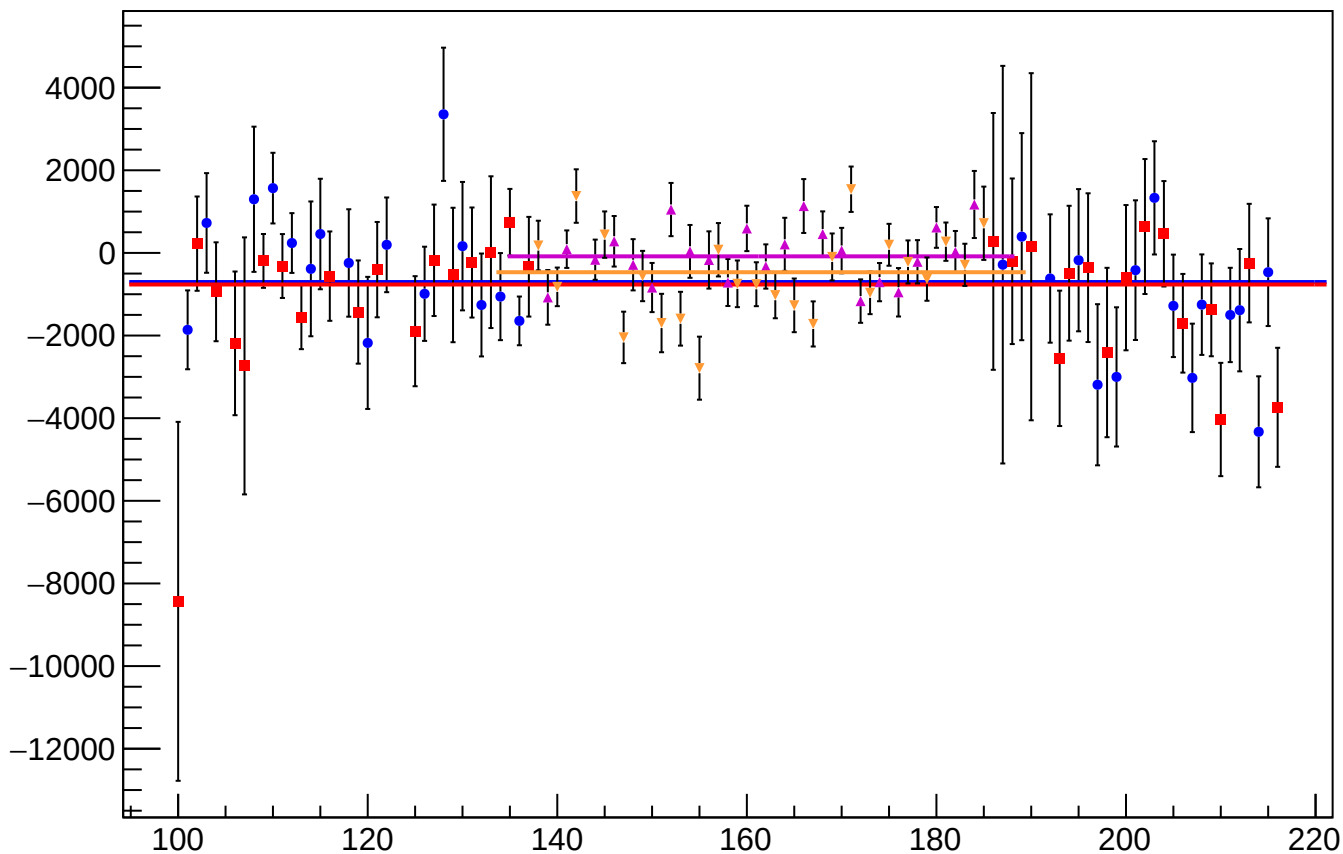
Left In: 775.922 $\pm$ 0.128  $\chi^2$ /NDF:2973.0/22

+ sign 771.514 $\pm$ 0.089  $\chi^2$ /NDF: 20688.4/54

All: 772.985 $\pm$ 0.063  $\chi^2$ /NDF: 50612.8/110

- sign 774.473 $\pm$ 0.089  $\chi^2$ /NDF: 29370.6/55

# asym\_us\_dd\_cor\_correction\_mean vs Slug



Right In:  $-705.011 \pm 219.343$   $\chi^2/\text{NDF}$ : 42.5/30

Left Out:  $-467.151 \pm 116.712$   $\chi^2/\text{NDF}$ : 64.4/23

Right Out:  $-764.198 \pm 220.988$   $\chi^2/\text{NDF}$ : 27.2/32

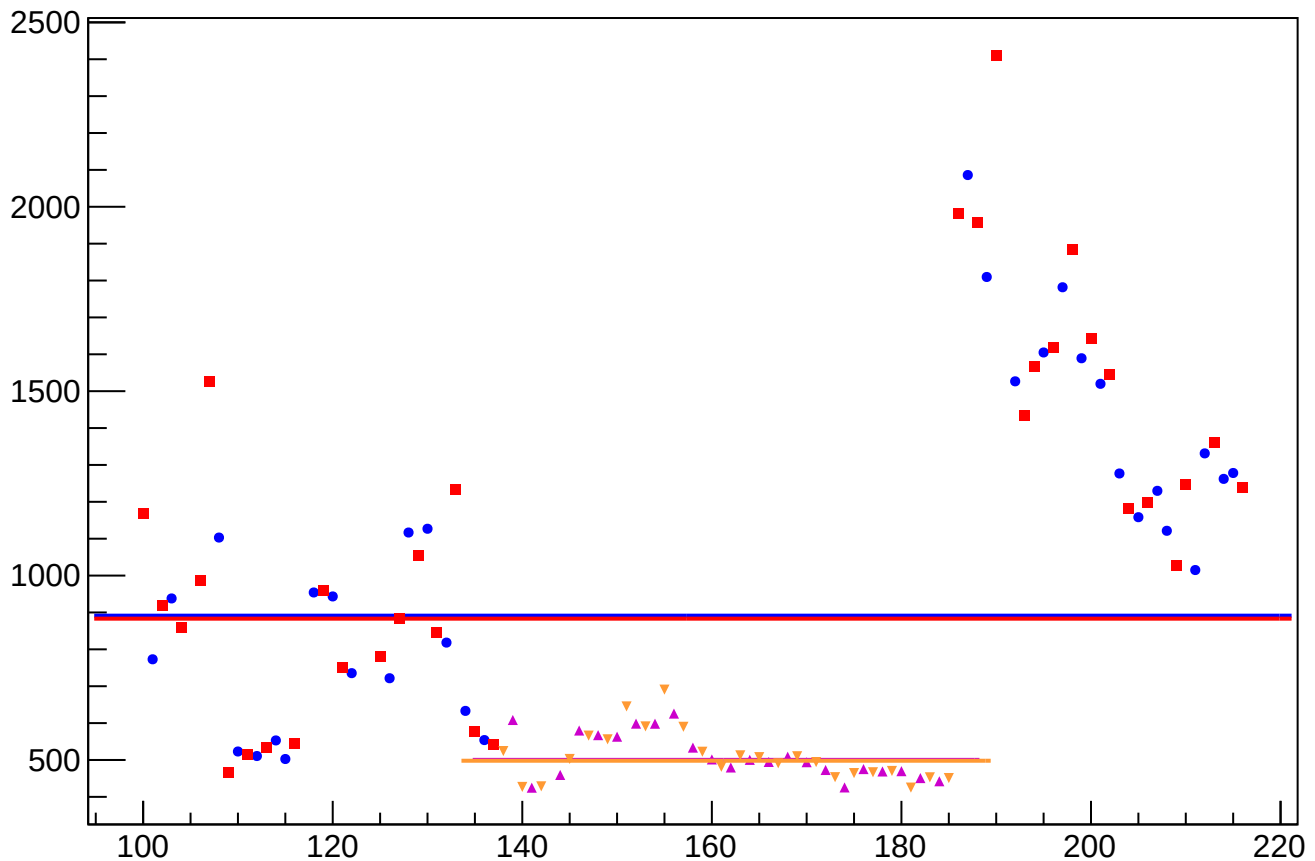
Left In:  $-83.154 \pm 117.808$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-519.636 \pm 103.034$   $\chi^2/\text{NDF}$ : 107.8/54

All:  $-378.028 \pm 73.181$   $\chi^2/\text{NDF}$ : 174.4/110

- sign  $-233.869 \pm 103.958$   $\chi^2/\text{NDF}$ : 62.7/55

# asym\_us\_dd\_cor\_correction\_rms vs Slug



Right In: 891.304+/-0.155  $\chi^2/\text{NDF}$ : 5289202.2/30

Left Out: 497.966+/-0.083  $\chi^2/\text{NDF}$ : 526993.3/23

+ sign 584.758+/-0.073  $\chi^2/\text{NDF}$ : 10828572.9/54

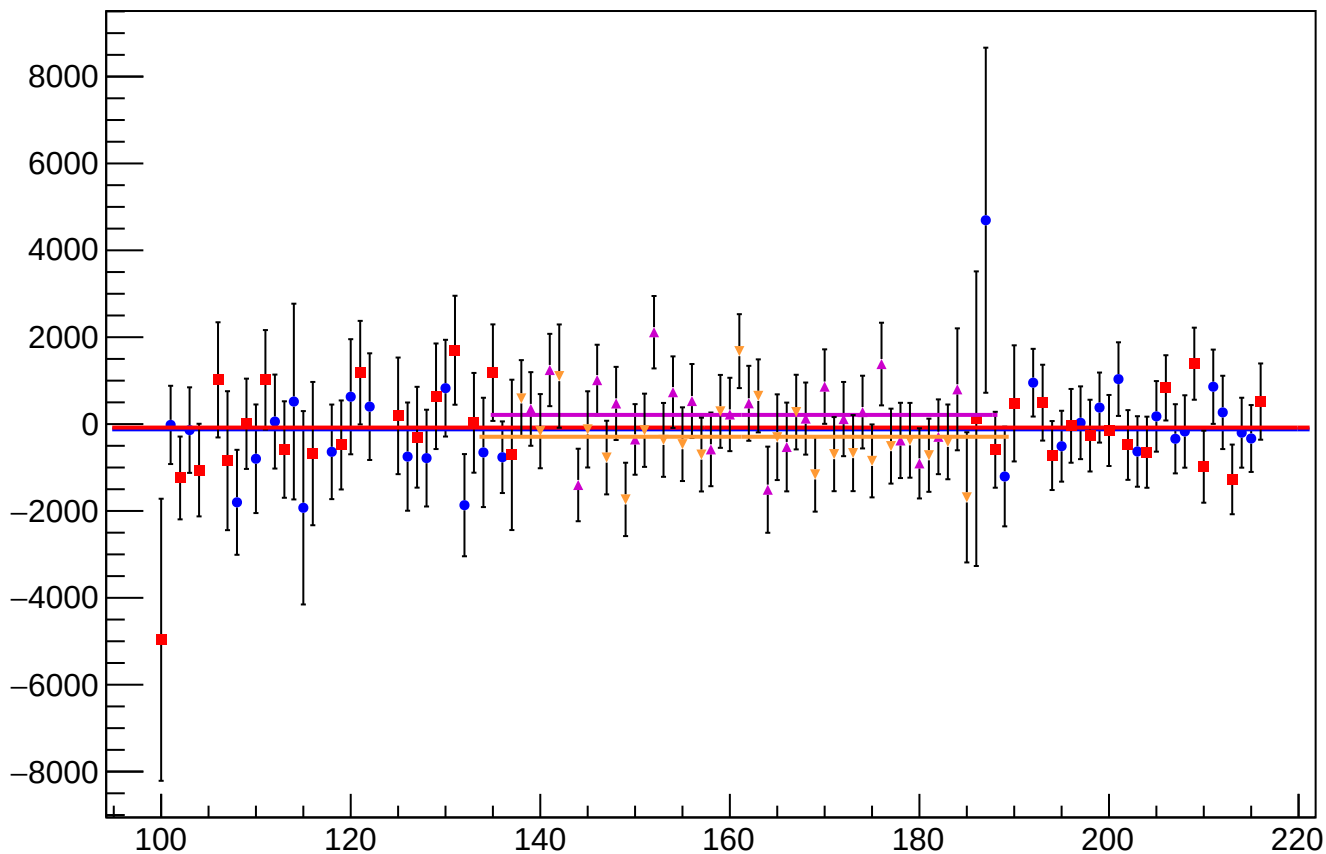
Right Out: 883.196+/-0.156  $\chi^2/\text{NDF}$ : 6509078.5/32

All: 584.898+/-0.052  $\chi^2/\text{NDF}$ : 22490351.5/11

Left In: 500.307+/-0.083  $\chi^2/\text{NDF}$ : 477388.4/22

- sign 585.040+/-0.074  $\chi^2/\text{NDF}$ : 11661771.2/55

# overload\_cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-121.126 \pm 175.738$   $\chi^2/\text{NDF}$ : 17.0/30

Left Out:  $-292.036 \pm 179.670$   $\chi^2/\text{NDF}$ : 16.6/23

Right Out:  $-80.363 \pm 177.182$   $\chi^2/\text{NDF}$ : 22.8/32

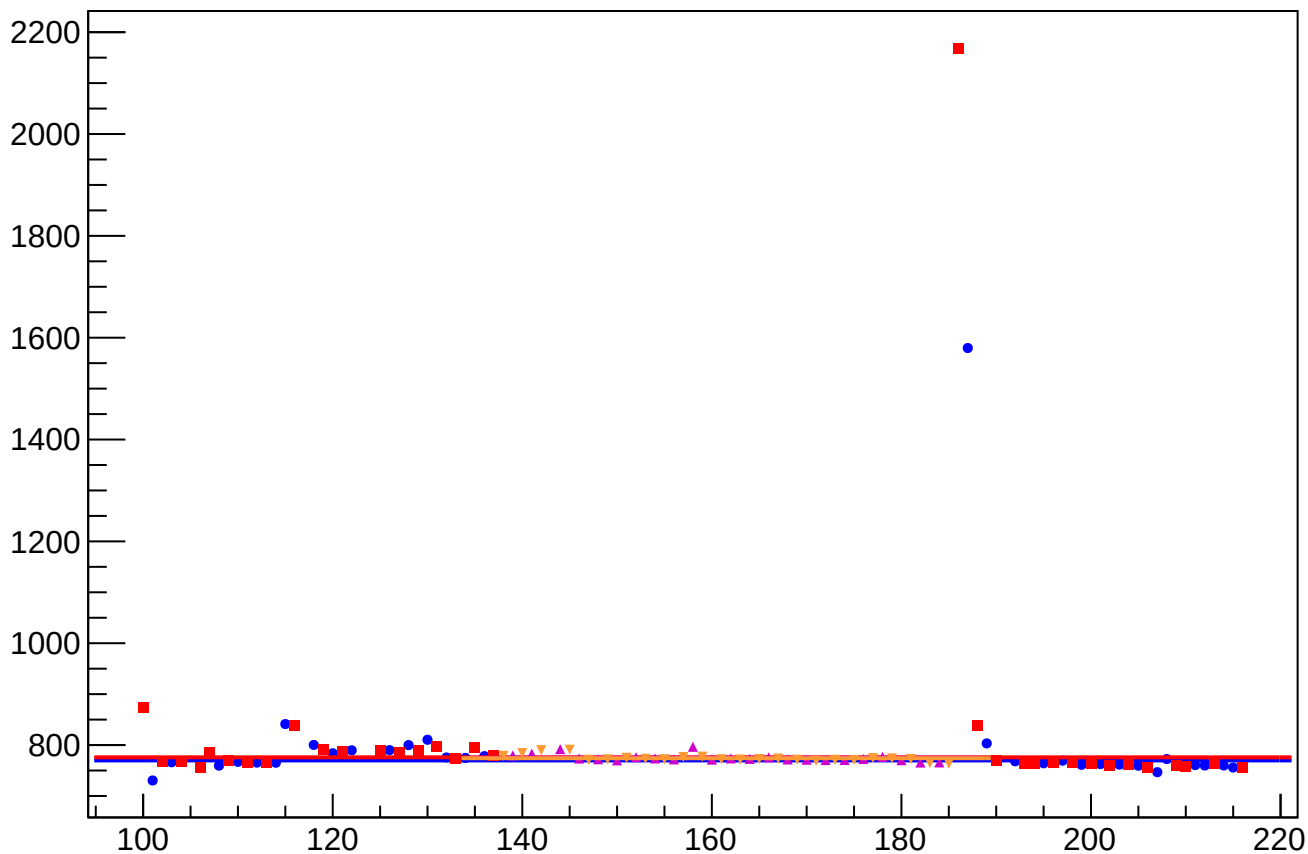
Left In:  $211.238 \pm 180.951$   $\chi^2/\text{NDF}$ : 22.1/22

+ sign  $-204.690 \pm 125.633$   $\chi^2/\text{NDF}$ : 34.1/54

All:  $-72.182 \pm 89.175$   $\chi^2/\text{NDF}$ : 82.6/110

- sign  $62.370 \pm 126.598$   $\chi^2/\text{NDF}$ : 46.3/55

# overload\_cor\_asym\_us\_dd\_rms vs Slug



Right In: 769.826+/-0.124  $\chi^2/\text{NDF}$ : 102357.6/30

Left Out: 774.142+/-0.127  $\chi^2/\text{NDF}$ : 2060.4/23

Right Out: 775.863+/-0.125  $\chi^2/\text{NDF}$ : 363373.7/32

Left In: 774.990+/-0.128  $\chi^2/\text{NDF}$ : 3148.2/22

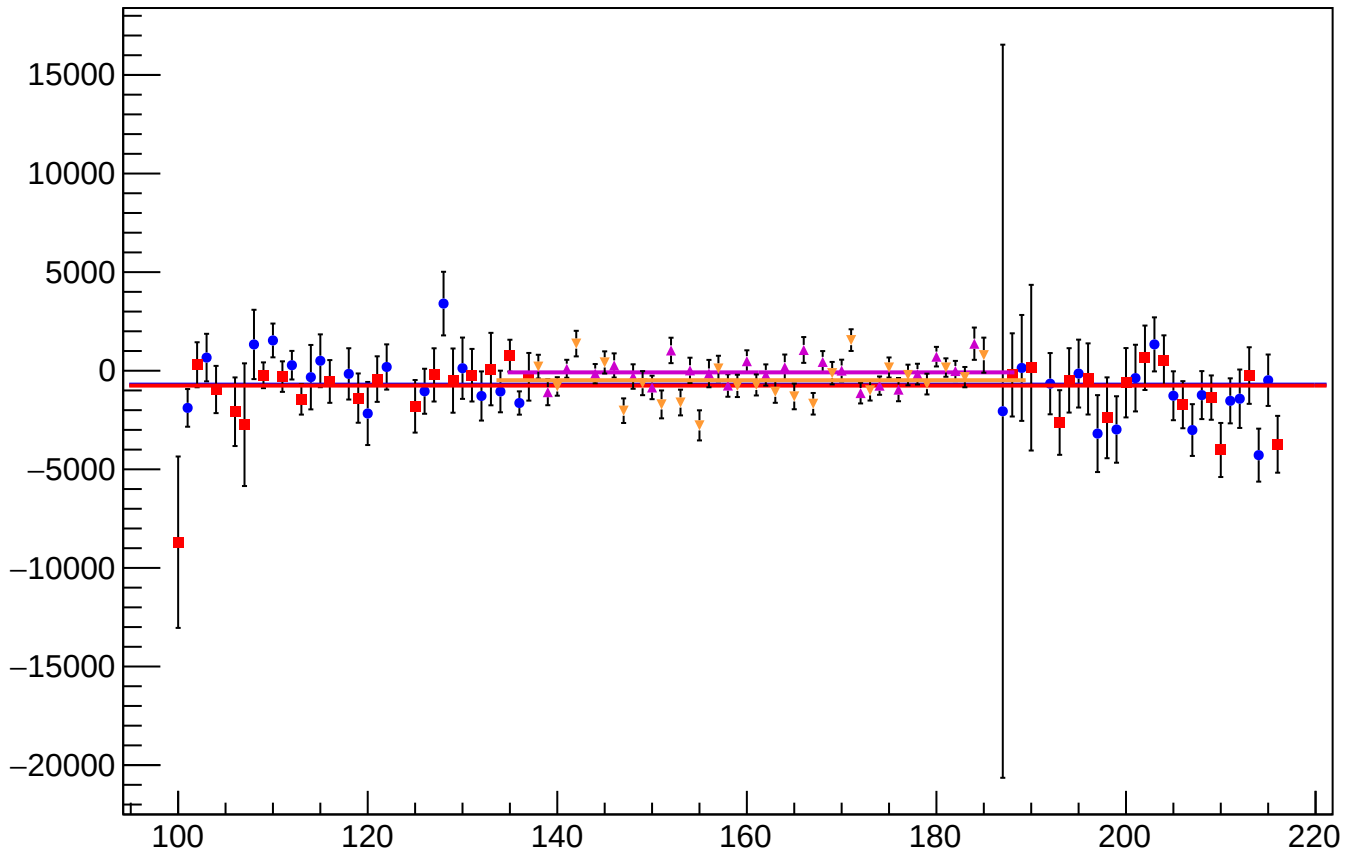
+ sign 771.936+/-0.089  $\chi^2/\text{NDF}$ : 105007.6/54

All: 773.673+/-0.063  $\chi^2/\text{NDF}$ : 472323.0/110

- sign 775.435+/-0.090  $\chi^2/\text{NDF}$ : 366545.6/55



asym\_us\_dd\_overload\_cor\_correction\_mean vs Slug



Right In:  $-704.932 \pm 219.902$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-481.314 \pm 117.092$   $\chi^2/\text{NDF}$ : 63.5/23

Right Out:  $-753.590 \pm 221.942$   $\chi^2/\text{NDF}$ : 27.1/31

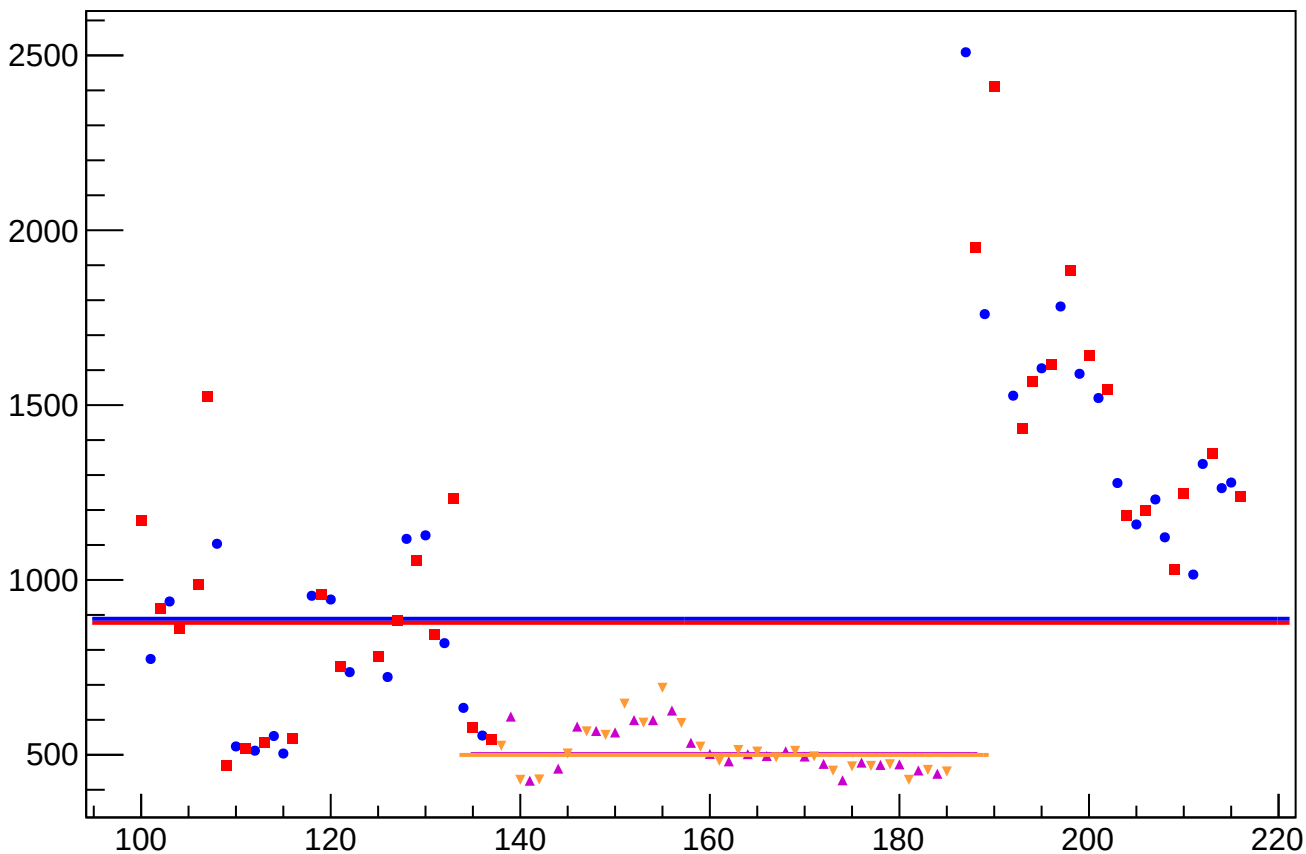
Left In:  $-83.196 \pm 118.194$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-530.710 \pm 103.353$   $\chi^2/\text{NDF}$ : 106.6/54

All:  $-382.411 \pm 73.422$   $\chi^2/\text{NDF}$ : 173.2/109

- sign  $-231.316 \pm 104.323$   $\chi^2/\text{NDF}$ : 62.4/54

asym\_us\_dd\_overload\_cor\_correction\_rms vs Slug



Right In: 888.995 $\pm$ 0.155  $\chi^2$ /NDF: 5104206.7/30

Left Out: 499.670 $\pm$ 0.083  $\chi^2$ /NDF: 516314.6/23

Right Out: 877.431 $\pm$ 0.157  $\chi^2$ /NDF: 6169706.9/31

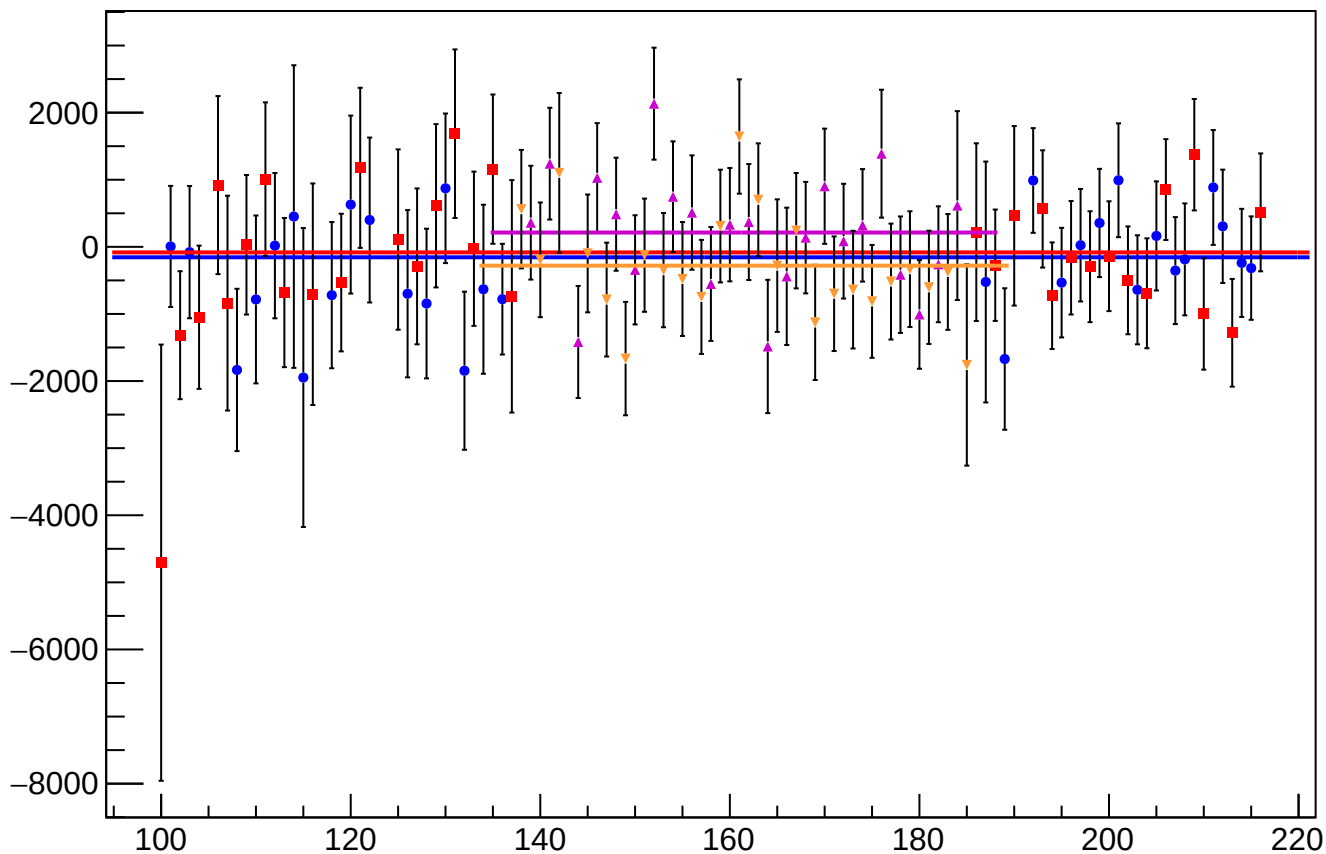
Left In: 502.026 $\pm$ 0.084  $\chi^2$ /NDF: 467449.2/22

+ sign 585.670 $\pm$ 0.073  $\chi^2$ /NDF: 10504703.1/54

All: 585.323 $\pm$ 0.052  $\chi^2$ /NDF: 21599691.7/10

- sign 584.969 $\pm$ 0.074  $\chi^2$ /NDF: 11094943.0/54

# eigen\_cor\_asym\_us\_dd\_mean vs Slug



Right In:  $-155.735 \pm 174.842$   $\chi^2/\text{NDF}$ : 17.1/30

Left Out:  $-280.364 \pm 179.881$   $\chi^2/\text{NDF}$ : 16.1/23

Right Out:  $-82.820 \pm 175.566$   $\chi^2/\text{NDF}$ : 22.6/32

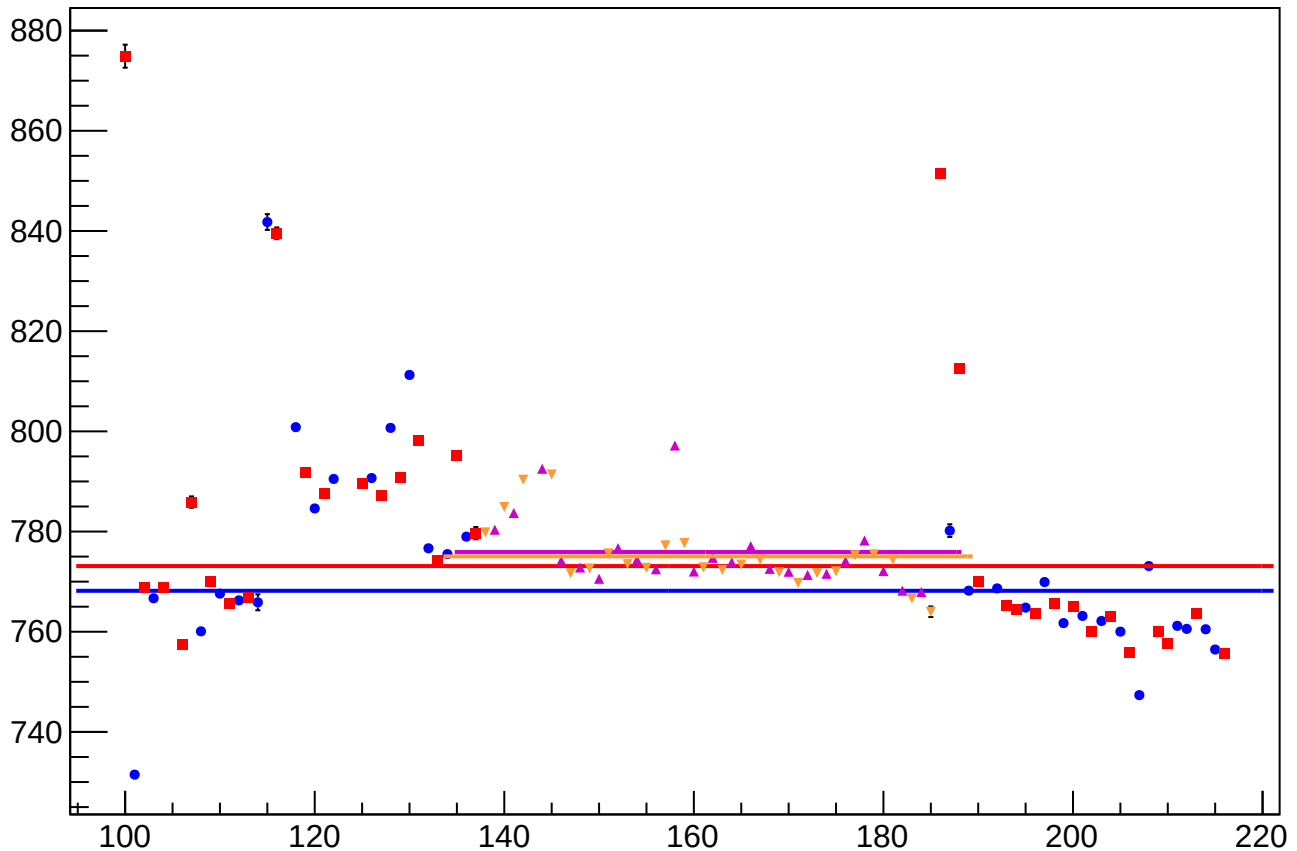
Left In:  $213.425 \pm 181.168$   $\chi^2/\text{NDF}$ : 22.4/22

+ sign  $-216.279 \pm 125.375$   $\chi^2/\text{NDF}$ : 33.5/54

All:  $-78.588 \pm 88.901$   $\chi^2/\text{NDF}$ : 82.3/110

- sign  $60.651 \pm 126.078$   $\chi^2/\text{NDF}$ : 46.4/55

# eigen\_cor\_asym\_us\_dd\_rms vs Slug



Right In: 768.174 $\pm$ 0.124  $\chi^2$ /NDF: 17234.7/30

Left Out: 775.050 $\pm$ 0.127  $\chi^2$ /NDF:1951.3/23

Right Out: 773.112 $\pm$ 0.124  $\chi^2$ /NDF: 26149.5/32

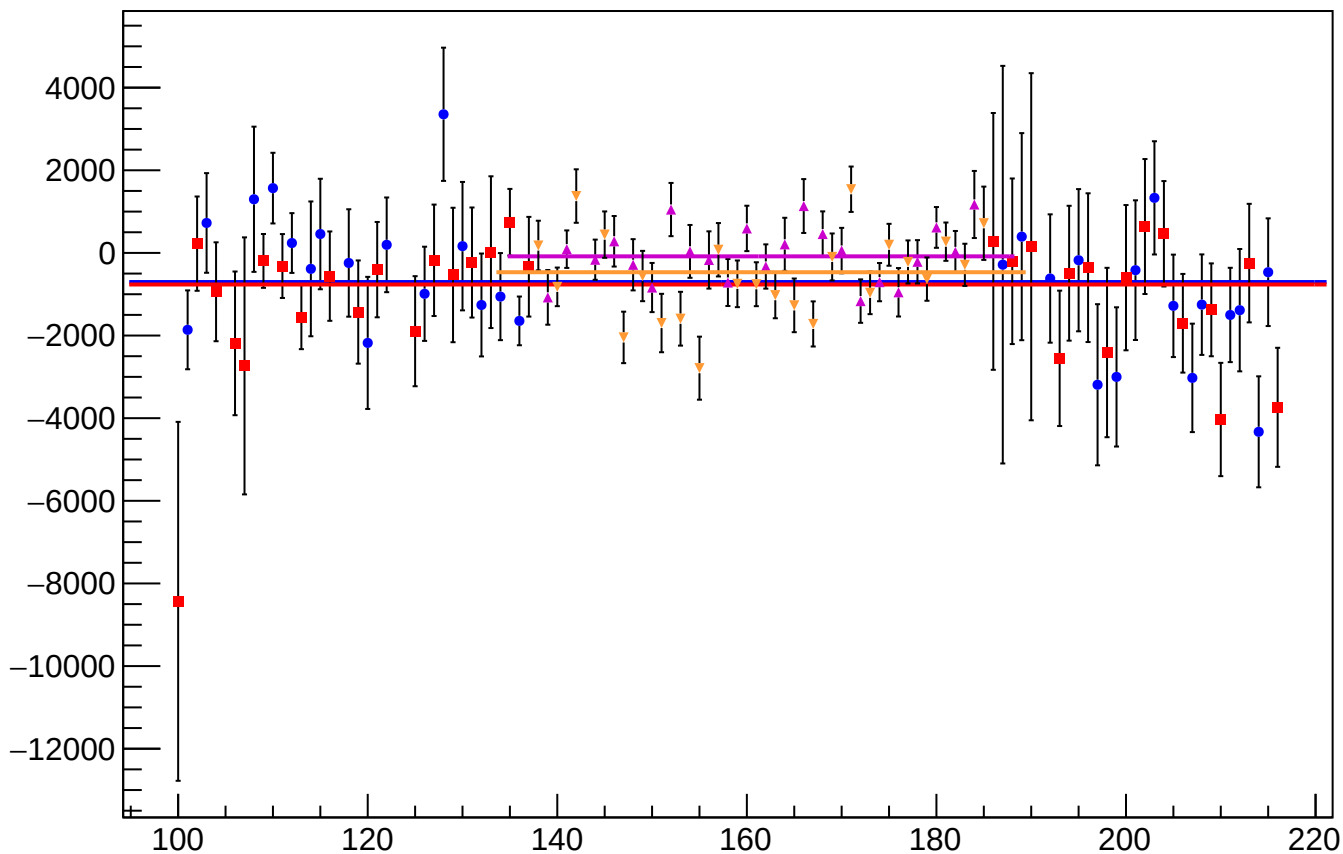
Left In: 775.922 $\pm$ 0.128  $\chi^2$ /NDF:2973.0/22

+ sign 771.514 $\pm$ 0.089  $\chi^2$ /NDF: 20688.4/54

All: 772.985 $\pm$ 0.063  $\chi^2$ /NDF: 50612.8/110

- sign 774.473 $\pm$ 0.089  $\chi^2$ /NDF: 29370.6/55

asym\_us\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: -705.011 $\pm$ 219.343  $\chi^2/\text{NDF}$ : 42.5/30

Left Out: -467.151 $\pm$ 116.712  $\chi^2/\text{NDF}$ : 64.4/23

Right Out: -764.198 $\pm$ 220.988  $\chi^2/\text{NDF}$ : 27.2/32

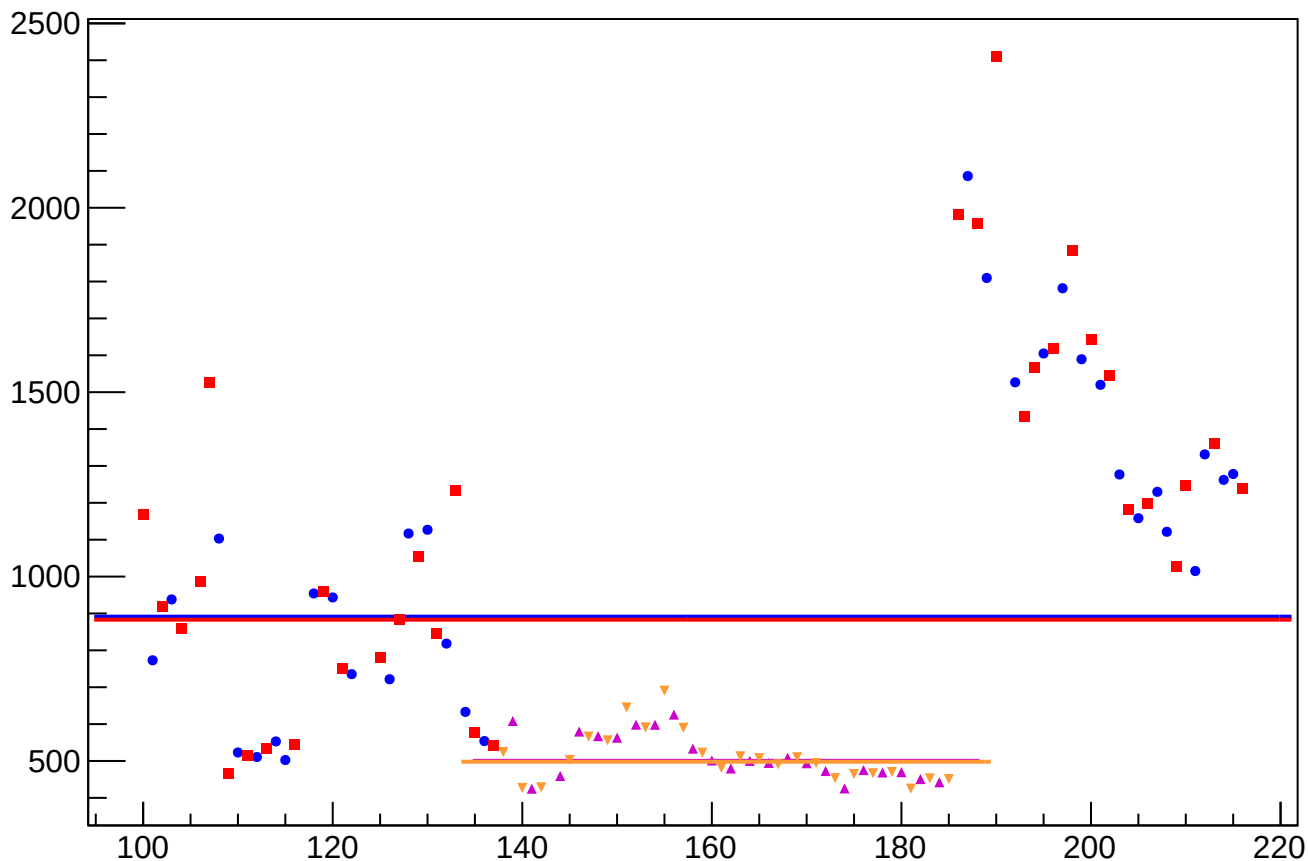
Left In: -83.154 $\pm$ 117.808  $\chi^2/\text{NDF}$ : 28.1/22

+ sign -519.636 $\pm$ 103.034  $\chi^2/\text{NDF}$ : 107.8/54

All: -378.028 $\pm$ 73.181  $\chi^2/\text{NDF}$ : 174.4/110

- sign -233.869 $\pm$ 103.958  $\chi^2/\text{NDF}$ : 62.7/55

asym\_us\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 891.304 $\pm$ 0.155  $\chi^2$ /NDF: 5289202.2/30

Left Out: 497.966 $\pm$ 0.083  $\chi^2$ /NDF: 526993.3/23

Right Out: 883.196 $\pm$ 0.156  $\chi^2$ /NDF: 6509078.5/32

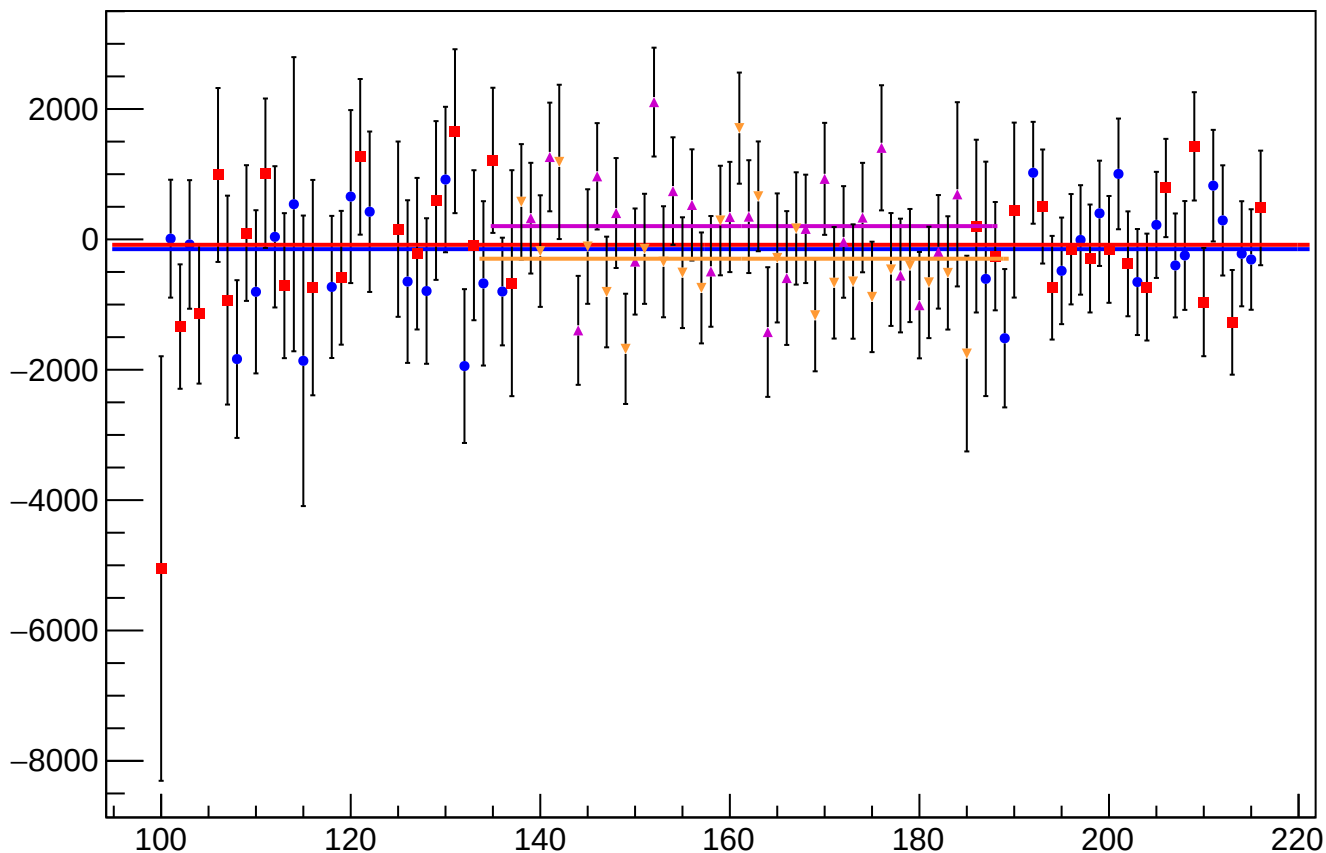
Left In: 500.307 $\pm$ 0.083  $\chi^2$ /NDF: 477388.4/22

+ sign 584.758 $\pm$ 0.073  $\chi^2$ /NDF: 10828572.9/54

All: 584.898 $\pm$ 0.052  $\chi^2$ /NDF: 22490351.5/11

- sign 585.040 $\pm$ 0.074  $\chi^2$ /NDF: 11661771.2/55

# dit\_asym\_us\_dd\_mean vs Slug



Right In:  $-149.953 \pm 175.045$   $\chi^2/\text{NDF}: 17.1/30$

Left Out:  $-296.771 \pm 180.280$   $\chi^2/\text{NDF}: 16.7/23$

Right Out:  $-83.181 \pm 175.774$   $\chi^2/\text{NDF}: 23.2/32$

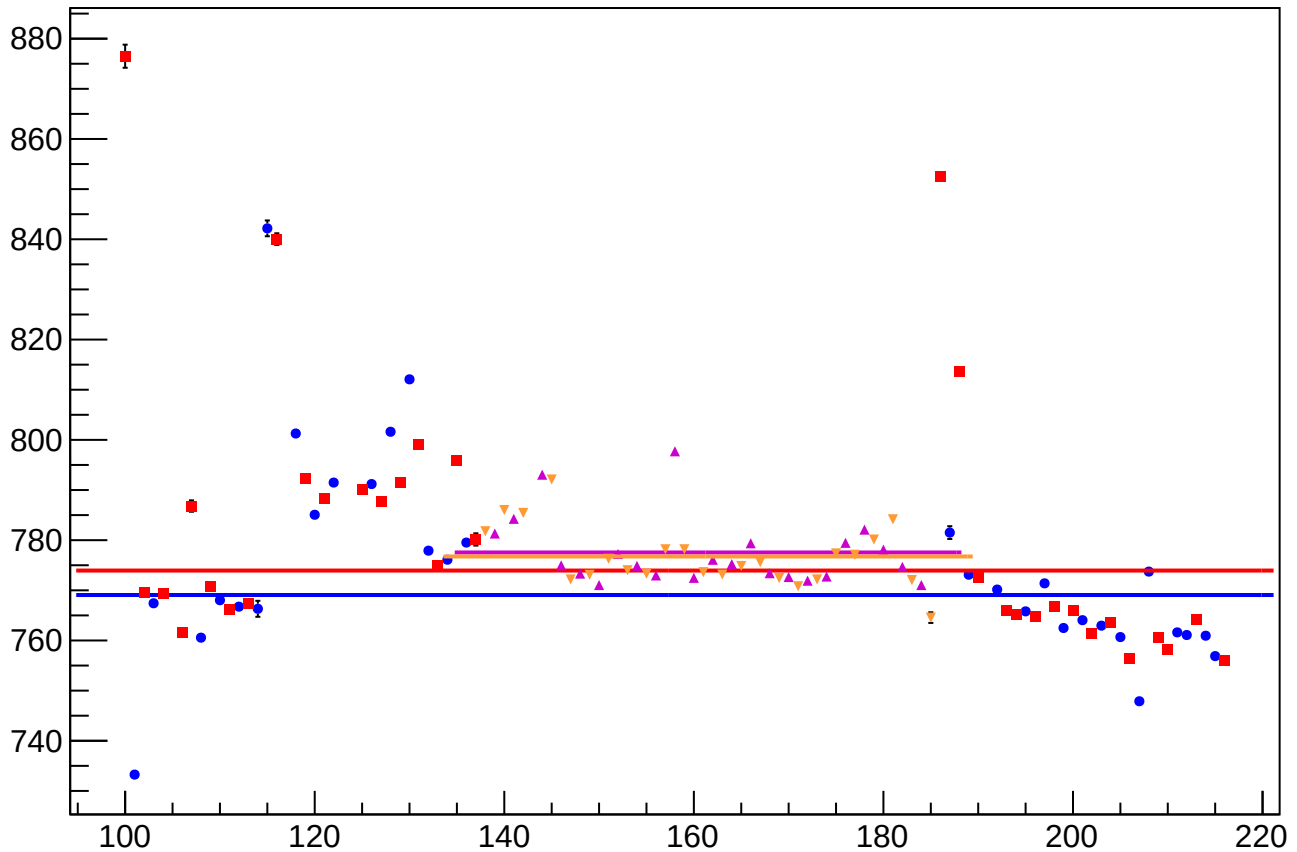
Left In:  $203.339 \pm 181.548$   $\chi^2/\text{NDF}: 22.1/22$

+ sign  $-221.199 \pm 125.586$   $\chi^2/\text{NDF}: 34.2/54$

All:  $-83.641 \pm 89.048$   $\chi^2/\text{NDF}: 83.2/110$

- sign  $55.450 \pm 126.283$   $\chi^2/\text{NDF}: 46.6/55$

# dit\_asym\_us\_dd\_rms vs Slug



Right In:  $769.067 \pm 0.124$   $\chi^2/\text{NDF}$ : 17111.7/30

Left Out:  $776.751 \pm 0.127$   $\chi^2/\text{NDF}$ : 1826.3/23

Right Out:  $773.945 \pm 0.124$   $\chi^2/\text{NDF}$ : 26091.0/32

Left In:  $777.550 \pm 0.128$   $\chi^2/\text{NDF}$ : 2750.7/22

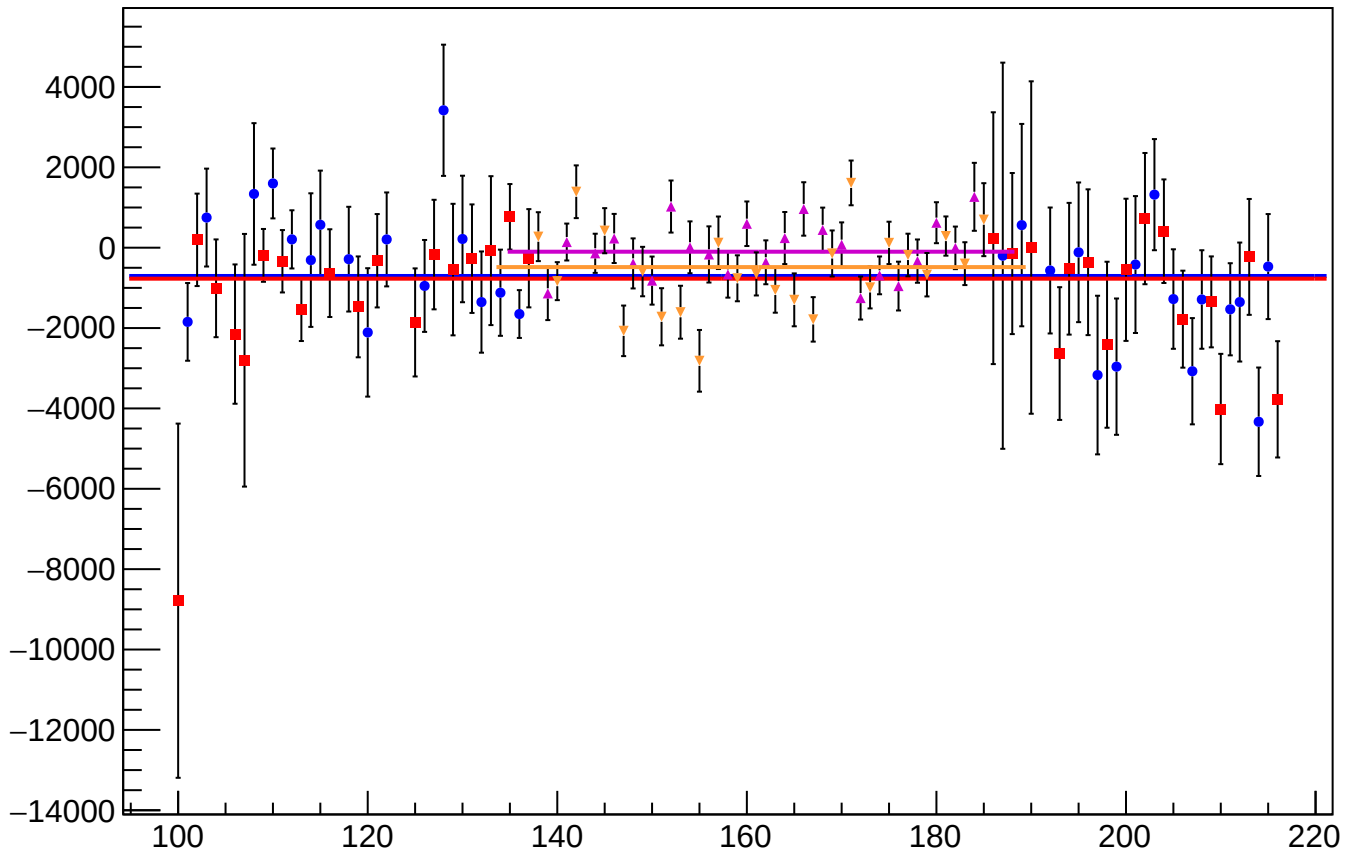
+ sign  $772.796 \pm 0.089$   $\chi^2/\text{NDF}$ : 20808.1/54

All:  $774.234 \pm 0.063$   $\chi^2/\text{NDF}$ : 50584.7/110

- sign  $775.689 \pm 0.089$   $\chi^2/\text{NDF}$ : 29248.7/55



# asym\_us\_dd\_dit\_correction\_mean vs Slug



Right In: -704.093 $\pm$ 221.190  $\chi^2/\text{NDF}$ : 42.4/30

Left Out: -482.886 $\pm$ 118.805  $\chi^2/\text{NDF}$ : 65.1/23

Right Out: -771.160 $\pm$ 222.769  $\chi^2/\text{NDF}$ : 27.4/32

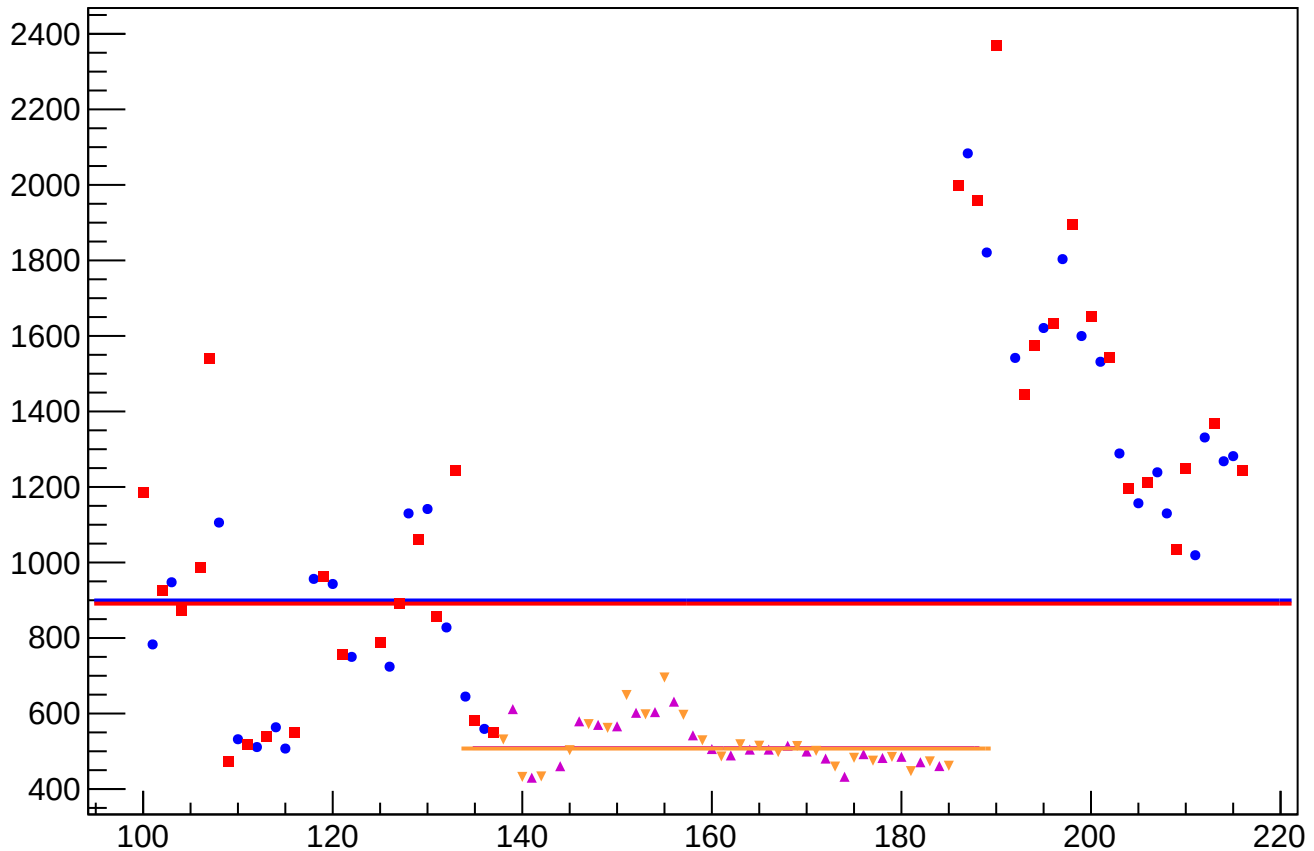
Left In: -99.985 $\pm$ 119.677  $\chi^2/\text{NDF}$ : 27.4/22

+ sign -532.415 $\pm$ 104.663  $\chi^2/\text{NDF}$ : 108.3/54

All: -392.386 $\pm$ 74.276  $\chi^2/\text{NDF}$ : 173.8/110

- sign -250.308 $\pm$ 105.426  $\chi^2/\text{NDF}$ : 61.9/55

# asym\_us\_dd\_dit\_correction\_rms vs Slug



Right In: 899.360+/-0.156  $\chi^2/\text{NDF}$ : 5253263.6/30

Left Out: 507.319+/-0.084  $\chi^2/\text{NDF}$ : 473982.3/23

Right Out: 891.088+/-0.158  $\chi^2/\text{NDF}$ : 6458735.0/32

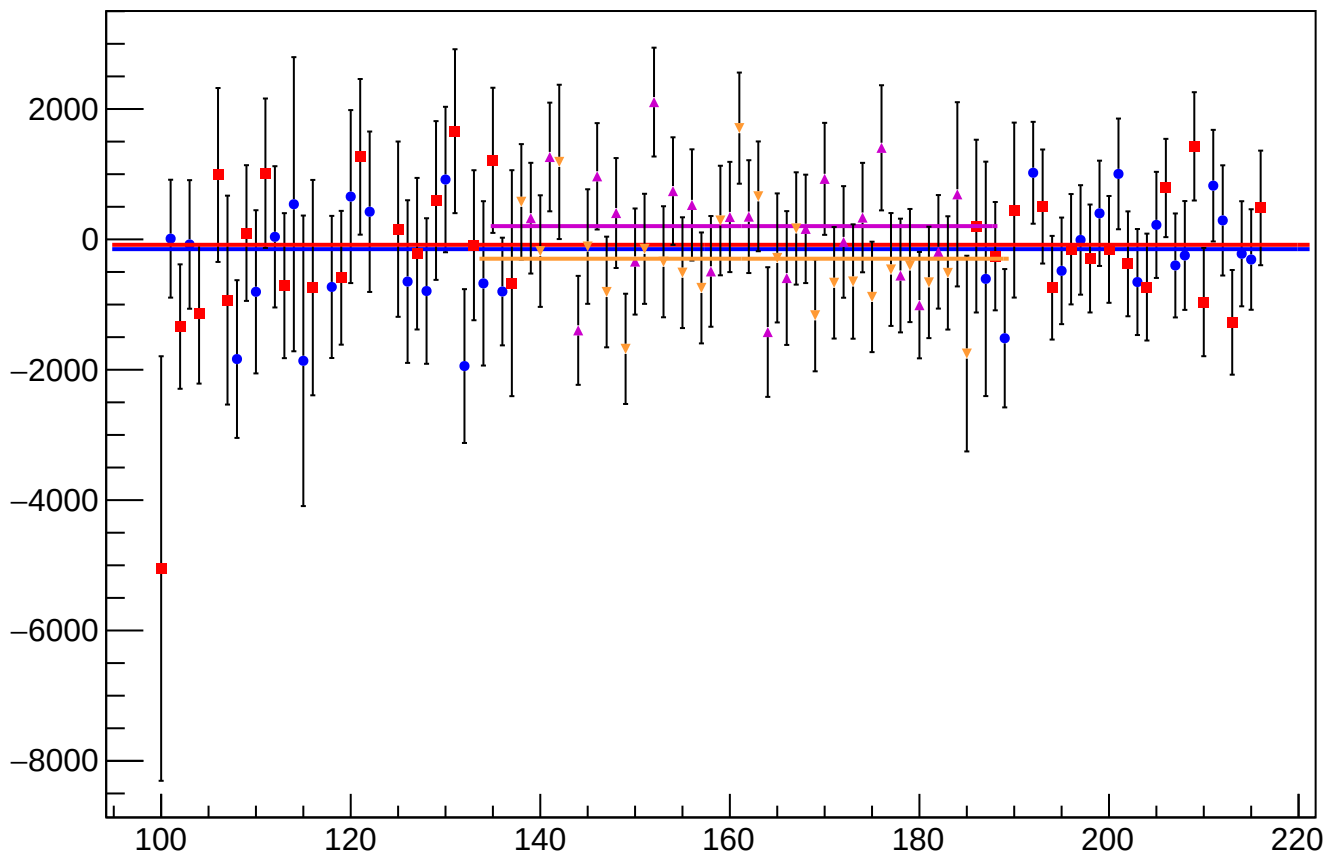
Left In: 508.638+/-0.085  $\chi^2/\text{NDF}$ : 432447.1/22

+ sign 595.098+/-0.074  $\chi^2/\text{NDF}$ : 10603403.9/54

All: 594.699+/-0.053  $\chi^2/\text{NDF}$ : 22069187.2/114

- sign 594.295+/-0.075  $\chi^2/\text{NDF}$ : 11465725.0/55

# eigen\_dit\_asym\_us\_dd\_mean vs Slug



Right In:  $-149.954 \pm 175.045$   $\chi^2/\text{NDF}$ : 17.1/30

Left Out:  $-296.771 \pm 180.280$   $\chi^2/\text{NDF}$ : 16.7/23

Right Out:  $-83.180 \pm 175.774$   $\chi^2/\text{NDF}$ : 23.2/32

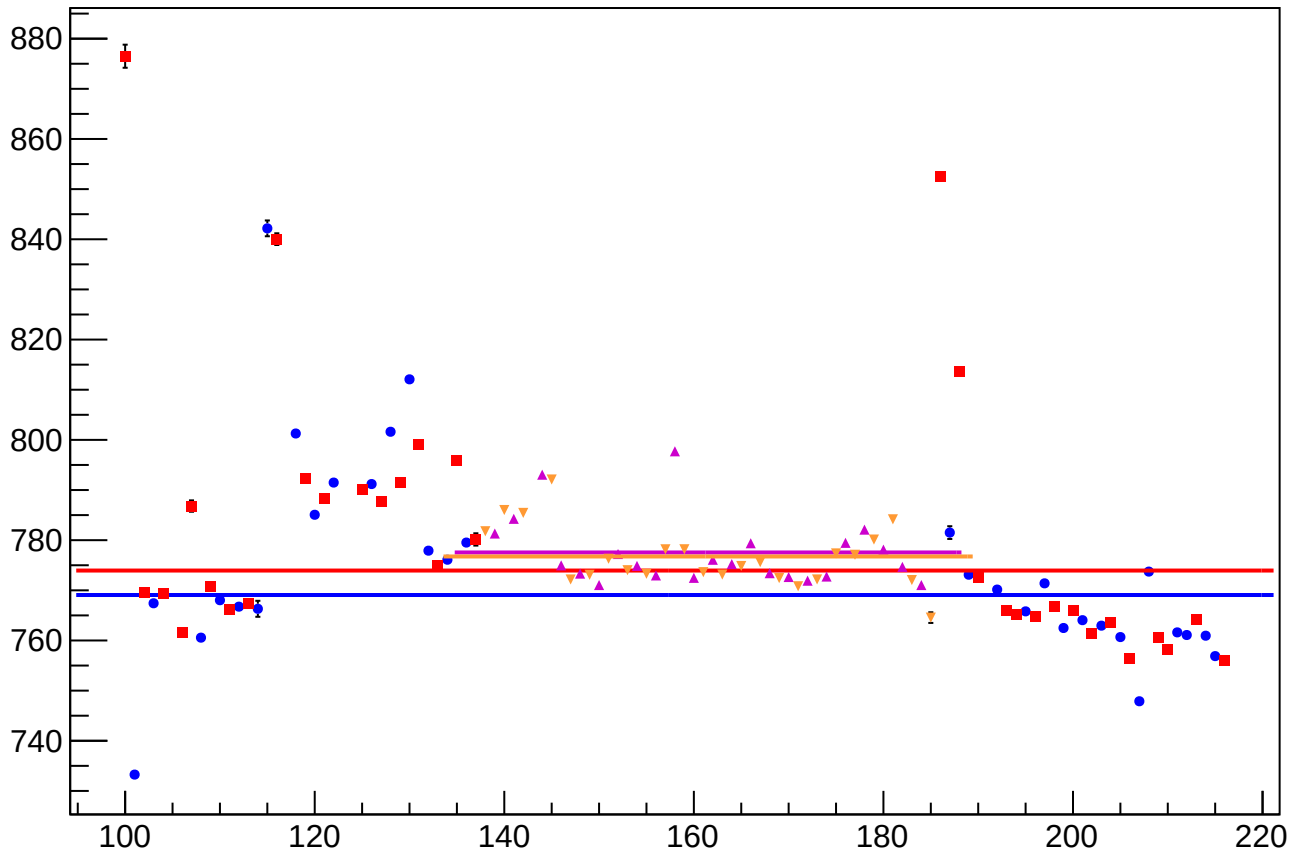
Left In:  $203.338 \pm 181.548$   $\chi^2/\text{NDF}$ : 22.1/22

+ sign  $-221.200 \pm 125.586$   $\chi^2/\text{NDF}$ : 34.2/54

All:  $-83.641 \pm 89.048$   $\chi^2/\text{NDF}$ : 83.2/110

- sign  $55.451 \pm 126.283$   $\chi^2/\text{NDF}$ : 46.6/55

# eigen\_dit\_asym\_us\_dd\_rms vs Slug



Right In: 769.067 $\pm$ 0.124  $\chi^2$ /NDF: 17111.6/30

Left Out: 776.751 $\pm$ 0.127  $\chi^2$ /NDF:1826.3/23

Right Out: 773.945 $\pm$ 0.124  $\chi^2$ /NDF: 26091.0/32

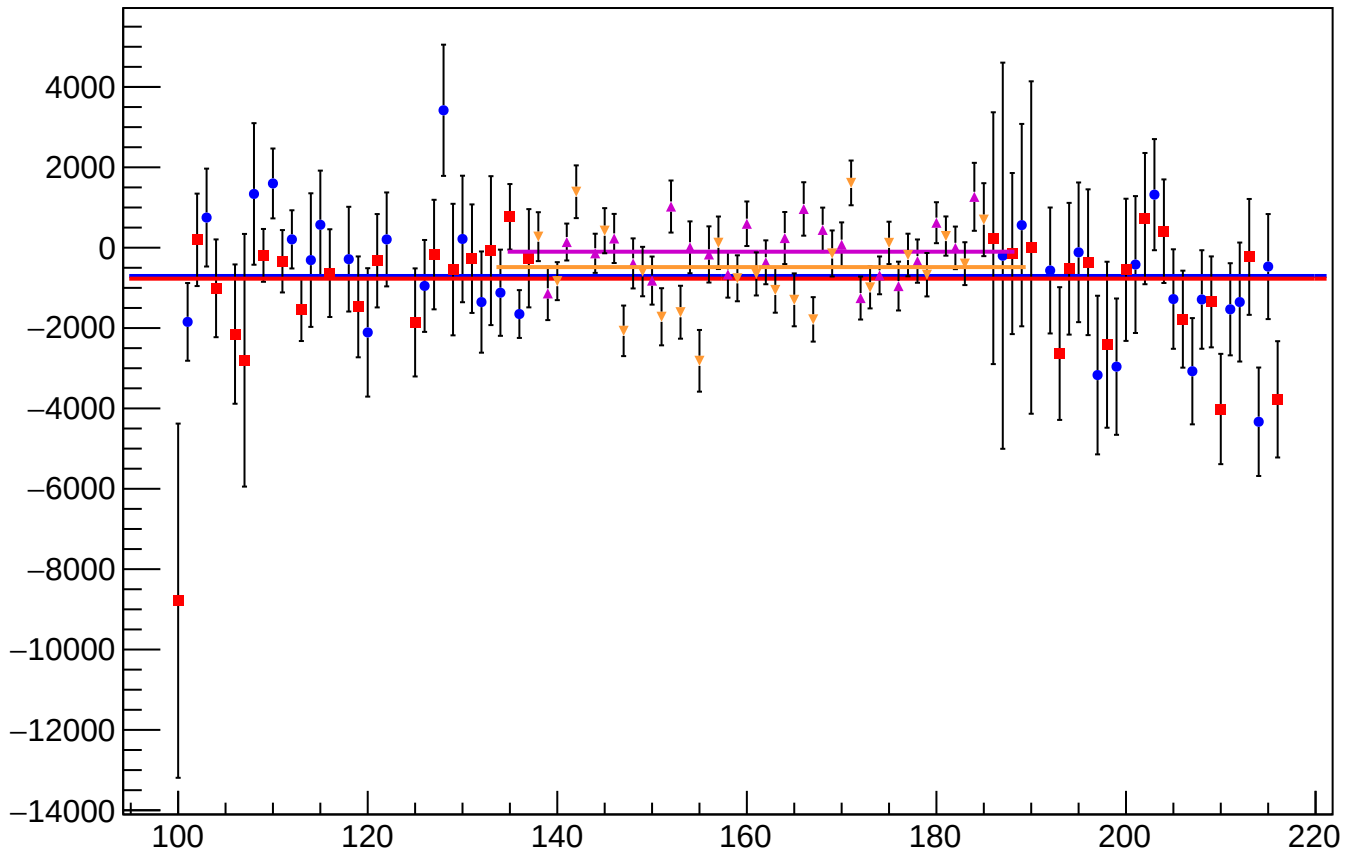
Left In: 777.550 $\pm$ 0.128  $\chi^2$ /NDF:2750.7/22

+ sign 772.796 $\pm$ 0.089  $\chi^2$ /NDF: 20808.0/54

All: 774.234 $\pm$ 0.063  $\chi^2$ /NDF: 50584.6/110

- sign 775.689 $\pm$ 0.089  $\chi^2$ /NDF: 29248.7/55

# asym\_us\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-704.087 \pm 221.189$   $\chi^2/\text{NDF}: 42.4/30$

Left Out:  $-482.886 \pm 118.806$   $\chi^2/\text{NDF}: 65.1/23$

Right Out:  $-771.158 \pm 222.769$   $\chi^2/\text{NDF}: 27.4/32$

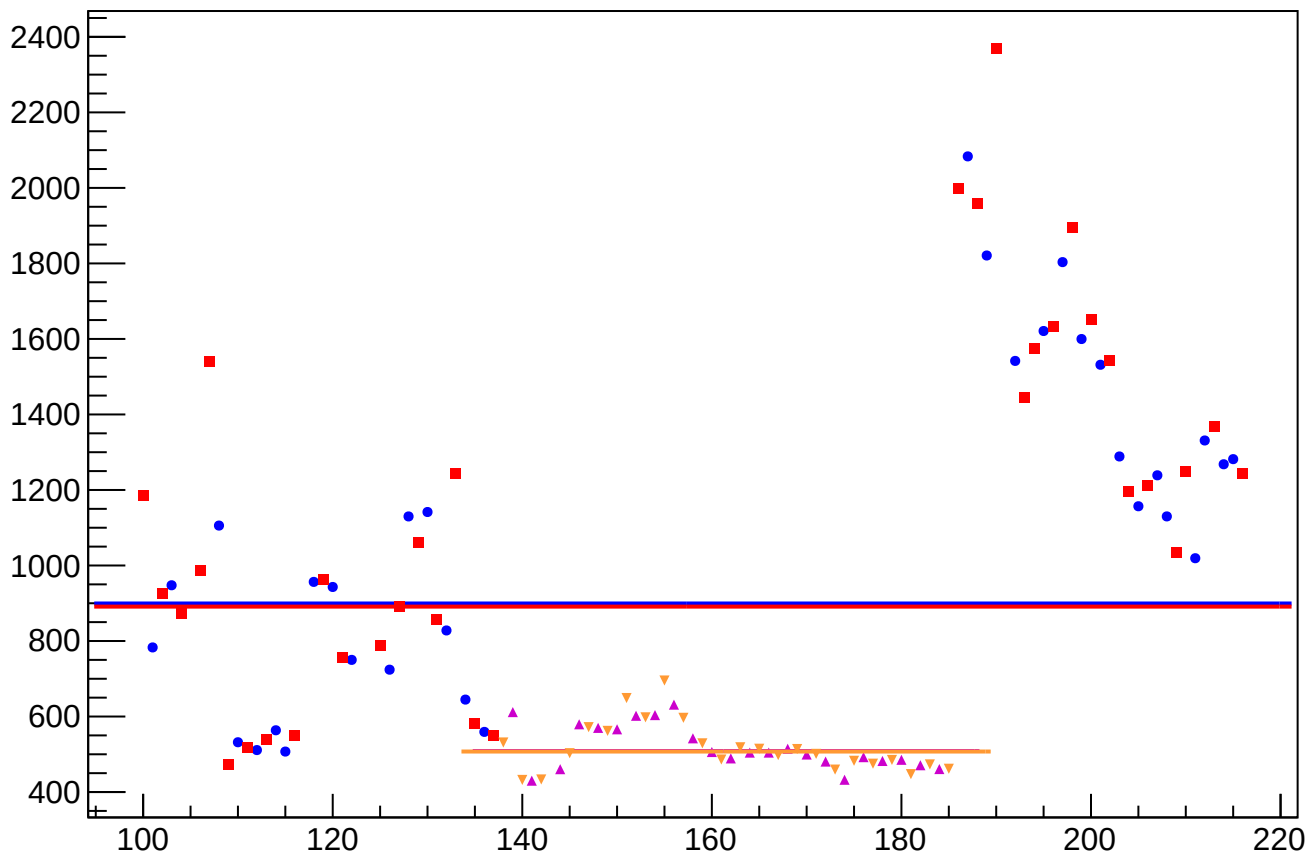
Left In:  $-99.985 \pm 119.677$   $\chi^2/\text{NDF}: 27.4/22$

+ sign  $-532.414 \pm 104.663$   $\chi^2/\text{NDF}: 108.3/54$

All:  $-392.385 \pm 74.276$   $\chi^2/\text{NDF}: 173.8/110$

- sign  $-250.308 \pm 105.426$   $\chi^2/\text{NDF}: 61.9/55$

# asym\_us\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 899.356+/-0.156  $\chi^2/\text{NDF}$ : 5253336.9/30

Left Out: 507.319+/-0.084  $\chi^2/\text{NDF}$ : 473992.3/23

+ sign 595.097+/-0.074  $\chi^2/\text{NDF}$ : 10603418.4/54

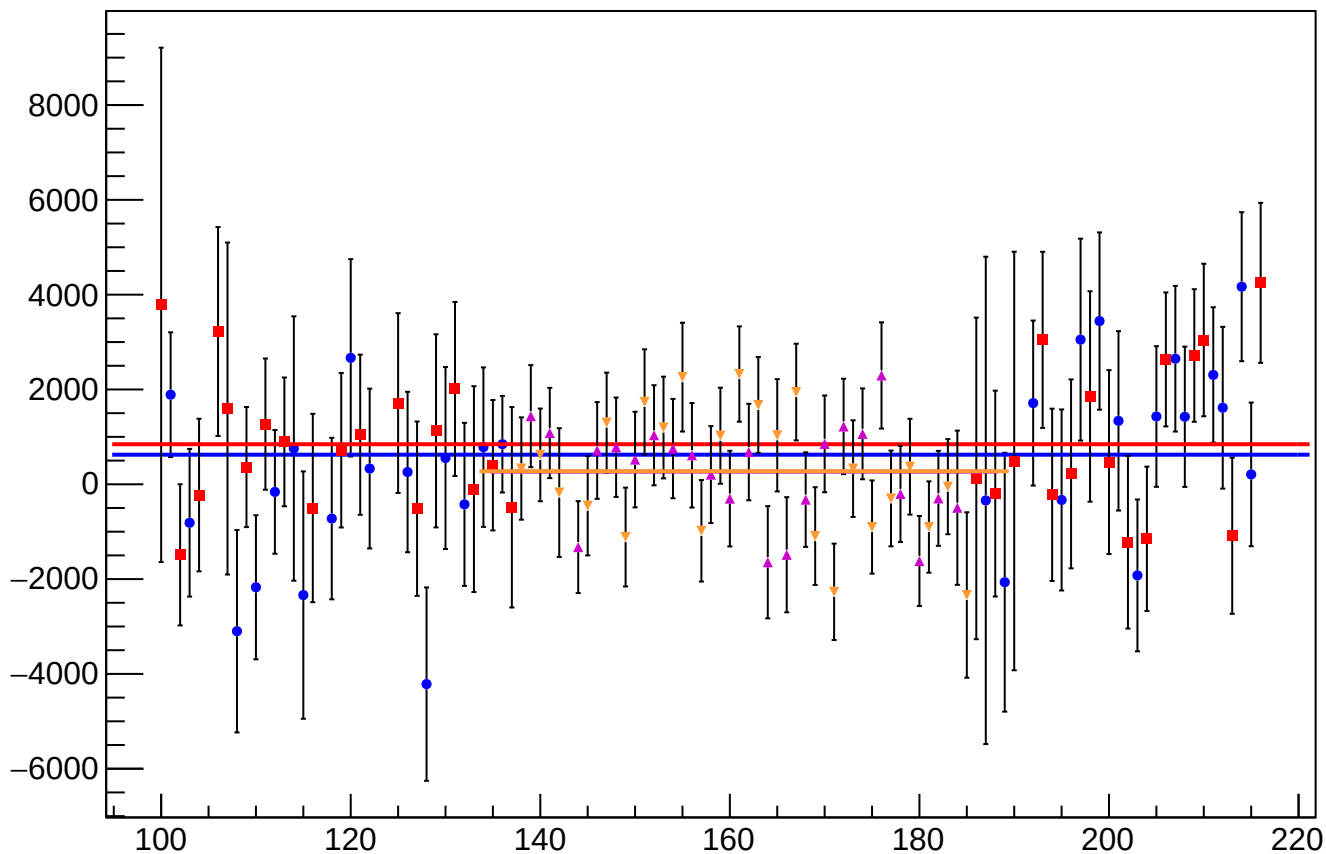
Right Out: 891.085+/-0.158  $\chi^2/\text{NDF}$ : 6458805.3/32

All: 594.699+/-0.053  $\chi^2/\text{NDF}$ : 22069224.6/11

- sign 594.295+/-0.075  $\chi^2/\text{NDF}$ : 11465747.8/55

Left In: 508.638+/-0.085  $\chi^2/\text{NDF}$ : 432461.7/22

# asym\_us\_dd\_mean vs Slug



Right In:  $624.308 \pm 302.729$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $275.181 \pm 216.290$   $\chi^2/\text{NDF}$ : 33.6/23

Right Out:  $844.809 \pm 309.803$   $\chi^2/\text{NDF}$ : 23.1/32

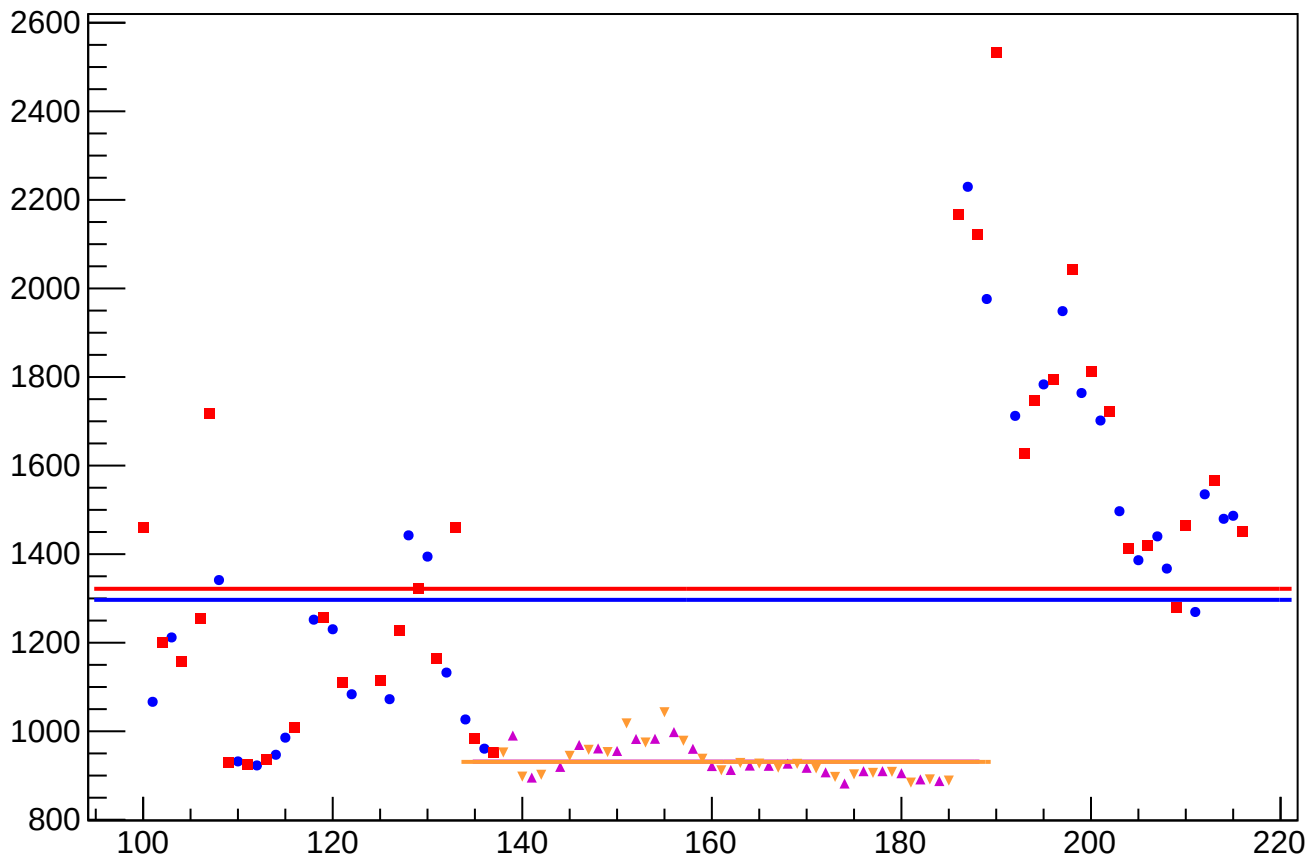
Left In:  $267.059 \pm 217.685$   $\chi^2/\text{NDF}$ : 21.4/22

+ sign  $393.169 \pm 175.987$   $\chi^2/\text{NDF}$ : 69.2/54

All:  $425.207 \pm 125.186$   $\chi^2/\text{NDF}$ : 116.0/110

- sign  $458.024 \pm 178.112$   $\chi^2/\text{NDF}$ : 46.8/55

# asym\_us\_dd\_rms vs Slug



Right In: 1296.808 $\pm$ 0.214  $\chi^2$ /NDF: 1777220.2/30

Left Out: 930.922 $\pm$ 0.153  $\chi^2$ /NDF: 61953.0/23

Right Out: 1321.762 $\pm$ 0.219  $\chi^2$ /NDF: 2247873.7/32

Left In: 931.562 $\pm$ 0.154  $\chi^2$ /NDF: 48916.1/22

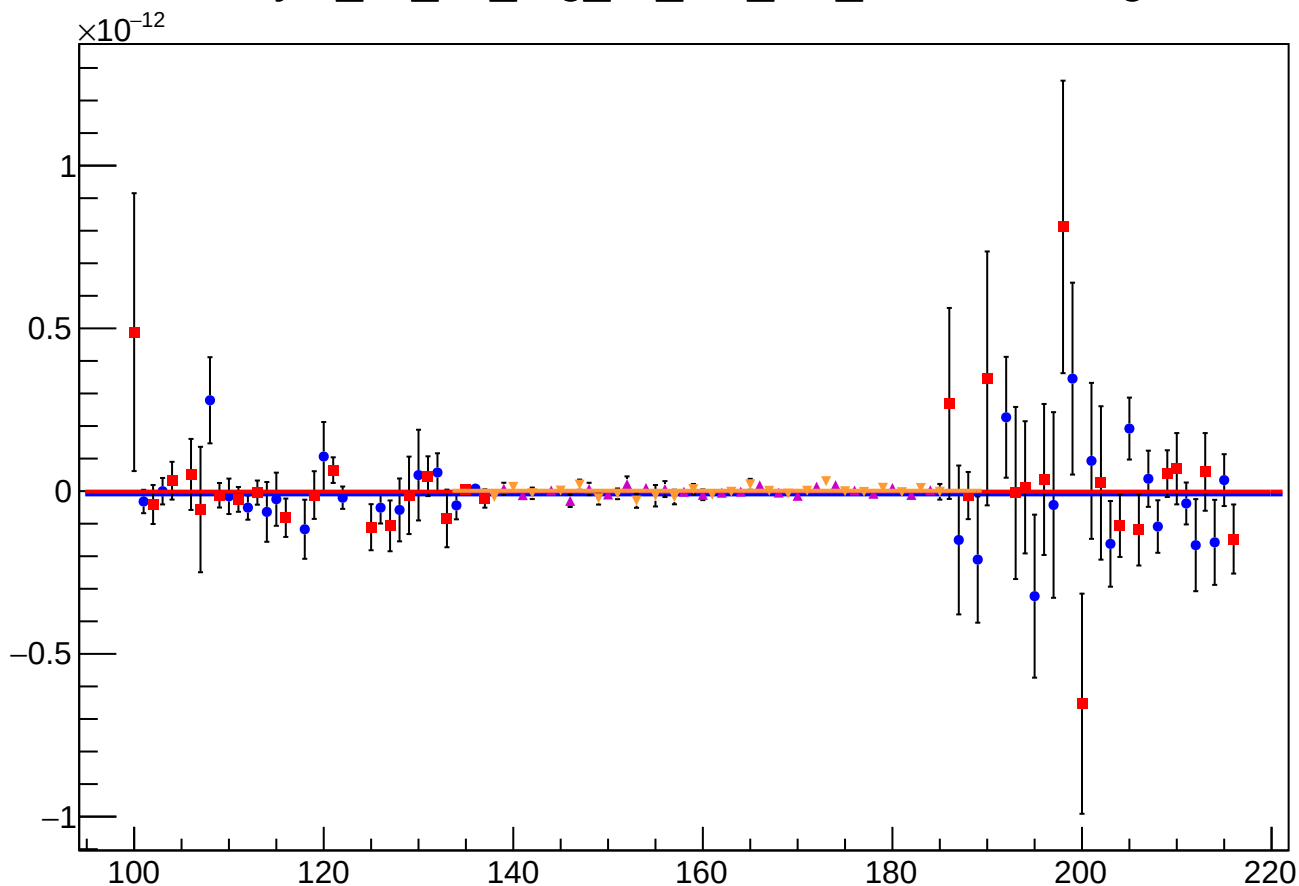
+ sign 1054.573 $\pm$ 0.124  $\chi^2$ /NDF: 3773382.6/54

All: 1057.519 $\pm$ 0.089  $\chi^2$ /NDF: 8195345.2/11

- sign 1060.536 $\pm$ 0.126  $\chi^2$ /NDF: 4420828.4/55



# asym\_us\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/32

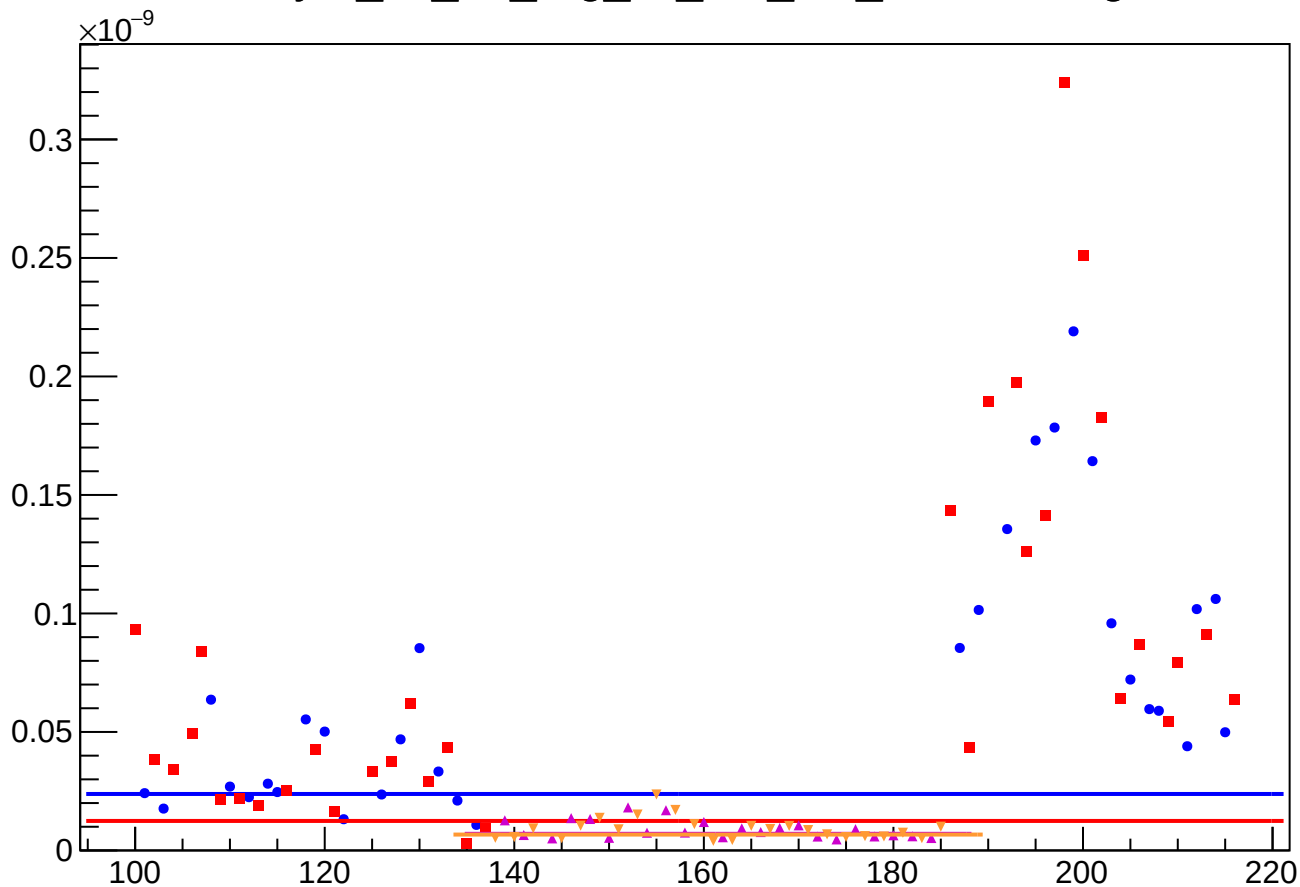
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.7/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.4/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.7/55

# asym\_us\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10526020.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2928195.0/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16172815.7/32

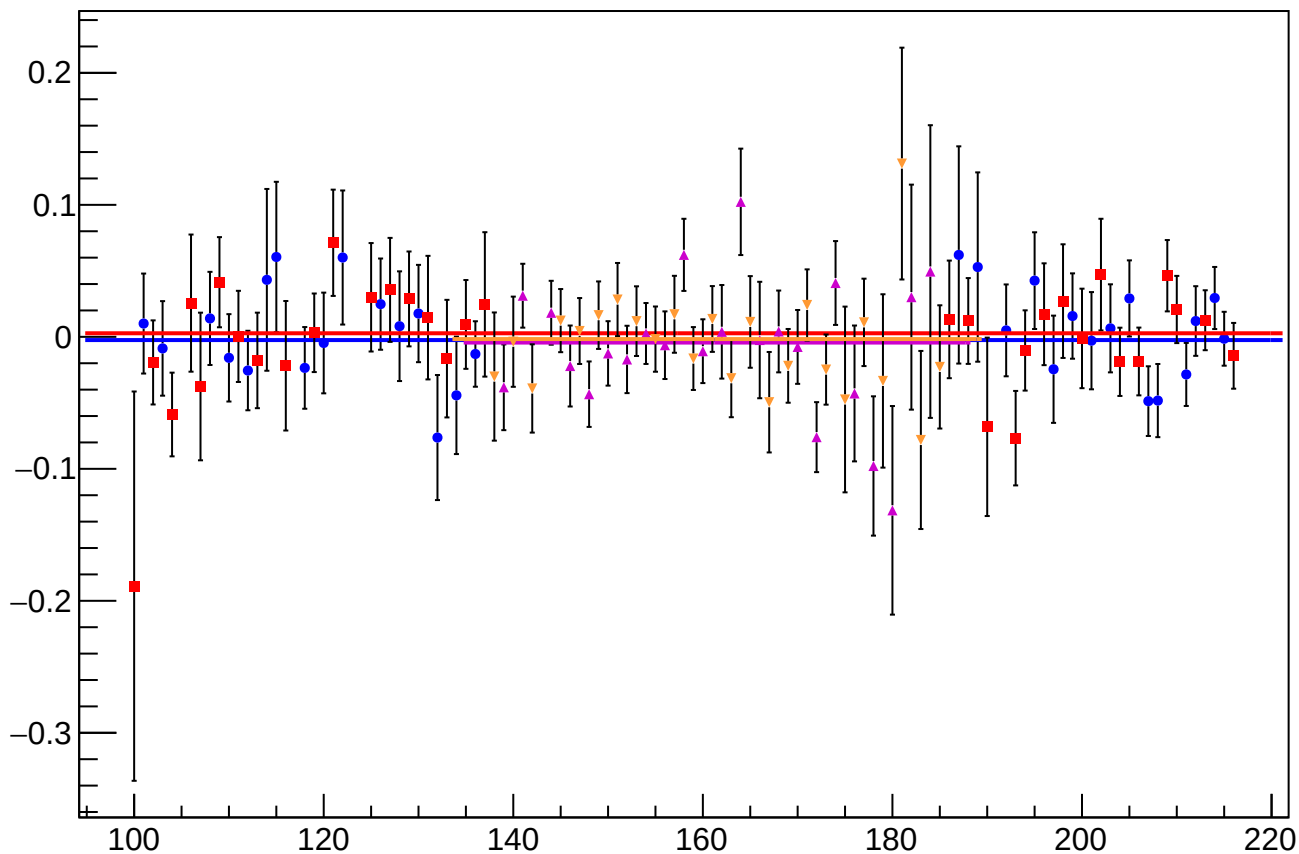
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2443418.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19372224.2/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 39039396.7/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19666991.0/55

# asym\_us\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 26.6/32

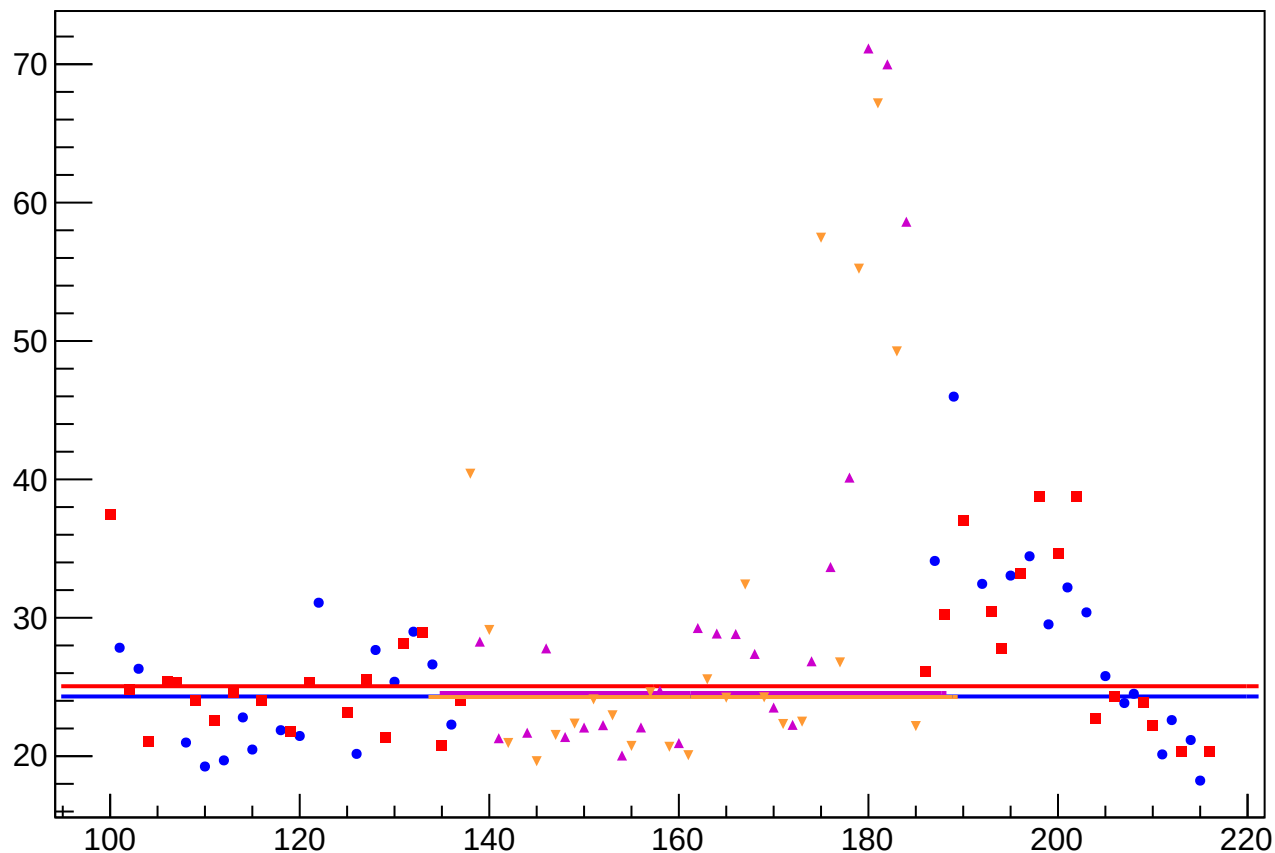
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.6/54

All:  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.5/110

- sign  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 63.8/55

# asym\_us\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 24.314+/-0.004     $\chi^2$ /NDF: 1343267.4/30

Left Out: 24.275+/-0.004     $\chi^2$ /NDF:2310679.0/23

Right Out: 25.054+/-0.004     $\chi^2$ /NDF: 1178800.8/32

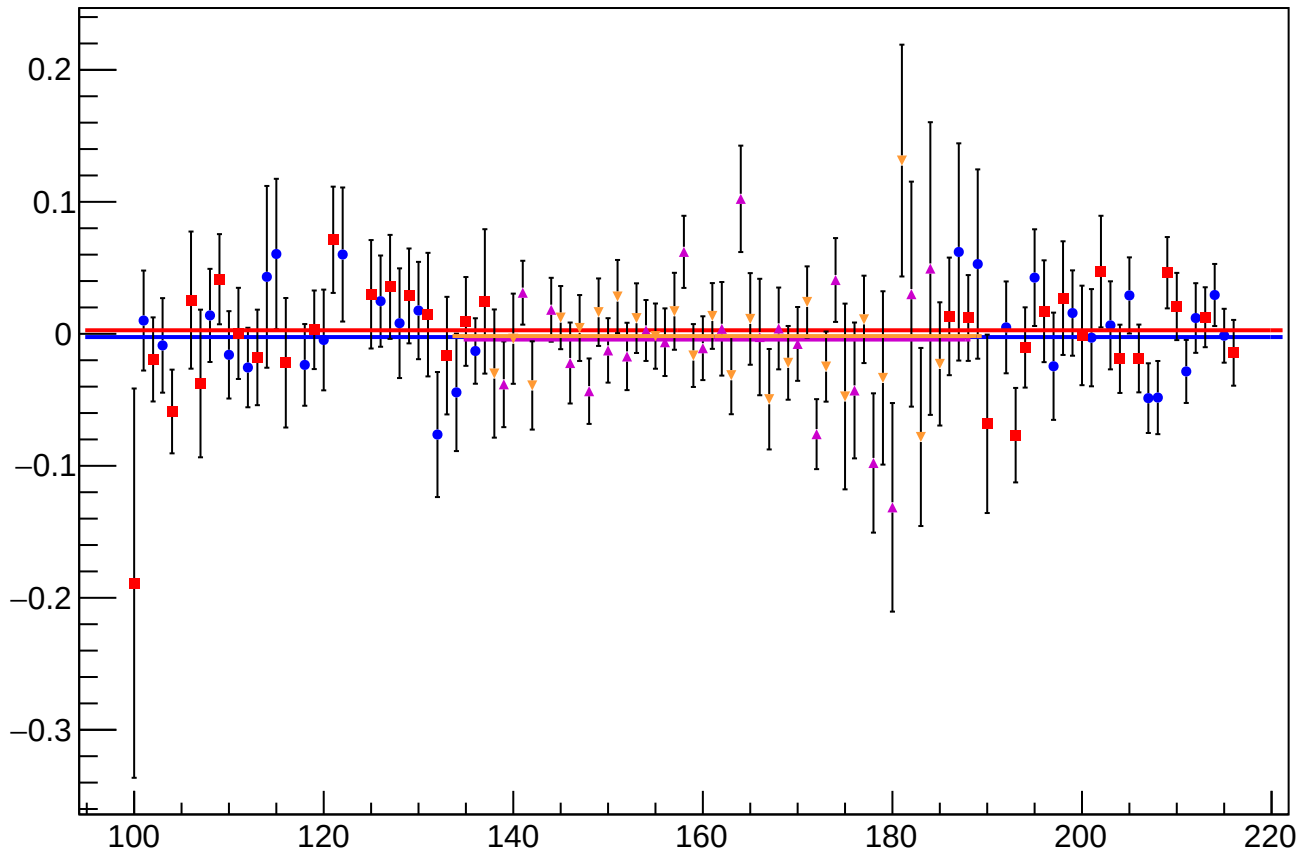
Left In: 24.565+/-0.005     $\chi^2$ /NDF:2132914.4/22

+ sign 24.295+/-0.003     $\chi^2$ /NDF: 3653987.6/54

All: 24.555+/-0.002     $\chi^2$ /NDF: 6986267.3/110

- sign 24.821+/-0.003     $\chi^2$ /NDF: 3317854.1/55

asym\_us\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 26.6/32

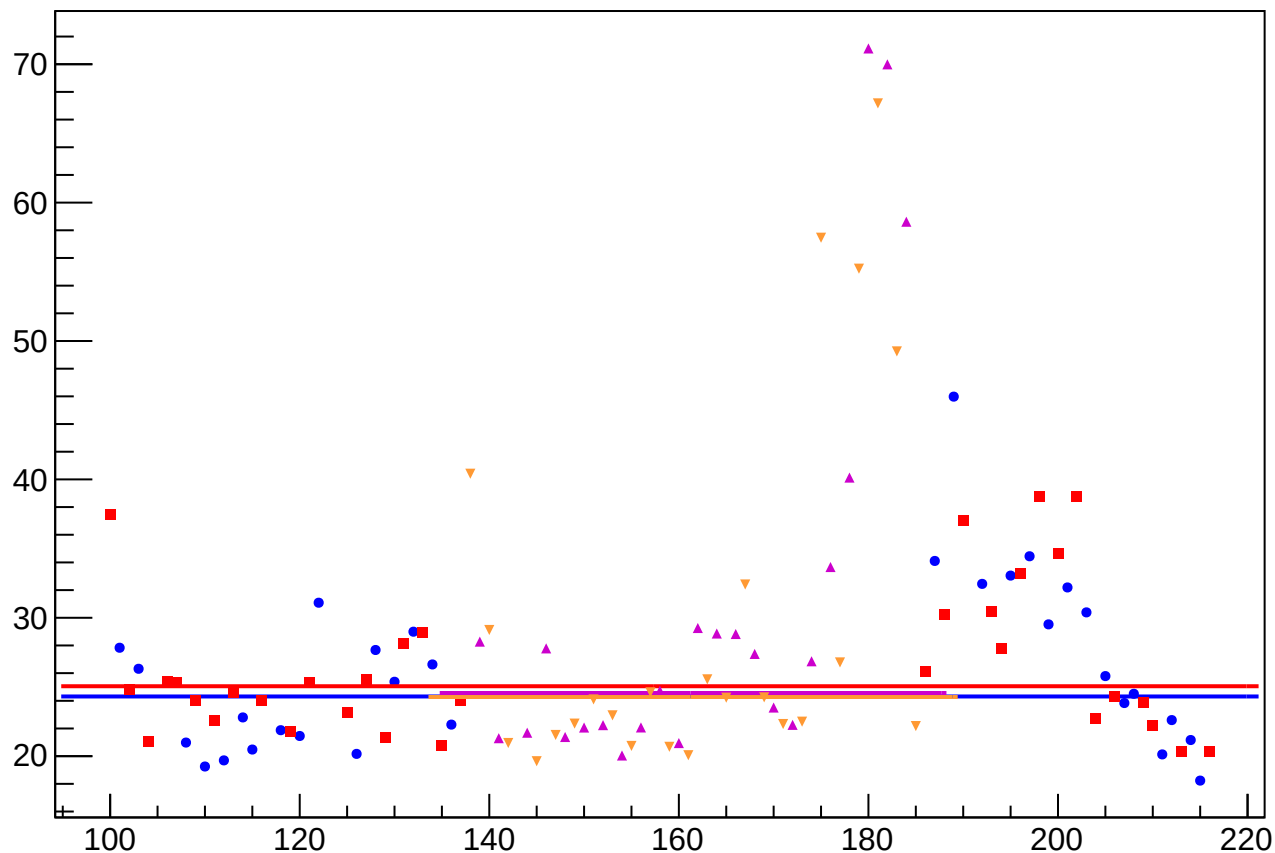
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.6/54

All:  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.5/110

- sign  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 63.8/55

asym\_us\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 24.314 $\pm$ 0.004  $\chi^2$ /NDF: 1343267.4/30

Left Out: 24.275 $\pm$ 0.004  $\chi^2$ /NDF: 2310679.0/23

Right Out: 25.054 $\pm$ 0.004  $\chi^2$ /NDF: 1178800.8/32

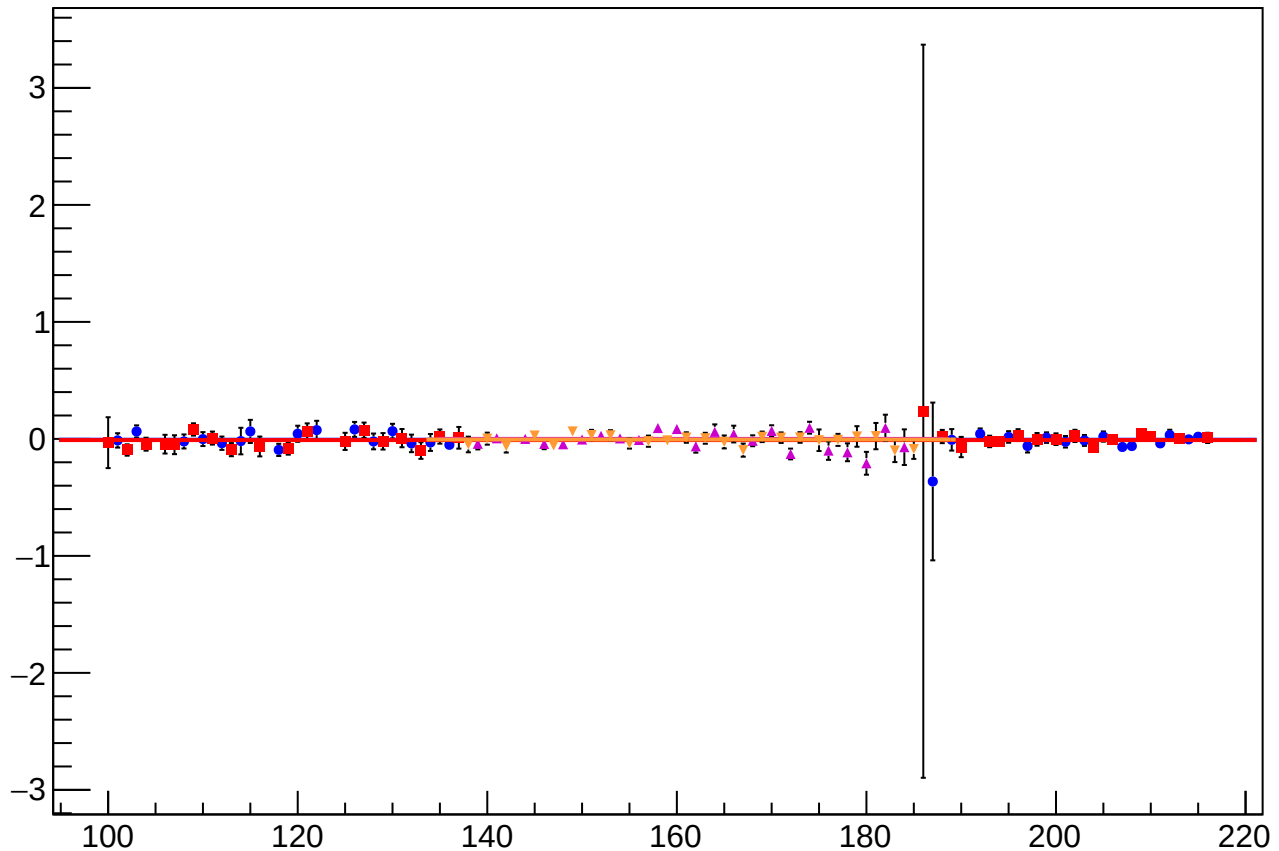
Left In: 24.565 $\pm$ 0.005  $\chi^2$ /NDF: 2132914.4/22

+ sign 24.295 $\pm$ 0.003  $\chi^2$ /NDF: 3653987.6/54

All: 24.555 $\pm$ 0.002  $\chi^2$ /NDF: 6986267.3/110

- sign 24.821 $\pm$ 0.003  $\chi^2$ /NDF: 3317854.1/55

asym\_us\_dd\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 20.6/30

Left Out:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 13.9/23

Right Out:  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.2/32

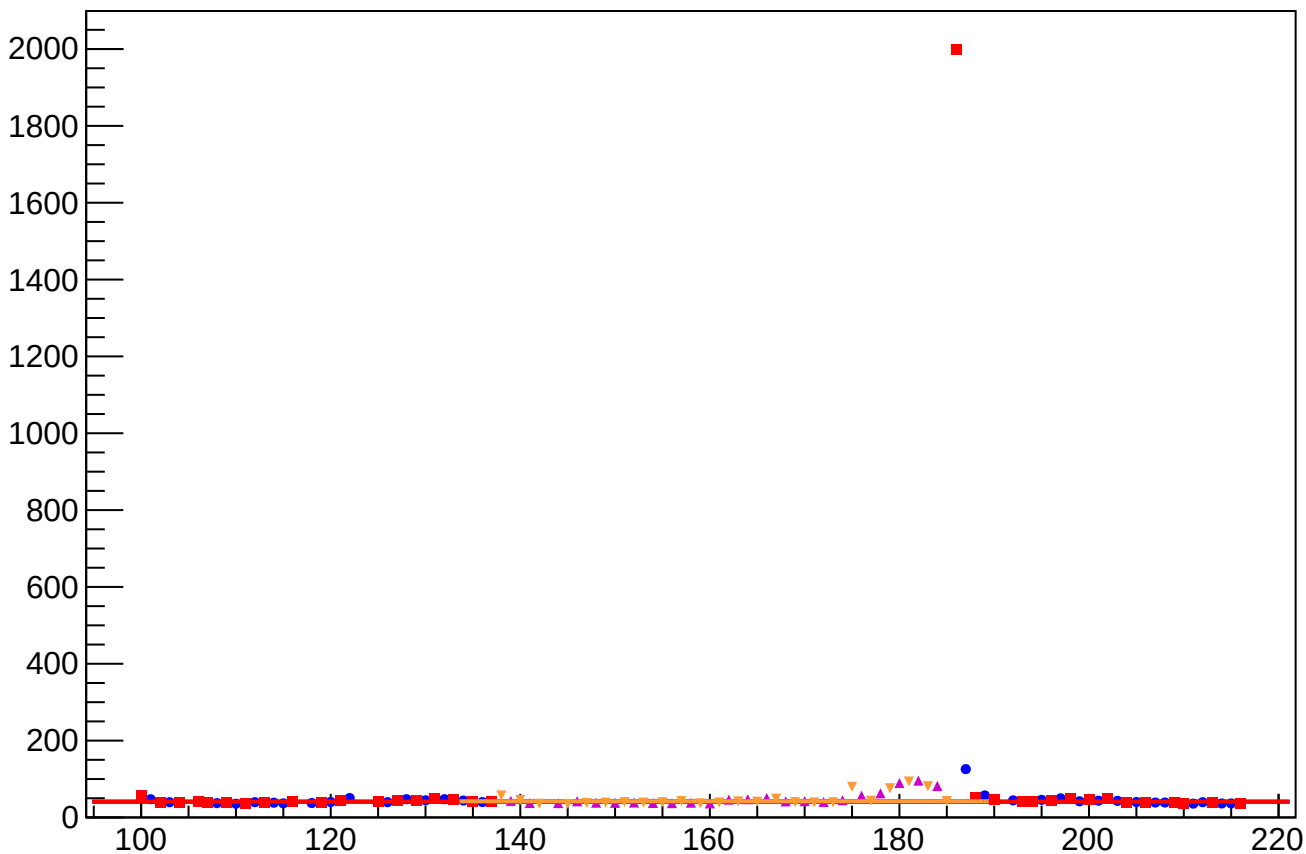
Left In:  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.9/22

+ sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.5/54

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 96.1/110

- sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 61.7/55

asym\_us\_dd\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 40.947 $\pm$ 0.007  $\chi^2$ /NDF: 420341.7/30

Left Out: 42.088 $\pm$ 0.007  $\chi^2$ /NDF: 1716047.0/23

Right Out: 41.417 $\pm$ 0.007  $\chi^2$ /NDF: 1140264.4/32

Left In: 42.078 $\pm$ 0.007  $\chi^2$ /NDF: 1543505.8/22

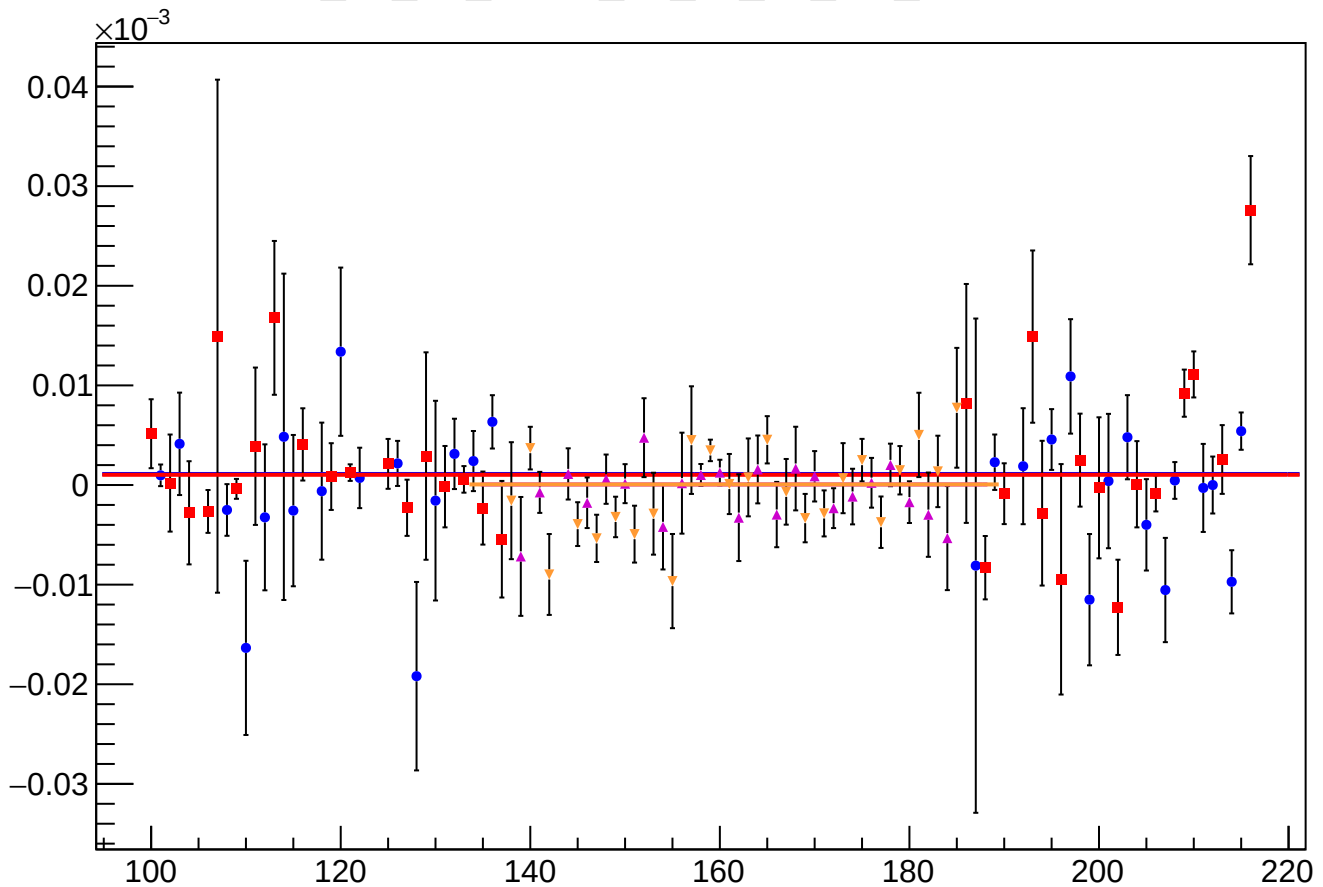
+ sign 41.474 $\pm$ 0.005  $\chi^2$ /NDF: 2149365.9/54

All: 41.599 $\pm$ 0.004  $\chi^2$ /NDF: 4838692.3/110

- sign 41.727 $\pm$ 0.005  $\chi^2$ /NDF: 2688056.4/55



asym\_us\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:51.7/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 93.3/32

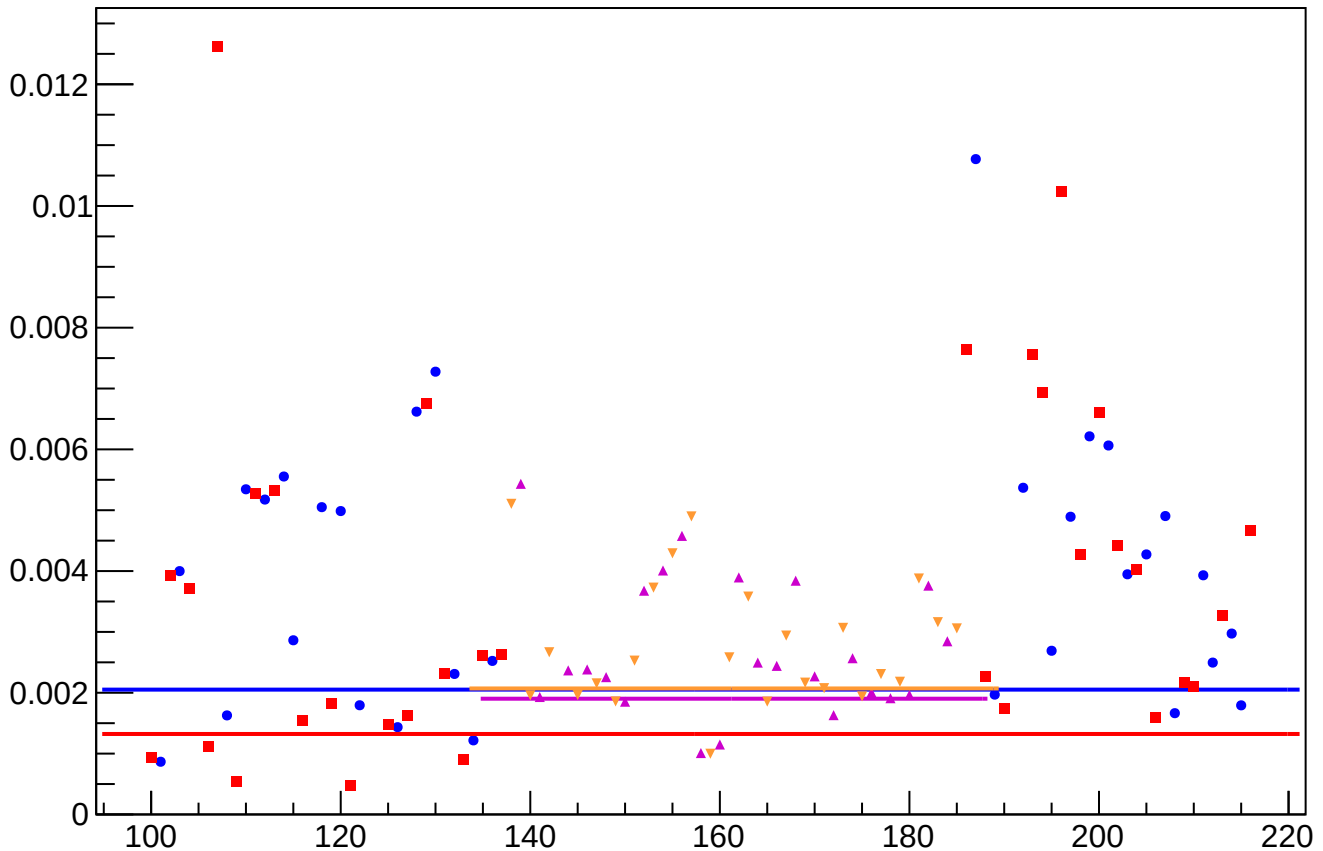
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 104.3/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 212.8/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 108.4/55

# asym\_us\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10654750.4/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5263163.7/23

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 16715258.7/32

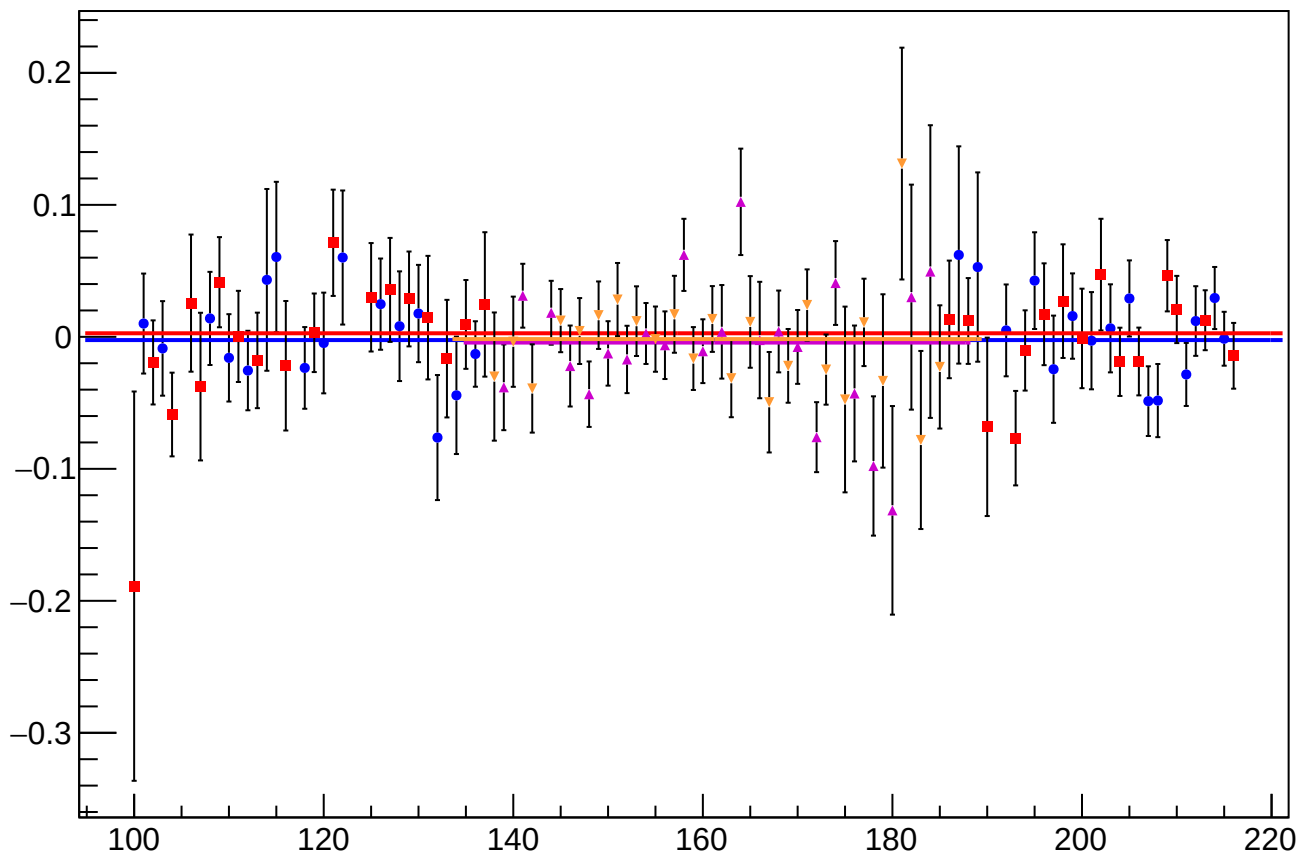
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5935945.7/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 15919153.7/54

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 41963484.3/110

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 24199637.6/55

# asym\_us\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $-0.002 \pm 0.006$   $\chi^2/\text{NDF}$ : 14.6/23

Right Out:  $0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 26.6/32

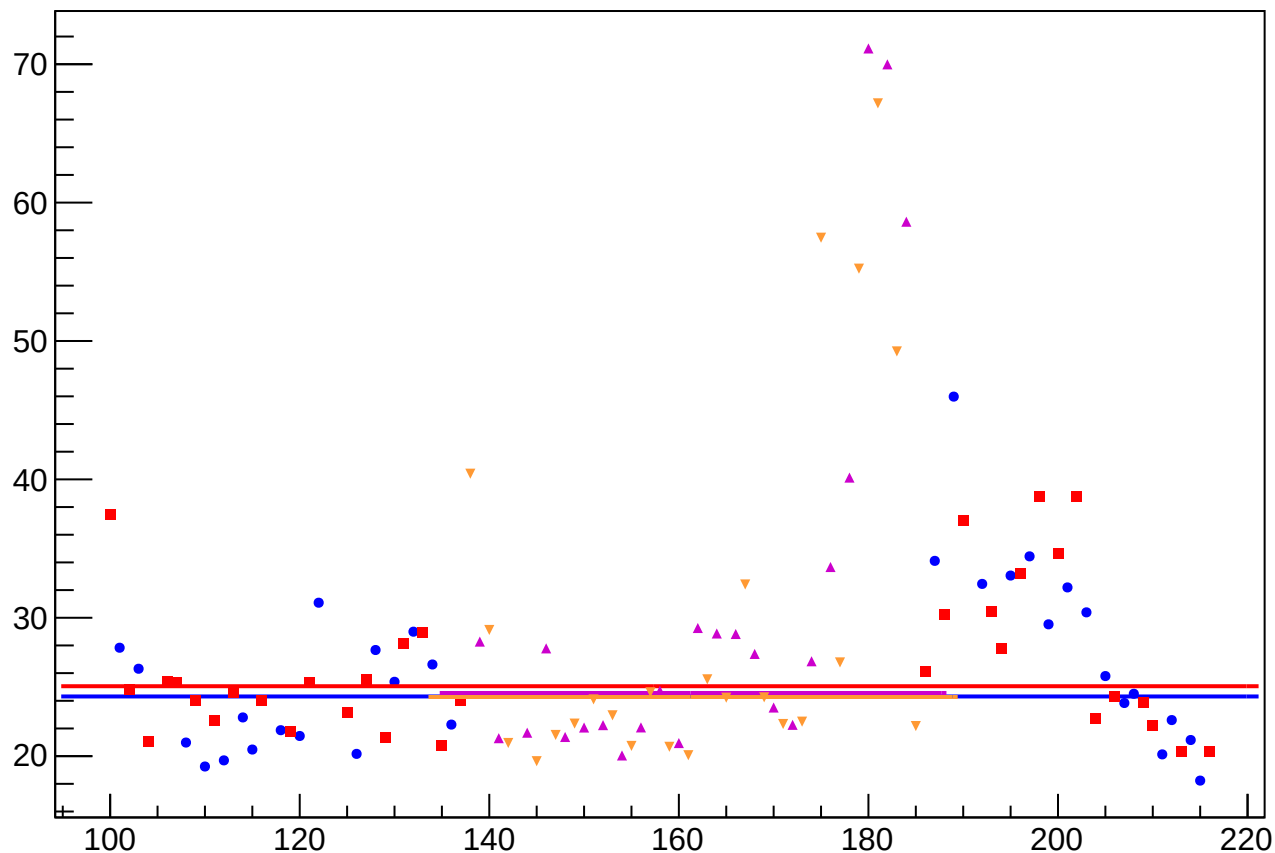
Left In:  $-0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.5/22

+ sign  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.6/54

All:  $-0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.5/110

- sign  $-0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 63.8/55

asym\_us\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $24.314 \pm 0.004$   $\chi^2/\text{NDF}$ : 1343250.7/30

Left Out:  $24.275 \pm 0.004$   $\chi^2/\text{NDF}$ : 2310684.7/23

Right Out:  $25.054 \pm 0.004$   $\chi^2/\text{NDF}$ : 1178755.3/32

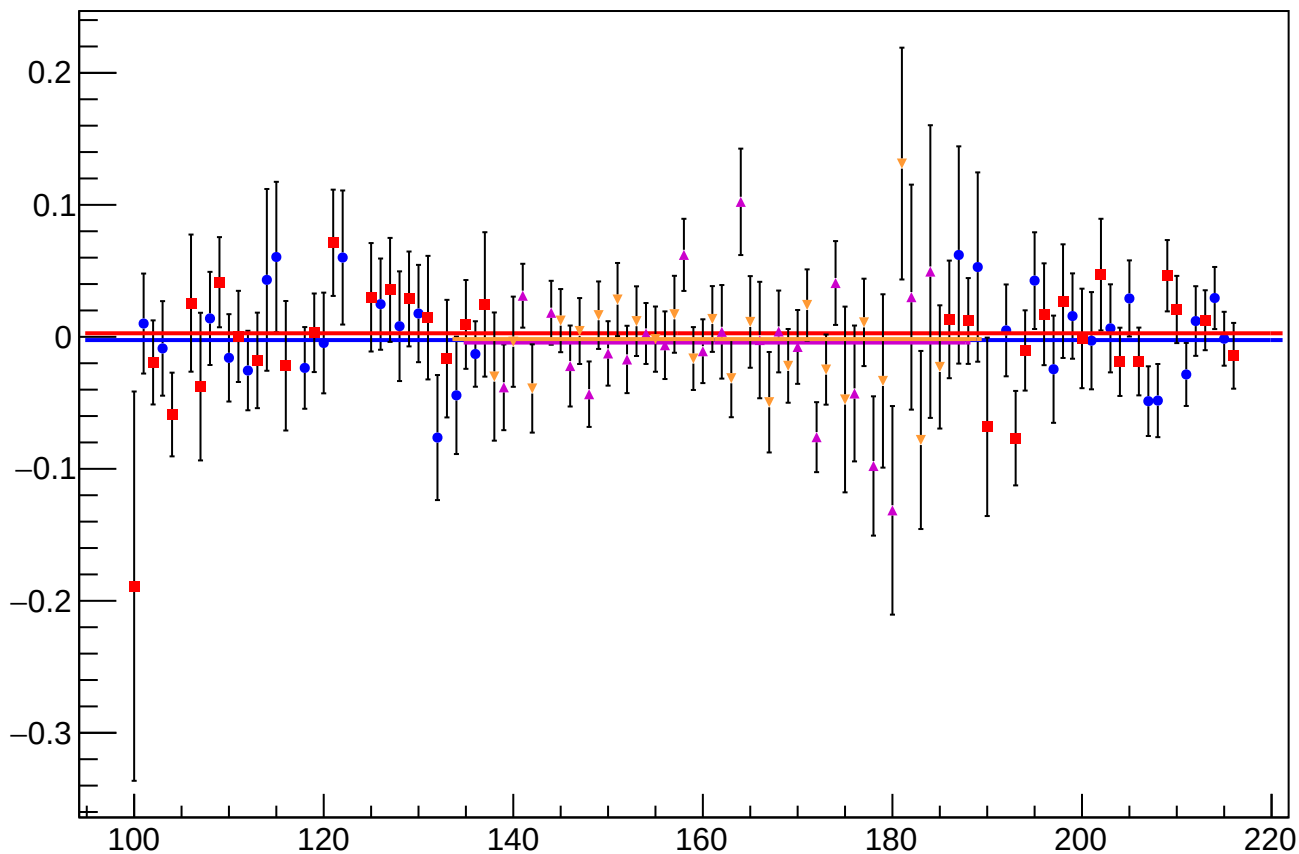
Left In:  $24.565 \pm 0.005$   $\chi^2/\text{NDF}$ : 2132779.0/22

+ sign  $24.295 \pm 0.003$   $\chi^2/\text{NDF}$ : 3653975.7/54

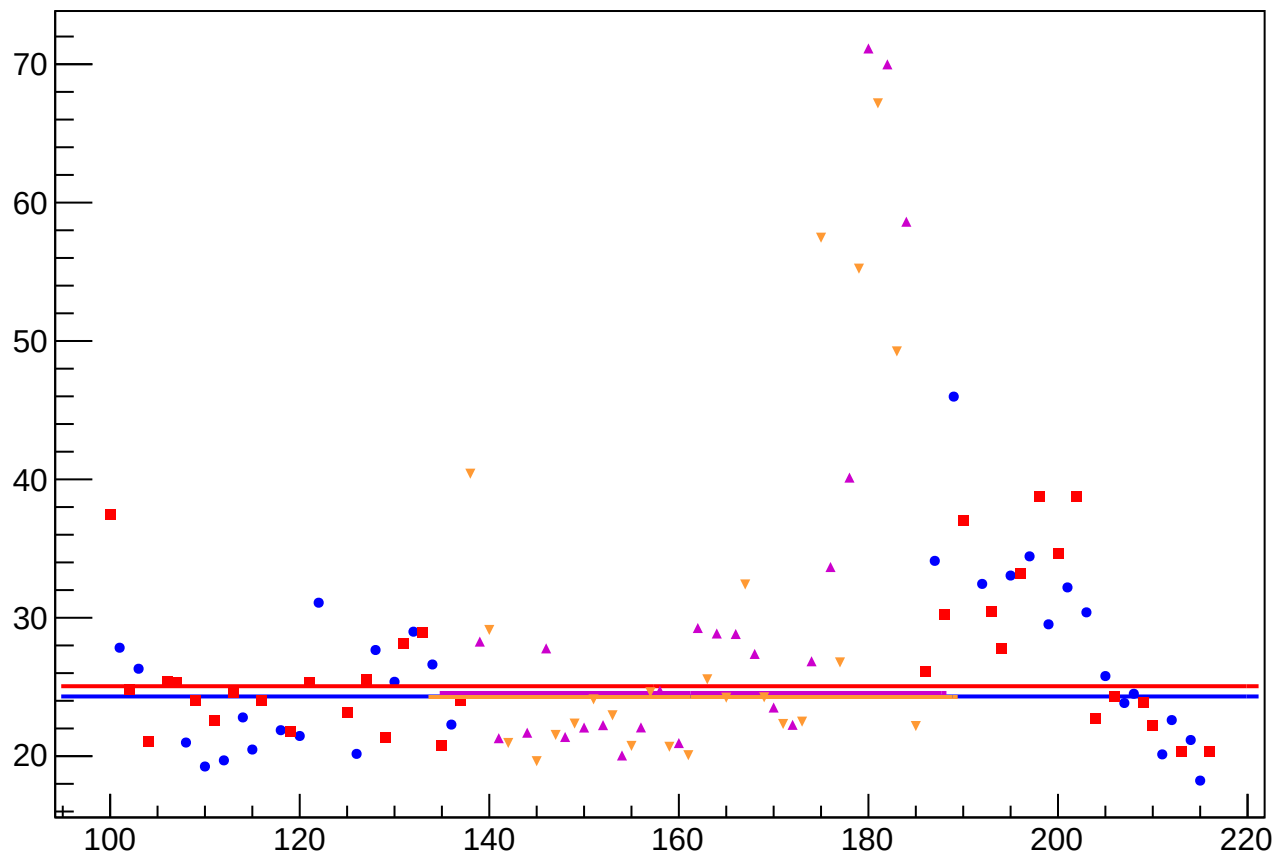
All:  $24.555 \pm 0.002$   $\chi^2/\text{NDF}$ : 6986091.6/110

- sign  $24.821 \pm 0.003$   $\chi^2/\text{NDF}$ : 3317670.2/55

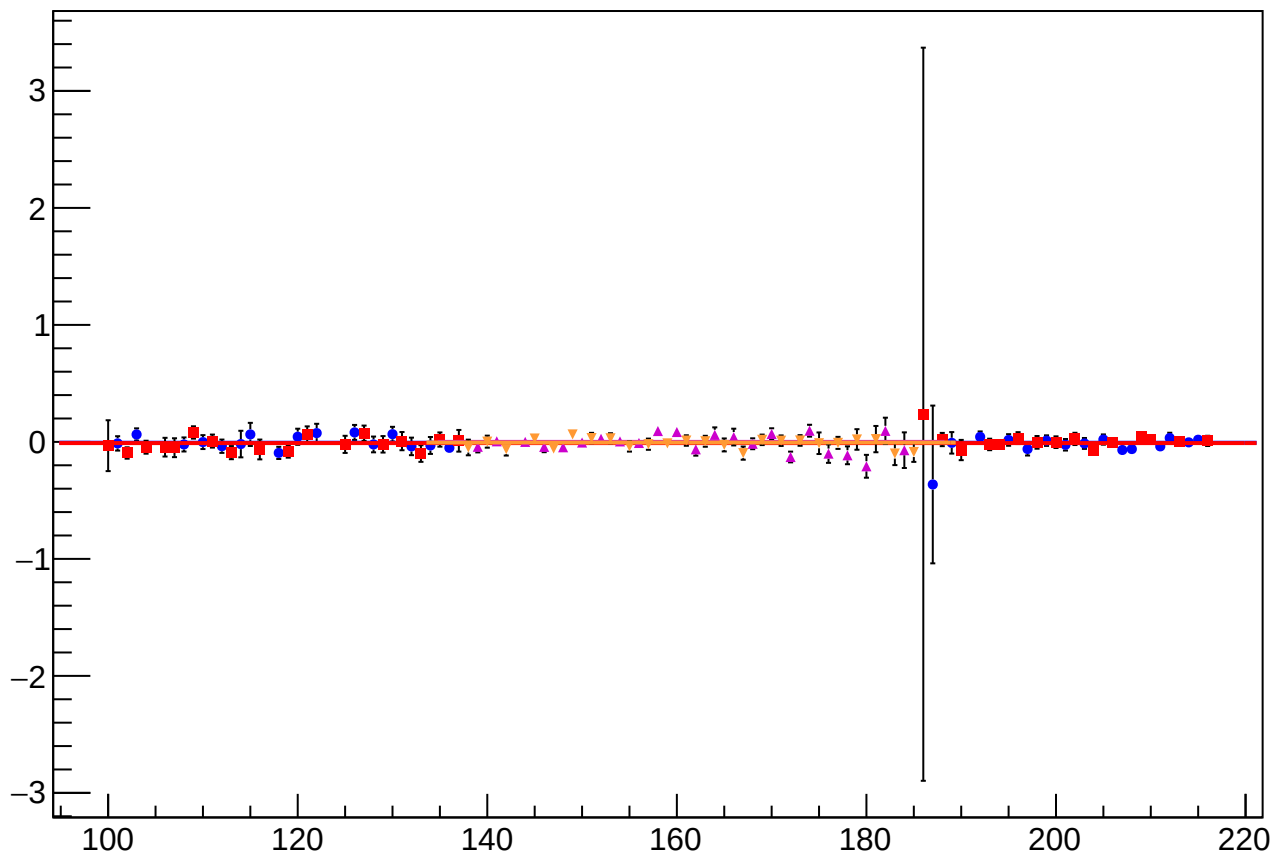
asym\_us\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



asym\_us\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



asym\_us\_dd\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 20.6/30

Left Out:  $-0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 13.9/23

Right Out:  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.2/32

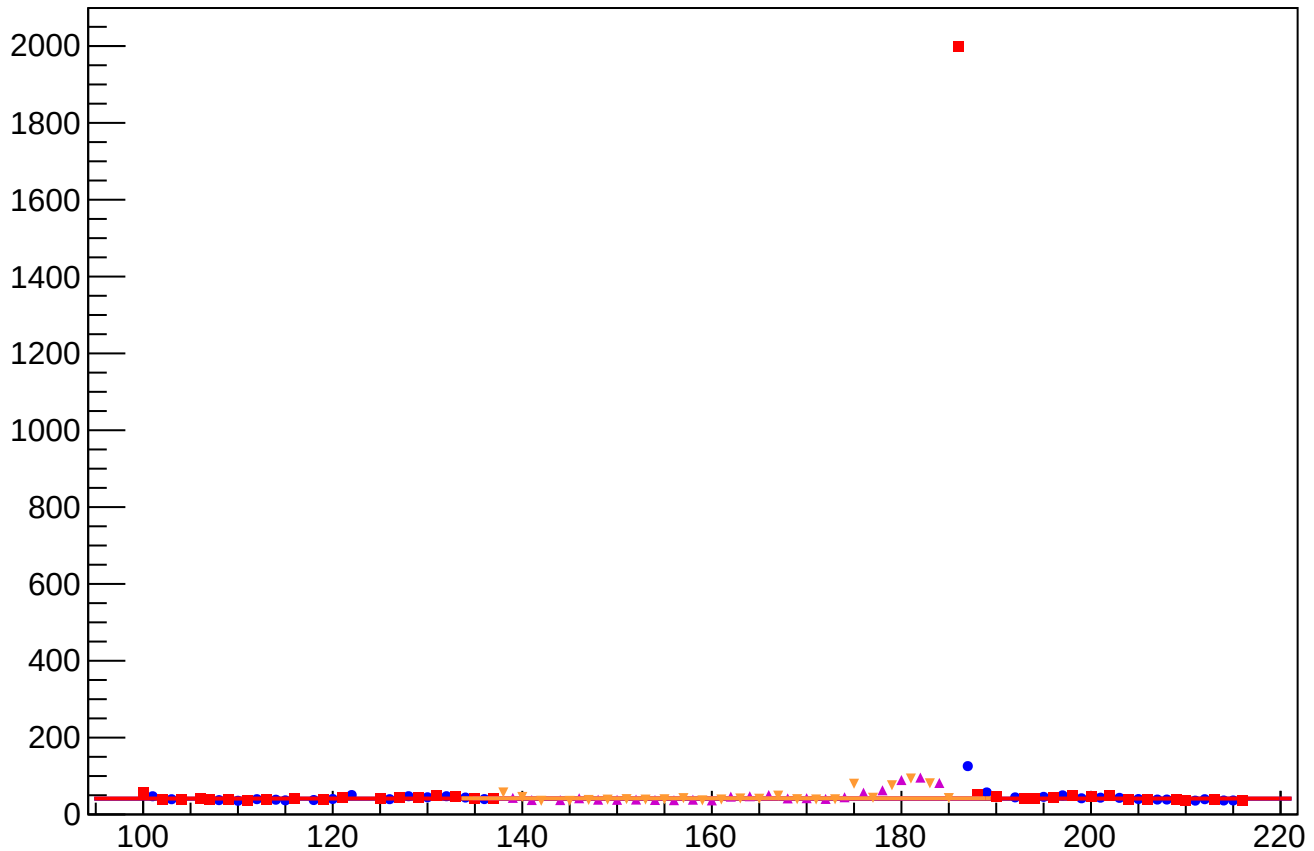
Left In:  $-0.000 \pm 0.010$   $\chi^2/\text{NDF}$ : 37.9/22

+ sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.5/54

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 96.2/110

- sign  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 61.7/55

asym\_us\_dd\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 40.947+/-0.007  $\chi^2/\text{NDF}$ : 420285.9/30

Left Out: 42.088+/-0.007  $\chi^2/\text{NDF}$ : 1716037.6/23

Right Out: 41.417+/-0.007  $\chi^2/\text{NDF}$ : 1140259.7/32

Left In: 42.078+/-0.007  $\chi^2/\text{NDF}$ : 1543481.3/22

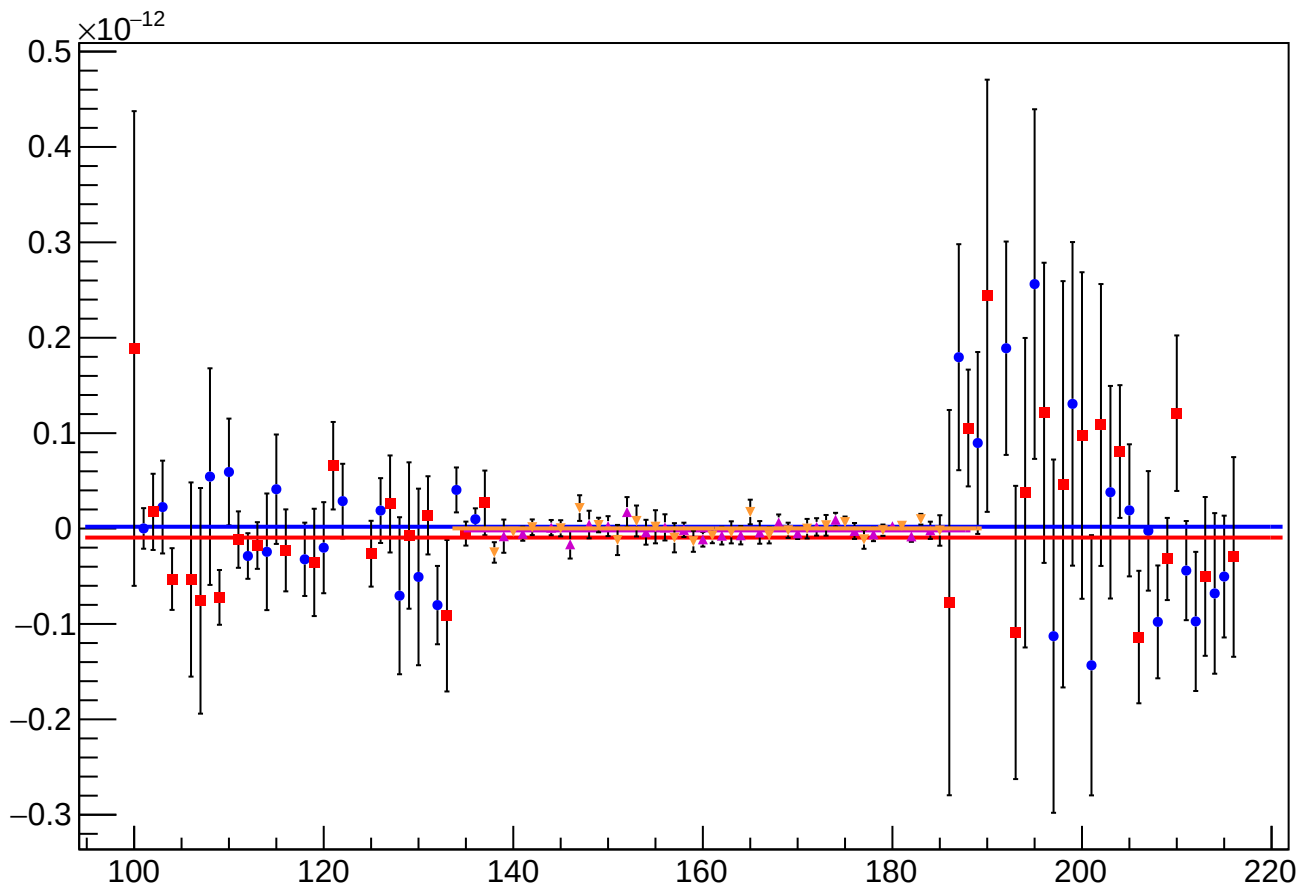
+ sign 41.474+/-0.005  $\chi^2/\text{NDF}$ : 2149301.9/54

All: 41.599+/-0.004  $\chi^2/\text{NDF}$ : 4838601.2/110

- sign 41.727+/-0.005  $\chi^2/\text{NDF}$ : 2688028.6/55



asym\_us\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.7/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.9/32

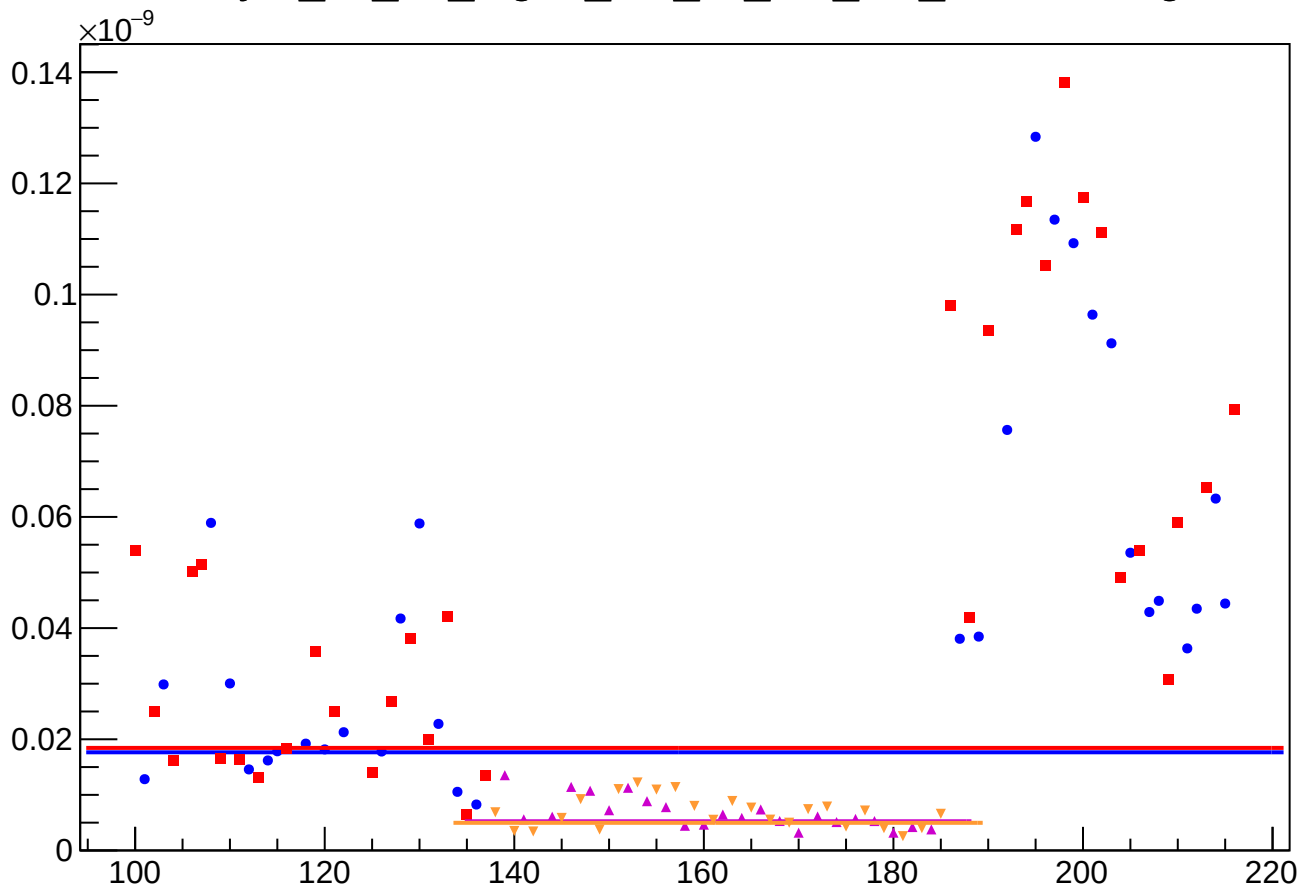
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.9/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 94.7/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.6/55

# asym\_us\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9605878.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3536964.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10930348.3/32

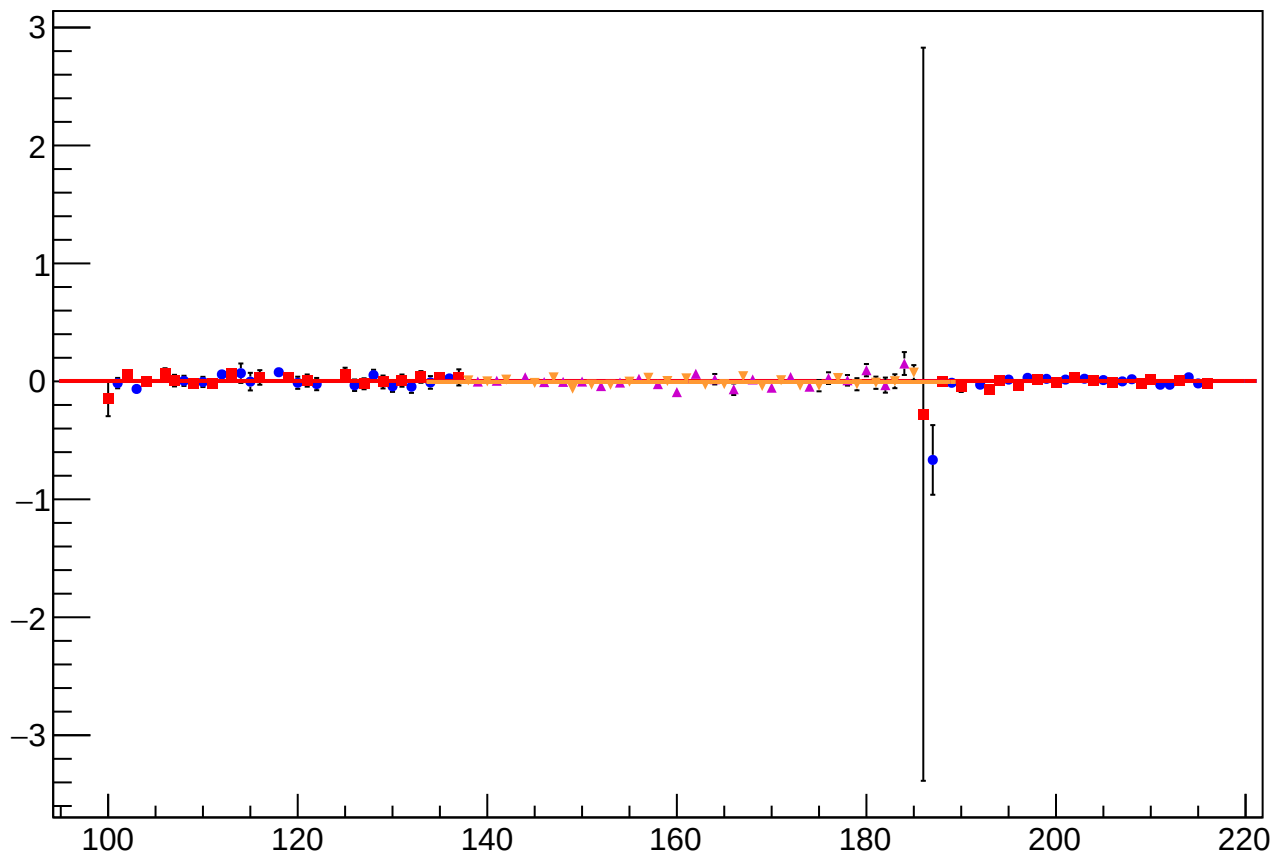
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2618852.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19399502.4/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39035556.0/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19607101.9/55

asym\_us\_dd\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.006  $\chi^2$ /NDF: 28.6/30

Left Out: -0.005 $\pm$ 0.007  $\chi^2$ /NDF:16.7/23

Right Out: 0.003 $\pm$ 0.006  $\chi^2$ /NDF: 23.9/32

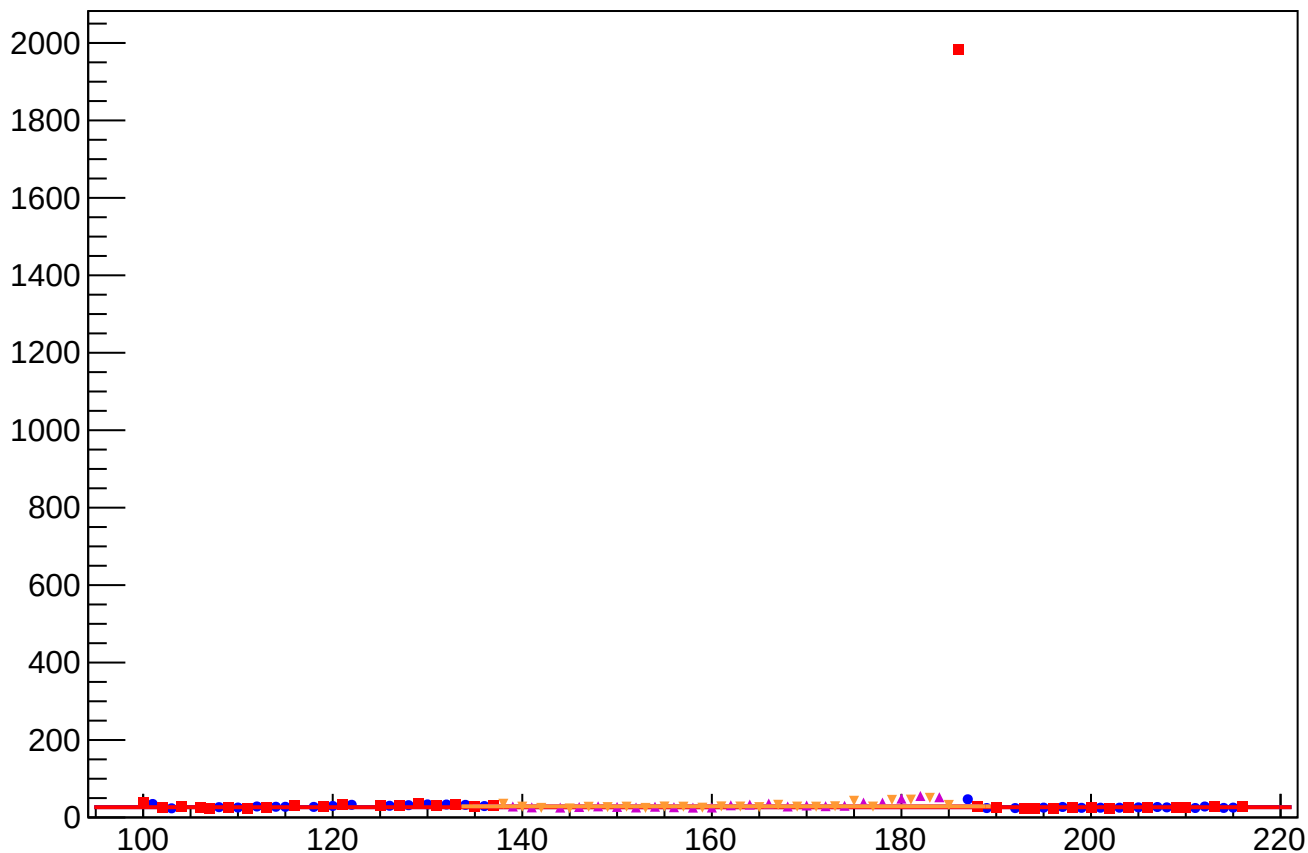
Left In: -0.004 $\pm$ 0.007  $\chi^2$ /NDF:31.2/22

+ sign -0.001 $\pm$ 0.005  $\chi^2$ /NDF: 46.1/54

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 101.8/110

- sign 0.000 $\pm$ 0.005  $\chi^2$ /NDF: 55.8/55

asym\_us\_dd\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 26.694+/-0.004  $\chi^2/\text{NDF}$ : 367580.0/30

Left Out: 28.781+/-0.005  $\chi^2/\text{NDF}$ : 1170605.8/23

Right Out: 26.436+/-0.004  $\chi^2/\text{NDF}$ : 1118175.7/32

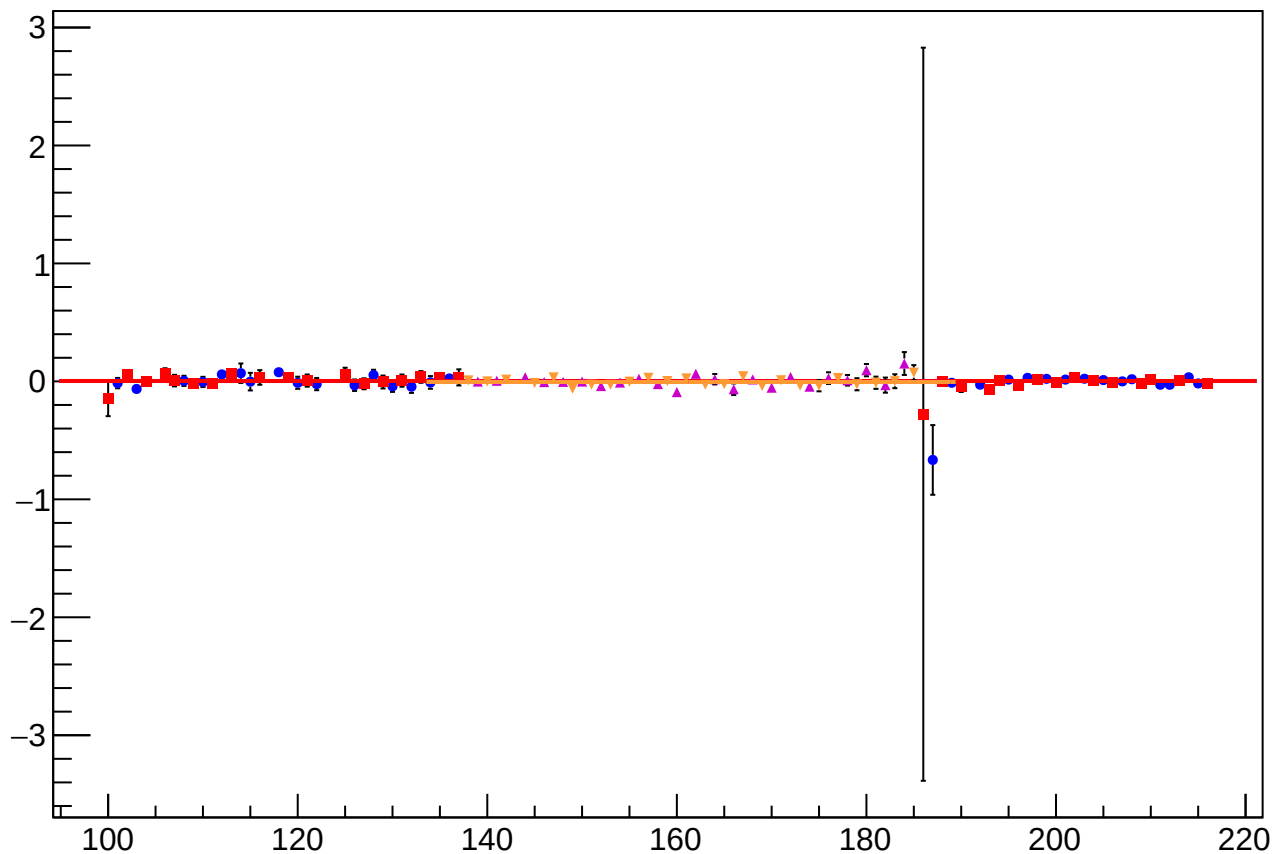
Left In: 29.255+/-0.005  $\chi^2/\text{NDF}$ : 1140337.0/22

+ sign 27.630+/-0.003  $\chi^2/\text{NDF}$ : 1634647.8/54

All: 27.651+/-0.002  $\chi^2/\text{NDF}$ : 4066333.4/110

- sign 27.673+/-0.003  $\chi^2/\text{NDF}$ : 2431603.2/55

asym\_us\_dd\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.003 $\pm$ 0.006  $\chi^2$ /NDF: 28.6/30

Left Out: -0.005 $\pm$ 0.007  $\chi^2$ /NDF: 16.7/23

Right Out: 0.003 $\pm$ 0.006  $\chi^2$ /NDF: 23.9/32

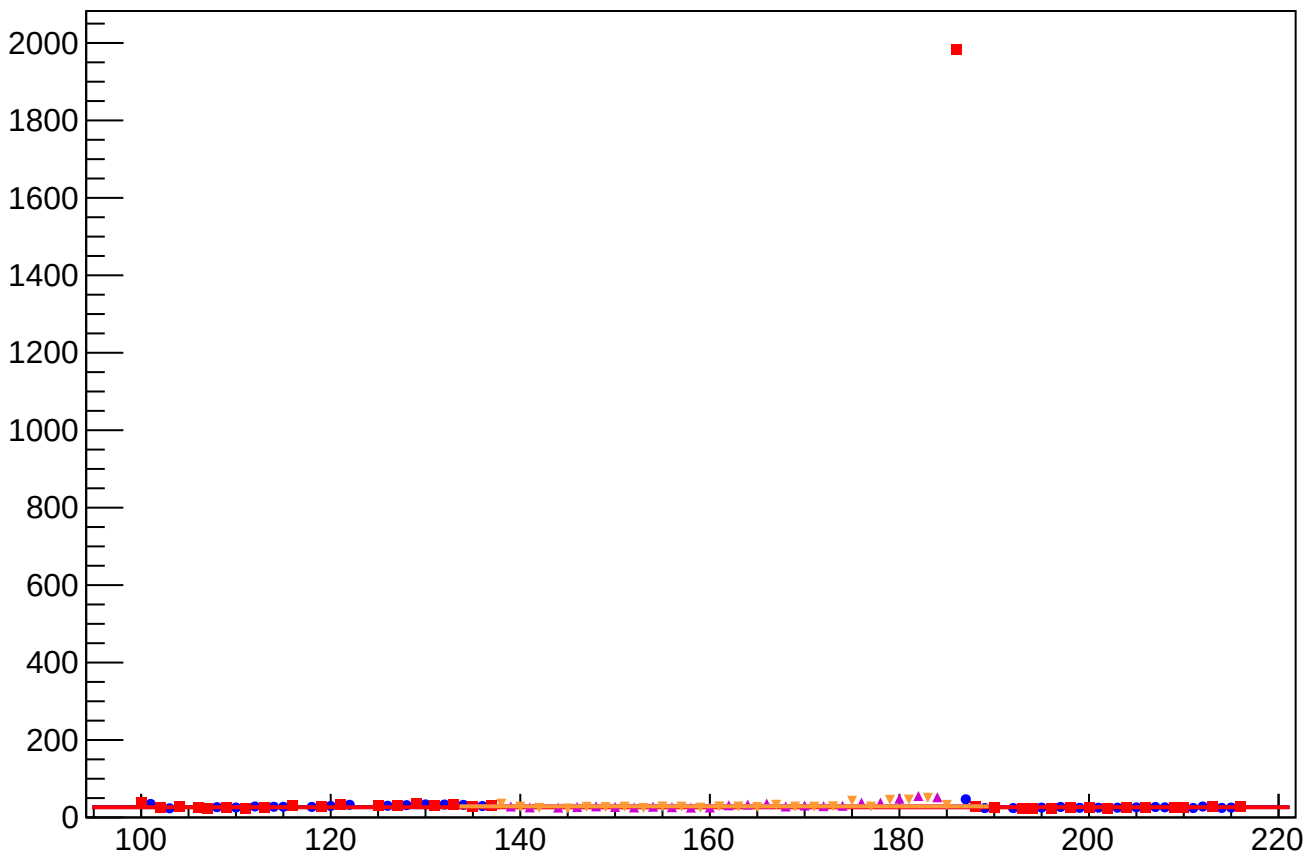
Left In: -0.004 $\pm$ 0.007  $\chi^2$ /NDF: 31.2/22

+ sign -0.001 $\pm$ 0.005  $\chi^2$ /NDF: 46.1/54

All: -0.000 $\pm$ 0.003  $\chi^2$ /NDF: 101.8/110

- sign 0.000 $\pm$ 0.005  $\chi^2$ /NDF: 55.8/55

asym\_us\_dd\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.694+/-0.004  $\chi^2/\text{NDF}$ : 367580.0/30

Left Out: 28.781+/-0.005  $\chi^2/\text{NDF}$ : 1170605.8/23

Right Out: 26.436+/-0.004  $\chi^2/\text{NDF}$ : 1118175.7/32

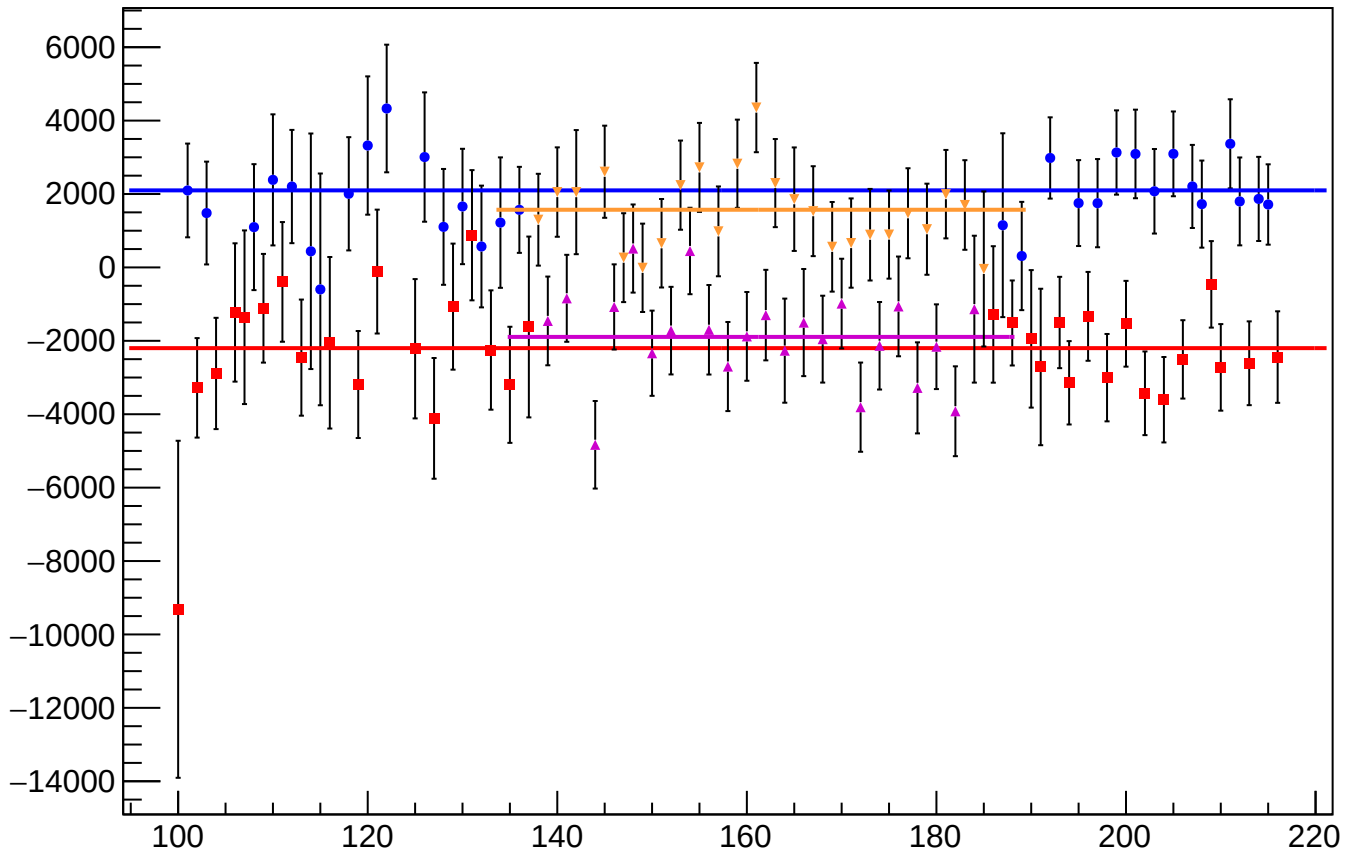
Left In: 29.255+/-0.005  $\chi^2/\text{NDF}$ : 1140337.0/22

+ sign 27.630+/-0.003  $\chi^2/\text{NDF}$ : 1634647.8/54

All: 27.651+/-0.002  $\chi^2/\text{NDF}$ : 4066333.4/110

- sign 27.673+/-0.003  $\chi^2/\text{NDF}$ : 2431603.2/55

# reg\_asym\_usl\_mean vs Slug



Right In: 2098.965 $\pm$ 248.217  $\chi^2$ /NDF: 11.7/30

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF: 15.4/23

Right Out: -2199.330 $\pm$ 247.794  $\chi^2$ /NDF: 20.9/33

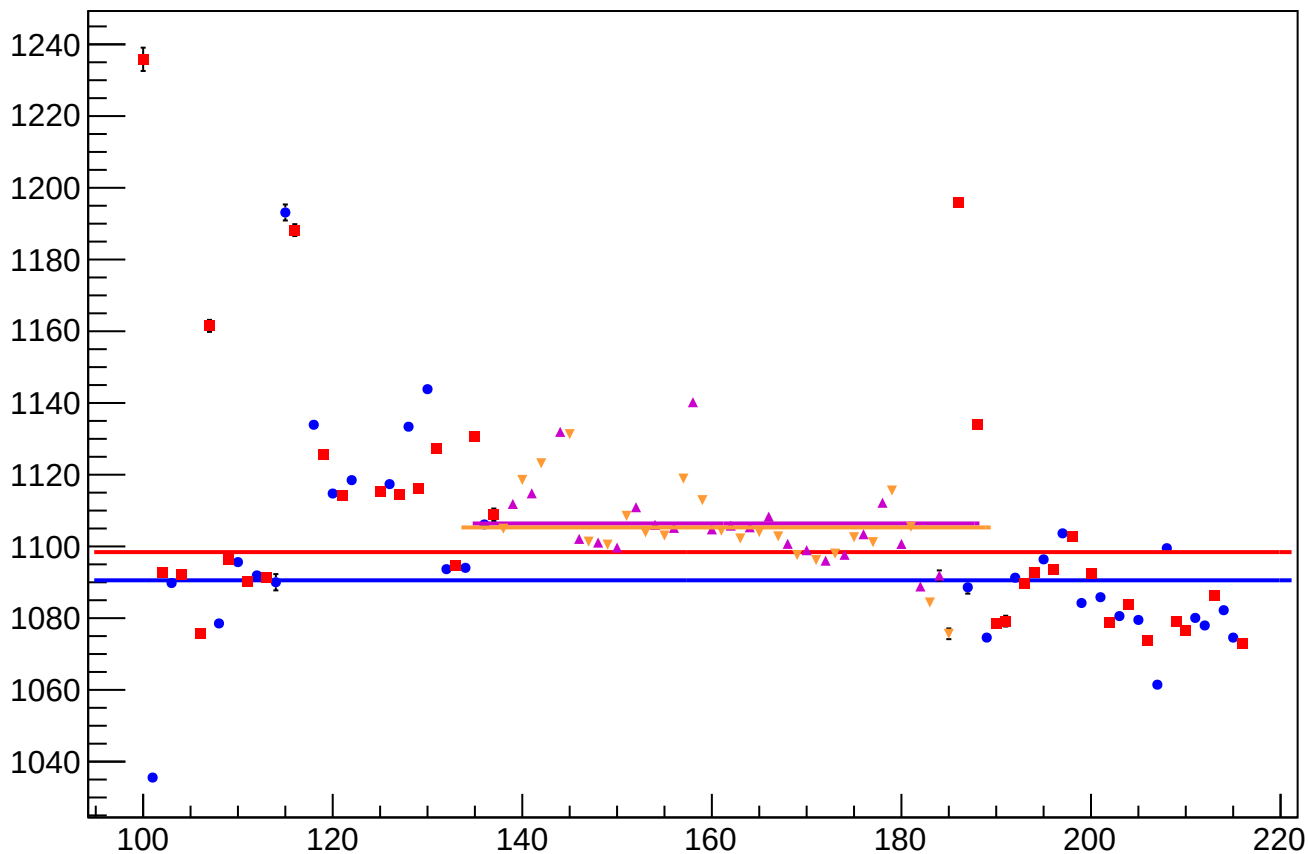
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF: 24.1/22

+ sign 1843.708 $\pm$ 178.384  $\chi^2$ /NDF: 29.3/54

All: -99.656 $\pm$ 126.294  $\chi^2$ /NDF: 313.0/111

- sign -2052.710 $\pm$ 178.829  $\chi^2$ /NDF: 45.7/56

# reg\_asym\_usl\_rms vs Slug



Right In: 1090.554 $\pm$ 0.176  $\chi^2$ /NDF: 16253.3/30

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF:3161.8/23

Right Out: 1098.419 $\pm$ 0.175  $\chi^2$ /NDF: 21782.6/33

Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF:3776.4/22

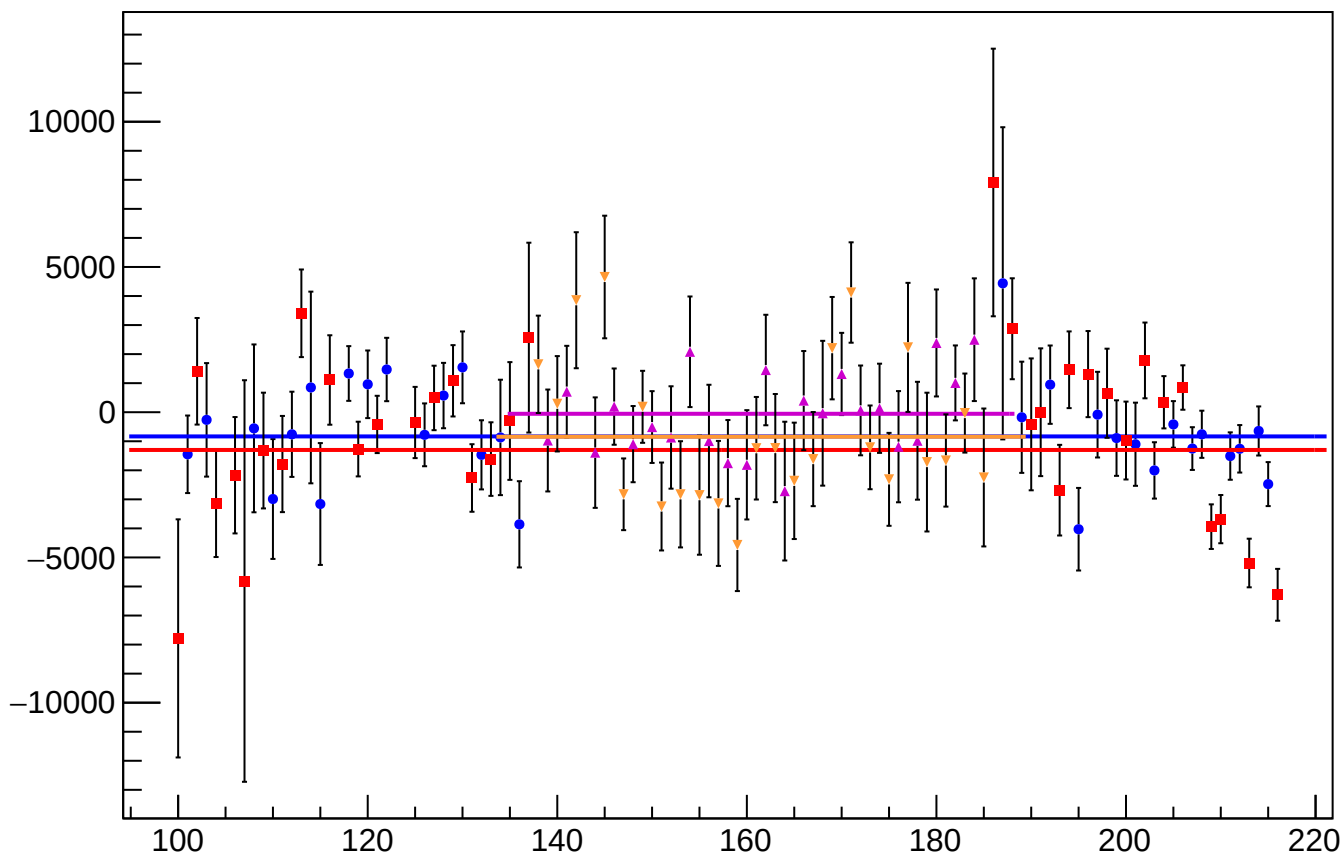
+ sign 1097.681 $\pm$ 0.126  $\chi^2$ /NDF: 22825.3/54

All: 1099.958 $\pm$ 0.089  $\chi^2$ /NDF: 50032.8/111

- sign 1102.246 $\pm$ 0.126  $\chi^2$ /NDF: 26554.4/56



# asym\_usl\_reg\_correction\_mean vs Slug



Right In: -833.300+/-206.727  $\chi^2/\text{NDF}$ : 40.7/30

Left Out: -844.649+/-347.346  $\chi^2/\text{NDF}$ : 44.2/23

Right Out: -1299.623+/-218.409  $\chi^2/\text{NDF}$ : 138.6/33

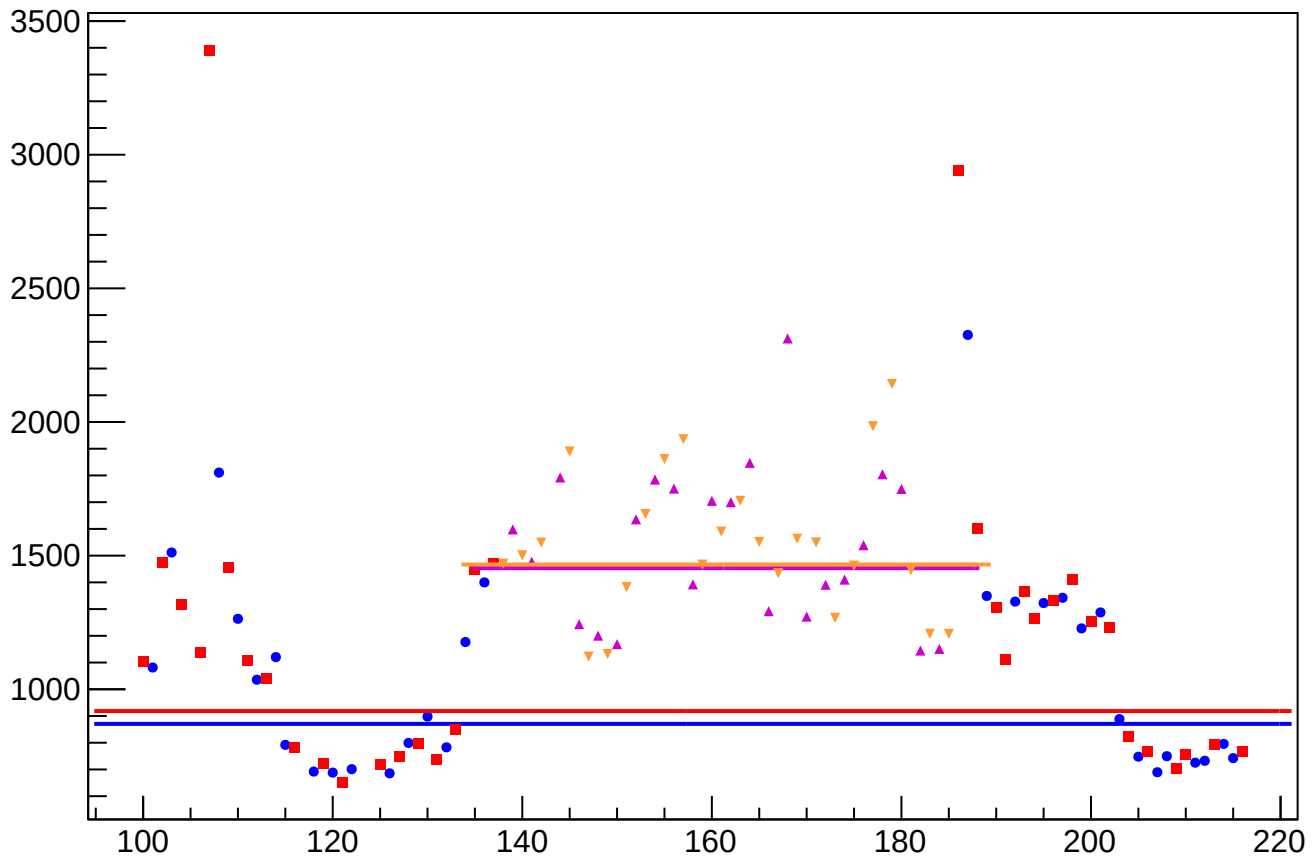
Left In: -54.347+/-345.962  $\chi^2/\text{NDF}$ : 13.0/22

+ sign -836.268+/-177.645  $\chi^2/\text{NDF}$ : 84.8/54

All: -888.403+/-128.030  $\chi^2/\text{NDF}$ : 245.9/111

- sign -944.751+/-184.685  $\chi^2/\text{NDF}$ : 160.9/56

# asym\_usl\_reg\_correction\_rms vs Slug



Right In: 870.499+/-0.146  $\chi^2/\text{NDF}$ : 2774370.2/30

Left Out: 1466.846+/-0.246  $\chi^2/\text{NDF}$ : 1043303.8/23

Right Out: 918.435+/-0.154  $\chi^2/\text{NDF}$ : 3470325.4/33

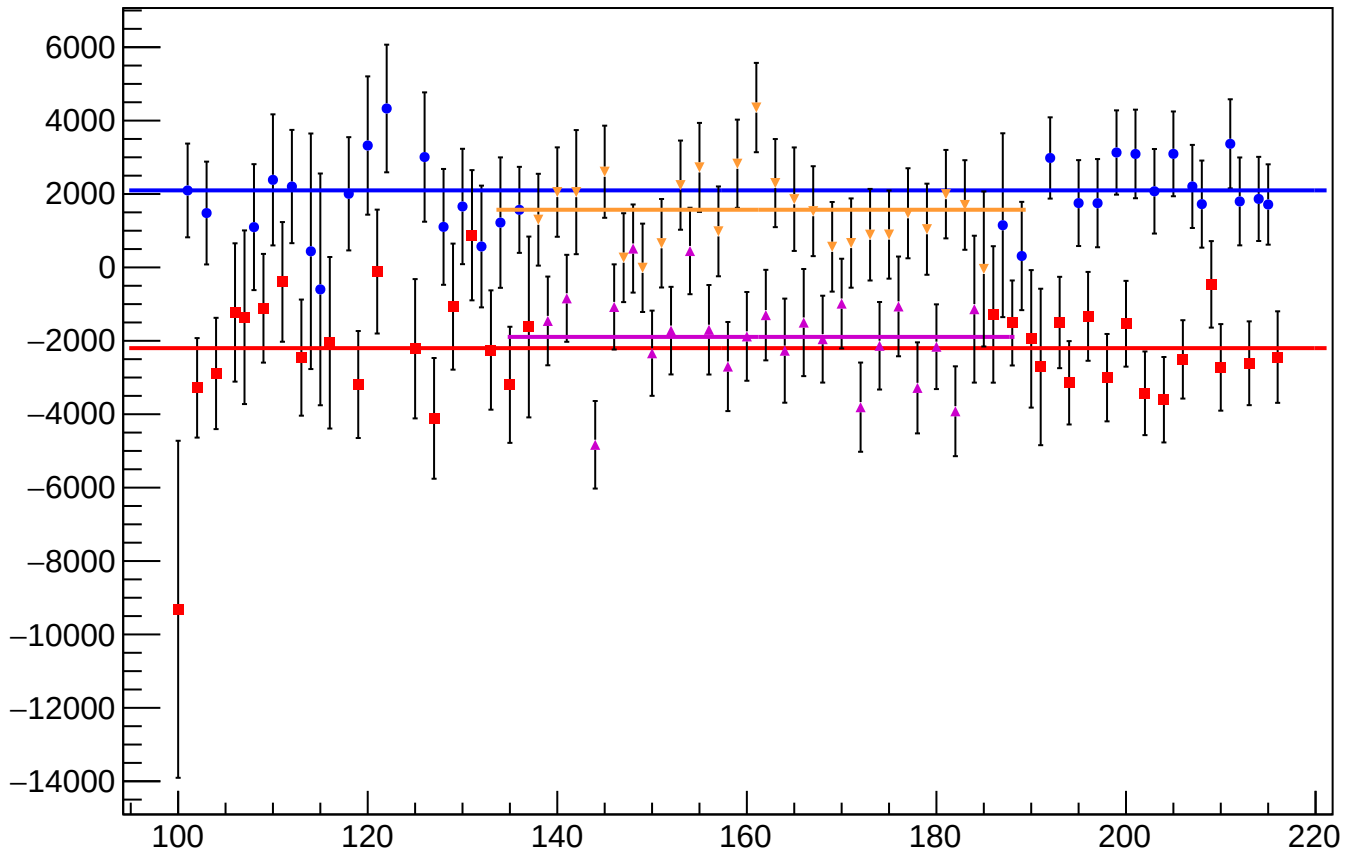
Left In: 1452.983+/-0.245  $\chi^2/\text{NDF}$ : 1129567.2/22

+ sign 1026.483+/-0.126  $\chi^2/\text{NDF}$ : 8170927.6/54

All: 1047.765+/-0.091  $\chi^2/\text{NDF}$ : 16244586.4/1

- sign 1070.767+/-0.131  $\chi^2/\text{NDF}$ : 8013929.8/56

# cor\_asym\_usl\_mean vs Slug



Right In: 2098.965 $\pm$ 248.217  $\chi^2$ /NDF: 11.7/30

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF: 15.4/23

Right Out: -2199.323 $\pm$ 247.794  $\chi^2$ /NDF: 20.9/33

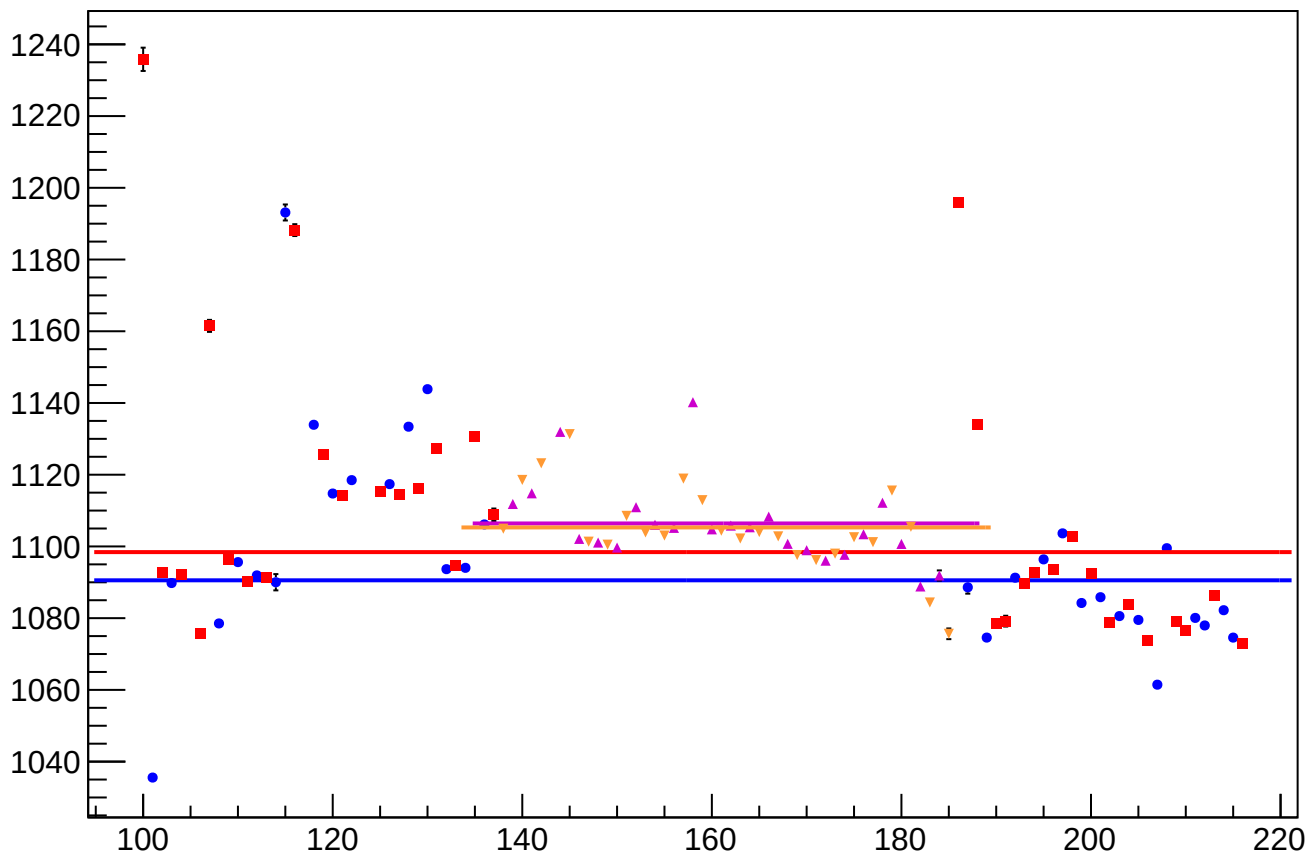
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF: 24.1/22

+ sign 1843.708 $\pm$ 178.384  $\chi^2$ /NDF: 29.3/54

All: -99.654 $\pm$ 126.294  $\chi^2$ /NDF: 313.0/111

- sign -2052.707 $\pm$ 178.829  $\chi^2$ /NDF: 45.7/56

# cor\_asym\_usl\_rms vs Slug



Right In: 1090.554 $\pm$ 0.176  $\chi^2$ /NDF: 16253.3/30

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF:3161.8/23

Right Out: 1098.419 $\pm$ 0.175  $\chi^2$ /NDF: 21782.6/33

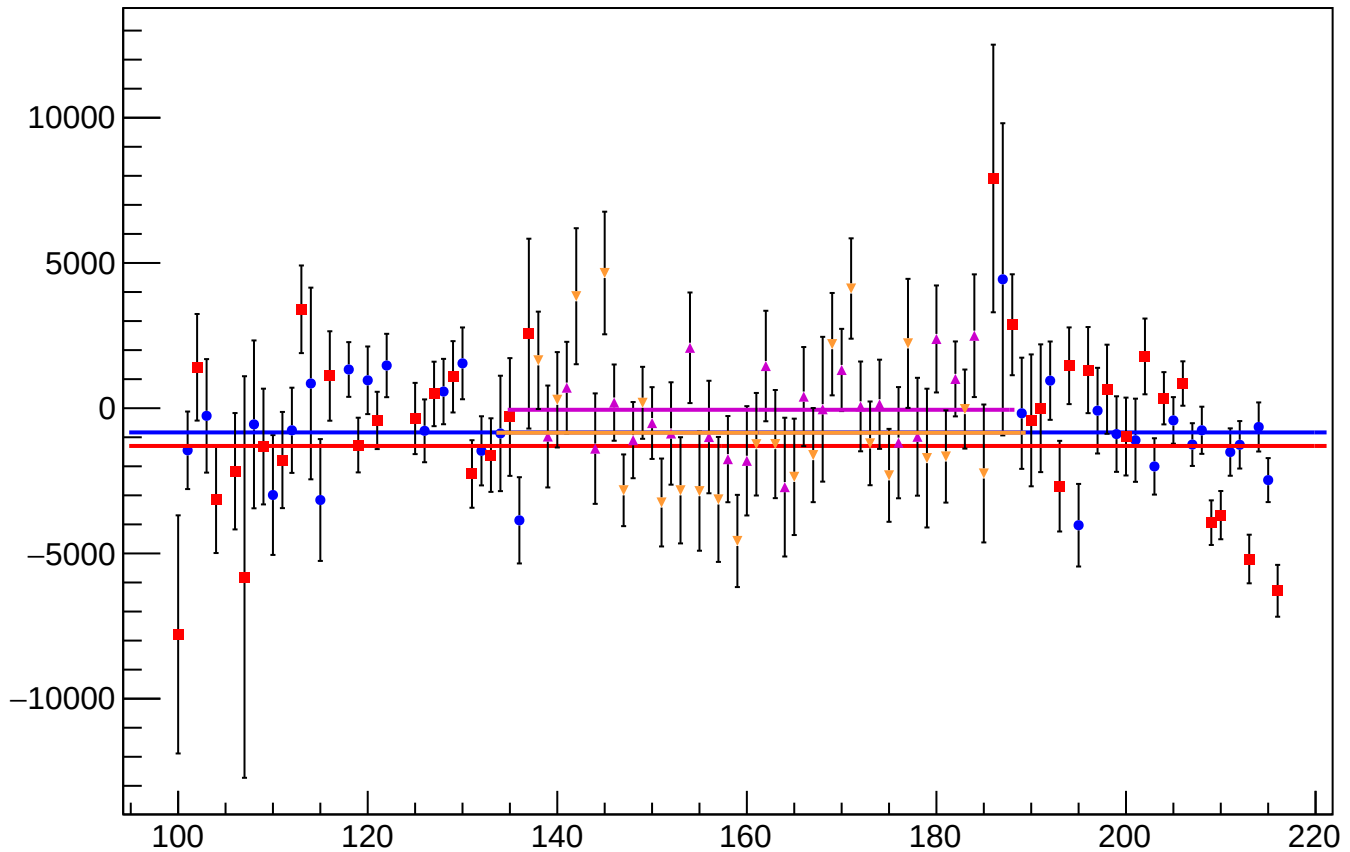
Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF:3776.4/22

+ sign 1097.681 $\pm$ 0.126  $\chi^2$ /NDF: 22825.3/54

All: 1099.958 $\pm$ 0.089  $\chi^2$ /NDF: 50032.8/111

- sign 1102.246 $\pm$ 0.126  $\chi^2$ /NDF: 26554.4/56

# asym\_usl\_cor\_correction\_mean vs Slug



Right In: -833.300+/-206.727  $\chi^2/\text{NDF}$ : 40.7/30

Left Out: -844.649+/-347.346  $\chi^2/\text{NDF}$ : 44.2/23

Right Out: -1299.622+/-218.409  $\chi^2/\text{NDF}$ : 138.6/33

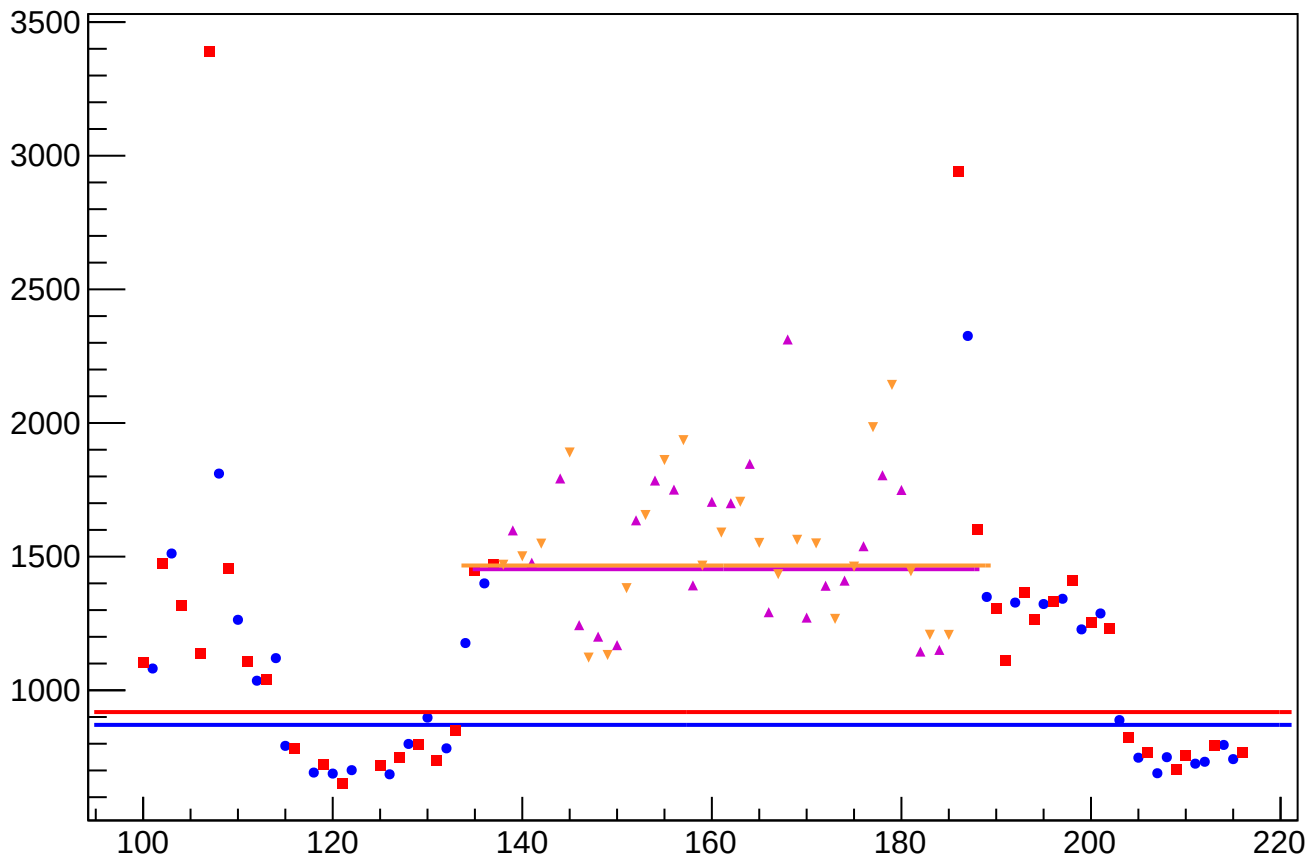
Left In: -54.347+/-345.962  $\chi^2/\text{NDF}$ : 13.0/22

+ sign -836.268+/-177.645  $\chi^2/\text{NDF}$ : 84.8/54

All: -888.402+/-128.030  $\chi^2/\text{NDF}$ : 245.9/111

- sign -944.751+/-184.685  $\chi^2/\text{NDF}$ : 160.9/56

# asym\_usl\_cor\_correction\_rms vs Slug



Right In: 870.499 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 2774370.2/30

Left Out: 1466.846 $\pm$ 0.246  $\chi^2/\text{NDF}$ : 1043303.8/23

Right Out: 918.434 $\pm$ 0.154  $\chi^2/\text{NDF}$ : 3470323.7/33

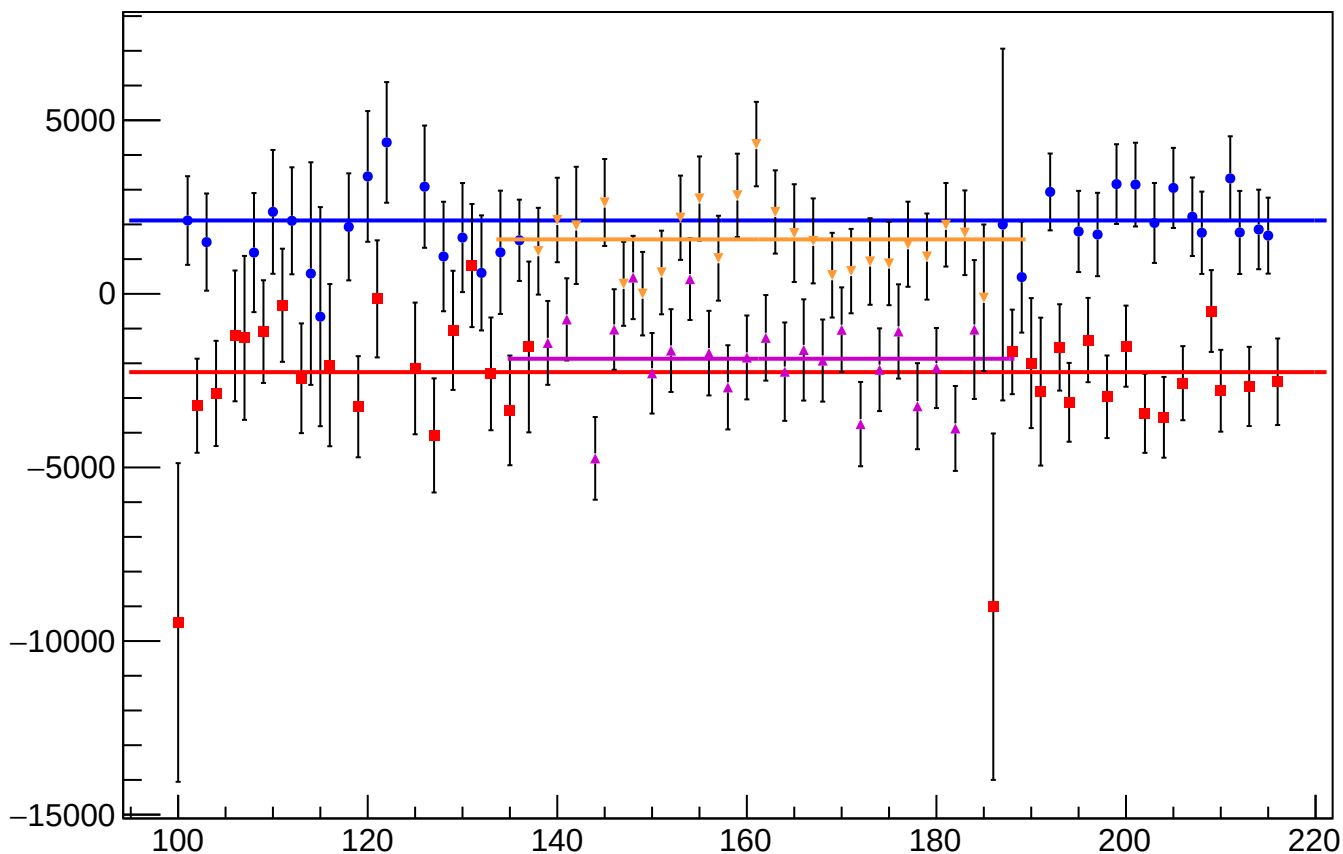
Left In: 1452.983 $\pm$ 0.245  $\chi^2/\text{NDF}$ : 1129567.2/22

+ sign 1026.483 $\pm$ 0.126  $\chi^2/\text{NDF}$ : 8170927.6/54

All: 1047.765 $\pm$ 0.091  $\chi^2/\text{NDF}$ : 16244585.8/1

- sign 1070.767 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 8013929.4/56

# overload\_cor\_asym\_usl\_mean vs Slug



Right In: 2113.712 $\pm$ 249.512  $\chi^2$ /NDF: 11.2/30

Left Out: 1568.786 $\pm$ 256.294  $\chi^2$ /NDF: 15.4/23

Right Out: -2254.802 $\pm$ 250.138  $\chi^2$ /NDF: 22.5/33

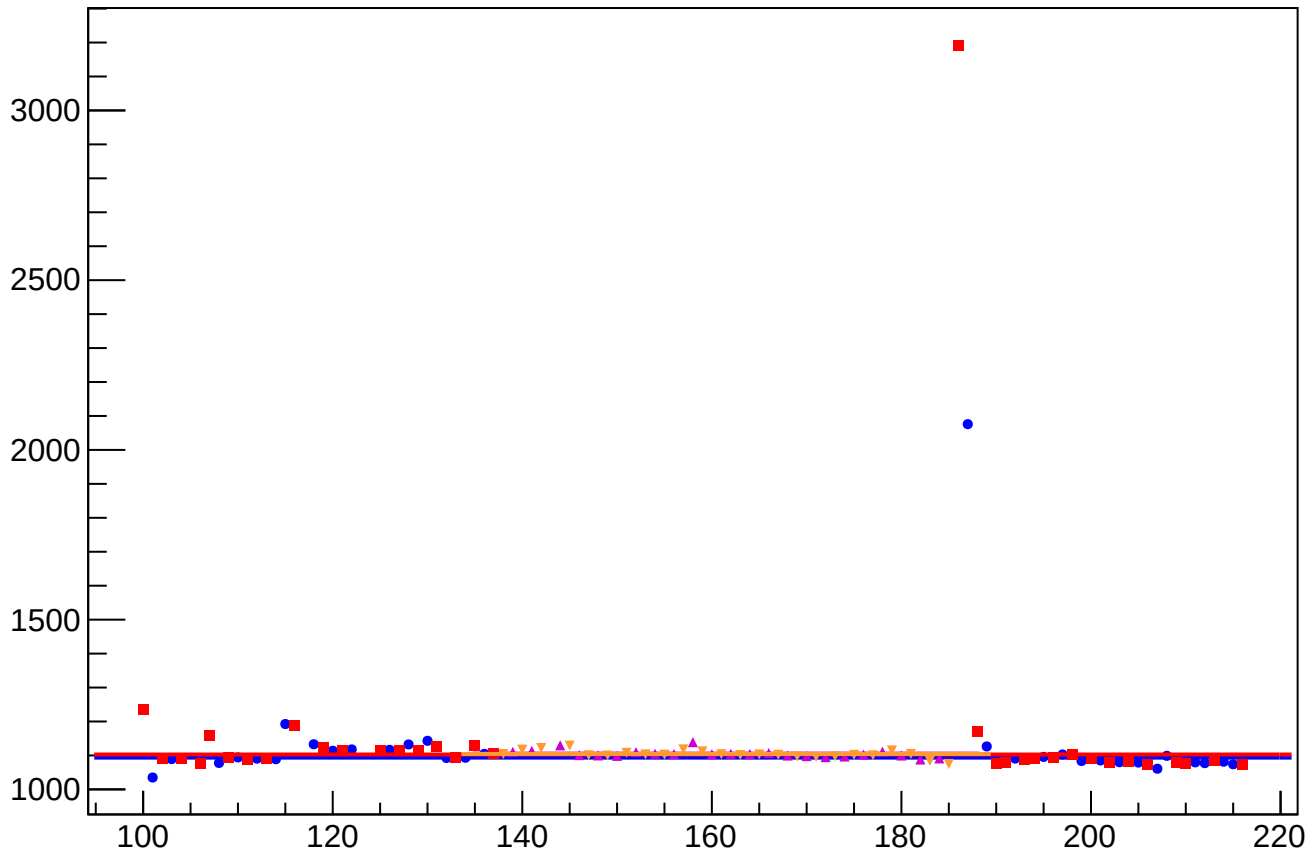
Left In: -1869.342 $\pm$ 258.099  $\chi^2$ /NDF: 23.4/22

+ sign 1848.554 $\pm$ 178.781  $\chi^2$ /NDF: 28.9/54

All: -100.580 $\pm$ 126.714  $\chi^2$ /NDF: 314.8/111

- sign -2068.109 $\pm$ 179.623  $\chi^2$ /NDF: 47.0/56

# overload\_cor\_asym\_usl\_rms vs Slug



Right In: 1093.574+/-0.176  $\chi^2/\text{NDF}$ : 92243.9/30

Left Out: 1104.258+/-0.181  $\chi^2/\text{NDF}$ : 2999.2/23

Right Out: 1102.728+/-0.177  $\chi^2/\text{NDF}$ : 372701.1/33

Left In: 1105.380+/-0.183  $\chi^2/\text{NDF}$ : 3661.0/22

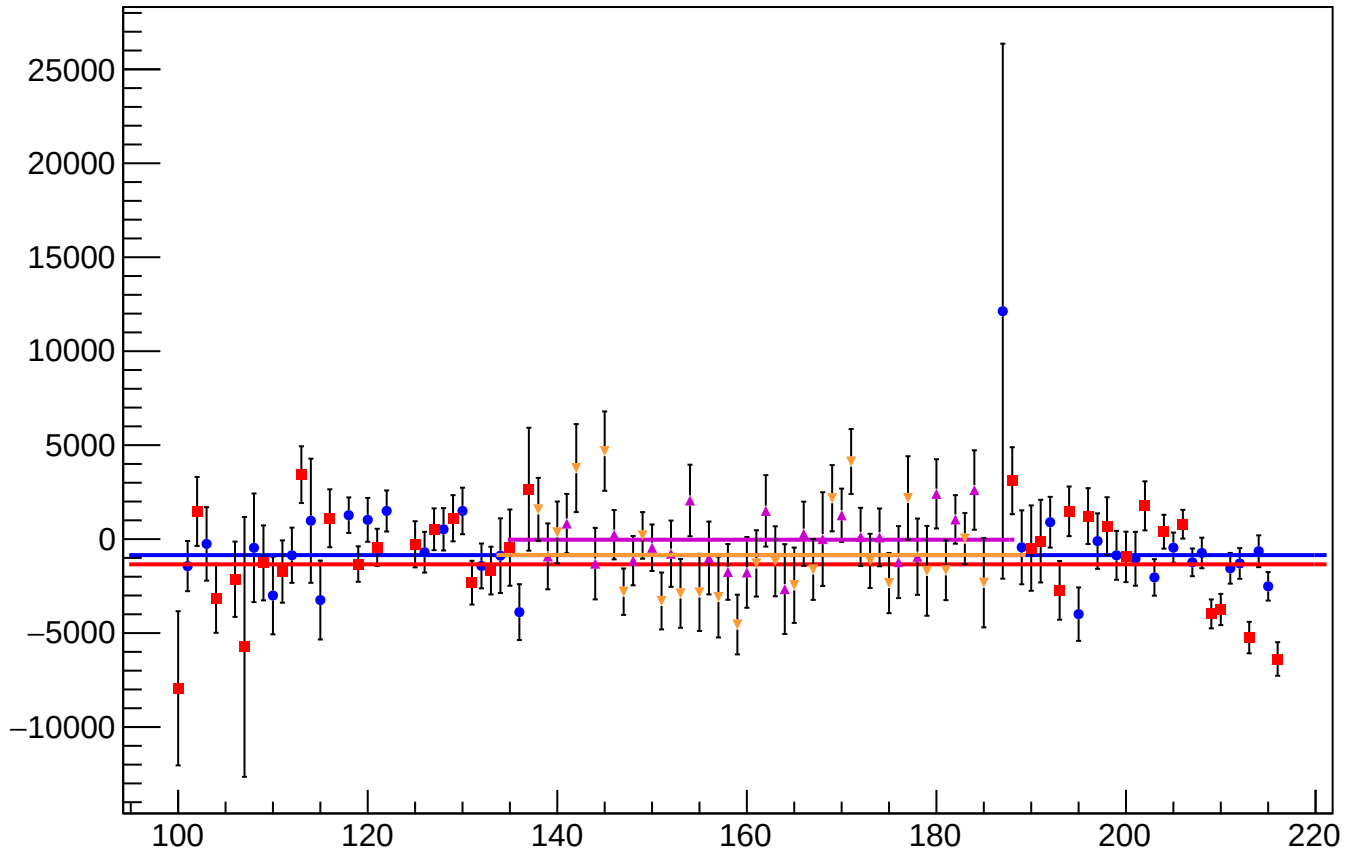
+ sign 1098.773+/-0.126  $\chi^2/\text{NDF}$ : 97027.6/54

All: 1101.380+/-0.090  $\chi^2/\text{NDF}$ : 474353.7/111

- sign 1104.013+/-0.127  $\chi^2/\text{NDF}$ : 376471.1/56



asym\_usl\_overload\_cor\_correction\_mean vs Slug



Right In:  $-850.783 \pm 207.167$   $\chi^2/\text{NDF}$ : 40.4/30

Left Out:  $-843.280 \pm 347.538$   $\chi^2/\text{NDF}$ : 44.0/23

Right Out:  $-1341.659 \pm 219.001$   $\chi^2/\text{NDF}$ : 137.5/32

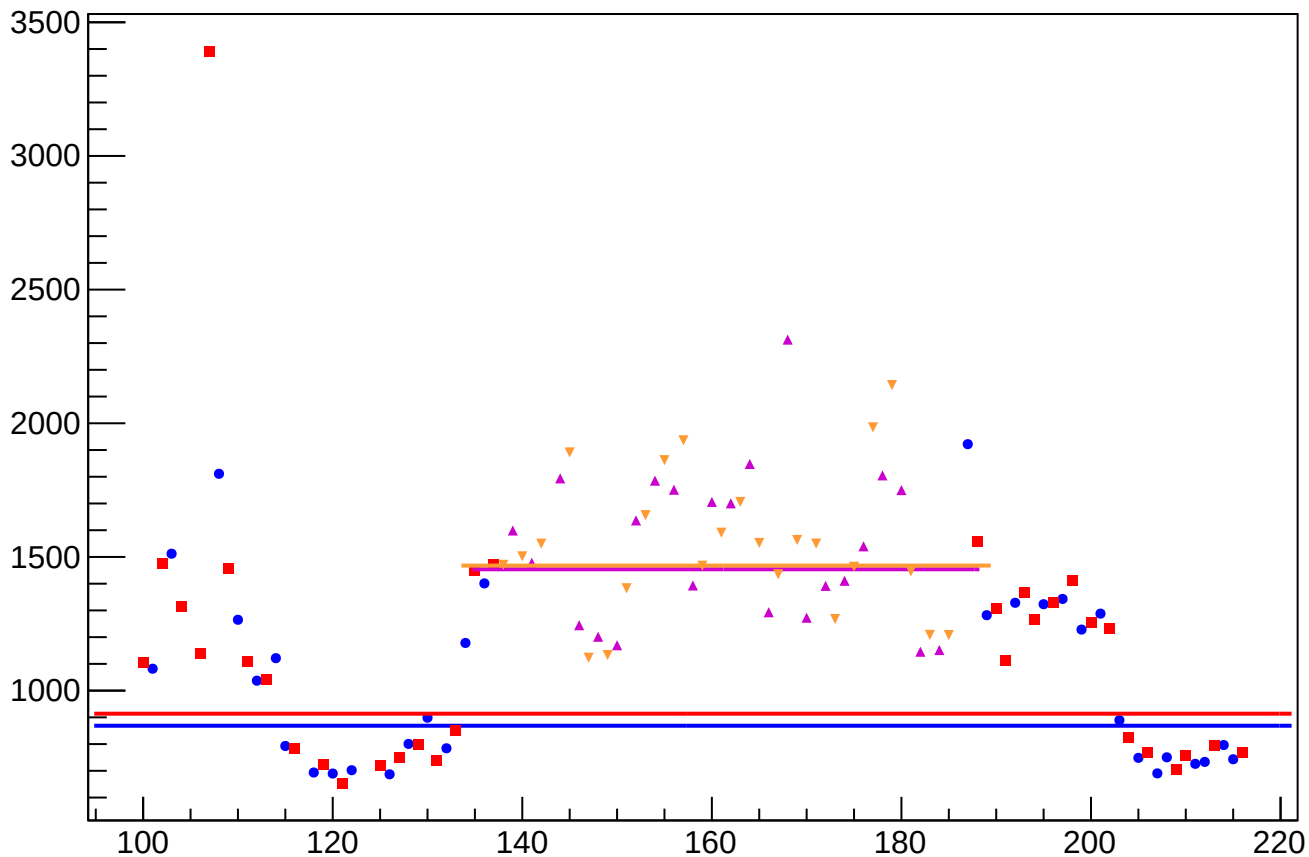
Left In:  $-31.387 \pm 346.155$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-848.816 \pm 177.950$   $\chi^2/\text{NDF}$ : 84.5/54

All:  $-905.646 \pm 128.273$   $\chi^2/\text{NDF}$ : 245.4/110

- sign  $-967.117 \pm 185.072$   $\chi^2/\text{NDF}$ : 160.8/55

# asym\_usl\_overload\_cor\_correction\_rms vs Slug



Right In: 868.646 $\pm$ 0.146  $\chi^2$ /NDF: 2593931.2/30

Left Out: 1467.697 $\pm$ 0.246  $\chi^2$ /NDF:1041877.5/23

Right Out: 913.701 $\pm$ 0.155  $\chi^2$ /NDF: 3020768.5/32

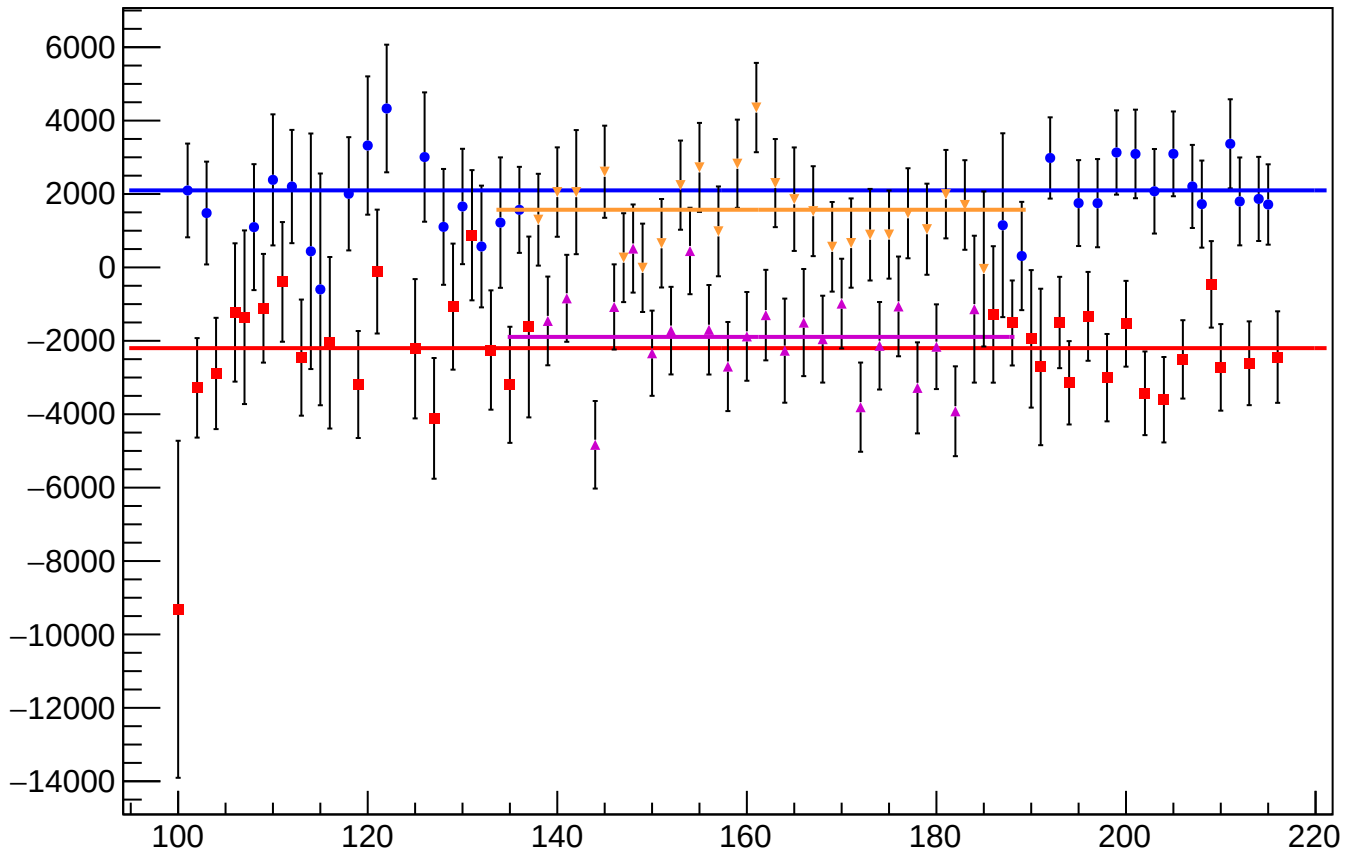
Left In: 1453.834 $\pm$ 0.245  $\chi^2$ /NDF:1127997.5/22

+ sign 1025.702 $\pm$ 0.126  $\chi^2$ /NDF: 8020173.5/54

All: 1046.068 $\pm$ 0.091  $\chi^2$ /NDF: 15701071.5/1

- sign 1068.098 $\pm$ 0.131  $\chi^2$ /NDF: 7626361.4/55

# eigen\_cor\_asym\_usl\_mean vs Slug



Right In: 2098.965 $\pm$ 248.217  $\chi^2$ /NDF: 11.7/30

Left Out: 1571.055 $\pm$ 256.536  $\chi^2$ /NDF:15.4/23

Right Out: -2199.323 $\pm$ 247.794  $\chi^2$ /NDF: 20.9/33

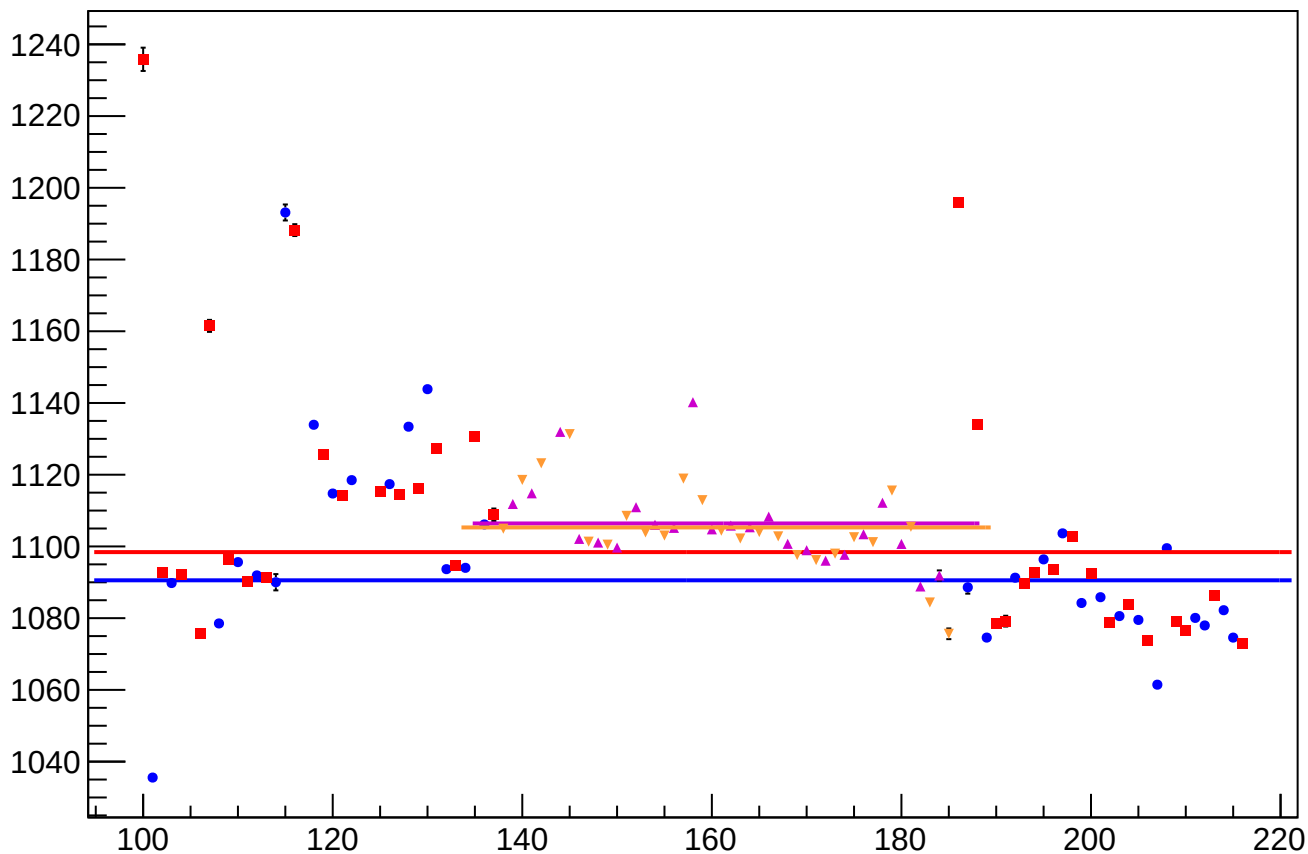
Left In: -1893.347 $\pm$ 258.339  $\chi^2$ /NDF:24.1/22

+ sign 1843.708 $\pm$ 178.384  $\chi^2$ /NDF: 29.3/54

All: -99.654 $\pm$ 126.294  $\chi^2$ /NDF: 313.0/111

- sign -2052.707 $\pm$ 178.829  $\chi^2$ /NDF: 45.7/56

# eigen\_cor\_asym\_usl\_rms vs Slug



Right In: 1090.554 $\pm$ 0.176  $\chi^2$ /NDF: 16253.3/30

Left Out: 1105.294 $\pm$ 0.181  $\chi^2$ /NDF: 3161.8/23

Right Out: 1098.419 $\pm$ 0.175  $\chi^2$ /NDF: 21782.6/33

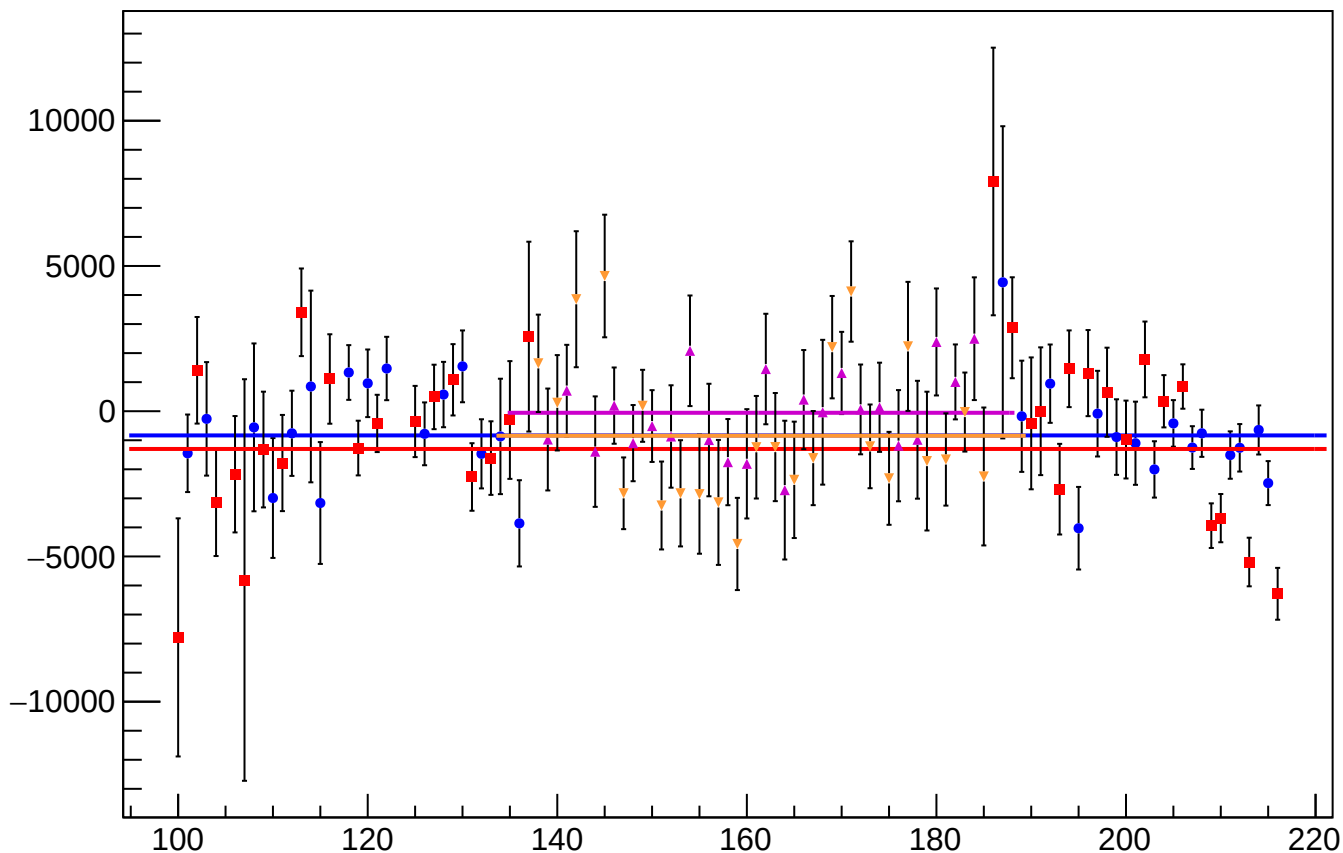
Left In: 1106.405 $\pm$ 0.183  $\chi^2$ /NDF: 3776.4/22

+ sign 1097.681 $\pm$ 0.126  $\chi^2$ /NDF: 22825.3/54

All: 1099.958 $\pm$ 0.089  $\chi^2$ /NDF: 50032.8/111

- sign 1102.246 $\pm$ 0.126  $\chi^2$ /NDF: 26554.4/56

# asym\_usl\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-833.300 \pm 206.727$   $\chi^2/\text{NDF}: 40.7/30$

Left Out:  $-844.649 \pm 347.346$   $\chi^2/\text{NDF}: 44.2/23$

Right Out:  $-1299.622 \pm 218.409$   $\chi^2/\text{NDF}: 138.6/33$

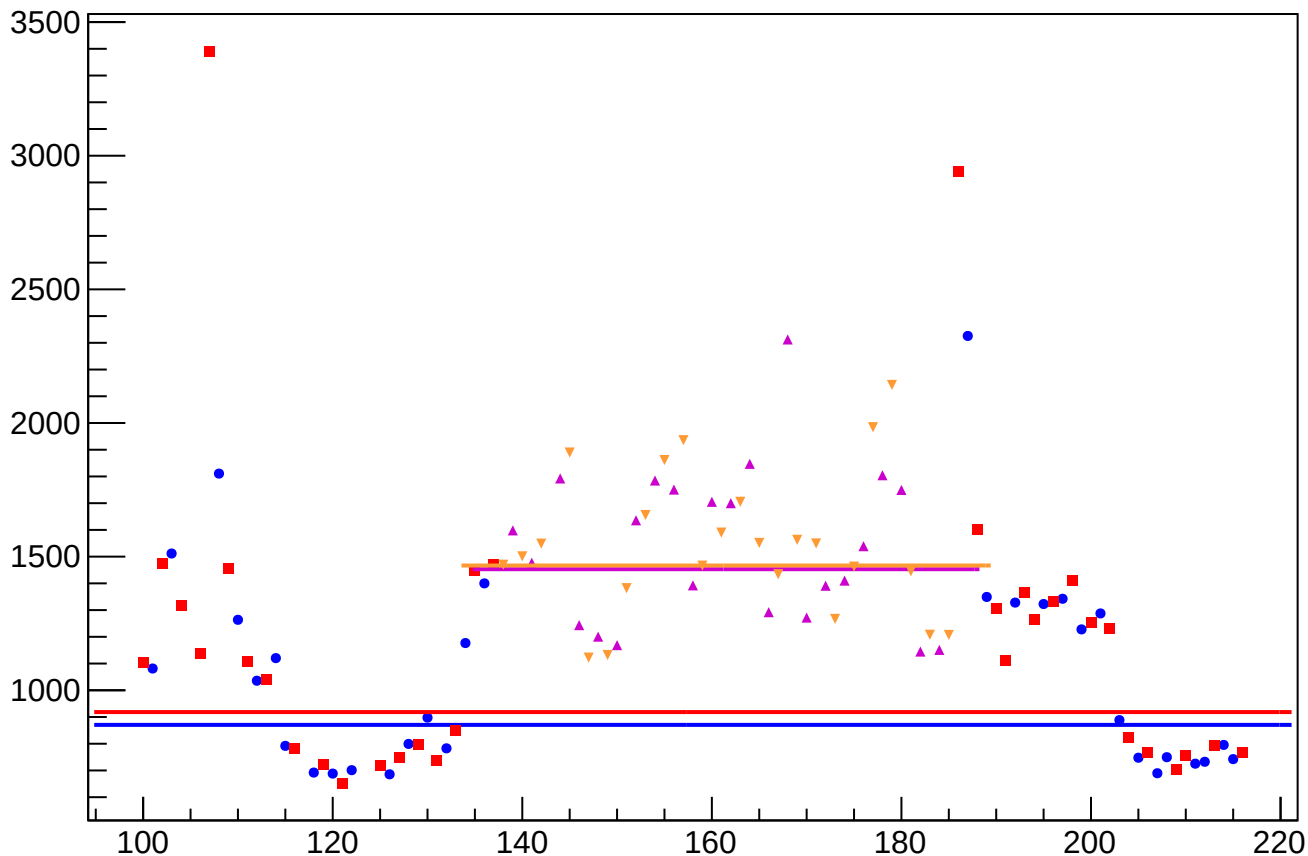
Left In:  $-54.347 \pm 345.962$   $\chi^2/\text{NDF}: 13.0/22$

+ sign  $-836.268 \pm 177.645$   $\chi^2/\text{NDF}: 84.8/54$

All:  $-888.402 \pm 128.030$   $\chi^2/\text{NDF}: 245.9/111$

- sign  $-944.751 \pm 184.685$   $\chi^2/\text{NDF}: 160.9/56$

# asym\_usl\_eigen\_cor\_correction\_rms vs Slug



Right In: 870.499 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 2774370.2/30

Left Out: 1466.846 $\pm$ 0.246  $\chi^2/\text{NDF}$ : 1043303.8/23

Right Out: 918.434 $\pm$ 0.154  $\chi^2/\text{NDF}$ : 3470323.7/33

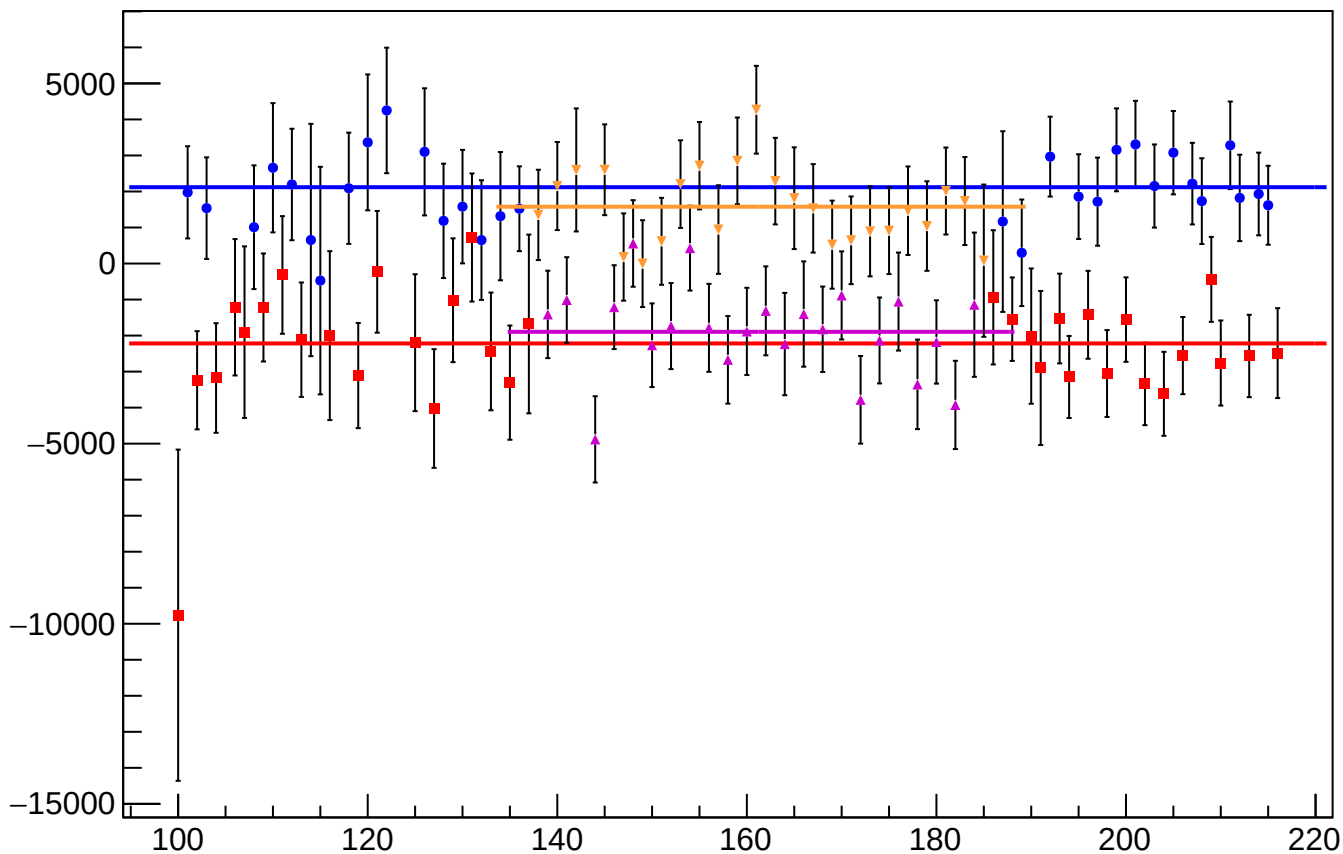
Left In: 1452.983 $\pm$ 0.245  $\chi^2/\text{NDF}$ : 1129567.2/22

+ sign 1026.483 $\pm$ 0.126  $\chi^2/\text{NDF}$ : 8170927.6/54

All: 1047.765 $\pm$ 0.091  $\chi^2/\text{NDF}$ : 16244585.8/1

- sign 1070.767 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 8013929.4/56

# dit\_asym\_usl\_mean vs Slug



Right In: 2119.053 $\pm$ 248.949  $\chi^2$ /NDF: 11.7/30

Left Out: 1577.402 $\pm$ 257.003  $\chi^2$ /NDF: 15.5/23

Right Out: -2218.454 $\pm$ 248.631  $\chi^2$ /NDF: 20.7/33

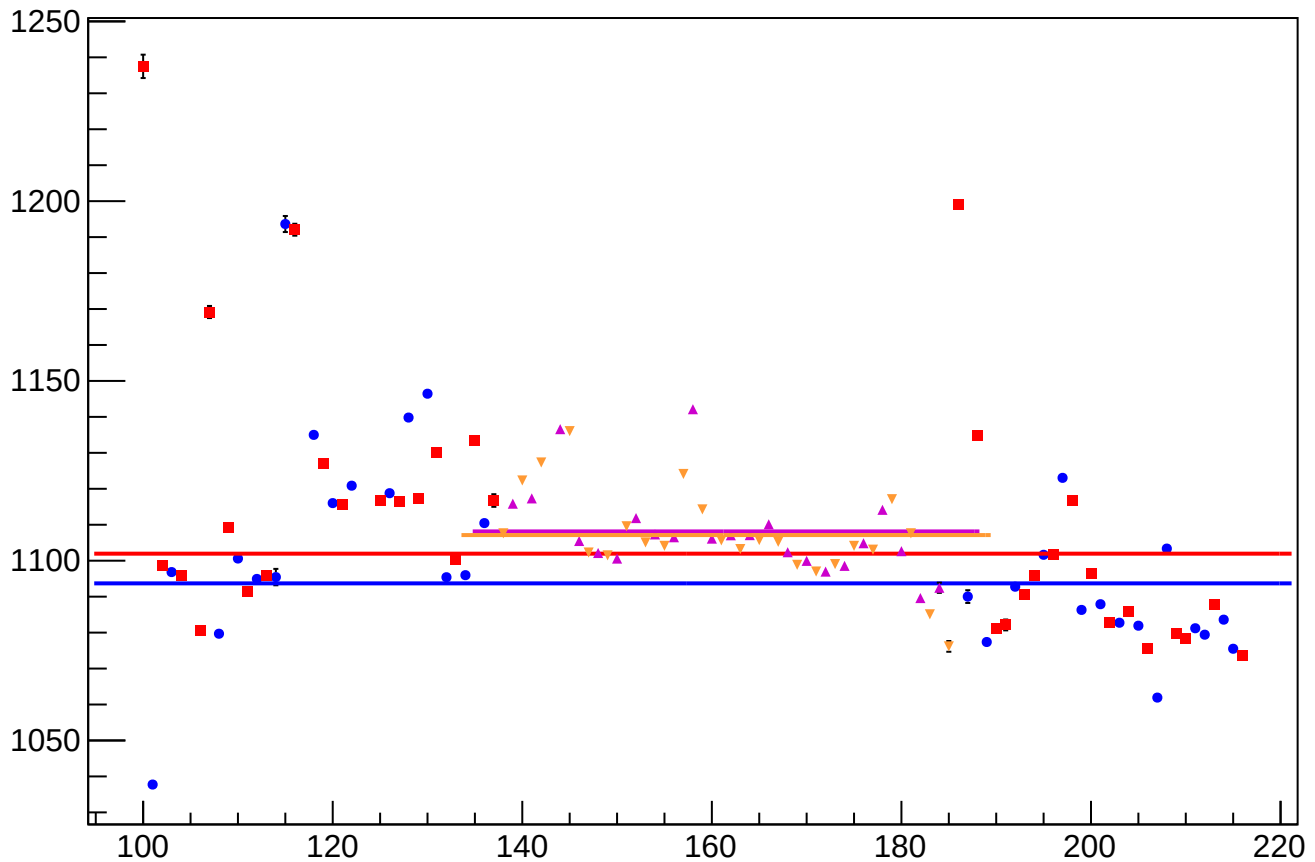
Left In: -1895.548 $\pm$ 258.750  $\chi^2$ /NDF: 24.1/22

+ sign 1856.848 $\pm$ 178.813  $\chi^2$ /NDF: 29.5/54

All: -98.189 $\pm$ 126.604  $\chi^2$ /NDF: 314.9/111

- sign -2063.438 $\pm$ 179.279  $\chi^2$ /NDF: 45.6/56

# dit\_asym\_usl\_rms vs Slug



Right In: 1093.695 $\pm$ 0.176  $\chi^2$ /NDF: 17854.5/30

Left Out: 1107.127 $\pm$ 0.182  $\chi^2$ /NDF: 3783.7/23

Right Out: 1101.956 $\pm$ 0.176  $\chi^2$ /NDF: 22296.0/33

Left In: 1108.145 $\pm$ 0.183  $\chi^2$ /NDF: 4190.5/22

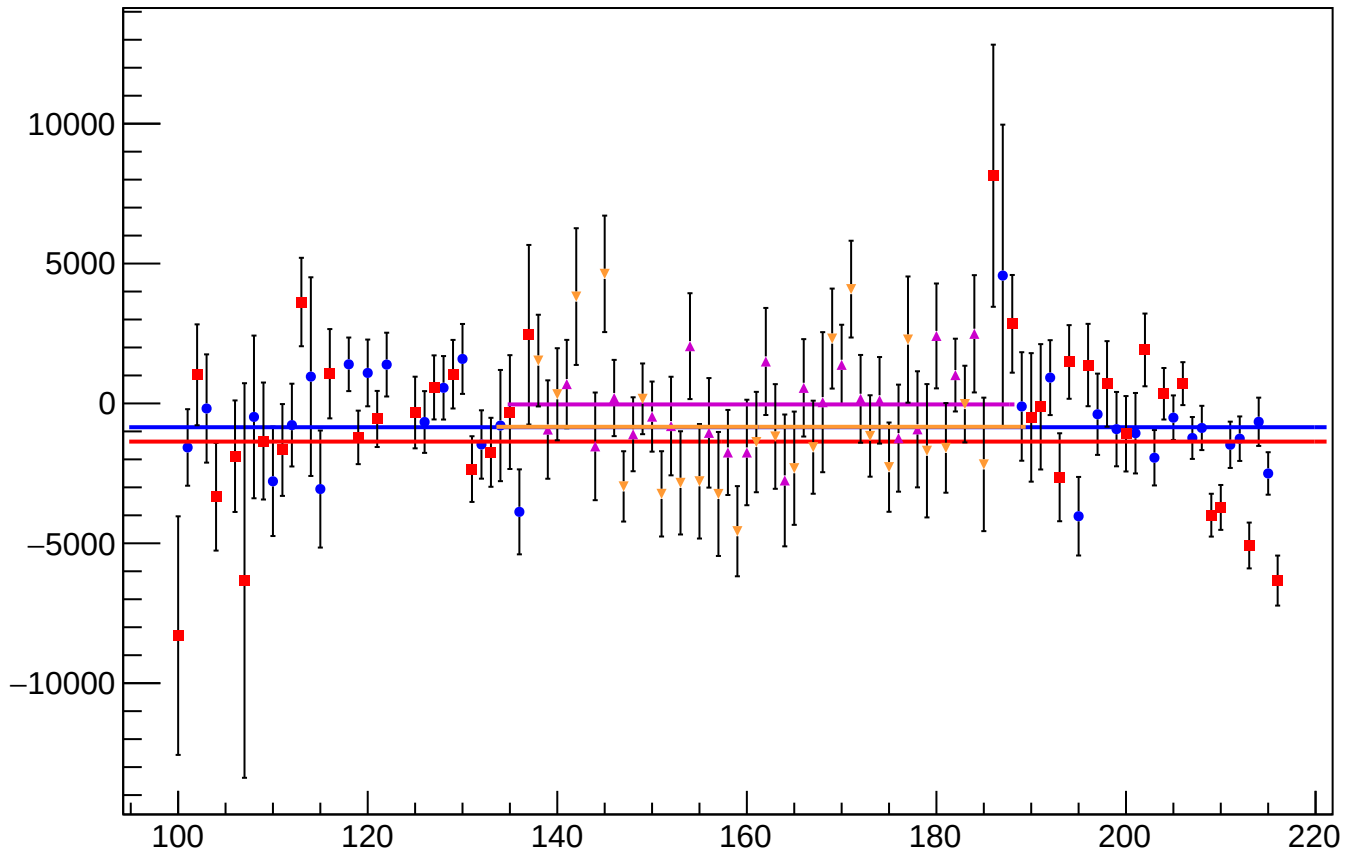
+ sign 1100.197 $\pm$ 0.126  $\chi^2$ /NDF: 24456.5/54

All: 1102.556 $\pm$ 0.090  $\chi^2$ /NDF: 52235.9/111

- sign 1104.927 $\pm$ 0.127  $\chi^2$ /NDF: 27081.5/56



# asym\_usl\_dit\_correction\_mean vs Slug



Right In:  $-850.255 \pm 208.132$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $-835.288 \pm 350.615$   $\chi^2/\text{NDF}$ : 43.6/23

Right Out:  $-1364.230 \pm 219.282$   $\chi^2/\text{NDF}$ : 138.8/33

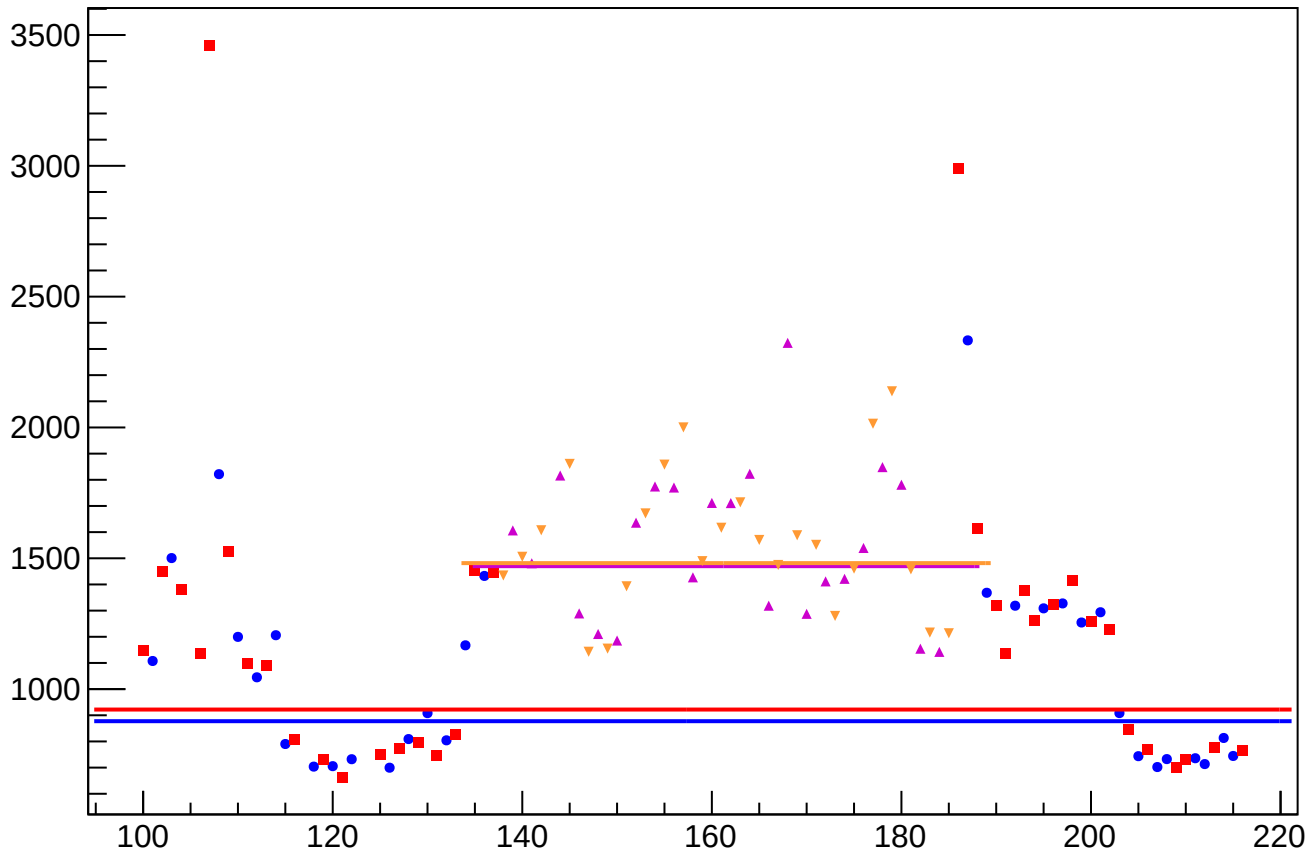
Left In:  $-35.516 \pm 349.636$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-846.355 \pm 178.974$   $\chi^2/\text{NDF}$ : 83.4/54

All:  $-915.084 \pm 128.889$   $\chi^2/\text{NDF}$ : 246.1/111

- sign  $-989.131 \pm 185.769$   $\chi^2/\text{NDF}$ : 162.3/56

# asym\_usl\_dit\_correction\_rms vs Slug



Right In:  $877.399 \pm 0.147$   $\chi^2/\text{NDF}: 2743496.1/30$

Left Out:  $1481.543 \pm 0.248$   $\chi^2/\text{NDF}: 1017463.8/23$

Right Out:  $921.905 \pm 0.155$   $\chi^2/\text{NDF}: 3516540.6/33$

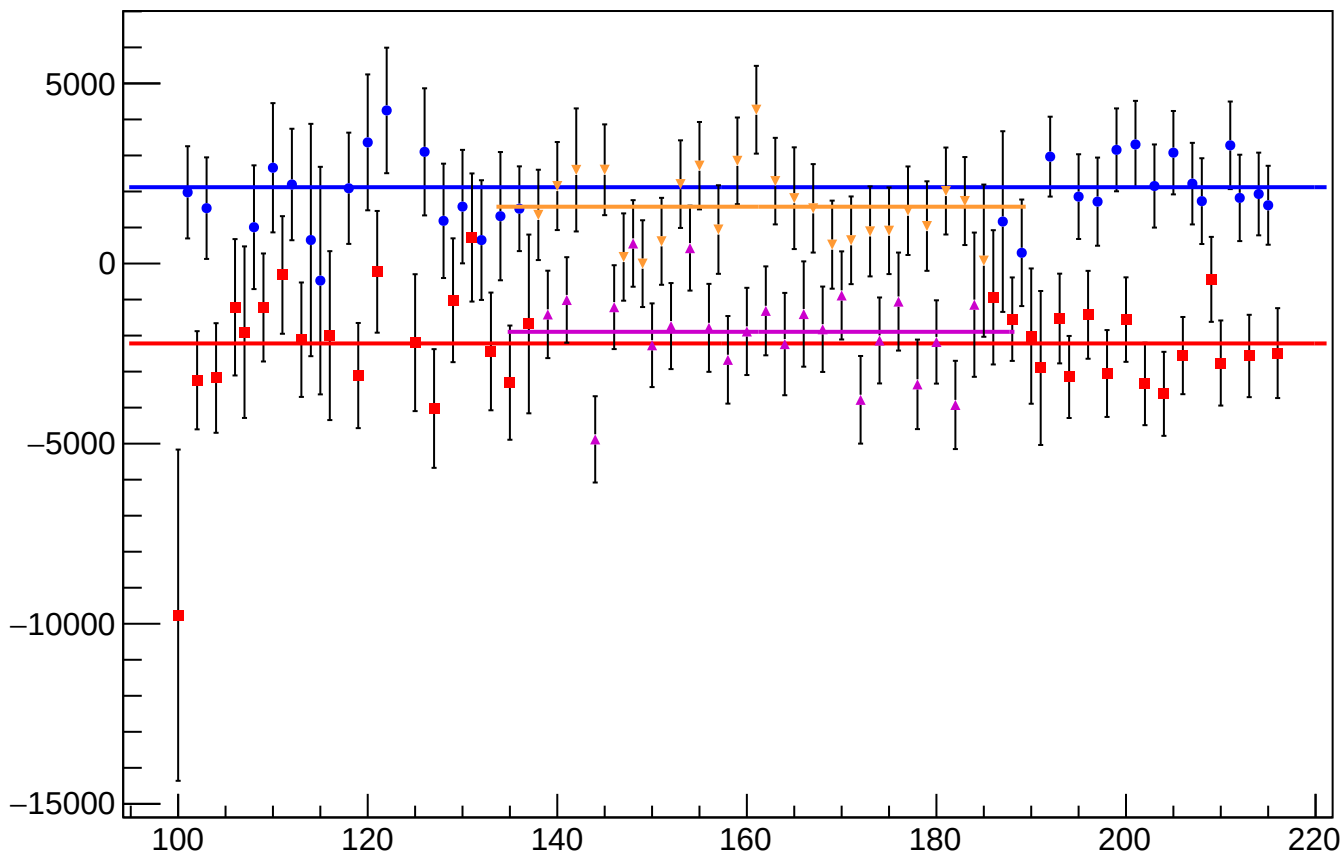
Left In:  $1469.907 \pm 0.247$   $\chi^2/\text{NDF}: 1095056.5/22$

+ sign  $1034.819 \pm 0.127$   $\chi^2/\text{NDF}: 8151816.6/54$

All:  $1054.935 \pm 0.091$   $\chi^2/\text{NDF}: 16342072.6/1$

- sign  $1076.607 \pm 0.131$   $\chi^2/\text{NDF}: 8137769.1/56$

# eigen\_dit\_asym\_usl\_mean vs Slug



Right In: 2119.053 $\pm$ 248.949  $\chi^2$ /NDF: 11.7/30

Left Out: 1577.399 $\pm$ 257.003  $\chi^2$ /NDF:15.5/23

Right Out: -2218.452 $\pm$ 248.631  $\chi^2$ /NDF: 20.7/33

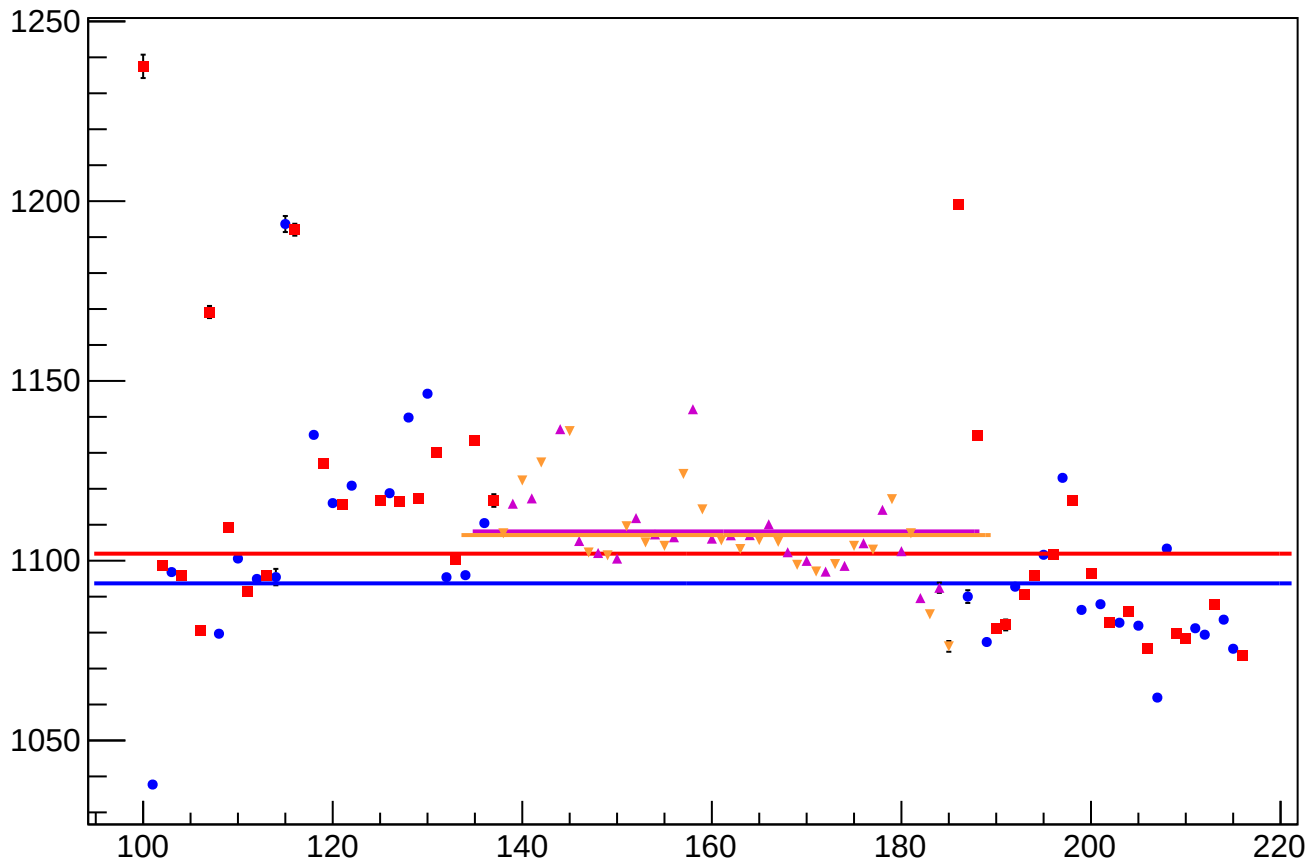
Left In: -1895.549 $\pm$ 258.750  $\chi^2$ /NDF:24.1/22

+ sign 1856.846 $\pm$ 178.813  $\chi^2$ /NDF: 29.5/54

All: -98.189 $\pm$ 126.604  $\chi^2$ /NDF: 314.9/111

- sign -2063.438 $\pm$ 179.279  $\chi^2$ /NDF: 45.6/56

# eigen\_dit\_asym\_usl\_rms vs Slug



Right In: 1093.695 $\pm$ 0.176  $\chi^2$ /NDF: 17854.5/30

Left Out: 1107.127 $\pm$ 0.182  $\chi^2$ /NDF: 3783.7/23

Right Out: 1101.956 $\pm$ 0.176  $\chi^2$ /NDF: 22295.9/33

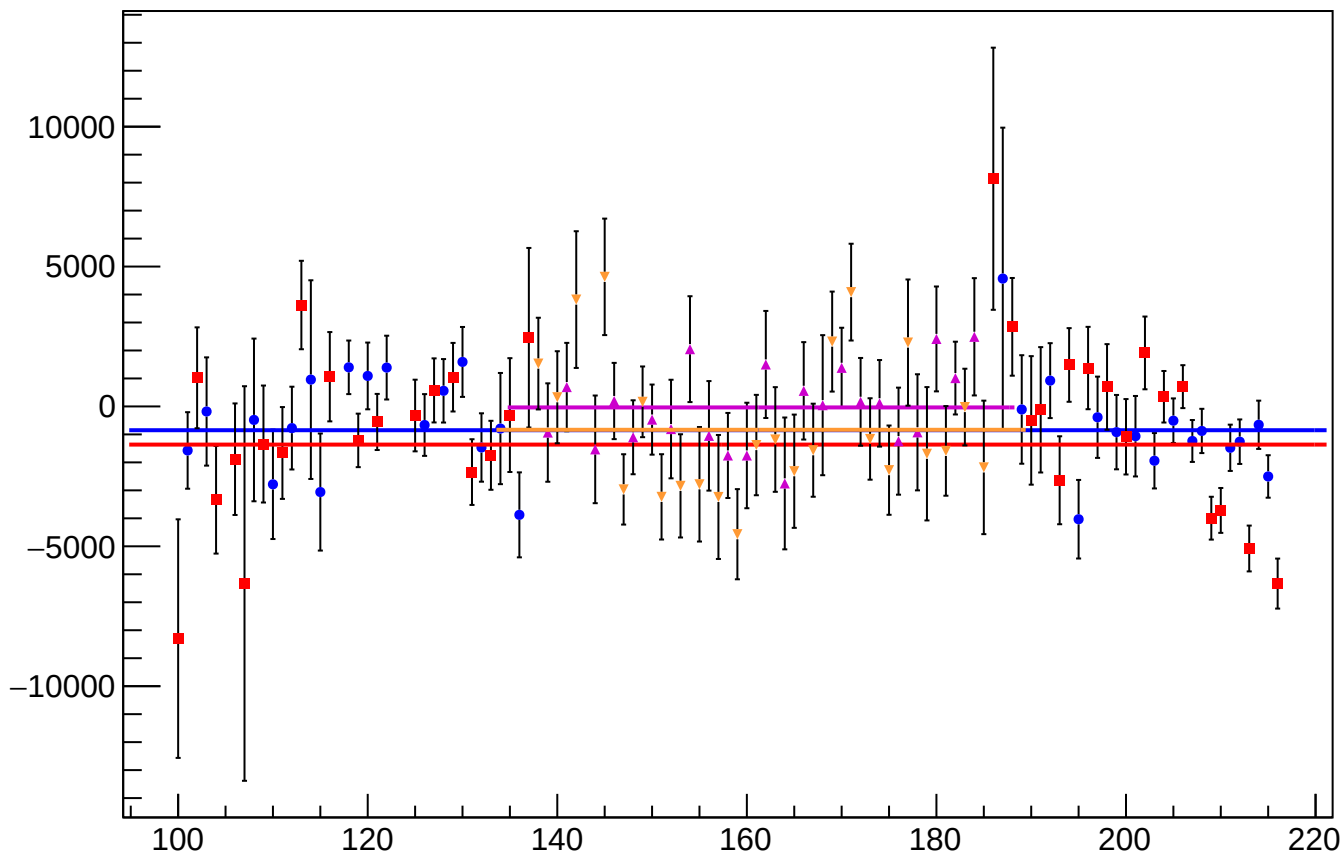
Left In: 1108.145 $\pm$ 0.183  $\chi^2$ /NDF: 4190.5/22

+ sign 1100.197 $\pm$ 0.126  $\chi^2$ /NDF: 24456.5/54

All: 1102.556 $\pm$ 0.090  $\chi^2$ /NDF: 52235.9/111

- sign 1104.927 $\pm$ 0.127  $\chi^2$ /NDF: 27081.4/56

# asym\_usl\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-850.253 \pm 208.132$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $-835.291 \pm 350.615$   $\chi^2/\text{NDF}$ : 43.6/23

Right Out:  $-1364.226 \pm 219.281$   $\chi^2/\text{NDF}$ : 138.8/33

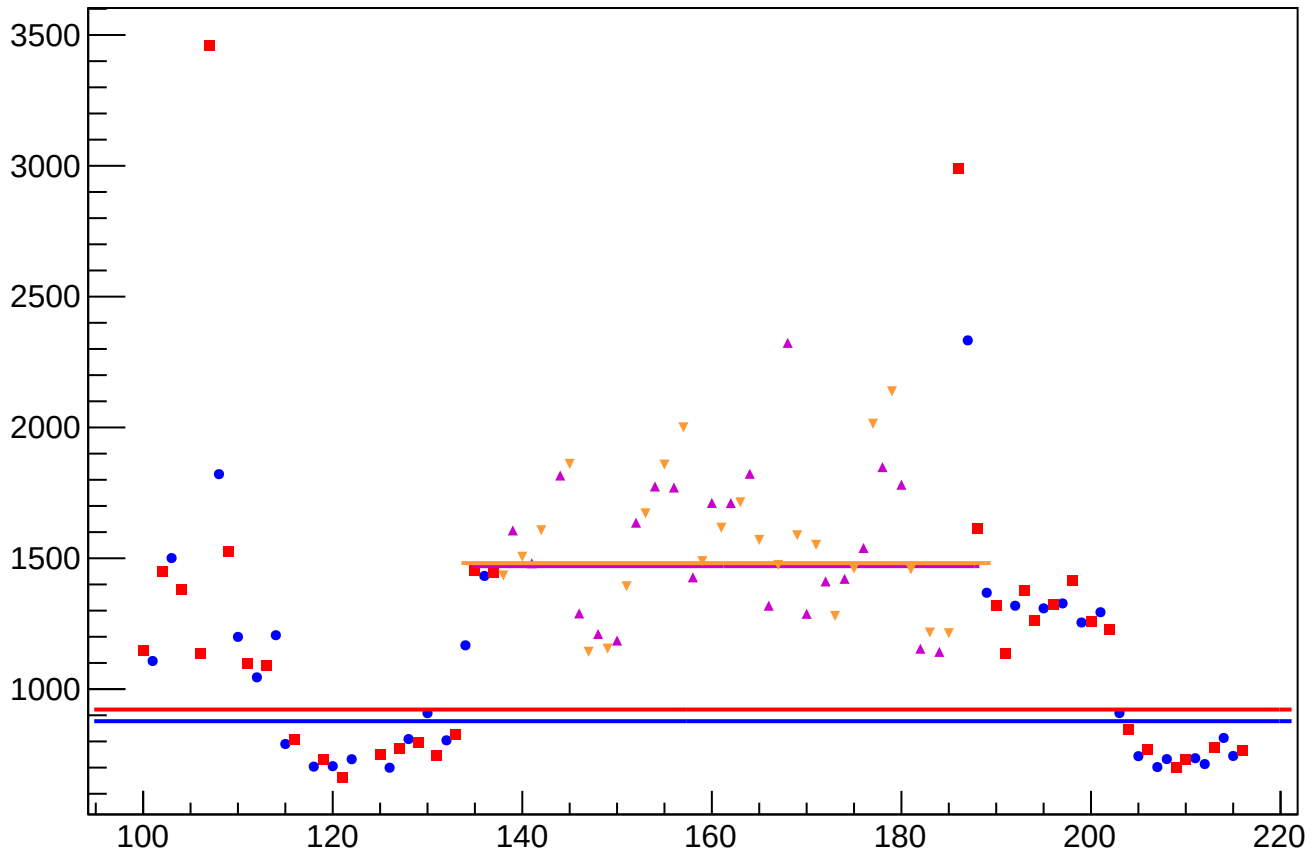
Left In:  $-35.516 \pm 349.636$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-846.354 \pm 178.974$   $\chi^2/\text{NDF}$ : 83.4/54

All:  $-915.083 \pm 128.889$   $\chi^2/\text{NDF}$ : 246.1/111

- sign  $-989.129 \pm 185.769$   $\chi^2/\text{NDF}$ : 162.3/56

# asym\_usl\_eigen\_dit\_correction\_rms vs Slug



Right In: 877.399 $\pm$ 0.147  $\chi^2/\text{NDF}$ : 2743497.2/30

Left Out: 1481.545 $\pm$ 0.248  $\chi^2/\text{NDF}$ : 1017460.8/23

Right Out: 921.905 $\pm$ 0.155  $\chi^2/\text{NDF}$ : 3516541.7/33

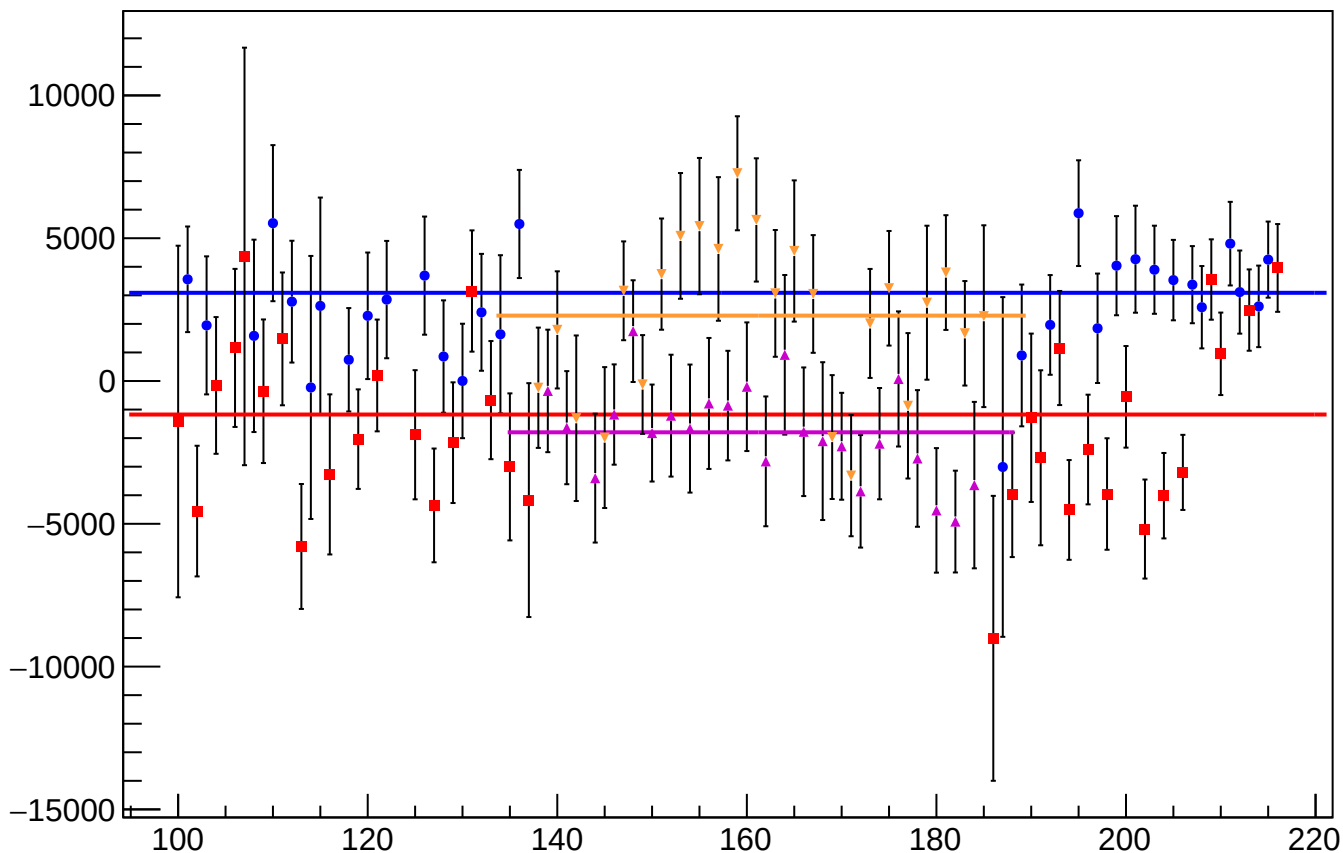
Left In: 1469.908 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 1095054.0/22

+ sign 1034.818 $\pm$ 0.127  $\chi^2/\text{NDF}$ : 8151837.4/54

All: 1054.934 $\pm$ 0.091  $\chi^2/\text{NDF}$ : 16342113.2/1

- sign 1076.607 $\pm$ 0.131  $\chi^2/\text{NDF}$ : 8137789.0/56

# asym\_usl\_mean vs Slug



Right In: 3088.890 $\pm$ 337.029  $\chi^2$ /NDF: 17.8/30

Left Out: 2289.701 $\pm$ 439.328  $\chi^2$ /NDF:36.0/23

Right Out: -1173.283 $\pm$ 346.937  $\chi^2$ /NDF: 73.4/33

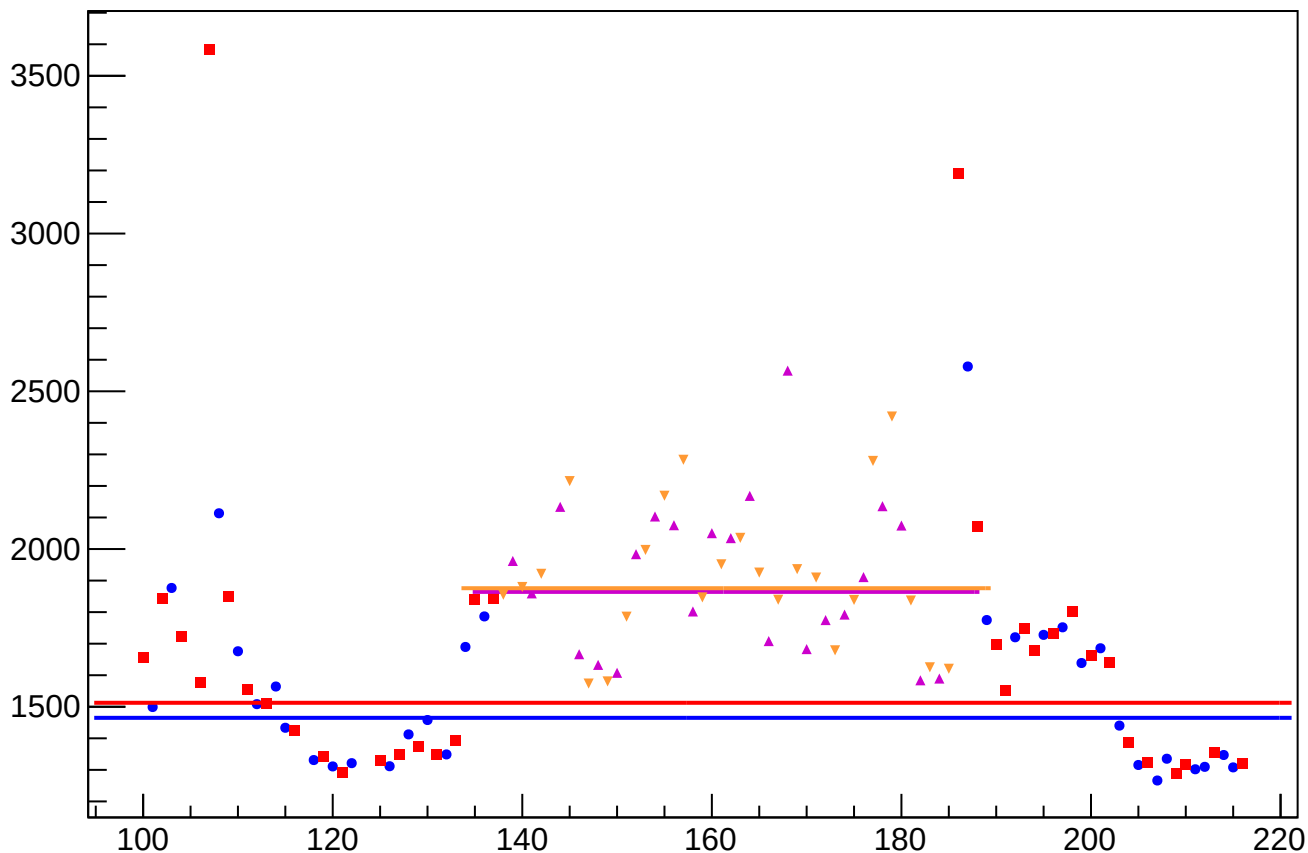
Left In: -1796.308 $\pm$ 439.143  $\chi^2$ /NDF:14.2/22

+ sign 2792.806 $\pm$ 267.406  $\chi^2$ /NDF: 55.9/54

All: 727.646 $\pm$ 190.768  $\chi^2$ /NDF: 266.3/111

- sign -1412.708 $\pm$ 272.231  $\chi^2$ /NDF: 88.9/56

# asym\_usl\_rms vs Slug



Right In: 1464.954+/-0.238  $\chi^2/\text{NDF}$ : 715251.2/30

Left Out: 1875.818+/-0.311  $\chi^2/\text{NDF}$ : 472556.0/23

Right Out: 1512.640+/-0.245  $\chi^2/\text{NDF}$ : 1106429.4/33

Left In: 1864.162+/-0.311  $\chi^2/\text{NDF}$ : 510600.5/22

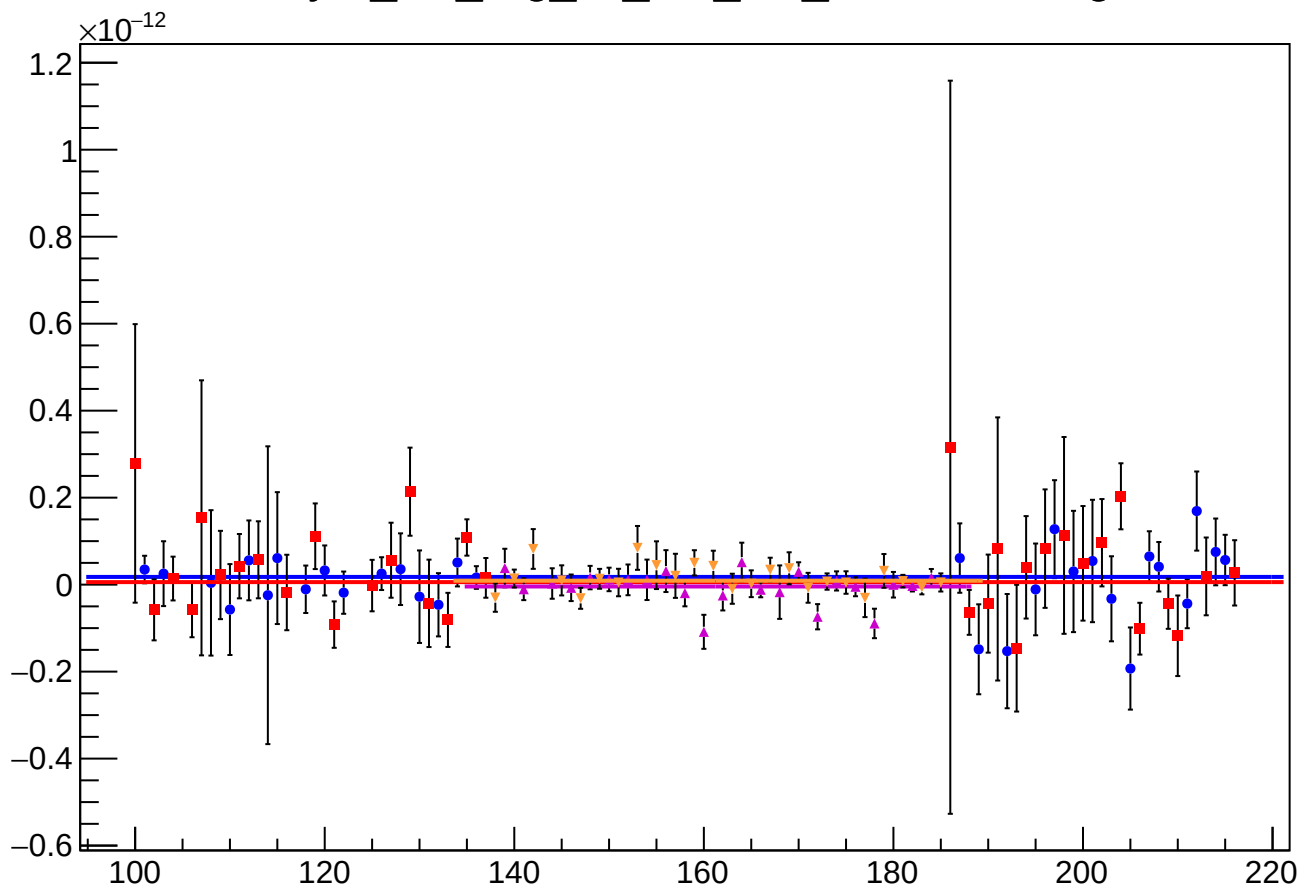
+ sign 1617.171+/-0.189  $\chi^2/\text{NDF}$ : 2288987.0/54

All: 1632.176+/-0.135  $\chi^2/\text{NDF}$ : 4707875.9/11

- sign 1647.728+/-0.192  $\chi^2/\text{NDF}$ : 2406064.3/56



# asym\_usl\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.6/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.1/33

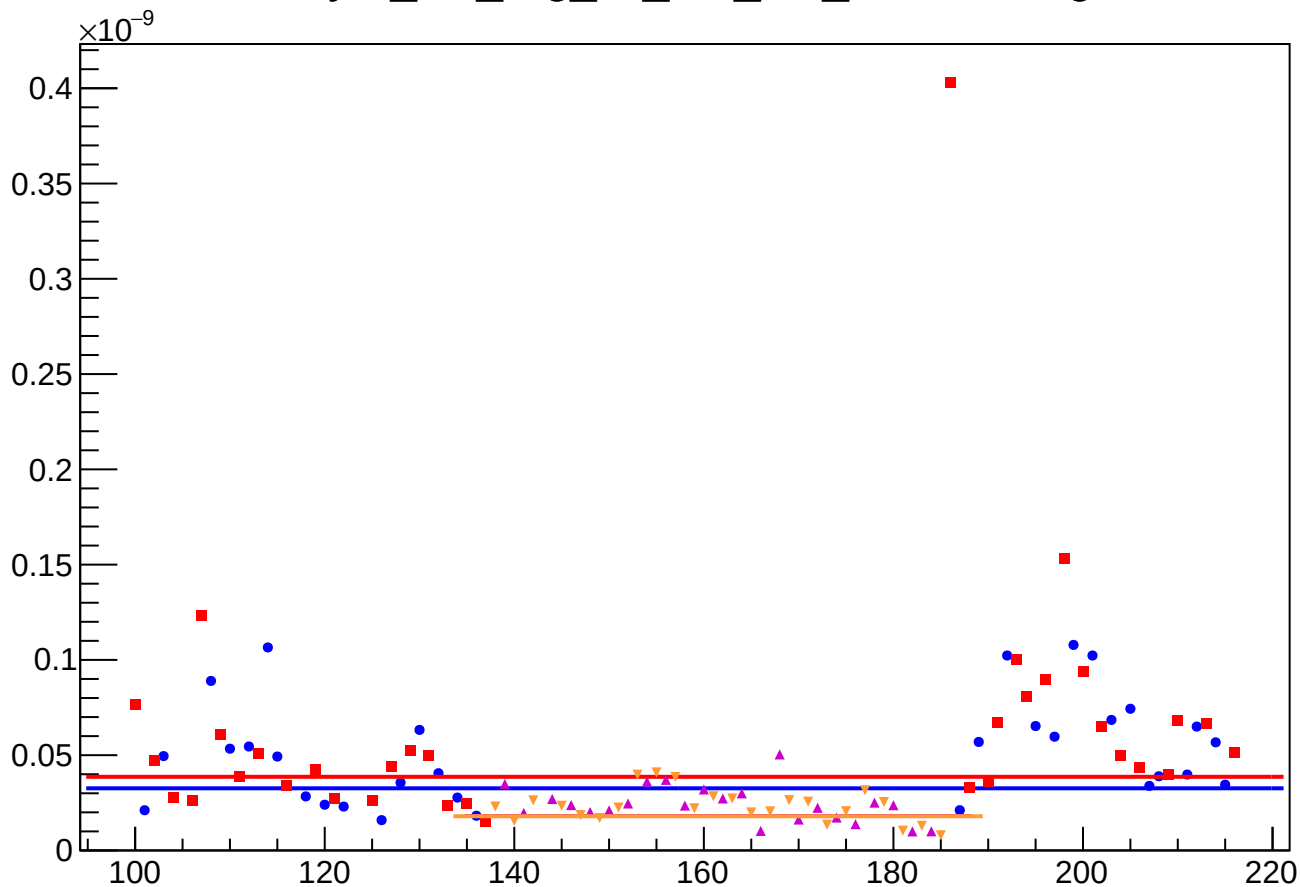
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.2/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 108.4/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.7/56

# asym\_usl\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5519834.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3491055.7/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4468649.5/33

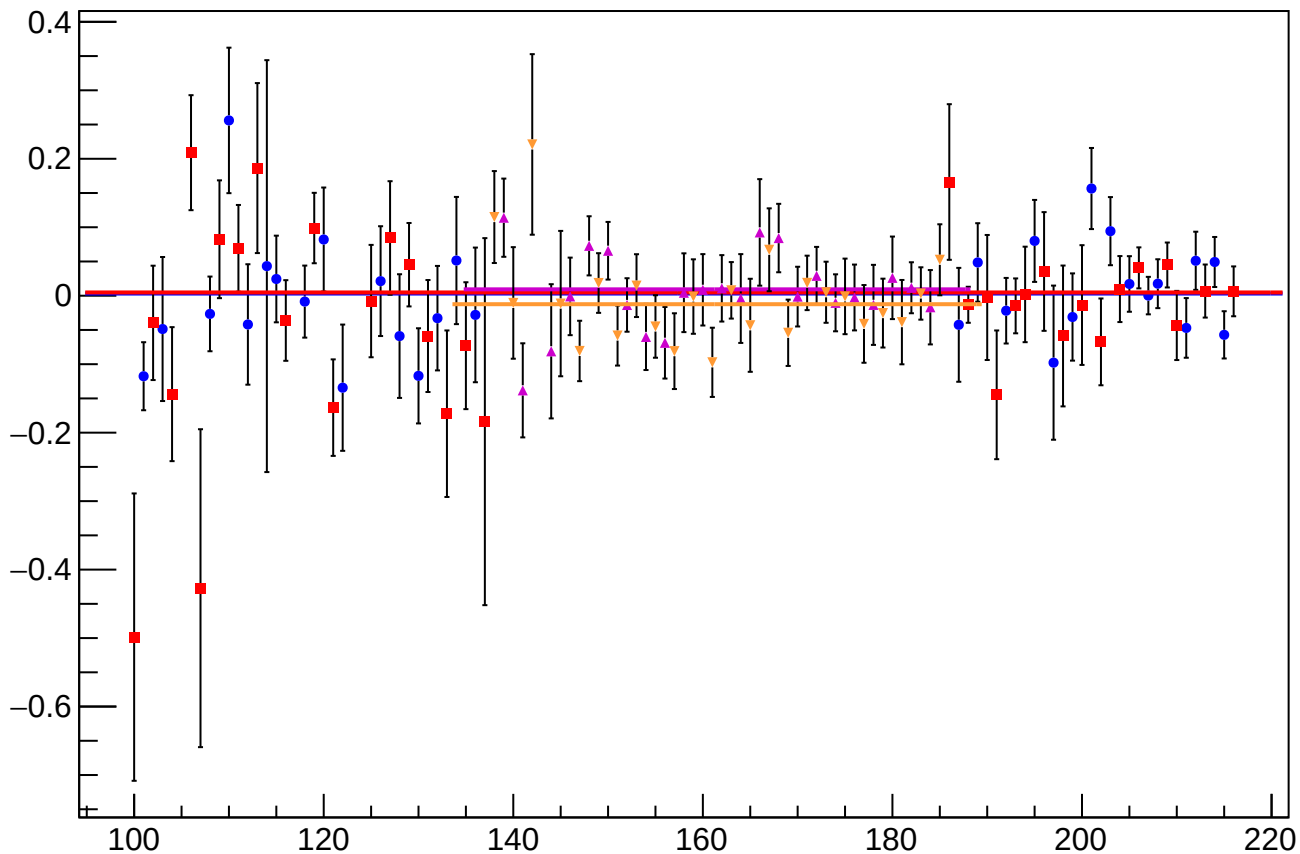
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4180182.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11722423.8/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24595015.5/111

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12864684.4/56

# asym\_usl\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 41.5/30

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.5/33

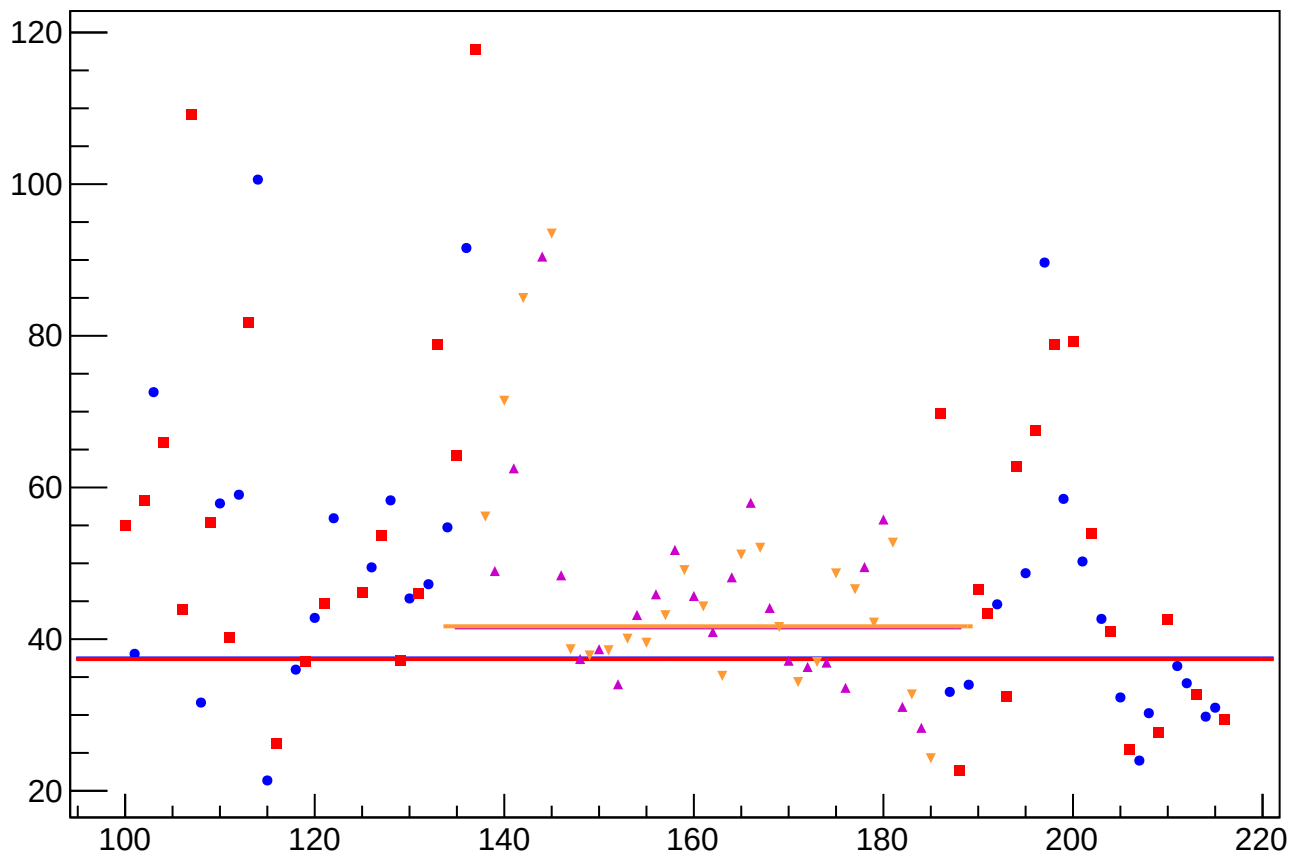
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 64.6/54

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 69.5/56

# asym\_usl\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 37.454 $\pm$ 0.007  $\chi^2$ /NDF: 3296448.5/30

Left Out: 41.694 $\pm$ 0.007  $\chi^2$ /NDF: 1821790.0/23

Right Out: 37.372 $\pm$ 0.007  $\chi^2$ /NDF: 4569202.1/33

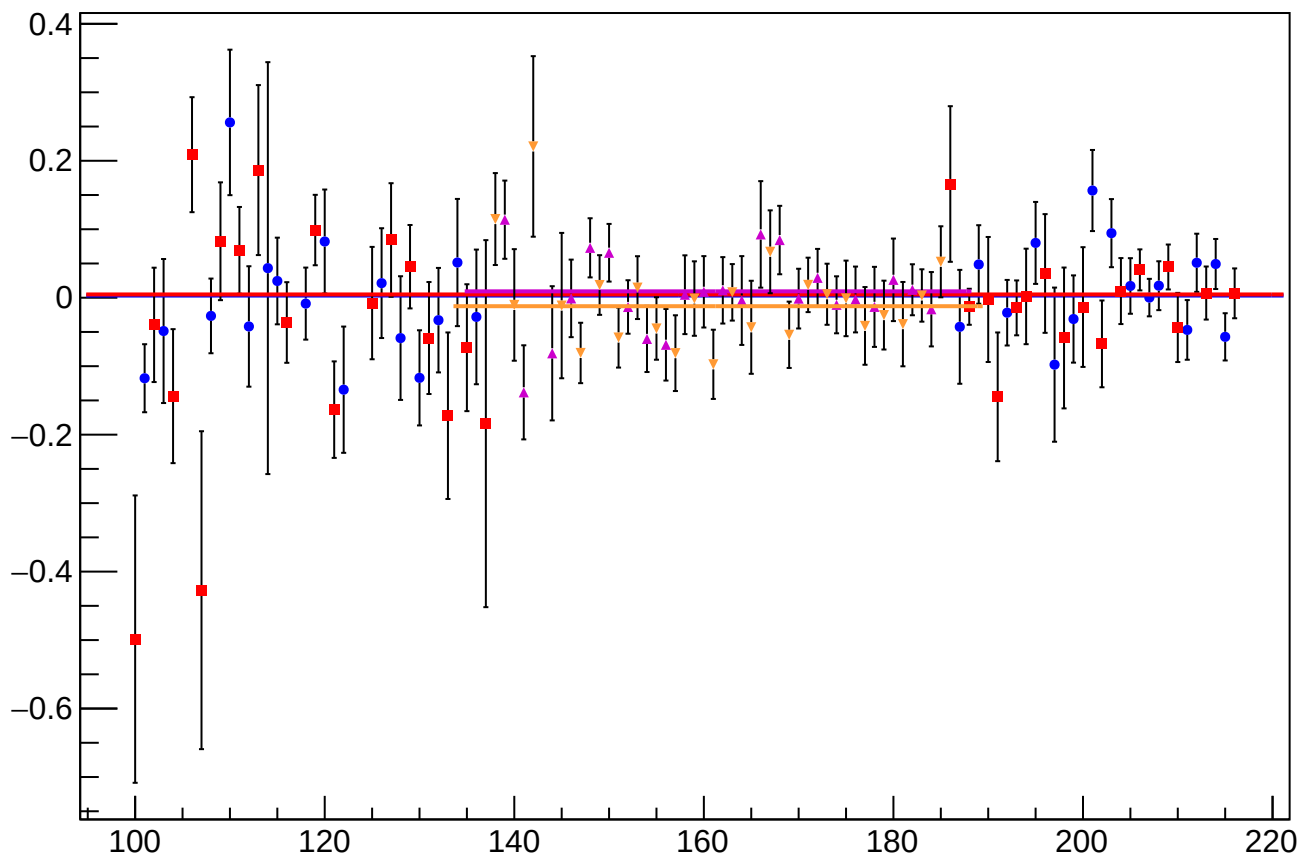
Left In: 41.550 $\pm$ 0.007  $\chi^2$ /NDF: 1612979.7/22

+ sign 39.429 $\pm$ 0.005  $\chi^2$ /NDF: 5292740.9/54

All: 39.390 $\pm$ 0.004  $\chi^2$ /NDF: 11642552.0/111

- sign 39.349 $\pm$ 0.005  $\chi^2$ /NDF: 6349686.6/56

# asym\_usl\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 41.5/30

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.5/33

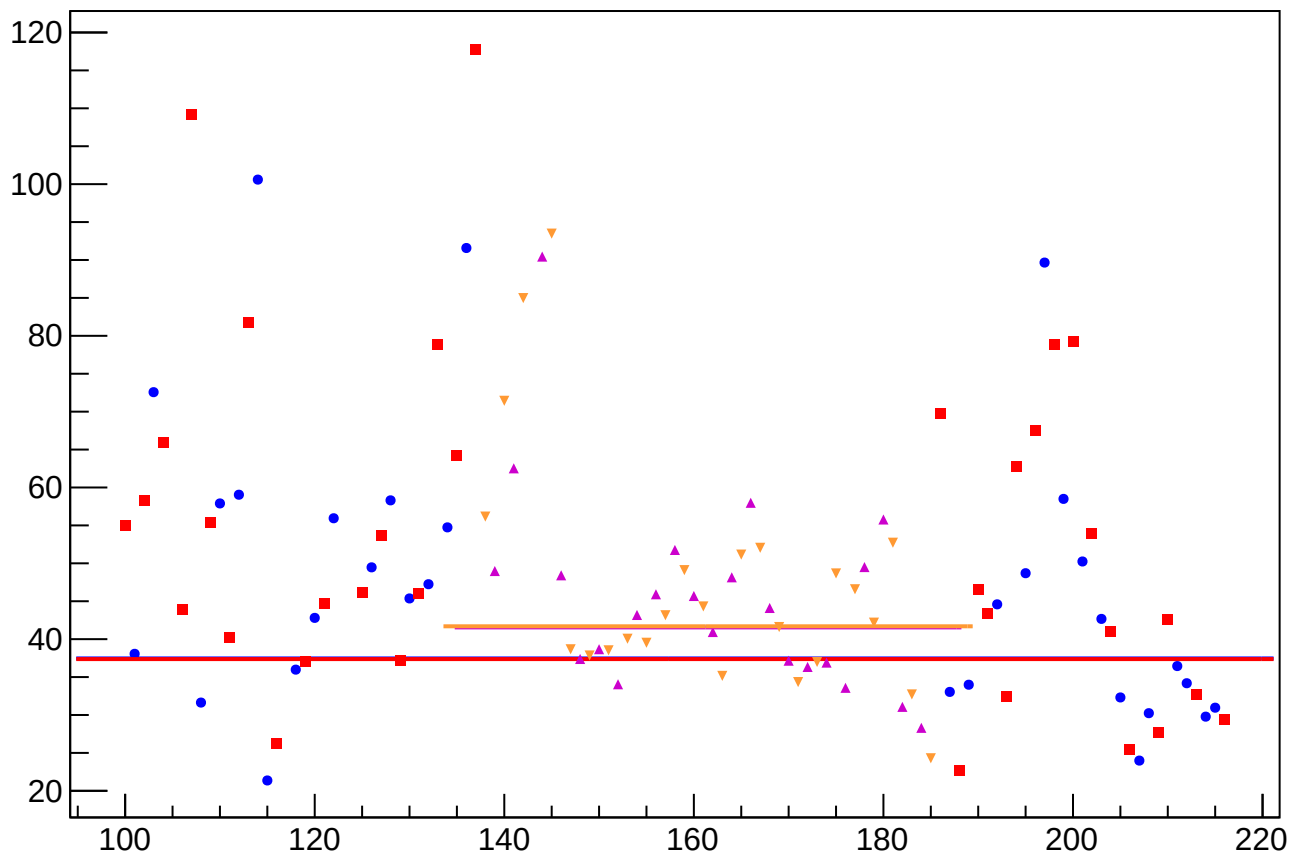
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 64.6/54

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 69.5/56

# asym\_usl\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $37.454 \pm 0.007$   $\chi^2/\text{NDF}: 3296448.5/30$

Left Out:  $41.694 \pm 0.007$   $\chi^2/\text{NDF}: 1821790.0/23$

Right Out:  $37.372 \pm 0.007$   $\chi^2/\text{NDF}: 4569202.1/33$

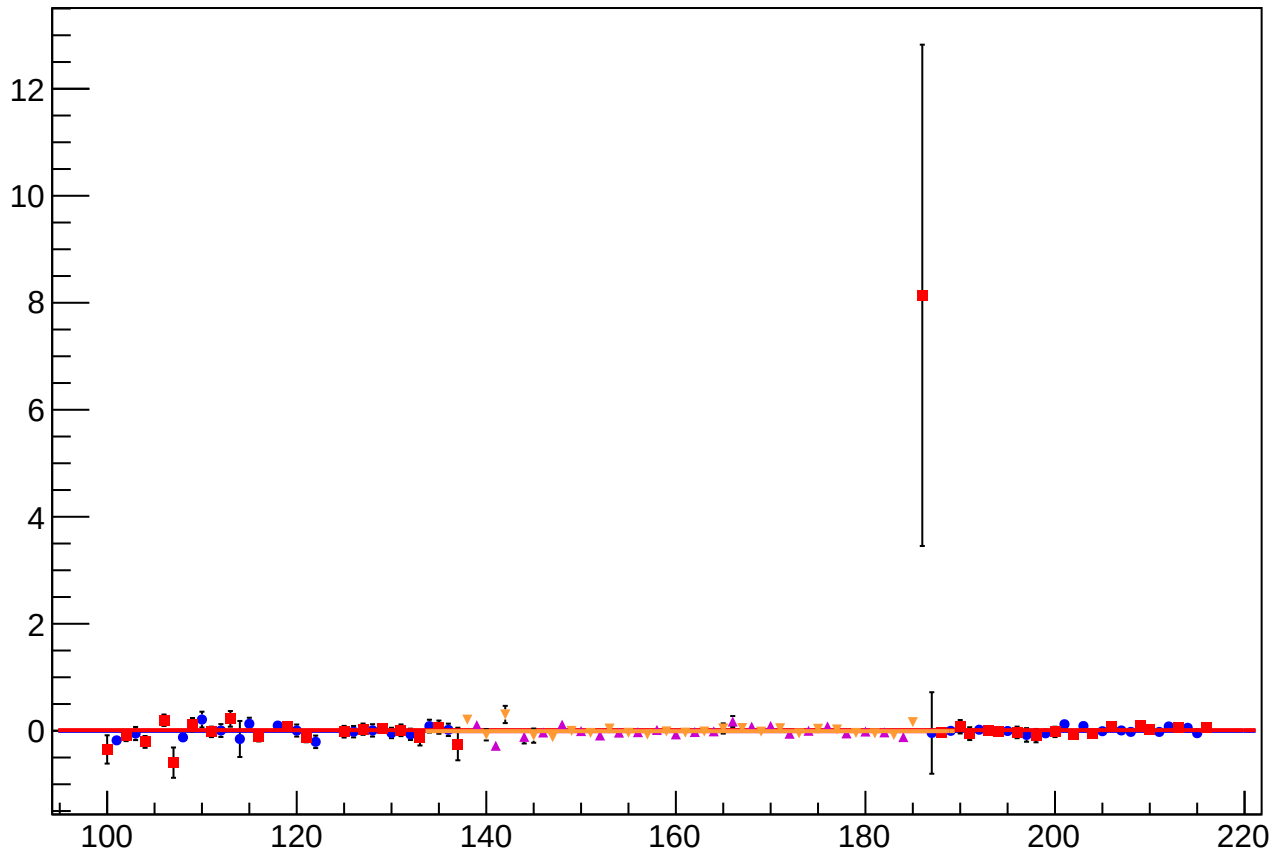
Left In:  $41.550 \pm 0.007$   $\chi^2/\text{NDF}: 1612979.7/22$

+ sign  $39.429 \pm 0.005$   $\chi^2/\text{NDF}: 5292740.9/54$

All:  $39.390 \pm 0.004$   $\chi^2/\text{NDF}: 11642552.0/111$

- sign  $39.349 \pm 0.005$   $\chi^2/\text{NDF}: 6349686.6/56$

asym\_usl\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-0.007 \pm 0.015$   $\chi^2/\text{NDF}$ : 23.7/23

Right Out:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 38.0/33

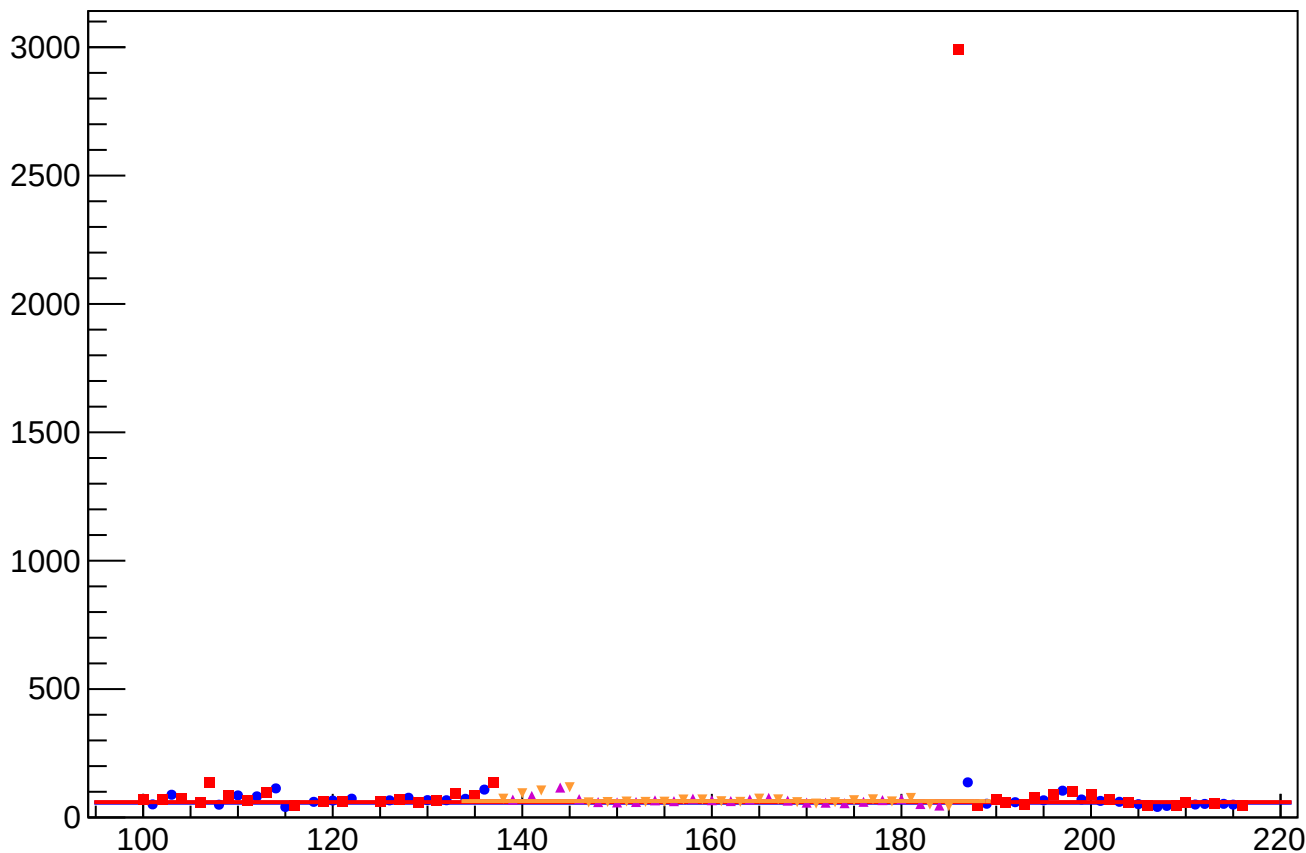
Left In:  $-0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 51.9/54

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 119.1/111

- sign  $0.003 \pm 0.011$   $\chi^2/\text{NDF}$ : 67.0/56

# asym\_usl\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 57.441+/-0.010  $\chi^2/\text{NDF}$ : 1905224.9/30

Left Out: 63.779+/-0.011  $\chi^2/\text{NDF}$ : 1078823.1/23

Right Out: 59.760+/-0.010  $\chi^2/\text{NDF}$ : 2883746.8/33

Left In: 64.036+/-0.011  $\chi^2/\text{NDF}$ : 838789.3/22

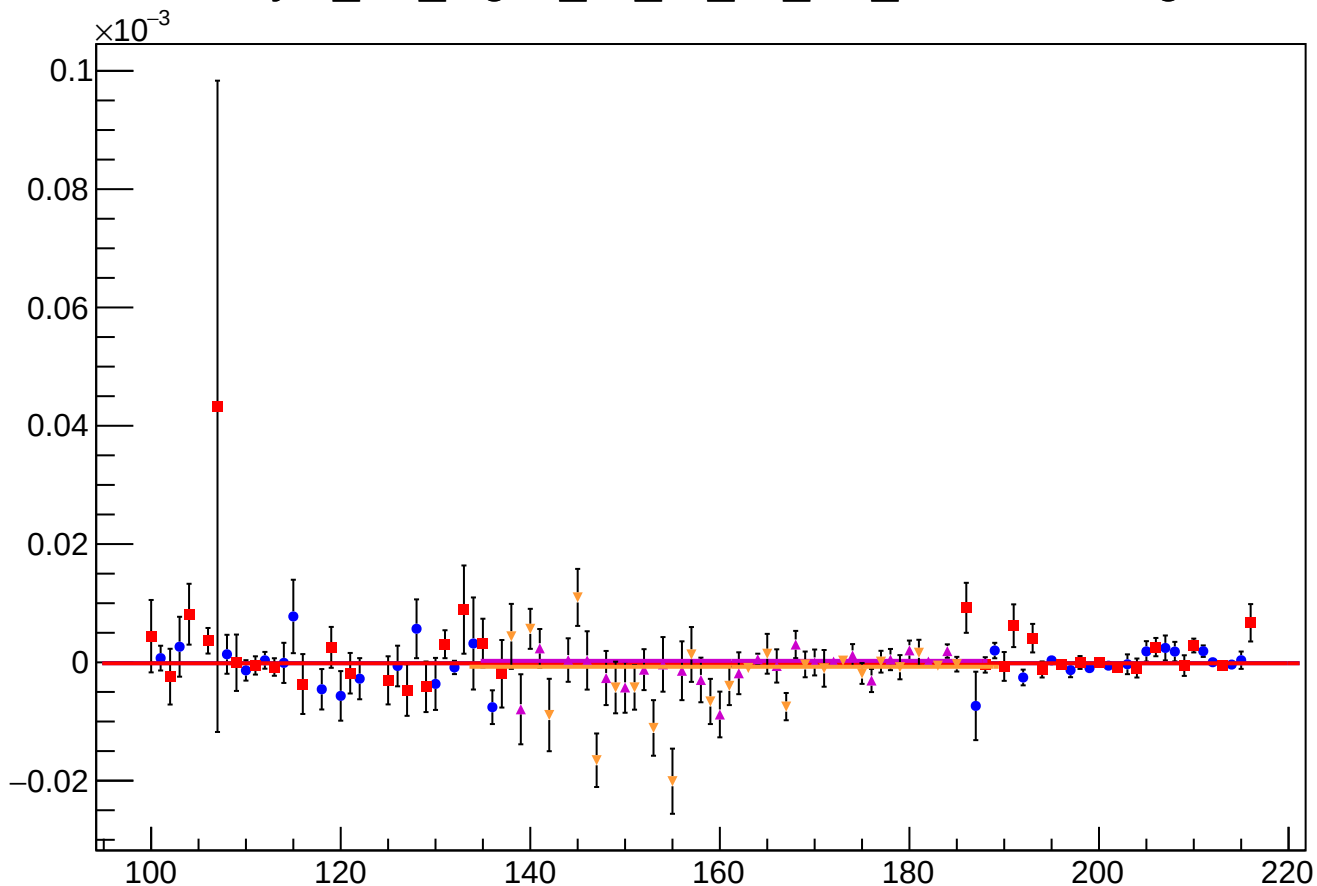
+ sign 60.340+/-0.007  $\chi^2/\text{NDF}$ : 3167649.7/54

All: 61.048+/-0.005  $\chi^2/\text{NDF}$ : 6989116.4/111

- sign 61.791+/-0.008  $\chi^2/\text{NDF}$ : 3802552.9/56



# asym\_usl\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.0/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.6/33

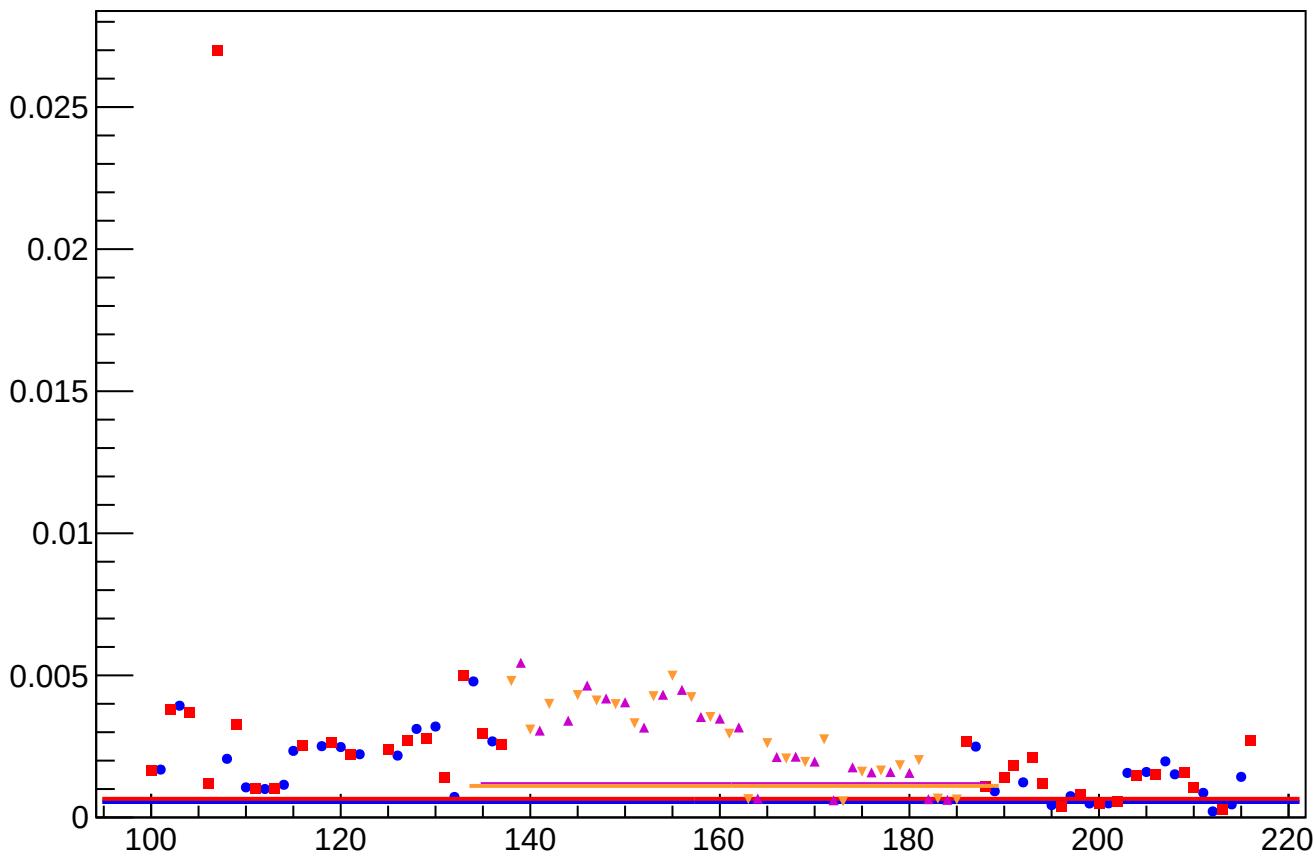
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.6/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 165.7/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.4/56

# asym\_usl\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 15593265.0/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:15160045.8/23

Right Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 15465108.7/33

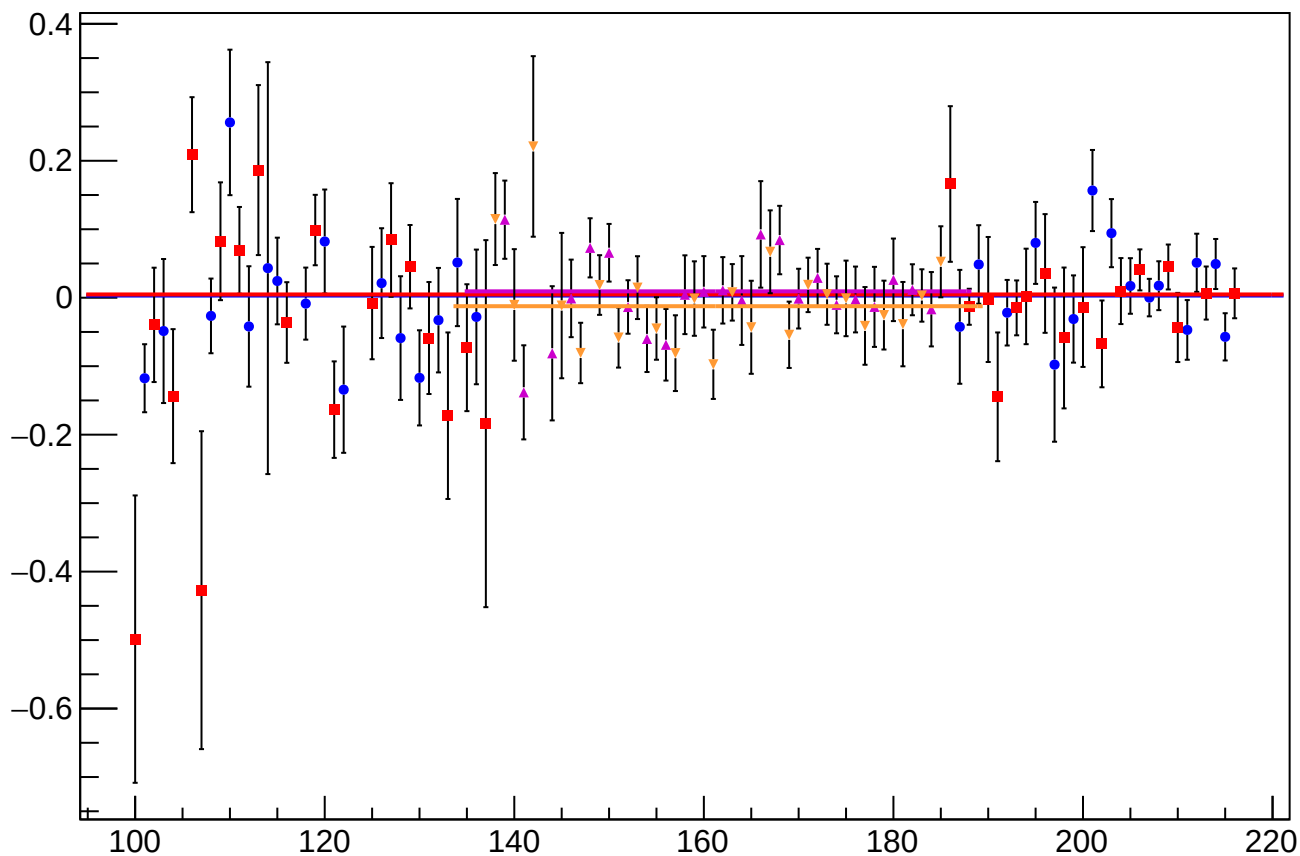
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:14252589.1/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 35112808.6/54

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 68518072.7/111

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 32838948.1/56

# asym\_usl\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 41.5/30

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.5/33

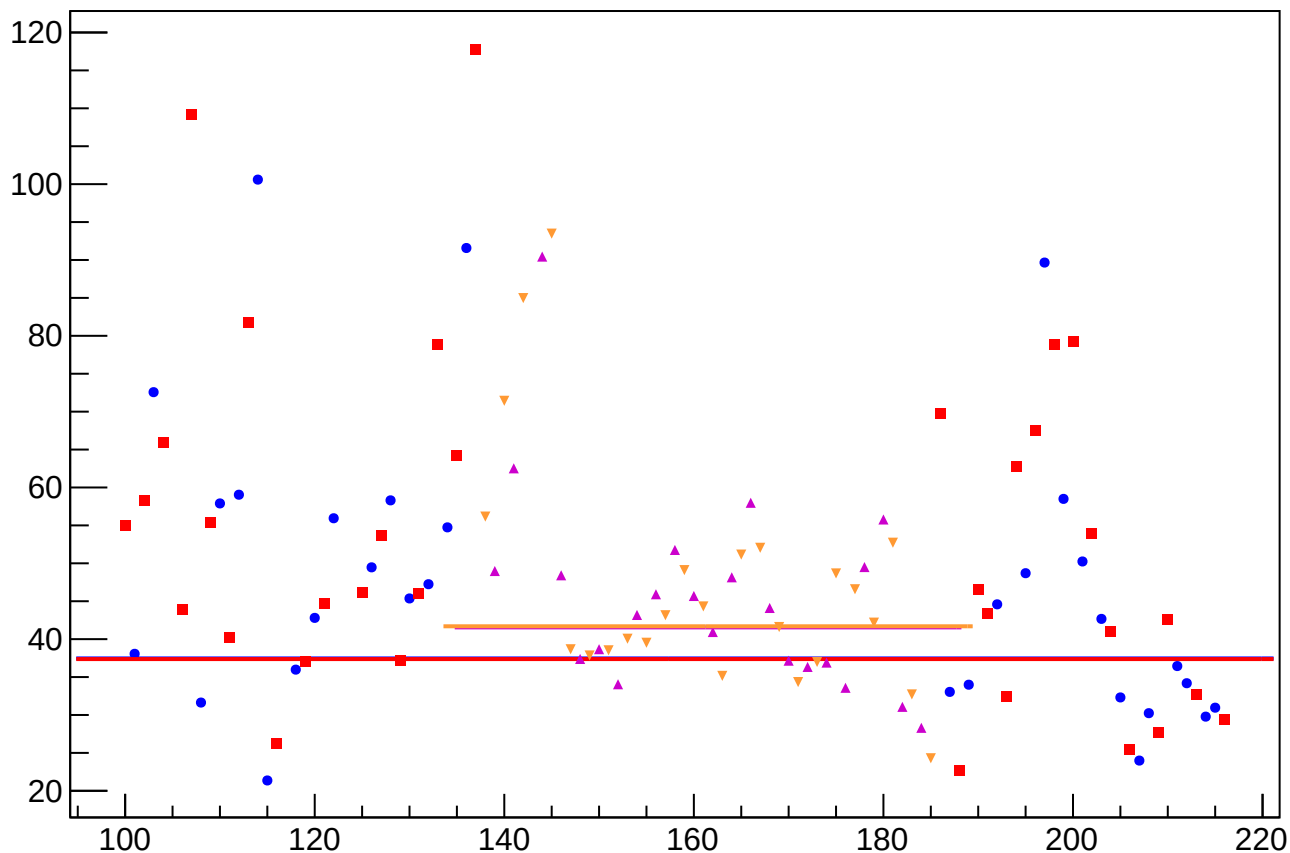
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 64.6/54

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 69.5/56

# asym\_usl\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $37.454 \pm 0.007$   $\chi^2/\text{NDF}$ : 3296432.7/30

Left Out:  $41.695 \pm 0.007$   $\chi^2/\text{NDF}$ : 1821753.6/23

Right Out:  $37.372 \pm 0.007$   $\chi^2/\text{NDF}$ : 4569099.8/33

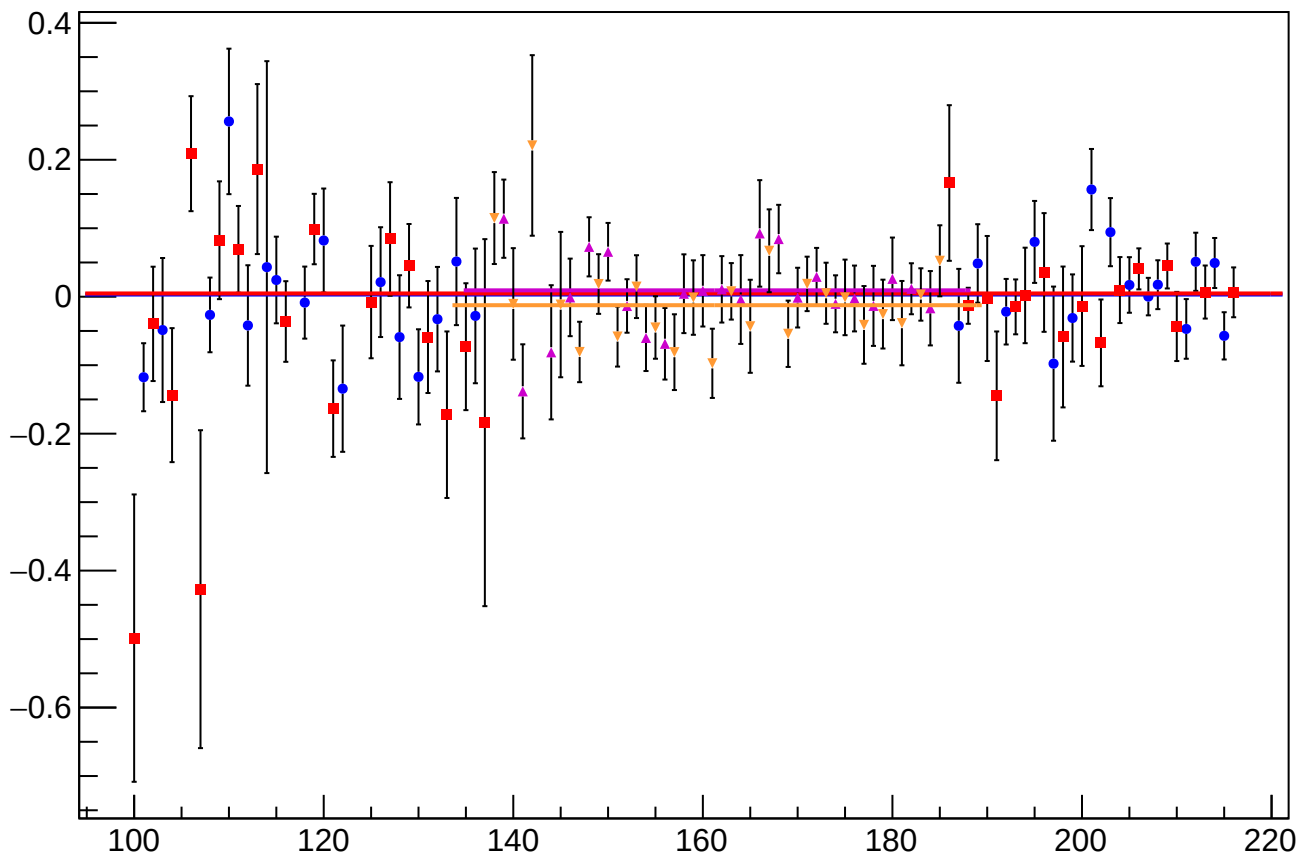
Left In:  $41.551 \pm 0.007$   $\chi^2/\text{NDF}$ : 1612941.1/22

+ sign  $39.429 \pm 0.005$   $\chi^2/\text{NDF}$ : 5292714.8/54

All:  $39.390 \pm 0.004$   $\chi^2/\text{NDF}$ : 11642411.7/111

- sign  $39.349 \pm 0.005$   $\chi^2/\text{NDF}$ : 6349572.8/56

asym\_usl\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 41.5/30

Left Out:  $-0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $0.005 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.5/33

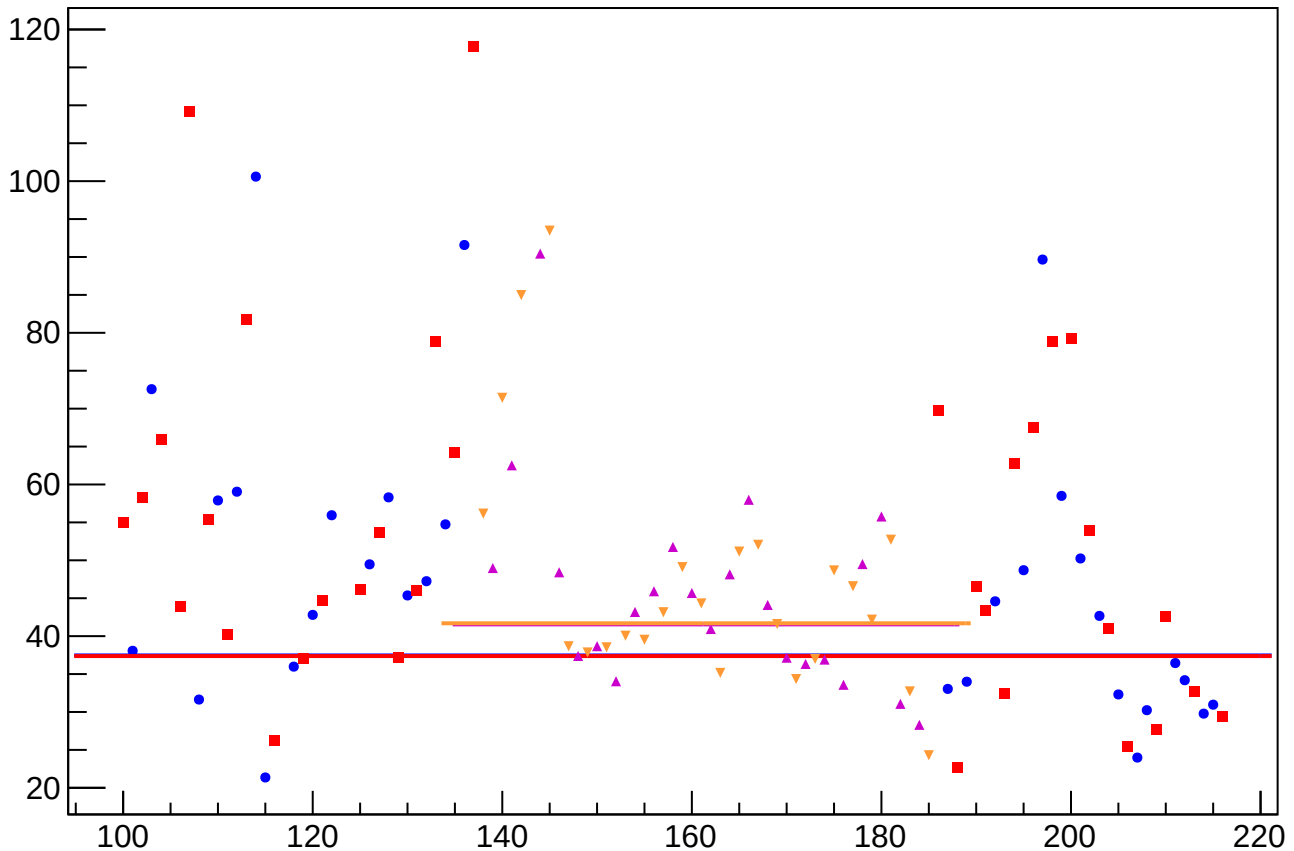
Left In:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 64.6/54

All:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 69.5/56

asym\_usl\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 37.454+/-0.007  $\chi^2/\text{NDF}$ : 3296432.7/30

Left Out: 41.695+/-0.007  $\chi^2/\text{NDF}$ : 1821753.6/23

Right Out: 37.372+/-0.007  $\chi^2/\text{NDF}$ : 4569099.8/33

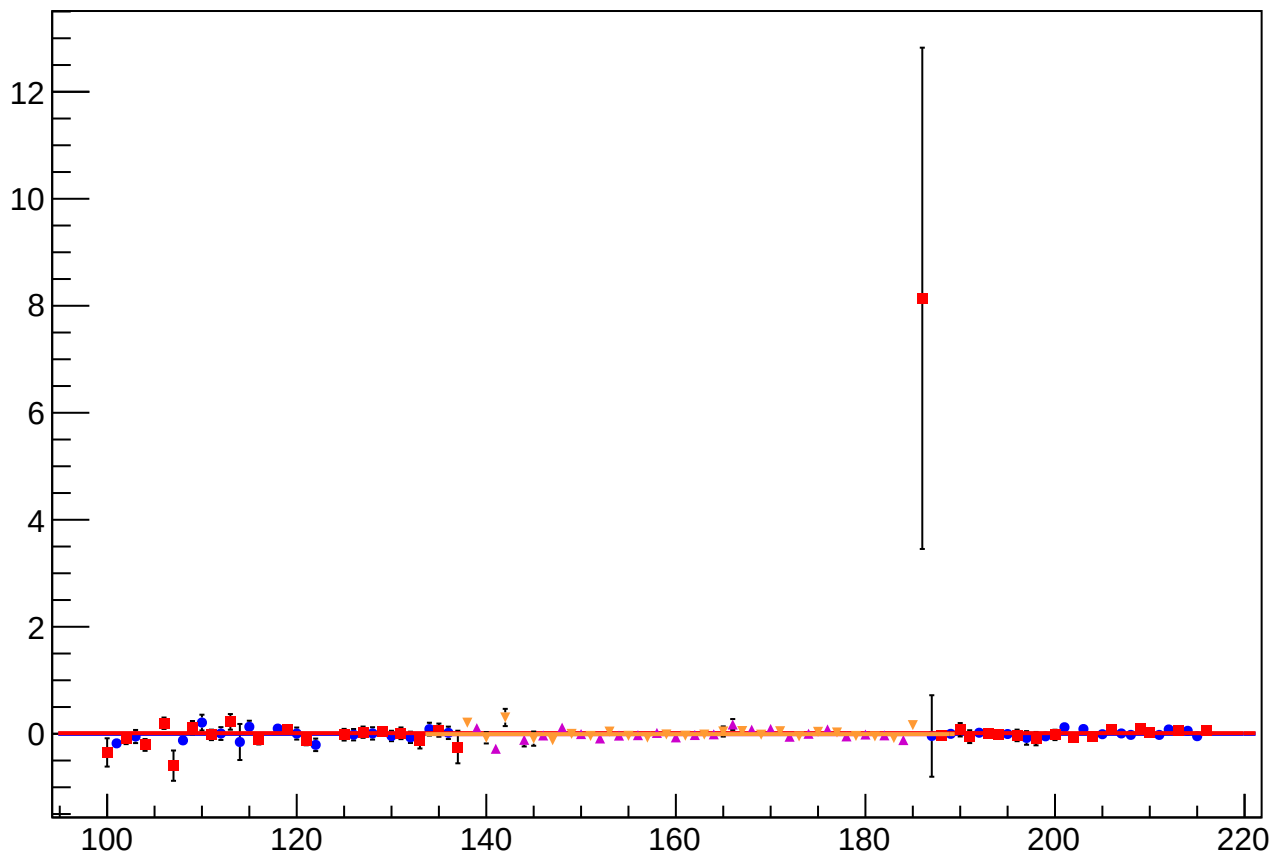
Left In: 41.551+/-0.007  $\chi^2/\text{NDF}$ : 1612941.1/22

+ sign 39.429+/-0.005  $\chi^2/\text{NDF}$ : 5292714.8/54

All: 39.390+/-0.004  $\chi^2/\text{NDF}$ : 11642411.7/111

- sign 39.349+/-0.005  $\chi^2/\text{NDF}$ : 6349572.8/56

asym\_usl\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.014$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-0.007 \pm 0.015$   $\chi^2/\text{NDF}$ : 23.7/23

Right Out:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 38.0/33

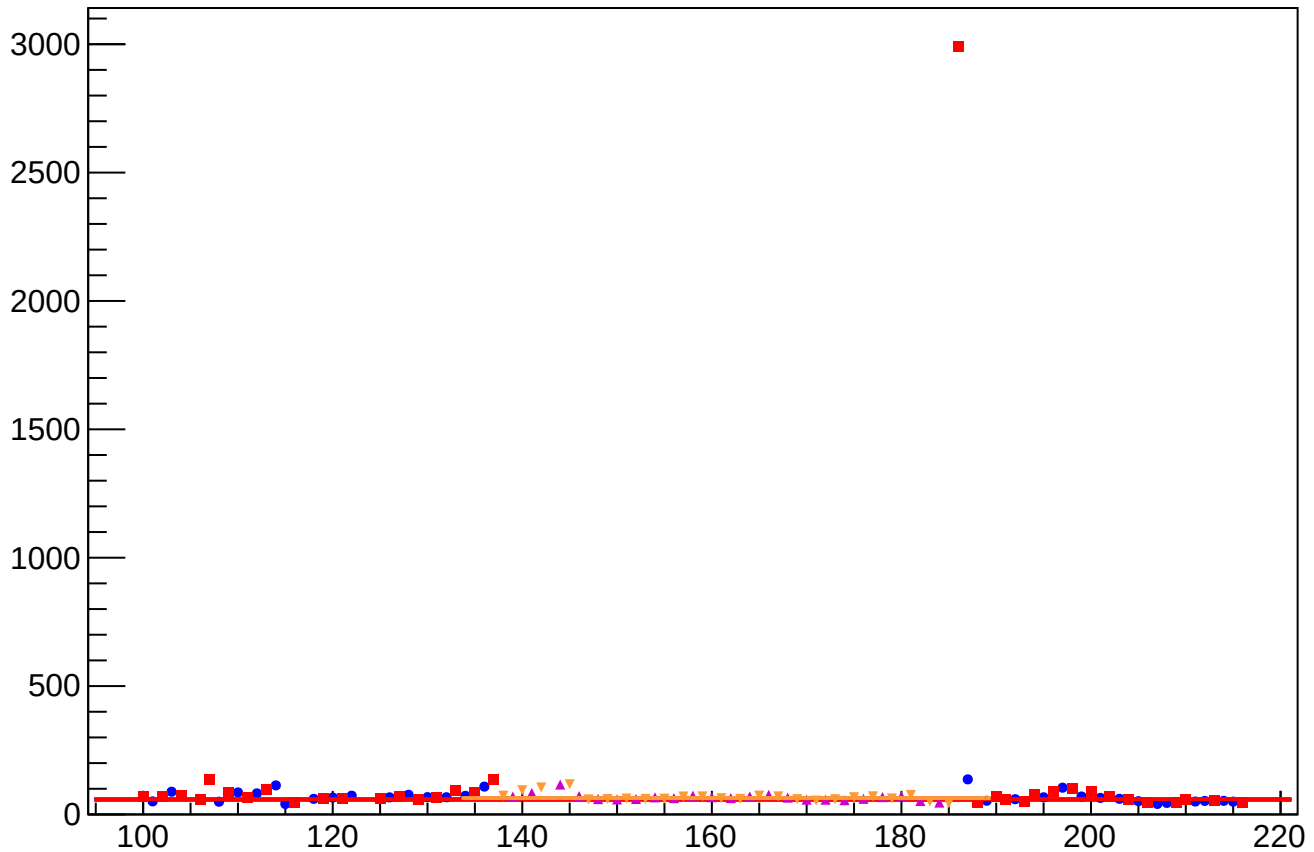
Left In:  $-0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $-0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 51.9/54

All:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 119.1/111

- sign  $0.003 \pm 0.011$   $\chi^2/\text{NDF}$ : 67.0/56

asym\_usl\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 57.441 $\pm$ 0.010  $\chi^2$ /NDF: 1905219.3/30

Left Out: 63.779 $\pm$ 0.011  $\chi^2$ /NDF: 1078810.5/23

Right Out: 59.760 $\pm$ 0.010  $\chi^2$ /NDF: 2883725.0/33

Left In: 64.036 $\pm$ 0.011  $\chi^2$ /NDF: 838784.5/22

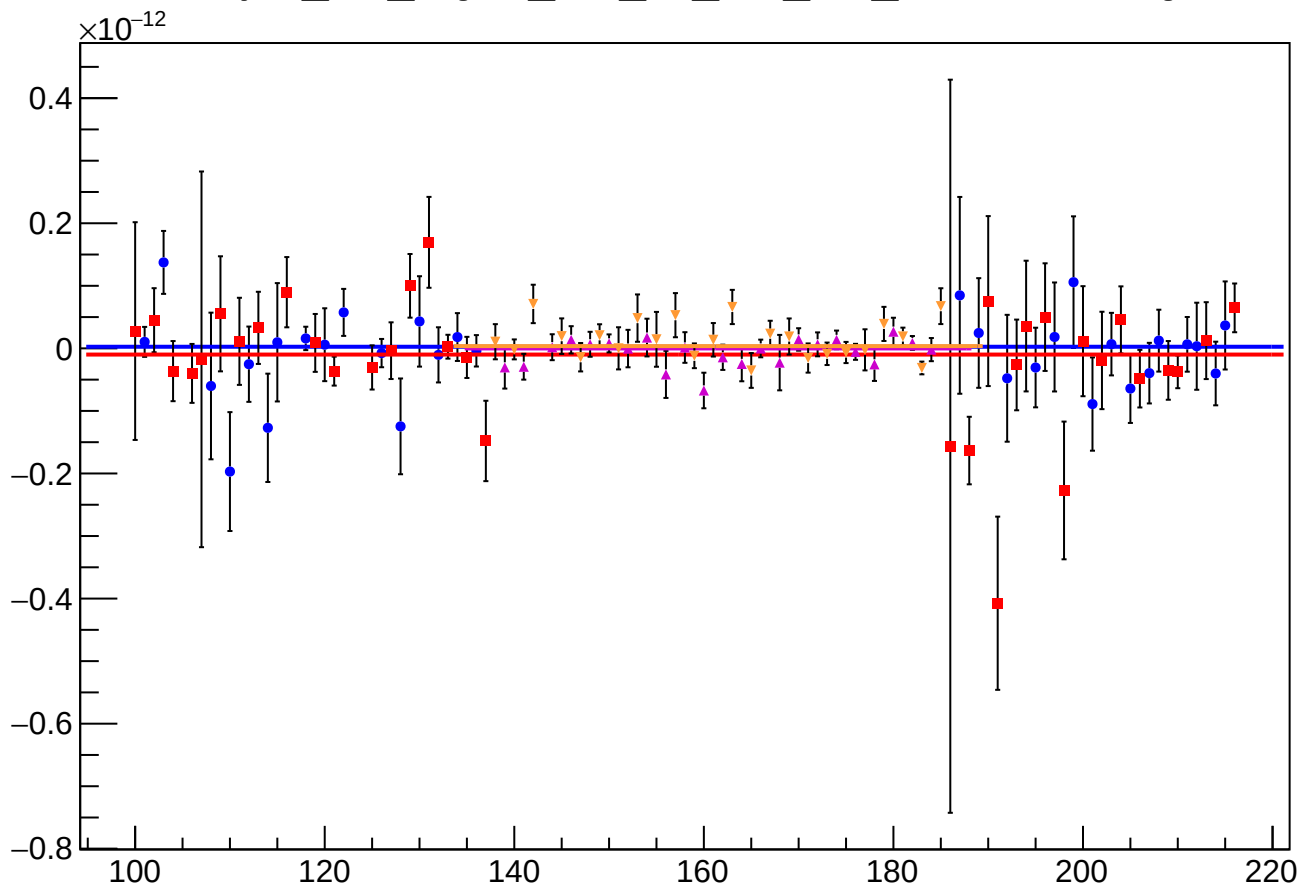
+ sign 60.340 $\pm$ 0.007  $\chi^2$ /NDF: 3167645.4/54

All: 61.048 $\pm$ 0.005  $\chi^2$ /NDF: 6989099.5/111

- sign 61.790 $\pm$ 0.008  $\chi^2$ /NDF: 3802540.7/56



# asym\_usl\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.3/33

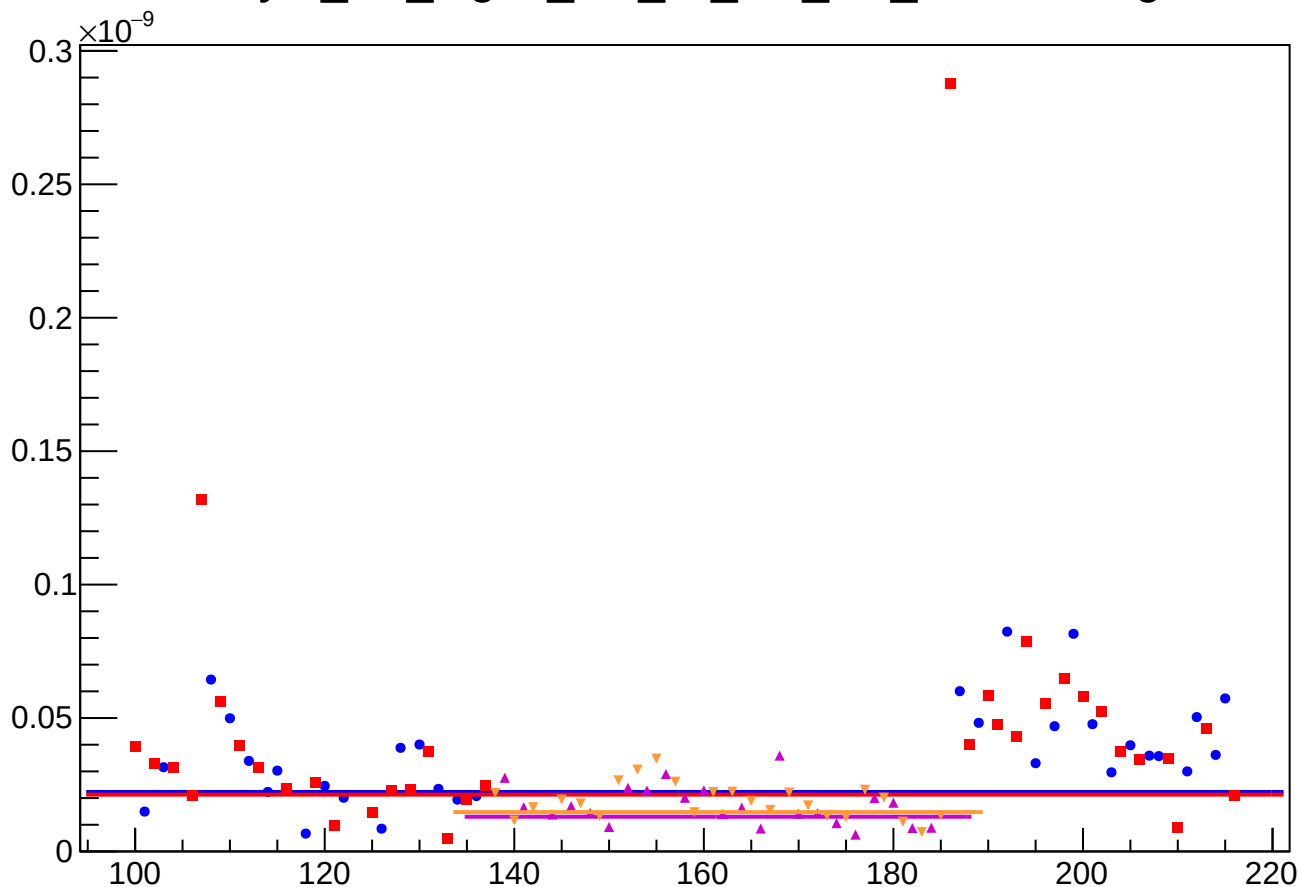
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.9/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 139.6/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 70.6/56

asym\_usl\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6808168.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3531388.4/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7402048.6/33

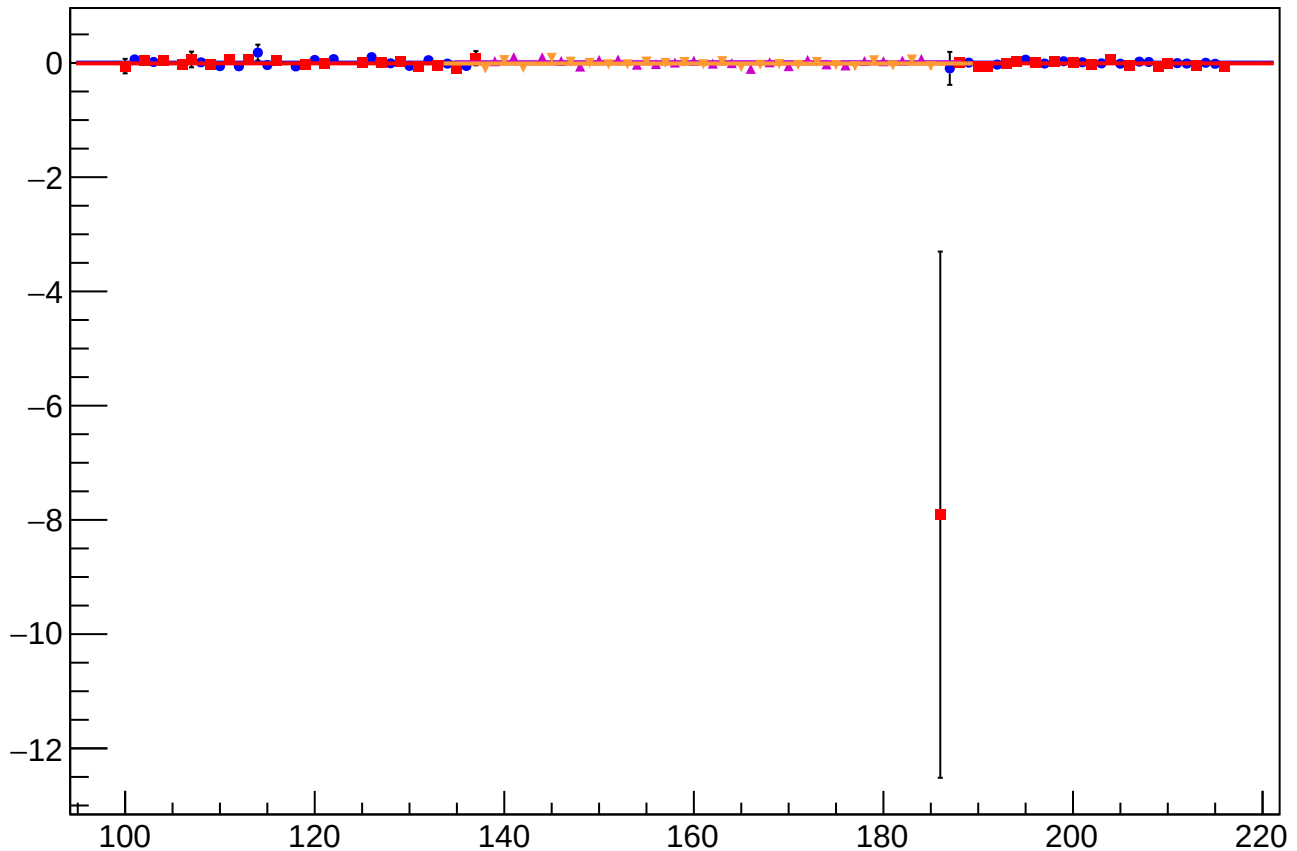
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3925910.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11706158.3/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24948196.6/111

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13005283.2/56

# asym\_usl\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.008  $\chi^2$ /NDF: 20.4/30

Left Out: -0.010 $\pm$ 0.009  $\chi^2$ /NDF: 19.4/23

Right Out: -0.008 $\pm$ 0.008  $\chi^2$ /NDF: 32.5/33

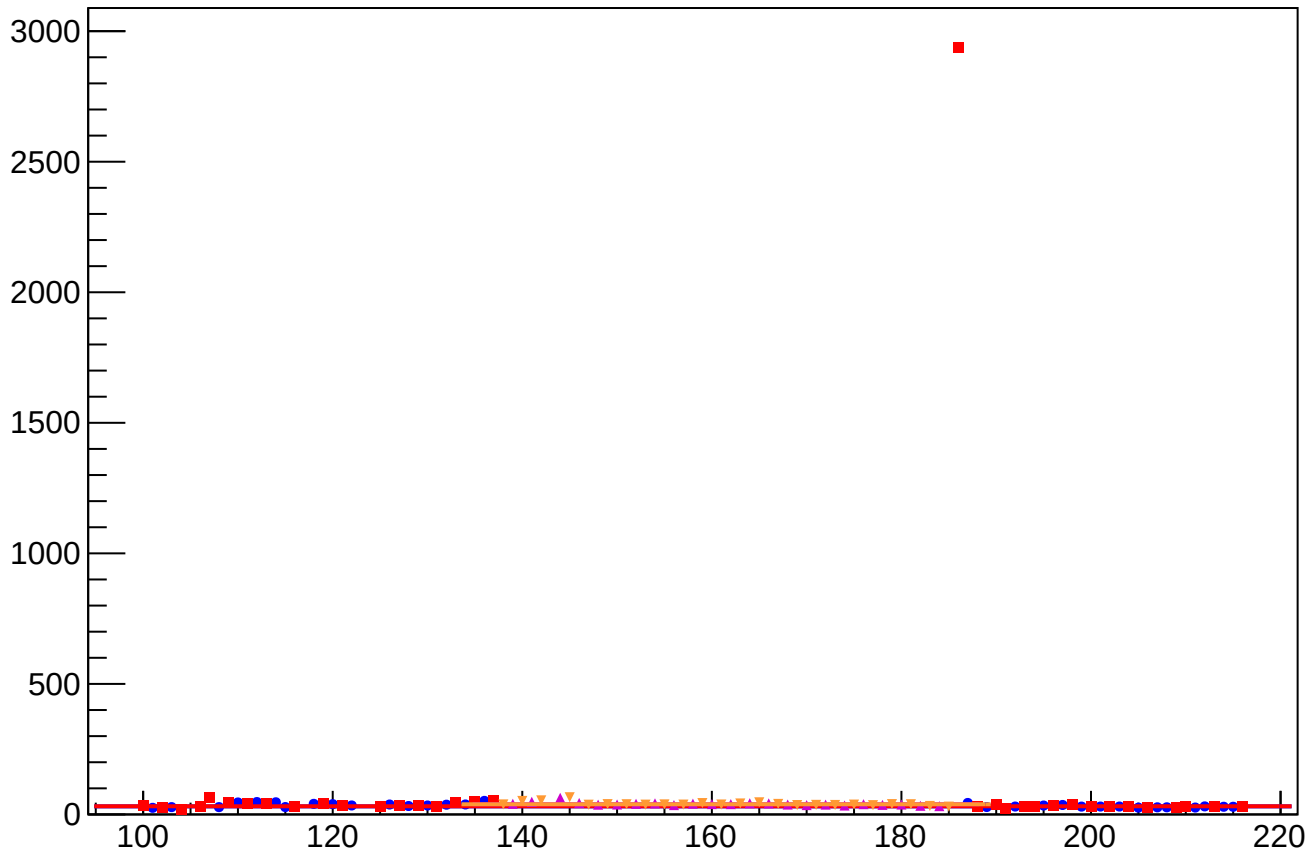
Left In: 0.011 $\pm$ 0.010  $\chi^2$ /NDF: 23.3/22

+ sign -0.000 $\pm$ 0.006  $\chi^2$ /NDF: 41.5/54

All: -0.000 $\pm$ 0.004  $\chi^2$ /NDF: 99.6/111

- sign -0.000 $\pm$ 0.006  $\chi^2$ /NDF: 58.1/56

# asym\_usl\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 30.912 $\pm$ 0.005  $\chi^2$ /NDF: 971524.9/30

Left Out: 38.972 $\pm$ 0.007  $\chi^2$ /NDF: 624525.1/23

Right Out: 31.335 $\pm$ 0.005  $\chi^2$ /NDF: 1993786.6/33

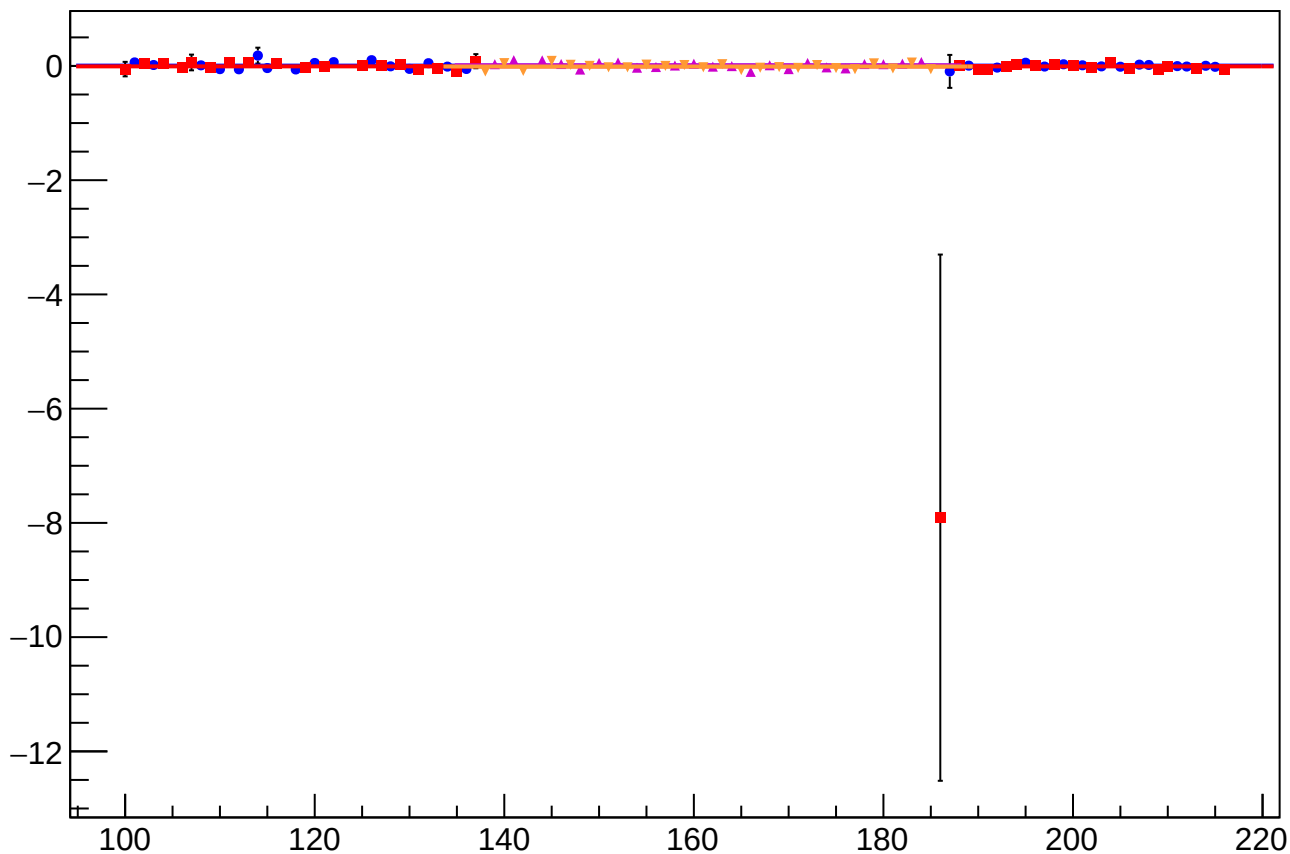
Left In: 39.179 $\pm$ 0.007  $\chi^2$ /NDF: 521827.1/22

+ sign 34.025 $\pm$ 0.004  $\chi^2$ /NDF: 2486479.0/54

All: 34.196 $\pm$ 0.003  $\chi^2$ /NDF: 5830594.3/111

- sign 34.372 $\pm$ 0.004  $\chi^2$ /NDF: 3340663.0/56

asym\_usl\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.4/30

Left Out:  $-0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 19.4/23

Right Out:  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 32.5/33

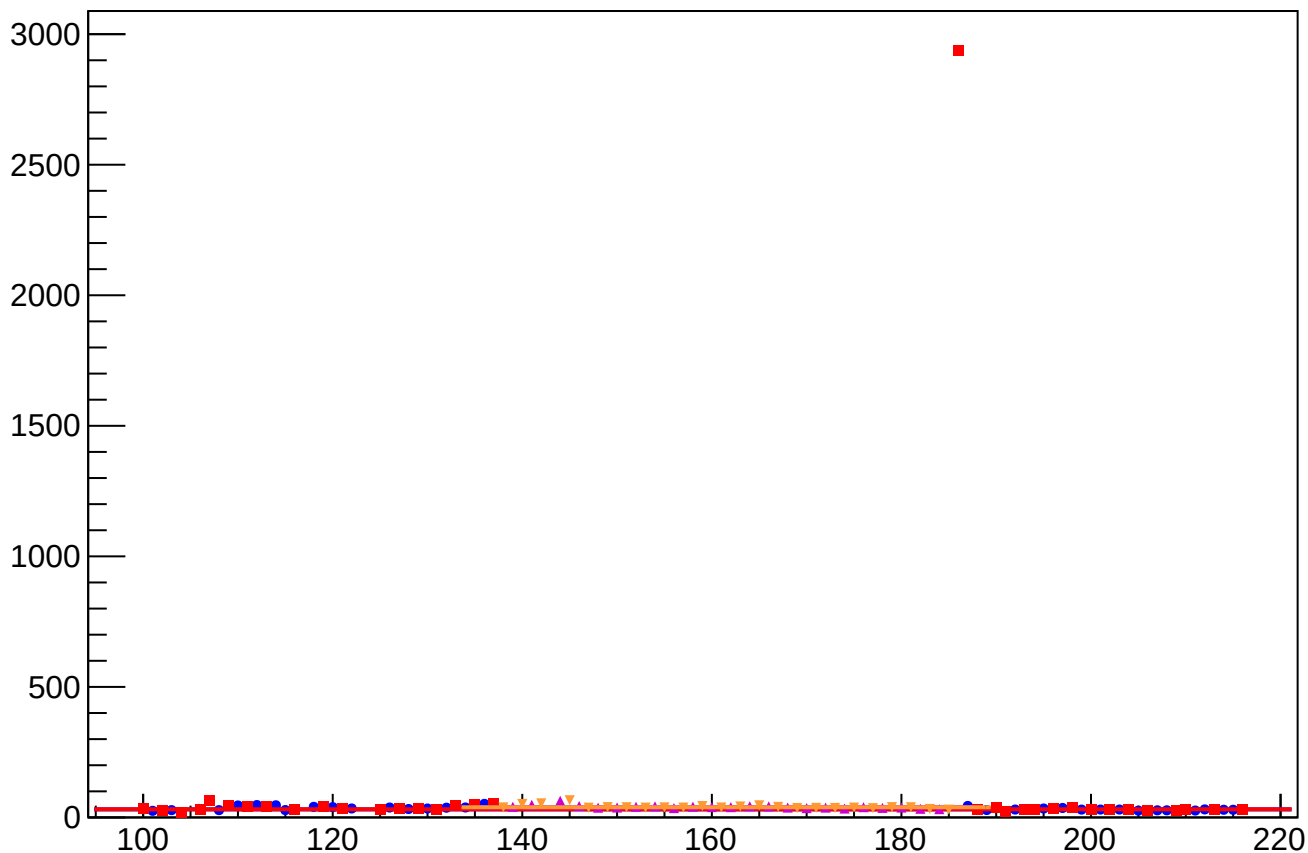
Left In:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 41.5/54

All:  $-0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 99.6/111

- sign  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 58.1/56

asym\_usl\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 30.912 $\pm$ 0.005  $\chi^2$ /NDF: 971524.9/30

Left Out: 38.972 $\pm$ 0.007  $\chi^2$ /NDF: 624525.1/23

Right Out: 31.335 $\pm$ 0.005  $\chi^2$ /NDF: 1993786.6/33

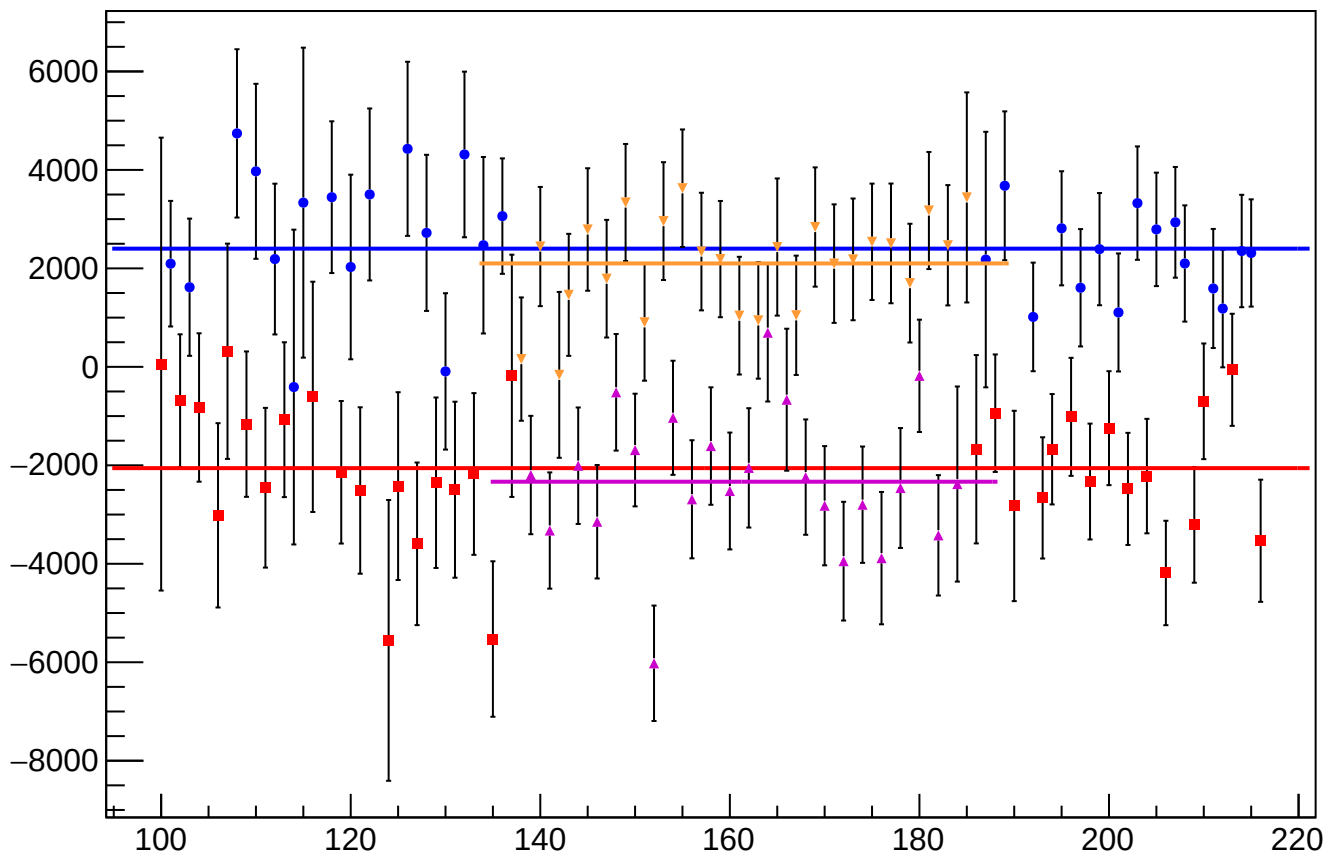
Left In: 39.179 $\pm$ 0.007  $\chi^2$ /NDF: 521827.1/22

+ sign 34.025 $\pm$ 0.004  $\chi^2$ /NDF: 2486479.0/54

All: 34.196 $\pm$ 0.003  $\chi^2$ /NDF: 5830594.3/111

- sign 34.372 $\pm$ 0.004  $\chi^2$ /NDF: 3340663.0/56

# reg\_asym\_usr\_mean vs Slug



Right In:  $2401.027 \pm 247.780$   $\chi^2/\text{NDF}: 16.8/30$

Left Out:  $2100.398 \pm 248.306$   $\chi^2/\text{NDF}: 13.8/24$

Right Out:  $-2057.221 \pm 247.941$   $\chi^2/\text{NDF}: 26.2/33$

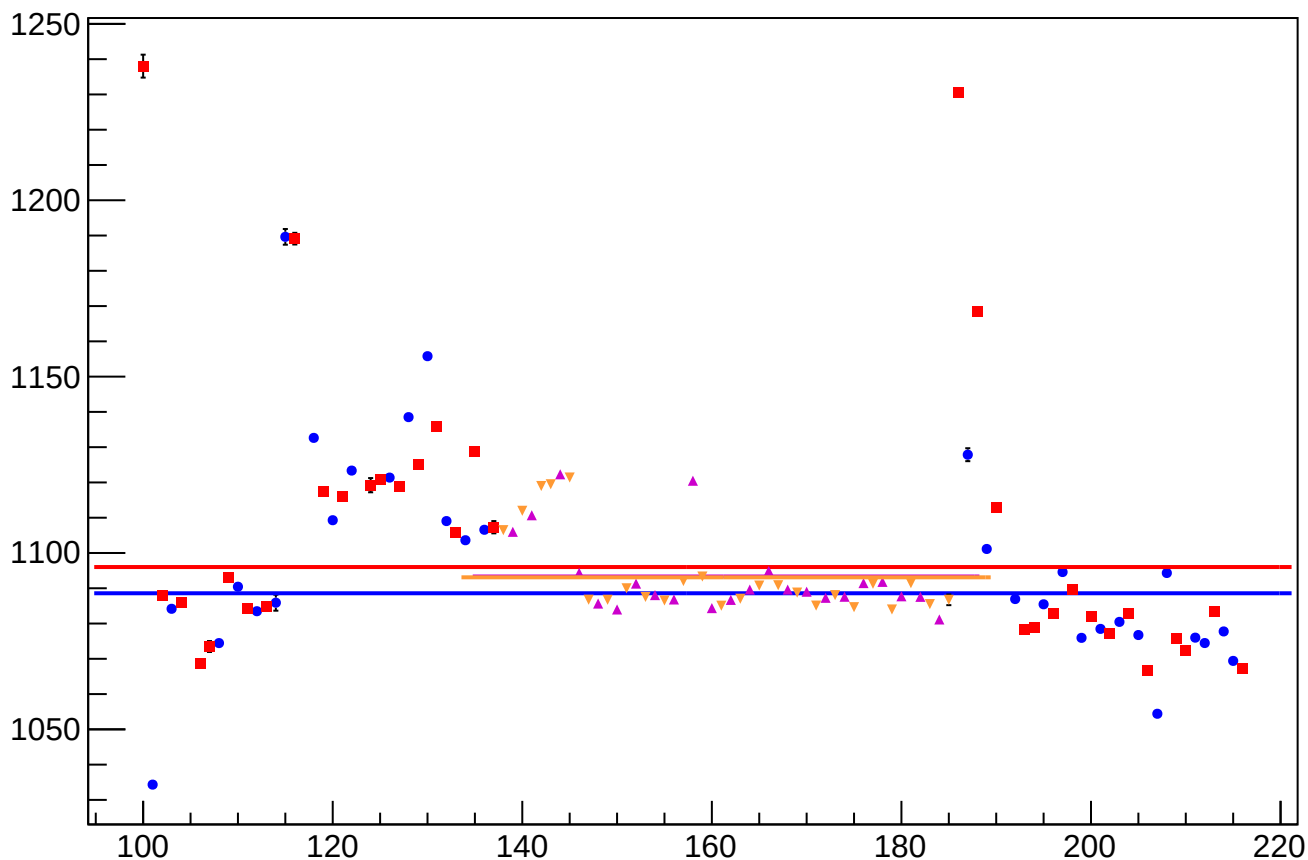
Left In:  $-2332.954 \pm 255.284$   $\chi^2/\text{NDF}: 29.5/22$

+ sign  $2251.031 \pm 175.393$   $\chi^2/\text{NDF}: 31.4/55$

All:  $61.007 \pm 124.885$   $\chi^2/\text{NDF}: 404.0/112$

- sign  $-2191.065 \pm 177.860$   $\chi^2/\text{NDF}: 56.3/56$

# reg\_asym\_usr\_rms vs Slug



Right In: 1088.582 $\pm$ 0.175  $\chi^2$ /NDF: 20248.6/30

Left Out: 1093.102 $\pm$ 0.176  $\chi^2$ /NDF: 3983.2/24

Right Out: 1096.017 $\pm$ 0.175  $\chi^2$ /NDF: 34155.9/33

Left In: 1093.338 $\pm$ 0.181  $\chi^2$ /NDF: 3725.7/22

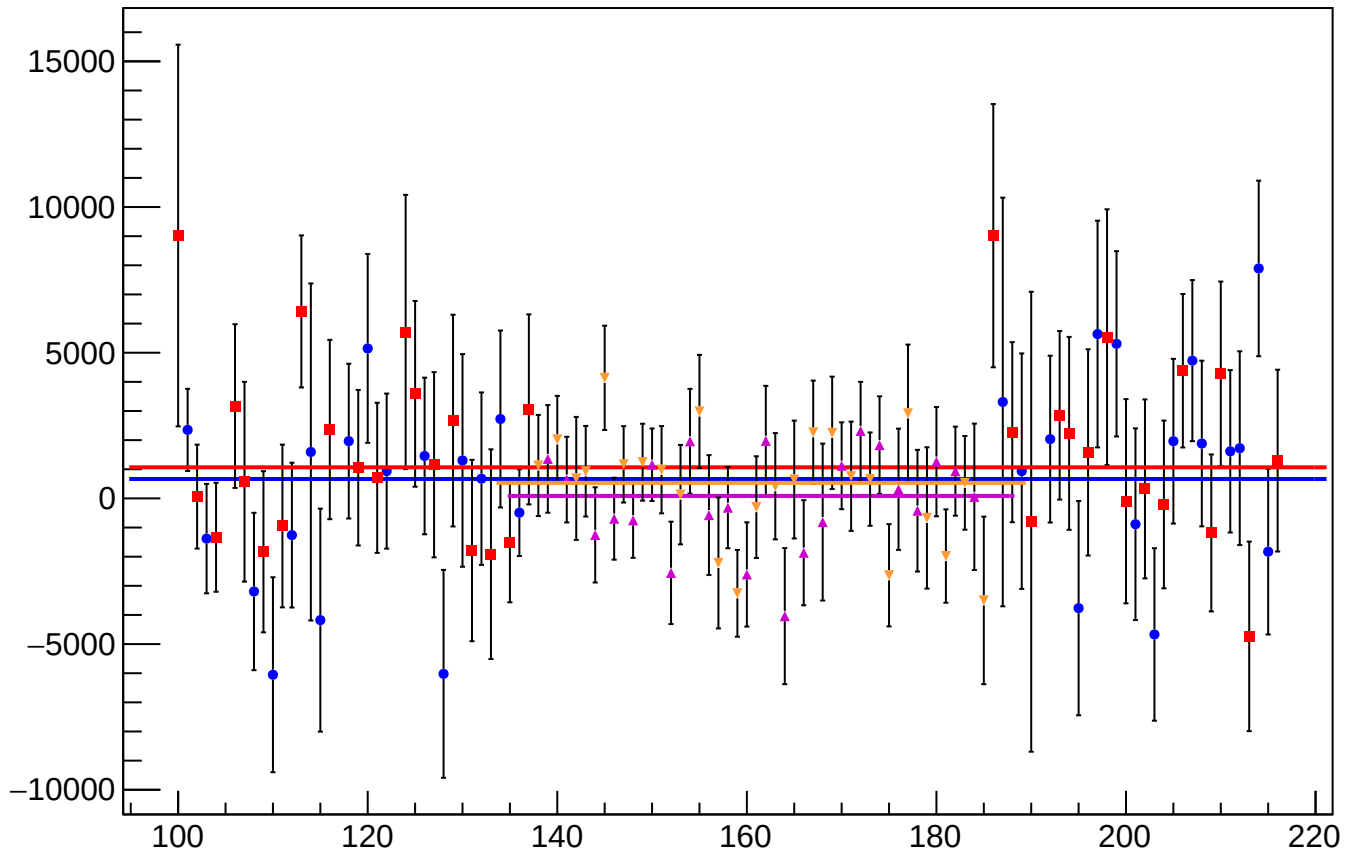
+ sign 1090.837 $\pm$ 0.124  $\chi^2$ /NDF: 24563.9/55

All: 1092.750 $\pm$ 0.088  $\chi^2$ /NDF: 63041.4/112

- sign 1094.717 $\pm$ 0.126  $\chi^2$ /NDF: 37995.0/56



# asym\_usr\_reg\_correction\_mean vs Slug



Right In: 666.591 $\pm$ 493.894  $\chi^2$ /NDF: 36.1/30

Left Out: 532.982 $\pm$ 347.223  $\chi^2$ /NDF: 26.4/24

Right Out: 1066.771 $\pm$ 508.718  $\chi^2$ /NDF: 27.0/33

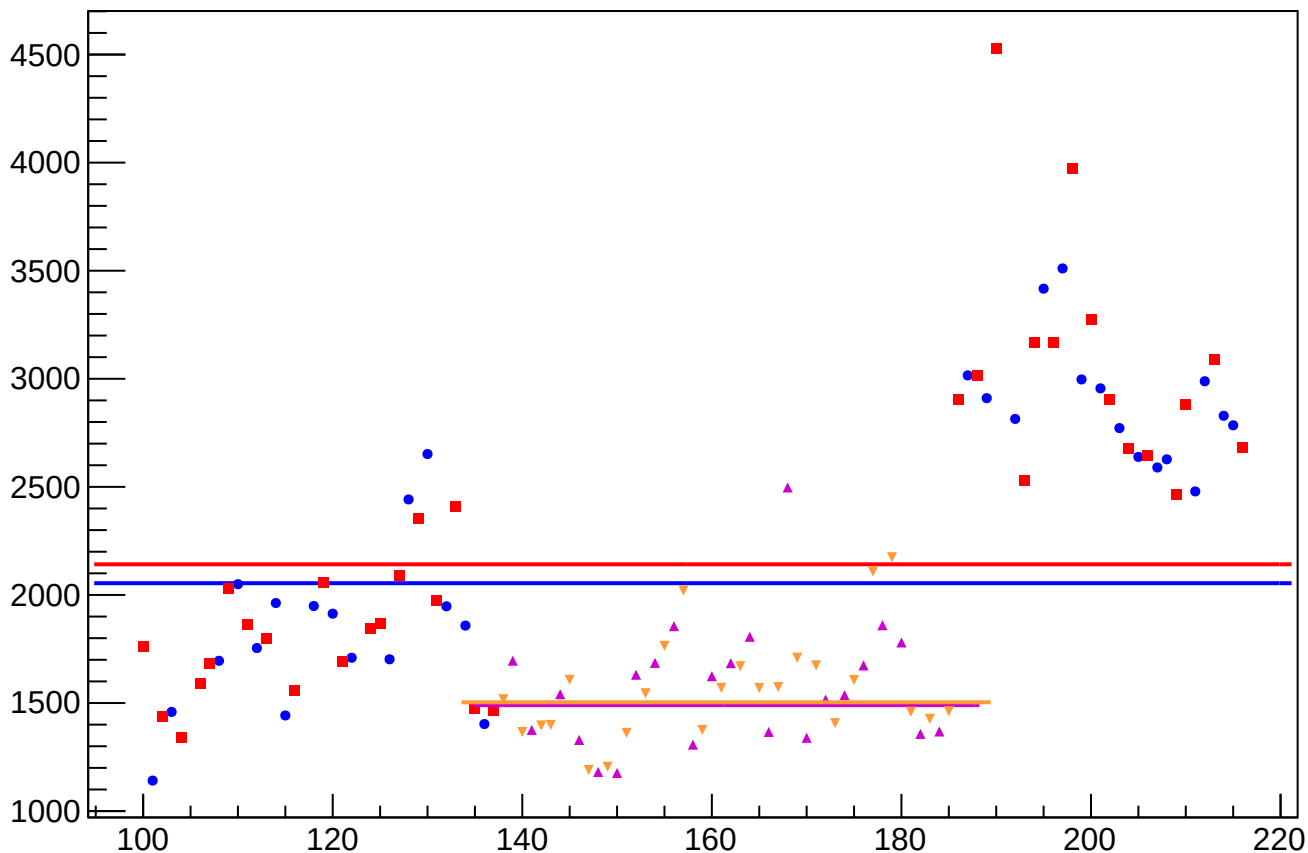
Left In: 85.329 $\pm$ 353.933  $\chi^2$ /NDF: 18.1/22

+ sign 577.176 $\pm$ 284.051  $\chi^2$ /NDF: 62.6/55

All: 493.247 $\pm$ 203.108  $\chi^2$ /NDF: 110.4/112

- sign 405.443 $\pm$ 290.534  $\chi^2$ /NDF: 47.6/56

# asym\_usr\_reg\_correction\_rms vs Slug



Right In: 2054.346+/-0.349  $\chi^2/\text{NDF}$ : 3679668.9/30

Left Out: 1503.437+/-0.246  $\chi^2/\text{NDF}$ : 799670.9/24

Right Out: 2141.769+/-0.360  $\chi^2/\text{NDF}$ : 3320077.7/33

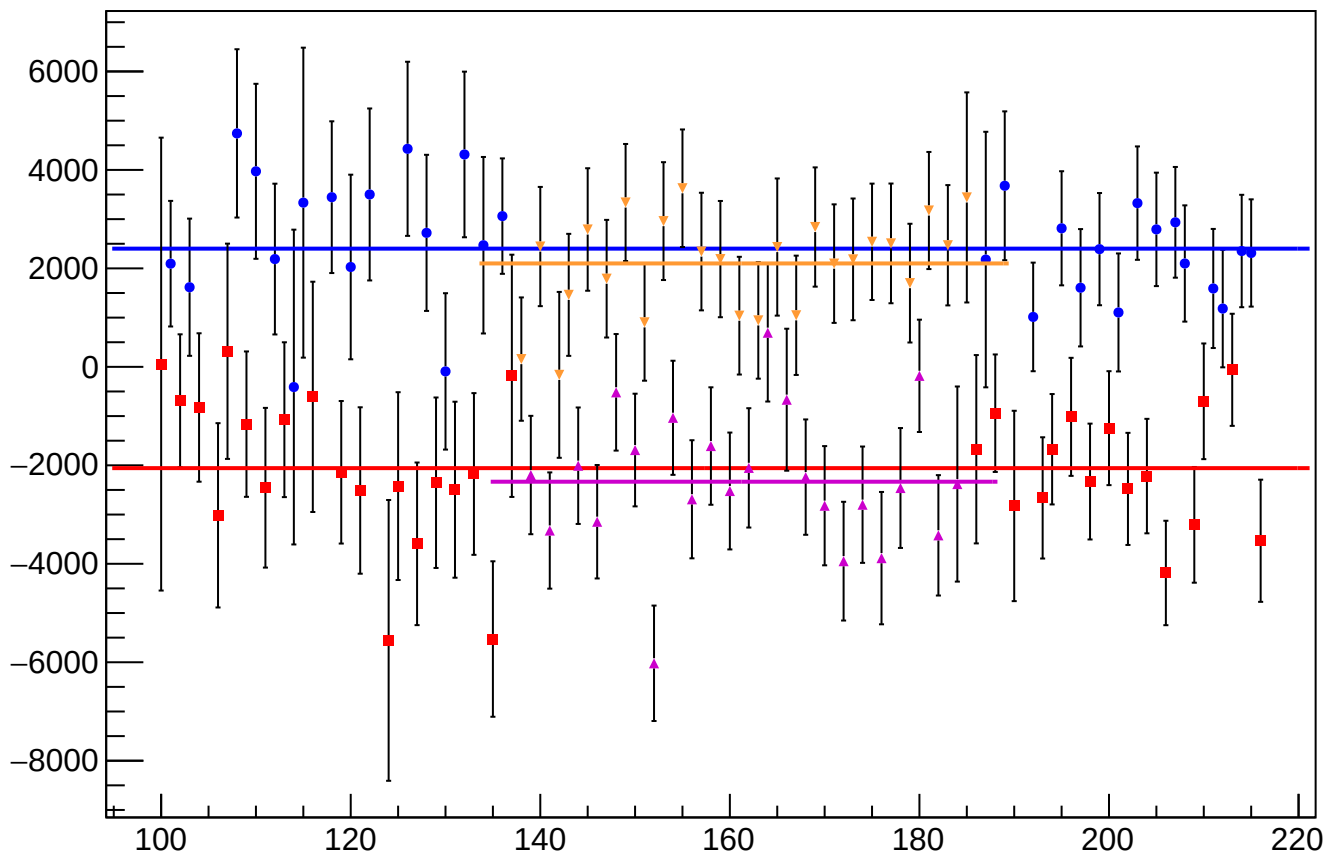
Left In: 1490.314+/-0.250  $\chi^2/\text{NDF}$ : 968221.5/22

+ sign 1685.661+/-0.201  $\chi^2/\text{NDF}$ : 6144663.1/55

All: 1694.036+/-0.144  $\chi^2/\text{NDF}$ : 12646537.1/100

- sign 1702.798+/-0.205  $\chi^2/\text{NDF}$ : 6498316.3/56

# cor\_asym\_usr\_mean vs Slug



Right In:  $2401.027 \pm 247.780$   $\chi^2/\text{NDF}: 16.8/30$

Left Out:  $2100.398 \pm 248.306$   $\chi^2/\text{NDF}: 13.8/24$

Right Out:  $-2057.221 \pm 247.941$   $\chi^2/\text{NDF}: 26.2/33$

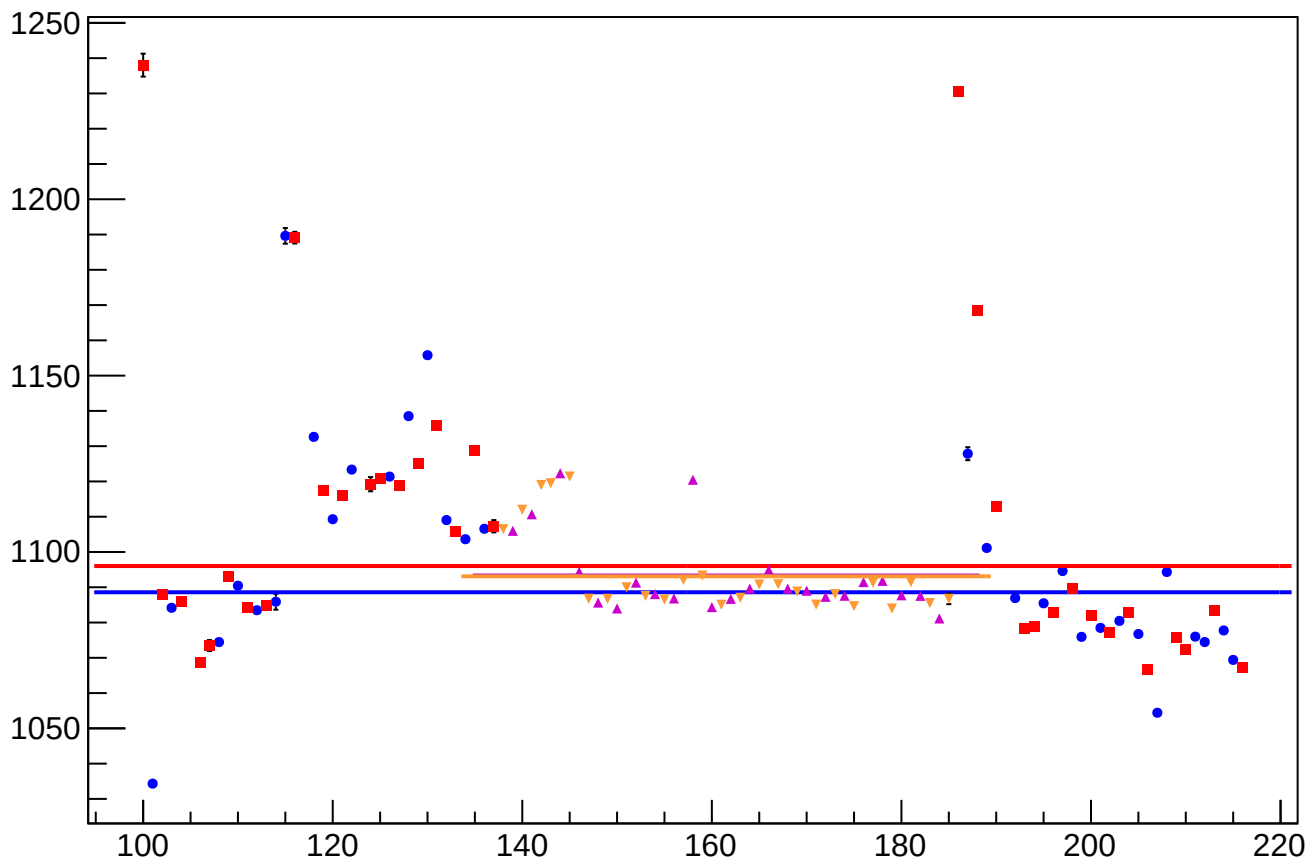
Left In:  $-2332.954 \pm 255.284$   $\chi^2/\text{NDF}: 29.5/22$

+ sign  $2251.031 \pm 175.393$   $\chi^2/\text{NDF}: 31.4/55$

All:  $61.007 \pm 124.885$   $\chi^2/\text{NDF}: 404.0/112$

- sign  $-2191.065 \pm 177.860$   $\chi^2/\text{NDF}: 56.3/56$

# cor\_asym\_usr\_rms vs Slug



Right In: 1088.582 $\pm$ 0.175  $\chi^2$ /NDF: 20248.6/30

Left Out: 1093.102 $\pm$ 0.176  $\chi^2$ /NDF: 3983.2/24

Right Out: 1096.017 $\pm$ 0.175  $\chi^2$ /NDF: 34155.9/33

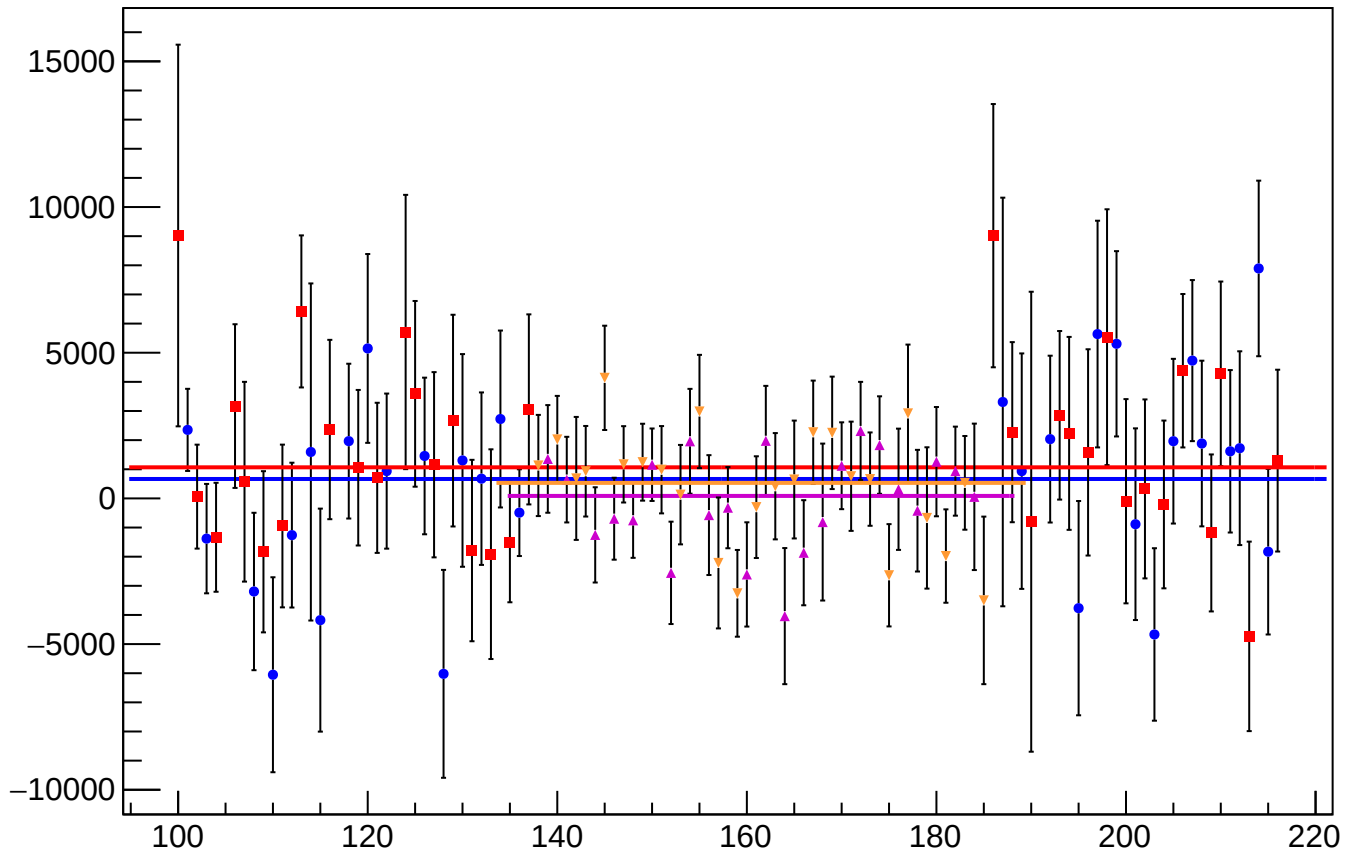
Left In: 1093.338 $\pm$ 0.181  $\chi^2$ /NDF: 3725.7/22

+ sign 1090.837 $\pm$ 0.124  $\chi^2$ /NDF: 24563.9/55

All: 1092.750 $\pm$ 0.088  $\chi^2$ /NDF: 63041.4/112

- sign 1094.717 $\pm$ 0.126  $\chi^2$ /NDF: 37995.0/56

# asym\_usr\_cor\_correction\_mean vs Slug



Right In:  $666.591 \pm 493.894$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $532.982 \pm 347.223$   $\chi^2/\text{NDF}$ : 26.4/24

Right Out:  $1066.771 \pm 508.718$   $\chi^2/\text{NDF}$ : 27.0/33

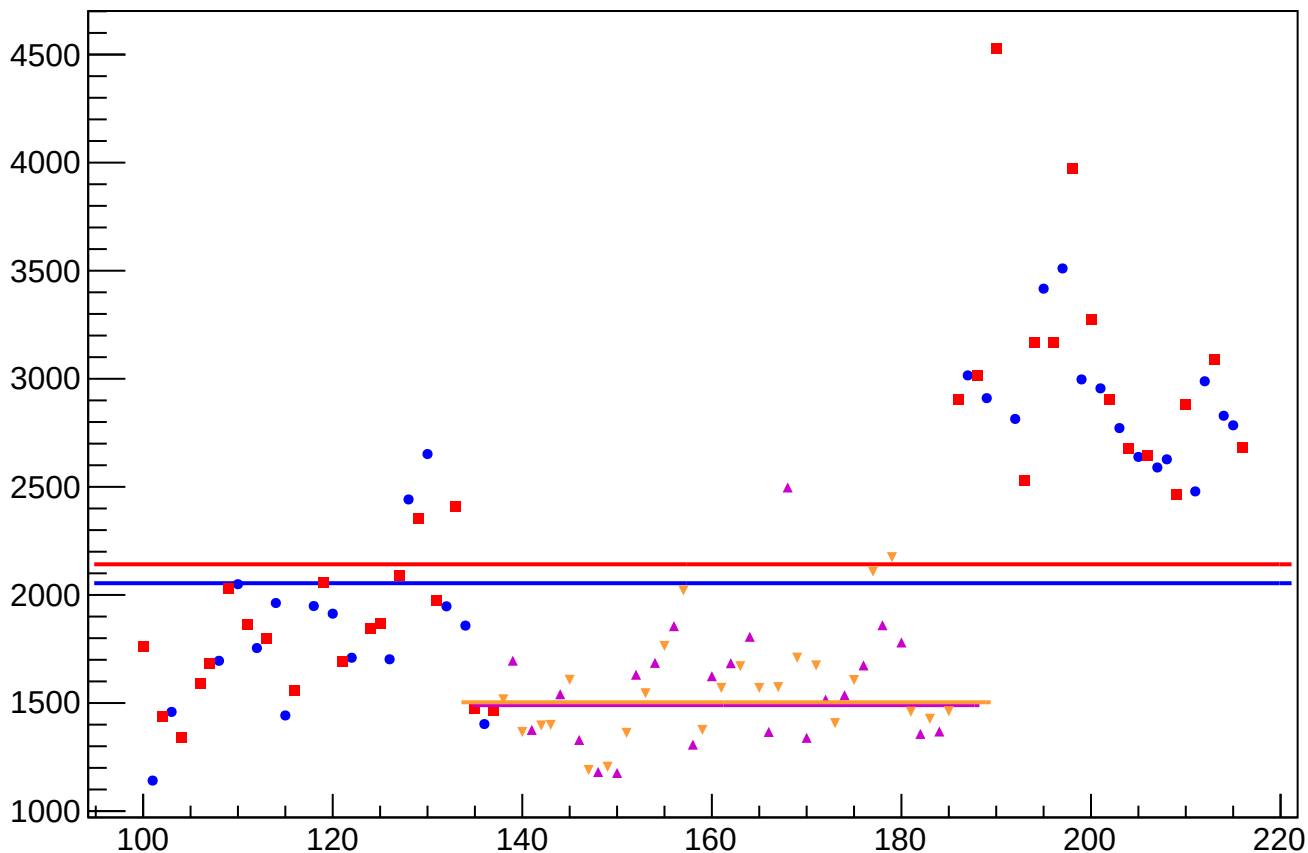
Left In:  $85.329 \pm 353.933$   $\chi^2/\text{NDF}$ : 18.1/22

+ sign  $577.176 \pm 284.051$   $\chi^2/\text{NDF}$ : 62.6/55

All:  $493.247 \pm 203.108$   $\chi^2/\text{NDF}$ : 110.4/112

- sign  $405.443 \pm 290.534$   $\chi^2/\text{NDF}$ : 47.6/56

# asym\_usr\_cor\_correction\_rms vs Slug



Right In: 2054.346+/-0.349  $\chi^2$ /NDF: 3679668.9/30

Left Out: 1503.437+/-0.246  $\chi^2$ /NDF: 799670.9/24

Right Out: 2141.769+/-0.360  $\chi^2$ /NDF: 3320077.7/33

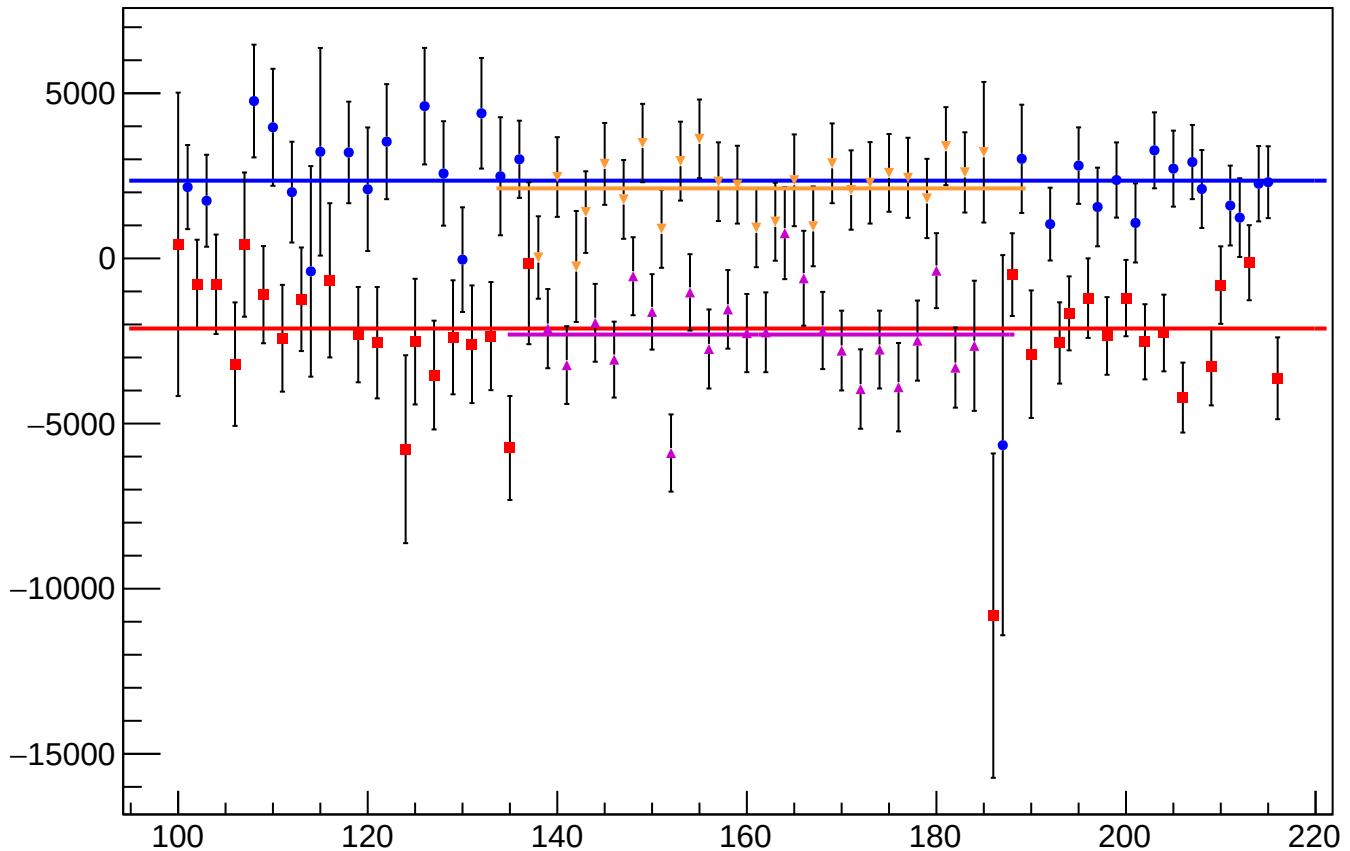
Left In: 1490.314+/-0.250  $\chi^2$ /NDF: 968221.5/22

+ sign 1685.661+/-0.201  $\chi^2$ /NDF: 6144663.1/55

All: 1694.036+/-0.144  $\chi^2$ /NDF: 12646537.1/100

- sign 1702.798+/-0.205  $\chi^2$ /NDF: 6498316.3/56

# overload\_cor\_asym\_usr\_mean vs Slug



Right In:  $2354.030 \pm 248.773$   $\chi^2/\text{NDF}$ : 18.0/30

Left Out:  $2119.973 \pm 247.544$   $\chi^2/\text{NDF}$ : 15.1/24

Right Out:  $-2122.632 \pm 249.892$   $\chi^2/\text{NDF}$ : 30.9/33

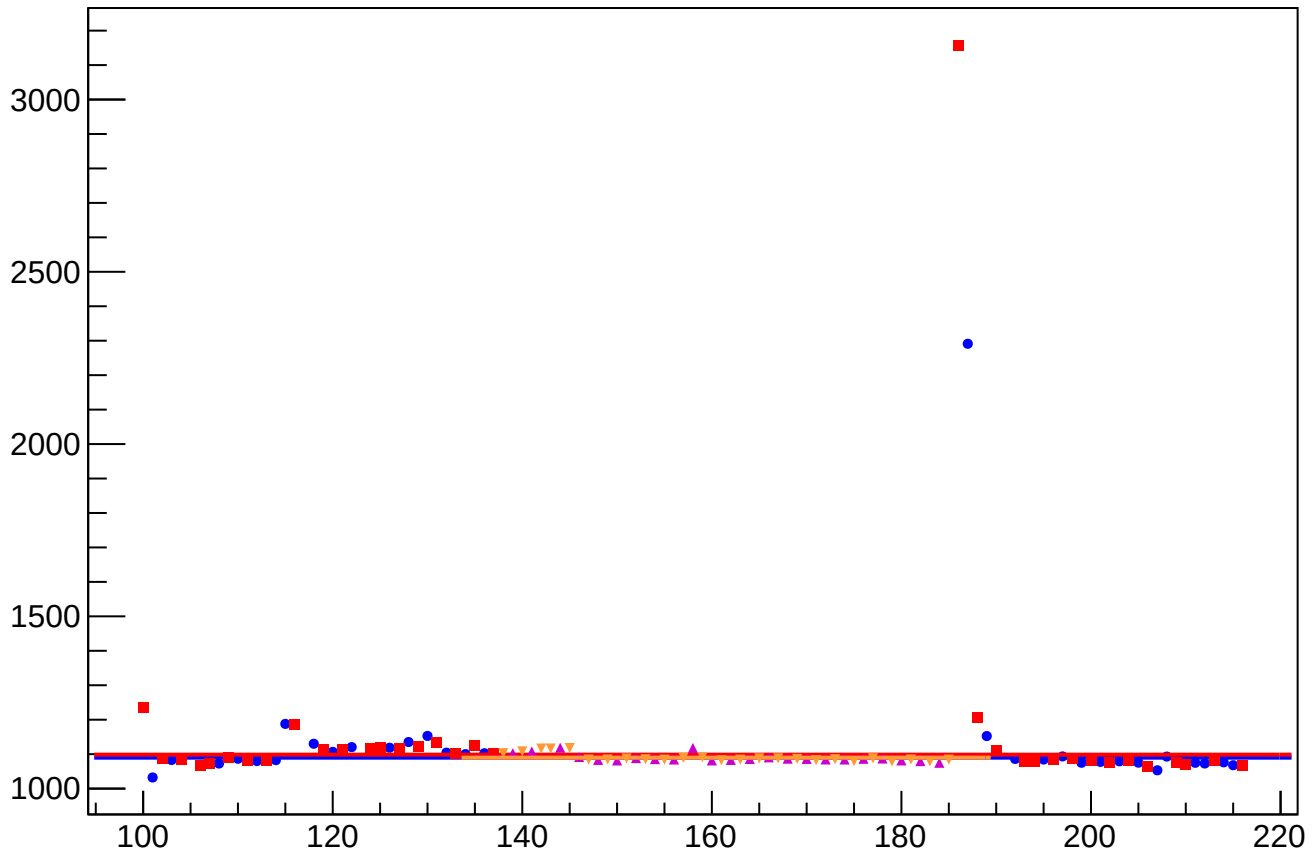
Left In:  $-2305.411 \pm 254.497$   $\chi^2/\text{NDF}$ : 28.5/22

+ sign  $2236.422 \pm 175.473$   $\chi^2/\text{NDF}$ : 33.6/55

All:  $47.662 \pm 125.068$   $\chi^2/\text{NDF}$ : 409.5/112

- sign  $-2212.353 \pm 178.306$   $\chi^2/\text{NDF}$ : 59.6/56

# overload\_cor\_asym\_usr\_rms vs Slug



Right In: 1089.793+/-0.176  $\chi^2/\text{NDF}$ : 109493.4/30

Left Out: 1089.744+/-0.175  $\chi^2/\text{NDF}$ : 4057.6/24

Right Out: 1098.548+/-0.177  $\chi^2/\text{NDF}$ : 383731.7/33

Left In: 1089.964+/-0.180  $\chi^2/\text{NDF}$ : 3896.0/22

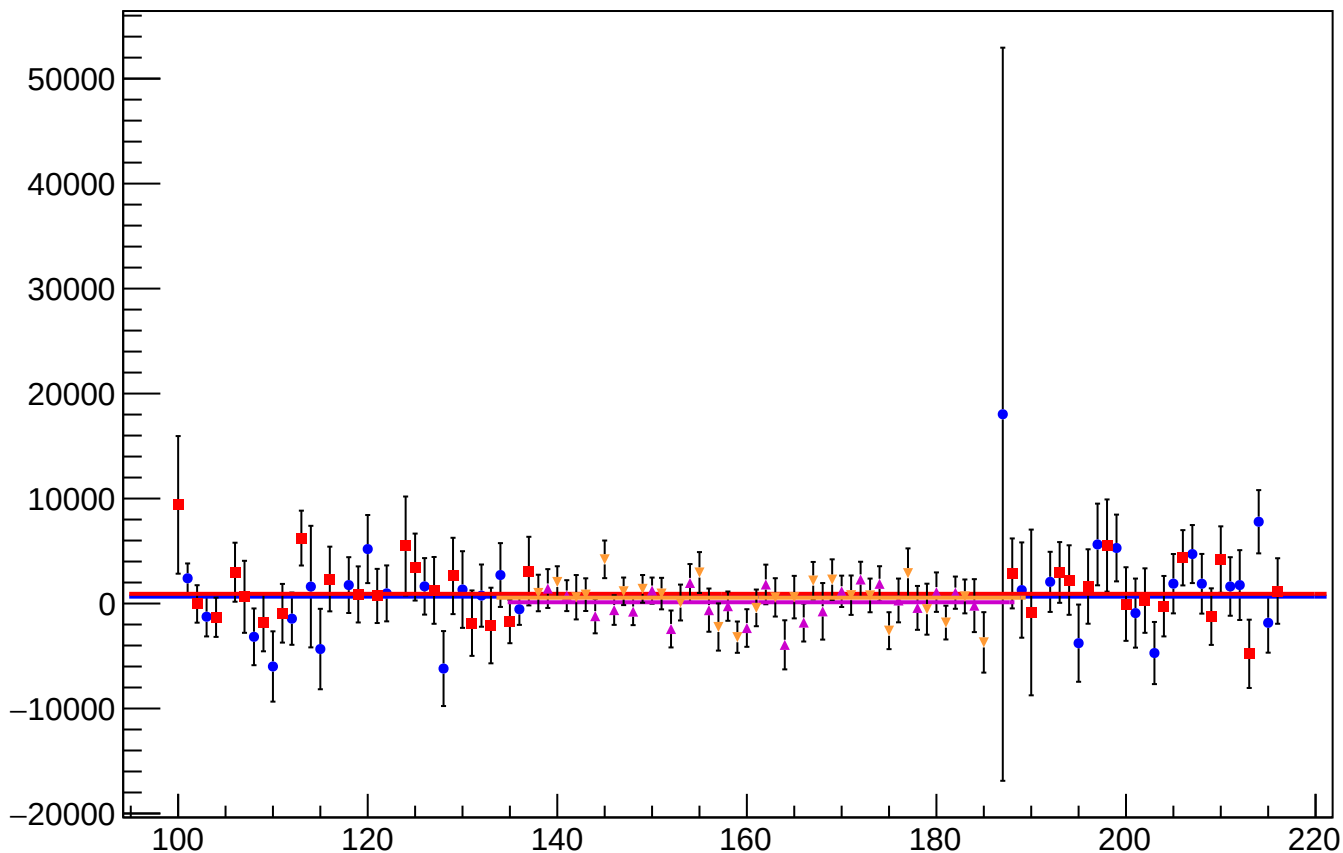
+ sign 1089.768+/-0.124  $\chi^2/\text{NDF}$ : 113551.1/55

All: 1092.015+/-0.088  $\chi^2/\text{NDF}$ : 503003.5/112

- sign 1094.335+/-0.126  $\chi^2/\text{NDF}$ : 388786.1/56



# asym\_usr\_overload\_cor\_correction\_mean vs Slug



Right In: 655.060 $\pm$ 496.280  $\chi^2$ /NDF: 36.4/30

Left Out: 553.759 $\pm$ 347.813  $\chi^2$ /NDF: 26.1/24

Right Out: 923.933 $\pm$ 513.326  $\chi^2$ /NDF: 24.0/32

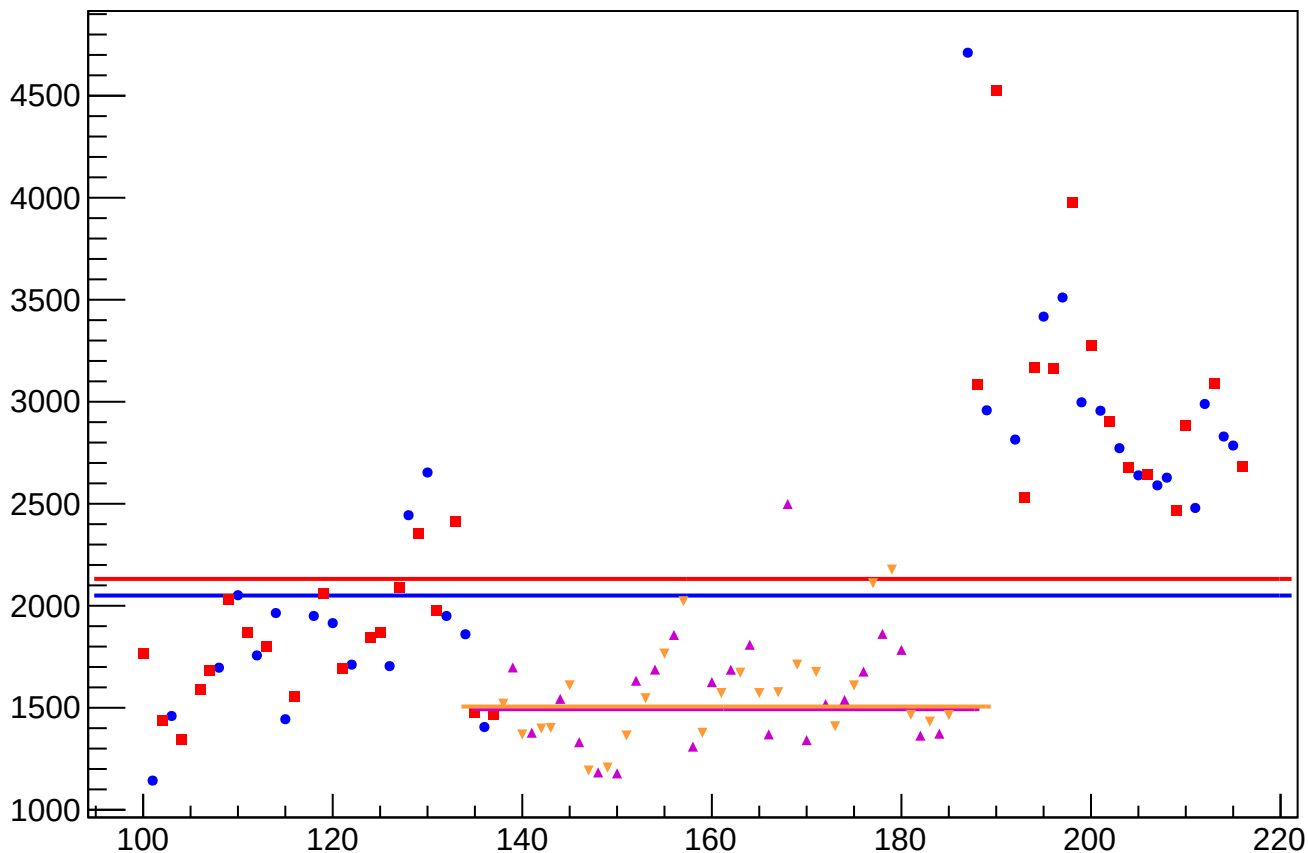
Left In: 121.420 $\pm$ 354.540  $\chi^2$ /NDF: 17.1/22

+ sign 587.127 $\pm$ 284.827  $\chi^2$ /NDF: 62.6/55

All: 486.335 $\pm$ 203.797  $\chi^2$ /NDF: 105.6/111

- sign 380.604 $\pm$ 291.723  $\chi^2$ /NDF: 42.8/55

# asym\_usr\_overload\_cor\_correction\_rms vs Slug



Right In: 2050.153+/-0.351  $\chi^2/\text{NDF}$ : 3630124.0/30

Left Out: 1506.103+/-0.246  $\chi^2/\text{NDF}$ : 796401.8/24

Right Out: 2131.659+/-0.363  $\chi^2/\text{NDF}$ : 3250763.2/32

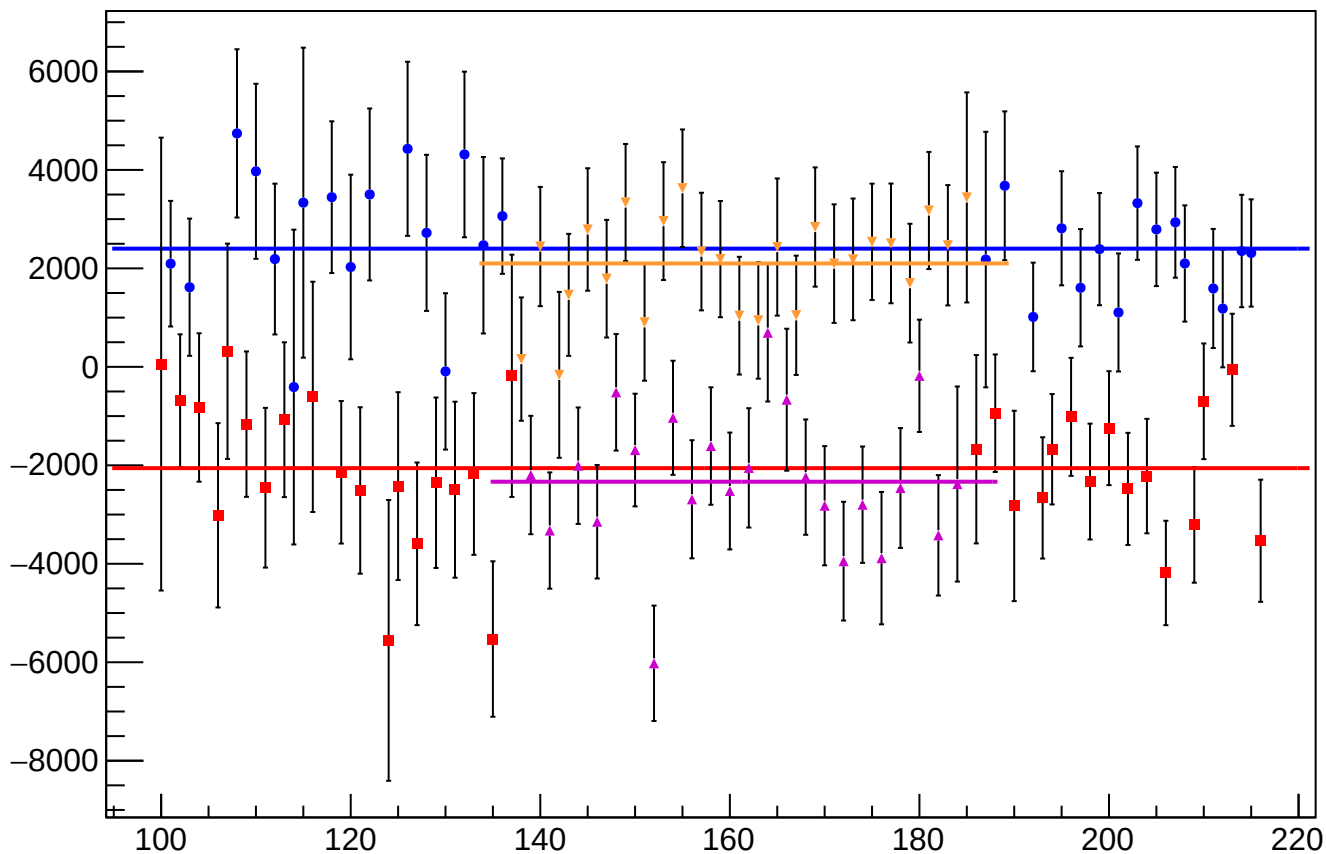
Left In: 1492.976+/-0.251  $\chi^2/\text{NDF}$ : 964358.0/22

+ sign 1685.307+/-0.201  $\chi^2/\text{NDF}$ : 6038380.3/55

All: 1692.111+/-0.144  $\chi^2/\text{NDF}$ : 12352005.2/100

- sign 1699.249+/-0.206  $\chi^2/\text{NDF}$ : 6311286.3/55

# eigen\_cor\_asym\_usr\_mean vs Slug



Right In:  $2401.027 \pm 247.780$   $\chi^2/\text{NDF}$ : 16.8/30

Left Out:  $2100.398 \pm 248.306$   $\chi^2/\text{NDF}$ : 13.8/24

Right Out:  $-2057.221 \pm 247.941$   $\chi^2/\text{NDF}$ : 26.2/33

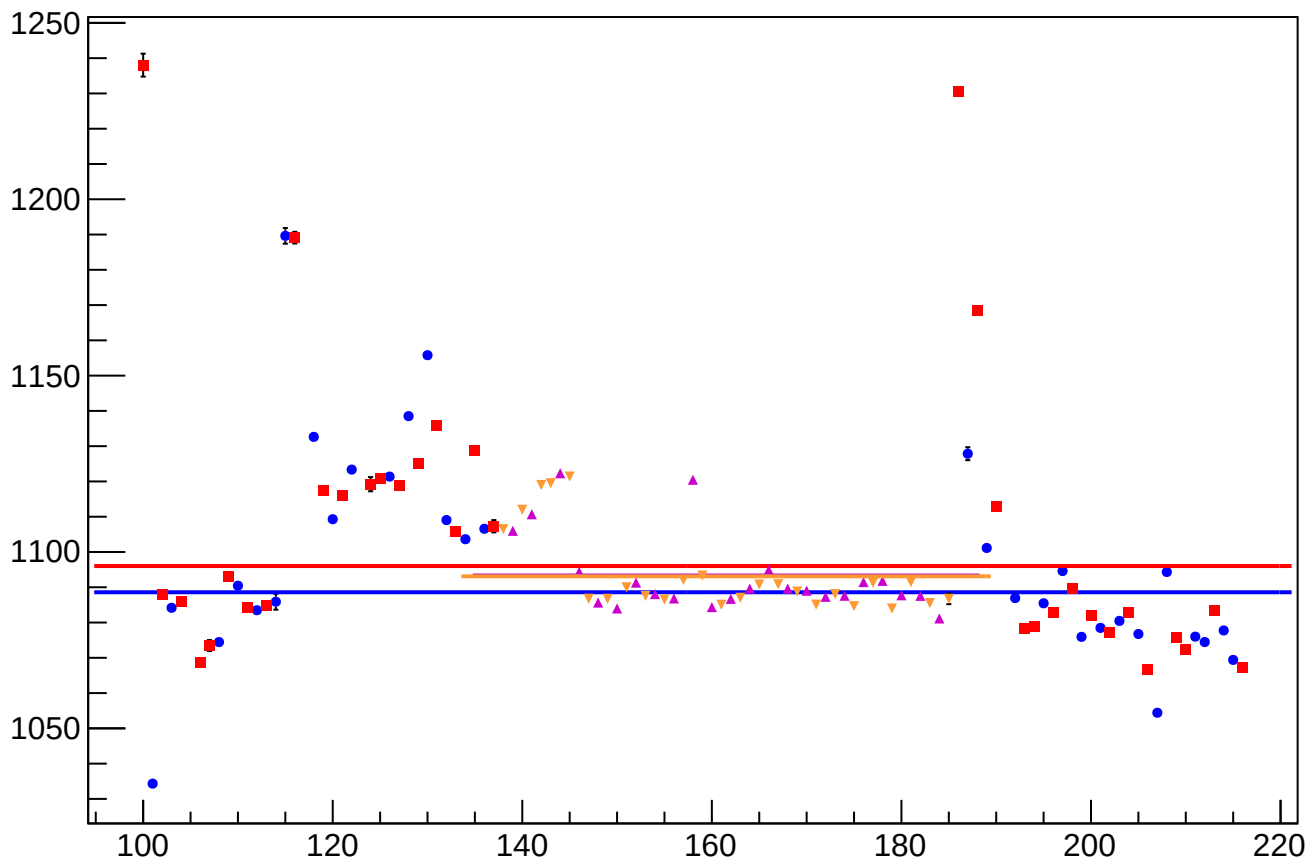
Left In:  $-2332.954 \pm 255.284$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $2251.031 \pm 175.393$   $\chi^2/\text{NDF}$ : 31.4/55

All:  $61.007 \pm 124.885$   $\chi^2/\text{NDF}$ : 404.0/112

- sign  $-2191.065 \pm 177.860$   $\chi^2/\text{NDF}$ : 56.3/56

# eigen\_cor\_asym\_usr\_rms vs Slug



Right In: 1088.582 $\pm$ 0.175  $\chi^2$ /NDF: 20248.6/30

Left Out: 1093.102 $\pm$ 0.176  $\chi^2$ /NDF: 3983.2/24

Right Out: 1096.017 $\pm$ 0.175  $\chi^2$ /NDF: 34155.9/33

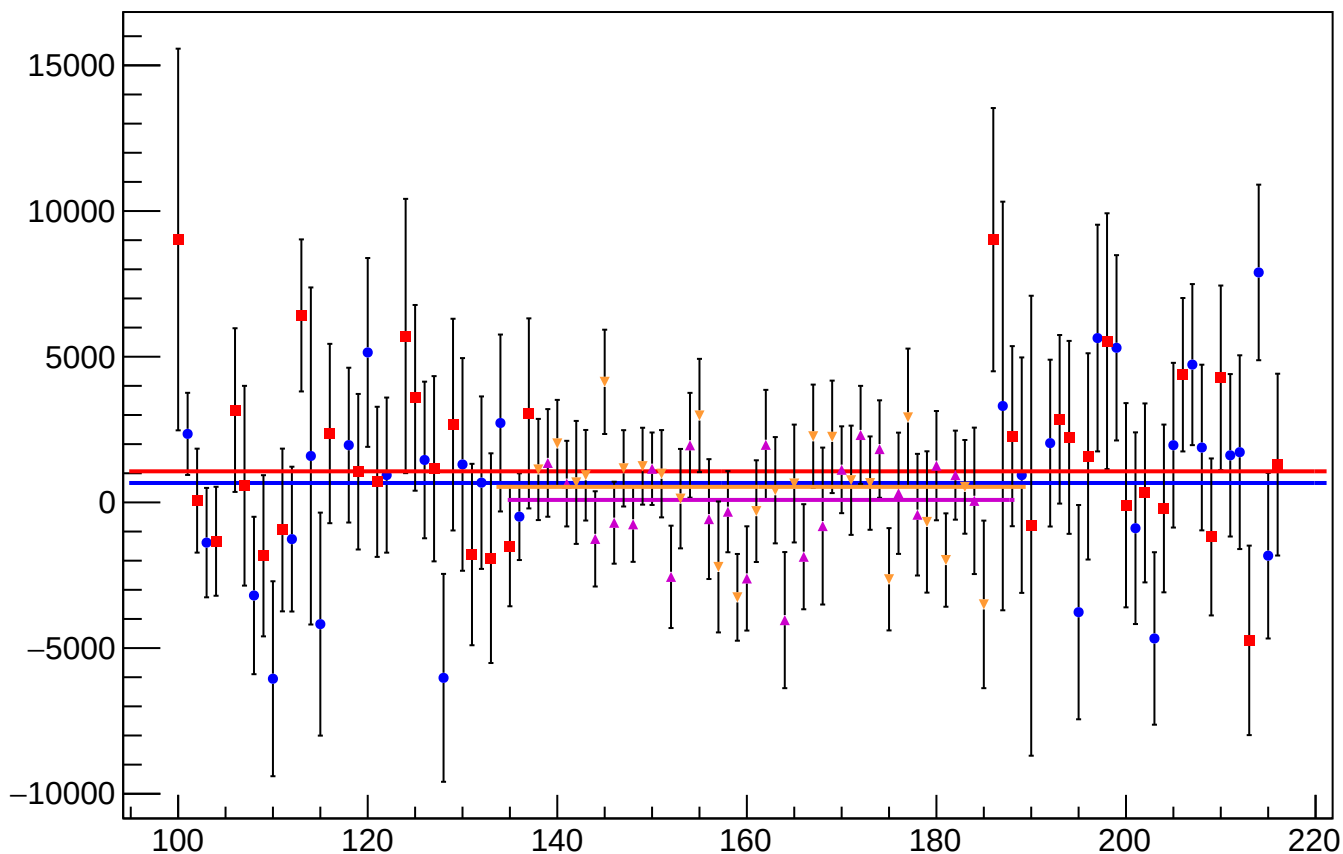
Left In: 1093.338 $\pm$ 0.181  $\chi^2$ /NDF: 3725.7/22

+ sign 1090.837 $\pm$ 0.124  $\chi^2$ /NDF: 24563.9/55

All: 1092.750 $\pm$ 0.088  $\chi^2$ /NDF: 63041.4/112

- sign 1094.717 $\pm$ 0.126  $\chi^2$ /NDF: 37995.0/56

# asym\_usr\_eigen\_cor\_correction\_mean vs Slug



Right In: 666.591 $\pm$ 493.894  $\chi^2/\text{NDF}$ : 36.1/30

Left Out: 532.982 $\pm$ 347.223  $\chi^2/\text{NDF}$ : 26.4/24

Right Out: 1066.771 $\pm$ 508.718  $\chi^2/\text{NDF}$ : 27.0/33

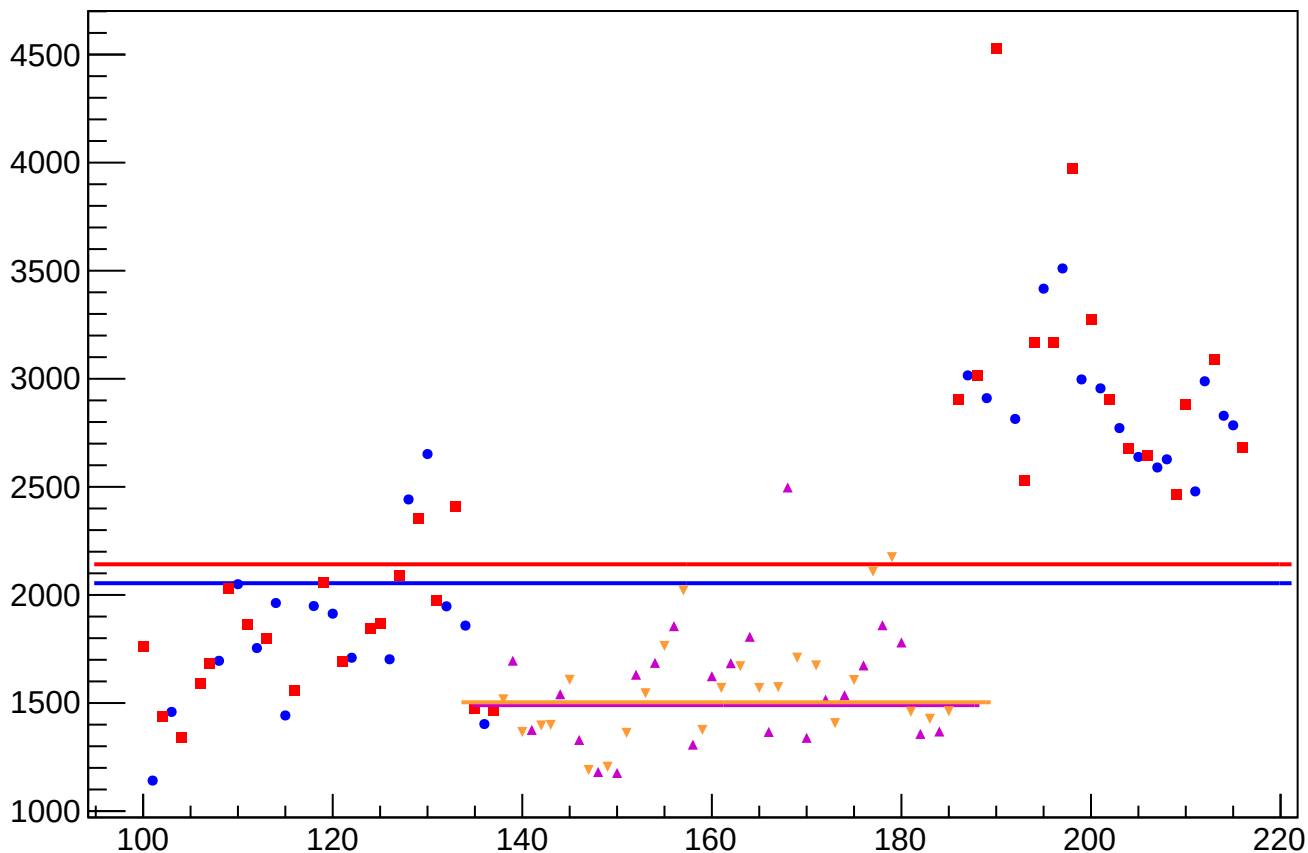
Left In: 85.329 $\pm$ 353.933  $\chi^2/\text{NDF}$ : 18.1/22

+ sign 577.176 $\pm$ 284.051  $\chi^2/\text{NDF}$ : 62.6/55

All: 493.247 $\pm$ 203.108  $\chi^2/\text{NDF}$ : 110.4/112

- sign 405.443 $\pm$ 290.534  $\chi^2/\text{NDF}$ : 47.6/56

# asym\_usr\_eigen\_cor\_correction\_rms vs Slug



Right In: 2054.346+/-0.349  $\chi^2/\text{NDF}$ : 3679668.9/30

Left Out: 1503.437+/-0.246  $\chi^2/\text{NDF}$ : 799670.9/24

Right Out: 2141.769+/-0.360  $\chi^2/\text{NDF}$ : 3320077.7/33

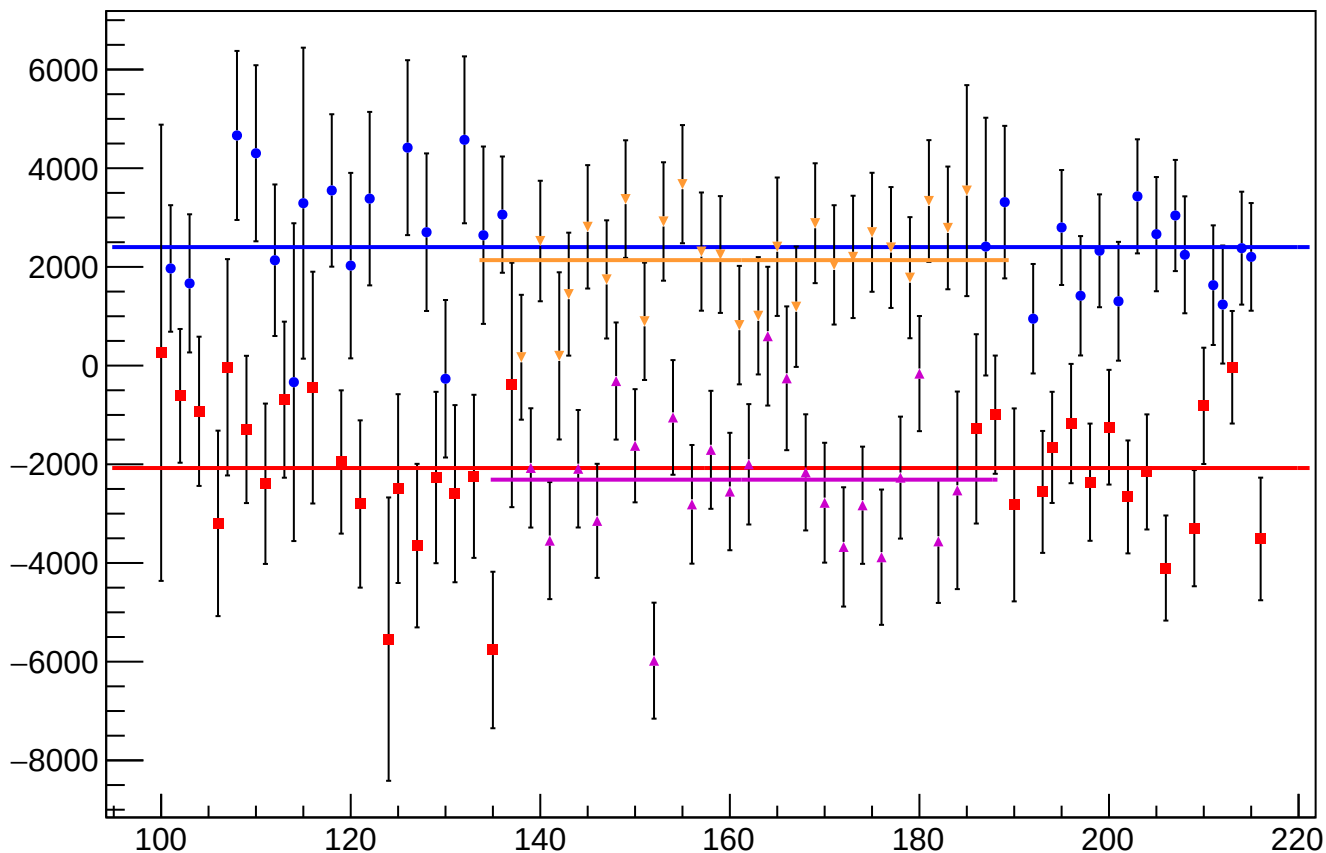
Left In: 1490.314+/-0.250  $\chi^2/\text{NDF}$ : 968221.5/22

+ sign 1685.661+/-0.201  $\chi^2/\text{NDF}$ : 6144663.1/55

All: 1694.036+/-0.144  $\chi^2/\text{NDF}$ : 12646537.1/100

- sign 1702.798+/-0.205  $\chi^2/\text{NDF}$ : 6498316.3/56

# dit\_asym\_usr\_mean vs Slug



Right In: 2401.426 $\pm$ 248.952  $\chi^2$ /NDF: 17.4/30

Left Out: 2137.184 $\pm$ 250.195  $\chi^2$ /NDF: 13.9/24

Right Out: -2075.753 $\pm$ 249.034  $\chi^2$ /NDF: 26.5/33

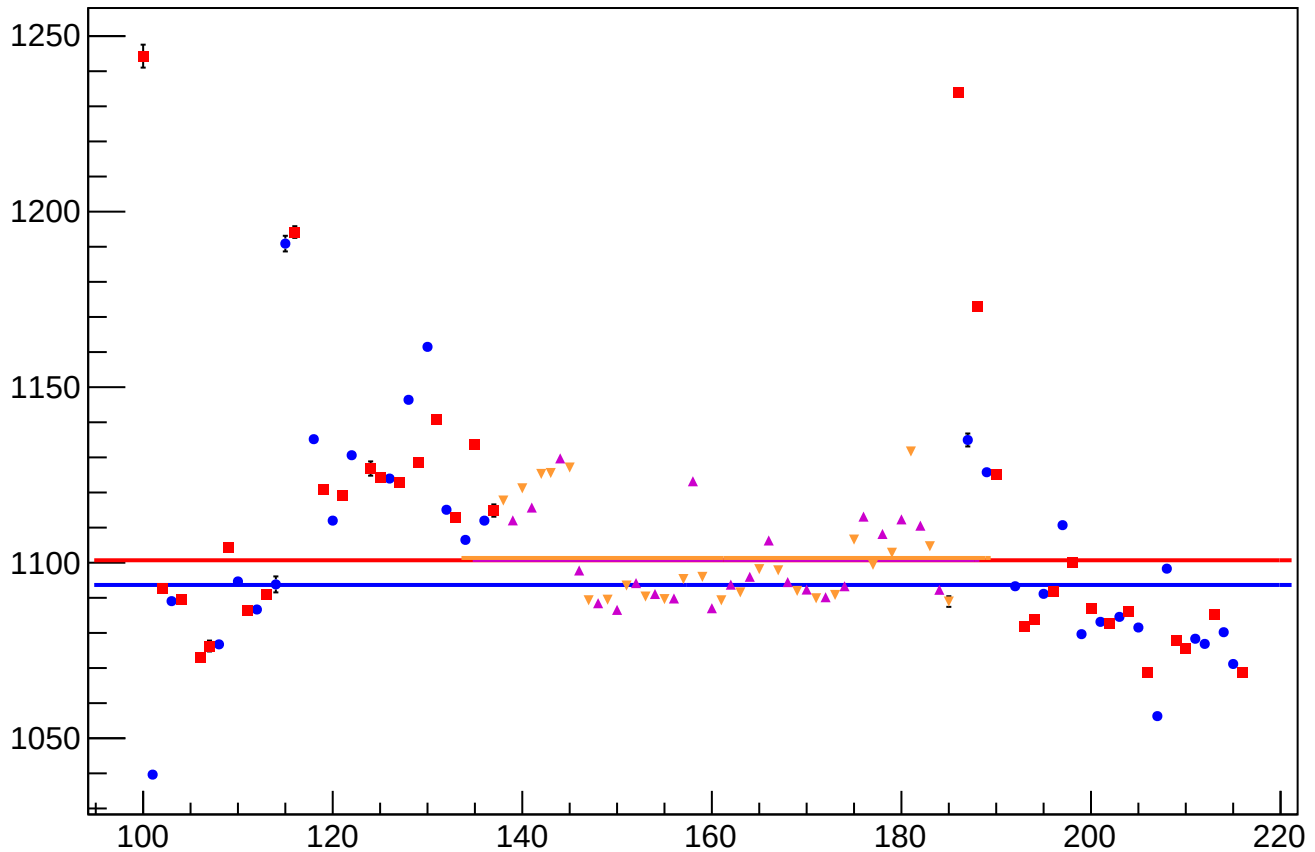
Left In: -2311.761 $\pm$ 257.036  $\chi^2$ /NDF: 29.9/22

+ sign 2269.963 $\pm$ 176.473  $\chi^2$ /NDF: 31.9/55

All: 69.869 $\pm$ 125.619  $\chi^2$ /NDF: 403.9/112

- sign -2190.026 $\pm$ 178.856  $\chi^2$ /NDF: 56.9/56

# dit\_asym\_usr\_rms vs Slug



Right In: 1093.665 $\pm$ 0.176  $\chi^2$ /NDF: 22155.5/30

Left Out: 1101.353 $\pm$ 0.177  $\chi^2$ /NDF: 5950.6/24

Right Out: 1100.695 $\pm$ 0.176  $\chi^2$ /NDF: 34716.9/33

Left In: 1100.792 $\pm$ 0.182  $\chi^2$ /NDF: 4641.7/22

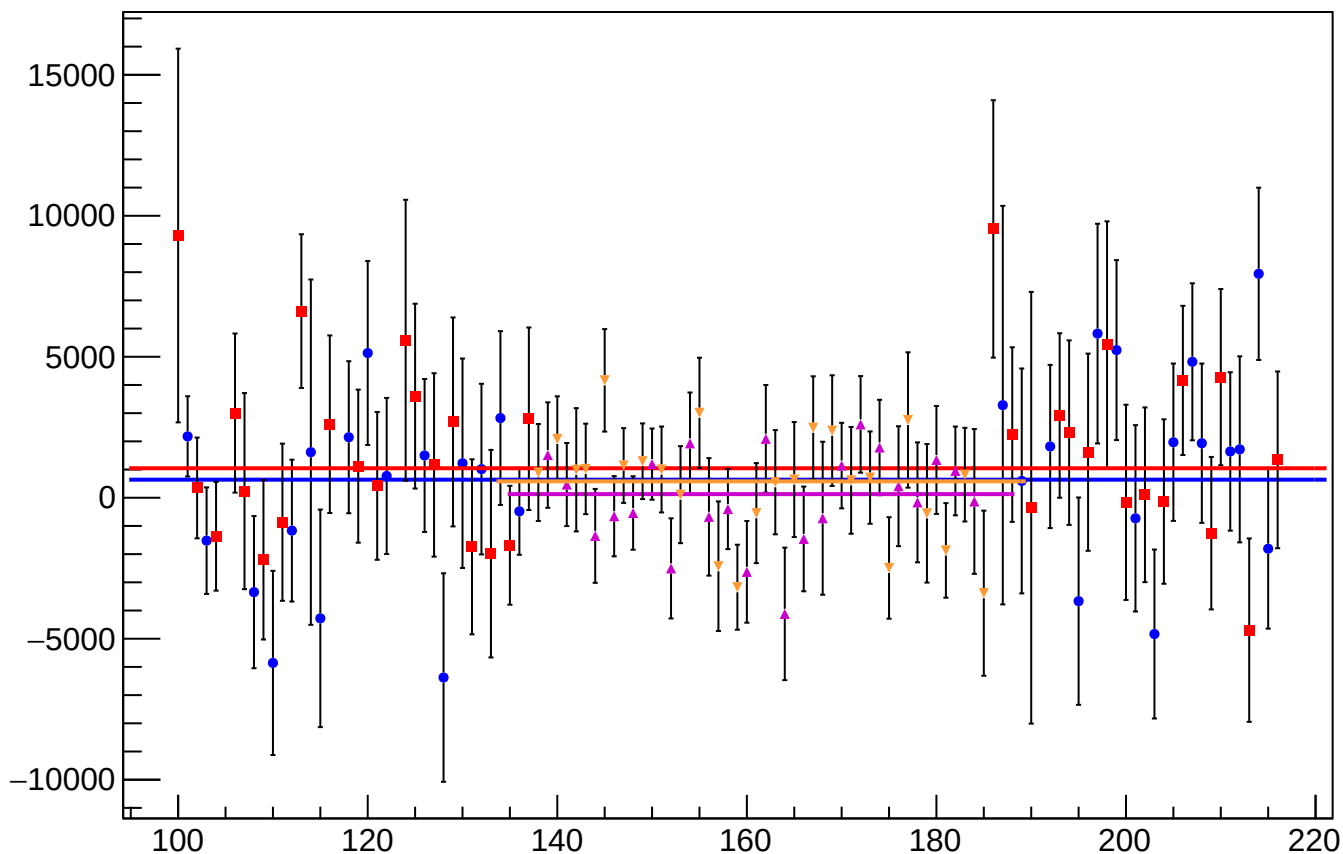
+ sign 1097.490 $\pm$ 0.125  $\chi^2$ /NDF: 29055.2/55

All: 1099.094 $\pm$ 0.089  $\chi^2$ /NDF: 68749.1/112

- sign 1100.742 $\pm$ 0.126  $\chi^2$ /NDF: 39358.8/56



# asym\_usr\_dit\_correction\_mean vs Slug



Right In: 641.124 $\pm$ 499.285  $\chi^2$ /NDF: 36.2/30

Left Out: 581.427 $\pm$ 353.389  $\chi^2$ /NDF: 25.4/24

Right Out: 1045.944 $\pm$ 514.273  $\chi^2$ /NDF: 27.1/33

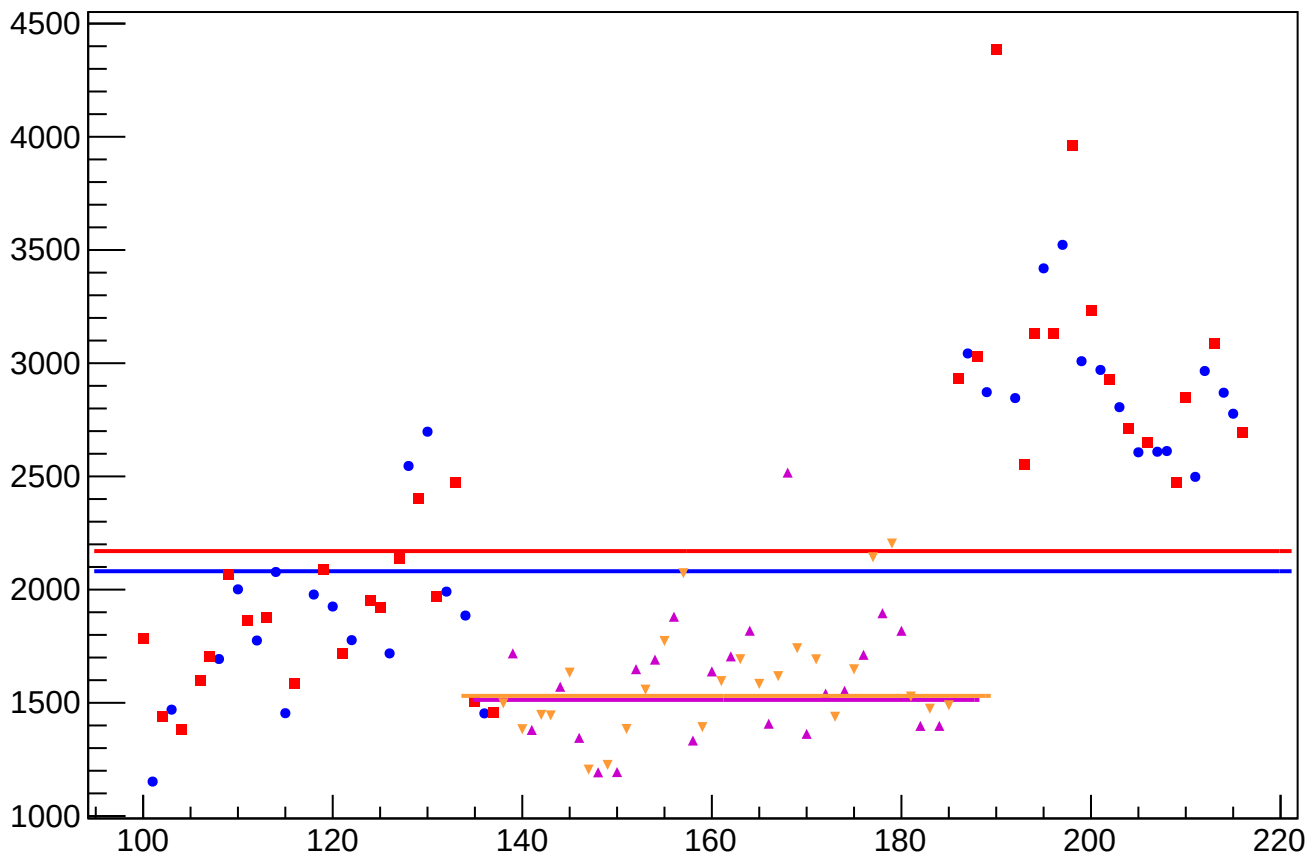
Left In: 128.769 $\pm$ 359.128  $\chi^2$ /NDF: 17.9/22

+ sign 601.352 $\pm$ 288.448  $\chi^2$ /NDF: 61.6/55

All: 517.153 $\pm$ 206.050  $\chi^2$ /NDF: 108.8/112

- sign 429.420 $\pm$ 294.441  $\chi^2$ /NDF: 47.1/56

# asym\_usr\_dit\_correction\_rms vs Slug



Right In: 2081.232 $\pm$ 0.353  $\chi^2$ /NDF: 3561007.8/30

Left Out: 1530.764 $\pm$ 0.250  $\chi^2$ /NDF: 795634.5/24

Right Out: 2170.144 $\pm$ 0.364  $\chi^2$ /NDF: 3164333.1/33

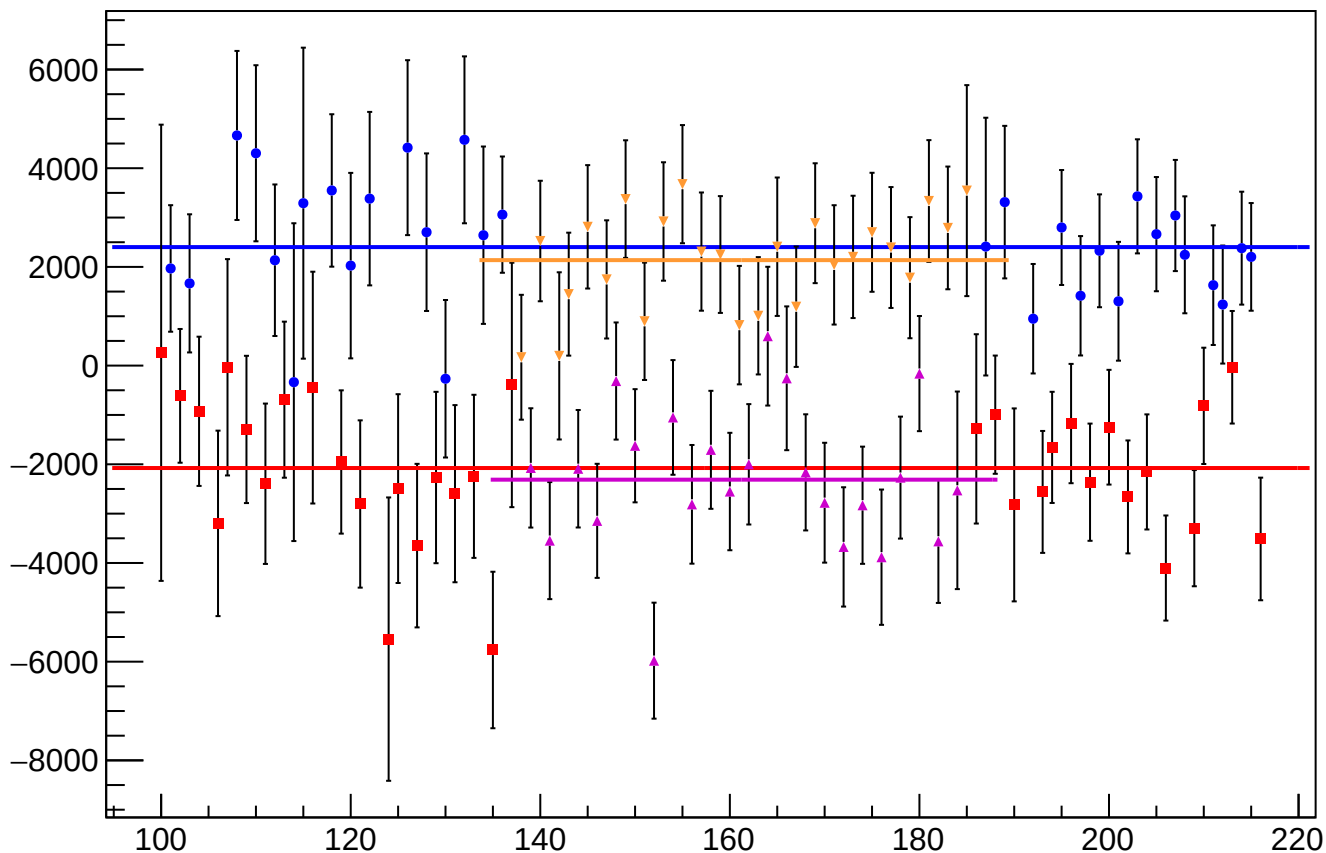
Left In: 1512.947 $\pm$ 0.254  $\chi^2$ /NDF: 957059.5/22

+ sign 1714.490 $\pm$ 0.204  $\chi^2$ /NDF: 5976307.7/55

All: 1721.290 $\pm$ 0.146  $\chi^2$ /NDF: 12295459.3/100

- sign 1728.376 $\pm$ 0.208  $\chi^2$ /NDF: 6316881.4/56

# eigen\_dit\_asym\_usr\_mean vs Slug



Right In: 2401.427 $\pm$ 248.952  $\chi^2$ /NDF: 17.4/30

Left Out: 2137.182 $\pm$ 250.195  $\chi^2$ /NDF: 13.9/24

Right Out: -2075.755 $\pm$ 249.034  $\chi^2$ /NDF: 26.5/33

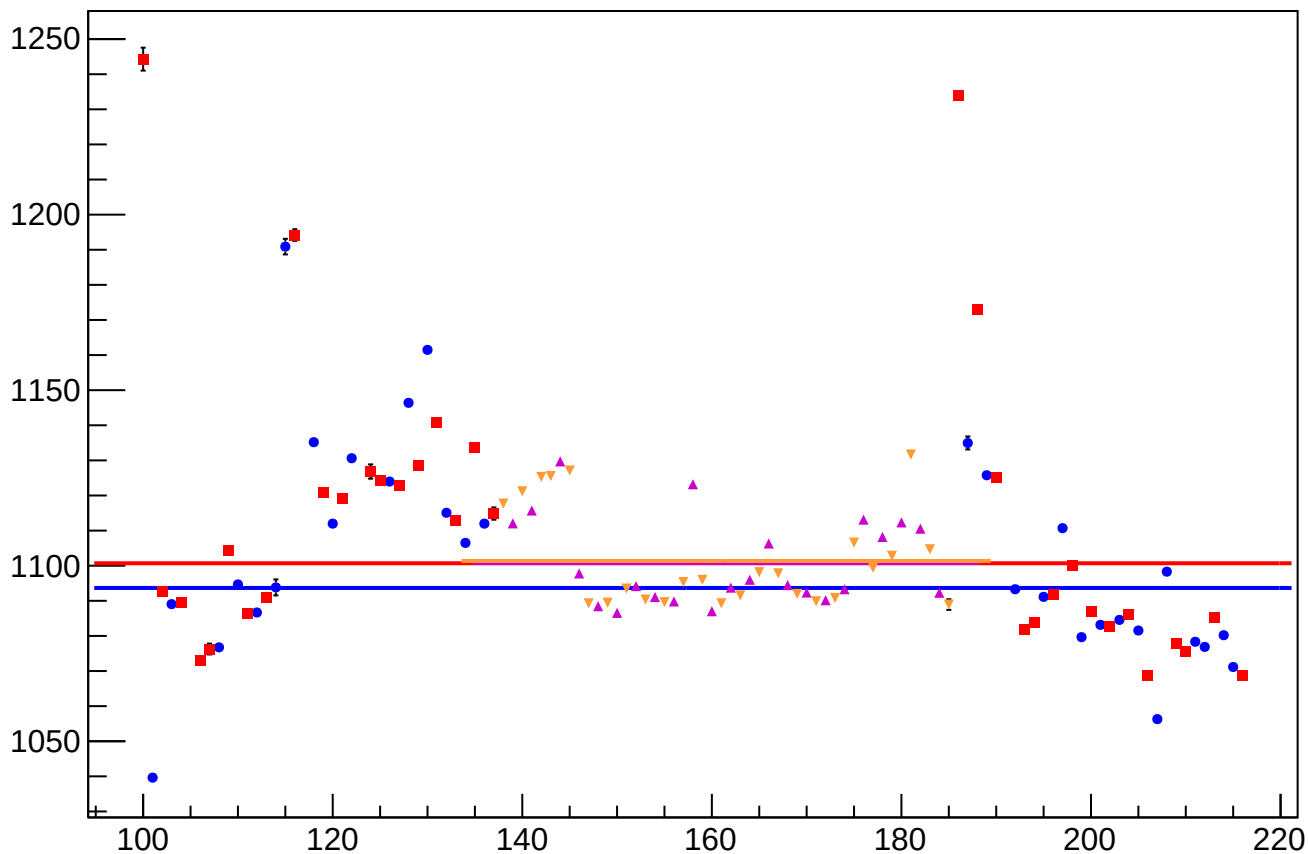
Left In: -2311.761 $\pm$ 257.036  $\chi^2$ /NDF: 29.9/22

+ sign 2269.962 $\pm$ 176.473  $\chi^2$ /NDF: 31.9/55

All: 69.868 $\pm$ 125.619  $\chi^2$ /NDF: 403.9/112

- sign -2190.027 $\pm$ 178.856  $\chi^2$ /NDF: 56.9/56

# eigen\_dit\_asym\_usr\_rms vs Slug



Right In: 1093.665 $\pm$ 0.176  $\chi^2$ /NDF: 22155.3/30

Left Out: 1101.353 $\pm$ 0.177  $\chi^2$ /NDF: 5950.6/24

Right Out: 1100.695 $\pm$ 0.176  $\chi^2$ /NDF: 34716.9/33

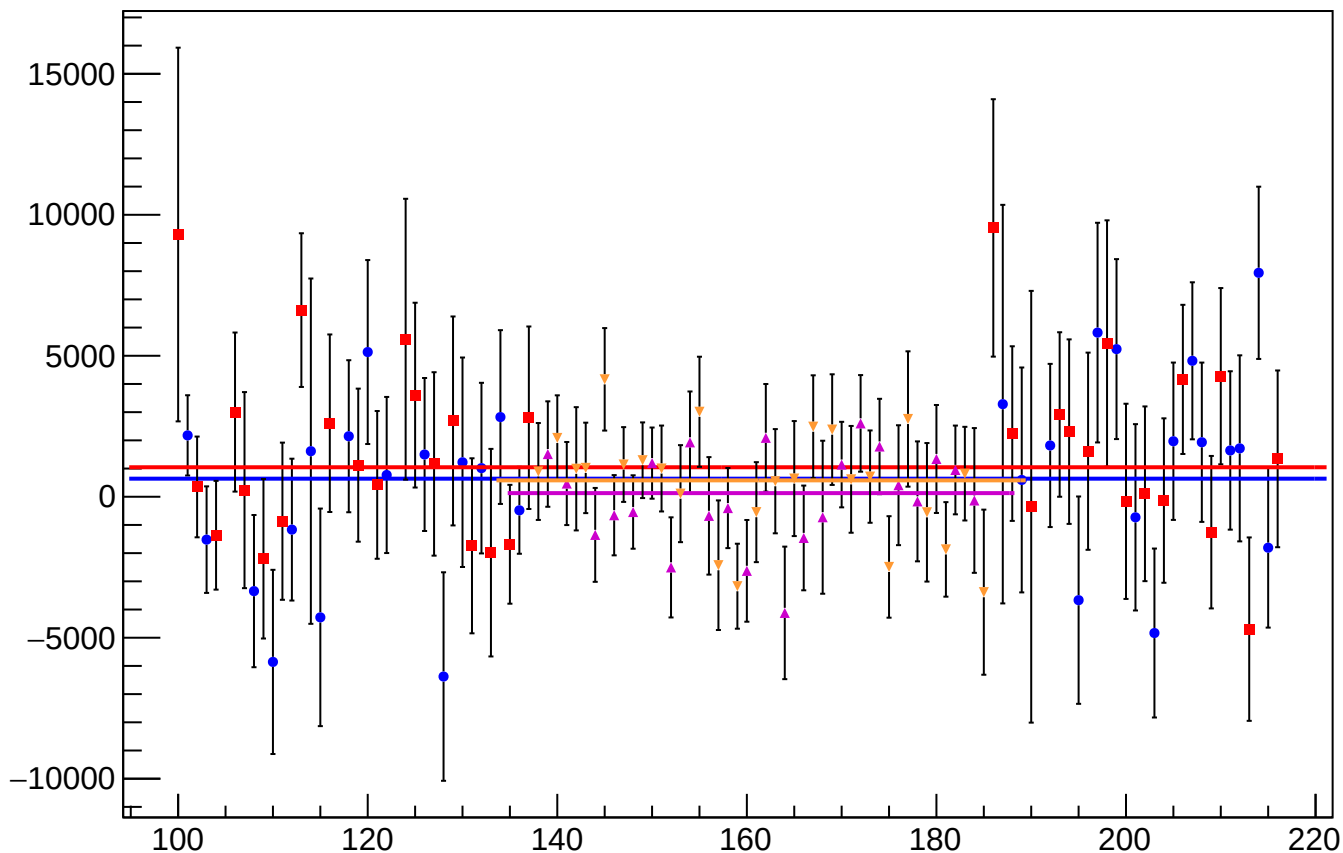
Left In: 1100.792 $\pm$ 0.182  $\chi^2$ /NDF: 4641.7/22

+ sign 1097.490 $\pm$ 0.125  $\chi^2$ /NDF: 29055.0/55

All: 1099.094 $\pm$ 0.089  $\chi^2$ /NDF: 68748.8/112

- sign 1100.742 $\pm$ 0.126  $\chi^2$ /NDF: 39358.7/56

# asym\_usr\_eigen\_dit\_correction\_mean vs Slug



Right In: 641.119 $\pm$ 499.285  $\chi^2$ /NDF: 36.2/30

Left Out: 581.426 $\pm$ 353.390  $\chi^2$ /NDF: 25.4/24

Right Out: 1045.944 $\pm$ 514.273  $\chi^2$ /NDF: 27.1/33

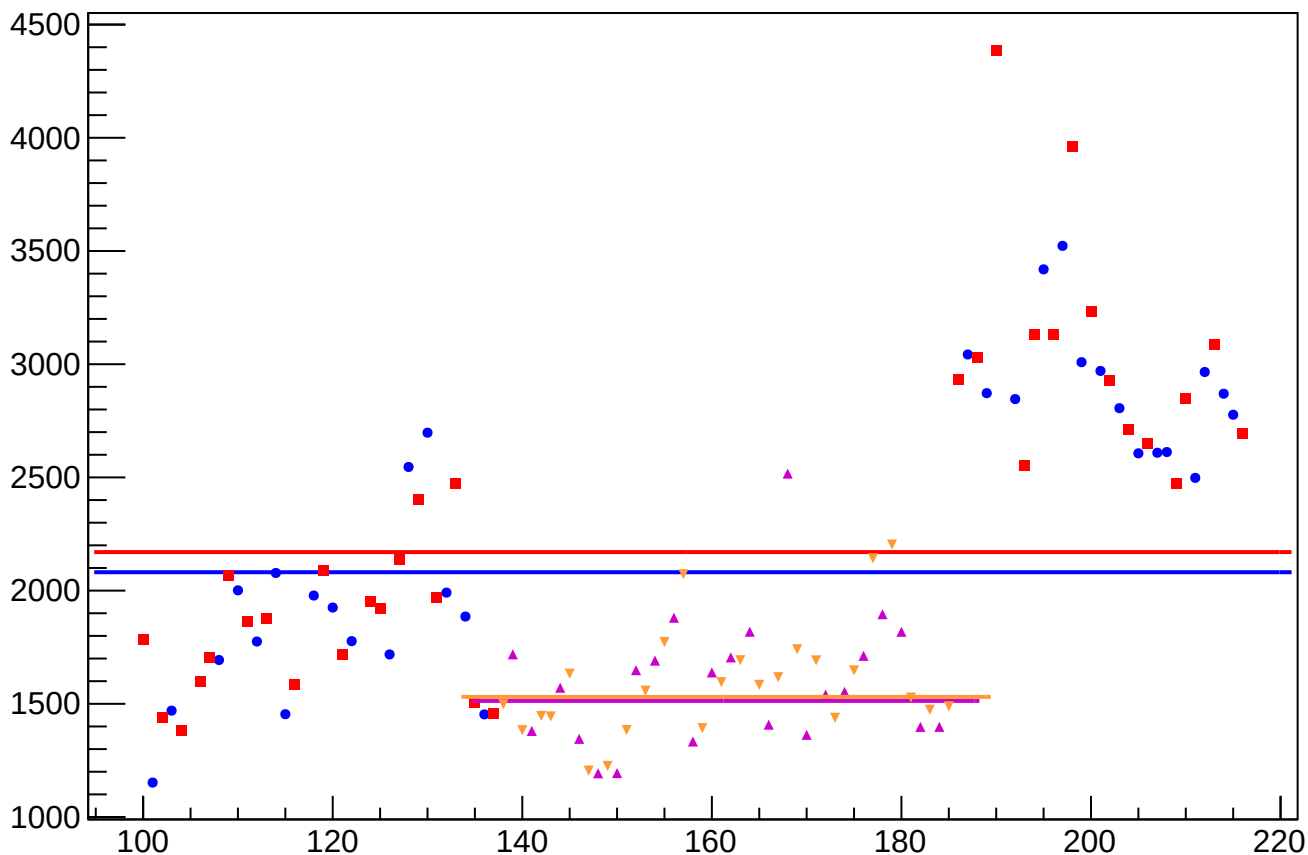
Left In: 128.769 $\pm$ 359.129  $\chi^2$ /NDF: 17.9/22

+ sign 601.349 $\pm$ 288.448  $\chi^2$ /NDF: 61.6/55

All: 517.153 $\pm$ 206.050  $\chi^2$ /NDF: 108.8/112

- sign 429.421 $\pm$ 294.442  $\chi^2$ /NDF: 47.1/56

# asym\_usr\_eigen\_dit\_correction\_rms vs Slug



Right In: 2081.231 $\pm$ 0.353  $\chi^2/\text{NDF}$ : 3561021.2/30

Left Out: 1530.768 $\pm$ 0.250  $\chi^2/\text{NDF}$ : 795638.4/24

Right Out: 2170.143 $\pm$ 0.364  $\chi^2/\text{NDF}$ : 3164333.1/33

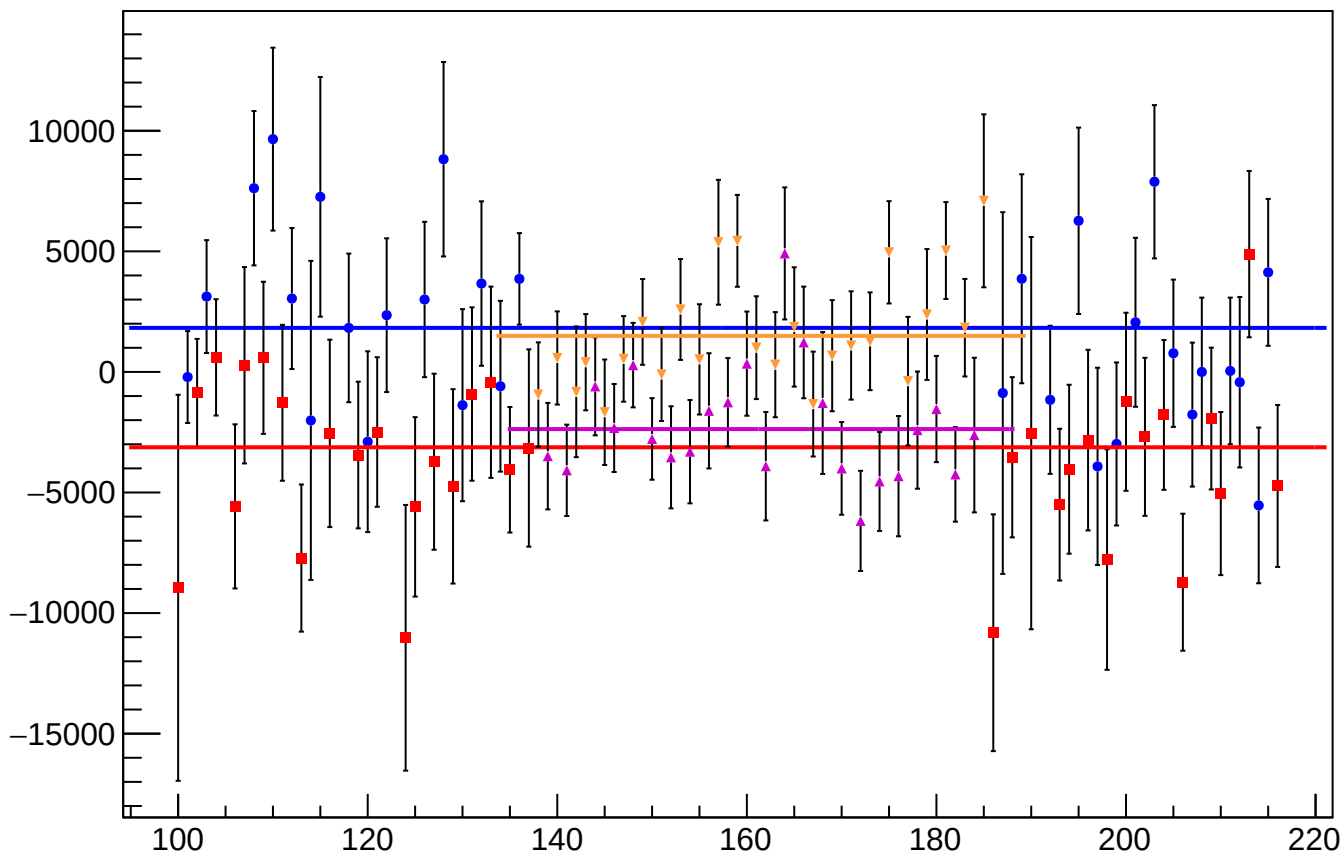
Left In: 1512.951 $\pm$ 0.254  $\chi^2/\text{NDF}$ : 957065.2/22

+ sign 1714.492 $\pm$ 0.204  $\chi^2/\text{NDF}$ : 5976292.5/55

All: 1721.293 $\pm$ 0.146  $\chi^2/\text{NDF}$ : 12295414.1/100

- sign 1728.379 $\pm$ 0.208  $\chi^2/\text{NDF}$ : 6316851.5/56

# asym\_usr\_mean vs Slug



Right In:  $1826.954 \pm 574.192$   $\chi^2/\text{NDF}: 36.7/30$

Left Out:  $1495.022 \pm 433.196$   $\chi^2/\text{NDF}: 23.8/24$

Right Out:  $-3125.203 \pm 584.796$   $\chi^2/\text{NDF}: 27.5/33$

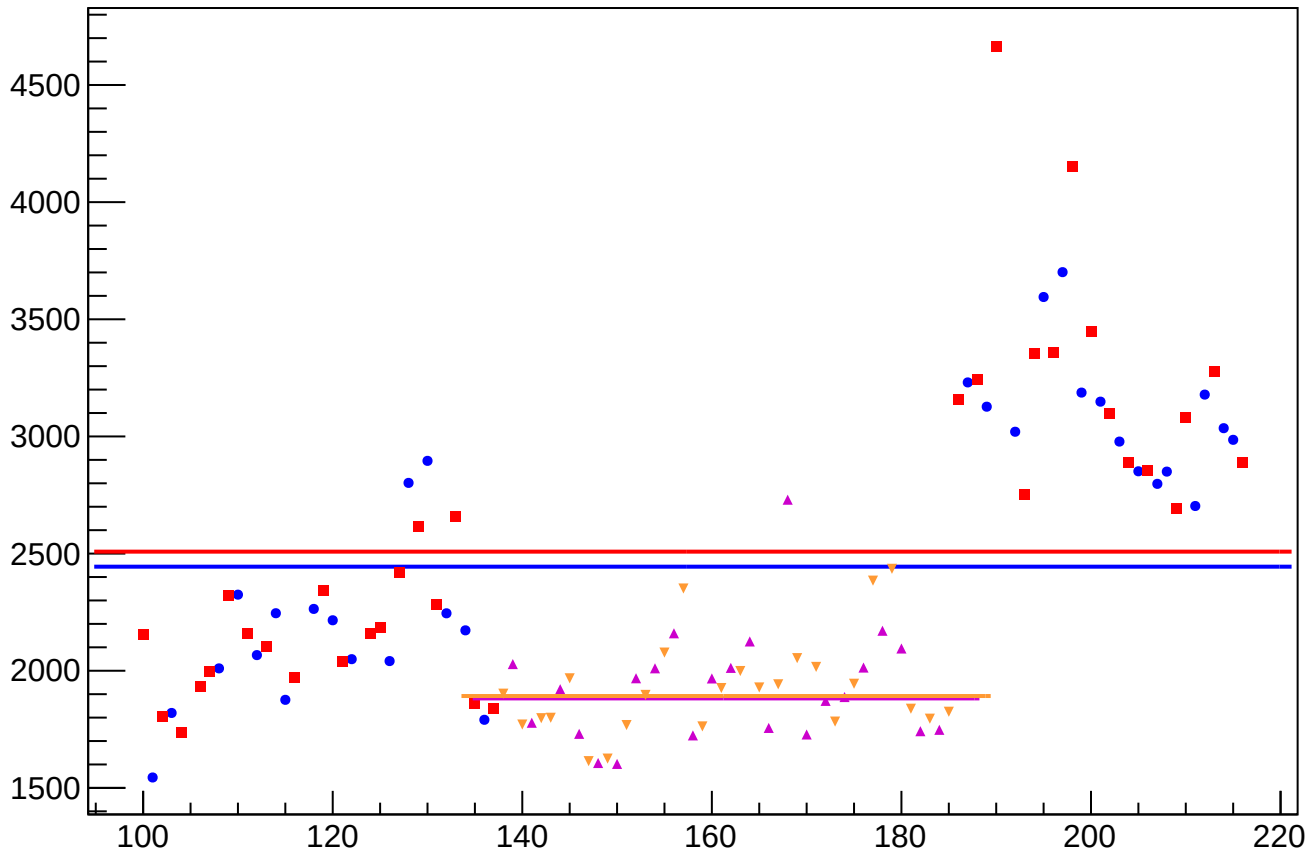
Left In:  $-2370.694 \pm 442.952$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $1615.423 \pm 345.817$   $\chi^2/\text{NDF}: 60.7/55$

All:  $-470.800 \pm 247.063$   $\chi^2/\text{NDF}: 187.2/112$

- sign  $-2645.762 \pm 353.096$   $\chi^2/\text{NDF}: 52.2/56$

# asym\_usr\_rms vs Slug

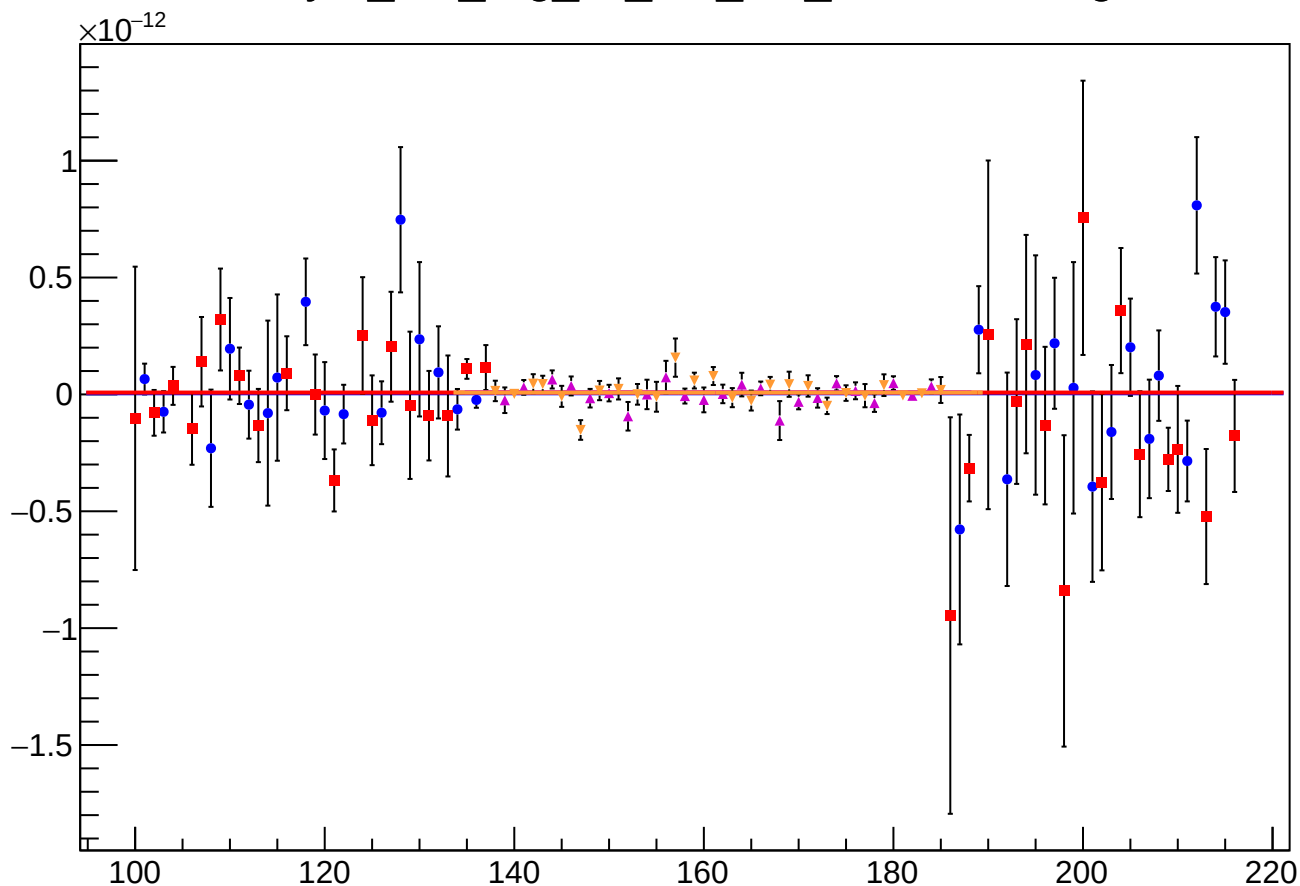


Right In:  $2444.182 \pm 0.406$   $\chi^2/\text{NDF}$ : 2133192.7/30  
 Left Out:  $1892.117 \pm 0.306$   $\chi^2/\text{NDF}$ : 389648.0/24  
 Right Out:  $2508.341 \pm 0.414$   $\chi^2/\text{NDF}$ : 2072083.9/33  
 Left In:  $1881.892 \pm 0.313$   $\chi^2/\text{NDF}$ : 462659.6/22

+ sign  $2092.366 \pm 0.245$   $\chi^2/\text{NDF}$ : 3701048.0/55  
 All:  $2101.133 \pm 0.175$   $\chi^2/\text{NDF}$ : 7696773.2/11  
 - sign  $2110.274 \pm 0.250$   $\chi^2/\text{NDF}$ : 3993099.6/56



# asym\_usr\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:32.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.5/33

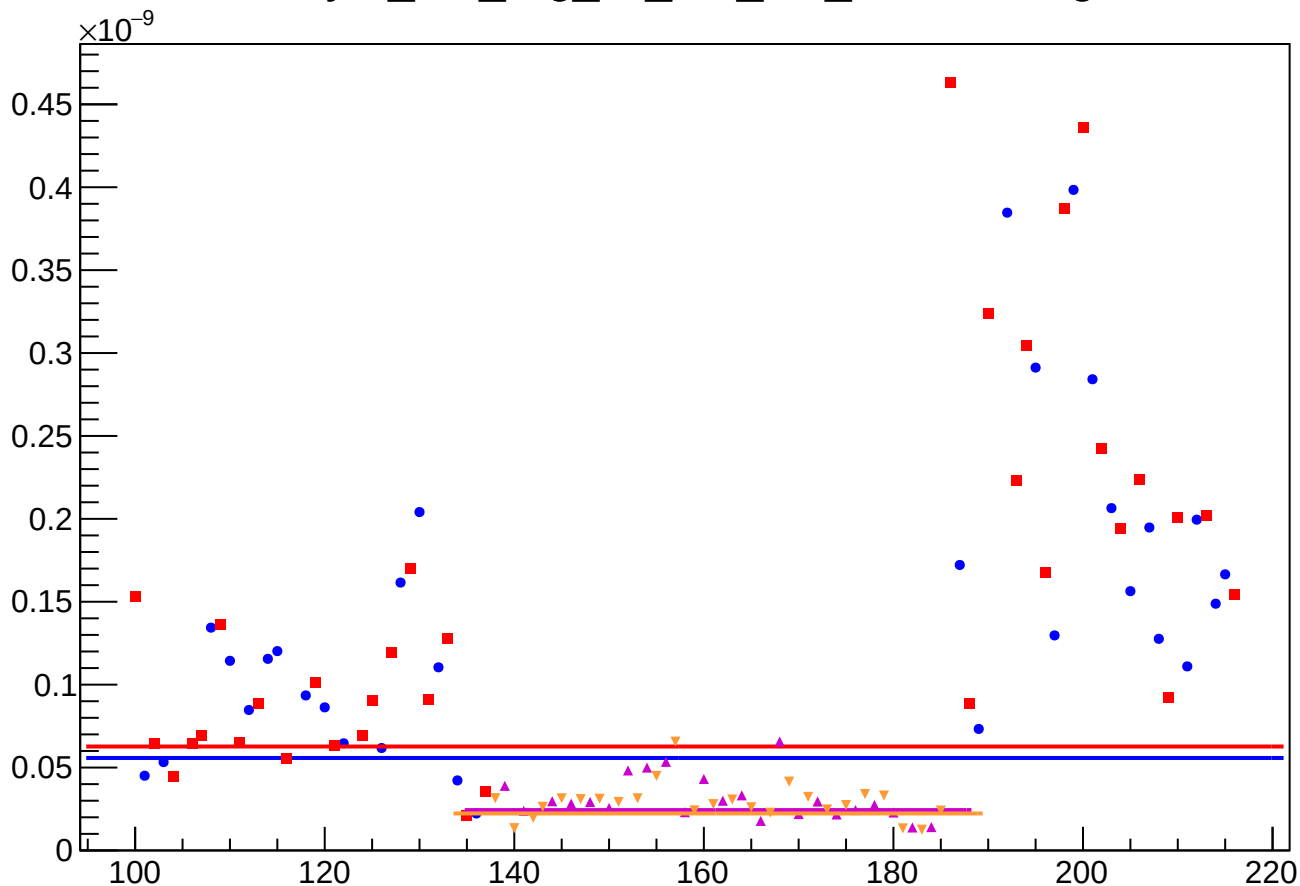
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 72.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.3/112

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.6/56

# asym\_usr\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10202119.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3629538.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9373489.4/33

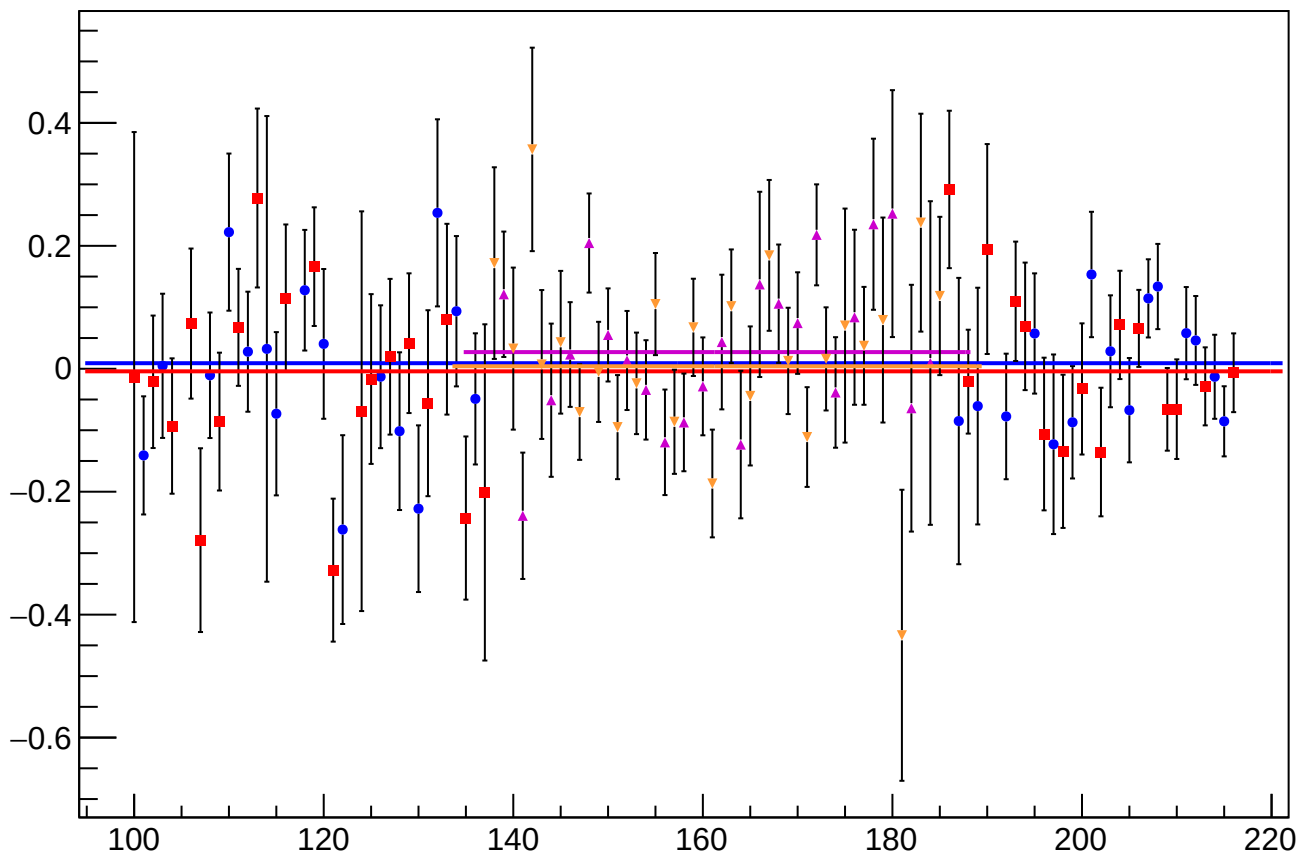
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3124271.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17784473.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34672267.1/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16768717.0/56

# asym\_usr\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $0.004 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 41.1/33

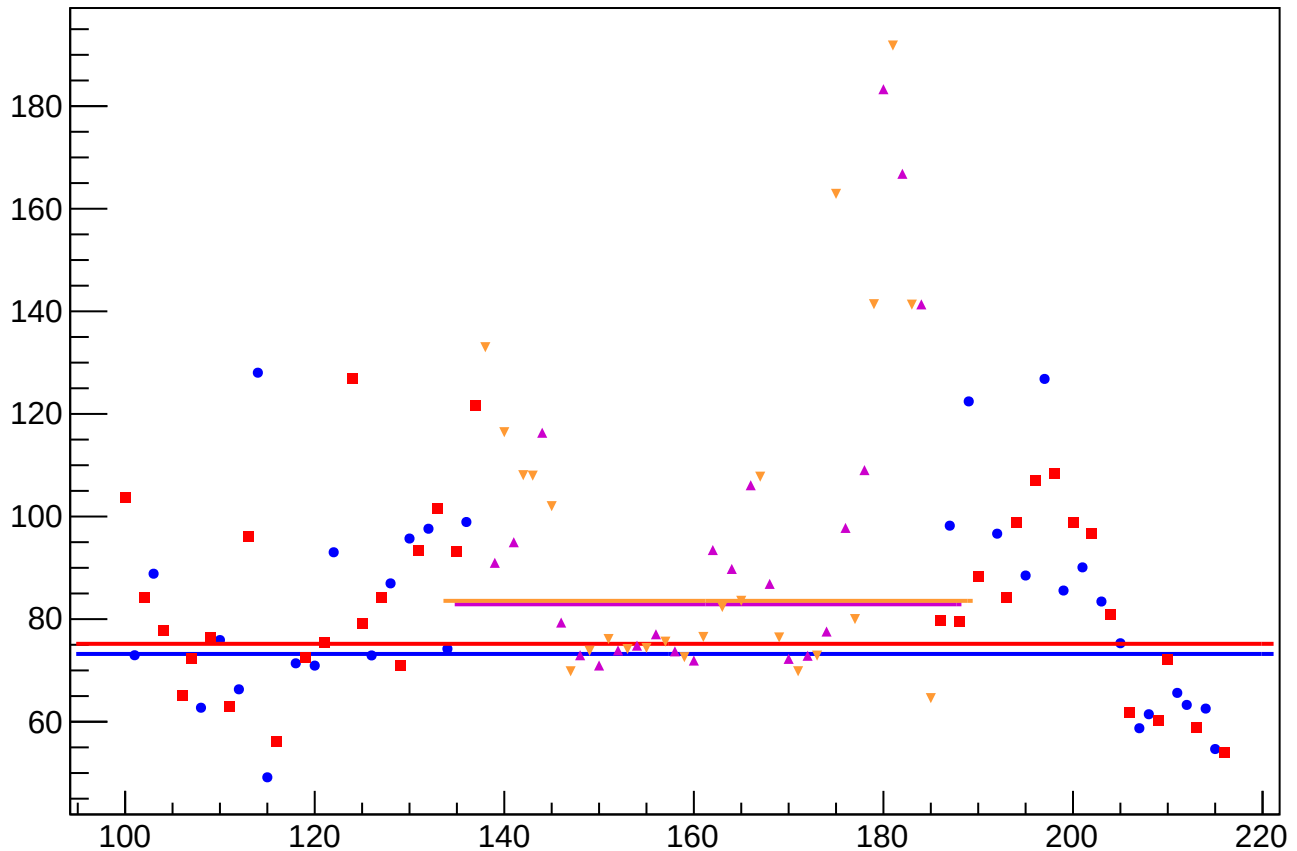
Left In:  $0.027 \pm 0.021$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 61.3/55

All:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 135.7/112

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}$ : 74.4/56

# asym\_usr\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $73.213 \pm 0.012$   $\chi^2/\text{NDF}: 1629703.2/30$

Left Out:  $83.564 \pm 0.014$   $\chi^2/\text{NDF}: 2172931.4/24$

Right Out:  $75.186 \pm 0.013$   $\chi^2/\text{NDF}: 1560920.2/33$

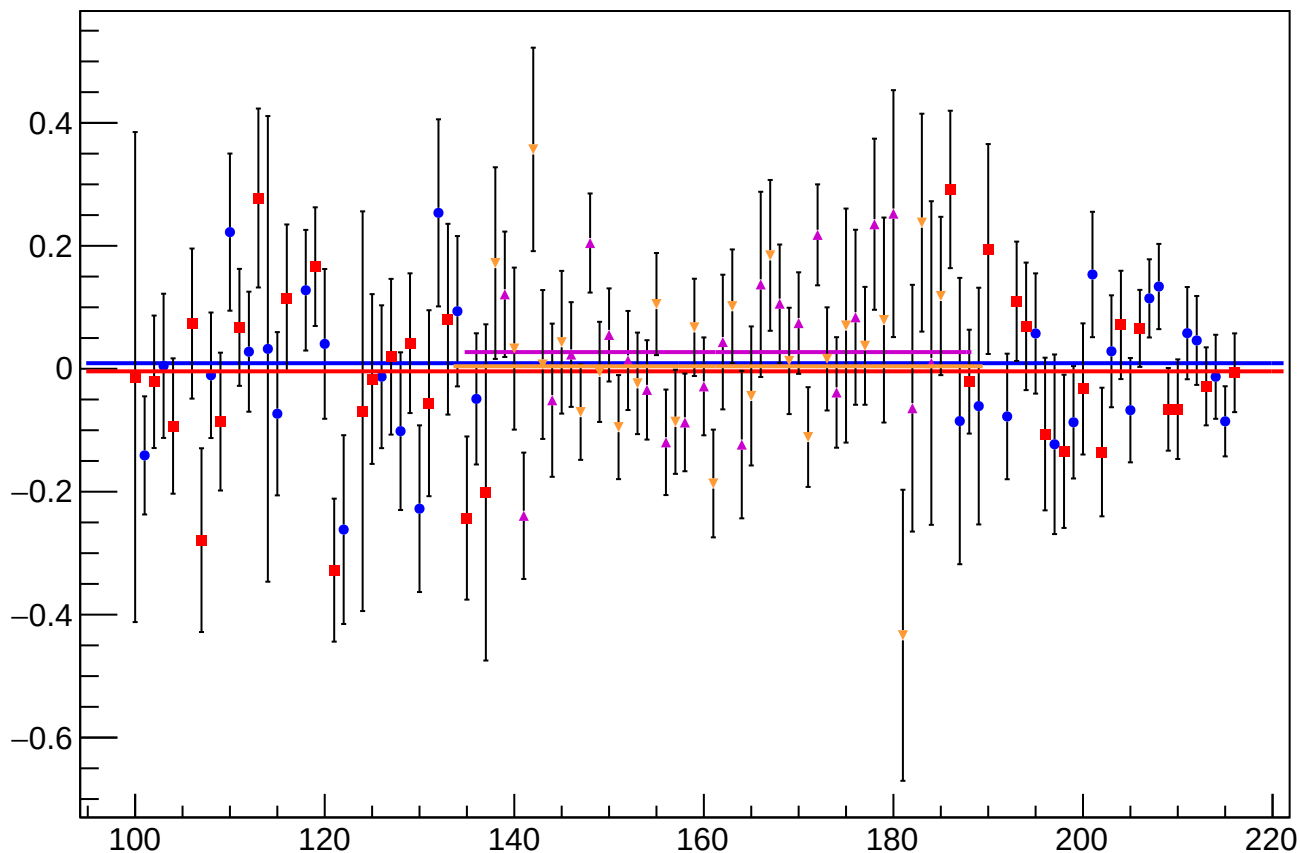
Left In:  $82.891 \pm 0.015$   $\chi^2/\text{NDF}: 1573003.1/22$

+ sign  $77.660 \pm 0.009$   $\chi^2/\text{NDF}: 4099157.0/55$

All:  $78.079 \pm 0.007$   $\chi^2/\text{NDF}: 7397000.0/112$

- sign  $78.509 \pm 0.010$   $\chi^2/\text{NDF}: 3293834.6/56$

# asym\_usr\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}: 33.1/30$

Left Out:  $0.004 \pm 0.020$   $\chi^2/\text{NDF}: 28.2/24$

Right Out:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}: 41.1/33$

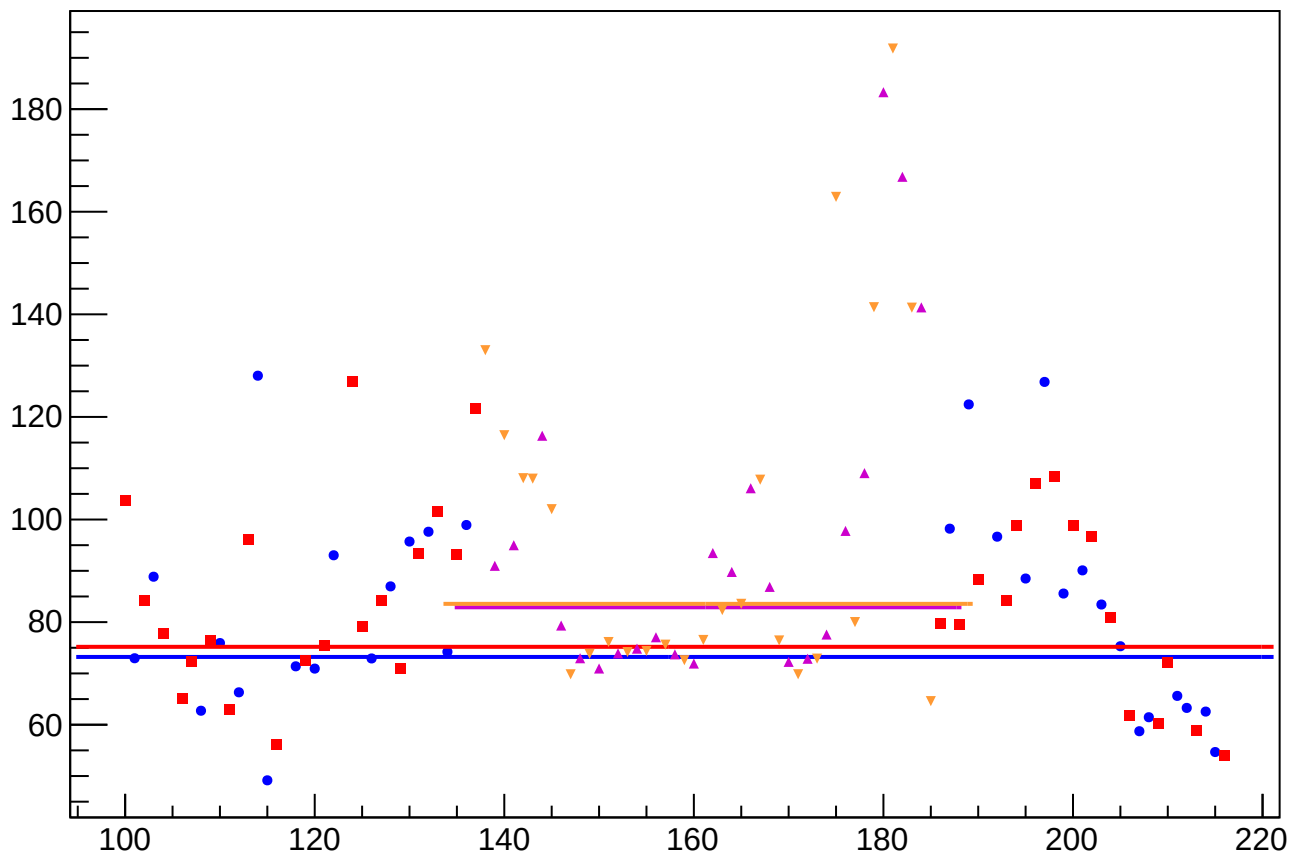
Left In:  $0.027 \pm 0.021$   $\chi^2/\text{NDF}: 32.0/22$

+ sign  $0.007 \pm 0.013$   $\chi^2/\text{NDF}: 61.3/55$

All:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}: 135.7/112$

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}: 74.4/56$

asym\_usr\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 73.213 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1629703.2/30

Left Out: 83.564 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 2172931.4/24

Right Out: 75.186 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 1560920.2/33

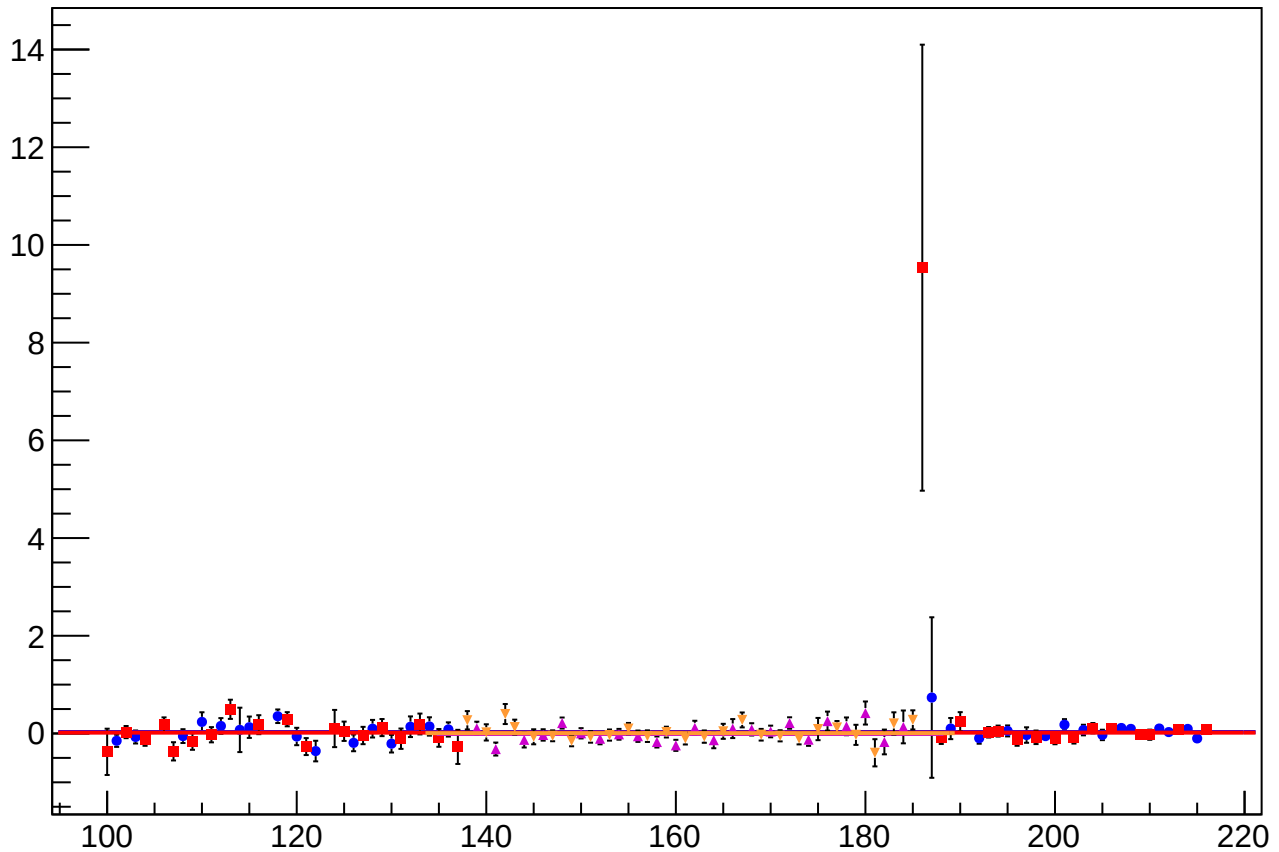
Left In: 82.891 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1573003.1/22

+ sign 77.660 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 4099157.0/55

All: 78.079 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 7397000.0/112

- sign 78.509 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 3293834.6/56

# asym\_usr\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In: 0.029 $\pm$ 0.023  $\chi^2$ /NDF: 28.0/30

Left Out: 0.006 $\pm$ 0.028  $\chi^2$ /NDF:21.3/24

Right Out: 0.017 $\pm$ 0.024  $\chi^2$ /NDF: 37.0/33

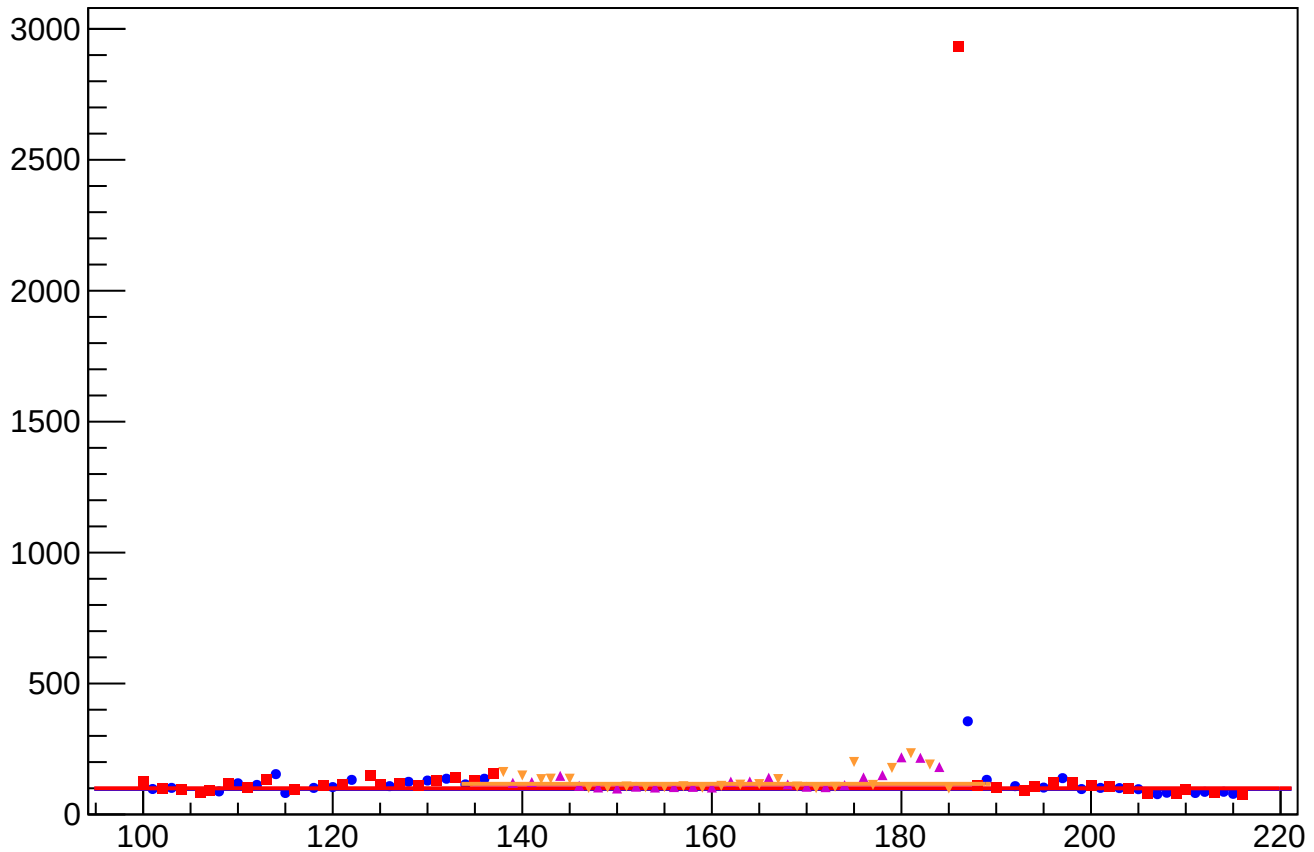
Left In: -0.010 $\pm$ 0.028  $\chi^2$ /NDF:31.3/22

+ sign 0.020 $\pm$ 0.018  $\chi^2$ /NDF: 49.7/55

All: 0.013 $\pm$ 0.013  $\chi^2$ /NDF: 118.9/112

- sign 0.006 $\pm$ 0.018  $\chi^2$ /NDF: 68.8/56

# asym\_usr\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 97.441+/-0.016  $\chi^2/\text{NDF}$ : 1136382.9/30

Left Out: 116.880+/-0.020  $\chi^2/\text{NDF}$ : 1596935.1/24

Right Out: 99.876+/-0.017  $\chi^2/\text{NDF}$ : 1758632.1/33

Left In: 115.858+/-0.020  $\chi^2/\text{NDF}$ : 1231382.1/22

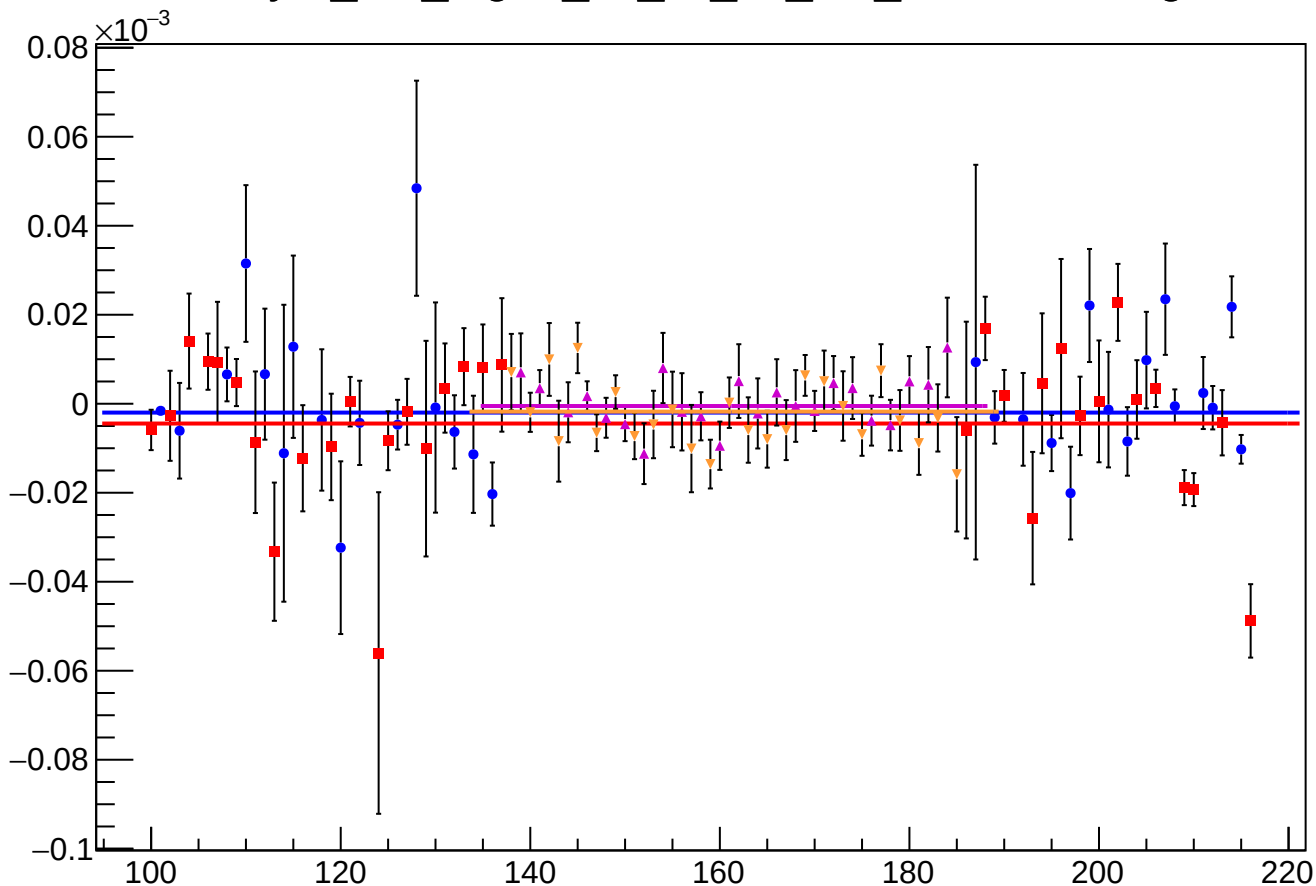
+ sign 105.403+/-0.013  $\chi^2/\text{NDF}$ : 3312249.3/55

All: 105.925+/-0.009  $\chi^2/\text{NDF}$ : 6684250.6/112

- sign 106.465+/-0.013  $\chi^2/\text{NDF}$ : 3368487.9/56



# asym\_usr\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.4/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 110.3/33

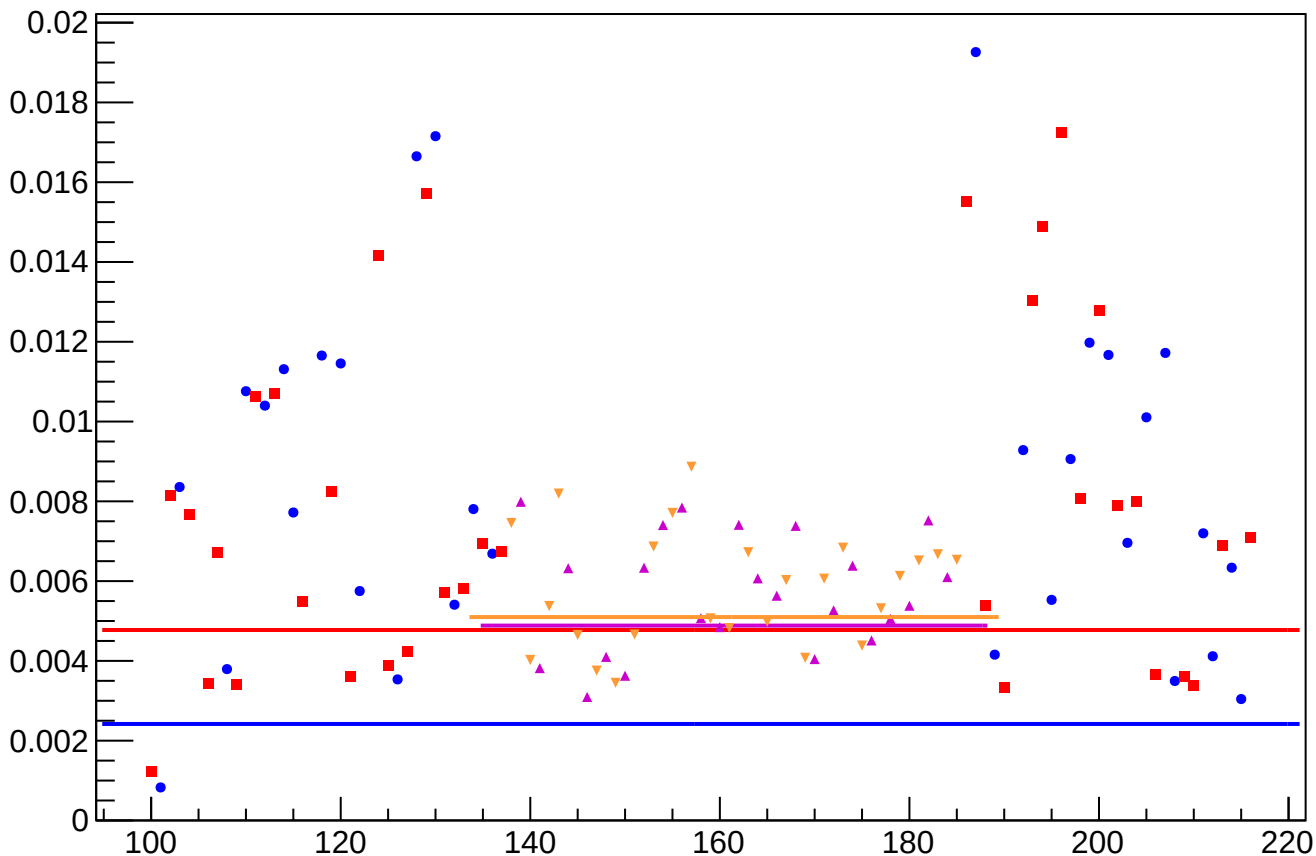
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 85.5/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 216.5/112

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.9/56

# asym\_usr\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 20306092.7/30

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2378649.6/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 8609974.6/33

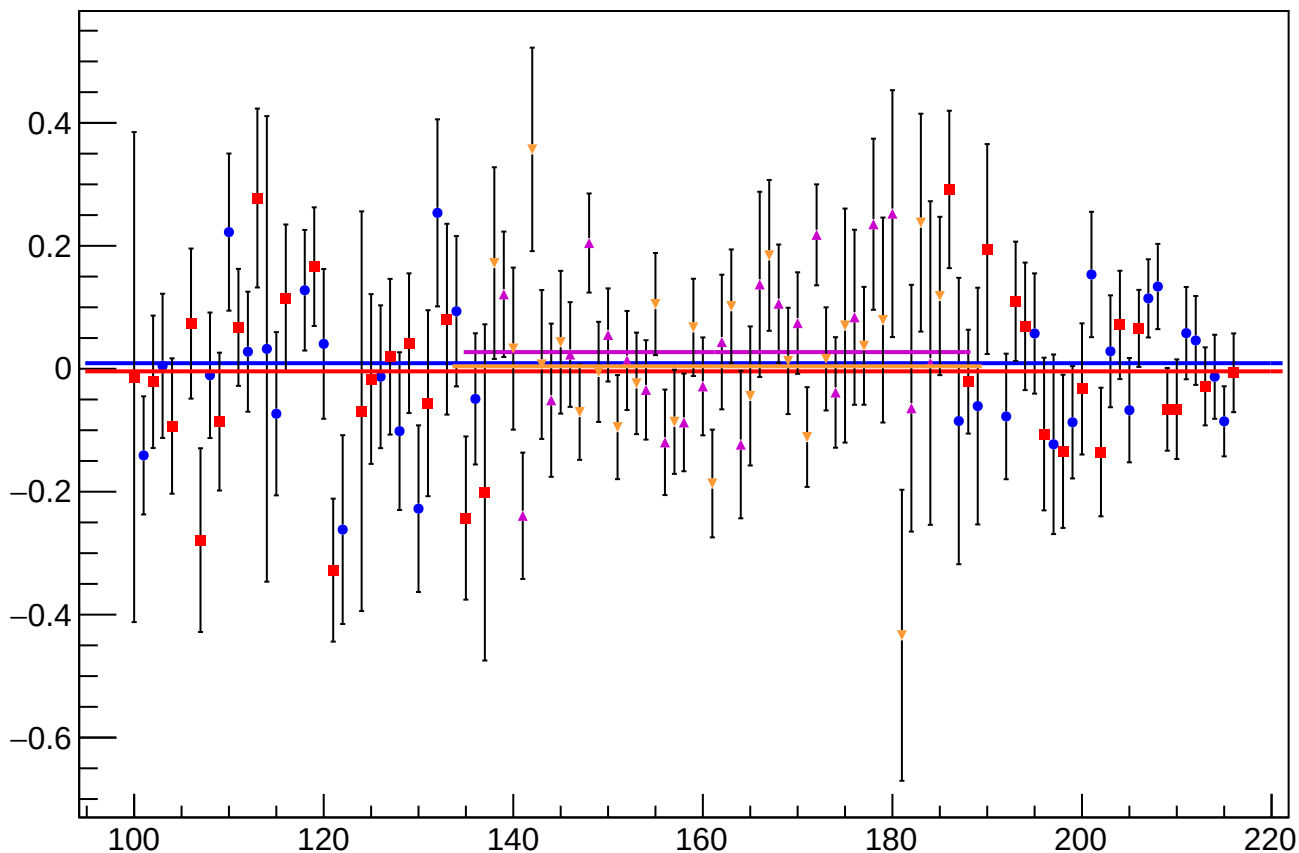
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:2725463.9/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 29293845.1/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 44477610.4/112

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 11343288.7/56

# asym\_usr\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}: 33.1/30$

Left Out:  $0.004 \pm 0.020$   $\chi^2/\text{NDF}: 28.2/24$

Right Out:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}: 41.1/33$

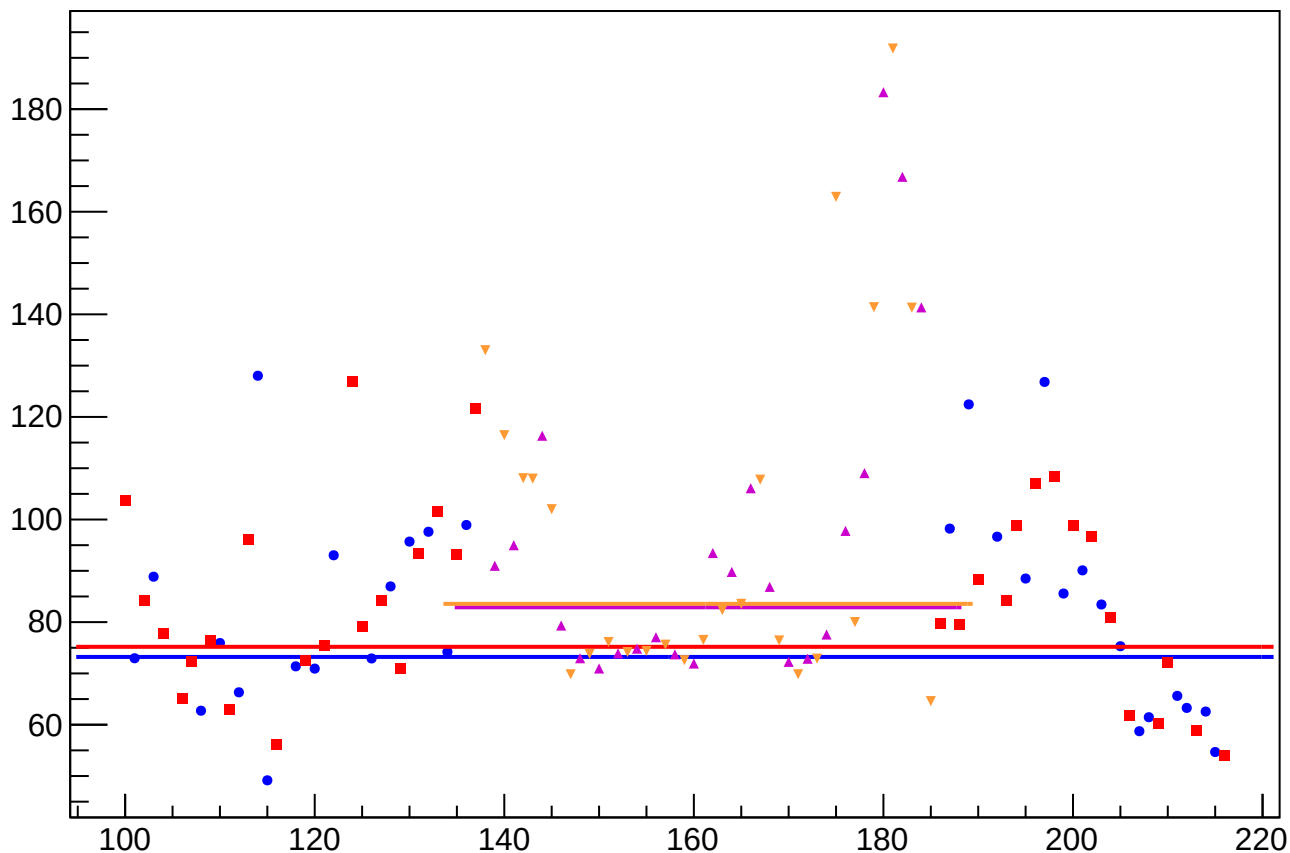
Left In:  $0.027 \pm 0.021$   $\chi^2/\text{NDF}: 32.0/22$

+ sign  $0.007 \pm 0.013$   $\chi^2/\text{NDF}: 61.3/55$

All:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}: 135.7/112$

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}: 74.4/56$

# asym\_usr\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $73.214 \pm 0.012$   $\chi^2/\text{NDF}: 1629585.9/30$

Left Out:  $83.565 \pm 0.014$   $\chi^2/\text{NDF}: 2172921.0/24$

Right Out:  $75.186 \pm 0.013$   $\chi^2/\text{NDF}: 1560836.3/33$

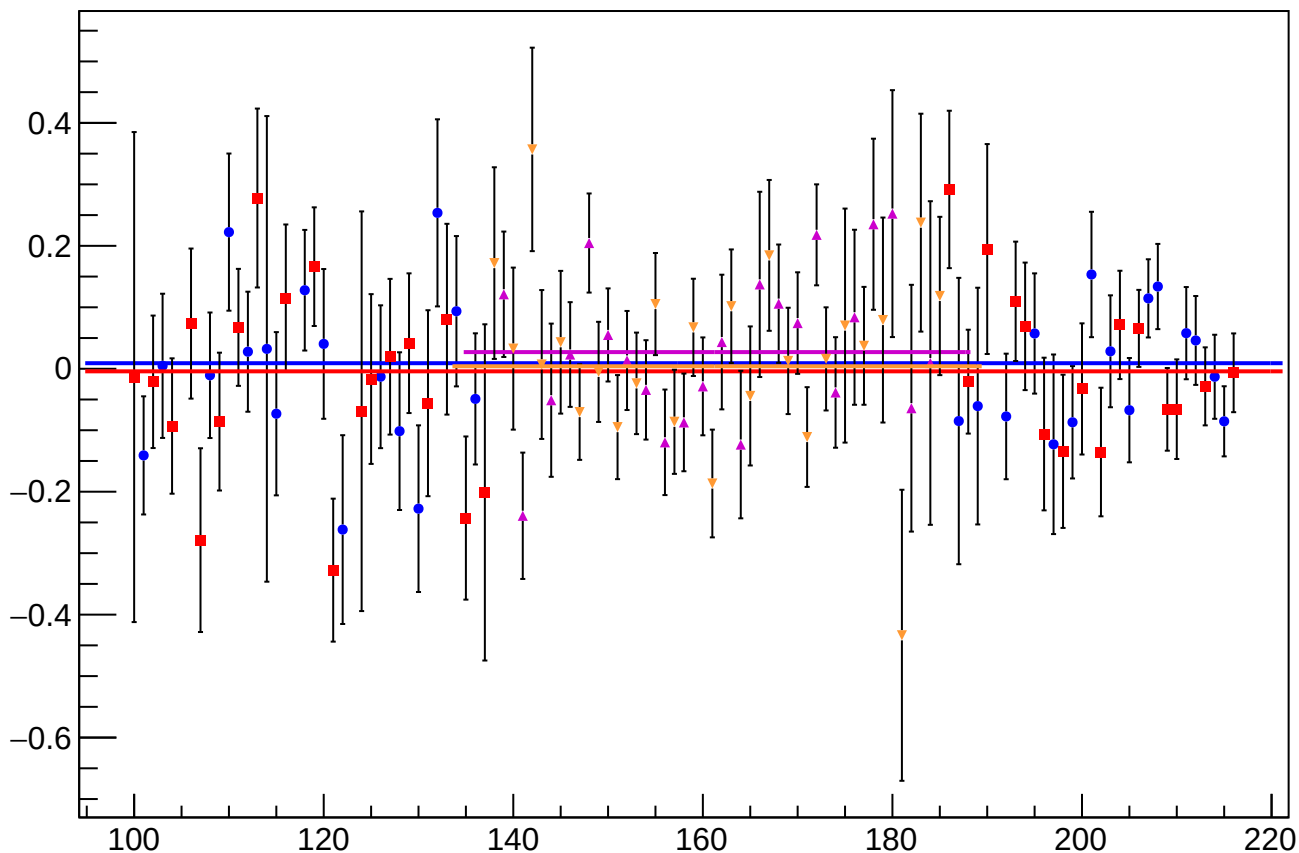
Left In:  $82.891 \pm 0.015$   $\chi^2/\text{NDF}: 1572981.0/22$

+ sign  $77.661 \pm 0.009$   $\chi^2/\text{NDF}: 4099043.7/55$

All:  $78.079 \pm 0.007$   $\chi^2/\text{NDF}: 7396812.7/112$

- sign  $78.509 \pm 0.010$   $\chi^2/\text{NDF}: 3293765.9/56$

asym\_usr\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $0.004 \pm 0.020$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 41.1/33

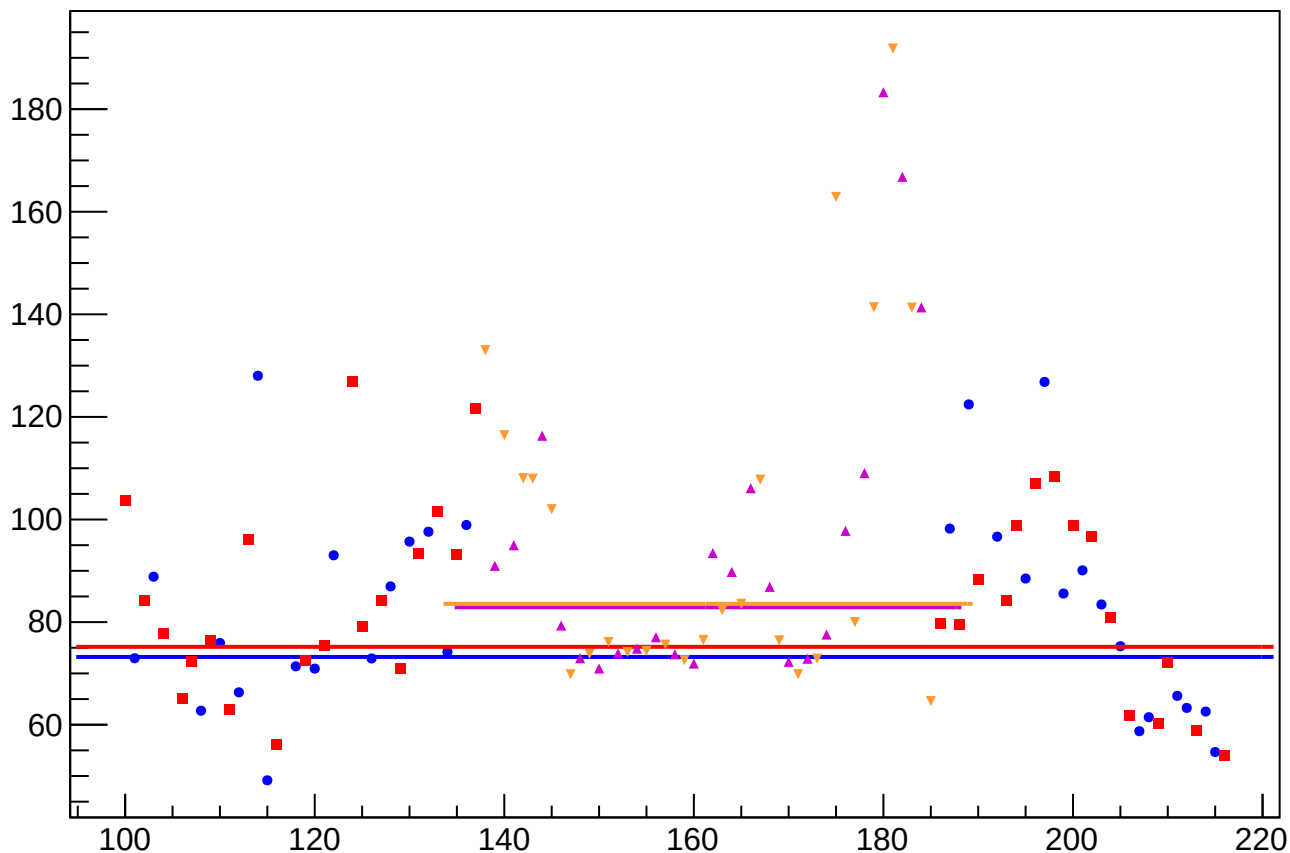
Left In:  $0.027 \pm 0.021$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 61.3/55

All:  $0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 135.7/112

- sign  $0.009 \pm 0.013$   $\chi^2/\text{NDF}$ : 74.4/56

asym\_usr\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 73.214 $\pm$ 0.012  $\chi^2/\text{NDF}$ : 1629585.9/30

Left Out: 83.565 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 2172921.0/24

Right Out: 75.186 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 1560836.3/33

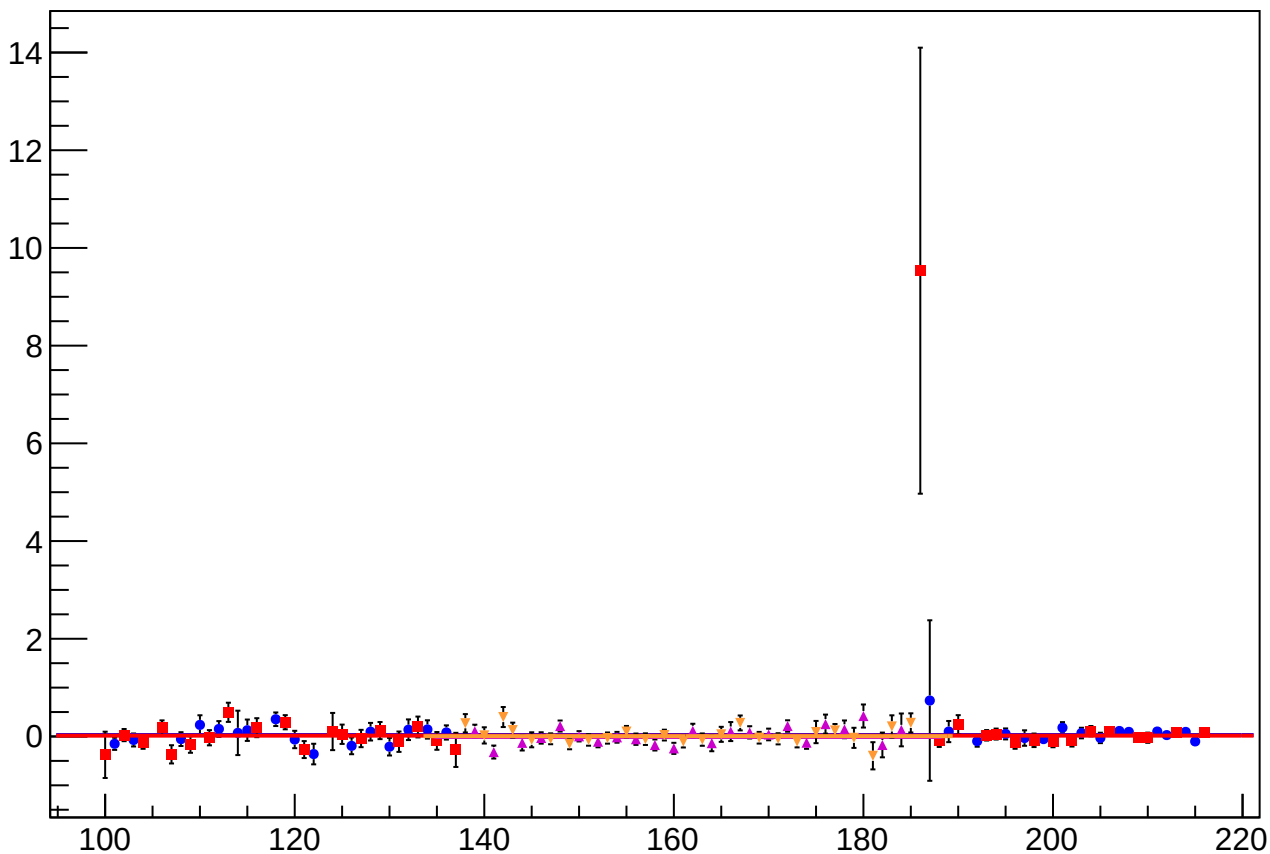
Left In: 82.891 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 1572981.0/22

+ sign 77.661 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 4099043.7/55

All: 78.079 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 7396812.7/112

- sign 78.509 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 3293765.9/56

asym\_usr\_eigen\_dit\_vs\_overload\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.023$   $\chi^2/\text{NDF}$ : 28.0/30

Left Out:  $0.006 \pm 0.028$   $\chi^2/\text{NDF}$ : 21.3/24

Right Out:  $0.017 \pm 0.024$   $\chi^2/\text{NDF}$ : 37.0/33

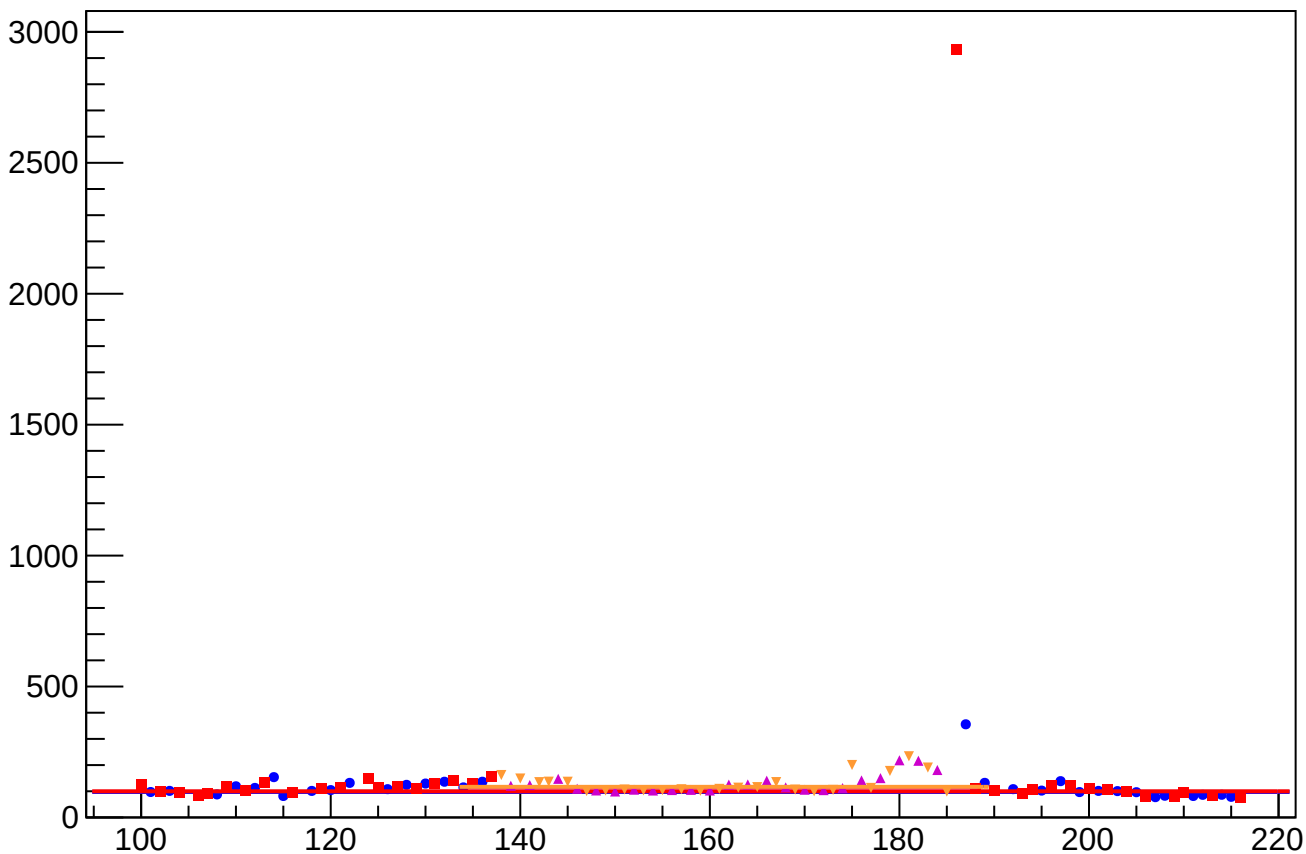
Left In:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 31.3/22

+ sign  $0.020 \pm 0.018$   $\chi^2/\text{NDF}$ : 49.7/55

All:  $0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 118.9/112

- sign  $0.006 \pm 0.018$   $\chi^2/\text{NDF}$ : 68.8/56

asym\_usr\_eigen\_dit\_vs\_overload\_cor\_diff\_rms vs Slug



Right In: 97.441 $\pm$ 0.016  $\chi^2$ /NDF: 1136261.3/30

Left Out: 116.880 $\pm$ 0.020  $\chi^2$ /NDF: 1596928.7/24

Right Out: 99.876 $\pm$ 0.017  $\chi^2$ /NDF: 1758560.8/33

Left In: 115.858 $\pm$ 0.020  $\chi^2$ /NDF: 1231371.8/22

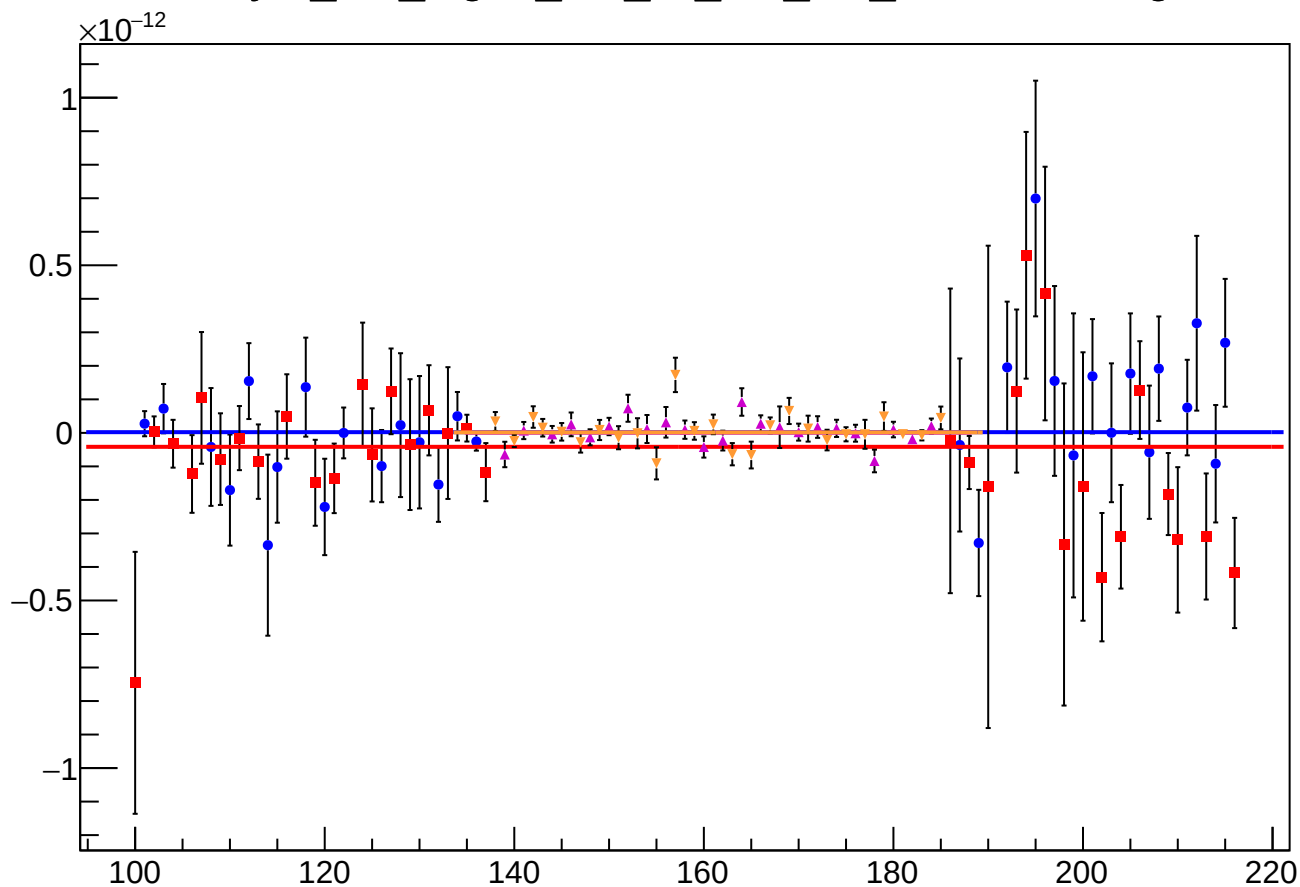
+ sign 105.403 $\pm$ 0.013  $\chi^2$ /NDF: 3312120.4/55

All: 105.925 $\pm$ 0.009  $\chi^2$ /NDF: 6684061.2/112

- sign 106.465 $\pm$ 0.013  $\chi^2$ /NDF: 3368430.2/56



# asym\_usr\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:36.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.6/33

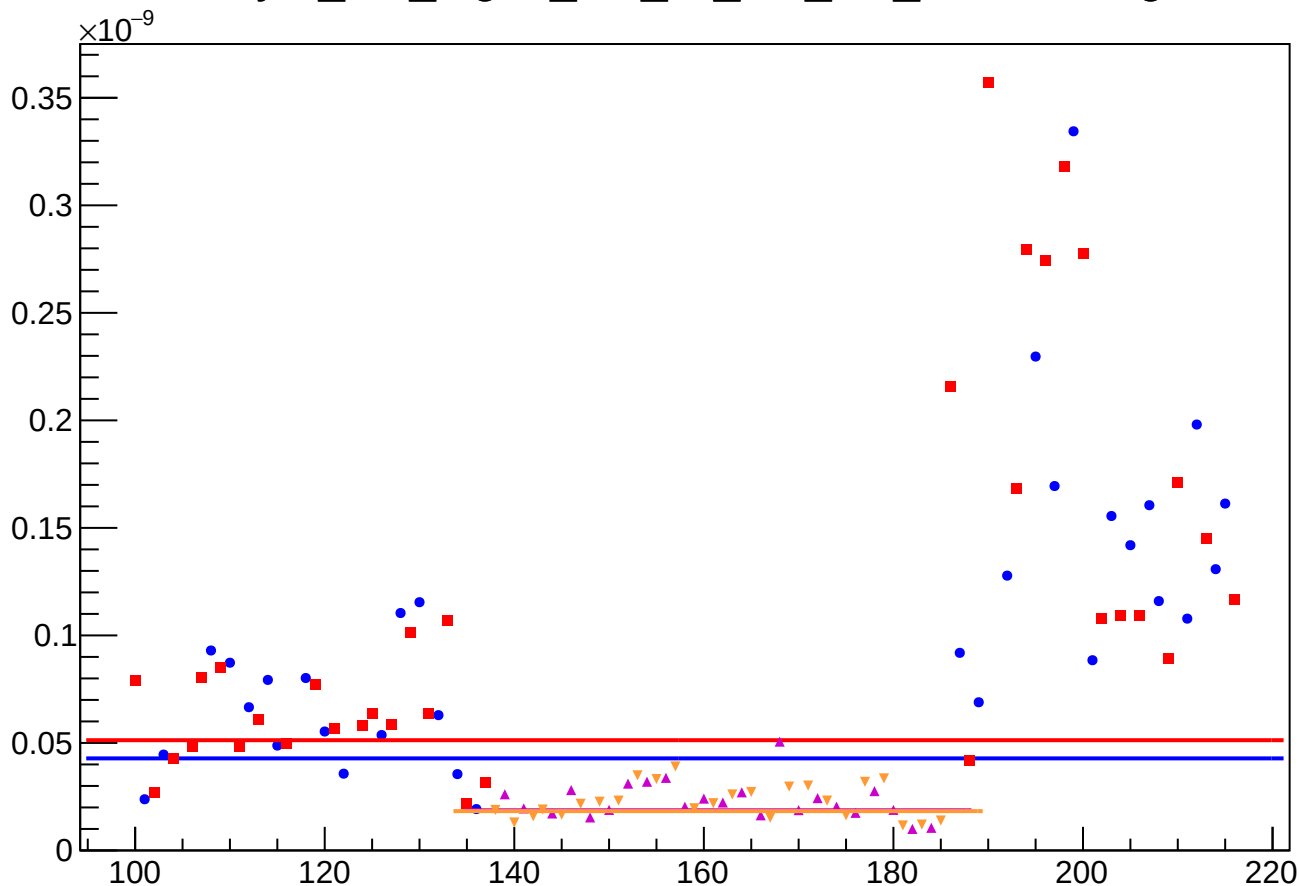
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.6/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 136.7/112

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.8/56

asym\_usr\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10489300.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3029080.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8633739.0/33

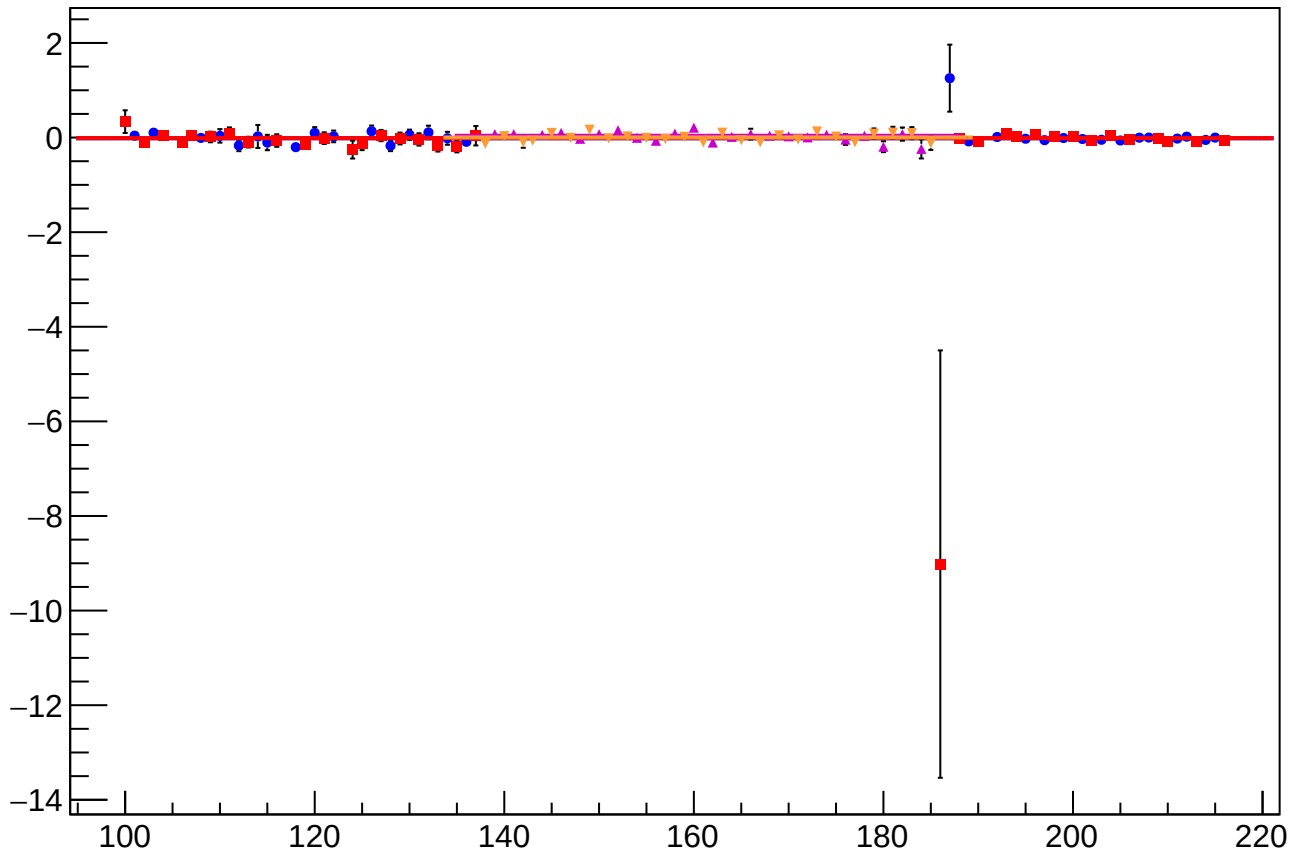
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2908977.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17335448.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34209488.3/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16856228.5/56

asym\_usr\_overload\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.012$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $0.003 \pm 0.017$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $-0.011 \pm 0.011$   $\chi^2/\text{NDF}$ : 39.9/33

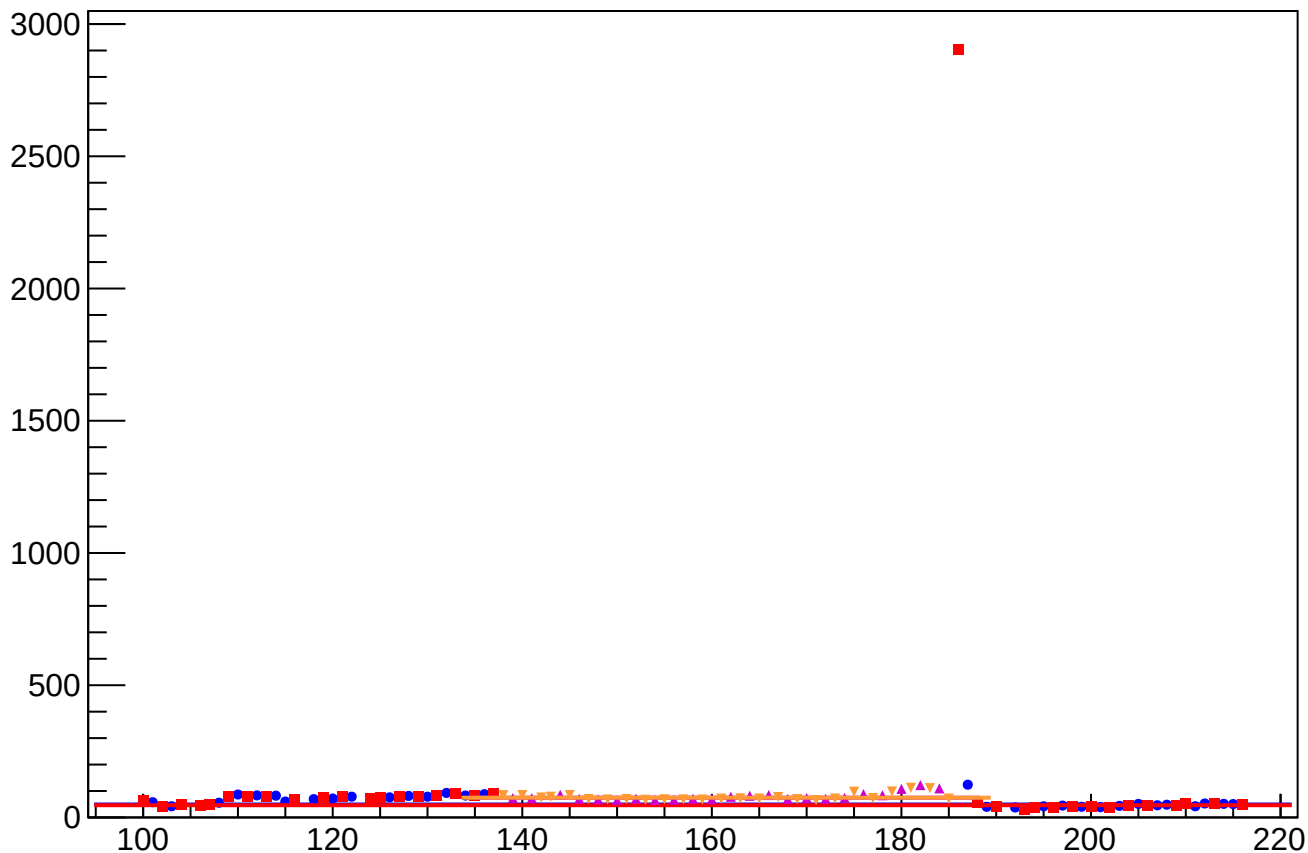
Left In:  $0.038 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.2/55

All:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 115.1/112

- sign  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 66.9/56

# asym\_usr\_overload\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 48.936+/-0.008  $\chi^2/\text{NDF}$ : 2299218.8/30

Left Out: 74.749+/-0.012  $\chi^2/\text{NDF}$ : 744366.0/24

Right Out: 46.285+/-0.008  $\chi^2/\text{NDF}$ : 3676516.3/33

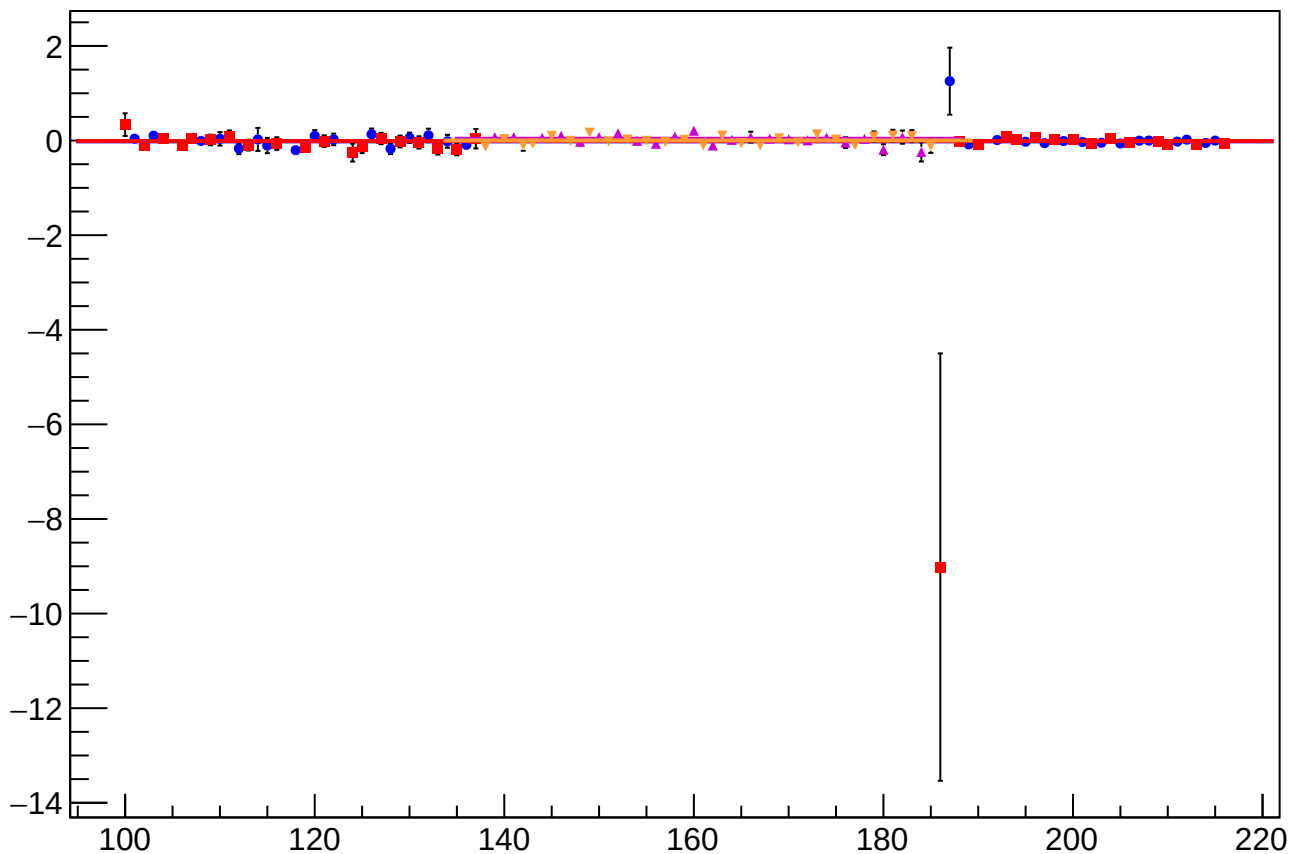
Left In: 74.601+/-0.013  $\chi^2/\text{NDF}$ : 713751.1/22

+ sign 57.096+/-0.007  $\chi^2/\text{NDF}$ : 6044775.0/55

All: 55.760+/-0.005  $\chi^2/\text{NDF}$ : 14075211.9/112

- sign 54.473+/-0.007  $\chi^2/\text{NDF}$ : 7957416.8/56

asym\_usr\_overload\_cor\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.016 \pm 0.012$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $0.003 \pm 0.017$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $-0.011 \pm 0.011$   $\chi^2/\text{NDF}$ : 39.9/33

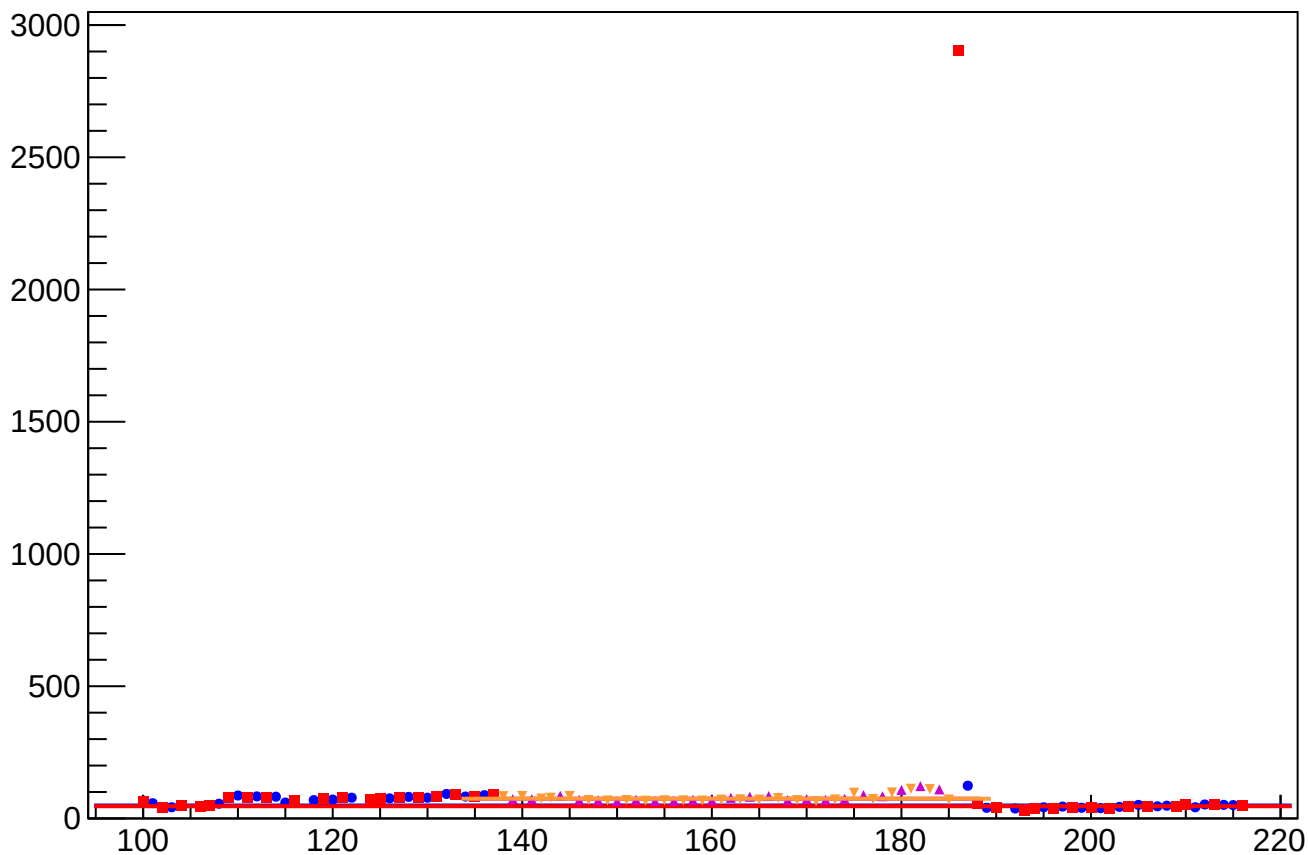
Left In:  $0.038 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 47.2/55

All:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 115.1/112

- sign  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 66.9/56

asym\_usr\_overload\_cor\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 48.936+/-0.008  $\chi^2/\text{NDF}$ : 2299218.8/30

Left Out: 74.749+/-0.012  $\chi^2/\text{NDF}$ : 744366.0/24

Right Out: 46.285+/-0.008  $\chi^2/\text{NDF}$ : 3676516.3/33

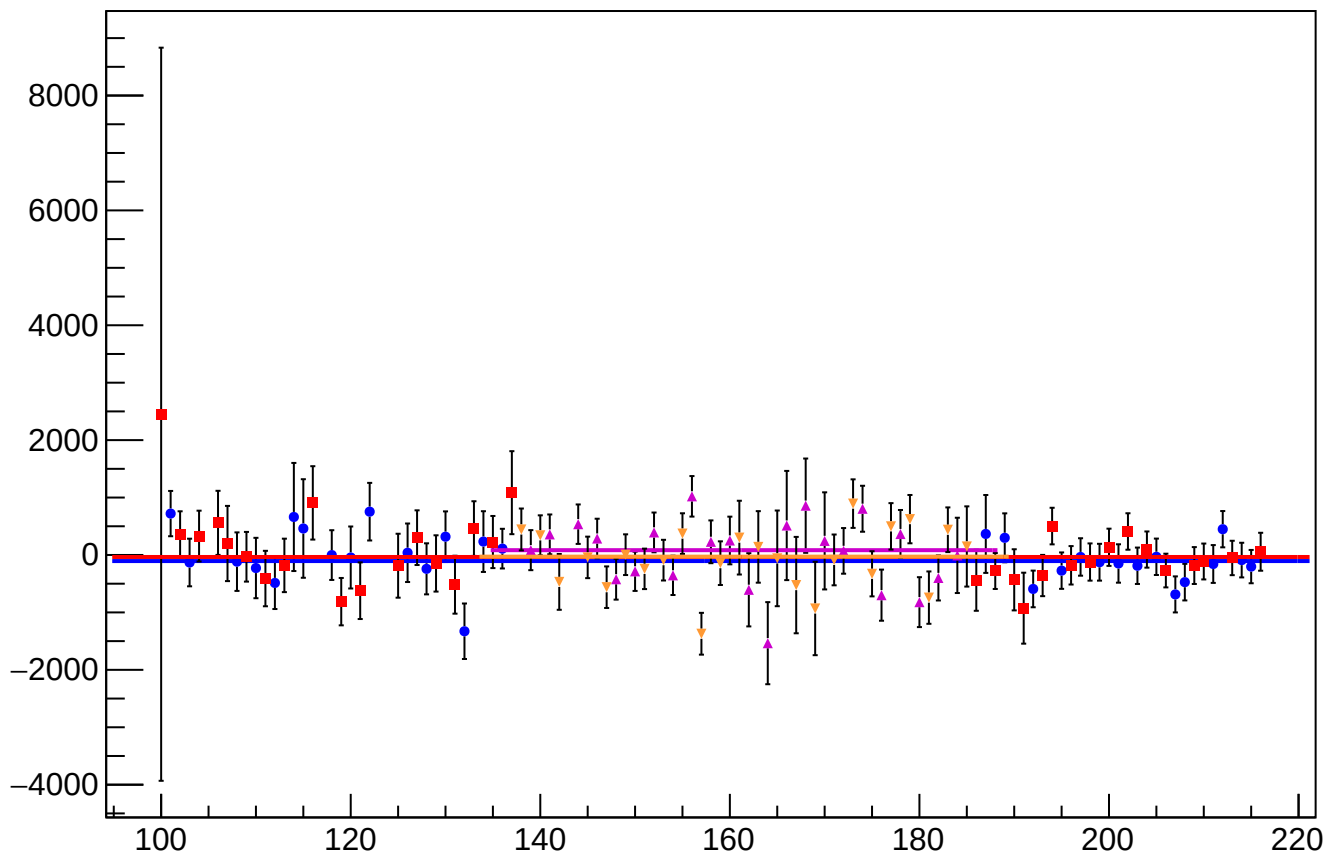
Left In: 74.601+/-0.013  $\chi^2/\text{NDF}$ : 713751.1/22

+ sign 57.096+/-0.007  $\chi^2/\text{NDF}$ : 6044775.0/55

All: 55.760+/-0.005  $\chi^2/\text{NDF}$ : 14075211.9/112

- sign 54.473+/-0.007  $\chi^2/\text{NDF}$ : 7957416.8/56

# asym\_dsl\_mean vs Slug



Right In:  $-105.989 \pm 69.388$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-29.346 \pm 86.530$   $\chi^2/\text{NDF}$ : 36.6/23

Right Out:  $-34.946 \pm 69.380$   $\chi^2/\text{NDF}$ : 27.4/33

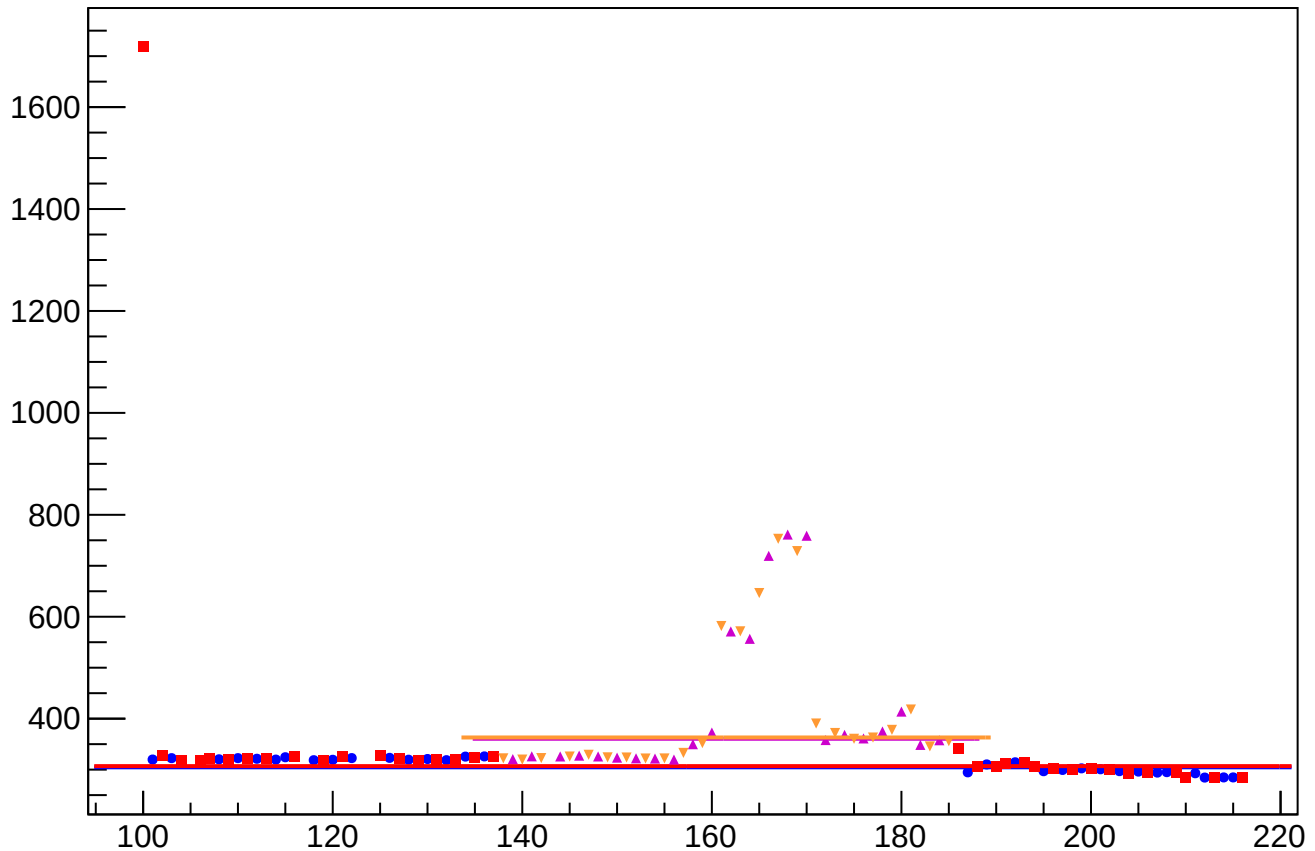
Left In:  $83.719 \pm 86.476$   $\chi^2/\text{NDF}$ : 35.8/22

+ sign  $-75.993 \pm 54.133$   $\chi^2/\text{NDF}$ : 66.7/54

All:  $-32.221 \pm 38.272$   $\chi^2/\text{NDF}$ : 132.4/111

- sign  $11.525 \pm 54.116$   $\chi^2/\text{NDF}$ : 64.4/56

# asym\_dsl\_rms vs Slug



Right In: 304.566+/-0.049     $\chi^2/\text{NDF}$ : 81385.9/30

Left Out: 363.079+/-0.061     $\chi^2/\text{NDF}$ : 1795570.0/23

Right Out: 306.872+/-0.049     $\chi^2/\text{NDF}$ : 183412.9/33

Left In: 360.585+/-0.061     $\chi^2/\text{NDF}$ : 1817691.0/22

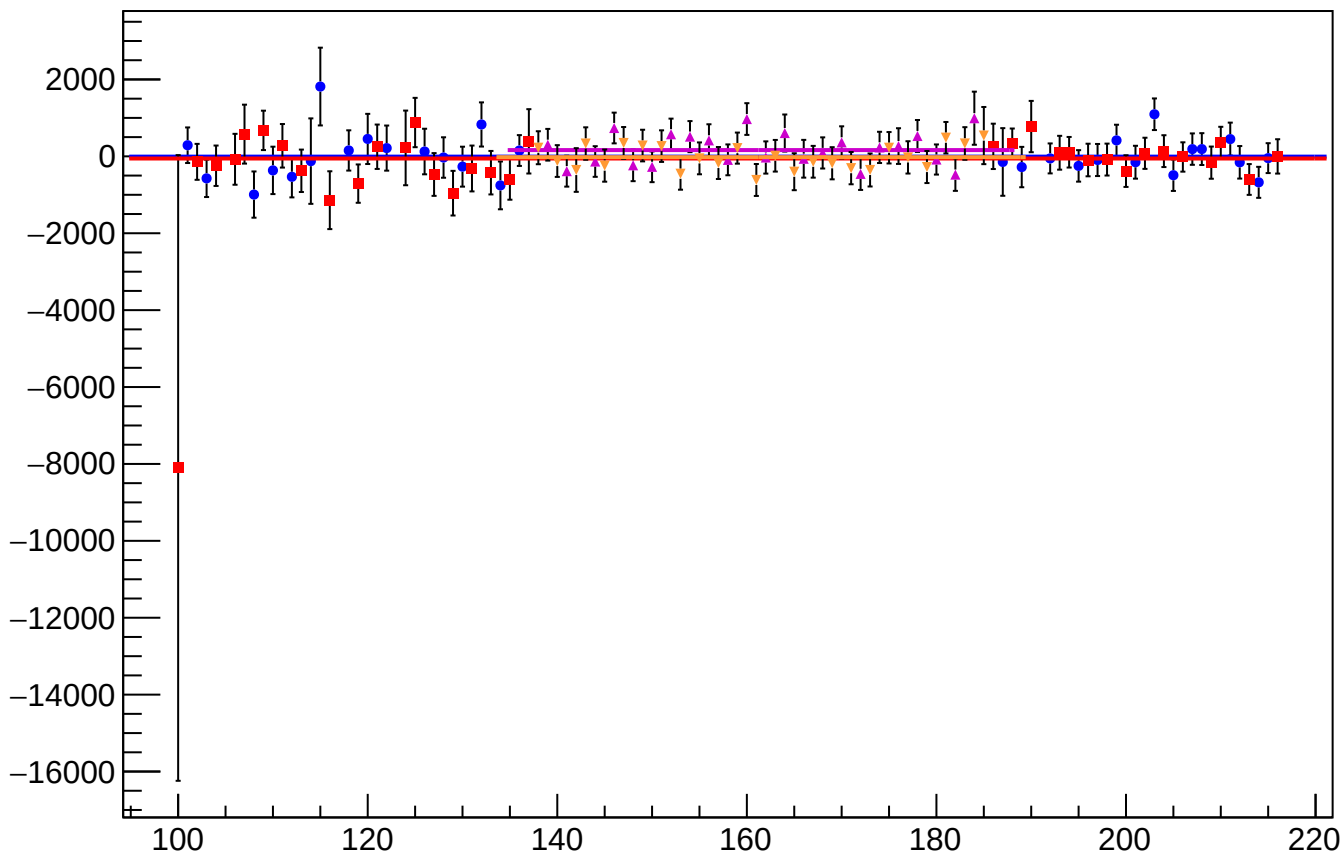
+ sign 327.466+/-0.038     $\chi^2/\text{NDF}$ : 2433571.6/54

All: 327.687+/-0.027     $\chi^2/\text{NDF}$ : 4904187.0/111

- sign 327.907+/-0.038     $\chi^2/\text{NDF}$ : 2470549.2/56



# asym\_dsr\_mean vs Slug



Right In:  $-7.358 \pm 86.799$   $\chi^2/\text{NDF}$ : 28.7/30

Left Out:  $-21.061 \pm 85.620$   $\chi^2/\text{NDF}$ : 12.6/24

Right Out:  $-56.179 \pm 86.489$   $\chi^2/\text{NDF}$ : 22.7/33

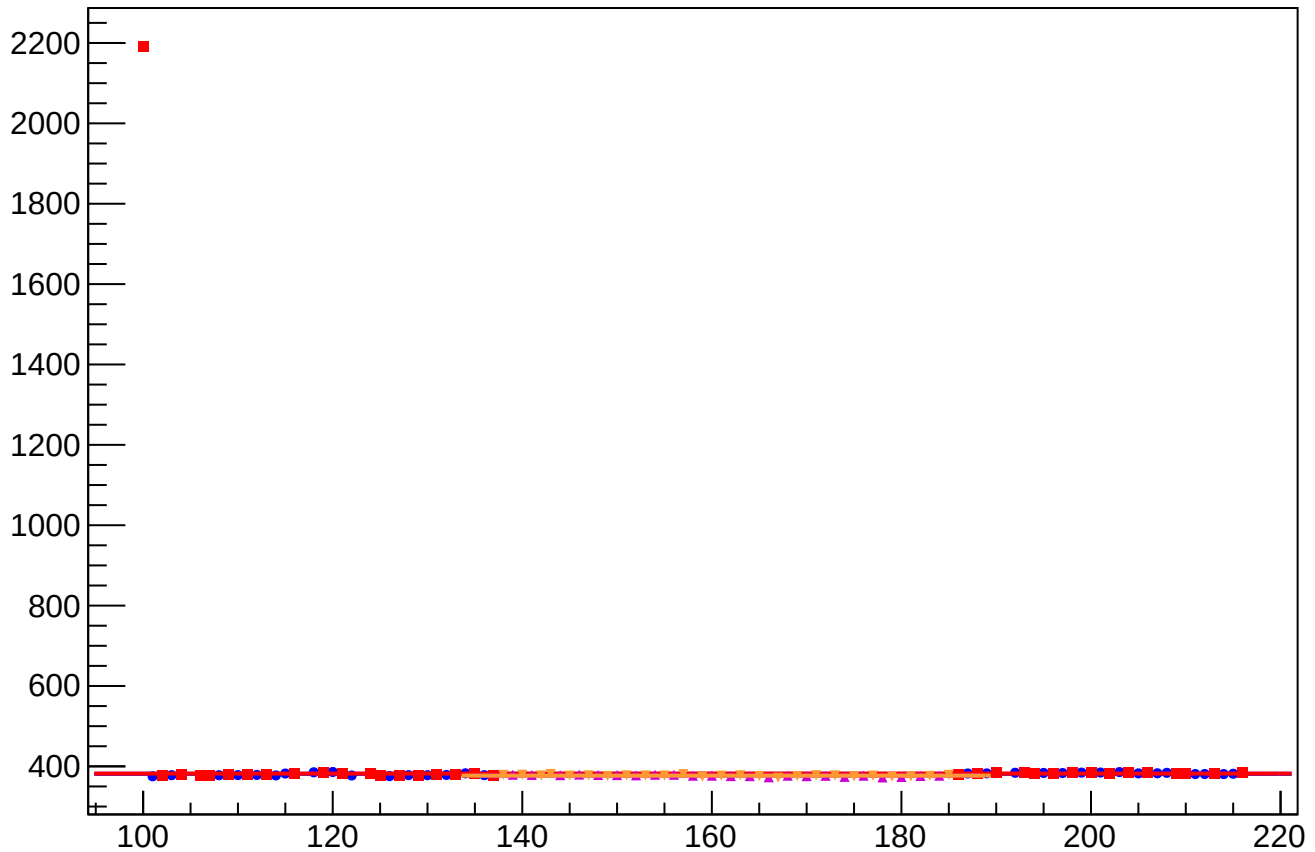
Left In:  $162.992 \pm 87.991$   $\chi^2/\text{NDF}$ : 21.8/22

+ sign  $-14.303 \pm 60.955$   $\chi^2/\text{NDF}$ : 41.3/55

All:  $18.218 \pm 43.356$   $\chi^2/\text{NDF}$ : 89.5/112

- sign  $51.519 \pm 61.681$   $\chi^2/\text{NDF}$ : 47.6/56

# asym\_dsr\_rms vs Slug



Right In: 381.438 $\pm$ 0.061  $\chi^2$ /NDF: 2253.4/30

Left Out: 376.906 $\pm$ 0.061  $\chi^2$ /NDF:1058.3/24

Right Out: 382.039 $\pm$ 0.061  $\chi^2$ /NDF: 100743.4/33

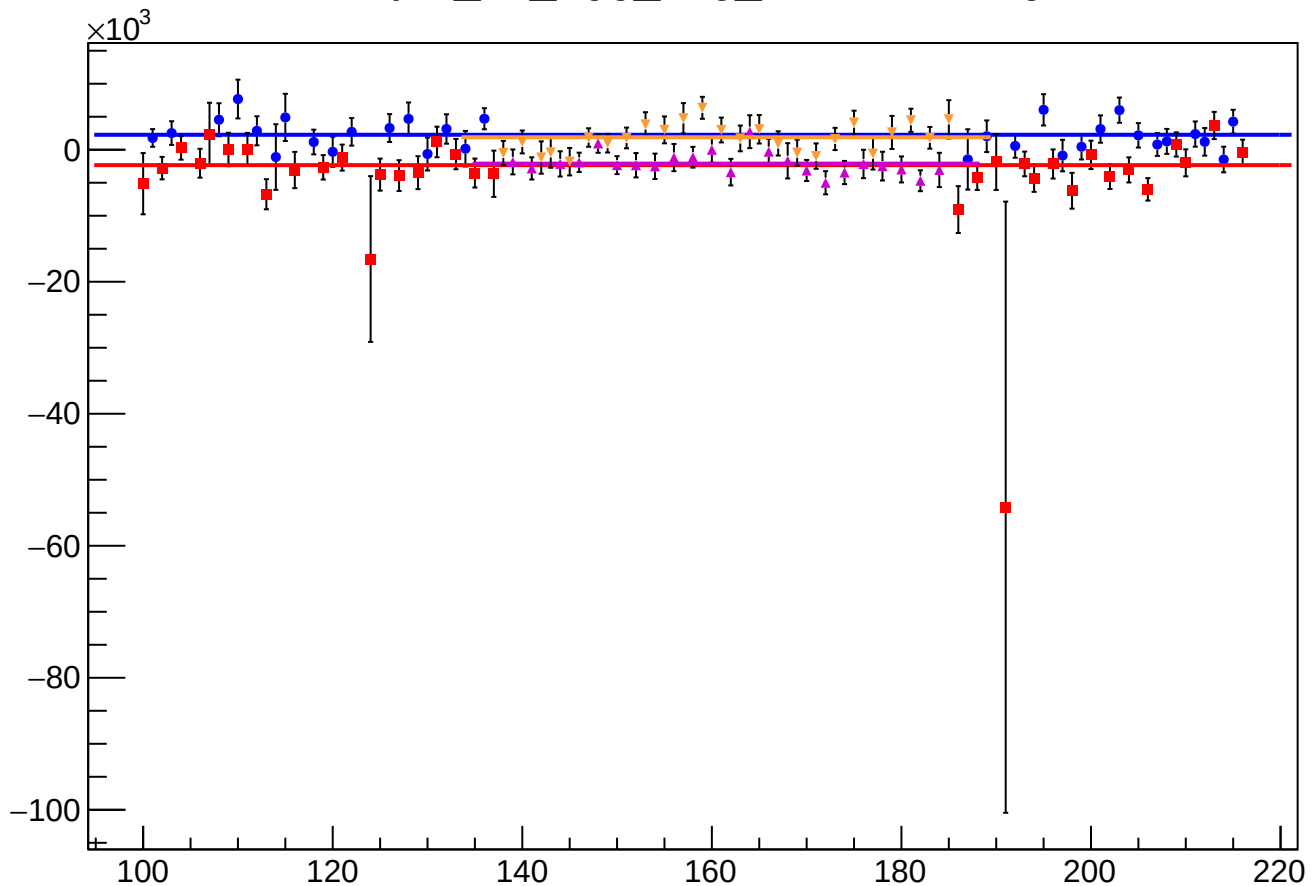
Left In: 376.846 $\pm$ 0.062  $\chi^2$ /NDF:1074.1/22

+ sign 379.141 $\pm$ 0.043  $\chi^2$ /NDF: 6075.6/55

All: 379.312 $\pm$ 0.031  $\chi^2$ /NDF: 111468.6/112

- sign 379.487 $\pm$ 0.044  $\chi^2$ /NDF: 105361.1/56

# asym\_us\_agg\_avg\_mean vs Slug



Right In: 2267.262 $\pm$ 375.449  $\chi^2$ /NDF: 29.6/30

Left Out: 1891.201 $\pm$ 375.290  $\chi^2$ /NDF: 28.4/24

Right Out: -2334.538 $\pm$ 384.968  $\chi^2$ /NDF: 42.3/34

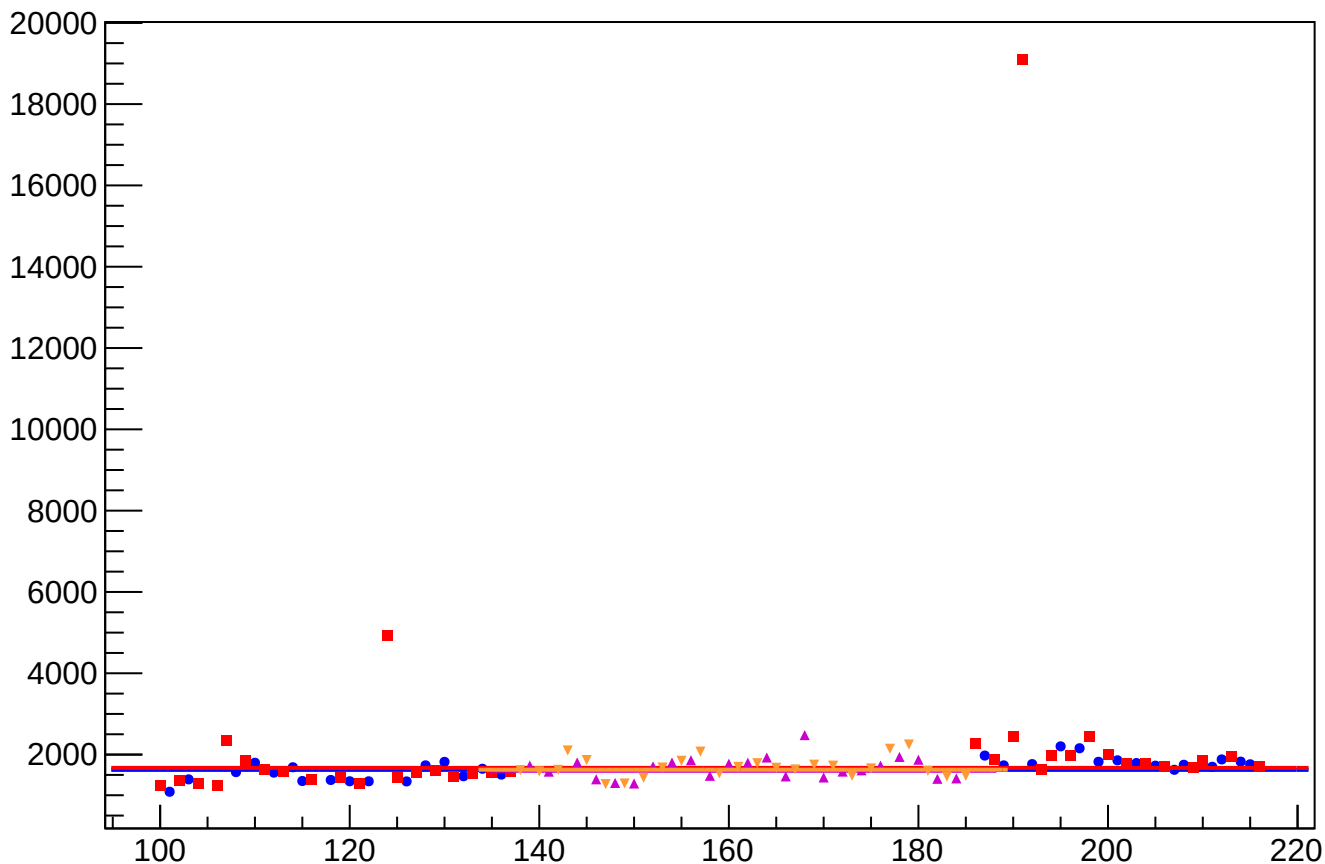
Left In: -2105.415 $\pm$ 379.051  $\chi^2$ /NDF: 18.6/22

+ sign 2079.152 $\pm$ 265.426  $\chi^2$ /NDF: 58.5/55

All: -32.048 $\pm$ 189.314  $\chi^2$ /NDF: 248.4/113

- sign -2218.202 $\pm$ 270.097  $\chi^2$ /NDF: 61.1/57

# asym\_us\_agg\_avg\_rms vs Slug



Right In: 1624.076 $\pm$ 0.265  $\chi^2$ /NDF: 945526.8/30

Left Out: 1628.479 $\pm$ 0.265  $\chi^2$ /NDF: 779094.7/24

Right Out: 1672.663 $\pm$ 0.272  $\chi^2$ /NDF: 1421222.5/34

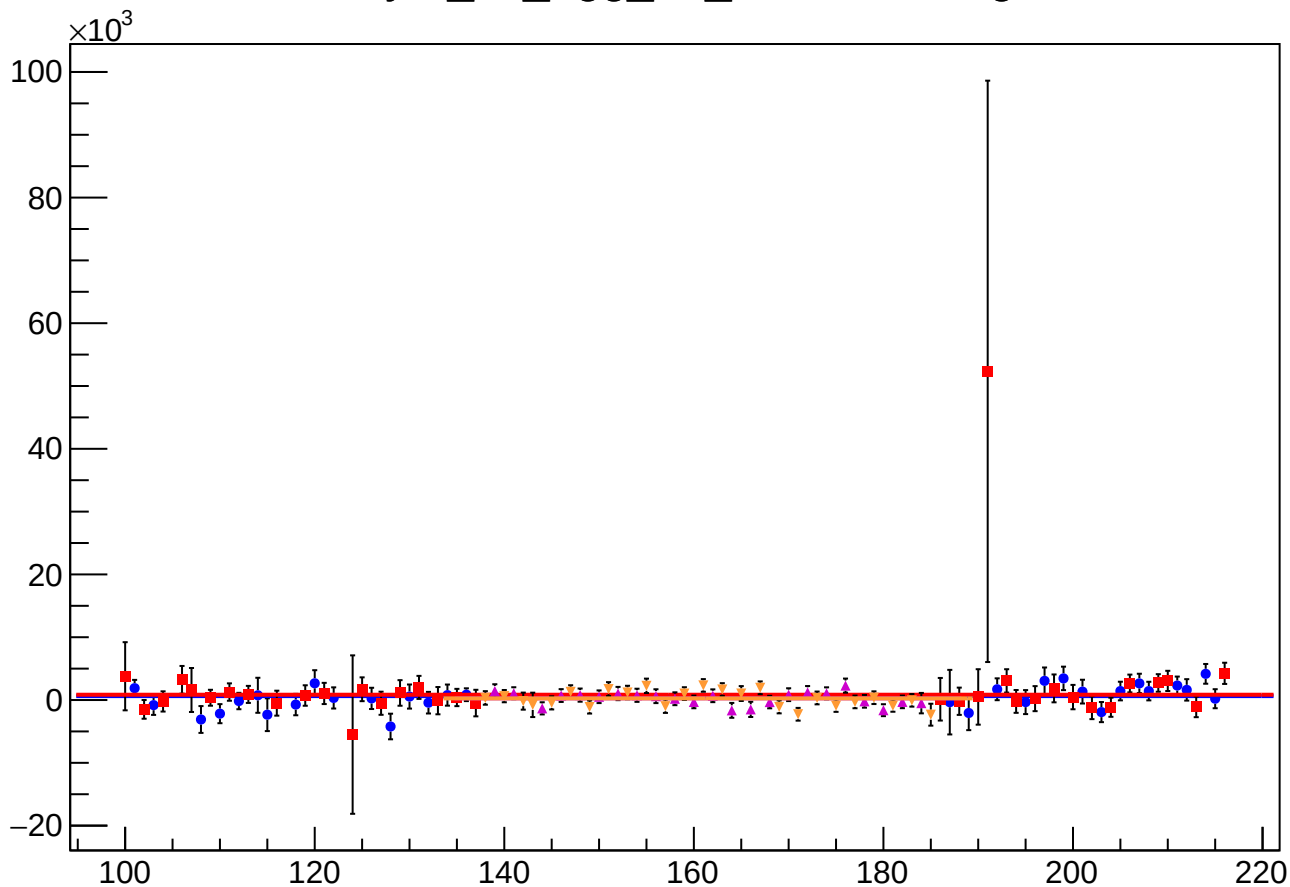
Left In: 1601.496 $\pm$ 0.268  $\chi^2$ /NDF: 793722.6/22

+ sign 1626.279 $\pm$ 0.188  $\chi^2$ /NDF: 1724759.1/55

All: 1631.314 $\pm$ 0.134  $\chi^2$ /NDF: 3975873.1/11

- sign 1636.528 $\pm$ 0.191  $\chi^2$ /NDF: 2249648.8/57

# asym\_us\_agg\_dd\_mean vs Slug



Right In:  $624.308 \pm 302.729$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $262.383 \pm 214.962$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $843.287 \pm 309.703$   $\chi^2/\text{NDF}$ : 24.6/34

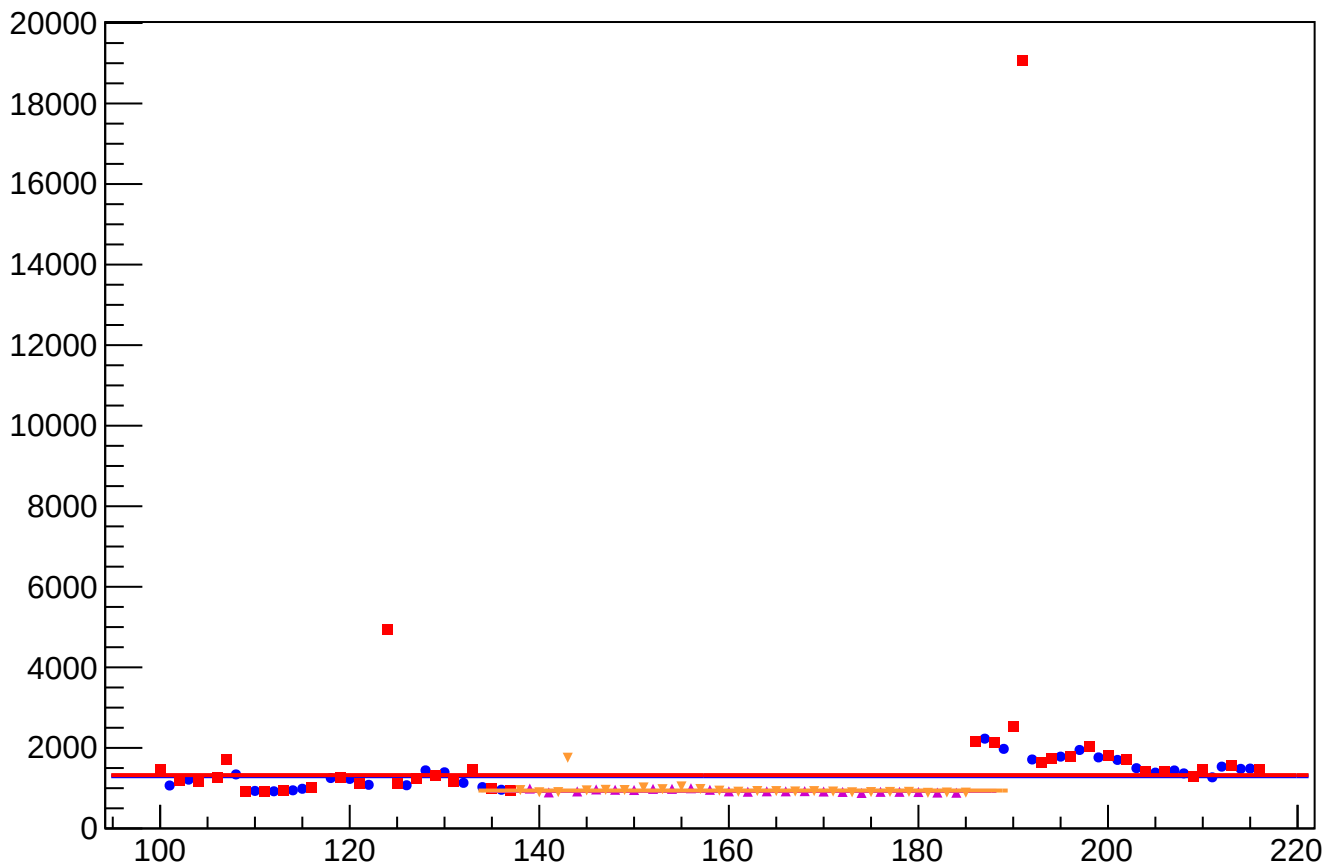
Left In:  $267.059 \pm 217.685$   $\chi^2/\text{NDF}$ : 21.4/22

+ sign  $383.700 \pm 175.270$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $420.062 \pm 124.921$   $\chi^2/\text{NDF}$ : 117.9/113

- sign  $457.604 \pm 178.093$   $\chi^2/\text{NDF}$ : 48.2/57

# asym\_us\_agg\_dd\_rms vs Slug



Right In: 1296.808+/-0.214     $\chi^2/\text{NDF}$ : 1777220.2/30

Left Out: 941.013+/-0.152     $\chi^2/\text{NDF}$ : 417710.2/24

Right Out: 1324.753+/-0.219     $\chi^2/\text{NDF}$ : 2710492.4/34

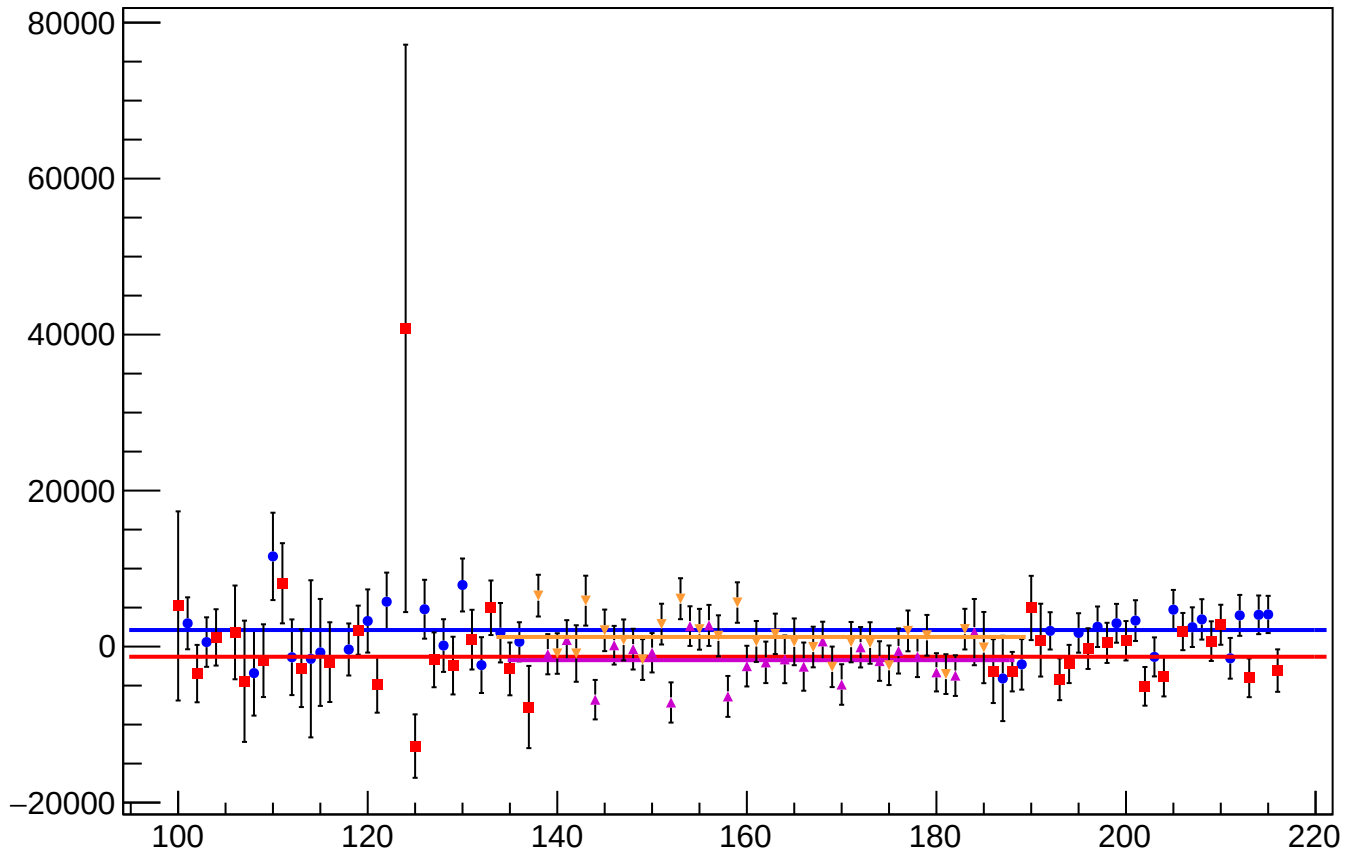
Left In: 931.562+/-0.154     $\chi^2/\text{NDF}$ : 48916.1/22

+ sign 1060.276+/-0.124     $\chi^2/\text{NDF}$ : 4031514.8/55

All: 1060.918+/-0.088     $\chi^2/\text{NDF}$ : 8948635.8/11

- sign 1061.581+/-0.126     $\chi^2/\text{NDF}$ : 4917066.5/57

# reg\_asym\_atl1\_mean vs Slug



Right In: 2122.109+/-553.191  $\chi^2/\text{NDF}: 22.8/30$

Left Out: 1234.728+/-541.289  $\chi^2/\text{NDF}: 23.9/24$

Right Out: -1303.666+/-558.112  $\chi^2/\text{NDF}: 37.7/34$

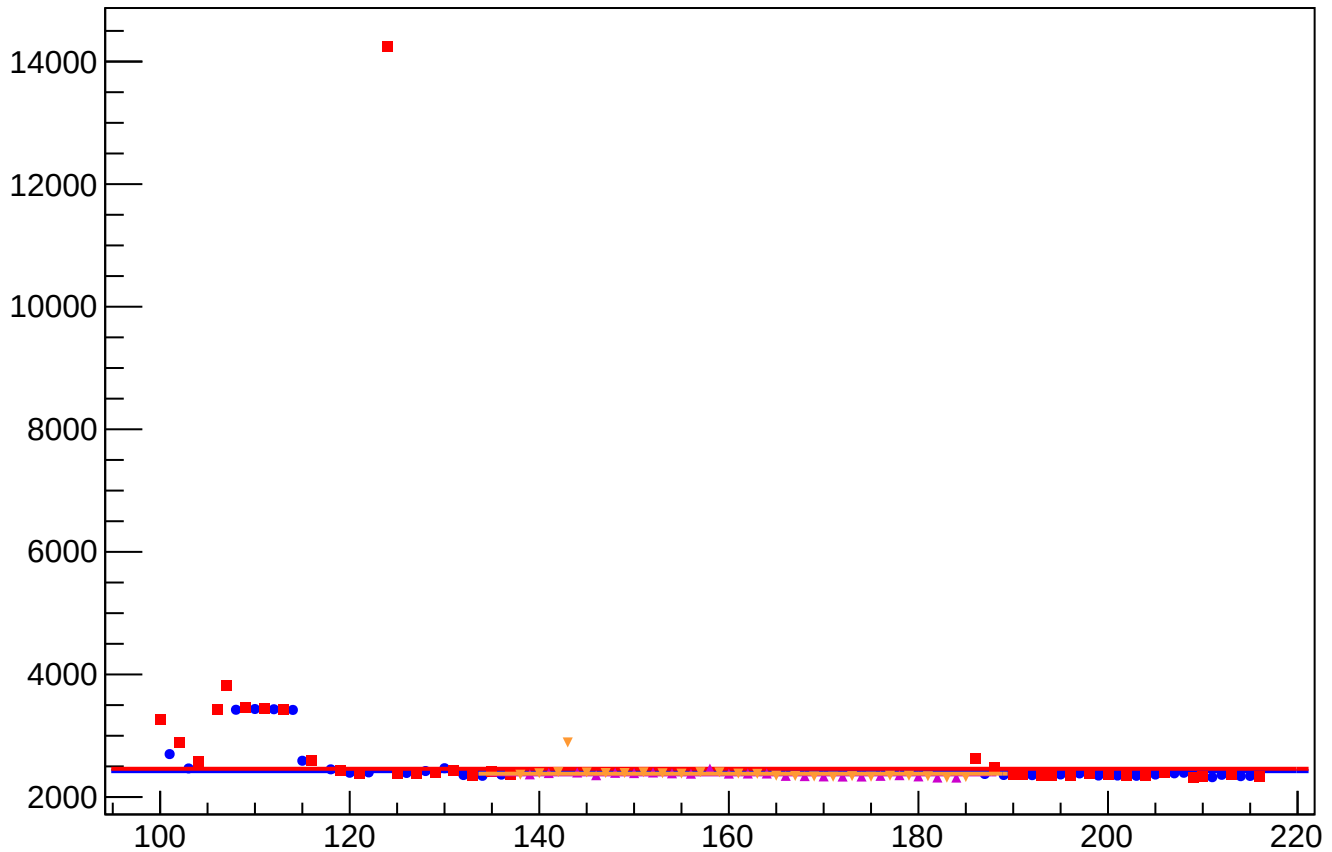
Left In: -1741.730+/-553.254  $\chi^2/\text{NDF}: 24.4/22$

+ sign 1668.770+/-386.889  $\chi^2/\text{NDF}: 48.0/55$

All: 96.761+/-275.678  $\chi^2/\text{NDF}: 143.9/113$

- sign -1524.613+/-392.916  $\chi^2/\text{NDF}: 62.4/57$

# reg\_asym\_atl1\_rms vs Slug



Right In: 2422.068+/-0.391  $\chi^2/\text{NDF}$ : 276971.2/30

Left Out: 2381.235+/-0.383  $\chi^2/\text{NDF}$ : 57623.2/24

Right Out: 2461.183+/-0.395  $\chi^2/\text{NDF}$ : 654409.8/34

Left In: 2369.384+/-0.391  $\chi^2/\text{NDF}$ : 7034.0/22

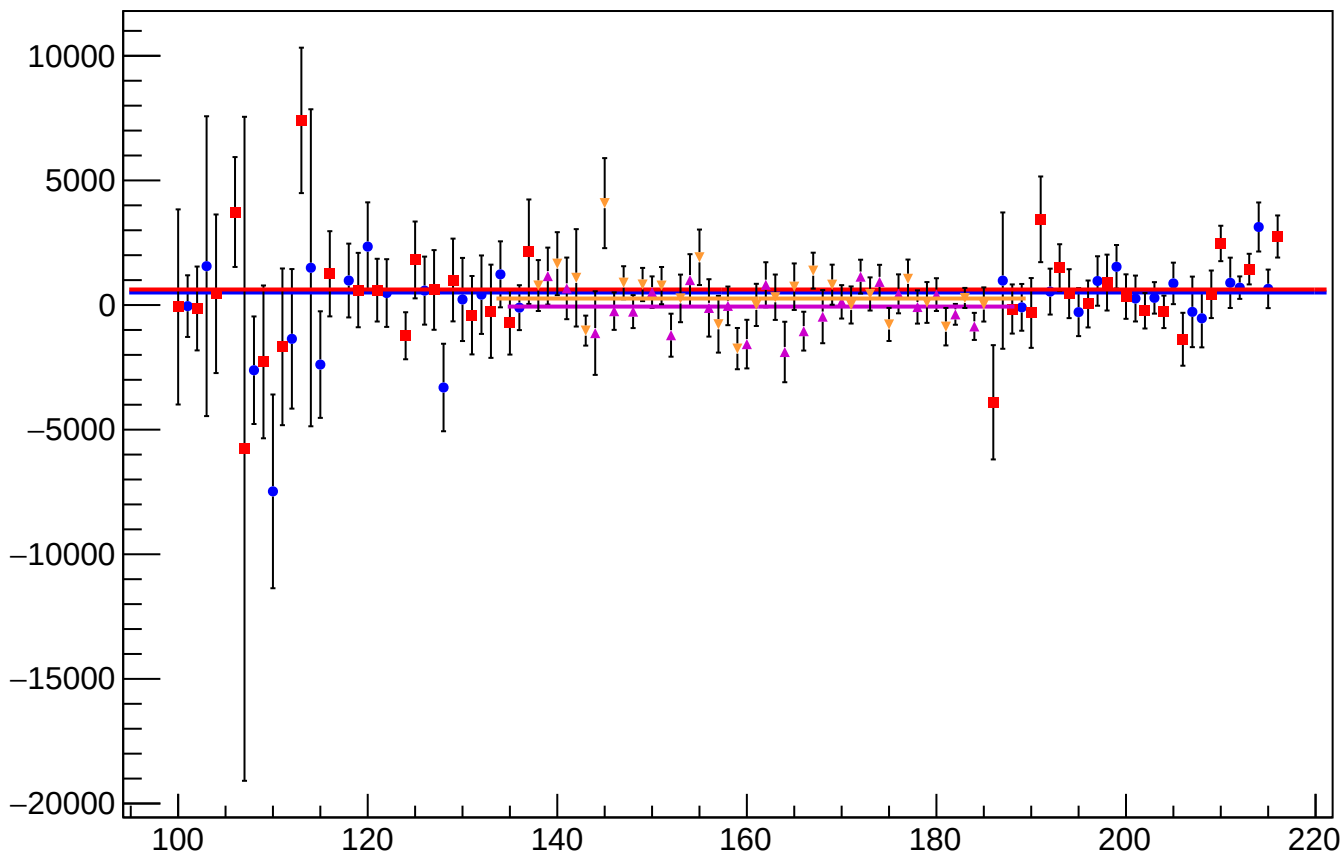
+ sign 2401.208+/-0.274  $\chi^2/\text{NDF}$ : 340161.2/55

All: 2407.939+/-0.195  $\chi^2/\text{NDF}$ : 1030125.1/11

- sign 2414.882+/-0.278  $\chi^2/\text{NDF}$ : 688734.0/57



# asym\_atl1\_reg\_correction\_mean vs Slug



Right In: 503.206 $\pm$ 192.831  $\chi^2/\text{NDF}$ : 27.2/30

Left Out: 261.877 $\pm$ 154.009  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: 623.986 $\pm$ 195.891  $\chi^2/\text{NDF}$ : 47.1/34

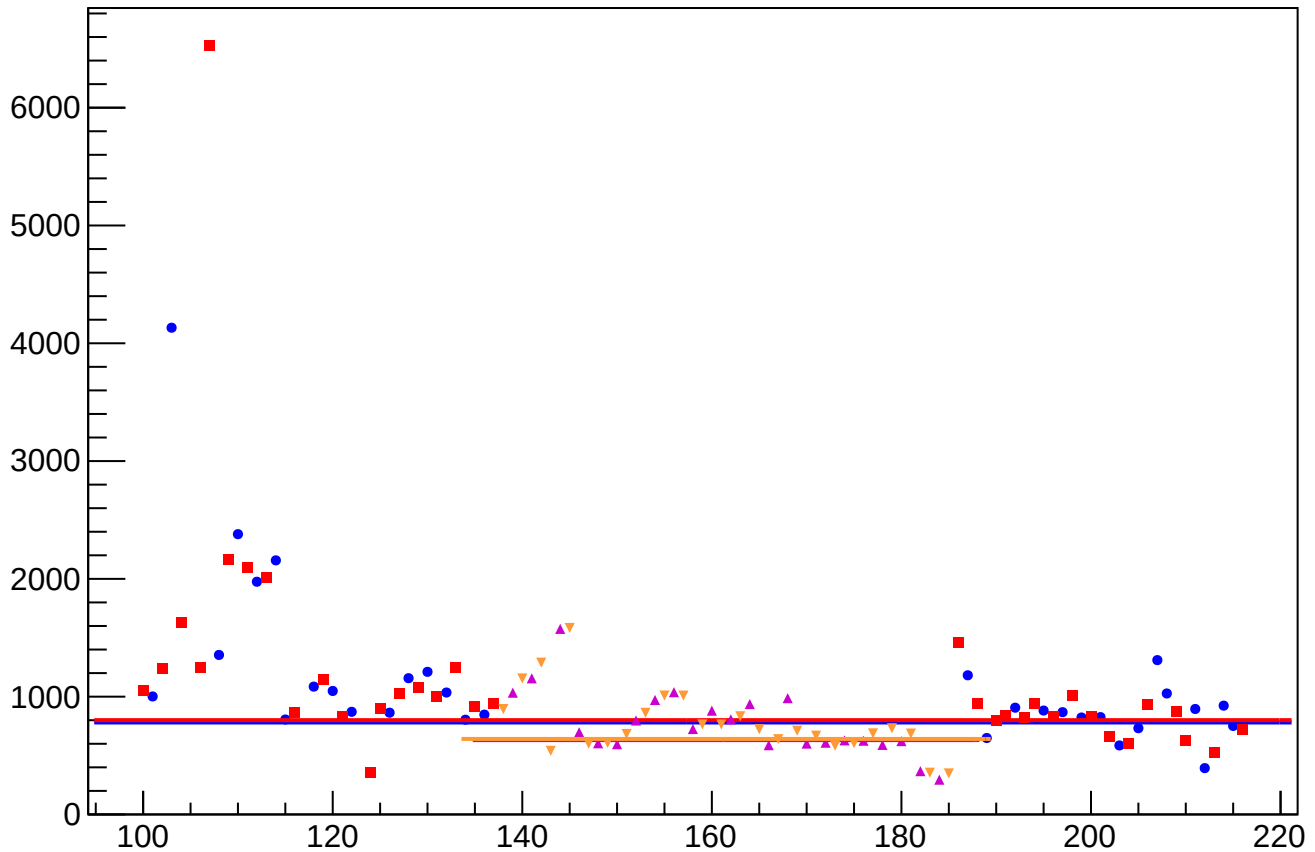
Left In: -61.960 $\pm$ 157.394  $\chi^2/\text{NDF}$ : 22.0/22

+ sign 355.863 $\pm$ 120.339  $\chi^2/\text{NDF}$ : 59.3/55

All: 282.945 $\pm$ 85.913  $\chi^2/\text{NDF}$ : 136.5/113

- sign 207.143 $\pm$ 122.695  $\chi^2/\text{NDF}$ : 76.5/57

# asym\_atl1\_reg\_correction\_rms vs Slug



Right In: 780.884+/-0.136  $\chi^2/\text{NDF}$ : 4336567.8/30

Left Out: 641.156+/-0.109  $\chi^2/\text{NDF}$ : 3474860.7/24

Right Out: 800.603+/-0.139  $\chi^2/\text{NDF}$ : 3801854.0/34

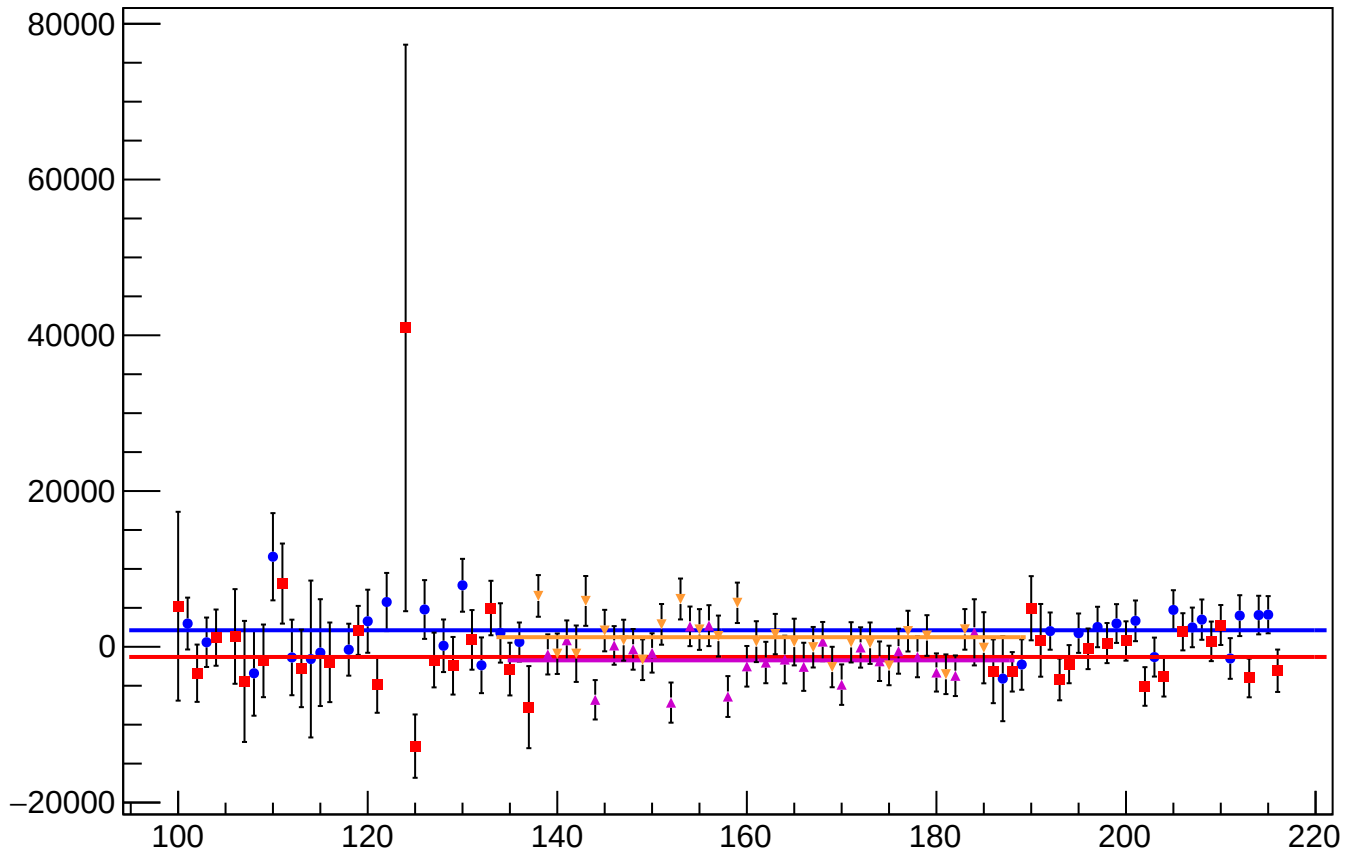
Left In: 631.199+/-0.111  $\chi^2/\text{NDF}$ : 3975438.6/22

+ sign 695.574+/-0.085  $\chi^2/\text{NDF}$ : 8452578.1/55

All: 696.596+/-0.061  $\chi^2/\text{NDF}$ : 17139104.5/11

- sign 697.658+/-0.087  $\chi^2/\text{NDF}$ : 8686232.4/57

# cor\_asym\_atl1\_mean vs Slug



Right In:  $2122.317 \pm 553.191$   $\chi^2/\text{NDF}$ : 22.8/30

Left Out:  $1234.706 \pm 541.289$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $-1306.784 \pm 558.167$   $\chi^2/\text{NDF}$ : 37.6/34

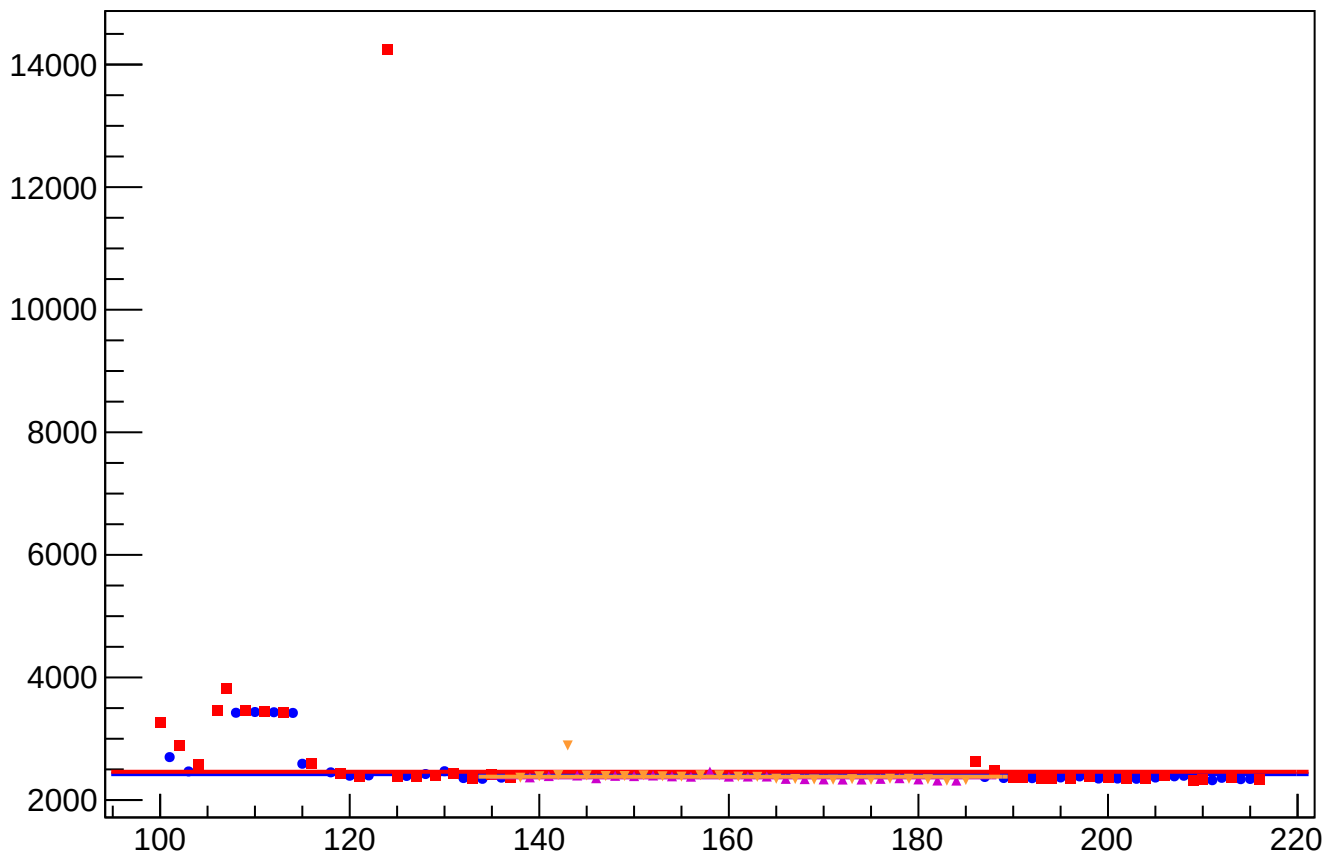
Left In:  $-1741.784 \pm 553.254$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $1668.860 \pm 386.889$   $\chi^2/\text{NDF}$ : 48.0/55

All:  $96.099 \pm 275.685$   $\chi^2/\text{NDF}$ : 143.8/113

- sign  $-1526.207 \pm 392.935$   $\chi^2/\text{NDF}$ : 62.3/57

# cor\_asym\_atl1\_rms vs Slug



Right In: 2422.068+/-0.391  $\chi^2/\text{NDF}$ : 276971.2/30

Left Out: 2381.235+/-0.383  $\chi^2/\text{NDF}$ : 57623.2/24

Right Out: 2461.325+/-0.395  $\chi^2/\text{NDF}$ : 657371.8/34

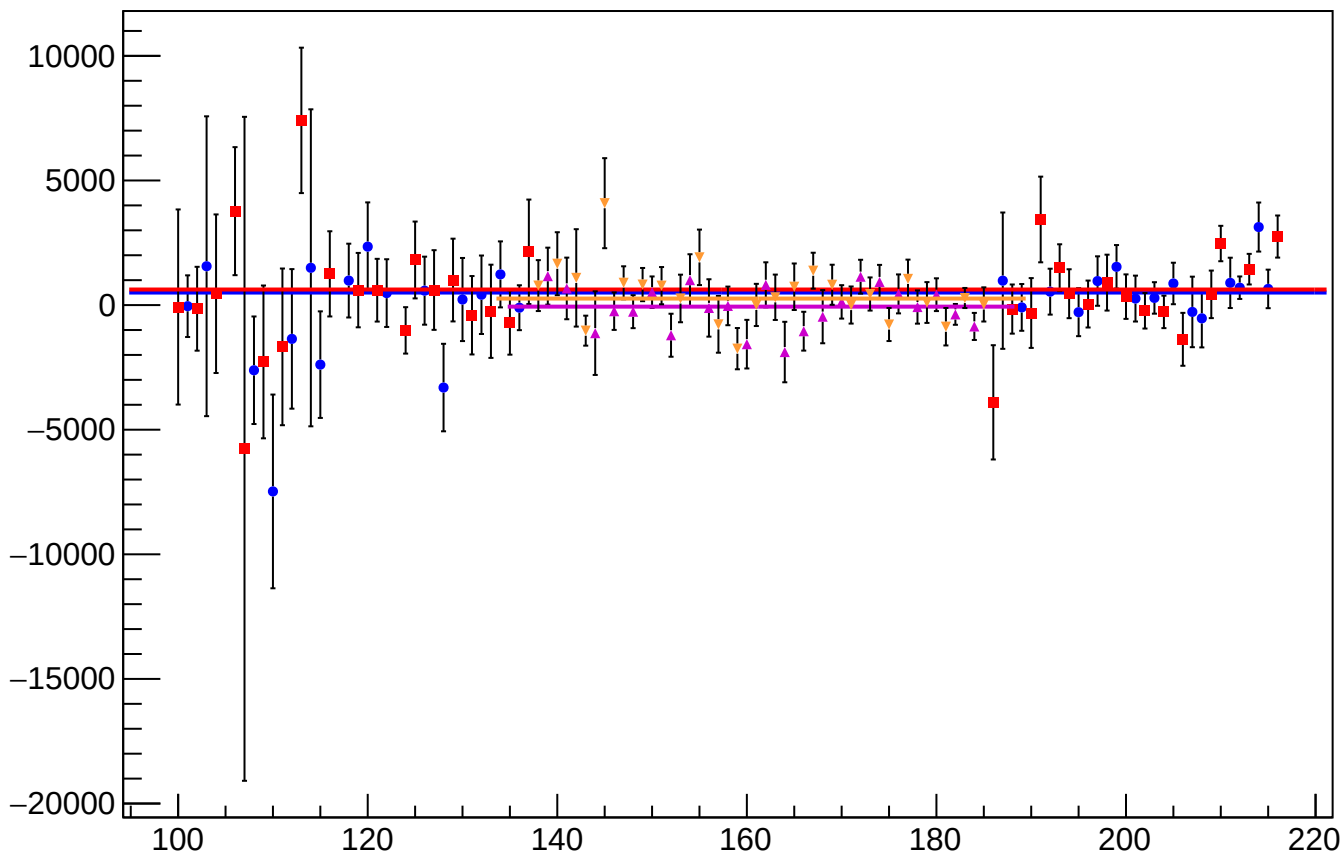
Left In: 2369.384+/-0.391  $\chi^2/\text{NDF}$ : 7034.0/22

+ sign 2401.208+/-0.274  $\chi^2/\text{NDF}$ : 340161.2/55

All: 2407.972+/-0.195  $\chi^2/\text{NDF}$ : 1033180.9/11

- sign 2414.948+/-0.278  $\chi^2/\text{NDF}$ : 691778.0/57

# asym\_atl1\_cor\_correction\_mean vs Slug



Right In:  $503.139 \pm 192.832$   $\chi^2/\text{NDF}$ : 27.2/30

Left Out:  $262.160 \pm 154.012$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $624.944 \pm 195.980$   $\chi^2/\text{NDF}$ : 45.8/34

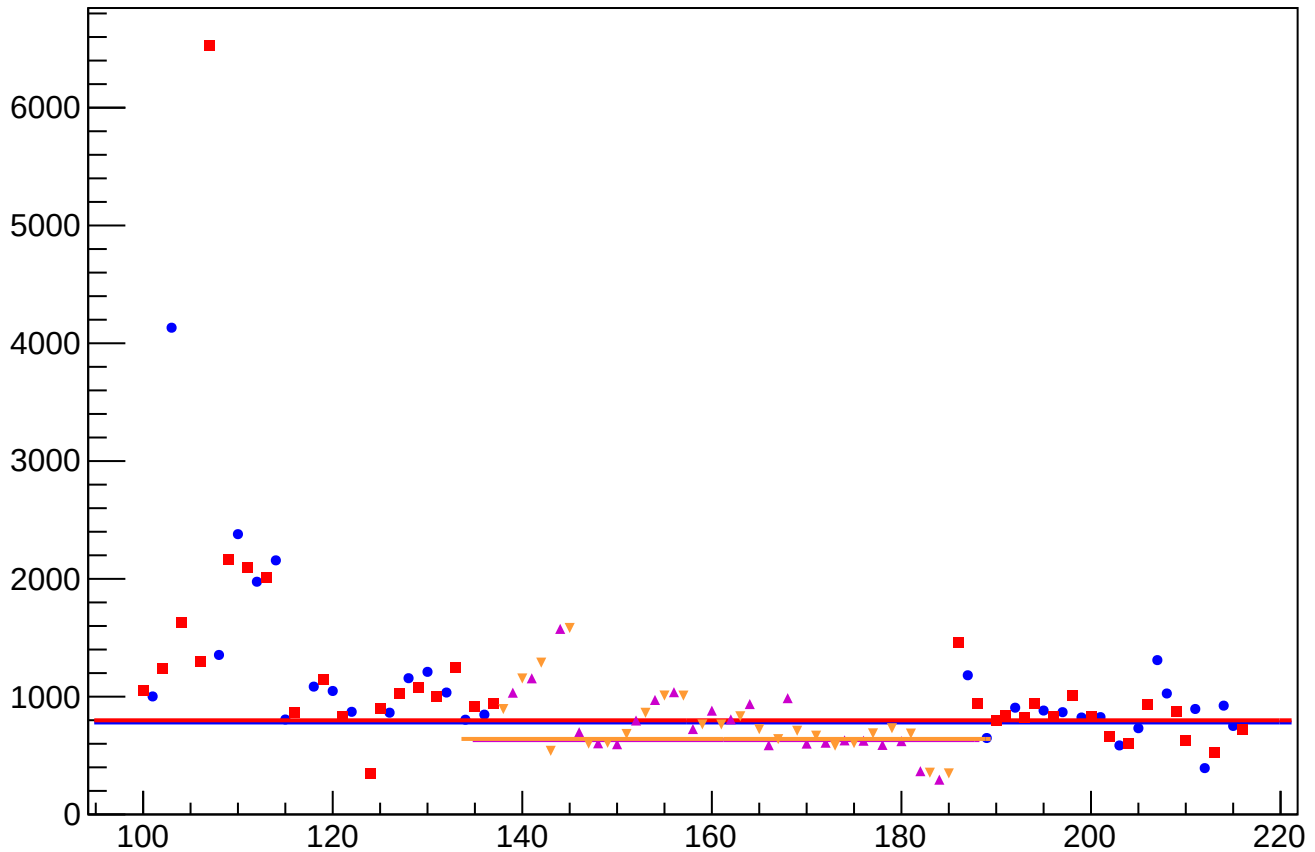
Left In:  $-61.976 \pm 157.393$   $\chi^2/\text{NDF}$ : 22.0/22

+ sign  $356.012 \pm 120.340$   $\chi^2/\text{NDF}$ : 59.3/55

All:  $283.139 \pm 85.921$   $\chi^2/\text{NDF}$ : 135.3/113

- sign  $207.358 \pm 122.717$   $\chi^2/\text{NDF}$ : 75.3/57

# asym\_atl1\_cor\_correction\_rms vs Slug



Right In: 780.895 $\pm$ 0.136  $\chi^2$ /NDF: 4336172.7/30

Left Out: 641.169 $\pm$ 0.109  $\chi^2$ /NDF:3474589.1/24

Right Out: 799.229 $\pm$ 0.139  $\chi^2$ /NDF: 3815423.0/34

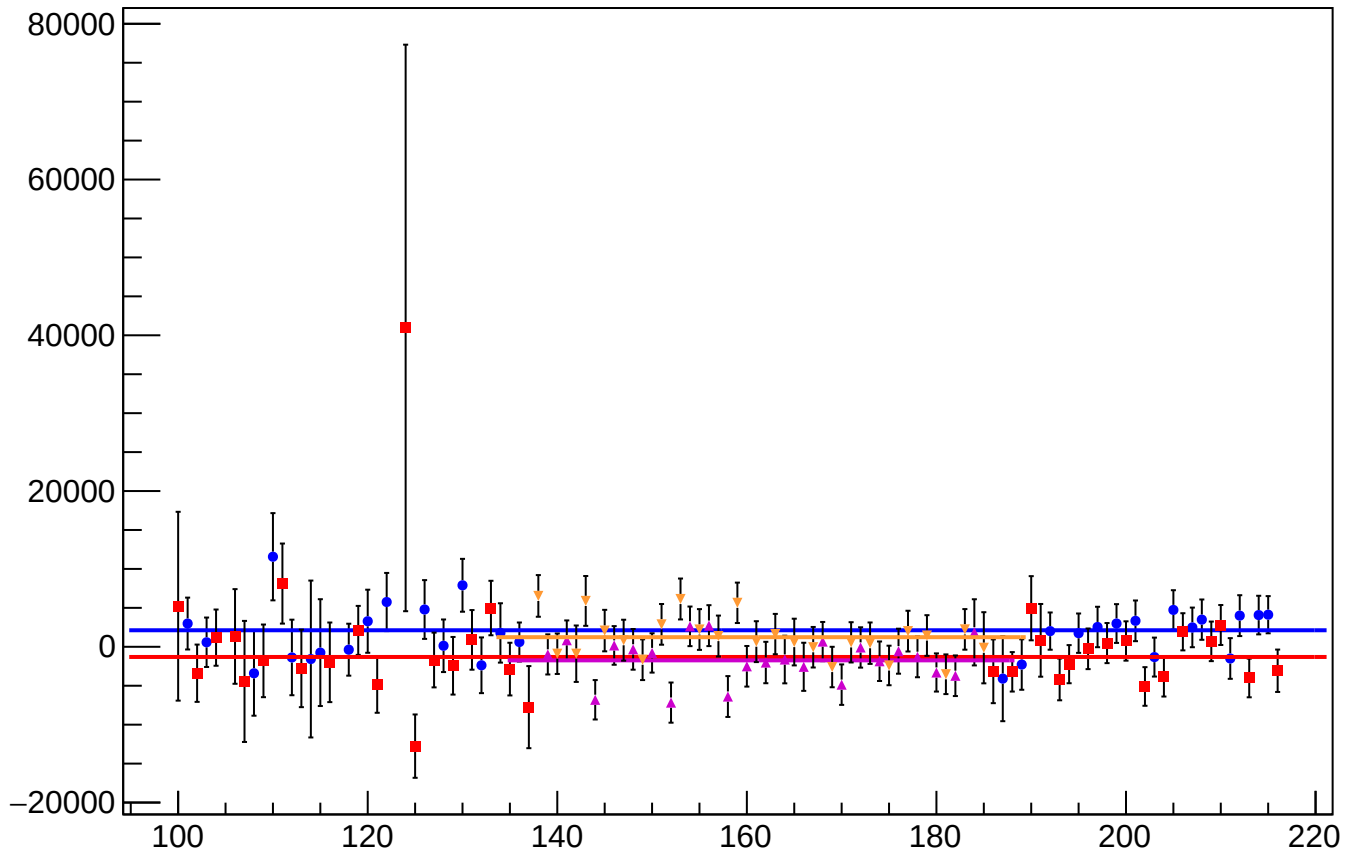
Left In: 631.196 $\pm$ 0.111  $\chi^2$ /NDF:3975563.1/22

+ sign 695.587 $\pm$ 0.085  $\chi^2$ /NDF: 8451882.0/55

All: 696.319 $\pm$ 0.061  $\chi^2$ /NDF: 17136803.7/11

- sign 697.080 $\pm$ 0.087  $\chi^2$ /NDF: 8684770.8/57

# eigen\_cor\_asym\_atl1\_mean vs Slug



Right In:  $2122.317 \pm 553.191$   $\chi^2/\text{NDF}$ : 22.8/30

Left Out:  $1234.706 \pm 541.289$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $-1306.784 \pm 558.167$   $\chi^2/\text{NDF}$ : 37.6/34

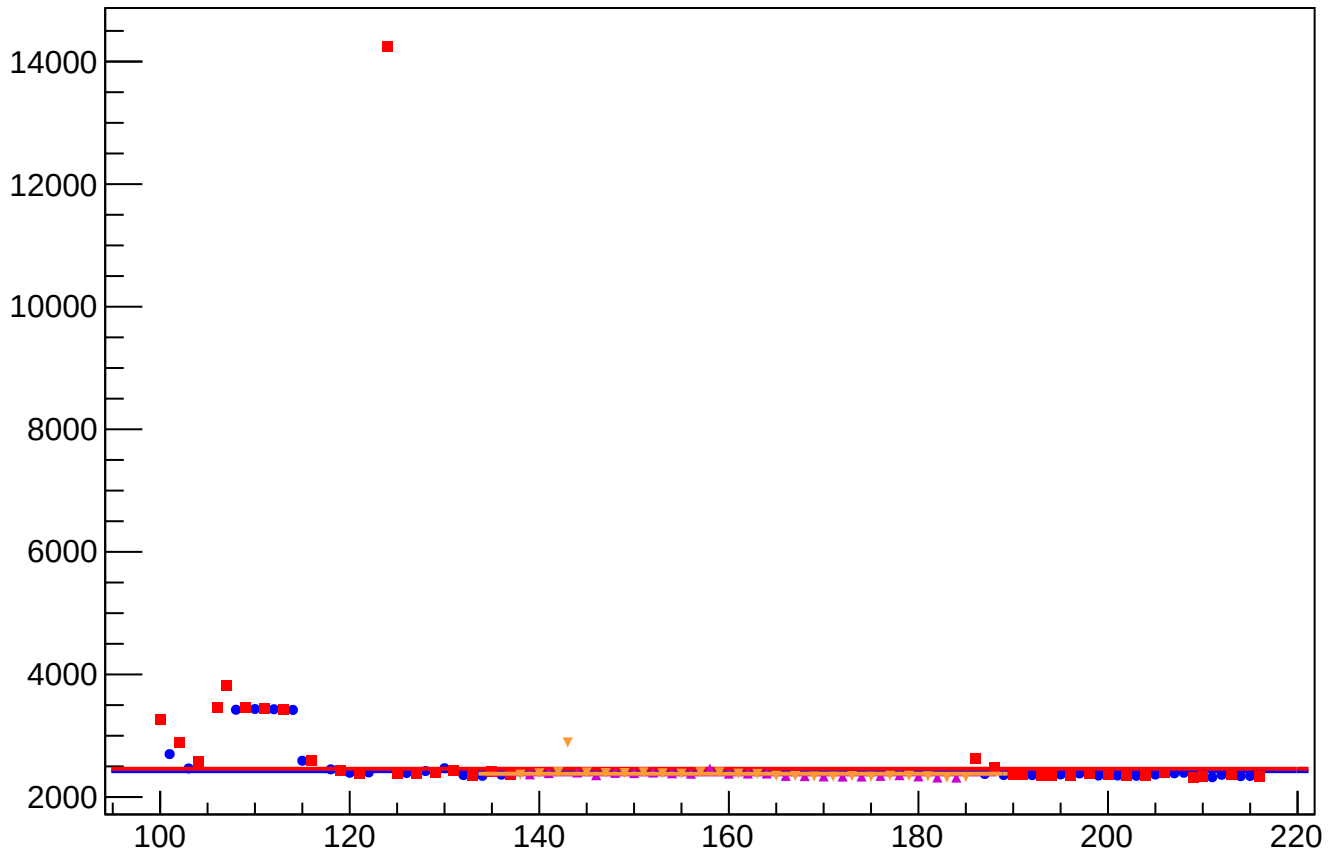
Left In:  $-1741.784 \pm 553.254$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $1668.860 \pm 386.889$   $\chi^2/\text{NDF}$ : 48.0/55

All:  $96.099 \pm 275.685$   $\chi^2/\text{NDF}$ : 143.8/113

- sign  $-1526.207 \pm 392.935$   $\chi^2/\text{NDF}$ : 62.3/57

# eigen\_cor\_asym\_atl1\_rms vs Slug



Right In: 2422.068+/-0.391  $\chi^2/\text{NDF}$ : 276971.2/30

Left Out: 2381.235+/-0.383  $\chi^2/\text{NDF}$ : 57623.2/24

Right Out: 2461.325+/-0.395  $\chi^2/\text{NDF}$ : 657371.8/34

Left In: 2369.384+/-0.391  $\chi^2/\text{NDF}$ : 7034.0/22

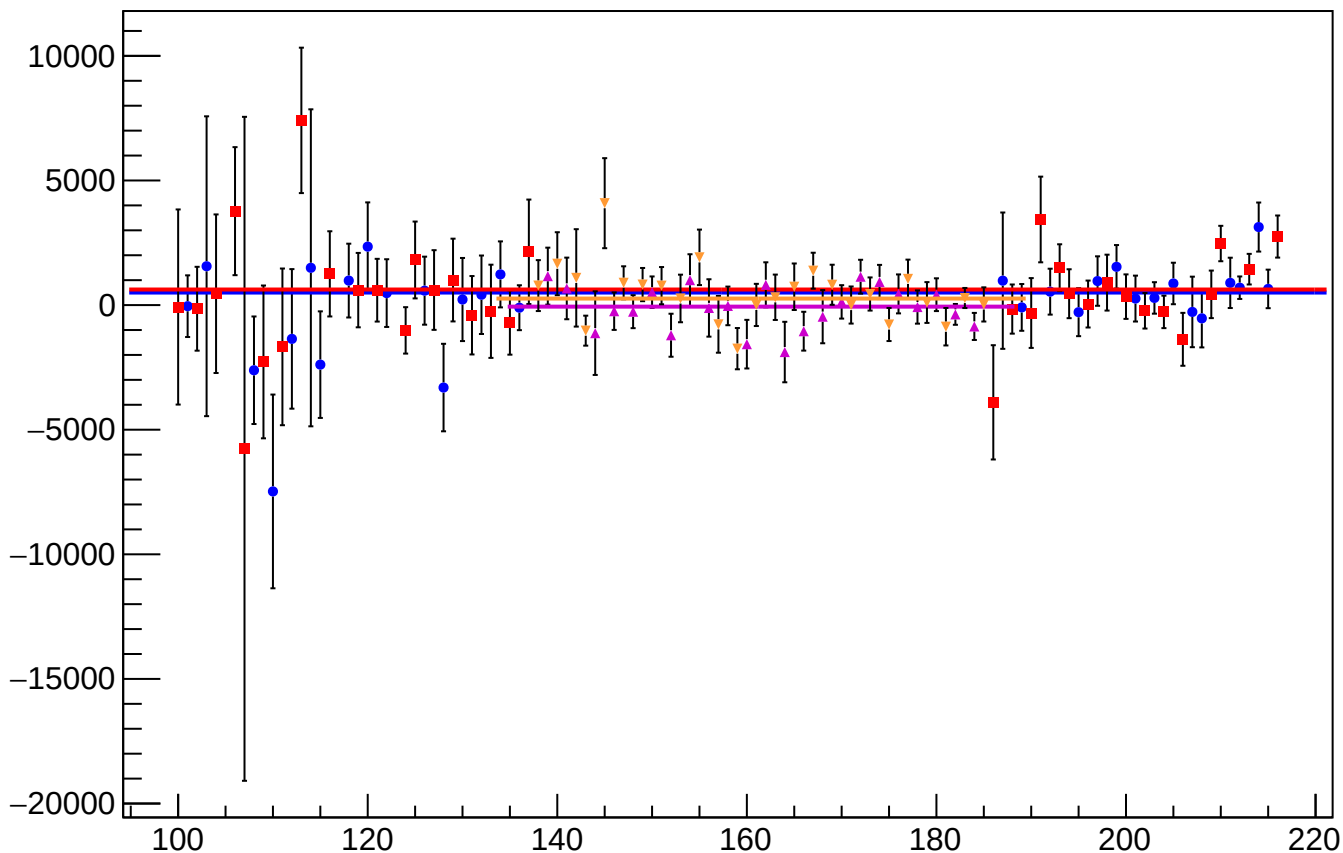
+ sign 2401.208+/-0.274  $\chi^2/\text{NDF}$ : 340161.2/55

All: 2407.972+/-0.195  $\chi^2/\text{NDF}$ : 1033180.9/11

- sign 2414.948+/-0.278  $\chi^2/\text{NDF}$ : 691778.0/57



# asym\_atl1\_eigen\_cor\_correction\_mean vs Slug



Right In: 503.139 $\pm$ 192.832  $\chi^2/\text{NDF}$ : 27.2/30

Left Out: 262.160 $\pm$ 154.012  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: 624.944 $\pm$ 195.980  $\chi^2/\text{NDF}$ : 45.8/34

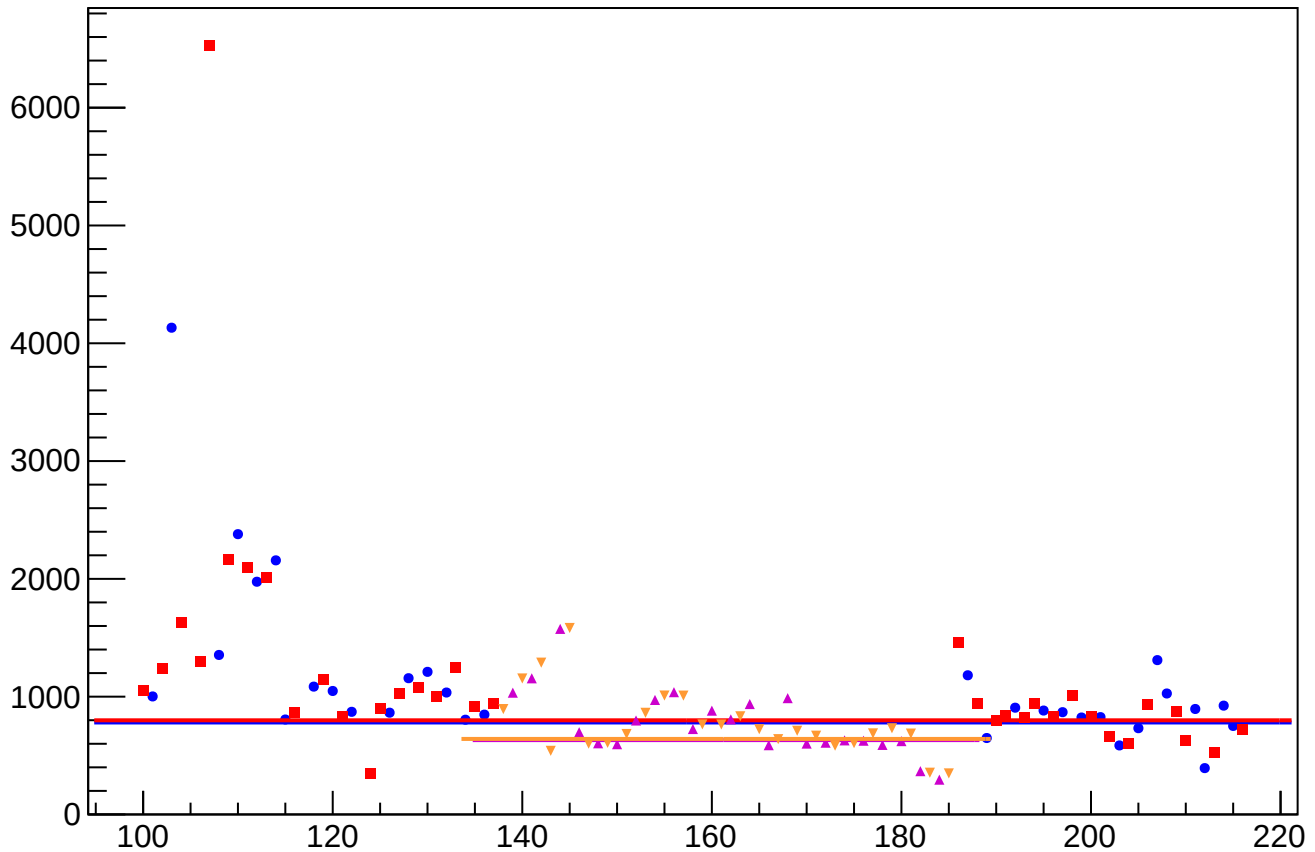
Left In: -61.976 $\pm$ 157.393  $\chi^2/\text{NDF}$ : 22.0/22

+ sign 356.012 $\pm$ 120.340  $\chi^2/\text{NDF}$ : 59.3/55

All: 283.139 $\pm$ 85.921  $\chi^2/\text{NDF}$ : 135.3/113

- sign 207.358 $\pm$ 122.717  $\chi^2/\text{NDF}$ : 75.3/57

# asym\_atl1\_eigen\_cor\_correction\_rms vs Slug



Right In: 780.895+/-0.136  $\chi^2/\text{NDF}$ : 4336172.7/30

Left Out: 641.169+/-0.109  $\chi^2/\text{NDF}$ : 3474589.1/24

Right Out: 799.229+/-0.139  $\chi^2/\text{NDF}$ : 3815423.0/34

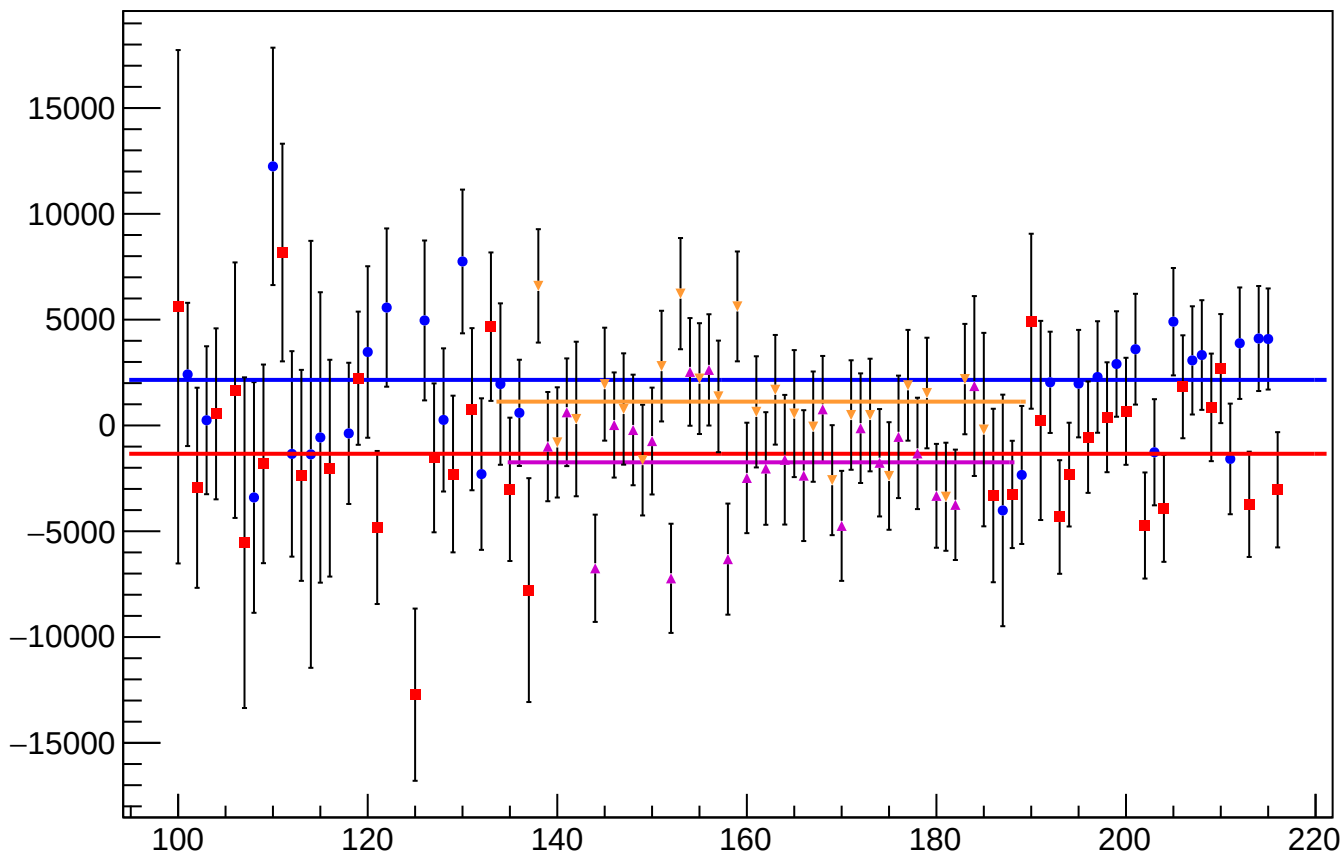
Left In: 631.196+/-0.111  $\chi^2/\text{NDF}$ : 3975563.1/22

+ sign 695.587+/-0.085  $\chi^2/\text{NDF}$ : 8451882.0/55

All: 696.319+/-0.061  $\chi^2/\text{NDF}$ : 17136803.7/11

- sign 697.080+/-0.087  $\chi^2/\text{NDF}$ : 8684770.8/57

# dit\_asym\_atl1\_mean vs Slug



Right In:  $2153.080 \pm 556.244$   $\chi^2/\text{NDF}$ : 23.1/30

Left Out:  $1125.562 \pm 549.834$   $\chi^2/\text{NDF}$ : 21.2/23

Right Out:  $-1338.583 \pm 564.213$   $\chi^2/\text{NDF}$ : 34.6/33

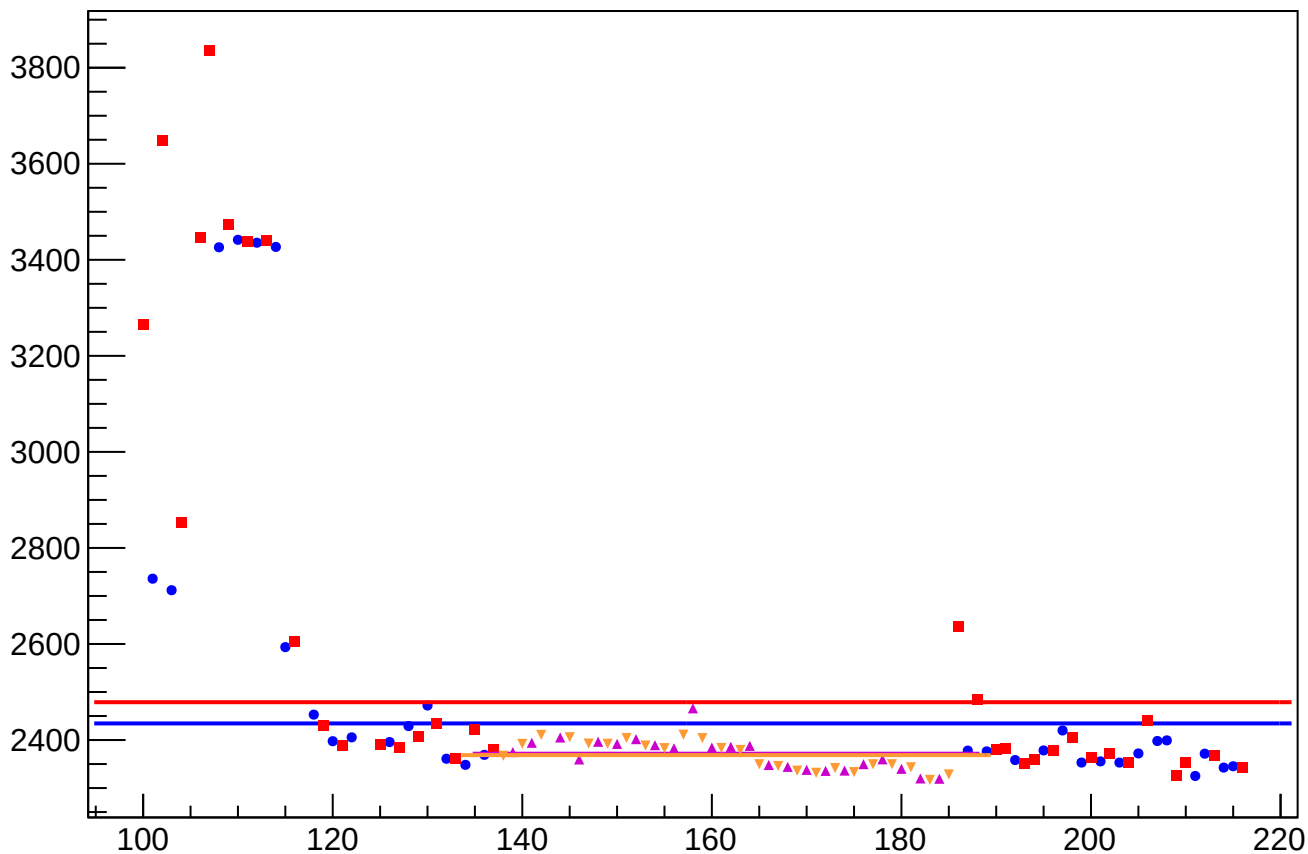
Left In:  $-1742.304 \pm 553.755$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $1633.367 \pm 391.038$   $\chi^2/\text{NDF}$ : 46.0/54

All:  $61.433 \pm 277.969$   $\chi^2/\text{NDF}$ : 137.3/111

- sign  $-1544.220 \pm 395.210$   $\chi^2/\text{NDF}$ : 58.6/56

# dit\_asym\_atl1\_rms vs Slug



Right In:  $2434.559 \pm 0.393$   $\chi^2/\text{NDF}$ : 290766.4/30

Left Out:  $2368.569 \pm 0.389$   $\chi^2/\text{NDF}$ : 5571.3/23

Right Out:  $2478.774 \pm 0.399$   $\chi^2/\text{NDF}$ : 556348.1/33

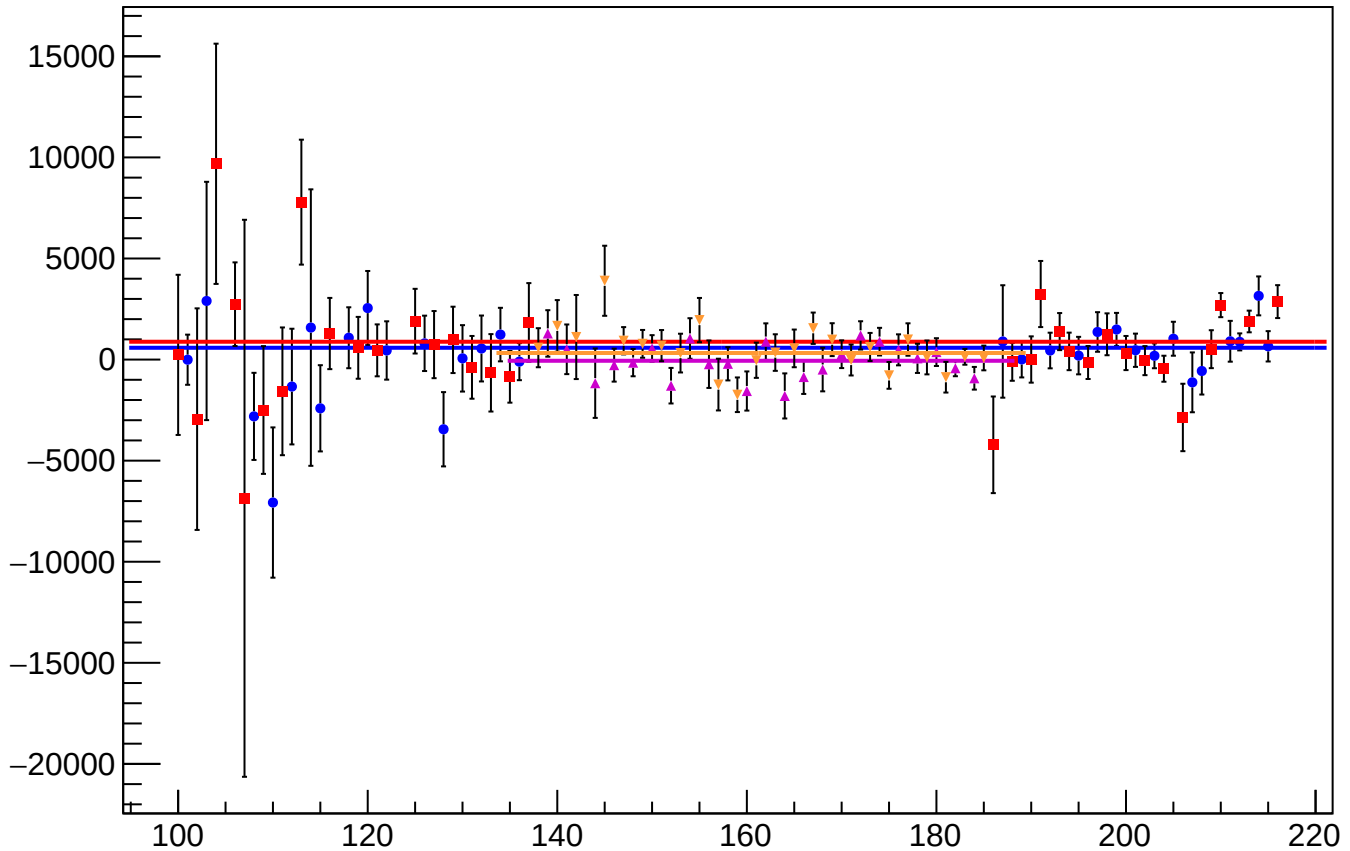
Left In:  $2371.518 \pm 0.392$   $\chi^2/\text{NDF}$ : 7053.5/22

+ sign  $2401.182 \pm 0.277$   $\chi^2/\text{NDF}$ : 310575.1/54

All:  $2412.540 \pm 0.197$   $\chi^2/\text{NDF}$ : 914201.0/111

- sign  $2424.143 \pm 0.279$   $\chi^2/\text{NDF}$ : 600214.7/56

# asym\_atl1\_dit\_correction\_mean vs Slug



Right In:  $583.899 \pm 187.451$   $\chi^2/\text{NDF}$ : 29.8/30

Left Out:  $325.955 \pm 160.041$   $\chi^2/\text{NDF}$ : 26.8/23

Right Out:  $882.295 \pm 192.441$   $\chi^2/\text{NDF}$ : 55.5/33

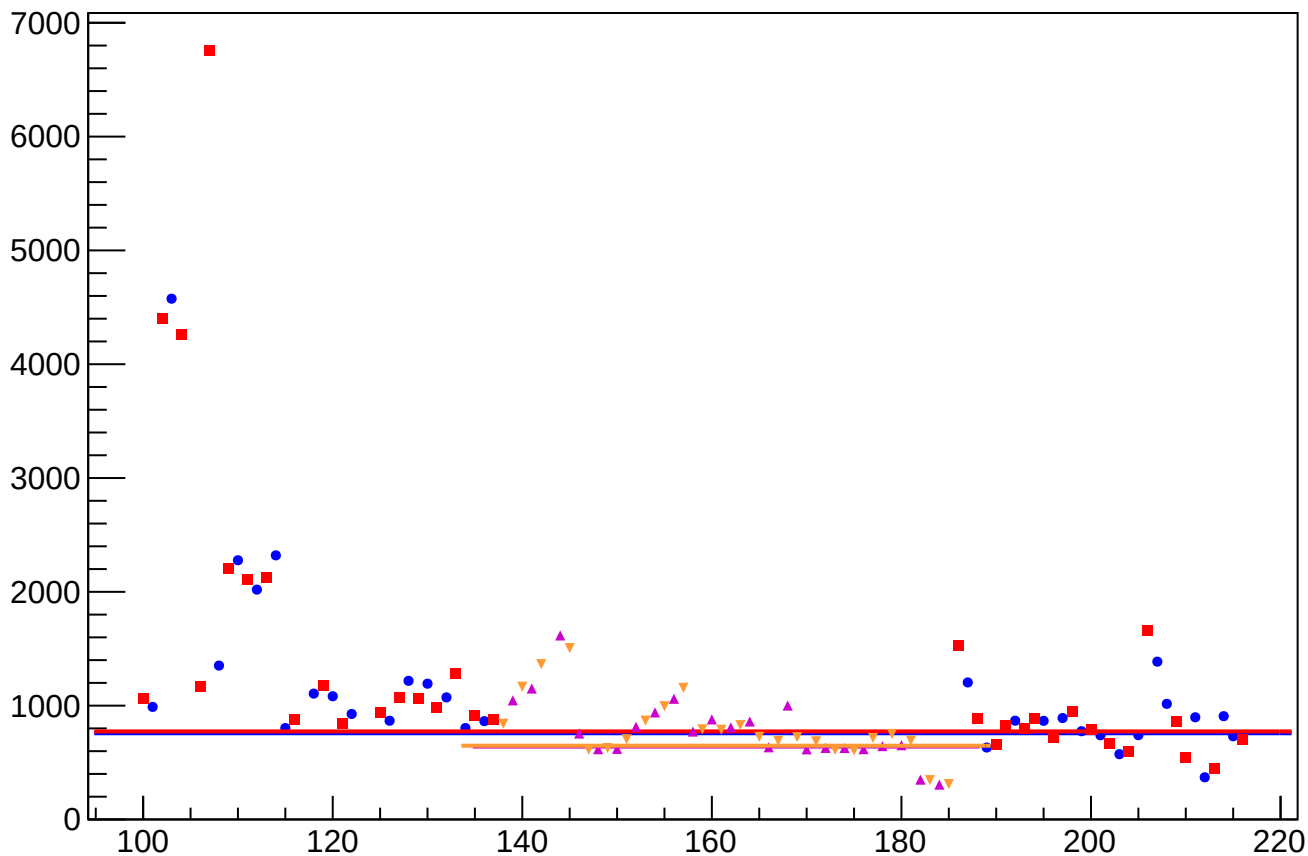
Left In:  $-59.619 \pm 159.669$   $\chi^2/\text{NDF}$ : 22.7/22

+ sign  $434.707 \pm 121.714$   $\chi^2/\text{NDF}$ : 57.6/54

All:  $380.091 \pm 86.474$   $\chi^2/\text{NDF}$ : 150.4/111

- sign  $324.424 \pm 122.880$   $\chi^2/\text{NDF}$ : 92.4/56

# asym\_atl1\_dit\_correction\_rms vs Slug



Right In: 757.427 $\pm$ 0.133  $\chi^2$ /NDF: 5080794.5/30

Left Out: 648.100 $\pm$ 0.113  $\chi^2$ /NDF: 3886991.8/23

Right Out: 773.646 $\pm$ 0.136  $\chi^2$ /NDF: 5880704.4/33

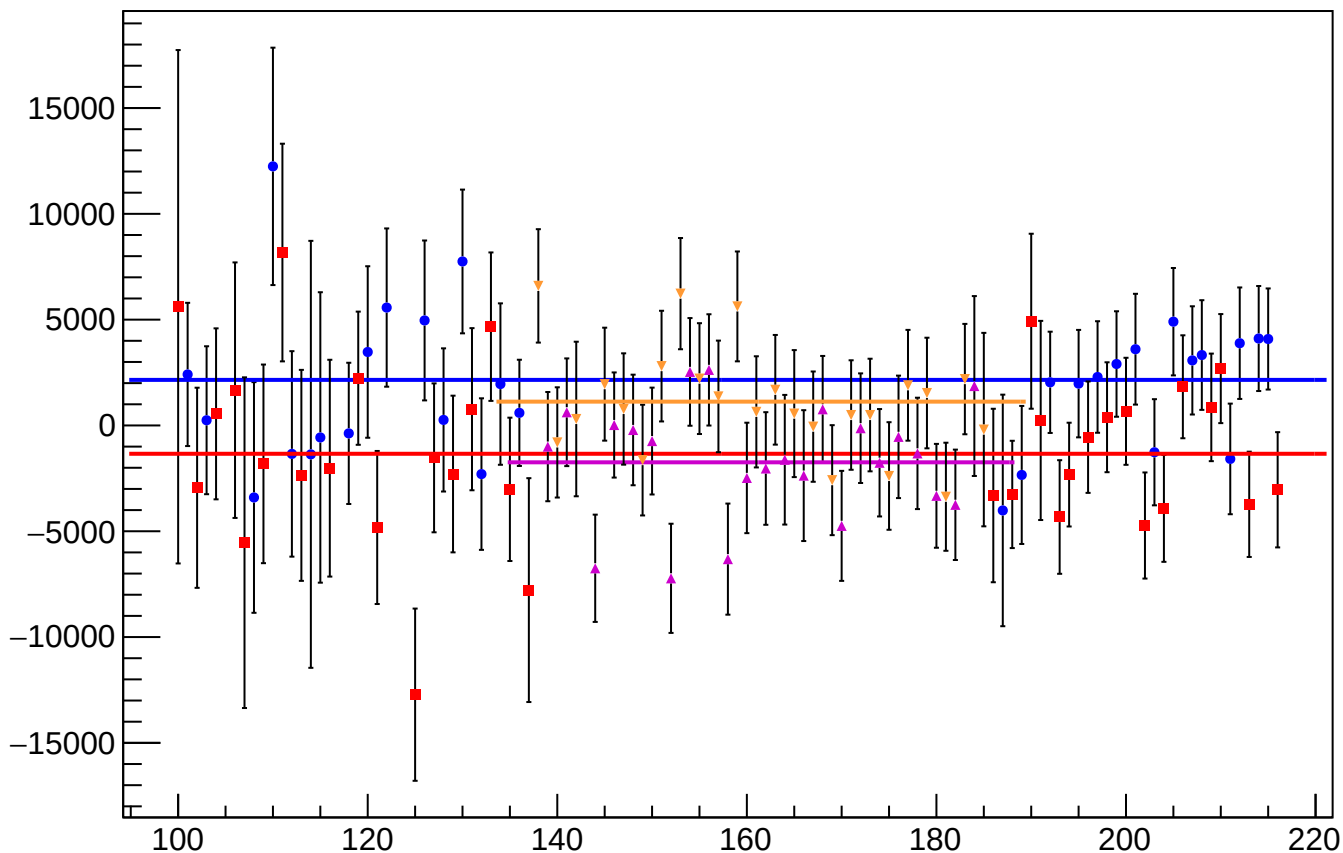
Left In: 640.422 $\pm$ 0.113  $\chi^2$ /NDF: 4128760.4/22

+ sign 694.194 $\pm$ 0.086  $\chi^2$ /NDF: 9361273.2/54

All: 694.465 $\pm$ 0.061  $\chi^2$ /NDF: 19938456.9/11

- sign 694.741 $\pm$ 0.087  $\chi^2$ /NDF: 10577163.8/56

# eigen\_dit\_asym\_atl1\_mean vs Slug



Right In: 2153.077 $\pm$ 556.244  $\chi^2$ /NDF: 23.1/30

Left Out: 1125.562 $\pm$ 549.834  $\chi^2$ /NDF:21.2/23

Right Out: -1338.583 $\pm$ 564.213  $\chi^2$ /NDF: 34.6/33

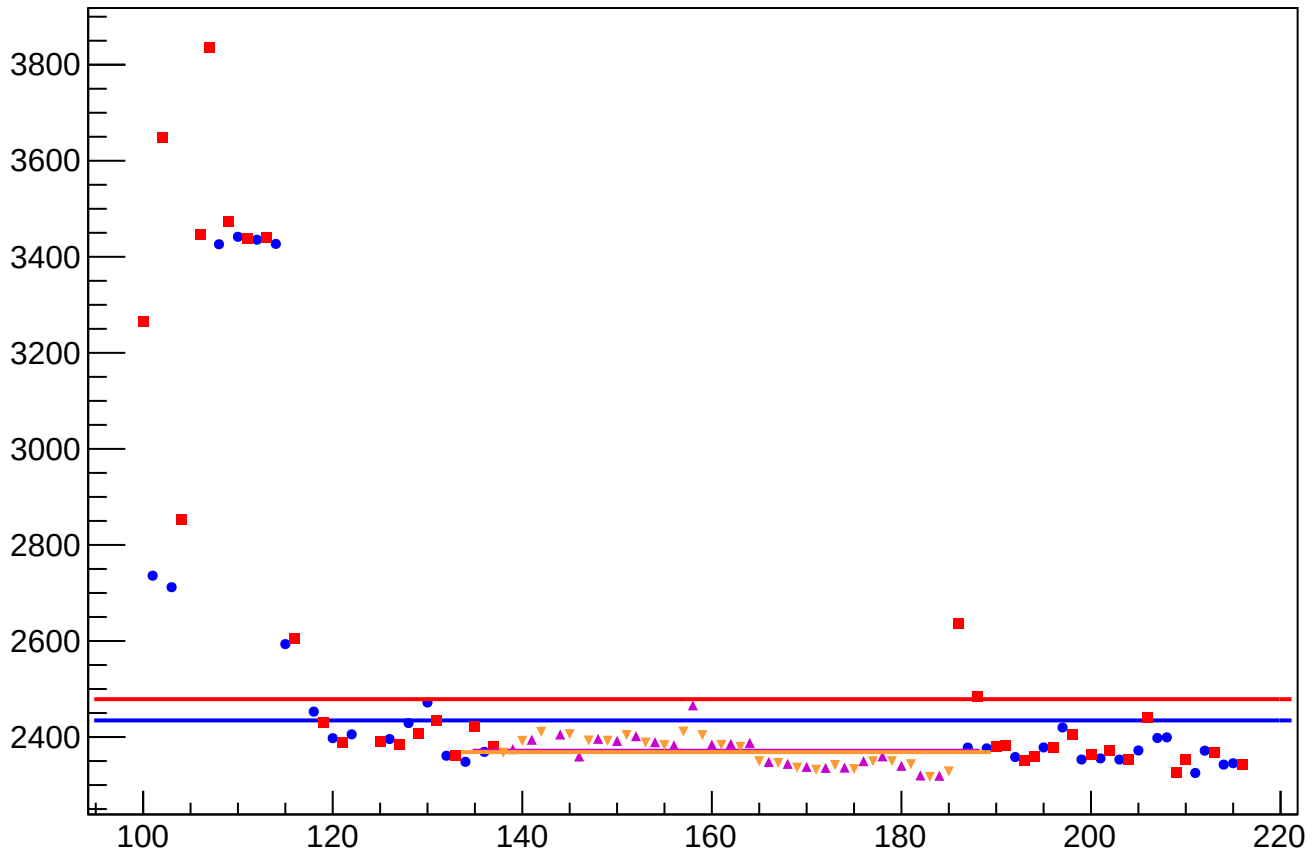
Left In: -1742.305 $\pm$ 553.755  $\chi^2$ /NDF:23.8/22

+ sign 1633.366 $\pm$ 391.038  $\chi^2$ /NDF: 46.0/54

All: 61.432 $\pm$ 277.969  $\chi^2$ /NDF: 137.3/111

- sign -1544.220 $\pm$ 395.210  $\chi^2$ /NDF: 58.6/56

# eigen\_dit\_asym\_atl1\_rms vs Slug



Right In: 2434.559 $\pm$ 0.393  $\chi^2$ /NDF: 290765.9/30

Left Out: 2368.569 $\pm$ 0.389  $\chi^2$ /NDF: 5571.3/23

Right Out: 2478.774 $\pm$ 0.399  $\chi^2$ /NDF: 556347.1/33

Left In: 2371.518 $\pm$ 0.392  $\chi^2$ /NDF: 7053.5/22

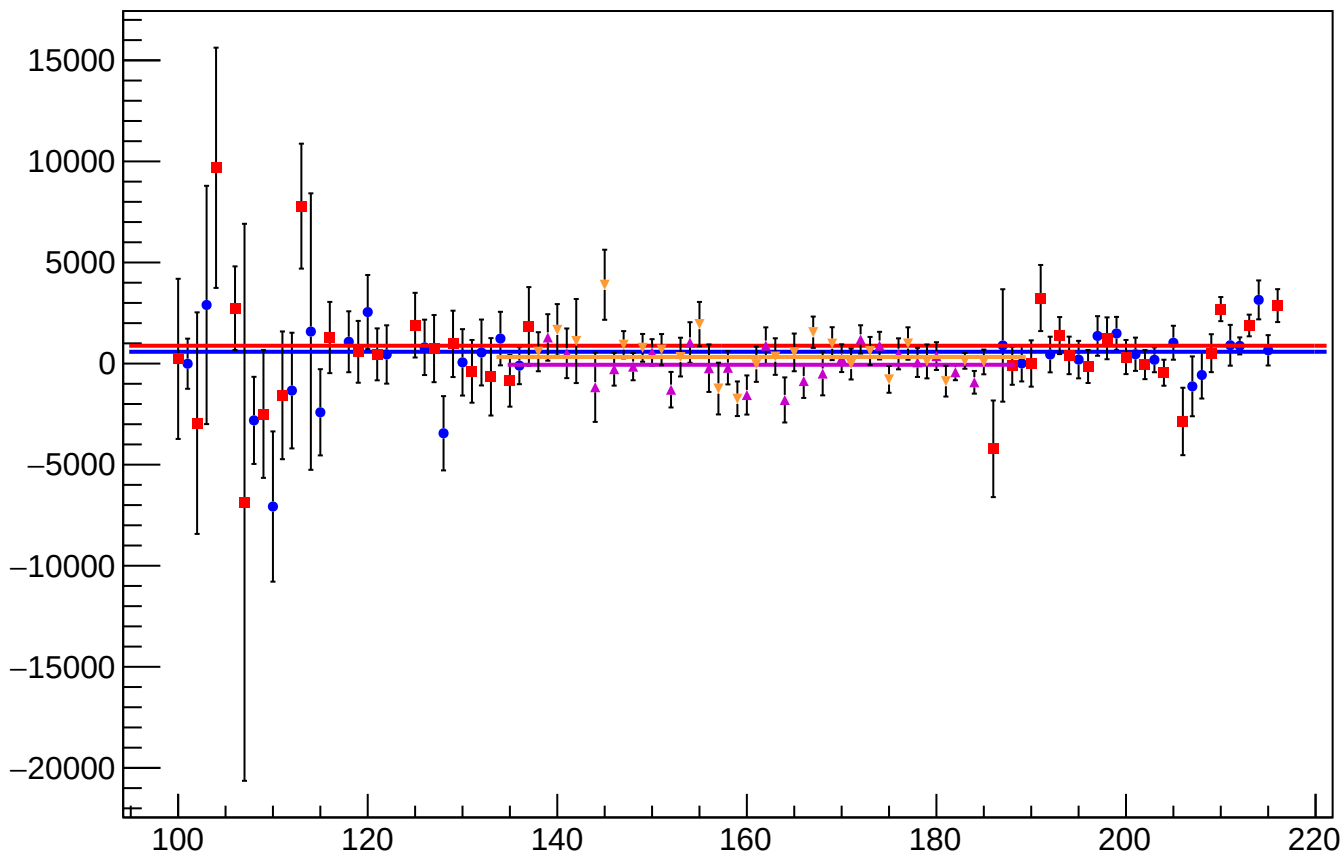
+ sign 2401.182 $\pm$ 0.277  $\chi^2$ /NDF: 310574.6/54

All: 2412.540 $\pm$ 0.197  $\chi^2$ /NDF: 914199.5/111

- sign 2424.143 $\pm$ 0.279  $\chi^2$ /NDF: 600213.7/56



# asym\_atl1\_eigen\_dit\_correction\_mean vs Slug



Right In:  $583.898 \pm 187.450$   $\chi^2/\text{NDF}: 29.8/30$

Left Out:  $325.955 \pm 160.042$   $\chi^2/\text{NDF}: 26.8/23$

Right Out:  $882.295 \pm 192.441$   $\chi^2/\text{NDF}: 55.5/33$

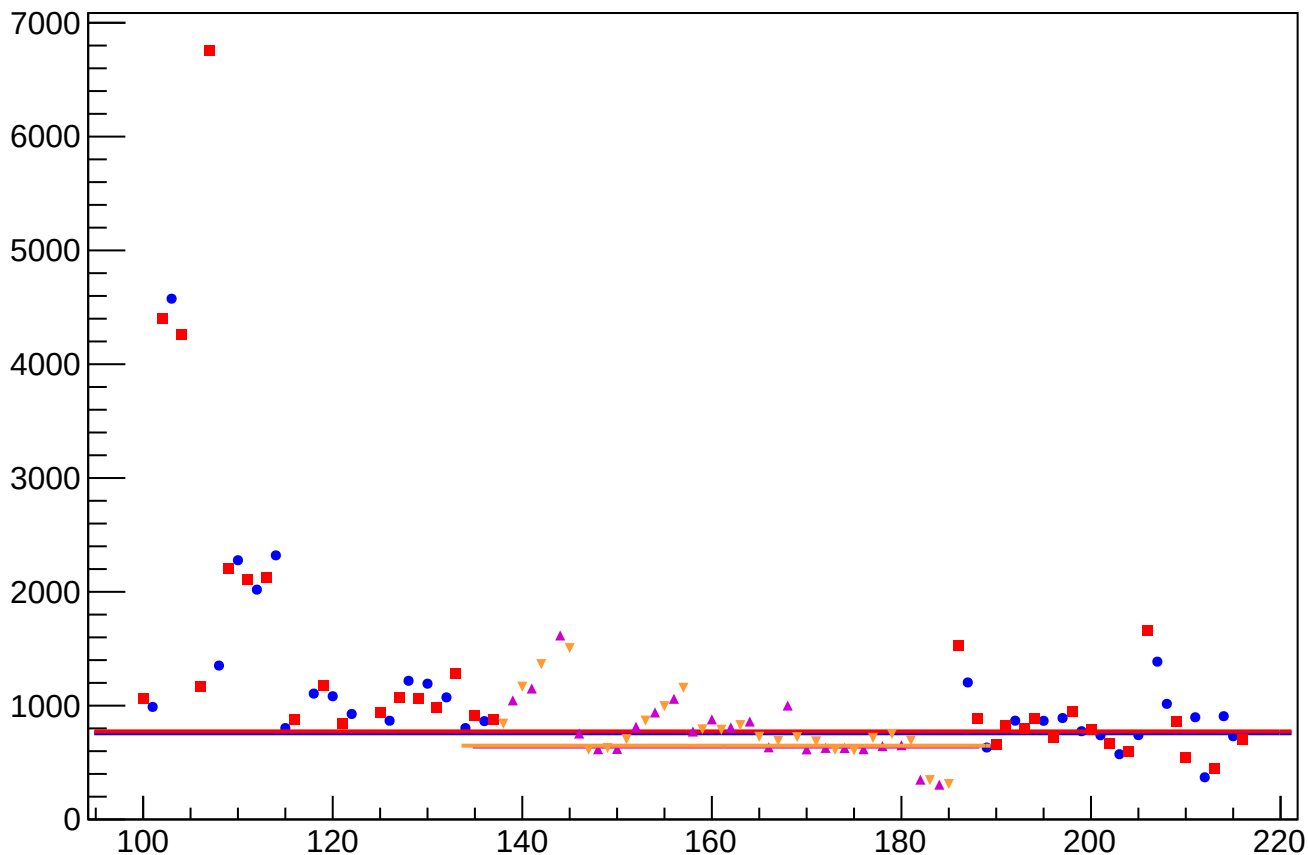
Left In:  $-59.619 \pm 159.670$   $\chi^2/\text{NDF}: 22.7/22$

+ sign  $434.707 \pm 121.715$   $\chi^2/\text{NDF}: 57.6/54$

All:  $380.091 \pm 86.474$   $\chi^2/\text{NDF}: 150.4/111$

- sign  $324.425 \pm 122.881$   $\chi^2/\text{NDF}: 92.4/56$

# asym\_atl1\_eigen\_dit\_correction\_rms vs Slug



Right In: 757.427+/-0.133  $\chi^2/\text{NDF}$ : 5080801.7/30

Left Out: 648.101+/-0.113  $\chi^2/\text{NDF}$ : 3887001.9/23

Right Out: 773.645+/-0.136  $\chi^2/\text{NDF}$ : 5880714.1/33

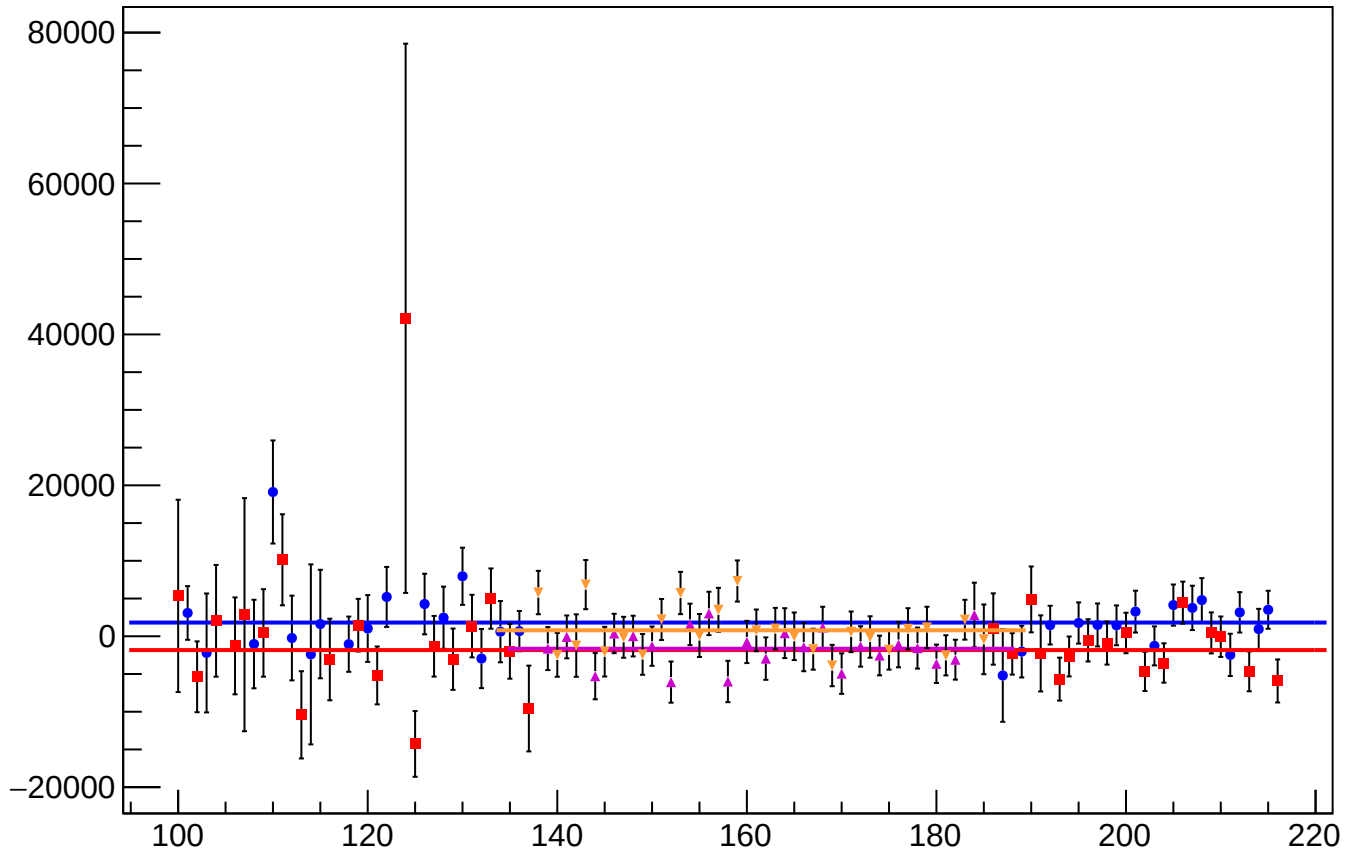
Left In: 640.423+/-0.113  $\chi^2/\text{NDF}$ : 4128774.2/22

+ sign 694.194+/-0.086  $\chi^2/\text{NDF}$ : 9361279.0/54

All: 694.465+/-0.061  $\chi^2/\text{NDF}$ : 19938475.5/11

- sign 694.741+/-0.087  $\chi^2/\text{NDF}$ : 10577176.5/56

# asym\_atl1\_mean vs Slug



Right In:  $1816.150 \pm 605.668$   $\chi^2/\text{NDF}$ : 23.1/30

Left Out:  $791.438 \pm 573.266$   $\chi^2/\text{NDF}$ : 27.1/24

Right Out:  $-1830.933 \pm 612.584$   $\chi^2/\text{NDF}$ : 41.1/34

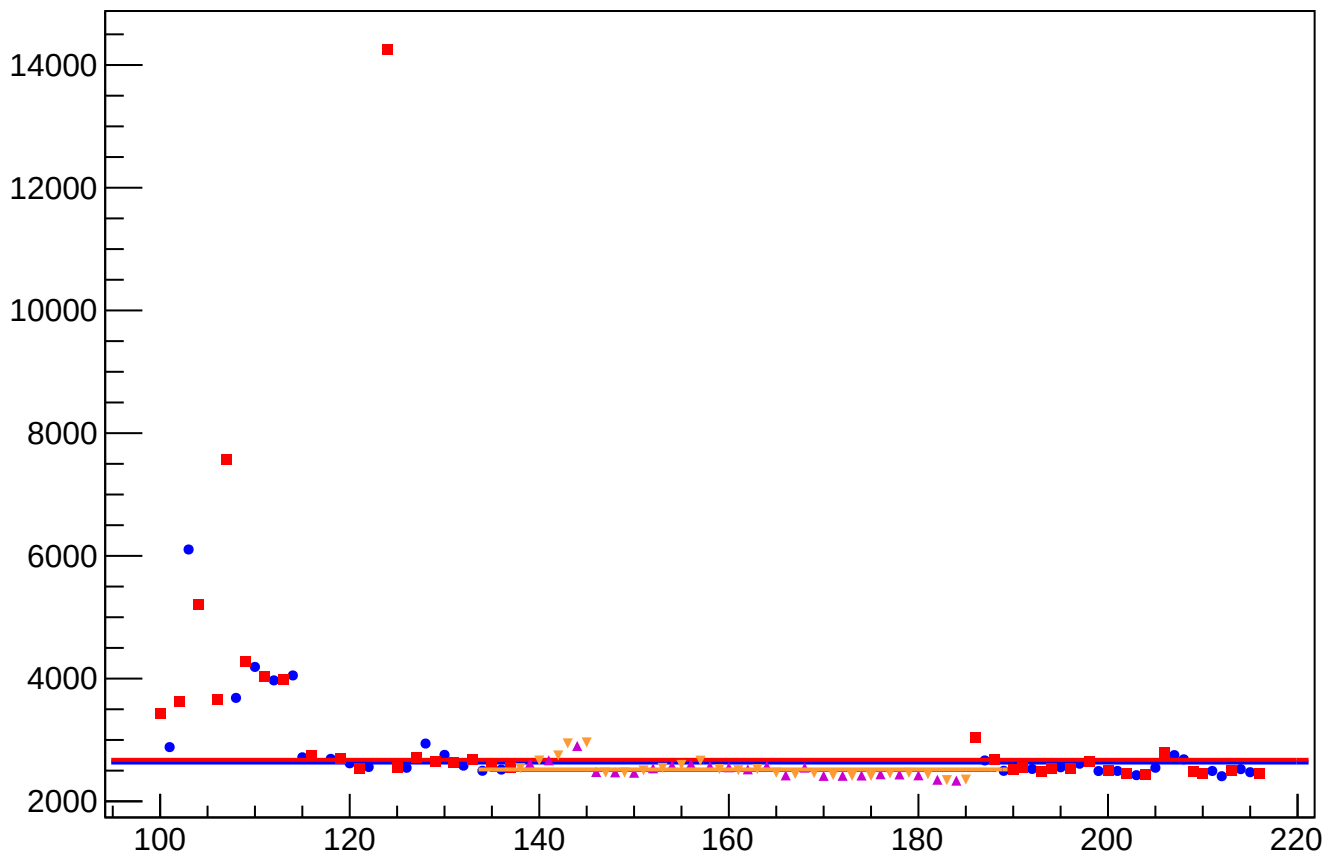
Left In:  $-1654.626 \pm 586.767$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $1275.653 \pm 416.344$   $\chi^2/\text{NDF}$ : 51.7/55

All:  $-205.128 \pm 296.980$   $\chi^2/\text{NDF}$ : 136.0/113

- sign  $-1738.986 \pm 423.740$   $\chi^2/\text{NDF}$ : 58.5/57

# asym\_atl1\_rms vs Slug



Right In: 2631.881+/-0.428  $\chi^2/\text{NDF}$ : 798164.9/30

Left Out: 2519.516+/-0.405  $\chi^2/\text{NDF}$ : 115204.3/24

Right Out: 2676.030+/-0.433  $\chi^2/\text{NDF}$ : 1260763.1/34

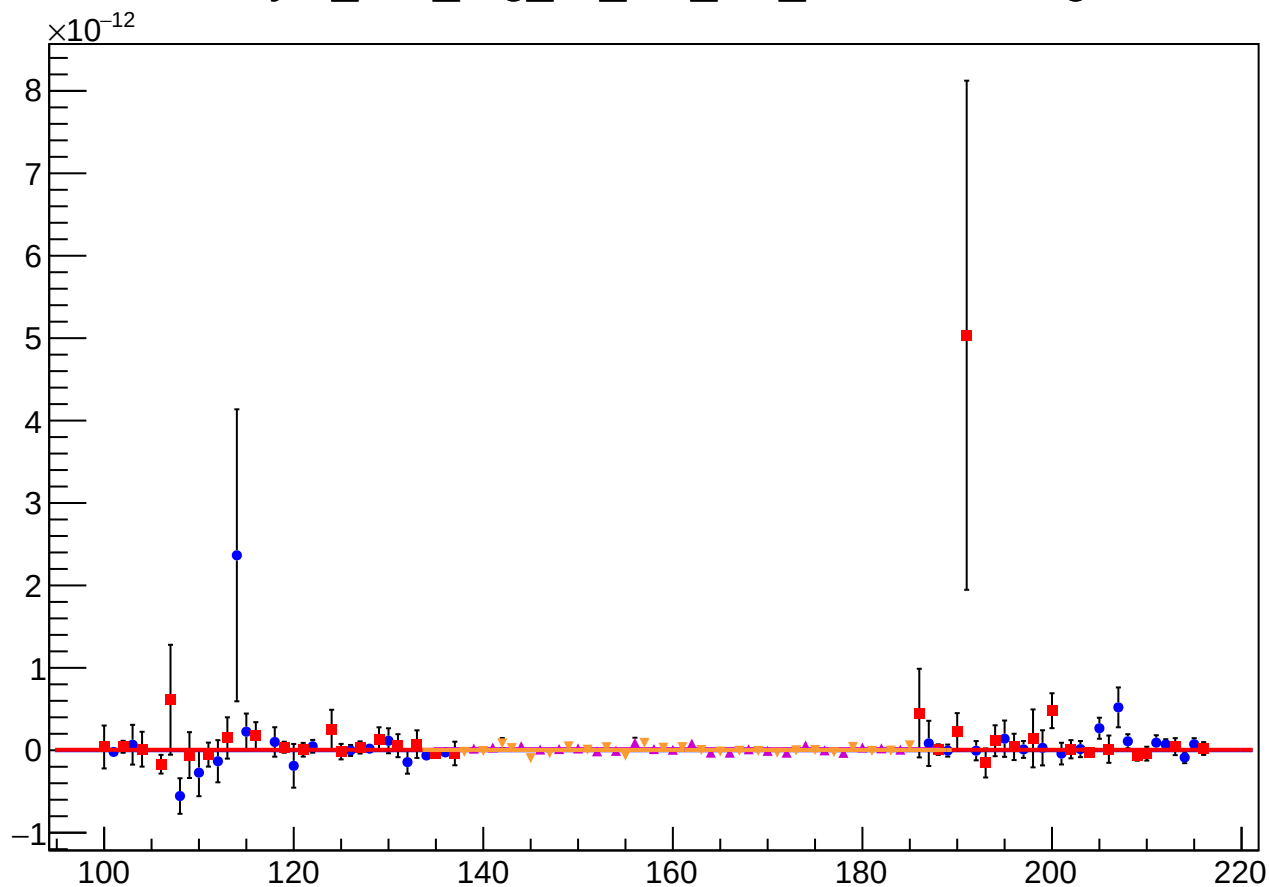
Left In: 2510.156+/-0.415  $\chi^2/\text{NDF}$ : 73771.4/22

+ sign 2572.612+/-0.294  $\chi^2/\text{NDF}$ : 949678.4/55

All: 2580.919+/-0.210  $\chi^2/\text{NDF}$ : 2362309.2/11

- sign 2589.524+/-0.300  $\chi^2/\text{NDF}$ : 1411009.9/57

asym\_atl1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.9/34

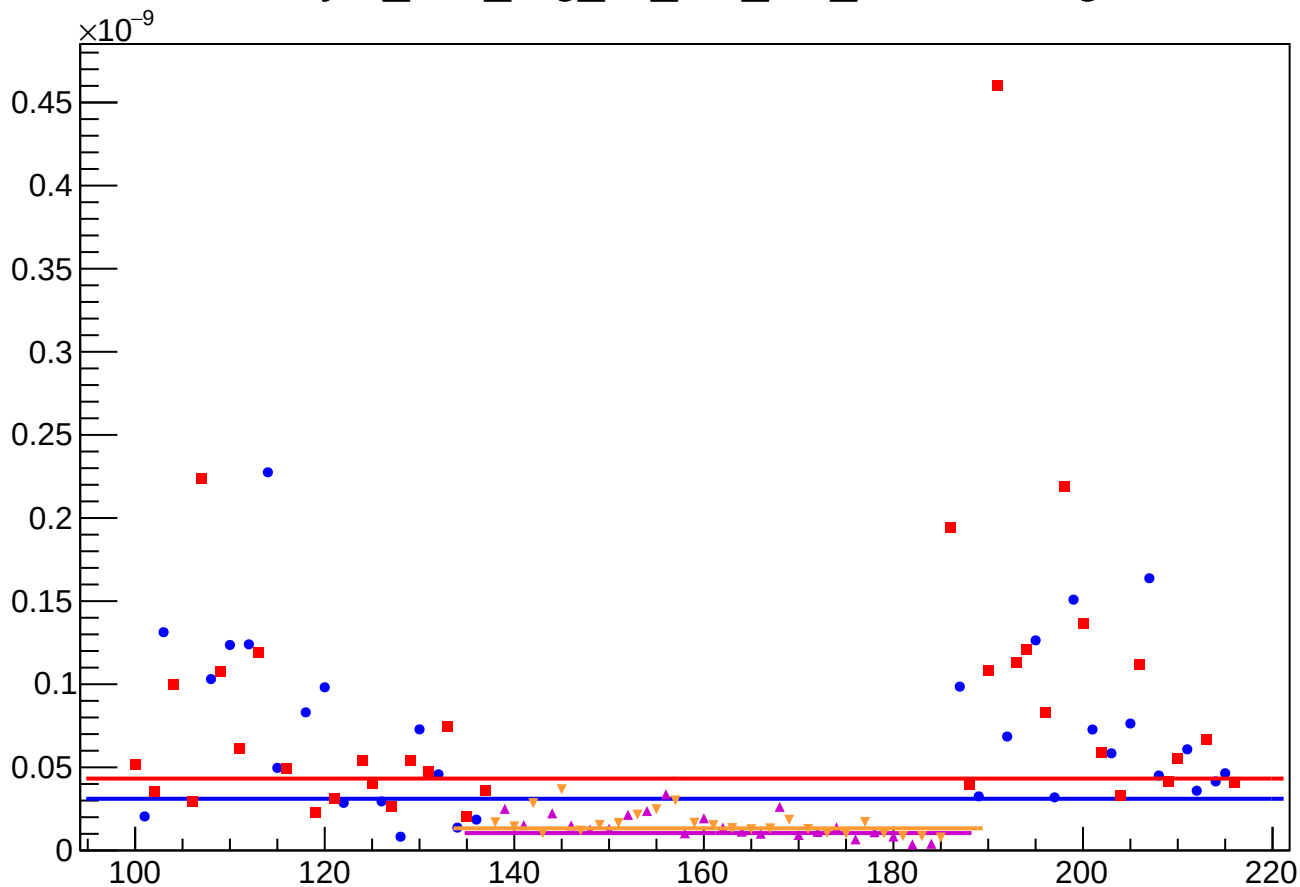
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:32.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 61.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.3/57

# asym\_atl1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}: 5855302.5/30$

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}: 1472019.5/24$

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}: 4107281.9/34$

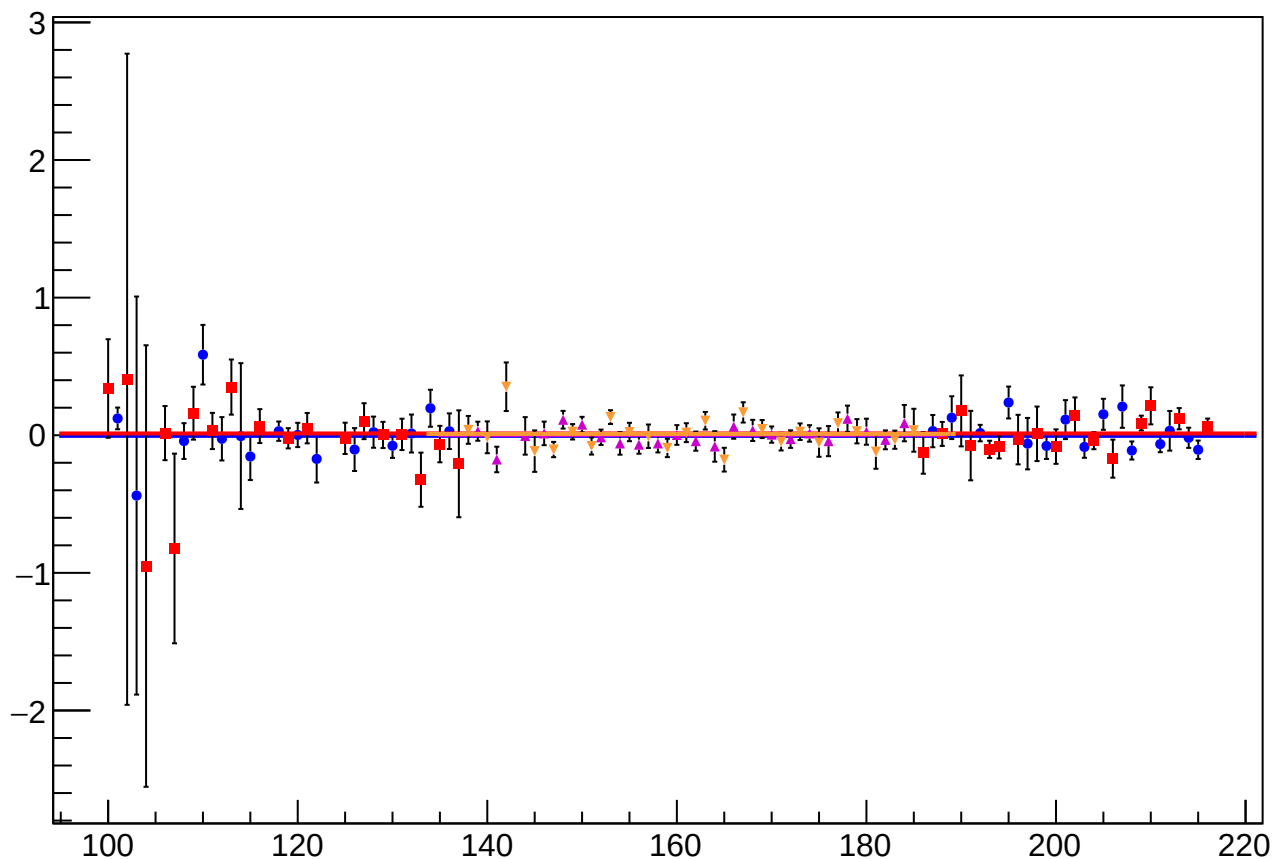
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}: 2813965.8/22$

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}: 10088799.1/55$

All: 0.000+/-0.000  $\chi^2/\text{NDF}: 23637270.7/113$

- sign 0.000+/-0.000  $\chi^2/\text{NDF}: 13213206.2/57$

# asym\_atl1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.2/30

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $0.013 \pm 0.019$   $\chi^2/\text{NDF}$ : 28.1/33

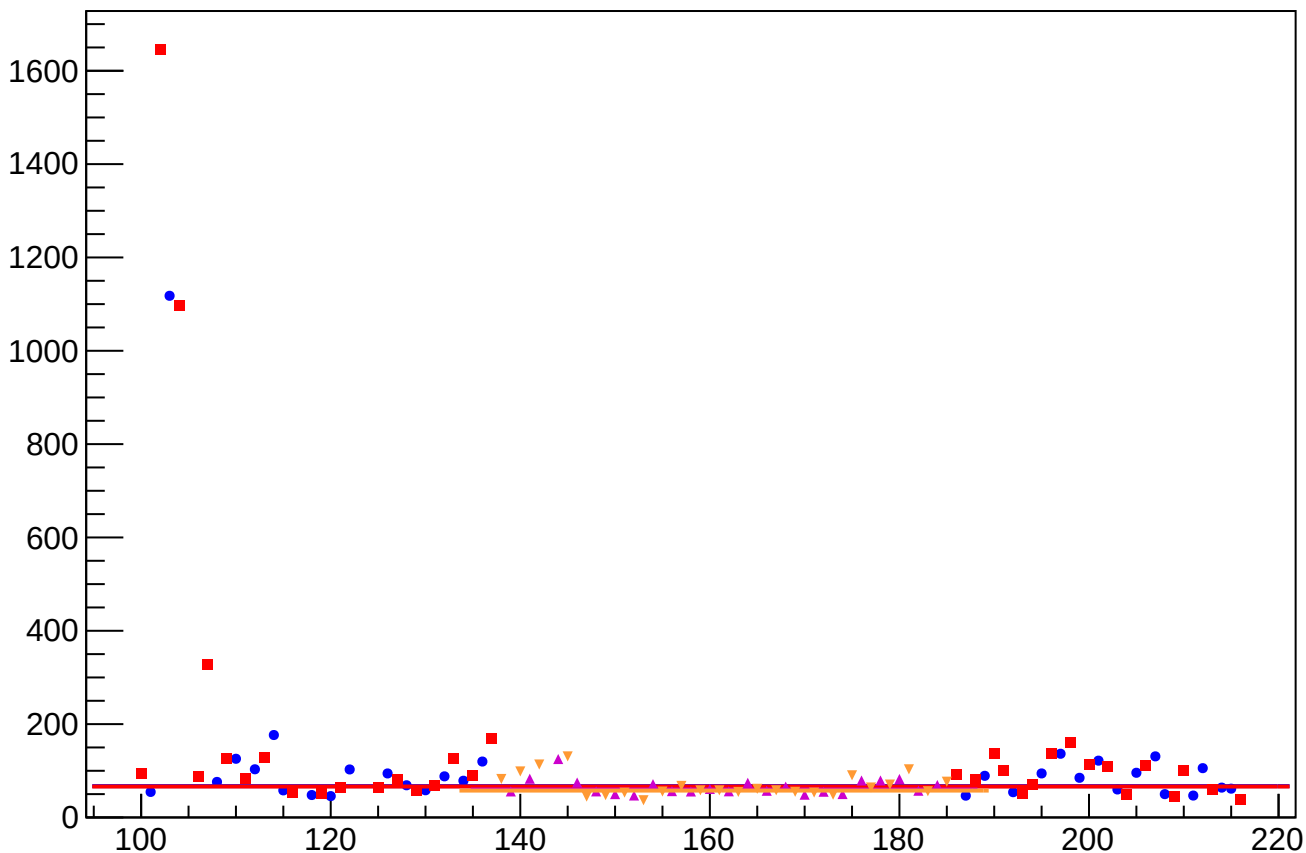
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.2/111

- sign  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 43.9/56

# asym\_atl1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 67.126+/-0.013  $\chi^2/\text{NDF}$ : 4250961.1/30

Left Out: 57.606+/-0.011  $\chi^2/\text{NDF}$ : 2213142.2/23

Right Out: 66.288+/-0.013  $\chi^2/\text{NDF}$ : 6008535.7/33

Left In: 59.828+/-0.011  $\chi^2/\text{NDF}$ : 1340700.1/22

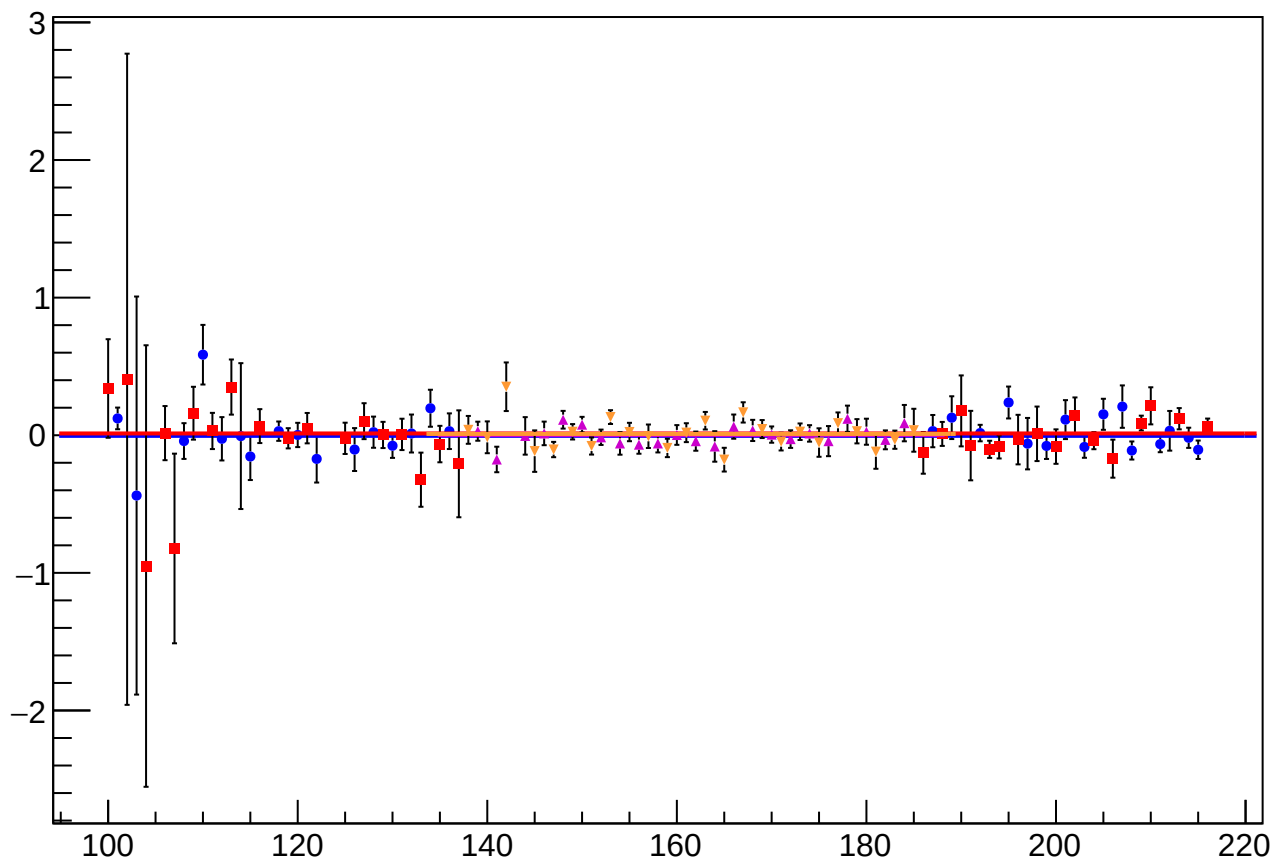
+ sign 61.489+/-0.008  $\chi^2/\text{NDF}$ : 6788037.4/54

All: 61.965+/-0.006  $\chi^2/\text{NDF}$ : 14286193.5/111

- sign 62.466+/-0.008  $\chi^2/\text{NDF}$ : 7491262.8/56



# asym\_atl1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.2/30

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $0.013 \pm 0.019$   $\chi^2/\text{NDF}$ : 28.1/33

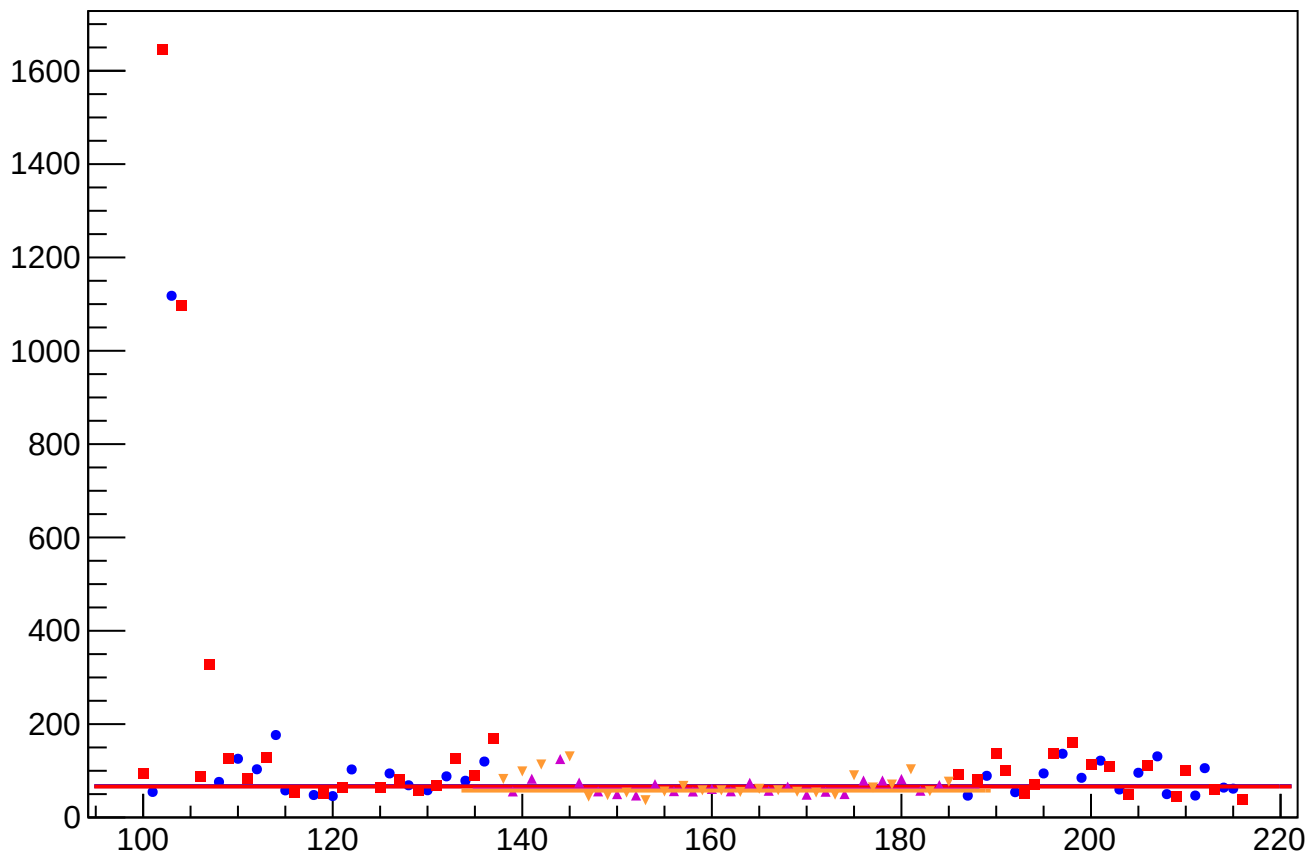
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.2/111

- sign  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 43.9/56

# asym\_atl1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 67.126 $\pm$ 0.013  $\chi^2$ /NDF: 4250961.1/30

Left Out: 57.606 $\pm$ 0.011  $\chi^2$ /NDF: 2213142.2/23

Right Out: 66.288 $\pm$ 0.013  $\chi^2$ /NDF: 6008535.7/33

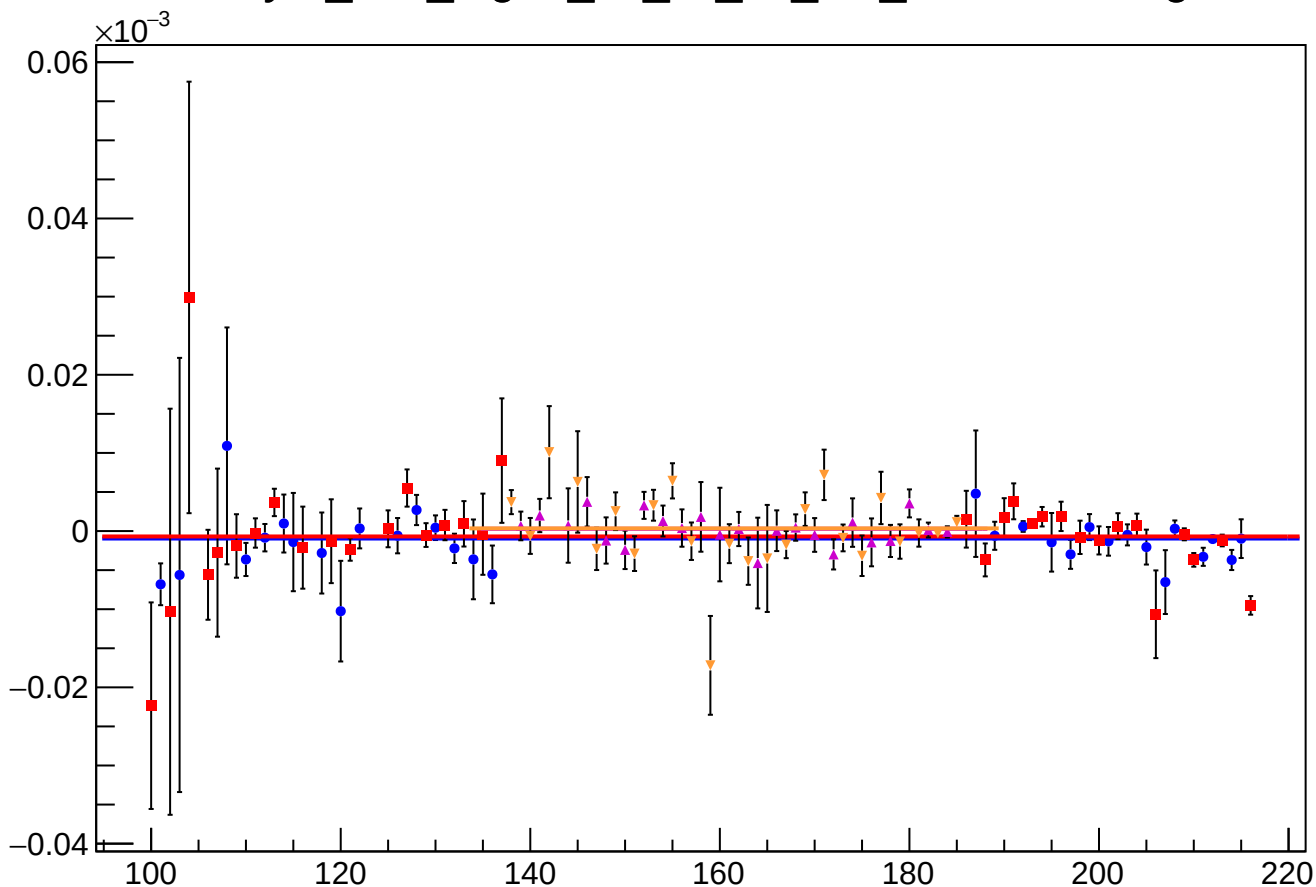
Left In: 59.828 $\pm$ 0.011  $\chi^2$ /NDF: 1340700.1/22

+ sign 61.489 $\pm$ 0.008  $\chi^2$ /NDF: 6788037.4/54

All: 61.965 $\pm$ 0.006  $\chi^2$ /NDF: 14286193.5/111

- sign 62.466 $\pm$ 0.008  $\chi^2$ /NDF: 7491262.8/56

asym\_atl1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.8/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114.5/33

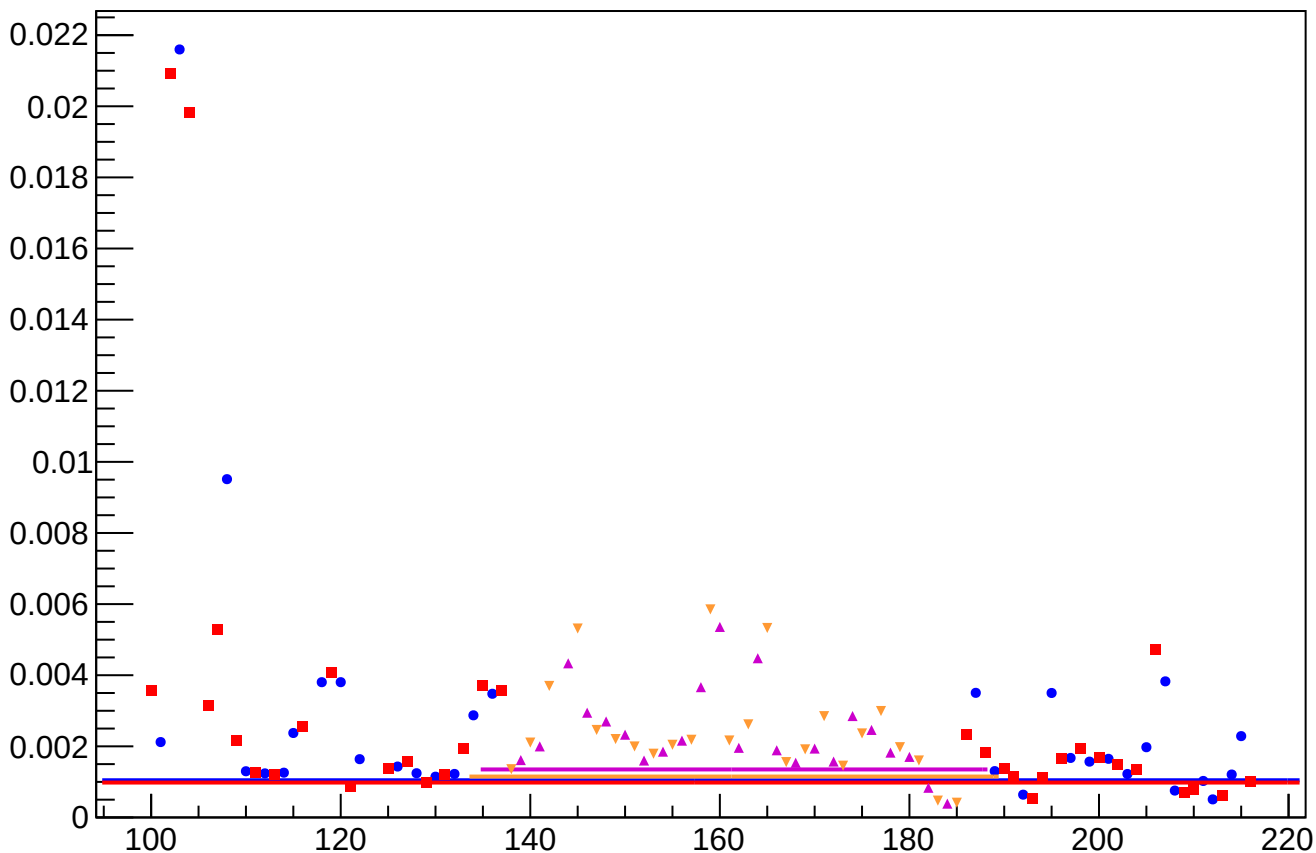
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.4/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 225.2/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 133.8/56

# asym\_atl1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10564278.2/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :13242273.9/23

Right Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9862981.7/33

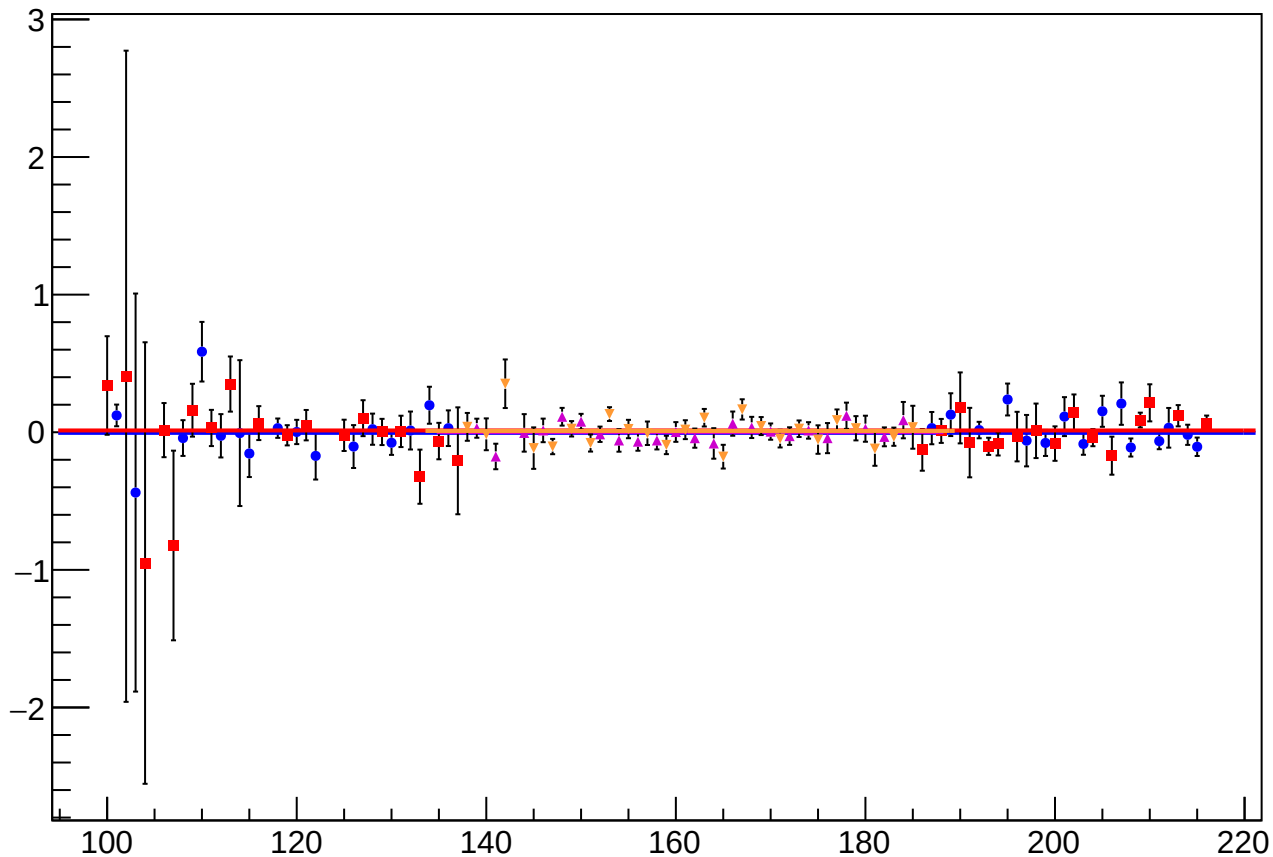
Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :10247159.8/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 23914546.8/54

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 45269298.2/111

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21350318.6/56

# asym\_atl1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.2/30

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $0.013 \pm 0.019$   $\chi^2/\text{NDF}$ : 28.1/33

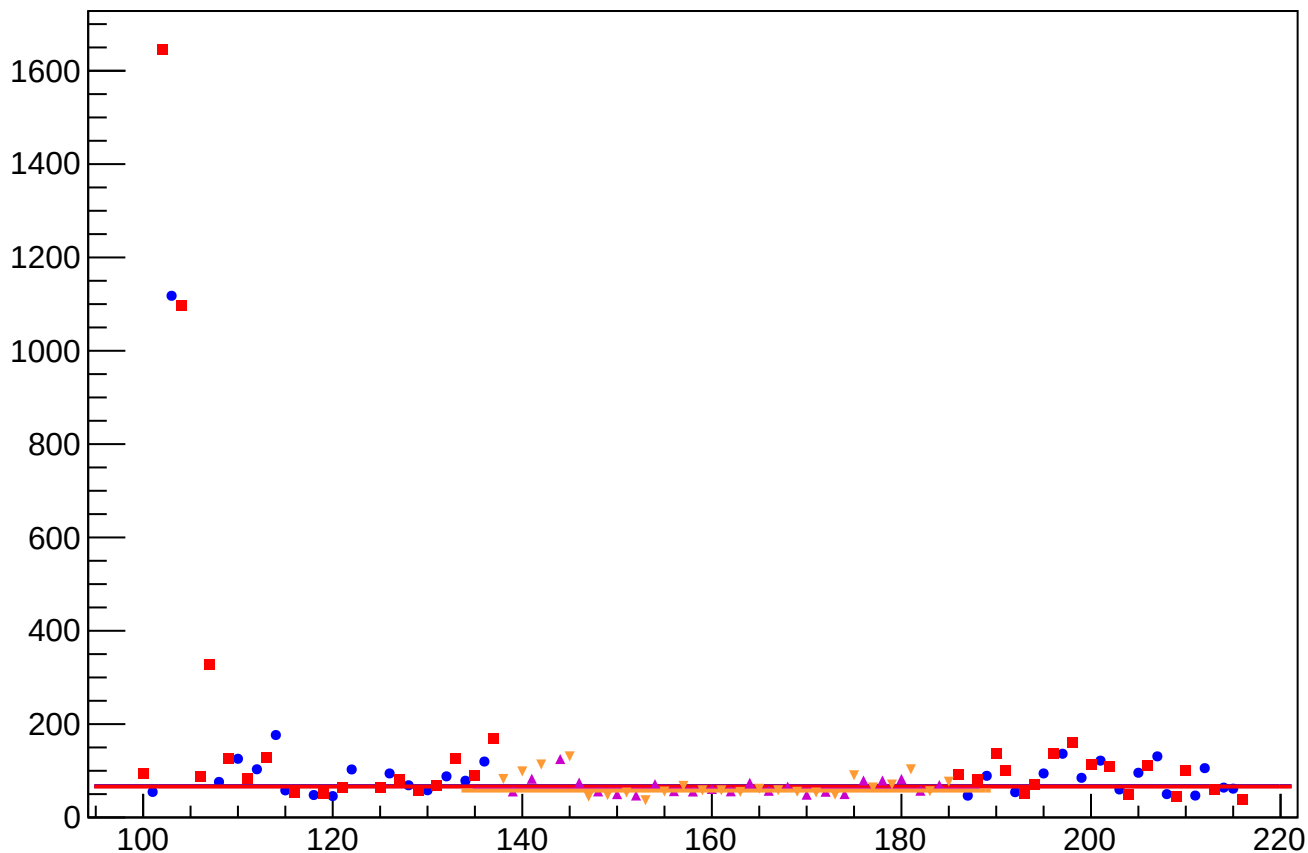
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.2/111

- sign  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 43.9/56

# asym\_atl1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $67.126 \pm 0.013$   $\chi^2/\text{NDF}: 4251100.2/30$

Left Out:  $57.606 \pm 0.011$   $\chi^2/\text{NDF}: 2213216.3/23$

Right Out:  $66.288 \pm 0.013$   $\chi^2/\text{NDF}: 6008550.4/33$

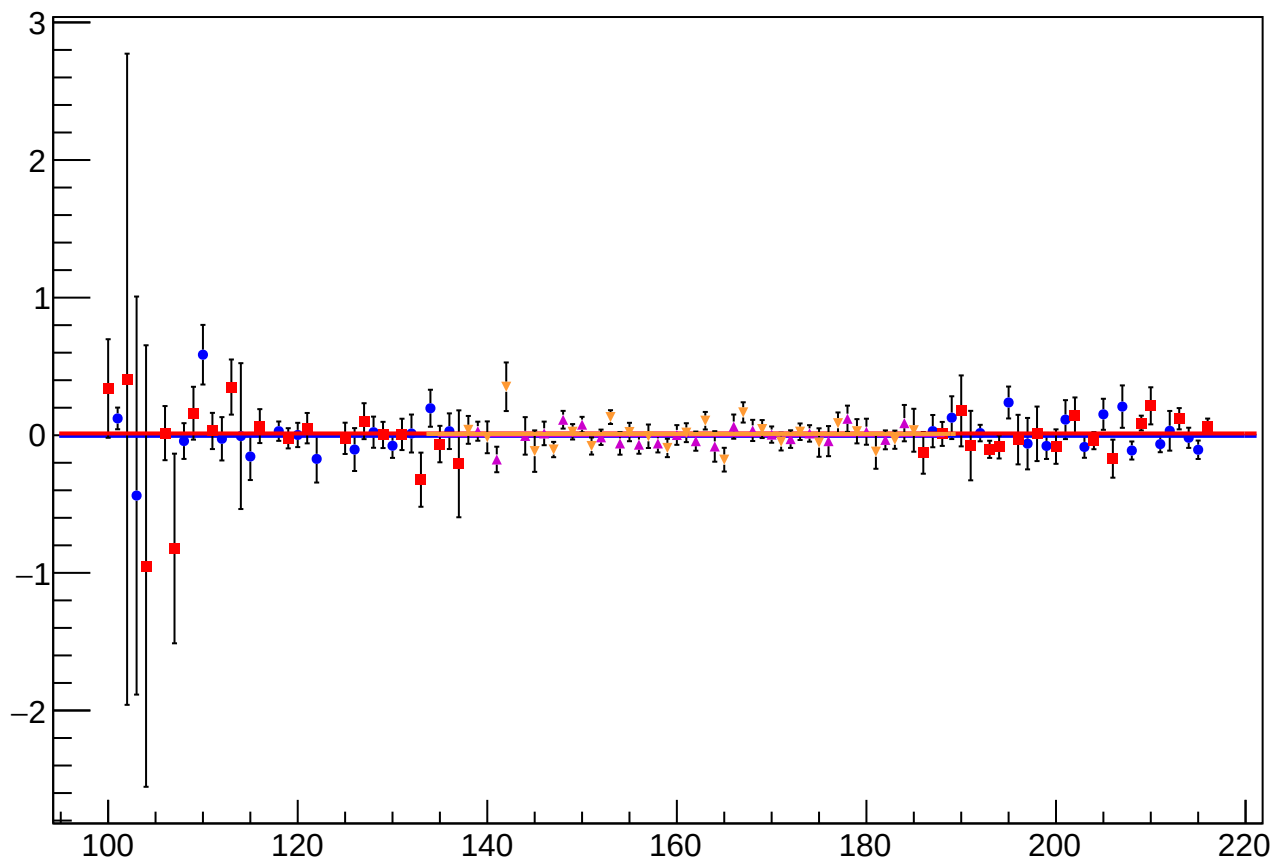
Left In:  $59.828 \pm 0.011$   $\chi^2/\text{NDF}: 1340684.6/22$

+ sign  $61.489 \pm 0.008$   $\chi^2/\text{NDF}: 6788225.6/54$

All:  $61.965 \pm 0.006$   $\chi^2/\text{NDF}: 14286377.8/111$

- sign  $62.466 \pm 0.008$   $\chi^2/\text{NDF}: 7491255.5/56$

asym\_atl1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 33.2/30

Left Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 34.7/23

Right Out:  $0.013 \pm 0.019$   $\chi^2/\text{NDF}$ : 28.1/33

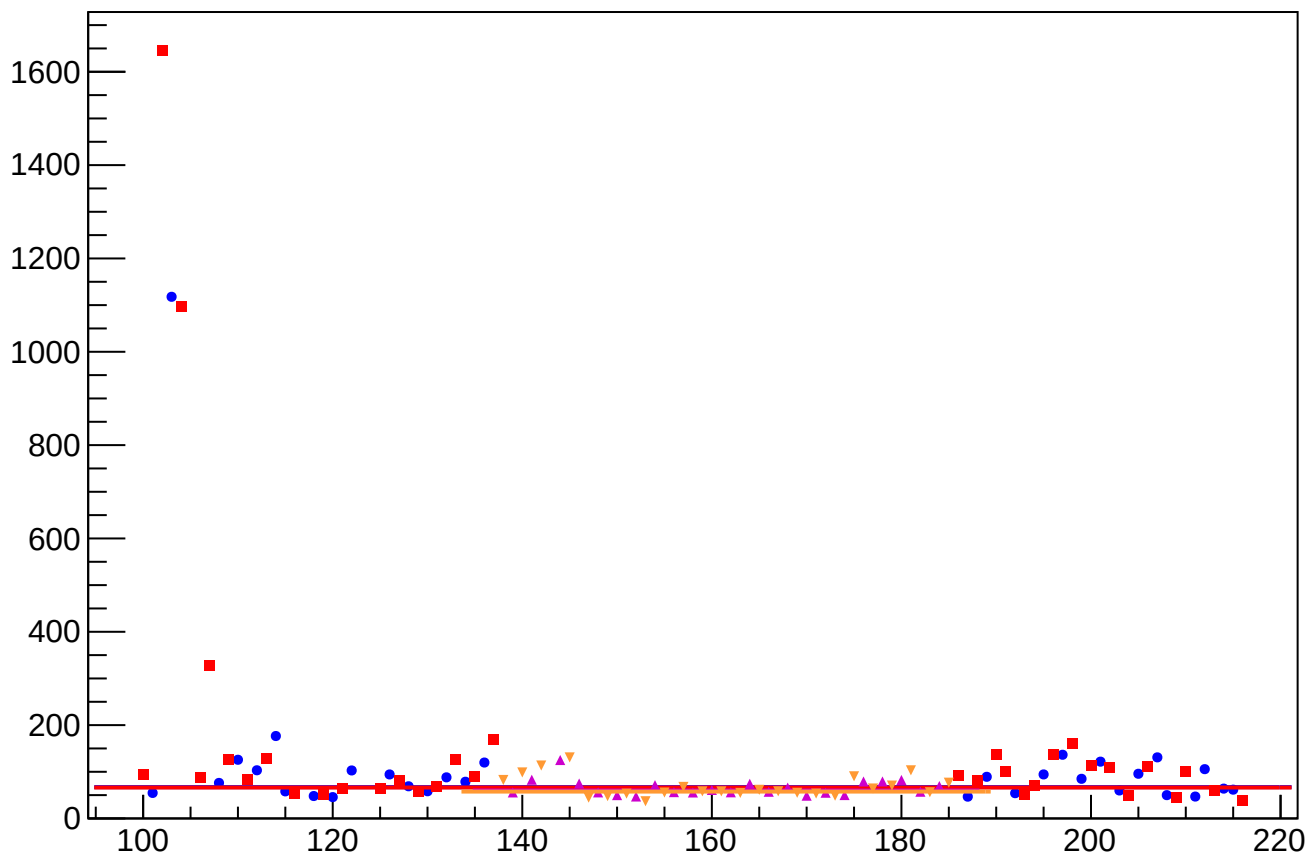
Left In:  $0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $0.004 \pm 0.012$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $0.005 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.2/111

- sign  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 43.9/56

# asym\_atl1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 67.126+/-0.013     $\chi^2/\text{NDF}$ : 4251100.2/30

Left Out: 57.606+/-0.011     $\chi^2/\text{NDF}$ : 2213216.3/23

Right Out: 66.288+/-0.013     $\chi^2/\text{NDF}$ : 6008550.4/33

Left In: 59.828+/-0.011     $\chi^2/\text{NDF}$ : 1340684.6/22

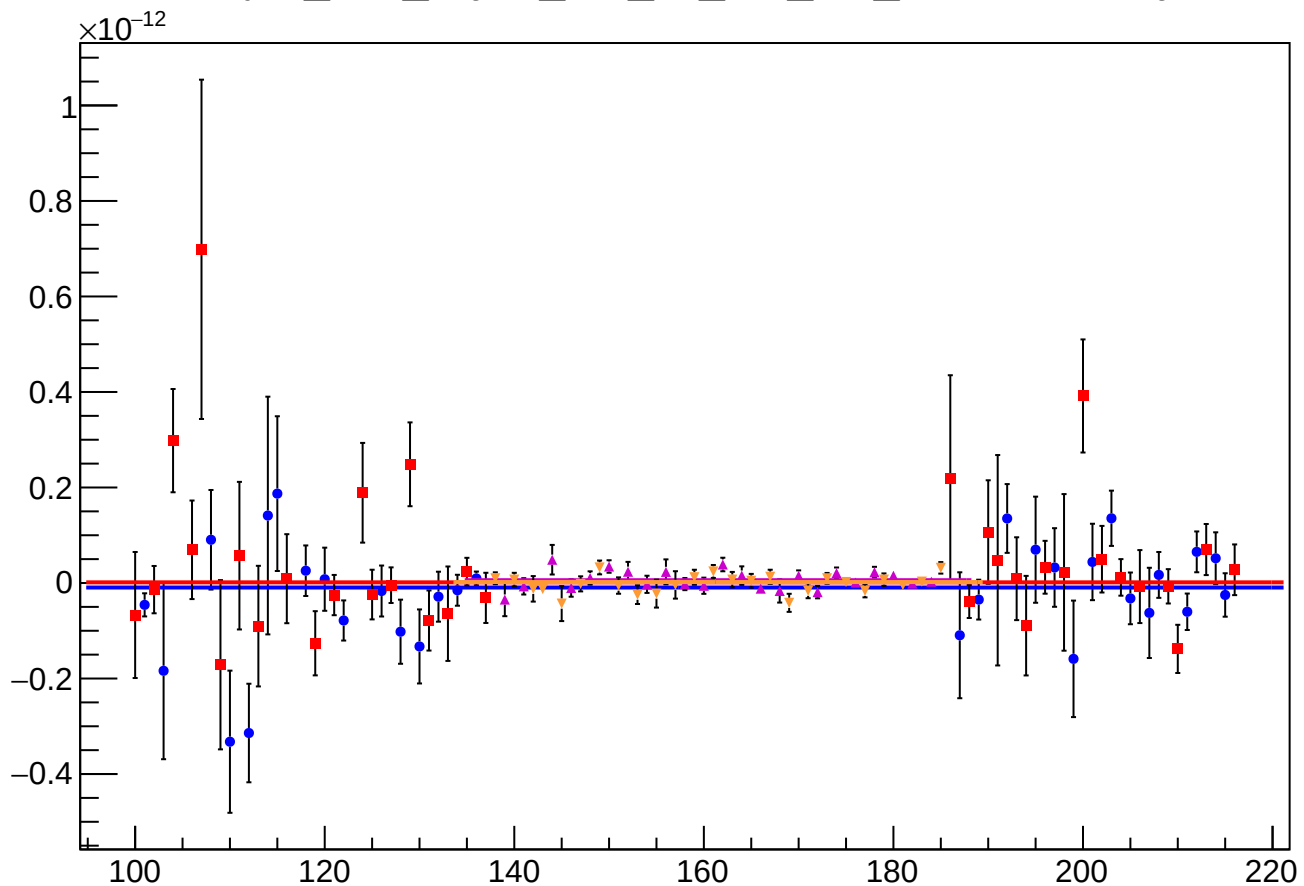
+ sign 61.489+/-0.008     $\chi^2/\text{NDF}$ : 6788225.6/54

All: 61.965+/-0.006     $\chi^2/\text{NDF}$ : 14286377.8/111

- sign 62.466+/-0.008     $\chi^2/\text{NDF}$ : 7491255.5/56



# asym\_atl1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.8/34

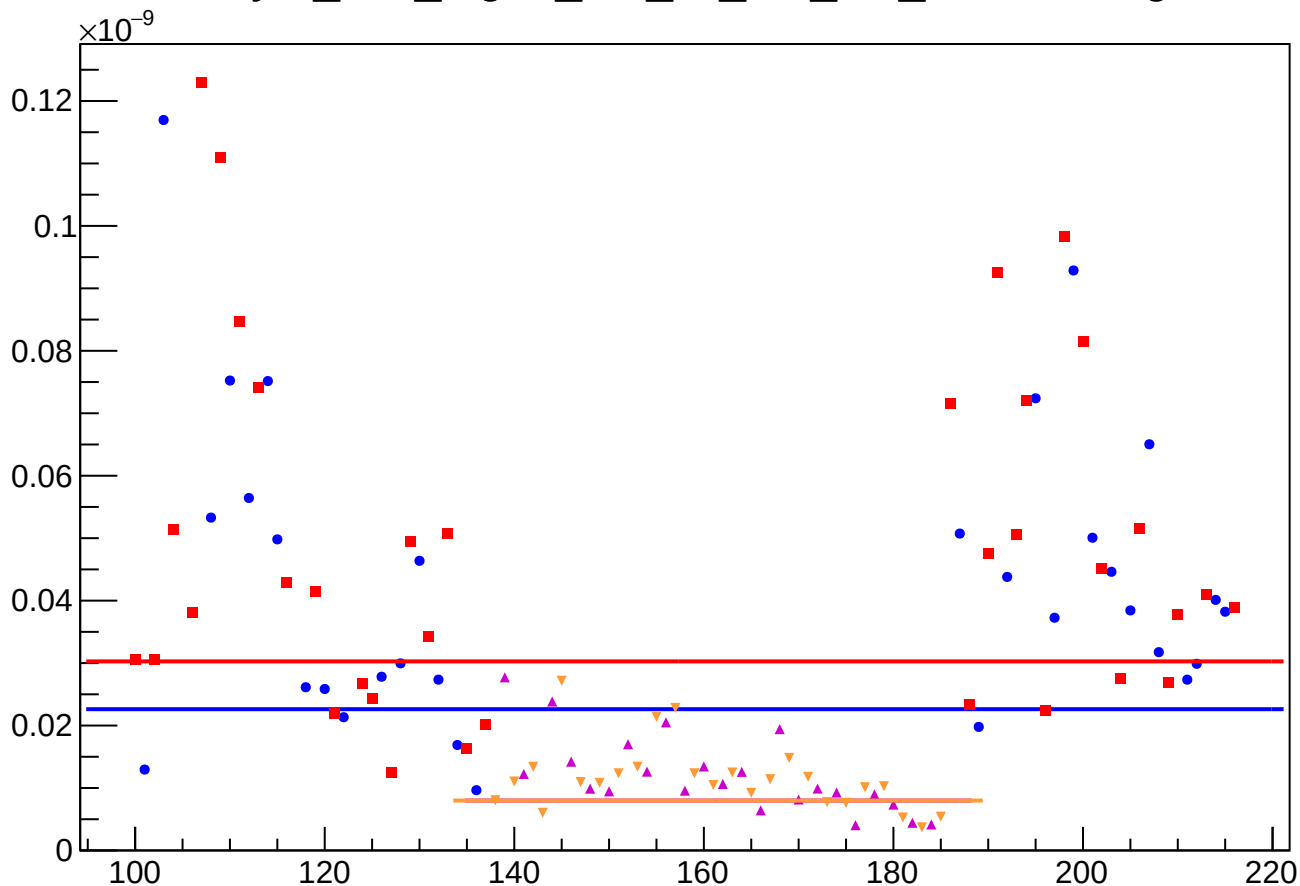
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 83.5/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 175.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 90.5/57

asym\_atl1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}: 6661573.3/30$

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}: 4887759.5/24$

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}: 4516428.5/34$

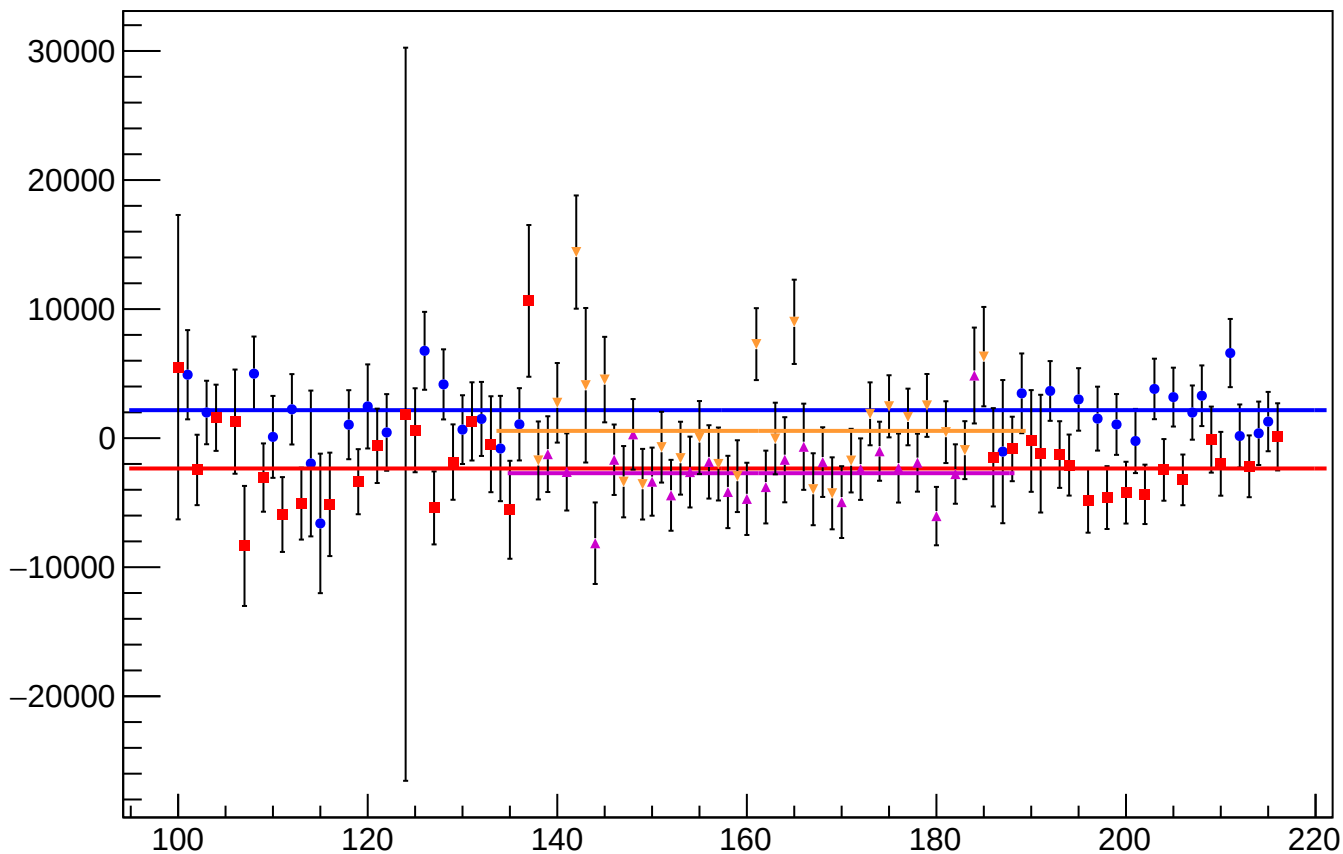
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}: 5188583.5/22$

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}: 17268372.3/55$

All: 0.000+/-0.000  $\chi^2/\text{NDF}: 35844389.9/113$

- sign 0.000+/-0.000  $\chi^2/\text{NDF}: 18574281.0/57$

# reg\_asym\_atl2\_mean vs Slug



Right In: 2167.449 $\pm$ 490.422  $\chi^2$ /NDF: 17.0/30

Left Out: 562.390 $\pm$ 557.316  $\chi^2$ /NDF: 43.9/24

Right Out: -2350.887 $\pm$ 488.858  $\chi^2$ /NDF: 24.2/34

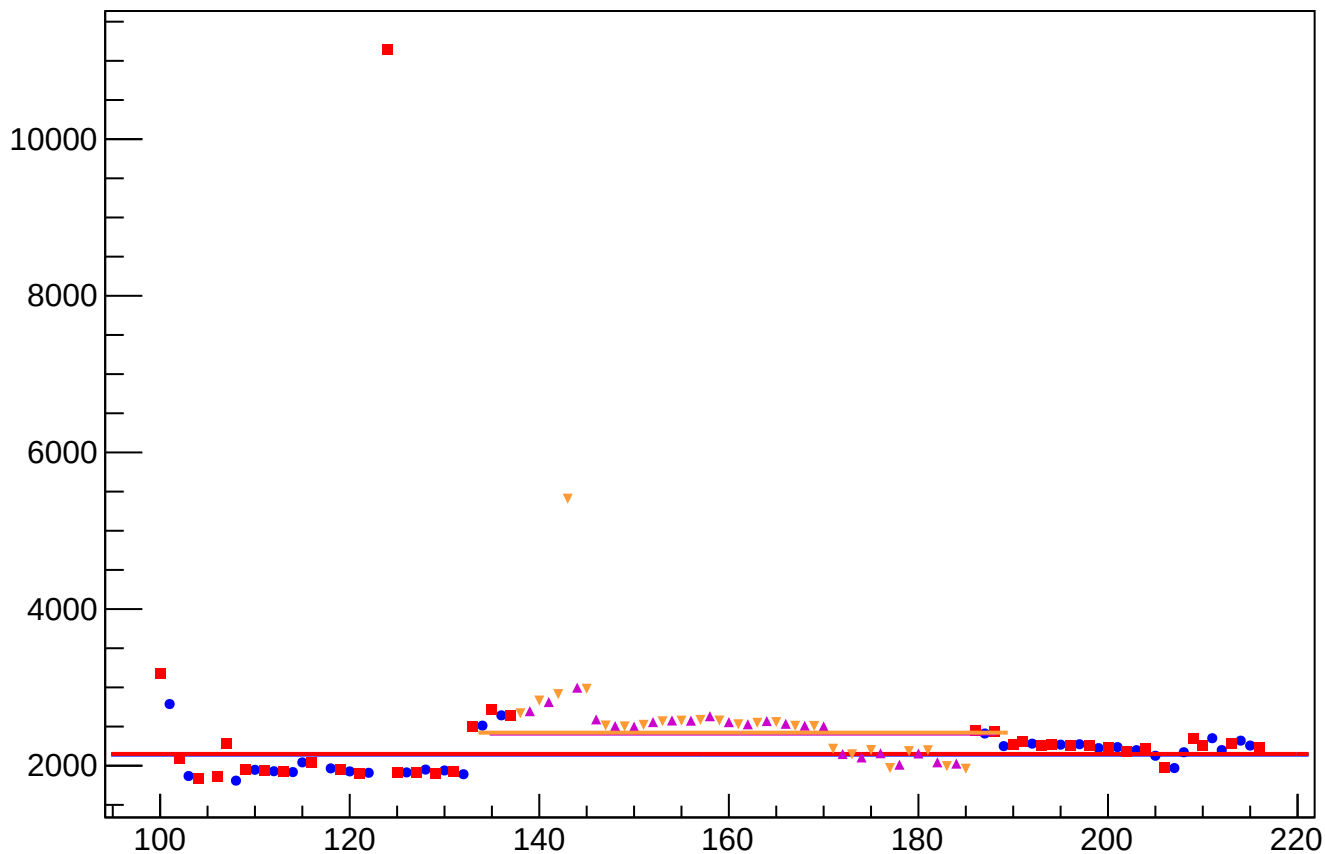
Left In: -2716.200 $\pm$ 566.202  $\chi^2$ /NDF: 14.3/22

+ sign 1466.980 $\pm$ 368.172  $\chi^2$ /NDF: 65.6/55

All: -510.002 $\pm$ 260.989  $\chi^2$ /NDF: 162.3/113

- sign -2506.907 $\pm$ 370.022  $\chi^2$ /NDF: 38.7/57

# reg\_asym\_atl2\_rms vs Slug



Right In: 2141.949+/-0.347  $\chi^2/\text{NDF}$ : 377898.9/30

Left Out: 2422.152+/-0.394  $\chi^2/\text{NDF}$ : 952857.9/24

Right Out: 2150.485+/-0.346  $\chi^2/\text{NDF}$ : 552581.4/34

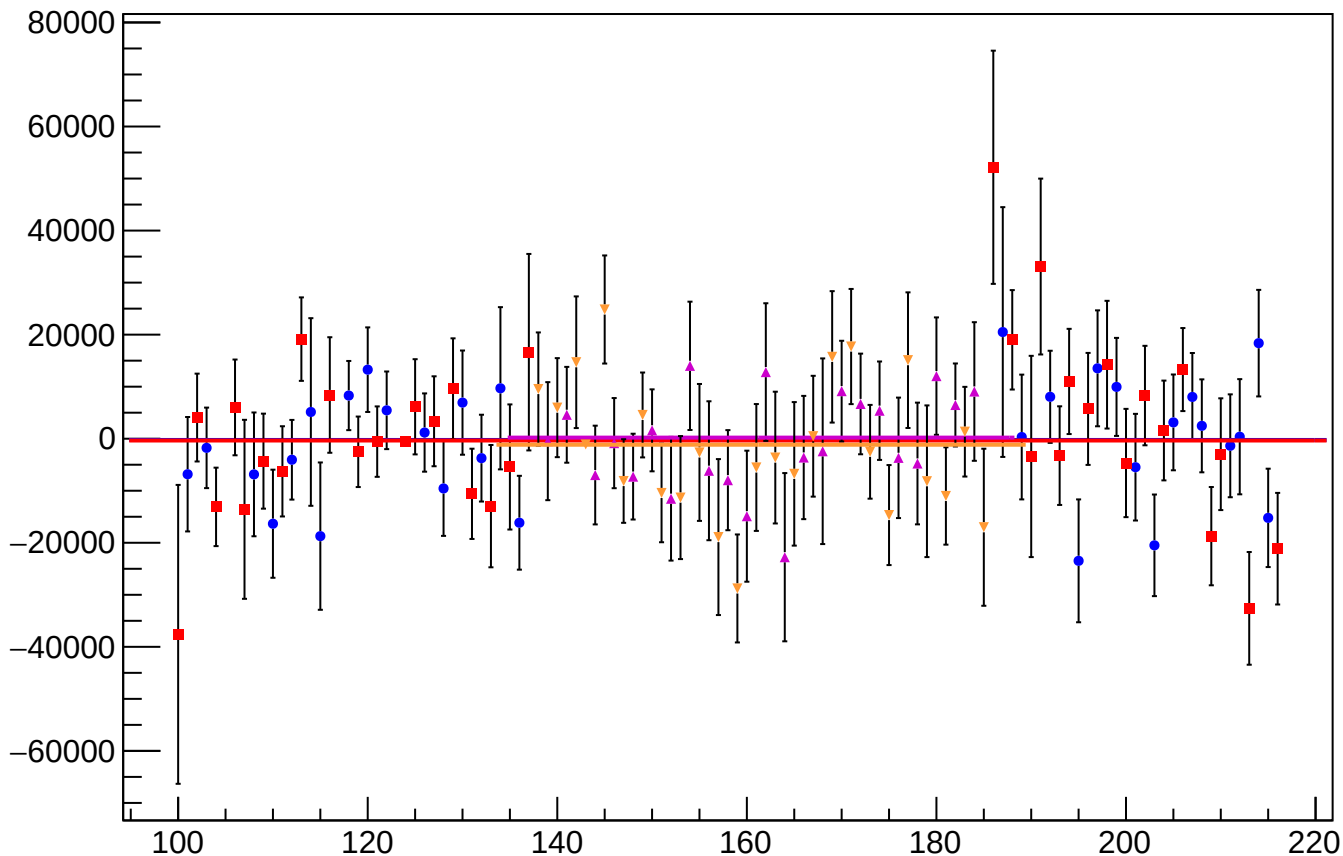
Left In: 2409.820+/-0.400  $\chi^2/\text{NDF}$ : 428364.2/22

+ sign 2264.233+/-0.260  $\chi^2/\text{NDF}$ : 1615683.4/55

All: 2262.745+/-0.185  $\chi^2/\text{NDF}$ : 2837075.9/11

- sign 2261.242+/-0.262  $\chi^2/\text{NDF}$ : 1221326.9/57

# asym\_atl2\_reg\_correction\_mean vs Slug



Right In:  $-242.872 \pm 1719.937$   $\chi^2/\text{NDF}$ : 35.2/30

Left Out:  $-1158.214 \pm 757.797$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-344.986 \pm 738.550$   $\chi^2/\text{NDF}$ : 55.5/34

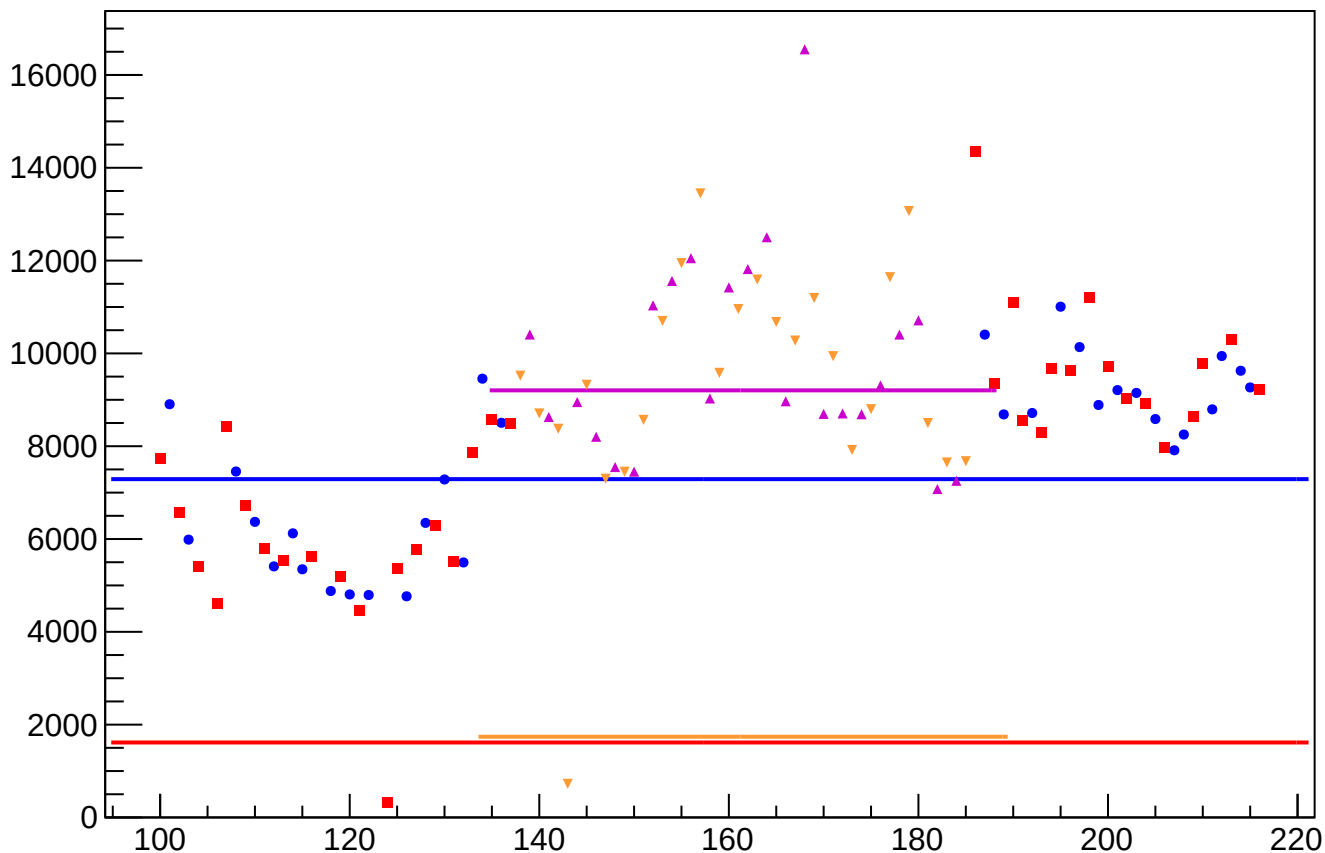
Left In:  $209.655 \pm 2195.058$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-1009.410 \pm 693.471$   $\chi^2/\text{NDF}$ : 67.4/55

All:  $-652.369 \pm 492.647$   $\chi^2/\text{NDF}$ : 136.9/113

- sign  $-288.583 \pm 699.990$   $\chi^2/\text{NDF}$ : 69.0/57

# asym\_atl2\_reg\_correction\_rms vs Slug



Right In: 7290.431+/-1.216  $\chi^2/\text{NDF}$ : 2437733.8/30

Left Out: 1739.692+/-0.536  $\chi^2/\text{NDF}$ : 27734045.9/24

Right Out: 1615.394+/-0.522  $\chi^2/\text{NDF}$ : 29539984.8/34

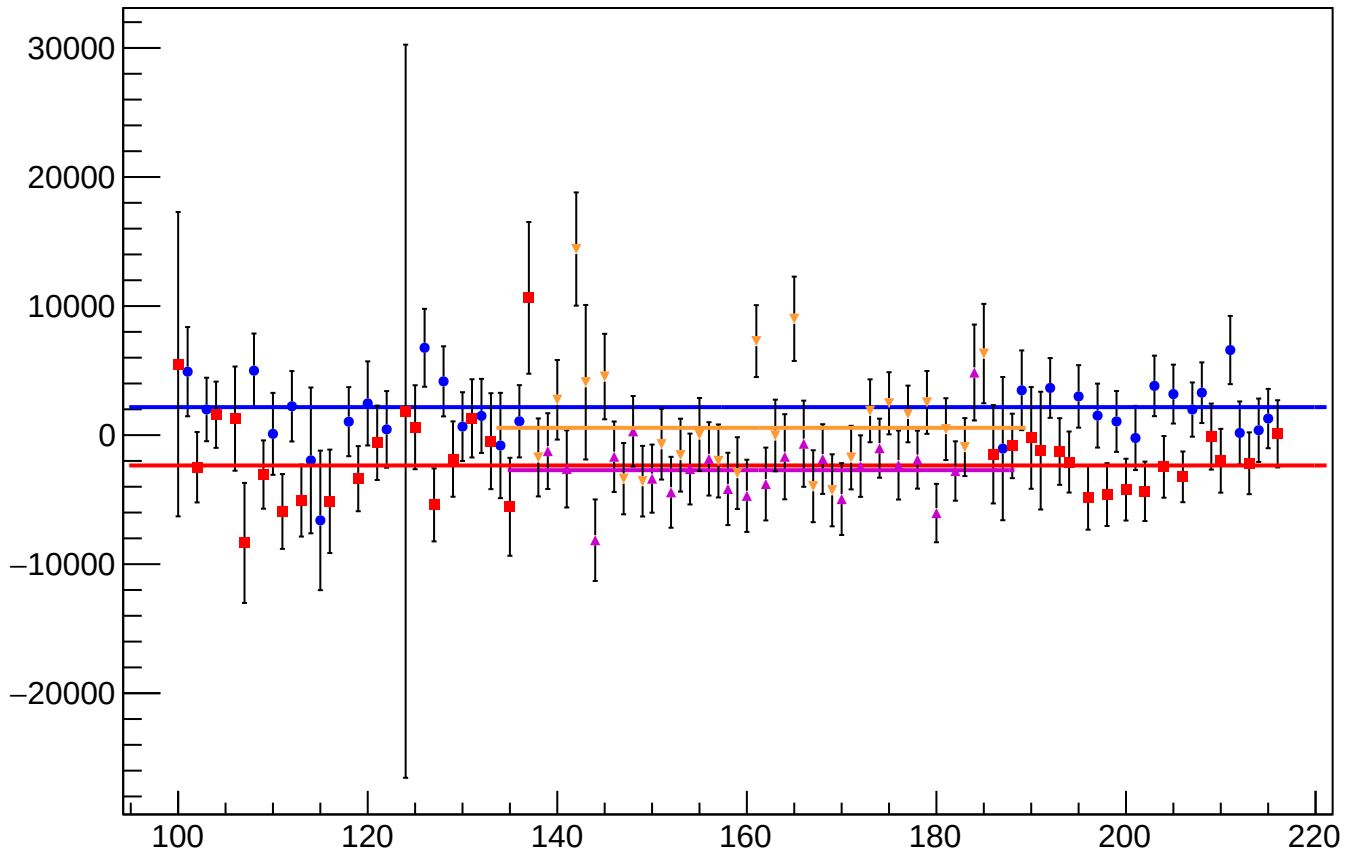
Left In: 9203.758+/-1.552  $\chi^2/\text{NDF}$ : 1272066.5/22

+ sign 2642.056+/-0.490  $\chi^2/\text{NDF}$ : 47616218.9/55

All: 2515.761+/-0.348  $\chi^2/\text{NDF}$ : 100033522.0

- sign 2387.079+/-0.495  $\chi^2/\text{NDF}$ : 52283377.7/57

# cor\_asym\_atl2\_mean vs Slug



Right In: 2167.413 $\pm$ 490.422  $\chi^2$ /NDF: 17.0/30

Left Out: 562.392 $\pm$ 557.316  $\chi^2$ /NDF:43.9/24

Right Out: -2351.636 $\pm$ 488.860  $\chi^2$ /NDF: 24.2/34

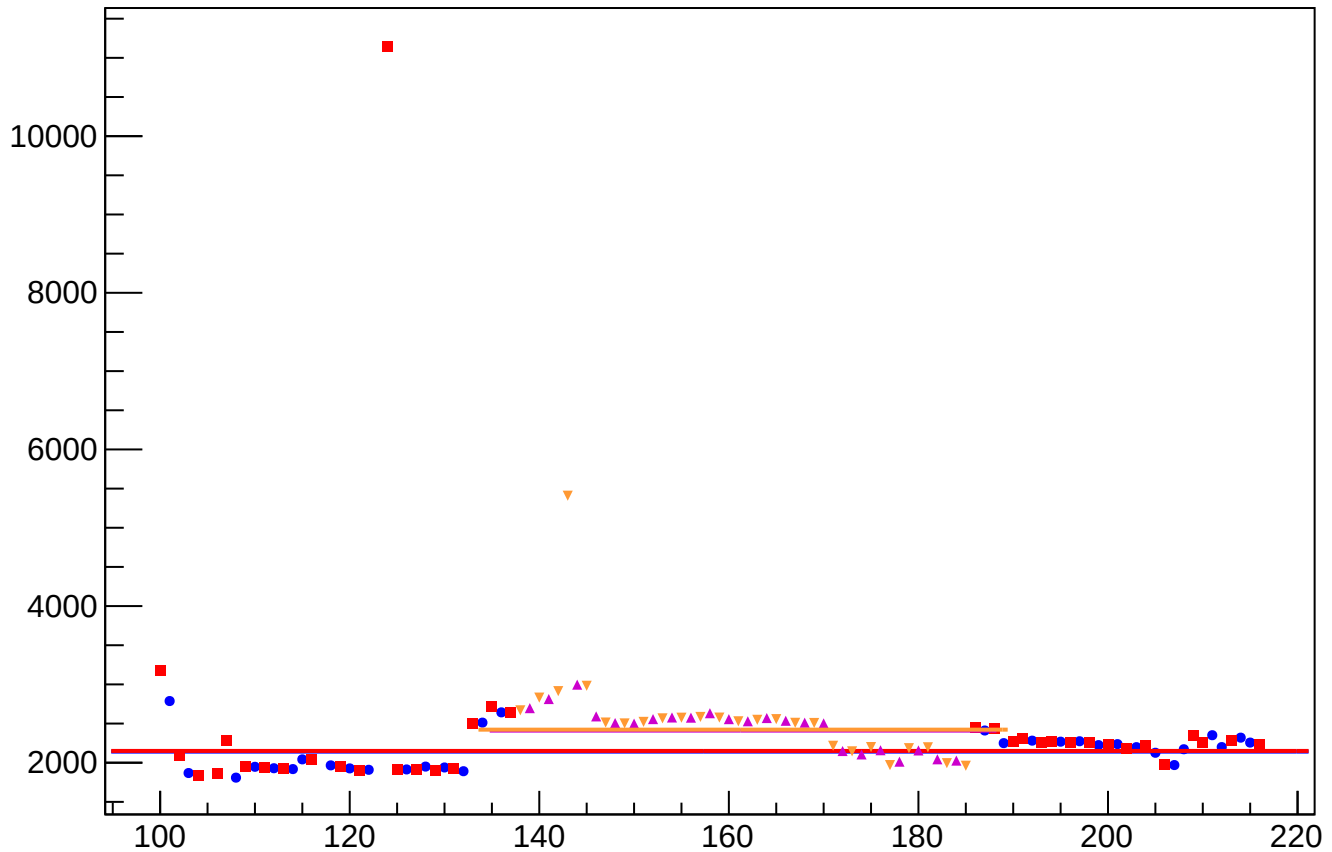
Left In: -2716.163 $\pm$ 566.202  $\chi^2$ /NDF:14.3/22

+ sign 1466.961 $\pm$ 368.172  $\chi^2$ /NDF: 65.6/55

All: -510.213 $\pm$ 260.989  $\chi^2$ /NDF: 162.3/113

- sign -2507.320 $\pm$ 370.023  $\chi^2$ /NDF: 38.7/57

# cor\_asym\_atl2\_rms vs Slug



Right In: 2141.949 $\pm$ 0.347  $\chi^2/\text{NDF}$ : 377898.8/30

Left Out: 2422.152 $\pm$ 0.394  $\chi^2/\text{NDF}$ : 952857.9/24

Right Out: 2150.495 $\pm$ 0.346  $\chi^2/\text{NDF}$ : 552572.5/34

Left In: 2409.820 $\pm$ 0.400  $\chi^2/\text{NDF}$ : 428364.2/22

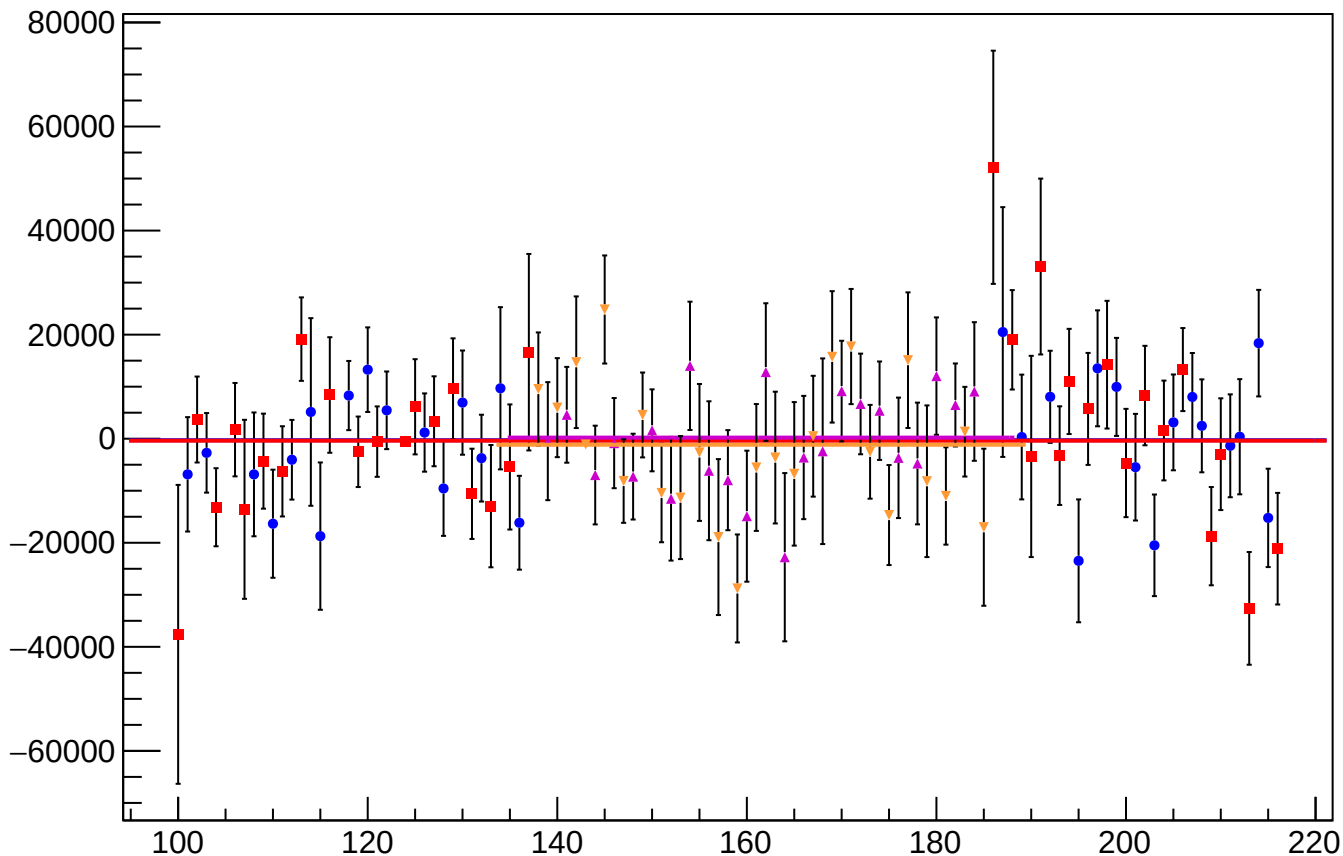
+ sign 2264.233 $\pm$ 0.260  $\chi^2/\text{NDF}$ : 1615683.5/55

All: 2262.748 $\pm$ 0.185  $\chi^2/\text{NDF}$ : 2837047.3/11

- sign 2261.249 $\pm$ 0.262  $\chi^2/\text{NDF}$ : 1221298.4/57



# asym\_atl2\_cor\_correction\_mean vs Slug



Right In:  $-293.622 \pm 1718.924$   $\chi^2/\text{NDF}: 35.3/30$

Left Out:  $-1157.974 \pm 757.732$   $\chi^2/\text{NDF}: 31.9/24$

Right Out:  $-375.897 \pm 738.248$   $\chi^2/\text{NDF}: 55.1/34$

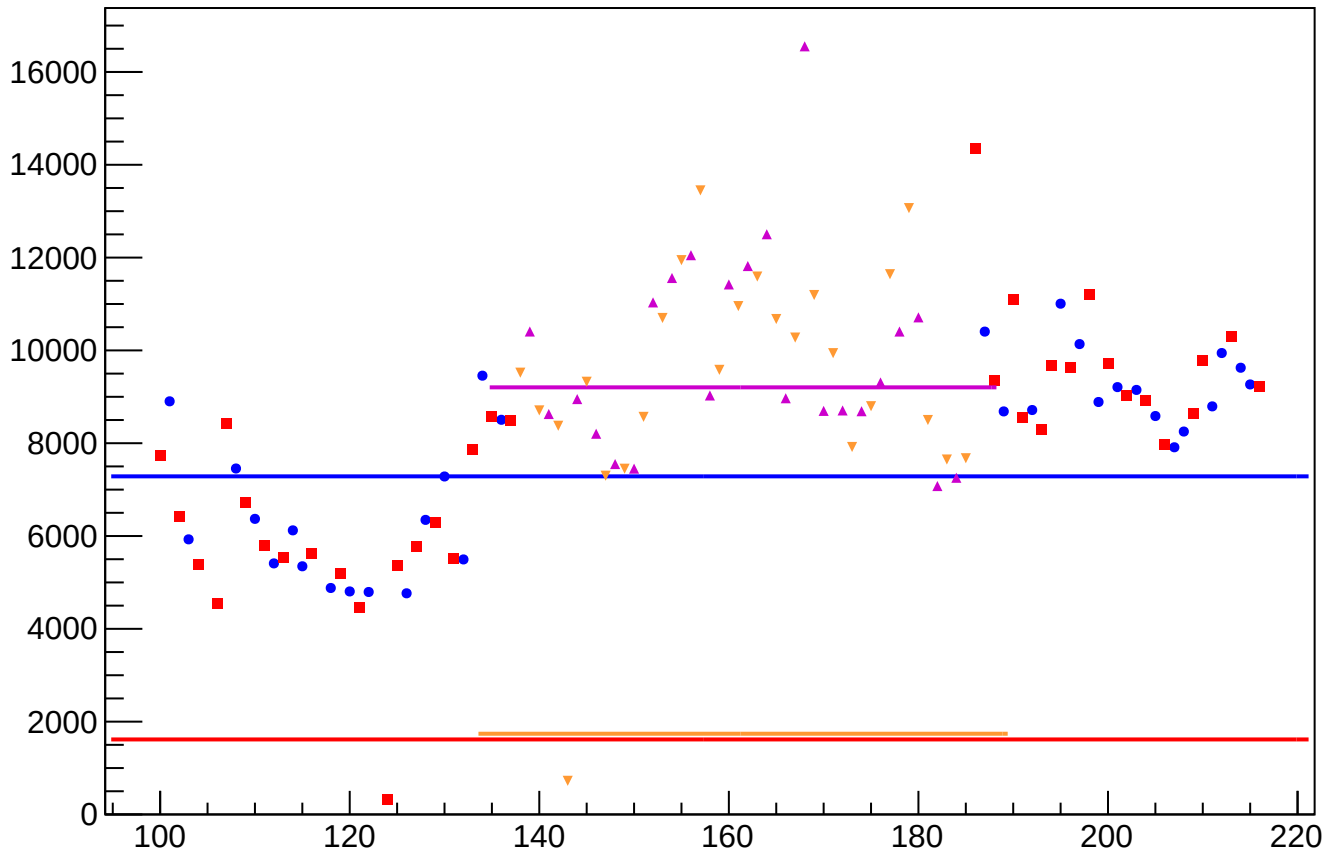
Left In:  $209.500 \pm 2195.055$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $-1017.341 \pm 693.355$   $\chi^2/\text{NDF}: 67.4/55$

All:  $-670.084 \pm 492.516$   $\chi^2/\text{NDF}: 136.5/113$

- sign  $-316.409 \pm 699.733$   $\chi^2/\text{NDF}: 68.6/57$

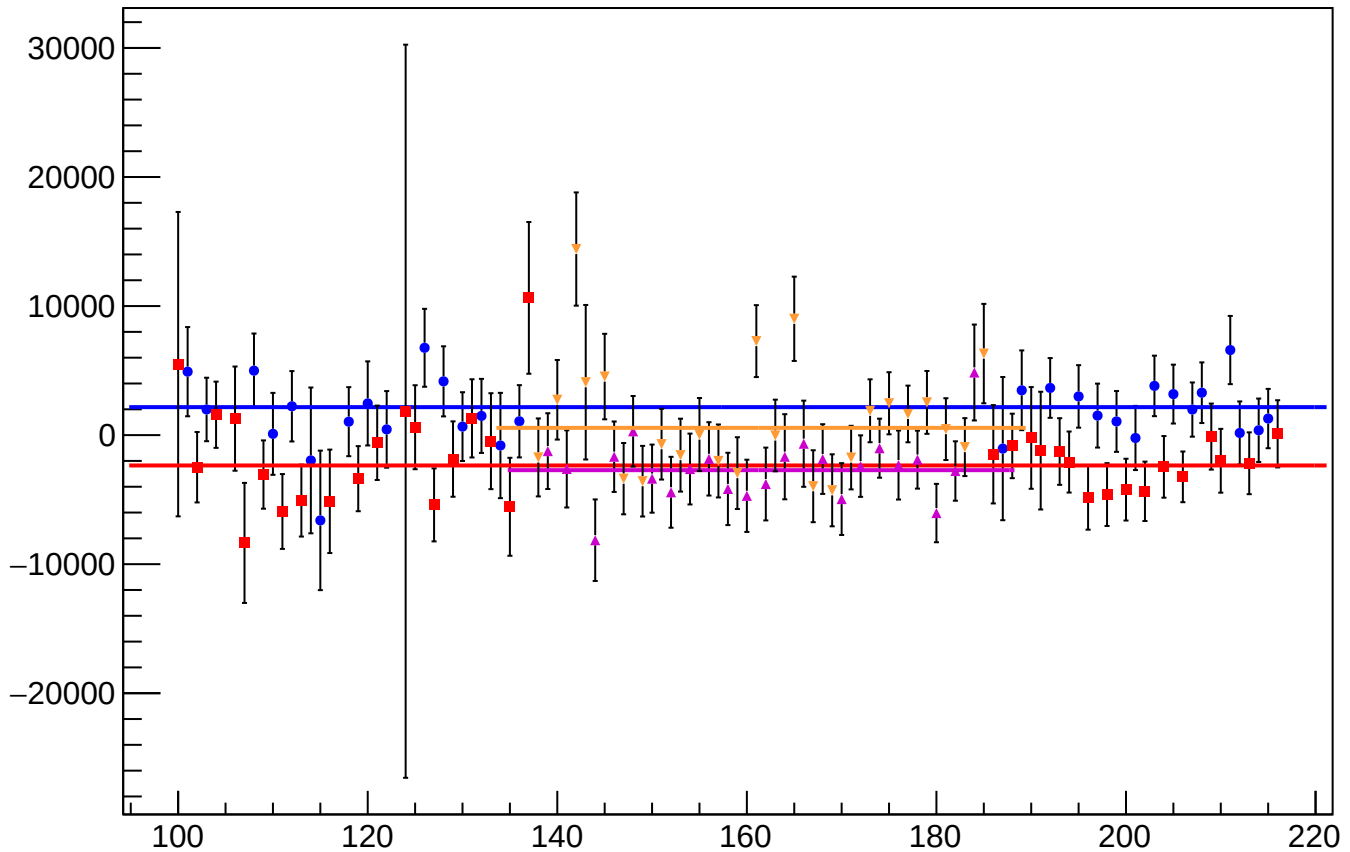
# asym\_atl2\_cor\_correction\_rms vs Slug



Right In:  $7285.920 \pm 1.215$   $\chi^2/\text{NDF}: 2444307.0/30$   
 Left Out:  $1739.457 \pm 0.536$   $\chi^2/\text{NDF}: 27735092.1/24$   
 Right Out:  $1616.475 \pm 0.522$   $\chi^2/\text{NDF}: 29529936.2/34$   
 Left In:  $9203.744 \pm 1.552$   $\chi^2/\text{NDF}: 1272079.0/22$

+ sign  $2641.887 \pm 0.490$   $\chi^2/\text{NDF}: 47614640.1/55$   
 All:  $2515.851 \pm 0.348$   $\chi^2/\text{NDF}: 100017013.4$   
 - sign  $2387.485 \pm 0.495$   $\chi^2/\text{NDF}: 52268979.0/57$

# eigen\_cor\_asym\_atl2\_mean vs Slug



Right In: 2167.413 $\pm$ 490.422  $\chi^2$ /NDF: 17.0/30

Left Out: 562.392 $\pm$ 557.316  $\chi^2$ /NDF: 43.9/24

Right Out: -2351.636 $\pm$ 488.860  $\chi^2$ /NDF: 24.2/34

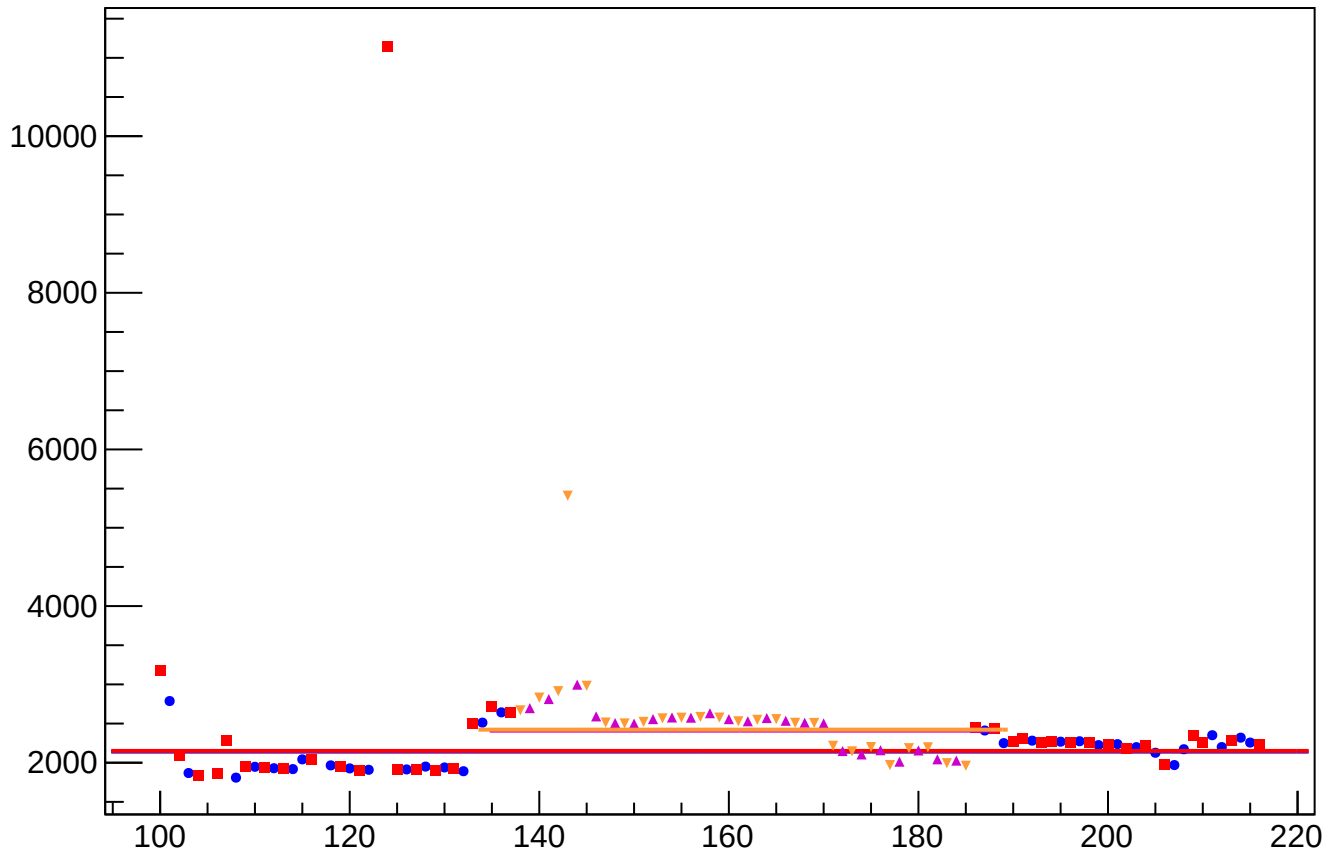
Left In: -2716.163 $\pm$ 566.202  $\chi^2$ /NDF: 14.3/22

+ sign 1466.961 $\pm$ 368.172  $\chi^2$ /NDF: 65.6/55

All: -510.213 $\pm$ 260.989  $\chi^2$ /NDF: 162.3/113

- sign -2507.320 $\pm$ 370.023  $\chi^2$ /NDF: 38.7/57

# eigen\_cor\_asym\_atl2\_rms vs Slug



Right In: 2141.949 $\pm$ 0.347  $\chi^2$ /NDF: 377898.8/30

Left Out: 2422.152 $\pm$ 0.394  $\chi^2$ /NDF: 952857.9/24

Right Out: 2150.495 $\pm$ 0.346  $\chi^2$ /NDF: 552572.5/34

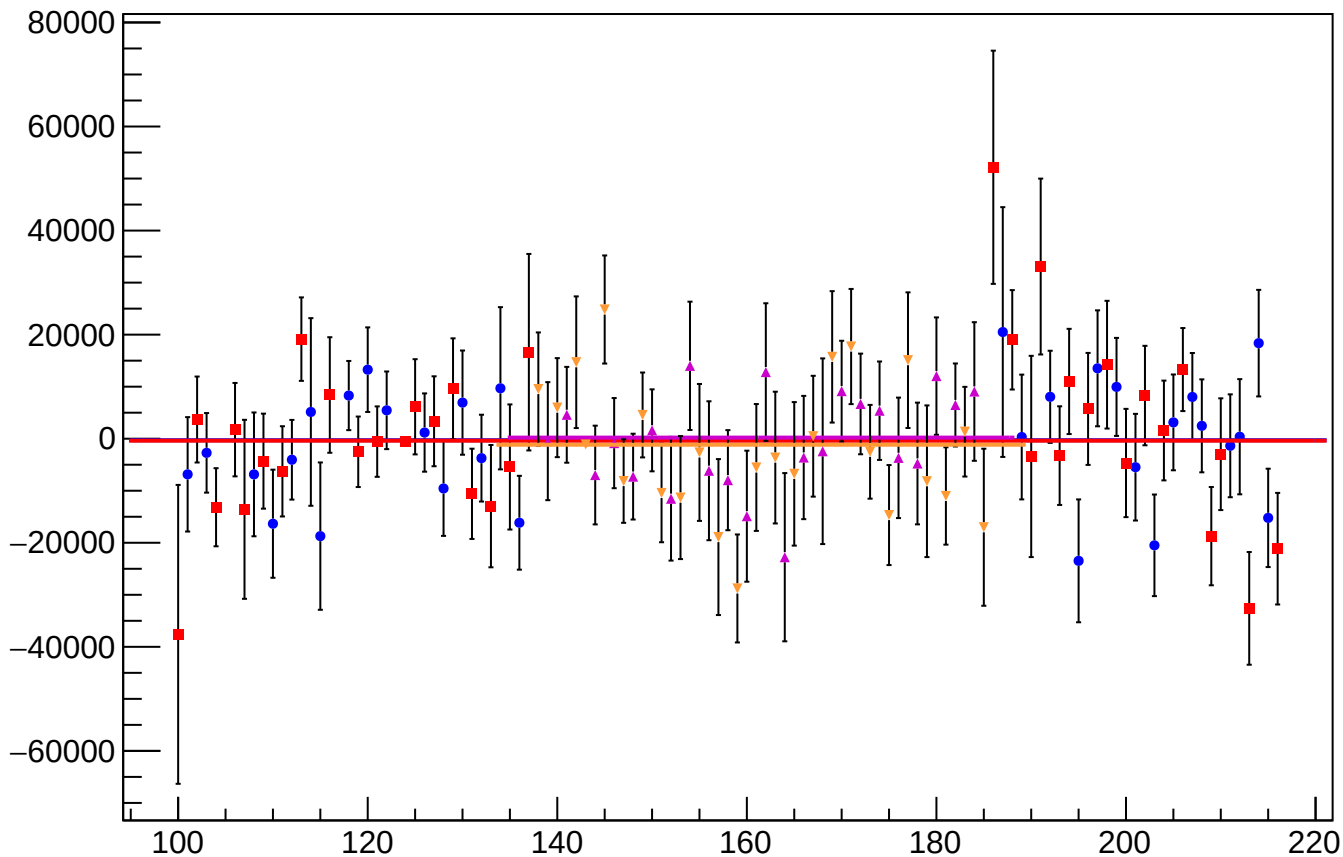
Left In: 2409.820 $\pm$ 0.400  $\chi^2$ /NDF: 428364.2/22

+ sign 2264.233 $\pm$ 0.260  $\chi^2$ /NDF: 1615683.5/55

All: 2262.748 $\pm$ 0.185  $\chi^2$ /NDF: 2837047.3/11

- sign 2261.249 $\pm$ 0.262  $\chi^2$ /NDF: 1221298.4/57

# asym\_atl2\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-293.622 \pm 1718.924$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-1157.974 \pm 757.732$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-375.897 \pm 738.248$   $\chi^2/\text{NDF}$ : 55.1/34

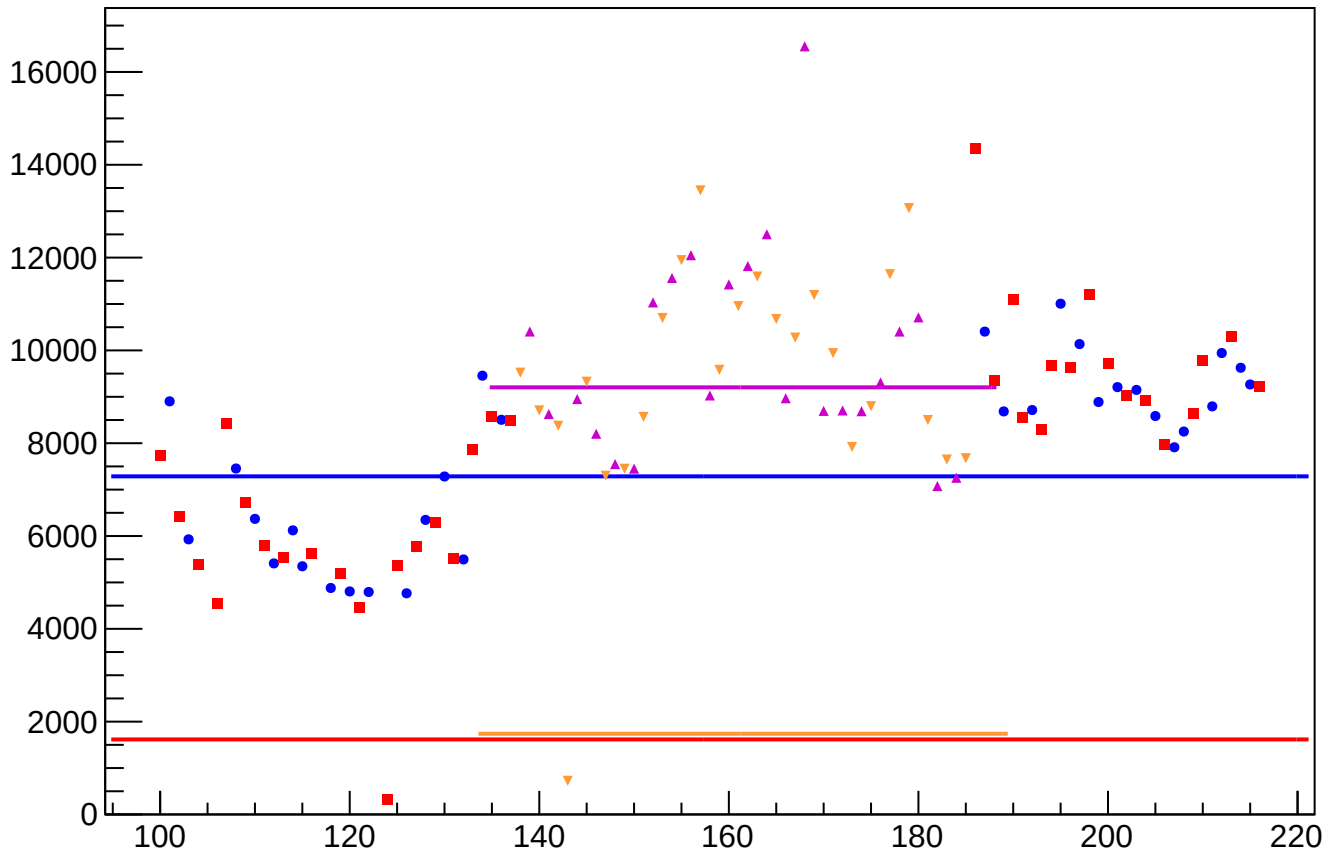
Left In:  $209.500 \pm 2195.055$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $-1017.341 \pm 693.355$   $\chi^2/\text{NDF}$ : 67.4/55

All:  $-670.084 \pm 492.516$   $\chi^2/\text{NDF}$ : 136.5/113

- sign  $-316.409 \pm 699.733$   $\chi^2/\text{NDF}$ : 68.6/57

# asym\_atl2\_eigen\_cor\_correction\_rms vs Slug



Right In: 7285.920 $\pm$ 1.215  $\chi^2$ /NDF: 2444307.0/30

Left Out: 1739.457 $\pm$ 0.536  $\chi^2$ /NDF: 27735092.1/24

Right Out: 1616.475 $\pm$ 0.522  $\chi^2$ /NDF: 29529936.2/34

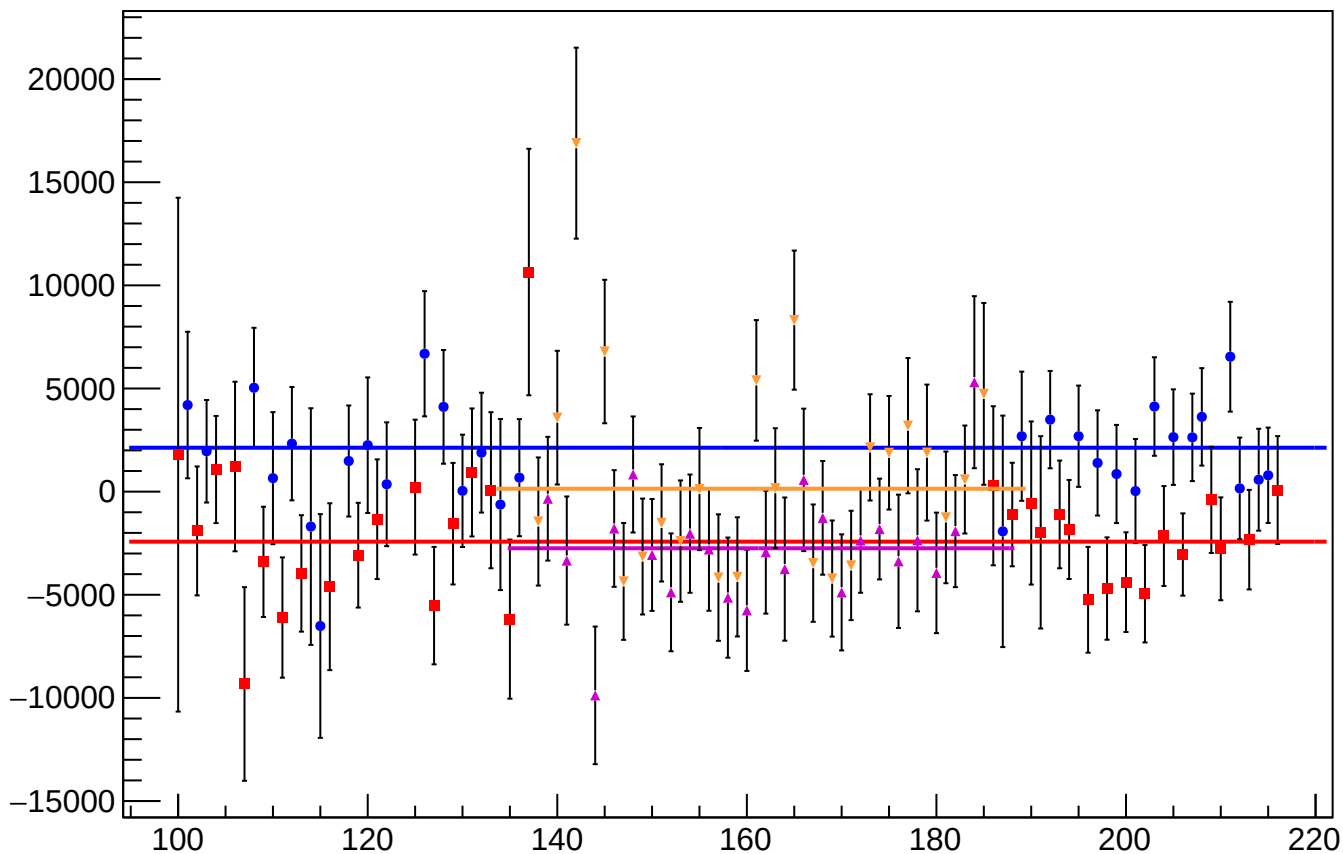
Left In: 9203.744 $\pm$ 1.552  $\chi^2$ /NDF: 1272079.0/22

+ sign 2641.887 $\pm$ 0.490  $\chi^2$ /NDF: 47614640.1/55

All: 2515.851 $\pm$ 0.348  $\chi^2$ /NDF: 100017013.4

- sign 2387.485 $\pm$ 0.495  $\chi^2$ /NDF: 52268979.0/57

# dit\_asym\_atl2\_mean vs Slug



Right In:  $2128.740 \pm 496.433$   $\chi^2/\text{NDF}$ : 16.3/30

Left Out:  $142.497 \pm 615.731$   $\chi^2/\text{NDF}$ : 45.8/23

Right Out:  $-2425.090 \pm 496.669$   $\chi^2/\text{NDF}$ : 23.5/33

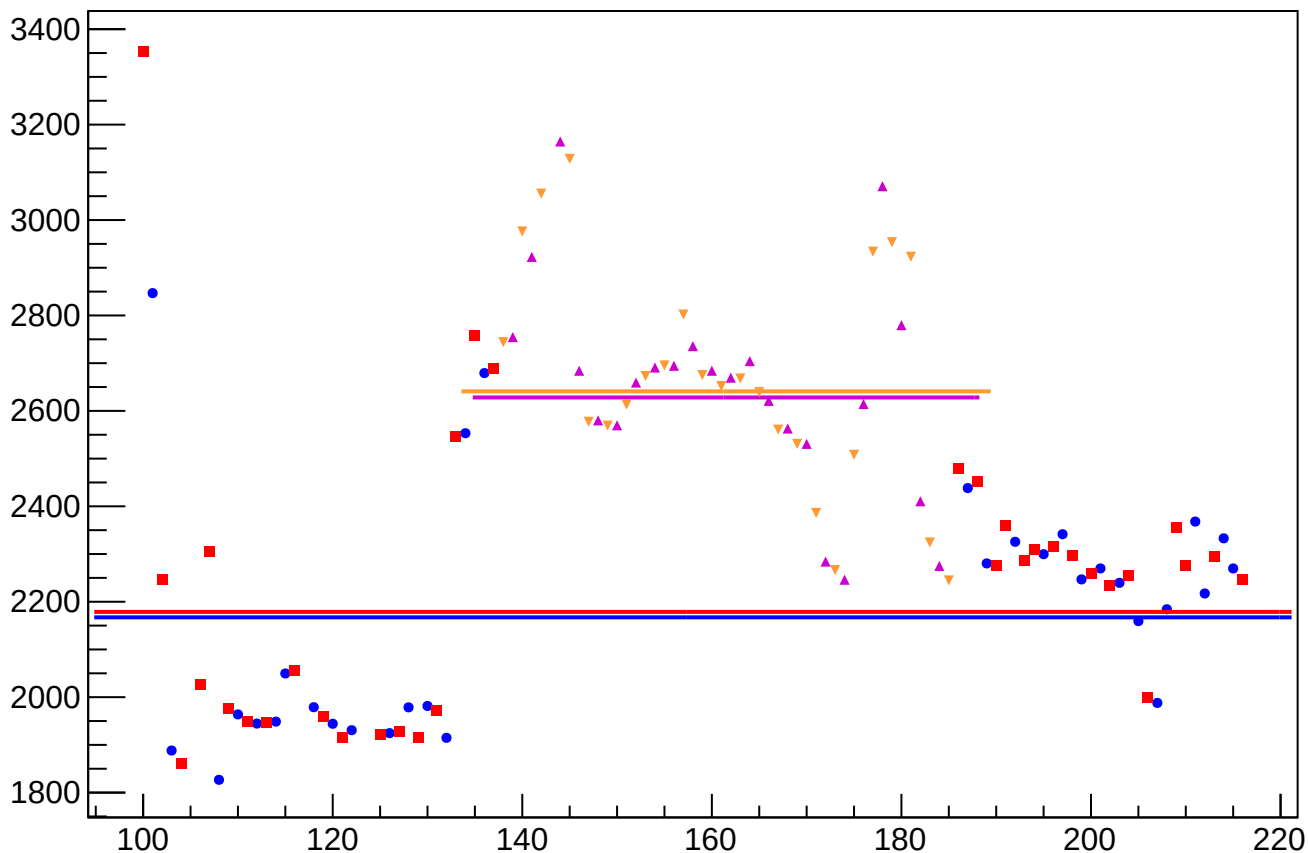
Left In:  $-2745.982 \pm 616.123$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $1346.252 \pm 386.468$   $\chi^2/\text{NDF}$ : 68.5/54

All:  $-601.564 \pm 273.348$   $\chi^2/\text{NDF}$ : 158.4/111

- sign  $-2551.482 \pm 386.676$   $\chi^2/\text{NDF}$ : 39.1/56

dit\_asym\_atl2\_rms vs Slug



Right In: 2167.298+/-0.351  $\chi^2/\text{NDF}$ : 389596.4/30

Left Out: 2640.990+/-0.435  $\chi^2/\text{NDF}$ : 253402.6/23

Right Out: 2178.734+/-0.351  $\chi^2/\text{NDF}$ : 354686.8/33

Left In: 2628.113+/-0.436  $\chi^2/\text{NDF}$ : 237507.6/22

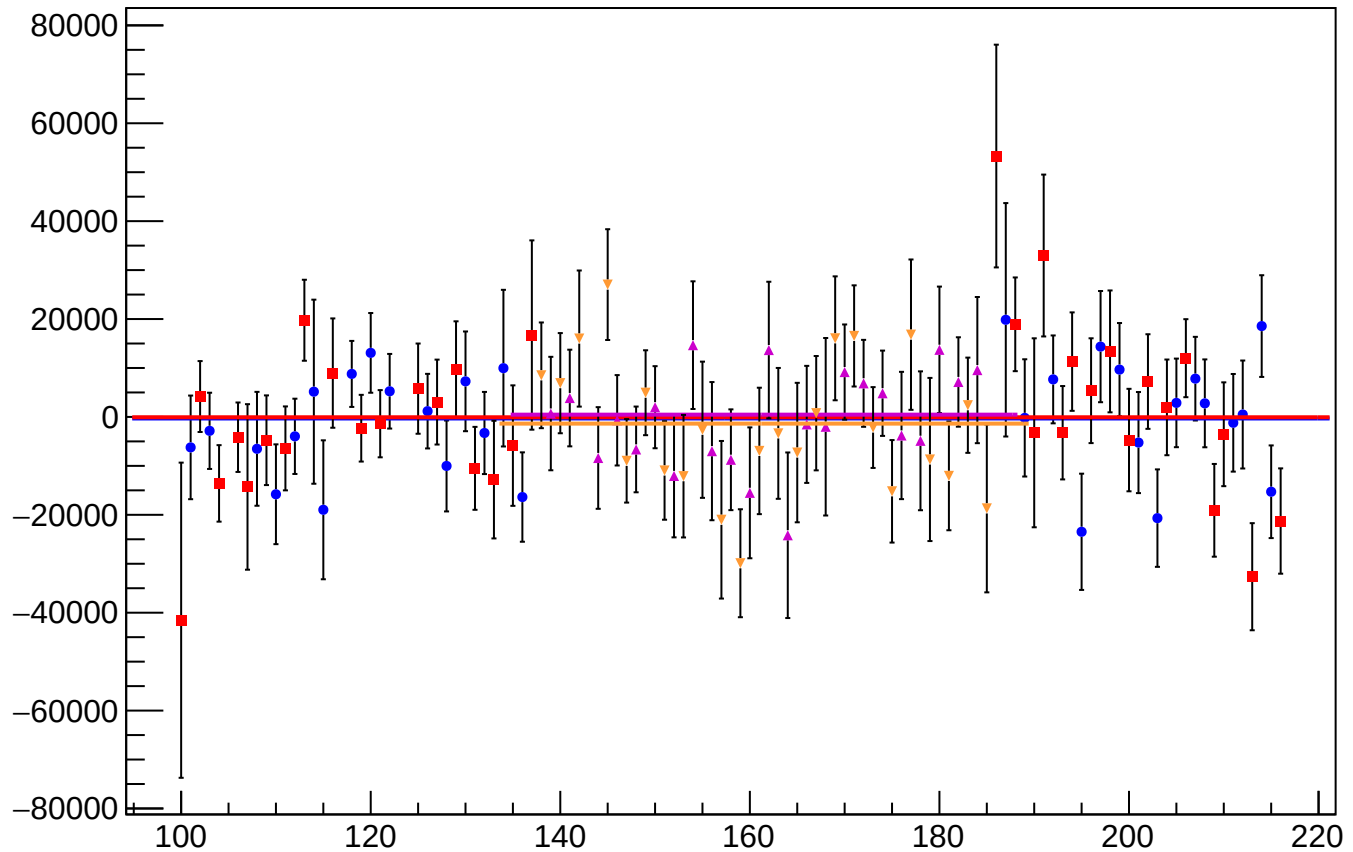
+ sign 2353.911+/-0.273  $\chi^2/\text{NDF}$ : 1360373.3/54

All: 2354.755+/-0.193  $\chi^2/\text{NDF}$ : 2597790.9/11

- sign 2355.599+/-0.273  $\chi^2/\text{NDF}$ : 1237398.5/56



# asym\_atl2\_dit\_correction\_mean vs Slug



Right In:  $-316.748 \pm 1731.866$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-1366.840 \pm 2326.289$   $\chi^2/\text{NDF}$ : 31.3/23

Right Out:  $-70.697 \pm 1679.685$   $\chi^2/\text{NDF}$ : 54.8/33

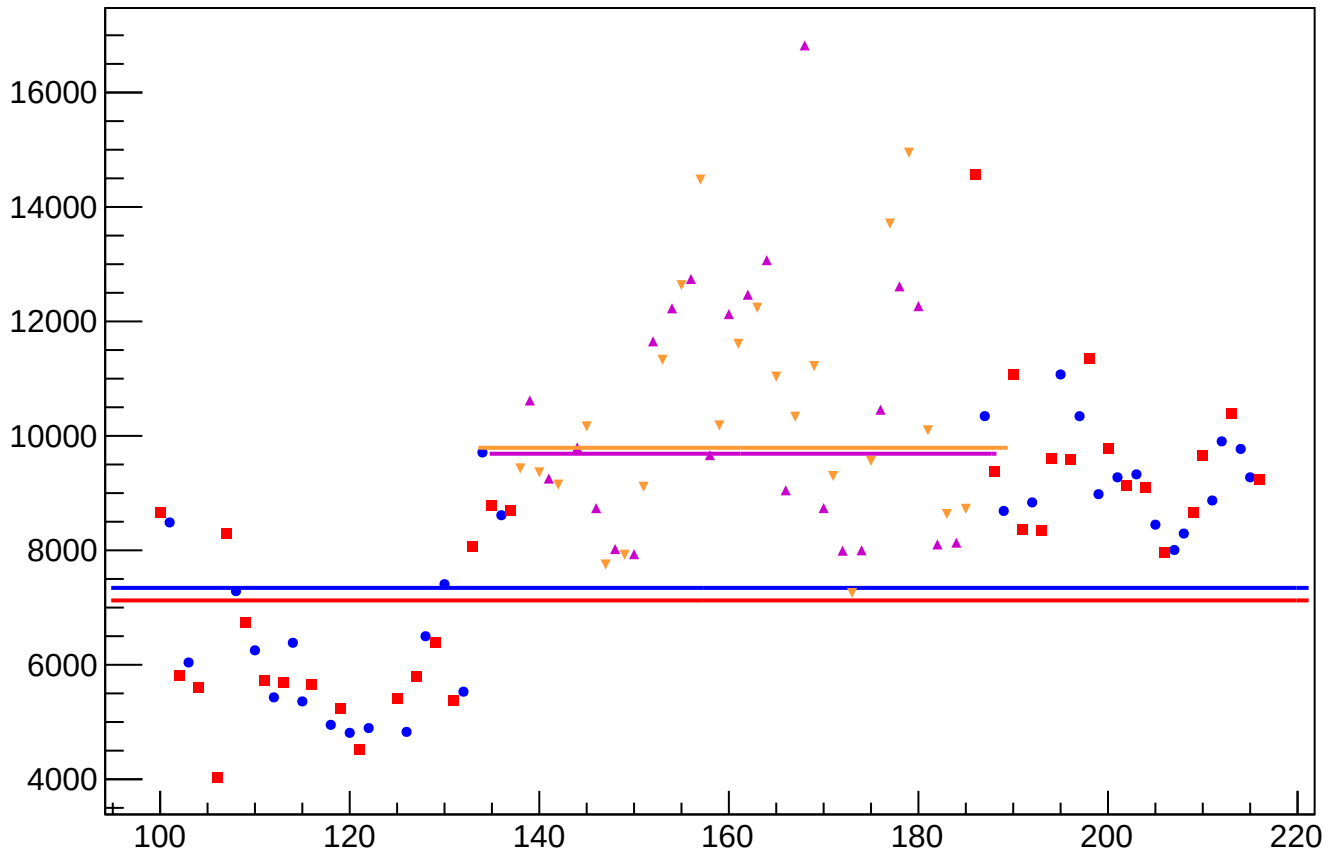
Left In:  $463.775 \pm 2314.478$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-691.211 \pm 1389.167$   $\chi^2/\text{NDF}$ : 66.3/54

All:  $-280.051 \pm 971.601$   $\chi^2/\text{NDF}$ : 134.3/111

- sign  $113.688 \pm 1359.419$   $\chi^2/\text{NDF}$ : 67.9/56

# asym\_atl2\_dit\_correction\_rms vs Slug



Right In: 7343.984+/-1.225  $\chi^2/\text{NDF}$ : 2401432.6/30

Left Out: 9792.234+/-1.645  $\chi^2/\text{NDF}$ : 1219062.5/23

Right Out: 7124.617+/-1.188  $\chi^2/\text{NDF}$ : 3054249.5/33

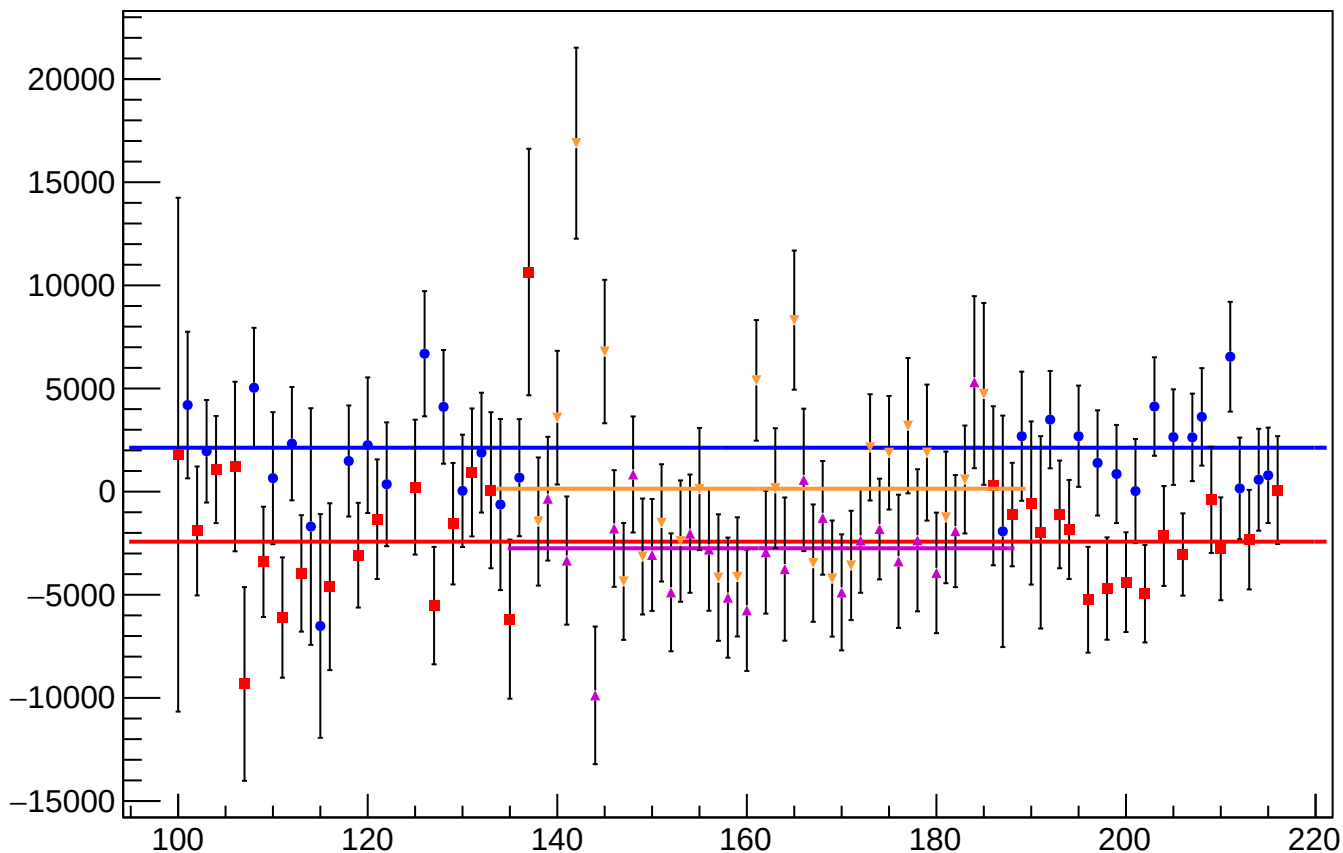
Left In: 9688.179+/-1.637  $\chi^2/\text{NDF}$ : 1378173.6/22

+ sign 8217.031+/-0.982  $\chi^2/\text{NDF}$ : 5045757.6/54

All: 8110.768+/-0.687  $\chi^2/\text{NDF}$ : 11108262.4/100

- sign 8009.008+/-0.961  $\chi^2/\text{NDF}$ : 6039595.6/56

# eigen\_dit\_asym\_atl2\_mean vs Slug



Right In: 2128.741 $\pm$ 496.433  $\chi^2$ /NDF: 16.3/30

Left Out: 142.487 $\pm$ 615.732  $\chi^2$ /NDF:45.8/23

Right Out: -2425.087 $\pm$ 496.669  $\chi^2$ /NDF: 23.5/33

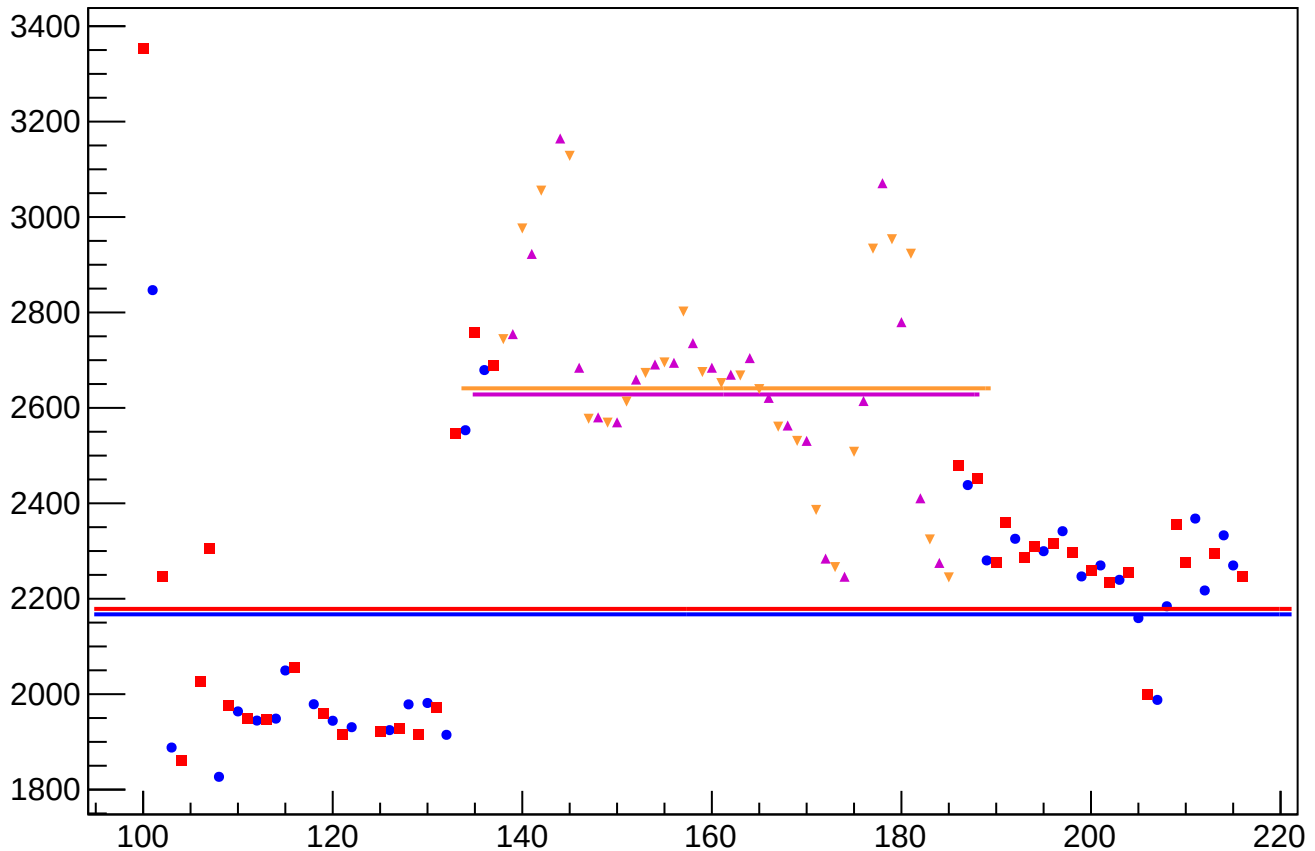
Left In: -2745.980 $\pm$ 616.124  $\chi^2$ /NDF:15.4/22

+ sign 1346.250 $\pm$ 386.468  $\chi^2$ /NDF: 68.5/54

All: -601.564 $\pm$ 273.348  $\chi^2$ /NDF: 158.4/111

- sign -2551.479 $\pm$ 386.677  $\chi^2$ /NDF: 39.1/56

# eigen\_dit\_asym\_atl2\_rms vs Slug



Right In: 2167.299+/-0.351  $\chi^2/\text{NDF}$ : 389596.4/30

Left Out: 2640.993+/-0.435  $\chi^2/\text{NDF}$ : 253411.8/23

Right Out: 2178.734+/-0.351  $\chi^2/\text{NDF}$ : 354687.4/33

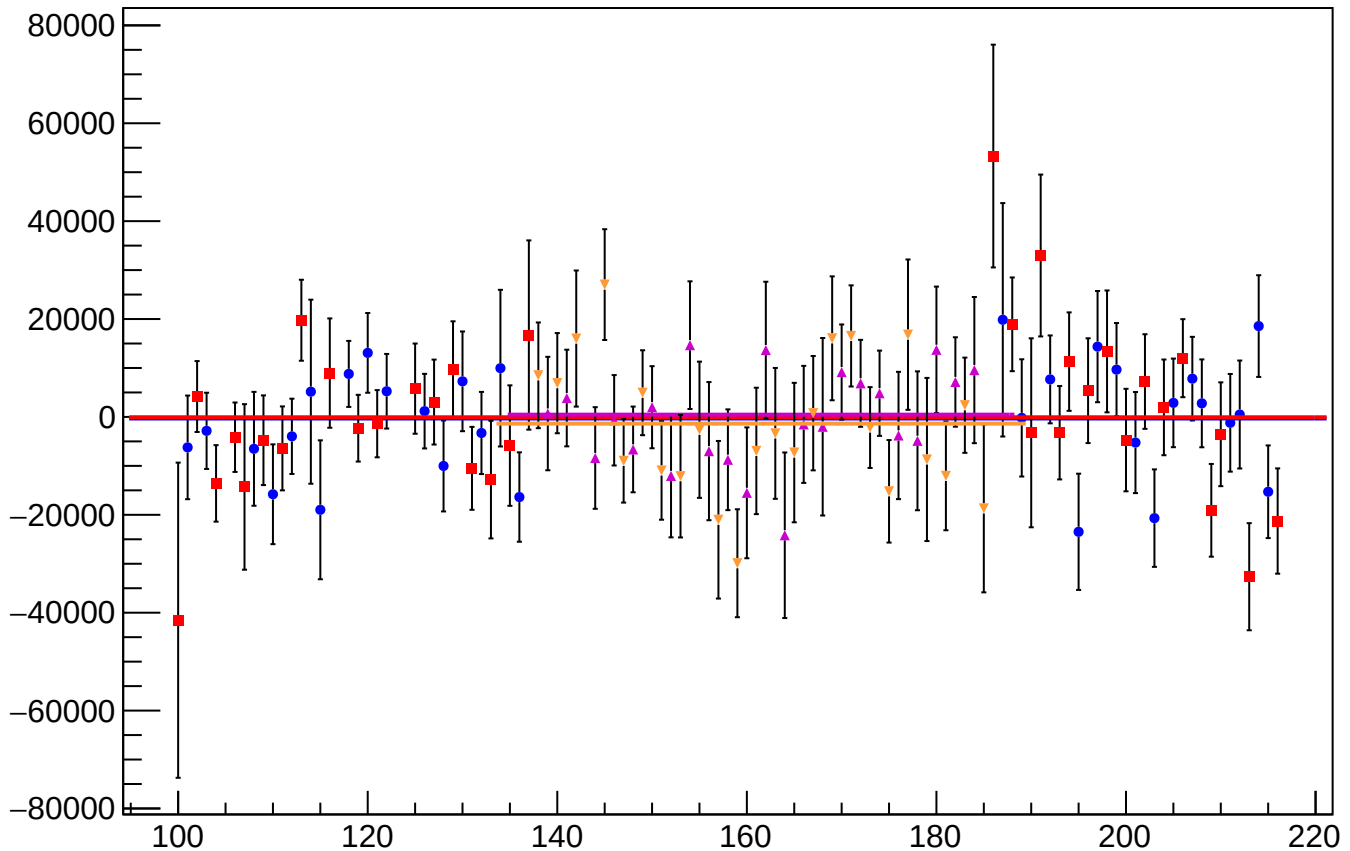
Left In: 2628.116+/-0.436  $\chi^2/\text{NDF}$ : 237516.8/22

+ sign 2353.912+/-0.273  $\chi^2/\text{NDF}$ : 1360388.1/54

All: 2354.756+/-0.193  $\chi^2/\text{NDF}$ : 2597821.2/11

- sign 2355.600+/-0.273  $\chi^2/\text{NDF}$ : 1237414.1/56

# asym\_atl2\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-316.741 \pm 1731.865$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-1366.849 \pm 2326.293$   $\chi^2/\text{NDF}$ : 31.3/23

Right Out:  $-70.705 \pm 1679.683$   $\chi^2/\text{NDF}$ : 54.8/33

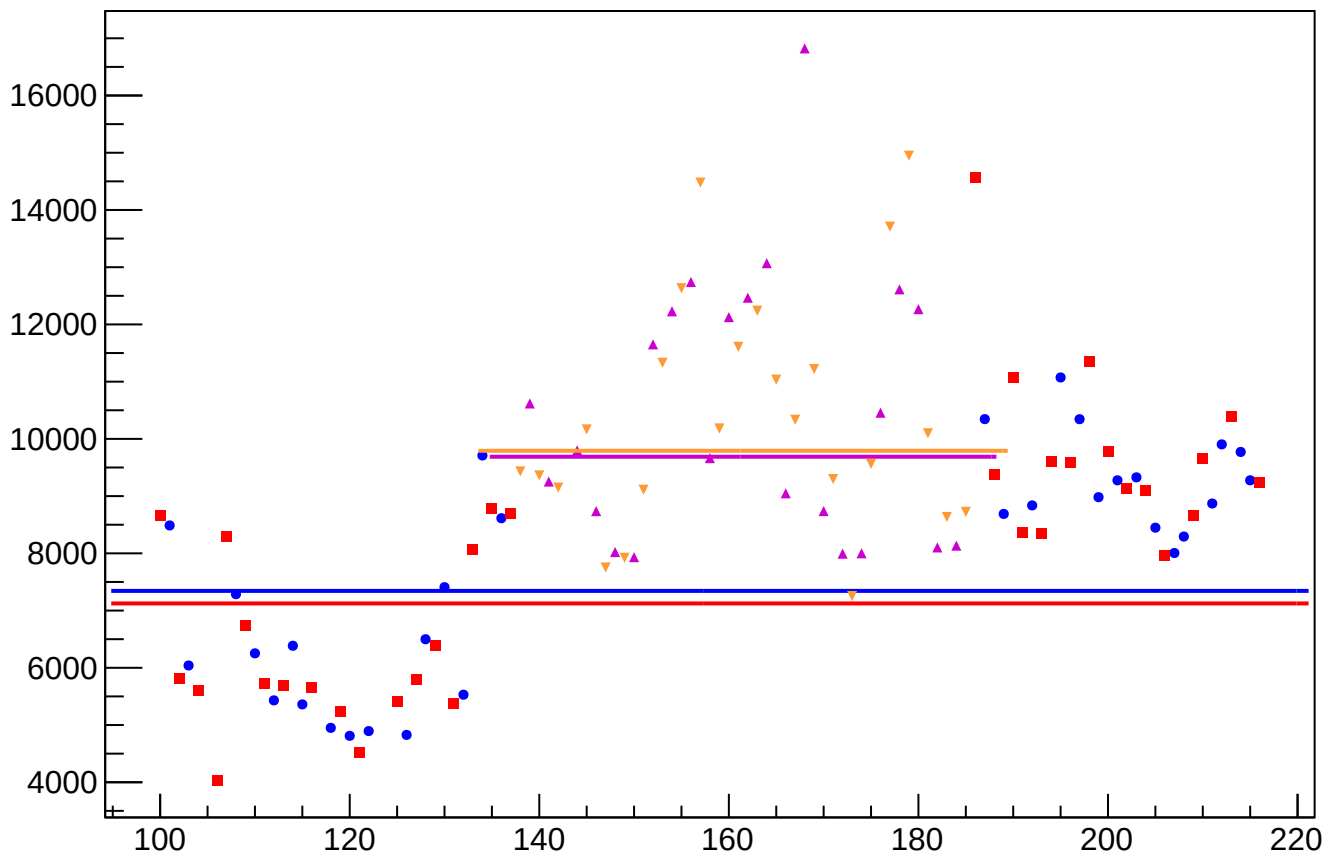
Left In:  $463.777 \pm 2314.482$   $\chi^2/\text{NDF}$ : 13.1/22

+ sign  $-691.209 \pm 1389.168$   $\chi^2/\text{NDF}$ : 66.3/54

All:  $-280.053 \pm 971.601$   $\chi^2/\text{NDF}$ : 134.3/111

- sign  $113.683 \pm 1359.419$   $\chi^2/\text{NDF}$ : 67.9/56

# asym\_atl2\_eigen\_dit\_correction\_rms vs Slug



Right In: 7343.974 $\pm$ 1.225     $\chi^2/\text{NDF}$ : 2401482.5/30

Left Out: 9792.251 $\pm$ 1.645     $\chi^2/\text{NDF}$ : 1219062.8/23

Right Out: 7124.605 $\pm$ 1.188     $\chi^2/\text{NDF}$ : 3054289.0/33

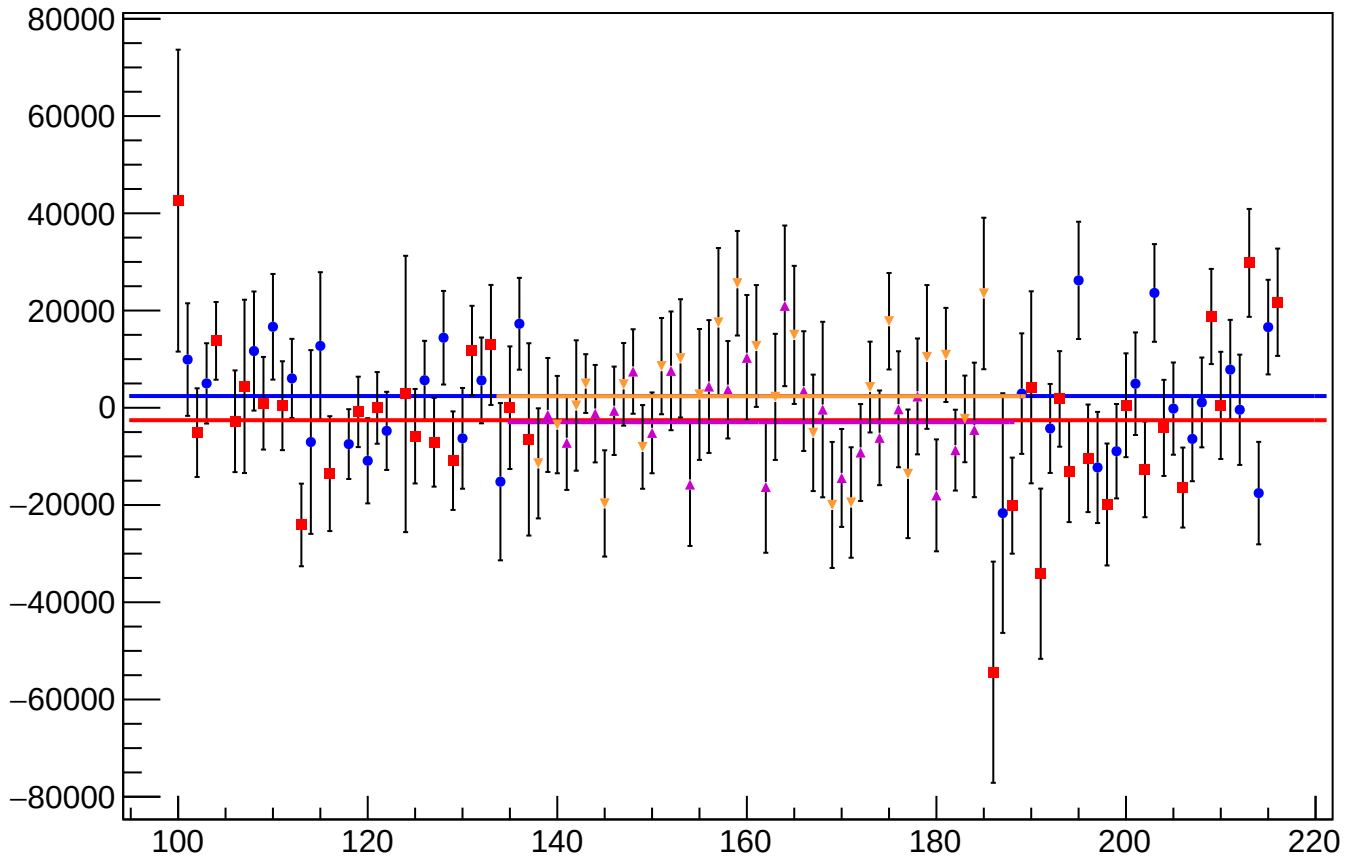
Left In: 9688.194 $\pm$ 1.637     $\chi^2/\text{NDF}$ : 1378175.1/22

+ sign 8217.028 $\pm$ 0.982     $\chi^2/\text{NDF}$ : 5045836.0/54

All: 8110.764 $\pm$ 0.687     $\chi^2/\text{NDF}$ : 11108414.8/100

- sign 8009.002 $\pm$ 0.961     $\chi^2/\text{NDF}$ : 6039668.9/56

# asym\_atl2\_mean vs Slug



Right In: 2411.584+/-1802.809  $\chi^2/\text{NDF}$ : 35.0/30

Left Out: 2387.857+/-2136.530  $\chi^2/\text{NDF}$ : 29.7/24

Right Out: -2556.980+/-1783.018  $\chi^2/\text{NDF}$ : 56.9/34

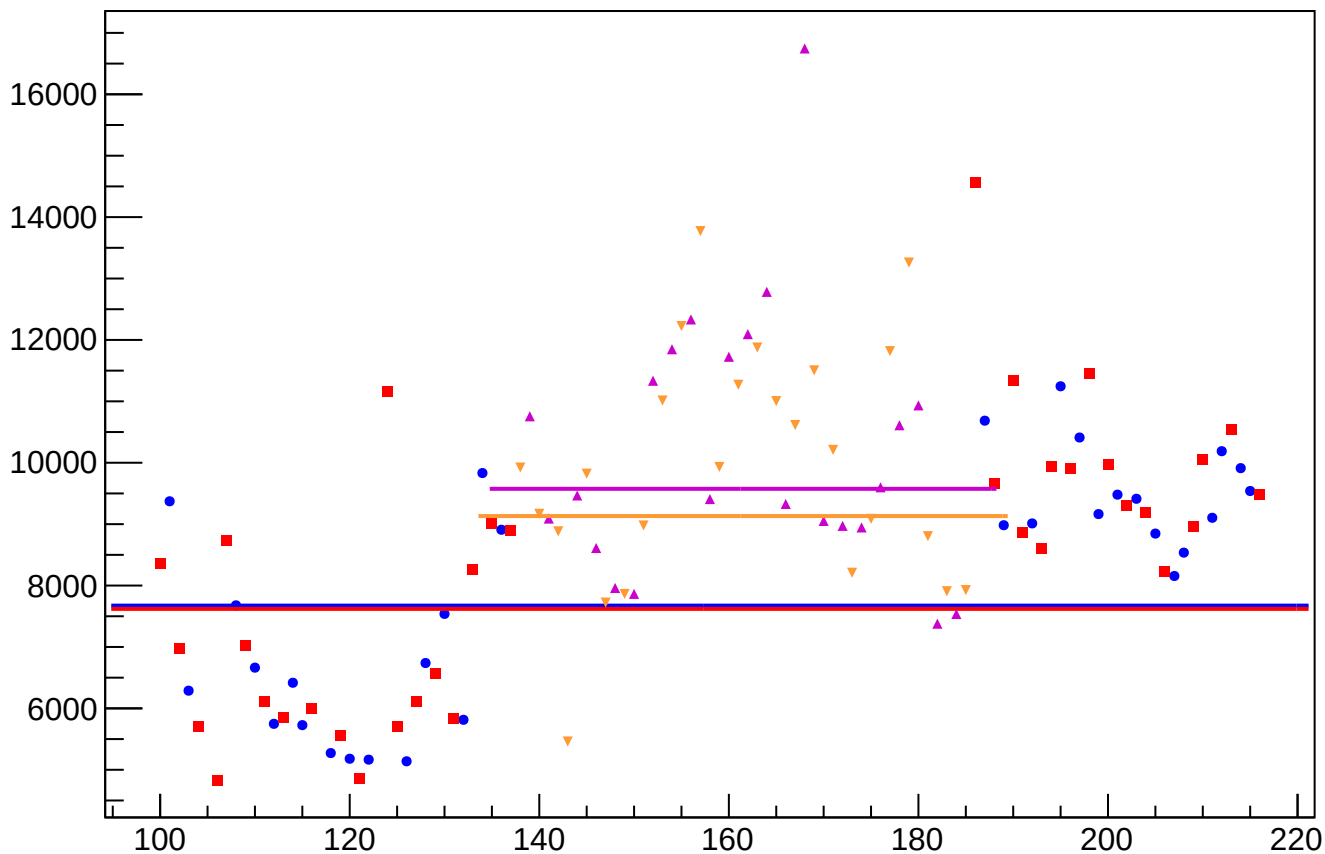
Left In: -2963.537+/-2278.927  $\chi^2/\text{NDF}$ : 13.0/22

+ sign 2401.717+/-1377.836  $\chi^2/\text{NDF}$ : 64.8/55

All: -106.219+/-983.494  $\chi^2/\text{NDF}$ : 141.4/113

- sign -2711.353+/-1404.282  $\chi^2/\text{NDF}$ : 69.9/57

# asym\_atl2\_rms vs Slug



Right In: 7673.179+/-1.275  $\chi^2/\text{NDF}$ : 2130870.3/30

Left Out: 9131.714+/-1.511  $\chi^2/\text{NDF}$ : 1811661.2/24

Right Out: 7620.353+/-1.261  $\chi^2/\text{NDF}$ : 2496348.8/34

Left In: 9575.233+/-1.611  $\chi^2/\text{NDF}$ : 1153802.3/22

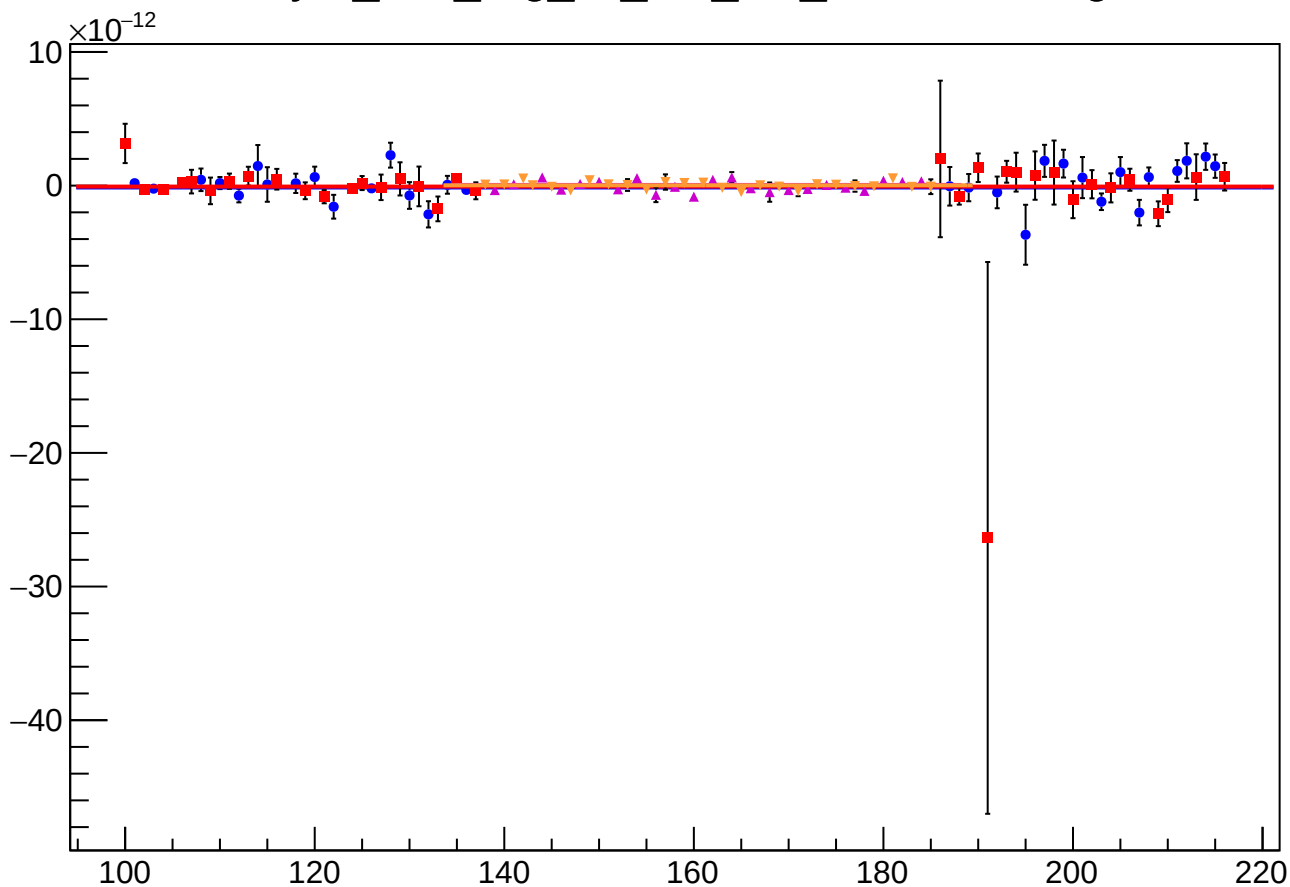
+ sign 8279.767+/-0.974  $\chi^2/\text{NDF}$ : 4486961.2/55

All: 8320.412+/-0.695  $\chi^2/\text{NDF}$ : 9053527.1/11

- sign 8362.632+/-0.993  $\chi^2/\text{NDF}$ : 4563017.6/57



# asym\_atl2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.0/34

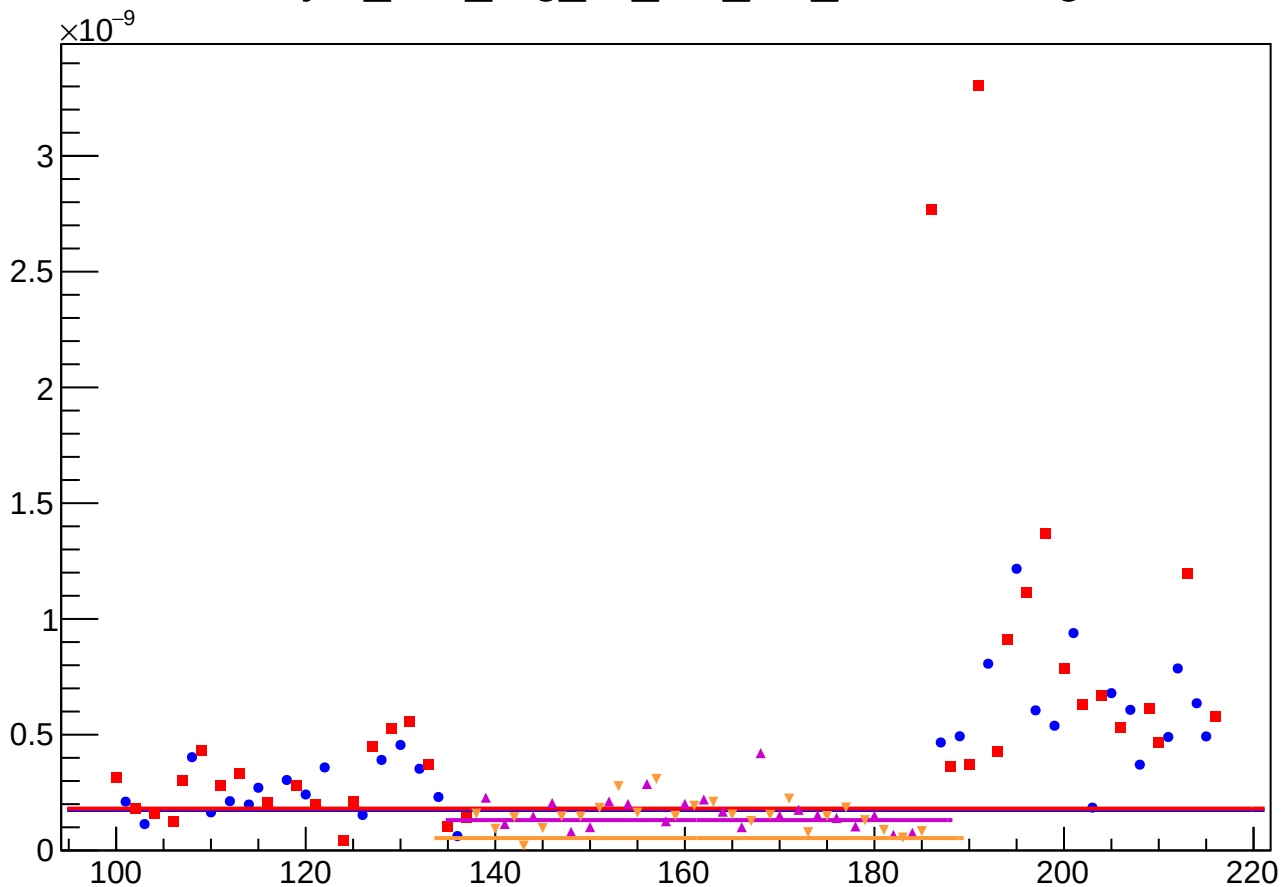
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.3/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 147.5/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.1/57

# asym\_atl2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6848934.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7244510.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8300699.0/34

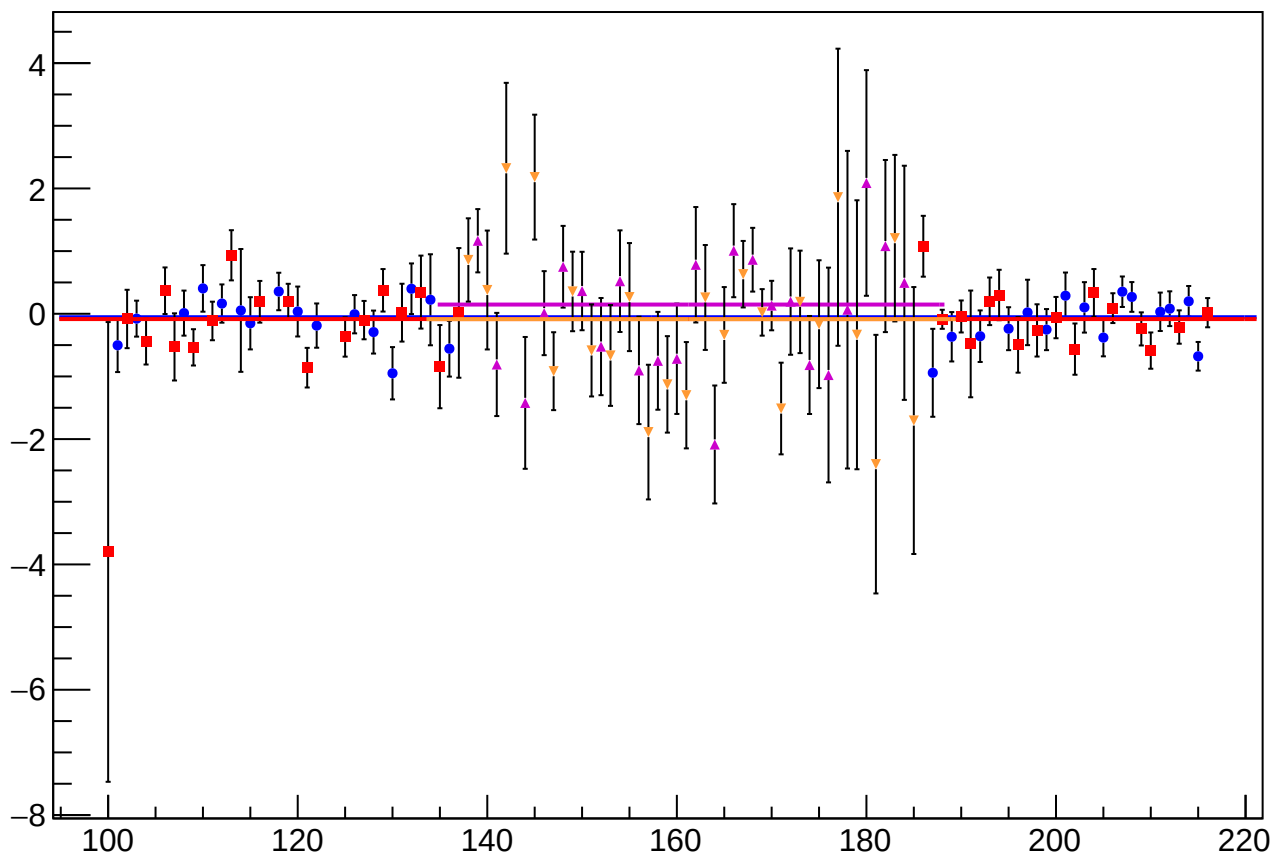
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1904207.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17426453.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32250334.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10646900.1/57

# asym\_atl2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.055 \pm 0.061$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.085 \pm 0.057$   $\chi^2/\text{NDF}$ : 40.7/33

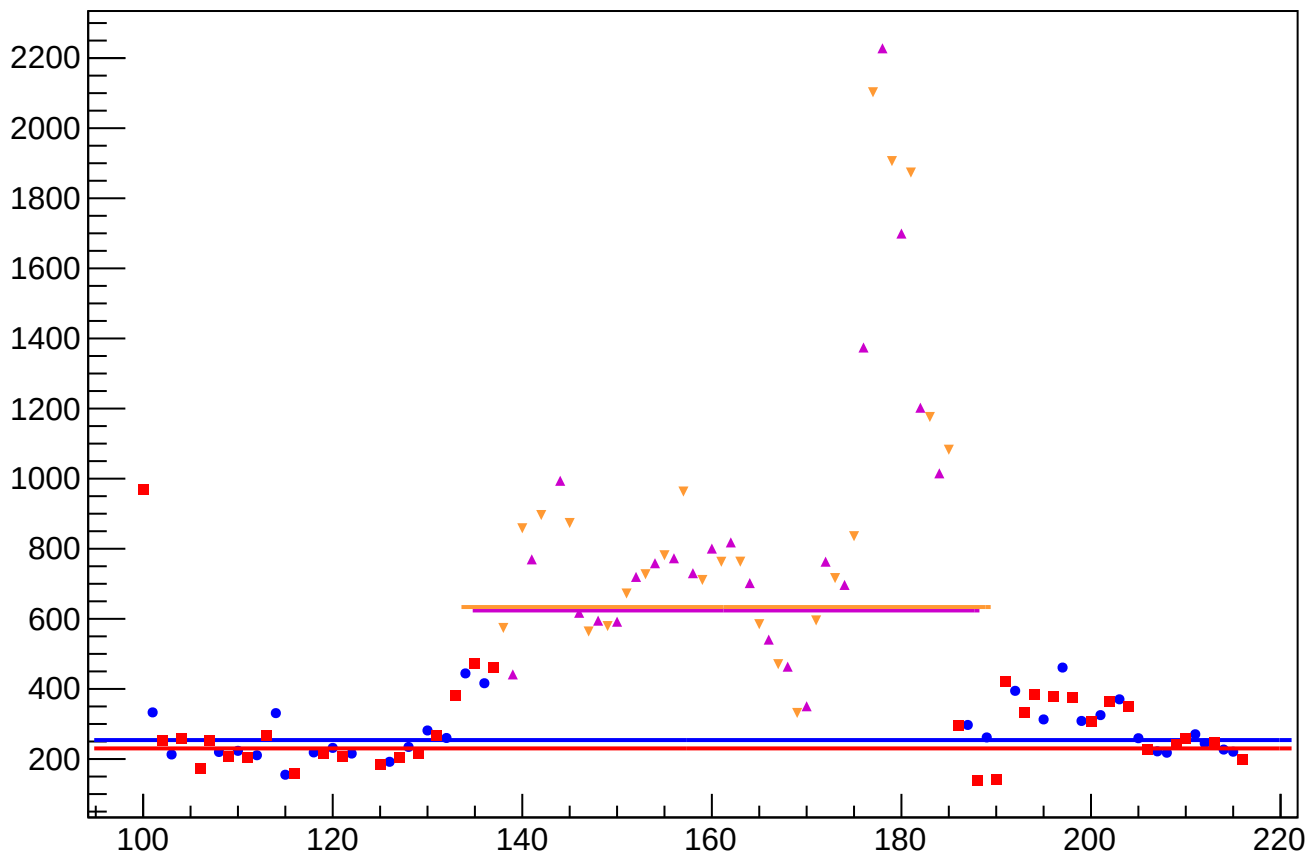
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.059 \pm 0.057$   $\chi^2/\text{NDF}$ : 62.5/54

All:  $-0.058 \pm 0.039$   $\chi^2/\text{NDF}$ : 131.5/111

- sign  $-0.058 \pm 0.053$   $\chi^2/\text{NDF}$ : 69.0/56

# asym\_atl2\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $254.090 \pm 0.043$   $\chi^2/\text{NDF}$ : 1932803.3/30

Left Out:  $633.674 \pm 0.114$   $\chi^2/\text{NDF}$ : 4994105.8/23

Right Out:  $230.271 \pm 0.040$   $\chi^2/\text{NDF}$ : 3476303.9/33

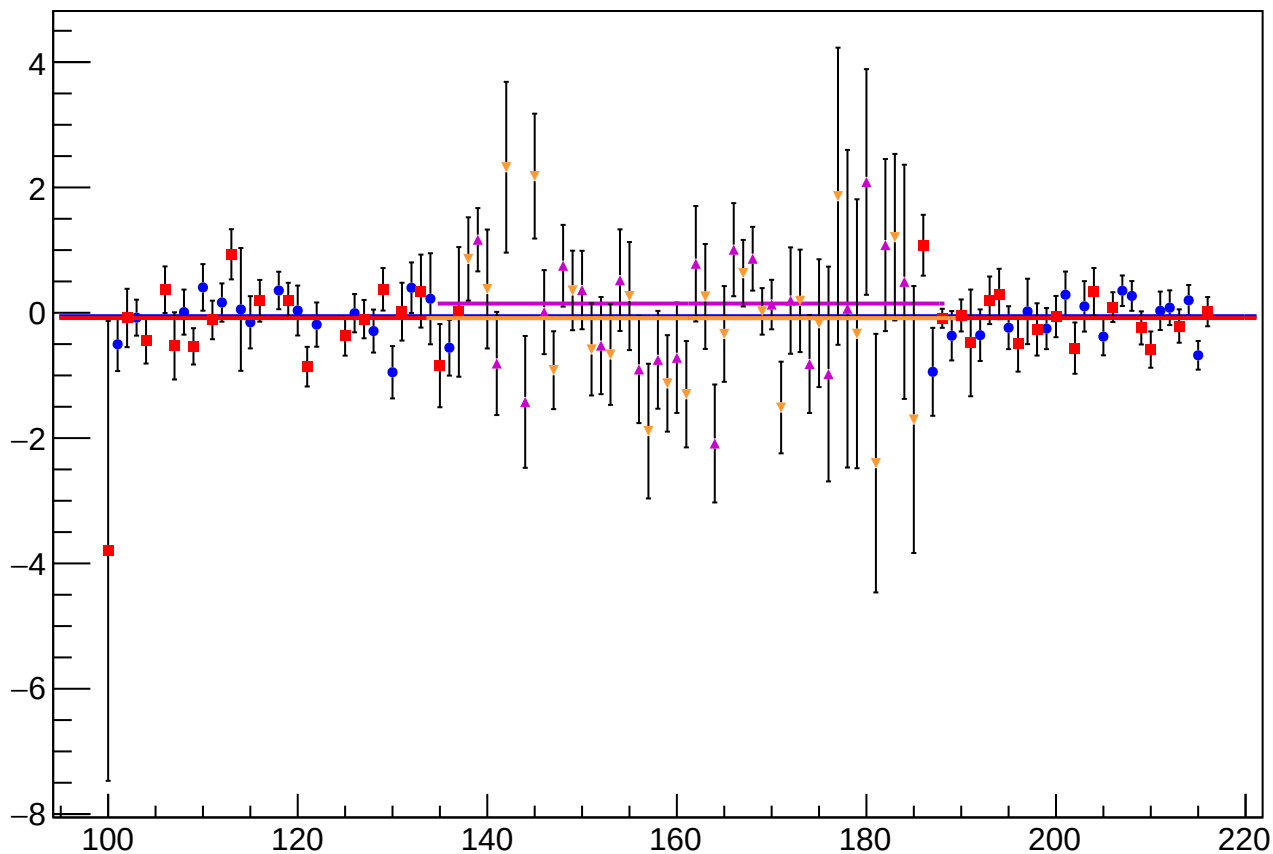
Left In:  $623.916 \pm 0.112$   $\chi^2/\text{NDF}$ : 4541431.8/22

+ sign  $301.576 \pm 0.040$   $\chi^2/\text{NDF}$ : 16601400.4/54

All:  $287.514 \pm 0.028$   $\chi^2/\text{NDF}$ : 35815010.9/13

- sign  $275.193 \pm 0.038$   $\chi^2/\text{NDF}$ : 18986017.3/56

# asym\_atl2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.055 \pm 0.061$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.085 \pm 0.057$   $\chi^2/\text{NDF}$ : 40.7/33

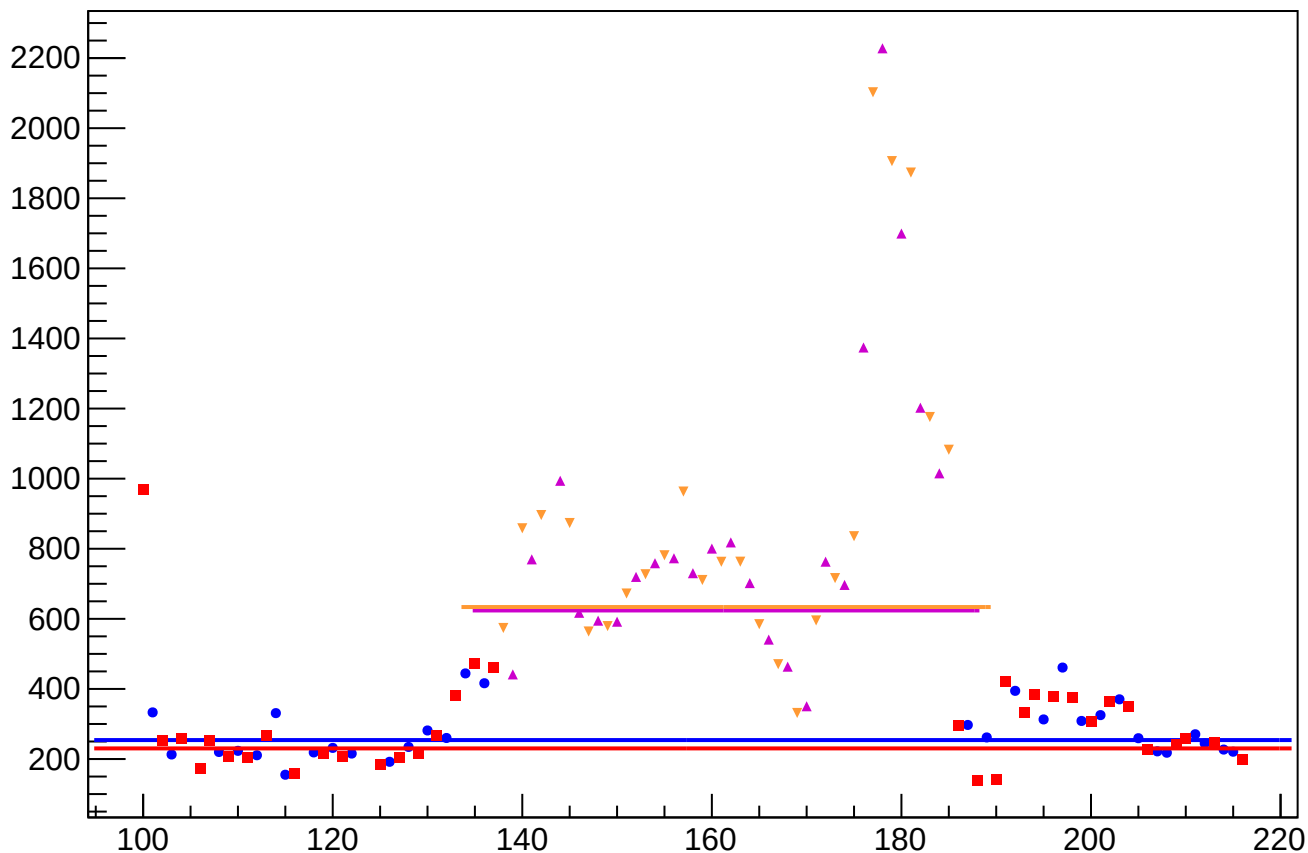
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.059 \pm 0.057$   $\chi^2/\text{NDF}$ : 62.5/54

All:  $-0.058 \pm 0.039$   $\chi^2/\text{NDF}$ : 131.5/111

- sign  $-0.058 \pm 0.053$   $\chi^2/\text{NDF}$ : 69.0/56

# asym\_atl2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 254.090 $\pm$ 0.043  $\chi^2$ /NDF: 1932803.3/30

Left Out: 633.674 $\pm$ 0.114  $\chi^2$ /NDF:4994105.8/23

Right Out: 230.271 $\pm$ 0.040  $\chi^2$ /NDF: 3476303.9/33

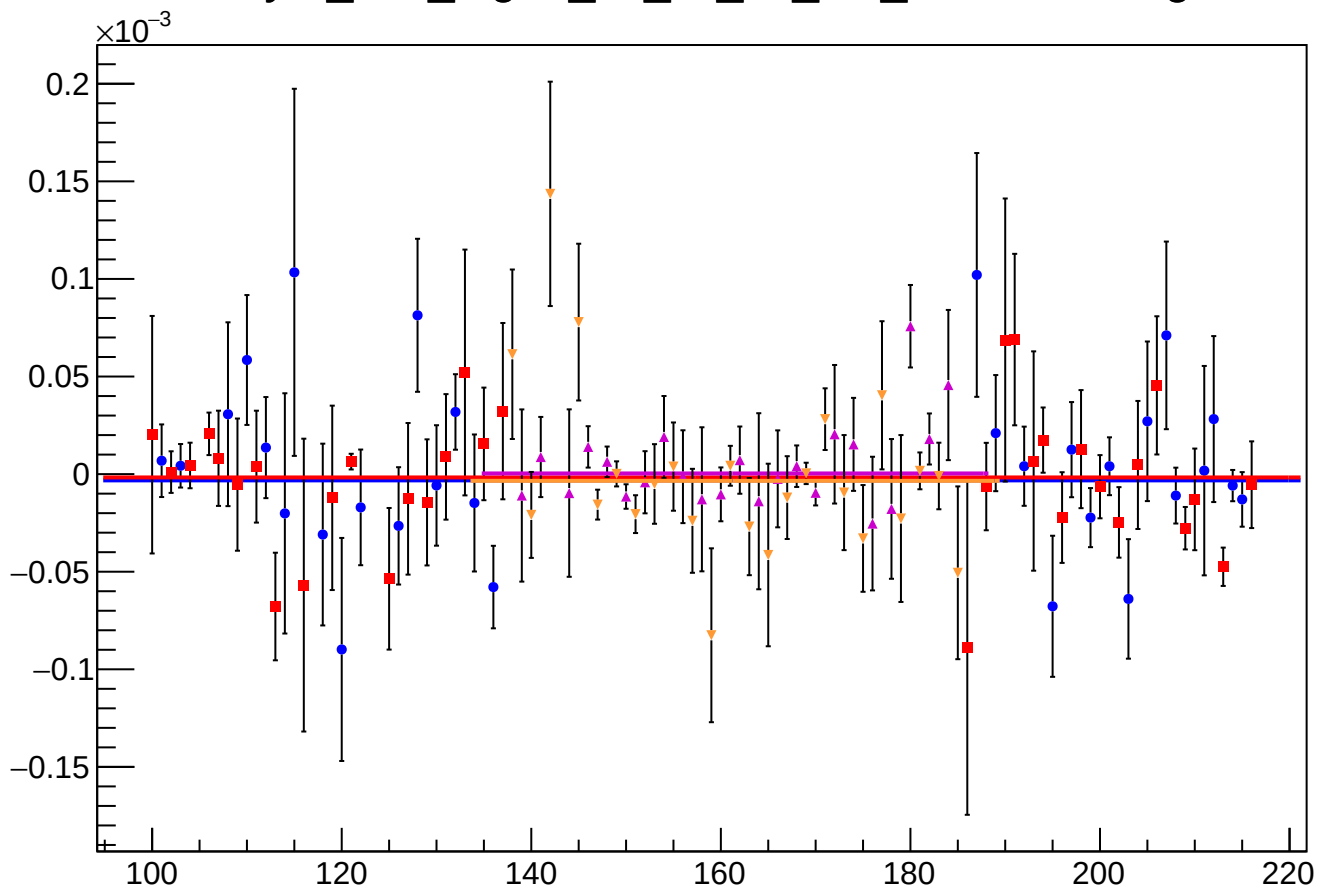
Left In: 623.916 $\pm$ 0.112  $\chi^2$ /NDF:4541431.8/22

+ sign 301.576 $\pm$ 0.040  $\chi^2$ /NDF: 16601400.4/54

All: 287.514 $\pm$ 0.028  $\chi^2$ /NDF: 35815010.9/1

- sign 275.193 $\pm$ 0.038  $\chi^2$ /NDF: 18986017.3/56

asym\_atl2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 42.1/30$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 34.3/23$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 57.5/33$

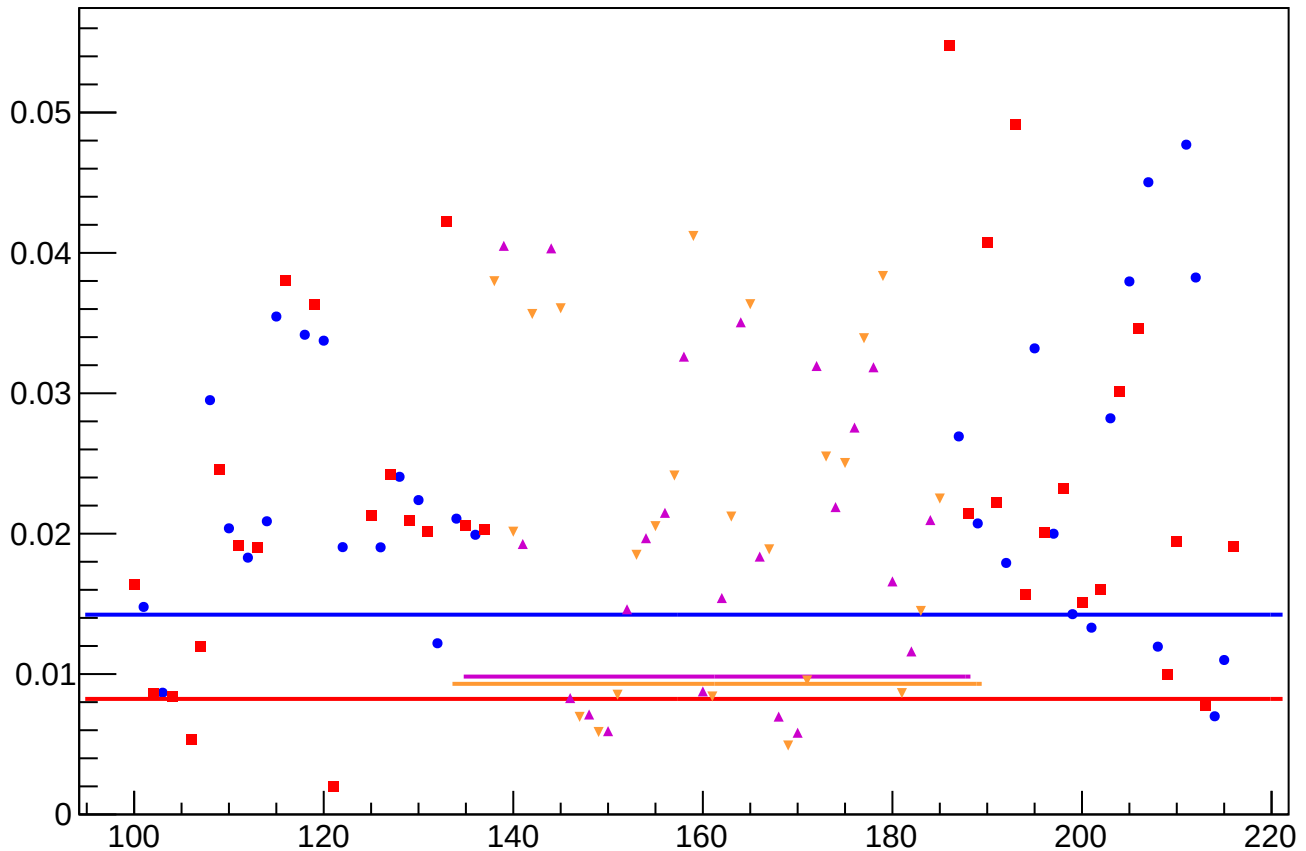
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 76.3/54$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 162.7/111$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 85.6/56$

asym\_atl2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.014 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8198866.0/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ :12224529.3/23

Right Out: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17374010.6/33

Left In: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ :10307261.6/22

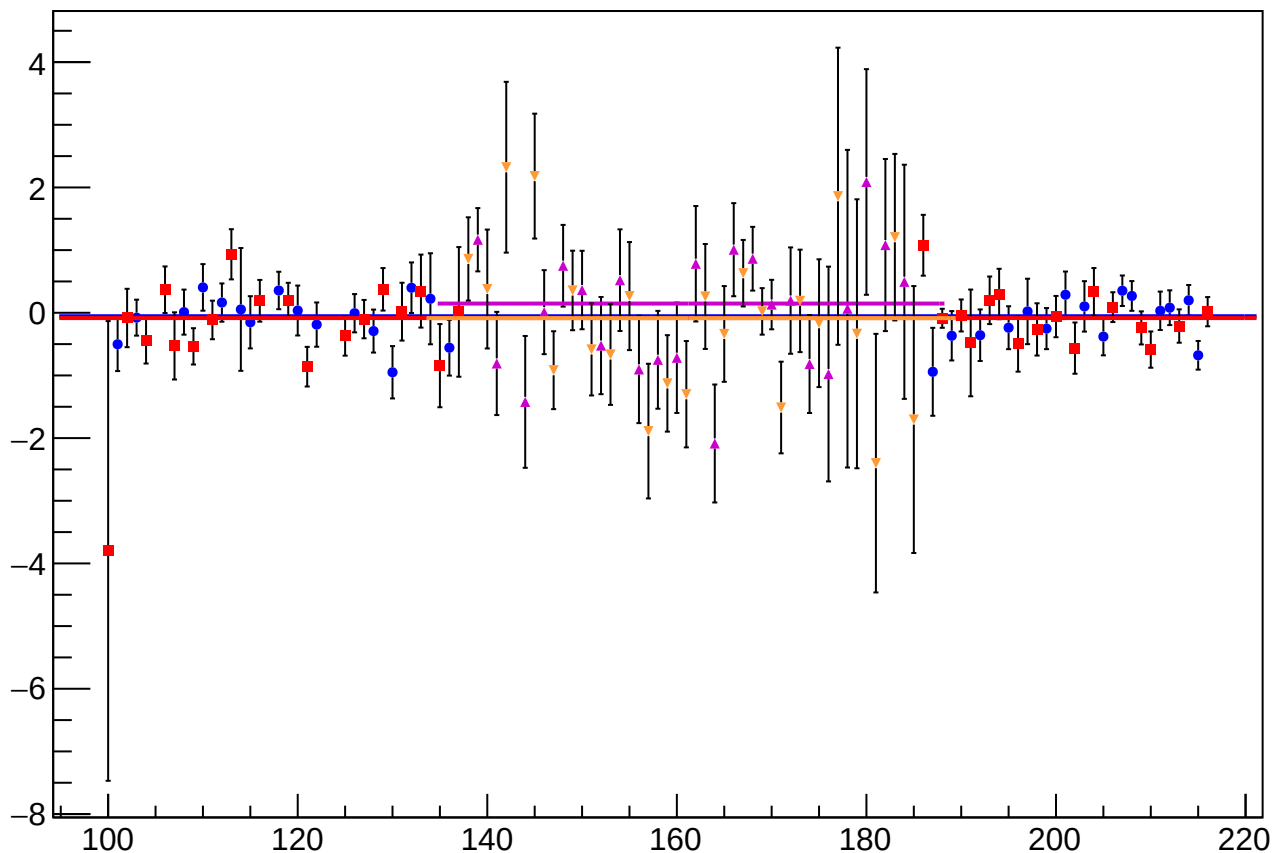
+ sign 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22608987.5/54

All: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 51533204.0/111

- sign 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 28005342.1/56



# asym\_atl2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.055 \pm 0.061$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.085 \pm 0.057$   $\chi^2/\text{NDF}$ : 40.7/33

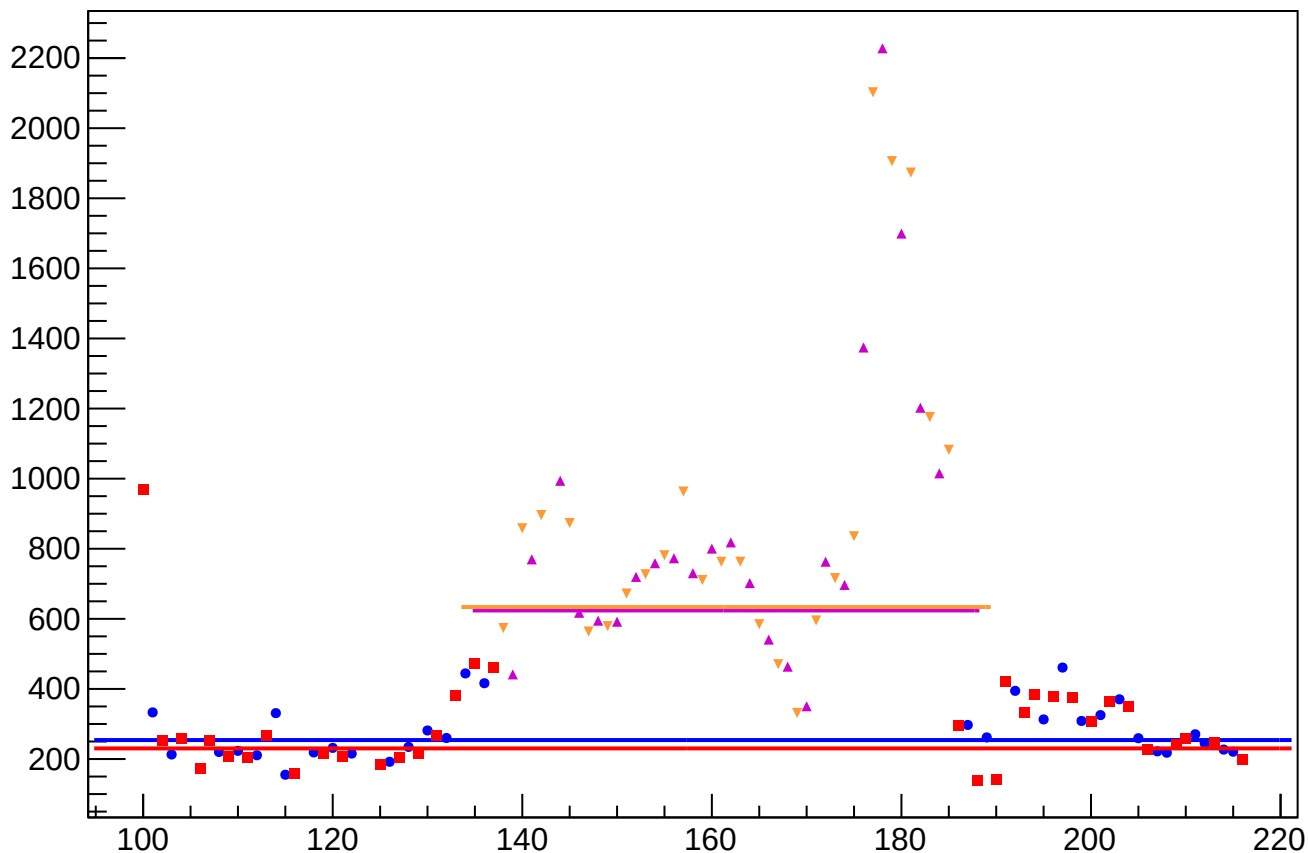
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.059 \pm 0.057$   $\chi^2/\text{NDF}$ : 62.5/54

All:  $-0.058 \pm 0.039$   $\chi^2/\text{NDF}$ : 131.5/111

- sign  $-0.058 \pm 0.053$   $\chi^2/\text{NDF}$ : 69.0/56

# asym\_atl2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 254.091+/-0.043  $\chi^2/\text{NDF}$ : 1932802.1/30

Left Out: 633.678+/-0.114  $\chi^2/\text{NDF}$ : 4994172.5/23

Right Out: 230.269+/-0.040  $\chi^2/\text{NDF}$ : 3476451.7/33

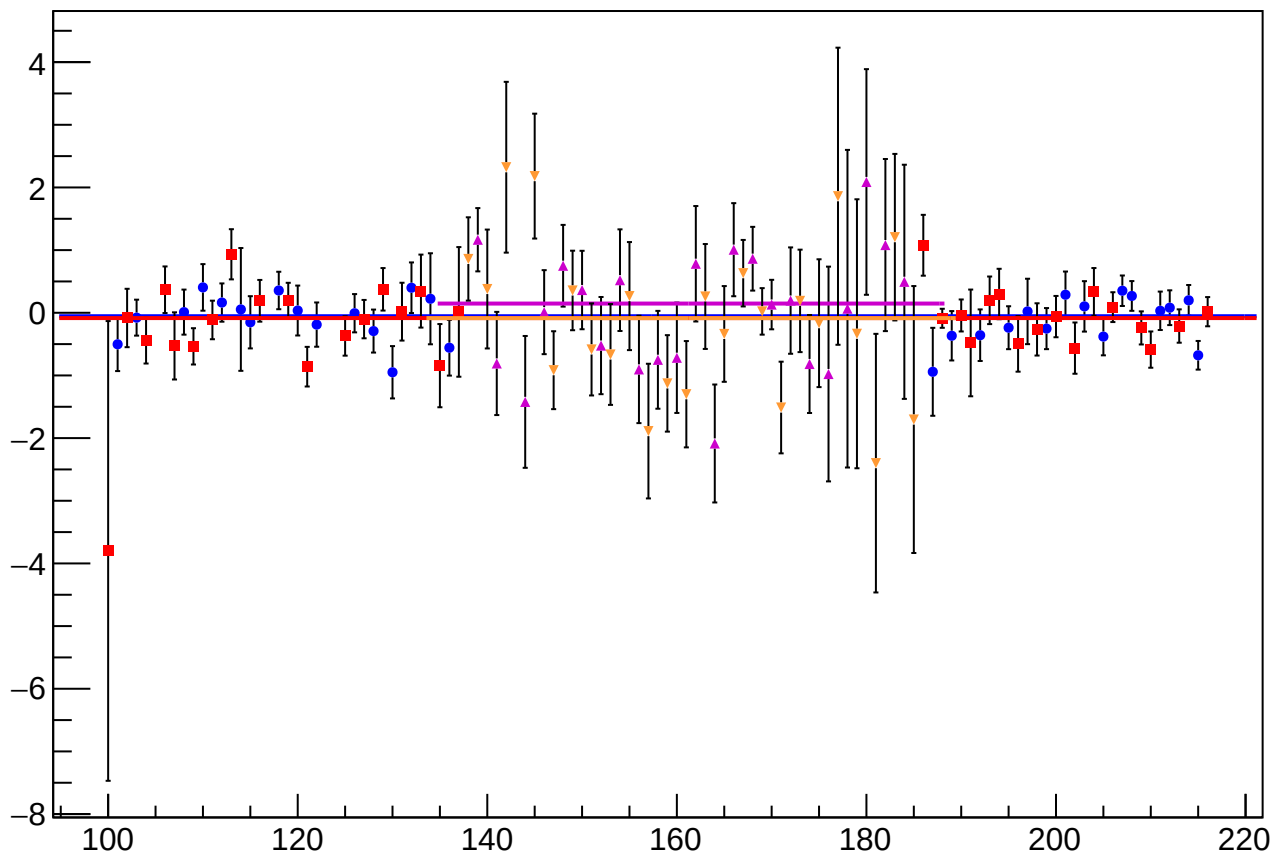
Left In: 623.922+/-0.112  $\chi^2/\text{NDF}$ : 4541413.9/22

+ sign 301.576+/-0.040  $\chi^2/\text{NDF}$ : 16601511.3/54

All: 287.513+/-0.028  $\chi^2/\text{NDF}$ : 35815595.4/1

- sign 275.190+/-0.038  $\chi^2/\text{NDF}$ : 18986438.9/56

asym\_atl2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.055 \pm 0.061$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-0.085 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.2/23

Right Out:  $-0.085 \pm 0.057$   $\chi^2/\text{NDF}$ : 40.7/33

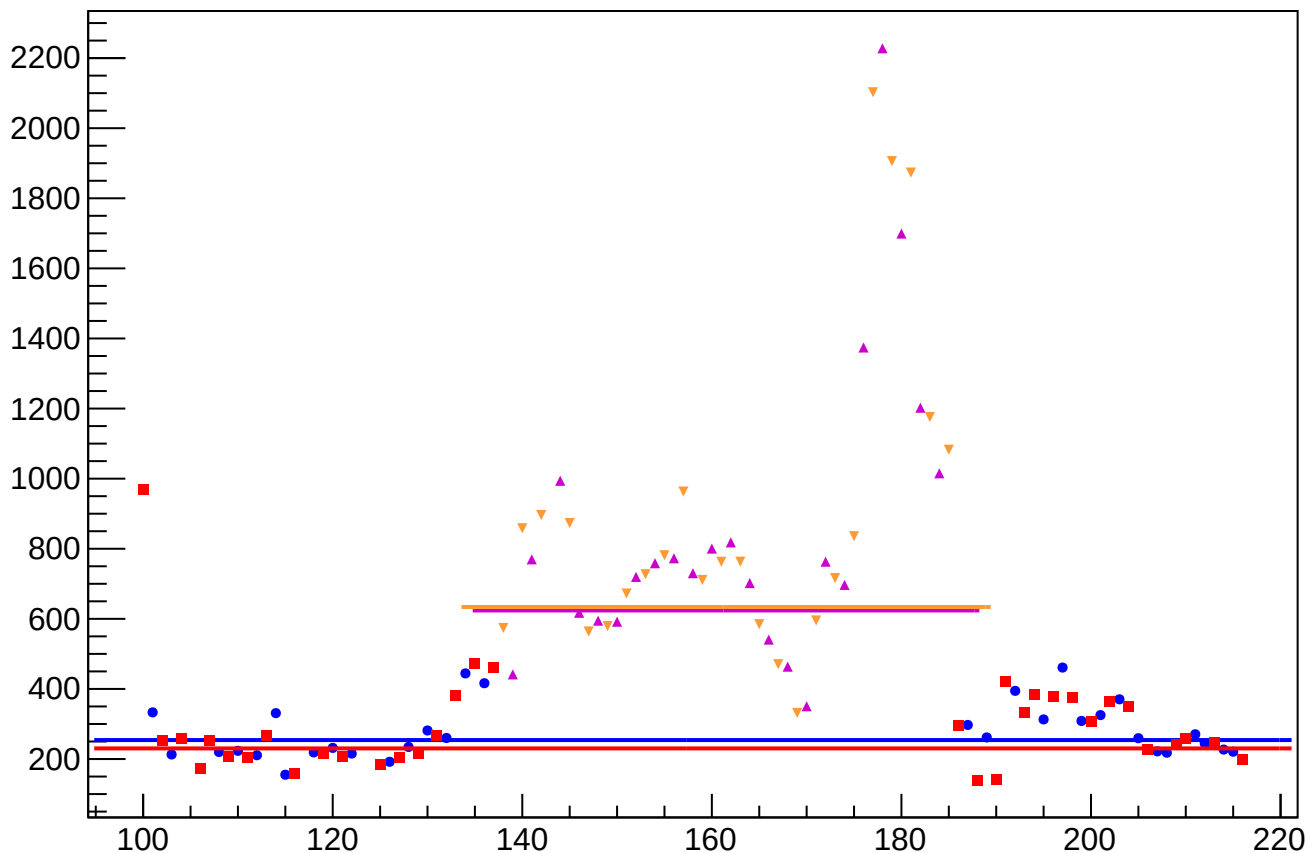
Left In:  $0.147 \pm 0.158$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $-0.059 \pm 0.057$   $\chi^2/\text{NDF}$ : 62.5/54

All:  $-0.058 \pm 0.039$   $\chi^2/\text{NDF}$ : 131.5/111

- sign  $-0.058 \pm 0.053$   $\chi^2/\text{NDF}$ : 69.0/56

asym\_atl2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 254.091 $\pm$ 0.043  $\chi^2$ /NDF: 1932802.1/30

Left Out: 633.678 $\pm$ 0.114  $\chi^2$ /NDF: 4994172.5/23

Right Out: 230.269 $\pm$ 0.040  $\chi^2$ /NDF: 3476451.7/33

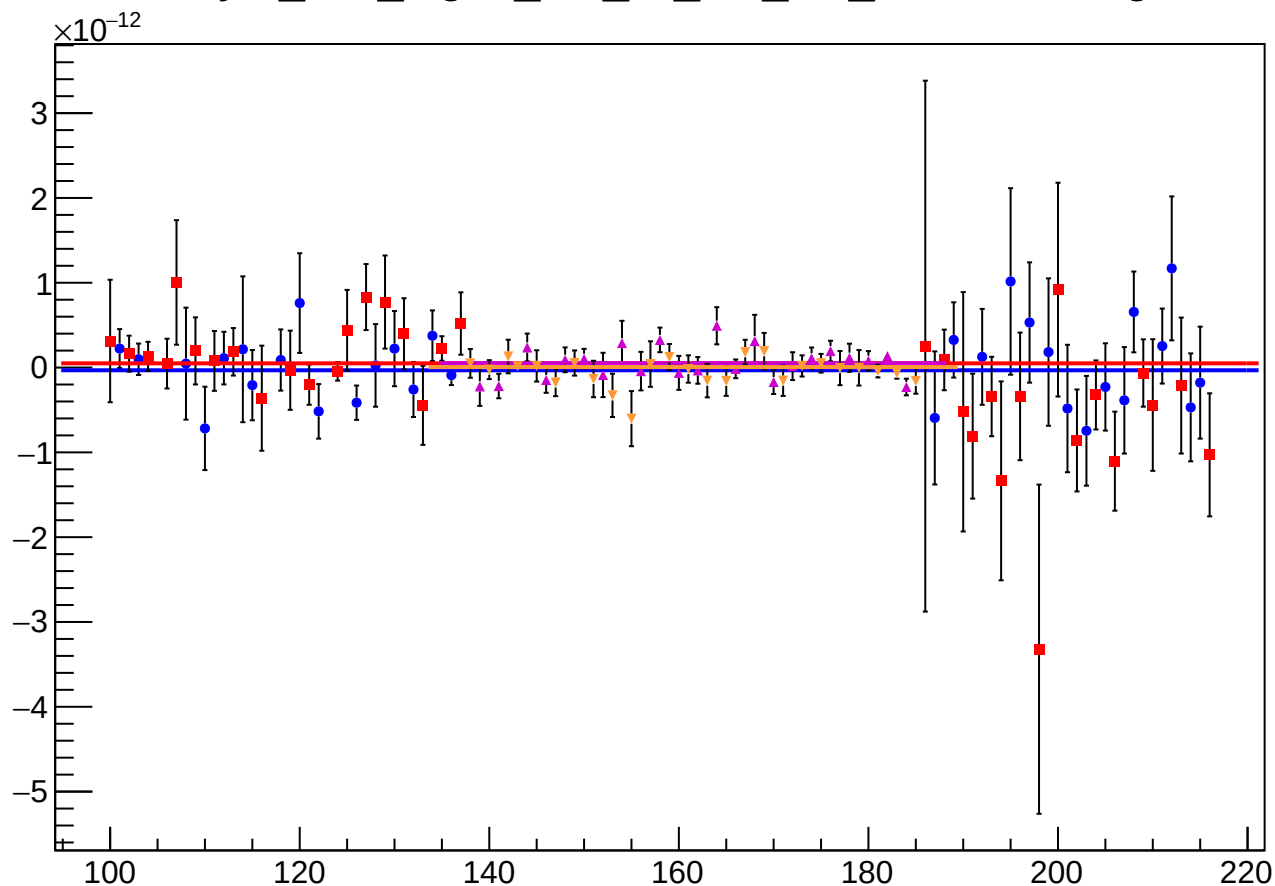
Left In: 623.922 $\pm$ 0.112  $\chi^2$ /NDF: 4541413.9/22

+ sign 301.576 $\pm$ 0.040  $\chi^2$ /NDF: 16601511.3/54

All: 287.513 $\pm$ 0.028  $\chi^2$ /NDF: 35815595.4/1

- sign 275.190 $\pm$ 0.038  $\chi^2$ /NDF: 18986438.9/56

asym\_atl2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.6/34

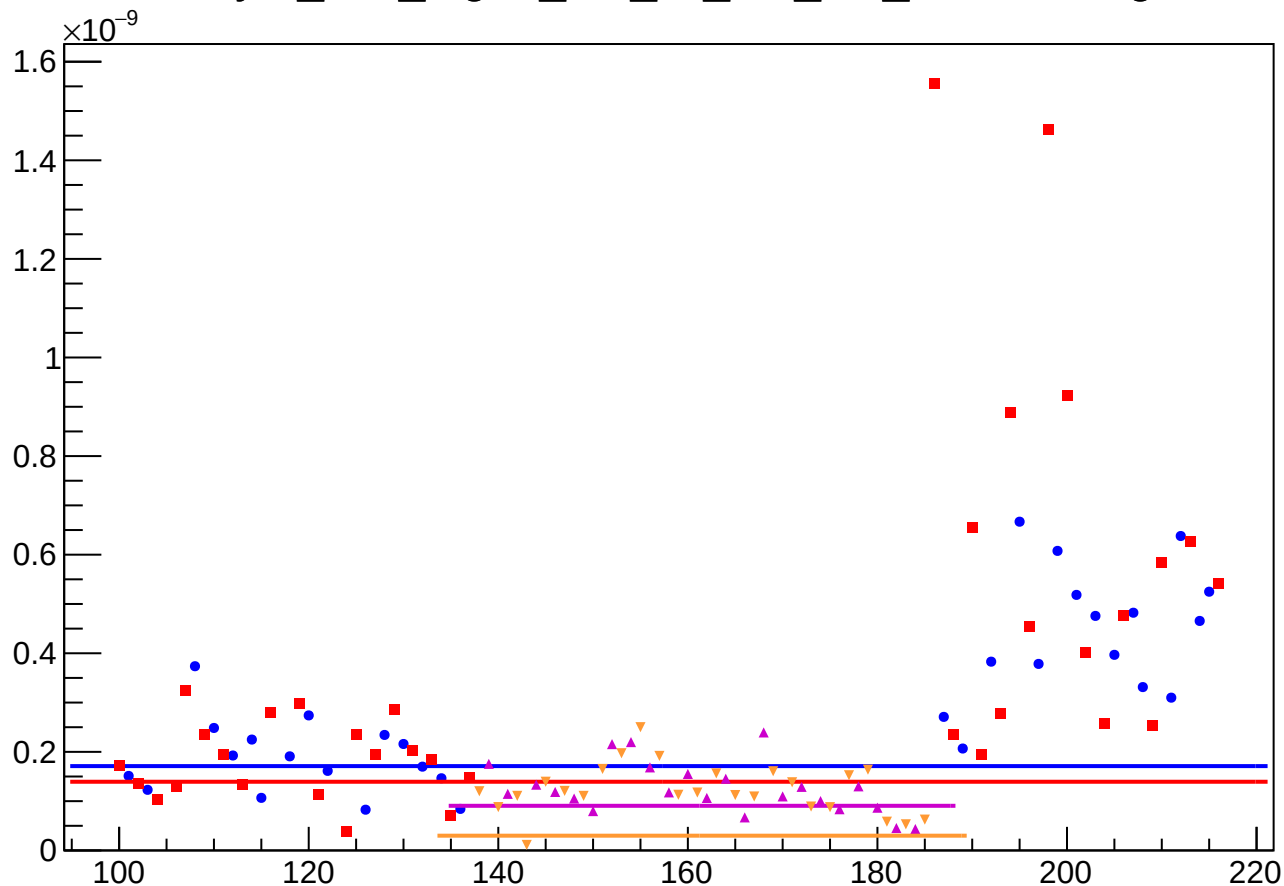
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.9/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 110.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.0/57

asym\_atl2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7256758.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17263498.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10525210.0/34

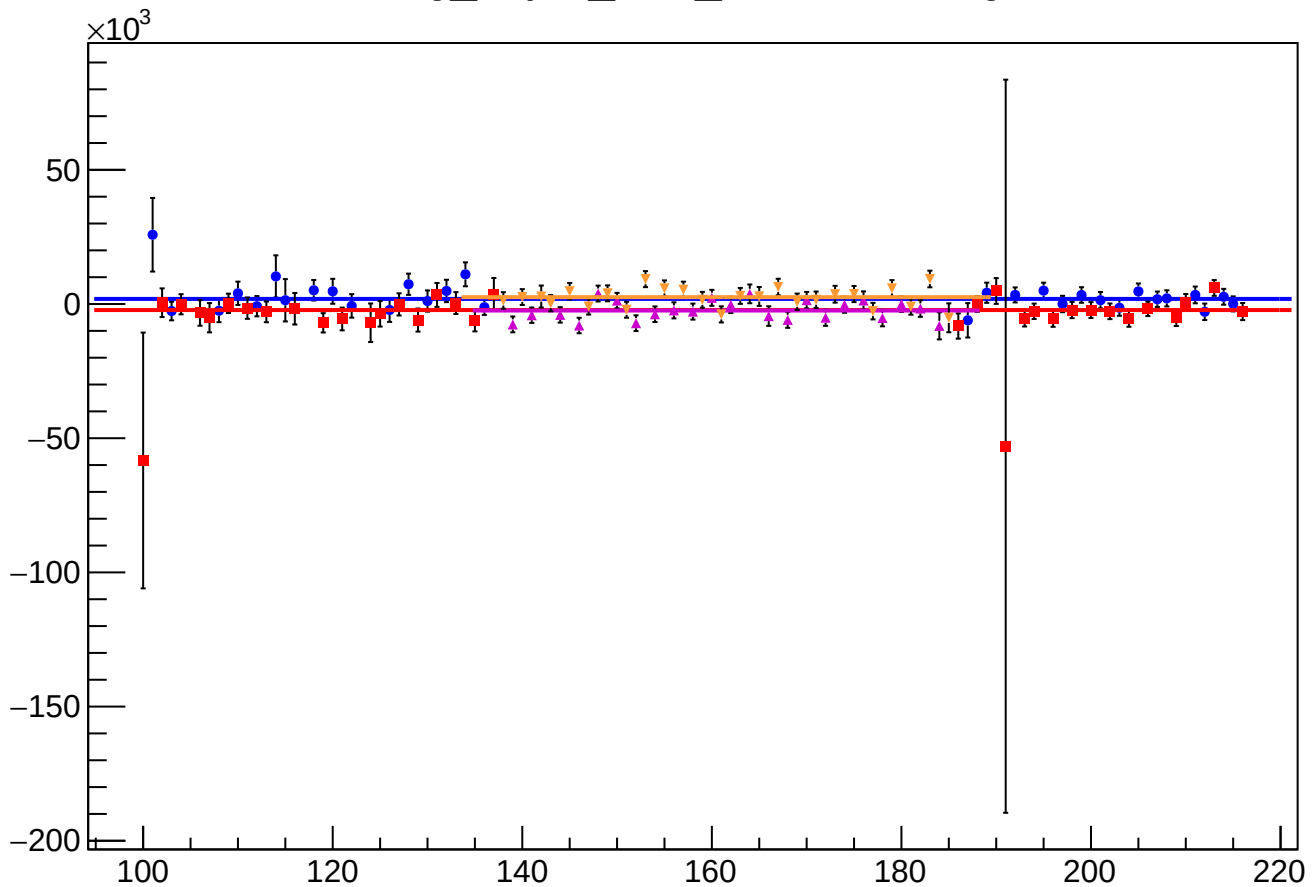
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4716343.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34391576.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 61168669.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16486015.7/57

# reg\_asym\_atr1\_mean vs Slug



Right In:  $1908.692 \pm 638.406$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $2556.827 \pm 621.829$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-2245.111 \pm 633.764$   $\chi^2/\text{NDF}$ : 28.3/34

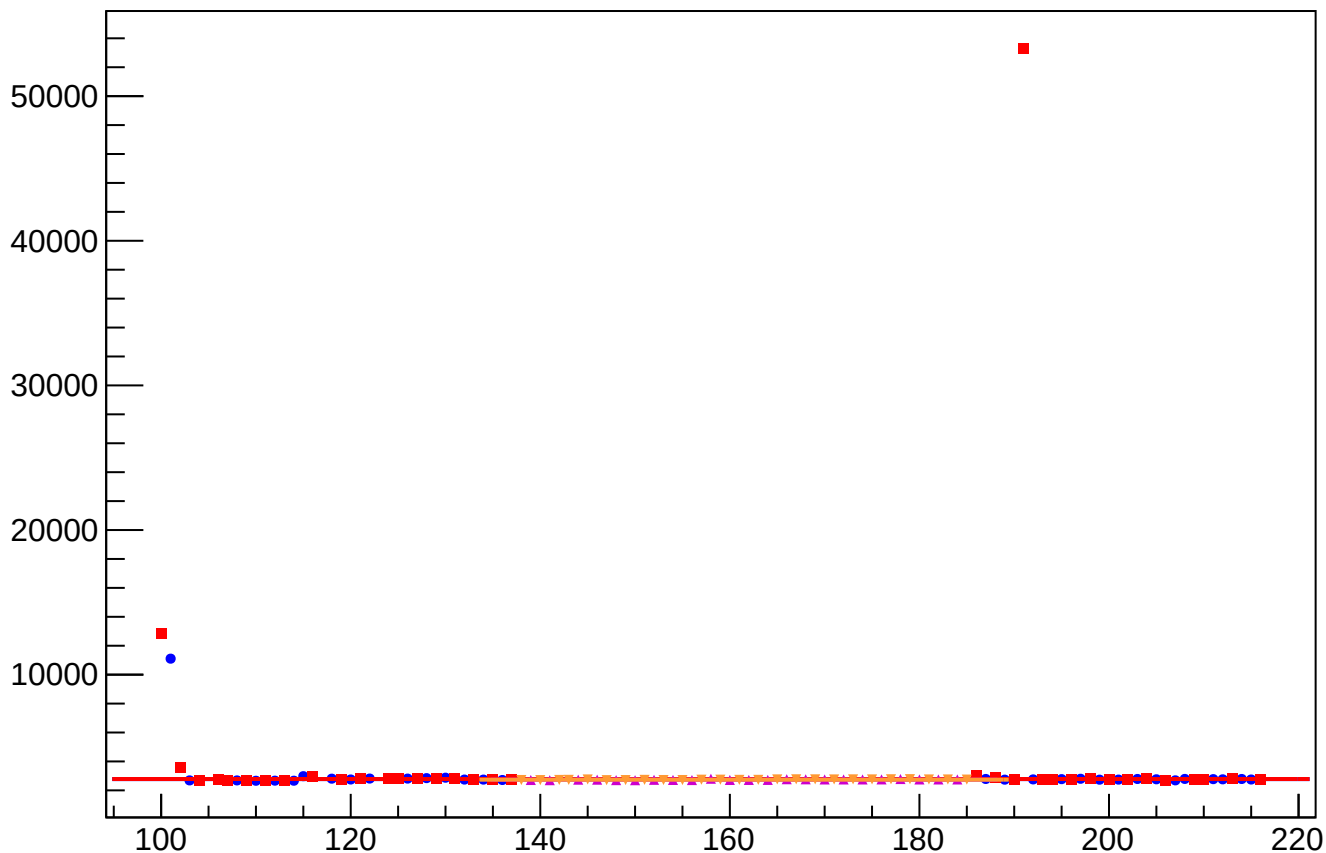
Left In:  $-2408.320 \pm 639.726$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $2241.283 \pm 445.445$   $\chi^2/\text{NDF}$ : 59.2/55

All:  $-17.923 \pm 316.656$   $\chi^2/\text{NDF}$ : 170.9/113

- sign  $-2325.951 \pm 450.232$   $\chi^2/\text{NDF}$ : 59.7/57

# reg\_asym\_atr1\_rms vs Slug



Right In: 2777.540 $\pm$ 0.451  $\chi^2$ /NDF: 750728.6/30

Left Out: 2737.519 $\pm$ 0.440  $\chi^2$ /NDF: 2317.5/24

Right Out: 2784.364 $\pm$ 0.448  $\chi^2$ /NDF: 481905.6/34

Left In: 2739.863 $\pm$ 0.452  $\chi^2$ /NDF: 3362.0/22

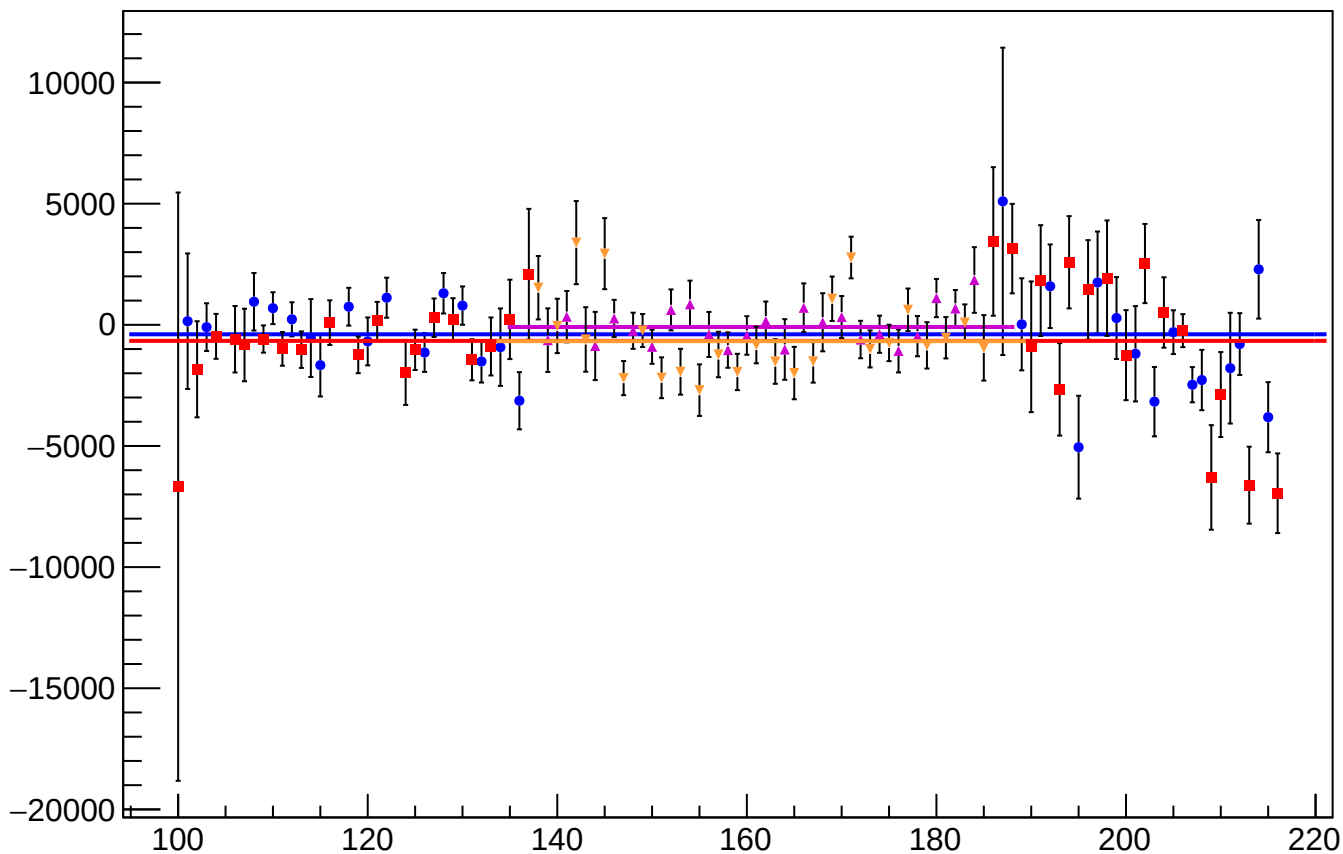
+ sign 2757.003 $\pm$ 0.315  $\chi^2$ /NDF: 757079.3/55

All: 2759.634 $\pm$ 0.224  $\chi^2$ /NDF: 1247372.2/11

- sign 2762.322 $\pm$ 0.318  $\chi^2$ /NDF: 490151.8/57



# asym\_atr1\_reg\_correction\_mean vs Slug



Right In:  $-391.012 \pm 196.807$   $\chi^2/\text{NDF}: 56.2/30$

Left Out:  $-673.693 \pm 181.230$   $\chi^2/\text{NDF}: 58.4/24$

Right Out:  $-661.691 \pm 189.869$   $\chi^2/\text{NDF}: 64.8/34$

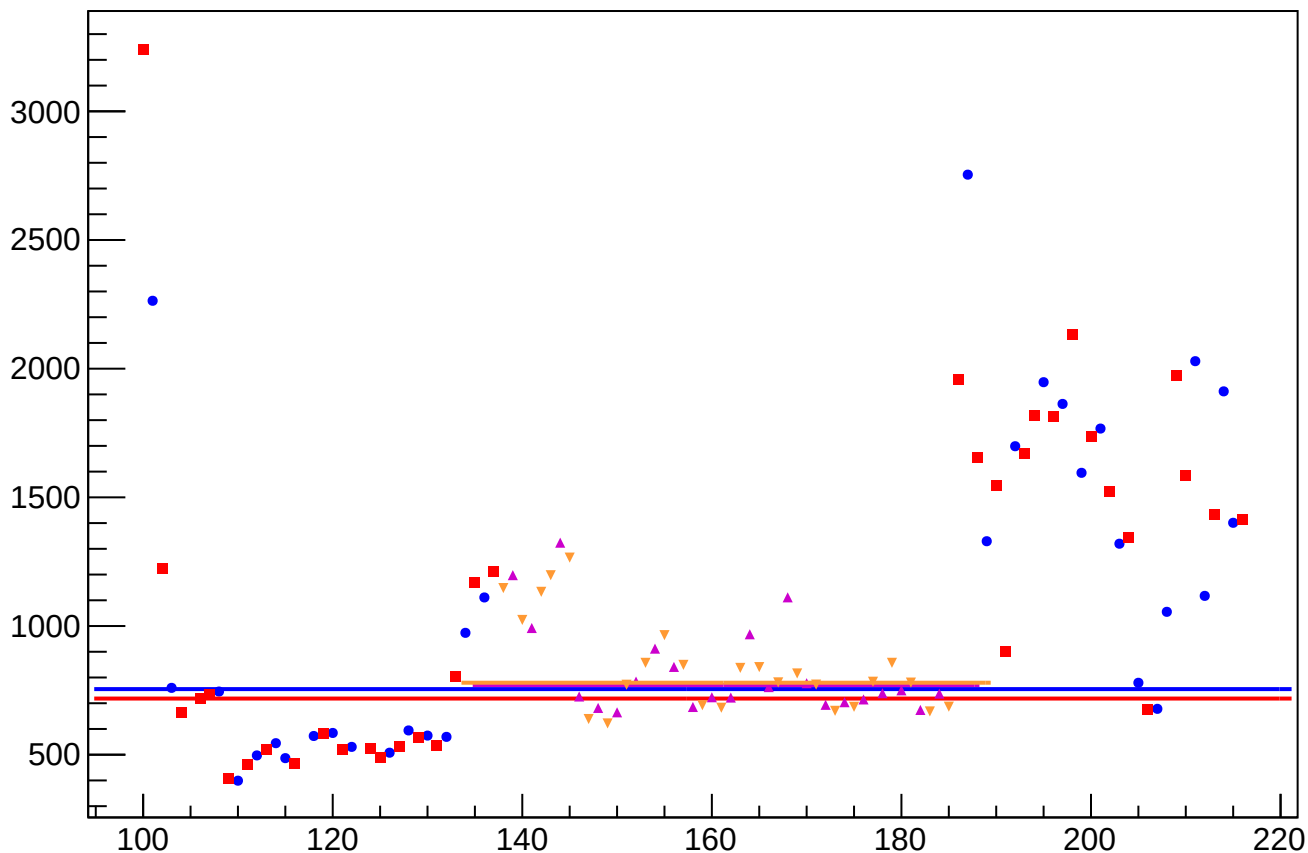
Left In:  $-89.519 \pm 183.491$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $-543.980 \pm 133.316$   $\chi^2/\text{NDF}: 115.7/55$

All:  $-453.986 \pm 93.780$   $\chi^2/\text{NDF}: 200.9/113$

- sign  $-365.834 \pm 131.945$   $\chi^2/\text{NDF}: 84.3/57$

# asym\_atr1\_reg\_correction\_rms vs Slug



Right In: 754.912+/-0.139     $\chi^2/\text{NDF}$ : 8023863.8/30

Left Out: 779.715+/-0.128     $\chi^2/\text{NDF}$ :1243743.5/24

Right Out: 718.172+/-0.134     $\chi^2/\text{NDF}$ : 9141266.2/34

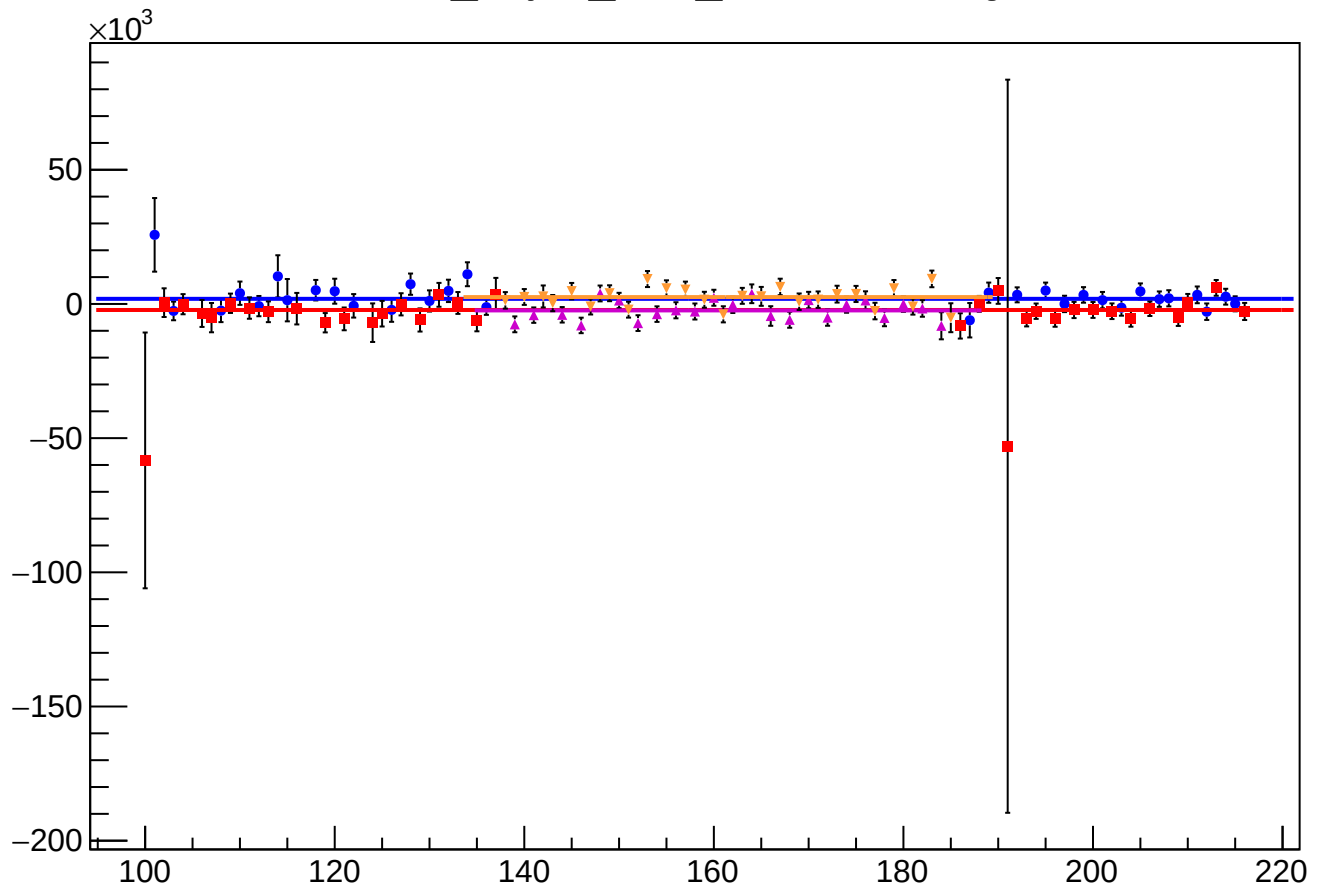
Left In: 770.795+/-0.130     $\chi^2/\text{NDF}$ :1076354.9/22

+ sign 768.334+/-0.094     $\chi^2/\text{NDF}$ : 9284797.3/55

All: 756.739+/-0.066     $\chi^2/\text{NDF}$ : 19611800.7/1

- sign 745.382+/-0.093     $\chi^2/\text{NDF}$ : 10297058.6/57

# cor\_asym\_atr1\_mean vs Slug



Right In:  $1908.381 \pm 638.406$   $\chi^2/\text{NDF}: 27.1/30$

Left Out:  $2556.787 \pm 621.829$   $\chi^2/\text{NDF}: 31.6/24$

Right Out:  $-2247.044 \pm 634.310$   $\chi^2/\text{NDF}: 28.3/34$

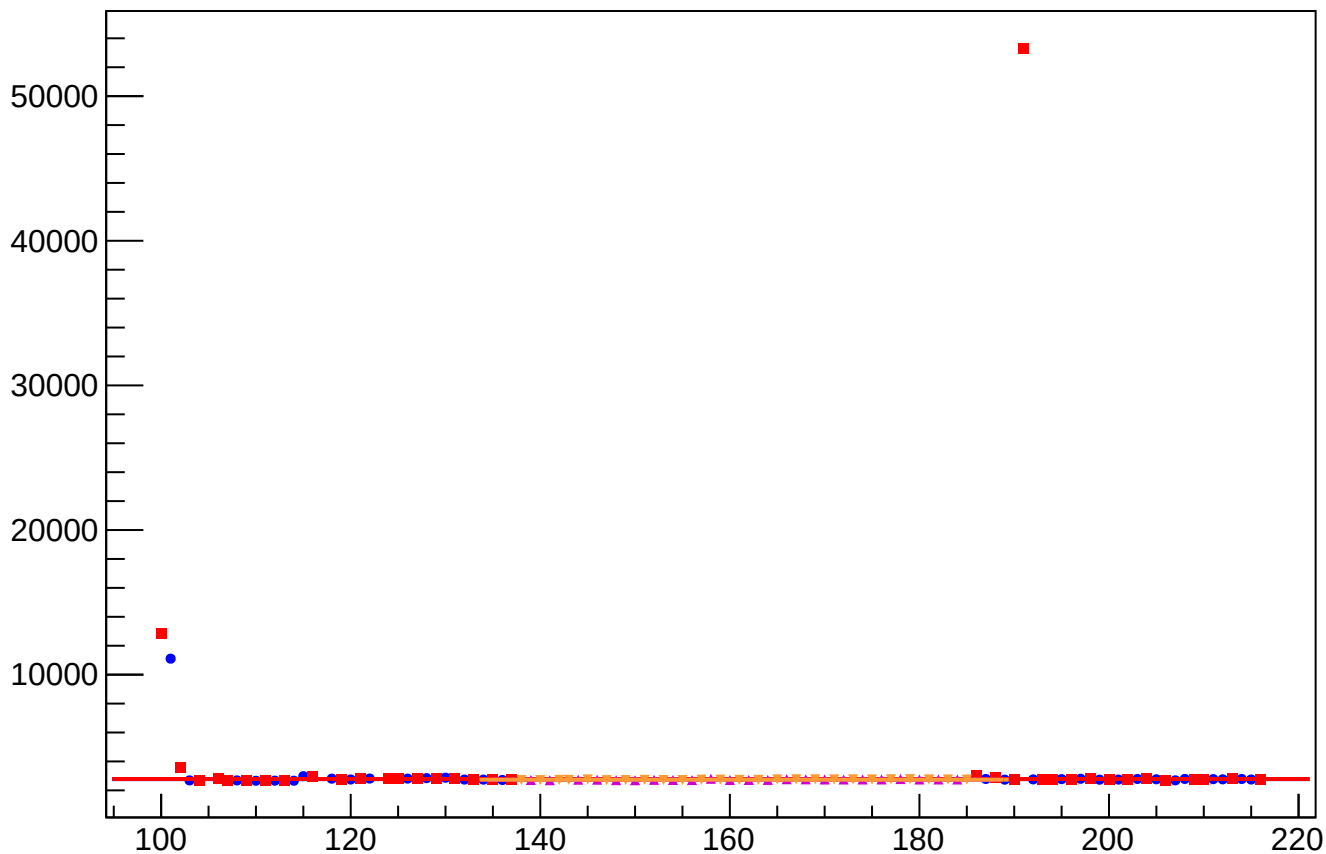
Left In:  $-2408.461 \pm 639.726$   $\chi^2/\text{NDF}: 31.4/22$

+ sign  $2241.111 \pm 445.445$   $\chi^2/\text{NDF}: 59.2/55$

All:  $-17.570 \pm 316.724$   $\chi^2/\text{NDF}: 170.9/113$

- sign  $-2327.066 \pm 450.428$   $\chi^2/\text{NDF}: 59.7/57$

# cor\_asym\_atr1\_rms vs Slug



Right In: 2777.540 $\pm$ 0.451  $\chi^2$ /NDF: 750727.7/30

Left Out: 2737.519 $\pm$ 0.440  $\chi^2$ /NDF: 2317.5/24

Right Out: 2786.350 $\pm$ 0.449  $\chi^2$ /NDF: 481773.0/34

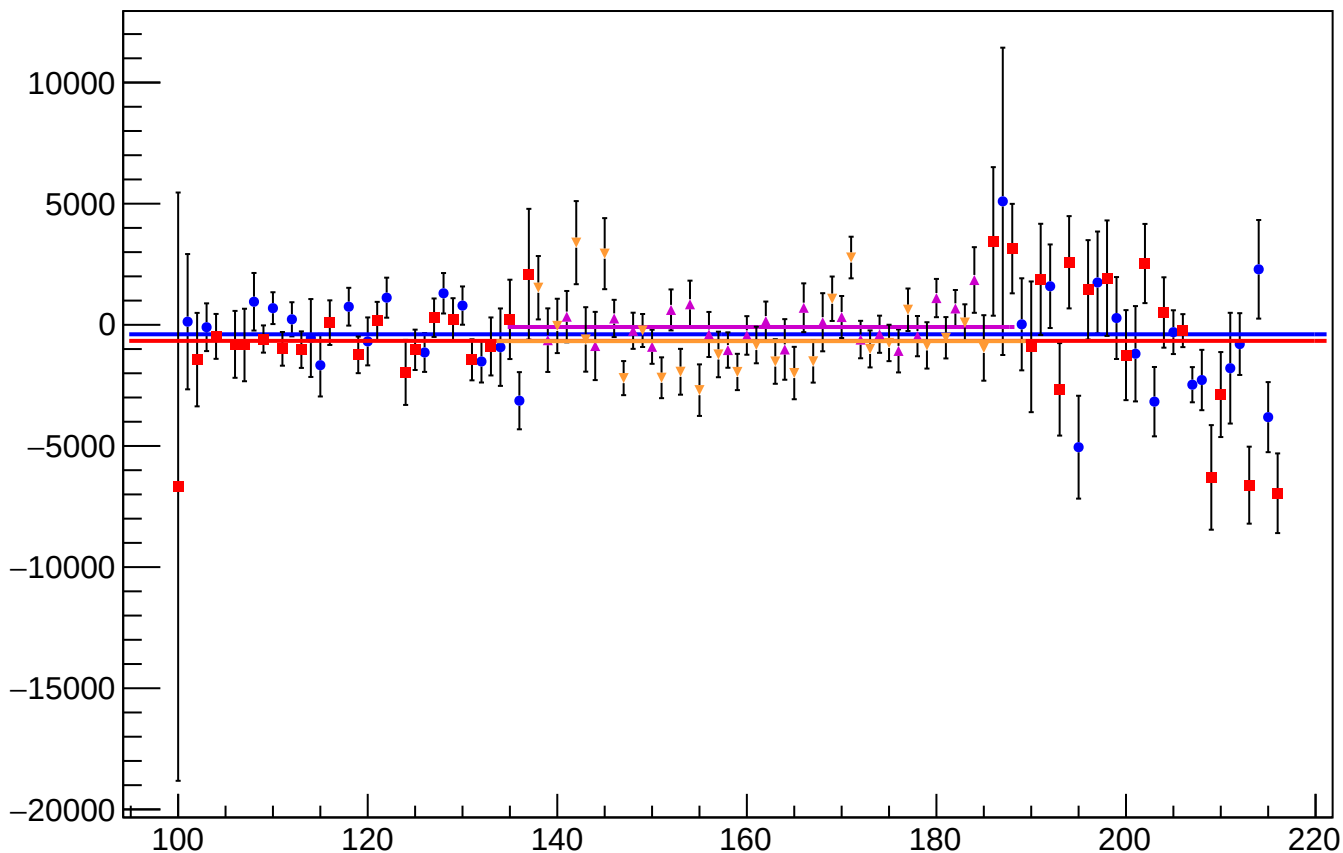
Left In: 2739.863 $\pm$ 0.452  $\chi^2$ /NDF: 3362.0/22

+ sign 2757.003 $\pm$ 0.315  $\chi^2$ /NDF: 757078.4/55

All: 2760.118 $\pm$ 0.224  $\chi^2$ /NDF: 1247736.6/11

- sign 2763.304 $\pm$ 0.319  $\chi^2$ /NDF: 490460.3/57

# asym\_atr1\_cor\_correction\_mean vs Slug



Right In:  $-390.994 \pm 196.800$   $\chi^2/\text{NDF}$ : 56.2/30

Left Out:  $-673.608 \pm 181.230$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $-662.365 \pm 189.843$   $\chi^2/\text{NDF}$ : 64.7/34

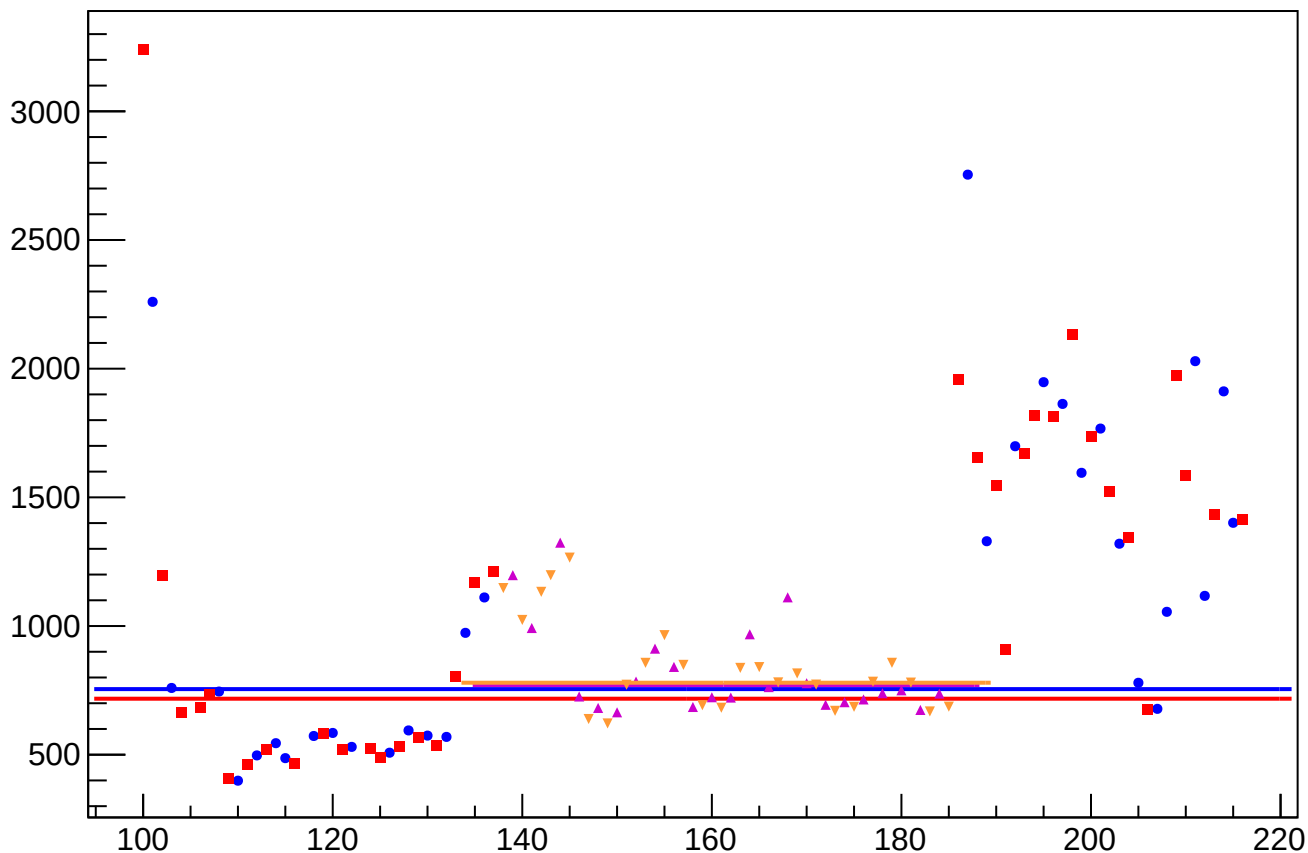
Left In:  $-89.643 \pm 183.492$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $-543.921 \pm 133.314$   $\chi^2/\text{NDF}$ : 115.7/55

All:  $-454.170 \pm 93.777$   $\chi^2/\text{NDF}$ : 200.8/113

- sign  $-366.265 \pm 131.937$   $\chi^2/\text{NDF}$ : 84.2/57

# asym\_atr1\_cor\_correction\_rms vs Slug



Right In: 754.898+/-0.139     $\chi^2/\text{NDF}$ : 8023042.1/30

Left Out: 779.713+/-0.128     $\chi^2/\text{NDF}$ :1243769.6/24

Right Out: 717.580+/-0.134     $\chi^2/\text{NDF}$ : 9137966.6/34

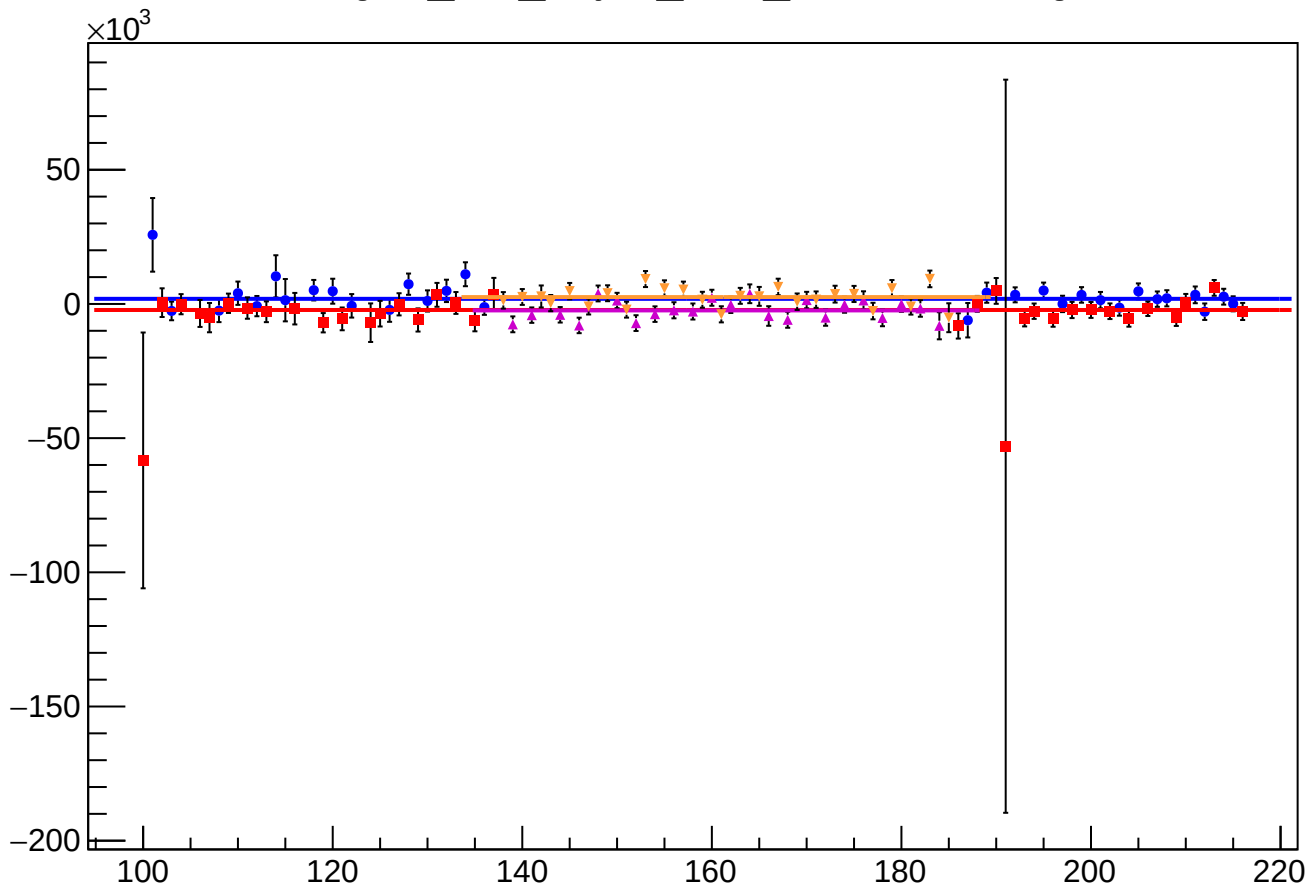
Left In: 770.799+/-0.130     $\chi^2/\text{NDF}$ :1076291.1/22

+ sign 768.326+/-0.094     $\chi^2/\text{NDF}$ : 9284018.0/55

All: 756.590+/-0.066     $\chi^2/\text{NDF}$ : 19610217.5/11

- sign 745.094+/-0.093     $\chi^2/\text{NDF}$ : 10295516.5/57

# eigen\_cor\_asym\_atr1\_mean vs Slug



Right In: 1908.381 $\pm$ 638.406  $\chi^2$ /NDF: 27.1/30

Left Out: 2556.787 $\pm$ 621.829  $\chi^2$ /NDF:31.6/24

Right Out: -2247.044 $\pm$ 634.310  $\chi^2$ /NDF: 28.3/34

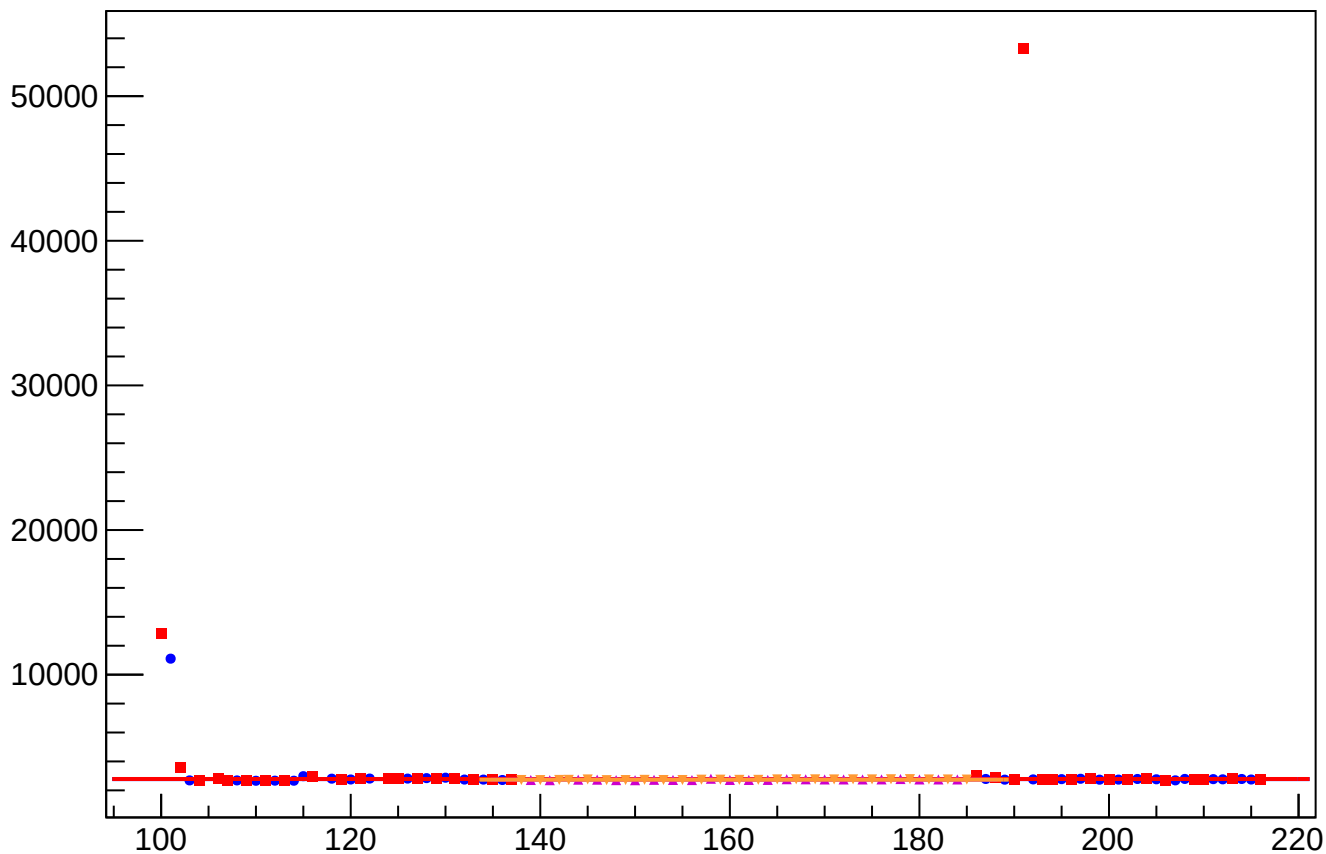
Left In: -2408.461 $\pm$ 639.726  $\chi^2$ /NDF:31.4/22

+ sign 2241.111 $\pm$ 445.445  $\chi^2$ /NDF: 59.2/55

All: -17.570 $\pm$ 316.724  $\chi^2$ /NDF: 170.9/113

- sign -2327.066 $\pm$ 450.428  $\chi^2$ /NDF: 59.7/57

# eigen\_cor\_asym\_atr1\_rms vs Slug



Right In: 2777.540+/-0.451  $\chi^2$ /NDF: 750727.7/30

Left Out: 2737.519+/-0.440  $\chi^2$ /NDF: 2317.5/24

Right Out: 2786.350+/-0.449  $\chi^2$ /NDF: 481773.0/34

Left In: 2739.863+/-0.452  $\chi^2$ /NDF: 3362.0/22

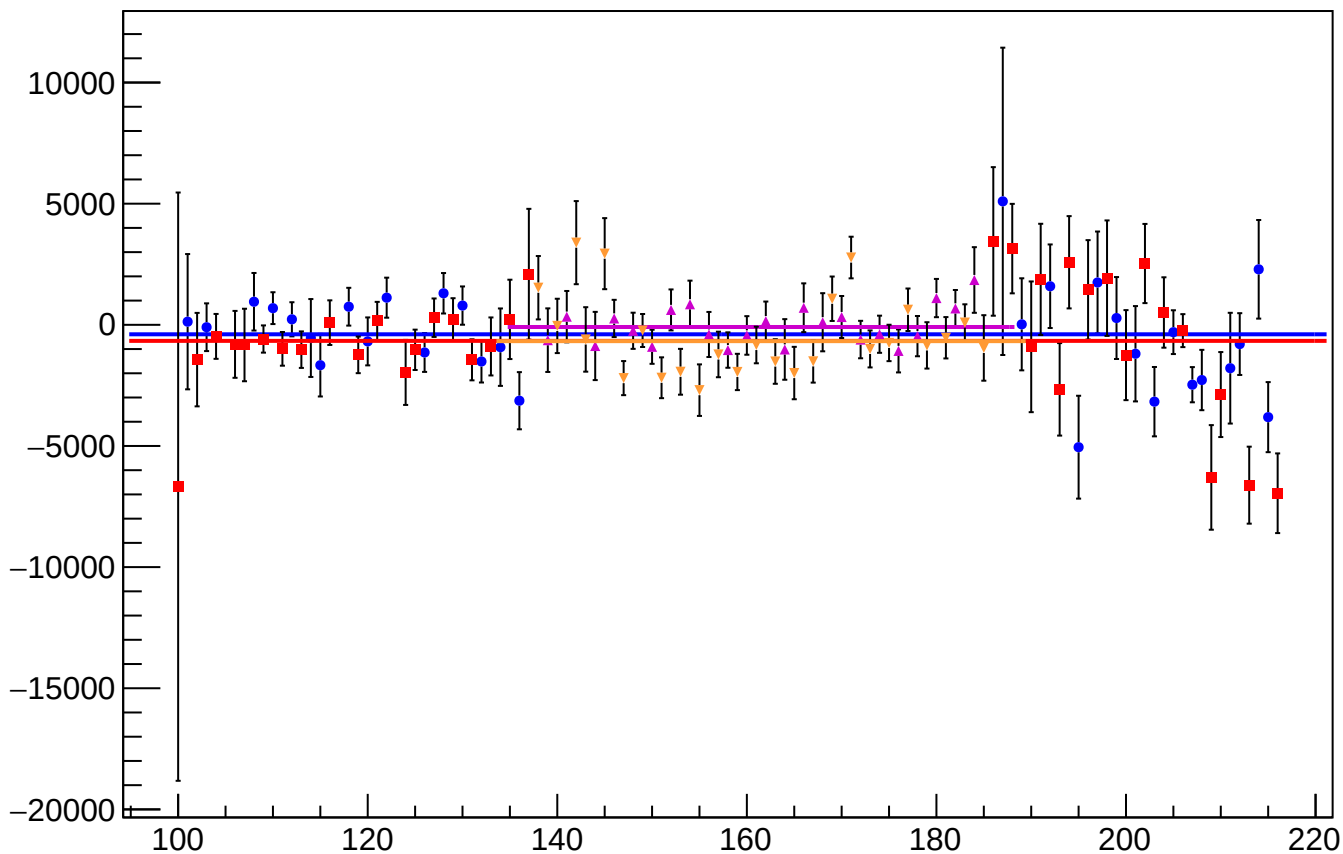
+ sign 2757.003+/-0.315  $\chi^2$ /NDF: 757078.4/55

All: 2760.118+/-0.224  $\chi^2$ /NDF: 1247736.6/11

- sign 2763.304+/-0.319  $\chi^2$ /NDF: 490460.3/57



# asym\_atr1\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-390.994 \pm 196.800$   $\chi^2/\text{NDF}$ : 56.2/30

Left Out:  $-673.608 \pm 181.230$   $\chi^2/\text{NDF}$ : 58.4/24

Right Out:  $-662.365 \pm 189.843$   $\chi^2/\text{NDF}$ : 64.7/34

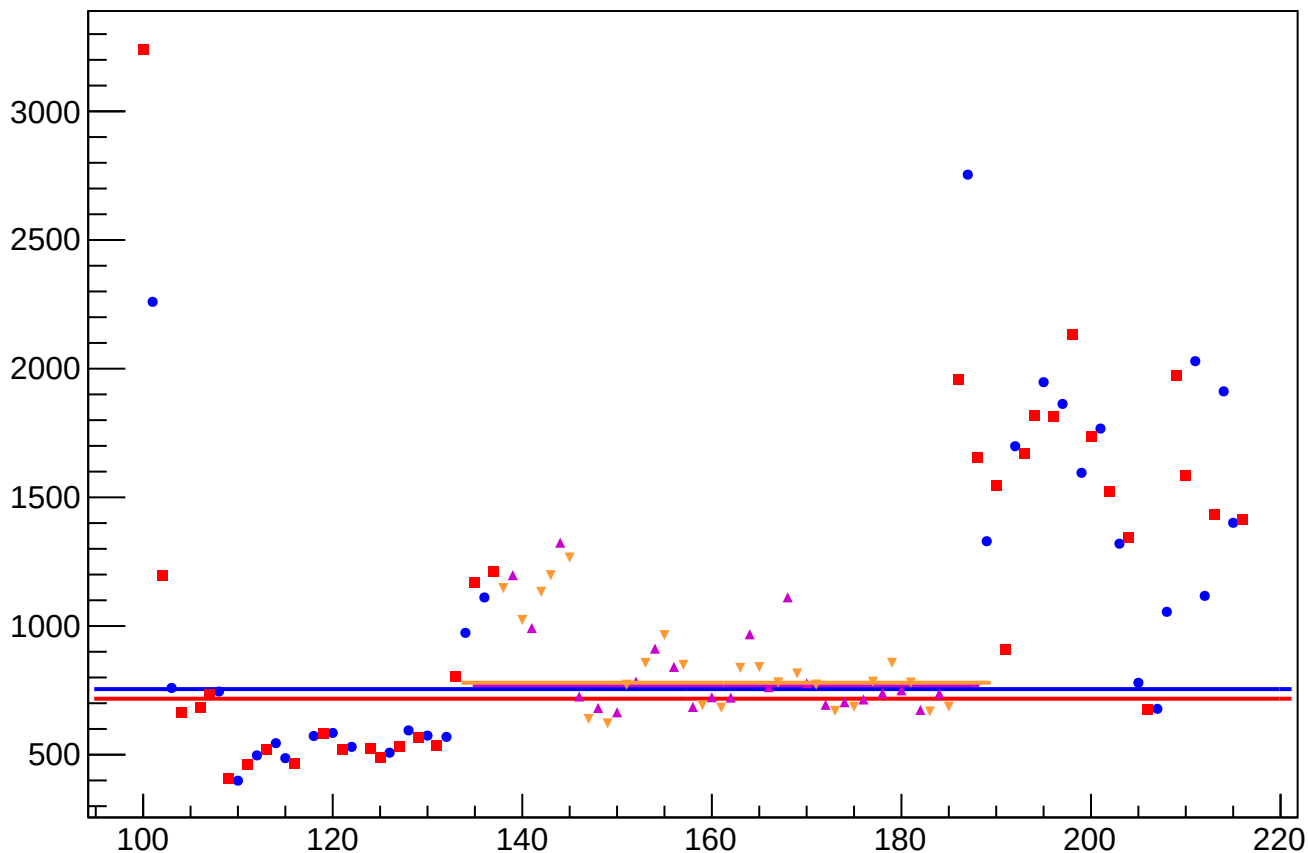
Left In:  $-89.643 \pm 183.492$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $-543.921 \pm 133.314$   $\chi^2/\text{NDF}$ : 115.7/55

All:  $-454.170 \pm 93.777$   $\chi^2/\text{NDF}$ : 200.8/113

- sign  $-366.265 \pm 131.937$   $\chi^2/\text{NDF}$ : 84.2/57

# asym\_atr1\_eigen\_cor\_correction\_rms vs Slug



Right In: 754.898 $\pm$ 0.139  $\chi^2$ /NDF: 8023042.1/30

Left Out: 779.713 $\pm$ 0.128  $\chi^2$ /NDF:1243769.6/24

Right Out: 717.580 $\pm$ 0.134  $\chi^2$ /NDF: 9137966.6/34

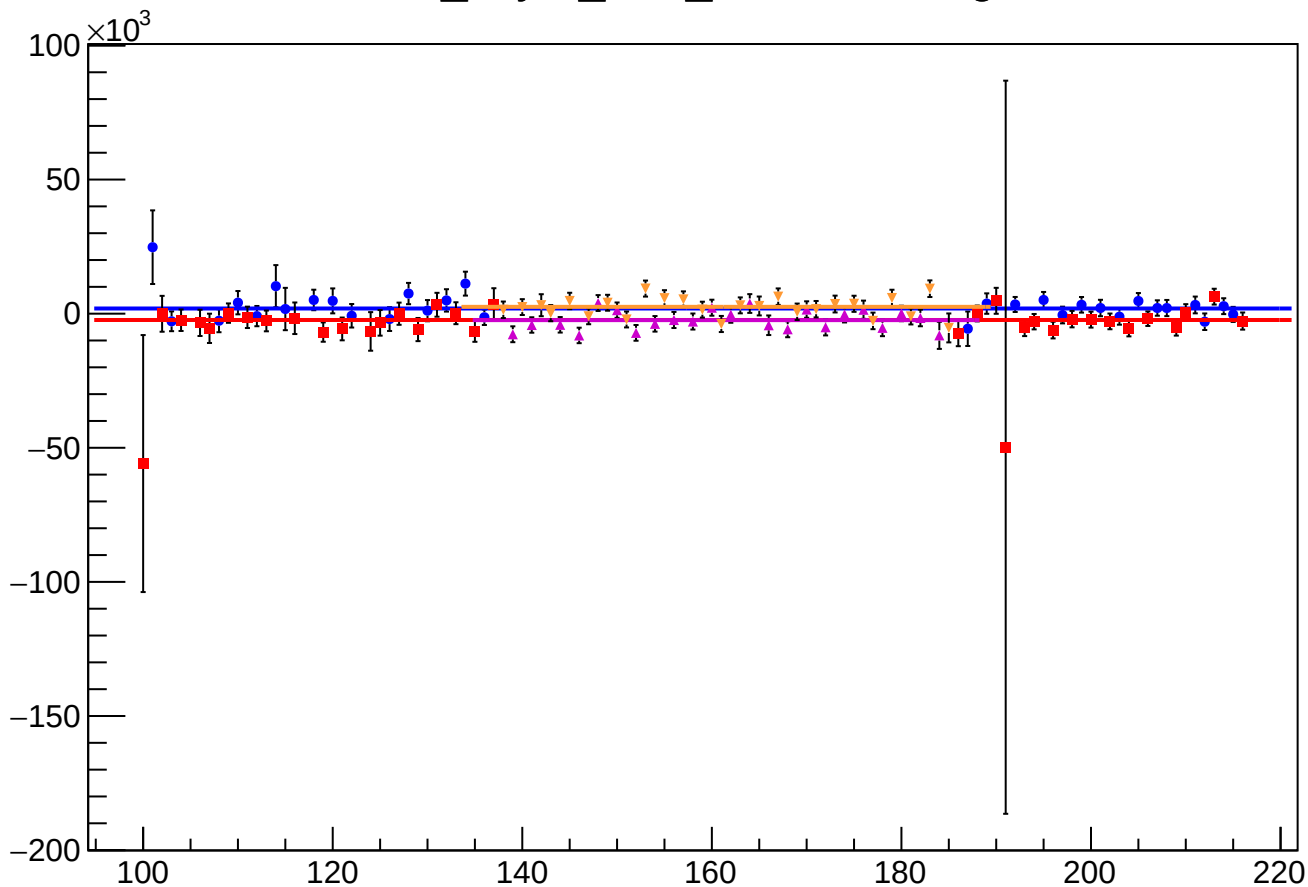
Left In: 770.799 $\pm$ 0.130  $\chi^2$ /NDF:1076291.1/22

+ sign 768.326 $\pm$ 0.094  $\chi^2$ /NDF: 9284018.0/55

All: 756.590 $\pm$ 0.066  $\chi^2$ /NDF: 19610217.5/1

- sign 745.094 $\pm$ 0.093  $\chi^2$ /NDF: 10295516.5/57

dit\_asym\_atr1\_mean vs Slug



Right In:  $1928.837 \pm 641.615$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $2545.043 \pm 622.236$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-2355.405 \pm 639.012$   $\chi^2/\text{NDF}$ : 28.1/34

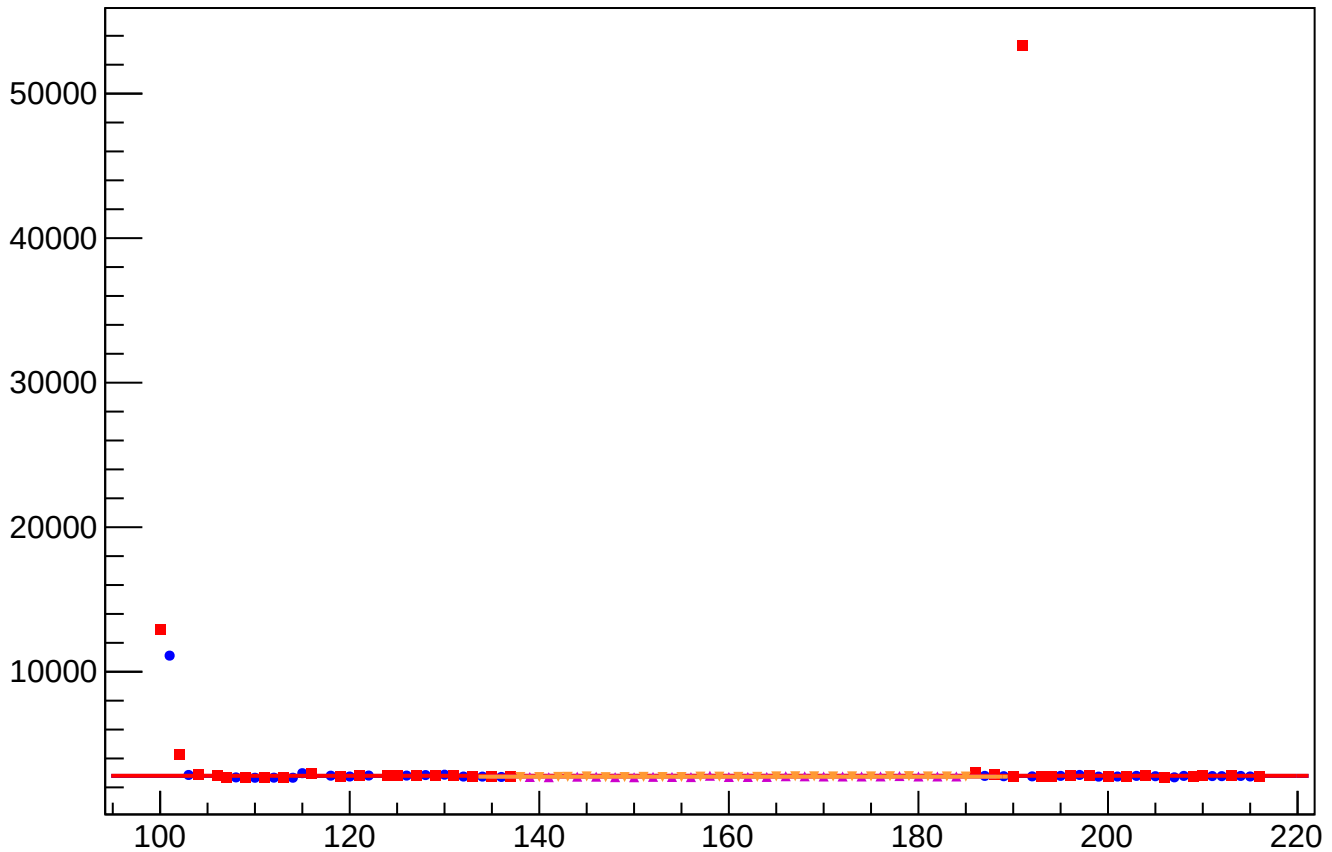
Left In:  $-2406.858 \pm 640.084$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $2246.386 \pm 446.681$   $\chi^2/\text{NDF}$ : 59.5/55

All:  $-38.796 \pm 317.794$   $\chi^2/\text{NDF}$ : 172.4/113

- sign  $-2381.088 \pm 452.228$   $\chi^2/\text{NDF}$ : 59.9/57

# dit\_asym\_atr1\_rms vs Slug



Right In: 2791.351+/-0.454  $\chi^2/\text{NDF}$ : 750535.5/30

Left Out: 2739.304+/-0.440  $\chi^2/\text{NDF}$ : 2322.3/24

Right Out: 2801.870+/-0.452  $\chi^2/\text{NDF}$ : 535628.5/34

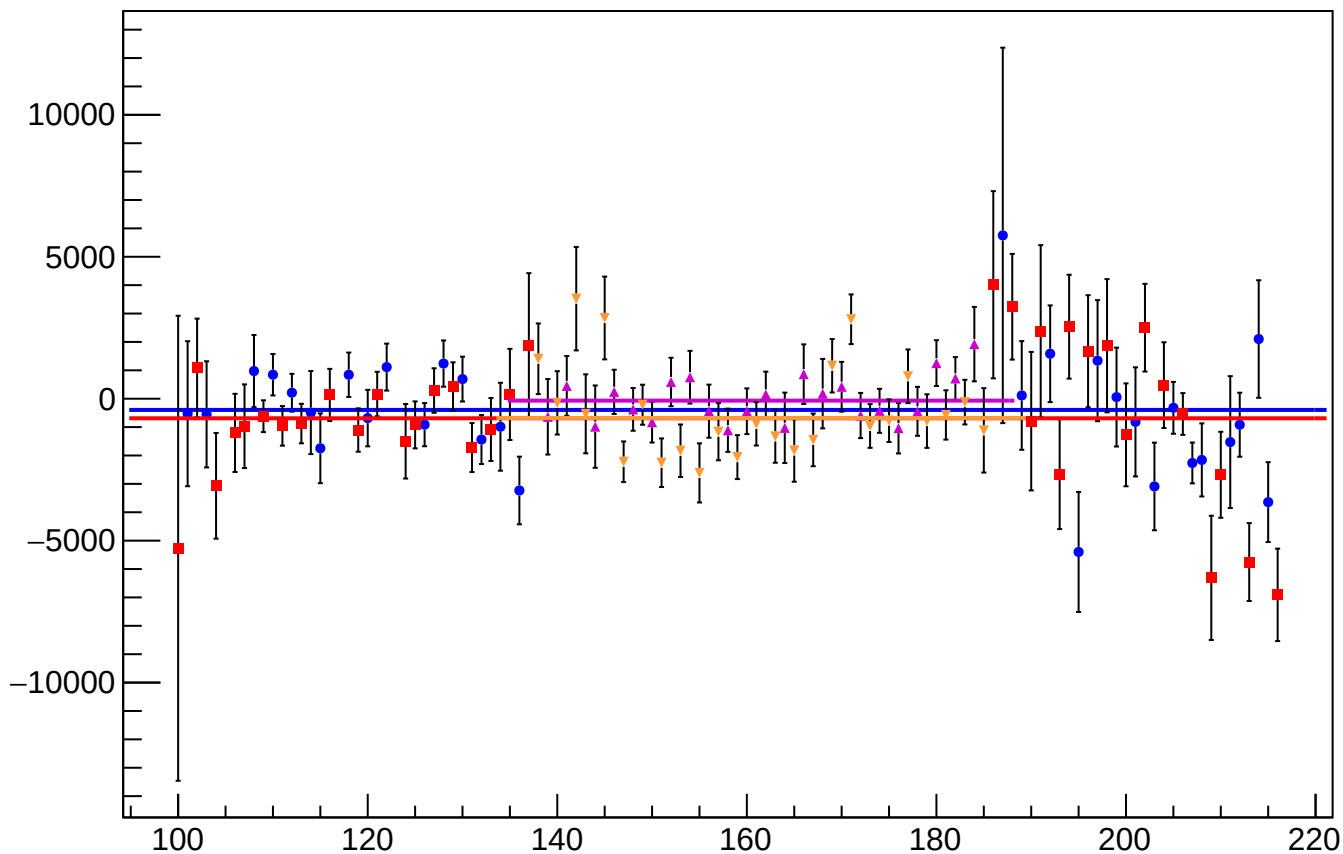
Left In: 2741.391+/-0.453  $\chi^2/\text{NDF}$ : 3369.6/22

+ sign 2764.530+/-0.316  $\chi^2/\text{NDF}$ : 759639.9/55

All: 2768.061+/-0.225  $\chi^2/\text{NDF}$ : 1307833.7/11

- sign 2771.681+/-0.320  $\chi^2/\text{NDF}$ : 547940.7/57

# asym\_atr1\_dit\_correction\_mean vs Slug



Right In:  $-395.153 \pm 198.869$   $\chi^2/\text{NDF}: 53.2/30$

Left Out:  $-678.226 \pm 185.004$   $\chi^2/\text{NDF}: 56.2/24$

Right Out:  $-689.377 \pm 190.873$   $\chi^2/\text{NDF}: 68.1/34$

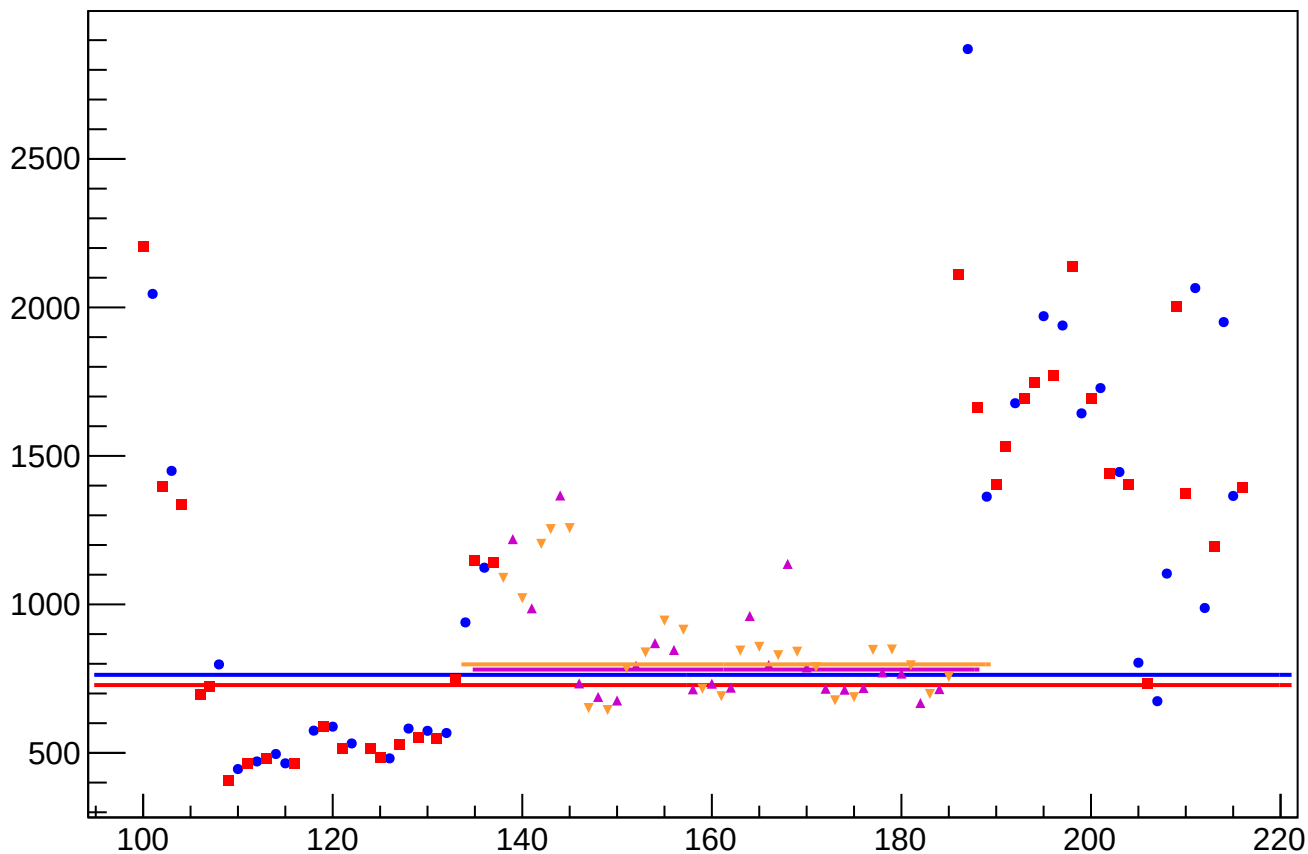
Left In:  $-67.156 \pm 185.436$   $\chi^2/\text{NDF}: 15.8/22$

+ sign  $-546.901 \pm 135.454$   $\chi^2/\text{NDF}: 110.5/55$

All:  $-456.468 \pm 94.902$   $\chi^2/\text{NDF}: 200.9/113$

- sign  $-369.278 \pm 133.004$   $\chi^2/\text{NDF}: 89.4/57$

# asym\_atr1\_dit\_correction\_rms vs Slug



Right In: 762.779+/-0.141     $\chi^2/\text{NDF}$ : 8406604.1/30

Left Out: 798.091+/-0.131     $\chi^2/\text{NDF}$ : 1168352.1/24

Right Out: 728.345+/-0.135     $\chi^2/\text{NDF}$ : 9418263.7/34

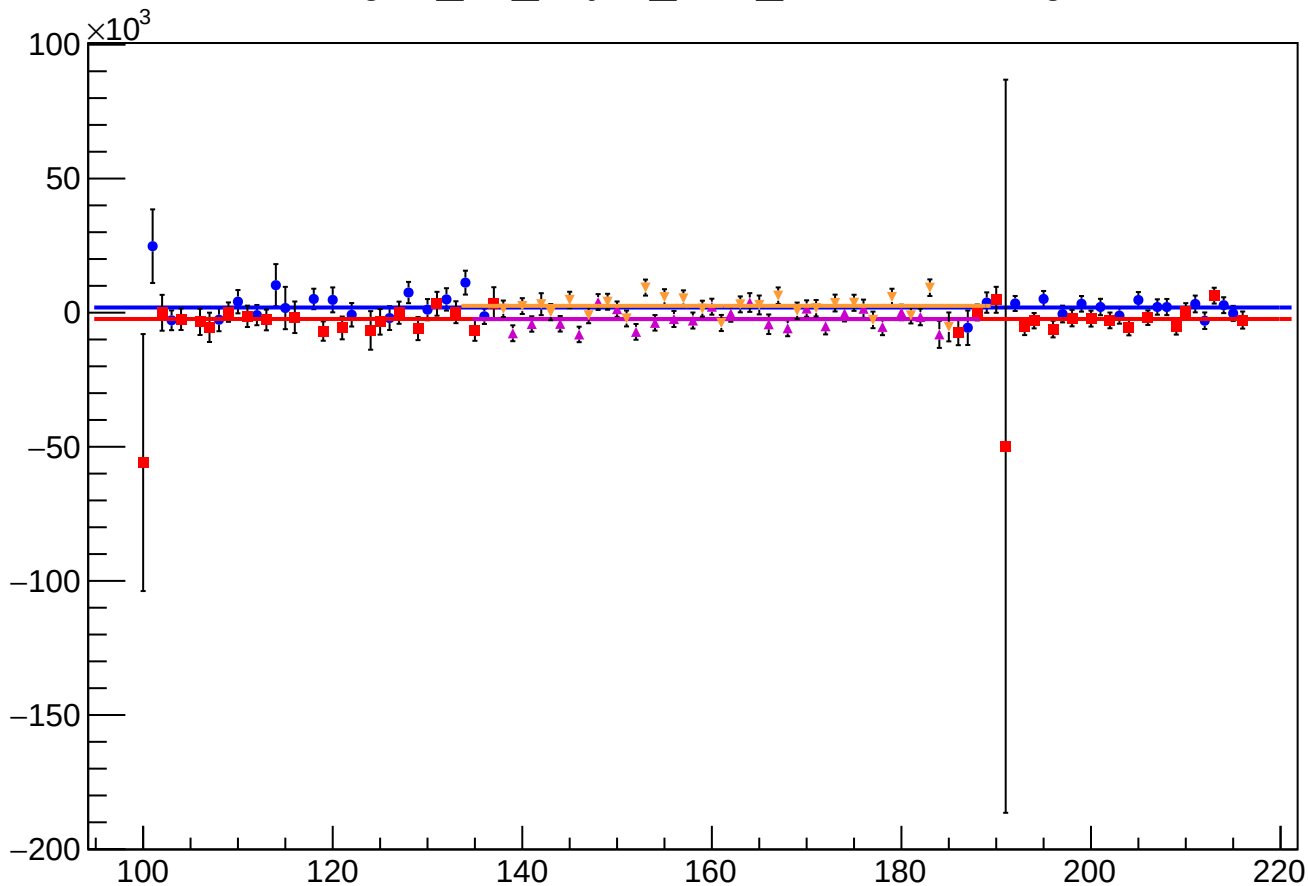
Left In: 780.525+/-0.131     $\chi^2/\text{NDF}$ : 1064827.5/22

+ sign 781.709+/-0.096     $\chi^2/\text{NDF}$ : 9608759.7/55

All: 768.207+/-0.067     $\chi^2/\text{NDF}$ : 20207777.3/11

- sign 755.189+/-0.094     $\chi^2/\text{NDF}$ : 10559985.4/57

# eigen\_dit\_asym\_atr1\_mean vs Slug



Right In:  $1928.838 \pm 641.615$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $2545.044 \pm 622.236$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-2355.402 \pm 639.012$   $\chi^2/\text{NDF}$ : 28.1/34

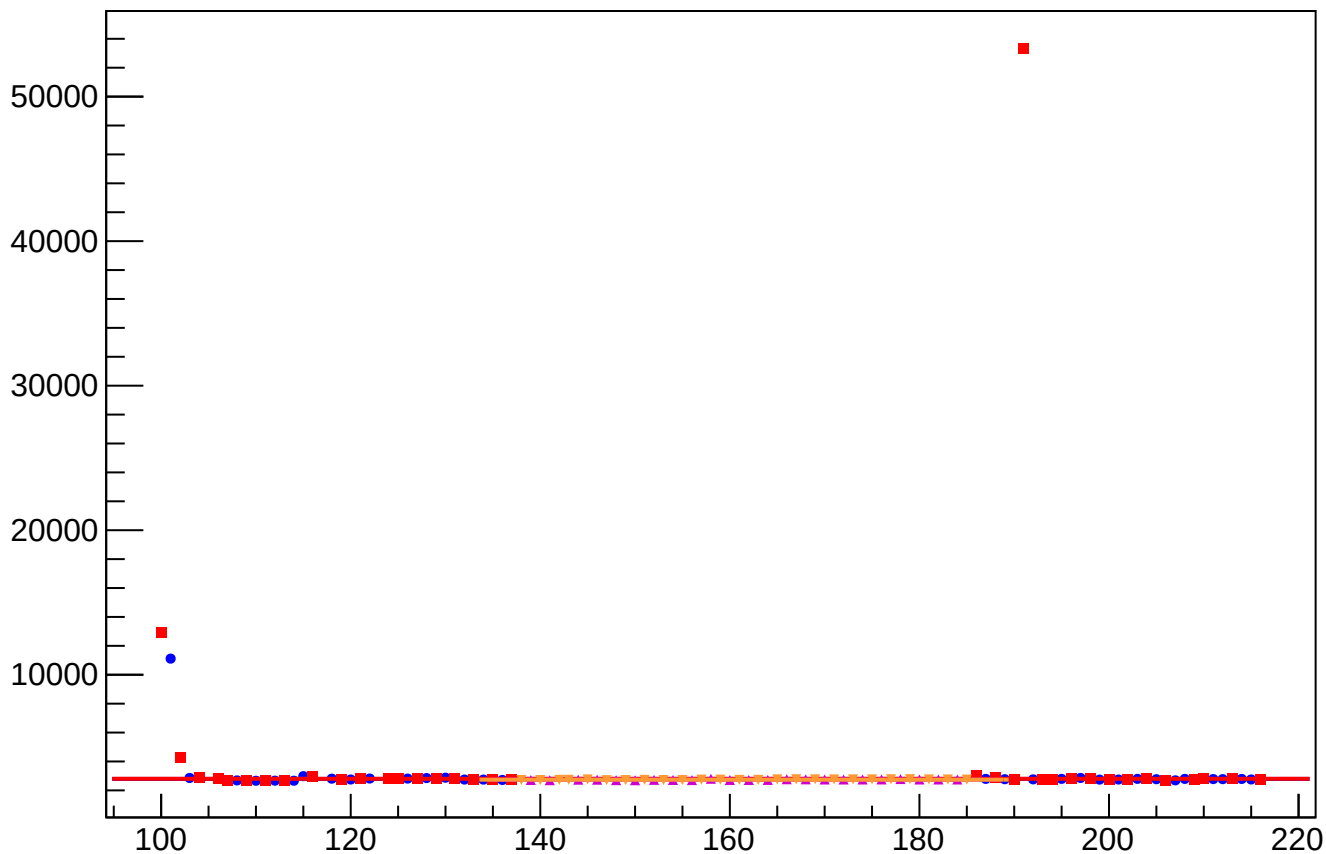
Left In:  $-2406.858 \pm 640.084$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $2246.387 \pm 446.681$   $\chi^2/\text{NDF}$ : 59.5/55

All:  $-38.795 \pm 317.794$   $\chi^2/\text{NDF}$ : 172.4/113

- sign  $-2381.087 \pm 452.228$   $\chi^2/\text{NDF}$ : 59.9/57

# eigen\_dit\_asym\_atr1\_rms vs Slug



Right In: 2791.351+/-0.454  $\chi^2/\text{NDF}$ : 750535.5/30

Left Out: 2739.304+/-0.440  $\chi^2/\text{NDF}$ : 2322.3/24

Right Out: 2801.870+/-0.452  $\chi^2/\text{NDF}$ : 535628.3/34

Left In: 2741.391+/-0.453  $\chi^2/\text{NDF}$ : 3369.6/22

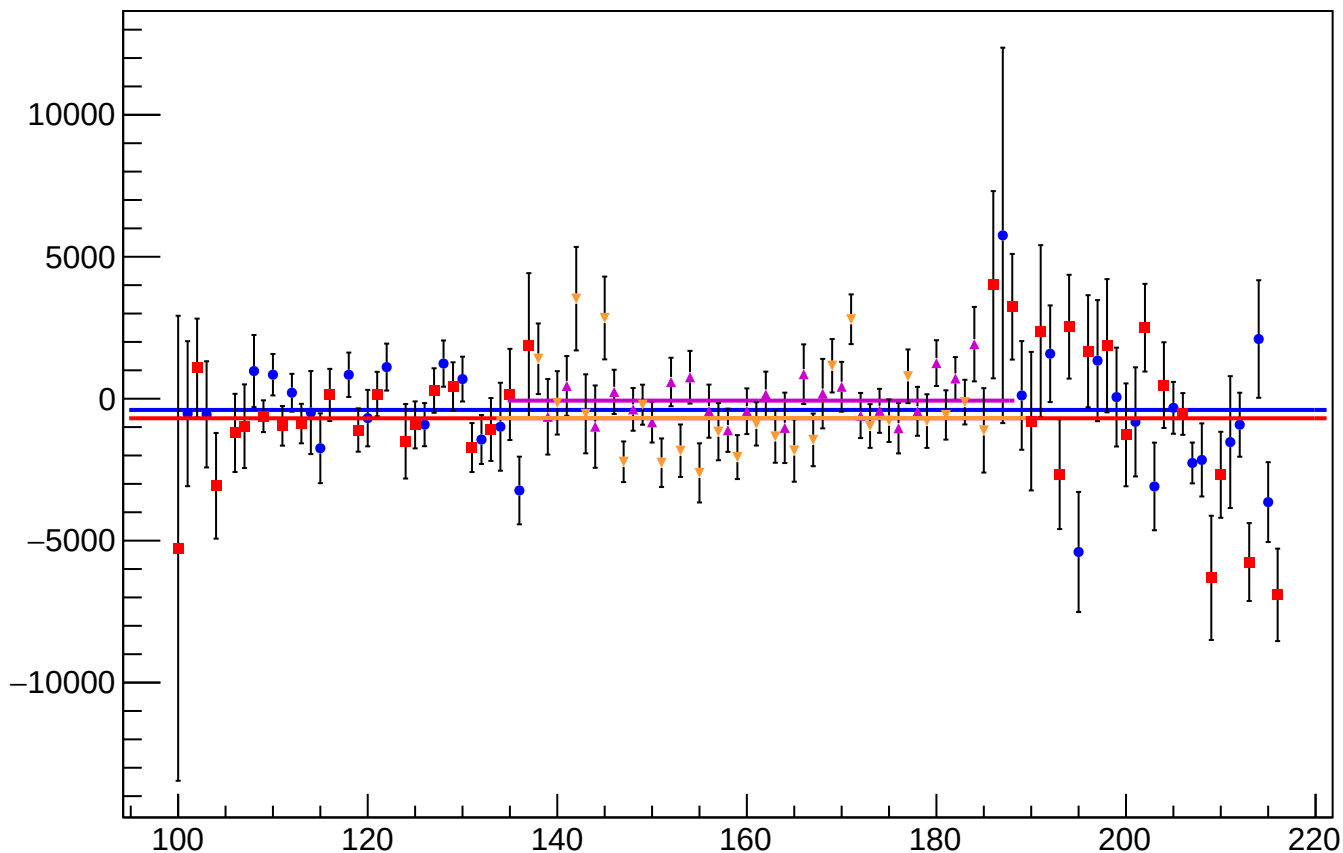
+ sign 2764.530+/-0.316  $\chi^2/\text{NDF}$ : 759639.8/55

All: 2768.061+/-0.225  $\chi^2/\text{NDF}$ : 1307833.5/11

- sign 2771.681+/-0.320  $\chi^2/\text{NDF}$ : 547940.5/57



# asym\_atr1\_eigen\_dit\_correction\_mean vs Slug



Right In: -395.153 $\pm$ 198.869  $\chi^2/\text{NDF}$ : 53.2/30

Left Out: -678.227 $\pm$ 185.004  $\chi^2/\text{NDF}$ : 56.2/24

Right Out: -689.377 $\pm$ 190.873  $\chi^2/\text{NDF}$ : 68.1/34

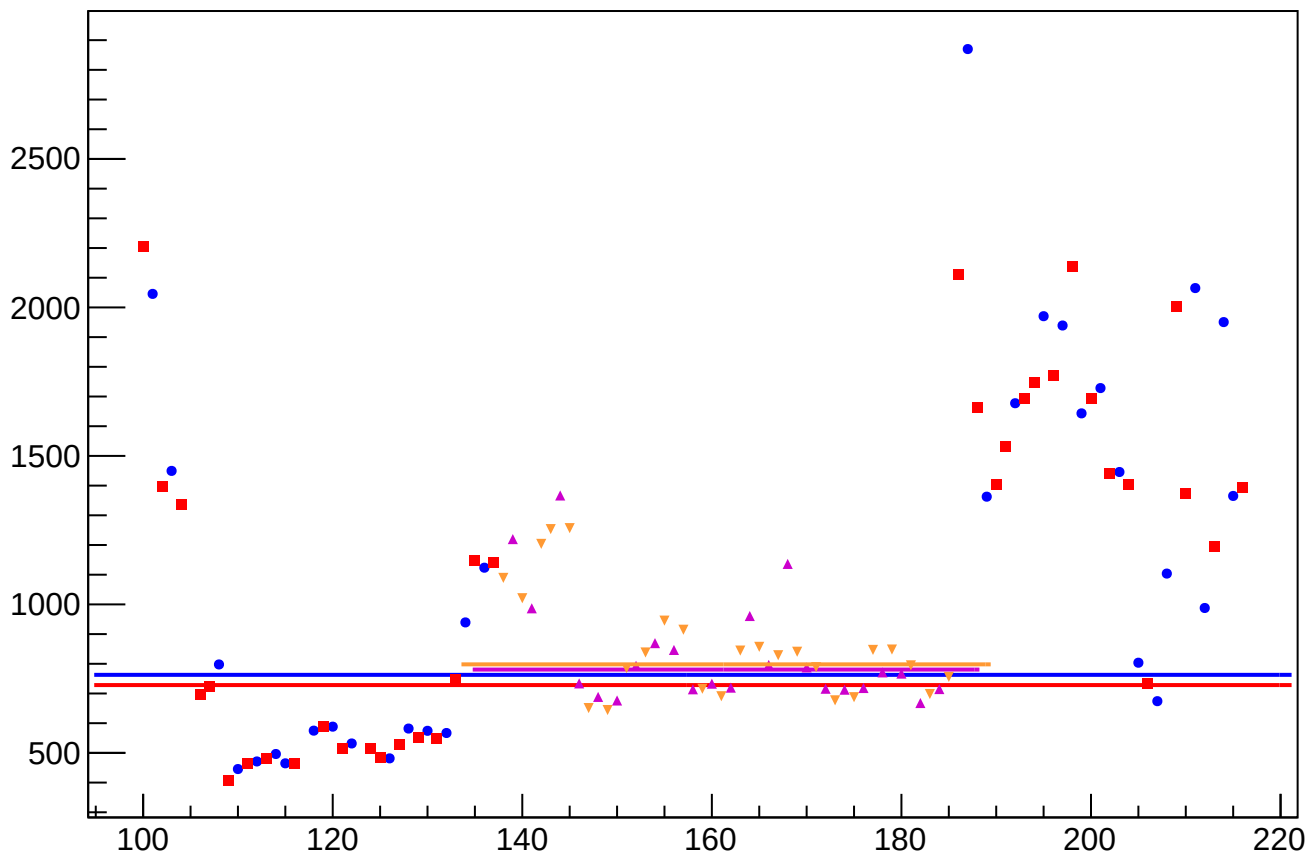
Left In: -67.157 $\pm$ 185.436  $\chi^2/\text{NDF}$ : 15.8/22

+ sign -546.901 $\pm$ 135.454  $\chi^2/\text{NDF}$ : 110.5/55

All: -456.468 $\pm$ 94.902  $\chi^2/\text{NDF}$ : 200.9/113

- sign -369.278 $\pm$ 133.004  $\chi^2/\text{NDF}$ : 89.4/57

# asym\_atr1\_eigen\_dit\_correction\_rms vs Slug



Right In: 762.780 $\pm$ 0.141  $\chi^2$ /NDF: 8406602.9/30

Left Out: 798.092 $\pm$ 0.131  $\chi^2$ /NDF:1168353.9/24

Right Out: 728.345 $\pm$ 0.135  $\chi^2$ /NDF: 9418271.1/34

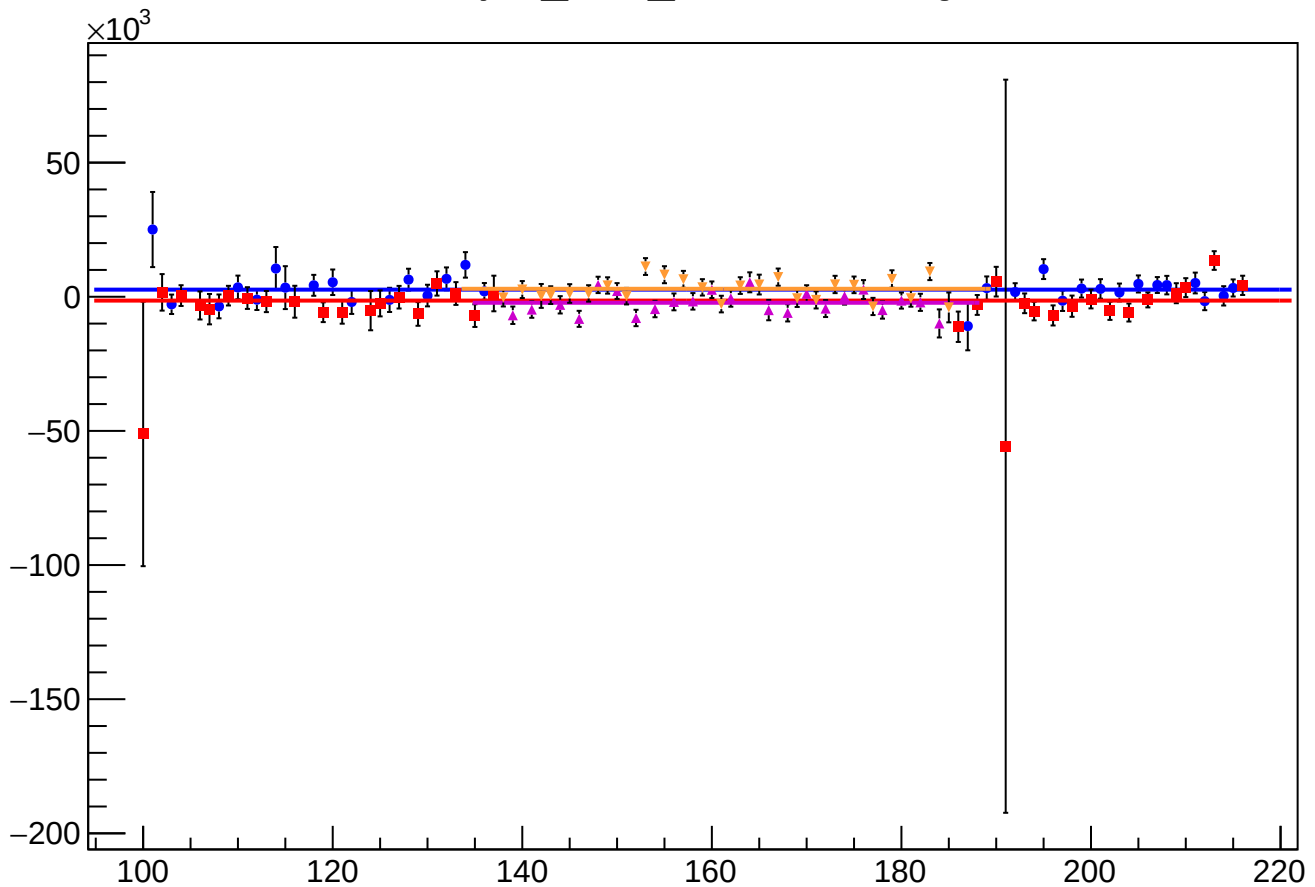
Left In: 780.525 $\pm$ 0.131  $\chi^2$ /NDF:1064830.7/22

+ sign 781.709 $\pm$ 0.096  $\chi^2$ /NDF: 9608759.5/55

All: 768.207 $\pm$ 0.067  $\chi^2$ /NDF: 20207787.4/11

- sign 755.189 $\pm$ 0.094  $\chi^2$ /NDF: 10559994.9/57

# asym\_atr1\_mean vs Slug



Right In:  $2653.525 \pm 707.524$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $2969.337 \pm 653.286$   $\chi^2/\text{NDF}$ : 35.7/24

Right Out:  $-1428.506 \pm 707.931$   $\chi^2/\text{NDF}$ : 45.8/34

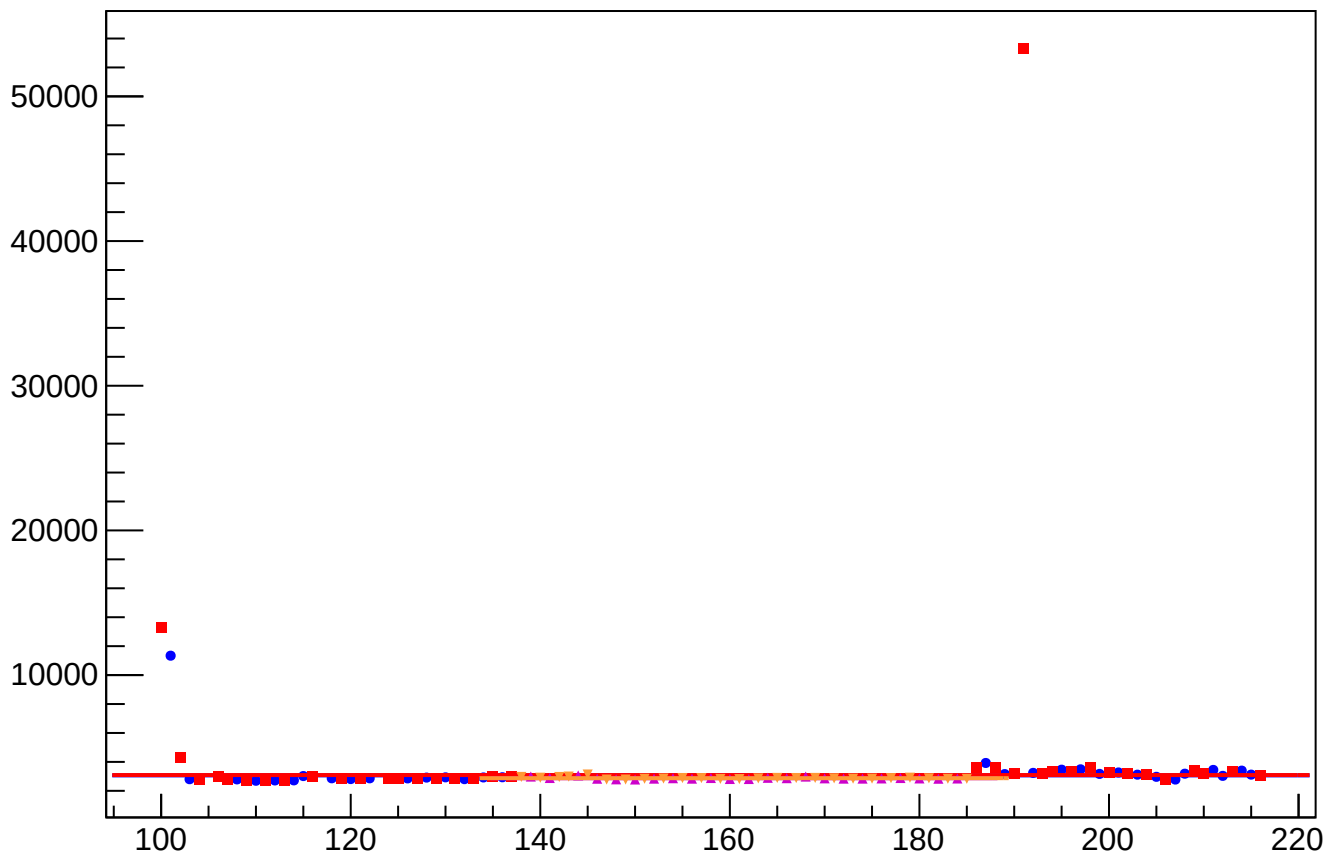
Left In:  $-2237.495 \pm 670.327$   $\chi^2/\text{NDF}$ : 33.8/22

+ sign  $2823.998 \pm 479.974$   $\chi^2/\text{NDF}$ : 64.1/55

All:  $517.240 \pm 341.761$   $\chi^2/\text{NDF}$ : 191.2/113

- sign  $-1855.056 \pm 486.744$   $\chi^2/\text{NDF}$ : 80.2/57

# asym\_atr1\_rms vs Slug



Right In: 3068.040+/-0.500  $\chi^2/\text{NDF}$ : 926999.9/30

Left Out: 2874.933+/-0.462  $\chi^2/\text{NDF}$ :21788.8/24

Right Out: 3090.124+/-0.501  $\chi^2/\text{NDF}$ : 761891.1/34

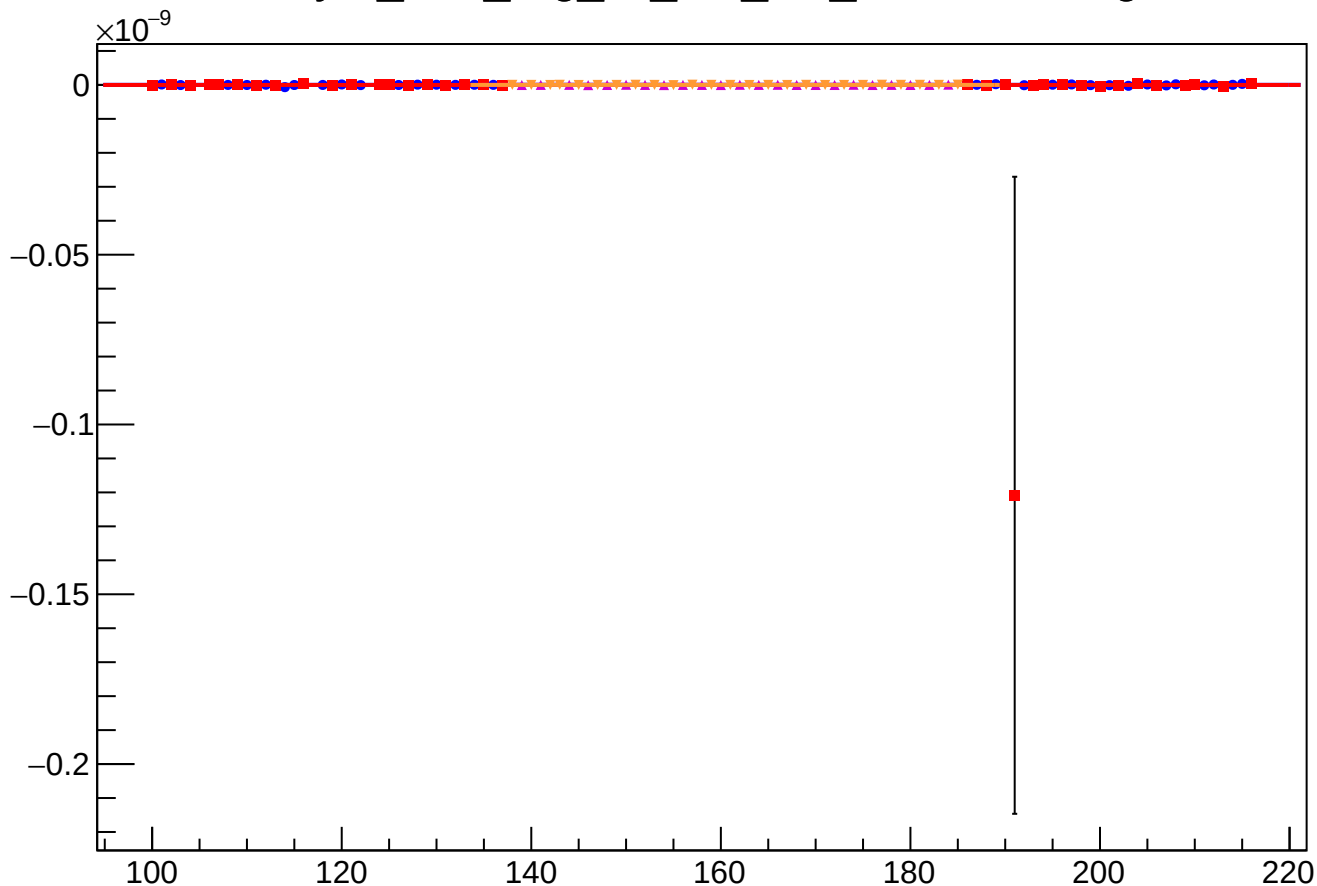
Left In: 2870.153+/-0.474  $\chi^2/\text{NDF}$ :17687.5/22

+ sign 2963.802+/-0.339  $\chi^2/\text{NDF}$ : 1029210.4/55

All: 2968.899+/-0.242  $\chi^2/\text{NDF}$ : 1911060.3/11

- sign 2974.141+/-0.344  $\chi^2/\text{NDF}$ : 881392.4/57

# asym\_atr1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14.4/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 45.7/34

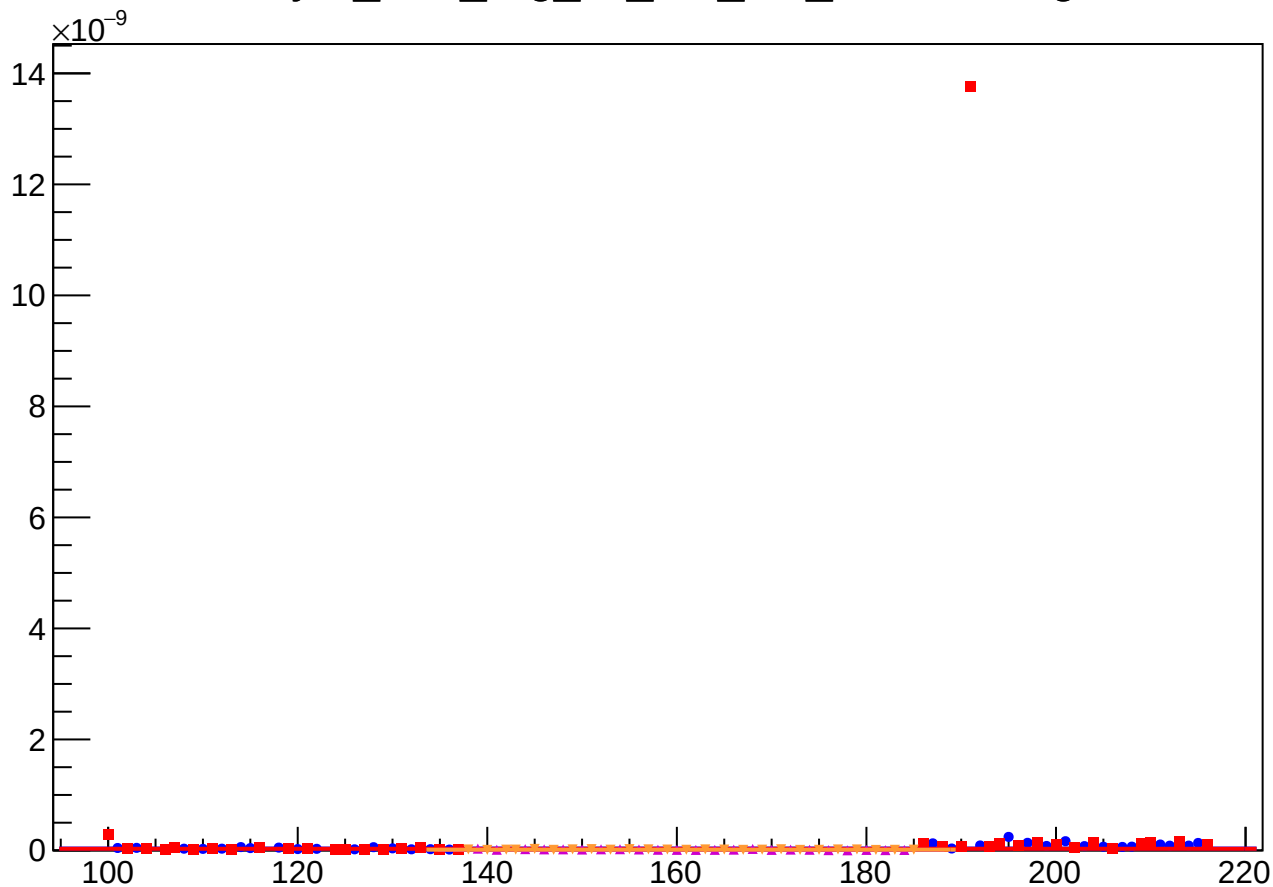
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 42.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 117.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 74.9/57

# asym\_atr1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5330733.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1210269.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5437649.0/34

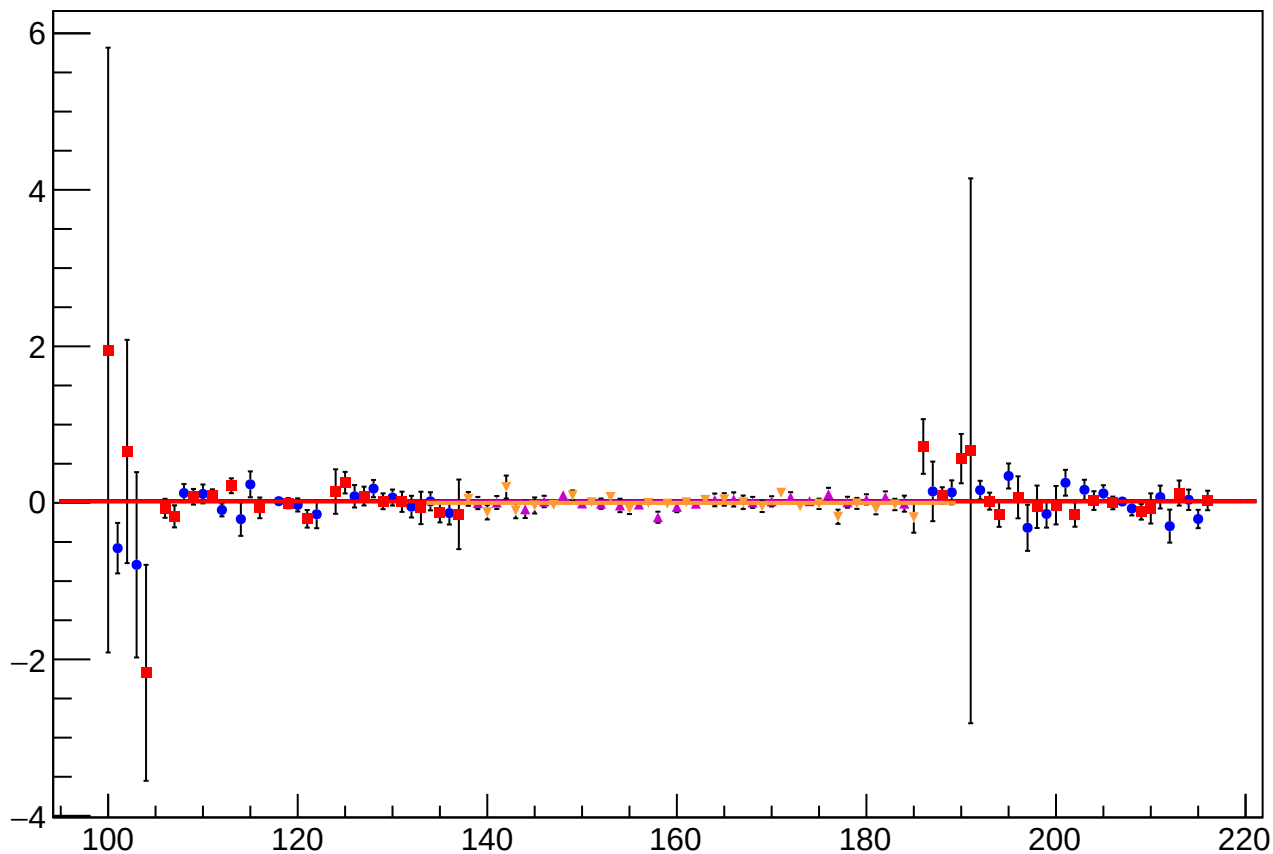
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3166775.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9697809.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21727227.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11701149.7/57

# asym\_atr1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.021$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-0.000 \pm 0.014$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.018 \pm 0.022$   $\chi^2/\text{NDF}$ : 33.2/34

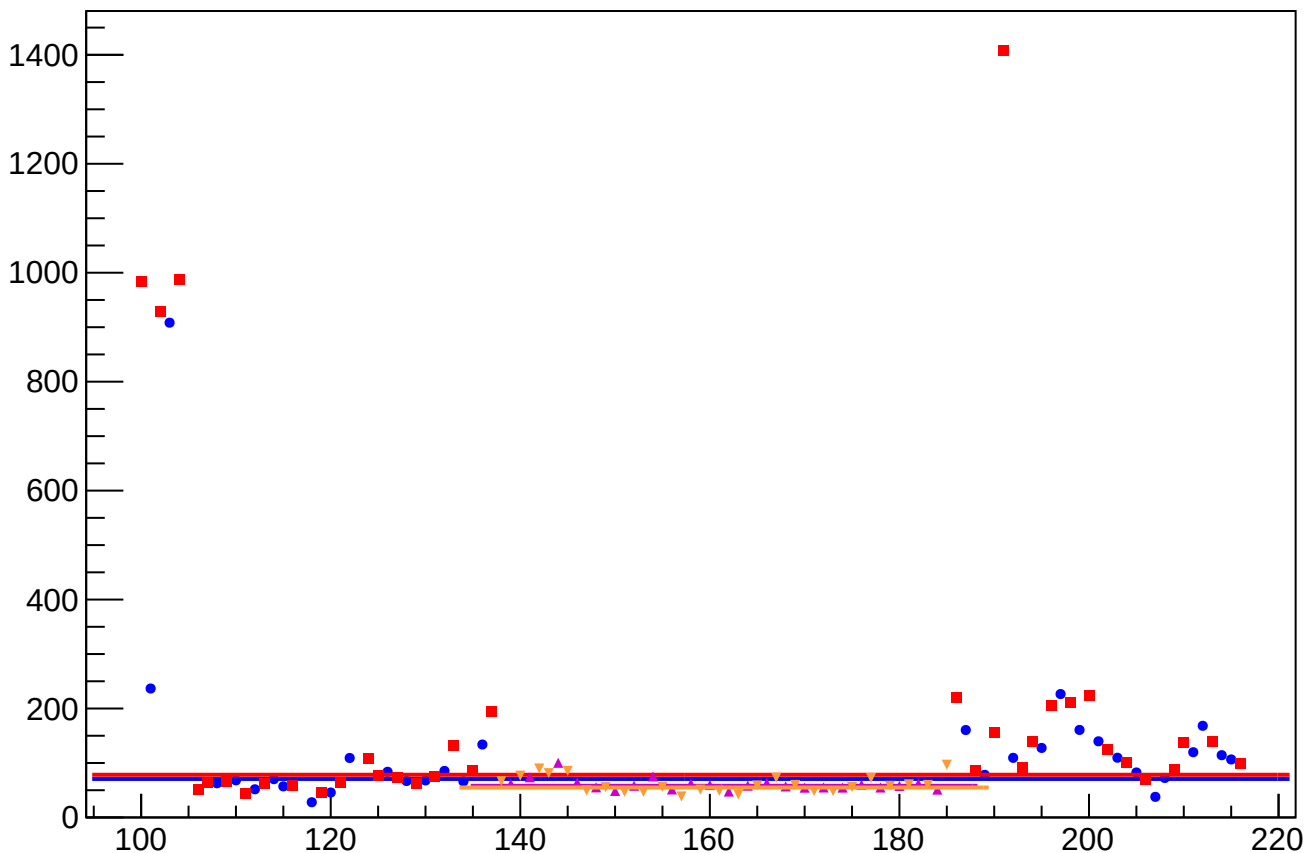
Left In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 107.3/113

- sign  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 48.9/57

# asym\_atr1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 70.731 $\pm$ 0.015  $\chi^2$ /NDF: 7633409.2/30

Left Out: 54.931 $\pm$ 0.010  $\chi^2$ /NDF: 1297647.2/24

Right Out: 78.393 $\pm$ 0.016  $\chi^2$ /NDF: 6824925.2/34

Left In: 58.138 $\pm$ 0.010  $\chi^2$ /NDF: 657436.9/22

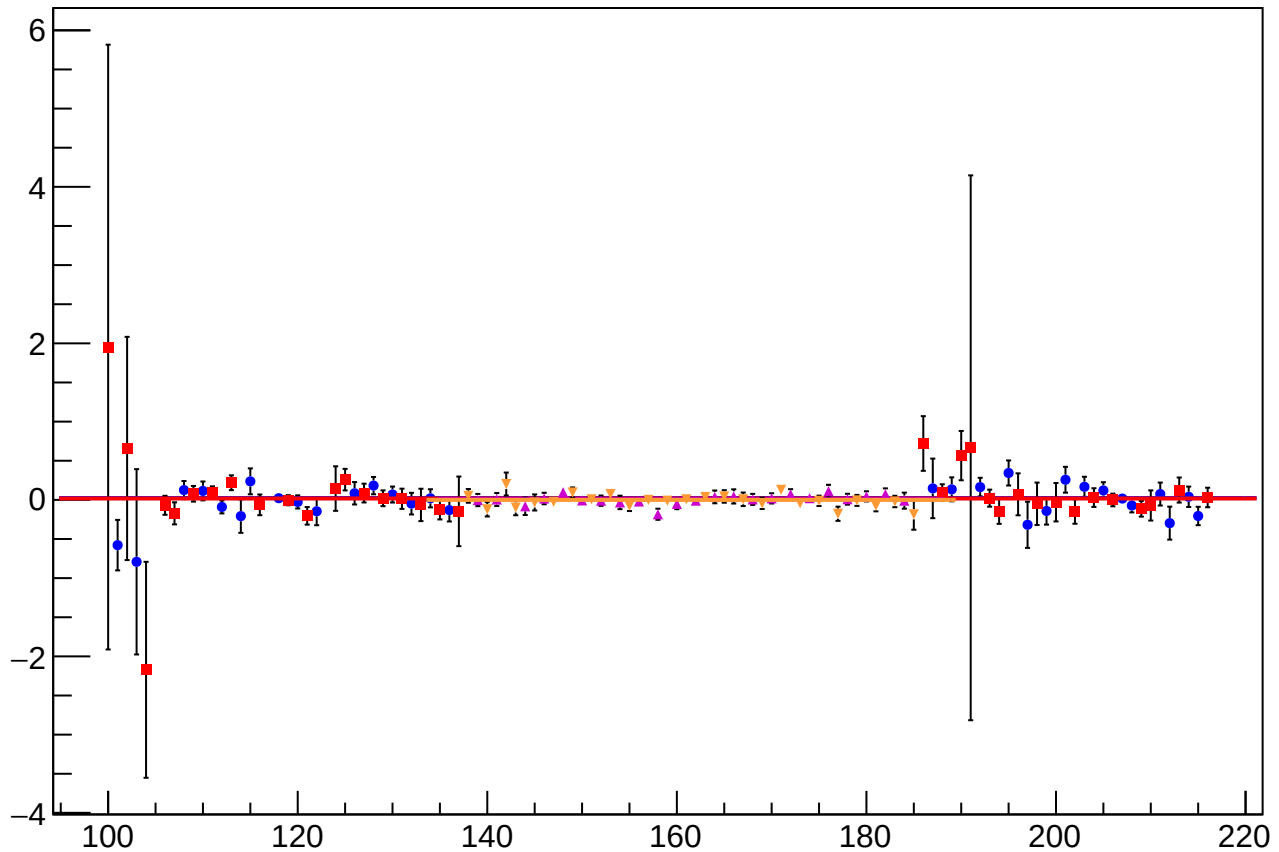
+ sign 59.928 $\pm$ 0.008  $\chi^2$ /NDF: 9725925.3/55

All: 62.045 $\pm$ 0.006  $\chi^2$ /NDF: 18502950.2/113

- sign 64.413 $\pm$ 0.009  $\chi^2$ /NDF: 8637228.8/57



# asym\_atr1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.021$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-0.000 \pm 0.014$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.018 \pm 0.022$   $\chi^2/\text{NDF}$ : 33.2/34

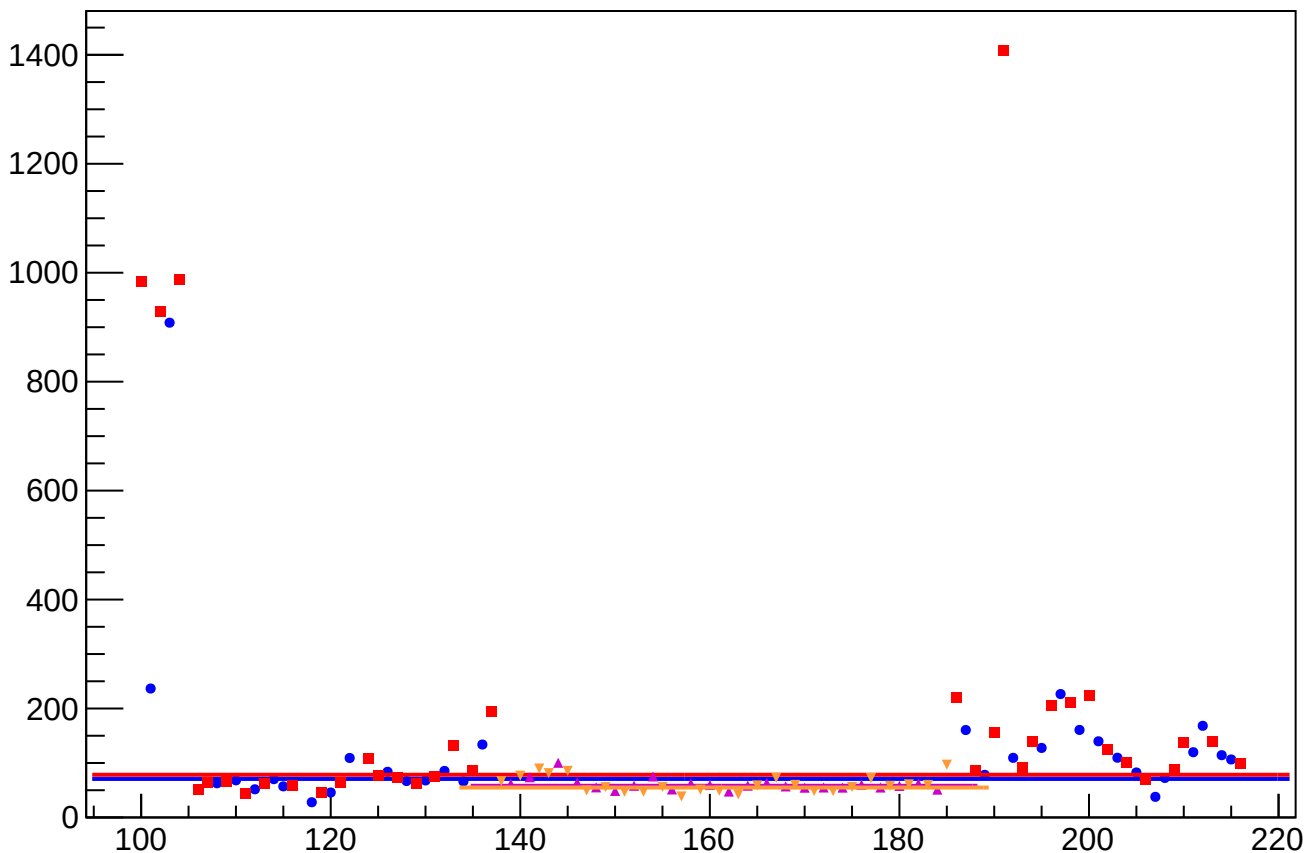
Left In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 107.3/113

- sign  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 48.9/57

# asym\_atr1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 70.731 $\pm$ 0.015  $\chi^2$ /NDF: 7633409.2/30

Left Out: 54.931 $\pm$ 0.010  $\chi^2$ /NDF: 1297647.2/24

Right Out: 78.393 $\pm$ 0.016  $\chi^2$ /NDF: 6824925.2/34

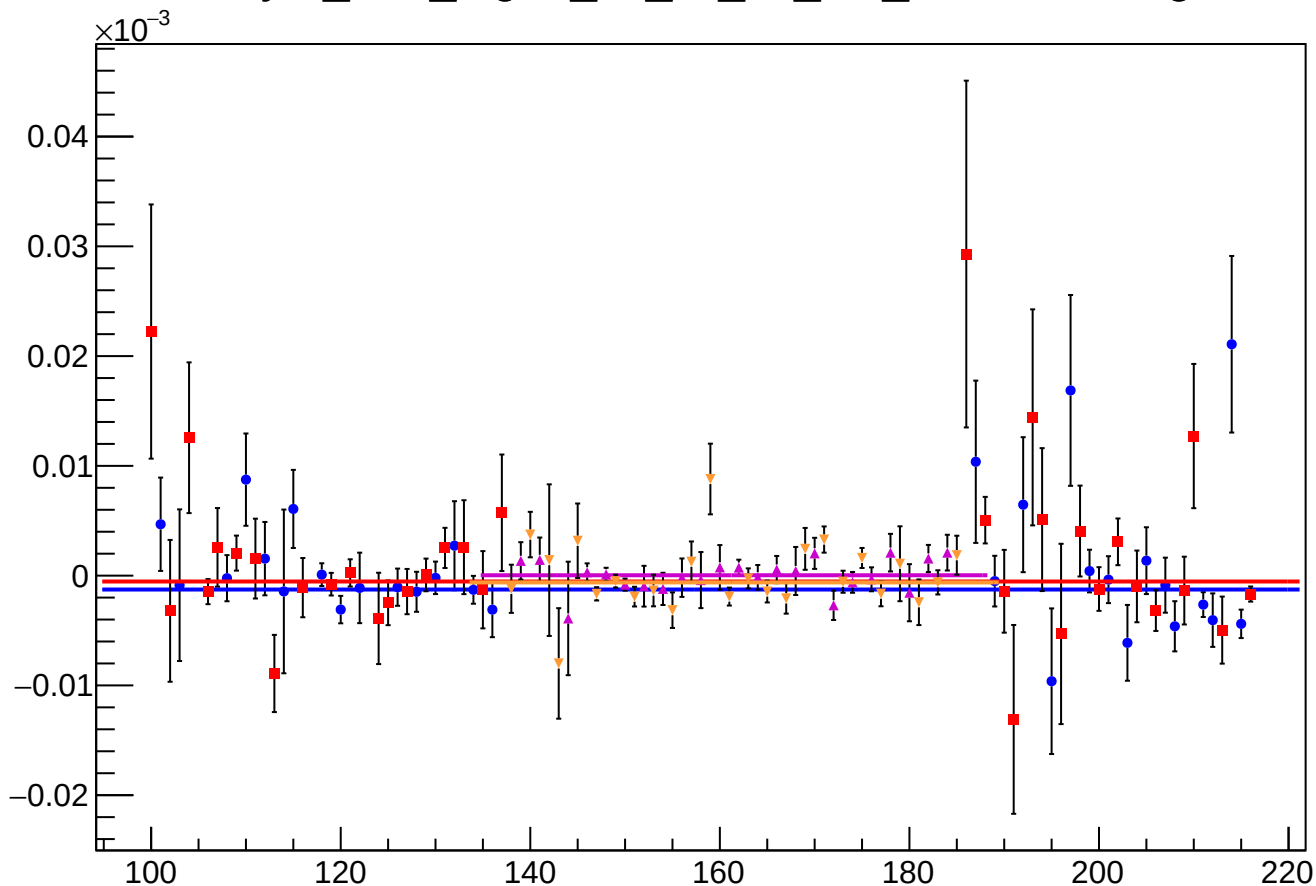
Left In: 58.138 $\pm$ 0.010  $\chi^2$ /NDF: 657436.9/22

+ sign 59.928 $\pm$ 0.008  $\chi^2$ /NDF: 9725925.3/55

All: 62.045 $\pm$ 0.006  $\chi^2$ /NDF: 18502950.2/113

- sign 64.413 $\pm$ 0.009  $\chi^2$ /NDF: 8637228.8/57

# asym\_atr1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.0/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.3/34

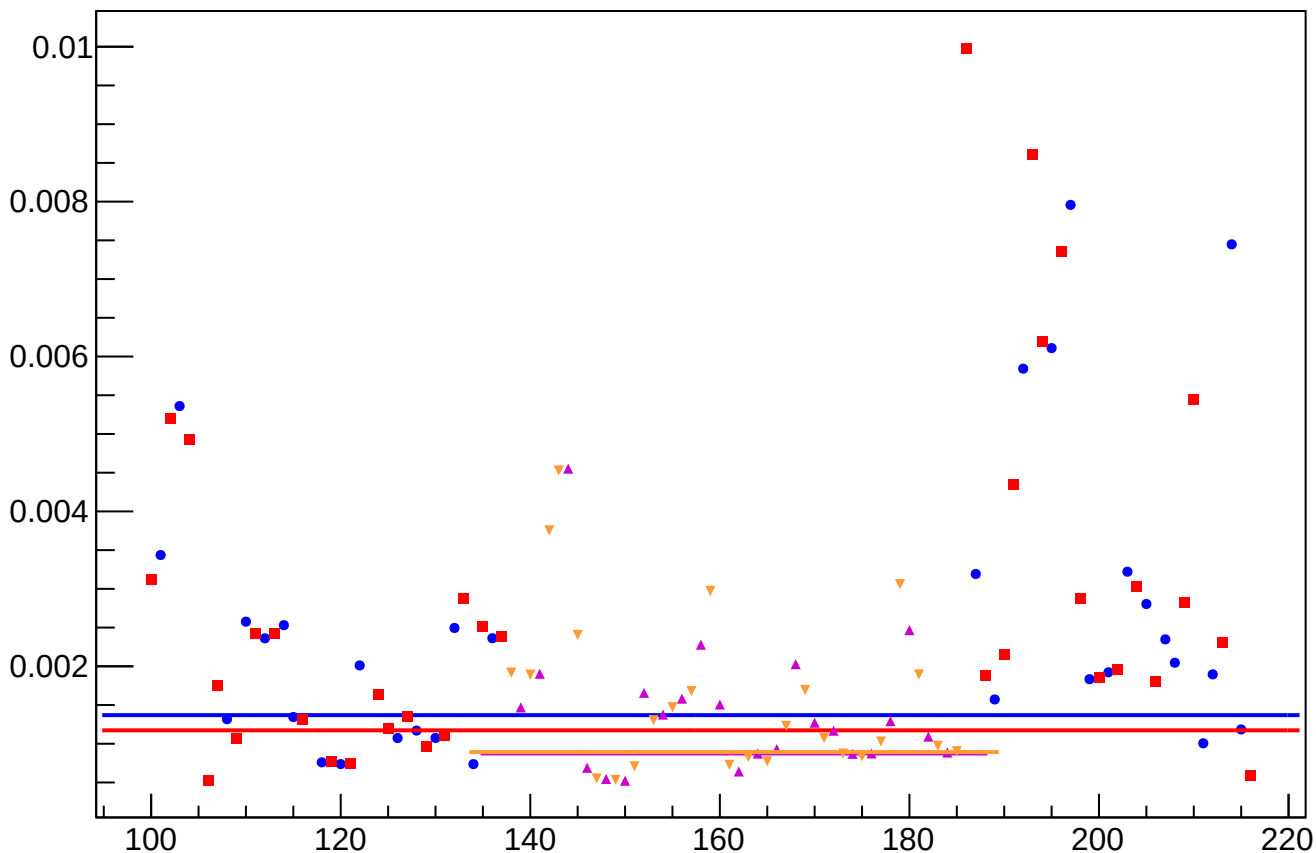
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 105.9/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 187.7/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 76.3/57

# asym\_atr1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 10542263.9/30

Left Out:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 7739119.9/24

Right Out:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 13573145.8/34

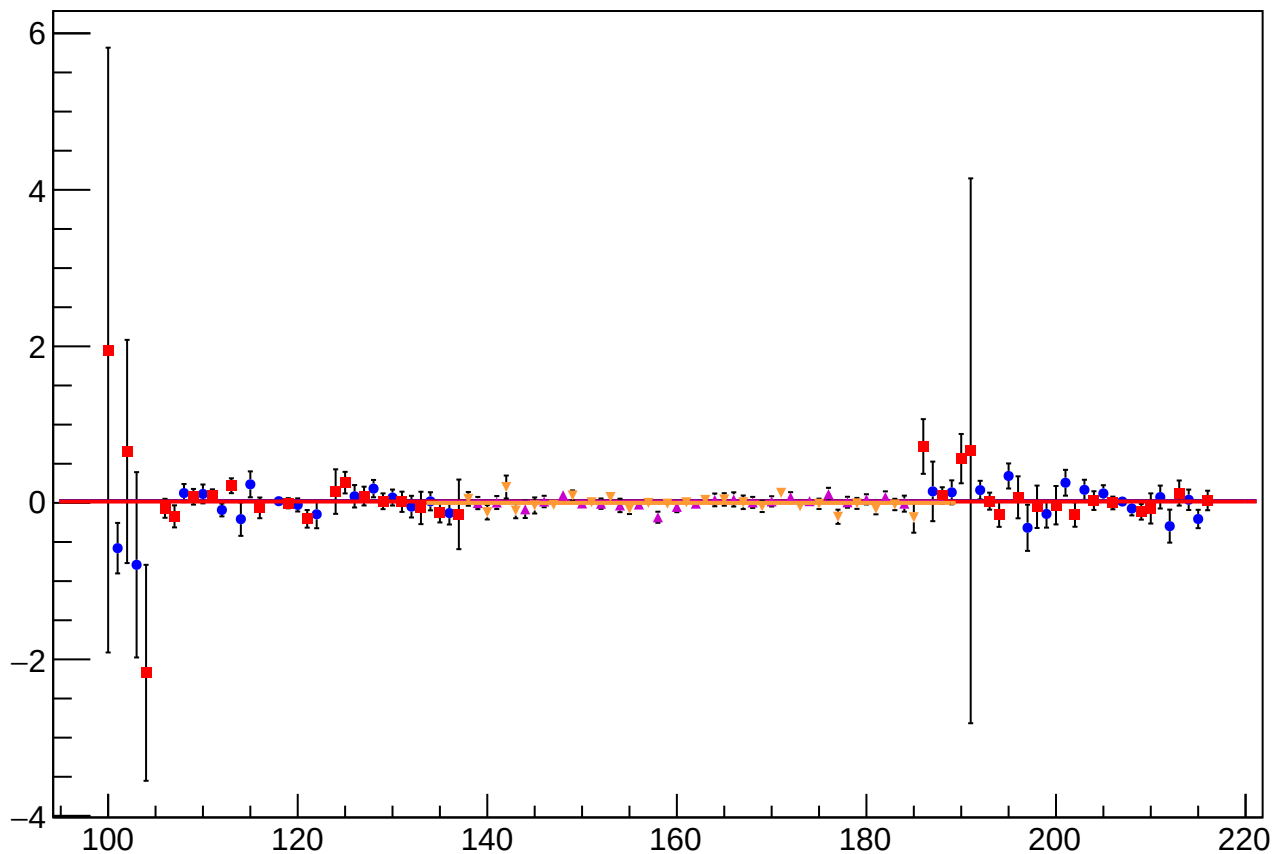
Left In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 6963716.3/22

+ sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 20589210.9/55

All:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 42213213.9/113

- sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}$ : 21544303.0/57

# asym\_atr1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.021$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-0.000 \pm 0.014$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.018 \pm 0.022$   $\chi^2/\text{NDF}$ : 33.2/34

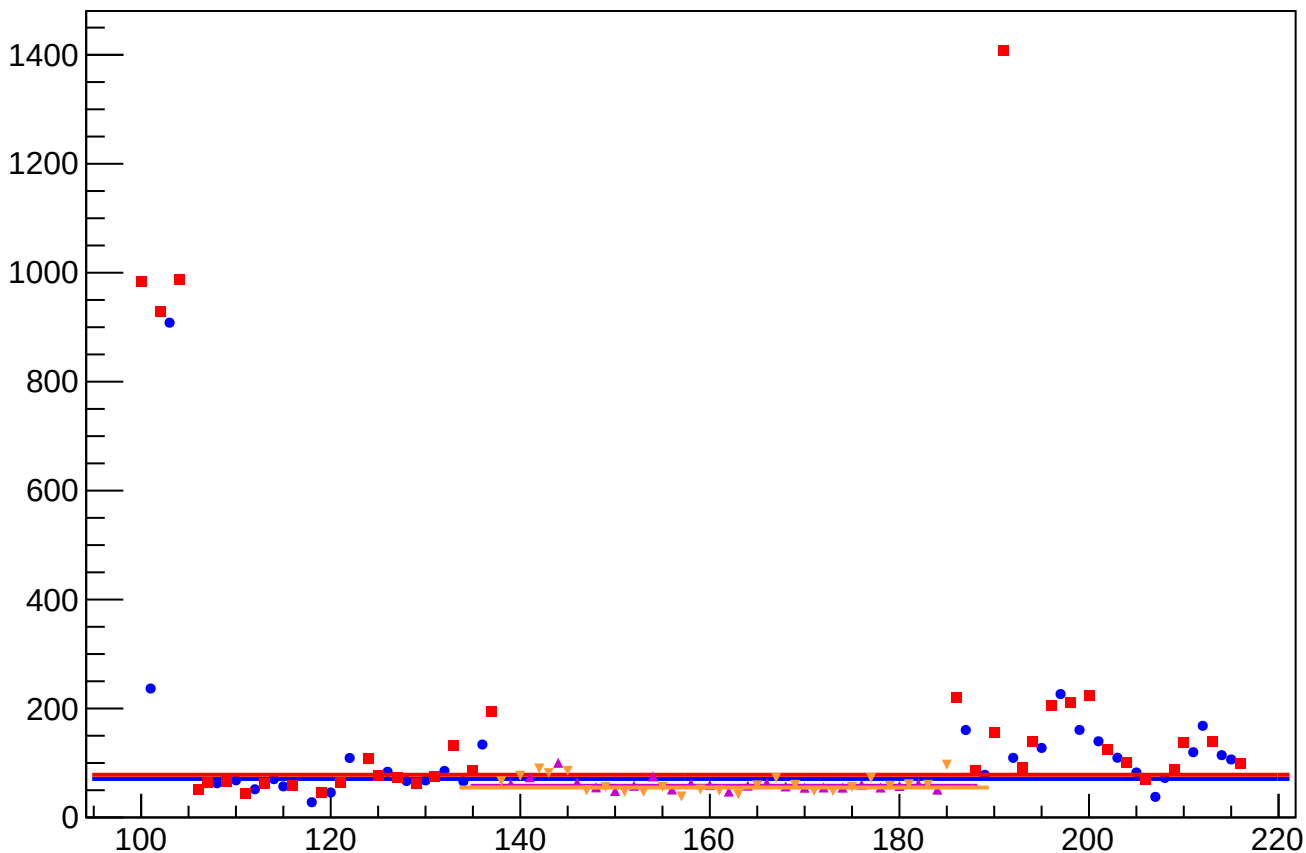
Left In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 107.3/113

- sign  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 48.9/57

# asym\_atr1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 70.730 $\pm$ 0.015  $\chi^2$ /NDF: 7633707.5/30

Left Out: 54.930 $\pm$ 0.010  $\chi^2$ /NDF: 1297722.9/24

Right Out: 78.393 $\pm$ 0.016  $\chi^2$ /NDF: 6824957.8/34

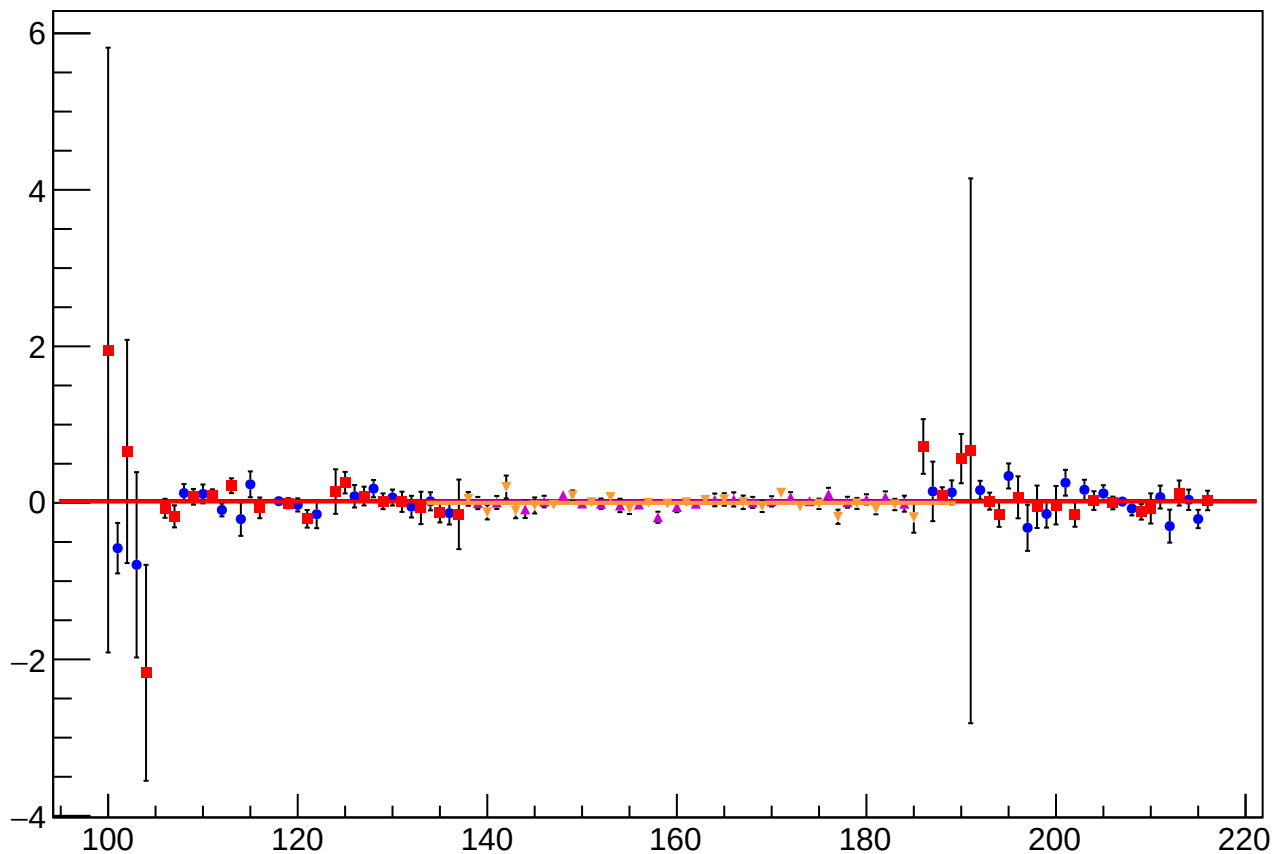
Left In: 58.138 $\pm$ 0.010  $\chi^2$ /NDF: 657460.3/22

+ sign 59.927 $\pm$ 0.008  $\chi^2$ /NDF: 9726237.3/55

All: 62.044 $\pm$ 0.006  $\chi^2$ /NDF: 18503335.8/113

- sign 64.413 $\pm$ 0.009  $\chi^2$ /NDF: 8637263.3/57

# asym\_atr1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.023 \pm 0.021$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-0.000 \pm 0.014$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $0.018 \pm 0.022$   $\chi^2/\text{NDF}$ : 33.2/34

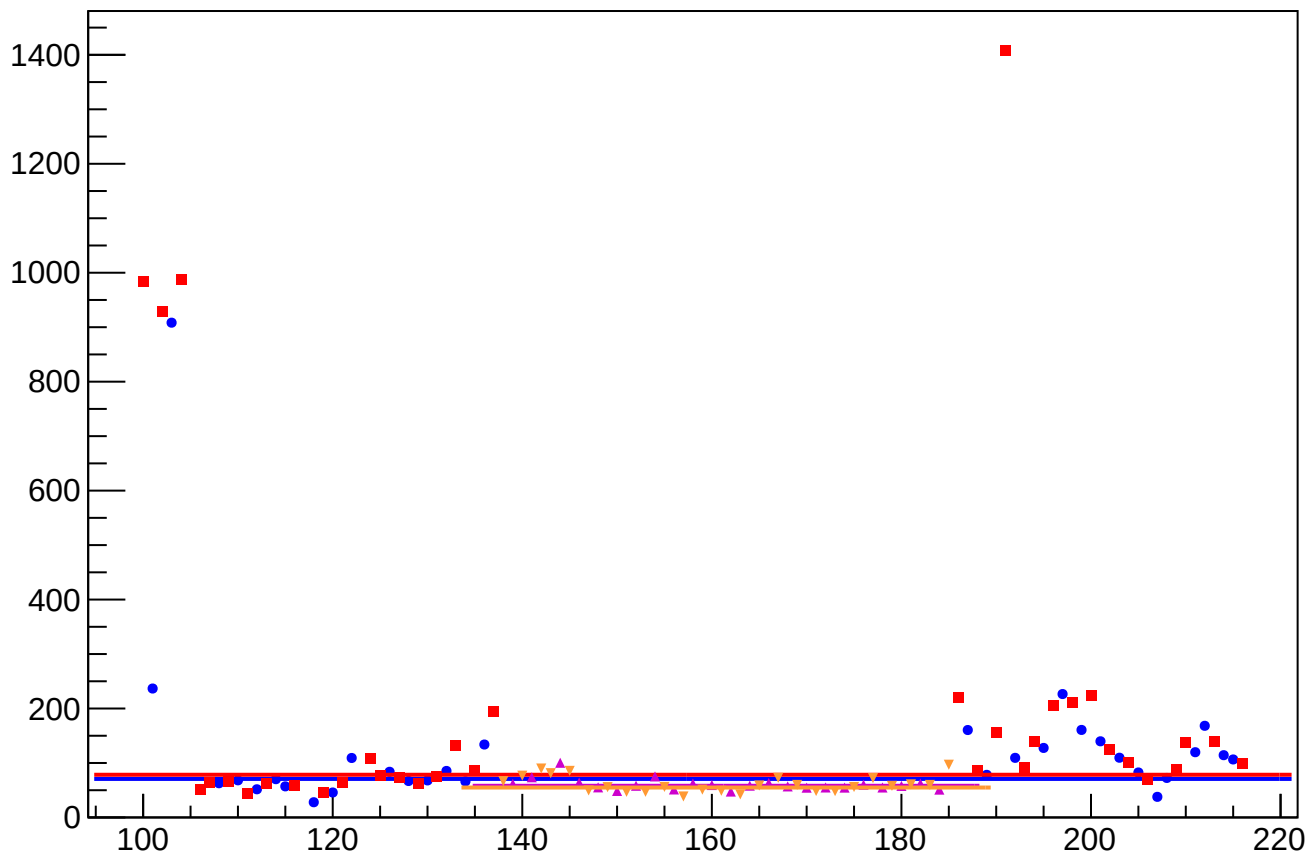
Left In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 15.5/22

+ sign  $0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 107.3/113

- sign  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 48.9/57

asym\_atr1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $70.730 \pm 0.015$   $\chi^2/\text{NDF}$ : 7633707.5/30

Left Out:  $54.930 \pm 0.010$   $\chi^2/\text{NDF}$ : 1297722.9/24

Right Out:  $78.393 \pm 0.016$   $\chi^2/\text{NDF}$ : 6824957.8/34

Left In:  $58.138 \pm 0.010$   $\chi^2/\text{NDF}$ : 657460.3/22

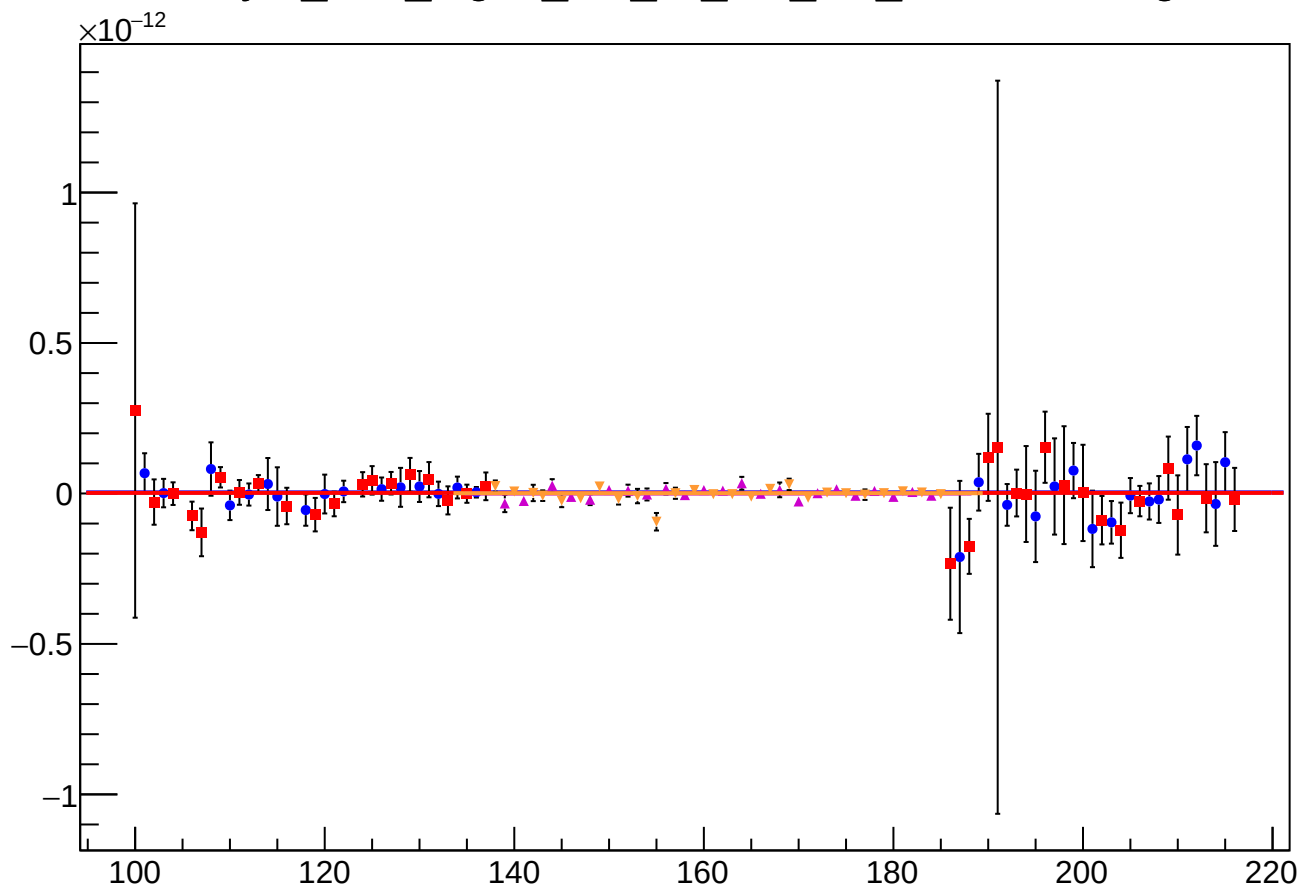
+ sign  $59.927 \pm 0.008$   $\chi^2/\text{NDF}$ : 9726237.3/55

All:  $62.044 \pm 0.006$   $\chi^2/\text{NDF}$ : 18503335.8/113

- sign  $64.413 \pm 0.009$   $\chi^2/\text{NDF}$ : 8637263.3/57



# asym\_atr1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.5/34

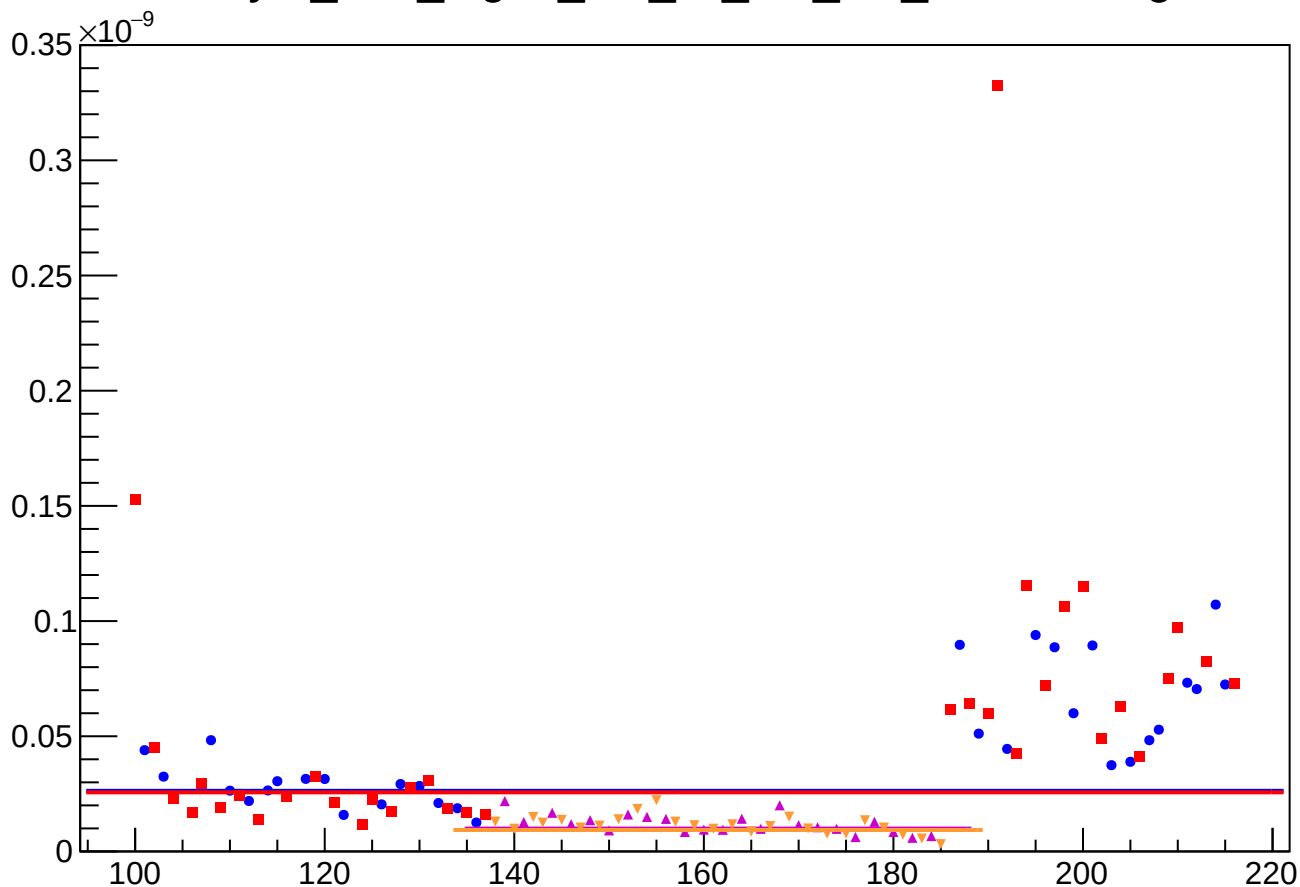
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 88.7/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.8/57

asym\_atr1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6336267.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3070809.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6722081.3/34

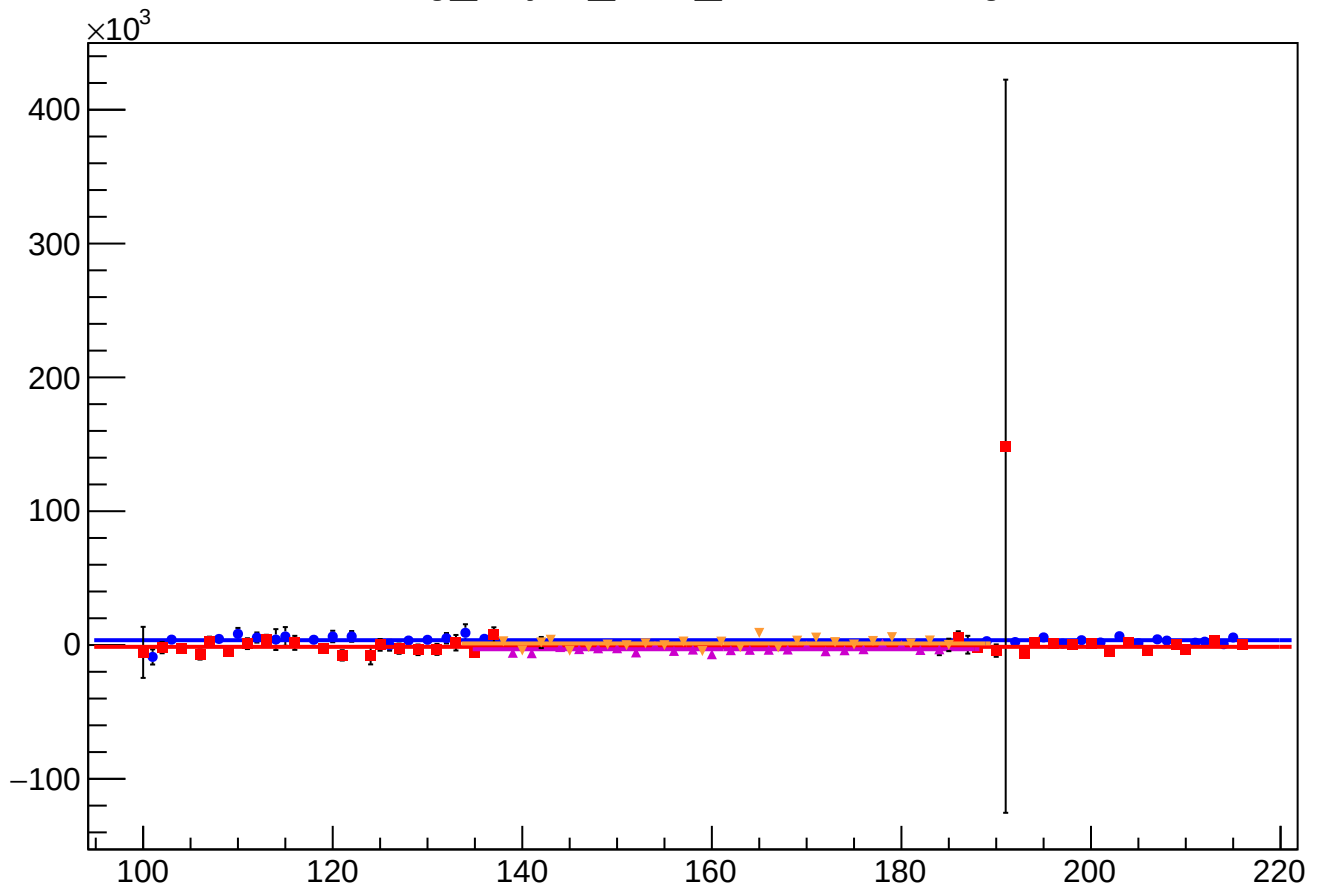
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2573277.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15462559.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29895757.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14373895.4/57

# reg\_asym\_atr2\_mean vs Slug



Right In: 3609.180+/-610.484  $\chi^2/\text{NDF}$ : 14.9/30

Left Out: 1188.836+/-556.242  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -1356.244+/-605.849  $\chi^2/\text{NDF}$ : 31.8/34

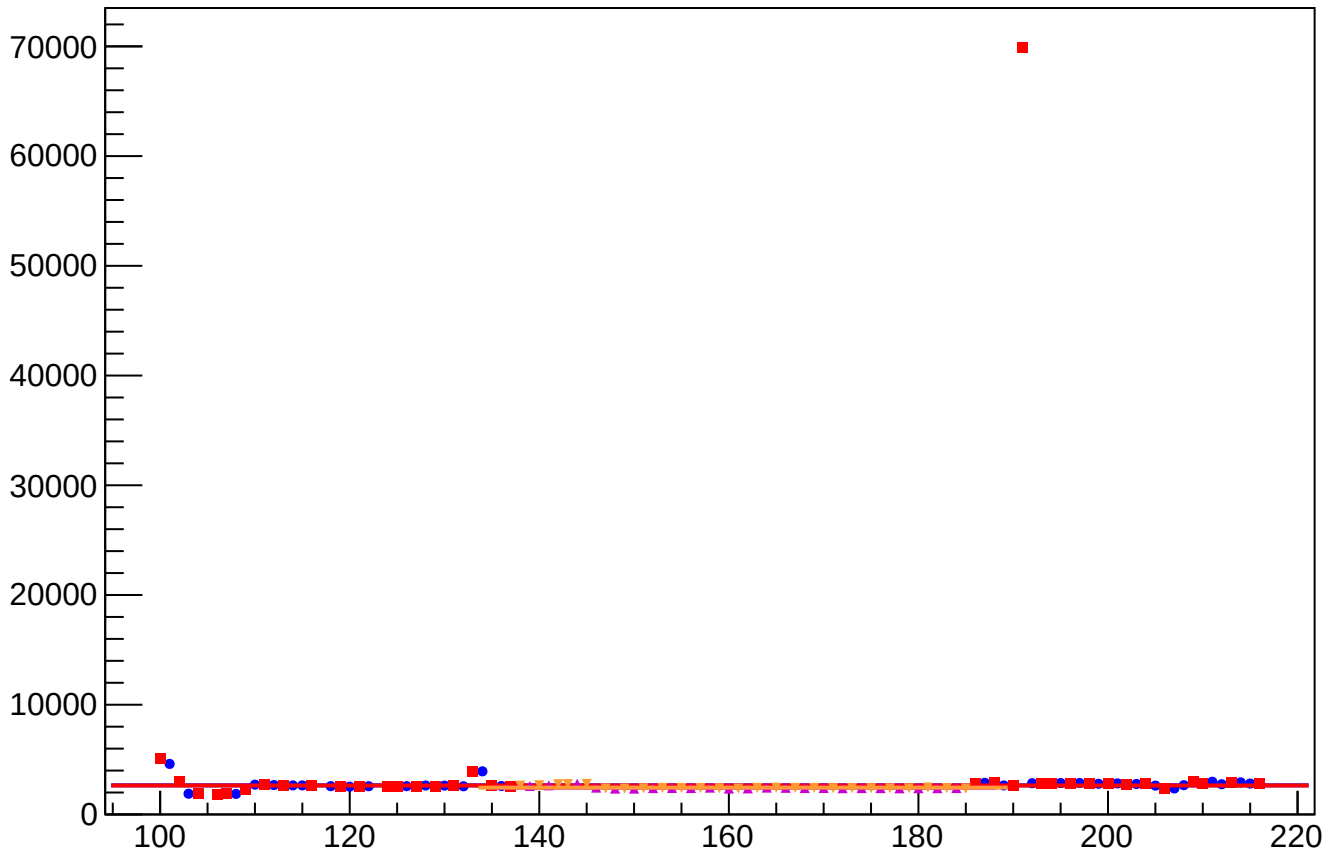
Left In: -3147.419+/-569.221  $\chi^2/\text{NDF}$ : 12.7/22

+ sign 2286.727+/-411.164  $\chi^2/\text{NDF}$ : 54.6/55

All: 10.032+/-292.030  $\chi^2/\text{NDF}$ : 165.6/113

- sign -2307.609+/-414.845  $\chi^2/\text{NDF}$ : 49.1/57

# reg\_asym\_atr2\_rms vs Slug



Right In: 2654.388+/-0.432  $\chi^2/\text{NDF}$ : 771403.7/30

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2639.105+/-0.428  $\chi^2/\text{NDF}$ : 807718.7/34

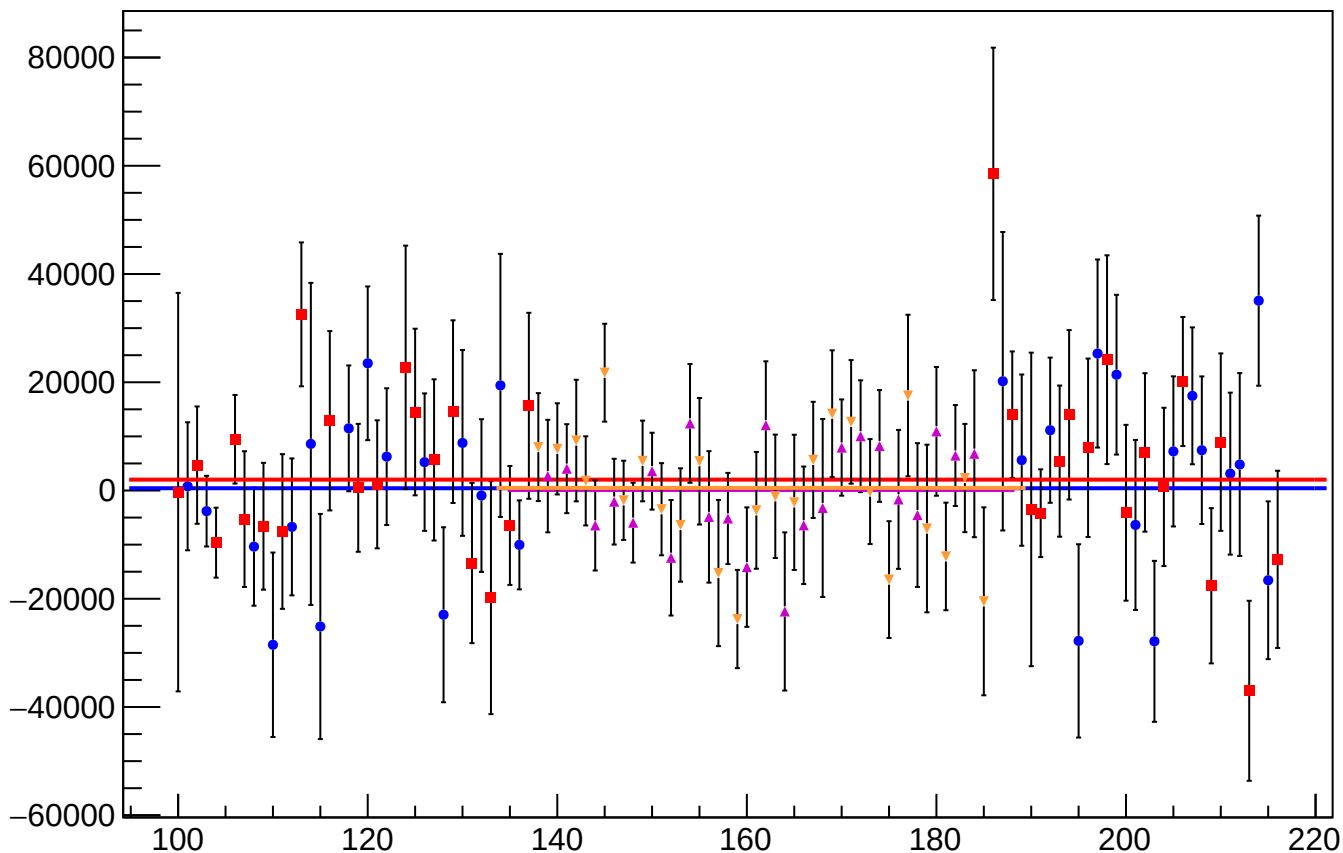
Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

+ sign 2540.431+/-0.291  $\chi^2/\text{NDF}$ : 988961.3/55

All: 2535.857+/-0.206  $\chi^2/\text{NDF}$ : 1975813.3/11

- sign 2531.201+/-0.293  $\chi^2/\text{NDF}$ : 986352.6/57

# asym\_atr2\_reg\_correction\_mean vs Slug



Right In:  $420.838 \pm 2427.064$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $477.187 \pm 2035.969$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $2010.402 \pm 2235.399$   $\chi^2/\text{NDF}$ : 37.2/34

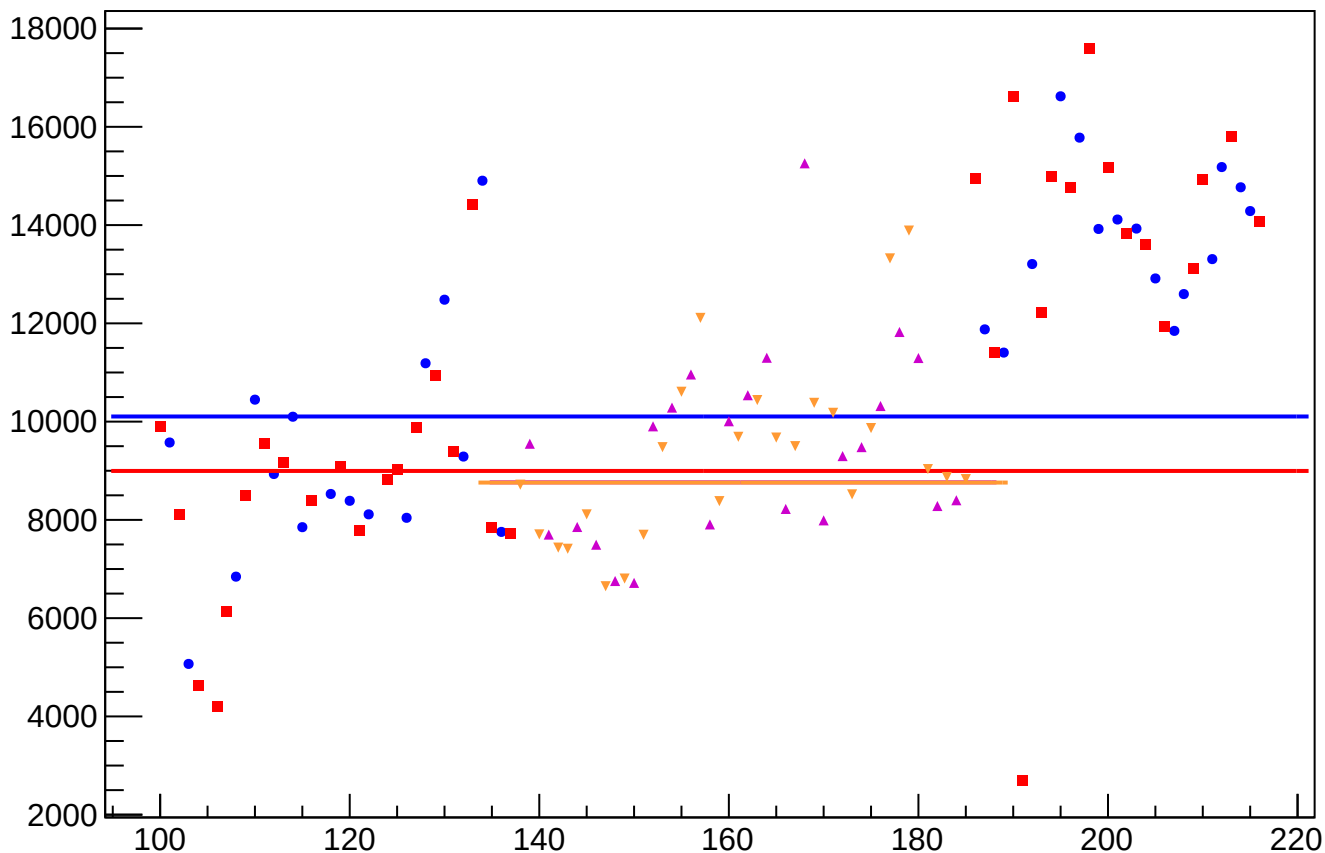
Left In:  $104.954 \pm 2090.899$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $453.913 \pm 1559.826$   $\chi^2/\text{NDF}$ : 62.3/55

All:  $729.750 \pm 1091.180$   $\chi^2/\text{NDF}$ : 114.5/113

- sign  $994.106 \pm 1527.019$   $\chi^2/\text{NDF}$ : 52.1/57

# asym\_atr2\_reg\_correction\_rms vs Slug



Right In: 10104.517+/-1.716  $\chi^2/\text{NDF}$ : 3682683.5/30

Left Out: 8759.635+/-1.440  $\chi^2/\text{NDF}$ :1222238.0/24

Right Out: 8996.138+/-1.581  $\chi^2/\text{NDF}$ : 6328488.5/34

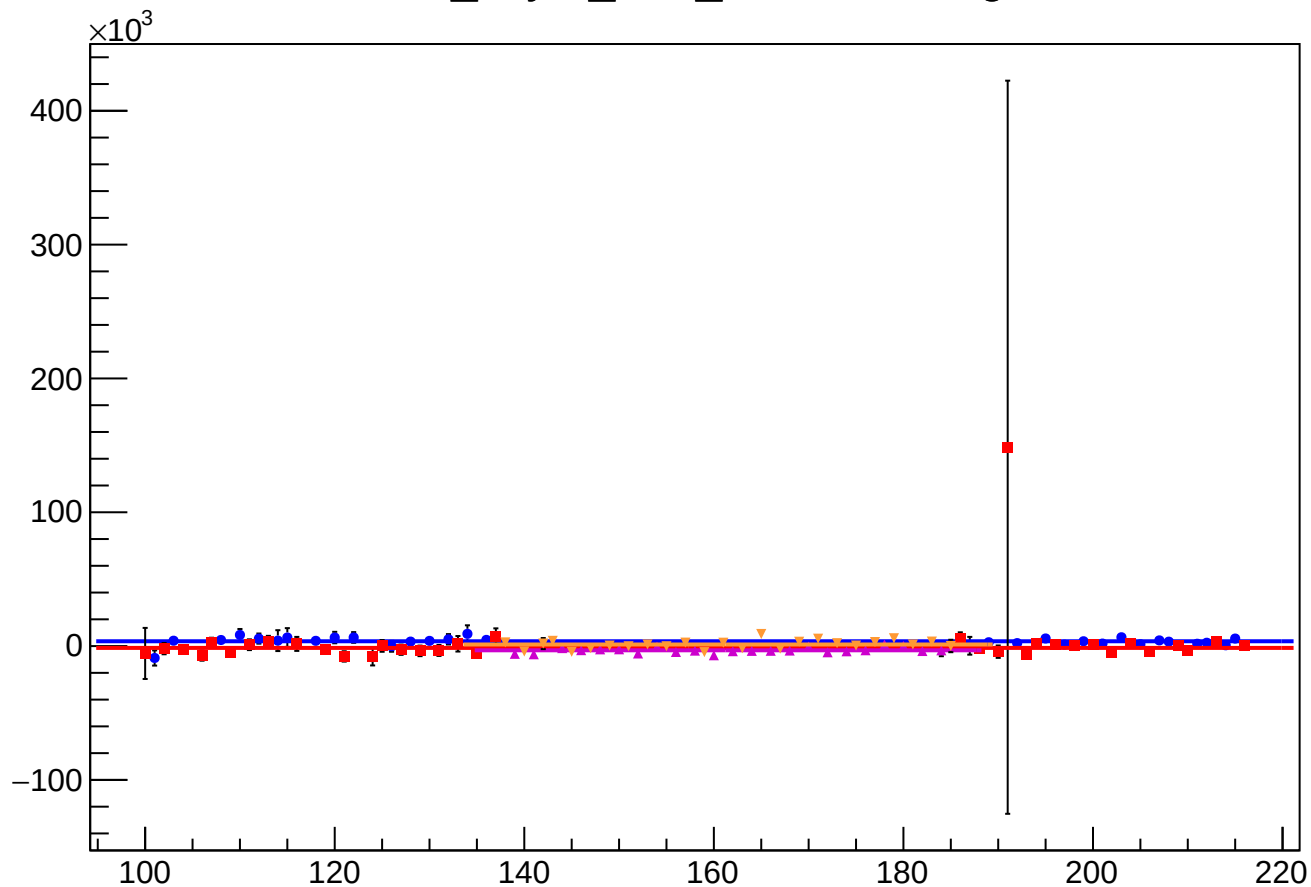
Left In: 8764.138+/-1.478  $\chi^2/\text{NDF}$ :1291698.9/22

+ sign 9315.122+/-1.103  $\chi^2/\text{NDF}$ : 5265372.0/55

All: 9089.055+/-0.772  $\chi^2/\text{NDF}$ : 12979320.6/100

- sign 8872.398+/-1.080  $\chi^2/\text{NDF}$ : 7631677.5/57

cor\_asym\_atr2\_mean vs Slug



Right In: 3609.043 $\pm$ 610.484  $\chi^2/\text{NDF}$ : 14.9/30

Left Out: 1188.666 $\pm$ 556.242  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -1356.554 $\pm$ 605.851  $\chi^2/\text{NDF}$ : 31.8/34

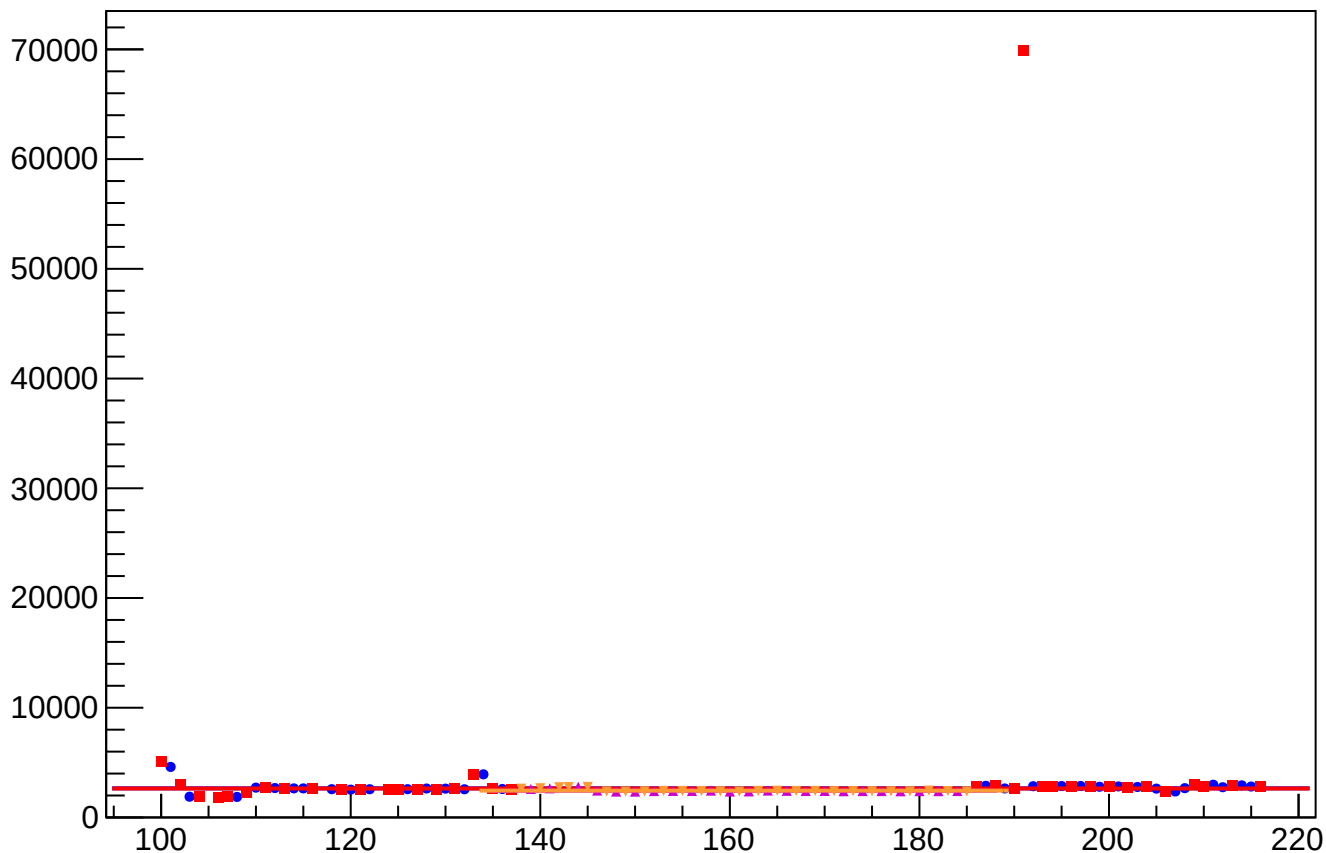
Left In: -3147.222 $\pm$ 569.221  $\chi^2/\text{NDF}$ : 12.7/22

+ sign 2286.572 $\pm$ 411.164  $\chi^2/\text{NDF}$ : 54.6/55

All: 9.935 $\pm$ 292.030  $\chi^2/\text{NDF}$ : 165.6/113

- sign -2307.653 $\pm$ 414.846  $\chi^2/\text{NDF}$ : 49.1/57

# cor\_asym\_atr2\_rms vs Slug



Right In: 2654.388+/-0.432  $\chi^2/\text{NDF}$ : 771400.8/30

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2639.116+/-0.428  $\chi^2/\text{NDF}$ : 807641.3/34

Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

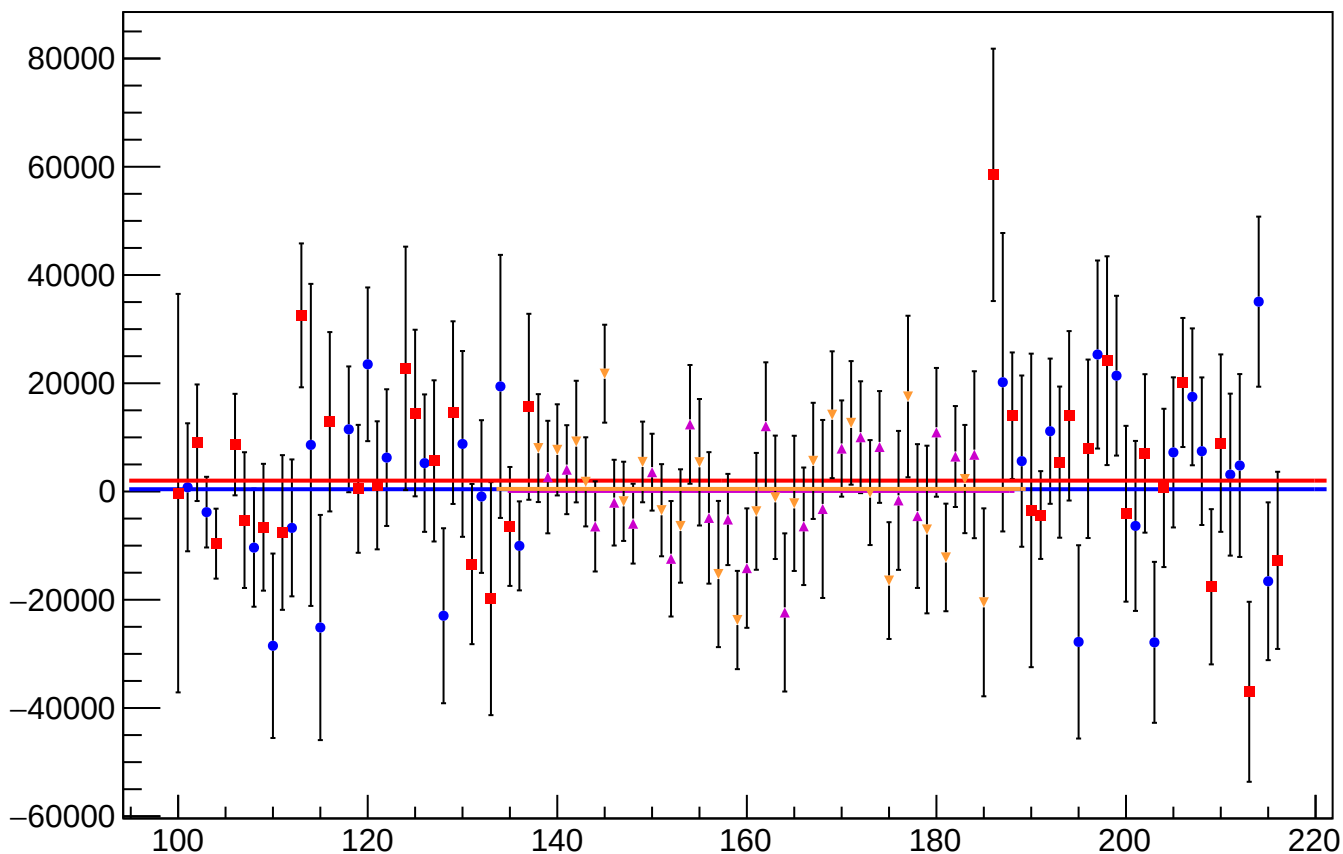
+ sign 2540.432+/-0.291  $\chi^2/\text{NDF}$ : 988958.9/55

All: 2535.860+/-0.206  $\chi^2/\text{NDF}$ : 1975746.4/11

- sign 2531.206+/-0.293  $\chi^2/\text{NDF}$ : 986288.5/57



# asym\_atr2\_cor\_correction\_mean vs Slug



Right In:  $421.182 \pm 2427.107$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $477.198 \pm 2035.967$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $2009.943 \pm 2254.943$   $\chi^2/\text{NDF}$ : 37.3/34

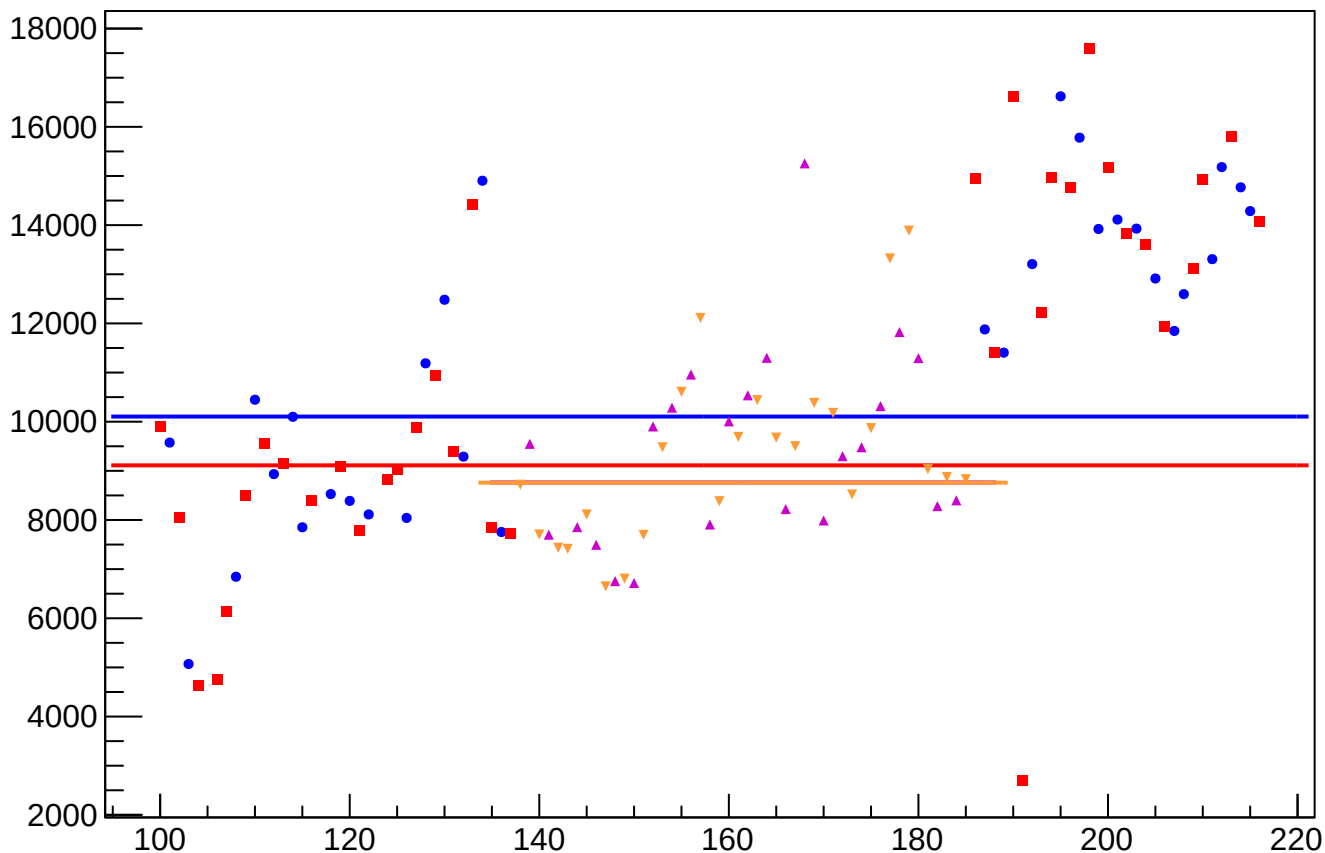
Left In:  $105.025 \pm 2090.897$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $454.062 \pm 1559.837$   $\chi^2/\text{NDF}$ : 62.3/55

All:  $724.448 \pm 1093.434$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $985.680 \pm 1533.205$   $\chi^2/\text{NDF}$ : 52.2/57

# asym\_atr2\_cor\_correction\_rms vs Slug



Right In: 10104.793+/-1.716  $\chi^2/\text{NDF}$ : 3682034.3/30

Left Out: 8759.625+/-1.440  $\chi^2/\text{NDF}$ :1222248.8/24

Right Out: 9111.752+/-1.594  $\chi^2/\text{NDF}$ : 6045626.8/34

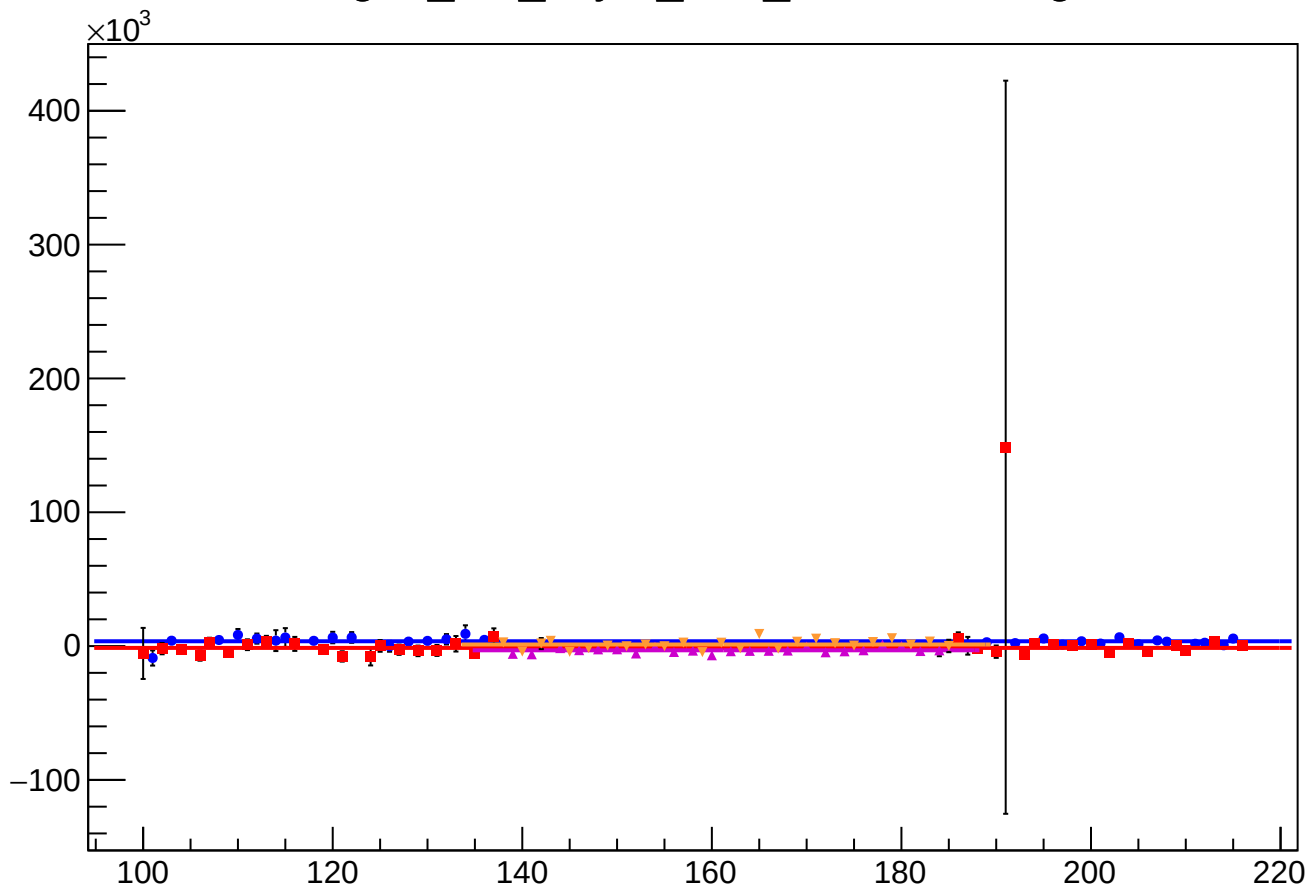
Left In: 8764.132+/-1.478  $\chi^2/\text{NDF}$ :1291700.3/22

+ sign 9315.218+/-1.103  $\chi^2/\text{NDF}$ : 5264879.8/55

All: 9116.668+/-0.773  $\chi^2/\text{NDF}$ : 12691476.8/100

- sign 8924.839+/-1.084  $\chi^2/\text{NDF}$ : 7362883.8/57

# eigen\_cor\_asym\_atr2\_mean vs Slug



Right In: 3609.043+/-610.484  $\chi^2/\text{NDF}$ : 14.9/30

Left Out: 1188.666+/-556.242  $\chi^2/\text{NDF}$ : 31.1/24

Right Out: -1356.554+/-605.851  $\chi^2/\text{NDF}$ : 31.8/34

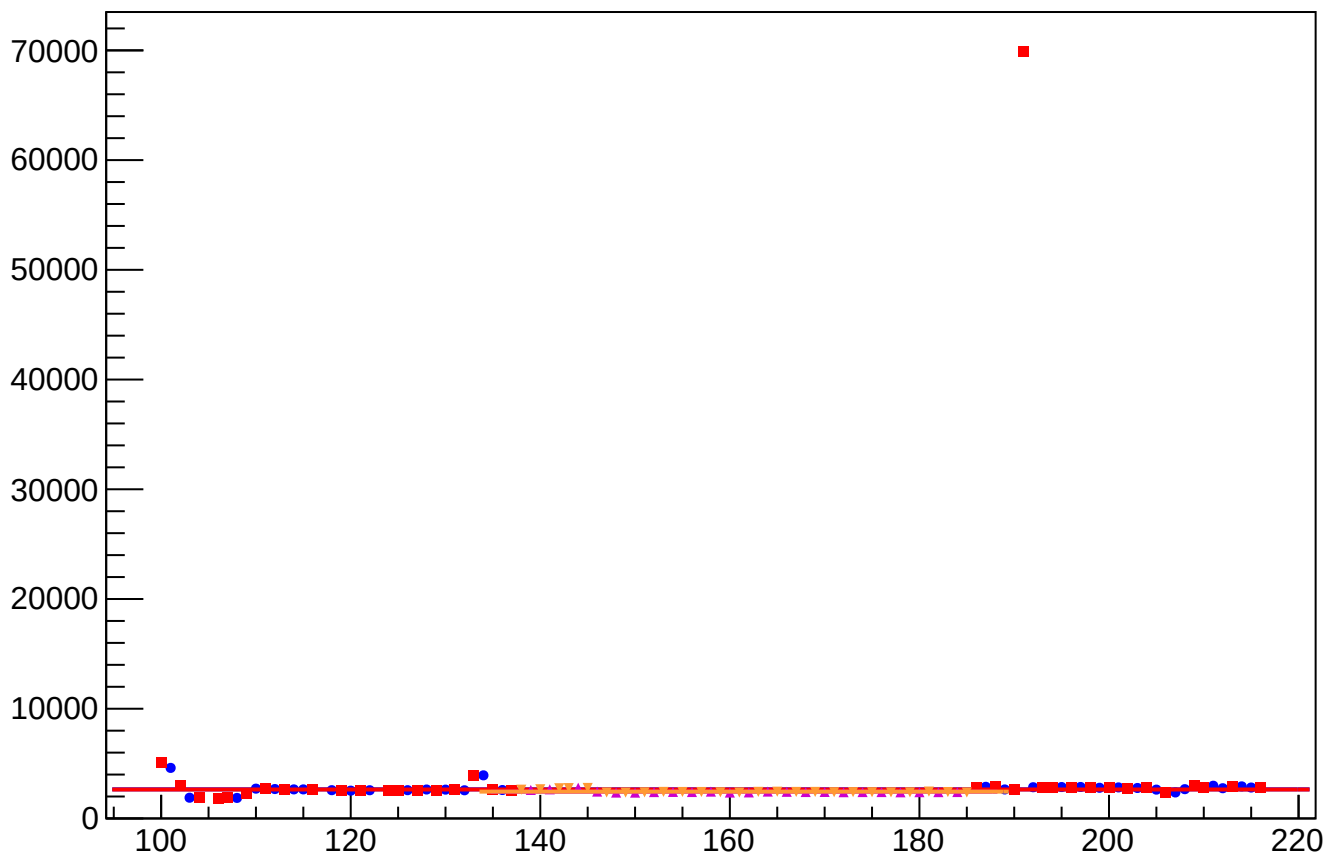
Left In: -3147.222+/-569.221  $\chi^2/\text{NDF}$ : 12.7/22

+ sign 2286.572+/-411.164  $\chi^2/\text{NDF}$ : 54.6/55

All: 9.935+/-292.030  $\chi^2/\text{NDF}$ : 165.6/113

- sign -2307.653+/-414.846  $\chi^2/\text{NDF}$ : 49.1/57

# eigen\_cor\_asym\_atr2\_rms vs Slug



Right In: 2654.388+/-0.432  $\chi^2/\text{NDF}$ : 771400.8/30

Left Out: 2445.826+/-0.393  $\chi^2/\text{NDF}$ : 90014.8/24

Right Out: 2639.116+/-0.428  $\chi^2/\text{NDF}$ : 807641.3/34

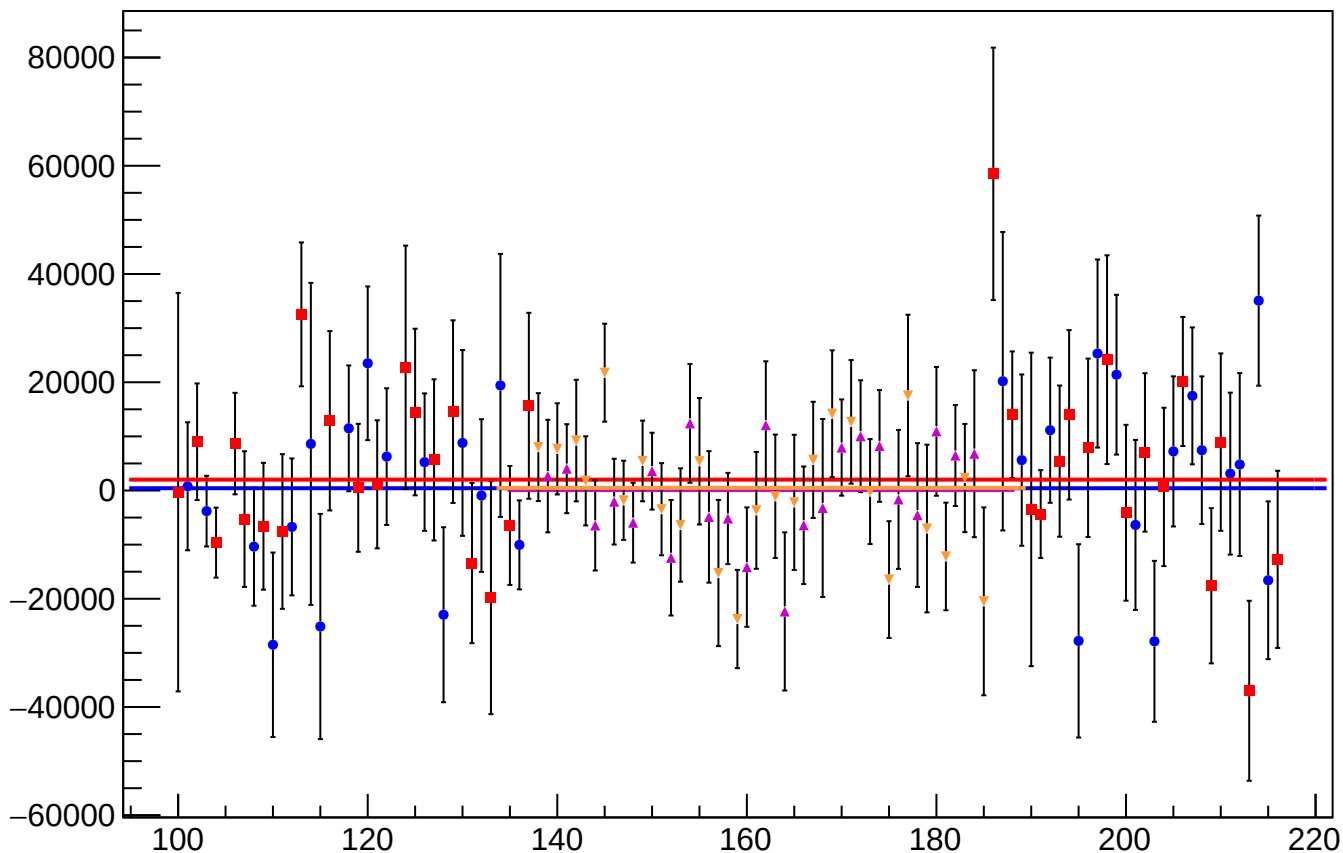
Left In: 2435.950+/-0.403  $\chi^2/\text{NDF}$ : 59189.9/22

+ sign 2540.432+/-0.291  $\chi^2/\text{NDF}$ : 988958.9/55

All: 2535.860+/-0.206  $\chi^2/\text{NDF}$ : 1975746.4/11

- sign 2531.206+/-0.293  $\chi^2/\text{NDF}$ : 986288.5/57

# asym\_atr2\_eigen\_cor\_correction\_mean vs Slug



Right In:  $421.182 \pm 2427.107$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $477.198 \pm 2035.967$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $2009.943 \pm 2254.943$   $\chi^2/\text{NDF}$ : 37.3/34

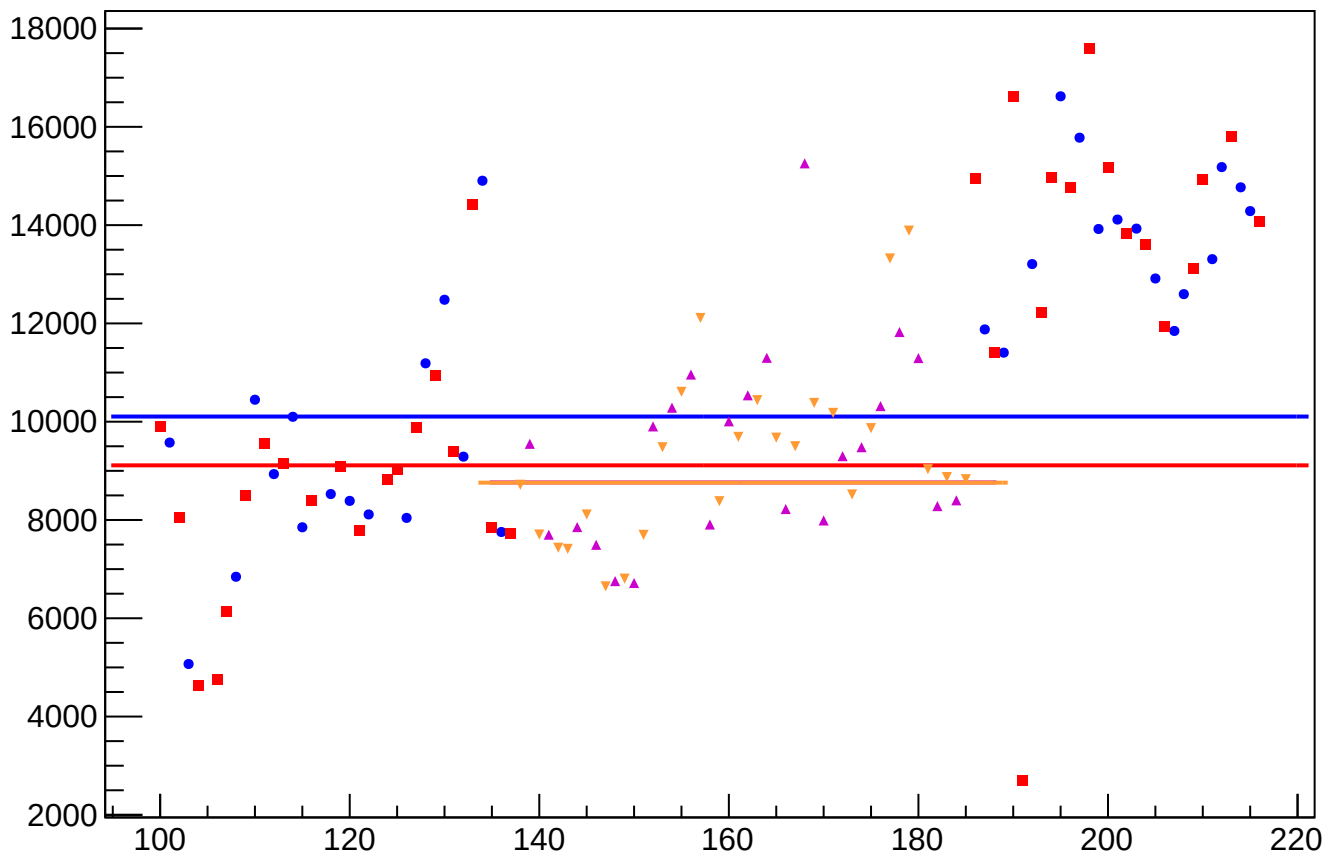
Left In:  $105.025 \pm 2090.897$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $454.062 \pm 1559.837$   $\chi^2/\text{NDF}$ : 62.3/55

All:  $724.448 \pm 1093.434$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $985.680 \pm 1533.205$   $\chi^2/\text{NDF}$ : 52.2/57

# asym\_atr2\_eigen\_cor\_correction\_rms vs Slug



Right In: 10104.793  $\pm$  1.716  $\chi^2/\text{NDF}$ : 3682034.3/30

Left Out: 8759.625  $\pm$  1.440  $\chi^2/\text{NDF}$ : 1222248.8/24

Right Out: 9111.752  $\pm$  1.594  $\chi^2/\text{NDF}$ : 6045626.8/34

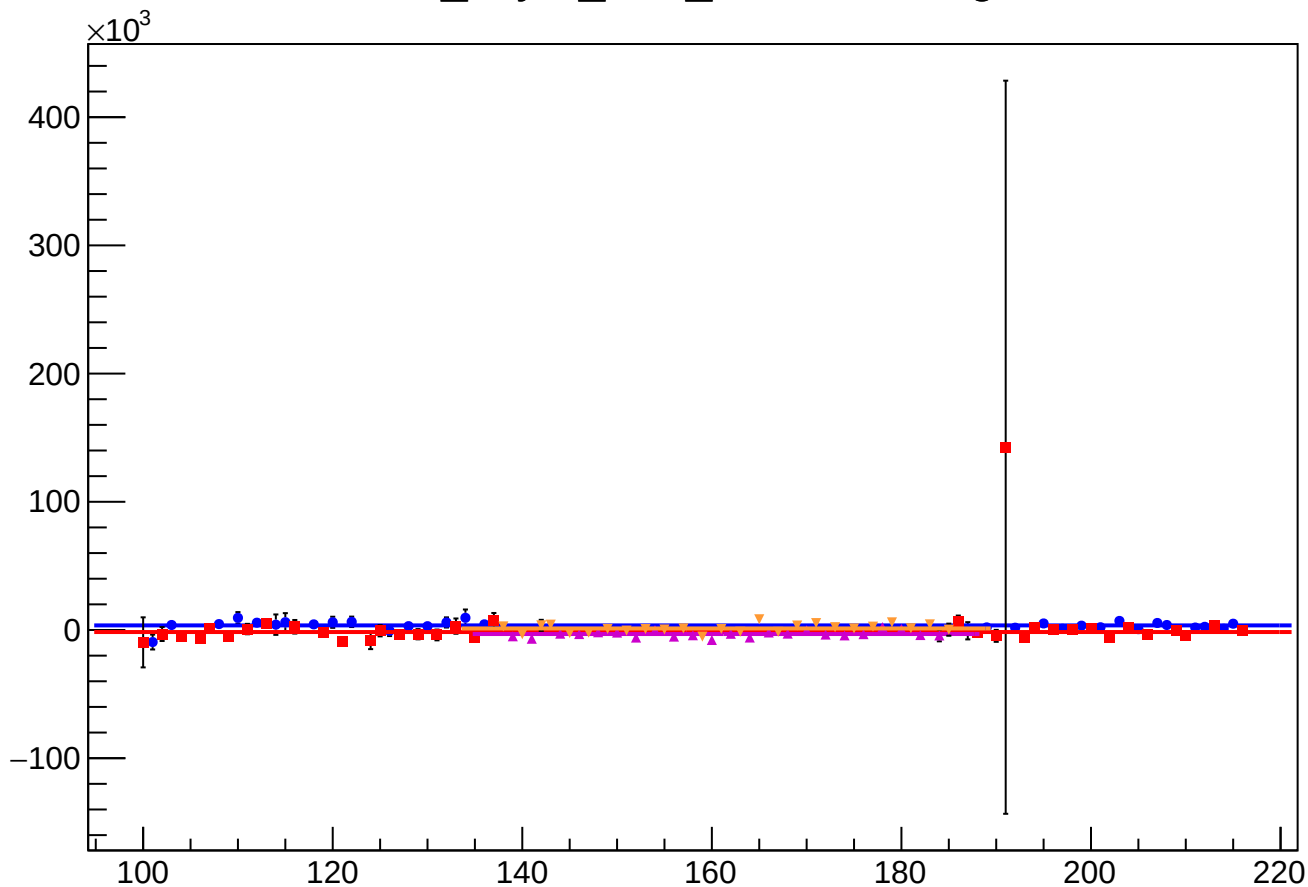
Left In: 8764.132  $\pm$  1.478  $\chi^2/\text{NDF}$ : 1291700.3/22

+ sign 9315.218  $\pm$  1.103  $\chi^2/\text{NDF}$ : 5264879.8/55

All: 9116.668  $\pm$  0.773  $\chi^2/\text{NDF}$ : 12691476.8/100

- sign 8924.839  $\pm$  1.084  $\chi^2/\text{NDF}$ : 7362883.8/57

dit\_asym\_atr2\_mean vs Slug



Right In: 3587.820+/-626.609  $\chi^2/\text{NDF}$ : 16.7/30

Left Out: 1213.875+/-579.693  $\chi^2/\text{NDF}$ : 26.8/24

Right Out: -1588.340+/-624.185  $\chi^2/\text{NDF}$ : 36.0/34

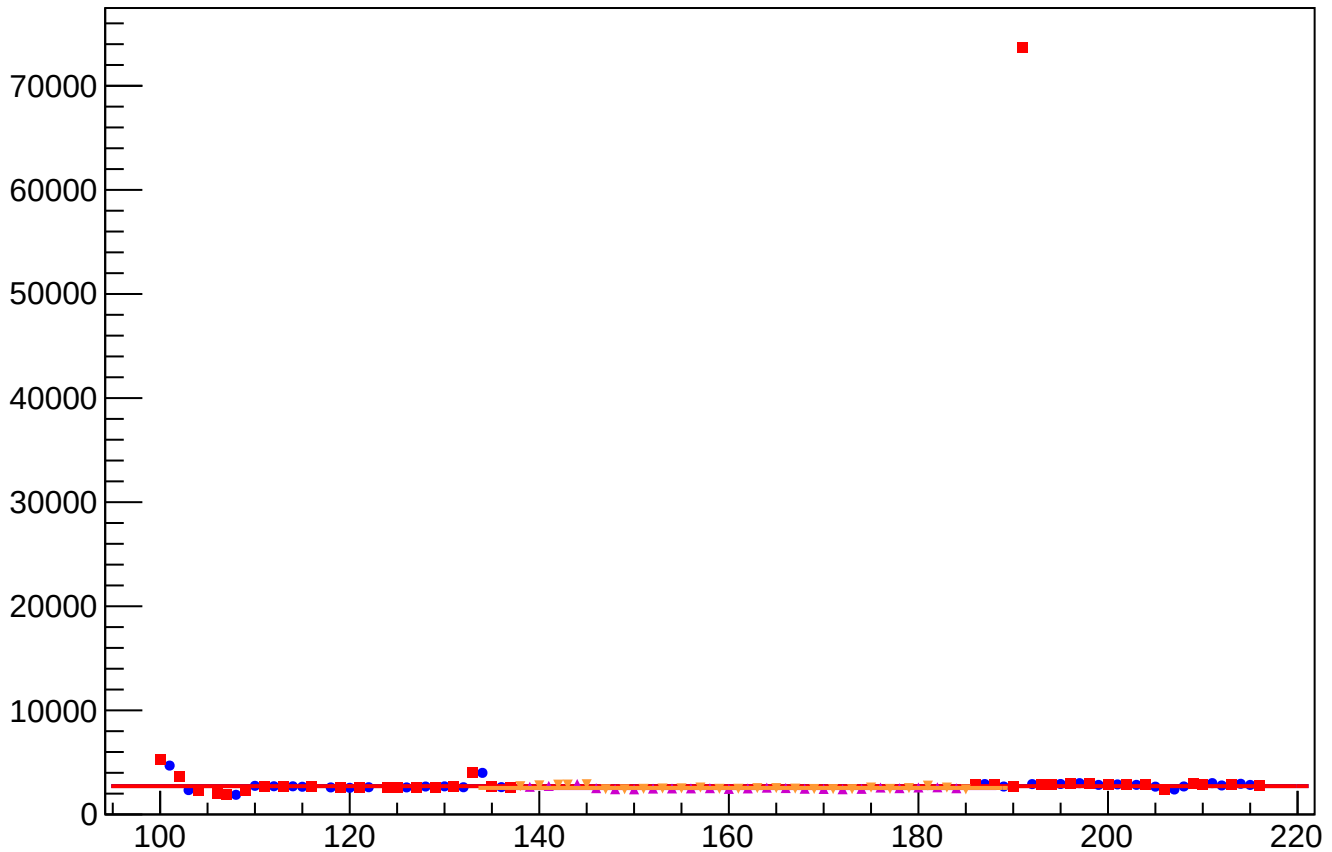
Left In: -3150.265+/-592.116  $\chi^2/\text{NDF}$ : 16.5/22

+ sign 2308.658+/-425.525  $\chi^2/\text{NDF}$ : 51.3/55

All: -28.527+/-302.315  $\chi^2/\text{NDF}$ : 168.0/113

- sign -2410.455+/-429.579  $\chi^2/\text{NDF}$ : 55.8/57

# dit\_asym\_atr2\_rms vs Slug



Right In: 2729.666+/-0.443  $\chi^2/\text{NDF}$ : 614431.8/30

Left Out: 2547.154+/-0.410  $\chi^2/\text{NDF}$ : 117298.5/24

Right Out: 2718.612+/-0.441  $\chi^2/\text{NDF}$ : 698441.2/34

Left In: 2532.772+/-0.419  $\chi^2/\text{NDF}$ : 68441.1/22

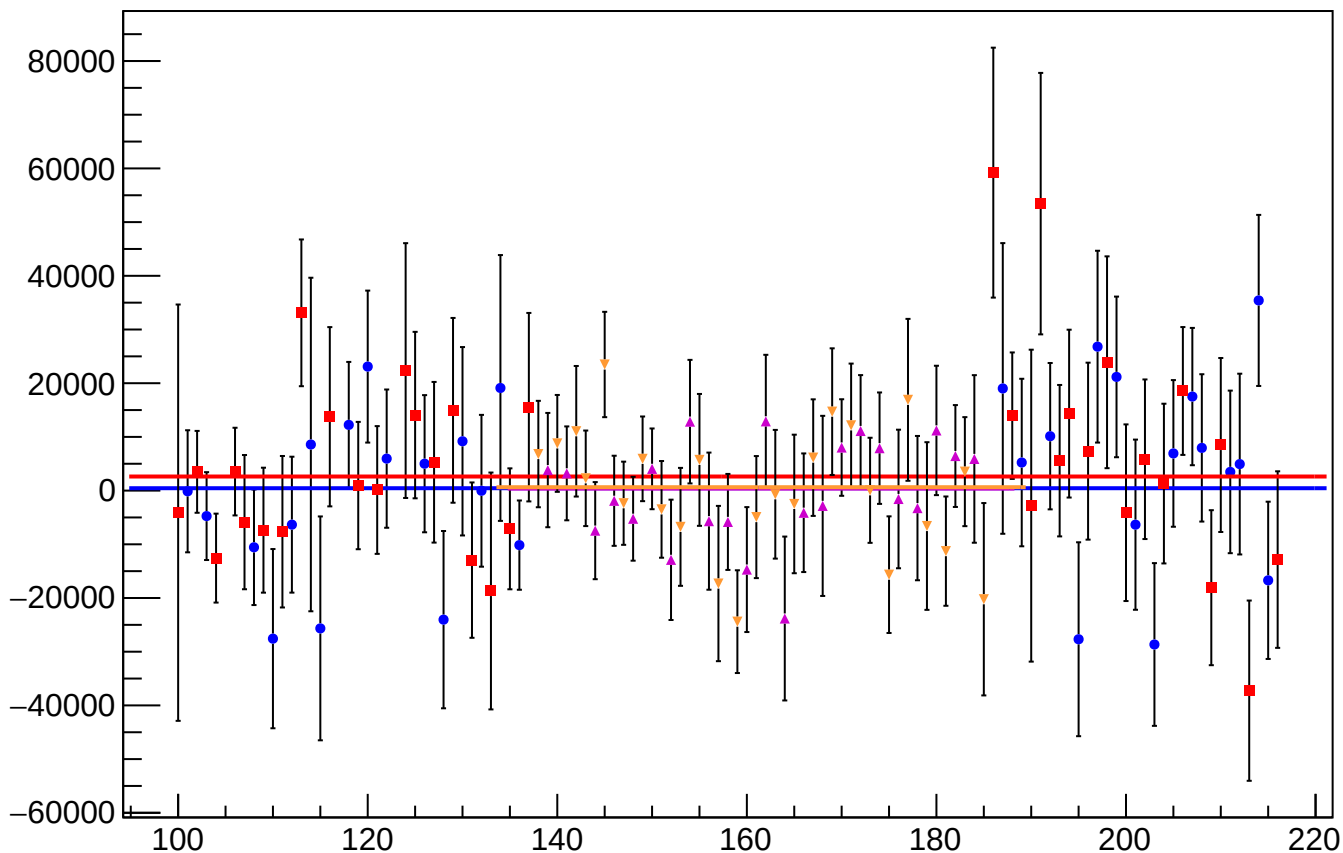
+ sign 2631.323+/-0.301  $\chi^2/\text{NDF}$ : 823157.1/55

All: 2626.120+/-0.214  $\chi^2/\text{NDF}$ : 1683982.9/11

- sign 2620.818+/-0.304  $\chi^2/\text{NDF}$ : 860222.1/57



# asym\_atr2\_dit\_correction\_mean vs Slug



Right In: 445.316 $\pm$ 2499.072  $\chi^2$ /NDF: 34.8/30

Left Out: 631.360 $\pm$ 2123.101  $\chi^2$ /NDF: 26.7/24

Right Out: 2623.977 $\pm$ 2330.446  $\chi^2$ /NDF: 39.6/34

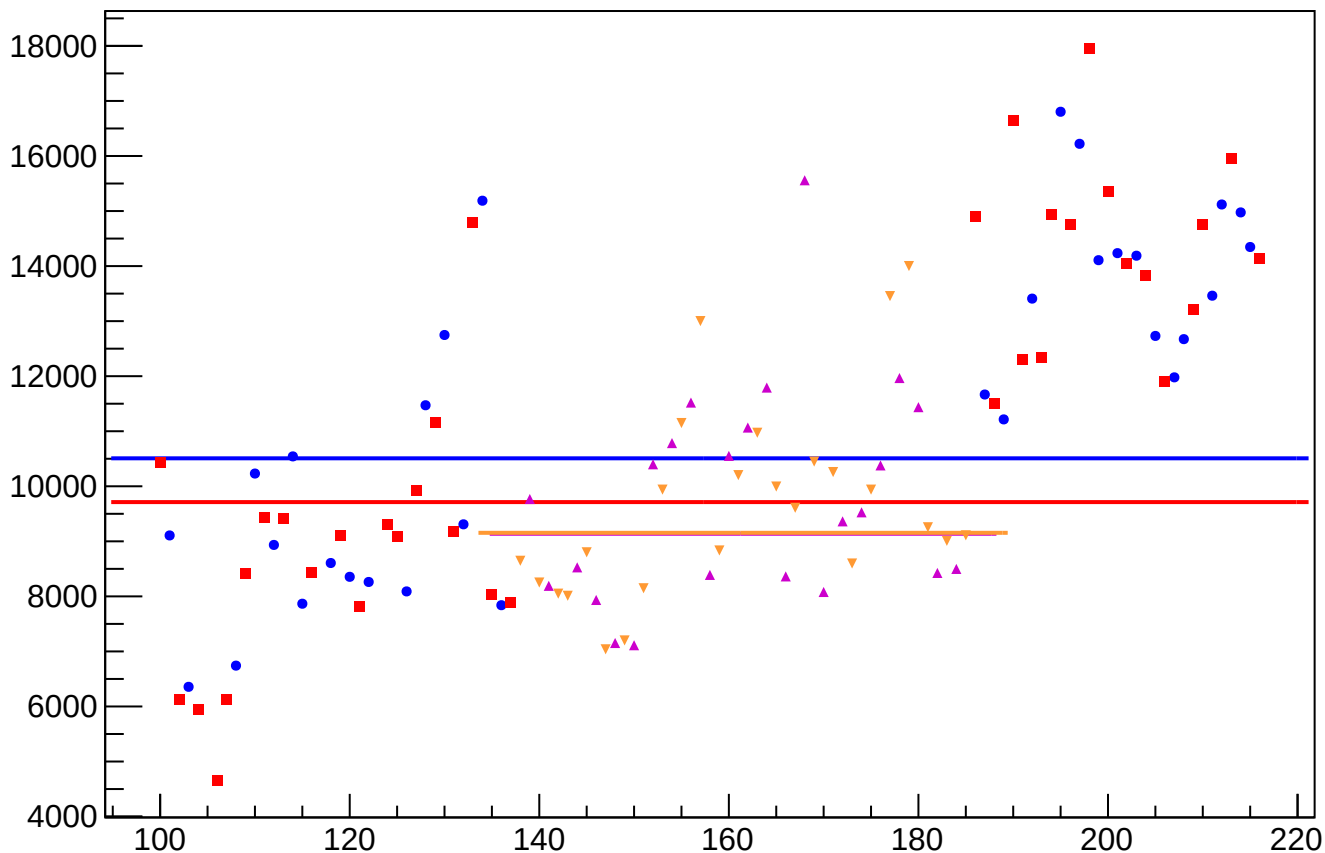
Left In: 377.922 $\pm$ 2176.347  $\chi^2$ /NDF: 14.2/22

+ sign 553.372 $\pm$ 1618.029  $\chi^2$ /NDF: 61.5/55

All: 996.251 $\pm$ 1134.297  $\chi^2$ /NDF: 116.0/113

- sign 1424.241 $\pm$ 1590.599  $\chi^2$ /NDF: 54.4/57

# asym\_atr2\_dit\_correction\_rms vs Slug



Right In: 10507.951+/-1.767  $\chi^2/\text{NDF}$ : 2958056.6/30

Left Out: 9154.688+/-1.501  $\chi^2/\text{NDF}$ :1072073.9/24

Right Out: 9712.832+/-1.648  $\chi^2/\text{NDF}$ : 4548214.6/34

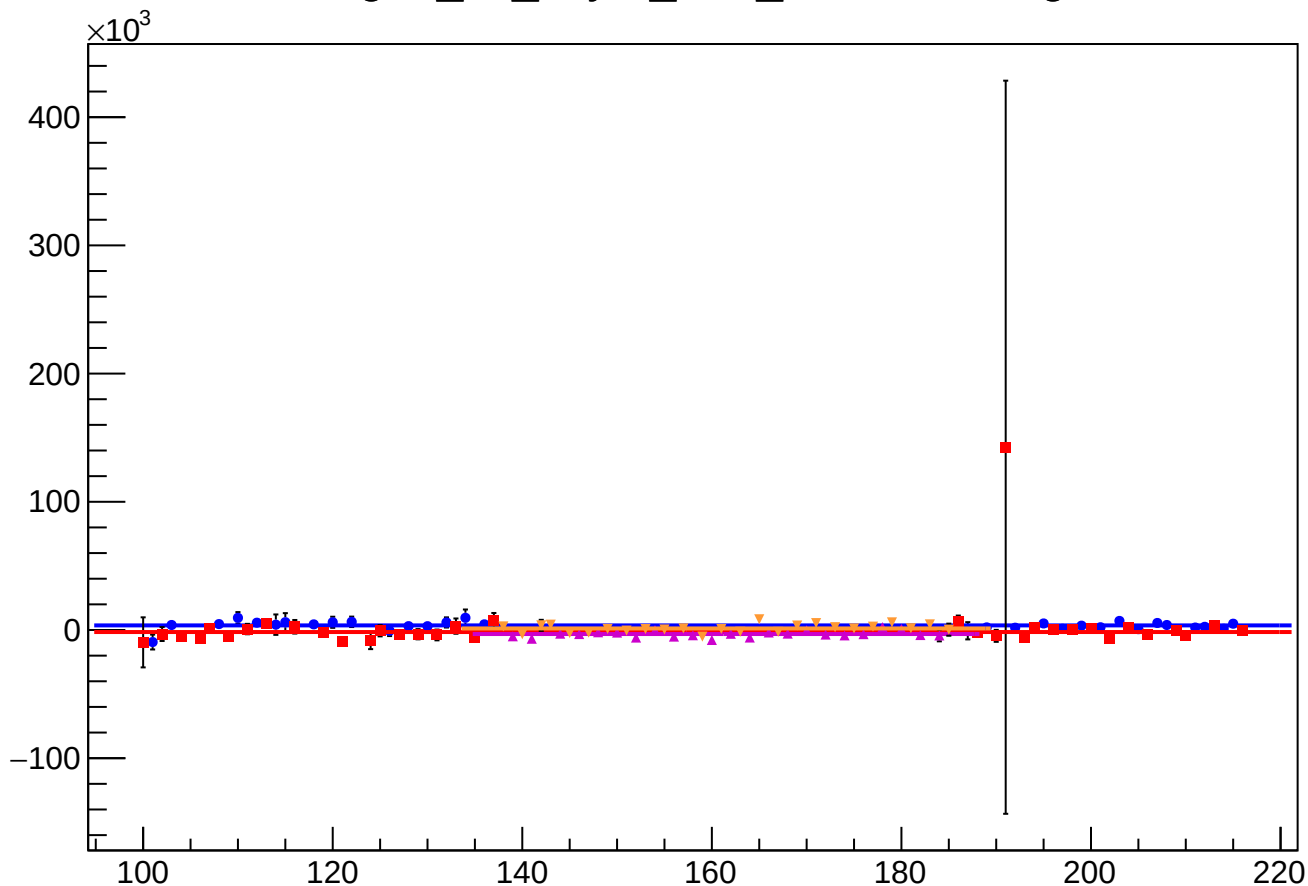
Left In: 9137.576+/-1.539  $\chi^2/\text{NDF}$ :1172792.2/22

+ sign 9721.968+/-1.144  $\chi^2/\text{NDF}$ : 4370749.0/55

All: 9561.058+/-0.802  $\chi^2/\text{NDF}$ : 10195744.3/100

- sign 9405.557+/-1.125  $\chi^2/\text{NDF}$ : 5786100.5/57

# eigen\_dit\_asym\_atr2\_mean vs Slug



Right In: 3587.813+/-626.609  $\chi^2/\text{NDF}$ : 16.7/30

Left Out: 1213.864+/-579.693  $\chi^2/\text{NDF}$ : 26.8/24

Right Out: -1588.344+/-624.185  $\chi^2/\text{NDF}$ : 36.0/34

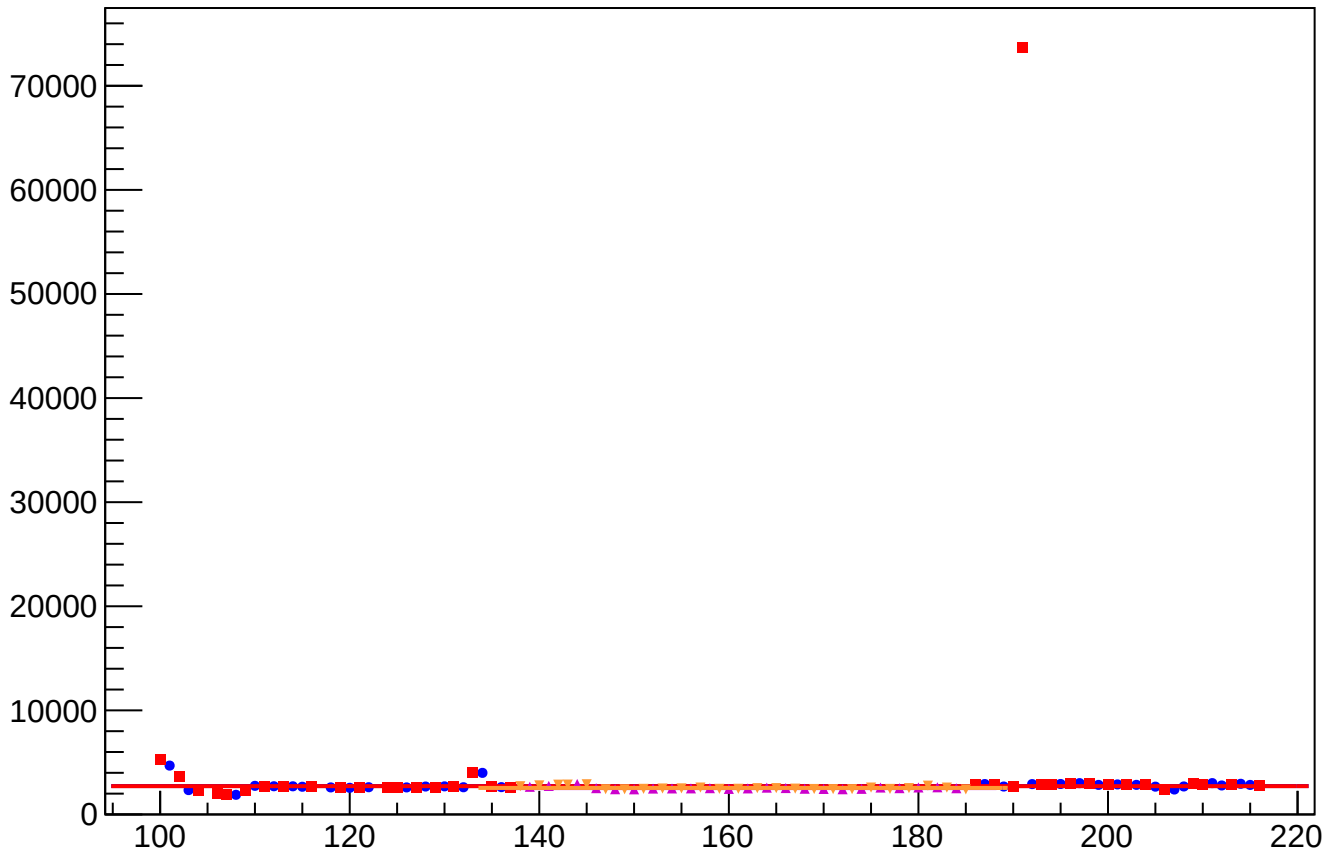
Left In: -3150.264+/-592.117  $\chi^2/\text{NDF}$ : 16.5/22

+ sign 2308.650+/-425.525  $\chi^2/\text{NDF}$ : 51.3/55

All: -28.531+/-302.315  $\chi^2/\text{NDF}$ : 168.0/113

- sign -2410.456+/-429.579  $\chi^2/\text{NDF}$ : 55.8/57

# eigen\_dit\_asym\_atr2\_rms vs Slug



Right In: 2729.666+/-0.443  $\chi^2/\text{NDF}$ : 614432.7/30

Left Out: 2547.156+/-0.410  $\chi^2/\text{NDF}$ : 117298.5/24

Right Out: 2718.612+/-0.441  $\chi^2/\text{NDF}$ : 698441.1/34

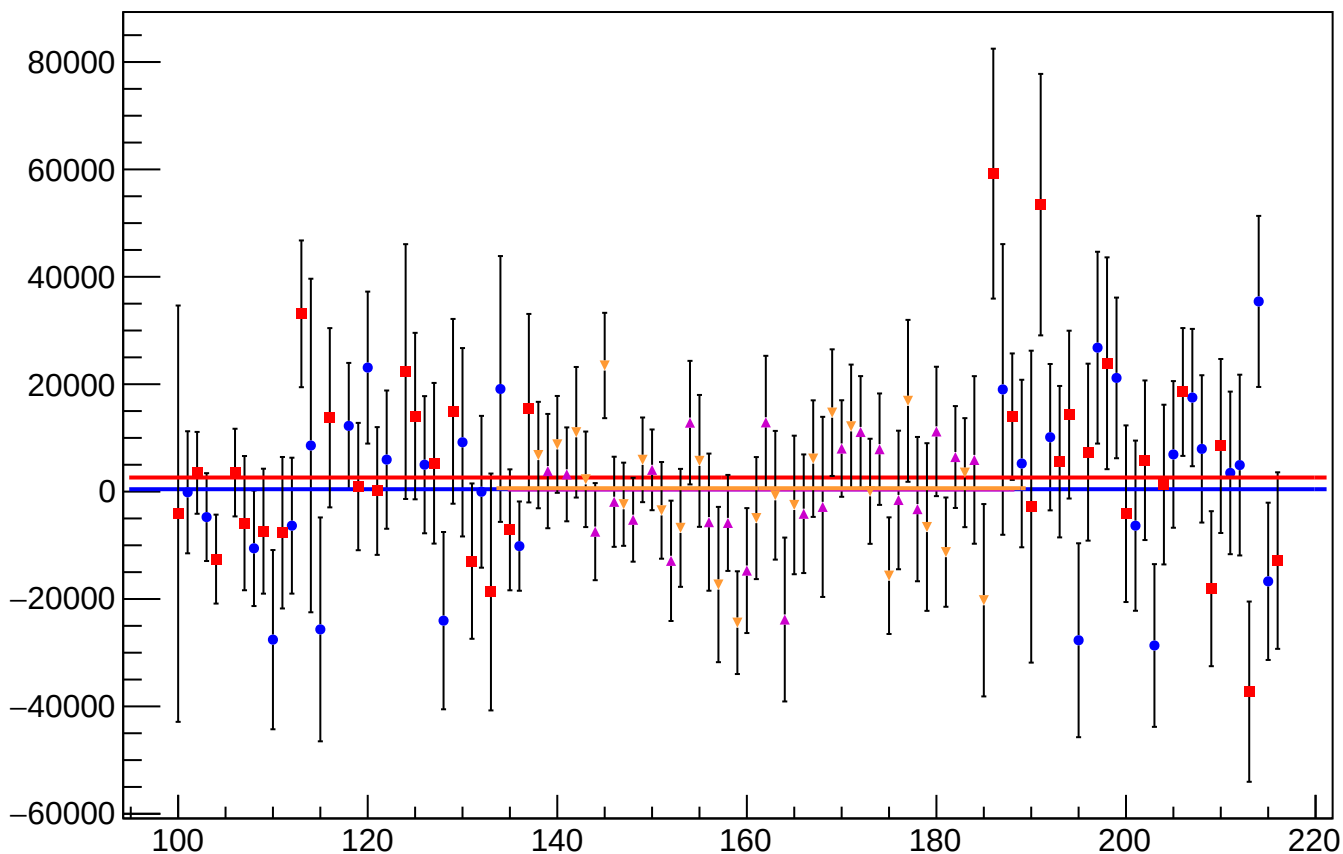
Left In: 2532.774+/-0.419  $\chi^2/\text{NDF}$ : 68440.8/22

+ sign 2631.323+/-0.301  $\chi^2/\text{NDF}$ : 823155.9/55

All: 2626.121+/-0.214  $\chi^2/\text{NDF}$ : 1683979.4/11

- sign 2620.819+/-0.304  $\chi^2/\text{NDF}$ : 860219.9/57

# asym\_atr2\_eigen\_dit\_correction\_mean vs Slug



Right In: 445.330 $\pm$ 2499.072  $\chi^2$ /NDF: 34.8/30

Left Out: 631.356 $\pm$ 2123.104  $\chi^2$ /NDF: 26.7/24

Right Out: 2623.971 $\pm$ 2330.444  $\chi^2$ /NDF: 39.6/34

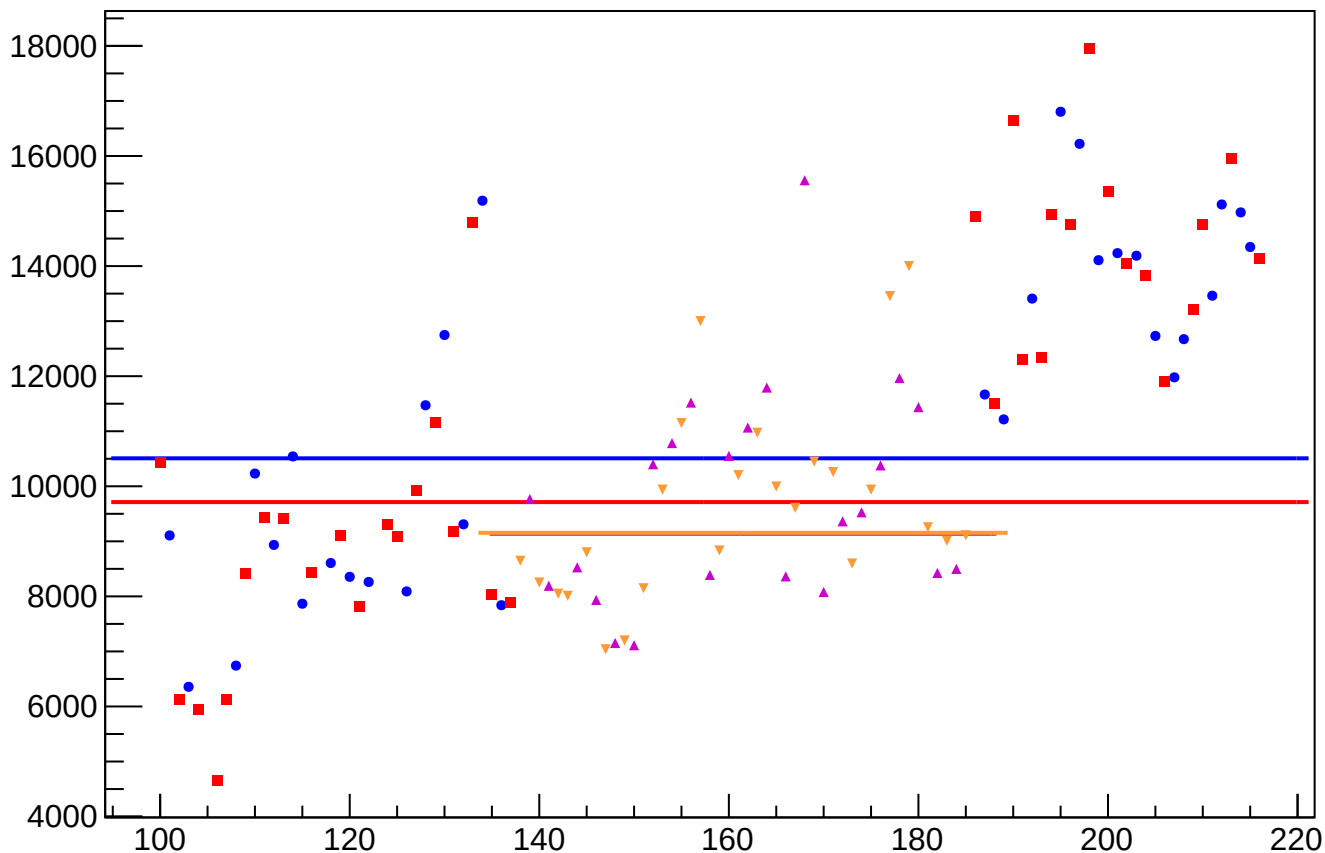
Left In: 377.927 $\pm$ 2176.350  $\chi^2$ /NDF: 14.2/22

+ sign 553.375 $\pm$ 1618.030  $\chi^2$ /NDF: 61.5/55

All: 996.253 $\pm$ 1134.298  $\chi^2$ /NDF: 116.0/113

- sign 1424.243 $\pm$ 1590.600  $\chi^2$ /NDF: 54.4/57

# asym\_atr2\_eigen\_dit\_correction\_rms vs Slug



Right In: 10507.946 $\pm$ 1.767  $\chi^2$ /NDF: 2958073.8/30

Left Out: 9154.703 $\pm$ 1.501  $\chi^2$ /NDF:1072075.9/24

+ sign 9721.975 $\pm$ 1.144  $\chi^2$ /NDF: 4370757.7/55

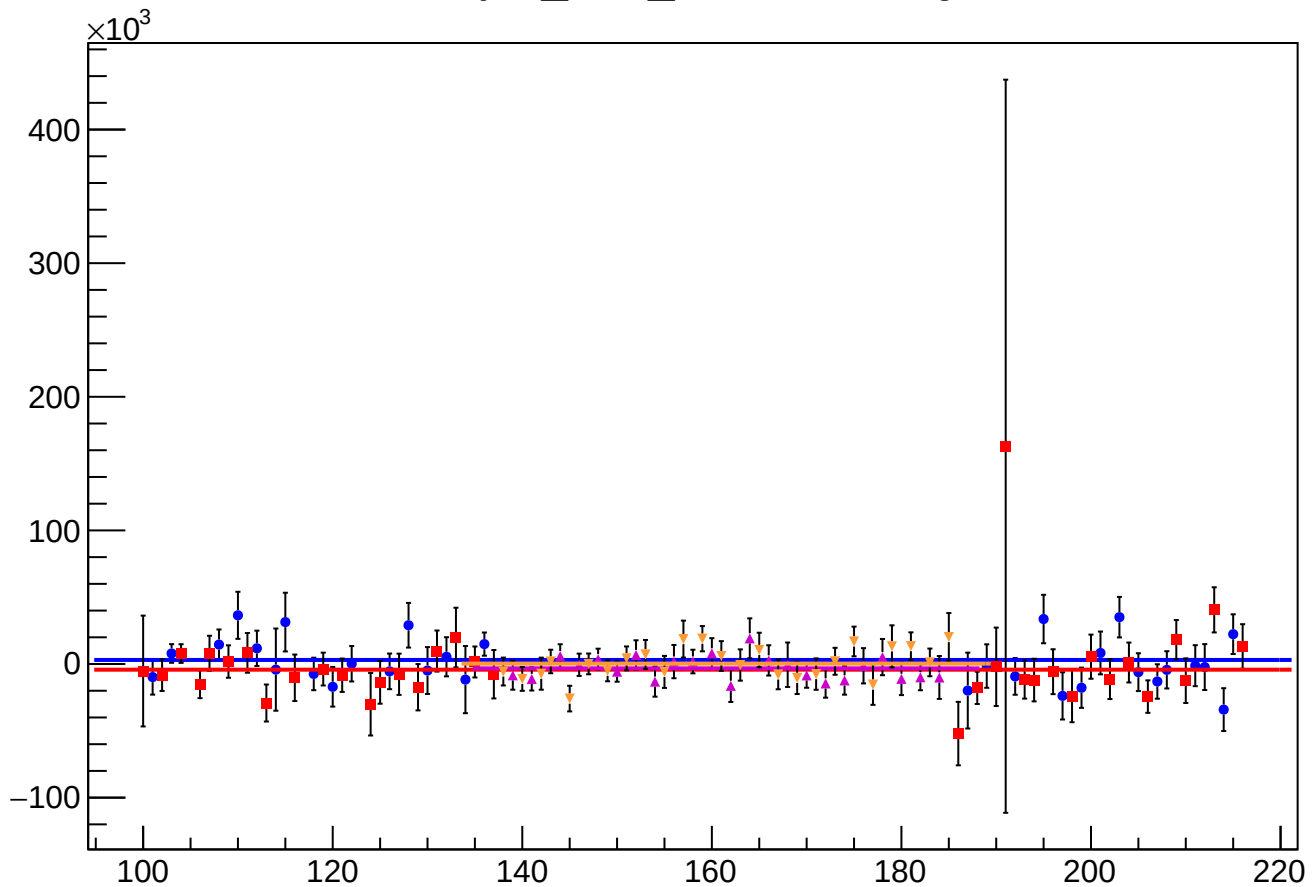
Right Out: 9712.822 $\pm$ 1.648  $\chi^2$ /NDF: 4548238.6/34

All: 9561.063 $\pm$ 0.802  $\chi^2$ /NDF: 10195776.4/101

Left In: 9137.590 $\pm$ 1.539  $\chi^2$ /NDF:1172796.0/22

- sign 9405.561 $\pm$ 1.125  $\chi^2$ /NDF: 5786122.9/57

# asym\_atr2\_mean vs Slug



Right In:  $3049.041 \pm 2526.031$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $295.038 \pm 2125.383$   $\chi^2/\text{NDF}$ : 26.3/24

+ sign  $1436.572 \pm 1626.300$   $\chi^2/\text{NDF}$ : 65.8/55

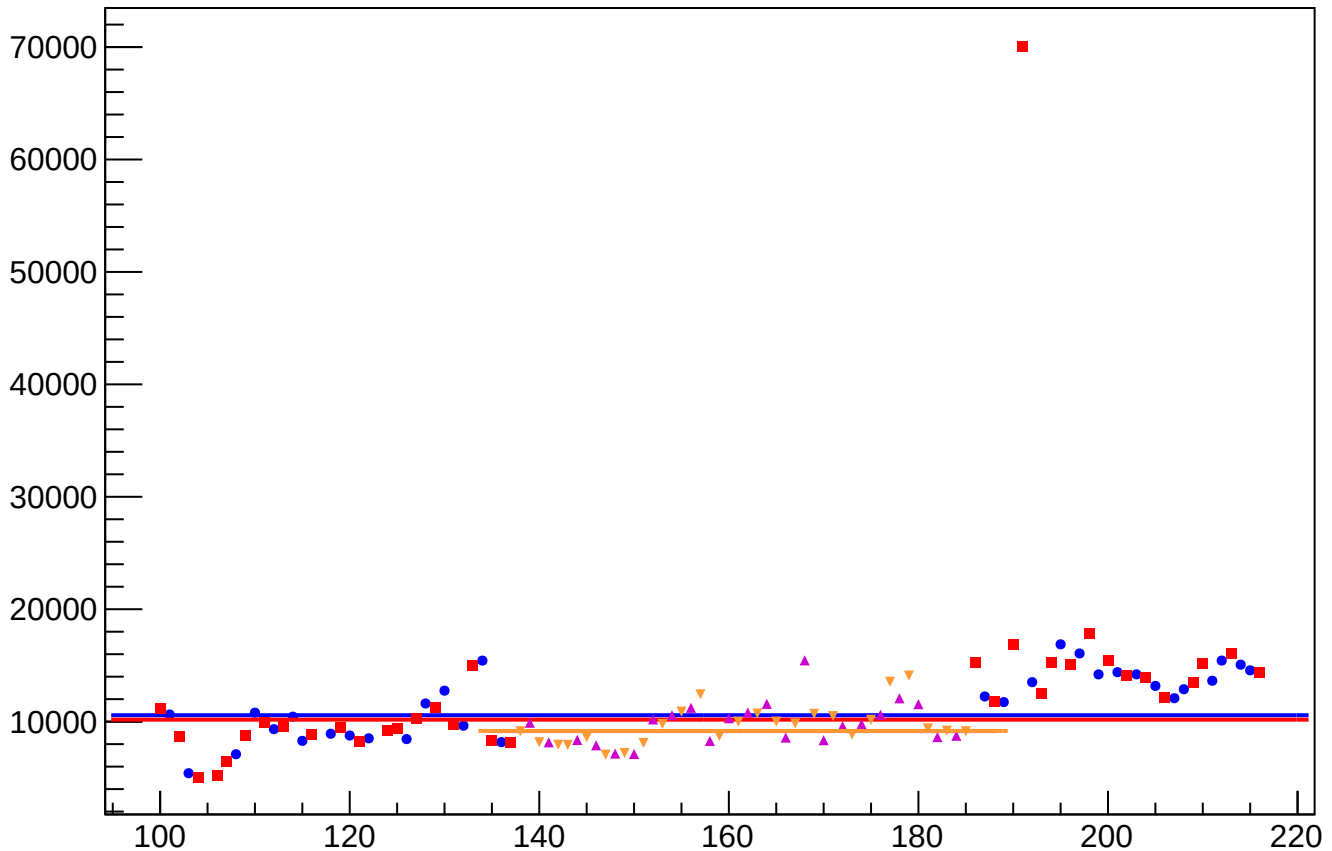
Right Out:  $-4235.347 \pm 2457.058$   $\chi^2/\text{NDF}$ : 35.3/34

All:  $-1112.350 \pm 1151.493$   $\chi^2/\text{NDF}$ : 119.7/11

- sign  $-3674.835 \pm 1630.622$   $\chi^2/\text{NDF}$ : 49.0/57

Left In:  $-3233.667 \pm 2179.845$   $\chi^2/\text{NDF}$ : 13.6/22

# asym\_atr2\_rms vs Slug



Right In: 10571.374 $\pm$ 1.786  $\chi^2$ /NDF: 3343612.2/30

Left Out: 9172.826 $\pm$ 1.503  $\chi^2$ /NDF:1056946.9/24

Right Out: 10177.523 $\pm$ 1.737  $\chi^2$ /NDF: 4288309.5/34

Left In: 9162.276 $\pm$ 1.541  $\chi^2$ /NDF:1127533.4/22

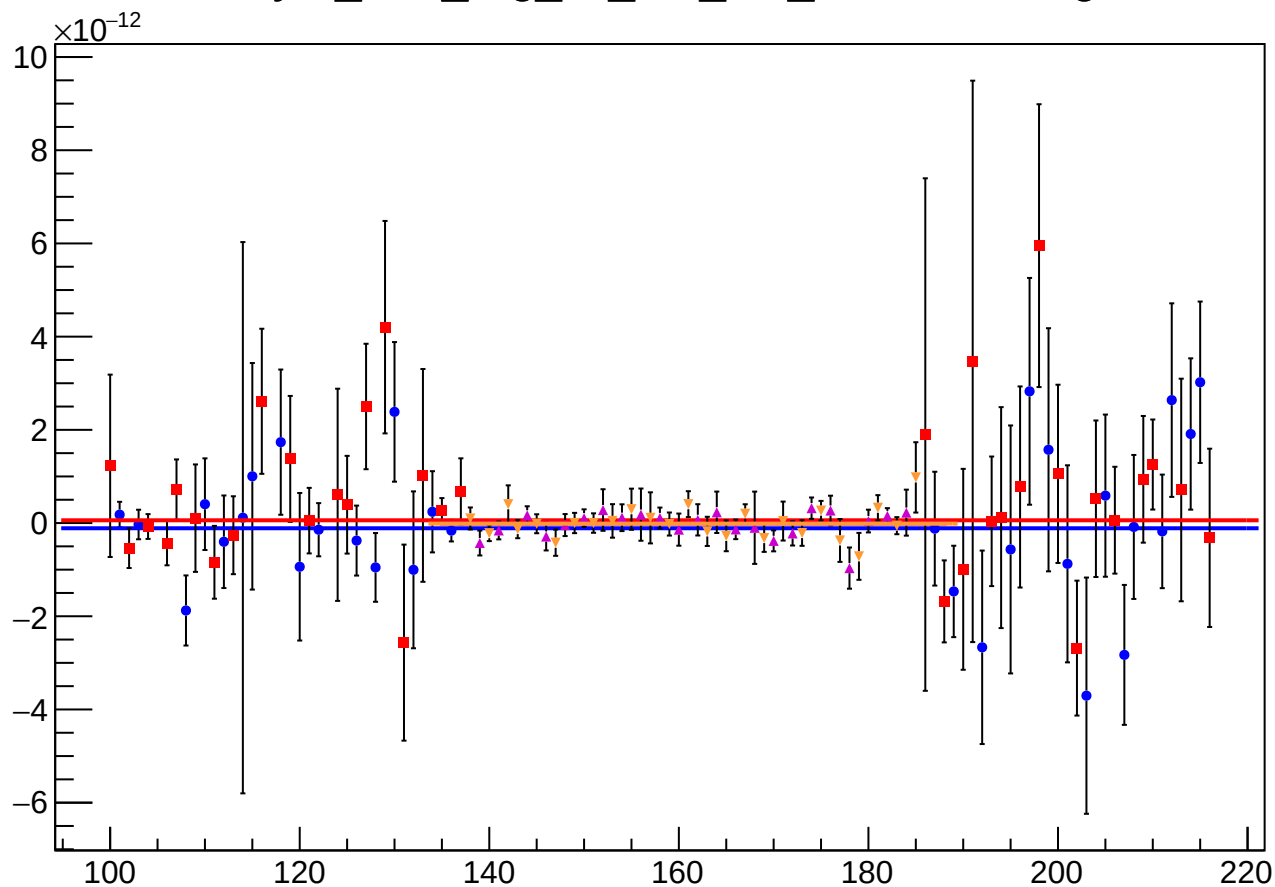
+ sign 9752.524 $\pm$ 1.150  $\chi^2$ /NDF: 4759509.7/55

All: 9681.166 $\pm$ 0.814  $\chi^2$ /NDF: 10374150.6/100

- sign 9609.430 $\pm$ 1.153  $\chi^2$ /NDF: 5606919.6/57



# asym\_atr2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/34

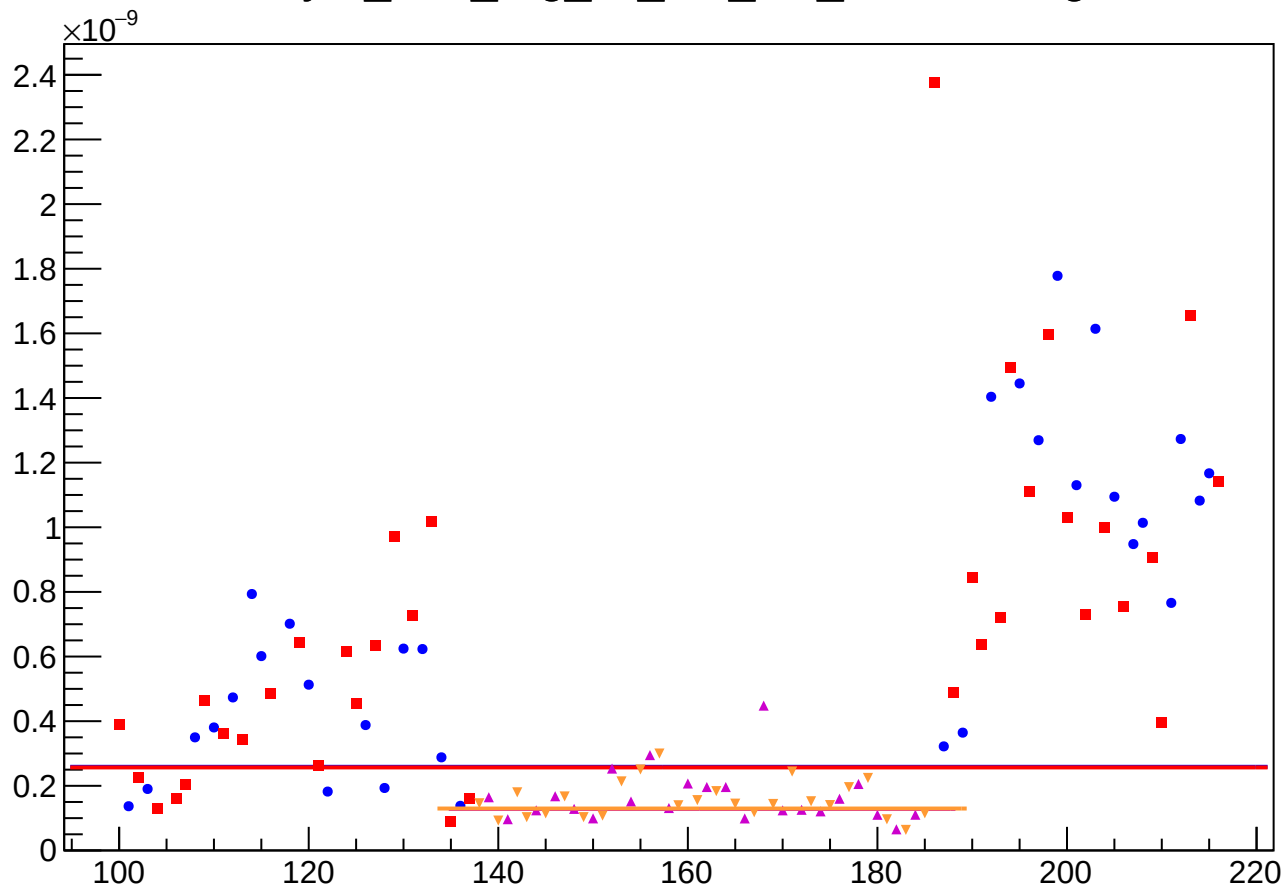
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.0/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 104.7/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.5/57

# asym\_atr2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7997624.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1390522.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7486358.4/34

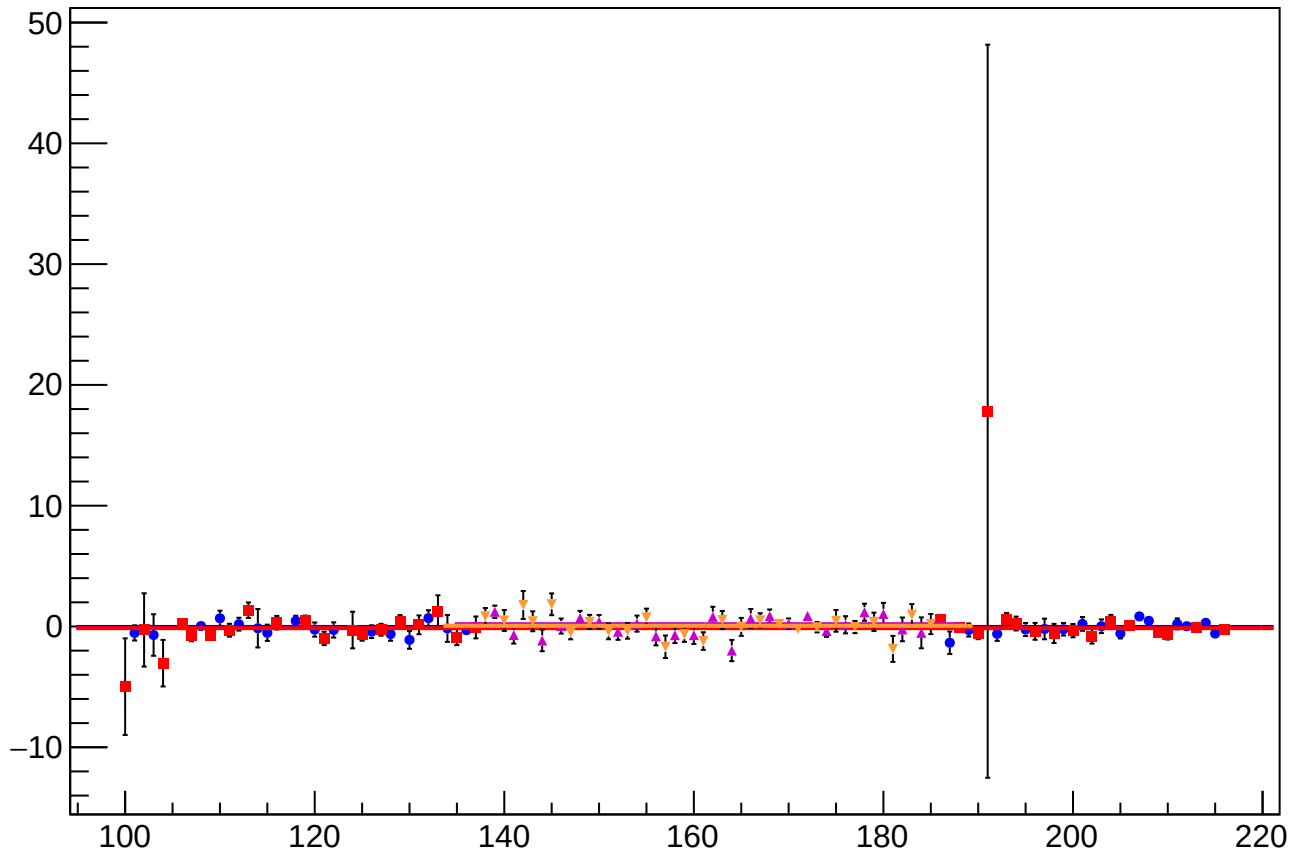
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1516080.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11128668.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21771312.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10642061.2/57

# asym\_atr2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.091$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.139 \pm 0.084$   $\chi^2/\text{NDF}$ : 36.9/34

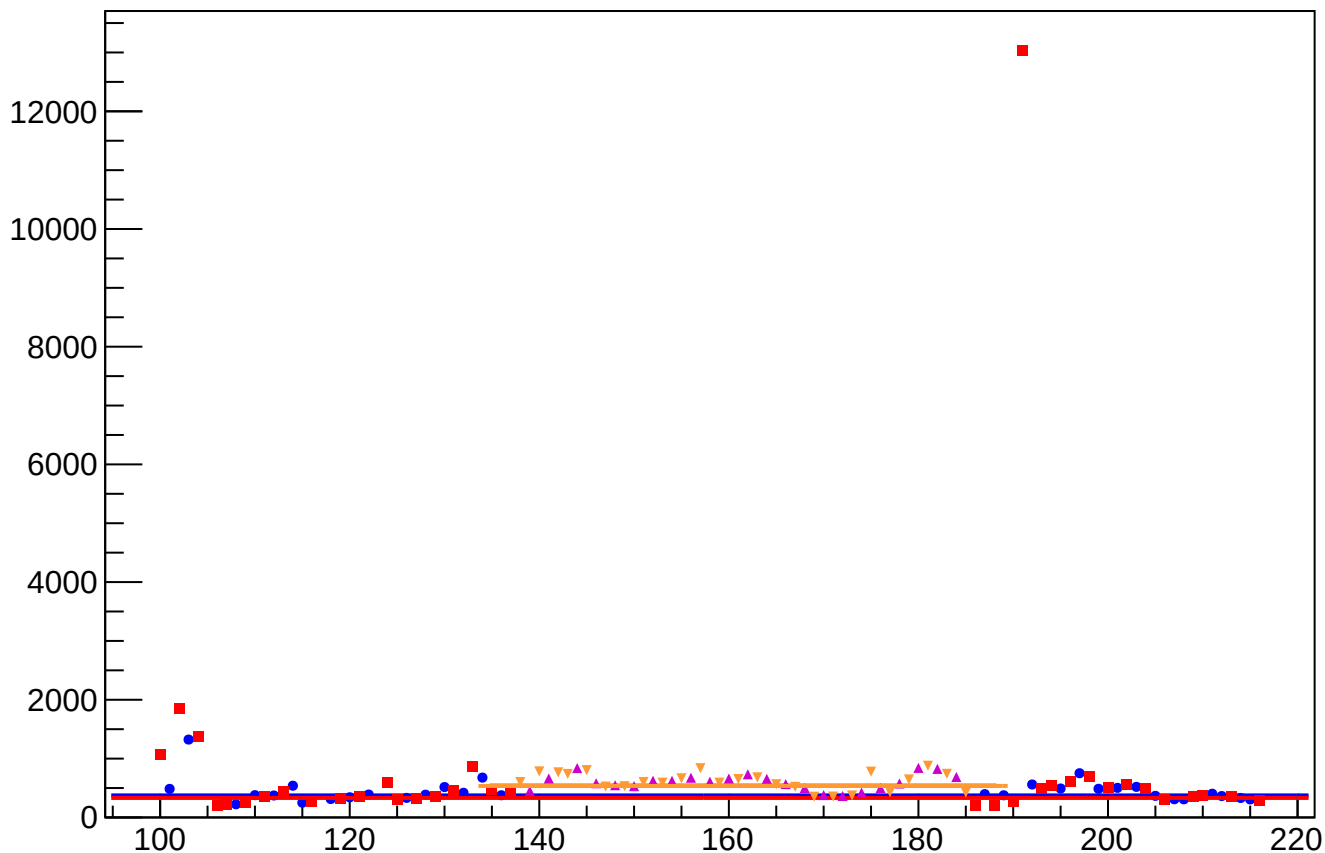
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.008 \pm 0.074$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.028 \pm 0.051$   $\chi^2/\text{NDF}$ : 125.9/113

- sign  $-0.046 \pm 0.071$   $\chi^2/\text{NDF}$ : 72.4/57

# asym\_atr2\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 374.785+/-0.064     $\chi^2/\text{NDF}$ : 2689168.0/30

Left Out: 535.943+/-0.092     $\chi^2/\text{NDF}$ : 2749736.4/24

Right Out: 331.675+/-0.059     $\chi^2/\text{NDF}$ : 5552007.5/34

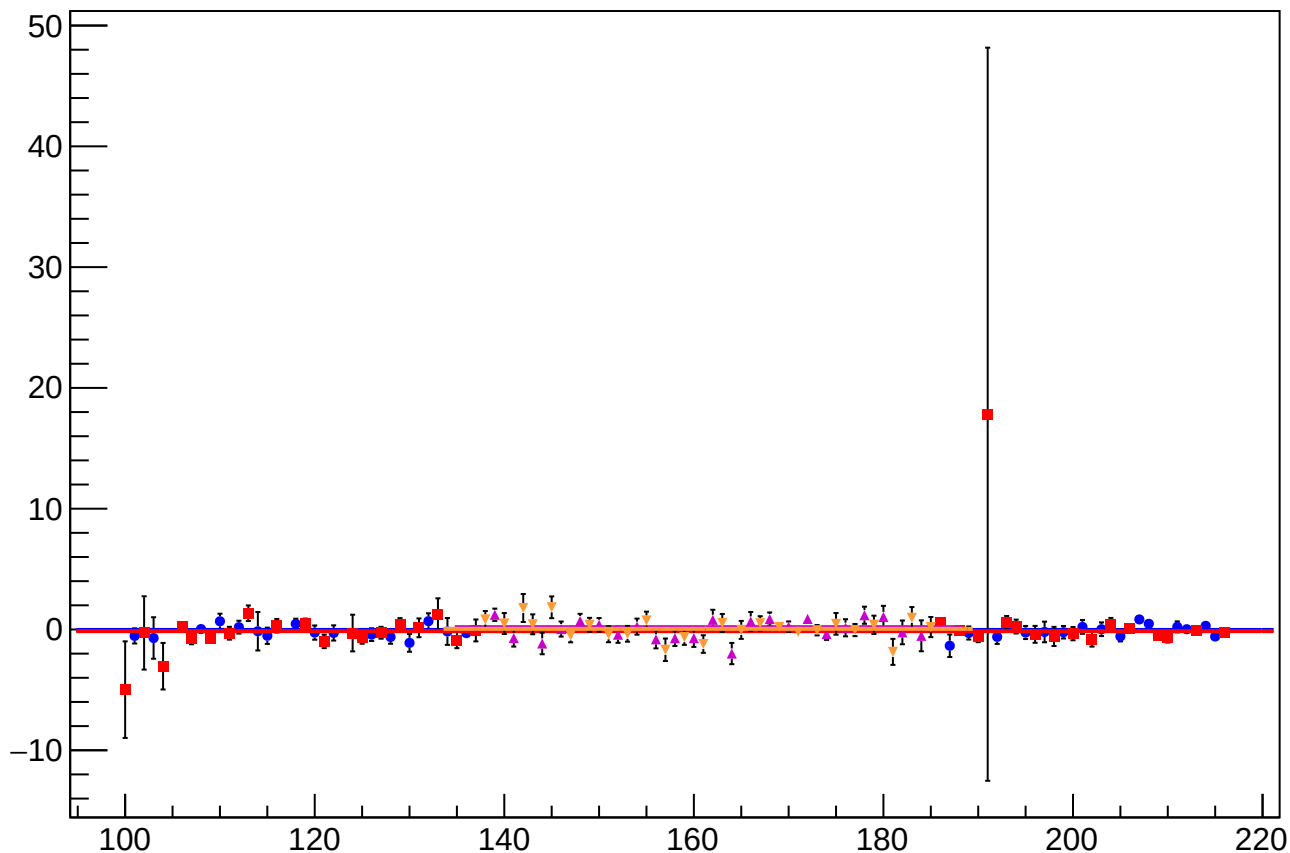
Left In: 540.804+/-0.094     $\chi^2/\text{NDF}$ : 1904998.0/22

+ sign 427.762+/-0.053     $\chi^2/\text{NDF}$ : 7518073.6/55

All: 408.426+/-0.036     $\chi^2/\text{NDF}$ : 18772868.3/11

- sign 390.839+/-0.050     $\chi^2/\text{NDF}$ : 10995786.9/57

# asym\_atr2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.091$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.139 \pm 0.084$   $\chi^2/\text{NDF}$ : 36.9/34

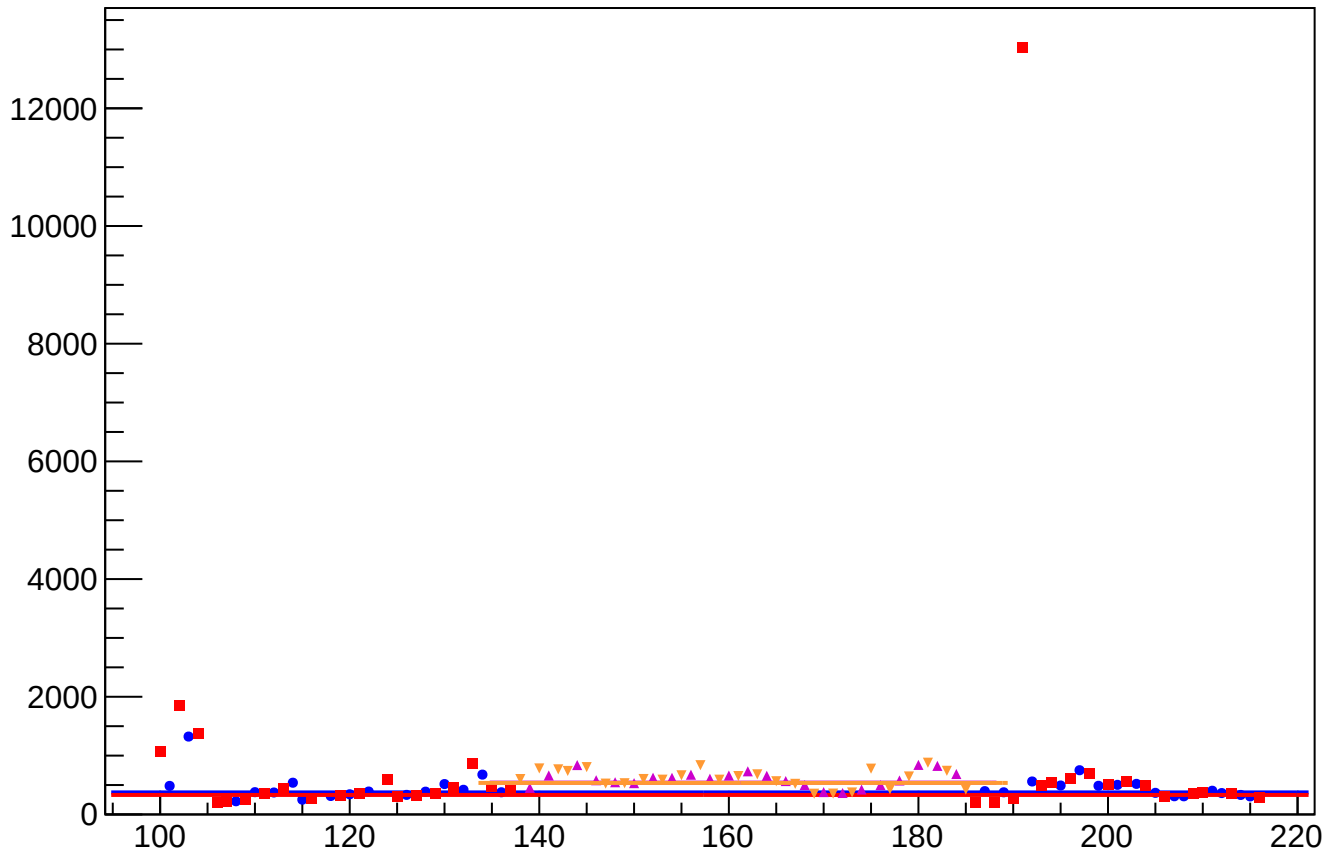
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.008 \pm 0.074$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.028 \pm 0.051$   $\chi^2/\text{NDF}$ : 125.9/113

- sign  $-0.046 \pm 0.071$   $\chi^2/\text{NDF}$ : 72.4/57

# asym\_atr2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 374.785 $\pm$ 0.064  $\chi^2$ /NDF: 2689168.0/30

Left Out: 535.943 $\pm$ 0.092  $\chi^2$ /NDF: 2749736.4/24

Right Out: 331.675 $\pm$ 0.059  $\chi^2$ /NDF: 5552007.5/34

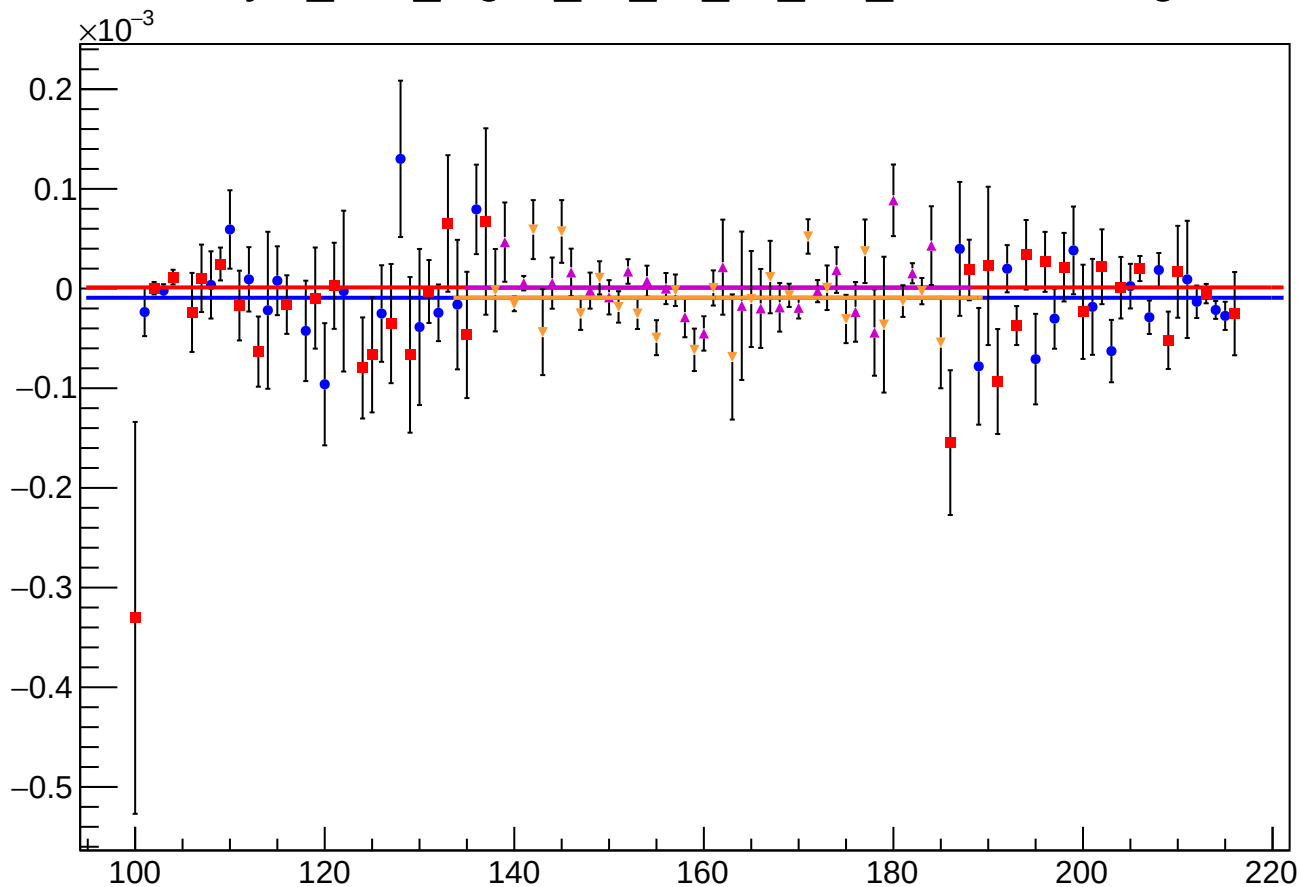
Left In: 540.804 $\pm$ 0.094  $\chi^2$ /NDF: 1904998.0/22

+ sign 427.762 $\pm$ 0.053  $\chi^2$ /NDF: 7518073.6/55

All: 408.426 $\pm$ 0.036  $\chi^2$ /NDF: 18772868.3/11

- sign 390.839 $\pm$ 0.050  $\chi^2$ /NDF: 10995786.9/57

# asym\_atr2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.5/34

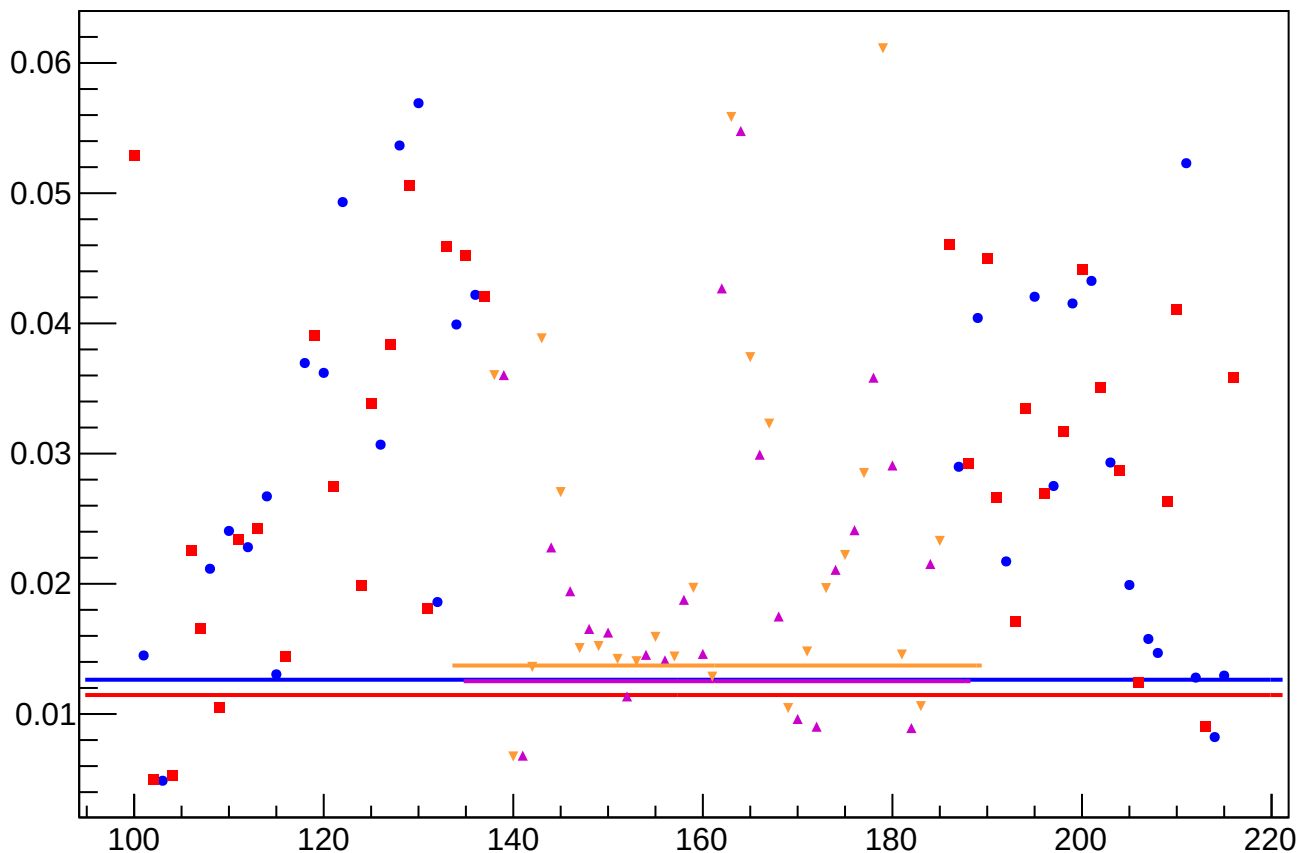
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 156.2/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.5/57

# asym\_atr2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 13718274.7/30

Left Out:  $0.014 \pm 0.000$   $\chi^2/\text{NDF}$ : 7717157.8/24

Right Out:  $0.011 \pm 0.000$   $\chi^2/\text{NDF}$ : 16292900.9/34

Left In:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 7121524.7/22

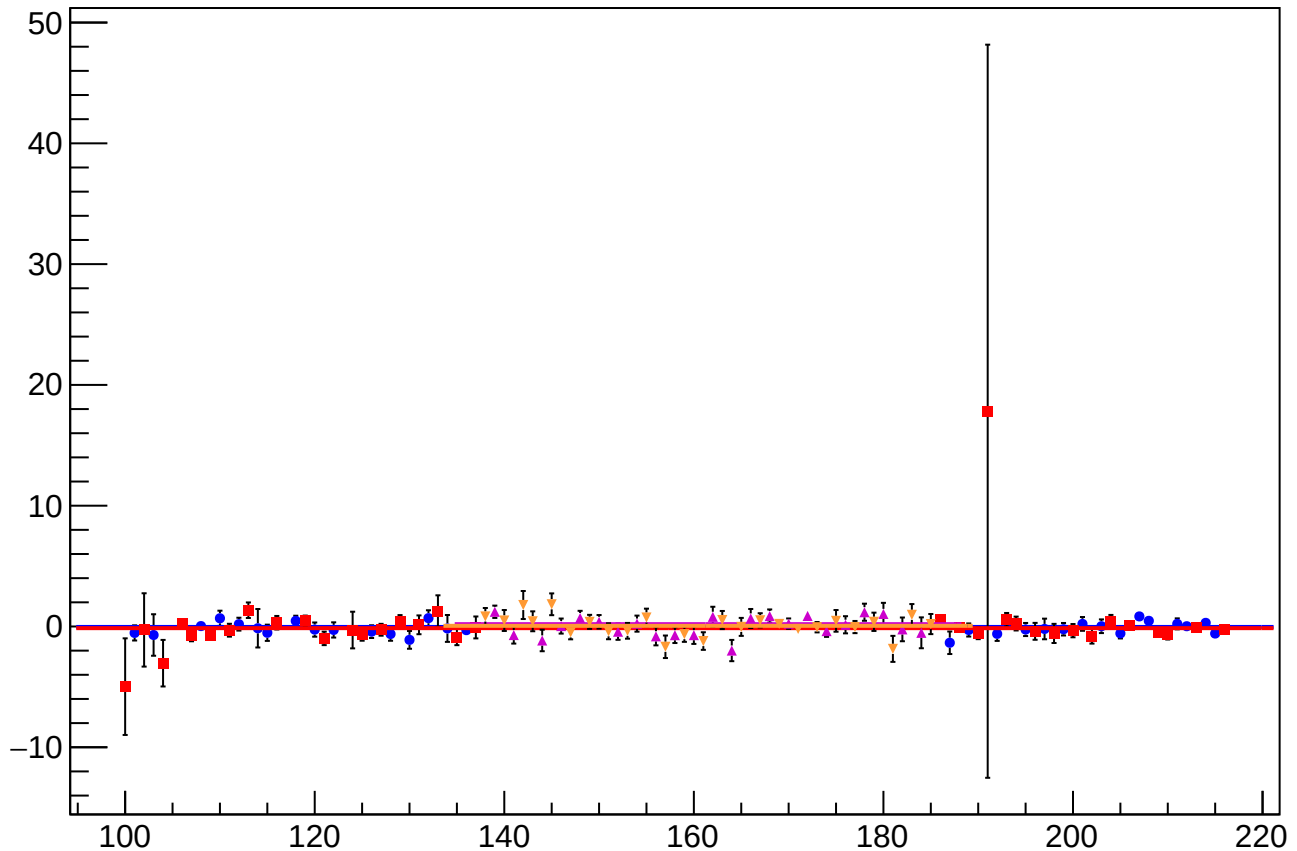
+ sign  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 21523313.5/55

All:  $0.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 45265633.4/113

- sign  $0.012 \pm 0.000$   $\chi^2/\text{NDF}$ : 23509799.8/57



# asym\_atr2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.091$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.139 \pm 0.084$   $\chi^2/\text{NDF}$ : 36.9/34

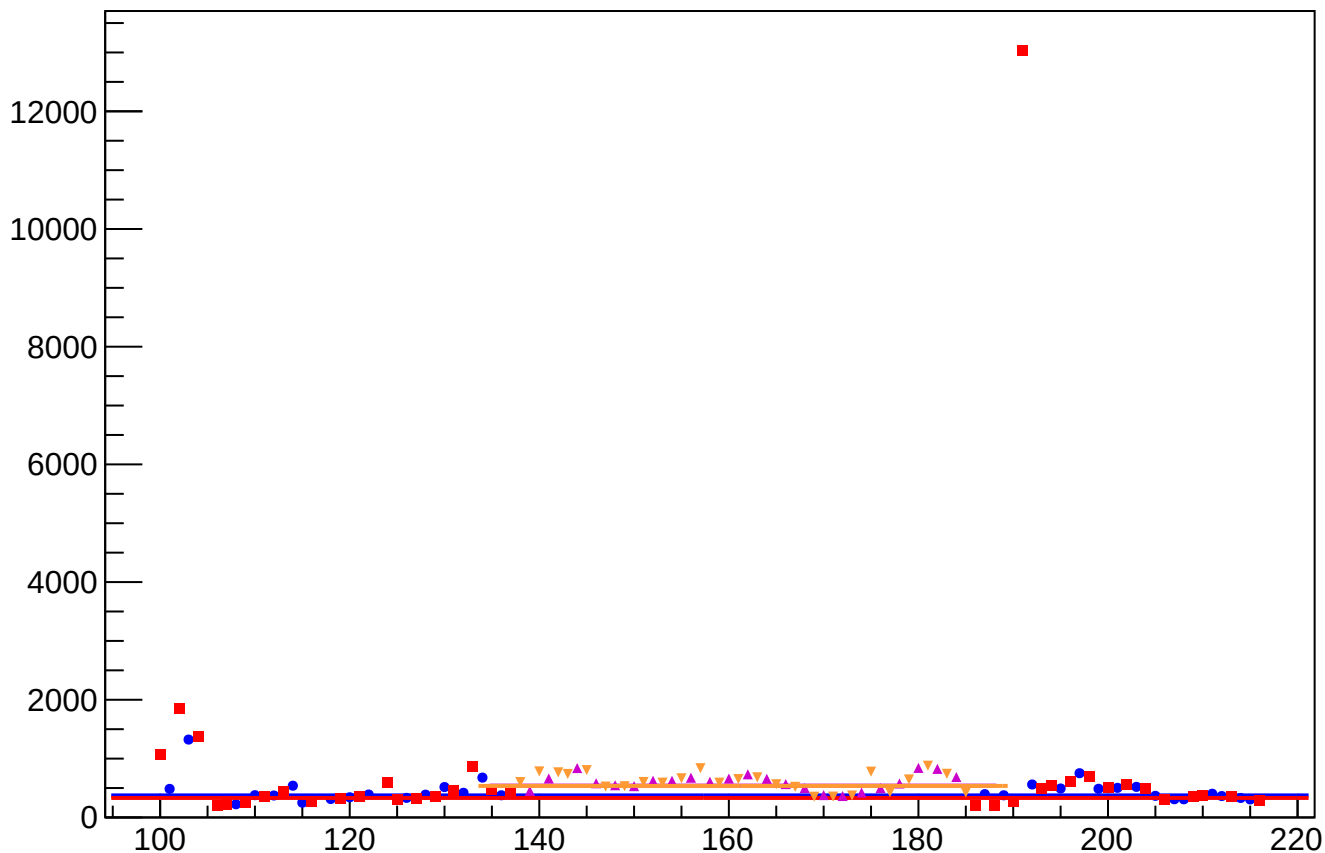
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.008 \pm 0.074$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.028 \pm 0.051$   $\chi^2/\text{NDF}$ : 125.9/113

- sign  $-0.046 \pm 0.071$   $\chi^2/\text{NDF}$ : 72.4/57

# asym\_atr2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $374.783 \pm 0.064$   $\chi^2/\text{NDF}$ : 2689201.5/30

Left Out:  $535.948 \pm 0.092$   $\chi^2/\text{NDF}$ : 2749816.2/24

Right Out:  $331.675 \pm 0.059$   $\chi^2/\text{NDF}$ : 5551959.3/34

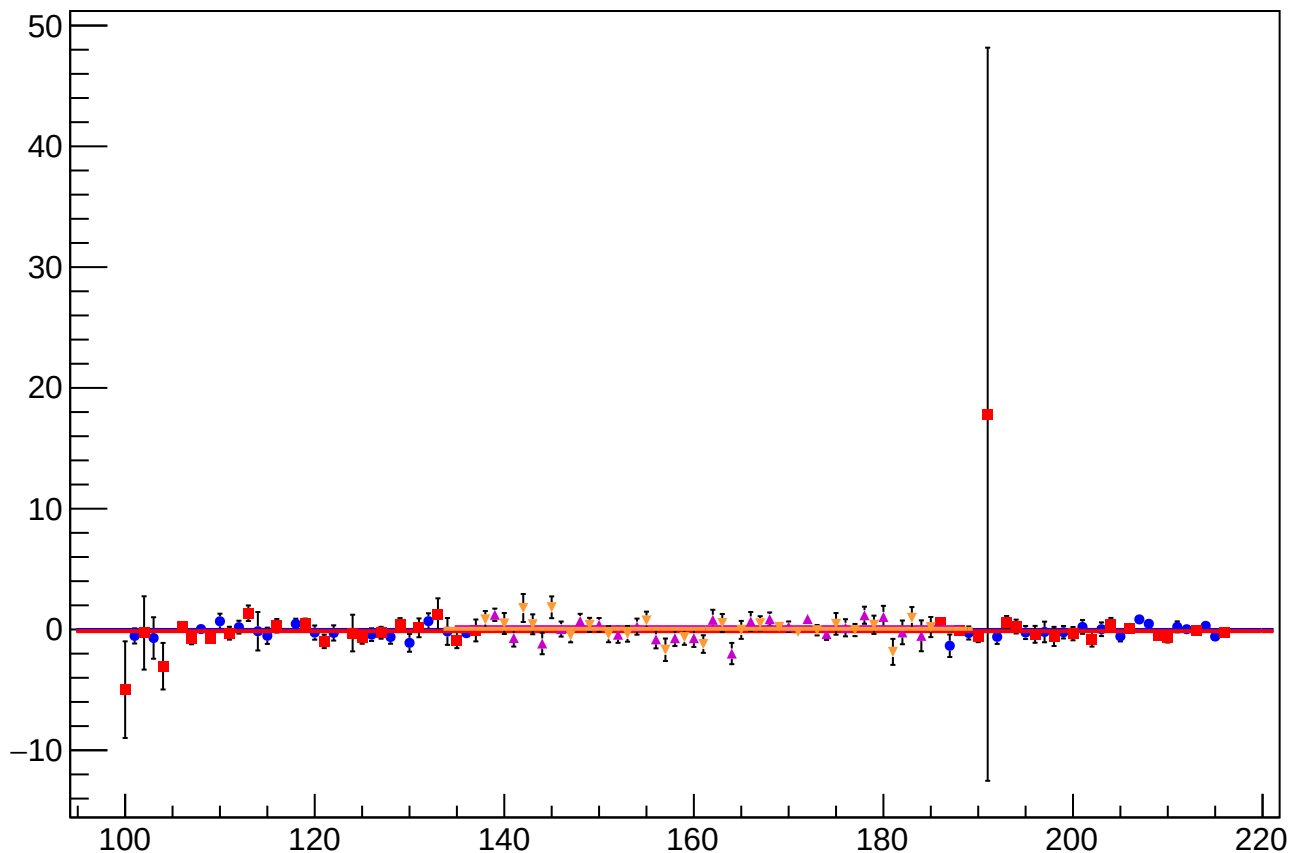
Left In:  $540.809 \pm 0.094$   $\chi^2/\text{NDF}$ : 1905035.9/22

+ sign  $427.761 \pm 0.053$   $\chi^2/\text{NDF}$ : 7518342.8/55

All:  $408.426 \pm 0.036$   $\chi^2/\text{NDF}$ : 18773249.9/11

- sign  $390.839 \pm 0.050$   $\chi^2/\text{NDF}$ : 10995915.3/57

asym\_atr2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.091$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $0.054 \pm 0.130$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $-0.139 \pm 0.084$   $\chi^2/\text{NDF}$ : 36.9/34

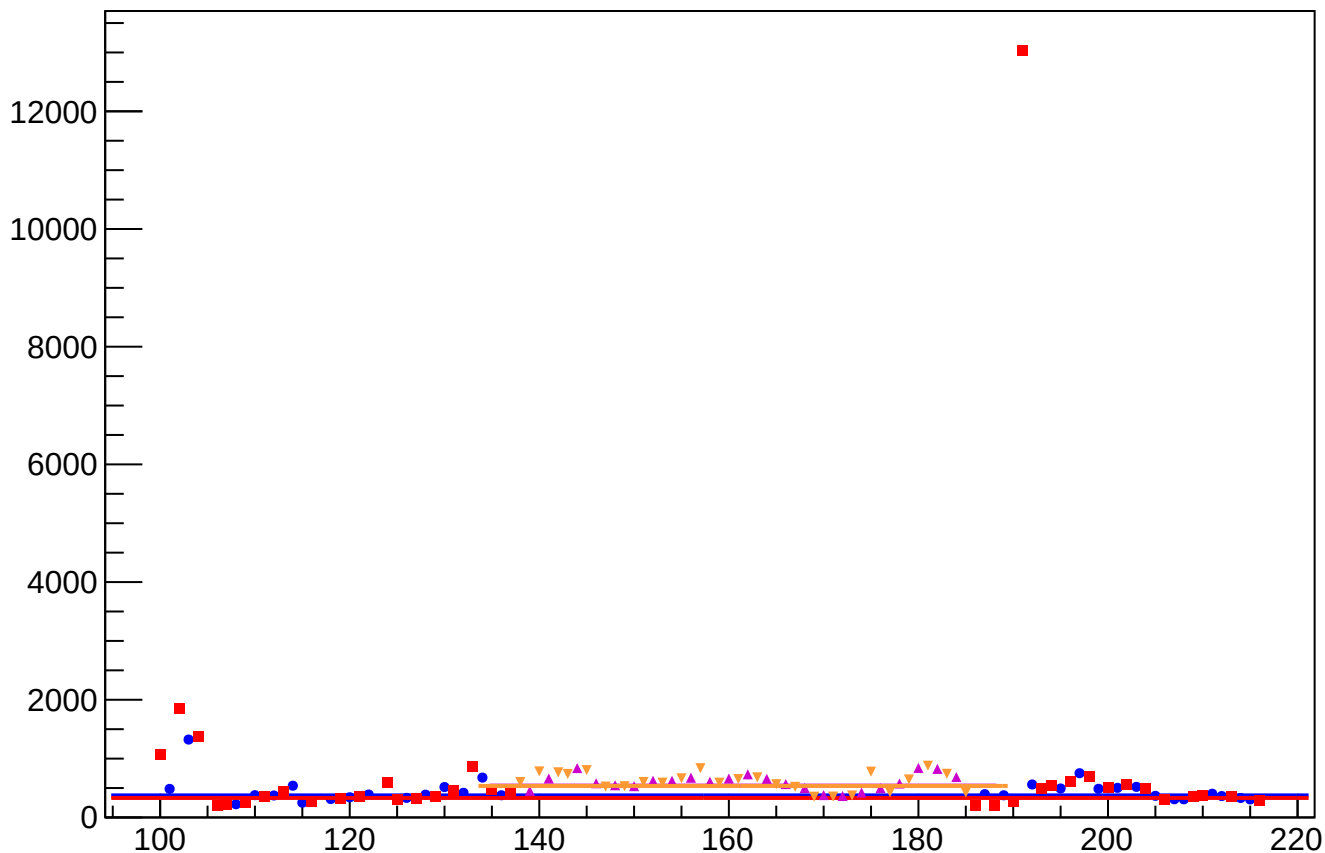
Left In:  $0.191 \pm 0.133$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.008 \pm 0.074$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.028 \pm 0.051$   $\chi^2/\text{NDF}$ : 125.9/113

- sign  $-0.046 \pm 0.071$   $\chi^2/\text{NDF}$ : 72.4/57

asym\_atr2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 374.783 $\pm$ 0.064  $\chi^2$ /NDF: 2689201.5/30

Left Out: 535.948 $\pm$ 0.092  $\chi^2$ /NDF: 2749816.2/24

Right Out: 331.675 $\pm$ 0.059  $\chi^2$ /NDF: 5551959.3/34

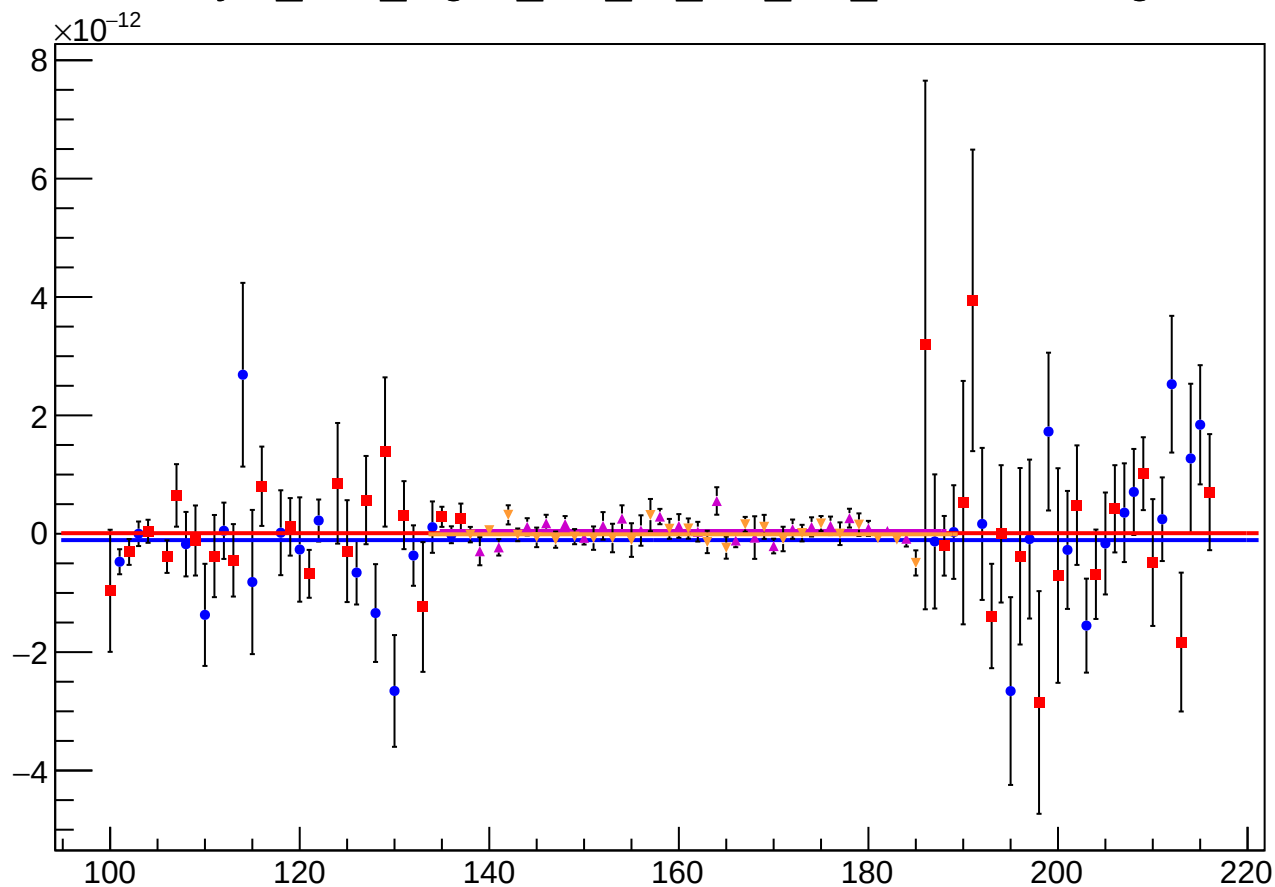
Left In: 540.809 $\pm$ 0.094  $\chi^2$ /NDF: 1905035.9/22

+ sign 427.761 $\pm$ 0.053  $\chi^2$ /NDF: 7518342.8/55

All: 408.426 $\pm$ 0.036  $\chi^2$ /NDF: 18773249.9/1

- sign 390.839 $\pm$ 0.050  $\chi^2$ /NDF: 10995915.3/57

asym\_atr2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.8/34

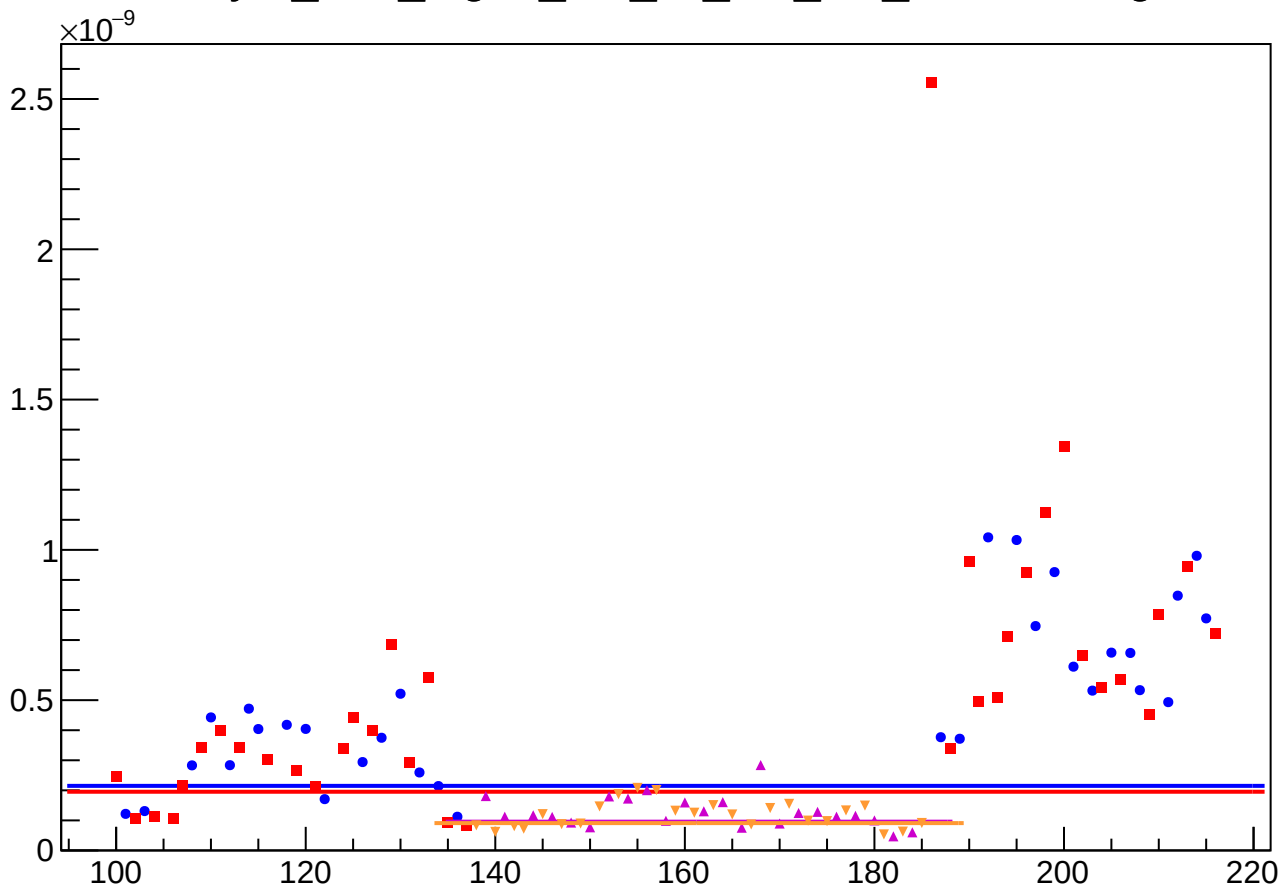
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.7/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 130.5/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 63.2/57

asym\_atr2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9425628.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3367730.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10592954.7/34

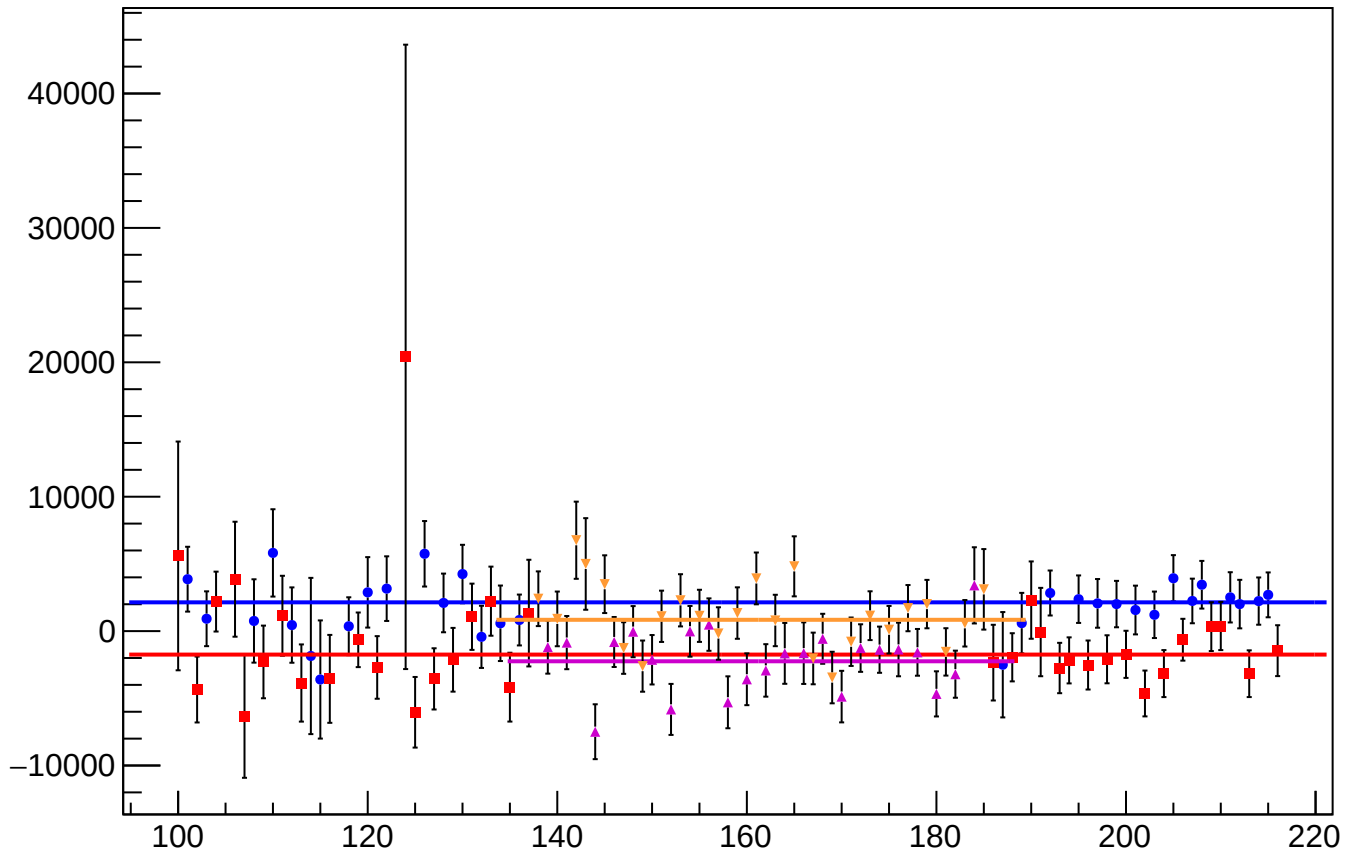
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3905784.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16864466.2/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 34190378.9/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17300648.4/57

# reg\_asym\_atl\_avg\_mean vs Slug



Right In:  $2140.664 \pm 376.614$   $\chi^2/\text{NDF}$ : 15.2/30

Left Out:  $841.572 \pm 394.444$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $-1746.513 \pm 379.332$   $\chi^2/\text{NDF}$ : 29.8/34

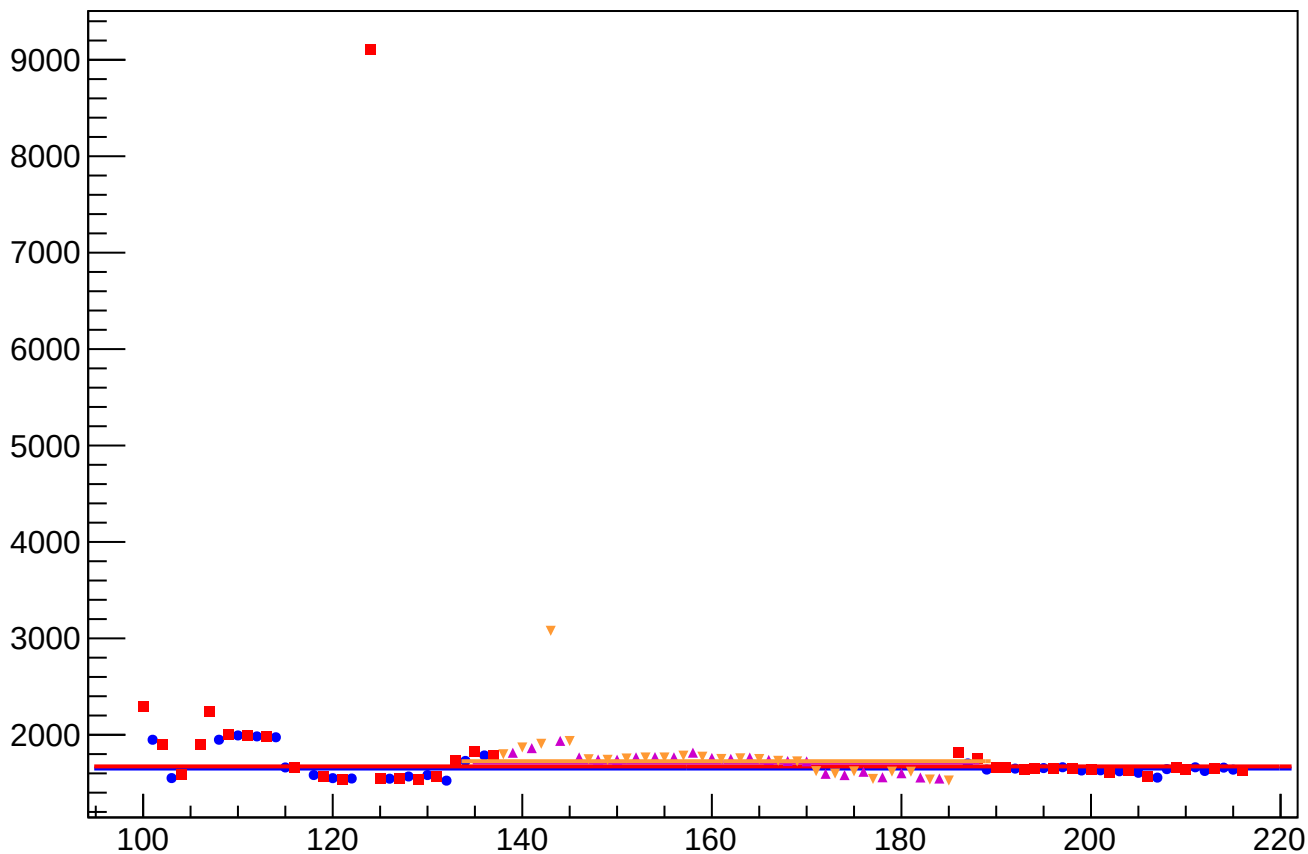
Left In:  $-2245.041 \pm 400.753$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $1521.143 \pm 272.392$   $\chi^2/\text{NDF}$ : 51.3/55

All:  $-210.666 \pm 193.696$   $\chi^2/\text{NDF}$ : 193.1/113

- sign  $-1982.098 \pm 275.490$   $\chi^2/\text{NDF}$ : 60.0/57

# reg\_asym\_atl\_avg\_rms vs Slug



Right In: 1650.263 $\pm$ 0.266  $\chi^2$ /NDF: 155519.1/30

Left Out: 1726.058 $\pm$ 0.279  $\chi^2$ /NDF: 454930.8/24

Right Out: 1672.257 $\pm$ 0.268  $\chi^2$ /NDF: 420337.5/34

Left In: 1713.156 $\pm$ 0.283  $\chi^2$ /NDF: 129290.6/22

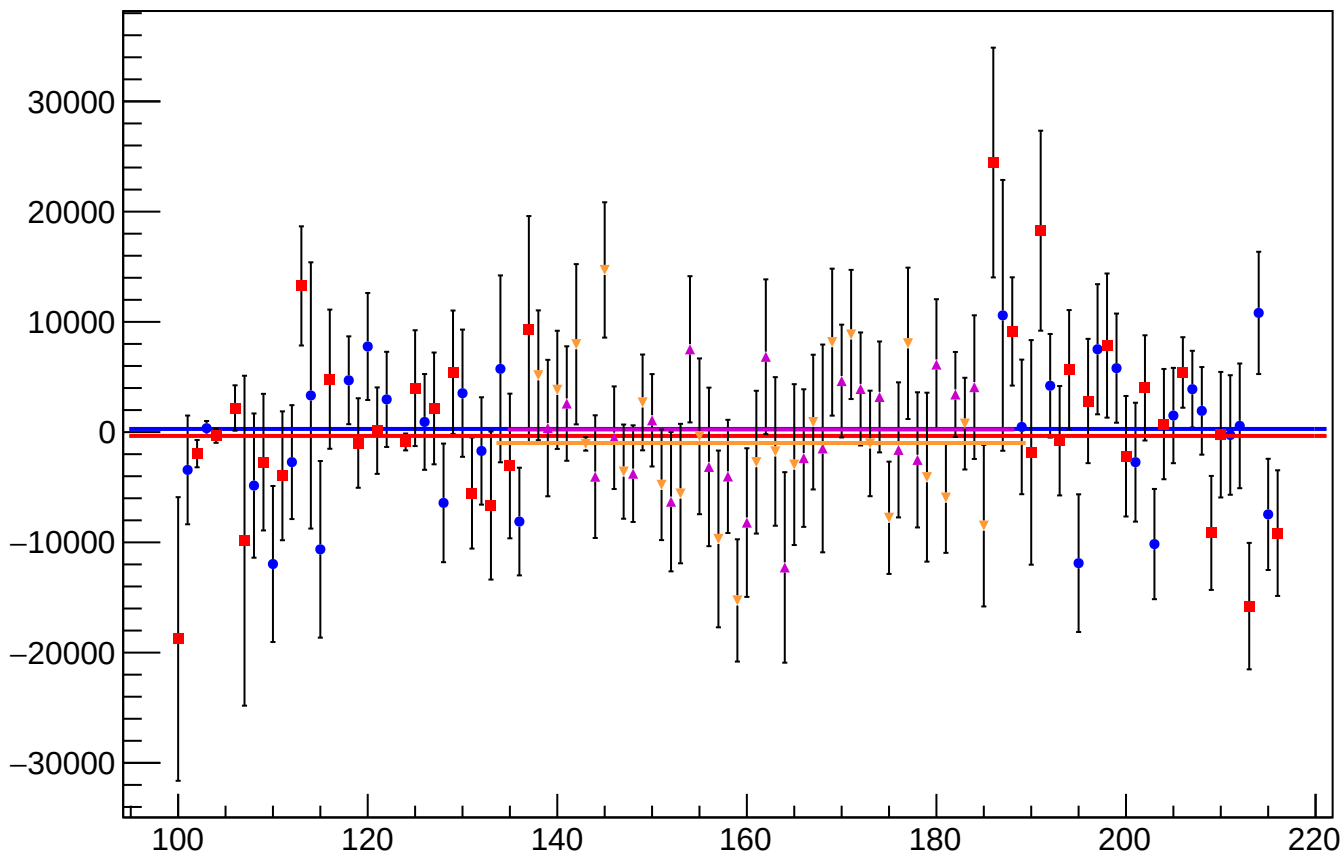
+ sign 1686.409 $\pm$ 0.193  $\chi^2$ /NDF: 649080.9/55

All: 1688.953 $\pm$ 0.137  $\chi^2$ /NDF: 1210065.4/11

- sign 1691.550 $\pm$ 0.195  $\chi^2$ /NDF: 560631.9/57



asym\_atl\_avg\_reg\_correction\_mean vs Slug



Right In:  $288.663 \pm 539.008$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-987.621 \pm 541.250$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-344.255 \pm 405.266$   $\chi^2/\text{NDF}$ : 52.2/34

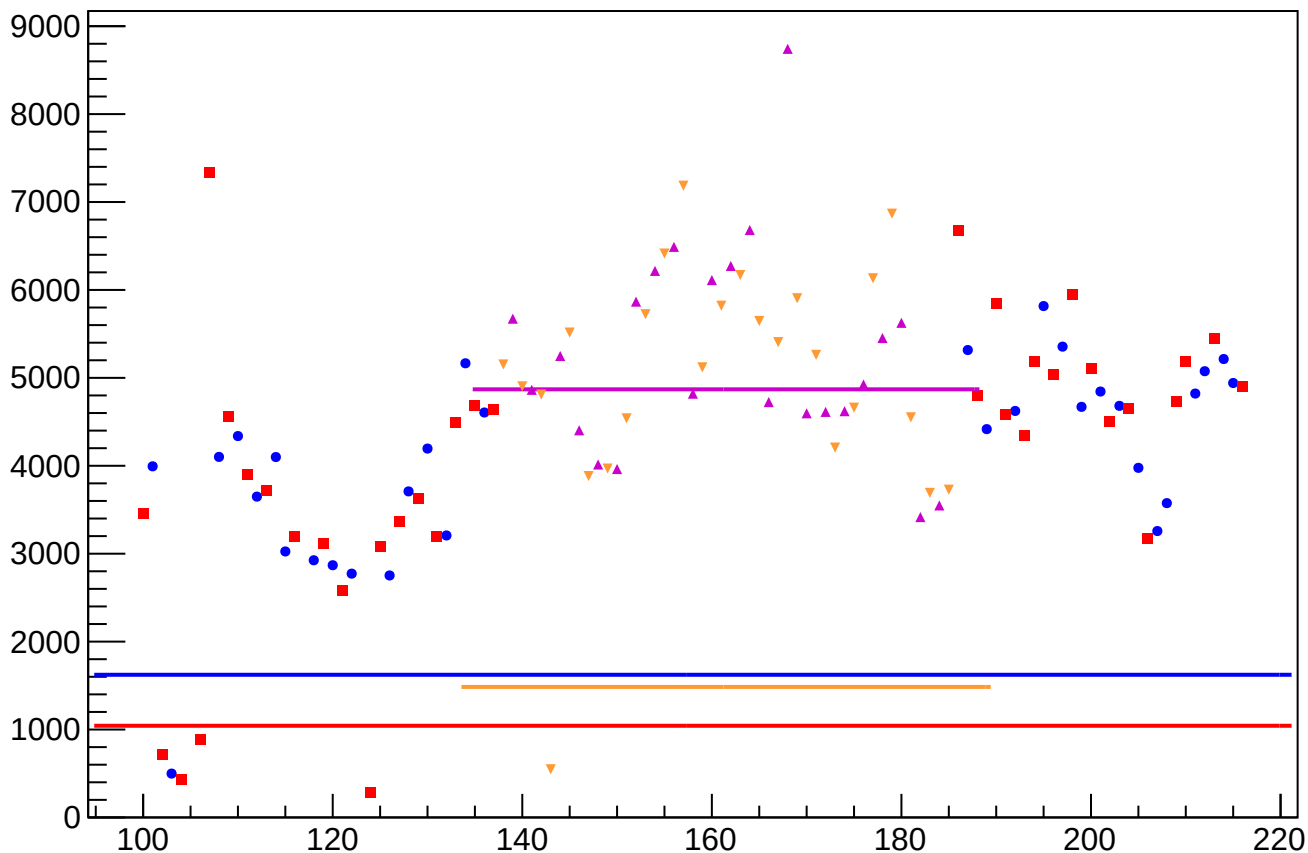
Left In:  $239.582 \pm 1165.046$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-346.830 \pm 381.926$   $\chi^2/\text{NDF}$ : 69.4/55

All:  $-314.105 \pm 270.360$   $\chi^2/\text{NDF}$ : 135.4/113

- sign  $-281.235 \pm 382.769$   $\chi^2/\text{NDF}$ : 66.0/57

# asym\_atl\_avg\_reg\_correction\_rms vs Slug



Right In:  $1622.803 \pm 0.381$   $\chi^2/\text{NDF}: 20033946.4/30$

Left Out:  $1484.563 \pm 0.383$   $\chi^2/\text{NDF}: 23224946.4/24$

Right Out:  $1043.011 \pm 0.287$   $\chi^2/\text{NDF}: 24976289.5/34$

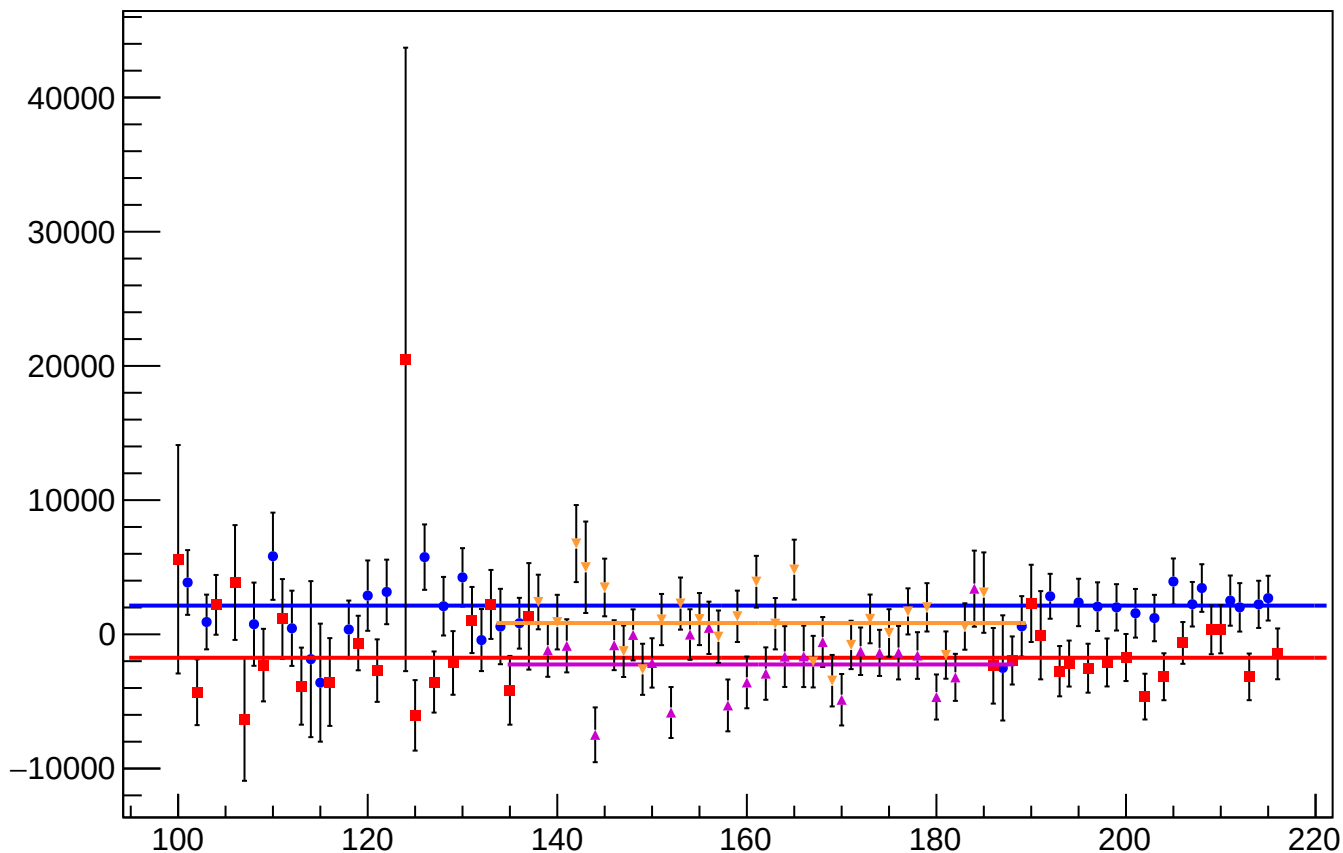
Left In:  $4869.707 \pm 0.824$   $\chi^2/\text{NDF}: 1474225.9/22$

+ sign  $1553.970 \pm 0.270$   $\chi^2/\text{NDF}: 43324397.5/55$

All:  $1505.128 \pm 0.191$   $\chi^2/\text{NDF}: 89088440.6/1$

- sign  $1456.070 \pm 0.271$   $\chi^2/\text{NDF}: 45698481.5/57$

# cor\_asym\_atl\_avg\_mean vs Slug



Right In: 2140.705 $\pm$ 376.614  $\chi^2$ /NDF: 15.2/30

Left Out: 841.564 $\pm$ 394.444  $\chi^2$ /NDF:30.4/24

Right Out: -1745.666 $\pm$ 379.333  $\chi^2$ /NDF: 29.8/34

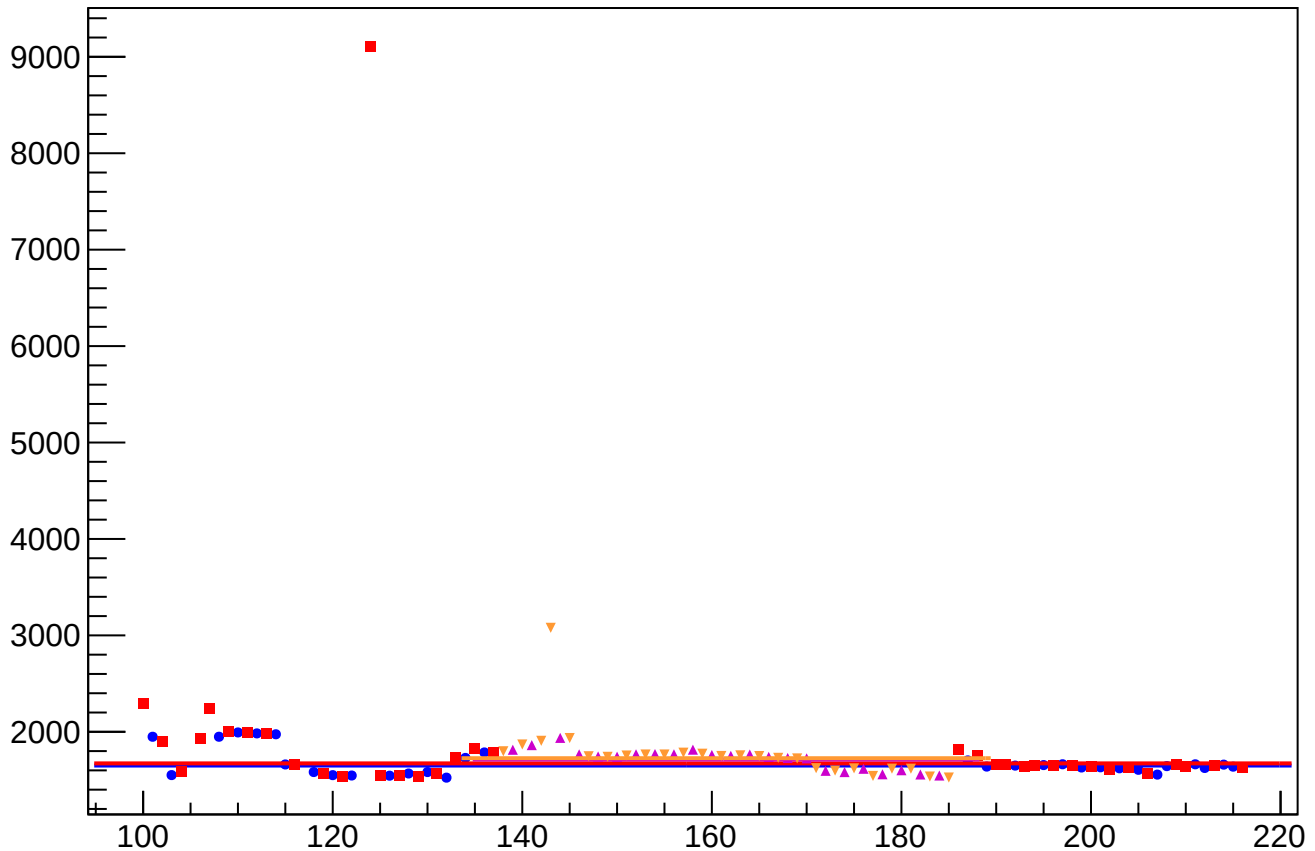
Left In: -2245.061 $\pm$ 400.753  $\chi^2$ /NDF:29.4/22

+ sign 1521.161 $\pm$ 272.392  $\chi^2$ /NDF: 51.3/55

All: -210.439 $\pm$ 193.696  $\chi^2$ /NDF: 193.0/113

- sign -1981.661 $\pm$ 275.490  $\chi^2$ /NDF: 60.0/57

# cor\_asym\_atl\_avg\_rms vs Slug



Right In: 1650.263 $\pm$ 0.266  $\chi^2$ /NDF: 155519.1/30

Left Out: 1726.058 $\pm$ 0.279  $\chi^2$ /NDF: 454930.8/24

Right Out: 1672.534 $\pm$ 0.268  $\chi^2$ /NDF: 422448.4/34

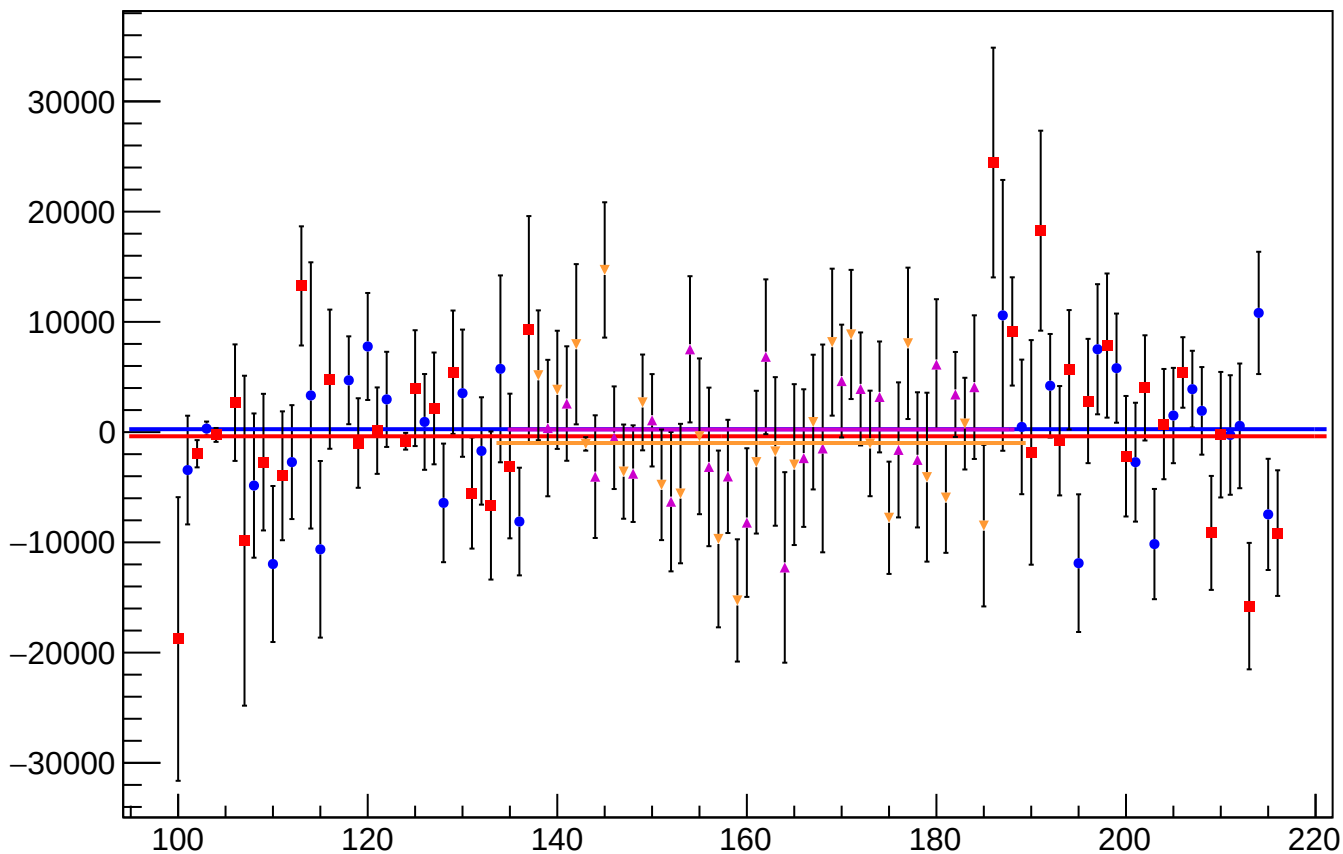
Left In: 1713.156 $\pm$ 0.283  $\chi^2$ /NDF: 129290.6/22

+ sign 1686.409 $\pm$ 0.193  $\chi^2$ /NDF: 649081.0/55

All: 1689.027 $\pm$ 0.137  $\chi^2$ /NDF: 1212047.0/11

- sign 1691.700 $\pm$ 0.195  $\chi^2$ /NDF: 562592.6/57

# asym\_atl\_avg\_cor\_correction\_mean vs Slug



Right In:  $266.363 \pm 529.694$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-987.291 \pm 541.232$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-376.471 \pm 410.327$   $\chi^2/\text{NDF}$ : 51.0/34

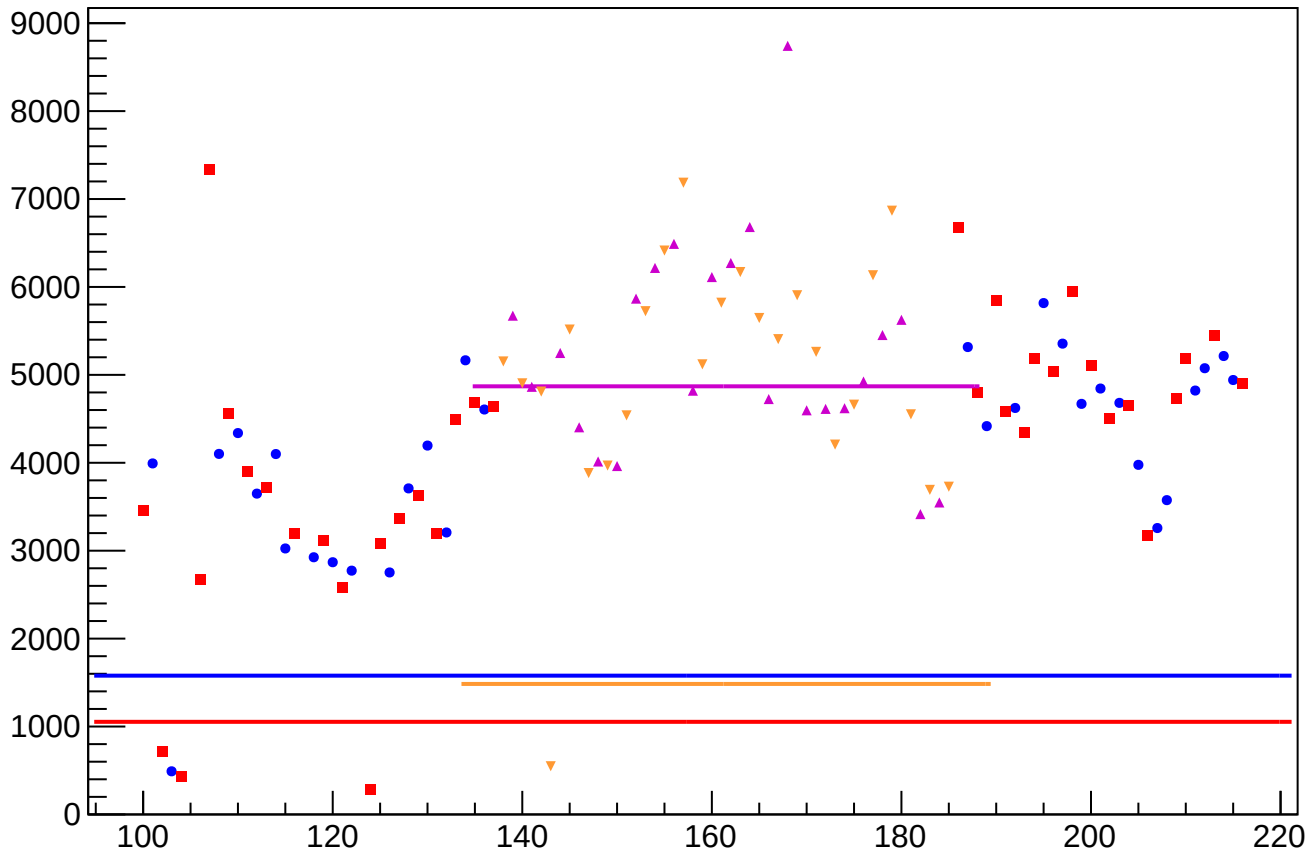
Left In:  $239.478 \pm 1165.045$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-346.959 \pm 378.564$   $\chi^2/\text{NDF}$ : 69.3/55

All:  $-328.153 \pm 270.627$   $\chi^2/\text{NDF}$ : 134.1/113

- sign  $-308.498 \pm 387.025$   $\chi^2/\text{NDF}$ : 64.8/57

# asym\_atl\_avg\_cor\_correction\_rms vs Slug



Right In: 1578.683 $\pm$ 0.375  $\chi^2$ /NDF: 20418755.3/30

Left Out: 1484.485 $\pm$ 0.383  $\chi^2$ /NDF: 23225570.5/24

Right Out: 1053.516 $\pm$ 0.290  $\chi^2$ /NDF: 25202850.1/34

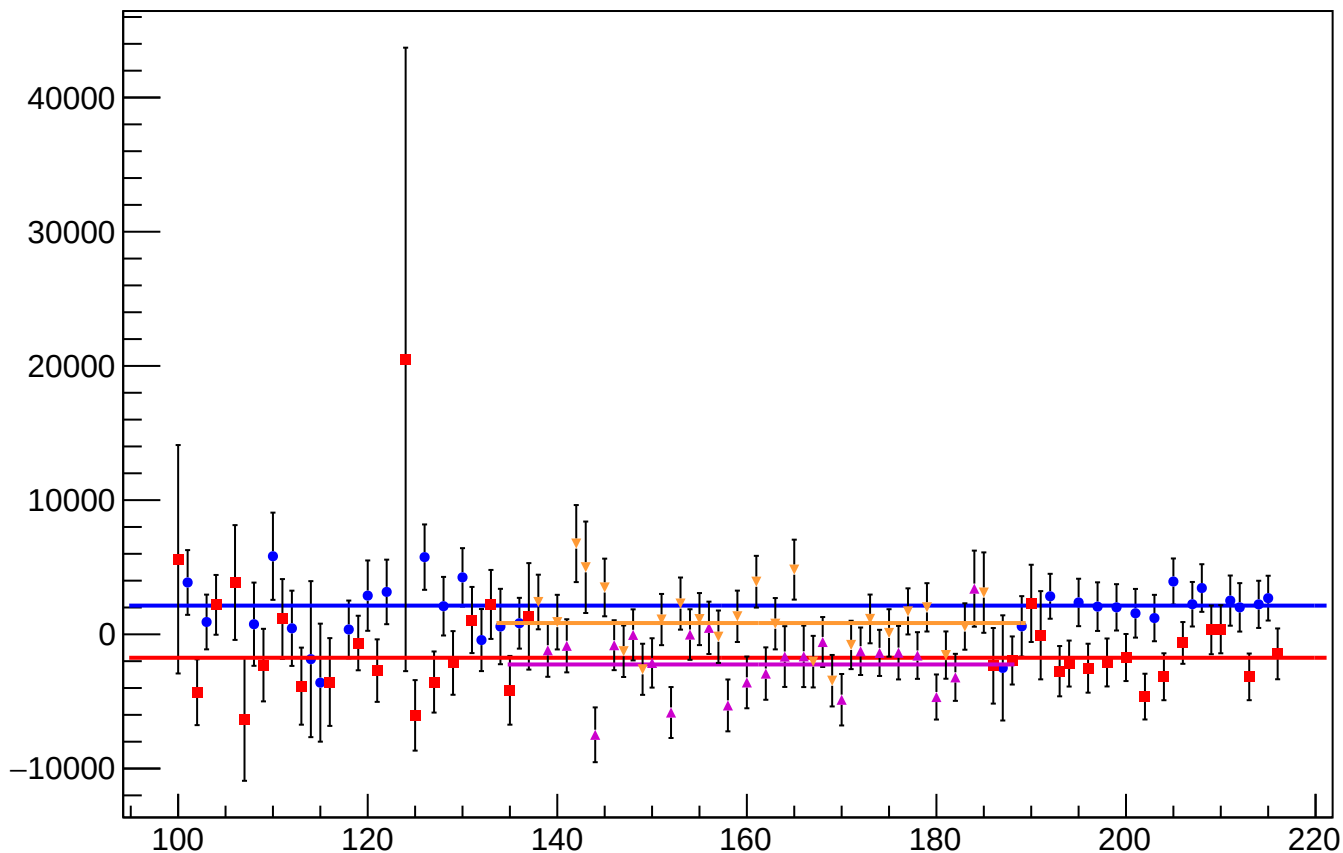
Left In: 4869.699 $\pm$ 0.824  $\chi^2$ /NDF: 1474252.6/22

+ sign 1532.599 $\pm$ 0.268  $\chi^2$ /NDF: 43675269.9/55

All: 1504.265 $\pm$ 0.191  $\chi^2$ /NDF: 89465894.5/1

- sign 1474.651 $\pm$ 0.274  $\chi^2$ /NDF: 45767711.1/57

# eigen\_cor\_asym\_atl\_avg\_mean vs Slug



Right In:  $2140.705 \pm 376.614$   $\chi^2/\text{NDF}$ : 15.2/30

Left Out:  $841.564 \pm 394.444$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $-1745.666 \pm 379.333$   $\chi^2/\text{NDF}$ : 29.8/34

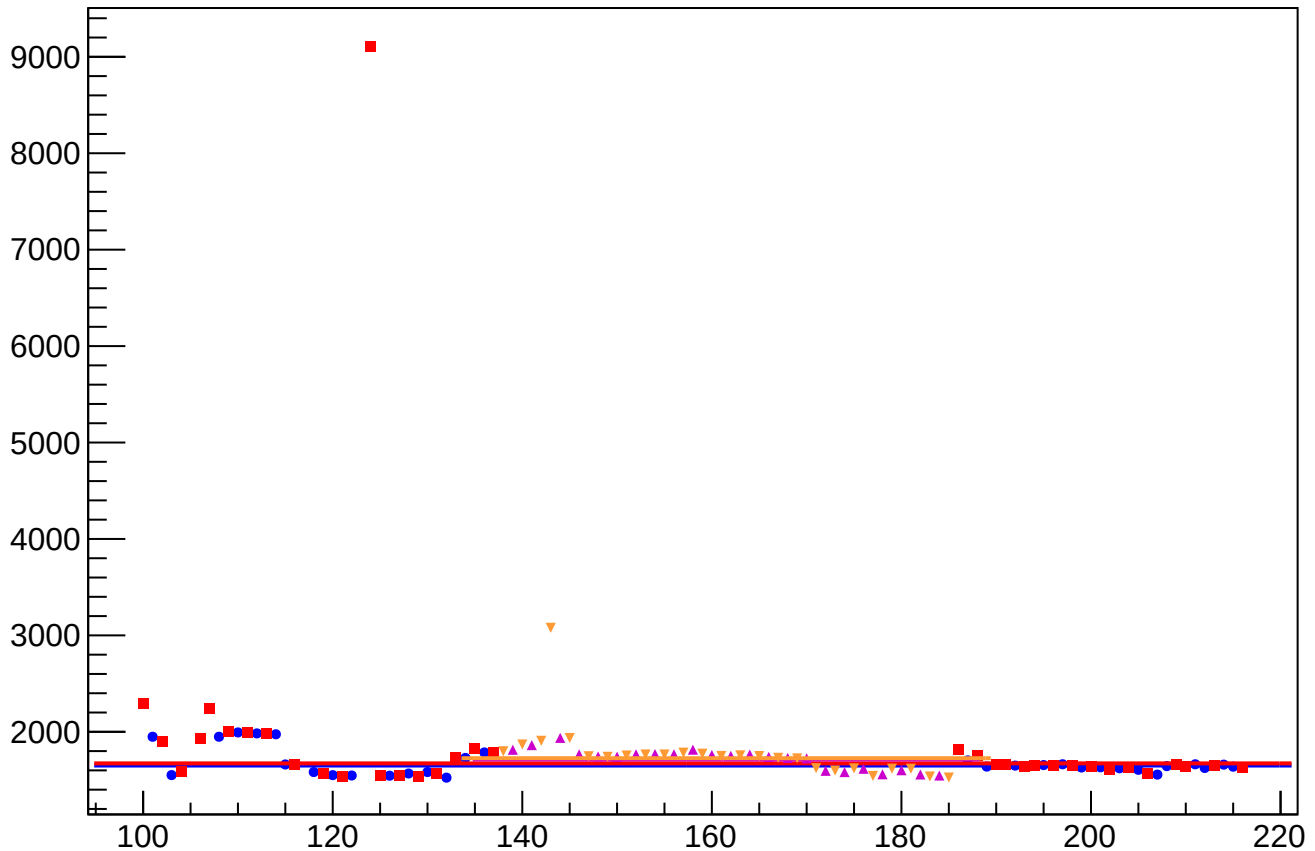
Left In:  $-2245.061 \pm 400.753$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $1521.161 \pm 272.392$   $\chi^2/\text{NDF}$ : 51.3/55

All:  $-210.439 \pm 193.696$   $\chi^2/\text{NDF}$ : 193.0/113

- sign  $-1981.661 \pm 275.490$   $\chi^2/\text{NDF}$ : 60.0/57

# eigen\_cor\_asym\_atl\_avg\_rms vs Slug



Right In: 1650.263+/-0.266  $\chi^2/\text{NDF}$ : 155519.1/30

Left Out: 1726.058+/-0.279  $\chi^2/\text{NDF}$ : 454930.8/24

Right Out: 1672.534+/-0.268  $\chi^2/\text{NDF}$ : 422448.4/34

Left In: 1713.156+/-0.283  $\chi^2/\text{NDF}$ : 129290.6/22

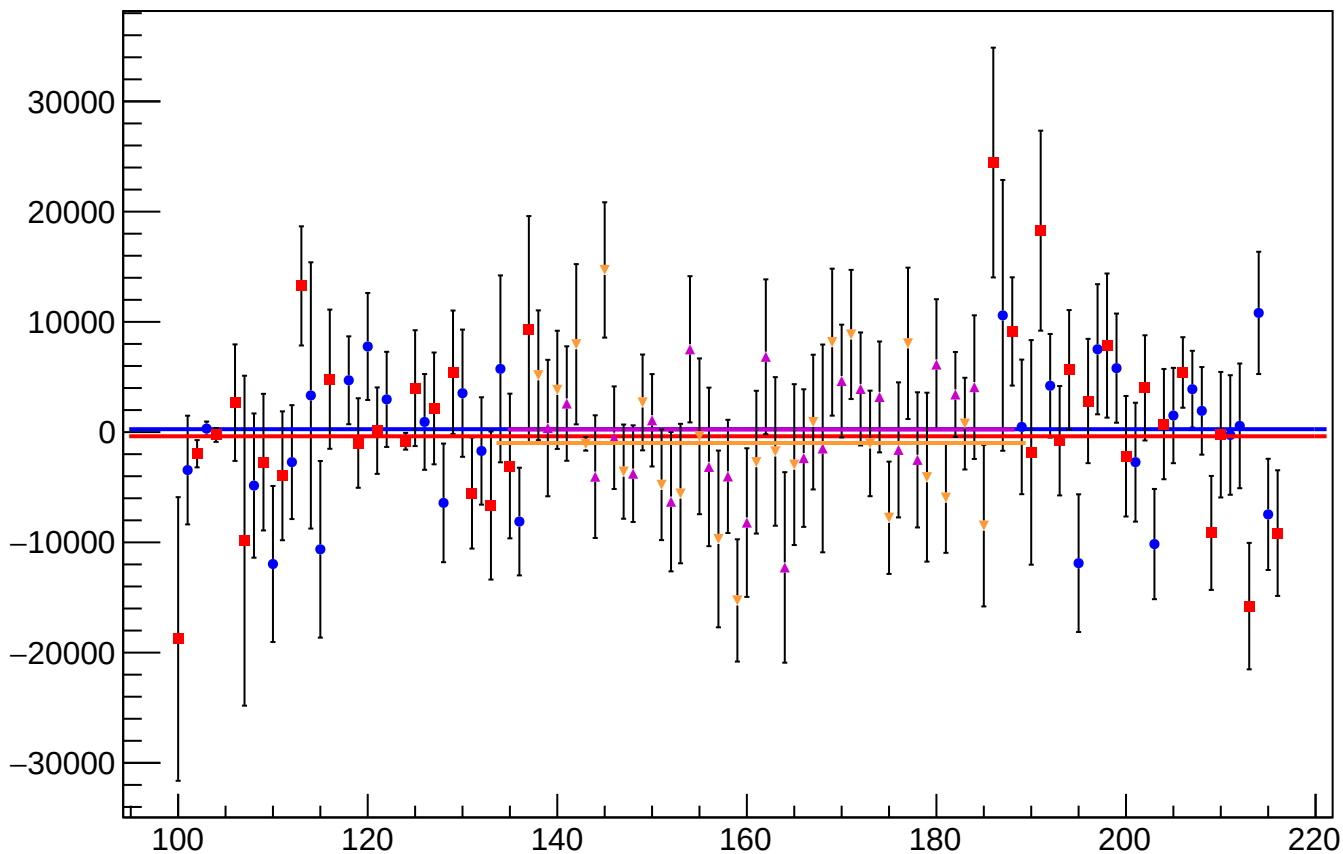
+ sign 1686.409+/-0.193  $\chi^2/\text{NDF}$ : 649081.0/55

All: 1689.027+/-0.137  $\chi^2/\text{NDF}$ : 1212047.0/11

- sign 1691.700+/-0.195  $\chi^2/\text{NDF}$ : 562592.6/57



asym\_atl\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $266.363 \pm 529.694$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-987.291 \pm 541.232$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-376.471 \pm 410.327$   $\chi^2/\text{NDF}$ : 51.0/34

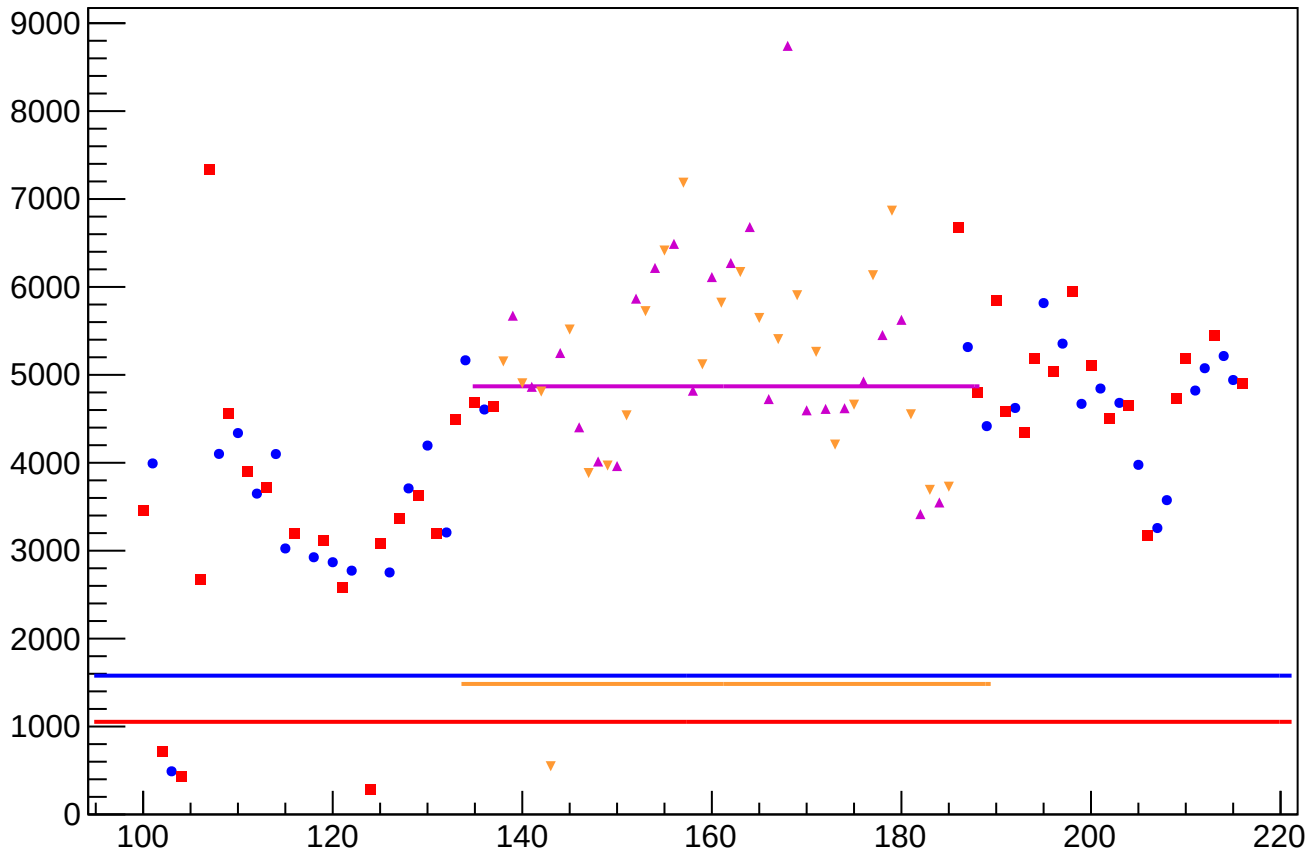
Left In:  $239.478 \pm 1165.045$   $\chi^2/\text{NDF}$ : 13.5/22

+ sign  $-346.959 \pm 378.564$   $\chi^2/\text{NDF}$ : 69.3/55

All:  $-328.153 \pm 270.627$   $\chi^2/\text{NDF}$ : 134.1/113

- sign  $-308.498 \pm 387.025$   $\chi^2/\text{NDF}$ : 64.8/57

asym\_atl\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1578.683 $\pm$ 0.375  $\chi^2$ /NDF: 20418755.3/30

Left Out: 1484.485 $\pm$ 0.383  $\chi^2$ /NDF: 23225570.5/24

Right Out: 1053.516 $\pm$ 0.290  $\chi^2$ /NDF: 25202850.1/34

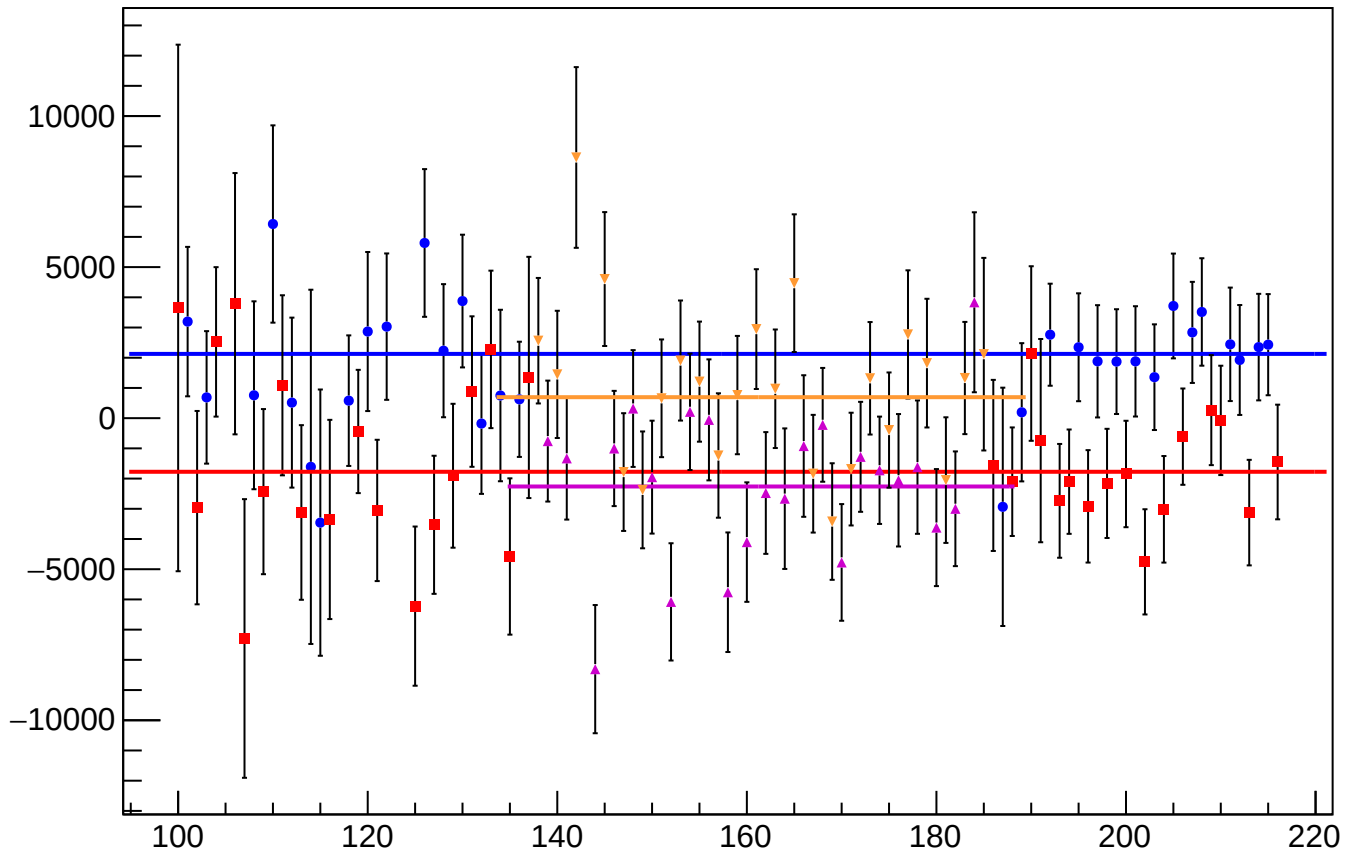
Left In: 4869.699 $\pm$ 0.824  $\chi^2$ /NDF: 1474252.6/22

+ sign 1532.599 $\pm$ 0.268  $\chi^2$ /NDF: 43675269.9/55

All: 1504.265 $\pm$ 0.191  $\chi^2$ /NDF: 89465894.5/1

- sign 1474.651 $\pm$ 0.274  $\chi^2$ /NDF: 45767711.1/57

# dit\_asym\_atl\_avg\_mean vs Slug



Right In:  $2127.177 \pm 380.483$   $\chi^2/\text{NDF}: 14.8/30$

Left Out:  $694.317 \pm 418.051$   $\chi^2/\text{NDF}: 32.2/23$

Right Out:  $-1774.688 \pm 385.665$   $\chi^2/\text{NDF}: 27.0/33$

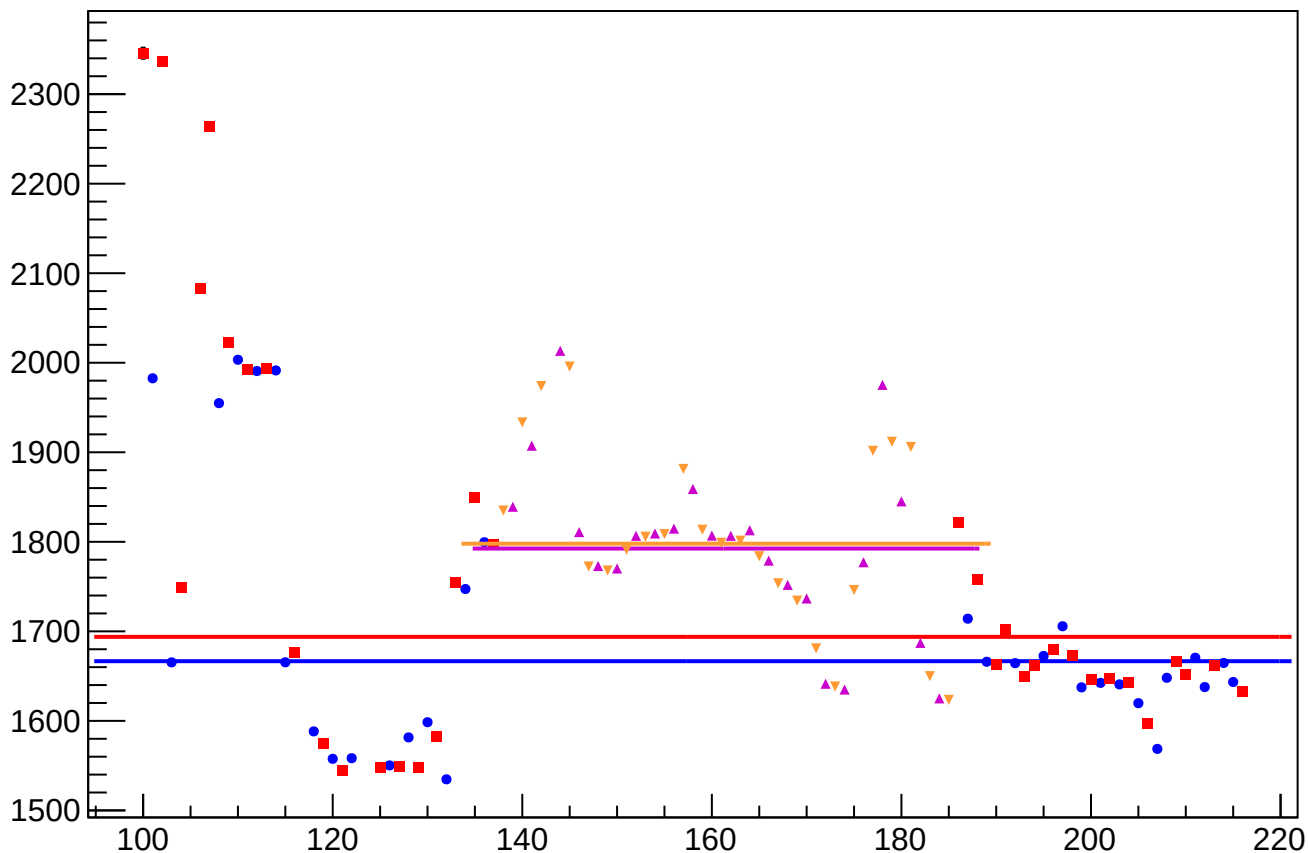
Left In:  $-2261.767 \pm 419.177$   $\chi^2/\text{NDF}: 30.4/22$

+ sign  $1478.008 \pm 281.388$   $\chi^2/\text{NDF}: 53.5/54$

All:  $-245.061 \pm 199.824$   $\chi^2/\text{NDF}: 187.2/111$

- sign  $-1997.982 \pm 283.815$   $\chi^2/\text{NDF}: 58.1/56$

# dit\_asym\_atl\_avg\_rms vs Slug



Right In: 1666.667 $\pm$ 0.269  $\chi^2$ /NDF: 153015.8/30

Left Out: 1797.909 $\pm$ 0.296  $\chi^2$ /NDF: 98002.1/23

Right Out: 1693.843 $\pm$ 0.272  $\chi^2$ /NDF: 288898.1/33

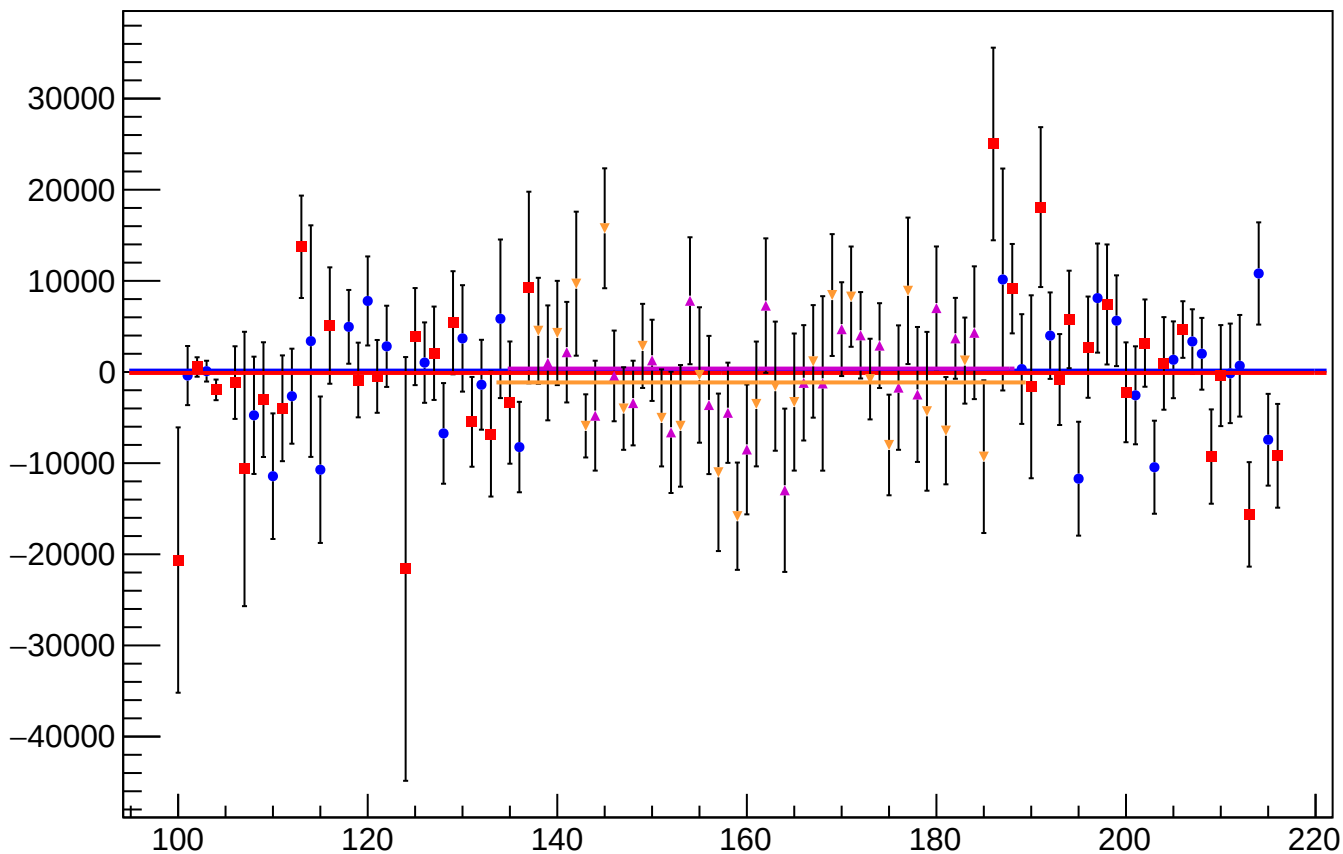
Left In: 1792.450 $\pm$ 0.296  $\chi^2$ /NDF: 92875.2/22

+ sign 1726.127 $\pm$ 0.199  $\chi^2$ /NDF: 358829.0/54

All: 1732.516 $\pm$ 0.141  $\chi^2$ /NDF: 802662.7/111

- sign 1739.010 $\pm$ 0.201  $\chi^2$ /NDF: 441754.8/56

# asym\_atl\_avg\_dit\_correction\_mean vs Slug



Right In: 152.522 $\pm$ 723.261  $\chi^2$ /NDF: 34.7/30

Left Out: -1144.405 $\pm$ 1164.458  $\chi^2$ /NDF:32.6/24

Right Out: -102.788 $\pm$ 606.051  $\chi^2$ /NDF: 51.1/34

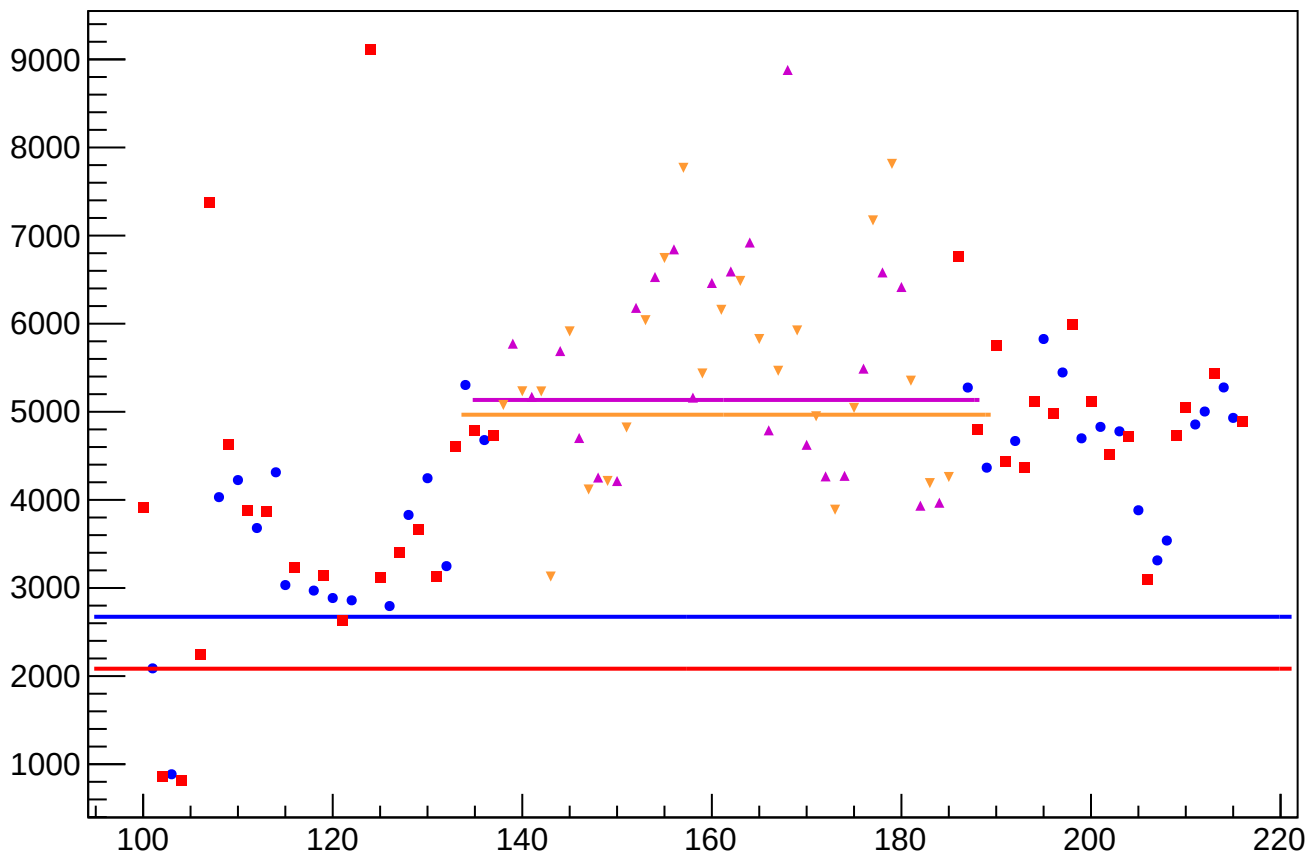
Left In: 374.927 $\pm$ 1228.699  $\chi^2$ /NDF:13.3/22

+ sign -208.524 $\pm$ 614.395  $\chi^2$ /NDF: 68.1/55

All: -96.769 $\pm$ 407.093  $\chi^2$ /NDF: 132.7/113

- sign -9.307 $\pm$ 543.529  $\chi^2$ /NDF: 64.5/57

# asym\_atl\_avg\_dit\_correction\_rms vs Slug



Right In: 2673.258 $\pm$ 0.511  $\chi^2$ /NDF: 10426216.4/30

Left Out: 4966.879 $\pm$ 0.823  $\chi^2$ /NDF:1917937.7/24

Right Out: 2083.943 $\pm$ 0.429  $\chi^2$ /NDF: 15657933.1/34

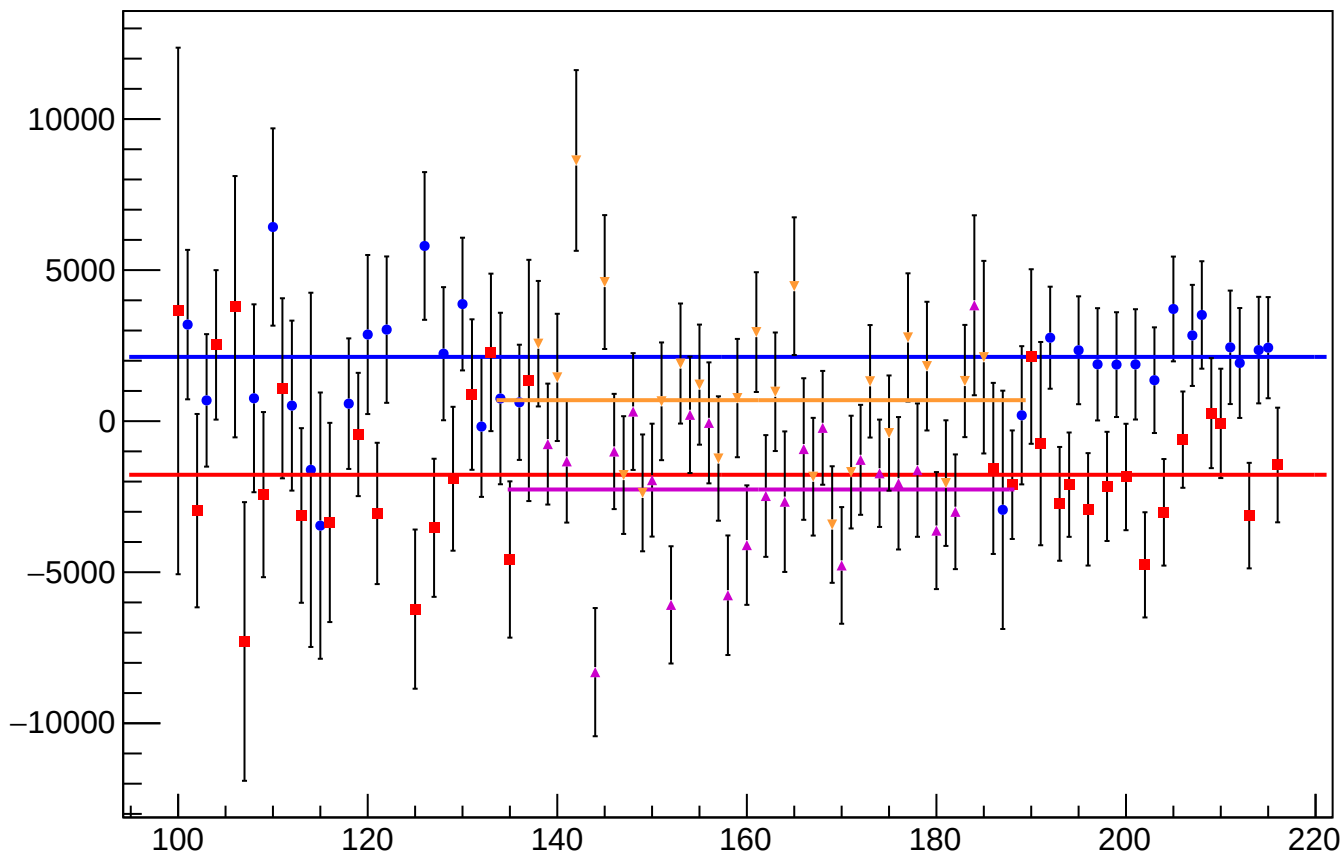
Left In: 5134.445 $\pm$ 0.869  $\chi^2$ /NDF:1487075.9/22

+ sign 3311.769 $\pm$ 0.434  $\chi^2$ /NDF: 17943413.7/55

All: 2957.856 $\pm$ 0.288  $\chi^2$ /NDF: 46186785.9/100

- sign 2680.876 $\pm$ 0.384  $\chi^2$ /NDF: 27060363.8/57

# eigen\_dit\_asym\_atl\_avg\_mean vs Slug



Right In:  $2127.174 \pm 380.483$   $\chi^2/\text{NDF}$ : 14.8/30

Left Out:  $694.313 \pm 418.051$   $\chi^2/\text{NDF}$ : 32.2/23

Right Out:  $-1774.685 \pm 385.665$   $\chi^2/\text{NDF}$ : 27.0/33

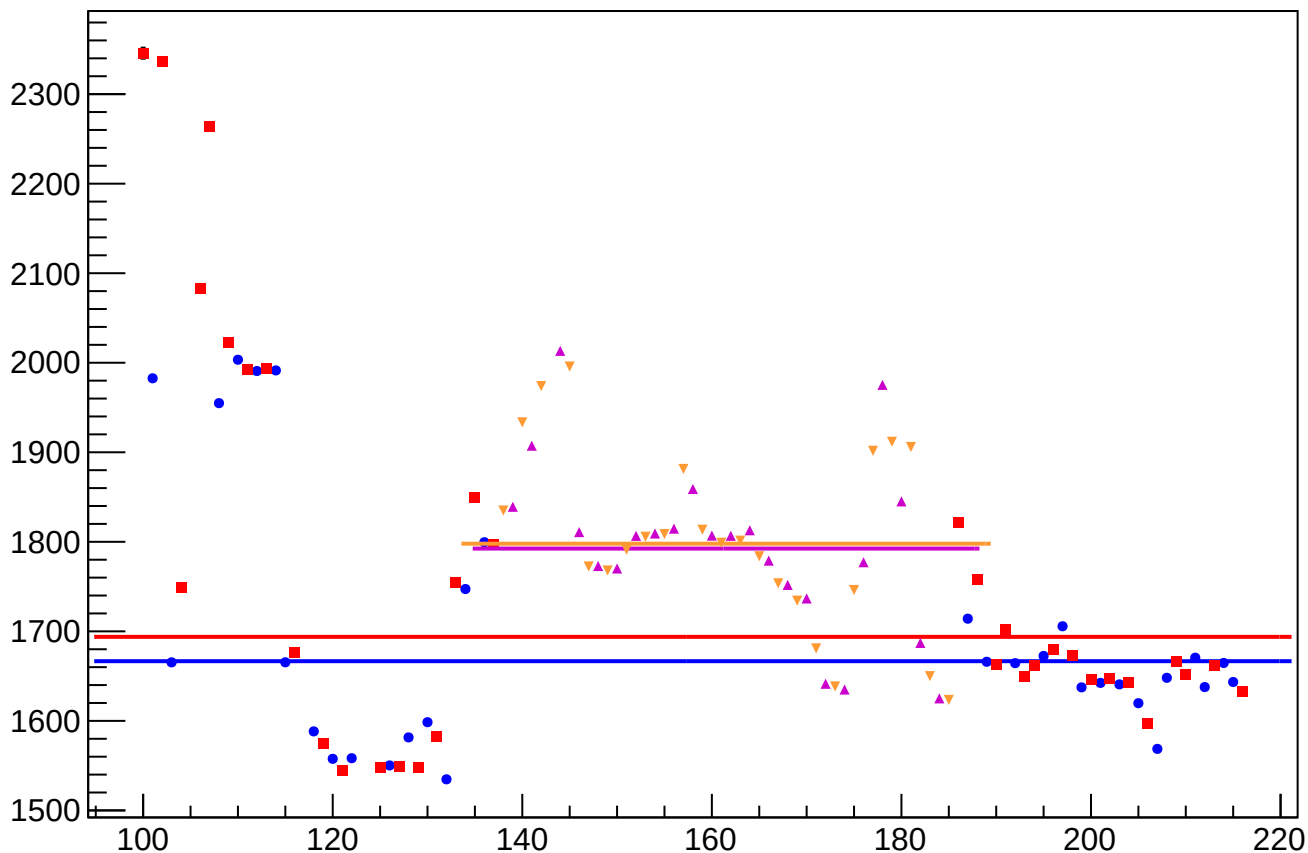
Left In:  $-2261.767 \pm 419.177$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $1478.005 \pm 281.388$   $\chi^2/\text{NDF}$ : 53.5/54

All:  $-245.062 \pm 199.824$   $\chi^2/\text{NDF}$ : 187.2/111

- sign  $-1997.980 \pm 283.815$   $\chi^2/\text{NDF}$ : 58.1/56

# eigen\_dit\_asym\_atl\_avg\_rms vs Slug



Right In: 1666.667 $\pm$ 0.269  $\chi^2$ /NDF: 153016.0/30

Left Out: 1797.911 $\pm$ 0.296  $\chi^2$ /NDF: 98005.5/23

Right Out: 1693.842 $\pm$ 0.272  $\chi^2$ /NDF: 288897.6/33

Left In: 1792.451 $\pm$ 0.296  $\chi^2$ /NDF: 92878.6/22

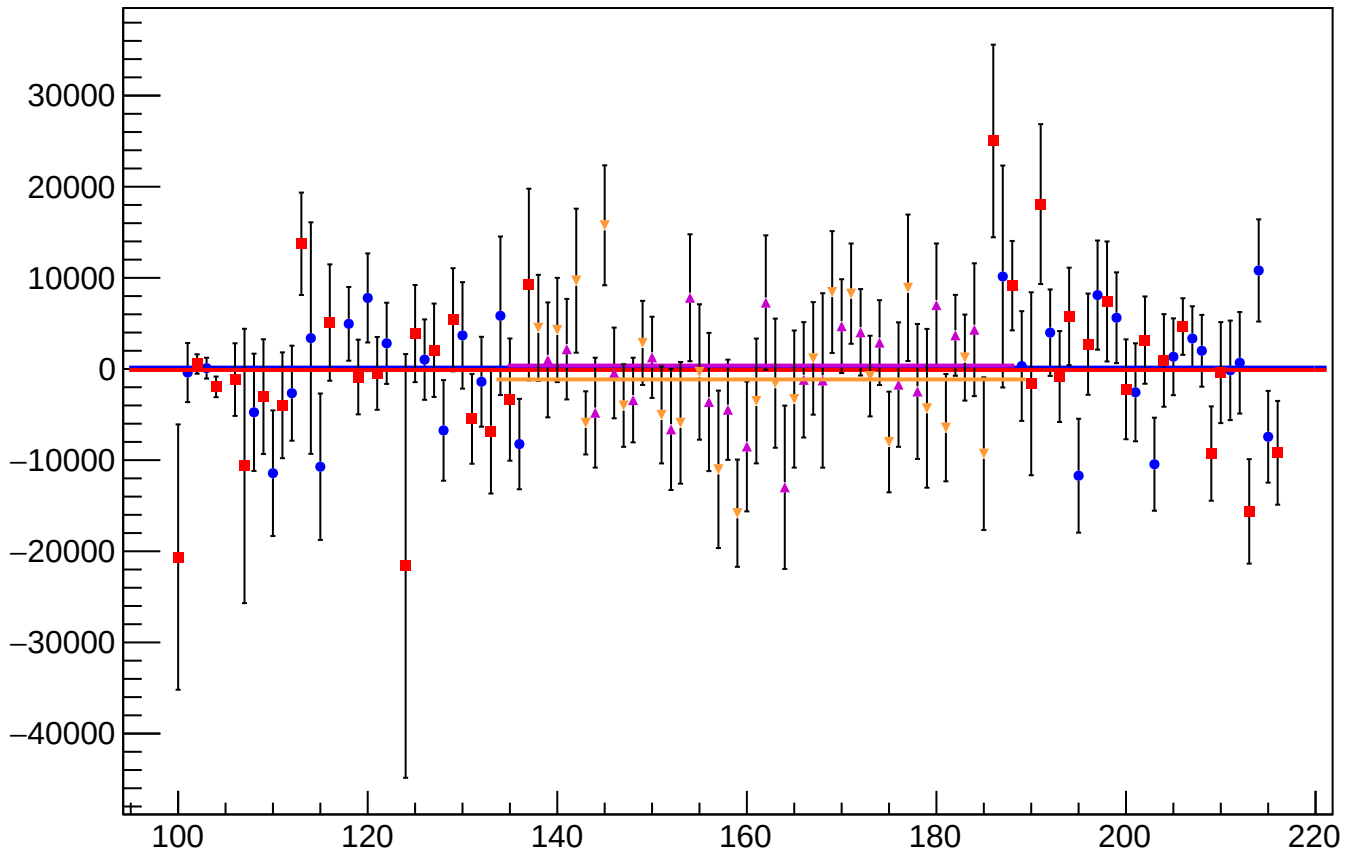
+ sign 1726.128 $\pm$ 0.199  $\chi^2$ /NDF: 358834.9/54

All: 1732.516 $\pm$ 0.141  $\chi^2$ /NDF: 802673.1/111

- sign 1739.010 $\pm$ 0.201  $\chi^2$ /NDF: 441759.3/56



# asym\_atl\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $152.522 \pm 723.258$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-1144.411 \pm 1164.460$   $\chi^2/\text{NDF}$ : 32.6/24

Right Out:  $-102.793 \pm 606.048$   $\chi^2/\text{NDF}$ : 51.1/34

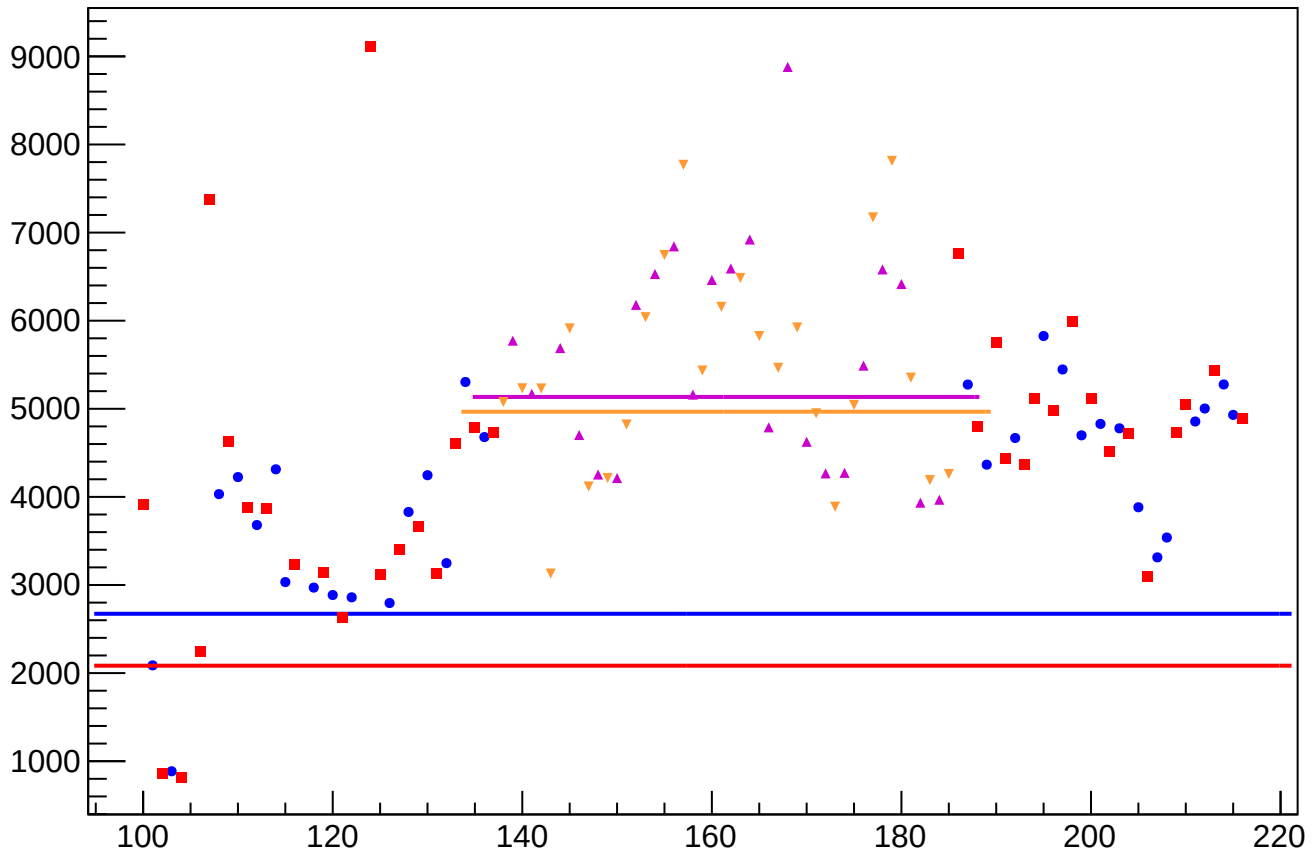
Left In:  $374.928 \pm 1228.701$   $\chi^2/\text{NDF}$ : 13.3/22

+ sign  $-208.523 \pm 614.393$   $\chi^2/\text{NDF}$ : 68.1/55

All:  $-96.771 \pm 407.091$   $\chi^2/\text{NDF}$ : 132.7/113

- sign  $-9.312 \pm 543.527$   $\chi^2/\text{NDF}$ : 64.5/57

# asym\_atl\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 2673.240 $\pm$ 0.511  $\chi^2/\text{NDF}$ : 10426369.5/30

Left Out: 4966.886 $\pm$ 0.823  $\chi^2/\text{NDF}$ : 1917943.9/24

Right Out: 2083.924 $\pm$ 0.429  $\chi^2/\text{NDF}$ : 15658085.7/34

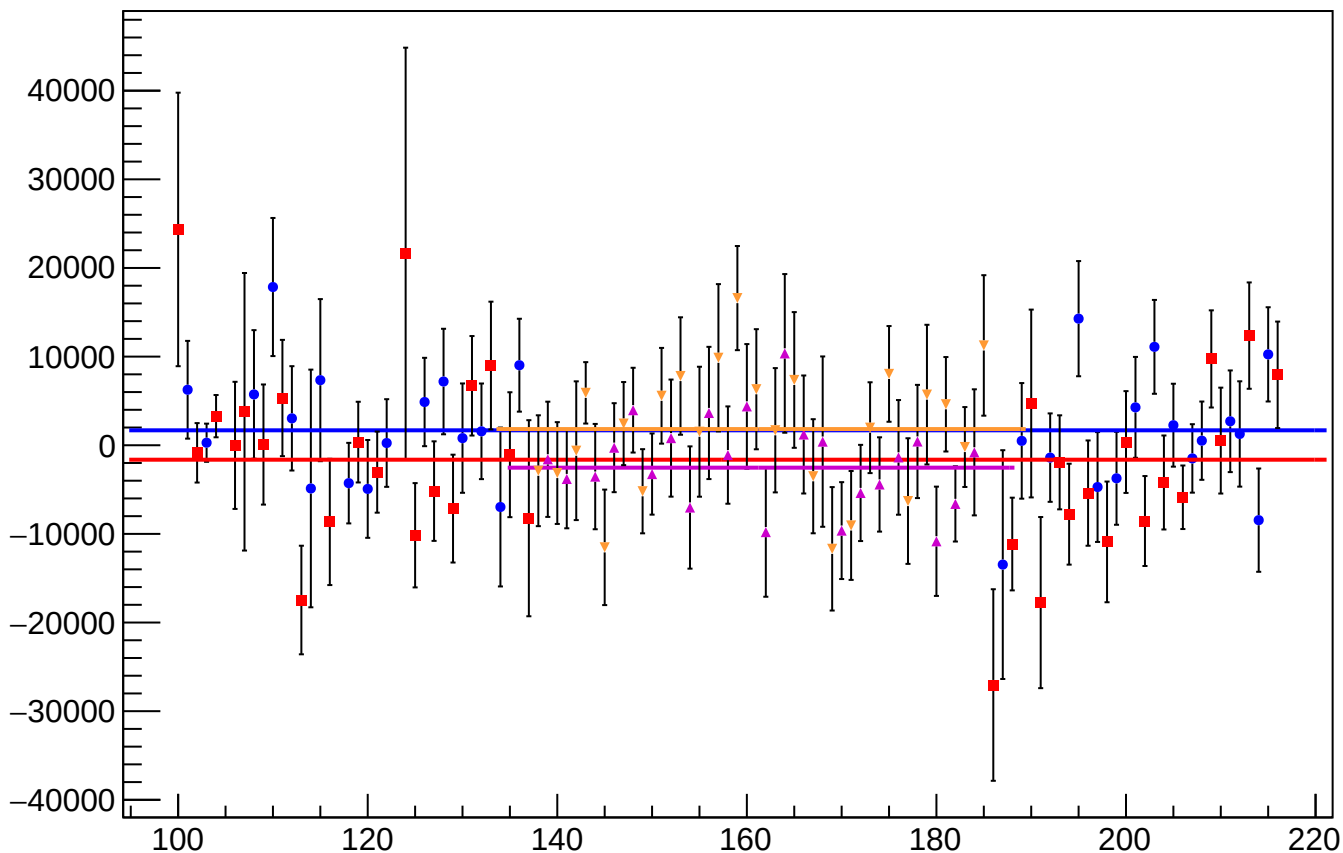
Left In: 5134.453 $\pm$ 0.869  $\chi^2/\text{NDF}$ : 1487077.8/22

+ sign 3311.754 $\pm$ 0.434  $\chi^2/\text{NDF}$ : 17943693.4/55

All: 2957.837 $\pm$ 0.288  $\chi^2/\text{NDF}$ : 46187414.9/100

- sign 2680.856 $\pm$ 0.384  $\chi^2/\text{NDF}$ : 27060688.1/57

# asym\_atl\_avg\_mean vs Slug



Right In: 1685.235 $\pm$ 936.299  $\chi^2$ /NDF: 31.3/30

Left Out: 1826.201 $\pm$ 1172.478  $\chi^2$ /NDF:31.1/24

Right Out: -1630.499 $\pm$ 940.996  $\chi^2$ /NDF: 56.9/34

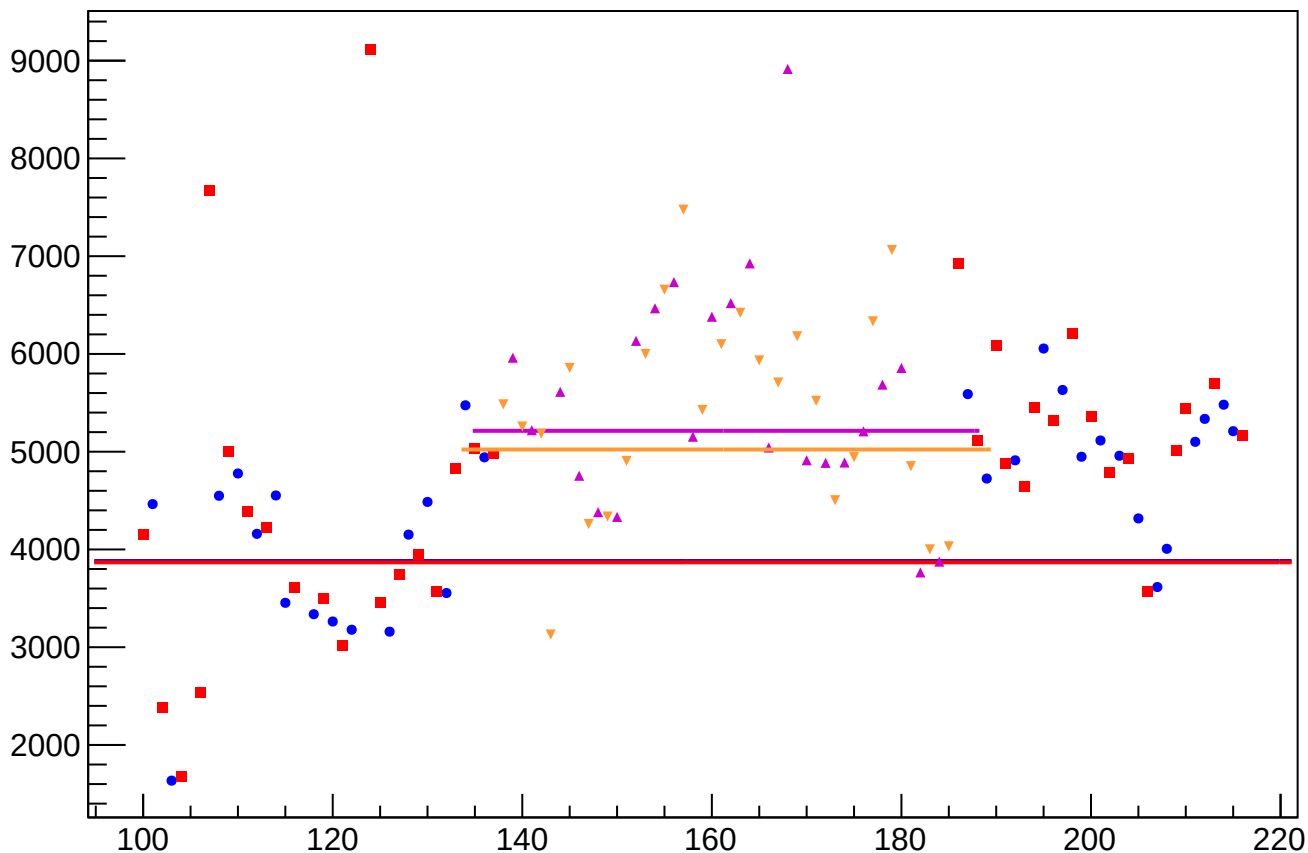
Left In: -2529.501 $\pm$ 1242.040  $\chi^2$ /NDF:13.2/22

+ sign 1740.126 $\pm$ 731.639  $\chi^2$ /NDF: 62.4/55

All: -63.173 $\pm$ 523.733  $\chi^2$ /NDF: 145.3/113

- sign -1958.340 $\pm$ 750.044  $\chi^2$ /NDF: 70.5/57

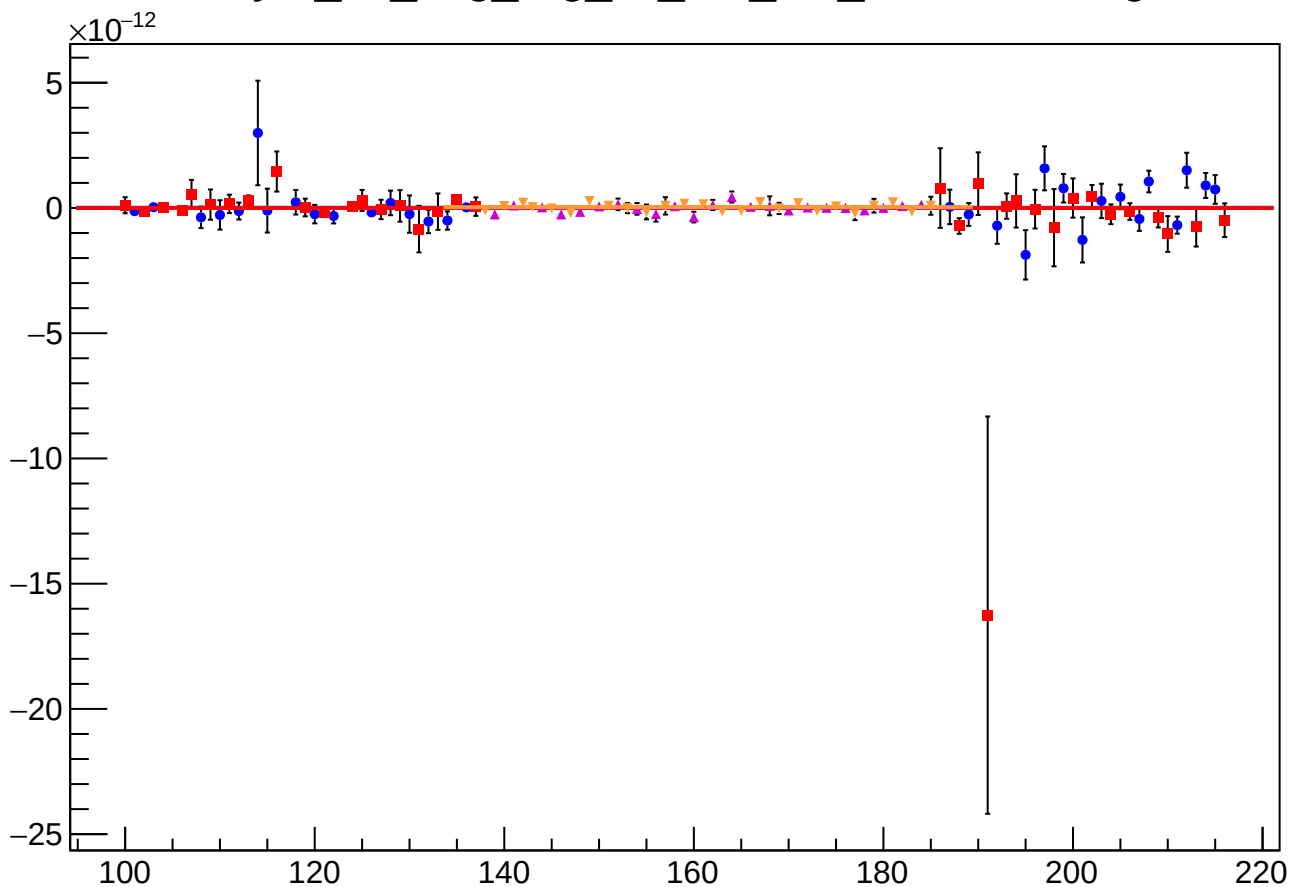
# asym\_atl\_avg\_rms vs Slug



Right In:  $3881.277 \pm 0.662$      $\chi^2/\text{NDF}$ : 3880034.3/30  
 Left Out:  $5022.407 \pm 0.829$      $\chi^2/\text{NDF}$ : 1676611.8/24  
 Right Out:  $3868.295 \pm 0.659$      $\chi^2/\text{NDF}$ : 4475774.2/34  
 Left In:  $5213.625 \pm 0.878$      $\chi^2/\text{NDF}$ : 1223192.9/22

+ sign  $4325.620 \pm 0.517$      $\chi^2/\text{NDF}$ : 6713438.8/55  
 All:  $4339.173 \pm 0.369$      $\chi^2/\text{NDF}$ : 13914438.7/130  
 - sign  $4353.252 \pm 0.527$      $\chi^2/\text{NDF}$ : 7199600.7/57

asym\_atl\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.1/34

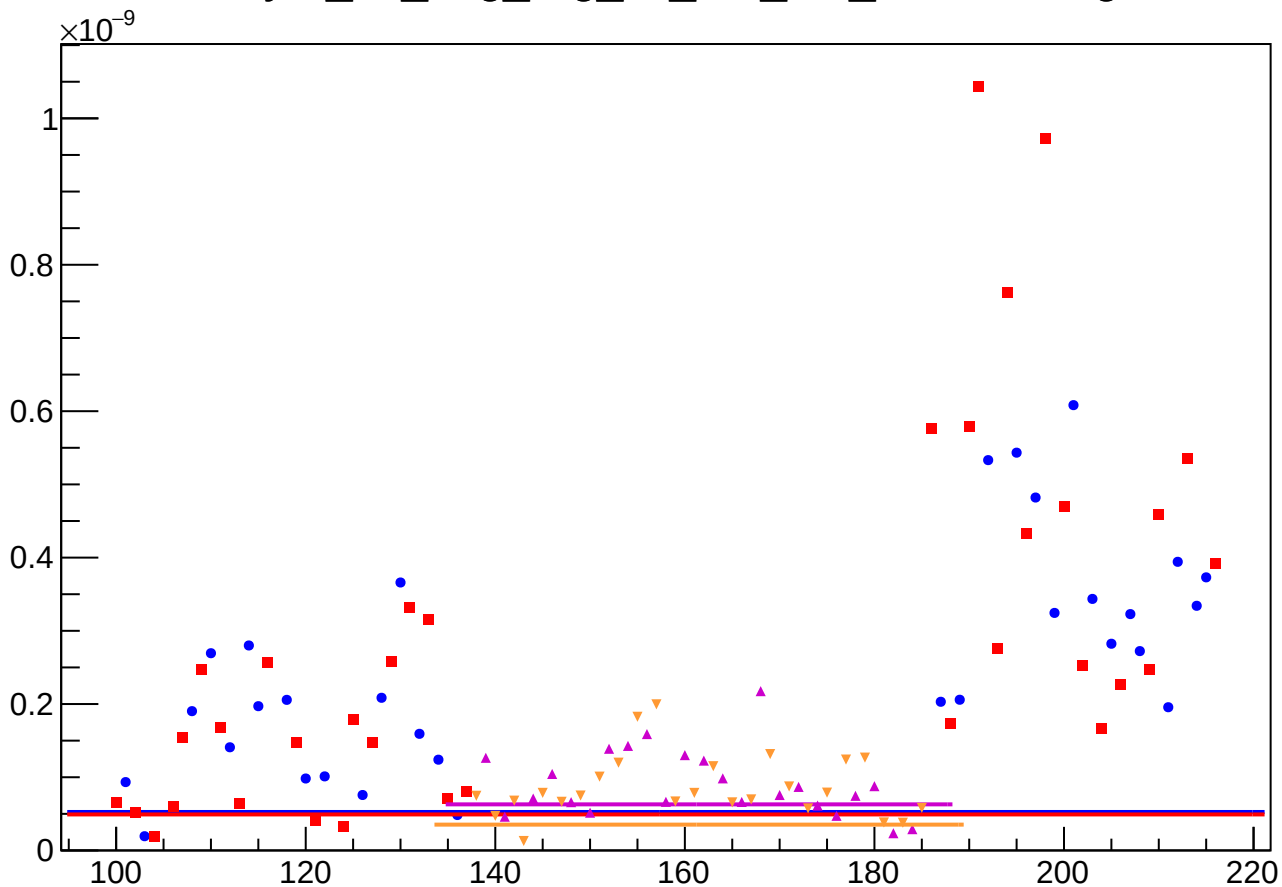
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.6/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.4/57

# asym\_atl\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10698989.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6511119.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10574661.2/34

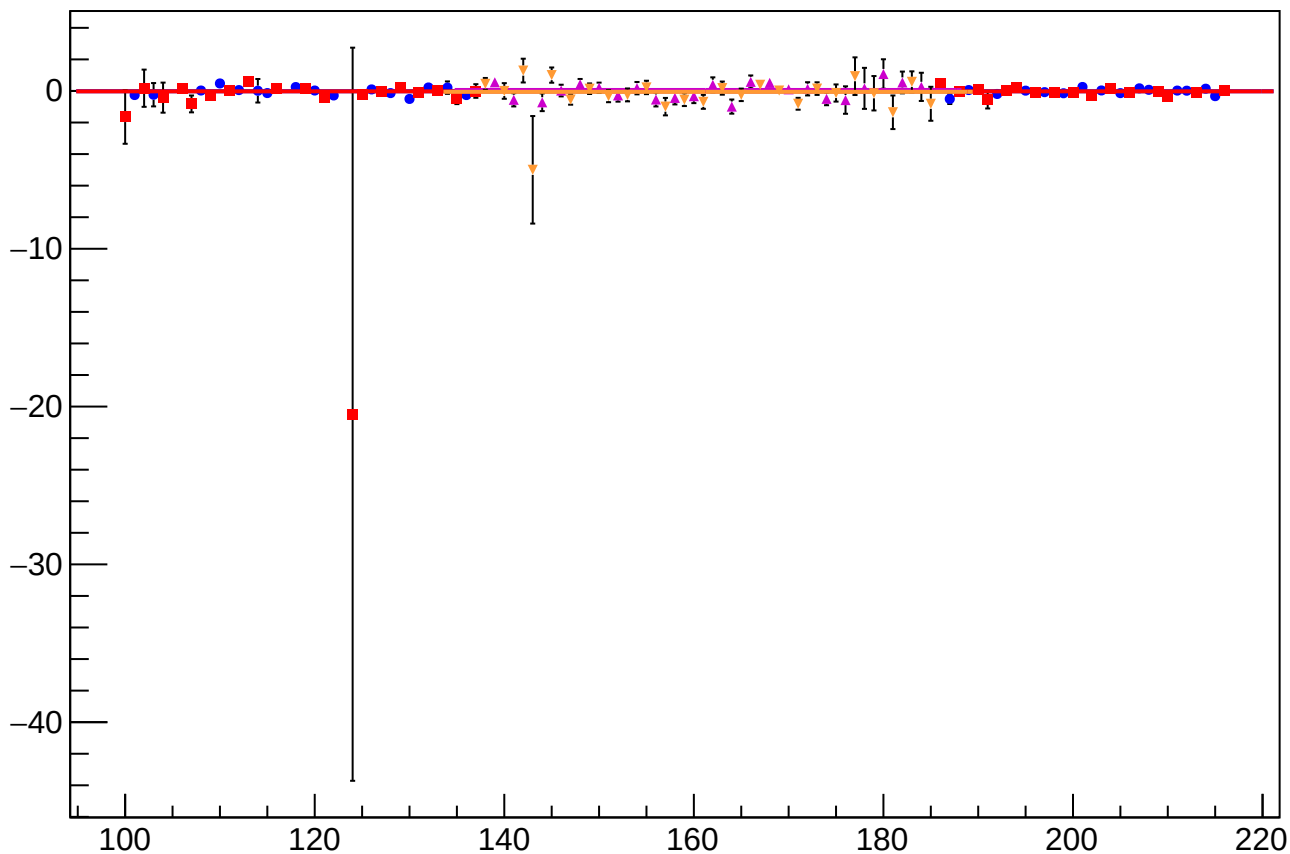
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2934305.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17628028.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32256783.9/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13723081.8/57

# asym\_atl\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.017 \pm 0.033$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.024 \pm 0.033$   $\chi^2/\text{NDF}$ : 36.0/34

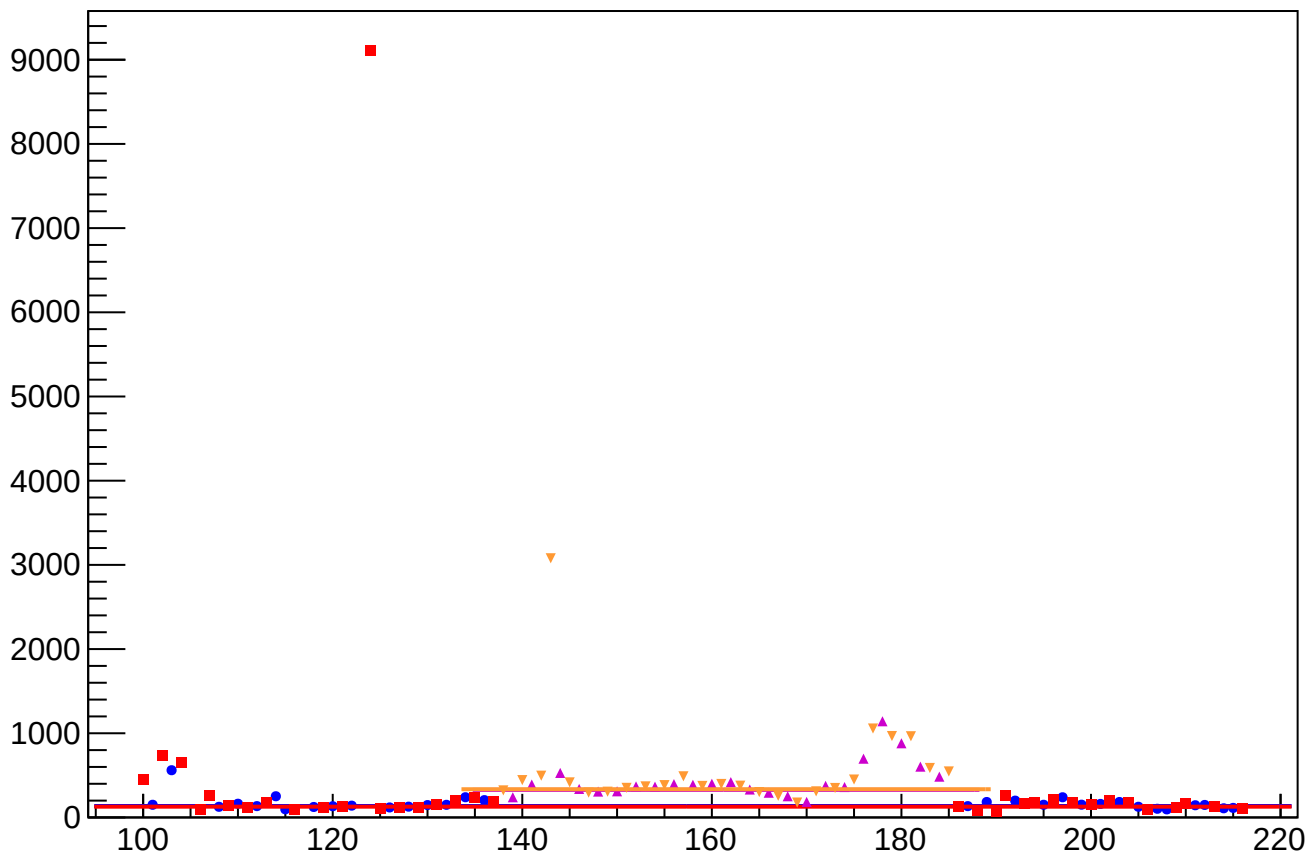
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.022 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.0/55

All:  $-0.017 \pm 0.022$   $\chi^2/\text{NDF}$ : 134.0/113

- sign  $-0.012 \pm 0.030$   $\chi^2/\text{NDF}$ : 64.9/57

# asym\_atl\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 135.928 $\pm$ 0.024  $\chi^2$ /NDF: 2486141.7/30

Left Out: 335.166 $\pm$ 0.060  $\chi^2$ /NDF: 5852083.8/24

Right Out: 128.210 $\pm$ 0.023  $\chi^2$ /NDF: 4333483.4/34

Left In: 327.572 $\pm$ 0.059  $\chi^2$ /NDF: 4153081.9/22

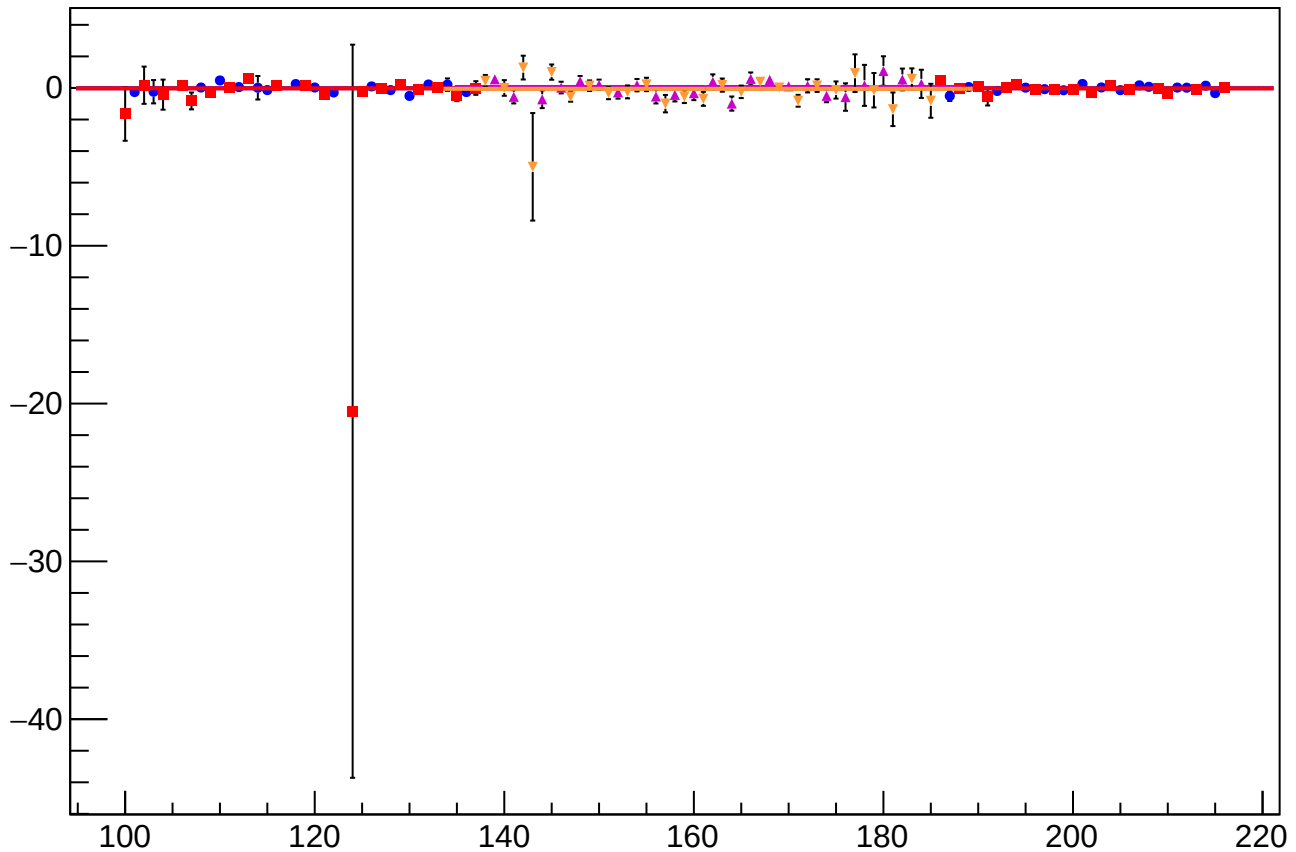
+ sign 162.896 $\pm$ 0.022  $\chi^2$ /NDF: 17927160.3/55

All: 158.765 $\pm$ 0.015  $\chi^2$ /NDF: 36541532.3/11

- sign 154.863 $\pm$ 0.021  $\chi^2$ /NDF: 18545872.4/57



asym\_atl\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.017 \pm 0.033$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.024 \pm 0.033$   $\chi^2/\text{NDF}$ : 36.0/34

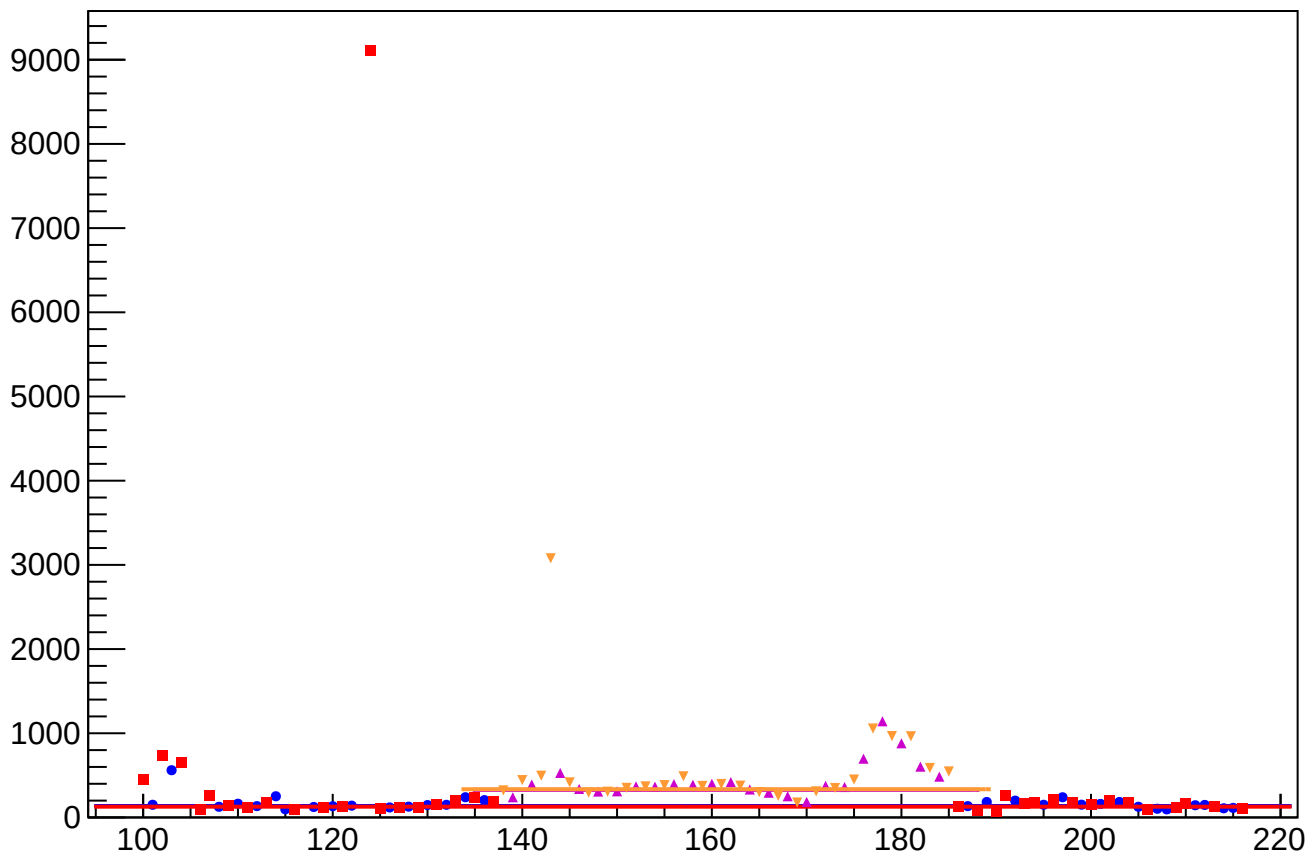
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.022 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.0/55

All:  $-0.017 \pm 0.022$   $\chi^2/\text{NDF}$ : 134.0/113

- sign  $-0.012 \pm 0.030$   $\chi^2/\text{NDF}$ : 64.9/57

asym\_atl\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 135.928 $\pm$ 0.024  $\chi^2$ /NDF: 2486141.7/30

Left Out: 335.166 $\pm$ 0.060  $\chi^2$ /NDF: 5852083.8/24

Right Out: 128.210 $\pm$ 0.023  $\chi^2$ /NDF: 4333483.4/34

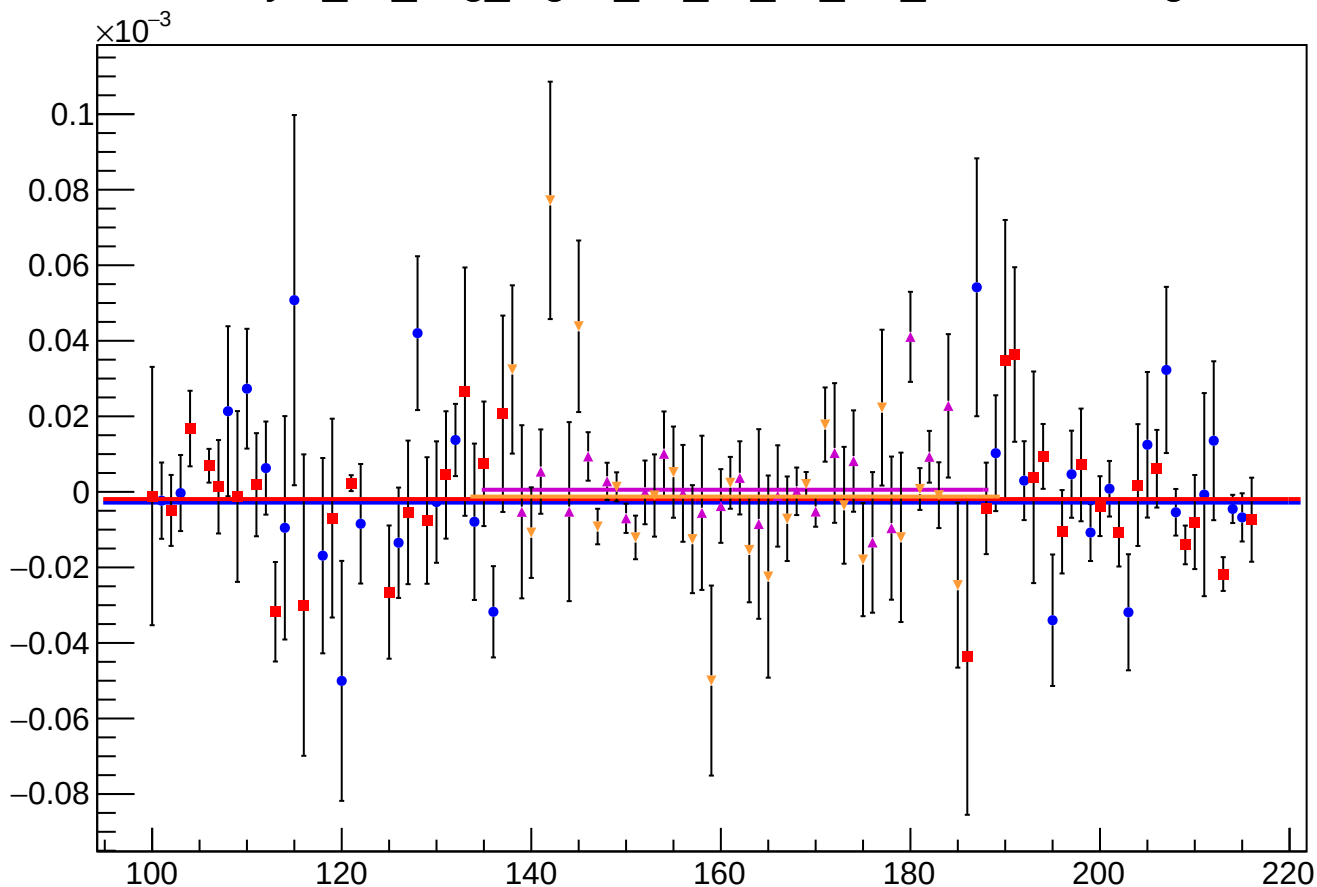
Left In: 327.572 $\pm$ 0.059  $\chi^2$ /NDF: 4153081.9/22

+ sign 162.896 $\pm$ 0.022  $\chi^2$ /NDF: 17927160.3/55

All: 158.765 $\pm$ 0.015  $\chi^2$ /NDF: 36541532.3/11

- sign 154.863 $\pm$ 0.021  $\chi^2$ /NDF: 18545872.4/57

asym\_atl\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.4/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.3/33

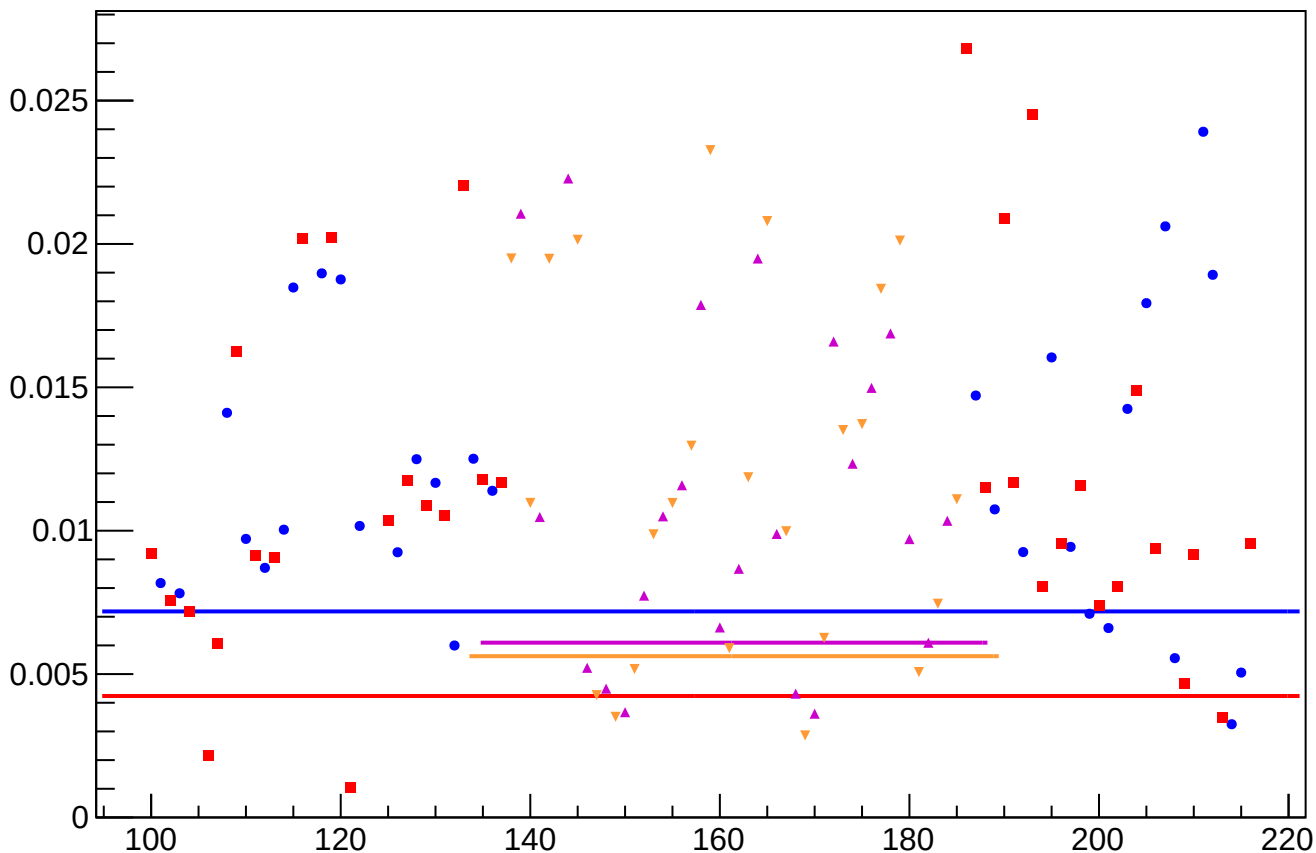
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 76.5/54

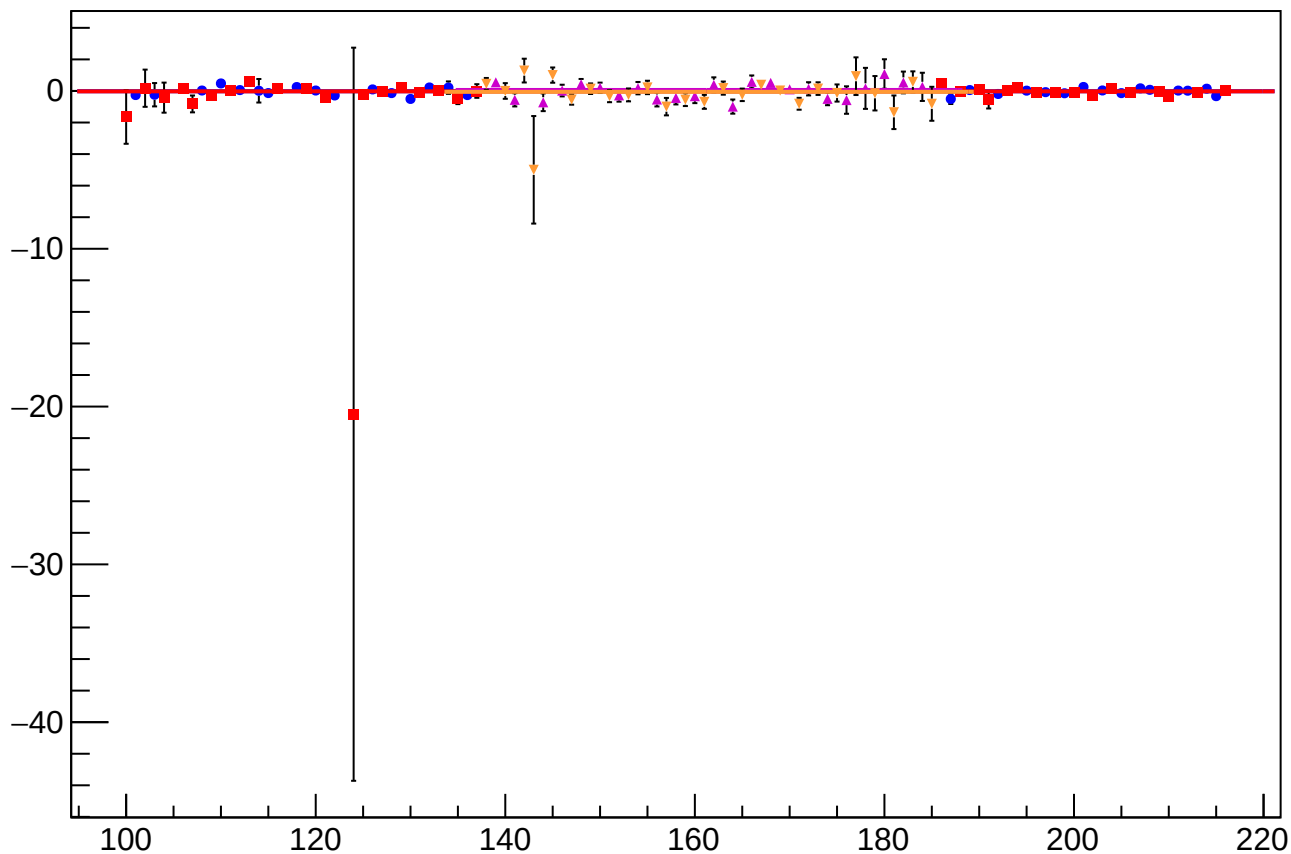
All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 159.9/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 83.1/56

asym\_atl\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



# asym\_atl\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.017 \pm 0.033$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.024 \pm 0.033$   $\chi^2/\text{NDF}$ : 36.0/34

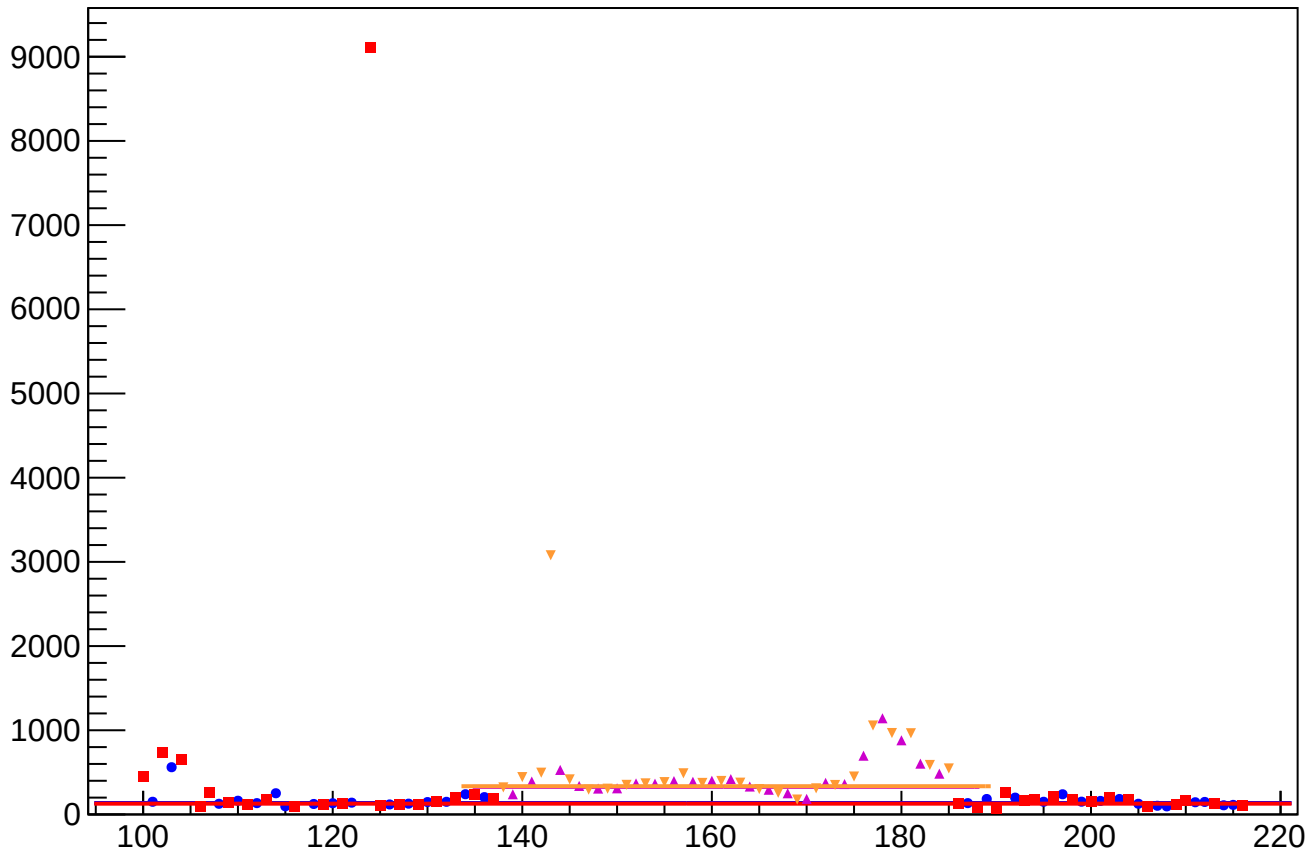
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.022 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.0/55

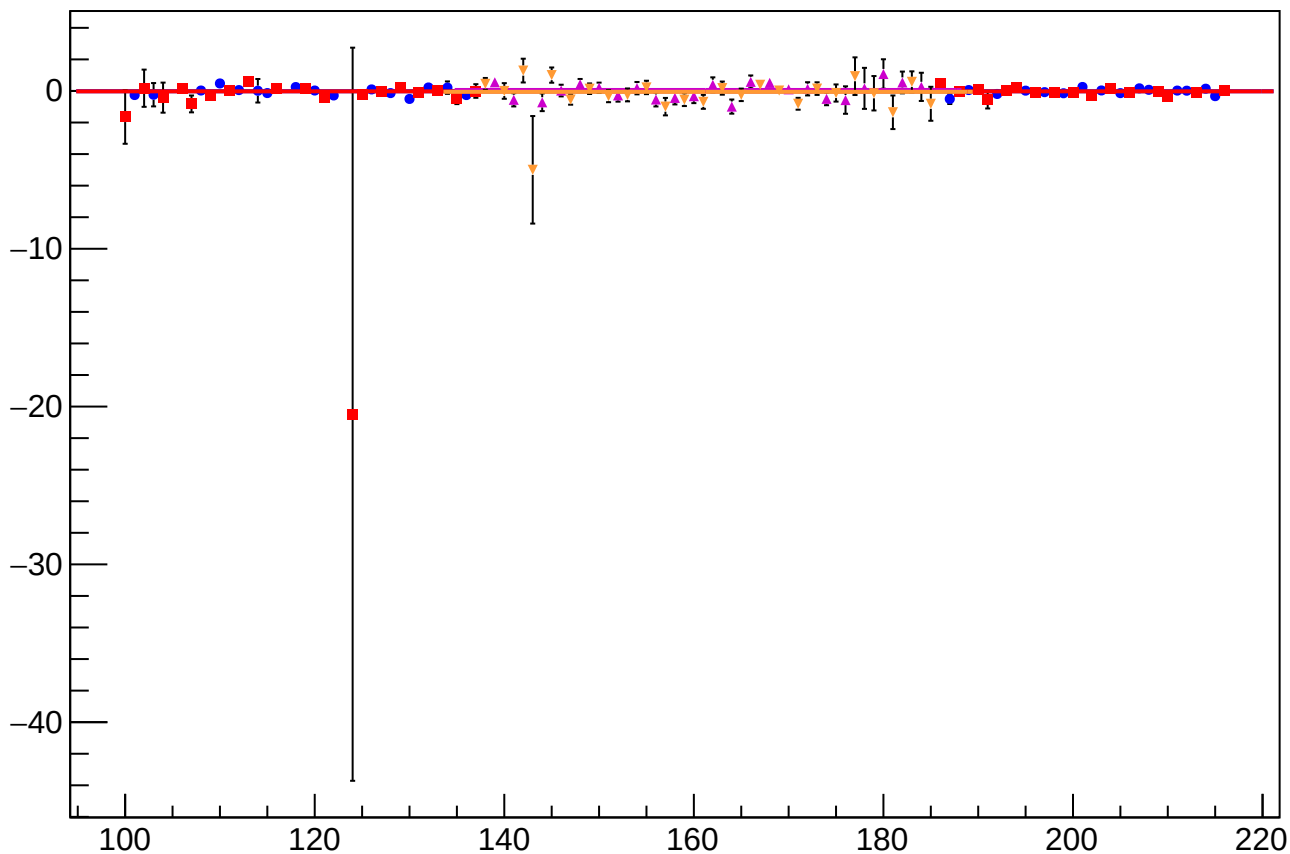
All:  $-0.017 \pm 0.022$   $\chi^2/\text{NDF}$ : 134.0/113

- sign  $-0.012 \pm 0.030$   $\chi^2/\text{NDF}$ : 64.9/57

asym\_atl\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



asym\_atl\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.017 \pm 0.033$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-0.054 \pm 0.085$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-0.024 \pm 0.033$   $\chi^2/\text{NDF}$ : 36.0/34

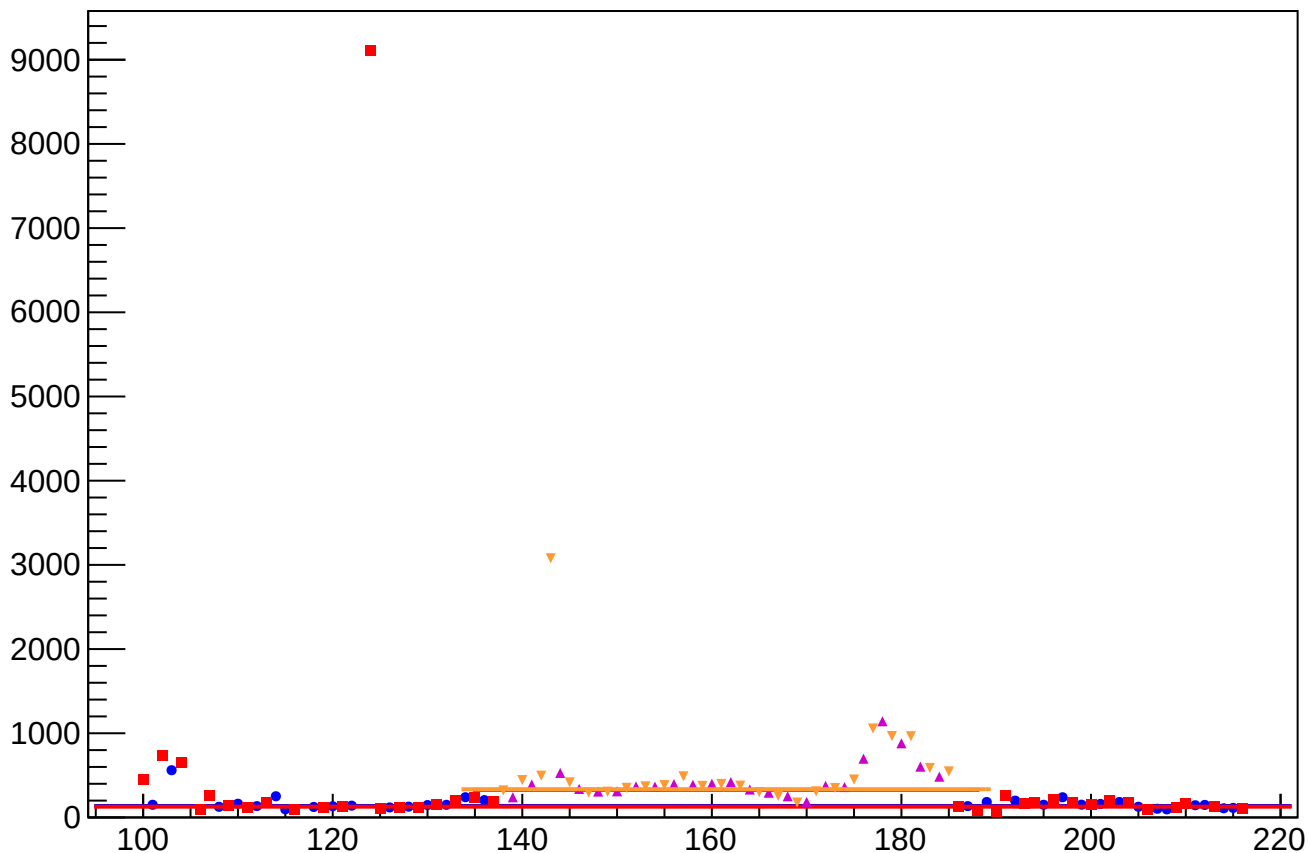
Left In:  $0.063 \pm 0.083$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-0.022 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.0/55

All:  $-0.017 \pm 0.022$   $\chi^2/\text{NDF}$ : 134.0/113

- sign  $-0.012 \pm 0.030$   $\chi^2/\text{NDF}$ : 64.9/57

asym\_atl\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 135.925 $\pm$ 0.024  $\chi^2$ /NDF: 2486353.2/30

Left Out: 335.168 $\pm$ 0.060  $\chi^2$ /NDF: 5852151.8/24

Right Out: 128.208 $\pm$ 0.023  $\chi^2$ /NDF: 4333584.3/34

Left In: 327.575 $\pm$ 0.059  $\chi^2$ /NDF: 4153087.6/22

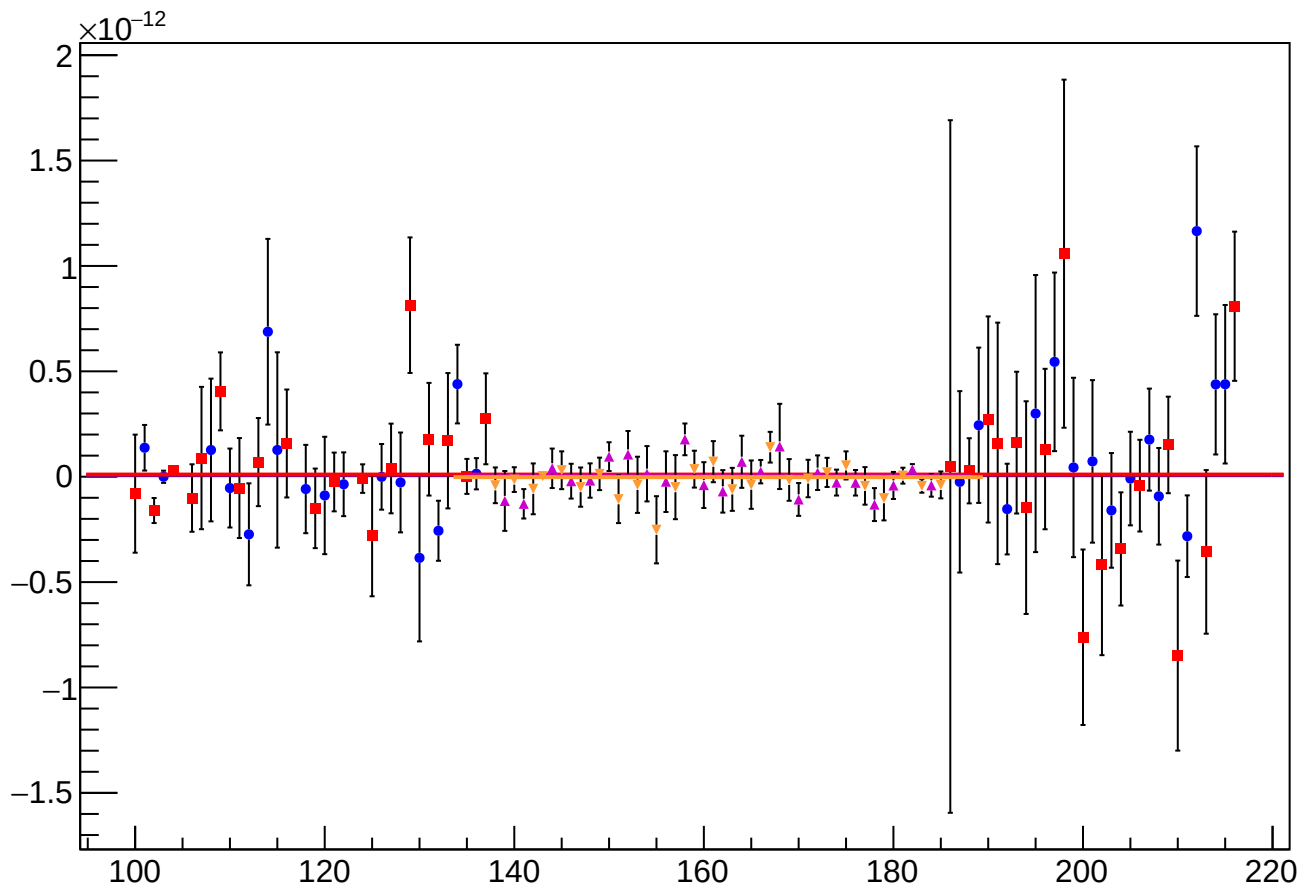
+ sign 162.893 $\pm$ 0.022  $\chi^2$ /NDF: 17927837.3/55

All: 158.762 $\pm$ 0.015  $\chi^2$ /NDF: 36542655.0/1

- sign 154.860 $\pm$ 0.021  $\chi^2$ /NDF: 18546334.1/57



asym\_atl\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.6/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.7/34

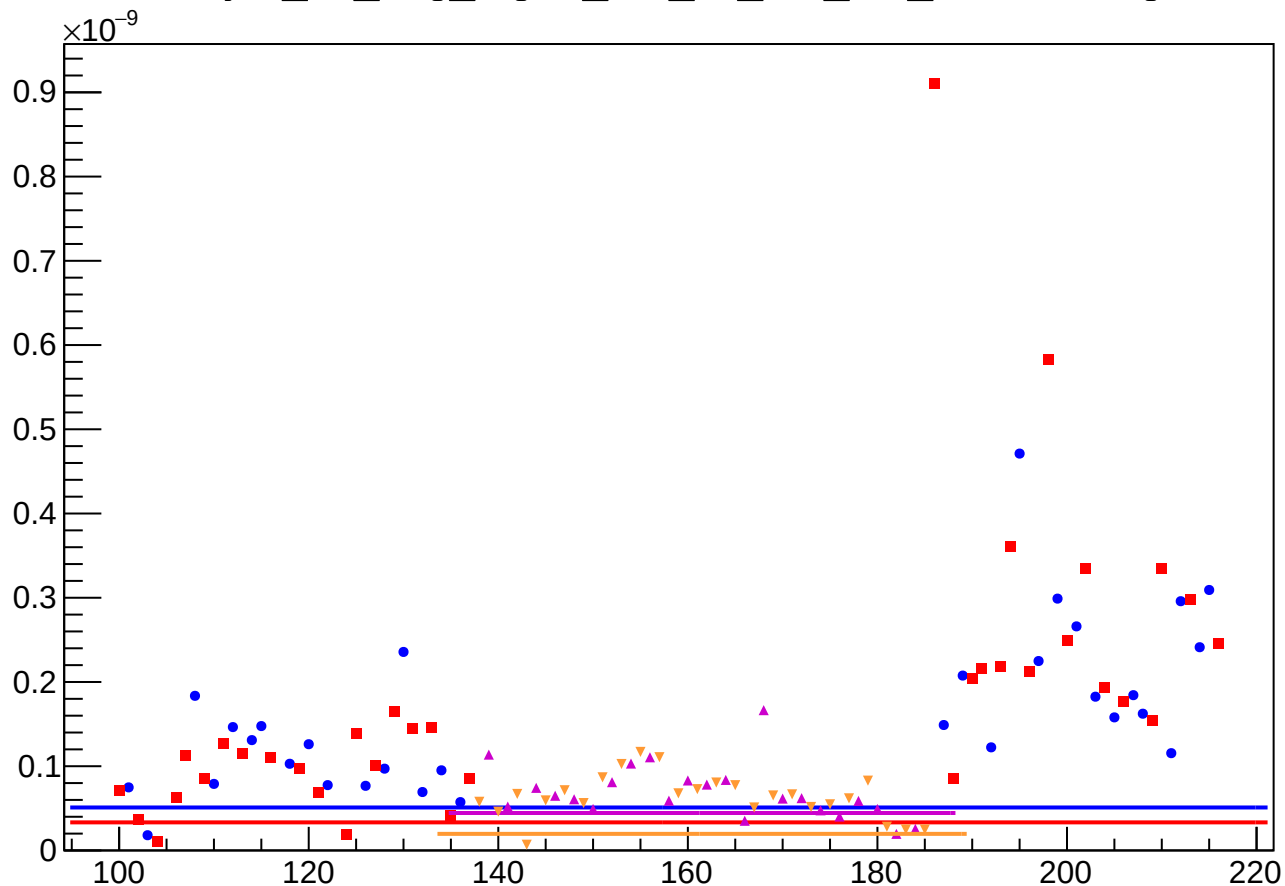
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.8/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.3/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.3/57

asym\_atl\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12264481.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14888228.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15332998.3/34

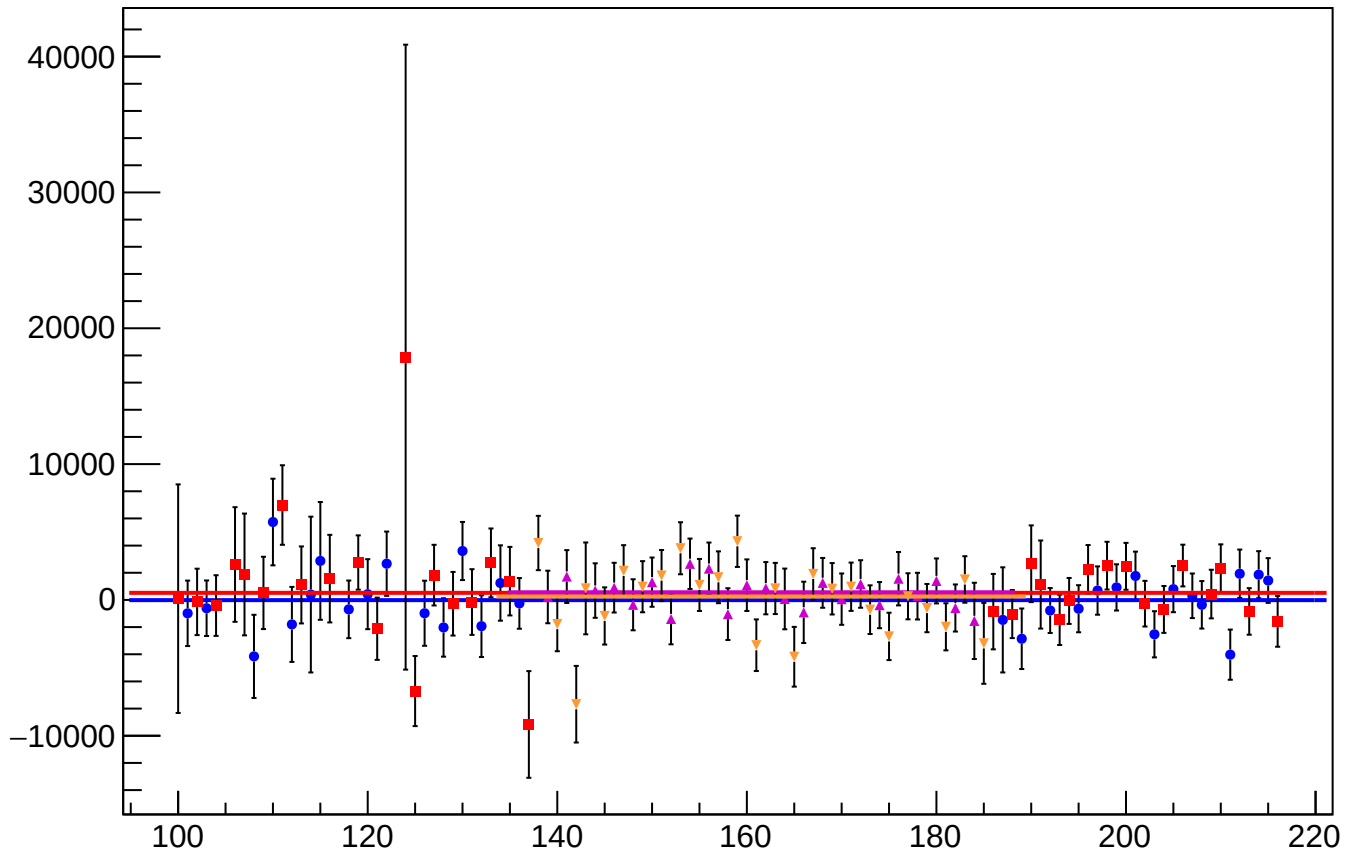
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5919814.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30480541.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 55273589.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21723488.1/57

# reg\_asym\_atl\_dd\_mean vs Slug



Right In:  $-14.954 \pm 371.586$   $\chi^2/\text{NDF}$ : 26.4/30

Left Out:  $248.233 \pm 388.827$   $\chi^2/\text{NDF}$ : 39.6/24

Right Out:  $522.114 \pm 374.145$   $\chi^2/\text{NDF}$ : 35.9/34

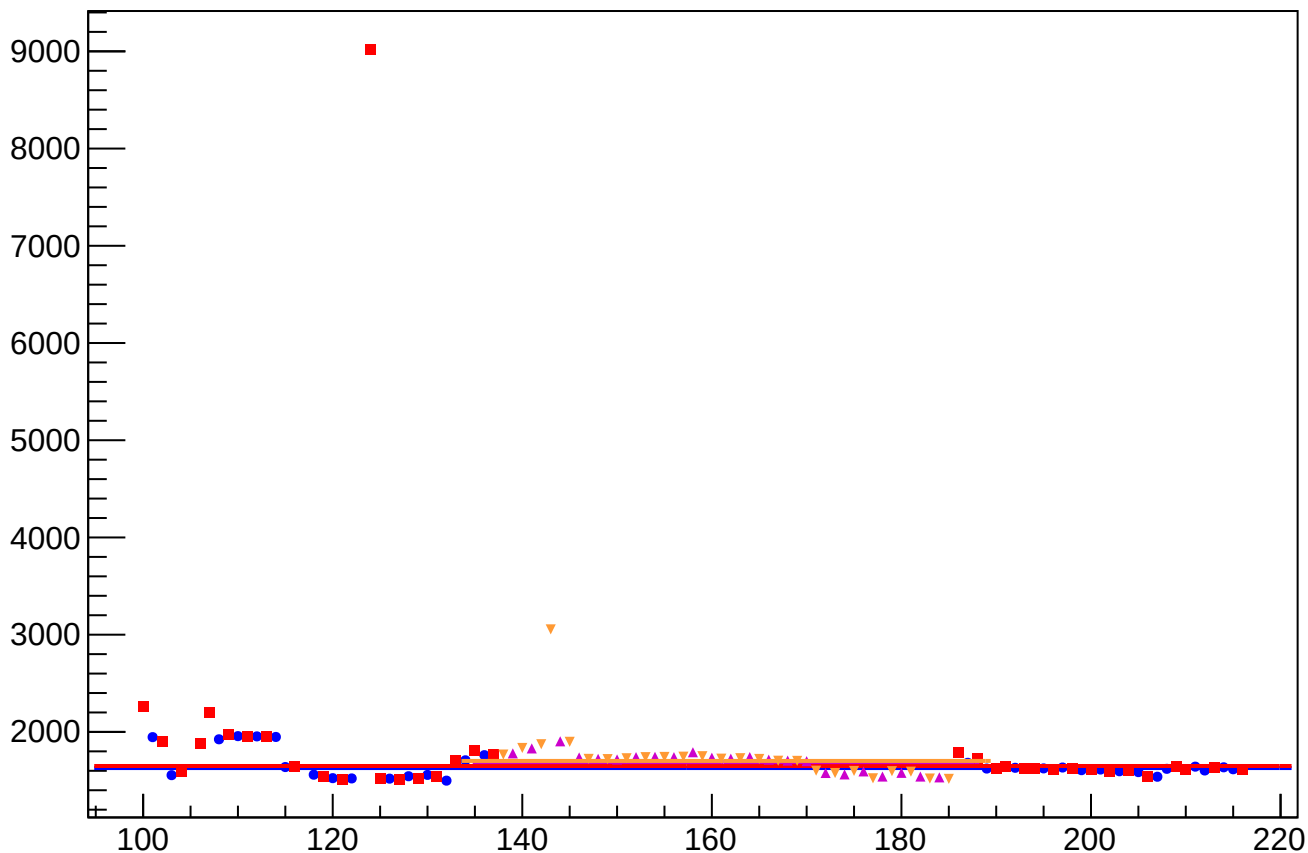
Left In:  $559.995 \pm 395.112$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $110.675 \pm 268.639$   $\chi^2/\text{NDF}$ : 66.2/55

All:  $322.940 \pm 191.019$   $\chi^2/\text{NDF}$ : 110.9/113

- sign  $540.023 \pm 271.670$   $\chi^2/\text{NDF}$ : 43.4/57

# reg\_asym\_atl\_dd\_rms vs Slug



Right In: 1628.220+/-0.263  $\chi^2/\text{NDF}$ : 157803.7/30

Left Out: 1701.583+/-0.275  $\chi^2/\text{NDF}$ : 452379.1/24

Right Out: 1649.458+/-0.264  $\chi^2/\text{NDF}$ : 423862.4/34

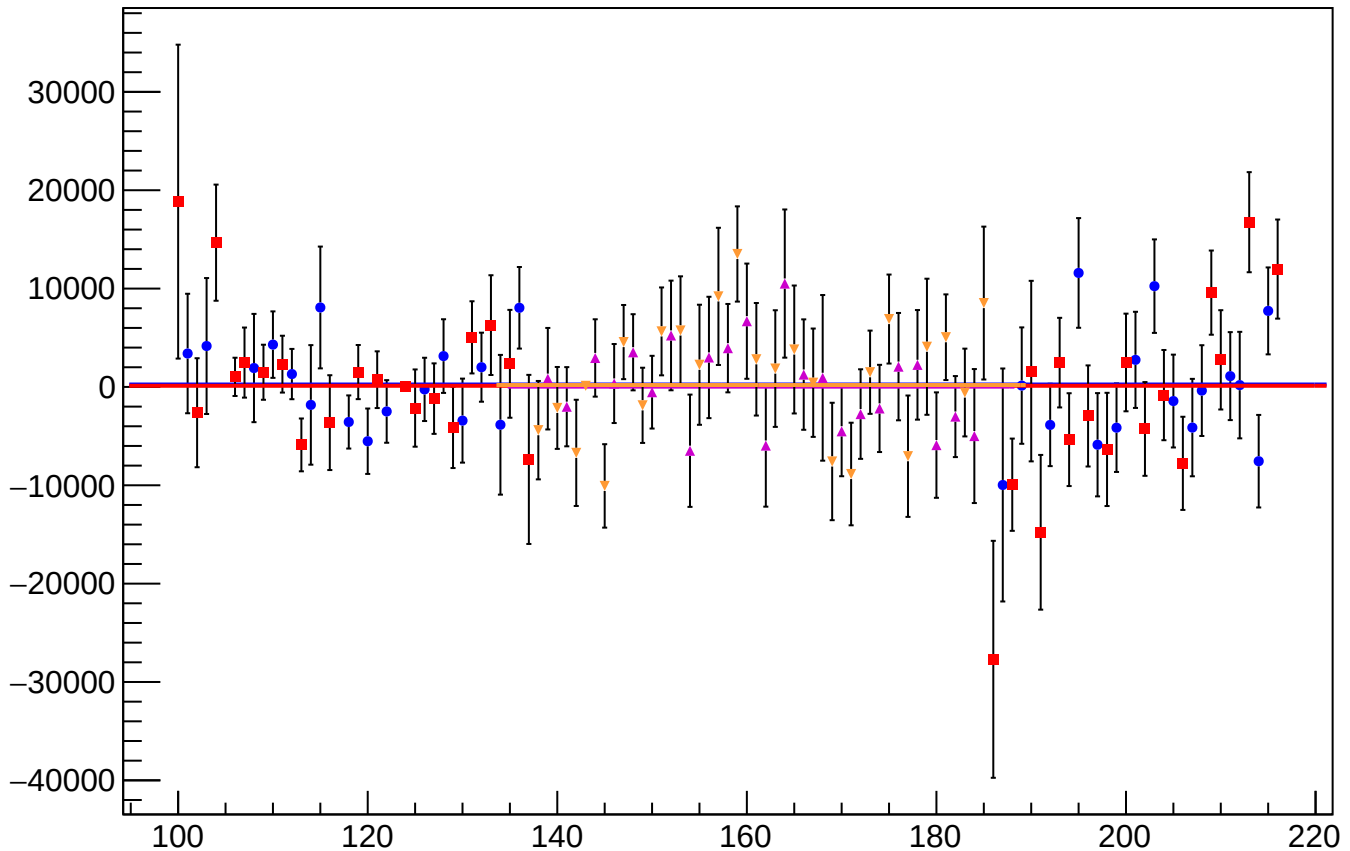
Left In: 1689.259+/-0.279  $\chi^2/\text{NDF}$ : 122317.9/22

+ sign 1663.239+/-0.190  $\chi^2/\text{NDF}$ : 647395.6/55

All: 1665.715+/-0.135  $\chi^2/\text{NDF}$ : 1204635.3/11

- sign 1668.243+/-0.192  $\chi^2/\text{NDF}$ : 556896.3/57

# asym\_atl\_dd\_reg\_correction\_mean vs Slug



Right In: 245.123 $\pm$ 768.693  $\chi^2$ /NDF: 34.7/30

Left Out: 193.503 $\pm$ 343.131  $\chi^2$ /NDF:33.9/24

Right Out: 117.254 $\pm$ 314.148  $\chi^2$ /NDF: 62.9/34

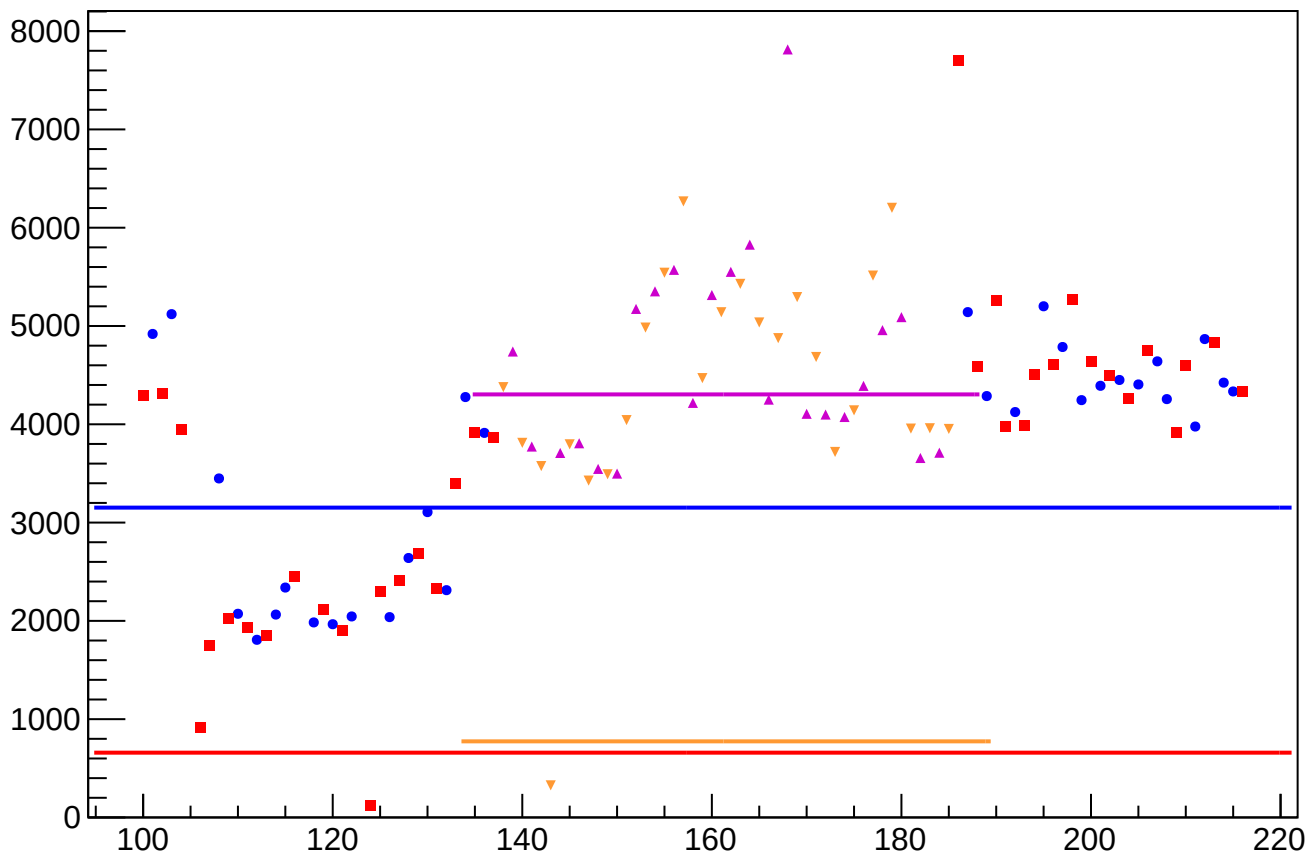
Left In: 28.728 $\pm$ 1025.481  $\chi^2$ /NDF:13.3/22

+ sign 202.080 $\pm$ 313.332  $\chi^2$ /NDF: 68.6/55

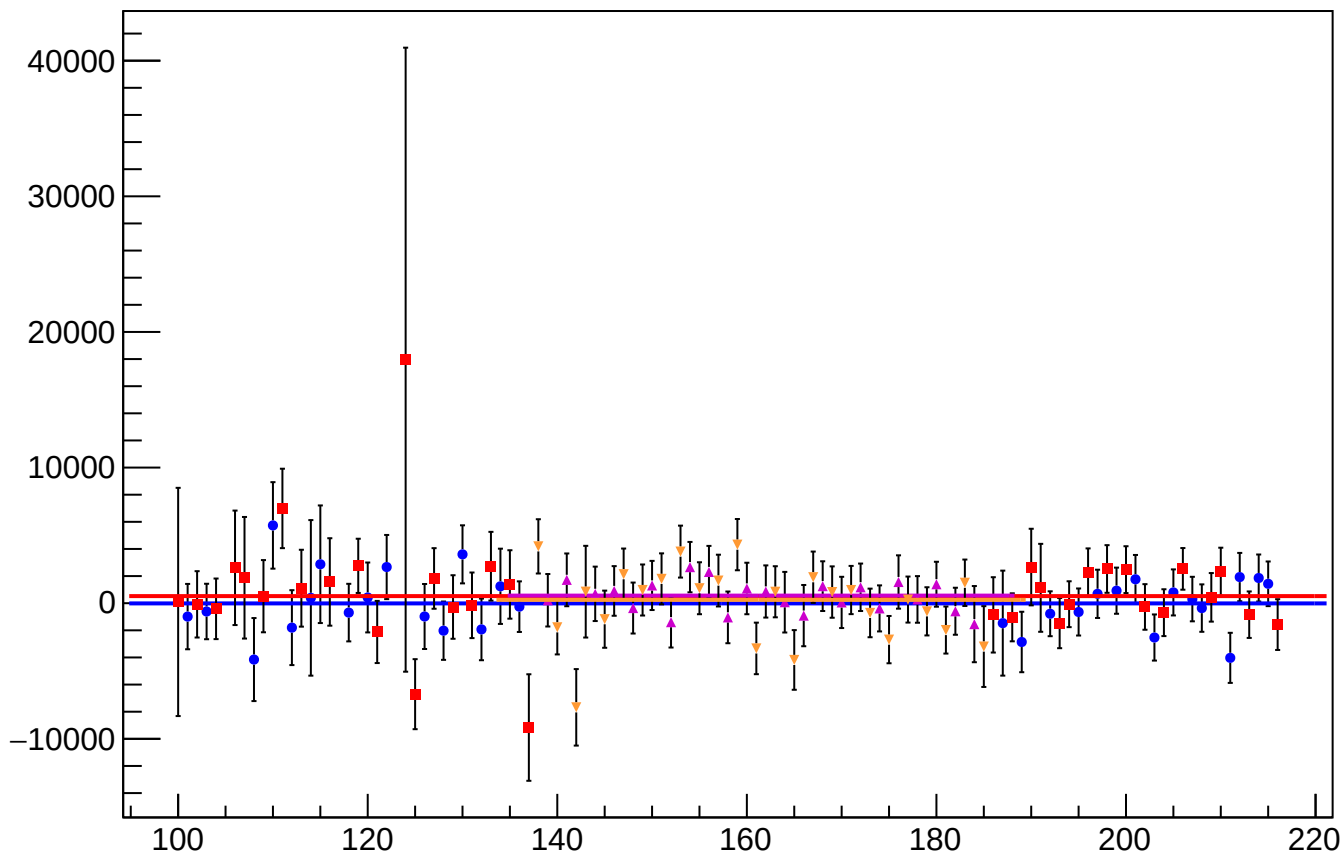
All: 153.918 $\pm$ 216.831  $\chi^2$ /NDF: 144.8/113

- sign 109.659 $\pm$ 300.370  $\chi^2$ /NDF: 76.2/57

# asym\_atl\_dd\_reg\_correction\_rms vs Slug



# cor\_asym\_atl\_dd\_mean vs Slug



Right In:  $-14.893 \pm 371.586$   $\chi^2/\text{NDF}$ : 26.4/30

Left Out:  $248.216 \pm 388.827$   $\chi^2/\text{NDF}$ : 39.6/24

Right Out:  $523.589 \pm 374.146$   $\chi^2/\text{NDF}$ : 35.9/34

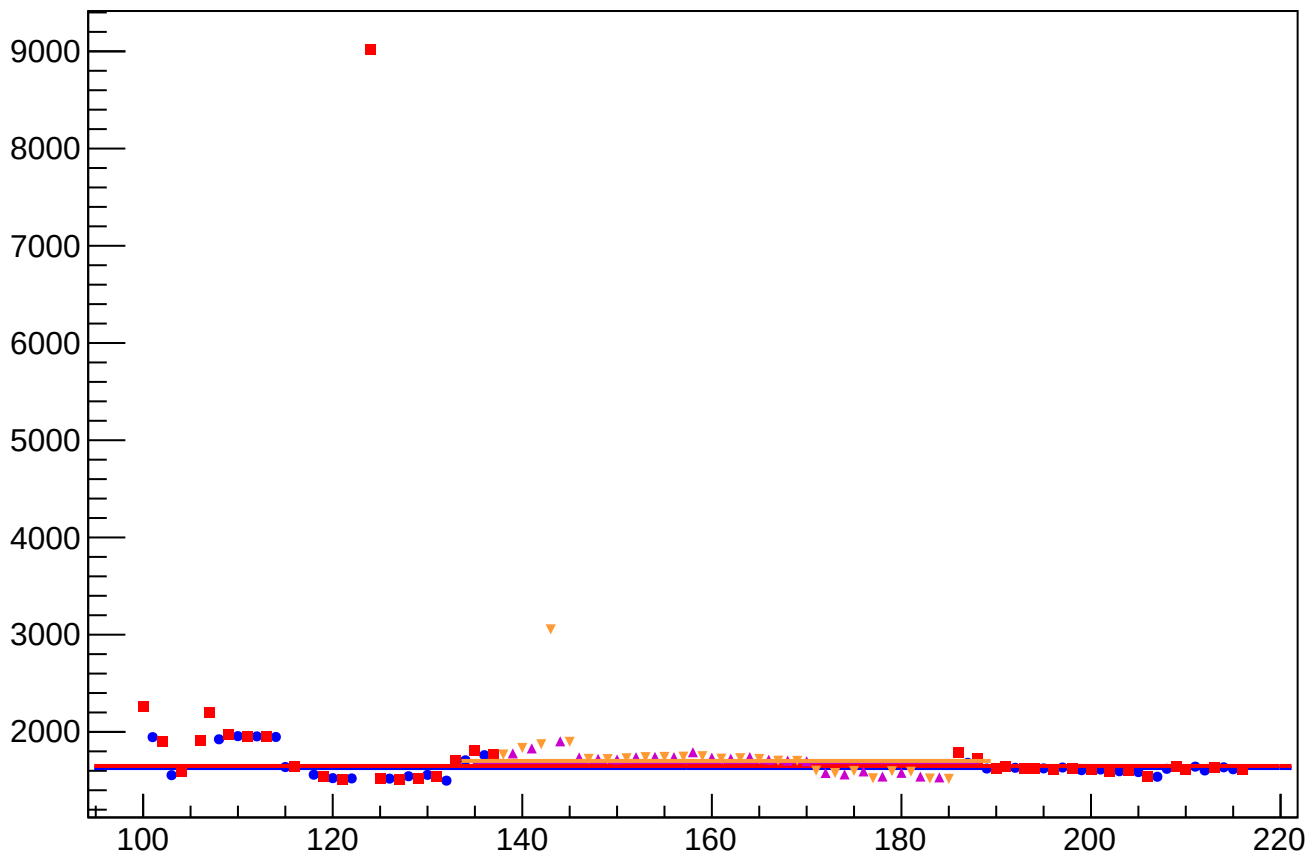
Left In:  $559.960 \pm 395.112$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $110.699 \pm 268.639$   $\chi^2/\text{NDF}$ : 66.2/55

All:  $323.328 \pm 191.019$   $\chi^2/\text{NDF}$ : 110.8/113

- sign  $540.784 \pm 271.671$   $\chi^2/\text{NDF}$ : 43.4/57

# cor\_asym\_atl\_dd\_rms vs Slug



Right In: 1628.220 $\pm$ 0.263  $\chi^2$ /NDF: 157803.7/30

Left Out: 1701.583 $\pm$ 0.275  $\chi^2$ /NDF: 452379.0/24

Right Out: 1649.721 $\pm$ 0.264  $\chi^2$ /NDF: 425980.6/34

Left In: 1689.259 $\pm$ 0.279  $\chi^2$ /NDF: 122317.9/22

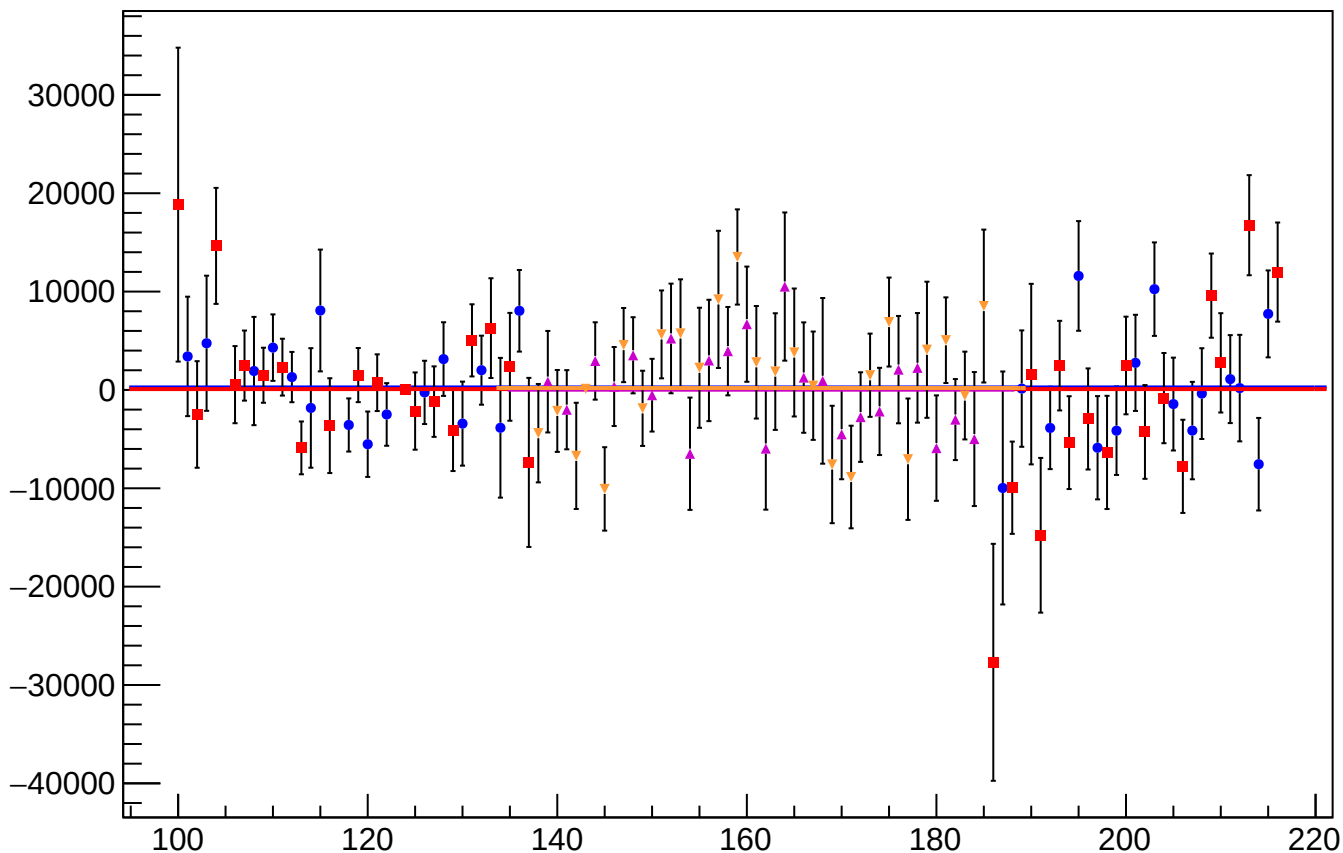
+ sign 1663.239 $\pm$ 0.190  $\chi^2$ /NDF: 647395.6/55

All: 1665.785 $\pm$ 0.135  $\chi^2$ /NDF: 1206630.6/11

- sign 1668.385 $\pm$ 0.192  $\chi^2$ /NDF: 558871.9/57



# asym\_atl\_dd\_cor\_correction\_mean vs Slug



Right In: 253.214 $\pm$ 768.632  $\chi^2$ /NDF: 34.8/30

Left Out: 193.916 $\pm$ 343.107  $\chi^2$ /NDF: 33.9/24

Right Out: 86.145 $\pm$ 306.860  $\chi^2$ /NDF: 62.7/34

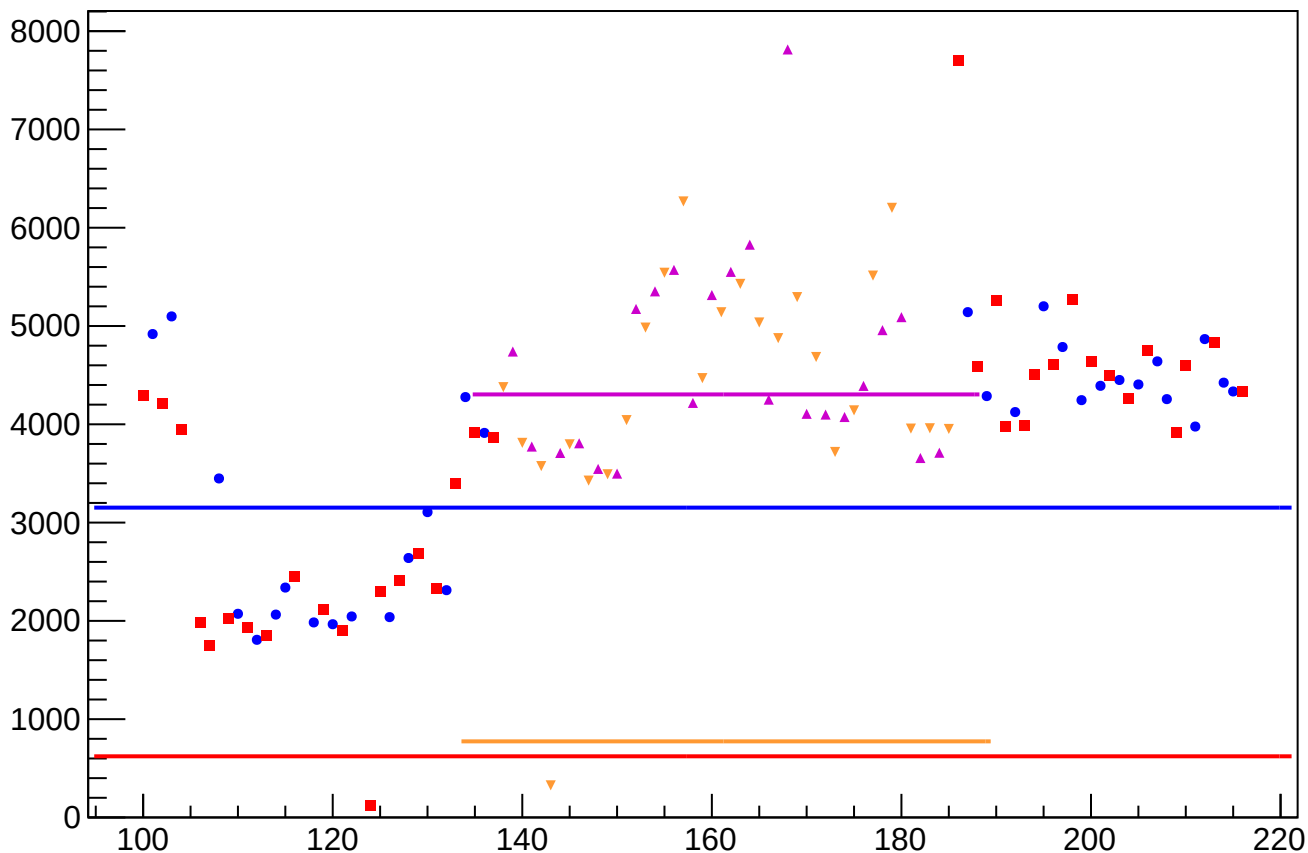
Left In: 28.766 $\pm$ 1025.480  $\chi^2$ /NDF: 13.3/22

+ sign 203.768 $\pm$ 313.309  $\chi^2$ /NDF: 68.7/55

All: 138.709 $\pm$ 214.383  $\chi^2$ /NDF: 144.7/113

- sign 81.430 $\pm$ 293.980  $\chi^2$ /NDF: 76.0/57

# asym\_atl\_dd\_cor\_correction\_rms vs Slug



Right In: 3152.220+/-0.544  $\chi^2/\text{NDF}$ : 4661928.5/30

Left Out: 774.143+/-0.243  $\chi^2/\text{NDF}$ : 28086455.1/24

Right Out: 622.141+/-0.217  $\chi^2/\text{NDF}$ : 30706693.8/34

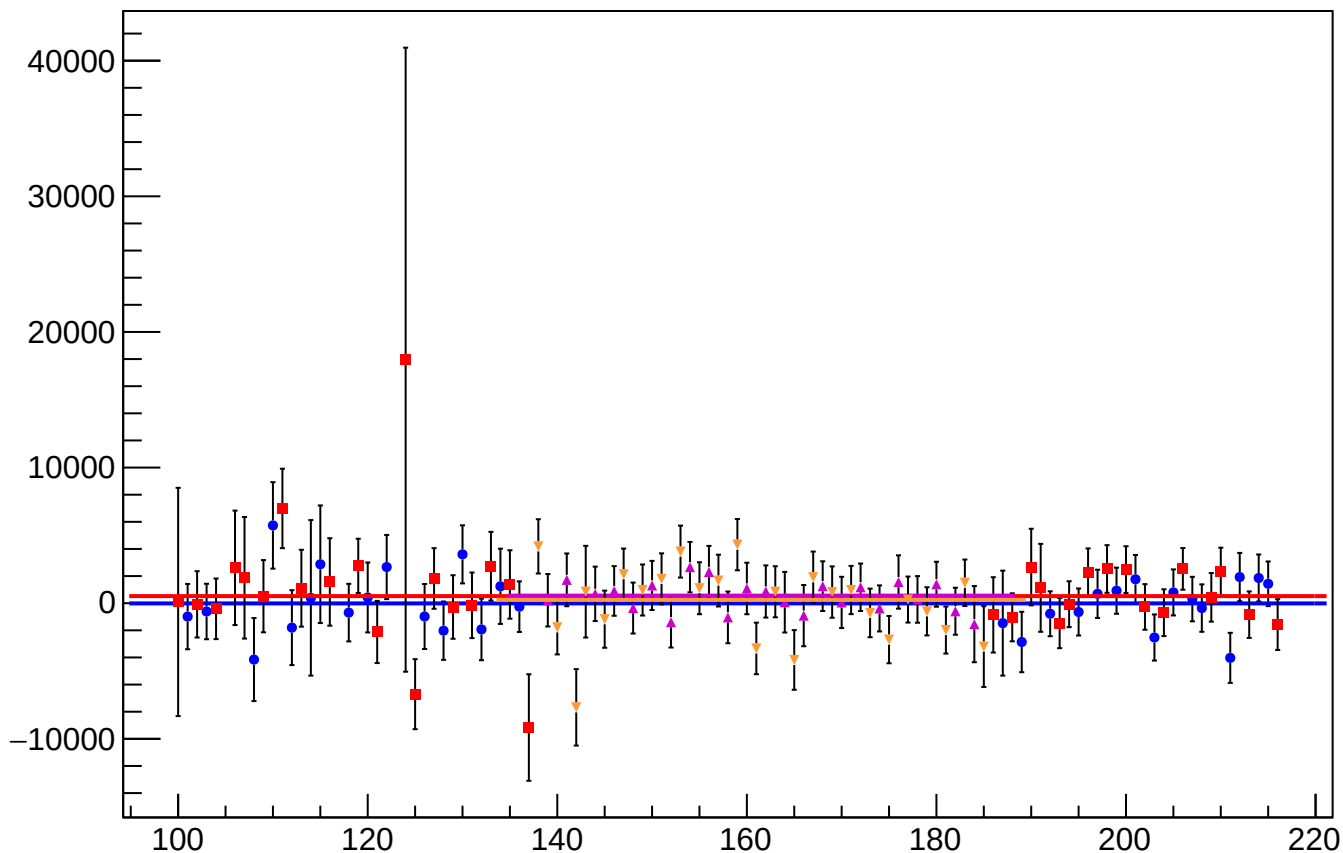
Left In: 4304.001+/-0.725  $\chi^2/\text{NDF}$ : 1216572.3/22

+ sign 1169.269+/-0.222  $\chi^2/\text{NDF}$ : 48711989.0/55

All: 1039.223+/-0.152  $\chi^2/\text{NDF}$ : 104946014.6

- sign 924.727+/-0.208  $\chi^2/\text{NDF}$ : 55586087.3/57

# eigen\_cor\_asym\_atl\_dd\_mean vs Slug



Right In:  $-14.893 \pm 371.586$   $\chi^2/\text{NDF}$ : 26.4/30

Left Out:  $248.216 \pm 388.827$   $\chi^2/\text{NDF}$ : 39.6/24

Right Out:  $523.589 \pm 374.146$   $\chi^2/\text{NDF}$ : 35.9/34

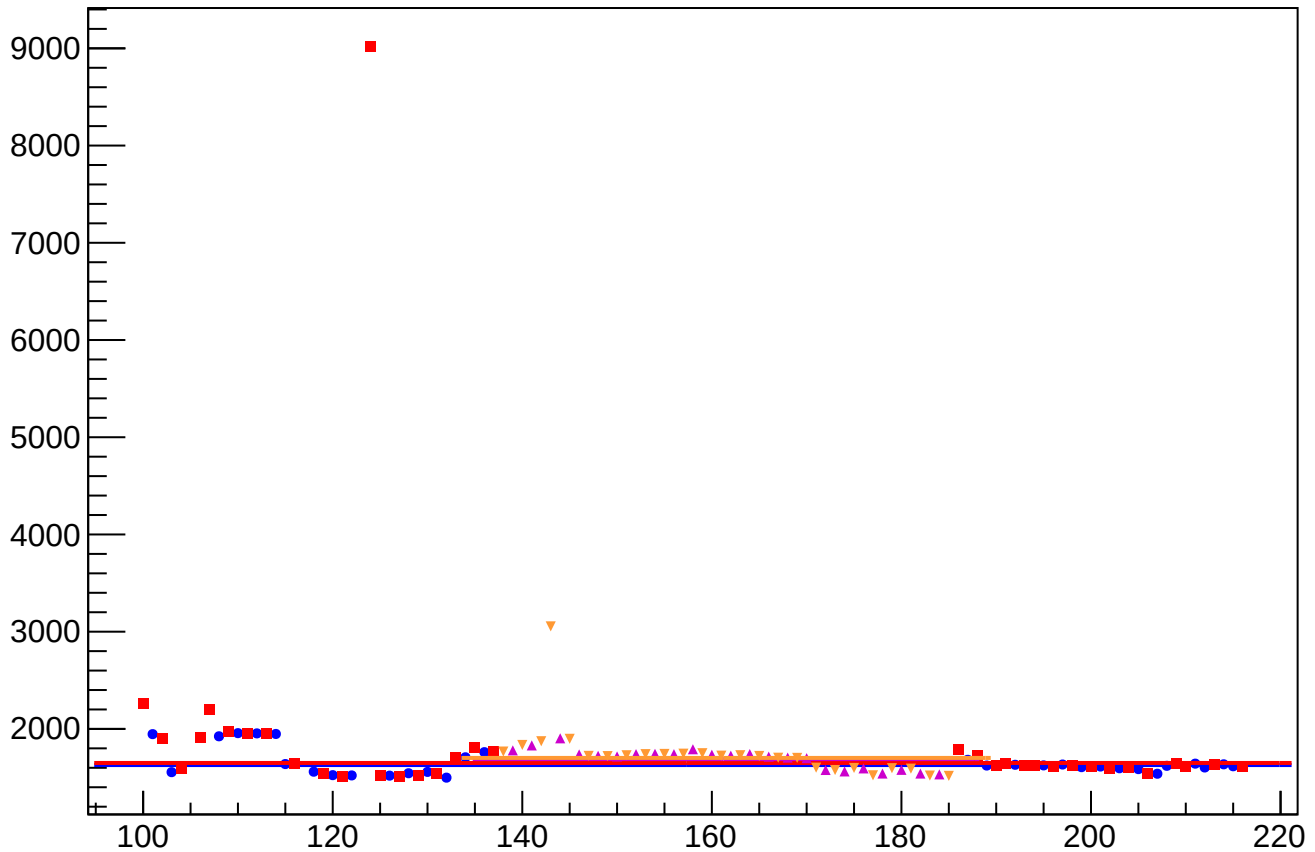
Left In:  $559.960 \pm 395.112$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $110.699 \pm 268.639$   $\chi^2/\text{NDF}$ : 66.2/55

All:  $323.328 \pm 191.019$   $\chi^2/\text{NDF}$ : 110.8/113

- sign  $540.784 \pm 271.671$   $\chi^2/\text{NDF}$ : 43.4/57

# eigen\_cor\_asym\_atl\_dd\_rms vs Slug



Right In: 1628.220+/-0.263  $\chi^2/\text{NDF}$ : 157803.7/30

Left Out: 1701.583+/-0.275  $\chi^2/\text{NDF}$ : 452379.0/24

Right Out: 1649.721+/-0.264  $\chi^2/\text{NDF}$ : 425980.6/34

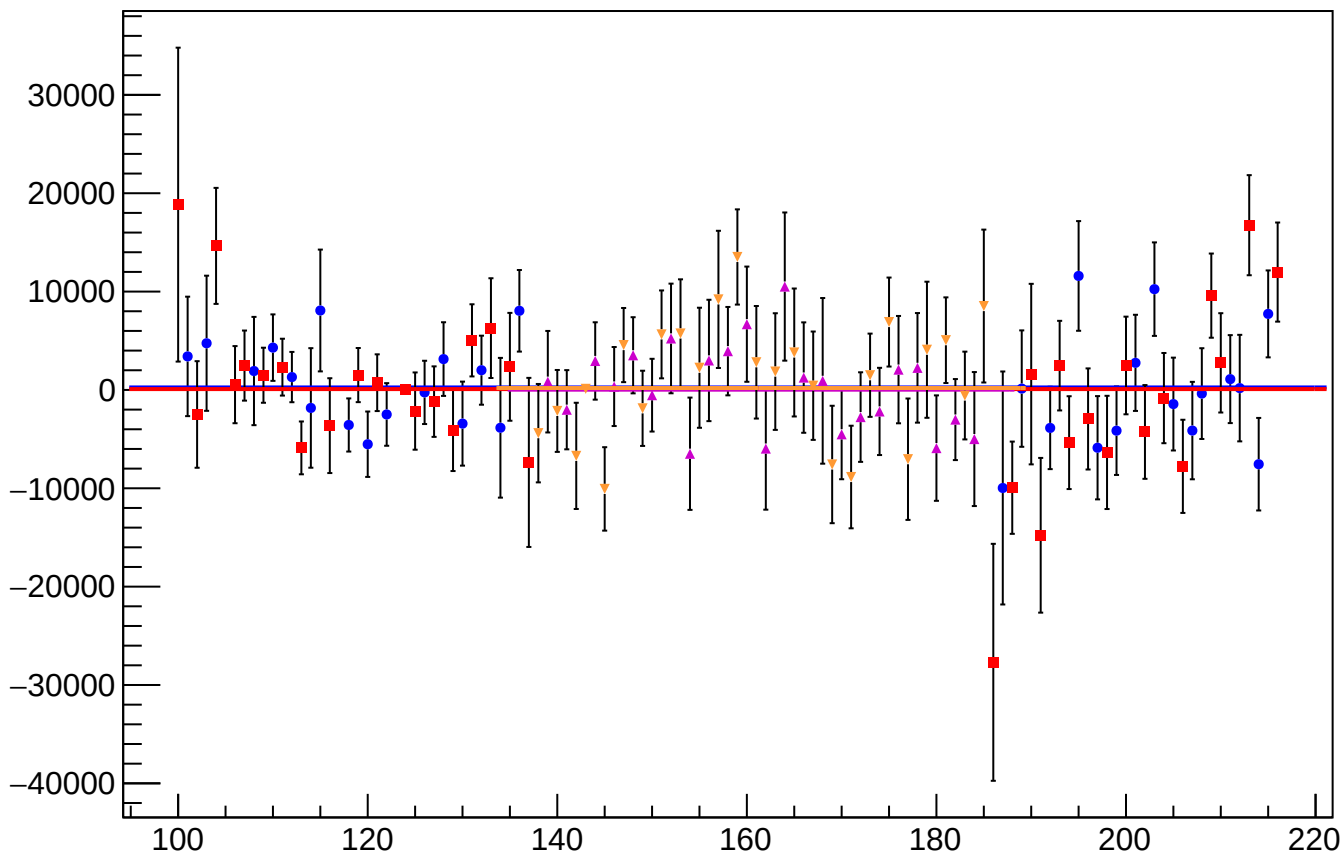
Left In: 1689.259+/-0.279  $\chi^2/\text{NDF}$ : 122317.9/22

+ sign 1663.239+/-0.190  $\chi^2/\text{NDF}$ : 647395.6/55

All: 1665.785+/-0.135  $\chi^2/\text{NDF}$ : 1206630.6/11

- sign 1668.385+/-0.192  $\chi^2/\text{NDF}$ : 558871.9/57

asym\_atl\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 253.214 $\pm$ 768.632  $\chi^2$ /NDF: 34.8/30

Left Out: 193.916 $\pm$ 343.107  $\chi^2$ /NDF:33.9/24

Right Out: 86.145 $\pm$ 306.860  $\chi^2$ /NDF: 62.7/34

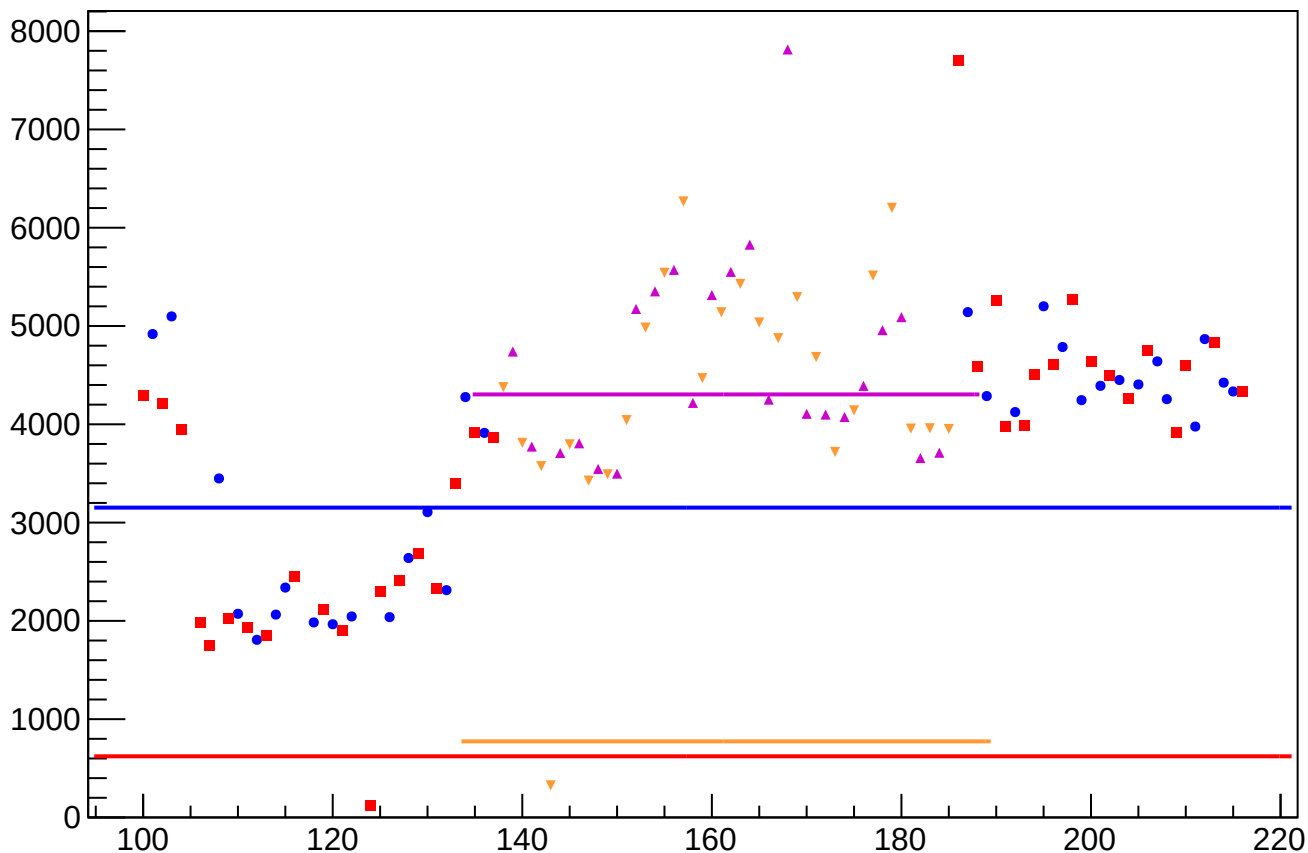
Left In: 28.766 $\pm$ 1025.480  $\chi^2$ /NDF:13.3/22

+ sign 203.768 $\pm$ 313.309  $\chi^2$ /NDF: 68.7/55

All: 138.709 $\pm$ 214.383  $\chi^2$ /NDF: 144.7/113

- sign 81.430 $\pm$ 293.980  $\chi^2$ /NDF: 76.0/57

asym\_atl\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 3152.220+/-0.544  $\chi^2/\text{NDF}$ : 4661928.5/30

Left Out: 774.143+/-0.243  $\chi^2/\text{NDF}$ : 28086455.1/24

Right Out: 622.141+/-0.217  $\chi^2/\text{NDF}$ : 30706693.8/34

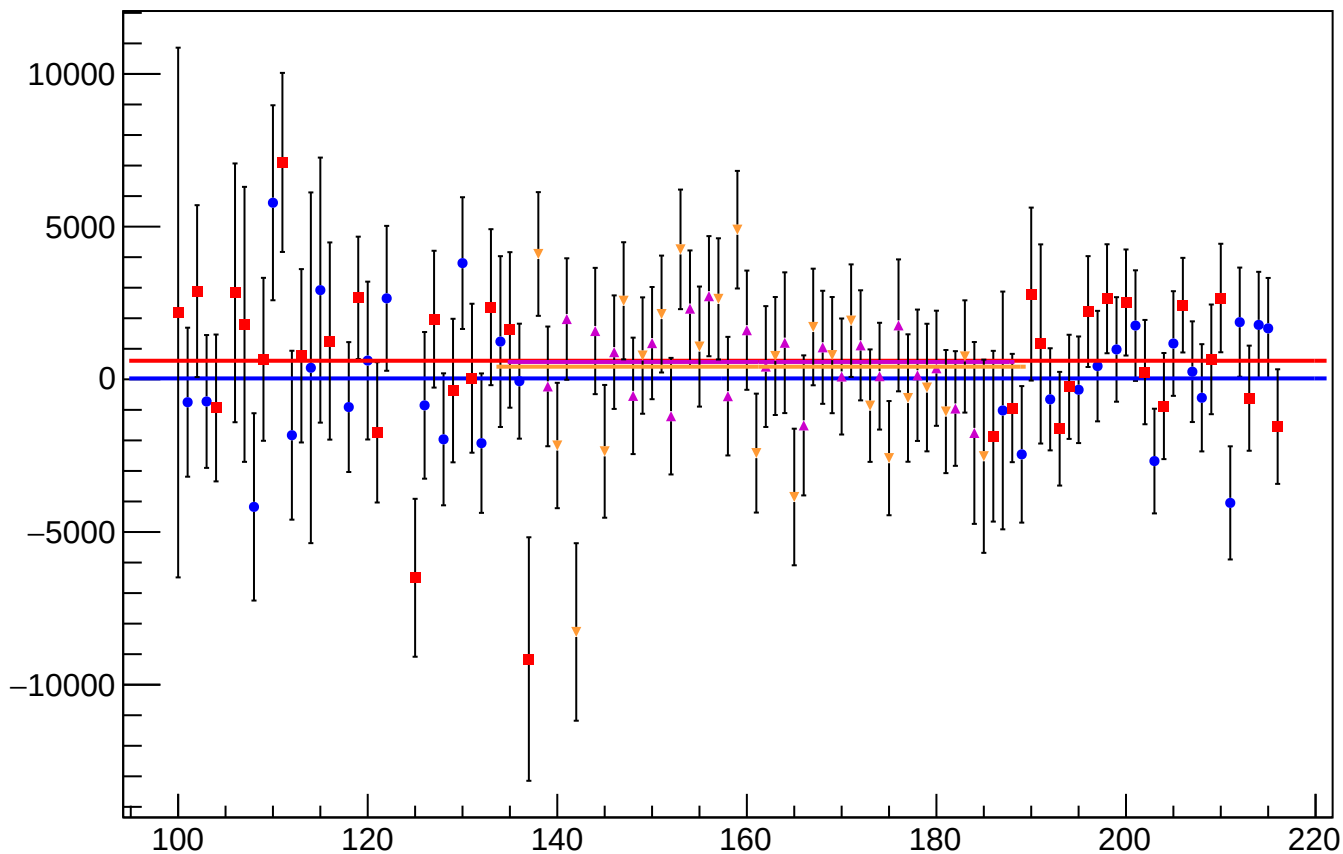
Left In: 4304.001+/-0.725  $\chi^2/\text{NDF}$ : 1216572.3/22

+ sign 1169.269+/-0.222  $\chi^2/\text{NDF}$ : 48711989.0/55

All: 1039.223+/-0.152  $\chi^2/\text{NDF}$ : 104946014.6

- sign 924.727+/-0.208  $\chi^2/\text{NDF}$ : 55586087.3/57

# dit\_asym\_atl\_dd\_mean vs Slug



Right In:  $30.004 \pm 374.511$   $\chi^2/\text{NDF}$ : 26.6/30

Left Out:  $413.309 \pm 410.536$   $\chi^2/\text{NDF}$ : 40.0/23

Right Out:  $608.233 \pm 378.308$   $\chi^2/\text{NDF}$ : 35.7/33

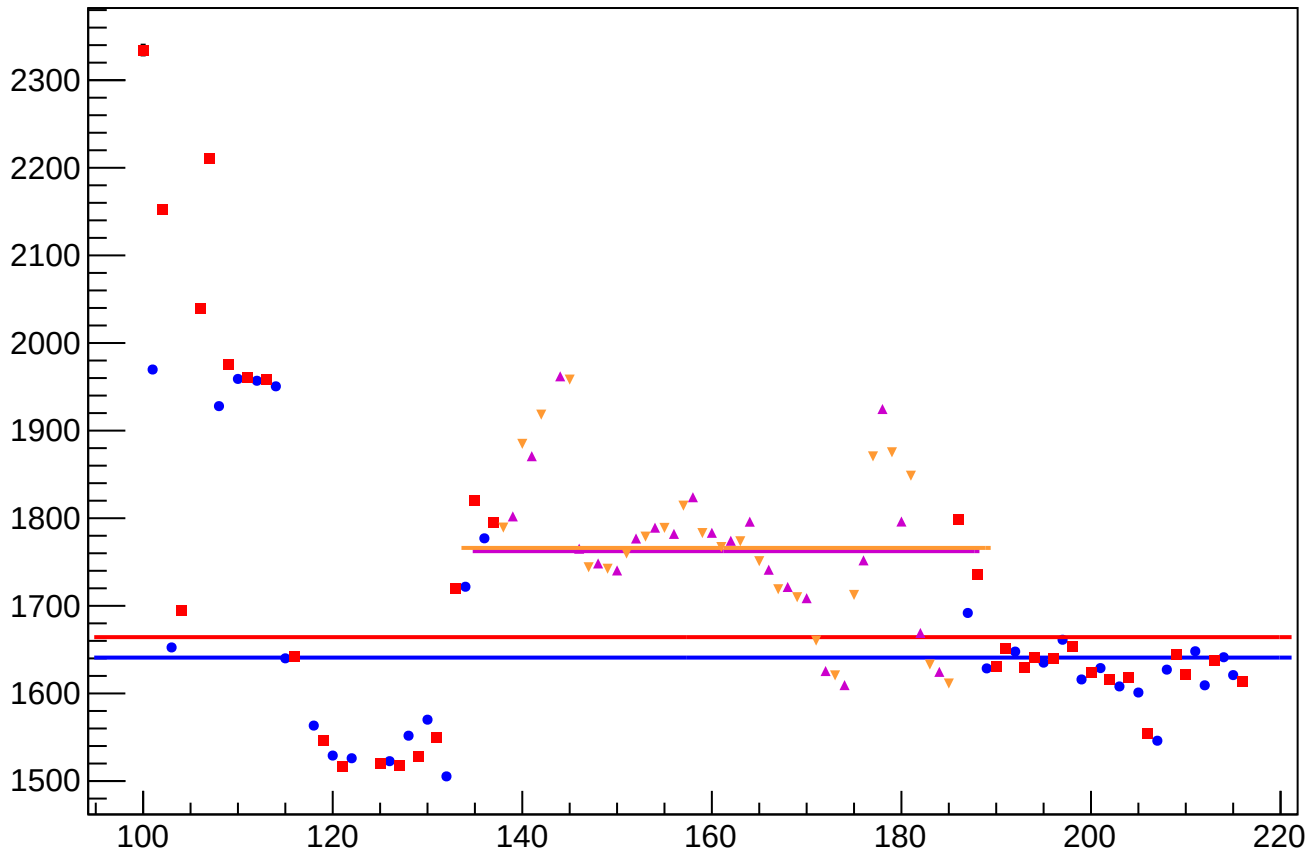
Left In:  $568.823 \pm 412.052$   $\chi^2/\text{NDF}$ : 7.7/22

+ sign  $204.105 \pm 276.680$   $\chi^2/\text{NDF}$ : 67.1/54

All:  $395.772 \pm 196.343$   $\chi^2/\text{NDF}$ : 111.5/111

- sign  $590.207 \pm 278.671$   $\chi^2/\text{NDF}$ : 43.5/56

# dit\_asym\_atl\_dd\_rms vs Slug



Right In:  $1640.933 \pm 0.265$   $\chi^2/\text{NDF}$ : 157101.8/30

Left Out:  $1766.115 \pm 0.290$   $\chi^2/\text{NDF}$ : 83252.4/23

+ sign  $1697.792 \pm 0.196$   $\chi^2/\text{NDF}$ : 341848.4/54

Right Out:  $1664.270 \pm 0.267$   $\chi^2/\text{NDF}$ : 268607.7/33

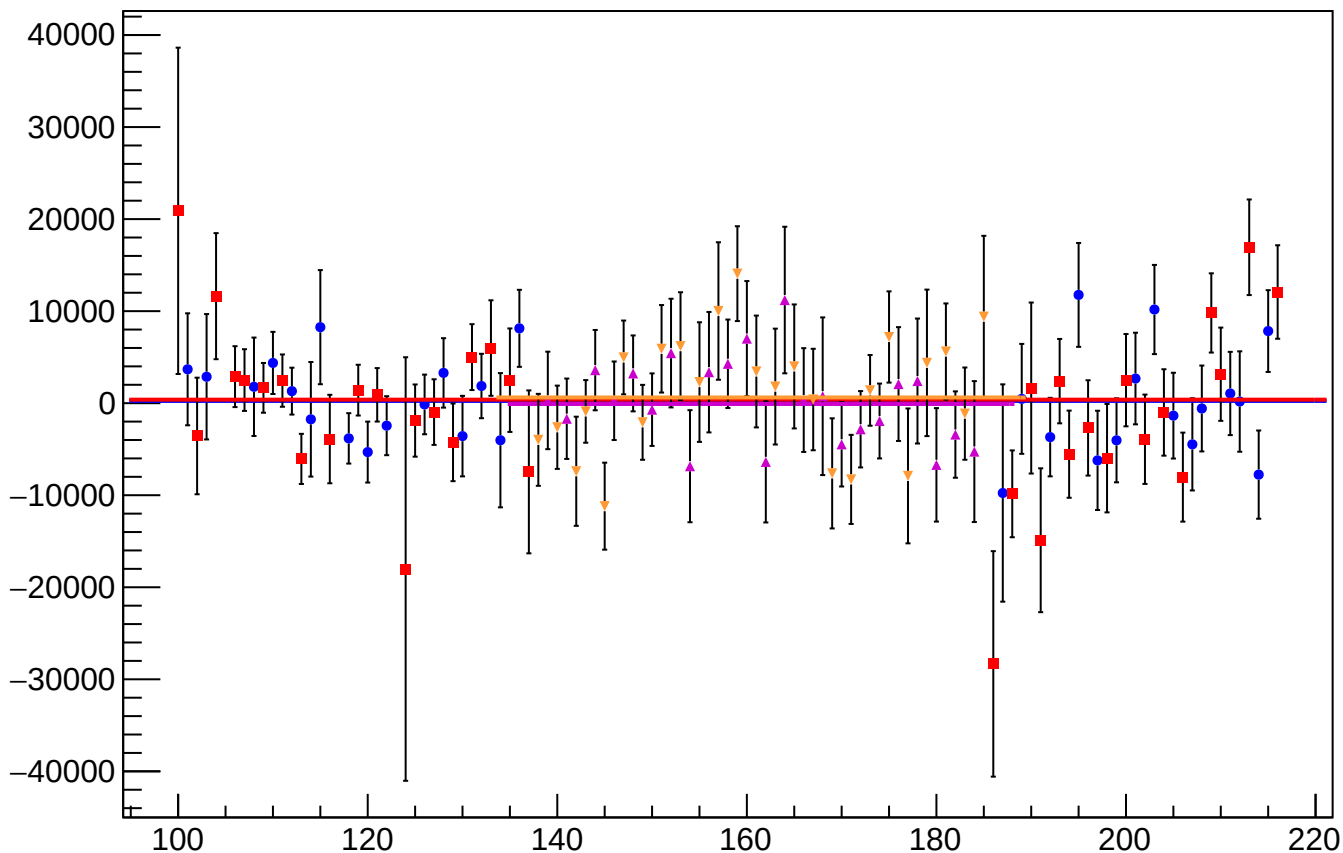
All:  $1703.416 \pm 0.139$   $\chi^2/\text{NDF}$ : 753811.4/111

Left In:  $1762.405 \pm 0.291$   $\chi^2/\text{NDF}$ : 80090.6/22

- sign  $1709.117 \pm 0.197$   $\chi^2/\text{NDF}$ : 410298.9/56



# asym\_atl\_dd\_dit\_correction\_mean vs Slug



Right In: 247.035 $\pm$ 773.823  $\chi^2$ /NDF: 34.5/30

Left Out: 619.658 $\pm$ 1034.658  $\chi^2$ /NDF:33.1/24

Right Out: 382.005 $\pm$ 733.875  $\chi^2$ /NDF: 60.7/34

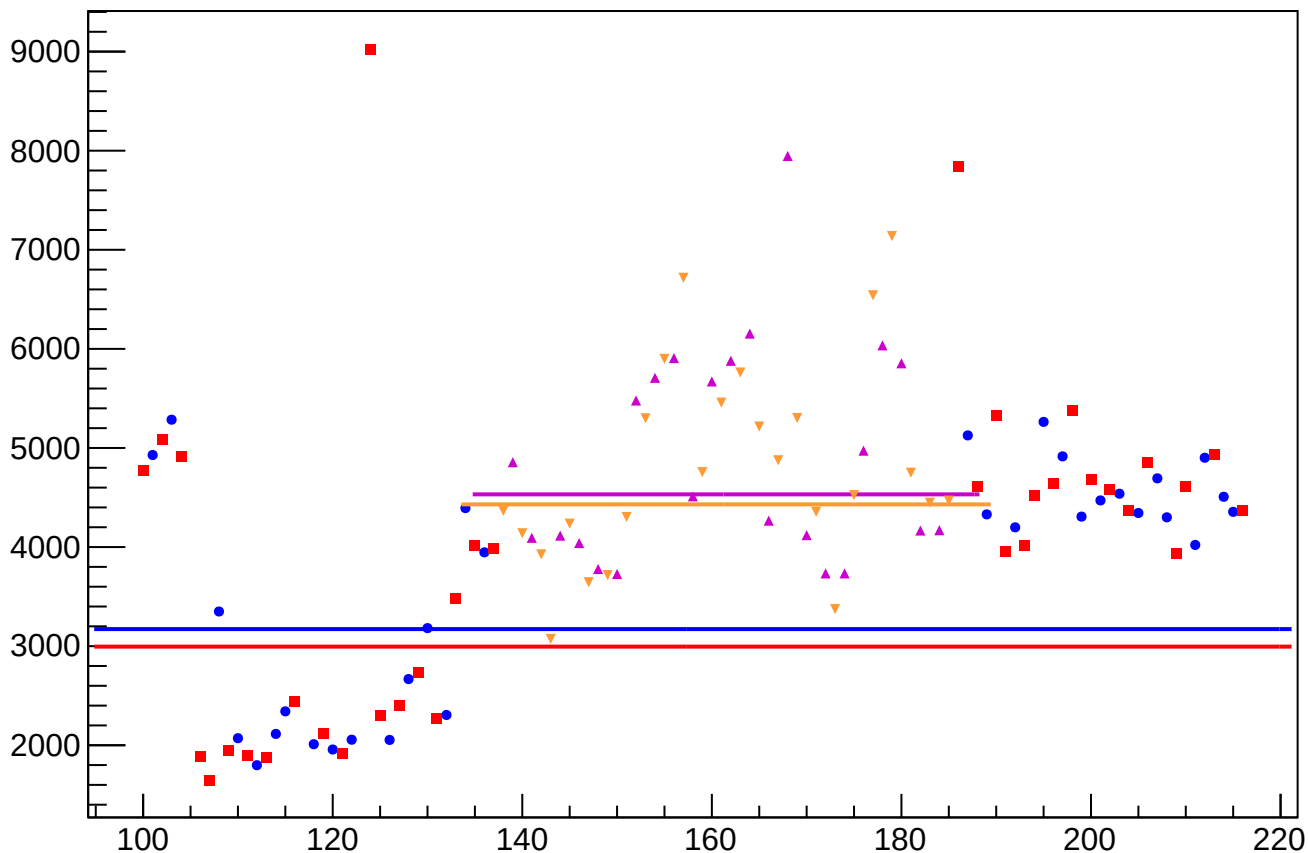
Left In: -85.511 $\pm$ 1082.508  $\chi^2$ /NDF:12.9/22

+ sign 380.699 $\pm$ 619.682  $\chi^2$ /NDF: 67.7/55

All: 306.291 $\pm$ 433.789  $\chi^2$ /NDF: 141.5/113

- sign 234.793 $\pm$ 607.442  $\chi^2$ /NDF: 73.8/57

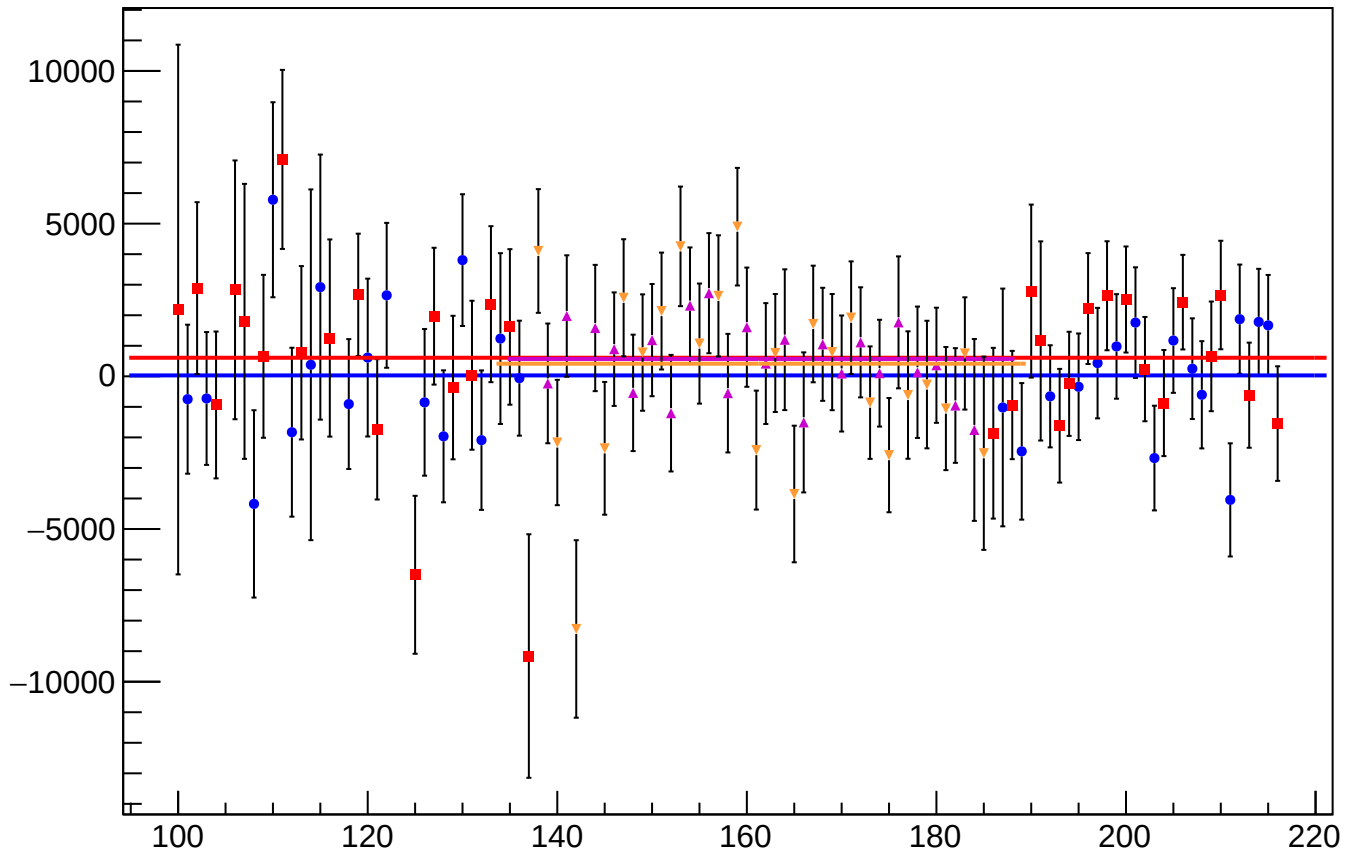
# asym\_atl\_dd\_dit\_correction\_rms vs Slug



Right In: 3172.255 $\pm$ 0.547  $\chi^2$ /NDF: 4787281.0/30  
 Left Out: 4430.796 $\pm$ 0.732  $\chi^2$ /NDF:1613272.4/24  
 Right Out: 2995.381 $\pm$ 0.519  $\chi^2$ /NDF: 6007638.9/34  
 Left In: 4531.944 $\pm$ 0.765  $\chi^2$ /NDF:1376472.2/22

+ sign 3623.707 $\pm$ 0.438  $\chi^2$ /NDF: 8298246.7/55  
 All: 3550.020 $\pm$ 0.307  $\chi^2$ /NDF: 18498604.6/100  
 - sign 3479.216 $\pm$ 0.430  $\chi^2$ /NDF: 10144906.0/57

# eigen\_dit\_asym\_atl\_dd\_mean vs Slug



Right In:  $30.002 \pm 374.511$   $\chi^2/\text{NDF}$ : 26.6/30

Left Out:  $413.311 \pm 410.536$   $\chi^2/\text{NDF}$ : 40.0/23

Right Out:  $608.231 \pm 378.308$   $\chi^2/\text{NDF}$ : 35.7/33

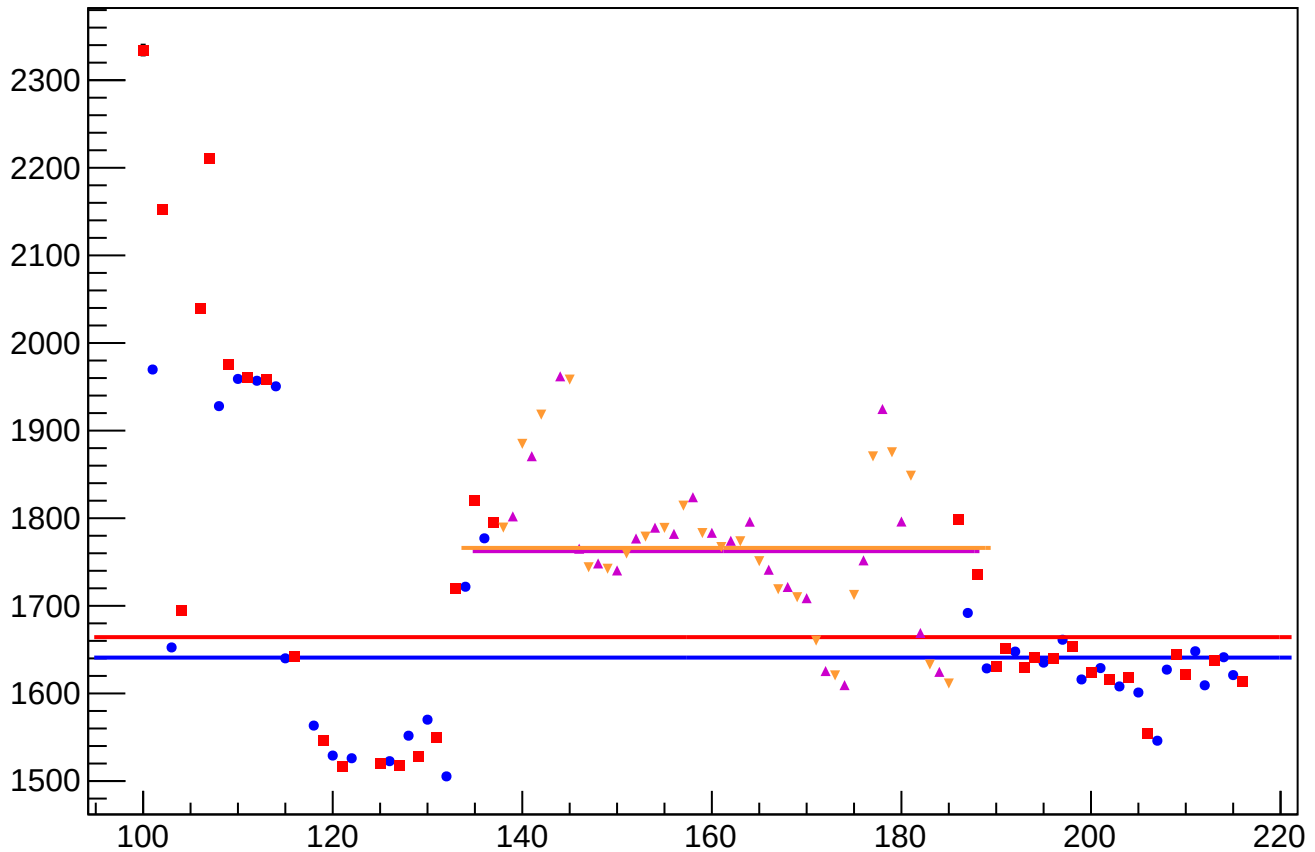
Left In:  $568.821 \pm 412.052$   $\chi^2/\text{NDF}$ : 7.7/22

+ sign  $204.104 \pm 276.680$   $\chi^2/\text{NDF}$ : 67.1/54

All:  $395.771 \pm 196.343$   $\chi^2/\text{NDF}$ : 111.5/111

- sign  $590.206 \pm 278.671$   $\chi^2/\text{NDF}$ : 43.5/56

# eigen\_dit\_asym\_atl\_dd\_rms vs Slug



Right In:  $1640.933 \pm 0.265$   $\chi^2/\text{NDF}$ : 157101.8/30

Left Out:  $1766.116 \pm 0.290$   $\chi^2/\text{NDF}$ : 83255.3/23

Right Out:  $1664.270 \pm 0.267$   $\chi^2/\text{NDF}$ : 268606.4/33

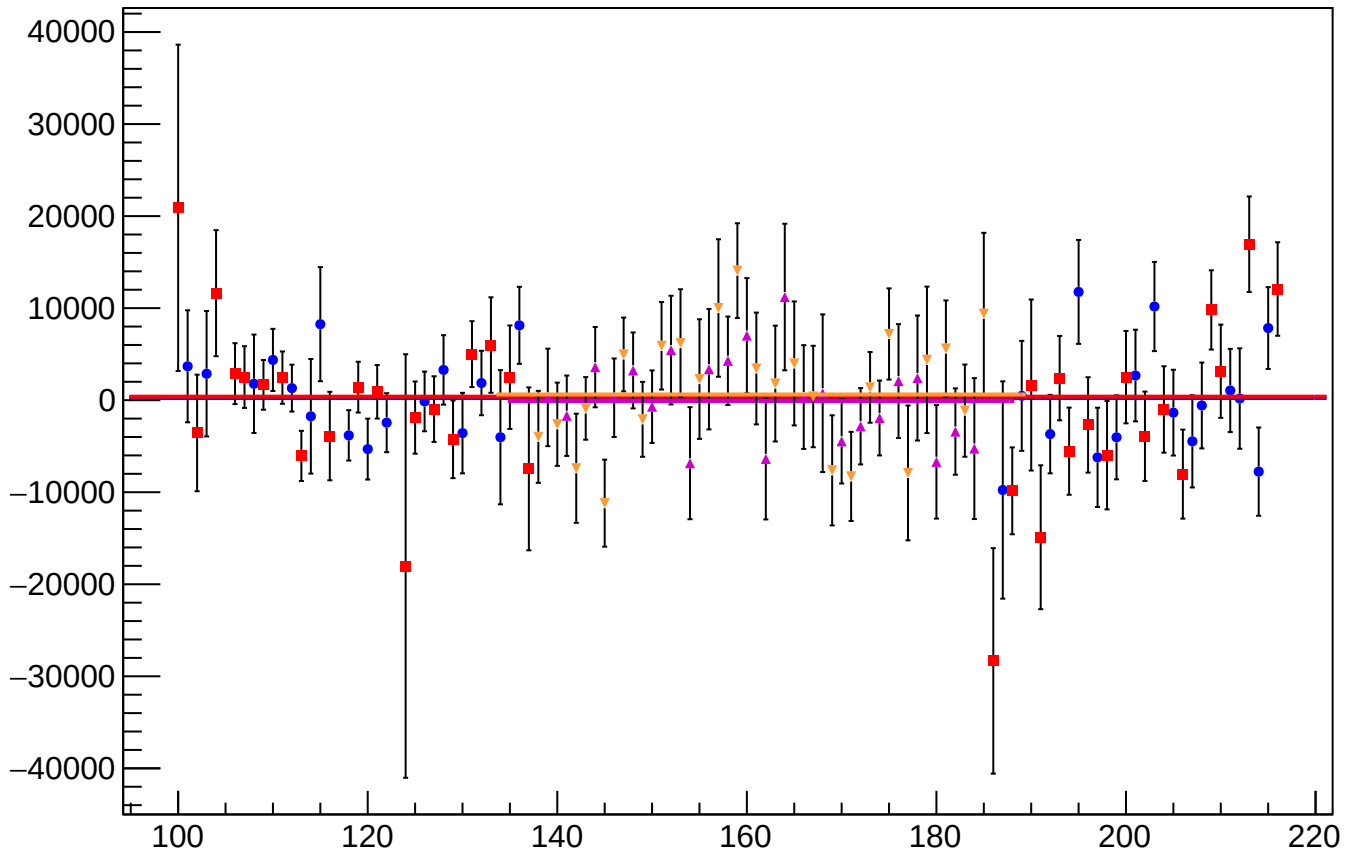
Left In:  $1762.406 \pm 0.291$   $\chi^2/\text{NDF}$ : 80093.2/22

+ sign  $1697.792 \pm 0.196$   $\chi^2/\text{NDF}$ : 341852.7/54

All:  $1703.417 \pm 0.139$   $\chi^2/\text{NDF}$ : 753818.2/111

- sign  $1709.117 \pm 0.197$   $\chi^2/\text{NDF}$ : 410301.2/56

# asym\_atl\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 247.030 $\pm$ 773.822  $\chi^2$ /NDF: 34.5/30

Left Out: 619.663 $\pm$ 1034.659  $\chi^2$ /NDF:33.1/24

Right Out: 382.008 $\pm$ 733.873  $\chi^2$ /NDF: 60.7/34

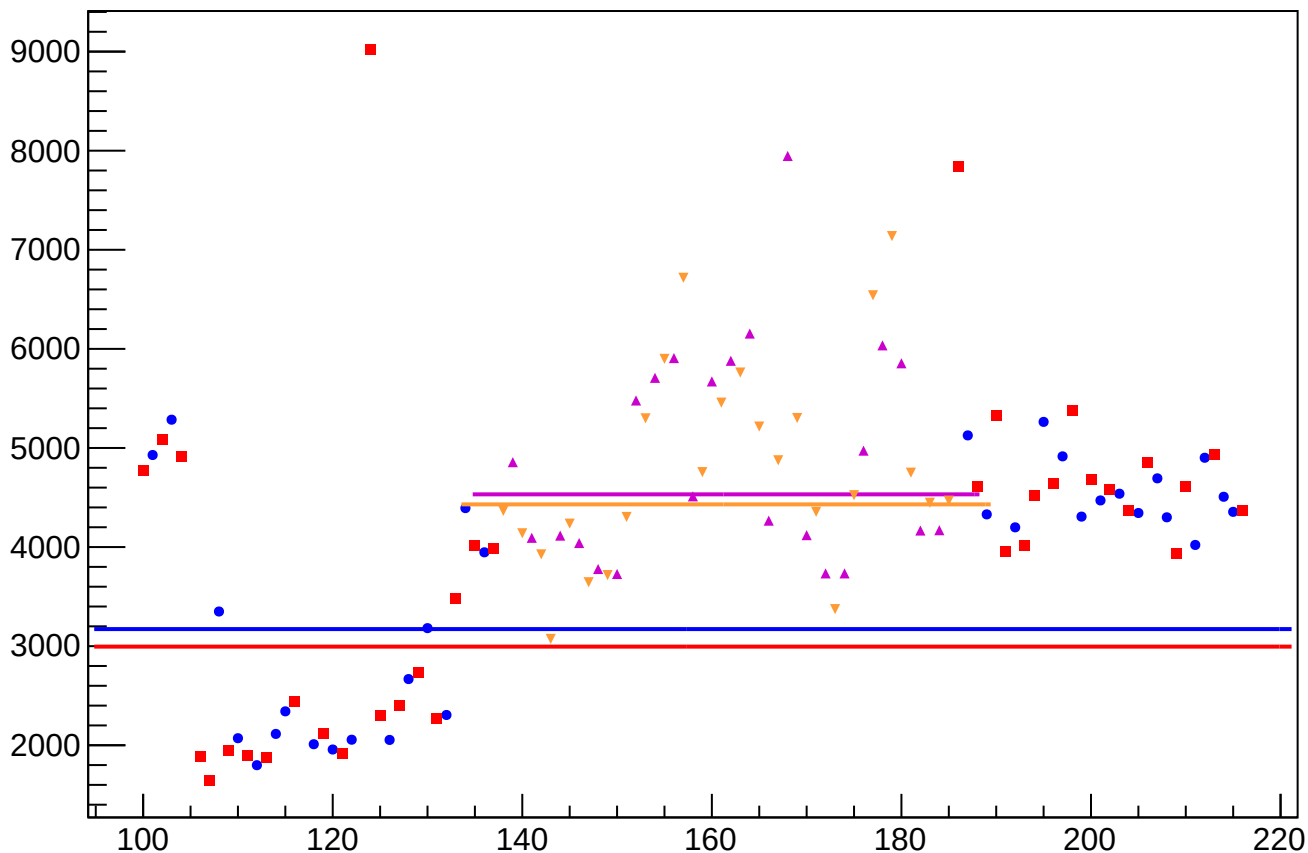
Left In: -85.511 $\pm$ 1082.509  $\chi^2$ /NDF:12.9/22

+ sign 380.696 $\pm$ 619.681  $\chi^2$ /NDF: 67.7/55

All: 306.291 $\pm$ 433.789  $\chi^2$ /NDF: 141.5/113

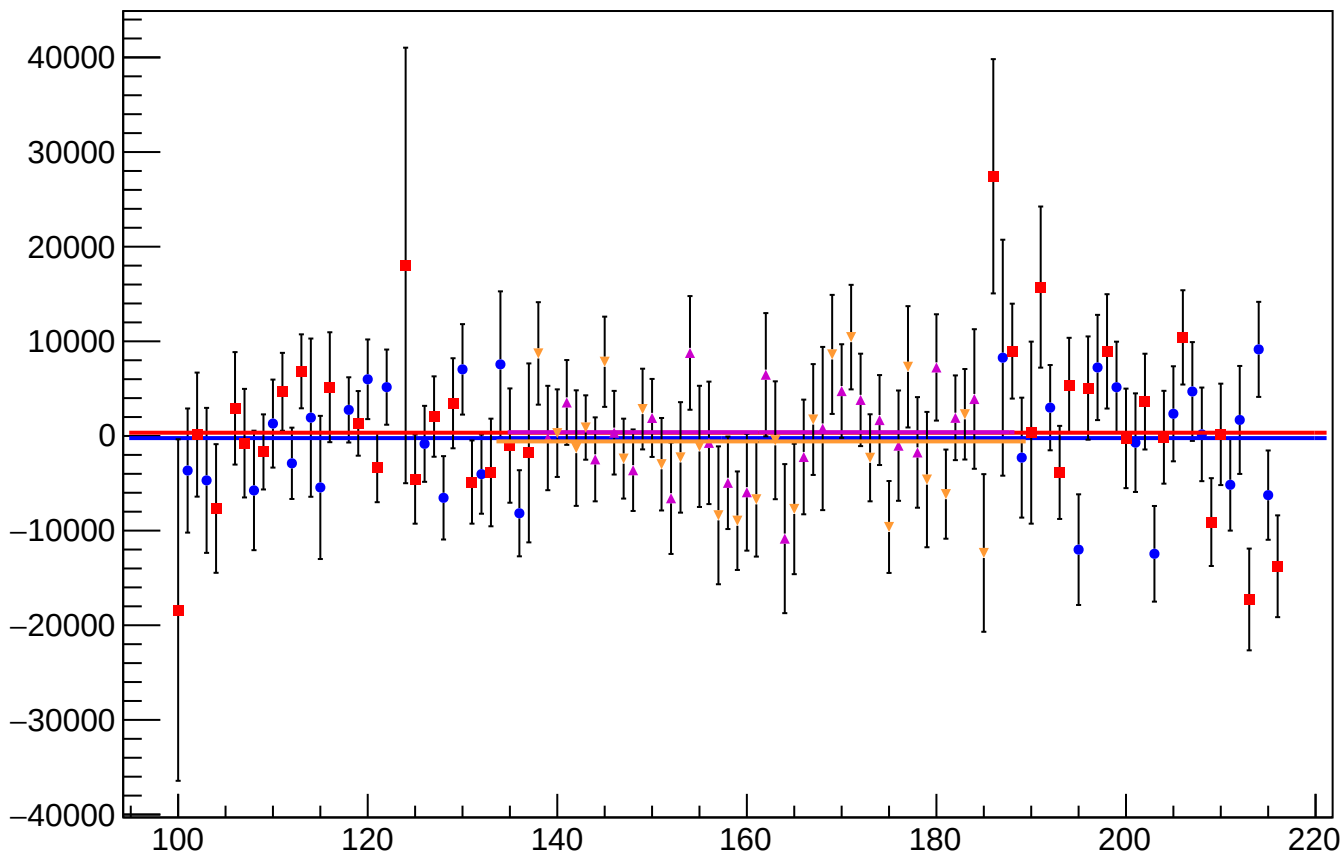
- sign 234.796 $\pm$ 607.441  $\chi^2$ /NDF: 73.8/57

asym\_atl\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 3172.246 $\pm$ 0.547  $\chi^2$ /NDF: 4787360.8/30  
 Left Out: 4430.803 $\pm$ 0.732  $\chi^2$ /NDF:1613274.9/24  
 Right Out: 2995.372 $\pm$ 0.519  $\chi^2$ /NDF: 6007702.6/34  
 Left In: 4531.951 $\pm$ 0.765  $\chi^2$ /NDF:1376473.4/22  
 + sign 3623.701 $\pm$ 0.438  $\chi^2$ /NDF: 8298375.0/55  
 All: 3550.015 $\pm$ 0.307  $\chi^2$ /NDF: 18498852.9/100  
 - sign 3479.210 $\pm$ 0.430  $\chi^2$ /NDF: 10145025.2/57

# asym\_atl\_dd\_mean vs Slug



Right In: -226.202 $\pm$ 900.149  $\chi^2$ /NDF: 38.1/30

Left Out: -573.122 $\pm$ 1054.836  $\chi^2$ /NDF: 28.8/24

Right Out: 344.140 $\pm$ 886.783  $\chi^2$ /NDF: 54.7/34

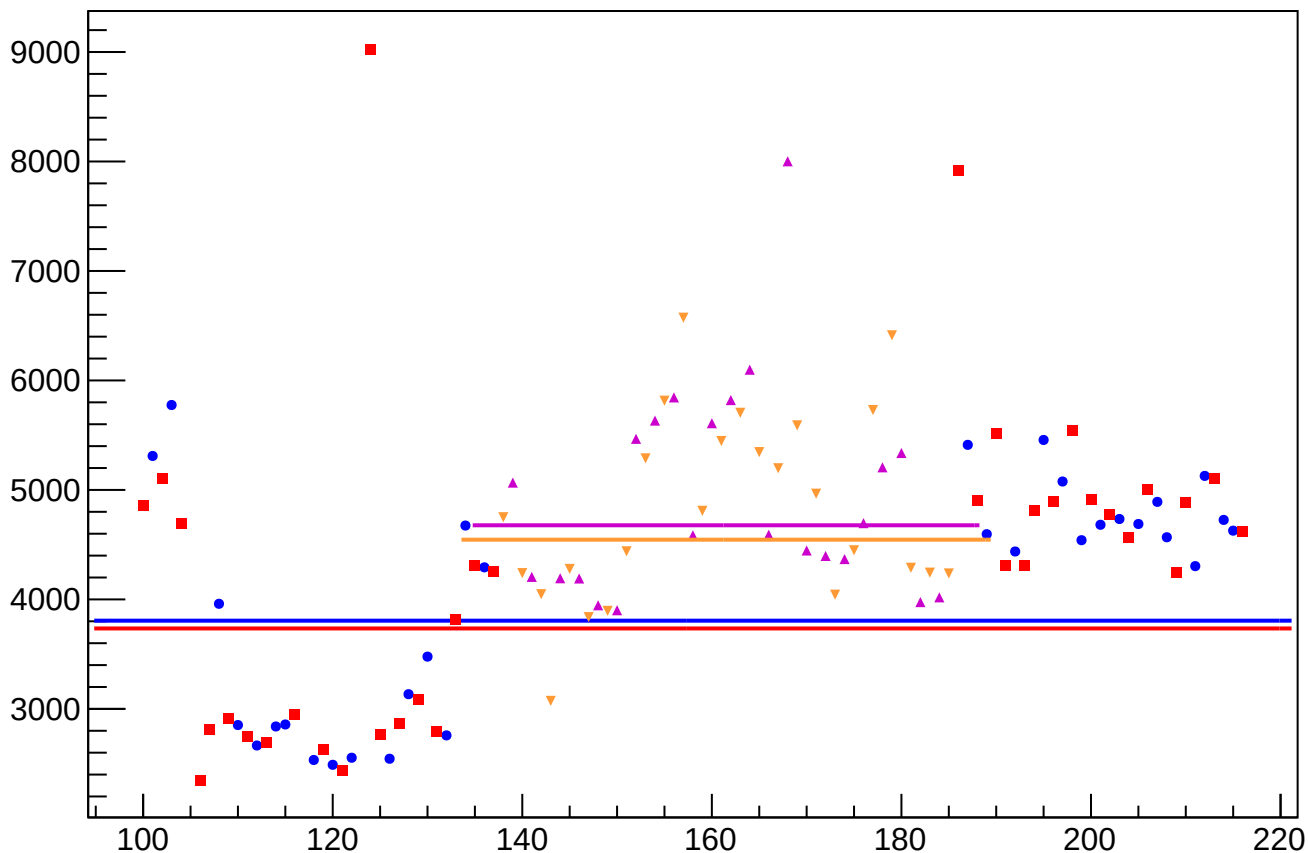
Left In: 398.404 $\pm$ 1109.490  $\chi^2$ /NDF: 14.0/22

+ sign -372.383 $\pm$ 684.724  $\chi^2$ /NDF: 66.9/55

All: -7.820 $\pm$ 486.971  $\chi^2$ /NDF: 136.2/113

- sign 365.293 $\pm$ 692.708  $\chi^2$ /NDF: 68.7/57

asym\_atl\_dd\_rms vs Slug



Right In: 3805.813 $\pm$ 0.637  $\chi^2$ /NDF: 2648974.2/30

Left Out: 4545.493 $\pm$ 0.746  $\chi^2$ /NDF: 1258528.5/24

Right Out: 3734.659 $\pm$ 0.622  $\chi^2$ /NDF: 3114505.8/34

Left In: 4677.049 $\pm$ 0.785  $\chi^2$ /NDF: 959885.7/22

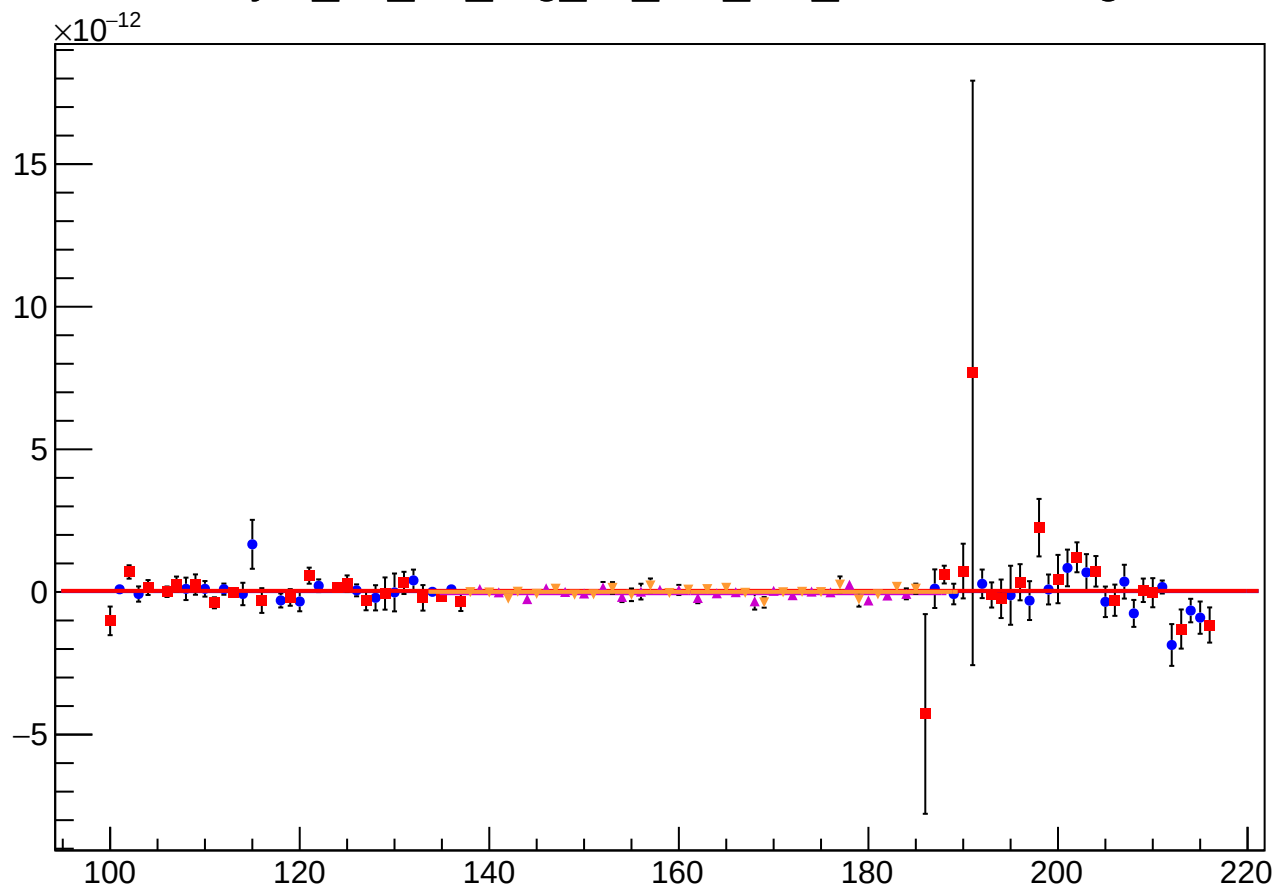
+ sign 4117.490 $\pm$ 0.484  $\chi^2$ /NDF: 4476552.6/55

All: 4108.008 $\pm$ 0.343  $\chi^2$ /NDF: 9437708.0/11

- sign 4098.400 $\pm$ 0.487  $\chi^2$ /NDF: 4960383.2/57



# asym\_atl\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.4/34

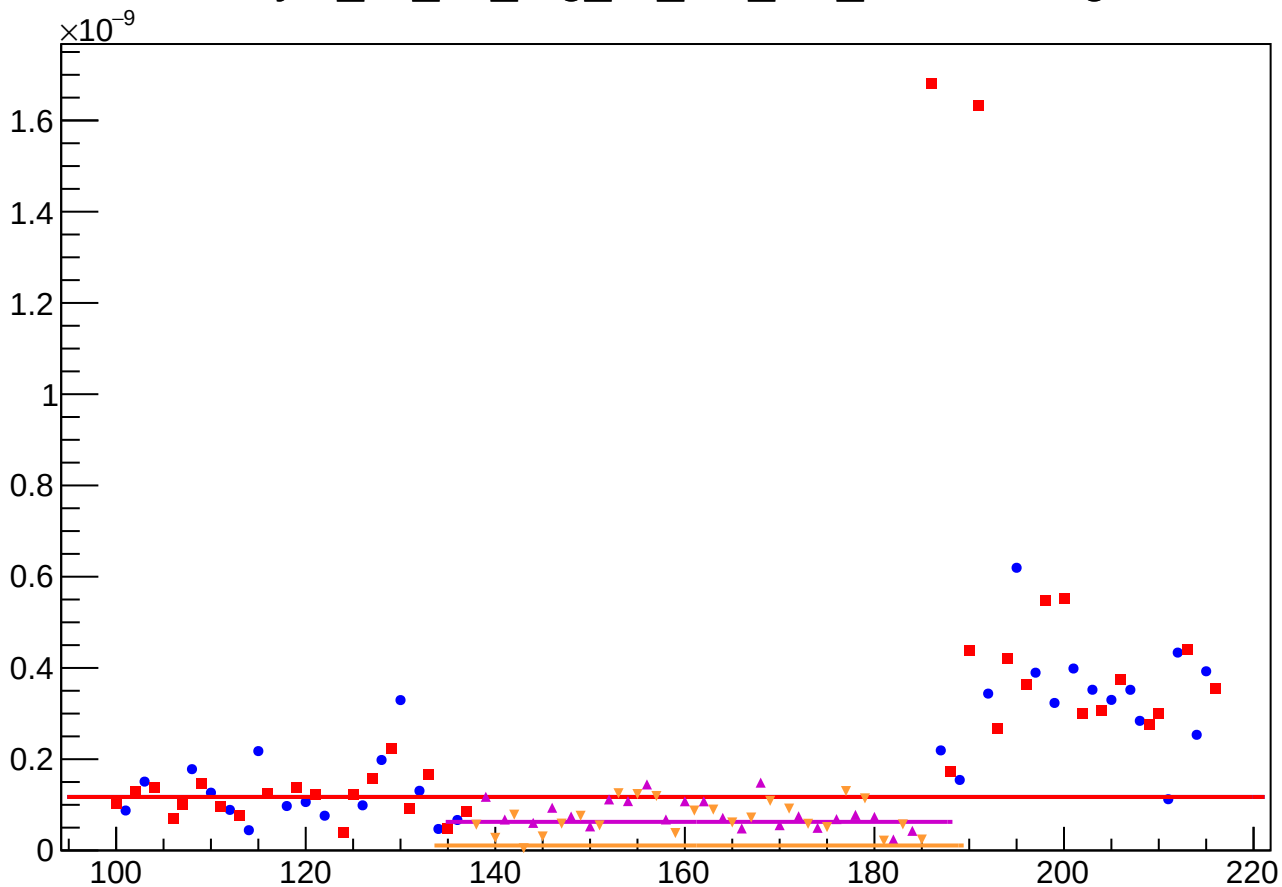
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.3/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 127.9/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 79.0/57

# asym\_atl\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5616716.1/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9705530.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6346948.9/34

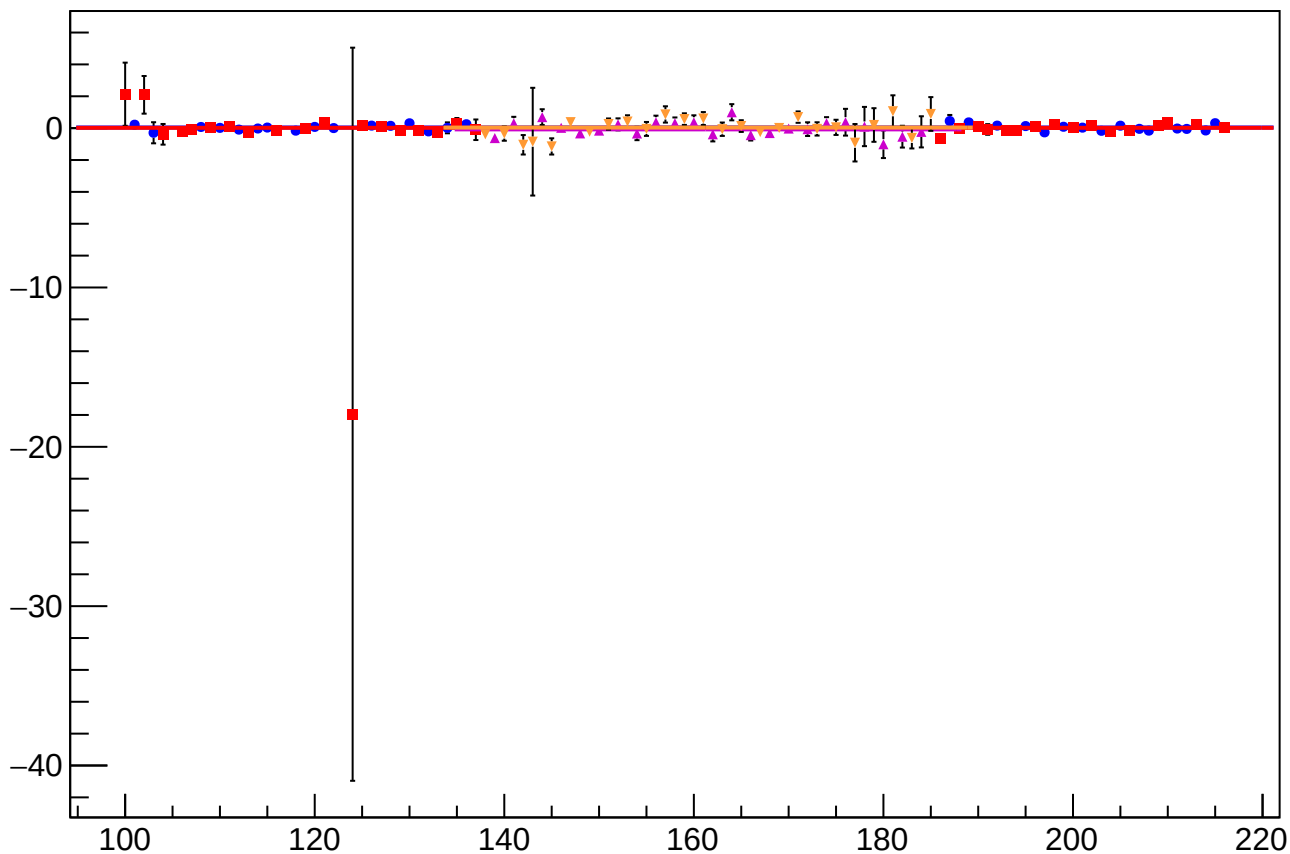
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2092071.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23703794.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 45709008.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10202576.1/57

# asym\_atl\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.040 \pm 0.031$   $\chi^2/\text{NDF}: 27.2/30$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}: 43.2/34$

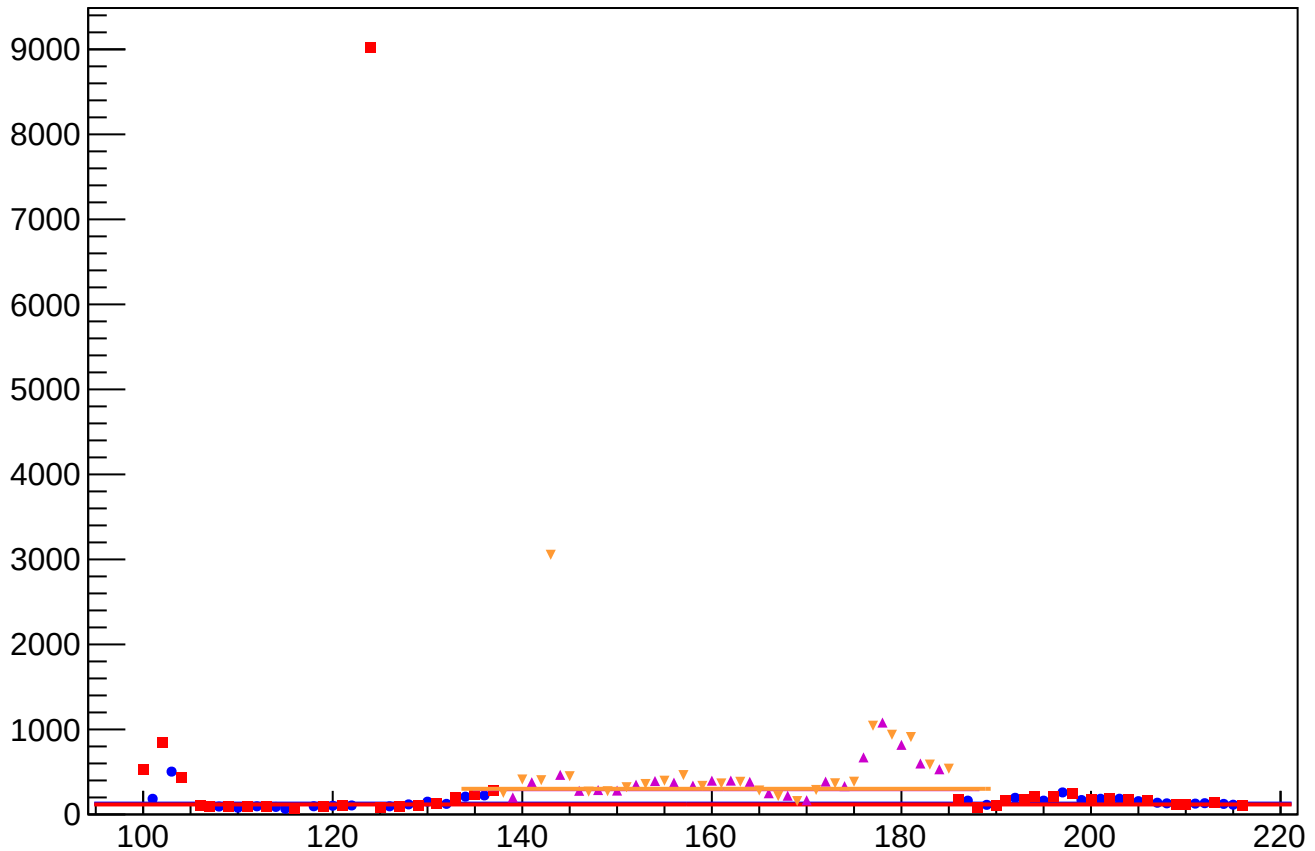
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.039 \pm 0.029$   $\chi^2/\text{NDF}: 56.8/55$

All:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}: 126.2/113$

- sign  $0.008 \pm 0.028$   $\chi^2/\text{NDF}: 68.8/57$

# asym\_atl\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 127.584+/-0.022  $\chi^2/\text{NDF}$ : 3476478.2/30

Left Out: 301.735+/-0.054  $\chi^2/\text{NDF}$ : 6693517.2/24

Right Out: 117.581+/-0.021  $\chi^2/\text{NDF}$ : 5506817.1/34

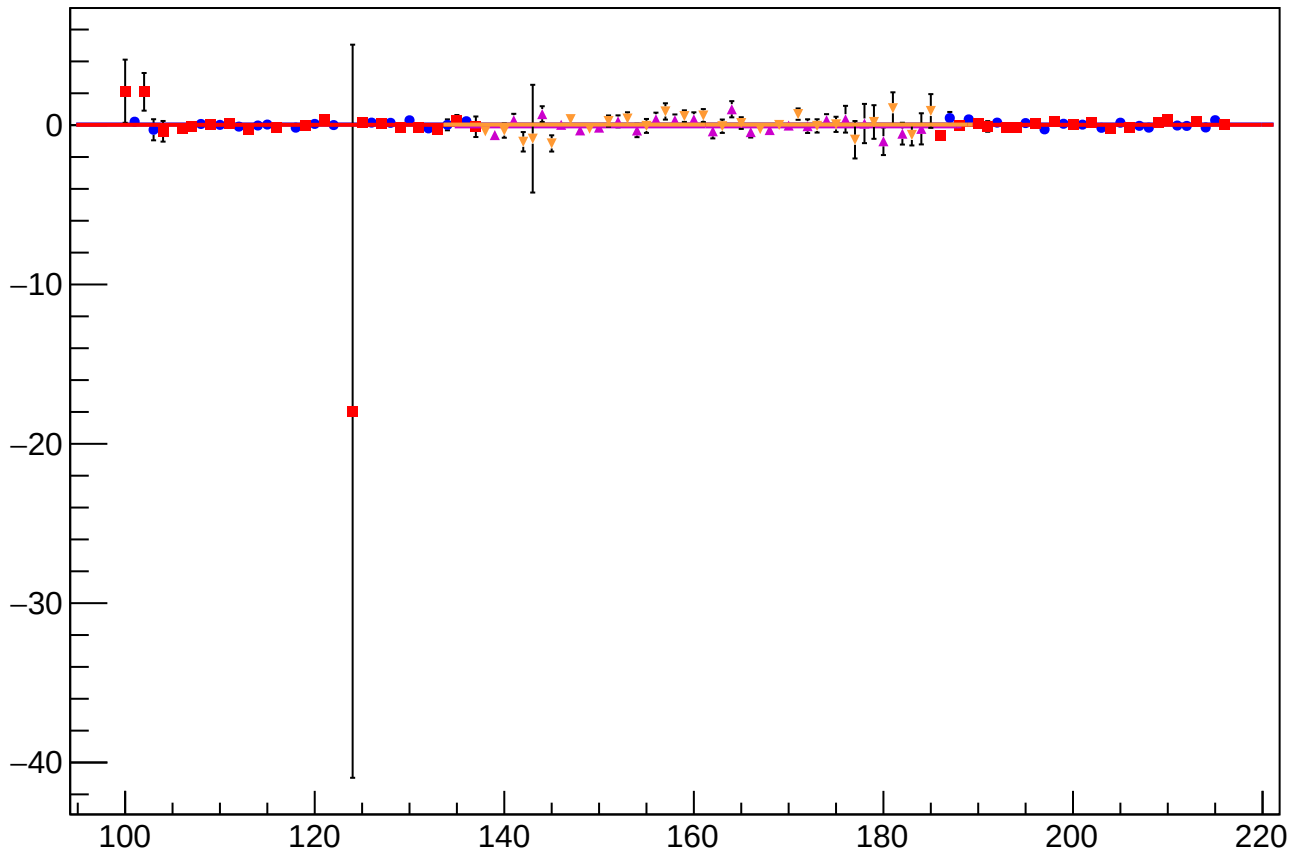
Left In: 296.875+/-0.054  $\chi^2/\text{NDF}$ : 4917907.0/22

+ sign 152.261+/-0.020  $\chi^2/\text{NDF}$ : 18966335.0/55

All: 146.516+/-0.014  $\chi^2/\text{NDF}$ : 39265498.1/11

- sign 141.315+/-0.019  $\chi^2/\text{NDF}$ : 20149193.5/57

asym\_atl\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.040 \pm 0.031$   $\chi^2/\text{NDF}: 27.2/30$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}: 43.2/34$

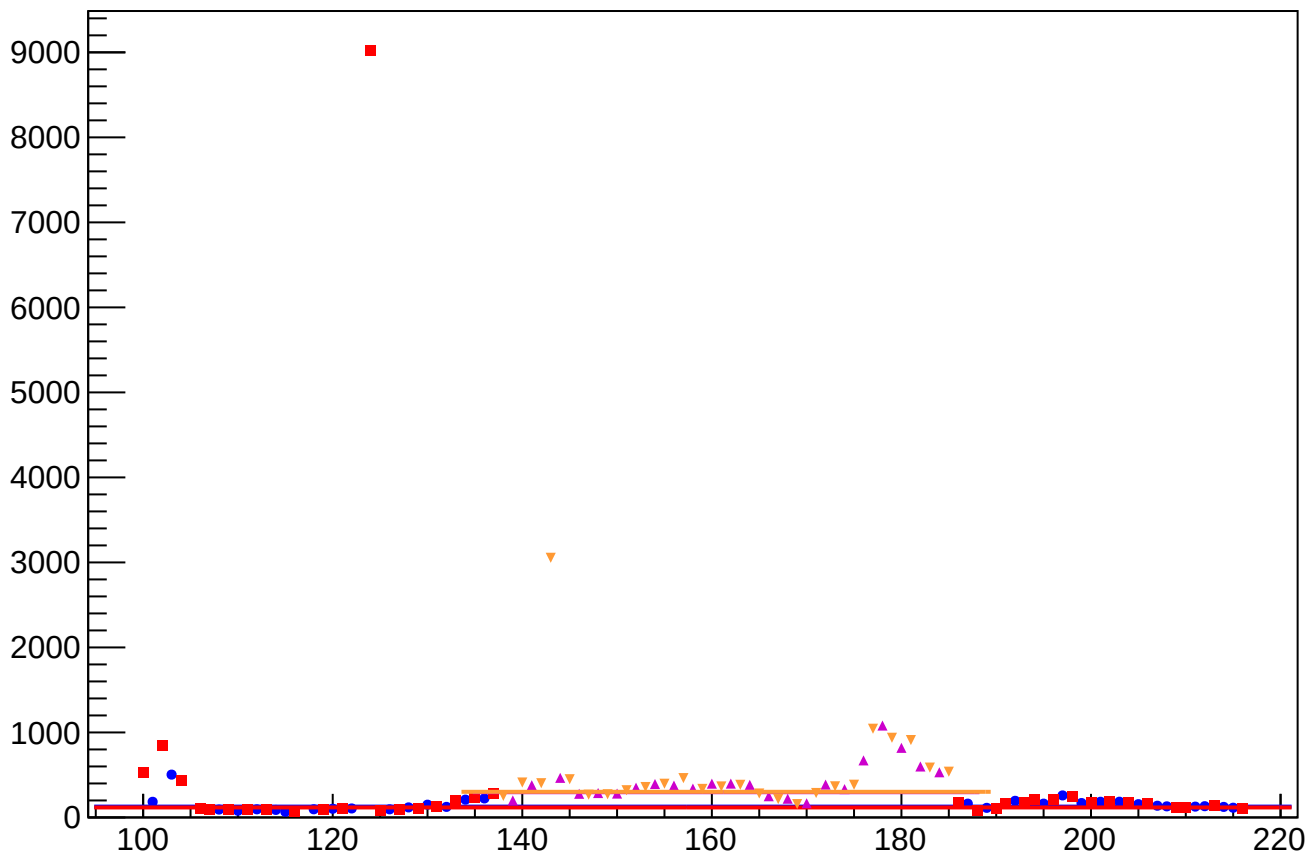
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.039 \pm 0.029$   $\chi^2/\text{NDF}: 56.8/55$

All:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}: 126.2/113$

- sign  $0.008 \pm 0.028$   $\chi^2/\text{NDF}: 68.8/57$

# asym\_atl\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 127.584 $\pm$ 0.022  $\chi^2$ /NDF: 3476478.2/30

Left Out: 301.735 $\pm$ 0.054  $\chi^2$ /NDF:6693517.2/24

Right Out: 117.581 $\pm$ 0.021  $\chi^2$ /NDF: 5506817.1/34

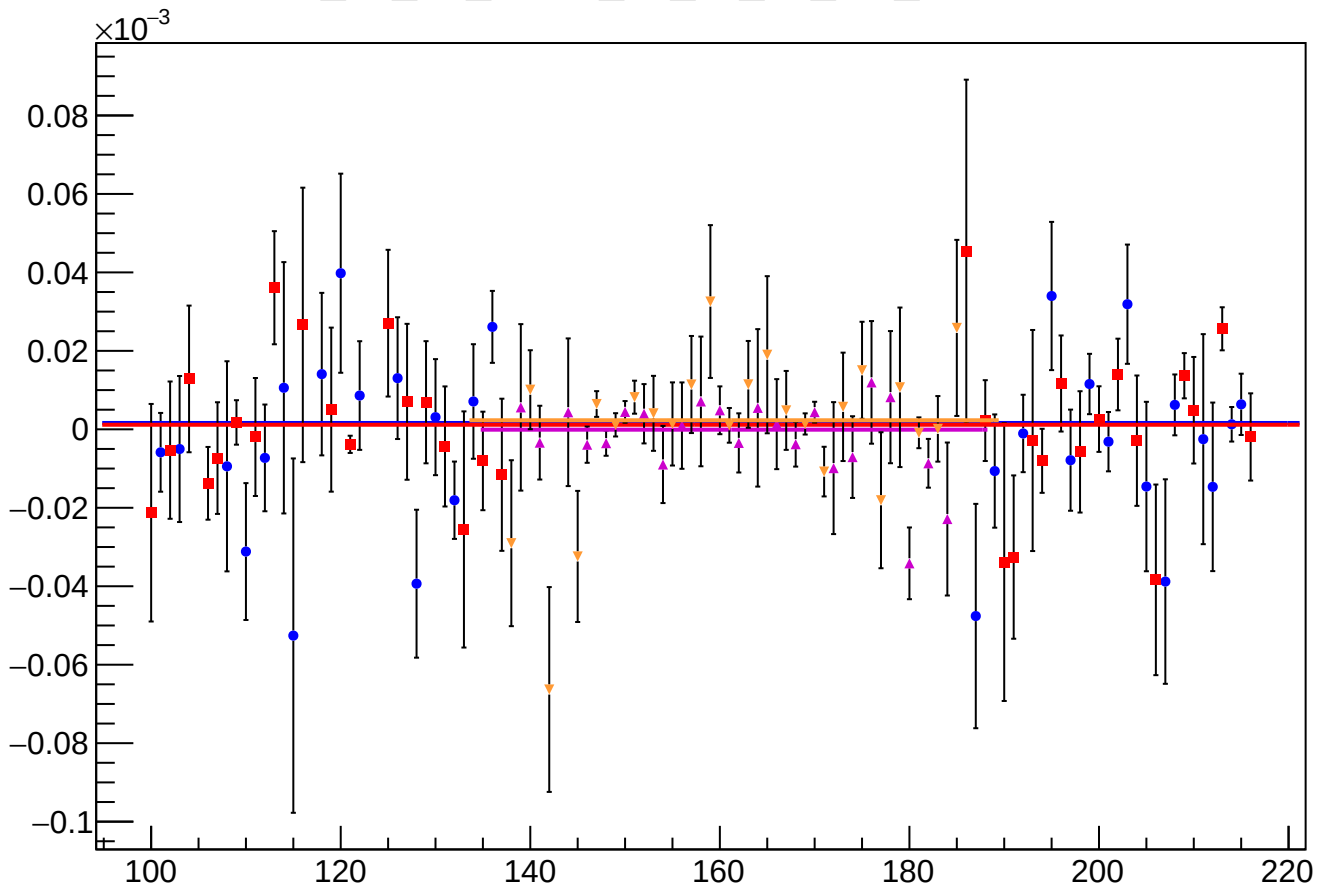
Left In: 296.875 $\pm$ 0.054  $\chi^2$ /NDF:4917907.0/22

+ sign 152.261 $\pm$ 0.020  $\chi^2$ /NDF: 18966335.0/55

All: 146.516 $\pm$ 0.014  $\chi^2$ /NDF: 39265498.1/11

- sign 141.315 $\pm$ 0.019  $\chi^2$ /NDF: 20149193.5/57

asym\_atl\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.1/33

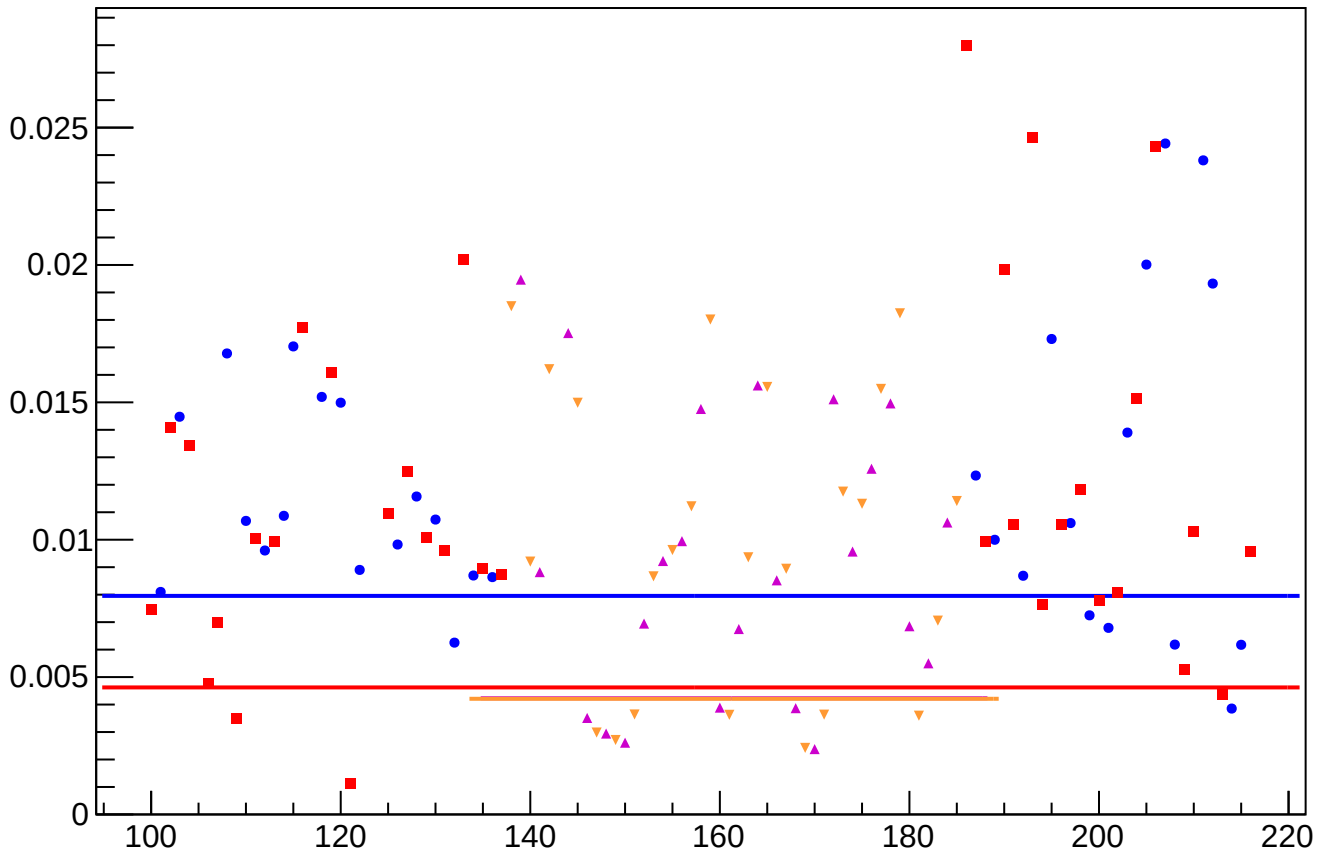
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.5/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 161.5/111

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 85.6/56

# asym\_atl\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.008 \pm 0.000$   $\chi^2/\text{NDF}$ : 6966318.9/30

Left Out:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 12078055.5/23

Right Out:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 16864089.0/33

Left In:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 11034220.9/22

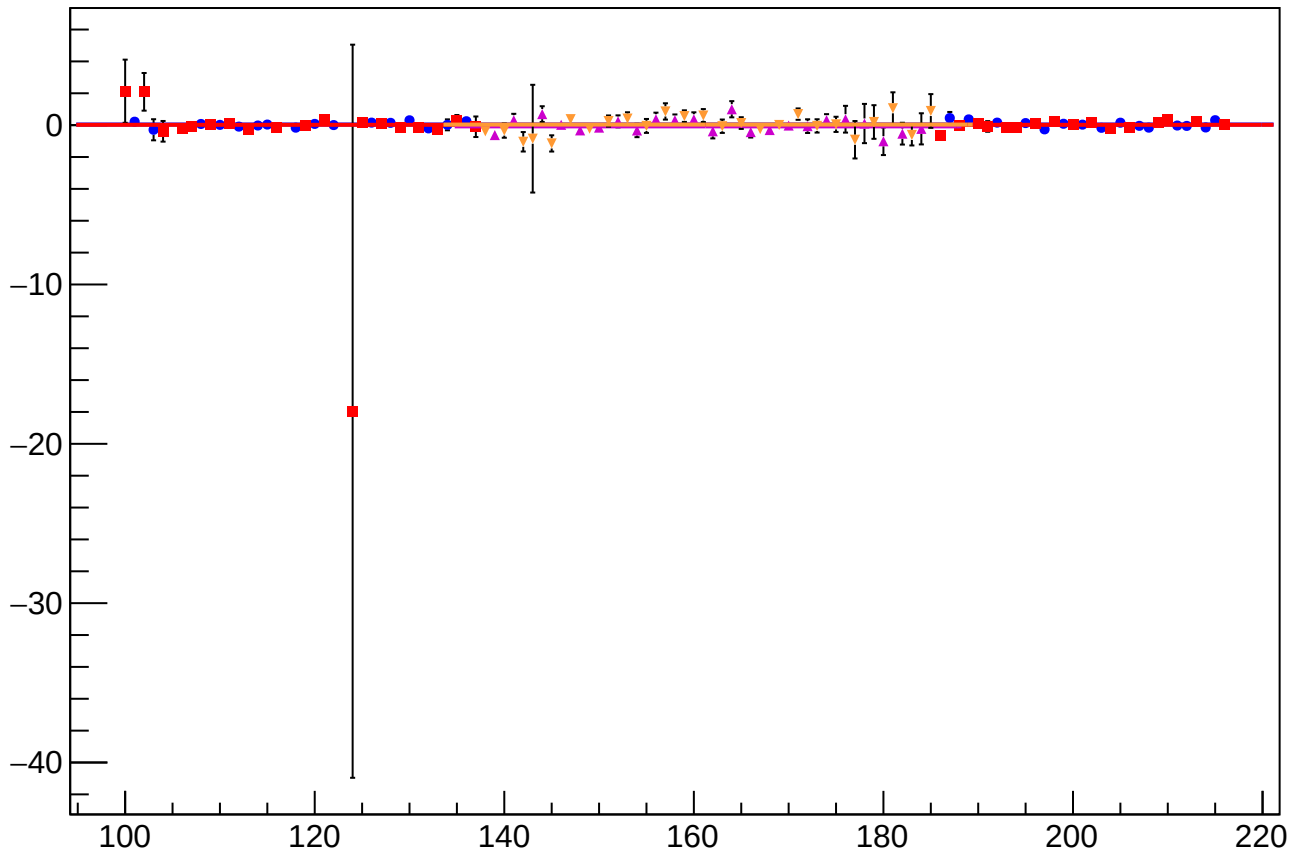
+ sign  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 23756581.0/54

All:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 52342298.5/111

- sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 27979202.1/56



# asym\_atl\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.040 \pm 0.031$   $\chi^2/\text{NDF}: 27.2/30$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}: 43.2/34$

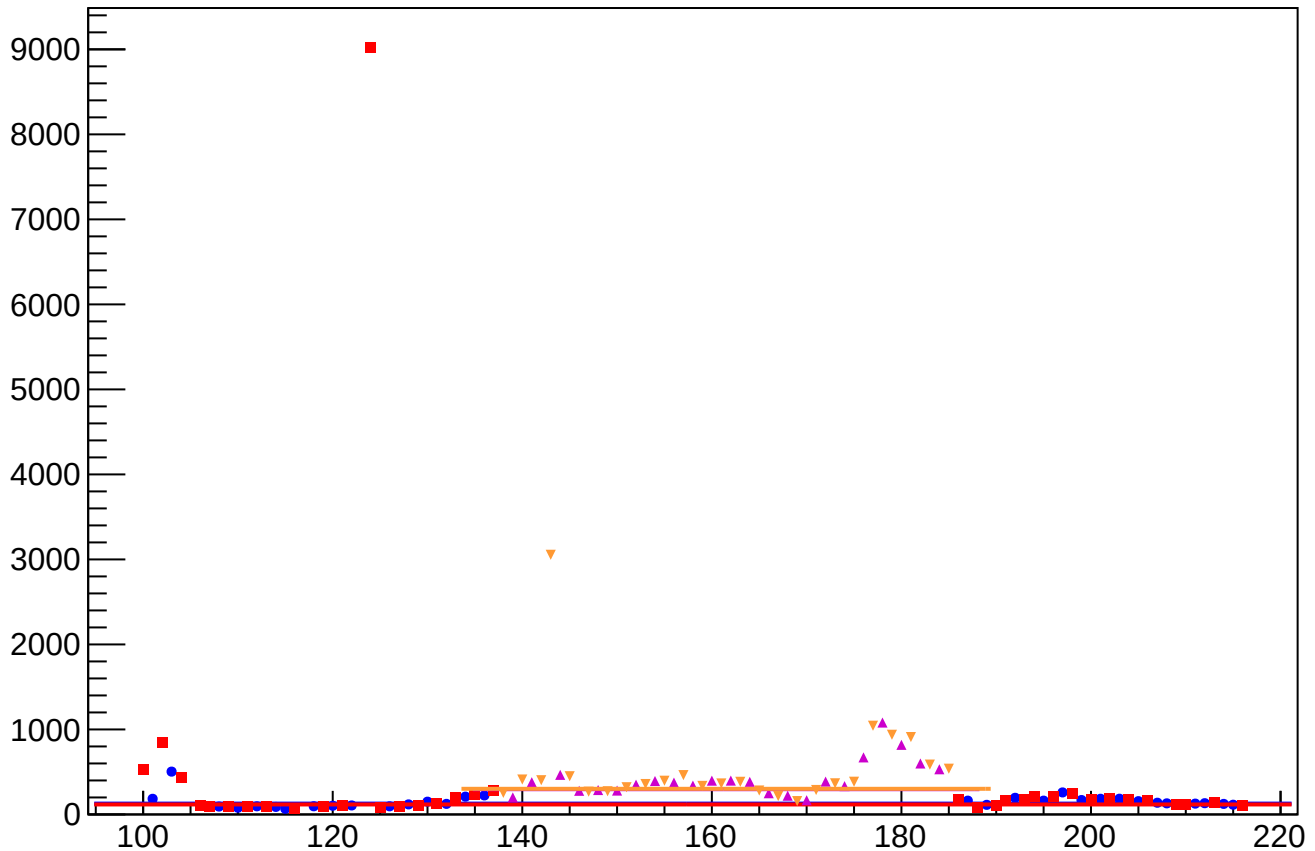
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.039 \pm 0.029$   $\chi^2/\text{NDF}: 56.8/55$

All:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}: 126.2/113$

- sign  $0.008 \pm 0.028$   $\chi^2/\text{NDF}: 68.8/57$

# asym\_atl\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 127.585 $\pm$ 0.022  $\chi^2$ /NDF: 3476461.4/30

Left Out: 301.737 $\pm$ 0.054  $\chi^2$ /NDF: 6693577.7/24

Right Out: 117.581 $\pm$ 0.021  $\chi^2$ /NDF: 5506771.2/34

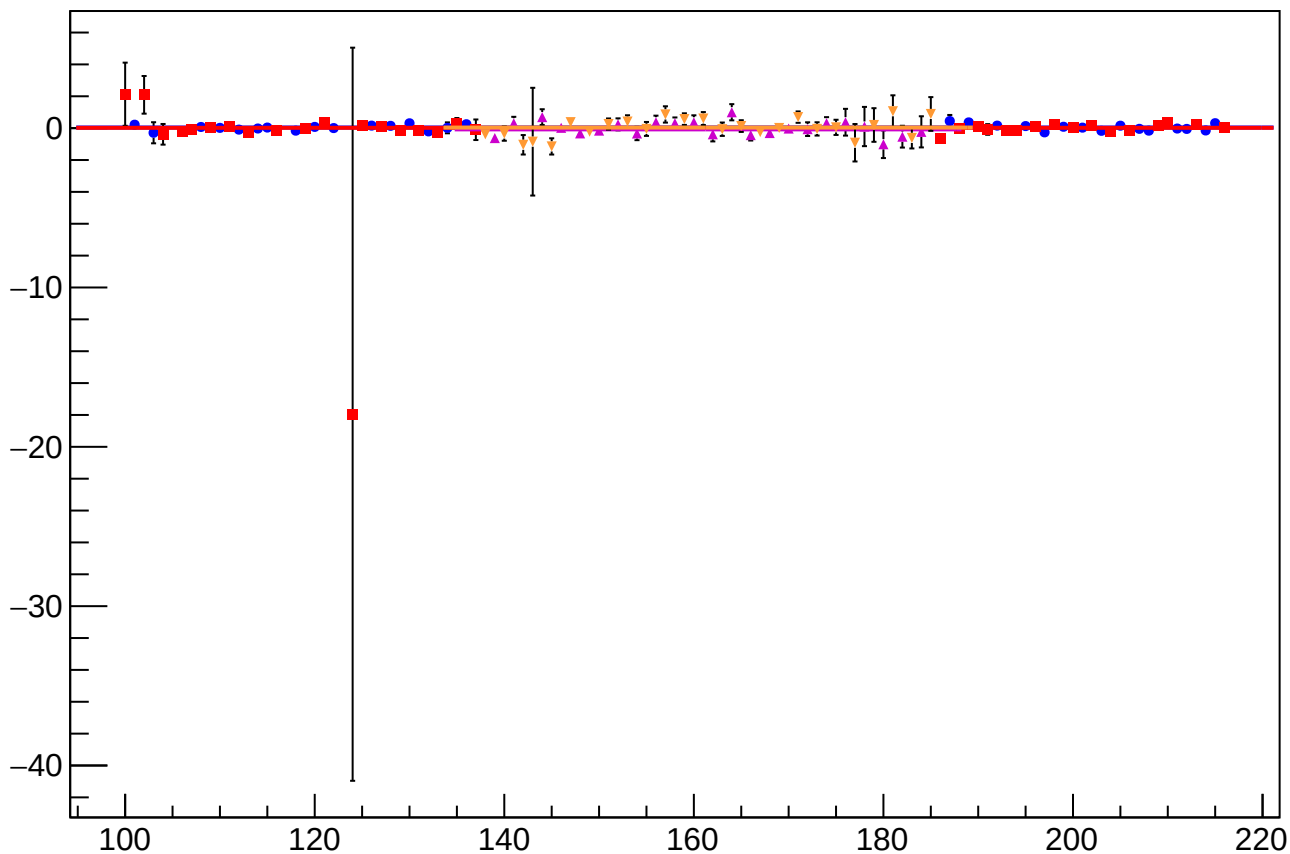
Left In: 296.878 $\pm$ 0.054  $\chi^2$ /NDF: 4917864.1/22

+ sign 152.262 $\pm$ 0.020  $\chi^2$ /NDF: 18966324.3/55

All: 146.517 $\pm$ 0.014  $\chi^2$ /NDF: 39265515.1/11

- sign 141.315 $\pm$ 0.019  $\chi^2$ /NDF: 20149207.9/57

asym\_atl\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.040 \pm 0.031$   $\chi^2/\text{NDF}: 27.2/30$

Left Out:  $0.036 \pm 0.077$   $\chi^2/\text{NDF}: 29.7/24$

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}: 43.2/34$

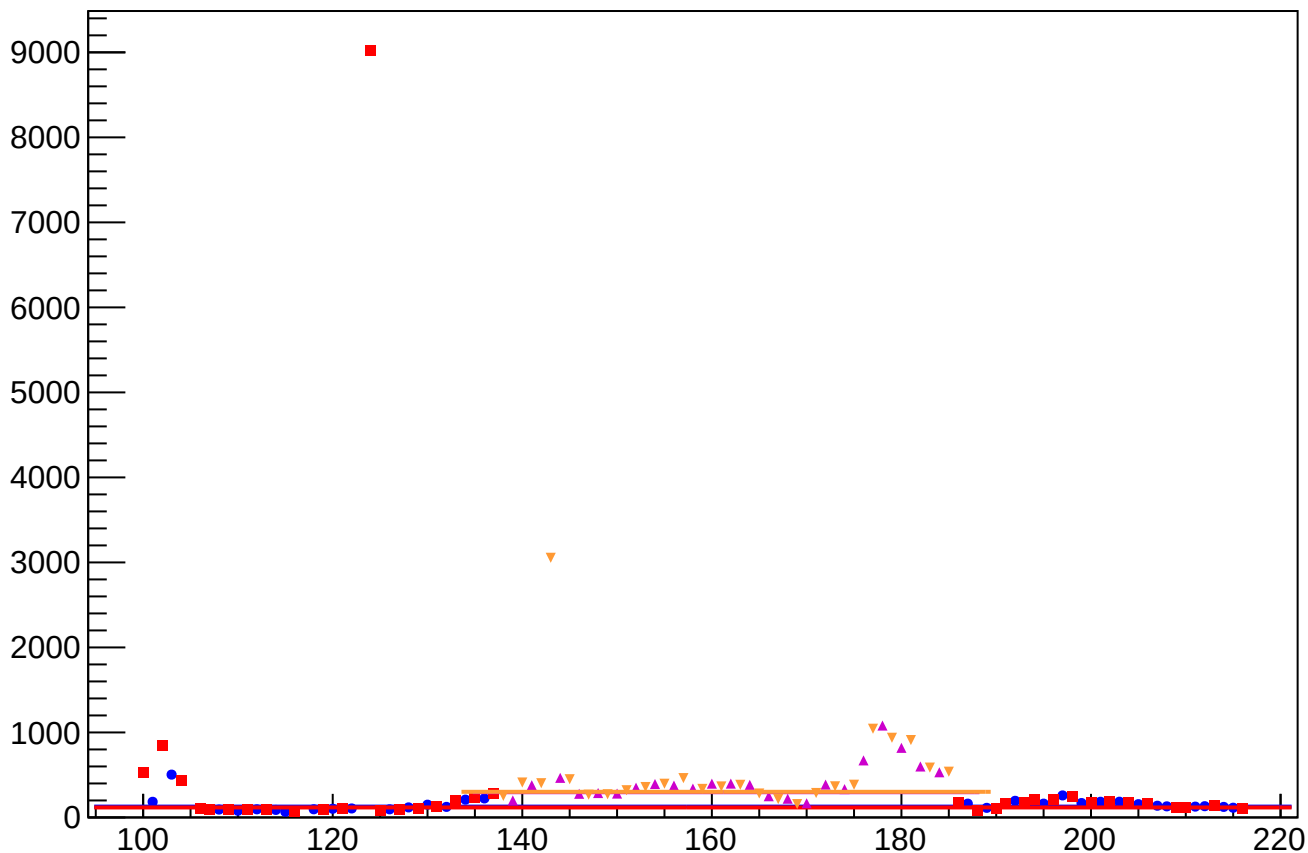
Left In:  $-0.078 \pm 0.076$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $0.039 \pm 0.029$   $\chi^2/\text{NDF}: 56.8/55$

All:  $0.023 \pm 0.020$   $\chi^2/\text{NDF}: 126.2/113$

- sign  $0.008 \pm 0.028$   $\chi^2/\text{NDF}: 68.8/57$

asym\_atl\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 127.585 $\pm$ 0.022  $\chi^2$ /NDF: 3476461.4/30

Left Out: 301.737 $\pm$ 0.054  $\chi^2$ /NDF: 6693577.7/24

Right Out: 117.581 $\pm$ 0.021  $\chi^2$ /NDF: 5506771.2/34

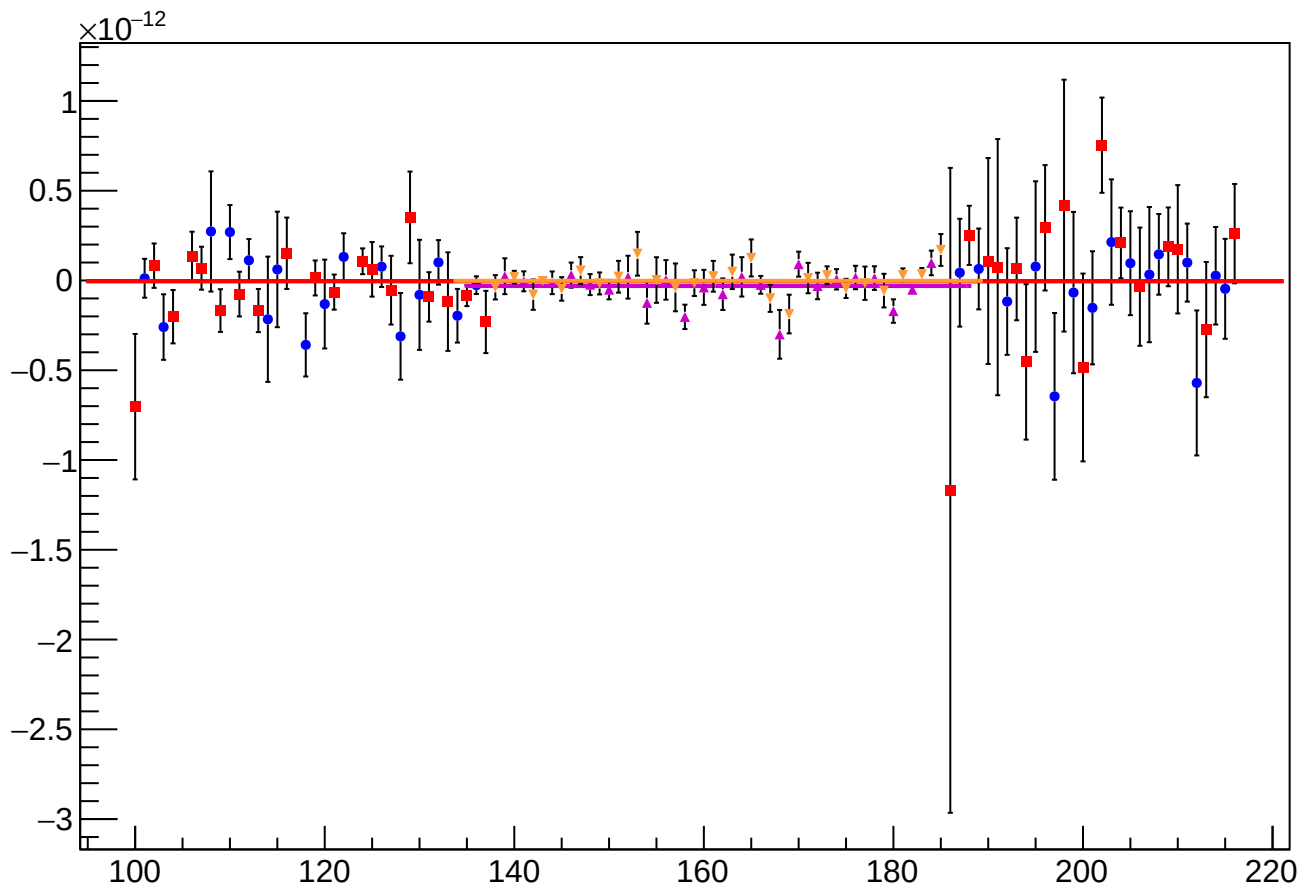
Left In: 296.878 $\pm$ 0.054  $\chi^2$ /NDF: 4917864.1/22

+ sign 152.262 $\pm$ 0.020  $\chi^2$ /NDF: 18966324.3/55

All: 146.517 $\pm$ 0.014  $\chi^2$ /NDF: 39265515.1/11

- sign 141.315 $\pm$ 0.019  $\chi^2$ /NDF: 20149207.9/57

asym\_atl\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 23.1/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:17.7/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 38.2/34

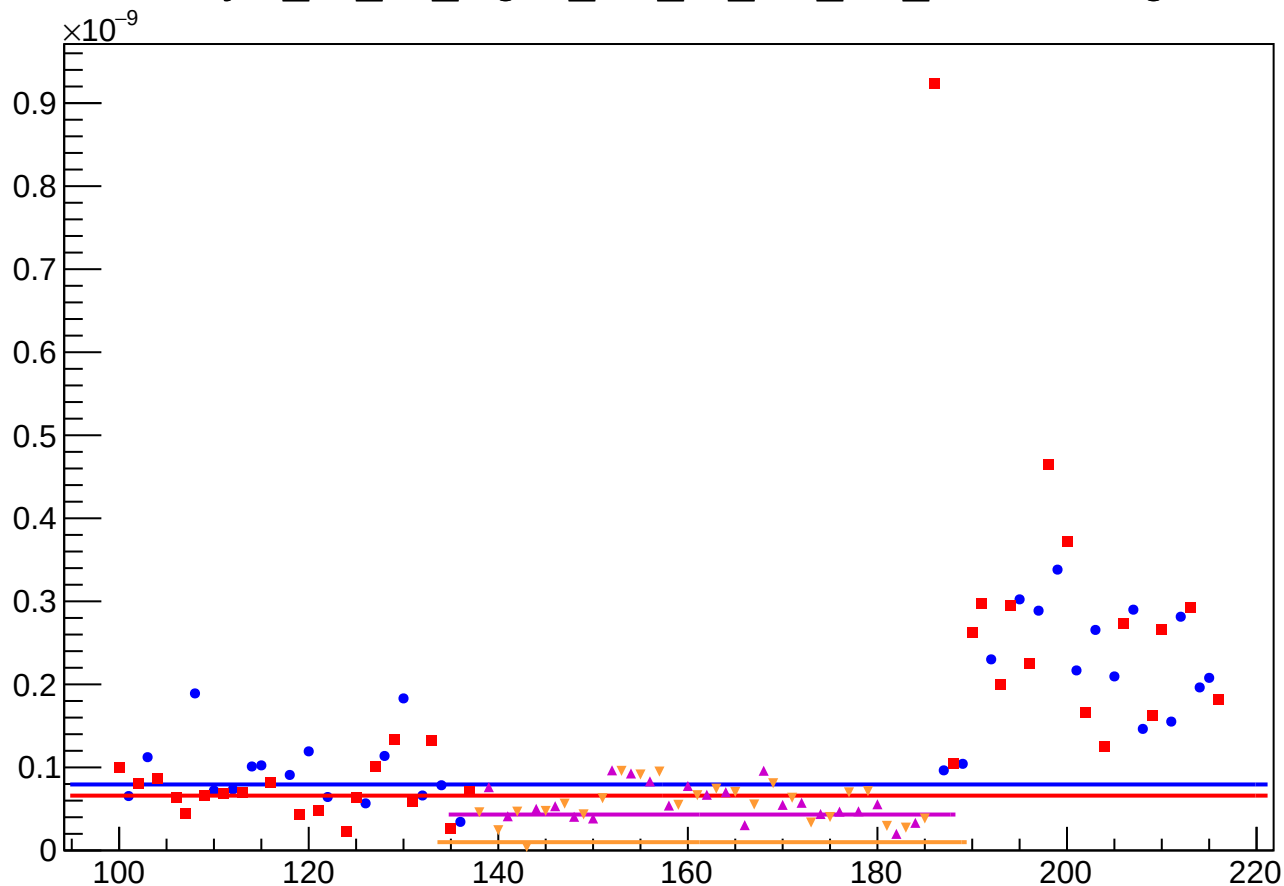
Left In: -0.000+/-0.000  $\chi^2$ /NDF:26.4/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 40.9/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 109.6/113

- sign -0.000+/-0.000  $\chi^2$ /NDF: 65.4/57

asym\_atl\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8220521.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :18523402.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9393254.0/34

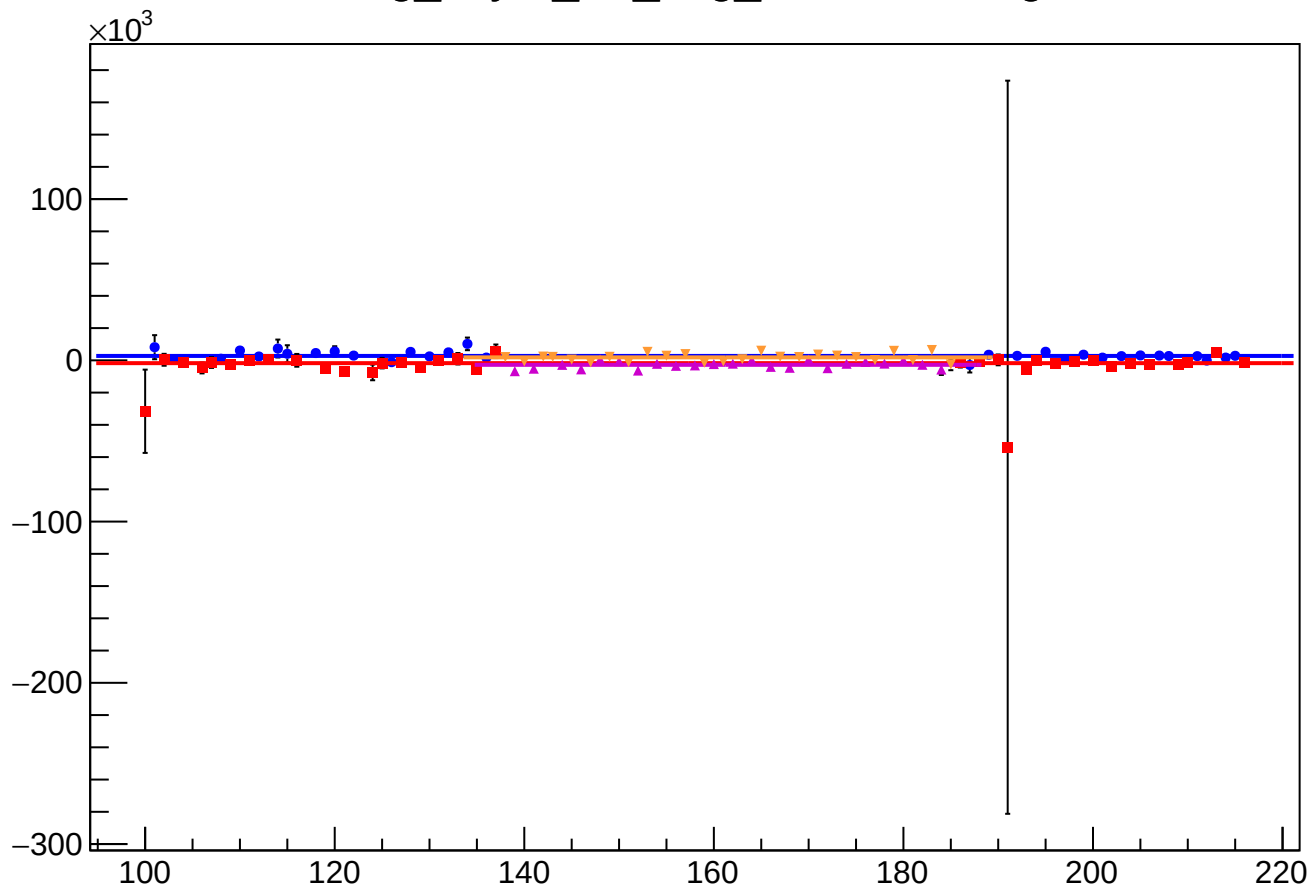
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :4049081.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37596311.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 68026279.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14689385.4/57

# reg\_asym\_atr\_avg\_mean vs Slug



Right In: 2741.434 $\pm$ 448.204  $\chi^2$ /NDF: 18.5/30

Left Out: 1851.999 $\pm$ 420.006  $\chi^2$ /NDF: 31.5/24

Right Out: -1735.795 $\pm$ 445.641  $\chi^2$ /NDF: 32.9/34

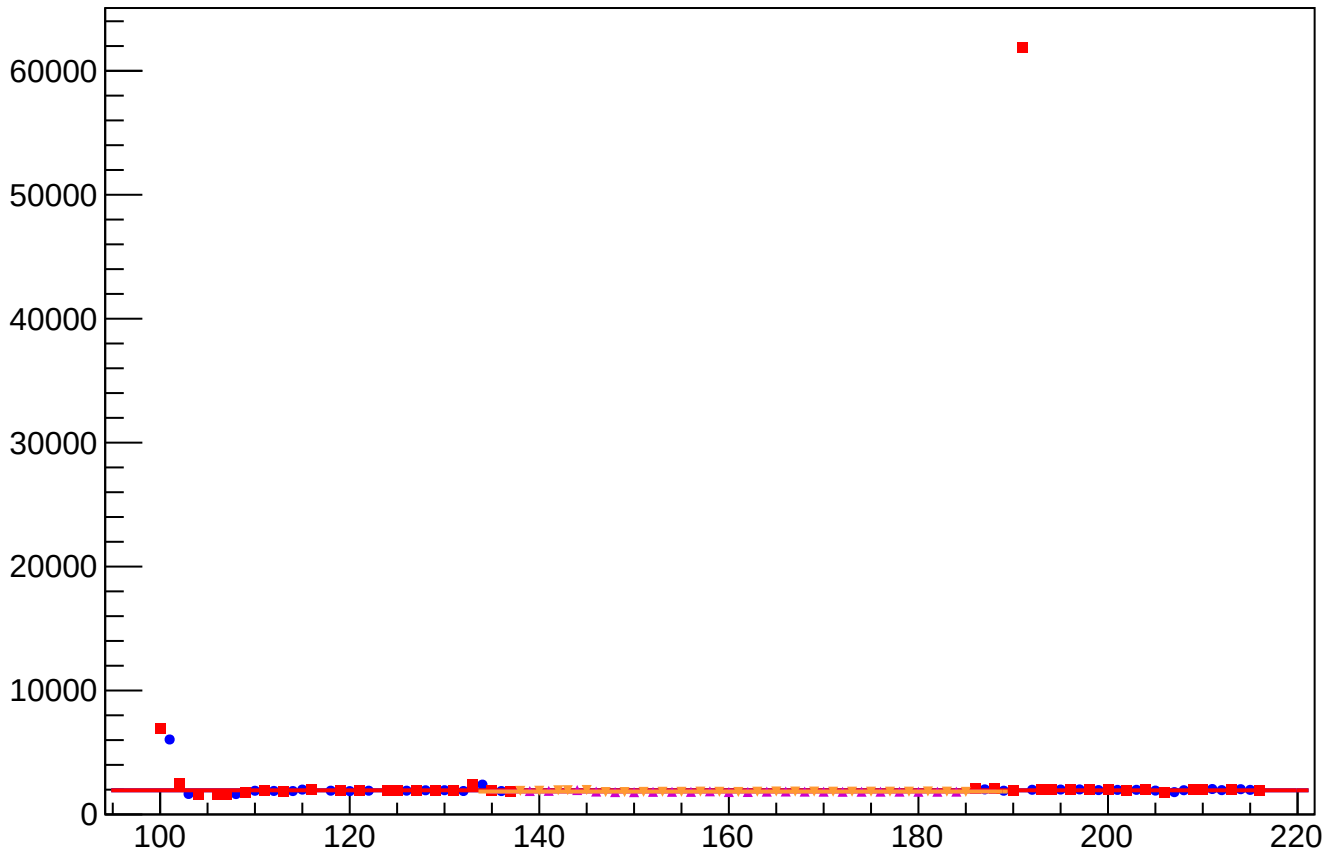
Left In: -2775.769 $\pm$ 430.870  $\chi^2$ /NDF: 25.4/22

+ sign 2267.859 $\pm$ 306.473  $\chi^2$ /NDF: 52.1/55

All: 21.507 $\pm$ 217.863  $\chi^2$ /NDF: 221.8/113

- sign -2273.302 $\pm$ 309.761  $\chi^2$ /NDF: 61.1/57

# reg\_asym\_atr\_avg\_rms vs Slug



Right In: 1950.352+/-0.317  $\chi^2/\text{NDF}$ : 727030.4/30

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1948.536+/-0.315  $\chi^2/\text{NDF}$ : 424738.0/34

Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

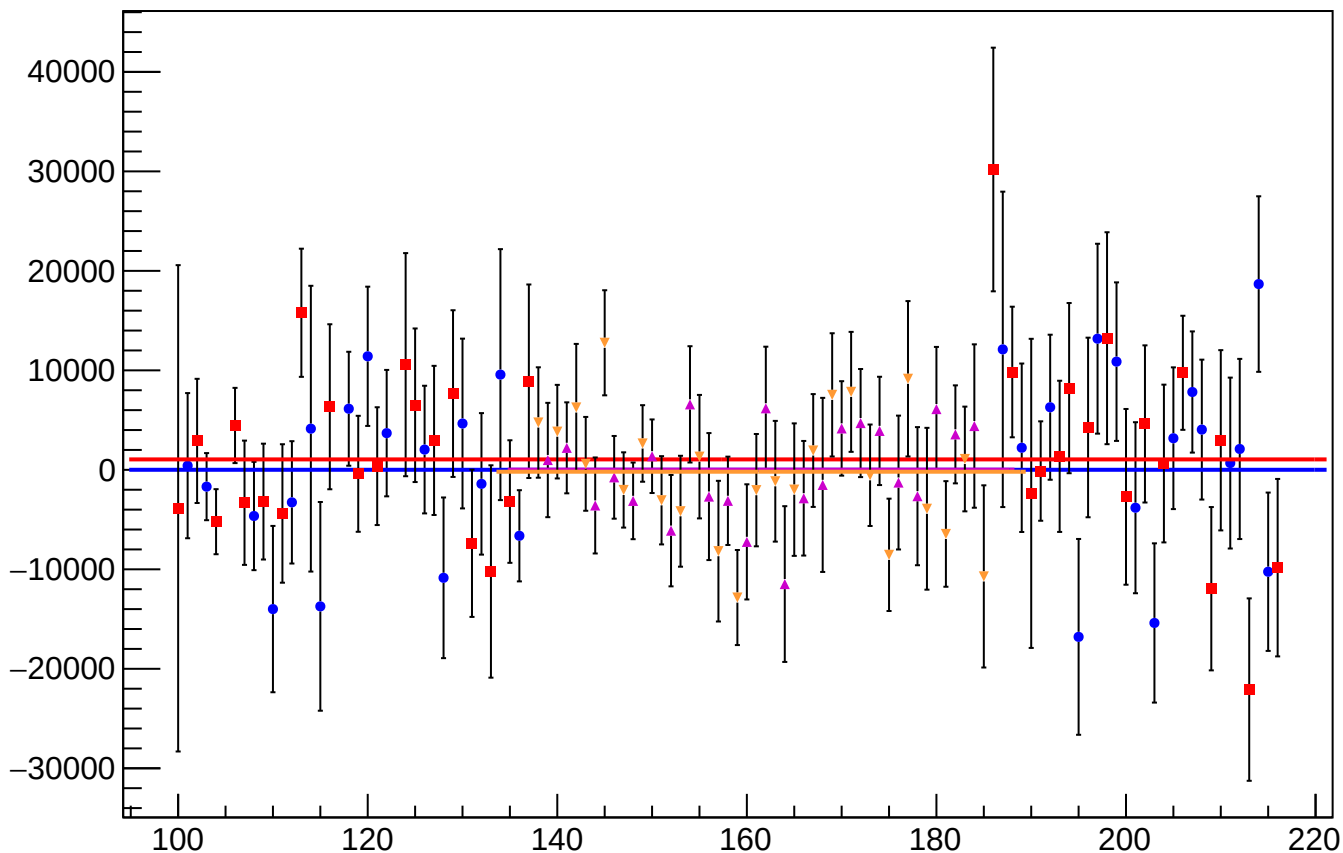
+ sign 1896.133+/-0.217  $\chi^2/\text{NDF}$ : 802884.2/55

All: 1895.634+/-0.154  $\chi^2/\text{NDF}$ : 1297468.1/11

- sign 1895.126+/-0.219  $\chi^2/\text{NDF}$ : 494573.2/57



# asym\_atr\_avg\_reg\_correction\_mean vs Slug



Right In:  $5.244 \pm 1267.902$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-189.458 \pm 1088.618$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $1048.823 \pm 1165.027$   $\chi^2/\text{NDF}$ : 40.2/34

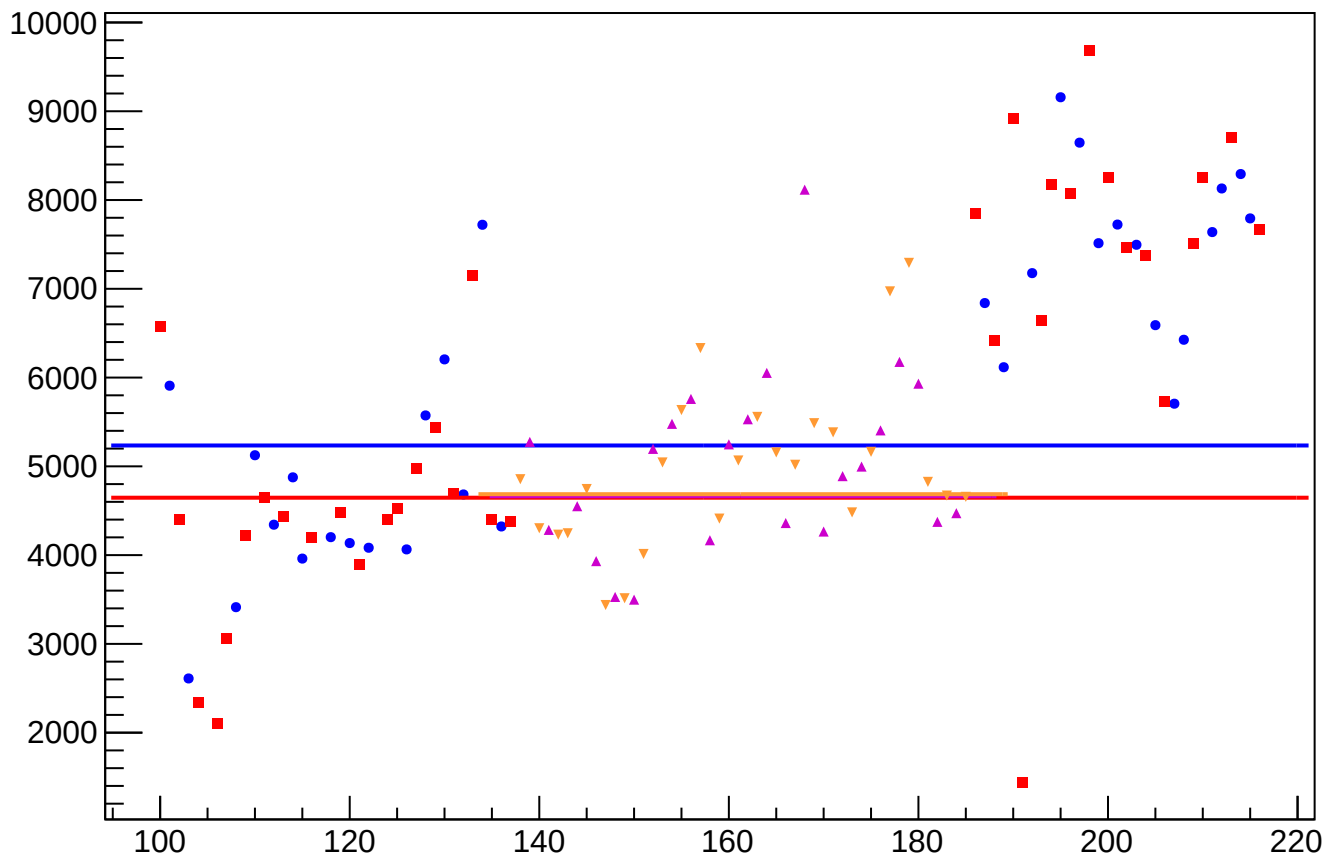
Left In:  $19.391 \pm 1112.574$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-106.835 \pm 825.946$   $\chi^2/\text{NDF}$ : 64.2/55

All:  $209.863 \pm 576.342$   $\chi^2/\text{NDF}$ : 118.8/113

- sign  $510.412 \pm 804.613$   $\chi^2/\text{NDF}$ : 54.4/57

# asym\_atr\_avg\_reg\_correction\_rms vs Slug



Right In: 5234.978 $\pm$ 0.897  $\chi^2$ /NDF: 4167872.5/30

Left Out: 4686.353 $\pm$ 0.770  $\chi^2$ /NDF:1185063.7/24

Right Out: 4646.646 $\pm$ 0.824  $\chi^2$ /NDF: 6786500.8/34

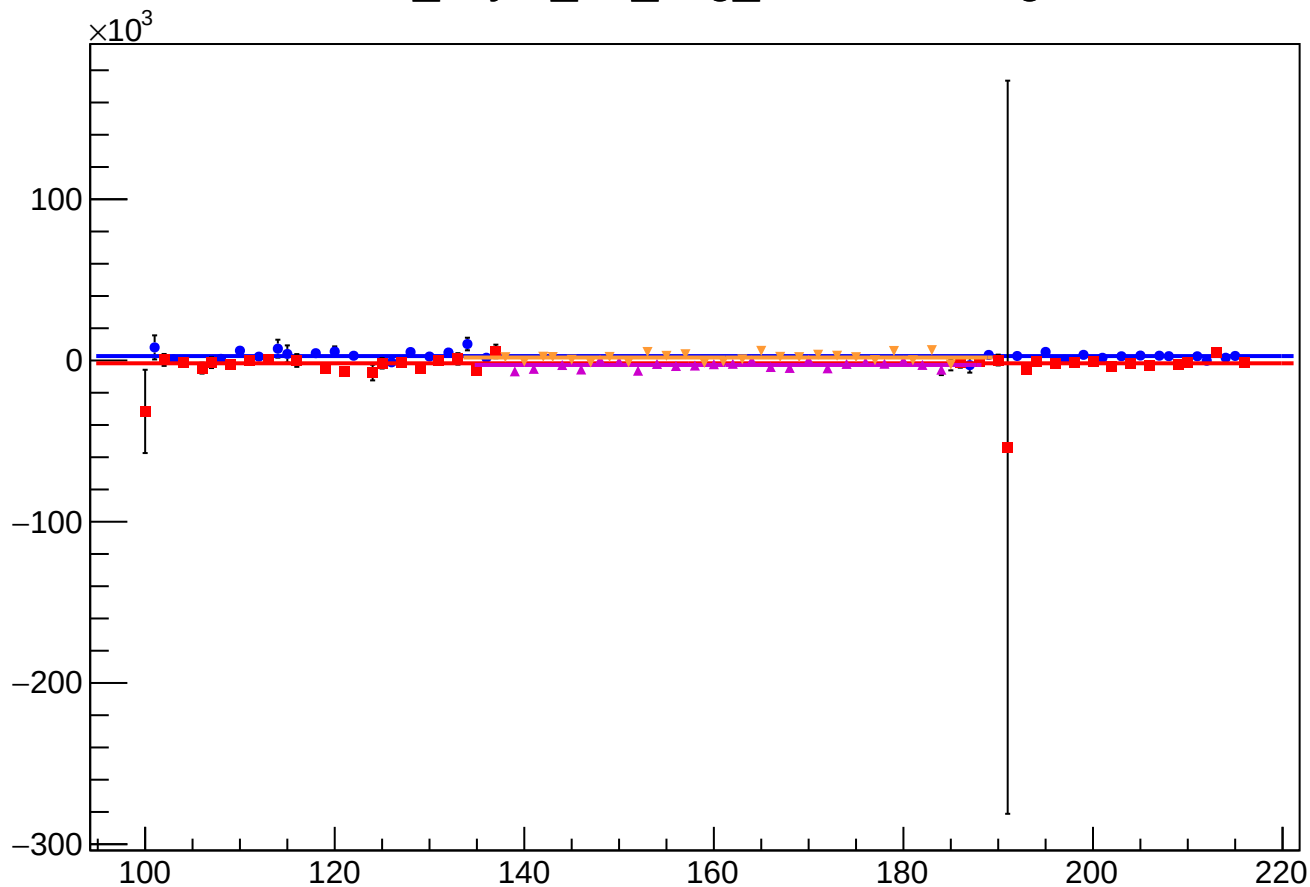
Left In: 4663.272 $\pm$ 0.787  $\chi^2$ /NDF:1286726.4/22

+ sign 4919.167 $\pm$ 0.584  $\chi^2$ /NDF: 5568493.3/55

All: 4783.803 $\pm$ 0.408  $\chi^2$ /NDF: 13746633.3/100

- sign 4655.341 $\pm$ 0.569  $\chi^2$ /NDF: 8073440.2/57

# cor\_asym\_atr\_avg\_mean vs Slug



Right In: 2741.177 $\pm$ 448.204  $\chi^2/\text{NDF}$ : 18.5/30

Left Out: 1851.888 $\pm$ 420.006  $\chi^2/\text{NDF}$ : 31.5/24

Right Out: -1736.244 $\pm$ 445.642  $\chi^2/\text{NDF}$ : 32.9/34

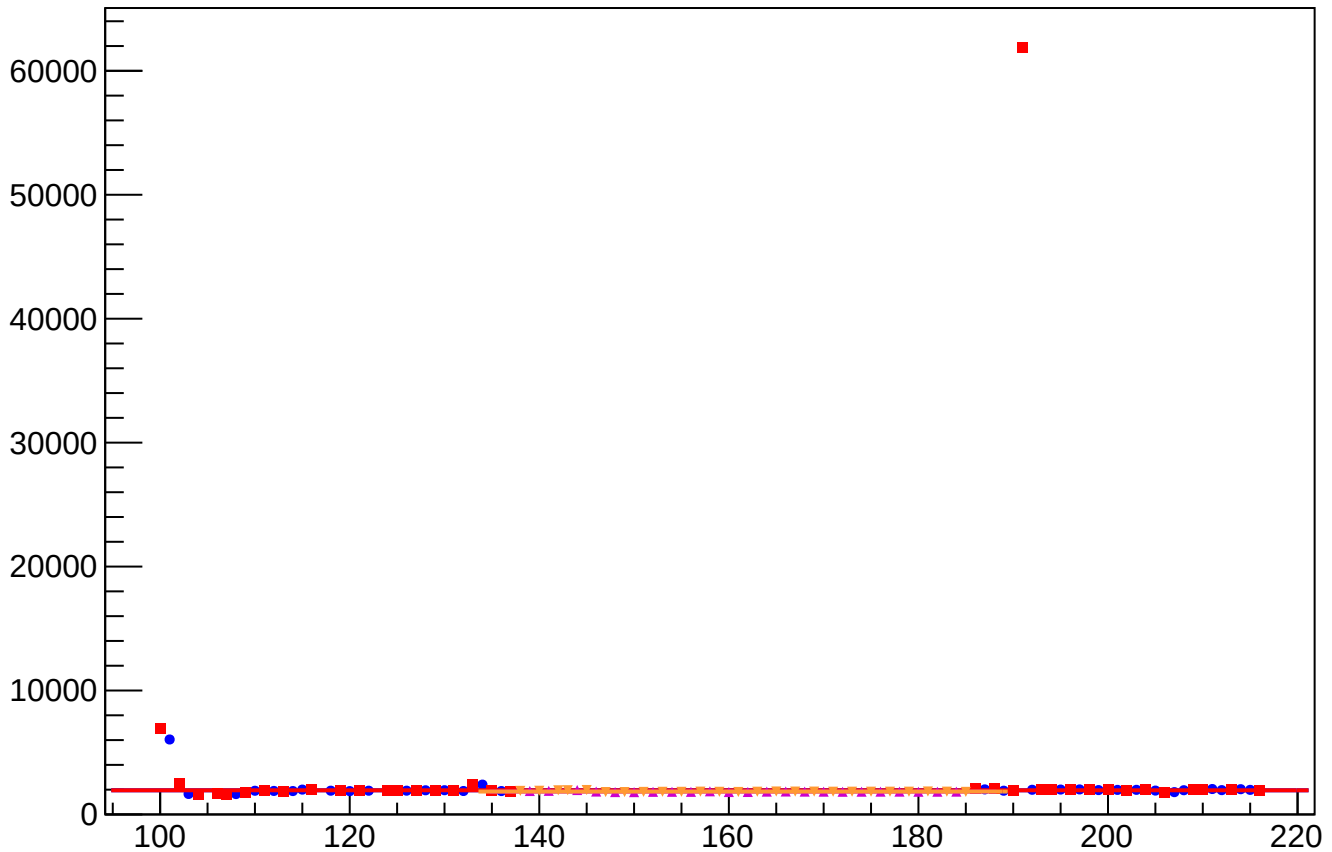
Left In: -2775.745 $\pm$ 430.870  $\chi^2/\text{NDF}$ : 25.4/22

+ sign 2267.680 $\pm$ 306.473  $\chi^2/\text{NDF}$ : 52.1/55

All: 21.317 $\pm$ 217.863  $\chi^2/\text{NDF}$ : 221.8/113

- sign -2273.509 $\pm$ 309.762  $\chi^2/\text{NDF}$ : 61.1/57

# cor\_asym\_atr\_avg\_rms vs Slug



Right In: 1950.352+/-0.317  $\chi^2/\text{NDF}$ : 727029.4/30

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1950.191+/-0.315  $\chi^2/\text{NDF}$ : 416421.8/34

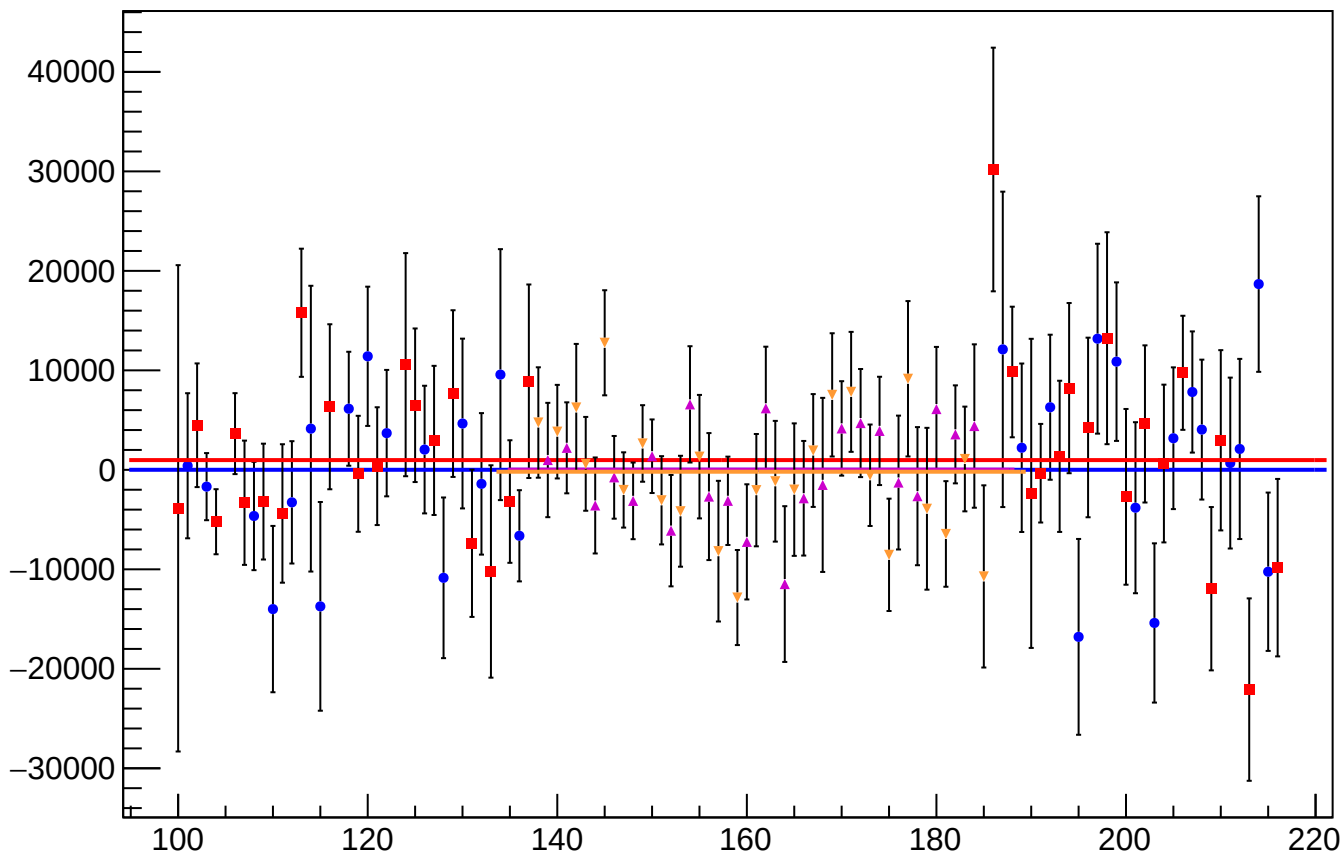
Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

+ sign 1896.133+/-0.217  $\chi^2/\text{NDF}$ : 802883.3/55

All: 1896.011+/-0.154  $\chi^2/\text{NDF}$ : 1290896.4/11

- sign 1895.887+/-0.219  $\chi^2/\text{NDF}$ : 488012.4/57

# asym\_atr\_avg\_cor\_correction\_mean vs Slug



Right In:  $5.059 \pm 1267.903$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-189.487 \pm 1088.617$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $979.170 \pm 1171.941$   $\chi^2/\text{NDF}$ : 40.0/34

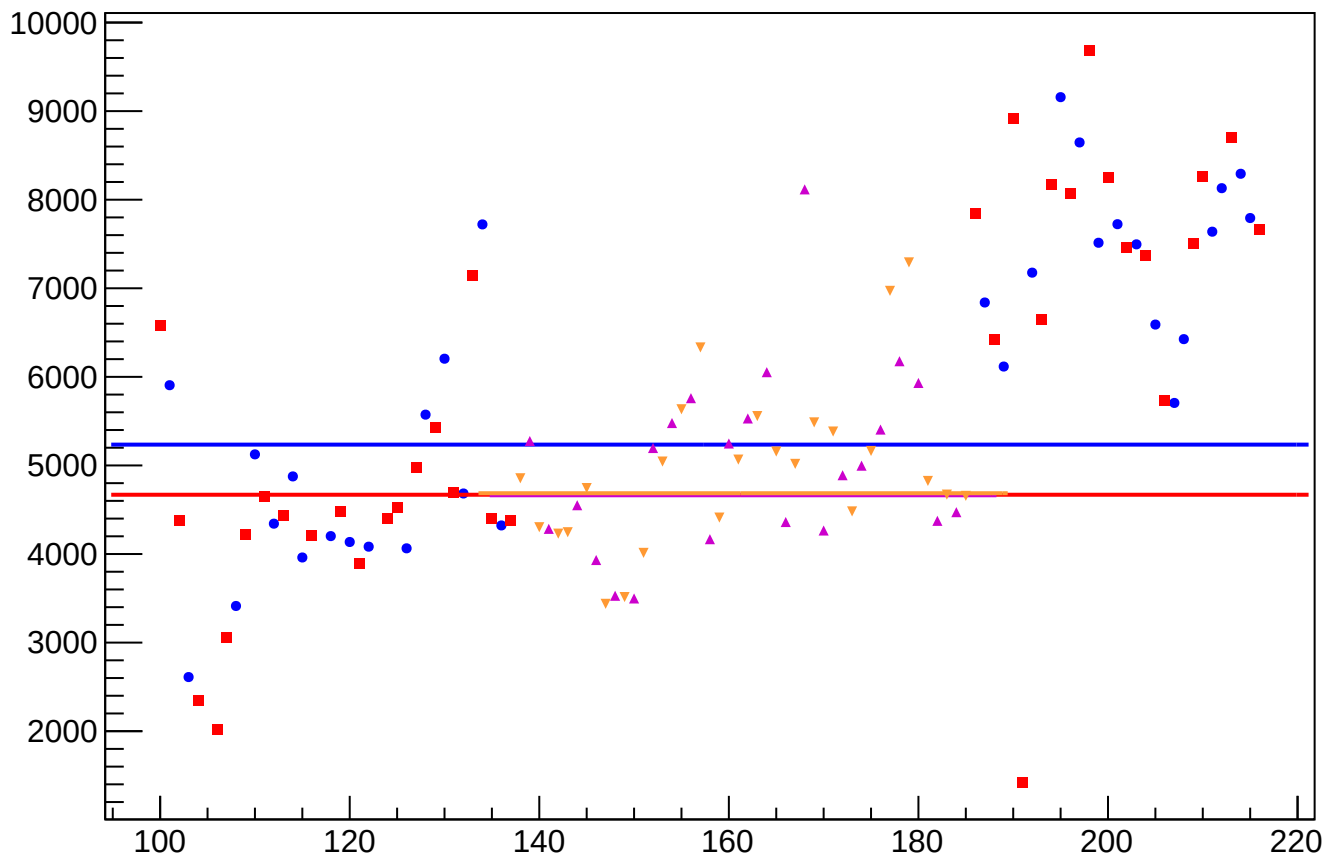
Left In:  $19.431 \pm 1112.574$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-106.930 \pm 825.946$   $\chi^2/\text{NDF}$ : 64.2/55

All:  $190.510 \pm 577.173$   $\chi^2/\text{NDF}$ : 118.6/113

- sign  $474.377 \pm 806.880$   $\chi^2/\text{NDF}$ : 54.1/57

# asym\_atr\_avg\_cor\_correction\_rms vs Slug



Right In: 5235.040+/-0.897  $\chi^2$ /NDF: 4167201.6/30

Left Out: 4686.346+/-0.770  $\chi^2$ /NDF:1185089.0/24

Right Out: 4669.231+/-0.829  $\chi^2$ /NDF: 6731111.2/34

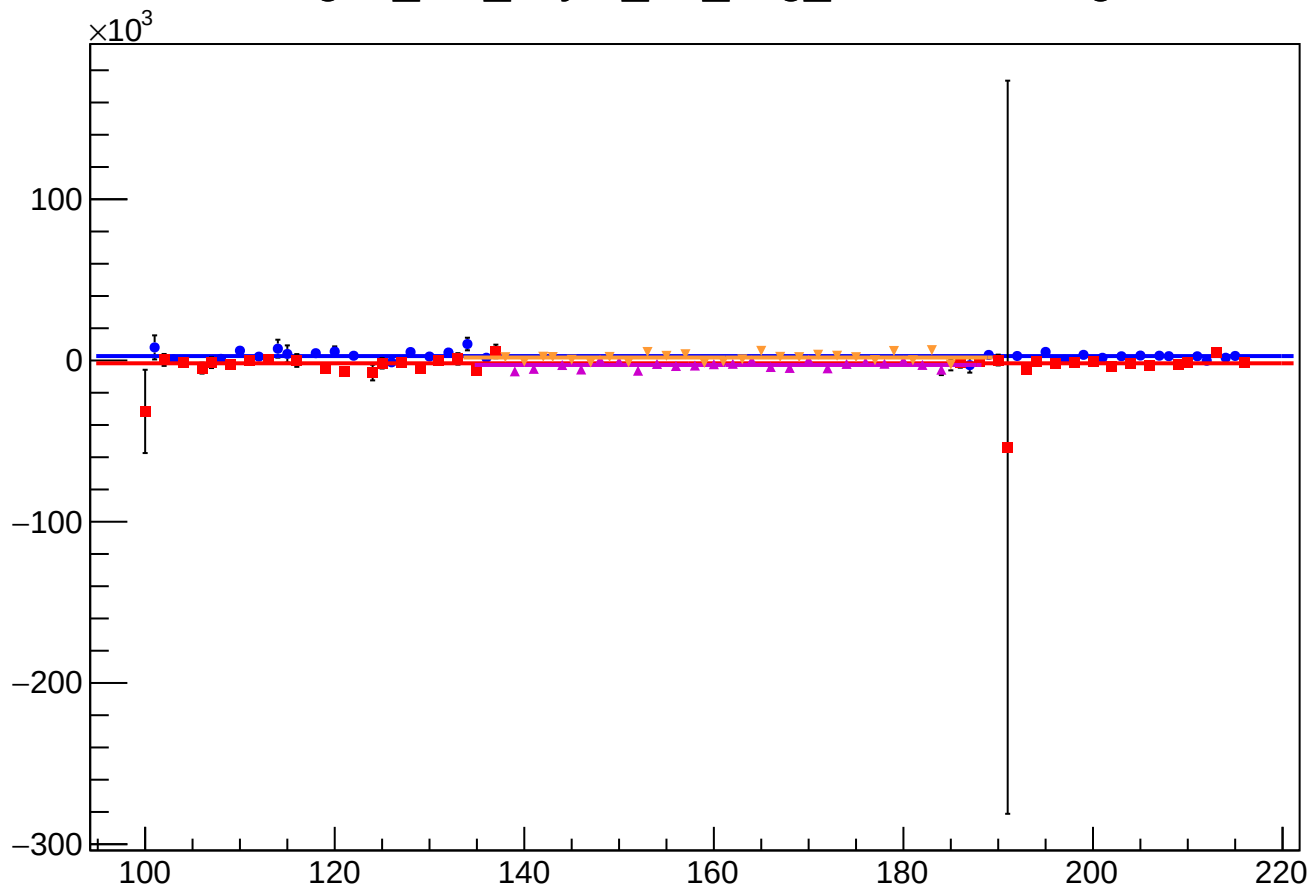
Left In: 4663.273+/-0.787  $\chi^2$ /NDF:1286722.8/22

+ sign 4919.188+/-0.584  $\chi^2$ /NDF: 5567901.7/55

All: 4789.688+/-0.408  $\chi^2$ /NDF: 13681851.8/100

- sign 4666.098+/-0.571  $\chi^2$ /NDF: 8017861.2/57

# eigen\_cor\_asym\_atr\_avg\_mean vs Slug



Right In: 2741.177 $\pm$ 448.204  $\chi^2$ /NDF: 18.5/30

Left Out: 1851.888 $\pm$ 420.006  $\chi^2$ /NDF: 31.5/24

Right Out: -1736.244 $\pm$ 445.642  $\chi^2$ /NDF: 32.9/34

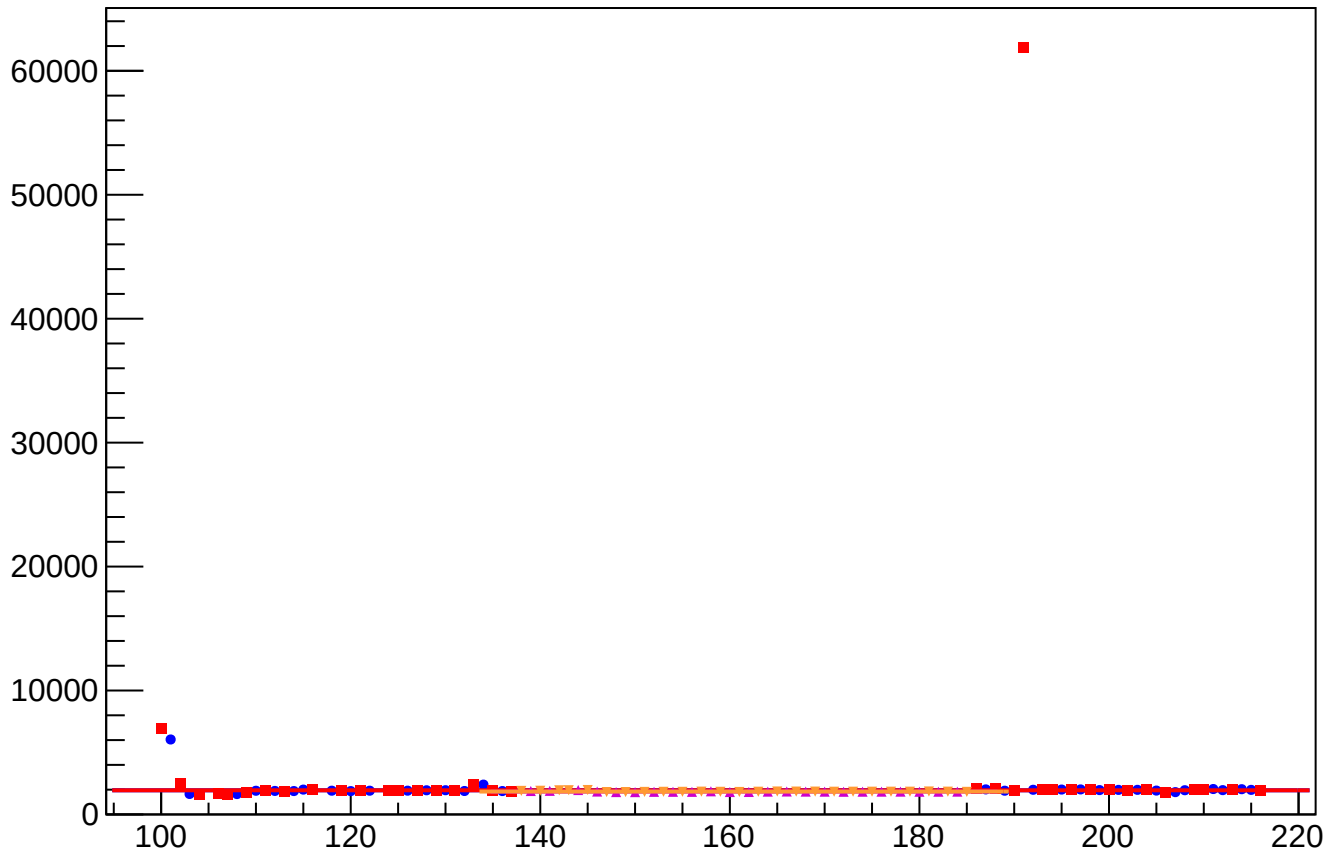
Left In: -2775.745 $\pm$ 430.870  $\chi^2$ /NDF: 25.4/22

+ sign 2267.680 $\pm$ 306.473  $\chi^2$ /NDF: 52.1/55

All: 21.317 $\pm$ 217.863  $\chi^2$ /NDF: 221.8/113

- sign -2273.509 $\pm$ 309.762  $\chi^2$ /NDF: 61.1/57

# eigen\_cor\_asym\_atr\_avg\_rms vs Slug



Right In: 1950.352+/-0.317  $\chi^2/\text{NDF}$ : 727029.4/30

Left Out: 1848.522+/-0.297  $\chi^2/\text{NDF}$ : 20886.6/24

Right Out: 1950.191+/-0.315  $\chi^2/\text{NDF}$ : 416421.8/34

Left In: 1845.061+/-0.305  $\chi^2/\text{NDF}$ : 14026.0/22

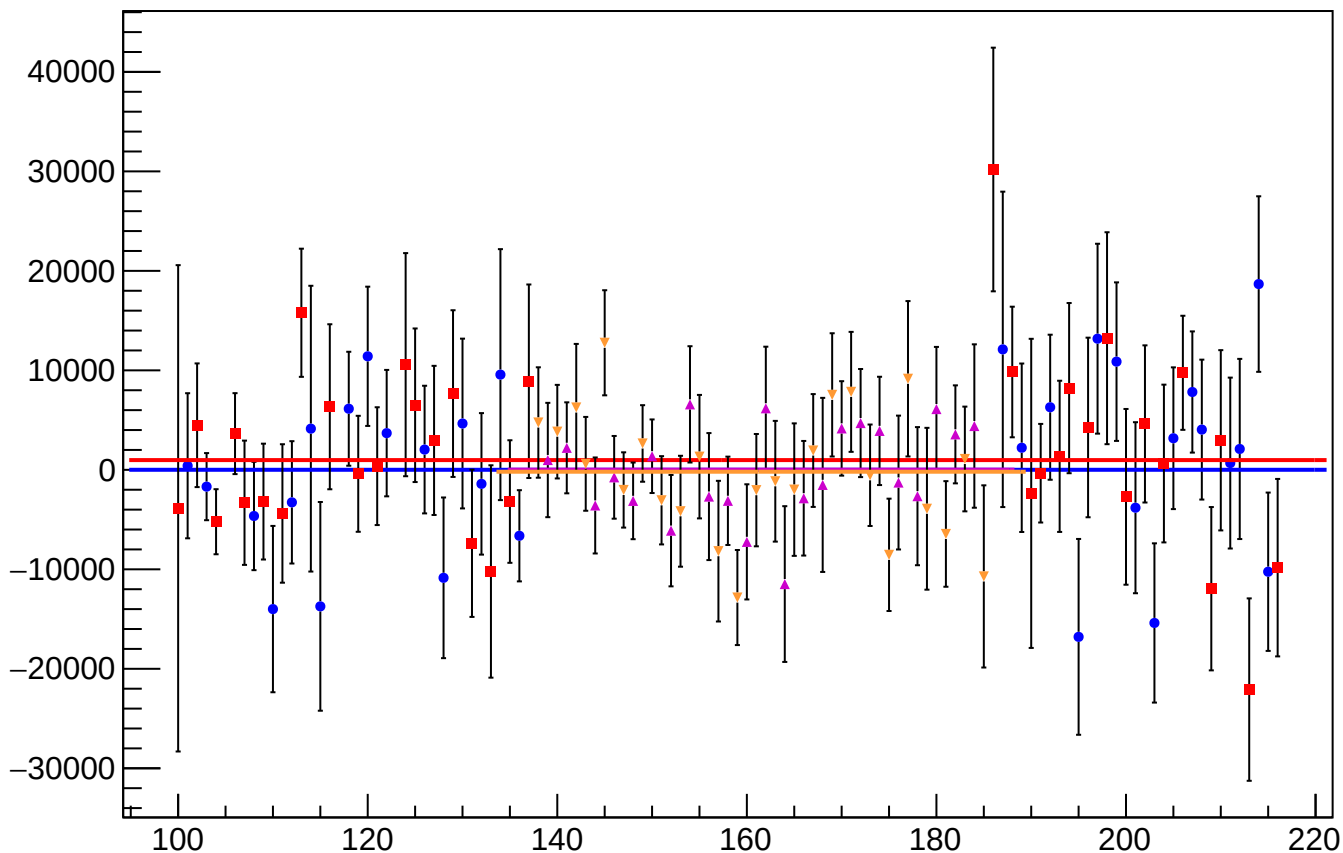
+ sign 1896.133+/-0.217  $\chi^2/\text{NDF}$ : 802883.3/55

All: 1896.011+/-0.154  $\chi^2/\text{NDF}$ : 1290896.4/11

- sign 1895.887+/-0.219  $\chi^2/\text{NDF}$ : 488012.4/57



asym\_atr\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $5.059 \pm 1267.903$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-189.487 \pm 1088.617$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $979.170 \pm 1171.941$   $\chi^2/\text{NDF}$ : 40.0/34

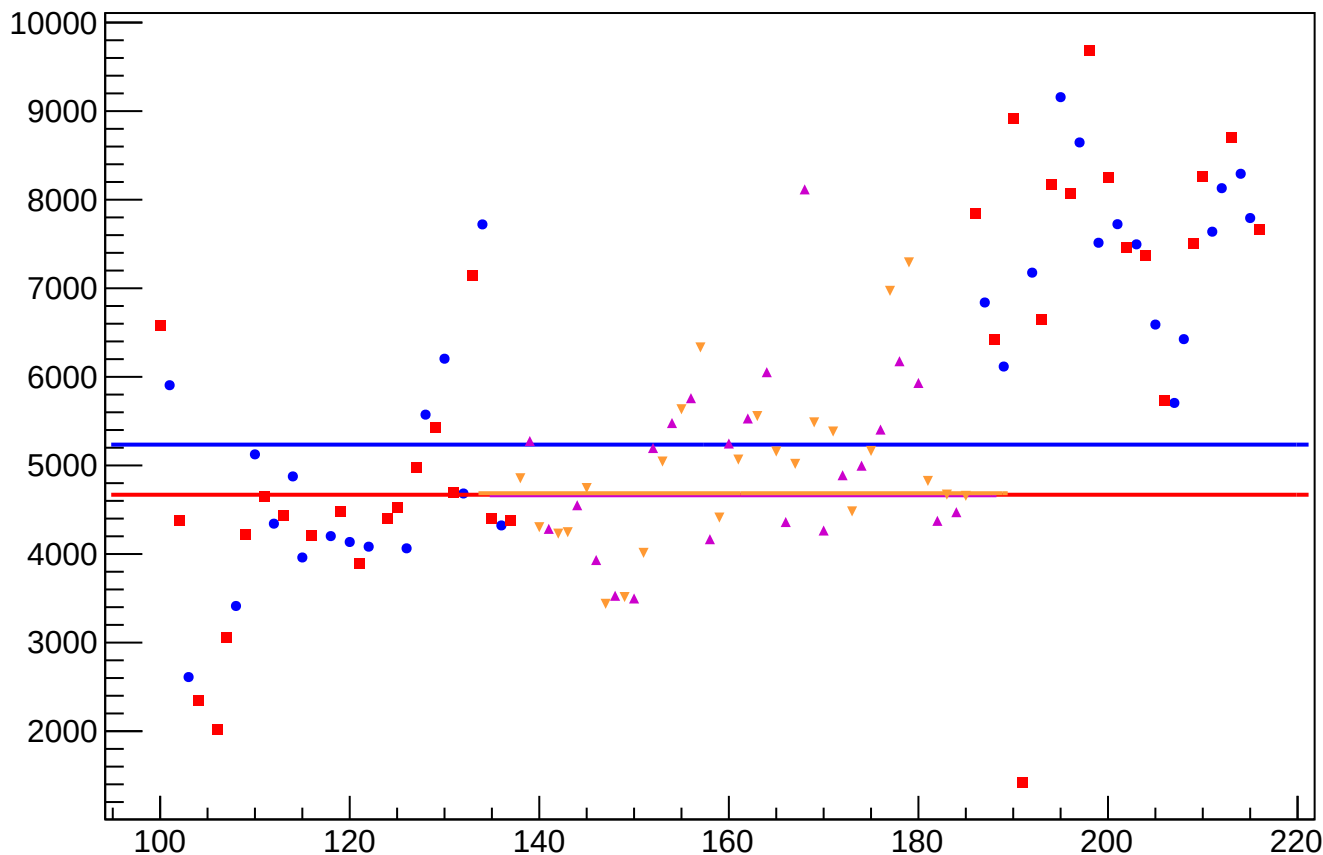
Left In:  $19.431 \pm 1112.574$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-106.930 \pm 825.946$   $\chi^2/\text{NDF}$ : 64.2/55

All:  $190.510 \pm 577.173$   $\chi^2/\text{NDF}$ : 118.6/113

- sign  $474.377 \pm 806.880$   $\chi^2/\text{NDF}$ : 54.1/57

# asym\_atr\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 5235.040 $\pm$ 0.897  $\chi^2/\text{NDF}$ : 4167201.6/30

Left Out: 4686.346 $\pm$ 0.770  $\chi^2/\text{NDF}$ : 1185089.0/24

Right Out: 4669.231 $\pm$ 0.829  $\chi^2/\text{NDF}$ : 6731111.2/34

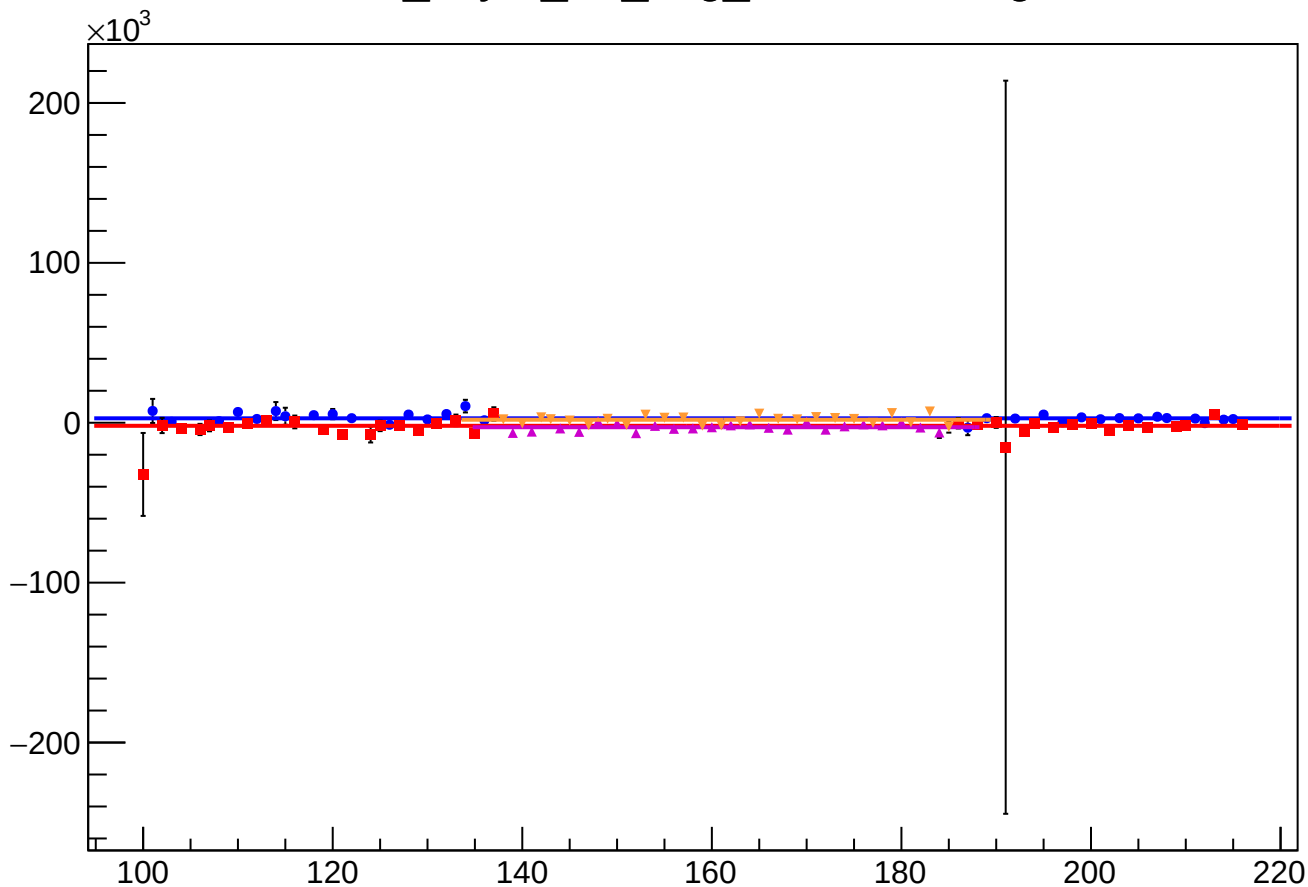
Left In: 4663.273 $\pm$ 0.787  $\chi^2/\text{NDF}$ : 1286722.8/22

+ sign 4919.188 $\pm$ 0.584  $\chi^2/\text{NDF}$ : 5567901.7/55

All: 4789.688 $\pm$ 0.408  $\chi^2/\text{NDF}$ : 13681851.8/100

- sign 4666.098 $\pm$ 0.571  $\chi^2/\text{NDF}$ : 8017861.2/57

# dit\_asym\_atr\_avg\_mean vs Slug



Right In:  $2771.471 \pm 456.391$   $\chi^2/\text{NDF}$ : 19.0/30

Left Out:  $1880.927 \pm 428.980$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-1914.973 \pm 454.992$   $\chi^2/\text{NDF}$ : 34.5/34

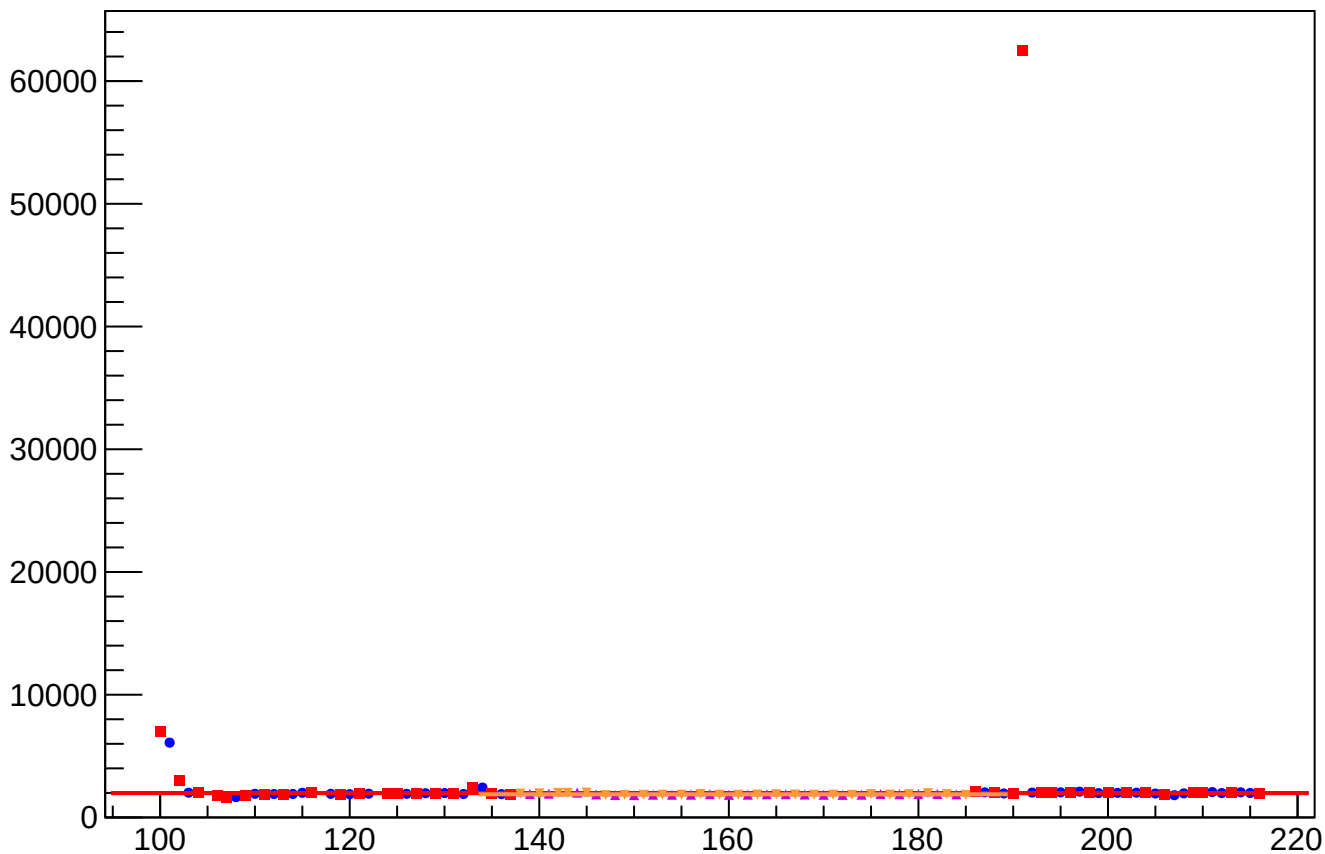
Left In:  $-2798.435 \pm 439.234$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $2298.654 \pm 312.576$   $\chi^2/\text{NDF}$ : 54.0/55

All:  $-11.296 \pm 222.229$   $\chi^2/\text{NDF}$ : 226.2/113

- sign  $-2372.267 \pm 316.010$   $\chi^2/\text{NDF}$ : 61.8/57

# dit\_asym\_atr\_avg\_rms vs Slug



Right In: 1986.576 $\pm$ 0.323  $\chi^2$ /NDF: 695065.2/30

Left Out: 1887.545 $\pm$ 0.303  $\chi^2$ /NDF: 31955.7/24

Right Out: 1987.664 $\pm$ 0.322  $\chi^2$ /NDF: 436104.6/34

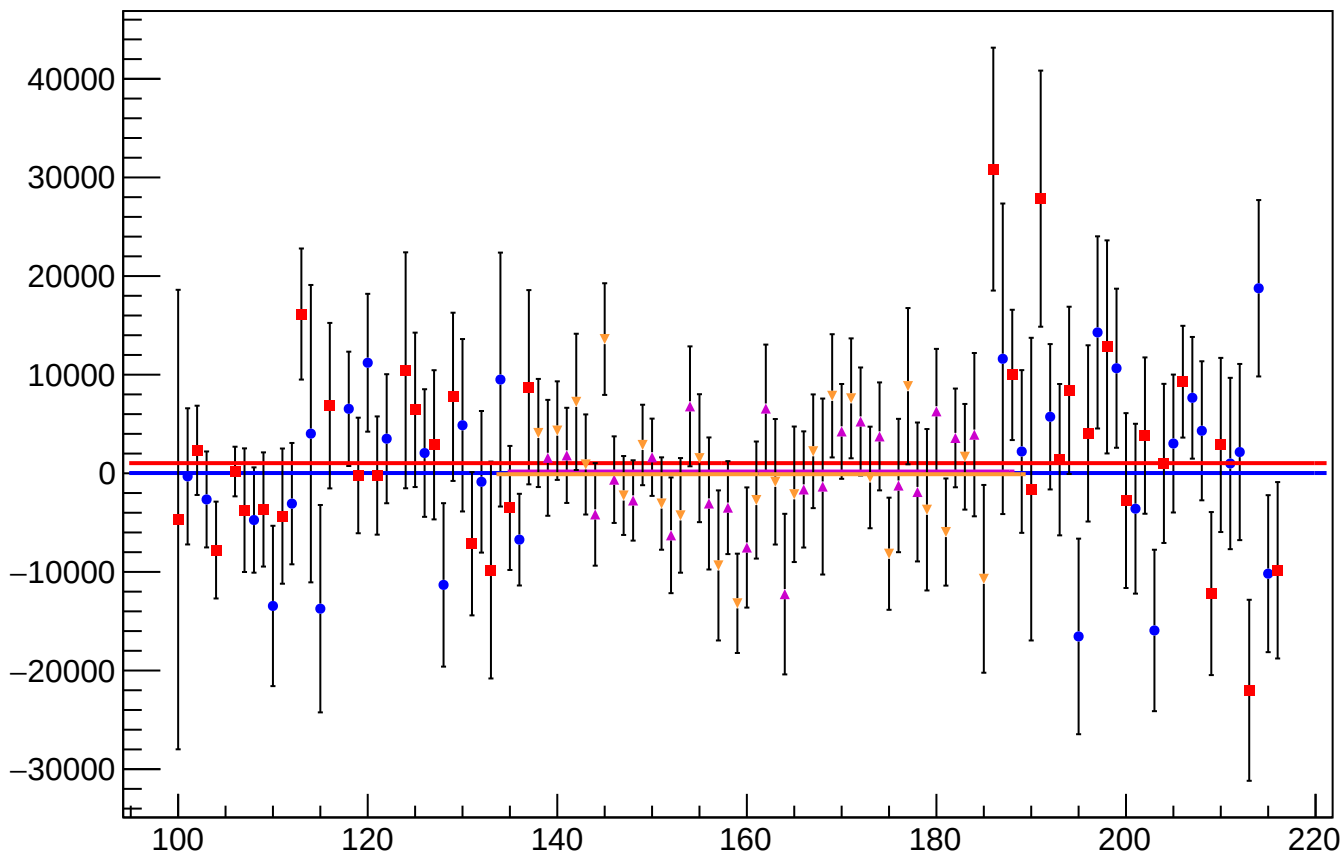
Left In: 1880.575 $\pm$ 0.311  $\chi^2$ /NDF: 19037.6/22

+ sign 1933.998 $\pm$ 0.221  $\chi^2$ /NDF: 777016.9/55

All: 1933.134 $\pm$ 0.157  $\chi^2$ /NDF: 1289557.9/11

- sign 1932.251 $\pm$ 0.223  $\chi^2$ /NDF: 512510.1/57

# asym\_atr\_avg\_dit\_correction\_mean vs Slug



Right In: 27.079 $\pm$ 1321.451  $\chi^2$ /NDF: 35.0/30

Left Out: -91.889 $\pm$ 1133.233  $\chi^2$ /NDF: 28.1/24

Right Out: 1030.092 $\pm$ 1149.798  $\chi^2$ /NDF: 43.1/34

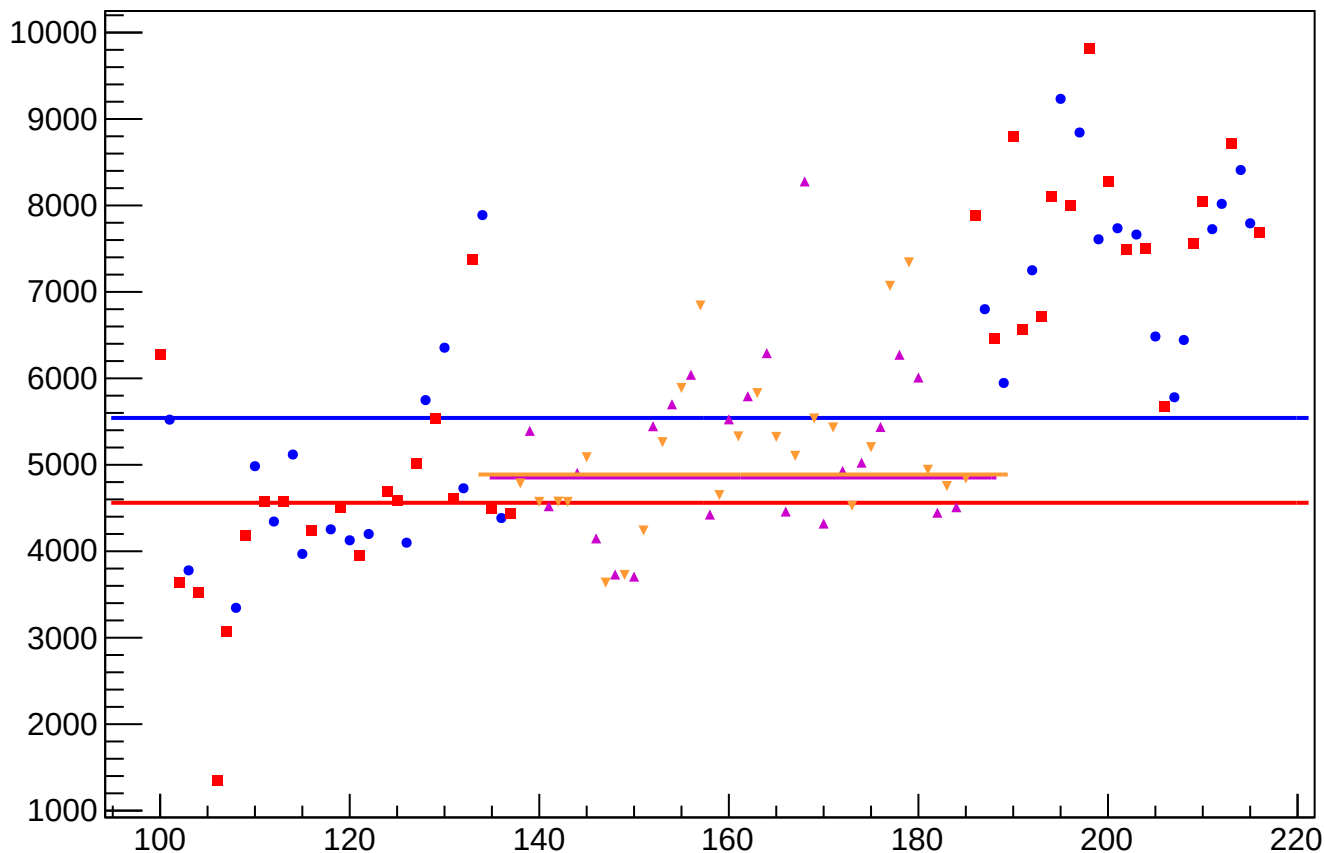
Left In: 177.137 $\pm$ 1156.061  $\chi^2$ /NDF: 13.5/22

+ sign -41.474 $\pm$ 860.234  $\chi^2$ /NDF: 63.1/55

All: 299.604 $\pm$ 591.727  $\chi^2$ /NDF: 120.3/113

- sign 605.931 $\pm$ 815.235  $\chi^2$ /NDF: 56.9/57

# asym\_atr\_avg\_dit\_correction\_rms vs Slug



Right In: 5542.142 $\pm$ 0.934  $\chi^2$ /NDF: 3076795.8/30

Left Out: 4887.823 $\pm$ 0.801  $\chi^2$ /NDF:1063298.6/24

Right Out: 4560.729 $\pm$ 0.813  $\chi^2$ /NDF: 7744684.2/34

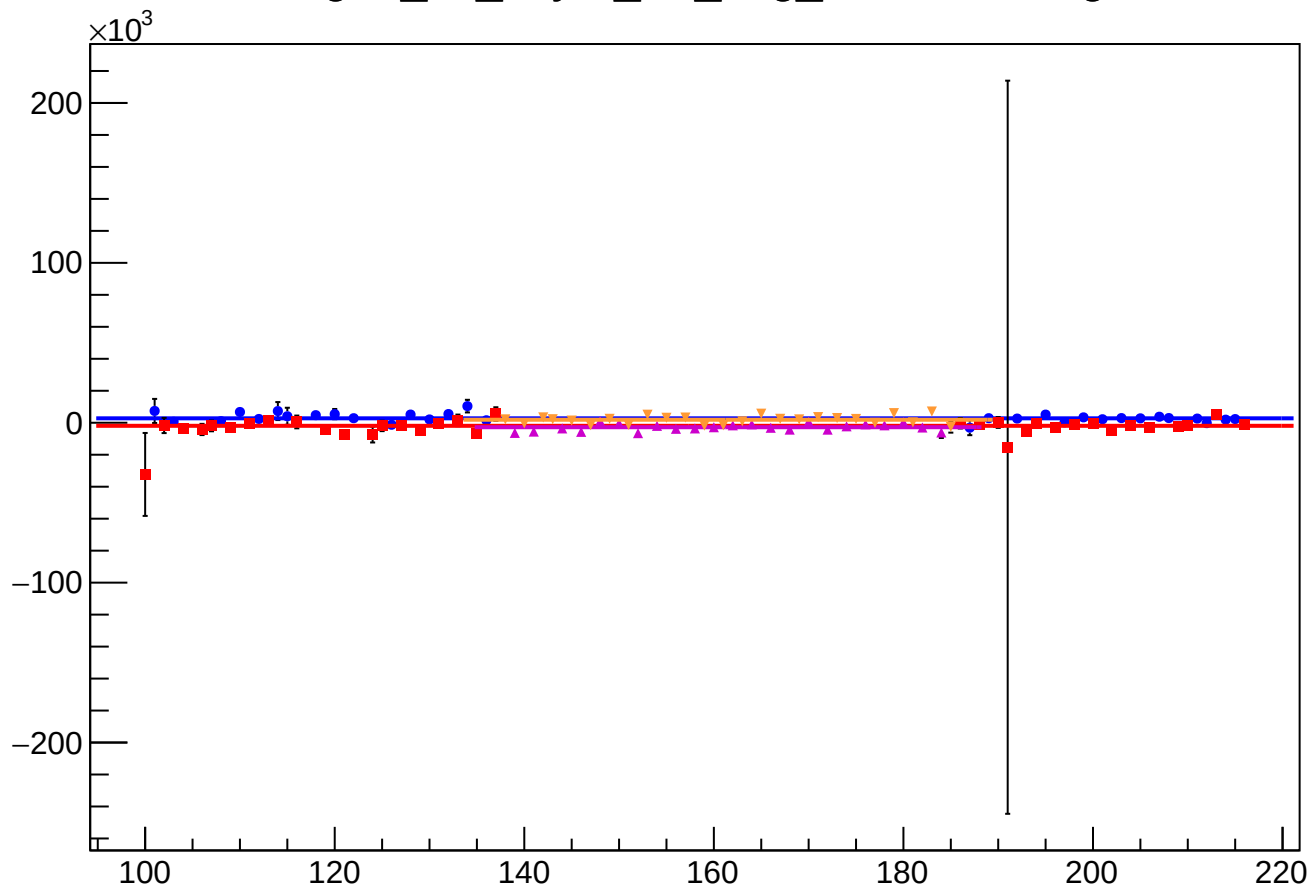
Left In: 4853.363 $\pm$ 0.817  $\chi^2$ /NDF:1178636.9/22

+ sign 5165.104 $\pm$ 0.608  $\chi^2$ /NDF: 4422648.6/55

All: 4923.363 $\pm$ 0.418  $\chi^2$ /NDF: 13710184.9/1

- sign 4706.252 $\pm$ 0.576  $\chi^2$ /NDF: 8987744.0/57

# eigen\_dit\_asym\_atr\_avg\_mean vs Slug



Right In:  $2771.468 \pm 456.391$   $\chi^2/\text{NDF}: 19.0/30$

Left Out:  $1880.922 \pm 428.981$   $\chi^2/\text{NDF}: 32.9/24$

Right Out:  $-1914.974 \pm 454.992$   $\chi^2/\text{NDF}: 34.5/34$

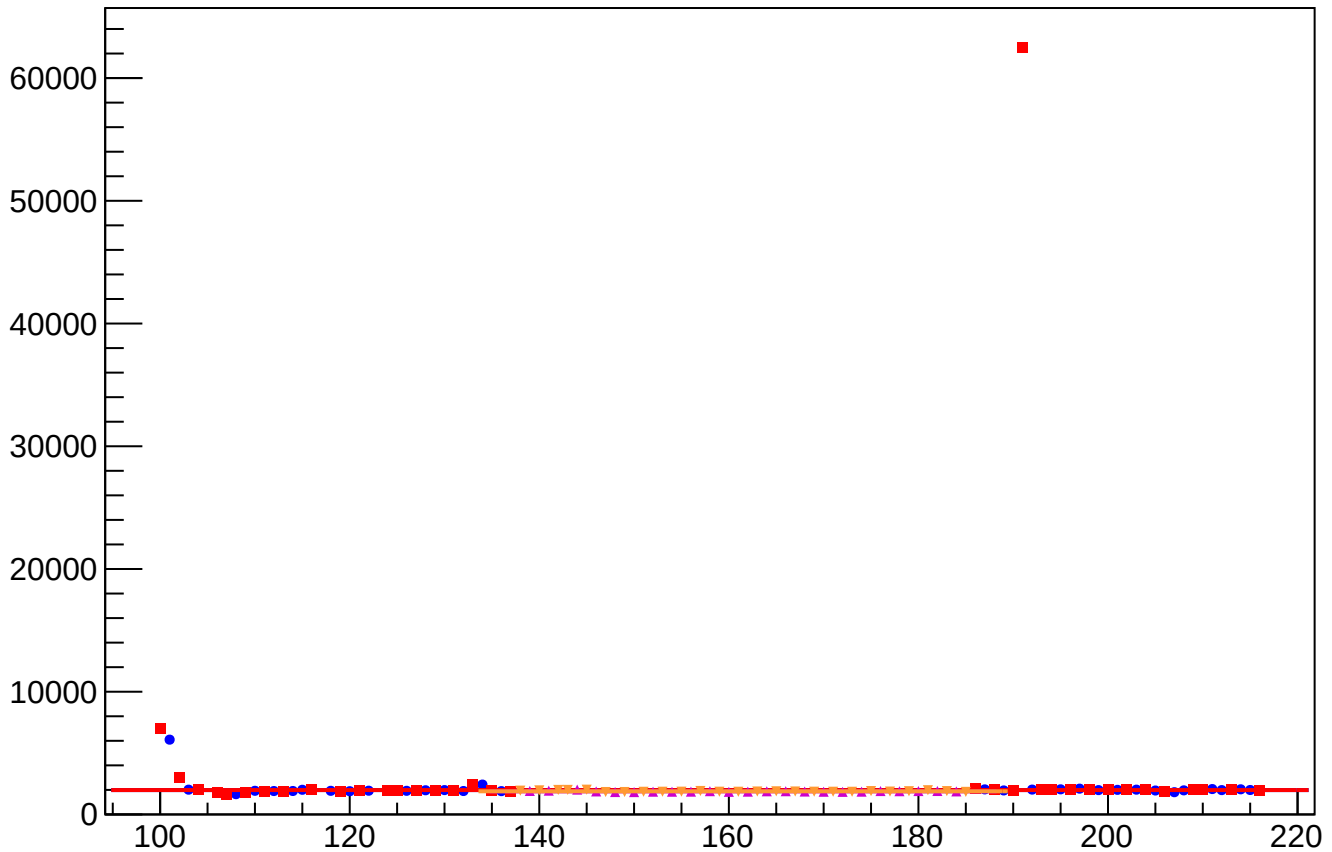
Left In:  $-2798.435 \pm 439.234$   $\chi^2/\text{NDF}: 25.4/22$

+ sign  $2298.650 \pm 312.576$   $\chi^2/\text{NDF}: 54.0/55$

All:  $-11.298 \pm 222.229$   $\chi^2/\text{NDF}: 226.2/113$

- sign  $-2372.267 \pm 316.010$   $\chi^2/\text{NDF}: 61.8/57$

# eigen\_dit\_asym\_atr\_avg\_rms vs Slug



Right In: 1986.576 $\pm$ 0.323  $\chi^2$ /NDF: 695065.4/30

Left Out: 1887.546 $\pm$ 0.303  $\chi^2$ /NDF: 31955.8/24

Right Out: 1987.664 $\pm$ 0.322  $\chi^2$ /NDF: 436104.1/34

Left In: 1880.576 $\pm$ 0.311  $\chi^2$ /NDF: 19037.6/22

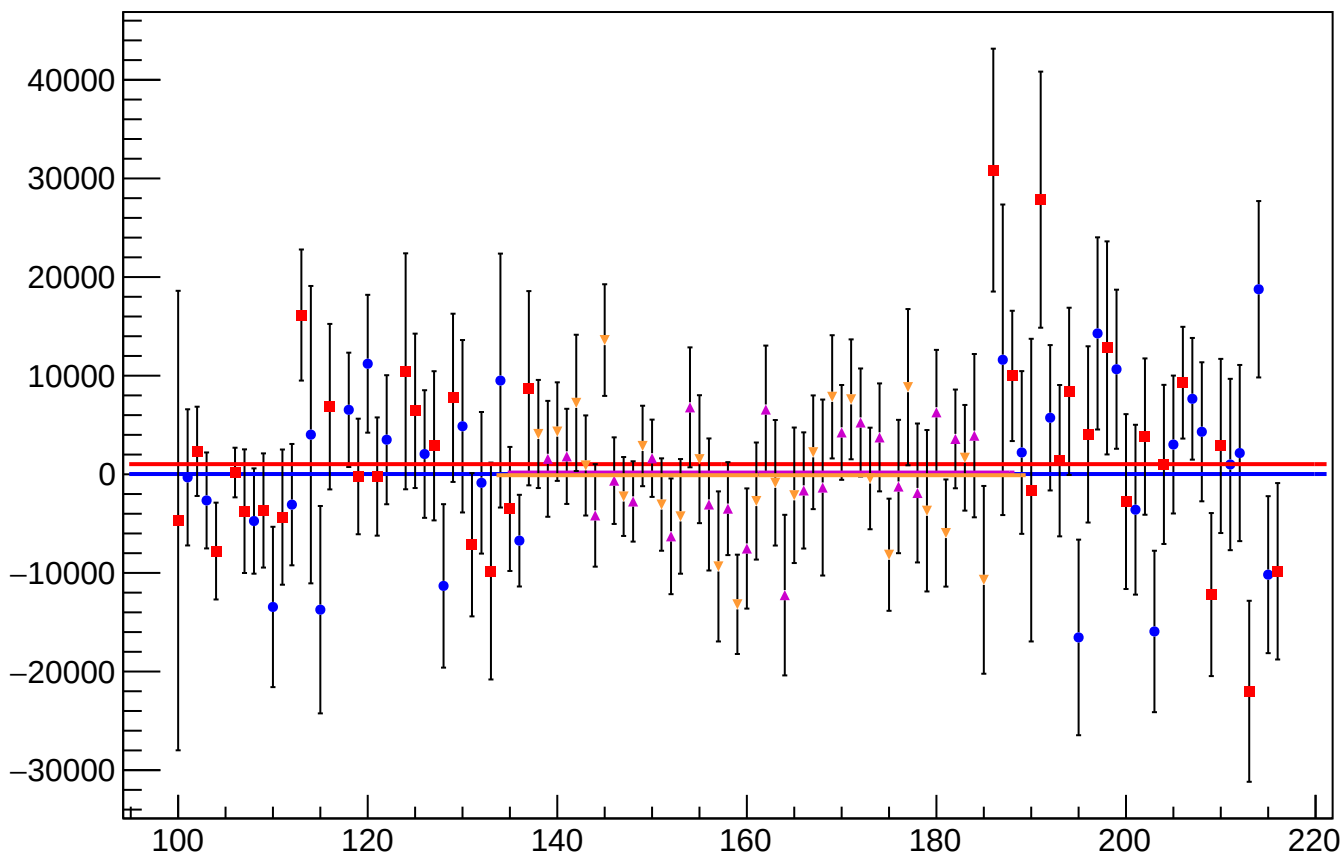
+ sign 1933.998 $\pm$ 0.221  $\chi^2$ /NDF: 777016.3/55

All: 1933.134 $\pm$ 0.157  $\chi^2$ /NDF: 1289555.9/11

- sign 1932.251 $\pm$ 0.223  $\chi^2$ /NDF: 512508.7/57



asym\_atr\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 27.086 $\pm$ 1321.450  $\chi^2$ /NDF: 35.0/30

Left Out: -91.892 $\pm$ 1133.235  $\chi^2$ /NDF: 28.1/24

Right Out: 1030.091 $\pm$ 1149.797  $\chi^2$ /NDF: 43.1/34

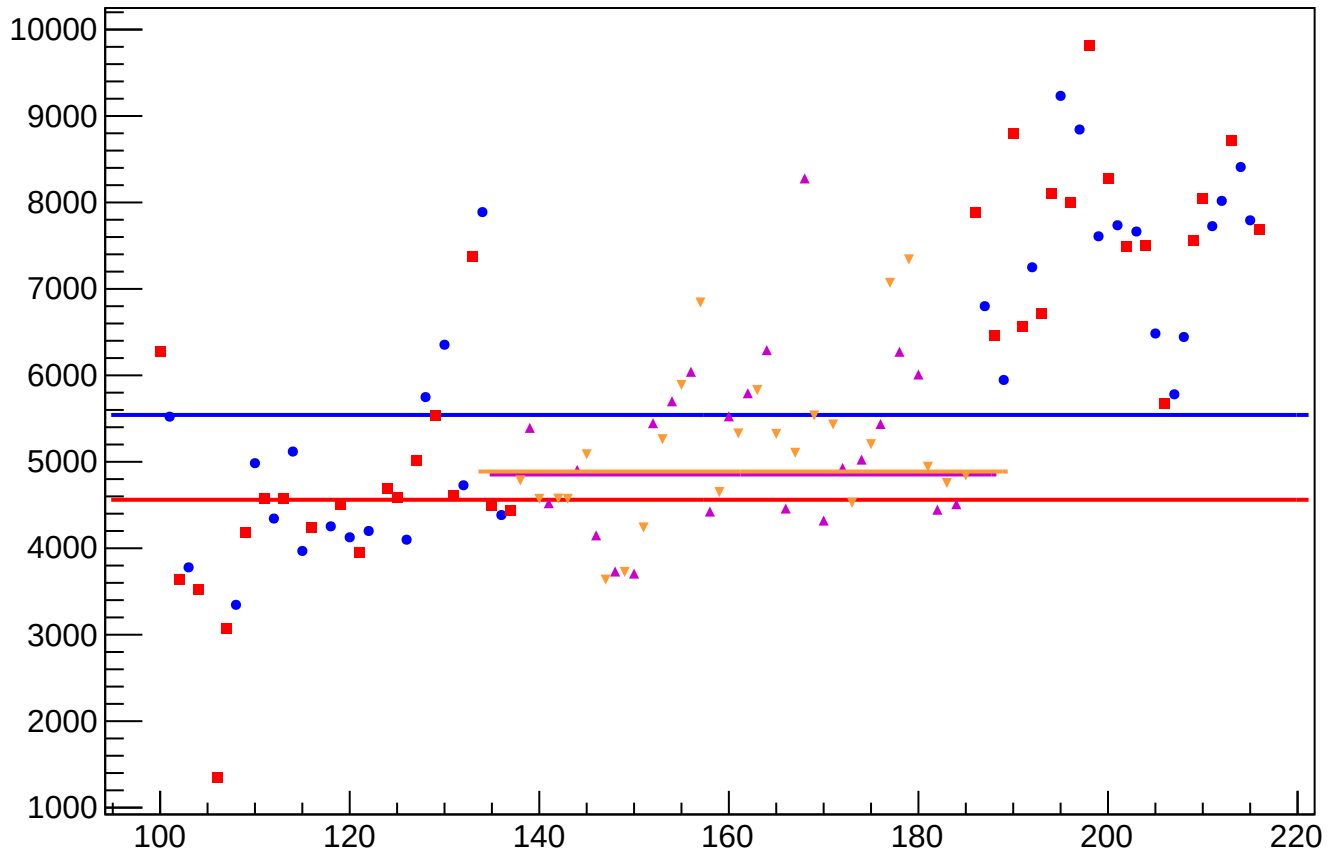
Left In: 177.140 $\pm$ 1156.062  $\chi^2$ /NDF: 13.5/22

+ sign -41.473 $\pm$ 860.235  $\chi^2$ /NDF: 63.1/55

All: 299.605 $\pm$ 591.728  $\chi^2$ /NDF: 120.3/113

- sign 605.933 $\pm$ 815.235  $\chi^2$ /NDF: 56.9/57

asym\_atr\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 5542.137+/-0.934  $\chi^2/\text{NDF}$ : 3076820.1/30

Left Out: 4887.830+/-0.801  $\chi^2/\text{NDF}$ : 1063300.0/24

Right Out: 4560.721+/-0.813  $\chi^2/\text{NDF}$ : 7744729.9/34

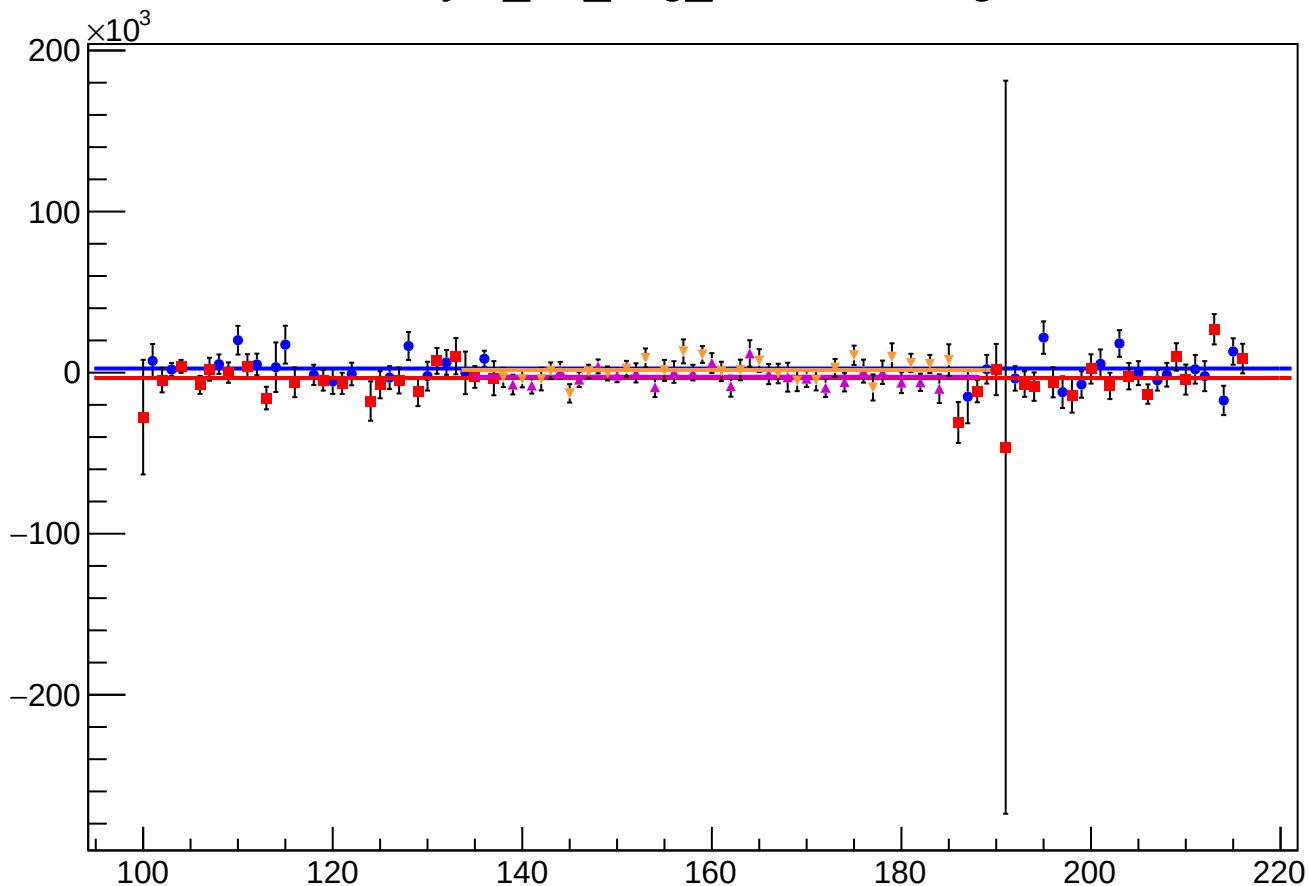
Left In: 4853.371+/-0.817  $\chi^2/\text{NDF}$ : 1178639.4/22

+ sign 5165.108+/-0.608  $\chi^2/\text{NDF}$ : 4422663.5/55

All: 4923.364+/-0.418  $\chi^2/\text{NDF}$ : 13710260.6/100

- sign 4706.250+/-0.576  $\chi^2/\text{NDF}$ : 8987799.3/57

# asym\_atr\_avg\_mean vs Slug



Right In: 2551.606 $\pm$ 1382.659  $\chi^2$ /NDF: 34.2/30

Left Out: 1654.615 $\pm$ 1178.652  $\chi^2$ /NDF:26.0/24

Right Out: -3317.817 $\pm$ 1341.606  $\chi^2$ /NDF: 41.4/34

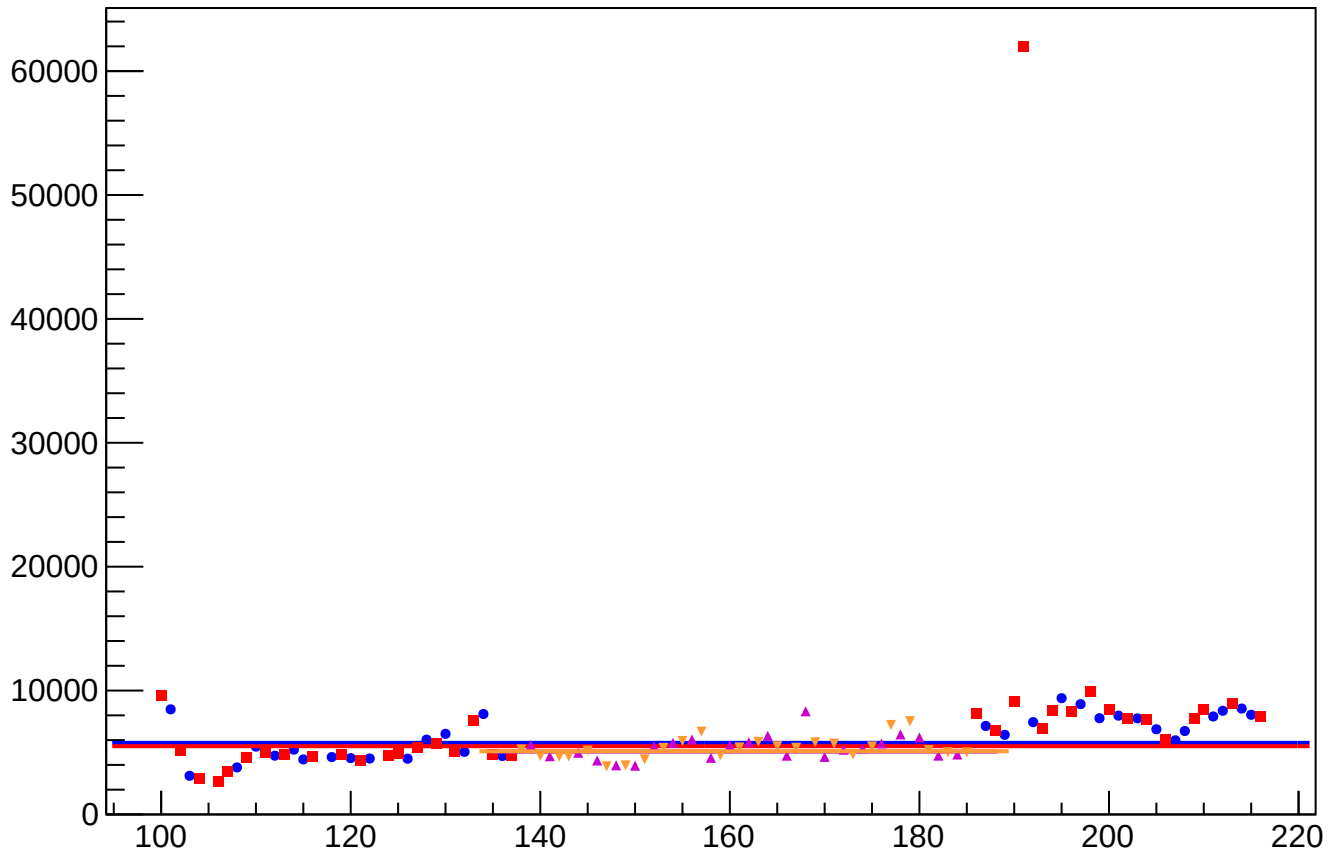
Left In: -2563.603 $\pm$ 1204.450  $\chi^2$ /NDF:16.0/22

+ sign 2032.116 $\pm$ 896.975  $\chi^2$ /NDF: 60.4/55

All: -436.020 $\pm$ 634.002  $\chi^2$ /NDF: 133.0/113

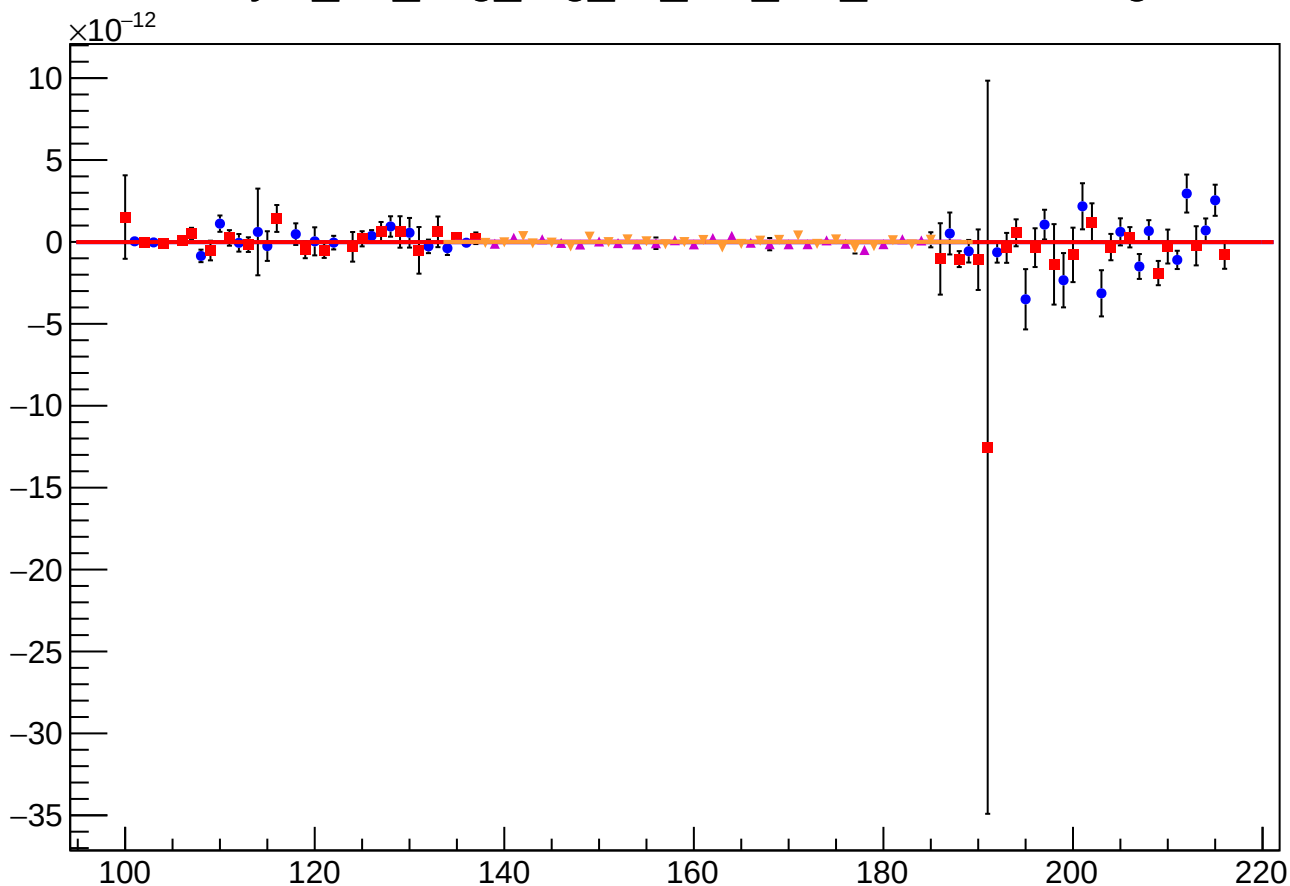
- sign -2900.198 $\pm$ 896.255  $\chi^2$ /NDF: 57.5/57

# asym\_atr\_avg\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 5781.013+/-0.978  | $\chi^2/\text{NDF}$ : 3352514.7/30 | + sign 5386.978+/-0.634 | $\chi^2/\text{NDF}$ : 4542311.9/55   |
| Left Out: 5100.641+/-0.833  | $\chi^2/\text{NDF}$ : 909330.5/24  | All: 5327.767+/-0.448   | $\chi^2/\text{NDF}$ : 10069617.4/100 |
| Right Out: 5508.685+/-0.943 | $\chi^2/\text{NDF}$ : 4400792.6/34 | - sign 5268.949+/-0.632 | $\chi^2/\text{NDF}$ : 5509933.4/57   |
| Left In: 5073.543+/-0.852   | $\chi^2/\text{NDF}$ : 991915.5/22  |                         |                                      |

asym\_atr\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.1/34

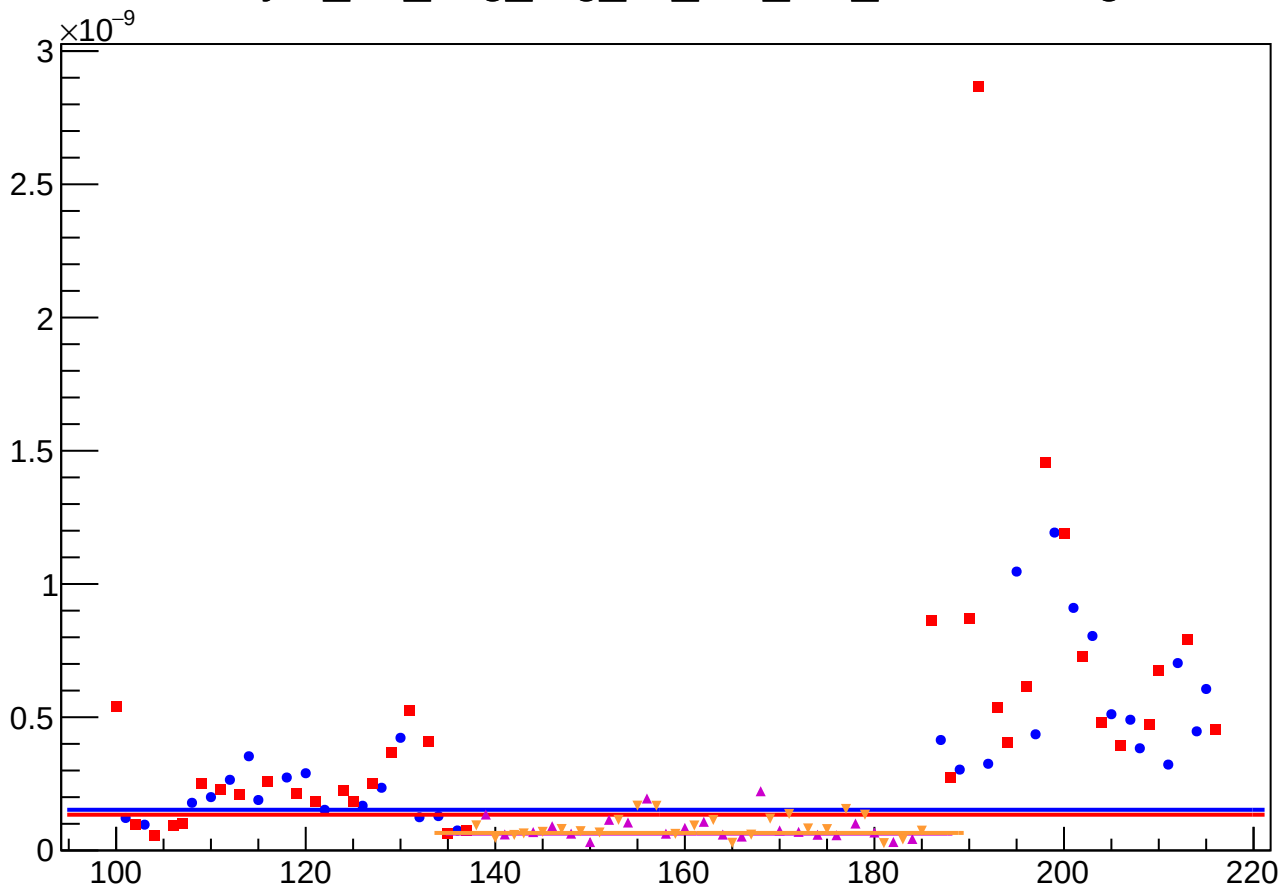
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 89.3/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 153.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 63.6/57

asym\_atr\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6771531.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2472657.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8452028.8/34

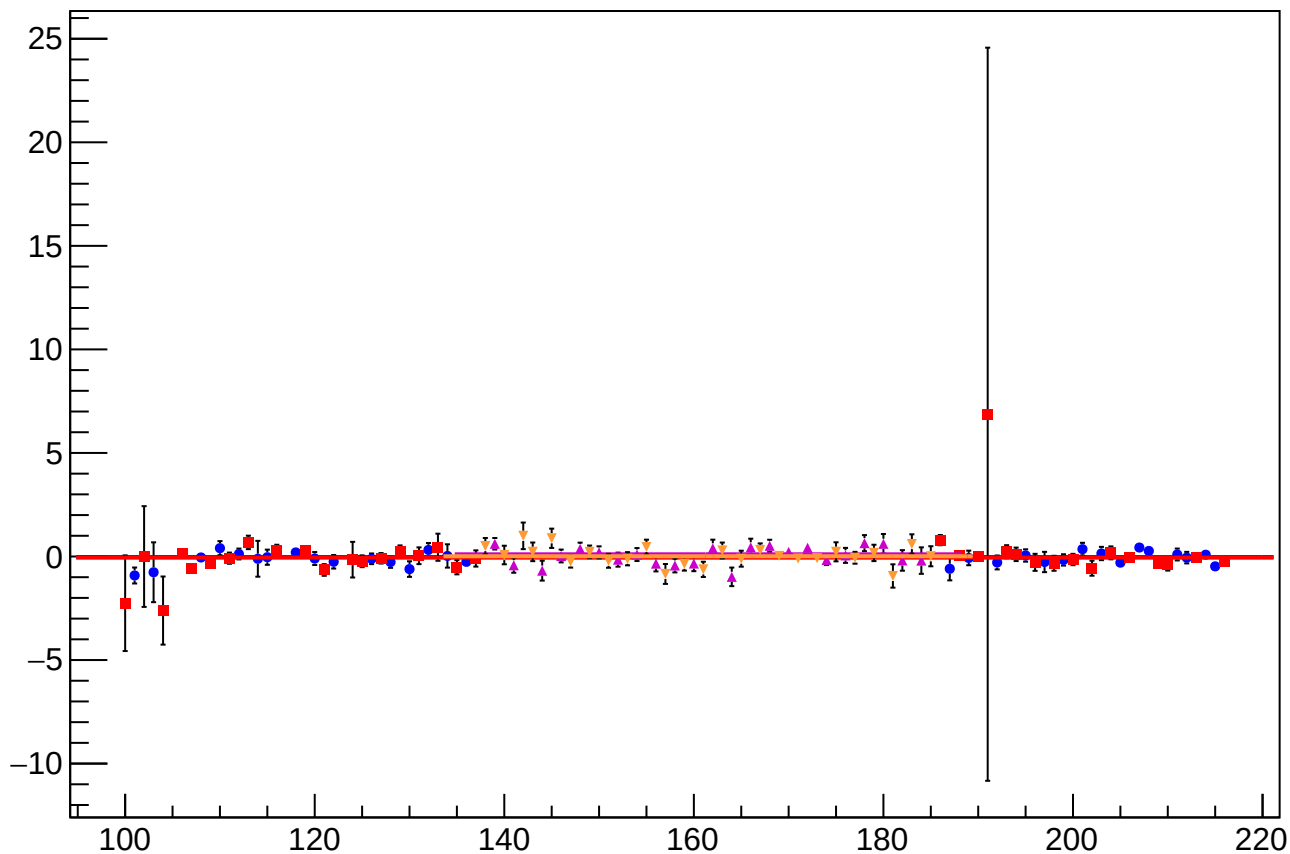
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2196878.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11827123.5/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24311119.1/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12457519.4/57

asym\_atr\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.030 \pm 0.050$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.054 \pm 0.046$   $\chi^2/\text{NDF}$ : 49.2/34

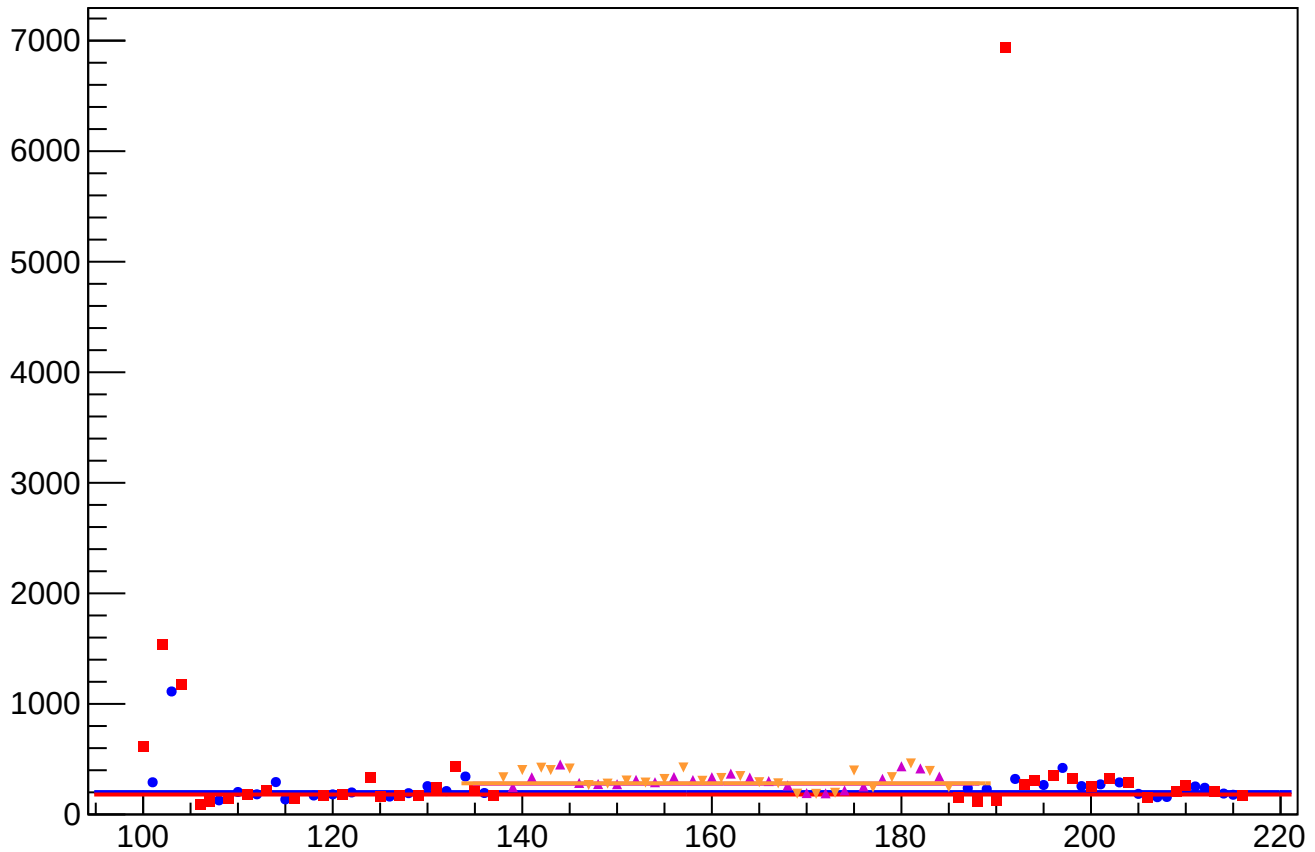
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.016 \pm 0.040$   $\chi^2/\text{NDF}$ : 61.5/55

All:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 145.9/113

- sign  $-0.004 \pm 0.038$   $\chi^2/\text{NDF}$ : 84.3/57

# asym\_atr\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 202.304+/-0.035  $\chi^2/\text{NDF}$ : 3033433.5/30

Left Out: 281.818+/-0.048  $\chi^2/\text{NDF}$ : 2520824.2/24

Right Out: 180.397+/-0.033  $\chi^2/\text{NDF}$ : 5686102.1/34

Left In: 278.409+/-0.049  $\chi^2/\text{NDF}$ : 1799690.4/22

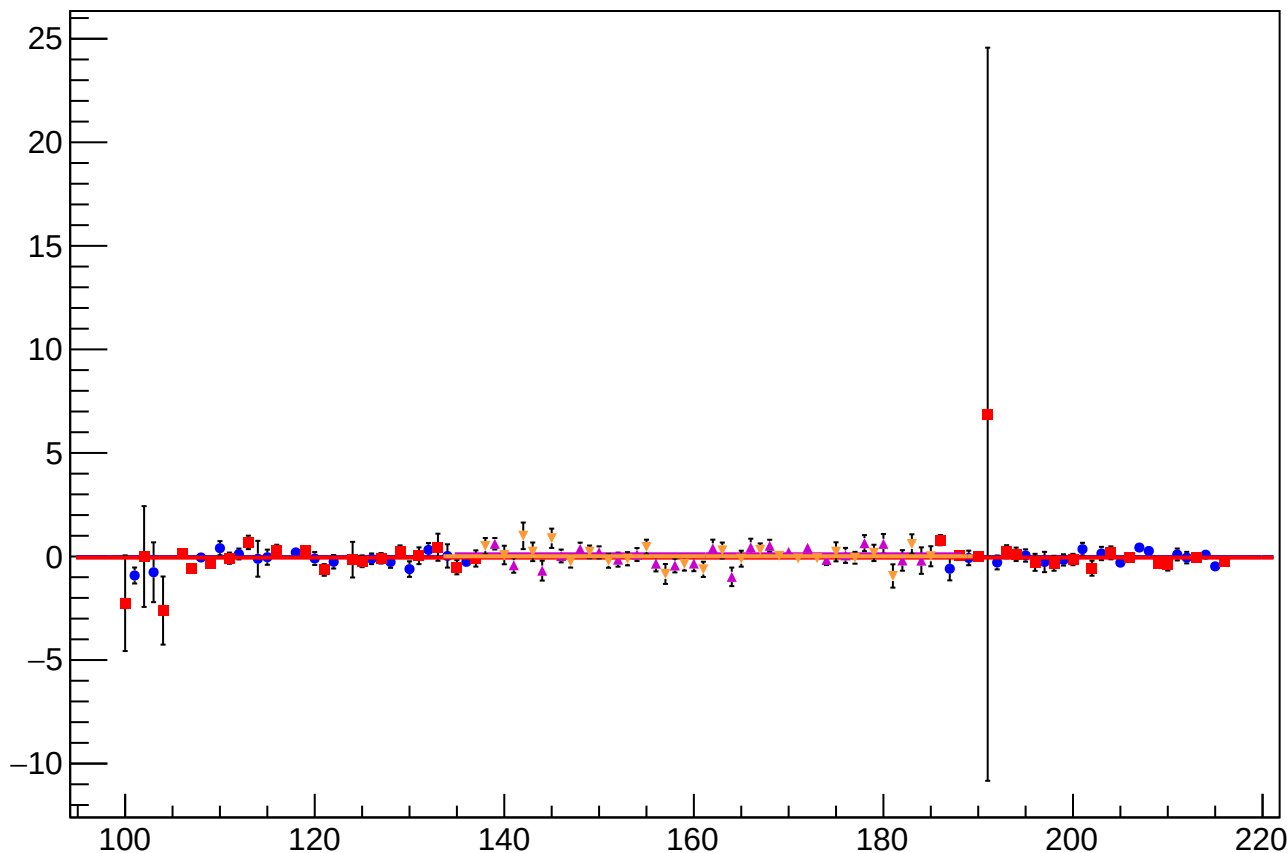
+ sign 230.064+/-0.028  $\chi^2/\text{NDF}$ : 7331739.1/55

All: 219.996+/-0.020  $\chi^2/\text{NDF}$ : 17869619.5/11

- sign 210.880+/-0.027  $\chi^2/\text{NDF}$ : 10298922.7/57



asym\_atr\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.030 \pm 0.050$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.054 \pm 0.046$   $\chi^2/\text{NDF}$ : 49.2/34

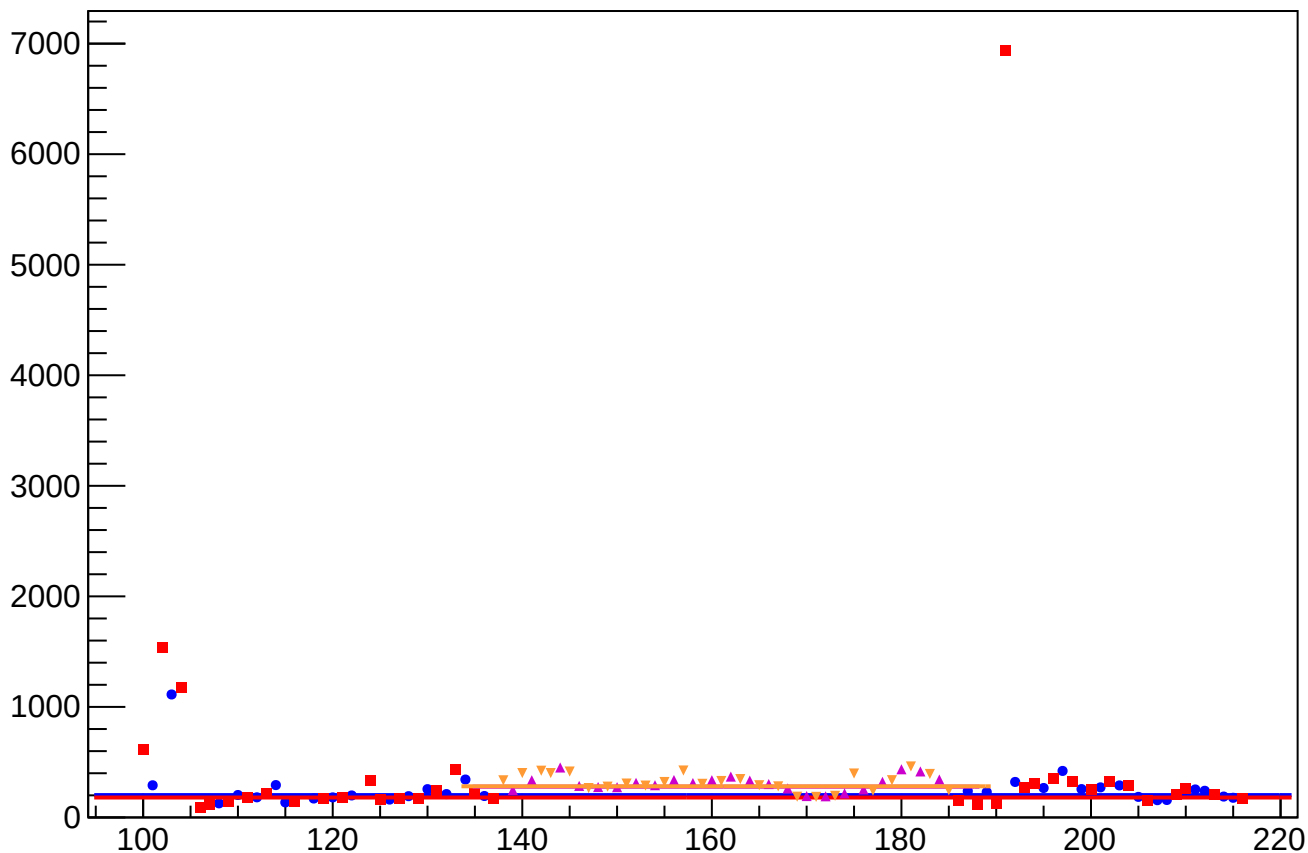
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.016 \pm 0.040$   $\chi^2/\text{NDF}$ : 61.5/55

All:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 145.9/113

- sign  $-0.004 \pm 0.038$   $\chi^2/\text{NDF}$ : 84.3/57

asym\_atr\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 202.304+/-0.035  $\chi^2/\text{NDF}$ : 3033433.5/30

Left Out: 281.818+/-0.048  $\chi^2/\text{NDF}$ : 2520824.2/24

Right Out: 180.397+/-0.033  $\chi^2/\text{NDF}$ : 5686102.1/34

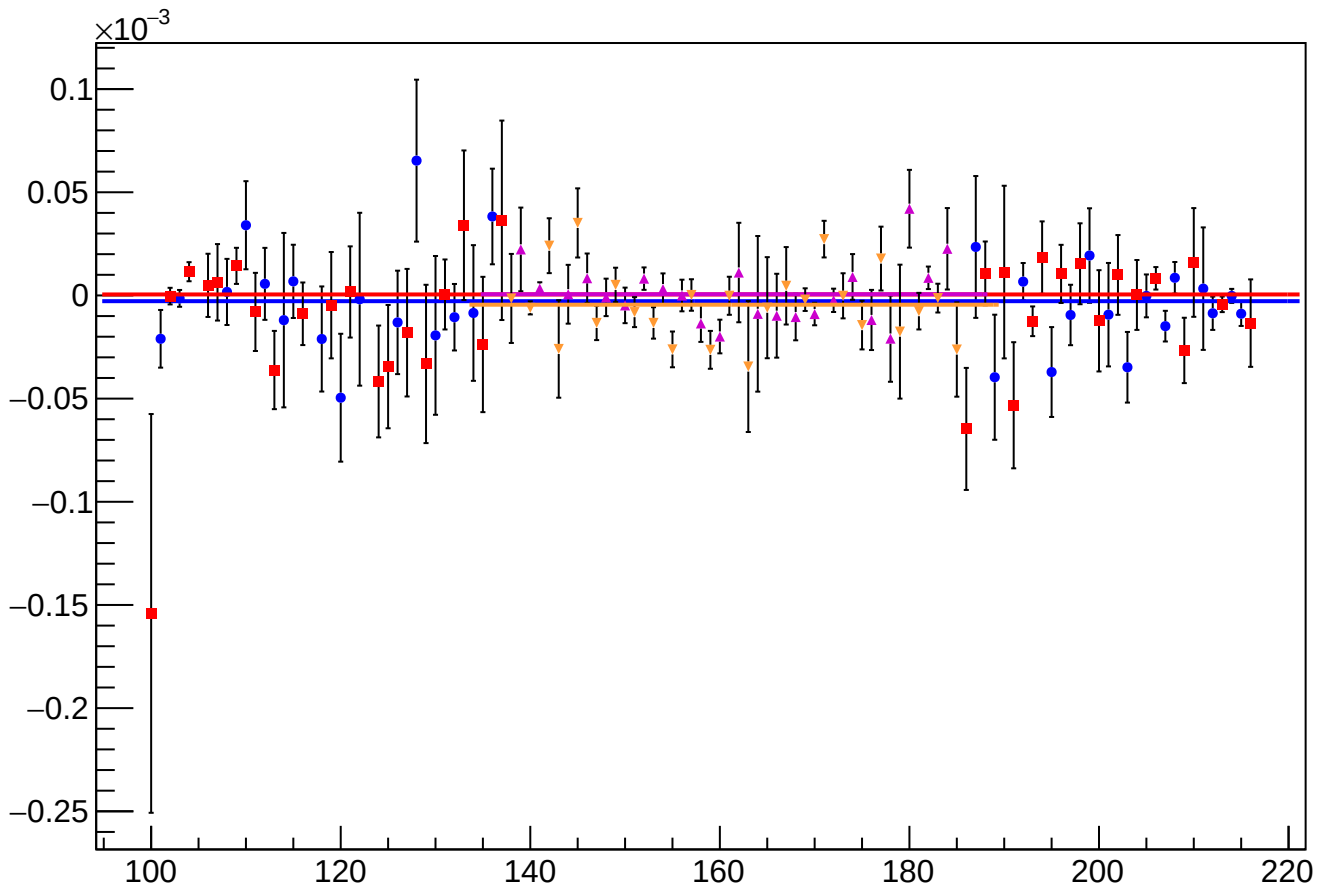
Left In: 278.409+/-0.049  $\chi^2/\text{NDF}$ : 1799690.4/22

+ sign 230.064+/-0.028  $\chi^2/\text{NDF}$ : 7331739.1/55

All: 219.996+/-0.020  $\chi^2/\text{NDF}$ : 17869619.5/11

- sign 210.880+/-0.027  $\chi^2/\text{NDF}$ : 10298922.7/57

asym\_atr\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.5/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.9/34

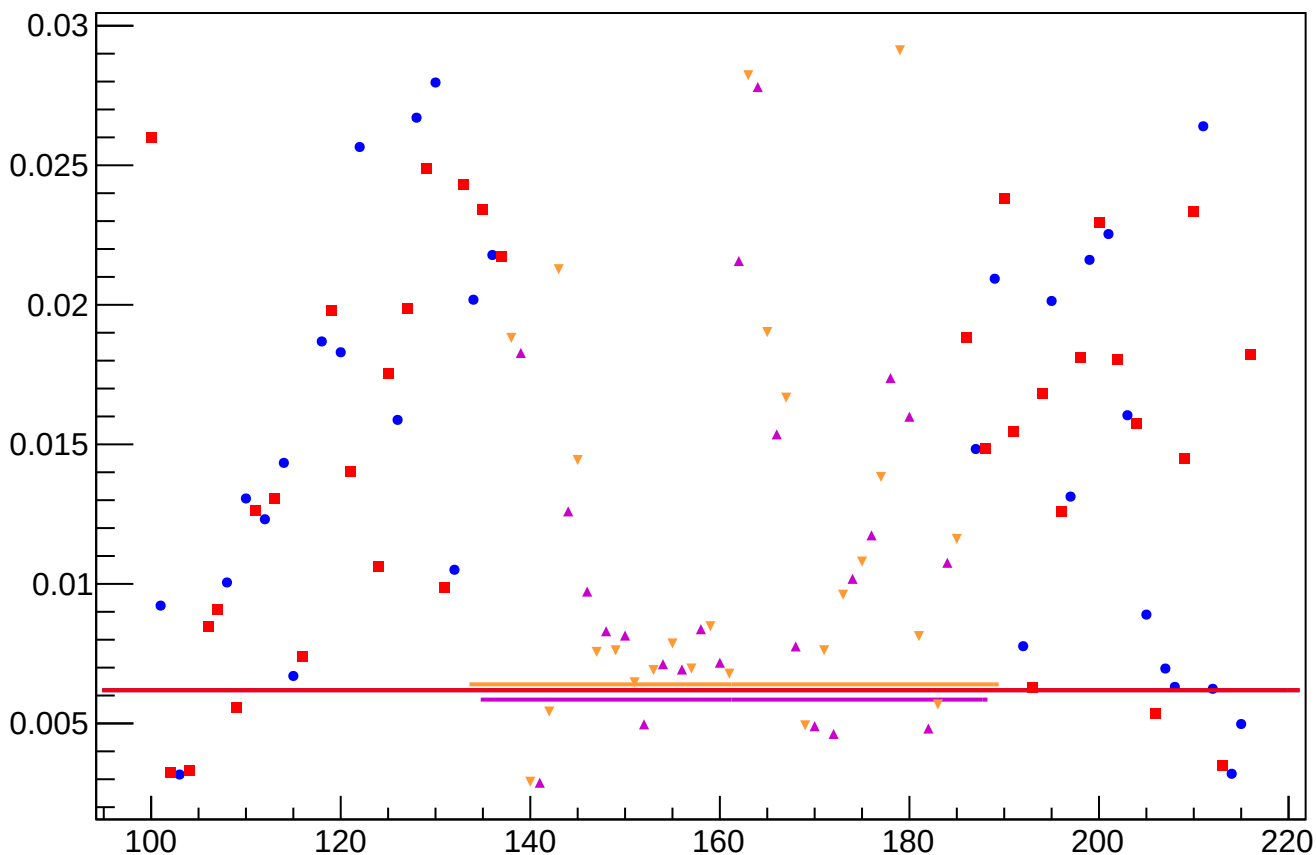
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 79.3/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 158.2/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.0/57

asym\_atr\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 13028633.2/30

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8964265.3/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 14770554.8/34

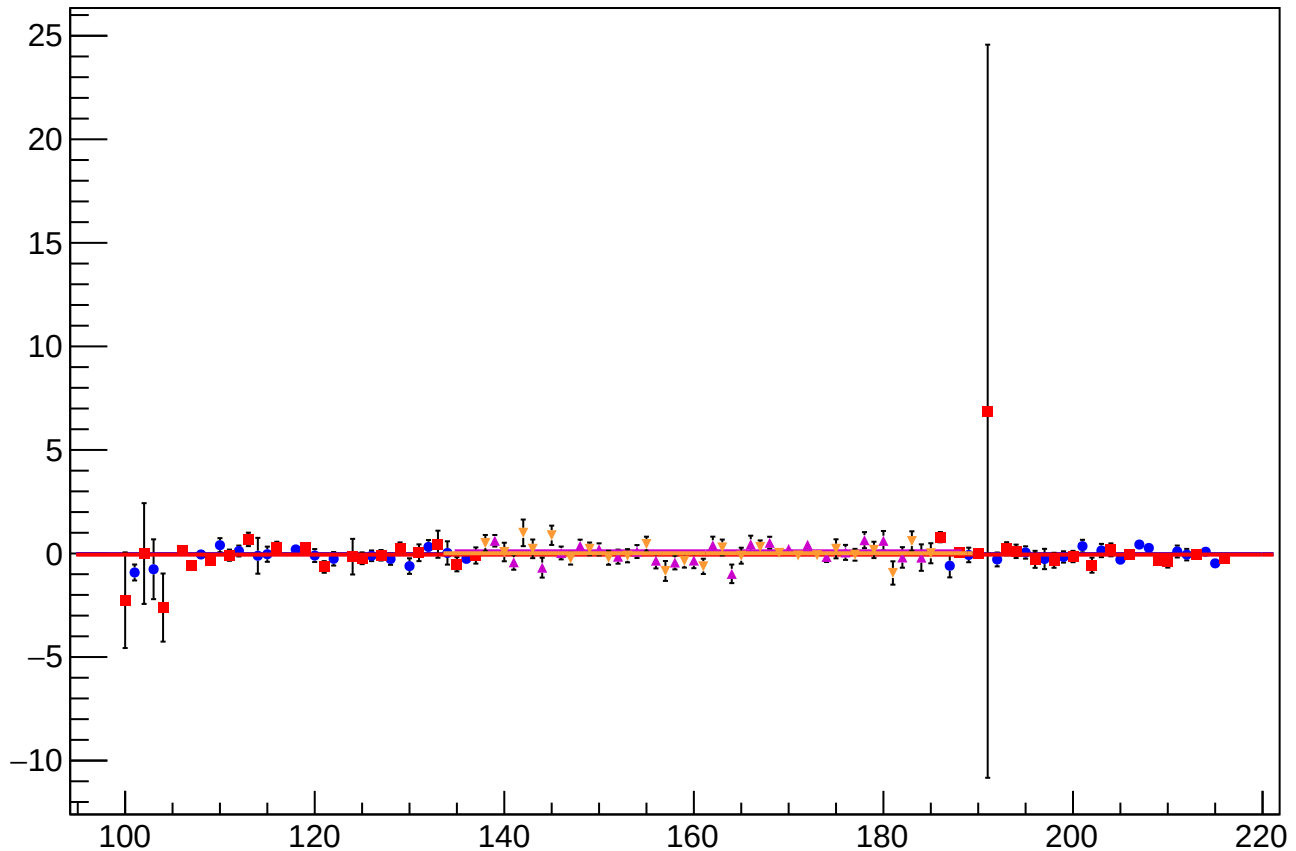
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8144305.6/22

+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 22006875.5/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 45017584.7/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 22953156.4/57

asym\_atr\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.030 \pm 0.050$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.054 \pm 0.046$   $\chi^2/\text{NDF}$ : 49.2/34

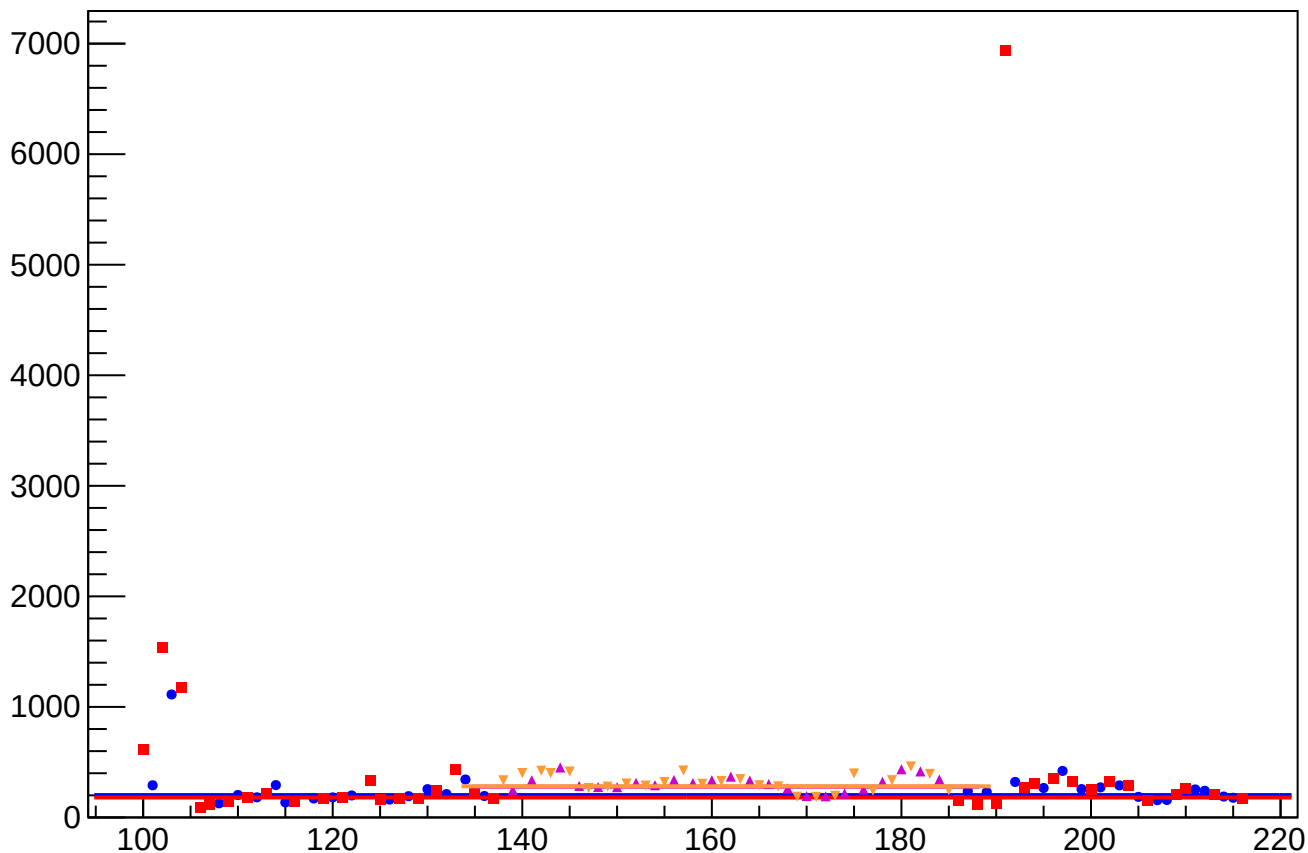
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.016 \pm 0.040$   $\chi^2/\text{NDF}$ : 61.5/55

All:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 145.9/113

- sign  $-0.004 \pm 0.038$   $\chi^2/\text{NDF}$ : 84.3/57

# asym\_atr\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 202.303+/-0.035  $\chi^2/\text{NDF}$ : 3033458.3/30

Left Out: 281.820+/-0.048  $\chi^2/\text{NDF}$ : 2520889.0/24

Right Out: 180.394+/-0.033  $\chi^2/\text{NDF}$ : 5686252.1/34

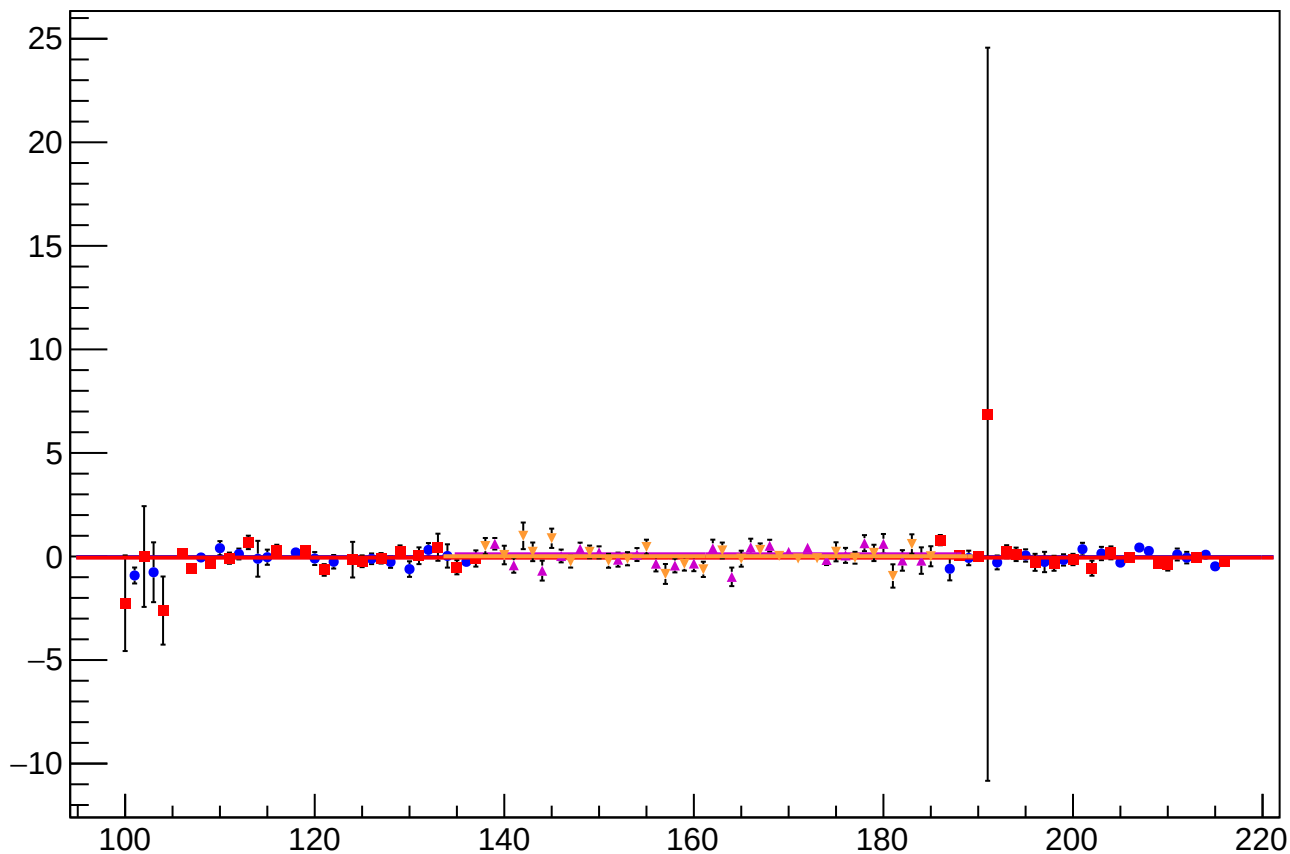
Left In: 278.412+/-0.049  $\chi^2/\text{NDF}$ : 1799730.1/22

+ sign 230.064+/-0.028  $\chi^2/\text{NDF}$ : 7331940.0/55

All: 219.995+/-0.020  $\chi^2/\text{NDF}$ : 17870350.1/11

- sign 210.878+/-0.027  $\chi^2/\text{NDF}$ : 10299396.0/57

asym\_atr\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.030 \pm 0.050$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.012 \pm 0.068$   $\chi^2/\text{NDF}$ : 25.2/24

Right Out:  $-0.054 \pm 0.046$   $\chi^2/\text{NDF}$ : 49.2/34

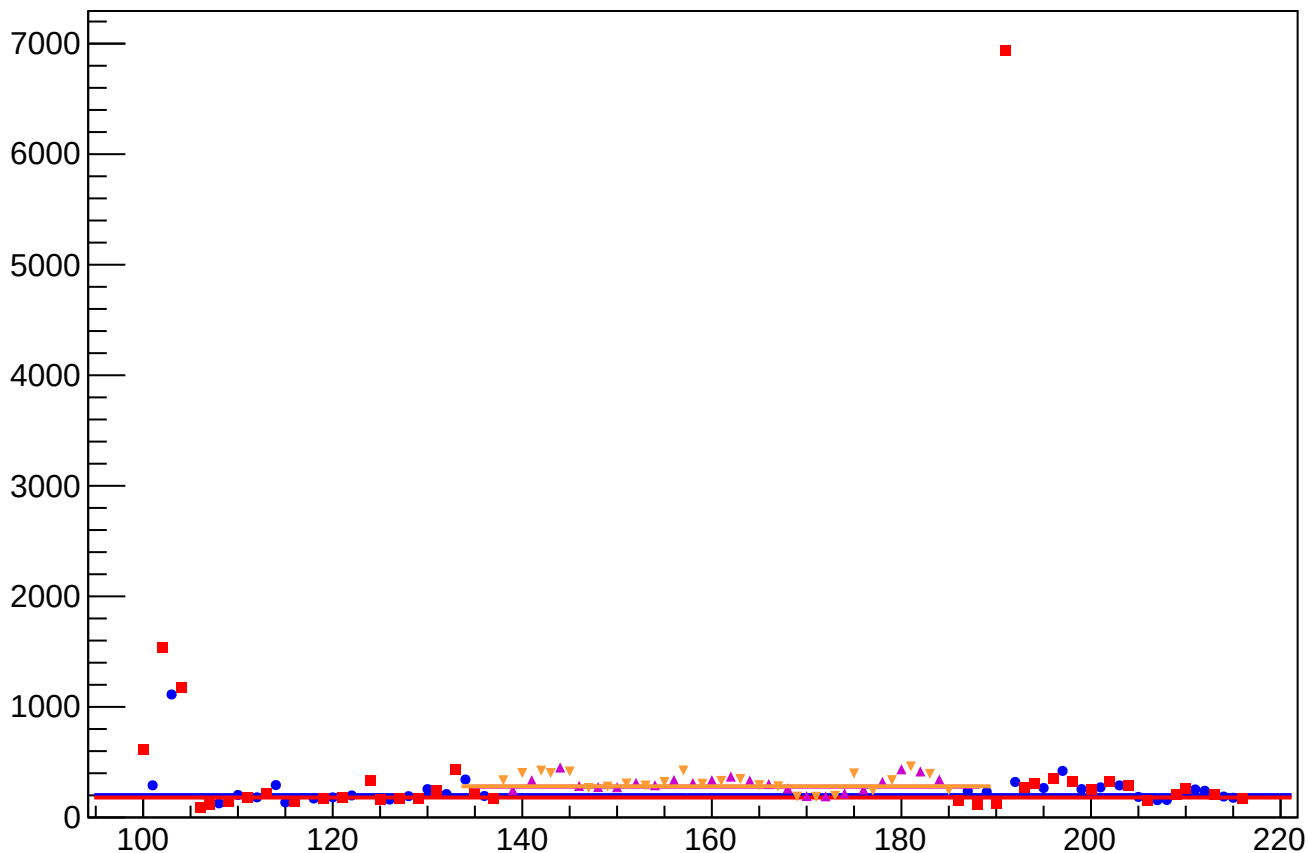
Left In:  $0.105 \pm 0.069$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.016 \pm 0.040$   $\chi^2/\text{NDF}$ : 61.5/55

All:  $-0.010 \pm 0.028$   $\chi^2/\text{NDF}$ : 145.9/113

- sign  $-0.004 \pm 0.038$   $\chi^2/\text{NDF}$ : 84.3/57

asym\_atr\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 202.303+/-0.035  $\chi^2/\text{NDF}$ : 3033458.3/30

Left Out: 281.820+/-0.048  $\chi^2/\text{NDF}$ : 2520889.0/24

Right Out: 180.394+/-0.033  $\chi^2/\text{NDF}$ : 5686252.1/34

Left In: 278.412+/-0.049  $\chi^2/\text{NDF}$ : 1799730.1/22

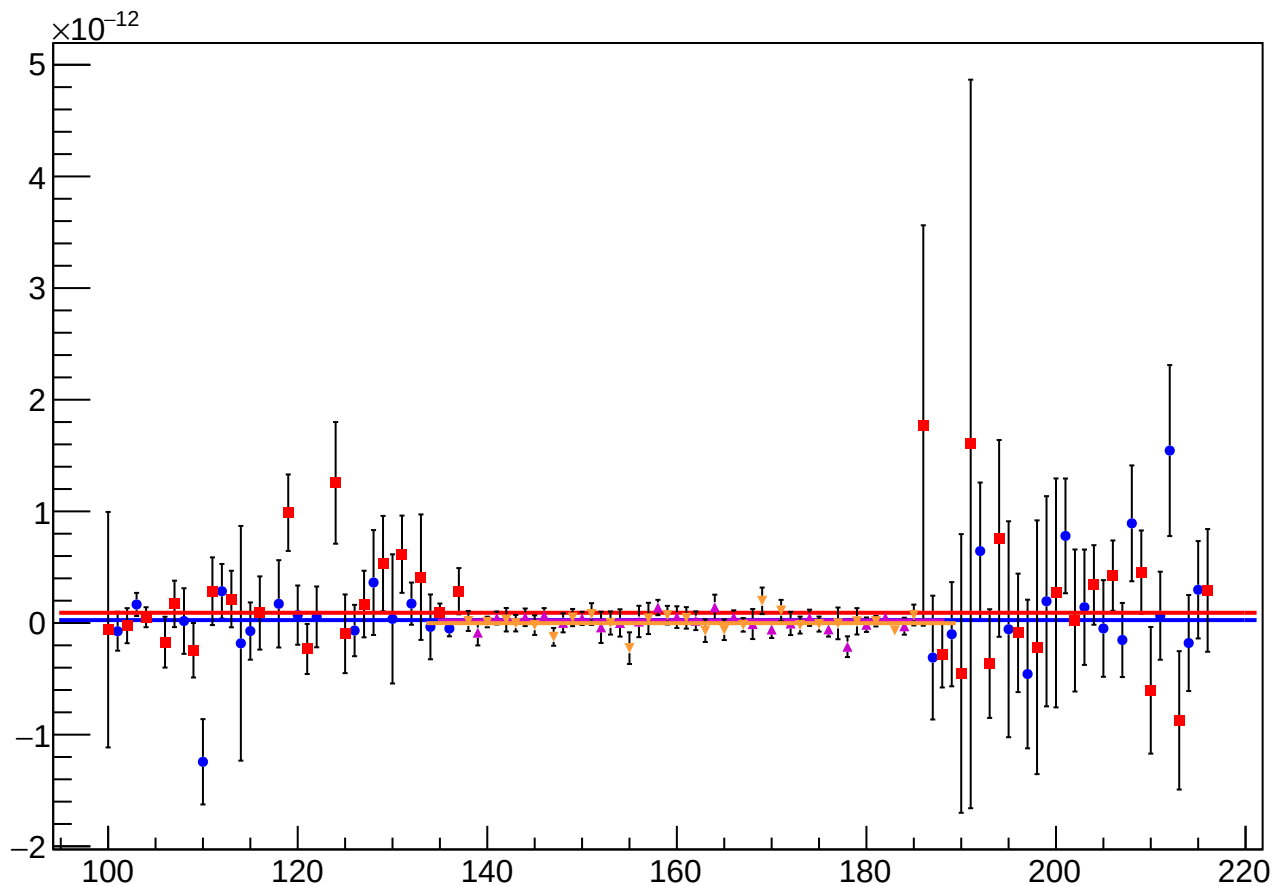
+ sign 230.064+/-0.028  $\chi^2/\text{NDF}$ : 7331940.0/55

All: 219.995+/-0.020  $\chi^2/\text{NDF}$ : 17870350.1/11

- sign 210.878+/-0.027  $\chi^2/\text{NDF}$ : 10299396.0/57



asym\_atr\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.0/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 15.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34.4/34

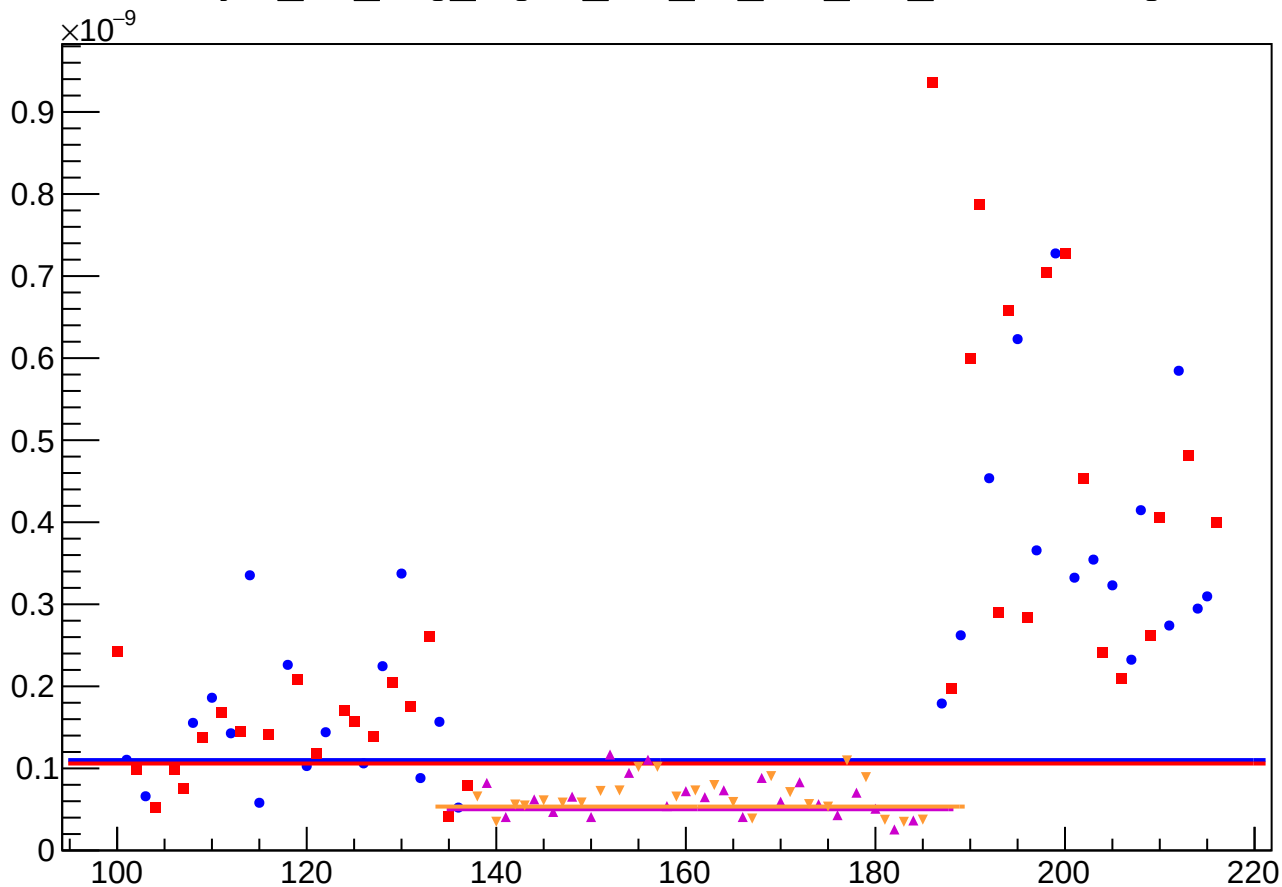
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 44.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 100.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 53.6/57

asym\_atr\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9533744.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2781376.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9759612.8/34

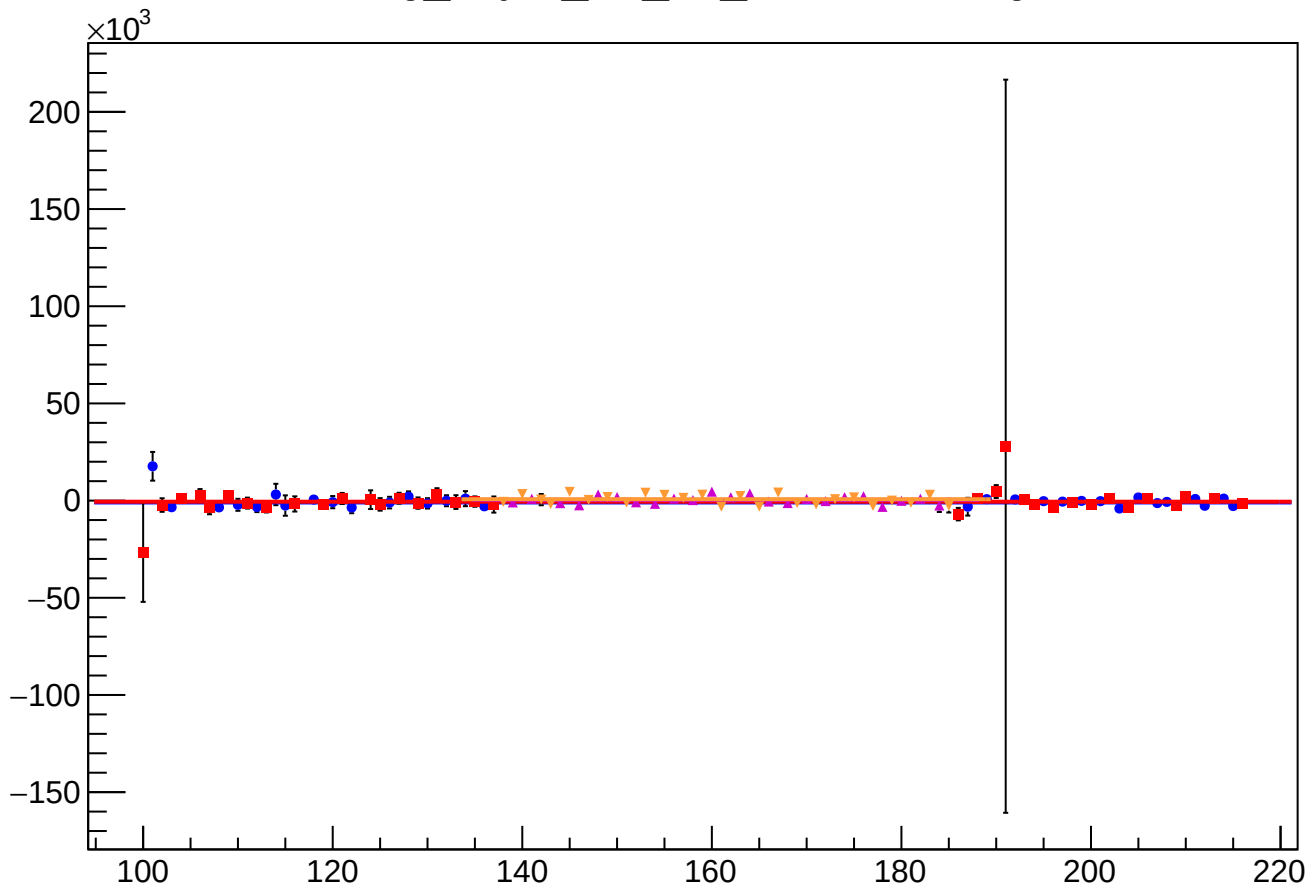
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3367886.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15385125.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31637317.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16198793.7/57

# reg\_asym\_atr\_dd\_mean vs Slug



Right In:  $-951.993 \pm 442.705$   $\chi^2/\text{NDF}$ : 22.5/30

Left Out:  $705.742 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-565.214 \pm 440.129$   $\chi^2/\text{NDF}$ : 26.8/34

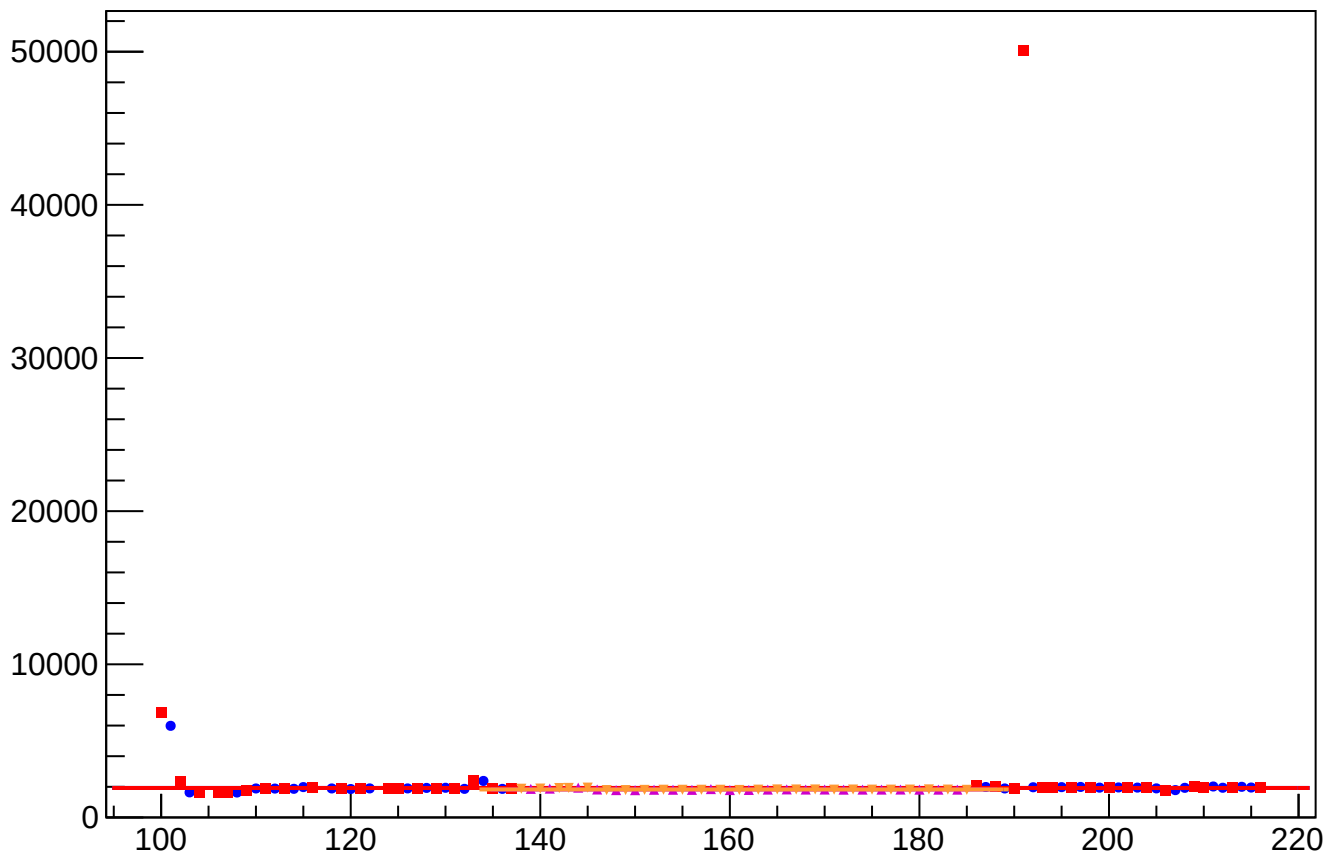
Left In:  $403.144 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $-70.395 \pm 302.919$   $\chi^2/\text{NDF}$ : 61.9/55

All:  $-67.967 \pm 215.340$   $\chi^2/\text{NDF}$ : 111.9/113

- sign  $-65.486 \pm 306.180$   $\chi^2/\text{NDF}$ : 50.0/57

# reg\_asym\_atr\_dd\_rms vs Slug



Right In: 1926.585 $\pm$ 0.313  $\chi^2$ /NDF: 723981.0/30

Left Out: 1828.243 $\pm$ 0.294  $\chi^2$ /NDF: 19329.0/24

Right Out: 1924.970 $\pm$ 0.311  $\chi^2$ /NDF: 393049.3/34

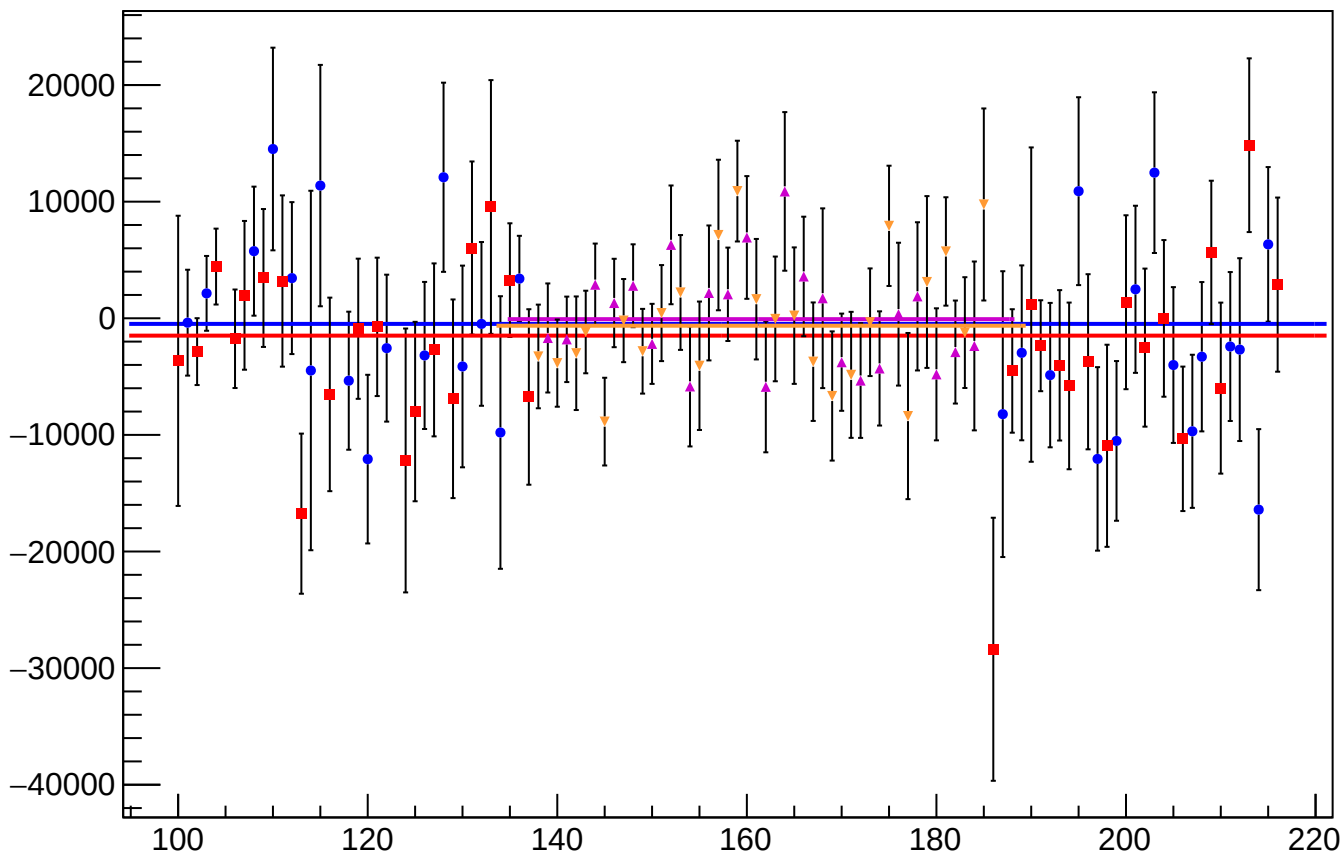
Left In: 1825.165 $\pm$ 0.301  $\chi^2$ /NDF: 13360.2/22

+ sign 1874.286 $\pm$ 0.214  $\chi^2$ /NDF: 795794.8/55

All: 1873.912 $\pm$ 0.152  $\chi^2$ /NDF: 1255356.3/11

- sign 1873.531 $\pm$ 0.216  $\chi^2$ /NDF: 459555.4/57

# asym\_atr\_dd\_reg\_correction\_mean vs Slug



Right In:  $-481.637 \pm 1150.487$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-637.703 \pm 946.866$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $-1488.506 \pm 1029.388$   $\chi^2/\text{NDF}$ : 32.9/34

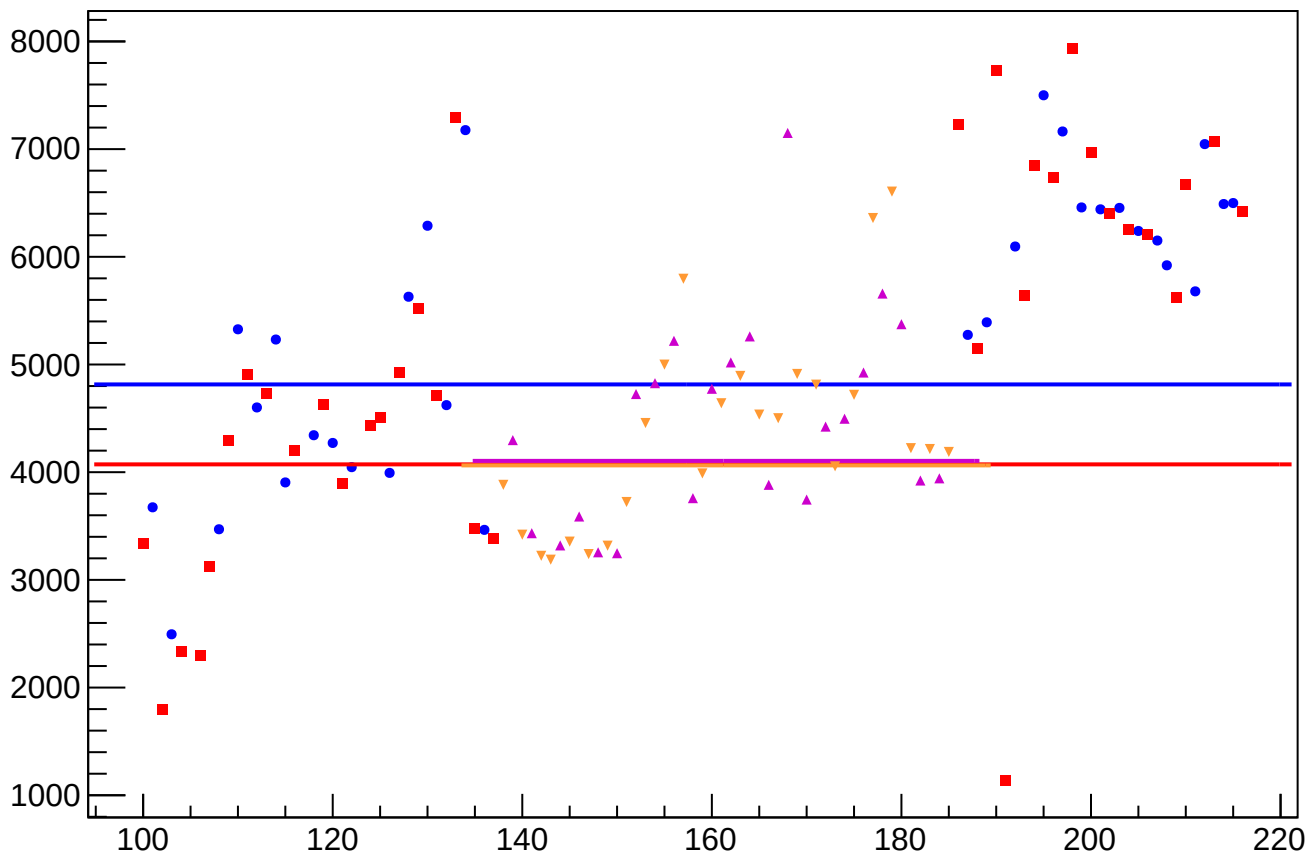
Left In:  $-75.764 \pm 980.243$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-574.680 \pm 731.100$   $\chi^2/\text{NDF}$ : 60.5/55

All:  $-663.690 \pm 509.296$   $\chi^2/\text{NDF}$ : 109.9/113

- sign  $-747.607 \pm 709.875$   $\chi^2/\text{NDF}$ : 49.3/57

# asym\_atr\_dd\_reg\_correction\_rms vs Slug



Right In: 4814.993 $\pm$ 0.814  $\chi^2$ /NDF: 3347377.1/30

Left Out: 4063.108 $\pm$ 0.670  $\chi^2$ /NDF:1405036.2/24

Right Out: 4072.612 $\pm$ 0.728  $\chi^2$ /NDF: 7104350.9/34

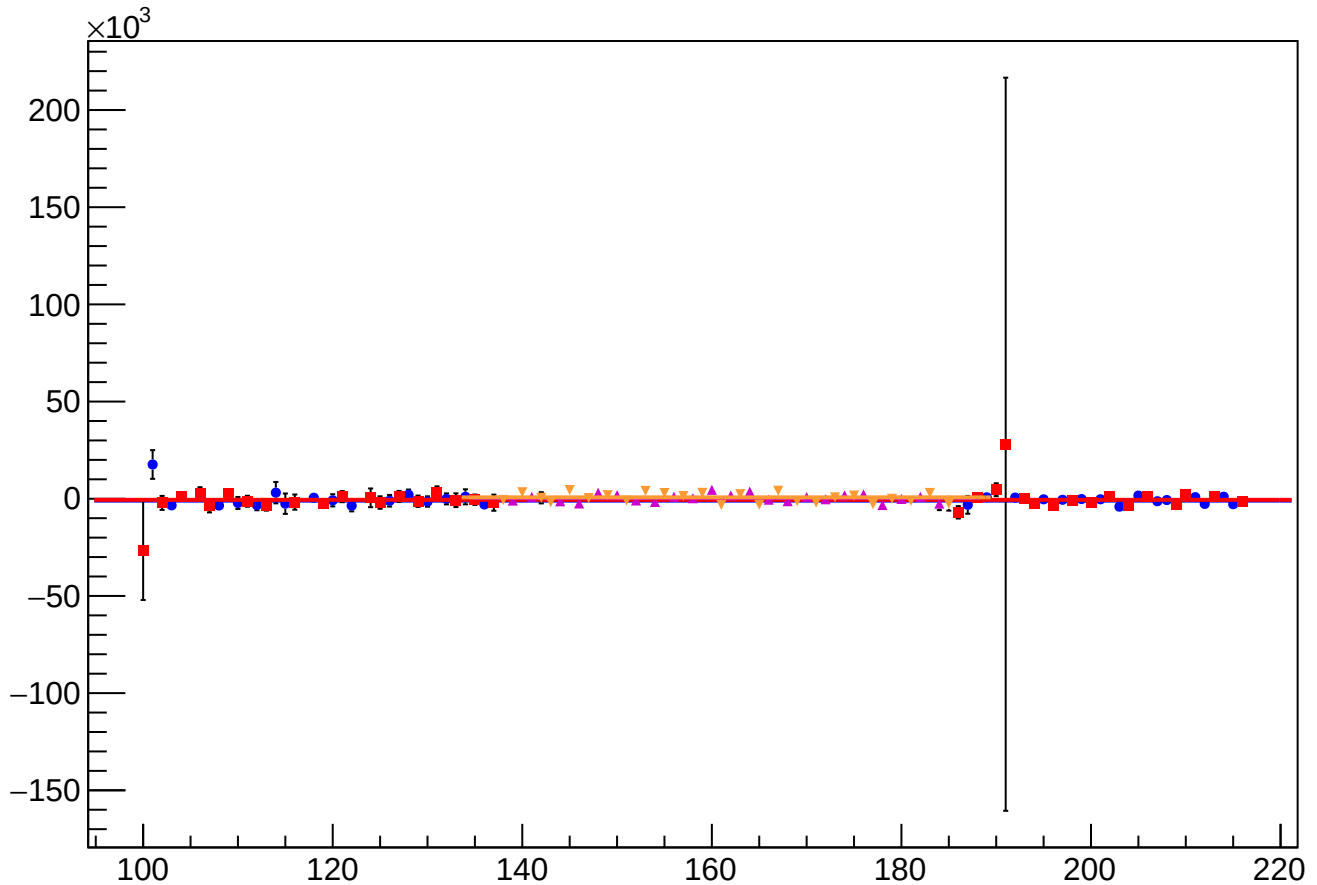
Left In: 4105.057 $\pm$ 0.693  $\chi^2$ /NDF:1359493.1/22

+ sign 4366.736 $\pm$ 0.517  $\chi^2$ /NDF: 5261680.3/55

All: 4224.101 $\pm$ 0.360  $\chi^2$ /NDF: 13874460.9/1

- sign 4089.628 $\pm$ 0.502  $\chi^2$ /NDF: 8464886.1/57

# cor\_asym\_atr\_dd\_mean vs Slug



Right In:  $-952.182 \pm 442.705$   $\chi^2/\text{NDF}$ : 22.5/30

Left Out:  $705.801 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-561.333 \pm 440.361$   $\chi^2/\text{NDF}$ : 26.7/34

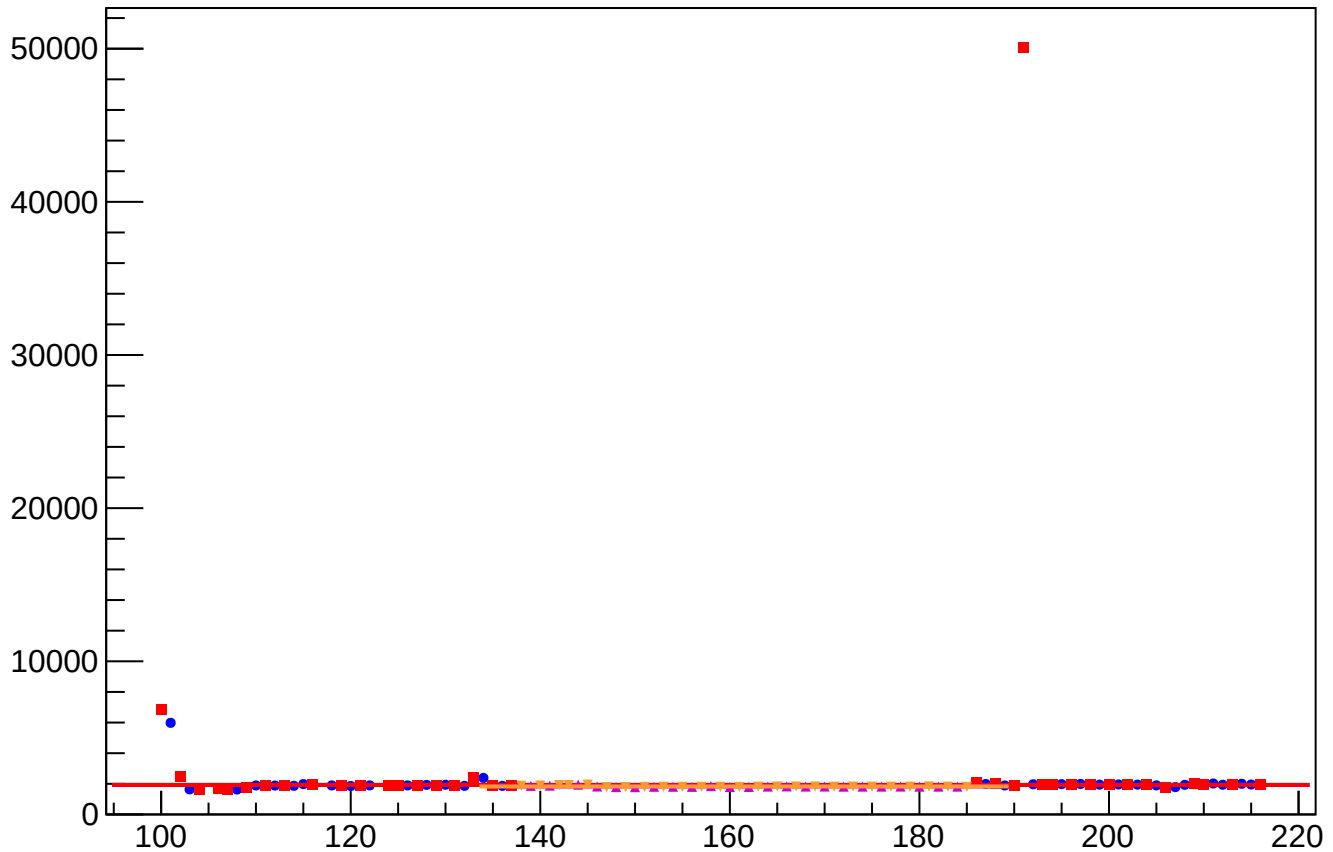
Left In:  $402.981 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-70.453 \pm 302.919$   $\chi^2/\text{NDF}$ : 61.9/55

All:  $-66.984 \pm 215.367$   $\chi^2/\text{NDF}$ : 111.8/113

- sign  $-63.438 \pm 306.259$   $\chi^2/\text{NDF}$ : 49.9/57

# cor\_asym\_atr\_dd\_rms vs Slug



Right In: 1926.585 $\pm$ 0.313  $\chi^2$ /NDF: 723981.2/30

Left Out: 1828.243 $\pm$ 0.294  $\chi^2$ /NDF: 19329.0/24

Right Out: 1927.748 $\pm$ 0.311  $\chi^2$ /NDF: 399217.5/34

Left In: 1825.165 $\pm$ 0.301  $\chi^2$ /NDF: 13360.2/22

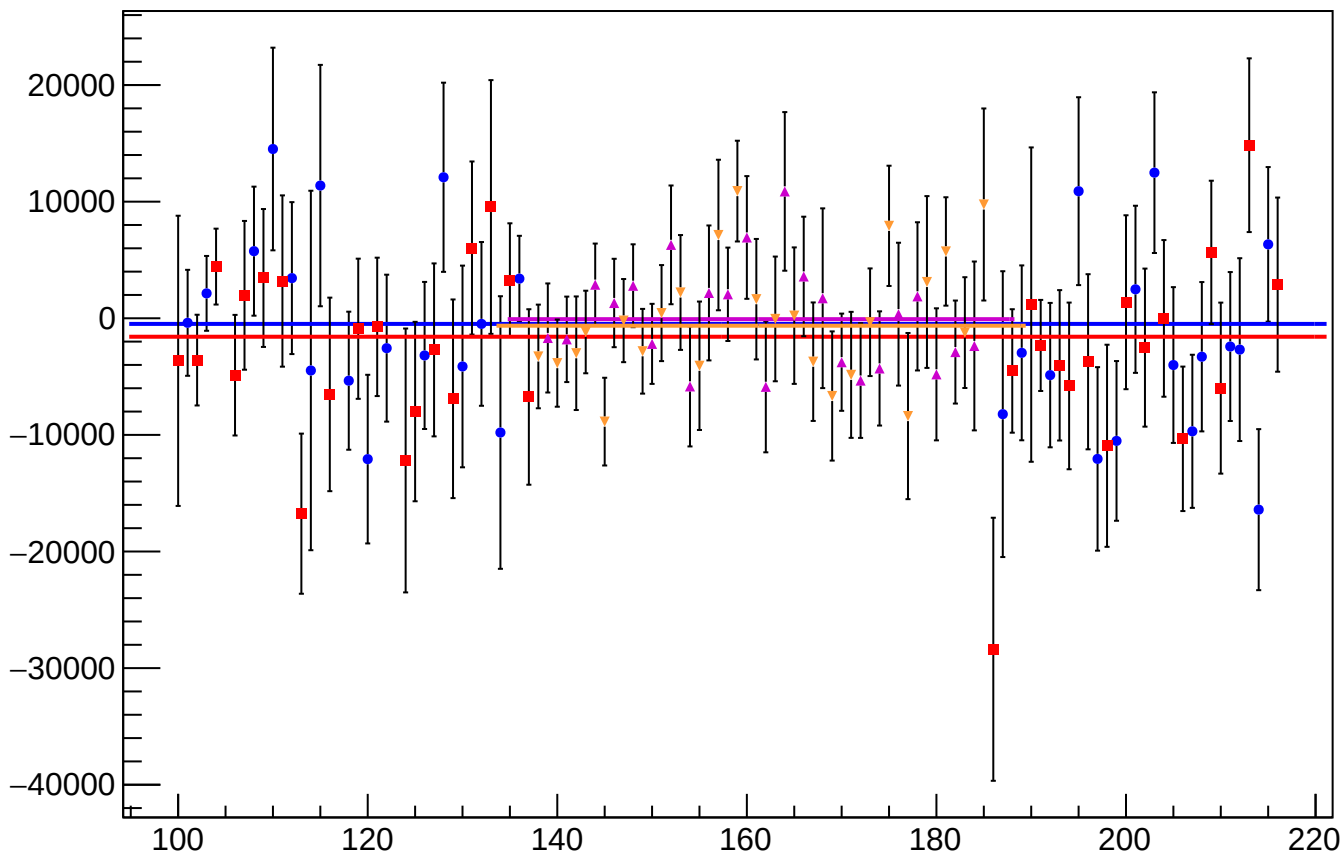
+ sign 1874.286 $\pm$ 0.214  $\chi^2$ /NDF: 795794.8/55

All: 1874.547 $\pm$ 0.152  $\chi^2$ /NDF: 1264449.1/11

- sign 1874.813 $\pm$ 0.216  $\chi^2$ /NDF: 468651.3/57



# asym\_atr\_dd\_cor\_correction\_mean vs Slug



Right In:  $-482.634 \pm 1150.568$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-637.720 \pm 946.866$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $-1582.886 \pm 1072.574$   $\chi^2/\text{NDF}$ : 33.4/34

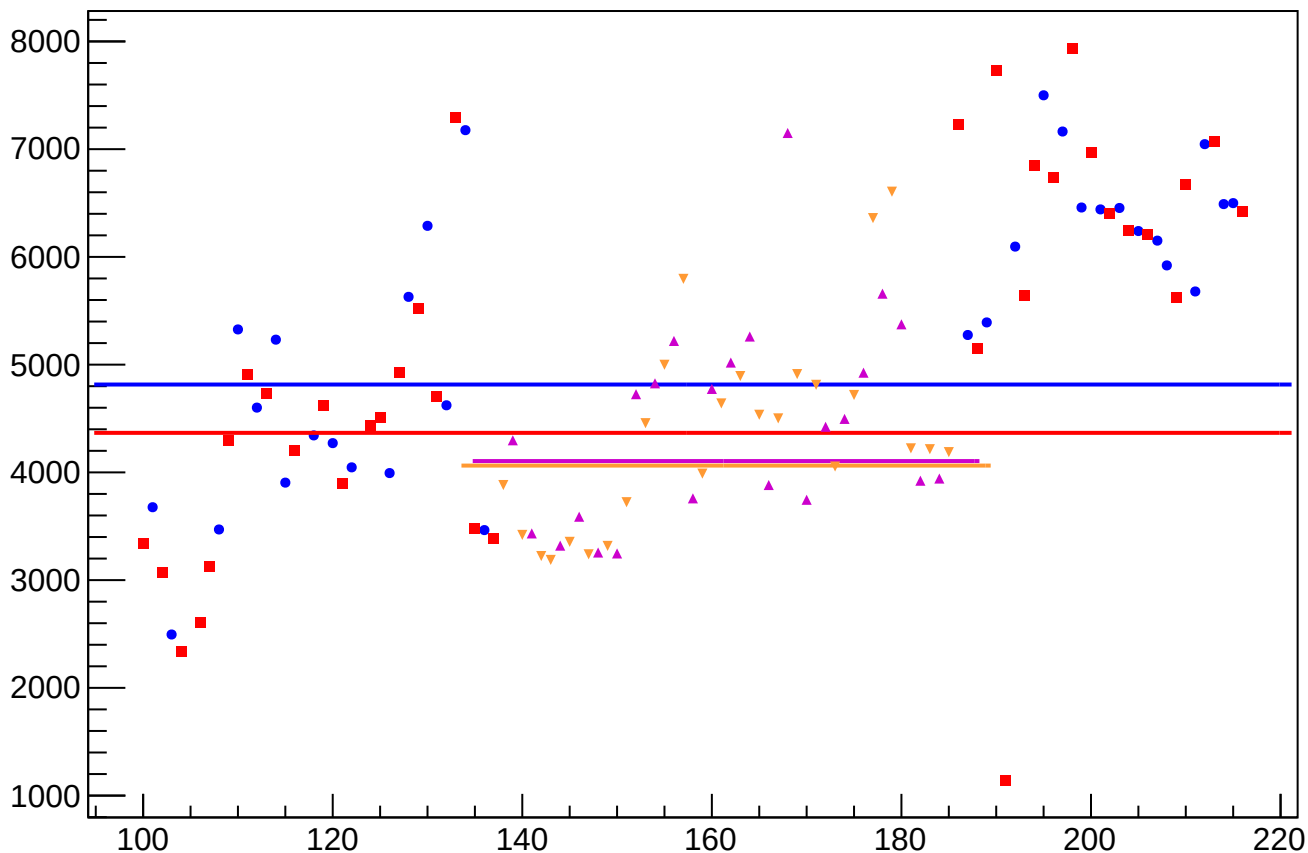
Left In:  $-75.789 \pm 980.241$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-575.098 \pm 731.120$   $\chi^2/\text{NDF}$ : 60.5/55

All:  $-669.360 \pm 514.293$   $\chi^2/\text{NDF}$ : 110.5/113

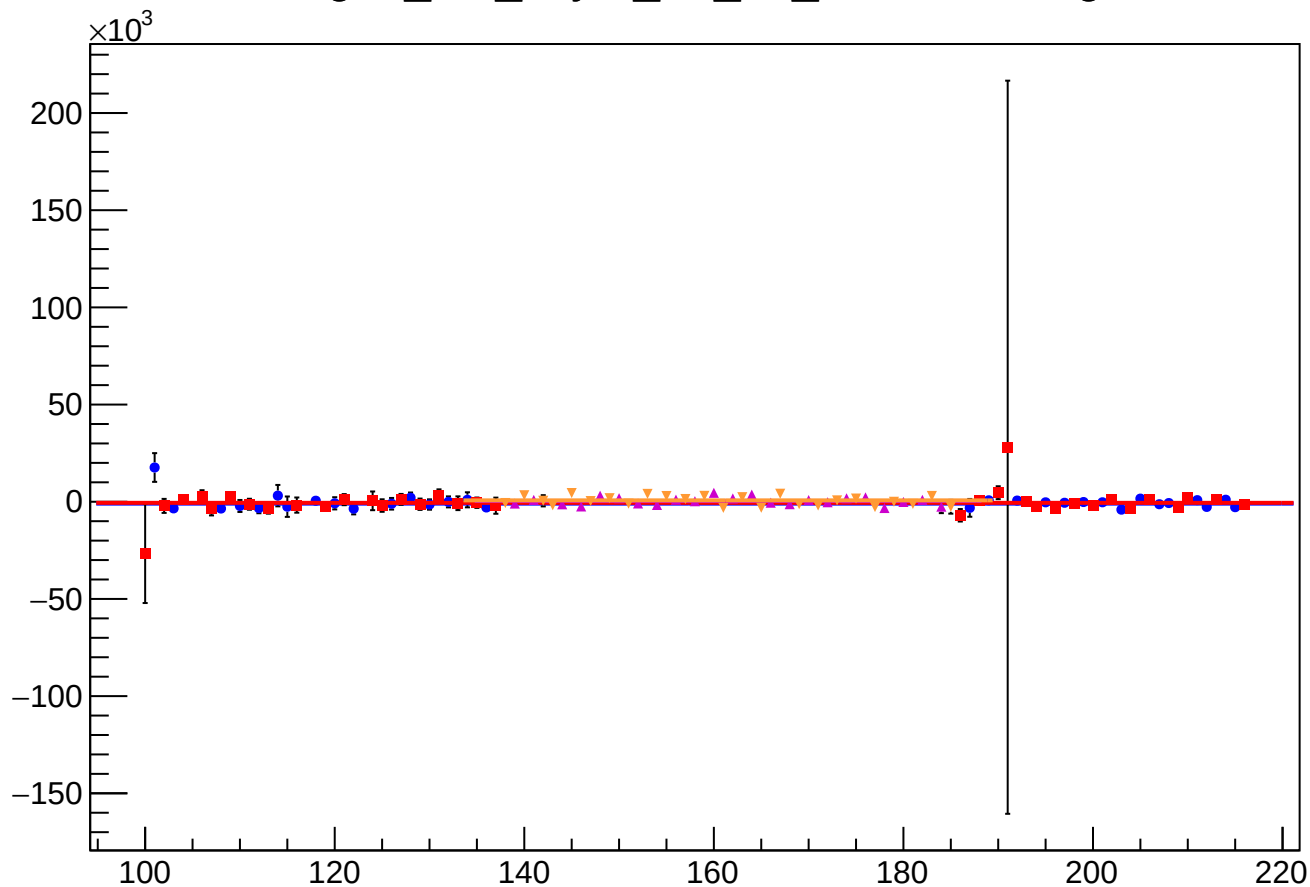
- sign  $-761.687 \pm 723.580$   $\chi^2/\text{NDF}$ : 49.9/57

# asym\_atr\_dd\_cor\_correction\_rms vs Slug



|                                 |                             |                             |                             |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Right In: 4815.449 $\pm$ 0.814  | $\chi^2$ /NDF: 3345756.8/30 | + sign 4366.893 $\pm$ 0.517 | $\chi^2$ /NDF: 5260633.3/55 |
| Left Out: 4063.106 $\pm$ 0.670  | $\chi^2$ /NDF: 1405030.5/24 | All: 4294.820 $\pm$ 0.364   | $\chi^2$ /NDF: 12353283.1/1 |
| Right Out: 4366.909 $\pm$ 0.758 | $\chi^2$ /NDF: 5629719.2/34 | - sign 4224.225 $\pm$ 0.512 | $\chi^2$ /NDF: 7054177.1/57 |
| Left In: 4105.050 $\pm$ 0.693   | $\chi^2$ /NDF: 1359501.9/22 |                             |                             |

# eigen\_cor\_asym\_atr\_dd\_mean vs Slug



Right In:  $-952.182 \pm 442.705$   $\chi^2/\text{NDF}$ : 22.5/30

Left Out:  $705.801 \pm 415.383$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $-561.333 \pm 440.361$   $\chi^2/\text{NDF}$ : 26.7/34

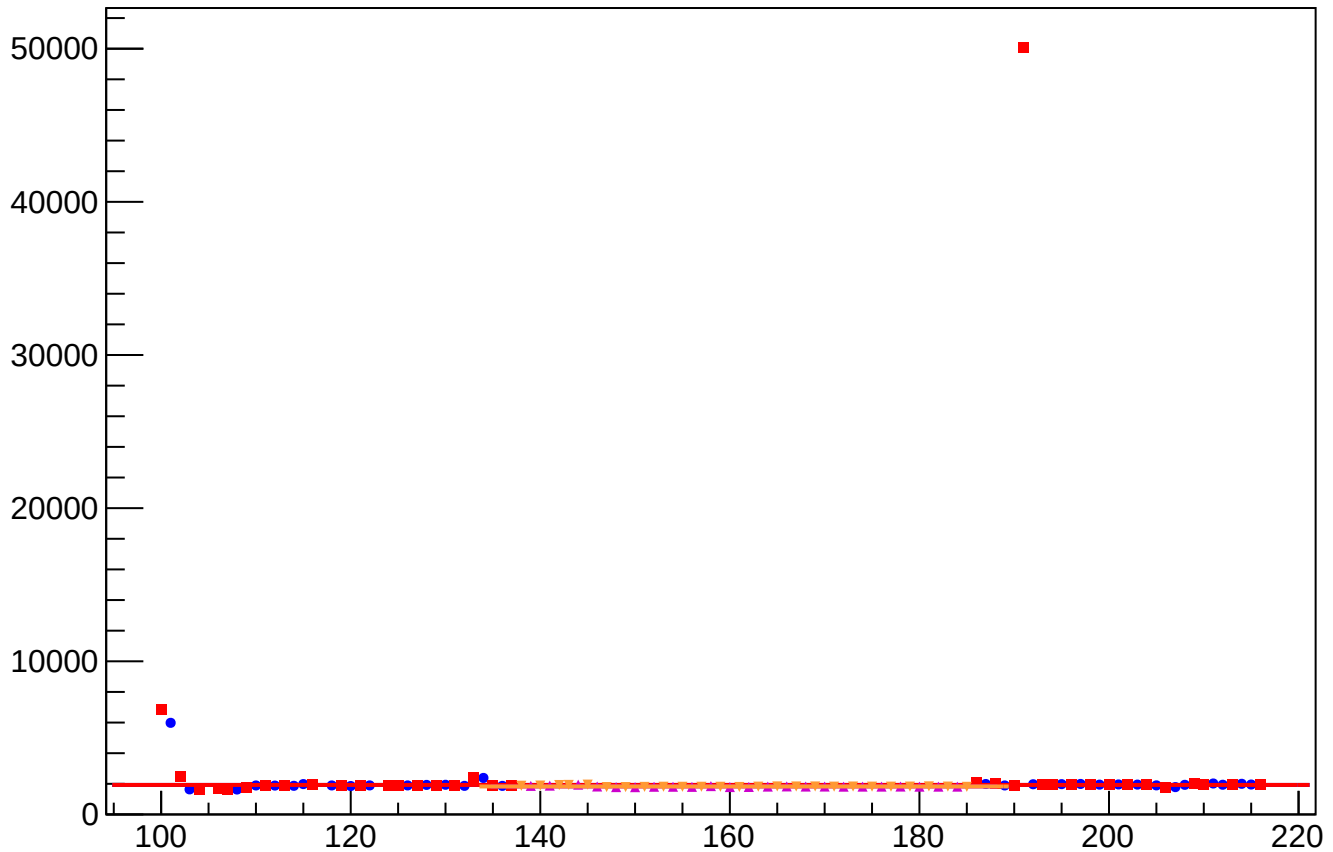
Left In:  $402.981 \pm 426.215$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-70.453 \pm 302.919$   $\chi^2/\text{NDF}$ : 61.9/55

All:  $-66.984 \pm 215.367$   $\chi^2/\text{NDF}$ : 111.8/113

- sign  $-63.438 \pm 306.259$   $\chi^2/\text{NDF}$ : 49.9/57

# eigen\_cor\_asym\_atr\_dd\_rms vs Slug



Right In: 1926.585+/-0.313  $\chi^2/\text{NDF}$ : 723981.2/30

Left Out: 1828.243+/-0.294  $\chi^2/\text{NDF}$ : 19329.0/24

Right Out: 1927.748+/-0.311  $\chi^2/\text{NDF}$ : 399217.5/34

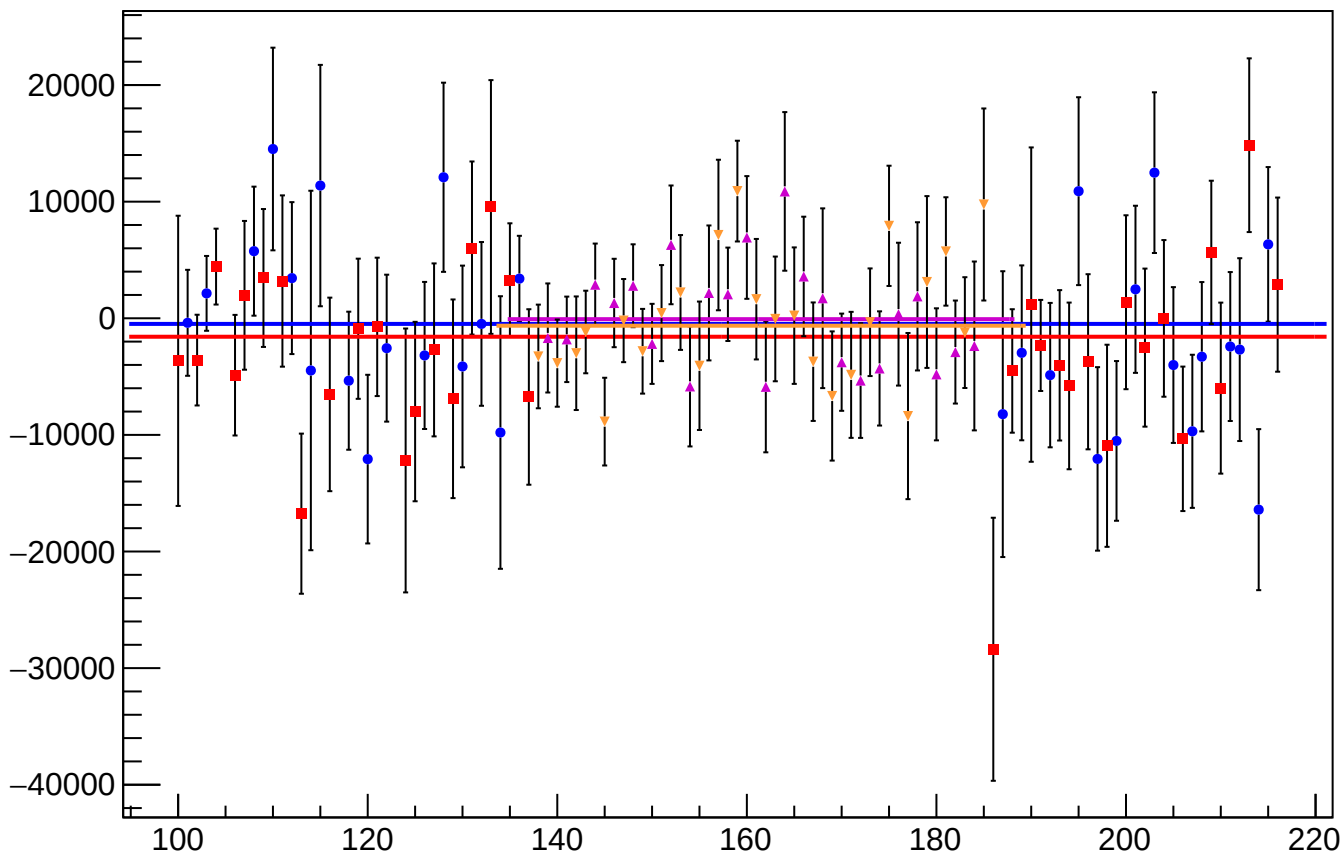
Left In: 1825.165+/-0.301  $\chi^2/\text{NDF}$ : 13360.2/22

+ sign 1874.286+/-0.214  $\chi^2/\text{NDF}$ : 795794.8/55

All: 1874.547+/-0.152  $\chi^2/\text{NDF}$ : 1264449.1/11

- sign 1874.813+/-0.216  $\chi^2/\text{NDF}$ : 468651.3/57

asym\_atr\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-482.634 \pm 1150.568$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-637.720 \pm 946.866$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $-1582.886 \pm 1072.574$   $\chi^2/\text{NDF}$ : 33.4/34

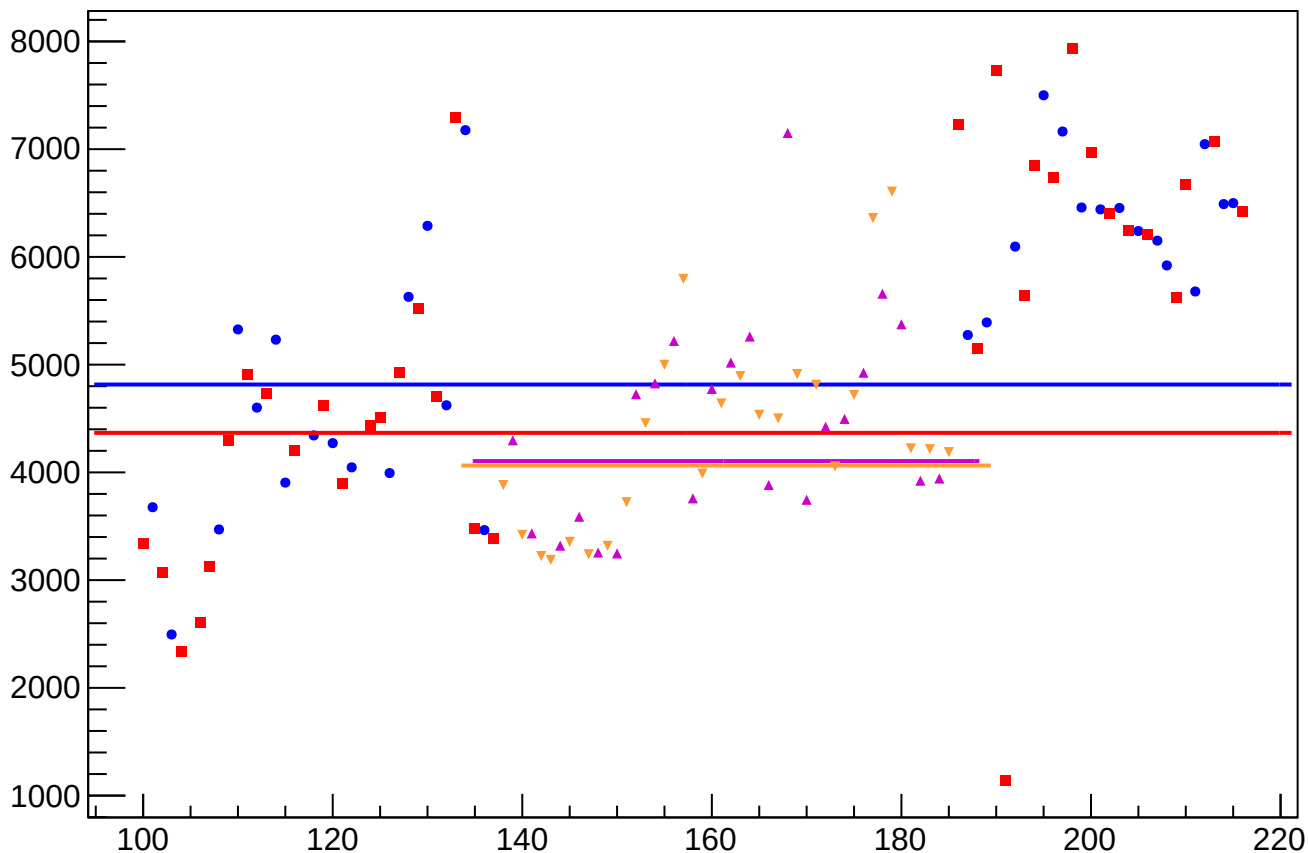
Left In:  $-75.789 \pm 980.241$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-575.098 \pm 731.120$   $\chi^2/\text{NDF}$ : 60.5/55

All:  $-669.360 \pm 514.293$   $\chi^2/\text{NDF}$ : 110.5/113

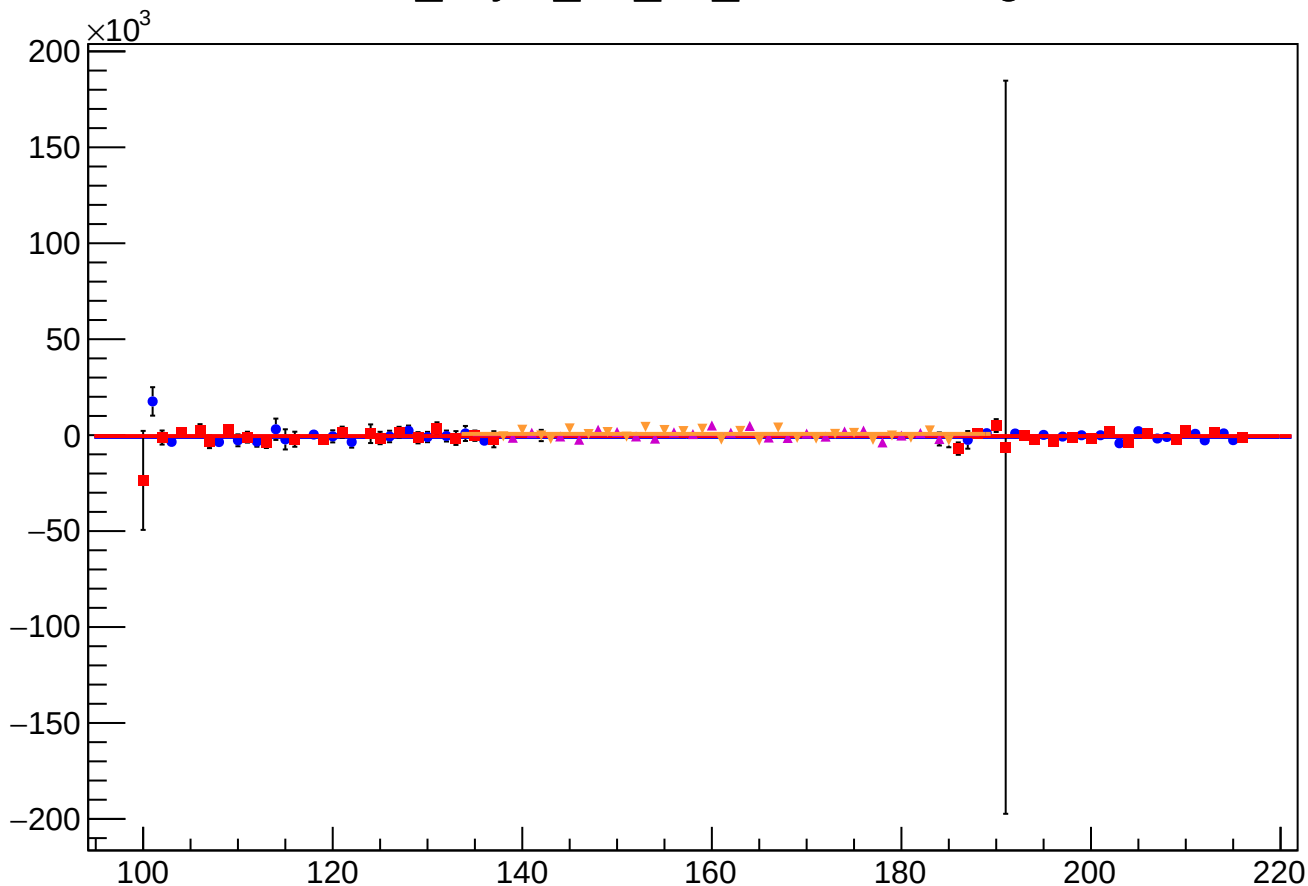
- sign  $-761.687 \pm 723.580$   $\chi^2/\text{NDF}$ : 49.9/57

asym\_atr\_dd\_eigen\_cor\_correction\_rms vs Slug



|                                 |                             |                             |                             |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Right In: 4815.449 $\pm$ 0.814  | $\chi^2$ /NDF: 3345756.8/30 | + sign 4366.893 $\pm$ 0.517 | $\chi^2$ /NDF: 5260633.3/55 |
| Left Out: 4063.106 $\pm$ 0.670  | $\chi^2$ /NDF: 1405030.5/24 | All: 4294.820 $\pm$ 0.364   | $\chi^2$ /NDF: 12353283.1/1 |
| Right Out: 4366.909 $\pm$ 0.758 | $\chi^2$ /NDF: 5629719.2/34 | - sign 4224.225 $\pm$ 0.512 | $\chi^2$ /NDF: 7054177.1/57 |
| Left In: 4105.050 $\pm$ 0.693   | $\chi^2$ /NDF: 1359501.9/22 |                             |                             |

dit\_asym\_atr\_dd\_mean vs Slug



Right In:  $-940.165 \pm 446.105$   $\chi^2/\text{NDF}$ : 23.6/30

Left Out:  $657.616 \pm 423.063$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $-477.931 \pm 444.205$   $\chi^2/\text{NDF}$ : 28.9/34

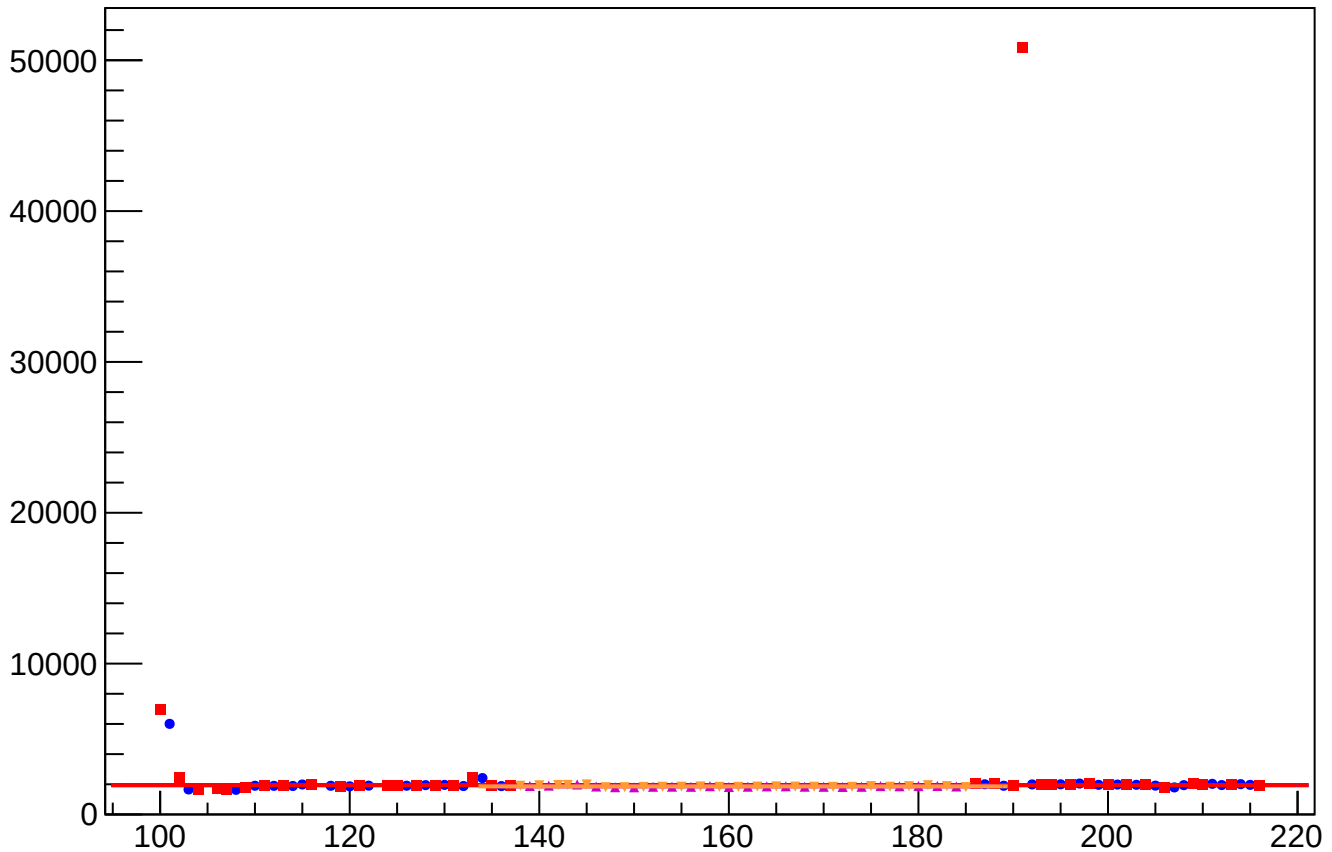
Left In:  $410.869 \pm 433.856$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-98.946 \pm 306.973$   $\chi^2/\text{NDF}$ : 57.4/55

All:  $-61.420 \pm 218.256$   $\chi^2/\text{NDF}$ : 111.9/113

- sign  $-23.057 \pm 310.377$   $\chi^2/\text{NDF}$ : 54.5/57

# dit\_asym\_atr\_dd\_rms vs Slug



Right In: 1941.248+/-0.315  $\chi^2/\text{NDF}$ : 726439.7/30

Left Out: 1861.731+/-0.299  $\chi^2/\text{NDF}$ : 26014.9/24

Right Out: 1944.091+/-0.314  $\chi^2/\text{NDF}$ : 407663.0/34

Left In: 1857.661+/-0.307  $\chi^2/\text{NDF}$ : 16381.0/22

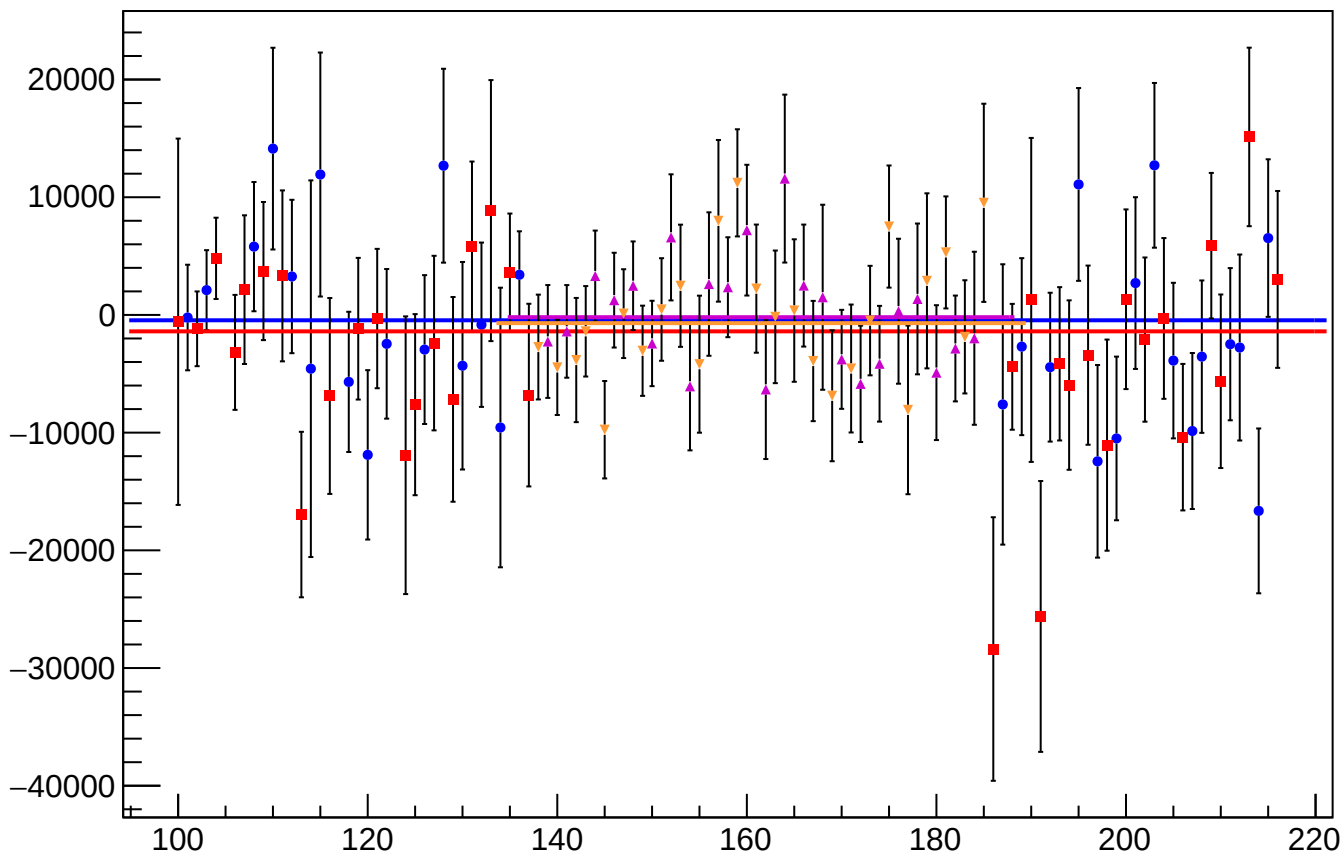
+ sign 1899.383+/-0.217  $\chi^2/\text{NDF}$ : 785910.6/55

All: 1899.627+/-0.154  $\chi^2/\text{NDF}$ : 1248725.0/11

- sign 1899.876+/-0.219  $\chi^2/\text{NDF}$ : 462811.8/57



# asym\_atr\_dd\_dit\_correction\_mean vs Slug



Right In:  $-455.155 \pm 1164.443$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-698.287 \pm 990.035$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-1395.996 \pm 1100.868$   $\chi^2/\text{NDF}$ : 36.9/34

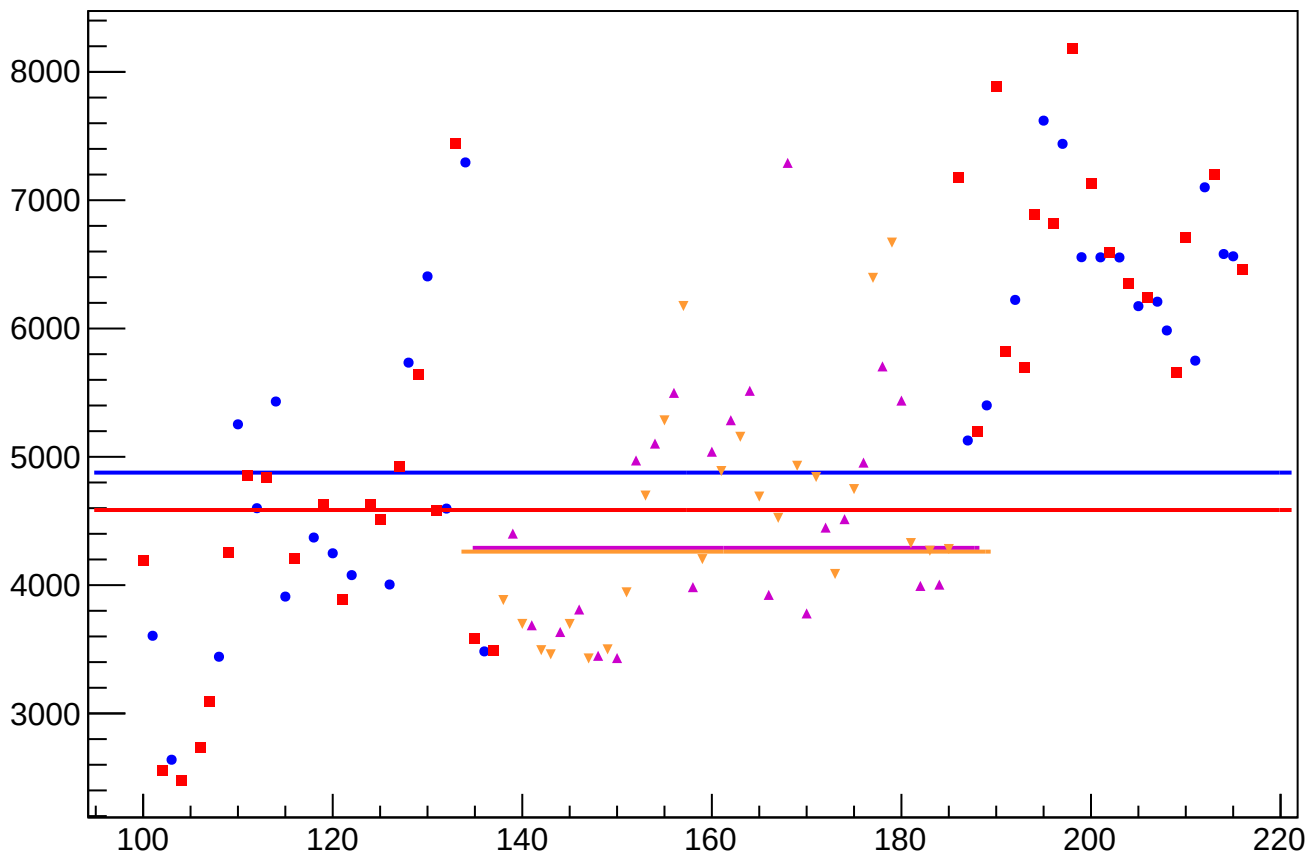
Left In:  $-192.486 \pm 1022.469$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-596.274 \pm 754.264$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-673.589 \pm 531.538$   $\chi^2/\text{NDF}$ : 112.6/113

- sign  $-749.865 \pm 749.179$   $\chi^2/\text{NDF}$ : 52.8/57

# asym\_atr\_dd\_dit\_correction\_rms vs Slug



Right In: 4876.973 $\pm$ 0.823  $\chi^2$ /NDF: 3261287.3/30

Left Out: 4261.124 $\pm$ 0.700  $\chi^2$ /NDF:1190561.4/24

Right Out: 4585.512 $\pm$ 0.778  $\chi^2$ /NDF: 4574236.0/34

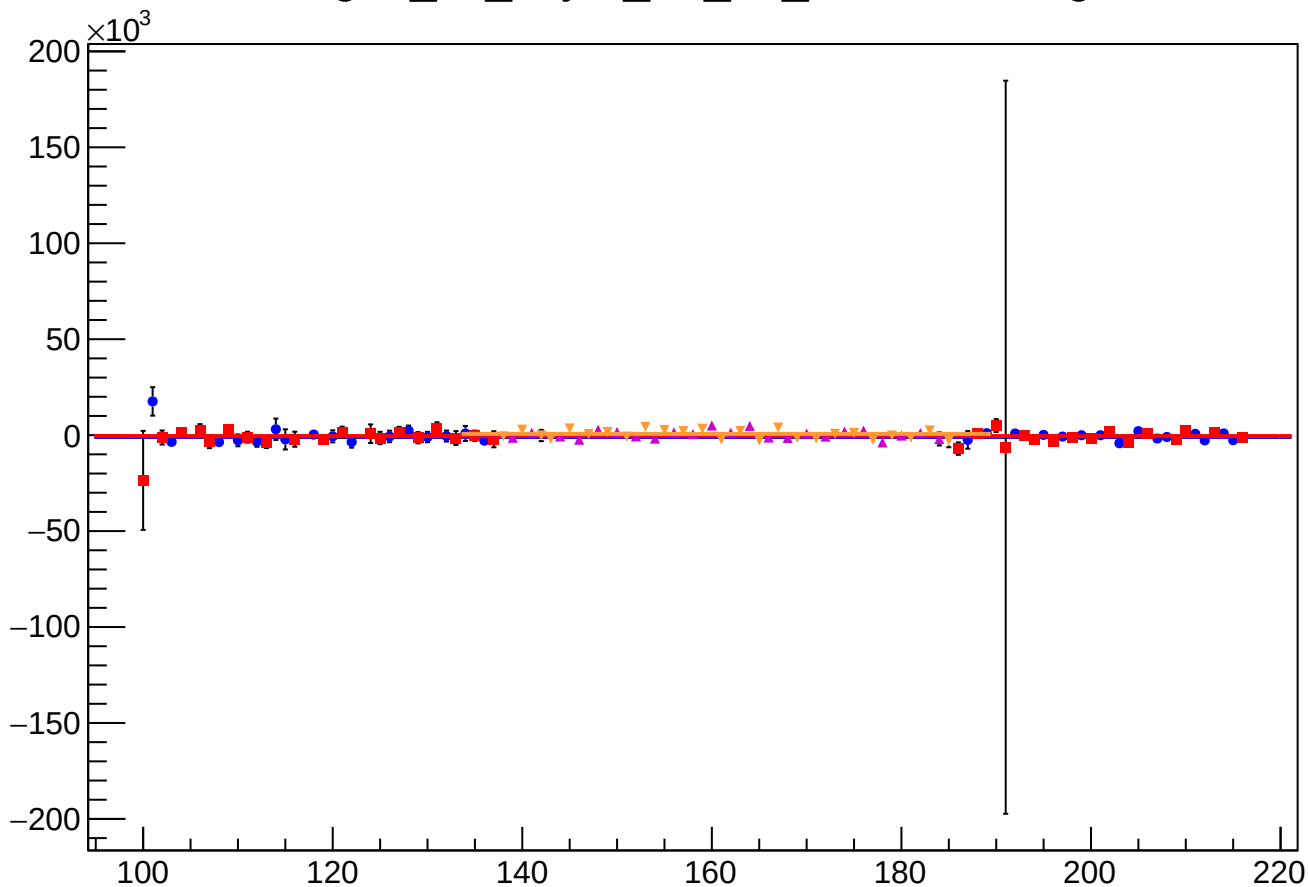
Left In: 4290.398 $\pm$ 0.723  $\chi^2$ /NDF:1213964.7/22

+ sign 4519.519 $\pm$ 0.533  $\chi^2$ /NDF: 4776552.7/55

All: 4472.984 $\pm$ 0.376  $\chi^2$ /NDF: 10657040.0/100

- sign 4427.074 $\pm$ 0.530  $\chi^2$ /NDF: 5865363.8/57

# eigen\_dit\_asym\_atr\_dd\_mean vs Slug



Right In:  $-940.162 \pm 446.105$   $\chi^2/\text{NDF}$ : 23.6/30

Left Out:  $657.622 \pm 423.063$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $-477.928 \pm 444.205$   $\chi^2/\text{NDF}$ : 28.9/34

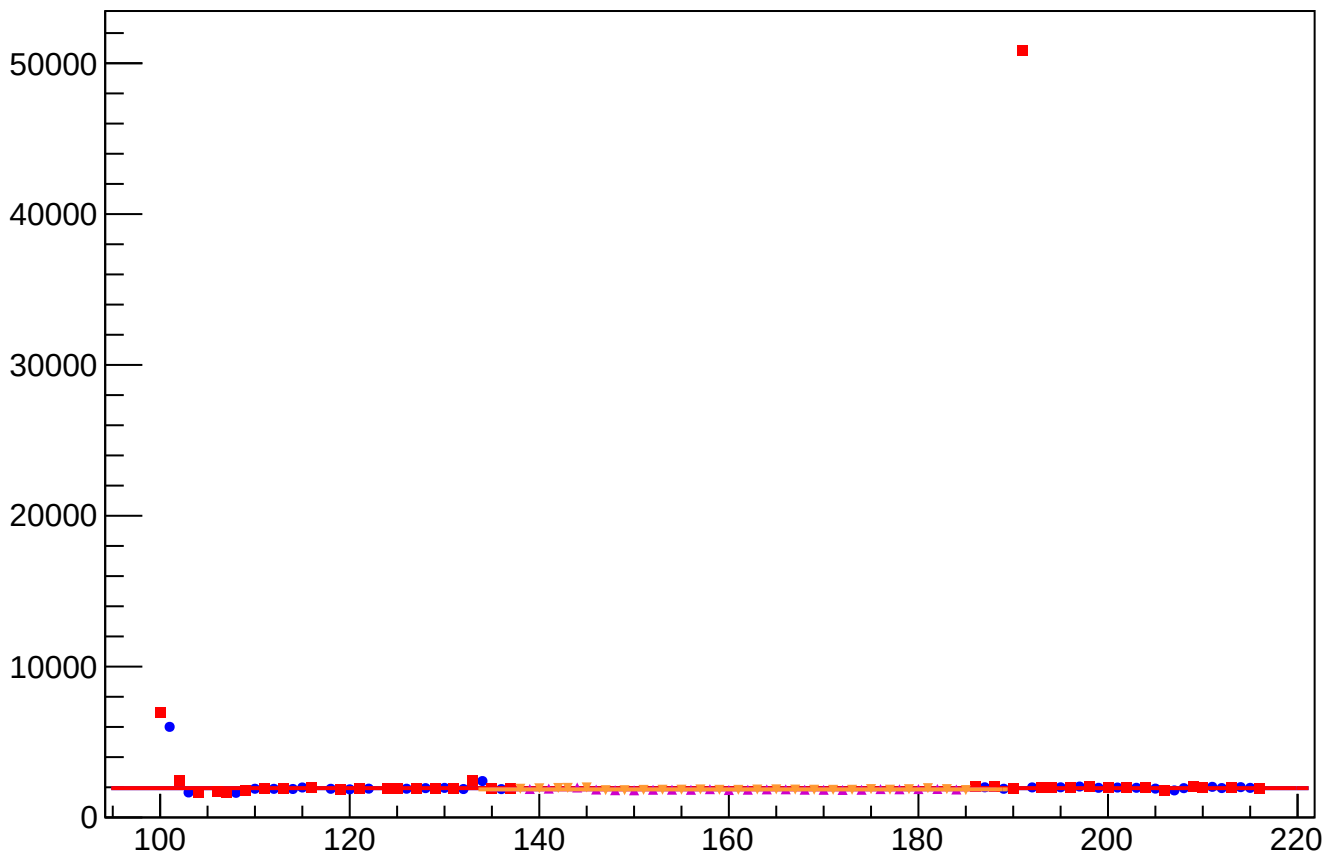
Left In:  $410.869 \pm 433.856$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-98.942 \pm 306.973$   $\chi^2/\text{NDF}$ : 57.4/55

All:  $-61.417 \pm 218.256$   $\chi^2/\text{NDF}$ : 111.9/113

- sign  $-23.056 \pm 310.377$   $\chi^2/\text{NDF}$ : 54.5/57

# eigen\_dit\_asym\_atr\_dd\_rms vs Slug



Right In: 1941.248+/-0.315  $\chi^2/\text{NDF}$ : 726439.6/30

Left Out: 1861.731+/-0.299  $\chi^2/\text{NDF}$ : 26014.9/24

Right Out: 1944.092+/-0.314  $\chi^2/\text{NDF}$ : 407663.1/34

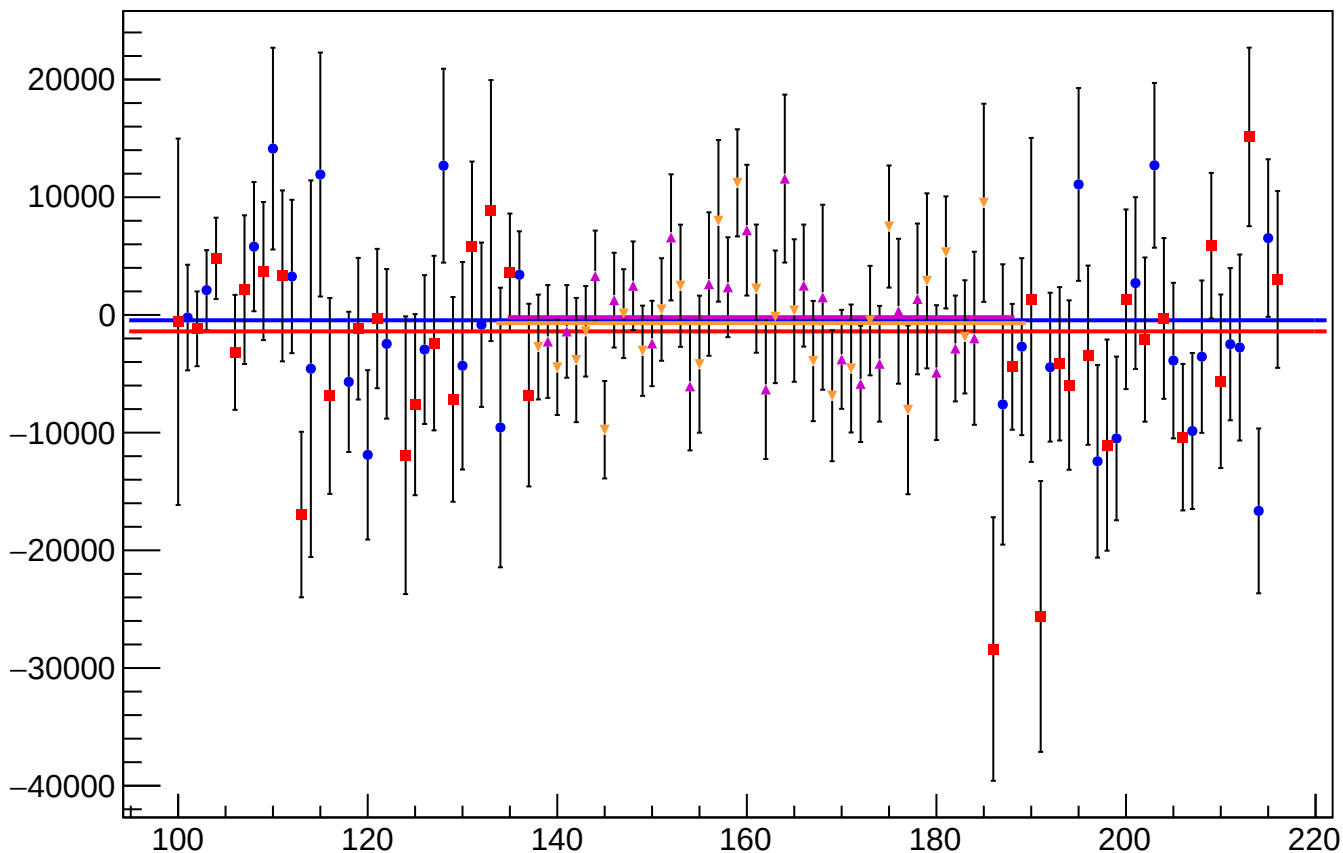
Left In: 1857.661+/-0.307  $\chi^2/\text{NDF}$ : 16380.9/22

+ sign 1899.383+/-0.217  $\chi^2/\text{NDF}$ : 785910.0/55

All: 1899.627+/-0.154  $\chi^2/\text{NDF}$ : 1248724.0/11

- sign 1899.876+/-0.219  $\chi^2/\text{NDF}$ : 462811.4/57

asym\_atr\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-455.161 \pm 1164.443$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-698.285 \pm 990.036$   $\chi^2/\text{NDF}$ : 25.3/24

+ sign  $-596.276 \pm 754.265$   $\chi^2/\text{NDF}$ : 59.8/55

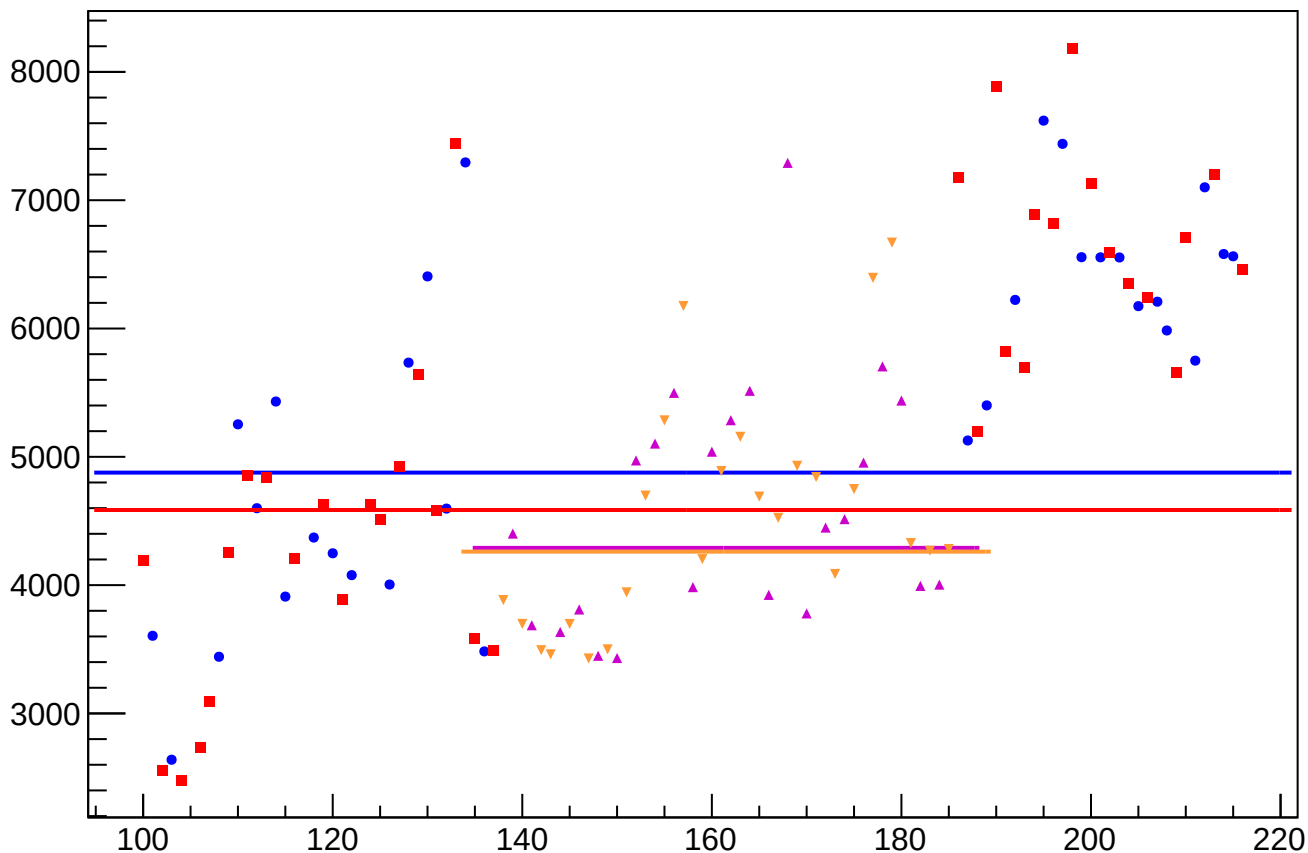
Right Out:  $-1395.994 \pm 1100.867$   $\chi^2/\text{NDF}$ : 36.9/34

All:  $-673.591 \pm 531.539$   $\chi^2/\text{NDF}$ : 112.6/113

Left In:  $-192.488 \pm 1022.471$   $\chi^2/\text{NDF}$ : 15.2/22

- sign  $-749.867 \pm 749.180$   $\chi^2/\text{NDF}$ : 52.8/57

# asym\_atr\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4876.972 $\pm$ 0.823  $\chi^2/\text{NDF}$ : 3261296.3/30

Left Out: 4261.131 $\pm$ 0.700  $\chi^2/\text{NDF}$ : 1190564.2/24

Right Out: 4585.510 $\pm$ 0.778  $\chi^2/\text{NDF}$ : 4574245.9/34

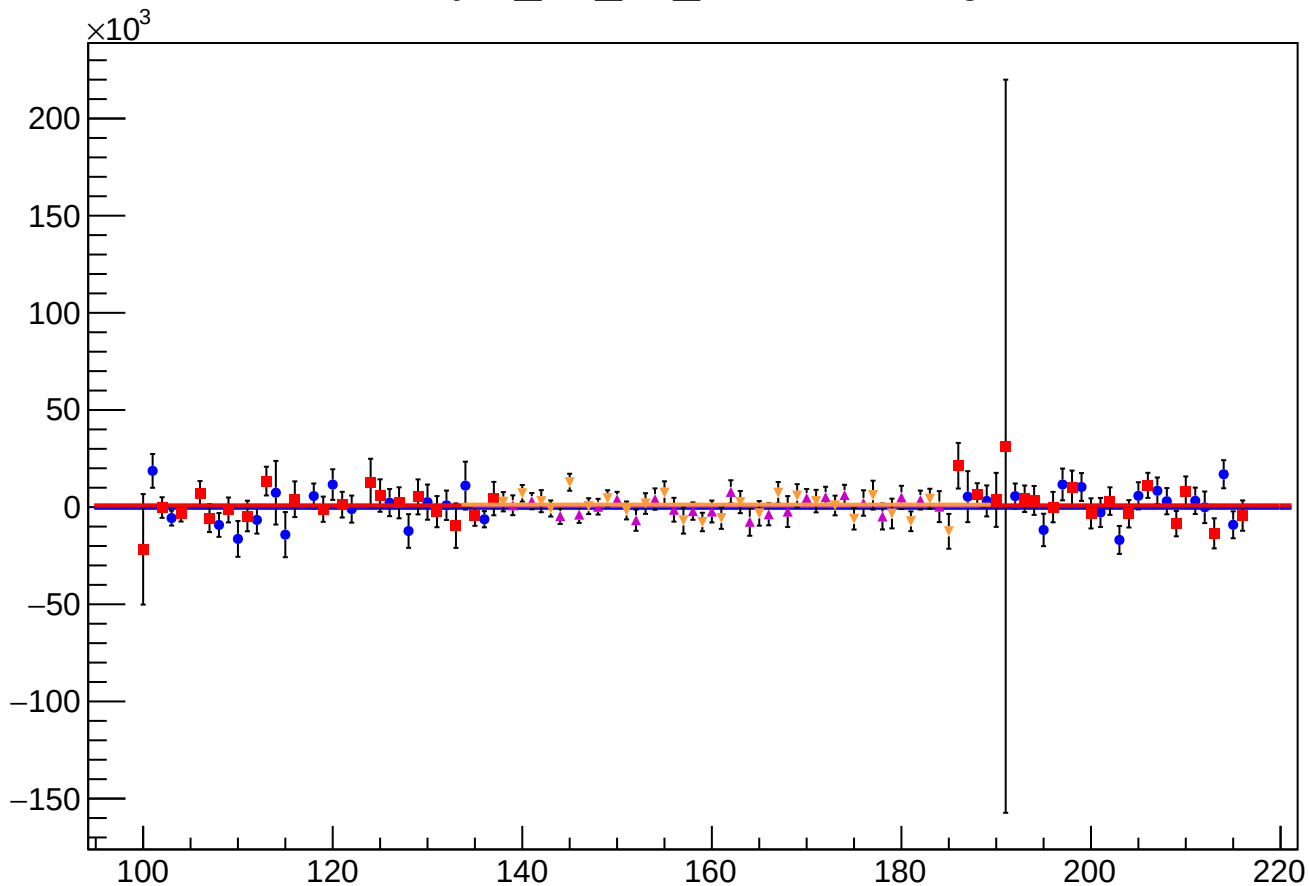
Left In: 4290.404 $\pm$ 0.723  $\chi^2/\text{NDF}$ : 1213970.5/22

+ sign 4519.523 $\pm$ 0.533  $\chi^2/\text{NDF}$ : 4776556.0/55

All: 4472.987 $\pm$ 0.376  $\chi^2/\text{NDF}$ : 10657055.0/100

- sign 4427.076 $\pm$ 0.530  $\chi^2/\text{NDF}$ : 5865375.0/57

# asym\_atr\_dd\_mean vs Slug



Right In:  $-341.068 \pm 1280.422$   $\chi^2/\text{NDF}: 45.5/30$

Left Out:  $1298.373 \pm 1049.555$   $\chi^2/\text{NDF}: 28.5/24$

Right Out:  $940.779 \pm 1244.684$   $\chi^2/\text{NDF}: 26.5/34$

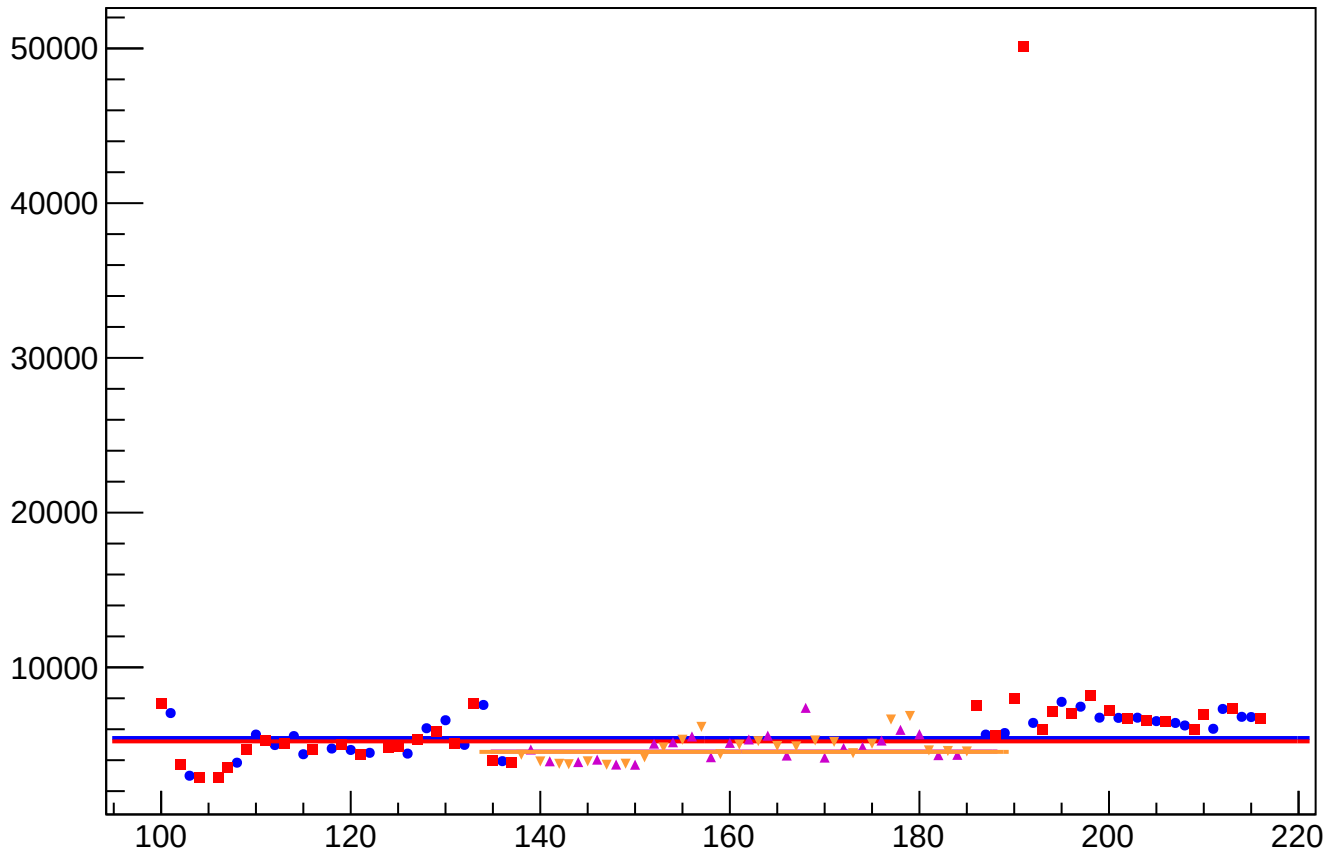
Left In:  $576.442 \pm 1082.127$   $\chi^2/\text{NDF}: 14.4/22$

+ sign  $639.518 \pm 811.709$   $\chi^2/\text{NDF}: 75.0/55$

All:  $686.115 \pm 575.702$   $\chi^2/\text{NDF}: 115.9/113$

- sign  $733.280 \pm 816.646$   $\chi^2/\text{NDF}: 41.0/57$

# asym\_atr\_dd\_rms vs Slug



Right In: 5431.988+/-0.905     $\chi^2/\text{NDF}$ : 2428400.1/30

Left Out: 4537.934+/-0.742     $\chi^2/\text{NDF}$ : 992905.4/24

Right Out: 5215.933+/-0.876     $\chi^2/\text{NDF}$ : 3137090.2/34

Left In: 4560.506+/-0.765     $\chi^2/\text{NDF}$ : 980201.3/22

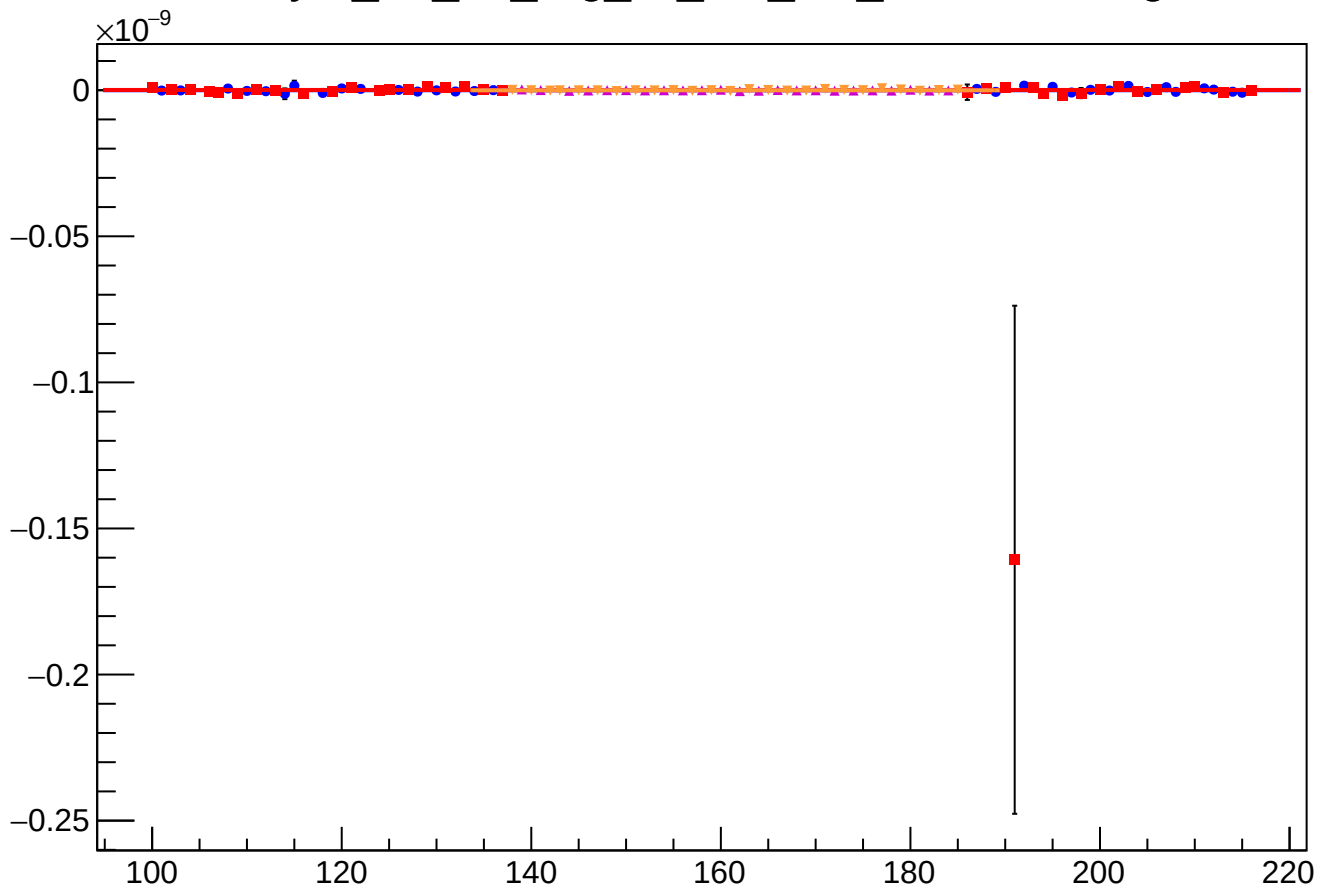
+ sign 4897.235+/-0.574     $\chi^2/\text{NDF}$ : 4004537.1/55

All: 4870.827+/-0.407     $\chi^2/\text{NDF}$ : 8443664.2/11

- sign 4844.208+/-0.576     $\chi^2/\text{NDF}$ : 4434876.4/57



# asym\_atr\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 28.4/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 37.9/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 43.7/34

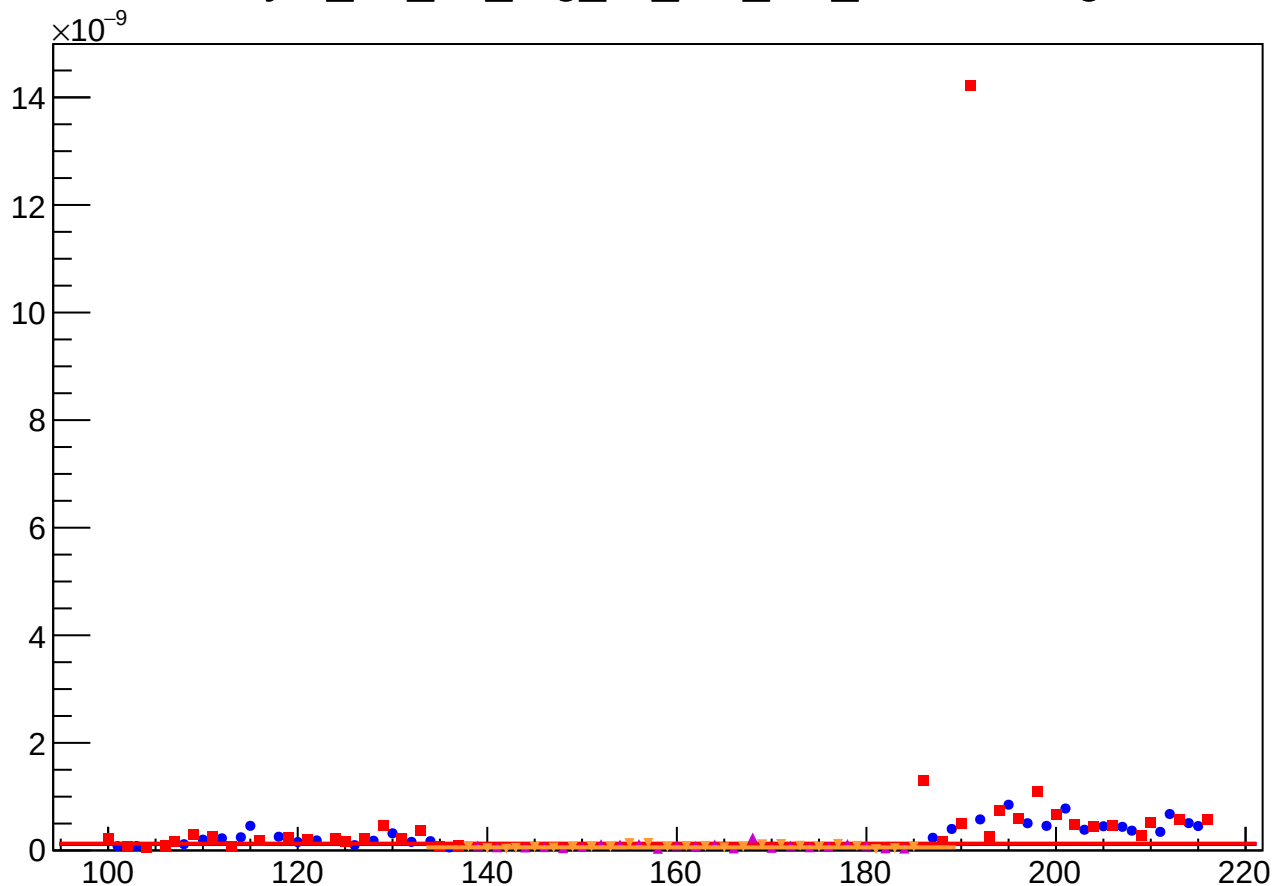
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 20.6/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 66.4/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 133.8/113

- sign 0.000+/-0.000  $\chi^2$ /NDF: 66.6/57

# asym\_atr\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7642730.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1934390.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7750869.8/34

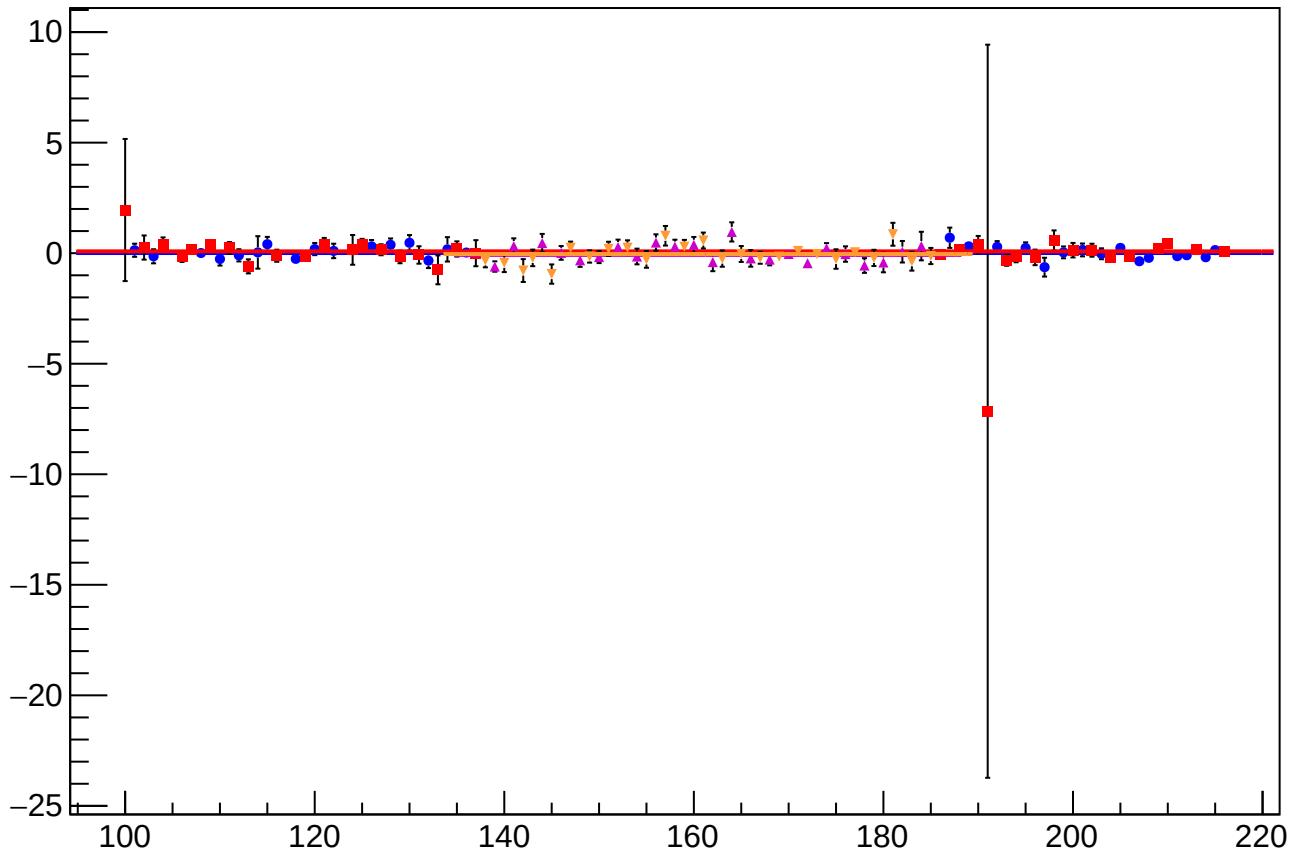
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2104577.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11404091.1/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 23220645.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11813633.9/57

# asym\_atr\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.043$   $\chi^2/\text{NDF}$ : 30.6/30

Left Out:  $-0.038 \pm 0.062$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.082 \pm 0.042$   $\chi^2/\text{NDF}$ : 33.3/34

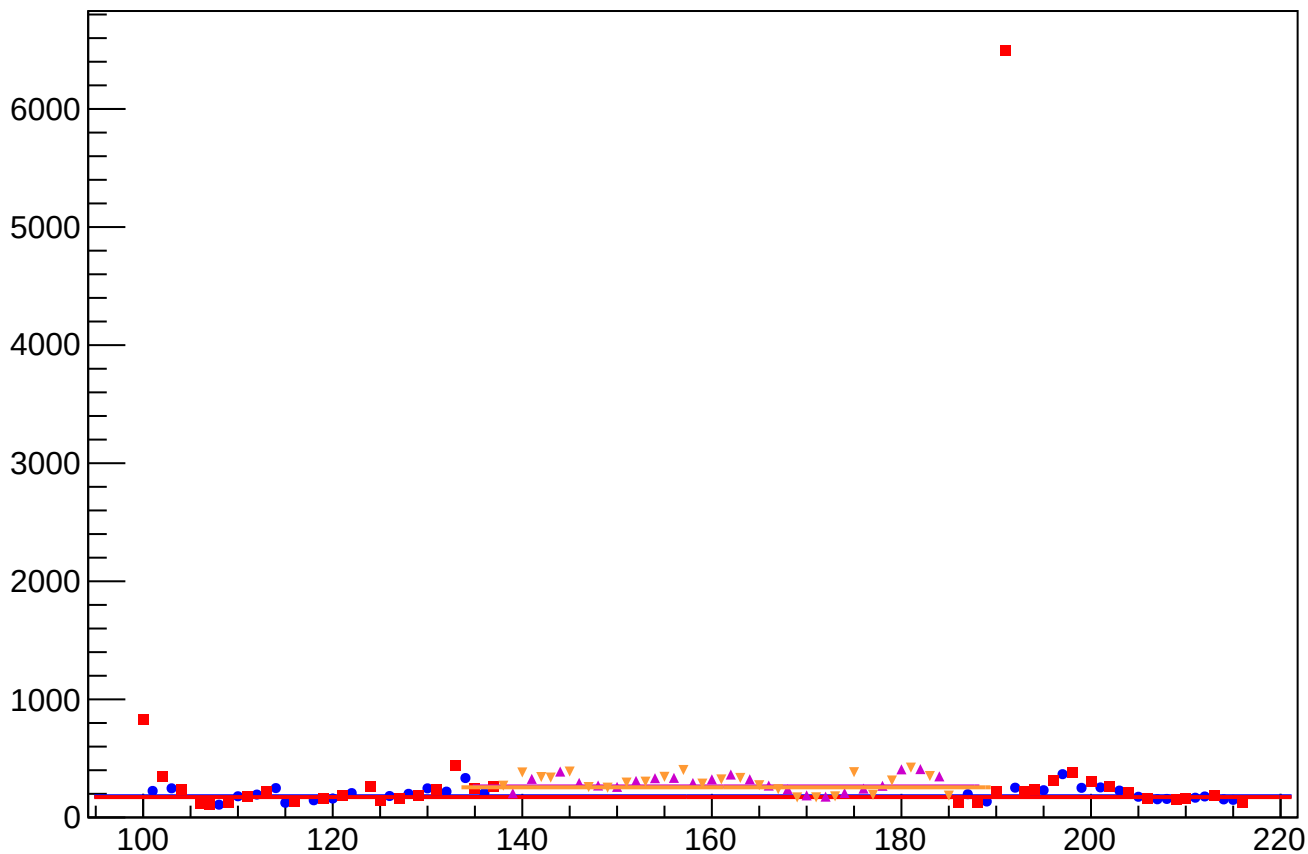
Left In:  $-0.078 \pm 0.065$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.007 \pm 0.035$   $\chi^2/\text{NDF}$ : 55.4/55

All:  $0.013 \pm 0.025$   $\chi^2/\text{NDF}$ : 124.8/113

- sign  $0.034 \pm 0.035$   $\chi^2/\text{NDF}$ : 68.7/57

# asym\_atr\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 179.729 $\pm$ 0.031  $\chi^2$ /NDF: 2212094.5/30

Left Out: 255.355 $\pm$ 0.044  $\chi^2$ /NDF: 2935324.6/24

Right Out: 172.372 $\pm$ 0.030  $\chi^2$ /NDF: 3785408.8/34

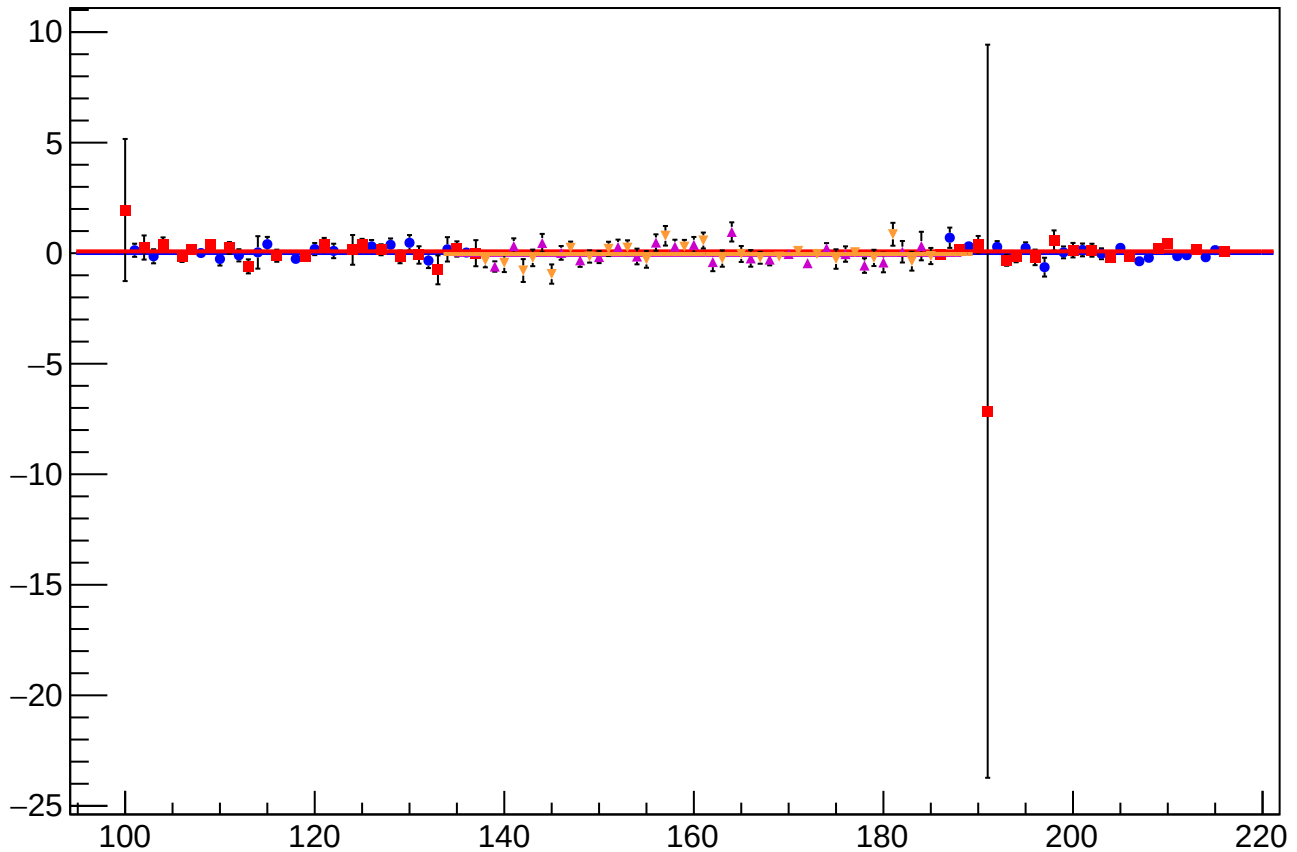
Left In: 262.788 $\pm$ 0.046  $\chi^2$ /NDF: 2025363.4/22

+ sign 204.500 $\pm$ 0.025  $\chi^2$ /NDF: 7153458.9/55

All: 201.923 $\pm$ 0.018  $\chi^2$ /NDF: 15710360.1/11

- sign 199.345 $\pm$ 0.025  $\chi^2$ /NDF: 8535743.5/57

asym\_atr\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.043$   $\chi^2/\text{NDF}$ : 30.6/30

Left Out:  $-0.038 \pm 0.062$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.082 \pm 0.042$   $\chi^2/\text{NDF}$ : 33.3/34

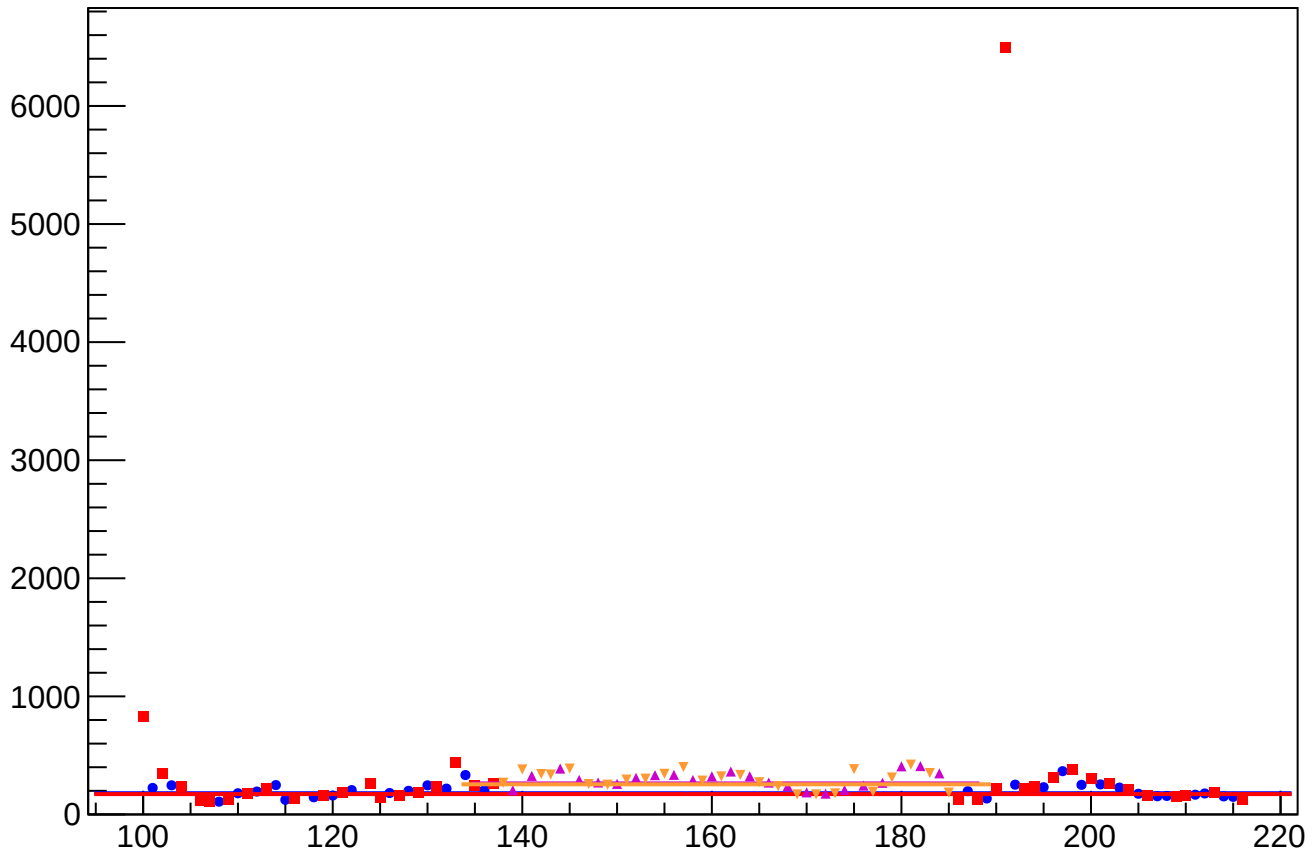
Left In:  $-0.078 \pm 0.065$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.007 \pm 0.035$   $\chi^2/\text{NDF}$ : 55.4/55

All:  $0.013 \pm 0.025$   $\chi^2/\text{NDF}$ : 124.8/113

- sign  $0.034 \pm 0.035$   $\chi^2/\text{NDF}$ : 68.7/57

# asym\_atr\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 179.729 $\pm$ 0.031  $\chi^2$ /NDF: 2212094.5/30

Left Out: 255.355 $\pm$ 0.044  $\chi^2$ /NDF: 2935324.6/24

Right Out: 172.372 $\pm$ 0.030  $\chi^2$ /NDF: 3785408.8/34

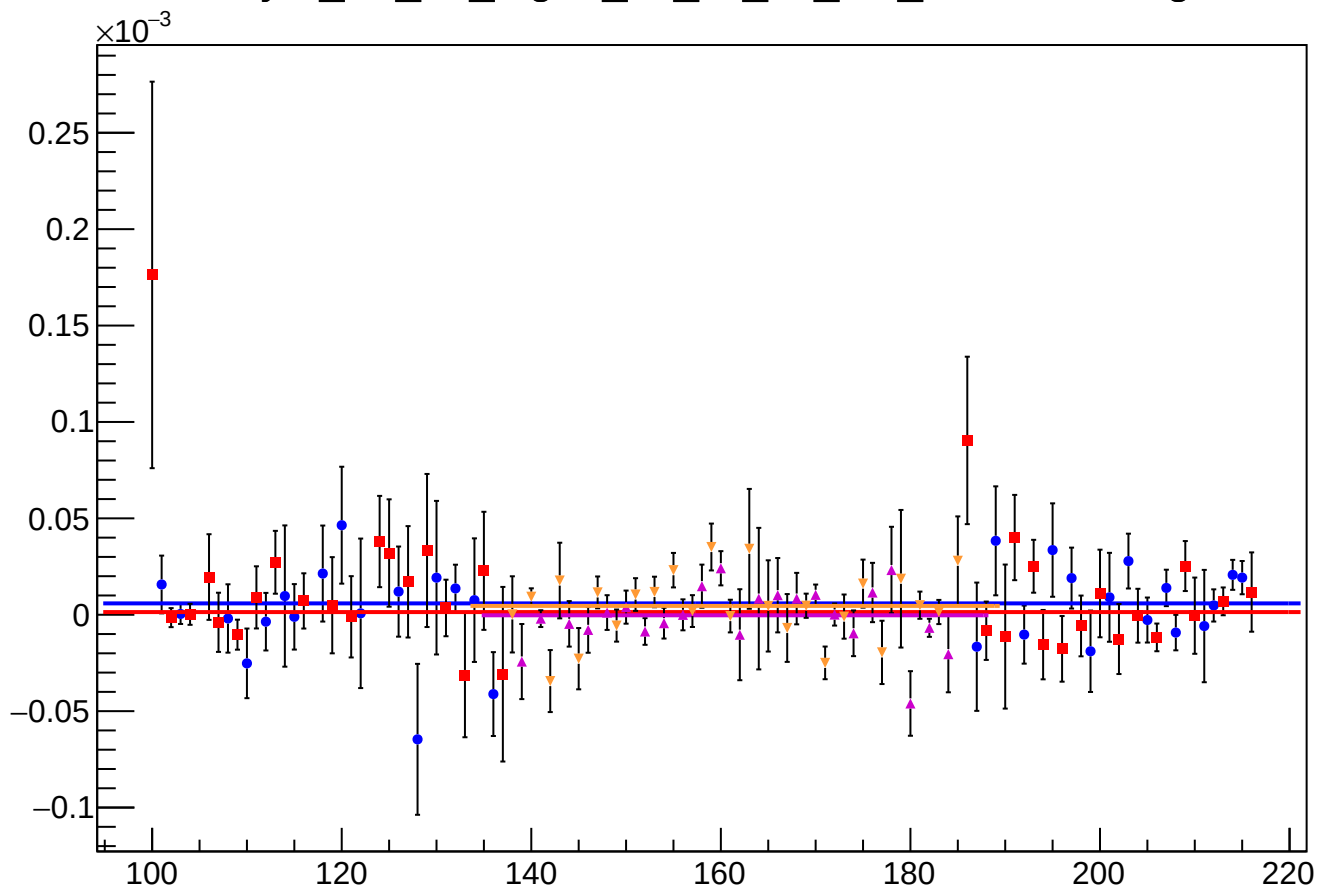
Left In: 262.788 $\pm$ 0.046  $\chi^2$ /NDF: 2025363.4/22

+ sign 204.500 $\pm$ 0.025  $\chi^2$ /NDF: 7153458.9/55

All: 201.923 $\pm$ 0.018  $\chi^2$ /NDF: 15710360.1/11

- sign 199.345 $\pm$ 0.025  $\chi^2$ /NDF: 8535743.5/57

asym\_atr\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.5/34

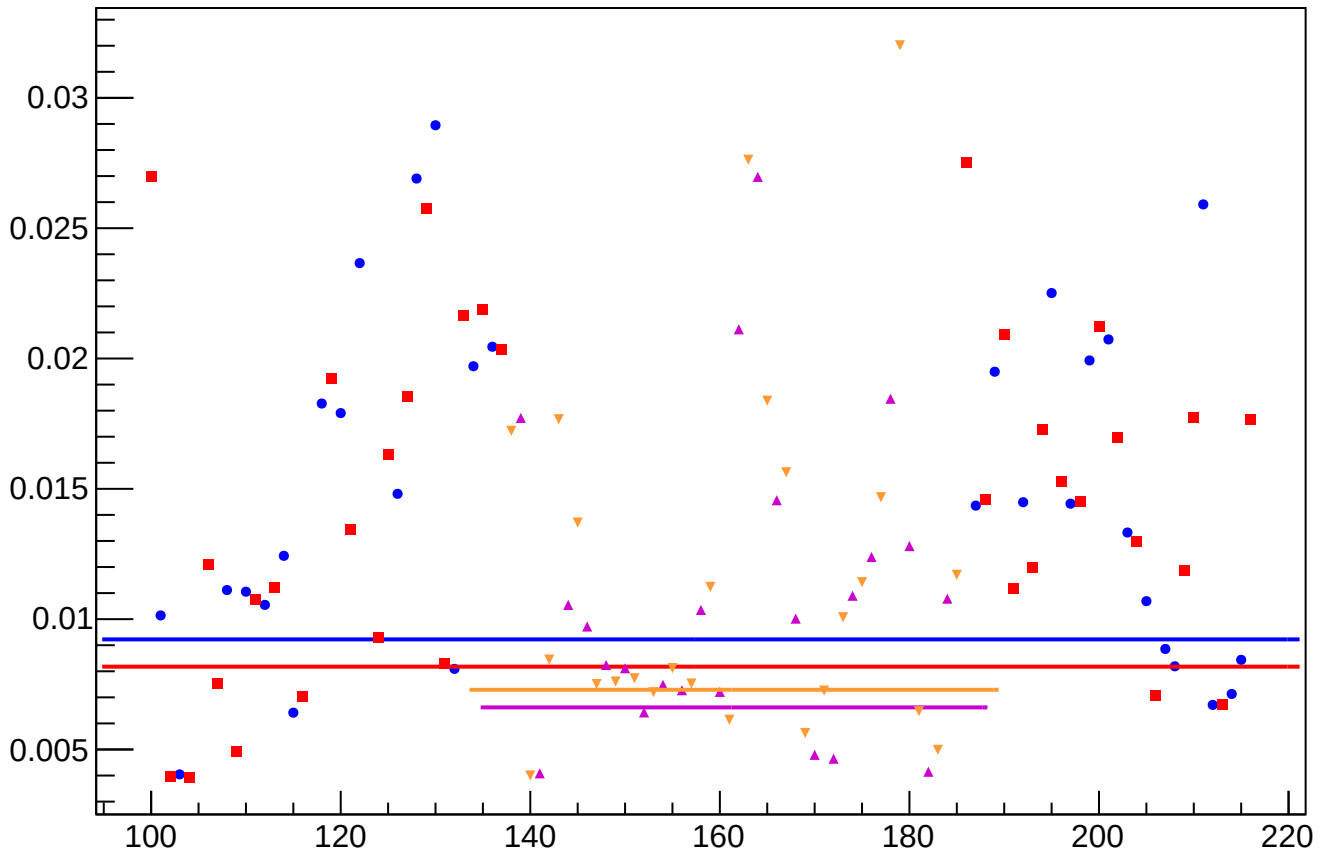
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 78.4/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 152.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.1/57

asym\_atr\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 8215098.7/30

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6772003.6/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 10446711.8/34

Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6410135.0/22

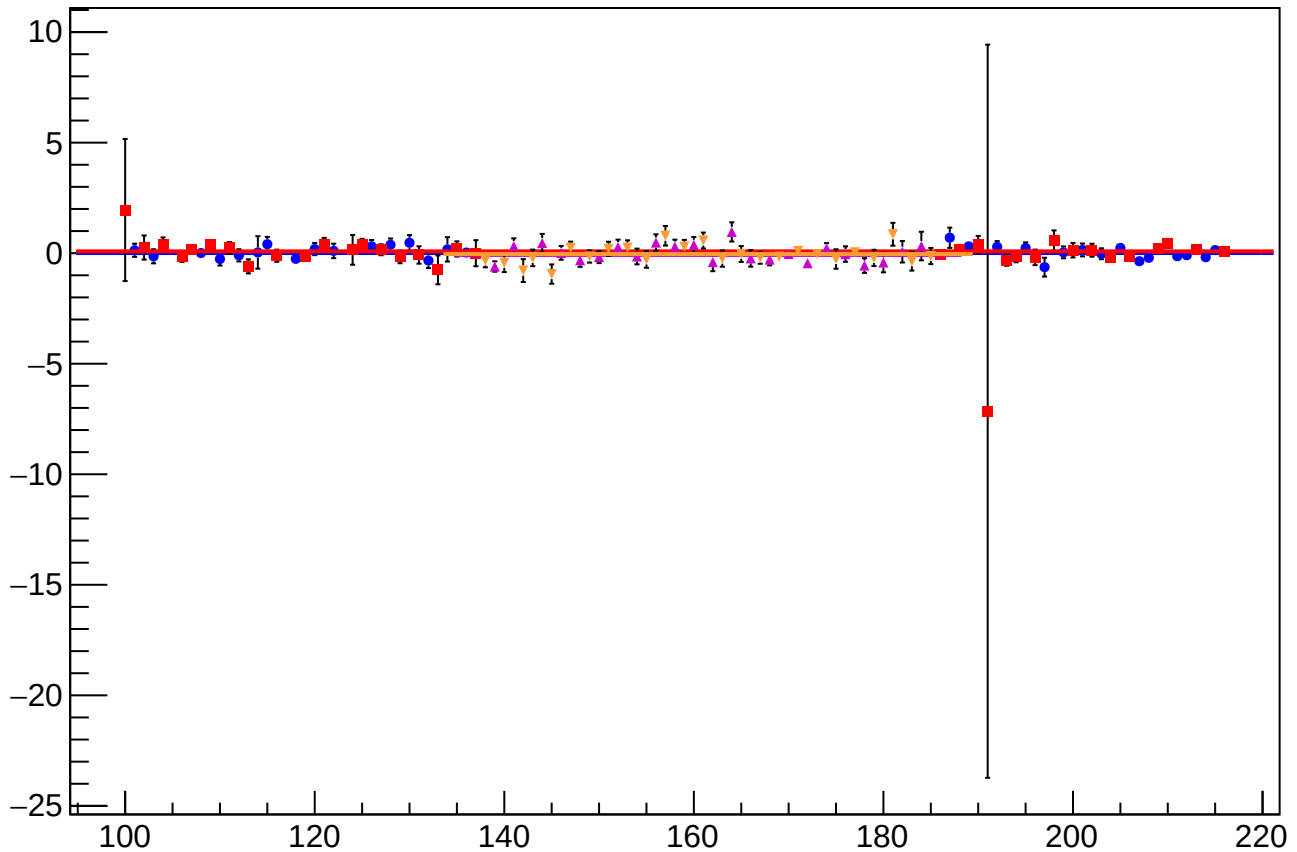
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 15780367.2/55

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 33534673.2/113

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 17466711.1/57



# asym\_atr\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.007 \pm 0.043$   $\chi^2/\text{NDF}$ : 30.6/30

Left Out:  $-0.038 \pm 0.062$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.082 \pm 0.042$   $\chi^2/\text{NDF}$ : 33.3/34

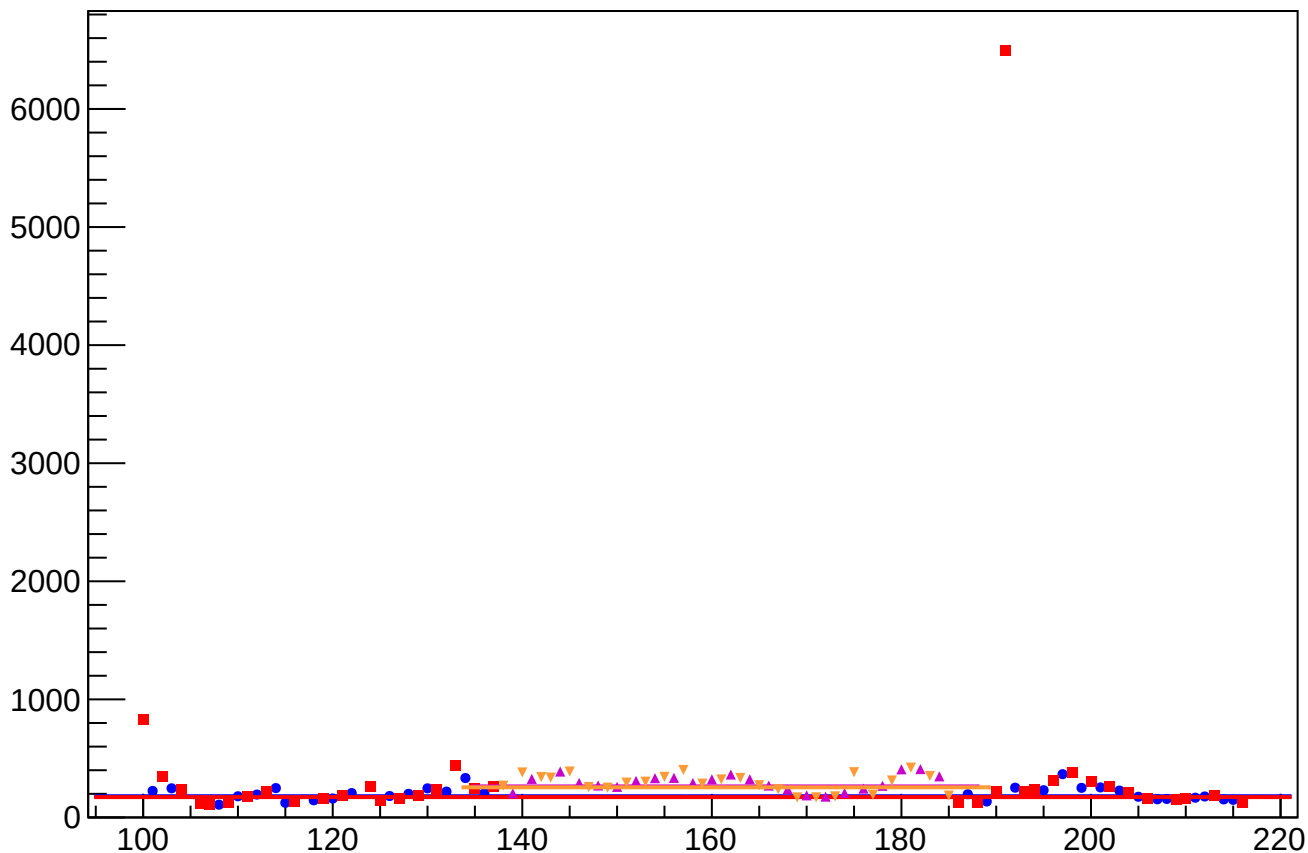
Left In:  $-0.078 \pm 0.065$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-0.007 \pm 0.035$   $\chi^2/\text{NDF}$ : 55.4/55

All:  $0.013 \pm 0.025$   $\chi^2/\text{NDF}$ : 124.7/113

- sign  $0.034 \pm 0.035$   $\chi^2/\text{NDF}$ : 68.7/57

asym\_atr\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 179.729 $\pm$ 0.031  $\chi^2$ /NDF: 2212094.3/30

Left Out: 255.357 $\pm$ 0.044  $\chi^2$ /NDF: 2935428.4/24

Right Out: 172.373 $\pm$ 0.030  $\chi^2$ /NDF: 3785339.0/34

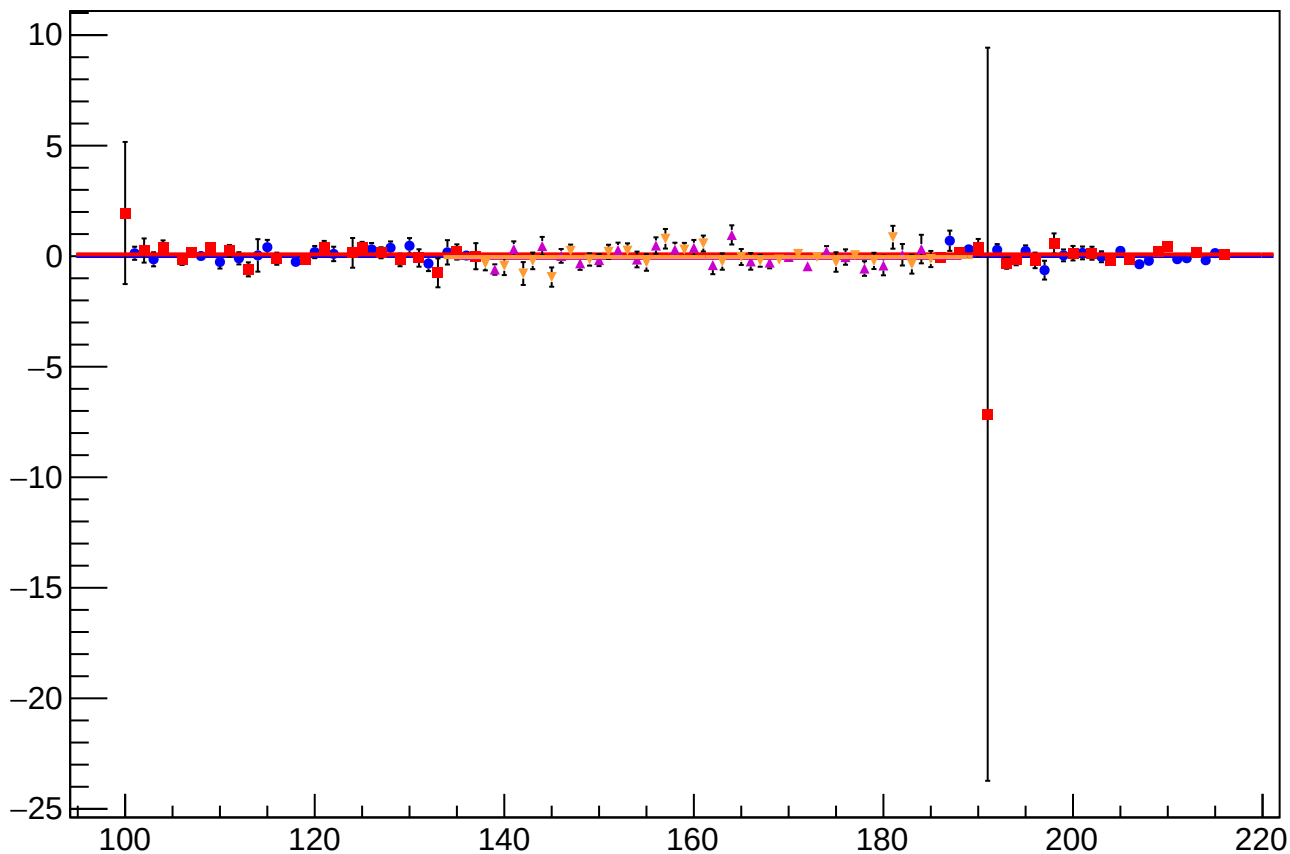
Left In: 262.790 $\pm$ 0.046  $\chi^2$ /NDF: 2025402.0/22

+ sign 204.501 $\pm$ 0.025  $\chi^2$ /NDF: 7153622.6/55

All: 201.924 $\pm$ 0.018  $\chi^2$ /NDF: 15710503.4/11

- sign 199.347 $\pm$ 0.025  $\chi^2$ /NDF: 8535731.3/57

asym\_atr\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.007 $\pm$ 0.043  $\chi^2$ /NDF: 30.6/30

Left Out: -0.038 $\pm$ 0.062  $\chi^2$ /NDF: 24.4/24

Right Out: 0.082 $\pm$ 0.042  $\chi^2$ /NDF: 33.3/34

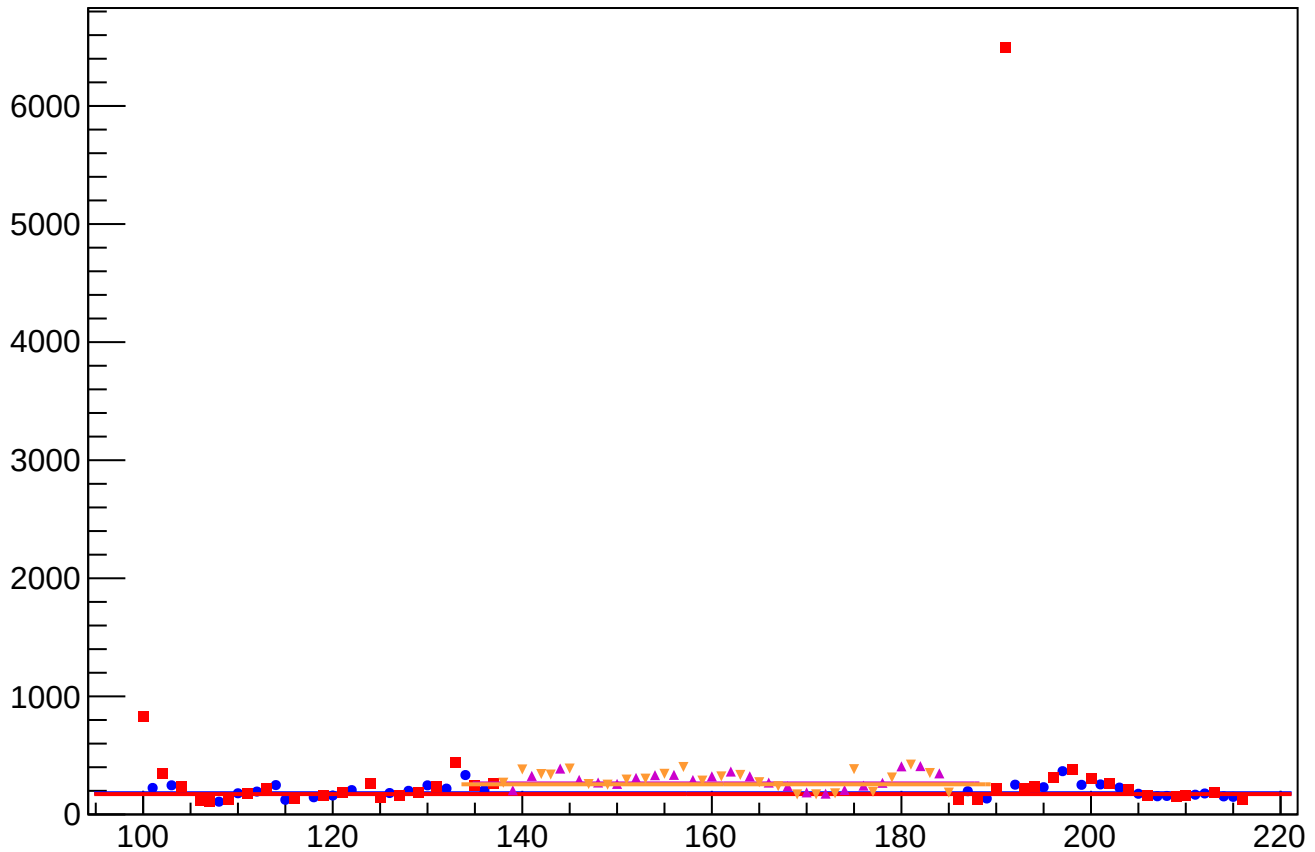
Left In: -0.078 $\pm$ 0.065  $\chi^2$ /NDF: 31.1/22

+ sign -0.007 $\pm$ 0.035  $\chi^2$ /NDF: 55.4/55

All: 0.013 $\pm$ 0.025  $\chi^2$ /NDF: 124.7/113

- sign 0.034 $\pm$ 0.035  $\chi^2$ /NDF: 68.7/57

asym\_atr\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 179.729+/-0.031  $\chi^2/\text{NDF}$ : 2212094.3/30

Left Out: 255.357+/-0.044  $\chi^2/\text{NDF}$ : 2935428.4/24

Right Out: 172.373+/-0.030  $\chi^2/\text{NDF}$ : 3785339.0/34

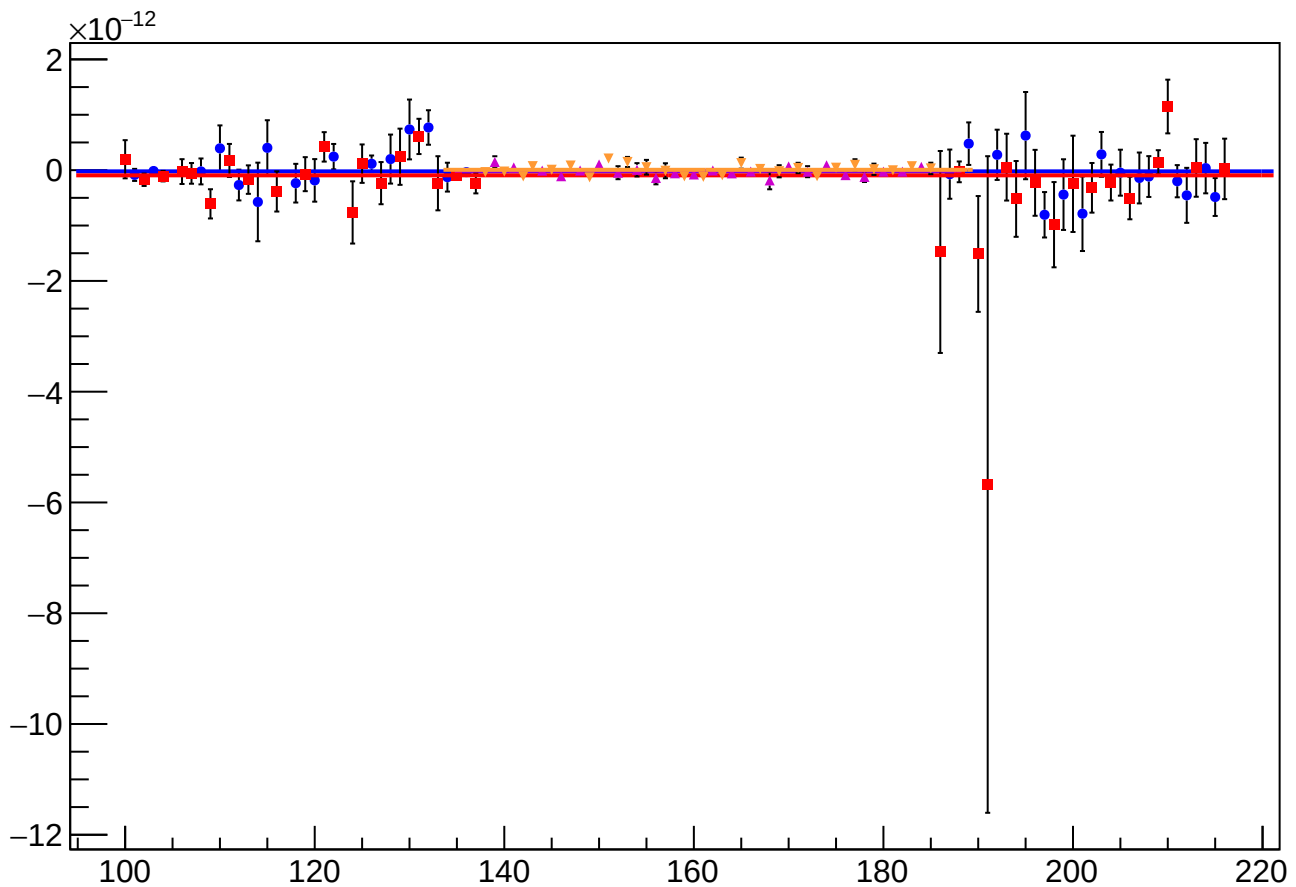
Left In: 262.790+/-0.046  $\chi^2/\text{NDF}$ : 2025402.0/22

+ sign 204.501+/-0.025  $\chi^2/\text{NDF}$ : 7153622.6/55

All: 201.924+/-0.018  $\chi^2/\text{NDF}$ : 15710503.4/11

- sign 199.347+/-0.025  $\chi^2/\text{NDF}$ : 8535731.3/57

asym\_atr\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.2/34

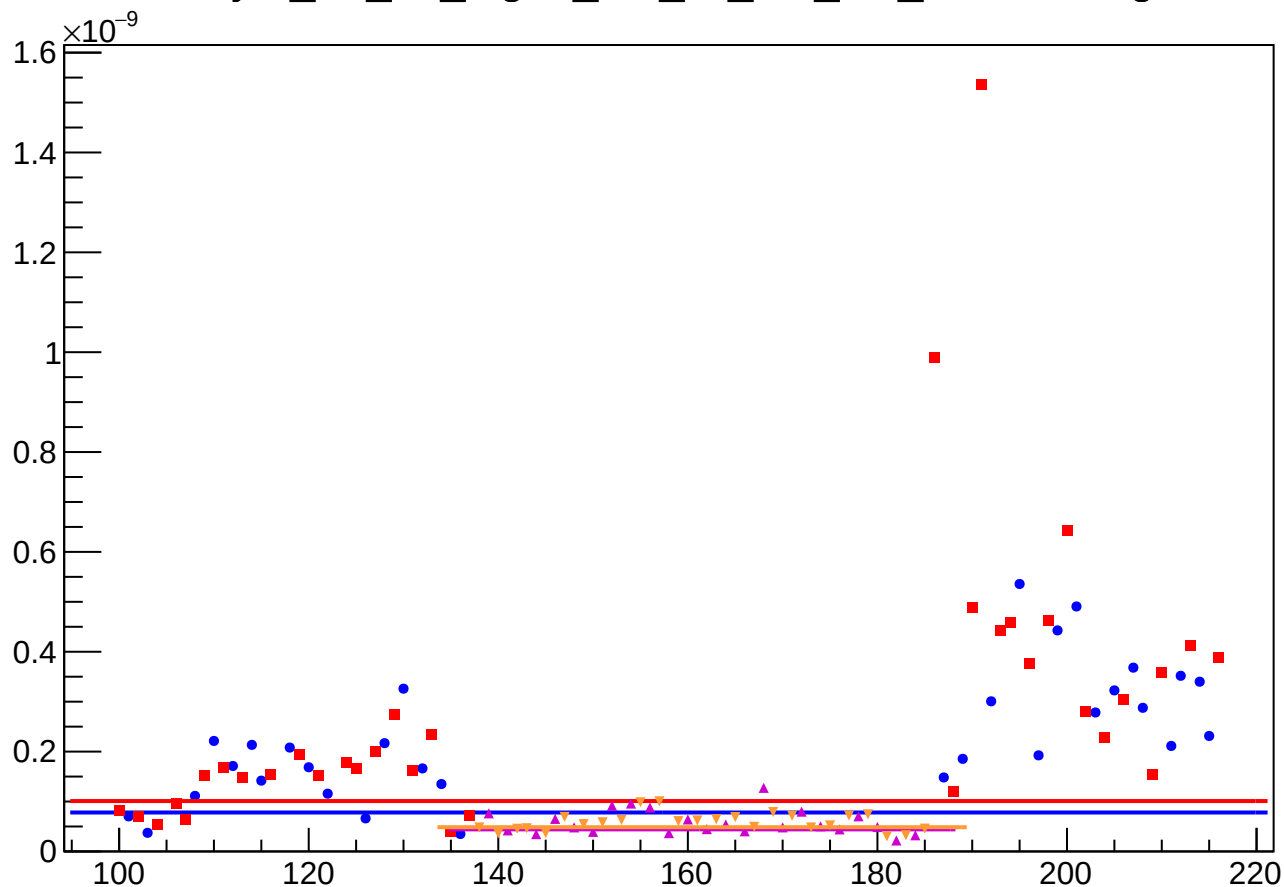
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.1/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 117.9/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.6/57

asym\_atr\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11621875.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2493290.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10175933.0/34

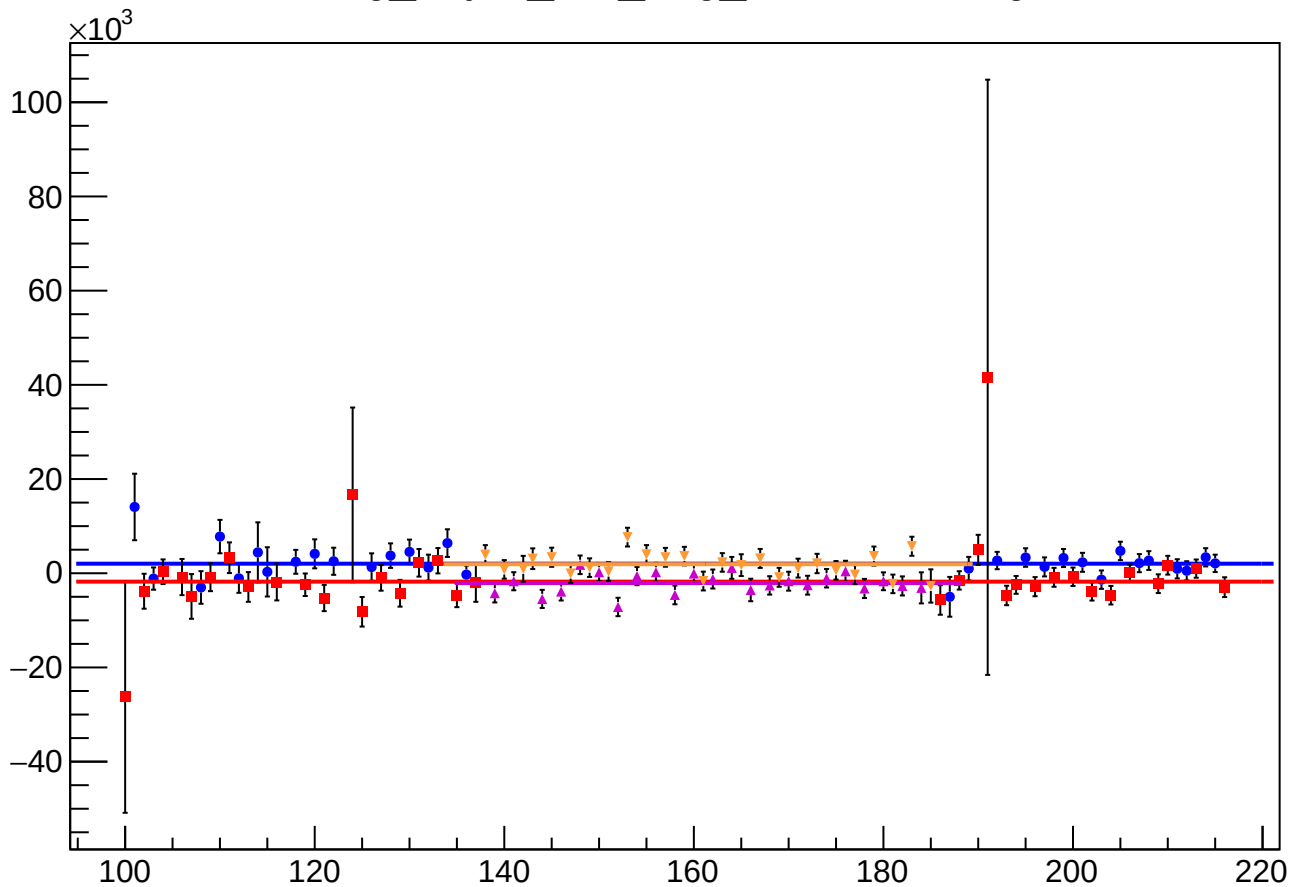
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3624474.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15424320.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33029473.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17568381.8/57

# reg\_asym\_at1\_avg\_mean vs Slug



Right In:  $2027.185 \pm 427.771$   $\chi^2/\text{NDF}$ : 26.9/30

Left Out:  $1920.623 \pm 412.915$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-1782.755 \pm 430.101$   $\chi^2/\text{NDF}$ : 37.8/34

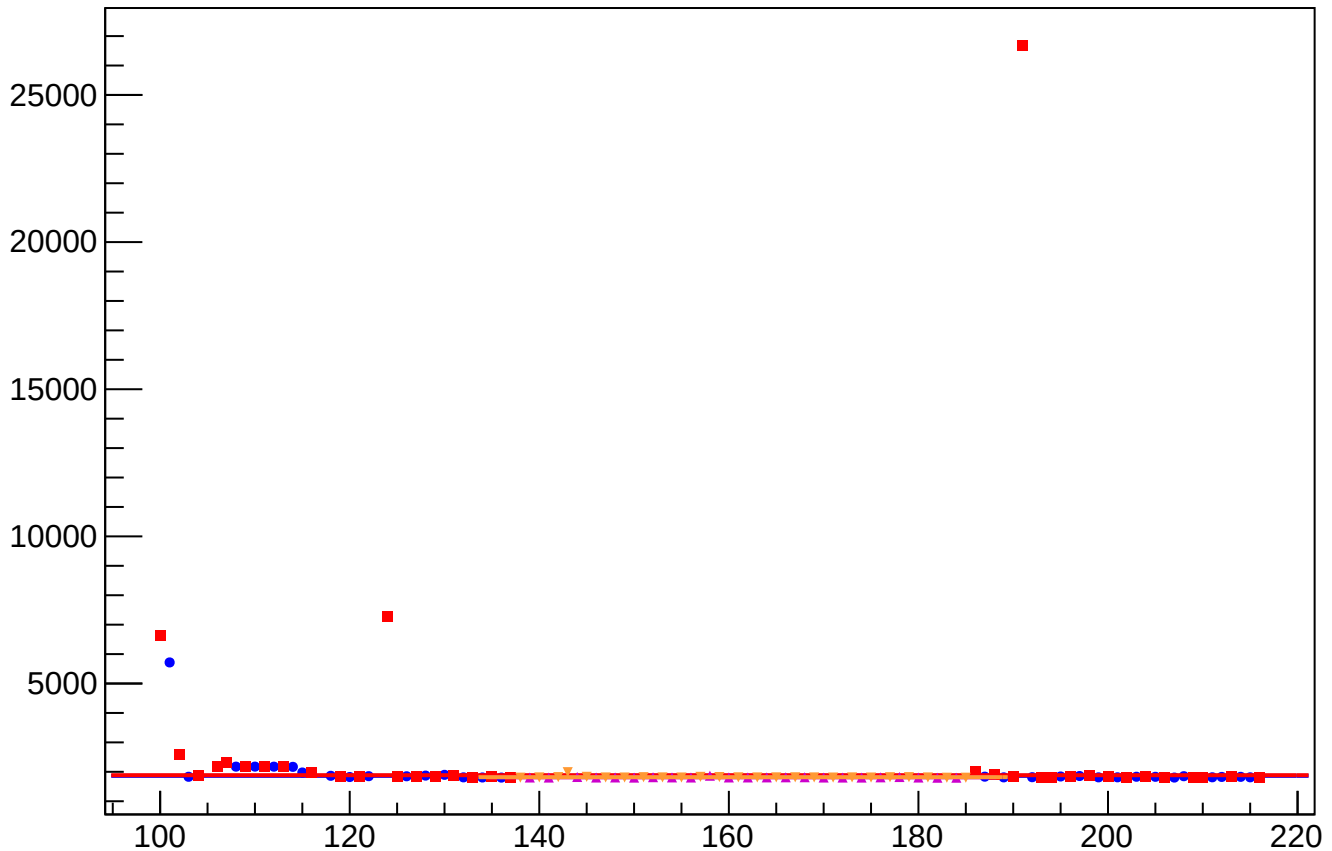
Left In:  $-2074.205 \pm 423.203$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $1972.022 \pm 297.088$   $\chi^2/\text{NDF}$ : 59.4/55

All:  $50.385 \pm 211.671$   $\chi^2/\text{NDF}$ : 209.0/113

- sign  $-1930.836 \pm 301.659$   $\chi^2/\text{NDF}$ : 64.6/57

# reg\_asym\_at1\_avg\_rms vs Slug



Right In: 1863.084 $\pm$ 0.302  $\chi^2$ /NDF: 670381.1/30

Left Out: 1817.524 $\pm$ 0.292  $\chi^2$ /NDF: 12955.2/24

Right Out: 1884.687 $\pm$ 0.304  $\chi^2$ /NDF: 744037.1/34

Left In: 1812.545 $\pm$ 0.299  $\chi^2$ /NDF: 2013.0/22

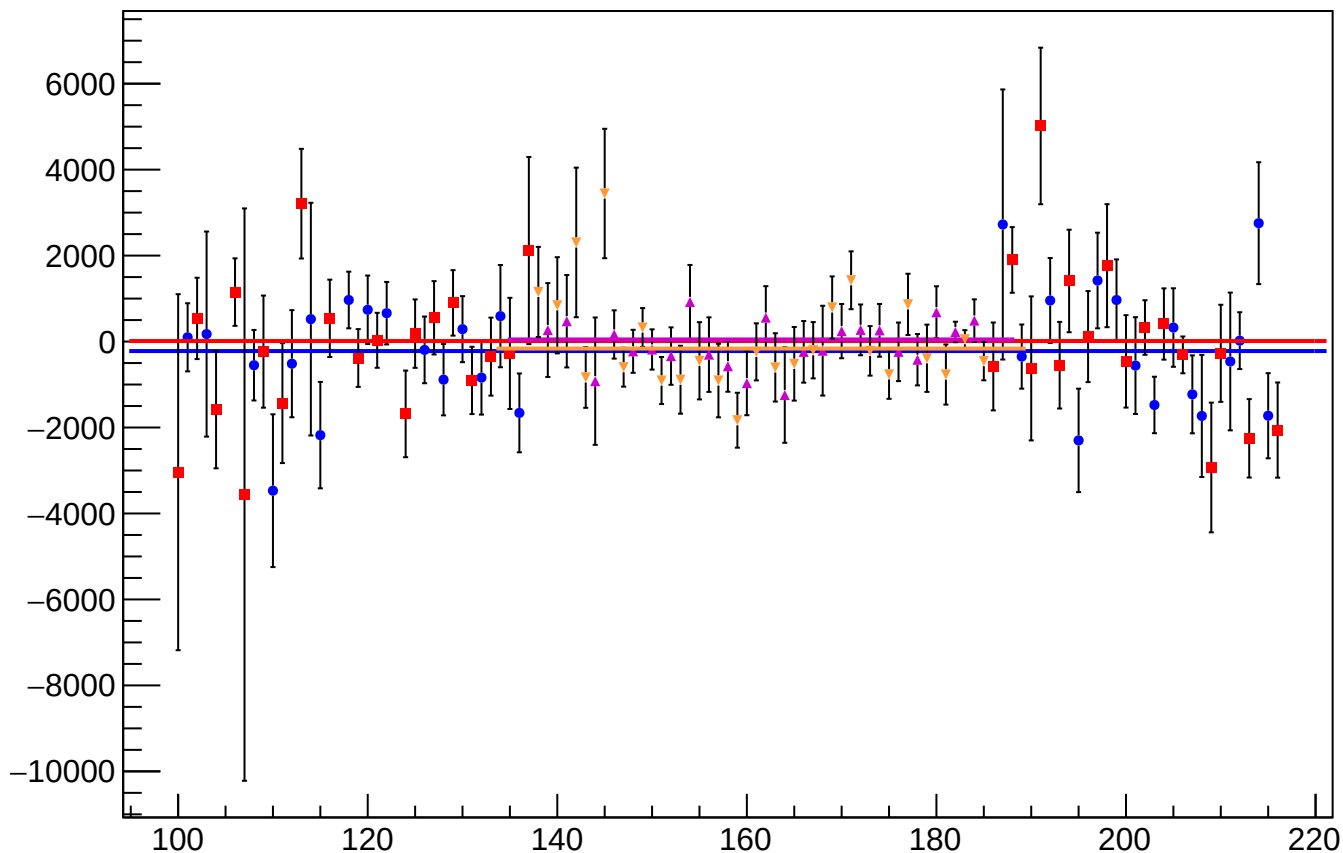
+ sign 1839.499 $\pm$ 0.210  $\chi^2$ /NDF: 695080.5/55

All: 1843.701 $\pm$ 0.150  $\chi^2$ /NDF: 1470532.2/11

- sign 1848.033 $\pm$ 0.213  $\chi^2$ /NDF: 774639.2/57



# asym\_at1\_avg\_reg\_correction\_mean vs Slug



Right In: -221.095 $\pm$ 170.050  $\chi^2$ /NDF: 39.4/30

Left Out: -162.996 $\pm$ 115.295  $\chi^2$ /NDF:36.8/24

Right Out: 12.479 $\pm$ 157.743  $\chi^2$ /NDF: 51.9/34

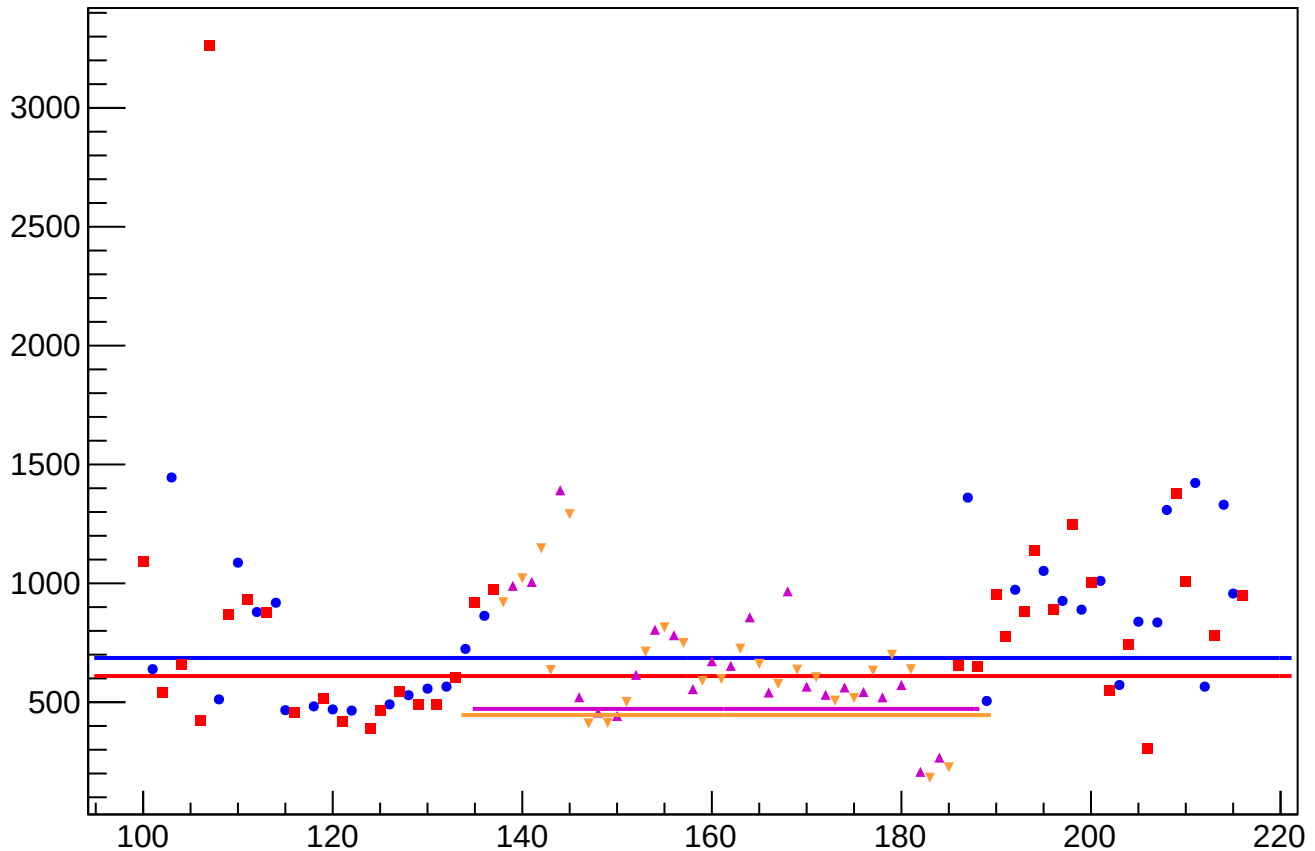
Left In: 49.290 $\pm$ 122.691  $\chi^2$ /NDF:11.3/22

+ sign -181.293 $\pm$ 95.429  $\chi^2$ /NDF: 76.3/55

All: -74.536 $\pm$ 67.974  $\chi^2$ /NDF: 142.2/113

- sign 35.415 $\pm$ 96.846  $\chi^2$ /NDF: 63.3/57

# asym\_at1\_avg\_reg\_correction\_rms vs Slug



Right In:  $686.053 \pm 0.120$   $\chi^2/\text{NDF}: 3943291.1/30$

Left Out:  $445.893 \pm 0.082$   $\chi^2/\text{NDF}: 7982455.6/24$

Right Out:  $610.032 \pm 0.112$   $\chi^2/\text{NDF}: 5005522.6/34$

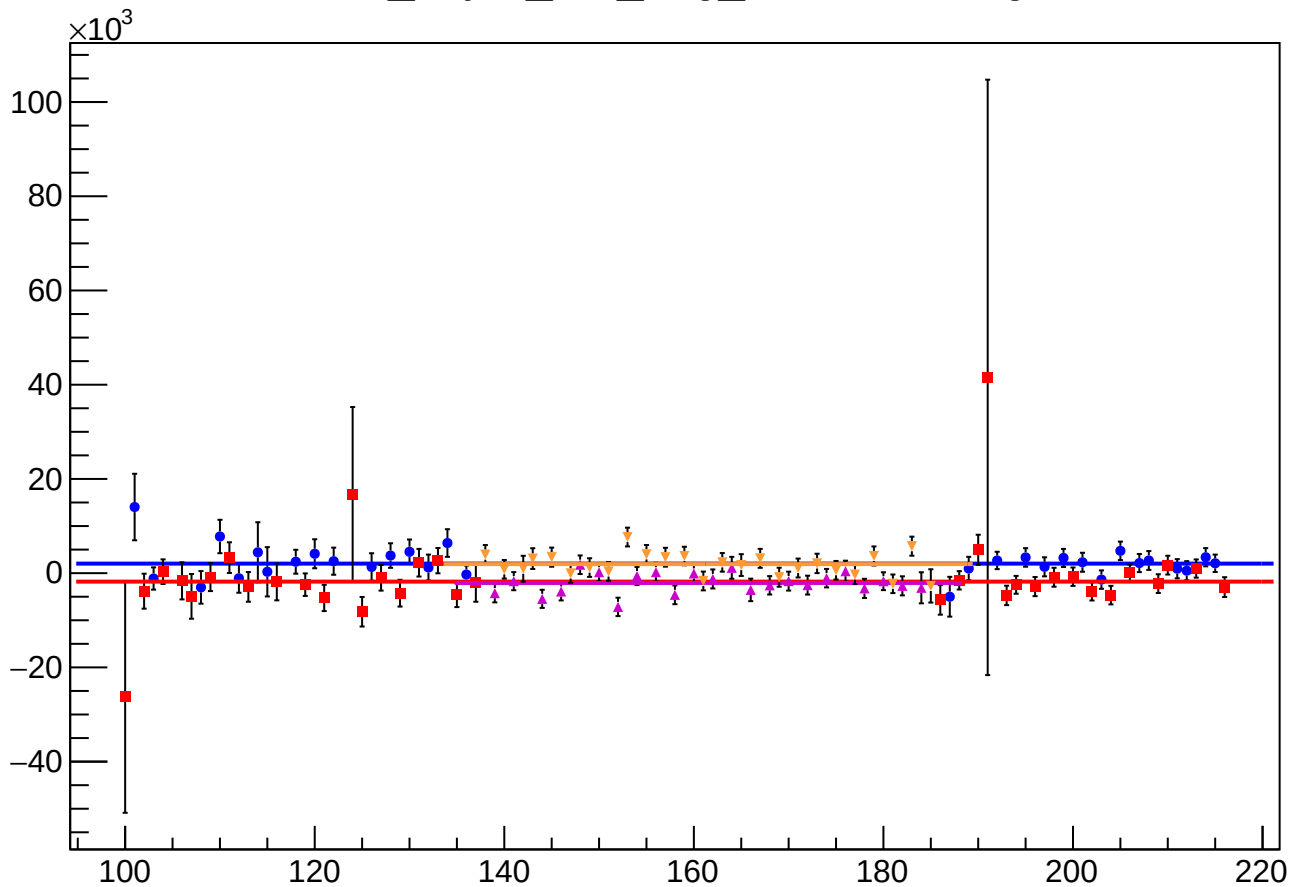
Left In:  $471.746 \pm 0.087$   $\chi^2/\text{NDF}: 6413905.5/22$

+ sign  $521.526 \pm 0.067$   $\chi^2/\text{NDF}: 14658609.5/55$

All:  $522.681 \pm 0.048$   $\chi^2/\text{NDF}: 27036325.7/11$

- sign  $523.870 \pm 0.068$   $\chi^2/\text{NDF}: 12377121.5/57$

# cor\_asym\_at1\_avg\_mean vs Slug



Right In: 2027.093 $\pm$ 427.771  $\chi^2$ /NDF: 26.9/30

Left Out: 1920.588 $\pm$ 412.915  $\chi^2$ /NDF:32.5/24

Right Out: -1793.260 $\pm$ 430.230  $\chi^2$ /NDF: 37.7/34

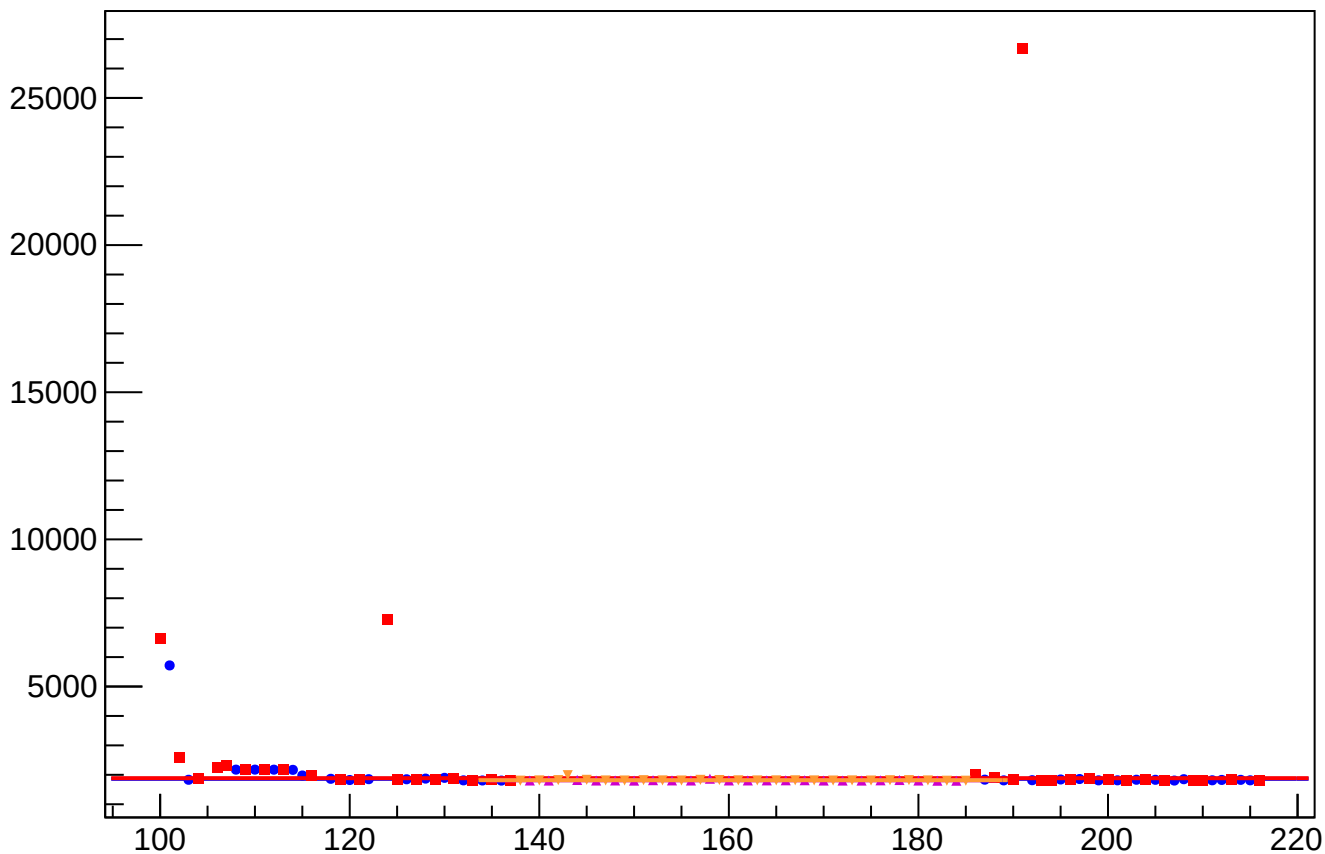
Left In: -2074.306 $\pm$ 423.203  $\chi^2$ /NDF:26.5/22

+ sign 1971.959 $\pm$ 297.088  $\chi^2$ /NDF: 59.4/55

All: 48.051 $\pm$ 211.686  $\chi^2$ /NDF: 209.1/113

- sign -1936.097 $\pm$ 301.703  $\chi^2$ /NDF: 64.5/57

# cor\_asym\_at1\_avg\_rms vs Slug



Right In: 1863.084 $\pm$ 0.302  $\chi^2$ /NDF: 670381.0/30

Left Out: 1817.524 $\pm$ 0.292  $\chi^2$ /NDF: 12955.2/24

Right Out: 1885.109 $\pm$ 0.304  $\chi^2$ /NDF: 747789.2/34

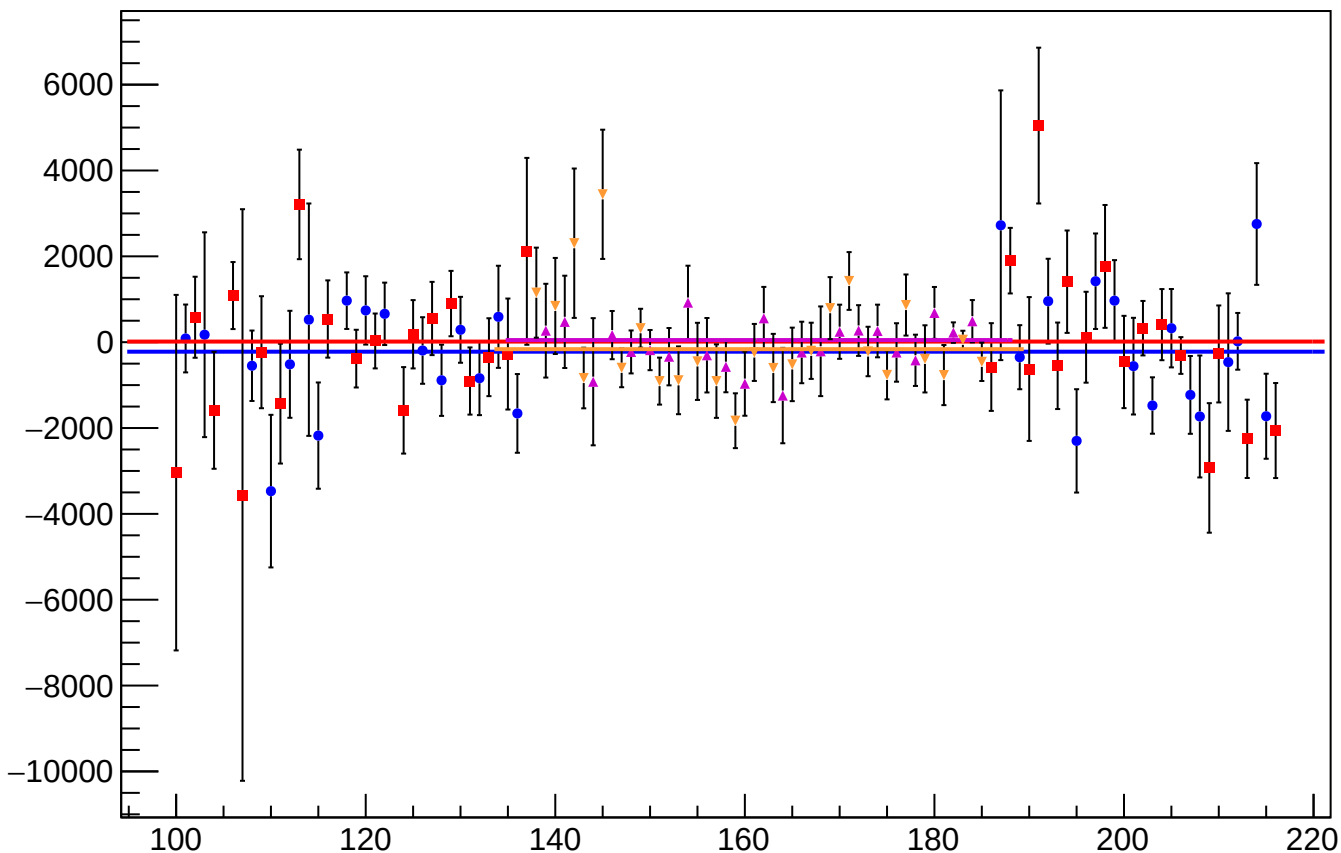
Left In: 1812.545 $\pm$ 0.299  $\chi^2$ /NDF: 2013.0/22

+ sign 1839.499 $\pm$ 0.210  $\chi^2$ /NDF: 695080.4/55

All: 1843.797 $\pm$ 0.150  $\chi^2$ /NDF: 1474648.5/11

- sign 1848.229 $\pm$ 0.213  $\chi^2$ /NDF: 778717.9/57

# asym\_at1\_avg\_cor\_correction\_mean vs Slug



Right In:  $-221.544 \pm 170.030$   $\chi^2/\text{NDF}$ : 39.4/30

Left Out:  $-162.911 \pm 115.291$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $14.270 \pm 157.687$   $\chi^2/\text{NDF}$ : 51.6/34

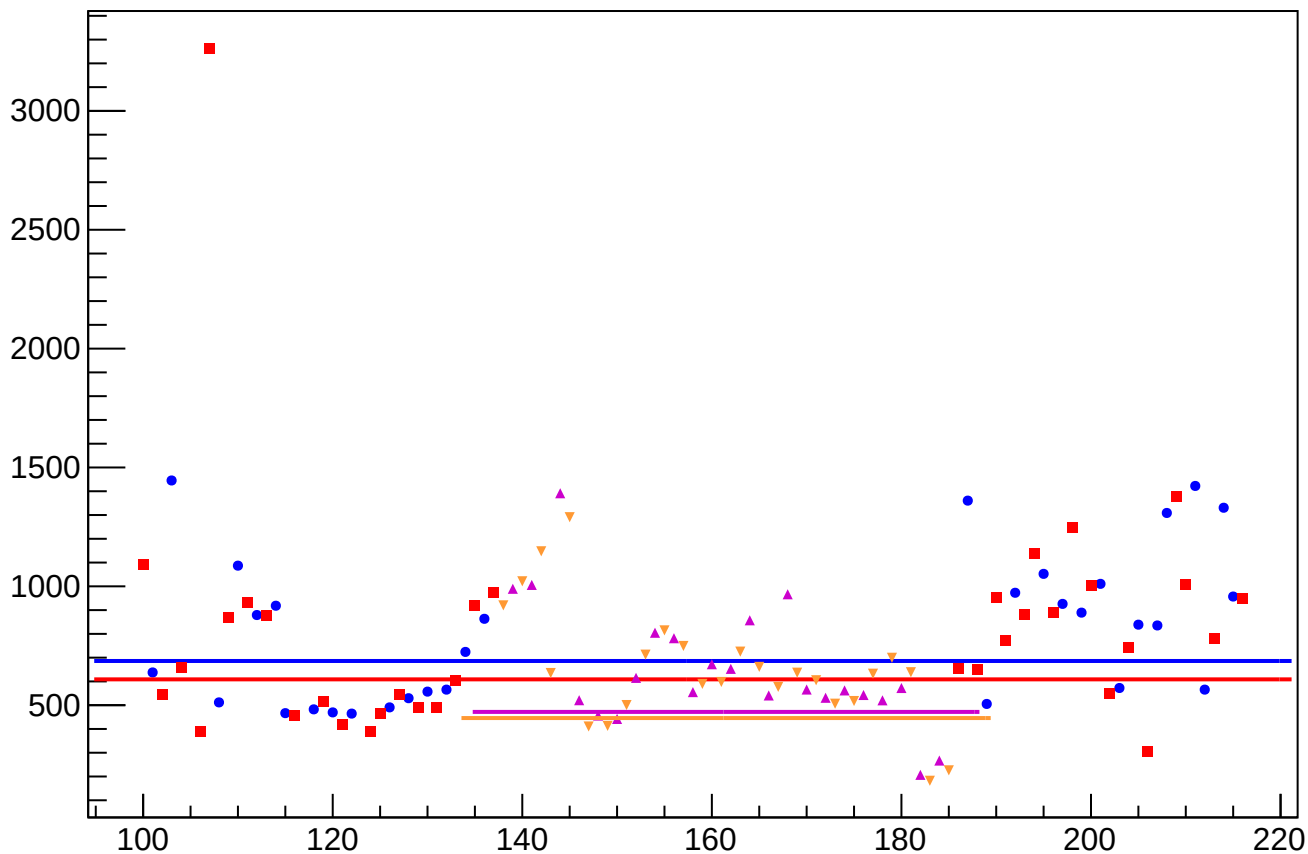
Left In:  $49.310 \pm 122.694$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-181.378 \pm 95.423$   $\chi^2/\text{NDF}$ : 76.3/55

All:  $-74.237 \pm 67.968$   $\chi^2/\text{NDF}$ : 141.9/113

- sign  $36.096 \pm 96.834$   $\chi^2/\text{NDF}$ : 63.0/57

# asym\_at1\_avg\_cor\_correction\_rms vs Slug



Right In:  $685.979 \pm 0.120$   $\chi^2/\text{NDF}$ : 3943815.7/30

Left Out:  $445.867 \pm 0.082$   $\chi^2/\text{NDF}$ : 7983869.6/24

Right Out:  $608.656 \pm 0.112$   $\chi^2/\text{NDF}$ : 5050941.0/34

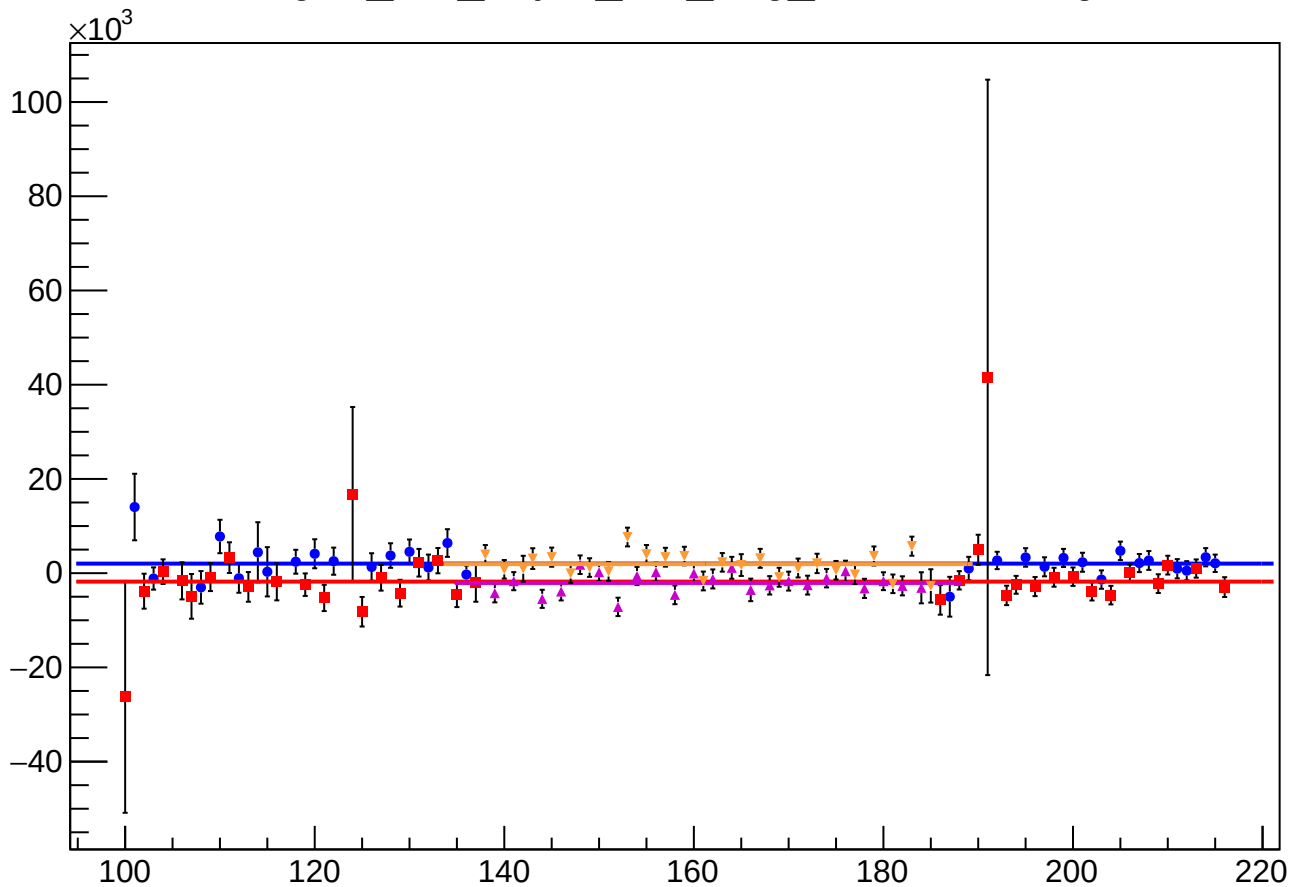
Left In:  $471.757 \pm 0.087$   $\chi^2/\text{NDF}$ : 6413685.0/22

+ sign  $521.493 \pm 0.067$   $\chi^2/\text{NDF}$ : 14659947.4/55

All:  $522.424 \pm 0.048$   $\chi^2/\text{NDF}$ : 27063924.5/11

- sign  $523.383 \pm 0.068$   $\chi^2/\text{NDF}$ : 12403590.8/57

# eigen\_cor\_asym\_at1\_avg\_mean vs Slug



Right In:  $2027.093 \pm 427.771$   $\chi^2/\text{NDF}$ : 26.9/30

Left Out:  $1920.588 \pm 412.915$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-1793.260 \pm 430.230$   $\chi^2/\text{NDF}$ : 37.7/34

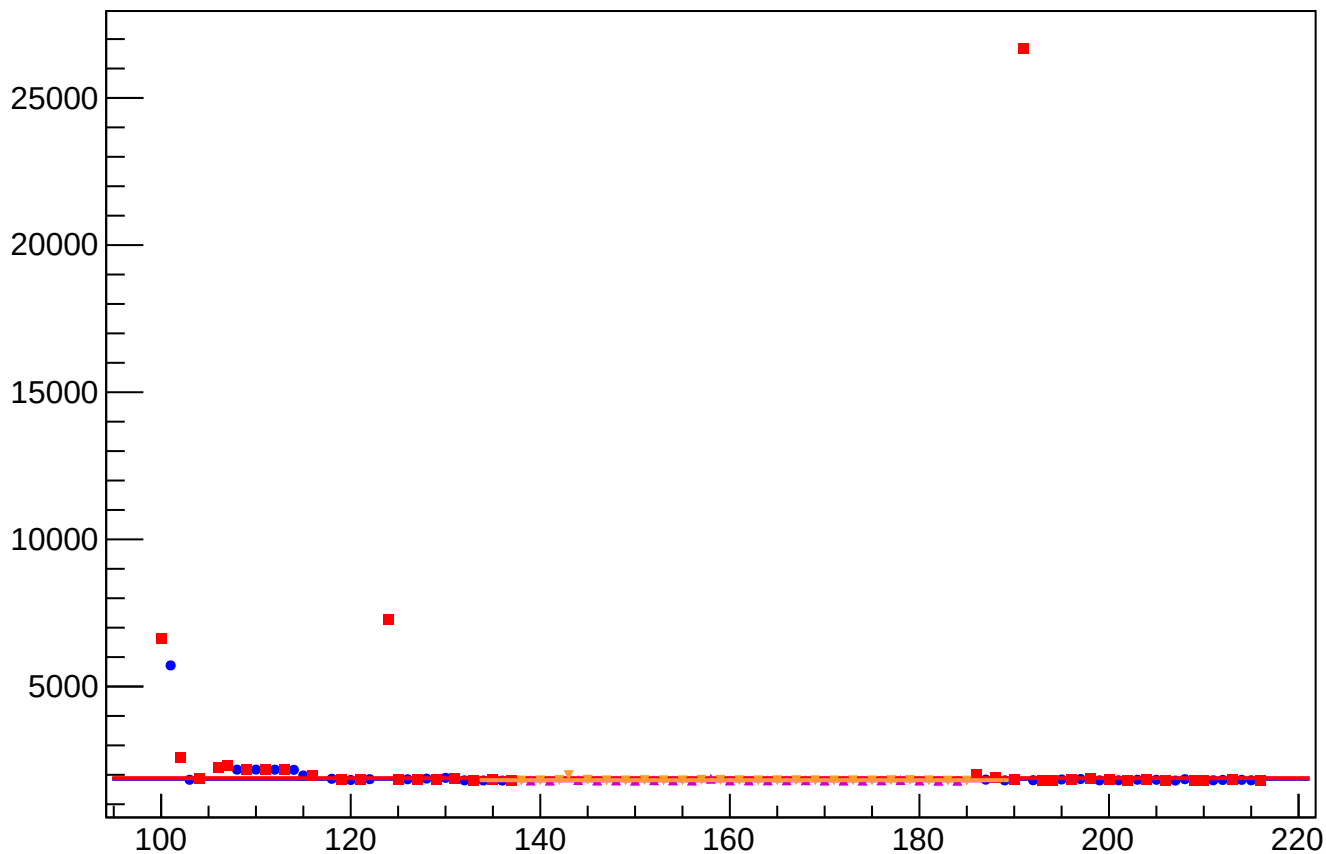
Left In:  $-2074.306 \pm 423.203$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $1971.959 \pm 297.088$   $\chi^2/\text{NDF}$ : 59.4/55

All:  $48.051 \pm 211.686$   $\chi^2/\text{NDF}$ : 209.1/113

- sign  $-1936.097 \pm 301.703$   $\chi^2/\text{NDF}$ : 64.5/57

# eigen\_cor\_asym\_at1\_avg\_rms vs Slug



Right In: 1863.084 $\pm$ 0.302     $\chi^2$ /NDF: 670381.0/30

Left Out: 1817.524 $\pm$ 0.292     $\chi^2$ /NDF: 12955.2/24

Right Out: 1885.109 $\pm$ 0.304     $\chi^2$ /NDF: 747789.2/34

Left In: 1812.545 $\pm$ 0.299     $\chi^2$ /NDF: 2013.0/22

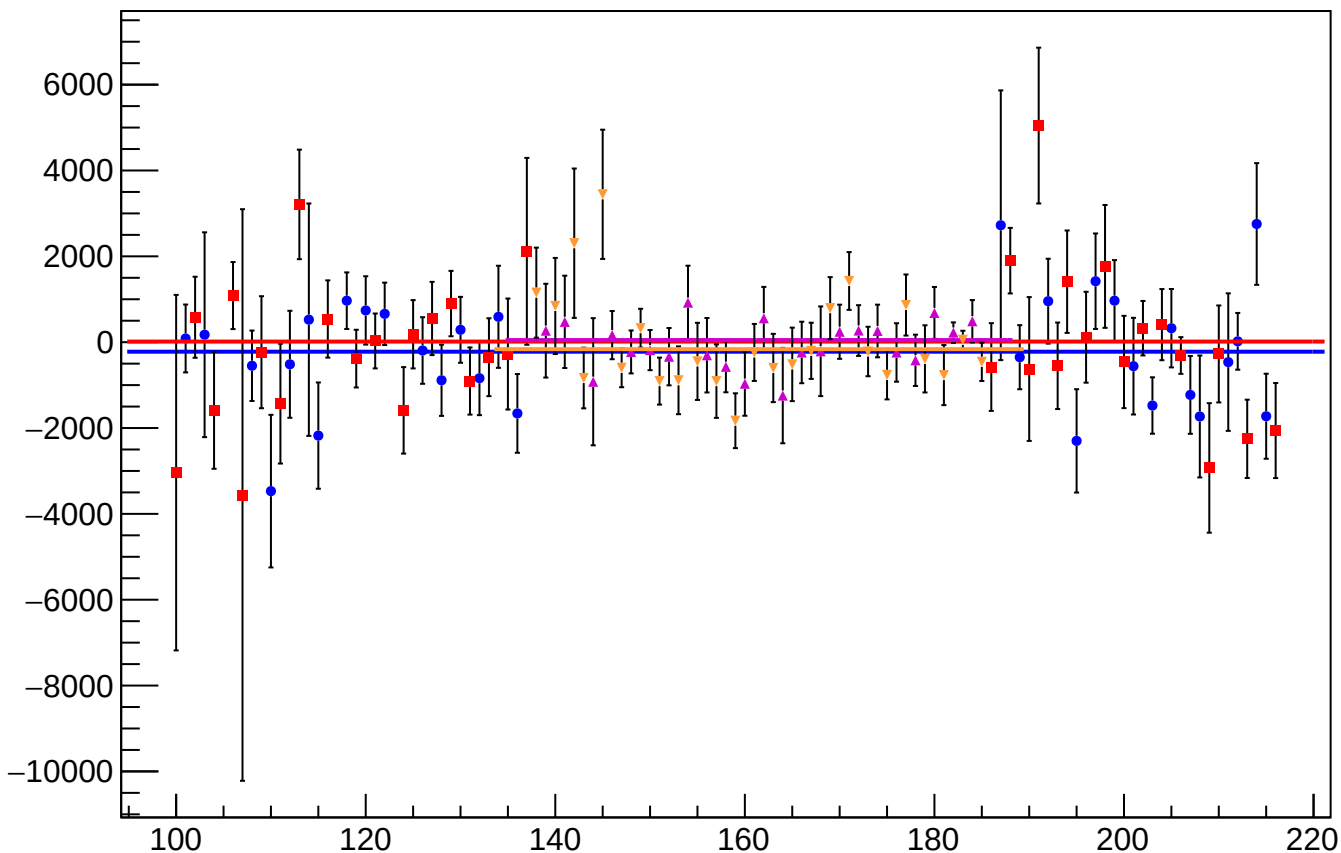
+ sign 1839.499 $\pm$ 0.210     $\chi^2$ /NDF: 695080.4/55

All: 1843.797 $\pm$ 0.150     $\chi^2$ /NDF: 1474648.5/11

- sign 1848.229 $\pm$ 0.213     $\chi^2$ /NDF: 778717.9/57



asym\_at1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -221.544+/-170.030  $\chi^2/\text{NDF}$ : 39.4/30

Left Out: -162.911+/-115.291  $\chi^2/\text{NDF}$ : 36.9/24

Right Out: 14.270+/-157.687  $\chi^2/\text{NDF}$ : 51.6/34

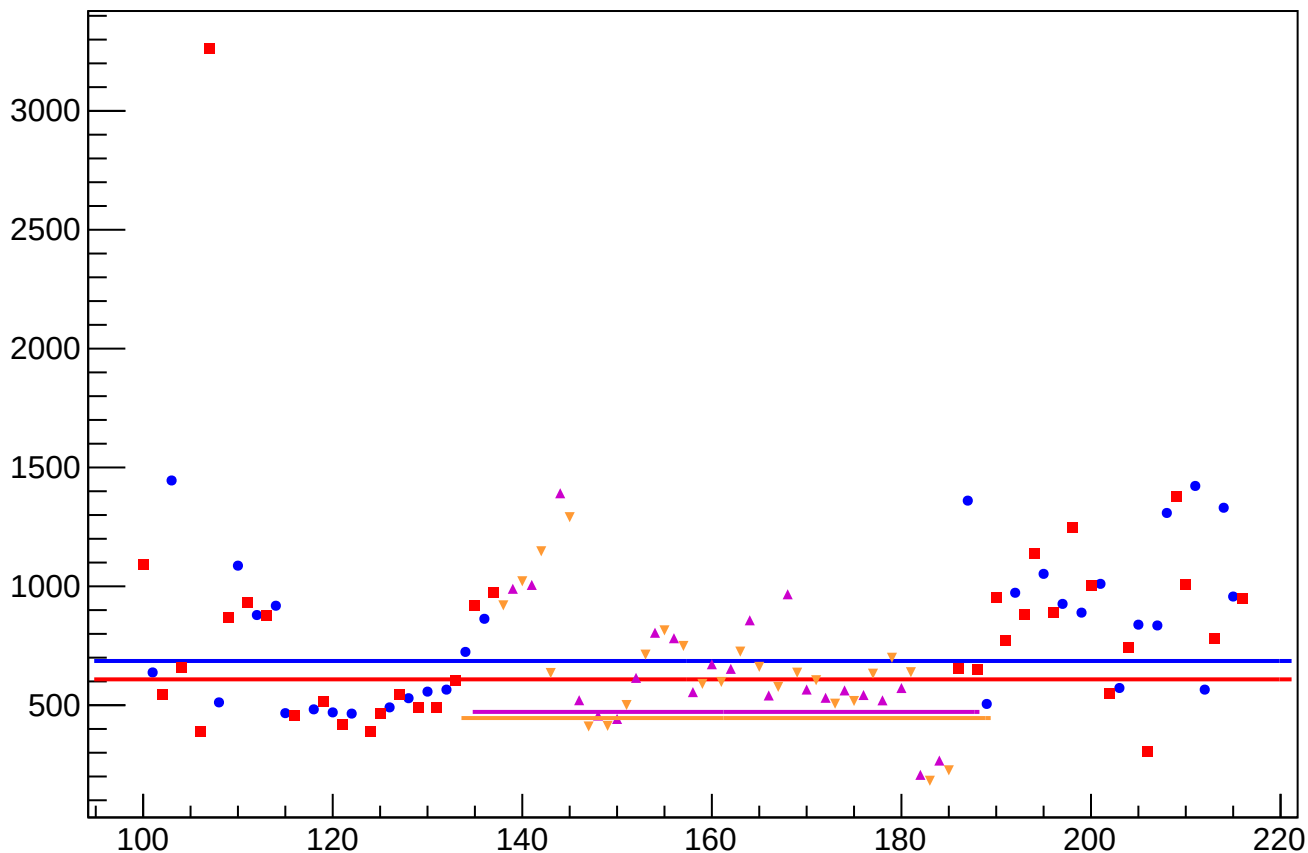
Left In: 49.310+/-122.694  $\chi^2/\text{NDF}$ : 11.3/22

+ sign -181.378+/-95.423  $\chi^2/\text{NDF}$ : 76.3/55

All: -74.237+/-67.968  $\chi^2/\text{NDF}$ : 141.9/113

- sign 36.096+/-96.834  $\chi^2/\text{NDF}$ : 63.0/57

asym\_at1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In:  $685.979 \pm 0.120$   $\chi^2/\text{NDF}$ : 3943815.7/30

Left Out:  $445.867 \pm 0.082$   $\chi^2/\text{NDF}$ : 7983869.6/24

Right Out:  $608.656 \pm 0.112$   $\chi^2/\text{NDF}$ : 5050941.0/34

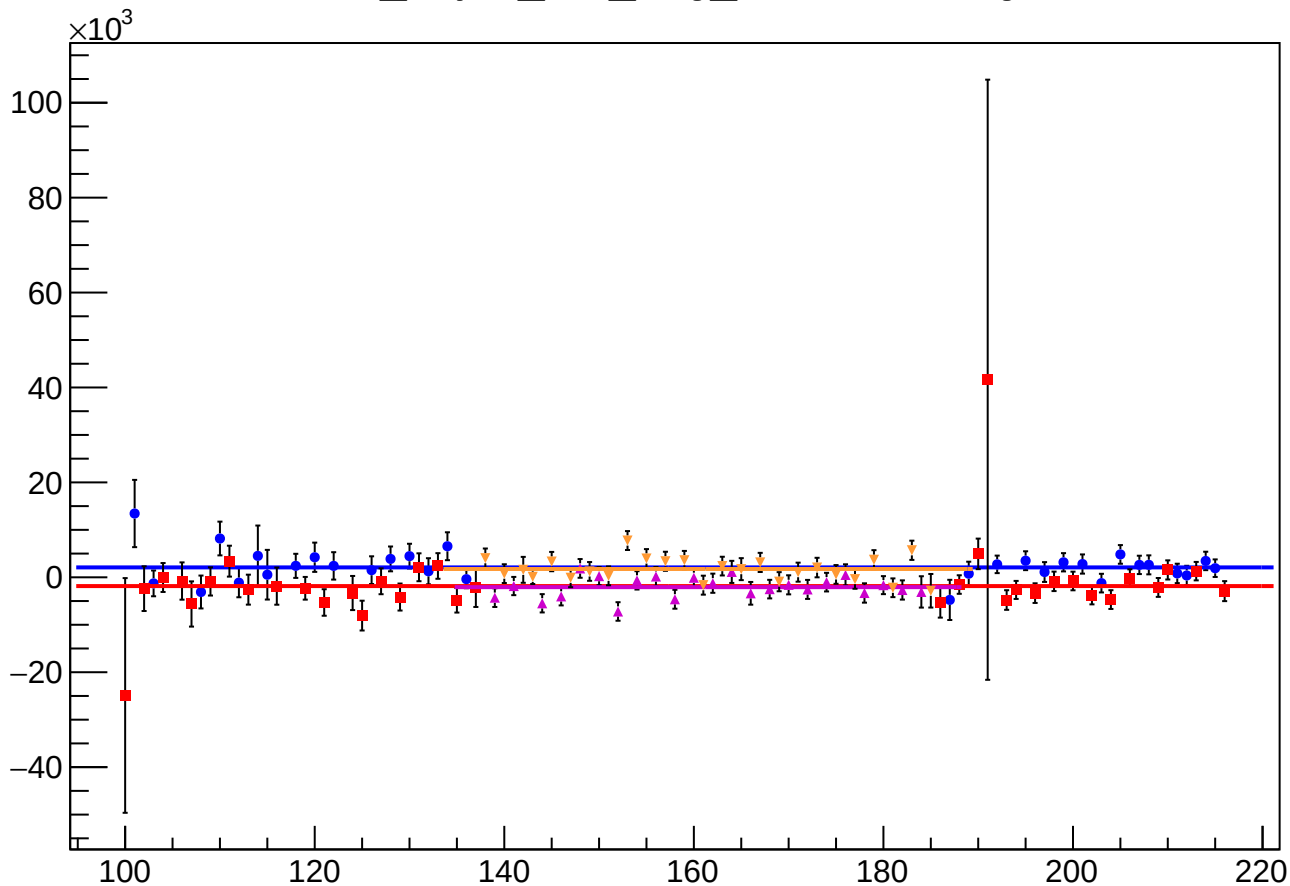
Left In:  $471.757 \pm 0.087$   $\chi^2/\text{NDF}$ : 6413685.0/22

+ sign  $521.493 \pm 0.067$   $\chi^2/\text{NDF}$ : 14659947.4/55

All:  $522.424 \pm 0.048$   $\chi^2/\text{NDF}$ : 27063924.5/11

- sign  $523.383 \pm 0.068$   $\chi^2/\text{NDF}$ : 12403590.8/57

# dit\_asym\_at1\_avg\_mean vs Slug



Right In: 2086.977 $\pm$ 431.526  $\chi^2$ /NDF: 27.2/30

Left Out: 1755.493 $\pm$ 405.401  $\chi^2$ /NDF:33.8/24

Right Out: -1848.951 $\pm$ 432.477  $\chi^2$ /NDF: 35.8/34

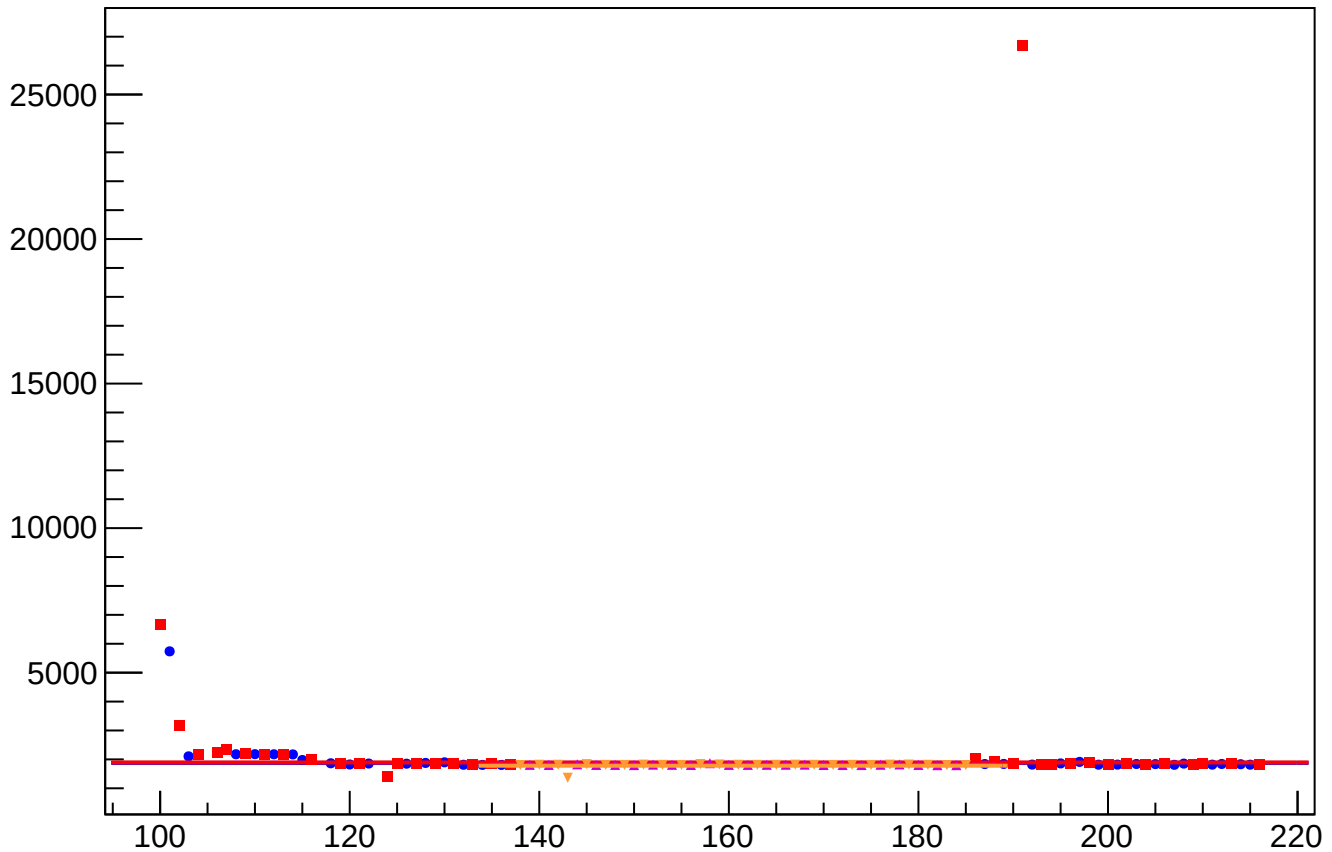
Left In: -2073.441 $\pm$ 423.648  $\chi^2$ /NDF:27.0/22

+ sign 1910.898 $\pm$ 295.466  $\chi^2$ /NDF: 61.3/55

All: 20.142 $\pm$ 211.416  $\chi^2$ /NDF: 208.2/113

- sign -1963.511 $\pm$ 302.638  $\chi^2$ /NDF: 63.0/57

# dit\_asym\_at1\_avg\_rms vs Slug



Right In: 1878.909 $\pm$ 0.305  $\chi^2$ /NDF: 683203.1/30

Left Out: 1780.913 $\pm$ 0.287  $\chi^2$ /NDF: 164936.9/24

Right Out: 1893.706 $\pm$ 0.306  $\chi^2$ /NDF: 701279.0/34

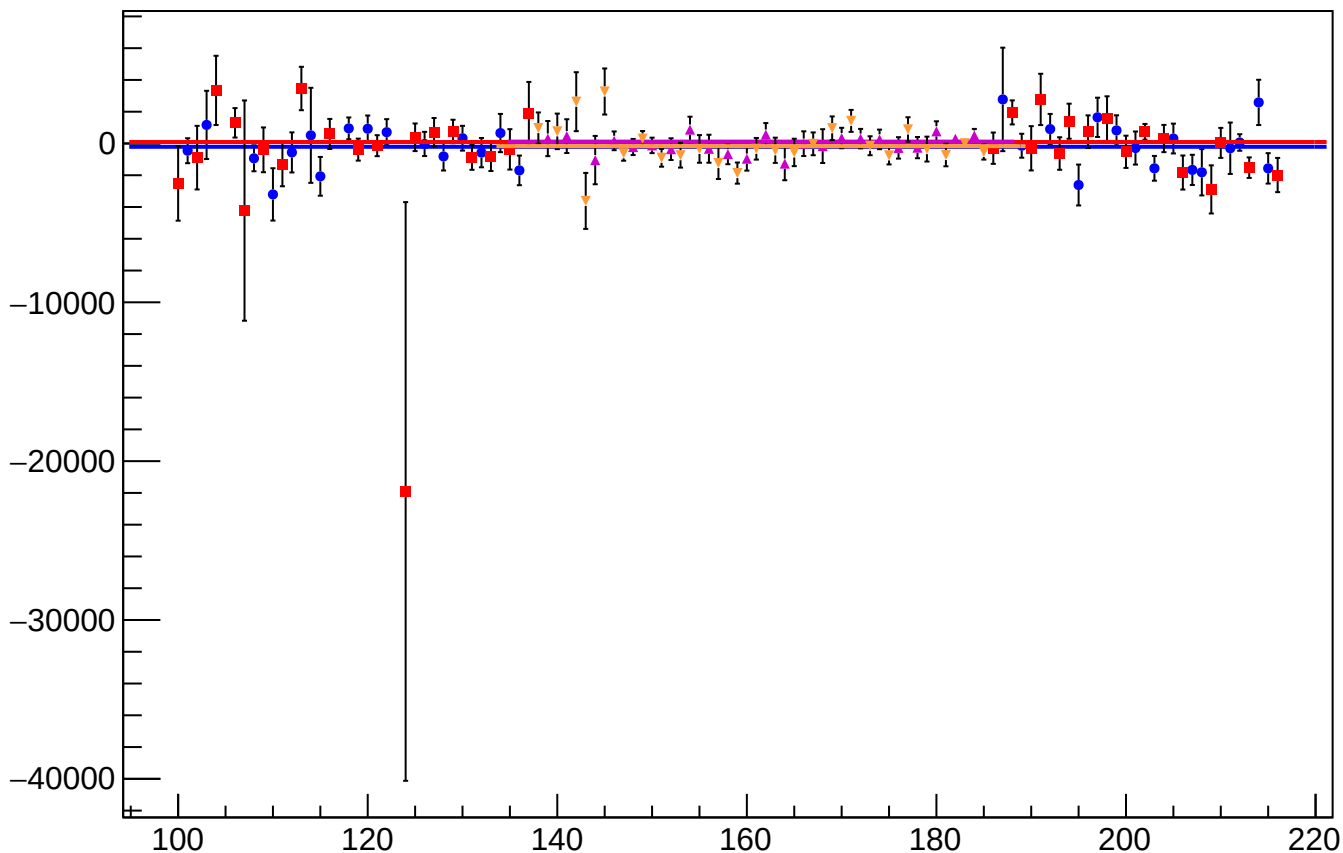
Left In: 1814.434 $\pm$ 0.300  $\chi^2$ /NDF: 2094.6/22

+ sign 1826.855 $\pm$ 0.209  $\chi^2$ /NDF: 902927.3/55

All: 1839.738 $\pm$ 0.149  $\chi^2$ /NDF: 1648382.0/11

- sign 1853.253 $\pm$ 0.214  $\chi^2$ /NDF: 737664.2/57

# asym\_at1\_avg\_dit\_correction\_mean vs Slug



Right In:  $-209.069 \pm 171.322$   $\chi^2/\text{NDF}$ : 39.4/30

Left Out:  $-167.909 \pm 121.628$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $92.050 \pm 166.761$   $\chi^2/\text{NDF}$ : 51.8/34

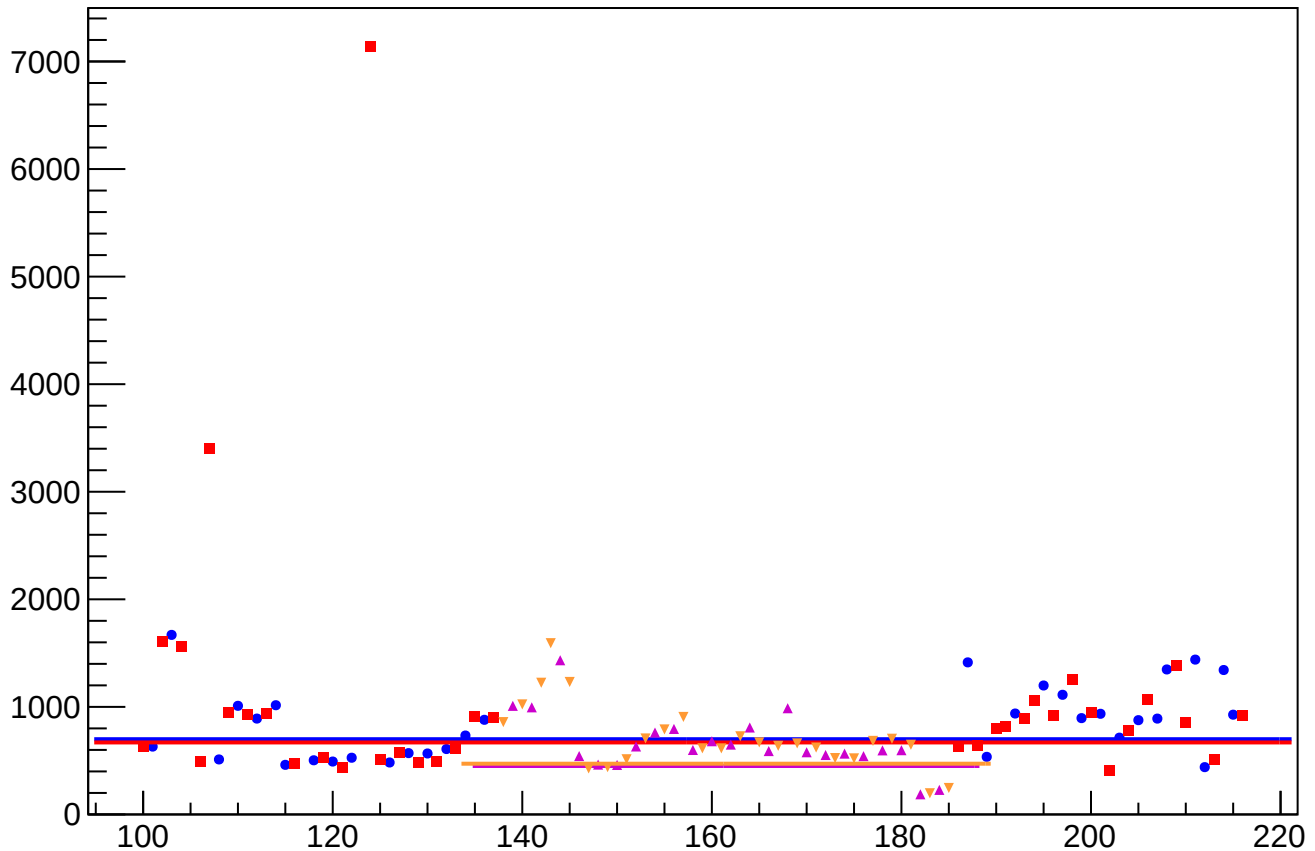
Left In:  $117.211 \pm 119.772$   $\chi^2/\text{NDF}$ : 12.3/22

+ sign  $-181.702 \pm 99.177$   $\chi^2/\text{NDF}$ : 77.8/55

All:  $-33.725 \pm 69.448$   $\chi^2/\text{NDF}$ : 146.3/113

- sign  $108.649 \pm 97.281$   $\chi^2/\text{NDF}$ : 64.1/57

# asym\_at1\_avg\_dit\_correction\_rms vs Slug



Right In: 699.617+/-0.121  $\chi^2/\text{NDF}$ : 4492301.5/30

Left Out: 471.777+/-0.086  $\chi^2/\text{NDF}$ : 8112666.9/24

Right Out: 669.451+/-0.118  $\chi^2/\text{NDF}$ : 5114060.5/34

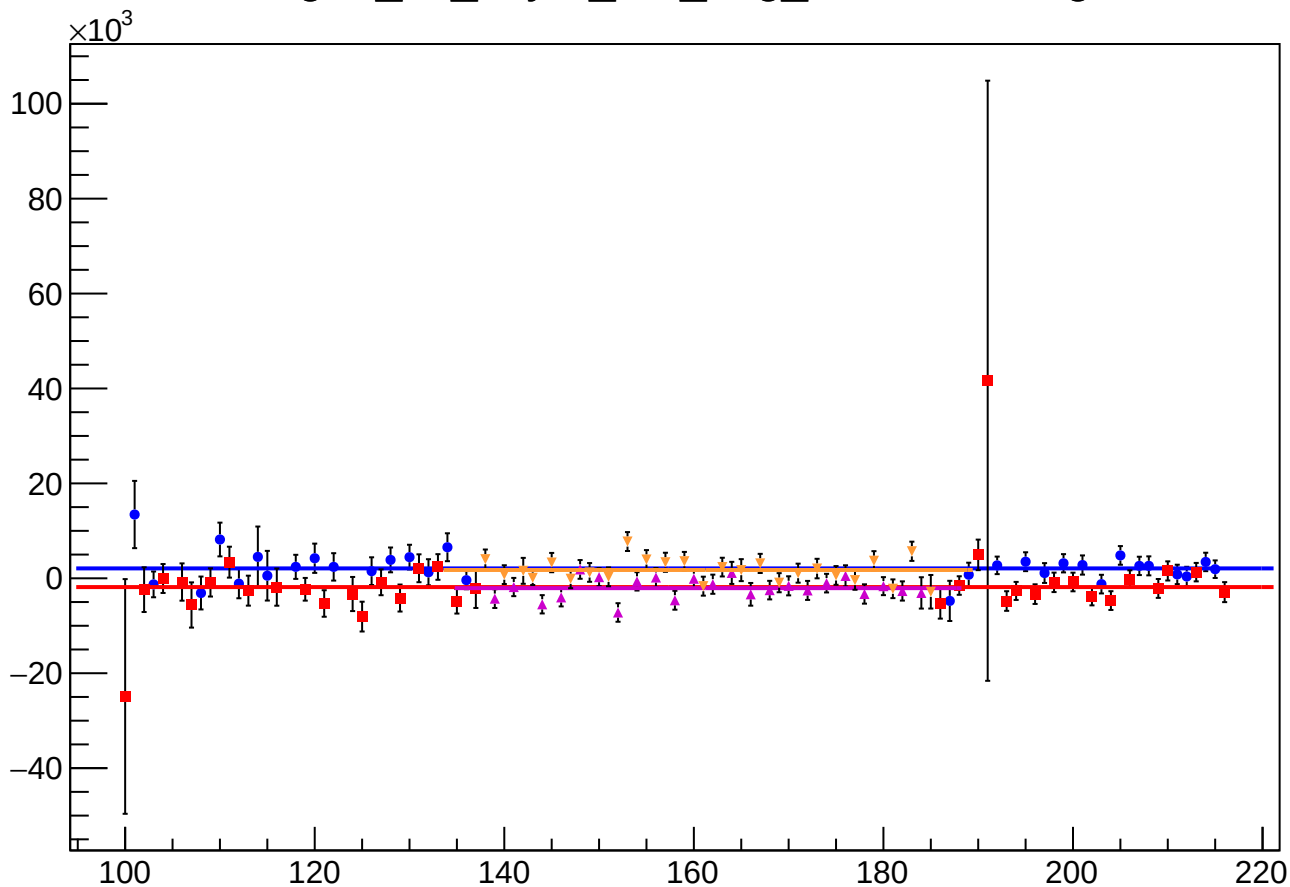
Left In: 450.652+/-0.085  $\chi^2/\text{NDF}$ : 7928332.5/22

+ sign 548.129+/-0.070  $\chi^2/\text{NDF}$ : 14956836.1/55

All: 536.397+/-0.049  $\chi^2/\text{NDF}$ : 30325462.1/11

- sign 525.110+/-0.069  $\chi^2/\text{NDF}$ : 15313713.5/57

# eigen\_dit\_asym\_at1\_avg\_mean vs Slug



Right In:  $2086.976 \pm 431.526$   $\chi^2/\text{NDF}$ : 27.2/30

Left Out:  $1755.493 \pm 405.401$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $-1848.950 \pm 432.477$   $\chi^2/\text{NDF}$ : 35.8/34

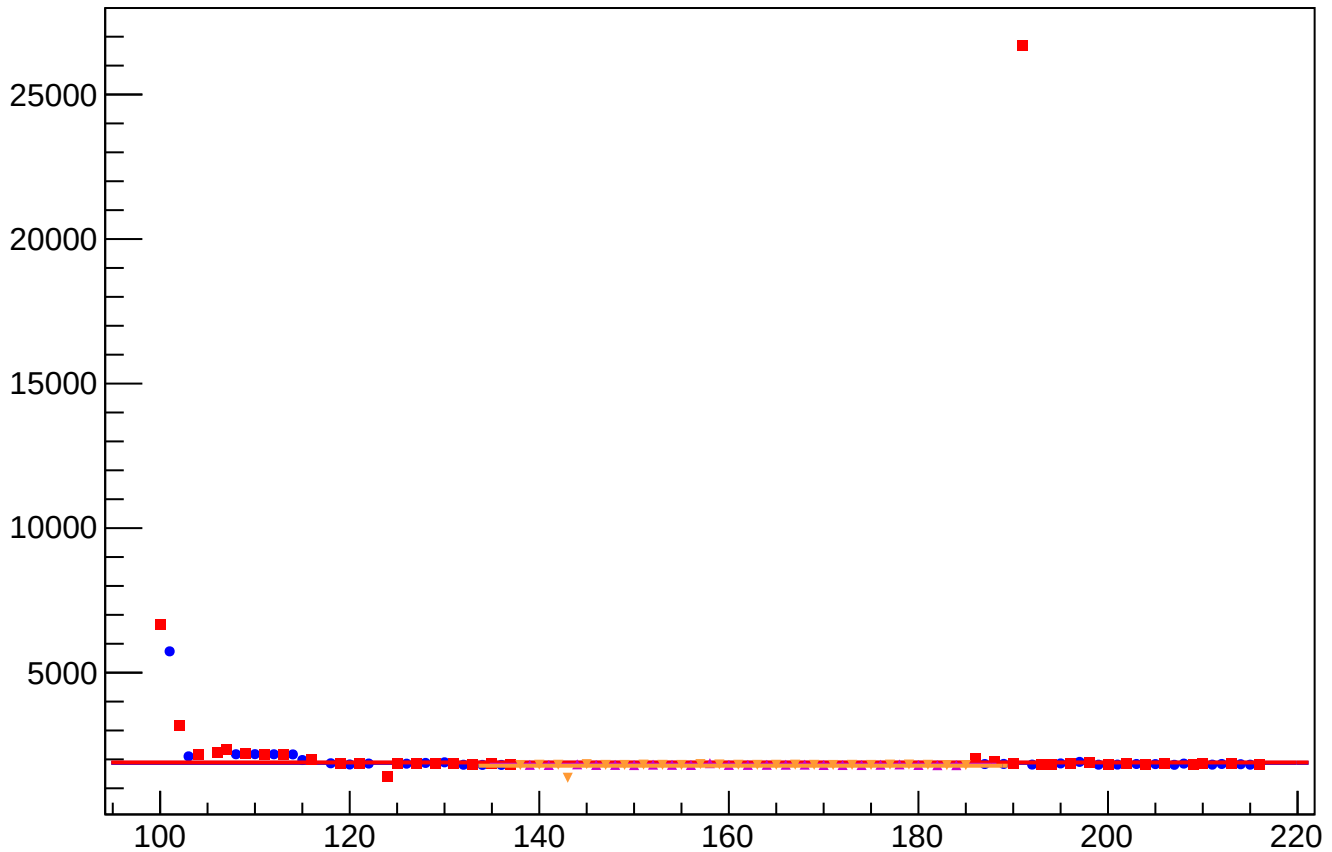
Left In:  $-2073.441 \pm 423.648$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $1910.898 \pm 295.466$   $\chi^2/\text{NDF}$ : 61.3/55

All:  $20.142 \pm 211.416$   $\chi^2/\text{NDF}$ : 208.2/113

- sign  $-1963.510 \pm 302.638$   $\chi^2/\text{NDF}$ : 63.0/57

# eigen\_dit\_asym\_at1\_avg\_rms vs Slug



Right In: 1878.909 $\pm$ 0.305  $\chi^2$ /NDF: 683202.6/30

Left Out: 1780.913 $\pm$ 0.287  $\chi^2$ /NDF: 164936.9/24

Right Out: 1893.706 $\pm$ 0.306  $\chi^2$ /NDF: 701277.6/34

Left In: 1814.434 $\pm$ 0.300  $\chi^2$ /NDF: 2094.6/22

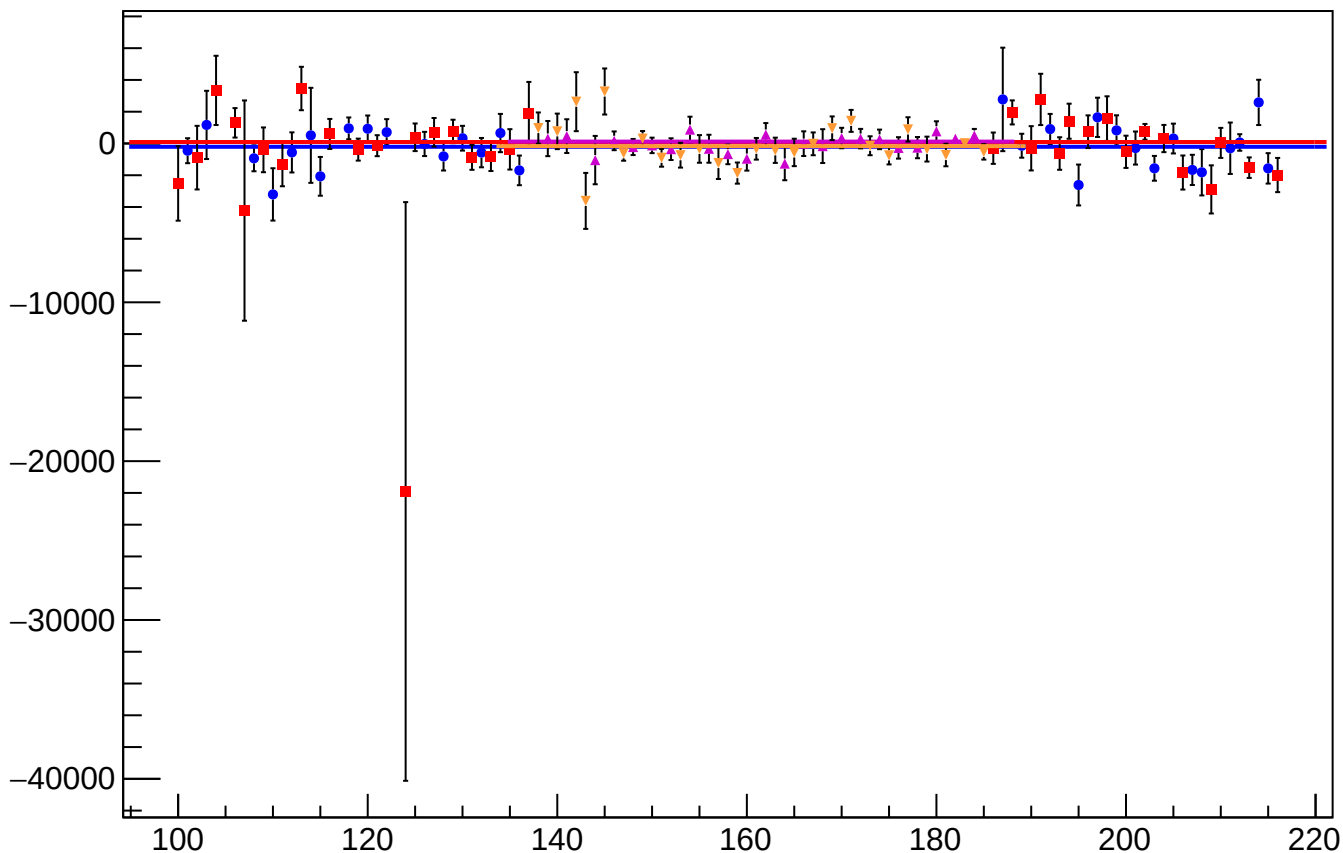
+ sign 1826.855 $\pm$ 0.209  $\chi^2$ /NDF: 902926.8/55

All: 1839.737 $\pm$ 0.149  $\chi^2$ /NDF: 1648379.9/11

- sign 1853.253 $\pm$ 0.214  $\chi^2$ /NDF: 737662.7/57



asym\_at1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -209.069+/-171.322  $\chi^2$ /NDF: 39.4/30

Left Out: -167.909+/-121.629  $\chi^2$ /NDF:38.3/24

Right Out: 92.050+/-166.761  $\chi^2$ /NDF: 51.8/34

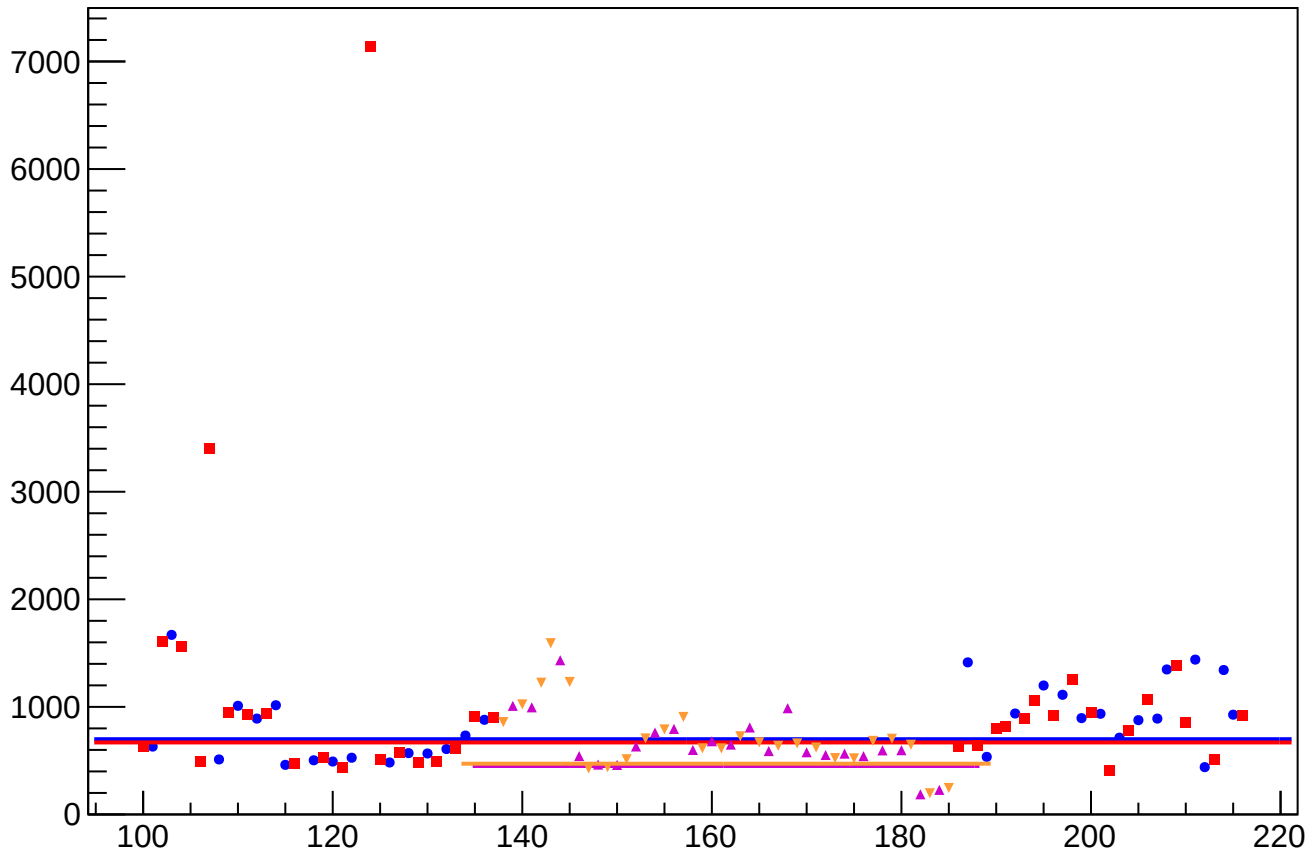
Left In: 117.211+/-119.772  $\chi^2$ /NDF:12.3/22

+ sign -181.703+/-99.177  $\chi^2$ /NDF: 77.8/55

All: -33.725+/-69.448  $\chi^2$ /NDF: 146.3/113

- sign 108.649+/-97.281  $\chi^2$ /NDF: 64.1/57

# asym\_at1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 699.617 $\pm$ 0.121  $\chi^2$ /NDF: 4492332.1/30

Left Out: 471.778 $\pm$ 0.086  $\chi^2$ /NDF: 8112665.9/24

Right Out: 669.451 $\pm$ 0.118  $\chi^2$ /NDF: 5114076.6/34

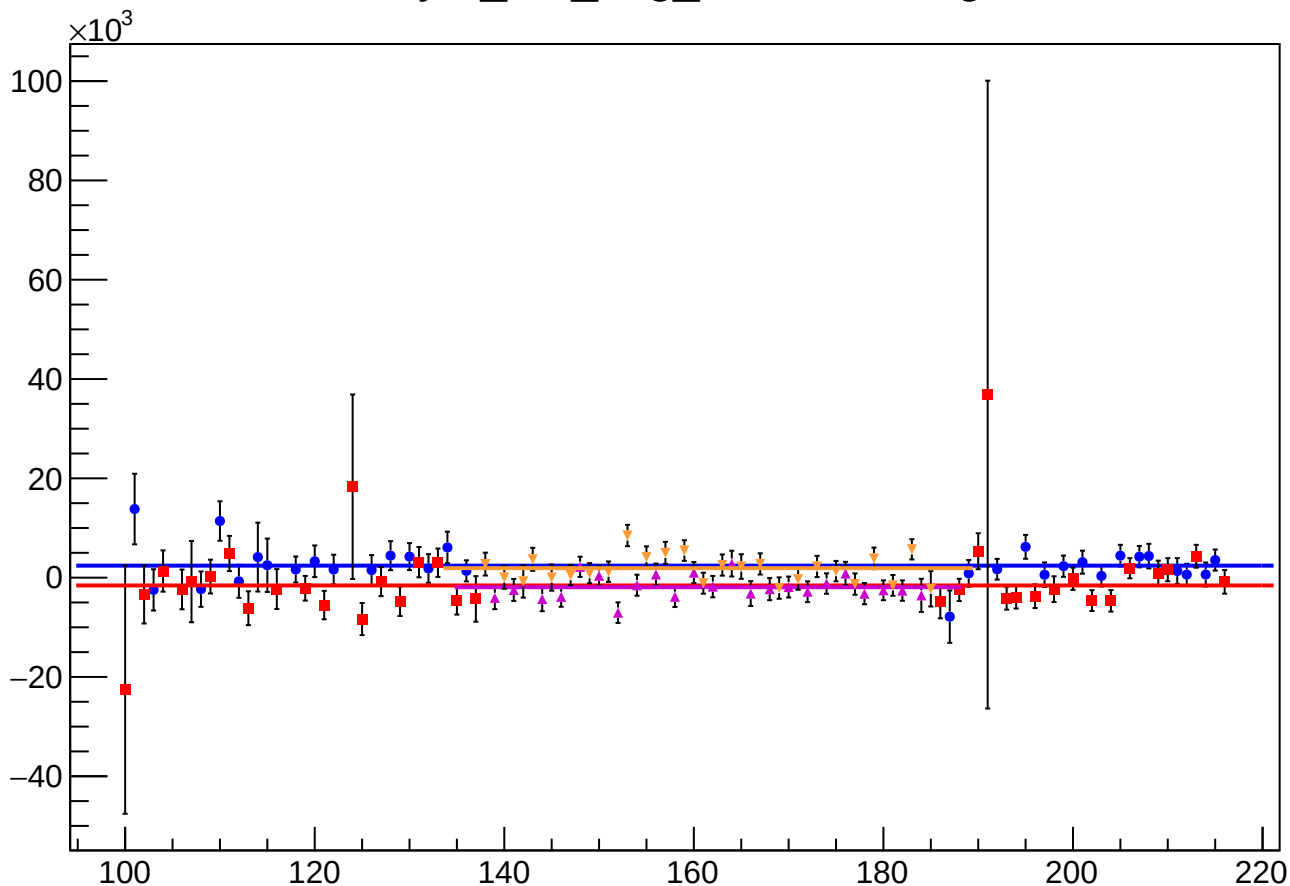
Left In: 450.653 $\pm$ 0.085  $\chi^2$ /NDF: 7928317.5/22

+ sign 548.130 $\pm$ 0.070  $\chi^2$ /NDF: 14956839.9/55

All: 536.398 $\pm$ 0.049  $\chi^2$ /NDF: 30325443.8/1

- sign 525.111 $\pm$ 0.069  $\chi^2$ /NDF: 15313693.1/57

# asym\_at1\_avg\_mean vs Slug



Right In:  $2418.014 \pm 485.908$   $\chi^2/\text{NDF}$ : 26.8/30

Left Out:  $1907.369 \pm 443.523$   $\chi^2/\text{NDF}$ : 36.3/24

Right Out:  $-1574.037 \pm 490.087$   $\chi^2/\text{NDF}$ : 47.2/34

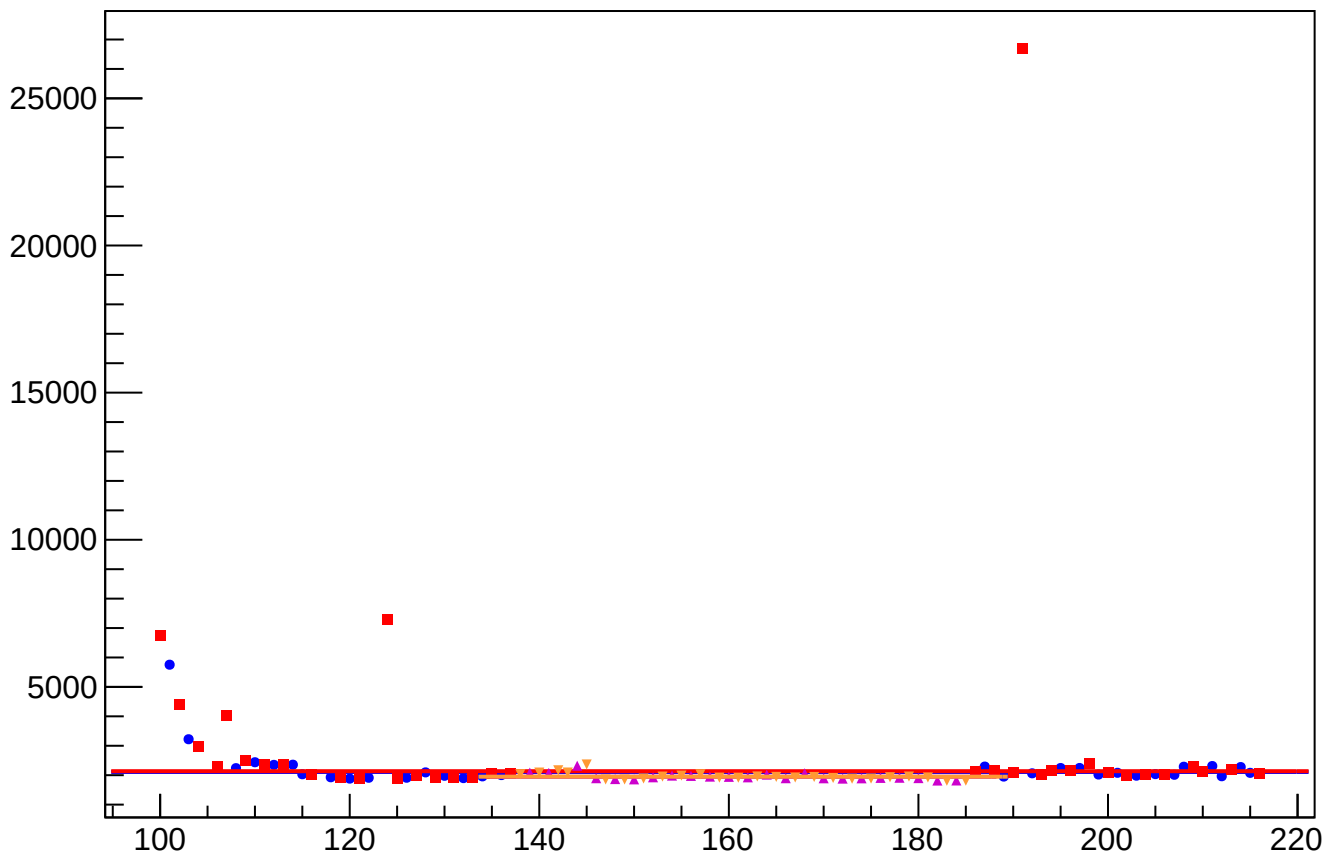
Left In:  $-1926.570 \pm 454.880$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $2139.453 \pm 327.580$   $\chi^2/\text{NDF}$ : 63.7/55

All:  $222.388 \pm 233.665$   $\chi^2/\text{NDF}$ : 205.6/113

- sign  $-1763.420 \pm 333.401$   $\chi^2/\text{NDF}$ : 72.2/57

# asym\_at1\_avg\_rms vs Slug



Right In: 2109.289+/-0.344  $\chi^2/\text{NDF}$ : 840753.7/30

Left Out: 1949.001+/-0.314  $\chi^2/\text{NDF}$ : 108523.9/24

Right Out: 2135.566+/-0.347  $\chi^2/\text{NDF}$ : 1189829.0/34

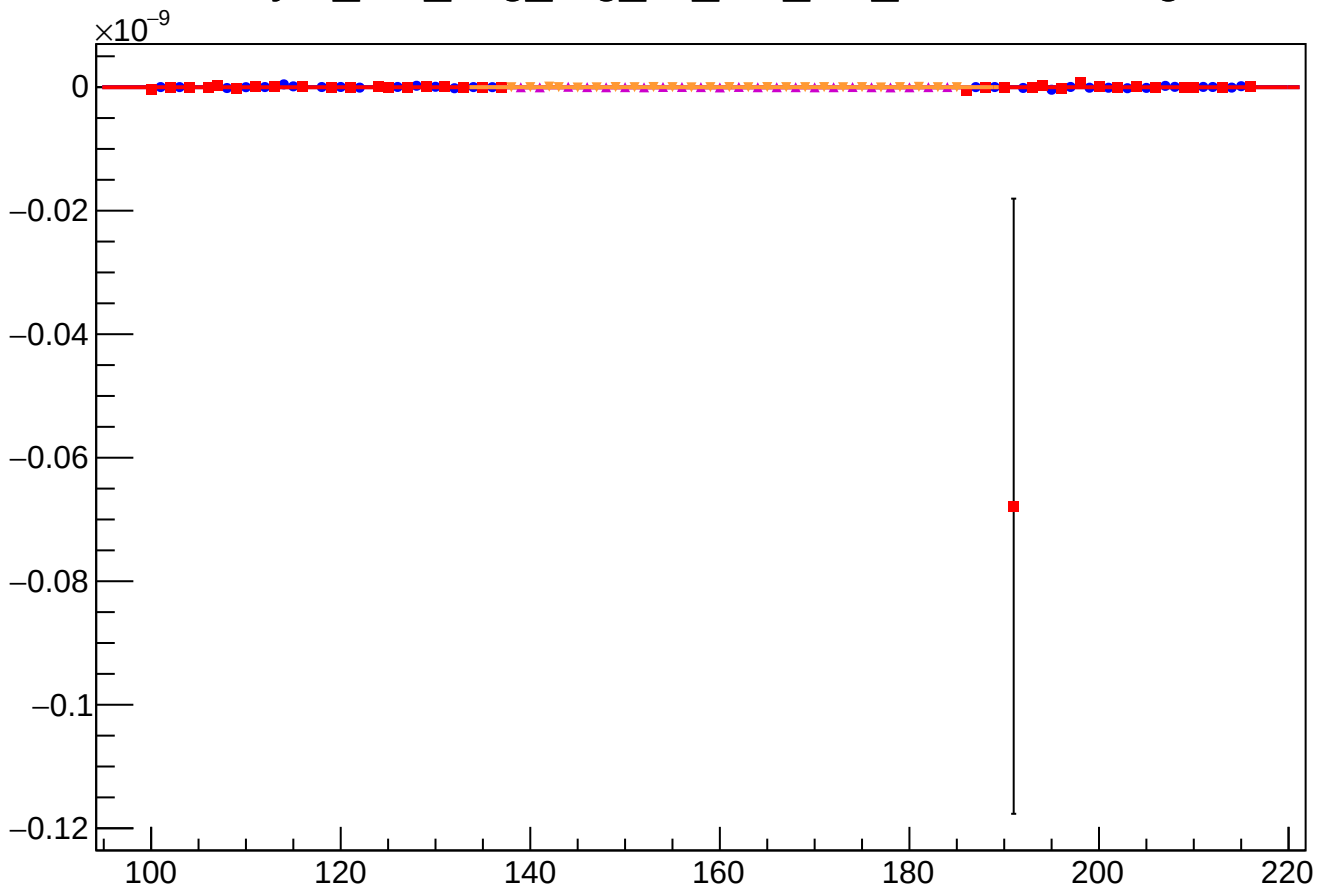
Left In: 1945.132+/-0.322  $\chi^2/\text{NDF}$ : 95954.5/22

+ sign 2021.851+/-0.232  $\chi^2/\text{NDF}$ : 1067998.3/55

All: 2027.457+/-0.165  $\chi^2/\text{NDF}$ : 2517198.2/11

- sign 2033.264+/-0.236  $\chi^2/\text{NDF}$ : 1448007.5/57

# asym\_at1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.7/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.5/34

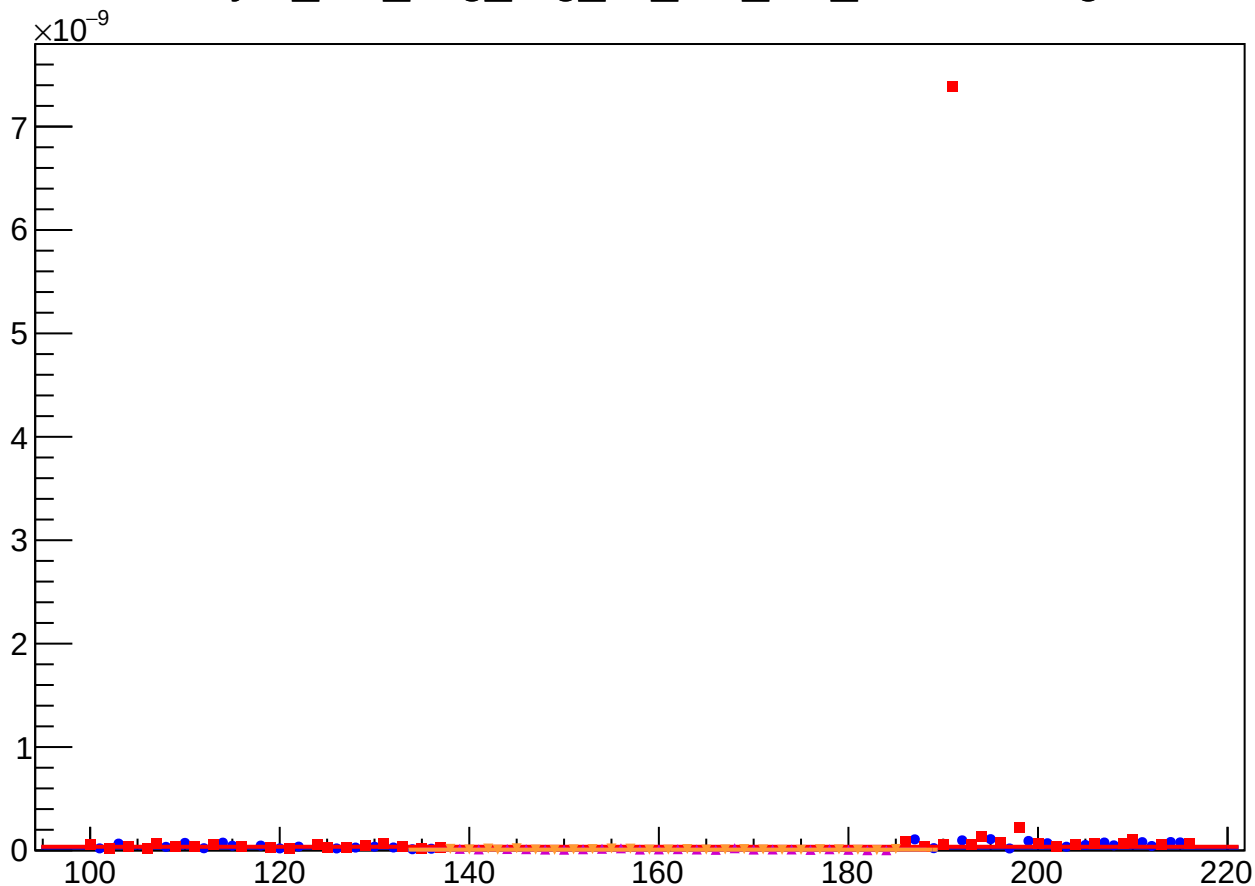
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 64.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 128.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 63.8/57

# asym\_at1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4664232.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2160933.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3912632.6/34

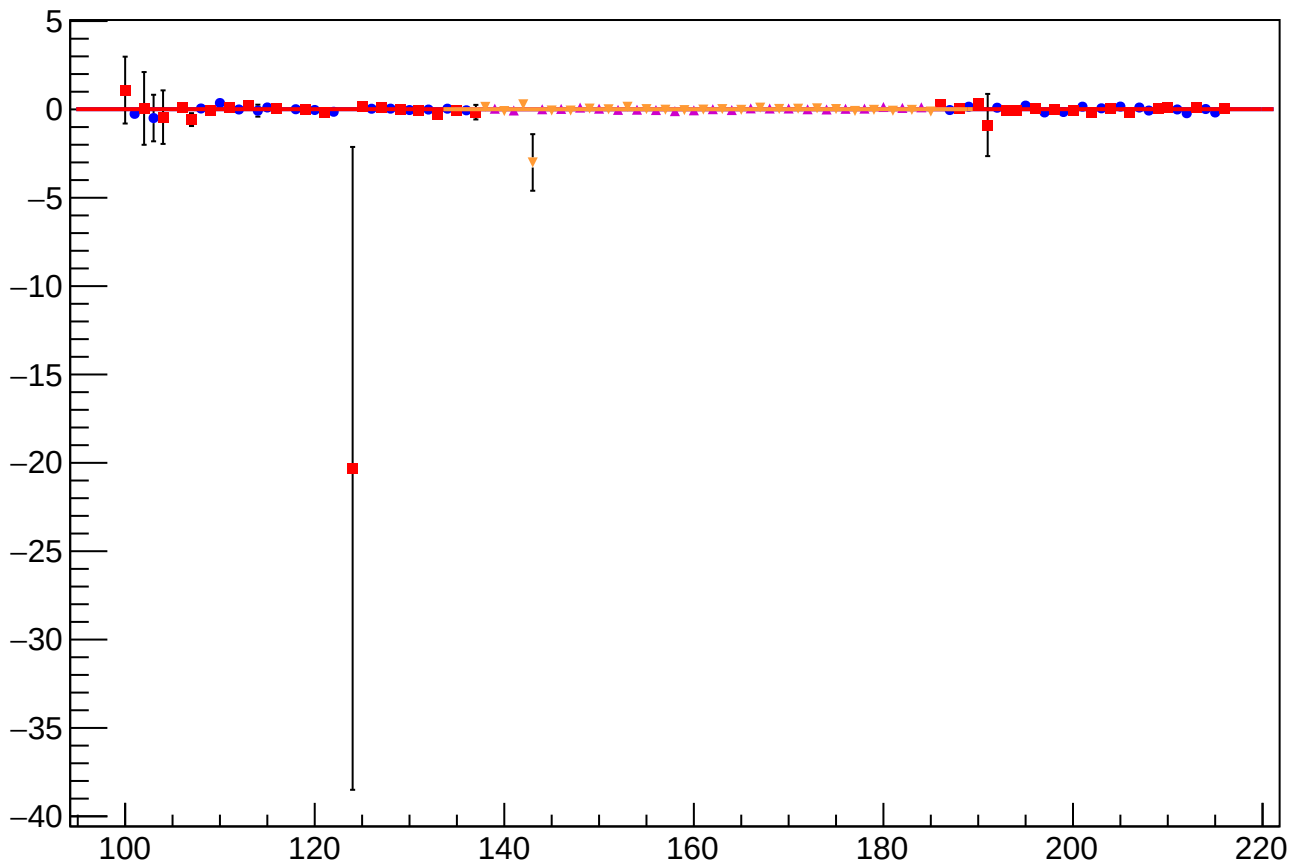
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2613869.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11847231.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24620376.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12772177.0/57

asym\_at1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.019$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $0.012 \pm 0.018$   $\chi^2/\text{NDF}$ : 31.8/34

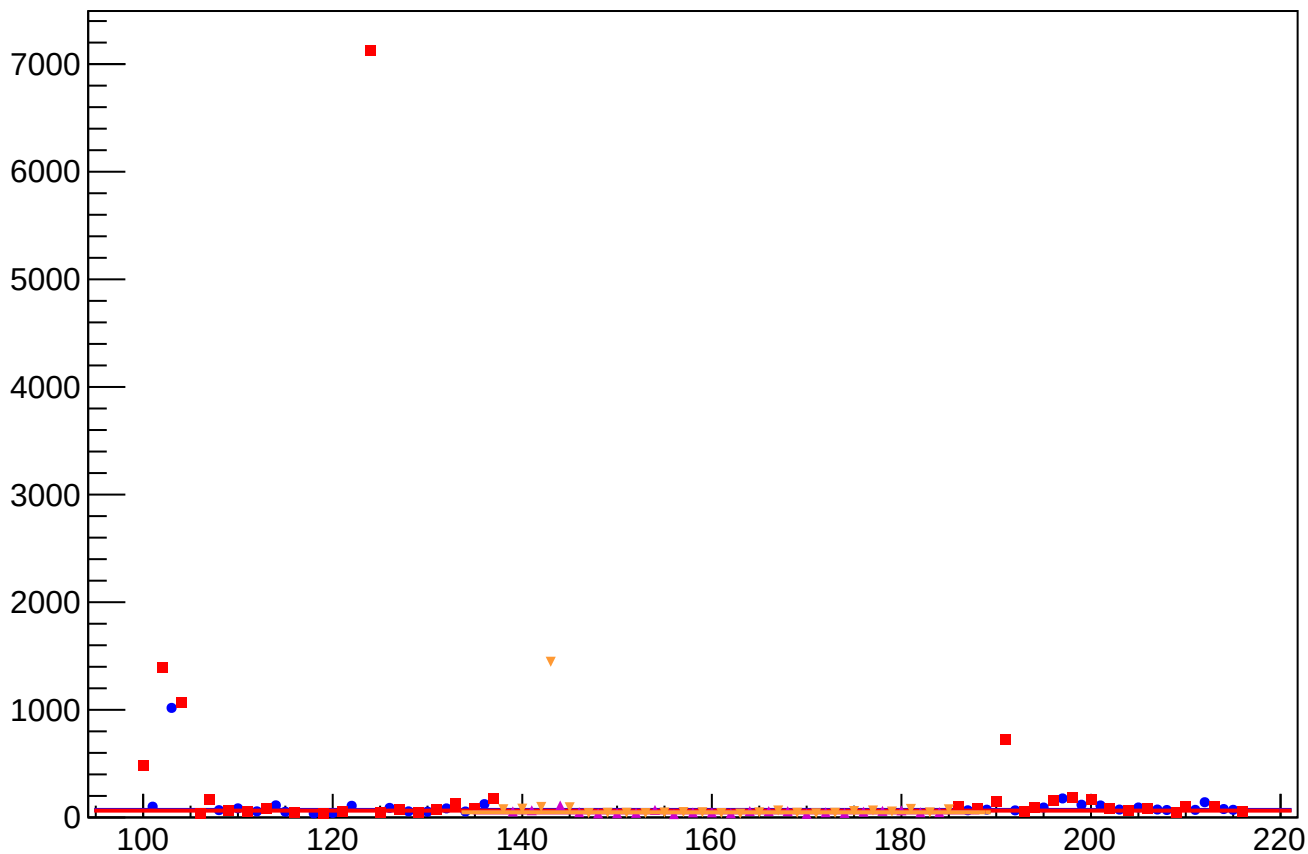
Left In:  $0.018 \pm 0.012$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 60.7/55

All:  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.0/113

- sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 52.2/57

# asym\_at1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 69.910 $\pm$ 0.013  $\chi^2$ /NDF: 4230263.8/30

Left Out: 47.901 $\pm$ 0.009  $\chi^2$ /NDF: 3496596.6/24

Right Out: 63.465 $\pm$ 0.013  $\chi^2$ /NDF: 6793028.2/34

Left In: 46.786 $\pm$ 0.009  $\chi^2$ /NDF: 1949486.1/22

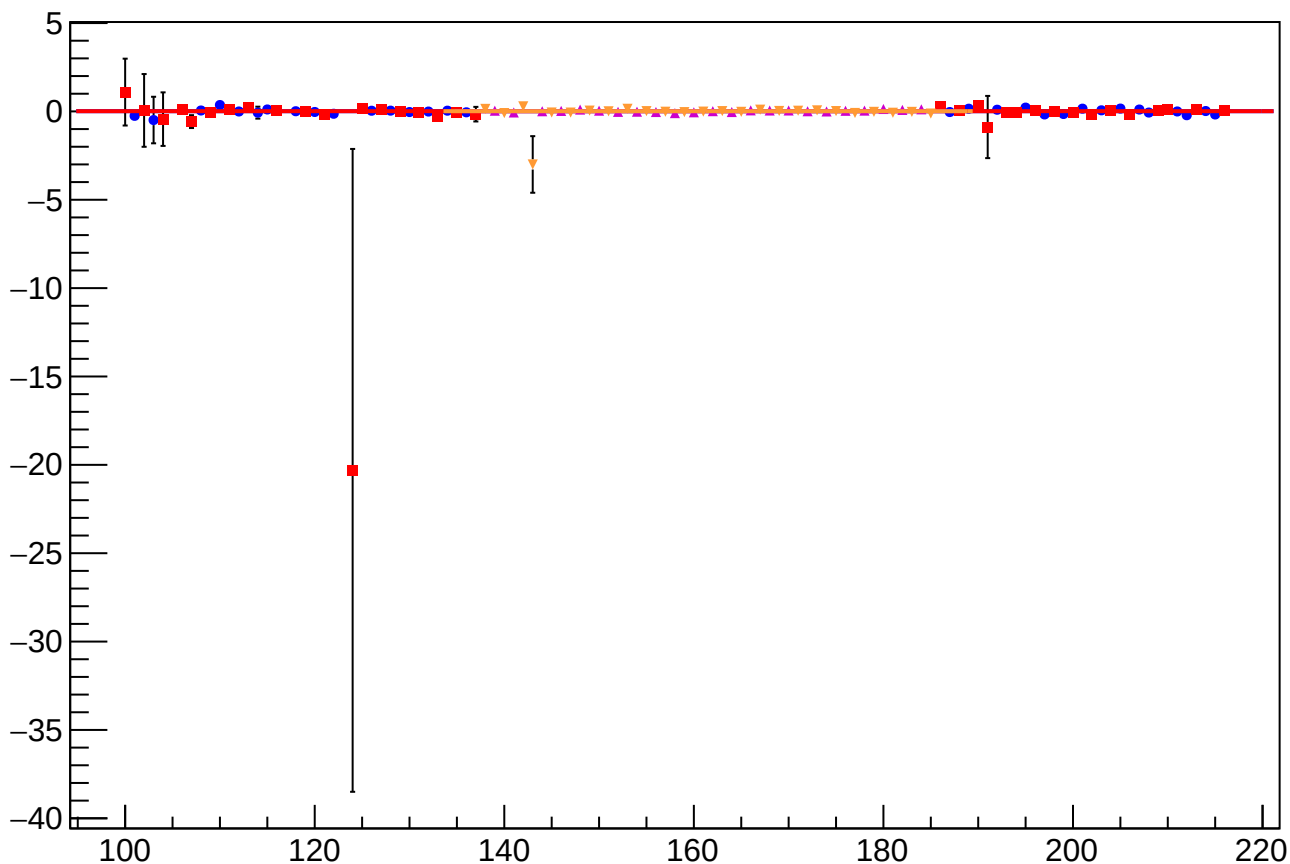
+ sign 54.557 $\pm$ 0.007  $\chi^2$ /NDF: 9619284.0/55

All: 53.237 $\pm$ 0.005  $\chi^2$ /NDF: 19577282.4/113

- sign 51.974 $\pm$ 0.007  $\chi^2$ /NDF: 9894894.5/57



asym\_at1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.012 $\pm$ 0.019  $\chi^2$ /NDF: 31.1/30

Left Out: 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 29.6/24

Right Out: 0.012 $\pm$ 0.018  $\chi^2$ /NDF: 31.8/34

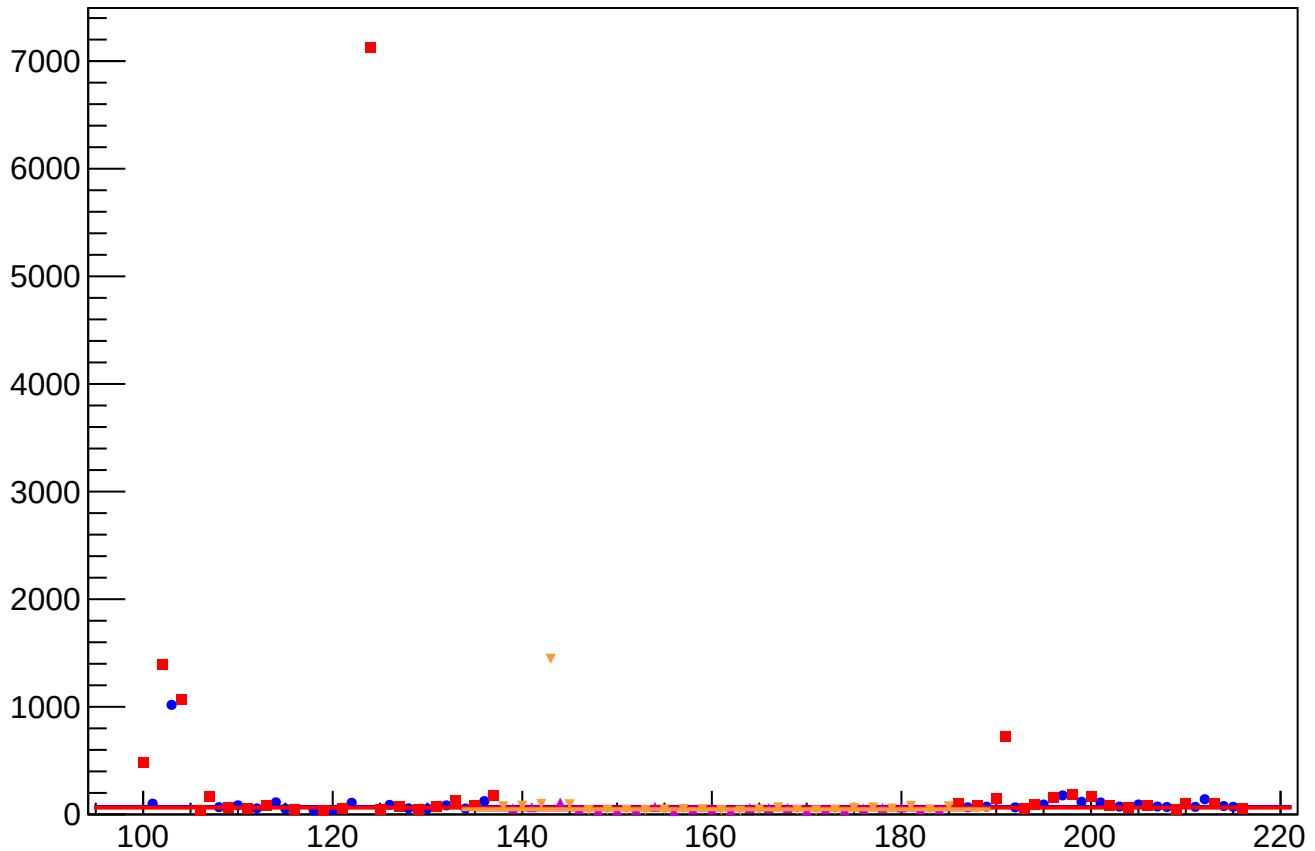
Left In: 0.018 $\pm$ 0.012  $\chi^2$ /NDF: 20.3/22

+ sign 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 60.7/55

All: 0.014 $\pm$ 0.007  $\chi^2$ /NDF: 113.0/113

- sign 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 52.2/57

asym\_at1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 69.910+/-0.013  $\chi^2/\text{NDF}$ : 4230263.8/30

Left Out: 47.901+/-0.009  $\chi^2/\text{NDF}$ : 3496596.6/24

Right Out: 63.465+/-0.013  $\chi^2/\text{NDF}$ : 6793028.2/34

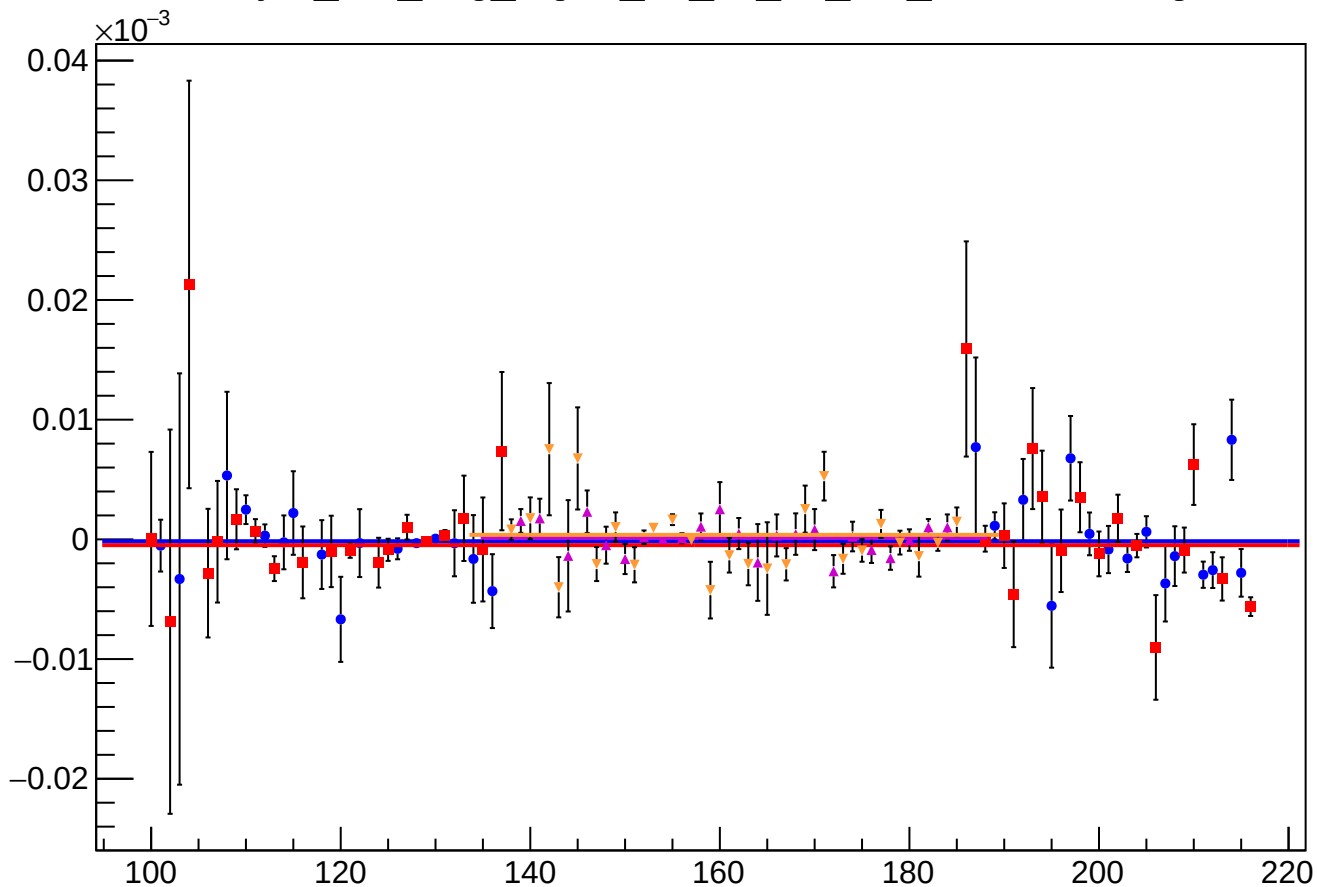
Left In: 46.786+/-0.009  $\chi^2/\text{NDF}$ : 1949486.1/22

+ sign 54.557+/-0.007  $\chi^2/\text{NDF}$ : 9619284.0/55

All: 53.237+/-0.005  $\chi^2/\text{NDF}$ : 19577282.4/113

- sign 51.974+/-0.007  $\chi^2/\text{NDF}$ : 9894894.5/57

asym\_at1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:51.7/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 82.6/34

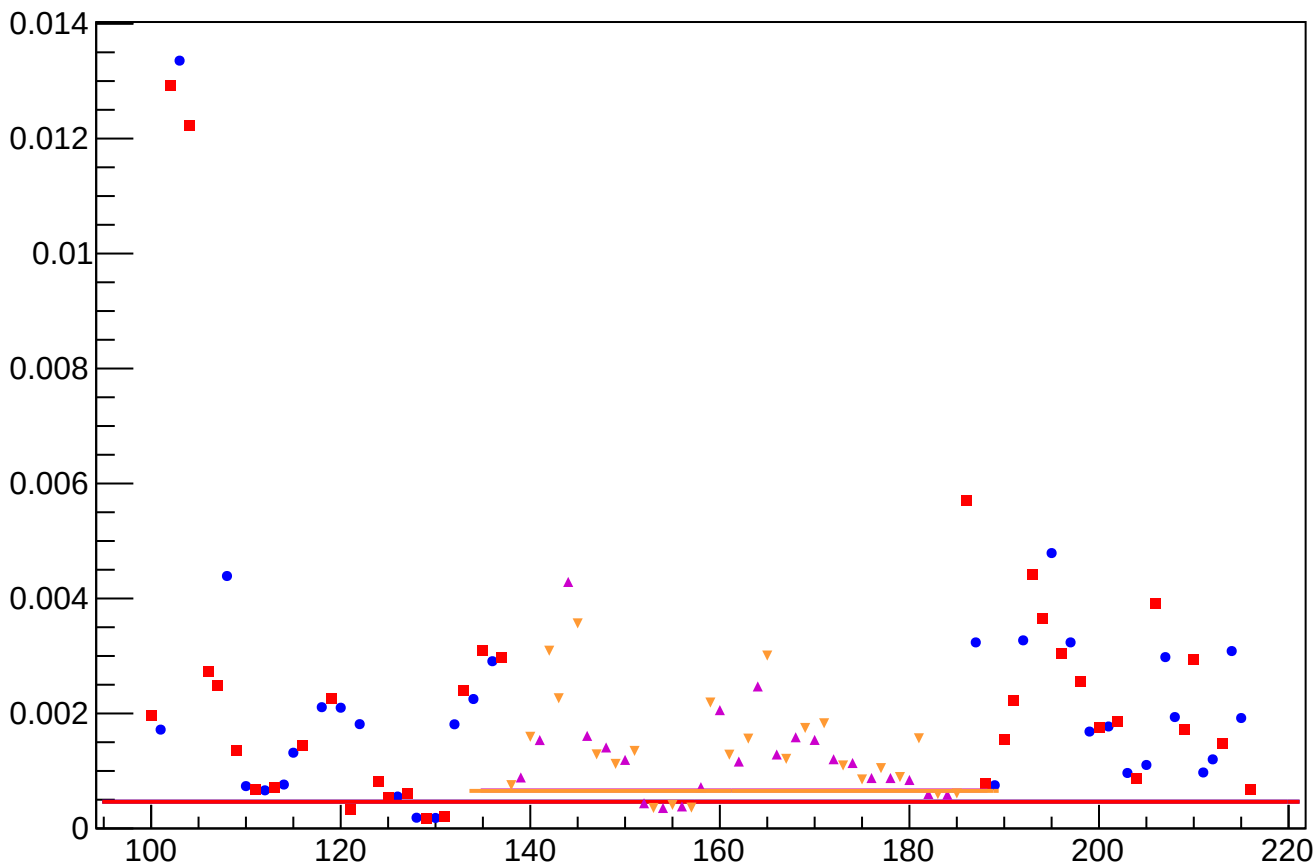
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 98.5/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 209.6/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 108.4/57

asym\_at1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22296670.5/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :12083891.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21658002.0/34

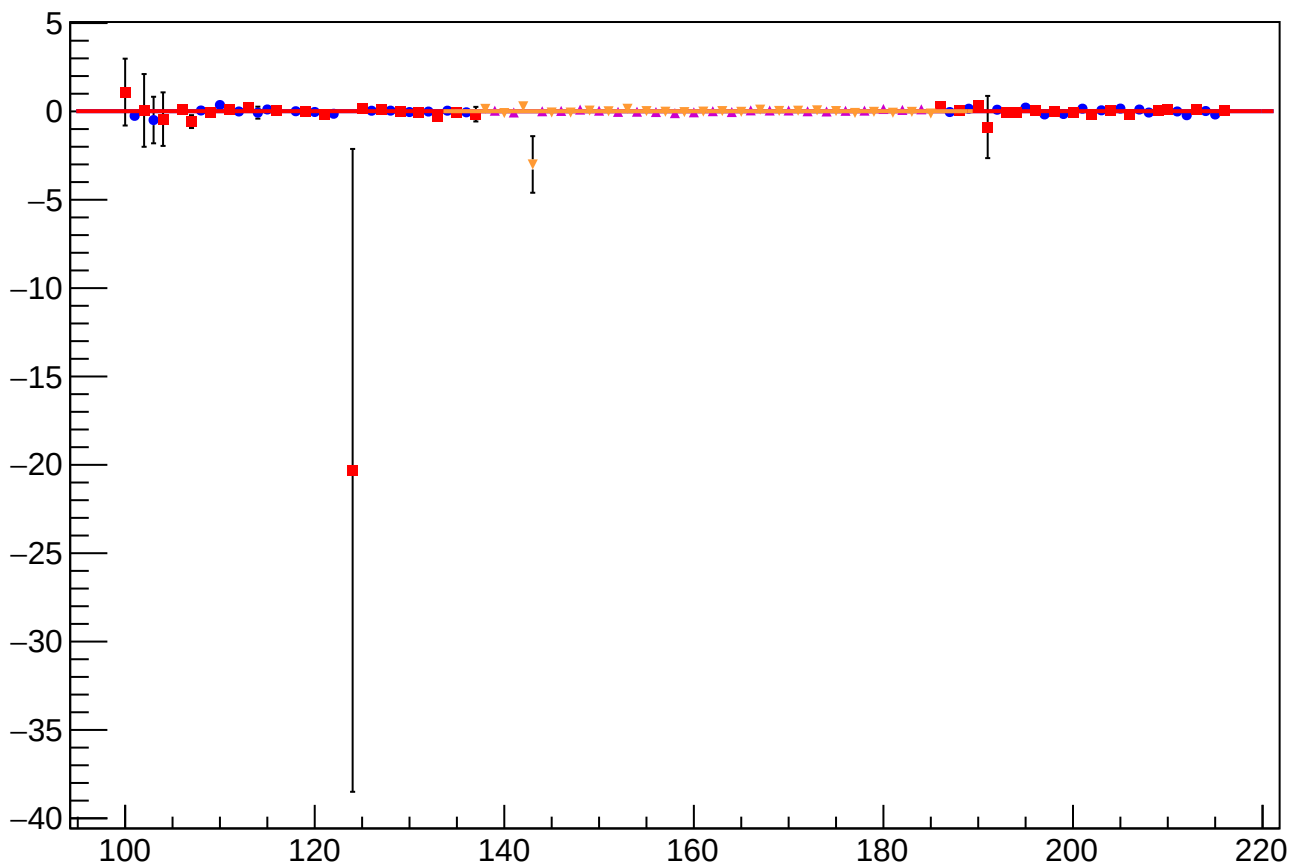
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9695095.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 35459013.5/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 67976651.9/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 32517485.1/57

asym\_at1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.019$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $0.012 \pm 0.018$   $\chi^2/\text{NDF}$ : 31.8/34

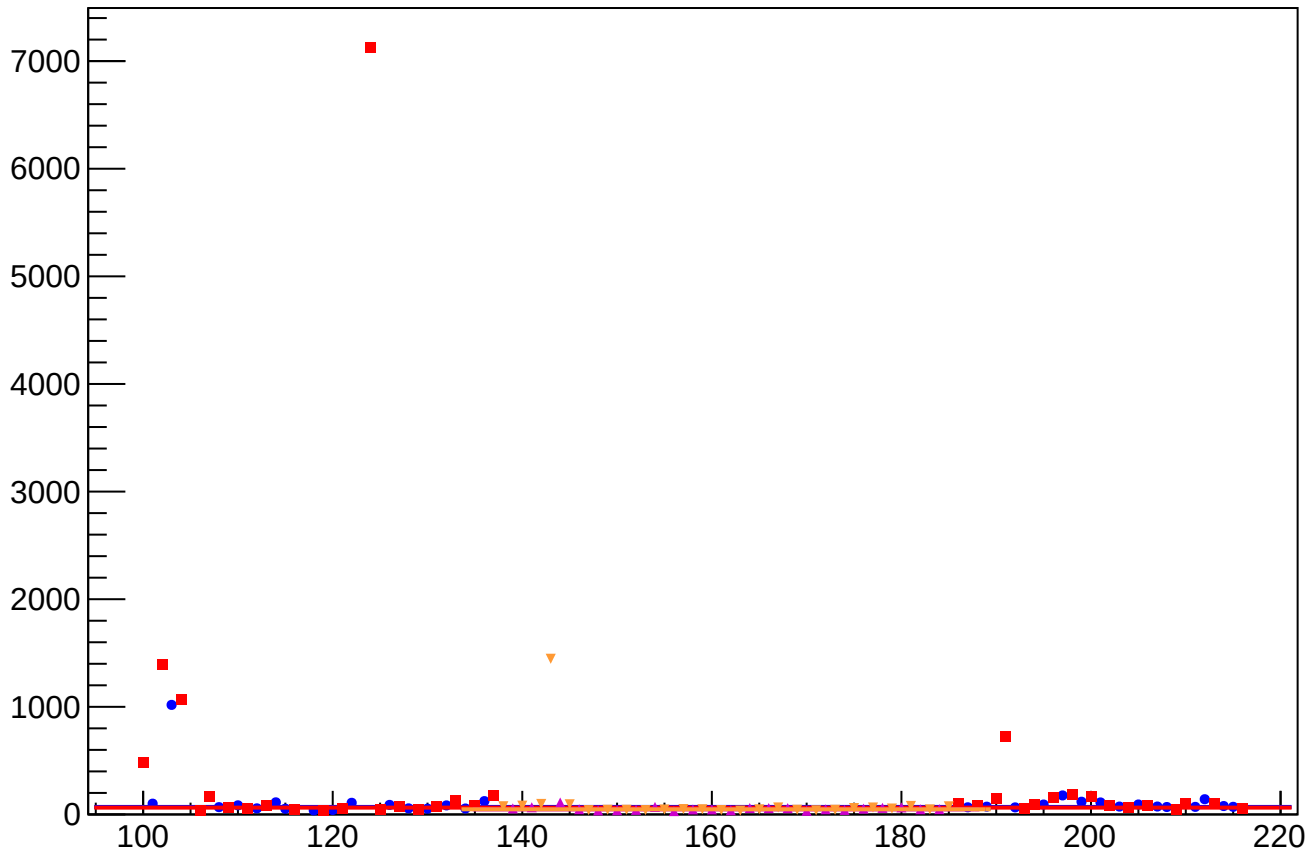
Left In:  $0.018 \pm 0.012$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.012 \pm 0.010$   $\chi^2/\text{NDF}$ : 60.7/55

All:  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.0/113

- sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 52.2/57

asym\_at1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 69.910+/-0.013  $\chi^2/\text{NDF}$ : 4230323.6/30

Left Out: 47.902+/-0.009  $\chi^2/\text{NDF}$ : 3496571.8/24

Right Out: 63.464+/-0.013  $\chi^2/\text{NDF}$ : 6793242.1/34

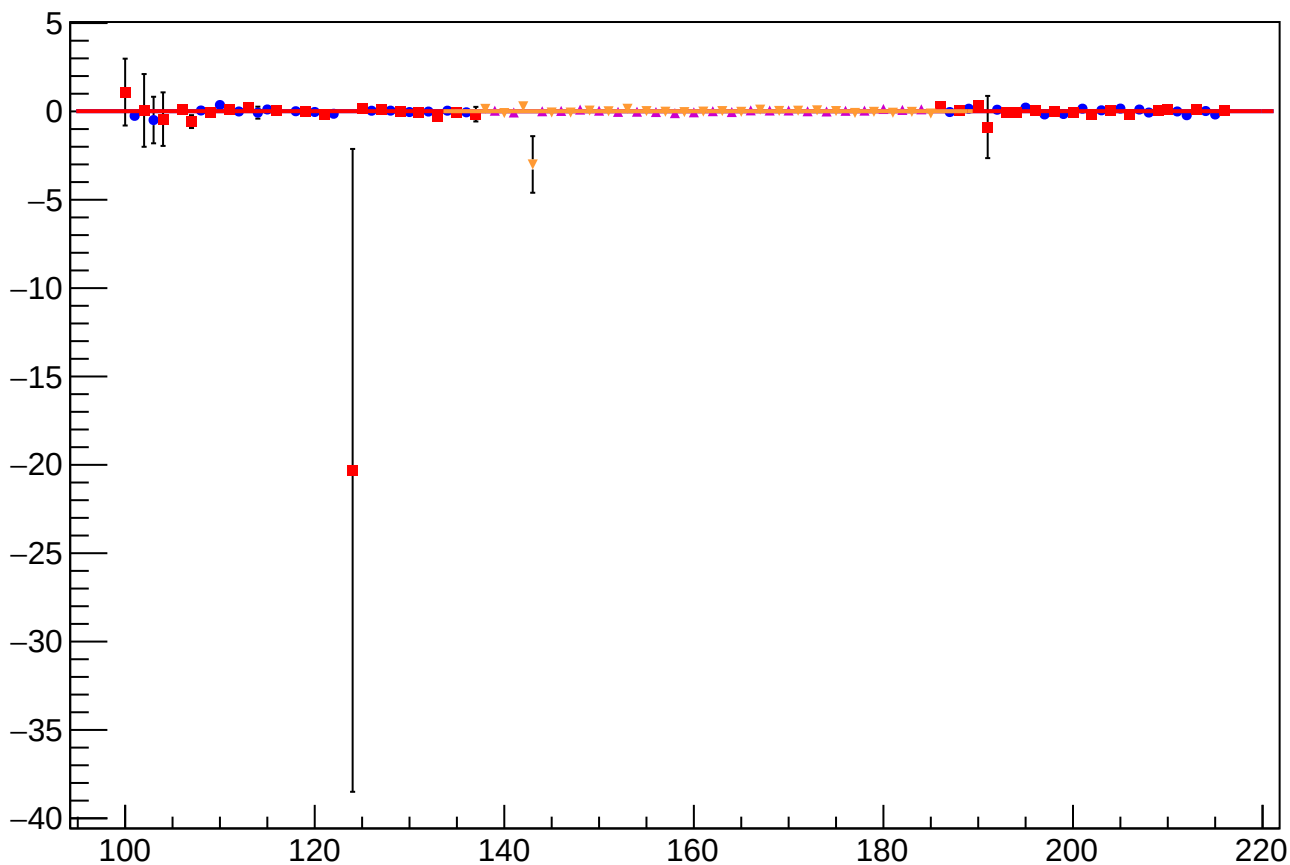
Left In: 46.786+/-0.009  $\chi^2/\text{NDF}$ : 1949480.3/22

+ sign 54.557+/-0.007  $\chi^2/\text{NDF}$ : 9619306.8/55

All: 53.237+/-0.005  $\chi^2/\text{NDF}$ : 19577441.9/113

- sign 51.973+/-0.007  $\chi^2/\text{NDF}$ : 9895011.1/57

asym\_at1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.012 $\pm$ 0.019  $\chi^2$ /NDF: 31.1/30

Left Out: 0.011 $\pm$ 0.012  $\chi^2$ /NDF: 29.6/24

Right Out: 0.012 $\pm$ 0.018  $\chi^2$ /NDF: 31.8/34

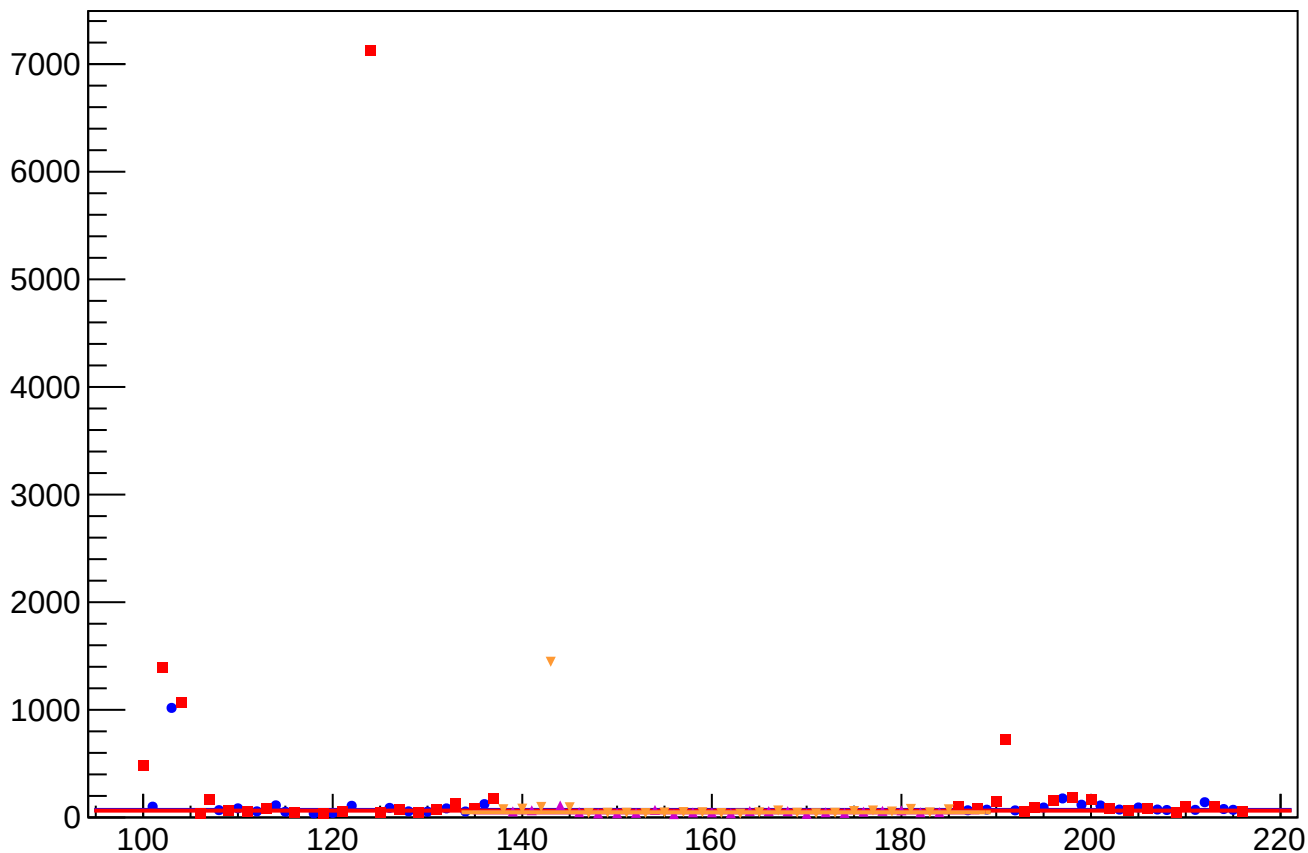
Left In: 0.018 $\pm$ 0.012  $\chi^2$ /NDF: 20.3/22

+ sign 0.012 $\pm$ 0.010  $\chi^2$ /NDF: 60.7/55

All: 0.014 $\pm$ 0.007  $\chi^2$ /NDF: 113.0/113

- sign 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 52.2/57

asym\_at1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 69.910 $\pm$ 0.013  $\chi^2$ /NDF: 4230323.6/30

Left Out: 47.902 $\pm$ 0.009  $\chi^2$ /NDF:3496571.8/24

Right Out: 63.464 $\pm$ 0.013  $\chi^2$ /NDF: 6793242.1/34

Left In: 46.786 $\pm$ 0.009  $\chi^2$ /NDF:1949480.3/22

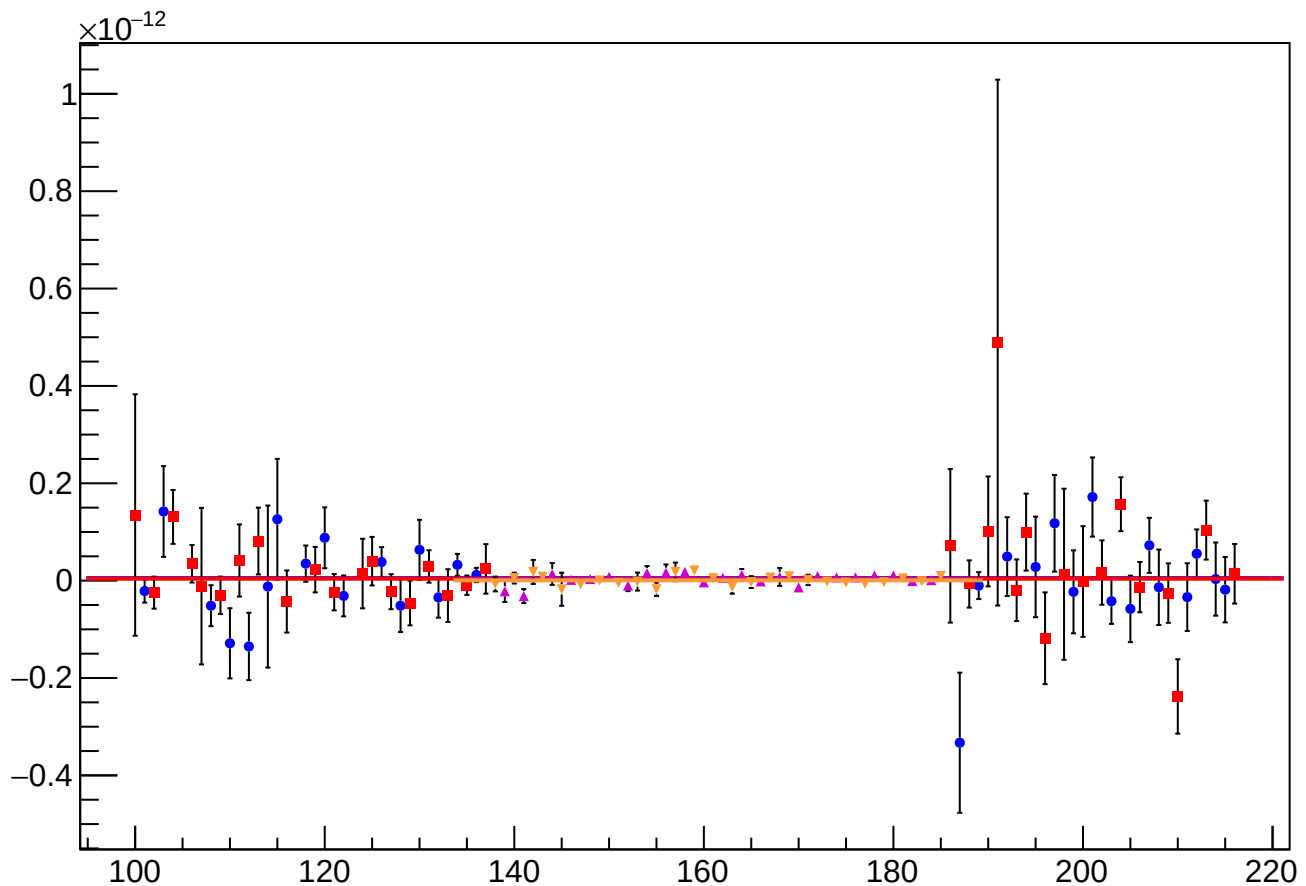
+ sign 54.557 $\pm$ 0.007  $\chi^2$ /NDF: 9619306.8/55

All: 53.237 $\pm$ 0.005  $\chi^2$ /NDF: 19577441.9/113

- sign 51.973 $\pm$ 0.007  $\chi^2$ /NDF: 9895011.1/57



asym\_at1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.3/34

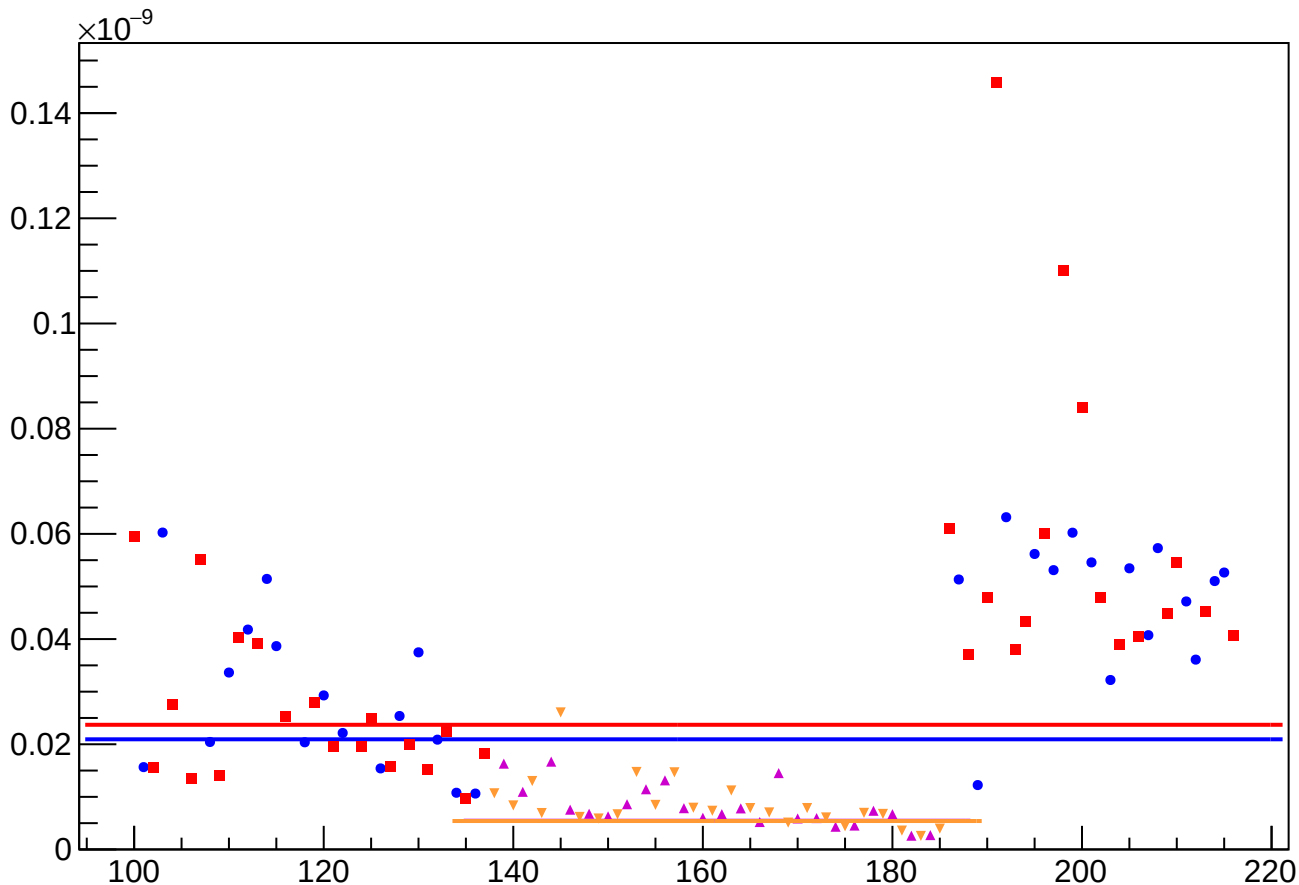
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.6/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.2/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.1/57

asym\_at1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6999261.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5134602.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5651699.0/34

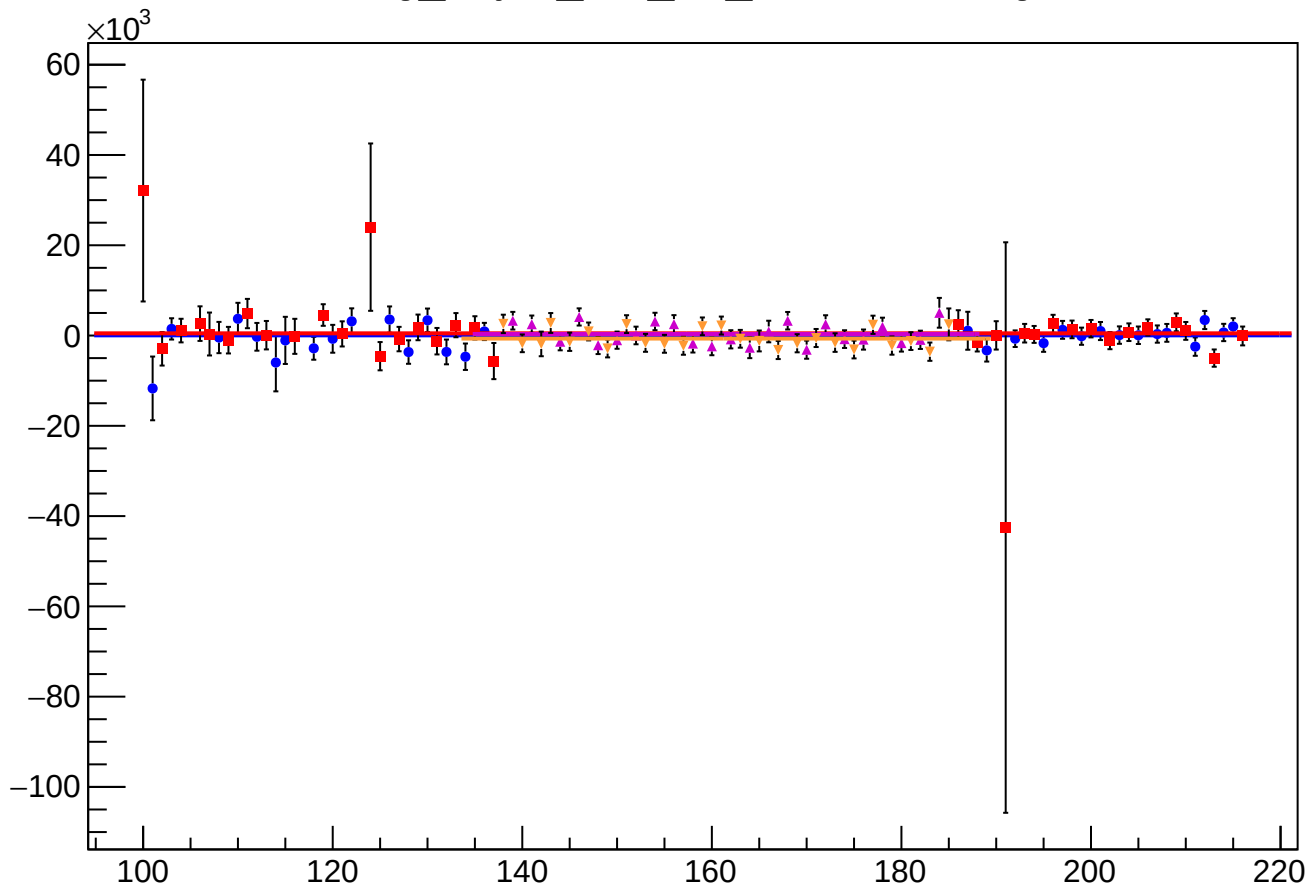
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4905821.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20184842.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39394587.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19209019.5/57

# reg\_asym\_at1\_dd\_mean vs Slug



Right In: 45.195 $\pm$ 424.874  $\chi^2$ /NDF: 26.6/30

Left Out: -670.041 $\pm$ 412.206  $\chi^2$ /NDF: 24.7/24

Right Out: 489.668 $\pm$ 426.906  $\chi^2$ /NDF: 30.8/34

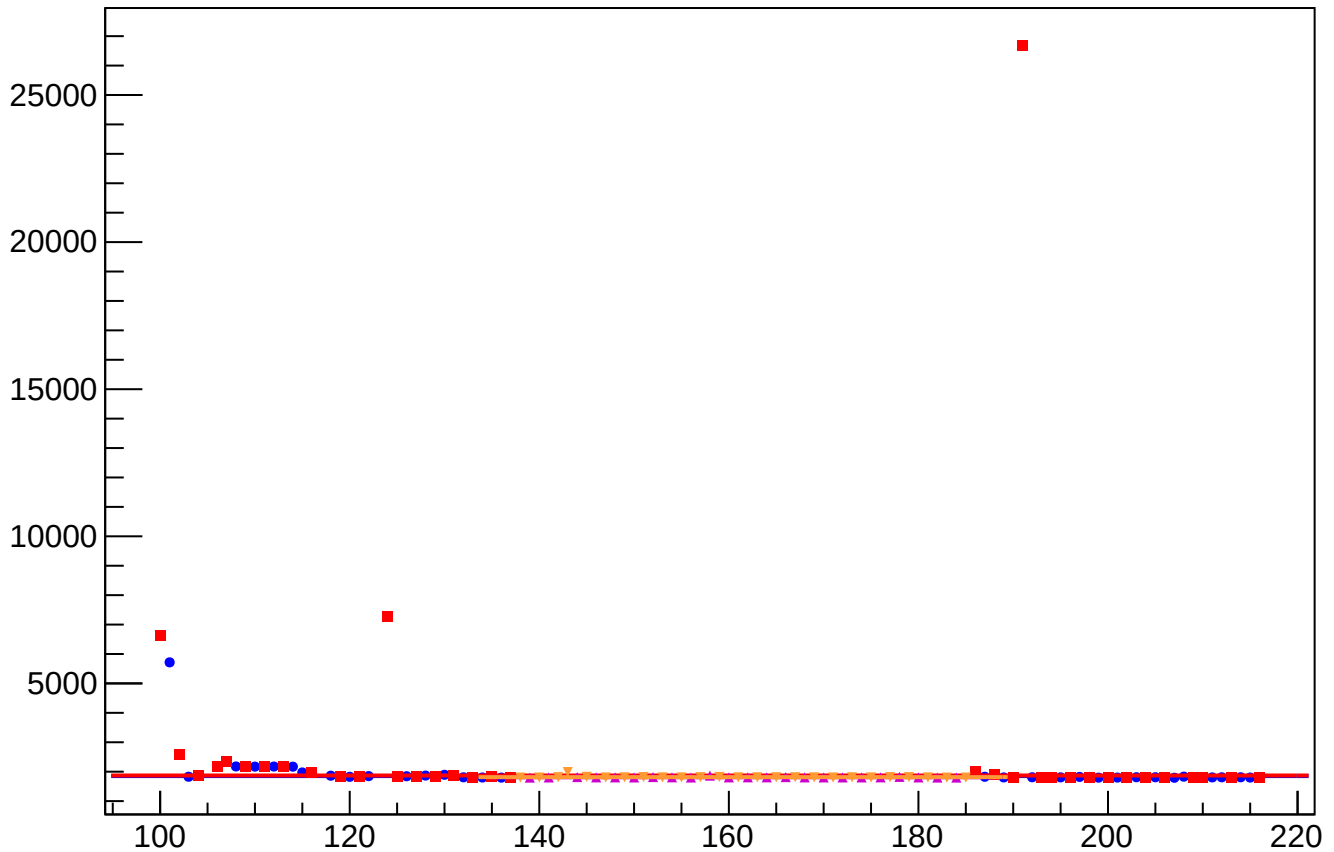
Left In: 342.945 $\pm$ 422.712  $\chi^2$ /NDF: 30.1/22

+ sign -323.245 $\pm$ 295.851  $\chi^2$ /NDF: 52.8/55

All: 40.563 $\pm$ 210.779  $\chi^2$ /NDF: 116.8/113

- sign 415.582 $\pm$ 300.374  $\chi^2$ /NDF: 60.9/57

# reg\_asym\_at1\_dd\_rms vs Slug



Right In: 1850.306 $\pm$ 0.300  $\chi^2$ /NDF: 679722.1/30

Left Out: 1814.435 $\pm$ 0.291  $\chi^2$ /NDF: 13102.1/24

Right Out: 1870.398 $\pm$ 0.302  $\chi^2$ /NDF: 757392.9/34

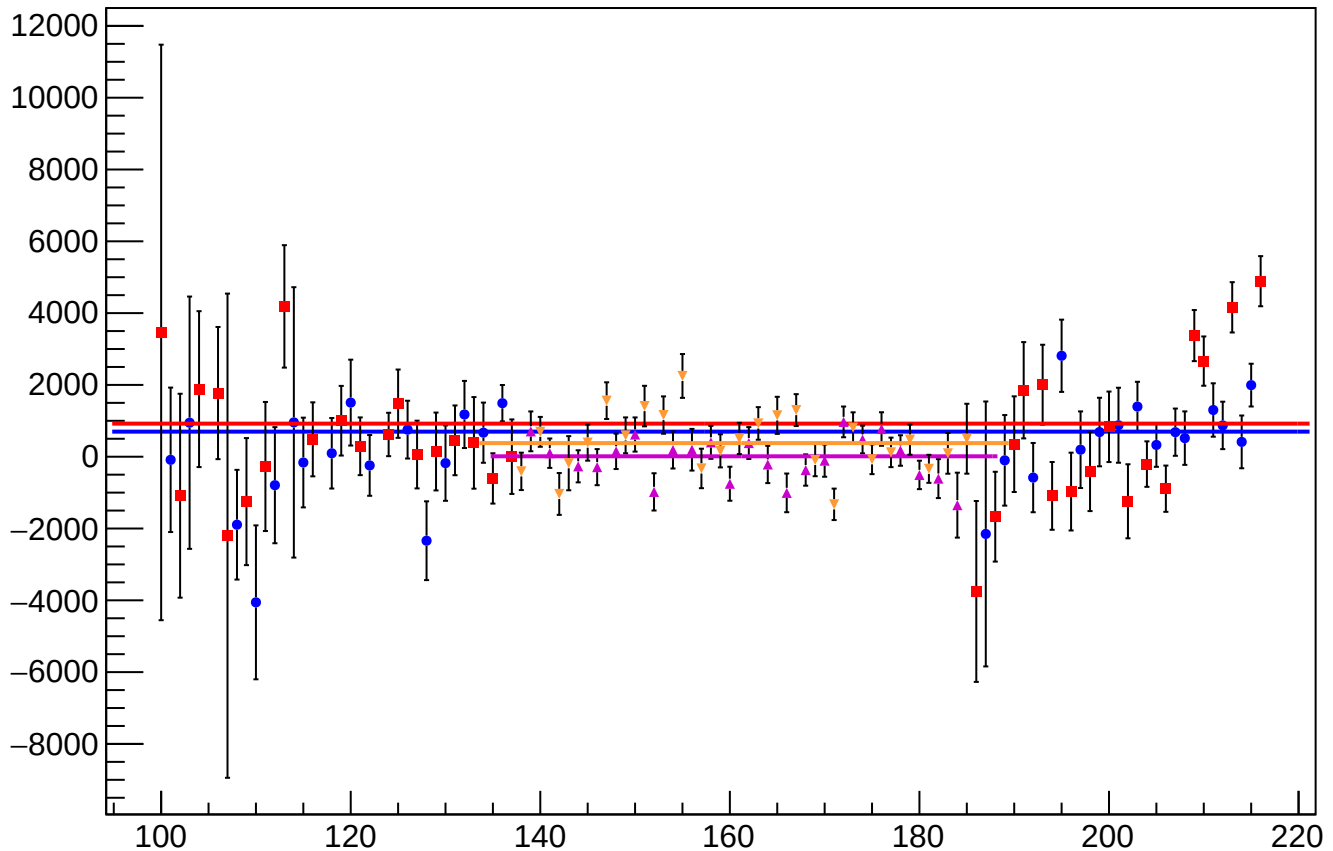
Left In: 1810.457 $\pm$ 0.299  $\chi^2$ /NDF: 1967.2/22

+ sign 1831.827 $\pm$ 0.209  $\chi^2$ /NDF: 700167.9/55

All: 1835.917 $\pm$ 0.149  $\chi^2$ /NDF: 1480213.0/11

- sign 1840.132 $\pm$ 0.212  $\chi^2$ /NDF: 779269.2/57

# asym\_at1\_dd\_reg\_correction\_mean vs Slug



Right In:  $698.500 \pm 161.615$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $379.353 \pm 97.013$   $\chi^2/\text{NDF}$ : 62.3/24

Right Out:  $921.731 \pm 166.133$   $\chi^2/\text{NDF}$ : 121.4/34

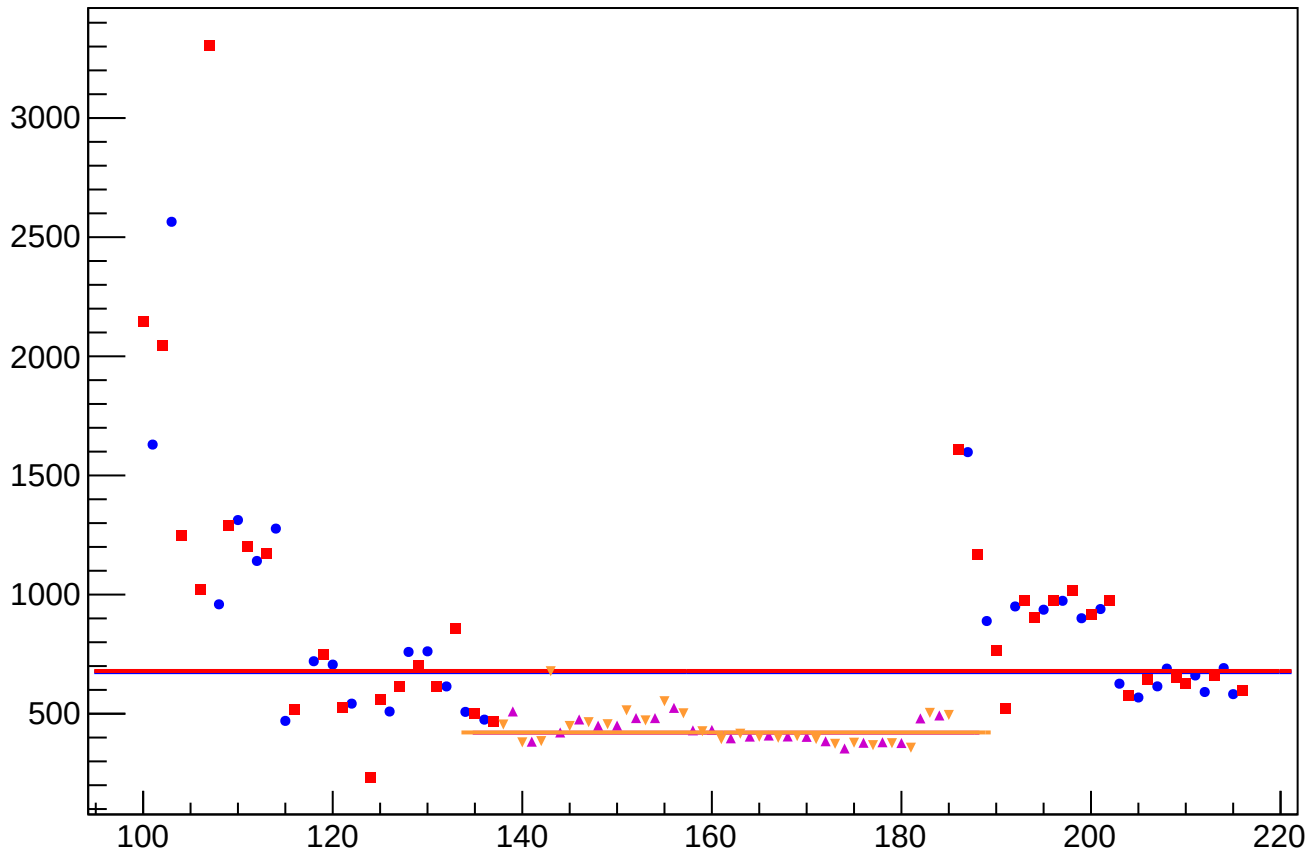
Left In:  $11.527 \pm 98.976$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $463.890 \pm 83.178$   $\chi^2/\text{NDF}$ : 102.1/55

All:  $359.280 \pm 59.460$   $\chi^2/\text{NDF}$ : 280.0/113

- sign  $249.961 \pm 85.030$   $\chi^2/\text{NDF}$ : 174.7/57

# asym\_at1\_dd\_reg\_correction\_rms vs Slug



Right In: 674.557 $\pm$ 0.114  $\chi^2$ /NDF: 3159801.1/30

Left Out: 421.417 $\pm$ 0.069  $\chi^2$ /NDF: 743048.1/24

Right Out: 679.402 $\pm$ 0.117  $\chi^2$ /NDF: 4728200.1/34

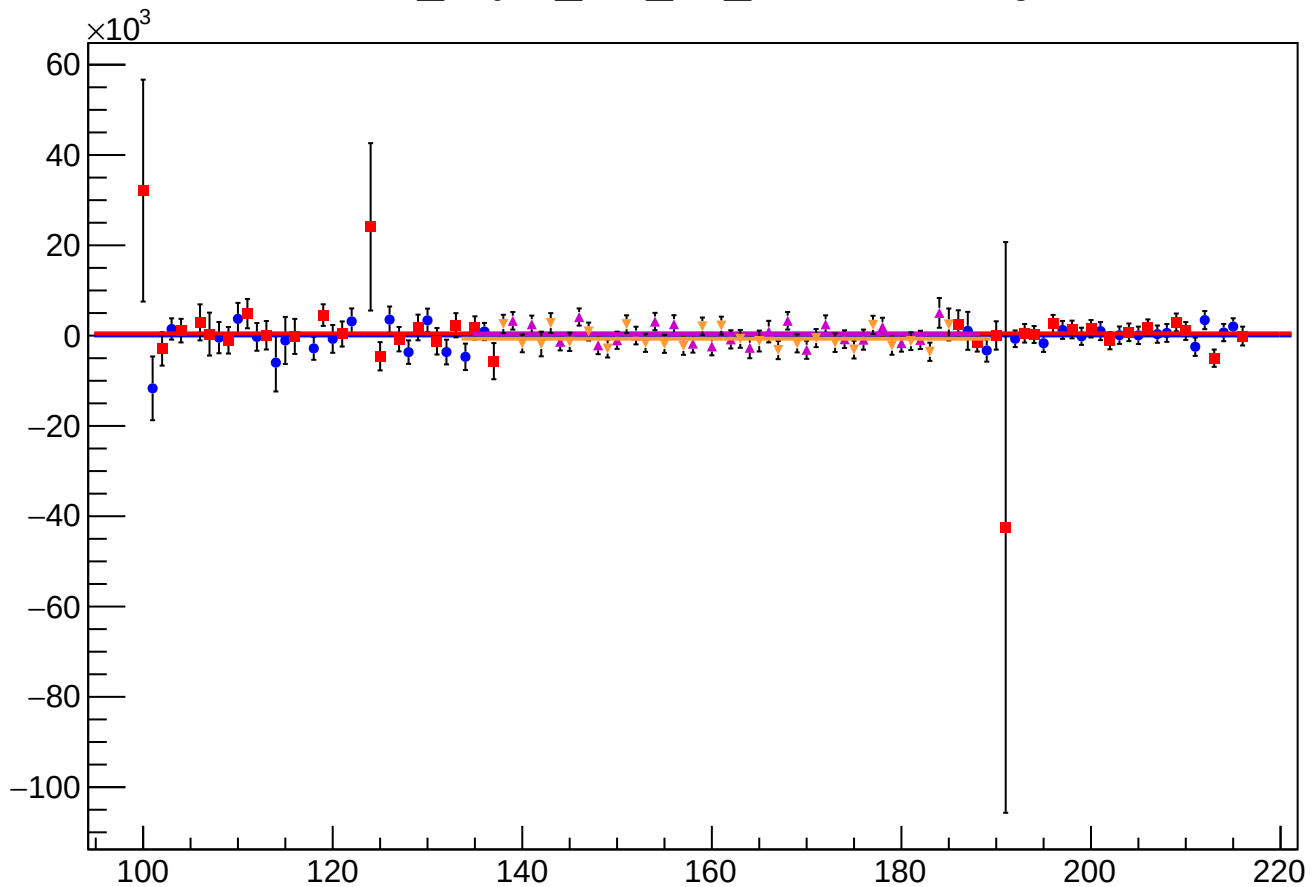
Left In: 420.222 $\pm$ 0.070  $\chi^2$ /NDF: 413129.7/22

+ sign 488.469 $\pm$ 0.059  $\chi^2$ /NDF: 7509853.3/55

All: 488.297 $\pm$ 0.042  $\chi^2$ /NDF: 16243720.5/11

- sign 488.116 $\pm$ 0.060  $\chi^2$ /NDF: 8733849.5/57

# cor\_asym\_at1\_dd\_mean vs Slug



Right In: 45.524 $\pm$ 424.874  $\chi^2$ /NDF: 26.6/30

Left Out: -670.031 $\pm$ 412.206  $\chi^2$ /NDF: 24.7/24

Right Out: 491.082 $\pm$ 427.116  $\chi^2$ /NDF: 30.9/34

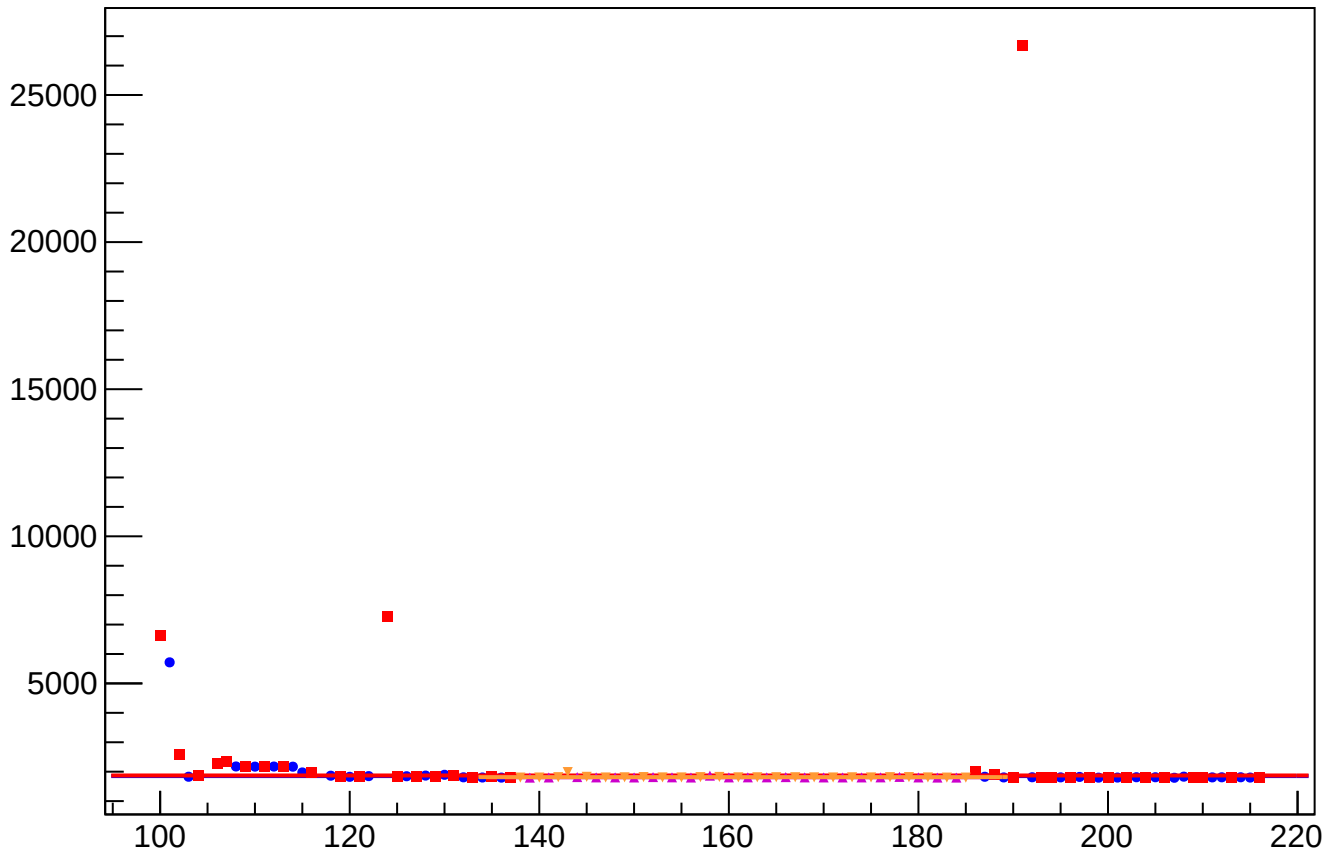
Left In: 342.989 $\pm$ 422.712  $\chi^2$ /NDF: 30.1/22

+ sign -323.081 $\pm$ 295.851  $\chi^2$ /NDF: 52.8/55

All: 40.895 $\pm$ 210.804  $\chi^2$ /NDF: 116.9/113

- sign 416.268 $\pm$ 300.447  $\chi^2$ /NDF: 61.0/57

# cor\_asym\_at1\_dd\_rms vs Slug



Right In: 1850.306+/-0.300  $\chi^2/\text{NDF}$ : 679722.0/30

Left Out: 1814.435+/-0.291  $\chi^2/\text{NDF}$ :13102.1/24

Right Out: 1871.025+/-0.302  $\chi^2/\text{NDF}$ : 763666.8/34

Left In: 1810.457+/-0.299  $\chi^2/\text{NDF}$ :1967.2/22

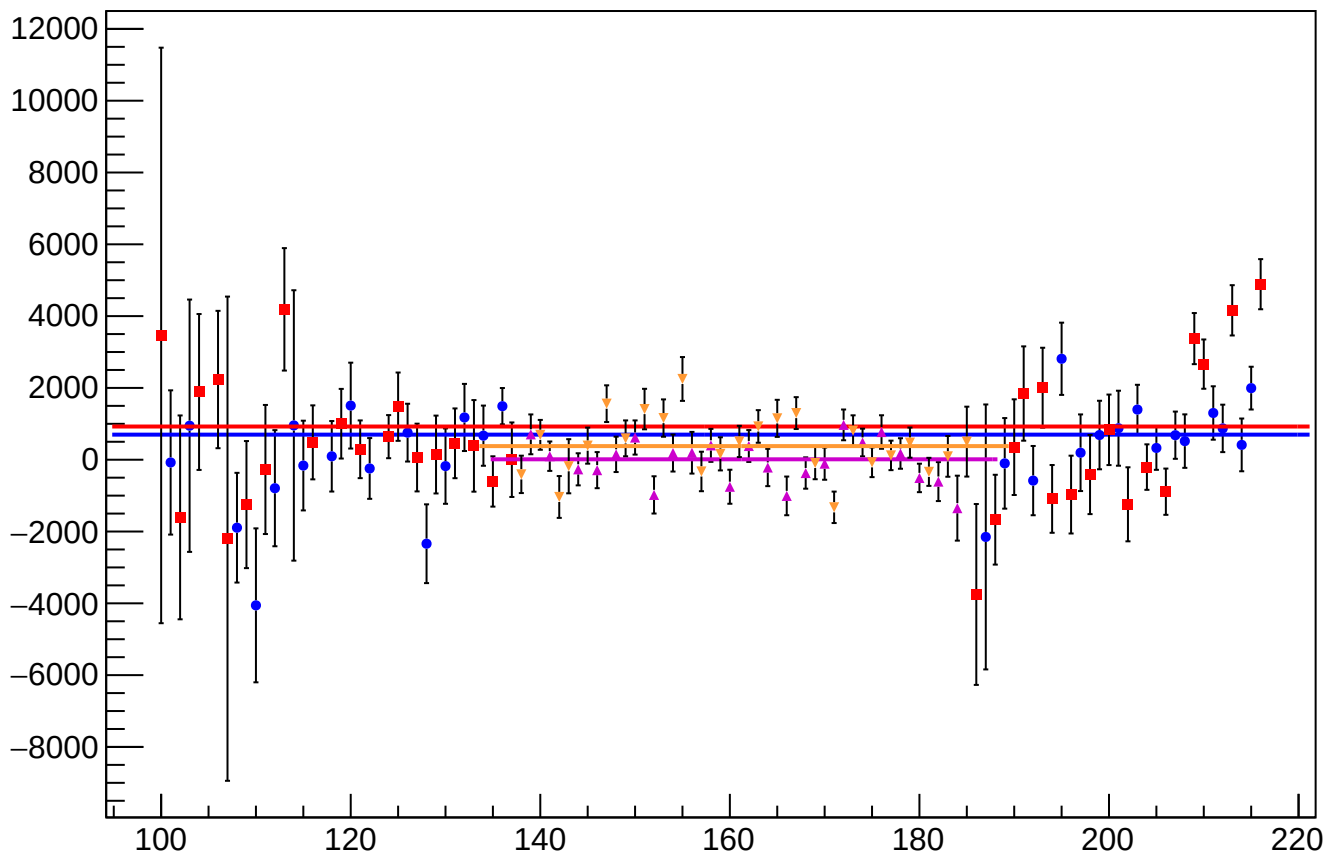
+ sign 1831.827+/-0.209  $\chi^2/\text{NDF}$ : 700167.8/55

All: 1836.061+/-0.149  $\chi^2/\text{NDF}$ : 1486951.5/11

- sign 1840.428+/-0.212  $\chi^2/\text{NDF}$ : 785951.7/57



# asym\_at1\_dd\_cor\_correction\_mean vs Slug



Right In:  $698.574 \pm 161.612$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $379.343 \pm 97.014$   $\chi^2/\text{NDF}$ : 62.3/24

Right Out:  $924.799 \pm 166.037$   $\chi^2/\text{NDF}$ : 122.0/34

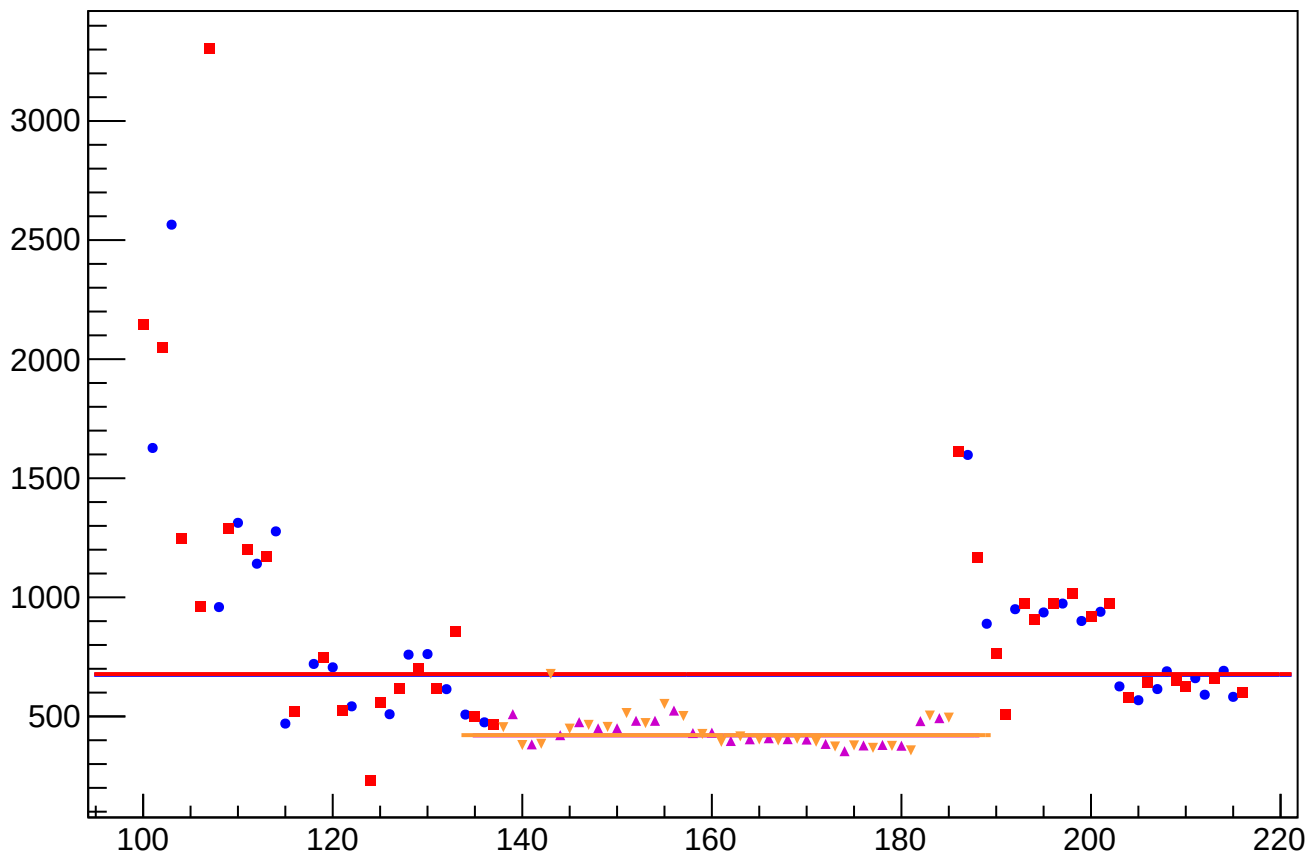
Left In:  $11.539 \pm 98.975$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $463.905 \pm 83.178$   $\chi^2/\text{NDF}$ : 102.1/55

All:  $359.767 \pm 59.455$   $\chi^2/\text{NDF}$ : 280.7/113

- sign  $250.976 \pm 85.016$   $\chi^2/\text{NDF}$ : 175.4/57

# asym\_at1\_dd\_cor\_correction\_rms vs Slug



Right In: 674.556+/-0.114  $\chi^2/\text{NDF}$ : 3158980.7/30

Left Out: 421.420+/-0.069  $\chi^2/\text{NDF}$ : 742987.6/24

Right Out: 677.826+/-0.117  $\chi^2/\text{NDF}$ : 4735548.5/34

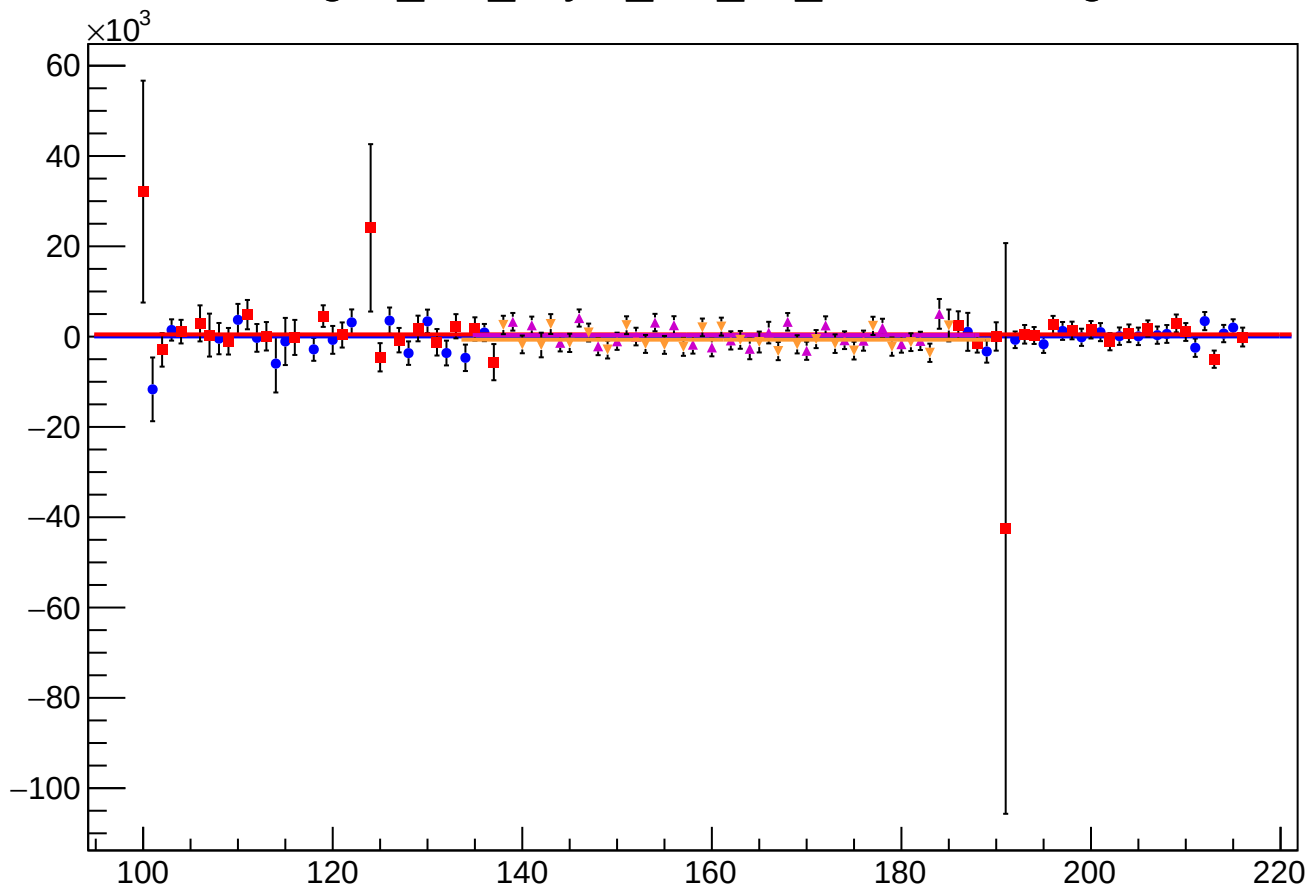
Left In: 420.218+/-0.070  $\chi^2/\text{NDF}$ : 413172.4/22

+ sign 488.473+/-0.059  $\chi^2/\text{NDF}$ : 7508909.6/55

All: 488.123+/-0.042  $\chi^2/\text{NDF}$ : 16209850.6/117

- sign 487.757+/-0.060  $\chi^2/\text{NDF}$ : 8700868.5/57

# eigen\_cor\_asym\_at1\_dd\_mean vs Slug



Right In: 45.524 $\pm$ 424.874  $\chi^2$ /NDF: 26.6/30

Left Out: -670.031 $\pm$ 412.206  $\chi^2$ /NDF: 24.7/24

Right Out: 491.082 $\pm$ 427.116  $\chi^2$ /NDF: 30.9/34

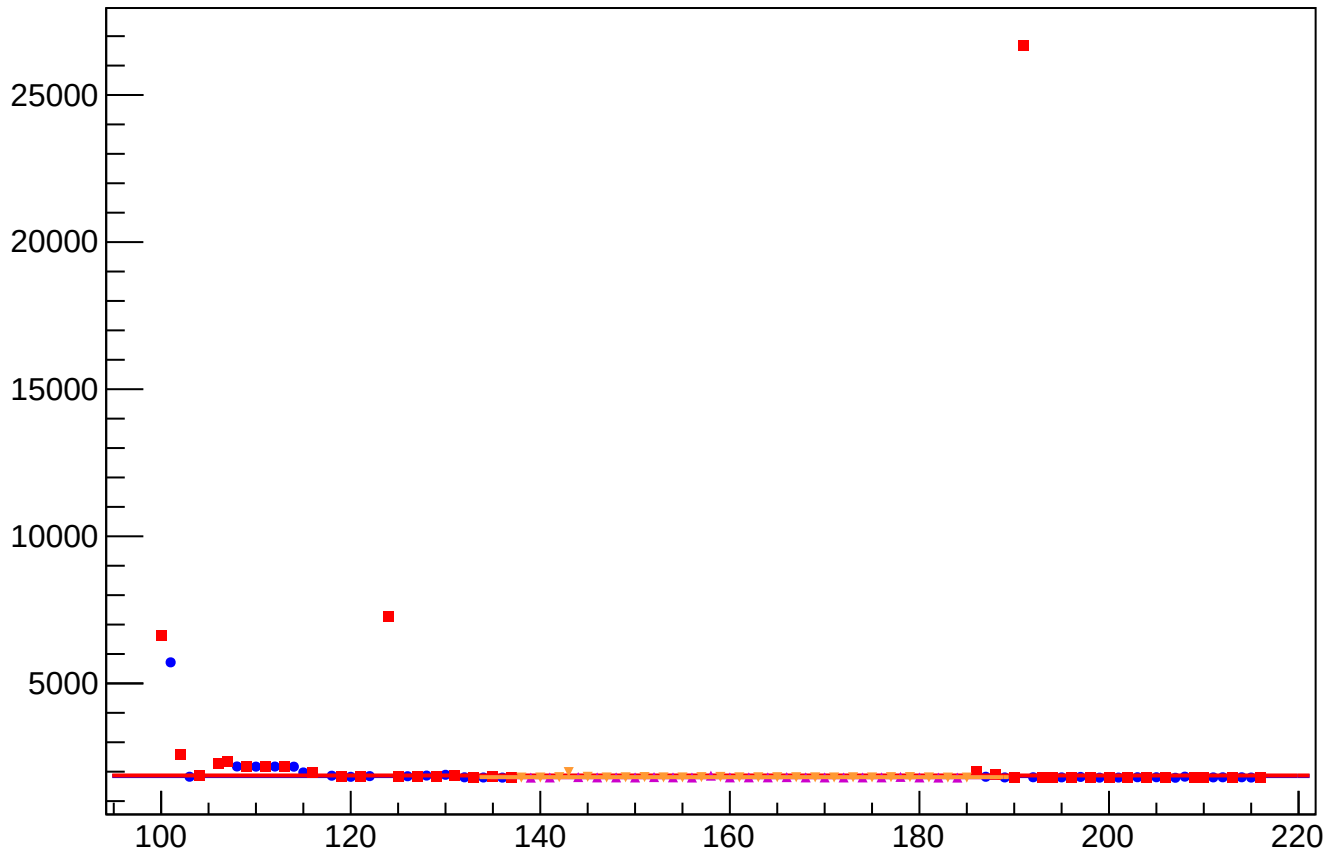
Left In: 342.989 $\pm$ 422.712  $\chi^2$ /NDF: 30.1/22

+ sign -323.081 $\pm$ 295.851  $\chi^2$ /NDF: 52.8/55

All: 40.895 $\pm$ 210.804  $\chi^2$ /NDF: 116.9/113

- sign 416.268 $\pm$ 300.447  $\chi^2$ /NDF: 61.0/57

# eigen\_cor\_asym\_at1\_dd\_rms vs Slug



Right In: 1850.306 $\pm$ 0.300  $\chi^2$ /NDF: 679722.0/30

Left Out: 1814.435 $\pm$ 0.291  $\chi^2$ /NDF:13102.1/24

Right Out: 1871.025 $\pm$ 0.302  $\chi^2$ /NDF: 763666.8/34

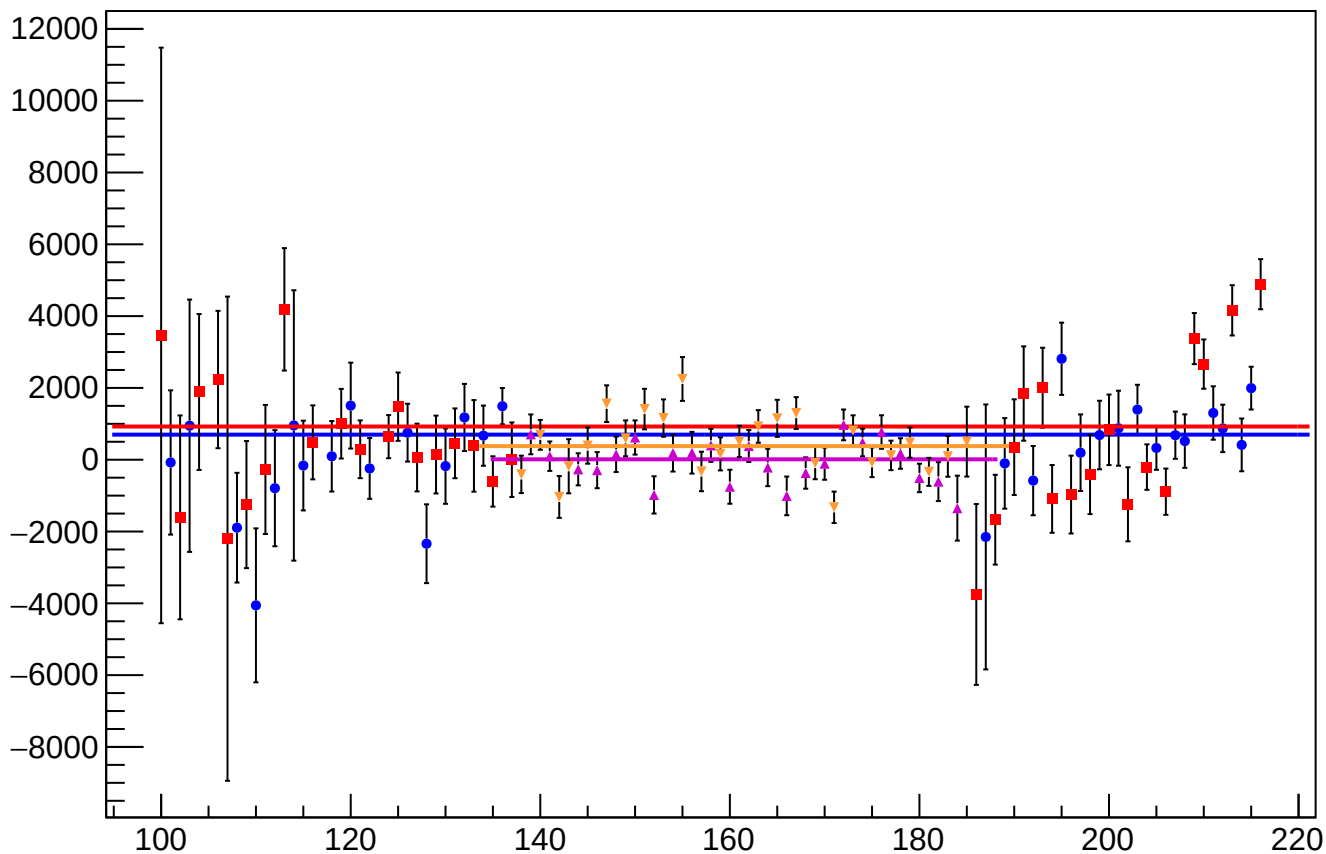
Left In: 1810.457 $\pm$ 0.299  $\chi^2$ /NDF:1967.2/22

+ sign 1831.827 $\pm$ 0.209  $\chi^2$ /NDF: 700167.8/55

All: 1836.061 $\pm$ 0.149  $\chi^2$ /NDF: 1486951.5/11

- sign 1840.428 $\pm$ 0.212  $\chi^2$ /NDF: 785951.7/57

asym\_at1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $698.574 \pm 161.612$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $379.343 \pm 97.014$   $\chi^2/\text{NDF}$ : 62.3/24

Right Out:  $924.799 \pm 166.037$   $\chi^2/\text{NDF}$ : 122.0/34

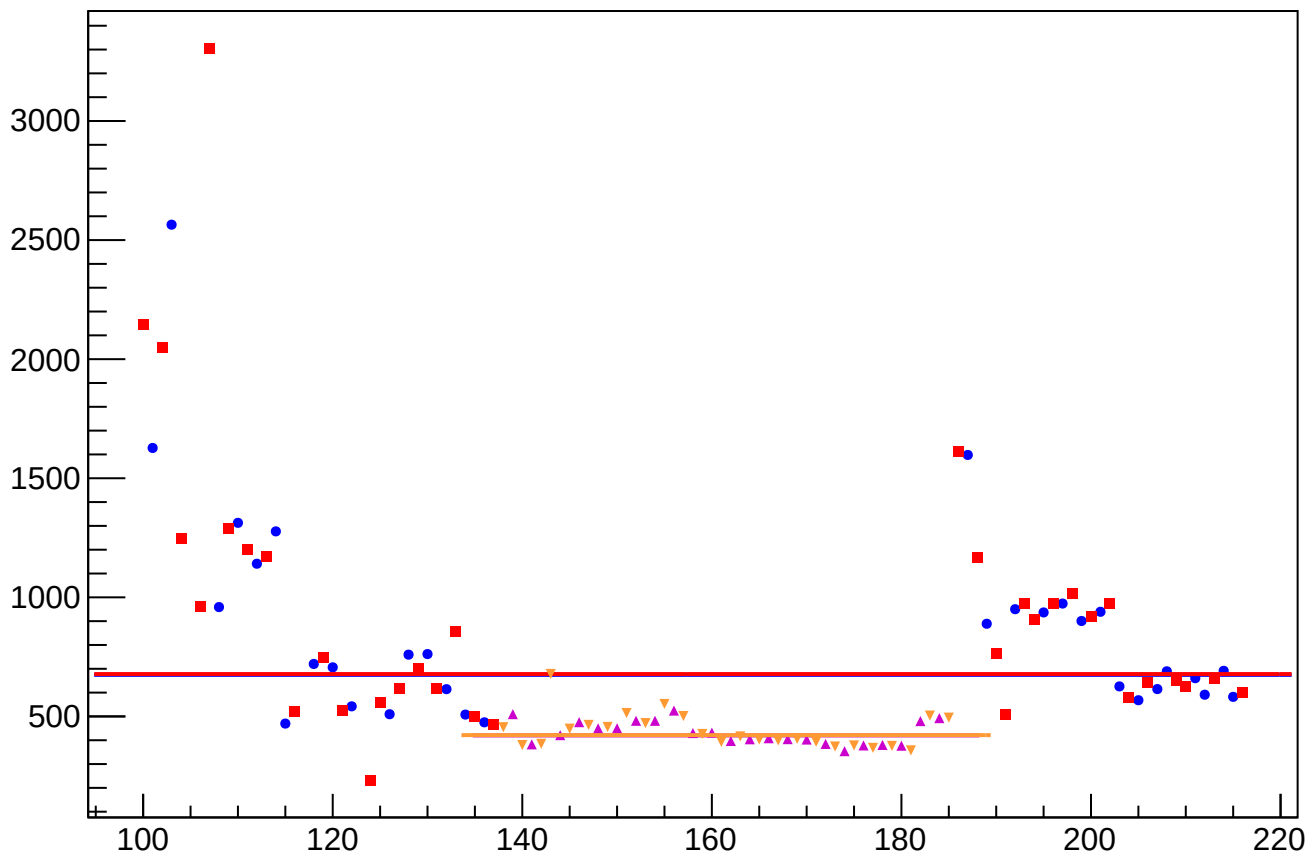
Left In:  $11.539 \pm 98.975$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $463.905 \pm 83.178$   $\chi^2/\text{NDF}$ : 102.1/55

All:  $359.767 \pm 59.455$   $\chi^2/\text{NDF}$ : 280.7/113

- sign  $250.976 \pm 85.016$   $\chi^2/\text{NDF}$ : 175.4/57

asym\_at1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 674.556+/-0.114  $\chi^2/\text{NDF}$ : 3158980.7/30

Left Out: 421.420+/-0.069  $\chi^2/\text{NDF}$ : 742987.6/24

Right Out: 677.826+/-0.117  $\chi^2/\text{NDF}$ : 4735548.5/34

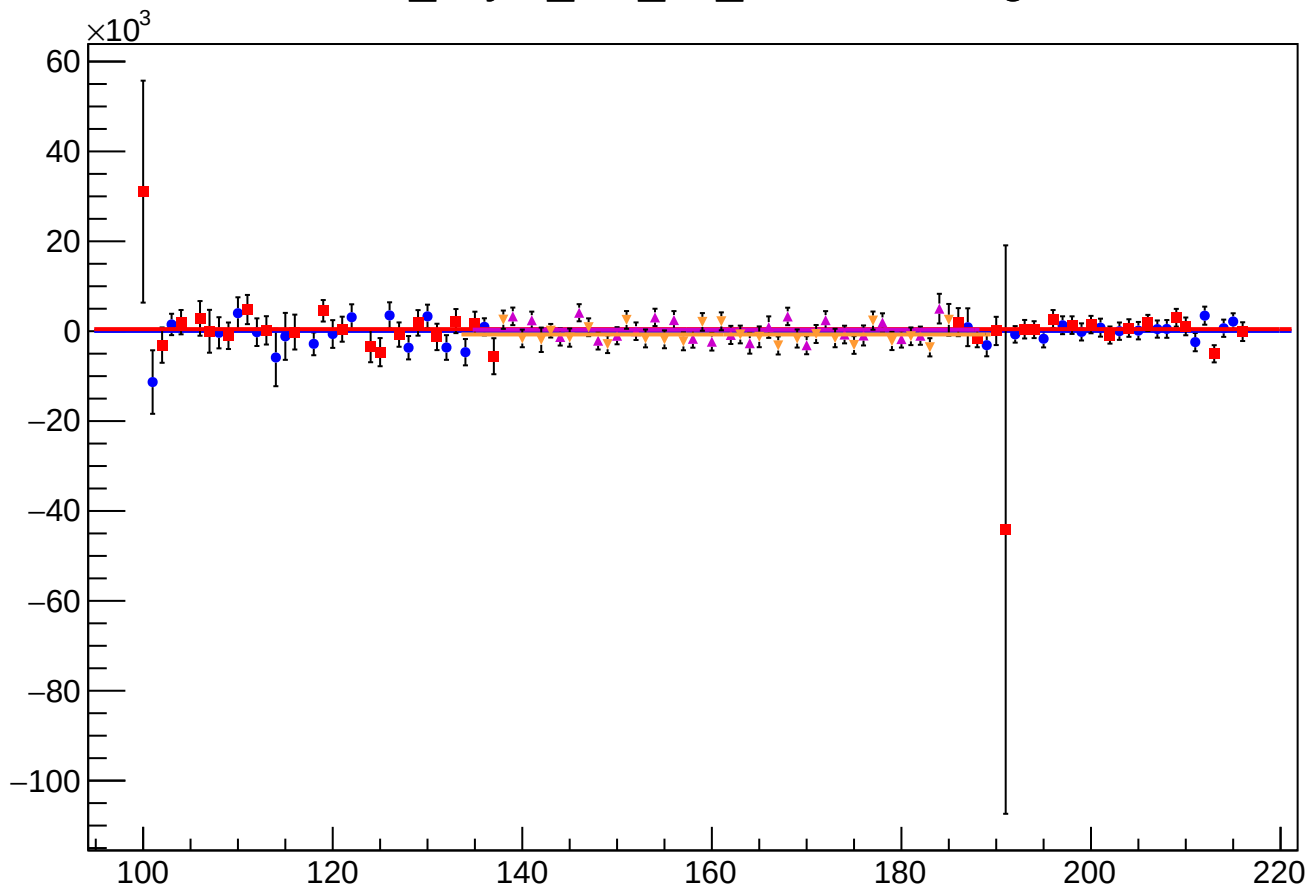
Left In: 420.218+/-0.070  $\chi^2/\text{NDF}$ : 413172.4/22

+ sign 488.473+/-0.059  $\chi^2/\text{NDF}$ : 7508909.6/55

All: 488.123+/-0.042  $\chi^2/\text{NDF}$ : 16209850.6/117

- sign 487.757+/-0.060  $\chi^2/\text{NDF}$ : 8700868.5/57

# dit\_asym\_at1\_dd\_mean vs Slug



Right In:  $61.481 \pm 425.298$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $-724.527 \pm 404.417$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $460.843 \pm 425.191$   $\chi^2/\text{NDF}$ : 30.4/34

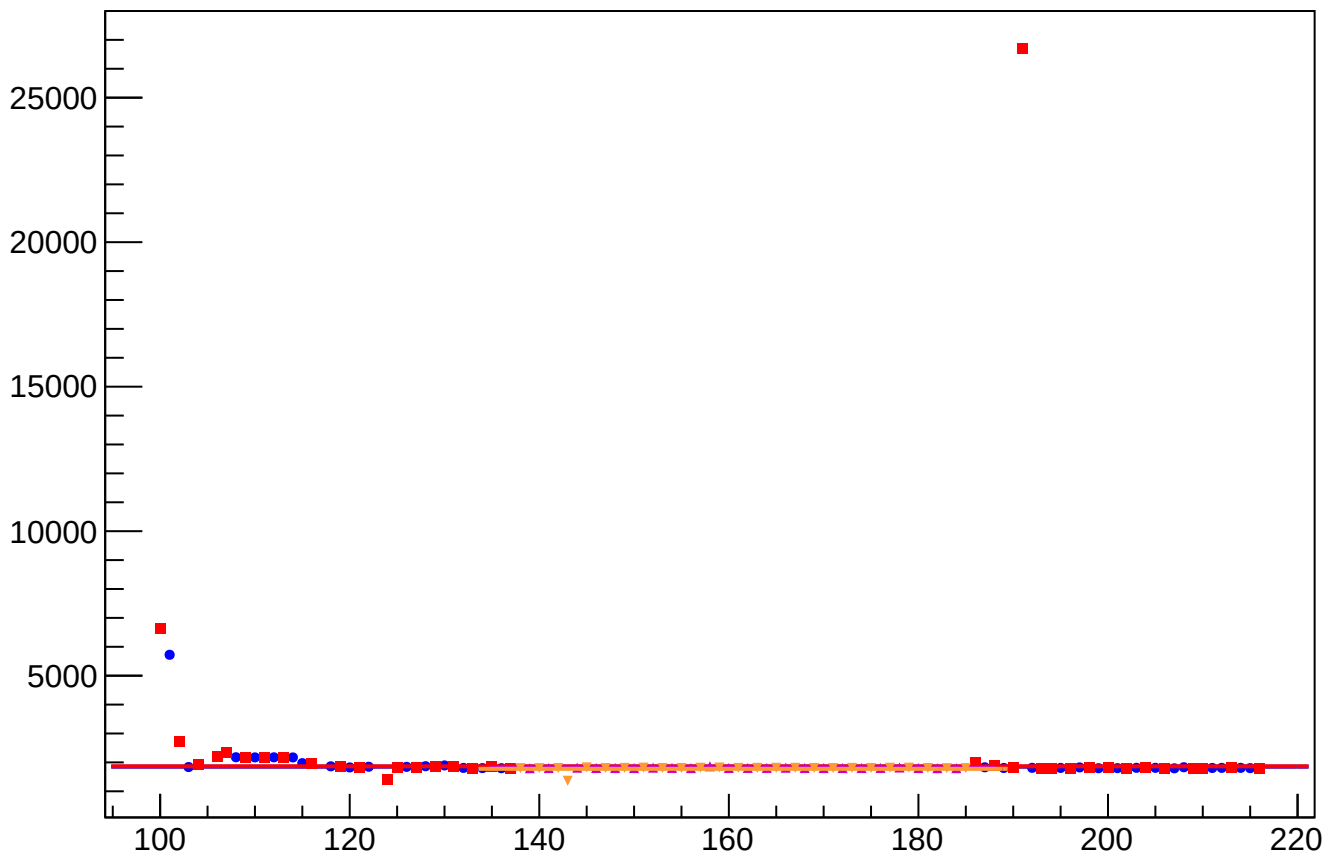
Left In:  $341.223 \pm 422.858$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $-351.291 \pm 293.070$   $\chi^2/\text{NDF}$ : 50.3/55

All:  $16.137 \pm 209.580$   $\chi^2/\text{NDF}$ : 113.6/113

- sign  $400.704 \pm 299.827$   $\chi^2/\text{NDF}$ : 60.1/57

# dit\_asym\_at1\_dd\_rms vs Slug



Right In: 1852.049 $\pm$ 0.301  $\chi^2$ /NDF: 679581.6/30

Left Out: 1776.721 $\pm$ 0.286  $\chi^2$ /NDF:161294.8/24

Right Out: 1864.298 $\pm$ 0.301  $\chi^2$ /NDF: 638240.2/34

Left In: 1811.084 $\pm$ 0.299  $\chi^2$ /NDF:1965.1/22

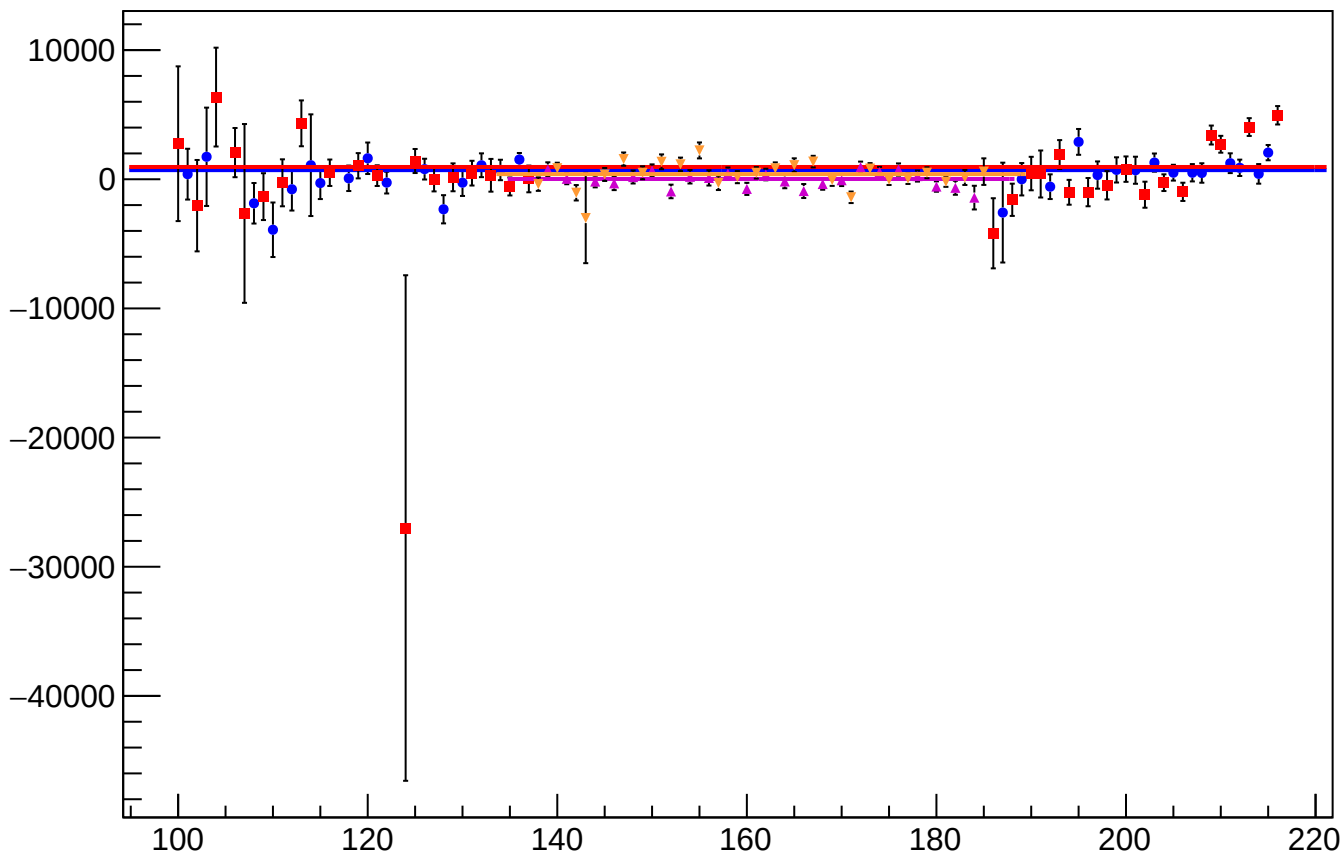
+ sign 1812.490 $\pm$ 0.207  $\chi^2$ /NDF: 873824.8/55

All: 1824.732 $\pm$ 0.148  $\chi^2$ /NDF: 1536921.5/11

- sign 1837.544 $\pm$ 0.212  $\chi^2$ /NDF: 655955.1/57



# asym\_at1\_dd\_dit\_correction\_mean vs Slug



Right In: 706.392 $\pm$ 161.609  $\chi^2$ /NDF: 37.4/30

Left Out: 398.269 $\pm$ 99.165  $\chi^2$ /NDF:60.5/24

Right Out: 950.593 $\pm$ 174.789  $\chi^2$ /NDF: 123.4/34

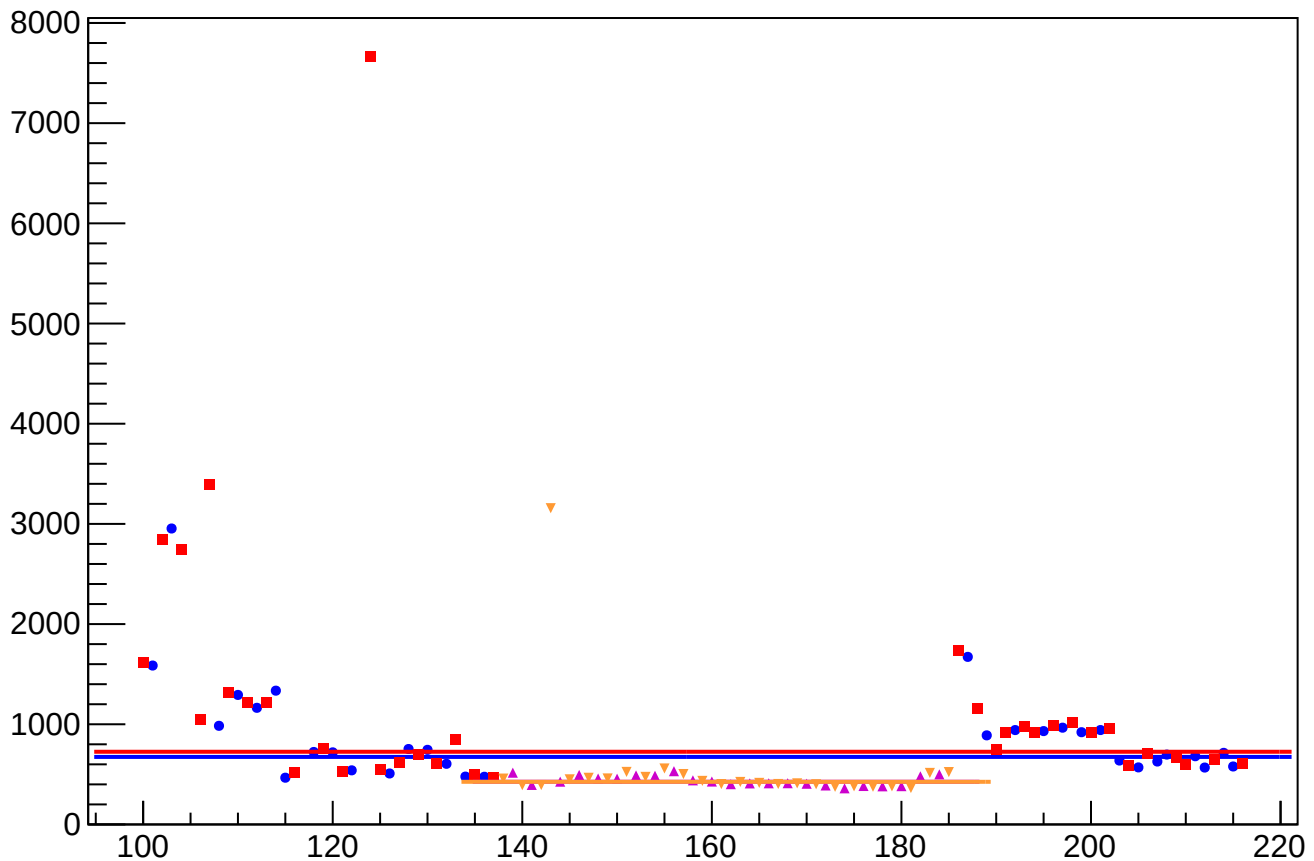
Left In: 21.453 $\pm$ 100.264  $\chi^2$ /NDF:30.8/22

+ sign 482.550 $\pm$ 84.521  $\chi^2$ /NDF: 100.5/55

All: 370.320 $\pm$ 60.613  $\chi^2$ /NDF: 279.7/113

- sign 251.491 $\pm$ 86.971  $\chi^2$ /NDF: 175.5/57

# asym\_at1\_dd\_dit\_correction\_rms vs Slug



Right In: 674.129+/-0.114     $\chi^2/\text{NDF}$ : 3373658.1/30

Left Out: 425.697+/-0.070     $\chi^2/\text{NDF}$ : 1718145.2/24

Right Out: 725.665+/-0.124     $\chi^2/\text{NDF}$ : 4547945.0/34

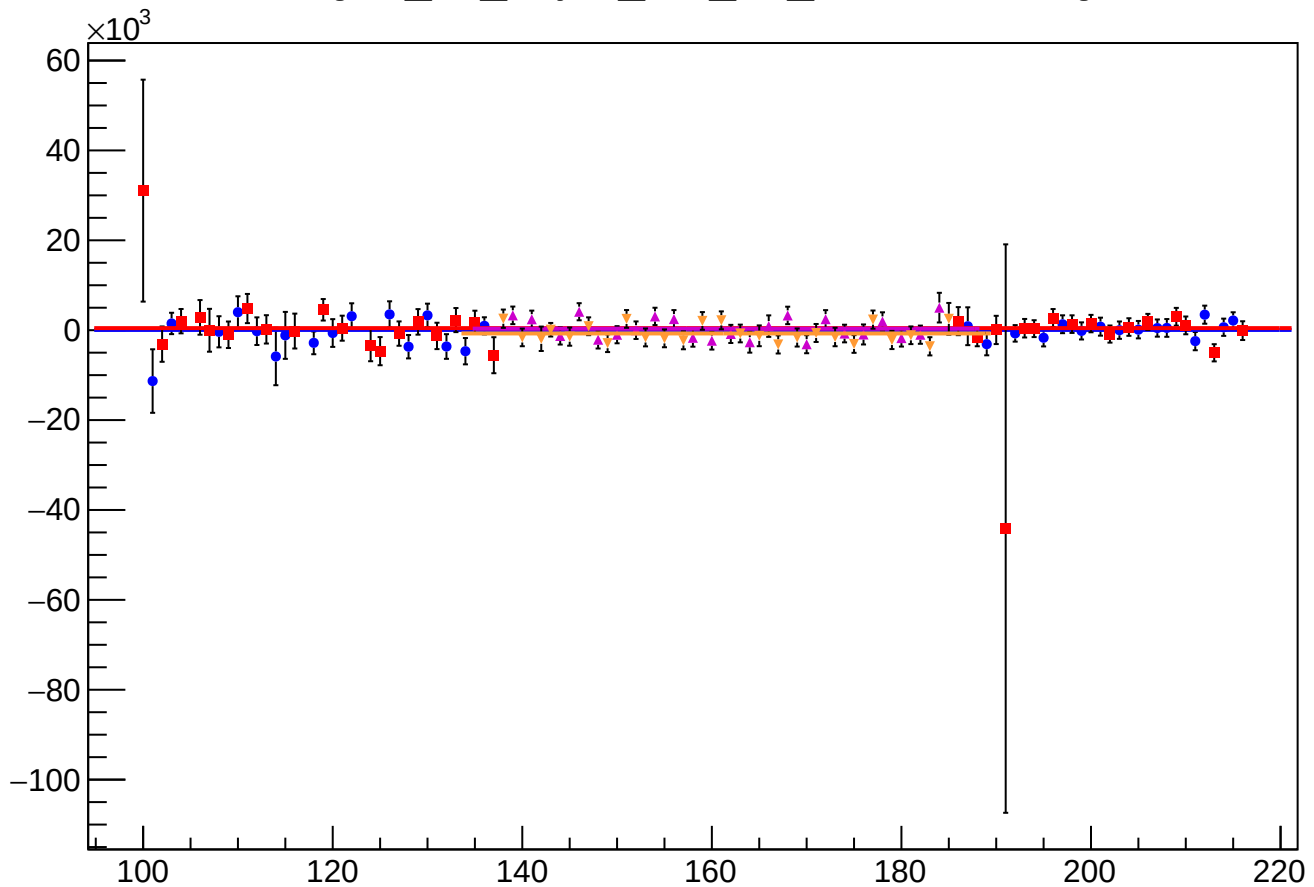
Left In: 426.144+/-0.071     $\chi^2/\text{NDF}$ : 415411.7/22

+ sign 493.650+/-0.060     $\chi^2/\text{NDF}$ : 8525294.1/55

All: 496.880+/-0.043     $\chi^2/\text{NDF}$ : 17913550.0/1

- sign 500.300+/-0.061     $\chi^2/\text{NDF}$ : 9382242.2/57

# eigen\_dit\_asym\_at1\_dd\_mean vs Slug



Right In:  $61.479 \pm 425.298$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $-724.528 \pm 404.417$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $460.842 \pm 425.191$   $\chi^2/\text{NDF}$ : 30.4/34

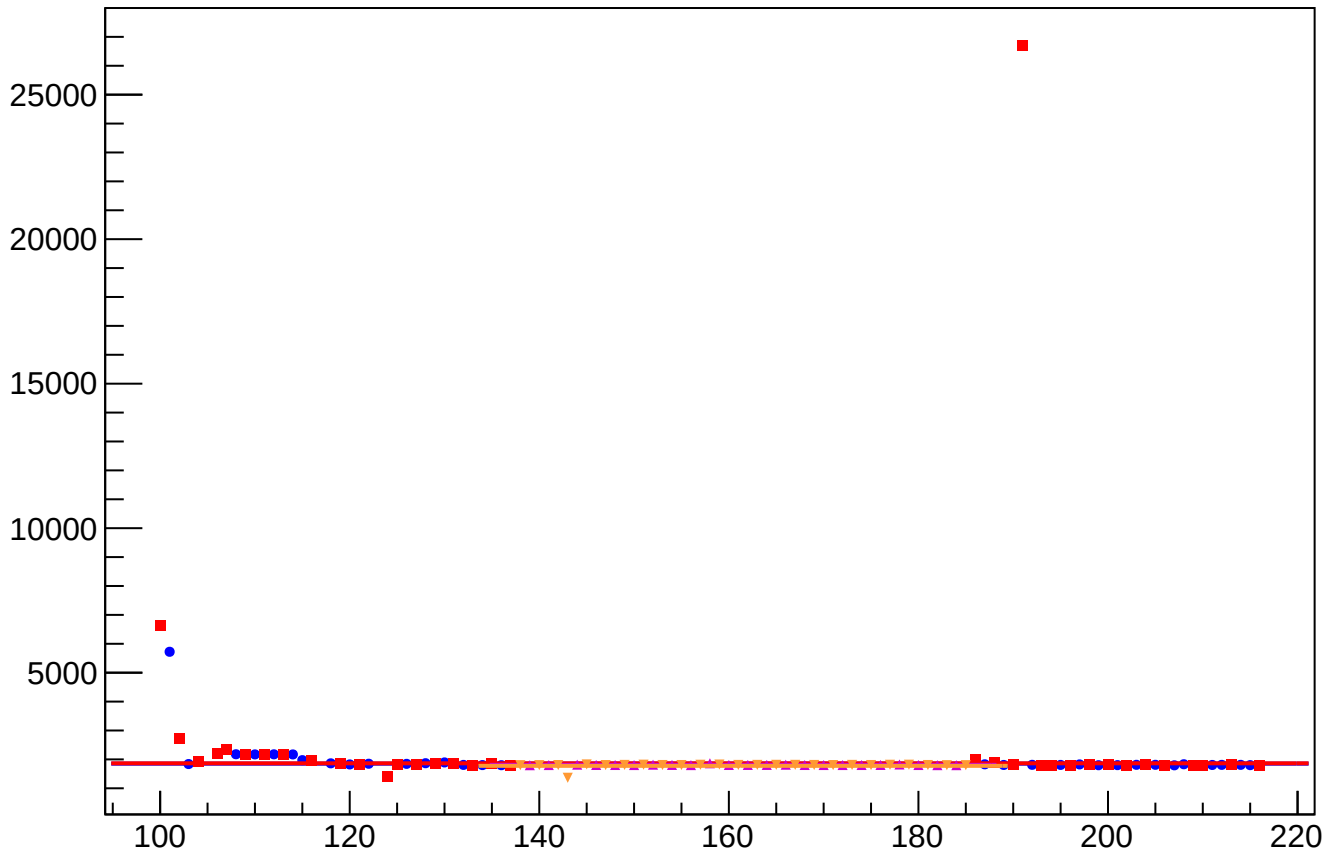
Left In:  $341.223 \pm 422.858$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $-351.292 \pm 293.070$   $\chi^2/\text{NDF}$ : 50.3/55

All:  $16.136 \pm 209.580$   $\chi^2/\text{NDF}$ : 113.6/113

- sign  $400.703 \pm 299.827$   $\chi^2/\text{NDF}$ : 60.1/57

# eigen\_dit\_asym\_at1\_dd\_rms vs Slug



Right In: 1852.049 $\pm$ 0.301  $\chi^2$ /NDF: 679581.6/30

Left Out: 1776.721 $\pm$ 0.286  $\chi^2$ /NDF:161294.8/24

Right Out: 1864.298 $\pm$ 0.301  $\chi^2$ /NDF: 638240.1/34

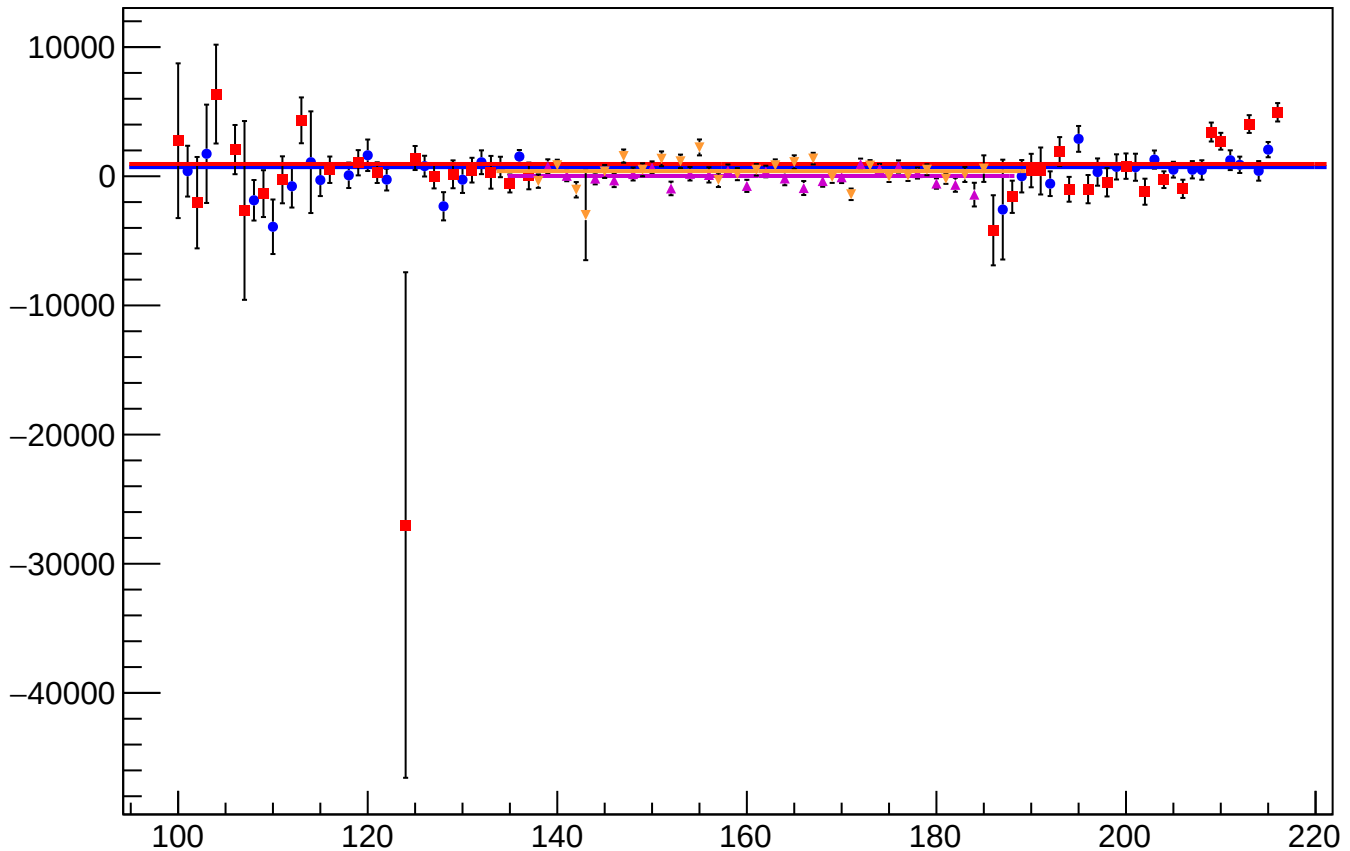
Left In: 1811.084 $\pm$ 0.299  $\chi^2$ /NDF:1965.1/22

+ sign 1812.490 $\pm$ 0.207  $\chi^2$ /NDF: 873824.8/55

All: 1824.732 $\pm$ 0.148  $\chi^2$ /NDF: 1536921.3/11

- sign 1837.544 $\pm$ 0.212  $\chi^2$ /NDF: 655954.9/57

# asym\_at1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 706.390 $\pm$ 161.609  $\chi^2$ /NDF: 37.4/30

Left Out: 398.268 $\pm$ 99.165  $\chi^2$ /NDF: 60.5/24

Right Out: 950.591 $\pm$ 174.790  $\chi^2$ /NDF: 123.4/34

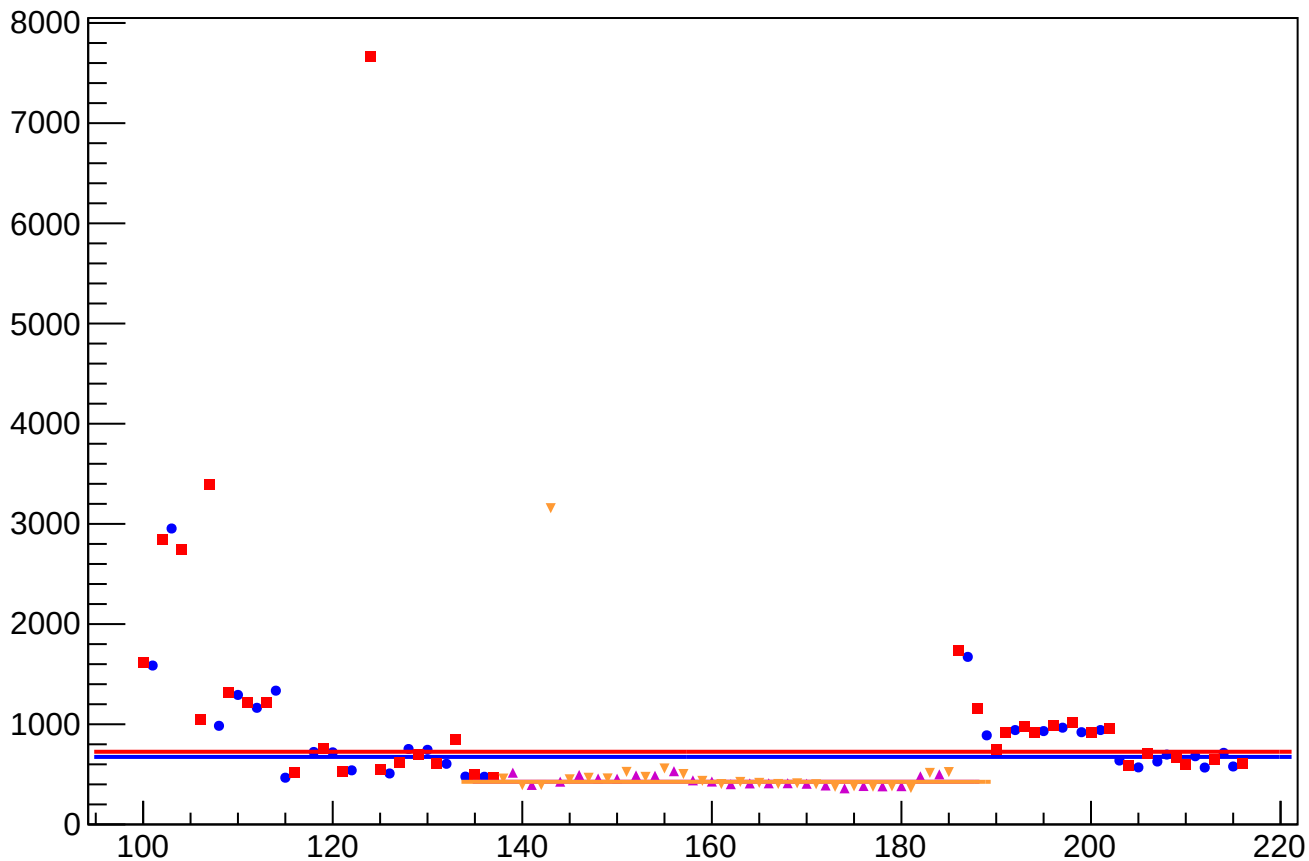
Left In: 21.452 $\pm$ 100.264  $\chi^2$ /NDF: 30.8/22

+ sign 482.549 $\pm$ 84.521  $\chi^2$ /NDF: 100.5/55

All: 370.319 $\pm$ 60.613  $\chi^2$ /NDF: 279.7/113

- sign 251.490 $\pm$ 86.971  $\chi^2$ /NDF: 175.5/57

# asym\_at1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 674.130+/-0.114     $\chi^2/\text{NDF}$ : 3373657.4/30

Left Out: 425.696+/-0.070     $\chi^2/\text{NDF}$ : 1718147.9/24

Right Out: 725.666+/-0.124     $\chi^2/\text{NDF}$ : 4547943.1/34

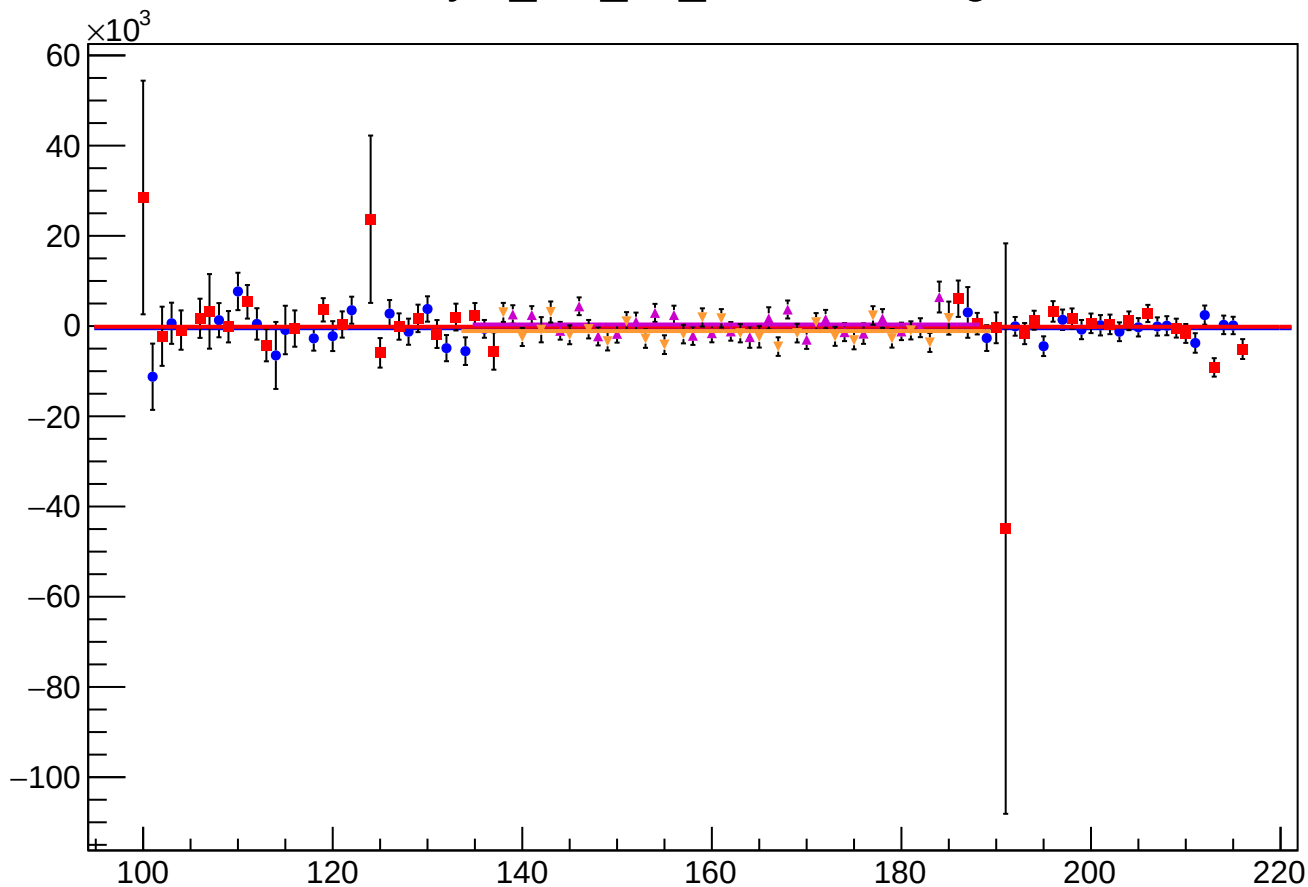
Left In: 426.144+/-0.071     $\chi^2/\text{NDF}$ : 415415.2/22

+ sign 493.650+/-0.060     $\chi^2/\text{NDF}$ : 8525311.9/55

All: 496.880+/-0.043     $\chi^2/\text{NDF}$ : 17913585.1/11

- sign 500.300+/-0.061     $\chi^2/\text{NDF}$ : 9382259.4/57

# asym\_at1\_dd\_mean vs Slug



Right In:  $-476.639 \pm 466.662$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $-1105.791 \pm 424.648$   $\chi^2/\text{NDF}$ : 28.0/24

Right Out:  $-153.066 \pm 476.655$   $\chi^2/\text{NDF}$ : 50.6/34

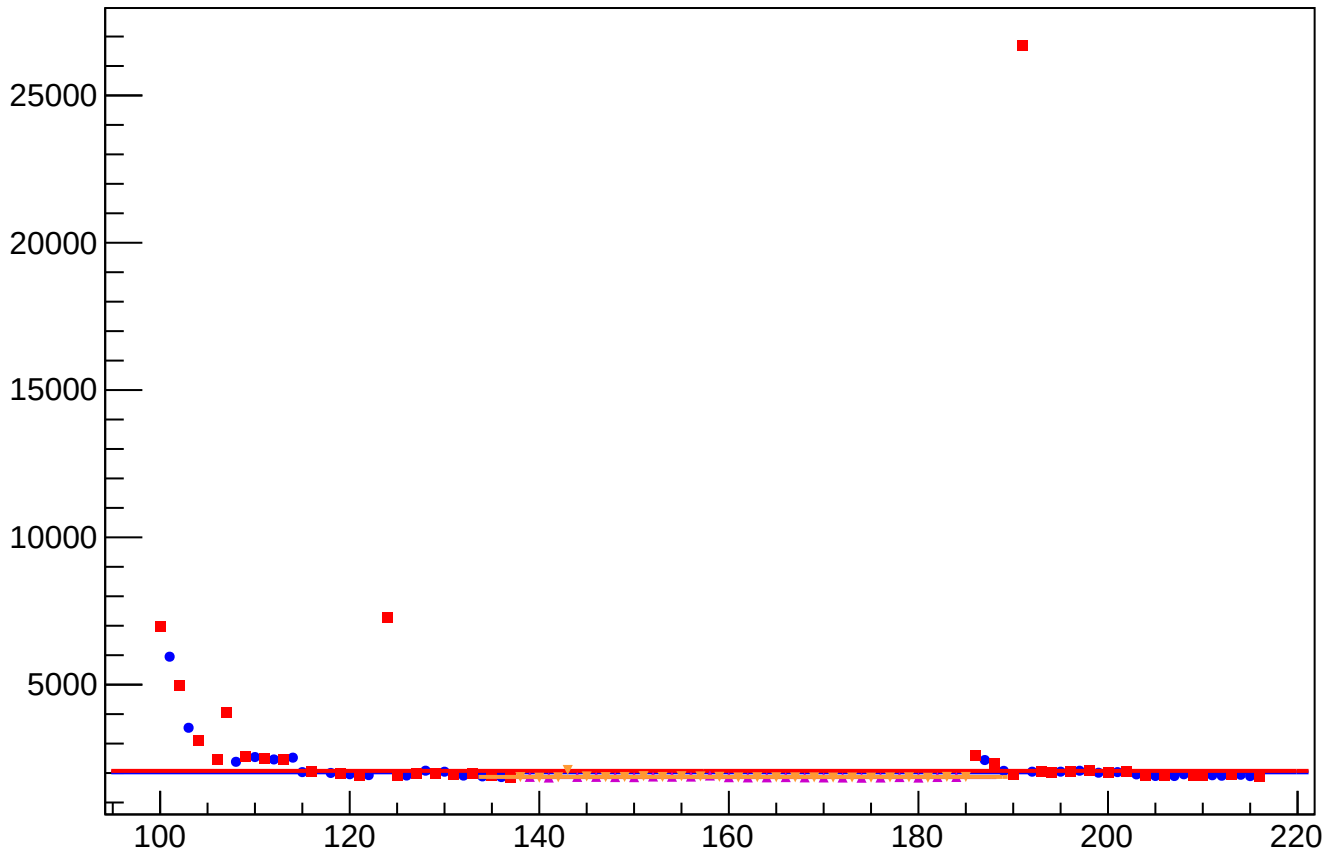
Left In:  $346.936 \pm 434.947$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $-820.806 \pm 314.077$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-361.197 \pm 224.592$   $\chi^2/\text{NDF}$ : 141.5/113

- sign  $119.764 \pm 321.289$   $\chi^2/\text{NDF}$ : 80.0/57

# asym\_at1\_dd\_rms vs Slug



Right In: 2024.249 $\pm$ 0.330  $\chi^2$ /NDF: 961776.3/30

Left Out: 1868.941 $\pm$ 0.300  $\chi^2$ /NDF: 23314.7/24

Right Out: 2073.443 $\pm$ 0.337  $\chi^2$ /NDF: 1417467.3/34

Left In: 1862.828 $\pm$ 0.308  $\chi^2$ /NDF: 2714.5/22

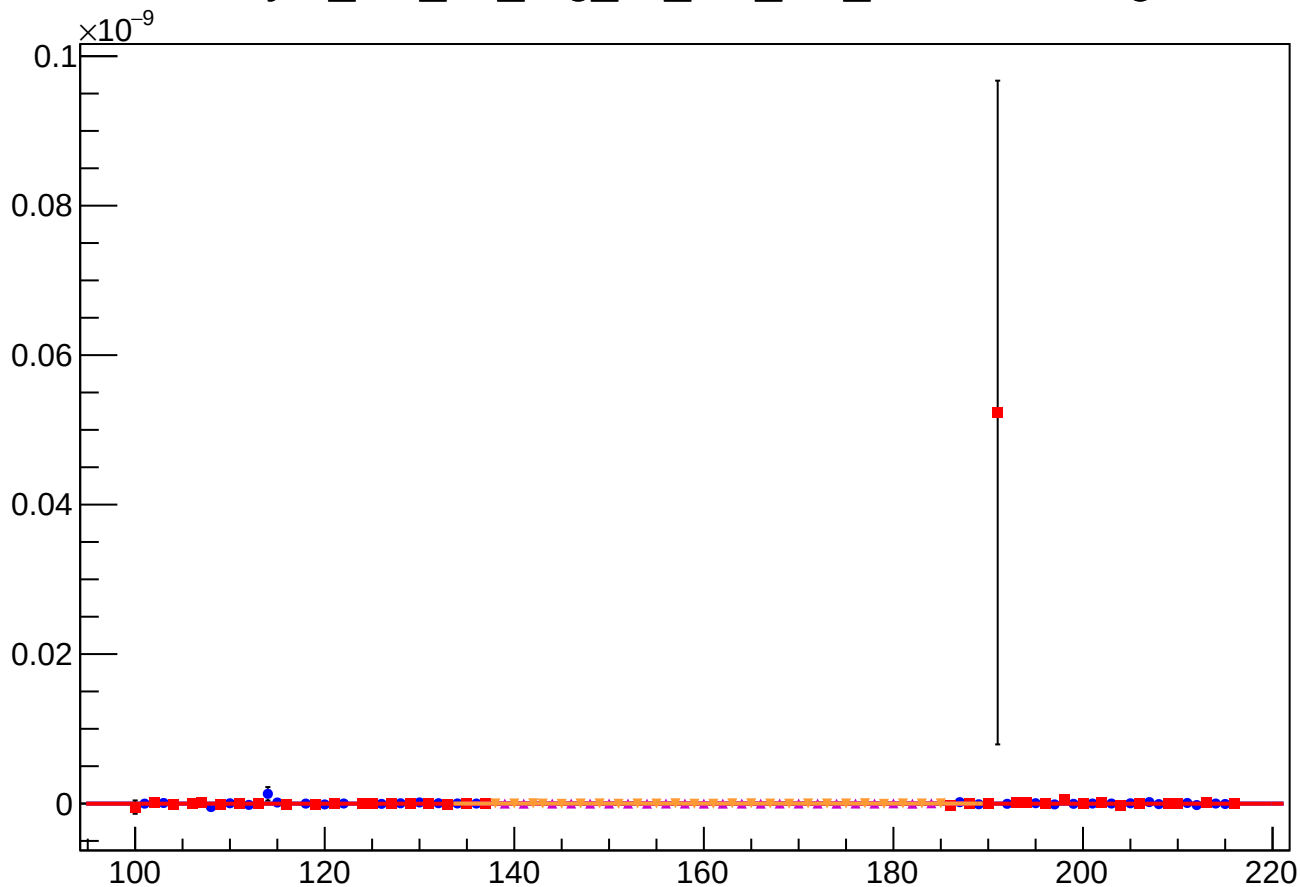
+ sign 1939.290 $\pm$ 0.222  $\chi^2$ /NDF: 1106269.6/55

All: 1948.687 $\pm$ 0.159  $\chi^2$ /NDF: 2743182.7/11

- sign 1958.520 $\pm$ 0.227  $\chi^2$ /NDF: 1633249.8/57



asym\_at1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 37.4/30

Left Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 42.1/24

Right Out: -0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 34.2/34

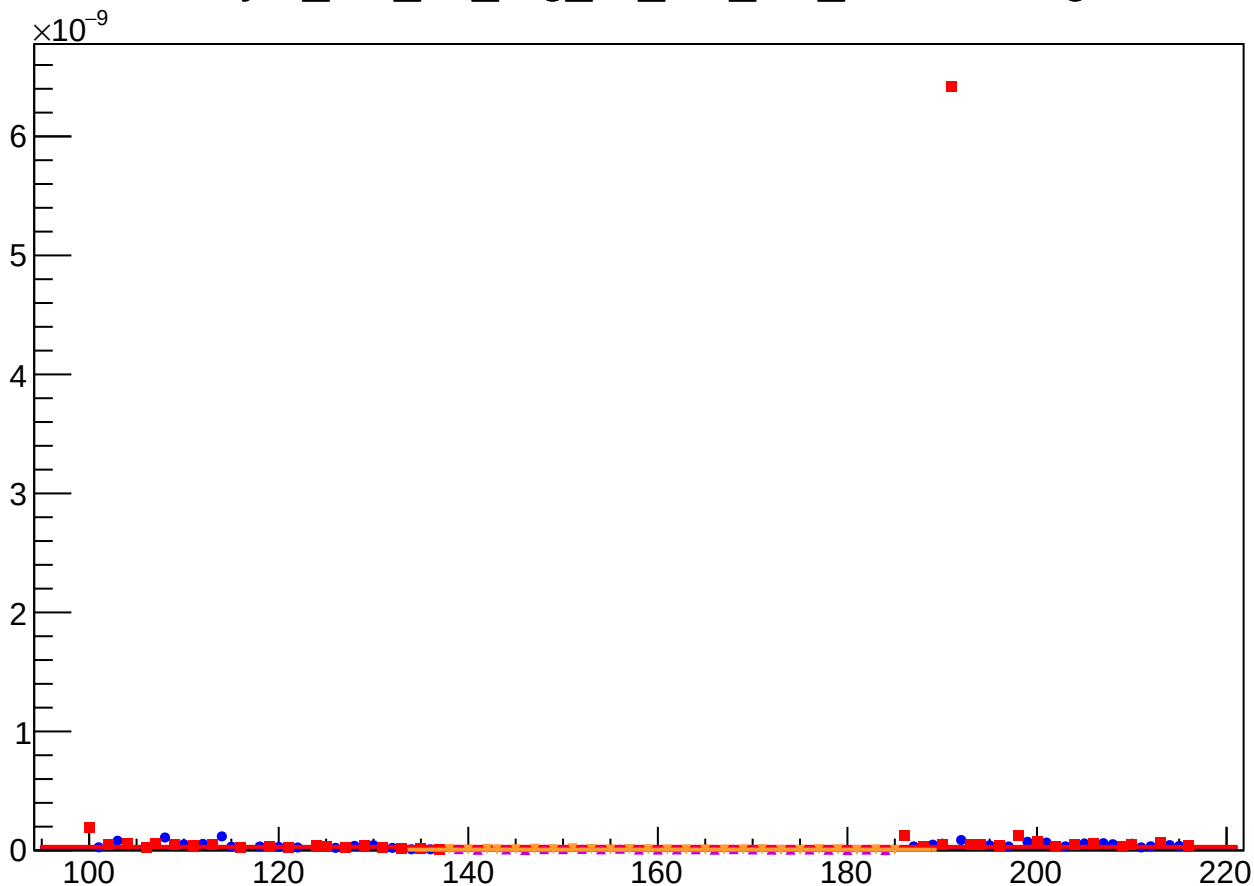
Left In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 17.3/22

+ sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 79.5/55

All: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 134.3/113

- sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 54.0/57

# asym\_at1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5484371.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1843010.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3765272.0/34

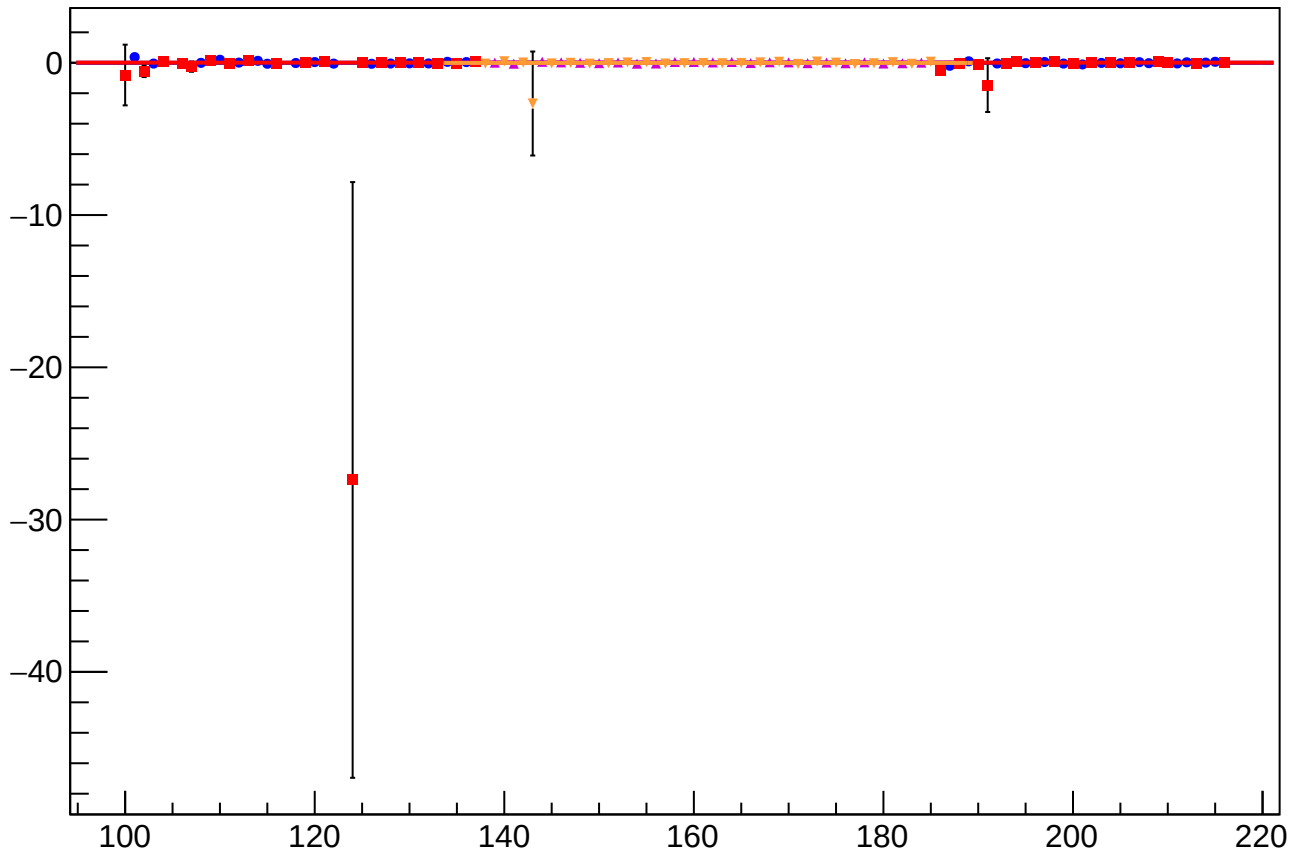
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1477997.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11384427.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22830474.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11444127.8/57

# asym\_at1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 28.2/34

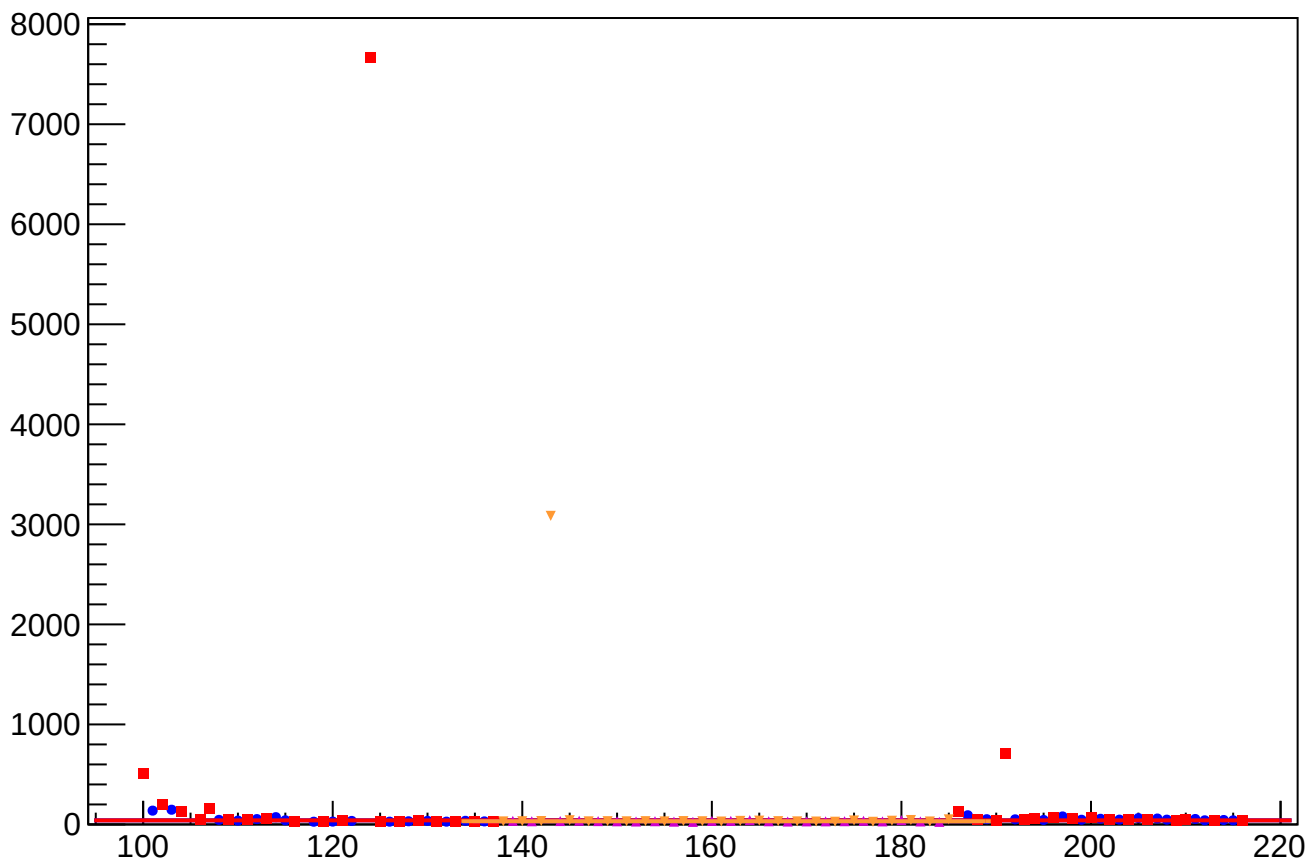
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 71.5/55

All:  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.5/113

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.2/57

# asym\_at1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.351 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3363872.6/30

Left Out: 32.277 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 2120929.6/24

Right Out: 40.961 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 4357312.7/34

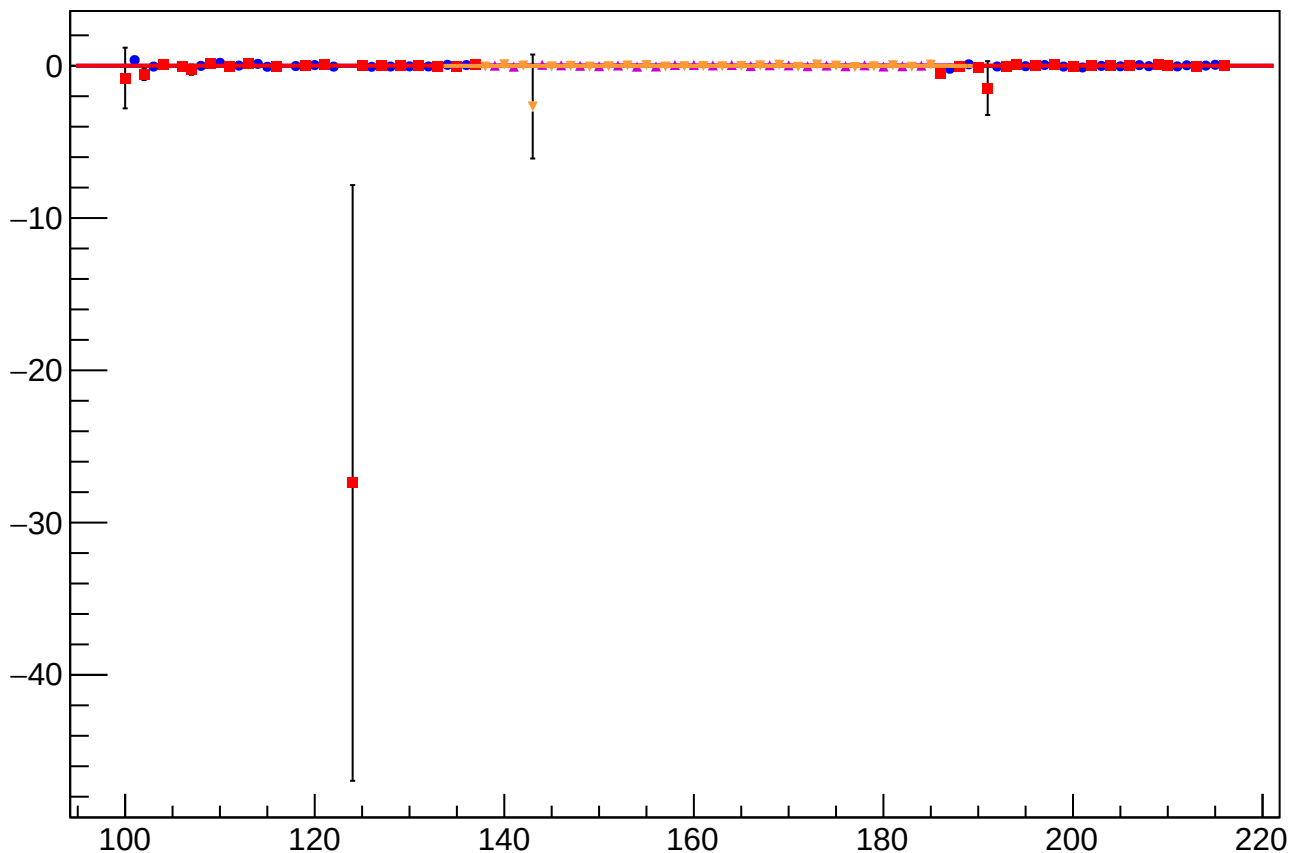
Left In: 32.421 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 426084.8/22

+ sign 35.634 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 6383697.7/55

All: 35.598 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 11948194.0/113

- sign 35.562 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 5564375.8/57

asym\_at1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 28.2/34

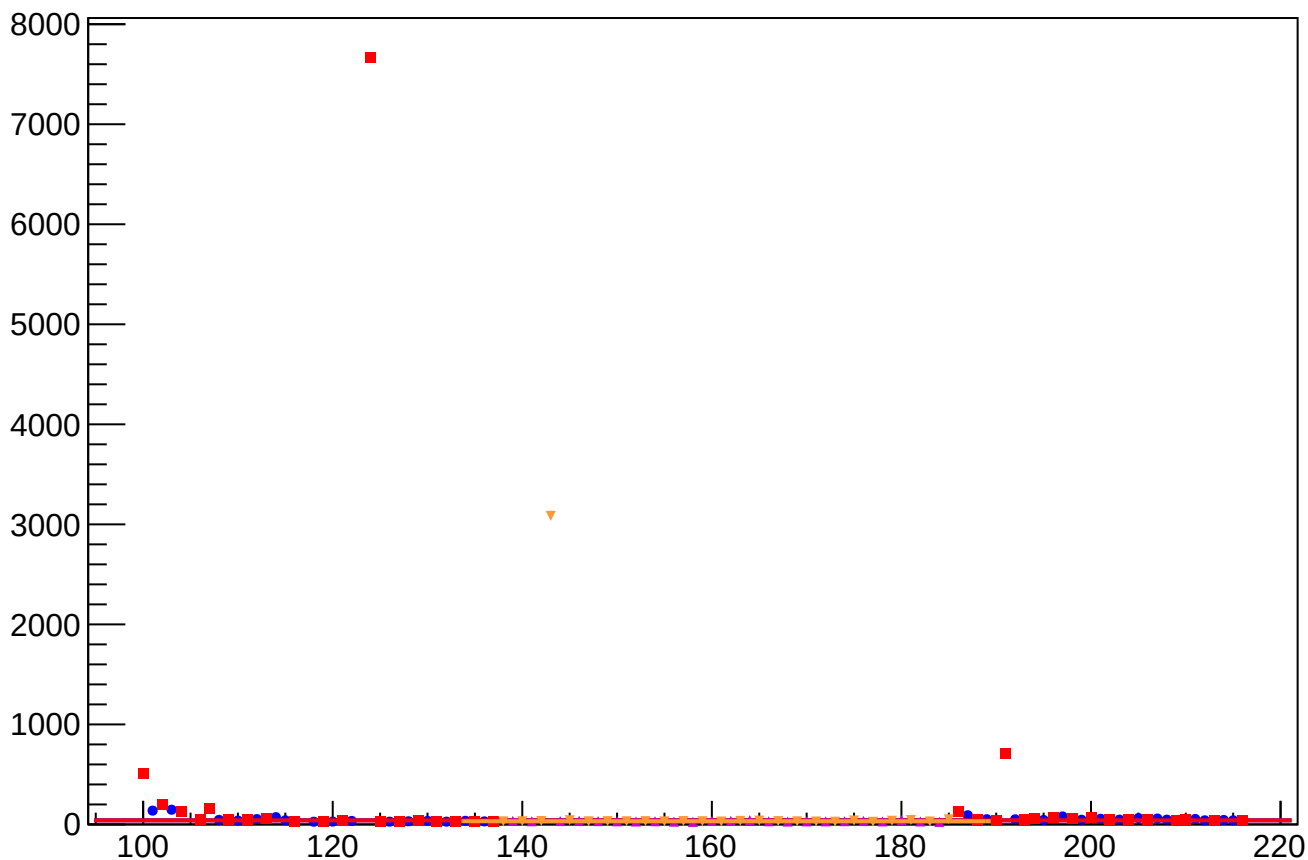
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 71.5/55

All:  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.5/113

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.2/57

# asym\_at1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.351 $\pm$ 0.008  $\chi^2$ /NDF: 3363872.6/30

Left Out: 32.277 $\pm$ 0.006  $\chi^2$ /NDF: 2120929.6/24

Right Out: 40.961 $\pm$ 0.008  $\chi^2$ /NDF: 4357312.7/34

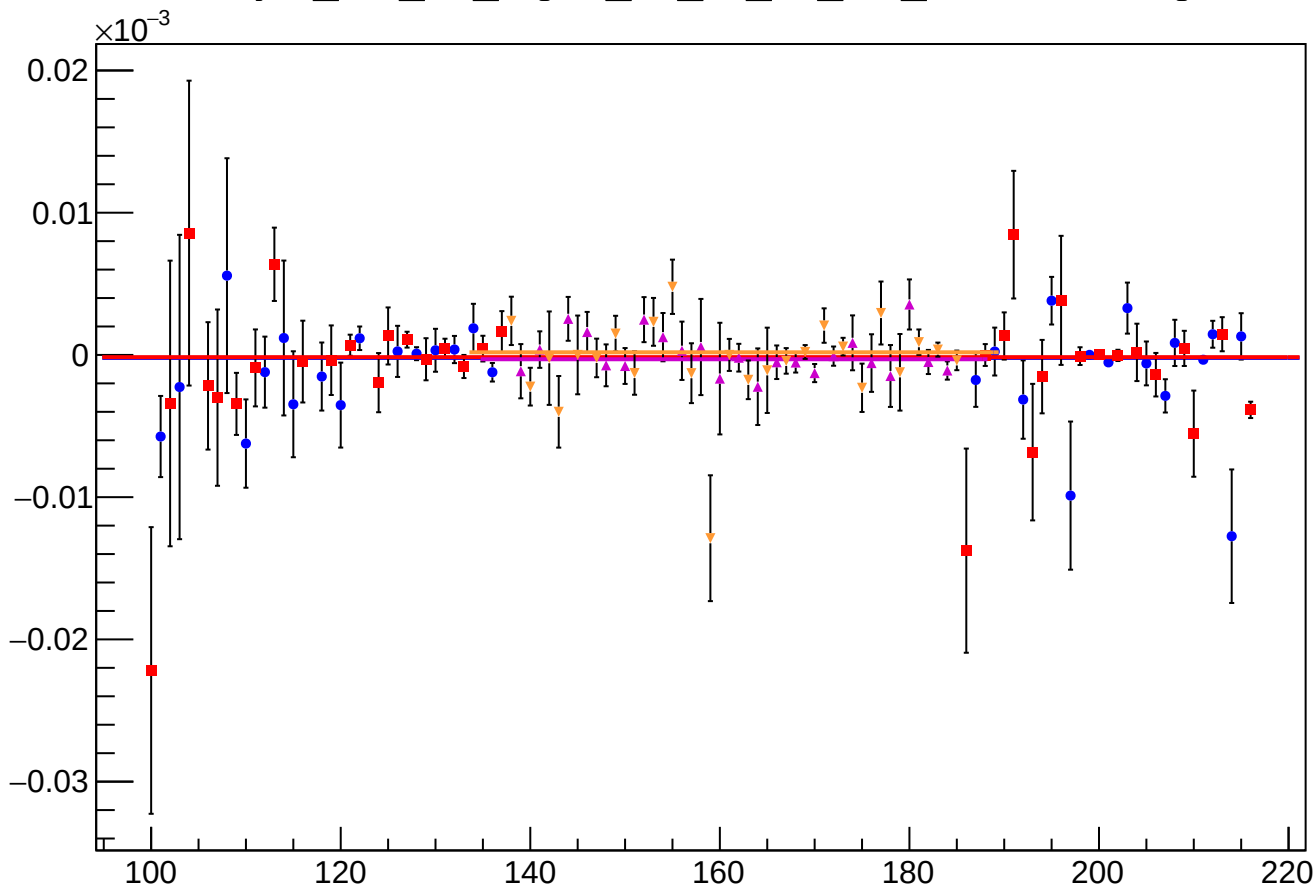
Left In: 32.421 $\pm$ 0.006  $\chi^2$ /NDF: 426084.8/22

+ sign 35.634 $\pm$ 0.005  $\chi^2$ /NDF: 6383697.7/55

All: 35.598 $\pm$ 0.003  $\chi^2$ /NDF: 11948194.0/113

- sign 35.562 $\pm$ 0.005  $\chi^2$ /NDF: 5564375.8/57

asym\_at1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 84.9/34

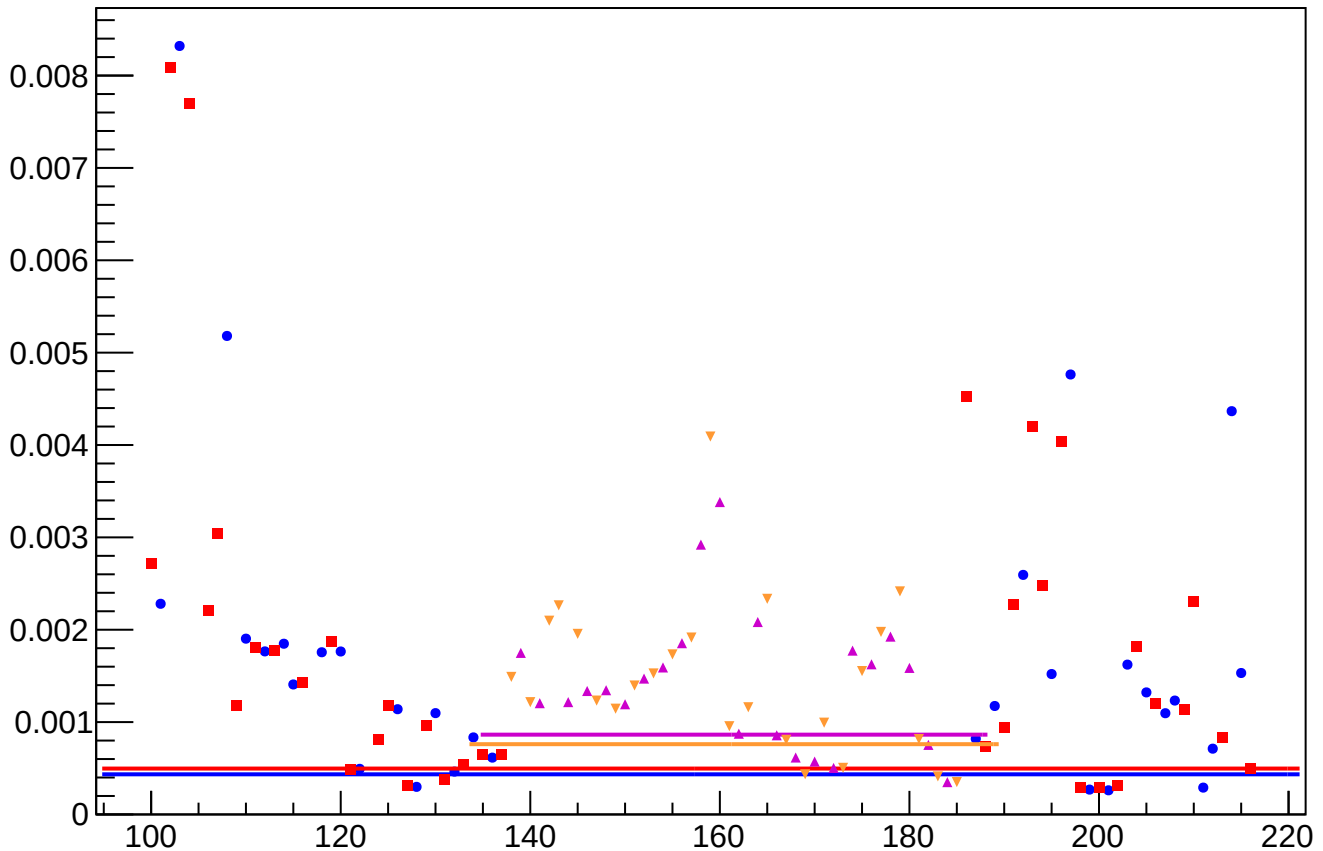
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.7/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 197.5/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 105.4/57

# asym\_at1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16844319.2/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :11085699.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14741947.2/34

Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :8440059.8/22

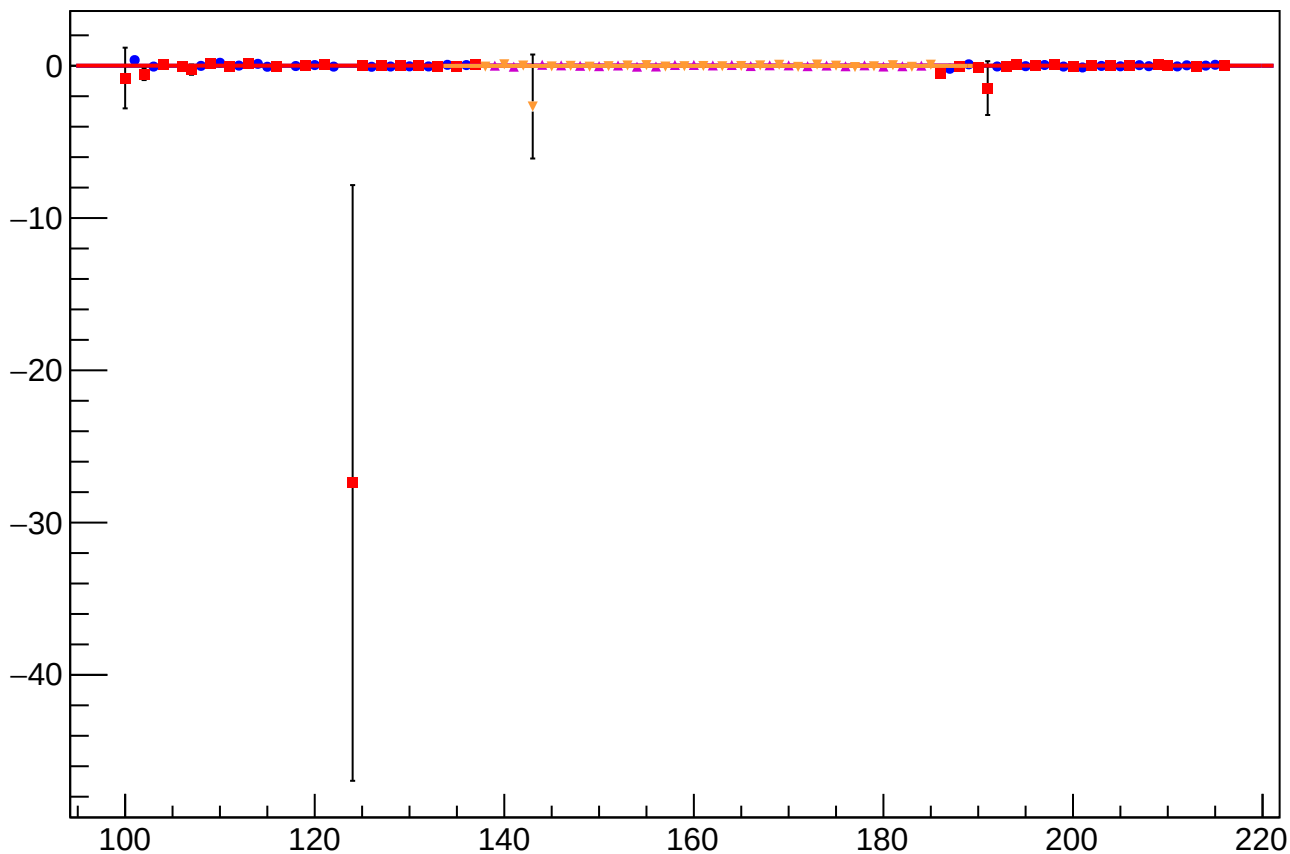
+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 31190680.8/55

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 57976136.9/113

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26438020.7/57



asym\_at1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 28.2/34

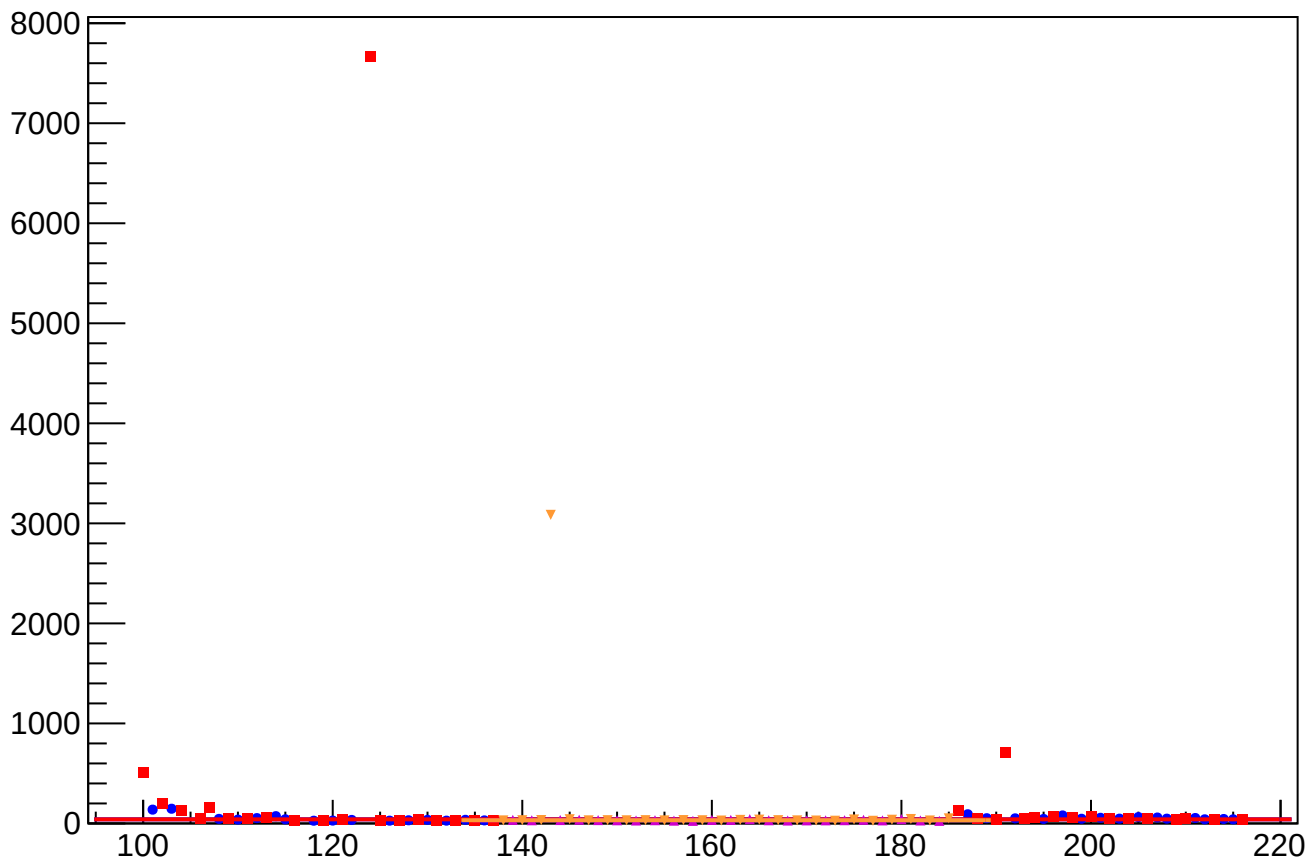
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 71.5/55

All:  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.5/113

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.2/57

# asym\_at1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.351 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3363865.7/30

Left Out: 32.277 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 2120971.9/24

Right Out: 40.961 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 4357326.6/34

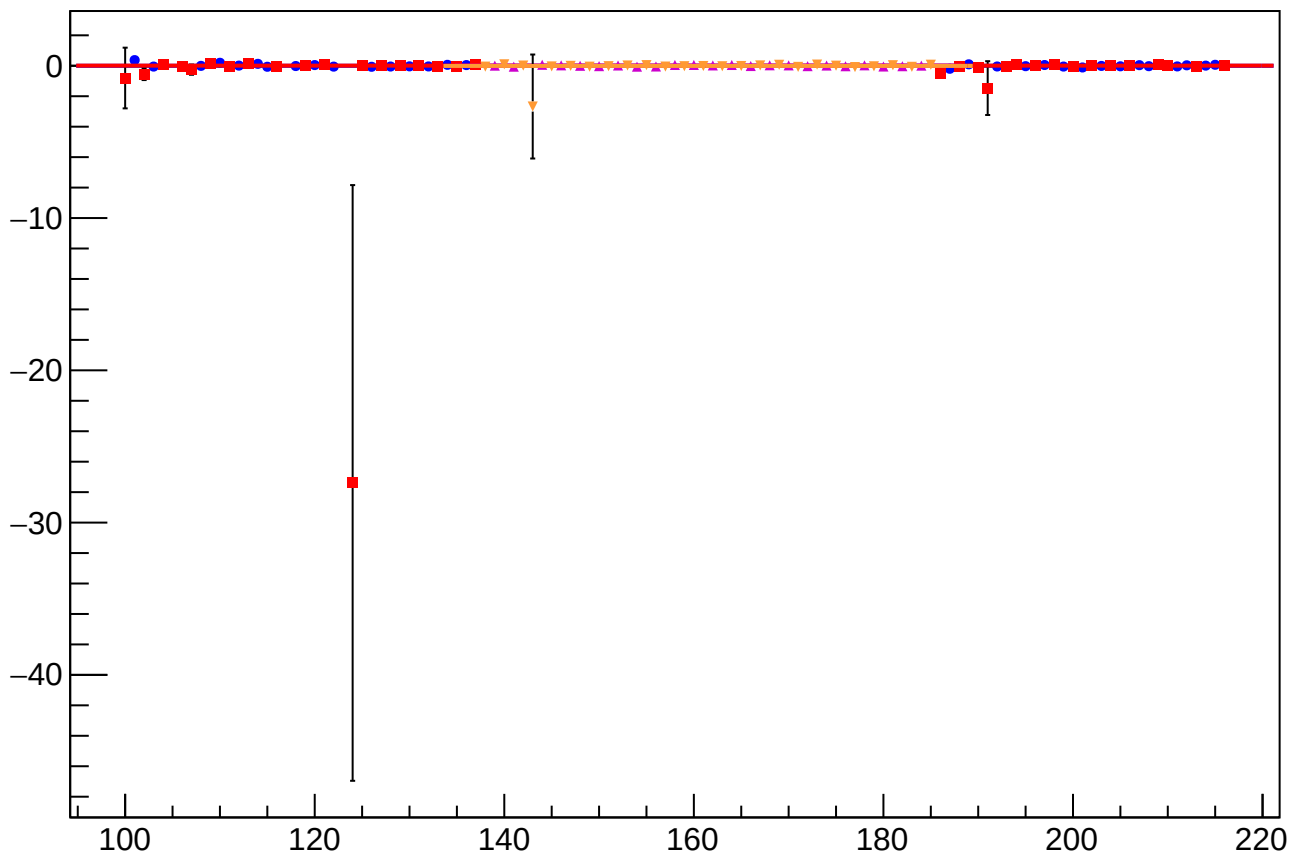
Left In: 32.422 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 426001.5/22

+ sign 35.634 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 6383749.7/55

All: 35.598 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 11948134.3/113

- sign 35.562 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 5564265.0/57

asym\_at1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.011$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $-0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 39.5/24

Right Out:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 28.2/34

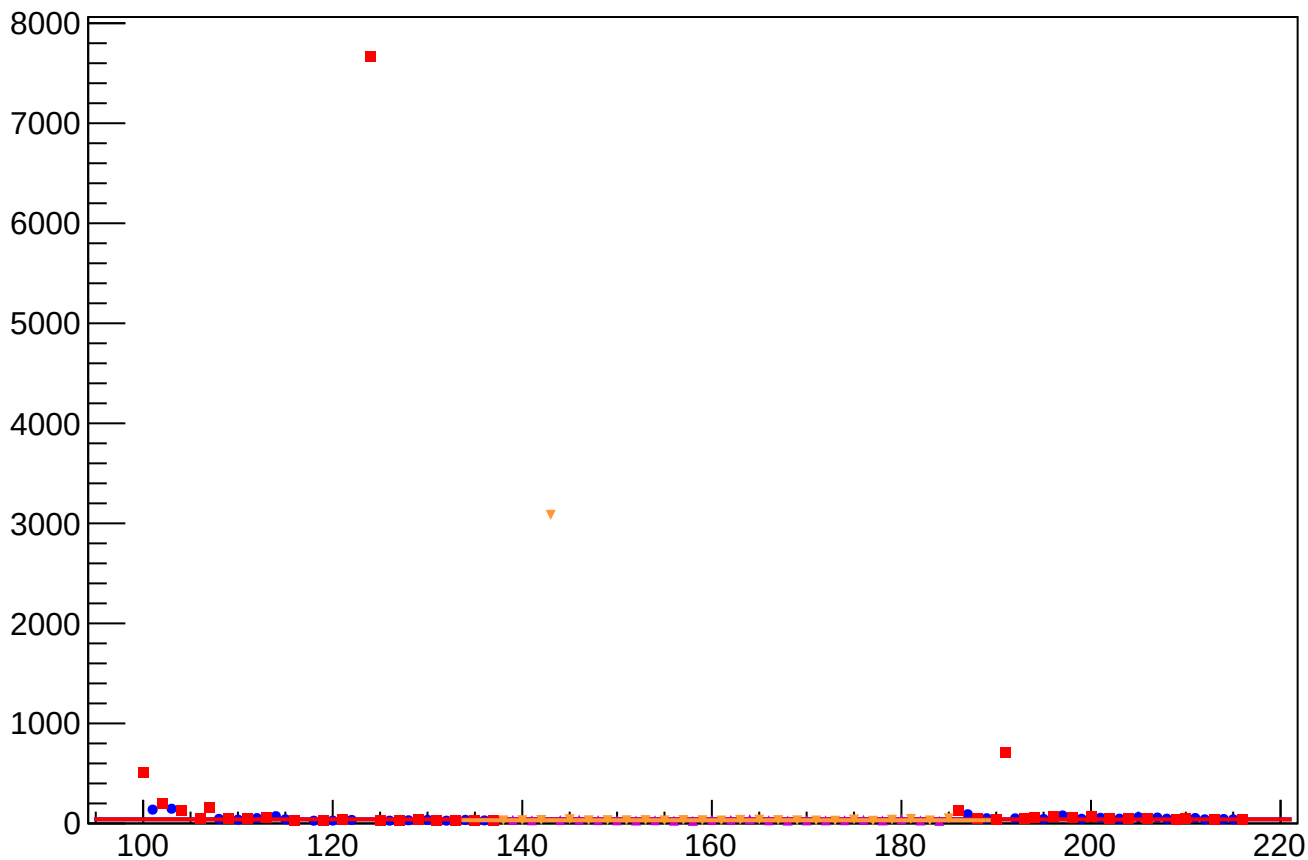
Left In:  $0.004 \pm 0.008$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 71.5/55

All:  $-0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.5/113

- sign  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 49.2/57

asym\_at1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.351 $\pm$ 0.008  $\chi^2$ /NDF: 3363865.7/30

Left Out: 32.277 $\pm$ 0.006  $\chi^2$ /NDF: 2120971.9/24

Right Out: 40.961 $\pm$ 0.008  $\chi^2$ /NDF: 4357326.6/34

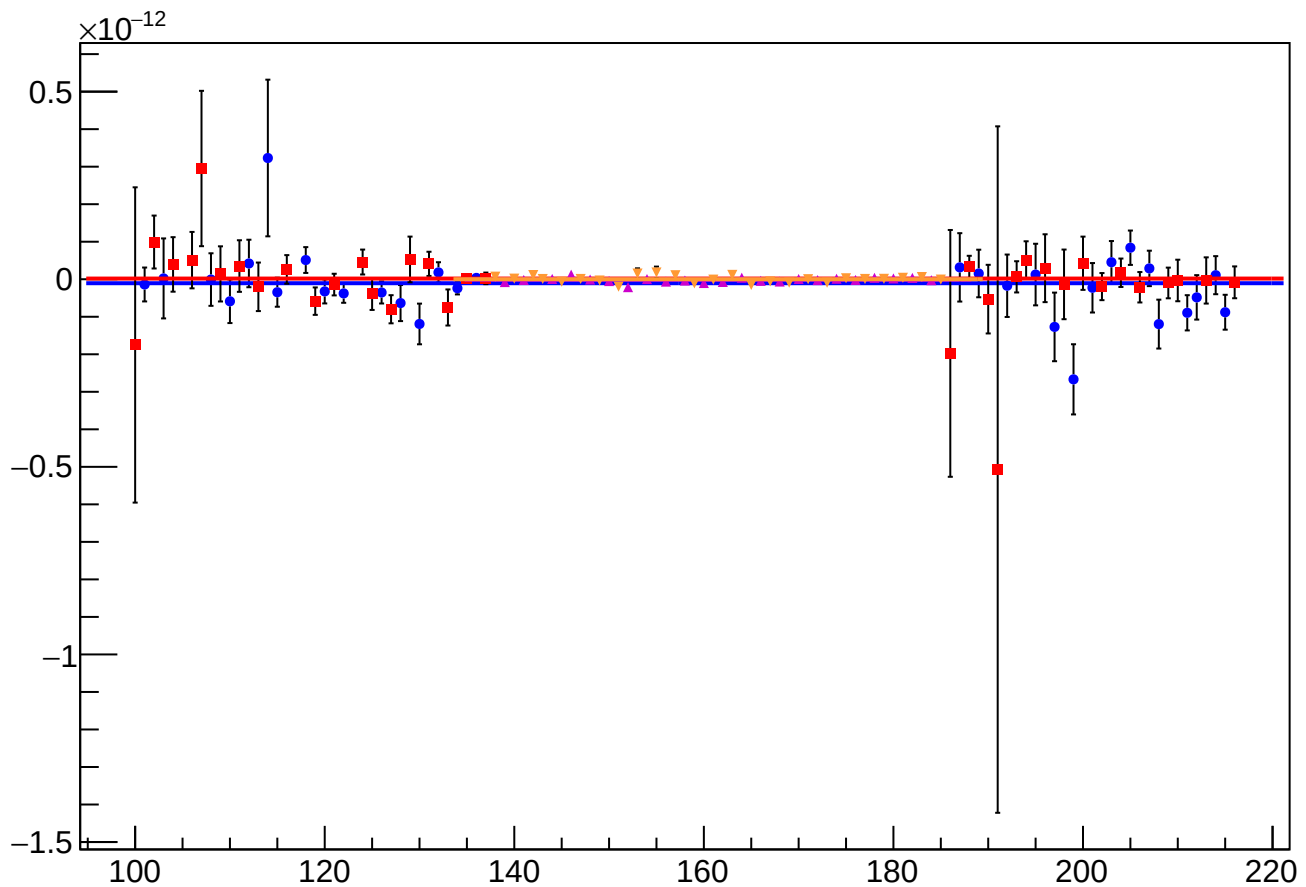
Left In: 32.422 $\pm$ 0.006  $\chi^2$ /NDF: 426001.5/22

+ sign 35.634 $\pm$ 0.005  $\chi^2$ /NDF: 6383749.7/55

All: 35.598 $\pm$ 0.003  $\chi^2$ /NDF: 11948134.3/113

- sign 35.562 $\pm$ 0.005  $\chi^2$ /NDF: 5564265.0/57

asym\_at1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/34

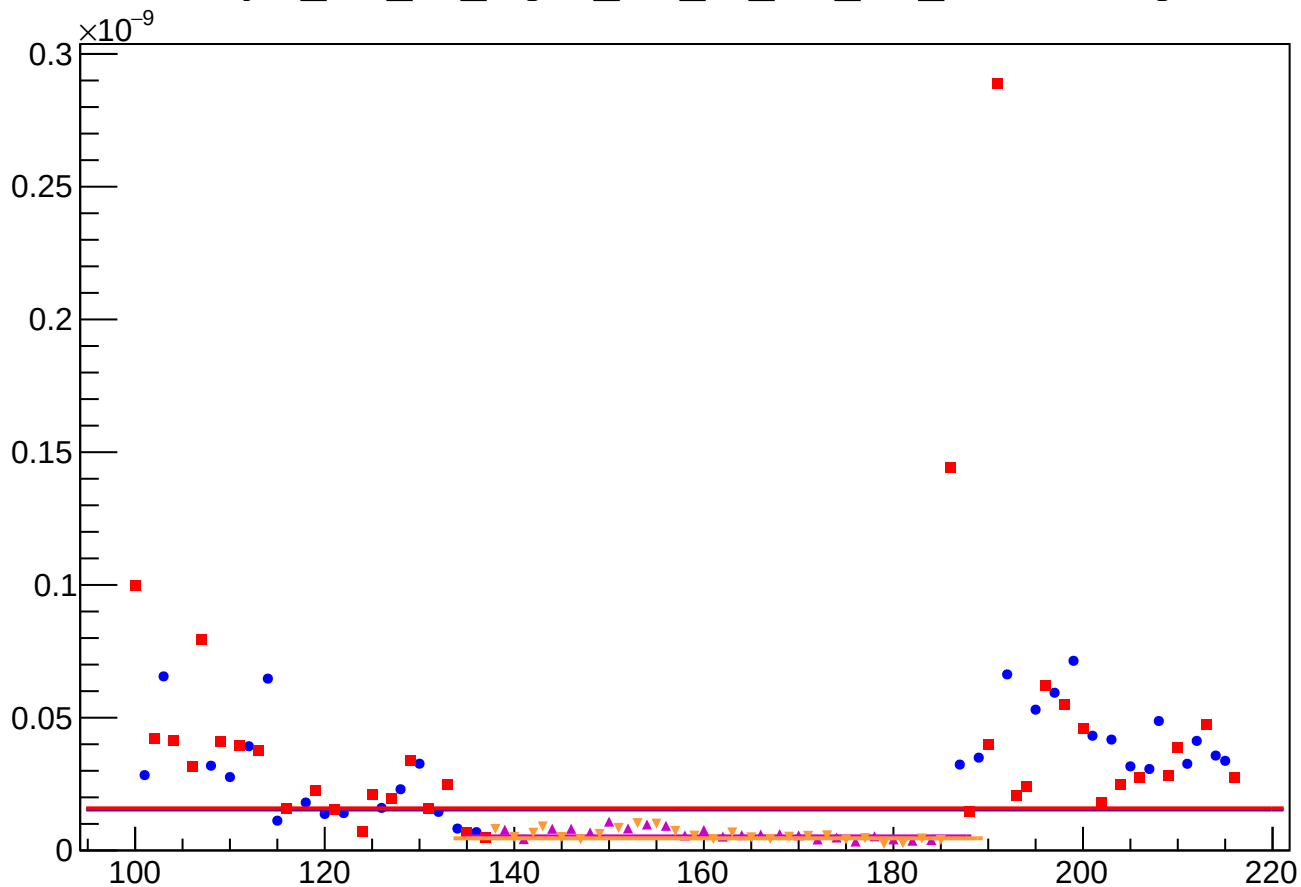
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.1/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 102.8/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.7/57

asym\_at1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9291611.6/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2796753.7/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7695086.0/34

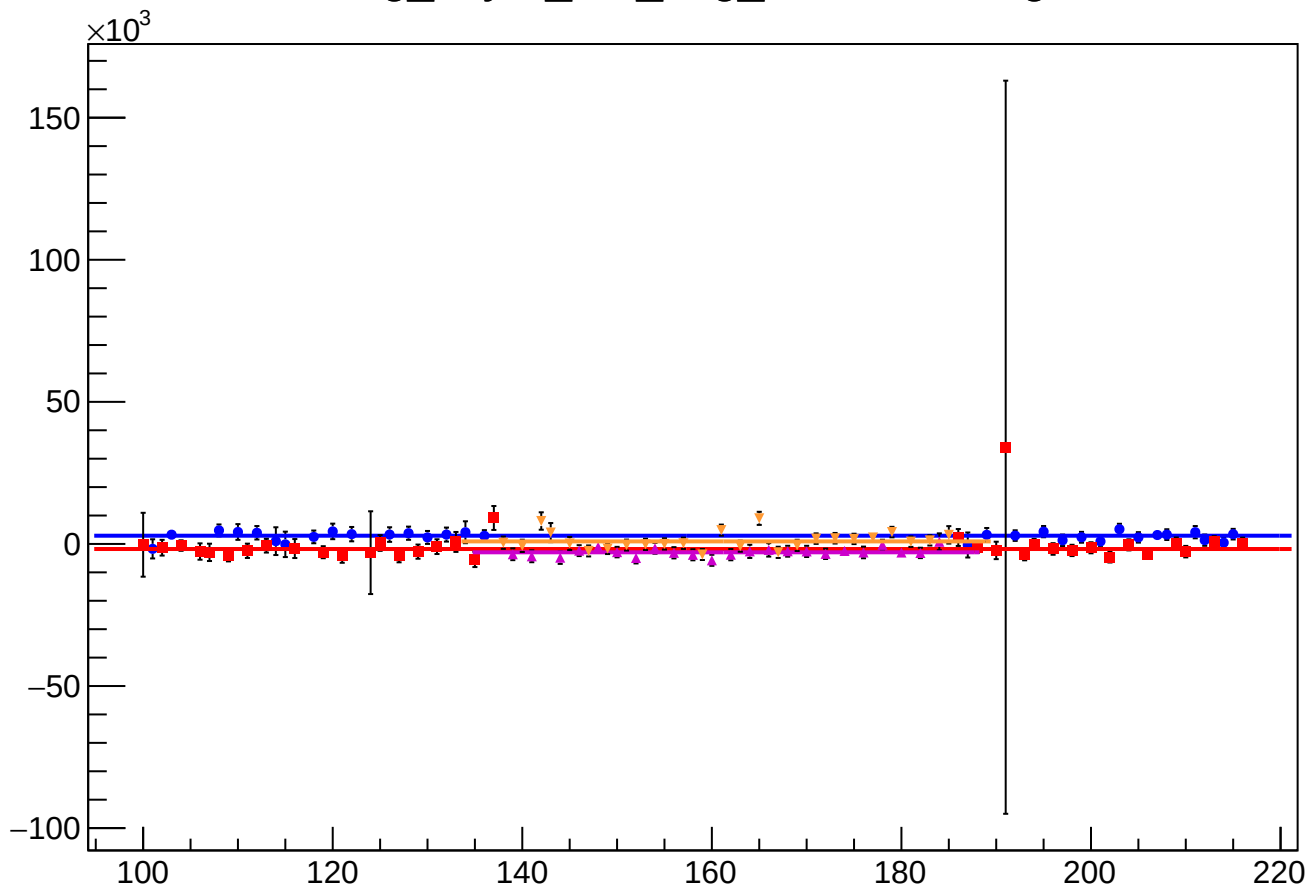
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2230717.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18452334.0/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33953290.5/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15239259.2/57

# reg\_asym\_at2\_avg\_mean vs Slug



Right In: 2897.701 $\pm$ 399.376  $\chi^2$ /NDF: 11.4/30

Left Out: 898.921 $\pm$ 405.540  $\chi^2$ /NDF: 45.3/24

Right Out: -1782.773 $\pm$ 400.186  $\chi^2$ /NDF: 25.9/34

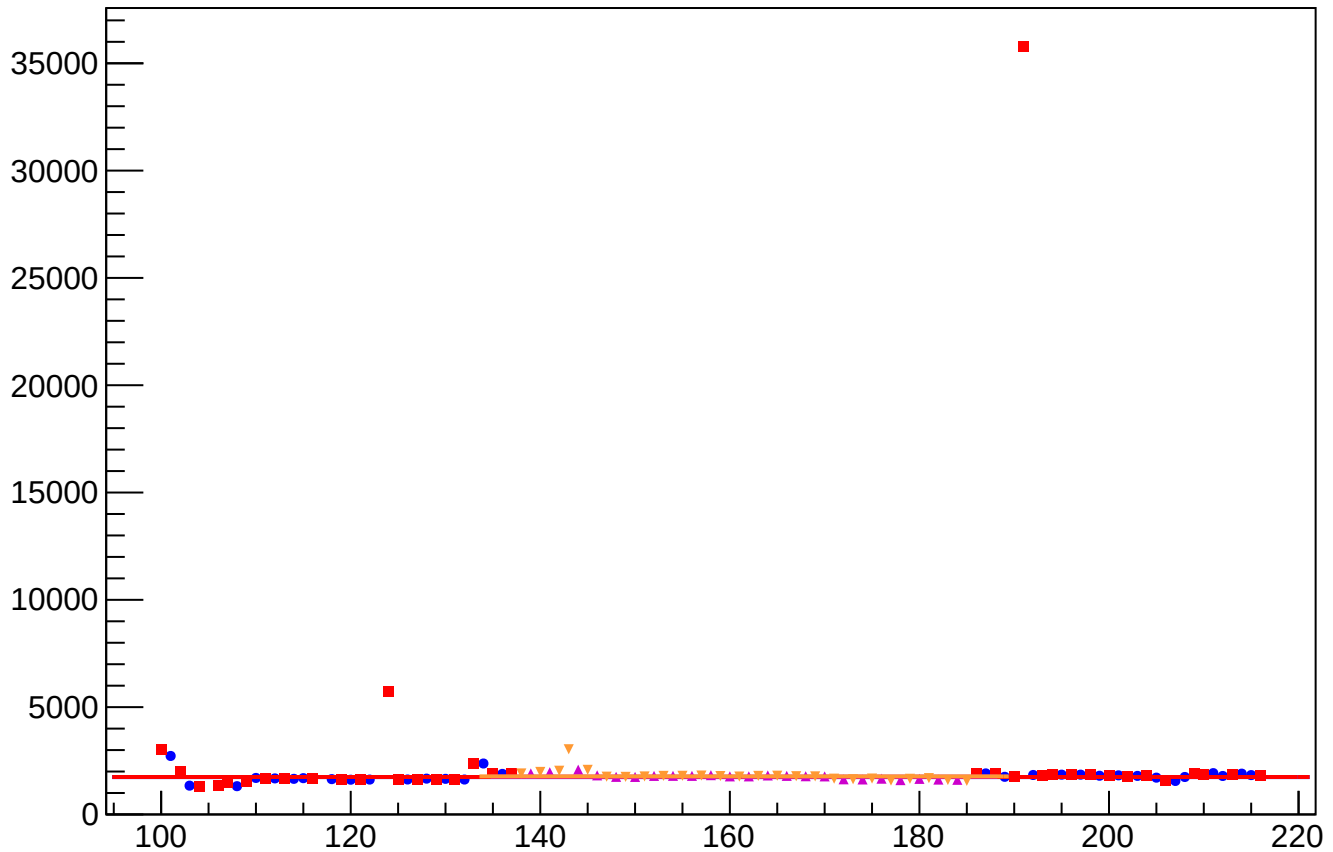
Left In: -2943.285 $\pm$ 412.069  $\chi^2$ /NDF: 10.6/22

+ sign 1913.617 $\pm$ 284.556  $\chi^2$ /NDF: 69.0/55

All: -197.386 $\pm$ 202.099  $\chi^2$ /NDF: 220.5/113

- sign -2346.055 $\pm$ 287.083  $\chi^2$ /NDF: 40.5/57

# reg\_asym\_at2\_avg\_rms vs Slug



Right In: 1740.715 $\pm$ 0.282  $\chi^2$ /NDF: 532644.4/30

Left Out: 1774.731 $\pm$ 0.287  $\chi^2$ /NDF: 446895.8/24

Right Out: 1745.261 $\pm$ 0.283  $\chi^2$ /NDF: 726000.2/34

Left In: 1761.089 $\pm$ 0.291  $\chi^2$ /NDF: 146266.6/22

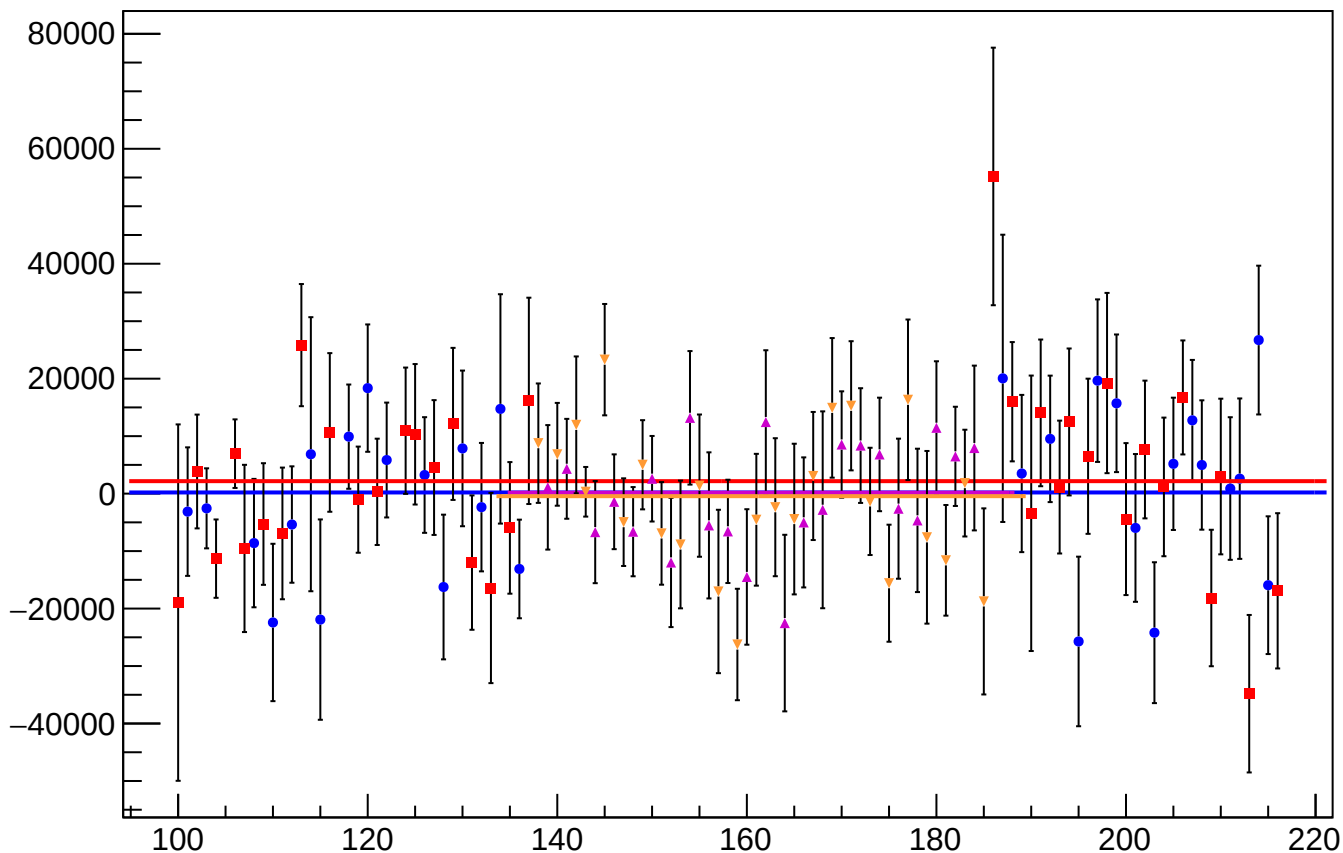
+ sign 1757.462 $\pm$ 0.201  $\chi^2$ /NDF: 986683.5/55

All: 1755.223 $\pm$ 0.143  $\chi^2$ /NDF: 1860718.8/11

- sign 1752.943 $\pm$ 0.203  $\chi^2$ /NDF: 873785.4/57



# asym\_at2\_avg\_reg\_correction\_mean vs Slug



Right In: 201.906+/-2101.656  $\chi^2/\text{NDF}$ : 34.9/30

Left Out: -443.346+/-1925.604  $\chi^2/\text{NDF}$ : 29.5/24

Right Out: 2168.920+/-1943.504  $\chi^2/\text{NDF}$ : 42.9/34

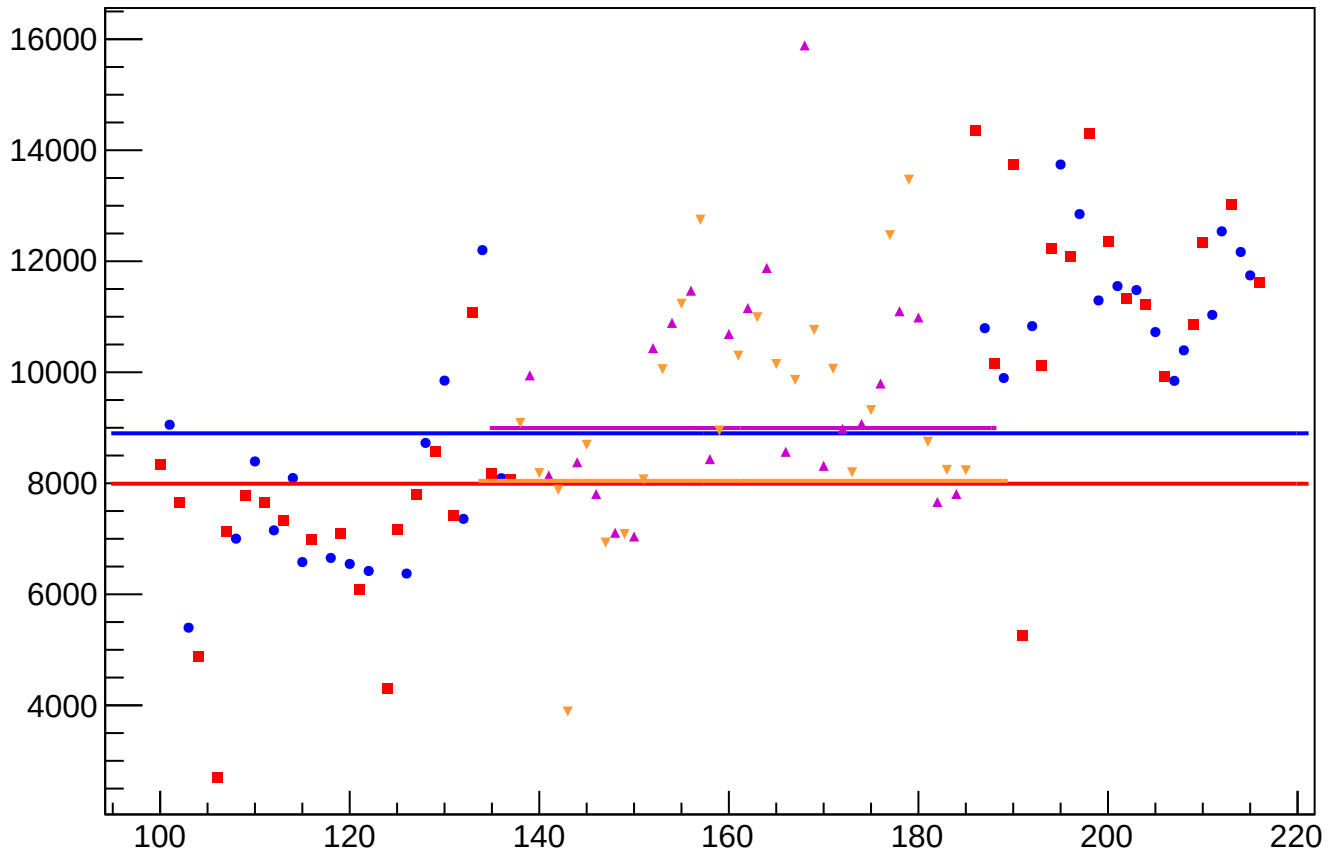
Left In: 155.268+/-2143.489  $\chi^2/\text{NDF}$ : 13.8/22

+ sign -148.873+/-1419.775  $\chi^2/\text{NDF}$ : 64.5/55

All: 545.896+/-1010.934  $\chi^2/\text{NDF}$ : 122.2/113

- sign 1260.390+/-1439.788  $\chi^2/\text{NDF}$ : 57.2/57

# asym\_at2\_avg\_reg\_correction\_rms vs Slug



Right In: 8900.312 $\pm$ 1.486  $\chi^2$ /NDF: 2492476.5/30

Left Out: 8043.834 $\pm$ 1.362  $\chi^2$ /NDF:3362838.6/24

Right Out: 7992.106 $\pm$ 1.374  $\chi^2$ /NDF: 5013865.7/34

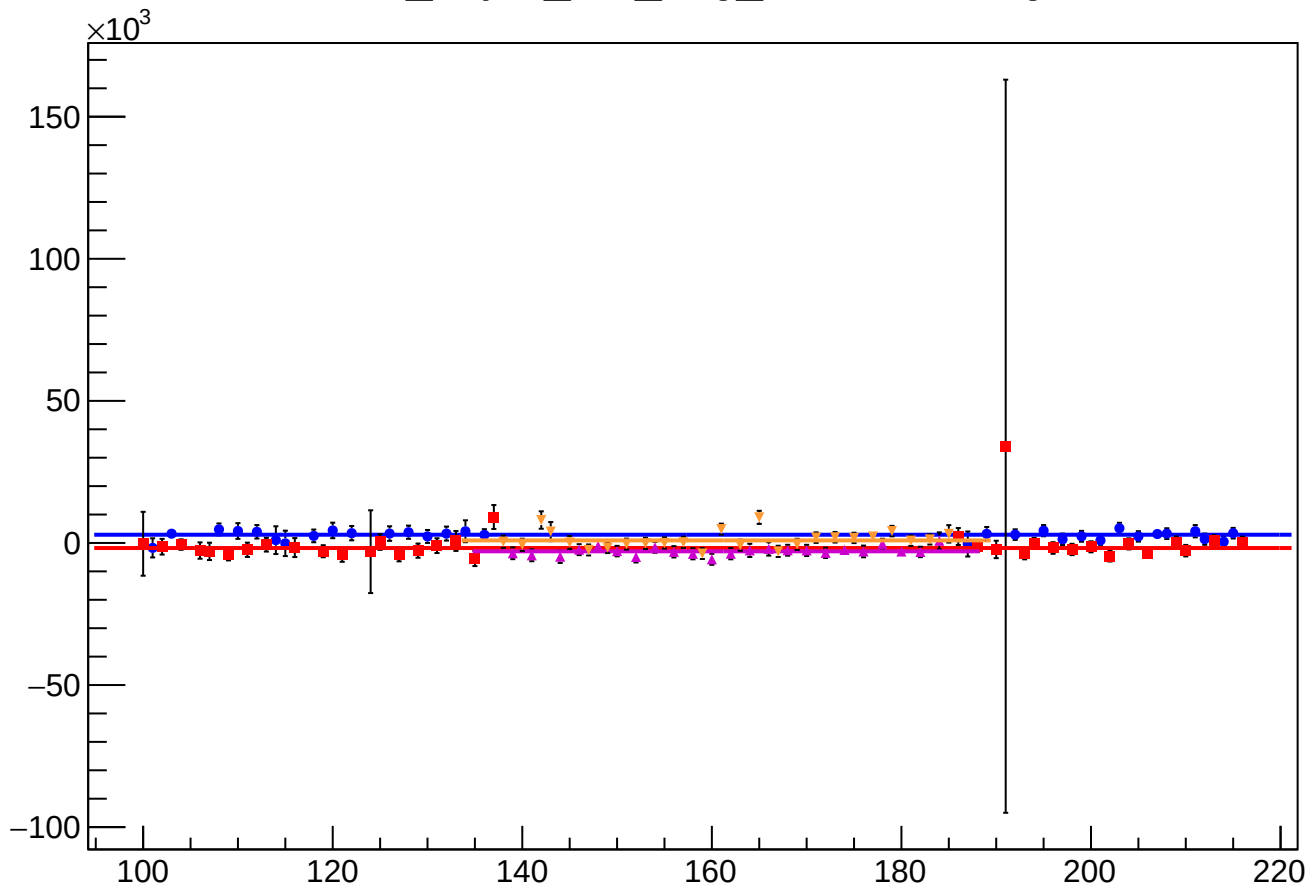
Left In: 8995.626 $\pm$ 1.516  $\chi^2$ /NDF:1207133.5/22

+ sign 8434.703 $\pm$ 1.004  $\chi^2$ /NDF: 6035884.3/55

All: 8439.720 $\pm$ 0.715  $\chi^2$ /NDF: 12497517.5/100

- sign 8444.878 $\pm$ 1.018  $\chi^2$ /NDF: 6461582.6/57

# cor\_asym\_at2\_avg\_mean vs Slug



Right In: 2897.725+/-399.376  $\chi^2/\text{NDF}$ : 11.4/30

Left Out: 898.842+/-405.540  $\chi^2/\text{NDF}$ : 45.3/24

Right Out: -1782.711+/-400.186  $\chi^2/\text{NDF}$ : 25.9/34

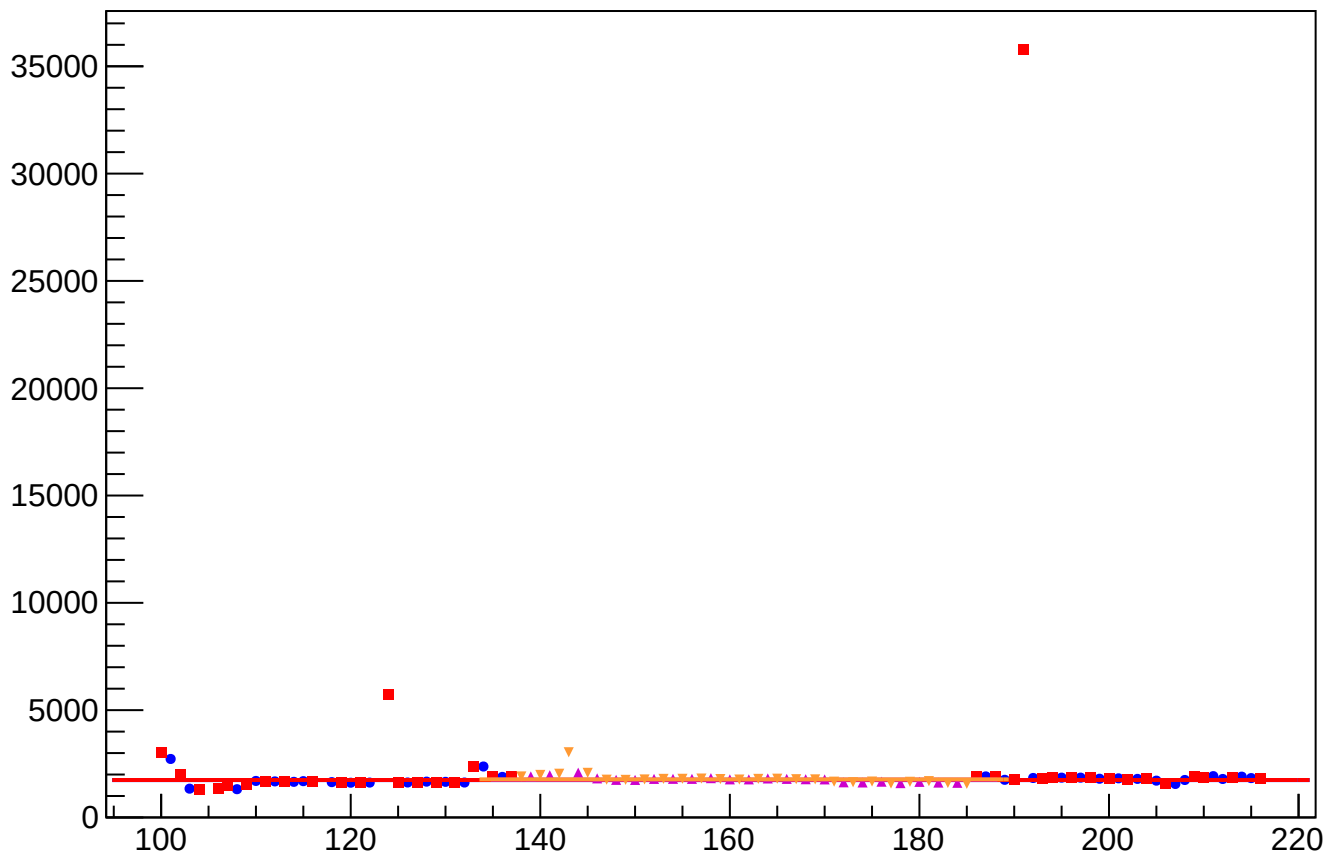
Left In: -2943.173+/-412.069  $\chi^2/\text{NDF}$ : 10.6/22

+ sign 1913.590+/-284.556  $\chi^2/\text{NDF}$ : 69.0/55

All: -197.357+/-202.099  $\chi^2/\text{NDF}$ : 220.5/113

- sign -2345.968+/-287.083  $\chi^2/\text{NDF}$ : 40.5/57

# cor\_asym\_at2\_avg\_rms vs Slug



Right In: 1740.715 $\pm$ 0.282  $\chi^2$ /NDF: 532644.8/30

Left Out: 1774.731 $\pm$ 0.287  $\chi^2$ /NDF: 446895.7/24

Right Out: 1745.261 $\pm$ 0.283  $\chi^2$ /NDF: 726000.5/34

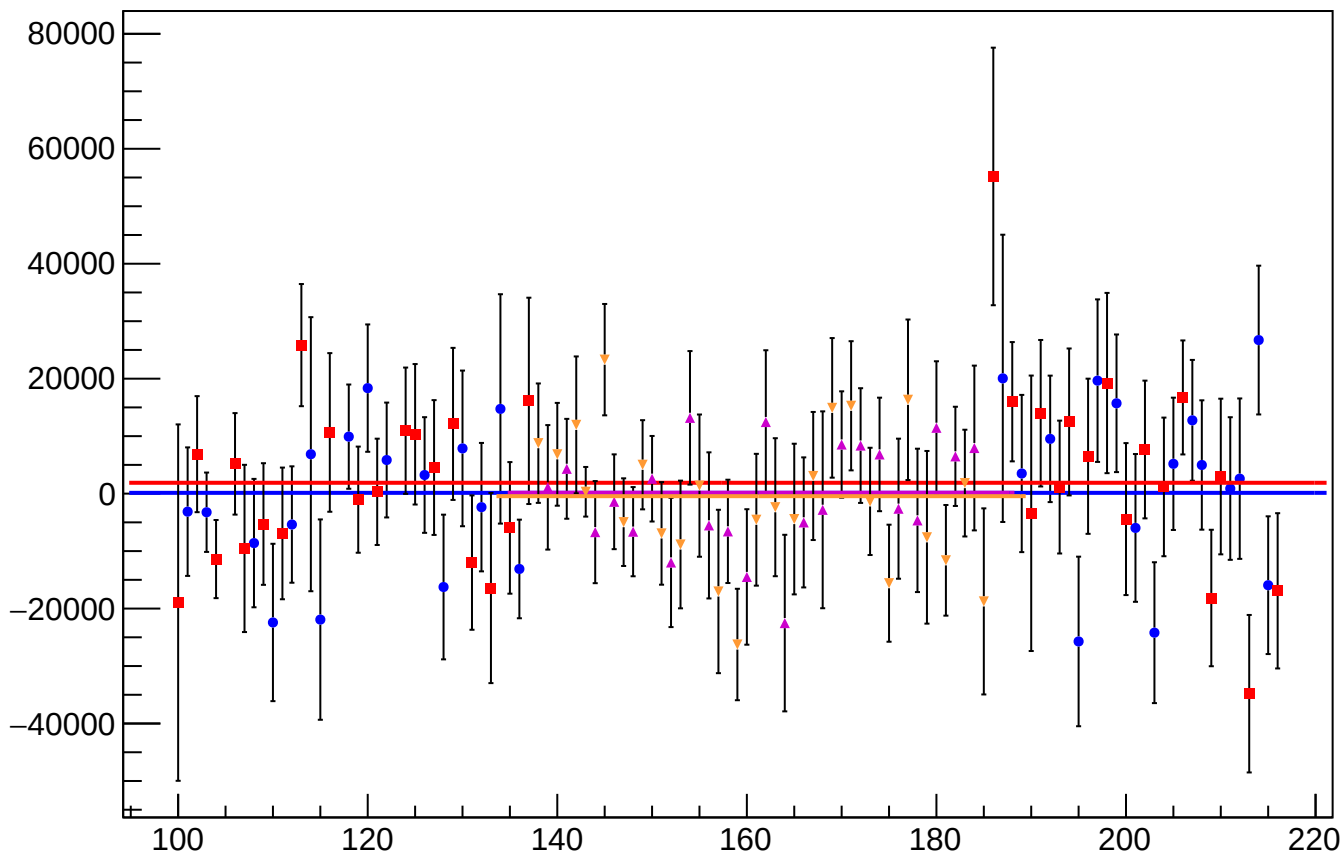
Left In: 1761.089 $\pm$ 0.291  $\chi^2$ /NDF: 146266.6/22

+ sign 1757.462 $\pm$ 0.201  $\chi^2$ /NDF: 986683.9/55

All: 1755.223 $\pm$ 0.143  $\chi^2$ /NDF: 1860719.5/11

- sign 1752.943 $\pm$ 0.203  $\chi^2$ /NDF: 873785.6/57

# asym\_at2\_avg\_cor\_correction\_mean vs Slug



Right In:  $134.724 \pm 2100.008$   $\chi^2/\text{NDF}: 35.0/30$

Left Out:  $-443.387 \pm 1925.600$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $1886.424 \pm 2003.153$   $\chi^2/\text{NDF}: 42.6/34$

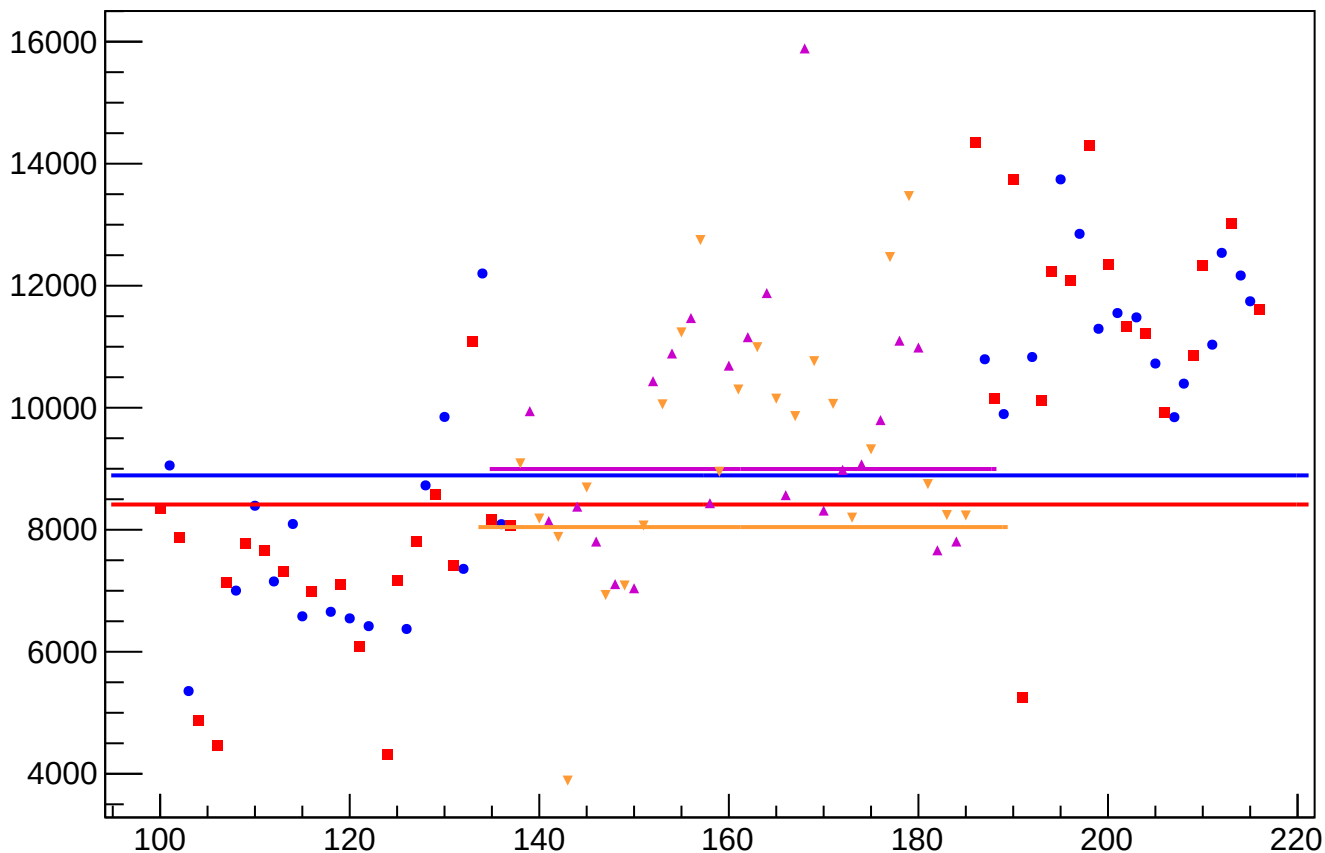
Left In:  $155.239 \pm 2143.487$   $\chi^2/\text{NDF}: 13.8/22$

+ sign  $-179.331 \pm 1419.265$   $\chi^2/\text{NDF}: 64.6/55$

All:  $430.683 \pm 1018.865$   $\chi^2/\text{NDF}: 121.7/113$

- sign  $1079.352 \pm 1463.542$   $\chi^2/\text{NDF}: 56.8/57$

# asym\_at2\_avg\_cor\_correction\_rms vs Slug



Right In: 8890.897 $\pm$ 1.485  $\chi^2$ /NDF: 2513625.1/30

Left Out: 8043.808 $\pm$ 1.362  $\chi^2$ /NDF: 3362915.7/24

Right Out: 8413.971 $\pm$ 1.416  $\chi^2$ /NDF: 3672964.1/34

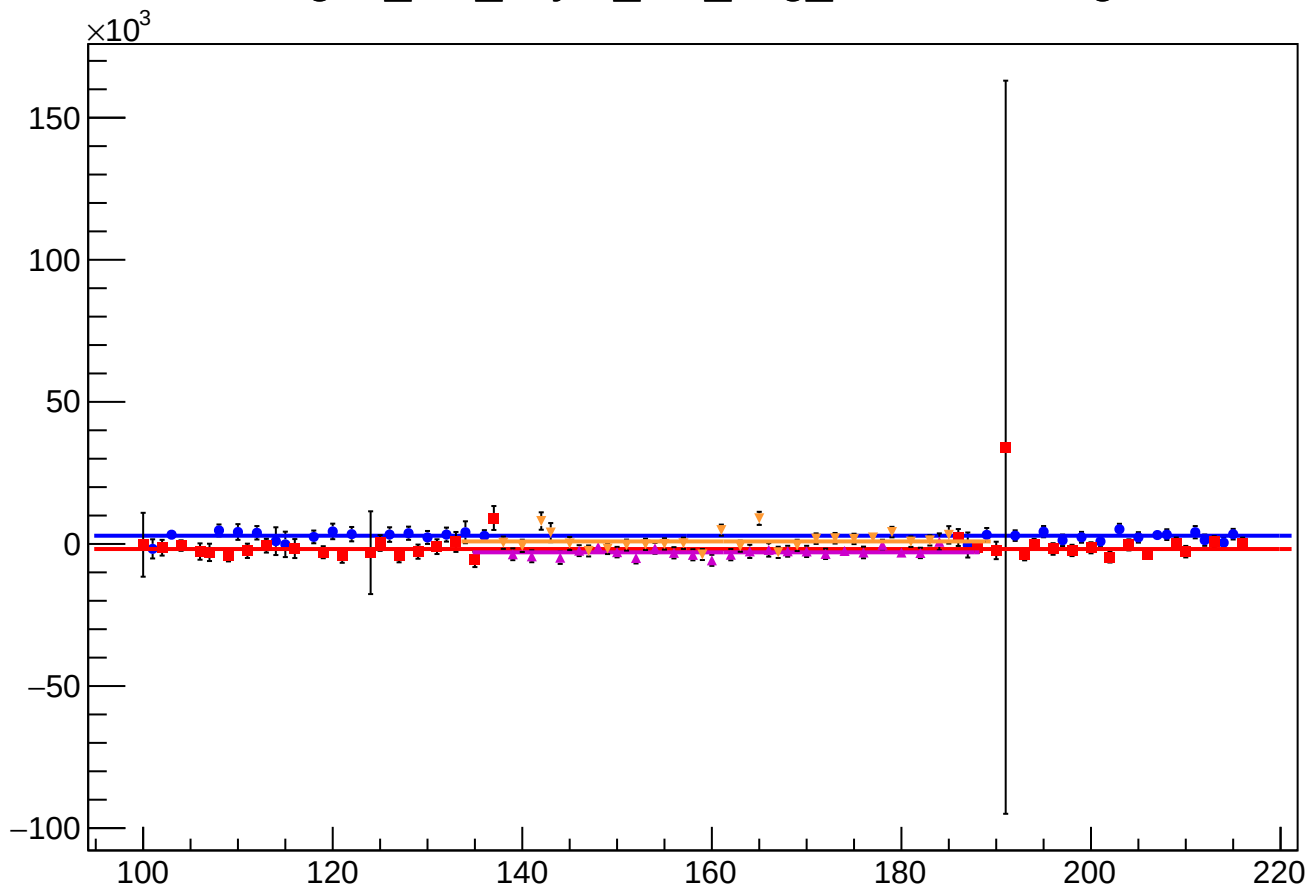
Left In: 8995.616 $\pm$ 1.516  $\chi^2$ /NDF: 1207139.1/22

+ sign 8430.722 $\pm$ 1.004  $\chi^2$ /NDF: 6053323.6/55

All: 8554.020 $\pm$ 0.720  $\chi^2$ /NDF: 11043183.9/100

- sign 8685.131 $\pm$ 1.035  $\chi^2$ /NDF: 4958715.0/57

# eigen\_cor\_asym\_at2\_avg\_mean vs Slug



Right In:  $2897.725 \pm 399.376$   $\chi^2/\text{NDF}$ : 11.4/30

Left Out:  $898.842 \pm 405.540$   $\chi^2/\text{NDF}$ : 45.3/24

Right Out:  $-1782.711 \pm 400.186$   $\chi^2/\text{NDF}$ : 25.9/34

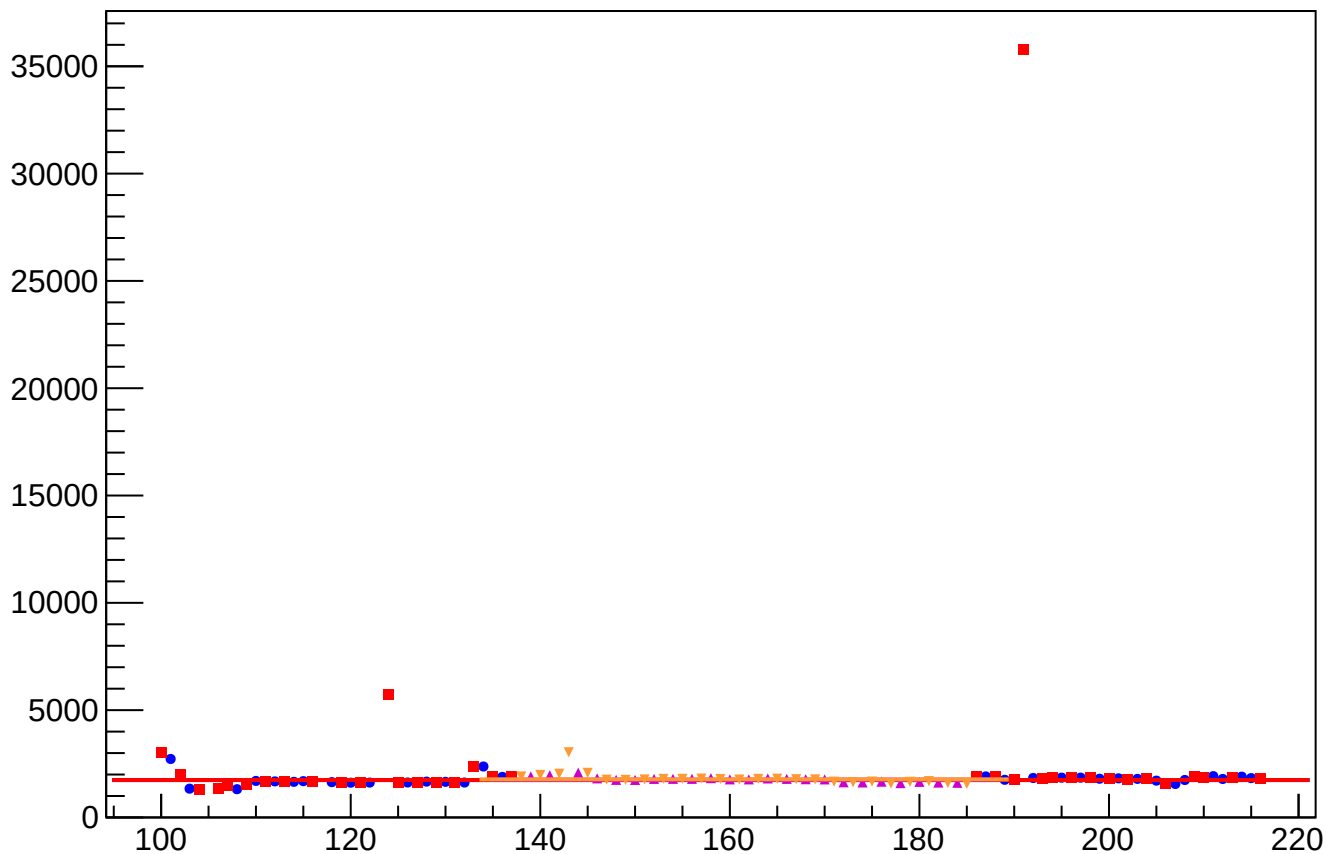
Left In:  $-2943.173 \pm 412.069$   $\chi^2/\text{NDF}$ : 10.6/22

+ sign  $1913.590 \pm 284.556$   $\chi^2/\text{NDF}$ : 69.0/55

All:  $-197.357 \pm 202.099$   $\chi^2/\text{NDF}$ : 220.5/113

- sign  $-2345.968 \pm 287.083$   $\chi^2/\text{NDF}$ : 40.5/57

# eigen\_cor\_asym\_at2\_avg\_rms vs Slug



Right In: 1740.715 $\pm$ 0.282  $\chi^2$ /NDF: 532644.8/30

Left Out: 1774.731 $\pm$ 0.287  $\chi^2$ /NDF: 446895.7/24

Right Out: 1745.261 $\pm$ 0.283  $\chi^2$ /NDF: 726000.5/34

Left In: 1761.089 $\pm$ 0.291  $\chi^2$ /NDF: 146266.6/22

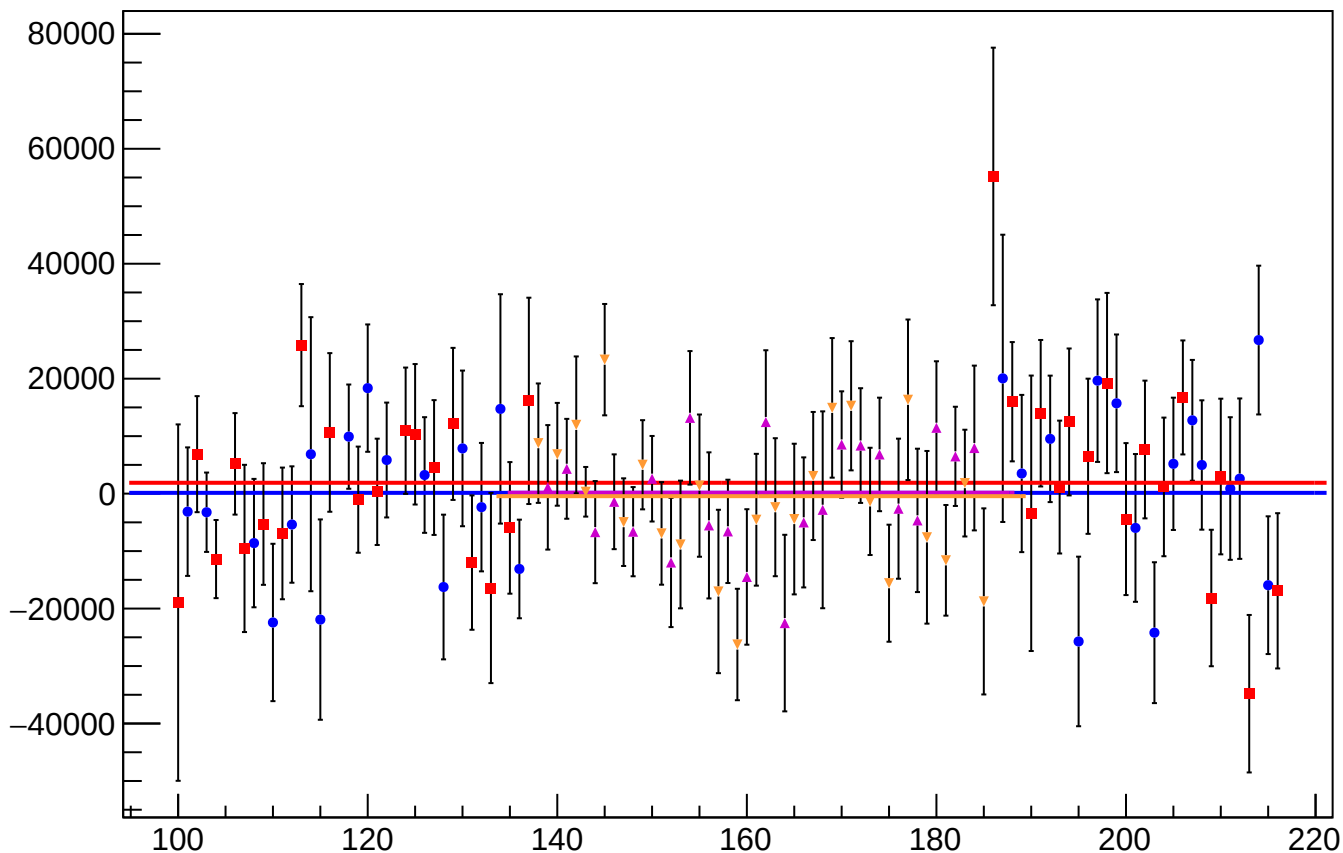
+ sign 1757.462 $\pm$ 0.201  $\chi^2$ /NDF: 986683.9/55

All: 1755.223 $\pm$ 0.143  $\chi^2$ /NDF: 1860719.5/11

- sign 1752.943 $\pm$ 0.203  $\chi^2$ /NDF: 873785.6/57



asym\_at2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 134.724 $\pm$ 2100.008  $\chi^2$ /NDF: 35.0/30

Left Out: -443.387 $\pm$ 1925.600  $\chi^2$ /NDF:29.5/24

Right Out: 1886.424 $\pm$ 2003.153  $\chi^2$ /NDF: 42.6/34

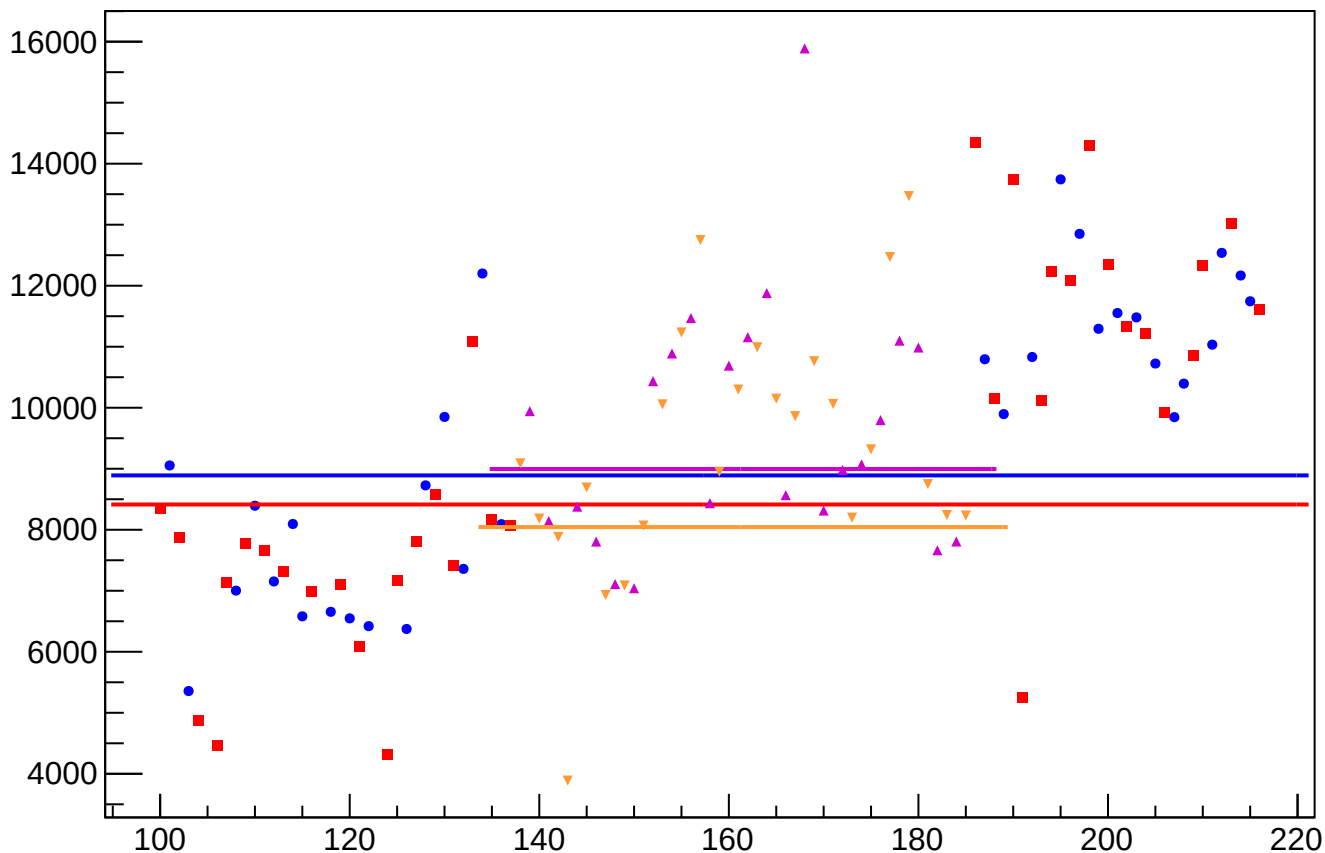
Left In: 155.239 $\pm$ 2143.487  $\chi^2$ /NDF:13.8/22

+ sign -179.331 $\pm$ 1419.265  $\chi^2$ /NDF: 64.6/55

All: 430.683 $\pm$ 1018.865  $\chi^2$ /NDF: 121.7/113

- sign 1079.352 $\pm$ 1463.542  $\chi^2$ /NDF: 56.8/57

asym\_at2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 8890.897 $\pm$ 1.485  $\chi^2$ /NDF: 2513625.1/30

Left Out: 8043.808 $\pm$ 1.362  $\chi^2$ /NDF:3362915.7/24

Right Out: 8413.971 $\pm$ 1.416  $\chi^2$ /NDF: 3672964.1/34

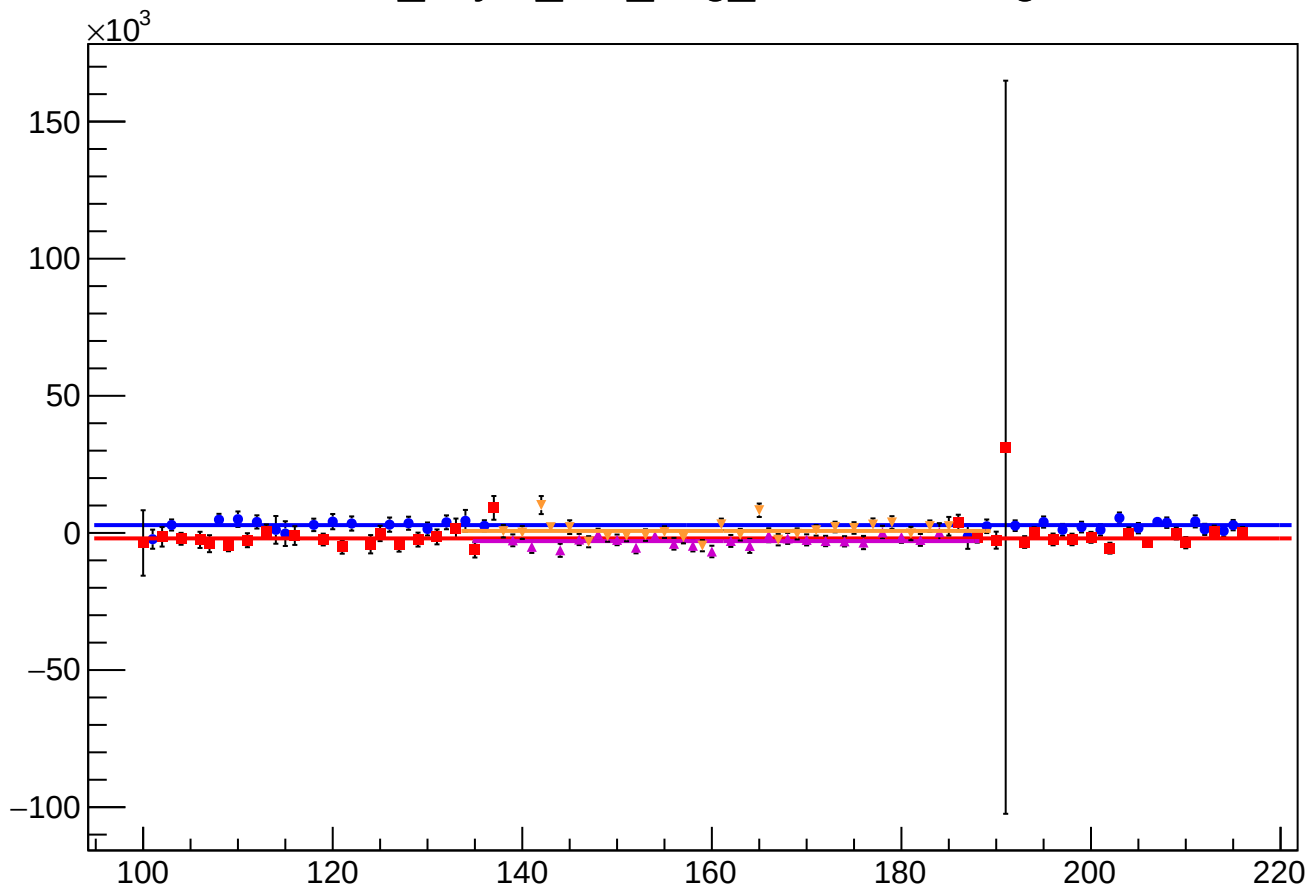
Left In: 8995.616 $\pm$ 1.516  $\chi^2$ /NDF:1207139.1/22

+ sign 8430.722 $\pm$ 1.004  $\chi^2$ /NDF: 6053323.6/55

All: 8554.020 $\pm$ 0.720  $\chi^2$ /NDF: 11043183.9/1

- sign 8685.131 $\pm$ 1.035  $\chi^2$ /NDF: 4958715.0/57

# dit\_asym\_at2\_avg\_mean vs Slug



Right In: 2851.125+/-411.788  $\chi^2/\text{NDF}$ : 12.9/30

Left Out: 739.029+/-432.878  $\chi^2/\text{NDF}$ : 41.6/24

Right Out: -1994.302+/-411.386  $\chi^2/\text{NDF}$ : 30.5/34

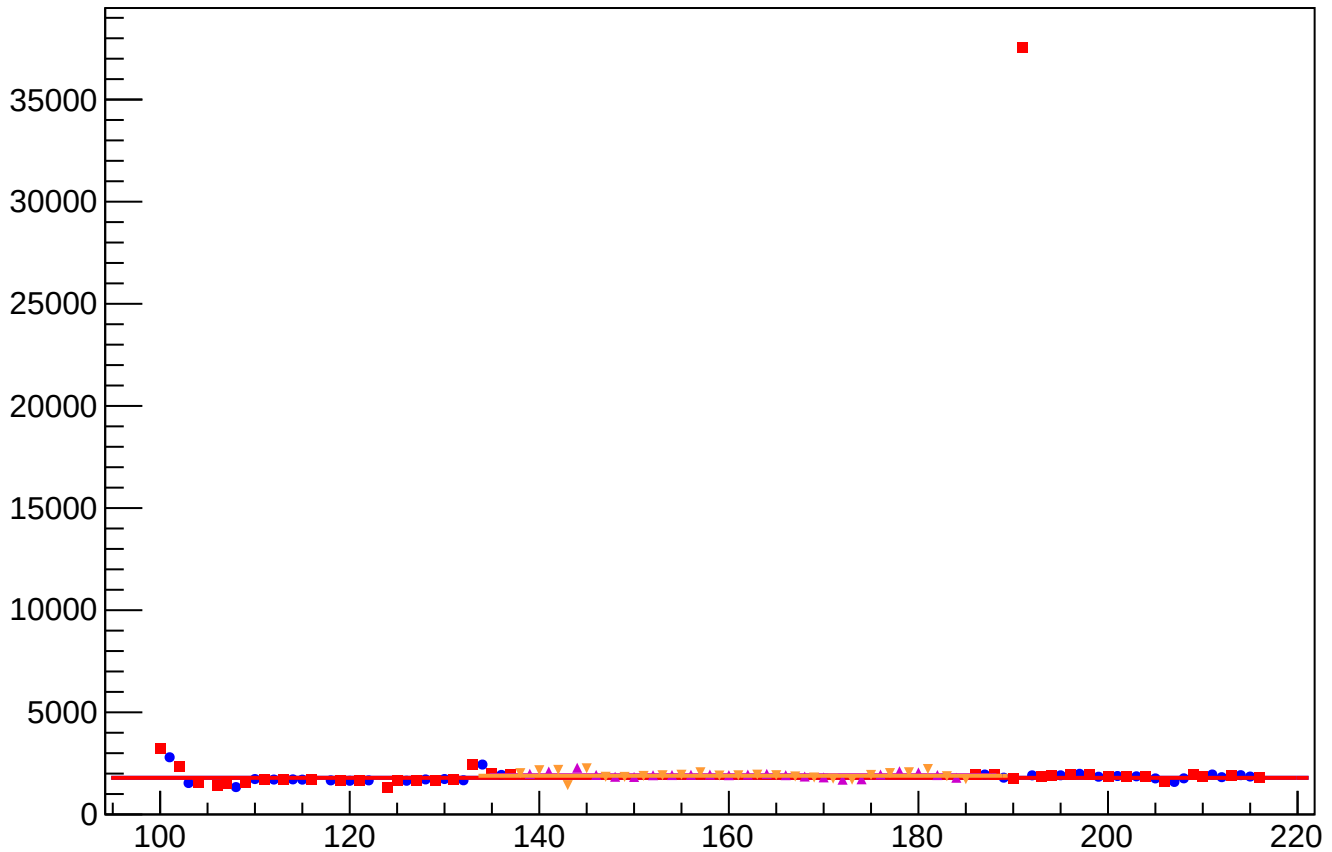
Left In: -2979.225+/-450.334  $\chi^2/\text{NDF}$ : 15.6/22

+ sign 1847.779+/-298.356  $\chi^2/\text{NDF}$ : 67.1/55

All: -258.974+/-212.845  $\chi^2/\text{NDF}$ : 217.4/113

- sign -2442.337+/-303.732  $\chi^2/\text{NDF}$ : 48.8/57

# dit\_asym\_at2\_avg\_rms vs Slug



Right In: 1795.357+/-0.291  $\chi^2/\text{NDF}$ : 479627.3/30

Left Out: 1894.684+/-0.306  $\chi^2/\text{NDF}$ : 368587.1/24

Right Out: 1792.651+/-0.291  $\chi^2/\text{NDF}$ : 585333.4/34

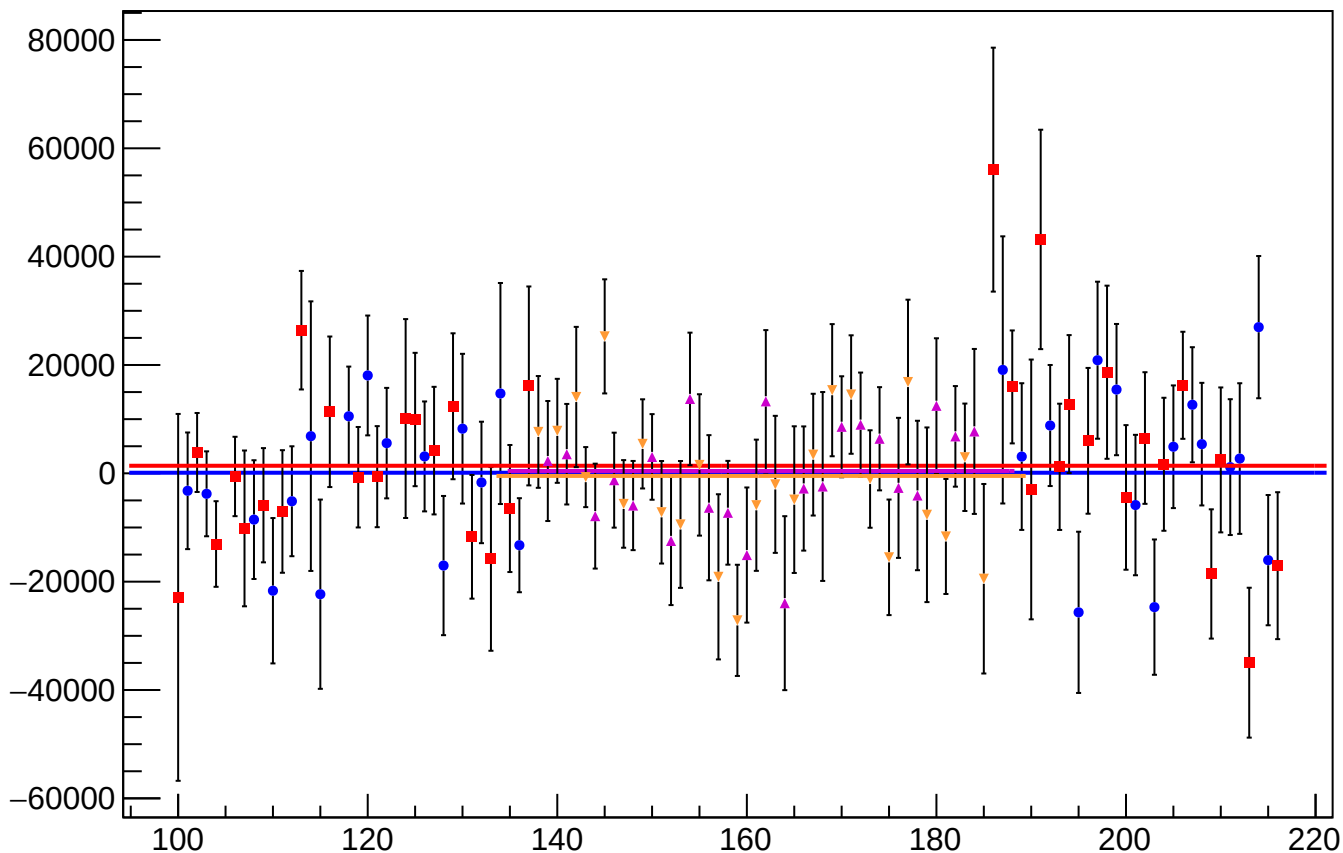
Left In: 1923.038+/-0.318  $\chi^2/\text{NDF}$ : 150977.3/22

+ sign 1842.542+/-0.211  $\chi^2/\text{NDF}$ : 903493.0/55

All: 1847.164+/-0.150  $\chi^2/\text{NDF}$ : 1732186.6/11

- sign 1851.954+/-0.215  $\chi^2/\text{NDF}$ : 827716.2/57

# asym\_at2\_avg\_dit\_correction\_mean vs Slug



Right In: 108.863 $\pm$ 2132.117  $\chi^2$ /NDF: 34.8/30

Left Out: -479.338 $\pm$ 2089.235  $\chi^2$ /NDF:28.8/24

Right Out: 1397.683 $\pm$ 2011.549  $\chi^2$ /NDF: 44.8/34

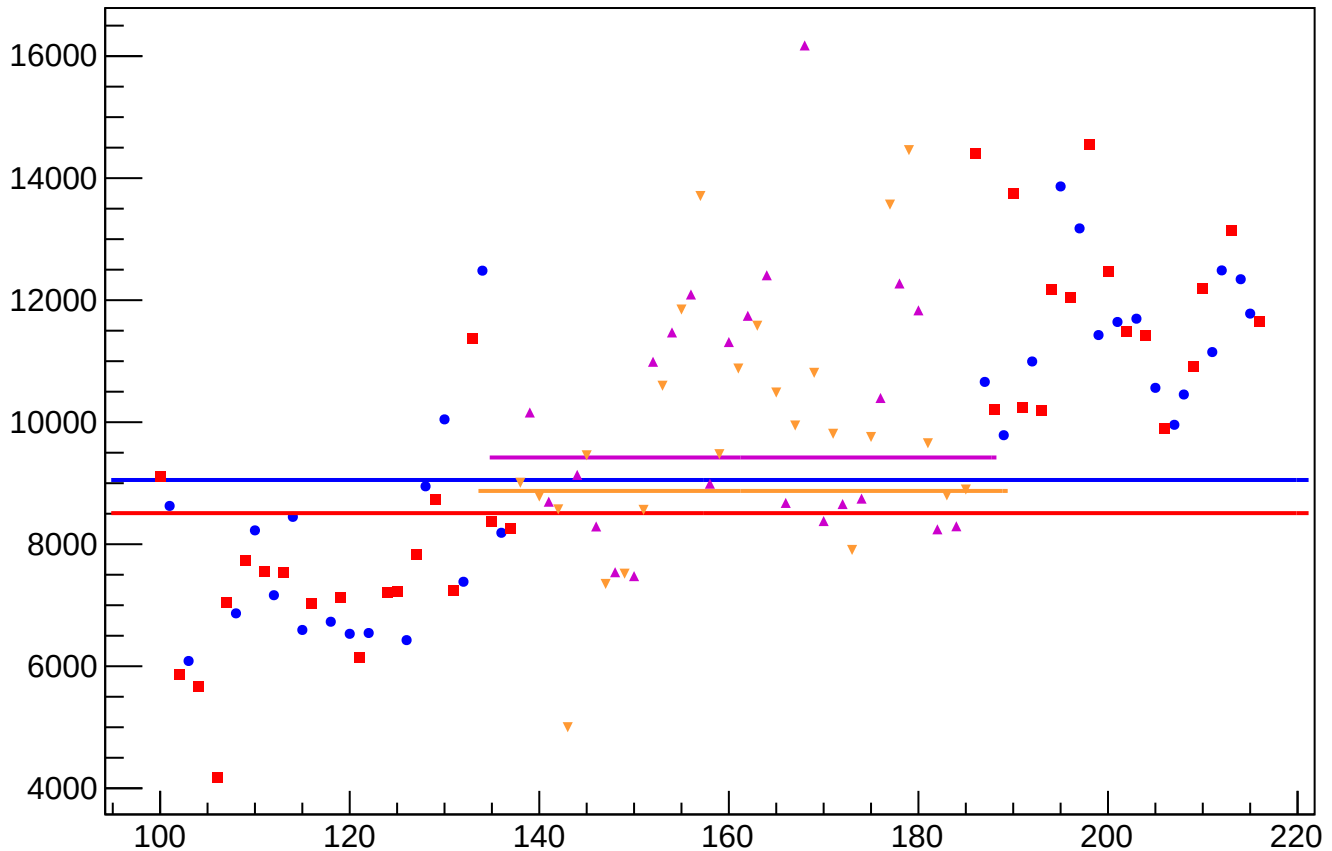
Left In: 436.717 $\pm$ 2245.180  $\chi^2$ /NDF:13.6/22

+ sign -191.212 $\pm$ 1492.242  $\chi^2$ /NDF: 63.7/55

All: 386.976 $\pm$ 1057.272  $\chi^2$ /NDF: 122.5/113

- sign 969.784 $\pm$ 1498.192  $\chi^2$ /NDF: 58.5/57

# asym\_at2\_avg\_dit\_correction\_rms vs Slug



Right In: 9052.877+/-1.508  $\chi^2/\text{NDF}$ : 2284378.0/30

Left Out: 8873.592+/-1.477  $\chi^2/\text{NDF}$ : 2203249.6/24

Right Out: 8509.603+/-1.422  $\chi^2/\text{NDF}$ : 3546153.6/34

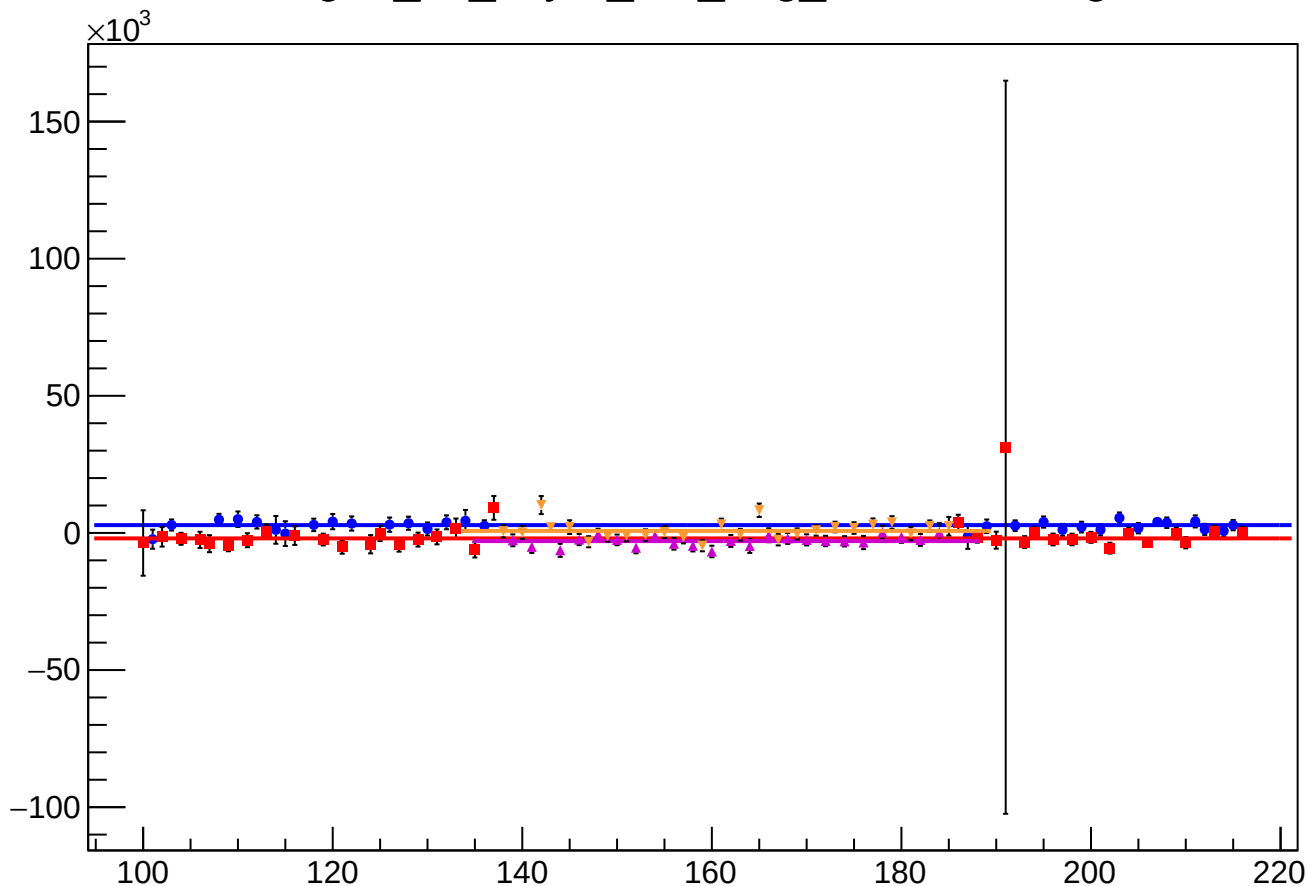
Left In: 9421.708+/-1.588  $\chi^2/\text{NDF}$ : 1204848.0/22

+ sign 8961.414+/-1.055  $\chi^2/\text{NDF}$ : 4494842.0/55

All: 8938.670+/-0.748  $\chi^2/\text{NDF}$ : 9429877.6/11

- sign 8915.745+/-1.059  $\chi^2/\text{NDF}$ : 4934102.7/57

# eigen\_dit\_asym\_at2\_avg\_mean vs Slug



Right In: 2851.120 $\pm$ 411.788  $\chi^2$ /NDF: 12.9/30

Left Out: 739.018 $\pm$ 432.879  $\chi^2$ /NDF: 41.6/24

Right Out: -1994.302 $\pm$ 411.386  $\chi^2$ /NDF: 30.5/34

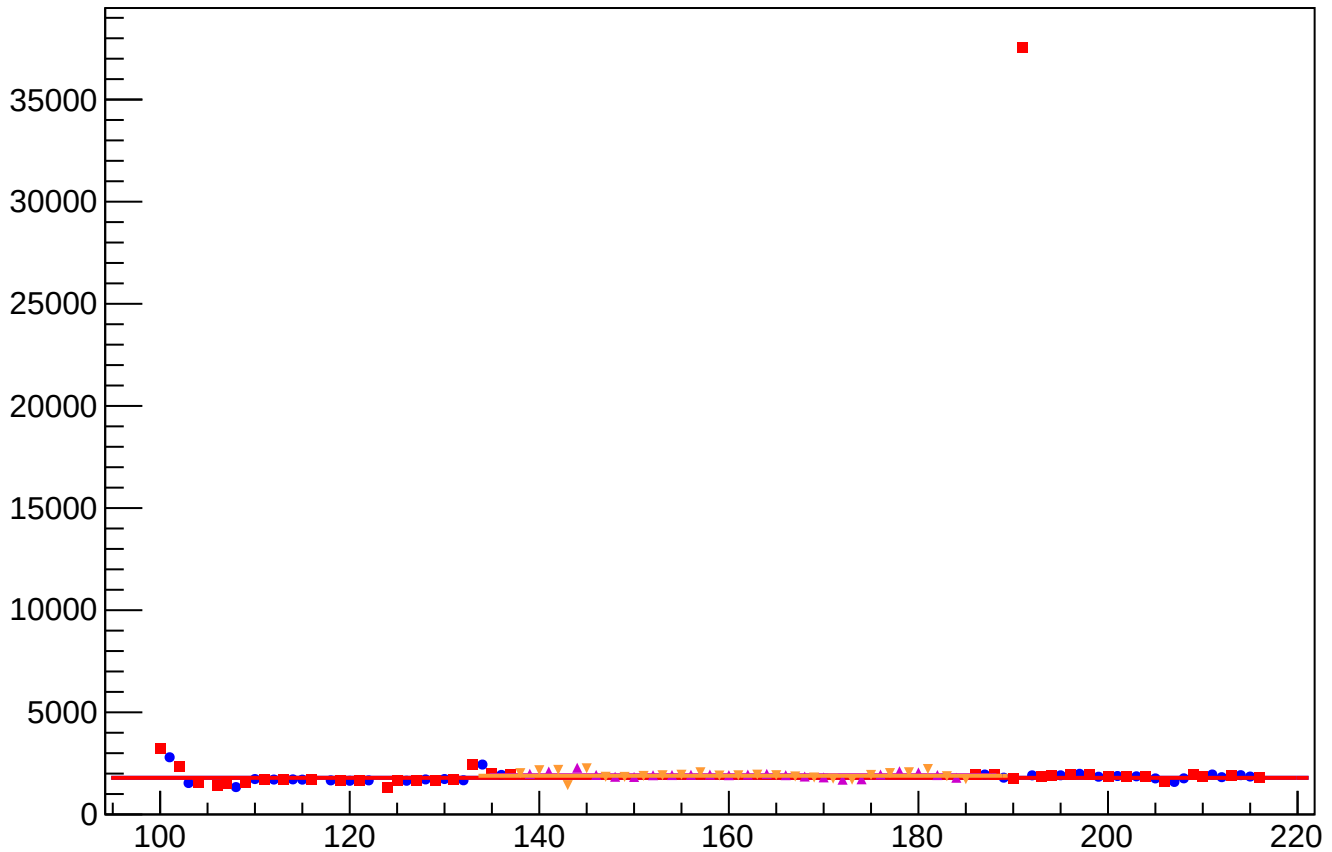
Left In: -2979.226 $\pm$ 450.335  $\chi^2$ /NDF: 15.6/22

+ sign 1847.773 $\pm$ 298.356  $\chi^2$ /NDF: 67.1/55

All: -258.977 $\pm$ 212.845  $\chi^2$ /NDF: 217.4/113

- sign -2442.337 $\pm$ 303.732  $\chi^2$ /NDF: 48.8/57

# eigen\_dit\_asym\_at2\_avg\_rms vs Slug



Right In: 1795.357+/-0.291  $\chi^2$ /NDF: 479627.9/30

Left Out: 1894.687+/-0.306  $\chi^2$ /NDF: 368594.6/24

Right Out: 1792.651+/-0.291  $\chi^2$ /NDF: 585334.8/34

Left In: 1923.042+/-0.318  $\chi^2$ /NDF: 150984.8/22

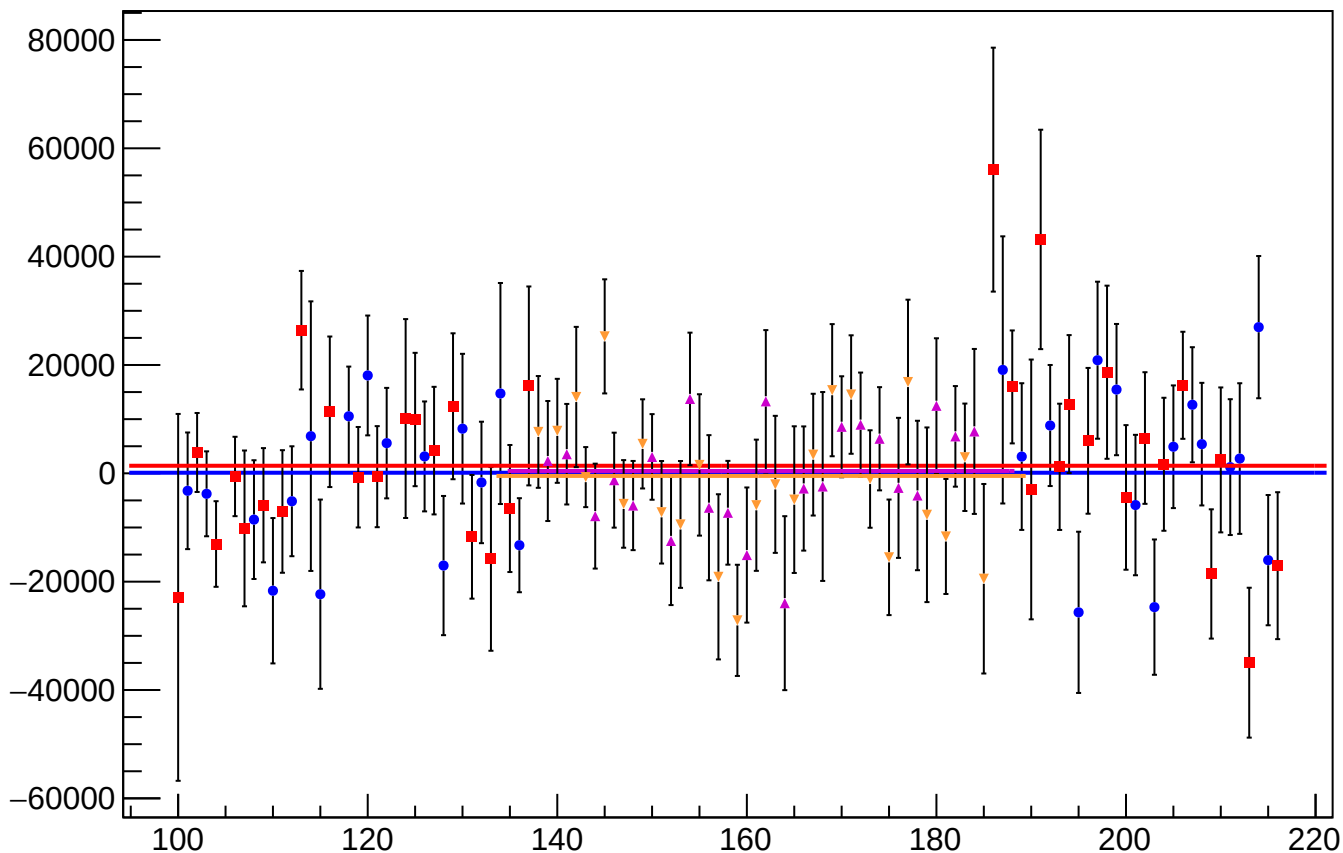
+ sign 1842.543+/-0.211  $\chi^2$ /NDF: 903504.7/55

All: 1847.165+/-0.150  $\chi^2$ /NDF: 1732211.5/11

- sign 1851.955+/-0.215  $\chi^2$ /NDF: 827729.5/57



asym\_at2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 108.869 $\pm$ 2132.115  $\chi^2$ /NDF: 34.8/30

Left Out: -479.345 $\pm$ 2089.238  $\chi^2$ /NDF:28.8/24

Right Out: 1397.673 $\pm$ 2011.547  $\chi^2$ /NDF: 44.8/34

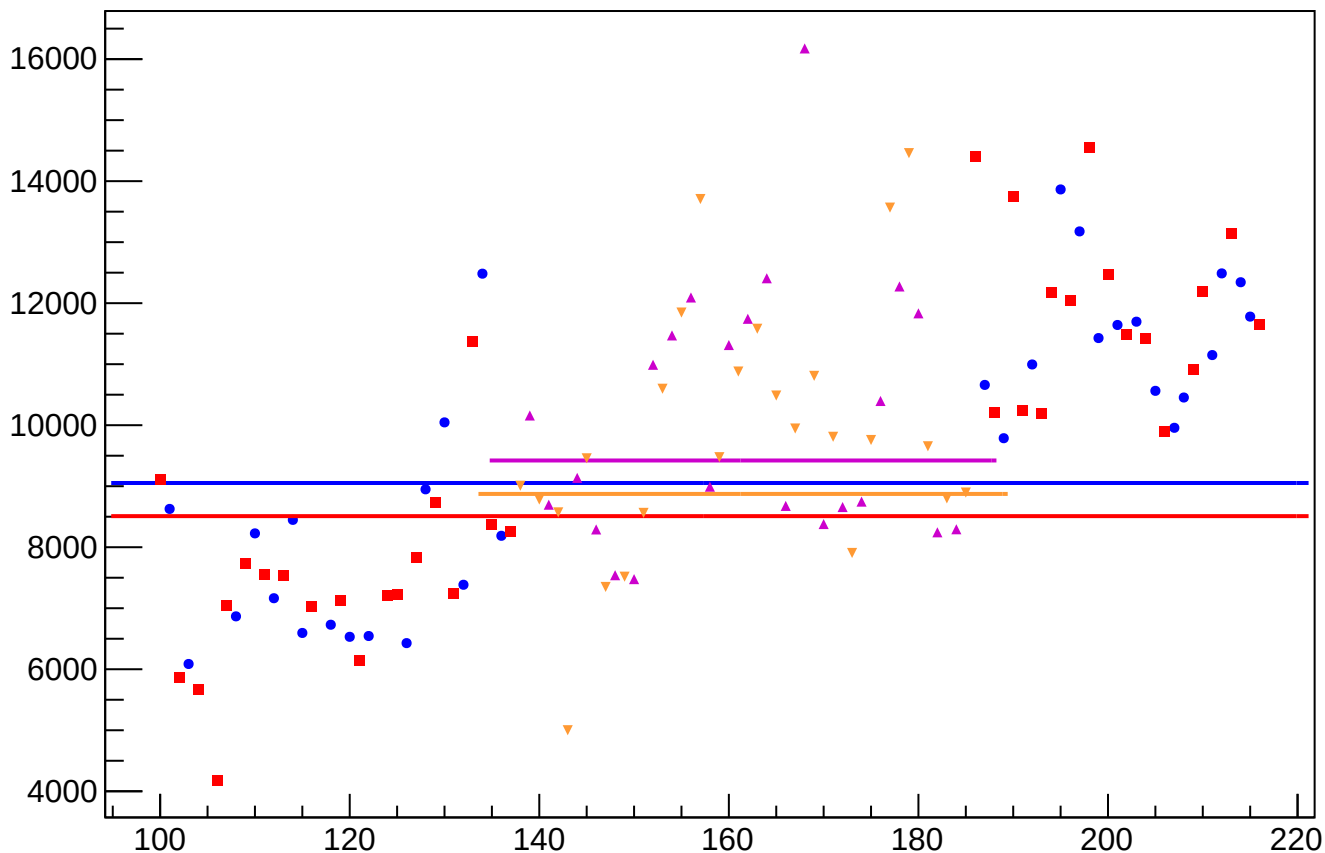
Left In: 436.720 $\pm$ 2245.183  $\chi^2$ /NDF:13.6/22

+ sign -191.212 $\pm$ 1492.243  $\chi^2$ /NDF: 63.7/55

All: 386.975 $\pm$ 1057.272  $\chi^2$ /NDF: 122.5/113

- sign 969.781 $\pm$ 1498.193  $\chi^2$ /NDF: 58.5/57

# asym\_at2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 9052.868 $\pm$ 1.508  $\chi^2$ /NDF: 2284412.6/30

Left Out: 8873.607 $\pm$ 1.477  $\chi^2$ /NDF: 2203251.2/24

Right Out: 8509.593 $\pm$ 1.422  $\chi^2$ /NDF: 3546183.6/34

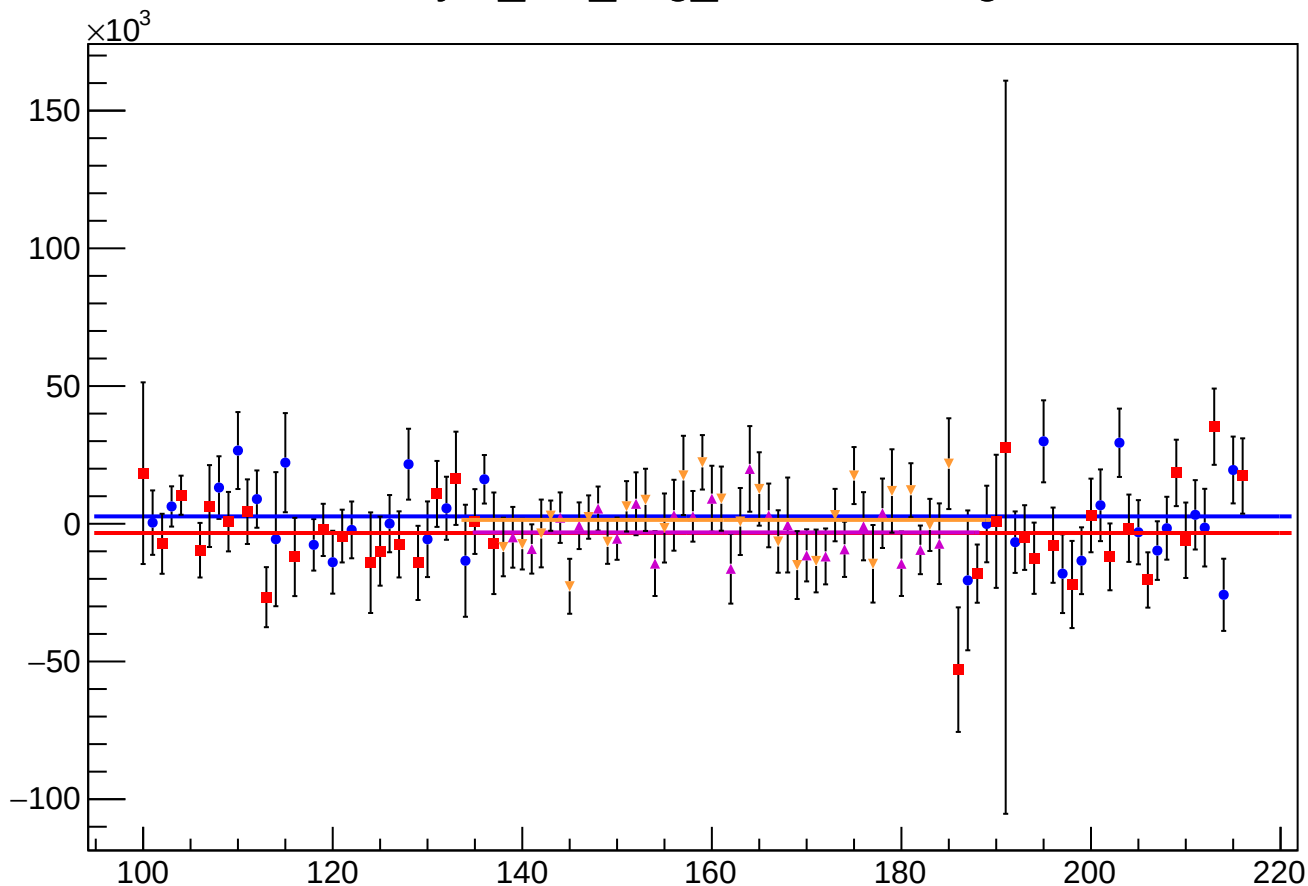
Left In: 9421.722 $\pm$ 1.588  $\chi^2$ /NDF: 1204851.9/22

+ sign 8961.417 $\pm$ 1.055  $\chi^2$ /NDF: 4494876.2/55

All: 8938.671 $\pm$ 0.748  $\chi^2$ /NDF: 9429955.7/11

- sign 8915.744 $\pm$ 1.059  $\chi^2$ /NDF: 4934146.4/57

# asym\_at2\_avg\_mean vs Slug



Right In: 2680.391 $\pm$ 2150.949  $\chi^2$ /NDF: 36.9/30

Left Out: 1408.316 $\pm$ 2039.907  $\chi^2$ /NDF: 27.4/24

Right Out: -3351.609 $\pm$ 2109.693  $\chi^2$ /NDF: 40.9/34

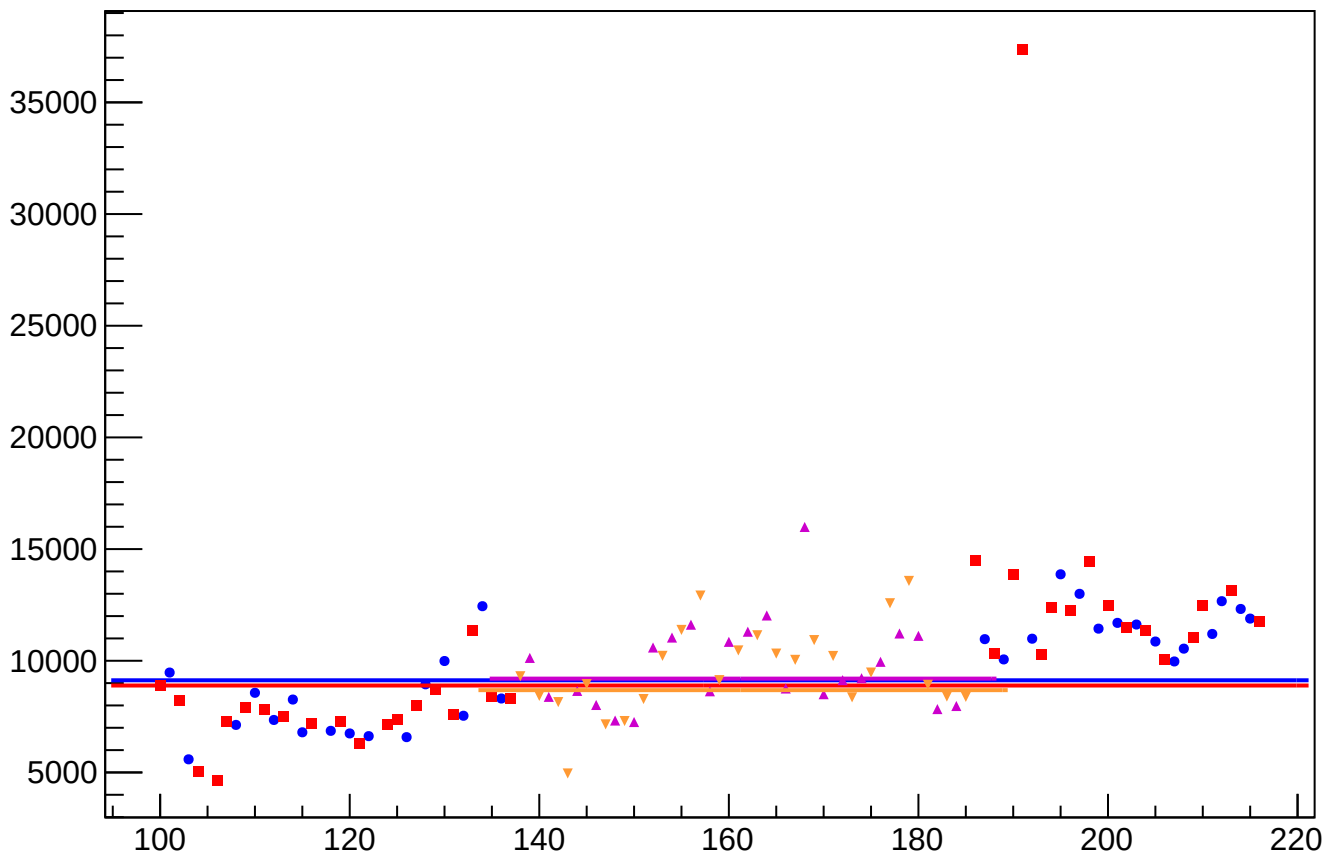
Left In: -3139.264 $\pm$ 2189.465  $\chi^2$ /NDF: 13.0/22

+ sign 2010.672 $\pm$ 1480.132  $\chi^2$ /NDF: 64.6/55

All: -550.853 $\pm$ 1060.153  $\chi^2$ /NDF: 124.6/113

- sign -3249.375 $\pm$ 1519.197  $\chi^2$ /NDF: 53.9/57

# asym\_at2\_avg\_rms vs Slug



Right In:  $9126.258 \pm 1.521$   $\chi^2/\text{NDF}$ : 2336031.8/30

Left Out:  $8684.549 \pm 1.442$   $\chi^2/\text{NDF}$ : 2051622.3/24

Right Out:  $8892.149 \pm 1.492$   $\chi^2/\text{NDF}$ : 3109312.4/34

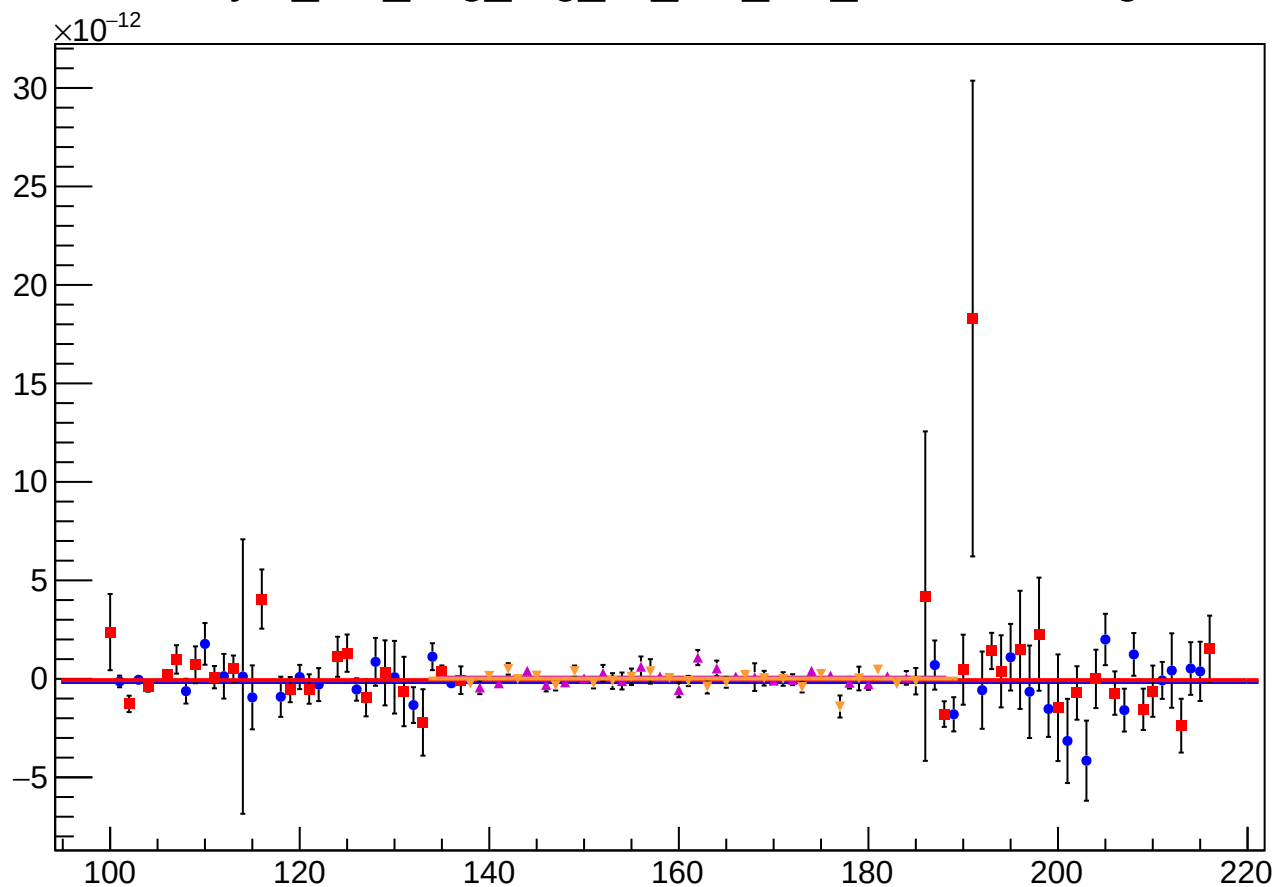
Left In:  $9200.796 \pm 1.548$   $\chi^2/\text{NDF}$ : 1129421.3/22

+ sign  $8893.709 \pm 1.047$   $\chi^2/\text{NDF}$ : 4432058.3/55

All:  $8965.312 \pm 0.750$   $\chi^2/\text{NDF}$ : 8701013.4/11

- sign  $9040.740 \pm 1.074$   $\chi^2/\text{NDF}$ : 4259344.2/57

# asym\_at2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/34

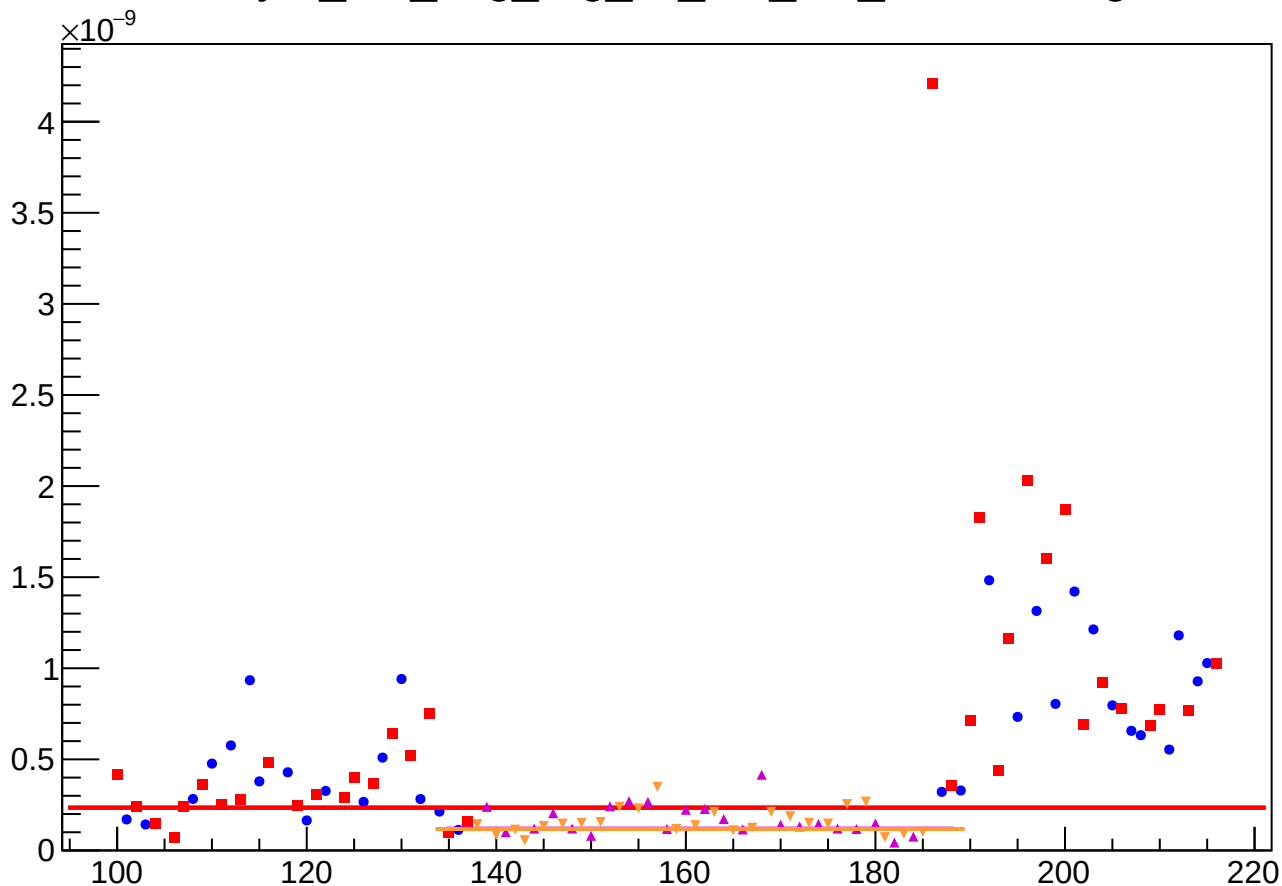
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.5/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 143.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 82.0/57

asym\_at2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7592445.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2335885.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7948766.7/34

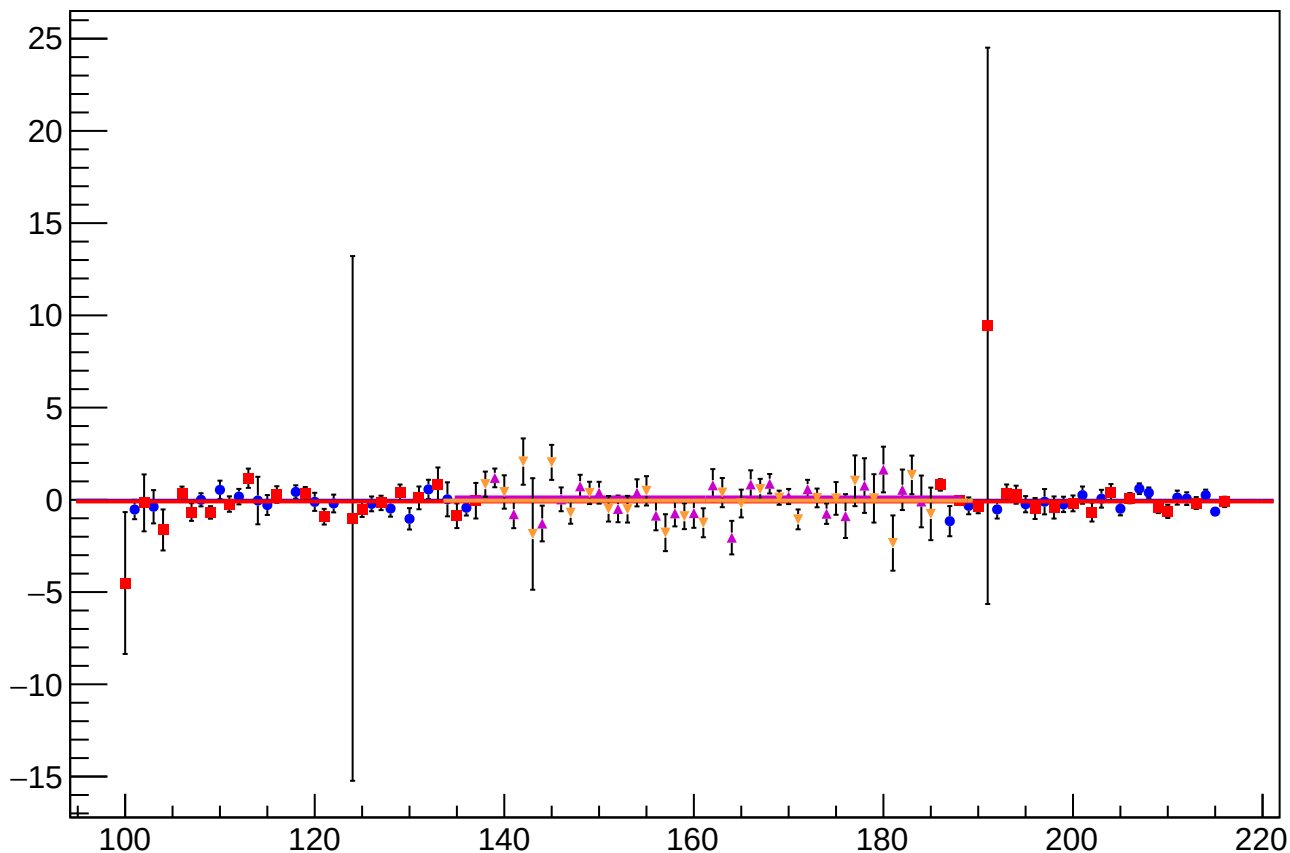
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2660632.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11756100.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 23989351.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12229576.5/57

# asym\_at2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.050 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.086 \pm 0.070$   $\chi^2/\text{NDF}$ : 43.3/34

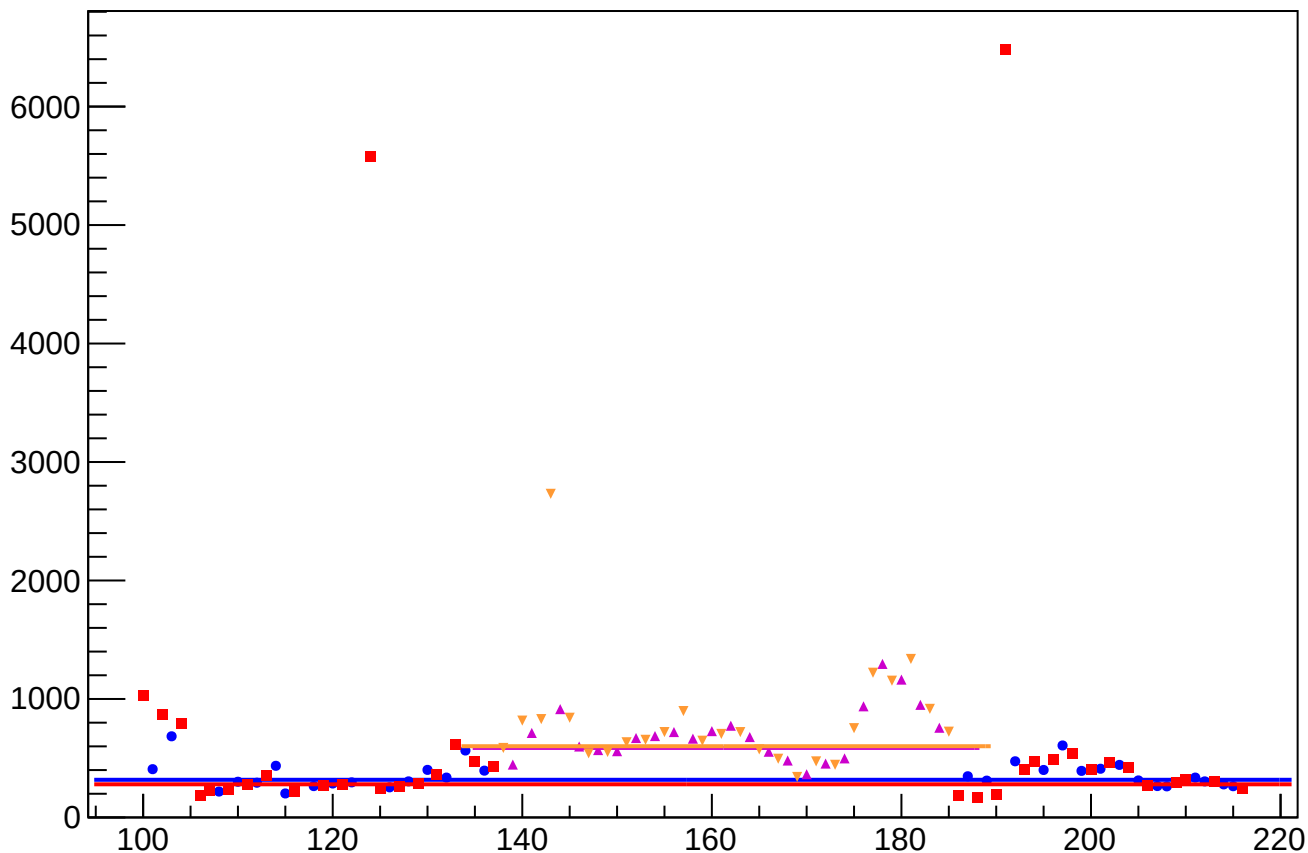
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.048 \pm 0.068$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-0.047 \pm 0.046$   $\chi^2/\text{NDF}$ : 133.9/113

- sign  $-0.046 \pm 0.063$   $\chi^2/\text{NDF}$ : 74.1/57

# asym\_at2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 317.901 $\pm$ 0.054  $\chi^2$ /NDF: 2200401.4/30

Left Out: 601.214 $\pm$ 0.104  $\chi^2$ /NDF: 4460456.7/24

Right Out: 279.842 $\pm$ 0.050  $\chi^2$ /NDF: 5062278.6/34

Left In: 586.817 $\pm$ 0.103  $\chi^2$ /NDF: 2934488.2/22

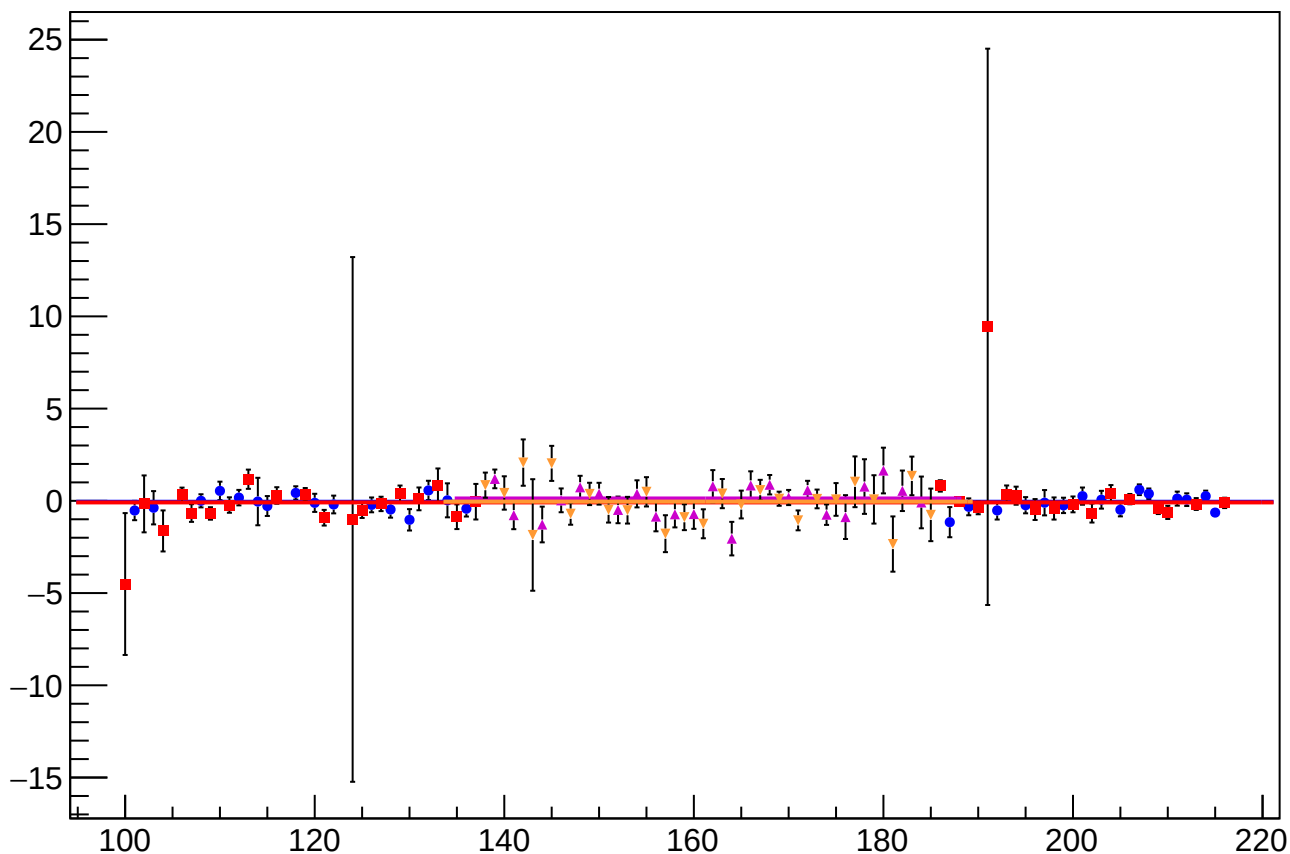
+ sign 377.713 $\pm$ 0.048  $\chi^2$ /NDF: 12480488.6/55

All: 356.415 $\pm$ 0.033  $\chi^2$ /NDF: 28094274.8/1

- sign 337.923 $\pm$ 0.045  $\chi^2$ /NDF: 15244858.0/57



asym\_at2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.050 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.086 \pm 0.070$   $\chi^2/\text{NDF}$ : 43.3/34

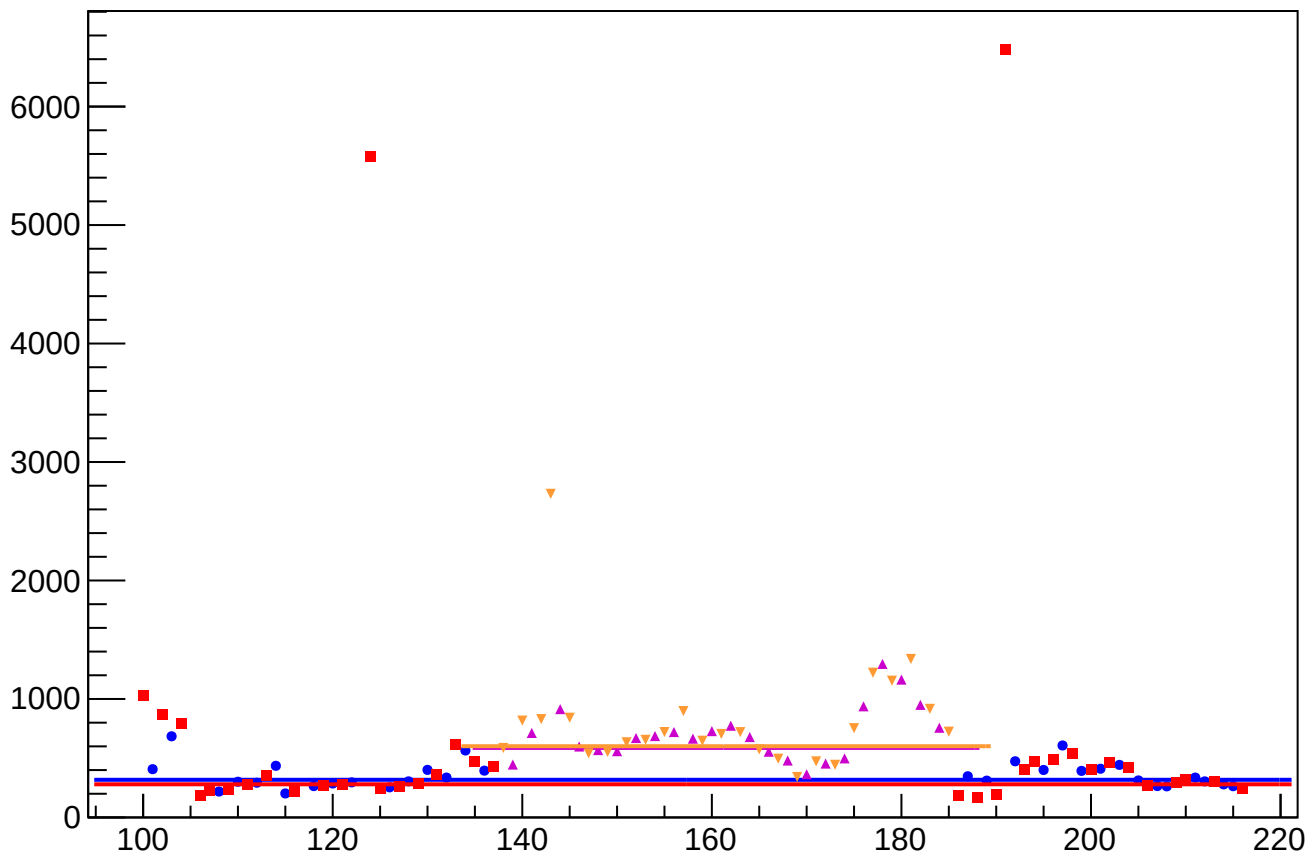
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.048 \pm 0.068$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-0.047 \pm 0.046$   $\chi^2/\text{NDF}$ : 133.9/113

- sign  $-0.046 \pm 0.063$   $\chi^2/\text{NDF}$ : 74.1/57

asym\_at2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $317.901 \pm 0.054$   $\chi^2/\text{NDF}$ : 2200401.4/30

Left Out:  $601.214 \pm 0.104$   $\chi^2/\text{NDF}$ : 4460456.7/24

Right Out:  $279.842 \pm 0.050$   $\chi^2/\text{NDF}$ : 5062278.6/34

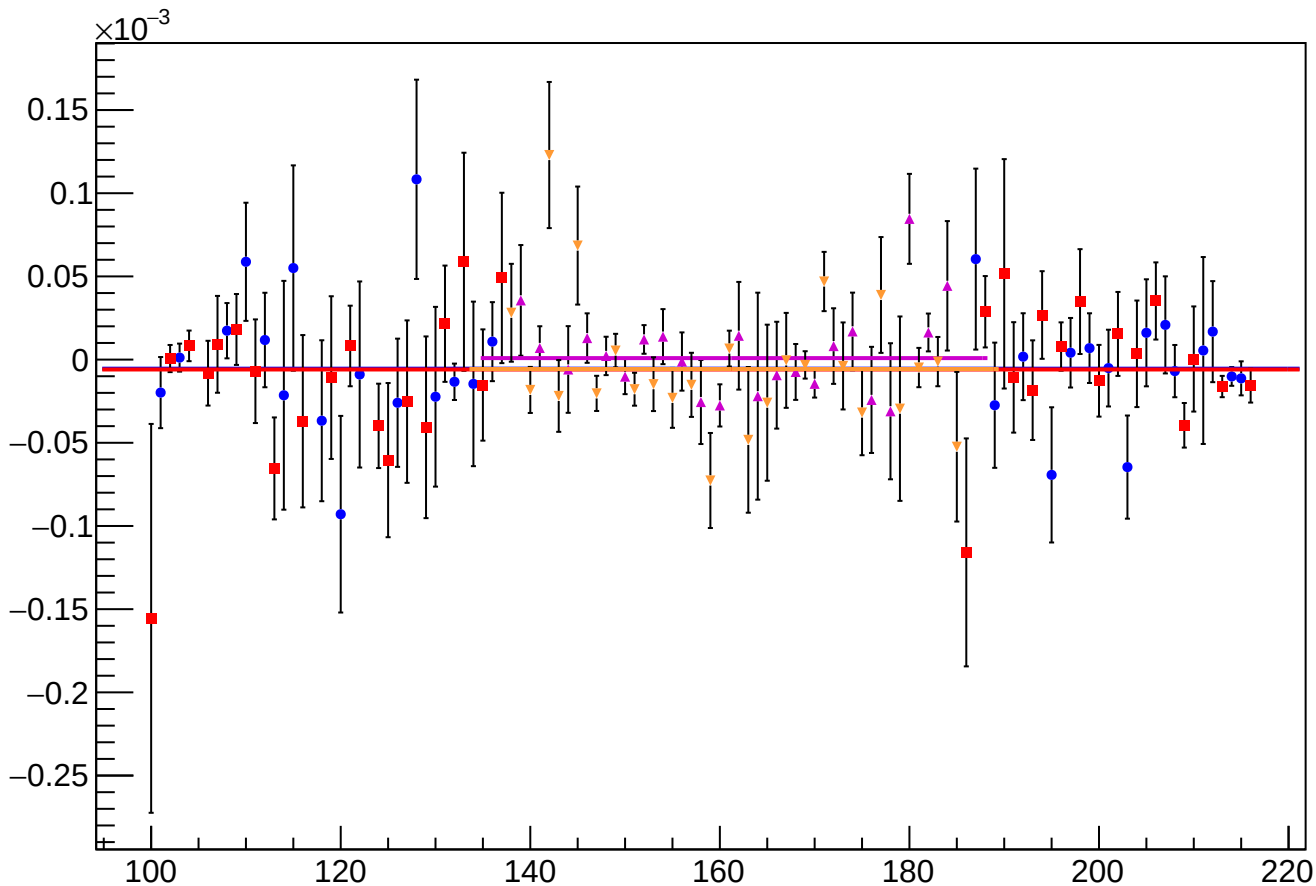
Left In:  $586.817 \pm 0.103$   $\chi^2/\text{NDF}$ : 2934488.2/22

+ sign  $377.713 \pm 0.048$   $\chi^2/\text{NDF}$ : 12480488.6/55

All:  $356.415 \pm 0.033$   $\chi^2/\text{NDF}$ : 28094274.8/11

- sign  $337.923 \pm 0.045$   $\chi^2/\text{NDF}$ : 15244858.0/57

asym\_at2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.3/34

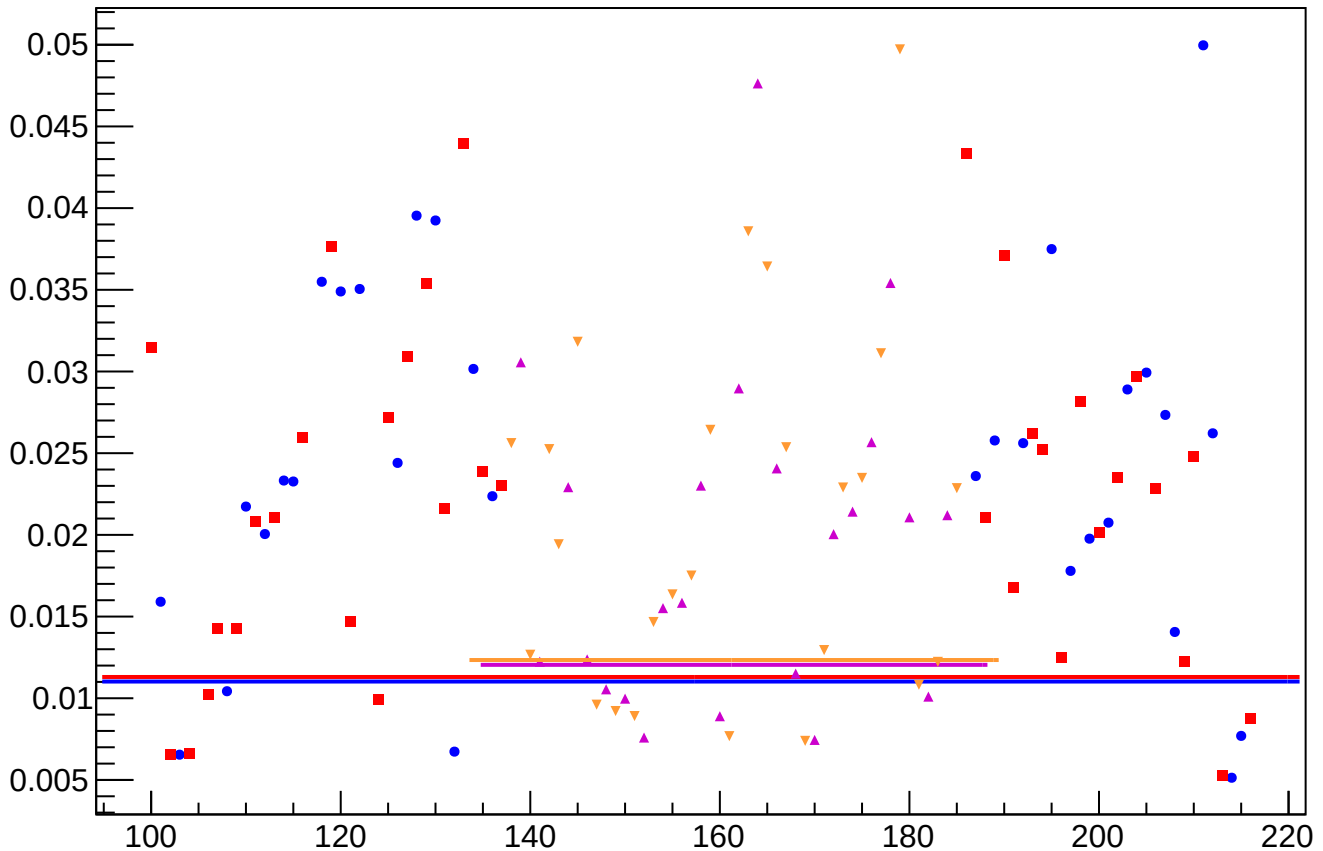
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.3/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 143.8/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.8/57

asym\_at2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 13429987.7/30

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 7839123.8/24

Right Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 11567572.6/34

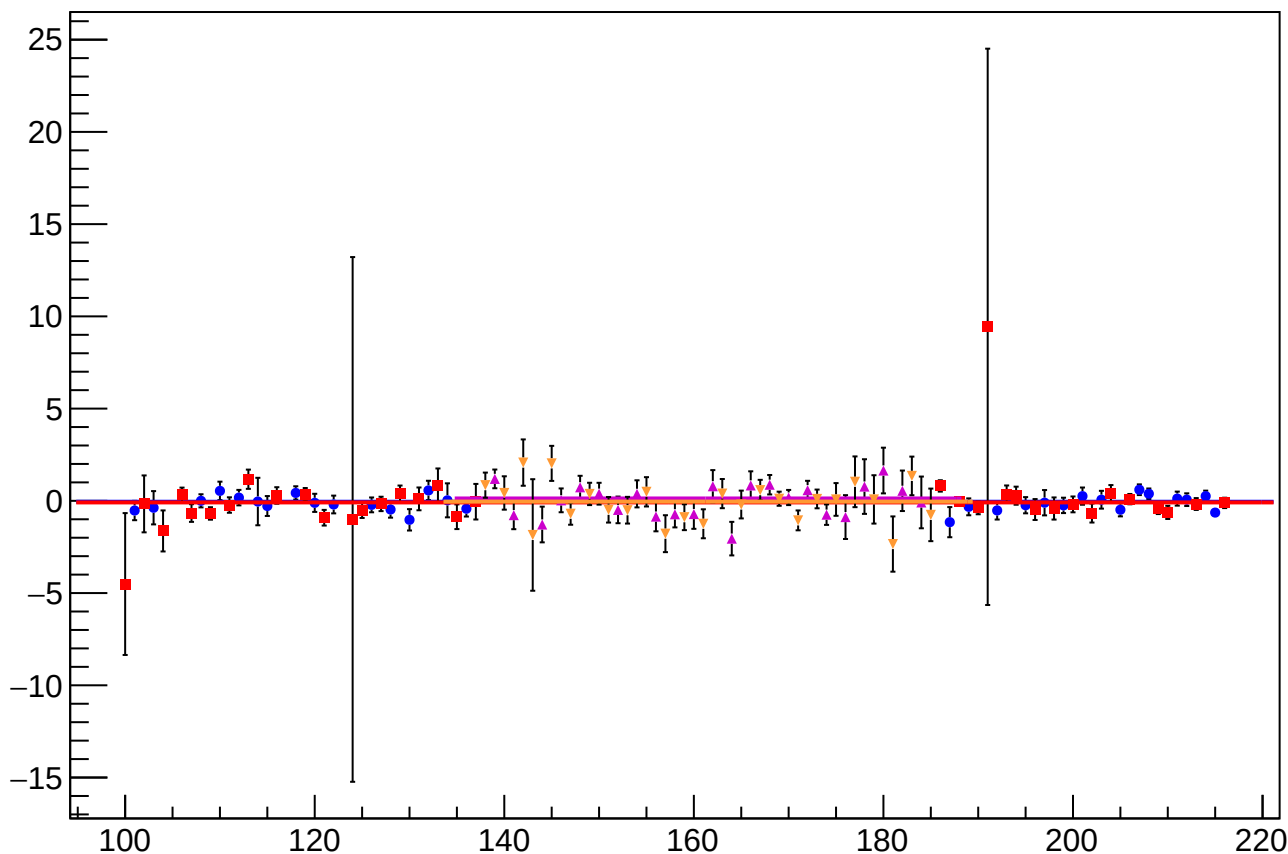
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6379401.9/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 21433227.7/55

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 39433938.2/113

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 18000588.3/57

asym\_at2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.050 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.086 \pm 0.070$   $\chi^2/\text{NDF}$ : 43.3/34

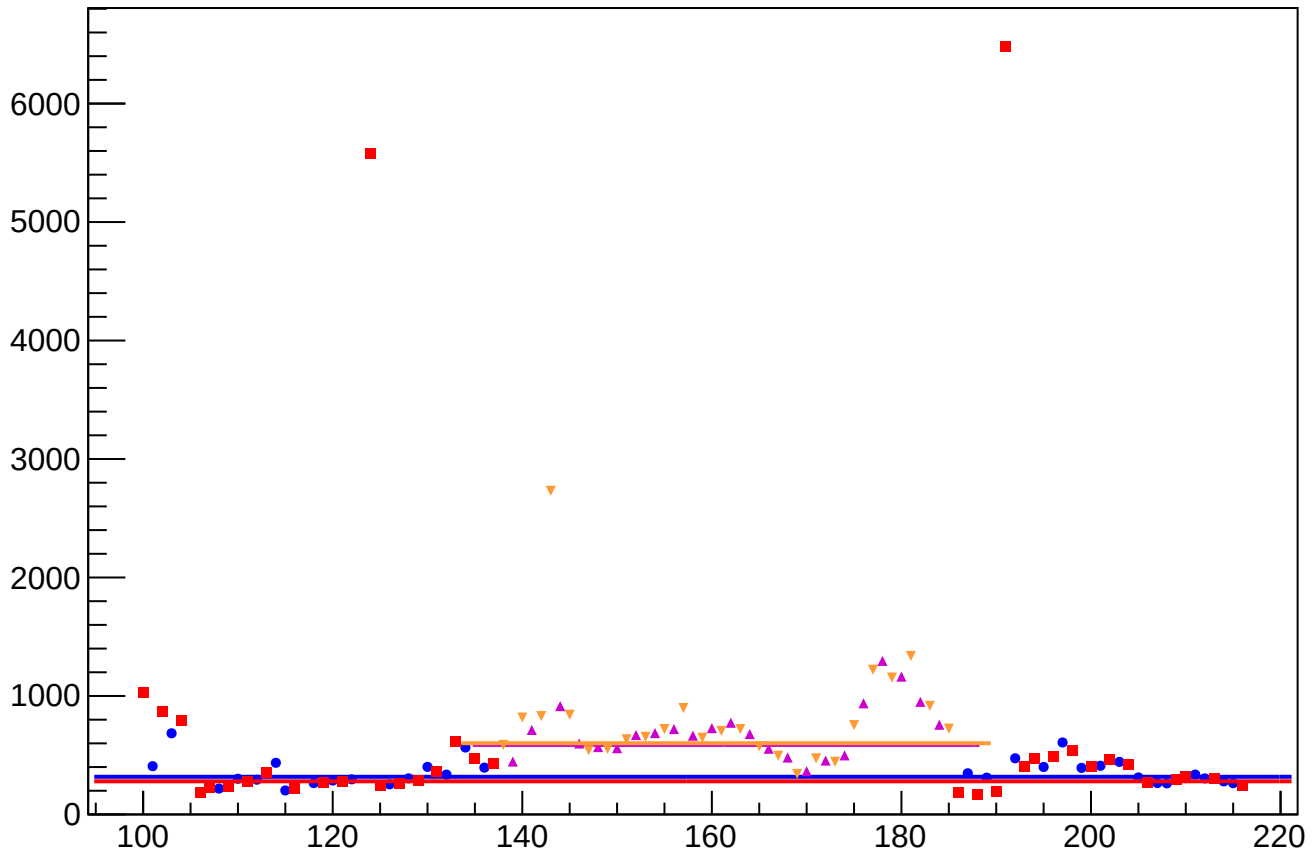
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.048 \pm 0.068$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-0.047 \pm 0.046$   $\chi^2/\text{NDF}$ : 133.9/113

- sign  $-0.045 \pm 0.063$   $\chi^2/\text{NDF}$ : 74.1/57

asym\_at2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 317.900 $\pm$ 0.054  $\chi^2$ /NDF: 2200398.1/30

Left Out: 601.214 $\pm$ 0.104  $\chi^2$ /NDF: 4460662.1/24

Right Out: 279.836 $\pm$ 0.050  $\chi^2$ /NDF: 5062585.5/34

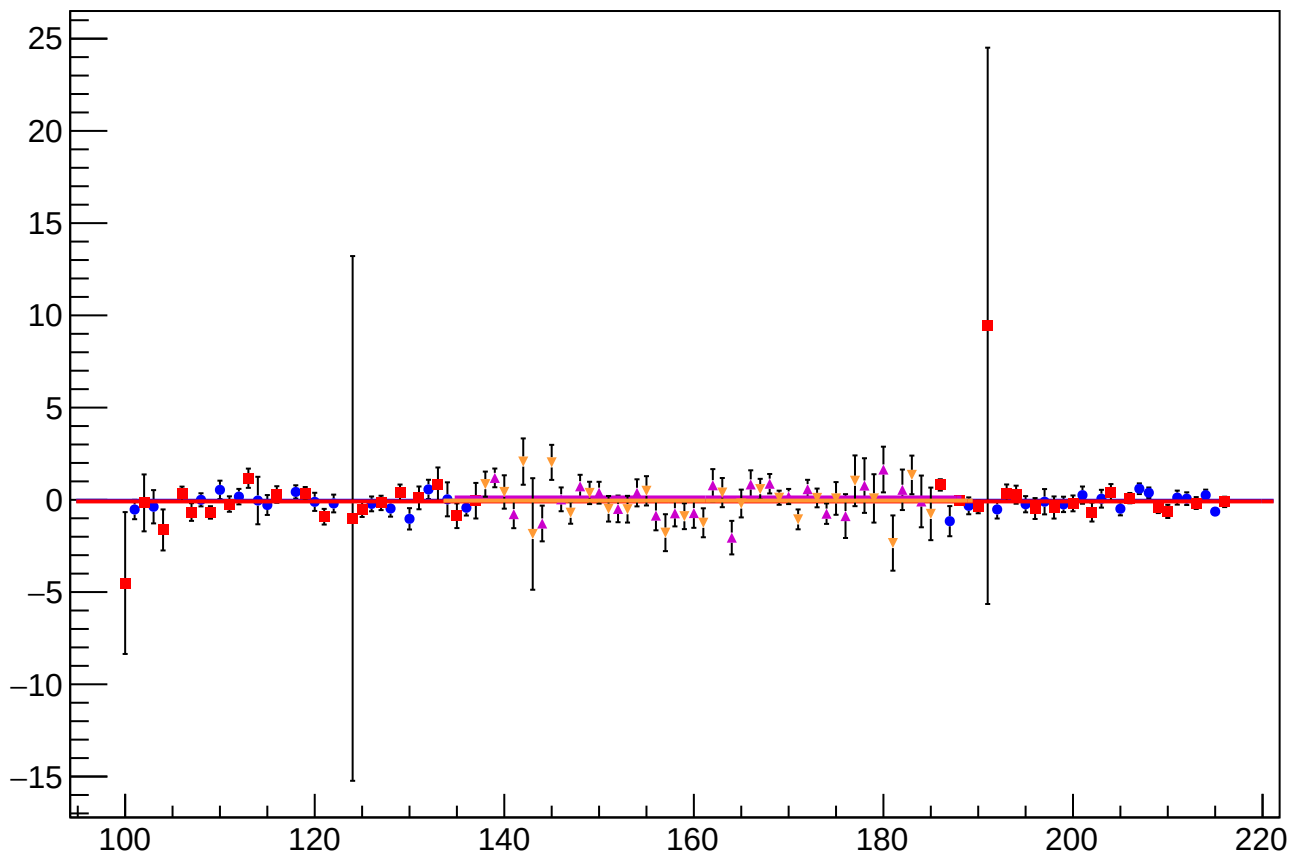
Left In: 586.820 $\pm$ 0.103  $\chi^2$ /NDF: 2934613.3/22

+ sign 377.712 $\pm$ 0.048  $\chi^2$ /NDF: 12480710.5/55

All: 356.411 $\pm$ 0.033  $\chi^2$ /NDF: 28095378.5/1

- sign 337.917 $\pm$ 0.045  $\chi^2$ /NDF: 15245646.2/57

asym\_at2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.050 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.041 \pm 0.148$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-0.086 \pm 0.070$   $\chi^2/\text{NDF}$ : 43.3/34

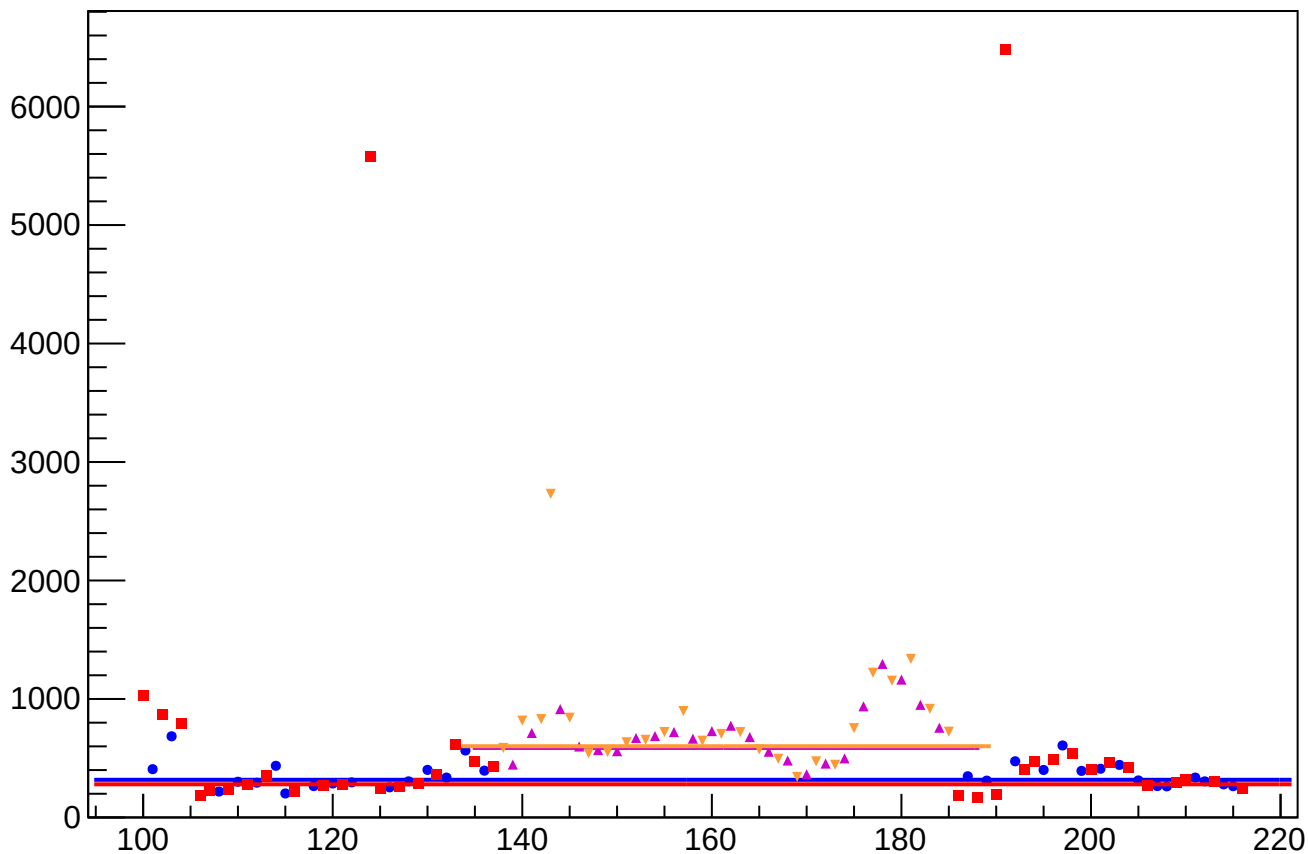
Left In:  $0.128 \pm 0.145$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.048 \pm 0.068$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-0.047 \pm 0.046$   $\chi^2/\text{NDF}$ : 133.9/113

- sign  $-0.045 \pm 0.063$   $\chi^2/\text{NDF}$ : 74.1/57

asym\_at2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 317.900 $\pm$ 0.054  $\chi^2$ /NDF: 2200398.1/30

Left Out: 601.214 $\pm$ 0.104  $\chi^2$ /NDF: 4460662.1/24

Right Out: 279.836 $\pm$ 0.050  $\chi^2$ /NDF: 5062585.5/34

Left In: 586.820 $\pm$ 0.103  $\chi^2$ /NDF: 2934613.3/22

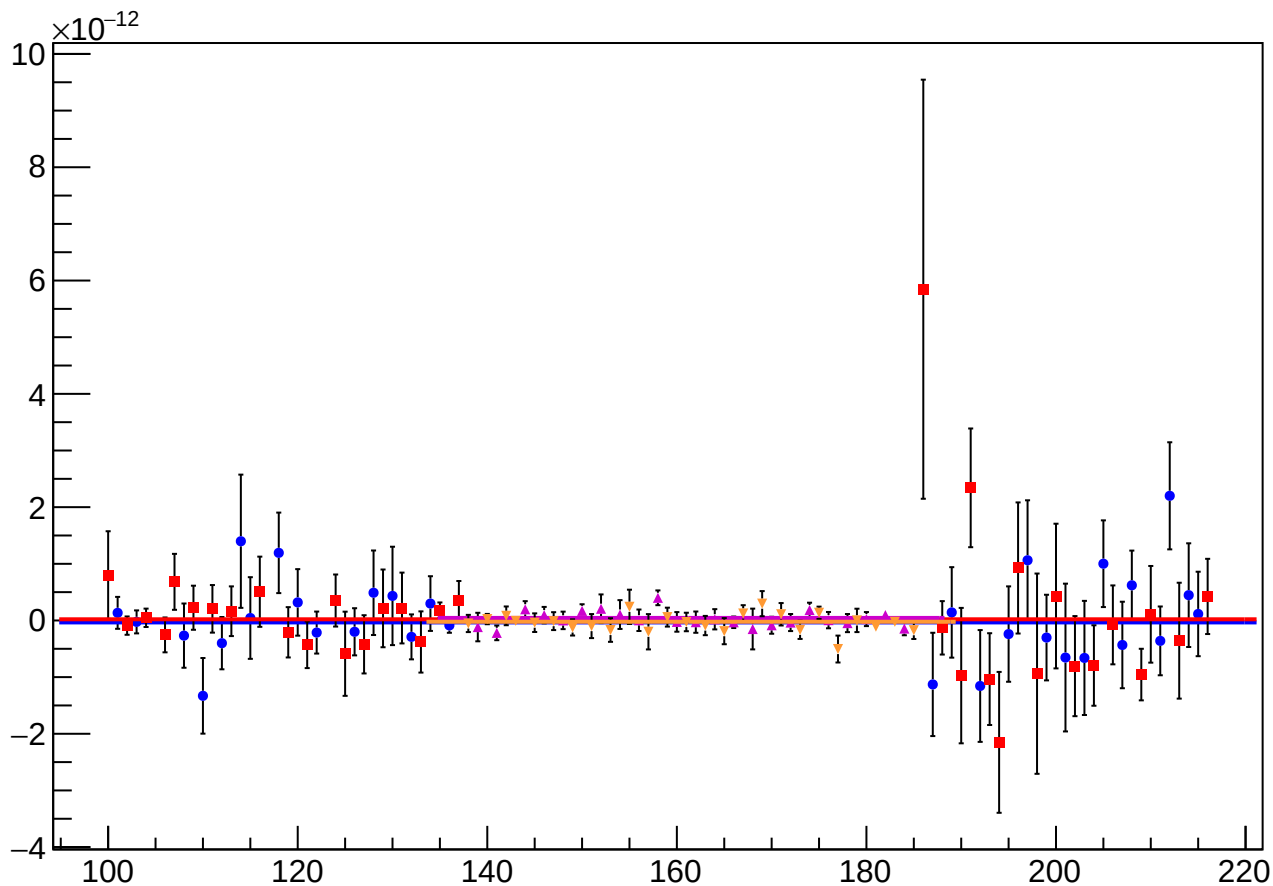
+ sign 377.712 $\pm$ 0.048  $\chi^2$ /NDF: 12480710.5/55

All: 356.411 $\pm$ 0.033  $\chi^2$ /NDF: 28095378.5/11

- sign 337.917 $\pm$ 0.045  $\chi^2$ /NDF: 15245646.2/57



asym\_at2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.1/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.0/34

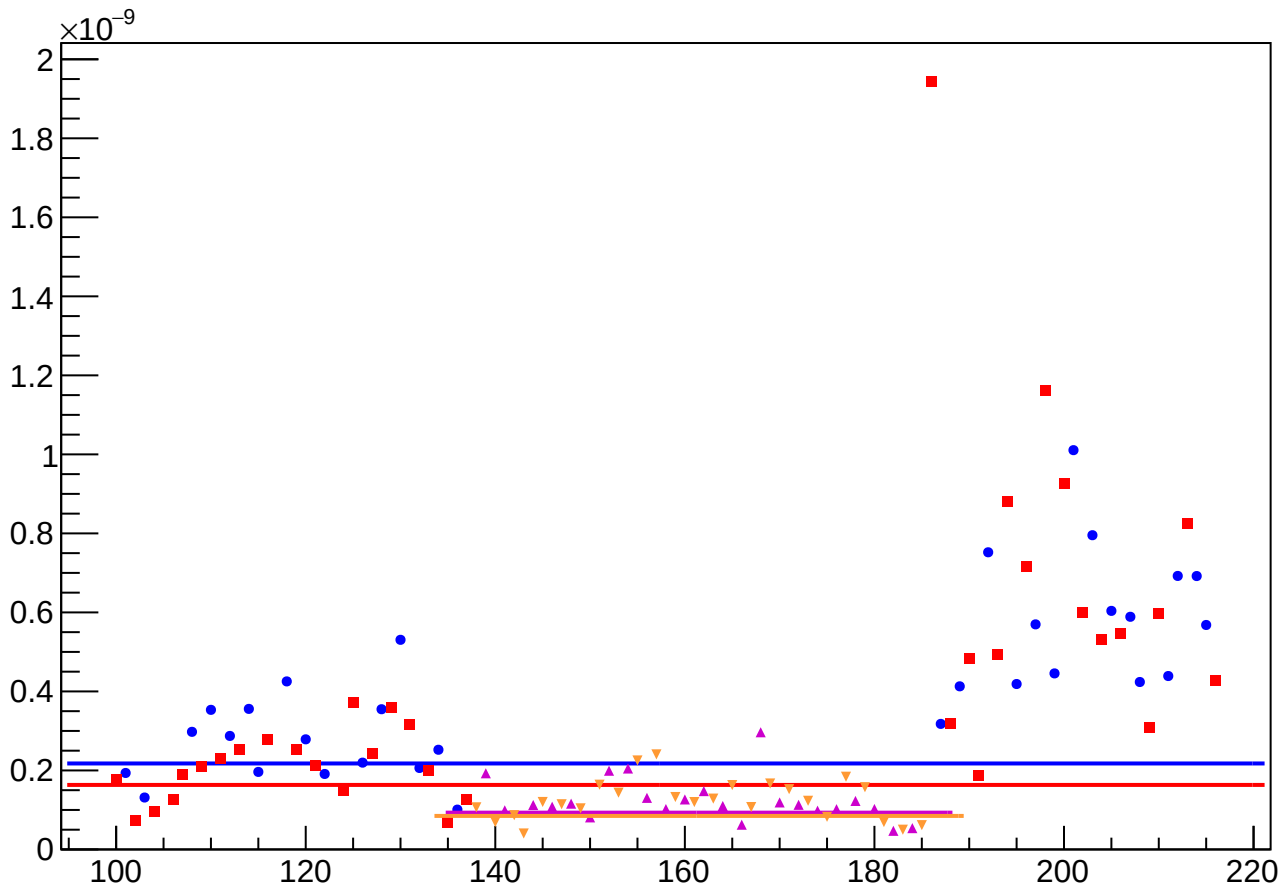
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:22.0/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.5/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 100.9/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.1/57

asym\_at2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8325455.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5379905.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9948013.0/34

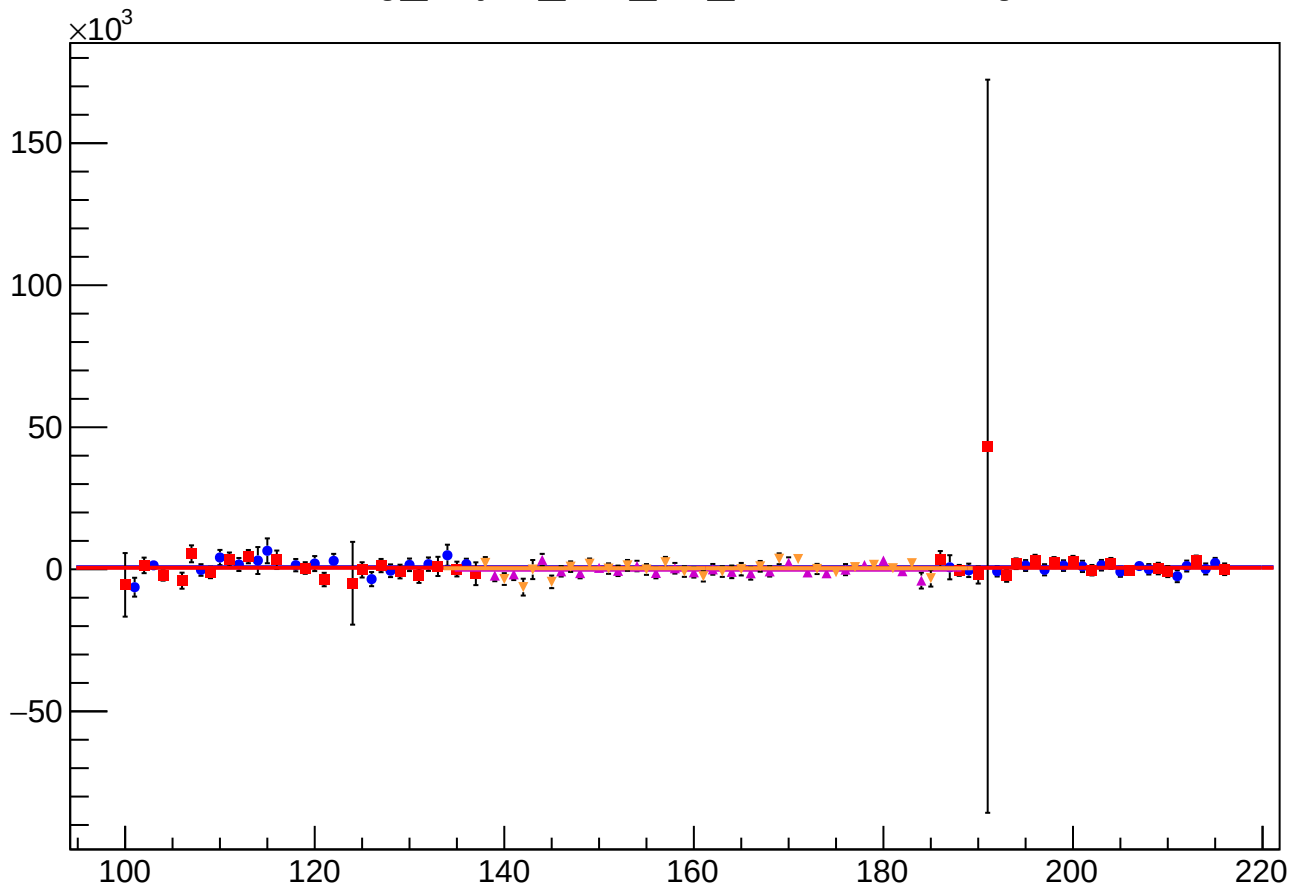
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3869234.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18862175.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34635942.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15718584.8/57

# reg\_asym\_at2\_dd\_mean vs Slug



Right In: 739.177 $\pm$ 388.008  $\chi^2$ /NDF: 20.4/30

Left Out: 361.645 $\pm$ 388.131  $\chi^2$ /NDF: 29.6/24

Right Out: 536.173 $\pm$ 389.049  $\chi^2$ /NDF: 31.1/34

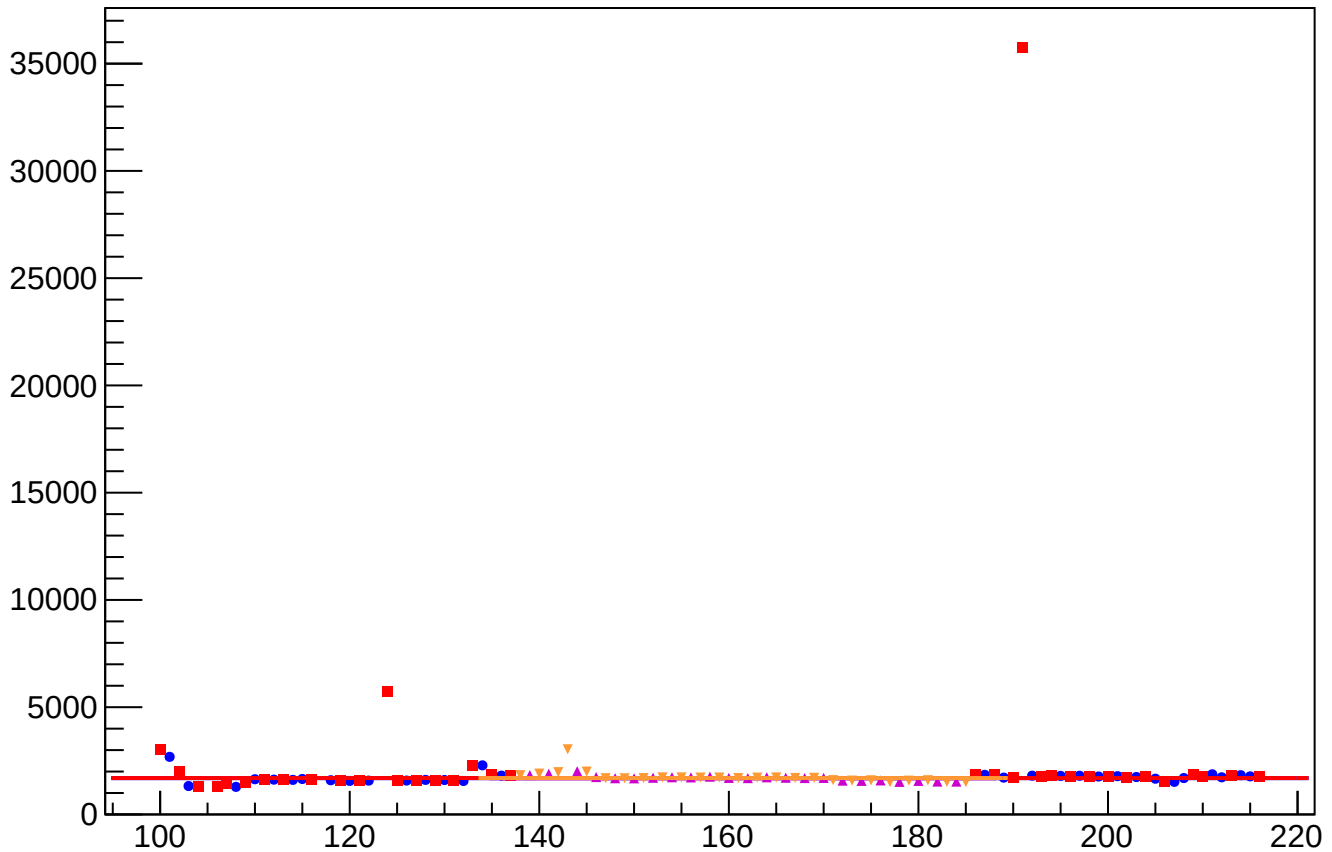
Left In: -157.028 $\pm$ 394.257  $\chi^2$ /NDF: 16.0/22

+ sign 550.471 $\pm$ 274.407  $\chi^2$ /NDF: 50.5/55

All: 373.952 $\pm$ 194.918  $\chi^2$ /NDF: 100.0/113

- sign 194.181 $\pm$ 276.922  $\chi^2$ /NDF: 48.7/57

# reg\_asym\_at2\_dd\_rms vs Slug



Right In: 1691.481+/-0.274  $\chi^2/\text{NDF}$ : 523492.7/30

Left Out: 1697.496+/-0.274  $\chi^2/\text{NDF}$ : 495397.9/24

Right Out: 1696.867+/-0.275  $\chi^2/\text{NDF}$ : 722799.4/34

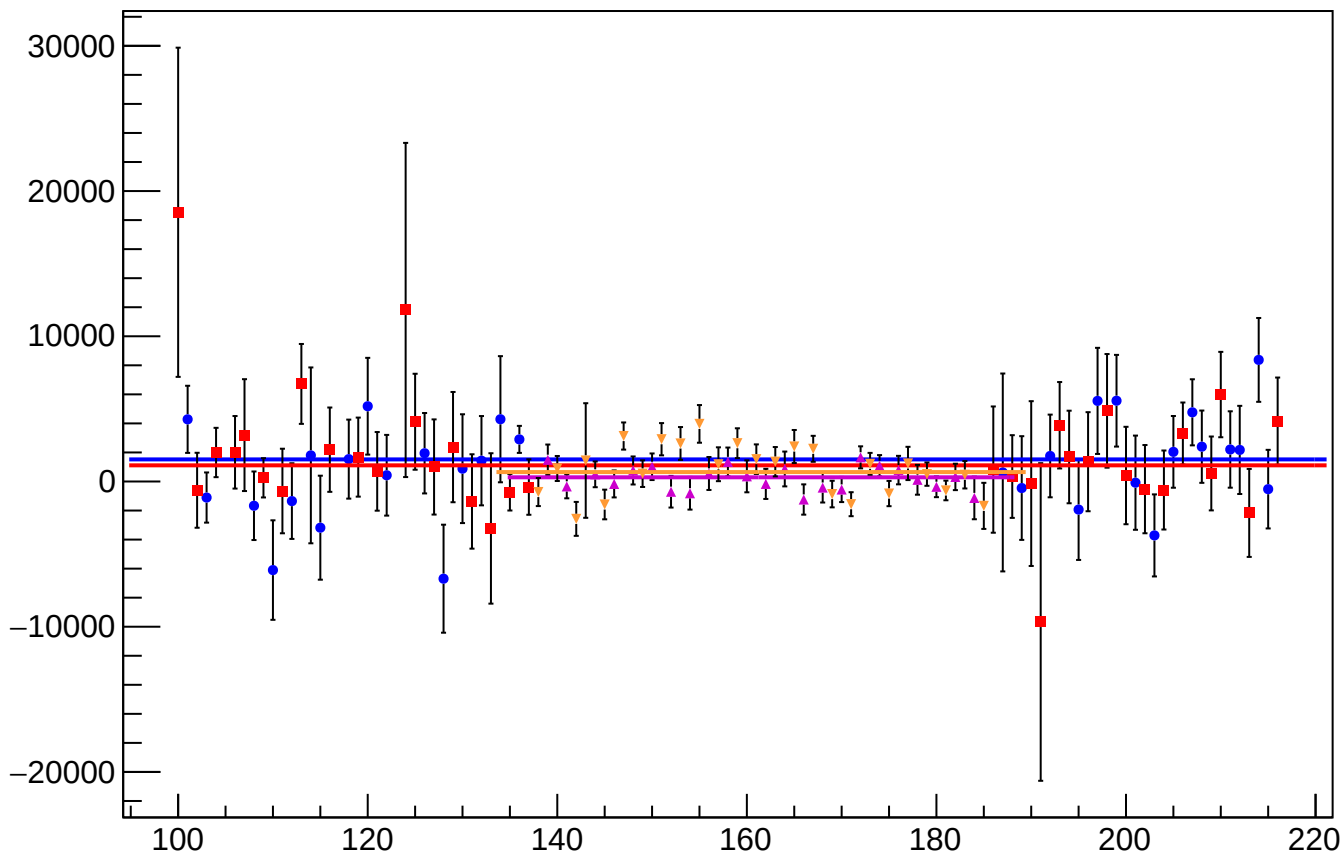
Left In: 1684.577+/-0.279  $\chi^2/\text{NDF}$ : 165355.7/22

+ sign 1694.488+/-0.194  $\chi^2/\text{NDF}$ : 1019130.8/55

All: 1692.662+/-0.138  $\chi^2/\text{NDF}$ : 1908449.2/11

- sign 1690.804+/-0.196  $\chi^2/\text{NDF}$ : 889139.8/57

# asym\_at2\_dd\_reg\_correction\_mean vs Slug



Right In: 1521.316 $\pm$ 460.652  $\chi^2$ /NDF: 38.7/30

Left Out: 649.165 $\pm$ 195.671  $\chi^2$ /NDF: 65.5/24

Right Out: 1112.465 $\pm$ 454.620  $\chi^2$ /NDF: 24.2/34

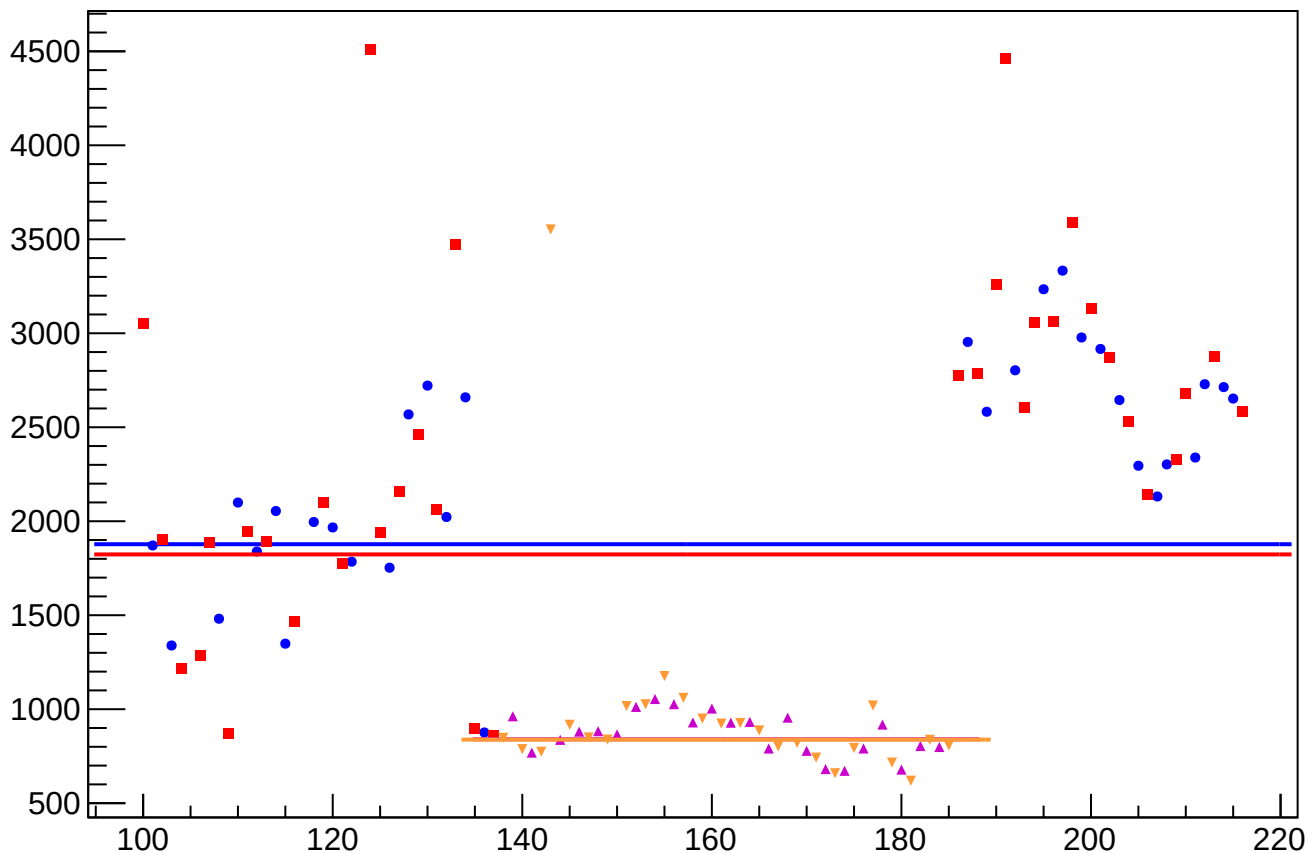
Left In: 288.616 $\pm$ 198.494  $\chi^2$ /NDF: 16.6/22

+ sign 782.473 $\pm$ 180.097  $\chi^2$ /NDF: 107.3/55

All: 603.312 $\pm$ 127.984  $\chi^2$ /NDF: 152.8/113

- sign 420.523 $\pm$ 181.911  $\chi^2$ /NDF: 43.5/57

# asym\_at2\_dd\_reg\_correction\_rms vs Slug



Right In: 1877.734 $\pm$ 0.326  $\chi^2$ /NDF: 5122037.8/30

Left Out: 838.243 $\pm$ 0.138  $\chi^2$ /NDF:1800245.5/24

Right Out: 1823.458 $\pm$ 0.321  $\chi^2$ /NDF: 6437003.2/34

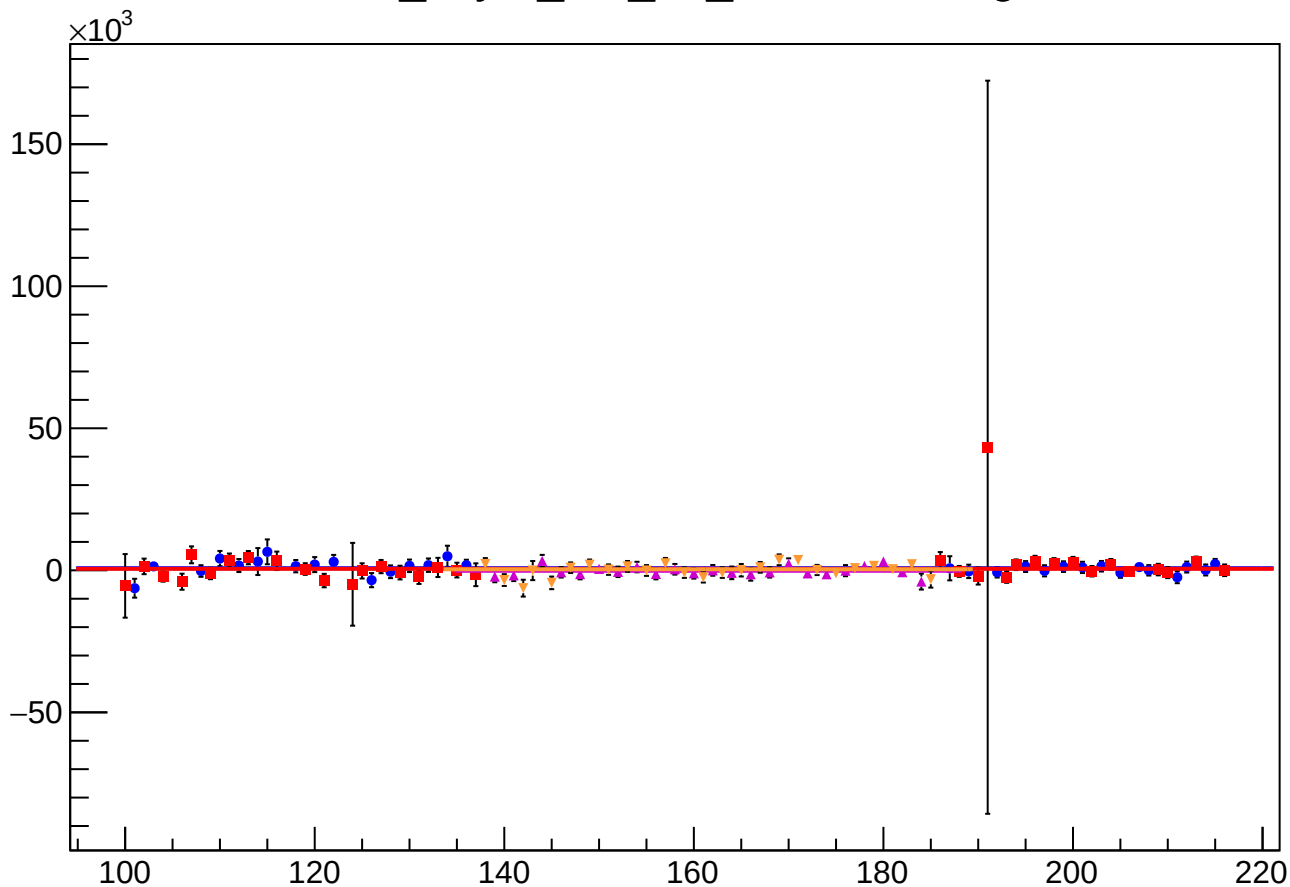
Left In: 839.976 $\pm$ 0.140  $\chi^2$ /NDF:669341.7/22

+ sign 997.129 $\pm$ 0.127  $\chi^2$ /NDF: 15549798.6/55

All: 997.284 $\pm$ 0.090  $\chi^2$ /NDF: 30517345.9/11

- sign 997.442 $\pm$ 0.129  $\chi^2$ /NDF: 14967544.3/57

# cor\_asym\_at2\_dd\_mean vs Slug



Right In: 739.214 $\pm$ 388.008  $\chi^2$ /NDF: 20.4/30

Left Out: 361.560 $\pm$ 388.131  $\chi^2$ /NDF:29.6/24

Right Out: 536.275 $\pm$ 389.049  $\chi^2$ /NDF: 31.1/34

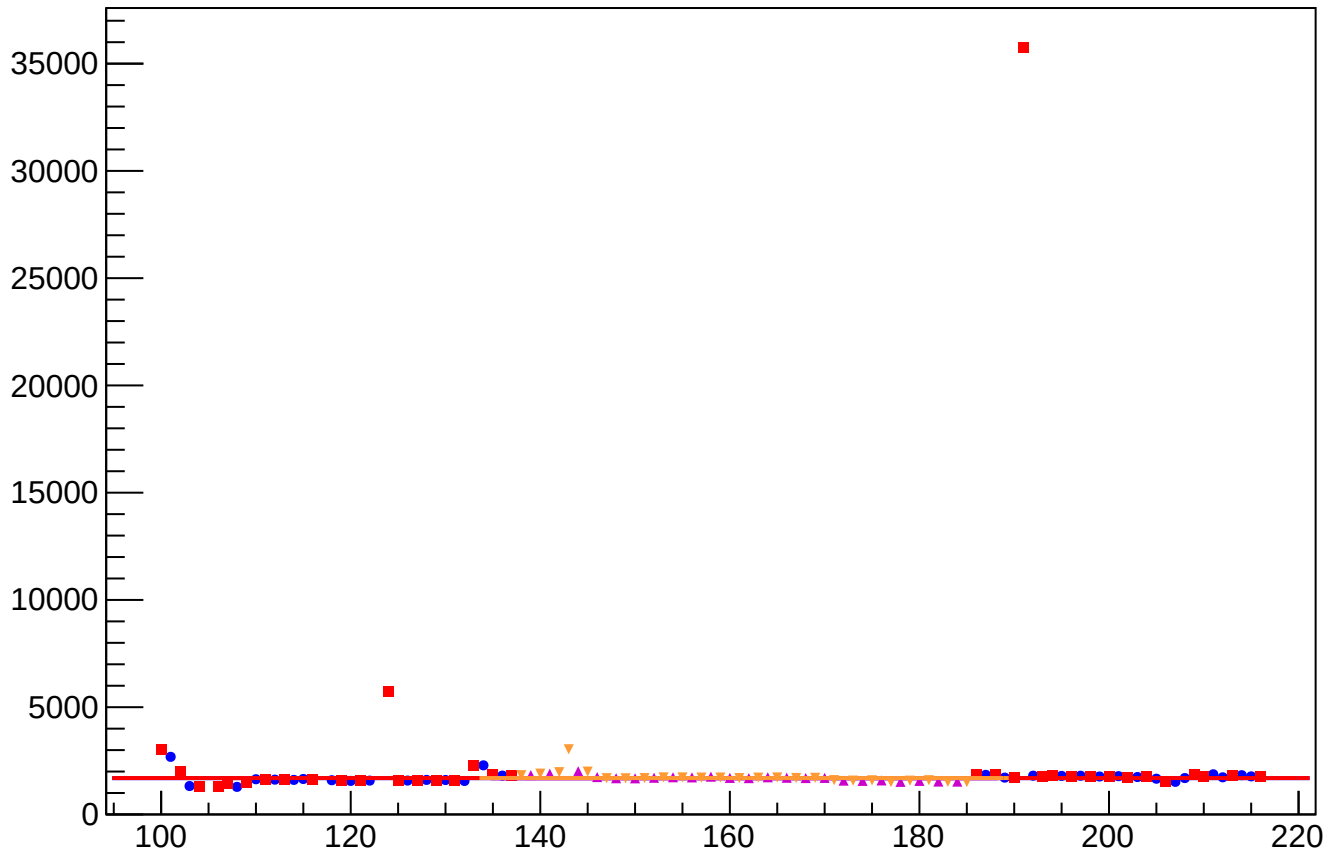
Left In: -156.934 $\pm$ 394.258  $\chi^2$ /NDF:16.0/22

+ sign 550.447 $\pm$ 274.407  $\chi^2$ /NDF: 50.5/55

All: 373.989 $\pm$ 194.918  $\chi^2$ /NDF: 100.0/113

- sign 194.279 $\pm$ 276.922  $\chi^2$ /NDF: 48.7/57

# cor\_asym\_at2\_dd\_rms vs Slug



Right In: 1691.481+/-0.274     $\chi^2/\text{NDF}$ : 523493.1/30

Left Out: 1697.496+/-0.274     $\chi^2/\text{NDF}$ : 495397.9/24

Right Out: 1696.867+/-0.275     $\chi^2/\text{NDF}$ : 722799.6/34

Left In: 1684.577+/-0.279     $\chi^2/\text{NDF}$ : 165355.7/22

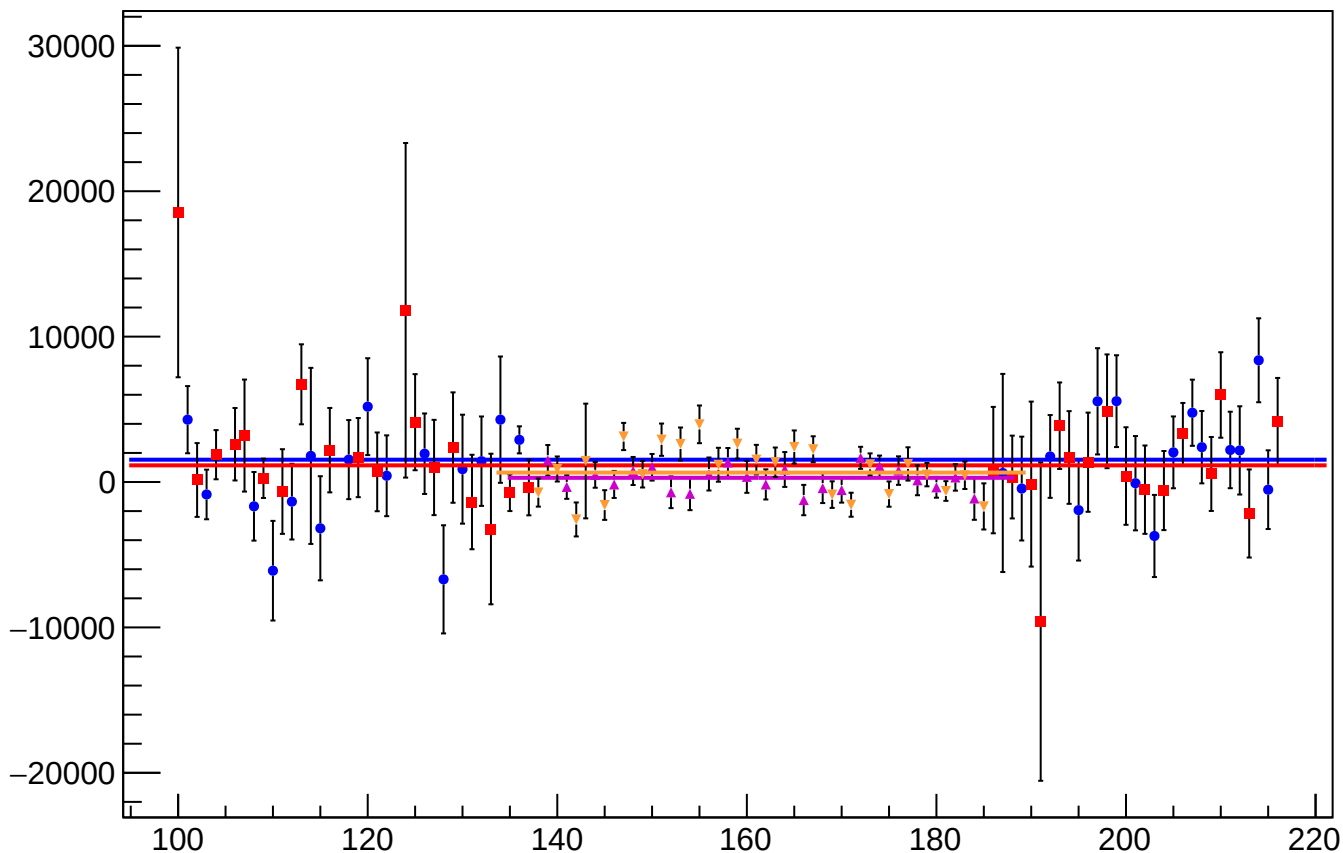
+ sign 1694.488+/-0.194     $\chi^2/\text{NDF}$ : 1019131.2/55

All: 1692.662+/-0.138     $\chi^2/\text{NDF}$ : 1908449.6/11

- sign 1690.804+/-0.196     $\chi^2/\text{NDF}$ : 889139.9/57



# asym\_at2\_dd\_cor\_correction\_mean vs Slug



Right In: 1535.236 $\pm$ 460.238  $\chi^2$ /NDF: 38.4/30

Left Out: 649.165 $\pm$ 195.673  $\chi^2$ /NDF: 65.5/24

Right Out: 1146.478 $\pm$ 454.201  $\chi^2$ /NDF: 24.0/34

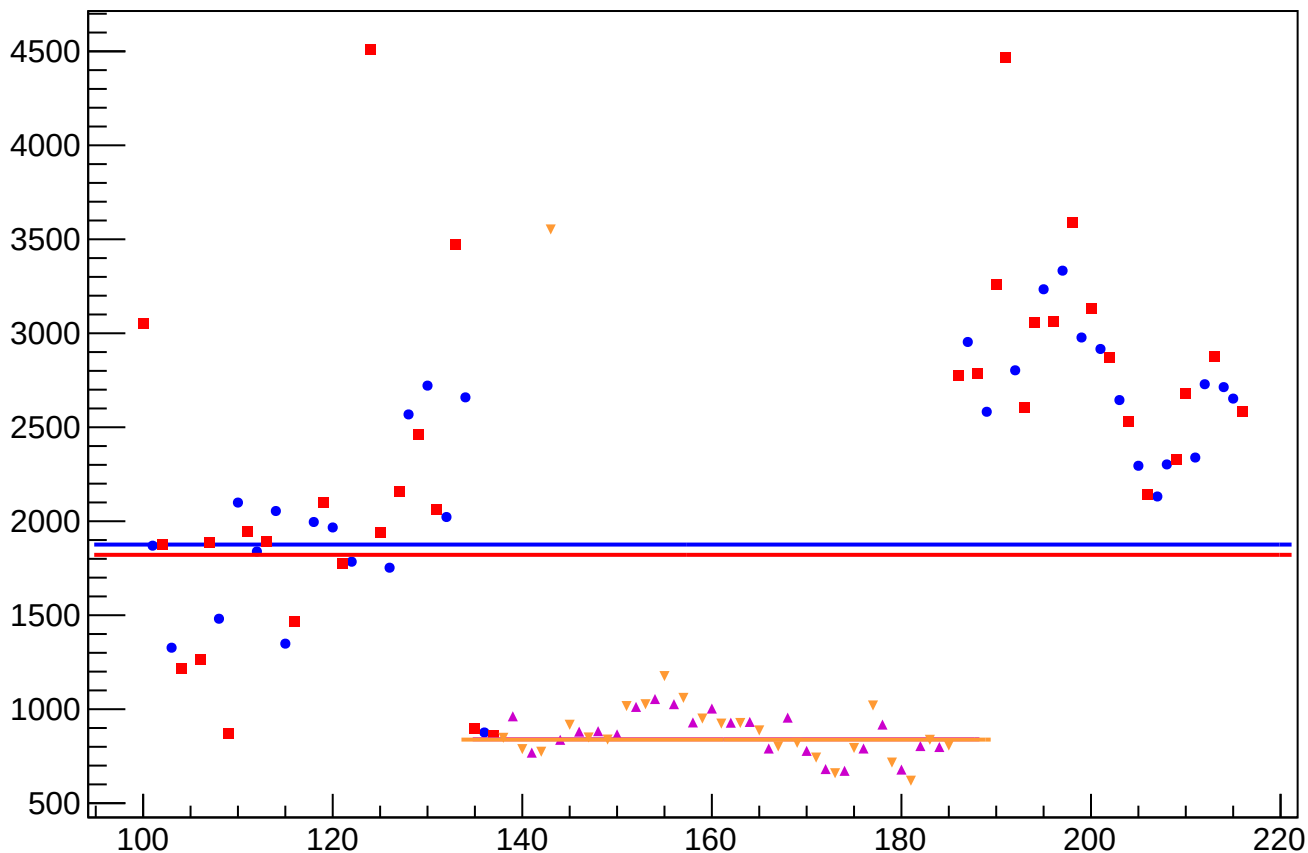
Left In: 288.602 $\pm$ 198.495  $\chi^2$ /NDF: 16.6/22

+ sign 784.810 $\pm$ 180.074  $\chi^2$ /NDF: 107.0/55

All: 607.284 $\pm$ 127.967  $\chi^2$ /NDF: 152.6/113

- sign 426.170 $\pm$ 181.884  $\chi^2$ /NDF: 43.6/57

# asym\_at2\_dd\_cor\_correction\_rms vs Slug



Right In: 1875.896 $\pm$ 0.325  $\chi^2$ /NDF: 5135558.8/30

Left Out: 838.254 $\pm$ 0.138  $\chi^2$ /NDF:1800138.0/24

Right Out: 1821.282 $\pm$ 0.321  $\chi^2$ /NDF: 6448172.0/34

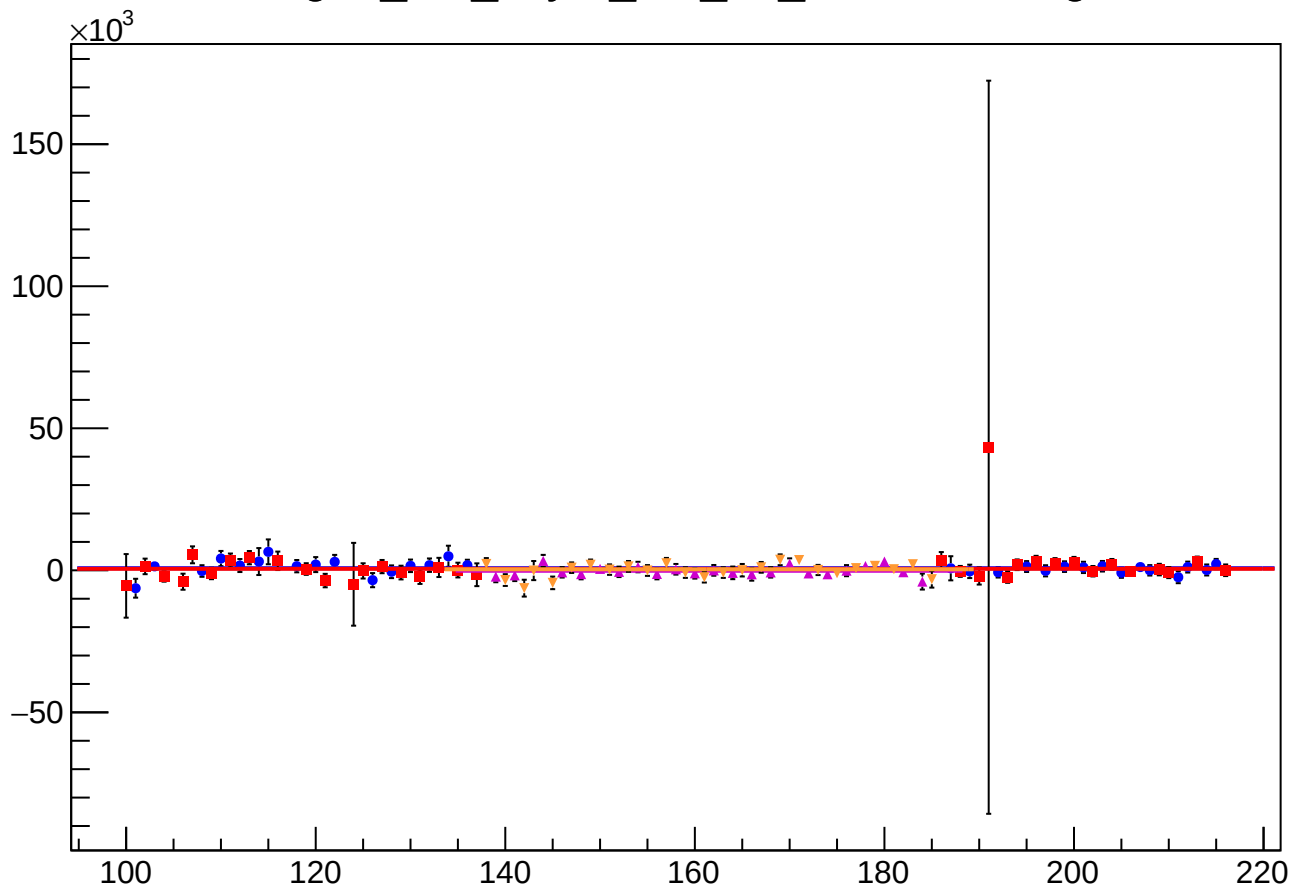
Left In: 839.978 $\pm$ 0.140  $\chi^2$ /NDF:669338.3/22

+ sign 997.102 $\pm$ 0.127  $\chi^2$ /NDF: 15545614.6/55

All: 997.220 $\pm$ 0.090  $\chi^2$ /NDF: 30501633.0/1

- sign 997.339 $\pm$ 0.129  $\chi^2$ /NDF: 14956016.7/57

# eigen\_cor\_asym\_at2\_dd\_mean vs Slug



Right In: 739.214 $\pm$ 388.008  $\chi^2/\text{NDF}$ : 20.4/30

Left Out: 361.560 $\pm$ 388.131  $\chi^2/\text{NDF}$ : 29.6/24

Right Out: 536.275 $\pm$ 389.049  $\chi^2/\text{NDF}$ : 31.1/34

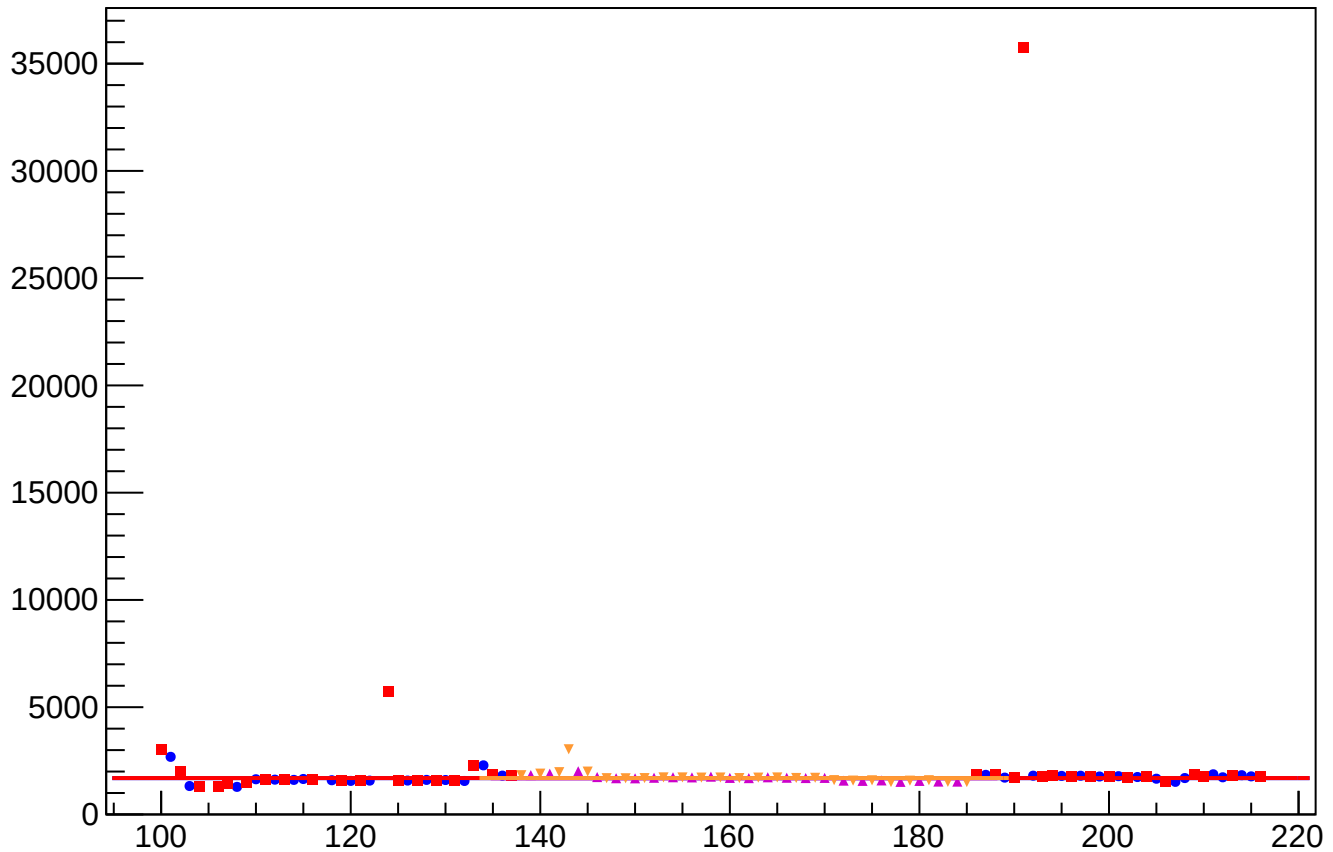
Left In: -156.934 $\pm$ 394.258  $\chi^2/\text{NDF}$ : 16.0/22

+ sign 550.447 $\pm$ 274.407  $\chi^2/\text{NDF}$ : 50.5/55

All: 373.989 $\pm$ 194.918  $\chi^2/\text{NDF}$ : 100.0/113

- sign 194.279 $\pm$ 276.922  $\chi^2/\text{NDF}$ : 48.7/57

# eigen\_cor\_asym\_at2\_dd\_rms vs Slug



Right In: 1691.481 $\pm$ 0.274  $\chi^2$ /NDF: 523493.1/30

Left Out: 1697.496 $\pm$ 0.274  $\chi^2$ /NDF: 495397.9/24

Right Out: 1696.867 $\pm$ 0.275  $\chi^2$ /NDF: 722799.6/34

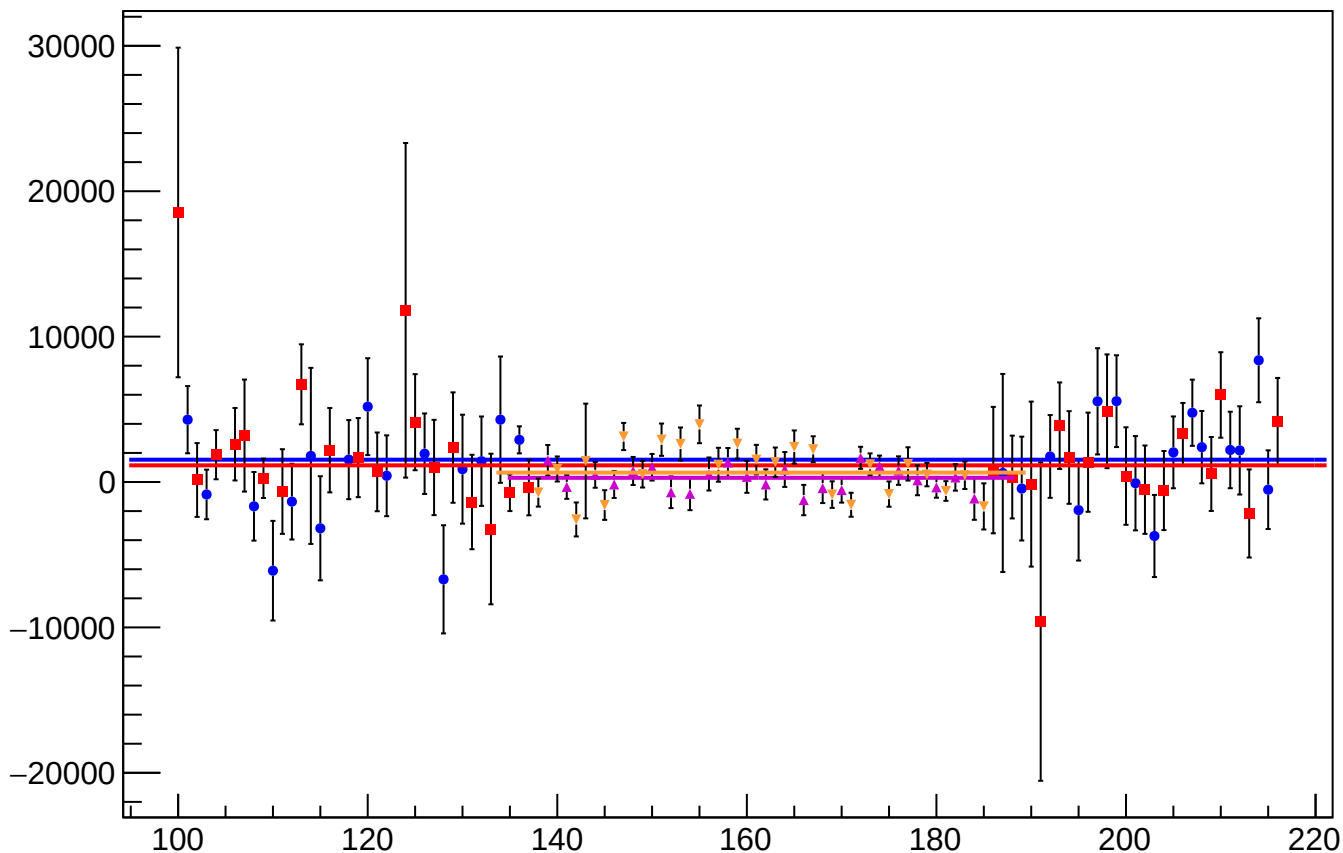
Left In: 1684.577 $\pm$ 0.279  $\chi^2$ /NDF: 165355.7/22

+ sign 1694.488 $\pm$ 0.194  $\chi^2$ /NDF: 1019131.2/55

All: 1692.662 $\pm$ 0.138  $\chi^2$ /NDF: 1908449.6/11

- sign 1690.804 $\pm$ 0.196  $\chi^2$ /NDF: 889139.9/57

asym\_at2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 1535.236 $\pm$ 460.238  $\chi^2$ /NDF: 38.4/30

Left Out: 649.165 $\pm$ 195.673  $\chi^2$ /NDF: 65.5/24

Right Out: 1146.478 $\pm$ 454.201  $\chi^2$ /NDF: 24.0/34

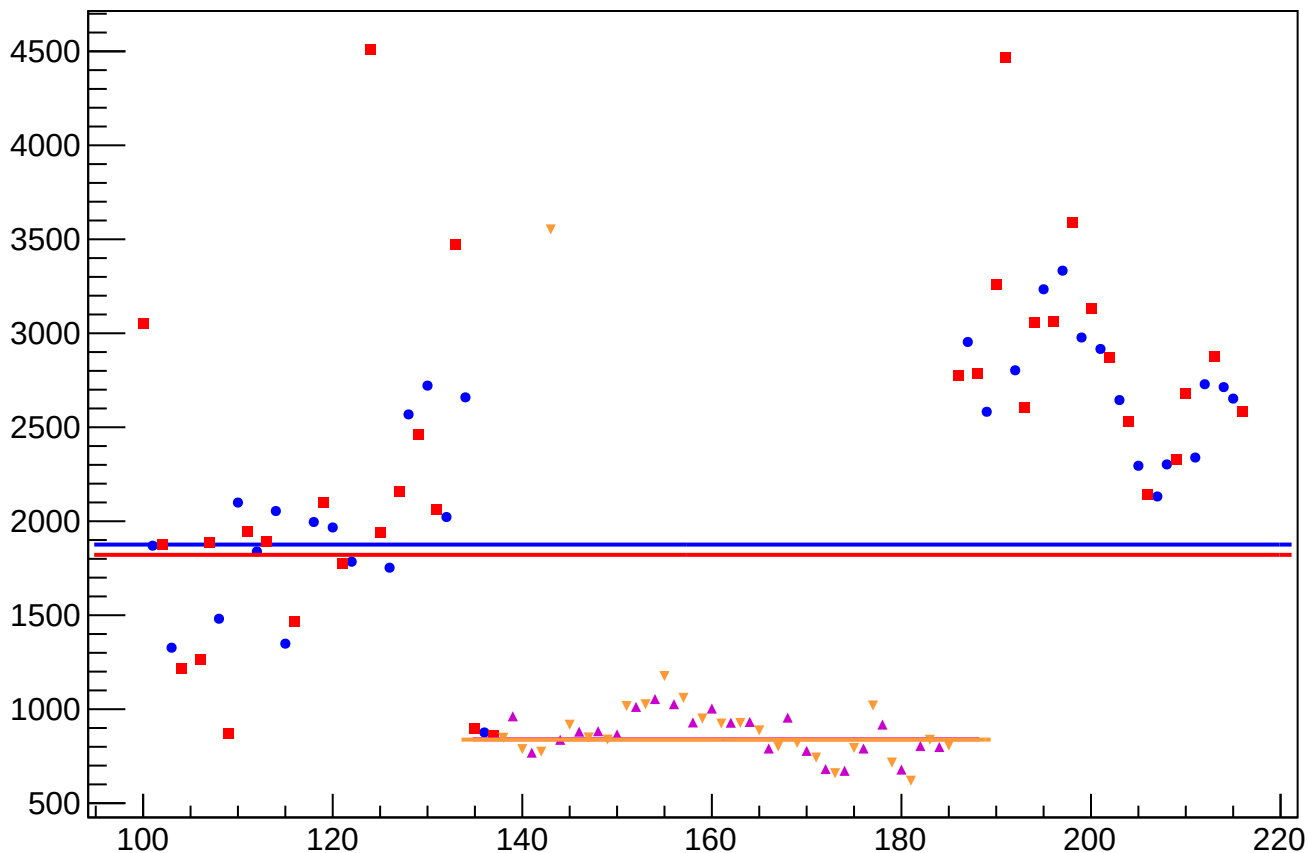
Left In: 288.602 $\pm$ 198.495  $\chi^2$ /NDF: 16.6/22

+ sign 784.810 $\pm$ 180.074  $\chi^2$ /NDF: 107.0/55

All: 607.284 $\pm$ 127.967  $\chi^2$ /NDF: 152.6/113

- sign 426.170 $\pm$ 181.884  $\chi^2$ /NDF: 43.6/57

# asym\_at2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1875.896 $\pm$ 0.325  $\chi^2$ /NDF: 5135558.8/30

Left Out: 838.254 $\pm$ 0.138  $\chi^2$ /NDF:1800138.0/24

Right Out: 1821.282 $\pm$ 0.321  $\chi^2$ /NDF: 6448172.0/34

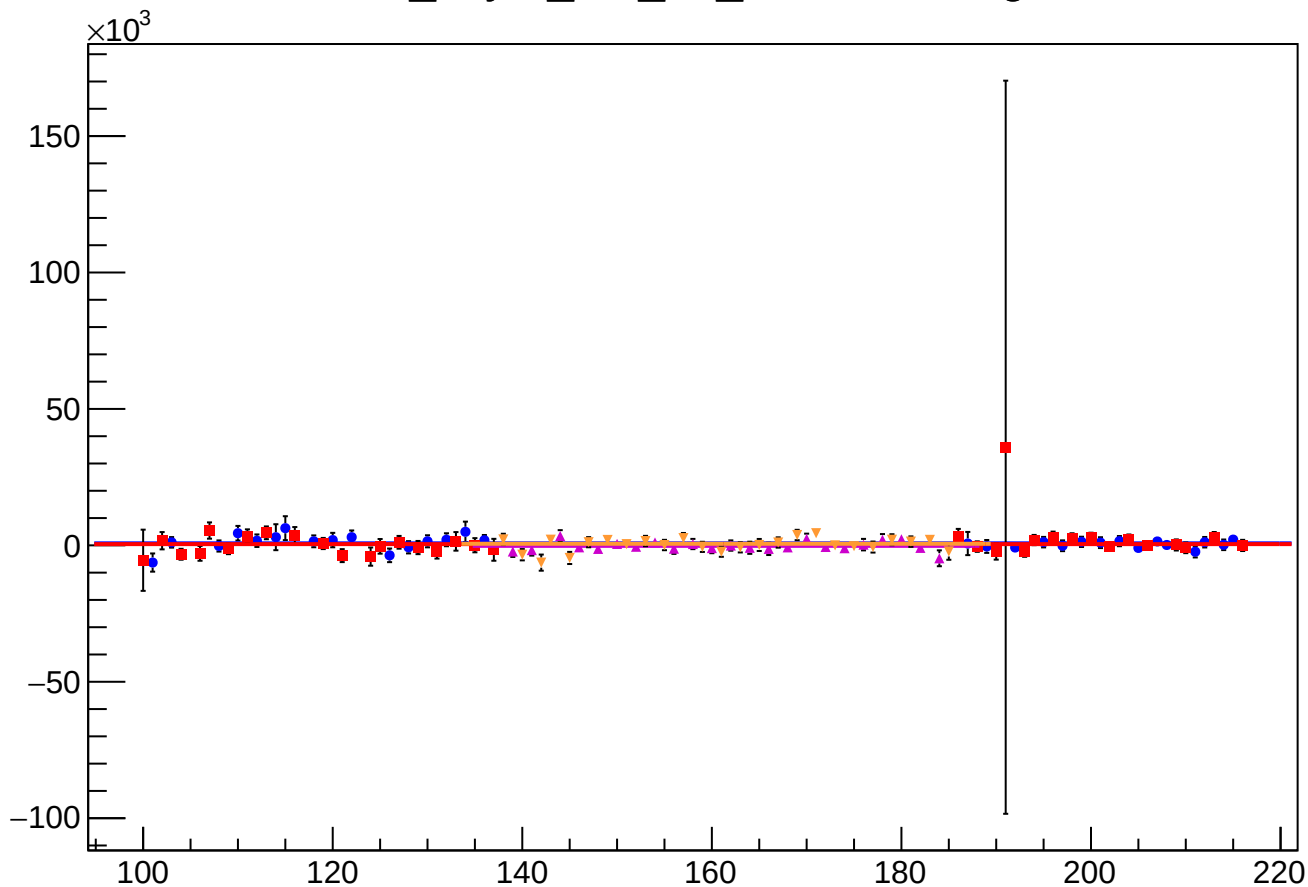
Left In: 839.978 $\pm$ 0.140  $\chi^2$ /NDF:669338.3/22

+ sign 997.102 $\pm$ 0.127  $\chi^2$ /NDF: 15545614.6/55

All: 997.220 $\pm$ 0.090  $\chi^2$ /NDF: 30501633.0/11

- sign 997.339 $\pm$ 0.129  $\chi^2$ /NDF: 14956016.7/57

# dit\_asym\_at2\_dd\_mean vs Slug



Right In:  $733.185 \pm 390.497$   $\chi^2/\text{NDF}$ : 20.8/30

Left Out:  $580.299 \pm 389.769$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $451.015 \pm 389.533$   $\chi^2/\text{NDF}$ : 33.5/34

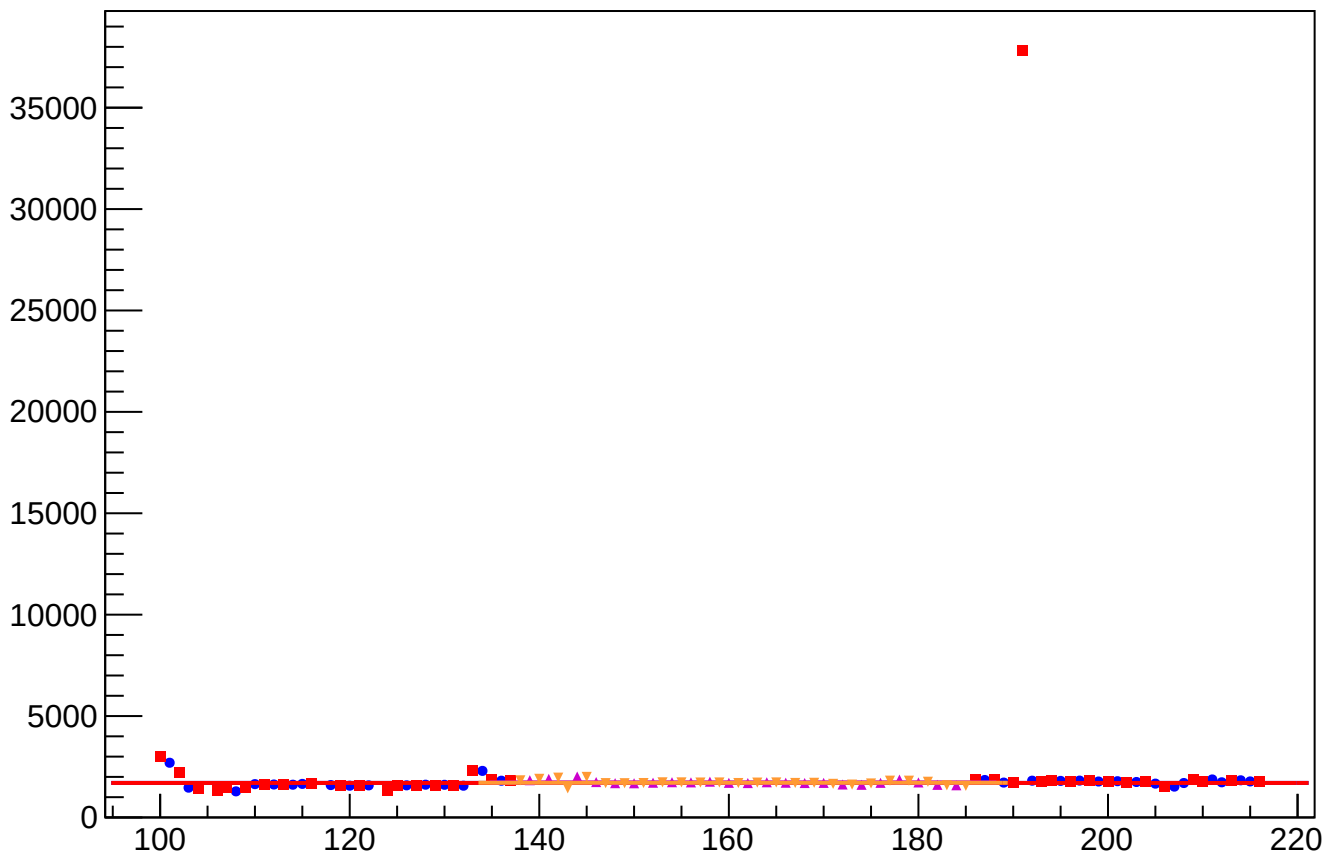
Left In:  $-185.836 \pm 404.094$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $656.600 \pm 275.865$   $\chi^2/\text{NDF}$ : 52.9/55

All:  $404.655 \pm 196.666$   $\chi^2/\text{NDF}$ : 103.7/113

- sign  $144.270 \pm 280.448$   $\chi^2/\text{NDF}$ : 49.2/57

# dit\_asym\_at2\_dd\_rms vs Slug



Right In: 1703.661 $\pm$ 0.276  $\chi^2$ /NDF: 464878.2/30

Left Out: 1711.712 $\pm$ 0.276  $\chi^2$ /NDF: 168006.4/24

Right Out: 1701.717 $\pm$ 0.275  $\chi^2$ /NDF: 582106.2/34

Left In: 1727.912 $\pm$ 0.286  $\chi^2$ /NDF: 100226.8/22

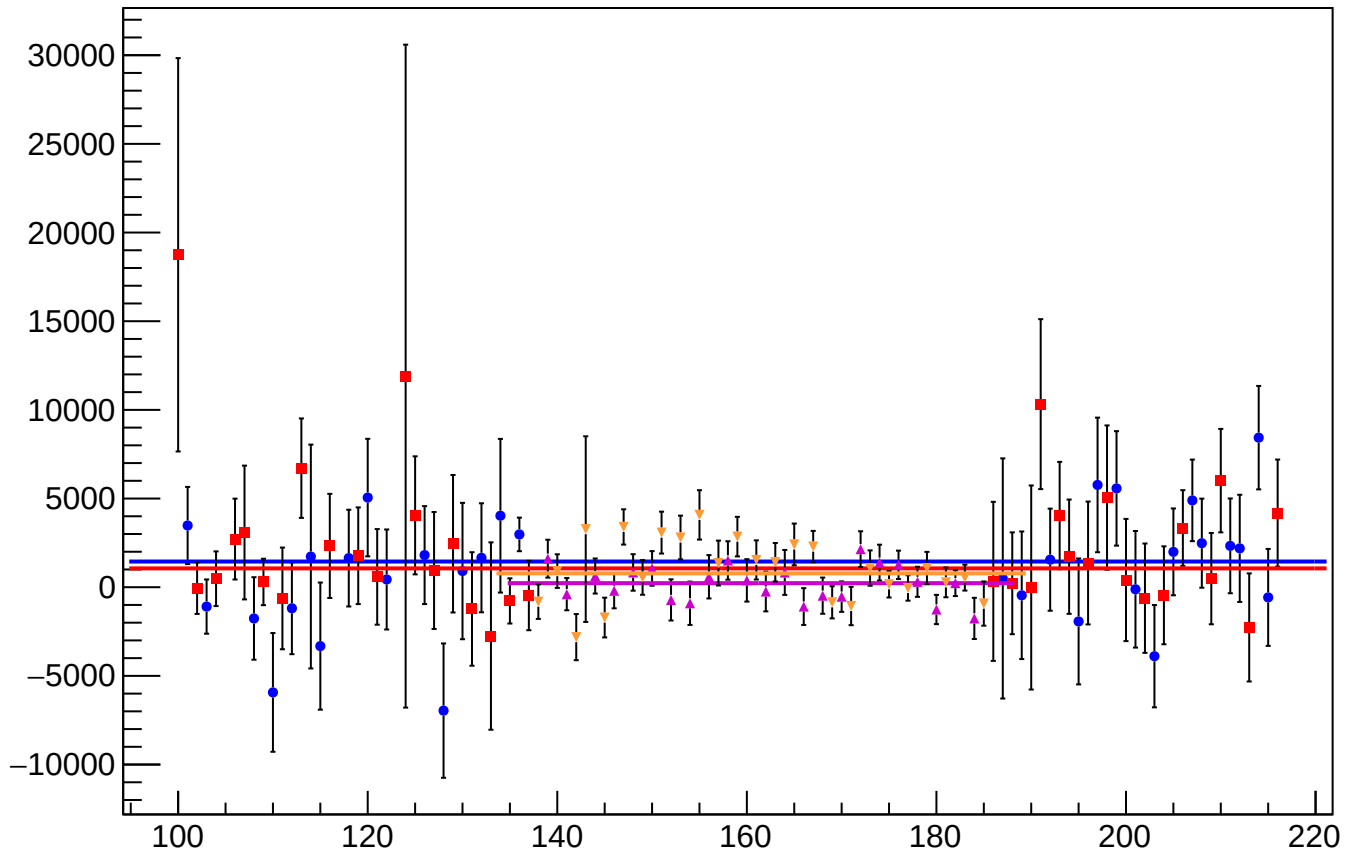
+ sign 1707.694 $\pm$ 0.195  $\chi^2$ /NDF: 633310.3/55

All: 1710.959 $\pm$ 0.139  $\chi^2$ /NDF: 1320569.6/11

- sign 1714.334 $\pm$ 0.198  $\chi^2$ /NDF: 686689.3/57



# asym\_at2\_dd\_dit\_correction\_mean vs Slug



Right In: 1448.423 $\pm$ 458.678  $\chi^2$ /NDF: 39.2/30

Left Out: 778.974 $\pm$ 201.641  $\chi^2$ /NDF: 54.5/24

Right Out: 1061.309 $\pm$ 435.628  $\chi^2$ /NDF: 27.0/34

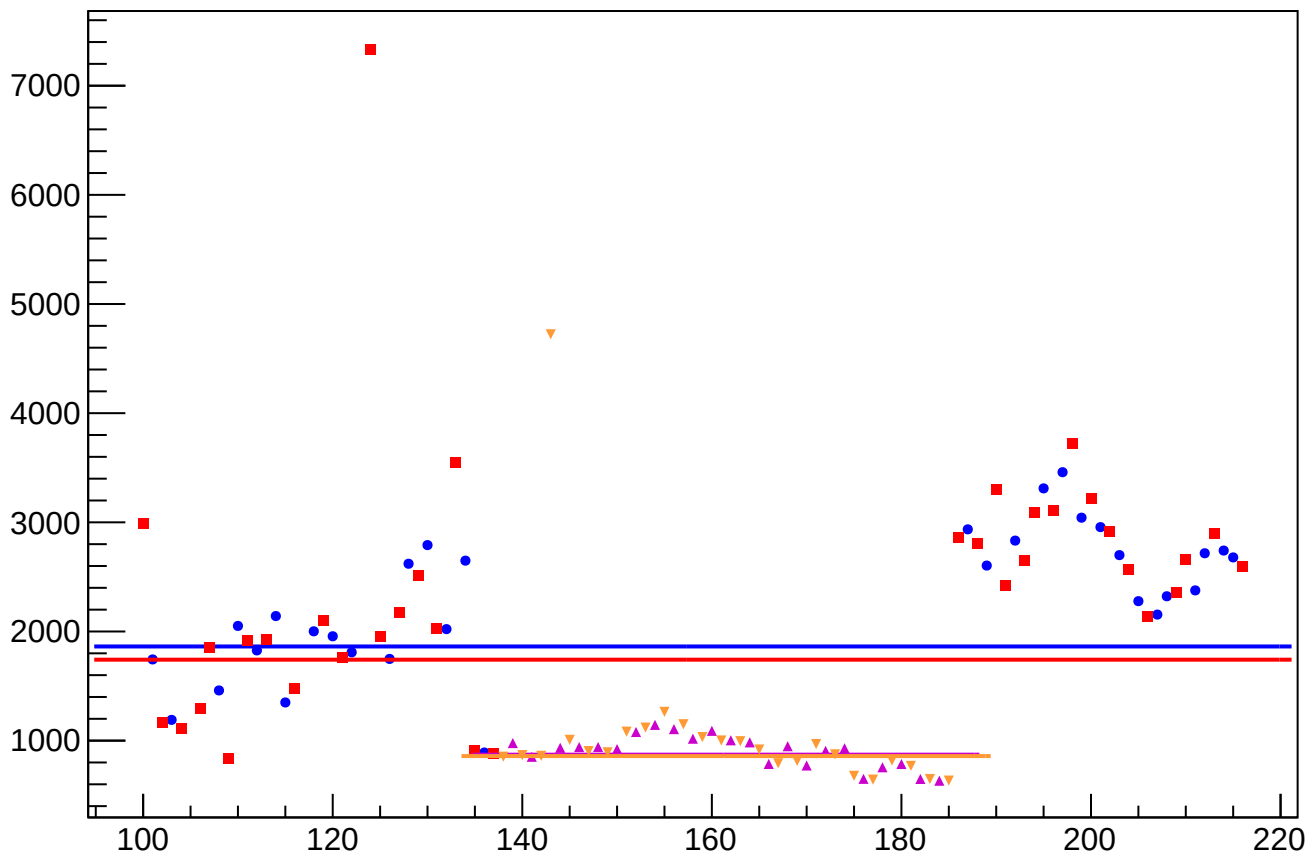
Left In: 228.879 $\pm$ 206.703  $\chi^2$ /NDF: 22.6/22

+ sign 887.397 $\pm$ 184.591  $\chi^2$ /NDF: 95.5/55

All: 637.561 $\pm$ 131.281  $\chi^2$ /NDF: 151.7/113

- sign 381.855 $\pm$ 186.747  $\chi^2$ /NDF: 52.5/57

# asym\_at2\_dd\_dit\_correction\_rms vs Slug



Right In: 1862.732 $\pm$ 0.324  $\chi^2$ /NDF: 5347217.4/30

Left Out: 858.593 $\pm$ 0.143  $\chi^2$ /NDF: 2279775.0/24

Right Out: 1741.733 $\pm$ 0.308  $\chi^2$ /NDF: 7133696.1/34

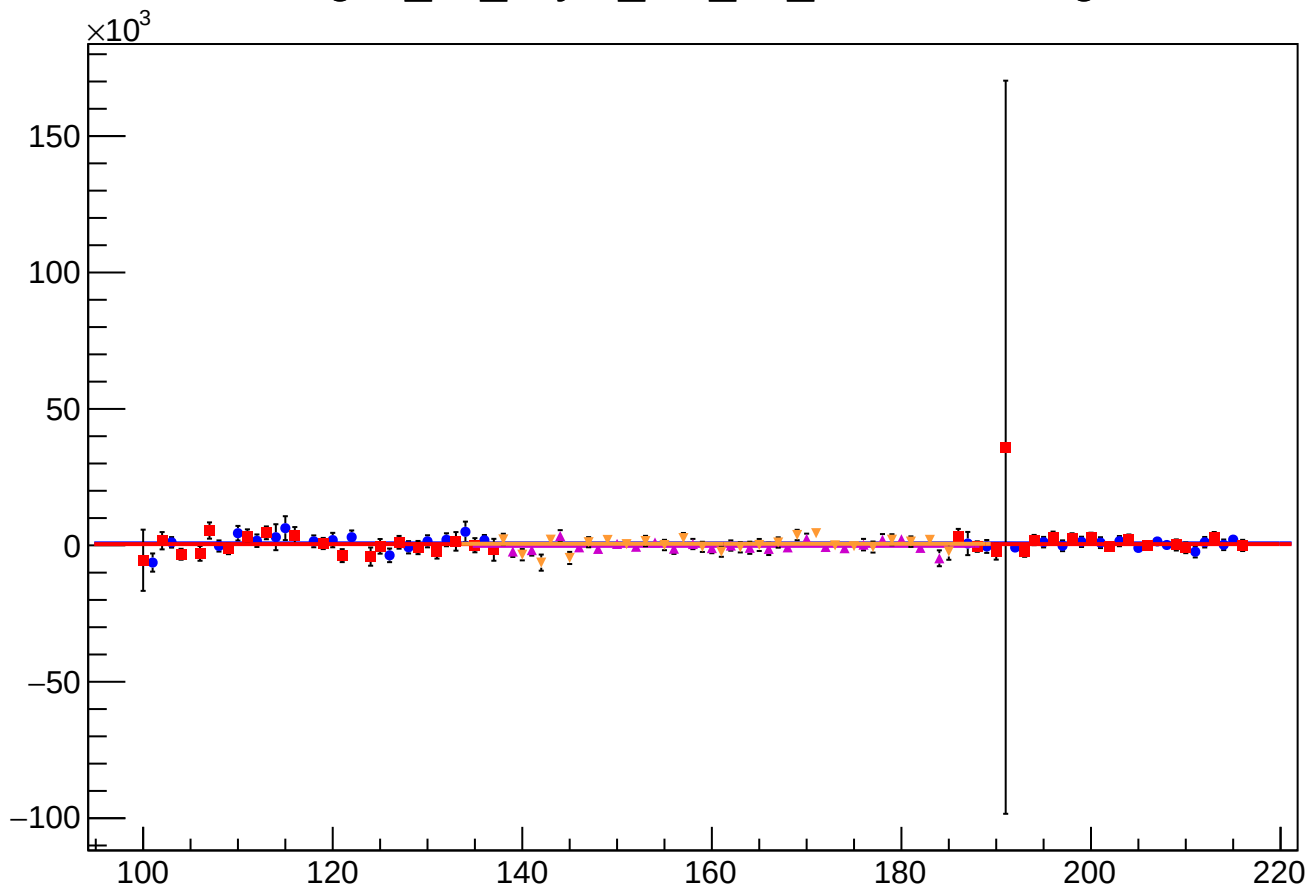
Left In: 871.527 $\pm$ 0.146  $\chi^2$ /NDF: 979356.2/22

+ sign 1021.223 $\pm$ 0.131  $\chi^2$ /NDF: 15659784.9/55

All: 1026.274 $\pm$ 0.093  $\chi^2$ /NDF: 30289988.8/100

- sign 1031.445 $\pm$ 0.132  $\chi^2$ /NDF: 14627172.7/57

# eigen\_dit\_asym\_at2\_dd\_mean vs Slug



Right In:  $733.181 \pm 390.497$   $\chi^2/\text{NDF}$ : 20.8/30

Left Out:  $580.295 \pm 389.769$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $451.011 \pm 389.533$   $\chi^2/\text{NDF}$ : 33.5/34

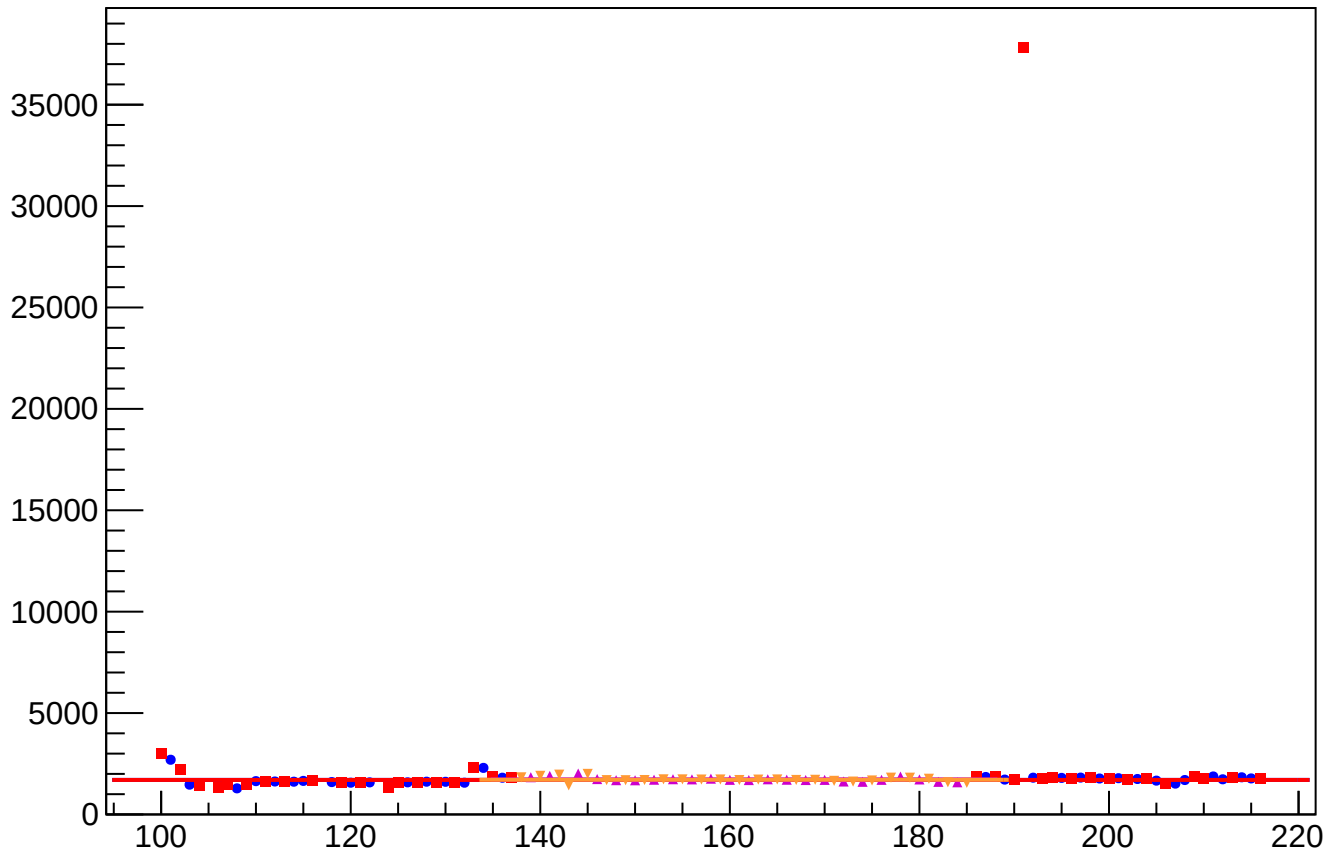
Left In:  $-185.837 \pm 404.094$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $656.595 \pm 275.865$   $\chi^2/\text{NDF}$ : 52.9/55

All:  $404.651 \pm 196.666$   $\chi^2/\text{NDF}$ : 103.7/113

- sign  $144.268 \pm 280.448$   $\chi^2/\text{NDF}$ : 49.2/57

# eigen\_dit\_asym\_at2\_dd\_rms vs Slug



Right In: 1703.661+/-0.276  $\chi^2/\text{NDF}$ : 464878.0/30

Left Out: 1711.711+/-0.276  $\chi^2/\text{NDF}$ : 168005.1/24

Right Out: 1701.717+/-0.275  $\chi^2/\text{NDF}$ : 582106.4/34

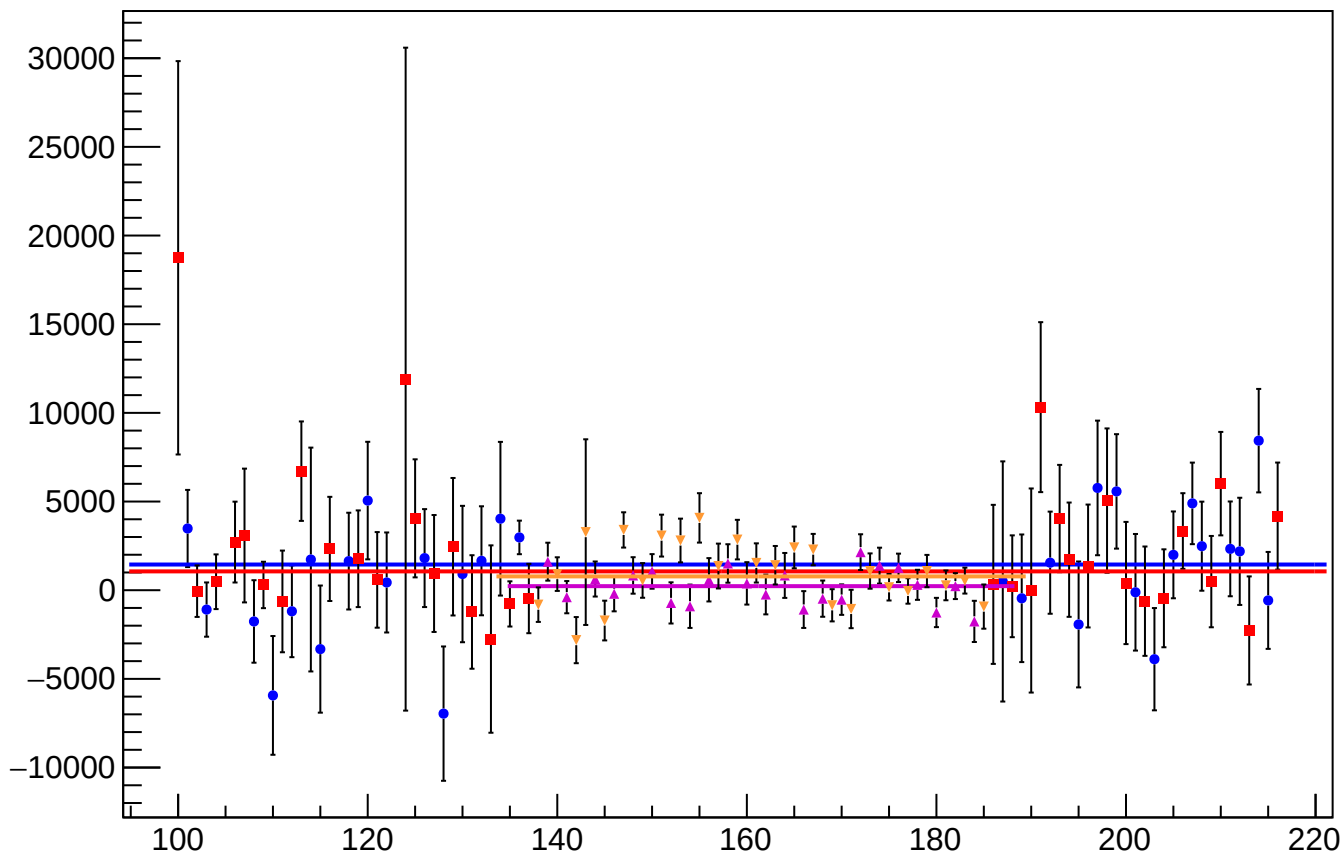
Left In: 1727.912+/-0.286  $\chi^2/\text{NDF}$ : 100226.8/22

+ sign 1707.694+/-0.195  $\chi^2/\text{NDF}$ : 633309.0/55

All: 1710.959+/-0.139  $\chi^2/\text{NDF}$ : 1320568.2/11

- sign 1714.334+/-0.198  $\chi^2/\text{NDF}$ : 686689.4/57

asym\_at2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 1448.421 $\pm$ 458.680  $\chi^2$ /NDF: 39.2/30

Left Out: 778.977 $\pm$ 201.641  $\chi^2$ /NDF: 54.5/24

Right Out: 1061.321 $\pm$ 435.630  $\chi^2$ /NDF: 27.0/34

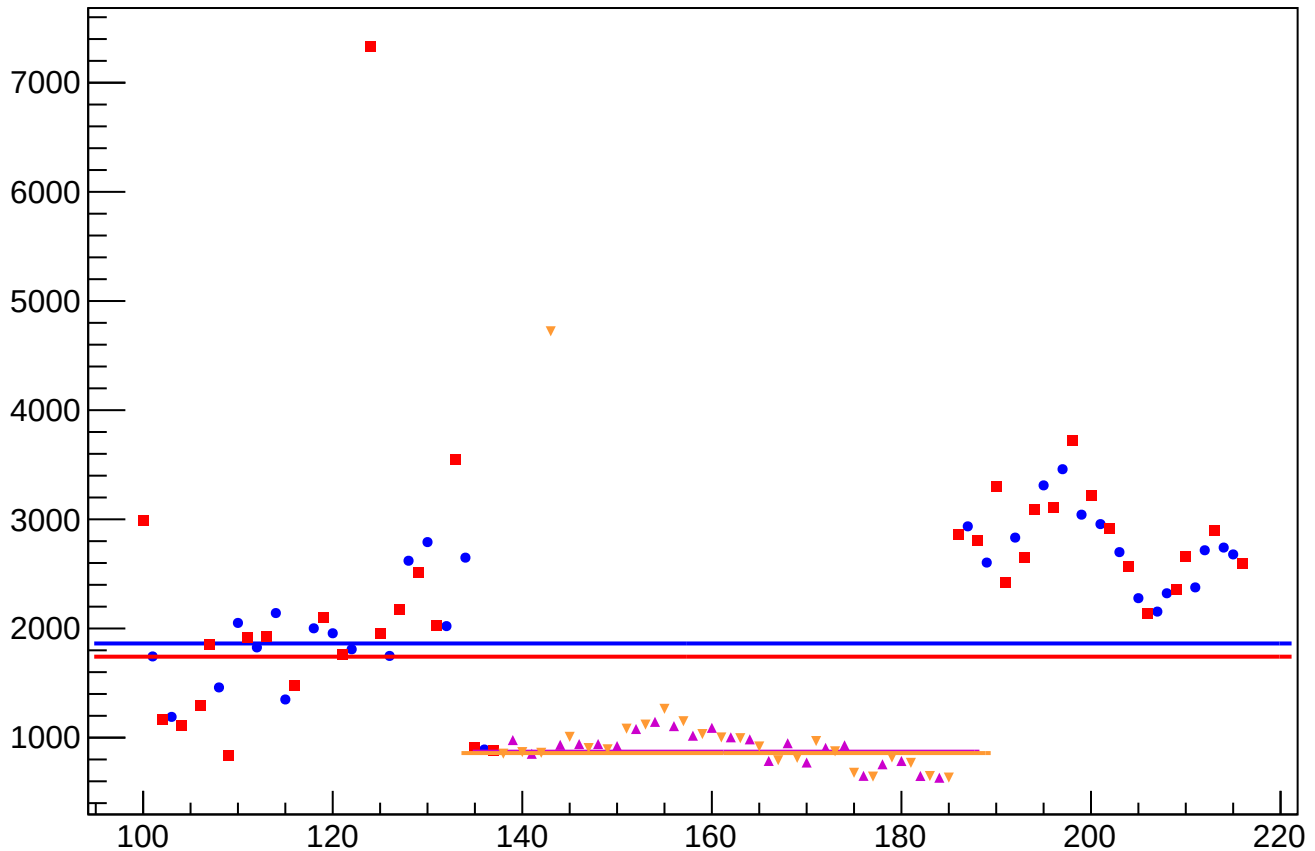
Left In: 228.876 $\pm$ 206.703  $\chi^2$ /NDF: 22.6/22

+ sign 887.399 $\pm$ 184.592  $\chi^2$ /NDF: 95.5/55

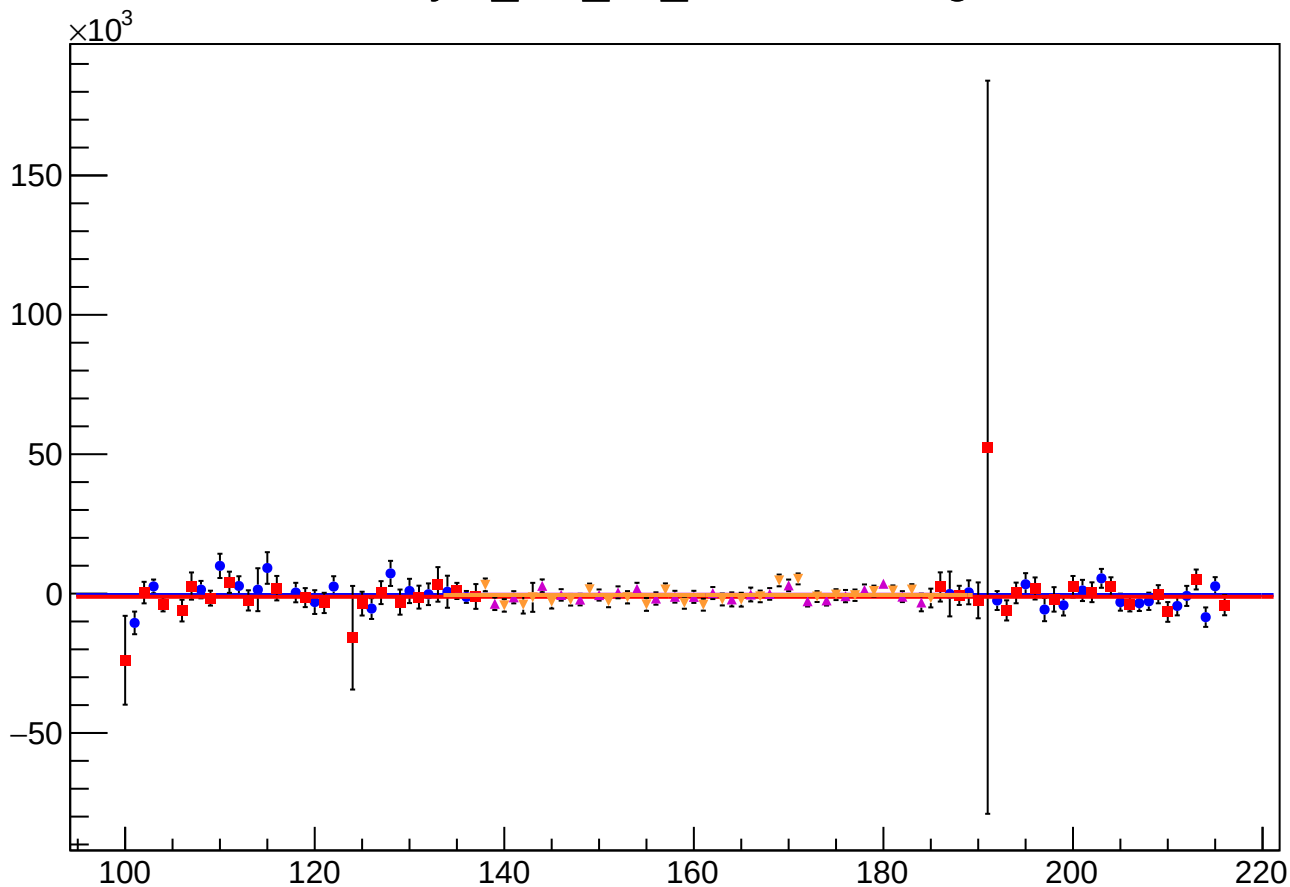
All: 637.561 $\pm$ 131.281  $\chi^2$ /NDF: 151.7/113

- sign 381.854 $\pm$ 186.747  $\chi^2$ /NDF: 52.5/57

# asym\_at2\_dd\_eigen\_dit\_correction\_rms vs Slug



# asym\_at2\_dd\_mean vs Slug



Right In: -513.023+/-645.895  $\chi^2/\text{NDF}$ : 40.7/30

Left Out: -501.517+/-439.916  $\chi^2/\text{NDF}$ : 35.9/24

Right Out: -1146.487+/-647.976  $\chi^2/\text{NDF}$ : 23.6/34

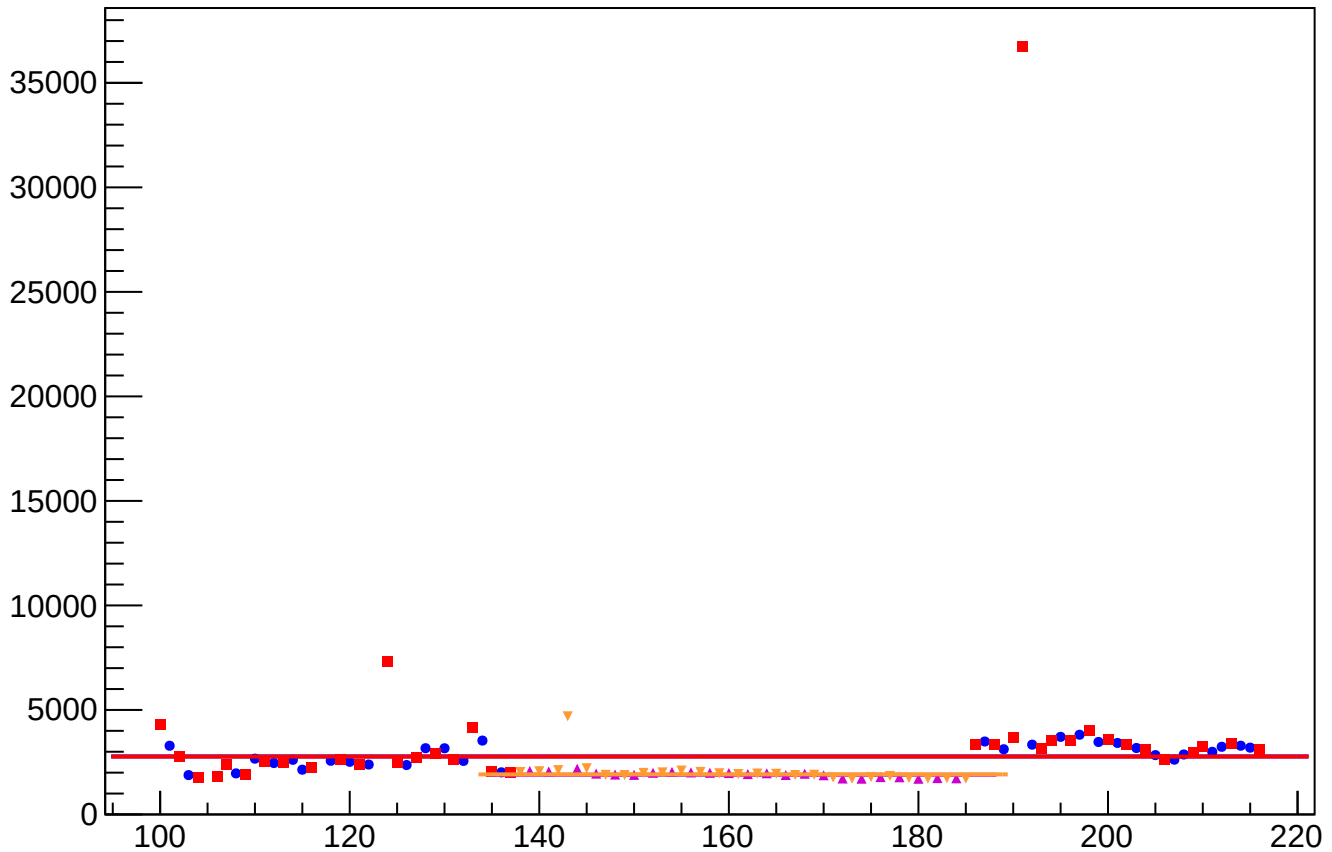
Left In: -411.323+/-444.573  $\chi^2/\text{NDF}$ : 18.9/22

+ sign -505.163+/-363.593  $\chi^2/\text{NDF}$ : 76.6/55

All: -575.313+/-258.151  $\chi^2/\text{NDF}$ : 120.0/113

- sign -646.623+/-366.587  $\chi^2/\text{NDF}$ : 43.3/57

# asym\_at2\_dd\_rms vs Slug



Right In: 2777.097 $\pm$ 0.457  $\chi^2$ /NDF: 1458152.1/30

Left Out: 1917.157 $\pm$ 0.311  $\chi^2$ /NDF: 756385.6/24

Right Out: 2768.329 $\pm$ 0.458  $\chi^2$ /NDF: 2087368.3/34

Left In: 1899.245 $\pm$ 0.314  $\chi^2$ /NDF: 173376.4/22

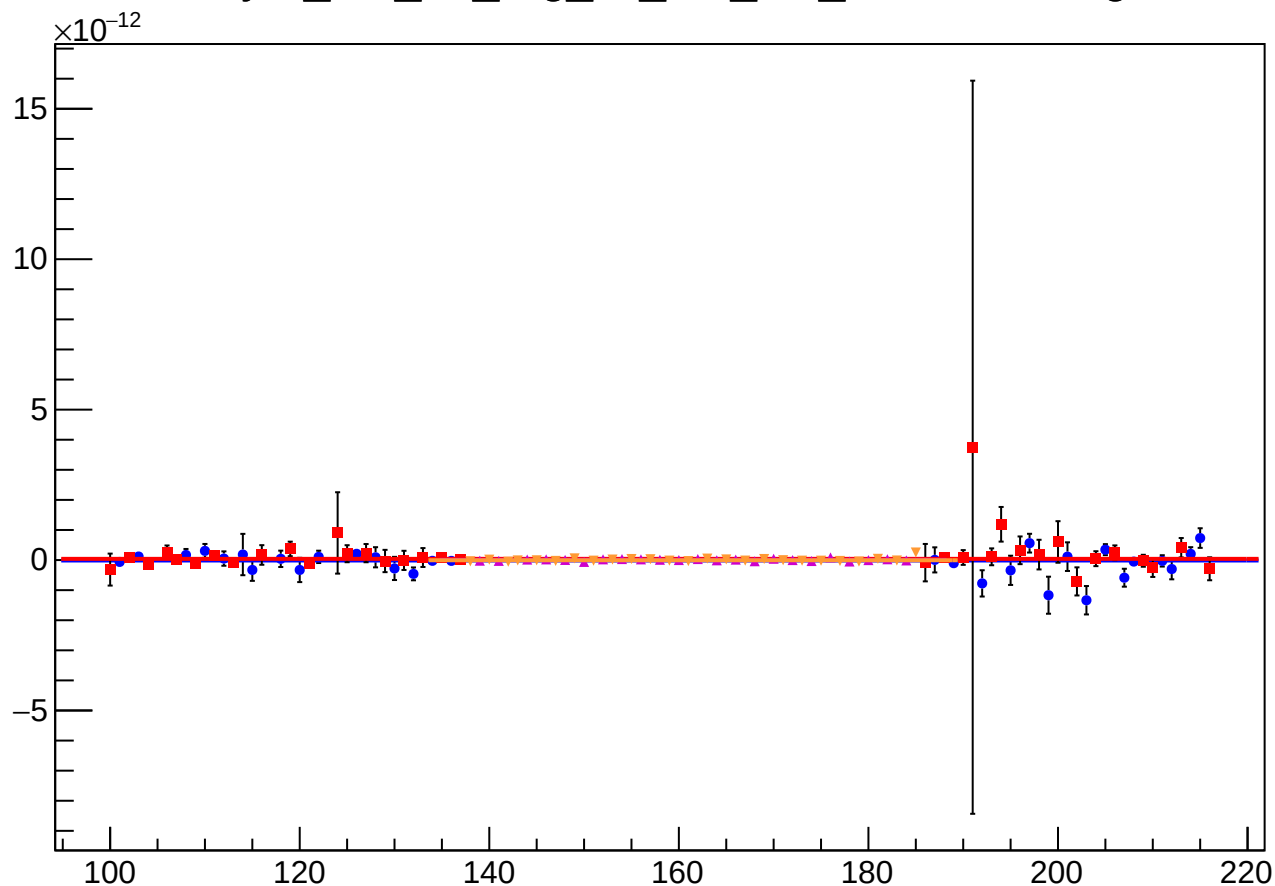
+ sign 2189.663 $\pm$ 0.257  $\chi^2$ /NDF: 4636310.3/55

All: 2183.587 $\pm$ 0.183  $\chi^2$ /NDF: 9344465.8/11

- sign 2177.409 $\pm$ 0.259  $\chi^2$ /NDF: 4707029.1/57



asym\_at2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 48.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.1/34

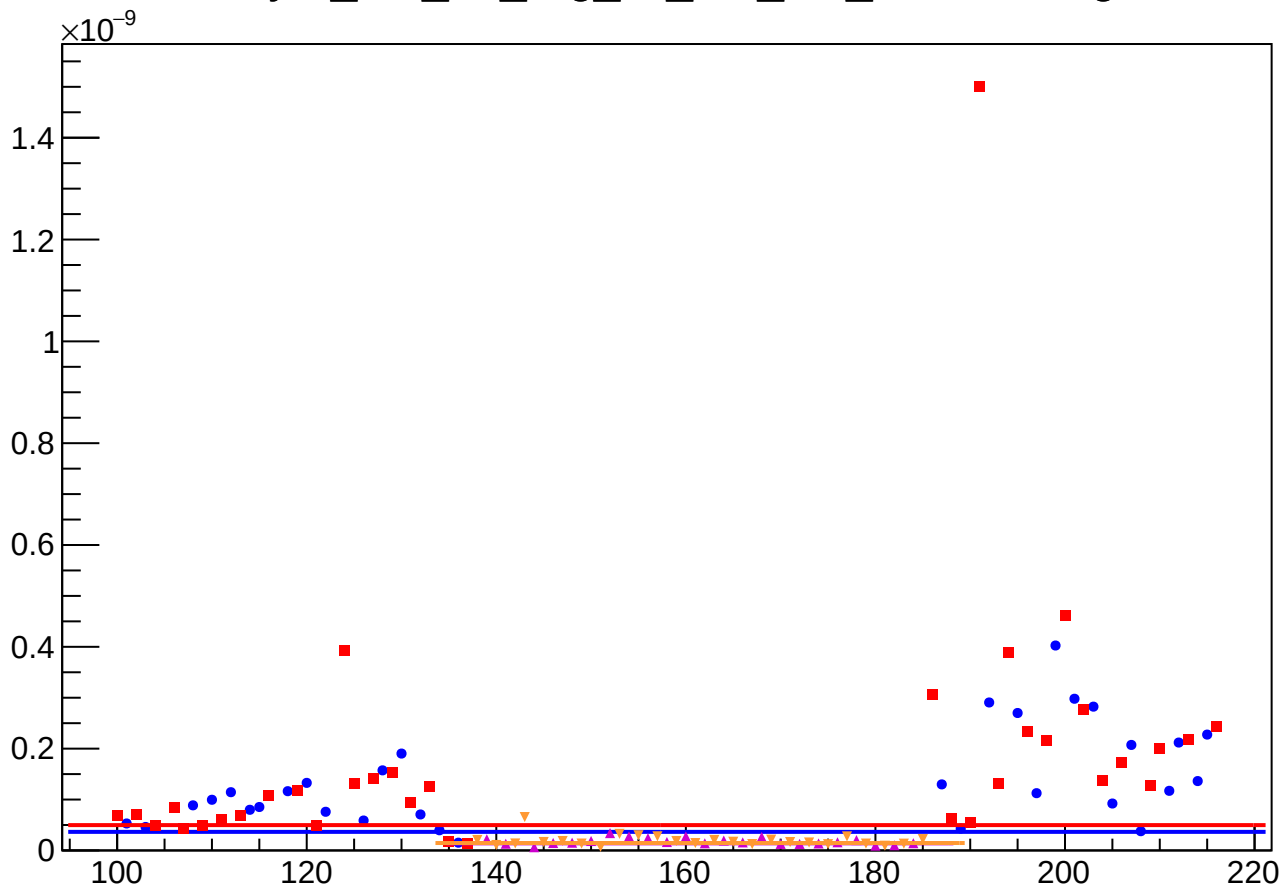
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 76.8/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 134.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.7/57

# asym\_at2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9102204.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1874636.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 8457596.8/34

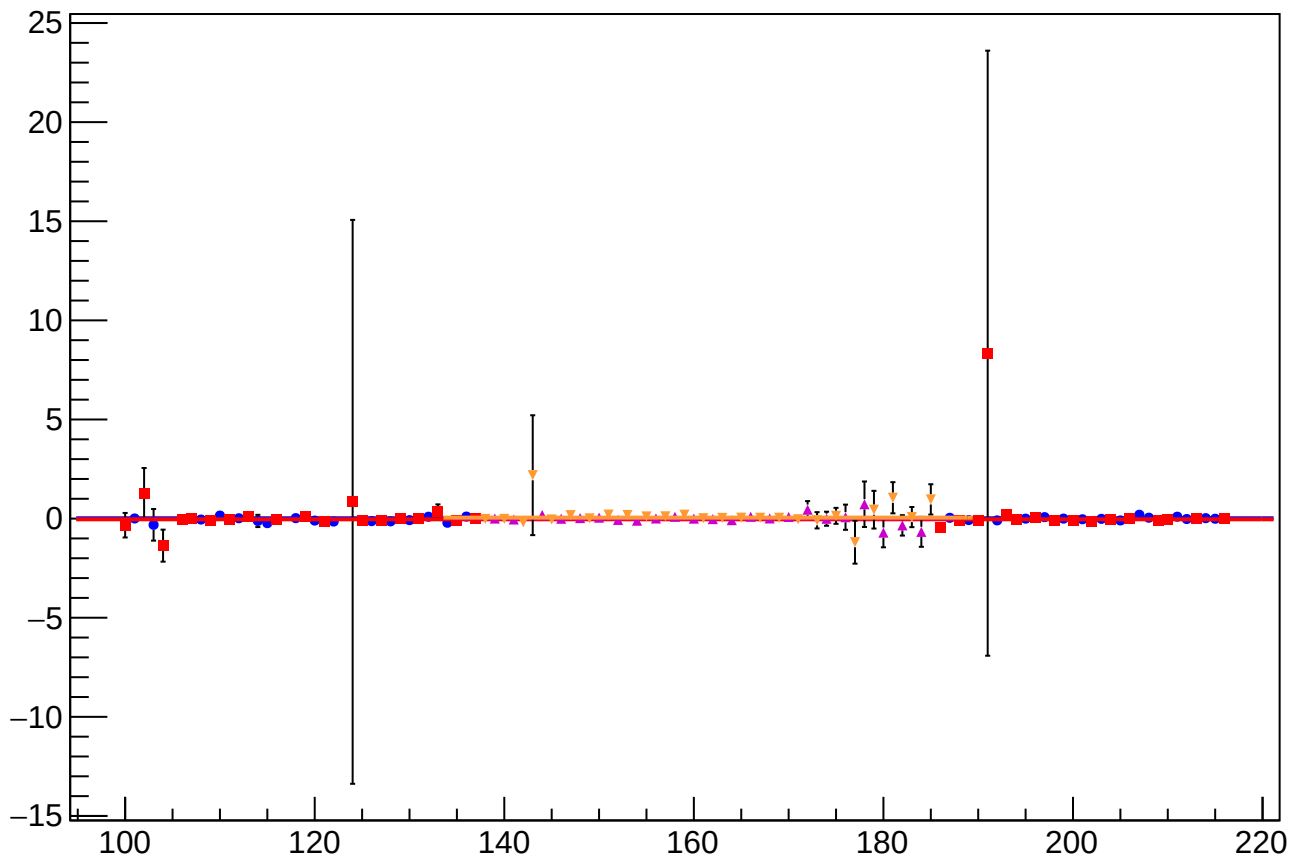
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1944578.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13039222.3/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27058345.9/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14010594.4/57

# asym\_at2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.016$   $\chi^2/\text{NDF}$ : 30.6/30

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.035 \pm 0.016$   $\chi^2/\text{NDF}$ : 25.9/34

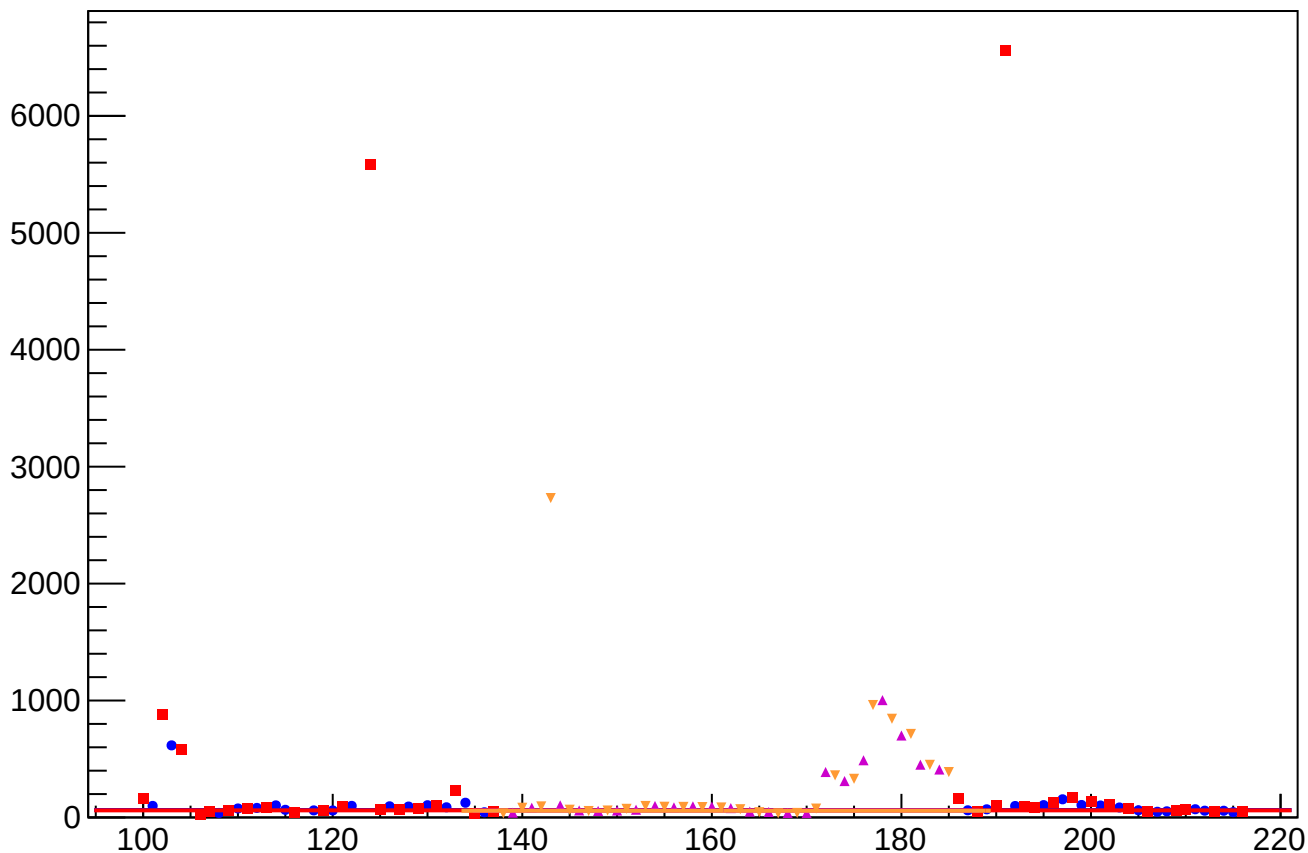
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.032 \pm 0.012$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $0.012 \pm 0.008$   $\chi^2/\text{NDF}$ : 109.9/113

- sign  $-0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 46.6/57

# asym\_at2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 63.672+/-0.012  $\chi^2$ /NDF: 4553916.0/30

Left Out: 57.259+/-0.012  $\chi^2$ /NDF: 12322019.7/24

Right Out: 60.790+/-0.011  $\chi^2$ /NDF: 7371399.5/34

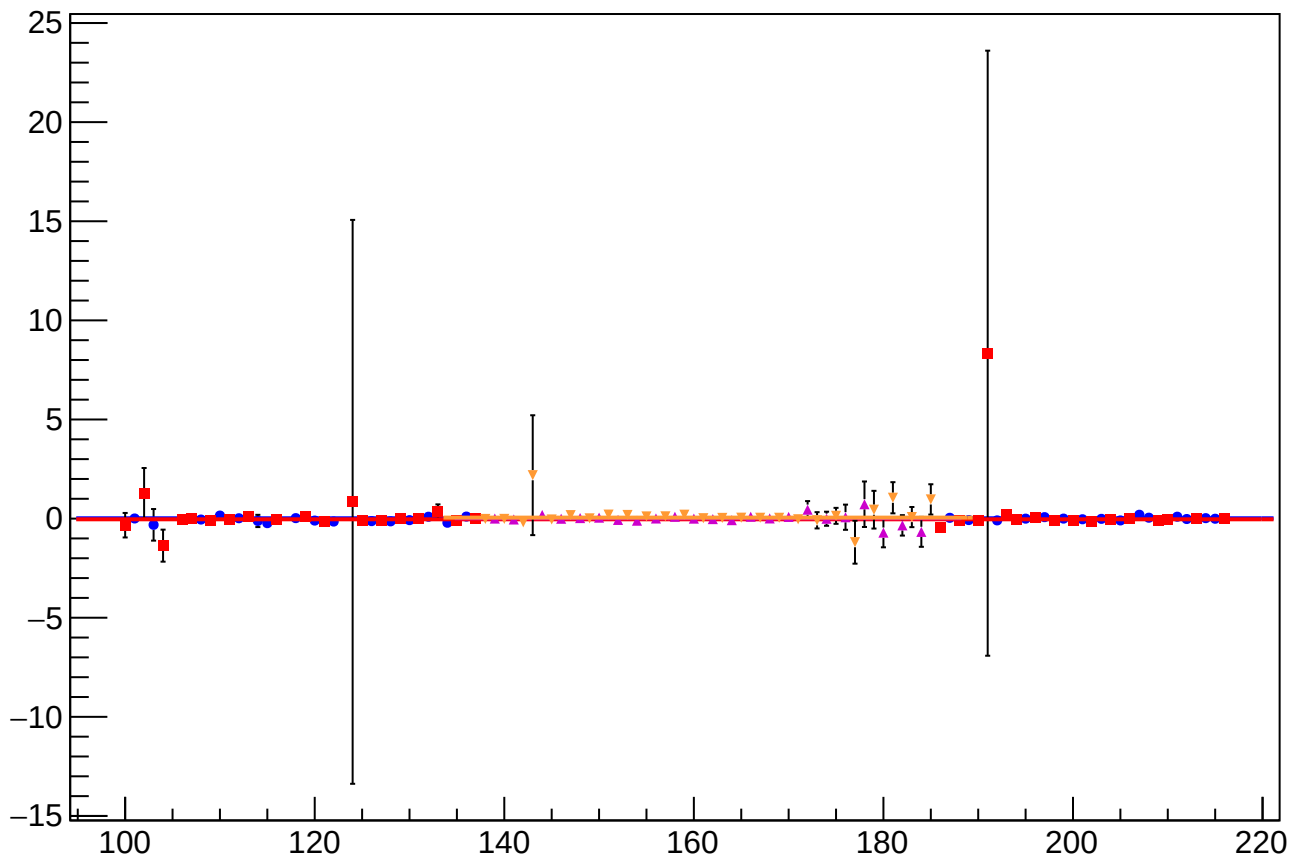
Left In: 58.580+/-0.012  $\chi^2$ /NDF: 10247660.0/22

+ sign 60.608+/-0.008  $\chi^2$ /NDF: 17024048.4/55

All: 60.176+/-0.006  $\chi^2$ /NDF: 34666019.9/113

- sign 59.743+/-0.008  $\chi^2$ /NDF: 17636585.2/57

asym\_at2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.016 $\pm$ 0.016  $\chi^2$ /NDF: 30.6/30

Left Out: 0.050 $\pm$ 0.017  $\chi^2$ /NDF:24.5/24

Right Out: -0.035 $\pm$ 0.016  $\chi^2$ /NDF: 25.9/34

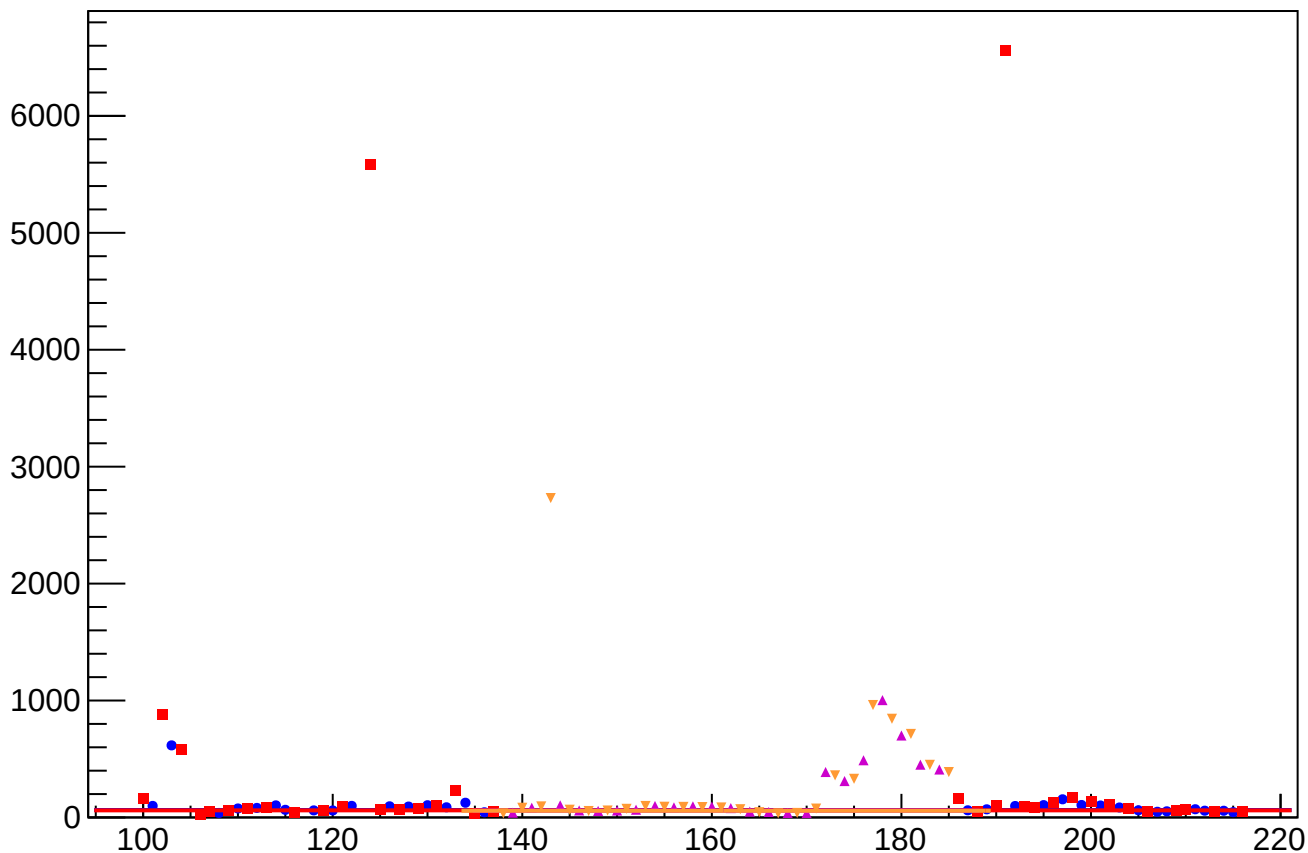
Left In: 0.019 $\pm$ 0.017  $\chi^2$ /NDF:15.4/22

+ sign 0.032 $\pm$ 0.012  $\chi^2$ /NDF: 57.1/55

All: 0.012 $\pm$ 0.008  $\chi^2$ /NDF: 109.9/113

- sign -0.009 $\pm$ 0.012  $\chi^2$ /NDF: 46.6/57

# asym\_at2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 63.672 $\pm$ 0.012  $\chi^2$ /NDF: 4553916.0/30

Left Out: 57.259 $\pm$ 0.012  $\chi^2$ /NDF: 12322019.7/24

Right Out: 60.790 $\pm$ 0.011  $\chi^2$ /NDF: 7371399.5/34

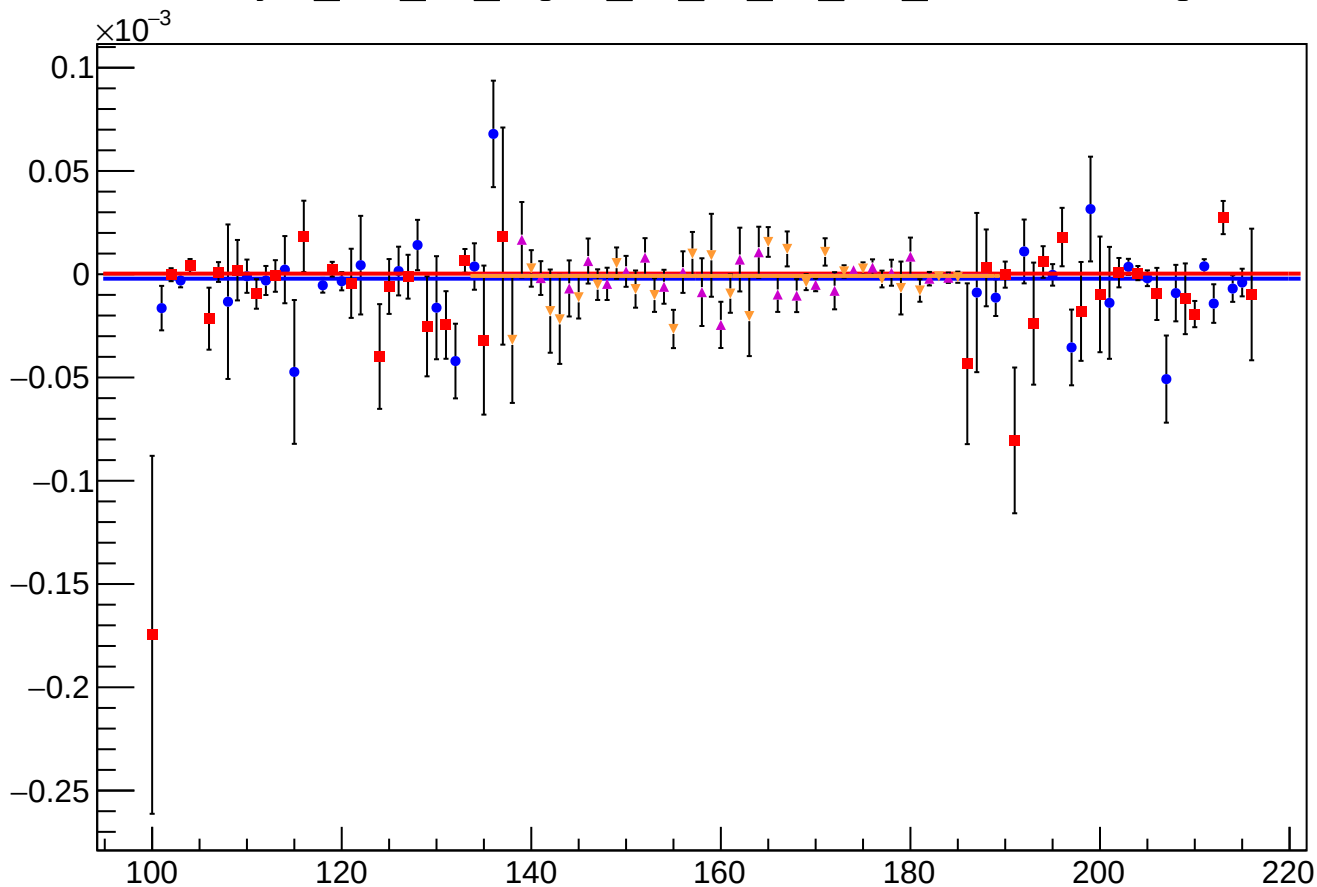
Left In: 58.580 $\pm$ 0.012  $\chi^2$ /NDF: 10247660.0/22

+ sign 60.608 $\pm$ 0.008  $\chi^2$ /NDF: 17024048.4/55

All: 60.176 $\pm$ 0.006  $\chi^2$ /NDF: 34666019.9/113

- sign 59.743 $\pm$ 0.008  $\chi^2$ /NDF: 17636585.2/57

asym\_at2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 39.6/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 51.4/34

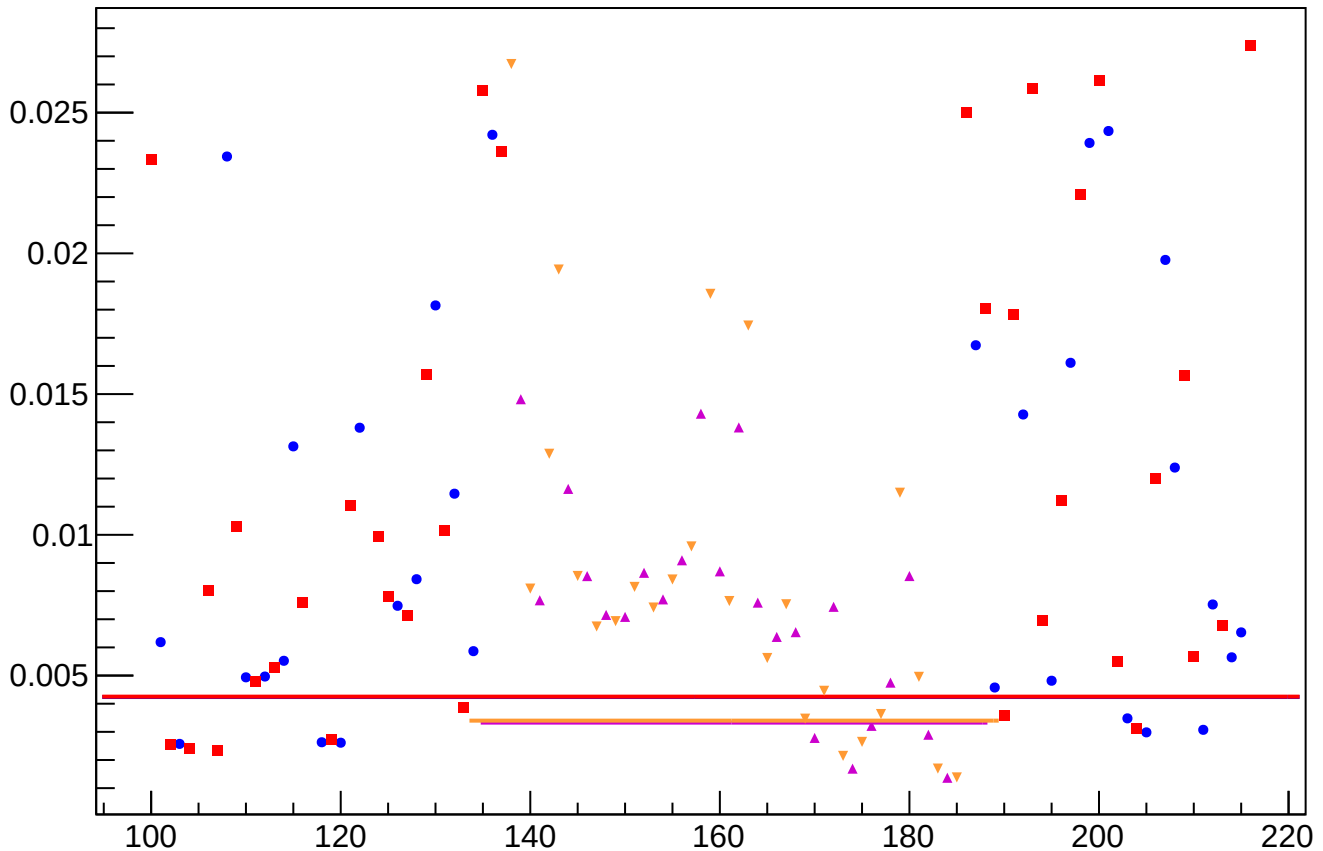
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.8/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 73.1/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 144.5/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 70.6/57

asym\_at2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 11965910.6/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:14248948.0/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 14408418.0/34

Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:12566501.1/22

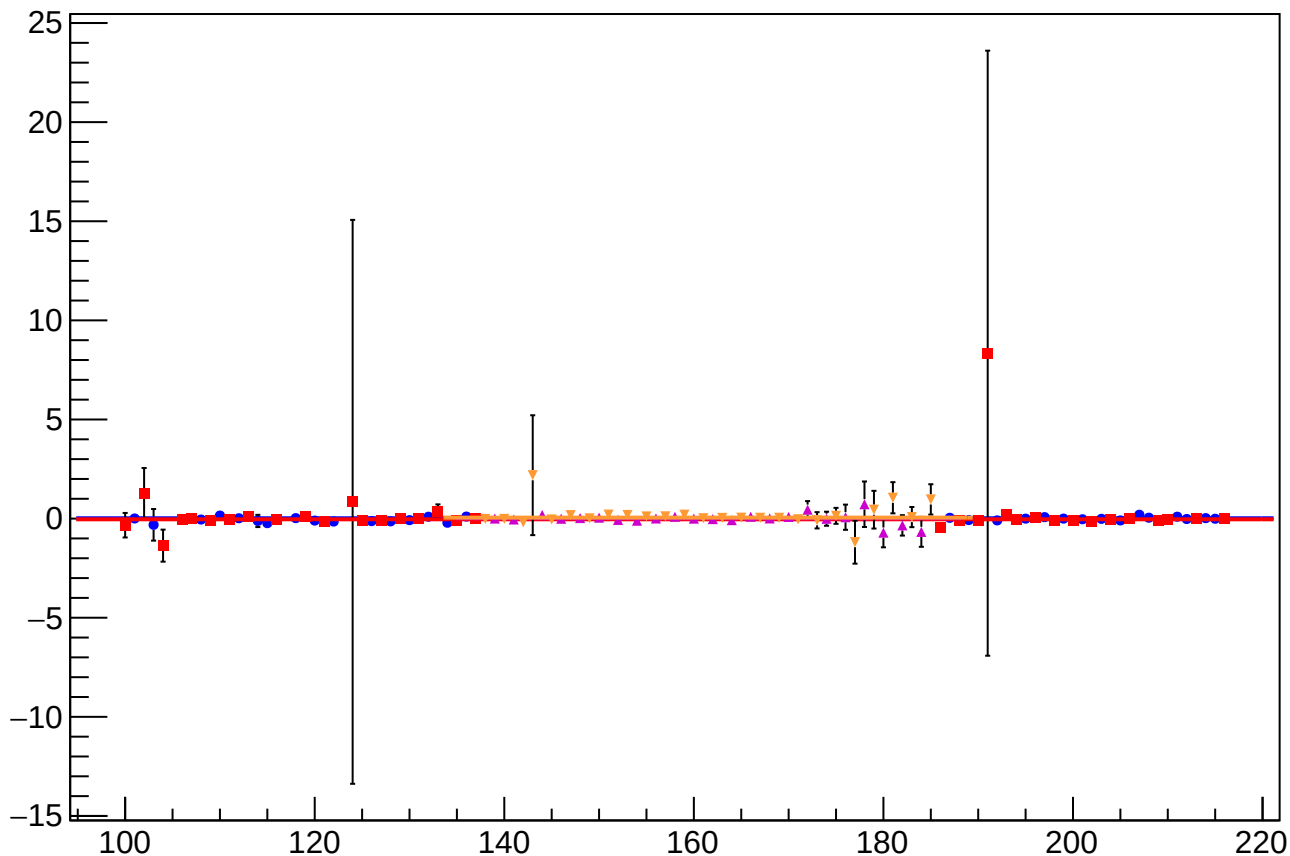
+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 26757037.6/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 54369355.6/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 27610668.9/57



asym\_at2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.016 $\pm$ 0.016  $\chi^2$ /NDF: 30.6/30

Left Out: 0.050 $\pm$ 0.017  $\chi^2$ /NDF:24.5/24

Right Out: -0.035 $\pm$ 0.016  $\chi^2$ /NDF: 25.9/34

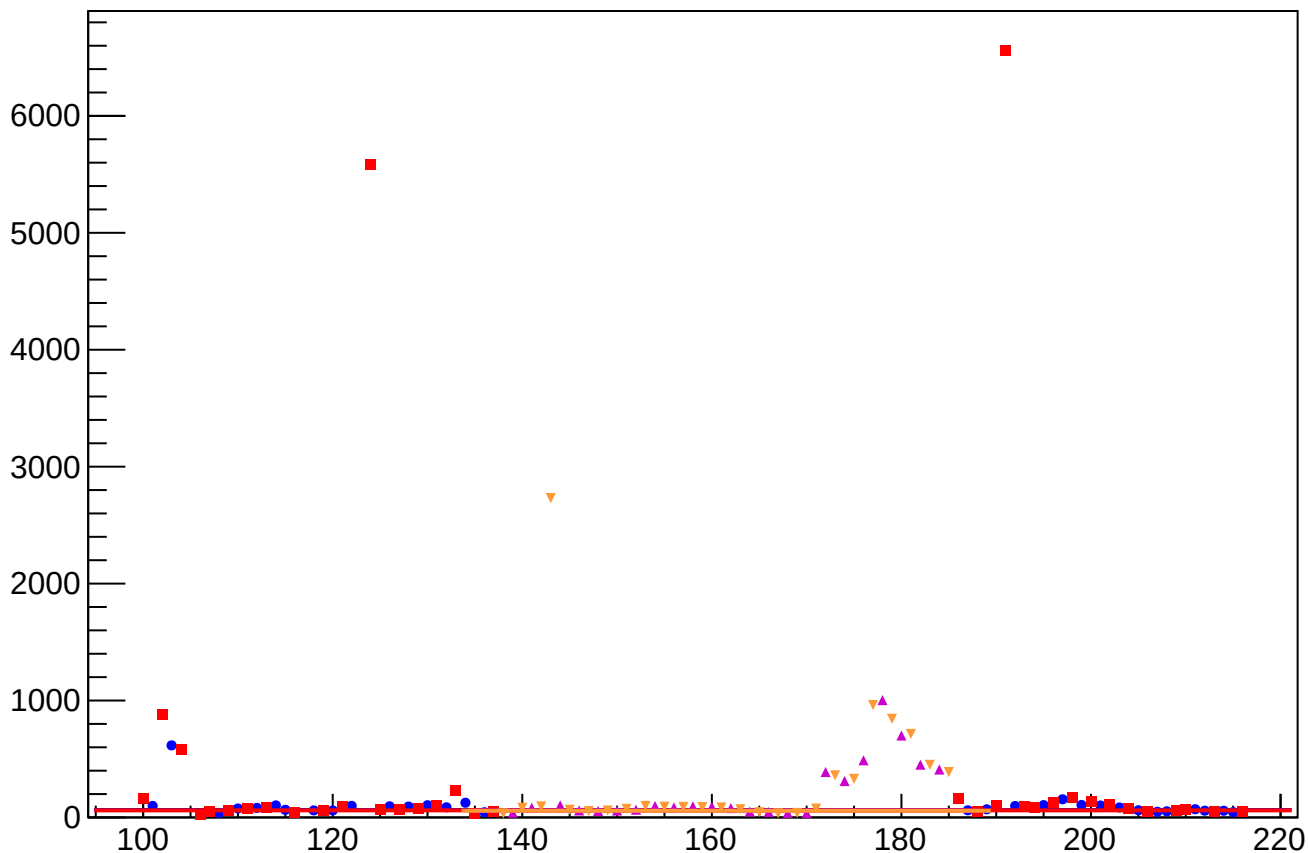
Left In: 0.019 $\pm$ 0.017  $\chi^2$ /NDF:15.4/22

+ sign 0.032 $\pm$ 0.012  $\chi^2$ /NDF: 57.1/55

All: 0.012 $\pm$ 0.008  $\chi^2$ /NDF: 109.9/113

- sign -0.009 $\pm$ 0.012  $\chi^2$ /NDF: 46.6/57

# asym\_at2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $63.674 \pm 0.012$   $\chi^2/\text{NDF}$ : 4553099.4/30

Left Out:  $57.258 \pm 0.012$   $\chi^2/\text{NDF}$ : 12321763.3/24

Right Out:  $60.788 \pm 0.011$   $\chi^2/\text{NDF}$ : 7372243.9/34

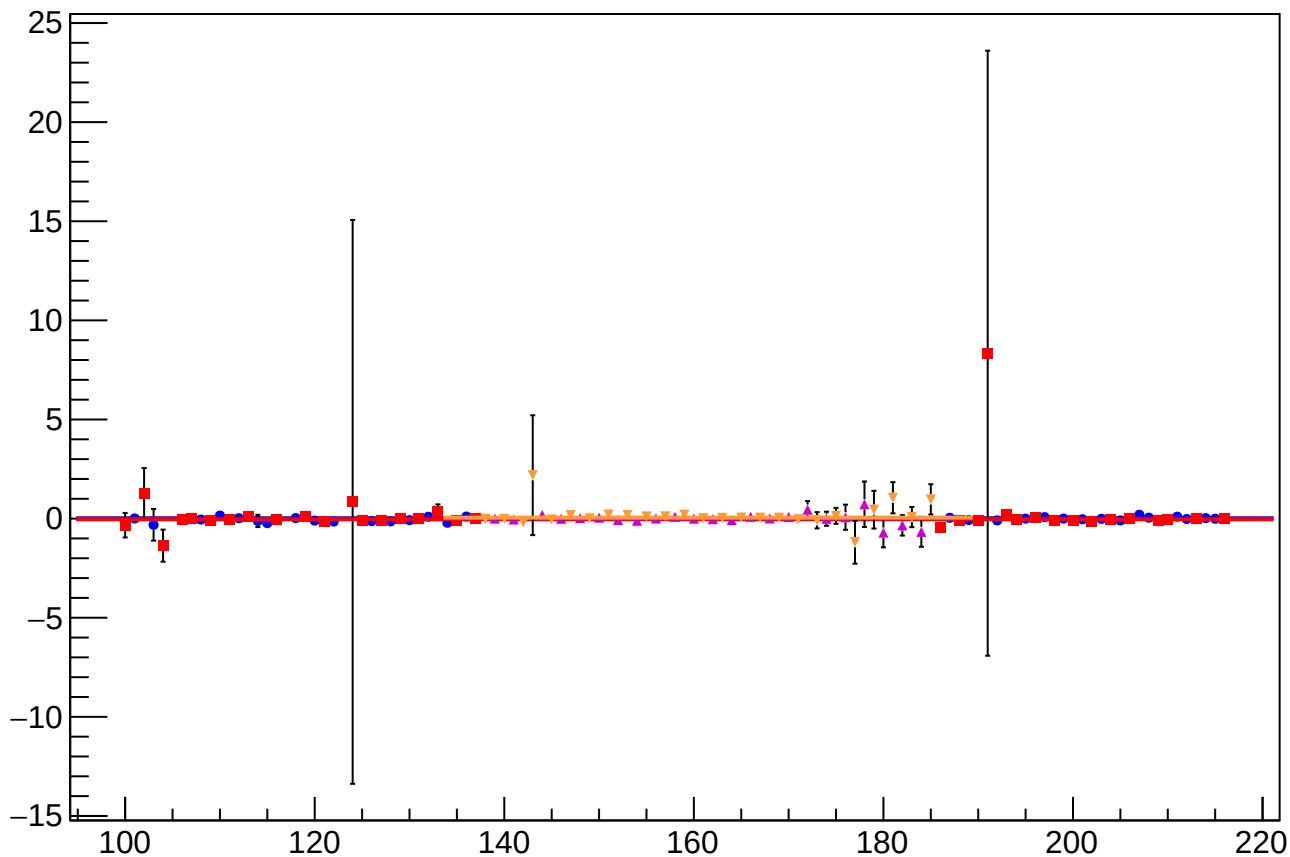
Left In:  $58.582 \pm 0.012$   $\chi^2/\text{NDF}$ : 10247153.8/22

+ sign  $60.608 \pm 0.008$   $\chi^2/\text{NDF}$ : 17023133.4/55

All:  $60.176 \pm 0.006$   $\chi^2/\text{NDF}$ : 34665376.9/113

- sign  $59.743 \pm 0.008$   $\chi^2/\text{NDF}$ : 17636850.5/57

asym\_at2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.016$   $\chi^2/\text{NDF}$ : 30.6/30

Left Out:  $0.050 \pm 0.017$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.035 \pm 0.016$   $\chi^2/\text{NDF}$ : 25.9/34

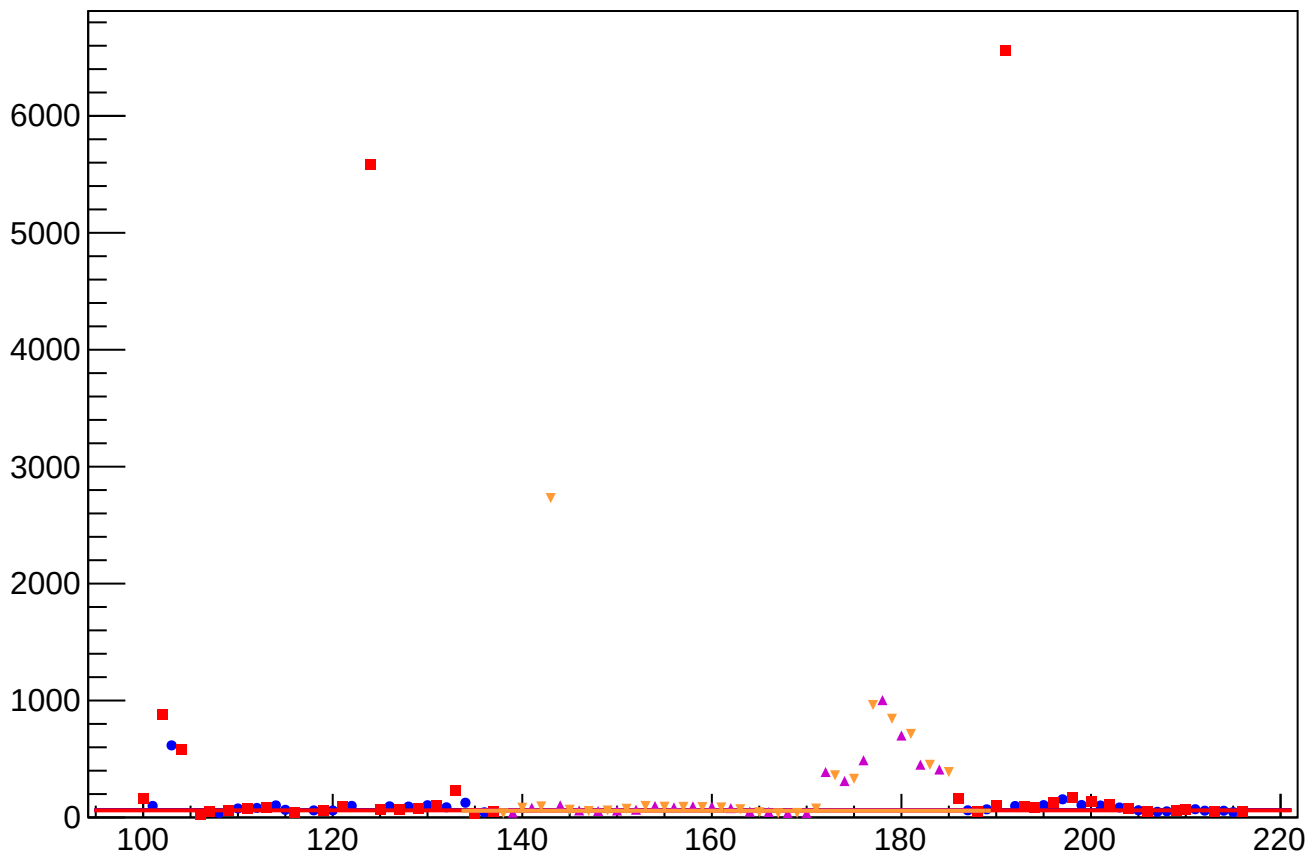
Left In:  $0.019 \pm 0.017$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $0.032 \pm 0.012$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $0.012 \pm 0.008$   $\chi^2/\text{NDF}$ : 109.9/113

- sign  $-0.009 \pm 0.012$   $\chi^2/\text{NDF}$ : 46.6/57

asym\_at2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 63.674+/-0.012  $\chi^2/\text{NDF}$ : 4553099.4/30

Left Out: 57.258+/-0.012  $\chi^2/\text{NDF}$ : 12321763.3/24

Right Out: 60.788+/-0.011  $\chi^2/\text{NDF}$ : 7372243.9/34

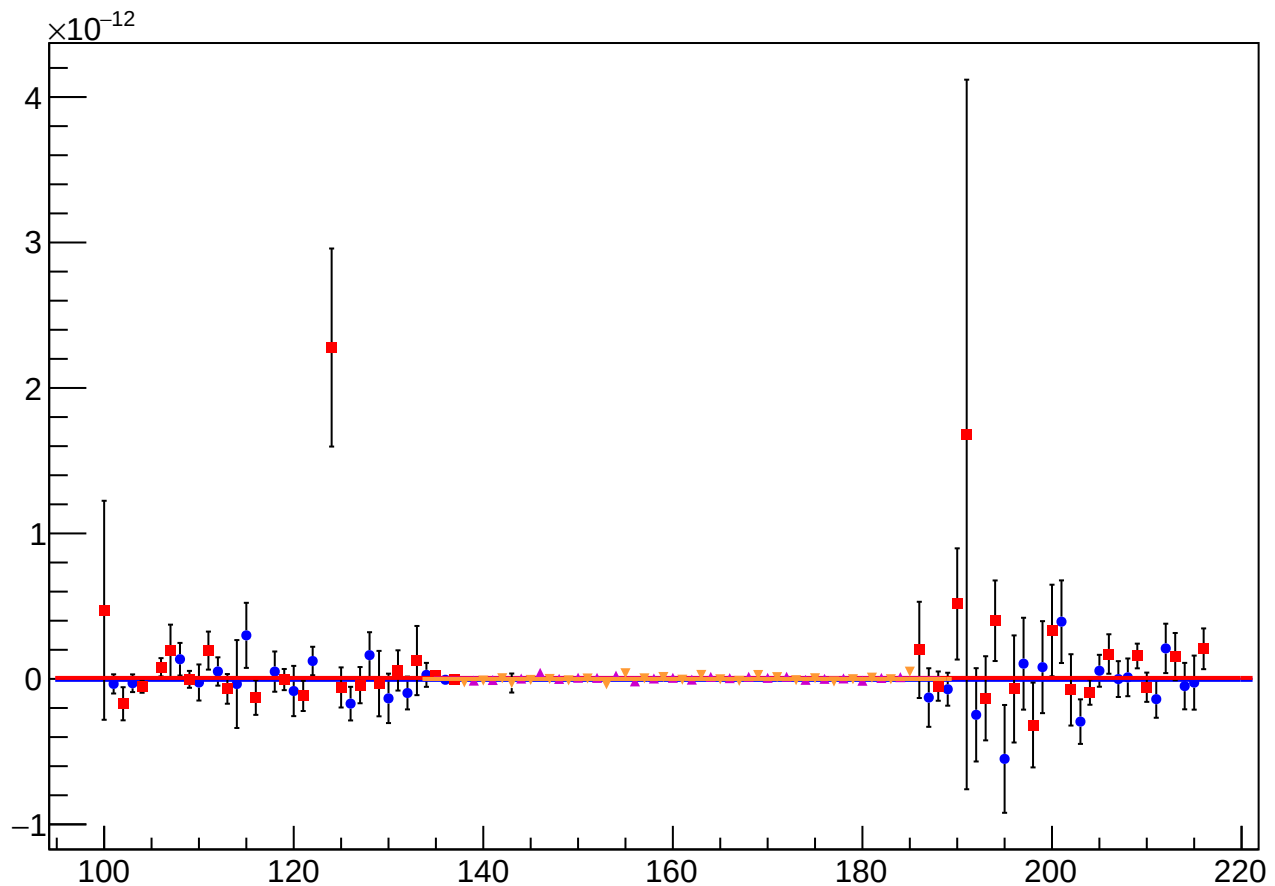
Left In: 58.582+/-0.012  $\chi^2/\text{NDF}$ : 10247153.8/22

+ sign 60.608+/-0.008  $\chi^2/\text{NDF}$ : 17023133.4/55

All: 60.176+/-0.006  $\chi^2/\text{NDF}$ : 34665376.9/113

- sign 59.743+/-0.008  $\chi^2/\text{NDF}$ : 17636850.5/57

asym\_at2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.0/34

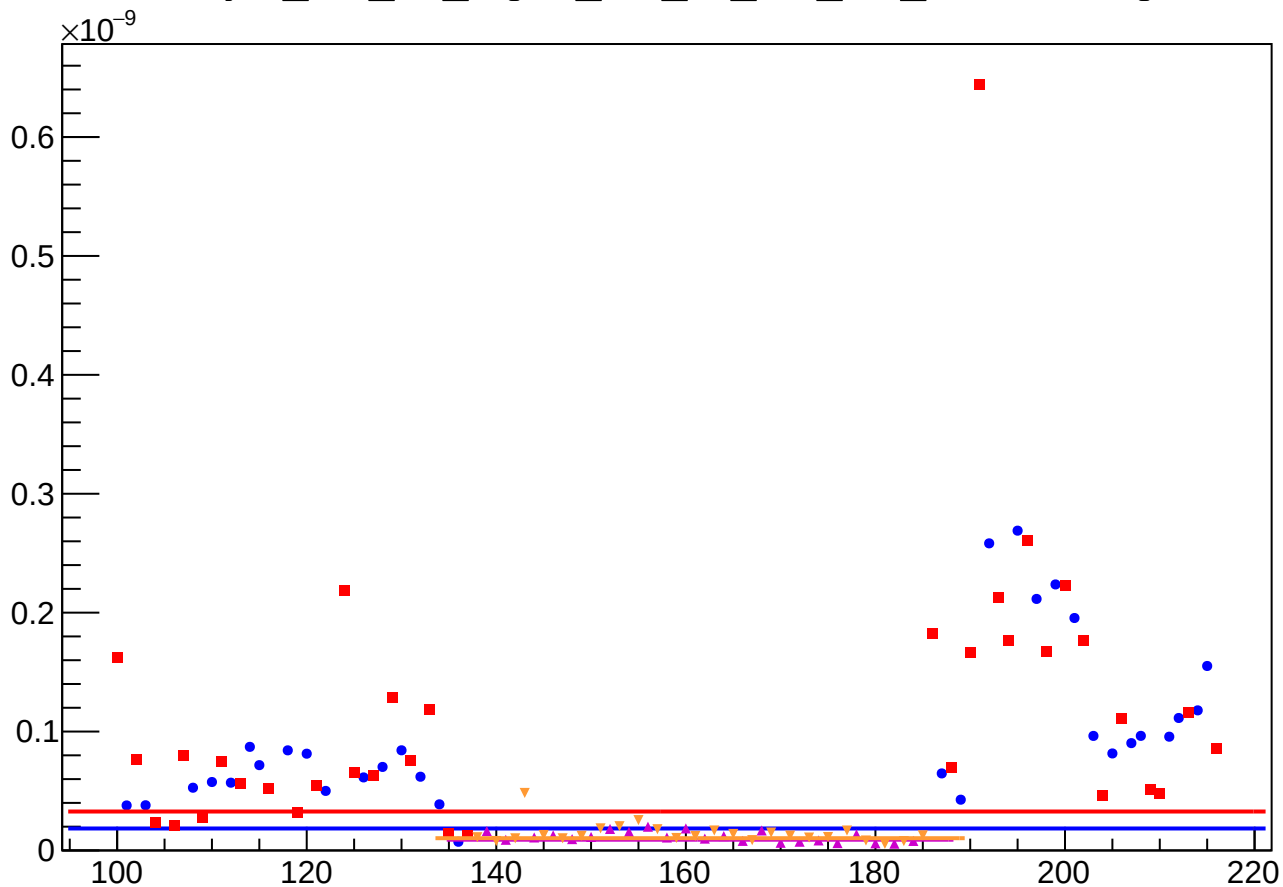
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.5/57

asym\_at2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15820560.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3643428.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10739096.9/34

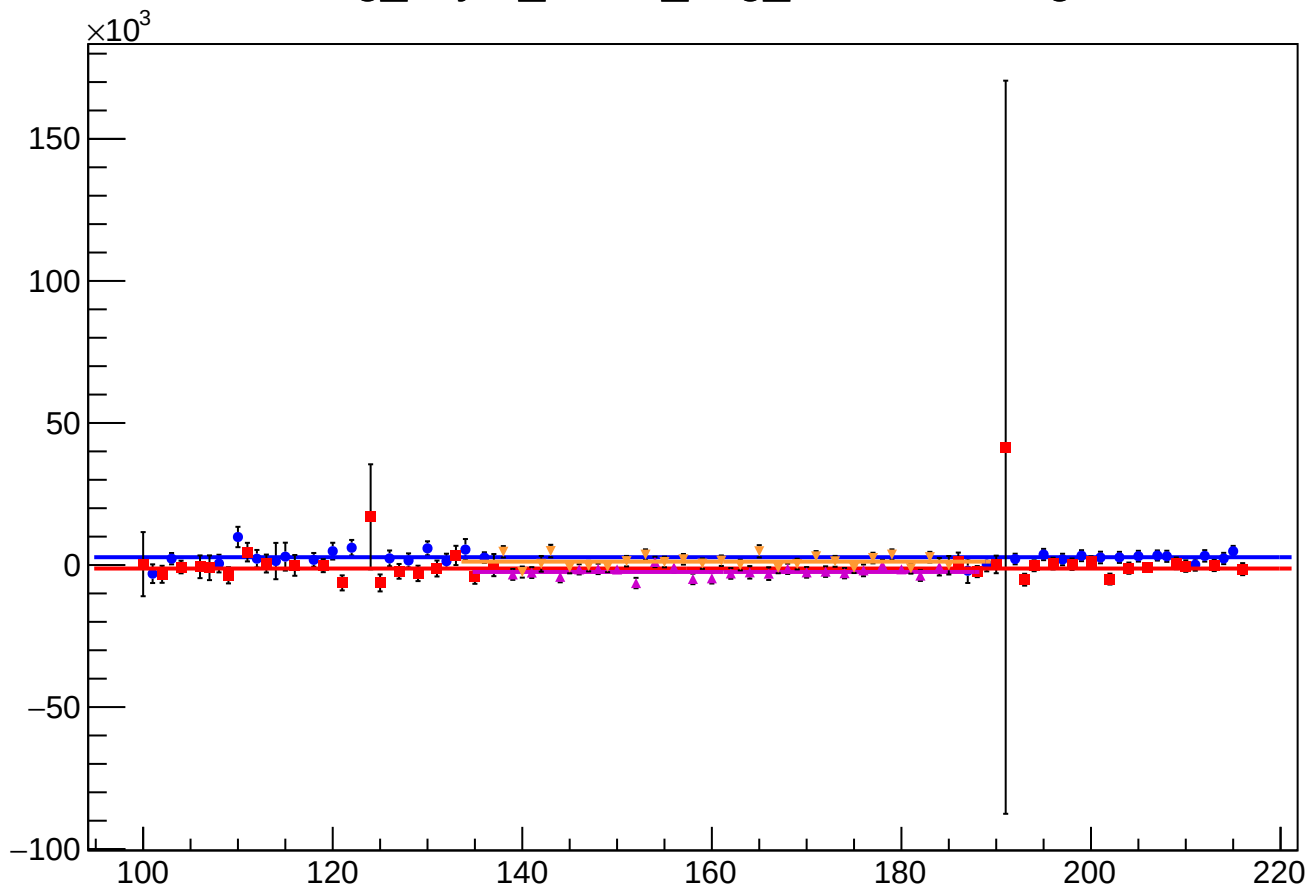
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3047861.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20690562.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40132999.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19310881.1/57

# reg\_asym\_atl1r2\_avg\_mean vs Slug



Right In:  $2753.540 \pm 418.780$   $\chi^2/\text{NDF}: 18.5/30$

Left Out:  $1202.401 \pm 389.137$   $\chi^2/\text{NDF}: 26.3/24$

Right Out:  $-1234.352 \pm 423.526$   $\chi^2/\text{NDF}: 29.2/34$

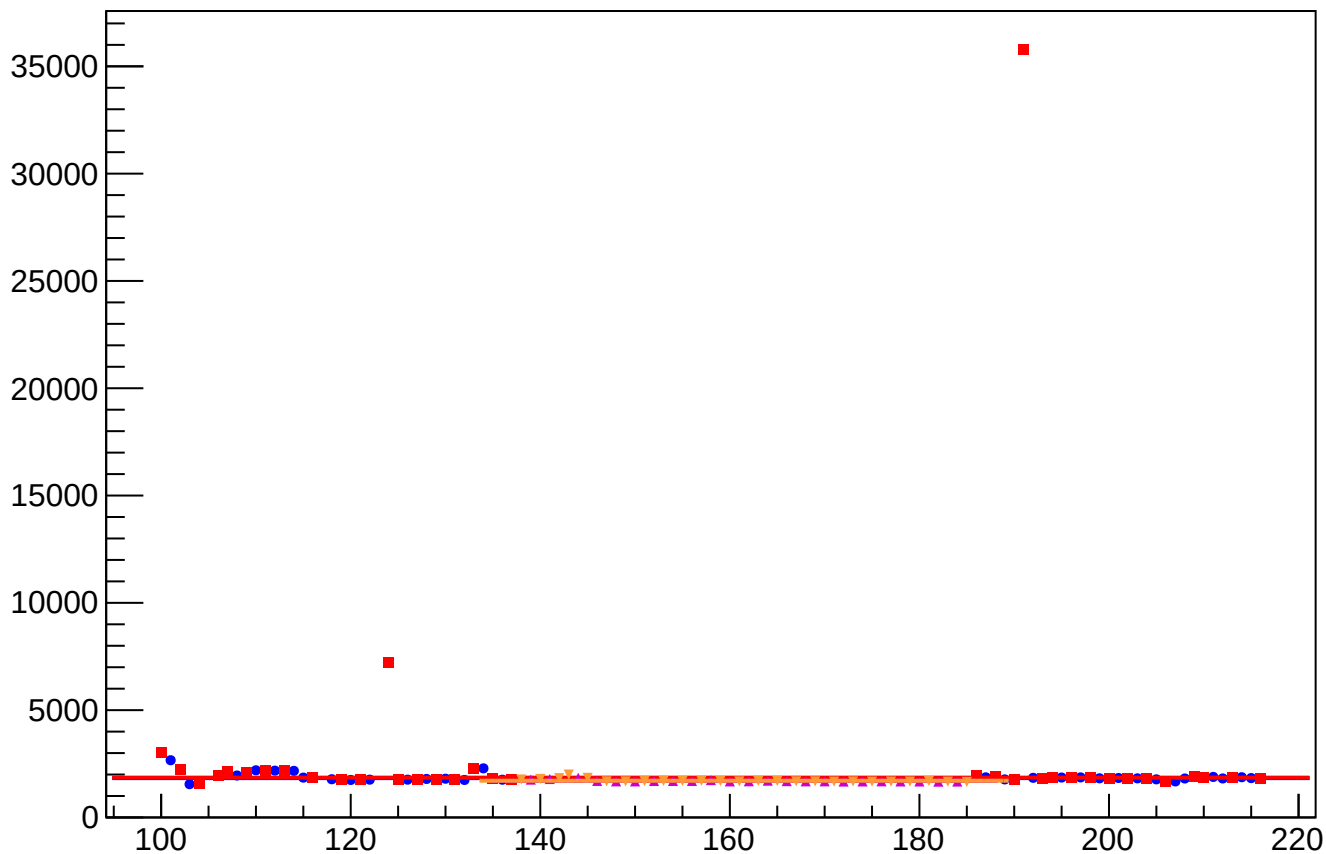
Left In:  $-2439.008 \pm 397.969$   $\chi^2/\text{NDF}: 17.5/22$

+ sign  $1921.134 \pm 285.065$   $\chi^2/\text{NDF}: 52.2/55$

All:  $56.208 \pm 203.301$   $\chi^2/\text{NDF}: 190.3/113$

- sign  $-1874.122 \pm 290.021$   $\chi^2/\text{NDF}: 51.0/57$

# reg\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1833.209+/-0.296  $\chi^2/\text{NDF}$ : 286914.8/30

Left Out: 1711.777+/-0.275  $\chi^2/\text{NDF}$ : 60068.7/24

Right Out: 1855.069+/-0.299  $\chi^2/\text{NDF}$ : 543755.9/34

Left In: 1703.969+/-0.281  $\chi^2/\text{NDF}$ : 22568.8/22

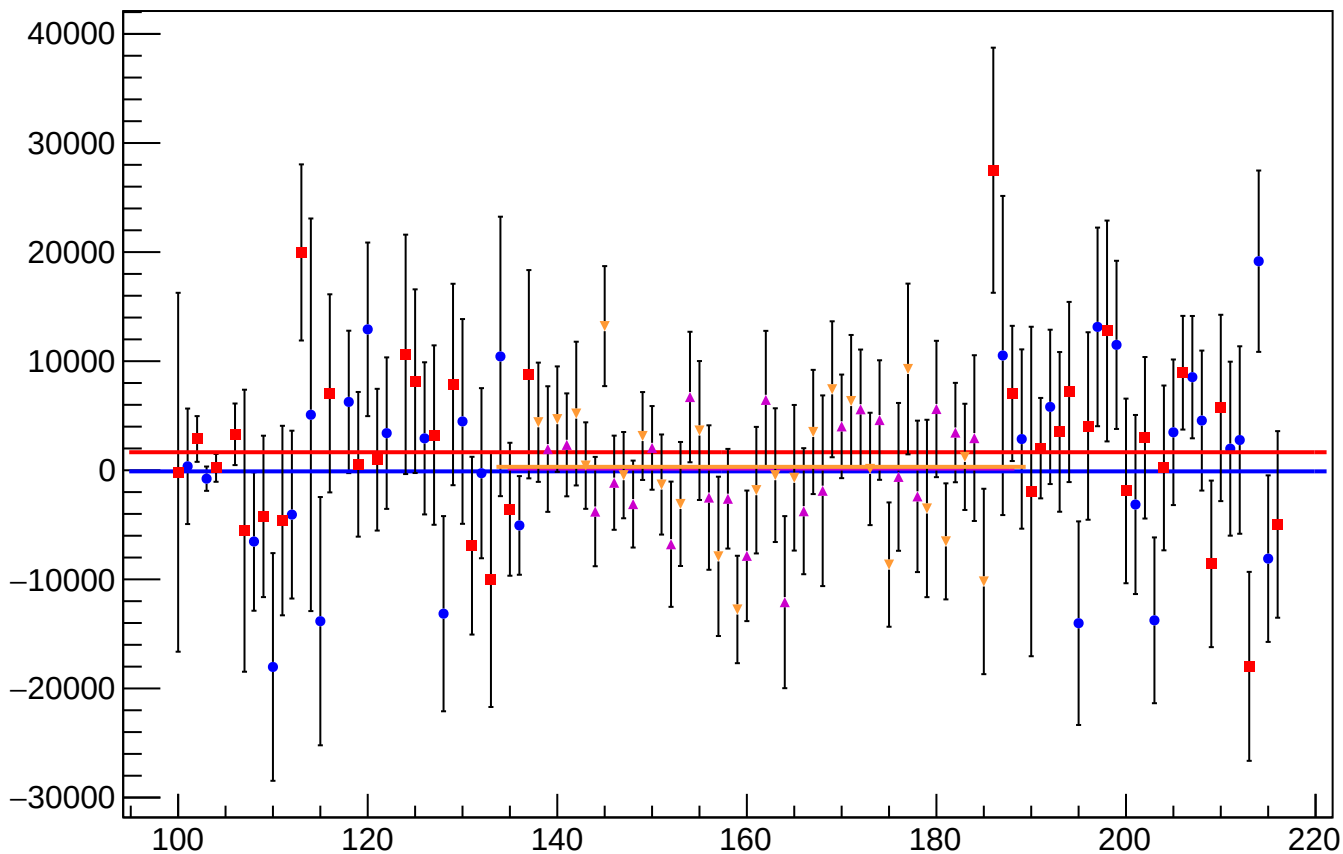
+ sign 1768.043+/-0.202  $\chi^2/\text{NDF}$ : 437226.2/55

All: 1771.407+/-0.144  $\chi^2/\text{NDF}$ : 1139431.9/11

- sign 1774.886+/-0.205  $\chi^2/\text{NDF}$ : 701639.3/57



# asym\_atl1r2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-100.088 \pm 867.127$   $\chi^2/\text{NDF}: 35.6/30$

Left Out:  $314.051 \pm 1091.976$   $\chi^2/\text{NDF}: 27.0/24$

Right Out:  $1654.561 \pm 822.386$   $\chi^2/\text{NDF}: 32.0/34$

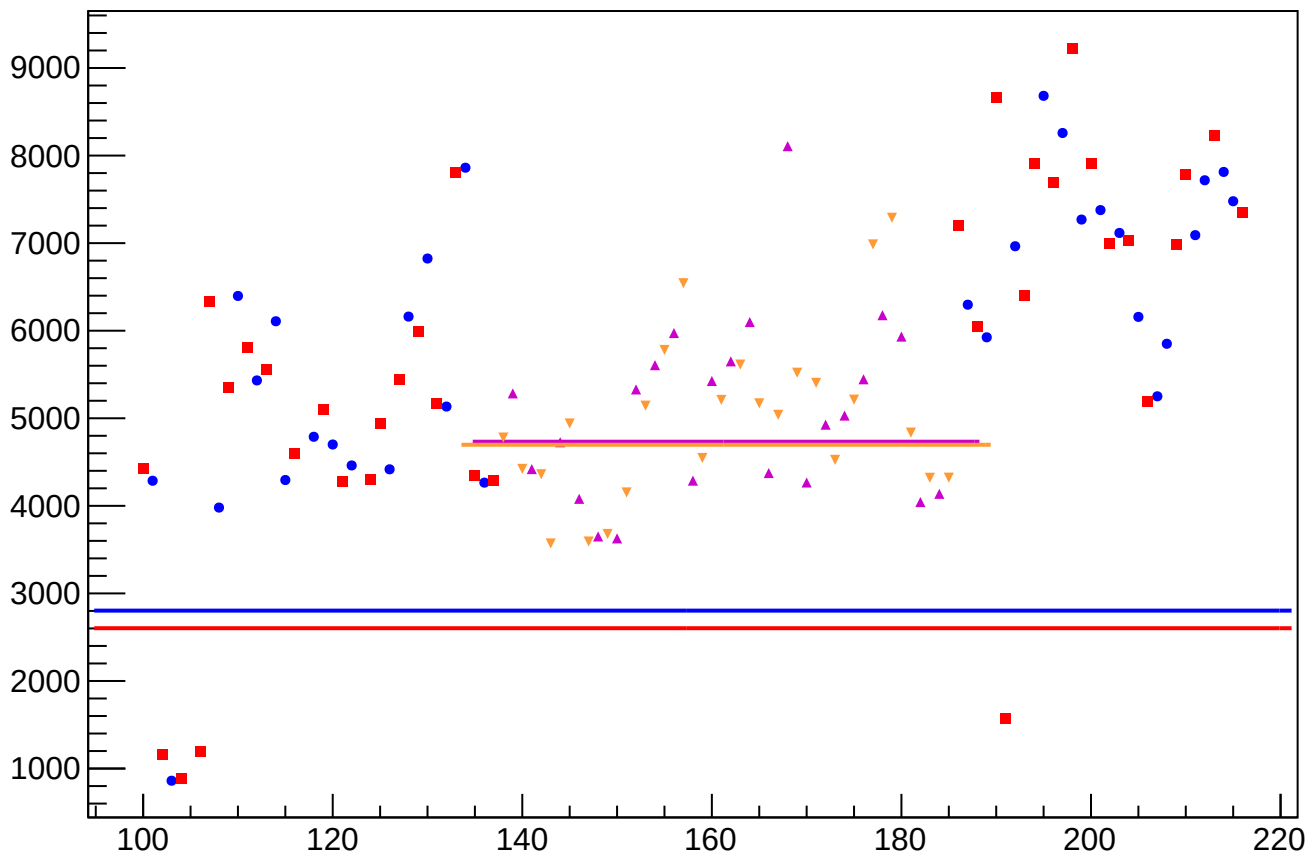
Left In:  $157.968 \pm 1128.443$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $60.068 \pm 679.066$   $\chi^2/\text{NDF}: 62.8/55$

All:  $609.305 \pm 474.981$   $\chi^2/\text{NDF}: 111.9/113$

- sign  $1135.419 \pm 664.617$   $\chi^2/\text{NDF}: 47.8/57$

asym\_atl1r2\_avg\_reg\_correction\_rms vs Slug



Right In: 2803.471+/-0.613  $\chi^2/\text{NDF}$ : 17332738.5/30

Left Out: 4697.622+/-0.772  $\chi^2/\text{NDF}$ :1239373.0/24

Right Out: 2602.527+/-0.582  $\chi^2/\text{NDF}$ : 17930824.7/34

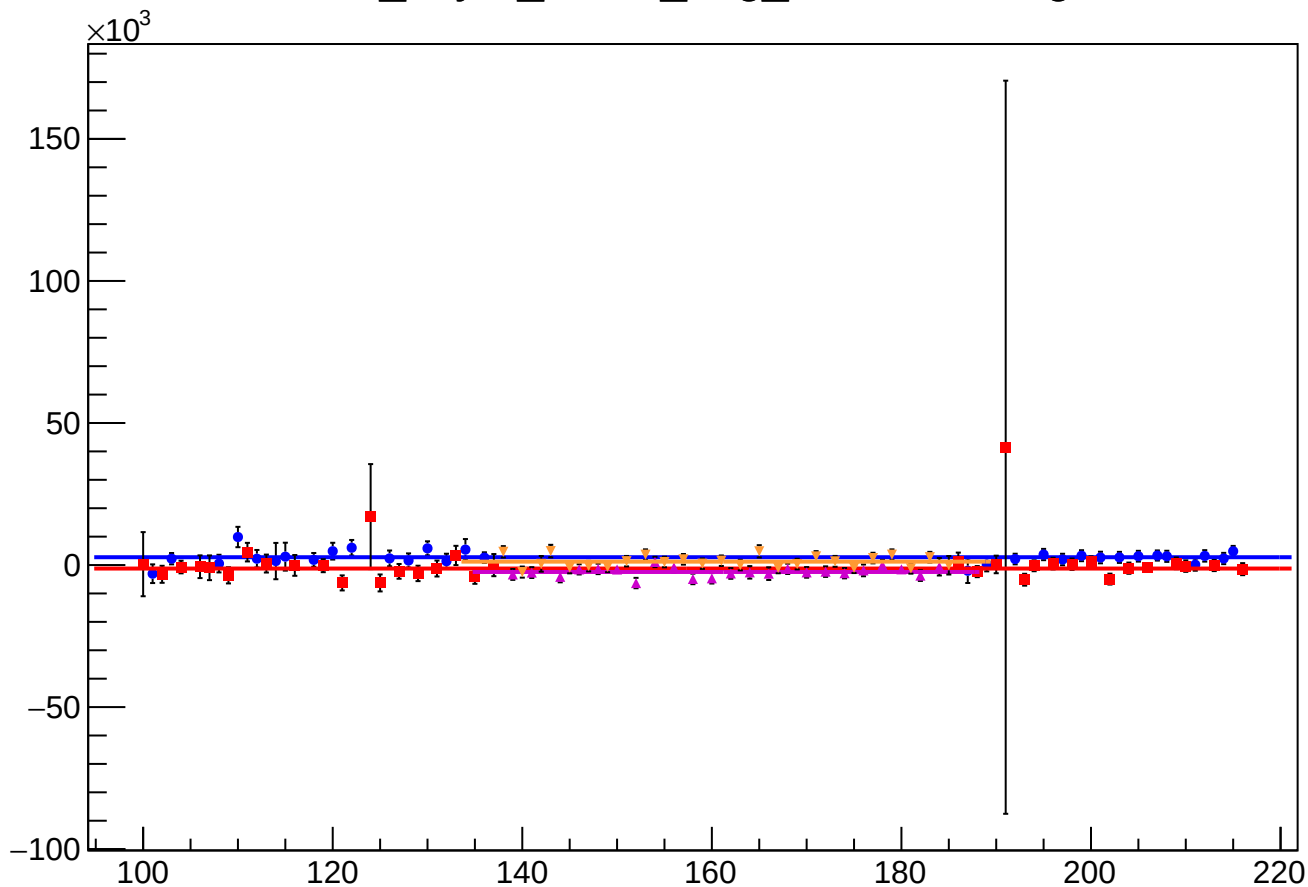
Left In: 4732.424+/-0.798  $\chi^2/\text{NDF}$ :1242793.9/22

+ sign 3535.979+/-0.480  $\chi^2/\text{NDF}$ : 22262662.5/55

All: 3436.573+/-0.336  $\chi^2/\text{NDF}$ : 46173682.5/100

- sign 3341.352+/-0.470  $\chi^2/\text{NDF}$ : 23827108.4/57

# cor\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2753.654 $\pm$ 418.780  $\chi^2/\text{NDF}$ : 18.5/30

Left Out: 1202.304 $\pm$ 389.137  $\chi^2/\text{NDF}$ : 26.3/24

Right Out: -1233.911 $\pm$ 423.527  $\chi^2/\text{NDF}$ : 29.2/34

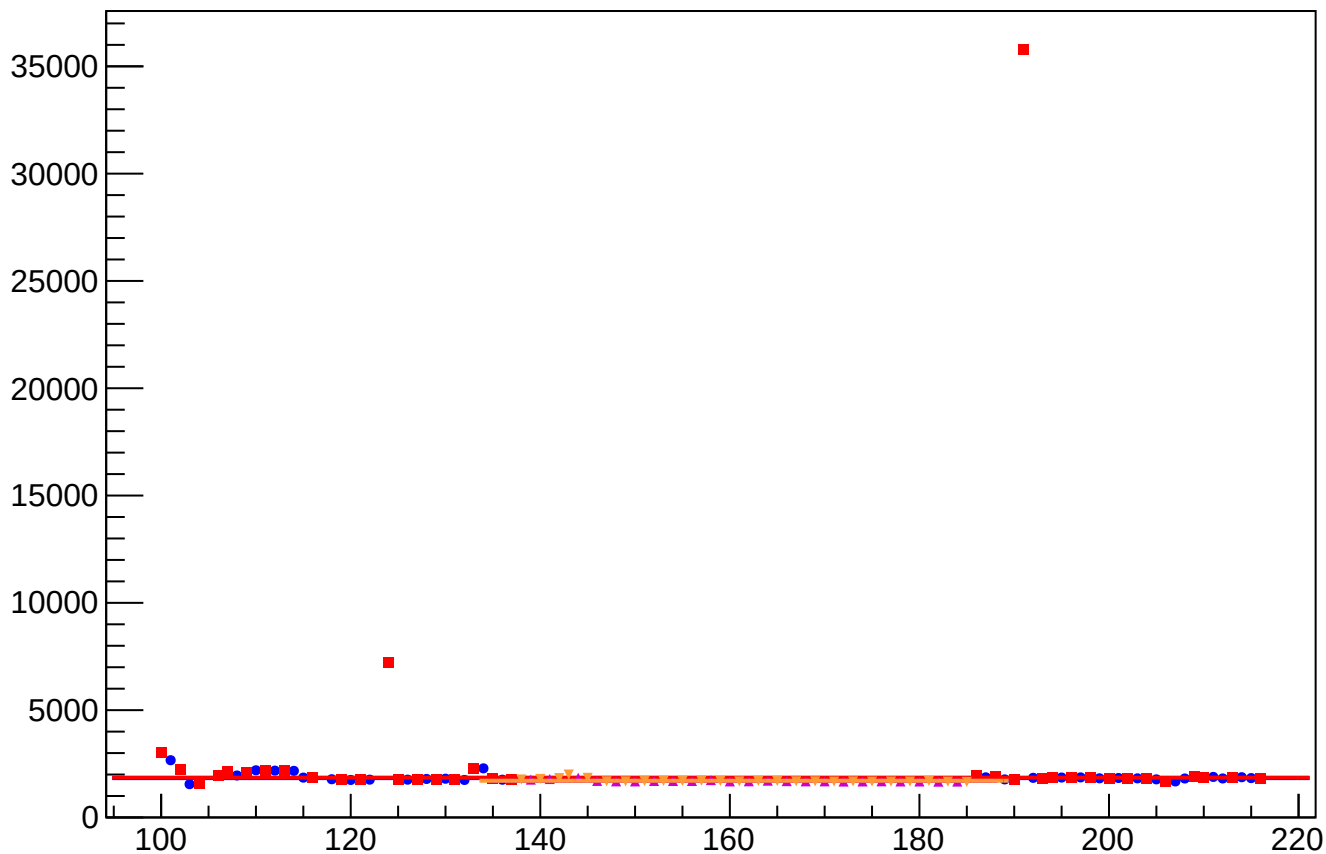
Left In: -2438.940 $\pm$ 397.969  $\chi^2/\text{NDF}$ : 17.5/22

+ sign 1921.134 $\pm$ 285.065  $\chi^2/\text{NDF}$ : 52.2/55

All: 56.328 $\pm$ 203.301  $\chi^2/\text{NDF}$ : 190.3/113

- sign -1873.879 $\pm$ 290.021  $\chi^2/\text{NDF}$ : 51.0/57

# cor\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1833.209+/-0.296  $\chi^2/\text{NDF}$ : 286914.7/30

Left Out: 1711.777+/-0.275  $\chi^2/\text{NDF}$ : 60068.7/24

Right Out: 1855.228+/-0.299  $\chi^2/\text{NDF}$ : 544129.7/34

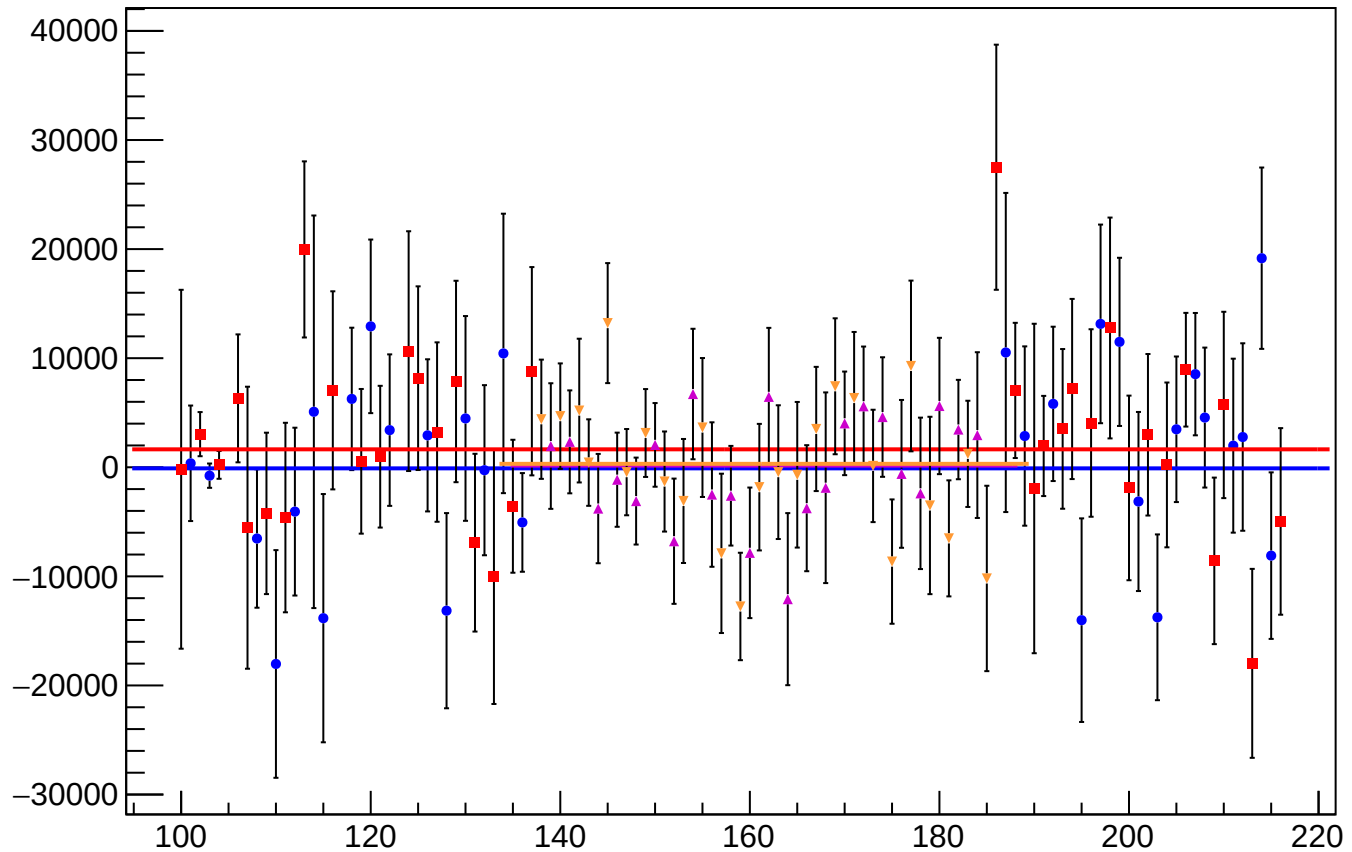
Left In: 1703.969+/-0.281  $\chi^2/\text{NDF}$ : 22568.8/22

+ sign 1768.043+/-0.202  $\chi^2/\text{NDF}$ : 437226.1/55

All: 1771.440+/-0.144  $\chi^2/\text{NDF}$ : 1140090.2/11

- sign 1774.954+/-0.205  $\chi^2/\text{NDF}$ : 702286.4/57

# asym\_atl1r2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-99.747 \pm 867.088$   $\chi^2/\text{NDF}: 35.6/30$

Left Out:  $314.084 \pm 1091.975$   $\chi^2/\text{NDF}: 27.0/24$

Right Out:  $1644.785 \pm 845.409$   $\chi^2/\text{NDF}: 32.4/34$

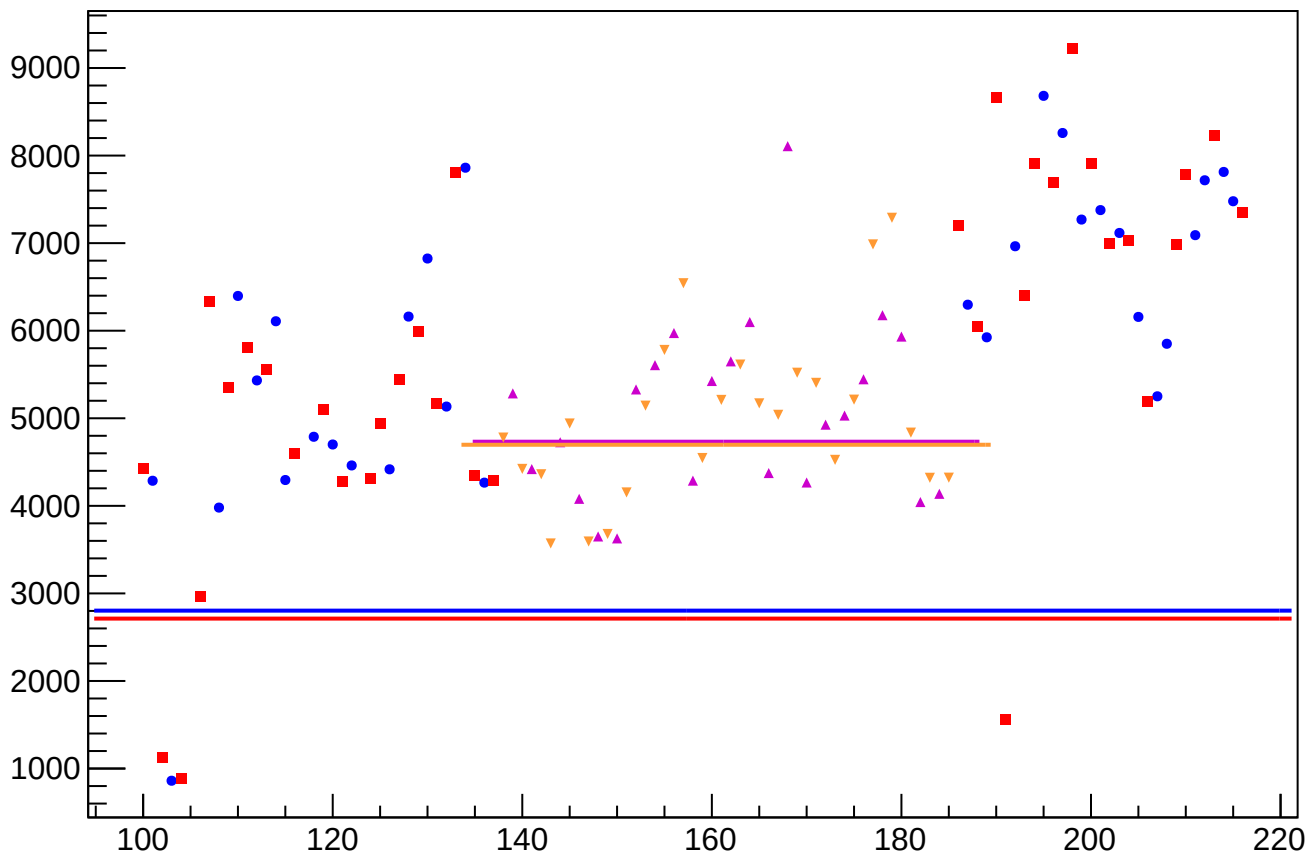
Left In:  $157.977 \pm 1128.443$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $60.281 \pm 679.047$   $\chi^2/\text{NDF}: 62.7/55$

All:  $587.182 \pm 479.289$   $\chi^2/\text{NDF}: 112.2/113$

- sign  $1110.281 \pm 676.593$   $\chi^2/\text{NDF}: 48.2/57$

# asym\_atl1r2\_avg\_cor\_correction\_rms vs Slug



Right In: 2803.263±/0.613     $\chi^2/\text{NDF}$ : 17333981.7/30

Left Out: 4697.618±/0.772     $\chi^2/\text{NDF}$ :1239387.1/24

Right Out: 2712.392±/0.598     $\chi^2/\text{NDF}$ : 17530888.8/34

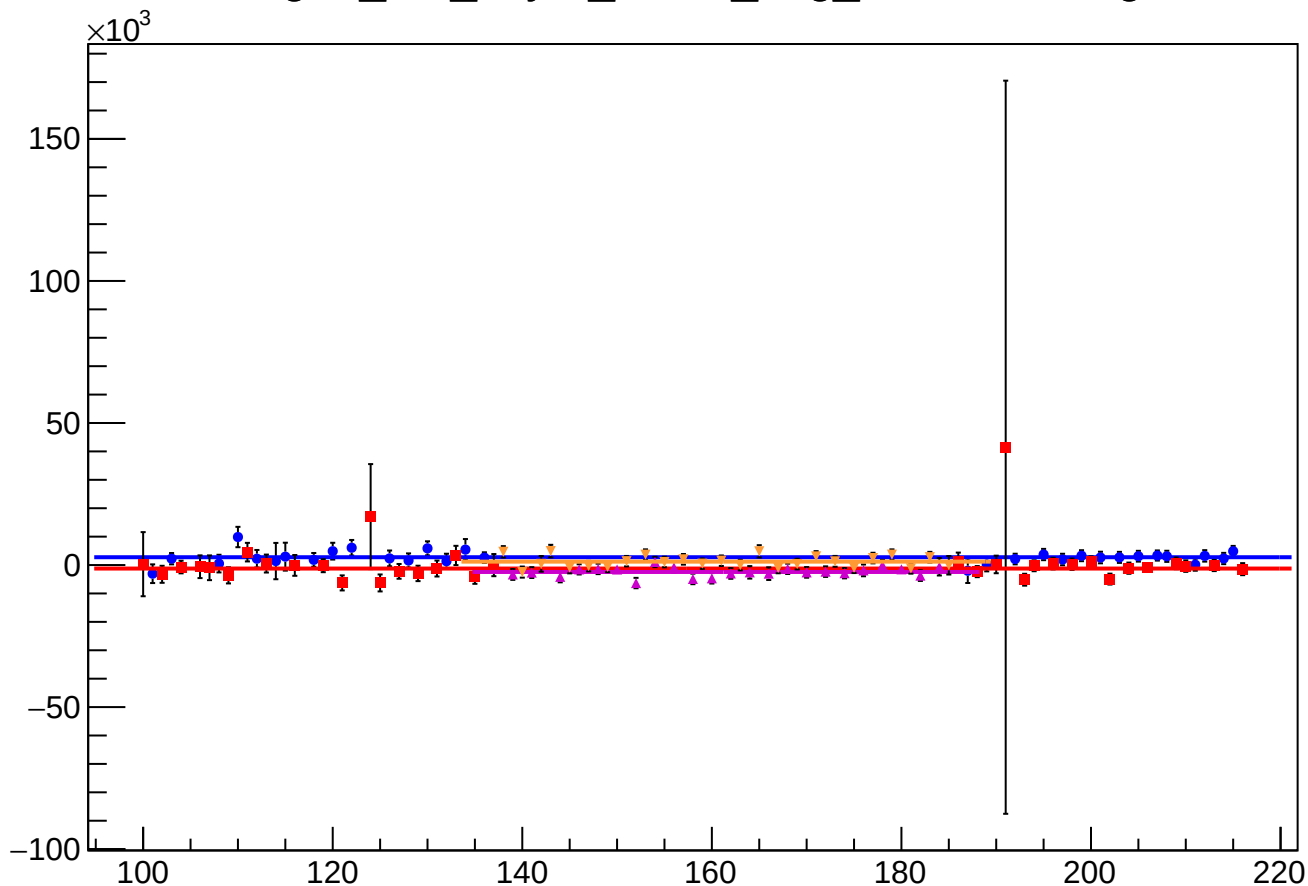
Left In: 4732.421±/0.798     $\chi^2/\text{NDF}$ :1242809.3/22

+ sign 3535.809±/0.480     $\chi^2/\text{NDF}$ : 22264848.4/55

All: 3487.022±/0.339     $\chi^2/\text{NDF}$ : 45164063.8/100

- sign 3438.586±/0.478     $\chi^2/\text{NDF}$ : 22878641.9/57

# eigen\_cor\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2753.654 $\pm$ 418.780  $\chi^2/\text{NDF}$ : 18.5/30

Left Out: 1202.304 $\pm$ 389.137  $\chi^2/\text{NDF}$ : 26.3/24

Right Out: -1233.911 $\pm$ 423.527  $\chi^2/\text{NDF}$ : 29.2/34

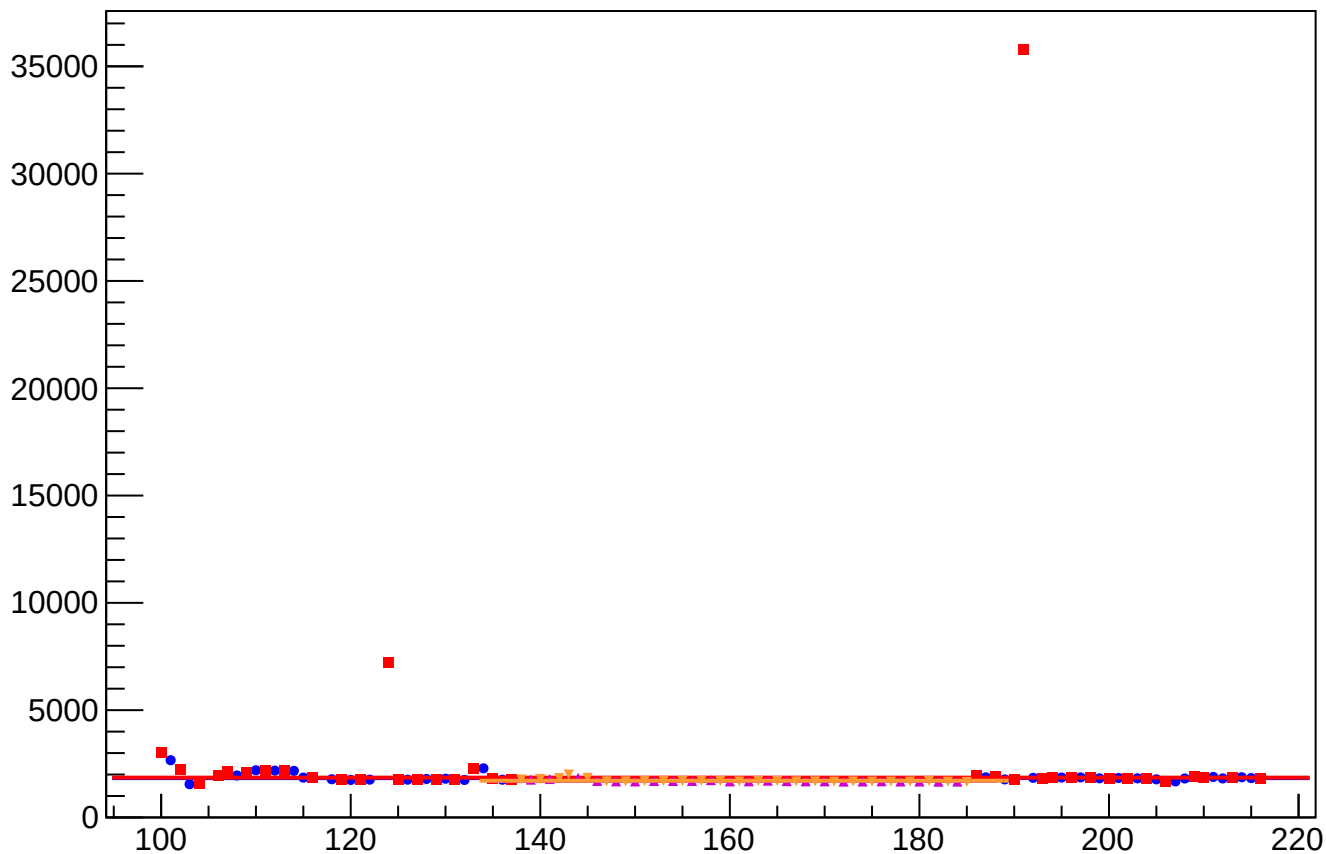
Left In: -2438.940 $\pm$ 397.969  $\chi^2/\text{NDF}$ : 17.5/22

+ sign 1921.134 $\pm$ 285.065  $\chi^2/\text{NDF}$ : 52.2/55

All: 56.328 $\pm$ 203.301  $\chi^2/\text{NDF}$ : 190.3/113

- sign -1873.879 $\pm$ 290.021  $\chi^2/\text{NDF}$ : 51.0/57

# eigen\_cor\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1833.209 $\pm$ 0.296     $\chi^2$ /NDF: 286914.7/30

Left Out: 1711.777 $\pm$ 0.275     $\chi^2$ /NDF: 60068.7/24

Right Out: 1855.228 $\pm$ 0.299     $\chi^2$ /NDF: 544129.7/34

Left In: 1703.969 $\pm$ 0.281     $\chi^2$ /NDF: 22568.8/22

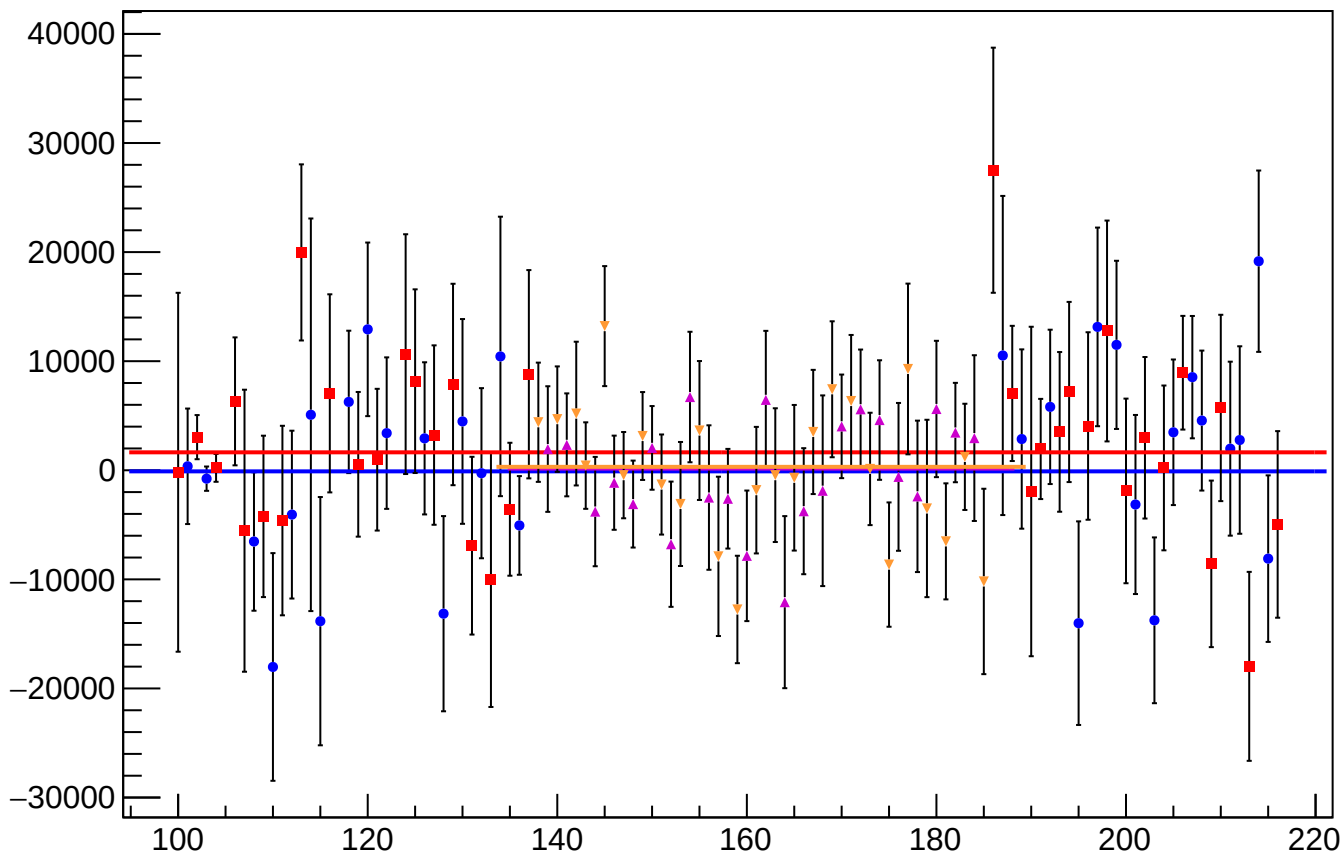
+ sign 1768.043 $\pm$ 0.202     $\chi^2$ /NDF: 437226.1/55

All: 1771.440 $\pm$ 0.144     $\chi^2$ /NDF: 1140090.2/11

- sign 1774.954 $\pm$ 0.205     $\chi^2$ /NDF: 702286.4/57



asym\_atl1r2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-99.747 \pm 867.088$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $314.084 \pm 1091.975$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $1644.785 \pm 845.409$   $\chi^2/\text{NDF}$ : 32.4/34

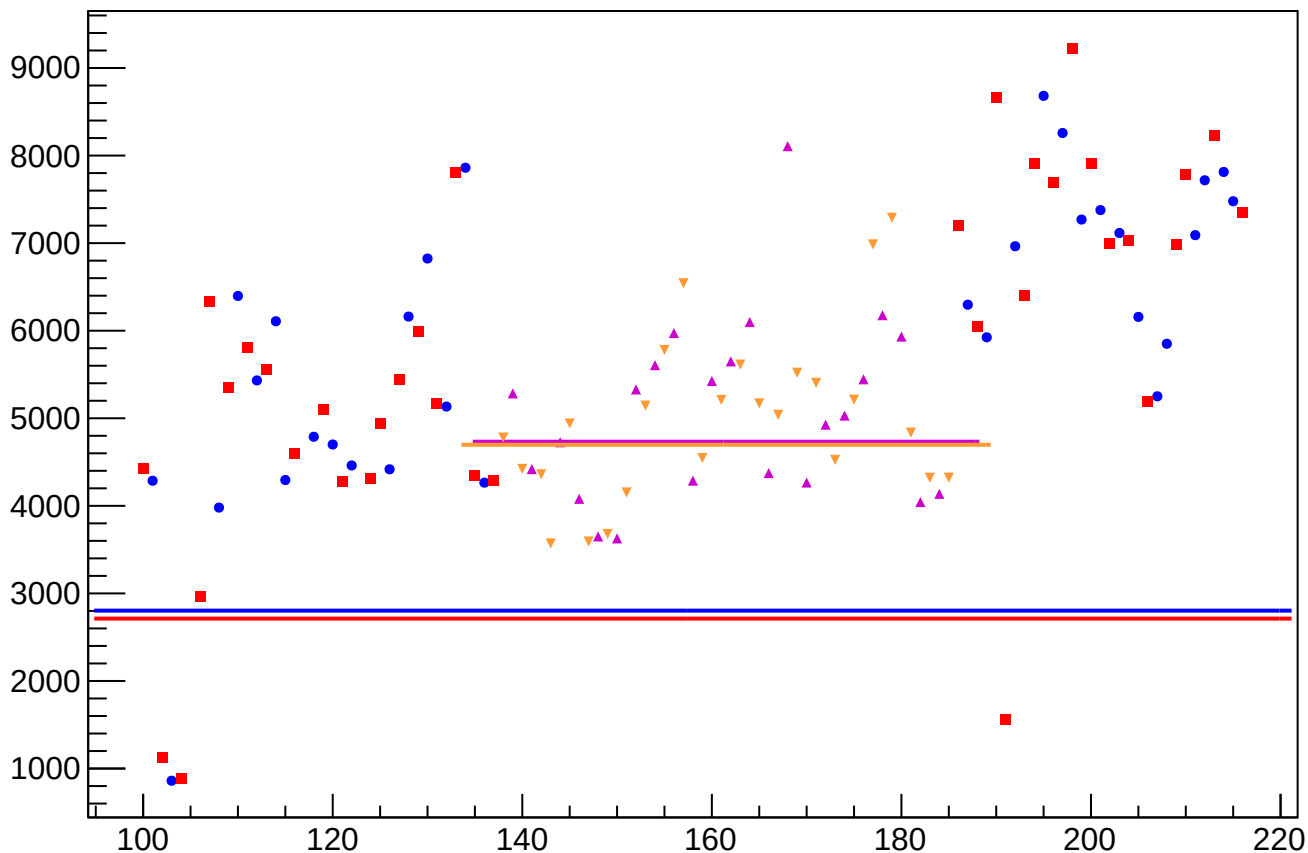
Left In:  $157.977 \pm 1128.443$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $60.281 \pm 679.047$   $\chi^2/\text{NDF}$ : 62.7/55

All:  $587.182 \pm 479.289$   $\chi^2/\text{NDF}$ : 112.2/113

- sign  $1110.281 \pm 676.593$   $\chi^2/\text{NDF}$ : 48.2/57

asym\_atl1r2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 2803.263+/-0.613  $\chi^2/\text{NDF}$ : 17333981.7/30

Left Out: 4697.618+/-0.772  $\chi^2/\text{NDF}$ : 1239387.1/24

Right Out: 2712.392+/-0.598  $\chi^2/\text{NDF}$ : 17530888.8/34

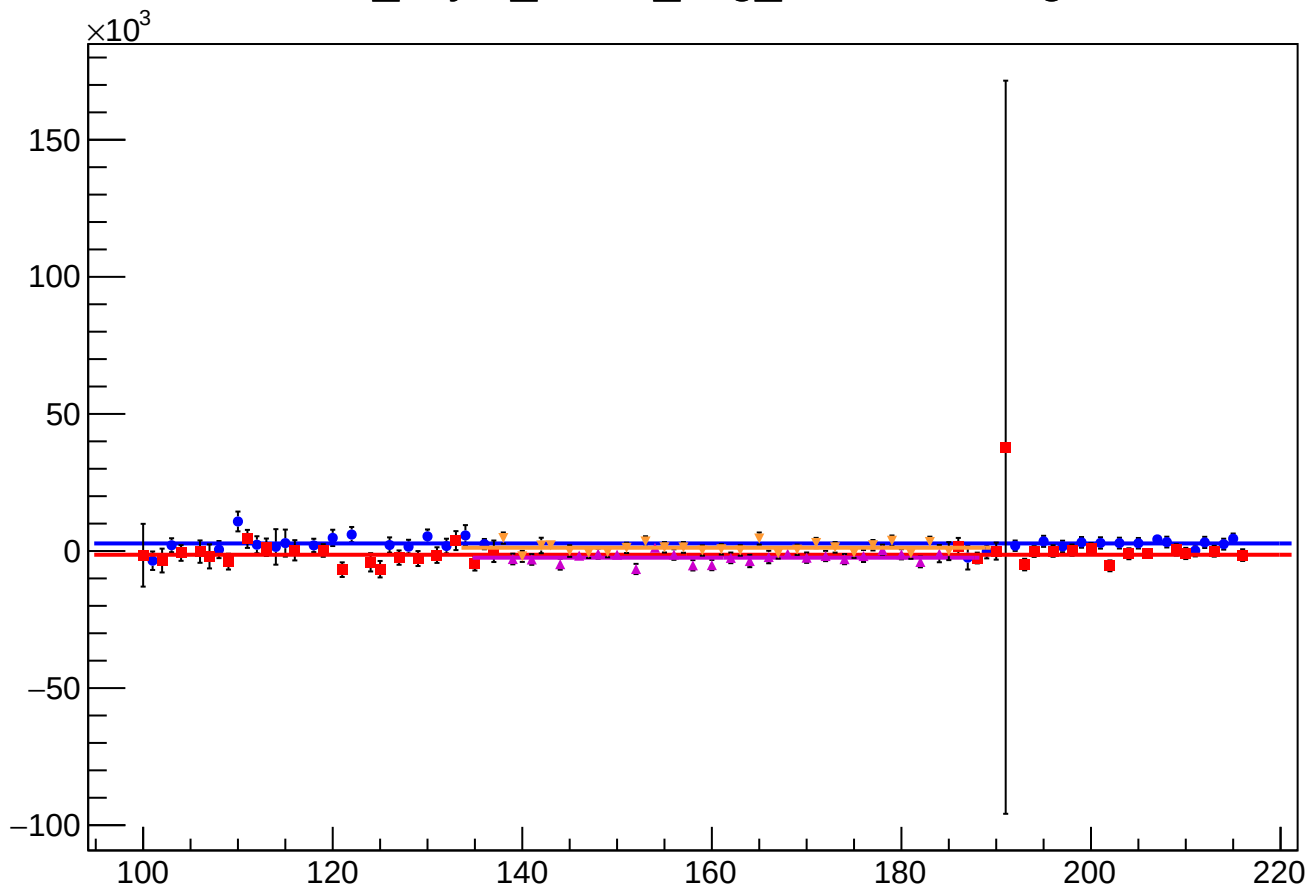
Left In: 4732.421+/-0.798  $\chi^2/\text{NDF}$ : 1242809.3/22

+ sign 3535.809+/-0.480  $\chi^2/\text{NDF}$ : 22264848.4/55

All: 3487.022+/-0.339  $\chi^2/\text{NDF}$ : 45164063.8/100

- sign 3438.586+/-0.478  $\chi^2/\text{NDF}$ : 22878641.9/57

dit\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2762.925 $\pm$ 426.971  $\chi^2/\text{NDF}$ : 19.7/30

Left Out: 1197.362 $\pm$ 392.981  $\chi^2/\text{NDF}$ : 19.5/24

Right Out: -1364.260 $\pm$ 430.336  $\chi^2/\text{NDF}$ : 30.8/34

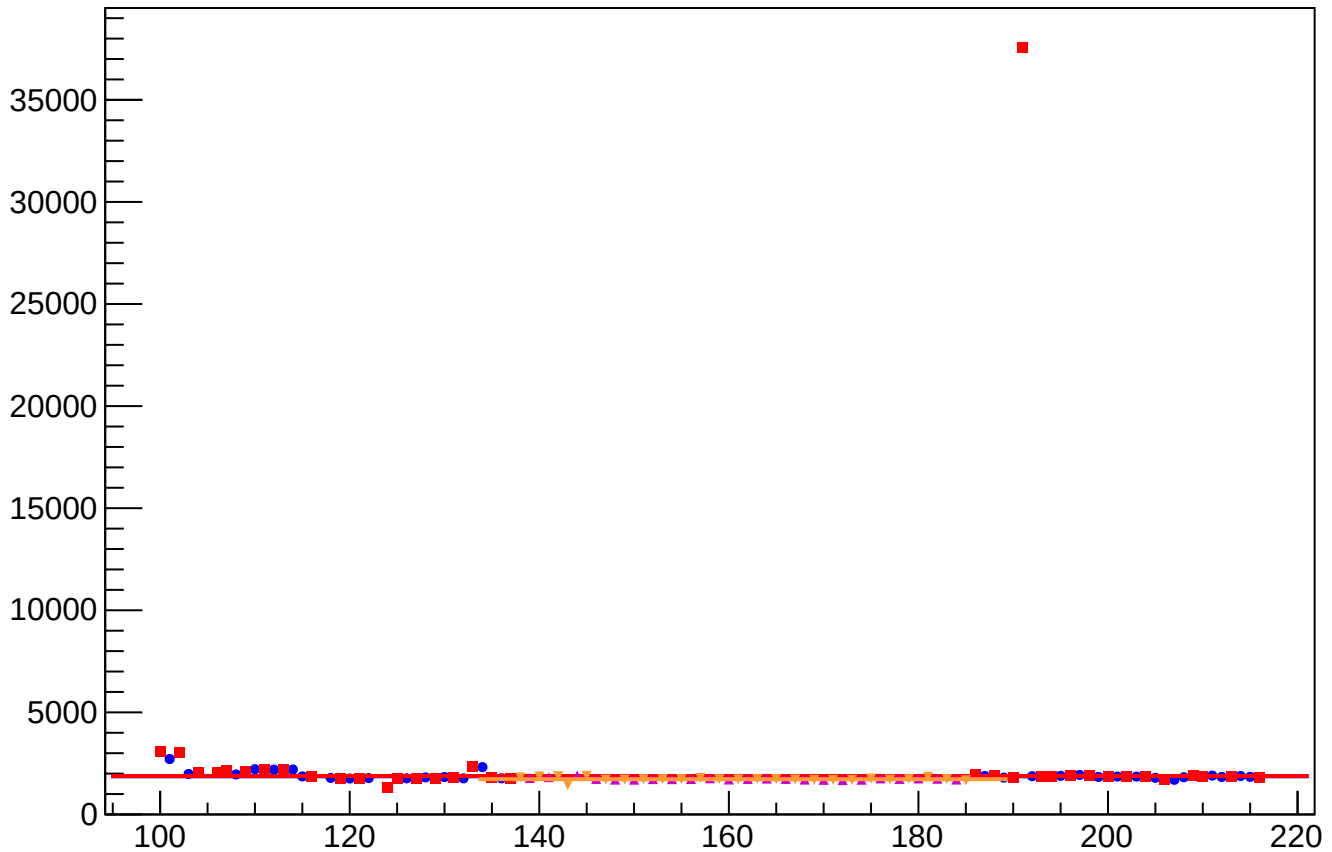
Left In: -2438.062 $\pm$ 407.551  $\chi^2/\text{NDF}$ : 20.6/22

+ sign 1915.358 $\pm$ 289.150  $\chi^2/\text{NDF}$ : 46.5/55

All: 36.933 $\pm$ 206.808  $\chi^2/\text{NDF}$ : 187.5/113

- sign -1930.339 $\pm$ 295.910  $\chi^2/\text{NDF}$ : 54.7/57

# dit\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1869.352 $\pm$ 0.302  $\chi^2$ /NDF: 253149.1/30

Left Out: 1727.235 $\pm$ 0.278  $\chi^2$ /NDF: 110270.9/24

Right Out: 1882.049 $\pm$ 0.304  $\chi^2$ /NDF: 522315.8/34

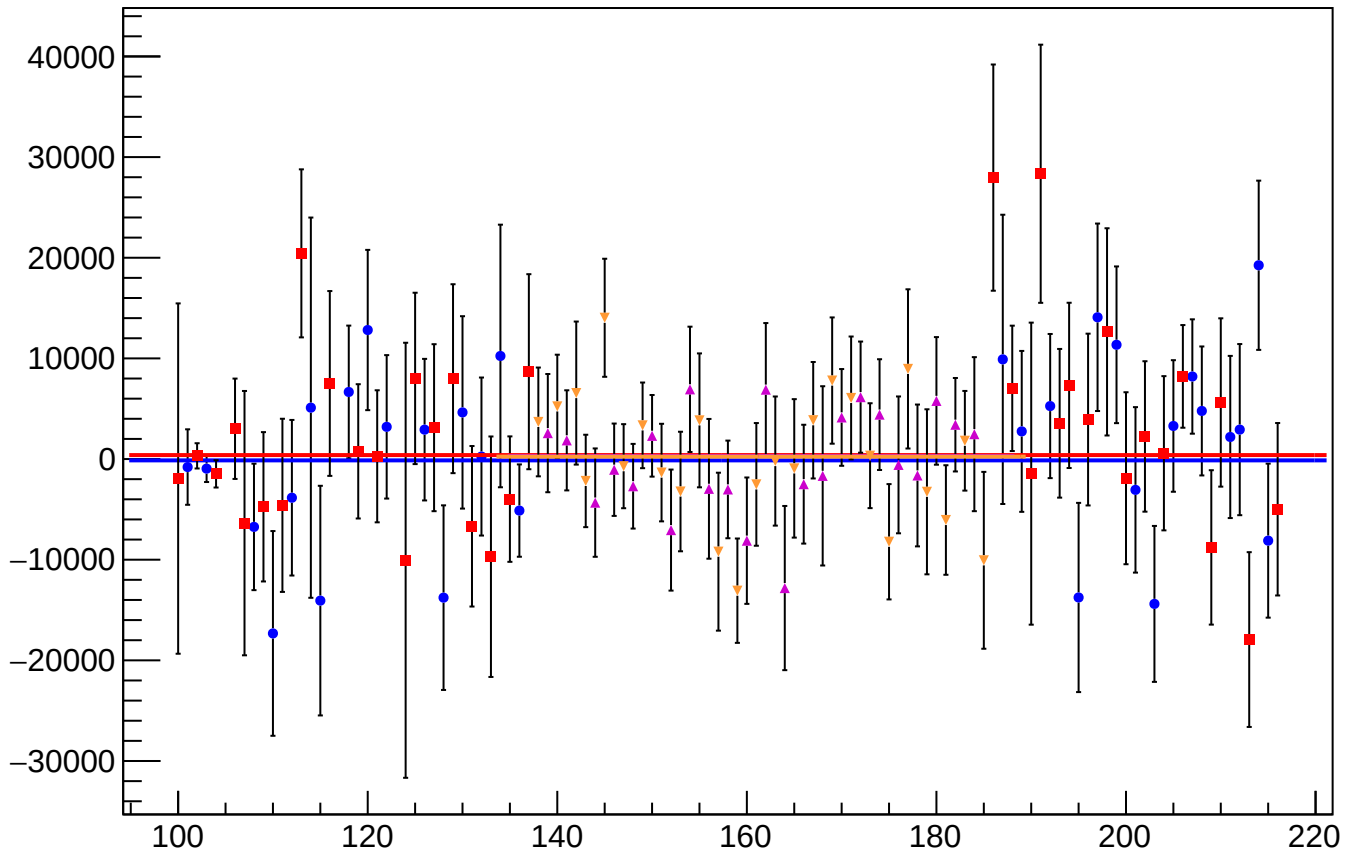
Left In: 1744.633 $\pm$ 0.288  $\chi^2$ /NDF: 26798.0/22

+ sign 1792.412 $\pm$ 0.204  $\chi^2$ /NDF: 483378.3/55

All: 1800.822 $\pm$ 0.146  $\chi^2$ /NDF: 1143497.2/11

- sign 1809.627 $\pm$ 0.209  $\chi^2$ /NDF: 656655.9/57

# asym\_atl1r2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-132.023 \pm 945.097$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $241.131 \pm 1140.961$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $393.392 \pm 772.013$   $\chi^2/\text{NDF}$ : 37.7/34

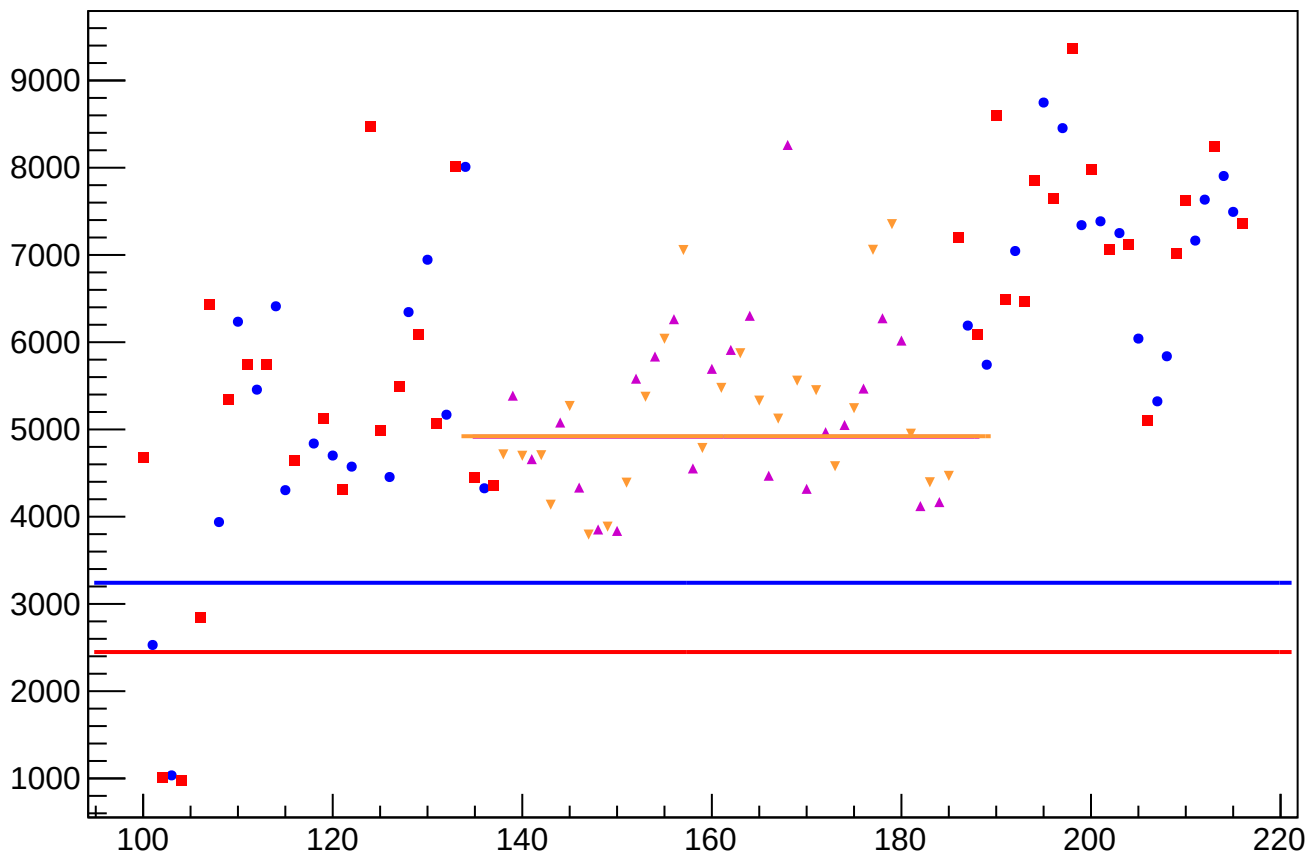
Left In:  $306.106 \pm 1171.019$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $19.824 \pm 727.830$   $\chi^2/\text{NDF}$ : 62.3/55

All:  $214.374 \pm 482.534$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $366.948 \pm 644.547$   $\chi^2/\text{NDF}$ : 52.2/57

# asym\_atl1r2\_avg\_dit\_correction\_rms vs Slug



Right In:  $3242.459 \pm 0.668$   $\chi^2/\text{NDF}: 14314380.3/30$

Left Out:  $4922.380 \pm 0.807$   $\chi^2/\text{NDF}: 1050408.0/24$

Right Out:  $2448.697 \pm 0.546$   $\chi^2/\text{NDF}: 19158243.2/34$

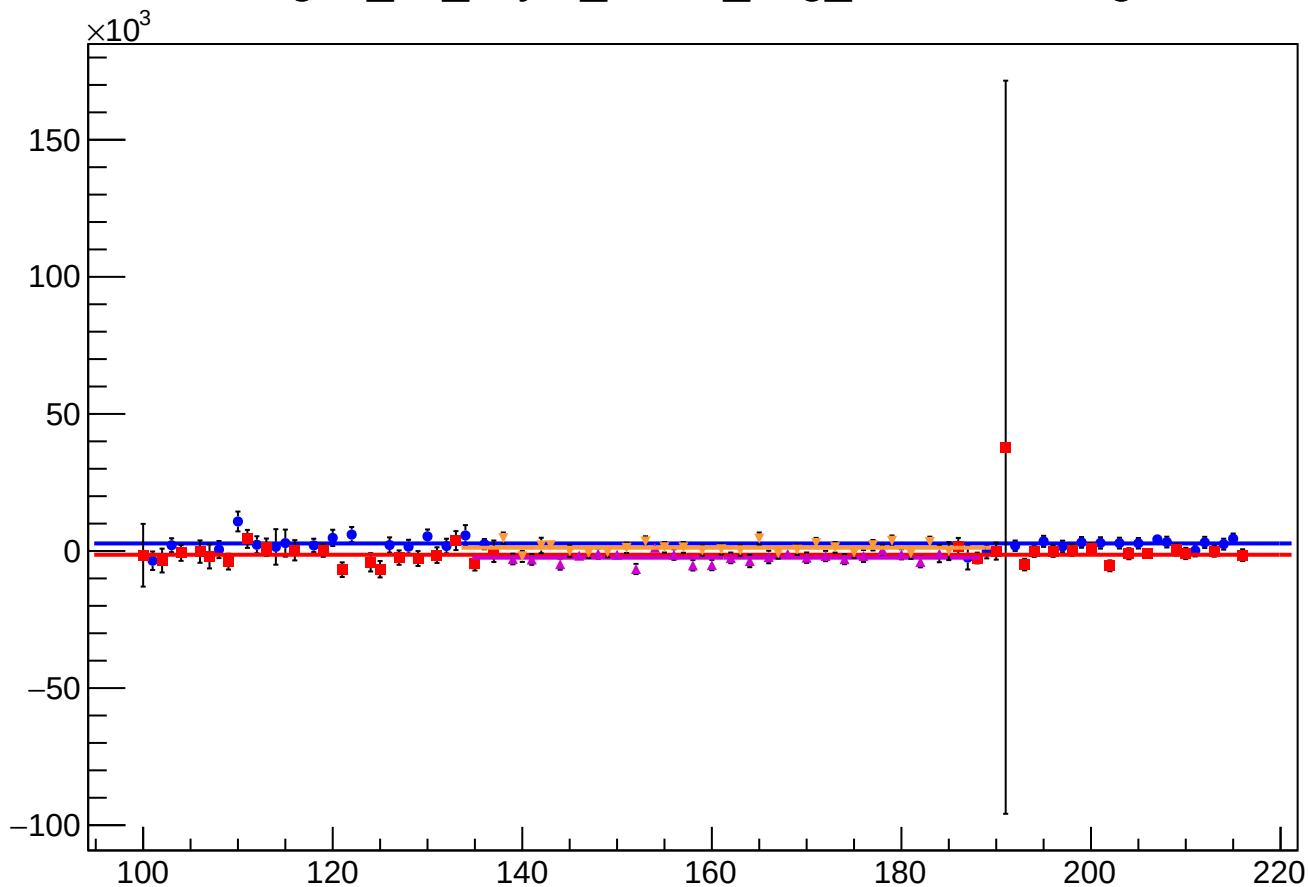
Left In:  $4916.964 \pm 0.828$   $\chi^2/\text{NDF}: 1161642.5/22$

+ sign  $3926.067 \pm 0.515$   $\chi^2/\text{NDF}: 17936210.9/55$

All:  $3517.159 \pm 0.341$   $\chi^2/\text{NDF}: 45576089.7/1$

- sign  $3196.477 \pm 0.456$   $\chi^2/\text{NDF}: 26513524.9/57$

eigen\_dit\_asym\_atl1r2\_avg\_mean vs Slug



Right In: 2762.920 $\pm$ 426.971  $\chi^2$ /NDF: 19.7/30

Left Out: 1197.356 $\pm$ 392.981  $\chi^2$ /NDF: 19.5/24

Right Out: -1364.262 $\pm$ 430.336  $\chi^2$ /NDF: 30.8/34

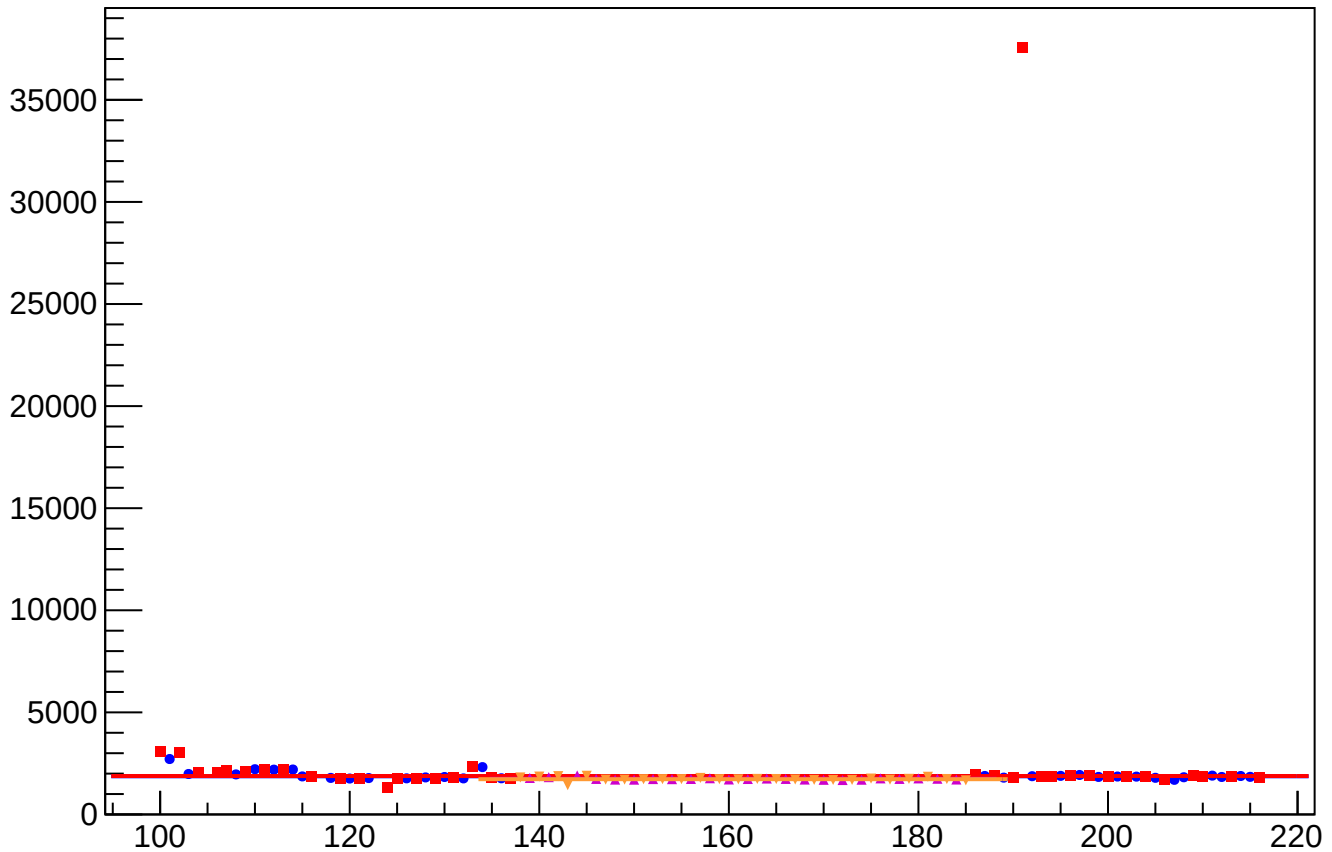
Left In: -2438.062 $\pm$ 407.552  $\chi^2$ /NDF: 20.6/22

+ sign 1915.353 $\pm$ 289.150  $\chi^2$ /NDF: 46.5/55

All: 36.930 $\pm$ 206.809  $\chi^2$ /NDF: 187.5/113

- sign -1930.340 $\pm$ 295.910  $\chi^2$ /NDF: 54.7/57

# eigen\_dit\_asym\_atl1r2\_avg\_rms vs Slug



Right In: 1869.352 $\pm$ 0.302  $\chi^2$ /NDF: 253149.1/30

Left Out: 1727.236 $\pm$ 0.278  $\chi^2$ /NDF: 110269.9/24

Right Out: 1882.049 $\pm$ 0.304  $\chi^2$ /NDF: 522314.7/34

Left In: 1744.633 $\pm$ 0.288  $\chi^2$ /NDF: 26798.0/22

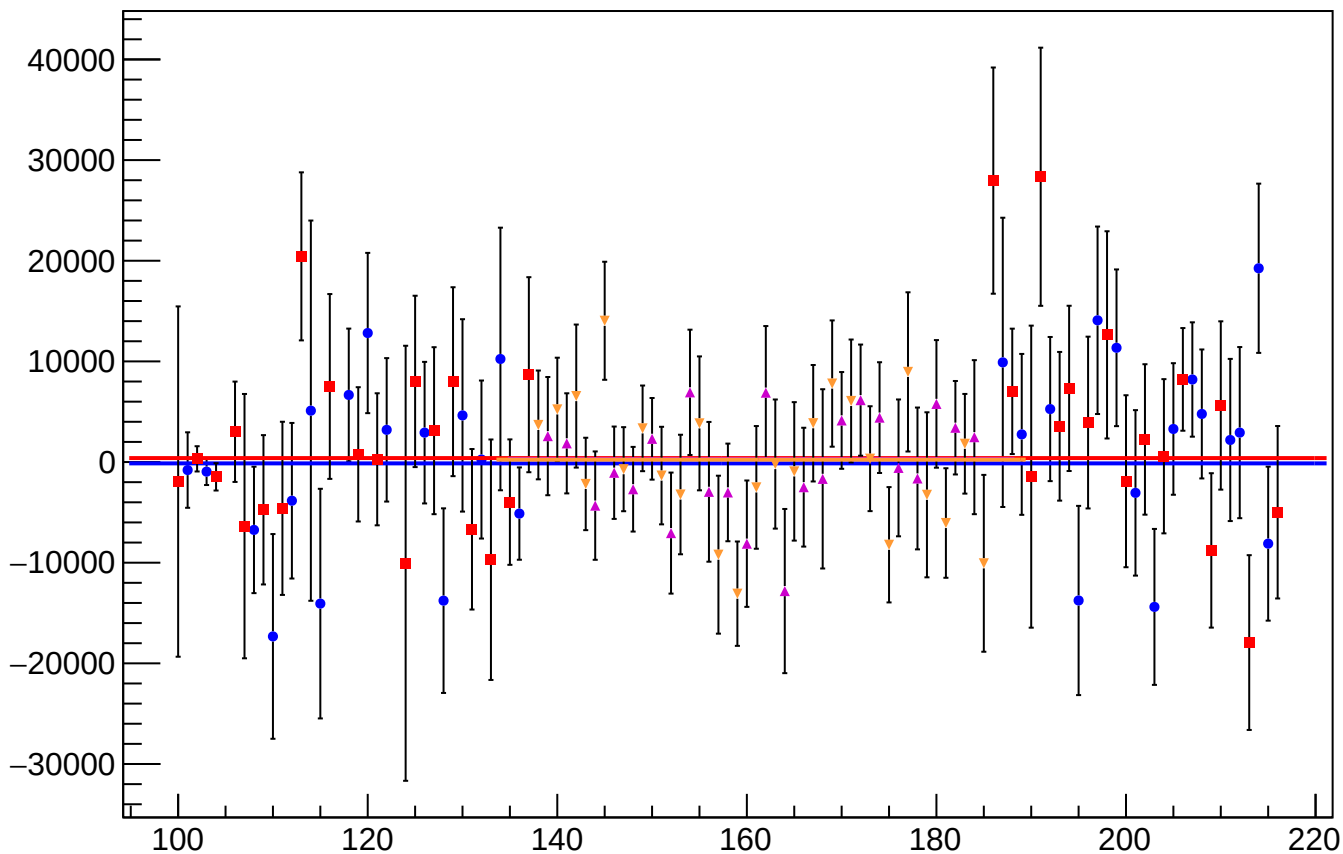
+ sign 1792.413 $\pm$ 0.204  $\chi^2$ /NDF: 483375.4/55

All: 1800.822 $\pm$ 0.146  $\chi^2$ /NDF: 1143491.6/11

- sign 1809.627 $\pm$ 0.209  $\chi^2$ /NDF: 656653.2/57



asym\_atl1r2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-132.023 \pm 945.097$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $241.128 \pm 1140.962$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $393.396 \pm 772.013$   $\chi^2/\text{NDF}$ : 37.7/34

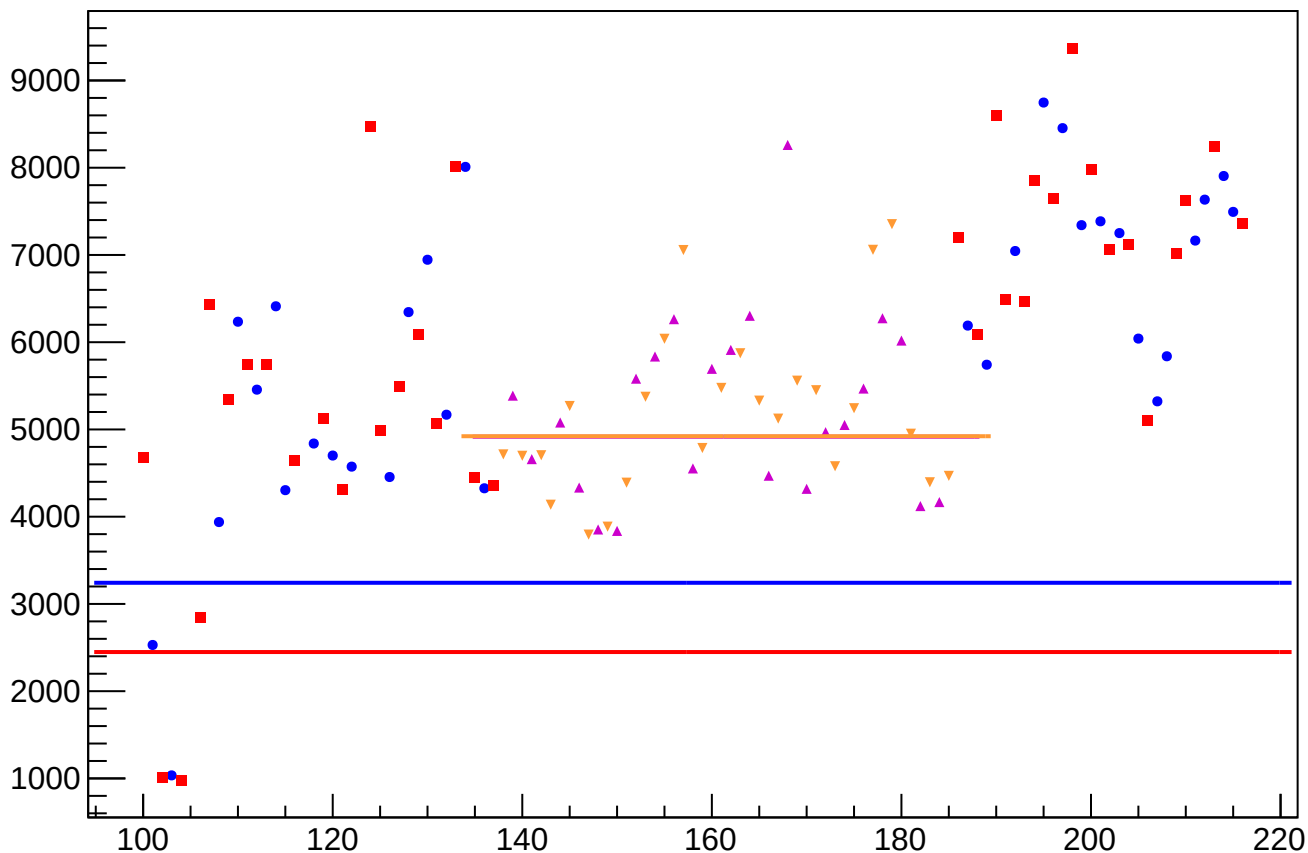
Left In:  $306.109 \pm 1171.021$   $\chi^2/\text{NDF}$ : 14.5/22

+ sign  $19.823 \pm 727.830$   $\chi^2/\text{NDF}$ : 62.3/55

All:  $214.376 \pm 482.534$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $366.952 \pm 644.547$   $\chi^2/\text{NDF}$ : 52.2/57

asym\_atl1r2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 3242.457+/-0.668  $\chi^2/\text{NDF}$ : 14314392.9/30

Left Out: 4922.388+/-0.807  $\chi^2/\text{NDF}$ : 1050409.4/24

Right Out: 2448.696+/-0.546  $\chi^2/\text{NDF}$ : 19158249.5/34

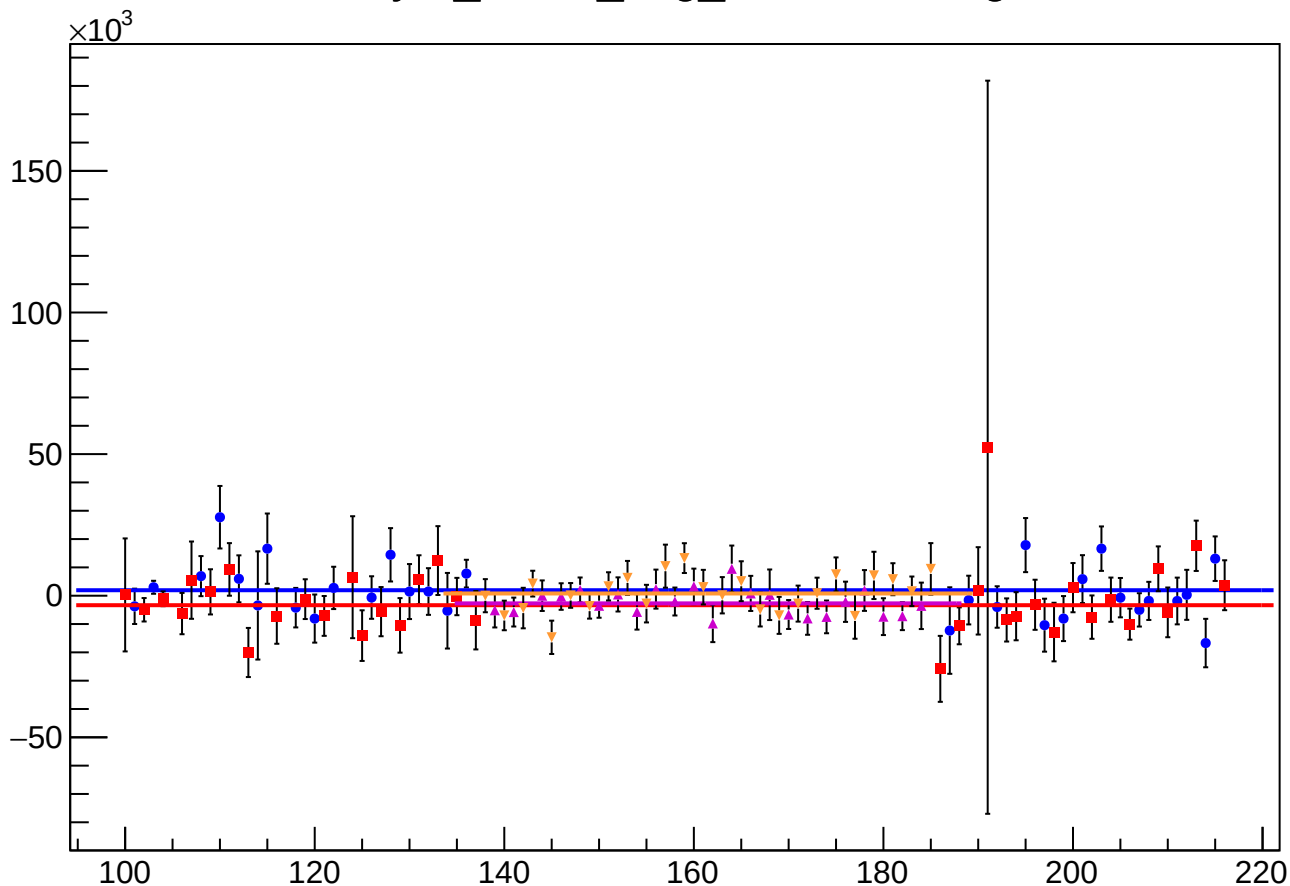
Left In: 4916.972+/-0.828  $\chi^2/\text{NDF}$ : 1161645.9/22

+ sign 3926.068+/-0.515  $\chi^2/\text{NDF}$ : 17936251.6/55

All: 3517.159+/-0.341  $\chi^2/\text{NDF}$ : 45576176.0/1

- sign 3196.476+/-0.456  $\chi^2/\text{NDF}$ : 26513567.7/57

# asym\_atl1r2\_avg\_mean vs Slug



Right In: 1937.967 $\pm$ 1234.709  $\chi^2$ /NDF: 34.9/30

Left Out: 787.965 $\pm$ 1171.964  $\chi^2$ /NDF: 27.6/24

Right Out: -3350.359 $\pm$ 1251.948  $\chi^2$ /NDF: 31.6/34

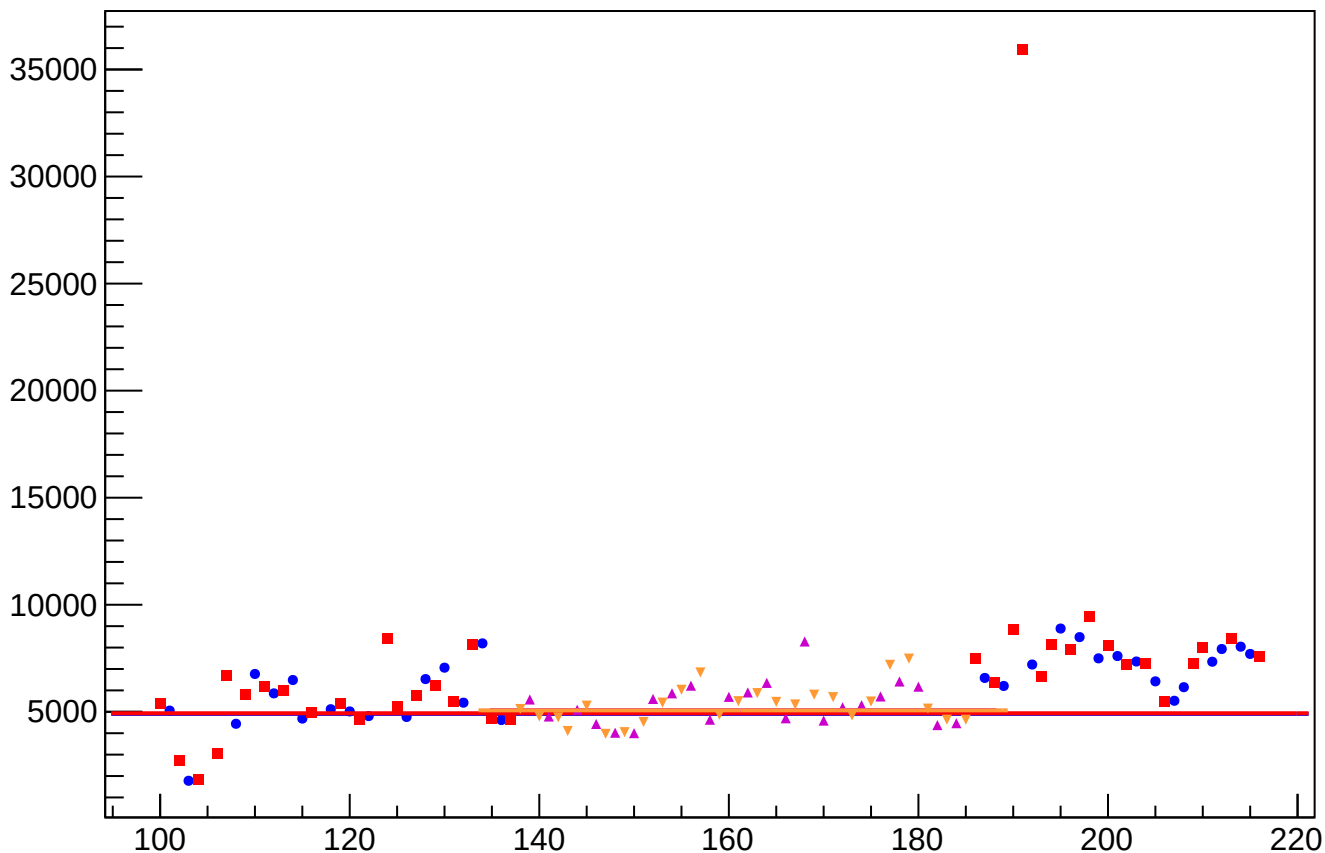
Left In: -2705.532 $\pm$ 1206.281  $\chi^2$ /NDF: 11.9/22

+ sign 1333.004 $\pm$ 850.020  $\chi^2$ /NDF: 62.9/55

All: -794.309 $\pm$ 607.540  $\chi^2$ /NDF: 119.3/113

- sign -3015.971 $\pm$ 868.665  $\chi^2$ /NDF: 43.6/57

# asym\_atl1r2\_avg\_rms vs Slug



Right In: 4902.773+/-0.873  $\chi^2/\text{NDF}$ : 6763228.7/30

Left Out: 5067.898+/-0.829  $\chi^2/\text{NDF}$ :954253.8/24

Right Out: 4930.553+/-0.879  $\chi^2/\text{NDF}$ : 6947815.9/34

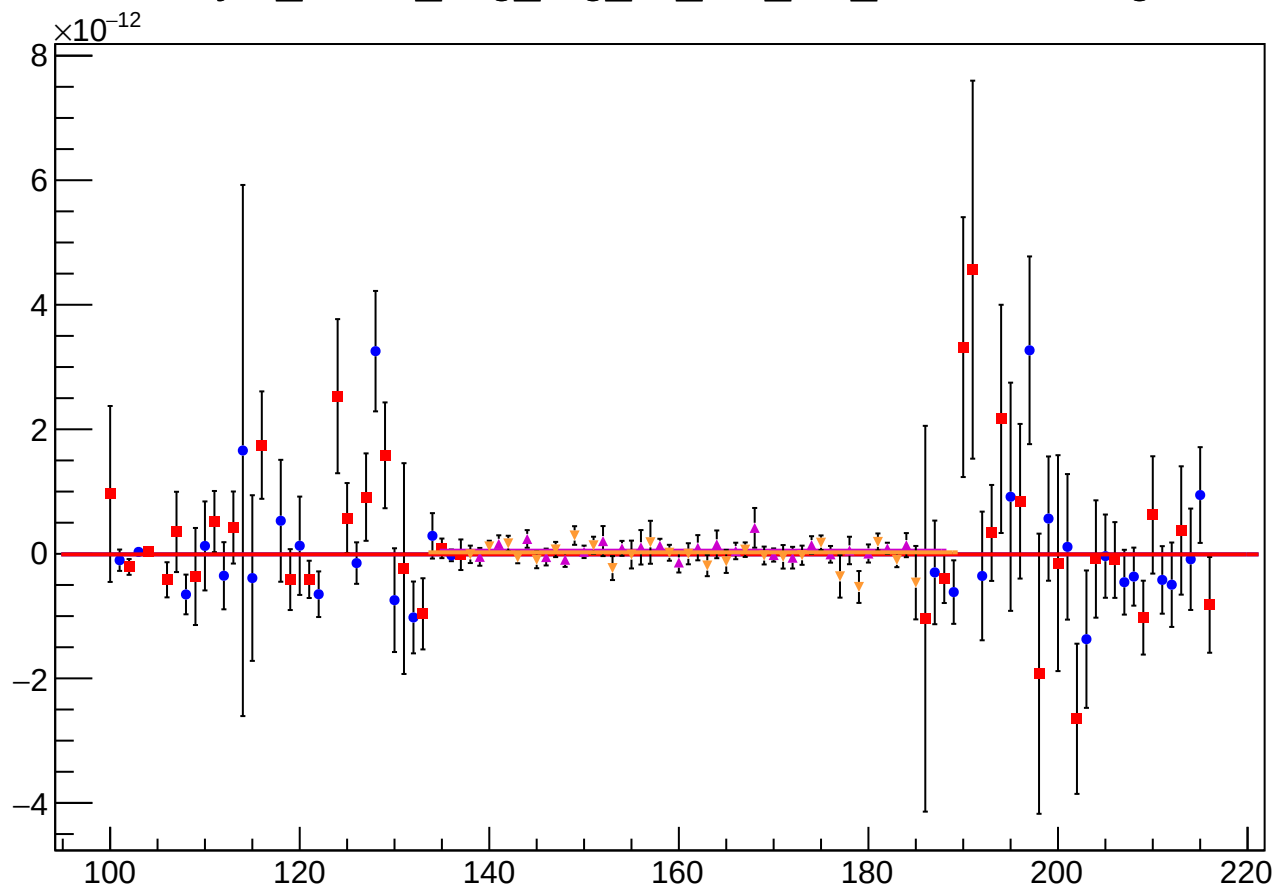
Left In: 5079.715+/-0.853  $\chi^2/\text{NDF}$ :1001241.5/22

+ sign 4989.637+/-0.601  $\chi^2/\text{NDF}$ : 7736299.6/55

All: 4998.362+/-0.429  $\chi^2/\text{NDF}$ : 15700608.9/100

- sign 5007.416+/-0.612  $\chi^2/\text{NDF}$ : 7963879.9/57

asym\_atl1r2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23.6/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 46.5/34

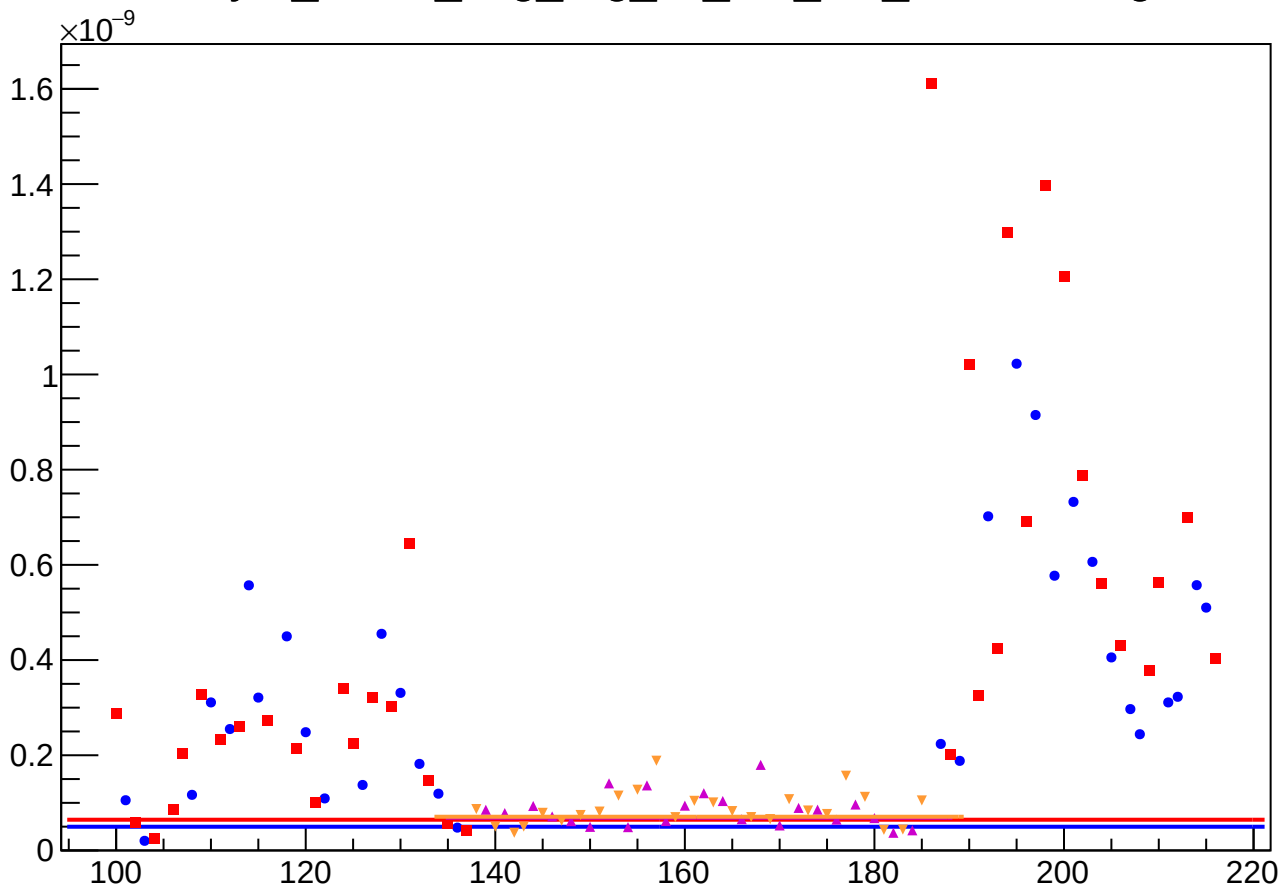
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 62.0/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 121.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 58.7/57

asym\_atl1r2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11014565.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1489228.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12004418.6/34

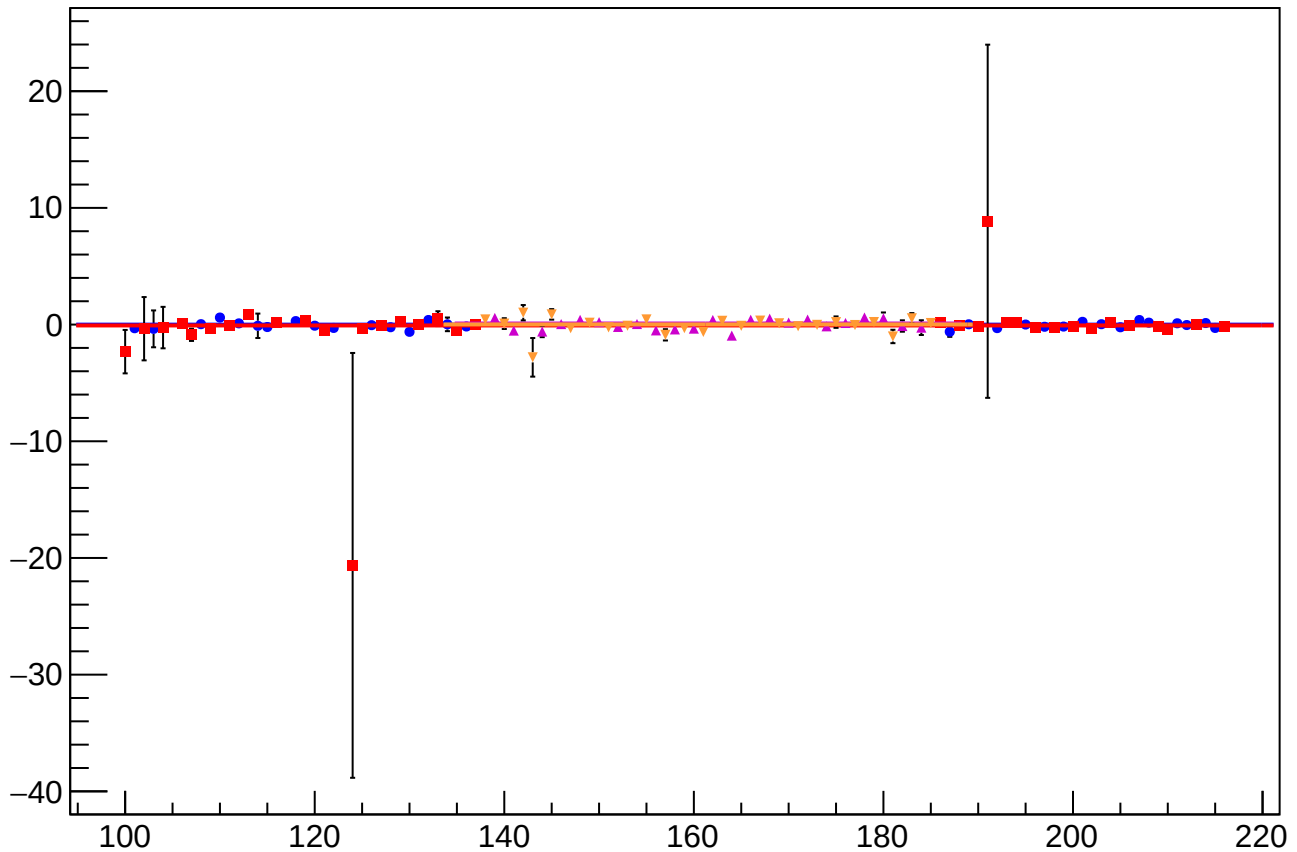
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1432116.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12923360.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26419181.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13449853.3/57

# asym\_atl1r2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.046$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.075 \pm 0.044$   $\chi^2/\text{NDF}$ : 32.1/34

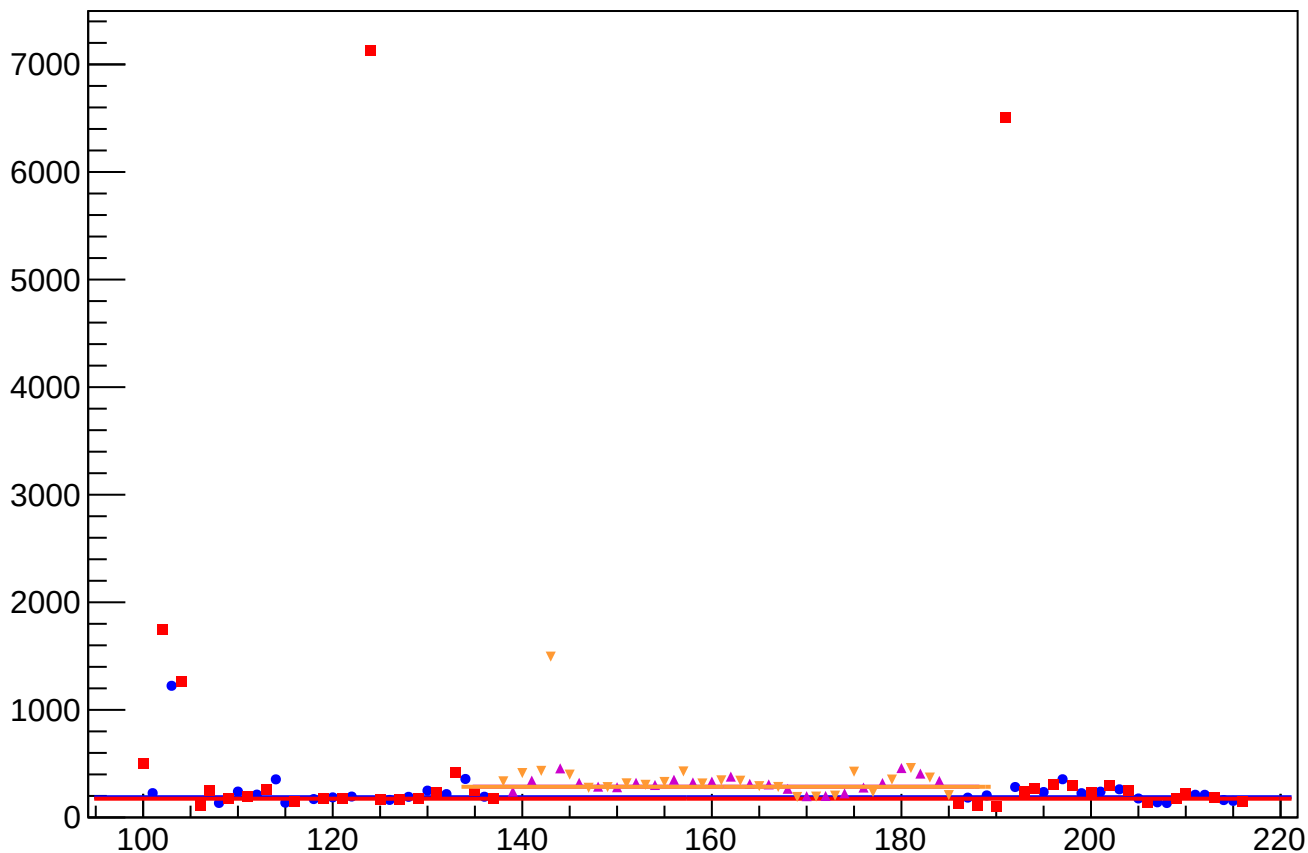
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.001 \pm 0.039$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-0.014 \pm 0.027$   $\chi^2/\text{NDF}$ : 124.3/113

- sign  $-0.028 \pm 0.038$   $\chi^2/\text{NDF}$ : 66.9/57

# asym\_atl1r2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 188.219 $\pm$ 0.033  $\chi^2$ /NDF: 2885992.2/30

Left Out: 285.036 $\pm$ 0.049  $\chi^2$ /NDF: 3407001.6/24

Right Out: 174.310 $\pm$ 0.031  $\chi^2$ /NDF: 5485047.3/34

Left In: 285.869 $\pm$ 0.050  $\chi^2$ /NDF: 1744706.1/22

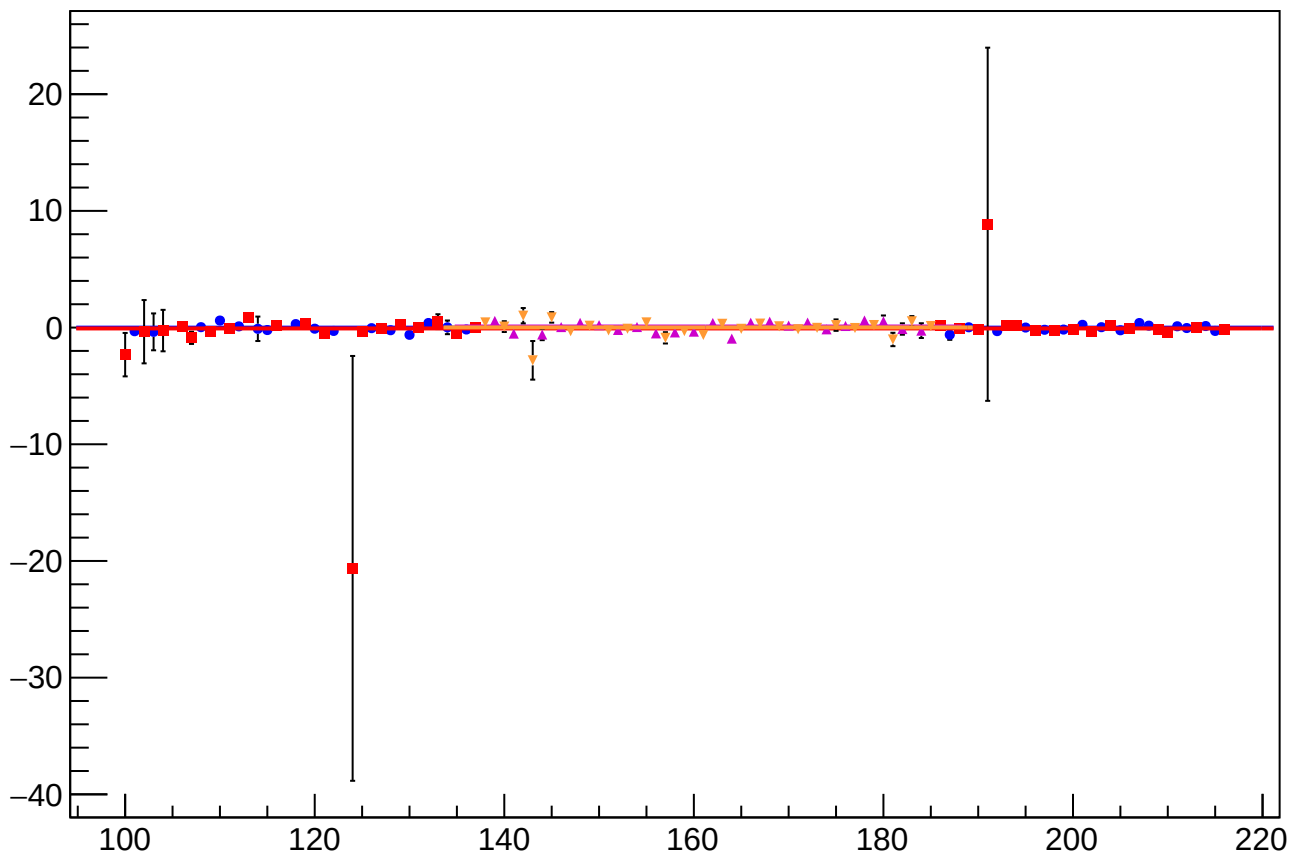
+ sign 217.696 $\pm$ 0.027  $\chi^2$ /NDF: 8967802.7/55

All: 211.712 $\pm$ 0.019  $\chi^2$ /NDF: 19884163.7/1

- sign 206.028 $\pm$ 0.027  $\chi^2$ /NDF: 10822276.5/57



asym\_atl1r2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.046$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.075 \pm 0.044$   $\chi^2/\text{NDF}$ : 32.1/34

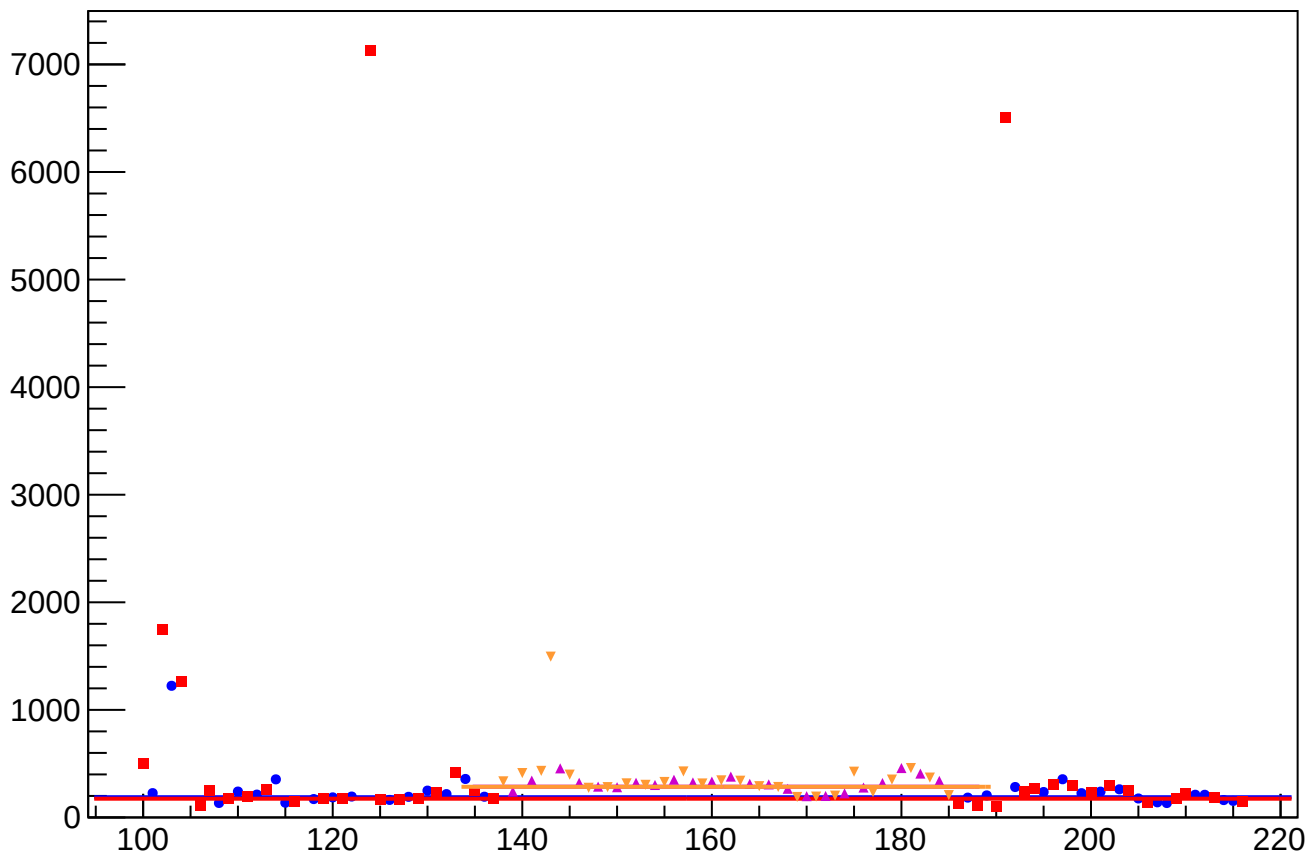
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.001 \pm 0.039$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-0.014 \pm 0.027$   $\chi^2/\text{NDF}$ : 124.3/113

- sign  $-0.028 \pm 0.038$   $\chi^2/\text{NDF}$ : 66.9/57

asym\_atl1r2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 188.219 $\pm$ 0.033  $\chi^2$ /NDF: 2885992.2/30

Left Out: 285.036 $\pm$ 0.049  $\chi^2$ /NDF: 3407001.6/24

Right Out: 174.310 $\pm$ 0.031  $\chi^2$ /NDF: 5485047.3/34

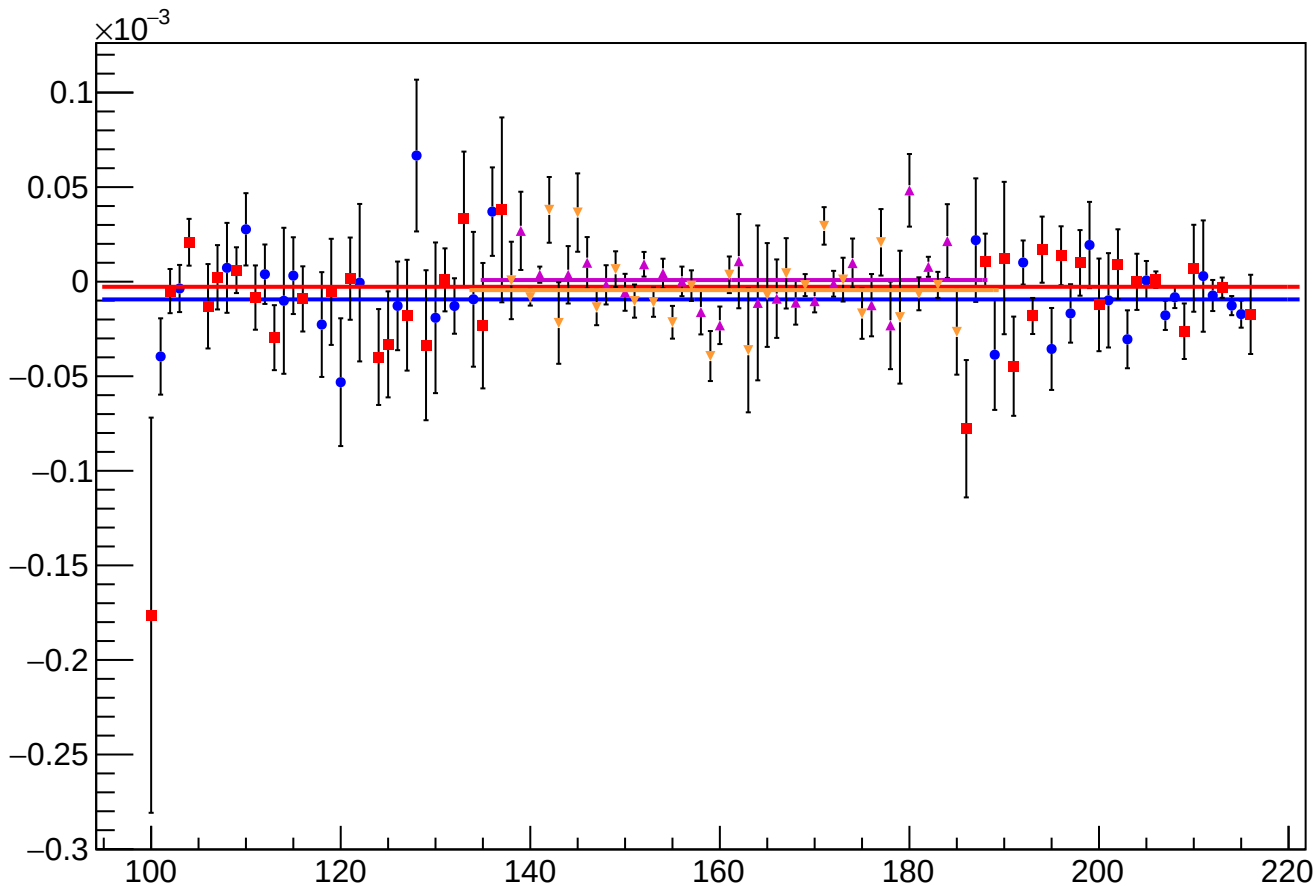
Left In: 285.869 $\pm$ 0.050  $\chi^2$ /NDF: 1744706.1/22

+ sign 217.696 $\pm$ 0.027  $\chi^2$ /NDF: 8967802.7/55

All: 211.712 $\pm$ 0.019  $\chi^2$ /NDF: 19884163.7/1

- sign 206.028 $\pm$ 0.027  $\chi^2$ /NDF: 10822276.5/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.2/34

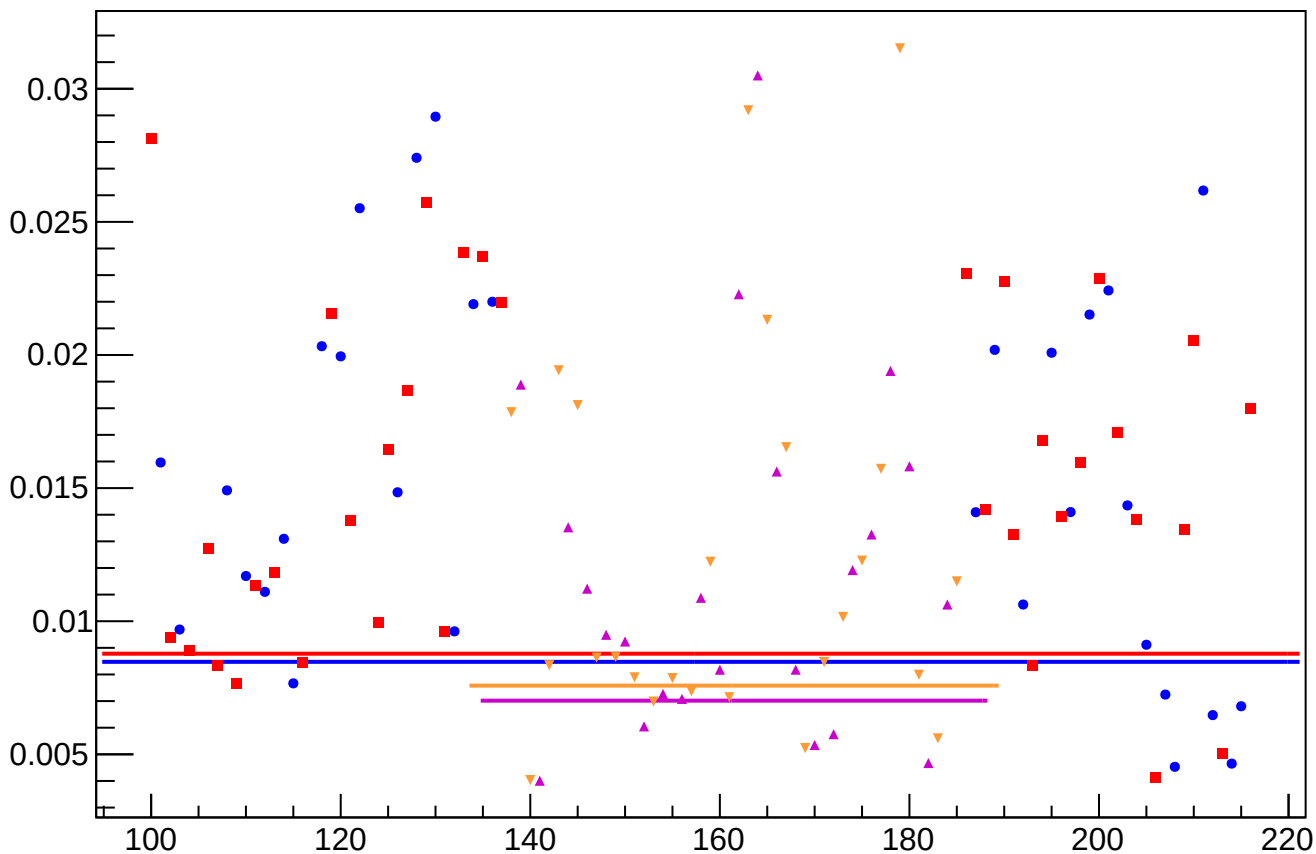
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 77.9/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 150.5/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.6/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9569699.5/30

Left Out: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7351454.7/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9938988.6/34

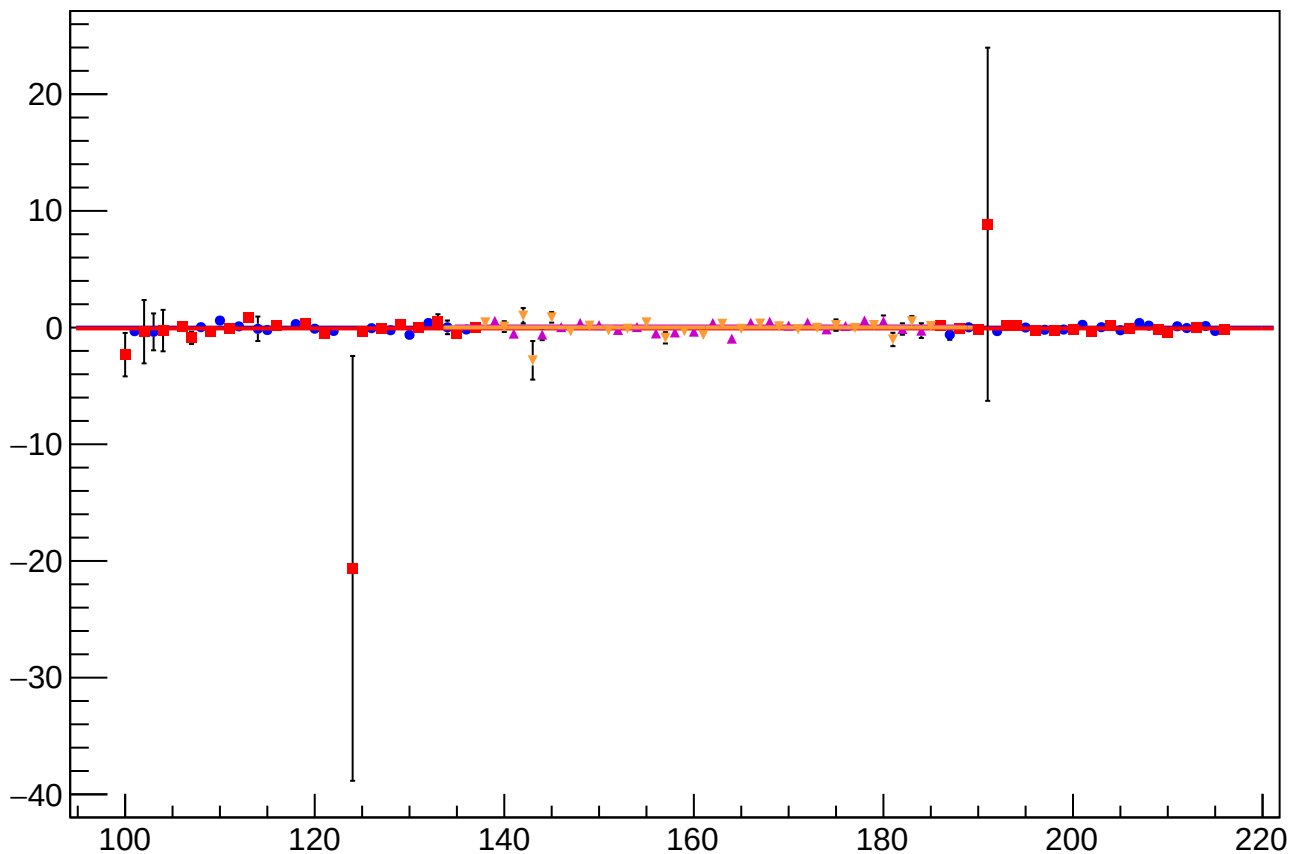
Left In: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6740679.5/22

+ sign 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17094523.3/55

All: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 34485233.2/113

- sign 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17365685.4/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.046$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.075 \pm 0.044$   $\chi^2/\text{NDF}$ : 32.1/34

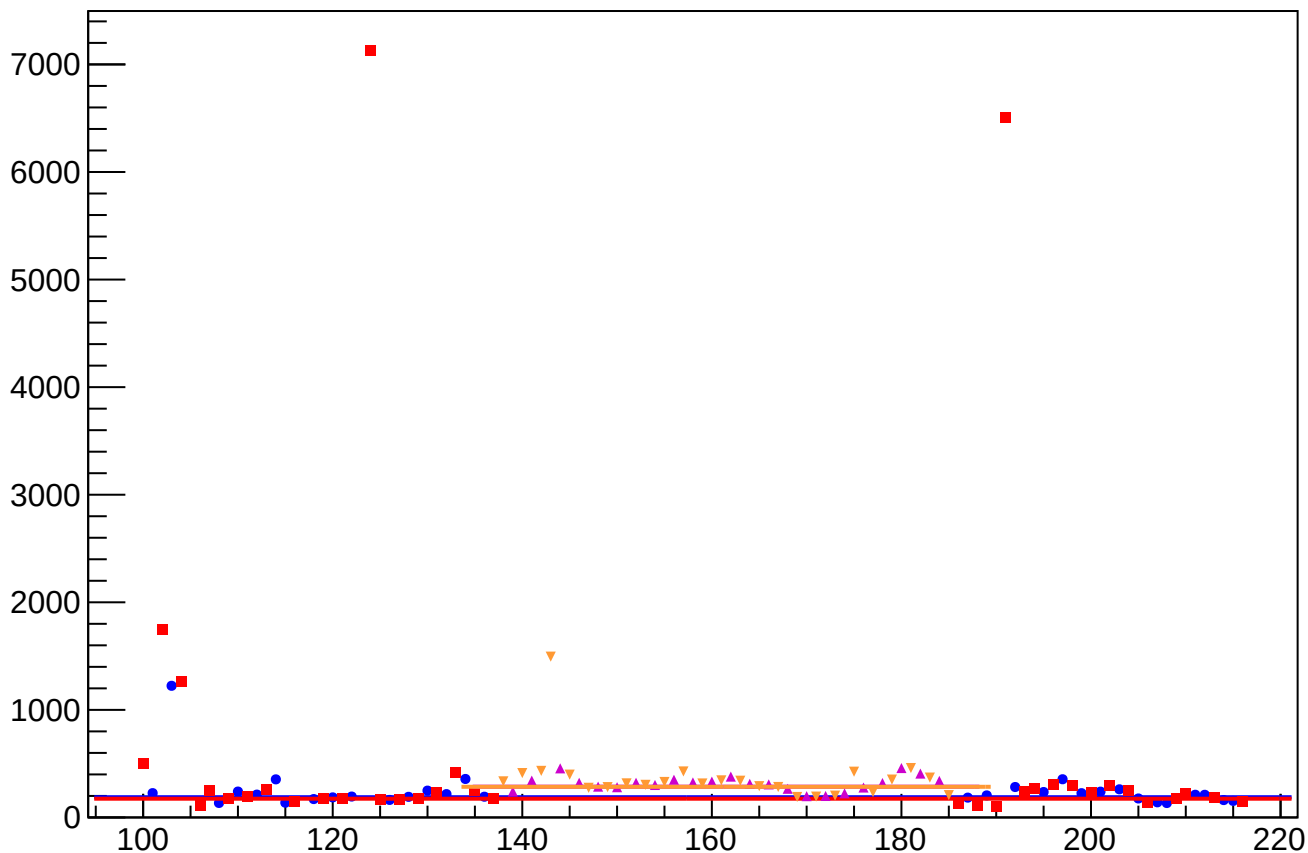
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.001 \pm 0.039$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-0.014 \pm 0.027$   $\chi^2/\text{NDF}$ : 124.3/113

- sign  $-0.028 \pm 0.038$   $\chi^2/\text{NDF}$ : 66.9/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 188.218 $\pm$ 0.033  $\chi^2$ /NDF: 2886009.2/30

Left Out: 285.039 $\pm$ 0.049  $\chi^2$ /NDF: 3407037.3/24

Right Out: 174.308 $\pm$ 0.031  $\chi^2$ /NDF: 5485185.7/34

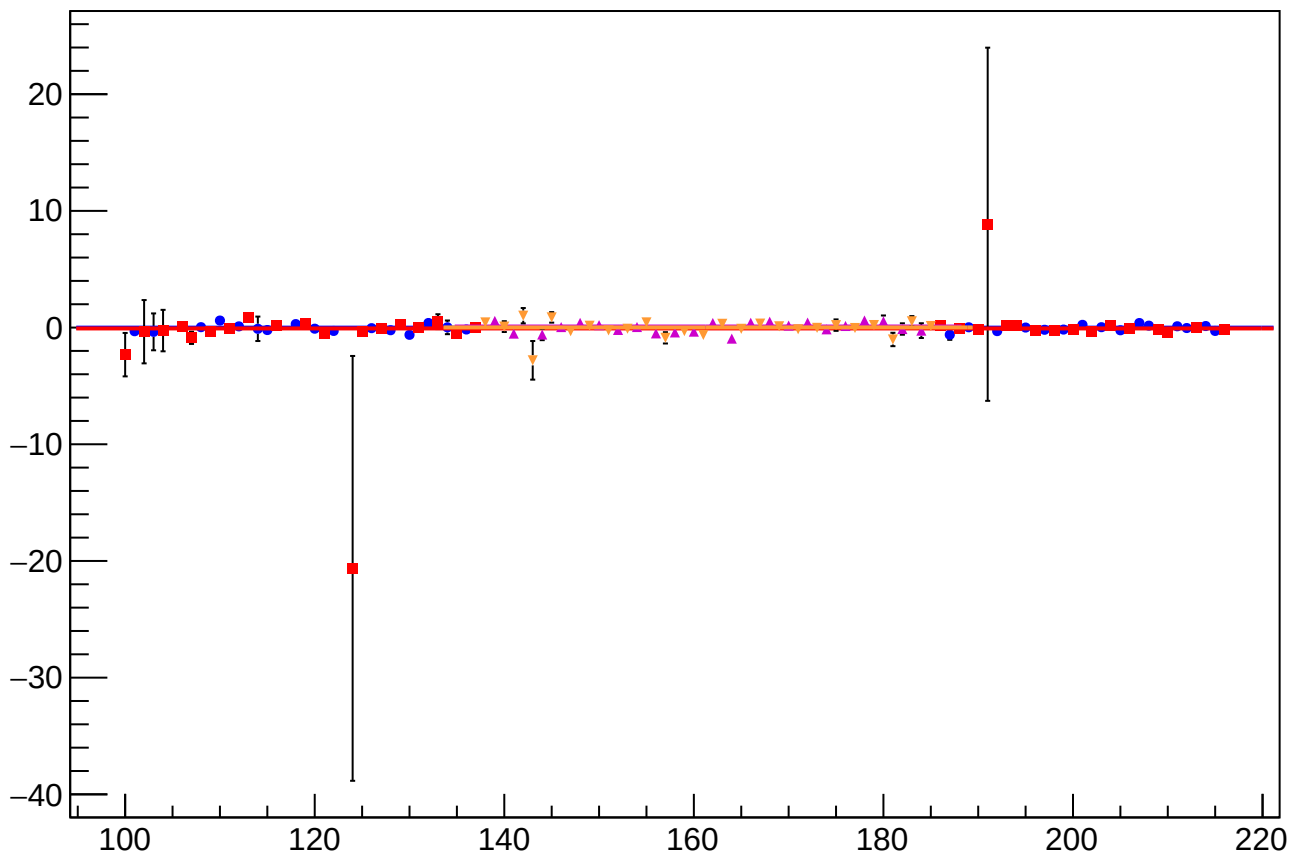
Left In: 285.871 $\pm$ 0.050  $\chi^2$ /NDF: 1744743.9/22

+ sign 217.695 $\pm$ 0.027  $\chi^2$ /NDF: 8968033.9/55

All: 211.711 $\pm$ 0.019  $\chi^2$ /NDF: 19884875.0/1

- sign 206.026 $\pm$ 0.027  $\chi^2$ /NDF: 10822735.2/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.046$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $0.014 \pm 0.070$   $\chi^2/\text{NDF}$ : 28.3/24

Right Out:  $-0.075 \pm 0.044$   $\chi^2/\text{NDF}$ : 32.1/34

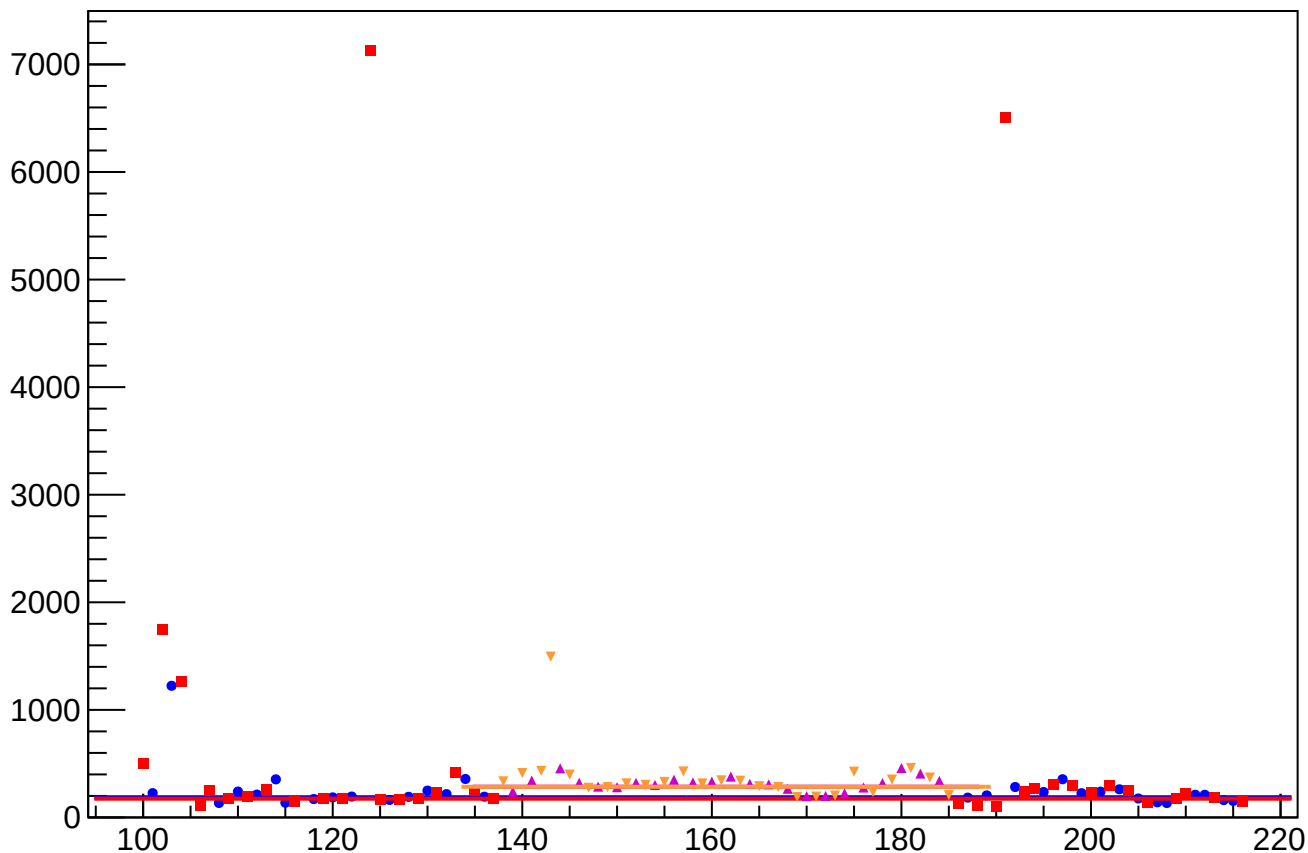
Left In:  $0.091 \pm 0.070$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.001 \pm 0.039$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-0.014 \pm 0.027$   $\chi^2/\text{NDF}$ : 124.3/113

- sign  $-0.028 \pm 0.038$   $\chi^2/\text{NDF}$ : 66.9/57

asym\_atl1r2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 188.218 $\pm$ 0.033  $\chi^2$ /NDF: 2886009.2/30

Left Out: 285.039 $\pm$ 0.049  $\chi^2$ /NDF: 3407037.3/24

Right Out: 174.308 $\pm$ 0.031  $\chi^2$ /NDF: 5485185.7/34

Left In: 285.871 $\pm$ 0.050  $\chi^2$ /NDF: 1744743.9/22

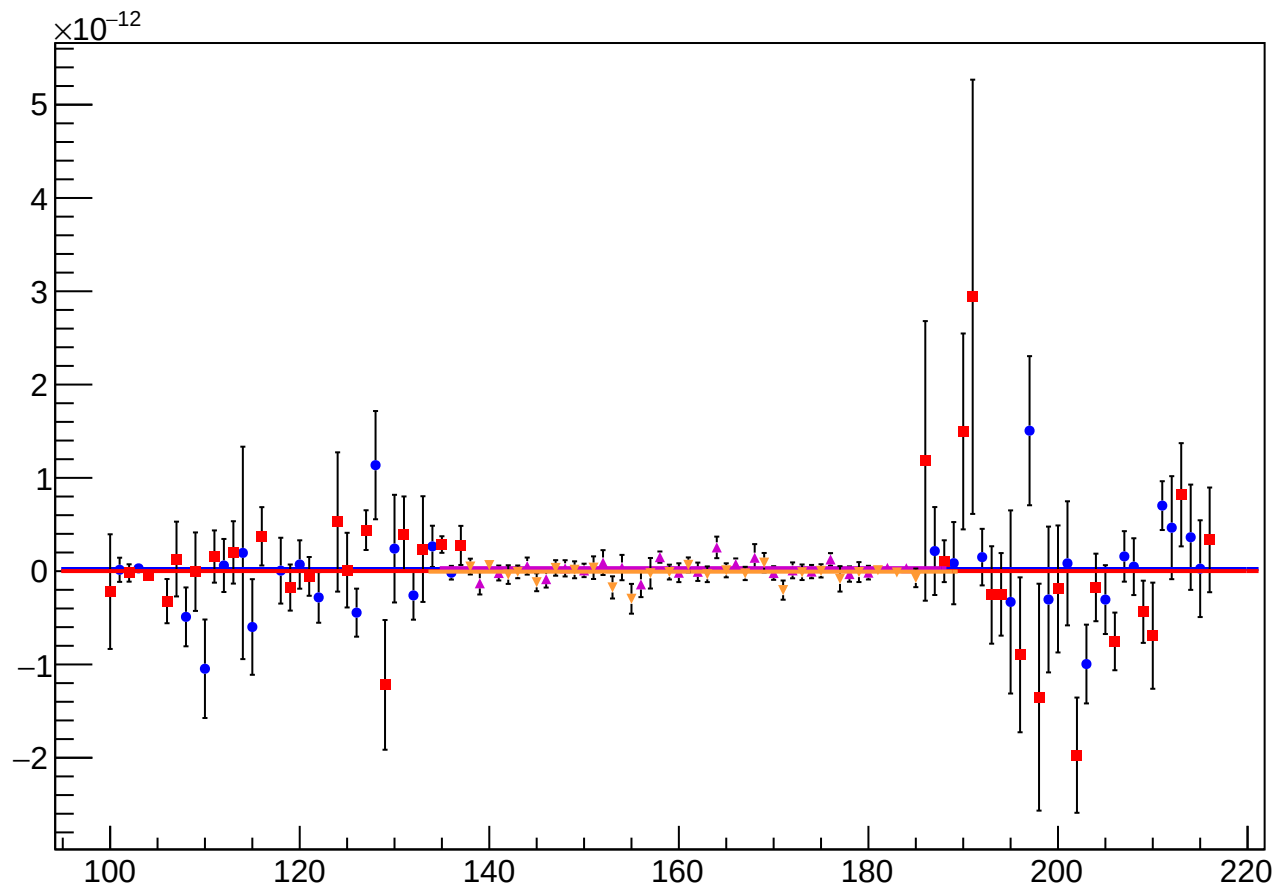
+ sign 217.695 $\pm$ 0.027  $\chi^2$ /NDF: 8968033.9/55

All: 211.711 $\pm$ 0.019  $\chi^2$ /NDF: 19884875.0/1

- sign 206.026 $\pm$ 0.027  $\chi^2$ /NDF: 10822735.2/57



asym\_atl1r2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.2/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.1/34

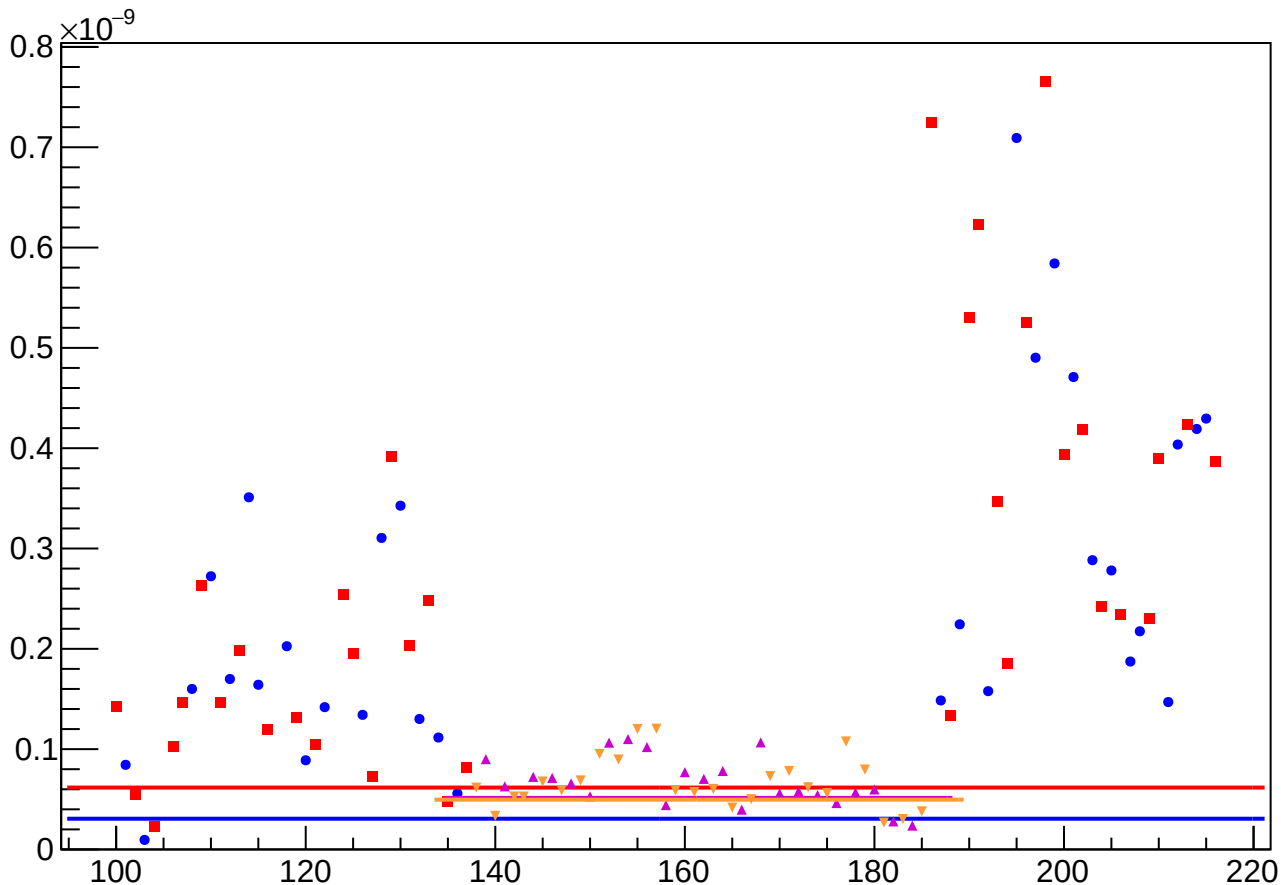
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 133.9/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.6/57

asym\_atl1r2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17596615.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3882649.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12783529.5/34

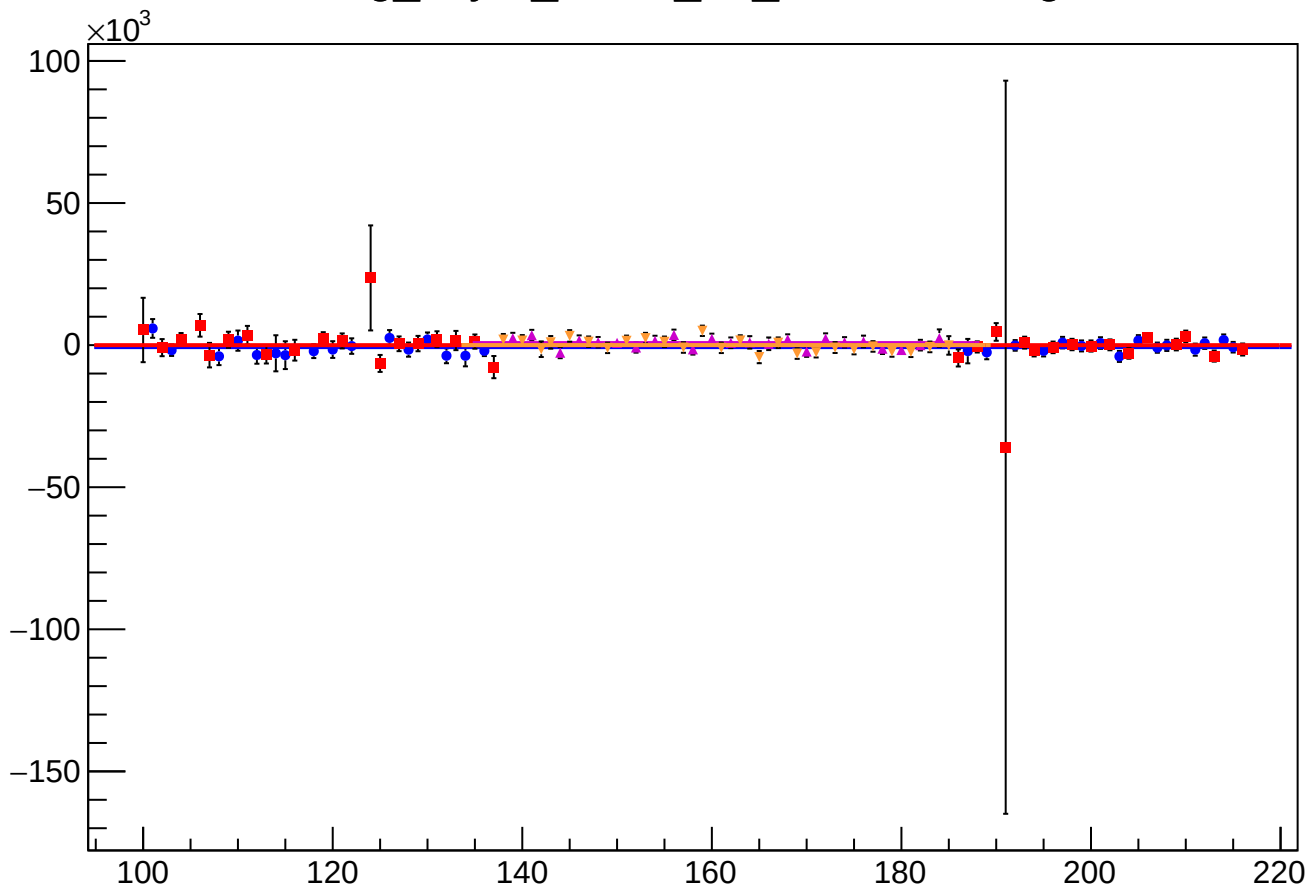
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3659712.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22614003.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 39920046.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16625730.6/57

# reg\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-698.679 \pm 418.624$   $\chi^2/\text{NDF}$ : 21.6/30

Left Out:  $23.114 \pm 387.732$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $-12.777 \pm 423.392$   $\chi^2/\text{NDF}$ : 38.3/34

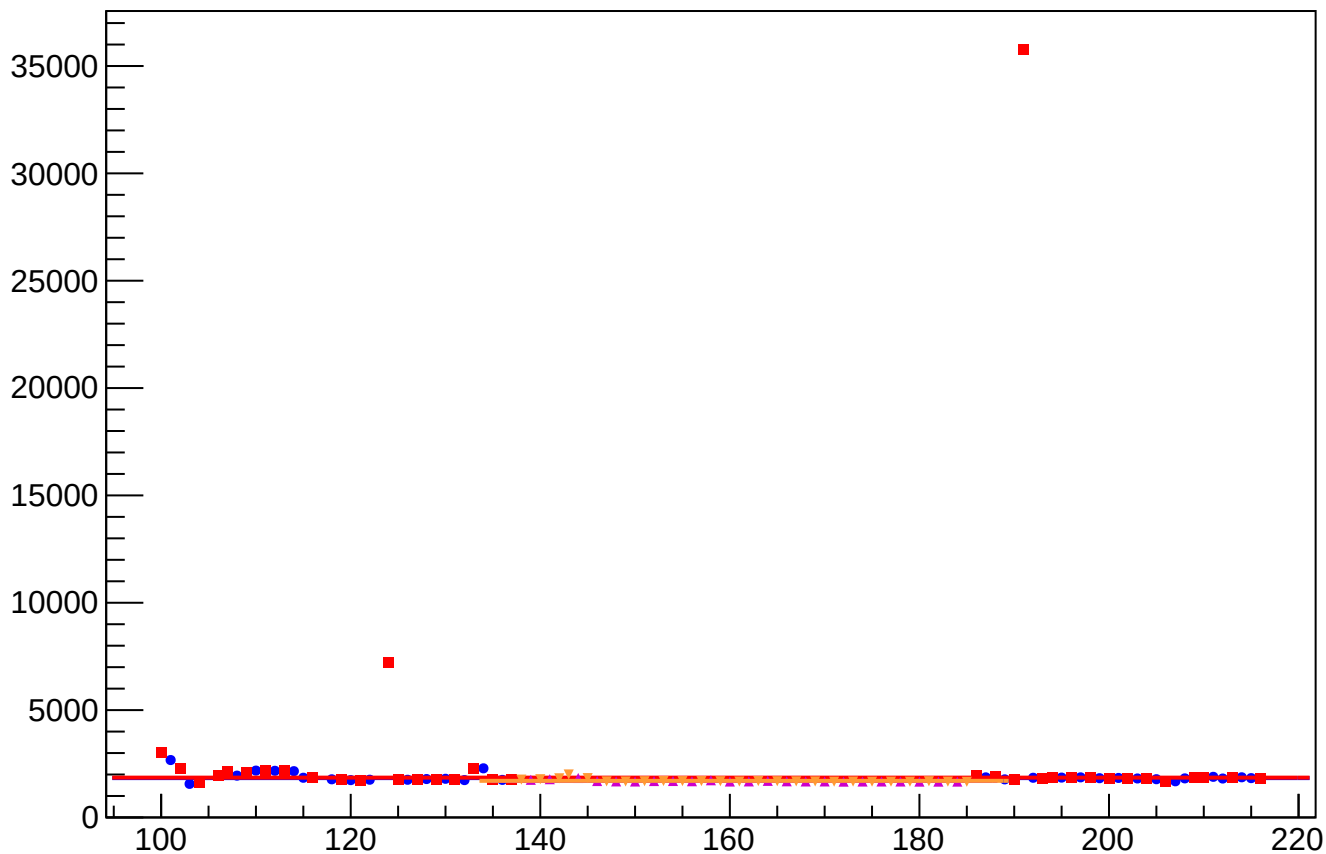
Left In:  $719.504 \pm 396.449$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $-310.171 \pm 284.463$   $\chi^2/\text{NDF}$ : 52.7/55

All:  $27.715 \pm 202.865$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $377.403 \pm 289.388$   $\chi^2/\text{NDF}$ : 59.0/57

# reg\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1832.710+/-0.296  $\chi^2/\text{NDF}$ : 281543.8/30

Left Out: 1705.634+/-0.274  $\chi^2/\text{NDF}$ : 59928.6/24

Right Out: 1854.799+/-0.299  $\chi^2/\text{NDF}$ : 536426.8/34

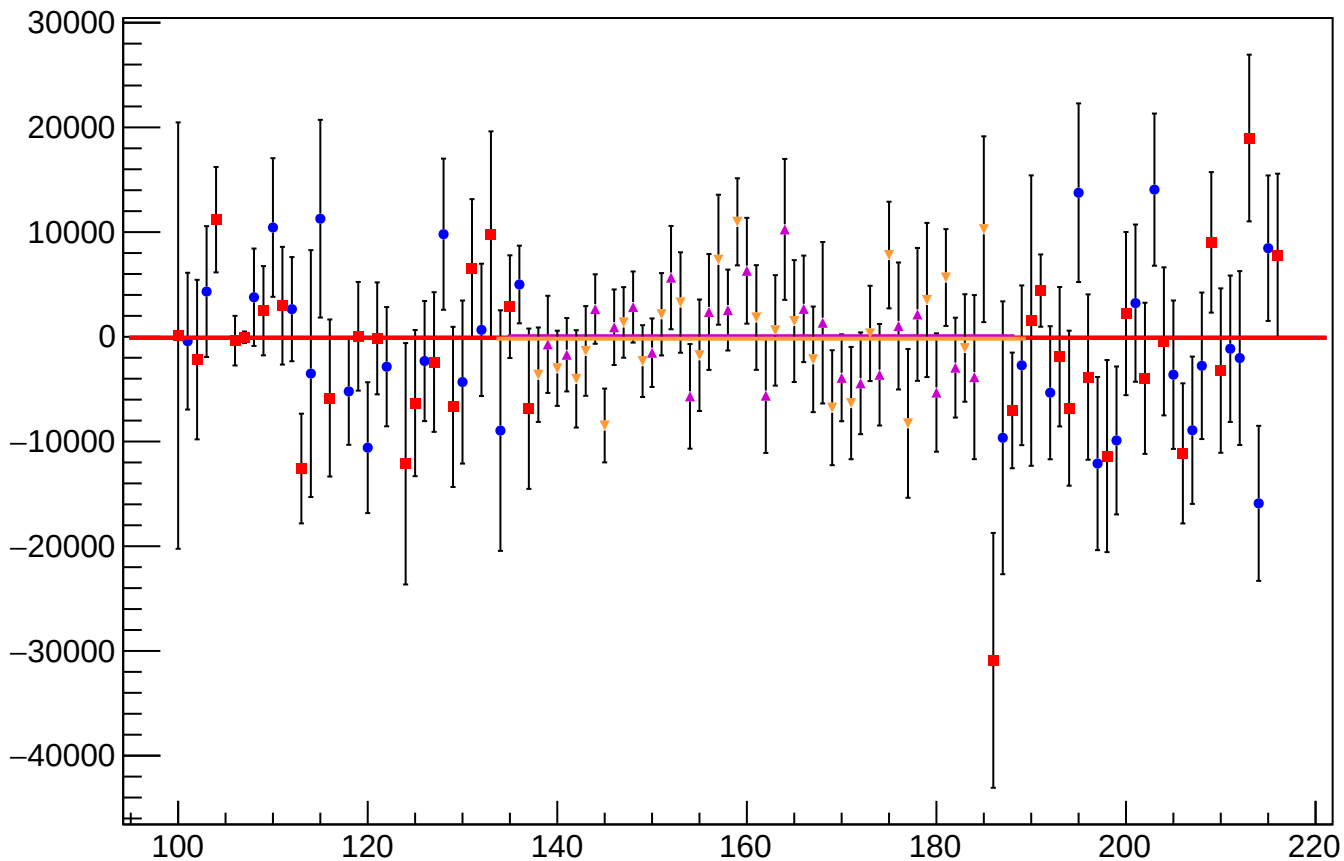
Left In: 1697.514+/-0.280  $\chi^2/\text{NDF}$ : 21146.9/22

+ sign 1764.311+/-0.201  $\chi^2/\text{NDF}$ : 440667.9/55

All: 1767.628+/-0.143  $\chi^2/\text{NDF}$ : 1145990.1/114

- sign 1771.059+/-0.205  $\chi^2/\text{NDF}$ : 704768.9/57

# asym\_atl1r2\_dd\_reg\_correction\_mean vs Slug



Right In:  $-76.171 \pm 1186.272$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-175.777 \pm 935.141$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-101.317 \pm 484.703$   $\chi^2/\text{NDF}$ : 42.1/34

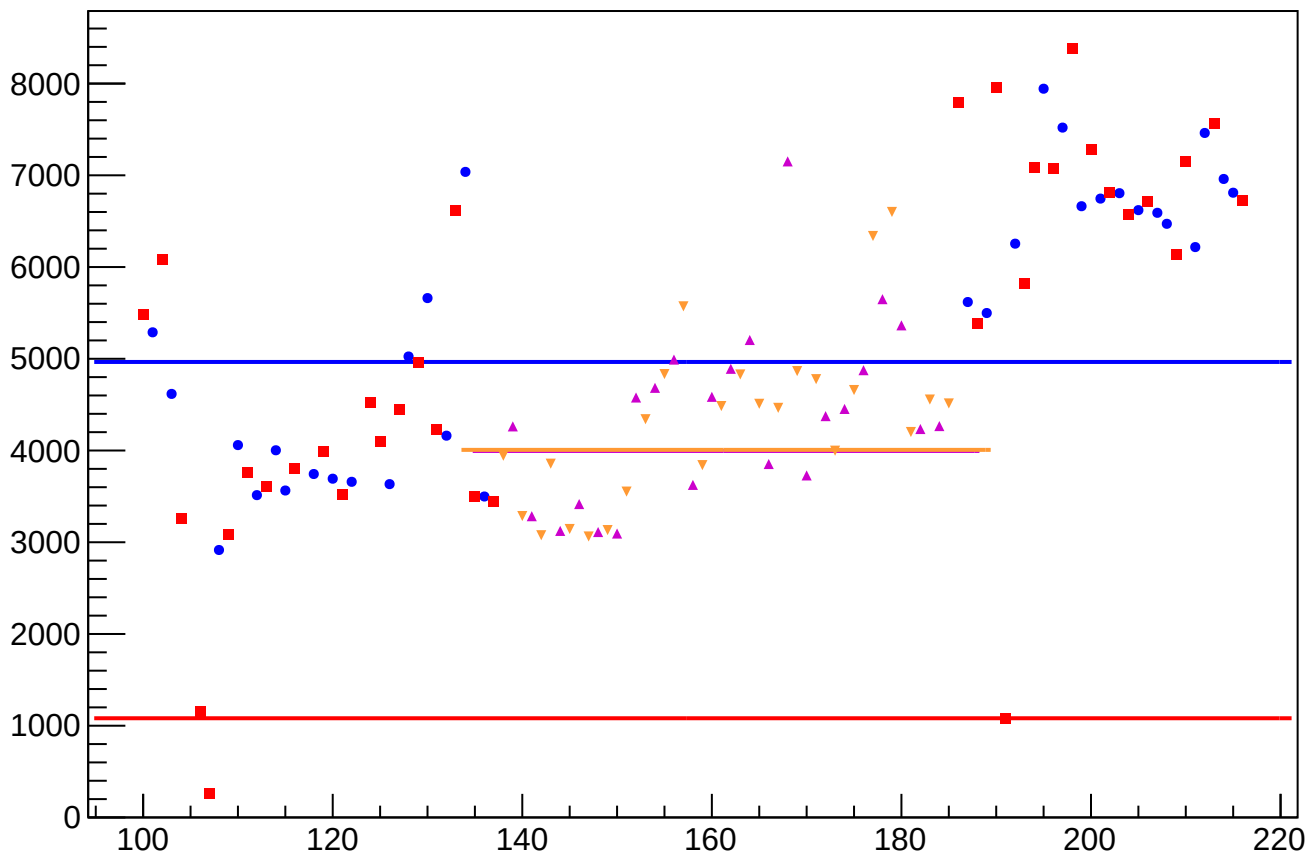
Left In:  $56.448 \pm 956.389$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-137.603 \pm 734.394$   $\chi^2/\text{NDF}$ : 62.5/55

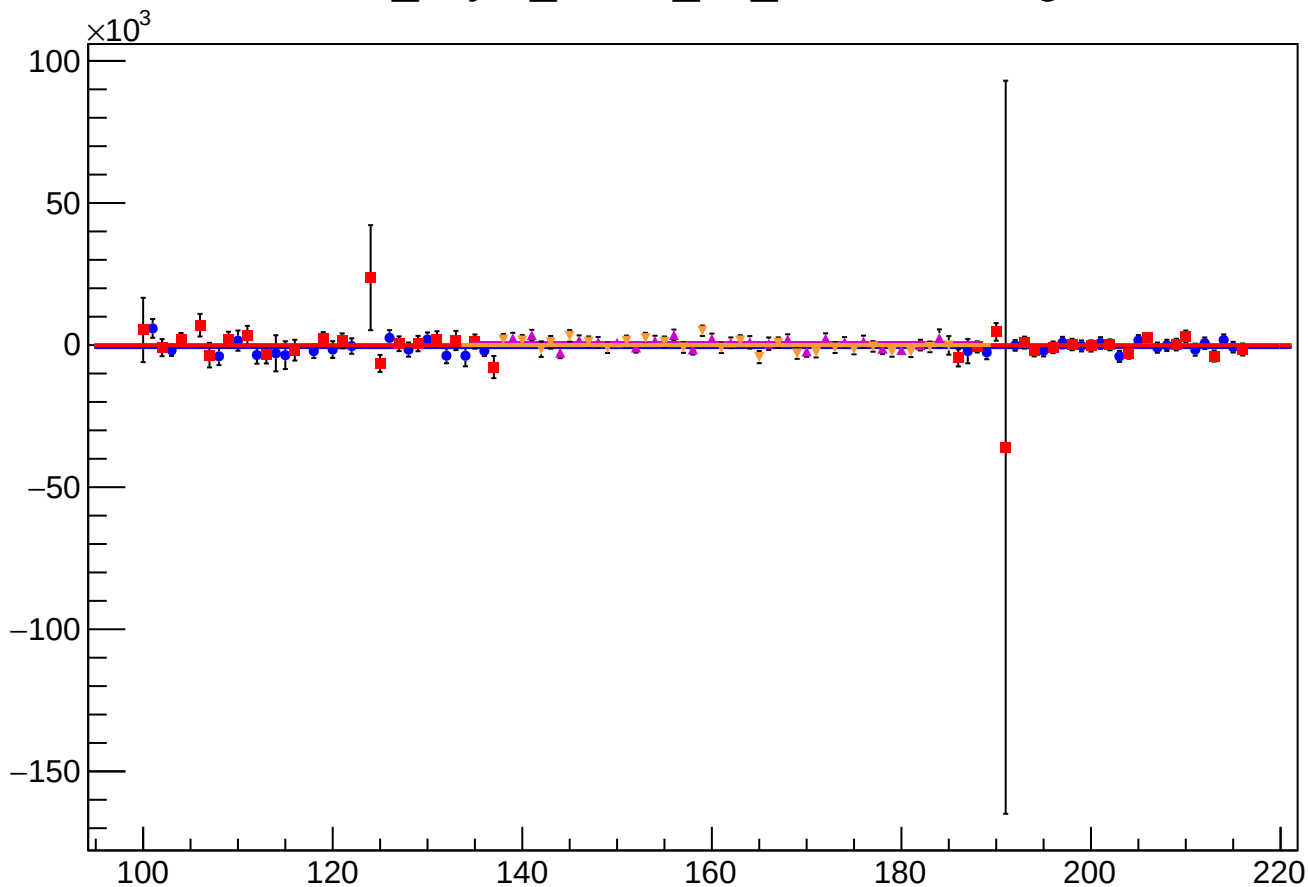
All:  $-86.713 \pm 372.578$   $\chi^2/\text{NDF}$ : 119.0/113

- sign  $-69.076 \pm 432.348$   $\chi^2/\text{NDF}$ : 56.4/57

# asym\_atl1r2\_dd\_reg\_correction\_rms vs Slug



# cor\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-698.510 \pm 418.624$   $\chi^2/\text{NDF}$ : 21.6/30

Left Out:  $23.186 \pm 387.732$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $-12.646 \pm 423.392$   $\chi^2/\text{NDF}$ : 38.4/34

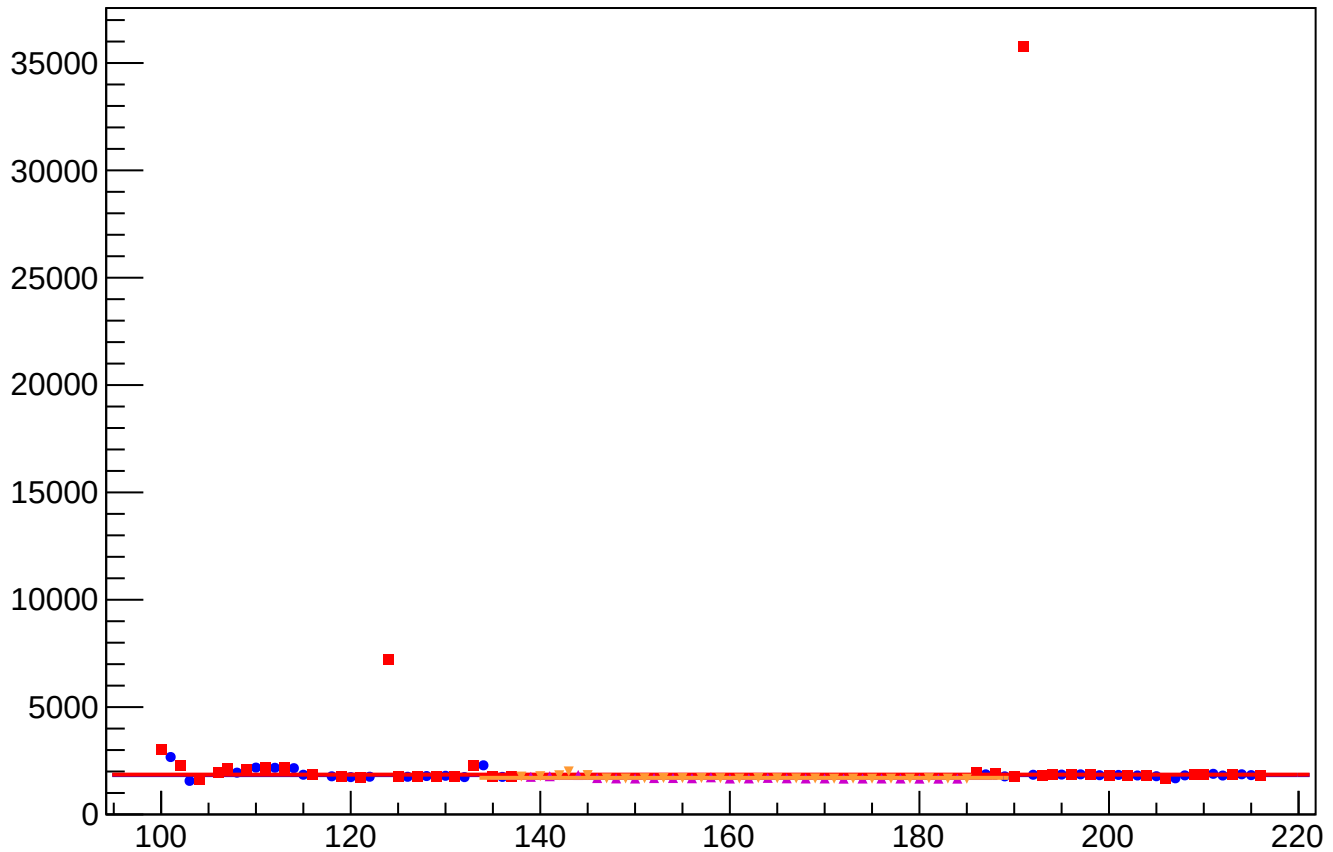
Left In:  $719.380 \pm 396.449$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $-310.054 \pm 284.463$   $\chi^2/\text{NDF}$ : 52.7/55

All:  $27.772 \pm 202.865$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $377.398 \pm 289.388$   $\chi^2/\text{NDF}$ : 59.0/57

# cor\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1832.710+/-0.296  $\chi^2/\text{NDF}$ : 281543.0/30

Left Out: 1705.635+/-0.274  $\chi^2/\text{NDF}$ : 59928.6/24

Right Out: 1854.959+/-0.299  $\chi^2/\text{NDF}$ : 536773.1/34

Left In: 1697.514+/-0.280  $\chi^2/\text{NDF}$ : 21146.9/22

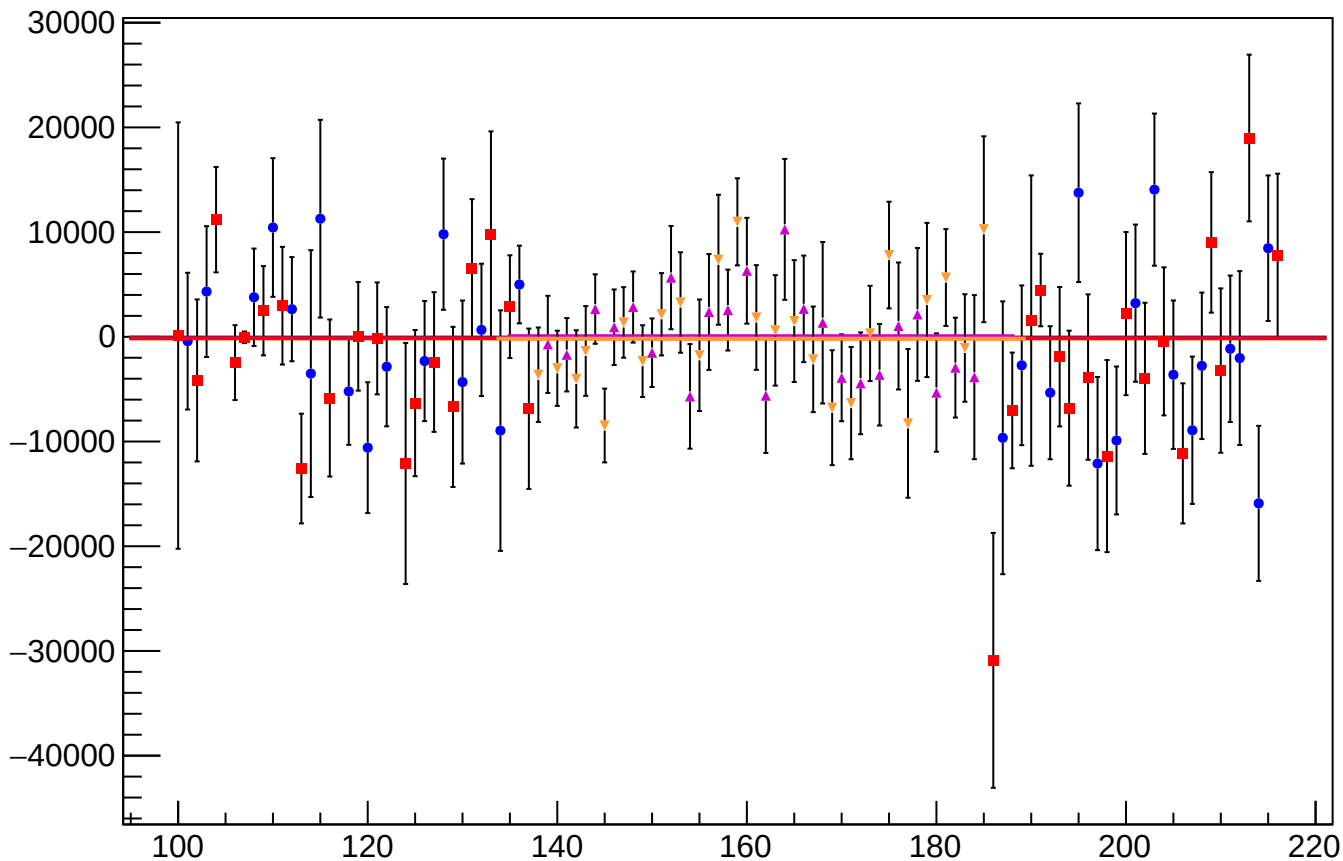
+ sign 1764.311+/-0.201  $\chi^2/\text{NDF}$ : 440667.3/55

All: 1767.662+/-0.143  $\chi^2/\text{NDF}$ : 1146633.0/11

- sign 1771.127+/-0.205  $\chi^2/\text{NDF}$ : 705401.3/57



# asym\_atl1r2\_dd\_cor\_correction\_mean vs Slug



Right In:  $-76.241 \pm 1186.275$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-175.755 \pm 935.140$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-141.071 \pm 490.532$   $\chi^2/\text{NDF}$ : 42.8/34

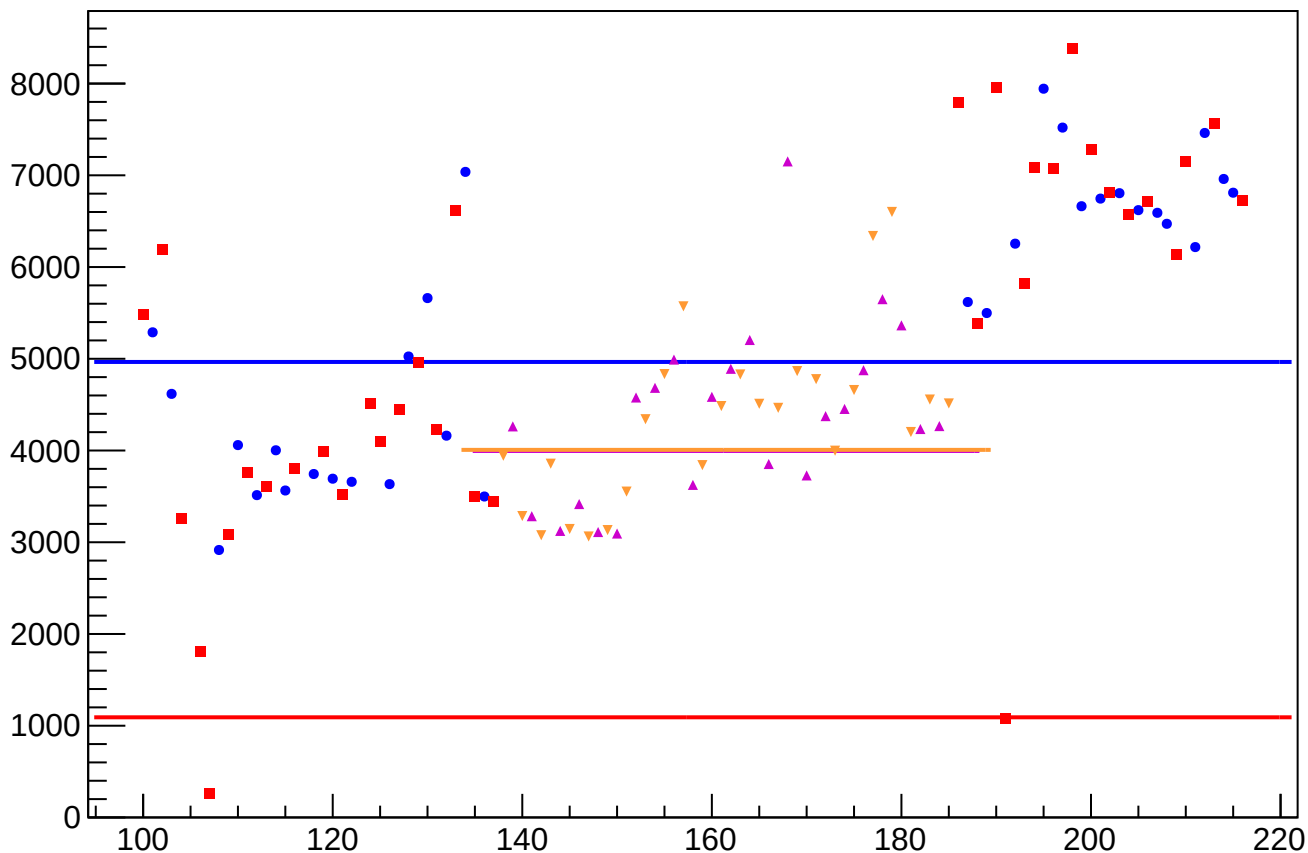
Left In:  $56.377 \pm 956.388$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-137.616 \pm 734.394$   $\chi^2/\text{NDF}$ : 62.5/55

All:  $-109.780 \pm 375.206$   $\chi^2/\text{NDF}$ : 119.6/113

- sign  $-99.947 \pm 436.470$   $\chi^2/\text{NDF}$ : 57.1/57

asym\_atl1r2\_dd\_cor\_correction\_rms vs Slug



Right In: 4965.362 $\pm$ 0.839  $\chi^2$ /NDF: 3229713.7/30

Left Out: 4006.990 $\pm$ 0.661  $\chi^2$ /NDF: 1503698.2/24

Right Out: 1091.673 $\pm$ 0.347  $\chi^2$ /NDF: 28734404.2/34

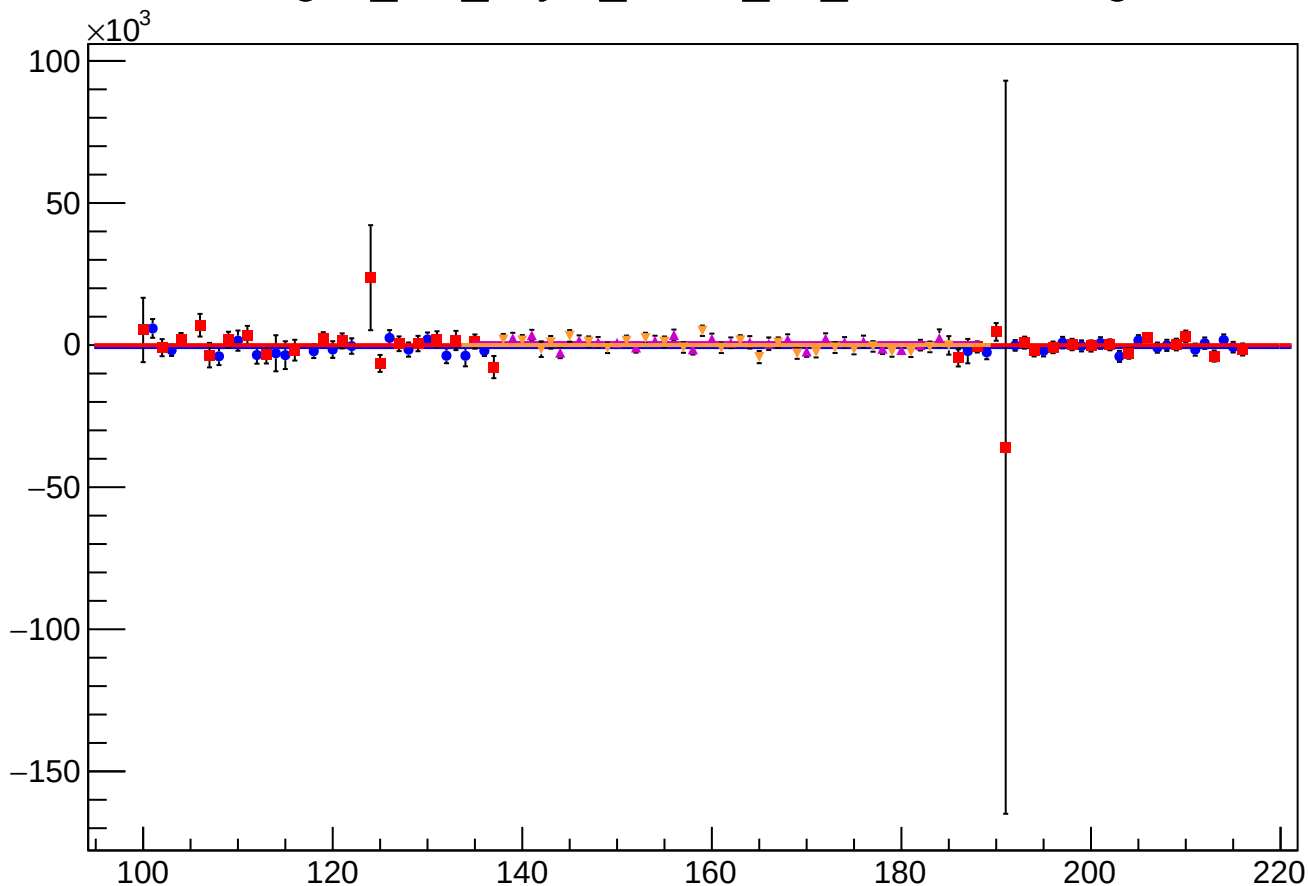
Left In: 3994.972 $\pm$ 0.676  $\chi^2$ /NDF: 1538098.4/22

+ sign 4374.291 $\pm$ 0.519  $\chi^2$ /NDF: 5538481.0/55

All: 2395.366 $\pm$ 0.265  $\chi^2$ /NDF: 70054811.9/1

- sign 1696.362 $\pm$ 0.309  $\chi^2$ /NDF: 44864641.6/57

eigen\_cor\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-698.510 \pm 418.624$   $\chi^2/\text{NDF}$ : 21.6/30

Left Out:  $23.186 \pm 387.732$   $\chi^2/\text{NDF}$ : 29.5/24

Right Out:  $-12.646 \pm 423.392$   $\chi^2/\text{NDF}$ : 38.4/34

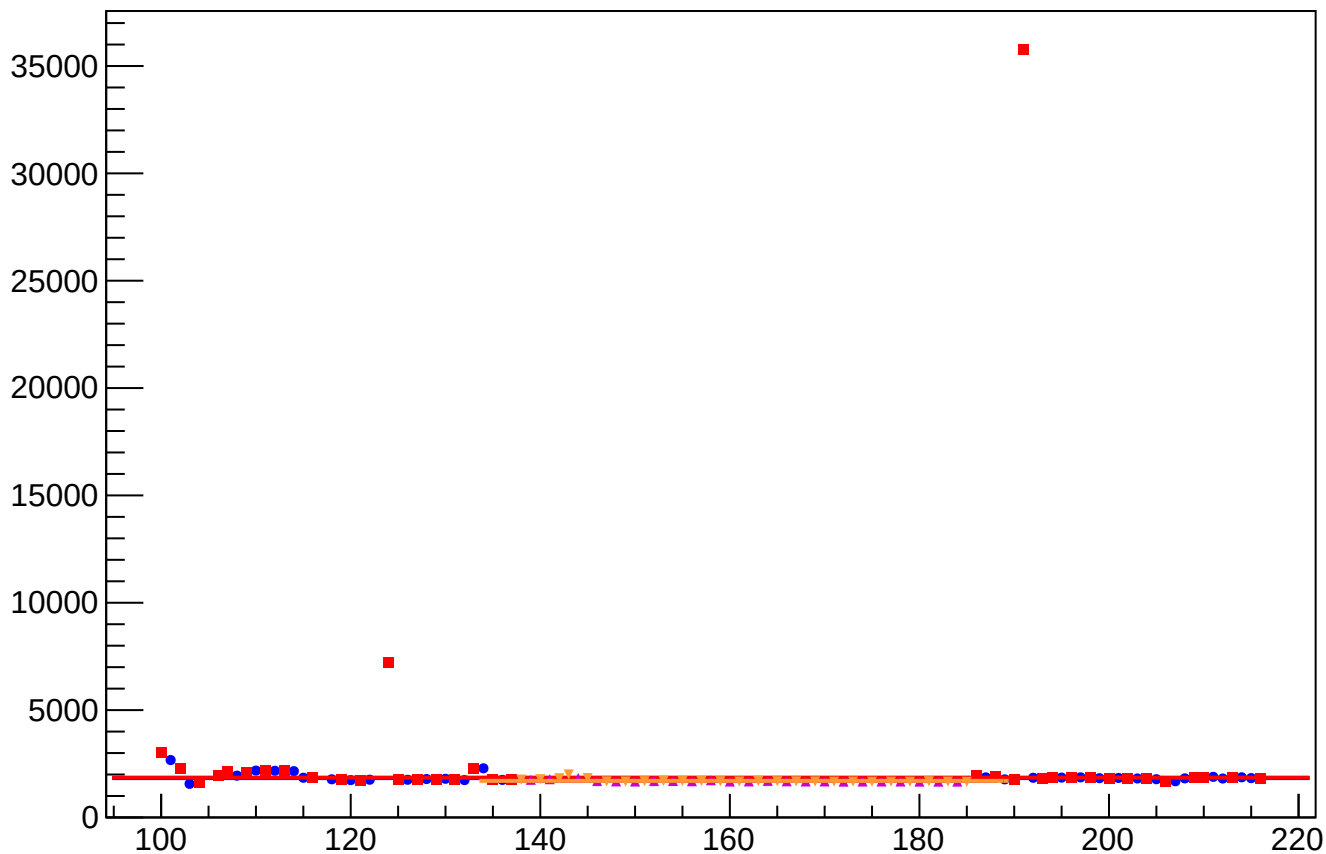
Left In:  $719.380 \pm 396.449$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $-310.054 \pm 284.463$   $\chi^2/\text{NDF}$ : 52.7/55

All:  $27.772 \pm 202.865$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $377.398 \pm 289.388$   $\chi^2/\text{NDF}$ : 59.0/57

# eigen\_cor\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1832.710+/-0.296     $\chi^2/\text{NDF}$ : 281543.0/30

Left Out: 1705.635+/-0.274     $\chi^2/\text{NDF}$ : 59928.6/24

Right Out: 1854.959+/-0.299     $\chi^2/\text{NDF}$ : 536773.1/34

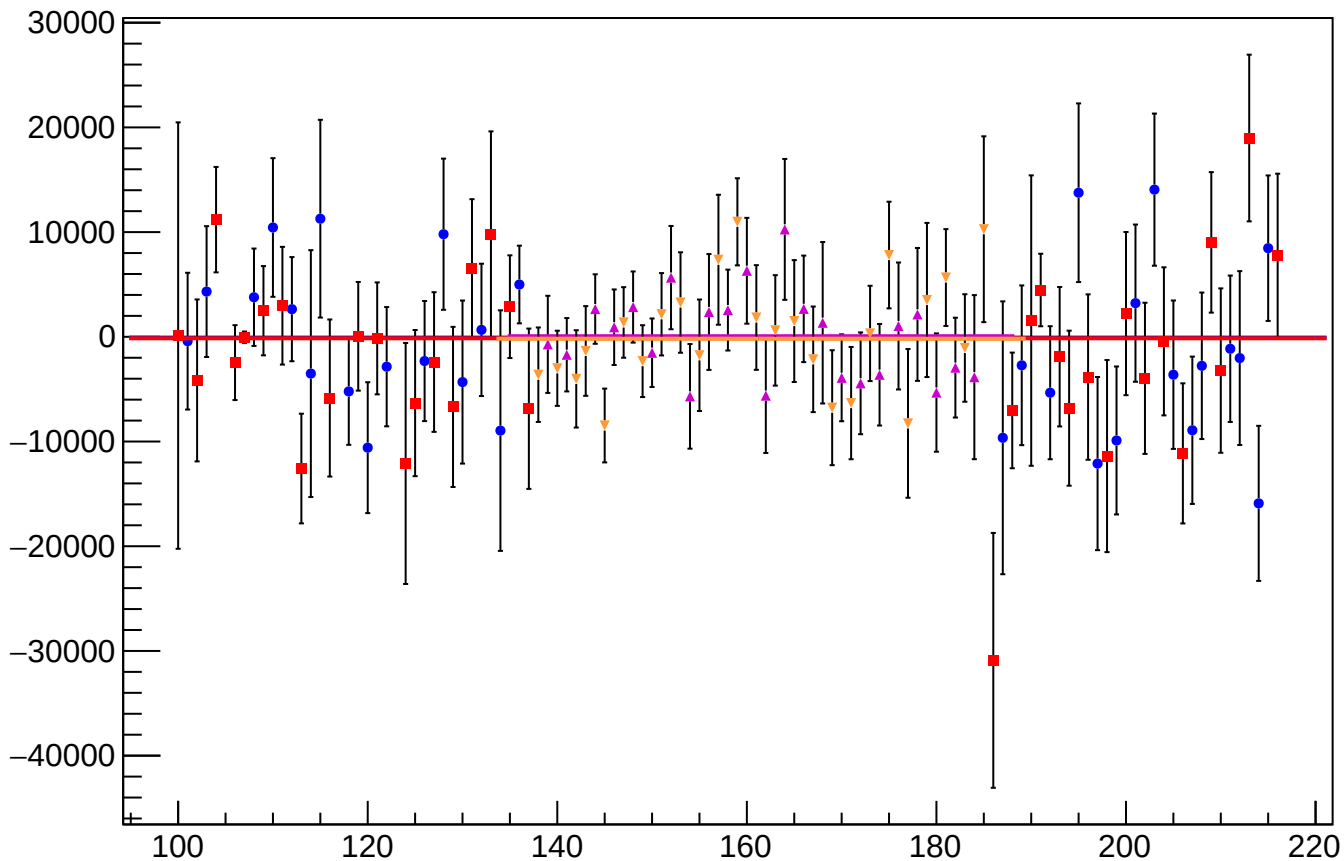
Left In: 1697.514+/-0.280     $\chi^2/\text{NDF}$ : 21146.9/22

+ sign 1764.311+/-0.201     $\chi^2/\text{NDF}$ : 440667.3/55

All: 1767.662+/-0.143     $\chi^2/\text{NDF}$ : 1146633.0/114

- sign 1771.127+/-0.205     $\chi^2/\text{NDF}$ : 705401.3/57

asym\_atl1r2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-76.241 \pm 1186.275$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-175.755 \pm 935.140$   $\chi^2/\text{NDF}$ : 27.9/24

Right Out:  $-141.071 \pm 490.532$   $\chi^2/\text{NDF}$ : 42.8/34

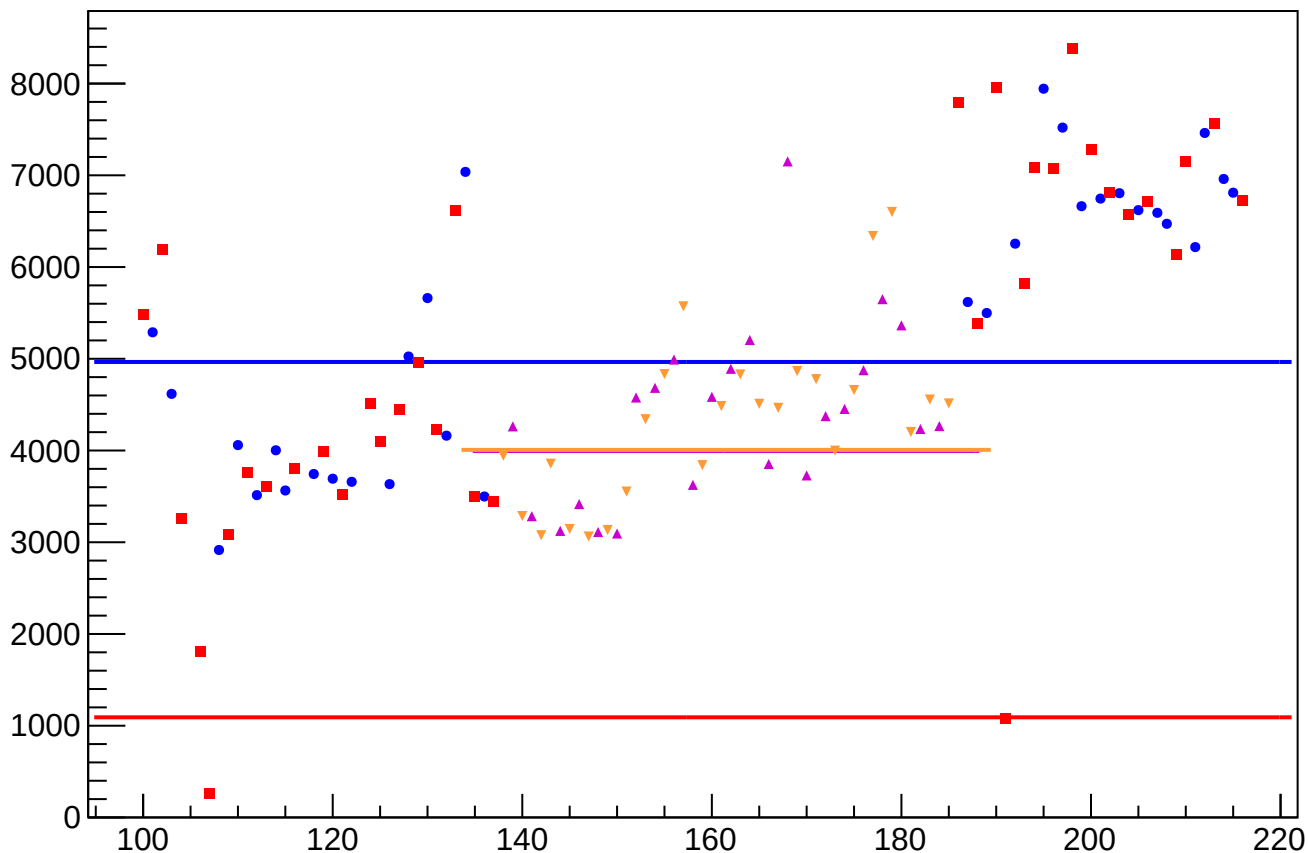
Left In:  $56.377 \pm 956.388$   $\chi^2/\text{NDF}$ : 14.3/22

+ sign  $-137.616 \pm 734.394$   $\chi^2/\text{NDF}$ : 62.5/55

All:  $-109.780 \pm 375.206$   $\chi^2/\text{NDF}$ : 119.6/113

- sign  $-99.947 \pm 436.470$   $\chi^2/\text{NDF}$ : 57.1/57

asym\_atl1r2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4965.362 $\pm$ 0.839  $\chi^2/\text{NDF}$ : 3229713.7/30

Left Out: 4006.990 $\pm$ 0.661  $\chi^2/\text{NDF}$ :1503698.2/24

Right Out: 1091.673 $\pm$ 0.347  $\chi^2/\text{NDF}$ : 28734404.2/34

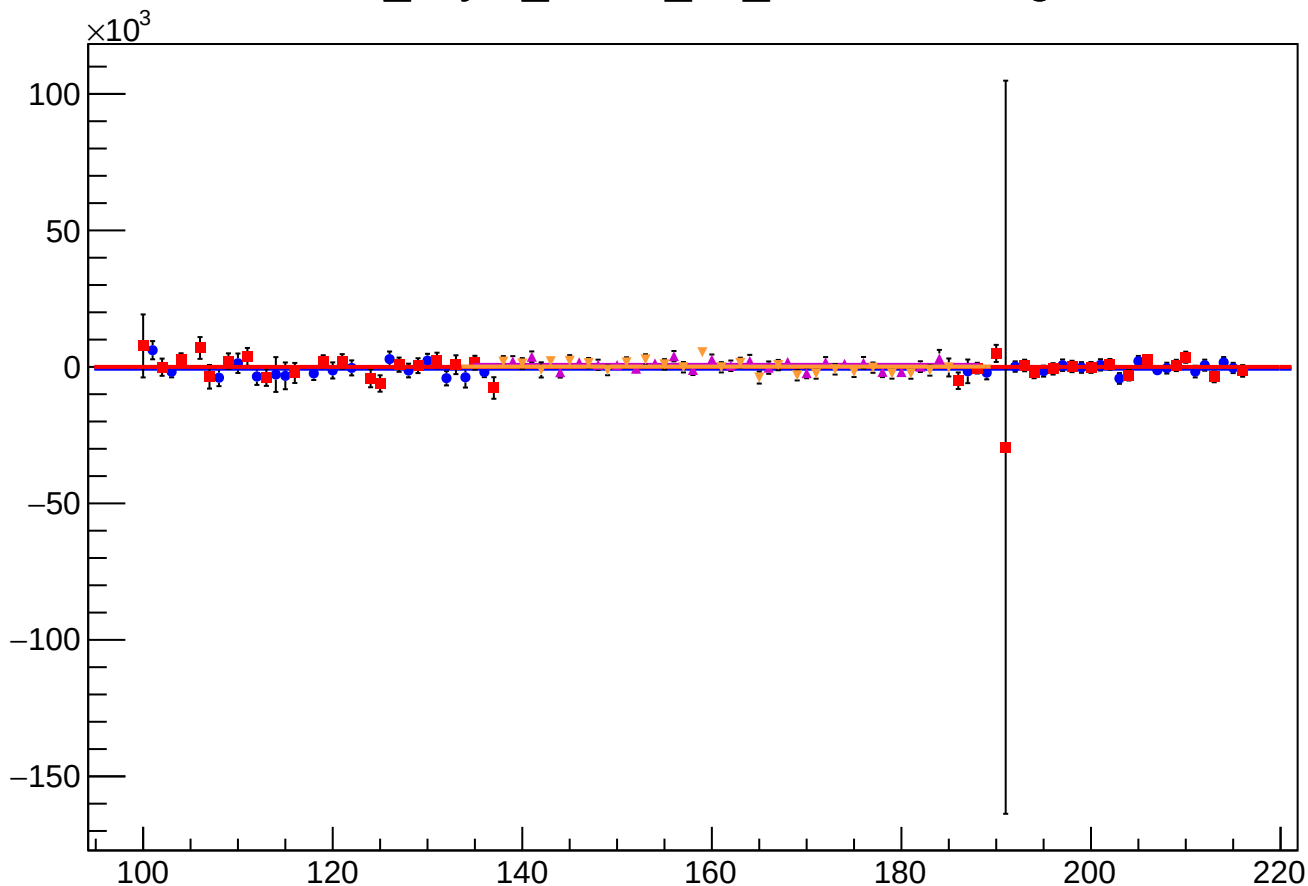
Left In: 3994.972 $\pm$ 0.676  $\chi^2/\text{NDF}$ :1538098.4/22

+ sign 4374.291 $\pm$ 0.519  $\chi^2/\text{NDF}$ : 5538481.0/55

All: 2395.366 $\pm$ 0.265  $\chi^2/\text{NDF}$ : 70054811.9/...

- sign 1696.362 $\pm$ 0.309  $\chi^2/\text{NDF}$ : 44864641.6/57

# dit\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-661.609 \pm 422.701$   $\chi^2/\text{NDF}$ : 22.6/30

Left Out:  $119.959 \pm 389.458$   $\chi^2/\text{NDF}$ : 29.7/24

Right Out:  $2.172 \pm 425.094$   $\chi^2/\text{NDF}$ : 39.8/34

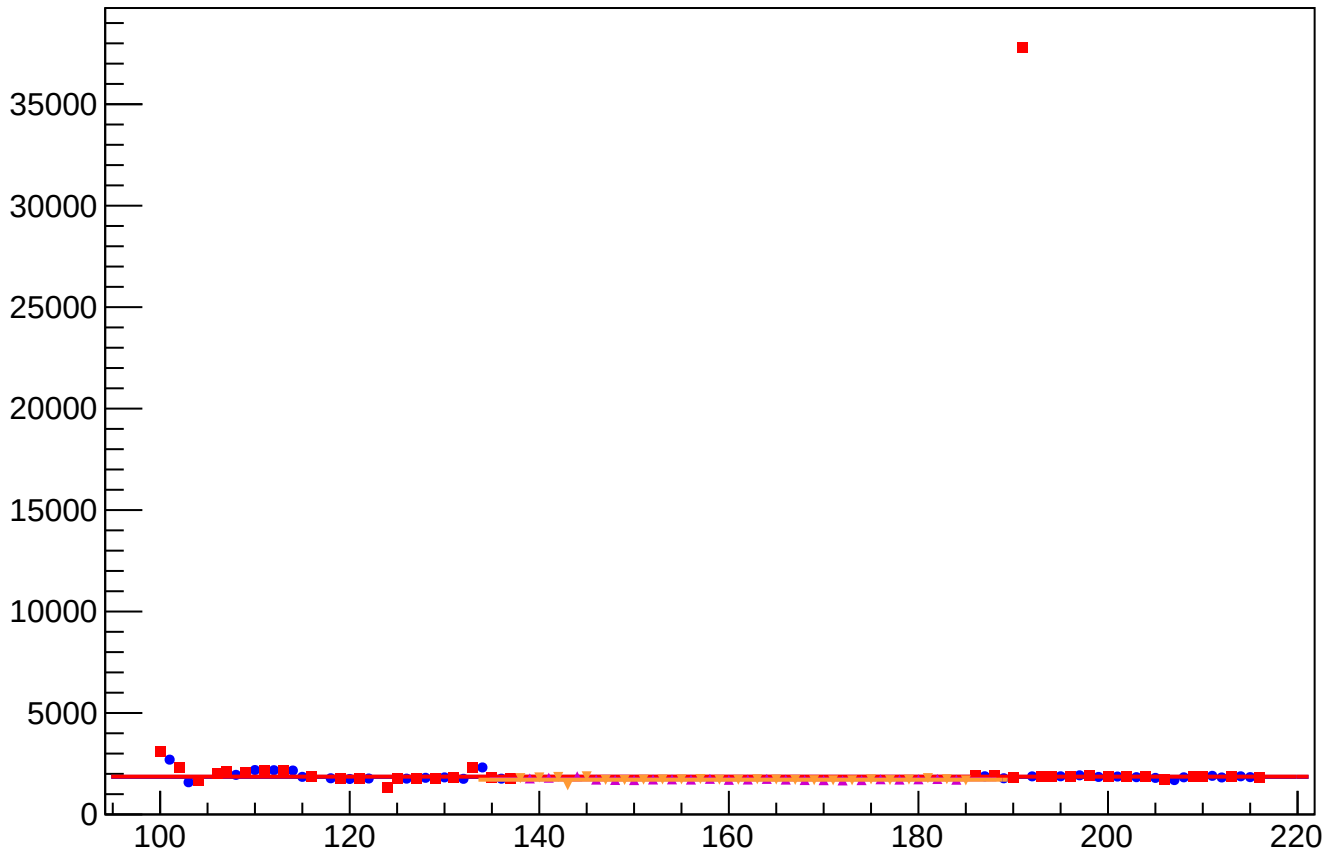
Left In:  $741.191 \pm 404.161$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $-238.888 \pm 286.421$   $\chi^2/\text{NDF}$ : 54.2/55

All:  $68.676 \pm 204.784$   $\chi^2/\text{NDF}$ : 116.9/113

- sign  $390.325 \pm 292.906$   $\chi^2/\text{NDF}$ : 60.4/57

# dit\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1850.376+/-0.299  $\chi^2/\text{NDF}$ : 281161.5/30

Left Out: 1712.310+/-0.275  $\chi^2/\text{NDF}$ : 94399.0/24

Right Out: 1863.870+/-0.300  $\chi^2/\text{NDF}$ : 431202.4/34

Left In: 1730.342+/-0.286  $\chi^2/\text{NDF}$ : 23075.7/22

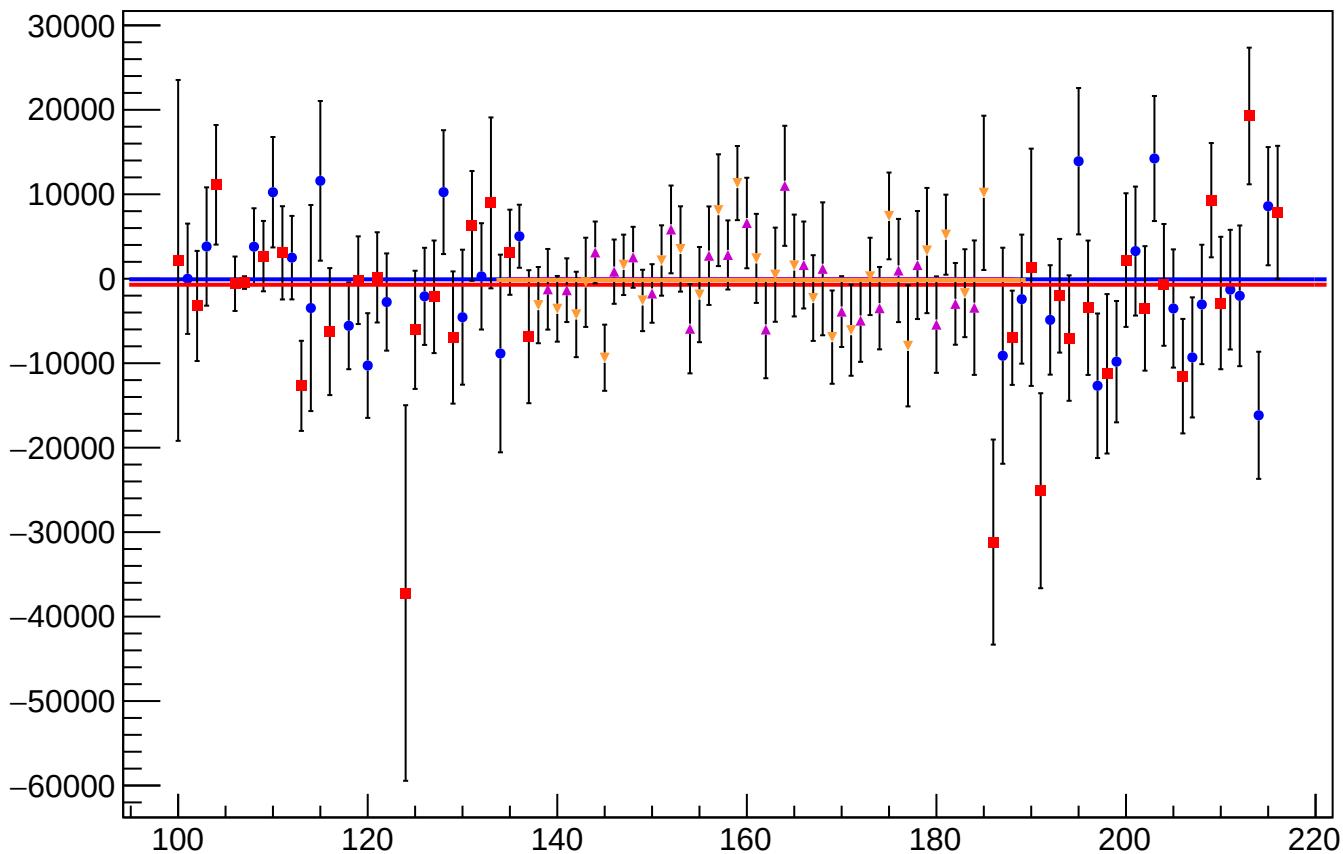
+ sign 1775.701+/-0.203  $\chi^2/\text{NDF}$ : 490965.7/55

All: 1784.529+/-0.145  $\chi^2/\text{NDF}$ : 1052809.2/11

- sign 1793.758+/-0.207  $\chi^2/\text{NDF}$ : 557957.5/57



# asym\_atl1r2\_dd\_dit\_correction\_mean vs Slug



Right In:  $-70.680 \pm 1196.328$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $-150.169 \pm 984.984$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $-709.639 \pm 623.817$   $\chi^2/\text{NDF}$ : 43.6/34

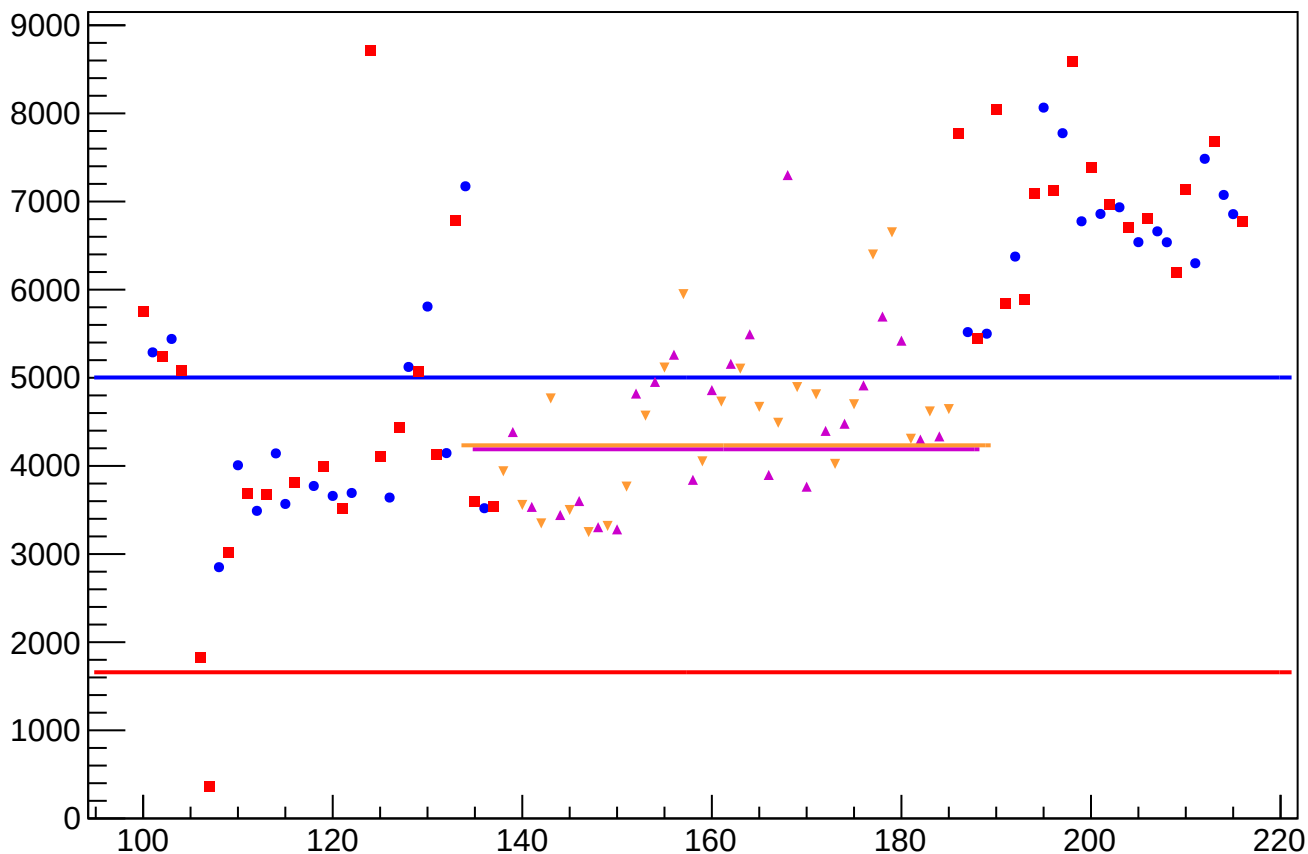
Left In:  $-65.169 \pm 1000.106$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-118.054 \pm 760.410$   $\chi^2/\text{NDF}$ : 61.2/55

All:  $-394.965 \pm 434.415$   $\chi^2/\text{NDF}$ : 119.3/113

- sign  $-529.129 \pm 529.293$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_atl1r2\_dd\_dit\_correction\_rms vs Slug



Right In: 5003.407 +/- 0.846  $\chi^2/\text{NDF}$ : 3388611.3/30

Left Out: 4233.905 +/- 0.696  $\chi^2/\text{NDF}$ : 1284783.2/24

Right Out: 1658.708 +/- 0.441  $\chi^2/\text{NDF}$ : 25156143.5/34

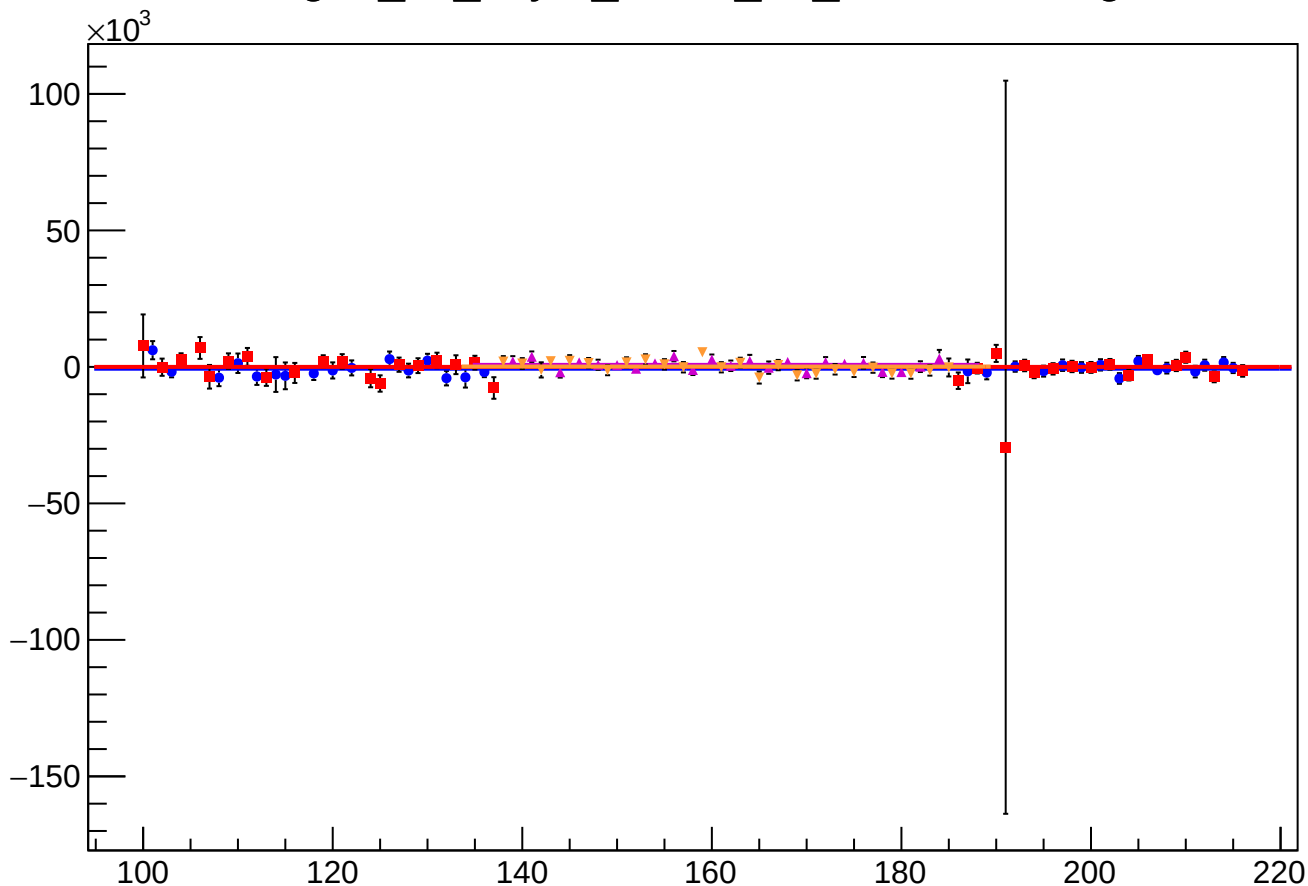
Left In: 4188.874 +/- 0.707  $\chi^2/\text{NDF}$ : 1344602.0/22

+ sign 4544.794 +/- 0.538  $\chi^2/\text{NDF}$ : 5166552.5/55

All: 3078.034 +/- 0.307  $\chi^2/\text{NDF}$ : 51929402.1/100

- sign 2367.385 +/- 0.374  $\chi^2/\text{NDF}$ : 35716123.7/57

# eigen\_dit\_asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-661.607 \pm 422.701$   $\chi^2/\text{NDF}$ : 22.6/30

Left Out:  $119.962 \pm 389.458$   $\chi^2/\text{NDF}$ : 29.7/24

Right Out:  $2.173 \pm 425.094$   $\chi^2/\text{NDF}$ : 39.8/34

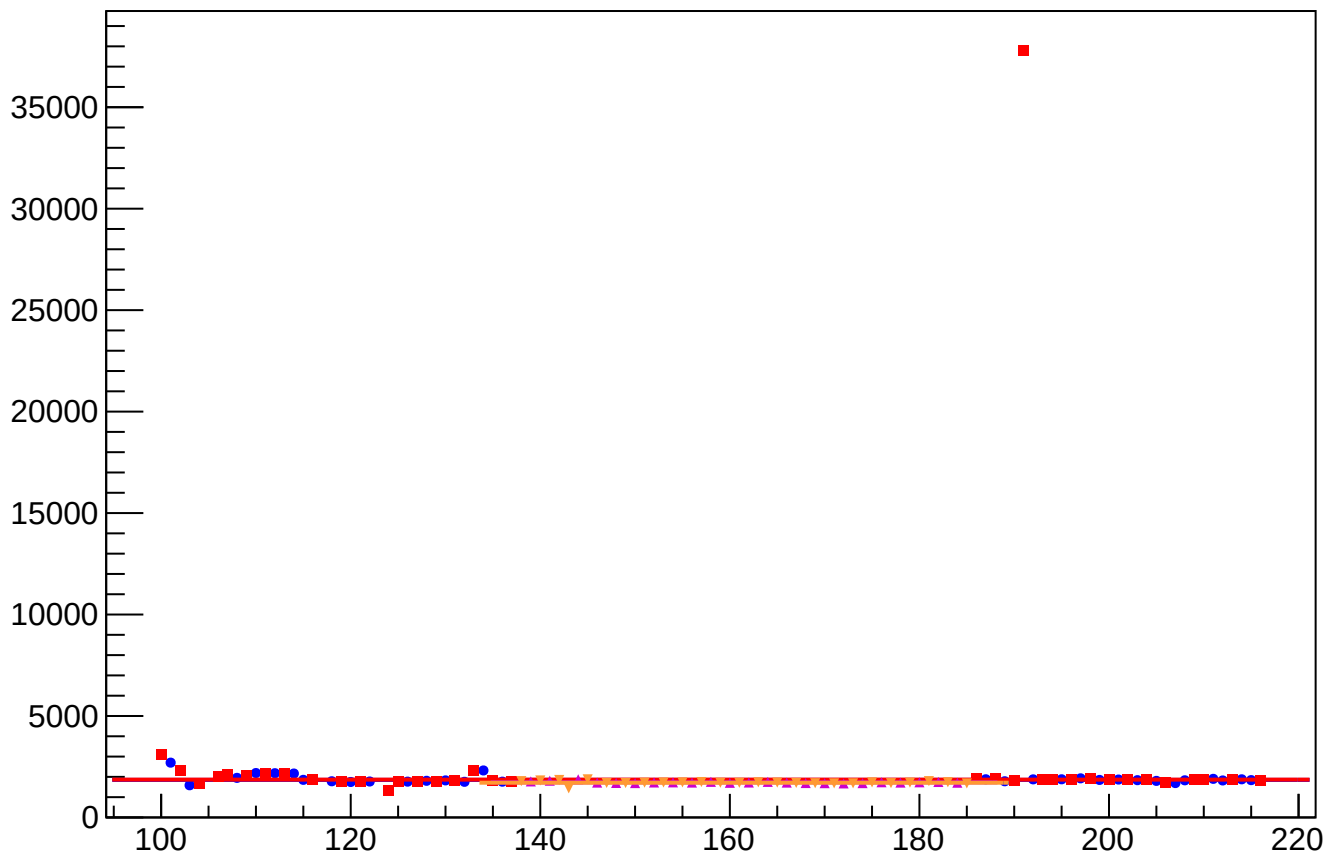
Left In:  $741.189 \pm 404.161$   $\chi^2/\text{NDF}$ : 19.0/22

+ sign  $-238.886 \pm 286.421$   $\chi^2/\text{NDF}$ : 54.2/55

All:  $68.677 \pm 204.784$   $\chi^2/\text{NDF}$ : 116.9/113

- sign  $390.324 \pm 292.906$   $\chi^2/\text{NDF}$ : 60.4/57

# eigen\_dit\_asym\_atl1r2\_dd\_rms vs Slug



Right In: 1850.376+/-0.299  $\chi^2/\text{NDF}$ : 281161.4/30

Left Out: 1712.310+/-0.275  $\chi^2/\text{NDF}$ : 94398.1/24

Right Out: 1863.870+/-0.300  $\chi^2/\text{NDF}$ : 431202.6/34

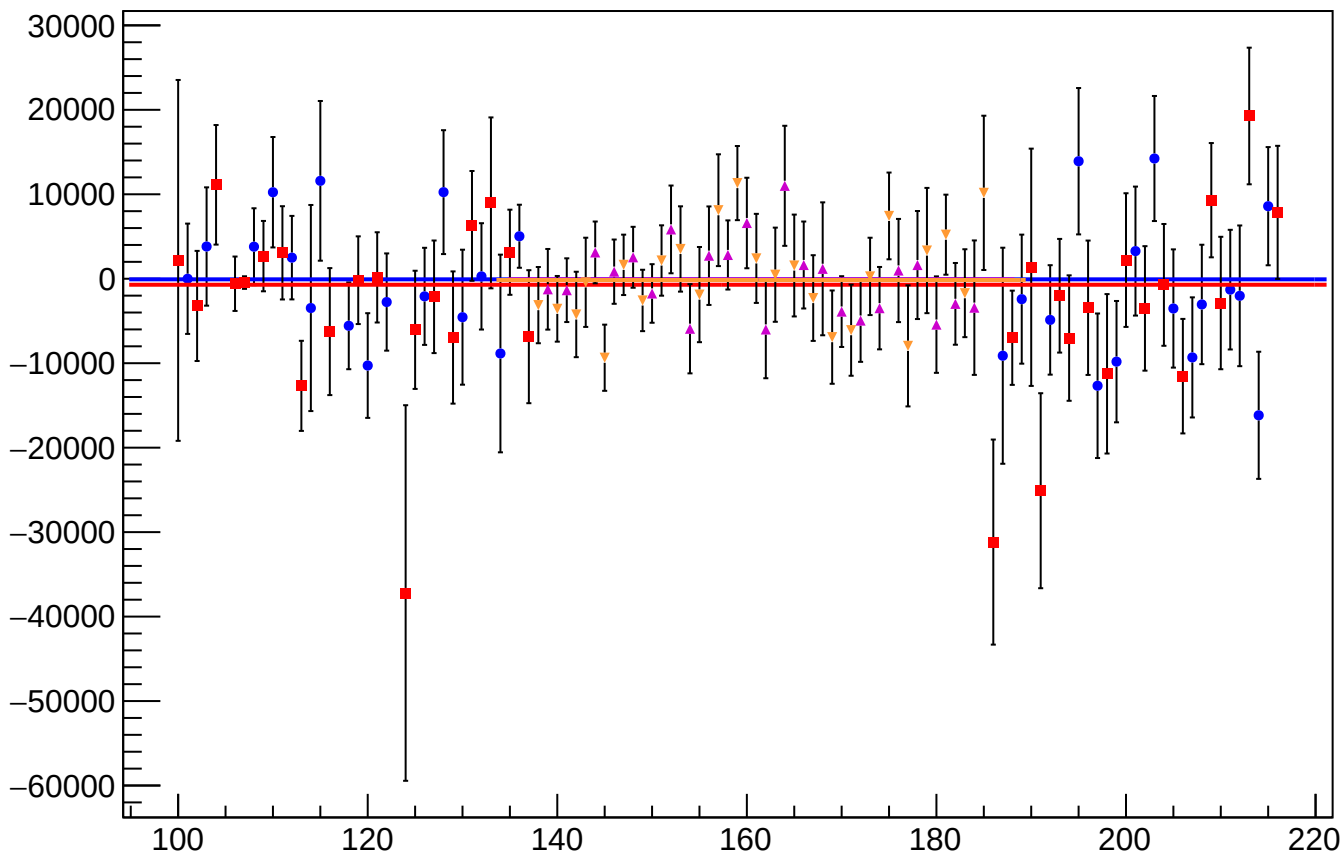
Left In: 1730.342+/-0.286  $\chi^2/\text{NDF}$ : 23075.7/22

+ sign 1775.701+/-0.203  $\chi^2/\text{NDF}$ : 490963.6/55

All: 1784.529+/-0.145  $\chi^2/\text{NDF}$ : 1052806.8/11

- sign 1793.758+/-0.207  $\chi^2/\text{NDF}$ : 557957.1/57

asym\_atl1r2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-70.689 \pm 1196.328$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $-150.169 \pm 984.986$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $-709.652 \pm 623.826$   $\chi^2/\text{NDF}$ : 43.6/34

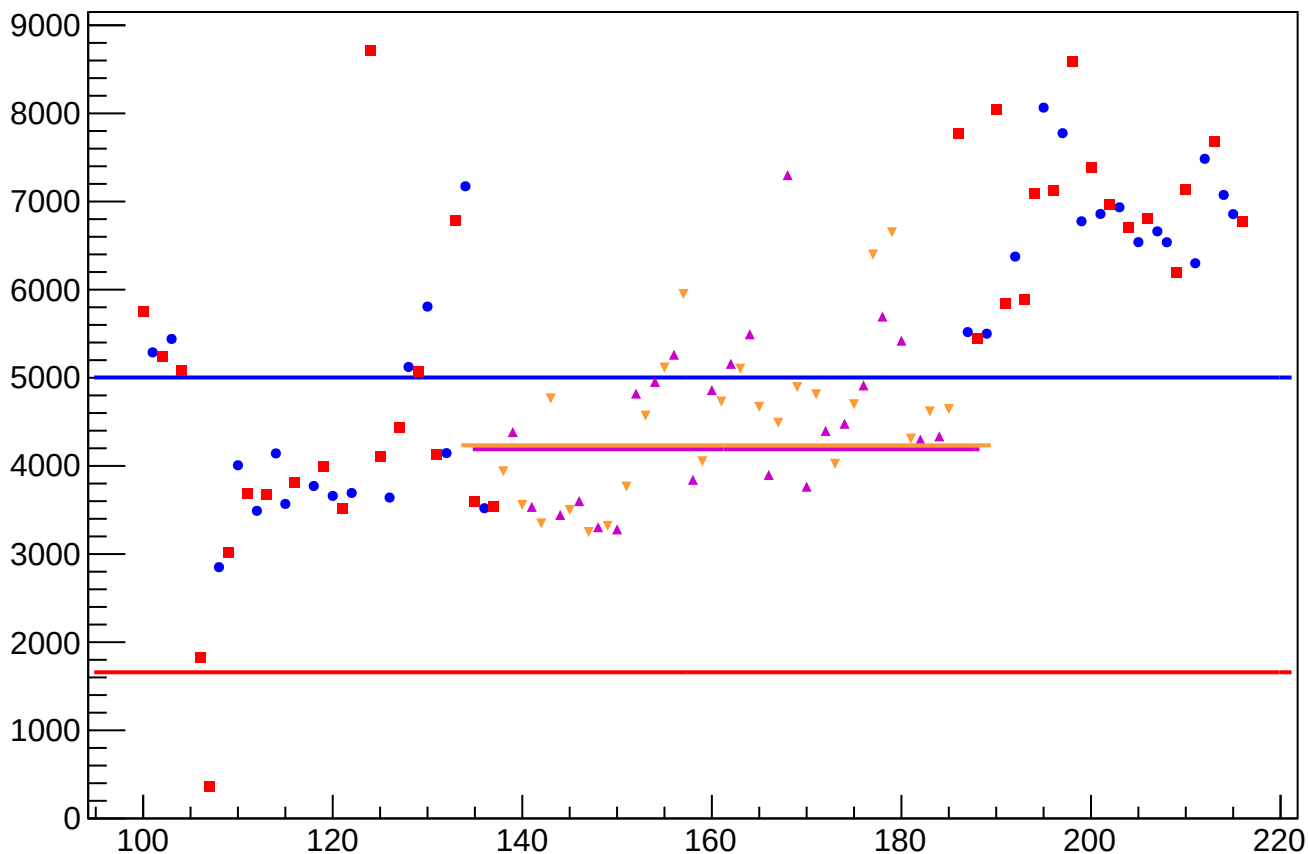
Left In:  $-65.171 \pm 1000.108$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-118.058 \pm 760.410$   $\chi^2/\text{NDF}$ : 61.2/55

All:  $-394.968 \pm 434.419$   $\chi^2/\text{NDF}$ : 119.3/113

- sign  $-529.135 \pm 529.298$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_atl1r2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 5003.403 $\pm$ 0.846  $\chi^2/\text{NDF}$ : 3388637.6/30

Left Out: 4233.911 $\pm$ 0.696  $\chi^2/\text{NDF}$ :1284785.6/24

Right Out: 1658.752 $\pm$ 0.441  $\chi^2/\text{NDF}$ : 25155809.4/34

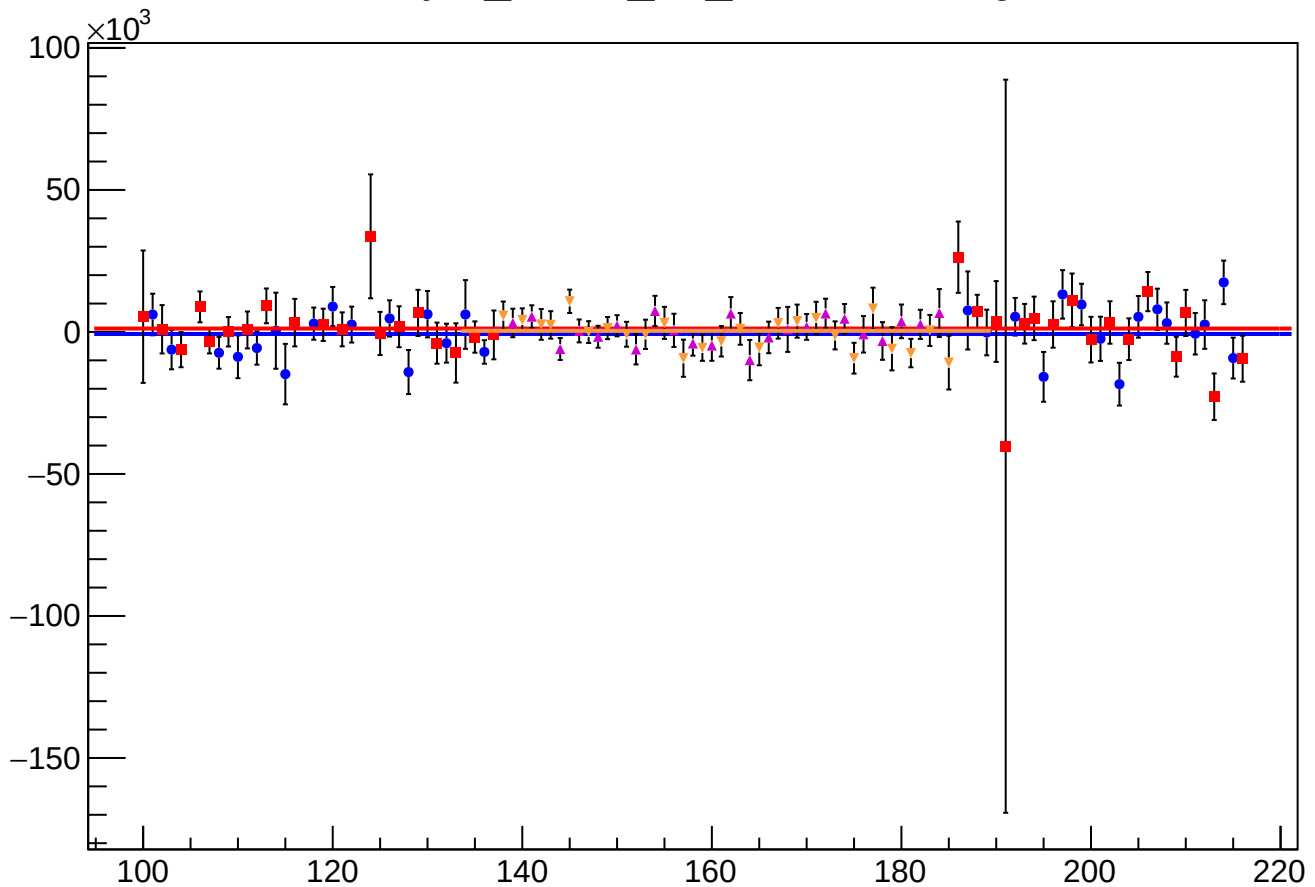
Left In: 4188.880 $\pm$ 0.707  $\chi^2/\text{NDF}$ :1344607.0/22

+ sign 4544.796 $\pm$ 0.538  $\chi^2/\text{NDF}$ : 5166568.1/55

All: 3078.076 $\pm$ 0.307  $\chi^2/\text{NDF}$ : 51928169.6/100

- sign 2367.432 $\pm$ 0.374  $\chi^2/\text{NDF}$ : 35715419.0/57

# asym\_atl1r2\_dd\_mean vs Slug



Right In:  $-712.567 \pm 1290.423$   $\chi^2/\text{NDF}$ : 40.4/30

Left Out:  $398.336 \pm 1028.431$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $1202.605 \pm 1230.410$   $\chi^2/\text{NDF}$ : 34.1/34

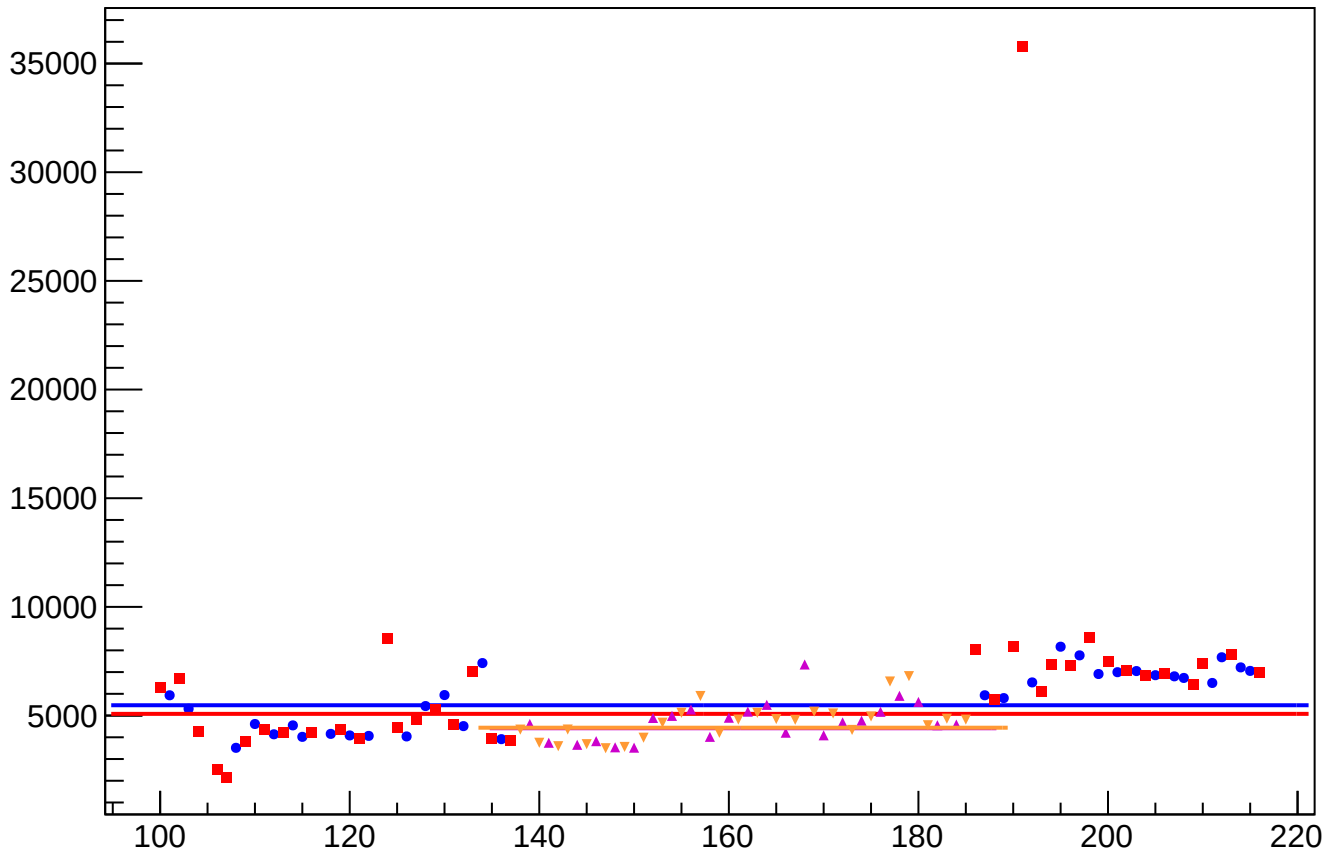
Left In:  $502.999 \pm 1049.682$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-33.184 \pm 804.256$   $\chi^2/\text{NDF}$ : 65.6/55

All:  $385.206 \pm 566.672$   $\chi^2/\text{NDF}$ : 117.8/113

- sign  $797.695 \pm 798.565$   $\chi^2/\text{NDF}$ : 51.7/57

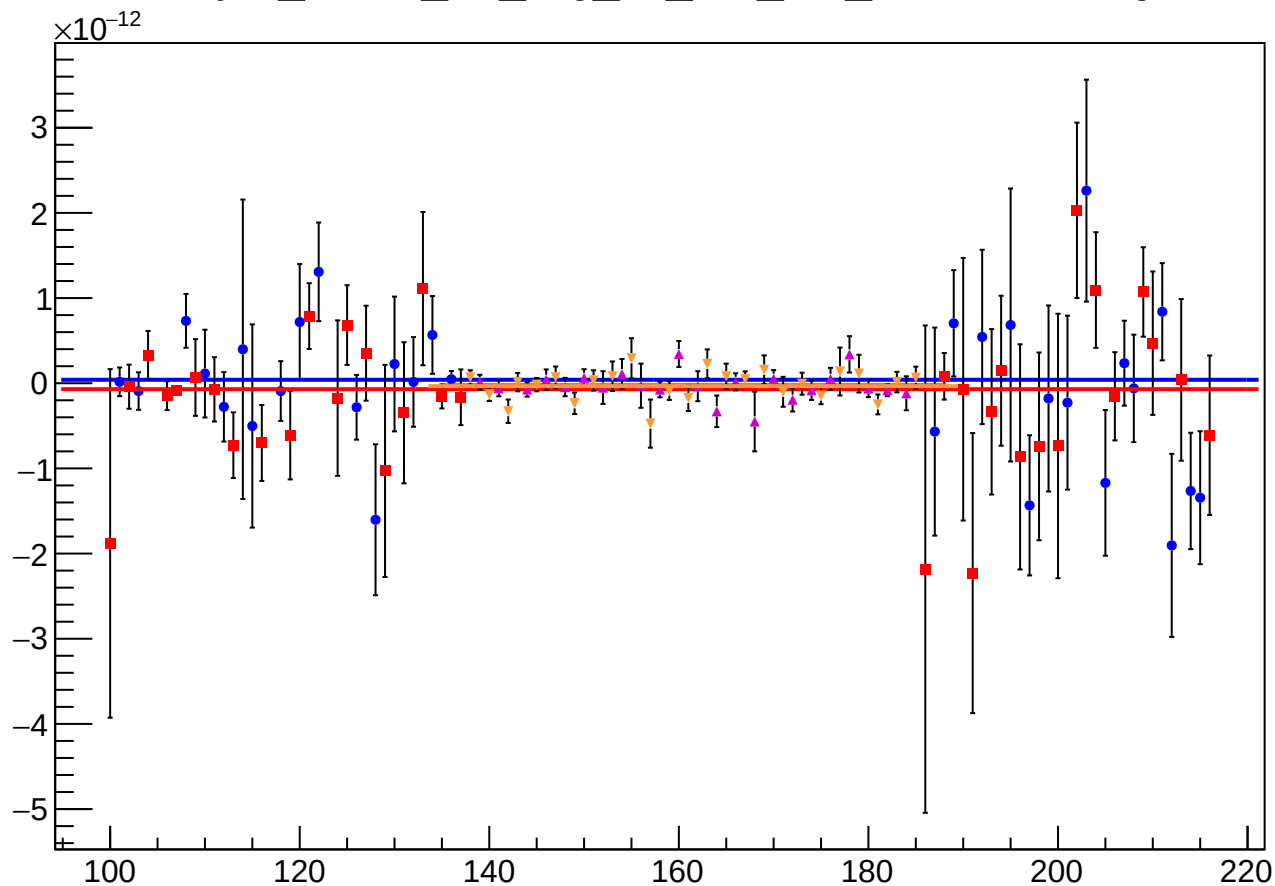
# asym\_atl1r2\_dd\_rms vs Slug



|                                 |                             |                             |                             |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Right In: 5474.522 $\pm$ 0.912  | $\chi^2$ /NDF: 2401683.2/30 | + sign 4842.346 $\pm$ 0.569 | $\chi^2$ /NDF: 4259683.0/55 |
| Left Out: 4440.810 $\pm$ 0.727  | $\chi^2$ /NDF: 1073119.1/24 | All: 4768.641 $\pm$ 0.400   | $\chi^2$ /NDF: 10043196.9/1 |
| Right Out: 5077.596 $\pm$ 0.865 | $\chi^2$ /NDF: 4301060.3/34 | - sign 4696.364 $\pm$ 0.563 | $\chi^2$ /NDF: 5750245.4/57 |
| Left In: 4415.366 $\pm$ 0.742   | $\chi^2$ /NDF: 1111411.1/22 |                             |                             |



# asym\_atl1r2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.4/34

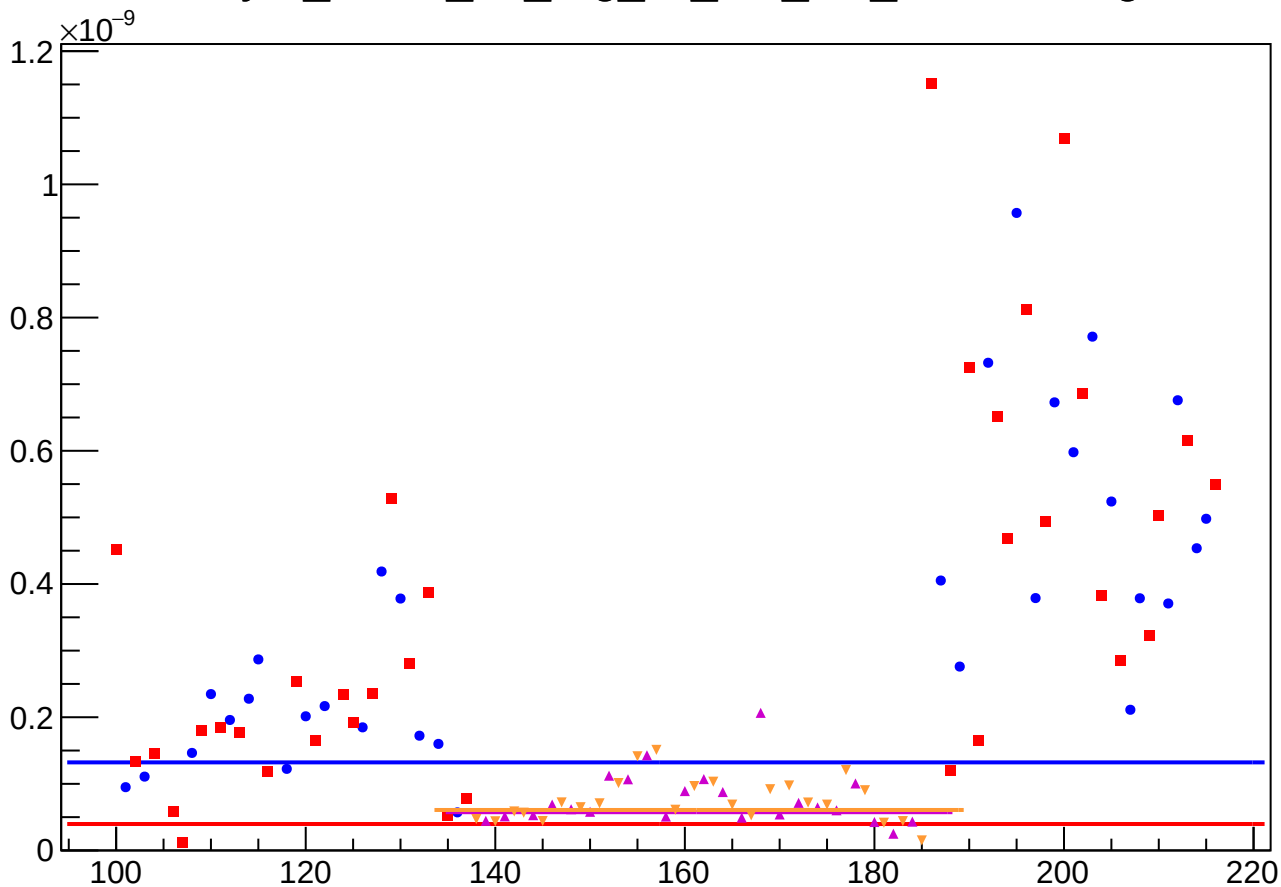
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.4/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.5/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.9/57

asym\_atl1r2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7530637.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1723737.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12866099.5/34

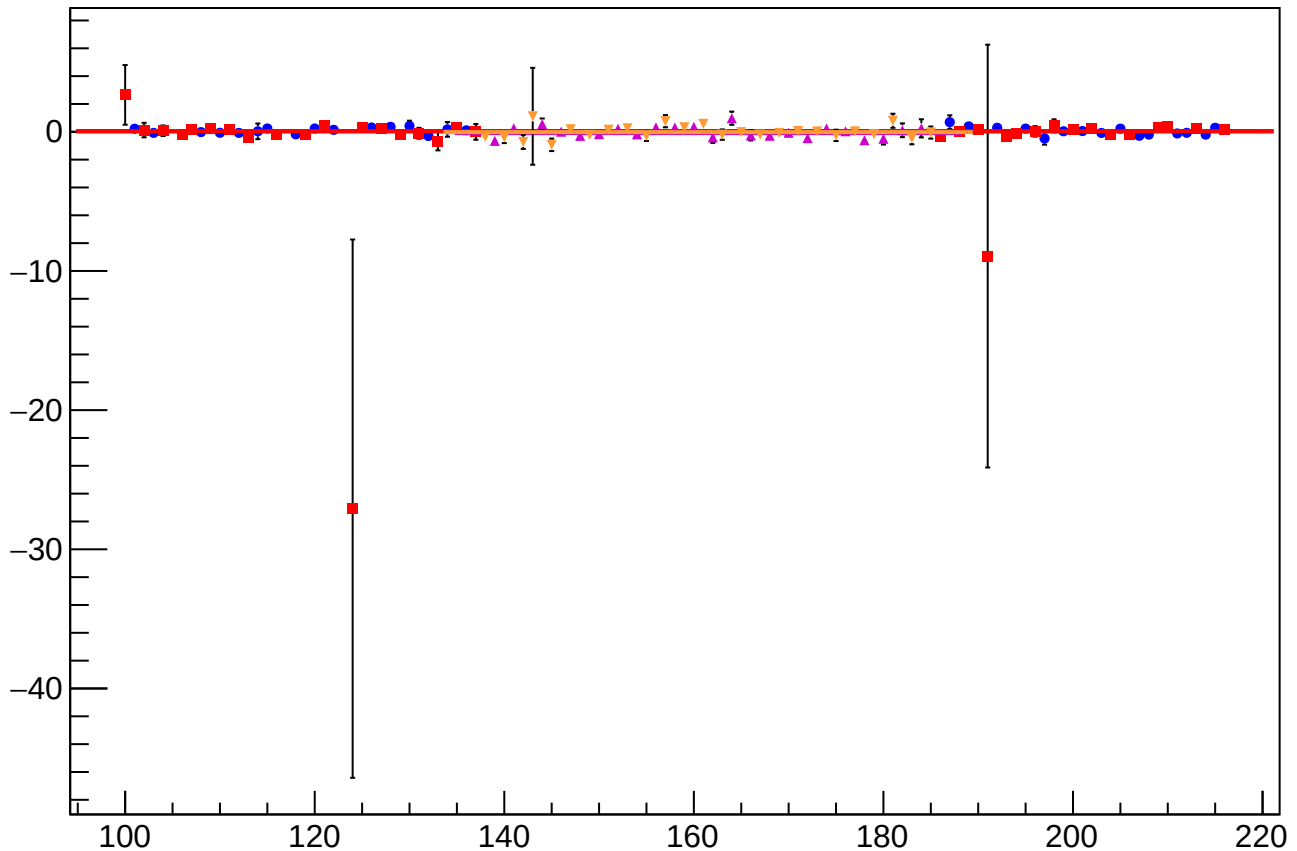
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1878360.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11390505.7/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27285112.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15121558.0/57

# asym\_atl1r2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.036 \pm 0.045$   $\chi^2/\text{NDF}$ : 24.7/30

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $0.045 \pm 0.042$   $\chi^2/\text{NDF}$ : 36.6/34

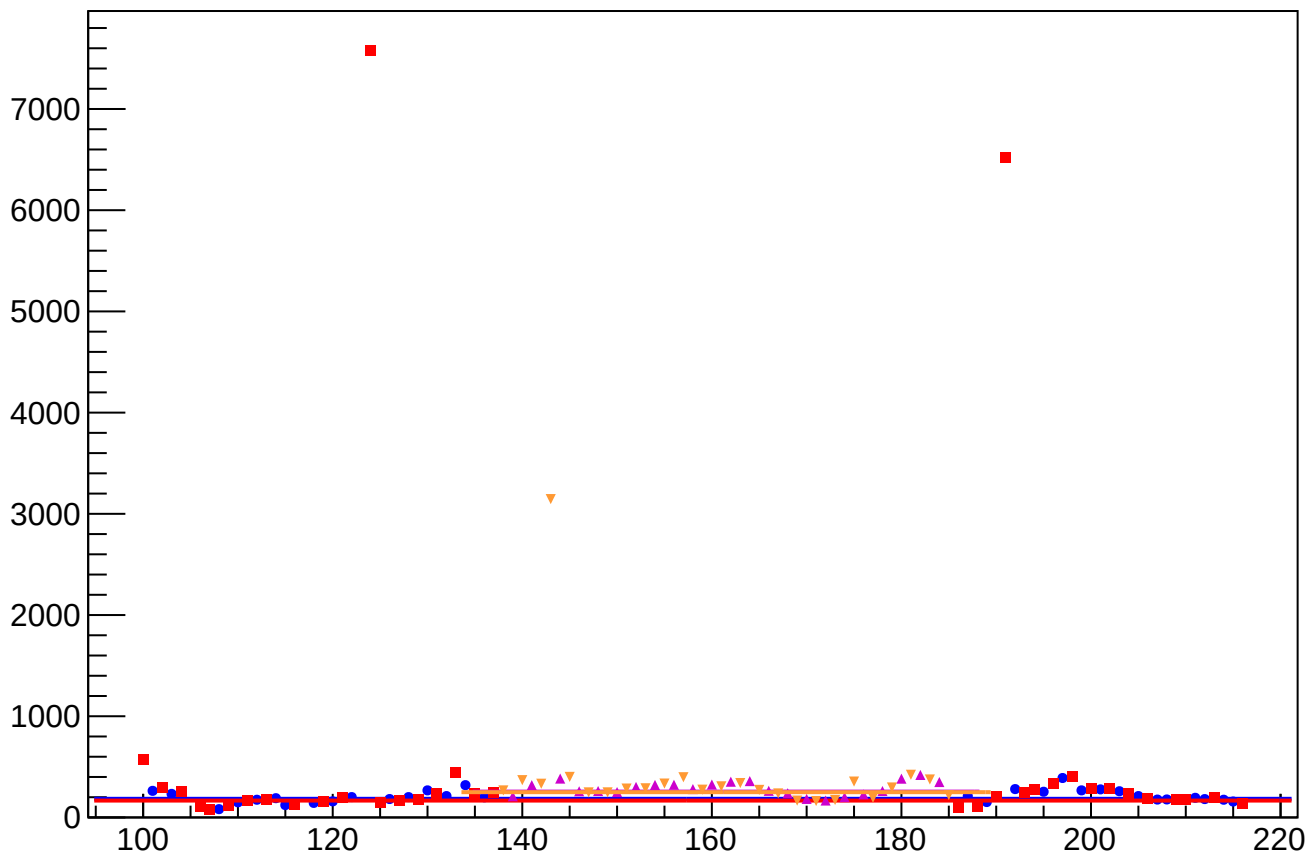
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $0.015 \pm 0.036$   $\chi^2/\text{NDF}$ : 48.9/55

All:  $0.008 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.5/113

- sign  $0.002 \pm 0.035$   $\chi^2/\text{NDF}$ : 71.5/57

# asym\_atl1r2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 184.191 $\pm$ 0.032  $\chi^2$ /NDF: 3036564.7/30

Left Out: 249.848 $\pm$ 0.044  $\chi^2$ /NDF: 4234507.4/24

Right Out: 166.828 $\pm$ 0.030  $\chi^2$ /NDF: 5393541.8/34

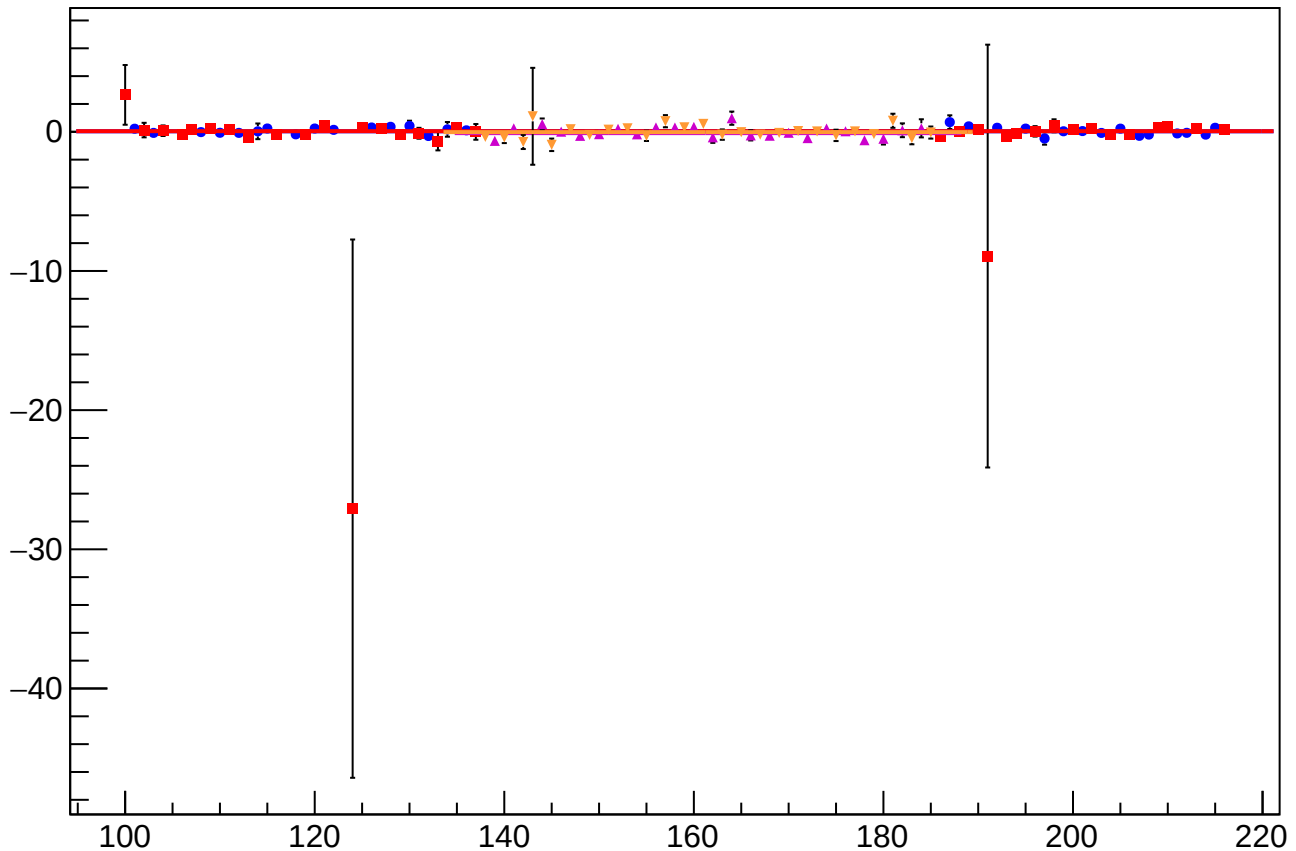
Left In: 255.299 $\pm$ 0.045  $\chi^2$ /NDF: 2111552.0/22

+ sign 206.870 $\pm$ 0.026  $\chi^2$ /NDF: 8757476.0/55

All: 200.278 $\pm$ 0.018  $\chi^2$ /NDF: 19117885.3/11

- sign 194.123 $\pm$ 0.025  $\chi^2$ /NDF: 10232286.1/57

asym\_atl1r2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.036 \pm 0.045$   $\chi^2/\text{NDF}$ : 24.7/30

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $0.045 \pm 0.042$   $\chi^2/\text{NDF}$ : 36.6/34

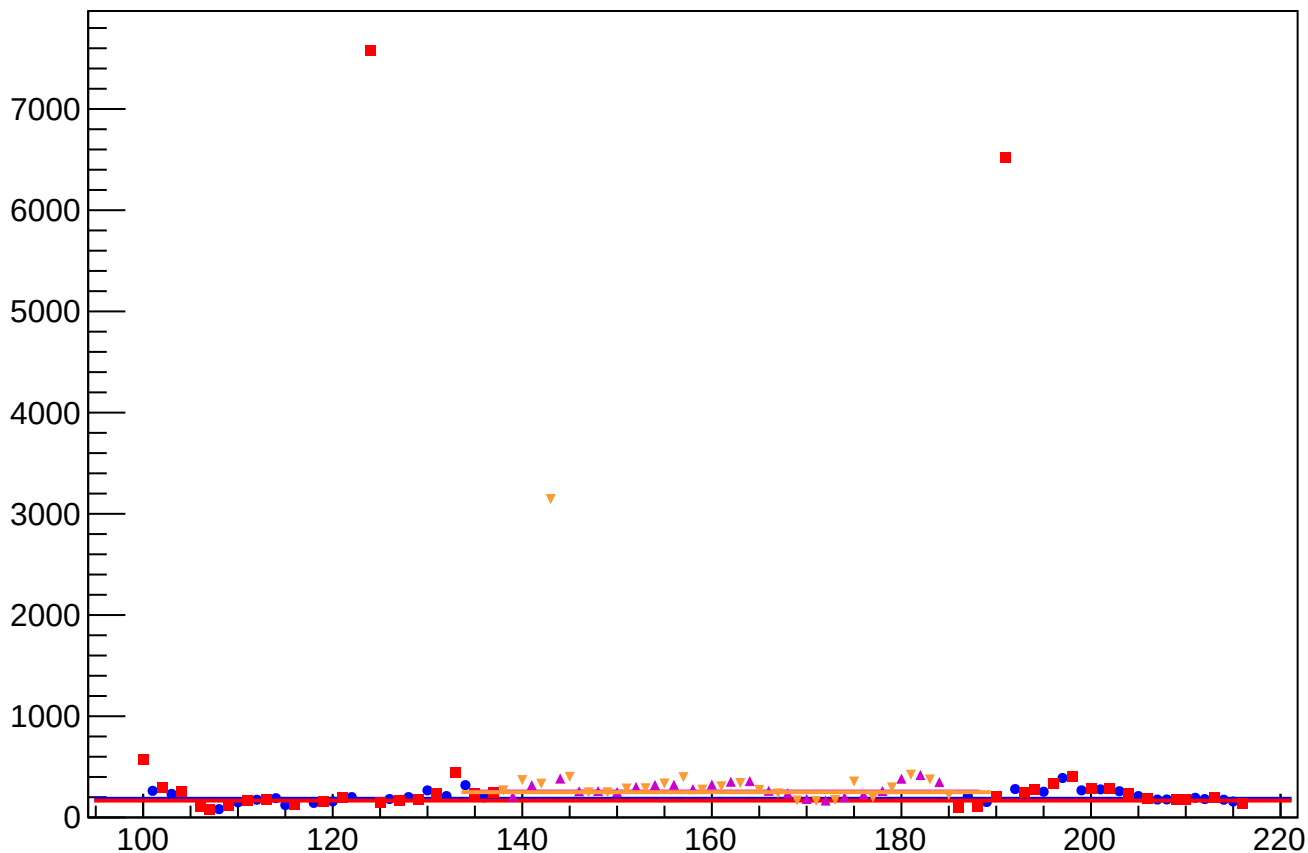
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $0.015 \pm 0.036$   $\chi^2/\text{NDF}$ : 48.9/55

All:  $0.008 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.5/113

- sign  $0.002 \pm 0.035$   $\chi^2/\text{NDF}$ : 71.5/57

asym\_atl1r2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 184.191+/-0.032  $\chi^2/\text{NDF}$ : 3036564.7/30

Left Out: 249.848+/-0.044  $\chi^2/\text{NDF}$ : 4234507.4/24

Right Out: 166.828+/-0.030  $\chi^2/\text{NDF}$ : 5393541.8/34

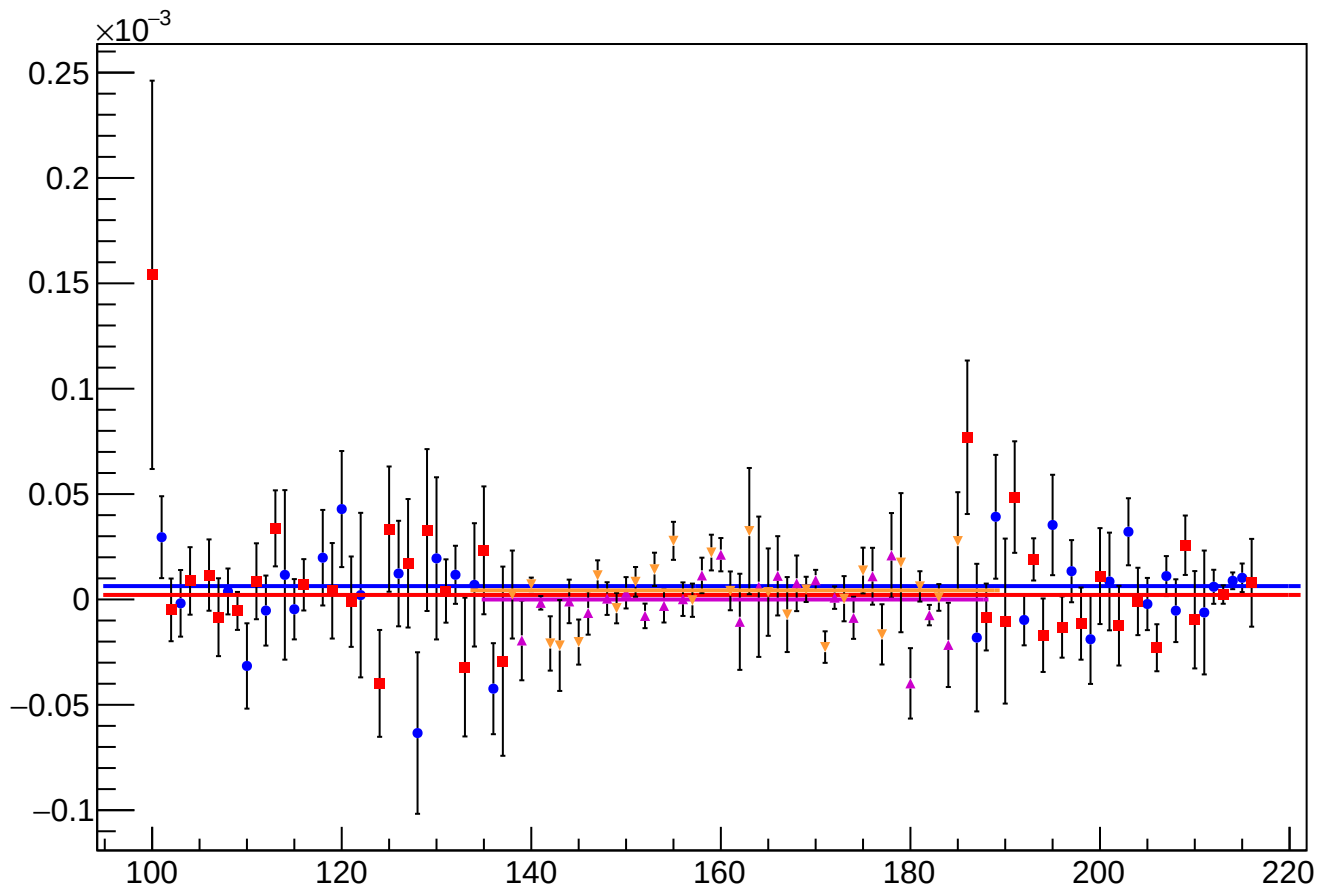
Left In: 255.299+/-0.045  $\chi^2/\text{NDF}$ : 2111552.0/22

+ sign 206.870+/-0.026  $\chi^2/\text{NDF}$ : 8757476.0/55

All: 200.278+/-0.018  $\chi^2/\text{NDF}$ : 19117885.3/111

- sign 194.123+/-0.025  $\chi^2/\text{NDF}$ : 10232286.1/57

asym\_atl1r2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.7/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.0/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.2/34

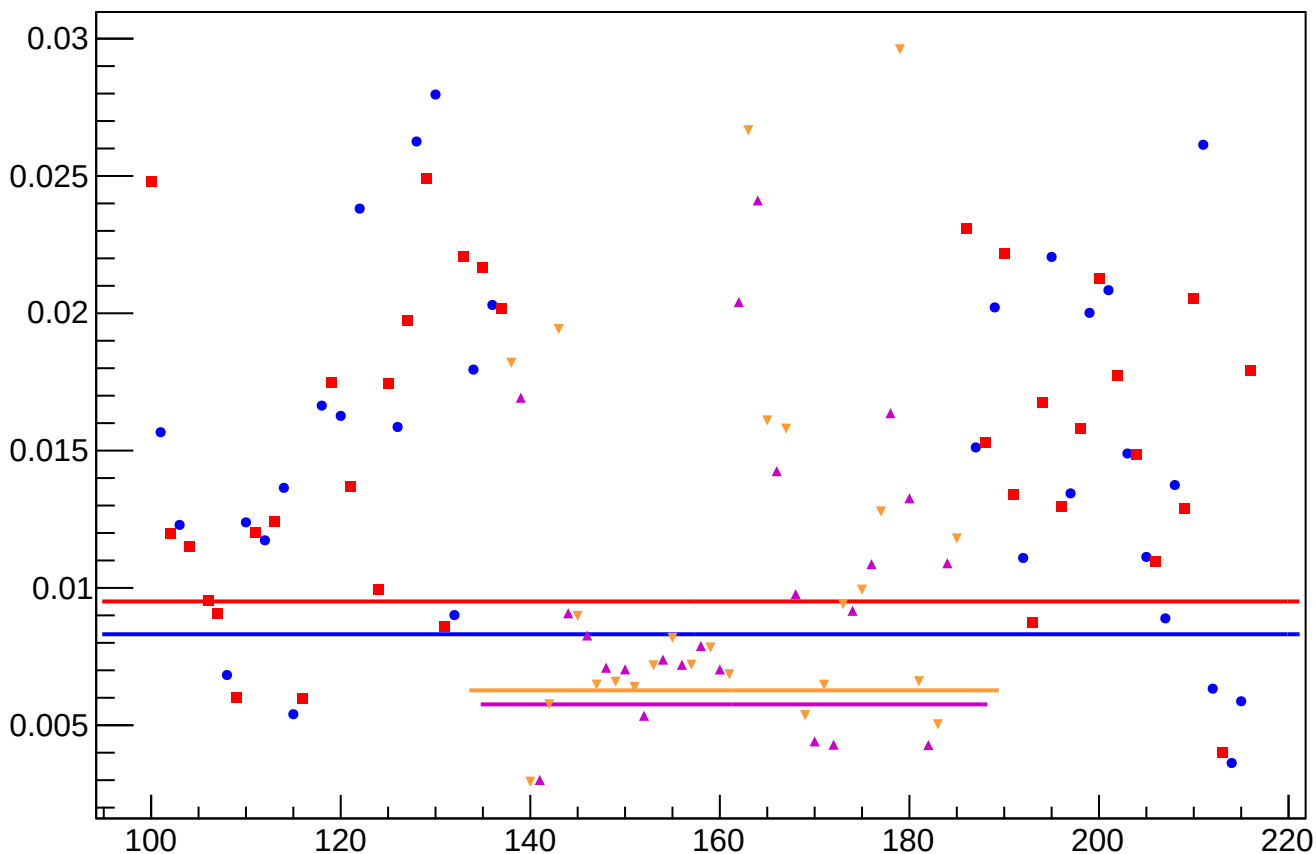
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 75.3/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 147.5/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.8/57

asym\_atl1r2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10700413.8/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7909965.6/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9222614.7/34

Left In: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7081814.9/22

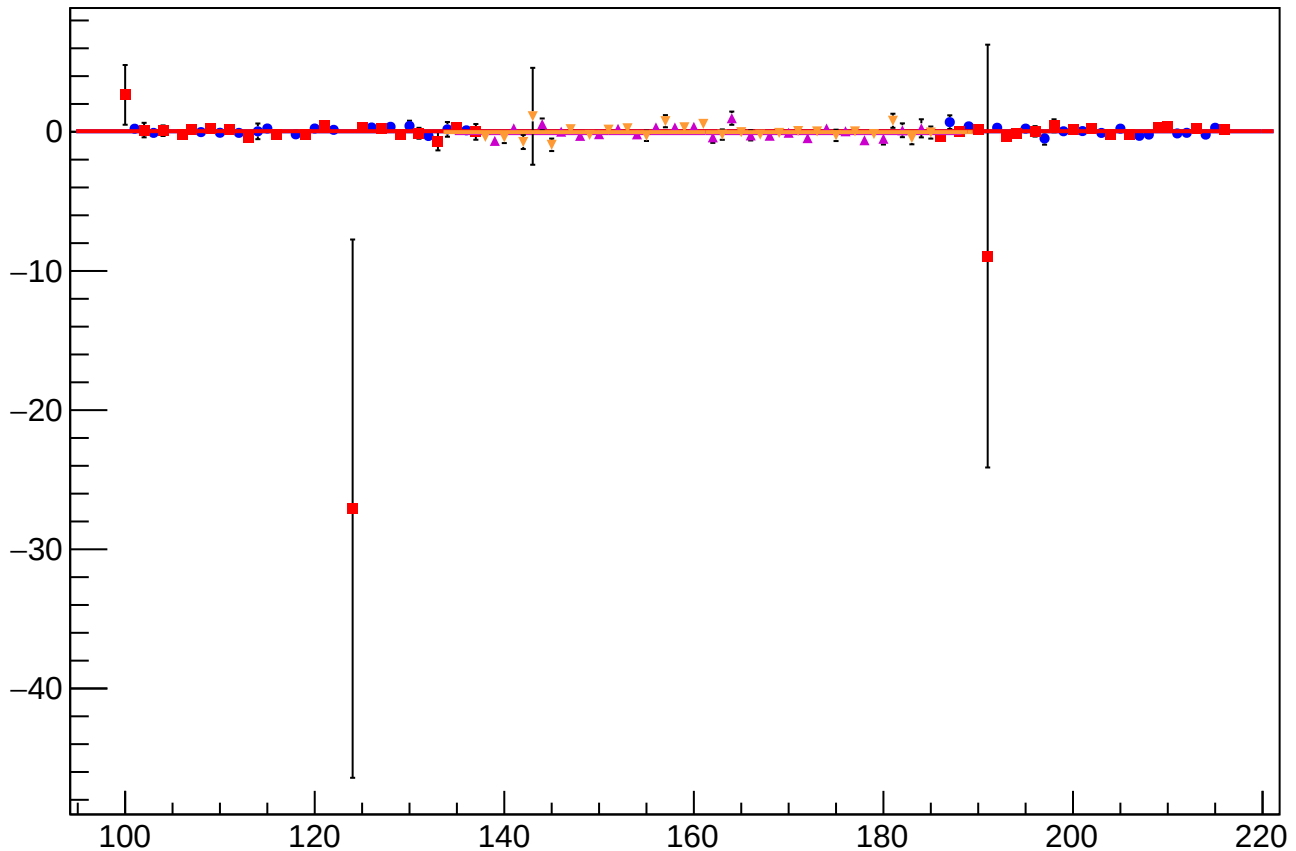
+ sign 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19651796.0/55

All: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 39207065.5/113

- sign 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19546560.0/57



asym\_atl1r2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.036 \pm 0.045$   $\chi^2/\text{NDF}$ : 24.7/30

Left Out:  $-0.024 \pm 0.062$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $0.045 \pm 0.042$   $\chi^2/\text{NDF}$ : 36.6/34

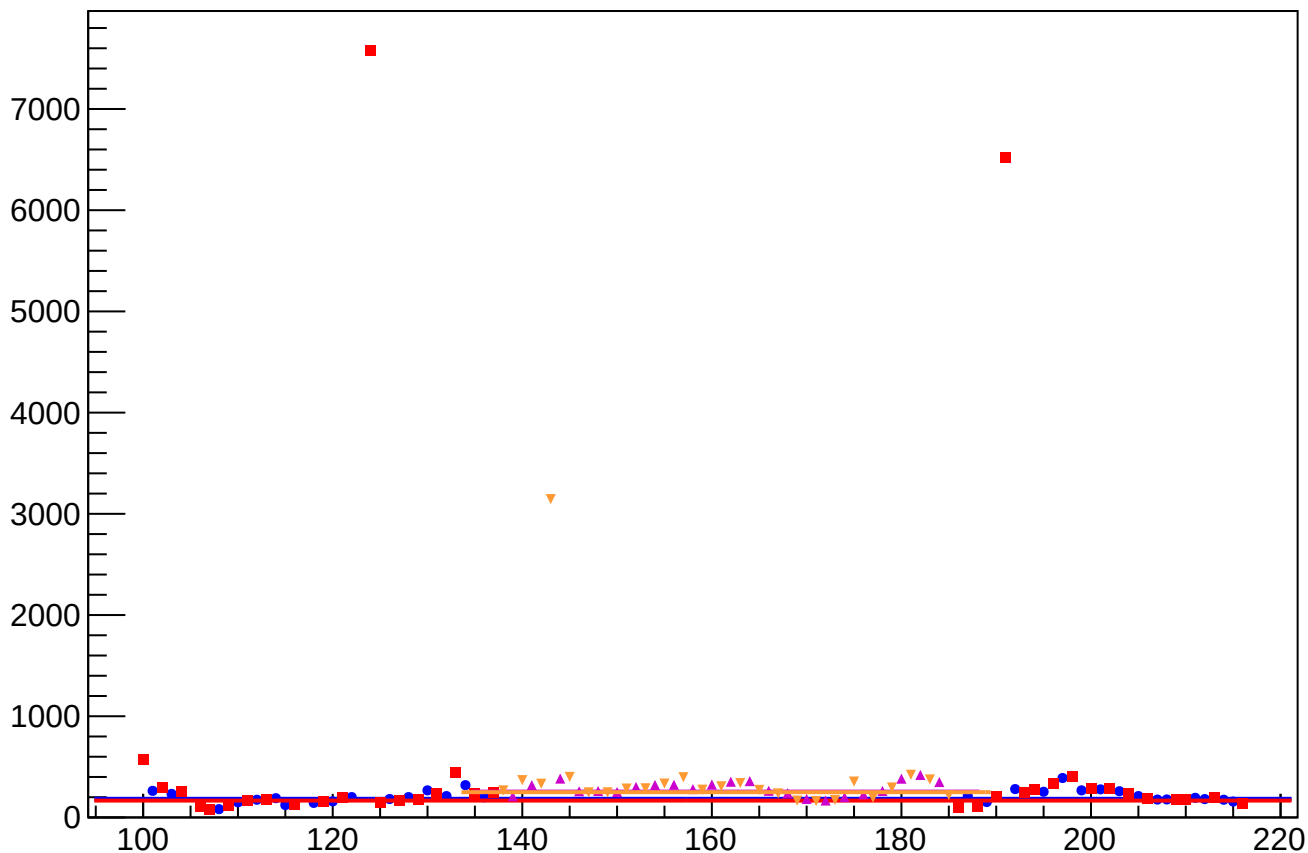
Left In:  $-0.095 \pm 0.063$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $0.015 \pm 0.036$   $\chi^2/\text{NDF}$ : 48.9/55

All:  $0.008 \pm 0.025$   $\chi^2/\text{NDF}$ : 120.5/113

- sign  $0.002 \pm 0.035$   $\chi^2/\text{NDF}$ : 71.5/57

asym\_atl1r2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 184.191+/-0.032  $\chi^2/\text{NDF}$ : 3036637.2/30

Left Out: 249.850+/-0.044  $\chi^2/\text{NDF}$ : 4234600.7/24

Right Out: 166.830+/-0.030  $\chi^2/\text{NDF}$ : 5393392.8/34

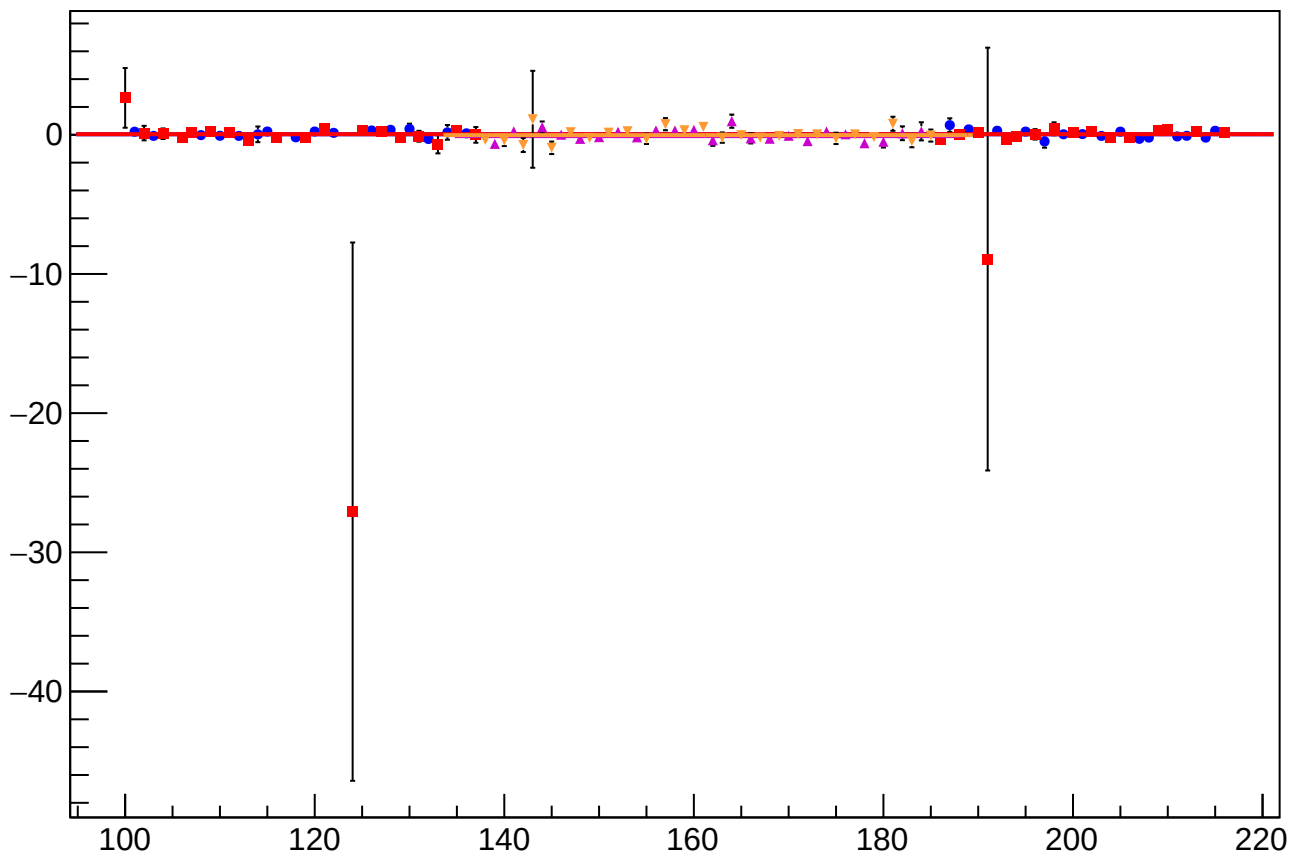
Left In: 255.302+/-0.045  $\chi^2/\text{NDF}$ : 2111585.0/22

+ sign 206.869+/-0.026  $\chi^2/\text{NDF}$ : 8757741.6/55

All: 200.279+/-0.018  $\chi^2/\text{NDF}$ : 19117943.0/11

- sign 194.126+/-0.025  $\chi^2/\text{NDF}$ : 10232130.1/57

asym\_atl1r2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.036 $\pm$ 0.045  $\chi^2$ /NDF: 24.7/30

Left Out: -0.024 $\pm$ 0.062  $\chi^2$ /NDF: 23.5/24

Right Out: 0.045 $\pm$ 0.042  $\chi^2$ /NDF: 36.6/34

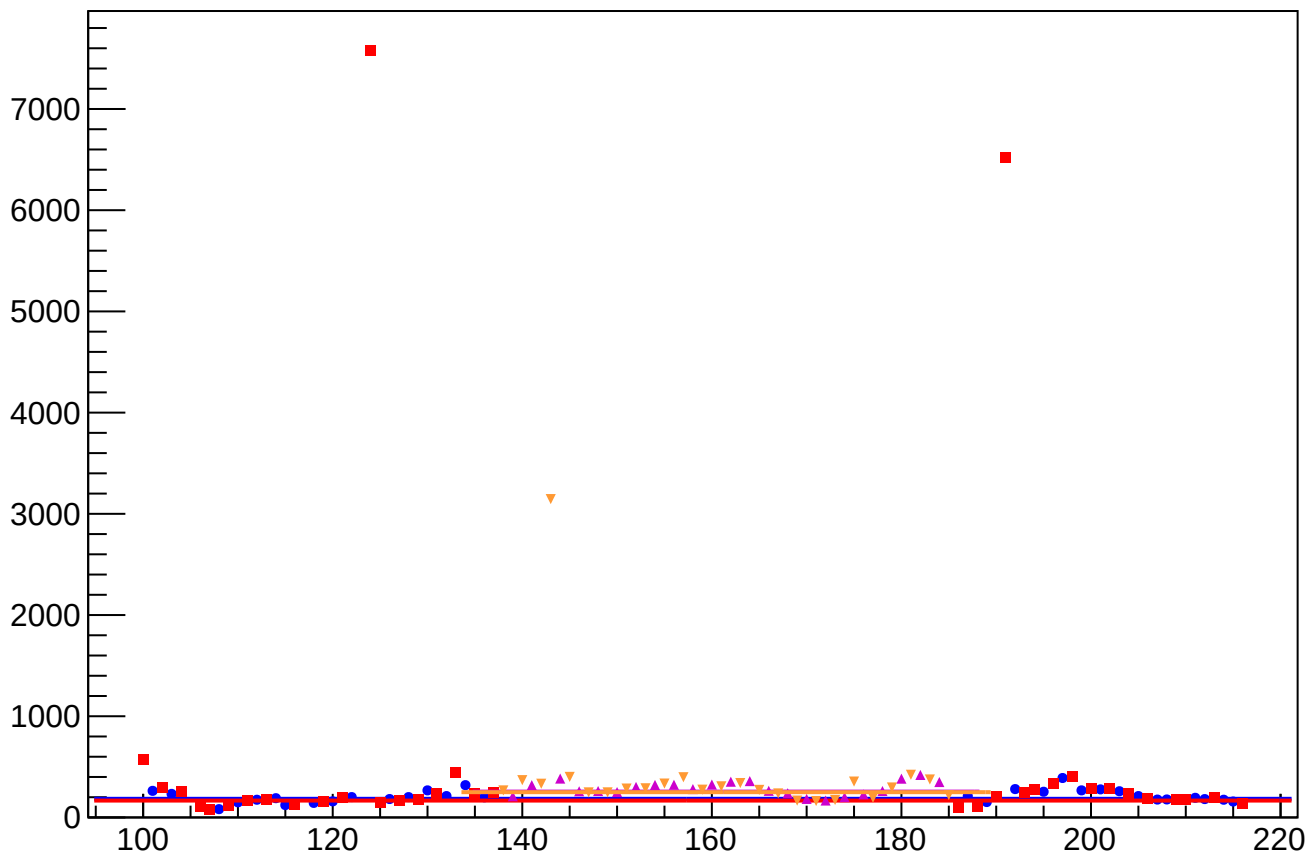
Left In: -0.095 $\pm$ 0.063  $\chi^2$ /NDF: 31.5/22

+ sign 0.015 $\pm$ 0.036  $\chi^2$ /NDF: 48.9/55

All: 0.008 $\pm$ 0.025  $\chi^2$ /NDF: 120.5/113

- sign 0.002 $\pm$ 0.035  $\chi^2$ /NDF: 71.5/57

asym\_atl1r2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 184.191 $\pm$ 0.032  $\chi^2$ /NDF: 3036637.2/30

Left Out: 249.850 $\pm$ 0.044  $\chi^2$ /NDF: 4234600.7/24

Right Out: 166.830 $\pm$ 0.030  $\chi^2$ /NDF: 5393392.8/34

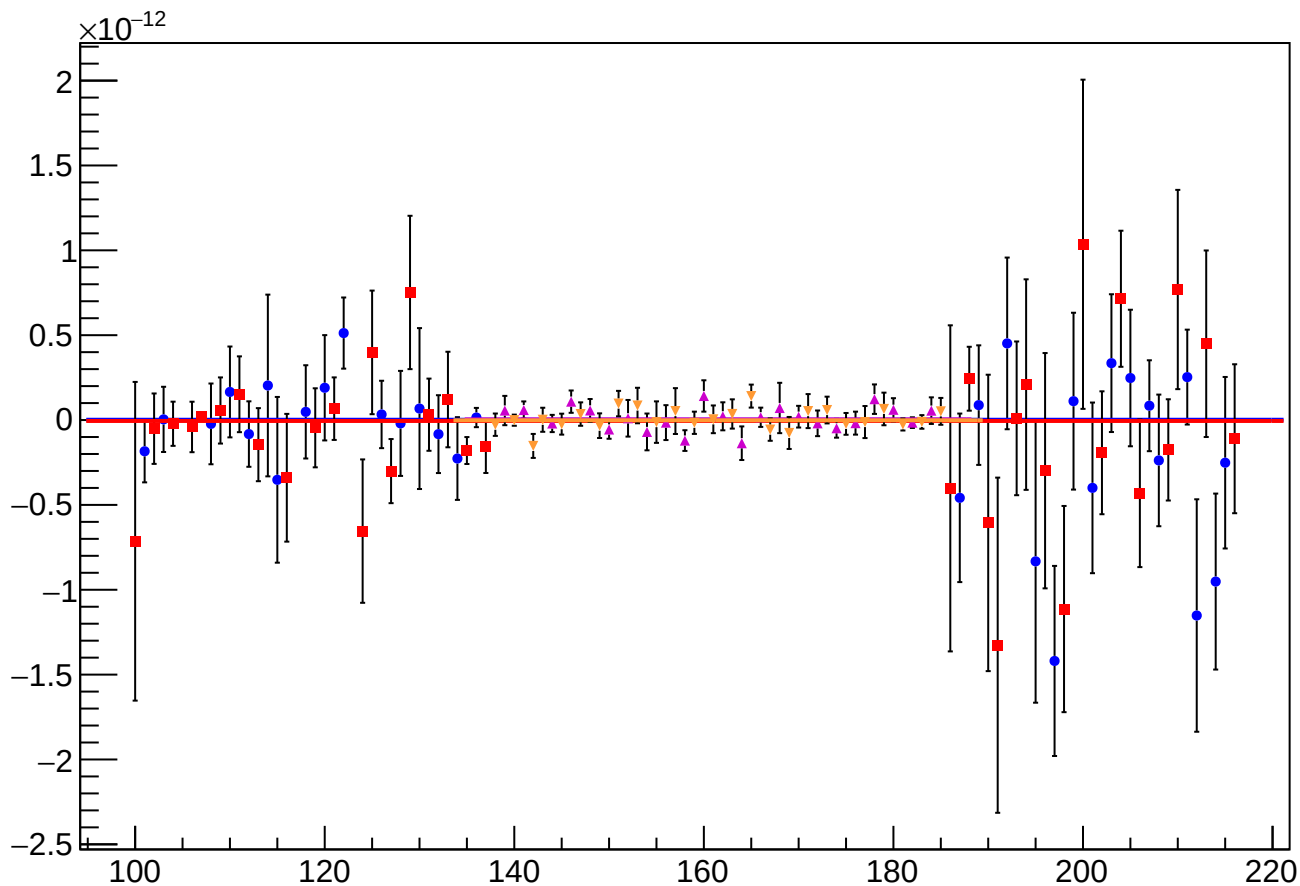
Left In: 255.302 $\pm$ 0.045  $\chi^2$ /NDF: 2111585.0/22

+ sign 206.869 $\pm$ 0.026  $\chi^2$ /NDF: 8757741.6/55

All: 200.279 $\pm$ 0.018  $\chi^2$ /NDF: 19117943.0/11

- sign 194.126 $\pm$ 0.025  $\chi^2$ /NDF: 10232130.1/57

asym\_atl1r2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.6/34

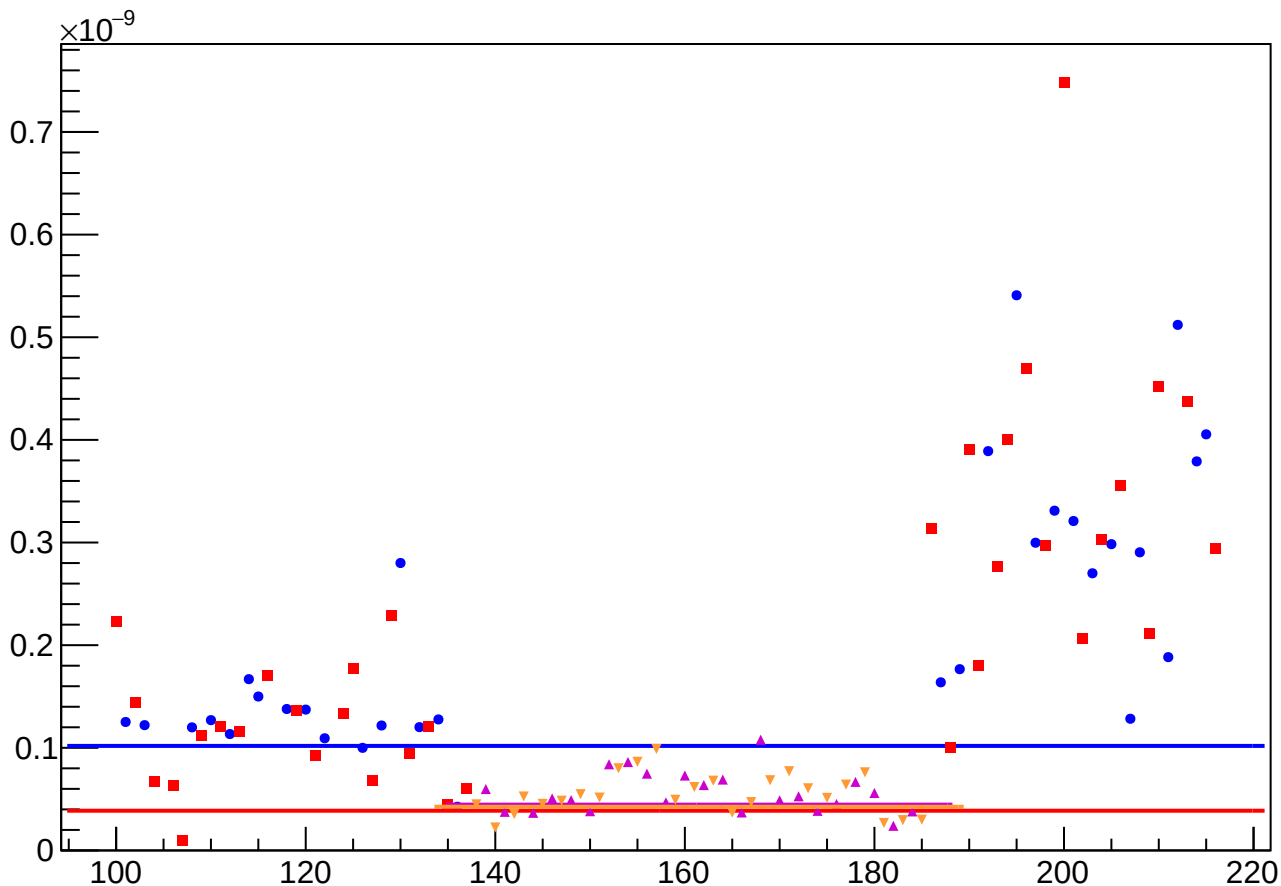
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 99.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.6/57

asym\_atl1r2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8566173.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3648691.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15743633.9/34

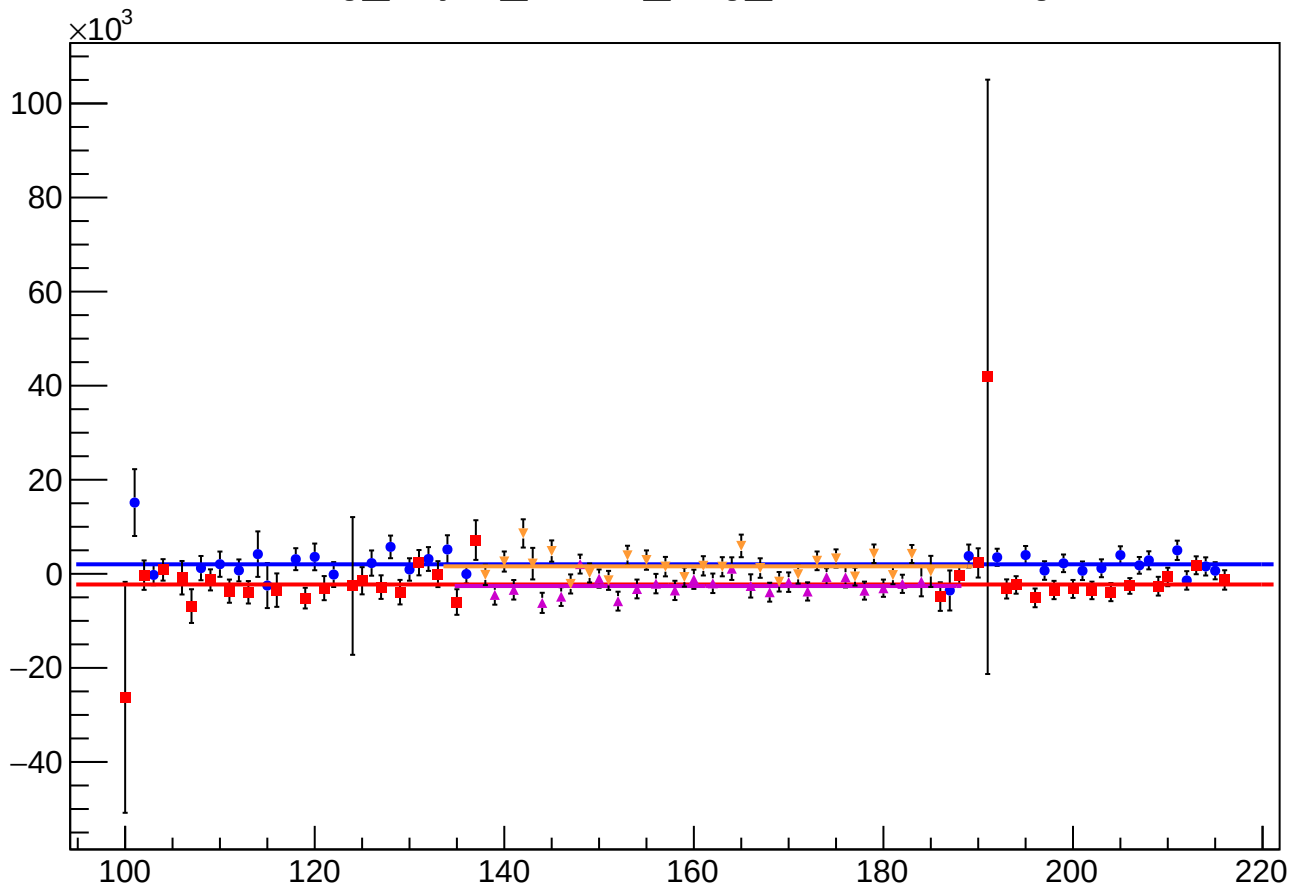
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2871089.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16275791.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35185950.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18716849.0/57

# reg\_asym\_atr1l2\_avg\_mean vs Slug



Right In:  $2023.893 \pm 406.539$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $1592.464 \pm 423.298$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-2264.356 \pm 406.187$   $\chi^2/\text{NDF}$ : 32.9/34

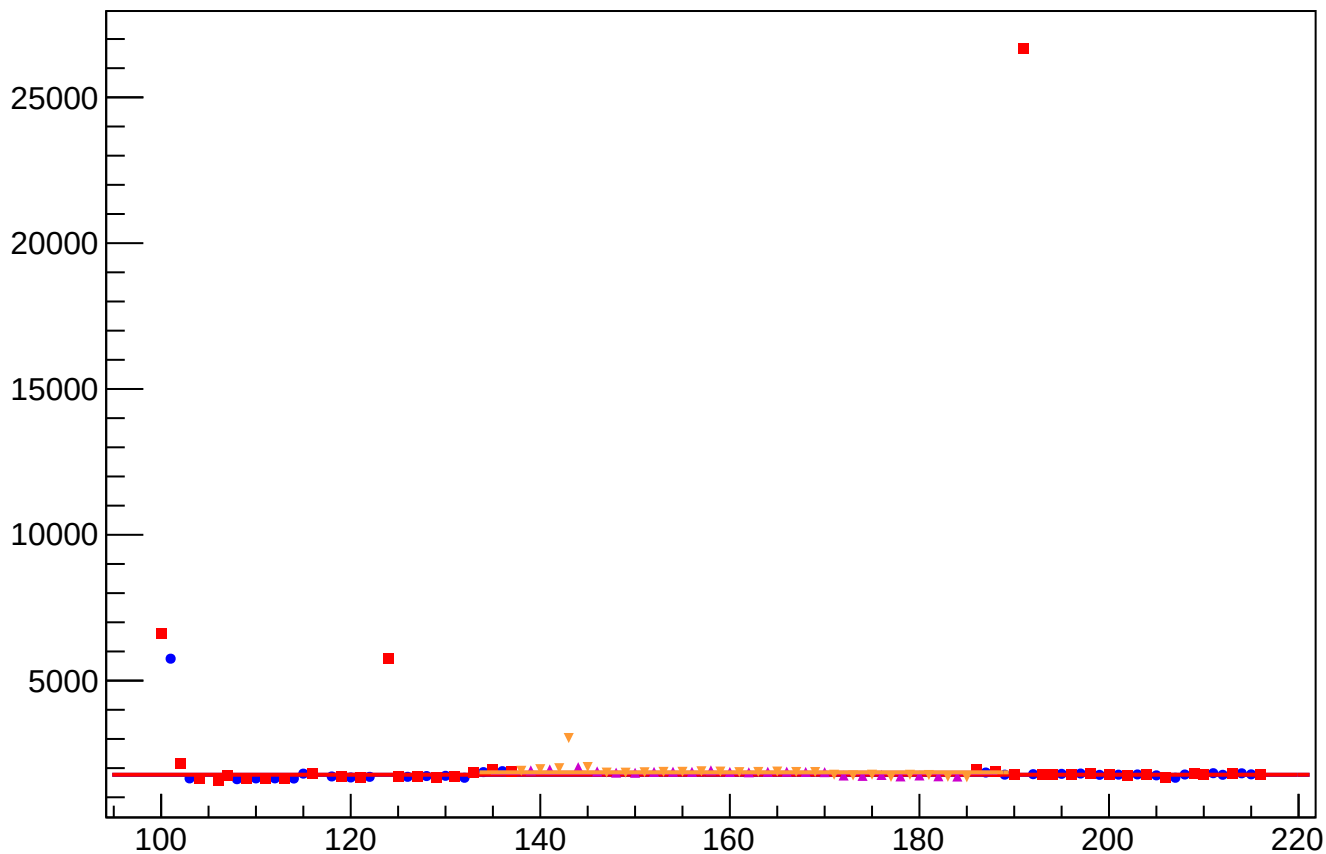
Left In:  $-2597.740 \pm 430.293$   $\chi^2/\text{NDF}$ : 20.1/22

+ sign  $1816.888 \pm 293.212$   $\chi^2/\text{NDF}$ : 56.1/55

All:  $-286.727 \pm 208.092$   $\chi^2/\text{NDF}$ : 213.1/113

- sign  $-2421.448 \pm 295.372$   $\chi^2/\text{NDF}$ : 53.3/57

# reg\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1768.974+/-0.287  $\chi^2/\text{NDF}$ : 684576.4/30

Left Out: 1855.560+/-0.299  $\chi^2/\text{NDF}$ : 324267.7/24

Right Out: 1774.009+/-0.286  $\chi^2/\text{NDF}$ : 648693.0/34

Left In: 1840.981+/-0.304  $\chi^2/\text{NDF}$ : 70985.8/22

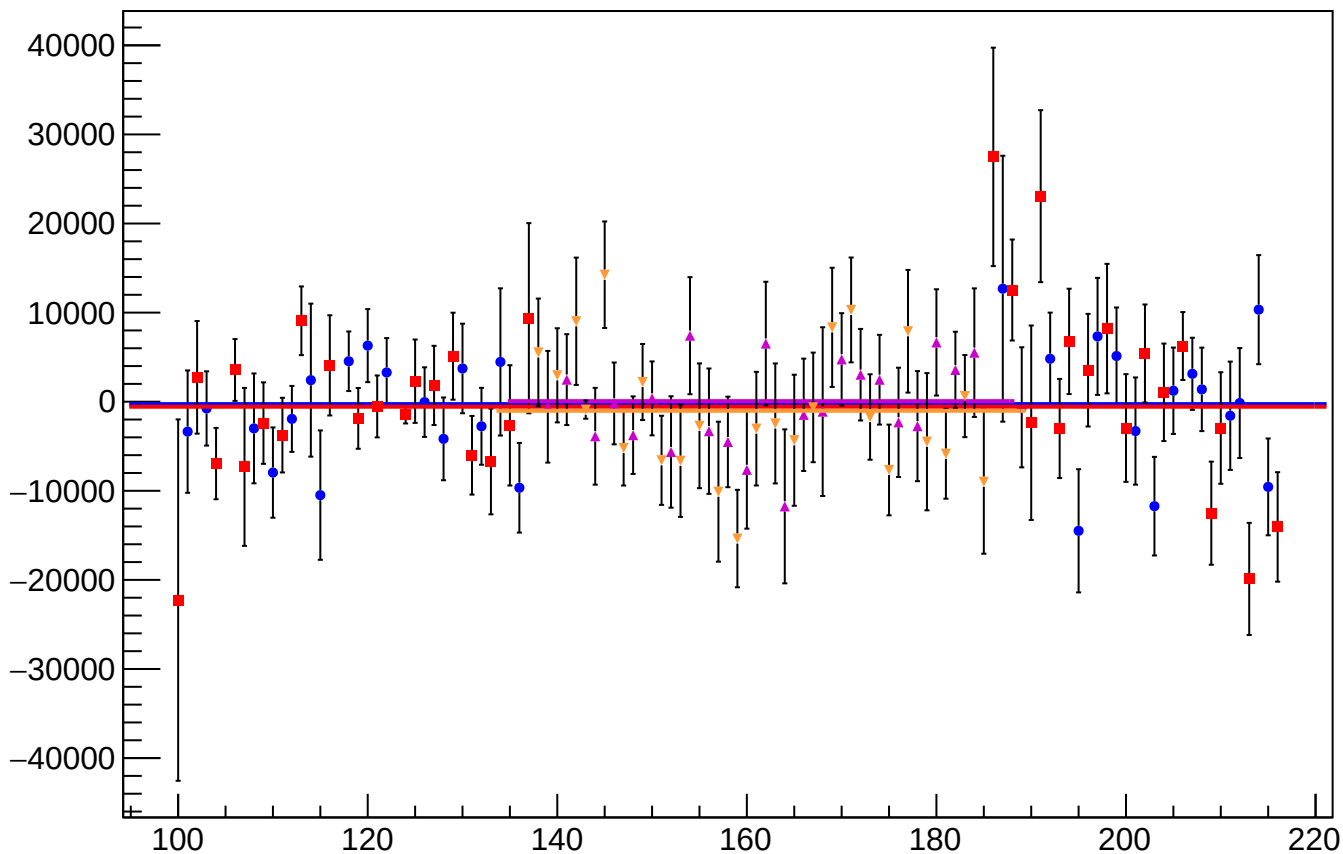
+ sign 1810.519+/-0.207  $\chi^2/\text{NDF}$ : 1052373.9/55

All: 1808.010+/-0.147  $\chi^2/\text{NDF}$ : 1798035.4/111

- sign 1805.472+/-0.209  $\chi^2/\text{NDF}$ : 745366.9/57



# asym\_atr1l2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-269.920 \pm 916.684$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $-1018.861 \pm 771.816$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-562.930 \pm 655.076$   $\chi^2/\text{NDF}$ : 63.8/34

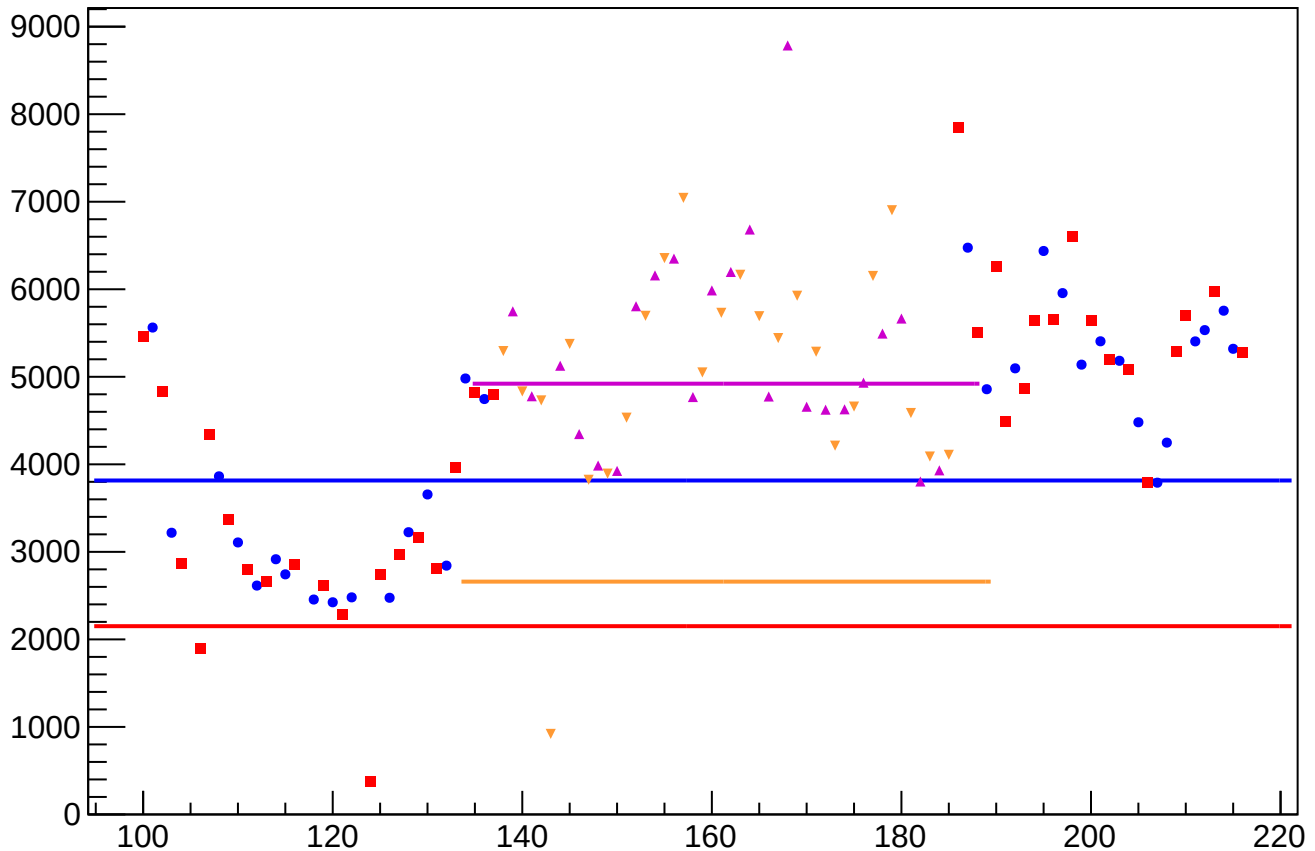
Left In:  $62.369 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-708.178 \pm 590.412$   $\chi^2/\text{NDF}$ : 69.8/55

All:  $-556.610 \pm 410.813$   $\chi^2/\text{NDF}$ : 146.9/113

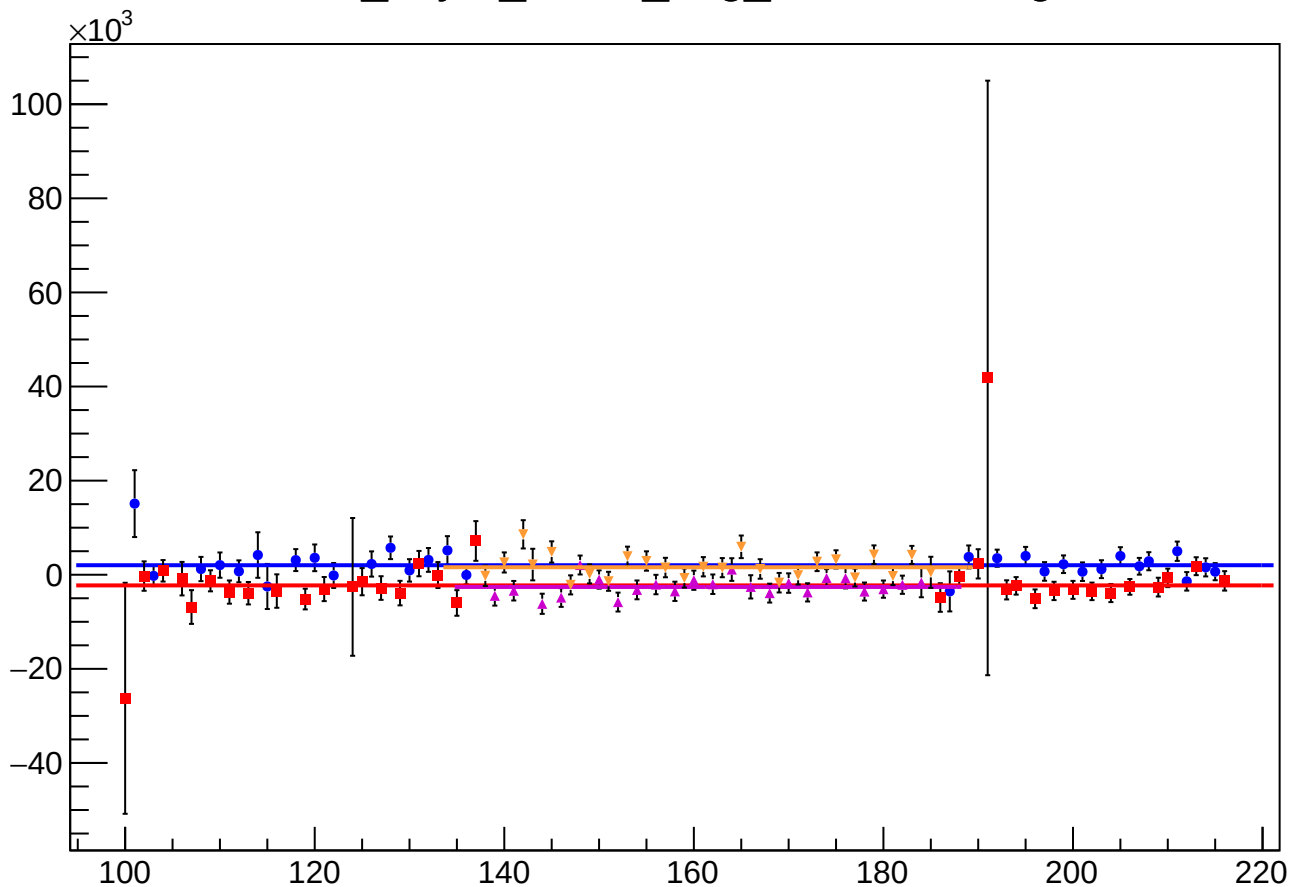
- sign  $-414.357 \pm 571.982$   $\chi^2/\text{NDF}$ : 77.0/57

asym\_atr1l2\_avg\_reg\_correction\_rms vs Slug



|                             |                                     |                         |                                     |
|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Right In: 3815.319+/-0.648  | $\chi^2/\text{NDF}$ : 3580593.6/30  | + sign 3139.266+/-0.417 | $\chi^2/\text{NDF}$ : 19975625.5/55 |
| Left Out: 2660.009+/-0.546  | $\chi^2/\text{NDF}$ : 14536074.6/24 | All: 2969.009+/-0.290   | $\chi^2/\text{NDF}$ : 47507904.9/1  |
| Right Out: 2150.976+/-0.463 | $\chi^2/\text{NDF}$ : 17459808.1/34 | - sign 2809.216+/-0.404 | $\chi^2/\text{NDF}$ : 27209871.1/57 |
| Left In: 4921.319+/-0.830   | $\chi^2/\text{NDF}$ : 1251123.1/22  |                         |                                     |

# cor\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2023.704 $\pm$ 406.539  $\chi^2/\text{NDF}$ : 24.3/30

Left Out: 1592.431 $\pm$ 423.298  $\chi^2/\text{NDF}$ : 31.3/24

Right Out: -2264.371 $\pm$ 406.187  $\chi^2/\text{NDF}$ : 32.9/34

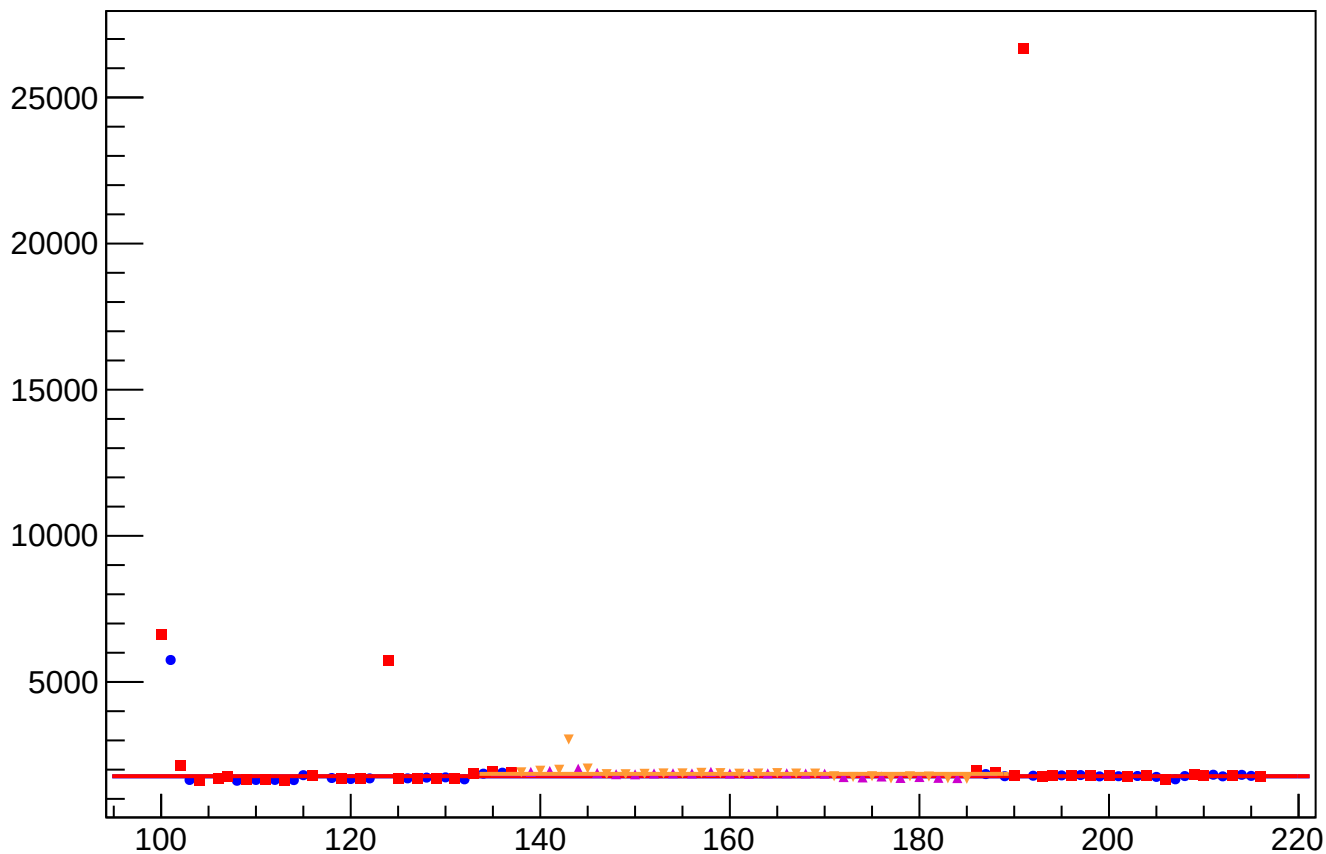
Left In: -2597.812 $\pm$ 430.293  $\chi^2/\text{NDF}$ : 20.1/22

+ sign 1816.774 $\pm$ 293.212  $\chi^2/\text{NDF}$ : 56.1/55

All: -286.805 $\pm$ 208.092  $\chi^2/\text{NDF}$ : 213.0/113

- sign -2421.490 $\pm$ 295.372  $\chi^2/\text{NDF}$ : 53.3/57

# cor\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1768.974+/-0.287  $\chi^2/\text{NDF}$ : 684576.7/30

Left Out: 1855.560+/-0.299  $\chi^2/\text{NDF}$ : 324267.7/24

Right Out: 1776.693+/-0.287  $\chi^2/\text{NDF}$ : 639966.4/34

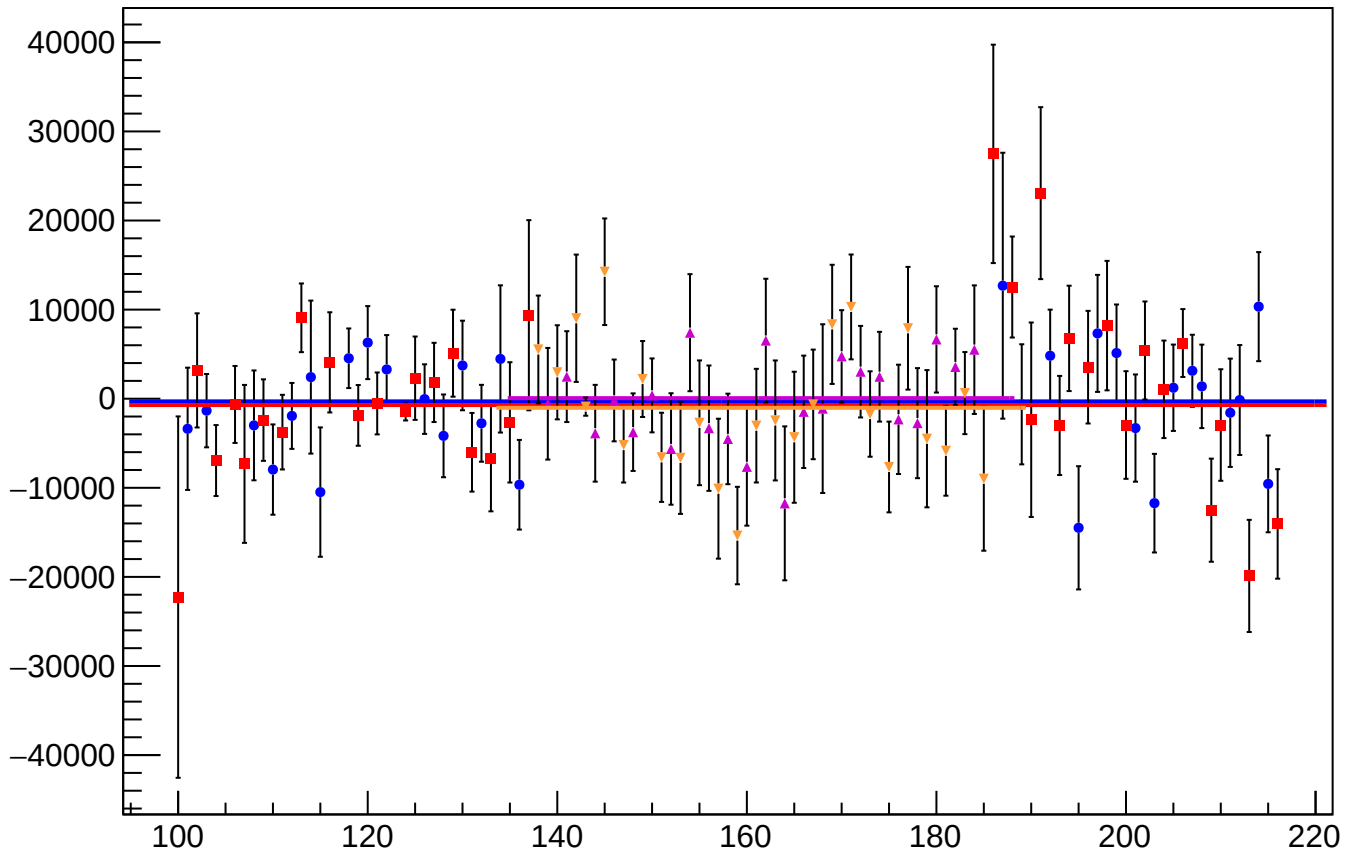
Left In: 1840.981+/-0.304  $\chi^2/\text{NDF}$ : 70985.8/22

+ sign 1810.519+/-0.207  $\chi^2/\text{NDF}$ : 1052374.3/55

All: 1808.741+/-0.147  $\chi^2/\text{NDF}$ : 1787113.9/11

- sign 1806.940+/-0.209  $\chi^2/\text{NDF}$ : 734591.6/57

# asym\_atr1l2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-299.829 \pm 916.109$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $-1018.712 \pm 771.798$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-711.953 \pm 659.274$   $\chi^2/\text{NDF}$ : 62.4/34

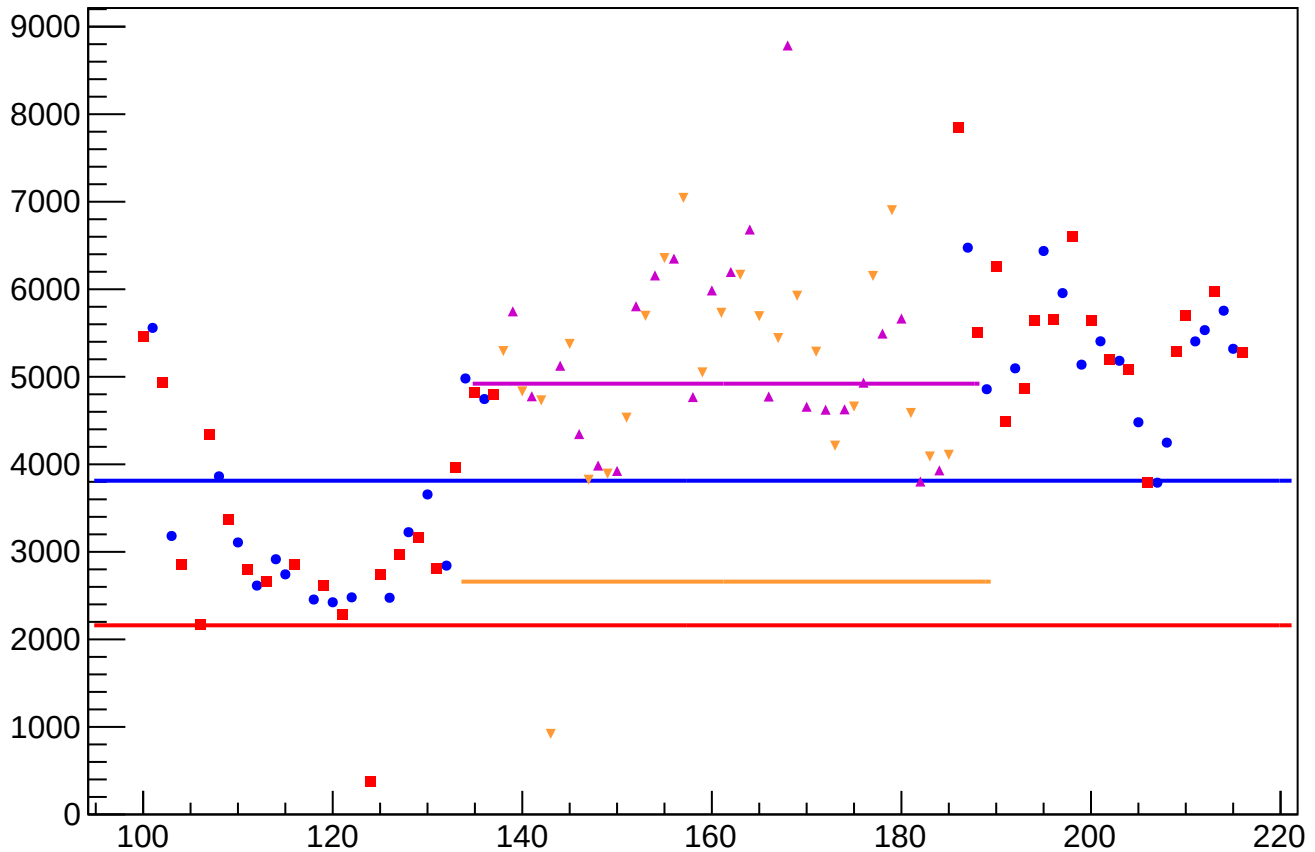
Left In:  $62.286 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-720.286 \pm 590.250$   $\chi^2/\text{NDF}$ : 69.8/55

All:  $-620.661 \pm 411.788$   $\chi^2/\text{NDF}$ : 145.6/113

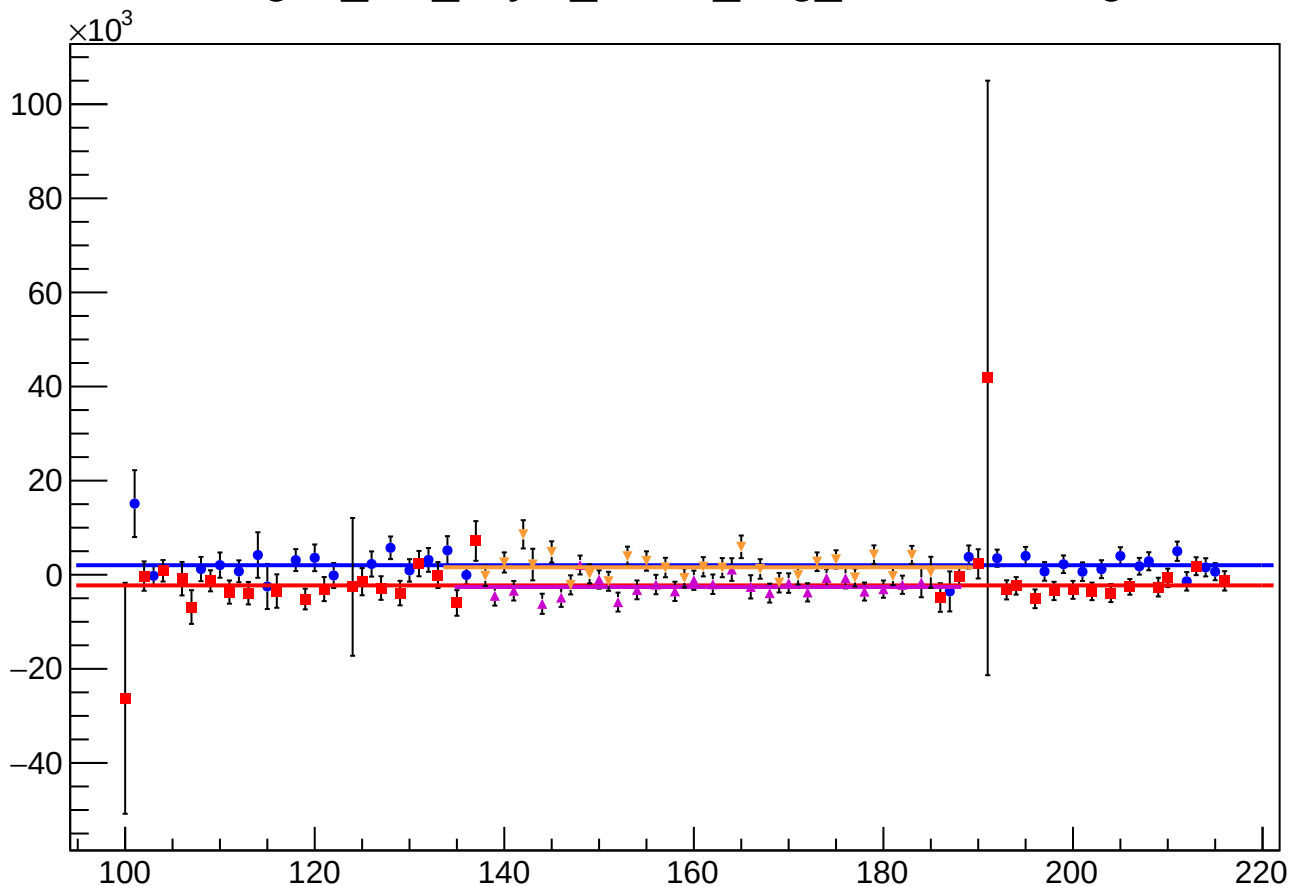
- sign  $-526.194 \pm 574.770$   $\chi^2/\text{NDF}$ : 75.8/57

asym\_atr1l2\_avg\_cor\_correction\_rms vs Slug



|                                 |                              |                             |                              |
|---------------------------------|------------------------------|-----------------------------|------------------------------|
| Right In: 3812.739 $\pm$ 0.648  | $\chi^2$ /NDF: 3586551.2/30  | + sign 3138.475 $\pm$ 0.417 | $\chi^2$ /NDF: 19975752.2/55 |
| Left Out: 2659.907 $\pm$ 0.546  | $\chi^2$ /NDF: 14536813.3/24 | All: 2976.614 $\pm$ 0.291   | $\chi^2$ /NDF: 47396593.1/1  |
| Right Out: 2160.820 $\pm$ 0.466 | $\chi^2$ /NDF: 17463766.8/34 | - sign 2823.131 $\pm$ 0.406 | $\chi^2$ /NDF: 27127829.0/57 |
| Left In: 4921.316 $\pm$ 0.830   | $\chi^2$ /NDF: 1251131.6/22  |                             |                              |

# eigen\_cor\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2023.704+/-406.539  $\chi^2/\text{NDF}$ : 24.3/30

Left Out: 1592.431+/-423.298  $\chi^2/\text{NDF}$ : 31.3/24

Right Out: -2264.371+/-406.187  $\chi^2/\text{NDF}$ : 32.9/34

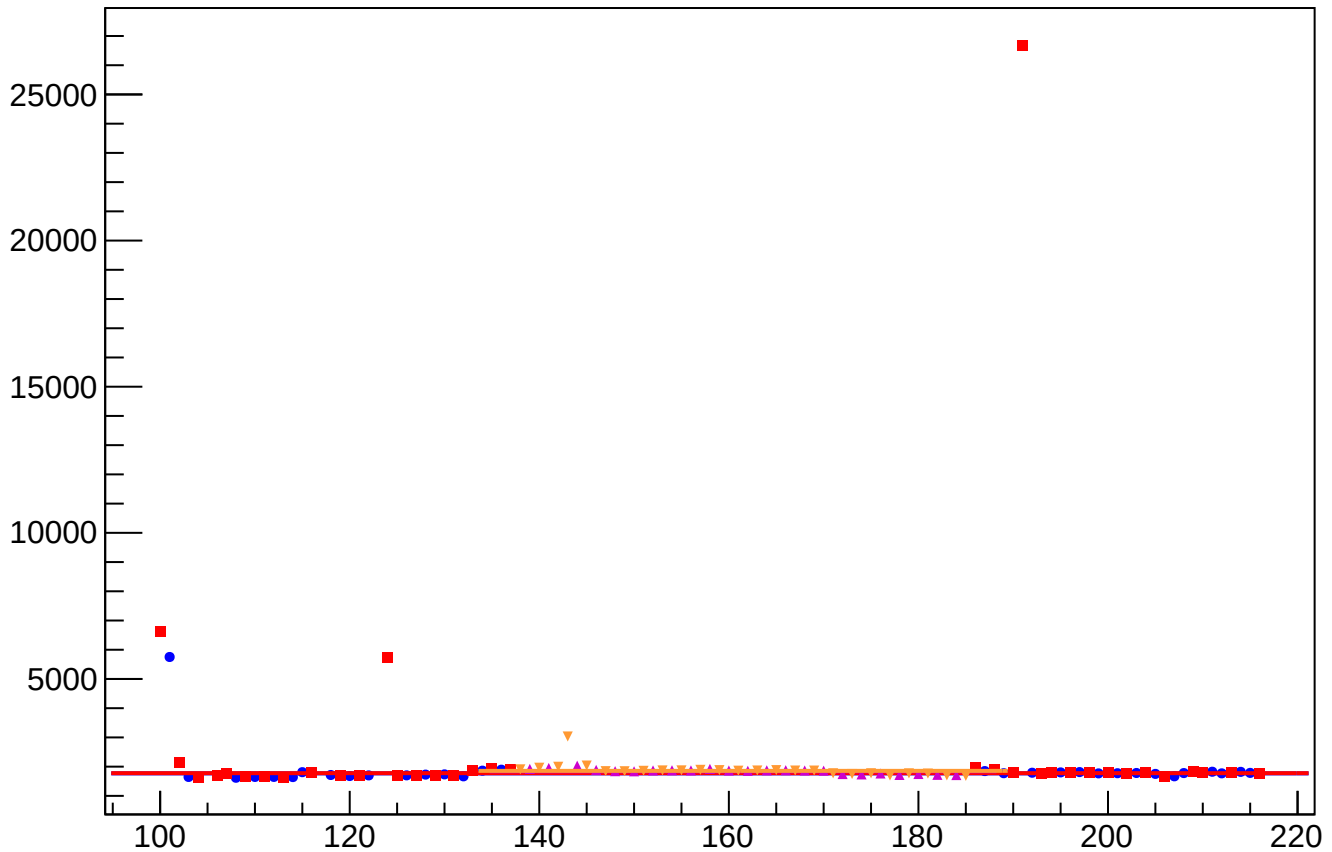
Left In: -2597.812+/-430.293  $\chi^2/\text{NDF}$ : 20.1/22

+ sign 1816.774+/-293.212  $\chi^2/\text{NDF}$ : 56.1/55

All: -286.805+/-208.092  $\chi^2/\text{NDF}$ : 213.0/113

- sign -2421.490+/-295.372  $\chi^2/\text{NDF}$ : 53.3/57

# eigen\_cor\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1768.974+/-0.287  $\chi^2/\text{NDF}$ : 684576.7/30

Left Out: 1855.560+/-0.299  $\chi^2/\text{NDF}$ : 324267.7/24

Right Out: 1776.693+/-0.287  $\chi^2/\text{NDF}$ : 639966.4/34

Left In: 1840.981+/-0.304  $\chi^2/\text{NDF}$ : 70985.8/22

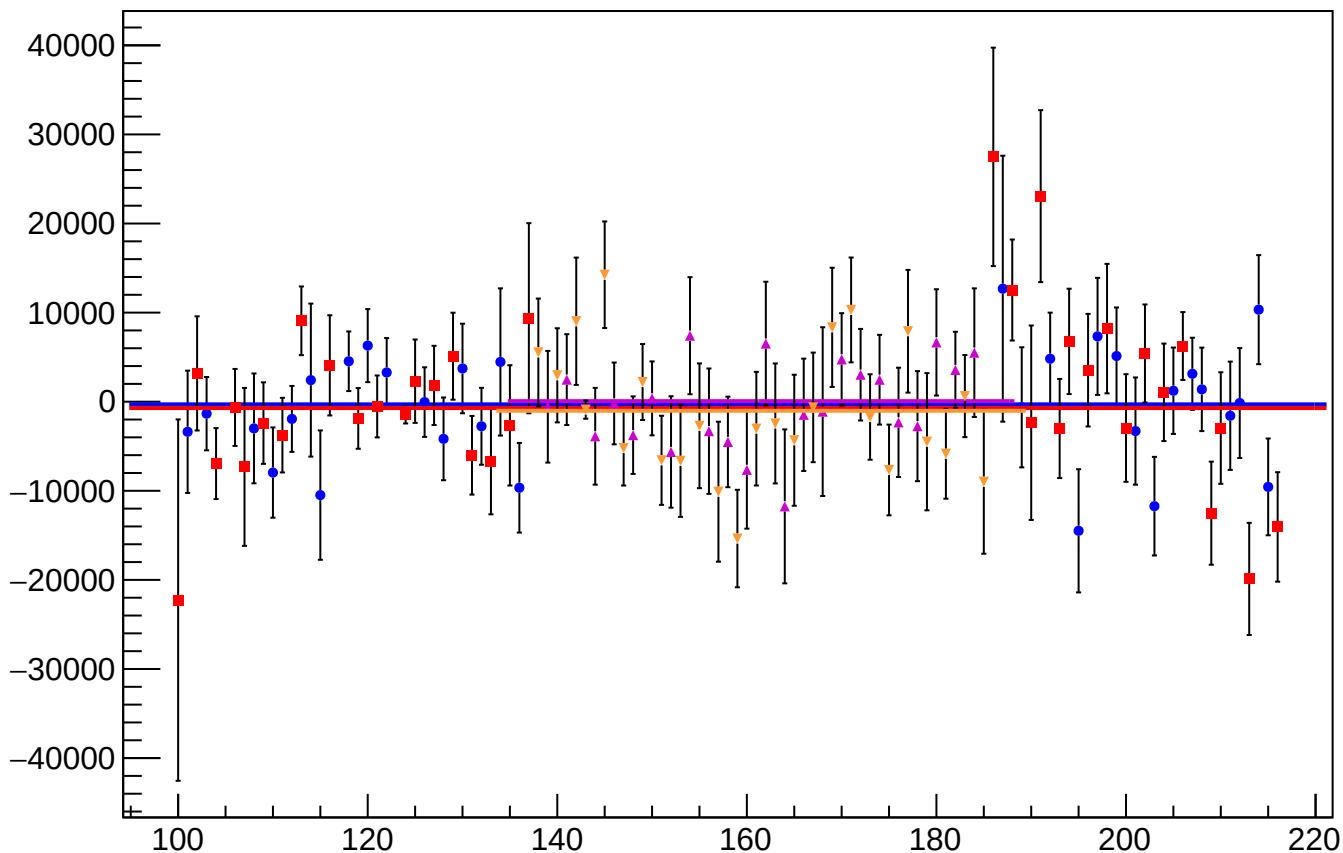
+ sign 1810.519+/-0.207  $\chi^2/\text{NDF}$ : 1052374.3/55

All: 1808.741+/-0.147  $\chi^2/\text{NDF}$ : 1787113.9/11

- sign 1806.940+/-0.209  $\chi^2/\text{NDF}$ : 734591.6/57



asym\_atr1l2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-299.829 \pm 916.109$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $-1018.712 \pm 771.798$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-711.953 \pm 659.274$   $\chi^2/\text{NDF}$ : 62.4/34

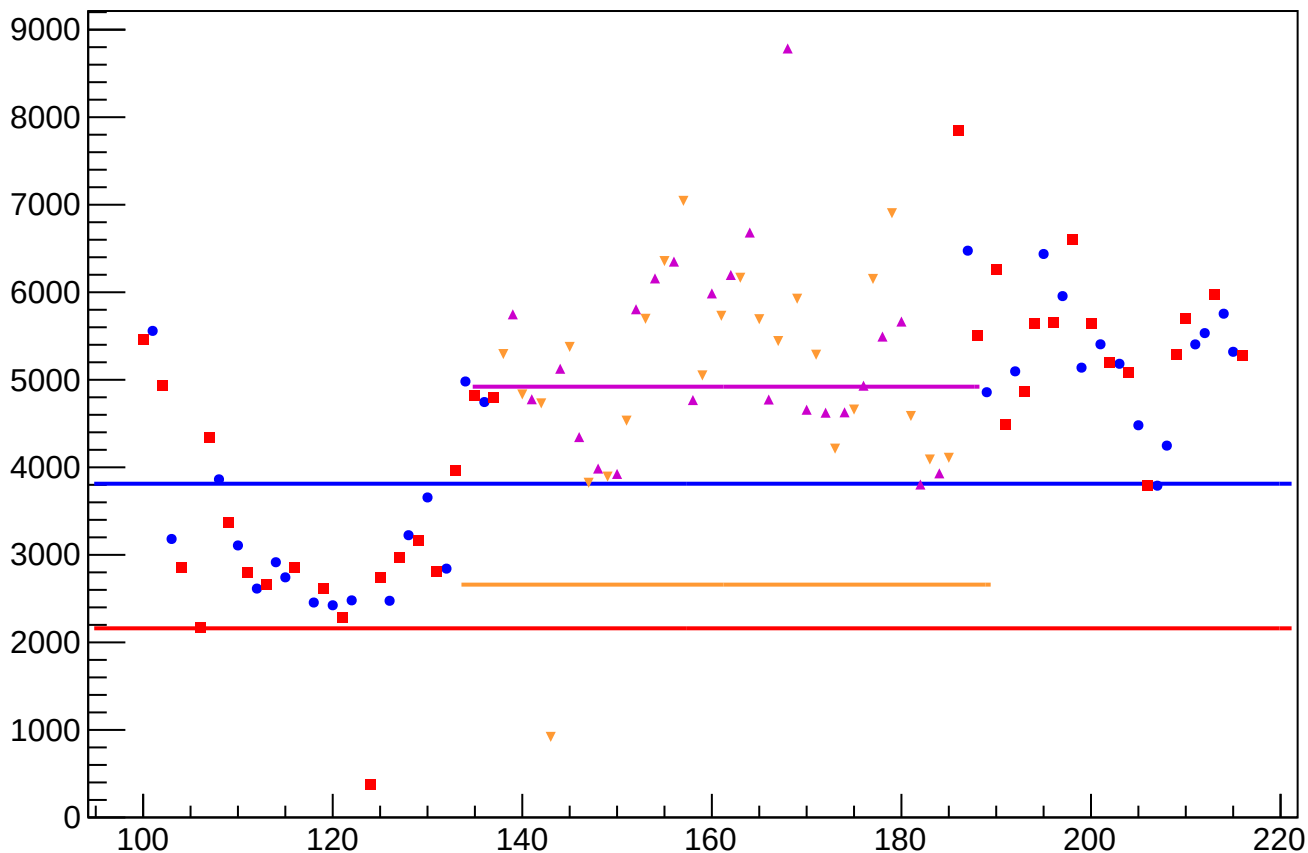
Left In:  $62.286 \pm 1173.429$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-720.286 \pm 590.250$   $\chi^2/\text{NDF}$ : 69.8/55

All:  $-620.661 \pm 411.788$   $\chi^2/\text{NDF}$ : 145.6/113

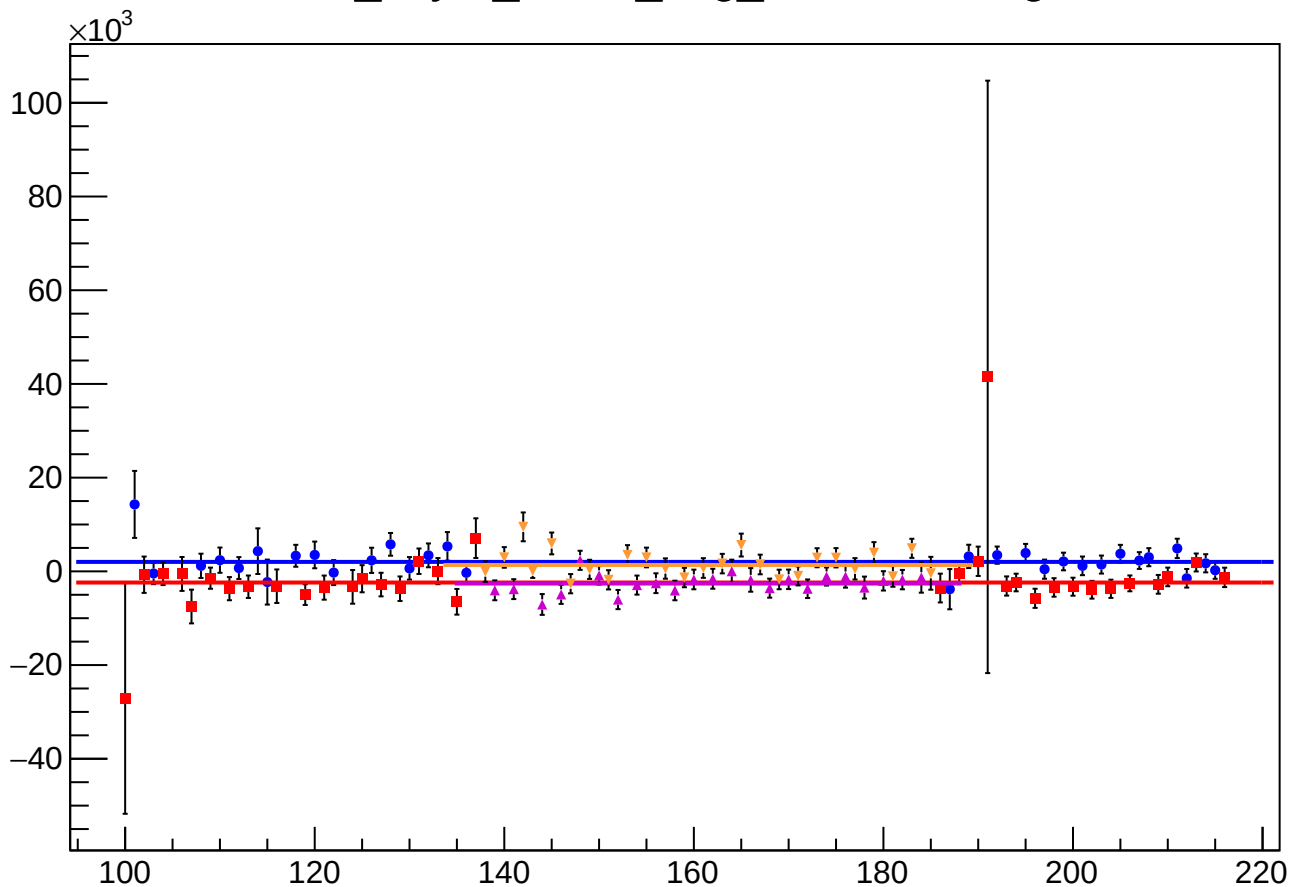
- sign  $-526.194 \pm 574.770$   $\chi^2/\text{NDF}$ : 75.8/57

asym\_atr1l2\_avg\_eigen\_cor\_correction\_rms vs Slug



|                                 |                              |                             |                              |
|---------------------------------|------------------------------|-----------------------------|------------------------------|
| Right In: 3812.739 $\pm$ 0.648  | $\chi^2$ /NDF: 3586551.2/30  | + sign 3138.475 $\pm$ 0.417 | $\chi^2$ /NDF: 19975752.2/55 |
| Left Out: 2659.907 $\pm$ 0.546  | $\chi^2$ /NDF: 14536813.3/24 | All: 2976.614 $\pm$ 0.291   | $\chi^2$ /NDF: 47396593.1/1  |
| Right Out: 2160.820 $\pm$ 0.466 | $\chi^2$ /NDF: 17463766.8/34 | - sign 2823.131 $\pm$ 0.406 | $\chi^2$ /NDF: 27127829.0/57 |
| Left In: 4921.316 $\pm$ 0.830   | $\chi^2$ /NDF: 1251131.6/22  |                             |                              |

# dit\_asym\_atr1l2\_avg\_mean vs Slug



Right In:  $2018.830 \pm 410.579$   $\chi^2/\text{NDF}$ : 24.1/30

Left Out:  $1363.887 \pm 427.332$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-2385.000 \pm 409.175$   $\chi^2/\text{NDF}$ : 31.3/34

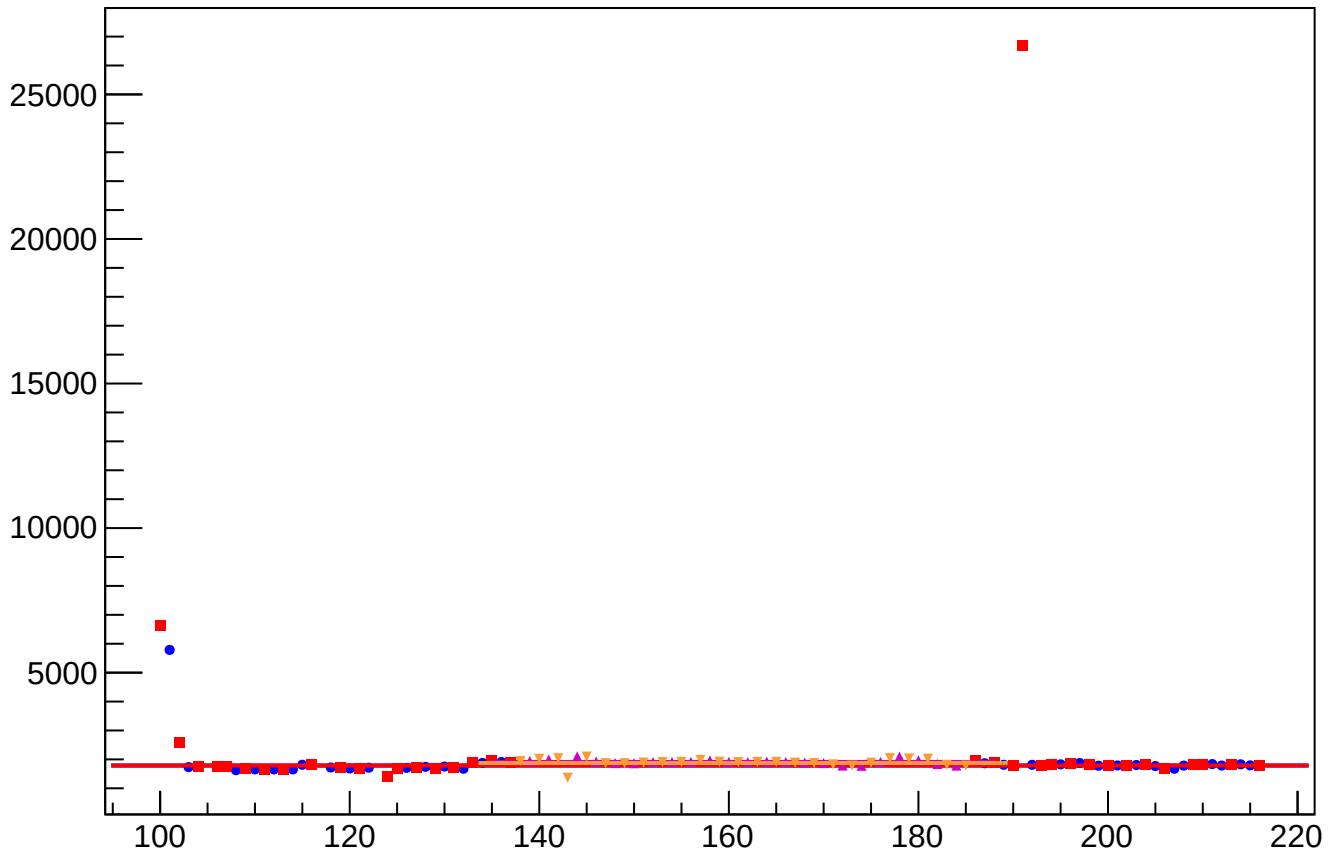
Left In:  $-2602.835 \pm 446.741$   $\chi^2/\text{NDF}$ : 20.0/22

+ sign  $1704.448 \pm 296.069$   $\chi^2/\text{NDF}$ : 61.4/55

All:  $-350.239 \pm 211.328$   $\chi^2/\text{NDF}$ : 211.1/113

- sign  $-2484.375 \pm 301.739$   $\chi^2/\text{NDF}$ : 51.5/57

# dit\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1786.374+/-0.290  $\chi^2/\text{NDF}$ : 684725.9/30

Left Out: 1873.177+/-0.302  $\chi^2/\text{NDF}$ : 309733.7/24

Right Out: 1790.120+/-0.289  $\chi^2/\text{NDF}$ : 563205.3/34

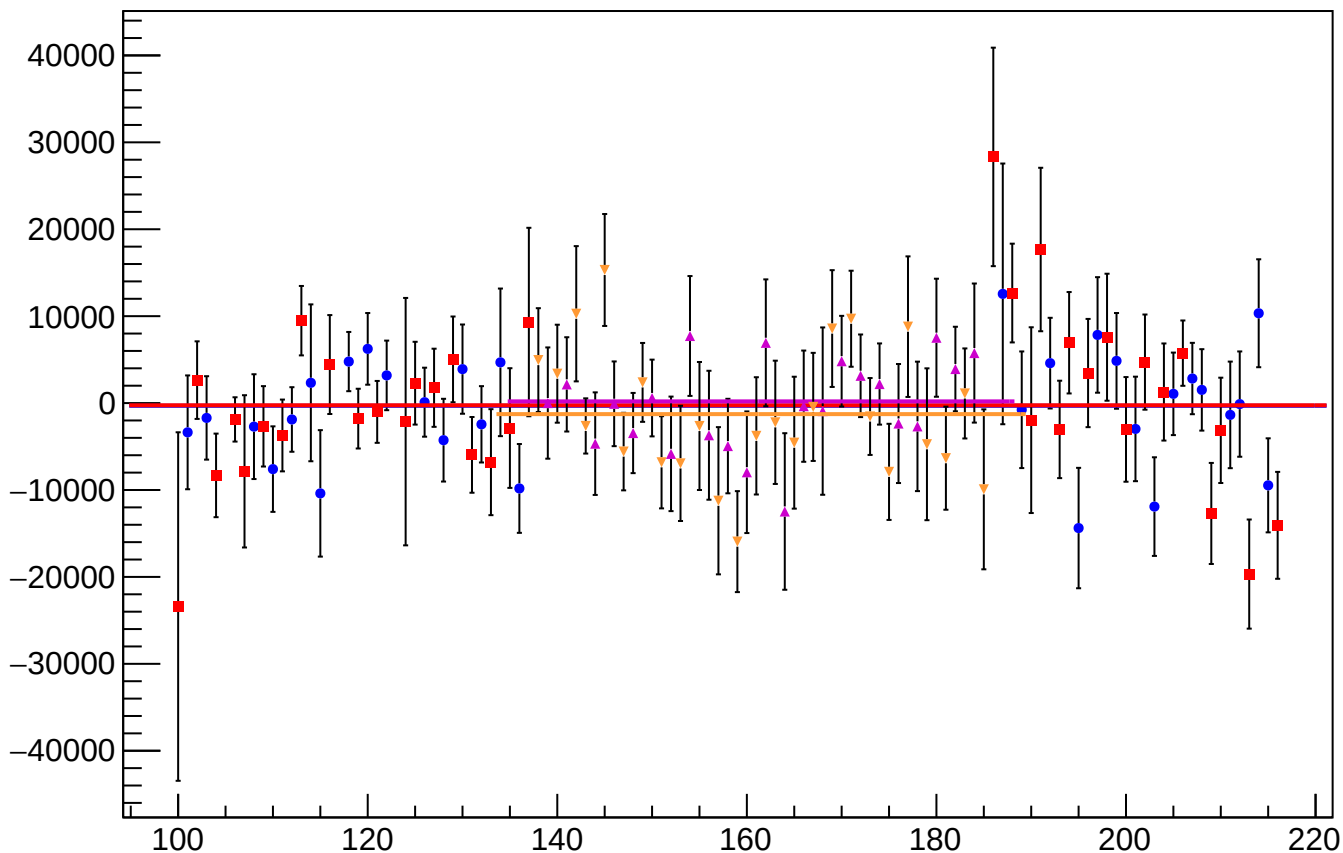
Left In: 1911.423+/-0.316  $\chi^2/\text{NDF}$ : 59139.8/22

+ sign 1828.041+/-0.209  $\chi^2/\text{NDF}$ : 1037370.1/55

All: 1836.559+/-0.149  $\chi^2/\text{NDF}$ : 1743351.8/11

- sign 1845.396+/-0.213  $\chi^2/\text{NDF}$ : 702608.9/57

# asym\_atr1l2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-308.202 \pm 929.274$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-1269.760 \pm 1156.132$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $-253.800 \pm 873.728$   $\chi^2/\text{NDF}$ : 59.4/34

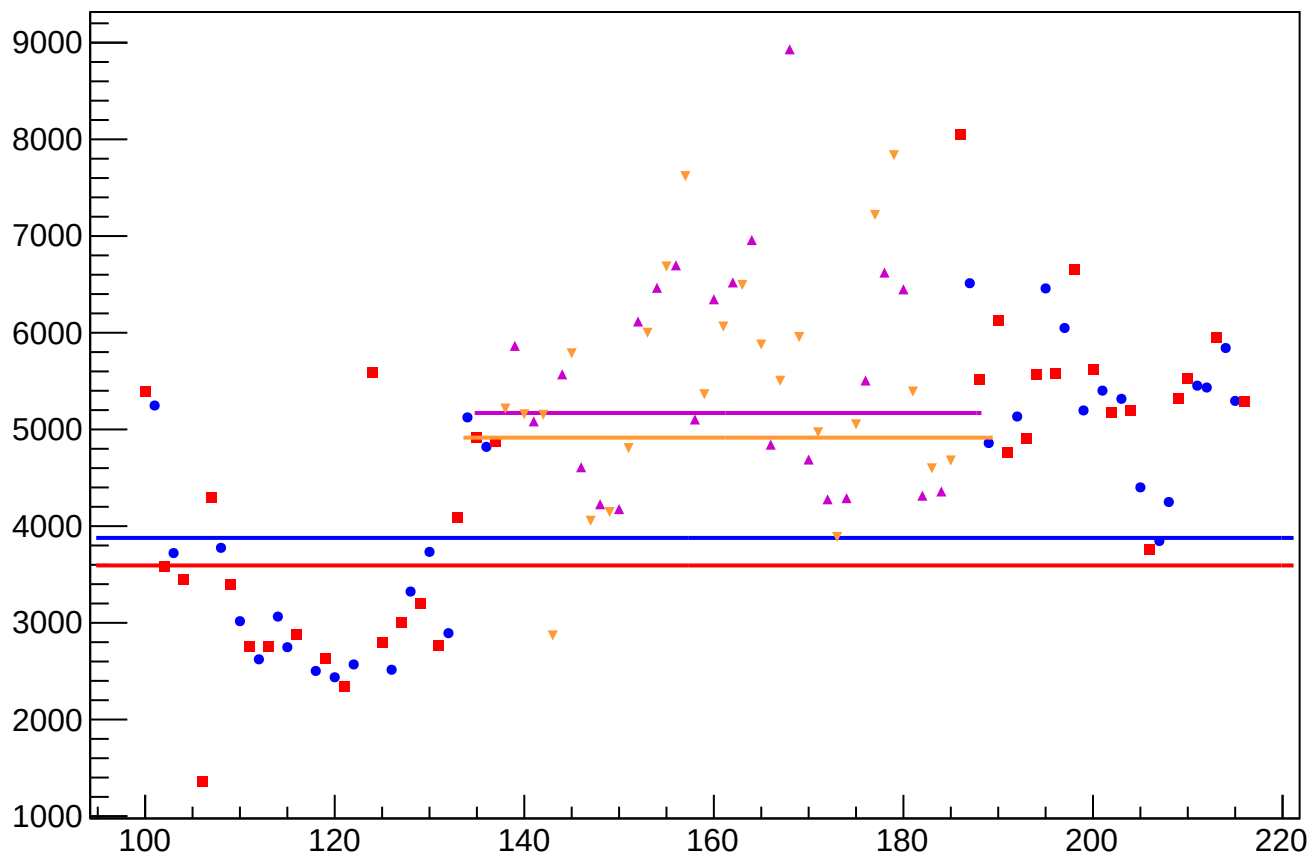
Left In:  $196.917 \pm 1234.538$   $\chi^2/\text{NDF}$ : 12.7/22

+ sign  $-685.603 \pm 724.304$   $\chi^2/\text{NDF}$ : 68.8/55

All:  $-389.989 \pm 508.183$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $-103.382 \pm 713.184$   $\chi^2/\text{NDF}$ : 72.2/57

# asym\_atr1l2\_avg\_dit\_correction\_rms vs Slug



Right In: 3878.217 $\pm$ 0.657  $\chi^2$ /NDF: 3425416.6/30

Left Out: 4915.244 $\pm$ 0.818  $\chi^2$ /NDF: 2166229.1/24

Right Out: 3593.382 $\pm$ 0.618  $\chi^2$ /NDF: 5398911.5/34

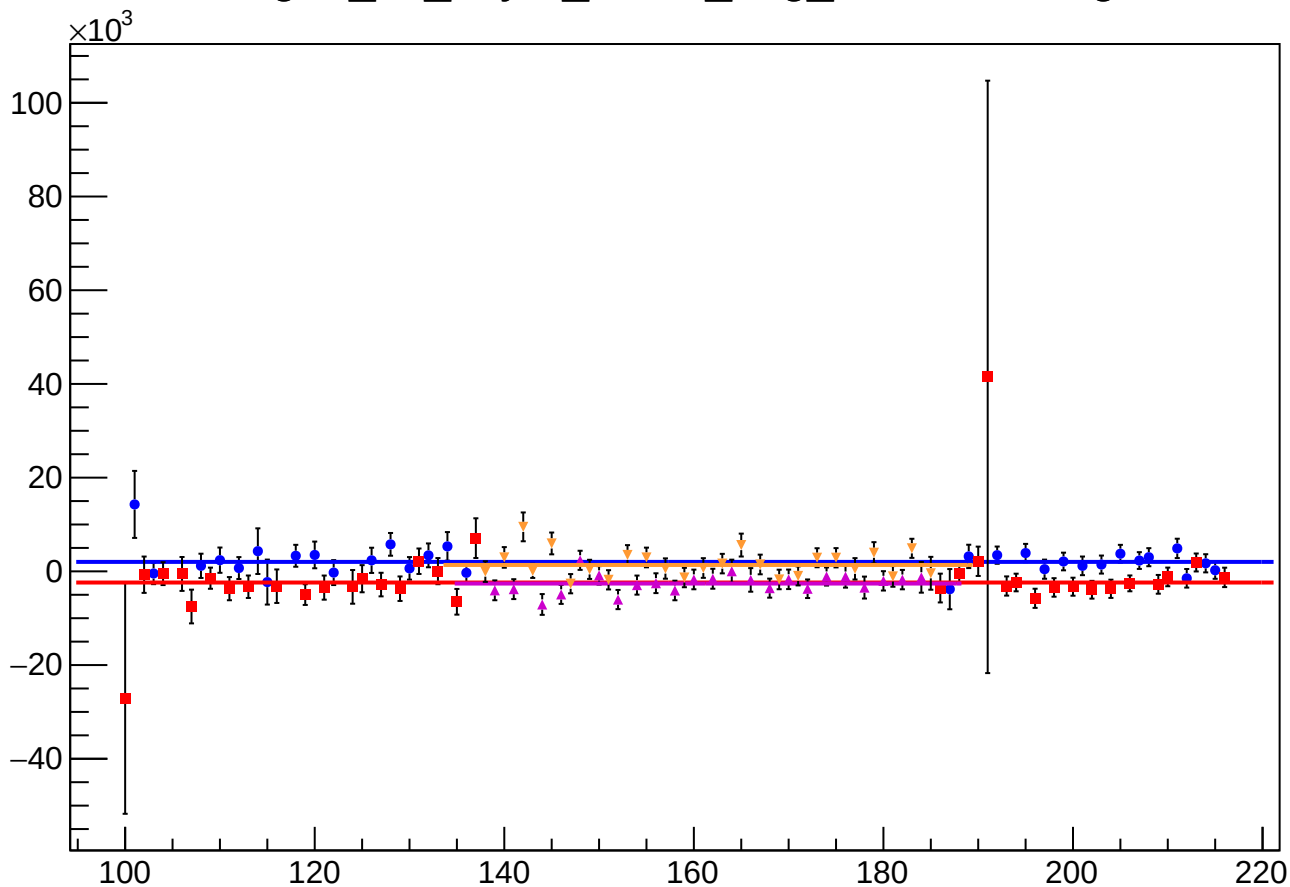
Left In: 5170.028 $\pm$ 0.873  $\chi^2$ /NDF: 1348711.3/22

+ sign 4285.238 $\pm$ 0.512  $\chi^2$ /NDF: 6569220.1/55

All: 4201.115 $\pm$ 0.359  $\chi^2$ /NDF: 15543377.5/1

- sign 4119.555 $\pm$ 0.504  $\chi^2$ /NDF: 8921022.3/57

# eigen\_dit\_asym\_atr1l2\_avg\_mean vs Slug



Right In: 2018.831 $\pm$ 410.579  $\chi^2/\text{NDF}$ : 24.1/30

Left Out: 1363.884 $\pm$ 427.333  $\chi^2/\text{NDF}$ : 36.1/24

Right Out: -2384.998 $\pm$ 409.175  $\chi^2/\text{NDF}$ : 31.3/34

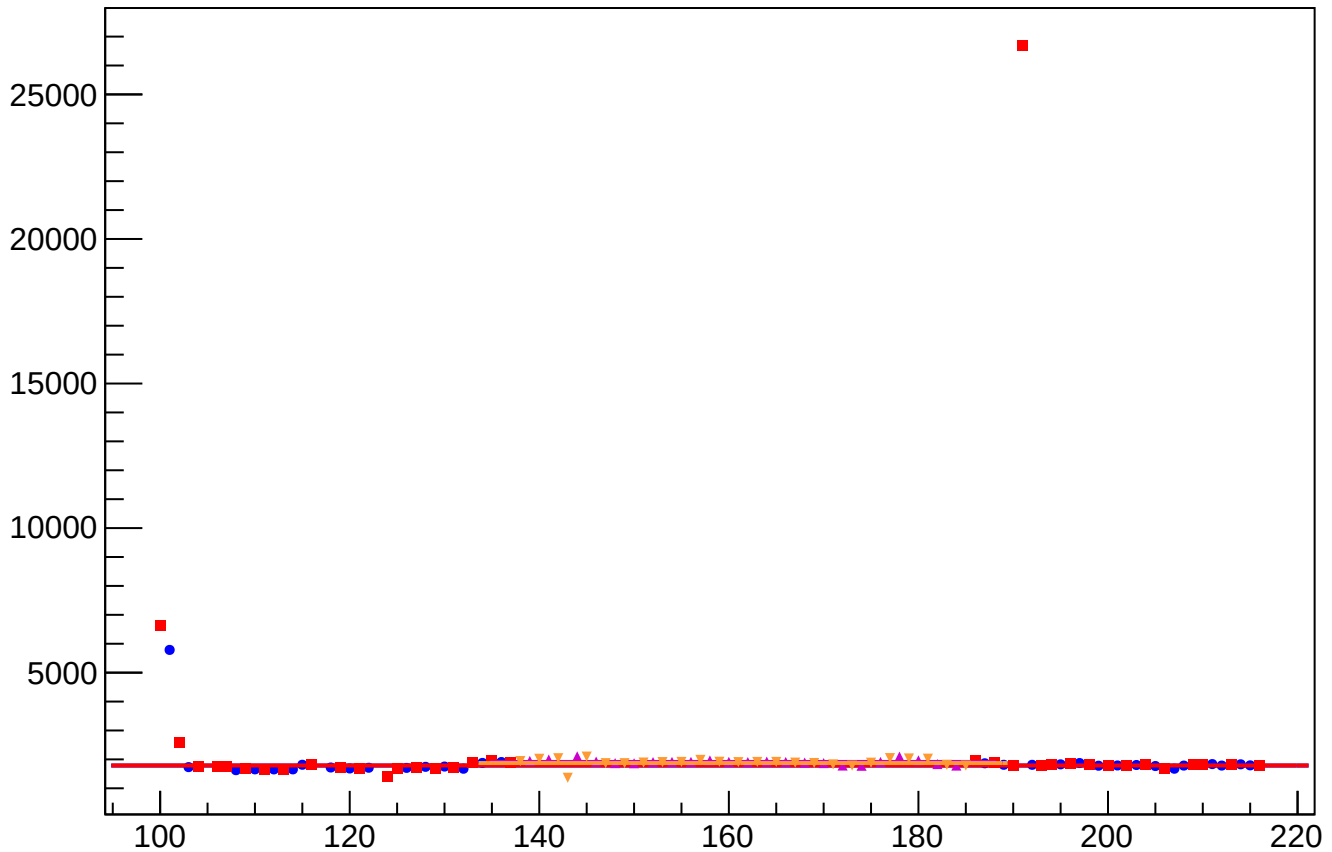
Left In: -2602.834 $\pm$ 446.742  $\chi^2/\text{NDF}$ : 20.0/22

+ sign 1704.448 $\pm$ 296.069  $\chi^2/\text{NDF}$ : 61.4/55

All: -350.238 $\pm$ 211.328  $\chi^2/\text{NDF}$ : 211.1/113

- sign -2484.373 $\pm$ 301.739  $\chi^2/\text{NDF}$ : 51.5/57

# eigen\_dit\_asym\_atr1l2\_avg\_rms vs Slug



Right In: 1786.374 $\pm$ 0.290  $\chi^2$ /NDF: 684726.0/30

Left Out: 1873.178 $\pm$ 0.302  $\chi^2$ /NDF: 309737.2/24

Right Out: 1790.119 $\pm$ 0.289  $\chi^2$ /NDF: 563205.3/34

Left In: 1911.425 $\pm$ 0.316  $\chi^2$ /NDF: 59142.0/22

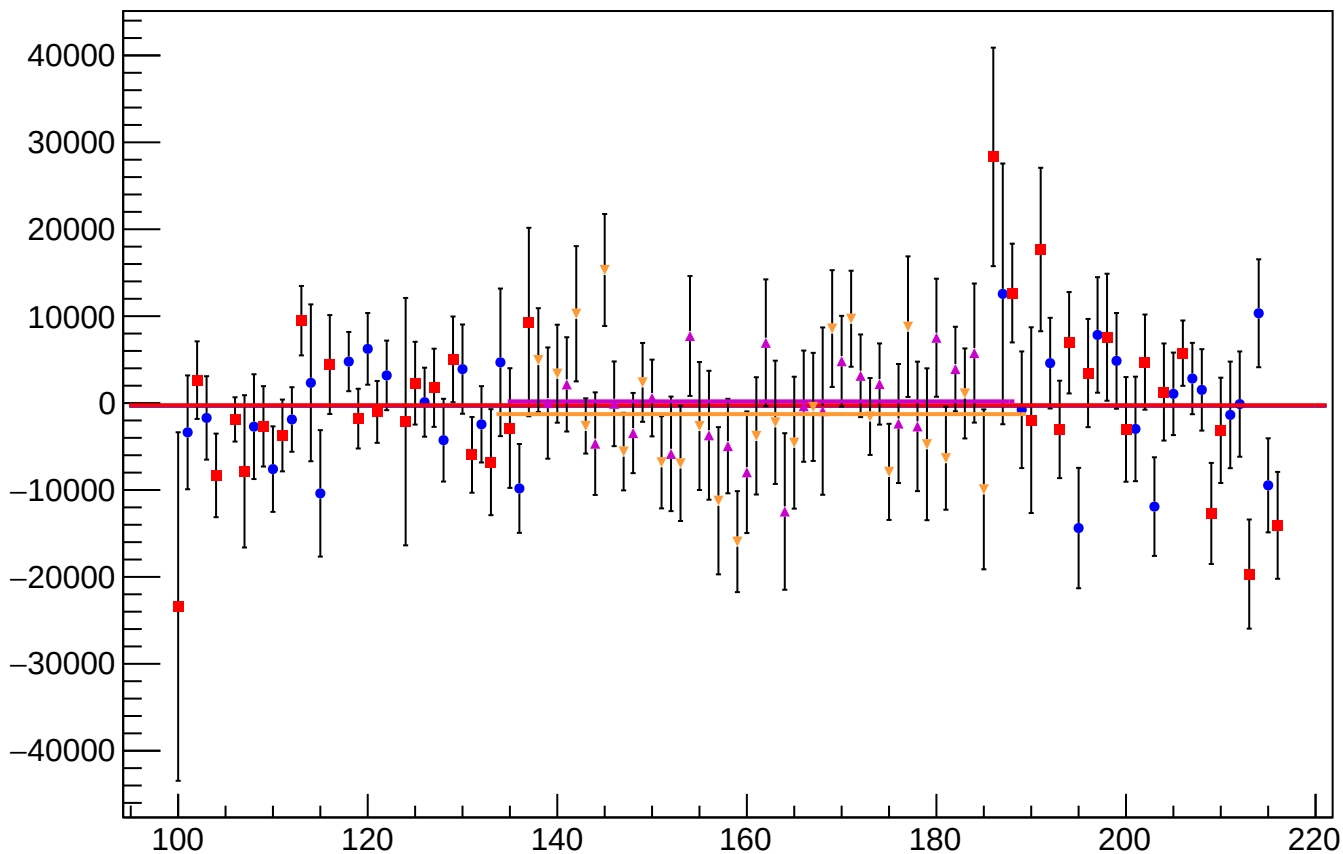
+ sign 1828.041 $\pm$ 0.209  $\chi^2$ /NDF: 1037374.6/55

All: 1836.559 $\pm$ 0.149  $\chi^2$ /NDF: 1743360.1/11

- sign 1845.396 $\pm$ 0.213  $\chi^2$ /NDF: 702612.8/57



asym\_atr1l2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-308.198 \pm 929.273$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-1269.765 \pm 1156.133$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $-253.804 \pm 873.727$   $\chi^2/\text{NDF}$ : 59.4/34

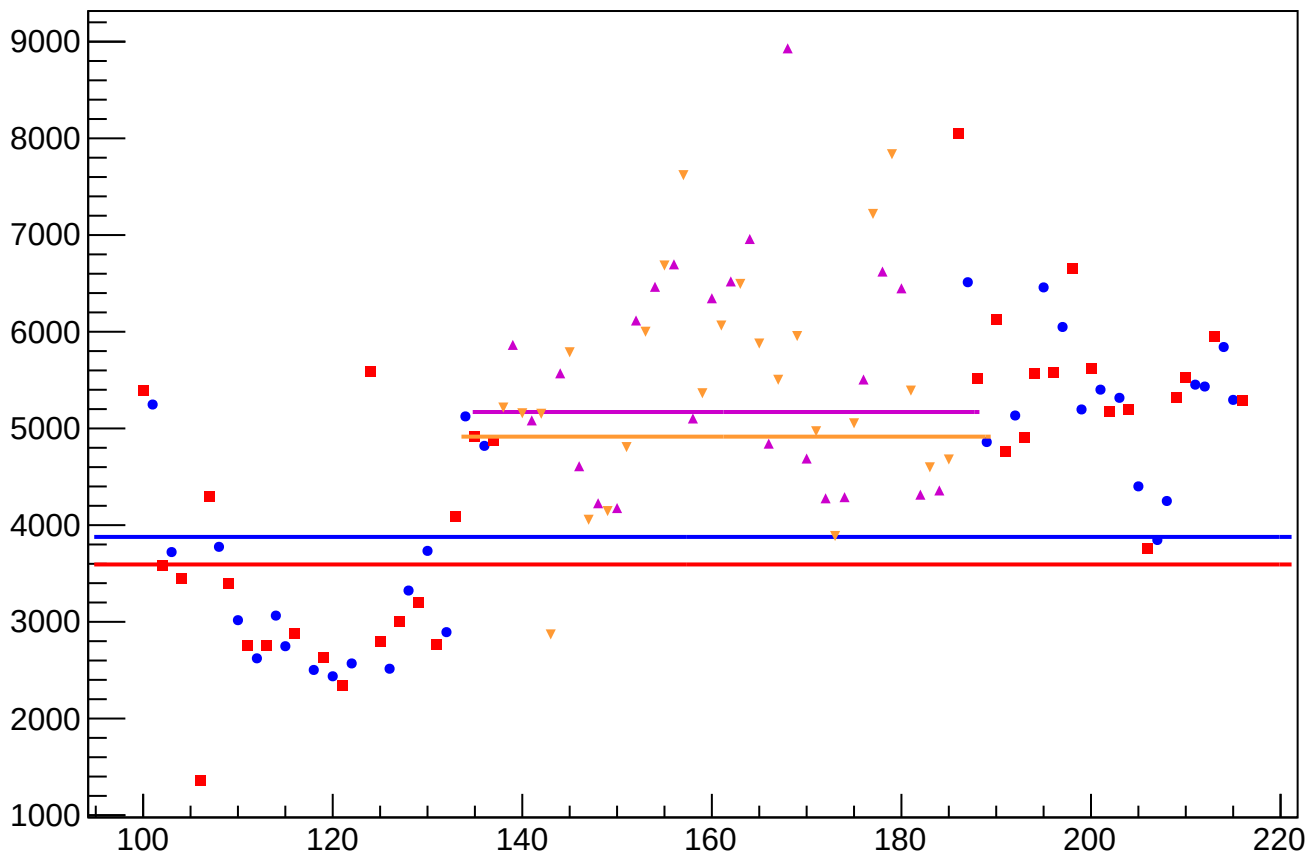
Left In:  $196.918 \pm 1234.540$   $\chi^2/\text{NDF}$ : 12.7/22

+ sign  $-685.601 \pm 724.304$   $\chi^2/\text{NDF}$ : 68.8/55

All:  $-389.990 \pm 508.183$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $-103.386 \pm 713.184$   $\chi^2/\text{NDF}$ : 72.2/57

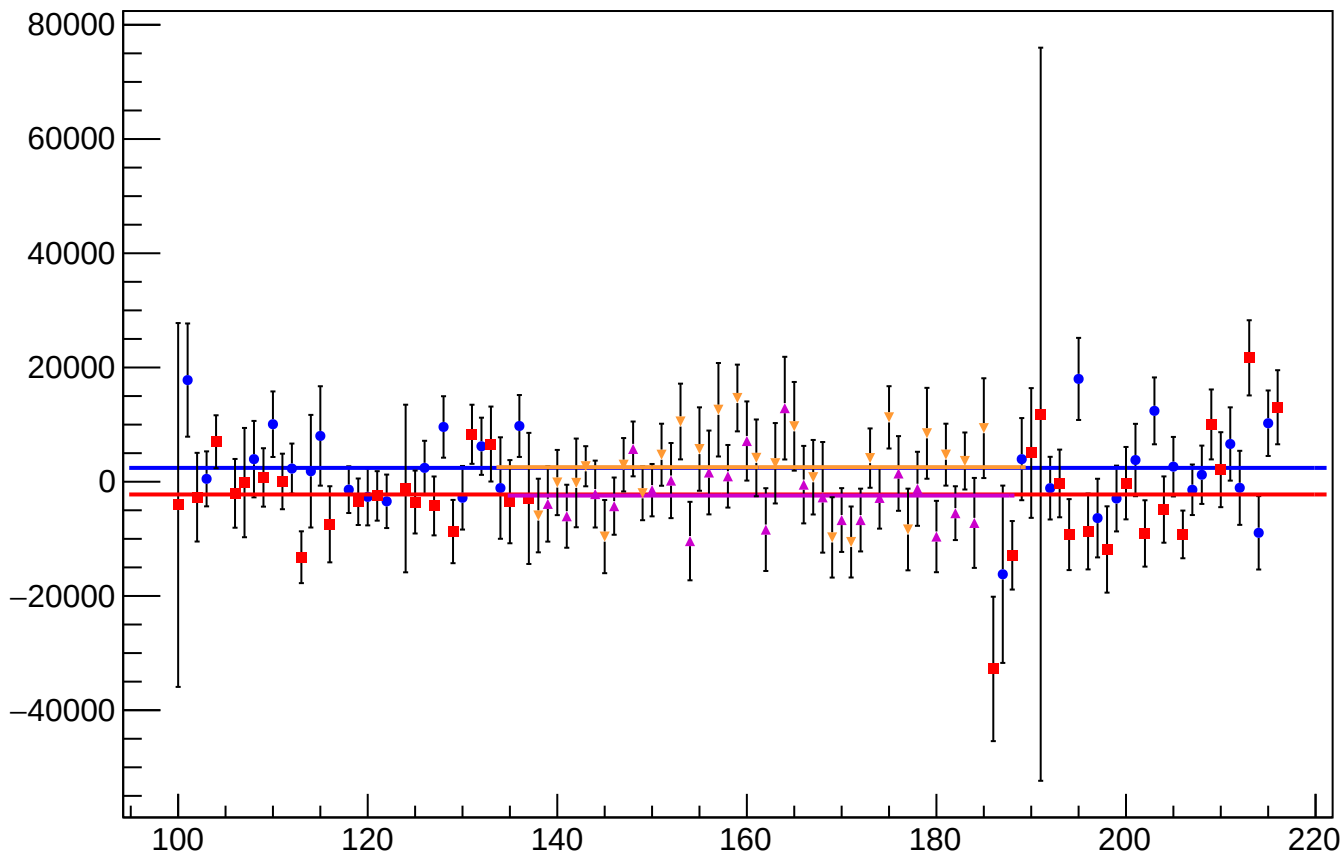
asym\_atr1l2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 3878.211+/-0.657  $\chi^2/\text{NDF}$ : 3425473.5/30  
 Left Out: 4915.251+/-0.818  $\chi^2/\text{NDF}$ : 2166236.2/24  
 Right Out: 3593.371+/-0.618  $\chi^2/\text{NDF}$ : 5398988.8/34  
 Left In: 5170.035+/-0.873  $\chi^2/\text{NDF}$ : 1348713.2/22

+ sign 4285.236+/-0.512  $\chi^2/\text{NDF}$ : 6569307.6/55  
 All: 4201.110+/-0.359  $\chi^2/\text{NDF}$ : 15543598.3/100  
 - sign 4119.548+/-0.504  $\chi^2/\text{NDF}$ : 8921152.4/57

# asym\_atr1l2\_avg\_mean vs Slug



Right In: 2422.612 $\pm$ 1033.852  $\chi^2$ /NDF: 32.1/30

Left Out: 2547.072 $\pm$ 1187.668  $\chi^2$ /NDF:29.1/24

Right Out: -2229.904 $\pm$ 1032.640  $\chi^2$ /NDF: 59.8/34

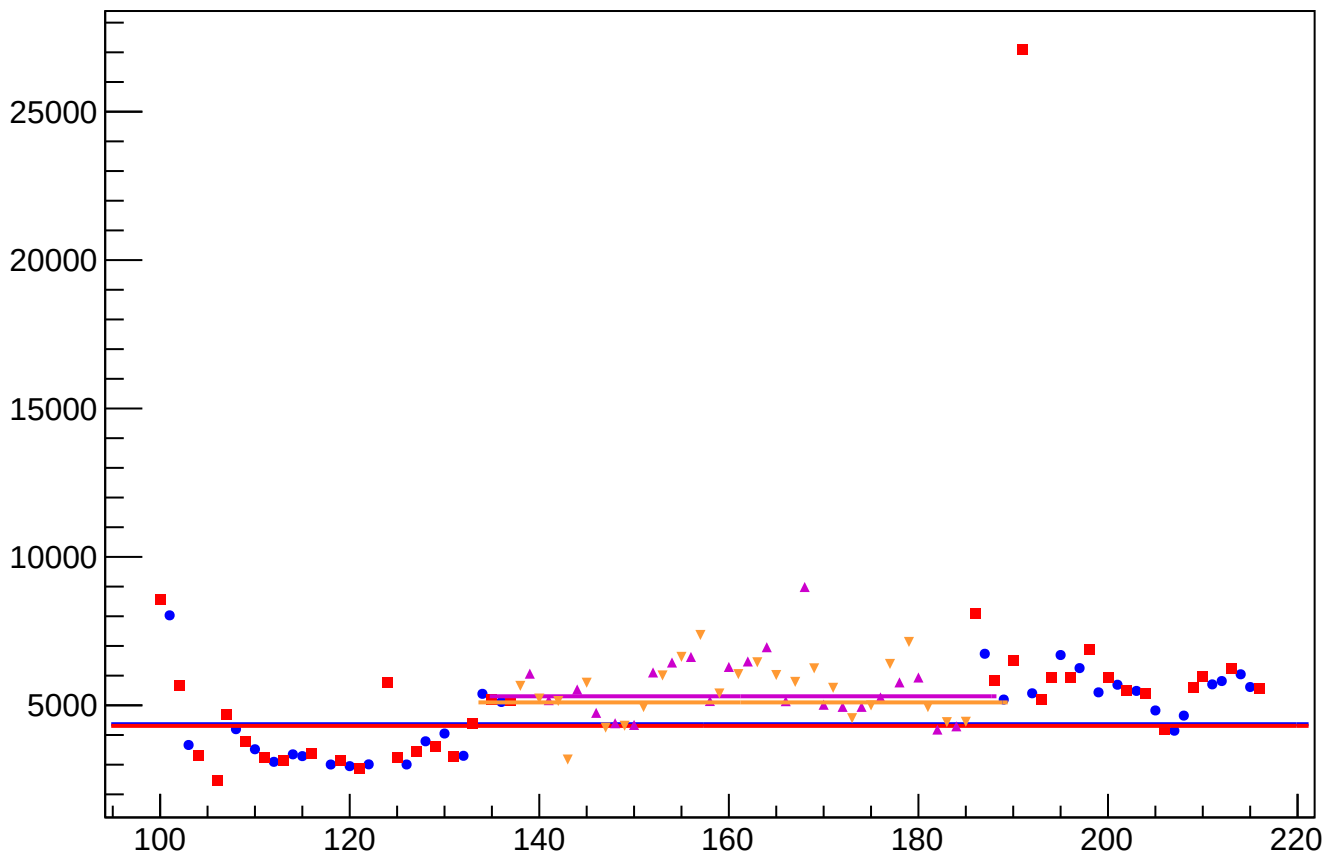
Left In: -2423.016 $\pm$ 1259.653  $\chi^2$ /NDF:15.0/22

+ sign 2476.266 $\pm$ 779.794  $\chi^2$ /NDF: 61.1/55

All: 141.340 $\pm$ 557.925  $\chi^2$ /NDF: 154.4/113

- sign -2307.522 $\pm$ 798.593  $\chi^2$ /NDF: 74.9/57

# asym\_atr1l2\_avg\_rms vs Slug



Right In: 4363.163+/-0.731  $\chi^2$ /NDF: 2661588.8/30

Left Out: 5097.995+/-0.840  $\chi^2$ /NDF:1544385.5/24

Right Out: 4307.383+/-0.723  $\chi^2$ /NDF: 3416528.1/34

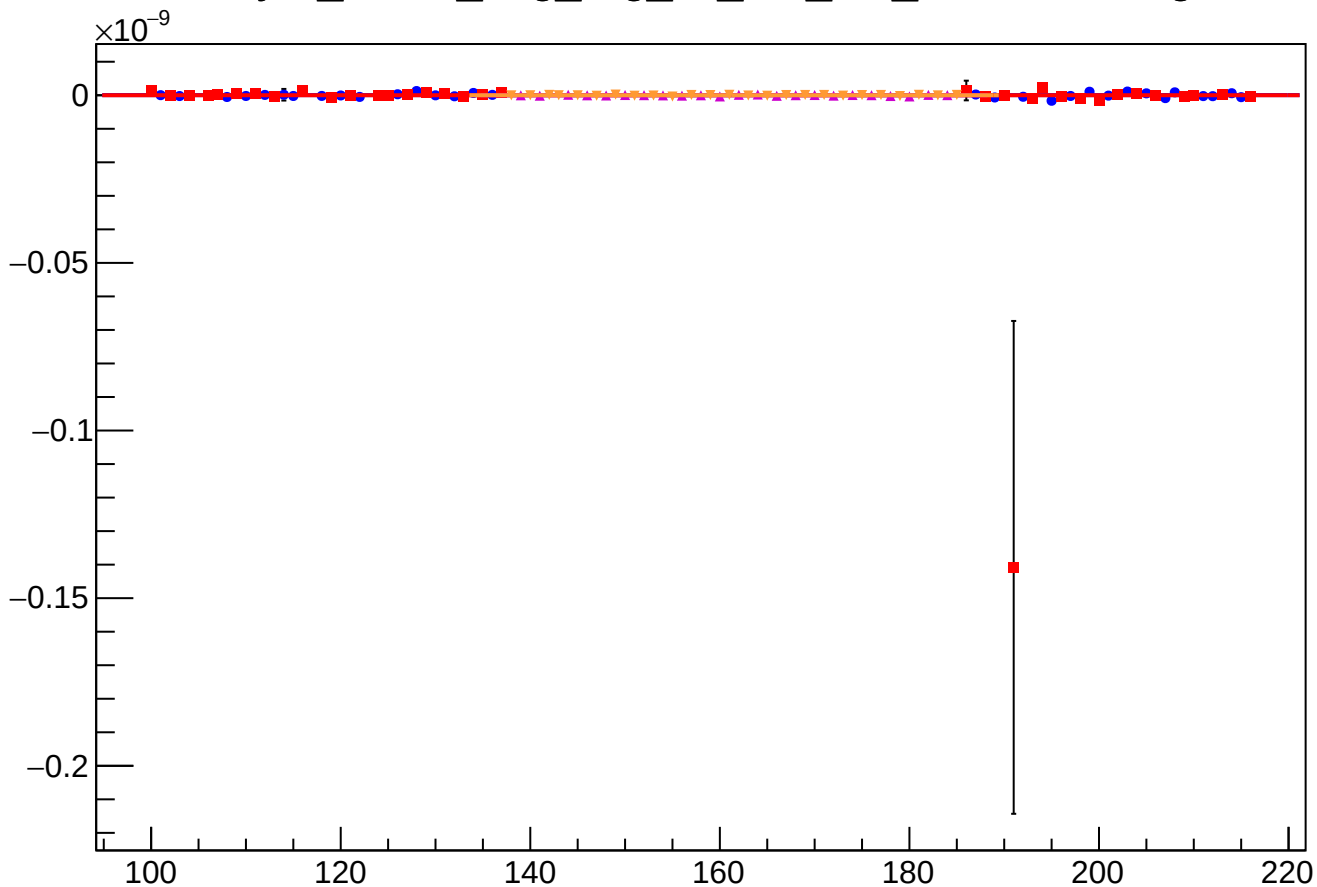
Left In: 5304.171+/-0.891  $\chi^2$ /NDF:1017974.6/22

+ sign 4679.943+/-0.551  $\chi^2$ /NDF: 4641545.3/55

All: 4691.555+/-0.393  $\chi^2$ /NDF: 9831513.6/11

- sign 4703.600+/-0.562  $\chi^2$ /NDF: 5189064.7/57

# asym\_atr1l2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.7/34

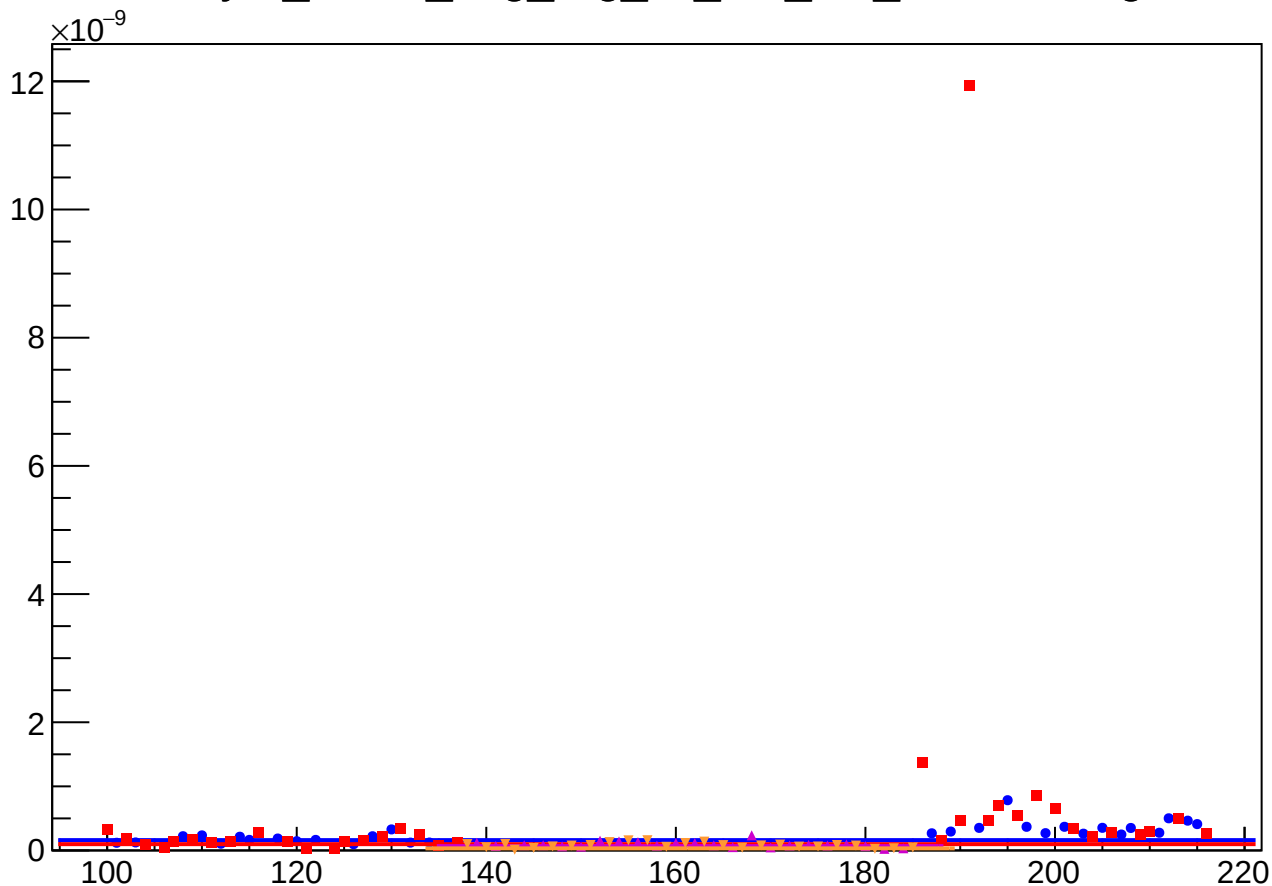
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:22.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 118.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.6/57

# asym\_atr1l2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4236356.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6126369.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8307316.5/34

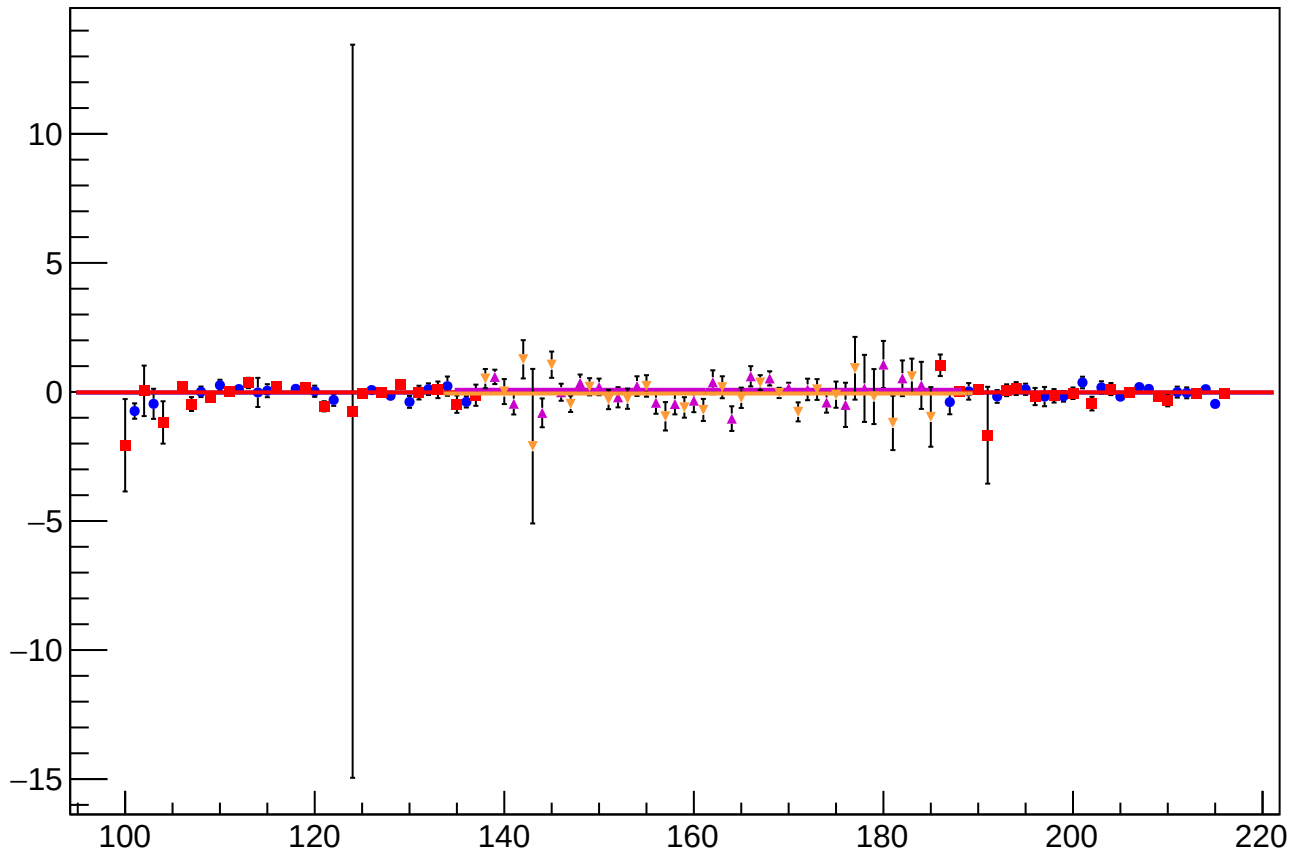
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2448729.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17430506.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31398254.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11328619.9/57

# asym\_atr1l2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.016 \pm 0.035$   $\chi^2/\text{NDF}$ : 43.1/34

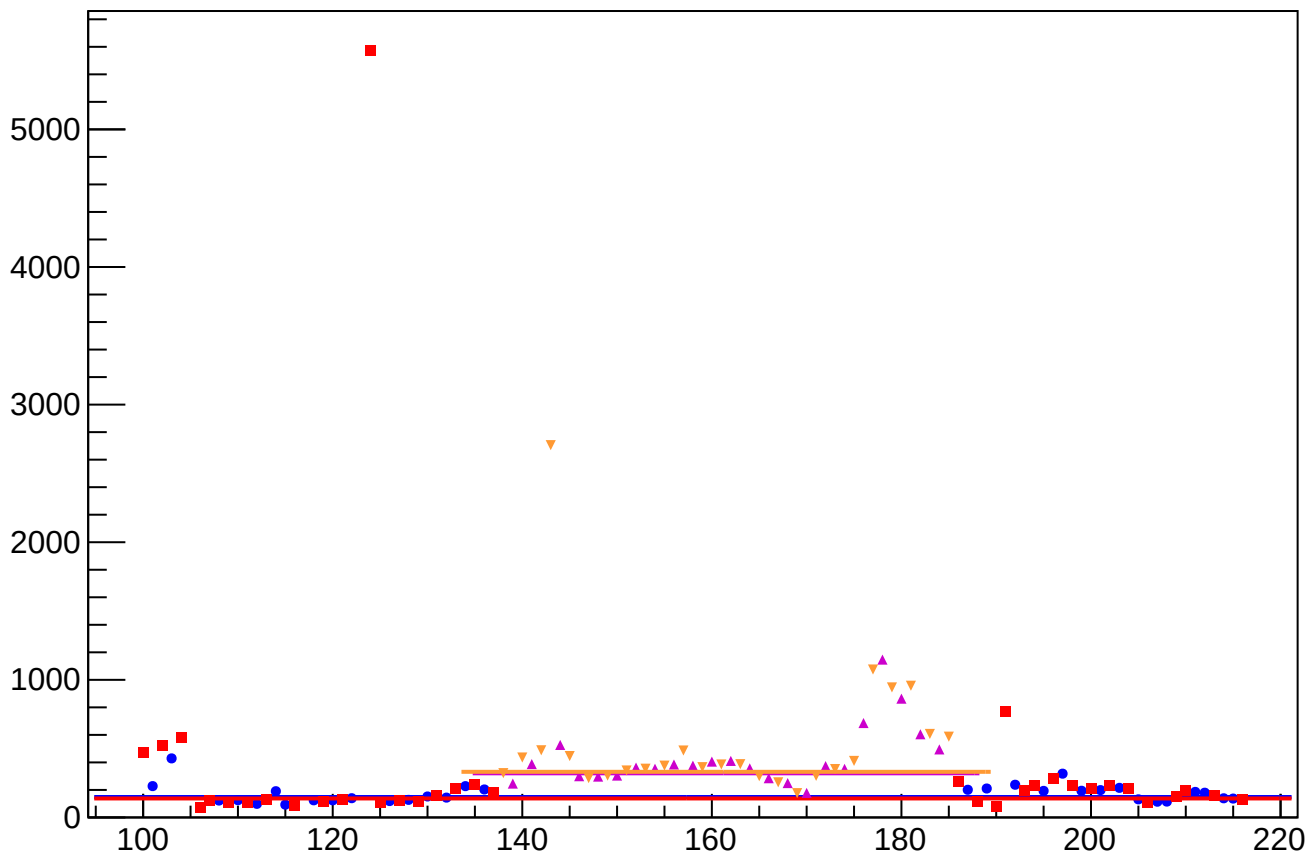
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.030 \pm 0.034$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $-0.014 \pm 0.023$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 71.4/57

asym\_atr1l2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 148.483 $\pm$ 0.026  $\chi^2$ /NDF: 2970120.8/30

Left Out: 331.651 $\pm$ 0.059  $\chi^2$ /NDF: 5838206.4/24

Right Out: 138.047 $\pm$ 0.025  $\chi^2$ /NDF: 5102267.9/34

Left In: 320.746 $\pm$ 0.057  $\chi^2$ /NDF: 4248172.2/22

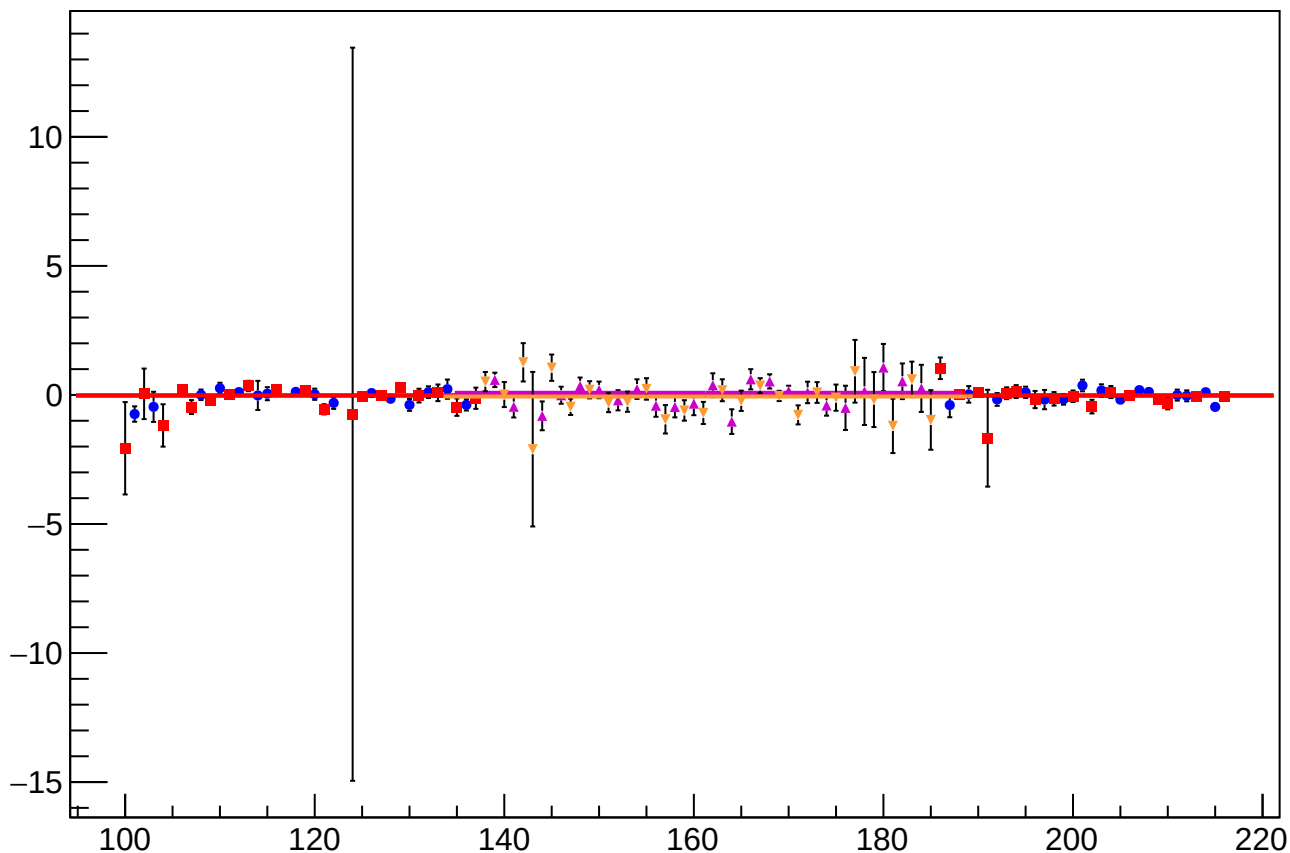
+ sign 178.301 $\pm$ 0.024  $\chi^2$ /NDF: 16828563.0/55

All: 172.541 $\pm$ 0.017  $\chi^2$ /NDF: 34809772.2/11

- sign 167.229 $\pm$ 0.023  $\chi^2$ /NDF: 17869356.2/57



asym\_atr1l2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.016 \pm 0.035$   $\chi^2/\text{NDF}$ : 43.1/34

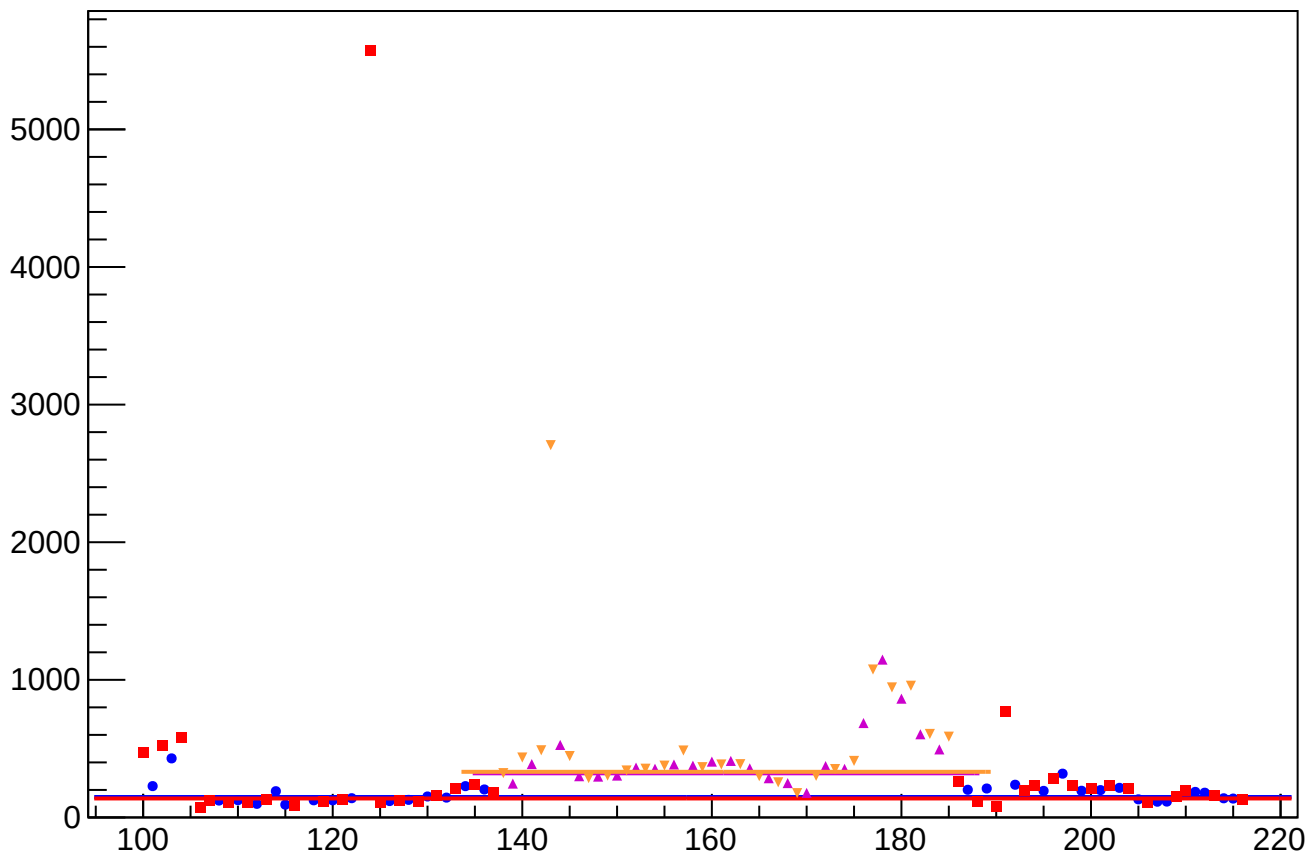
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.030 \pm 0.034$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $-0.014 \pm 0.023$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 71.4/57

asym\_atr1l2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 148.483+/-0.026  $\chi^2/\text{NDF}$ : 2970120.8/30

Left Out: 331.651+/-0.059  $\chi^2/\text{NDF}$ : 5838206.4/24

Right Out: 138.047+/-0.025  $\chi^2/\text{NDF}$ : 5102267.9/34

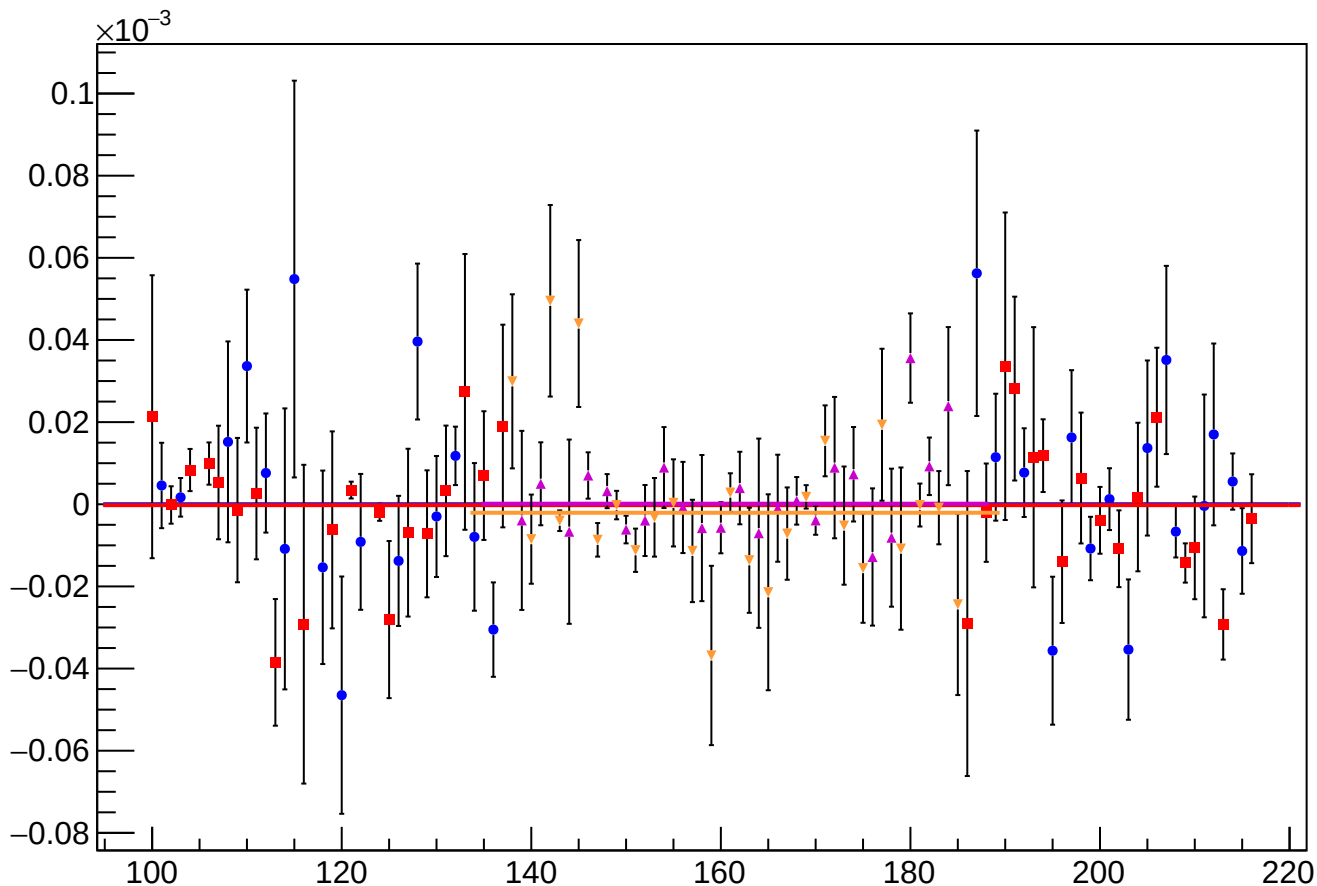
Left In: 320.746+/-0.057  $\chi^2/\text{NDF}$ : 4248172.2/22

+ sign 178.301+/-0.024  $\chi^2/\text{NDF}$ : 16828563.0/55

All: 172.541+/-0.017  $\chi^2/\text{NDF}$ : 34809772.2/11

- sign 167.229+/-0.023  $\chi^2/\text{NDF}$ : 17869356.2/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.3/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.1/34

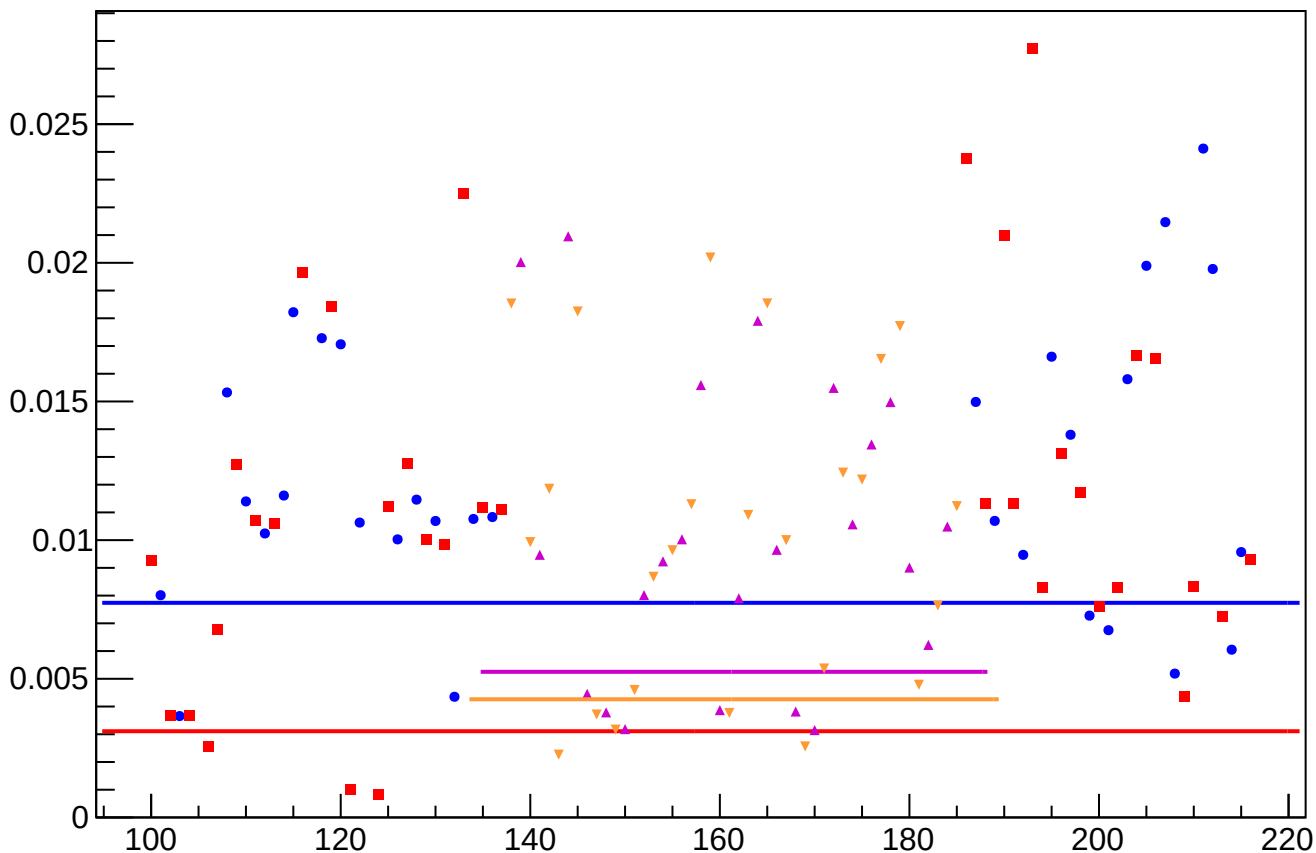
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 80.8/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 158.8/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 77.0/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8072872.8/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12968514.8/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21364006.6/34

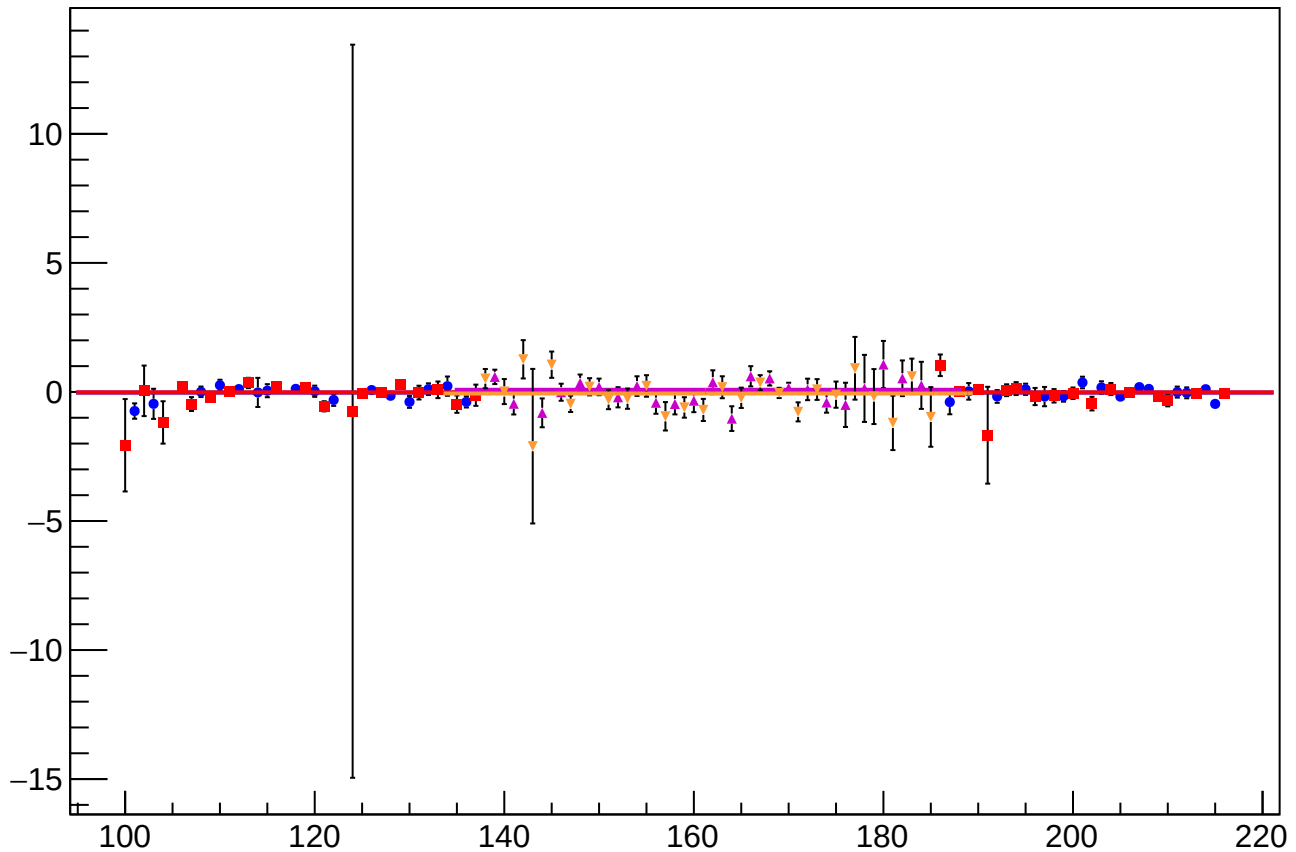
Left In: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9531217.7/22

+ sign 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 25210280.0/55

All: 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 60404516.1/113

- sign 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 33444656.4/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.016 \pm 0.035$   $\chi^2/\text{NDF}$ : 43.1/34

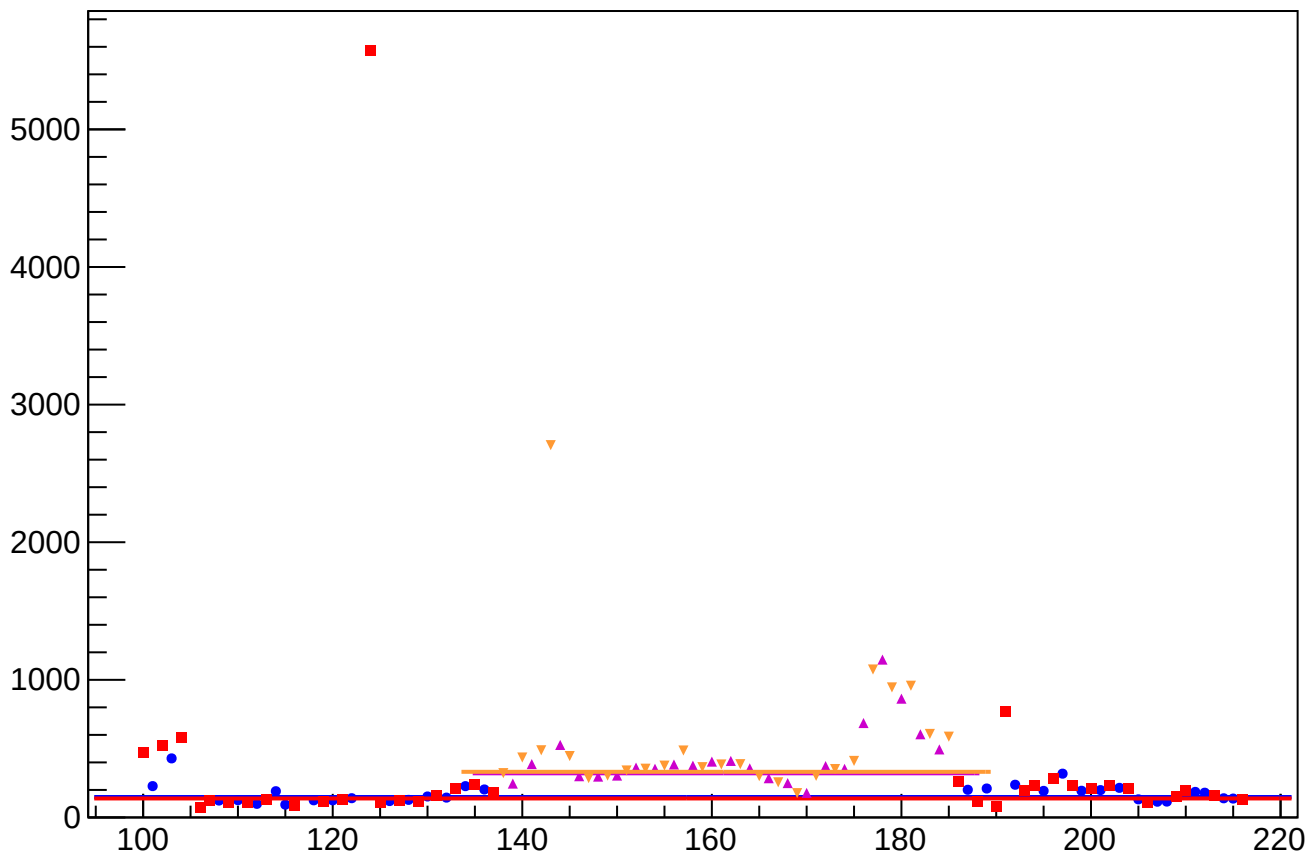
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.030 \pm 0.034$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $-0.014 \pm 0.023$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 71.4/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 148.483 $\pm$ 0.026  $\chi^2$ /NDF: 2970104.4/30

Left Out: 331.653 $\pm$ 0.059  $\chi^2$ /NDF: 5838264.0/24

Right Out: 138.047 $\pm$ 0.025  $\chi^2$ /NDF: 5102290.7/34

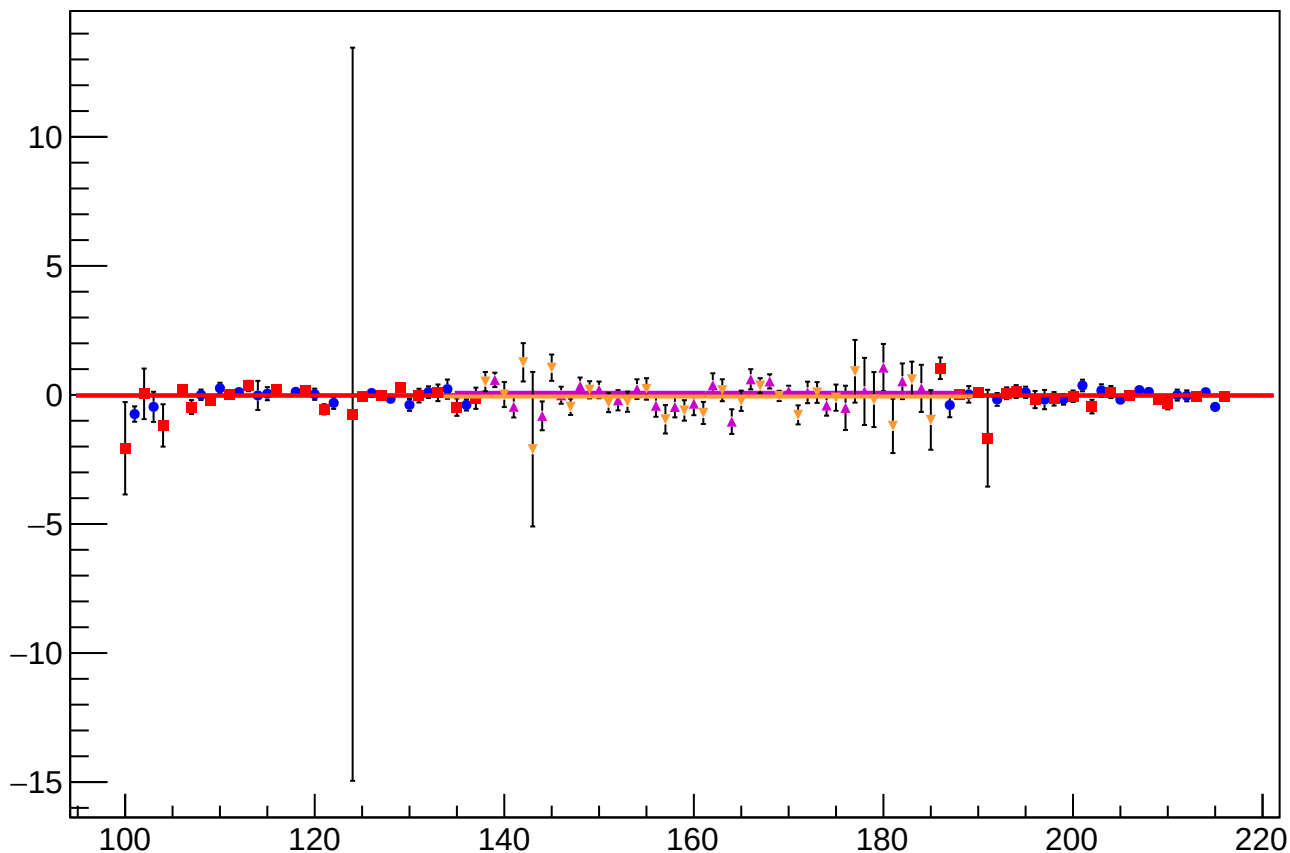
Left In: 320.749 $\pm$ 0.057  $\chi^2$ /NDF: 4248171.3/22

+ sign 178.301 $\pm$ 0.024  $\chi^2$ /NDF: 16828688.8/55

All: 172.541 $\pm$ 0.017  $\chi^2$ /NDF: 34810139.6/11

- sign 167.228 $\pm$ 0.023  $\chi^2$ /NDF: 17869584.5/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.037$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.061 \pm 0.084$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.016 \pm 0.035$   $\chi^2/\text{NDF}$ : 43.1/34

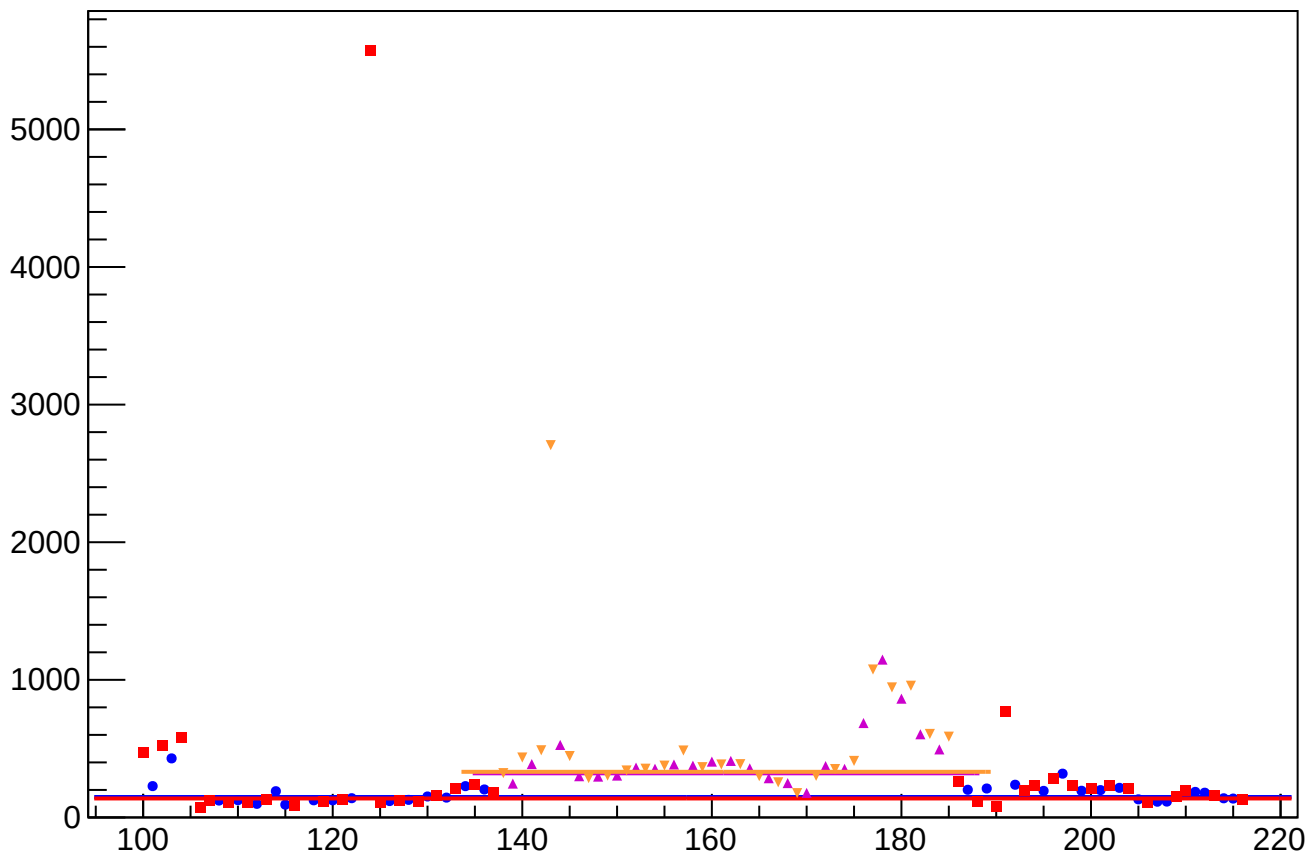
Left In:  $0.084 \pm 0.081$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.030 \pm 0.034$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $-0.014 \pm 0.023$   $\chi^2/\text{NDF}$ : 141.3/113

- sign  $0.000 \pm 0.032$   $\chi^2/\text{NDF}$ : 71.4/57

asym\_atr1l2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 148.483 $\pm$ 0.026  $\chi^2$ /NDF: 2970104.4/30

Left Out: 331.653 $\pm$ 0.059  $\chi^2$ /NDF: 5838264.0/24

Right Out: 138.047 $\pm$ 0.025  $\chi^2$ /NDF: 5102290.7/34

Left In: 320.749 $\pm$ 0.057  $\chi^2$ /NDF: 4248171.3/22

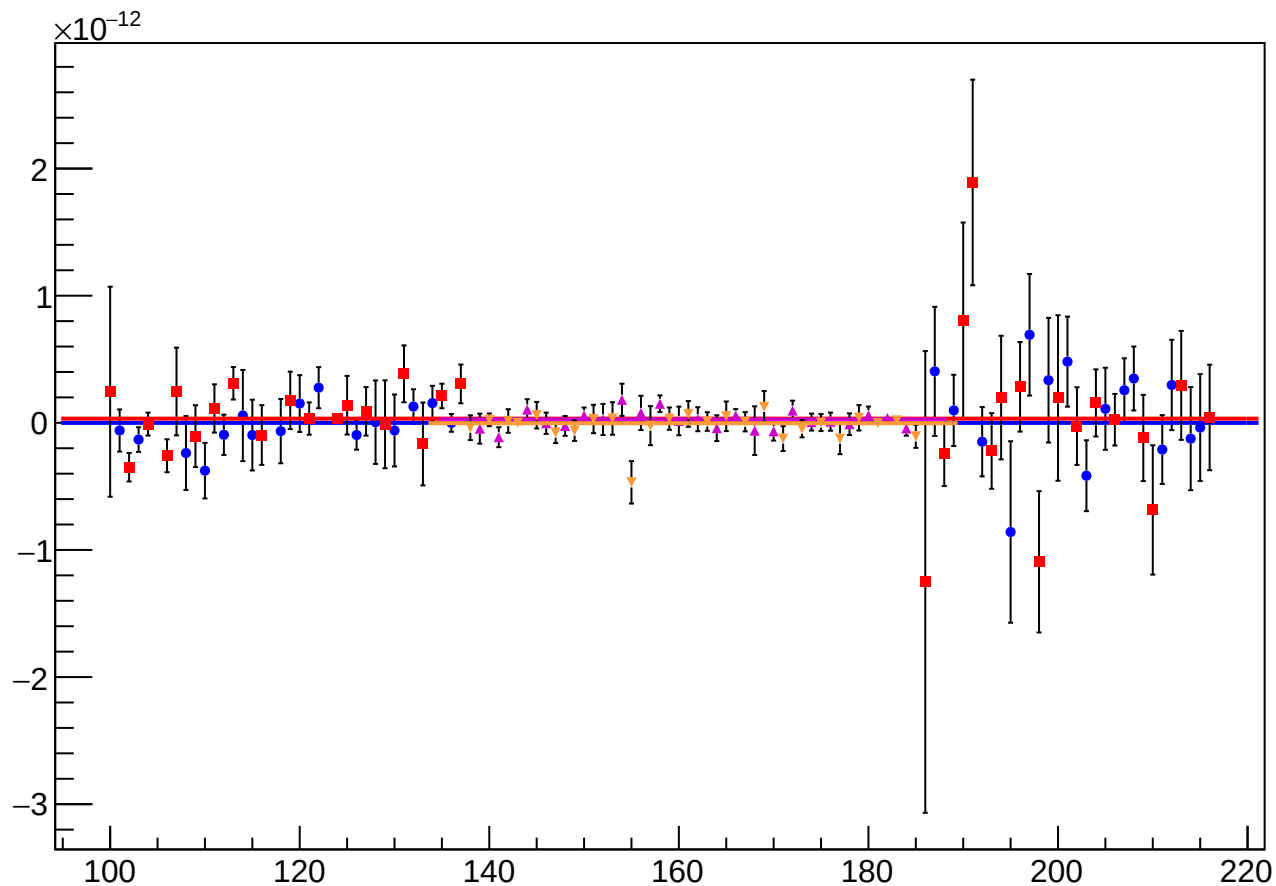
+ sign 178.301 $\pm$ 0.024  $\chi^2$ /NDF: 16828688.8/55

All: 172.541 $\pm$ 0.017  $\chi^2$ /NDF: 34810139.6/1

- sign 167.228 $\pm$ 0.023  $\chi^2$ /NDF: 17869584.5/57



asym\_atr1l2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.0/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.4/34

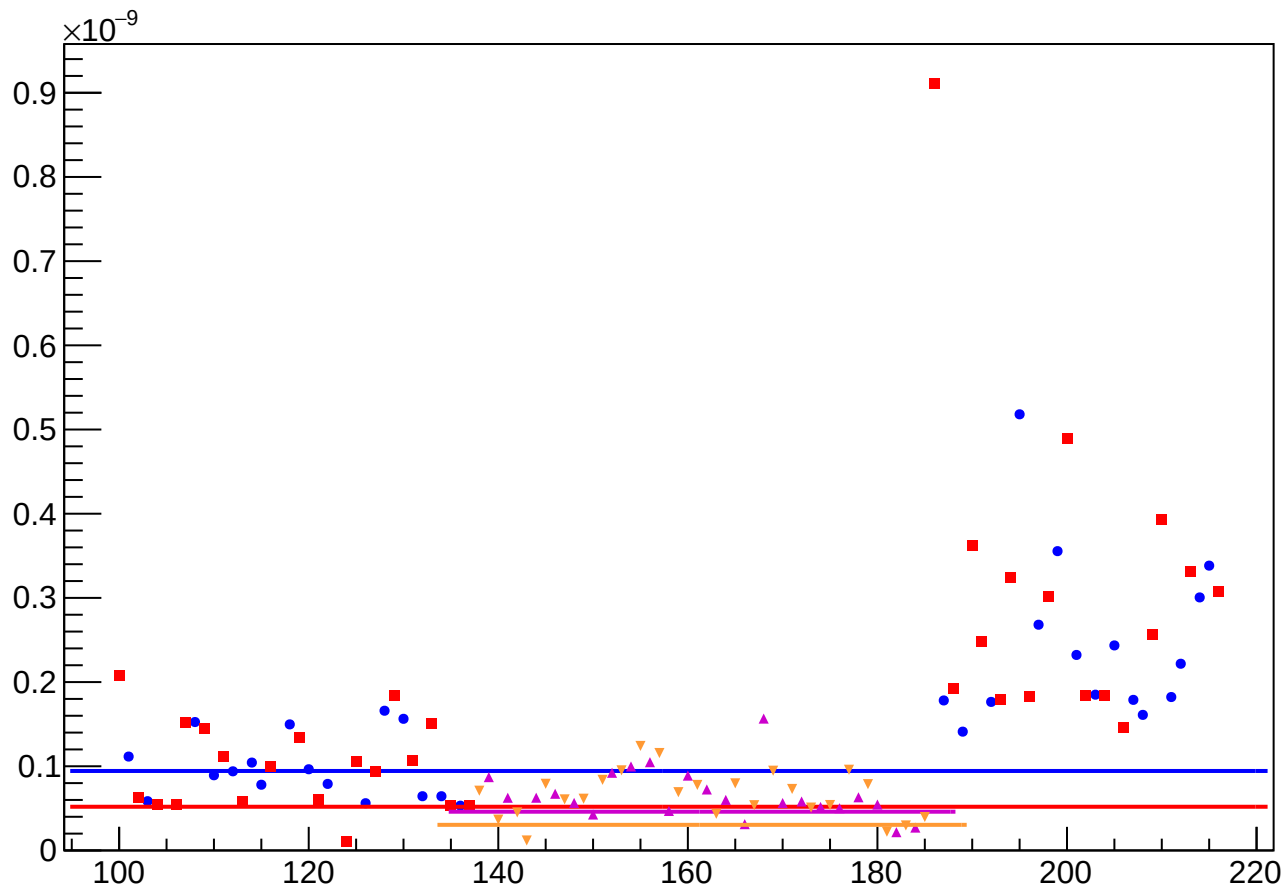
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.1/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.4/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.6/57

asym\_atr1l2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6598242.7/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10517831.9/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13414981.7/34

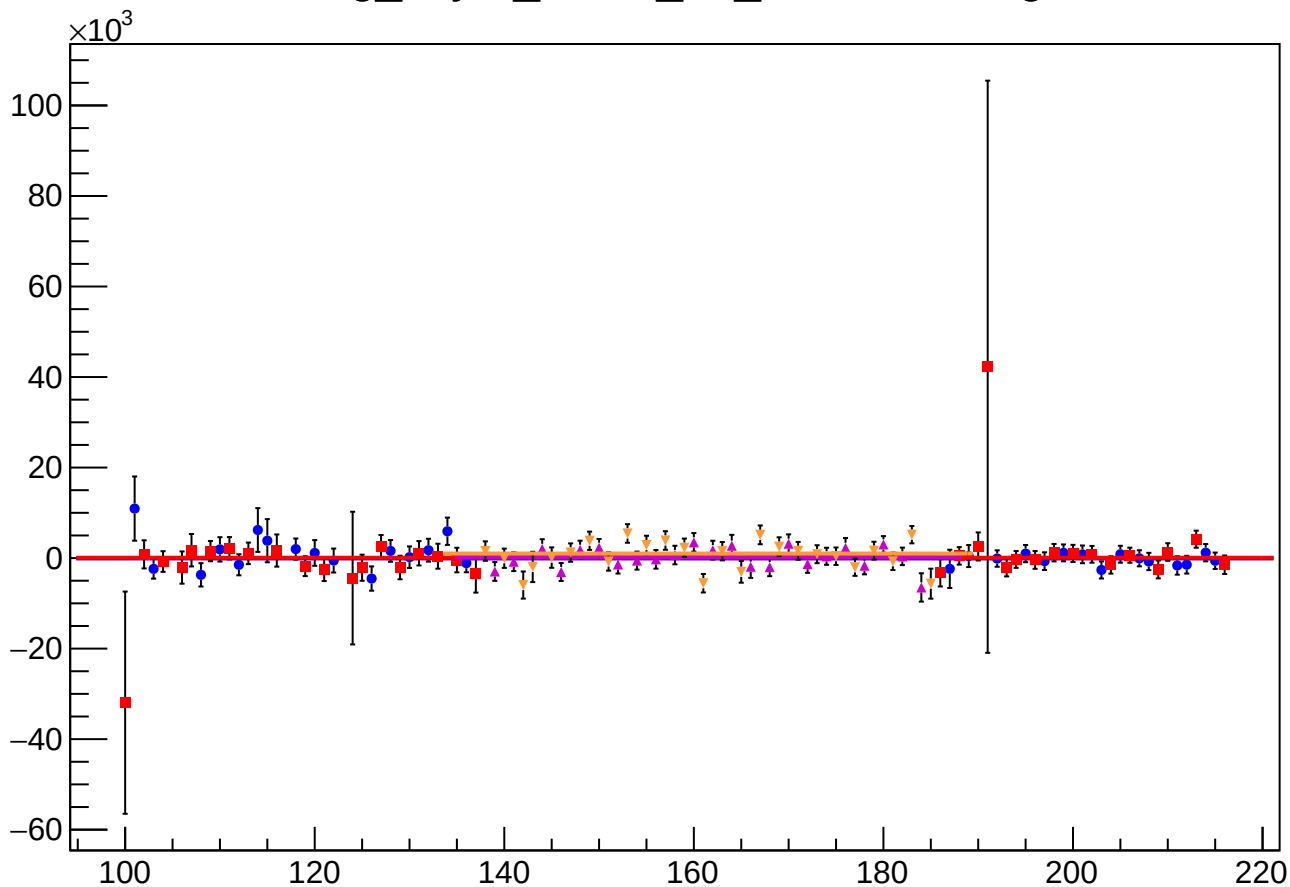
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4899715.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23500167.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42885498.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18400621.2/57

# reg\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-74.185 \pm 404.673$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $1004.165 \pm 422.582$   $\chi^2/\text{NDF}$ : 47.4/24

Right Out:  $72.522 \pm 404.303$   $\chi^2/\text{NDF}$ : 21.5/34

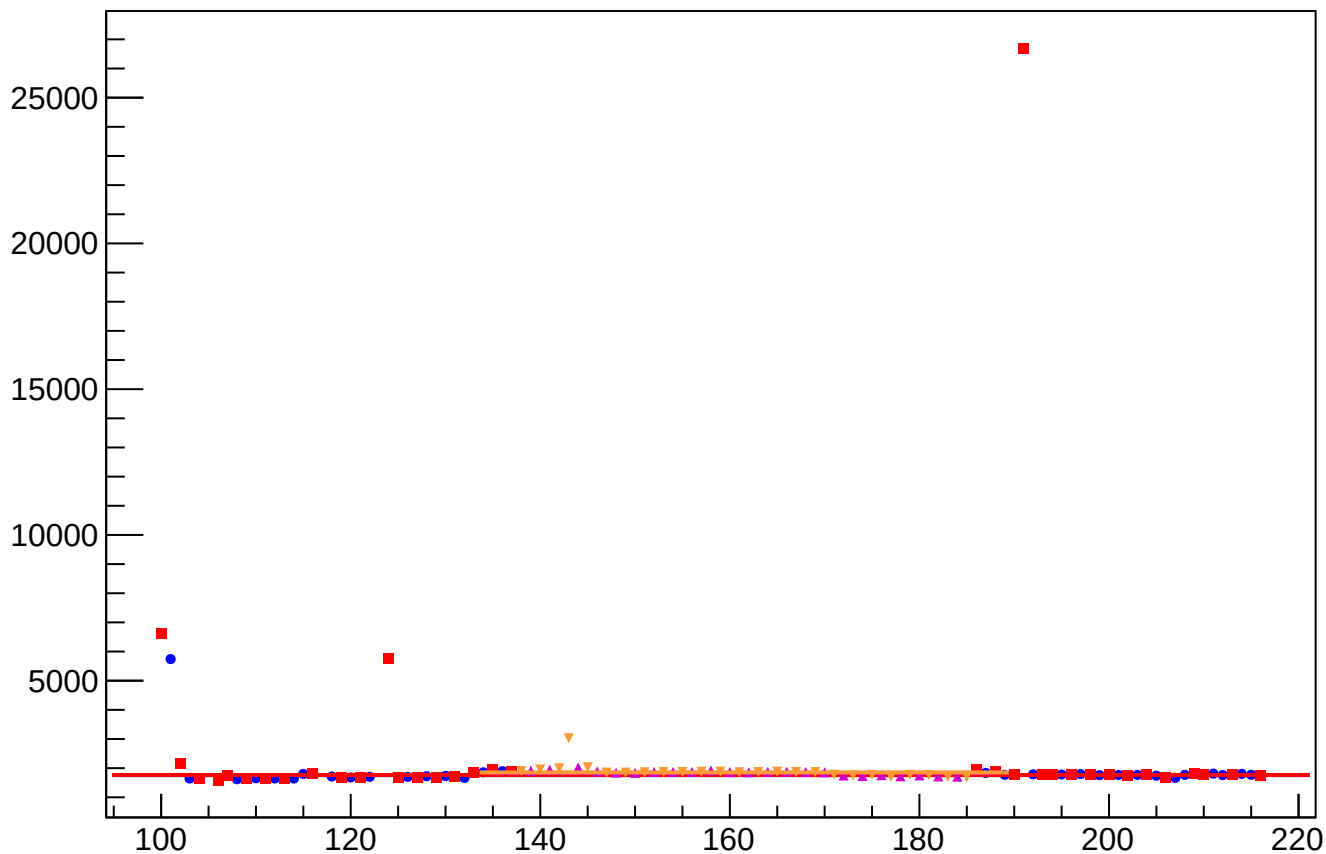
Left In:  $229.321 \pm 429.699$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $441.656 \pm 292.273$   $\chi^2/\text{NDF}$ : 73.7/55

All:  $295.002 \pm 207.435$   $\chi^2/\text{NDF}$ : 122.2/113

- sign  $146.152 \pm 294.454$   $\chi^2/\text{NDF}$ : 47.9/57

# reg\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1761.004 $\pm$ 0.286  $\chi^2$ /NDF: 680234.0/30

Left Out: 1852.534 $\pm$ 0.299  $\chi^2$ /NDF: 321038.9/24

Right Out: 1765.960 $\pm$ 0.285  $\chi^2$ /NDF: 646358.2/34

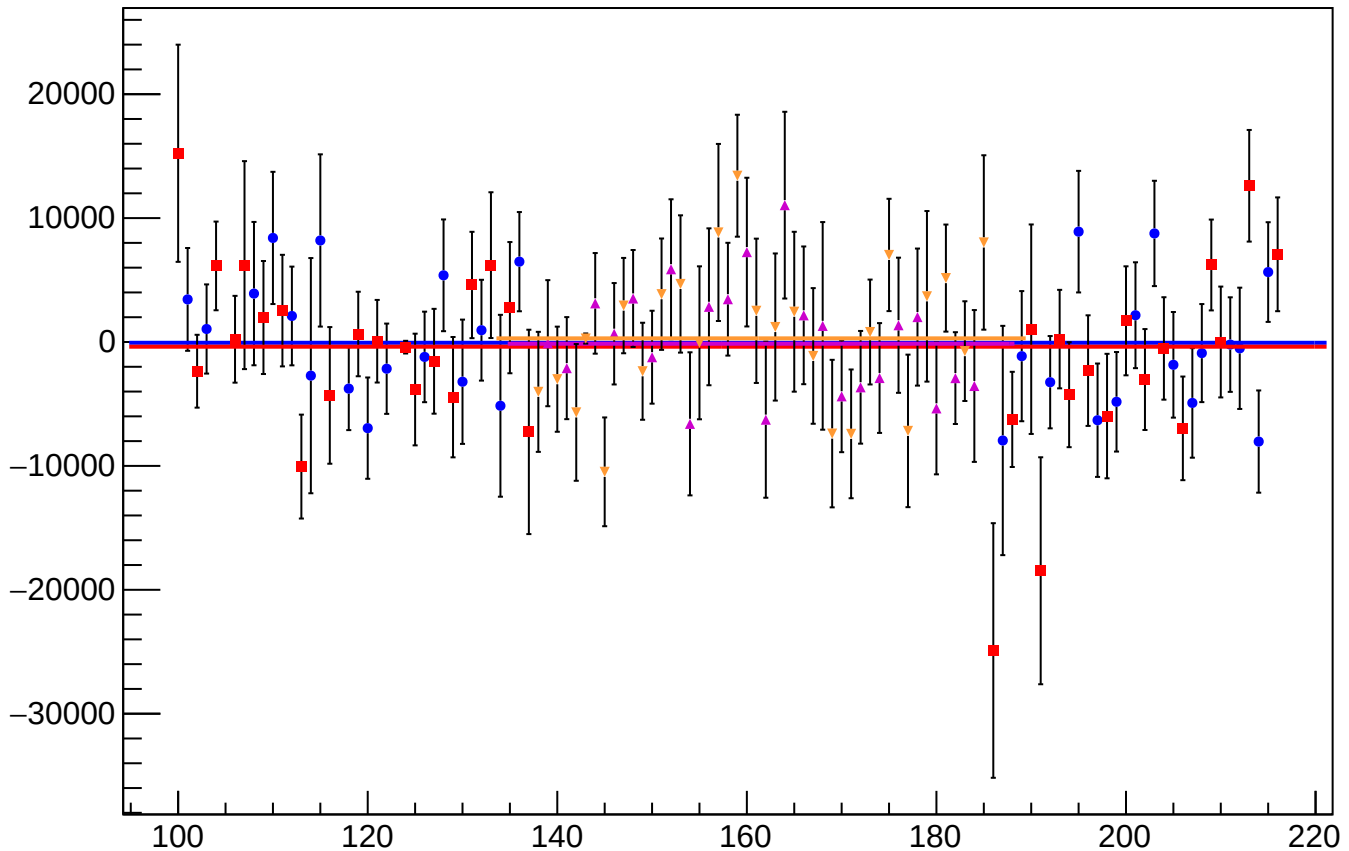
Left In: 1838.528 $\pm$ 0.304  $\chi^2$ /NDF: 68478.0/22

+ sign 1804.788 $\pm$ 0.207  $\chi^2$ /NDF: 1050217.3/55

All: 1802.376 $\pm$ 0.147  $\chi^2$ /NDF: 1795663.9/11

- sign 1799.935 $\pm$ 0.208  $\chi^2$ /NDF: 745172.5/57

# asym\_atr1l2\_dd\_reg\_correction\_mean vs Slug



Right In:  $-62.568 \pm 788.801$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $294.407 \pm 379.922$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-379.100 \pm 425.277$   $\chi^2/\text{NDF}$ : 50.8/34

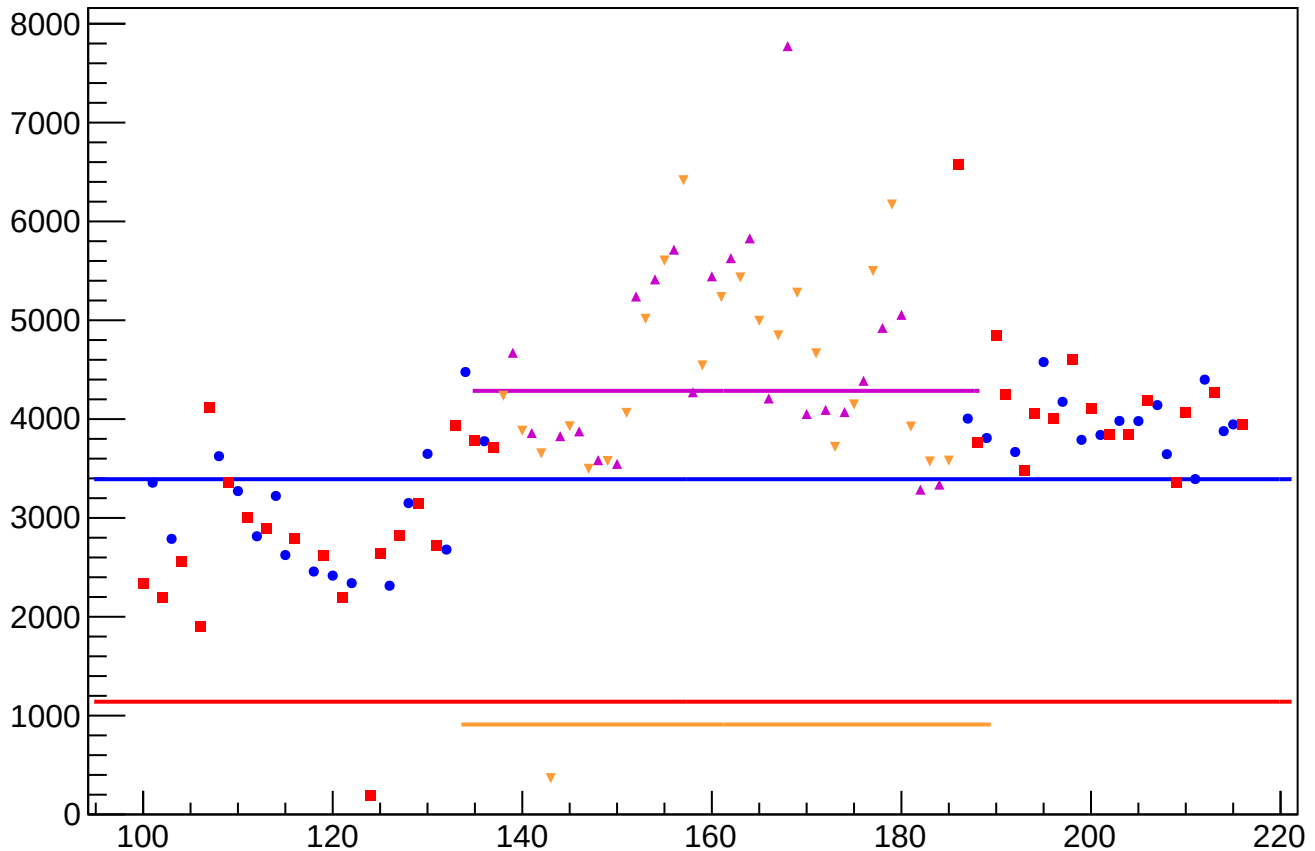
Left In:  $-138.350 \pm 1022.943$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $227.189 \pm 342.288$   $\chi^2/\text{NDF}$ : 65.2/55

All:  $-19.254 \pm 258.027$   $\chi^2/\text{NDF}$ : 131.2/113

- sign  $-343.621 \pm 392.693$   $\chi^2/\text{NDF}$ : 64.7/57

# asym\_atr12\_dd\_reg\_correction\_rms vs Slug



Right In: 3391.982 $\pm$ 0.558  $\chi^2$ /NDF: 1414276.1/30

Left Out: 910.135 $\pm$ 0.269  $\chi^2$ /NDF: 26774123.9/24

Right Out: 1140.675 $\pm$ 0.301  $\chi^2$ /NDF: 24630292.1/34

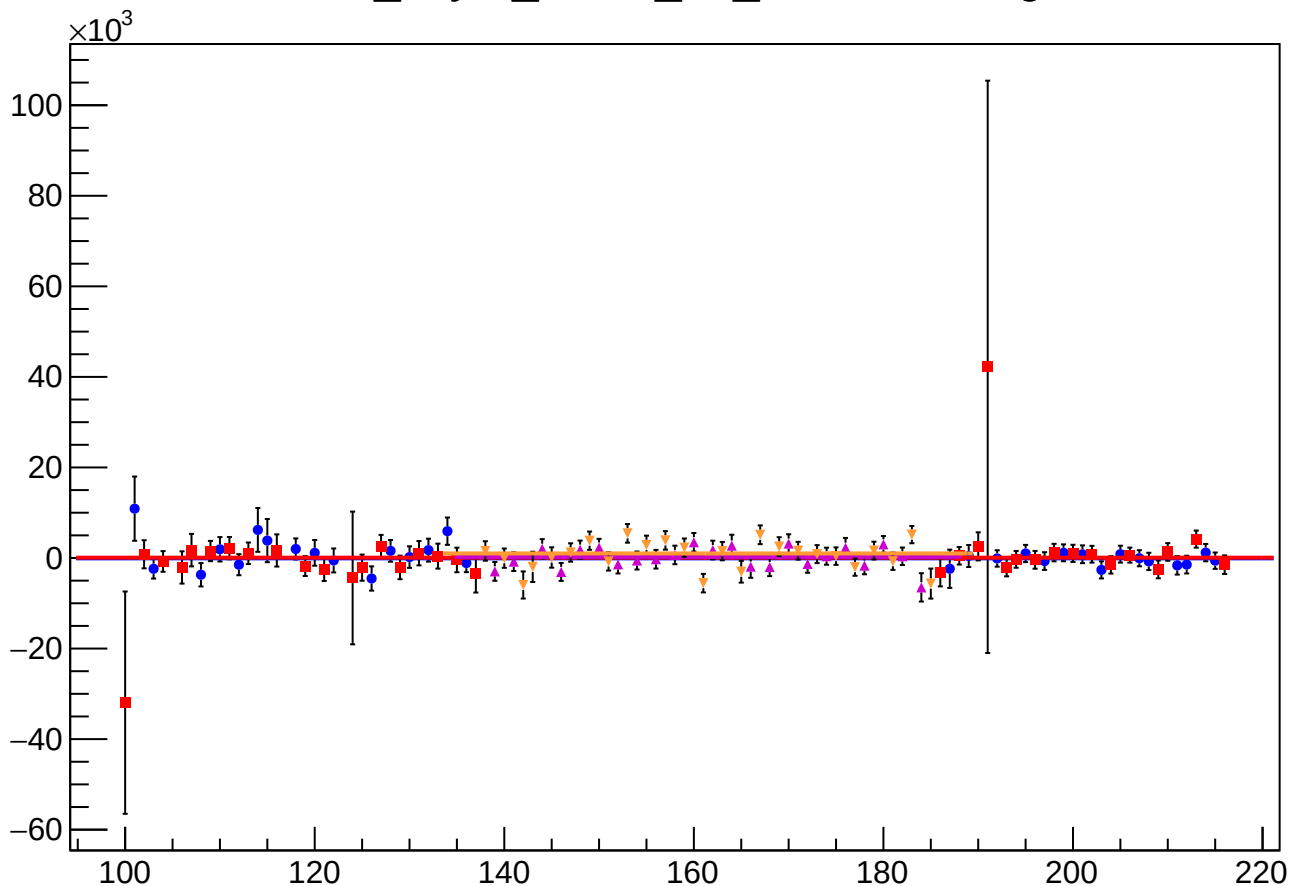
Left In: 4285.839 $\pm$ 0.723  $\chi^2$ /NDF: 1327947.9/22

+ sign 1377.466 $\pm$ 0.242  $\chi^2$ /NDF: 44259334.5/55

All: 1475.344 $\pm$ 0.182  $\chi^2$ /NDF: 86716745.0/100

- sign 1604.171 $\pm$ 0.278  $\chi^2$ /NDF: 42078625.9/57

# cor\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-74.323 \pm 404.673$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $1004.123 \pm 422.582$   $\chi^2/\text{NDF}$ : 47.4/24

Right Out:  $72.515 \pm 404.303$   $\chi^2/\text{NDF}$ : 21.5/34

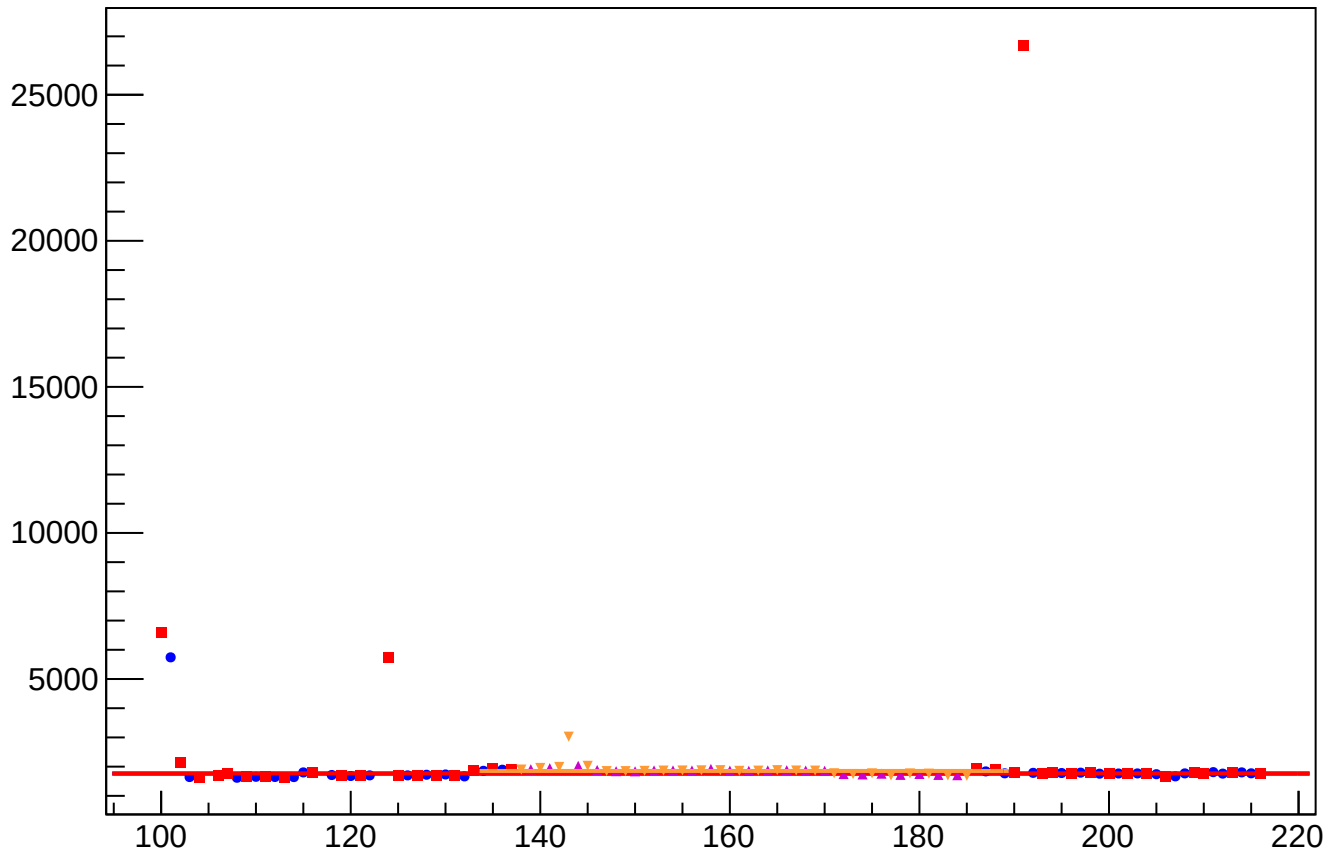
Left In:  $229.236 \pm 429.699$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $441.564 \pm 292.273$   $\chi^2/\text{NDF}$ : 73.7/55

All:  $294.934 \pm 207.435$   $\chi^2/\text{NDF}$ : 122.2/113

- sign  $146.108 \pm 294.454$   $\chi^2/\text{NDF}$ : 47.9/57

# cor\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1761.004 $\pm$ 0.286  $\chi^2$ /NDF: 680234.2/30

Left Out: 1852.534 $\pm$ 0.299  $\chi^2$ /NDF: 321038.9/24

Right Out: 1768.597 $\pm$ 0.285  $\chi^2$ /NDF: 638217.3/34

Left In: 1838.528 $\pm$ 0.304  $\chi^2$ /NDF: 68478.0/22

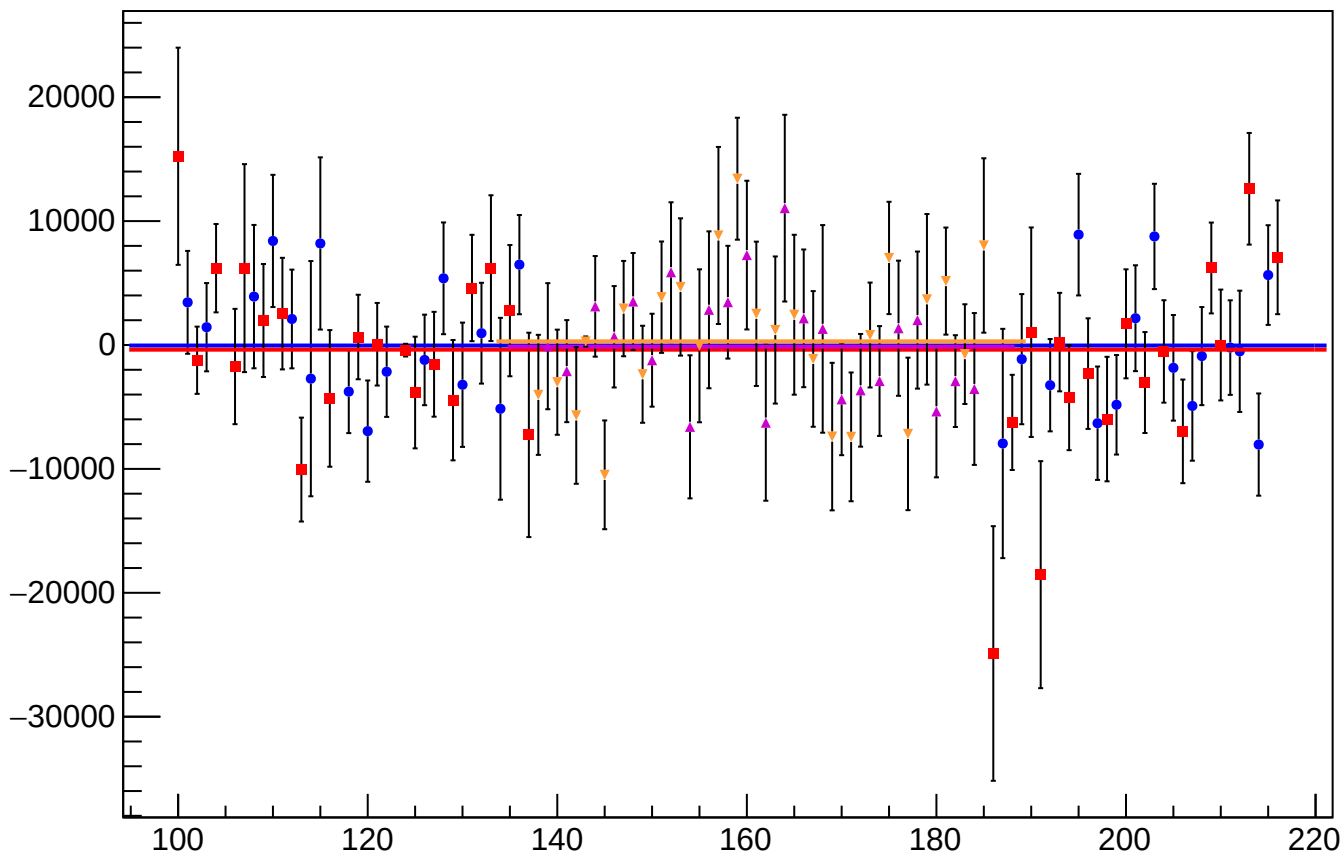
+ sign 1804.788 $\pm$ 0.207  $\chi^2$ /NDF: 1050217.6/55

All: 1803.098 $\pm$ 0.147  $\chi^2$ /NDF: 1785182.7/11

- sign 1801.385 $\pm$ 0.208  $\chi^2$ /NDF: 734830.4/57



# asym\_atr1l2\_dd\_cor\_correction\_mean vs Slug



Right In:  $-42.505 \pm 788.418$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $295.308 \pm 379.951$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-377.341 \pm 426.009$   $\chi^2/\text{NDF}$ : 50.6/34

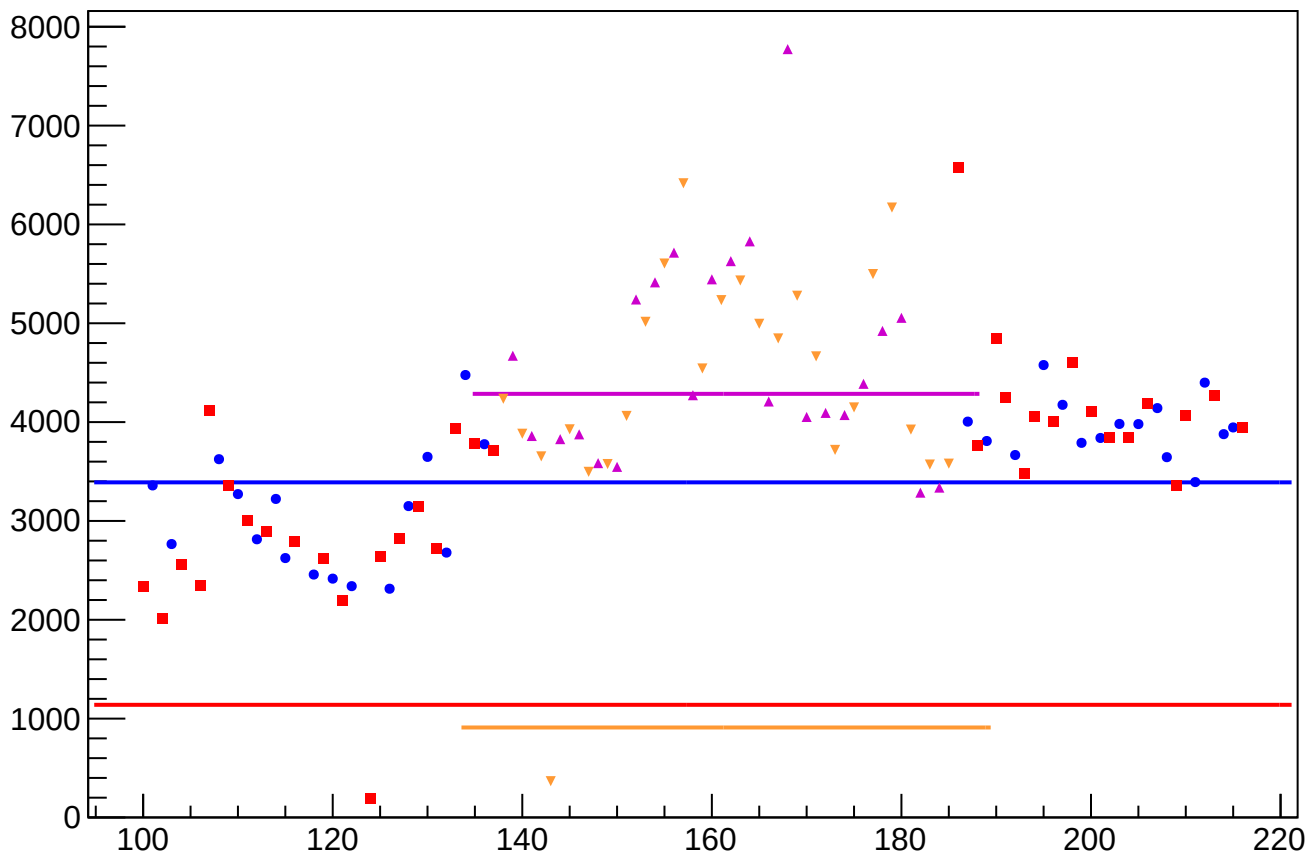
Left In:  $-138.272 \pm 1022.940$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $231.640 \pm 342.278$   $\chi^2/\text{NDF}$ : 65.3/55

All:  $-15.606 \pm 258.186$   $\chi^2/\text{NDF}$ : 131.0/113

- sign  $-342.006 \pm 393.269$   $\chi^2/\text{NDF}$ : 64.6/57

# asym\_atr1l2\_dd\_cor\_correction\_rms vs Slug



Right In:  $3390.378 \pm 0.557$   $\chi^2/\text{NDF}: 1419713.5/30$

Left Out:  $910.253 \pm 0.269$   $\chi^2/\text{NDF}: 26772969.1/24$

Right Out:  $1139.593 \pm 0.301$   $\chi^2/\text{NDF}: 24605830.8/34$

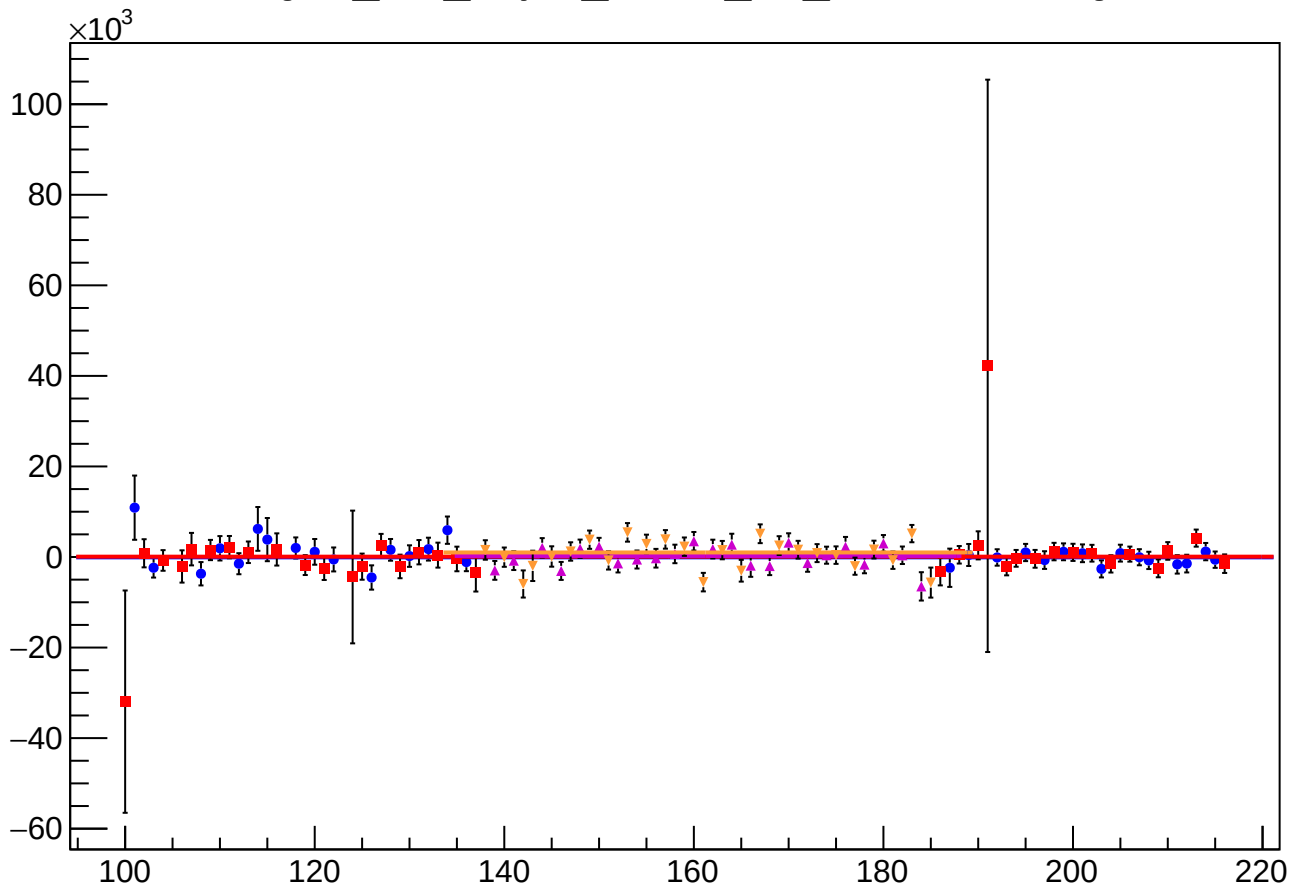
Left In:  $4285.828 \pm 0.723$   $\chi^2/\text{NDF}: 1327963.4/22$

+ sign  $1377.686 \pm 0.242$   $\chi^2/\text{NDF}: 44253492.6/55$

All:  $1475.492 \pm 0.183$   $\chi^2/\text{NDF}: 86689424.8/100$

- sign  $1604.611 \pm 0.278$   $\chi^2/\text{NDF}: 42057036.9/57$

# eigen\_cor\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-74.323 \pm 404.673$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $1004.123 \pm 422.582$   $\chi^2/\text{NDF}$ : 47.4/24

Right Out:  $72.515 \pm 404.303$   $\chi^2/\text{NDF}$ : 21.5/34

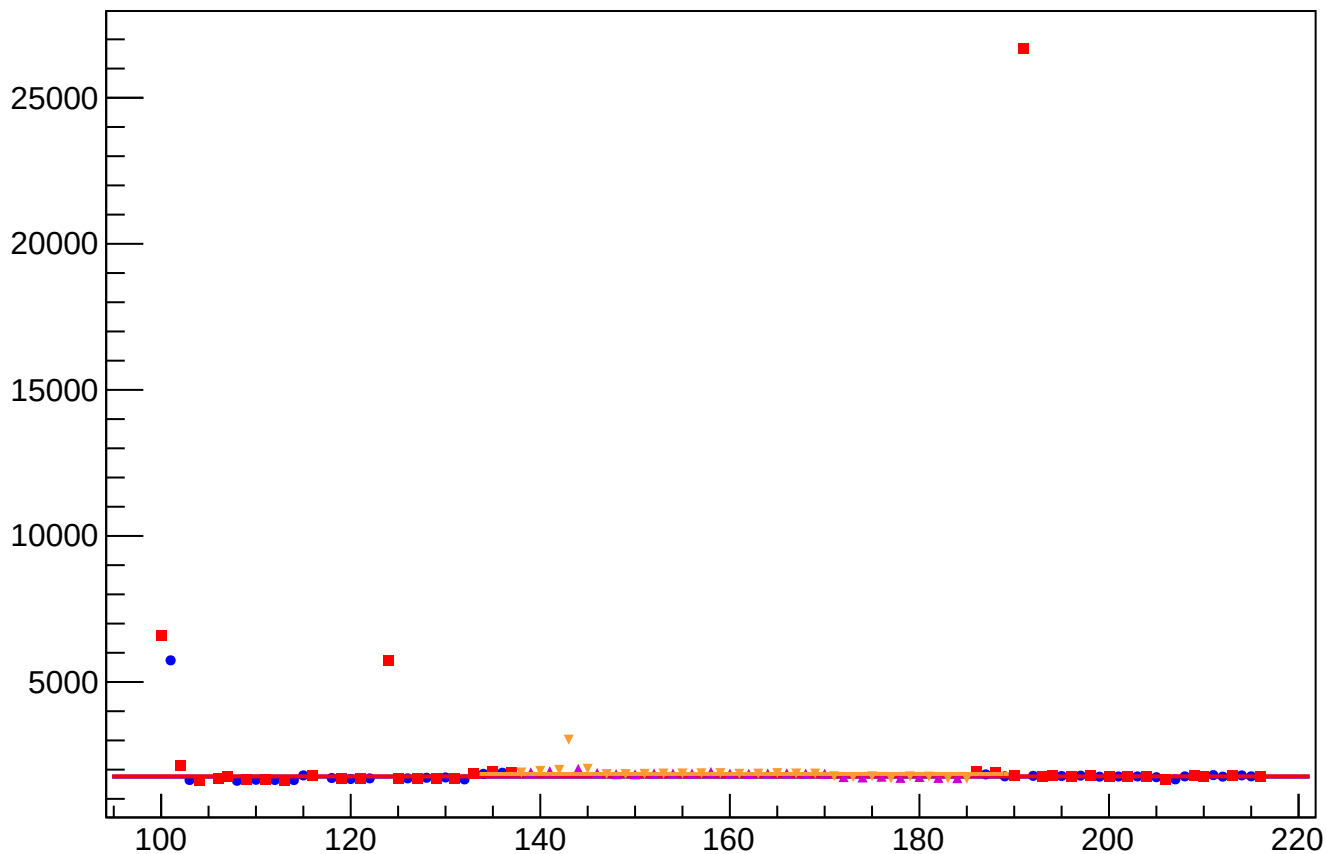
Left In:  $229.236 \pm 429.699$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $441.564 \pm 292.273$   $\chi^2/\text{NDF}$ : 73.7/55

All:  $294.934 \pm 207.435$   $\chi^2/\text{NDF}$ : 122.2/113

- sign  $146.108 \pm 294.454$   $\chi^2/\text{NDF}$ : 47.9/57

# eigen\_cor\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1761.004+/-0.286  $\chi^2/\text{NDF}$ : 680234.2/30

Left Out: 1852.534+/-0.299  $\chi^2/\text{NDF}$ : 321038.9/24

Right Out: 1768.597+/-0.285  $\chi^2/\text{NDF}$ : 638217.3/34

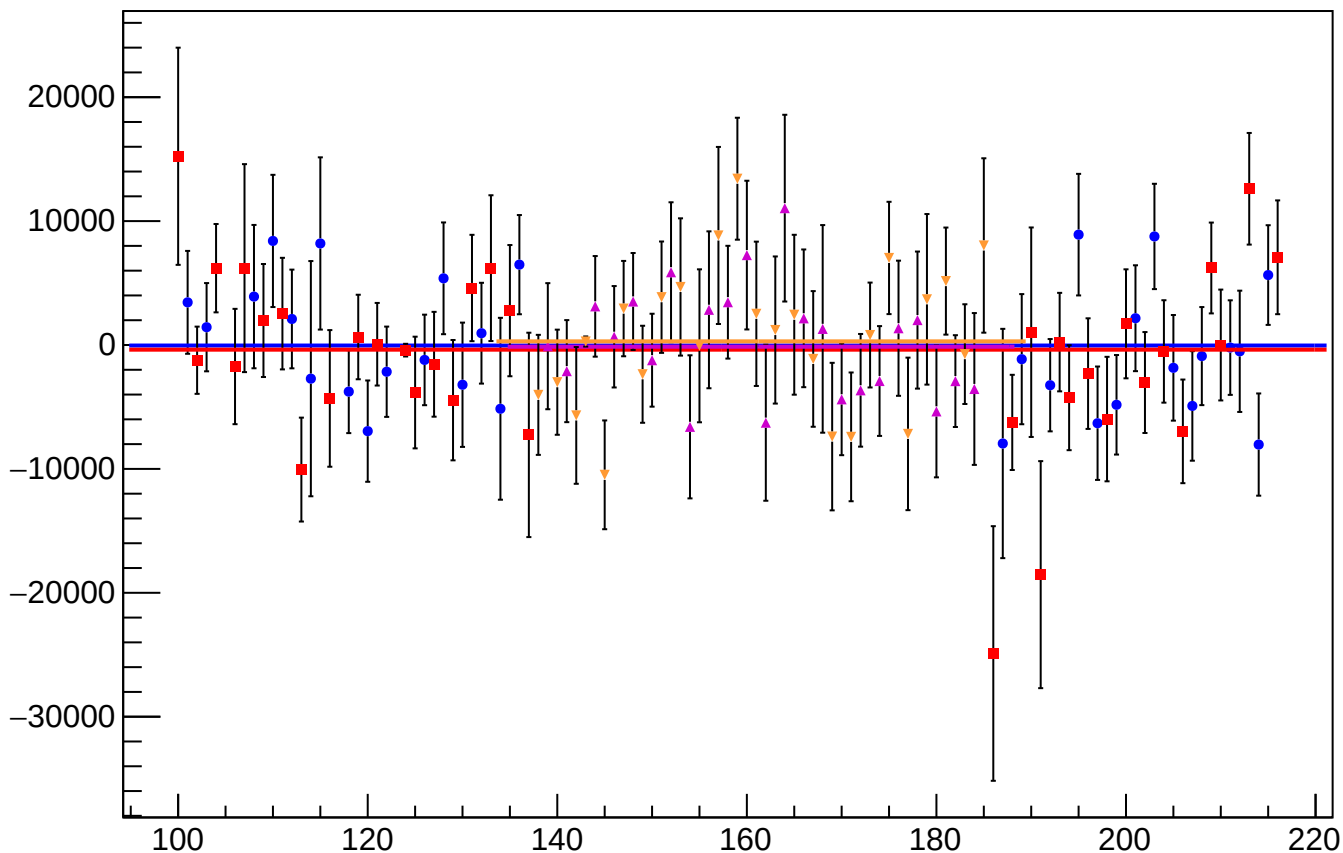
Left In: 1838.528+/-0.304  $\chi^2/\text{NDF}$ : 68478.0/22

+ sign 1804.788+/-0.207  $\chi^2/\text{NDF}$ : 1050217.6/55

All: 1803.098+/-0.147  $\chi^2/\text{NDF}$ : 1785182.7/11

- sign 1801.385+/-0.208  $\chi^2/\text{NDF}$ : 734830.4/57

asym\_atr1l2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-42.505 \pm 788.418$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $295.308 \pm 379.951$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-377.341 \pm 426.009$   $\chi^2/\text{NDF}$ : 50.6/34

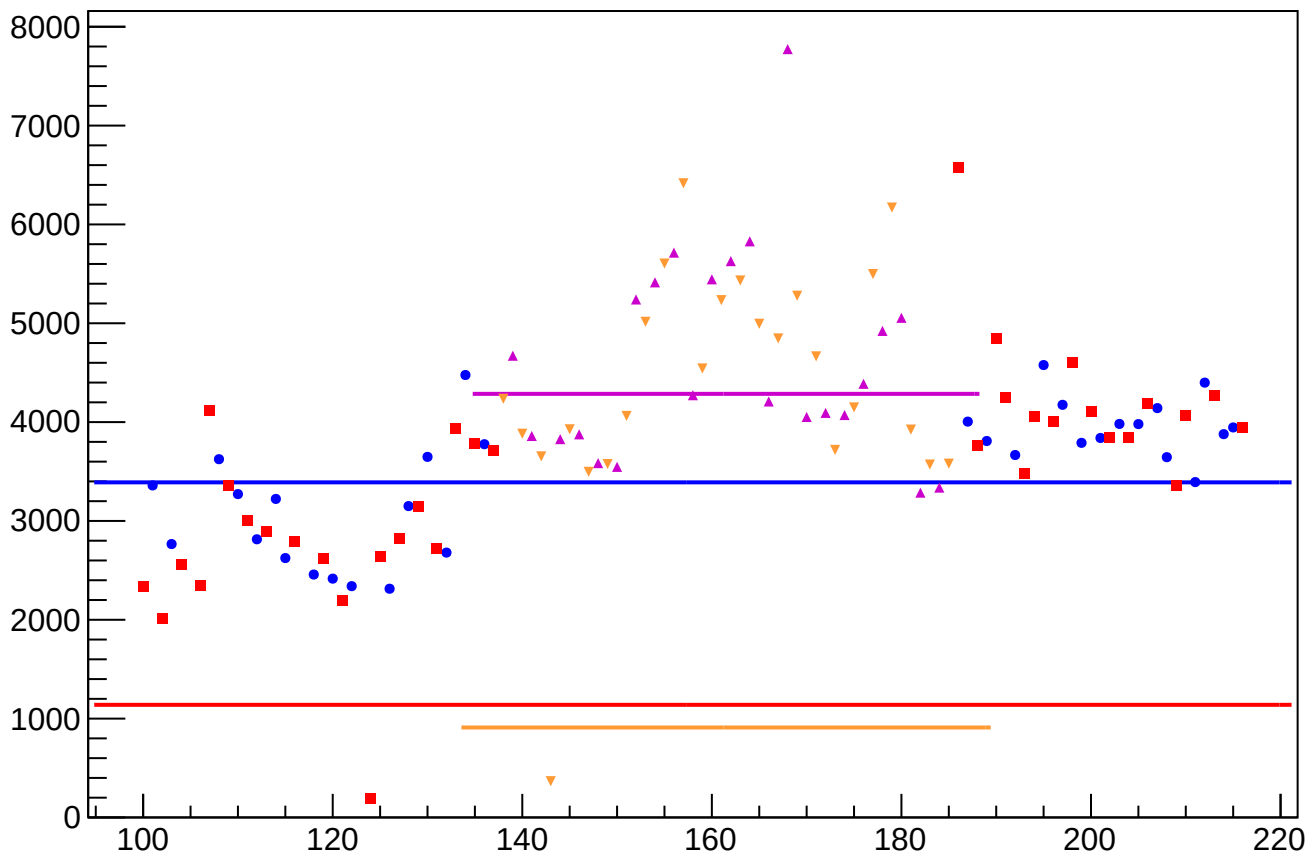
Left In:  $-138.272 \pm 1022.940$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $231.640 \pm 342.278$   $\chi^2/\text{NDF}$ : 65.3/55

All:  $-15.606 \pm 258.186$   $\chi^2/\text{NDF}$ : 131.0/113

- sign  $-342.006 \pm 393.269$   $\chi^2/\text{NDF}$ : 64.6/57

asym\_atr1l2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $3390.378 \pm 0.557$   $\chi^2/\text{NDF}: 1419713.5/30$

Left Out:  $910.253 \pm 0.269$   $\chi^2/\text{NDF}: 26772969.1/24$

Right Out:  $1139.593 \pm 0.301$   $\chi^2/\text{NDF}: 24605830.8/34$

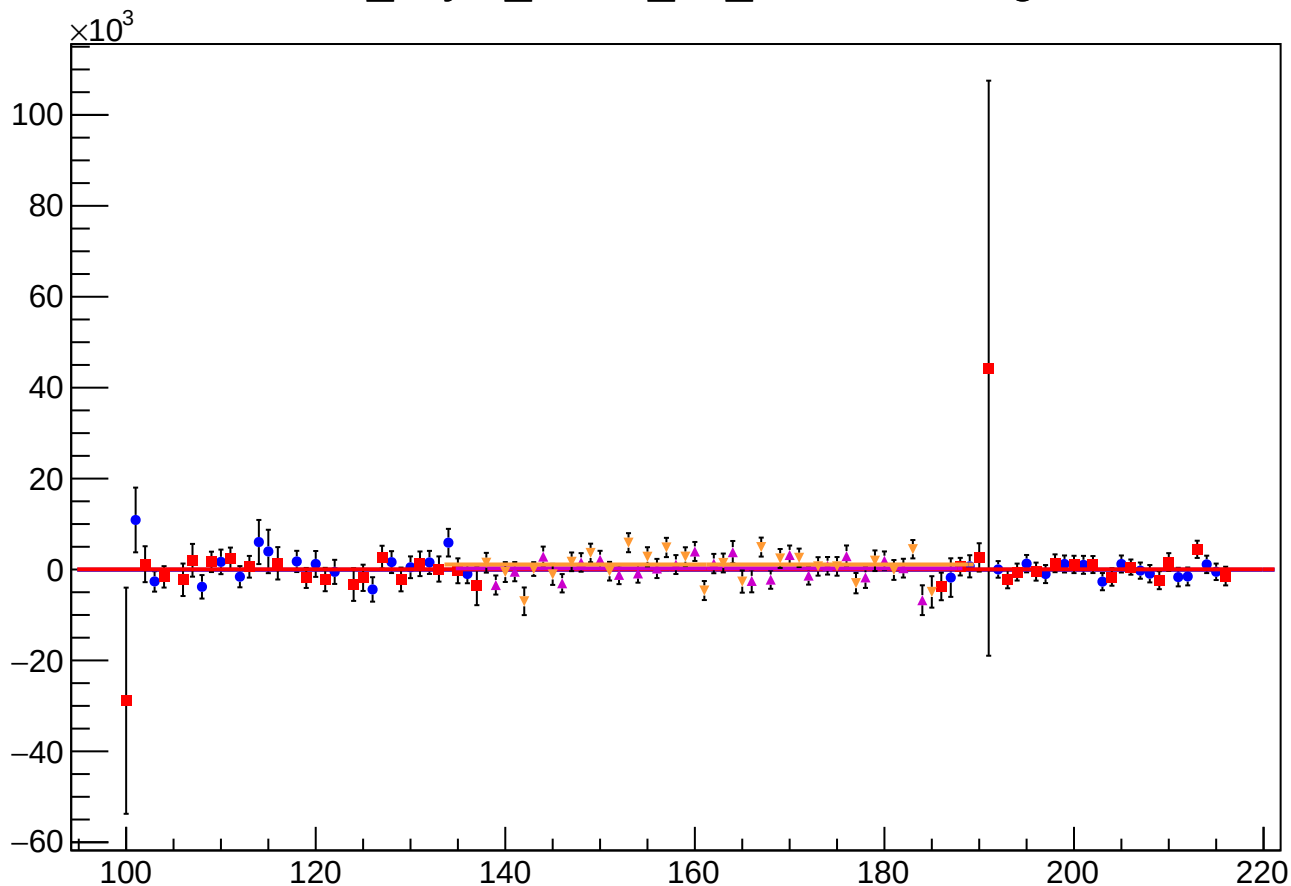
Left In:  $4285.828 \pm 0.723$   $\chi^2/\text{NDF}: 1327963.4/22$

+ sign  $1377.686 \pm 0.242$   $\chi^2/\text{NDF}: 44253492.6/55$

All:  $1475.492 \pm 0.183$   $\chi^2/\text{NDF}: 86689424.8/100$

- sign  $1604.611 \pm 0.278$   $\chi^2/\text{NDF}: 42057036.9/57$

# dit\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-56.398 \pm 406.888$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $1103.308 \pm 425.320$   $\chi^2/\text{NDF}$ : 44.8/24

Right Out:  $36.385 \pm 405.450$   $\chi^2/\text{NDF}$ : 24.0/34

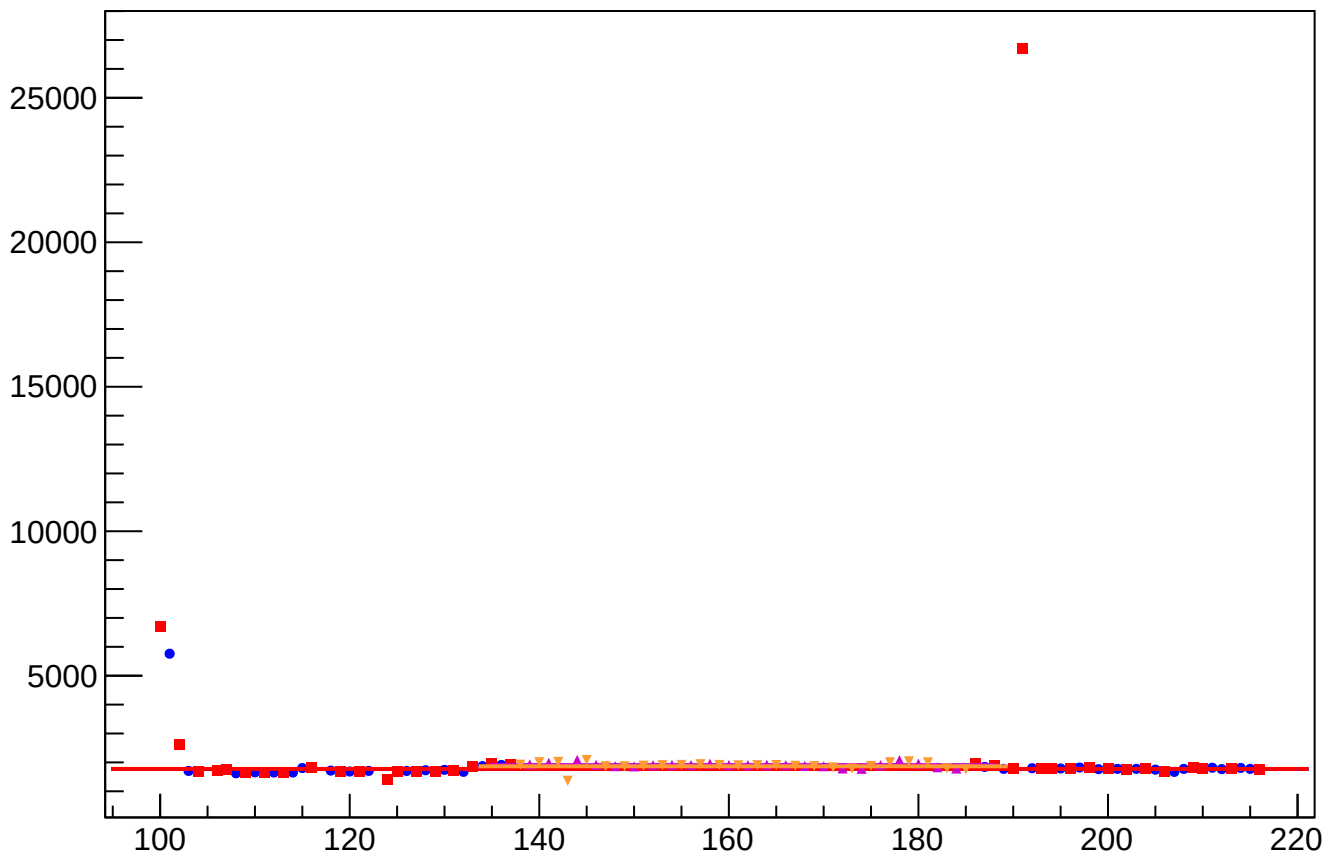
Left In:  $264.609 \pm 445.353$   $\chi^2/\text{NDF}$ : 27.7/22

+ sign  $497.783 \pm 294.014$   $\chi^2/\text{NDF}$ : 72.0/55

All:  $322.295 \pm 209.919$   $\chi^2/\text{NDF}$ : 124.5/113

- sign  $139.816 \pm 299.813$   $\chi^2/\text{NDF}$ : 51.8/57

# dit\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1770.649+/-0.288  $\chi^2/\text{NDF}$ : 678901.6/30

Left Out: 1864.841+/-0.301  $\chi^2/\text{NDF}$ : 294712.1/24

Right Out: 1773.615+/-0.286  $\chi^2/\text{NDF}$ : 570027.4/34

Left In: 1905.628+/-0.315  $\chi^2/\text{NDF}$ : 52781.7/22

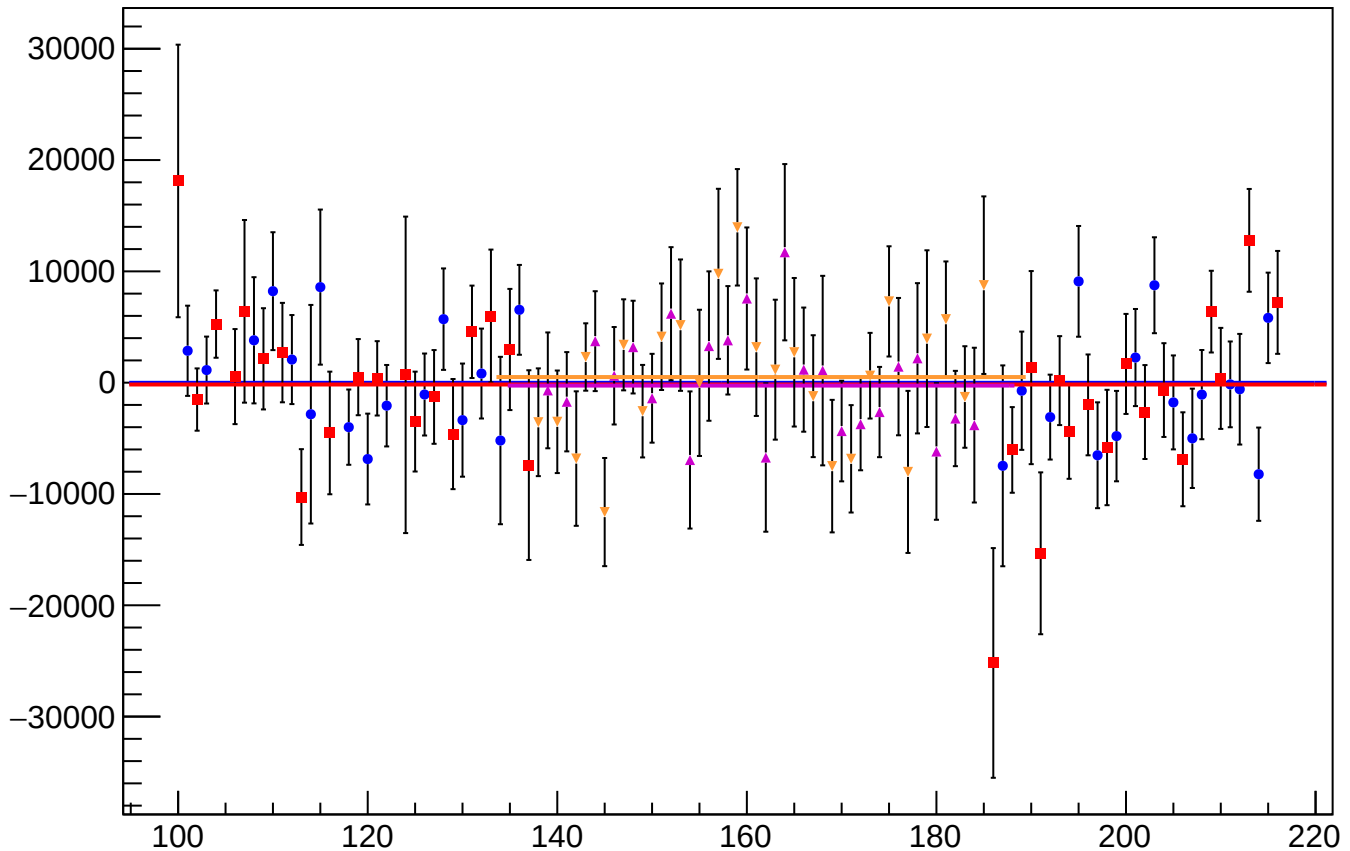
+ sign 1815.660+/-0.208  $\chi^2/\text{NDF}$ : 1024830.1/55

All: 1824.348+/-0.148  $\chi^2/\text{NDF}$ : 1747386.5/11

- sign 1833.370+/-0.212  $\chi^2/\text{NDF}$ : 718996.5/57



# asym\_atr1l2\_dd\_dit\_correction\_mean vs Slug



Right In:  $-13.400 \pm 786.405$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $504.261 \pm 1021.684$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-163.426 \pm 765.473$   $\chi^2/\text{NDF}$ : 49.7/34

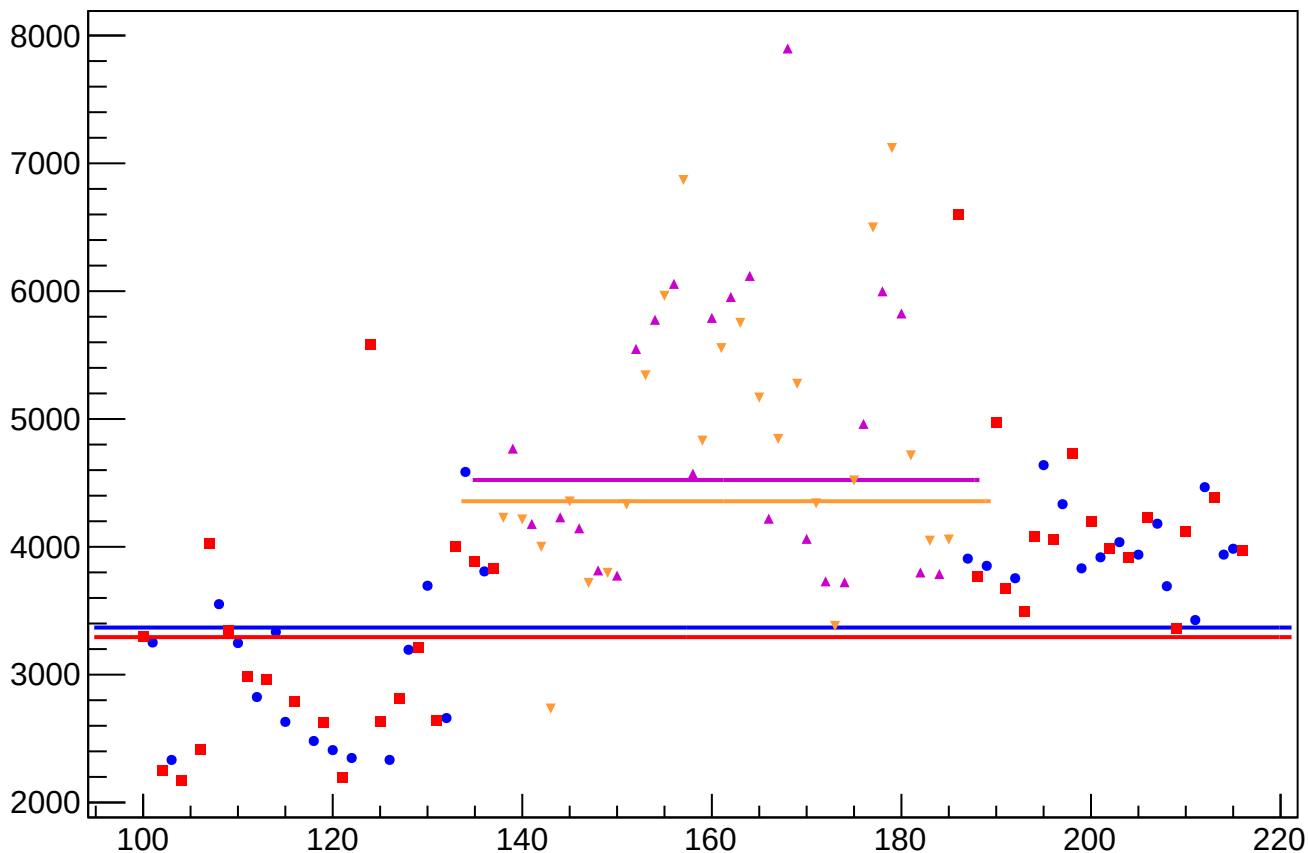
Left In:  $-261.050 \pm 1081.402$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $179.191 \pm 623.178$   $\chi^2/\text{NDF}$ : 65.2/55

All:  $-7.927 \pm 441.221$   $\chi^2/\text{NDF}$ : 128.6/113

- sign  $-196.013 \pm 624.787$   $\chi^2/\text{NDF}$ : 63.3/57

asym\_atr1l2\_dd\_dit\_correction\_rms vs Slug



Right In: 3368.513 $\pm$ 0.556  $\chi^2$ /NDF: 1671917.6/30

Left Out: 4356.643 $\pm$ 0.722  $\chi^2$ /NDF: 1912322.9/24

Right Out: 3293.621 $\pm$ 0.541  $\chi^2$ /NDF: 2315819.9/34

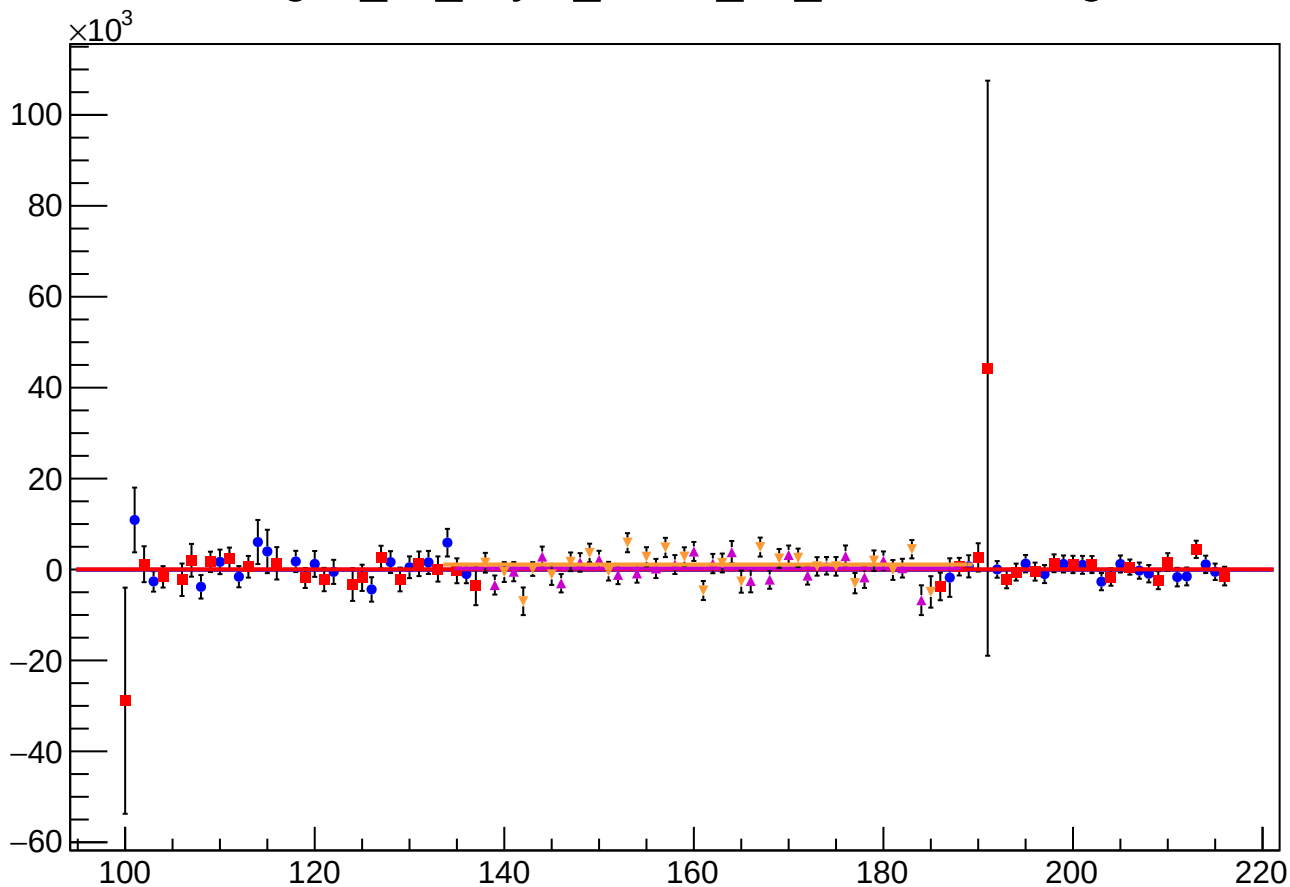
Left In: 4522.787 $\pm$ 0.765  $\chi^2$ /NDF: 1434008.9/22

+ sign 3736.138 $\pm$ 0.441  $\chi^2$ /NDF: 4759020.2/55

All: 3720.070 $\pm$ 0.312  $\chi^2$ /NDF: 10232906.8/100

- sign 3703.920 $\pm$ 0.442  $\chi^2$ /NDF: 5471220.6/57

# eigen\_dit\_asym\_atr1l2\_dd\_mean vs Slug



Right In:  $-56.399 \pm 406.889$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $1103.310 \pm 425.321$   $\chi^2/\text{NDF}$ : 44.8/24

Right Out:  $36.385 \pm 405.450$   $\chi^2/\text{NDF}$ : 24.0/34

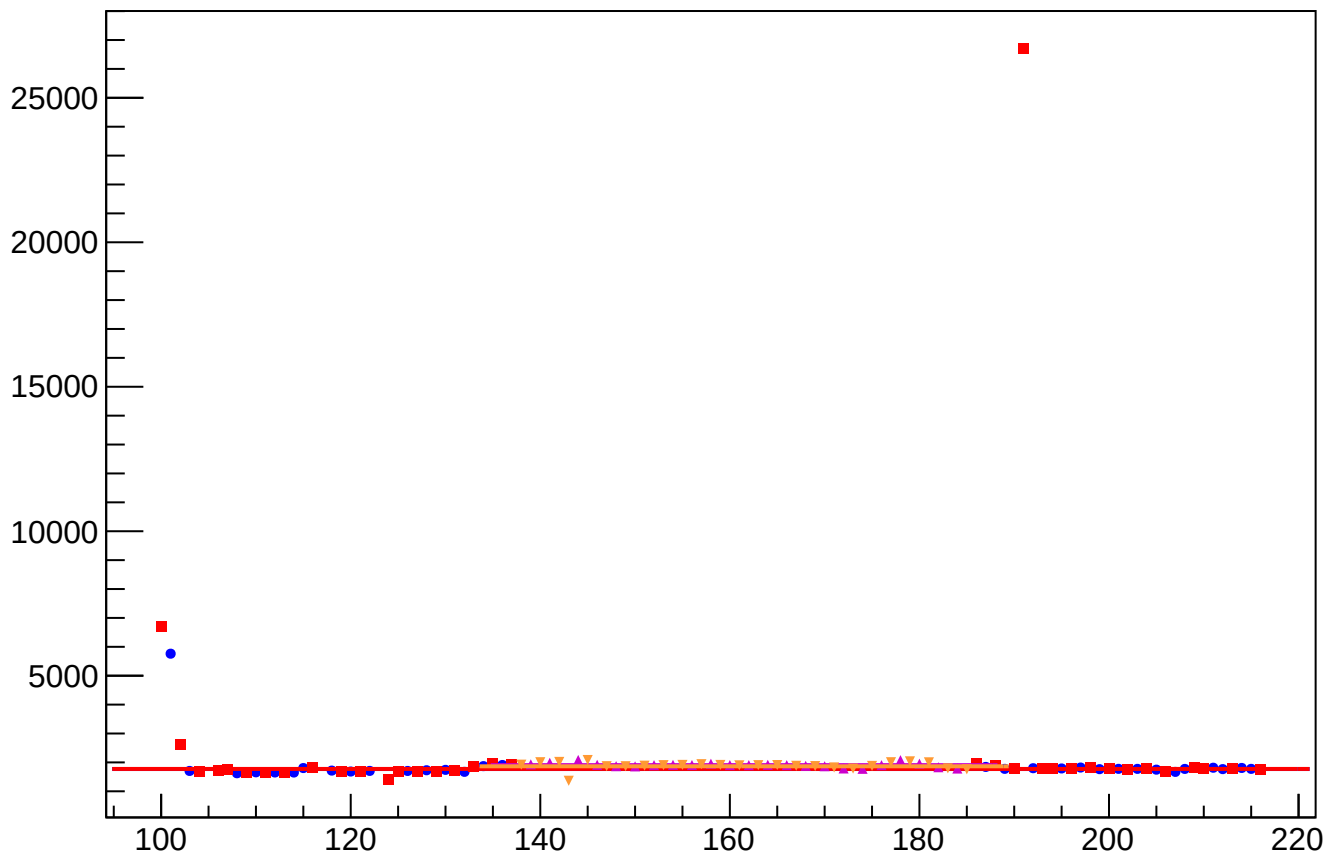
Left In:  $264.609 \pm 445.354$   $\chi^2/\text{NDF}$ : 27.7/22

+ sign  $497.783 \pm 294.014$   $\chi^2/\text{NDF}$ : 72.0/55

All:  $322.295 \pm 209.920$   $\chi^2/\text{NDF}$ : 124.5/113

- sign  $139.817 \pm 299.813$   $\chi^2/\text{NDF}$ : 51.8/57

# eigen\_dit\_asym\_atr1l2\_dd\_rms vs Slug



Right In: 1770.649 $\pm$ 0.288  $\chi^2$ /NDF: 678901.6/30

Left Out: 1864.842 $\pm$ 0.301  $\chi^2$ /NDF: 294715.4/24

Right Out: 1773.615 $\pm$ 0.286  $\chi^2$ /NDF: 570027.4/34

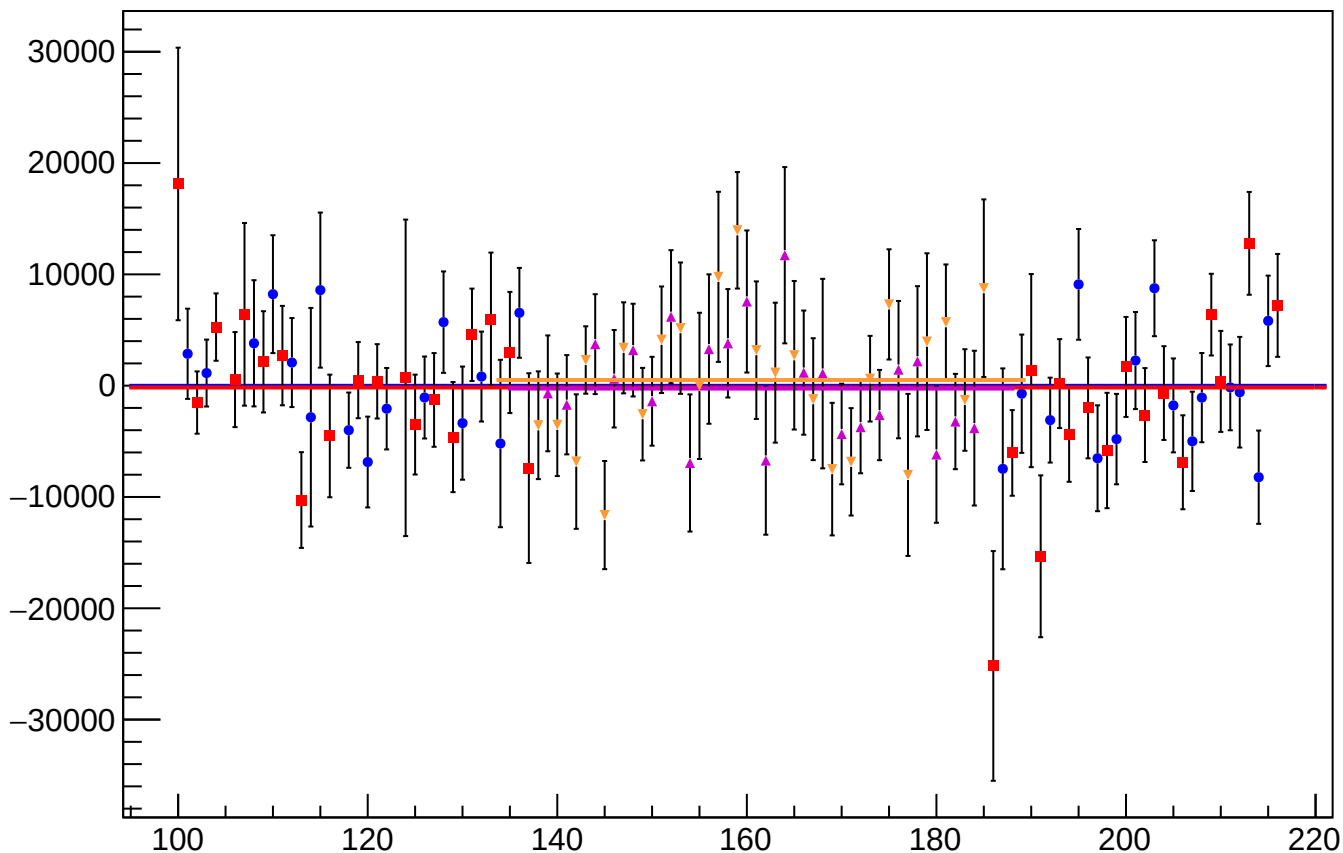
Left In: 1905.629 $\pm$ 0.315  $\chi^2$ /NDF: 52783.9/22

+ sign 1815.660 $\pm$ 0.208  $\chi^2$ /NDF: 1024834.4/55

All: 1824.348 $\pm$ 0.148  $\chi^2$ /NDF: 1747394.4/11

- sign 1833.371 $\pm$ 0.212  $\chi^2$ /NDF: 719000.1/57

asym\_atr1l2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-13.402 \pm 786.405$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $504.265 \pm 1021.686$   $\chi^2/\text{NDF}$ : 30.1/24

Right Out:  $-163.422 \pm 765.473$   $\chi^2/\text{NDF}$ : 49.7/34

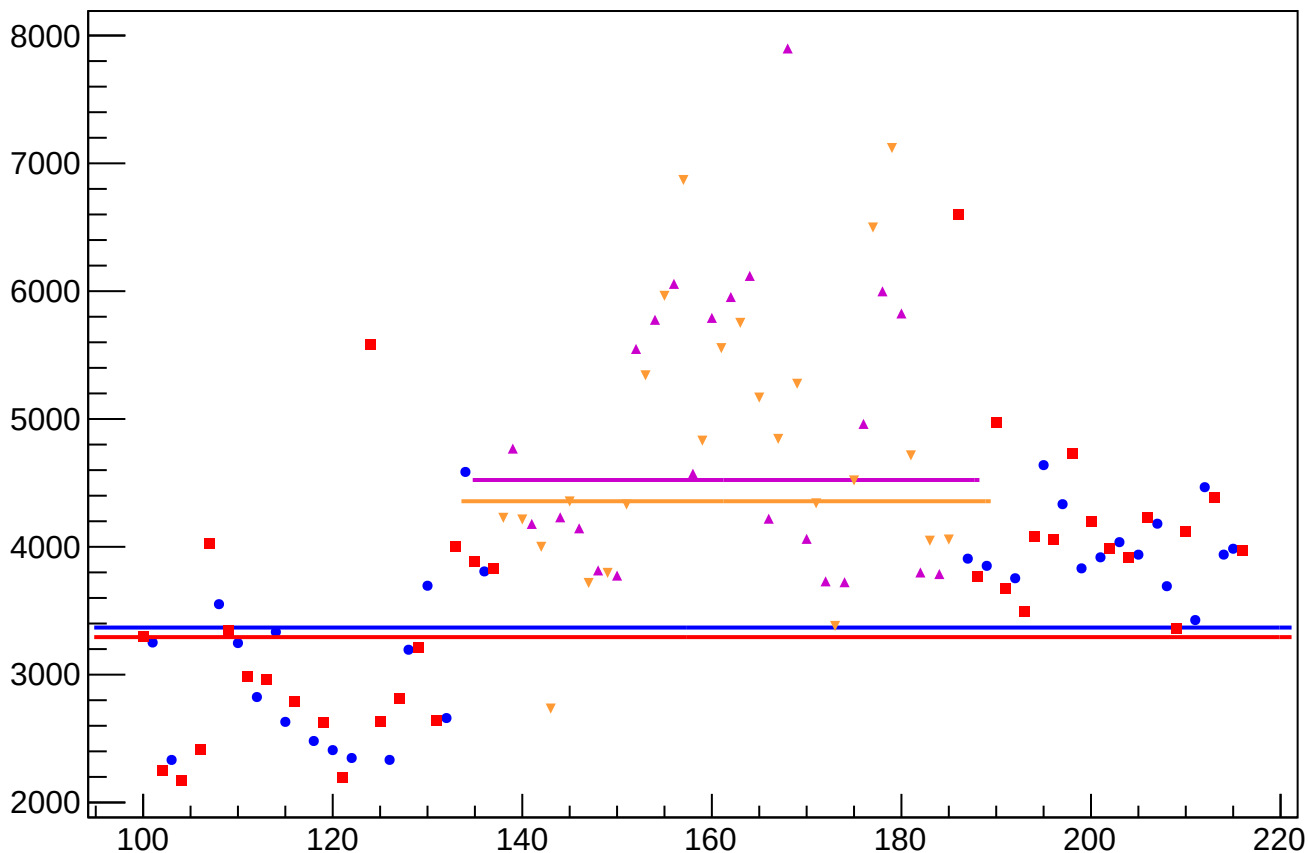
Left In:  $-261.051 \pm 1081.404$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $179.191 \pm 623.178$   $\chi^2/\text{NDF}$ : 65.2/55

All:  $-7.926 \pm 441.221$   $\chi^2/\text{NDF}$ : 128.6/113

- sign  $-196.011 \pm 624.787$   $\chi^2/\text{NDF}$ : 63.3/57

asym\_atr1l2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 3368.511 $\pm$ 0.556  $\chi^2$ /NDF: 1671951.9/30

Left Out: 4356.650 $\pm$ 0.722  $\chi^2$ /NDF: 1912327.4/24

Right Out: 3293.618 $\pm$ 0.541  $\chi^2$ /NDF: 2315839.1/34

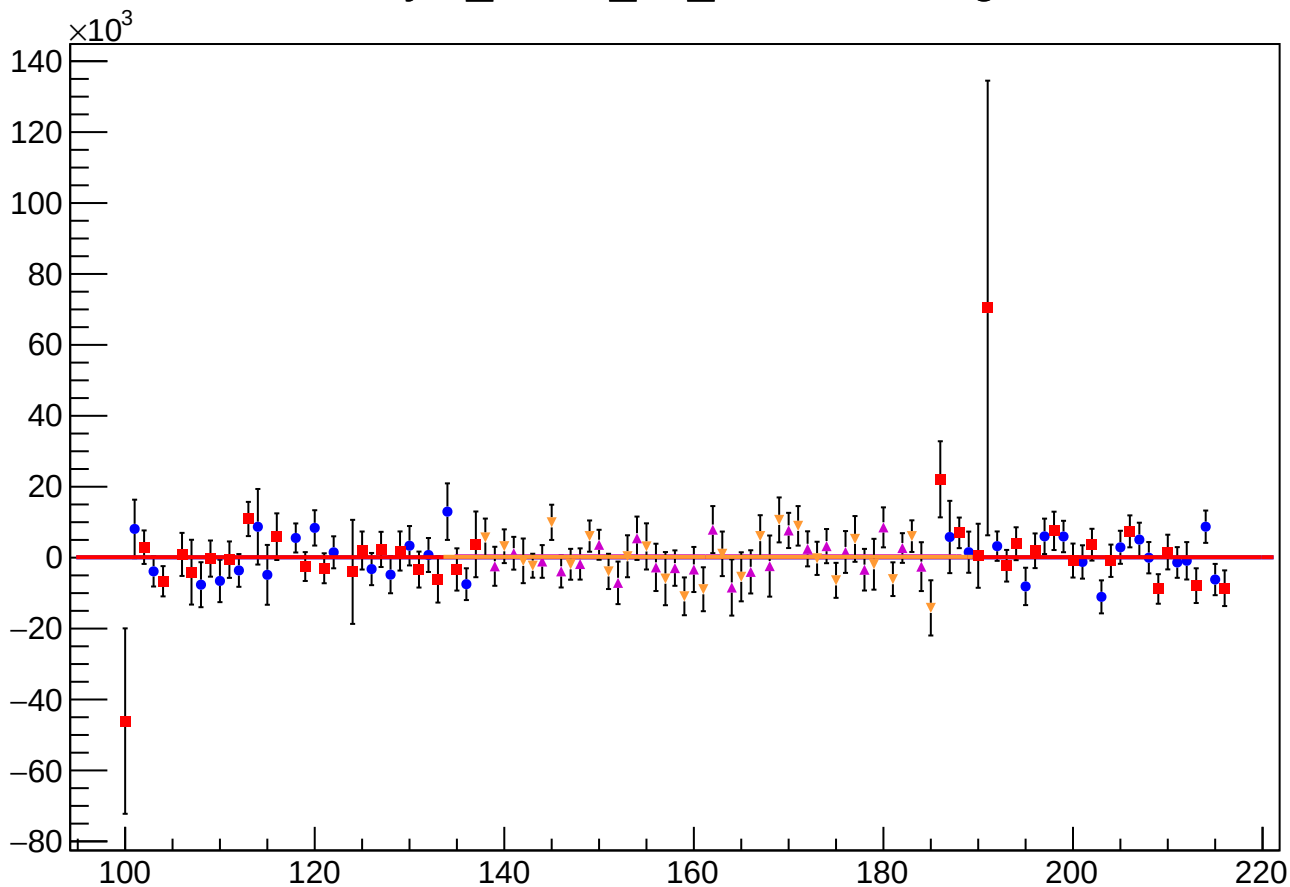
Left In: 4522.795 $\pm$ 0.765  $\chi^2$ /NDF: 1434009.9/22

+ sign 3736.138 $\pm$ 0.441  $\chi^2$ /NDF: 4759078.9/55

All: 3720.070 $\pm$ 0.312  $\chi^2$ /NDF: 10233013.0/100

- sign 3703.919 $\pm$ 0.442  $\chi^2$ /NDF: 5471267.9/57

# asym\_atr1l2\_dd\_mean vs Slug



Right In:  $77.566 \pm 907.687$   $\chi^2/\text{NDF}$ : 37.6/30

Left Out:  $239.929 \pm 1064.647$   $\chi^2/\text{NDF}$ : 32.2/24

Right Out:  $135.224 \pm 900.389$   $\chi^2/\text{NDF}$ : 40.0/34

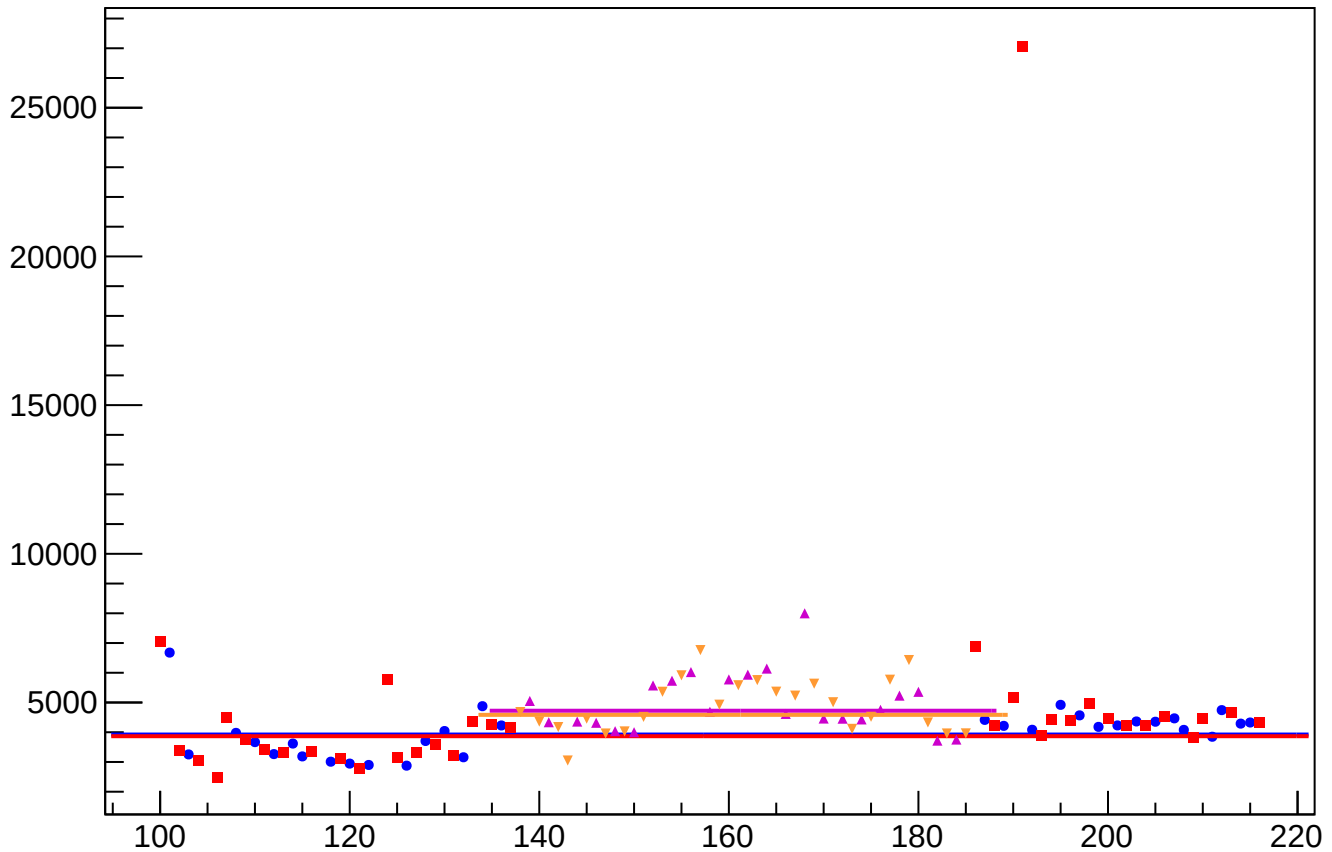
Left In:  $397.881 \pm 1121.323$   $\chi^2/\text{NDF}$ : 14.2/22

+ sign  $145.908 \pm 690.726$   $\chi^2/\text{NDF}$ : 69.8/55

All:  $191.296 \pm 492.378$   $\chi^2/\text{NDF}$ : 124.1/113

- sign  $238.188 \pm 702.067$   $\chi^2/\text{NDF}$ : 54.3/57

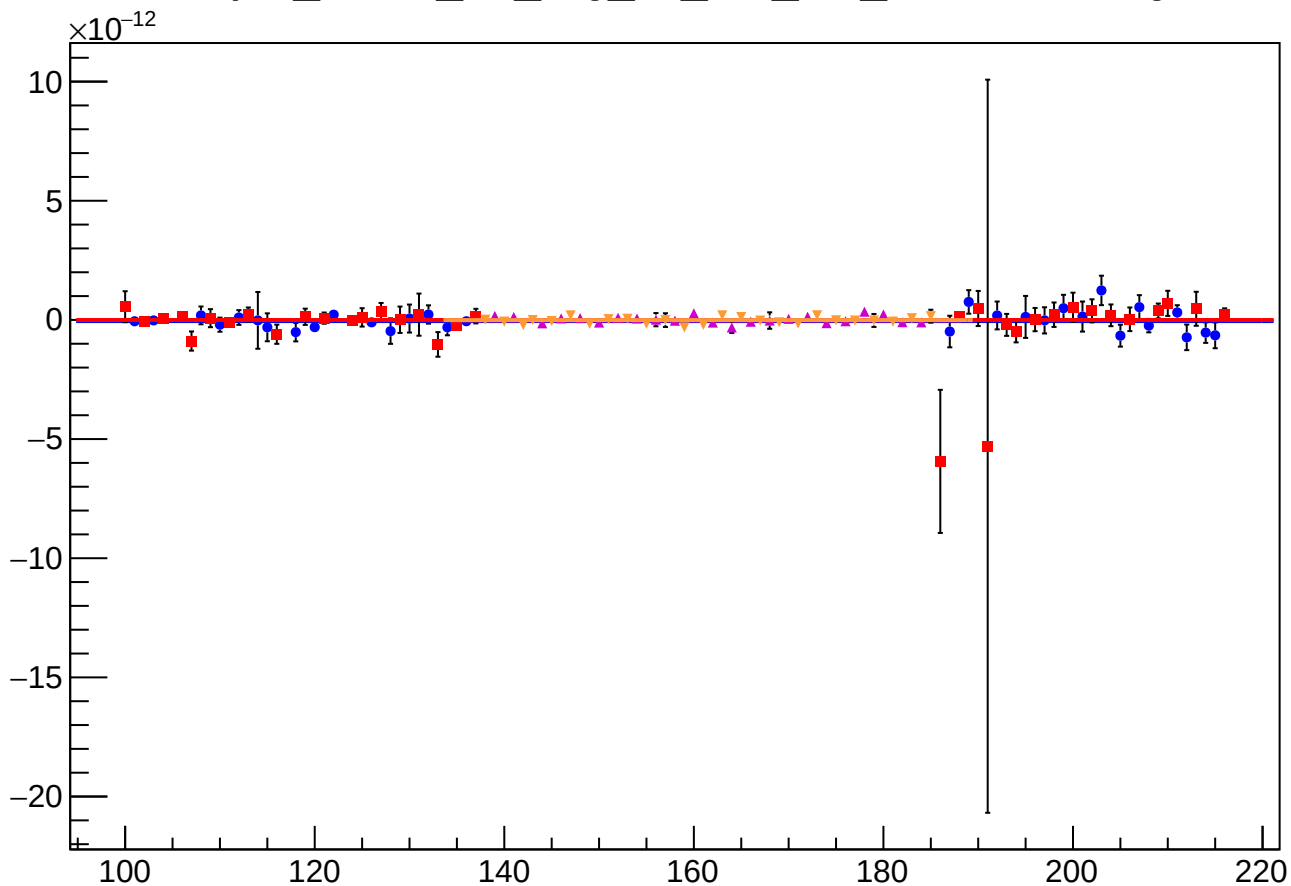
# asym\_atr1l2\_dd\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 3922.494+/-0.642  | $\chi^2/\text{NDF}$ : 1087453.0/30 | + sign 4201.214+/-0.488 | $\chi^2/\text{NDF}$ : 2847193.1/55 |
| Left Out: 4584.664+/-0.753  | $\chi^2/\text{NDF}$ : 1311720.7/24 | All: 4200.256+/-0.347   | $\chi^2/\text{NDF}$ : 6099352.8/11 |
| Right Out: 3866.310+/-0.632 | $\chi^2/\text{NDF}$ : 1521838.7/34 | - sign 4199.274+/-0.494 | $\chi^2/\text{NDF}$ : 3252151.9/57 |
| Left In: 4723.014+/-0.793   | $\chi^2/\text{NDF}$ : 1016613.0/22 |                         |                                    |



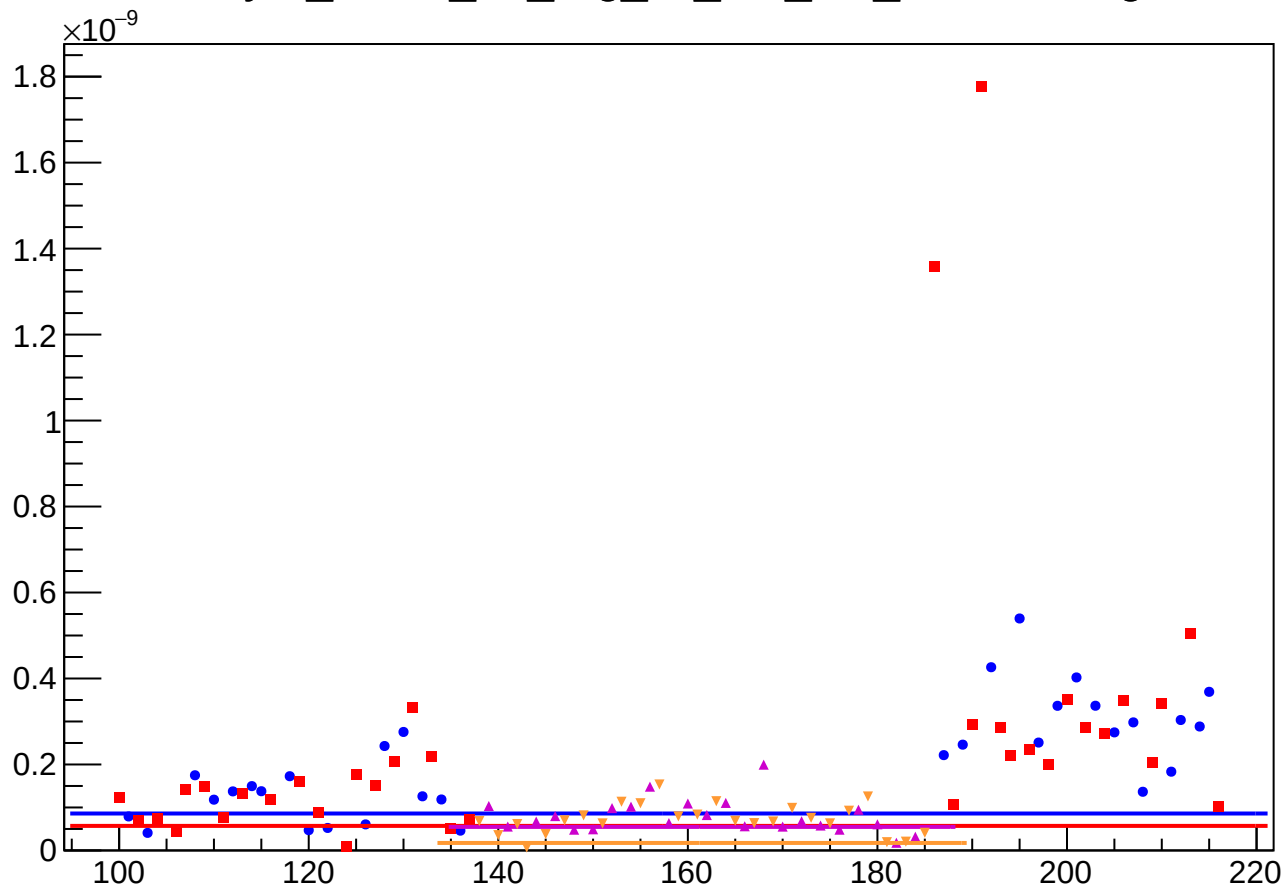
# asym\_atr1l2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.3/30  
 Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.8/24  
 Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.2/34  
 Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.9/55  
 All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 107.3/113  
 - sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.4/57

# asym\_atr1l2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7146713.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8870606.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9415196.4/34

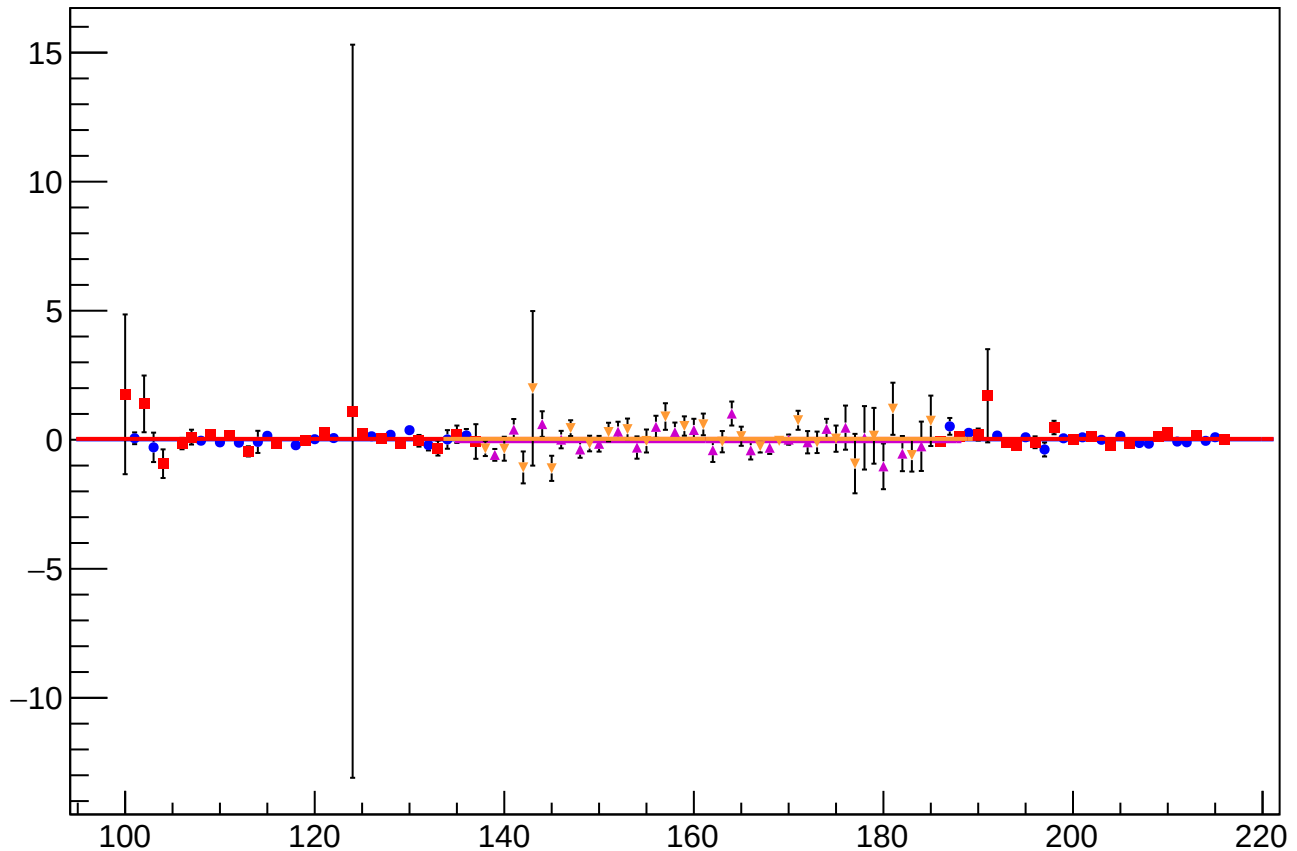
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2798764.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21016729.6/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 37697346.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12220378.9/57

# asym\_atr1l2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.030$   $\chi^2/\text{NDF}$ : 25.9/30

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.034 \pm 0.029$   $\chi^2/\text{NDF}$ : 41.4/34

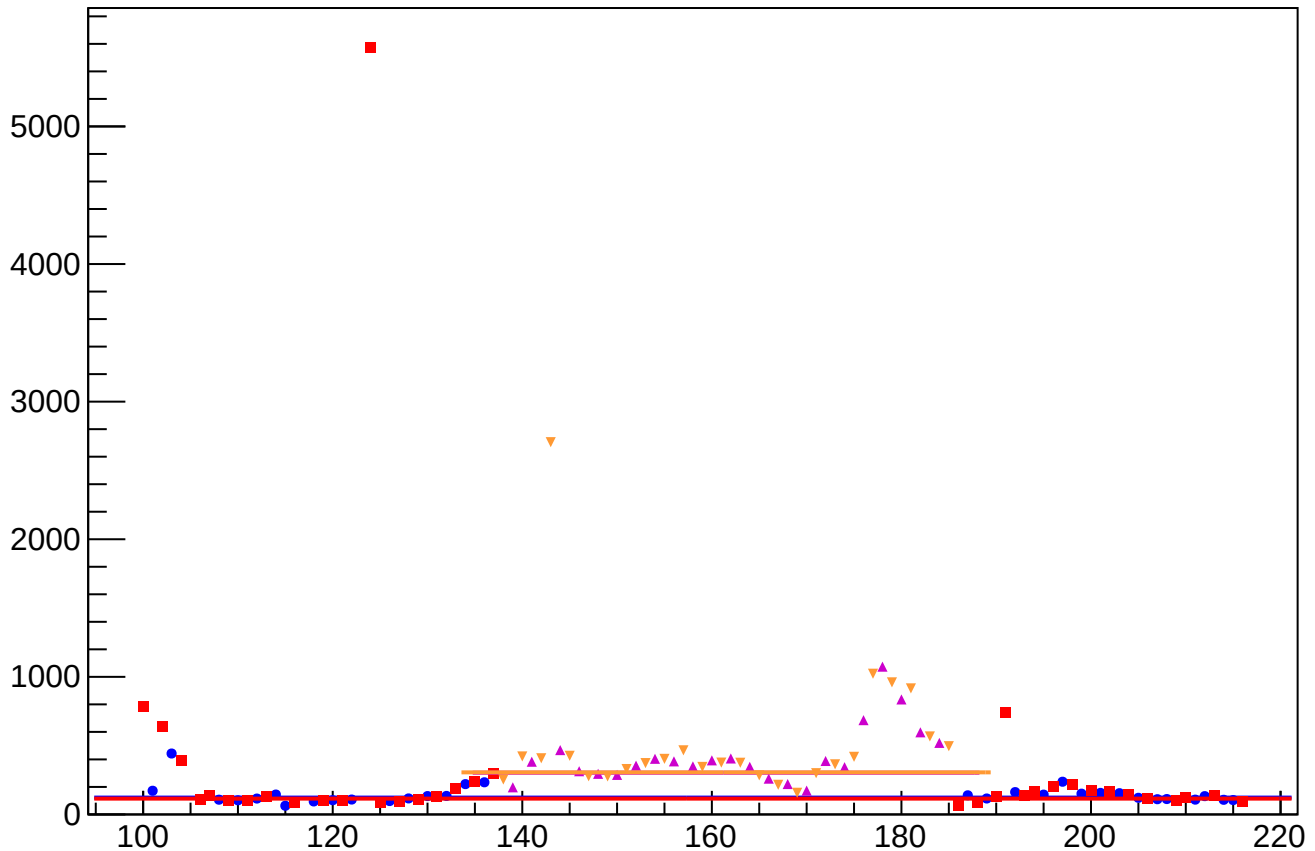
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.017 \pm 0.028$   $\chi^2/\text{NDF}$ : 56.4/55

All:  $0.020 \pm 0.019$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $0.023 \pm 0.027$   $\chi^2/\text{NDF}$ : 68.7/57

# asym\_atr1l2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 122.583+/-0.021  $\chi^2/\text{NDF}$ : 2622301.6/30

Left Out: 305.950+/-0.055  $\chi^2/\text{NDF}$ : 6634928.0/24

Right Out: 115.153+/-0.020  $\chi^2/\text{NDF}$ : 4526941.2/34

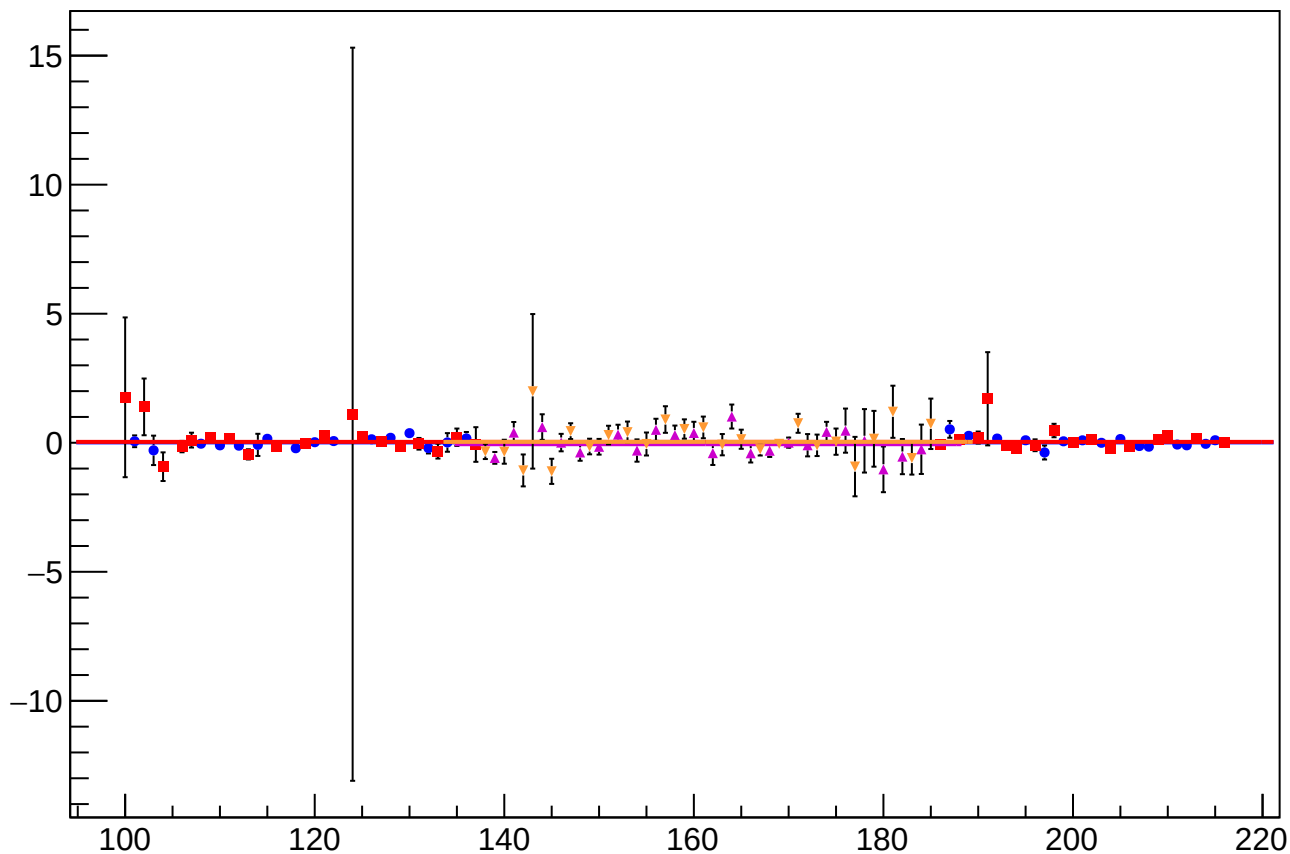
Left In: 303.278+/-0.055  $\chi^2/\text{NDF}$ : 4813442.3/22

+ sign 145.951+/-0.020  $\chi^2/\text{NDF}$ : 18917317.9/55

All: 141.917+/-0.014  $\chi^2/\text{NDF}$ : 38737633.1/11

- sign 138.116+/-0.019  $\chi^2/\text{NDF}$ : 19738652.1/57

asym\_atr1l2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.030$   $\chi^2/\text{NDF}$ : 25.9/30

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.034 \pm 0.029$   $\chi^2/\text{NDF}$ : 41.4/34

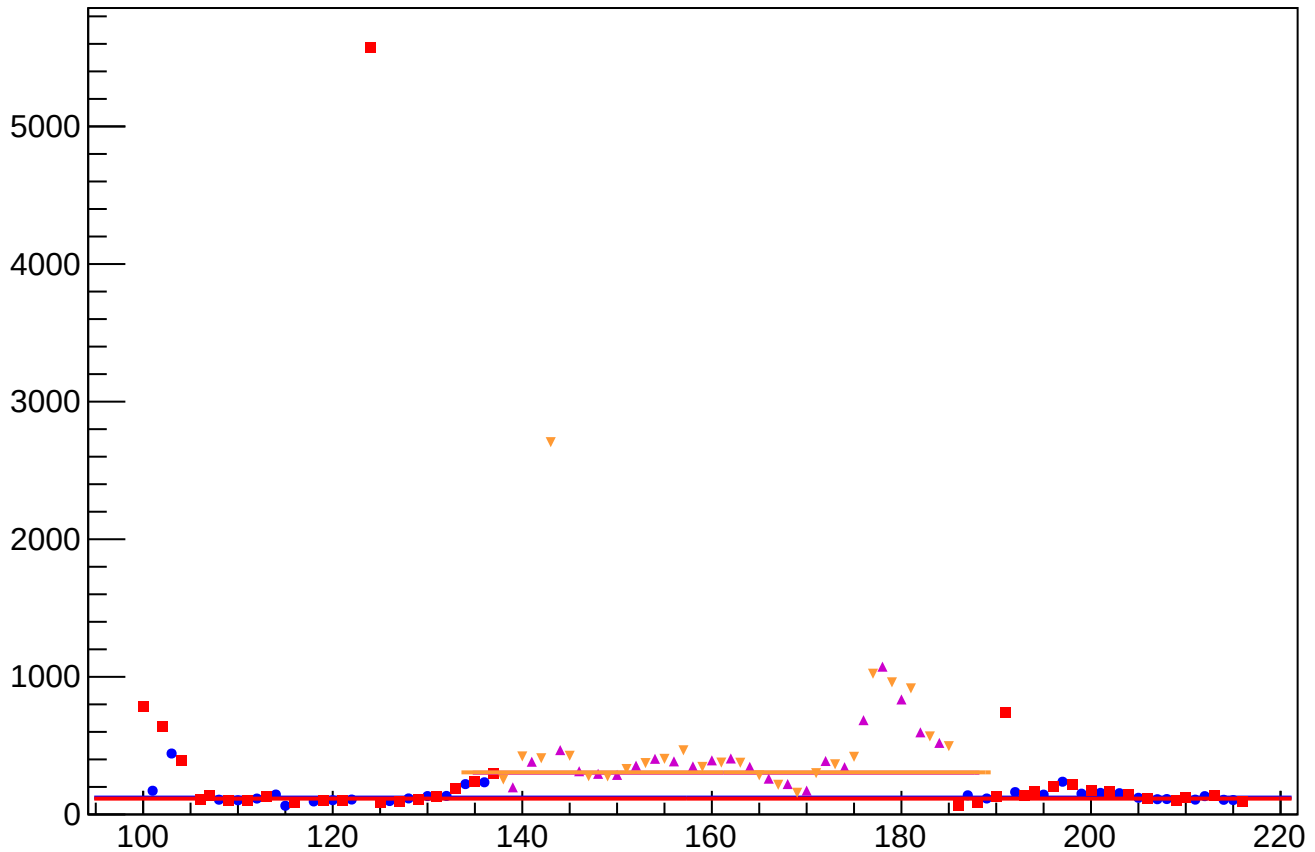
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.017 \pm 0.028$   $\chi^2/\text{NDF}$ : 56.4/55

All:  $0.020 \pm 0.019$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $0.023 \pm 0.027$   $\chi^2/\text{NDF}$ : 68.7/57

asym\_atr1l2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 122.583+/-0.021  $\chi^2/\text{NDF}$ : 2622301.6/30

Left Out: 305.950+/-0.055  $\chi^2/\text{NDF}$ : 6634928.0/24

Right Out: 115.153+/-0.020  $\chi^2/\text{NDF}$ : 4526941.2/34

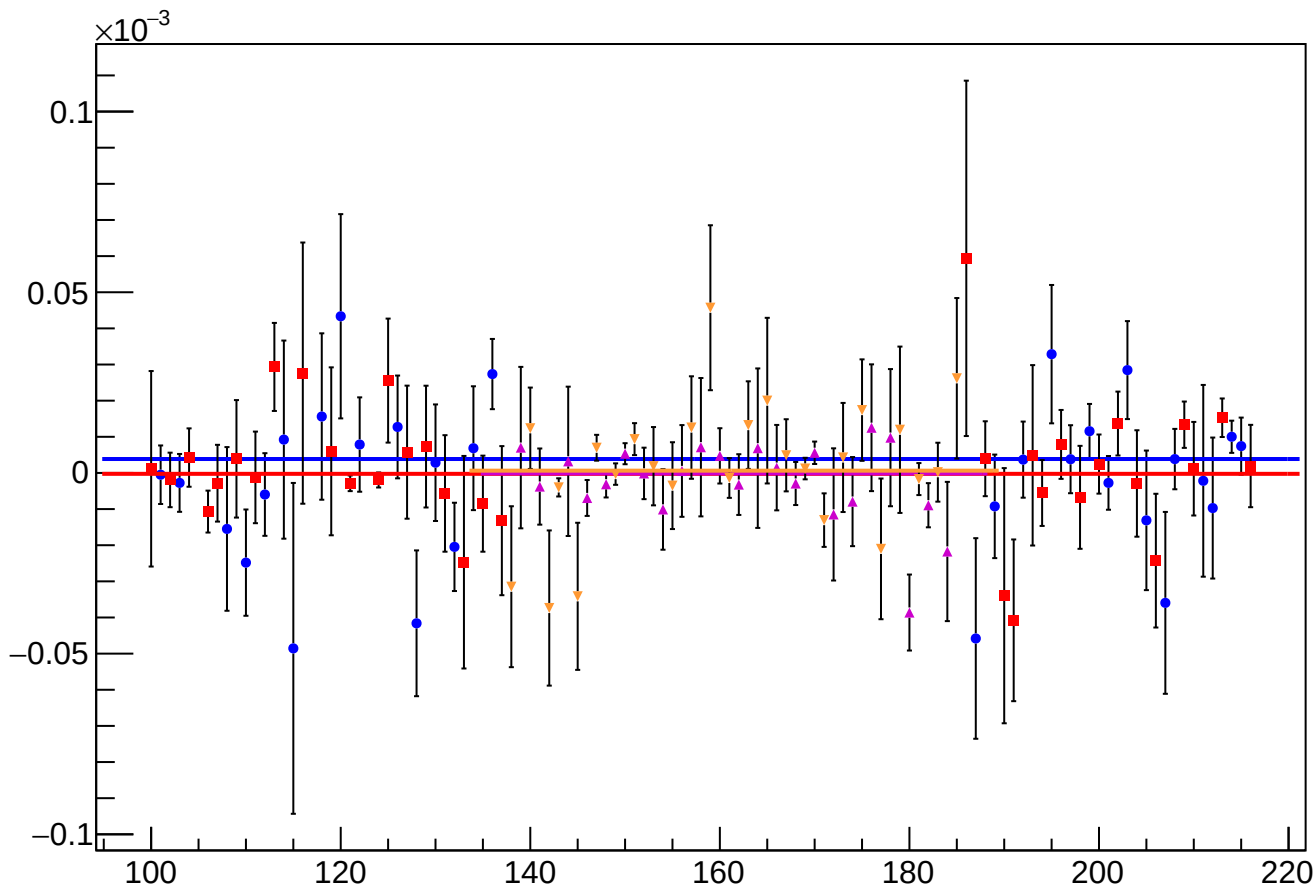
Left In: 303.278+/-0.055  $\chi^2/\text{NDF}$ : 4813442.3/22

+ sign 145.951+/-0.020  $\chi^2/\text{NDF}$ : 18917317.9/55

All: 141.917+/-0.014  $\chi^2/\text{NDF}$ : 38737633.1/11

- sign 138.116+/-0.019  $\chi^2/\text{NDF}$ : 19738652.1/57

asym\_atr1l2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.0/34

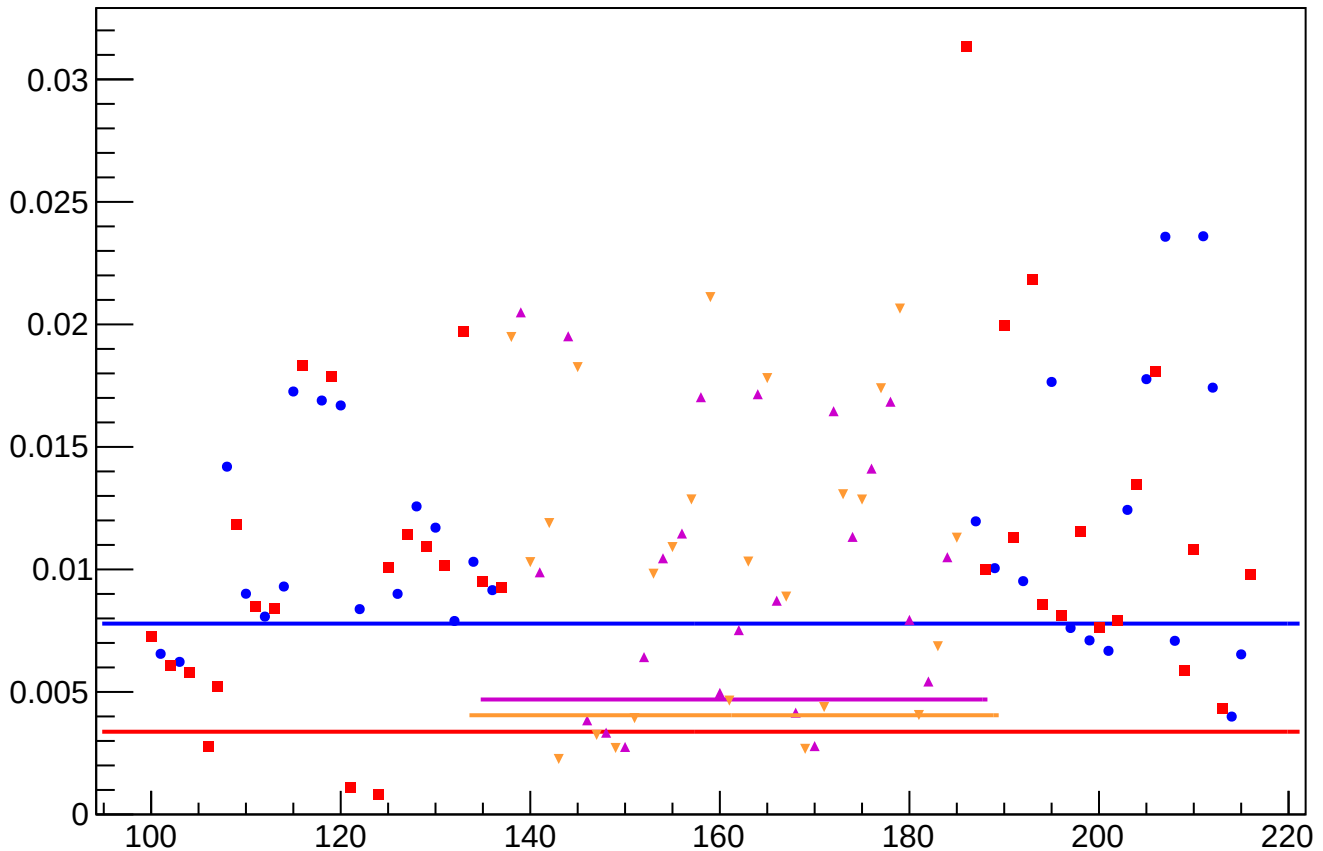
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 79.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 151.5/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.9/57

asym\_atr1l2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6244871.3/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:13552895.5/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 20744107.0/34

Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:10859759.8/22

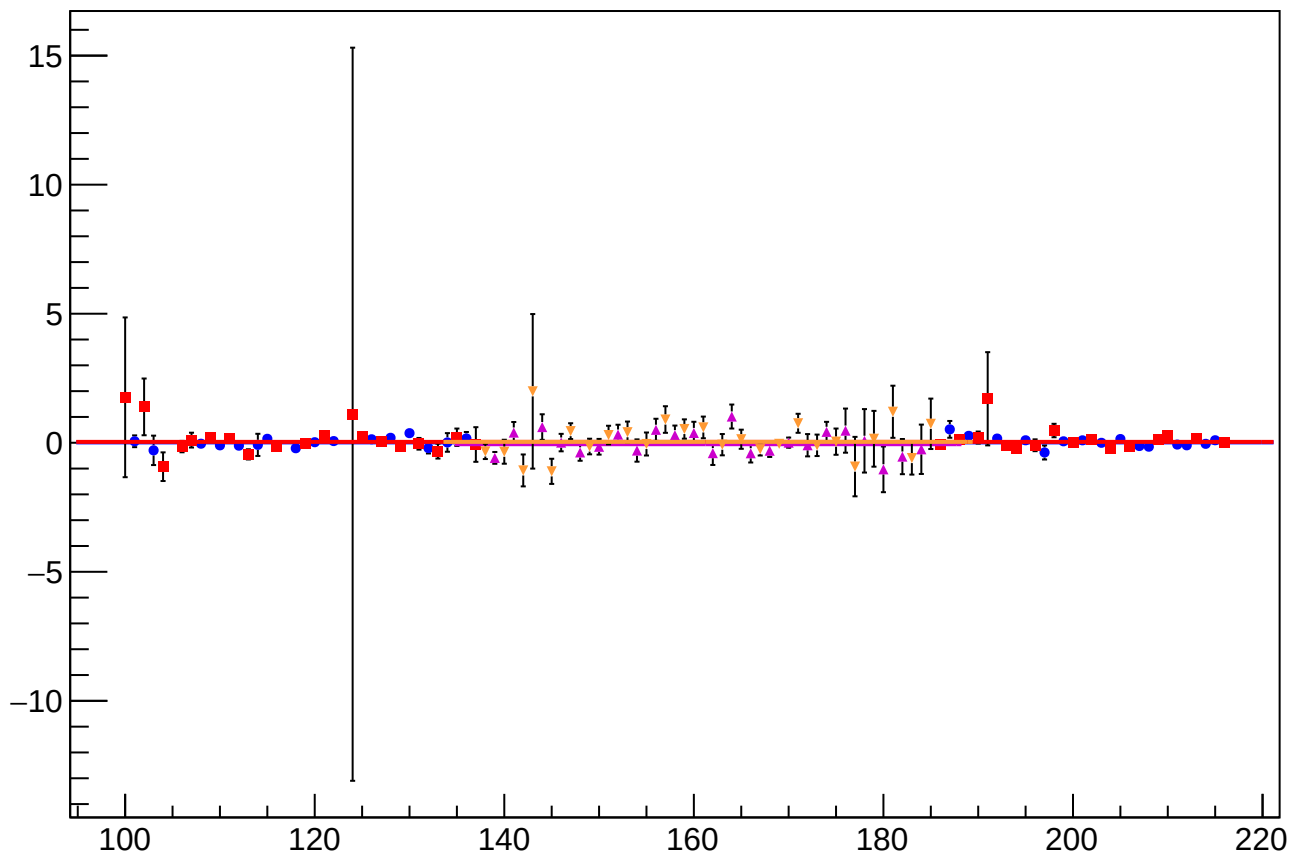
+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 24913593.9/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 58828660.4/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 32630463.1/57



# asym\_atr1l2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.030$   $\chi^2/\text{NDF}$ : 25.9/30

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.034 \pm 0.029$   $\chi^2/\text{NDF}$ : 41.4/34

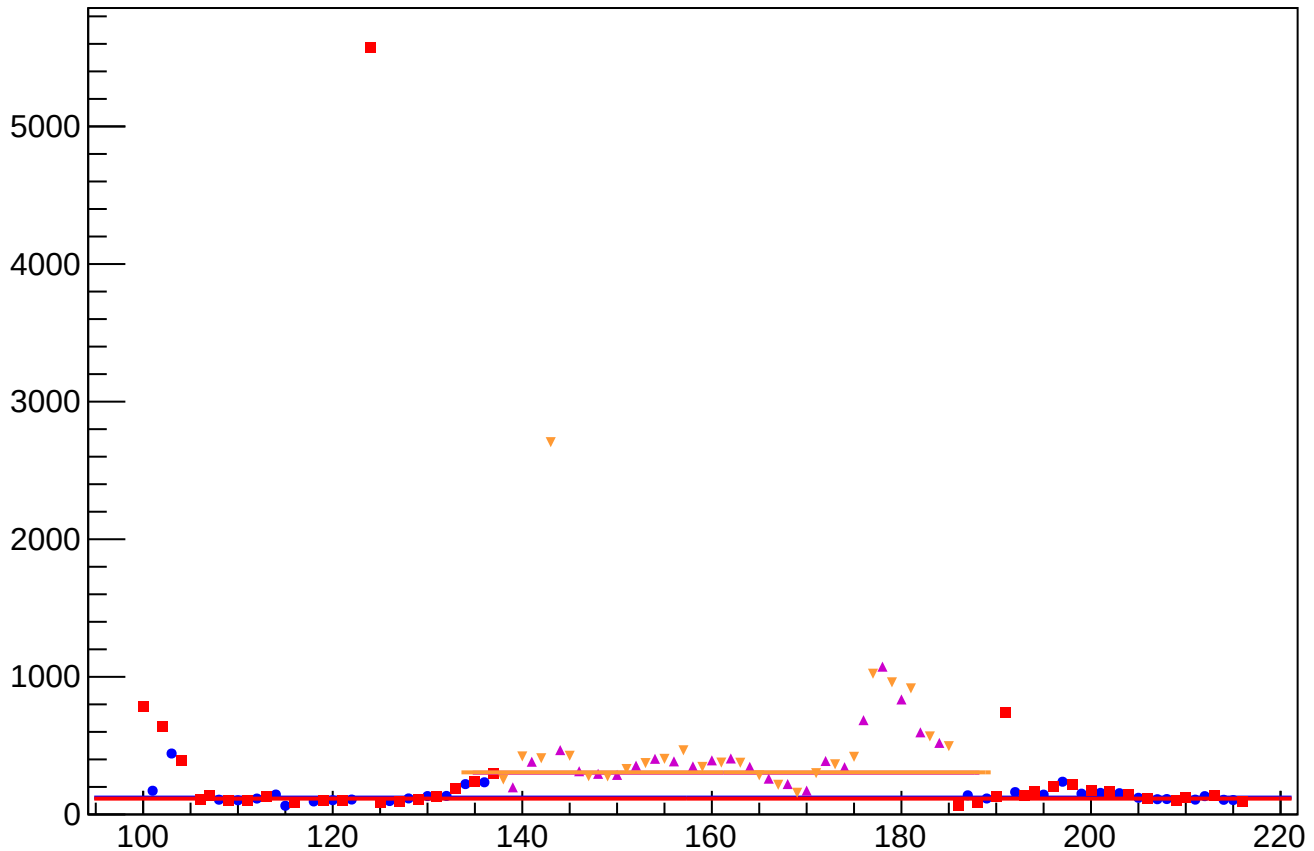
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $0.017 \pm 0.028$   $\chi^2/\text{NDF}$ : 56.4/55

All:  $0.020 \pm 0.019$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $0.023 \pm 0.027$   $\chi^2/\text{NDF}$ : 68.7/57

asym\_atr1l2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 122.584+/-0.021  $\chi^2/\text{NDF}$ : 2622275.8/30

Left Out: 305.951+/-0.055  $\chi^2/\text{NDF}$ : 6634999.6/24

Right Out: 115.154+/-0.020  $\chi^2/\text{NDF}$ : 4526791.8/34

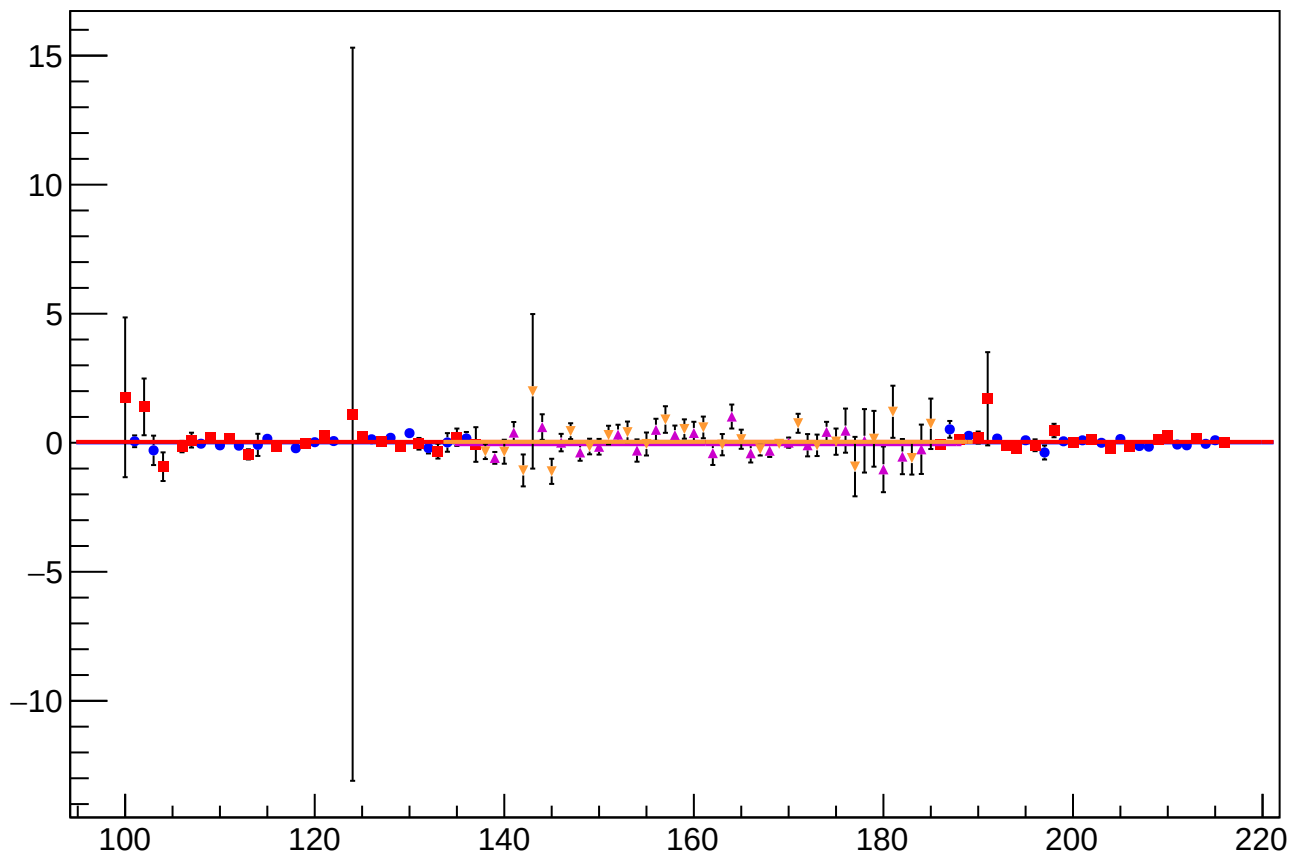
Left In: 303.281+/-0.055  $\chi^2/\text{NDF}$ : 4813426.5/22

+ sign 145.953+/-0.020  $\chi^2/\text{NDF}$ : 18917303.0/55

All: 141.918+/-0.014  $\chi^2/\text{NDF}$ : 38737487.0/11

- sign 138.117+/-0.019  $\chi^2/\text{NDF}$ : 19738517.9/57

asym\_atr1l2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.014 \pm 0.030$   $\chi^2/\text{NDF}$ : 25.9/30

Left Out:  $0.034 \pm 0.078$   $\chi^2/\text{NDF}$ : 30.5/24

Right Out:  $0.034 \pm 0.029$   $\chi^2/\text{NDF}$ : 41.4/34

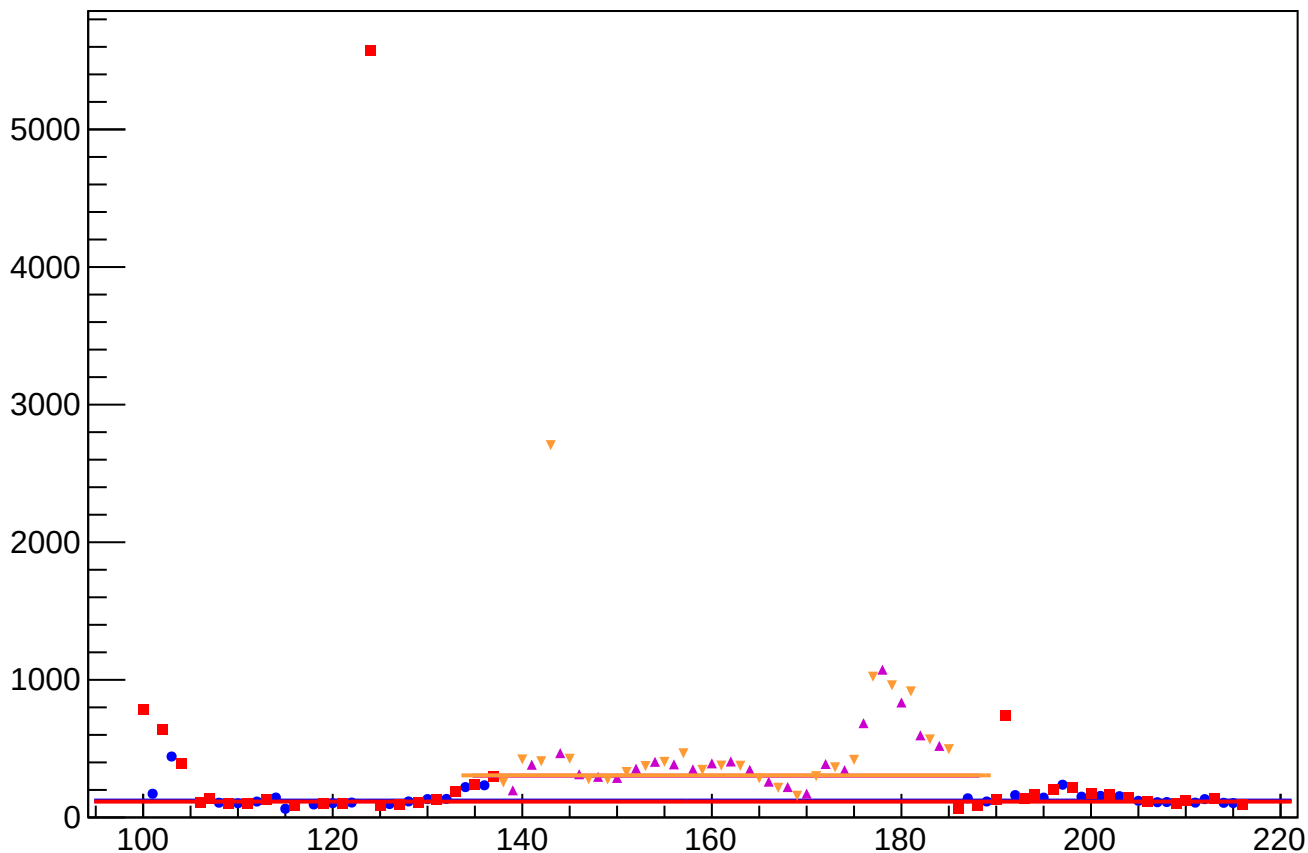
Left In:  $-0.056 \pm 0.077$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $0.017 \pm 0.028$   $\chi^2/\text{NDF}$ : 56.4/55

All:  $0.020 \pm 0.019$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $0.023 \pm 0.027$   $\chi^2/\text{NDF}$ : 68.7/57

asym\_atr1l2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 122.584 $\pm$ 0.021  $\chi^2$ /NDF: 2622275.8/30

Left Out: 305.951 $\pm$ 0.055  $\chi^2$ /NDF: 6634999.6/24

Right Out: 115.154 $\pm$ 0.020  $\chi^2$ /NDF: 4526791.8/34

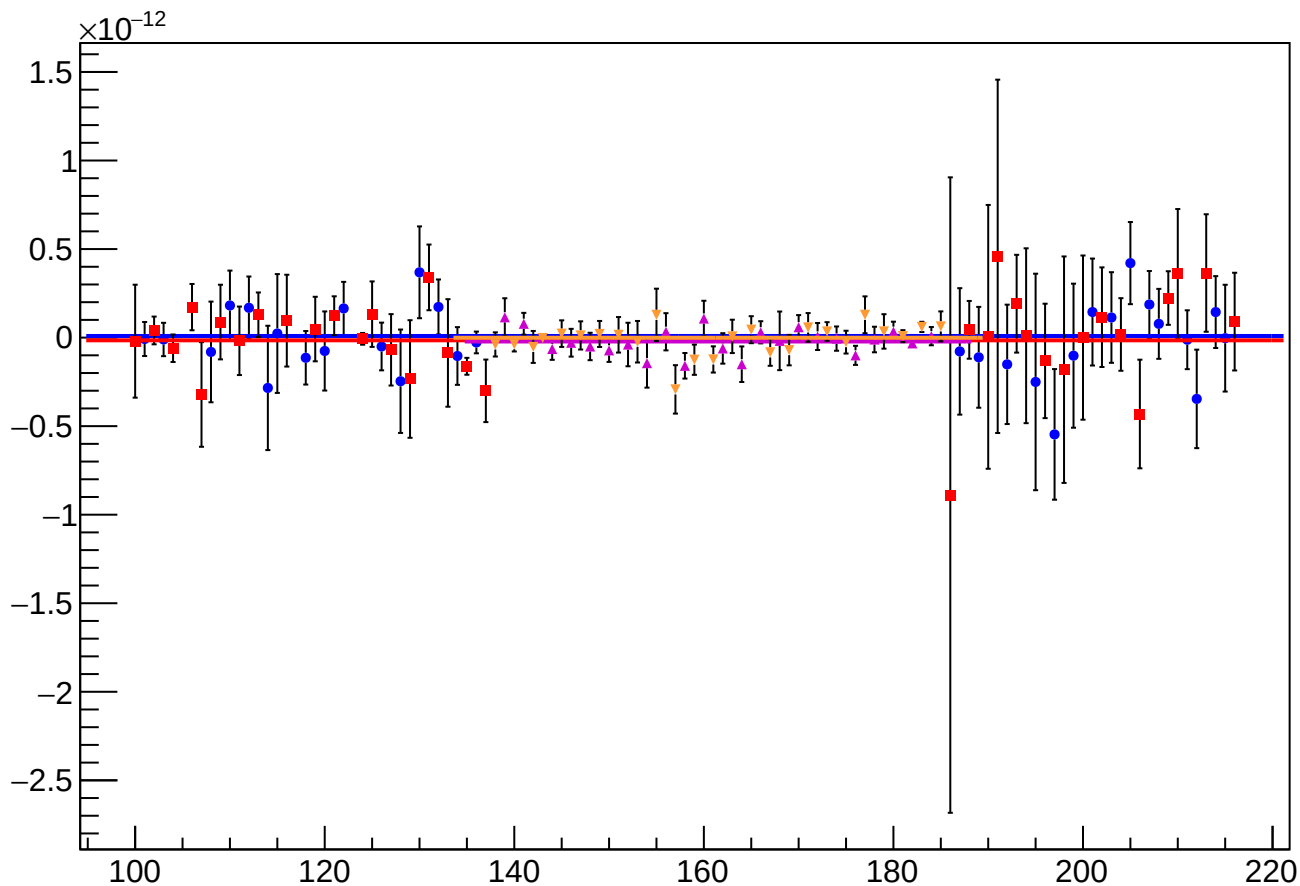
Left In: 303.281 $\pm$ 0.055  $\chi^2$ /NDF: 4813426.5/22

+ sign 145.953 $\pm$ 0.020  $\chi^2$ /NDF: 18917303.0/55

All: 141.918 $\pm$ 0.014  $\chi^2$ /NDF: 38737487.0/1

- sign 138.117 $\pm$ 0.019  $\chi^2$ /NDF: 19738517.9/57

asym\_atr1l2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.8/34

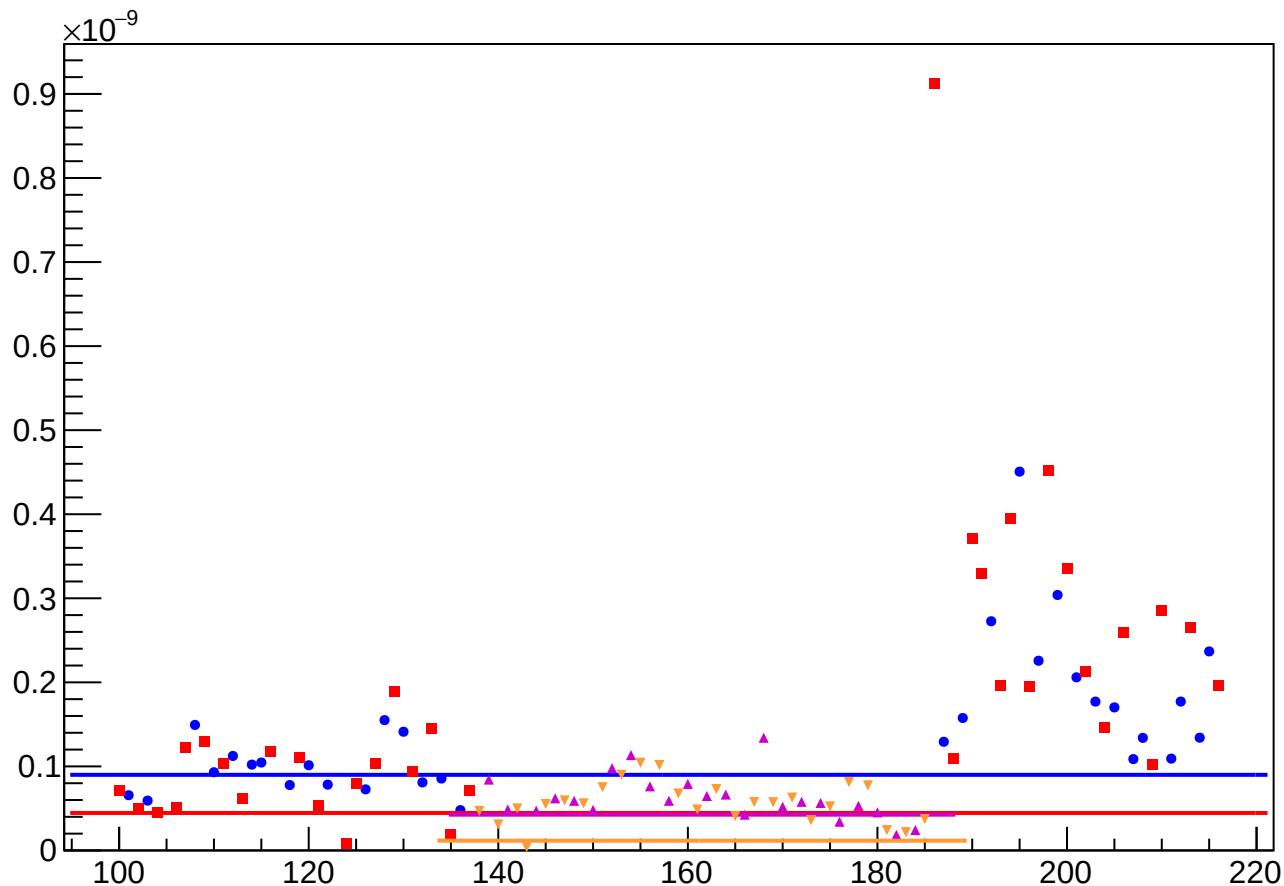
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.9/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 95.8/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.5/57

asym\_atr1l2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5573663.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17863822.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14904779.1/34

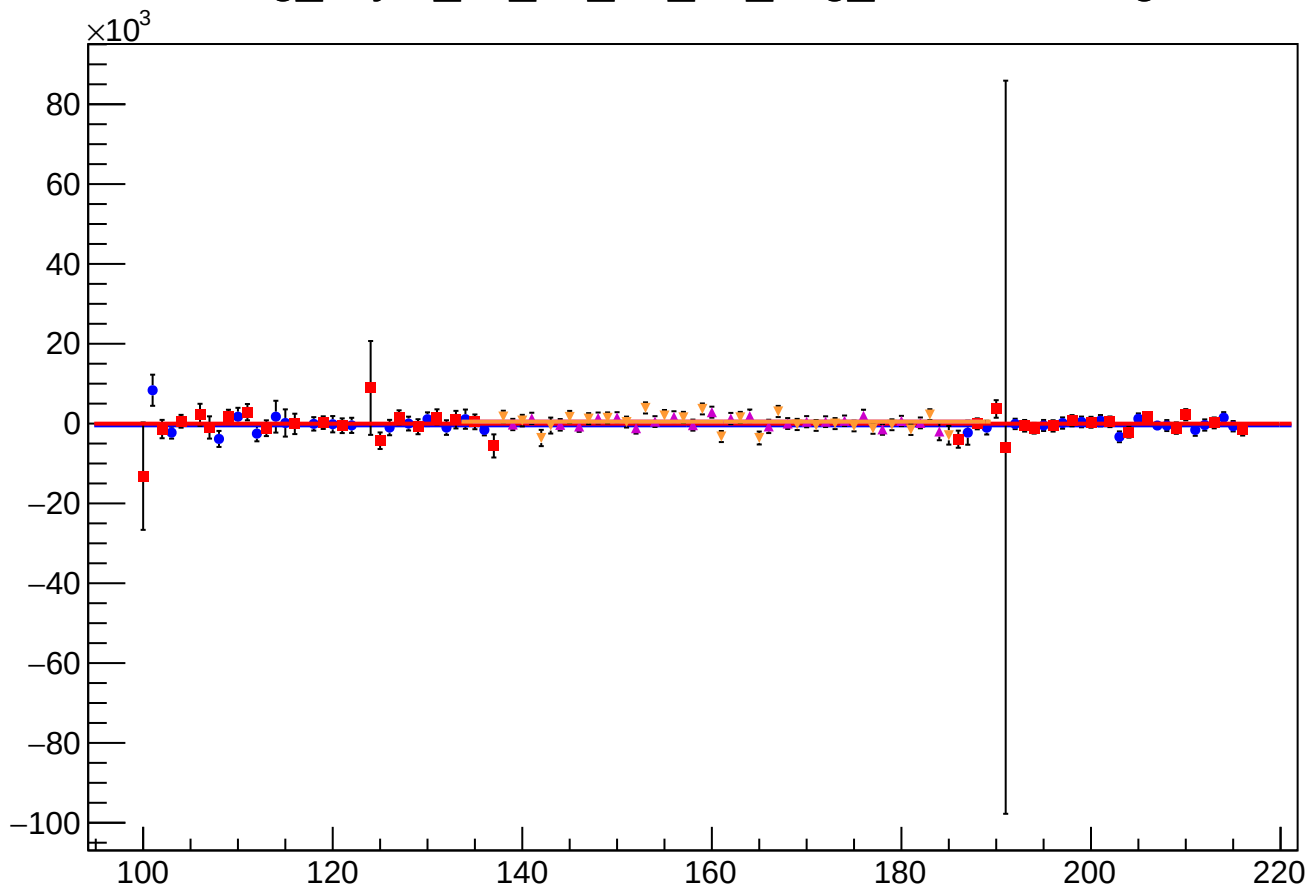
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5419961.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36113086.6/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66892048.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20338699.5/57

reg\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-438.594 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.969 \pm 294.665$   $\chi^2/\text{NDF}$ : 32.2/34

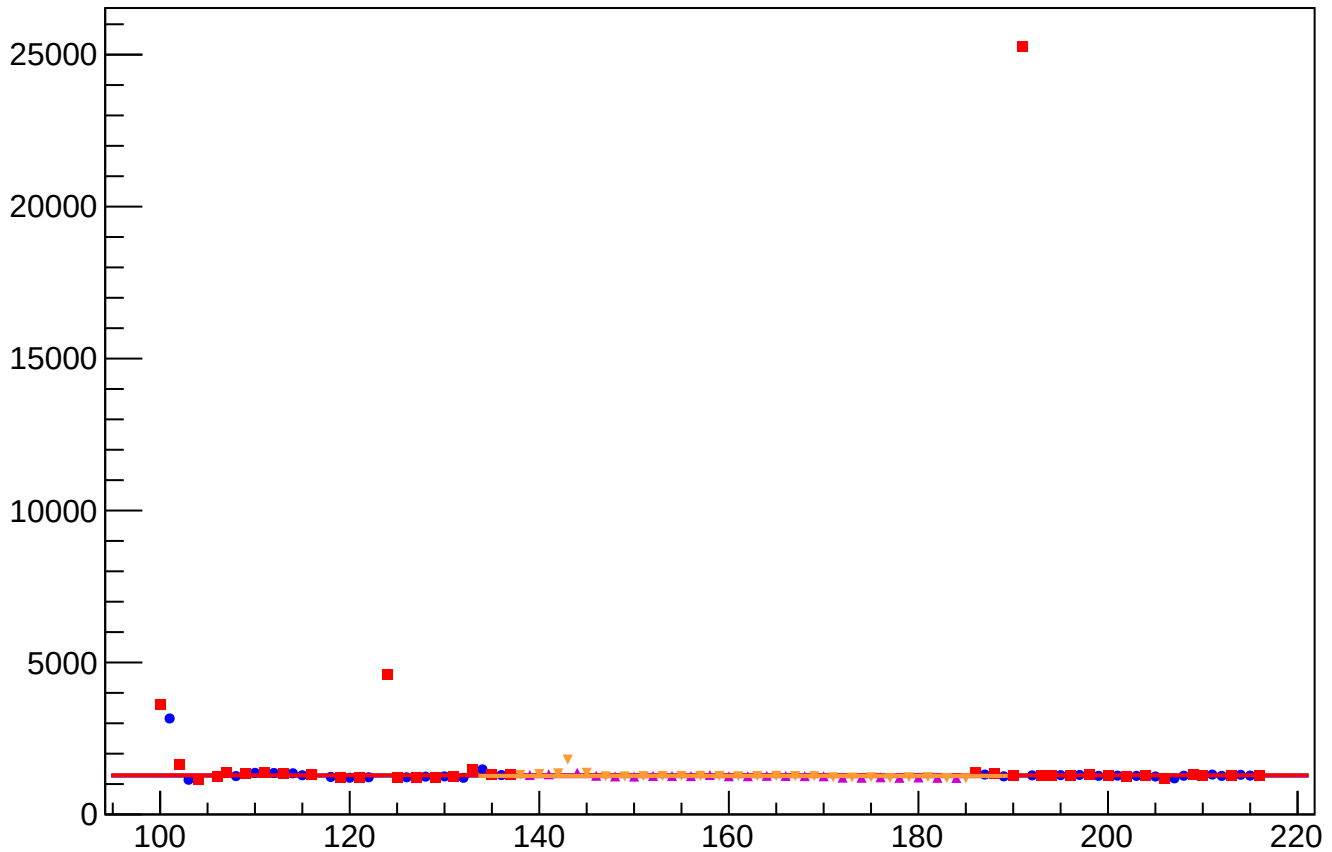
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.321 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $133.352 \pm 146.256$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $234.696 \pm 208.042$   $\chi^2/\text{NDF}$ : 48.1/57

# reg\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1278.671 $\pm$ 0.207  $\chi^2$ /NDF: 530240.2/30

Left Out: 1266.967 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.416 $\pm$ 0.208  $\chi^2$ /NDF: 483049.1/34

Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.4/22

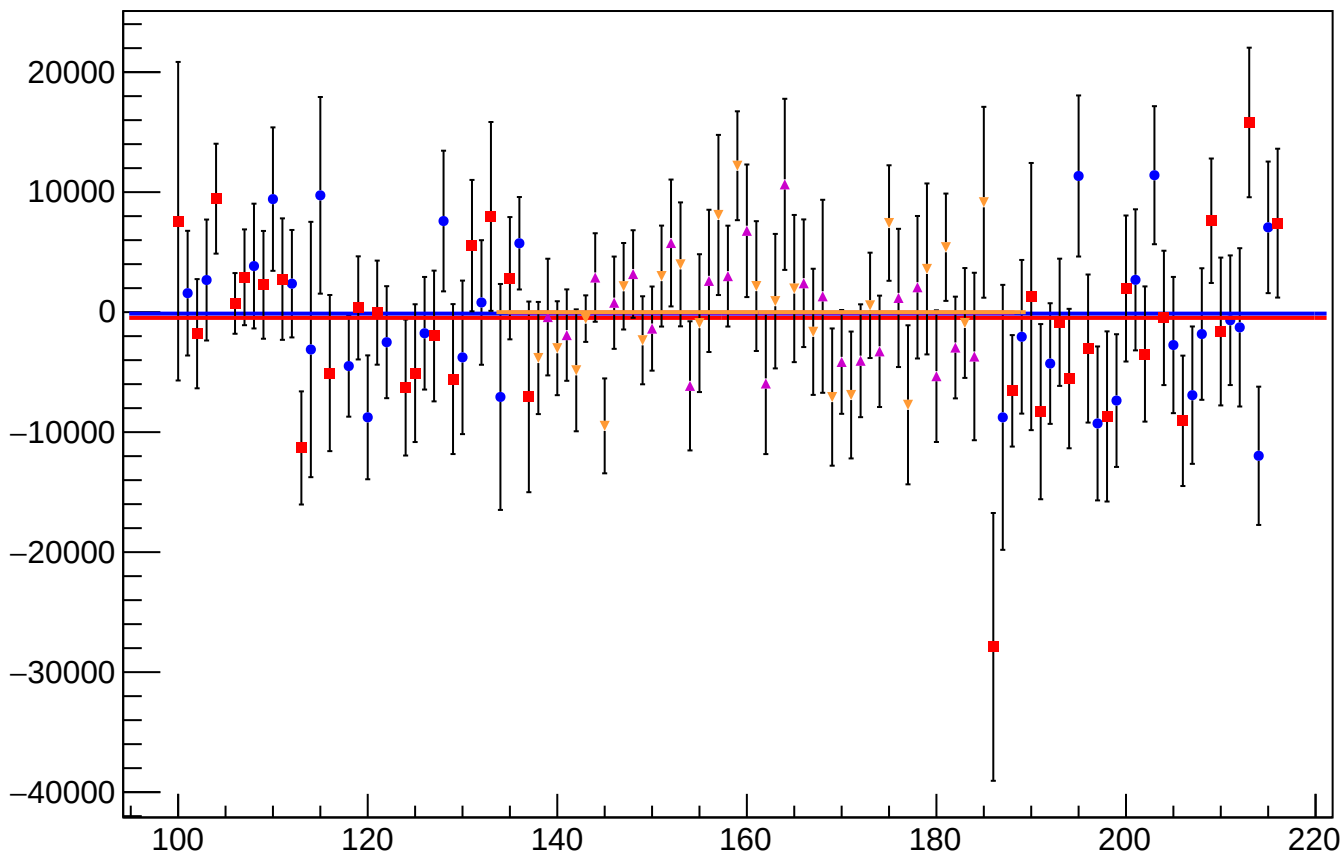
+ sign 1272.724 $\pm$ 0.145  $\chi^2$ /NDF: 719404.7/55

All: 1272.837 $\pm$ 0.103  $\chi^2$ /NDF: 1250287.1/11

- sign 1272.952 $\pm$ 0.147  $\chi^2$ /NDF: 530881.2/57



asym\_atl\_dd\_atr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-123.063 \pm 1002.318$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-0.604 \pm 886.488$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-479.384 \pm 897.222$   $\chi^2/\text{NDF}$ : 43.7/34

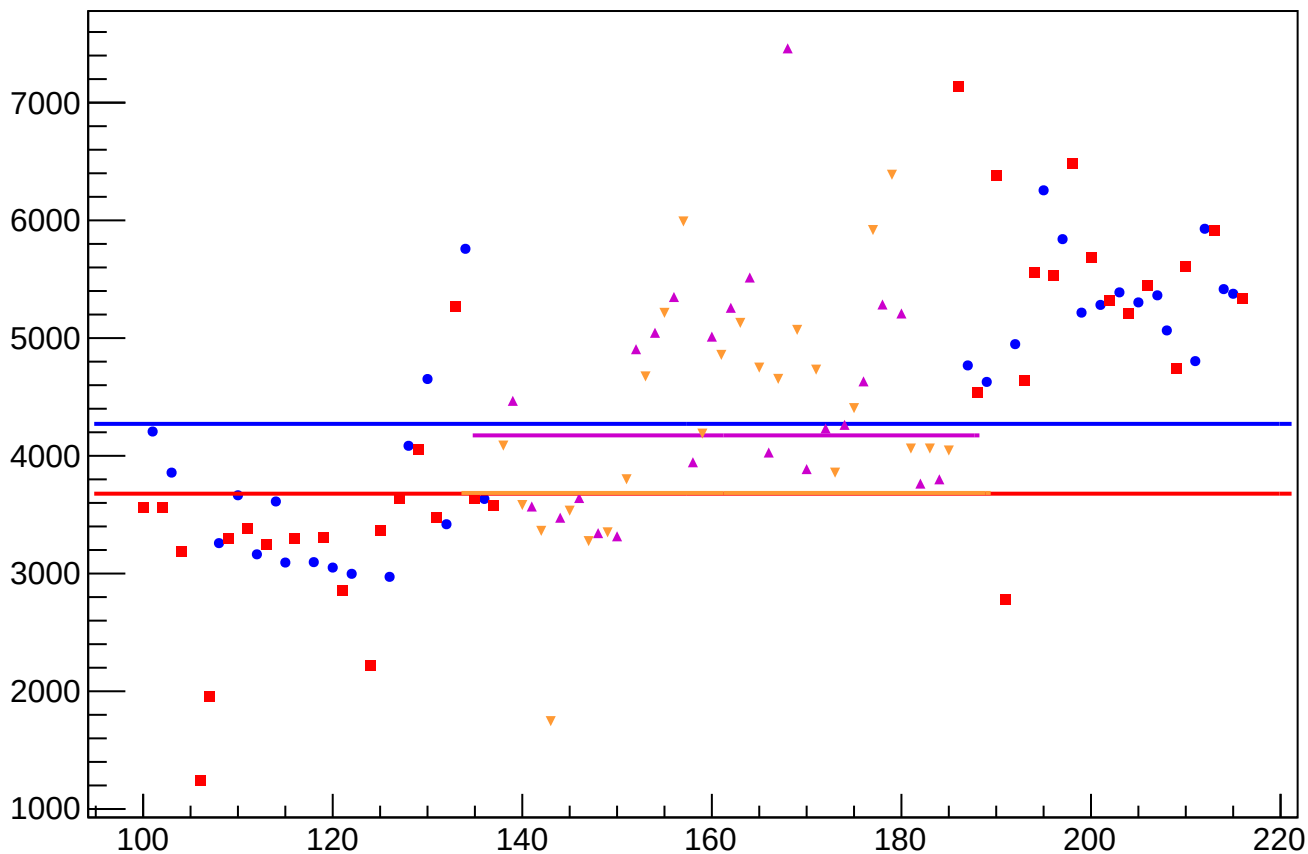
Left In:  $-31.593 \pm 995.348$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-54.352 \pm 664.035$   $\chi^2/\text{NDF}$ : 63.7/55

All:  $-166.094 \pm 470.388$   $\chi^2/\text{NDF}$ : 121.6/113

- sign  $-278.643 \pm 666.431$   $\chi^2/\text{NDF}$ : 57.8/57

asym\_atl\_dd\_atr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 4271.434+/-0.709  $\chi^2/\text{NDF}$ : 2039285.0/30

Left Out: 3684.769+/-0.627  $\chi^2/\text{NDF}$ : 3693646.6/24

Right Out: 3678.435+/-0.634  $\chi^2/\text{NDF}$ : 5224633.4/34

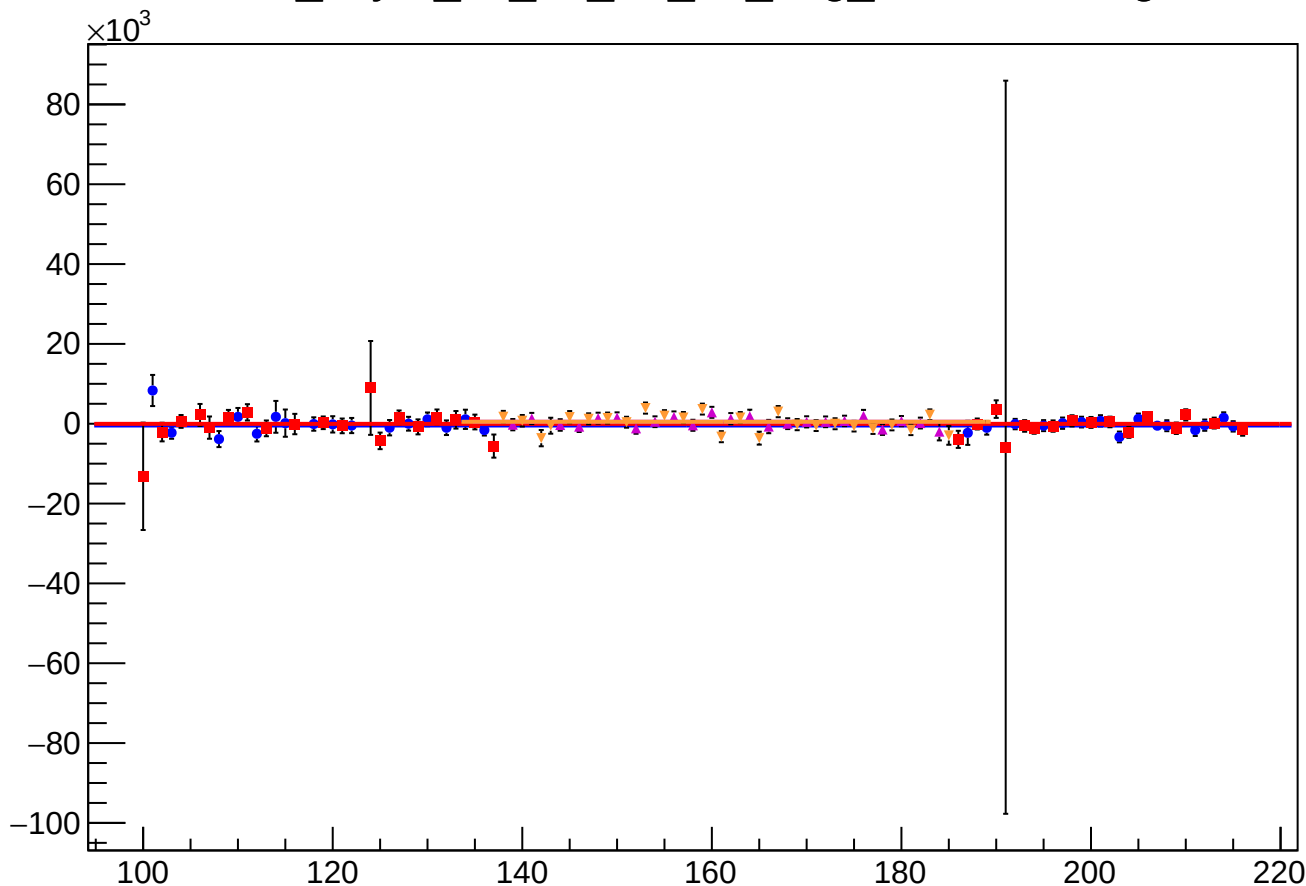
Left In: 4173.556+/-0.704  $\chi^2/\text{NDF}$ : 1274968.4/22

+ sign 3942.259+/-0.470  $\chi^2/\text{NDF}$ : 6117377.4/55

All: 3921.401+/-0.333  $\chi^2/\text{NDF}$ : 12893971.5/100

- sign 3900.393+/-0.471  $\chi^2/\text{NDF}$ : 6772633.5/57

cor\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

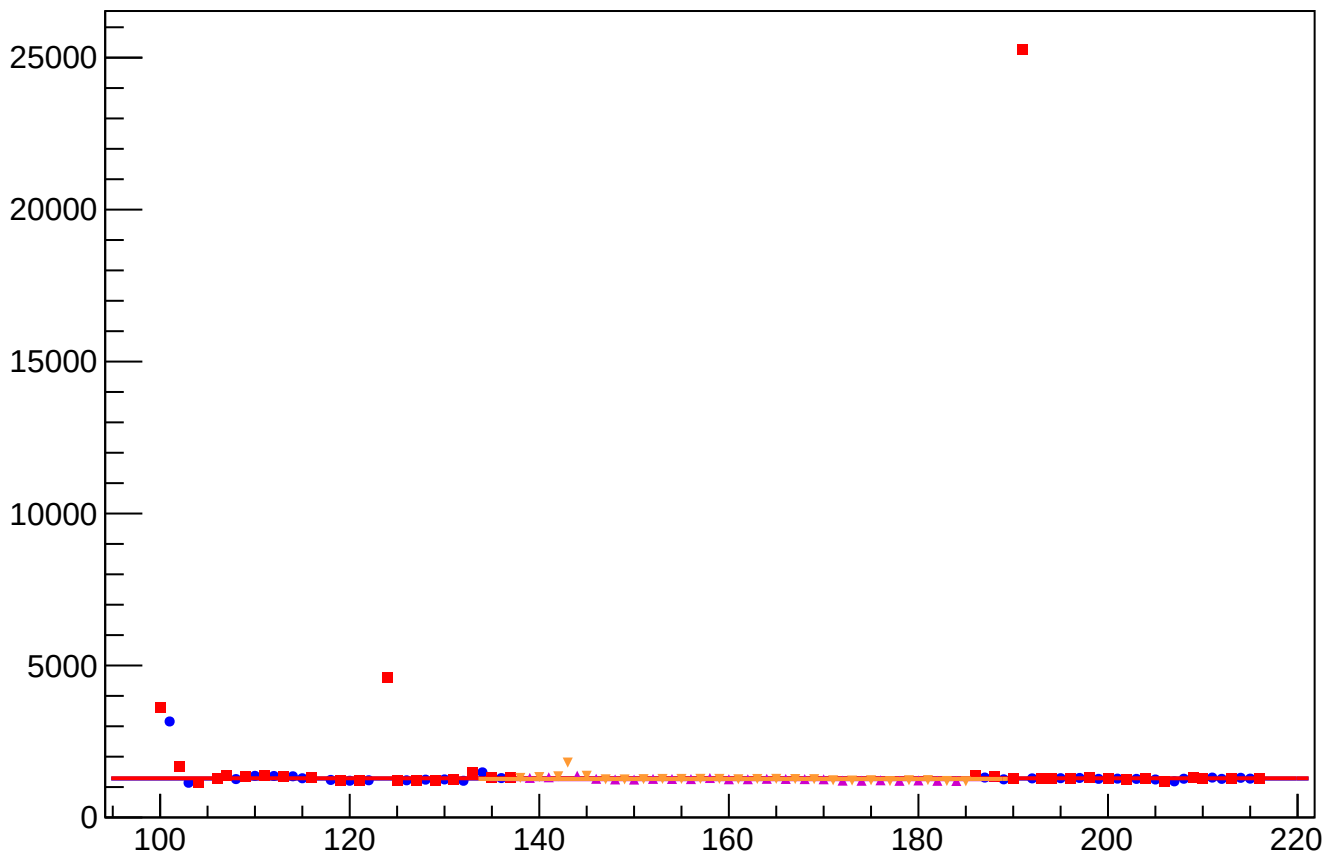
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

# cor\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1278.671+/-0.207  $\chi^2/\text{NDF}$ : 530241.7/30

Left Out: 1266.968+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1289.147+/-0.208  $\chi^2/\text{NDF}$ : 489951.7/34

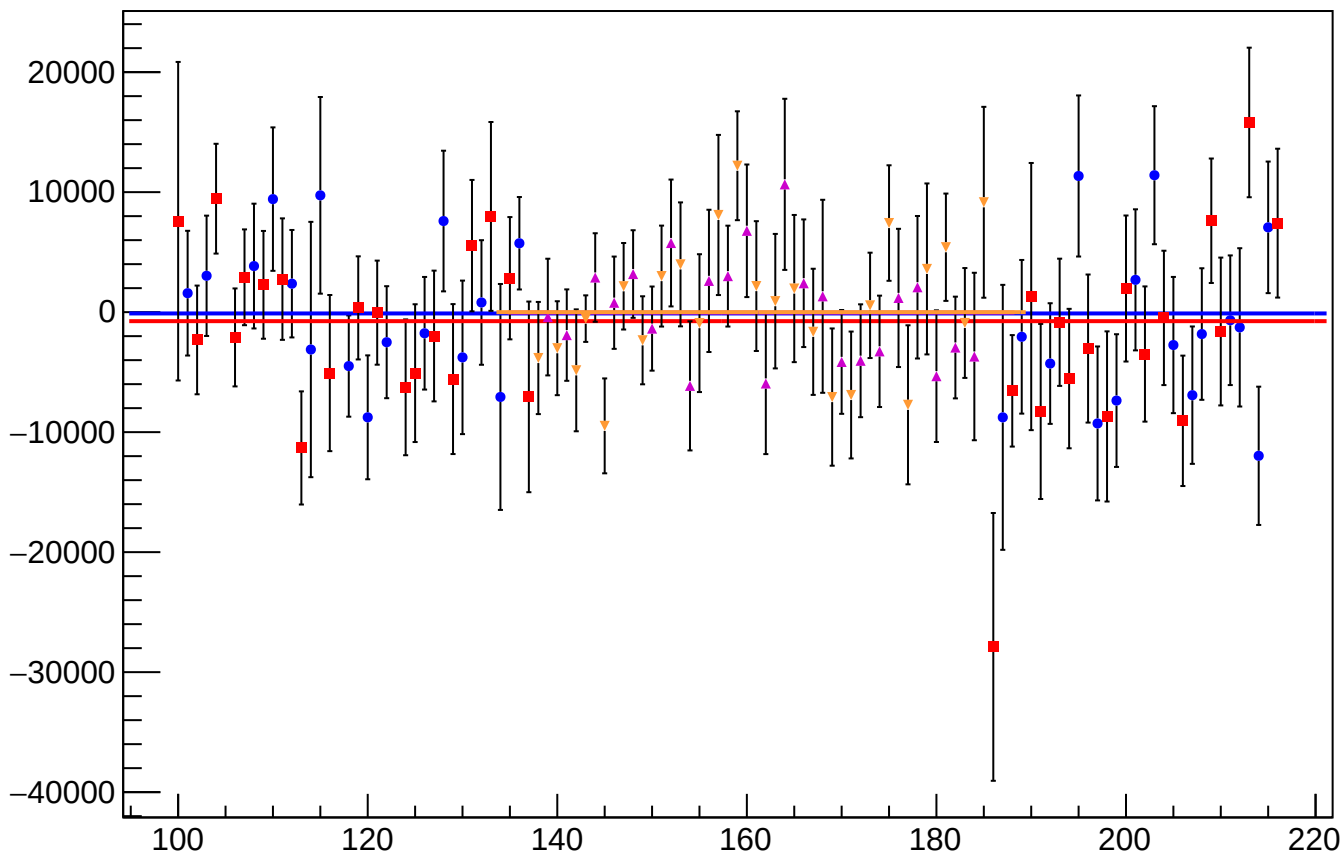
Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.3/22

+ sign 1272.724+/-0.145  $\chi^2/\text{NDF}$ : 719406.1/55

All: 1273.013+/-0.103  $\chi^2/\text{NDF}$ : 1257719.6/11

- sign 1273.308+/-0.147  $\chi^2/\text{NDF}$ : 538305.5/57

asym\_atl\_dd\_atr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}$ : 43.6/34

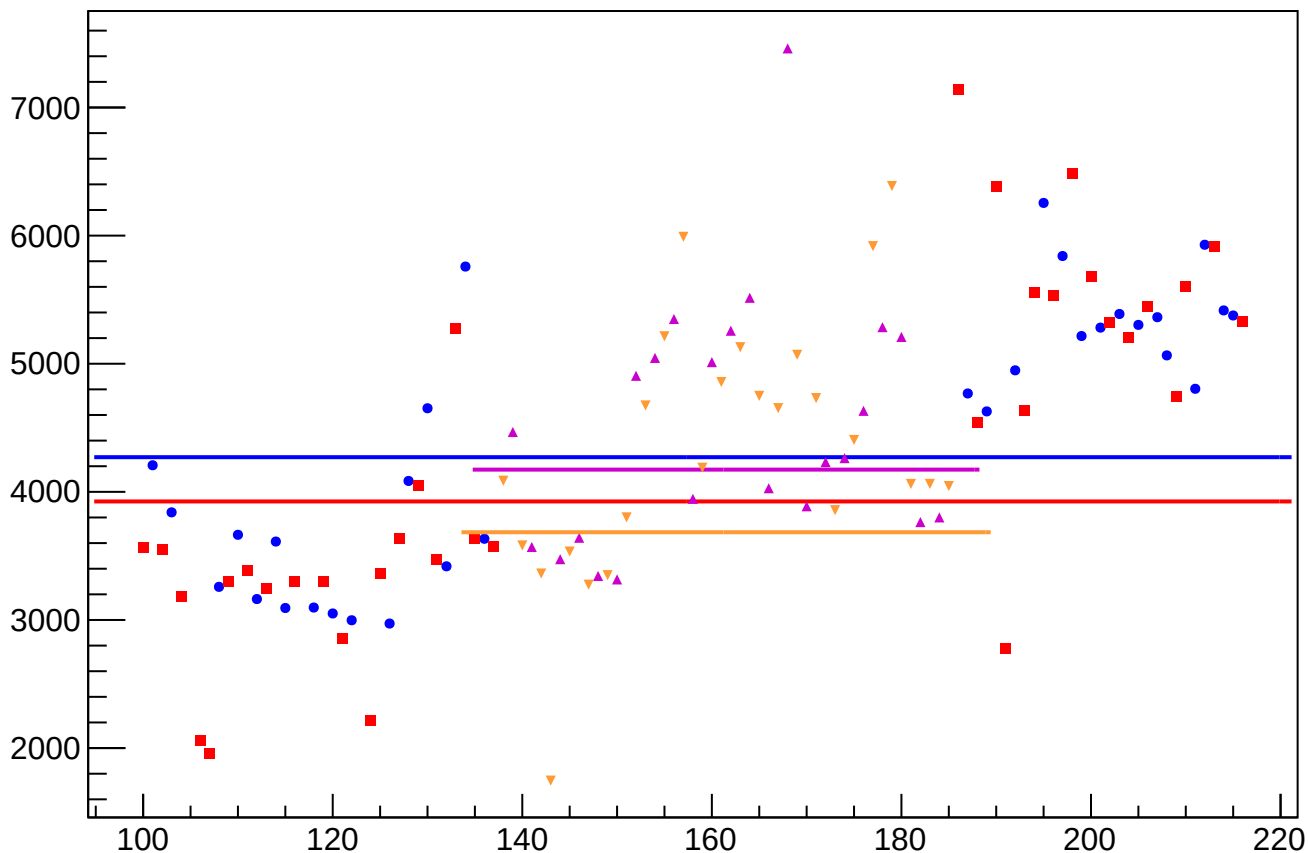
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}$ : 63.8/55

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}$ : 121.8/113

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_atl\_dd\_atr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 4270.610 $\pm$ 0.709  $\chi^2$ /NDF: 2040584.0/30

Left Out: 3684.762 $\pm$ 0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3925.142 $\pm$ 0.660  $\chi^2$ /NDF: 3543440.7/34

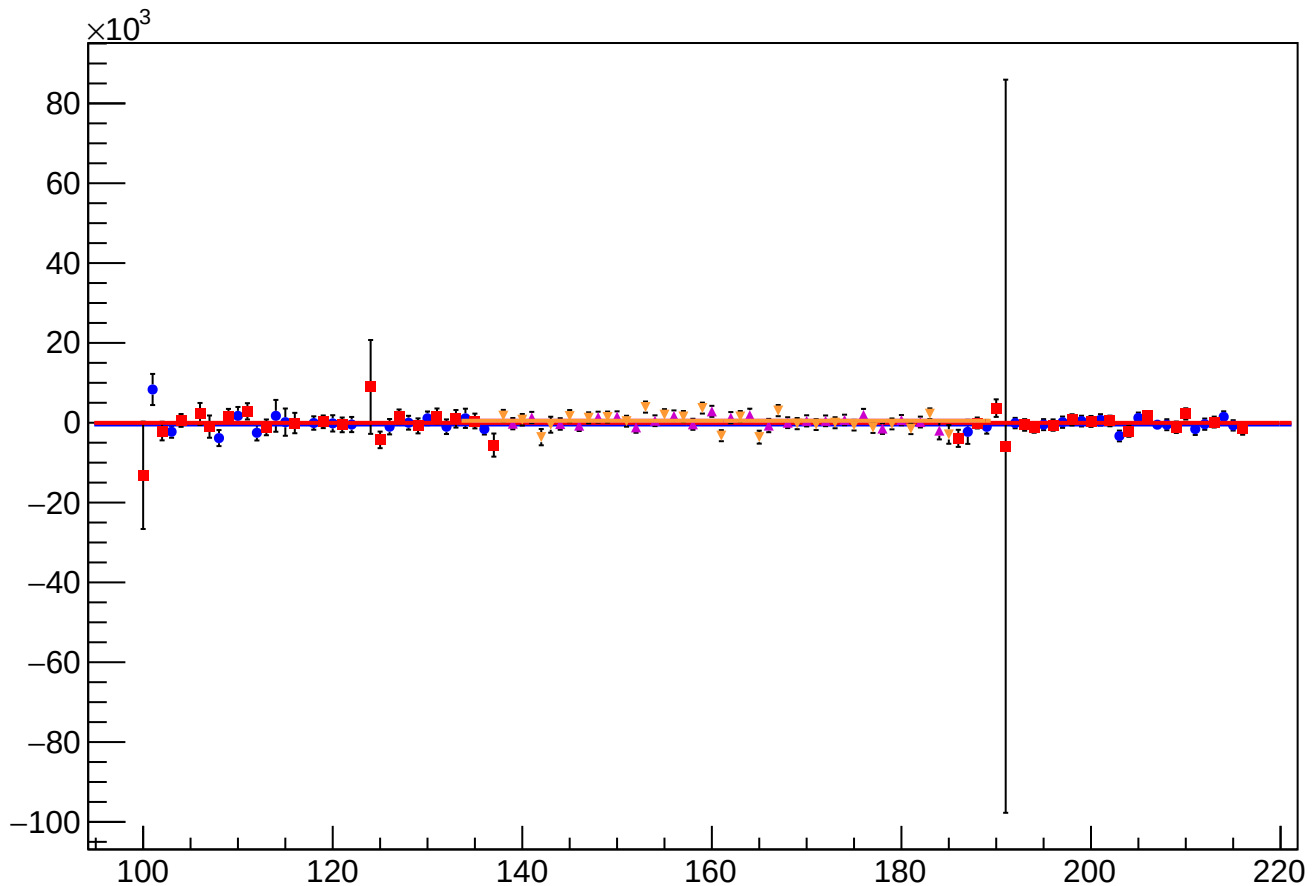
Left In: 4173.550 $\pm$ 0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3941.950 $\pm$ 0.470  $\chi^2$ /NDF: 6117732.5/55

All: 3990.434 $\pm$ 0.336  $\chi^2$ /NDF: 11024271.5/100

- sign 4041.444 $\pm$ 0.482  $\chi^2$ /NDF: 4884655.4/57

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

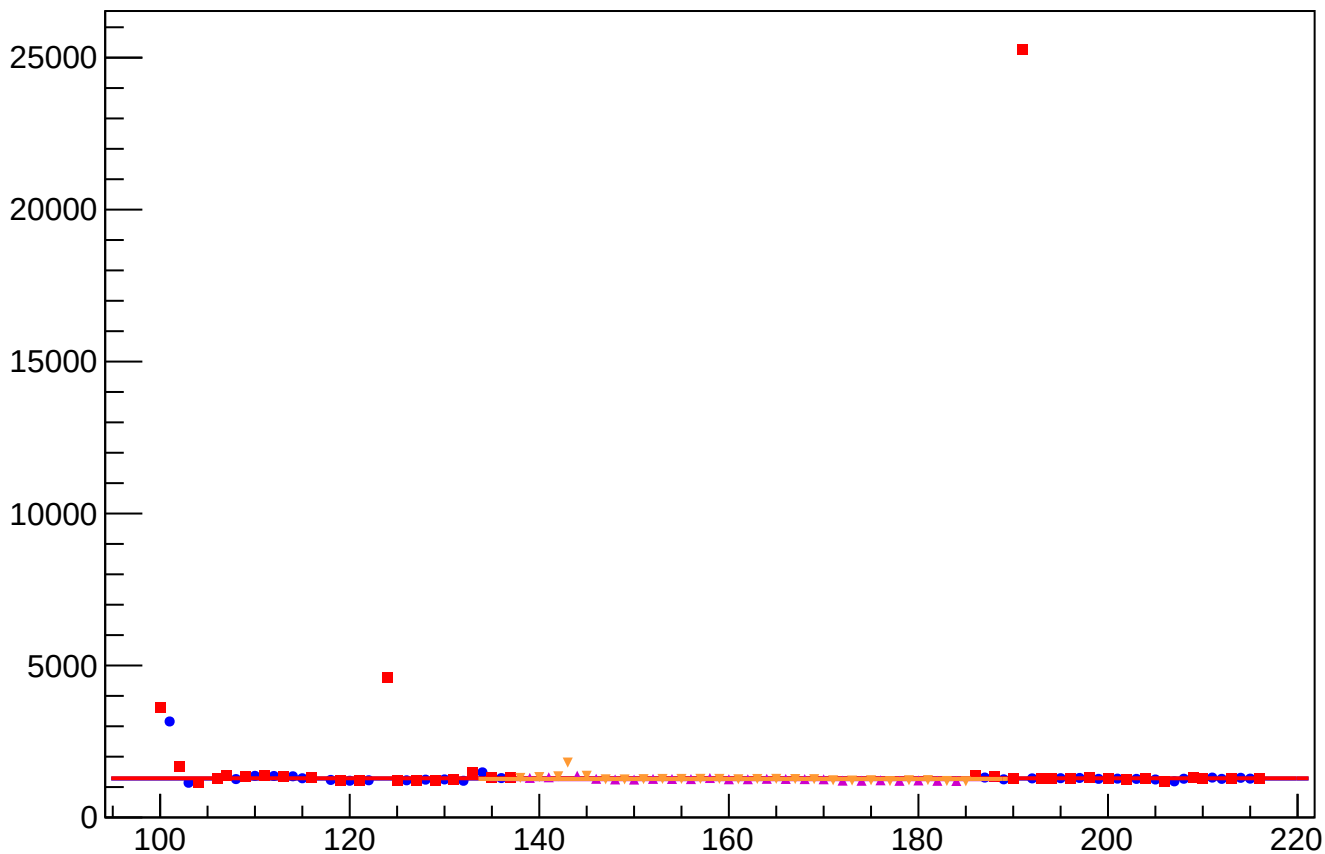
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1278.671+/-0.207  $\chi^2/\text{NDF}$ : 530241.7/30

Left Out: 1266.968+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1289.147+/-0.208  $\chi^2/\text{NDF}$ : 489951.7/34

Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.3/22

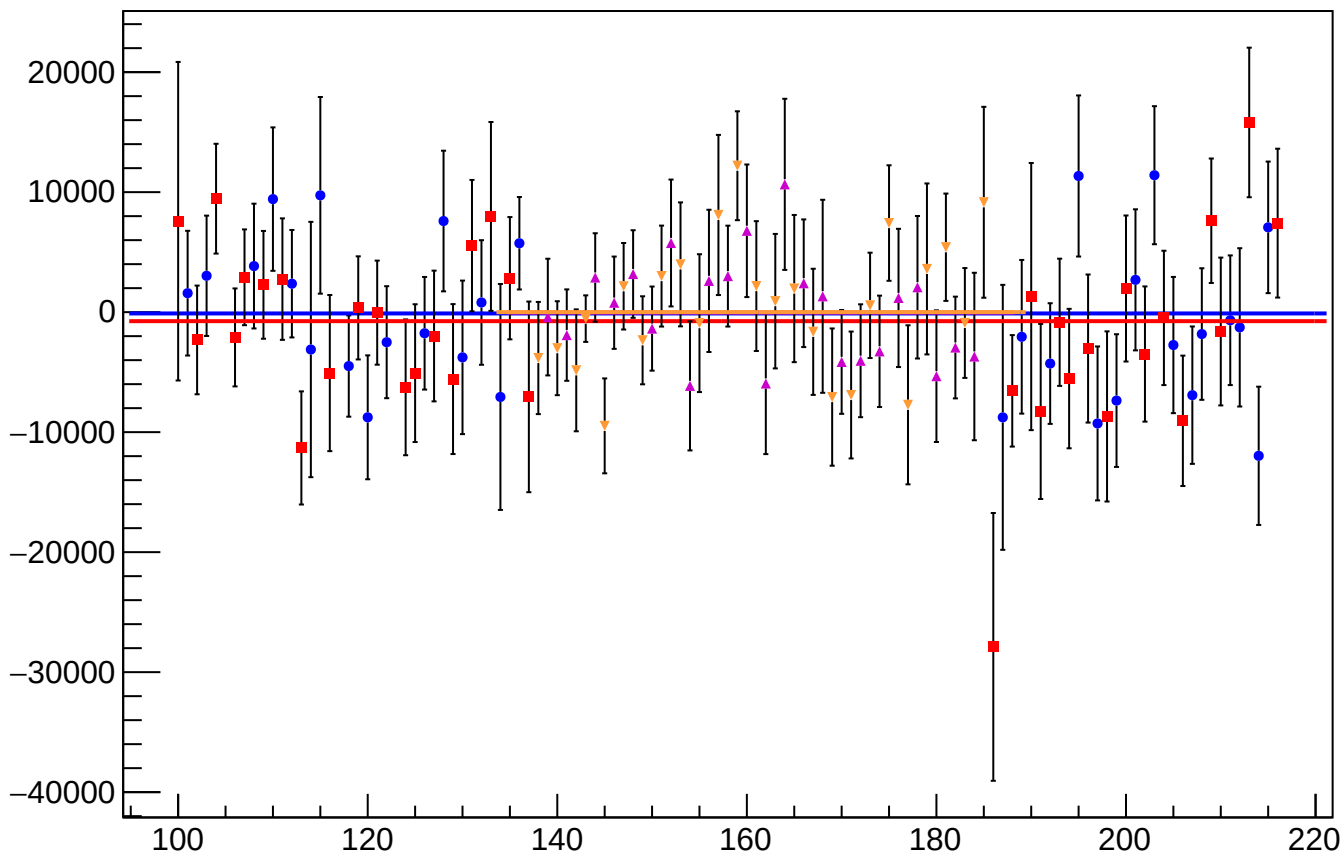
+ sign 1272.724+/-0.145  $\chi^2/\text{NDF}$ : 719406.1/55

All: 1273.013+/-0.103  $\chi^2/\text{NDF}$ : 1257719.6/11

- sign 1273.308+/-0.147  $\chi^2/\text{NDF}$ : 538305.5/57



asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}$ : 43.6/34

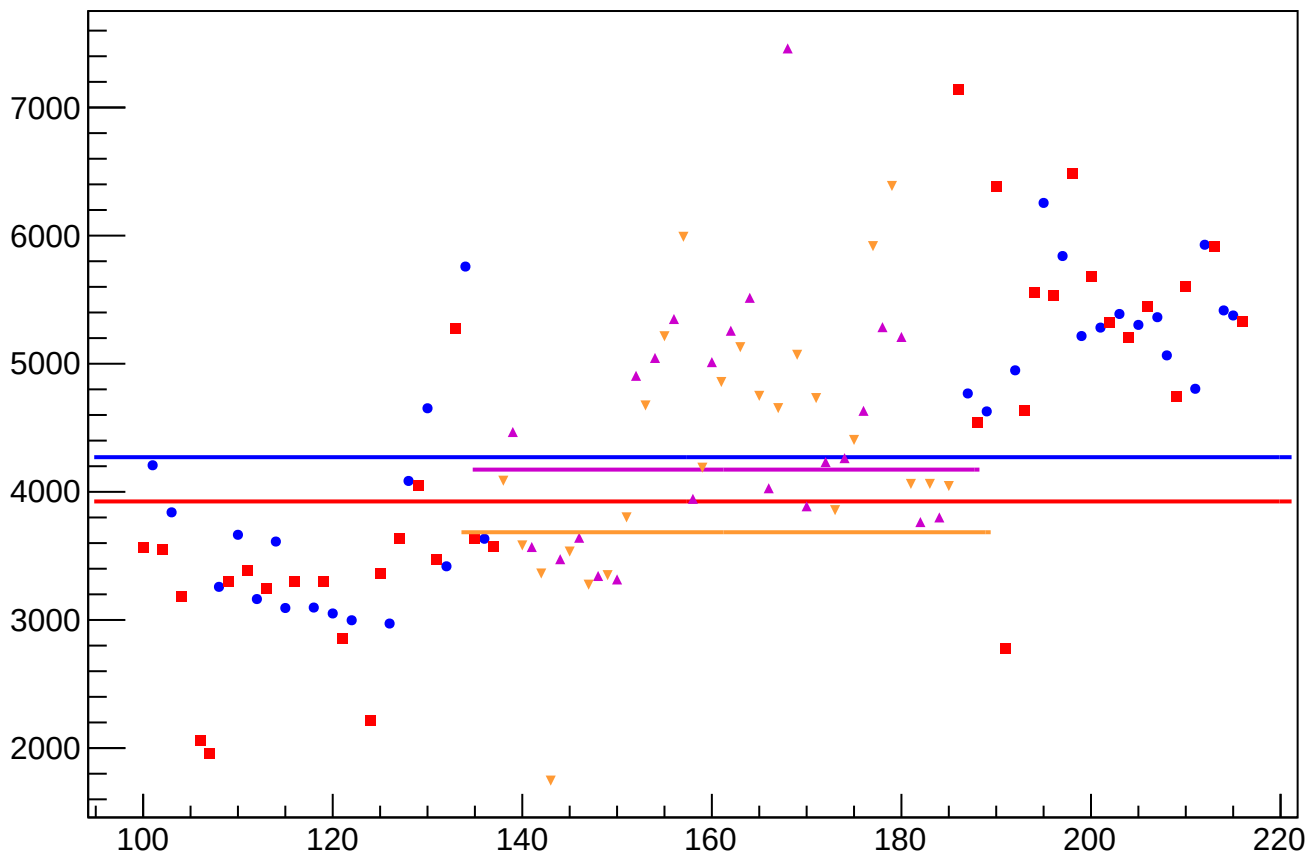
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}$ : 63.8/55

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}$ : 121.8/113

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 4270.610+/-0.709  $\chi^2$ /NDF: 2040584.0/30

Left Out: 3684.762+/-0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3925.142+/-0.660  $\chi^2$ /NDF: 3543440.7/34

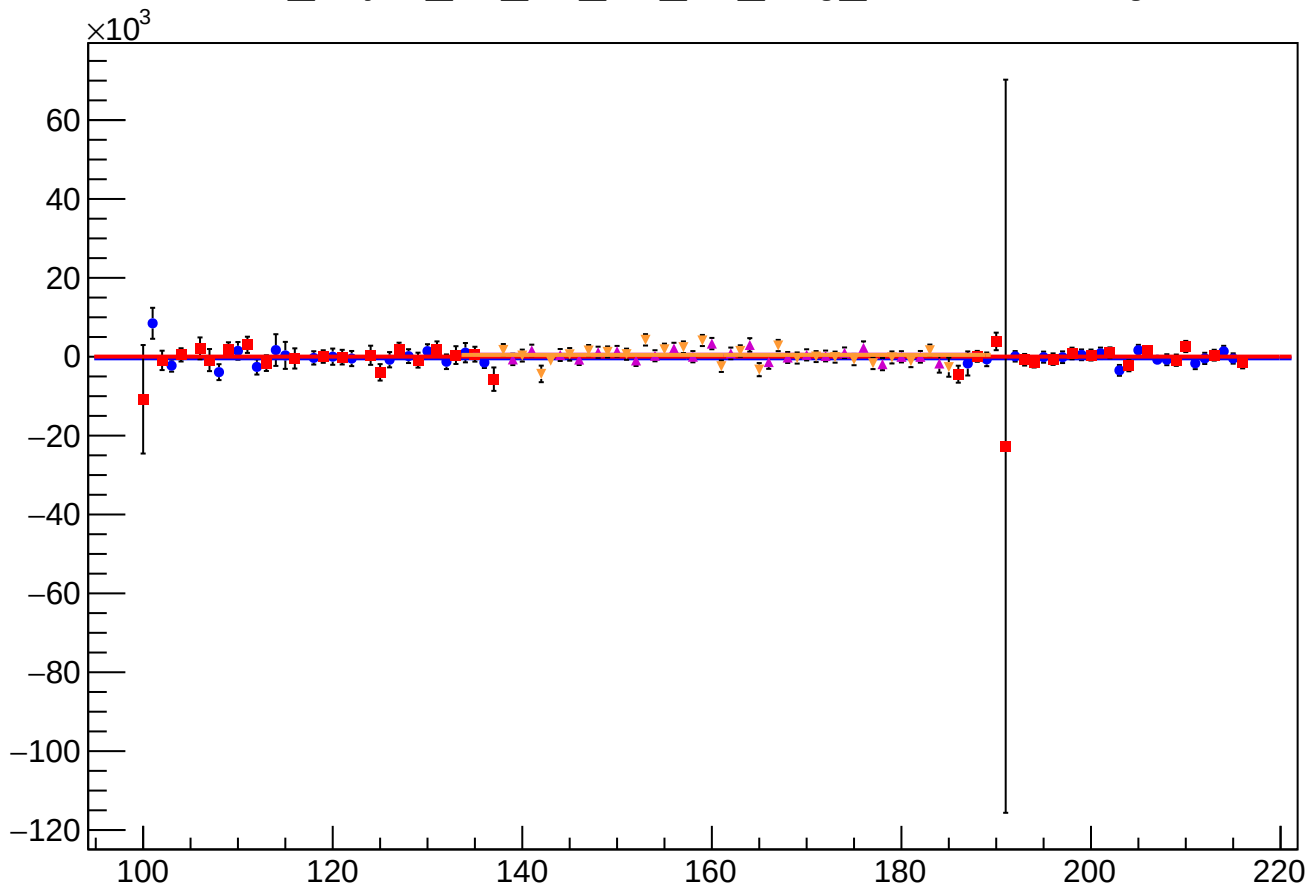
Left In: 4173.550+/-0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3941.950+/-0.470  $\chi^2$ /NDF: 6117732.5/55

All: 3990.434+/-0.336  $\chi^2$ /NDF: 11024271.5/100

- sign 4041.444+/-0.482  $\chi^2$ /NDF: 4884655.4/57

dit\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.504 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

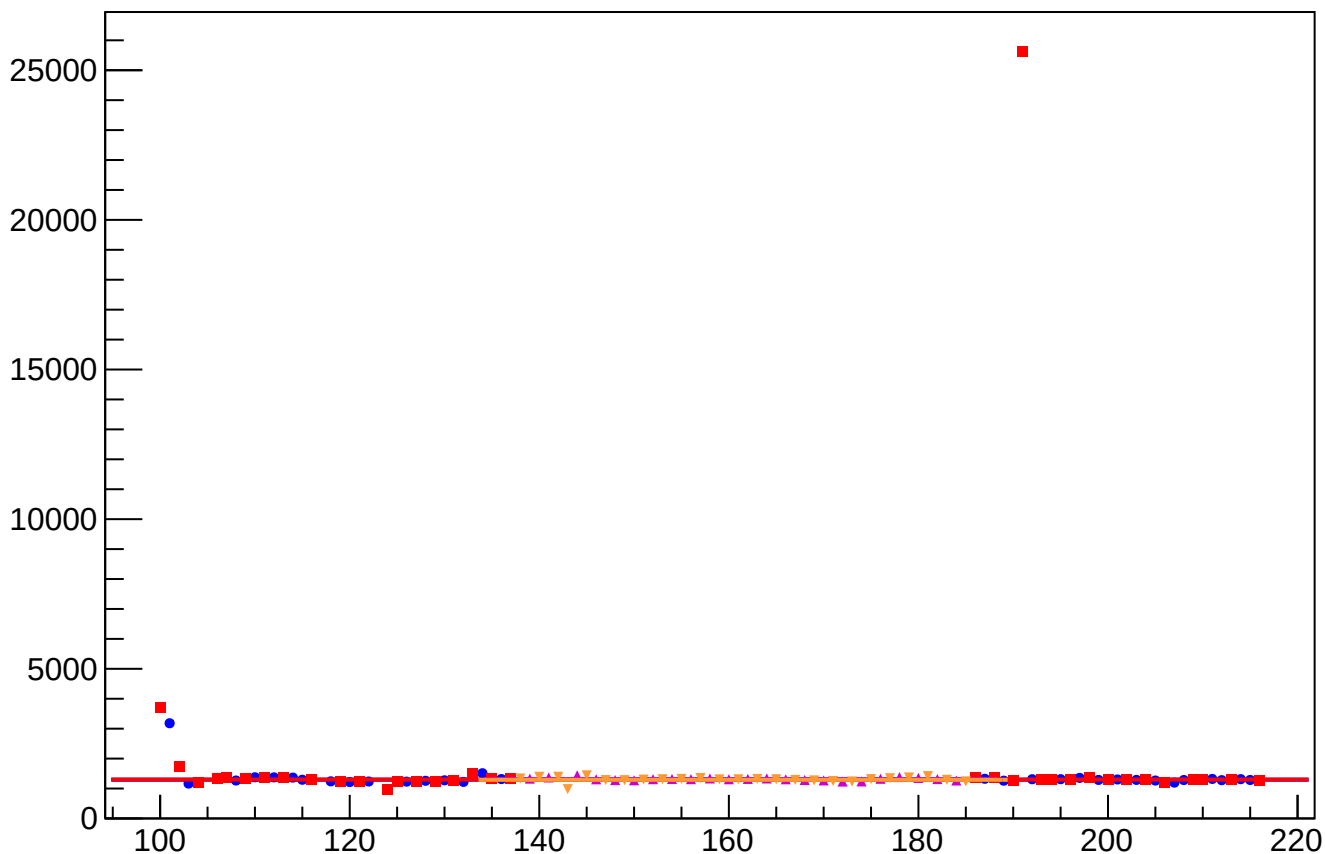
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.262 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.600 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

dit\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1294.797 $\pm$ 0.210  $\chi^2$ /NDF: 530209.2/30

Left Out: 1291.211 $\pm$ 0.208  $\chi^2$ /NDF: 230735.1/24

Right Out: 1299.977 $\pm$ 0.210  $\chi^2$ /NDF: 378886.7/34

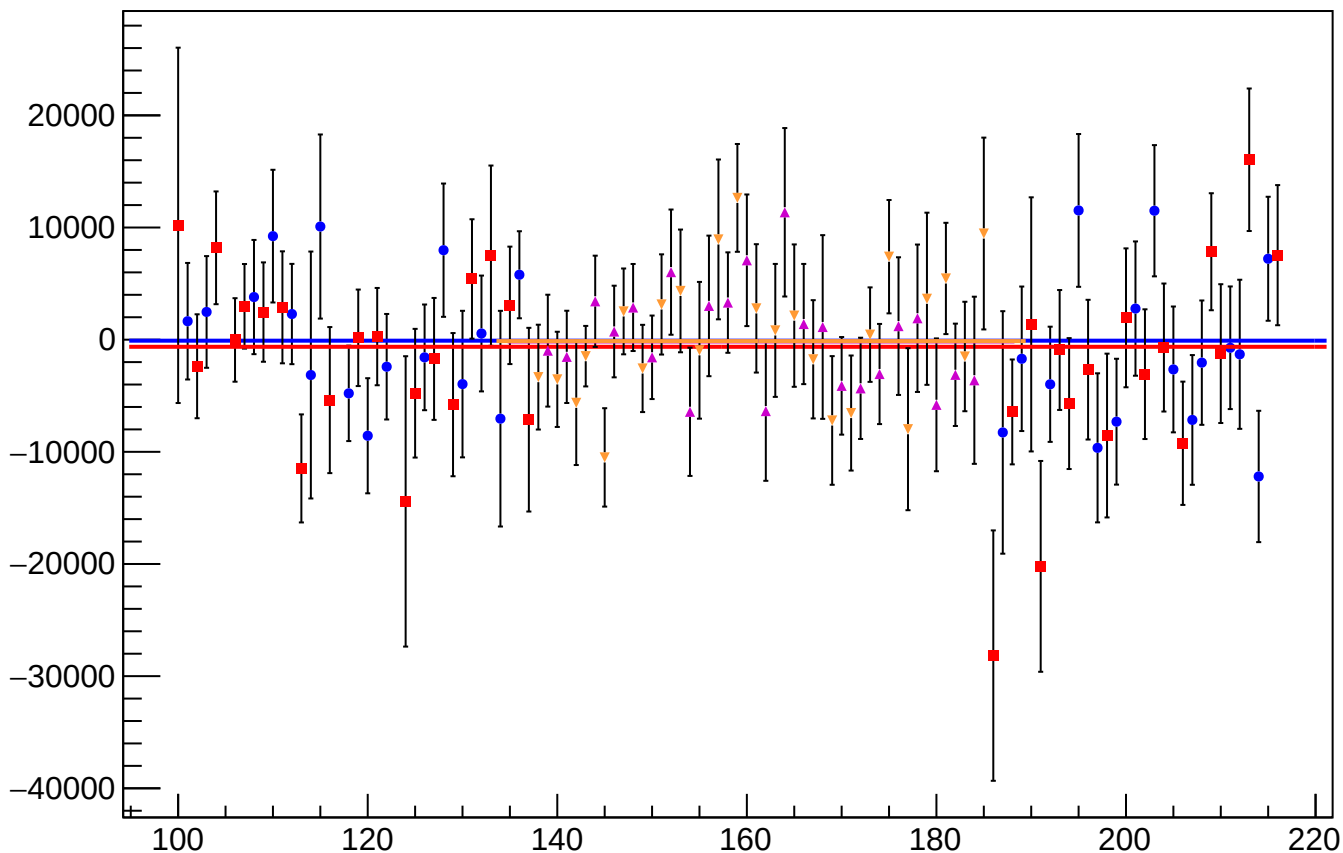
Left In: 1314.006 $\pm$ 0.217  $\chi^2$ /NDF: 43044.7/22

+ sign 1292.987 $\pm$ 0.148  $\chi^2$ /NDF: 761091.5/55

All: 1299.727 $\pm$ 0.106  $\chi^2$ /NDF: 1189428.5/11

- sign 1306.754 $\pm$ 0.151  $\chi^2$ /NDF: 424089.3/57

asym\_atl\_dd\_atr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-89.752 \pm 1008.403$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.939 \pm 949.479$   $\chi^2/\text{NDF}$ : 45.2/34

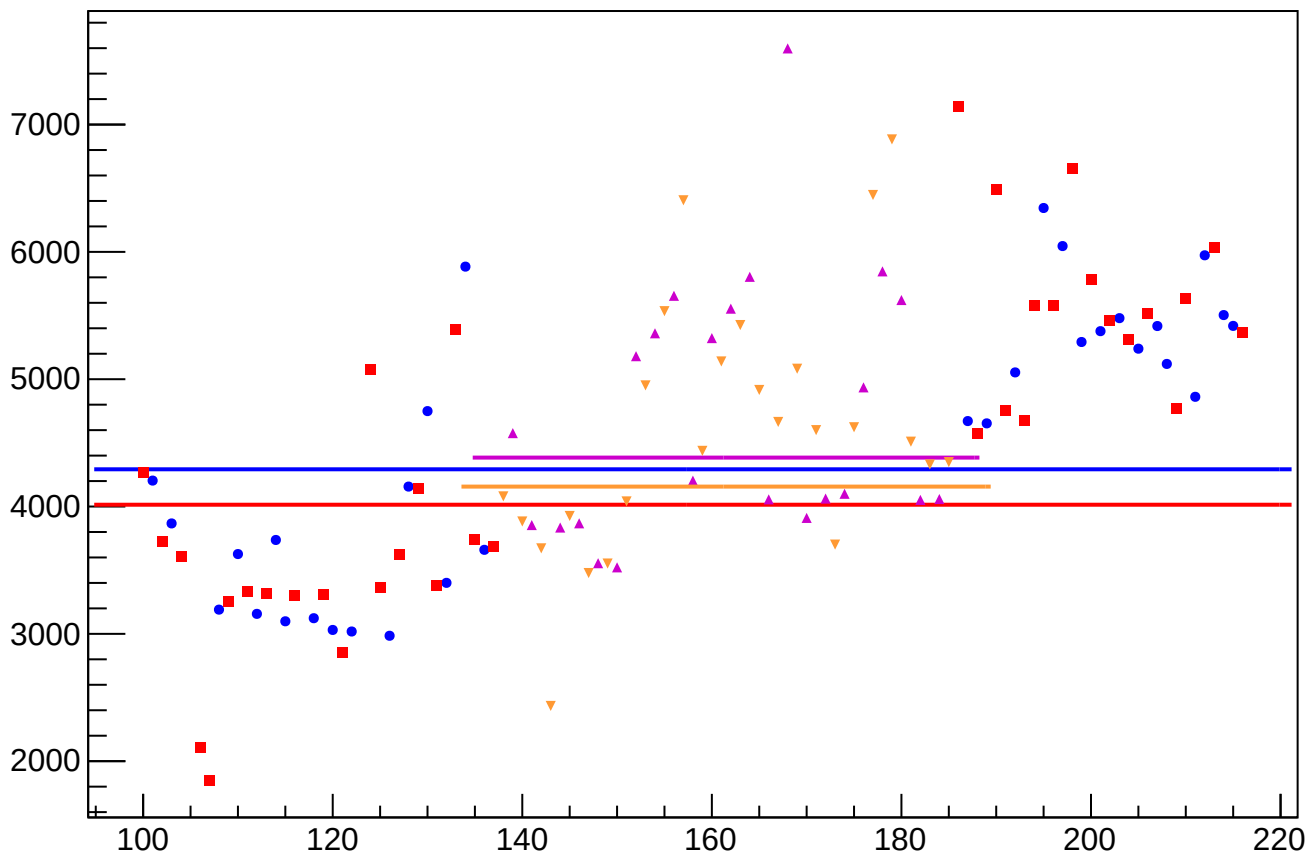
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.101 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.031 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_atl\_dd\_atr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 4292.473 $\pm$ 0.713  $\chi^2$ /NDF: 2142067.4/30

Left Out: 4156.582 $\pm$ 0.691  $\chi^2$ /NDF:2080766.1/24

+ sign 4222.395 $\pm$ 0.496  $\chi^2$ /NDF: 4241563.6/55

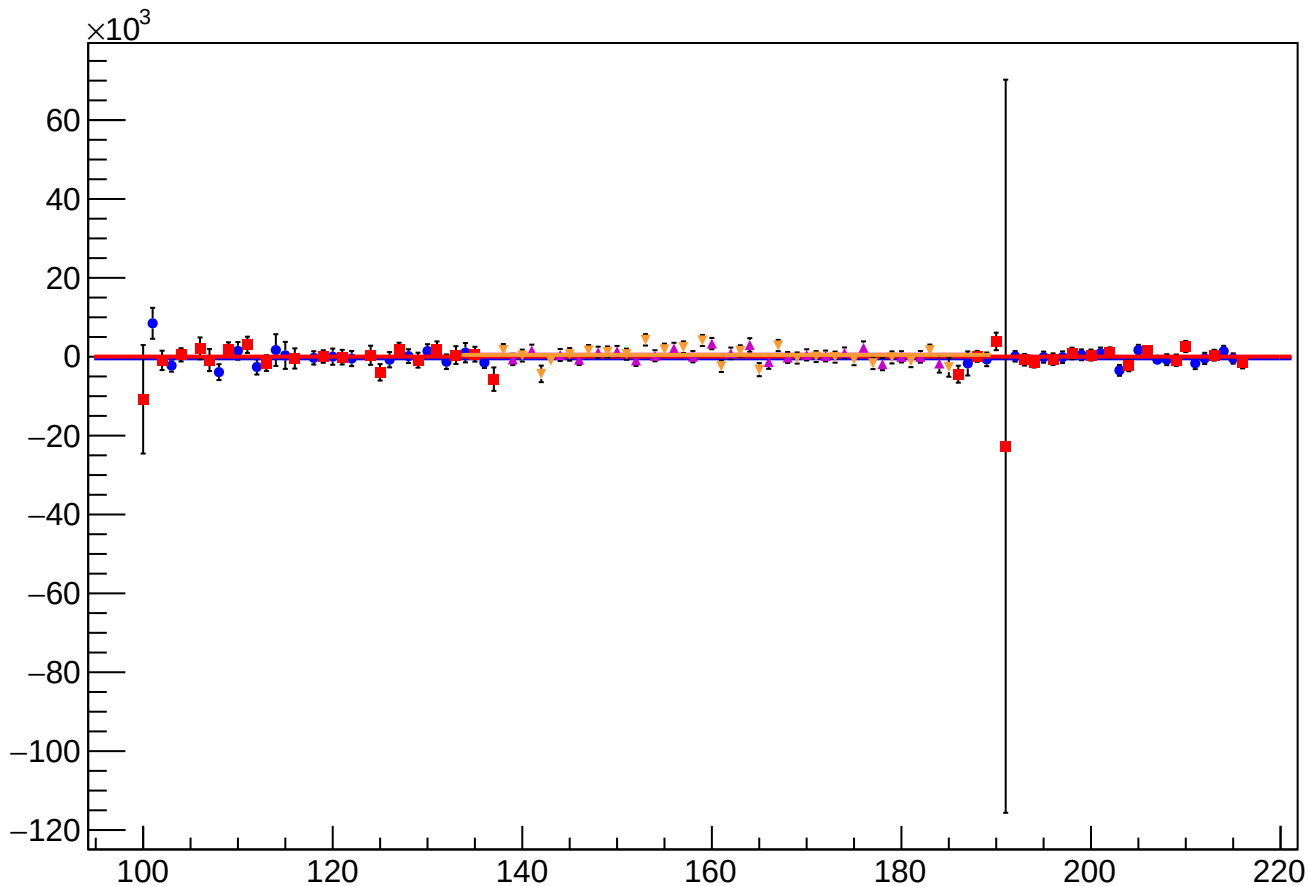
Right Out: 4014.174 $\pm$ 0.671  $\chi^2$ /NDF: 3581136.8/34

All: 4201.966 $\pm$ 0.351  $\chi^2$ /NDF: 9218946.9/11

Left In: 4384.323 $\pm$ 0.739  $\chi^2$ /NDF:1255470.8/22

- sign 4181.472 $\pm$ 0.497  $\chi^2$ /NDF: 4973988.3/57

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.933 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.505 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

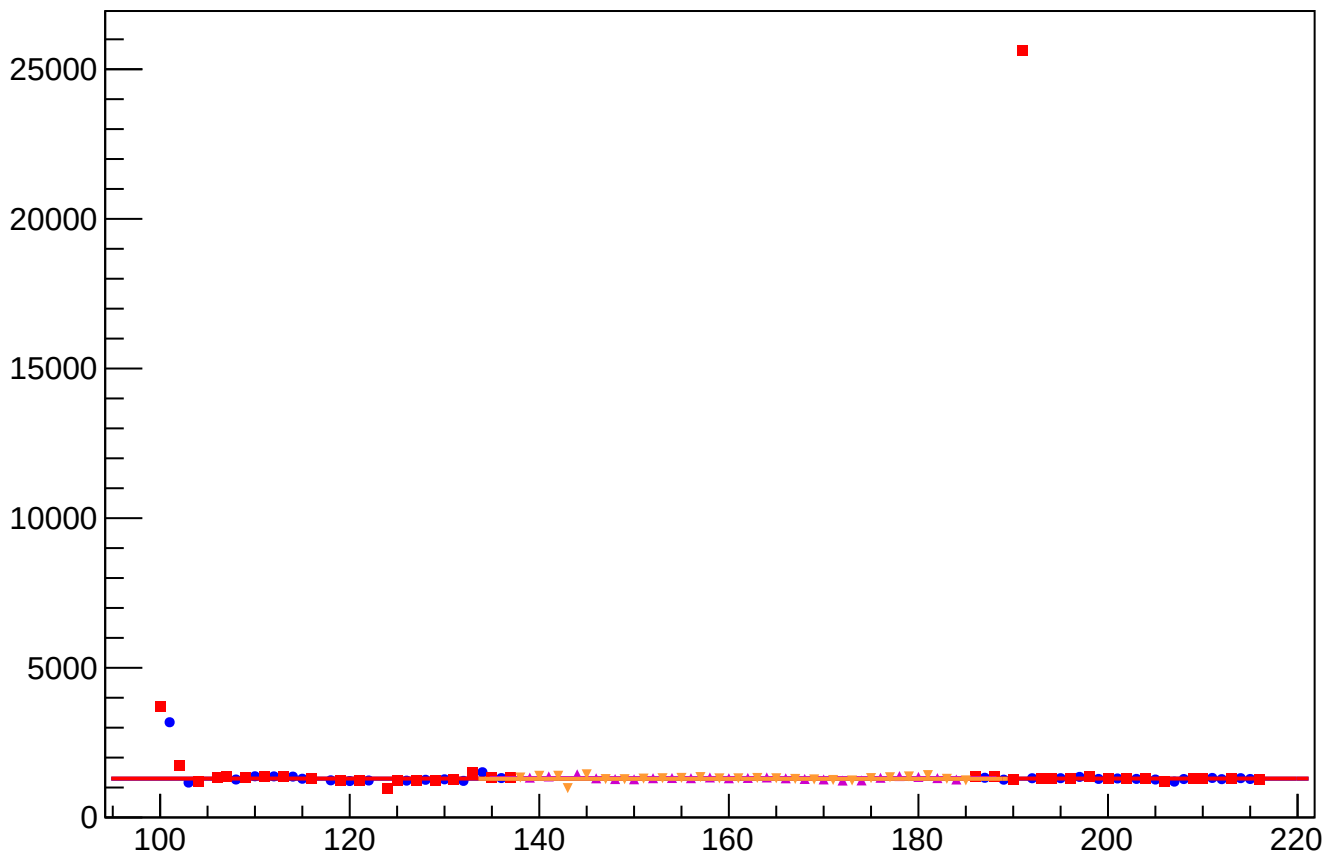
Left In:  $503.558 \pm 307.056$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.264 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.602 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 1294.797+/-0.210  $\chi^2/\text{NDF}$ : 530209.3/30

Left Out: 1291.212+/-0.208  $\chi^2/\text{NDF}$ : 230737.6/24

Right Out: 1299.977+/-0.210  $\chi^2/\text{NDF}$ : 378886.8/34

Left In: 1314.007+/-0.217  $\chi^2/\text{NDF}$ : 43046.8/22

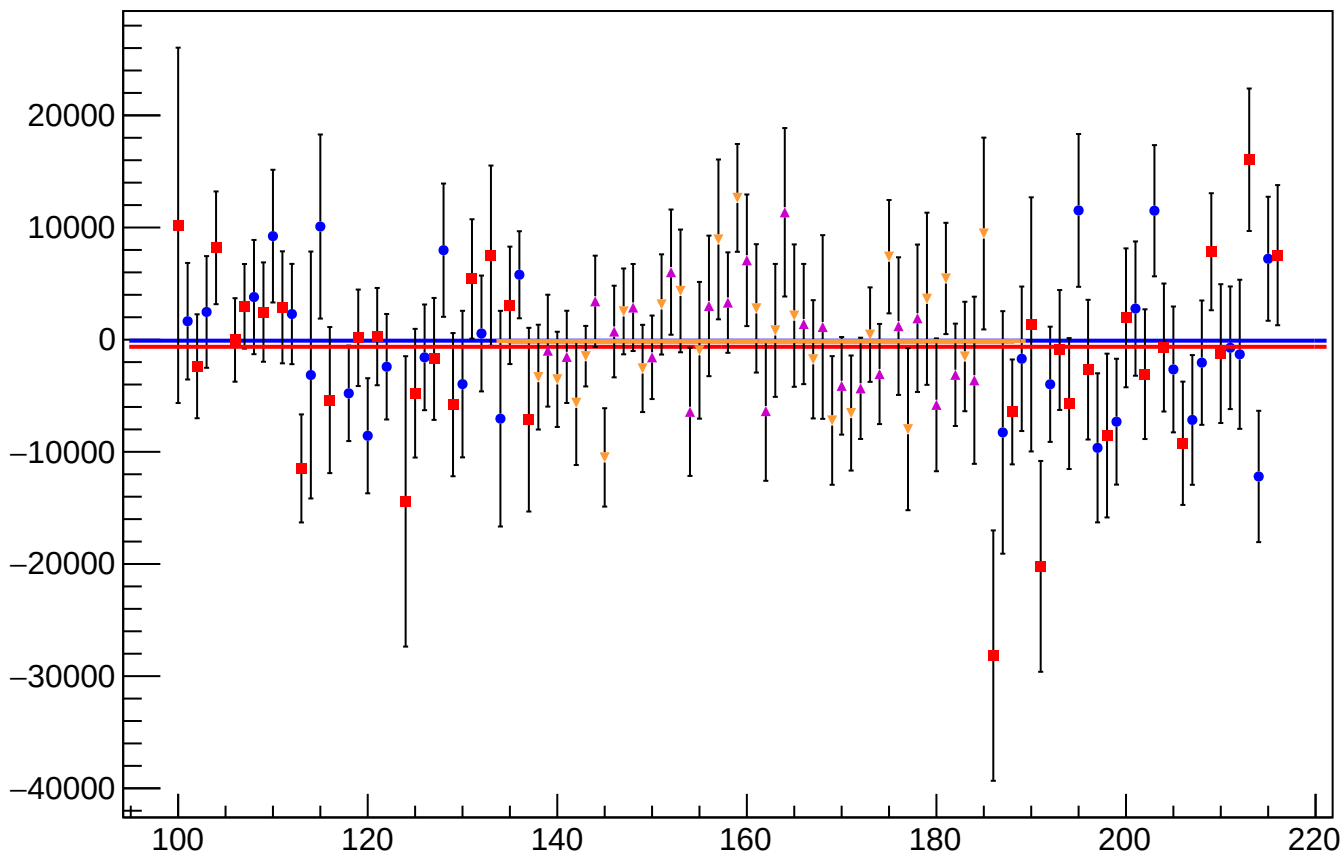
+ sign 1292.988+/-0.148  $\chi^2/\text{NDF}$ : 761093.9/55

All: 1299.728+/-0.106  $\chi^2/\text{NDF}$ : 1189433.6/11

- sign 1306.755+/-0.151  $\chi^2/\text{NDF}$ : 424091.9/57



asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-89.755 \pm 1008.402$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.934 \pm 949.478$   $\chi^2/\text{NDF}$ : 45.2/34

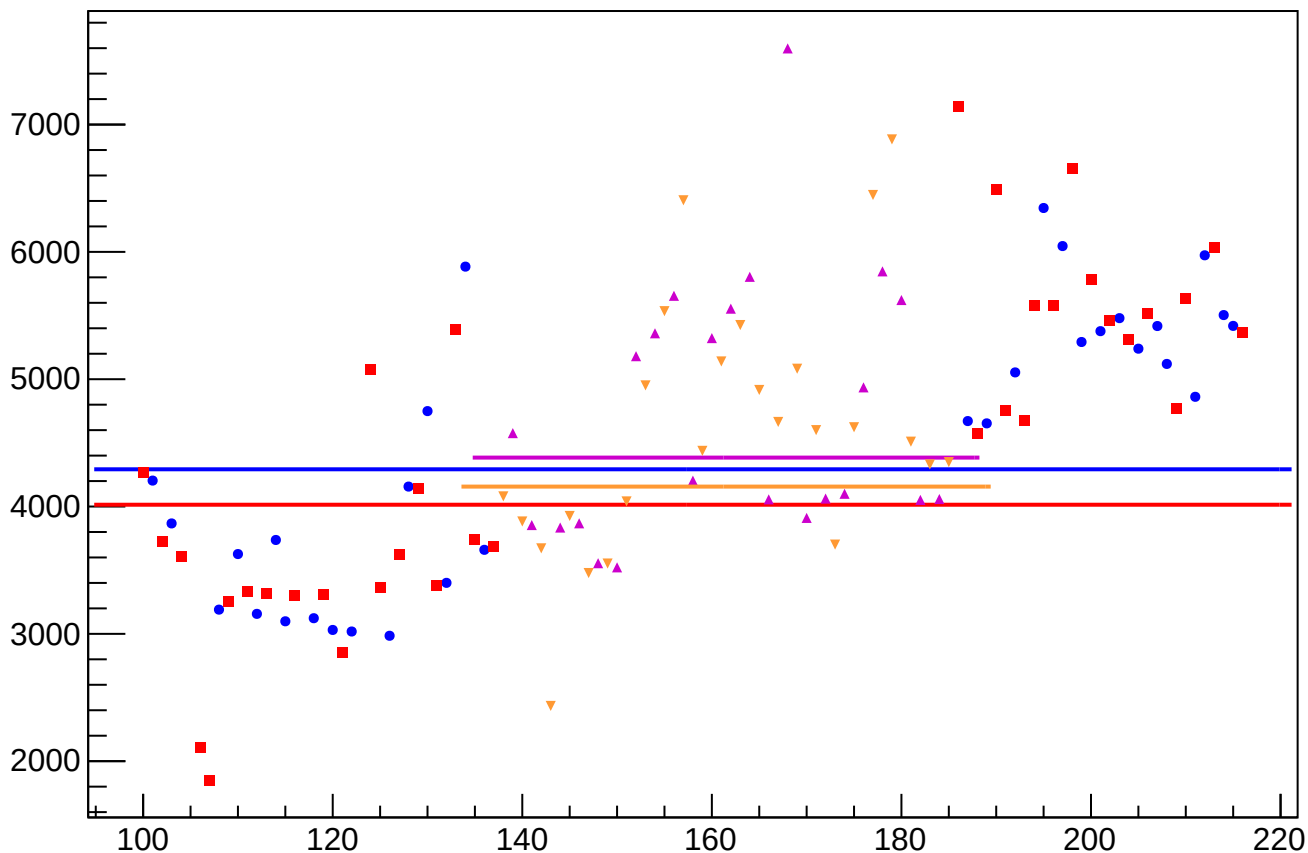
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.102 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.029 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 4292.468 $\pm$ 0.713  $\chi^2/\text{NDF}$ : 2142105.7/30

Left Out: 4156.588 $\pm$ 0.691  $\chi^2/\text{NDF}$ : 2080769.0/24

Right Out: 4014.168 $\pm$ 0.671  $\chi^2/\text{NDF}$ : 3581172.3/34

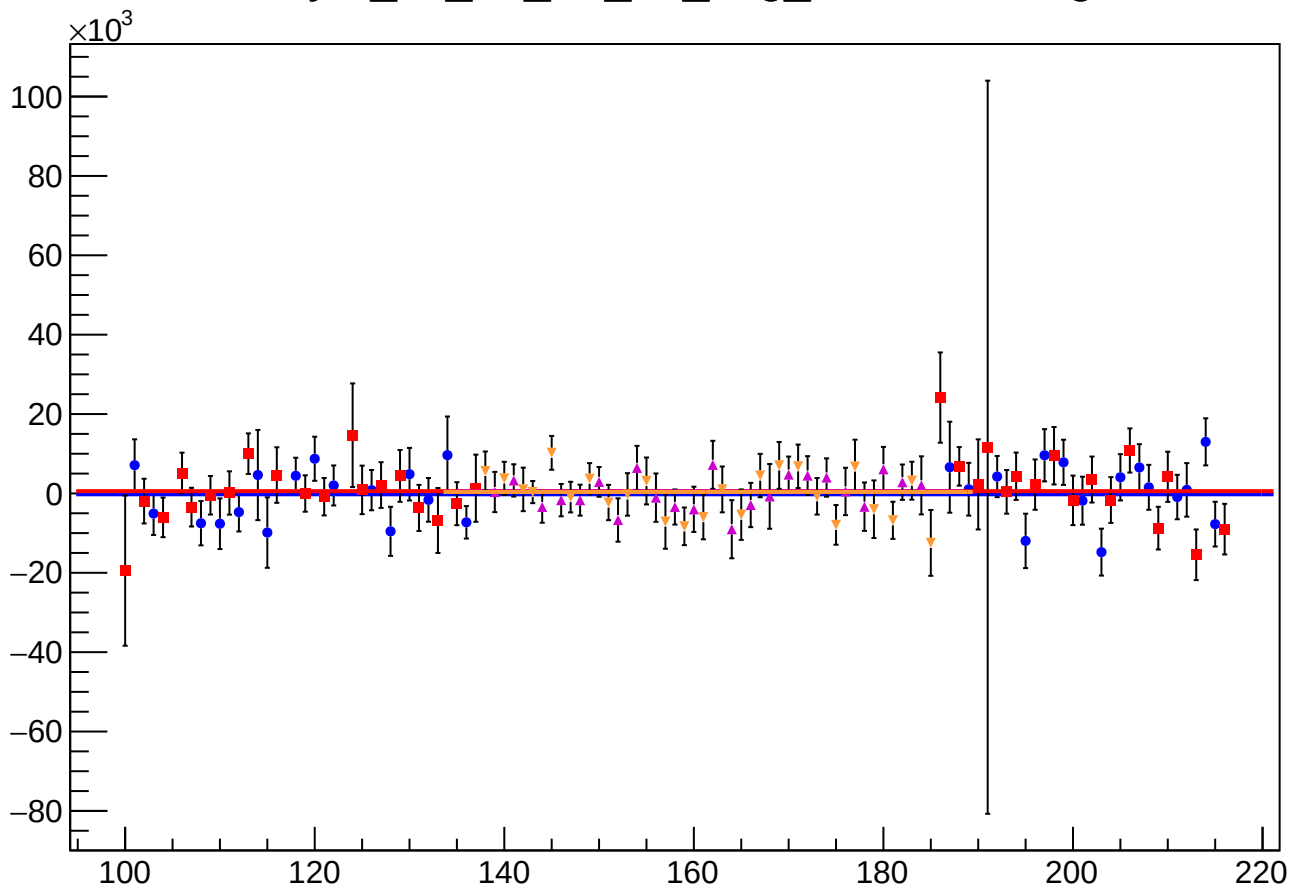
Left In: 4384.329 $\pm$ 0.739  $\chi^2/\text{NDF}$ : 1255475.0/22

+ sign 4222.396 $\pm$ 0.496  $\chi^2/\text{NDF}$ : 4241601.7/55

All: 4201.966 $\pm$ 0.351  $\chi^2/\text{NDF}$ : 9219034.3/11

- sign 4181.472 $\pm$ 0.497  $\chi^2/\text{NDF}$ : 4974037.3/57

# asym\_atl\_dd\_atr\_dd\_avg\_mean vs Slug



Right In:  $-220.989 \pm 1060.049$   $\chi^2/\text{NDF}: 41.4/30$

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}: 27.7/24$

Right Out:  $567.702 \pm 1026.015$   $\chi^2/\text{NDF}: 35.5/34$

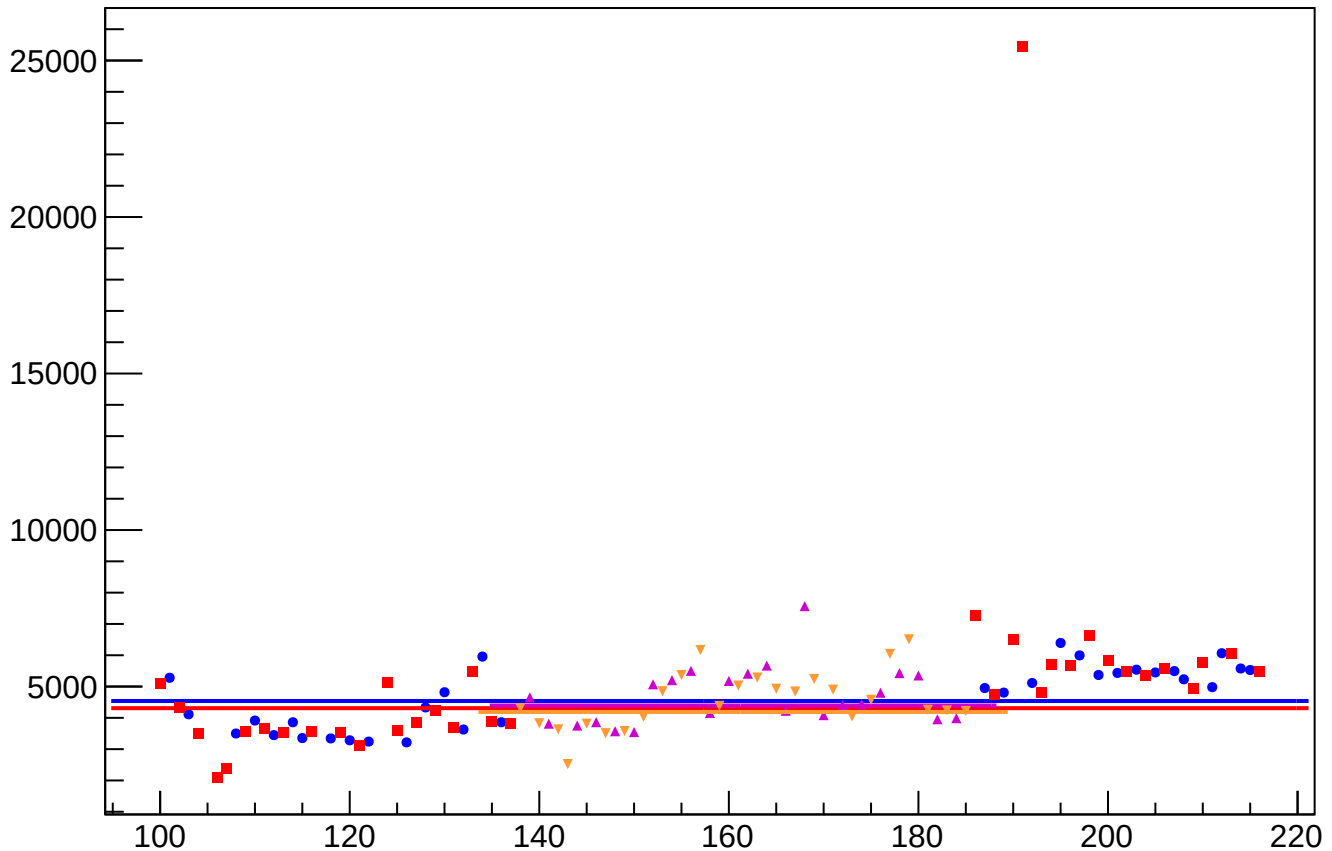
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}: 13.9/22$

+ sign  $93.672 \pm 719.547$   $\chi^2/\text{NDF}: 69.2/55$

All:  $309.682 \pm 513.150$   $\chi^2/\text{NDF}: 118.8/113$

- sign  $533.246 \pm 732.021$   $\chi^2/\text{NDF}: 49.4/57$

# asym\_atl\_dd\_atr\_dd\_avg\_rms vs Slug



Right In: 4538.146 $\pm$ 0.750  $\chi^2$ /NDF: 1724125.7/30

Left Out: 4187.848 $\pm$ 0.693  $\chi^2$ /NDF:1796345.9/24

Right Out: 4309.396 $\pm$ 0.720  $\chi^2$ /NDF: 2840615.1/34

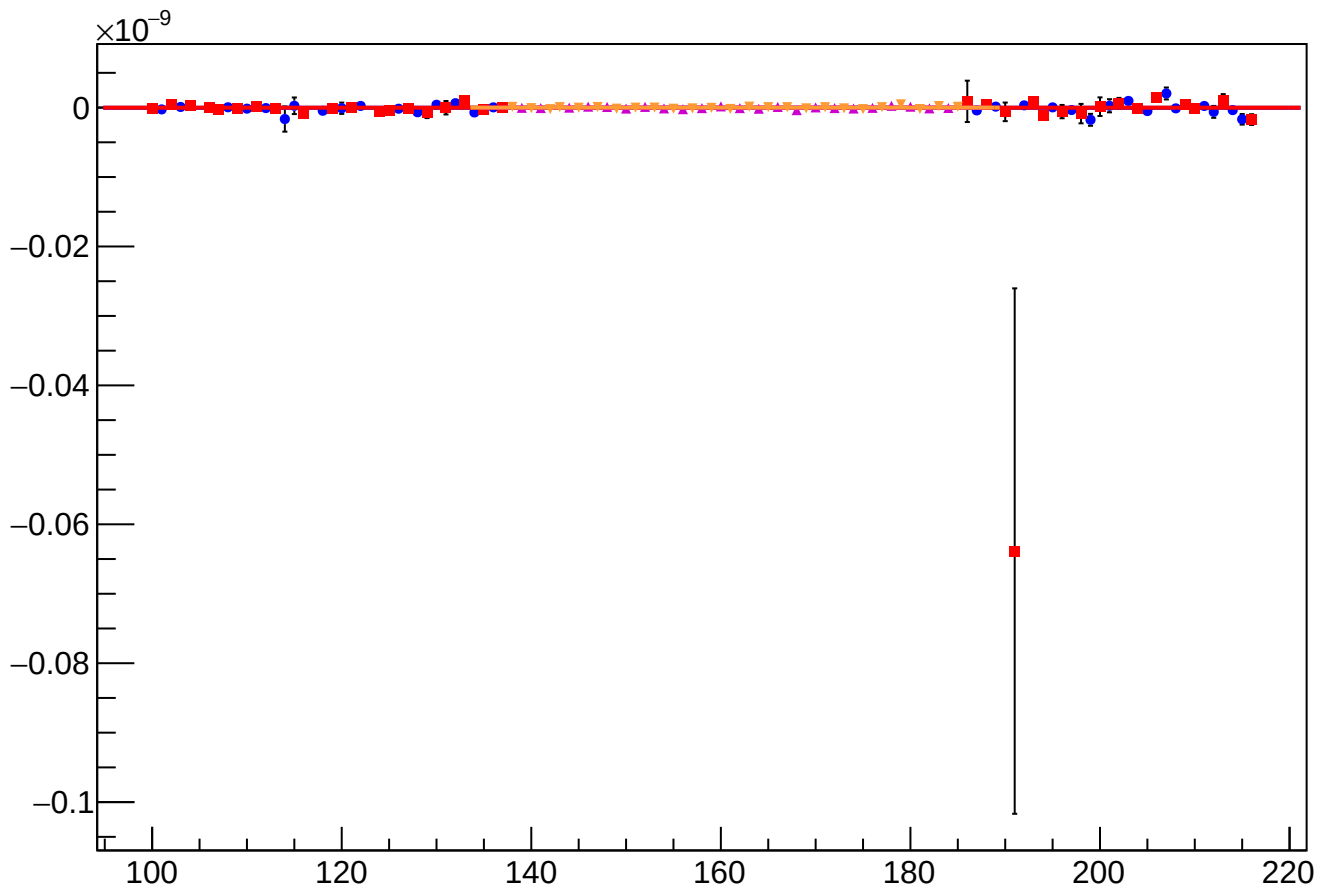
Left In: 4394.324 $\pm$ 0.739  $\chi^2$ /NDF:1088394.9/22

+ sign 4349.249 $\pm$ 0.509  $\chi^2$ /NDF: 3638244.4/55

All: 4349.989 $\pm$ 0.362  $\chi^2$ /NDF: 7574040.4/11

- sign 4350.748 $\pm$ 0.515  $\chi^2$ /NDF: 3935791.7/57

asym\_atl\_dd\_atr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 40.4/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 30.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 40.3/34

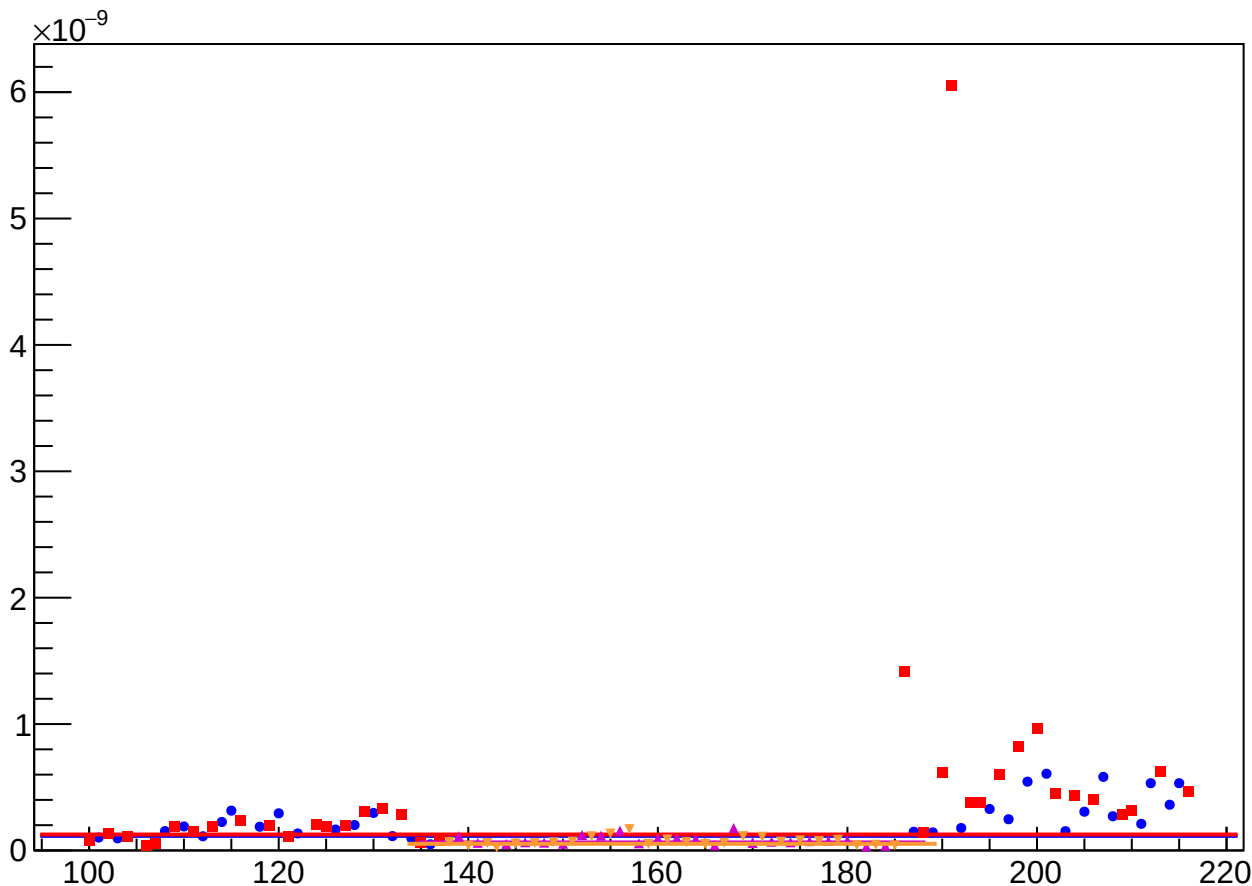
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 17.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 71.1/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 128.6/113

- sign -0.000+/-0.000  $\chi^2$ /NDF: 57.3/57

asym\_atl\_dd\_atr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5930476.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2628519.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7898222.6/34

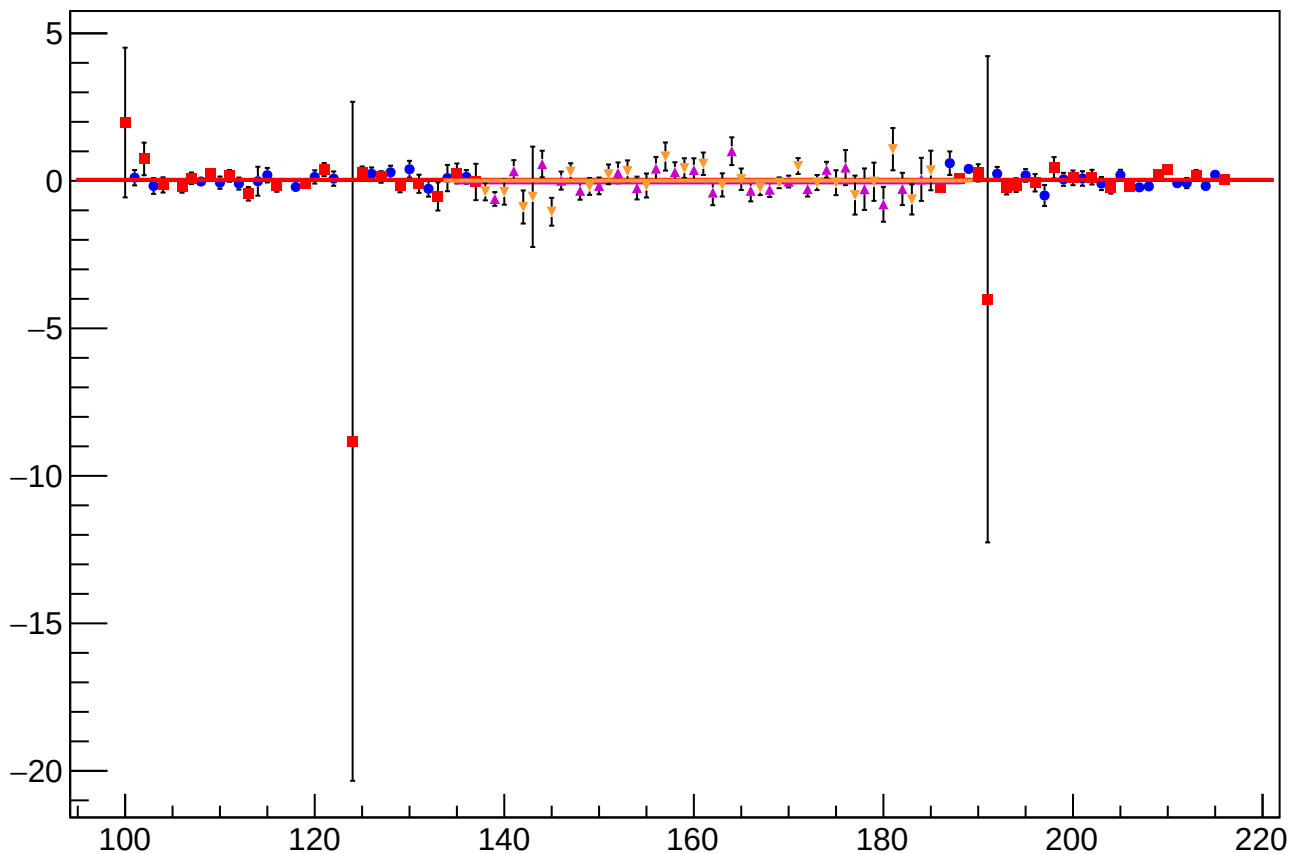
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1788279.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10866985.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22695732.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11541517.9/57

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.029 $\pm$ 0.037  $\chi^2$ /NDF: 31.2/30

Left Out: 0.009 $\pm$ 0.071  $\chi^2$ /NDF: 28.9/24

Right Out: 0.036 $\pm$ 0.035  $\chi^2$ /NDF: 40.7/34

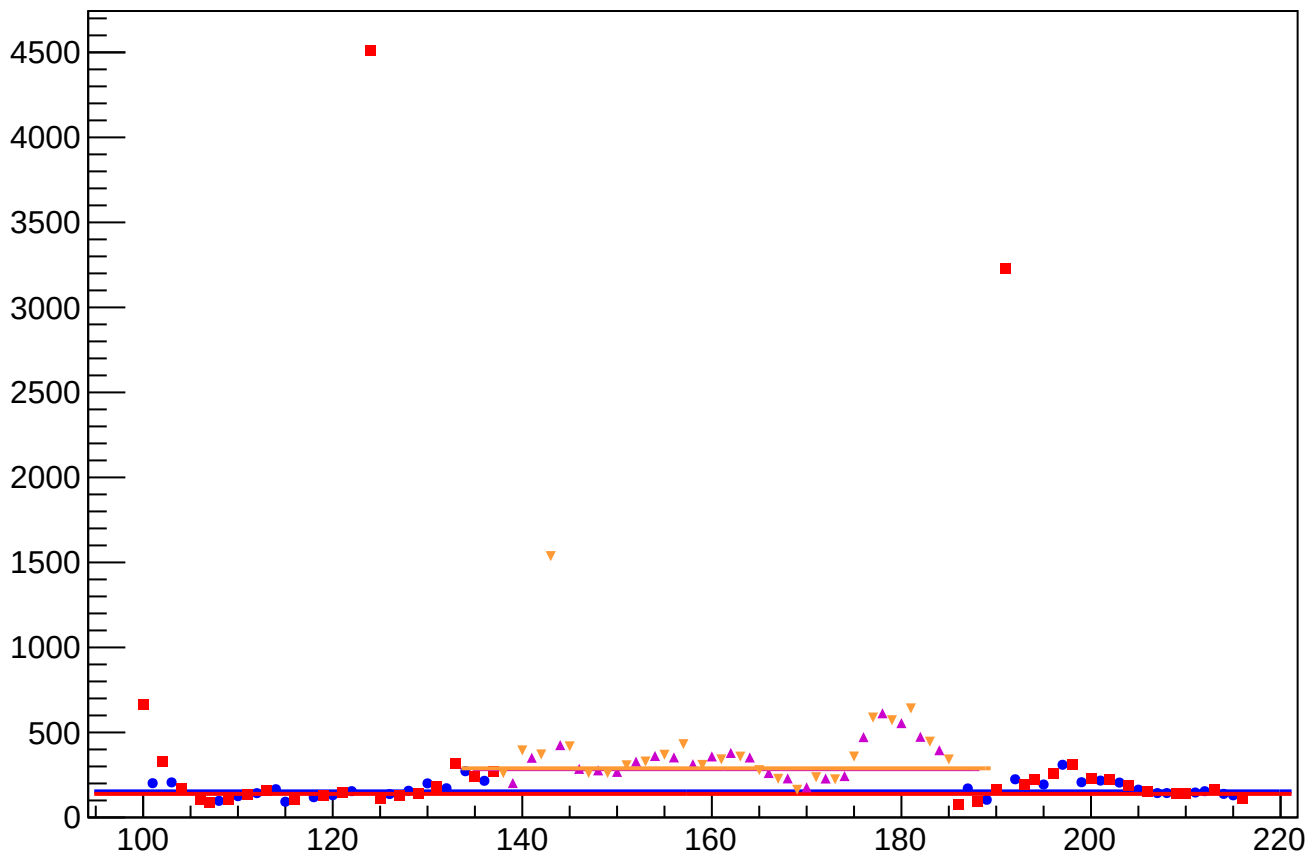
Left In: -0.053 $\pm$ 0.070  $\chi^2$ /NDF: 27.8/22

+ sign 0.025 $\pm$ 0.033  $\chi^2$ /NDF: 60.1/55

All: 0.022 $\pm$ 0.022  $\chi^2$ /NDF: 129.9/113

- sign 0.019 $\pm$ 0.031  $\chi^2$ /NDF: 69.8/57

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.295 $\pm$ 0.026  $\chi^2$ /NDF: 2349343.2/30

Left Out: 288.922 $\pm$ 0.050  $\chi^2$ /NDF: 4648197.0/24

Right Out: 138.738 $\pm$ 0.024  $\chi^2$ /NDF: 4792212.8/34

Left In: 284.168 $\pm$ 0.050  $\chi^2$ /NDF: 3077521.1/22

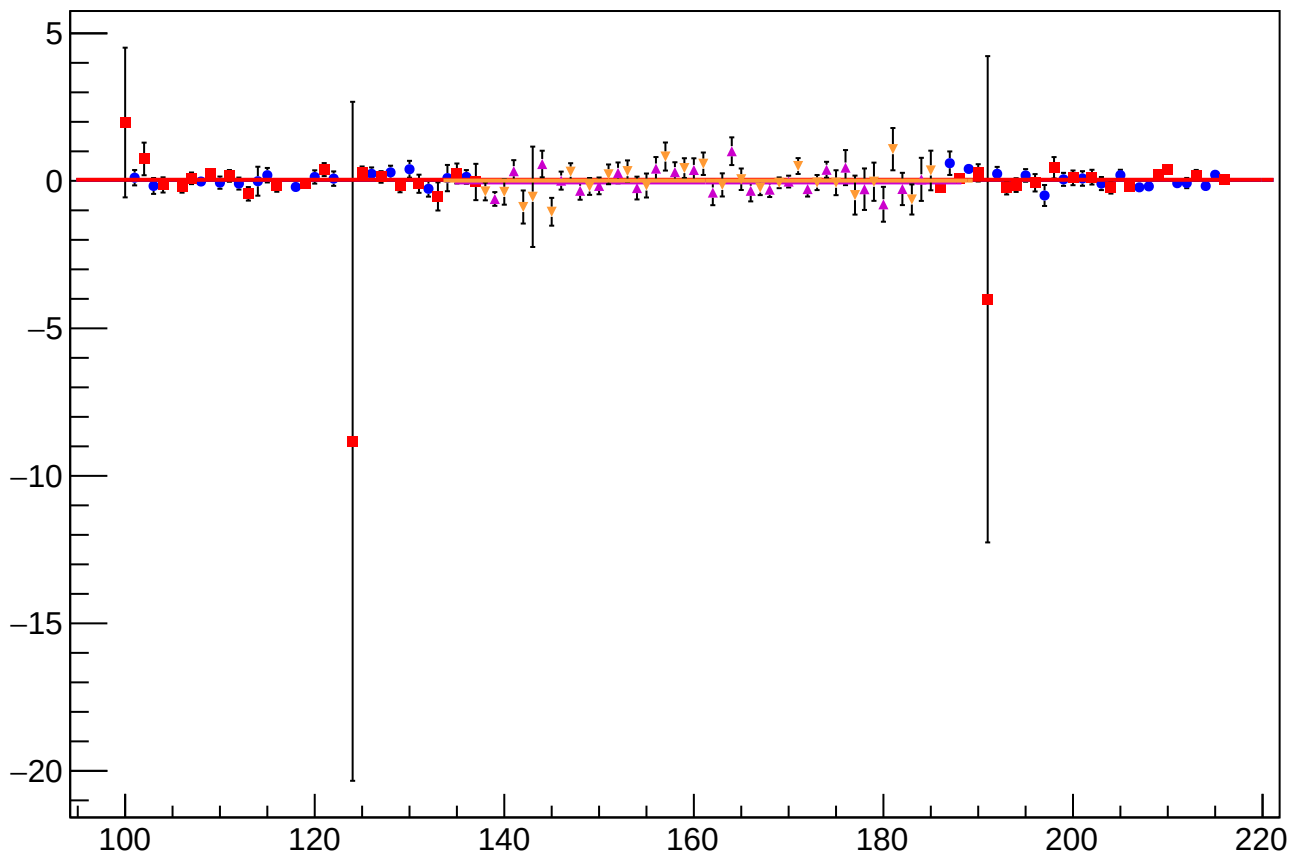
+ sign 182.019 $\pm$ 0.023  $\chi^2$ /NDF: 12746955.7/55

All: 174.101 $\pm$ 0.016  $\chi^2$ /NDF: 27716978.1/11

- sign 166.968 $\pm$ 0.022  $\chi^2$ /NDF: 14746883.6/57



asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.029 $\pm$ 0.037  $\chi^2$ /NDF: 31.2/30

Left Out: 0.009 $\pm$ 0.071  $\chi^2$ /NDF: 28.9/24

Right Out: 0.036 $\pm$ 0.035  $\chi^2$ /NDF: 40.7/34

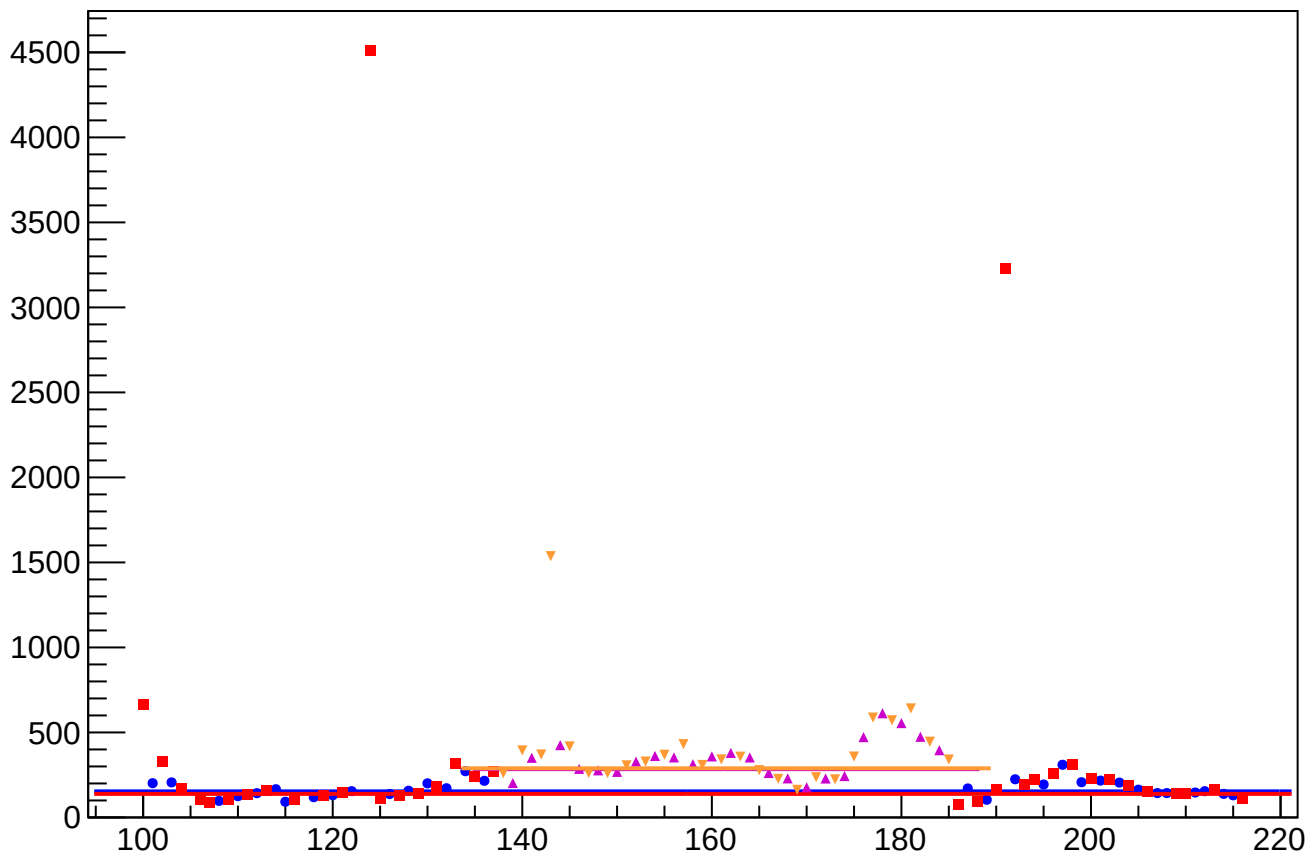
Left In: -0.053 $\pm$ 0.070  $\chi^2$ /NDF: 27.8/22

+ sign 0.025 $\pm$ 0.033  $\chi^2$ /NDF: 60.1/55

All: 0.022 $\pm$ 0.022  $\chi^2$ /NDF: 129.9/113

- sign 0.019 $\pm$ 0.031  $\chi^2$ /NDF: 69.8/57

asym\_atl\_dd\_atr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.295 $\pm$ 0.026  $\chi^2$ /NDF: 2349343.2/30

Left Out: 288.922 $\pm$ 0.050  $\chi^2$ /NDF: 4648197.0/24

Right Out: 138.738 $\pm$ 0.024  $\chi^2$ /NDF: 4792212.8/34

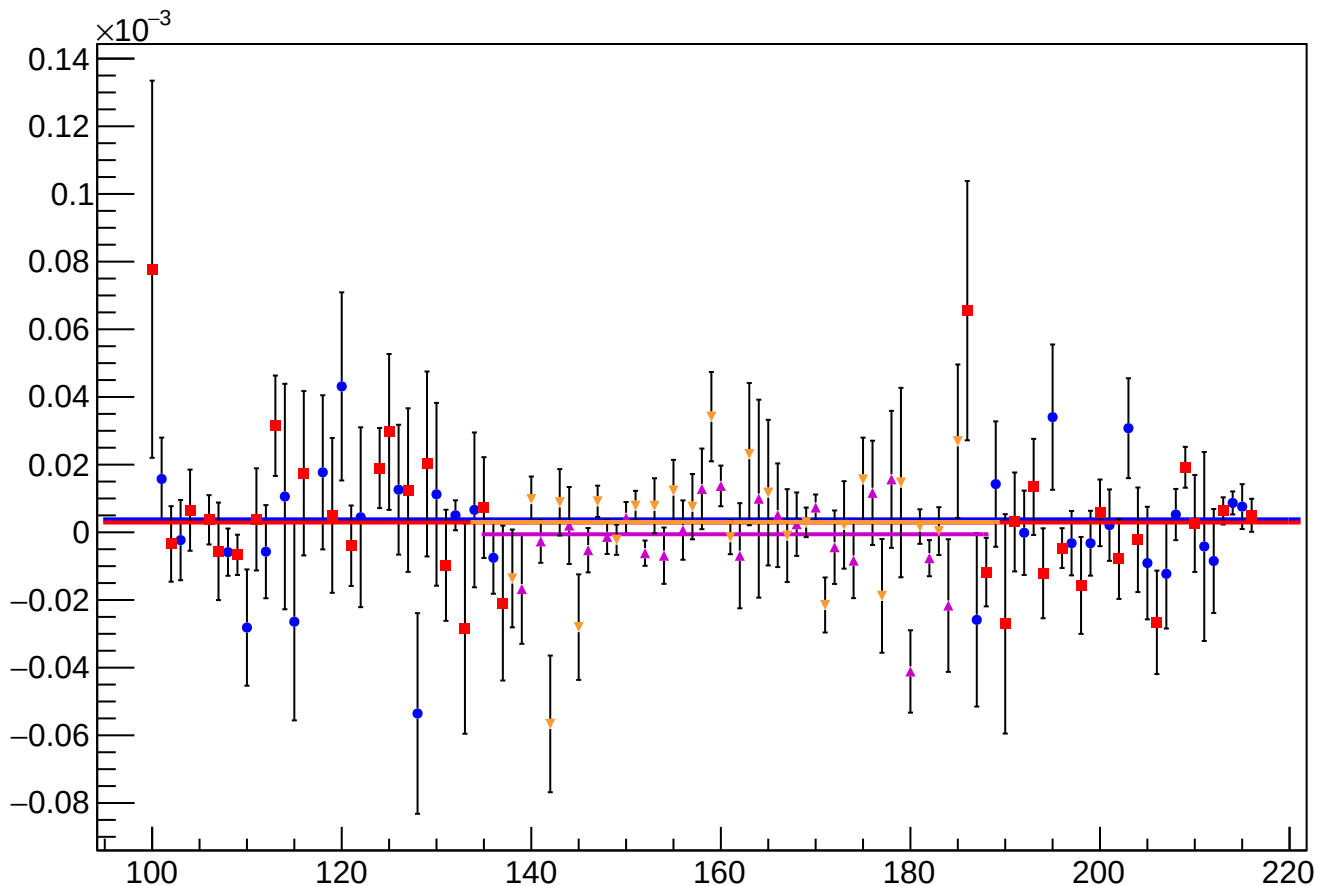
Left In: 284.168 $\pm$ 0.050  $\chi^2$ /NDF: 3077521.1/22

+ sign 182.019 $\pm$ 0.023  $\chi^2$ /NDF: 12746955.7/55

All: 174.101 $\pm$ 0.016  $\chi^2$ /NDF: 27716978.1/11

- sign 166.968 $\pm$ 0.022  $\chi^2$ /NDF: 14746883.6/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:42.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/34

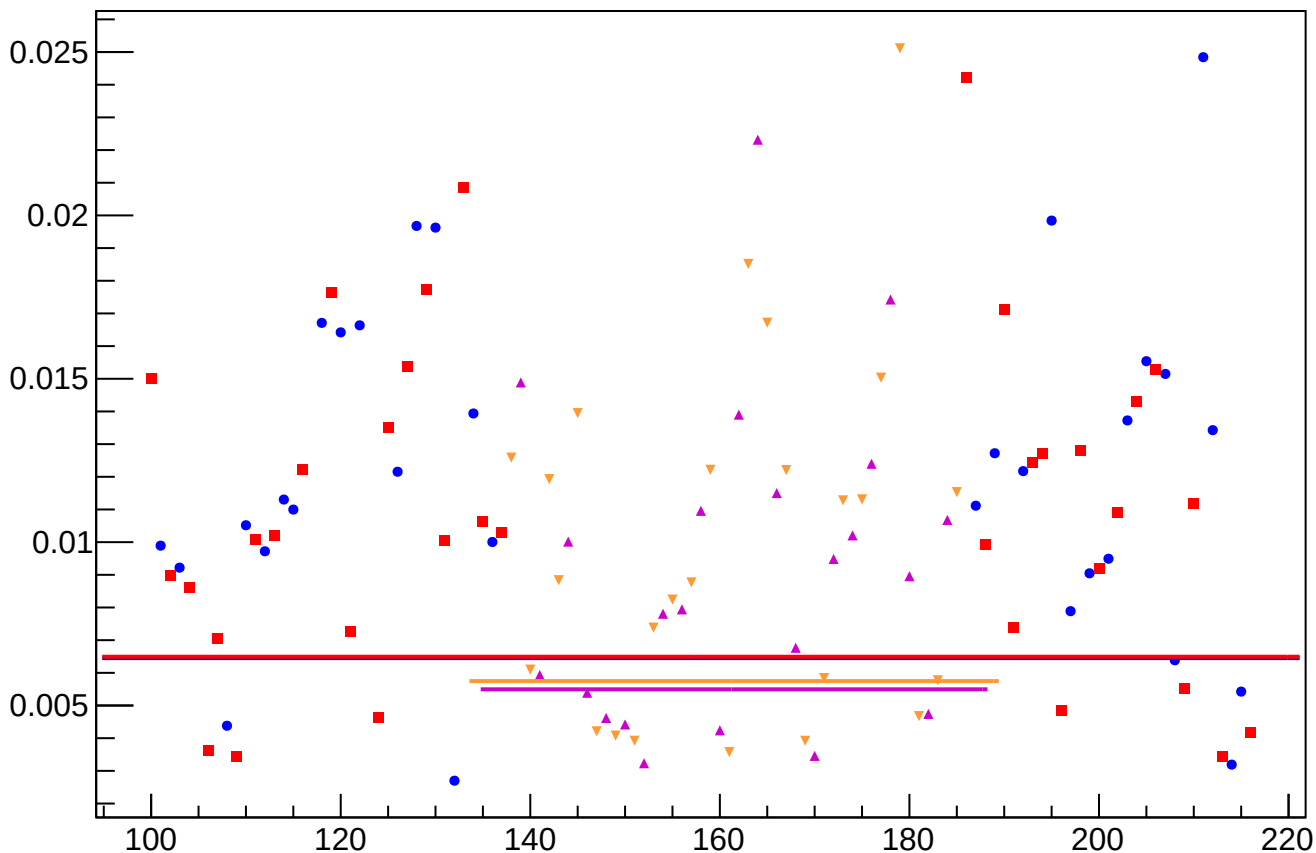
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:33.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 148.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.3/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 11320349.7/30

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8128513.8/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 9153023.7/34

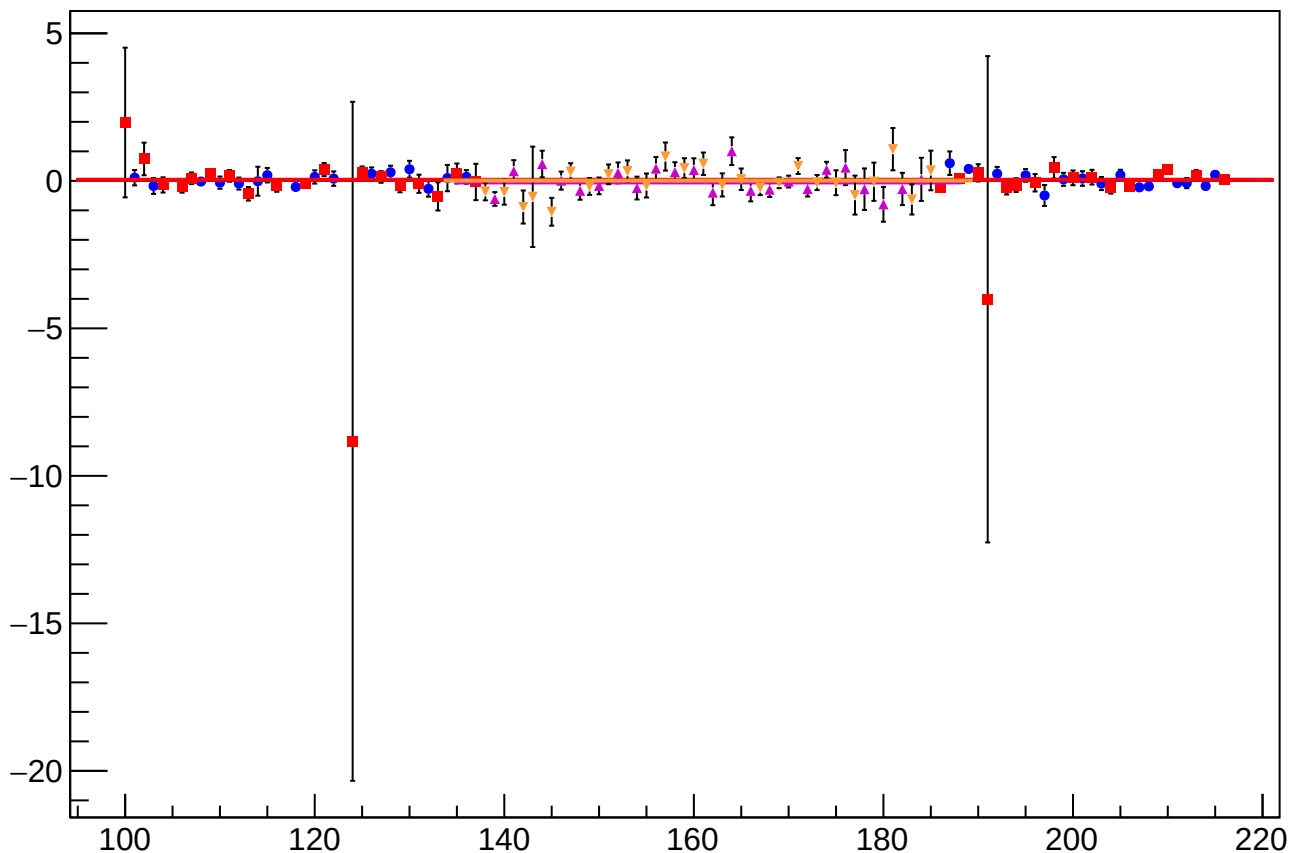
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6937299.0/22

+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 19625941.1/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 36100368.5/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 16465195.6/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

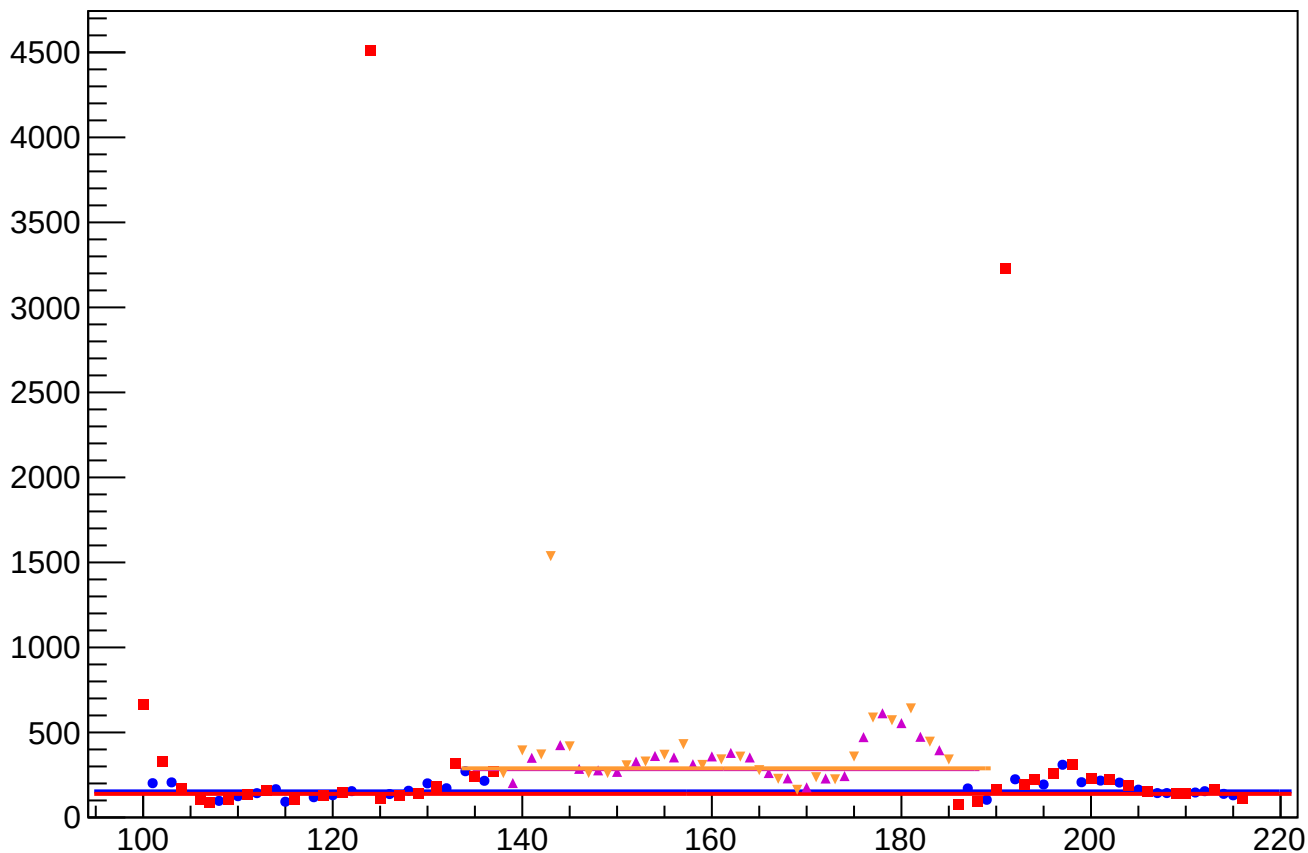
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.296 $\pm$ 0.026  $\chi^2$ /NDF: 2349328.6/30

Left Out: 288.922 $\pm$ 0.050  $\chi^2$ /NDF: 4648388.8/24

Right Out: 138.740 $\pm$ 0.024  $\chi^2$ /NDF: 4792049.6/34

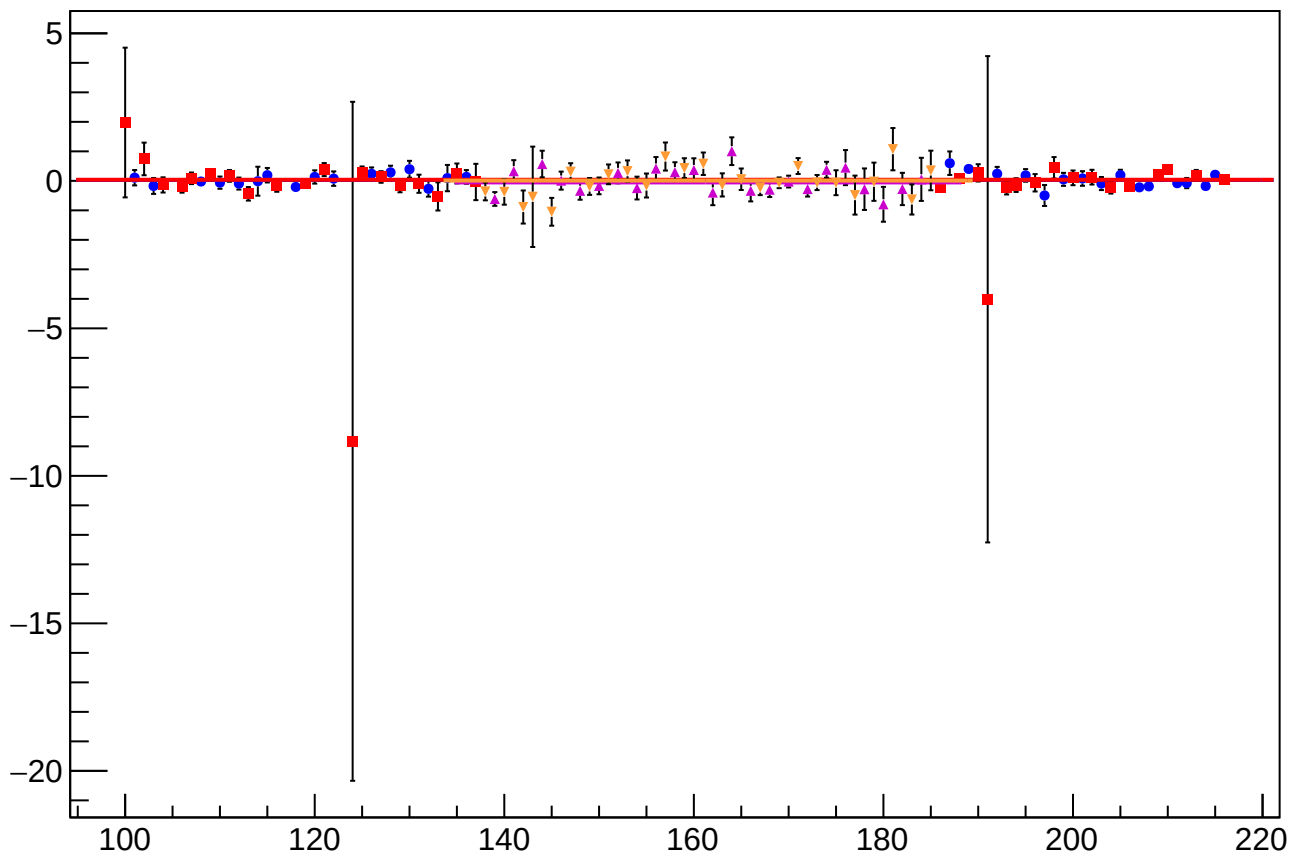
Left In: 284.170 $\pm$ 0.050  $\chi^2$ /NDF: 3077626.7/22

+ sign 182.019 $\pm$ 0.023  $\chi^2$ /NDF: 12747066.0/55

All: 174.102 $\pm$ 0.016  $\chi^2$ /NDF: 27716879.3/11

- sign 166.970 $\pm$ 0.022  $\chi^2$ /NDF: 14746714.5/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

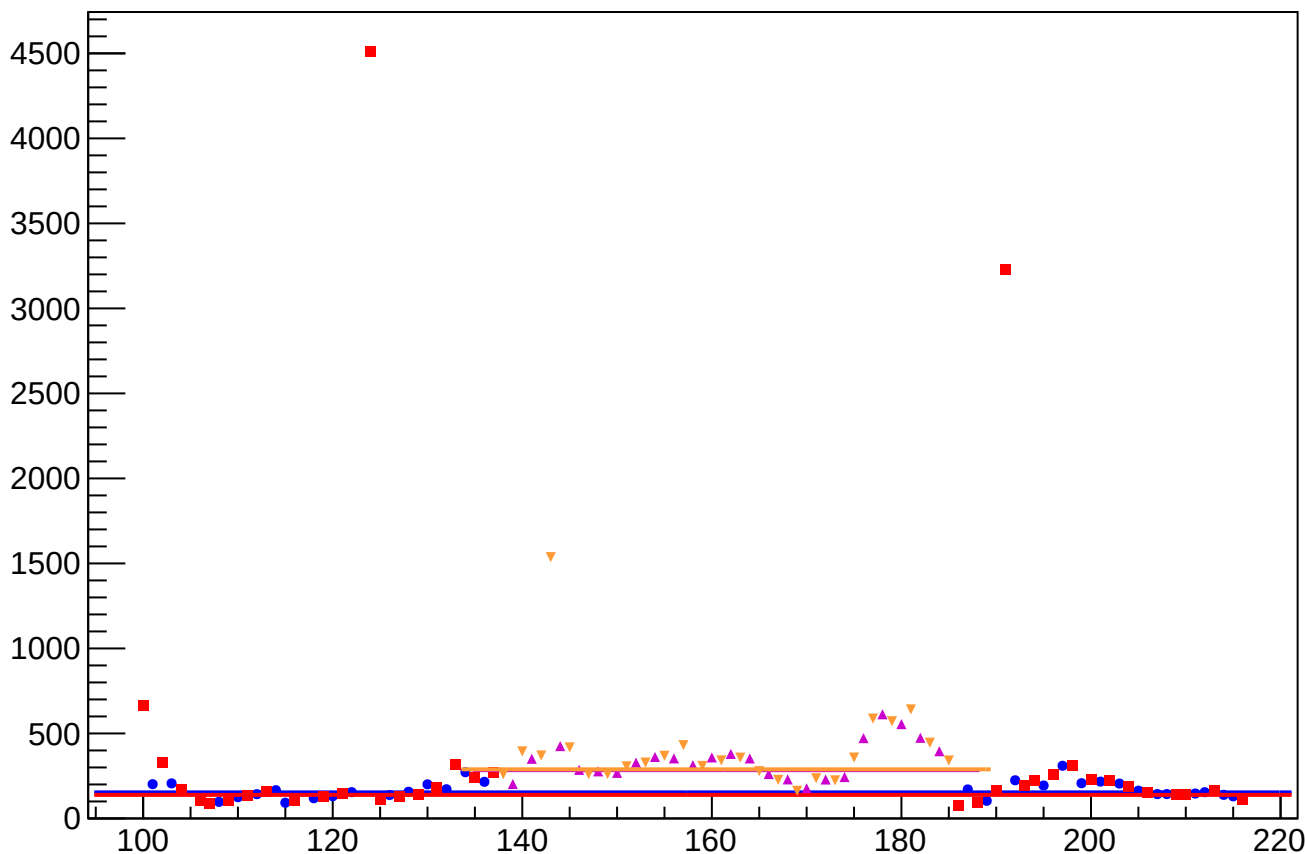
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.296+/-0.026  $\chi^2/\text{NDF}$ : 2349328.6/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 138.740+/-0.024  $\chi^2/\text{NDF}$ : 4792049.6/34

Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

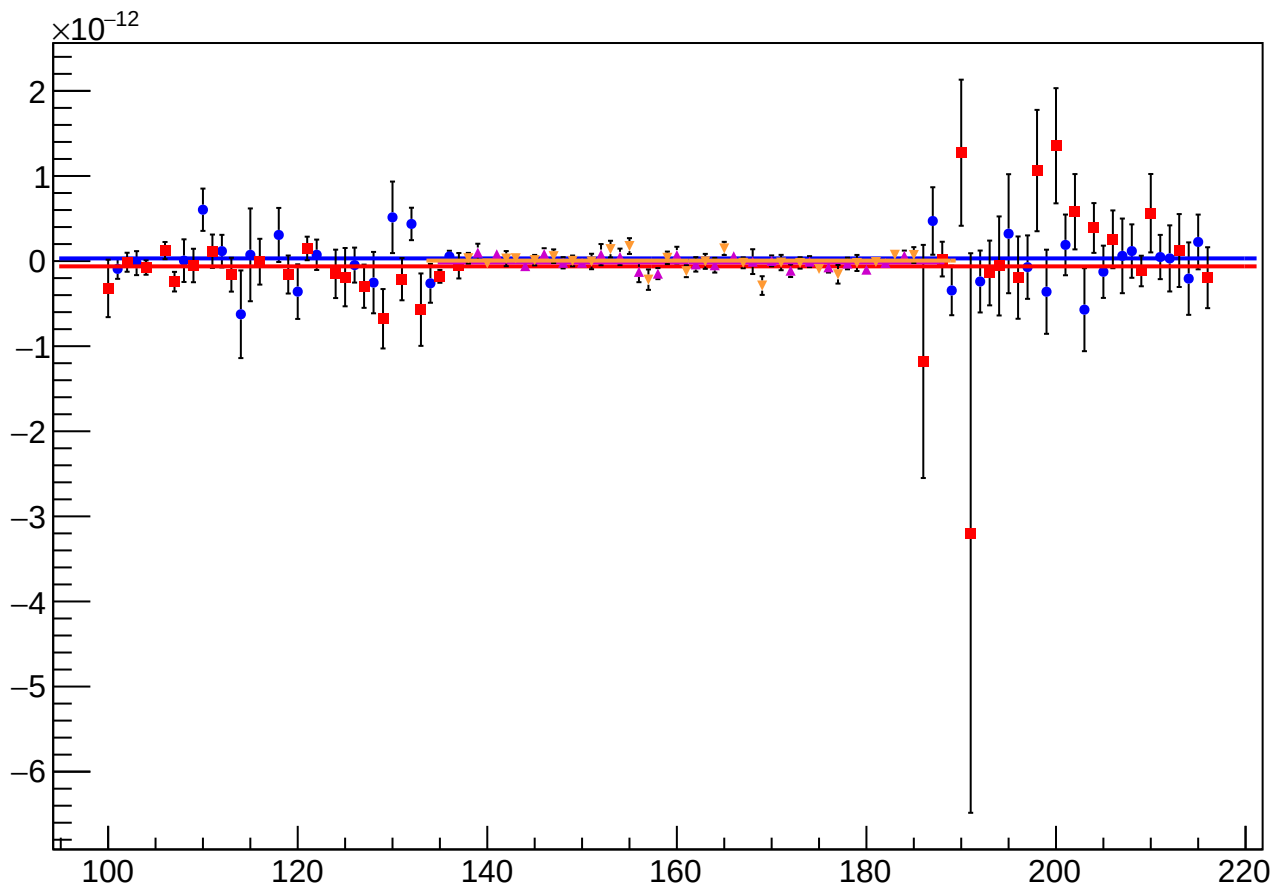
+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12747066.0/55

All: 174.102+/-0.016  $\chi^2/\text{NDF}$ : 27716879.3/11

- sign 166.970+/-0.022  $\chi^2/\text{NDF}$ : 14746714.5/57



asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.4/34

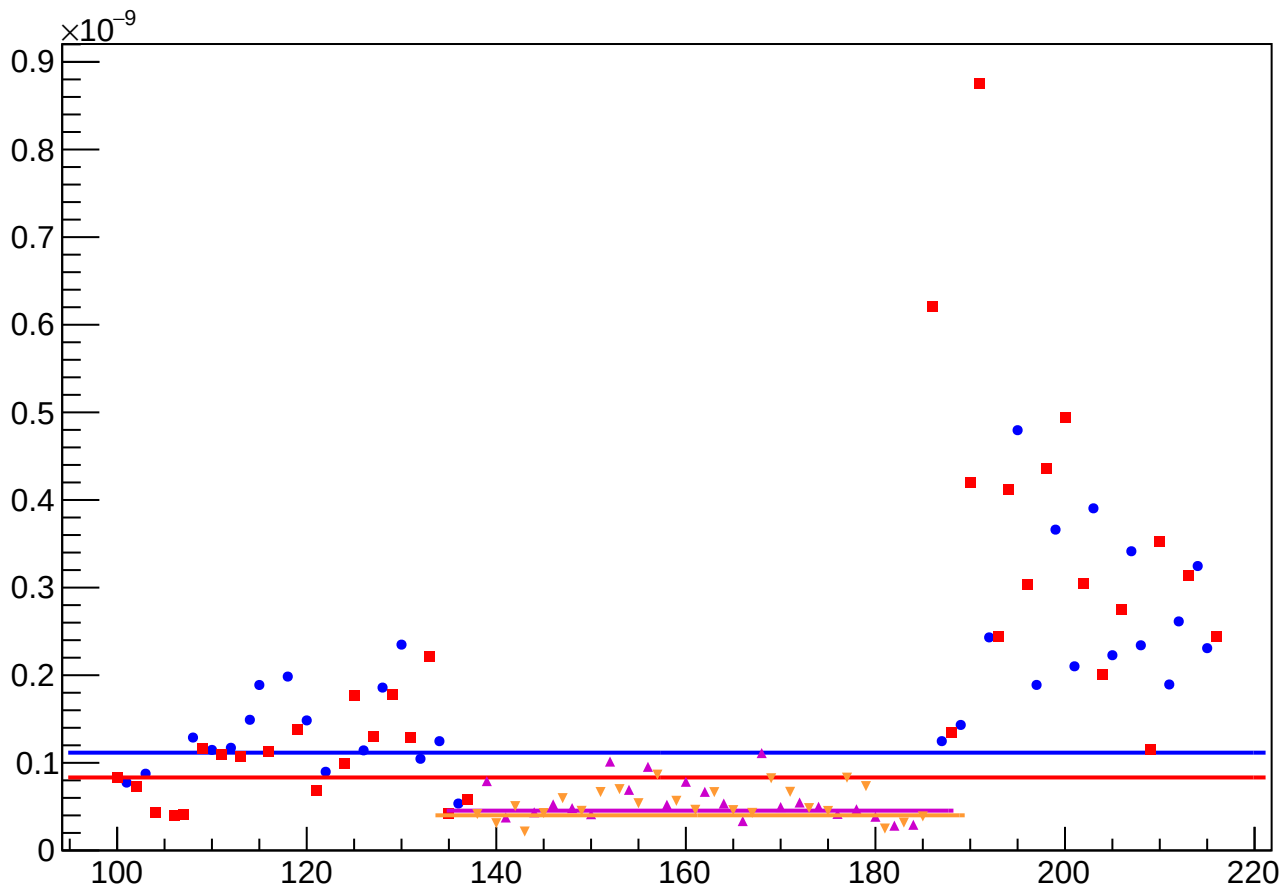
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.7/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.2/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.5/57

asym\_atl\_dd\_atr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6898634.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3609934.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9399601.0/34

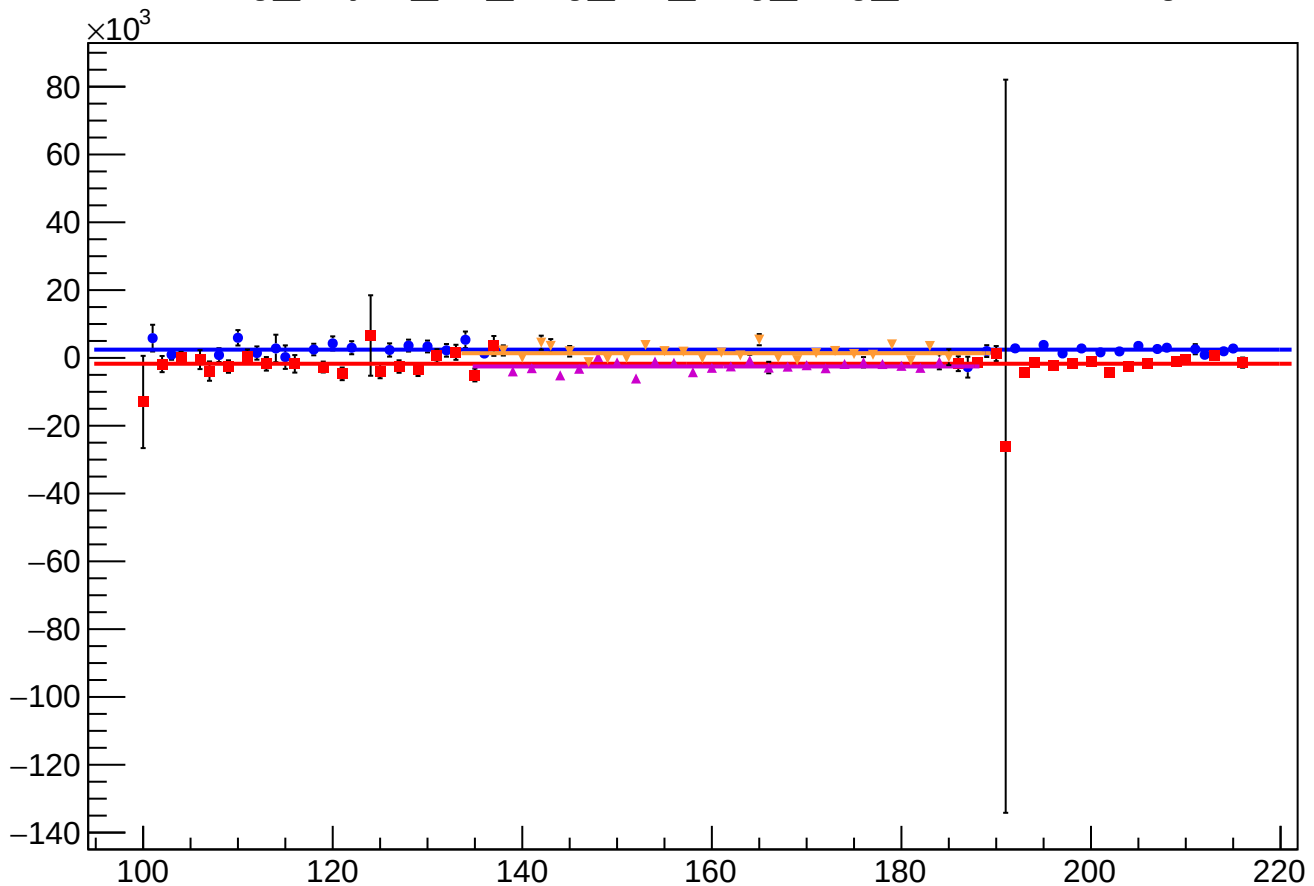
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2780344.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16657123.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31347011.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14543709.2/57

reg\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2440.246 $\pm$ 297.711  $\chi^2$ /NDF: 16.3/30

Left Out: 1383.252 $\pm$ 292.777  $\chi^2$ /NDF: 32.9/24

Right Out: -1720.866 $\pm$ 299.207  $\chi^2$ /NDF: 33.1/34

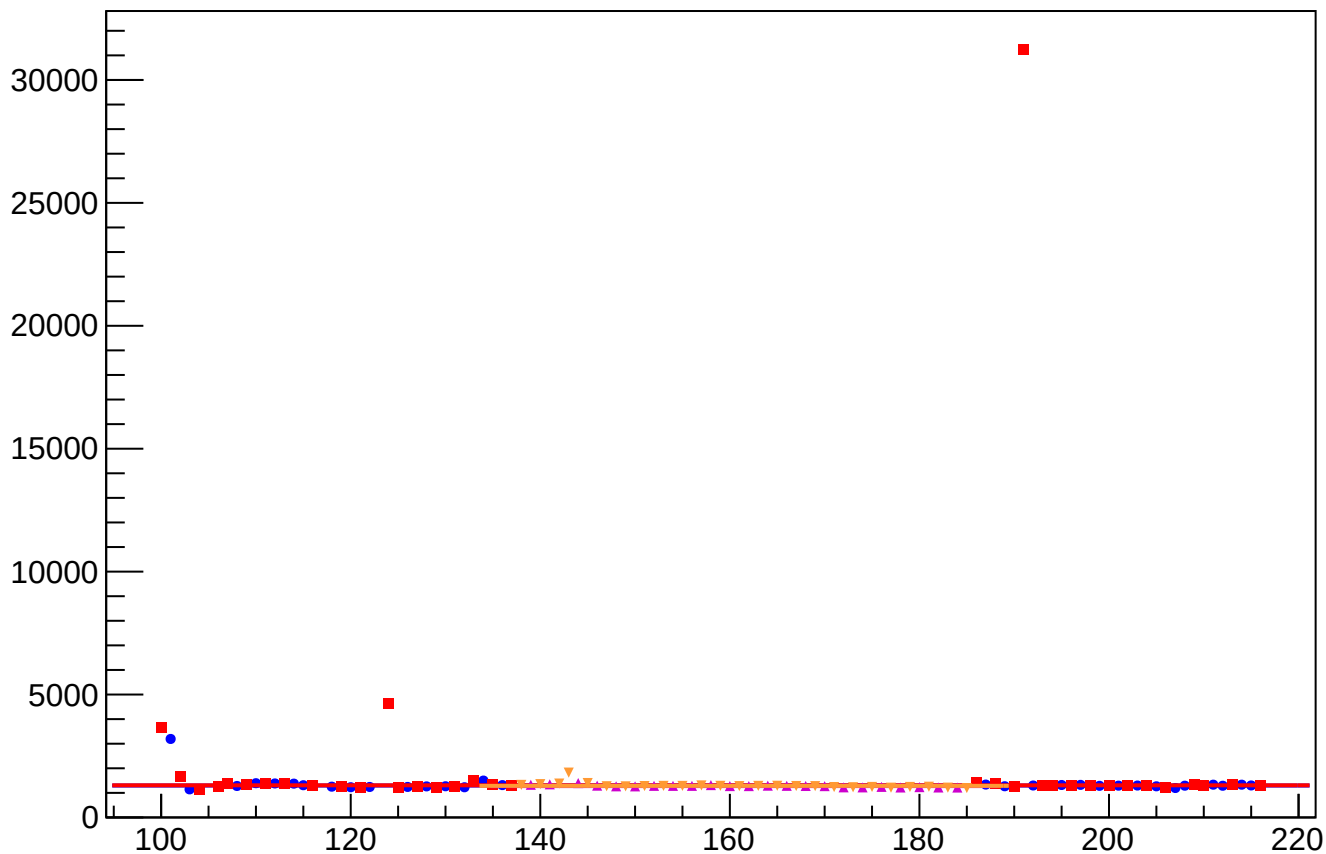
Left In: -2519.365 $\pm$ 298.095  $\chi^2$ /NDF: 22.5/22

+ sign 1902.916 $\pm$ 208.747  $\chi^2$ /NDF: 55.6/55

All: -86.055 $\pm$ 148.458  $\chi^2$ /NDF: 298.5/113

- sign -2121.601 $\pm$ 211.177  $\chi^2$ /NDF: 59.2/57

# reg\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1297.996 $\pm$ 0.211  $\chi^2$ /NDF: 534868.5/30

Left Out: 1285.649 $\pm$ 0.207  $\chi^2$ /NDF: 191027.3/24

Right Out: 1307.680 $\pm$ 0.211  $\chi^2$ /NDF: 506403.0/34

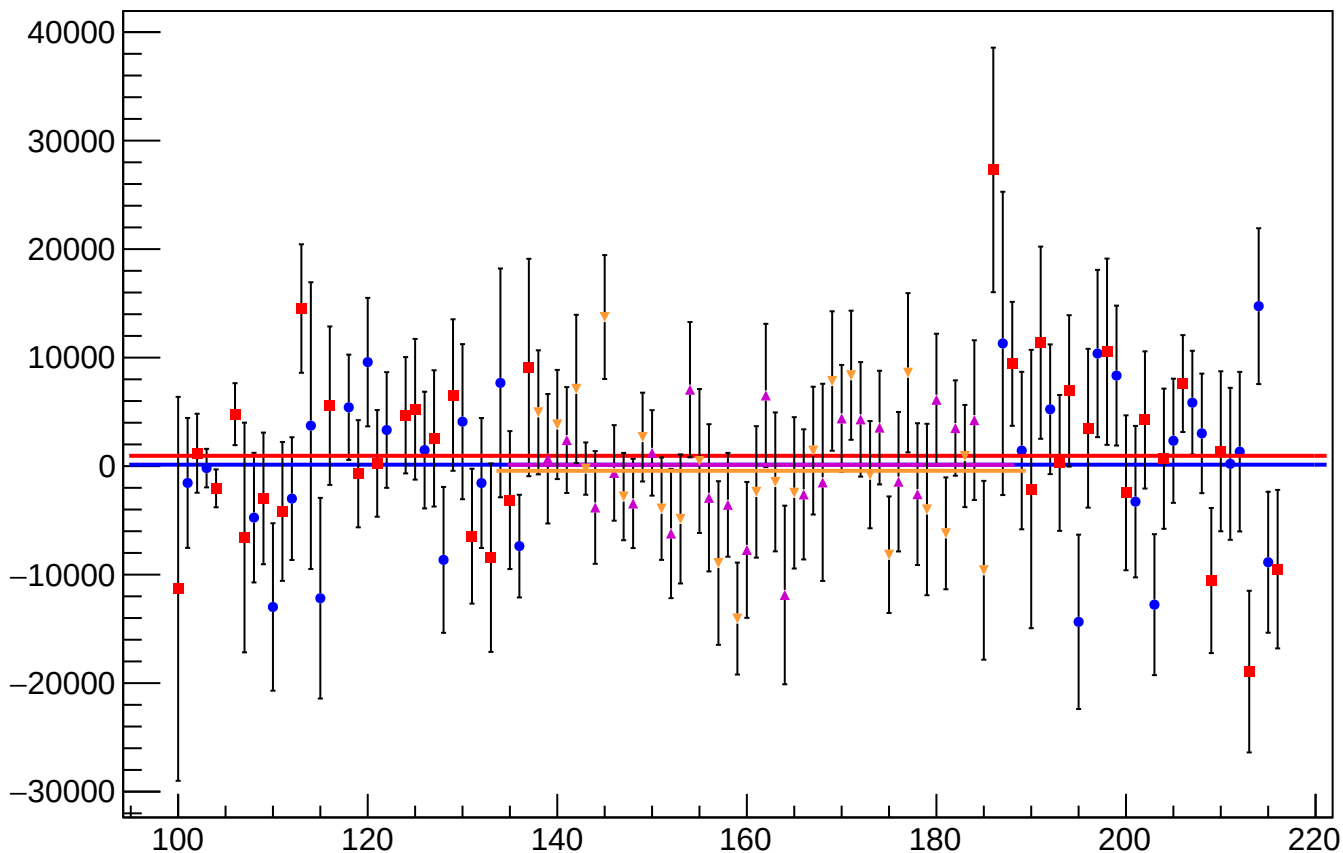
Left In: 1275.941 $\pm$ 0.211  $\chi^2$ /NDF: 41399.0/22

+ sign 1291.719 $\pm$ 0.148  $\chi^2$ /NDF: 727644.6/55

All: 1291.743 $\pm$ 0.105  $\chi^2$ /NDF: 1286752.5/11

- sign 1291.767 $\pm$ 0.149  $\chi^2$ /NDF: 559107.8/57

asym\_atl\_avg\_atr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: 132.169 $\pm$ 978.377  $\chi^2$ /NDF: 35.3/30

Left Out: -428.530 $\pm$ 1038.038  $\chi^2$ /NDF:29.8/24

Right Out: 951.254 $\pm$ 901.805  $\chi^2$ /NDF: 44.0/34

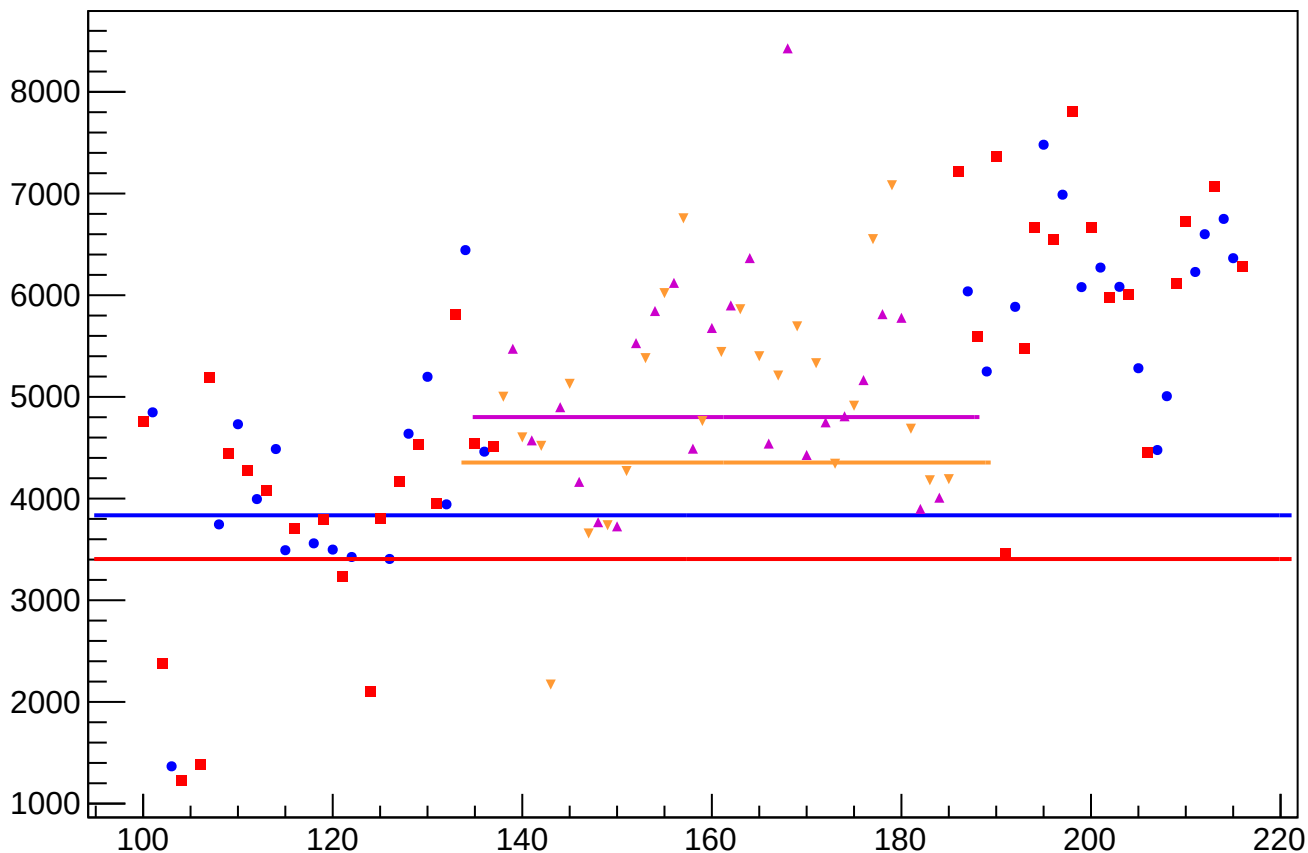
Left In: 119.335 $\pm$ 1144.695  $\chi^2$ /NDF:13.6/22

+ sign -131.605 $\pm$ 711.975  $\chi^2$ /NDF: 65.2/55

All: 252.460 $\pm$ 502.168  $\chi^2$ /NDF: 123.7/113

- sign 632.660 $\pm$ 708.383  $\chi^2$ /NDF: 57.9/57

asym\_atl\_avg\_atr\_avg\_avg\_reg\_correction\_rms vs Slug



Right In: 3835.448 $\pm$ 0.692  $\chi^2/\text{NDF}$ : 7493533.8/30

Left Out: 4354.526 $\pm$ 0.734  $\chi^2/\text{NDF}$ : 3071436.3/24

Right Out: 3405.405 $\pm$ 0.638  $\chi^2/\text{NDF}$ : 9917134.4/34

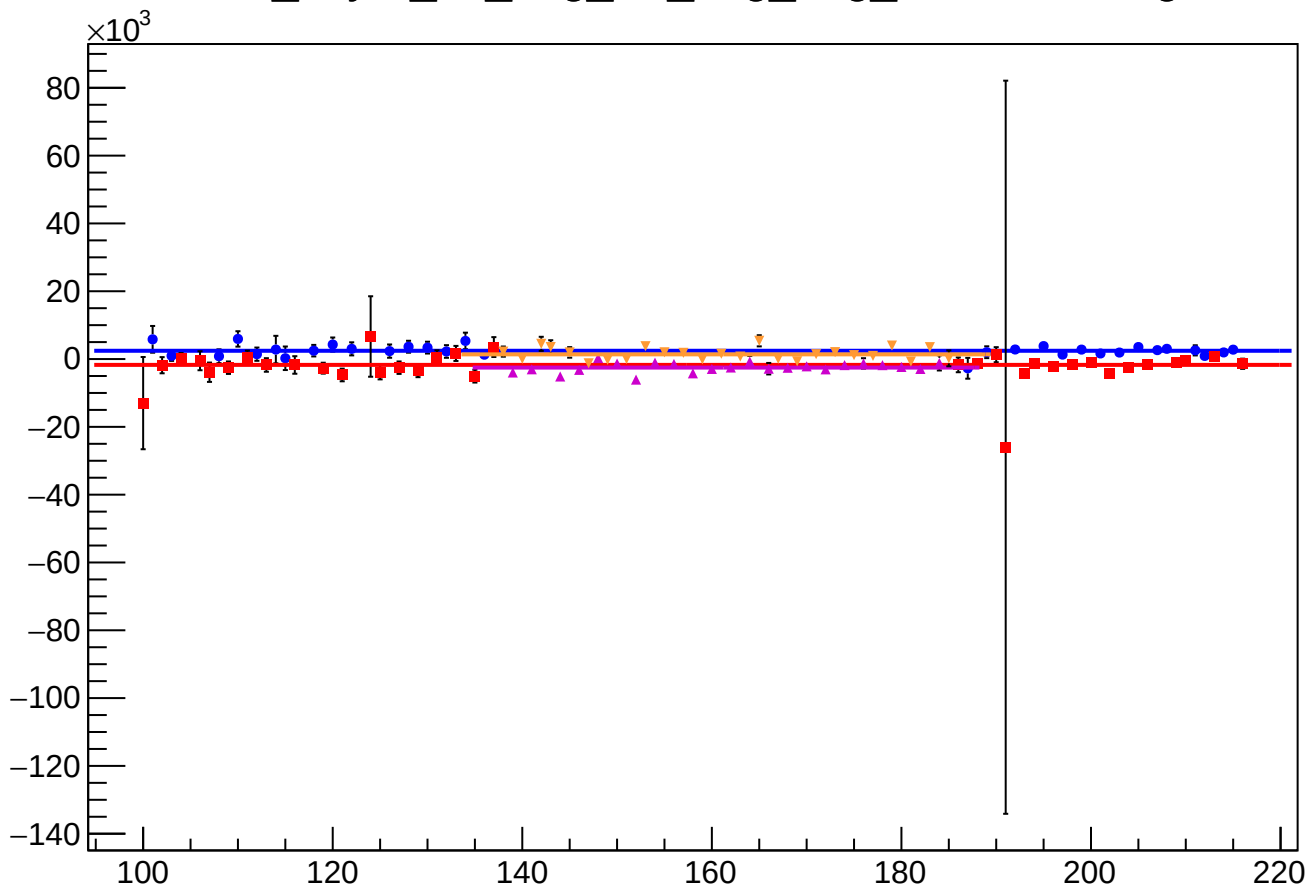
Left In: 4801.573 $\pm$ 0.809  $\chi^2/\text{NDF}$ : 1231883.2/22

+ sign 4079.643 $\pm$ 0.503  $\chi^2/\text{NDF}$ : 10829811.2/55

All: 4009.511 $\pm$ 0.355  $\chi^2/\text{NDF}$ : 23853295.0/100

- sign 3940.085 $\pm$ 0.501  $\chi^2/\text{NDF}$ : 12984867.8/57

cor\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2440.154 $\pm$ 297.711  $\chi^2/\text{NDF}$ : 16.3/30

Left Out: 1383.188 $\pm$ 292.777  $\chi^2/\text{NDF}$ : 32.9/24

Right Out: -1720.787 $\pm$ 299.207  $\chi^2/\text{NDF}$ : 33.1/34

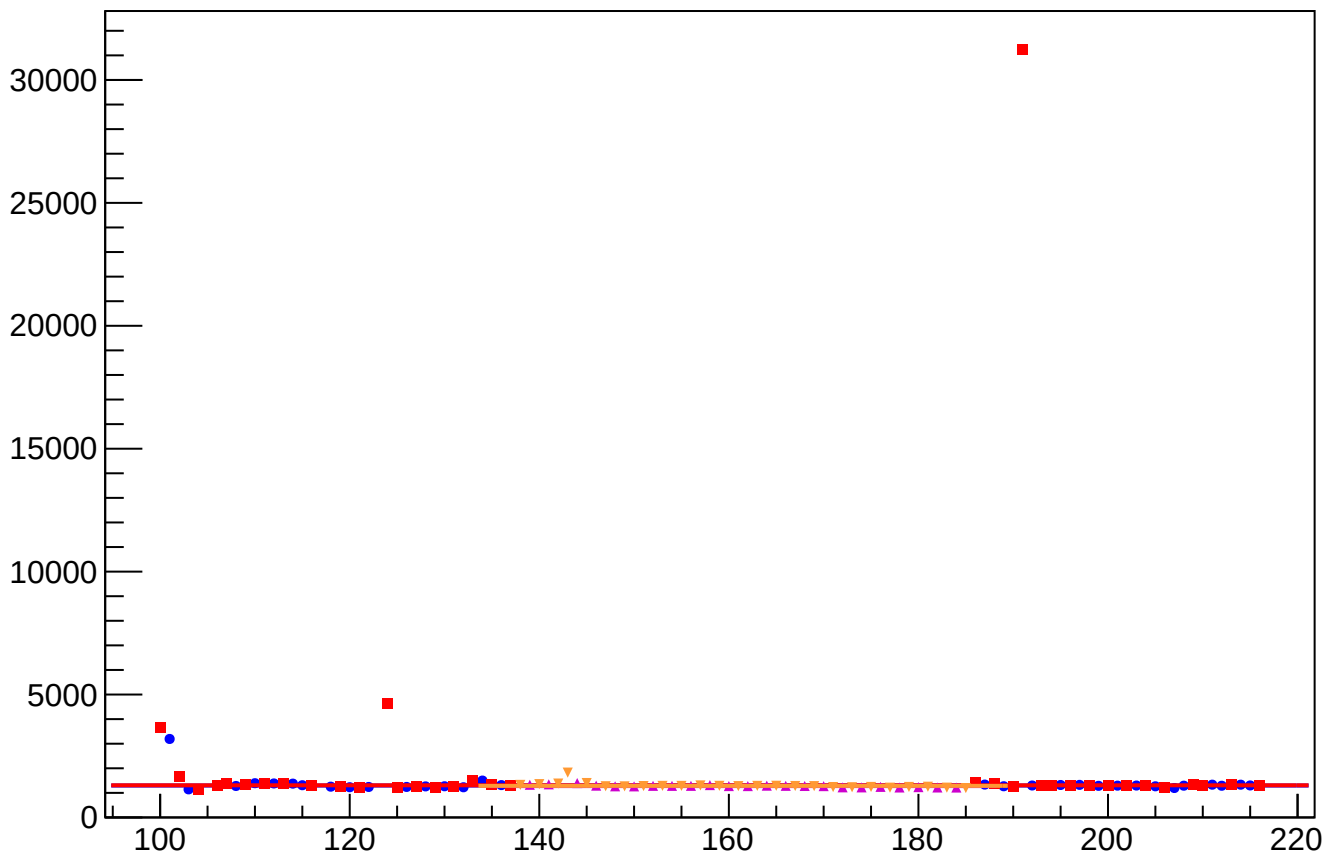
Left In: -2519.366 $\pm$ 298.095  $\chi^2/\text{NDF}$ : 22.5/22

+ sign 1902.838 $\pm$ 208.747  $\chi^2/\text{NDF}$ : 55.6/55

All: -86.075 $\pm$ 148.458  $\chi^2/\text{NDF}$ : 298.5/113

- sign -2121.563 $\pm$ 211.177  $\chi^2/\text{NDF}$ : 59.2/57

cor\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1297.996+/-0.211  $\chi^2$ /NDF: 534870.0/30

Left Out: 1285.649+/-0.207  $\chi^2$ /NDF: 191027.3/24

Right Out: 1308.089+/-0.211  $\chi^2$ /NDF: 506069.7/34

Left In: 1275.941+/-0.211  $\chi^2$ /NDF: 41399.0/22

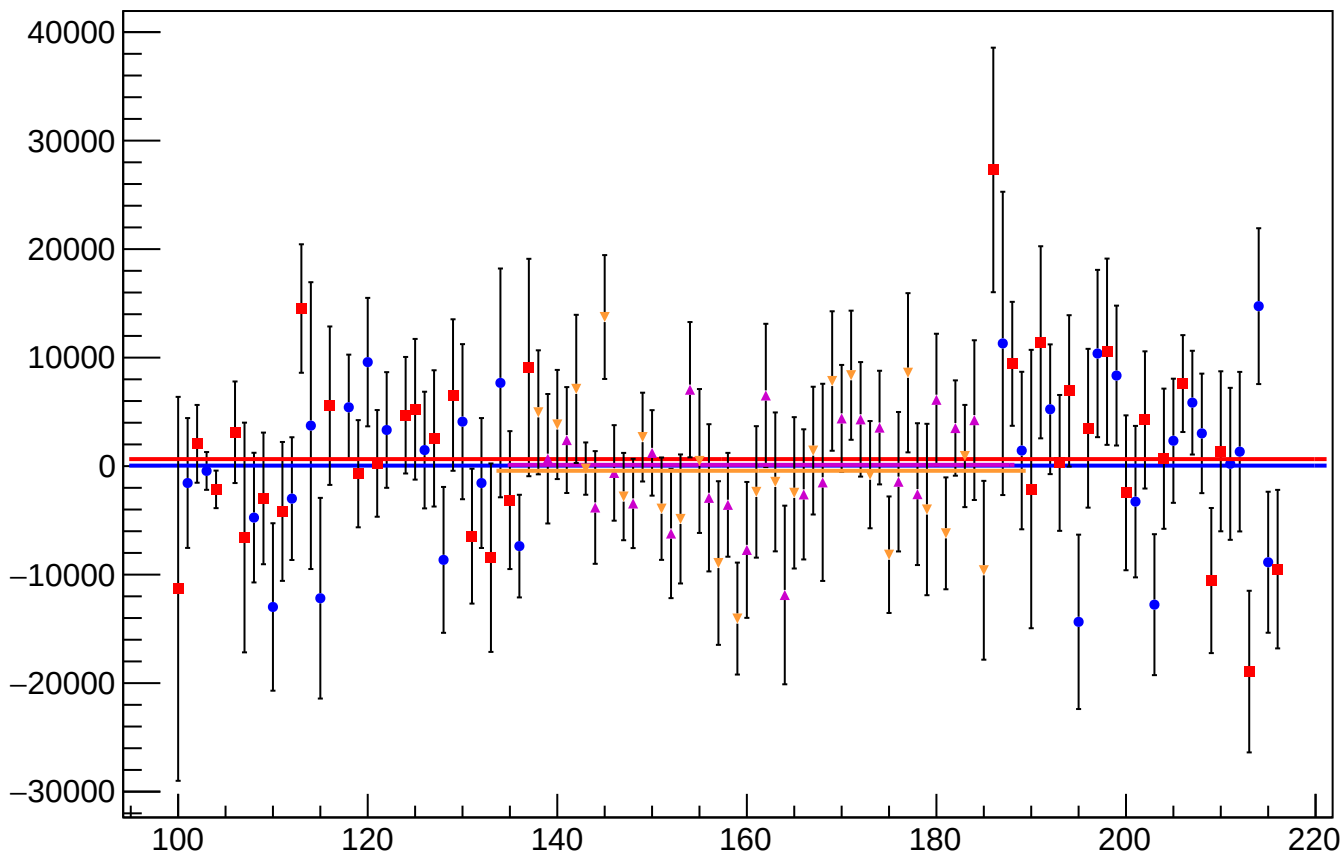
+ sign 1291.719+/-0.148  $\chi^2$ /NDF: 727646.0/55

All: 1291.842+/-0.105  $\chi^2$ /NDF: 1286712.0/11

- sign 1291.966+/-0.149  $\chi^2$ /NDF: 559064.5/57



asym\_atl\_avg\_atr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In: 47.009+/-972.598  $\chi^2/\text{NDF}$ : 35.3/30

Left Out: -428.525+/-1038.036  $\chi^2/\text{NDF}$ : 29.8/24

Right Out: 647.151+/-928.043  $\chi^2/\text{NDF}$ : 42.6/34

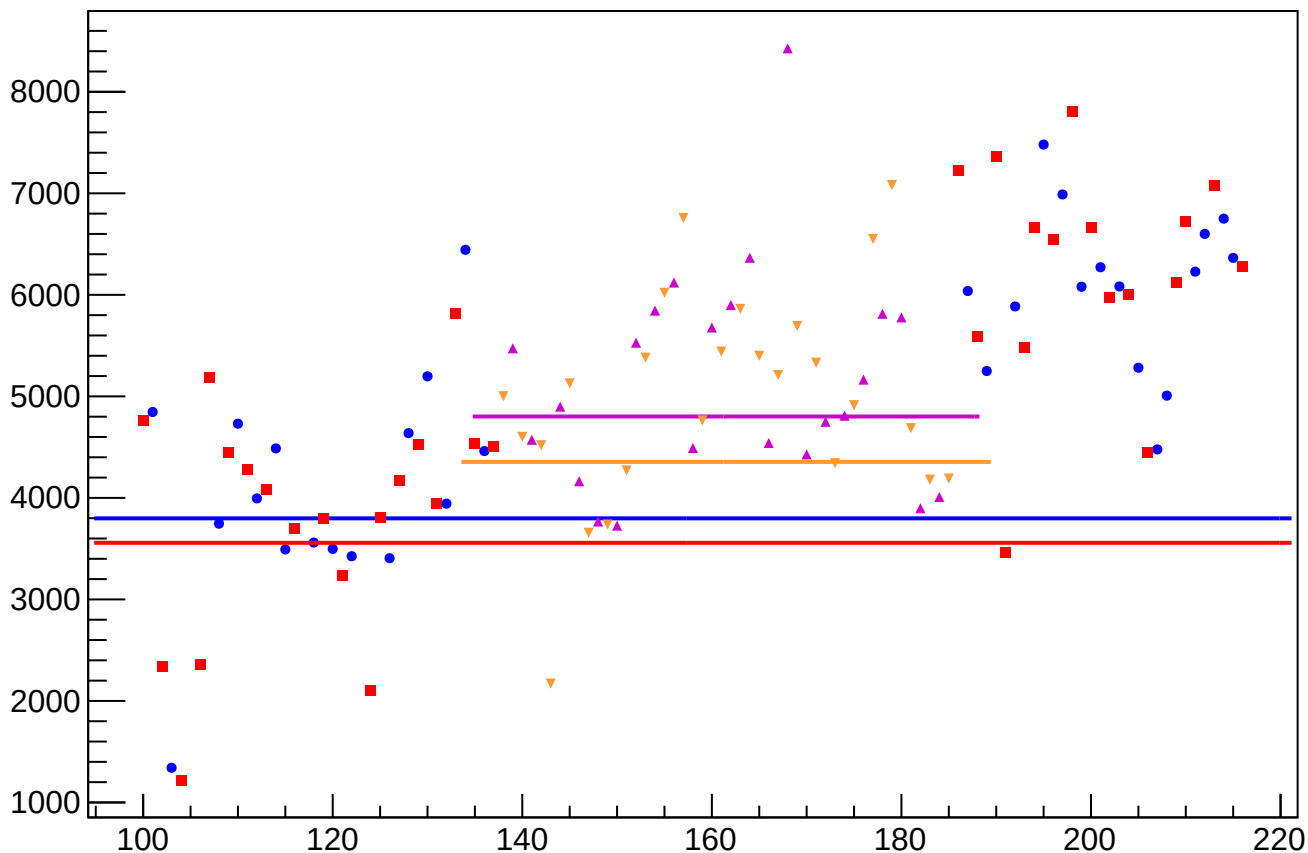
Left In: 119.307+/-1144.695  $\chi^2/\text{NDF}$ : 13.6/22

+ sign -175.297+/-709.738  $\chi^2/\text{NDF}$ : 65.3/55

All: 126.475+/-505.757  $\chi^2/\text{NDF}$ : 122.0/113

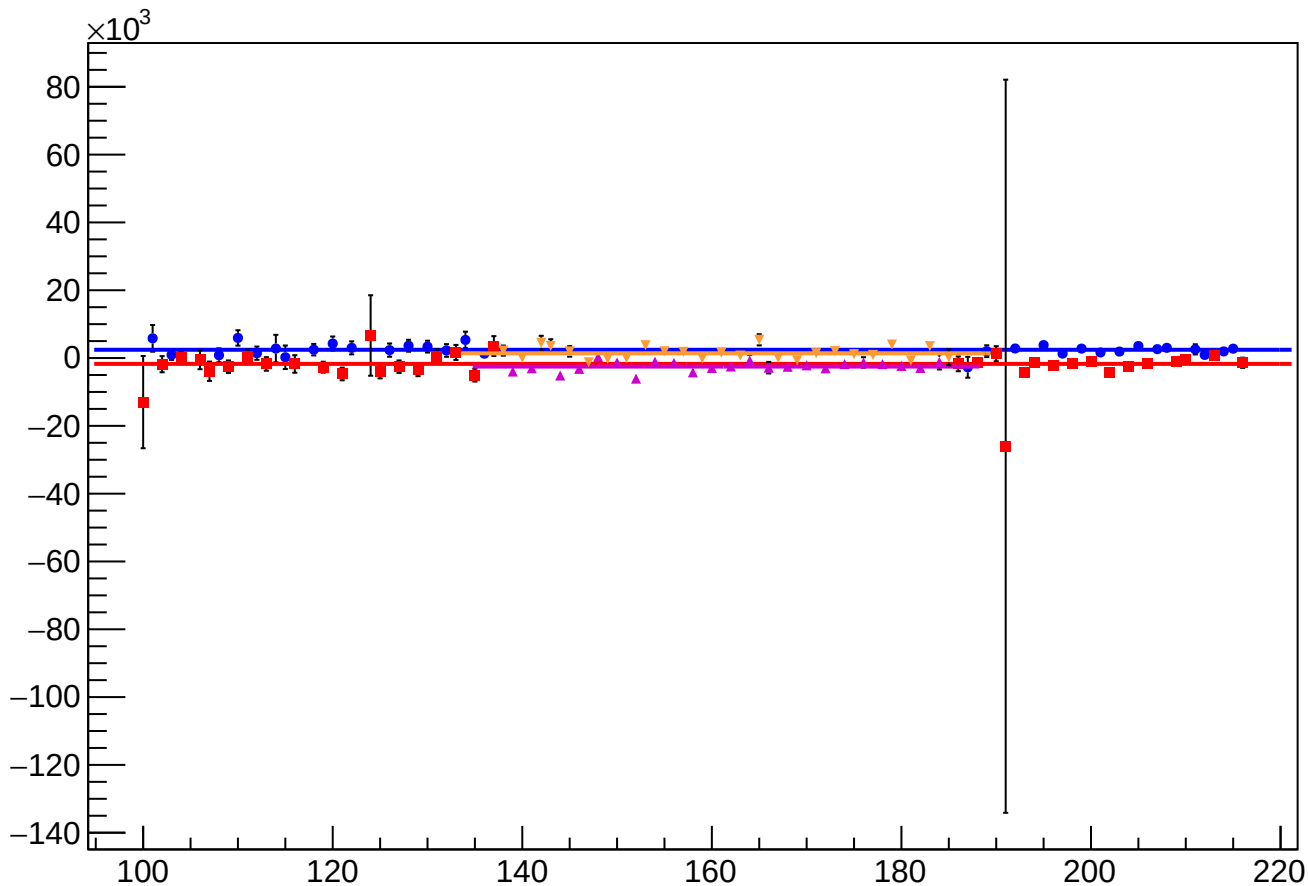
- sign 437.806+/-720.890  $\chi^2/\text{NDF}$ : 56.4/57

asym\_atl\_avg\_atr\_avg\_avg\_cor\_correction\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 3798.509+/-0.688  | $\chi^2/\text{NDF}$ : 7724685.2/30 | + sign 4058.433+/-0.502 | $\chi^2/\text{NDF}$ : 11101767.2/55  |
| Left Out: 4354.511+/-0.734  | $\chi^2/\text{NDF}$ : 3071528.5/24 | All: 4054.875+/-0.358   | $\chi^2/\text{NDF}$ : 22831055.3/100 |
| Right Out: 3557.995+/-0.656 | $\chi^2/\text{NDF}$ : 9073007.4/34 | - sign 4051.203+/-0.510 | $\chi^2/\text{NDF}$ : 11729185.9/57  |
| Left In: 4801.570+/-0.809   | $\chi^2/\text{NDF}$ : 1231894.6/22 |                         |                                      |

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In:  $2440.154 \pm 297.711$   $\chi^2/\text{NDF}$ : 16.3/30

Left Out:  $1383.188 \pm 292.777$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-1720.787 \pm 299.207$   $\chi^2/\text{NDF}$ : 33.1/34

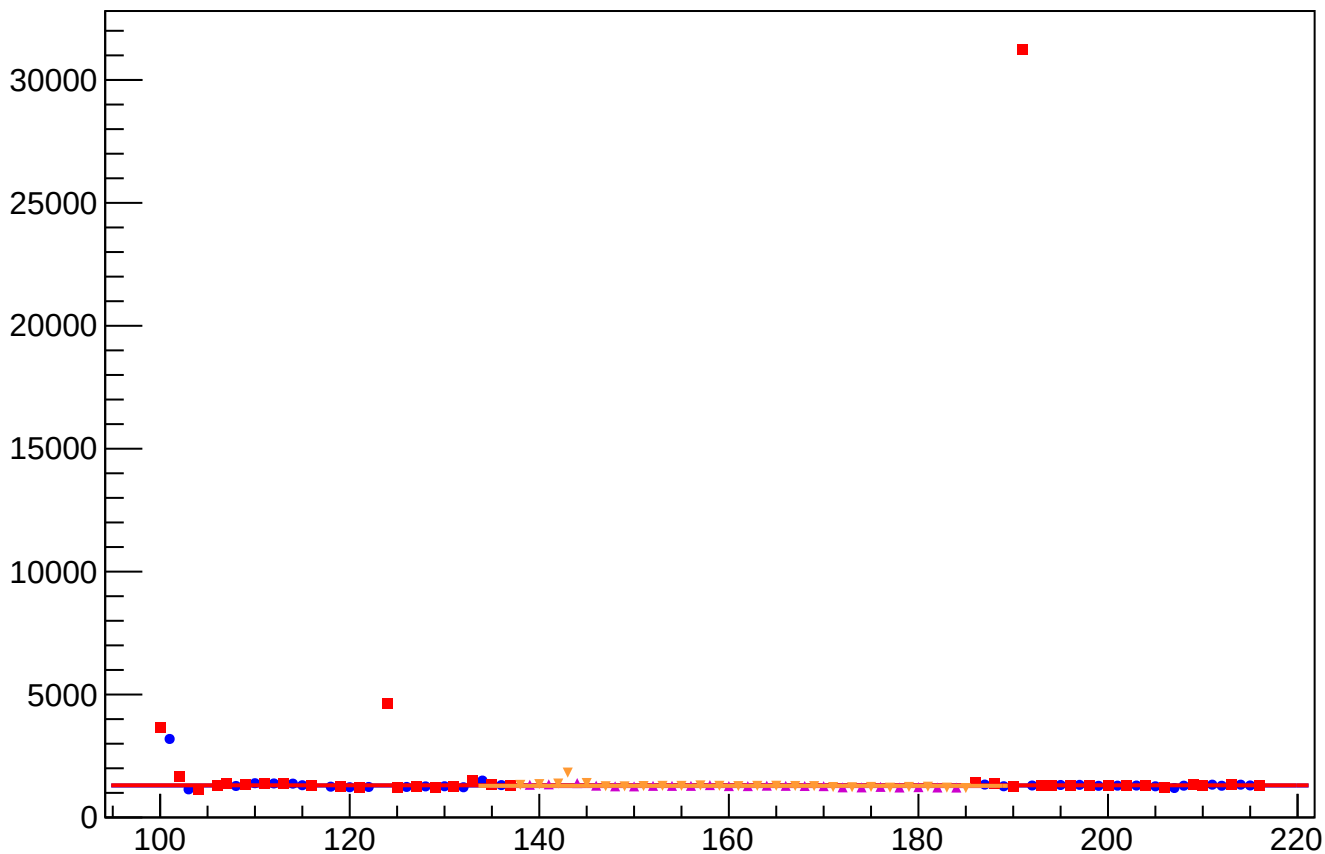
Left In:  $-2519.366 \pm 298.095$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $1902.838 \pm 208.747$   $\chi^2/\text{NDF}$ : 55.6/55

All:  $-86.075 \pm 148.458$   $\chi^2/\text{NDF}$ : 298.5/113

- sign  $-2121.563 \pm 211.177$   $\chi^2/\text{NDF}$ : 59.2/57

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1297.996 $\pm$ 0.211  $\chi^2$ /NDF: 534870.0/30

Left Out: 1285.649 $\pm$ 0.207  $\chi^2$ /NDF: 191027.3/24

Right Out: 1308.089 $\pm$ 0.211  $\chi^2$ /NDF: 506069.7/34

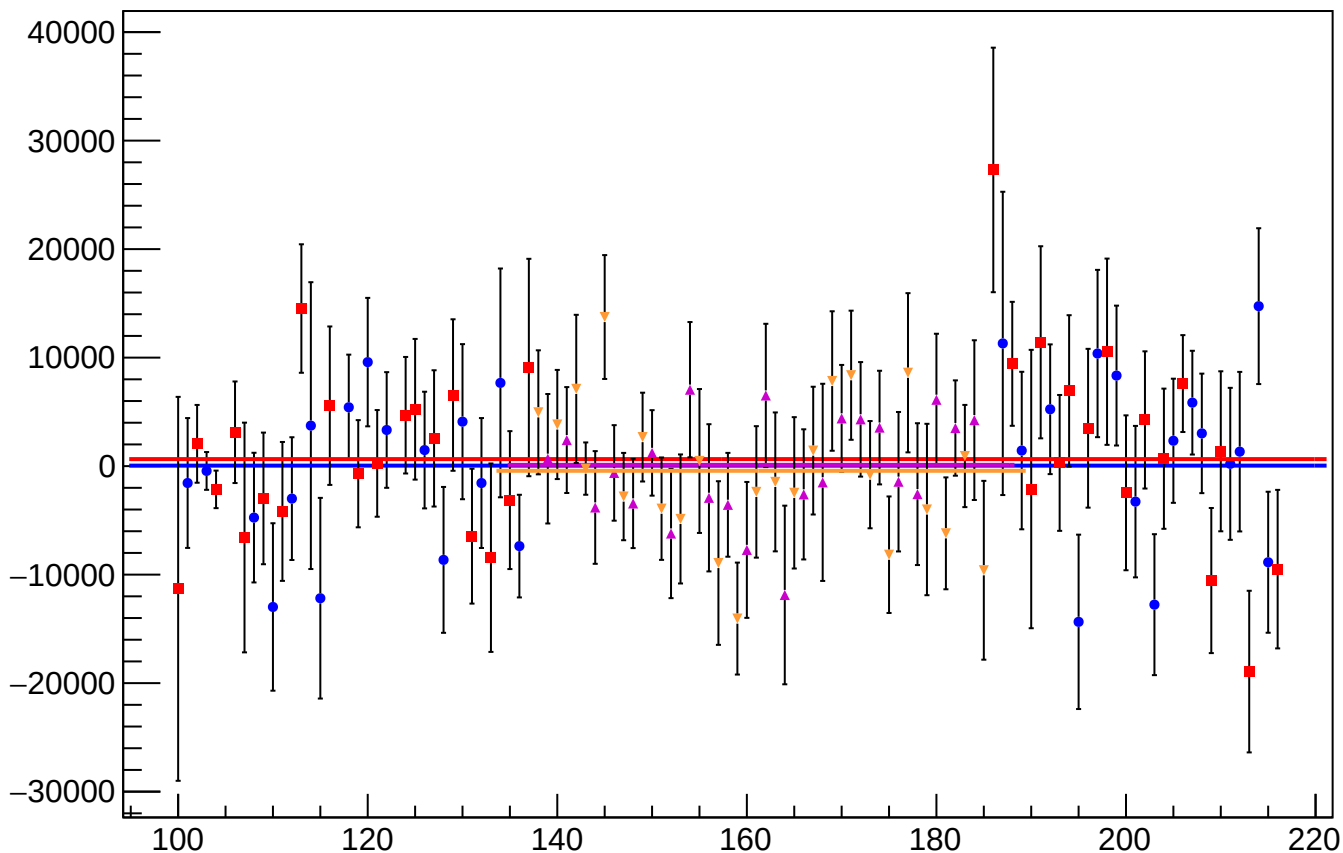
Left In: 1275.941 $\pm$ 0.211  $\chi^2$ /NDF: 41399.0/22

+ sign 1291.719 $\pm$ 0.148  $\chi^2$ /NDF: 727646.0/55

All: 1291.842 $\pm$ 0.105  $\chi^2$ /NDF: 1286712.0/11

- sign 1291.966 $\pm$ 0.149  $\chi^2$ /NDF: 559064.5/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 47.009+/-972.598  $\chi^2/\text{NDF}$ : 35.3/30

Left Out: -428.525+/-1038.036  $\chi^2/\text{NDF}$ : 29.8/24

Right Out: 647.151+/-928.043  $\chi^2/\text{NDF}$ : 42.6/34

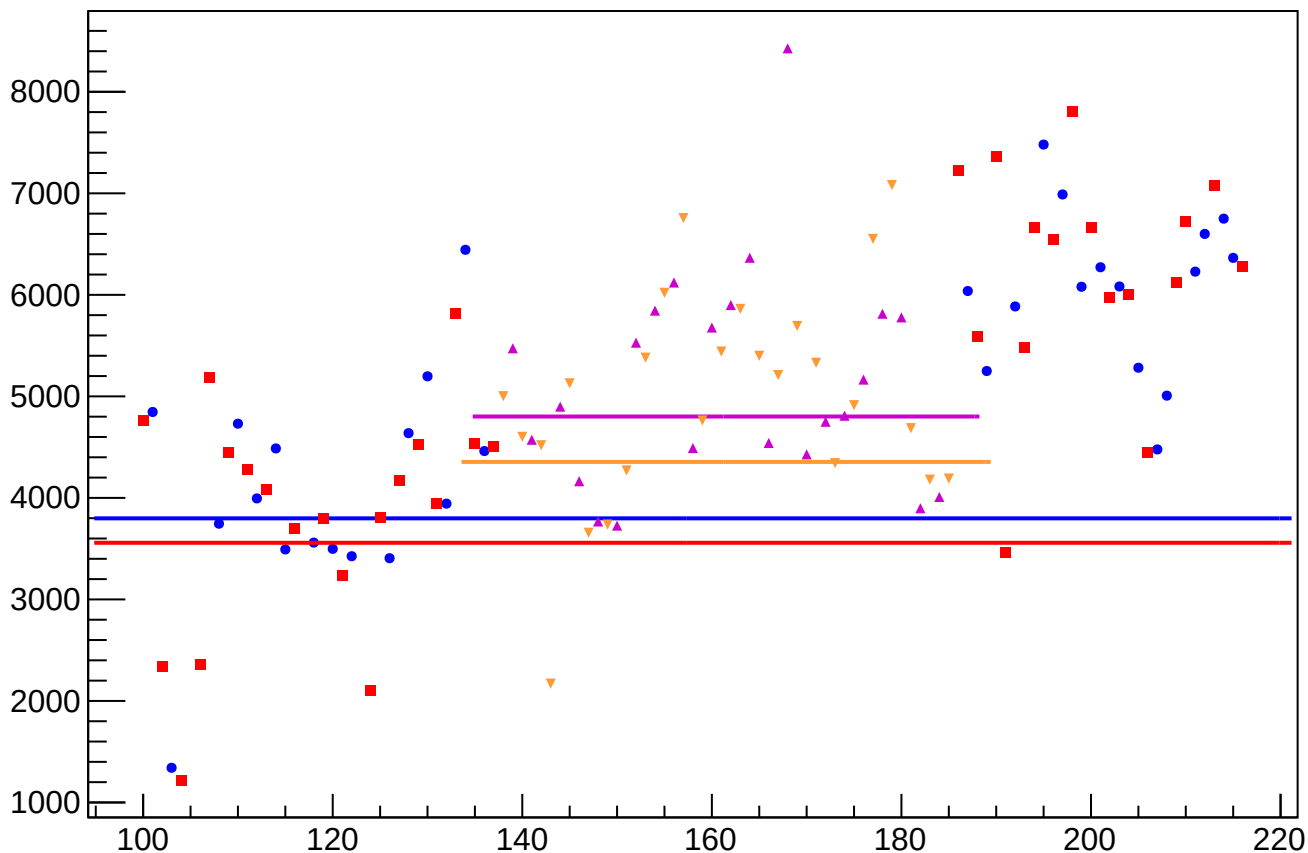
Left In: 119.307+/-1144.695  $\chi^2/\text{NDF}$ : 13.6/22

+ sign -175.297+/-709.738  $\chi^2/\text{NDF}$ : 65.3/55

All: 126.475+/-505.757  $\chi^2/\text{NDF}$ : 122.0/113

- sign 437.806+/-720.890  $\chi^2/\text{NDF}$ : 56.4/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 3798.509+/-0.688  $\chi^2/\text{NDF}$ : 7724685.2/30

Left Out: 4354.511+/-0.734  $\chi^2/\text{NDF}$ : 3071528.5/24

Right Out: 3557.995+/-0.656  $\chi^2/\text{NDF}$ : 9073007.4/34

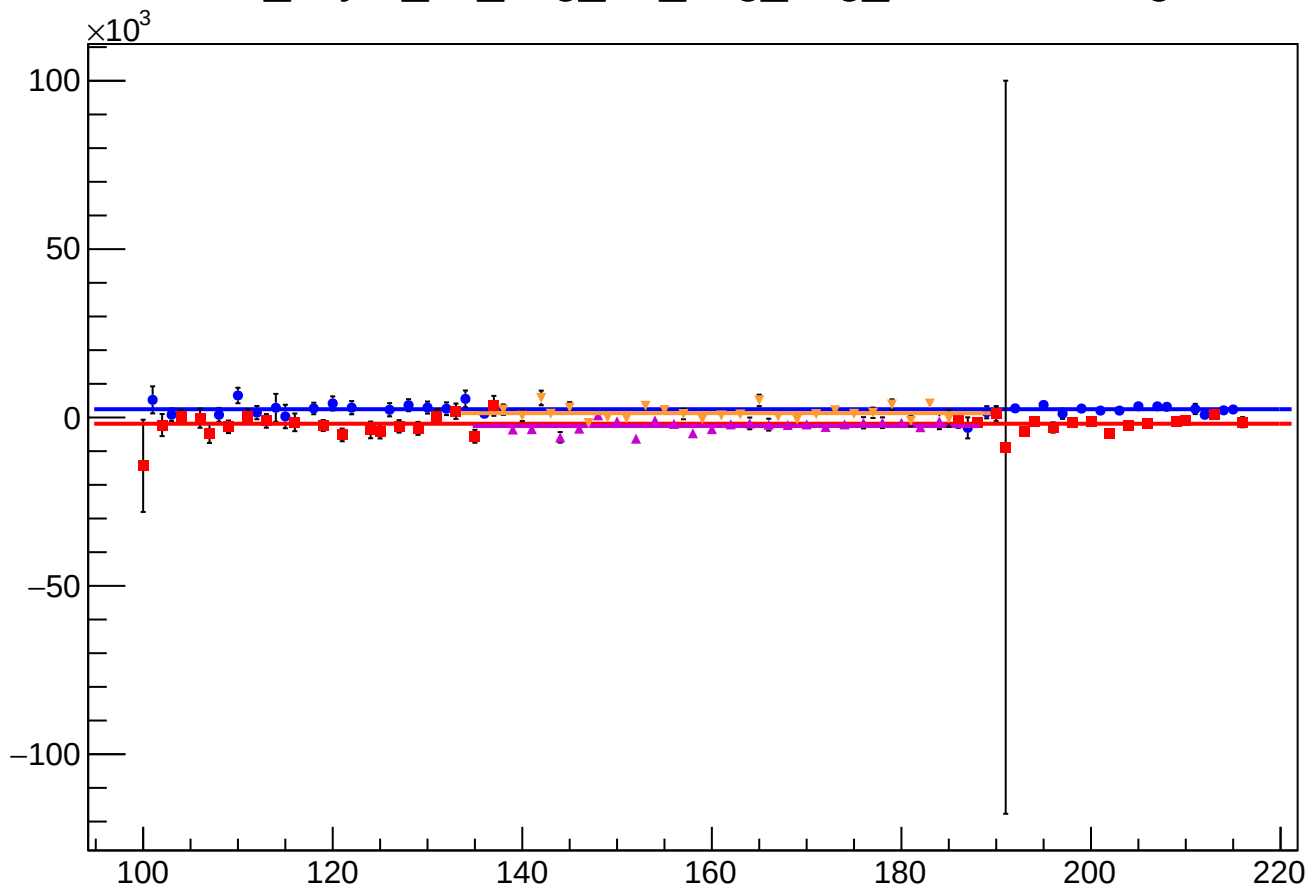
Left In: 4801.570+/-0.809  $\chi^2/\text{NDF}$ : 1231894.6/22

+ sign 4058.433+/-0.502  $\chi^2/\text{NDF}$ : 11101767.2/55

All: 4054.875+/-0.358  $\chi^2/\text{NDF}$ : 22831055.3/100

- sign 4051.203+/-0.510  $\chi^2/\text{NDF}$ : 11729185.9/57

dit\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2461.196 $\pm$ 304.955  $\chi^2$ /NDF: 17.0/30

Left Out: 1284.422 $\pm$ 300.530  $\chi^2$ /NDF: 33.4/24

Right Out: -1849.809 $\pm$ 305.346  $\chi^2$ /NDF: 34.8/34

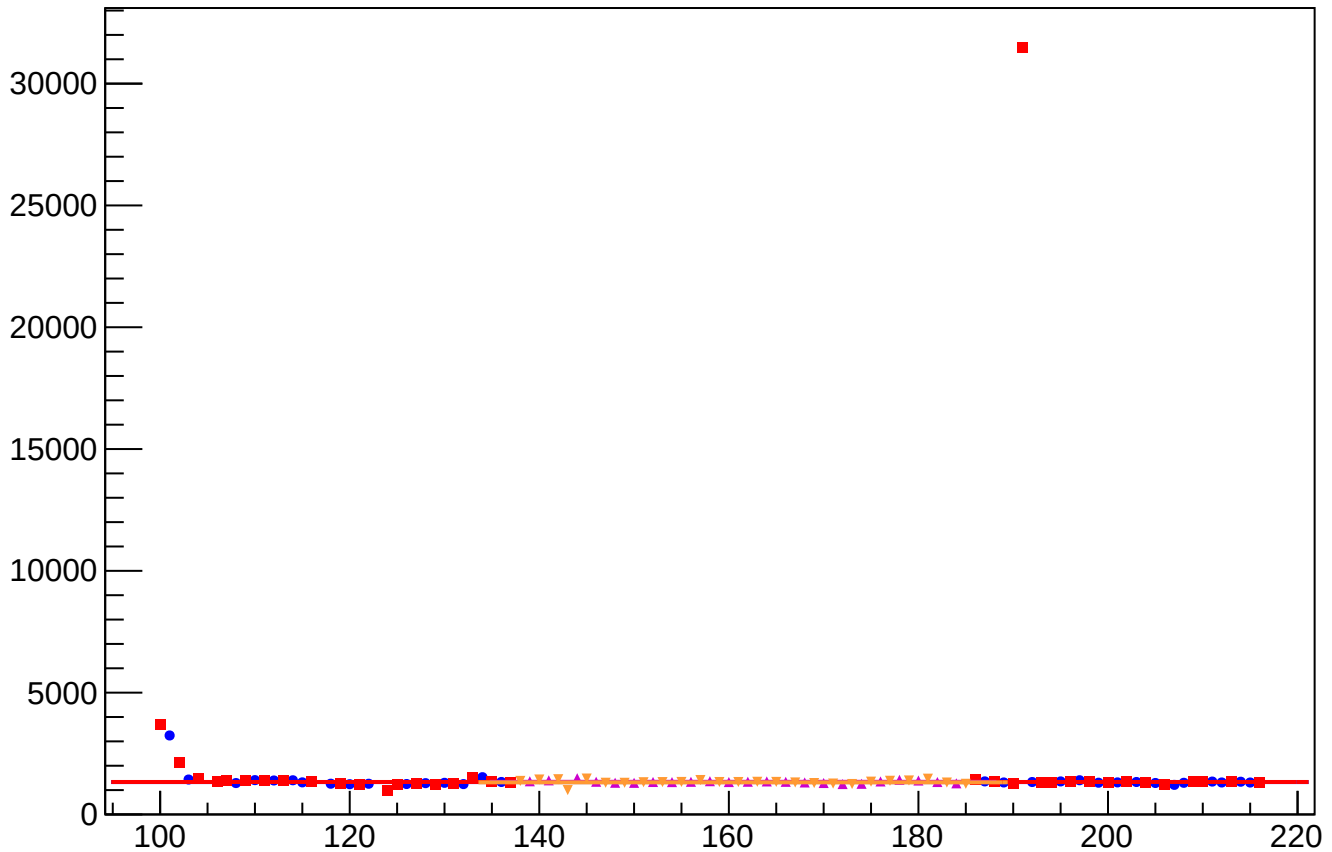
Left In: -2531.791 $\pm$ 312.886  $\chi^2$ /NDF: 25.0/22

+ sign 1864.207 $\pm$ 214.054  $\chi^2$ /NDF: 57.9/55

All: -117.277 $\pm$ 152.917  $\chi^2$ /NDF: 295.2/113

- sign -2182.483 $\pm$ 218.529  $\chi^2$ /NDF: 62.3/57

dit\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1329.406 $\pm$ 0.216  $\chi^2$ /NDF: 523409.9/30

Left Out: 1318.174 $\pm$ 0.213  $\chi^2$ /NDF: 248547.7/24

Right Out: 1333.176 $\pm$ 0.216  $\chi^2$ /NDF: 448751.1/34

Left In: 1338.602 $\pm$ 0.221  $\chi^2$ /NDF: 54248.5/22

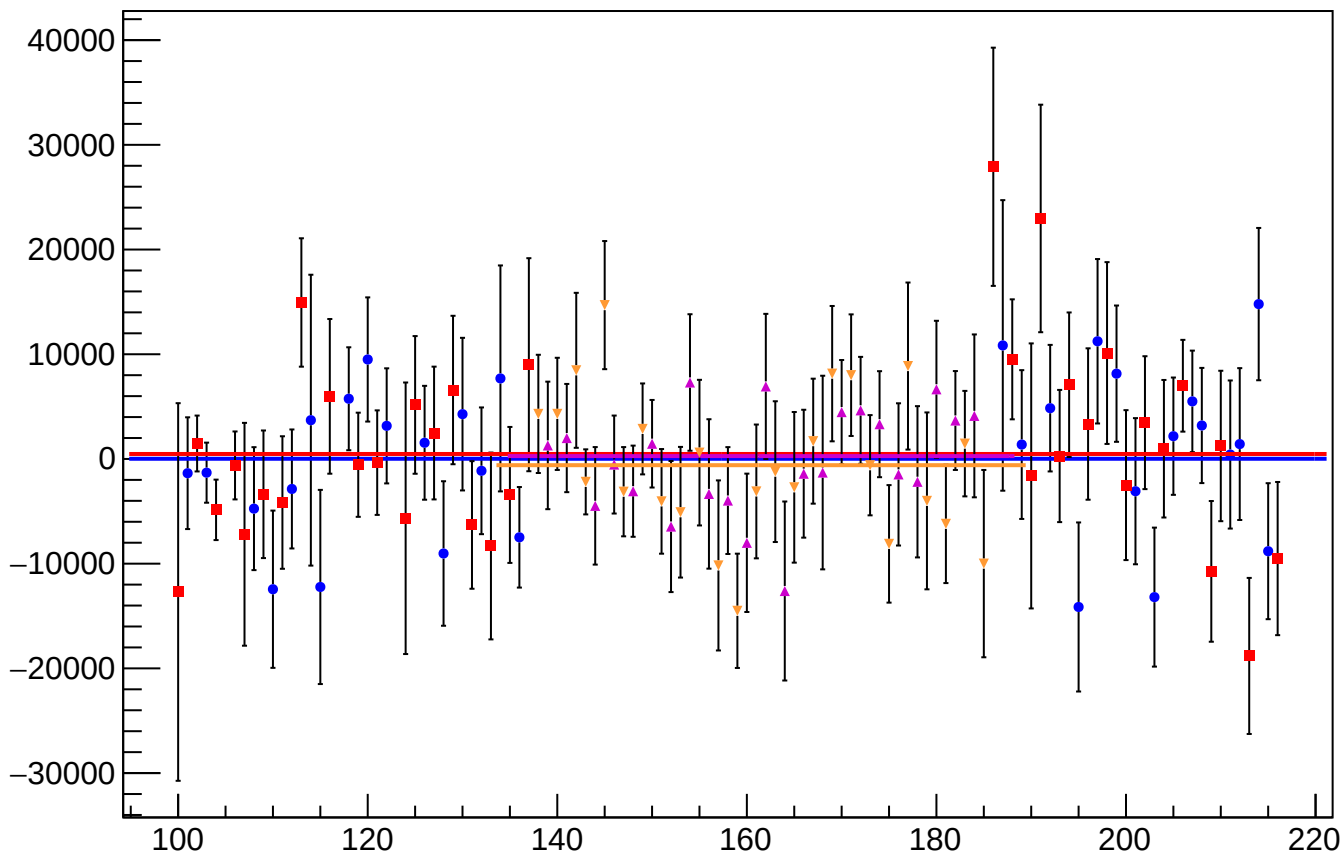
+ sign 1323.708 $\pm$ 0.151  $\chi^2$ /NDF: 773333.8/55

All: 1329.640 $\pm$ 0.108  $\chi^2$ /NDF: 1279778.7/11

- sign 1335.822 $\pm$ 0.155  $\chi^2$ /NDF: 503307.8/57



asym\_atl\_avg\_atr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In:  $19.147 \pm 1086.649$   $\chi^2/\text{NDF}: 35.0/30$

Left Out:  $-594.916 \pm 1122.287$   $\chi^2/\text{NDF}: 29.5/24$

Right Out:  $475.480 \pm 989.772$   $\chi^2/\text{NDF}: 45.6/34$

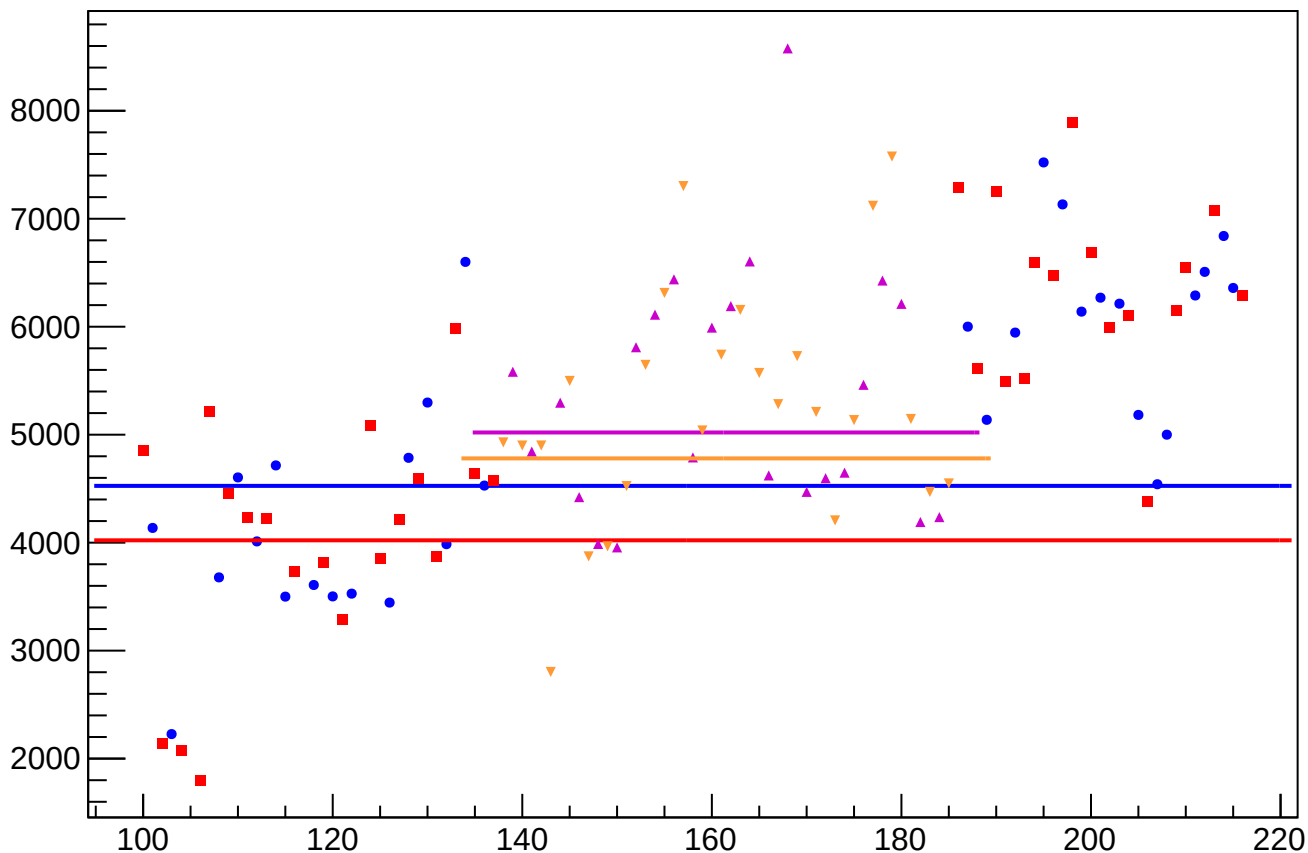
Left In:  $272.915 \pm 1196.804$   $\chi^2/\text{NDF}: 13.4/22$

+ sign  $-277.980 \pm 780.672$   $\chi^2/\text{NDF}: 64.7/55$

All:  $65.415 \pm 545.564$   $\chi^2/\text{NDF}: 124.1/113$

- sign  $393.207 \pm 762.730$   $\chi^2/\text{NDF}: 59.0/57$

asym\_atl\_avg\_atr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 4525.997 $\pm$ 0.768  $\chi^2$ /NDF: 3465746.3/30

Left Out: 4780.396 $\pm$ 0.794  $\chi^2$ /NDF: 2006245.3/24

Right Out: 4021.681 $\pm$ 0.700  $\chi^2$ /NDF: 6256454.0/34

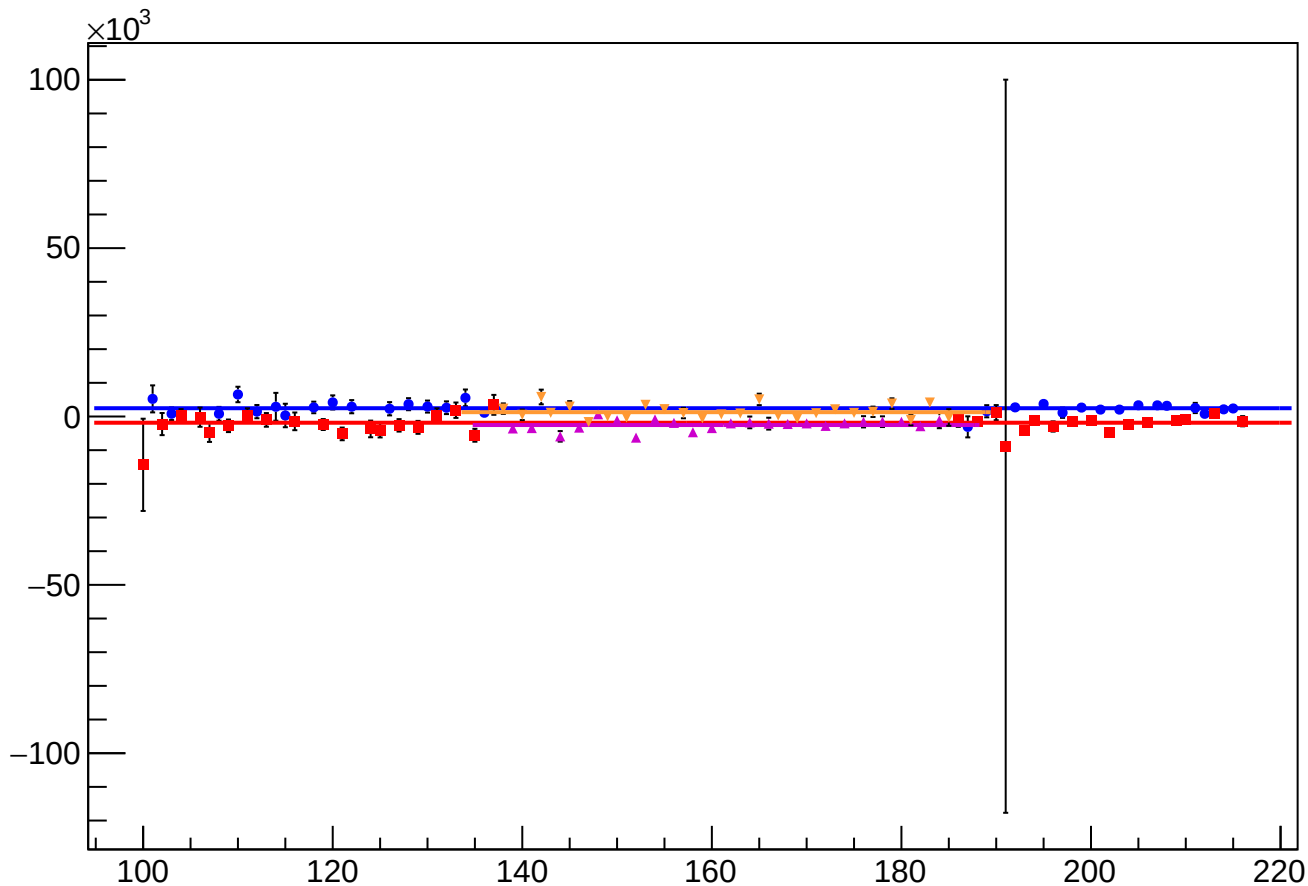
Left In: 5020.560 $\pm$ 0.846  $\chi^2$ /NDF: 1225091.9/22

+ sign 4649.093 $\pm$ 0.552  $\chi^2$ /NDF: 5525032.5/55

All: 4535.661 $\pm$ 0.386  $\chi^2$ /NDF: 13916441.8/100

- sign 4427.383 $\pm$ 0.539  $\chi^2$ /NDF: 8308879.0/57

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2461.193 $\pm$ 304.955  $\chi^2/\text{NDF}$ : 17.0/30

Left Out: 1284.416 $\pm$ 300.530  $\chi^2/\text{NDF}$ : 33.4/24

Right Out: -1849.807 $\pm$ 305.346  $\chi^2/\text{NDF}$ : 34.8/34

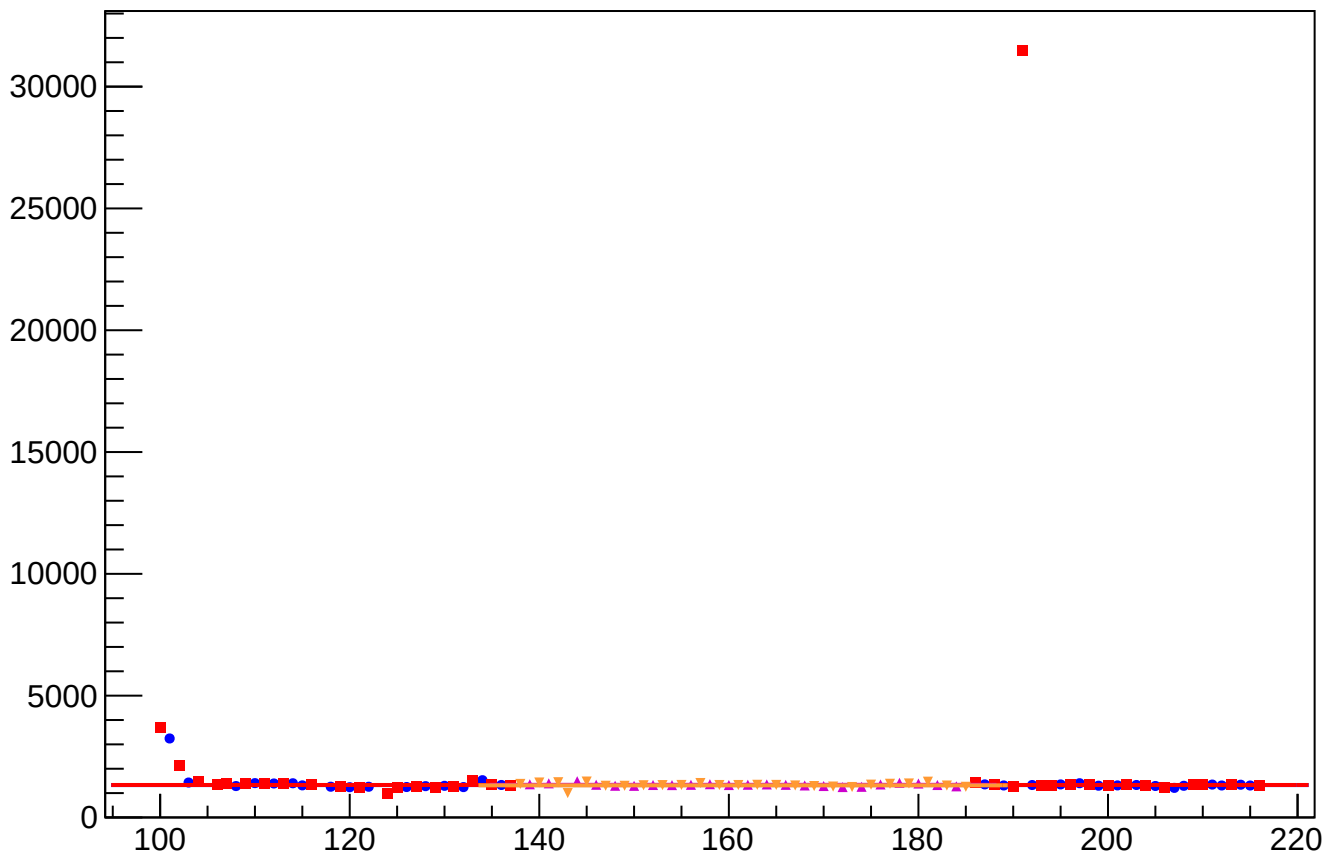
Left In: -2531.791 $\pm$ 312.887  $\chi^2/\text{NDF}$ : 25.0/22

+ sign 1864.204 $\pm$ 214.054  $\chi^2/\text{NDF}$ : 57.9/55

All: -117.278 $\pm$ 152.917  $\chi^2/\text{NDF}$ : 295.2/113

- sign -2182.482 $\pm$ 218.530  $\chi^2/\text{NDF}$ : 62.3/57

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



Right In: 1329.405+/-0.216  $\chi^2/\text{NDF}$ : 523410.0/30

Left Out: 1318.176+/-0.213  $\chi^2/\text{NDF}$ : 248550.2/24

Right Out: 1333.176+/-0.216  $\chi^2/\text{NDF}$ : 448750.1/34

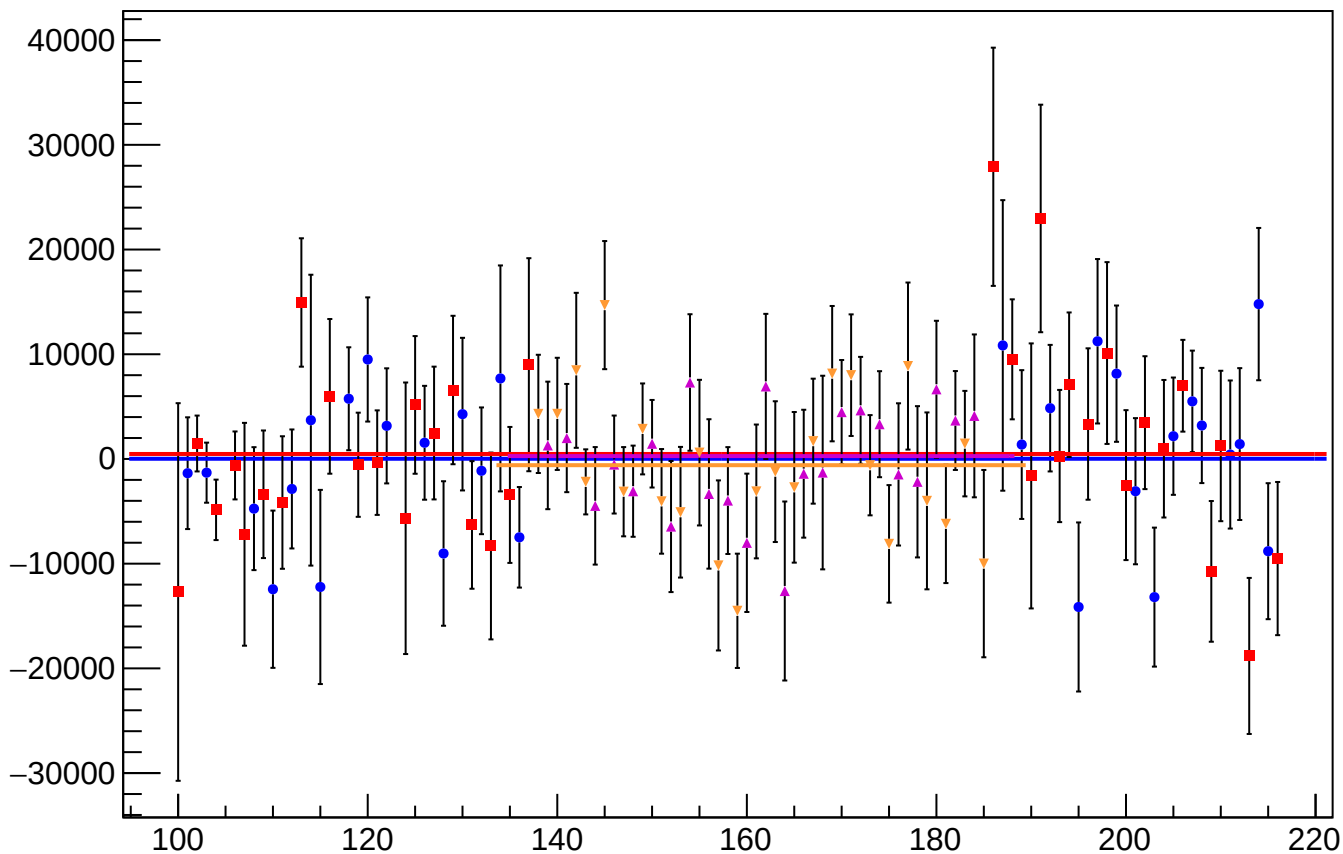
Left In: 1338.604+/-0.221  $\chi^2/\text{NDF}$ : 54251.0/22

+ sign 1323.708+/-0.151  $\chi^2/\text{NDF}$ : 773336.1/55

All: 1329.641+/-0.108  $\chi^2/\text{NDF}$ : 1279782.7/11

- sign 1335.823+/-0.155  $\chi^2/\text{NDF}$ : 503309.5/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 19.148 $\pm$ 1086.649  $\chi^2$ /NDF: 35.0/30

Left Out: -594.920 $\pm$ 1122.288  $\chi^2$ /NDF:29.5/24

Right Out: 475.476 $\pm$ 989.770  $\chi^2$ /NDF: 45.6/34

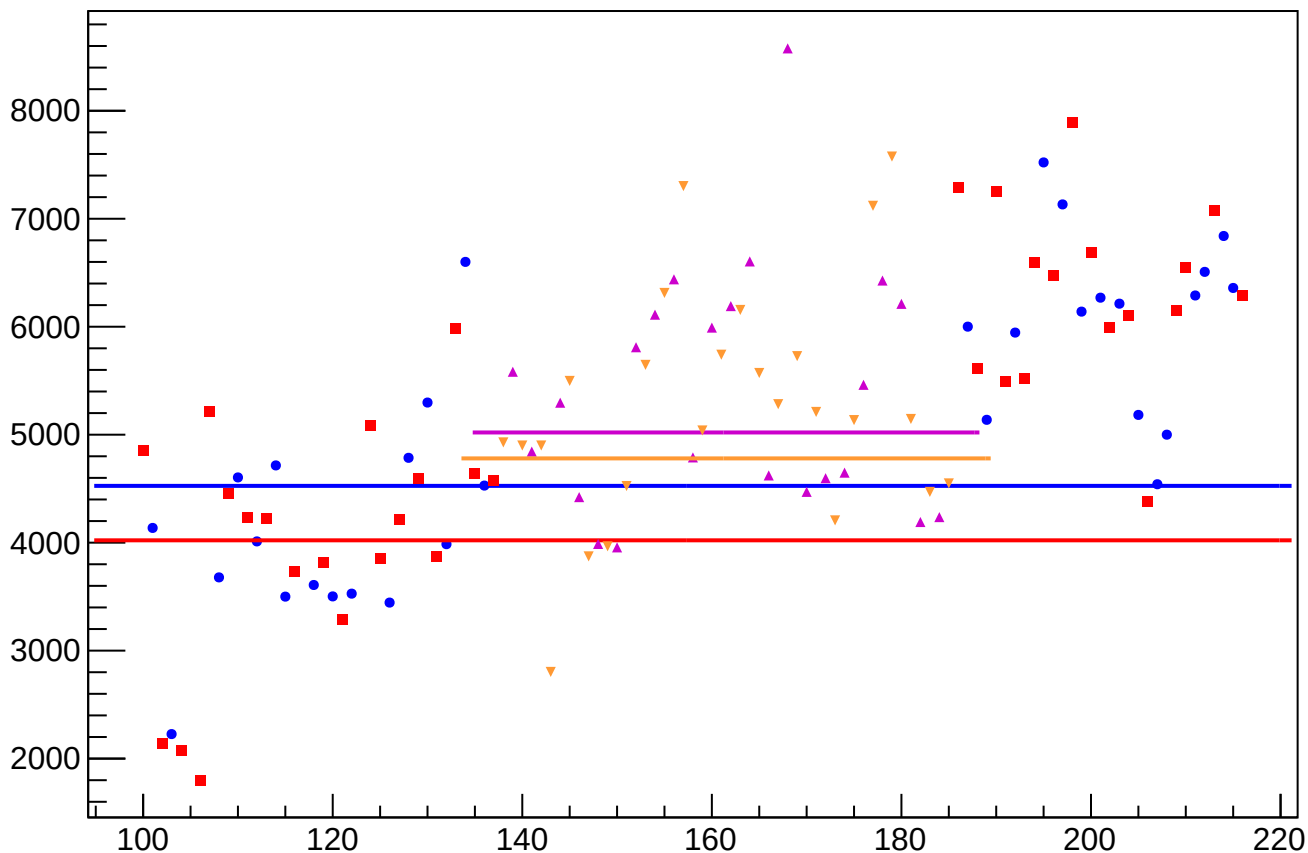
Left In: 272.917 $\pm$ 1196.806  $\chi^2$ /NDF:13.4/22

+ sign -277.981 $\pm$ 780.672  $\chi^2$ /NDF: 64.7/55

All: 65.414 $\pm$ 545.564  $\chi^2$ /NDF: 124.1/113

- sign 393.205 $\pm$ 762.729  $\chi^2$ /NDF: 59.0/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 4525.991 $\pm$ 0.768  $\chi^2/\text{NDF}$ : 3465783.5/30

Left Out: 4780.404 $\pm$ 0.794  $\chi^2/\text{NDF}$ : 2006246.8/24

Right Out: 4021.673 $\pm$ 0.700  $\chi^2/\text{NDF}$ : 6256499.4/34

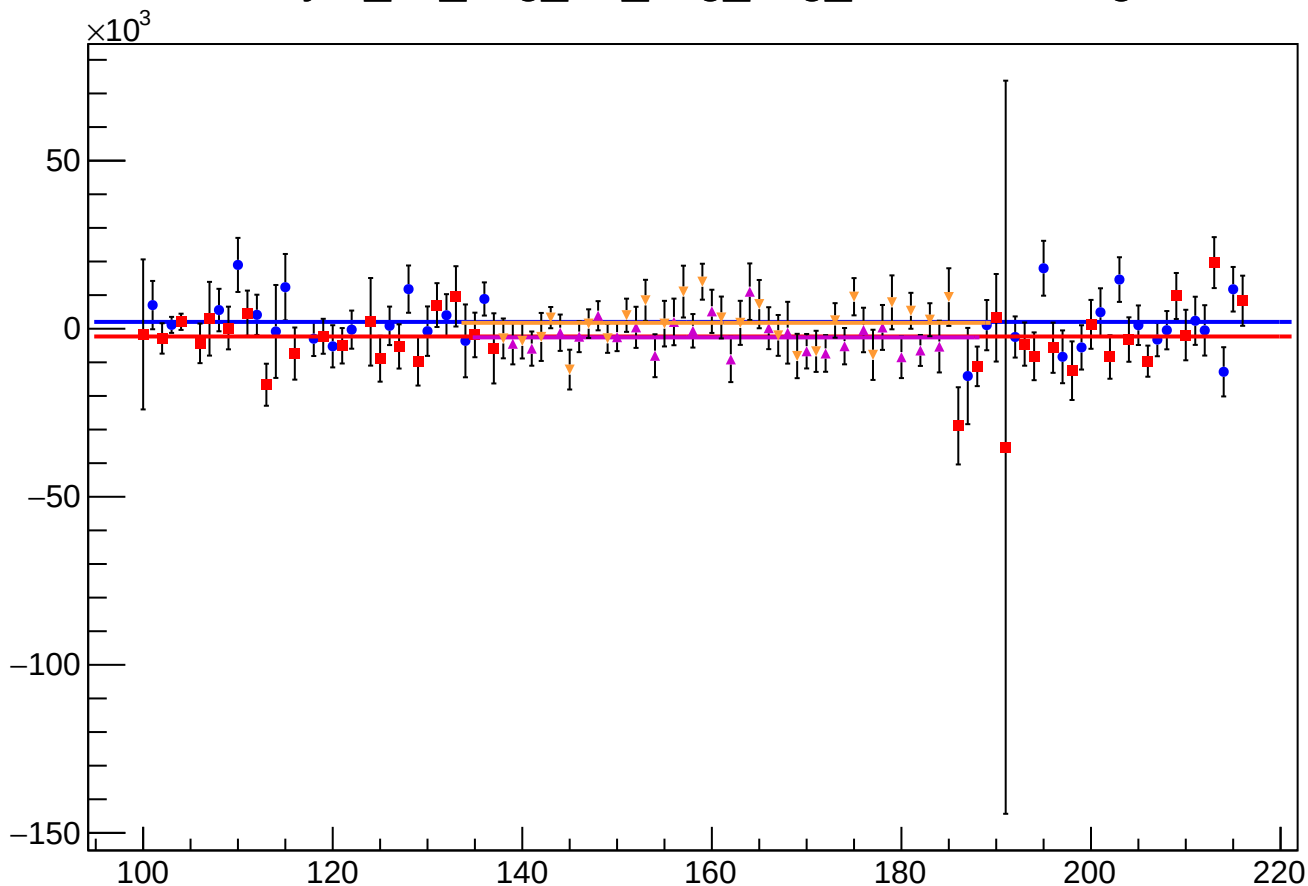
Left In: 5020.567 $\pm$ 0.846  $\chi^2/\text{NDF}$ : 1225095.5/22

+ sign 4649.094 $\pm$ 0.552  $\chi^2/\text{NDF}$ : 5525076.7/55

All: 4535.660 $\pm$ 0.386  $\chi^2/\text{NDF}$ : 13916563.2/100

- sign 4427.380 $\pm$ 0.539  $\chi^2/\text{NDF}$ : 8308953.4/57

asym\_atl\_avg\_atr\_avg\_avg\_mean vs Slug



Right In: 2027.723 $\pm$ 1089.047  $\chi^2$ /NDF: 33.7/30

Left Out: 1761.683 $\pm$ 1116.232  $\chi^2$ /NDF: 27.7/24

Right Out: -2309.166 $\pm$ 1076.057  $\chi^2$ /NDF: 44.6/34

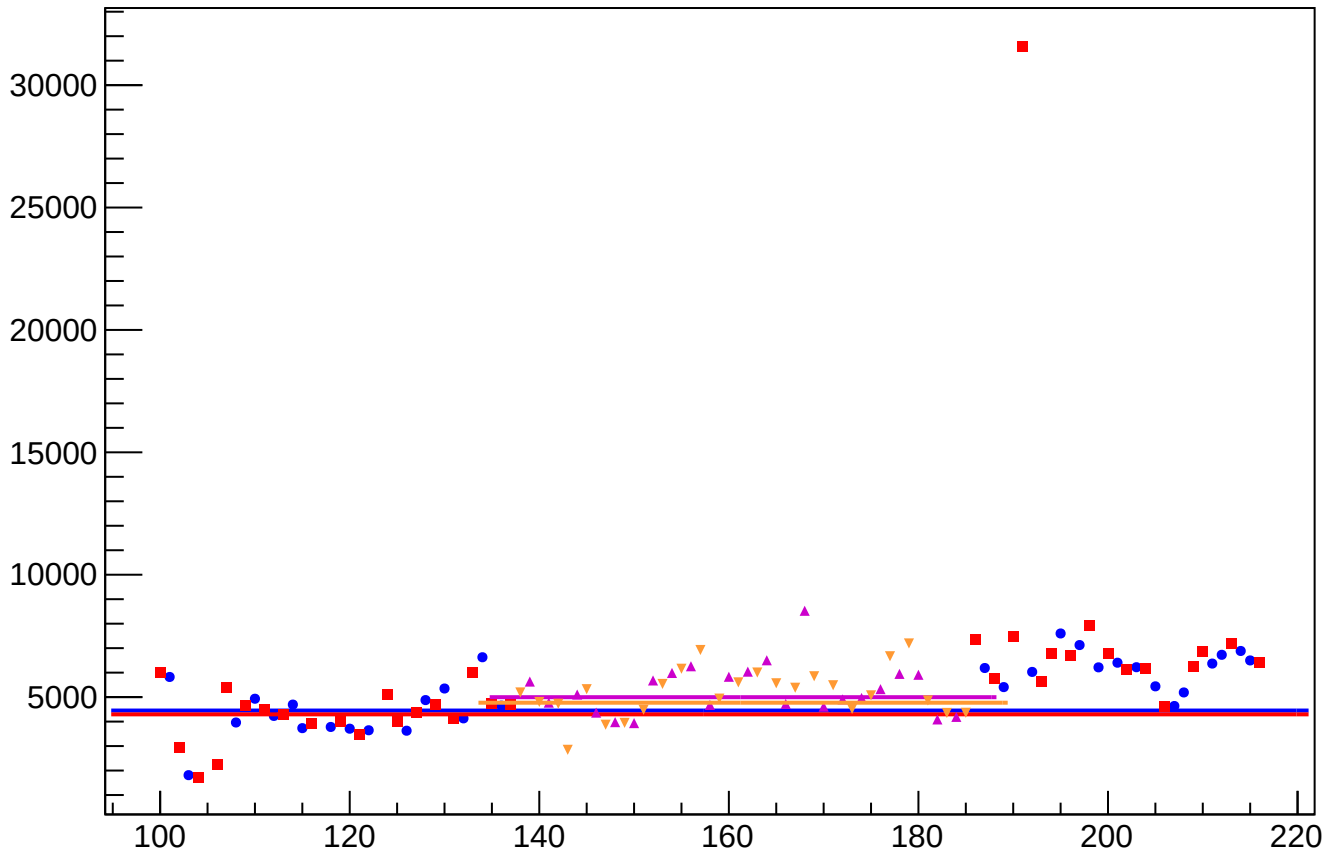
Left In: -2579.960 $\pm$ 1188.448  $\chi^2$ /NDF: 13.3/22

+ sign 1897.982 $\pm$ 779.506  $\chi^2$ /NDF: 61.4/55

All: -216.739 $\pm$ 557.505  $\chi^2$ /NDF: 134.3/113

- sign -2431.156 $\pm$ 797.669  $\chi^2$ /NDF: 57.9/57

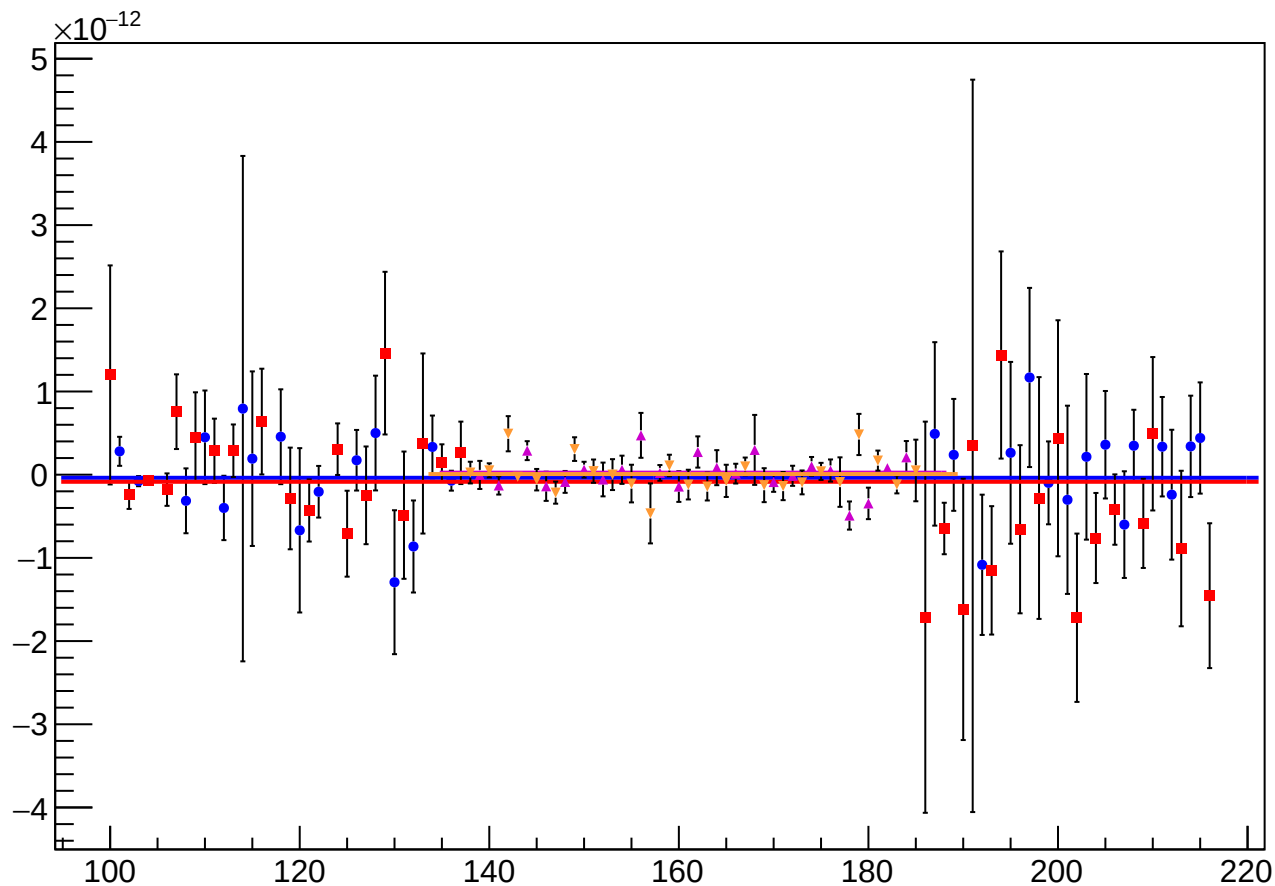
# asym\_atl\_avg\_atr\_avg\_avg\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 4451.231+/-0.770  | $\chi^2/\text{NDF}$ : 4826411.0/30 | + sign 4607.261+/-0.551 | $\chi^2/\text{NDF}$ : 6697678.3/55 |
| Left Out: 4771.181+/-0.789  | $\chi^2/\text{NDF}$ : 1787082.6/24 | All: 4607.722+/-0.393   | $\chi^2/\text{NDF}$ : 14048223.7/1 |
| Right Out: 4295.345+/-0.754 | $\chi^2/\text{NDF}$ : 5868803.5/34 | - sign 4608.200+/-0.561 | $\chi^2/\text{NDF}$ : 7350543.9/57 |
| Left In: 4996.720+/-0.840   | $\chi^2/\text{NDF}$ : 1095876.8/22 |                         |                                    |



asym\_atl\_avg\_atr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.1/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.1/34

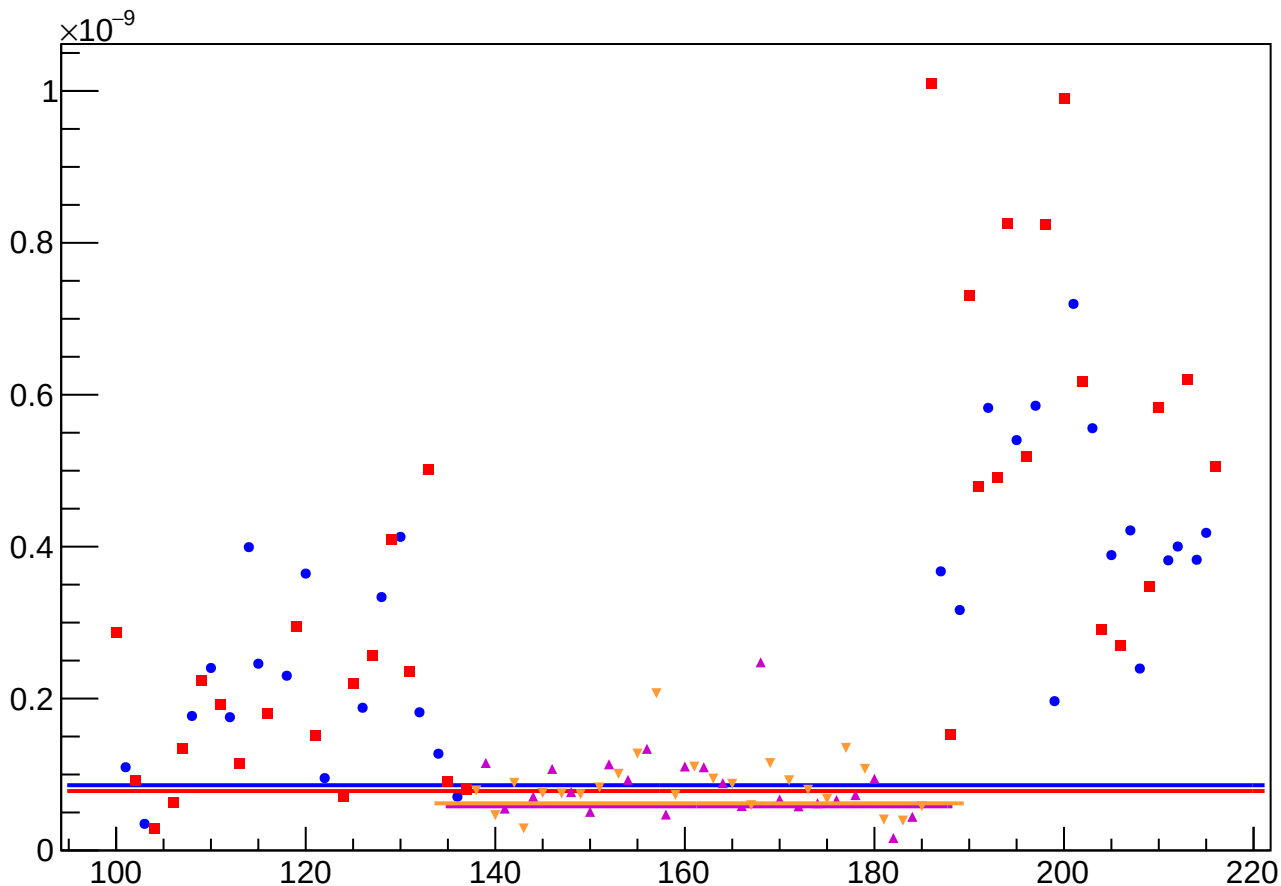
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.7/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.3/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 121.4/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 73.1/57

asym\_atl\_avg\_atr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9000487.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2443383.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10566882.4/34

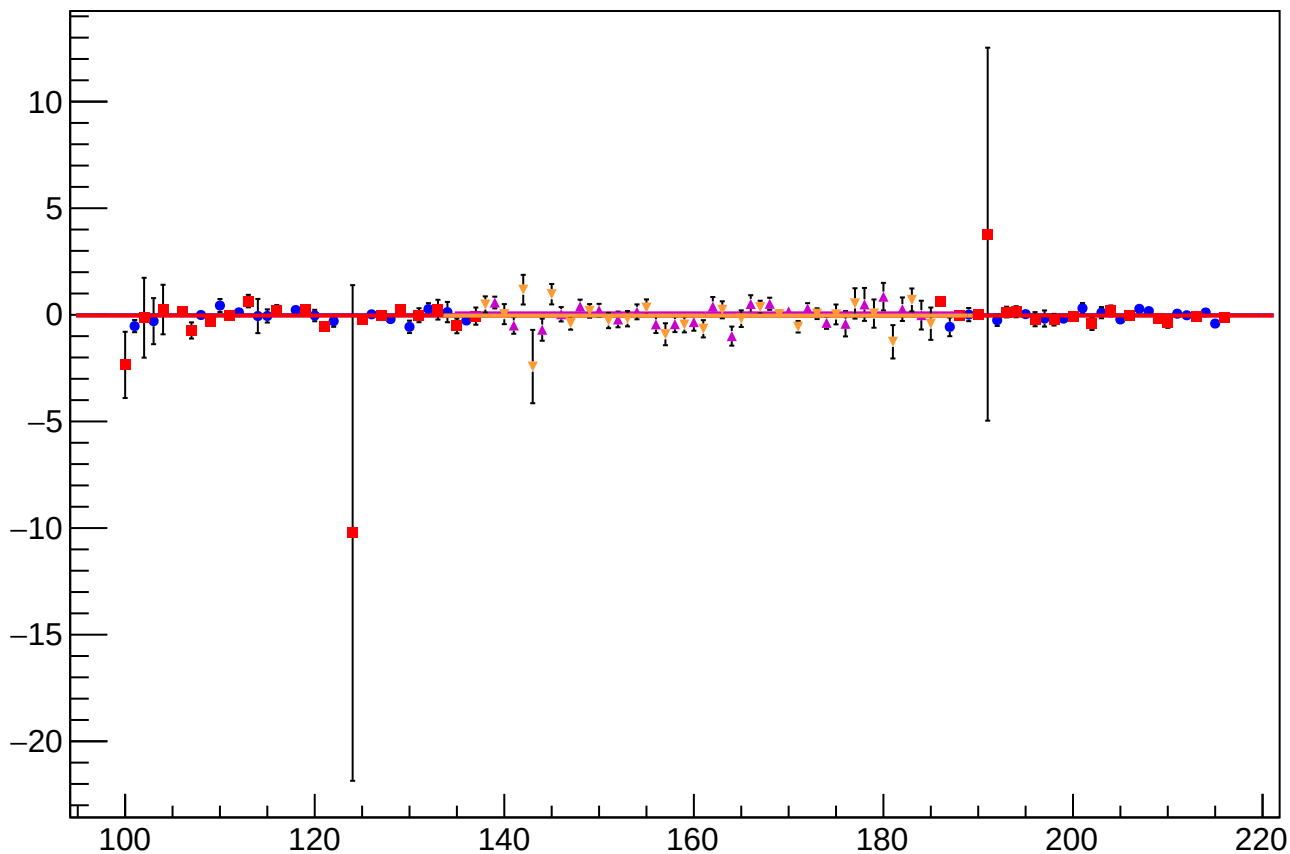
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2966562.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11841297.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25704901.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13823235.5/57

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.041$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.033 \pm 0.039$   $\chi^2/\text{NDF}$ : 43.3/34

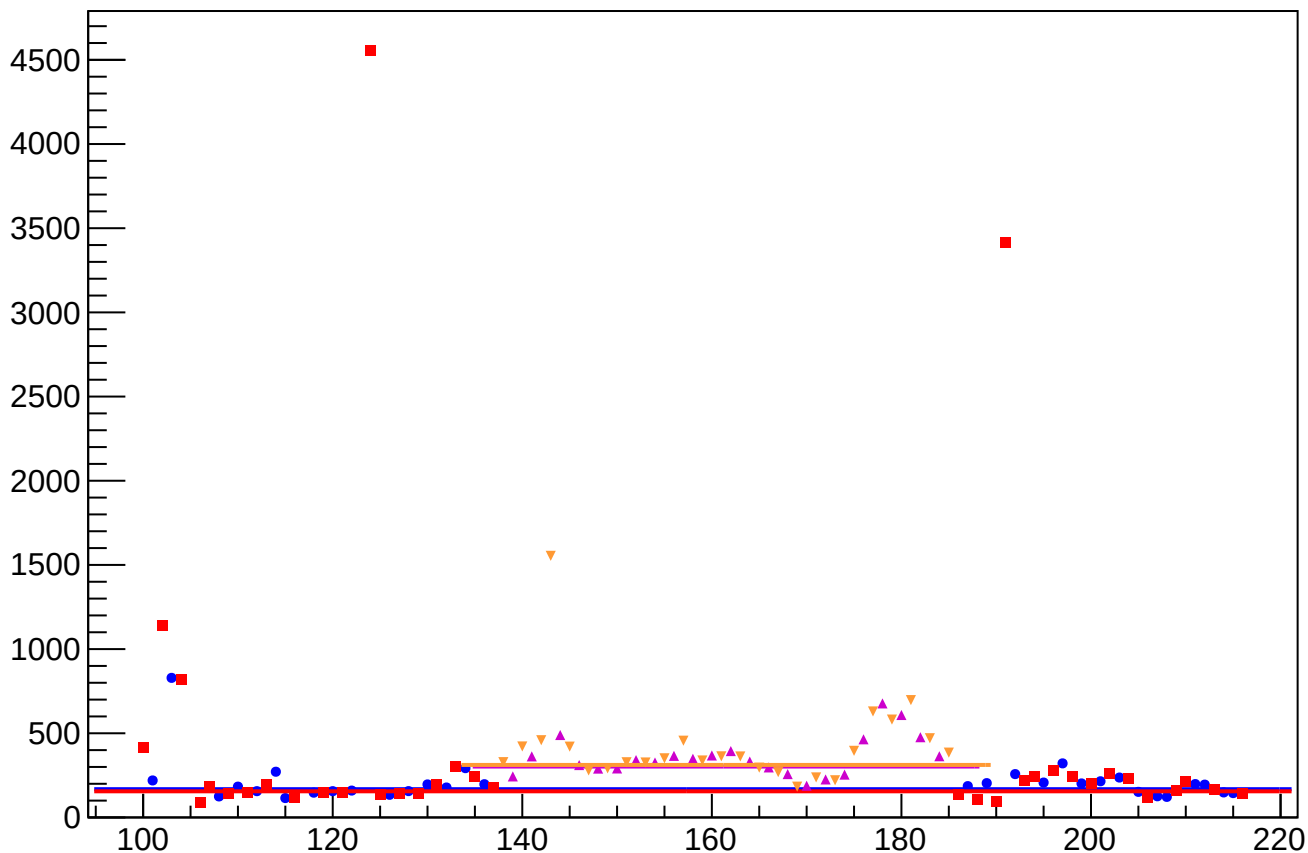
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.024 \pm 0.036$   $\chi^2/\text{NDF}$ : 67.8/55

All:  $-0.017 \pm 0.025$   $\chi^2/\text{NDF}$ : 142.6/113

- sign  $-0.011 \pm 0.035$   $\chi^2/\text{NDF}$ : 74.7/57

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 167.934 $\pm$ 0.029  $\chi^2$ /NDF: 2746635.7/30

Left Out: 311.961 $\pm$ 0.054  $\chi^2$ /NDF: 4350162.2/24

Right Out: 155.296 $\pm$ 0.028  $\chi^2$ /NDF: 4908105.0/34

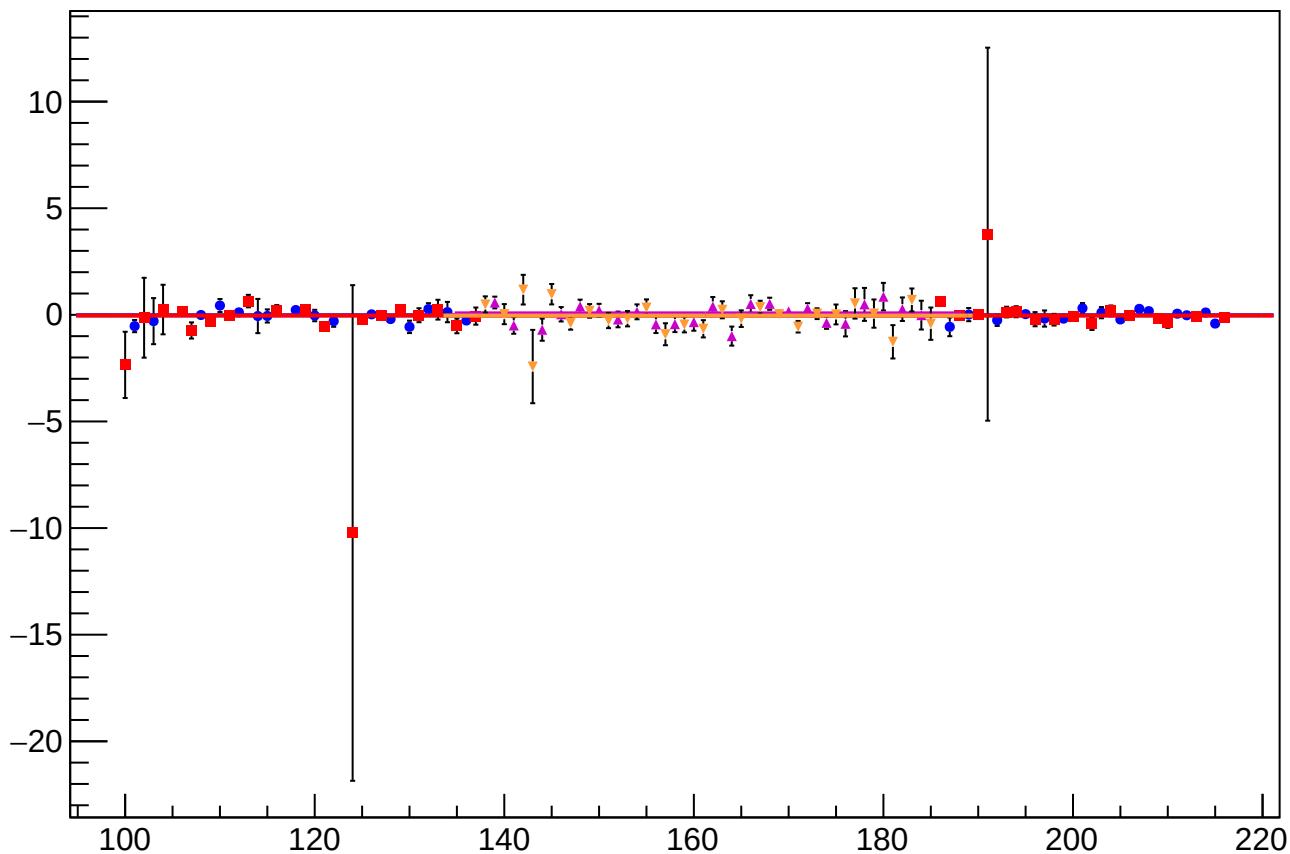
Left In: 302.375 $\pm$ 0.053  $\chi^2$ /NDF: 2808730.8/22

+ sign 200.224 $\pm$ 0.026  $\chi^2$ /NDF: 12571649.3/55

All: 193.387 $\pm$ 0.018  $\chi^2$ /NDF: 26469989.1/11

- sign 187.096 $\pm$ 0.025  $\chi^2$ /NDF: 13762138.5/57

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.041$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.033 \pm 0.039$   $\chi^2/\text{NDF}$ : 43.3/34

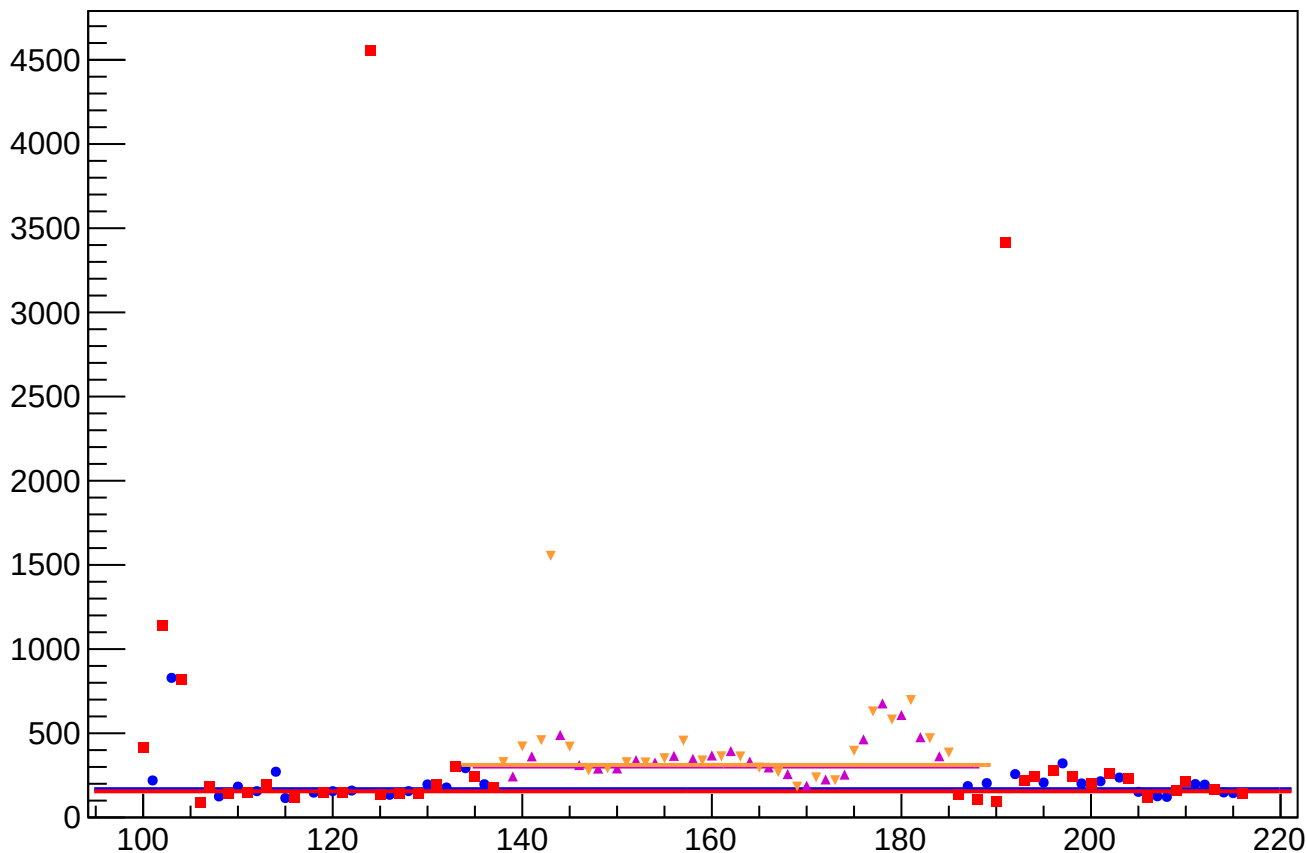
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.024 \pm 0.036$   $\chi^2/\text{NDF}$ : 67.8/55

All:  $-0.017 \pm 0.025$   $\chi^2/\text{NDF}$ : 142.6/113

- sign  $-0.011 \pm 0.035$   $\chi^2/\text{NDF}$ : 74.7/57

asym\_atl\_avg\_atr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 167.934+/-0.029  $\chi^2/\text{NDF}$ : 2746635.7/30

Left Out: 311.961+/-0.054  $\chi^2/\text{NDF}$ : 4350162.2/24

Right Out: 155.296+/-0.028  $\chi^2/\text{NDF}$ : 4908105.0/34

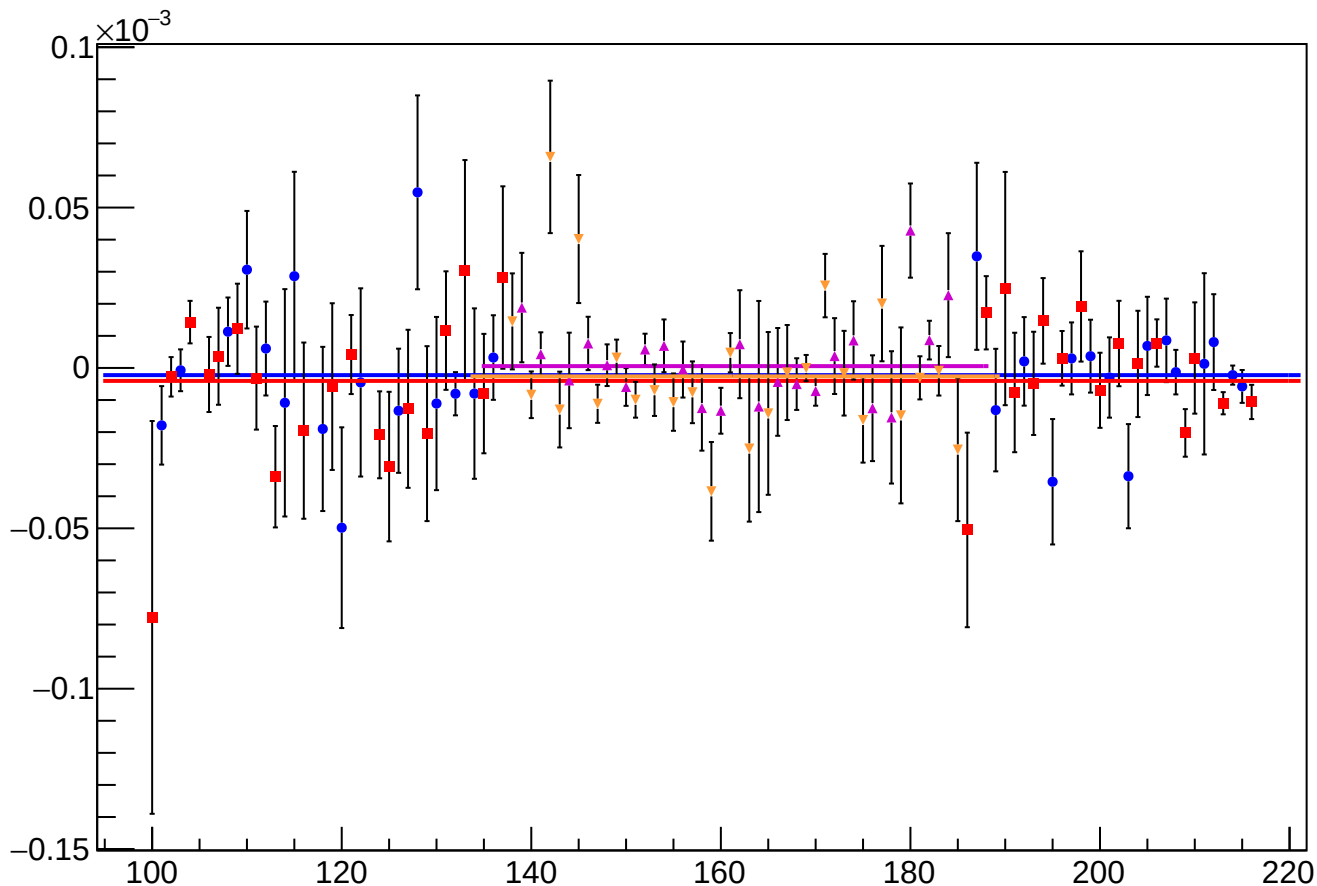
Left In: 302.375+/-0.053  $\chi^2/\text{NDF}$ : 2808730.8/22

+ sign 200.224+/-0.026  $\chi^2/\text{NDF}$ : 12571649.3/55

All: 193.387+/-0.018  $\chi^2/\text{NDF}$ : 26469989.1/11

- sign 187.096+/-0.025  $\chi^2/\text{NDF}$ : 13762138.5/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.4/34

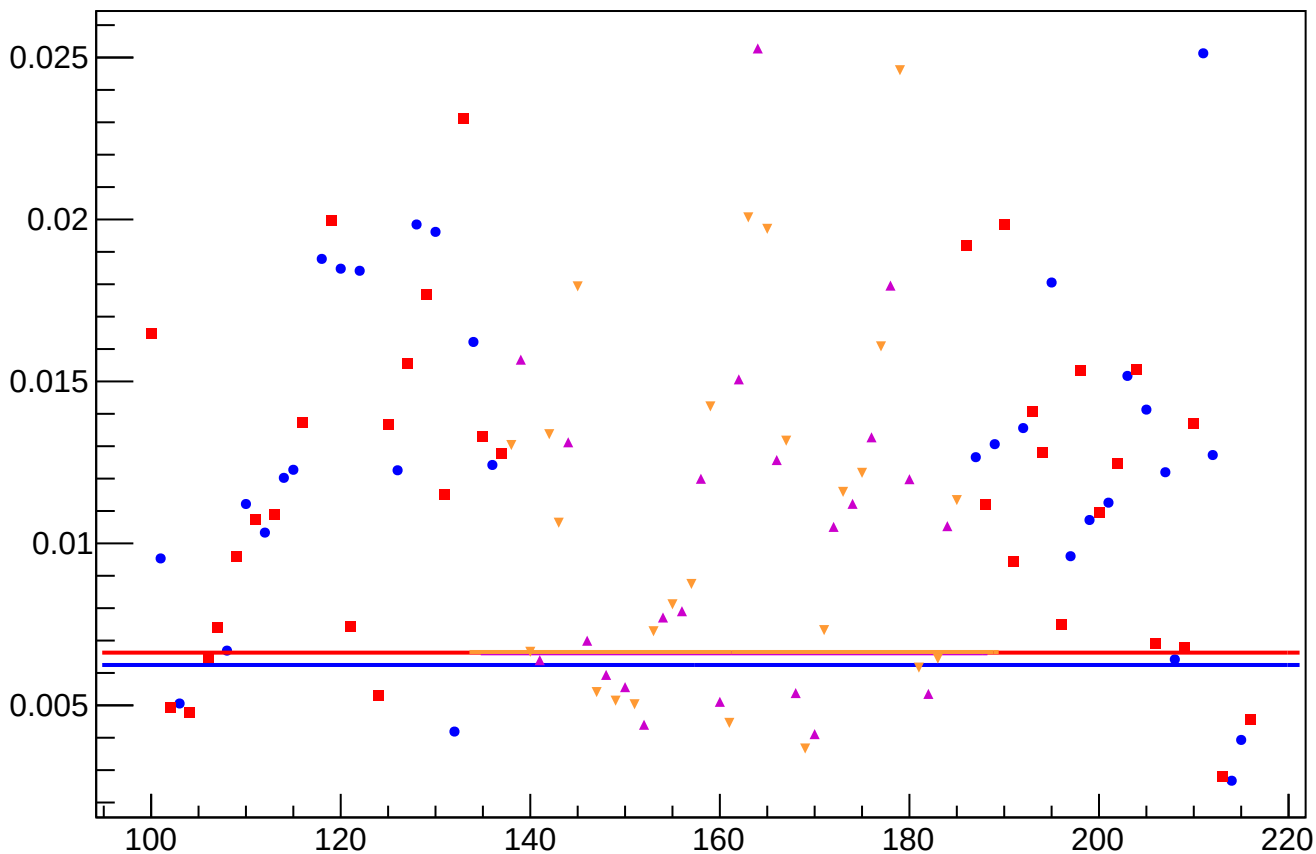
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.2/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 146.0/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 76.7/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 12314759.6/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 7513935.6/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 9778161.2/34

Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5855747.2/22

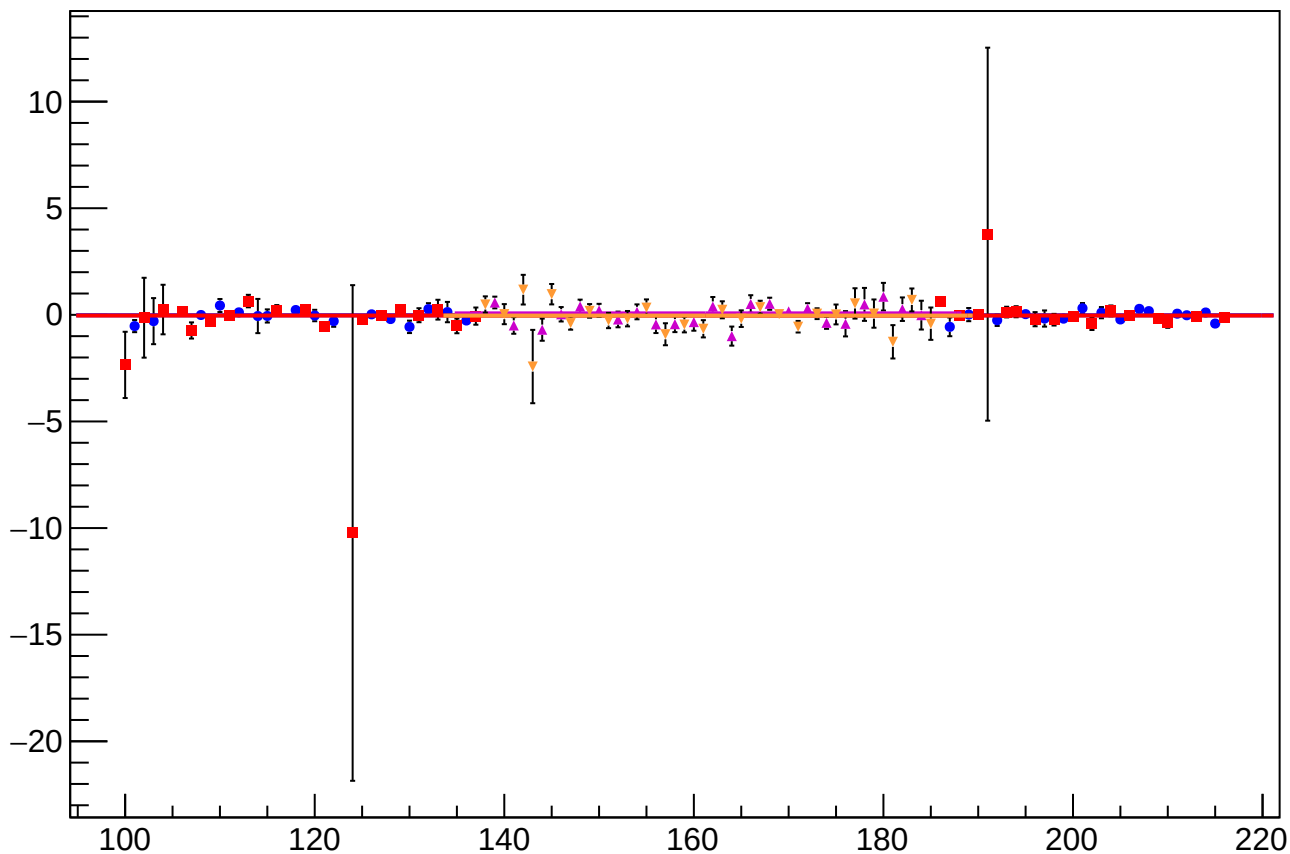
+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 19880411.9/55

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 35531473.4/113

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 15634050.9/57



asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.041$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.033 \pm 0.039$   $\chi^2/\text{NDF}$ : 43.3/34

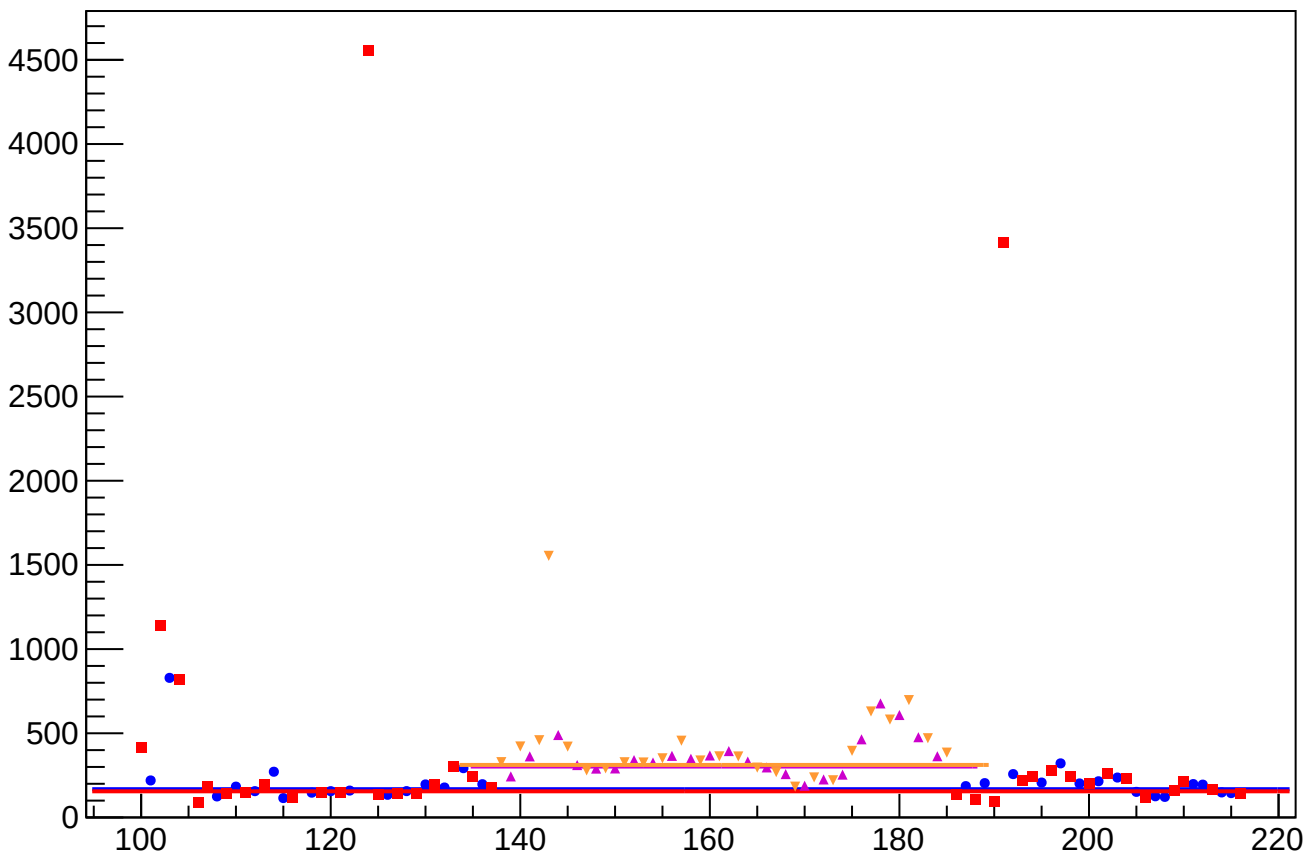
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.024 \pm 0.036$   $\chi^2/\text{NDF}$ : 67.8/55

All:  $-0.017 \pm 0.025$   $\chi^2/\text{NDF}$ : 142.6/113

- sign  $-0.011 \pm 0.035$   $\chi^2/\text{NDF}$ : 74.7/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 167.933+/-0.029  $\chi^2/\text{NDF}$ : 2746705.3/30

Left Out: 311.961+/-0.054  $\chi^2/\text{NDF}$ : 4350376.6/24

Right Out: 155.294+/-0.028  $\chi^2/\text{NDF}$ : 4908318.1/34

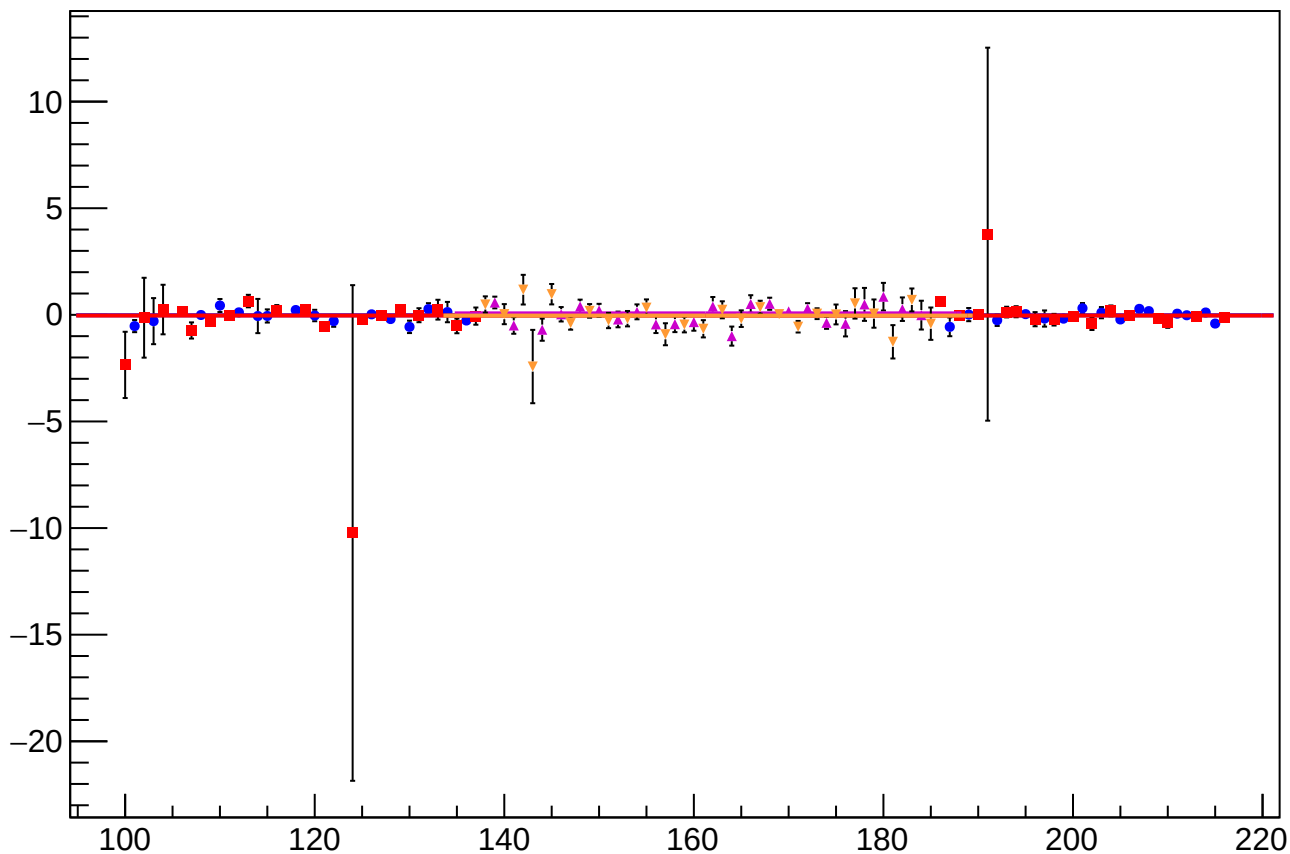
Left In: 302.377+/-0.053  $\chi^2/\text{NDF}$ : 2808874.8/22

+ sign 200.223+/-0.026  $\chi^2/\text{NDF}$ : 12572007.8/55

All: 193.385+/-0.018  $\chi^2/\text{NDF}$ : 26471052.8/11

- sign 187.093+/-0.025  $\chi^2/\text{NDF}$ : 13762806.9/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.021 \pm 0.041$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-0.035 \pm 0.077$   $\chi^2/\text{NDF}$ : 32.5/24

Right Out:  $-0.033 \pm 0.039$   $\chi^2/\text{NDF}$ : 43.3/34

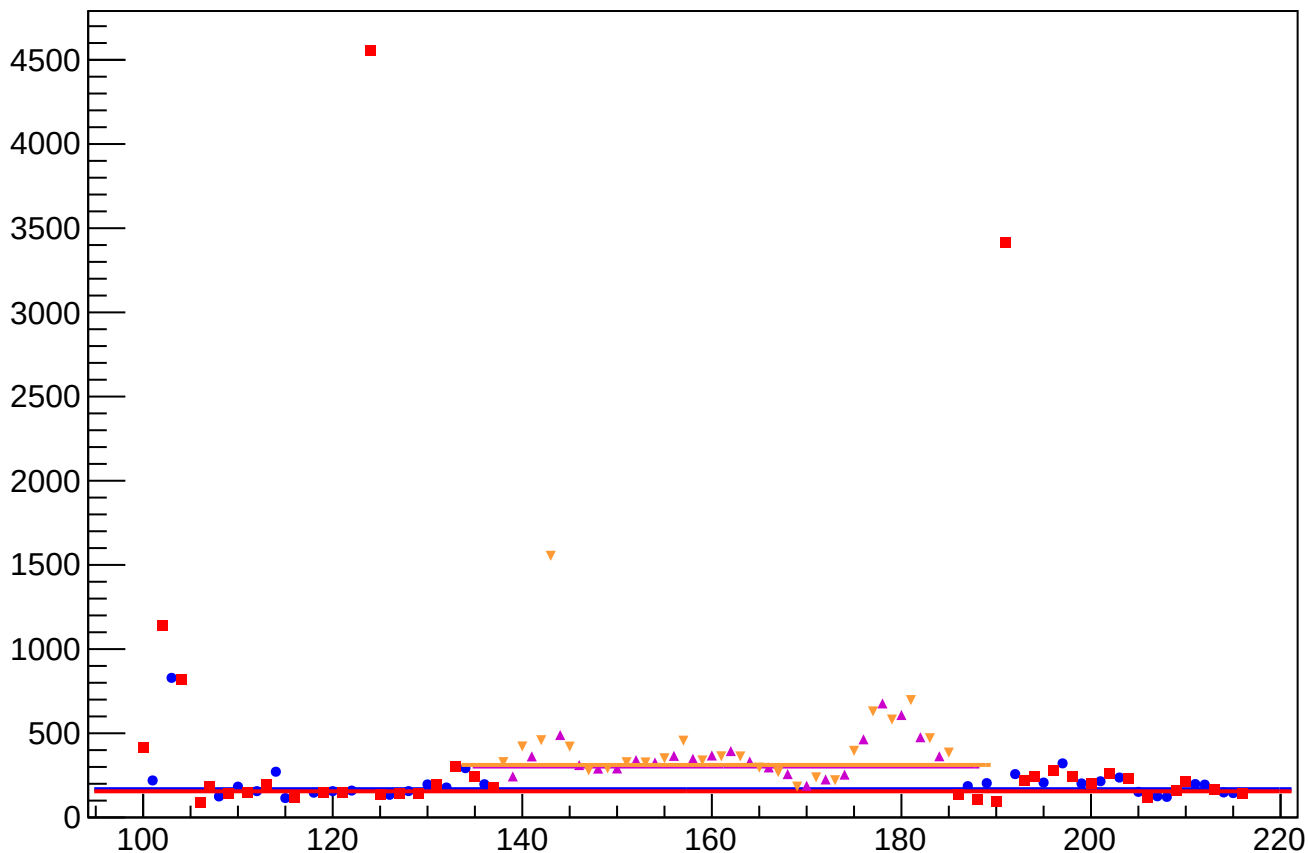
Left In:  $0.069 \pm 0.075$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-0.024 \pm 0.036$   $\chi^2/\text{NDF}$ : 67.8/55

All:  $-0.017 \pm 0.025$   $\chi^2/\text{NDF}$ : 142.6/113

- sign  $-0.011 \pm 0.035$   $\chi^2/\text{NDF}$ : 74.7/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 167.933+/-0.029  $\chi^2/\text{NDF}$ : 2746705.3/30

Left Out: 311.961+/-0.054  $\chi^2/\text{NDF}$ : 4350376.6/24

Right Out: 155.294+/-0.028  $\chi^2/\text{NDF}$ : 4908318.1/34

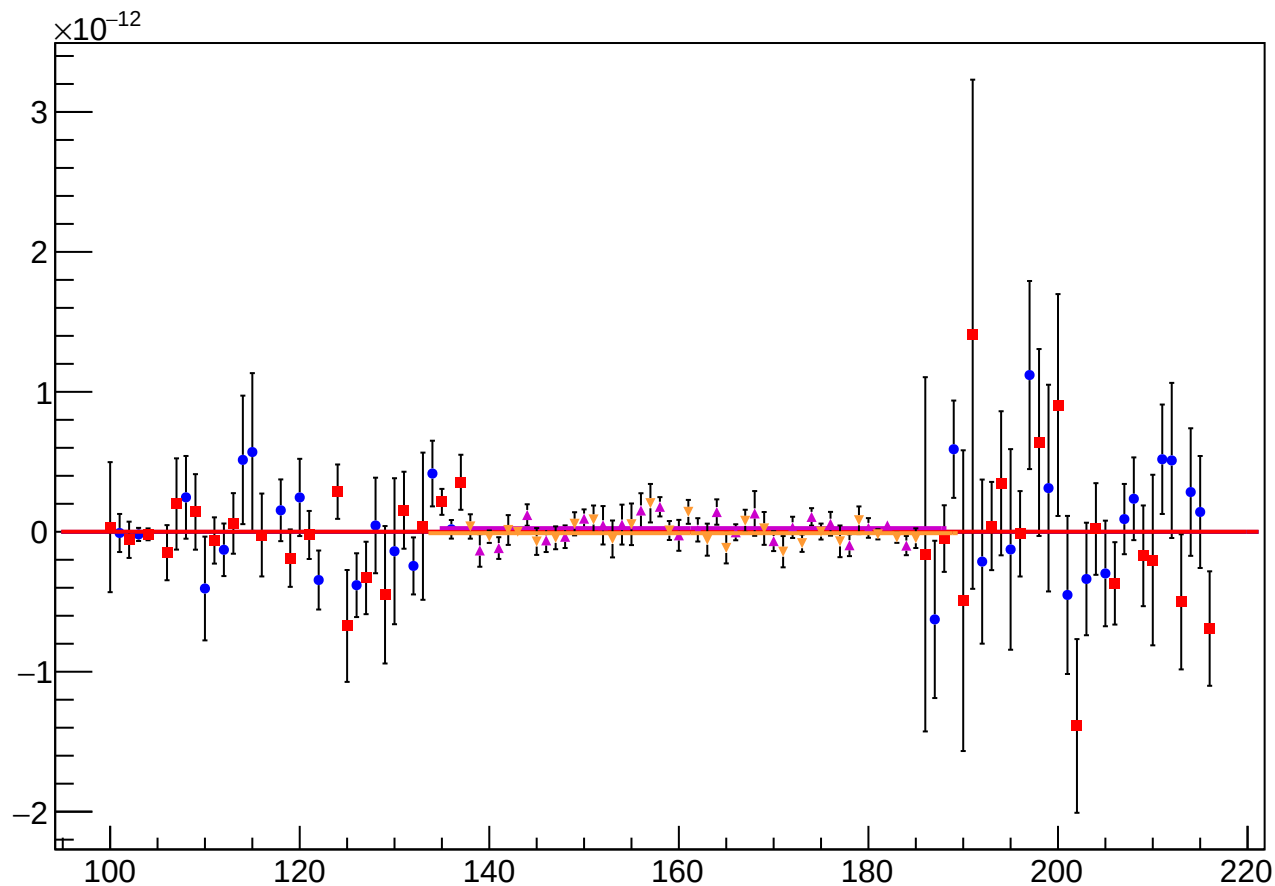
Left In: 302.377+/-0.053  $\chi^2/\text{NDF}$ : 2808874.8/22

+ sign 200.223+/-0.026  $\chi^2/\text{NDF}$ : 12572007.8/55

All: 193.385+/-0.018  $\chi^2/\text{NDF}$ : 26471052.8/11

- sign 187.093+/-0.025  $\chi^2/\text{NDF}$ : 13762806.9/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.4/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.4/34

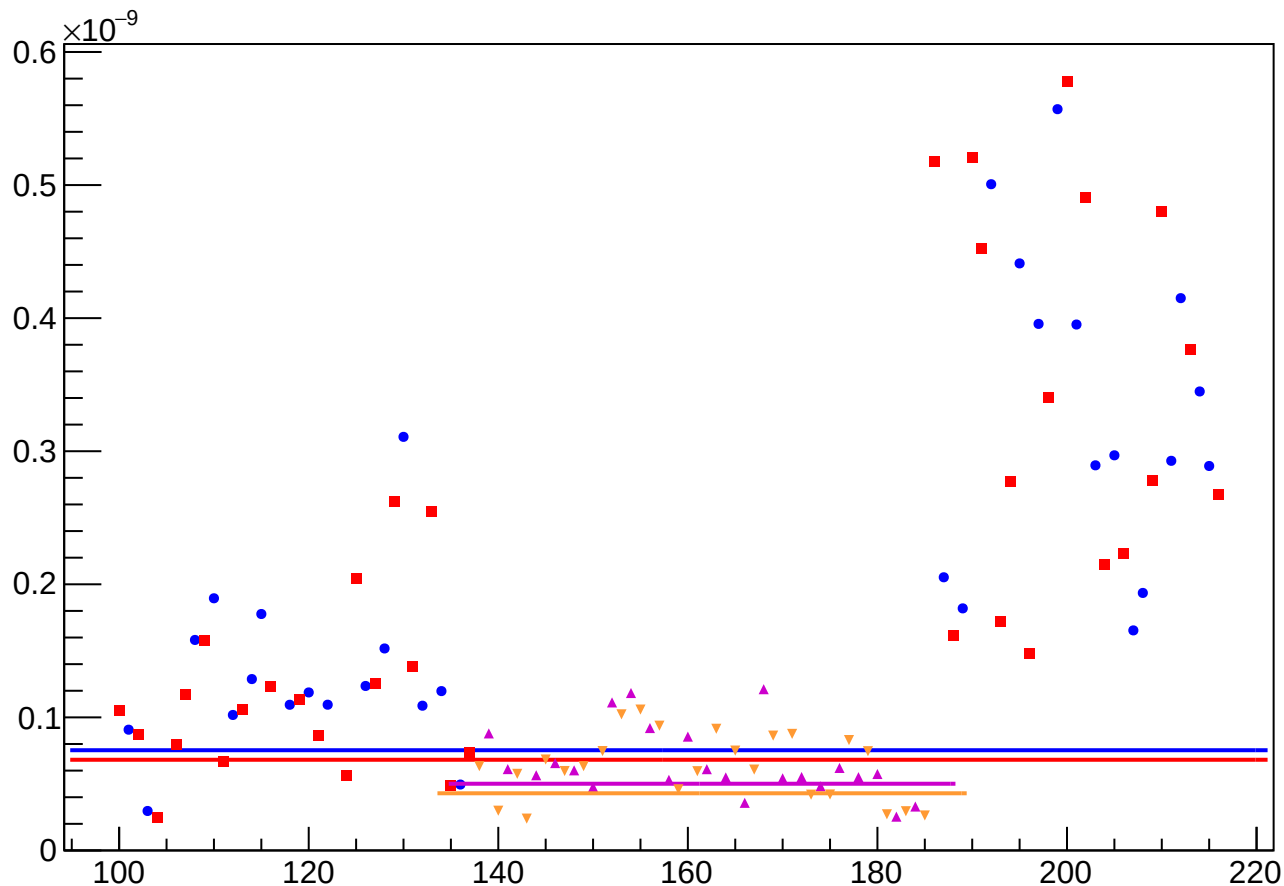
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 109.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.6/57

asym\_atl\_avg\_atr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11873577.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5074676.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11418432.0/34

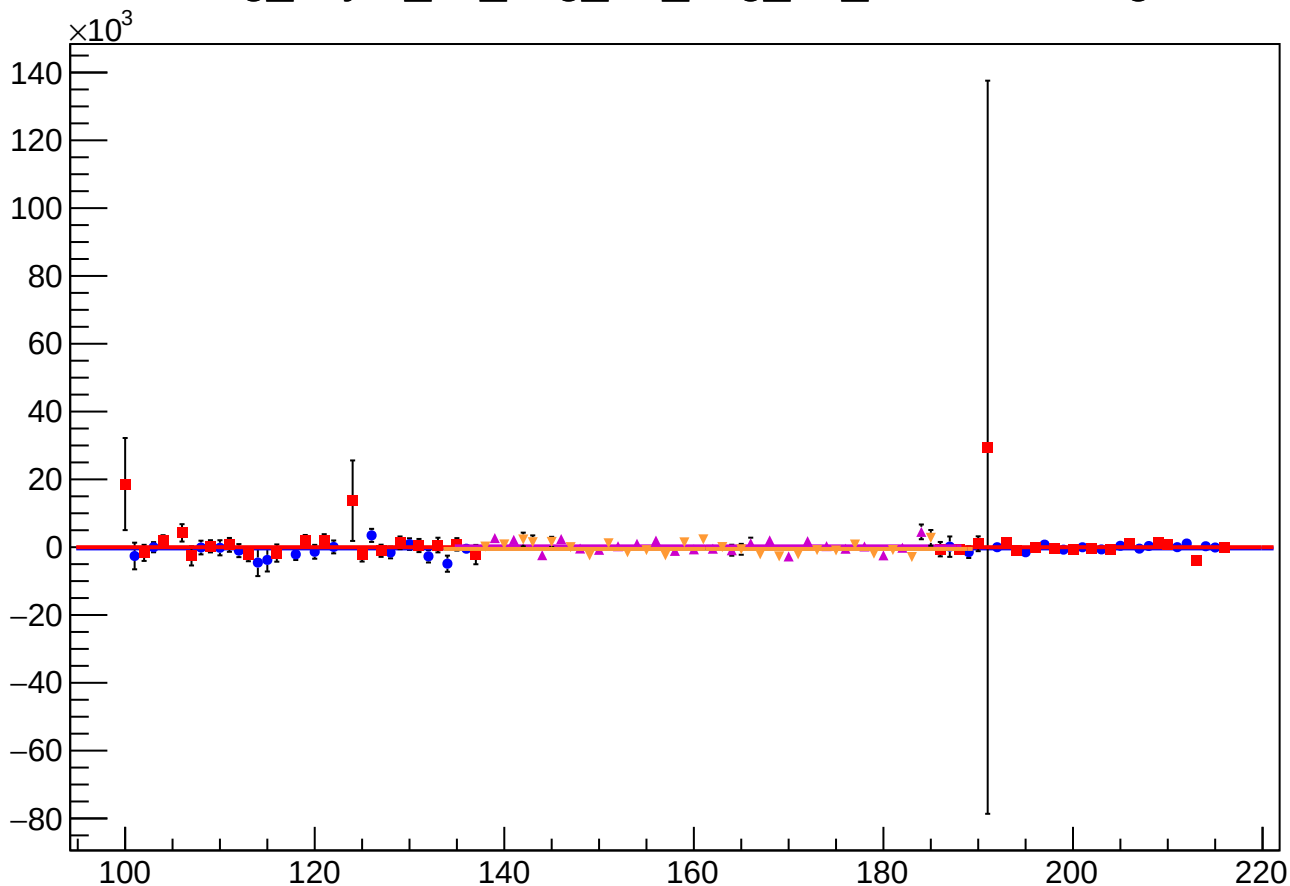
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3611362.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18733511.5/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34534842.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15598542.8/57

reg\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-361.129 \pm 292.027$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-514.484 \pm 285.945$   $\chi^2/\text{NDF}$ : 30.9/24

Right Out:  $-5.203 \pm 293.245$   $\chi^2/\text{NDF}$ : 29.8/34

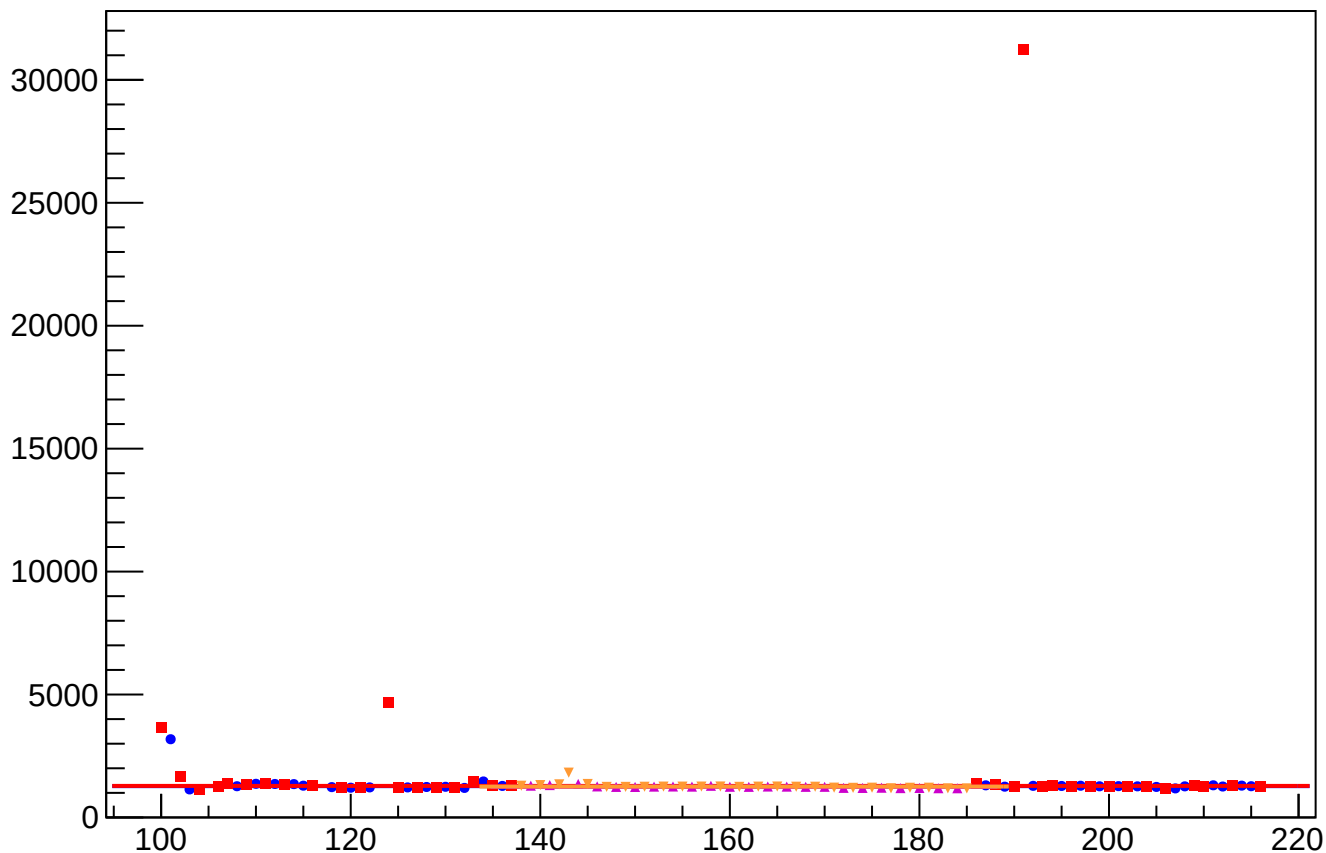
Left In:  $242.686 \pm 291.166$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-439.421 \pm 204.310$   $\chi^2/\text{NDF}$ : 49.3/55

All:  $-163.037 \pm 145.278$   $\chi^2/\text{NDF}$ : 115.2/113

- sign  $119.623 \pm 206.616$   $\chi^2/\text{NDF}$ : 62.2/57

# reg\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1273.339+/-0.206  $\chi^2/\text{NDF}$ : 534165.5/30

Left Out: 1255.514+/-0.202  $\chi^2/\text{NDF}$ : 203124.1/24

Right Out: 1283.056+/-0.207  $\chi^2/\text{NDF}$ : 508009.8/34

Left In: 1246.355+/-0.206  $\chi^2/\text{NDF}$ : 39857.0/22

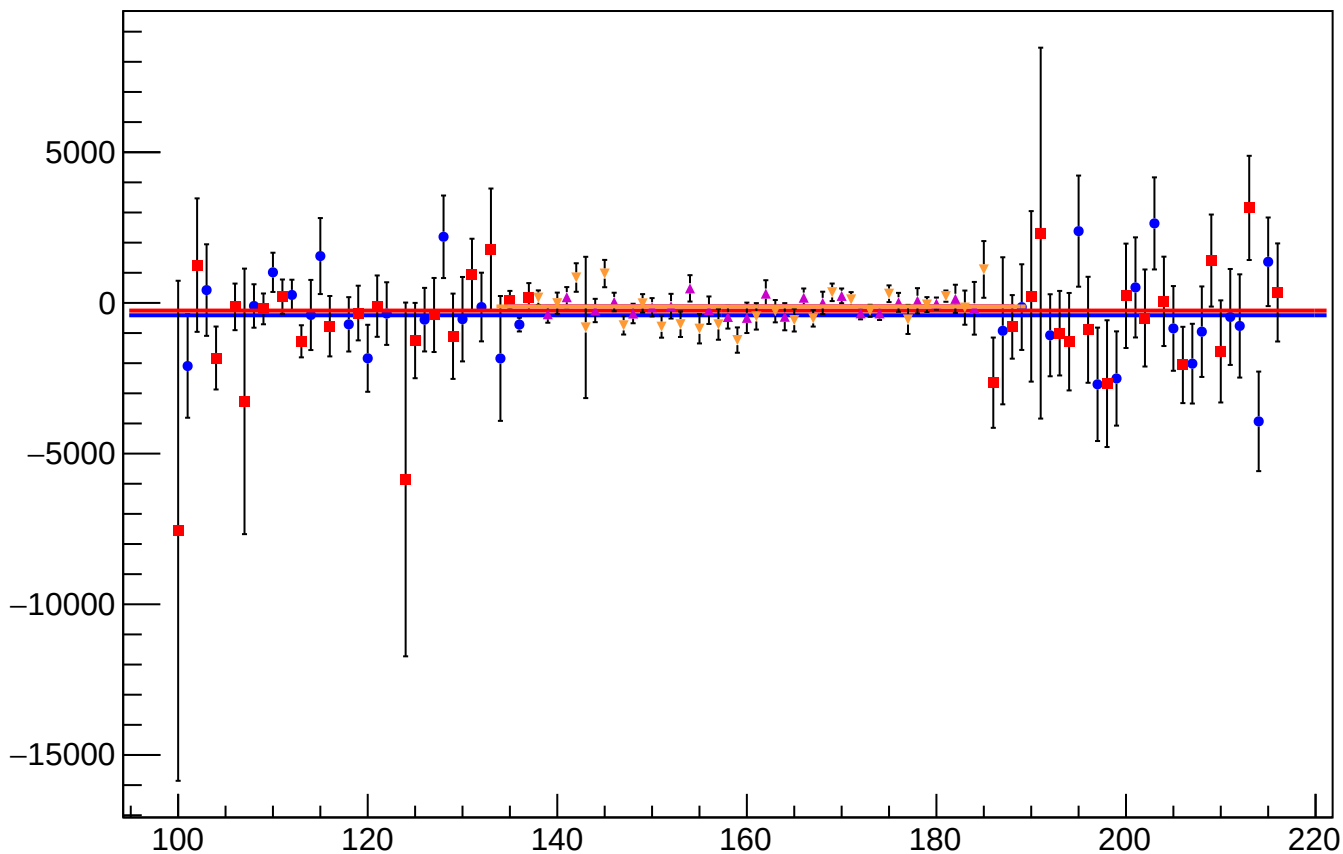
+ sign 1264.239+/-0.144  $\chi^2/\text{NDF}$ : 741093.7/55

All: 1264.405+/-0.103  $\chi^2/\text{NDF}$ : 1304738.5/11

- sign 1264.575+/-0.146  $\chi^2/\text{NDF}$ : 563642.1/57



asym\_atl\_avg\_atr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-410.326 \pm 155.400$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-117.028 \pm 65.059$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-254.182 \pm 156.176$   $\chi^2/\text{NDF}$ : 28.0/34

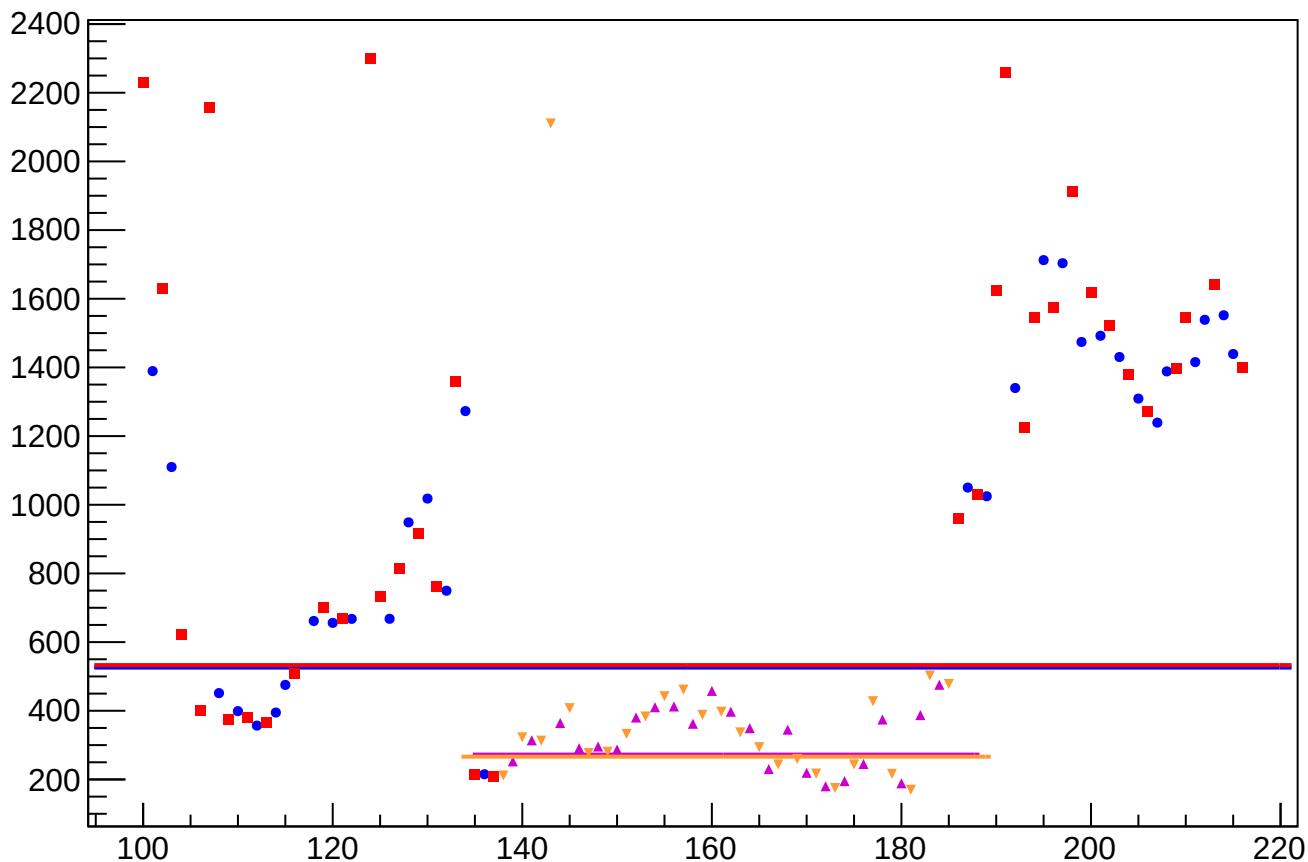
Left In:  $-107.341 \pm 67.001$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-160.769 \pm 60.012$   $\chi^2/\text{NDF}$ : 87.6/55

All:  $-145.861 \pm 42.976$   $\chi^2/\text{NDF}$ : 130.2/113

- sign  $-130.166 \pm 61.574$   $\chi^2/\text{NDF}$ : 42.5/57

asym\_atl\_avg\_atr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 525.804 $\pm$ 0.110  $\chi^2$ /NDF: 15268100.9/30

Left Out: 266.321 $\pm$ 0.046  $\chi^2$ /NDF: 4630130.4/24

Right Out: 533.052 $\pm$ 0.110  $\chi^2$ /NDF: 15123404.4/34

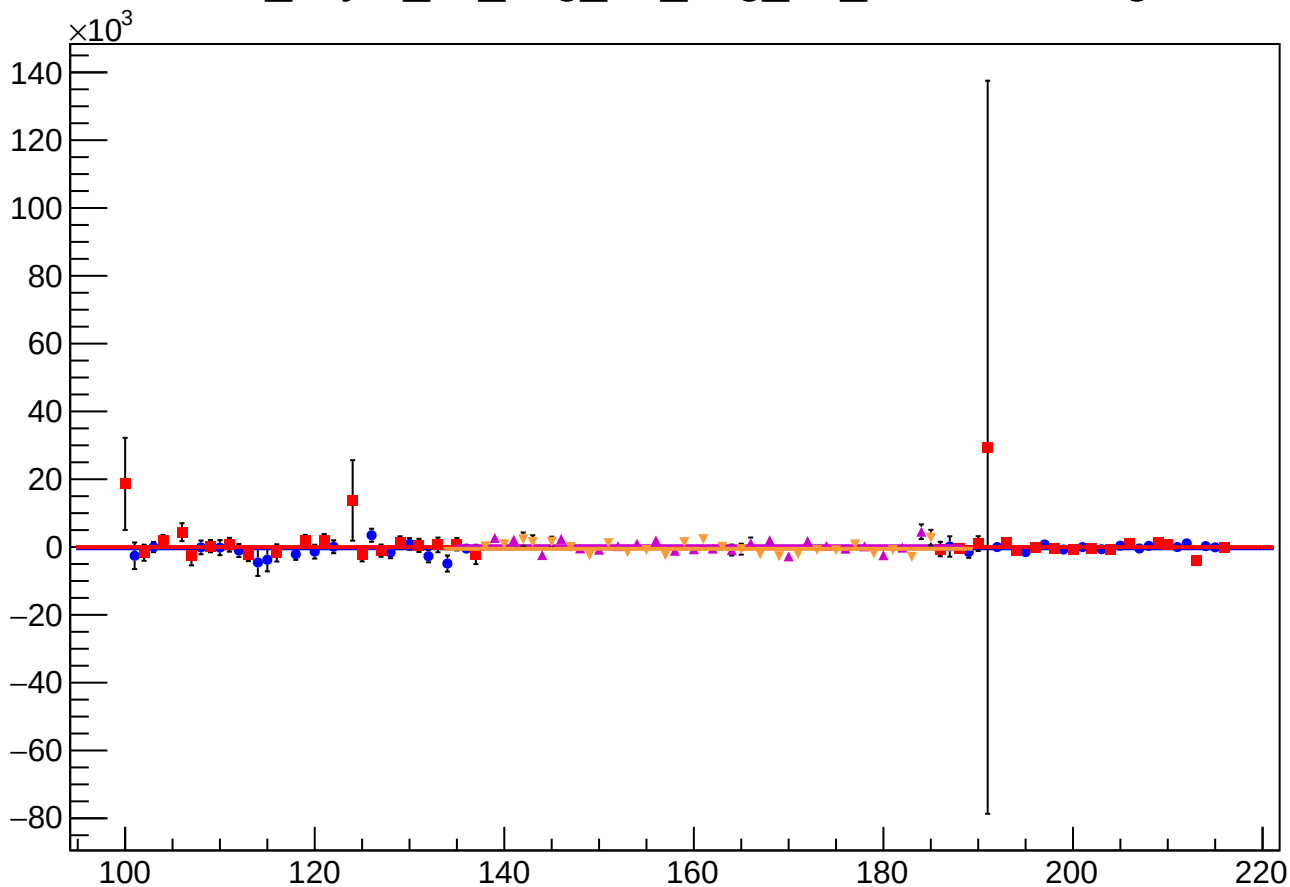
Left In: 272.368 $\pm$ 0.047  $\chi^2$ /NDF: 2887823.5/22

+ sign 305.018 $\pm$ 0.042  $\chi^2$ /NDF: 24642956.4/55

All: 308.852 $\pm$ 0.030  $\chi^2$ /NDF: 47377016.4/11

- sign 312.888 $\pm$ 0.044  $\chi^2$ /NDF: 22717304.0/57

cor\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-360.995 \pm 292.027$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-514.430 \pm 285.945$   $\chi^2/\text{NDF}$ : 30.9/24

Right Out:  $-6.429 \pm 293.359$   $\chi^2/\text{NDF}$ : 29.8/34

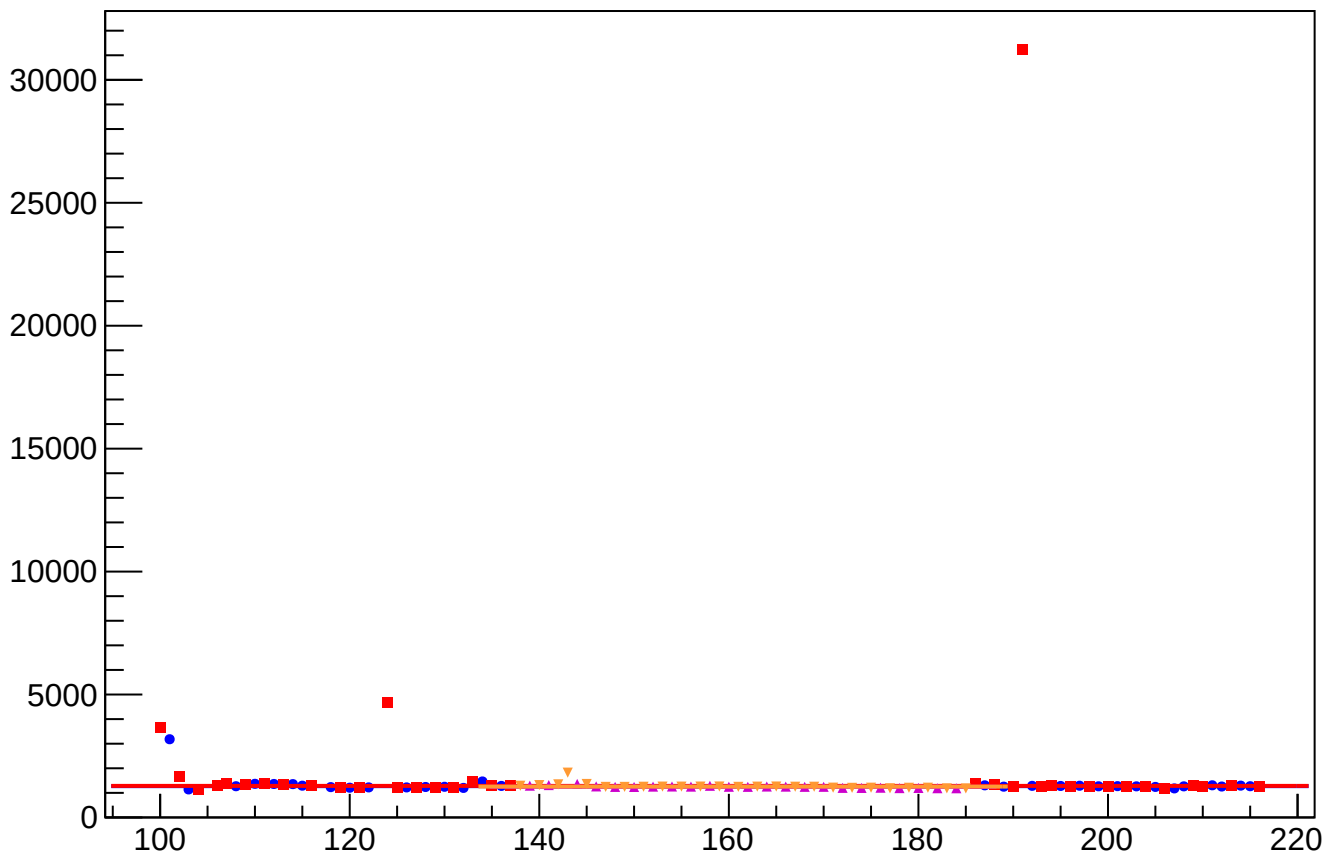
Left In:  $242.663 \pm 291.166$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-439.327 \pm 204.310$   $\chi^2/\text{NDF}$ : 49.3/55

All:  $-163.326 \pm 145.292$   $\chi^2/\text{NDF}$ : 115.2/113

- sign  $119.051 \pm 206.657$   $\chi^2/\text{NDF}$ : 62.3/57

cor\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1273.339 $\pm$ 0.206  $\chi^2$ /NDF: 534166.8/30

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.0/24

Right Out: 1283.573 $\pm$ 0.207  $\chi^2$ /NDF: 508006.4/34

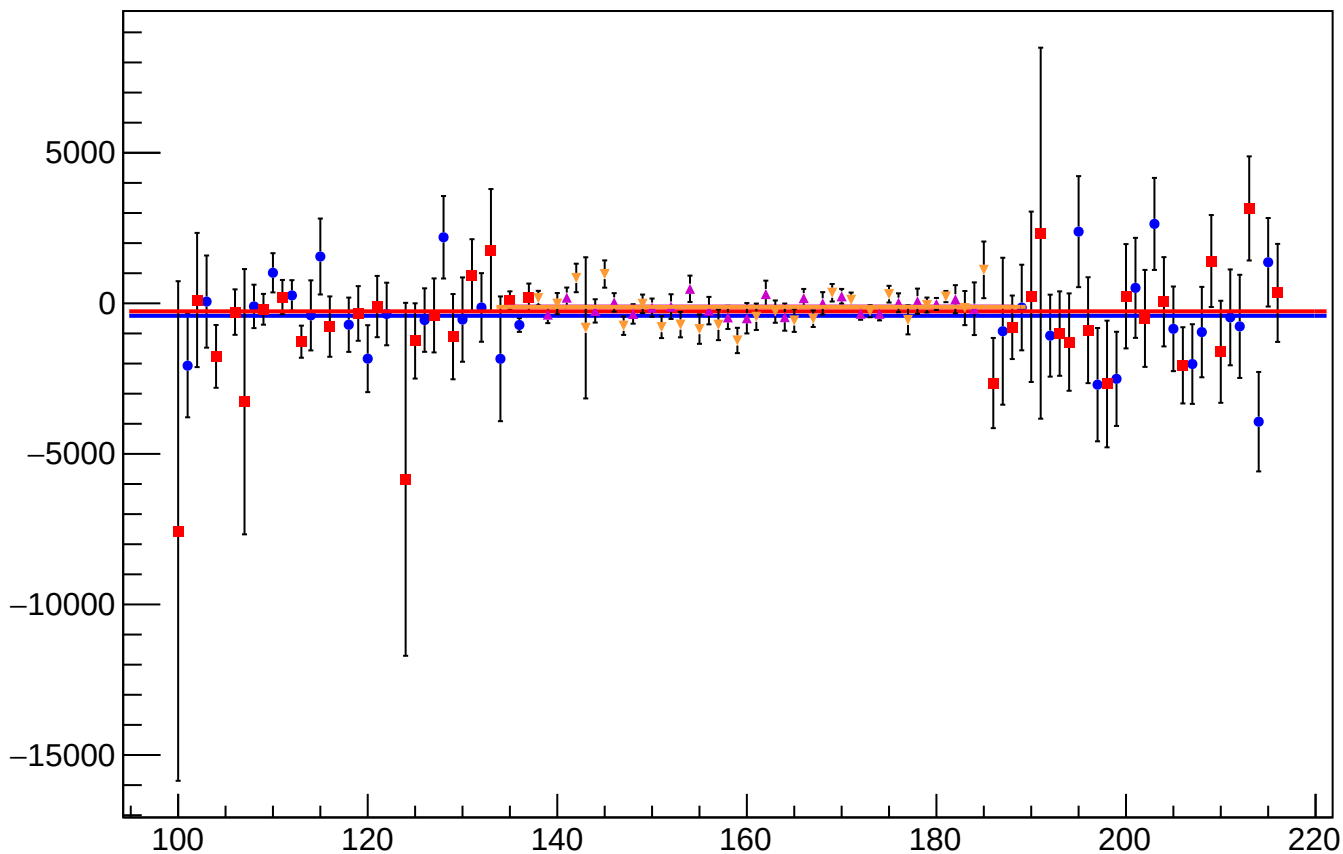
Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

+ sign 1264.239 $\pm$ 0.144  $\chi^2$ /NDF: 741095.1/55

All: 1264.528 $\pm$ 0.103  $\chi^2$ /NDF: 1305183.8/11

- sign 1264.824 $\pm$ 0.146  $\chi^2$ /NDF: 564080.6/57

asym\_atl\_avg\_atr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-414.142 \pm 155.415$   $\chi^2/\text{NDF}$ : 35.9/30

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-265.254 \pm 156.022$   $\chi^2/\text{NDF}$ : 27.3/34

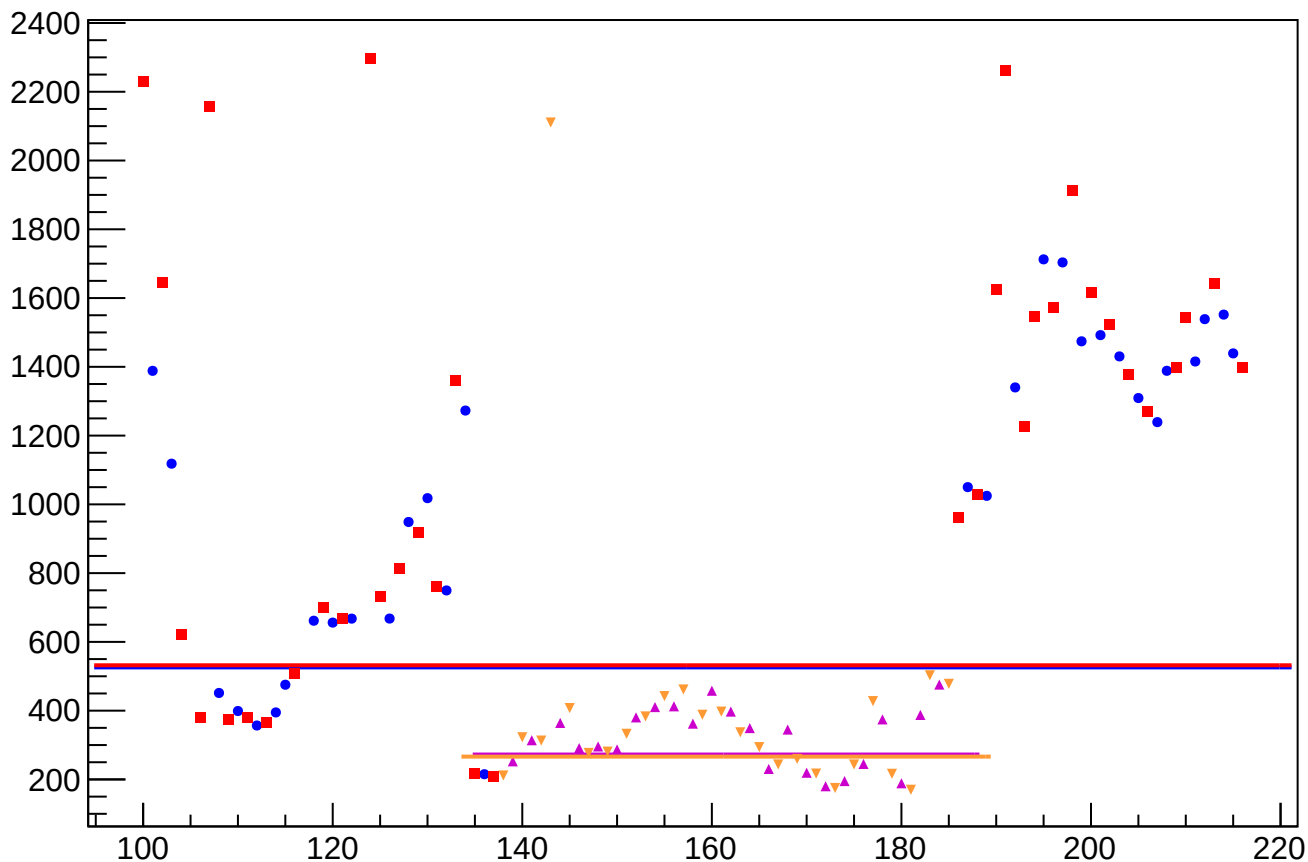
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-161.310 \pm 60.014$   $\chi^2/\text{NDF}$ : 87.5/55

All:  $-147.043 \pm 42.974$   $\chi^2/\text{NDF}$ : 129.5/113

- sign  $-132.029 \pm 61.566$   $\chi^2/\text{NDF}$ : 41.9/57

asym\_atl\_avg\_atr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 525.826 $\pm$ 0.110  $\chi^2$ /NDF: 15271071.4/30

Left Out: 266.326 $\pm$ 0.046  $\chi^2$ /NDF: 4630167.4/24

Right Out: 531.958 $\pm$ 0.110  $\chi^2$ /NDF: 15152273.7/34

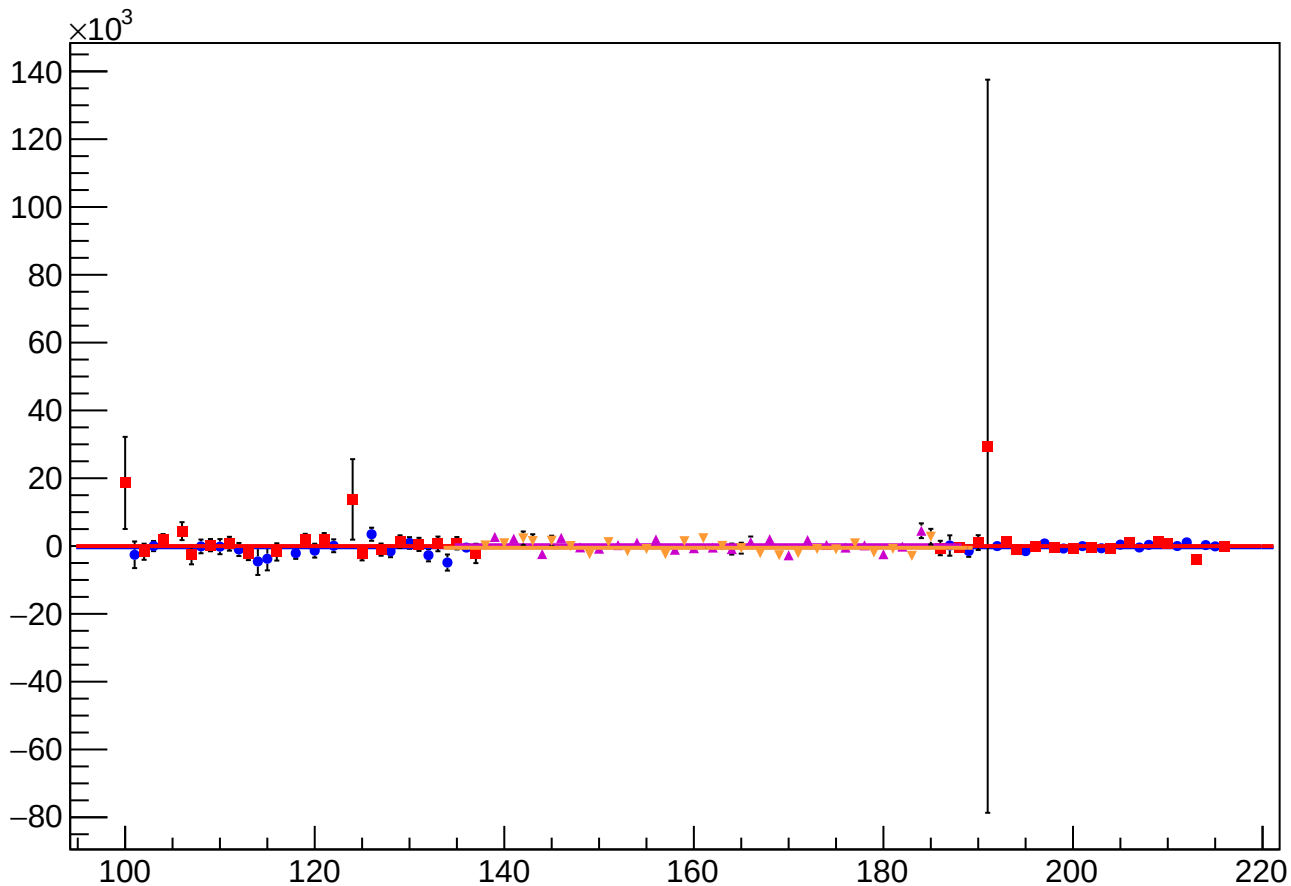
Left In: 272.378 $\pm$ 0.047  $\chi^2$ /NDF: 2887597.1/22

+ sign 305.021 $\pm$ 0.042  $\chi^2$ /NDF: 24645734.9/55

All: 308.810 $\pm$ 0.030  $\chi^2$ /NDF: 47376051.7/11

- sign 312.796 $\pm$ 0.044  $\chi^2$ /NDF: 22713962.3/57

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-360.995 \pm 292.027$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-514.430 \pm 285.945$   $\chi^2/\text{NDF}$ : 30.9/24

Right Out:  $-6.429 \pm 293.359$   $\chi^2/\text{NDF}$ : 29.8/34

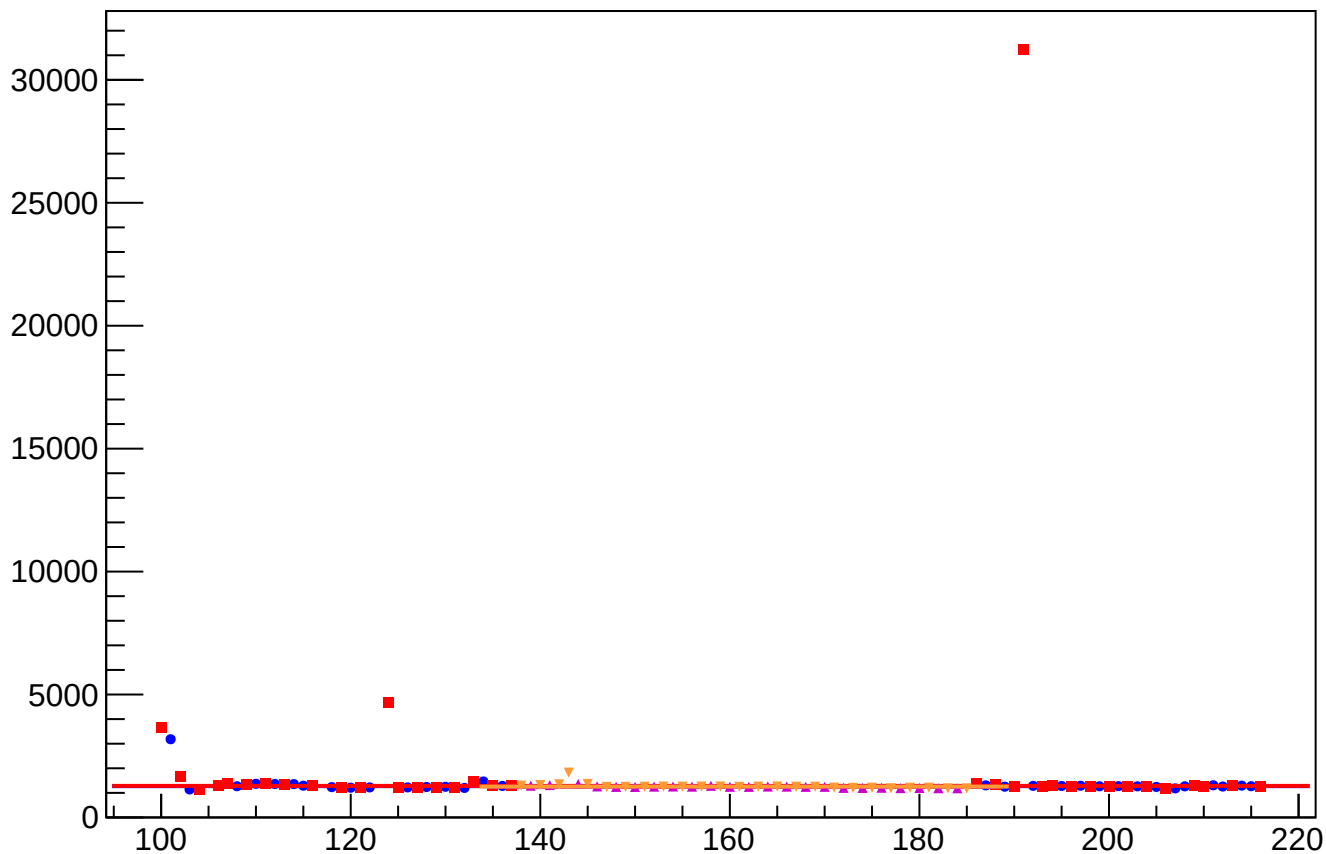
Left In:  $242.663 \pm 291.166$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-439.327 \pm 204.310$   $\chi^2/\text{NDF}$ : 49.3/55

All:  $-163.326 \pm 145.292$   $\chi^2/\text{NDF}$ : 115.2/113

- sign  $119.051 \pm 206.657$   $\chi^2/\text{NDF}$ : 62.3/57

eigen\_cor\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1273.339+/-0.206  $\chi^2/\text{NDF}$ : 534166.8/30

Left Out: 1255.514+/-0.202  $\chi^2/\text{NDF}$ : 203124.0/24

Right Out: 1283.573+/-0.207  $\chi^2/\text{NDF}$ : 508006.4/34

Left In: 1246.355+/-0.206  $\chi^2/\text{NDF}$ : 39857.0/22

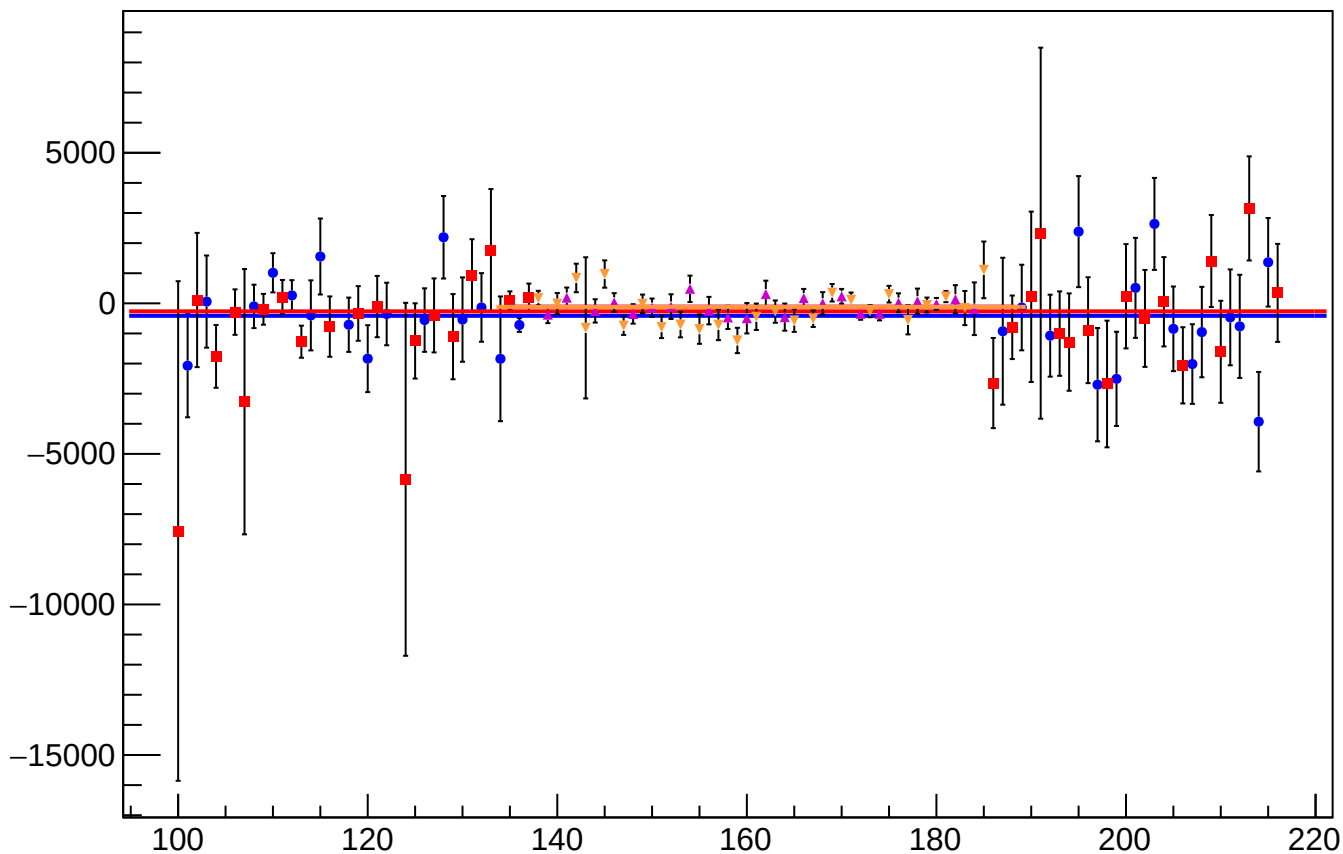
+ sign 1264.239+/-0.144  $\chi^2/\text{NDF}$ : 741095.1/55

All: 1264.528+/-0.103  $\chi^2/\text{NDF}$ : 1305183.8/11

- sign 1264.824+/-0.146  $\chi^2/\text{NDF}$ : 564080.6/57



asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-414.142 \pm 155.415$   $\chi^2/\text{NDF}$ : 35.9/30

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-265.254 \pm 156.022$   $\chi^2/\text{NDF}$ : 27.3/34

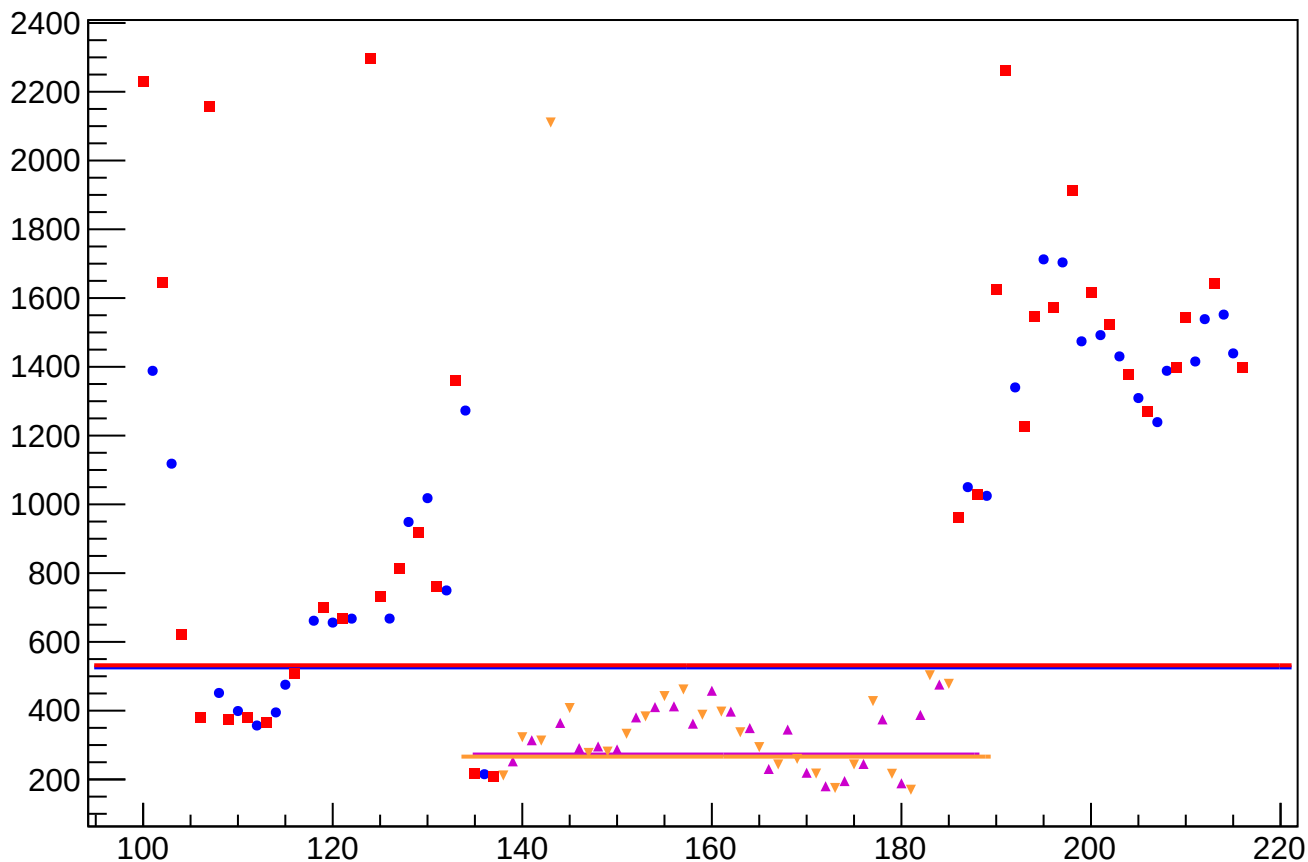
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-161.310 \pm 60.014$   $\chi^2/\text{NDF}$ : 87.5/55

All:  $-147.043 \pm 42.974$   $\chi^2/\text{NDF}$ : 129.5/113

- sign  $-132.029 \pm 61.566$   $\chi^2/\text{NDF}$ : 41.9/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 525.826 $\pm$ 0.110  $\chi^2$ /NDF: 15271071.4/30

Left Out: 266.326 $\pm$ 0.046  $\chi^2$ /NDF: 4630167.4/24

Right Out: 531.958 $\pm$ 0.110  $\chi^2$ /NDF: 15152273.7/34

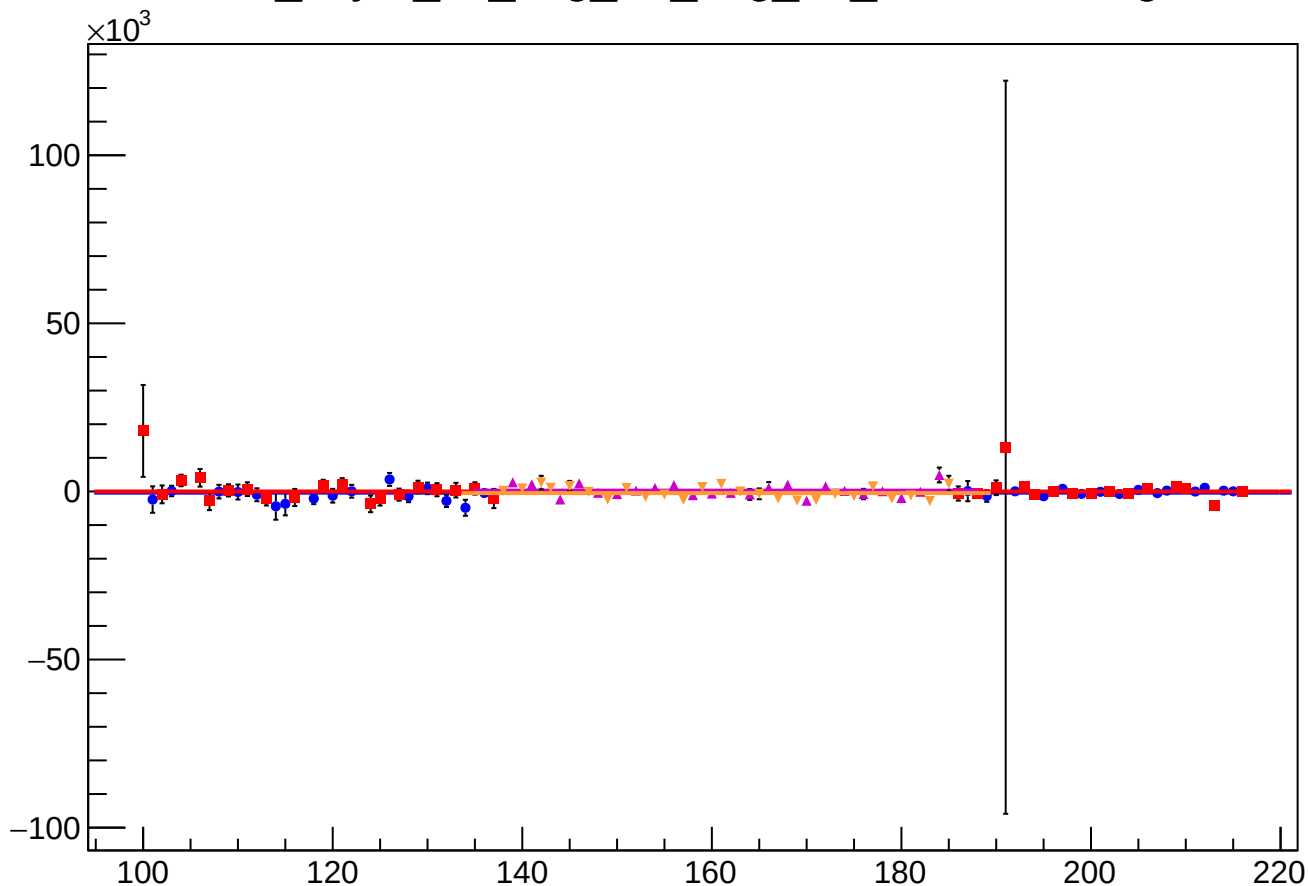
Left In: 272.378 $\pm$ 0.047  $\chi^2$ /NDF: 2887597.1/22

+ sign 305.021 $\pm$ 0.042  $\chi^2$ /NDF: 24645734.9/55

All: 308.810 $\pm$ 0.030  $\chi^2$ /NDF: 47376051.7/11

- sign 312.796 $\pm$ 0.044  $\chi^2$ /NDF: 22713962.3/57

dit\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-352.361 \pm 292.805$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-493.436 \pm 282.734$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-11.619 \pm 292.872$   $\chi^2/\text{NDF}$ : 31.8/34

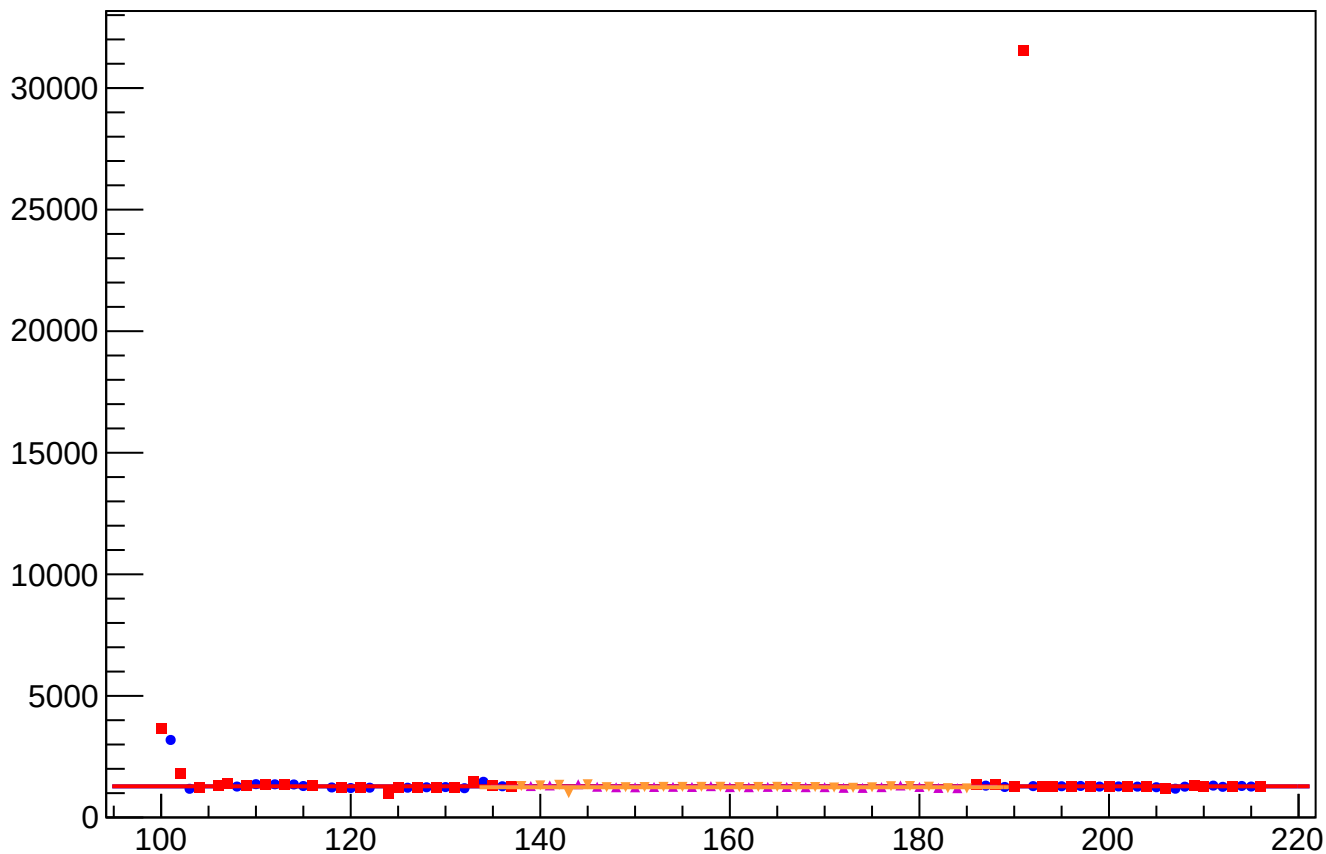
Left In:  $242.004 \pm 294.339$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-425.366 \pm 203.390$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $-160.945 \pm 145.287$   $\chi^2/\text{NDF}$ : 118.9/113

- sign  $114.558 \pm 207.609$   $\chi^2/\text{NDF}$ : 62.9/57

dit\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1276.803 $\pm$ 0.207  $\chi^2$ /NDF: 526769.5/30

Left Out: 1242.539 $\pm$ 0.200  $\chi^2$ /NDF:130023.1/24

Right Out: 1281.503 $\pm$ 0.207  $\chi^2$ /NDF: 388326.1/34

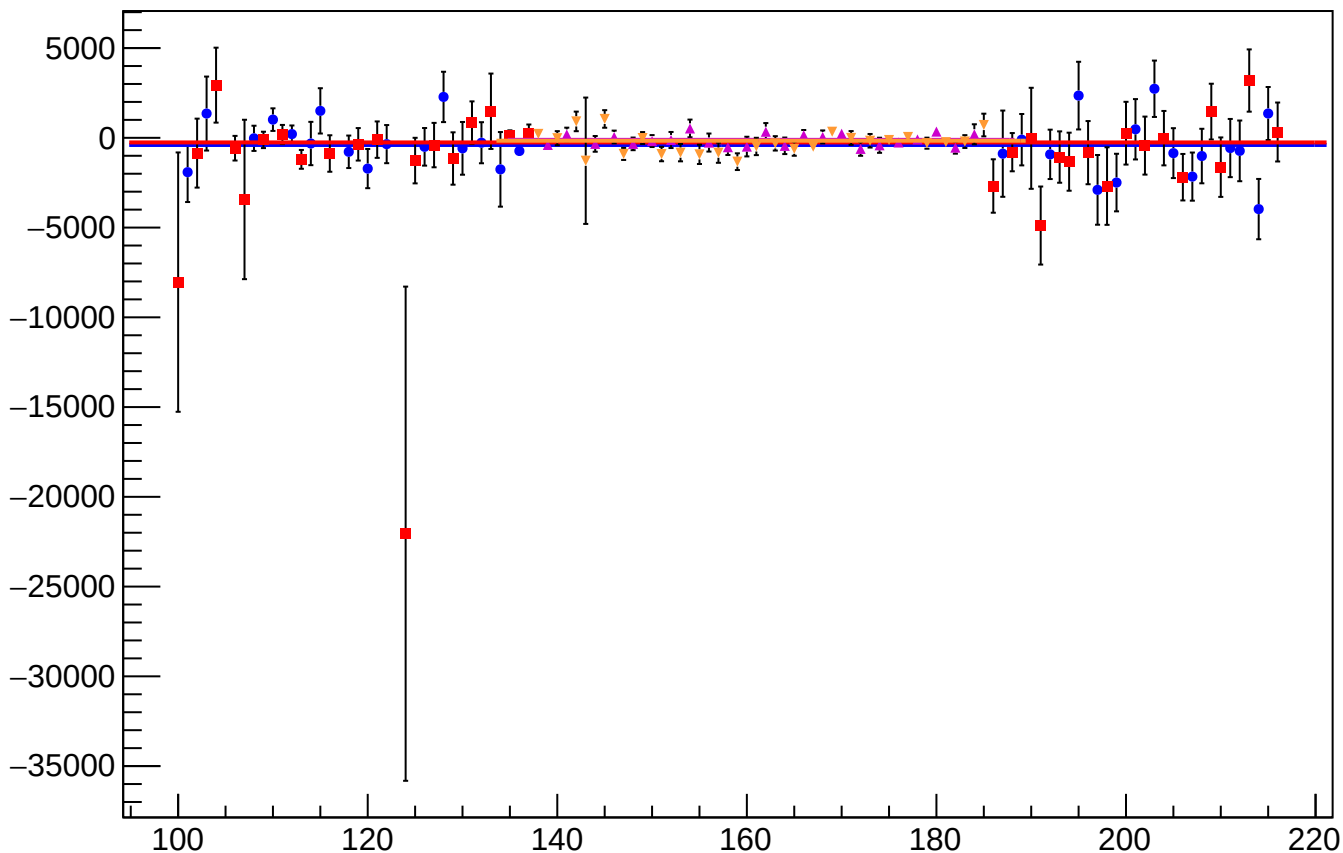
Left In: 1260.094 $\pm$ 0.208  $\chi^2$ /NDF:27932.1/22

+ sign 1259.072 $\pm$ 0.144  $\chi^2$ /NDF: 670965.4/55

All: 1264.841 $\pm$ 0.103  $\chi^2$ /NDF: 1095826.4/11

- sign 1270.852 $\pm$ 0.147  $\chi^2$ /NDF: 421575.4/57

asym\_atl\_avg\_atr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $-397.642 \pm 157.039$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-160.930 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-256.344 \pm 156.094$   $\chi^2/\text{NDF}$ : 34.1/34

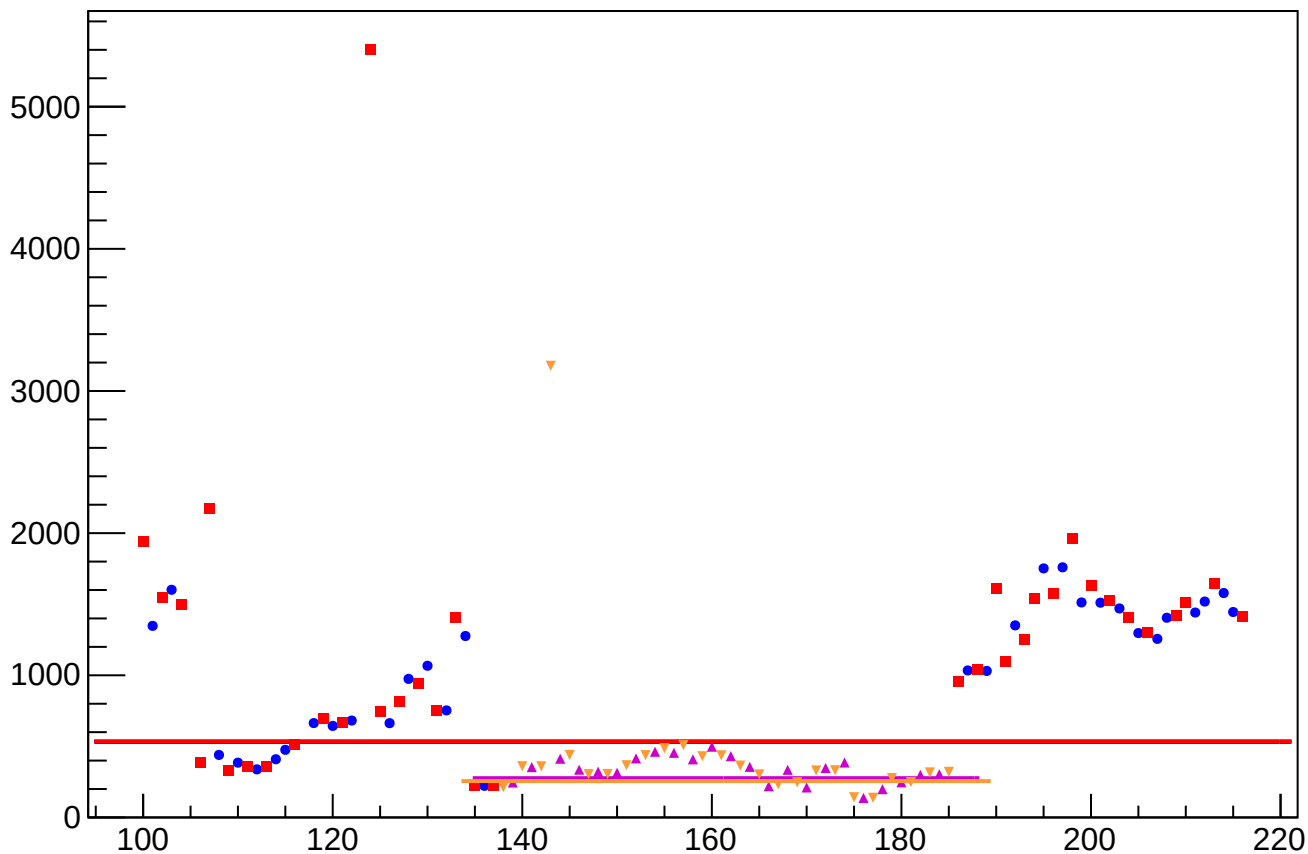
Left In:  $-113.722 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-194.765 \pm 59.372$   $\chi^2/\text{NDF}$ : 82.1/55

All:  $-167.562 \pm 43.204$   $\chi^2/\text{NDF}$ : 135.6/113

- sign  $-136.945 \pm 62.987$   $\chi^2/\text{NDF}$ : 53.0/57

asym\_atl\_avg\_atr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 531.606+/-0.111  $\chi^2/\text{NDF}$ : 15407600.6/30

Left Out: 255.768+/-0.045  $\chi^2/\text{NDF}$ : 6373929.4/24

Right Out: 535.953+/-0.110  $\chi^2/\text{NDF}$ : 15662903.2/34

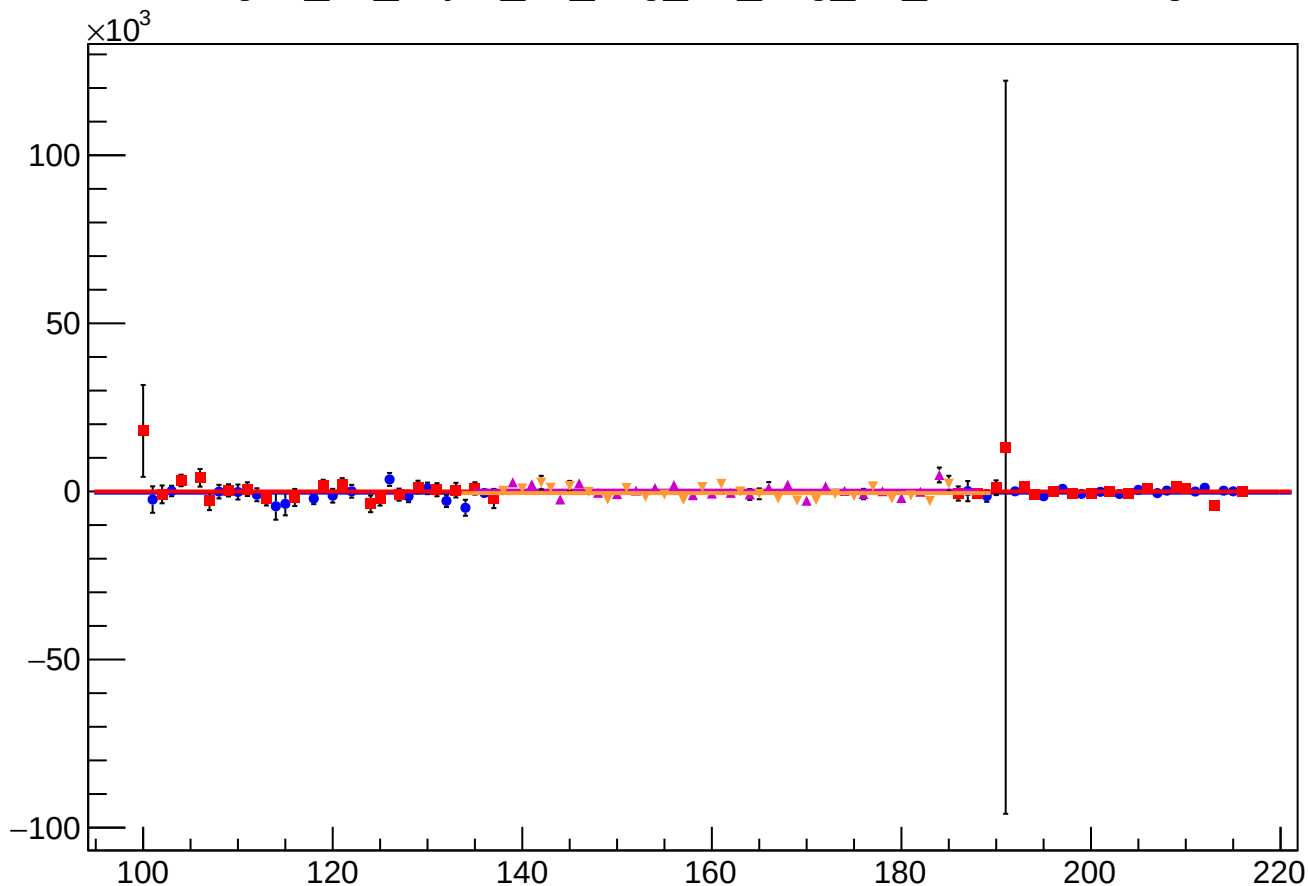
Left In: 276.298+/-0.049  $\chi^2/\text{NDF}$ : 4027410.5/22

+ sign 295.197+/-0.042  $\chi^2/\text{NDF}$ : 27070061.9/55

All: 306.197+/-0.031  $\chi^2/\text{NDF}$ : 51539326.9/11

- sign 318.578+/-0.045  $\chi^2/\text{NDF}$ : 24323338.5/57

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-352.360 \pm 292.805$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-493.435 \pm 282.734$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-11.619 \pm 292.872$   $\chi^2/\text{NDF}$ : 31.8/34

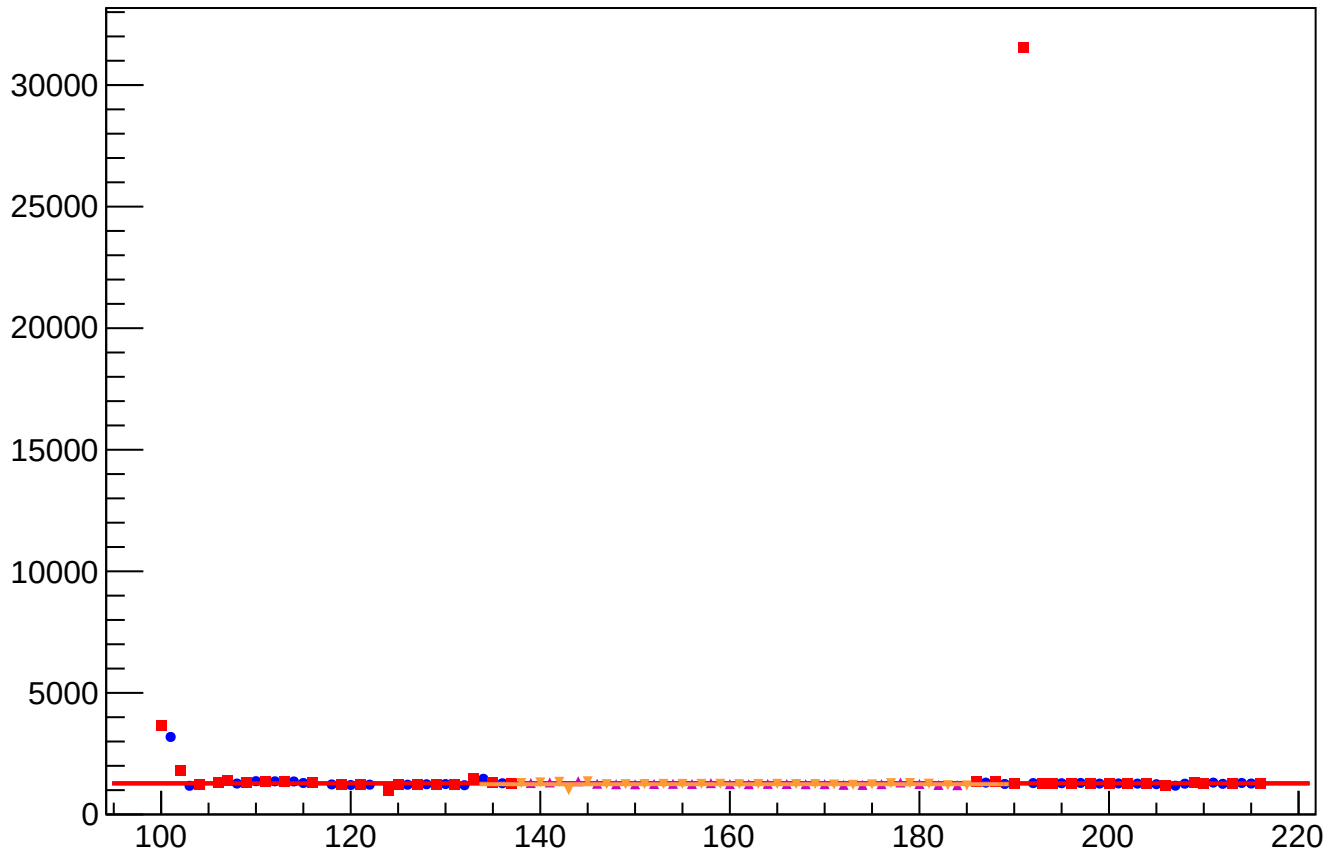
Left In:  $242.004 \pm 294.339$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-425.366 \pm 203.390$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $-160.944 \pm 145.287$   $\chi^2/\text{NDF}$ : 118.9/113

- sign  $114.559 \pm 207.609$   $\chi^2/\text{NDF}$ : 62.9/57

eigen\_dit\_asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1276.803+/-0.207  $\chi^2/\text{NDF}$ : 526769.5/30

Left Out: 1242.539+/-0.200  $\chi^2/\text{NDF}$ : 130022.2/24

Right Out: 1281.503+/-0.207  $\chi^2/\text{NDF}$ : 388326.4/34

Left In: 1260.094+/-0.208  $\chi^2/\text{NDF}$ : 27932.2/22

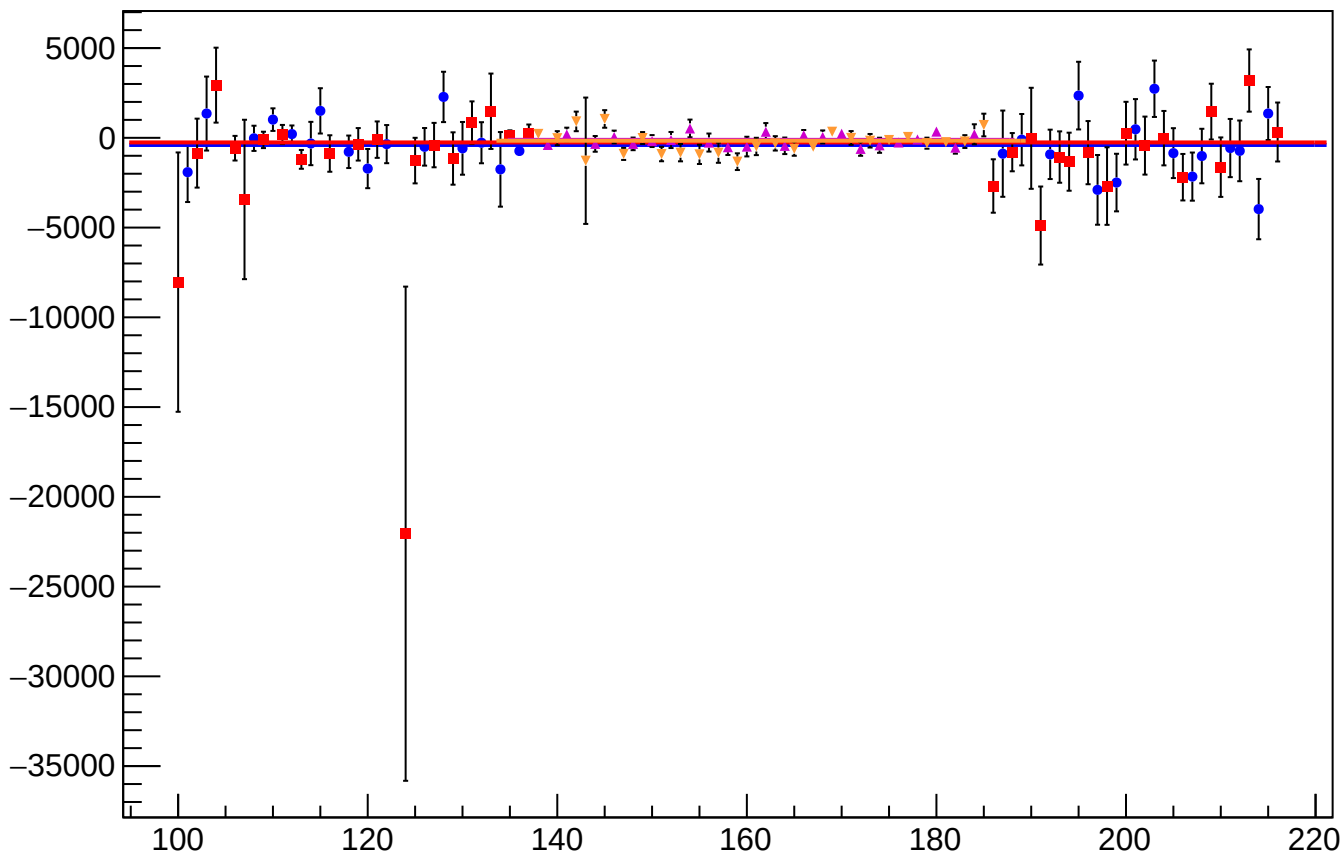
+ sign 1259.072+/-0.144  $\chi^2/\text{NDF}$ : 670964.5/55

All: 1264.841+/-0.103  $\chi^2/\text{NDF}$ : 1095825.9/11

- sign 1270.852+/-0.147  $\chi^2/\text{NDF}$ : 421575.7/57



asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-397.643 \pm 157.041$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-160.933 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-256.351 \pm 156.096$   $\chi^2/\text{NDF}$ : 34.1/34

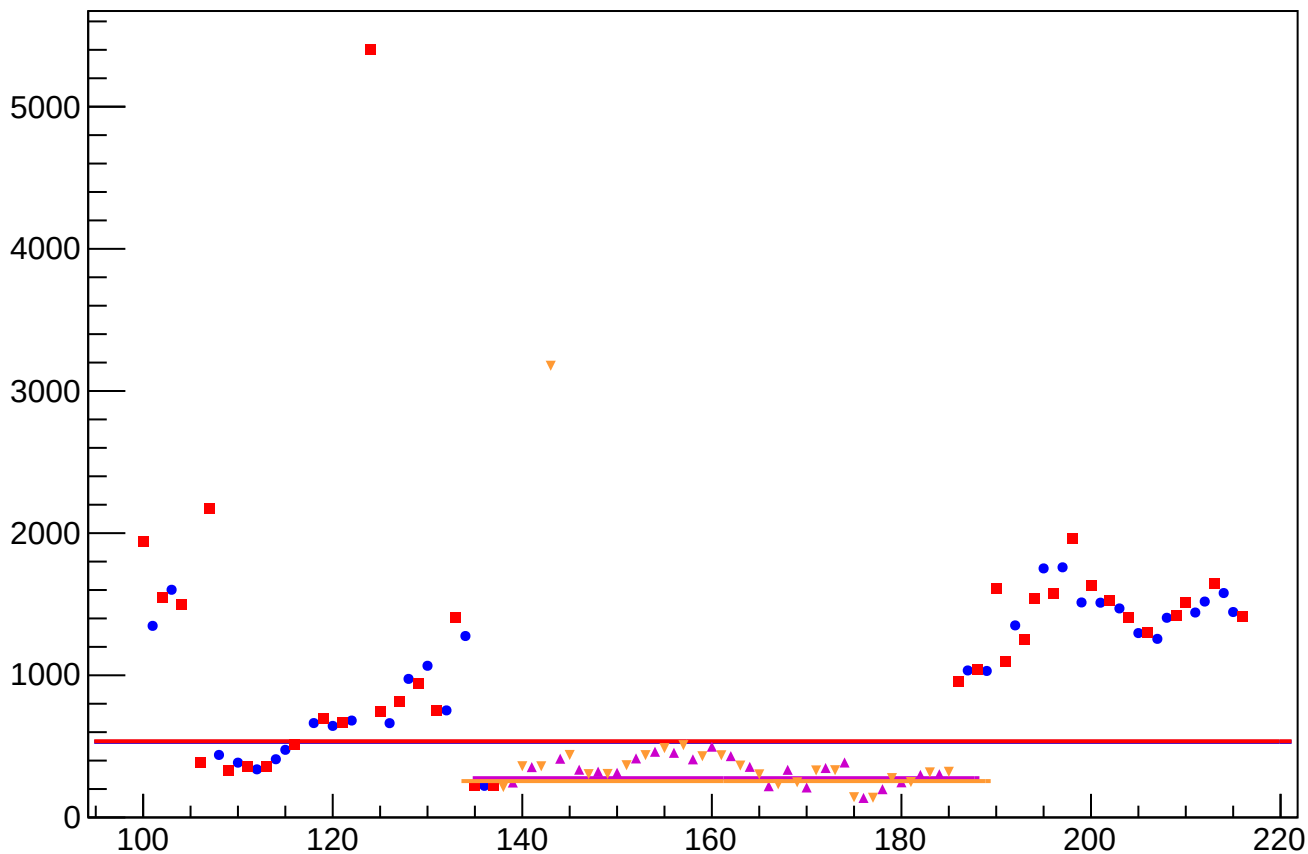
Left In:  $-113.720 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-194.768 \pm 59.373$   $\chi^2/\text{NDF}$ : 82.1/55

All:  $-167.563 \pm 43.204$   $\chi^2/\text{NDF}$ : 135.6/113

- sign  $-136.944 \pm 62.987$   $\chi^2/\text{NDF}$ : 53.0/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 531.619+/-0.111  $\chi^2/\text{NDF}$ : 15407153.4/30

Left Out: 255.770+/-0.045  $\chi^2/\text{NDF}$ : 6373829.7/24

Right Out: 535.963+/-0.110  $\chi^2/\text{NDF}$ : 15662571.9/34

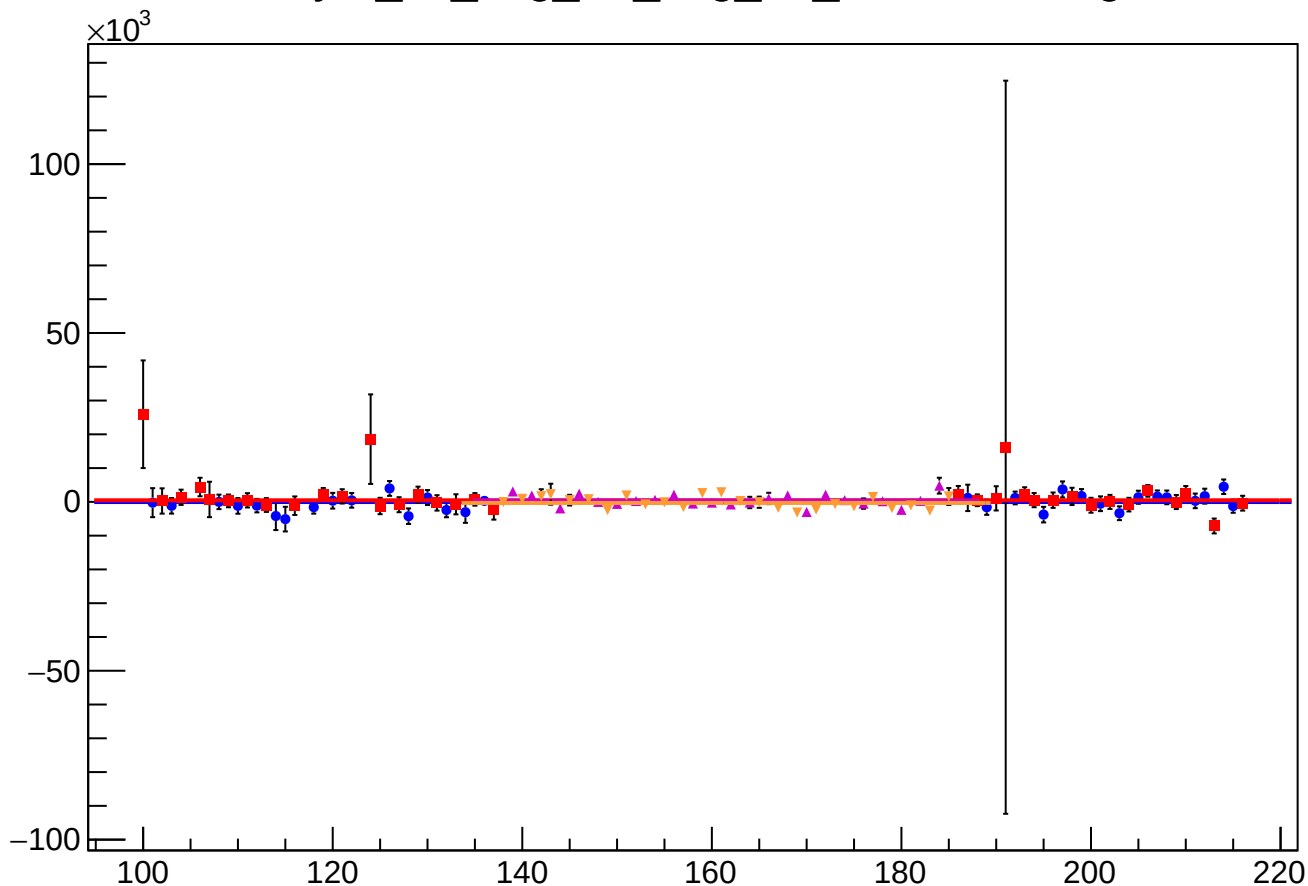
Left In: 276.299+/-0.049  $\chi^2/\text{NDF}$ : 4027371.0/22

+ sign 295.199+/-0.042  $\chi^2/\text{NDF}$ : 27069824.7/55

All: 306.199+/-0.031  $\chi^2/\text{NDF}$ : 51538956.0/11

- sign 318.579+/-0.045  $\chi^2/\text{NDF}$ : 24323217.6/57

# asym\_atl\_avg\_atr\_avg\_dd\_mean vs Slug



Right In:  $-46.625 \pm 394.422$   $\chi^2/\text{NDF}$ : 30.2/30

Left Out:  $-319.744 \pm 298.271$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $467.927 \pm 397.010$   $\chi^2/\text{NDF}$ : 29.3/34

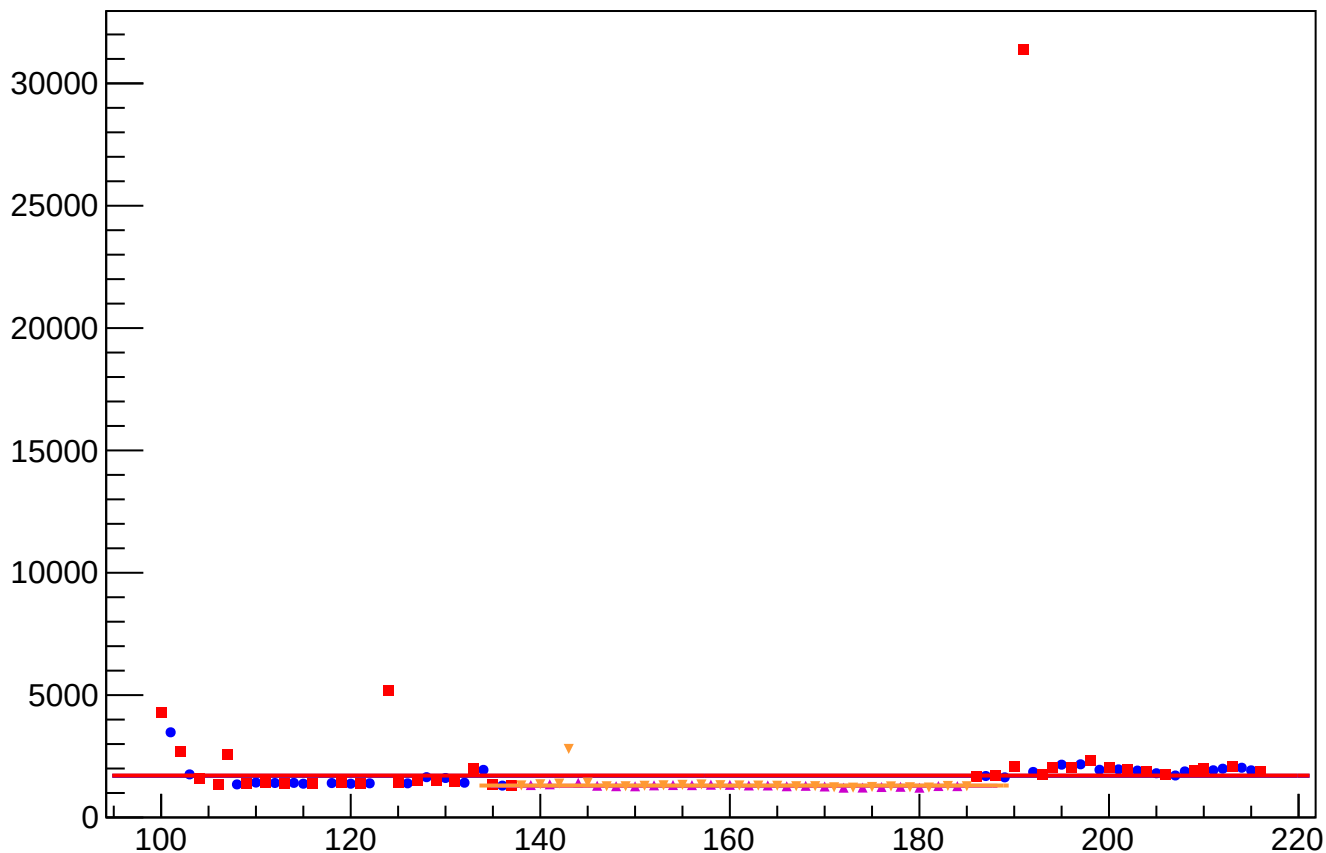
Left In:  $356.387 \pm 301.902$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-220.379 \pm 237.904$   $\chi^2/\text{NDF}$ : 62.1/55

All:  $85.328 \pm 169.069$   $\chi^2/\text{NDF}$ : 124.5/113

- sign  $397.255 \pm 240.312$   $\chi^2/\text{NDF}$ : 59.0/57

# asym\_atl\_avg\_atr\_avg\_dd\_rms vs Slug



Right In: 1701.208+/-0.279     $\chi^2/\text{NDF}$ : 1279971.3/30

Left Out: 1304.156+/-0.211     $\chi^2/\text{NDF}$ : 519609.1/24

Right Out: 1712.842+/-0.281     $\chi^2/\text{NDF}$ : 1518390.6/34

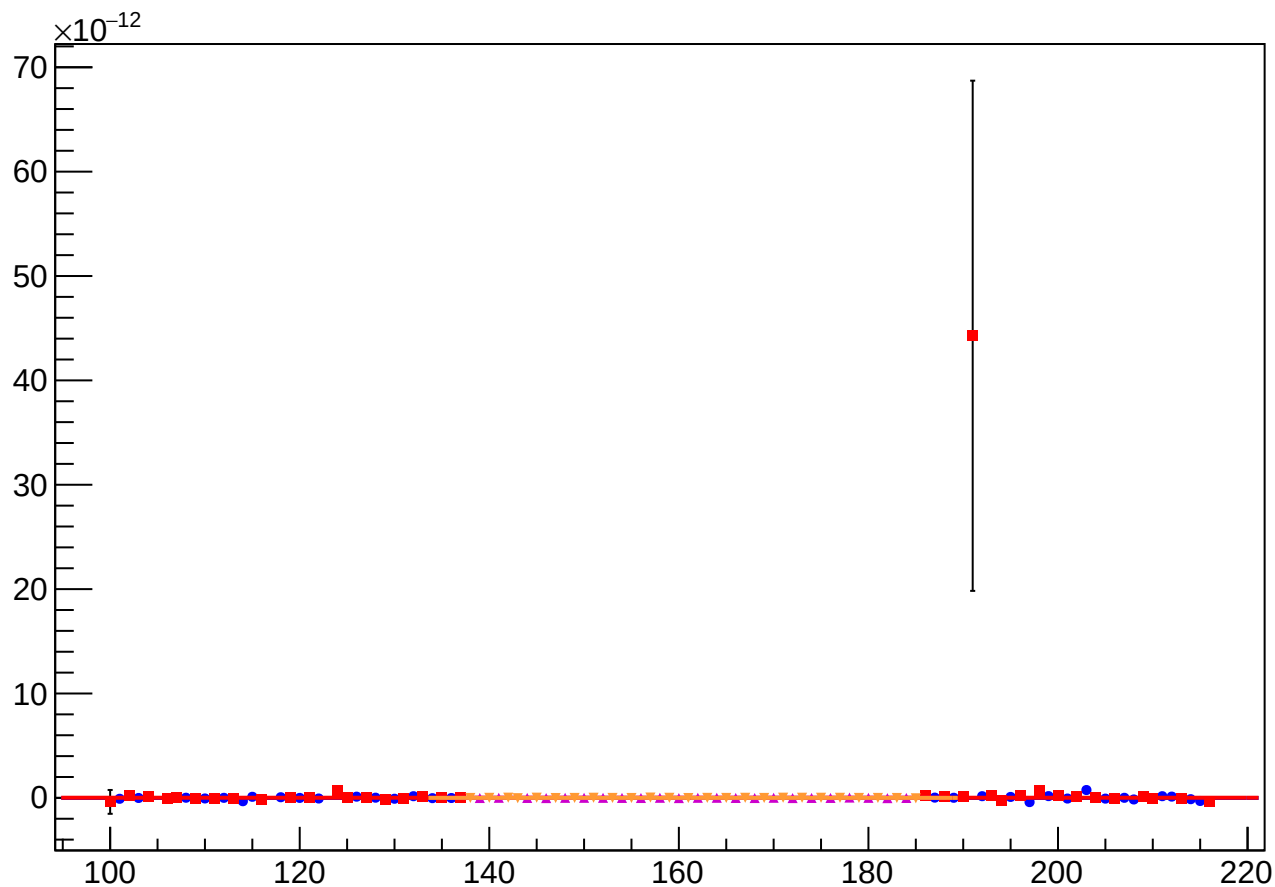
Left In: 1292.123+/-0.213     $\chi^2/\text{NDF}$ : 48343.1/22

+ sign 1448.610+/-0.168     $\chi^2/\text{NDF}$ : 3088973.2/55

All: 1447.453+/-0.120     $\chi^2/\text{NDF}$ : 6078886.2/11

- sign 1446.272+/-0.170     $\chi^2/\text{NDF}$ : 2989817.4/57

asym\_atl\_avg\_atr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.5/34

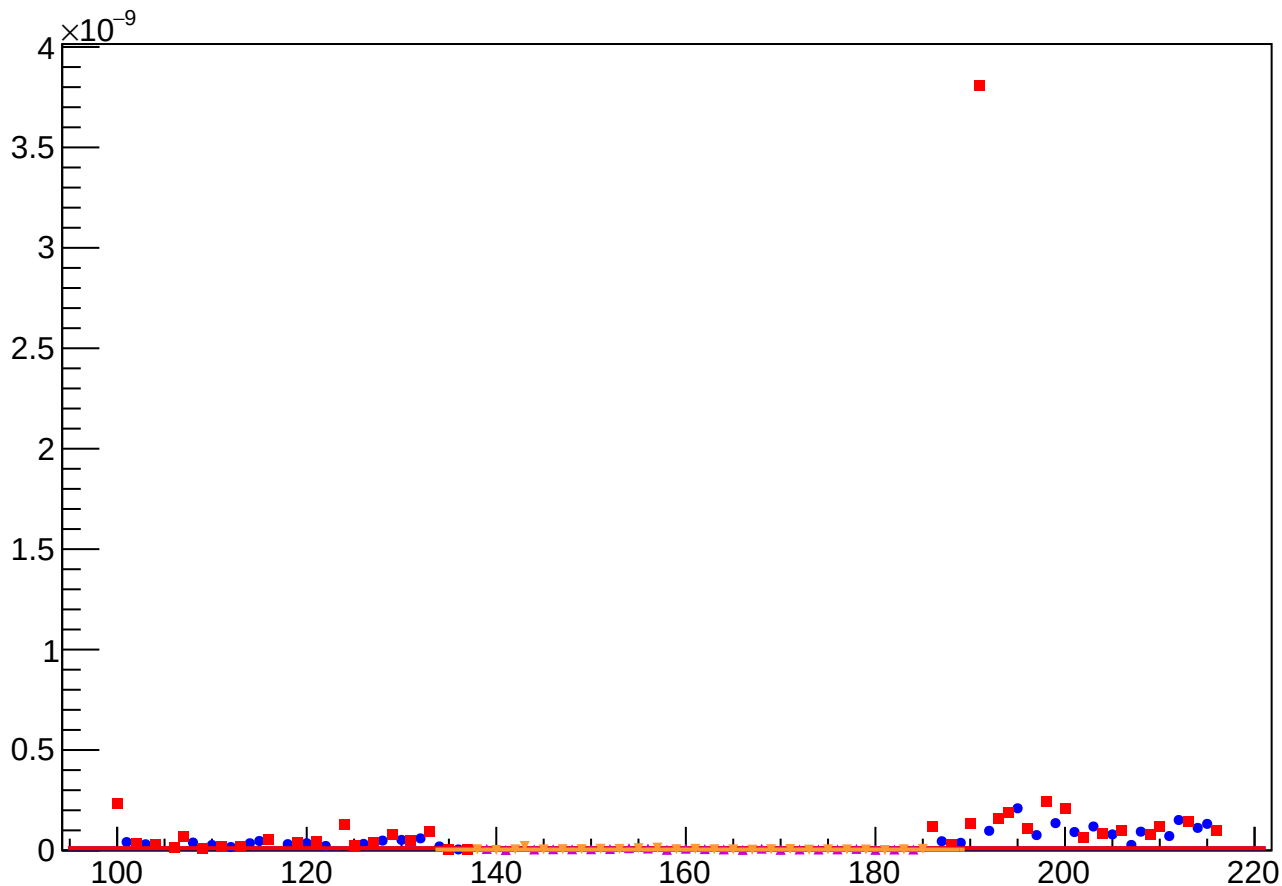
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.2/57

asym\_atl\_avg\_atr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10219502.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2715297.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11798540.9/34

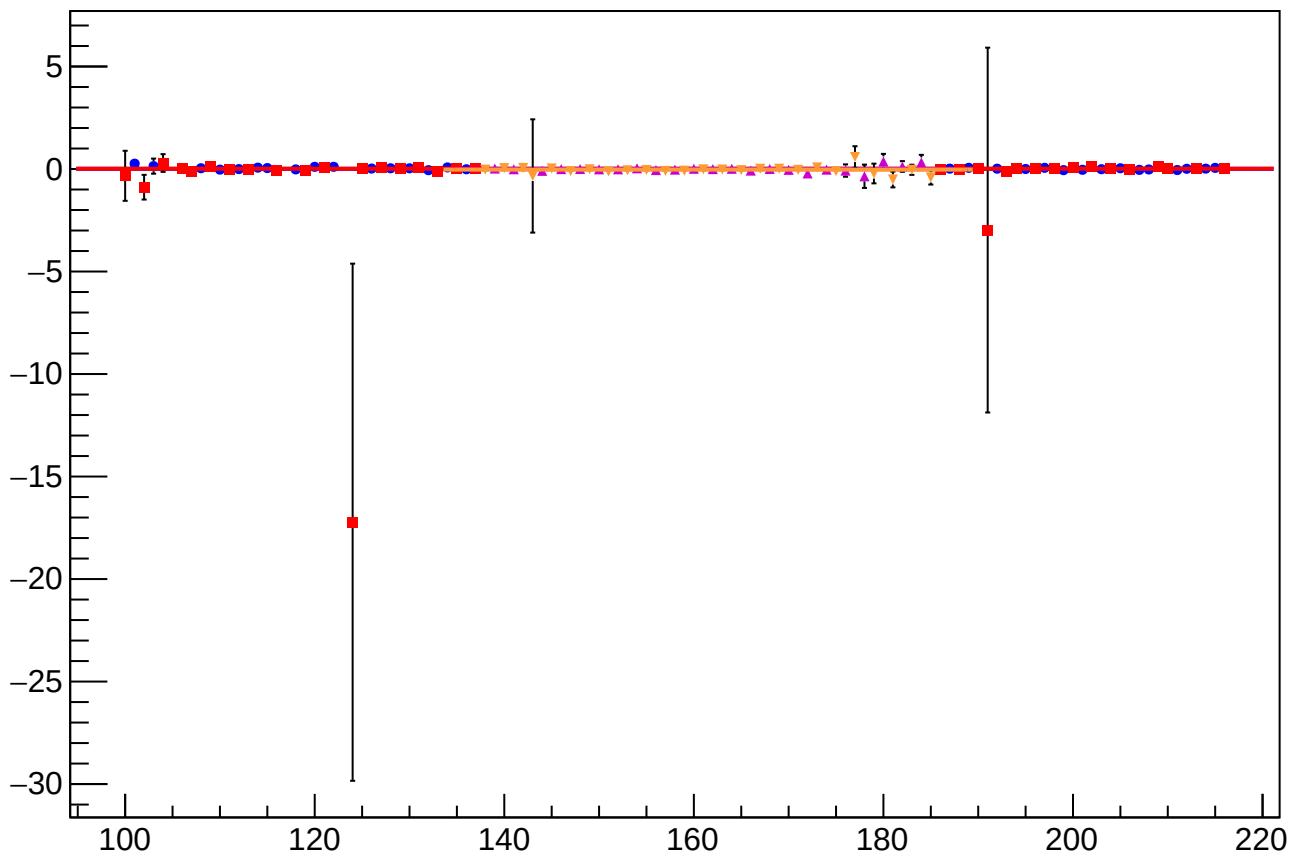
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1884808.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14253003.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29193300.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14916391.0/57

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

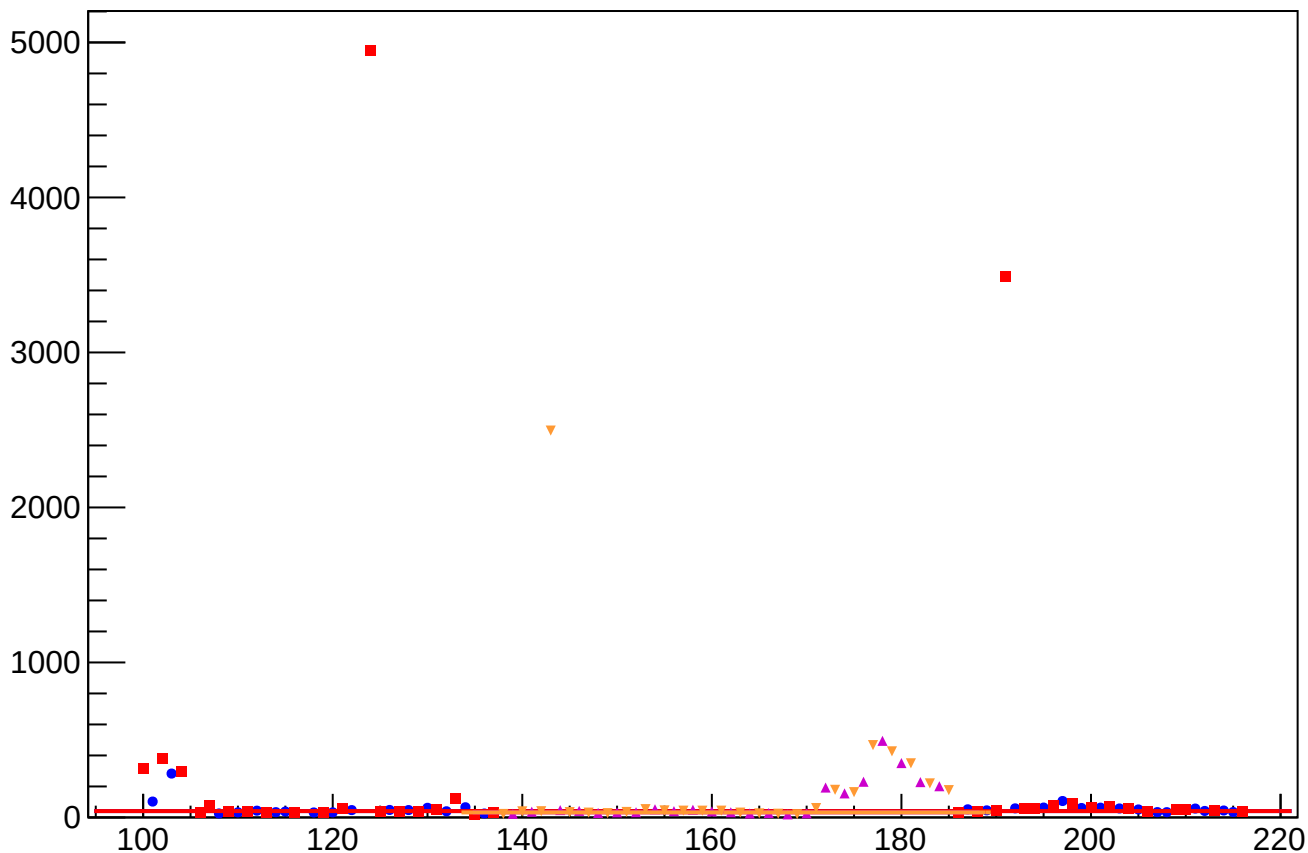
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.215 $\pm$ 0.008  $\chi^2$ /NDF: 4315118.2/30

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10871758.1/24

Right Out: 41.063 $\pm$ 0.008  $\chi^2$ /NDF: 5538206.4/34

Left In: 32.738 $\pm$ 0.007  $\chi^2$ /NDF: 8963240.8/22

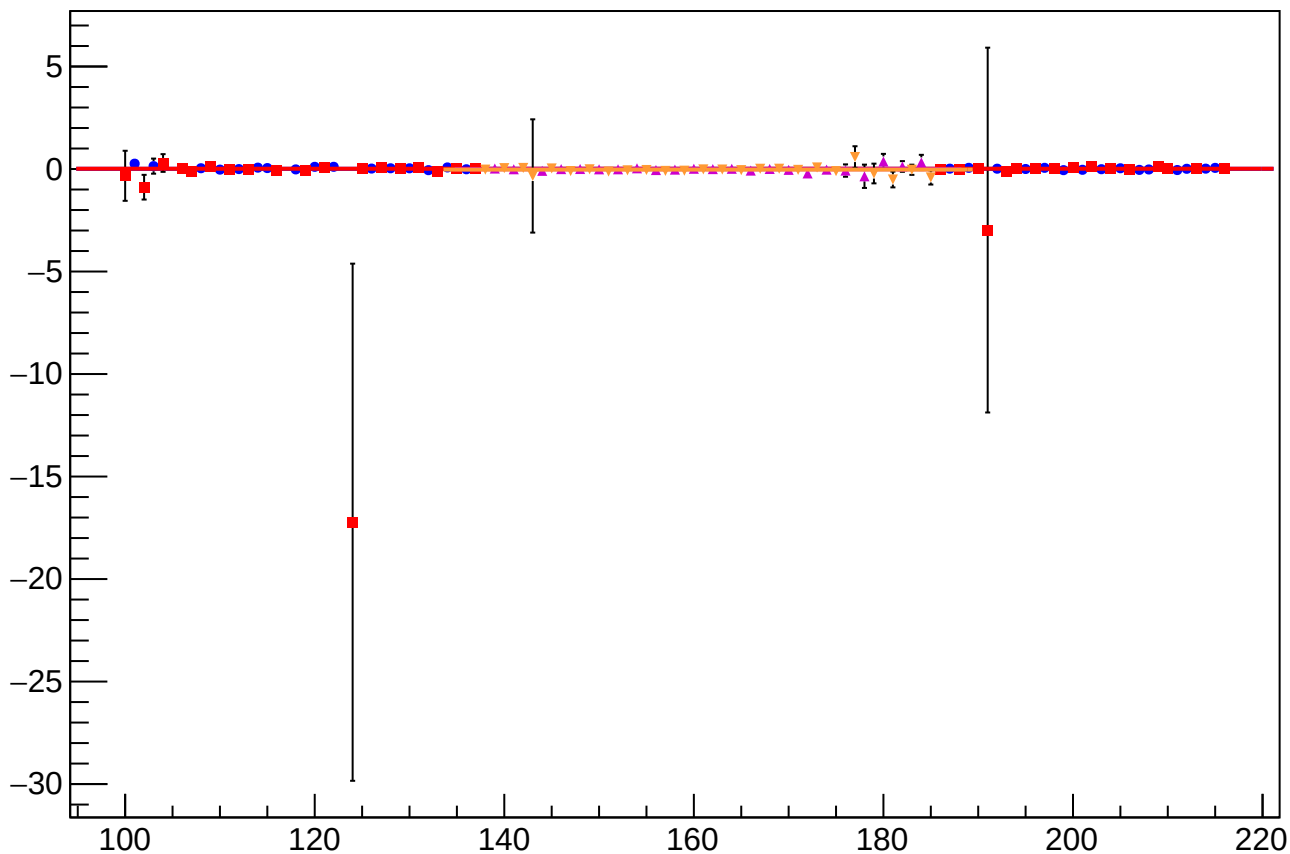
+ sign 36.397 $\pm$ 0.005  $\chi^2$ /NDF: 15922736.6/55

All: 36.398 $\pm$ 0.004  $\chi^2$ /NDF: 31099511.6/113

- sign 36.399 $\pm$ 0.005  $\chi^2$ /NDF: 15176775.0/57



asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

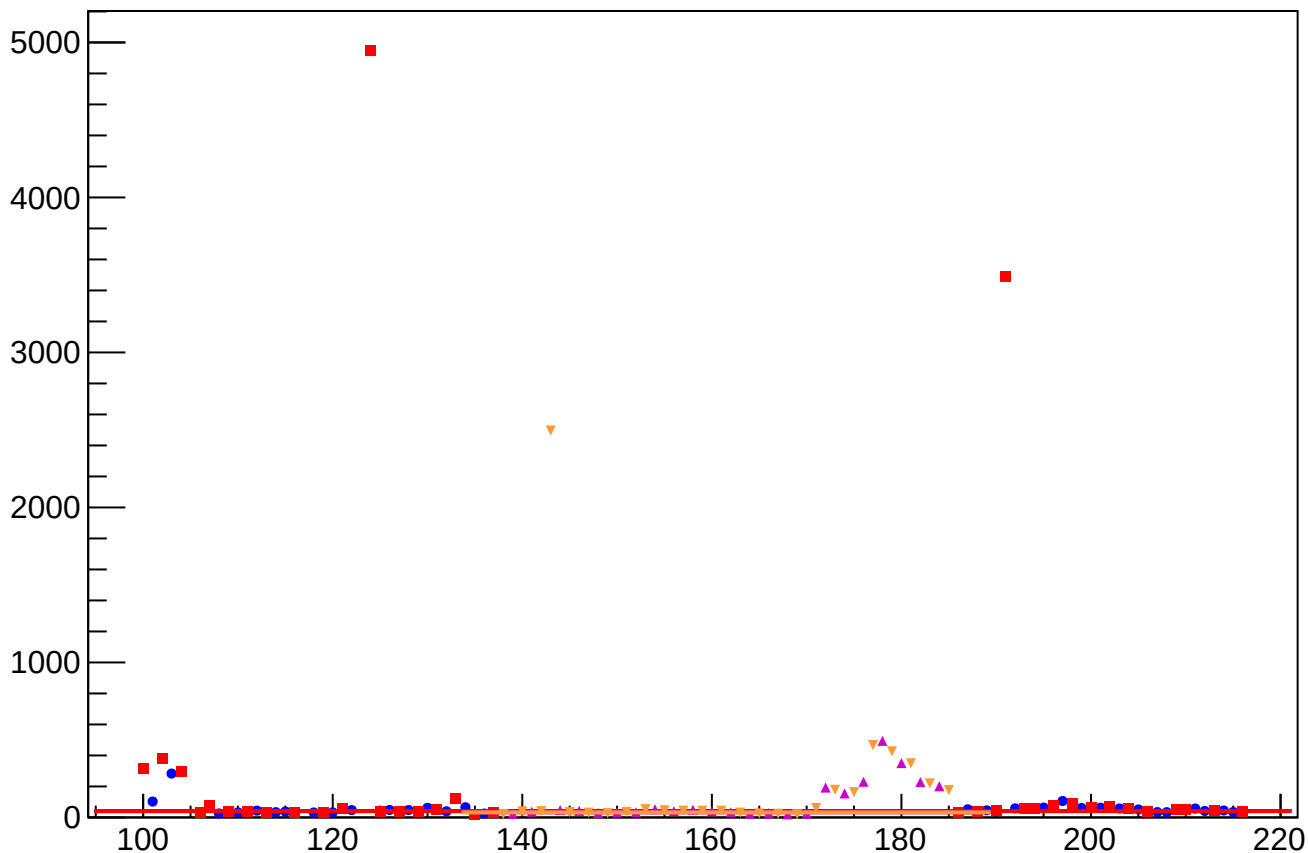
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl\_avg\_atr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.215+/-0.008  $\chi^2/\text{NDF}$ : 4315118.2/30

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ : 10871758.1/24

Right Out: 41.063+/-0.008  $\chi^2/\text{NDF}$ : 5538206.4/34

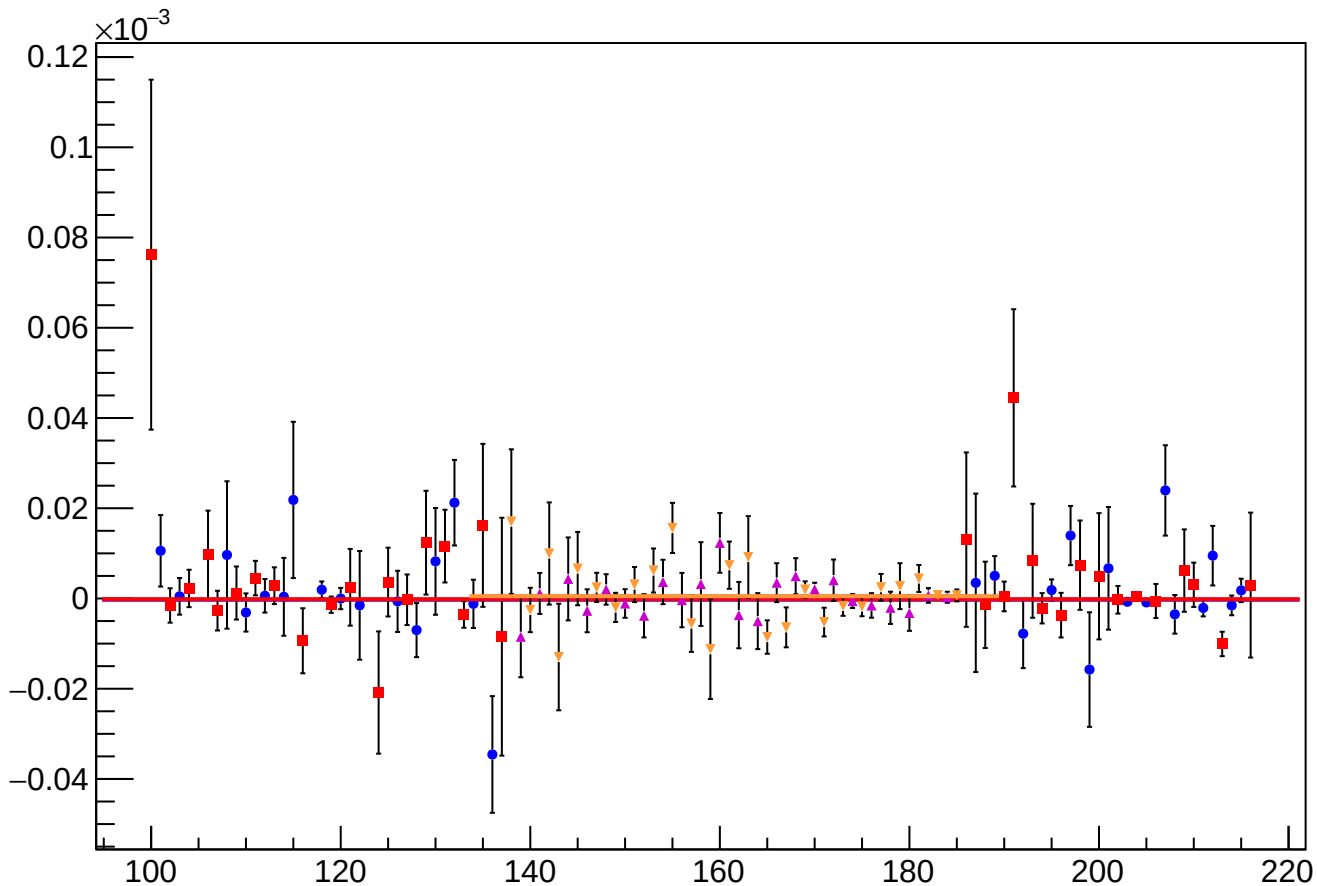
Left In: 32.738+/-0.007  $\chi^2/\text{NDF}$ : 8963240.8/22

+ sign 36.397+/-0.005  $\chi^2/\text{NDF}$ : 15922736.6/55

All: 36.398+/-0.004  $\chi^2/\text{NDF}$ : 31099511.6/113

- sign 36.399+/-0.005  $\chi^2/\text{NDF}$ : 15176775.0/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.9/34

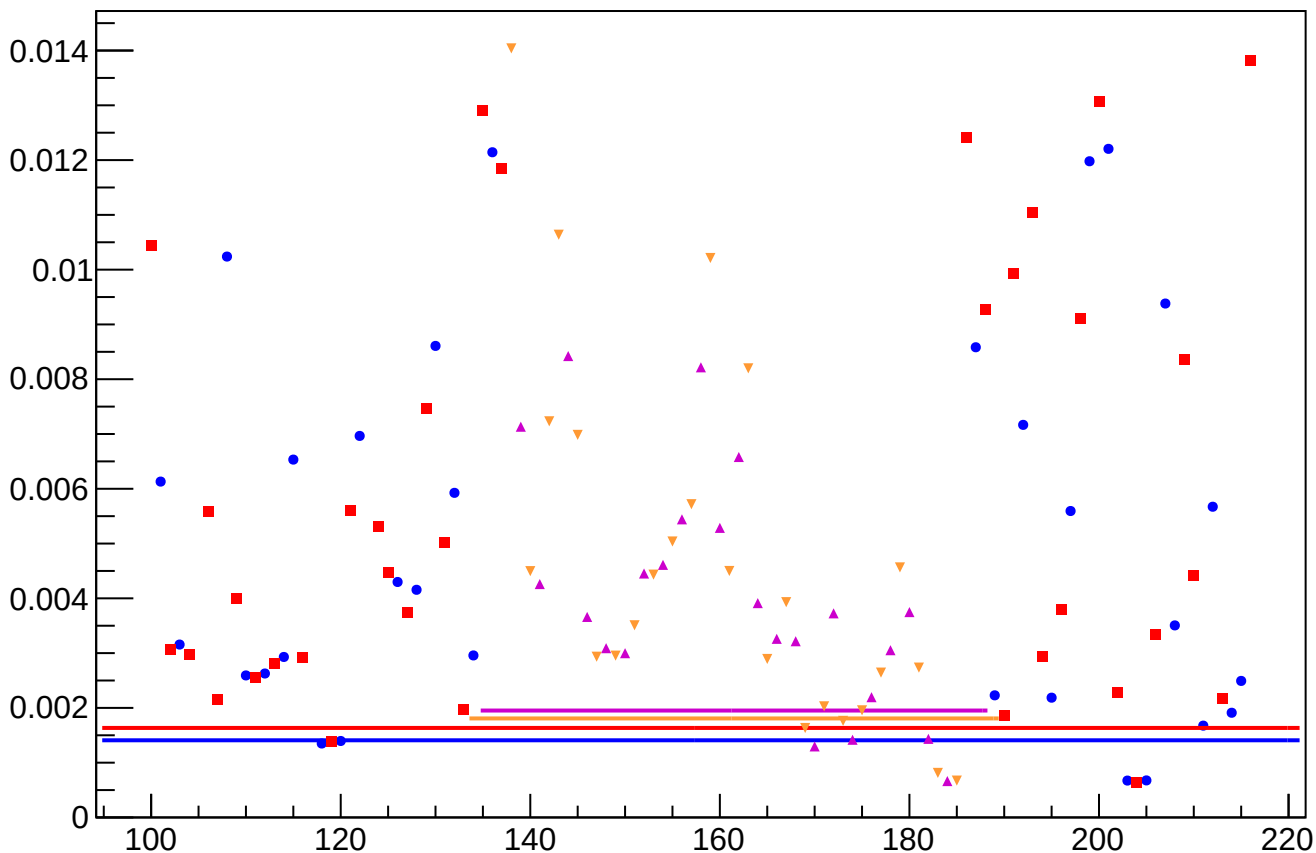
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 77.7/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 132.9/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.2/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17302056.9/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 14941257.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 18433235.9/34

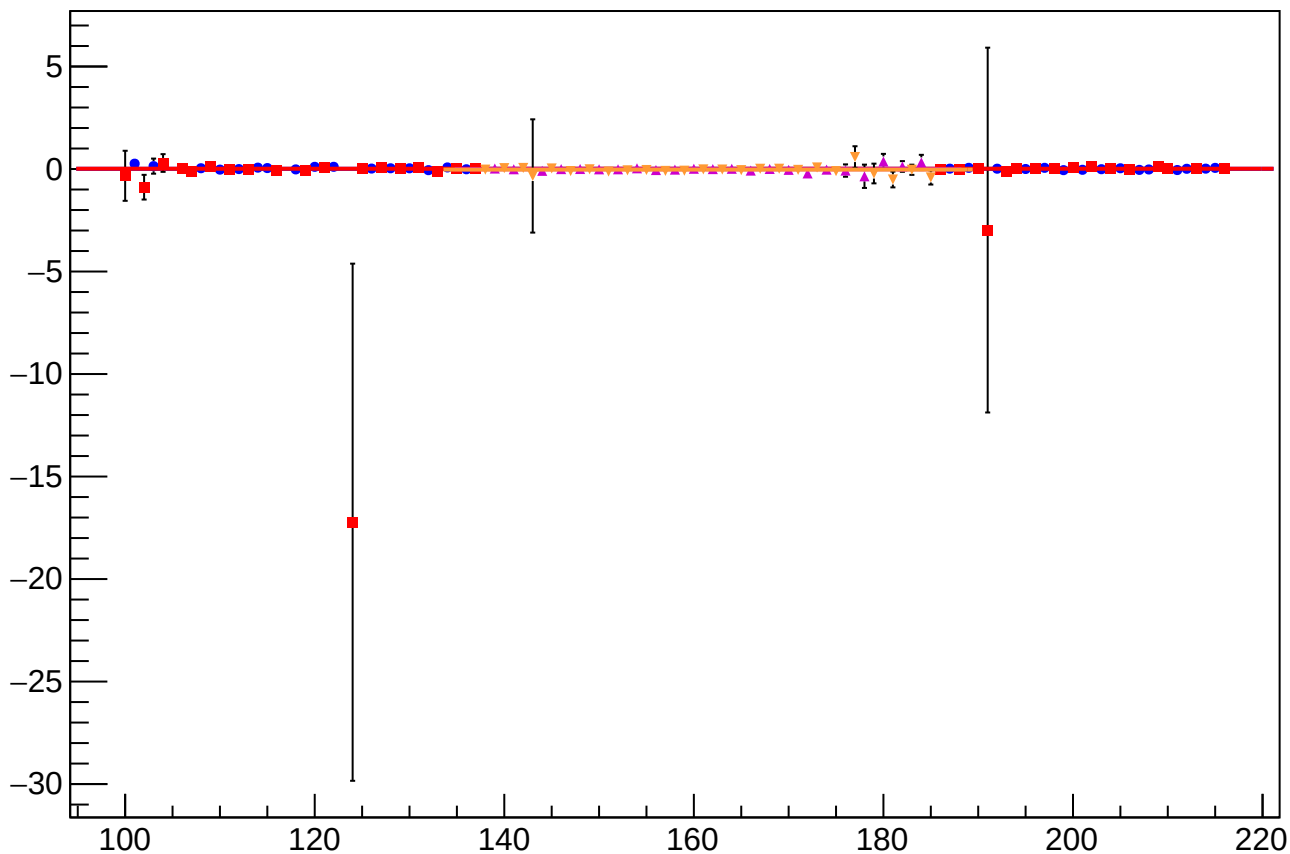
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11478607.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 32851733.0/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 63359157.6/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 30224730.5/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

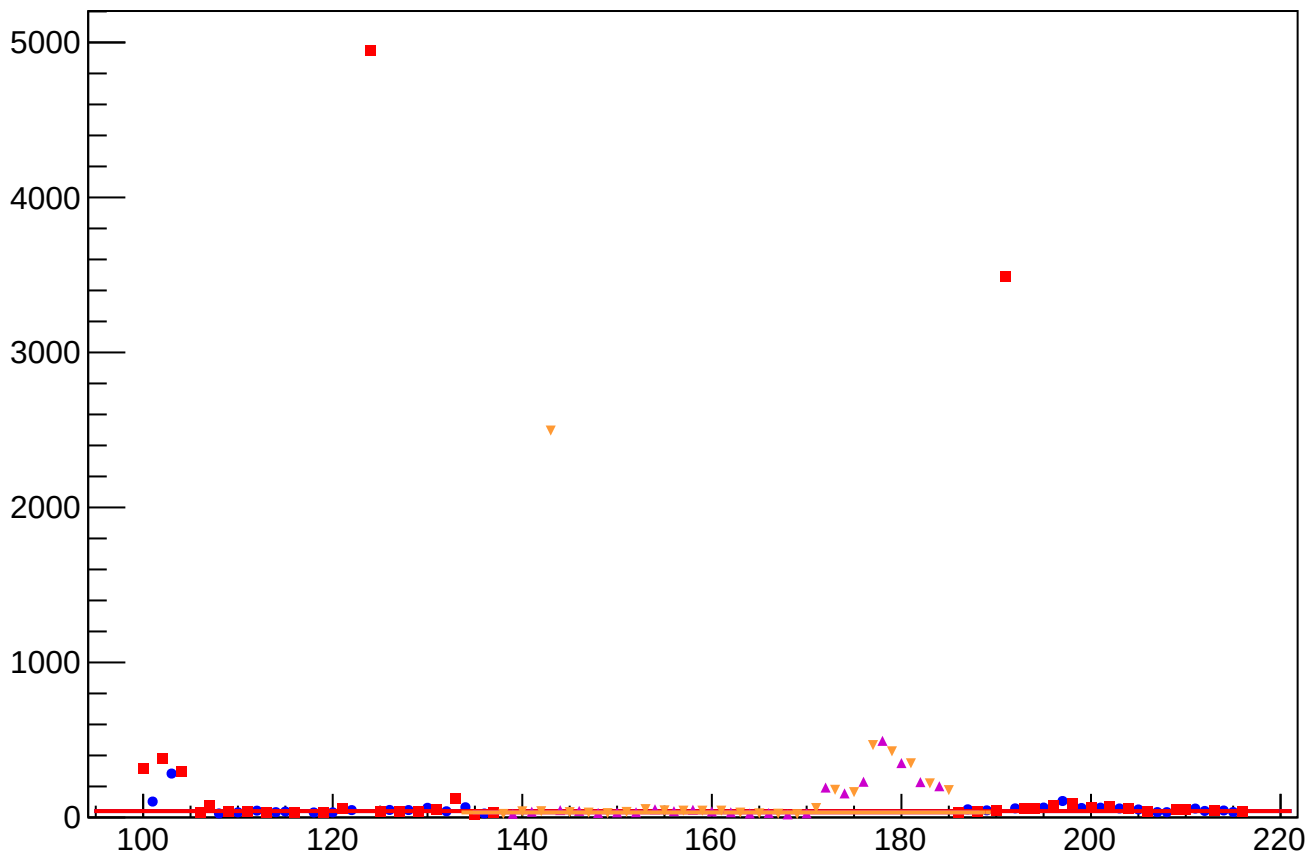
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.215+/-0.008  $\chi^2/\text{NDF}$ : 4314755.1/30

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ : 10872015.8/24

Right Out: 41.063+/-0.008  $\chi^2/\text{NDF}$ : 5538028.1/34

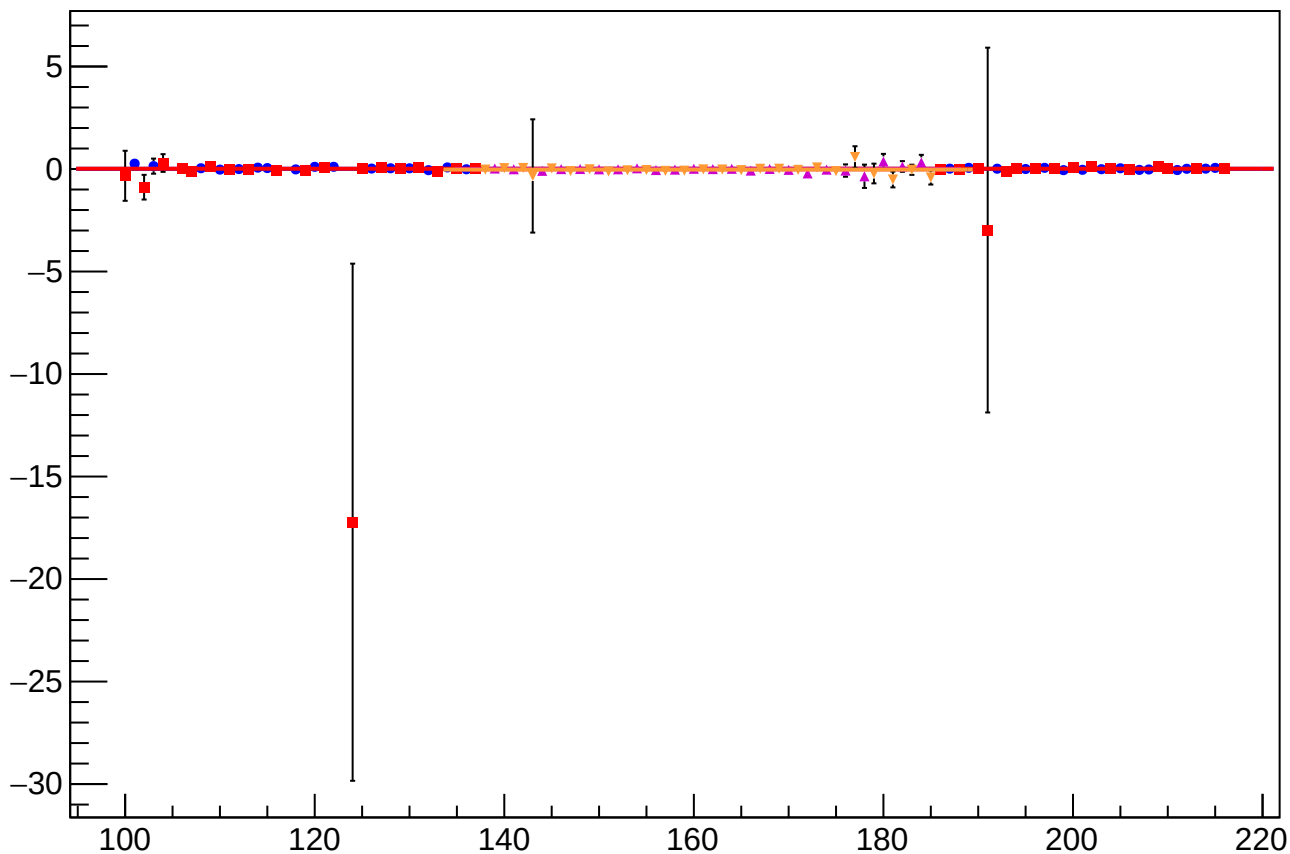
Left In: 32.737+/-0.007  $\chi^2/\text{NDF}$ : 8963873.9/22

+ sign 36.397+/-0.005  $\chi^2/\text{NDF}$ : 15922704.0/55

All: 36.397+/-0.004  $\chi^2/\text{NDF}$ : 31100137.4/113

- sign 36.398+/-0.005  $\chi^2/\text{NDF}$ : 15177433.4/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

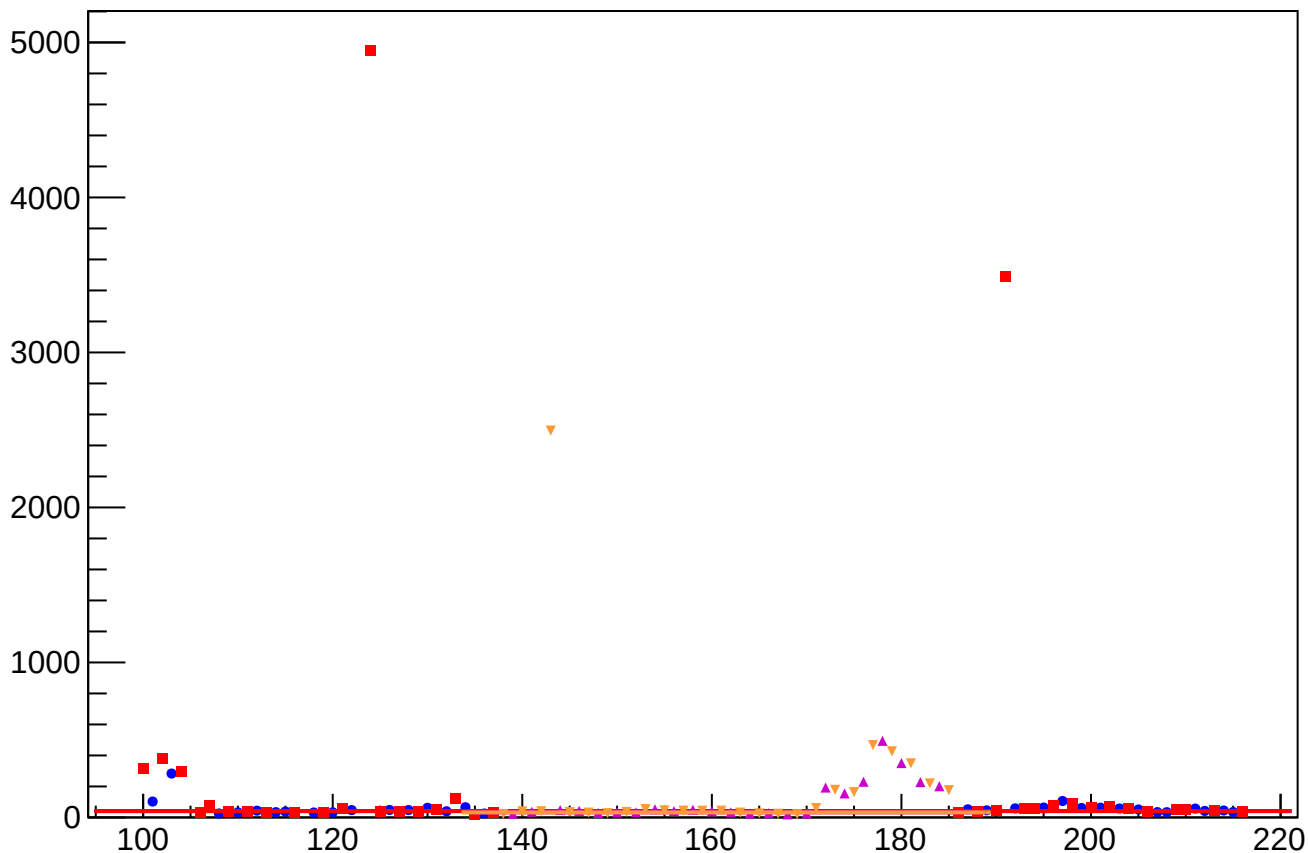
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.215 $\pm$ 0.008  $\chi^2$ /NDF: 4314755.1/30

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10872015.8/24

Right Out: 41.063 $\pm$ 0.008  $\chi^2$ /NDF: 5538028.1/34

Left In: 32.737 $\pm$ 0.007  $\chi^2$ /NDF: 8963873.9/22

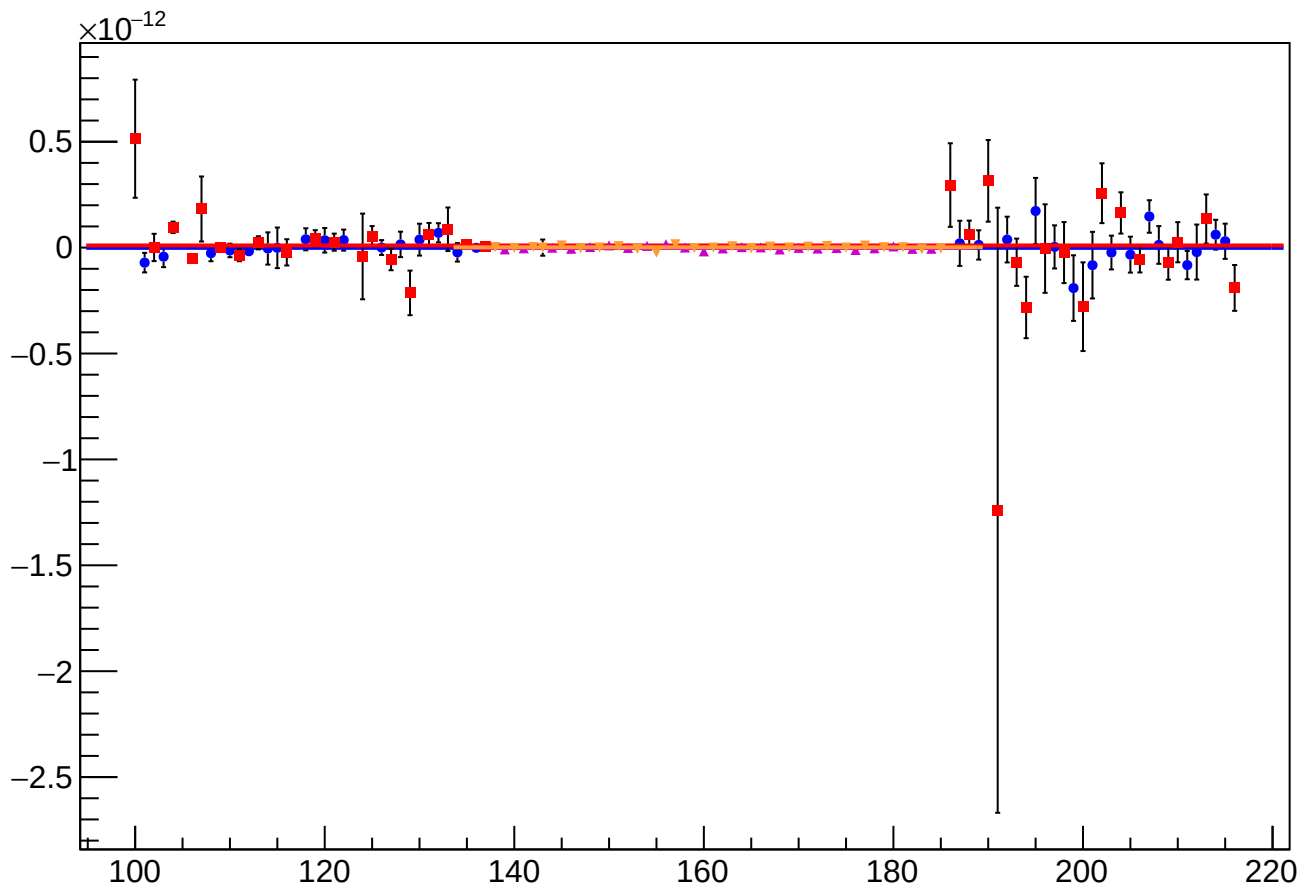
+ sign 36.397 $\pm$ 0.005  $\chi^2$ /NDF: 15922704.0/55

All: 36.397 $\pm$ 0.004  $\chi^2$ /NDF: 31100137.4/113

- sign 36.398 $\pm$ 0.005  $\chi^2$ /NDF: 15177433.4/57



asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 64.9/34

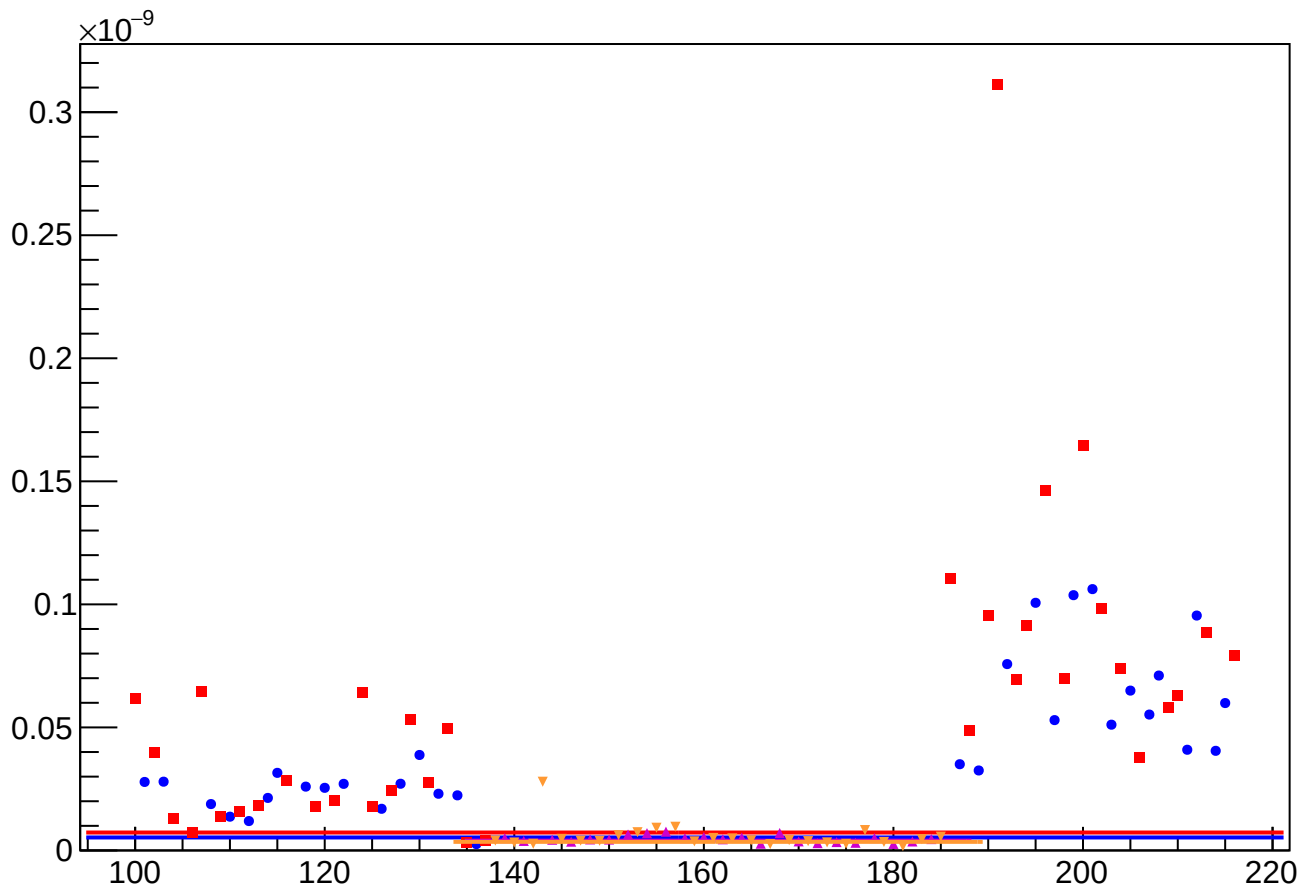
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 138.7/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 100.6/57

asym\_atl\_avg\_atr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15898013.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4688121.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16298543.2/34

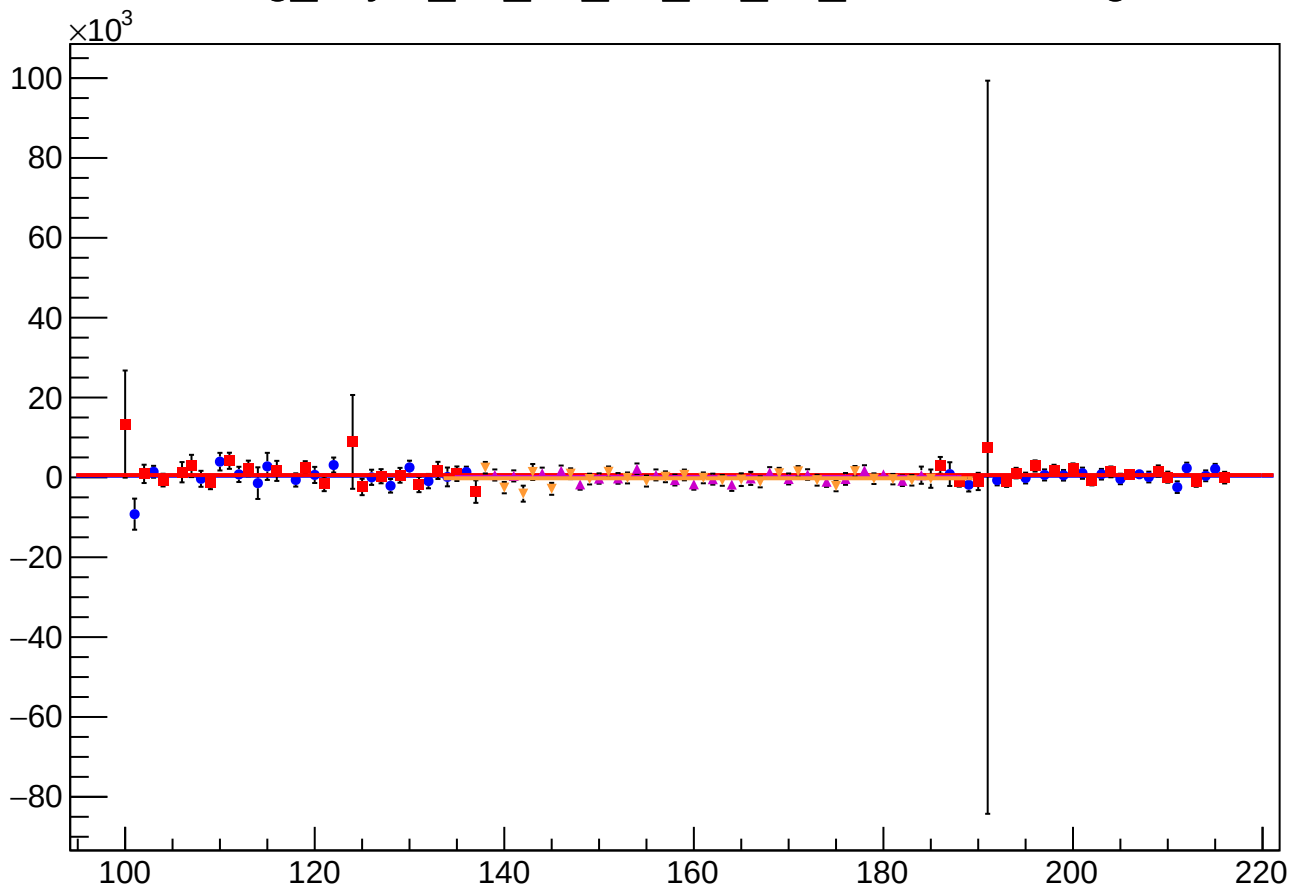
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2073078.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21090751.1/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 40940656.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19570240.3/57

reg\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $411.603 \pm 288.956$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-220.721 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $583.776 \pm 290.120$   $\chi^2/\text{NDF}$ : 29.7/34

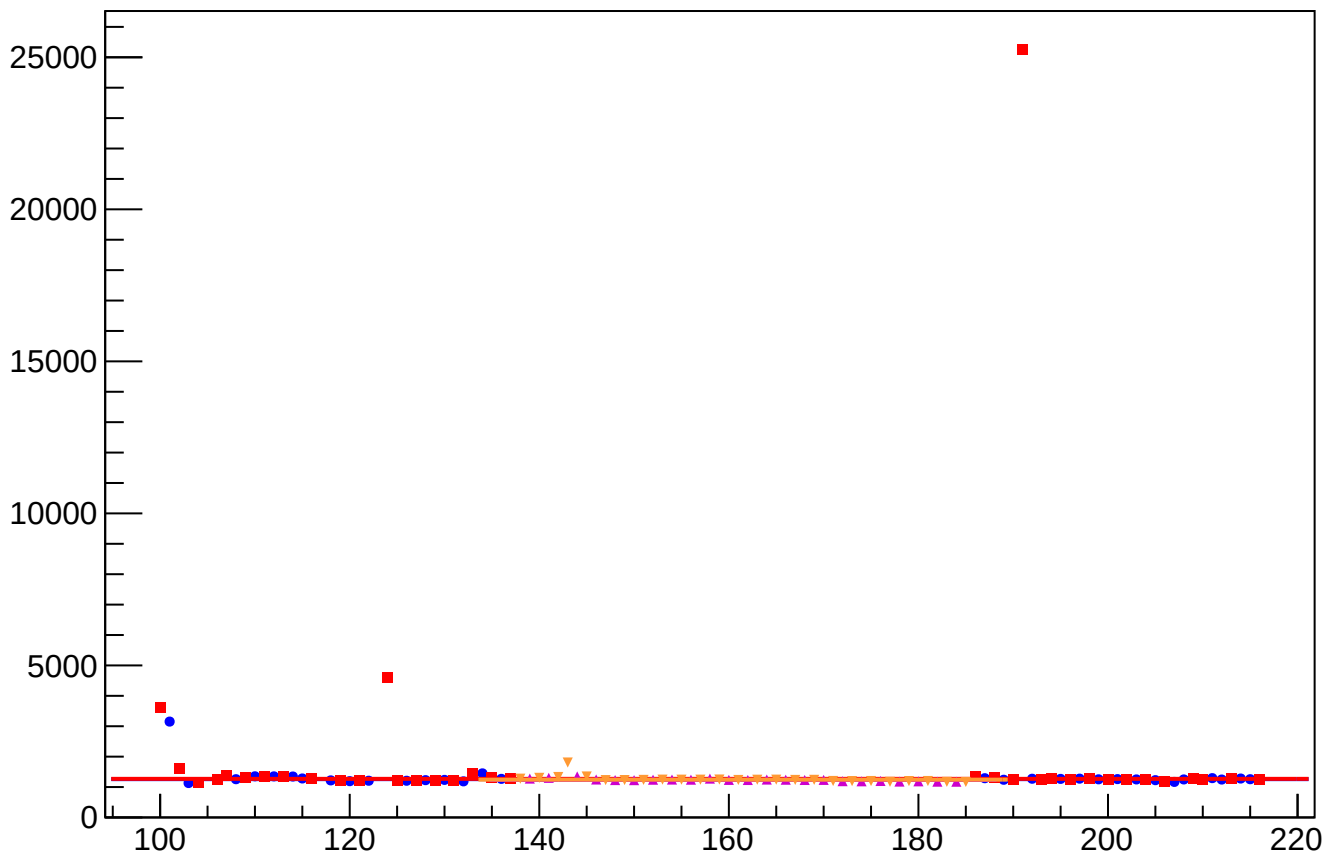
Left In:  $92.402 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $88.918 \pm 202.204$   $\chi^2/\text{NDF}$ : 54.6/55

All:  $211.316 \pm 143.774$   $\chi^2/\text{NDF}$ : 101.2/113

- sign  $336.472 \pm 204.470$   $\chi^2/\text{NDF}$ : 45.8/57

# reg\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1259.920 $\pm$ 0.204  $\chi^2$ /NDF: 535655.7/30

Left Out: 1242.825 $\pm$ 0.200  $\chi^2$ /NDF: 203299.1/24

Right Out: 1269.614 $\pm$ 0.205  $\chi^2$ /NDF: 487009.9/34

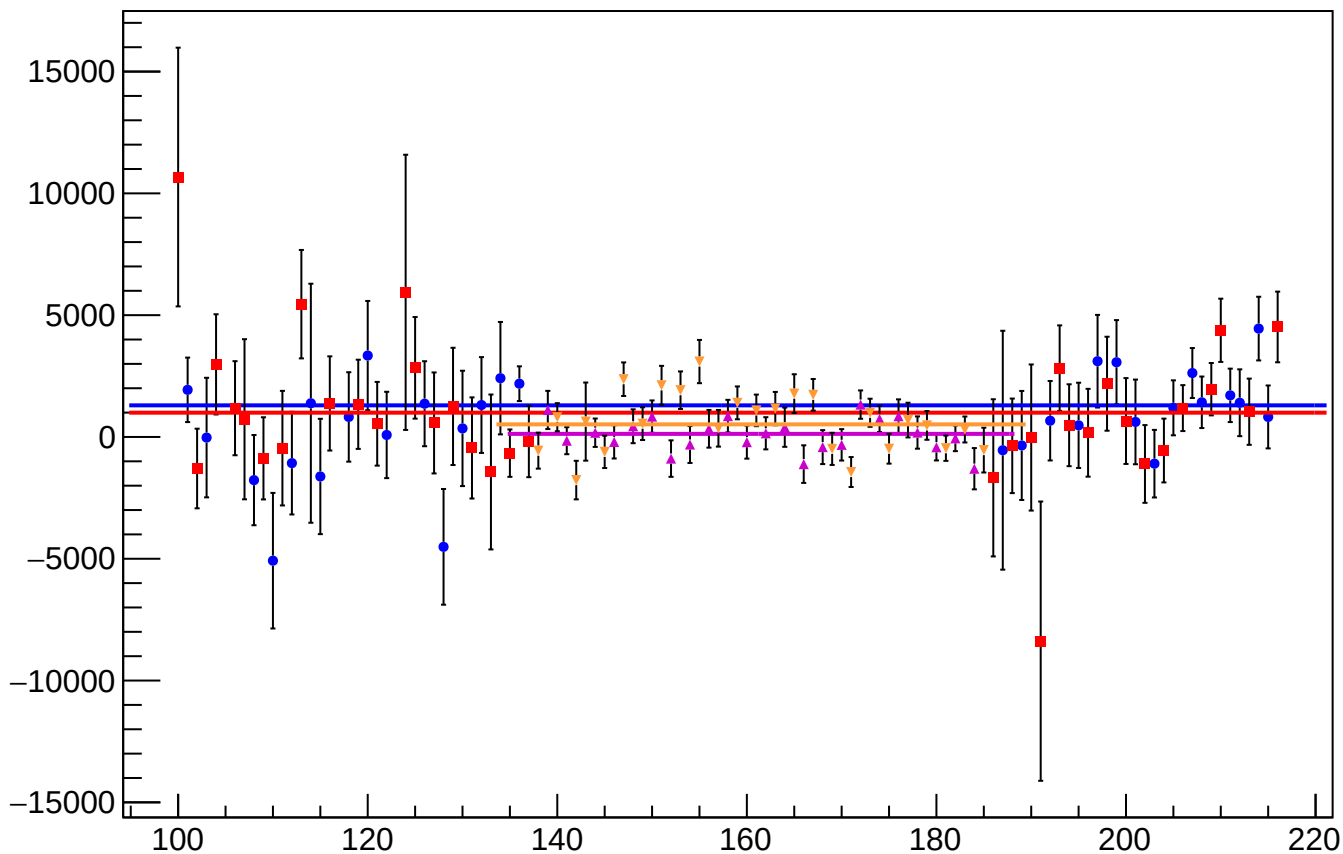
Left In: 1233.752 $\pm$ 0.204  $\chi^2$ /NDF: 39281.8/22

+ sign 1251.196 $\pm$ 0.143  $\chi^2$ /NDF: 742527.4/55

All: 1251.379 $\pm$ 0.102  $\chi^2$ /NDF: 1284202.3/11

- sign 1251.565 $\pm$ 0.145  $\chi^2$ /NDF: 541671.6/57

asym\_atl\_dd\_atr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: 1297.622 $\pm$ 276.313  $\chi^2$ /NDF: 34.5/30

Left Out: 516.792 $\pm$ 135.746  $\chi^2$ /NDF: 67.0/24

Right Out: 997.266 $\pm$ 290.822  $\chi^2$ /NDF: 40.7/34

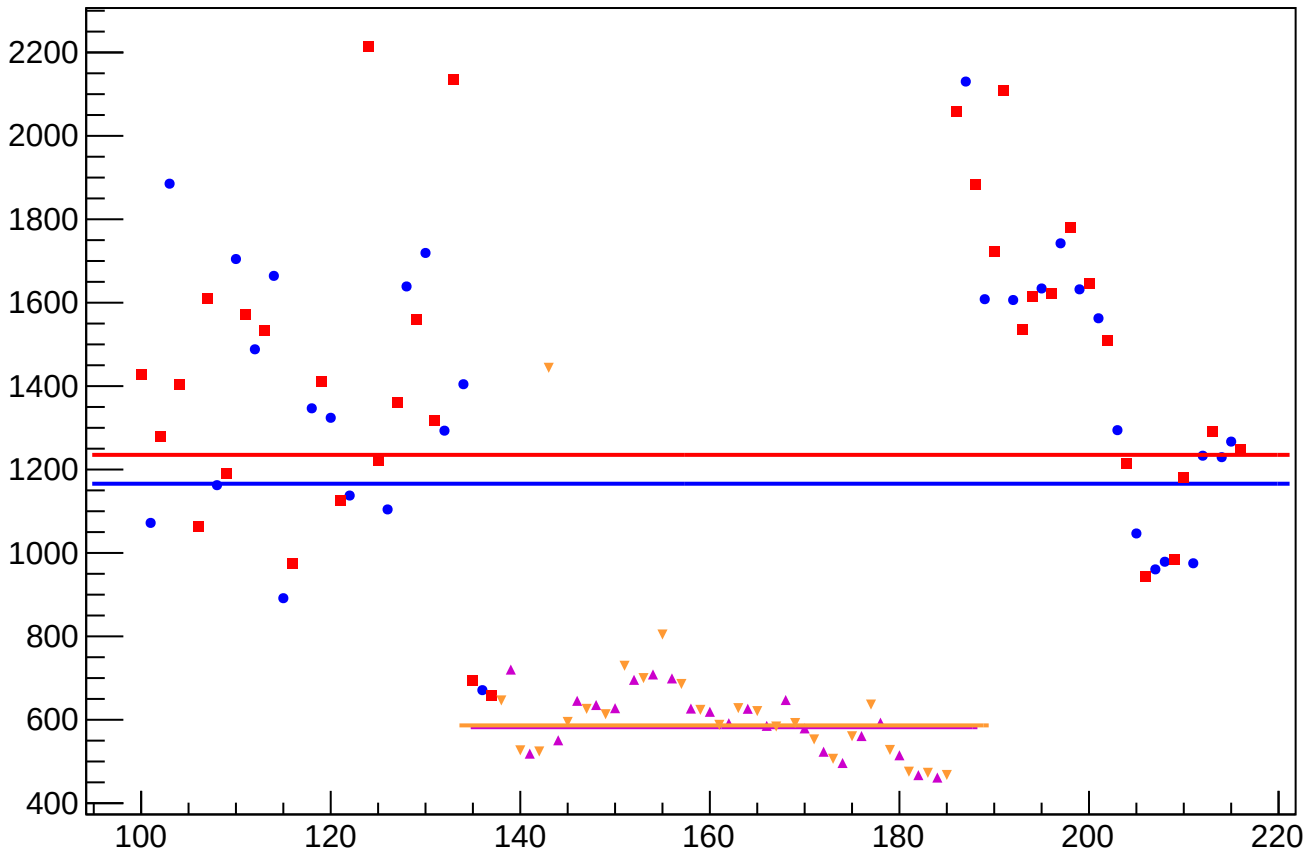
Left In: 126.569 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 668.607 $\pm$ 121.837  $\chi^2$ /NDF: 108.0/55

All: 480.484 $\pm$ 86.952  $\chi^2$ /NDF: 182.4/113

- sign 285.202 $\pm$ 124.134  $\chi^2$ /NDF: 69.6/57

asym\_atl\_dd\_atr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In:  $1165.972 \pm 0.195$   $\chi^2/\text{NDF}: 2707490.2/30$

Left Out:  $586.557 \pm 0.096$   $\chi^2/\text{NDF}: 1202915.7/24$

+ sign  $699.211 \pm 0.086$   $\chi^2/\text{NDF}: 10994949.0/55$

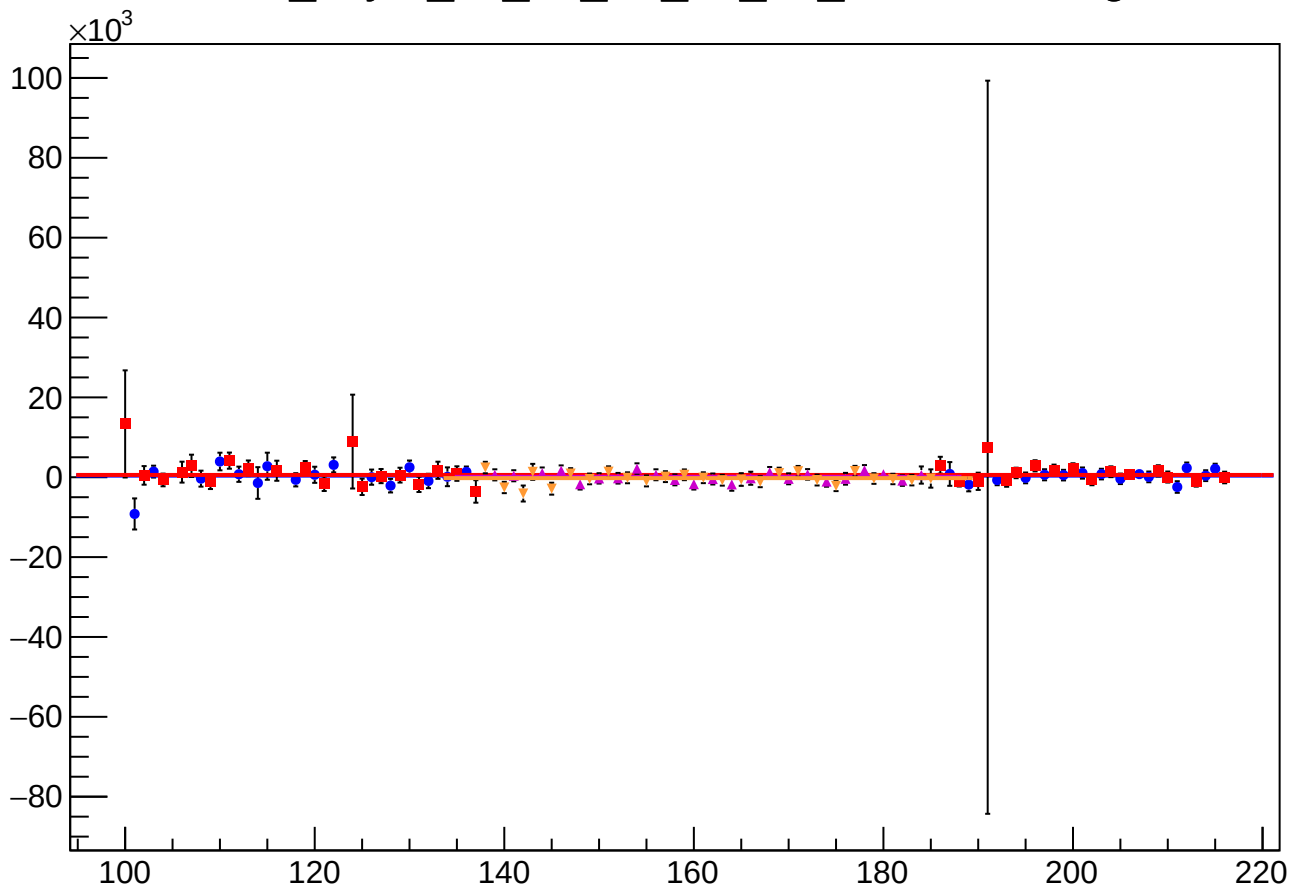
Right Out:  $1235.161 \pm 0.206$   $\chi^2/\text{NDF}: 2737889.9/34$

All:  $700.165 \pm 0.061$   $\chi^2/\text{NDF}: 22537831.2/11$

Left In:  $582.190 \pm 0.097$   $\chi^2/\text{NDF}: 559261.3/22$

- sign  $701.155 \pm 0.088$   $\chi^2/\text{NDF}: 11542632.3/57$

cor\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $411.786 \pm 288.956$   $\chi^2/\text{NDF}: 28.2/30$

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}: 23.9/24$

Right Out:  $576.384 \pm 290.300$   $\chi^2/\text{NDF}: 29.7/34$

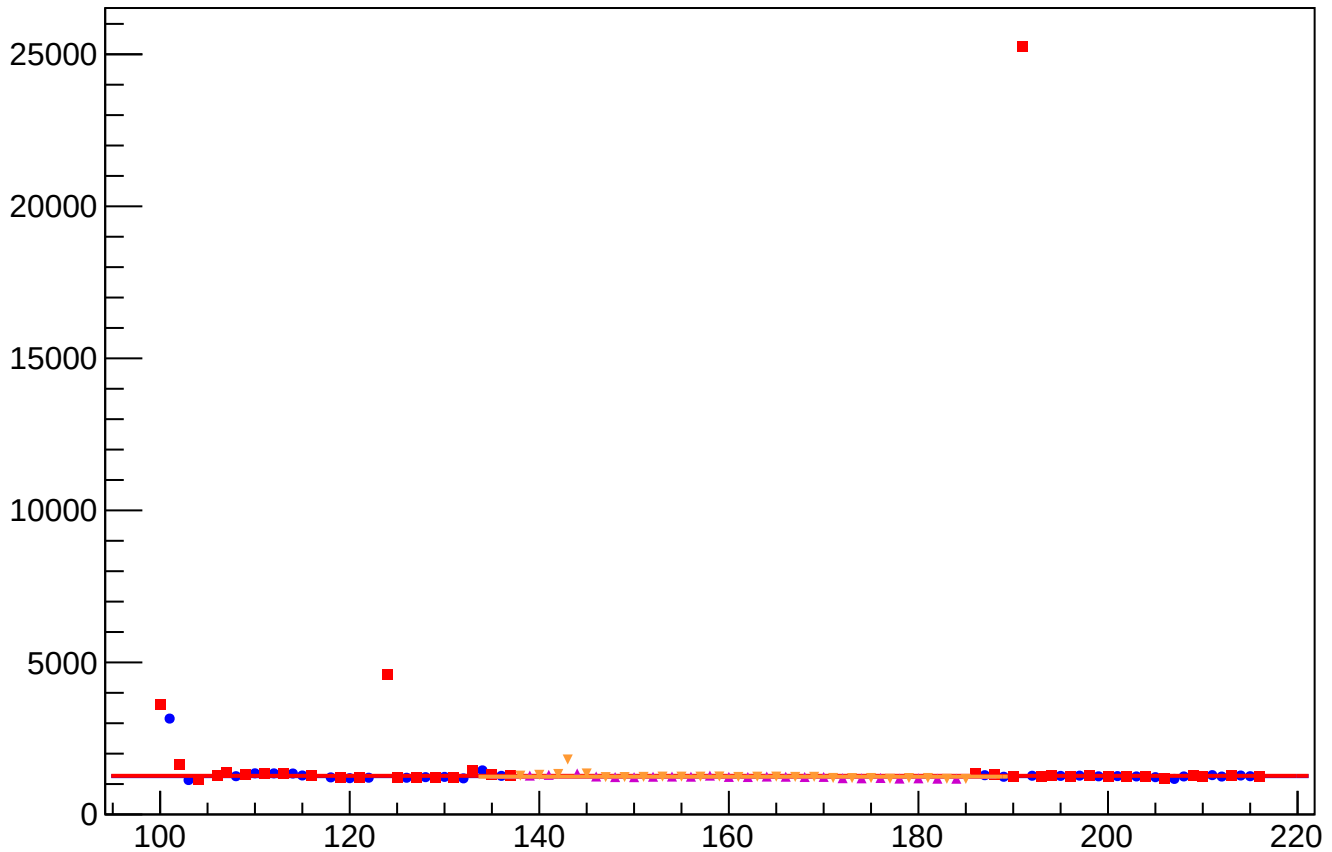
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $88.990 \pm 202.204$   $\chi^2/\text{NDF}: 54.6/55$

All:  $209.443 \pm 143.796$   $\chi^2/\text{NDF}: 101.1/113$

- sign  $332.686 \pm 204.533$   $\chi^2/\text{NDF}: 45.8/57$

# cor\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1259.920+/-0.204  $\chi^2/\text{NDF}$ : 535657.1/30

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1270.431+/-0.205  $\chi^2/\text{NDF}$ : 494194.9/34

Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.7/22

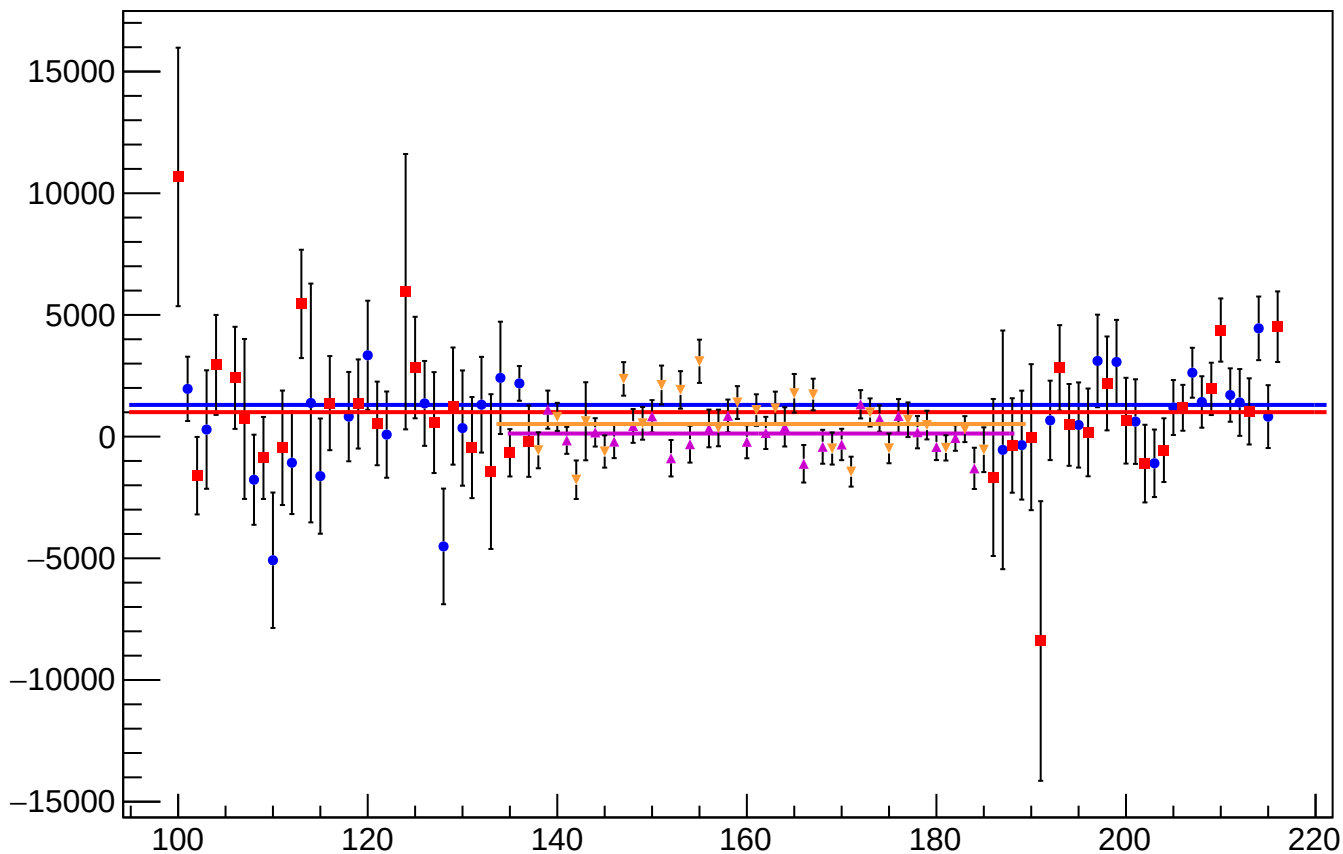
+ sign 1251.196+/-0.143  $\chi^2/\text{NDF}$ : 742528.7/55

All: 1251.574+/-0.102  $\chi^2/\text{NDF}$ : 1292098.0/11

- sign 1251.960+/-0.145  $\chi^2/\text{NDF}$ : 549555.2/57



asym\_atl\_dd\_atr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: 1302.736 $\pm$ 276.264  $\chi^2/\text{NDF}$ : 34.4/30

Left Out: 516.811 $\pm$ 135.747  $\chi^2/\text{NDF}$ : 67.0/24

Right Out: 1005.629 $\pm$ 291.069  $\chi^2/\text{NDF}$ : 41.8/34

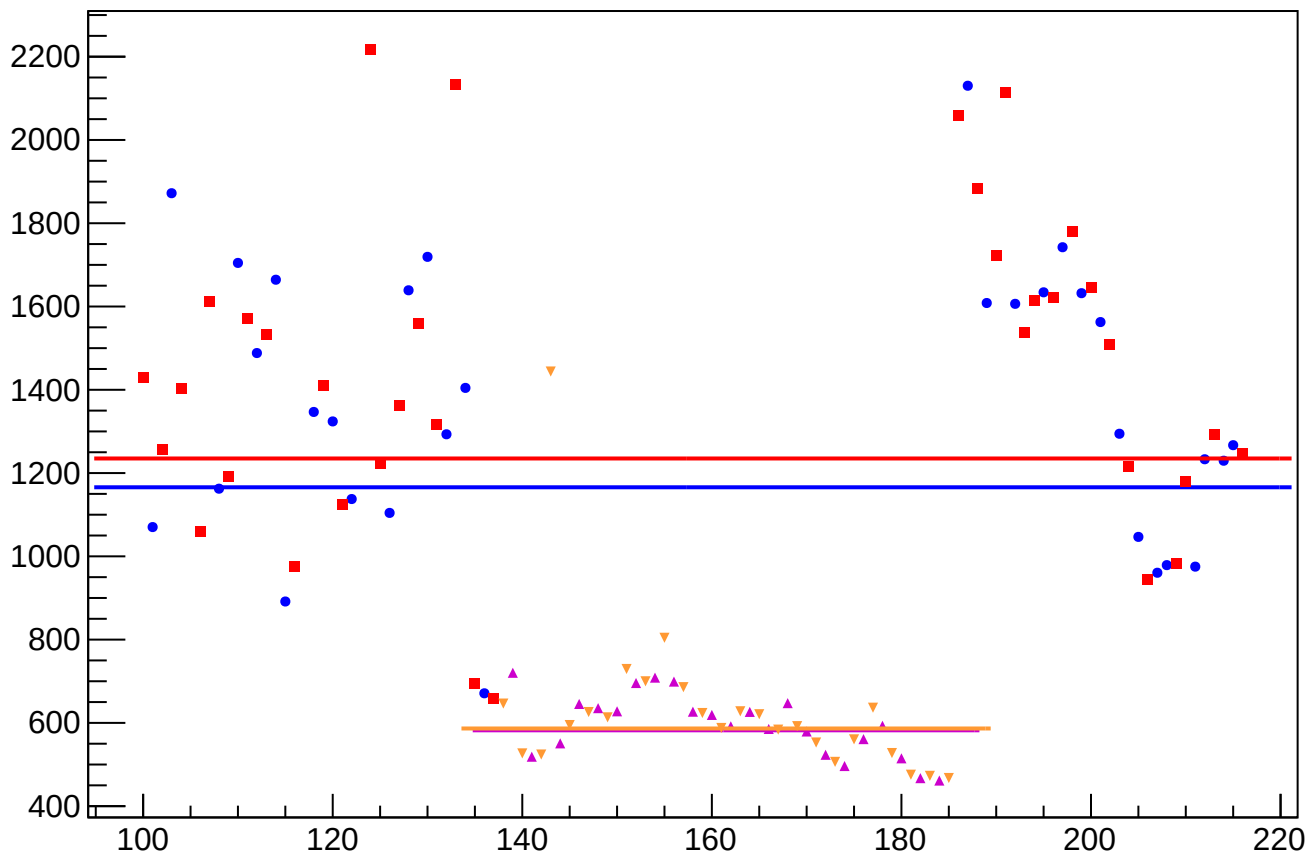
Left In: 126.549 $\pm$ 137.266  $\chi^2/\text{NDF}$ : 21.6/22

+ sign 669.661 $\pm$ 121.834  $\chi^2/\text{NDF}$ : 108.0/55

All: 481.686 $\pm$ 86.958  $\chi^2/\text{NDF}$ : 183.7/113

- sign 286.486 $\pm$ 124.153  $\chi^2/\text{NDF}$ : 70.8/57

asym\_atl\_dd\_atr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 1165.861 $\pm$ 0.195  $\chi^2$ /NDF: 2704419.4/30

Left Out: 586.562 $\pm$ 0.096  $\chi^2$ /NDF: 1202822.0/24

Right Out: 1235.016 $\pm$ 0.206  $\chi^2$ /NDF: 2735249.3/34

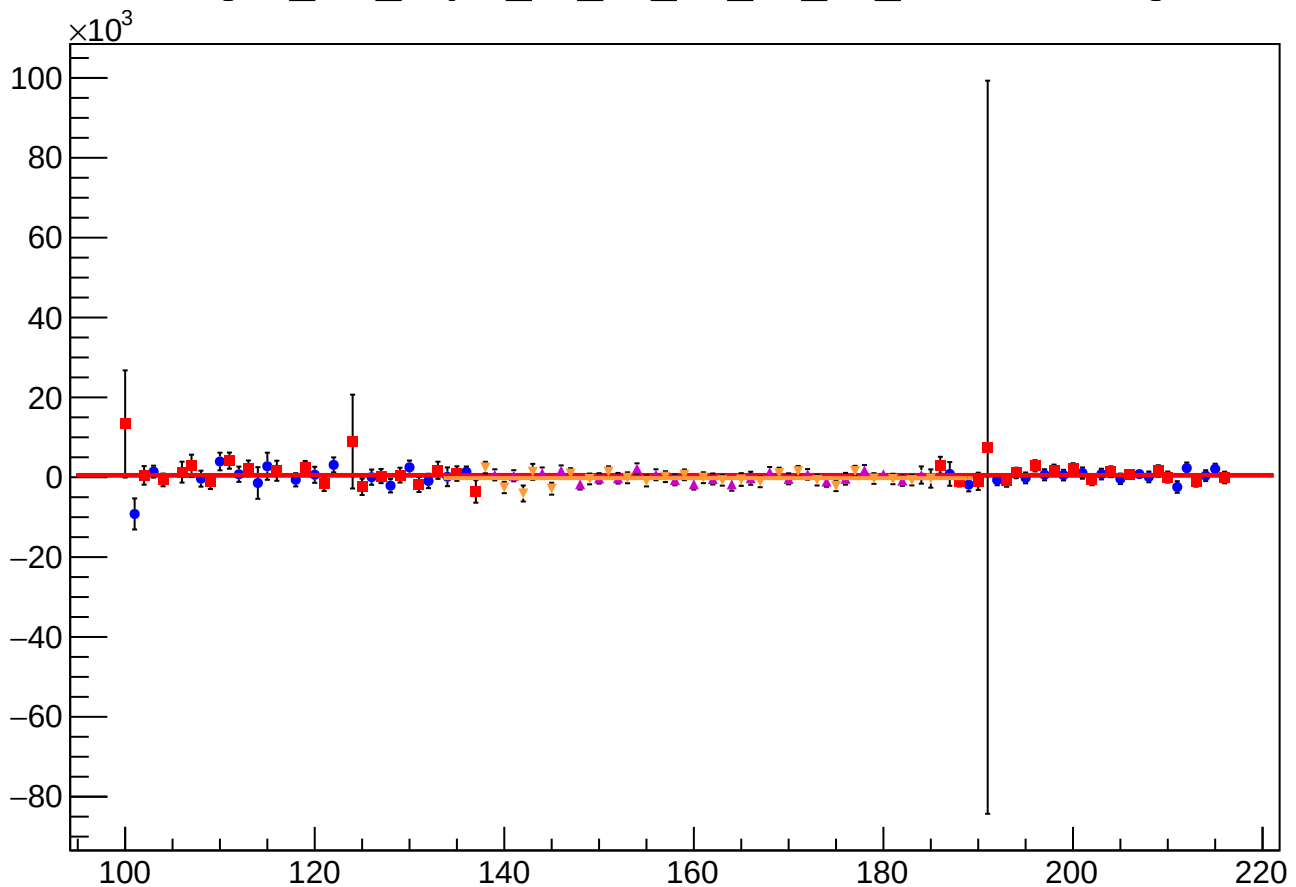
Left In: 582.189 $\pm$ 0.097  $\chi^2$ /NDF: 559258.0/22

+ sign 699.226 $\pm$ 0.086  $\chi^2$ /NDF: 10990935.8/55

All: 700.078 $\pm$ 0.061  $\chi^2$ /NDF: 22516050.3/11

- sign 700.962 $\pm$ 0.088  $\chi^2$ /NDF: 11524915.4/57

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In:  $411.786 \pm 288.956$   $\chi^2/\text{NDF}: 28.2/30$

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}: 23.9/24$

Right Out:  $576.384 \pm 290.300$   $\chi^2/\text{NDF}: 29.7/34$

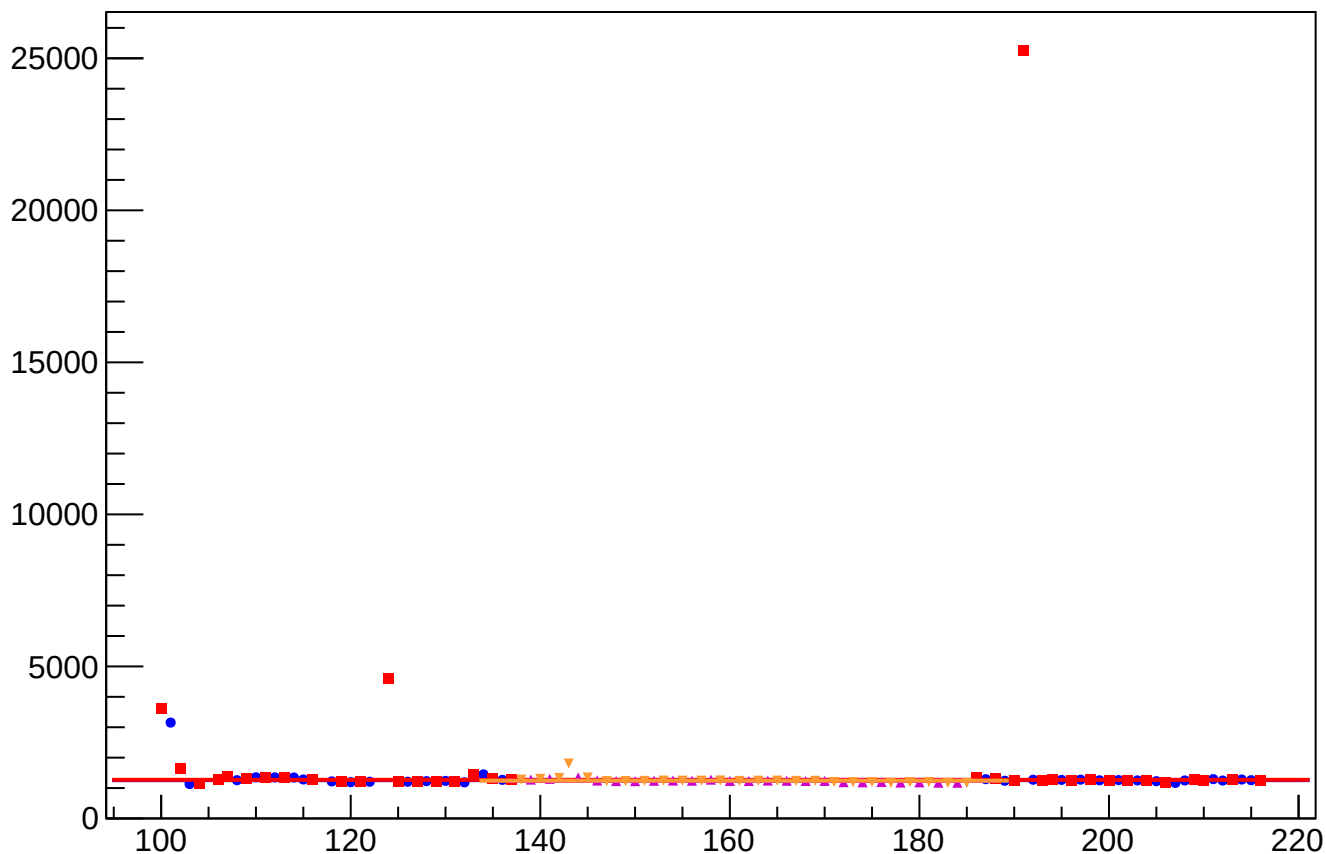
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}: 14.7/22$

+ sign  $88.990 \pm 202.204$   $\chi^2/\text{NDF}: 54.6/55$

All:  $209.443 \pm 143.796$   $\chi^2/\text{NDF}: 101.1/113$

- sign  $332.686 \pm 204.533$   $\chi^2/\text{NDF}: 45.8/57$

eigen\_cor\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1259.920+/-0.204  $\chi^2/\text{NDF}$ : 535657.1/30

Left Out: 1242.825+/-0.200  $\chi^2/\text{NDF}$ : 203299.1/24

Right Out: 1270.431+/-0.205  $\chi^2/\text{NDF}$ : 494194.9/34

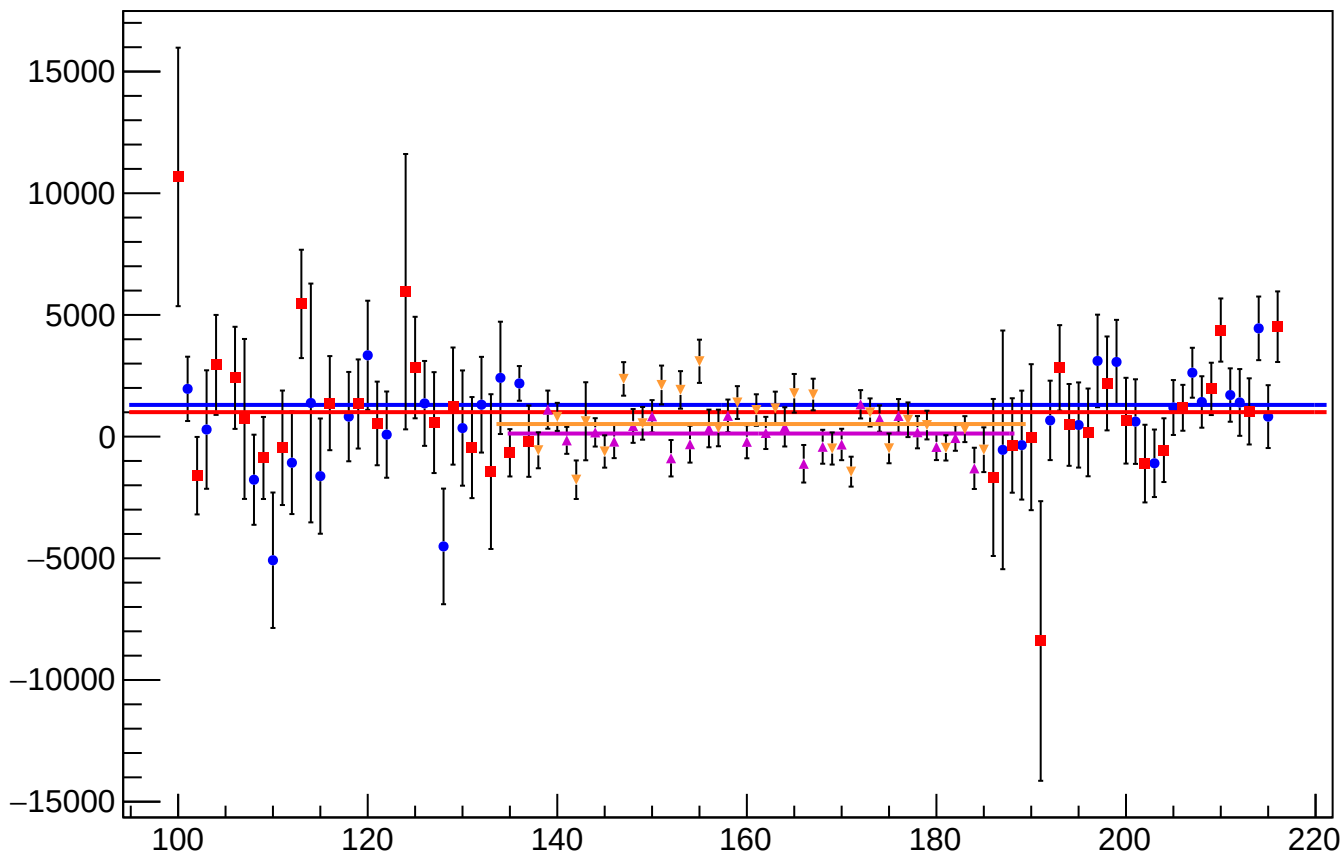
Left In: 1233.752+/-0.204  $\chi^2/\text{NDF}$ : 39281.7/22

+ sign 1251.196+/-0.143  $\chi^2/\text{NDF}$ : 742528.7/55

All: 1251.574+/-0.102  $\chi^2/\text{NDF}$ : 1292098.0/11

- sign 1251.960+/-0.145  $\chi^2/\text{NDF}$ : 549555.2/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 1302.736 $\pm$ 276.264  $\chi^2$ /NDF: 34.4/30

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 1005.629 $\pm$ 291.069  $\chi^2$ /NDF: 41.8/34

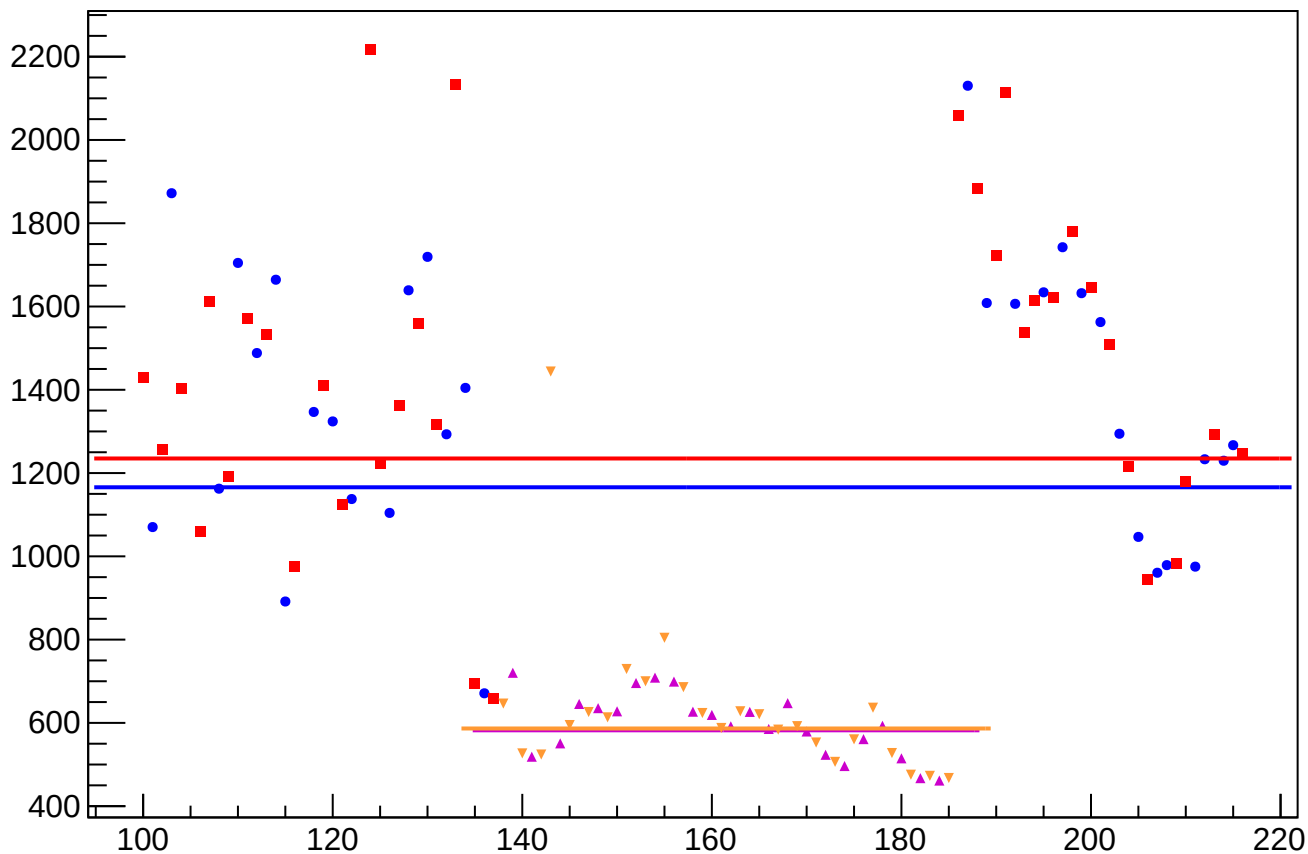
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 669.661 $\pm$ 121.834  $\chi^2$ /NDF: 108.0/55

All: 481.686 $\pm$ 86.958  $\chi^2$ /NDF: 183.7/113

- sign 286.486 $\pm$ 124.153  $\chi^2$ /NDF: 70.8/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $1165.861 \pm 0.195$   $\chi^2/\text{NDF}$ : 2704419.4/30

Left Out:  $586.562 \pm 0.096$   $\chi^2/\text{NDF}$ : 1202822.0/24

Right Out:  $1235.016 \pm 0.206$   $\chi^2/\text{NDF}$ : 2735249.3/34

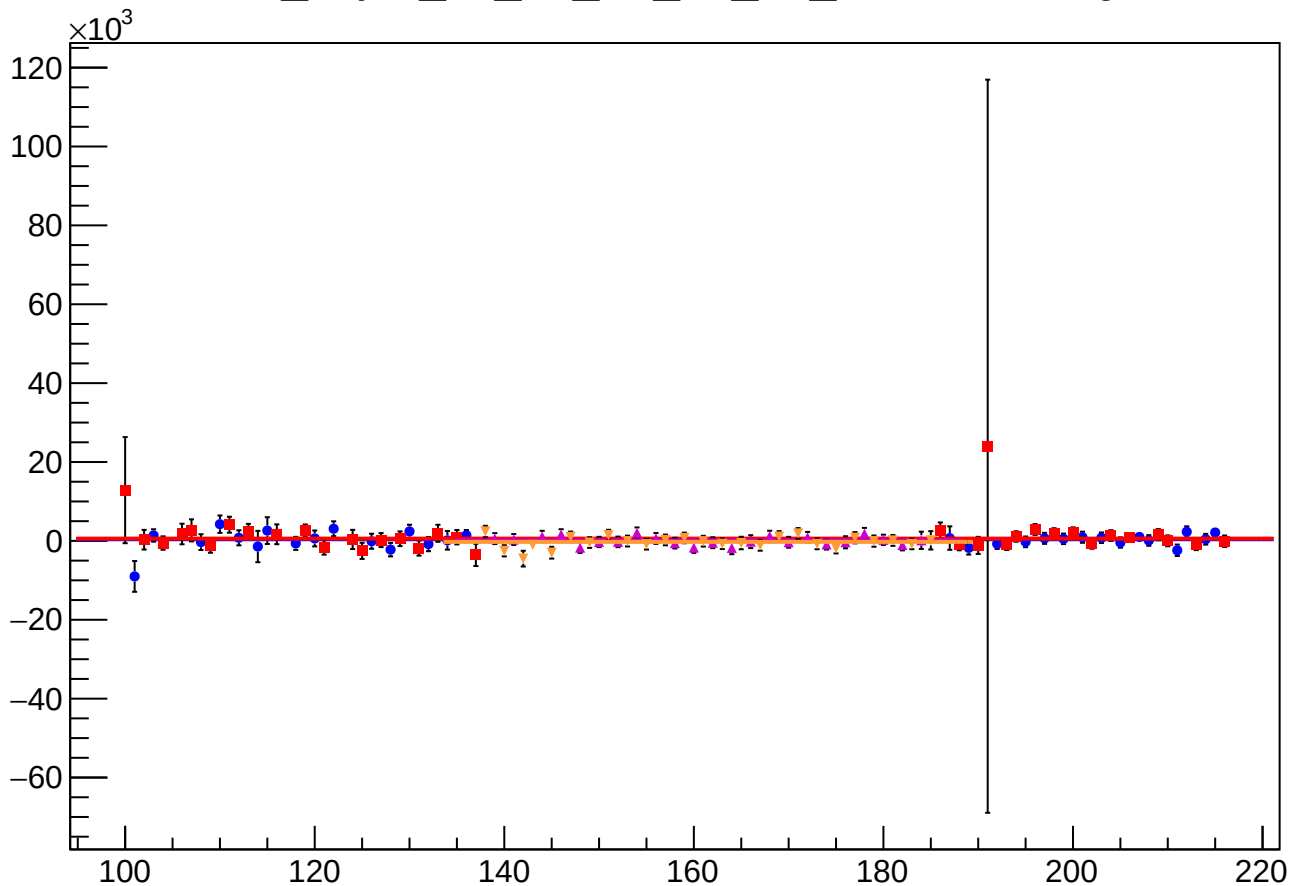
Left In:  $582.189 \pm 0.097$   $\chi^2/\text{NDF}$ : 559258.0/22

+ sign  $699.226 \pm 0.086$   $\chi^2/\text{NDF}$ : 10990935.8/55

All:  $700.078 \pm 0.061$   $\chi^2/\text{NDF}$ : 22516050.3/11

- sign  $700.962 \pm 0.088$   $\chi^2/\text{NDF}$ : 11524915.4/57

dit\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In: 420.174 $\pm$ 289.813  $\chi^2$ /NDF: 28.2/30

Left Out: -250.849 $\pm$ 279.923  $\chi^2$ /NDF:24.0/24

Right Out: 573.200 $\pm$ 289.660  $\chi^2$ /NDF: 29.2/34

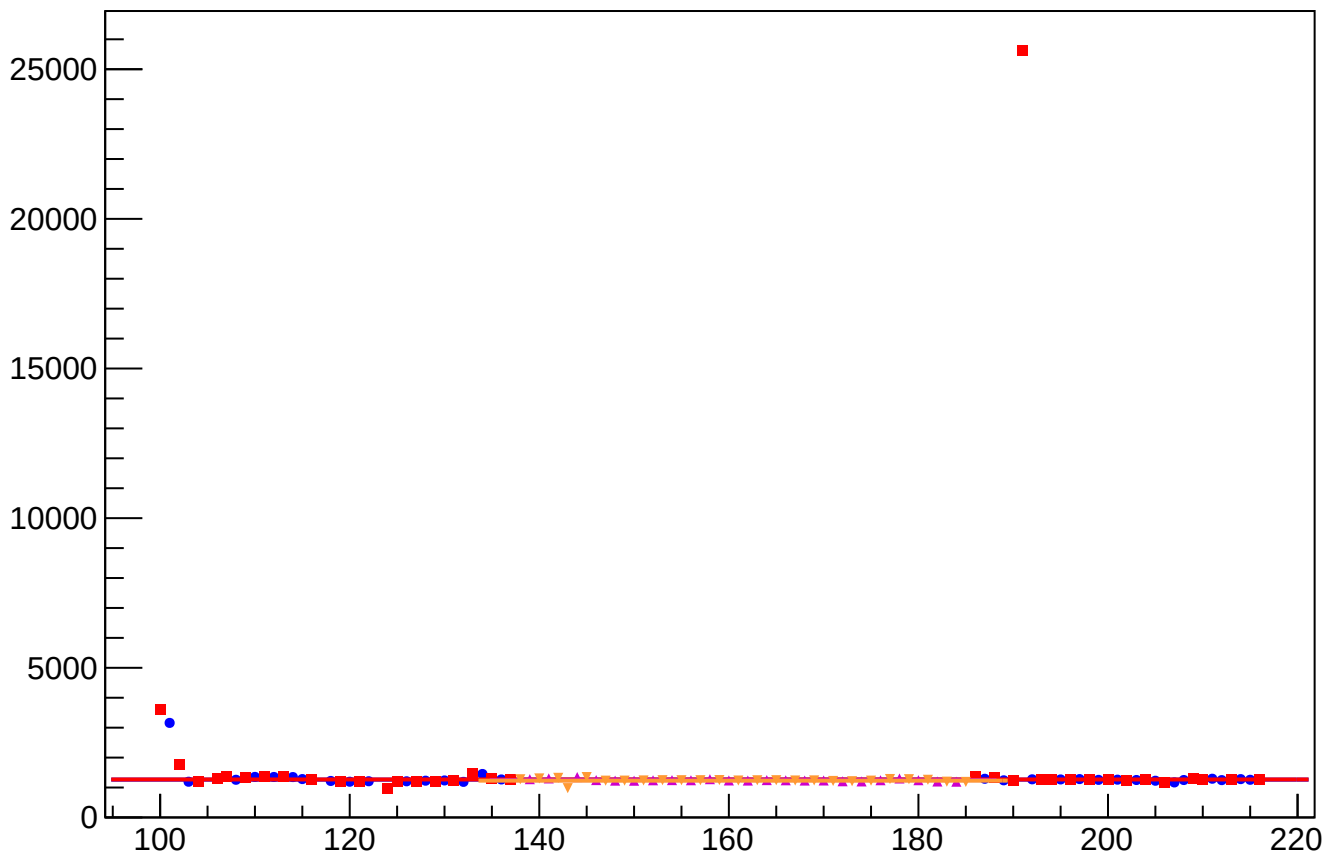
Left In: 74.881 $\pm$ 291.458  $\chi^2$ /NDF:14.0/22

+ sign 73.017 $\pm$ 201.341  $\chi^2$ /NDF: 55.0/55

All: 196.747 $\pm$ 143.802  $\chi^2$ /NDF: 100.4/113

- sign 325.582 $\pm$ 205.453  $\chi^2$ /NDF: 44.7/57

dit\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1263.810+/-0.205  $\chi^2/\text{NDF}$ : 525470.7/30

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141607.5/24

Right Out: 1269.111+/-0.205  $\chi^2/\text{NDF}$ : 385395.3/34

Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.8/22

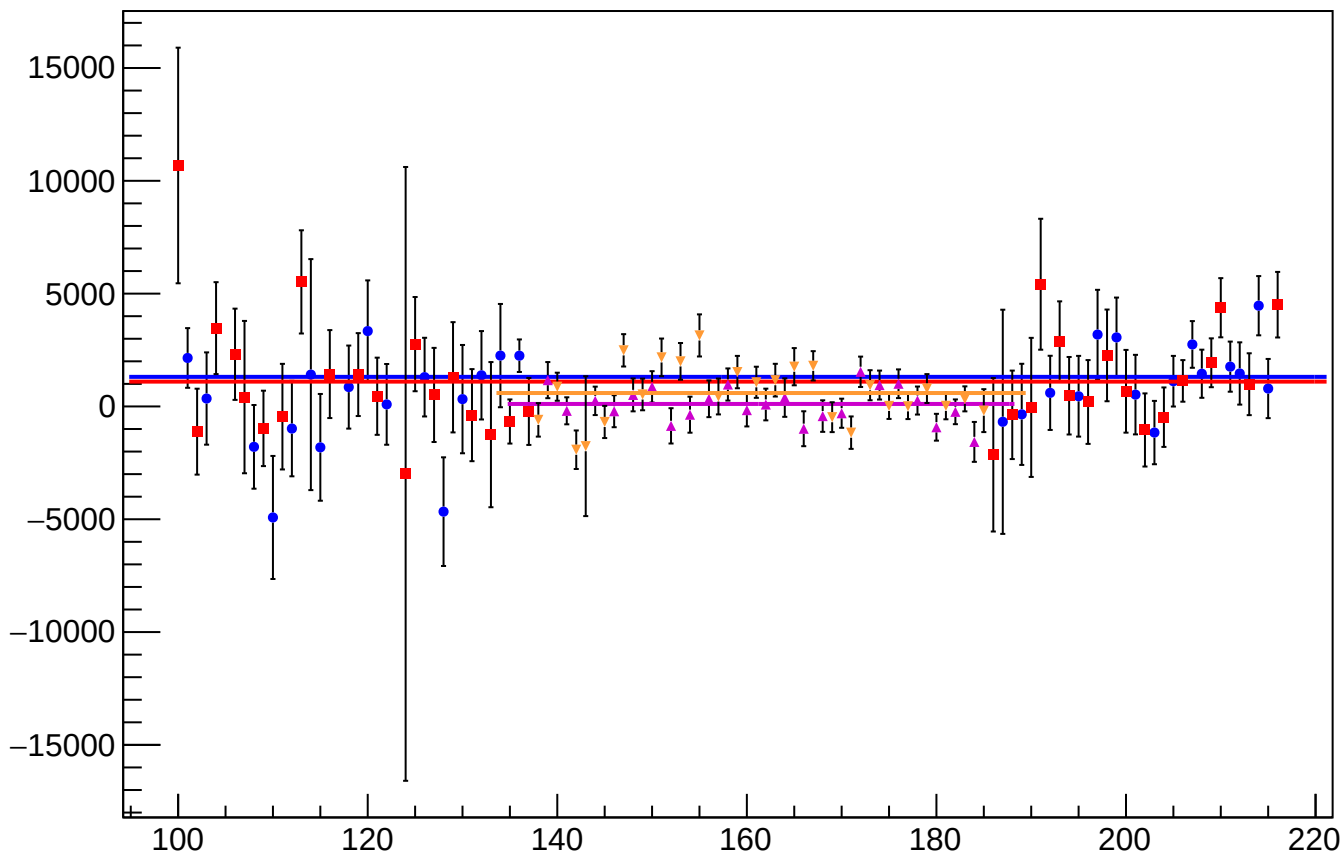
+ sign 1246.311+/-0.142  $\chi^2/\text{NDF}$ : 681172.2/55

All: 1252.289+/-0.102  $\chi^2/\text{NDF}$ : 1102894.0/11

- sign 1258.514+/-0.145  $\chi^2/\text{NDF}$ : 418122.8/57



asym\_atl\_dd\_atr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In: 1311.254 $\pm$ 277.760  $\chi^2$ /NDF: 35.5/30

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 1100.510 $\pm$ 293.386  $\chi^2$ /NDF: 39.4/34

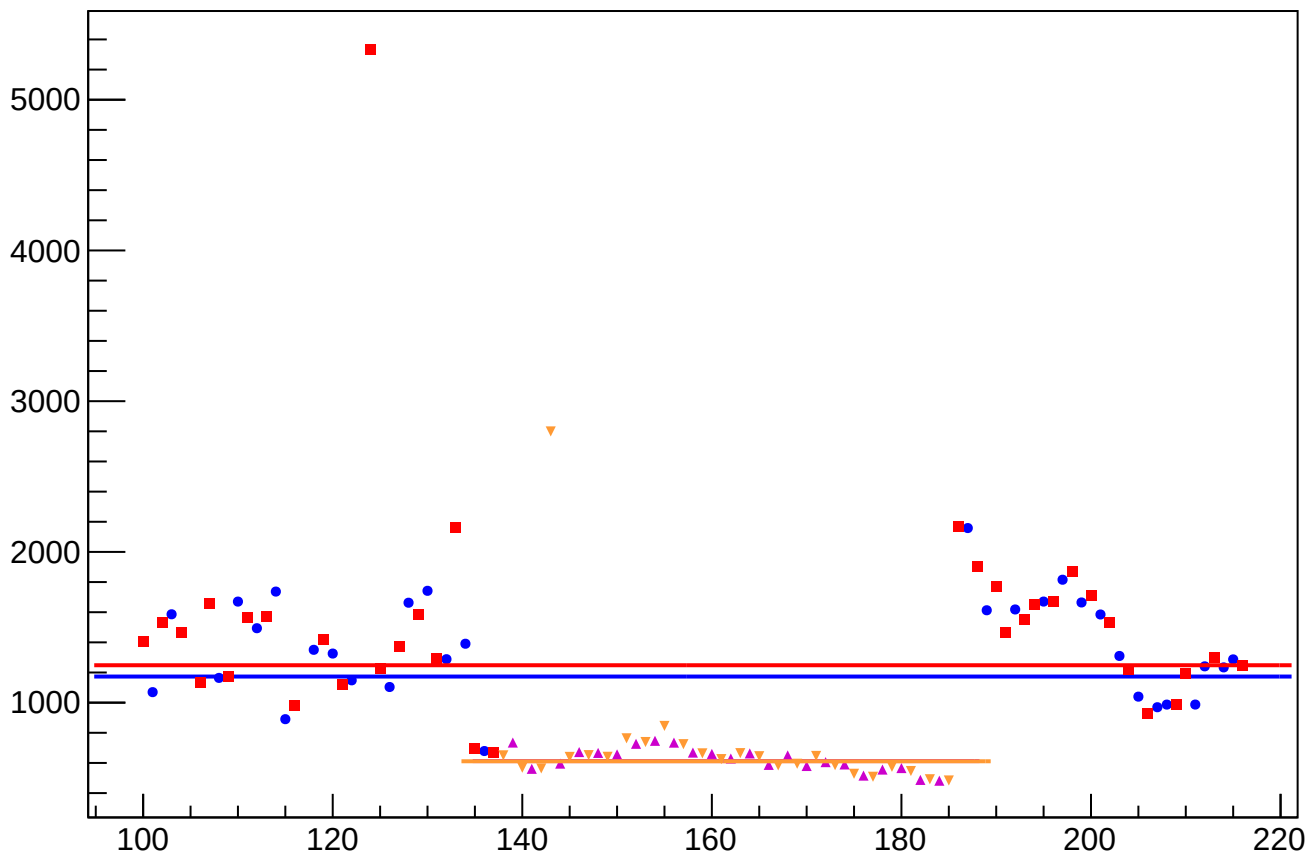
Left In: 110.252 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 743.627 $\pm$ 126.528  $\chi^2$ /NDF: 98.1/55

All: 528.319 $\pm$ 90.479  $\chi^2$ /NDF: 178.3/113

- sign 302.998 $\pm$ 129.437  $\chi^2$ /NDF: 74.3/57

asym\_atl\_dd\_atr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 1173.201+/-0.196  $\chi^2/\text{NDF}$ : 2646017.2/30

Left Out: 611.087+/-0.101  $\chi^2/\text{NDF}$ : 1619322.3/24

+ sign 727.729+/-0.089  $\chi^2/\text{NDF}$ : 10756695.9/55

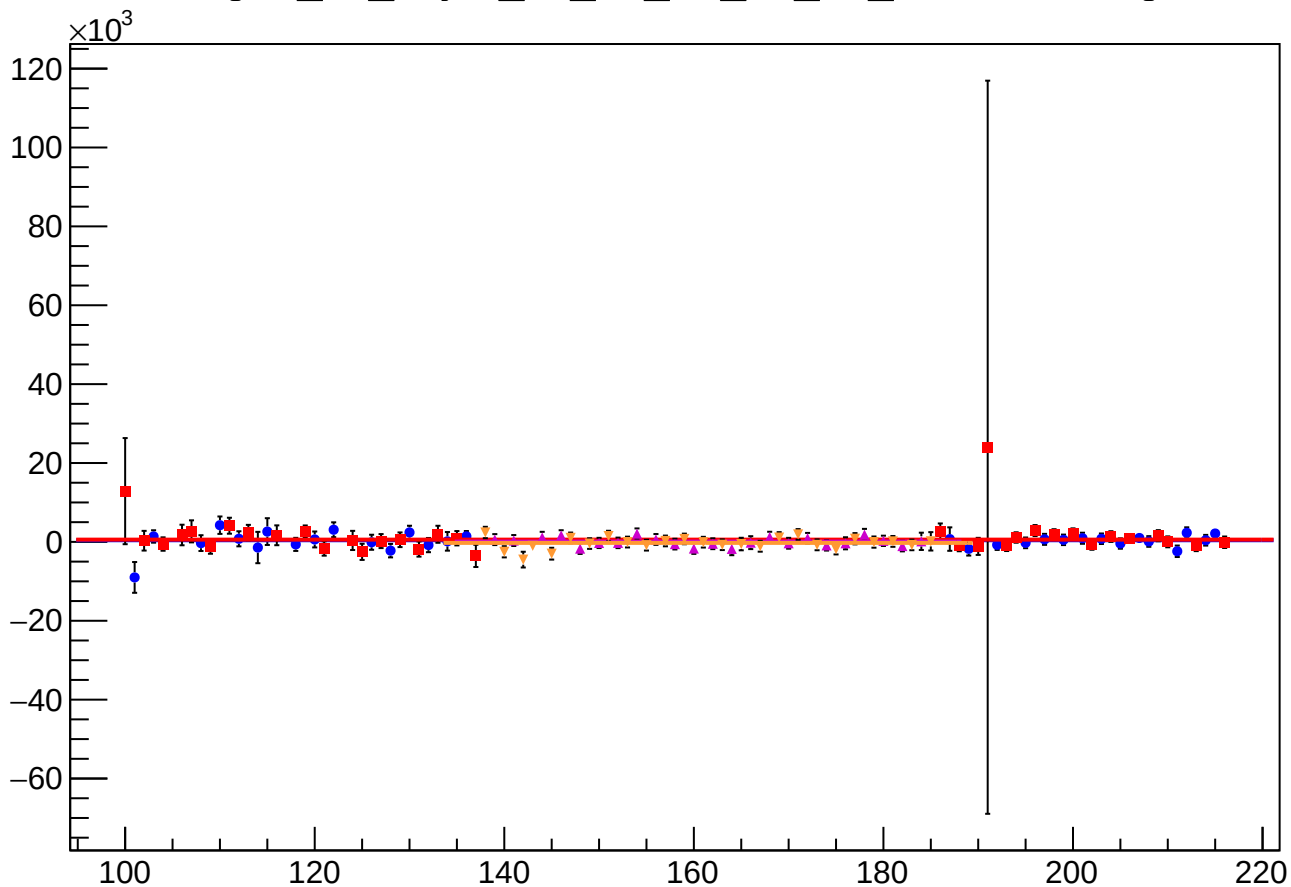
Right Out: 1248.185+/-0.207  $\chi^2/\text{NDF}$ : 3030885.9/34

All: 731.843+/-0.064  $\chi^2/\text{NDF}$ : 21864722.2/11

Left In: 612.399+/-0.102  $\chi^2/\text{NDF}$ : 508595.4/22

- sign 736.150+/-0.092  $\chi^2/\text{NDF}$ : 11103697.4/57

eigen\_dit\_asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In: 420.171 $\pm$ 289.813  $\chi^2$ /NDF: 28.2/30

Left Out: -250.851 $\pm$ 279.923  $\chi^2$ /NDF:24.0/24

Right Out: 573.199 $\pm$ 289.660  $\chi^2$ /NDF: 29.2/34

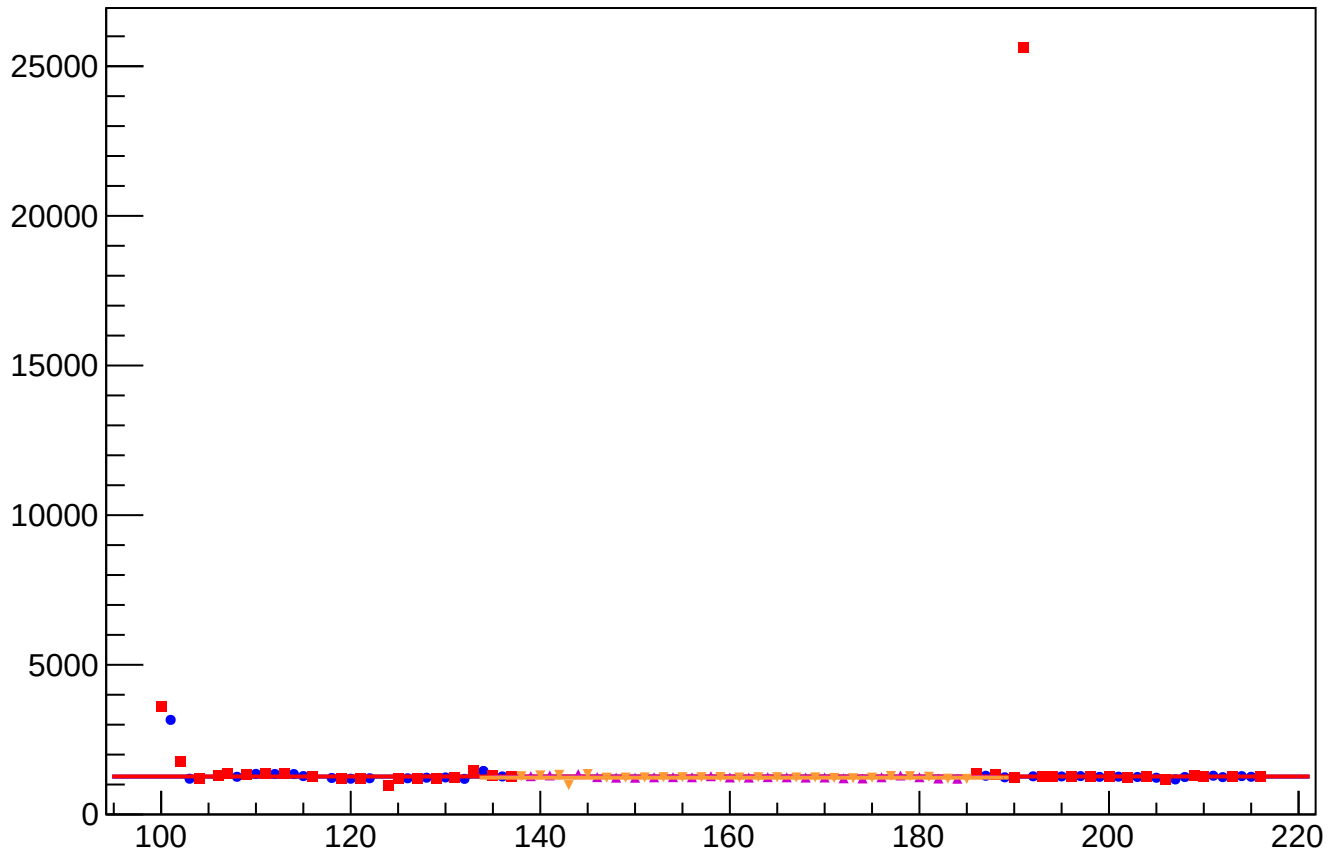
Left In: 74.881 $\pm$ 291.458  $\chi^2$ /NDF:14.0/22

+ sign 73.015 $\pm$ 201.341  $\chi^2$ /NDF: 55.0/55

All: 196.745 $\pm$ 143.801  $\chi^2$ /NDF: 100.4/113

- sign 325.582 $\pm$ 205.453  $\chi^2$ /NDF: 44.7/57

# eigen\_dit\_asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1263.810 $\pm$ 0.205  $\chi^2$ /NDF: 525470.8/30

Left Out: 1229.986 $\pm$ 0.198  $\chi^2$ /NDF: 141606.6/24

Right Out: 1269.111 $\pm$ 0.205  $\chi^2$ /NDF: 385395.1/34

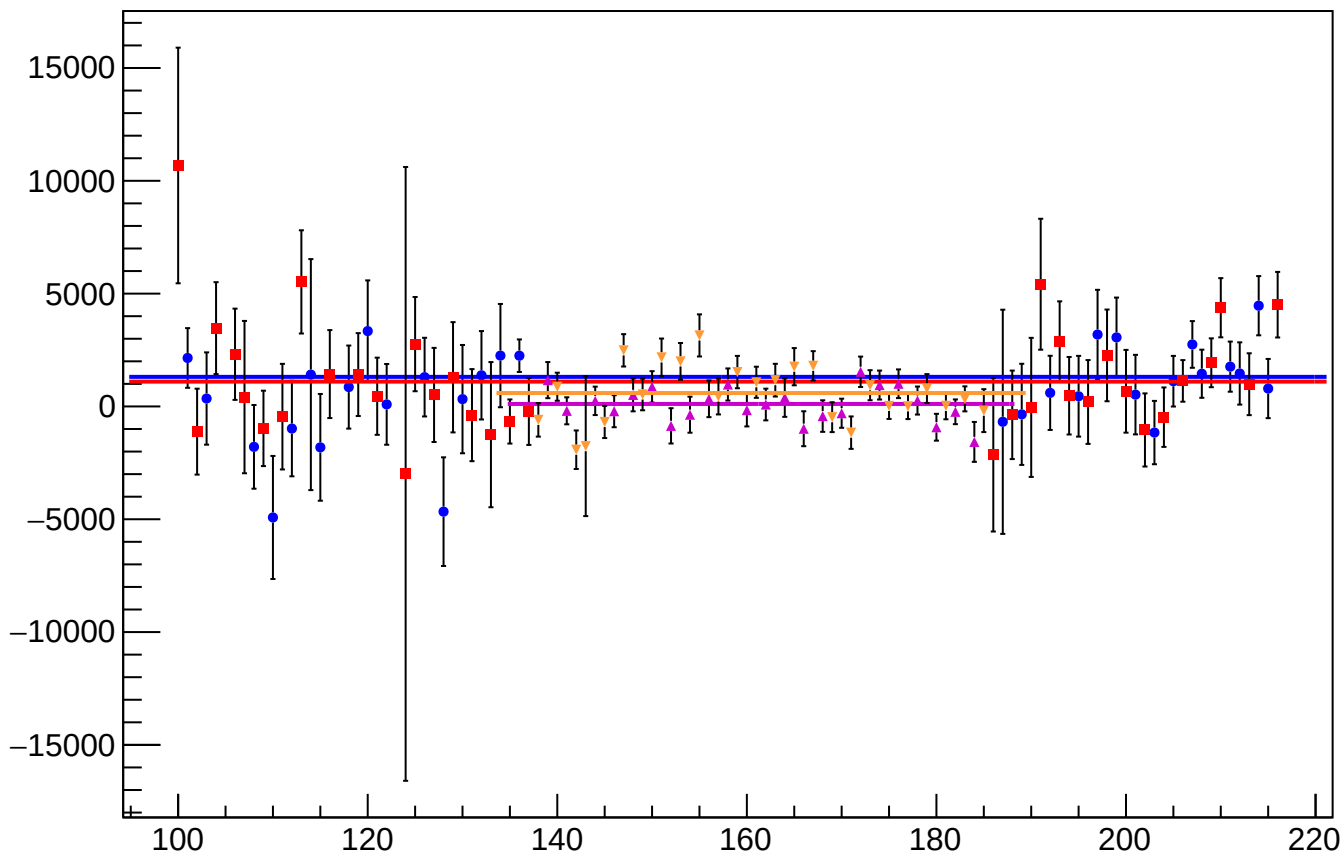
Left In: 1247.785 $\pm$ 0.206  $\chi^2$ /NDF: 27340.7/22

+ sign 1246.311 $\pm$ 0.142  $\chi^2$ /NDF: 681171.3/55

All: 1252.289 $\pm$ 0.102  $\chi^2$ /NDF: 1102892.9/11

- sign 1258.514 $\pm$ 0.145  $\chi^2$ /NDF: 418122.6/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 1311.253 $\pm$ 277.760  $\chi^2$ /NDF: 35.5/30

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 1100.512 $\pm$ 293.386  $\chi^2$ /NDF: 39.4/34

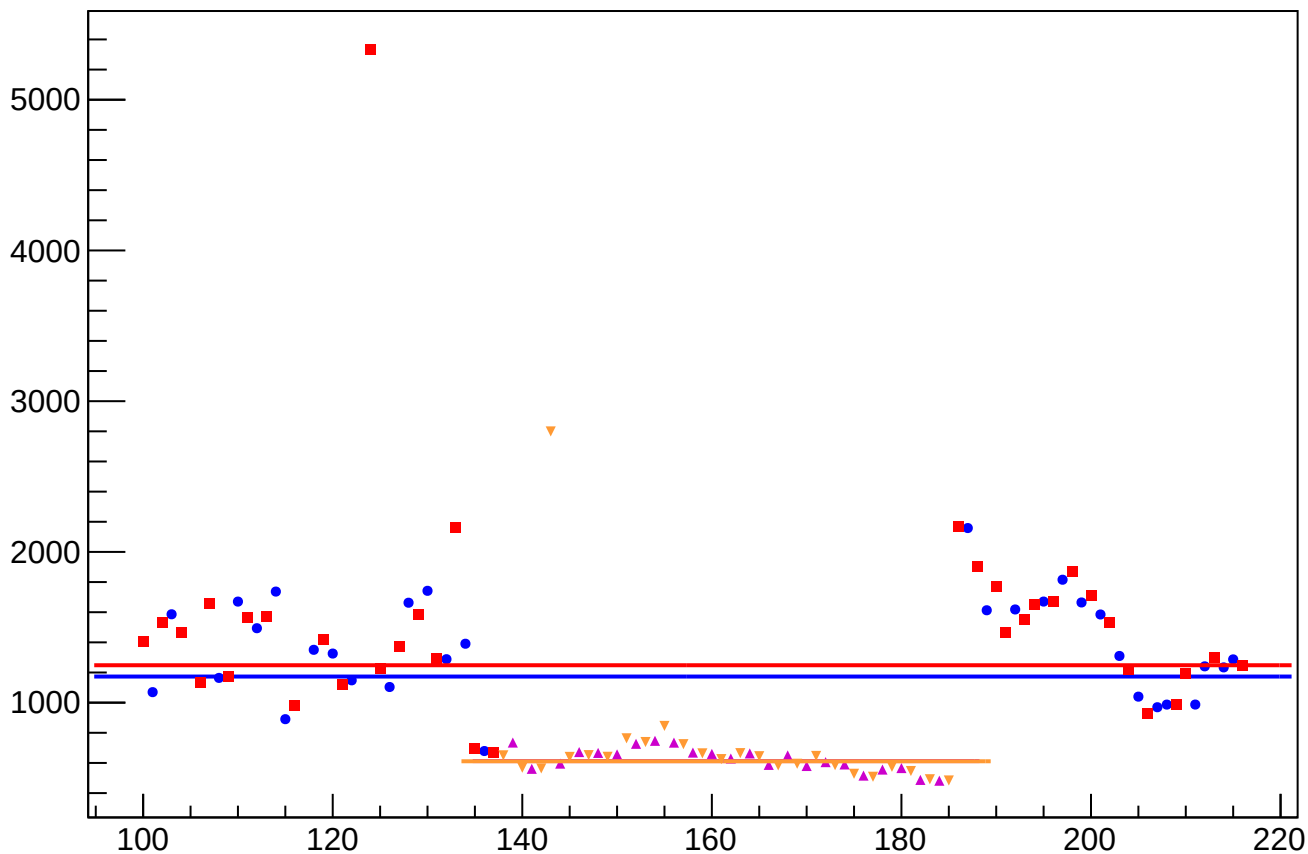
Left In: 110.251 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 743.626 $\pm$ 126.528  $\chi^2$ /NDF: 98.1/55

All: 528.319 $\pm$ 90.479  $\chi^2$ /NDF: 178.3/113

- sign 302.997 $\pm$ 129.437  $\chi^2$ /NDF: 74.3/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $1173.202 \pm 0.196$   $\chi^2/\text{NDF}: 2645957.2/30$

Left Out:  $611.086 \pm 0.101$   $\chi^2/\text{NDF}: 1619319.5/24$

Right Out:  $1248.188 \pm 0.207$   $\chi^2/\text{NDF}: 3030829.1/34$

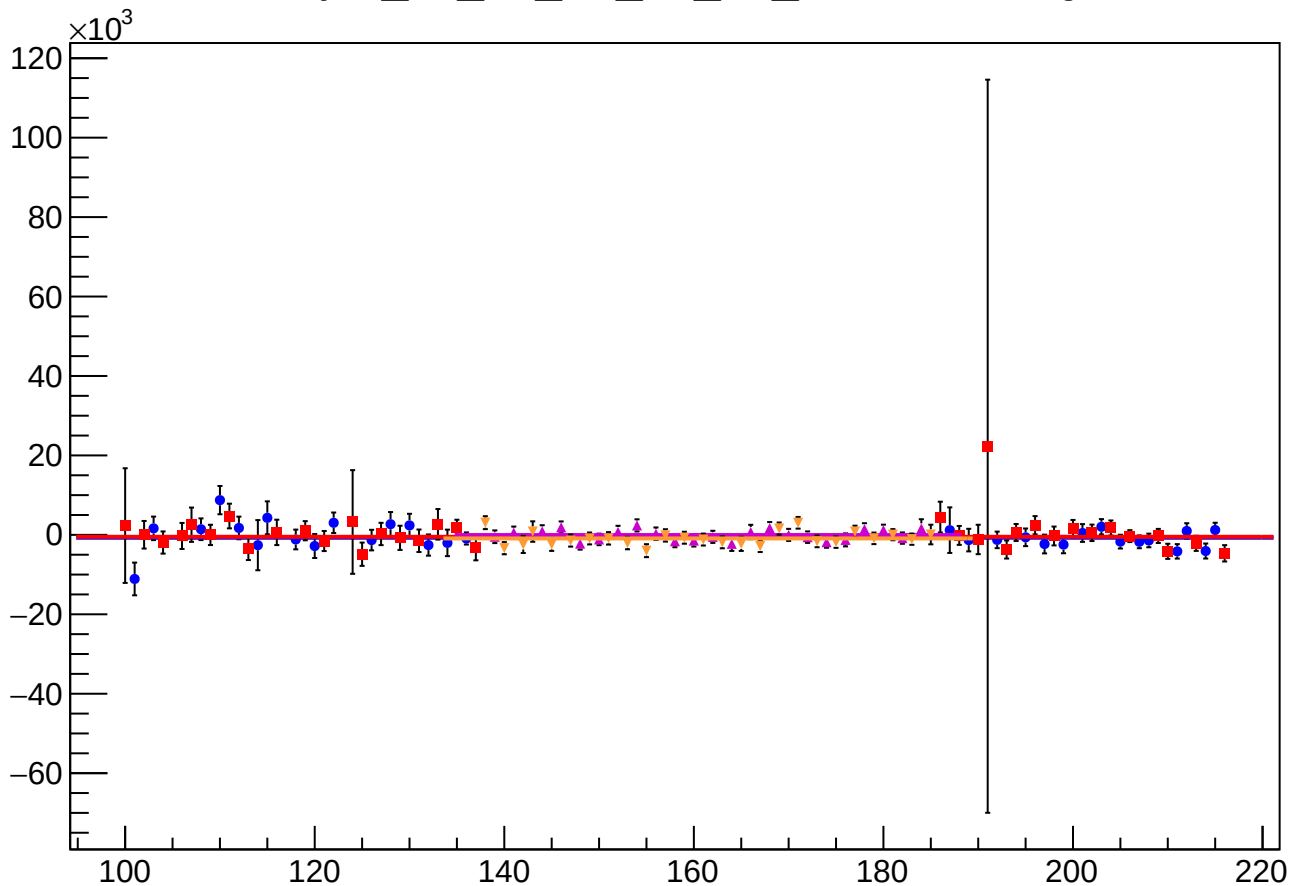
Left In:  $612.398 \pm 0.102$   $\chi^2/\text{NDF}: 508597.7/22$

+ sign  $727.729 \pm 0.089$   $\chi^2/\text{NDF}: 10756662.0/55$

All:  $731.843 \pm 0.064$   $\chi^2/\text{NDF}: 21864704.4/11$

- sign  $736.149 \pm 0.092$   $\chi^2/\text{NDF}: 11103713.9/57$

asym\_atl\_dd\_atr\_dd\_dd\_mean vs Slug



Right In: -721.502 $\pm$ 419.243  $\chi^2$ /NDF: 35.8/30

Left Out: -899.894 $\pm$ 316.449  $\chi^2$ /NDF: 29.8/24

Right Out: -491.109 $\pm$ 430.291  $\chi^2$ /NDF: 27.0/34

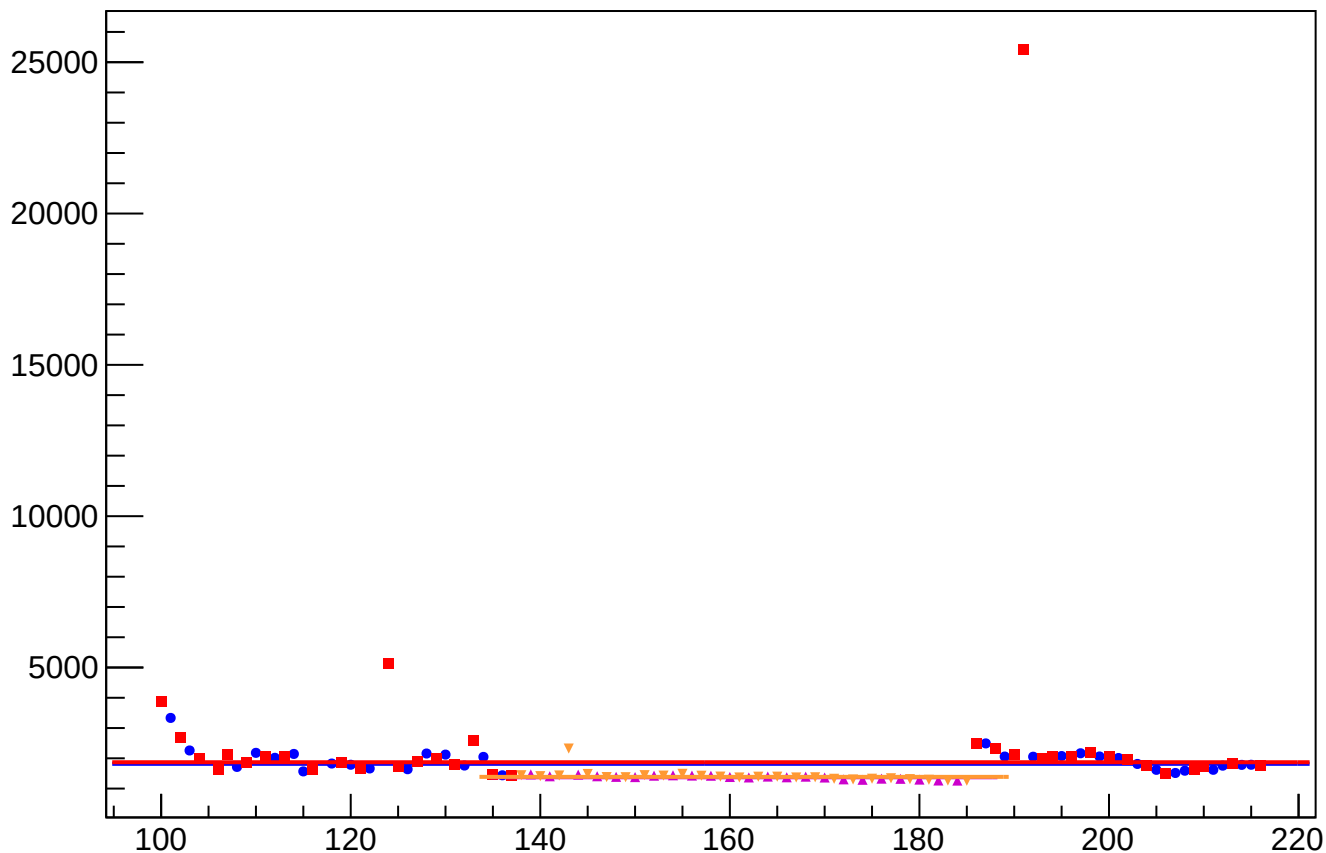
Left In: -48.178 $\pm$ 320.929  $\chi^2$ /NDF: 17.9/22

+ sign -835.147 $\pm$ 252.575  $\chi^2$ /NDF: 65.7/55

All: -526.595 $\pm$ 180.230  $\chi^2$ /NDF: 114.3/113

- sign -206.500 $\pm$ 257.256  $\chi^2$ /NDF: 45.6/57

# asym\_atl\_dd\_atr\_dd\_dd\_rms vs Slug



Right In: 1817.481+/-0.296  $\chi^2/\text{NDF}$ : 893605.4/30

Left Out: 1386.845+/-0.224  $\chi^2/\text{NDF}$ :339794.5/24

Right Out: 1870.202+/-0.304  $\chi^2/\text{NDF}$ : 1056819.0/34

Left In: 1373.217+/-0.227  $\chi^2/\text{NDF}$ :64467.6/22

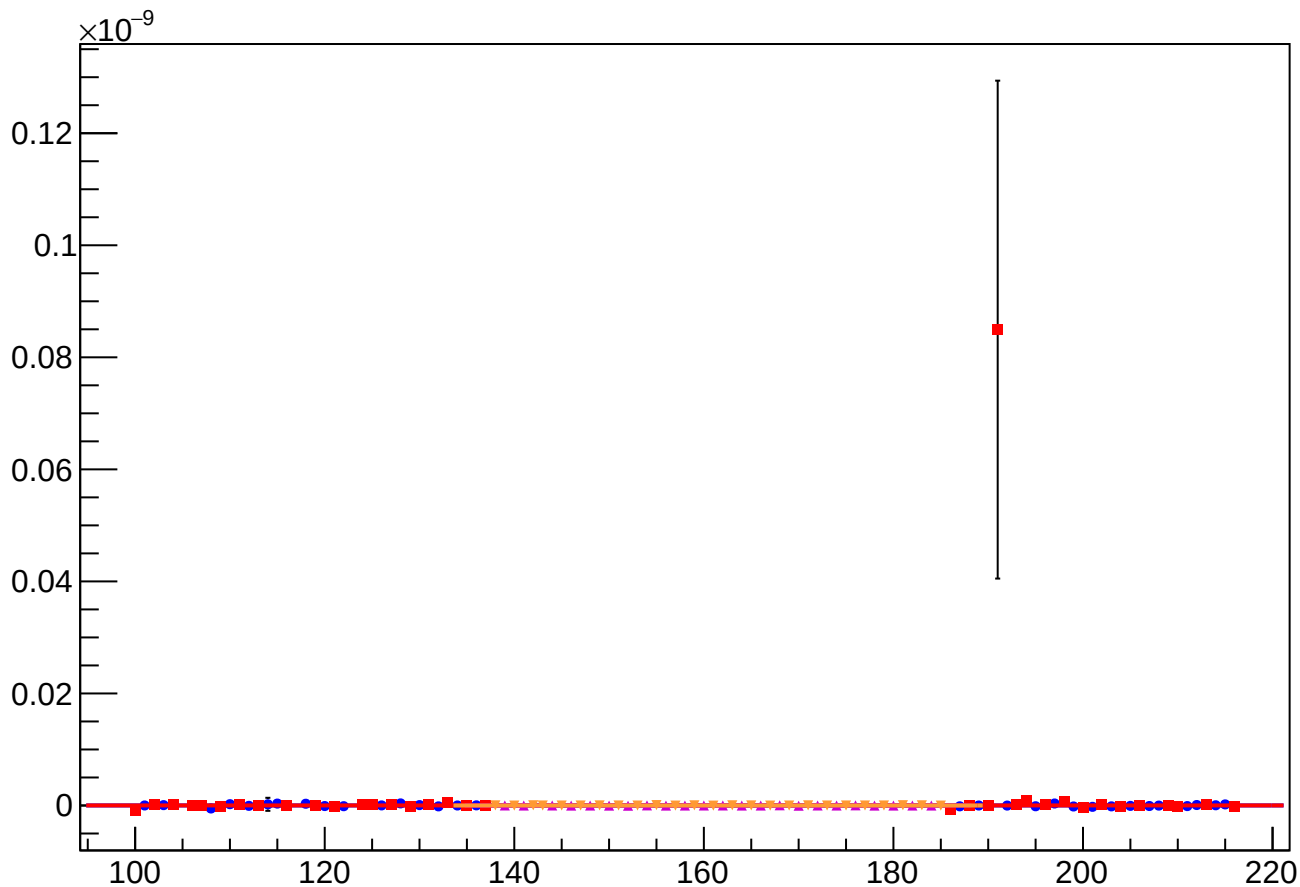
+ sign 1543.145+/-0.179  $\chi^2/\text{NDF}$ : 2577688.4/55

All: 1546.932+/-0.127  $\chi^2/\text{NDF}$ : 5414275.6/11

- sign 1550.861+/-0.182  $\chi^2/\text{NDF}$ : 2835671.0/57



asym\_atl\_dd\_atr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 49.7/34

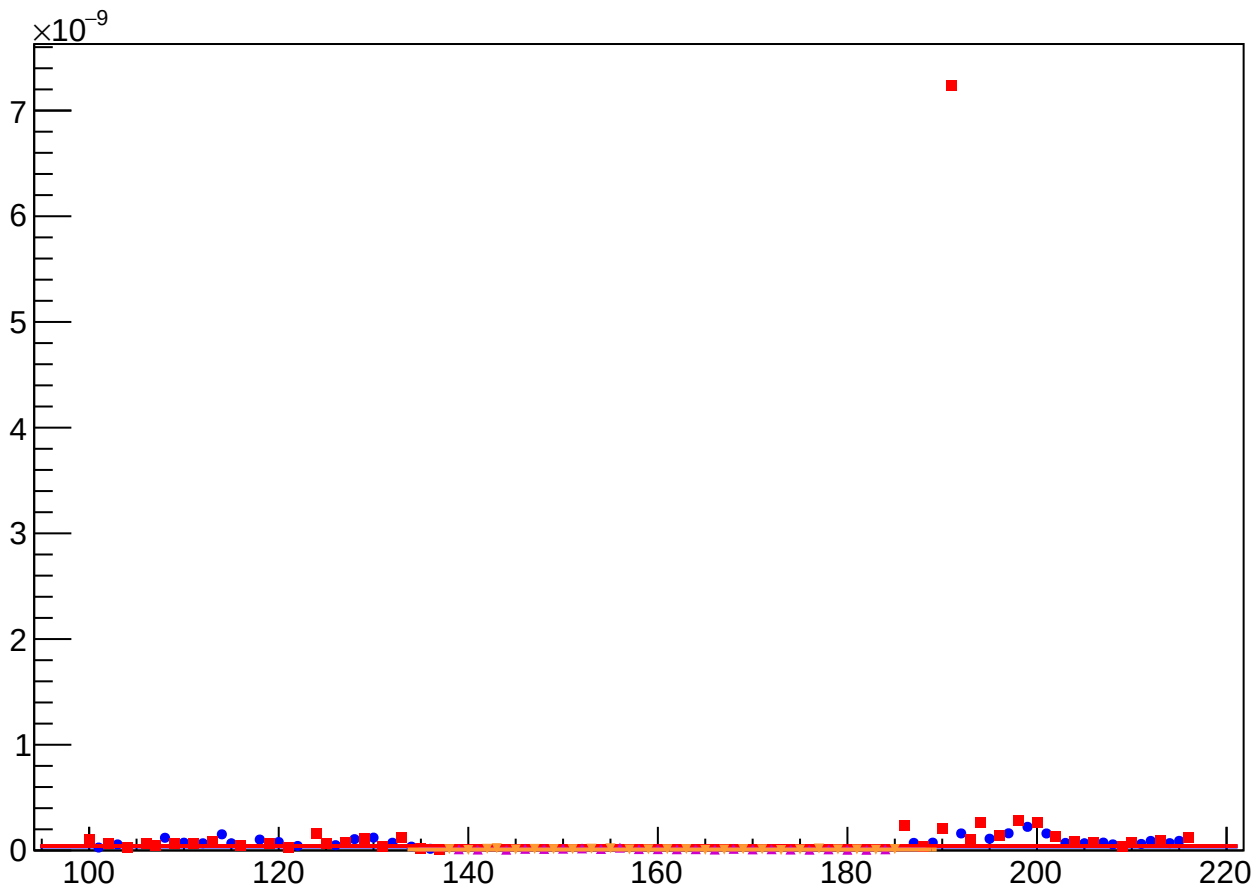
Left In: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 52.0/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 116.5/113

- sign -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 63.8/57

asym\_atl\_dd\_atr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7003564.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2148494.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7281715.5/34

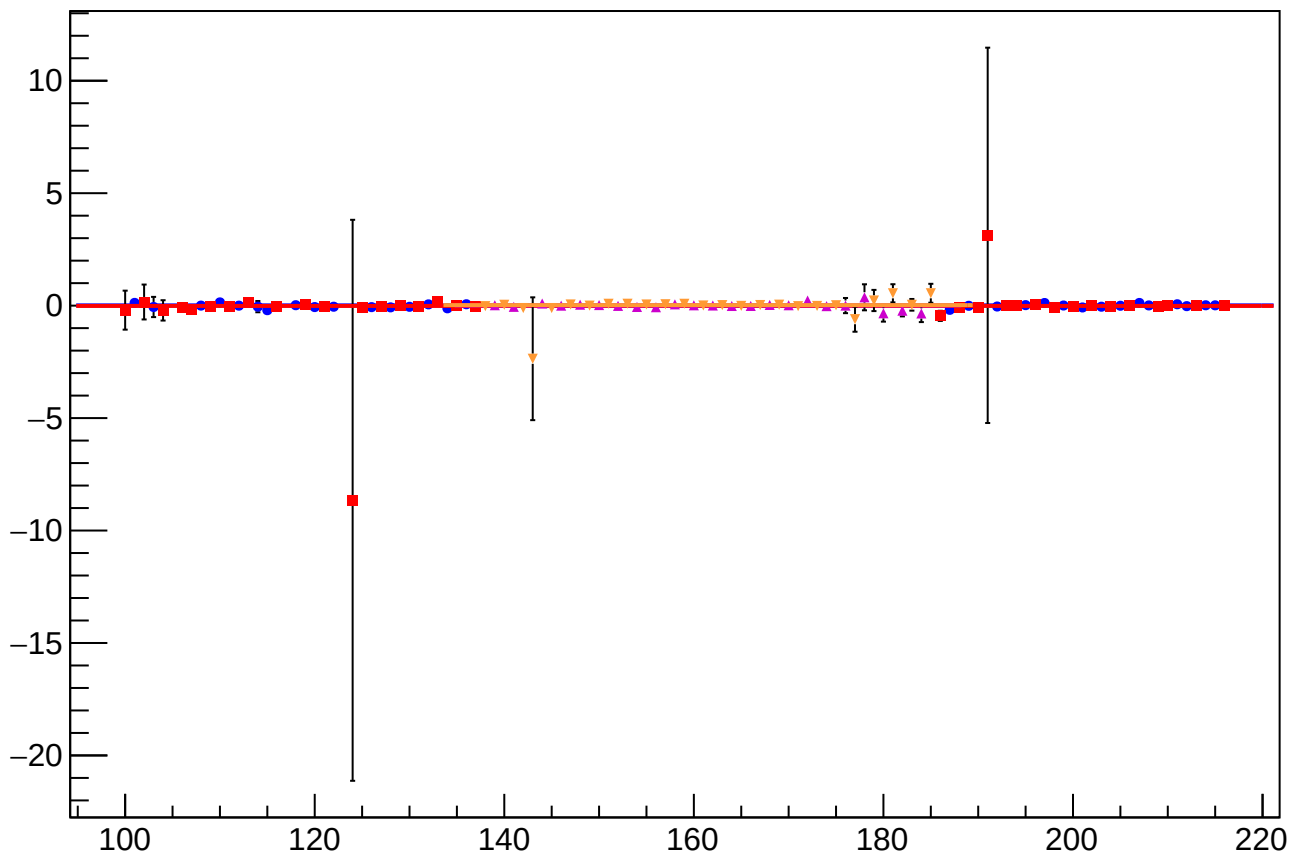
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1232395.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14921001.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28923133.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13734070.1/57

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}: 45.0/30$

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}: 22.8/24$

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}: 24.1/34$

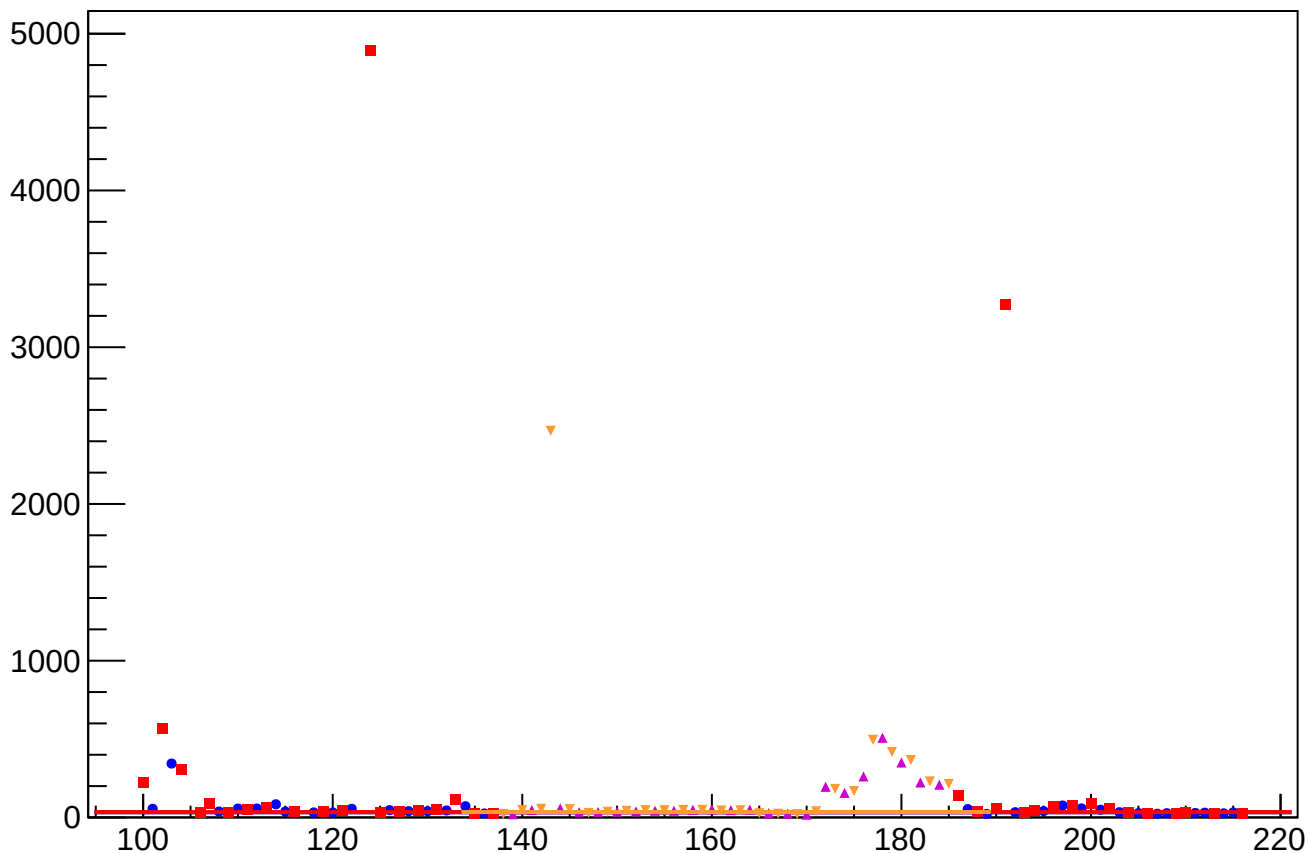
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}: 68.7/55$

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}: 114.2/113$

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 41.6/57$

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 32.929 $\pm$ 0.006  $\chi^2$ /NDF: 3733447.0/30

Left Out: 34.624 $\pm$ 0.007  $\chi^2$ /NDF: 11402451.4/24

Right Out: 33.892 $\pm$ 0.006  $\chi^2$ /NDF: 6693406.6/34

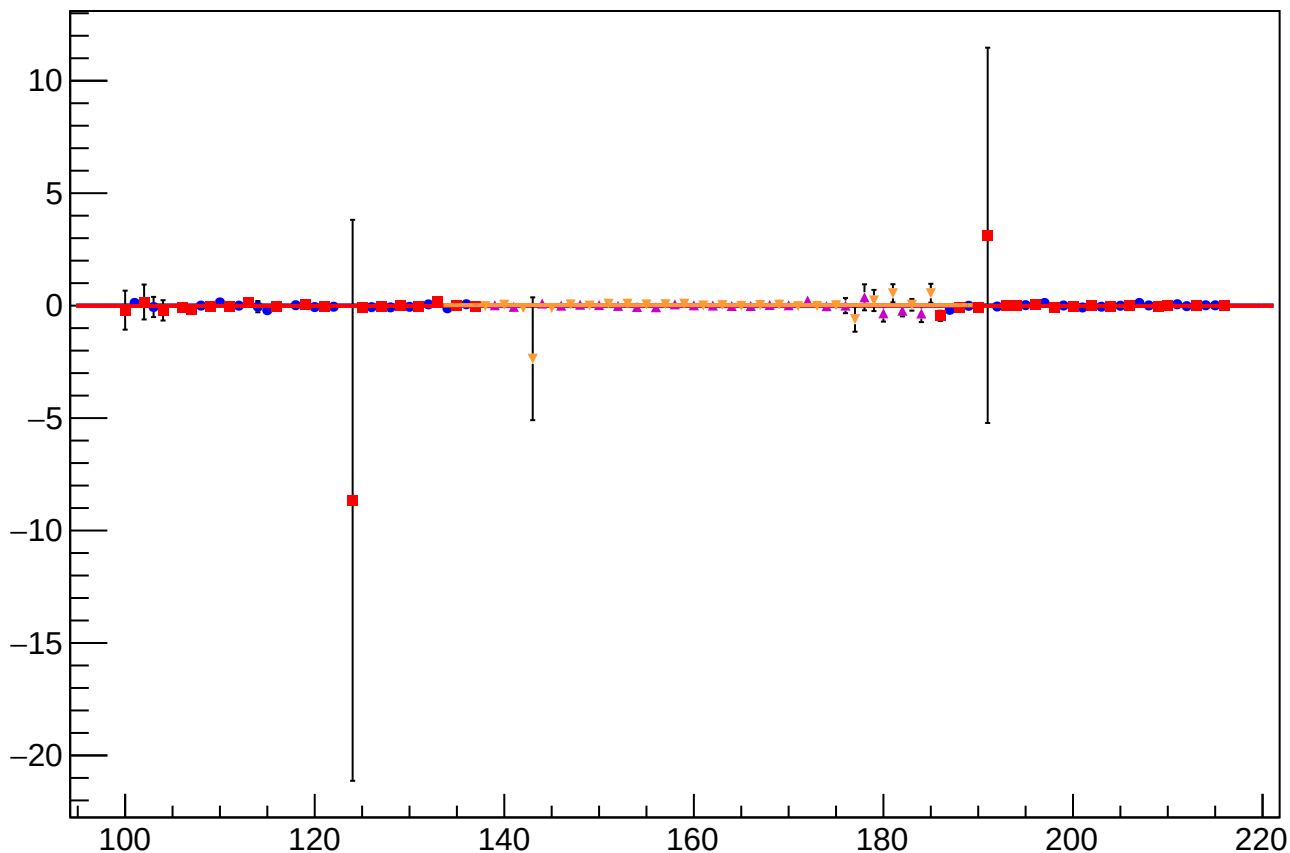
Left In: 33.592 $\pm$ 0.007  $\chi^2$ /NDF: 10067466.4/22

+ sign 33.635 $\pm$ 0.005  $\chi^2$ /NDF: 15168061.8/55

All: 33.693 $\pm$ 0.003  $\chi^2$ /NDF: 31930232.6/113

- sign 33.754 $\pm$ 0.005  $\chi^2$ /NDF: 16761854.1/57

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 45.0/30

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.1/34

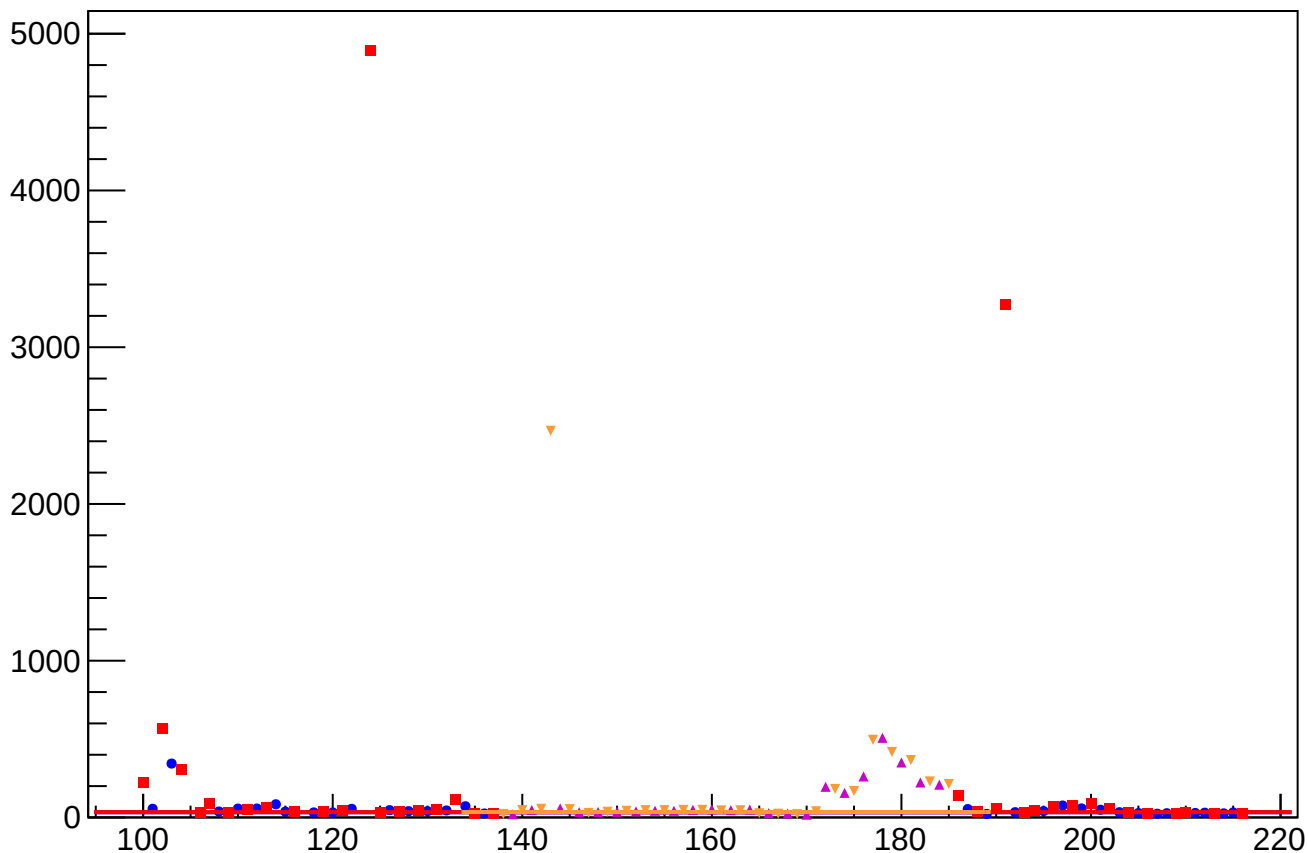
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.2/113

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 41.6/57

asym\_atl\_dd\_atr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 32.929 $\pm$ 0.006  $\chi^2$ /NDF: 3733447.0/30

Left Out: 34.624 $\pm$ 0.007  $\chi^2$ /NDF: 11402451.4/24

Right Out: 33.892 $\pm$ 0.006  $\chi^2$ /NDF: 6693406.6/34

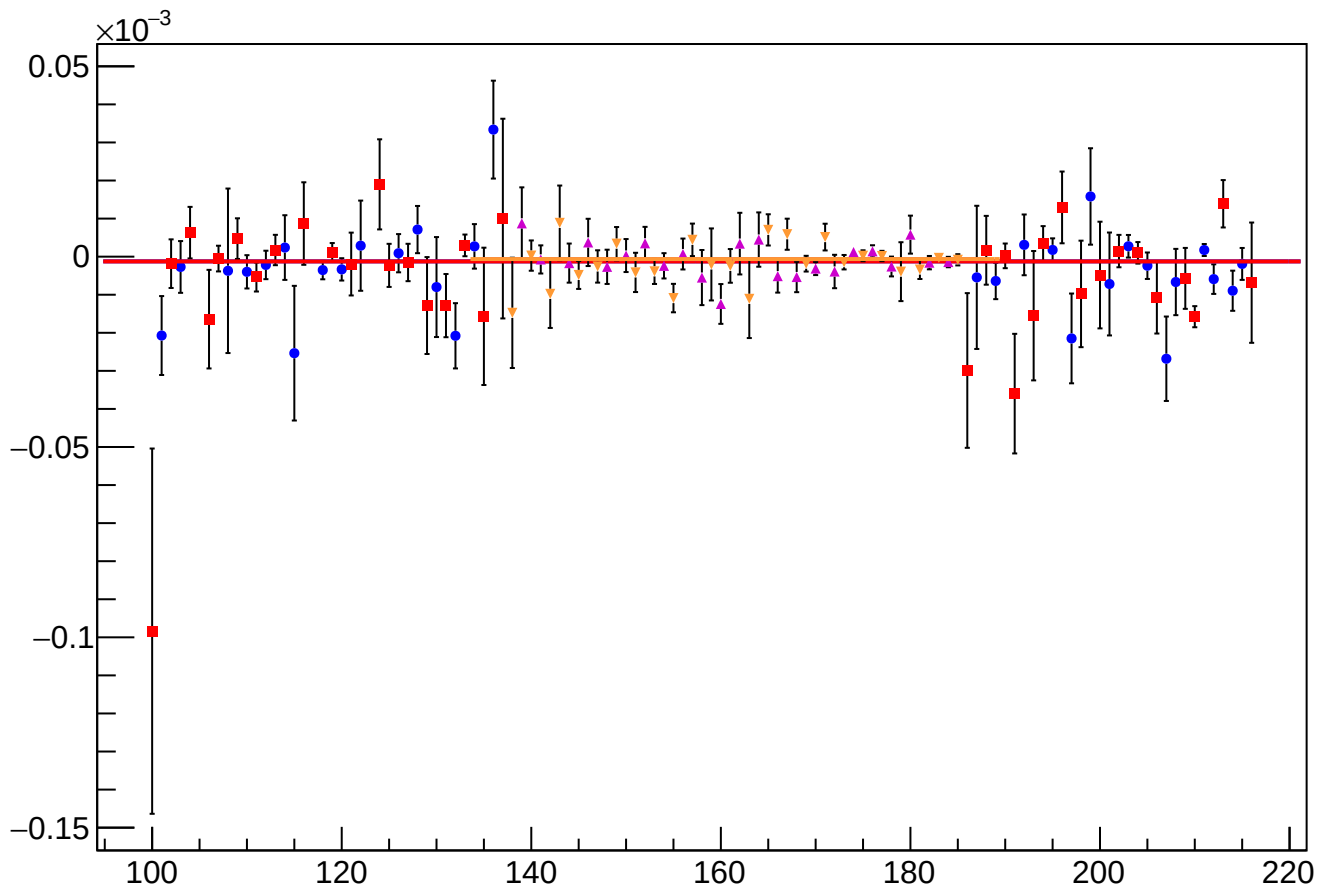
Left In: 33.592 $\pm$ 0.007  $\chi^2$ /NDF: 10067466.4/22

+ sign 33.635 $\pm$ 0.005  $\chi^2$ /NDF: 15168061.8/55

All: 33.693 $\pm$ 0.003  $\chi^2$ /NDF: 31930232.6/113

- sign 33.754 $\pm$ 0.005  $\chi^2$ /NDF: 16761854.1/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 45.0/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.4/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 67.8/34

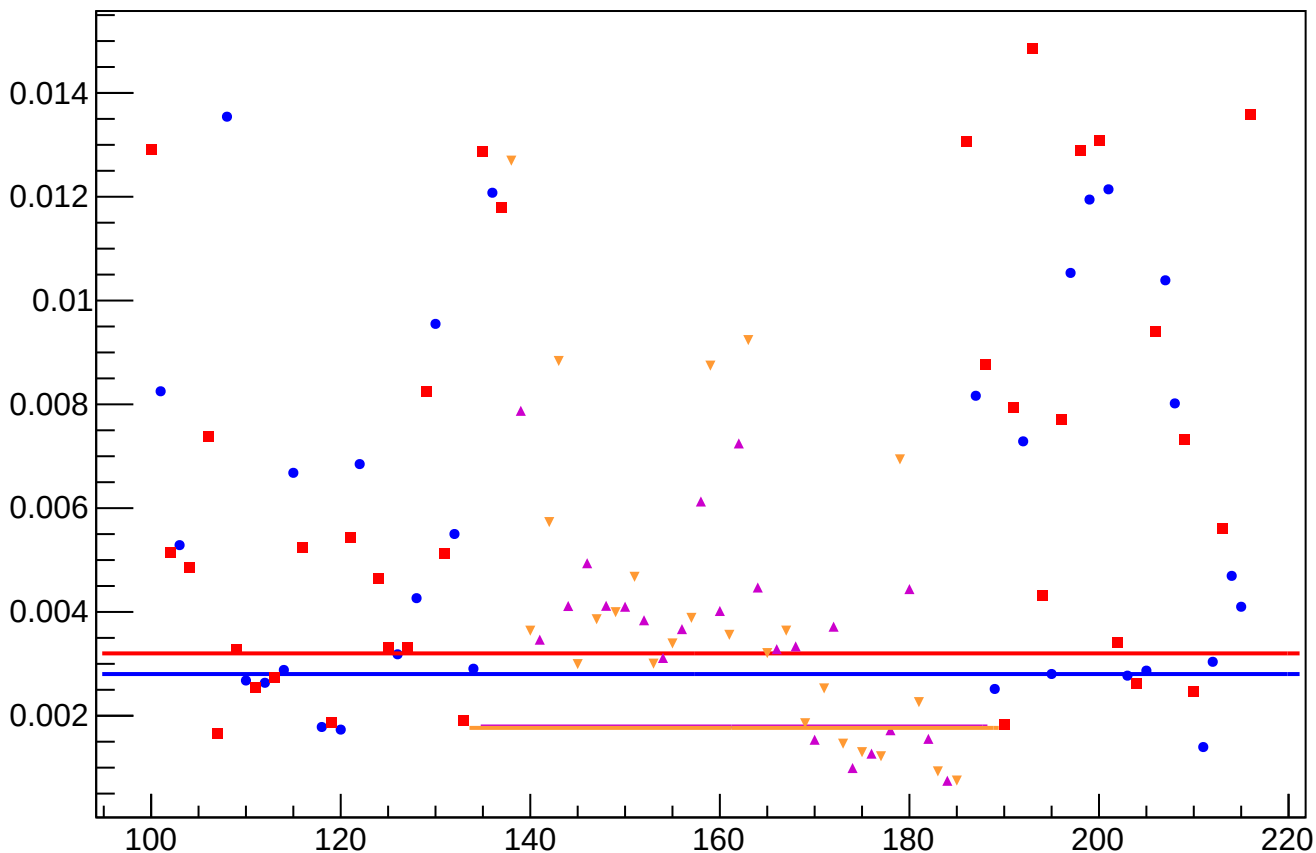
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 21.9/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 73.8/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 163.9/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 90.1/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11525264.3/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :12926339.2/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11597526.8/34

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :10766932.4/22

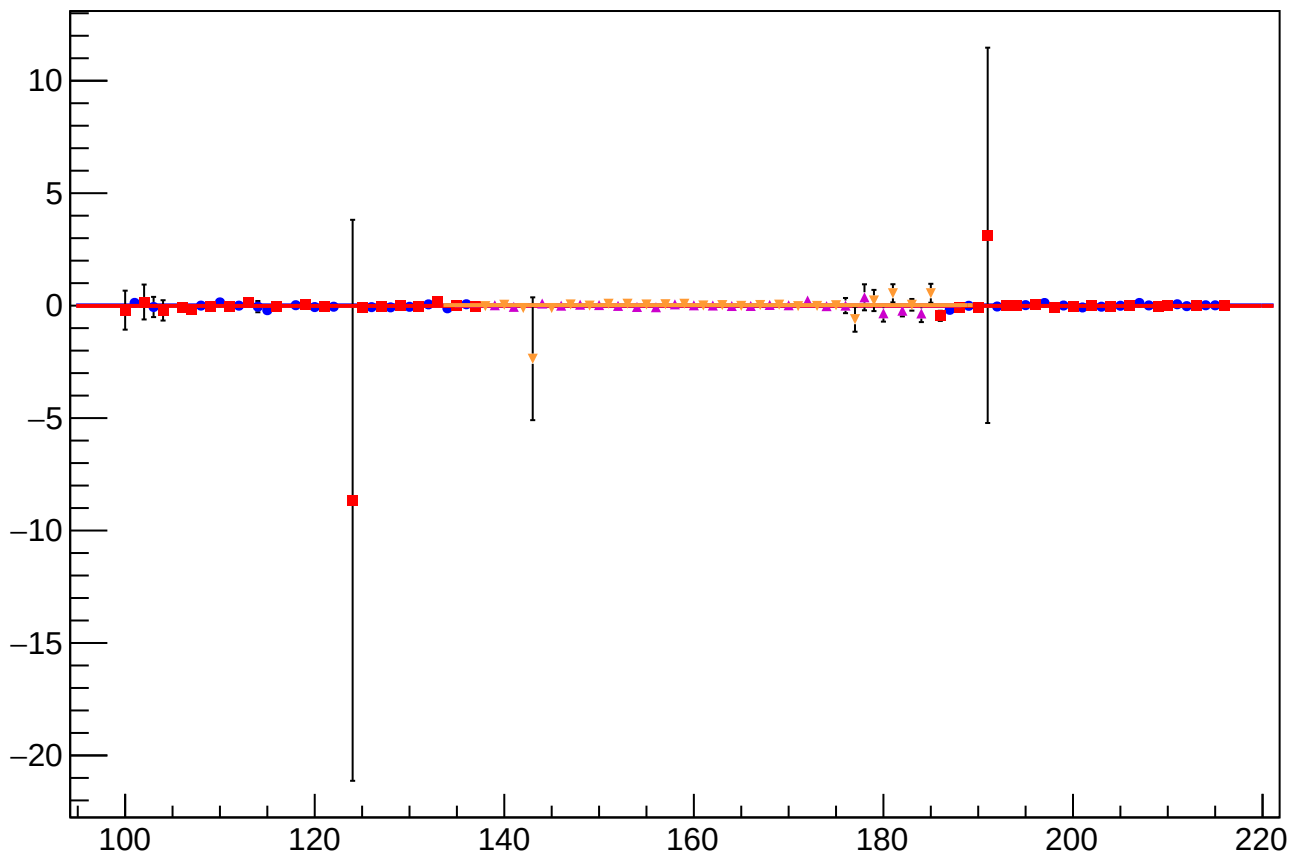
+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 26826907.6/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 52929953.0/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 26038590.4/57



asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}: 45.0/30$

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}: 22.8/24$

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}: 24.1/34$

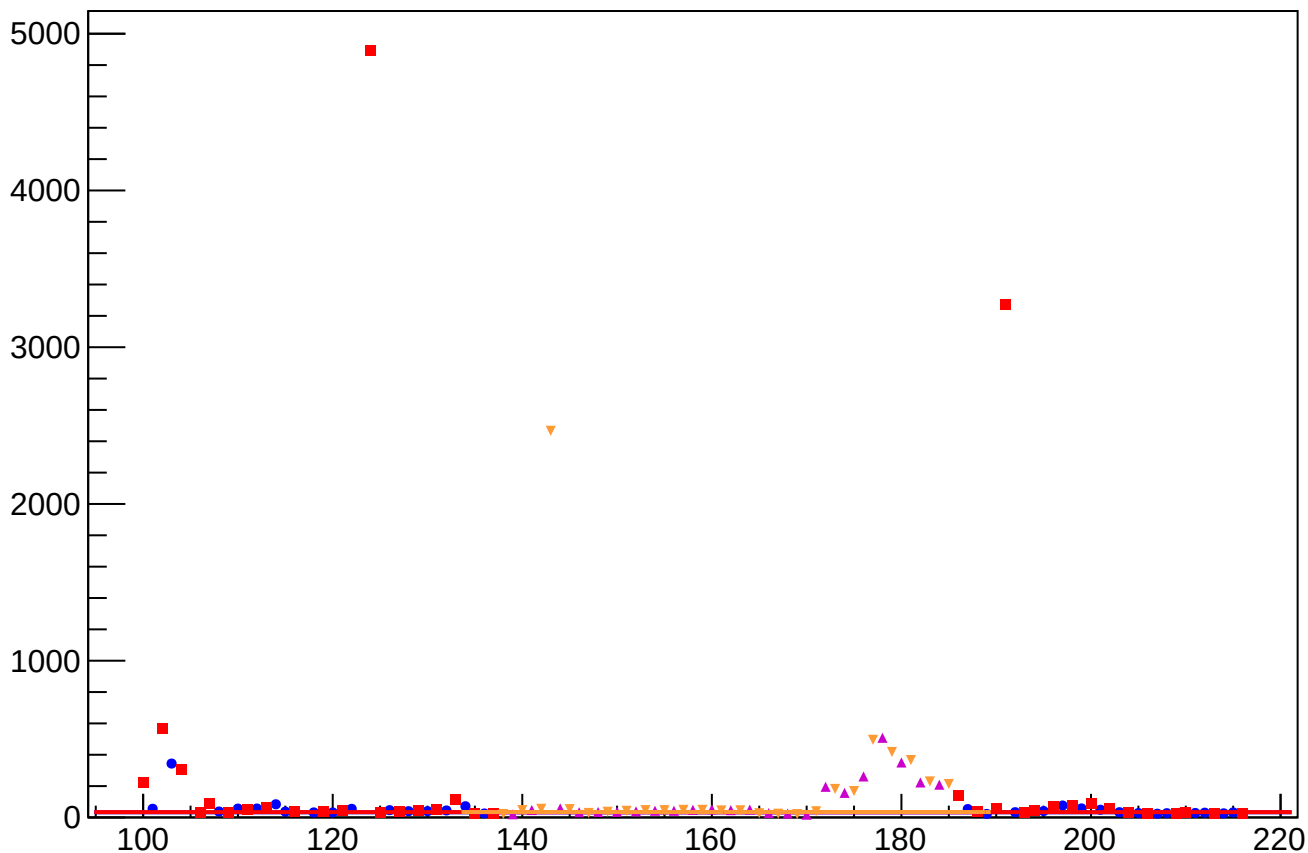
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}: 68.7/55$

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}: 114.2/113$

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 41.6/57$

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 32.931+/-0.006  $\chi^2/\text{NDF}$ : 3732212.7/30

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 33.893+/-0.006  $\chi^2/\text{NDF}$ : 6693295.8/34

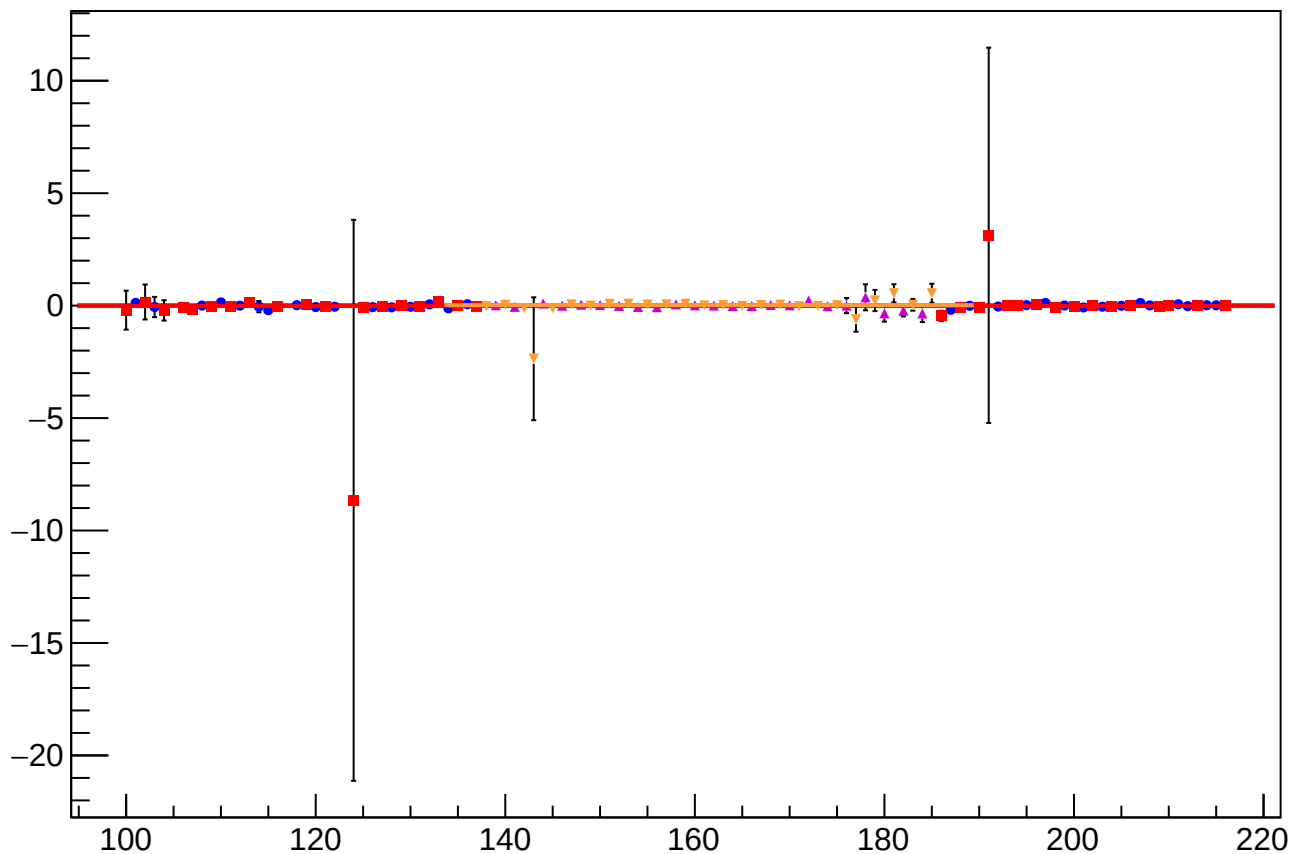
Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

+ sign 33.636+/-0.005  $\chi^2/\text{NDF}$ : 15166812.2/55

All: 33.695+/-0.003  $\chi^2/\text{NDF}$ : 31927591.9/113

- sign 33.755+/-0.005  $\chi^2/\text{NDF}$ : 16760461.6/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.011 $\pm$ 0.009  $\chi^2$ /NDF: 45.0/30

Left Out: 0.023 $\pm$ 0.010  $\chi^2$ /NDF:22.8/24

Right Out: -0.013 $\pm$ 0.009  $\chi^2$ /NDF: 24.1/34

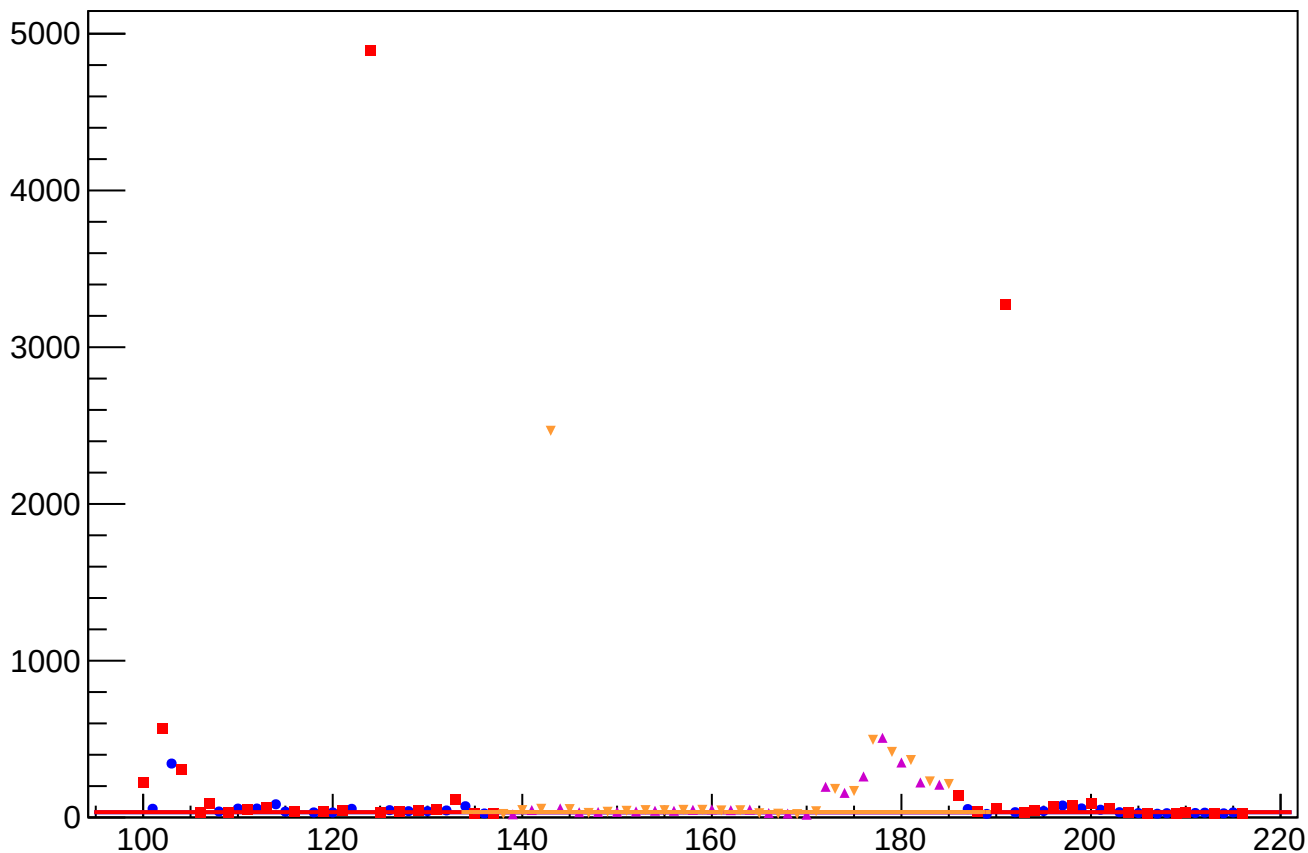
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF:14.8/22

+ sign 0.016 $\pm$ 0.007  $\chi^2$ /NDF: 68.7/55

All: 0.007 $\pm$ 0.005  $\chi^2$ /NDF: 114.2/113

- sign -0.002 $\pm$ 0.007  $\chi^2$ /NDF: 41.6/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 32.931+/-0.006  $\chi^2/\text{NDF}$ : 3732212.7/30

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 33.893+/-0.006  $\chi^2/\text{NDF}$ : 6693295.8/34

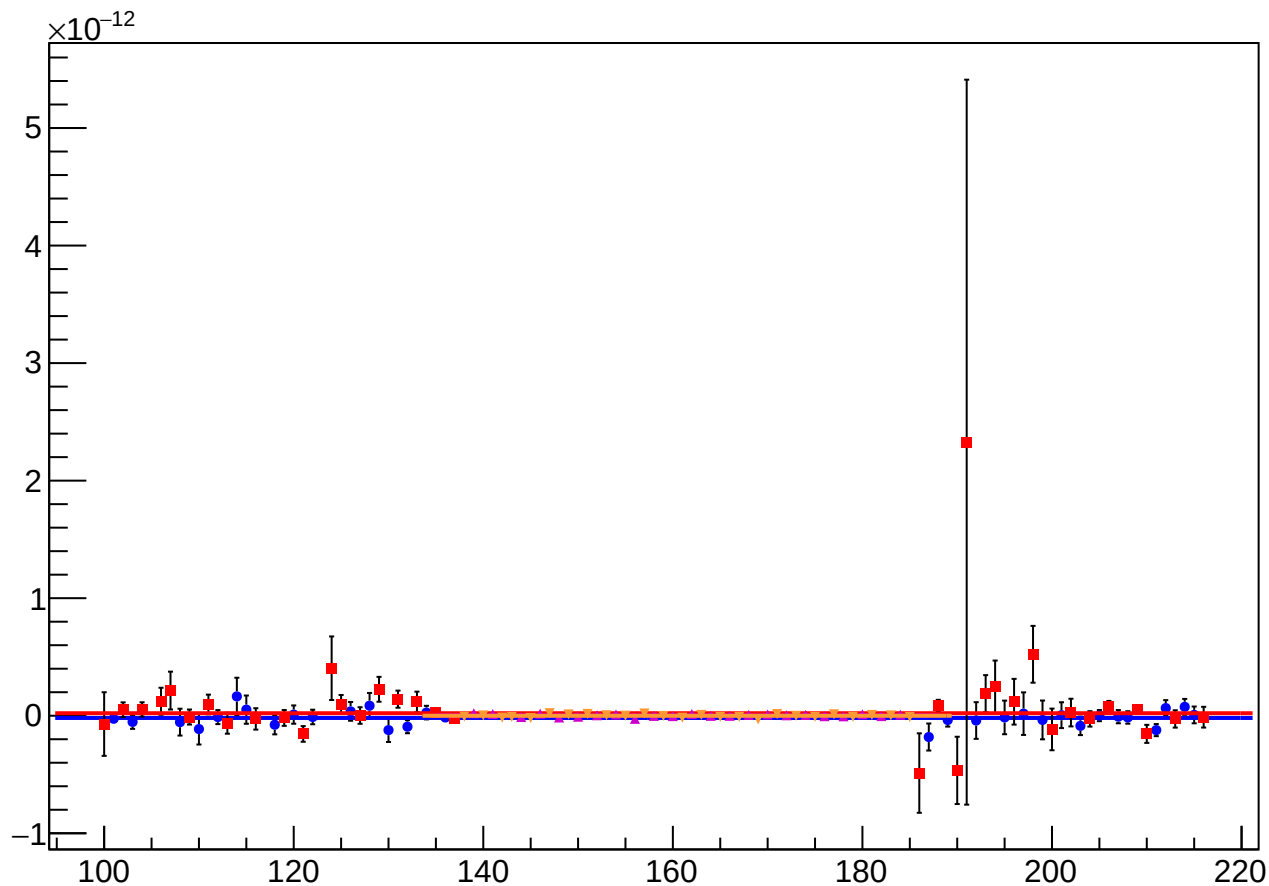
Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

+ sign 33.636+/-0.005  $\chi^2/\text{NDF}$ : 15166812.2/55

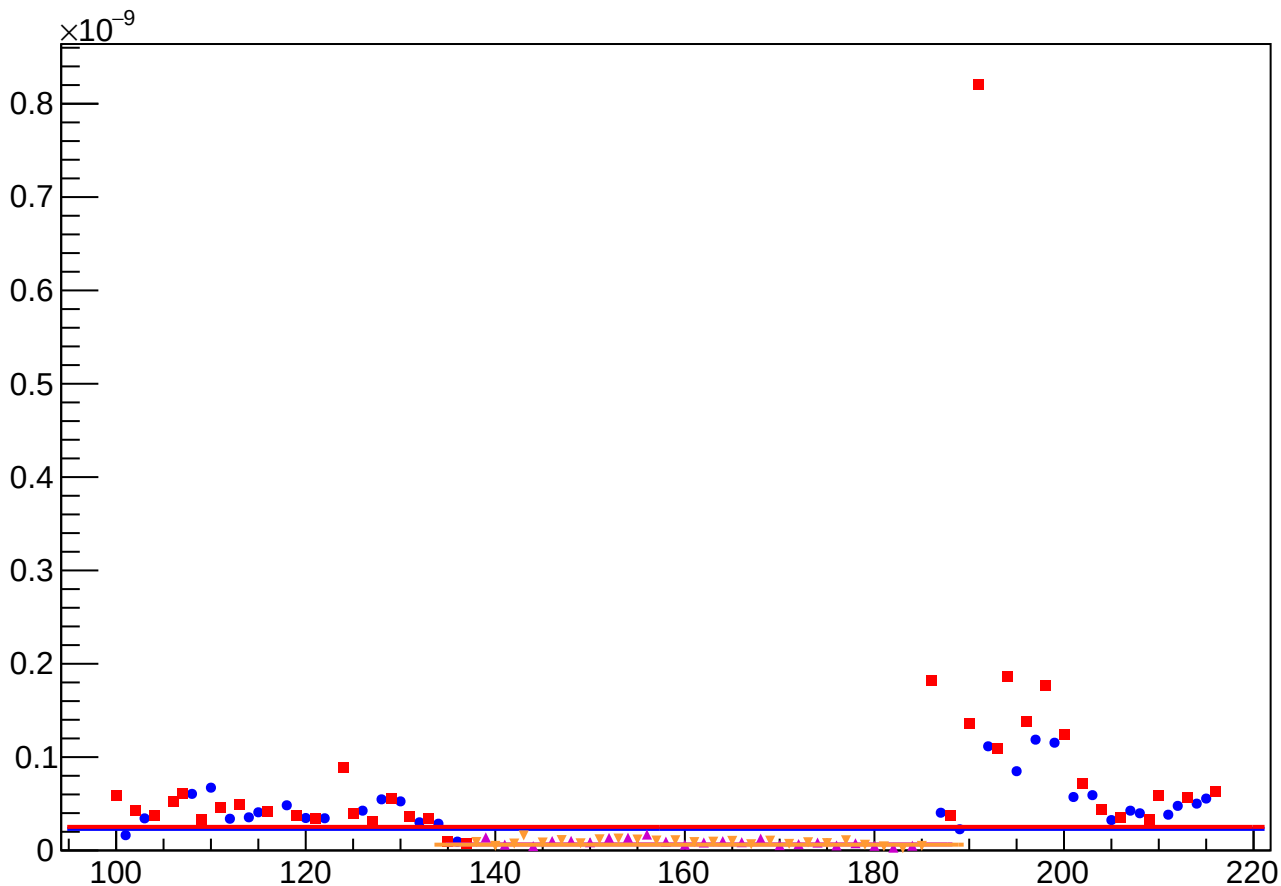
All: 33.695+/-0.003  $\chi^2/\text{NDF}$ : 31927591.9/113

- sign 33.755+/-0.005  $\chi^2/\text{NDF}$ : 16760461.6/57

asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



asym\_atl\_dd\_atr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8535778.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5077918.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10867383.2/34

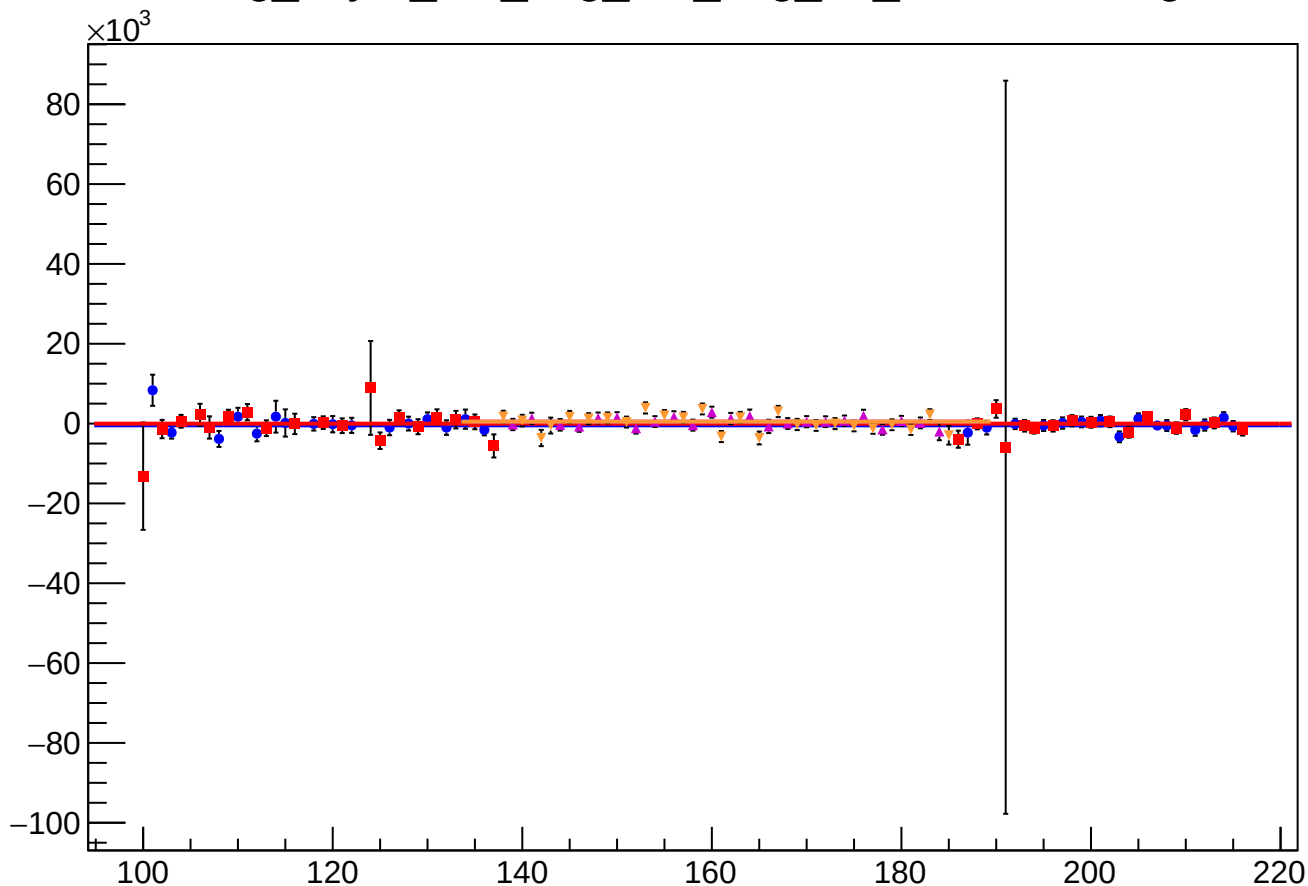
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3998320.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20722197.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 42748715.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22006767.6/57

# reg\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-438.594 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.969 \pm 294.665$   $\chi^2/\text{NDF}$ : 32.2/34

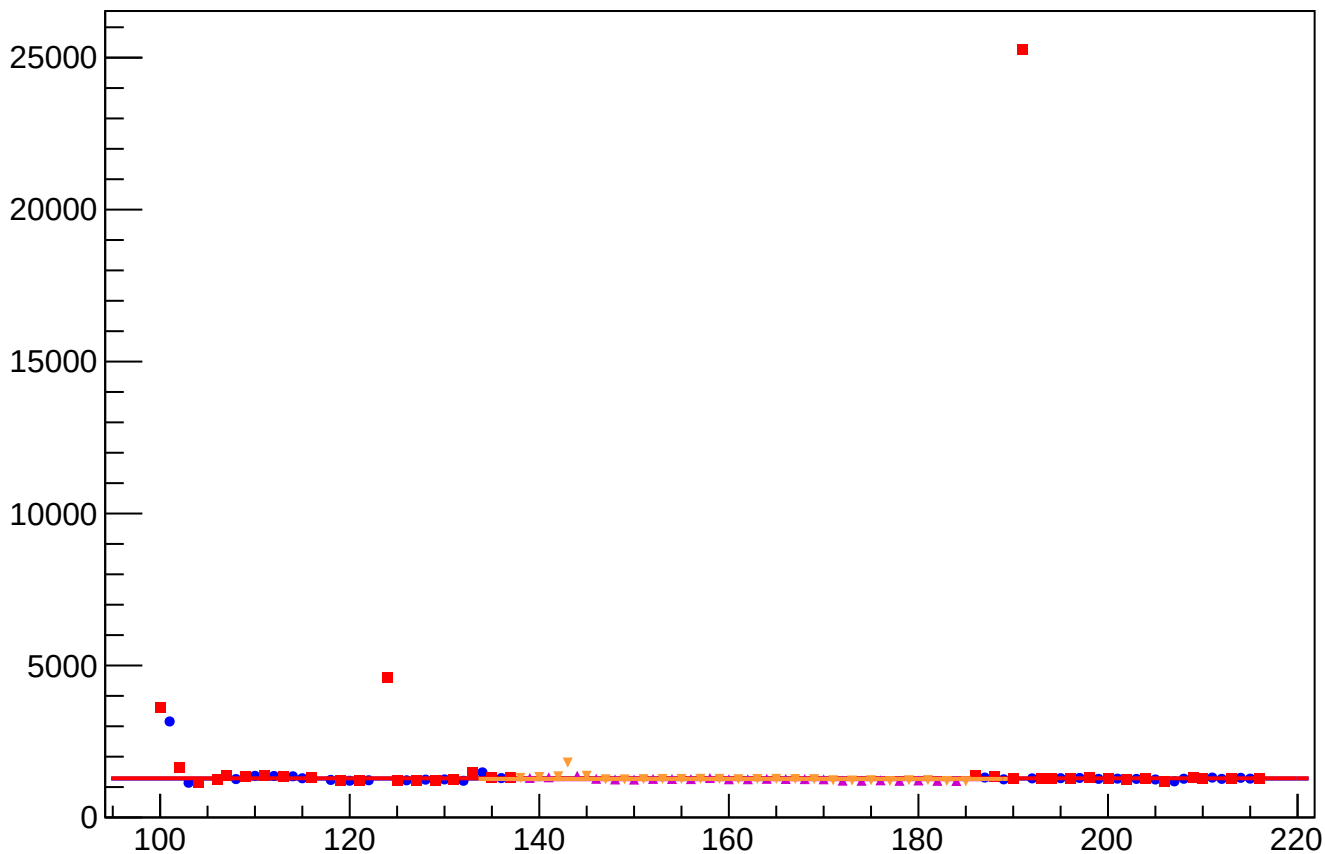
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.321 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $133.352 \pm 146.256$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $234.696 \pm 208.042$   $\chi^2/\text{NDF}$ : 48.1/57

reg\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1278.671 $\pm$ 0.207  $\chi^2$ /NDF: 530240.2/30

Left Out: 1266.967 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1288.416 $\pm$ 0.208  $\chi^2$ /NDF: 483049.1/34

Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.4/22

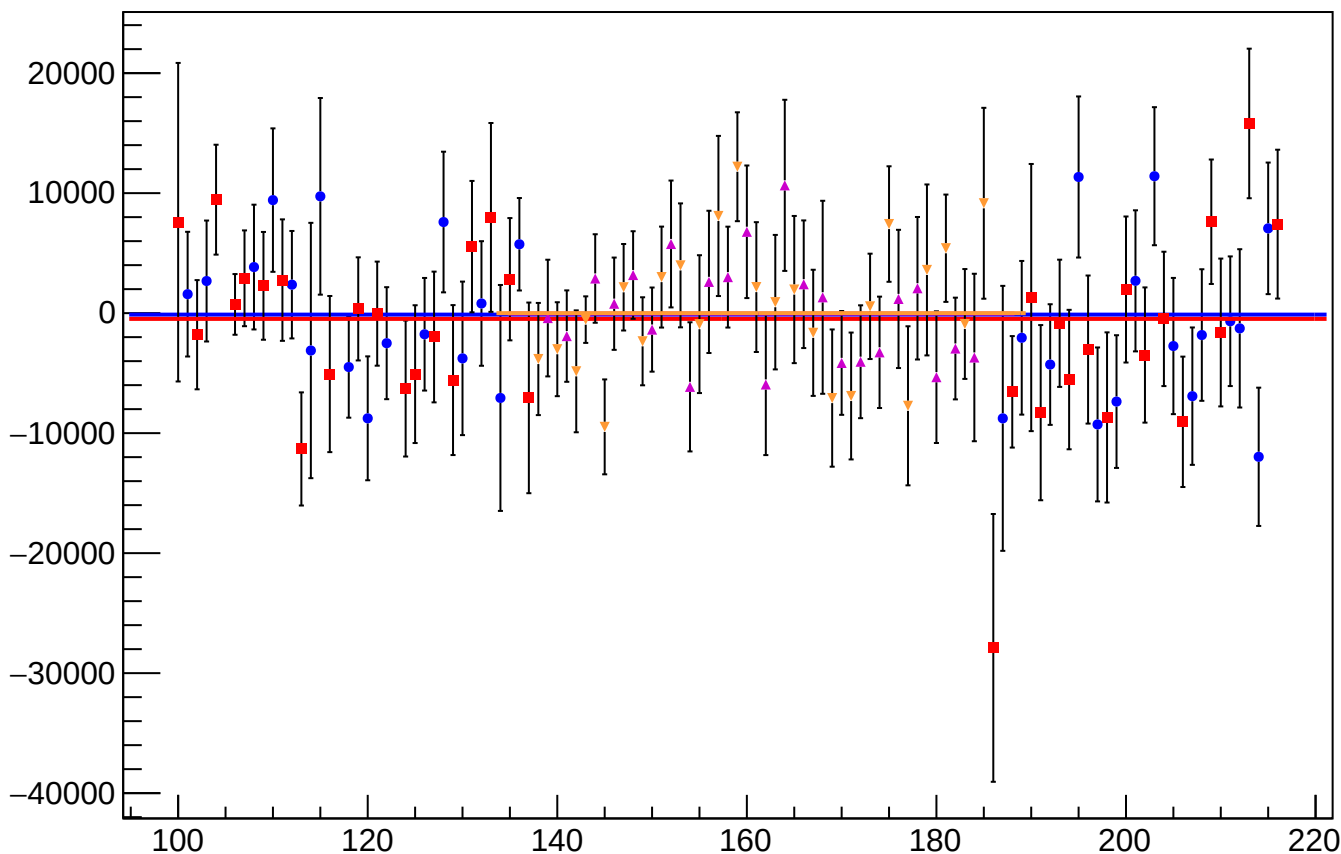
+ sign 1272.724 $\pm$ 0.145  $\chi^2$ /NDF: 719404.7/55

All: 1272.837 $\pm$ 0.103  $\chi^2$ /NDF: 1250287.1/11

- sign 1272.952 $\pm$ 0.147  $\chi^2$ /NDF: 530881.2/57



asym\_at1\_avg\_at2\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-123.063 \pm 1002.318$   $\chi^2/\text{NDF}: 34.6/30$

Left Out:  $-0.604 \pm 886.488$   $\chi^2/\text{NDF}: 29.1/24$

Right Out:  $-479.384 \pm 897.222$   $\chi^2/\text{NDF}: 43.7/34$

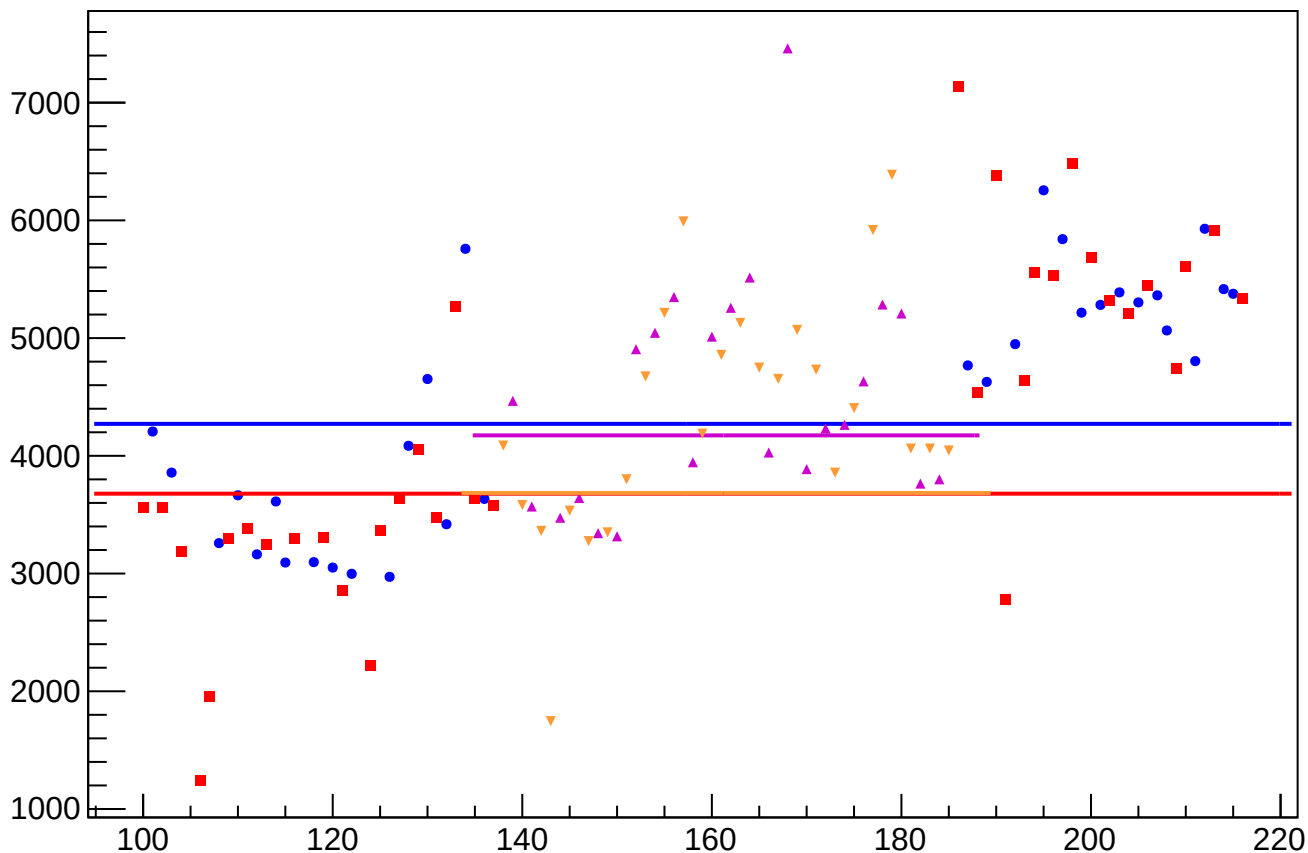
Left In:  $-31.593 \pm 995.348$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $-54.352 \pm 664.035$   $\chi^2/\text{NDF}: 63.7/55$

All:  $-166.094 \pm 470.388$   $\chi^2/\text{NDF}: 121.6/113$

- sign  $-278.643 \pm 666.431$   $\chi^2/\text{NDF}: 57.8/57$

asym\_at1\_avg\_at2\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 4271.434+/-0.709  $\chi^2/\text{NDF}$ : 2039285.0/30

Left Out: 3684.769+/-0.627  $\chi^2/\text{NDF}$ : 3693646.6/24

Right Out: 3678.435+/-0.634  $\chi^2/\text{NDF}$ : 5224633.4/34

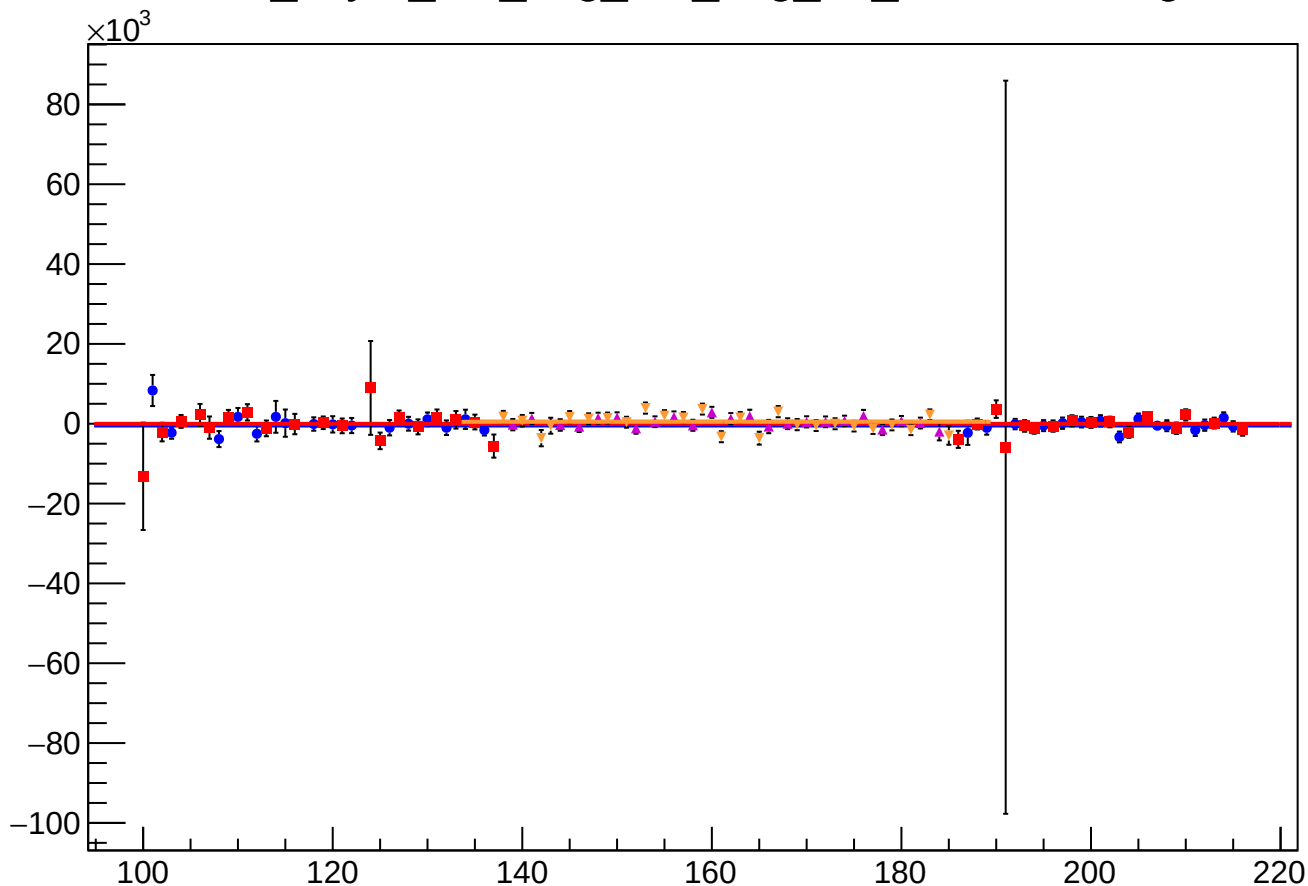
Left In: 4173.556+/-0.704  $\chi^2/\text{NDF}$ : 1274968.4/22

+ sign 3942.259+/-0.470  $\chi^2/\text{NDF}$ : 6117377.4/55

All: 3921.401+/-0.333  $\chi^2/\text{NDF}$ : 12893971.5/100

- sign 3900.393+/-0.471  $\chi^2/\text{NDF}$ : 6772633.5/57

cor\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

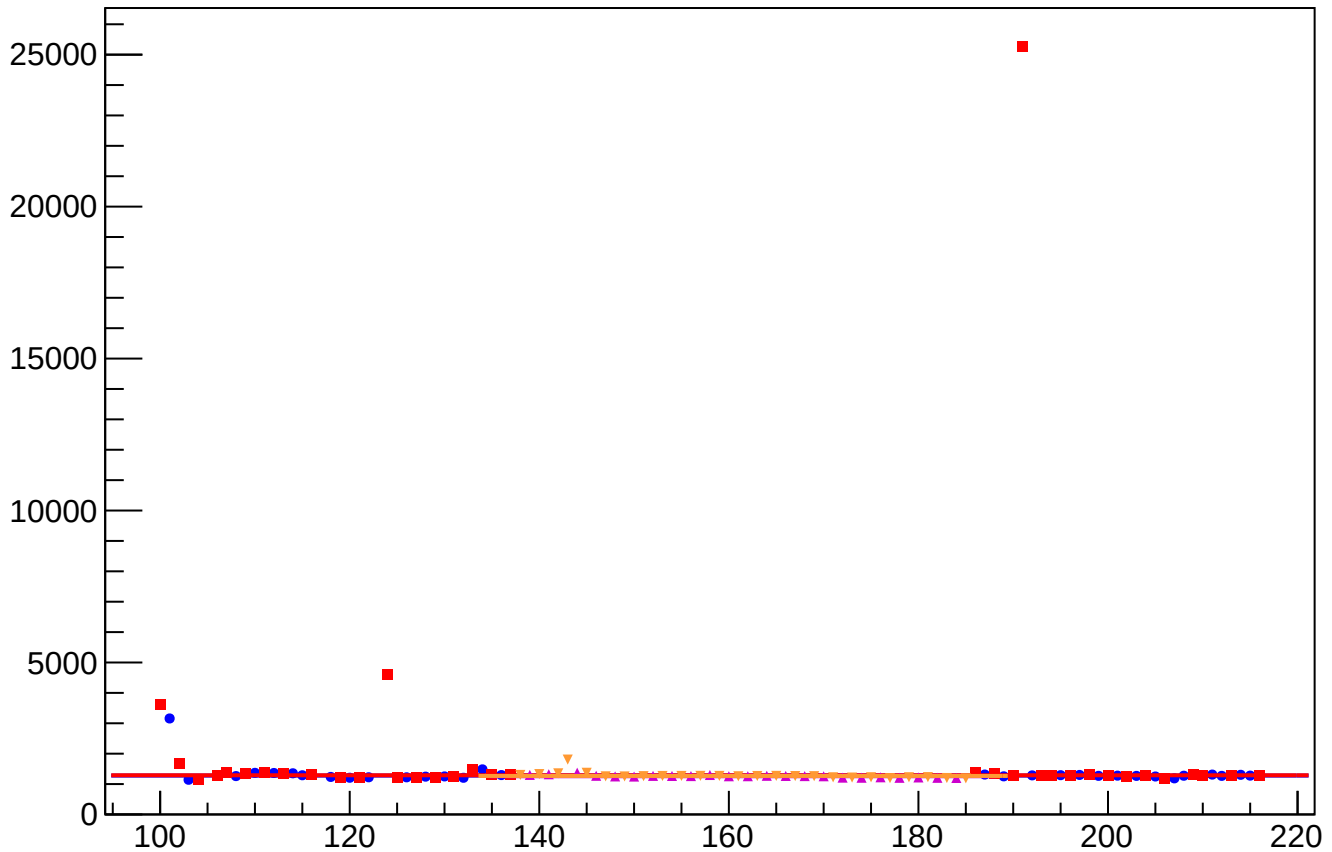
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

# cor\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1278.671 $\pm$ 0.207  $\chi^2$ /NDF: 530241.7/30

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1289.147 $\pm$ 0.208  $\chi^2$ /NDF: 489951.7/34

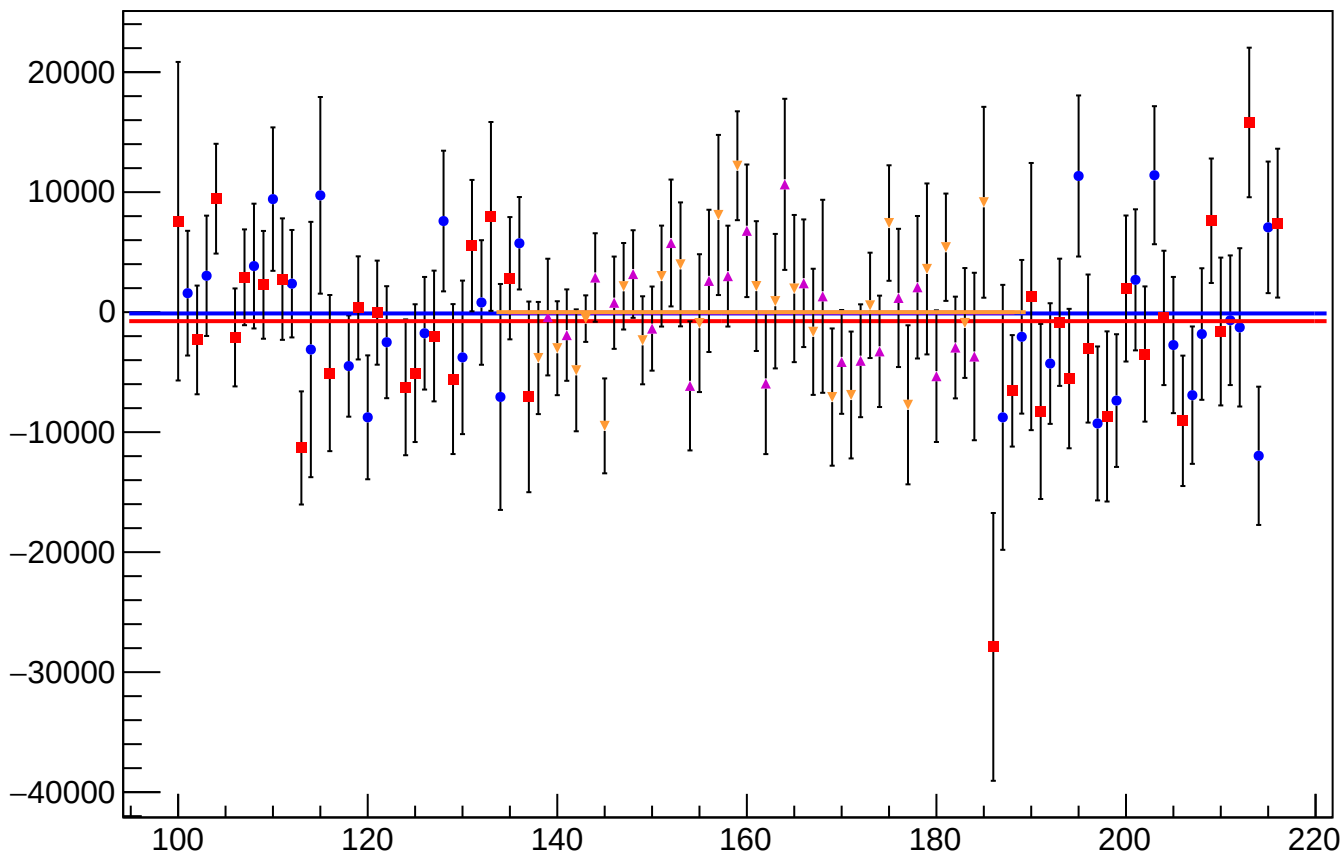
Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

+ sign 1272.724 $\pm$ 0.145  $\chi^2$ /NDF: 719406.1/55

All: 1273.013 $\pm$ 0.103  $\chi^2$ /NDF: 1257719.6/11

- sign 1273.308 $\pm$ 0.147  $\chi^2$ /NDF: 538305.5/57

asym\_at1\_avg\_at2\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}: 34.7/30$

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}: 29.1/24$

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}: 43.6/34$

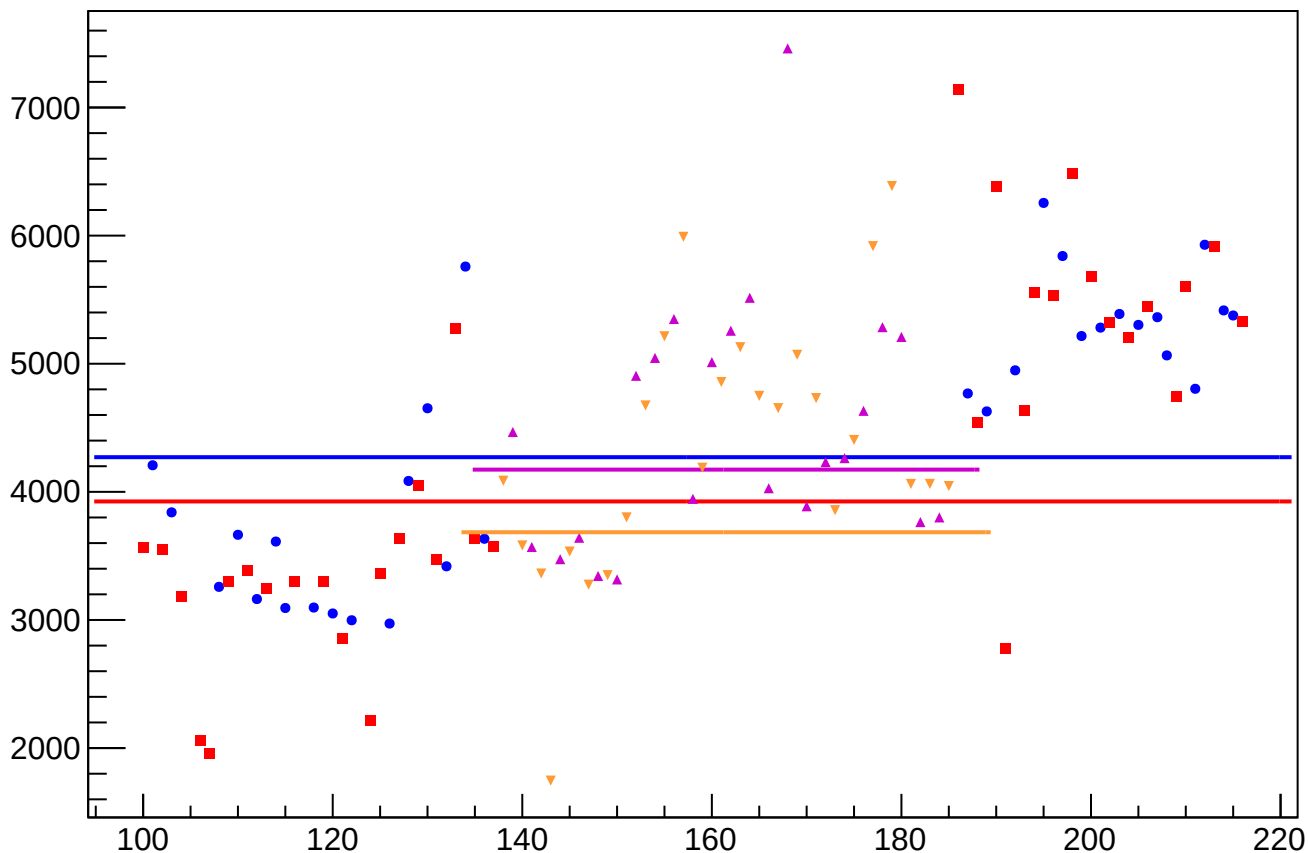
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}: 63.8/55$

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}: 121.8/113$

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}: 57.9/57$

asym\_at1\_avg\_at2\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 4270.610 $\pm$ 0.709  $\chi^2$ /NDF: 2040584.0/30

Left Out: 3684.762 $\pm$ 0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3925.142 $\pm$ 0.660  $\chi^2$ /NDF: 3543440.7/34

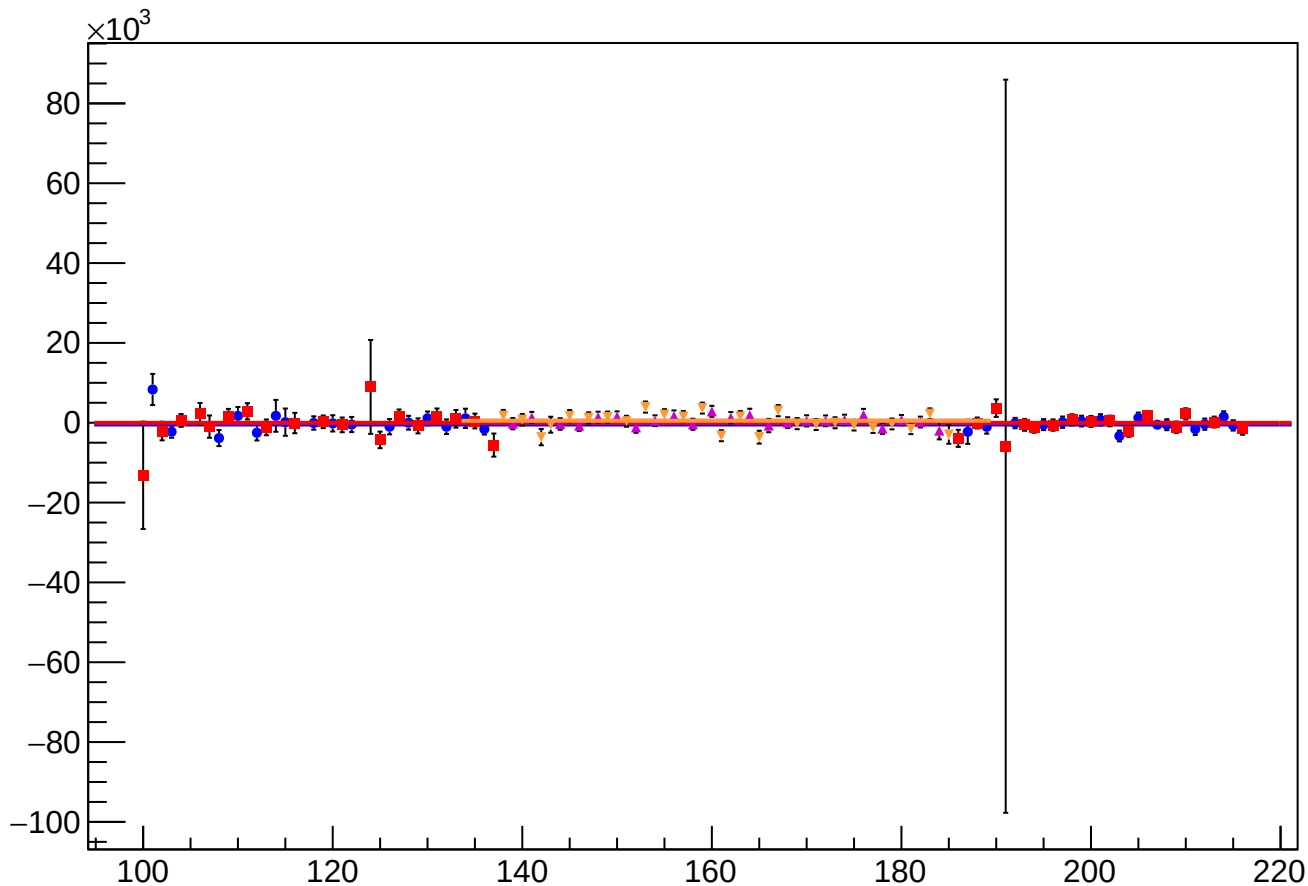
Left In: 4173.550 $\pm$ 0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3941.950 $\pm$ 0.470  $\chi^2$ /NDF: 6117732.5/55

All: 3990.434 $\pm$ 0.336  $\chi^2$ /NDF: 11024271.5/100

- sign 4041.444 $\pm$ 0.482  $\chi^2$ /NDF: 4884655.4/57

eigen\_cor\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

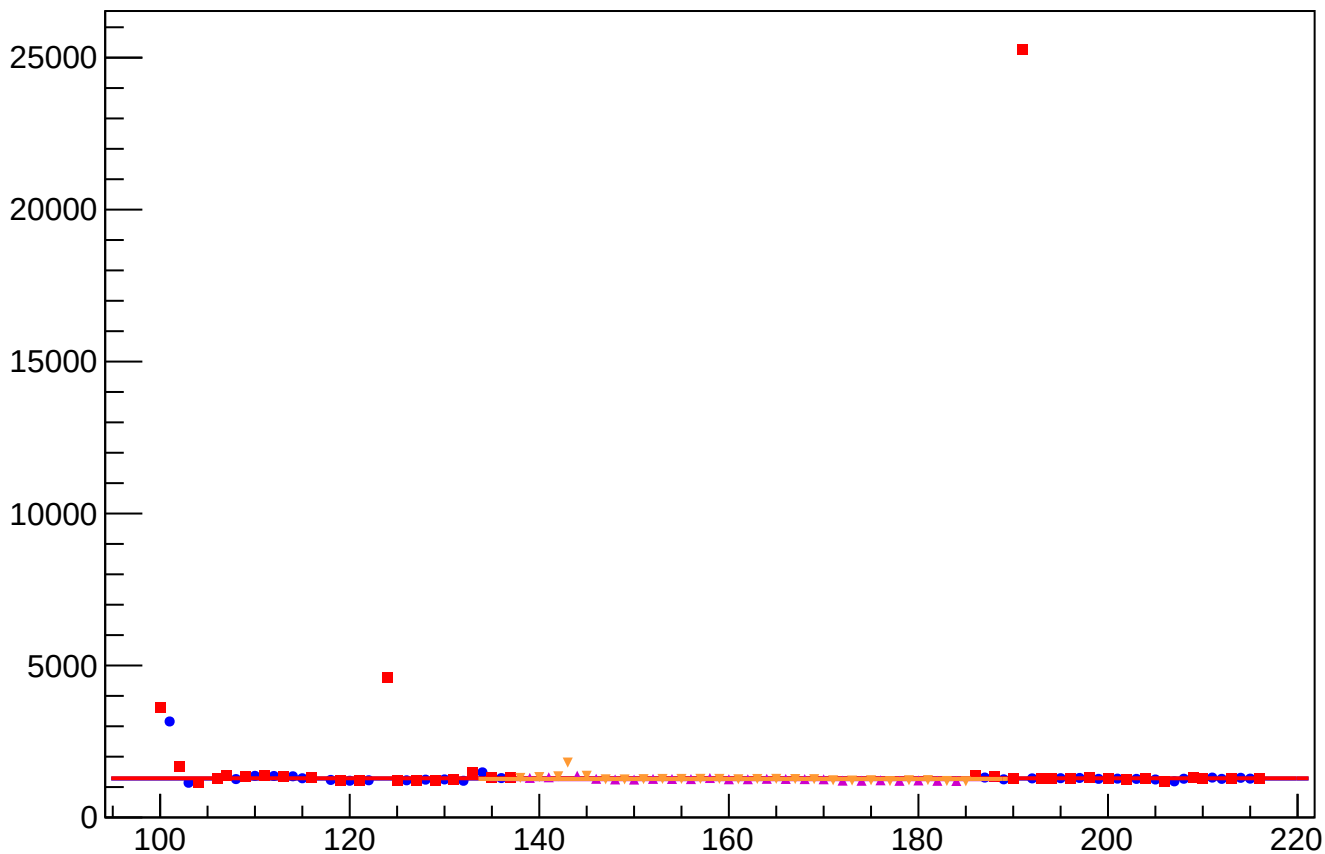
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

eigen\_cor\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1278.671 $\pm$ 0.207  $\chi^2$ /NDF: 530241.7/30

Left Out: 1266.968 $\pm$ 0.204  $\chi^2$ /NDF: 187545.6/24

Right Out: 1289.147 $\pm$ 0.208  $\chi^2$ /NDF: 489951.7/34

Left In: 1257.551 $\pm$ 0.208  $\chi^2$ /NDF: 36816.3/22

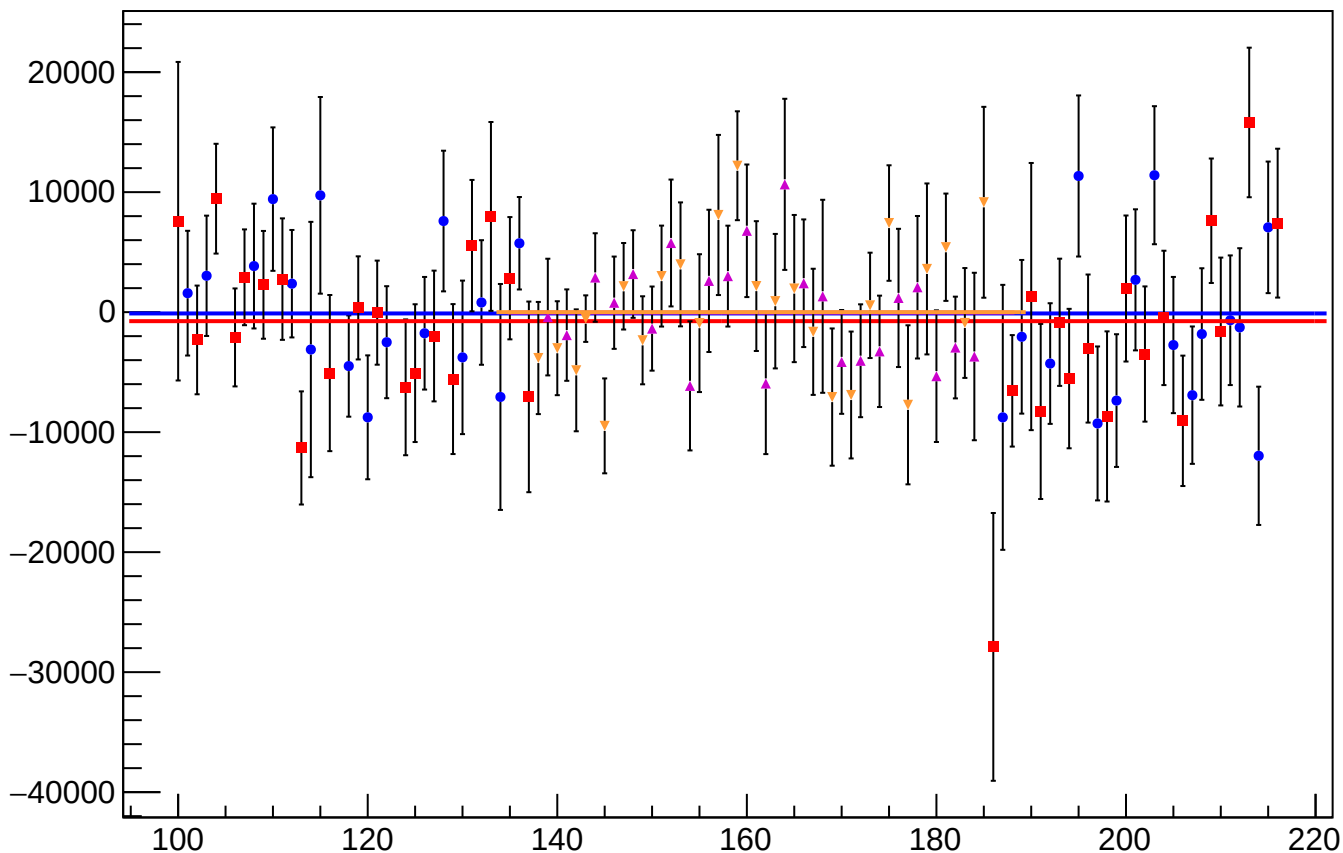
+ sign 1272.724 $\pm$ 0.145  $\chi^2$ /NDF: 719406.1/55

All: 1273.013 $\pm$ 0.103  $\chi^2$ /NDF: 1257719.6/11

- sign 1273.308 $\pm$ 0.147  $\chi^2$ /NDF: 538305.5/57



asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}$ : 43.6/34

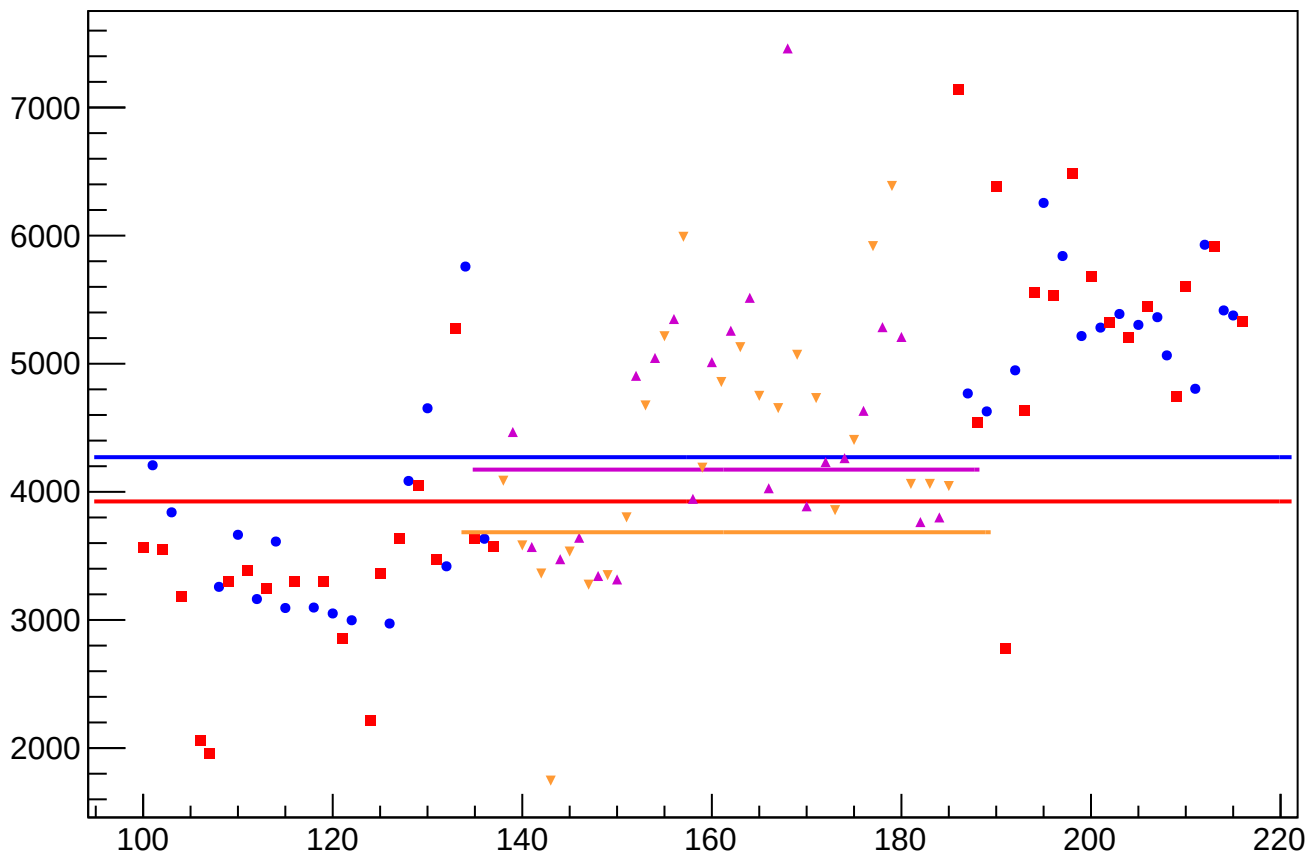
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}$ : 63.8/55

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}$ : 121.8/113

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4270.610 $\pm$ 0.709  $\chi^2/\text{NDF}$ : 2040584.0/30

Left Out: 3684.762 $\pm$ 0.627  $\chi^2/\text{NDF}$ : 3693687.2/24

Right Out: 3925.142 $\pm$ 0.660  $\chi^2/\text{NDF}$ : 3543440.7/34

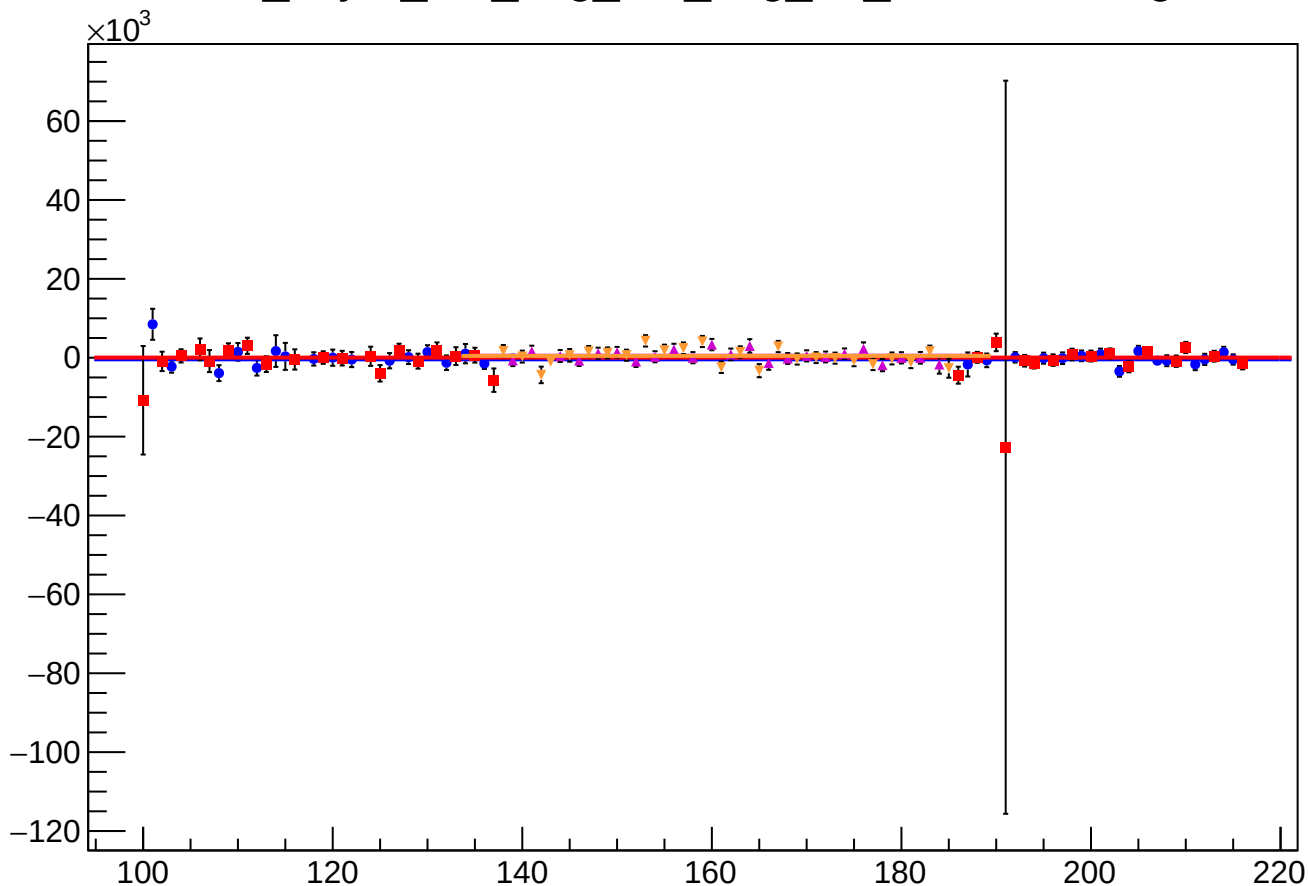
Left In: 4173.550 $\pm$ 0.704  $\chi^2/\text{NDF}$ : 1274967.5/22

+ sign 3941.950 $\pm$ 0.470  $\chi^2/\text{NDF}$ : 6117732.5/55

All: 3990.434 $\pm$ 0.336  $\chi^2/\text{NDF}$ : 11024271.5/100

- sign 4041.444 $\pm$ 0.482  $\chi^2/\text{NDF}$ : 4884655.4/57

dit\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.504 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

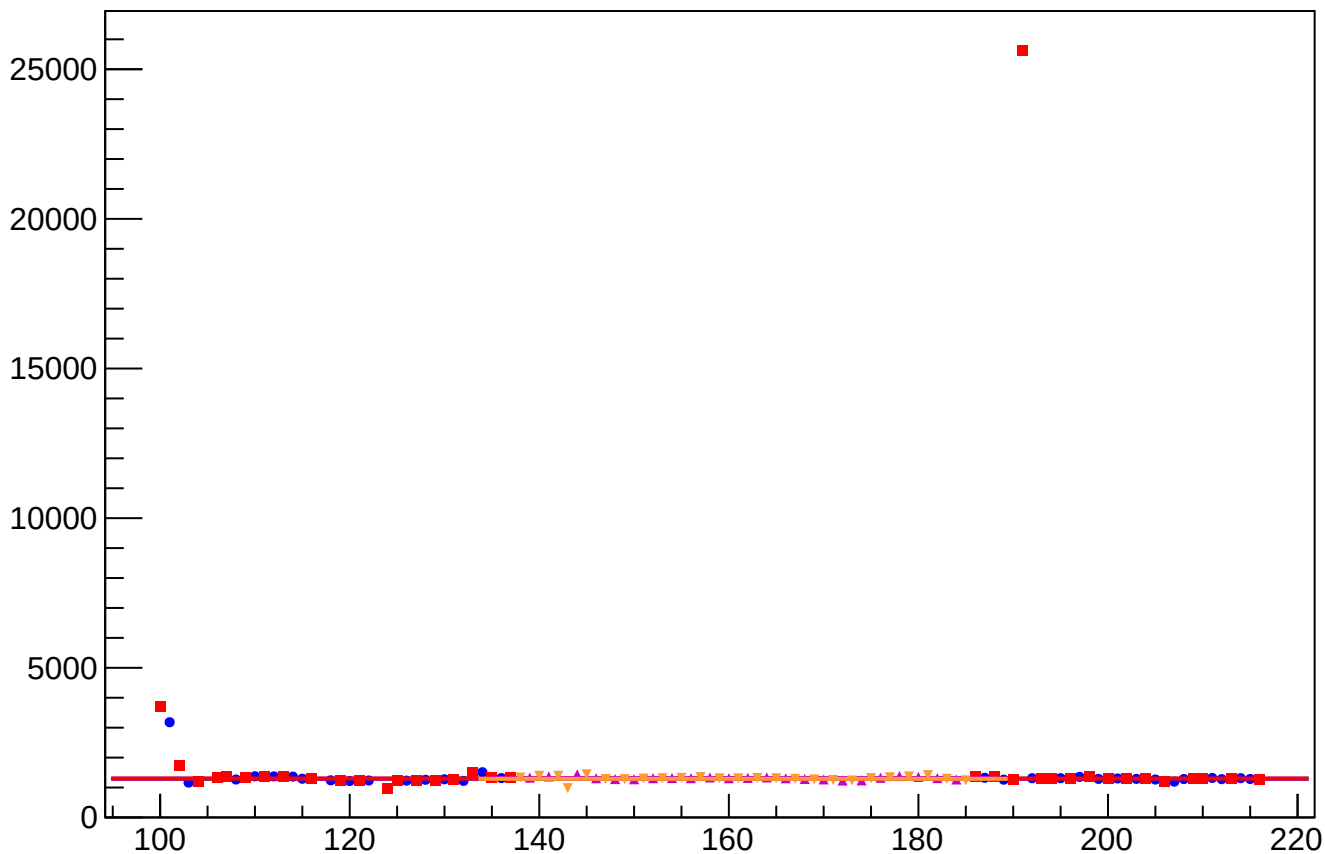
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.262 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.600 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

dit\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1294.797 $\pm$ 0.210  $\chi^2$ /NDF: 530209.2/30

Left Out: 1291.211 $\pm$ 0.208  $\chi^2$ /NDF: 230735.1/24

Right Out: 1299.977 $\pm$ 0.210  $\chi^2$ /NDF: 378886.7/34

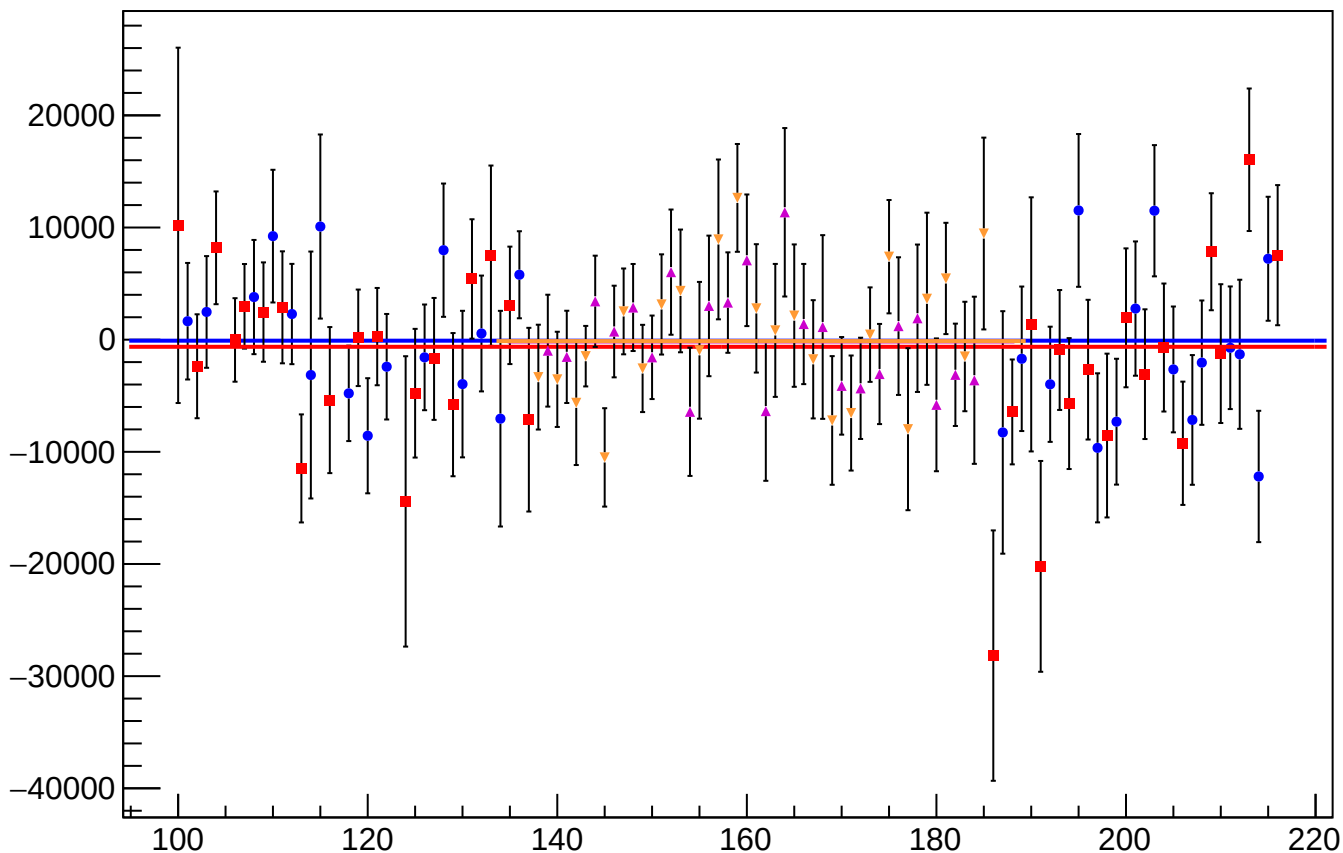
Left In: 1314.006 $\pm$ 0.217  $\chi^2$ /NDF: 43044.7/22

+ sign 1292.987 $\pm$ 0.148  $\chi^2$ /NDF: 761091.5/55

All: 1299.727 $\pm$ 0.106  $\chi^2$ /NDF: 1189428.5/11

- sign 1306.754 $\pm$ 0.151  $\chi^2$ /NDF: 424089.3/57

asym\_at1\_avg\_at2\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $-89.752 \pm 1008.403$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.939 \pm 949.479$   $\chi^2/\text{NDF}$ : 45.2/34

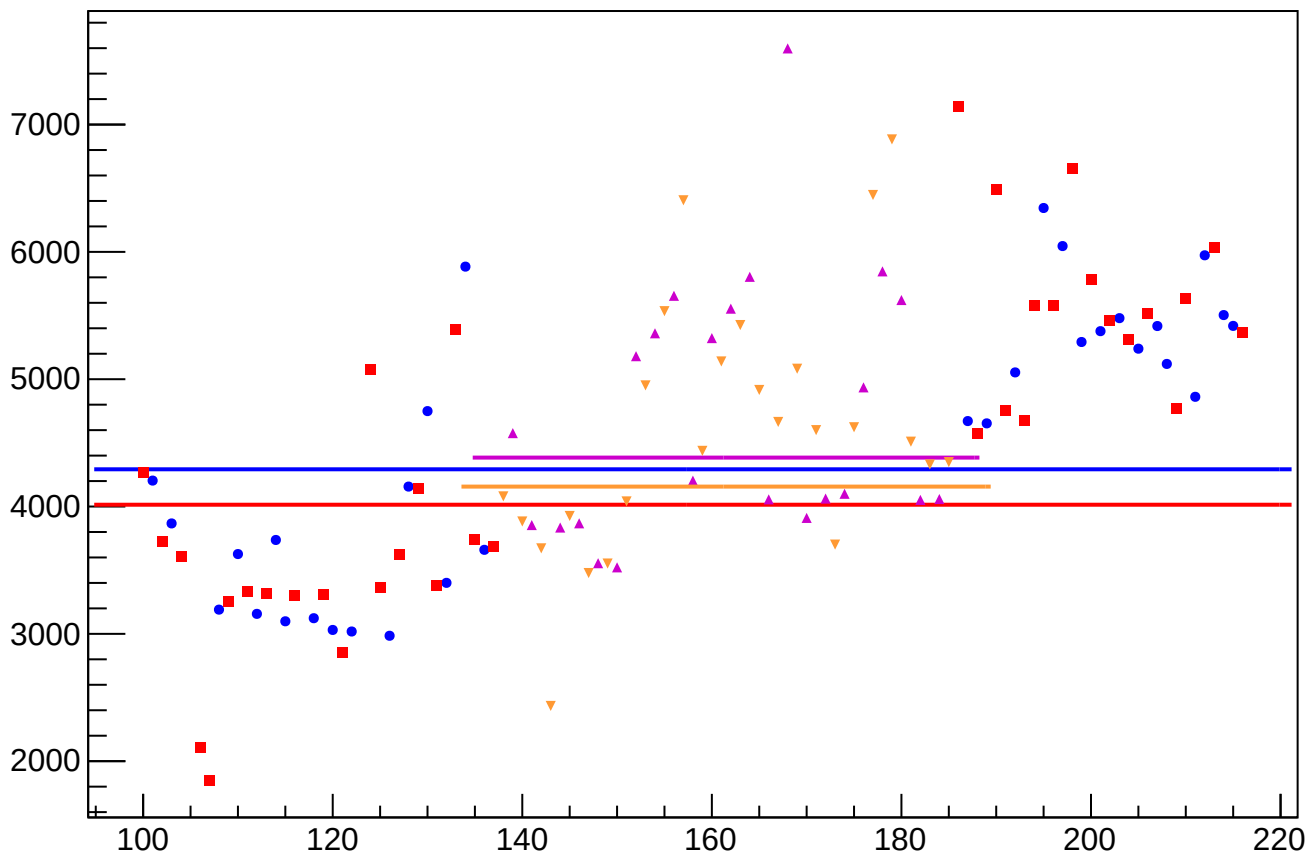
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.101 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.031 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_at1\_avg\_at2\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 4292.473+/-0.713  $\chi^2/\text{NDF}$ : 2142067.4/30

Left Out: 4156.582+/-0.691  $\chi^2/\text{NDF}$ : 2080766.1/24

Right Out: 4014.174+/-0.671  $\chi^2/\text{NDF}$ : 3581136.8/34

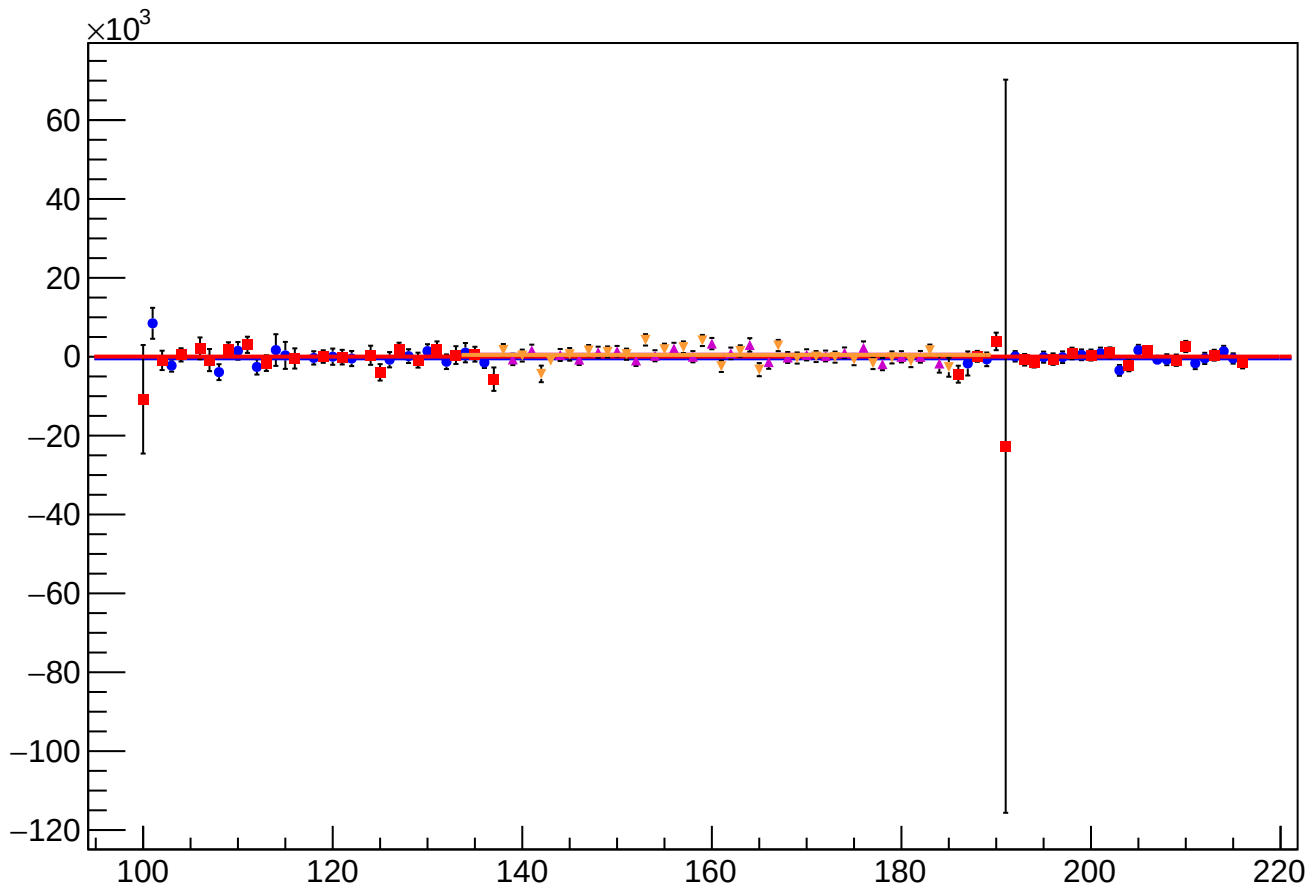
Left In: 4384.323+/-0.739  $\chi^2/\text{NDF}$ : 1255470.8/22

+ sign 4222.395+/-0.496  $\chi^2/\text{NDF}$ : 4241563.6/55

All: 4201.966+/-0.351  $\chi^2/\text{NDF}$ : 9218946.9/11

- sign 4181.472+/-0.497  $\chi^2/\text{NDF}$ : 4973988.3/57

eigen\_dit\_asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.933 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.505 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

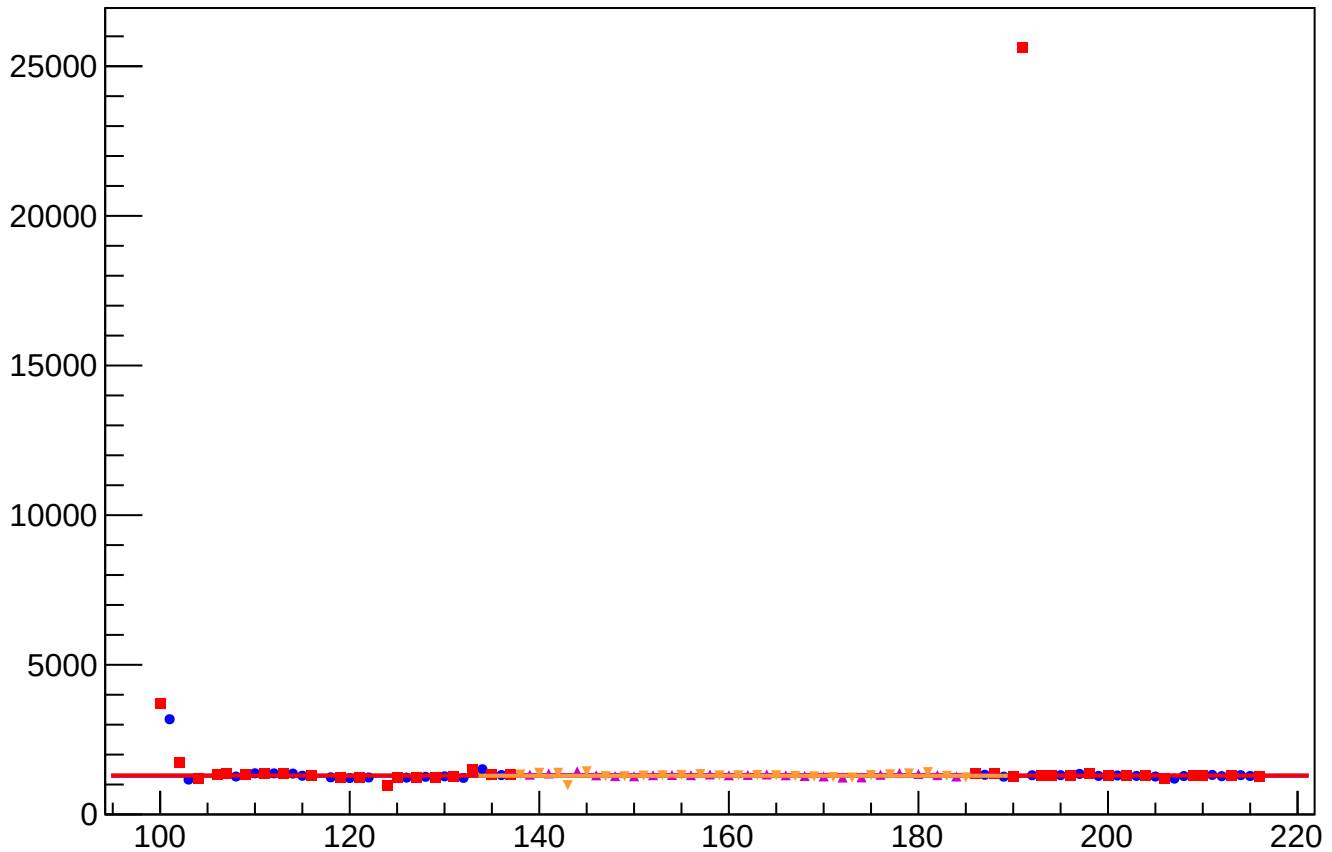
Left In:  $503.558 \pm 307.056$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.264 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.602 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

eigen\_dit\_asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 1294.797 $\pm$ 0.210  $\chi^2$ /NDF: 530209.3/30

Left Out: 1291.212 $\pm$ 0.208  $\chi^2$ /NDF: 230737.6/24

Right Out: 1299.977 $\pm$ 0.210  $\chi^2$ /NDF: 378886.8/34

Left In: 1314.007 $\pm$ 0.217  $\chi^2$ /NDF: 43046.8/22

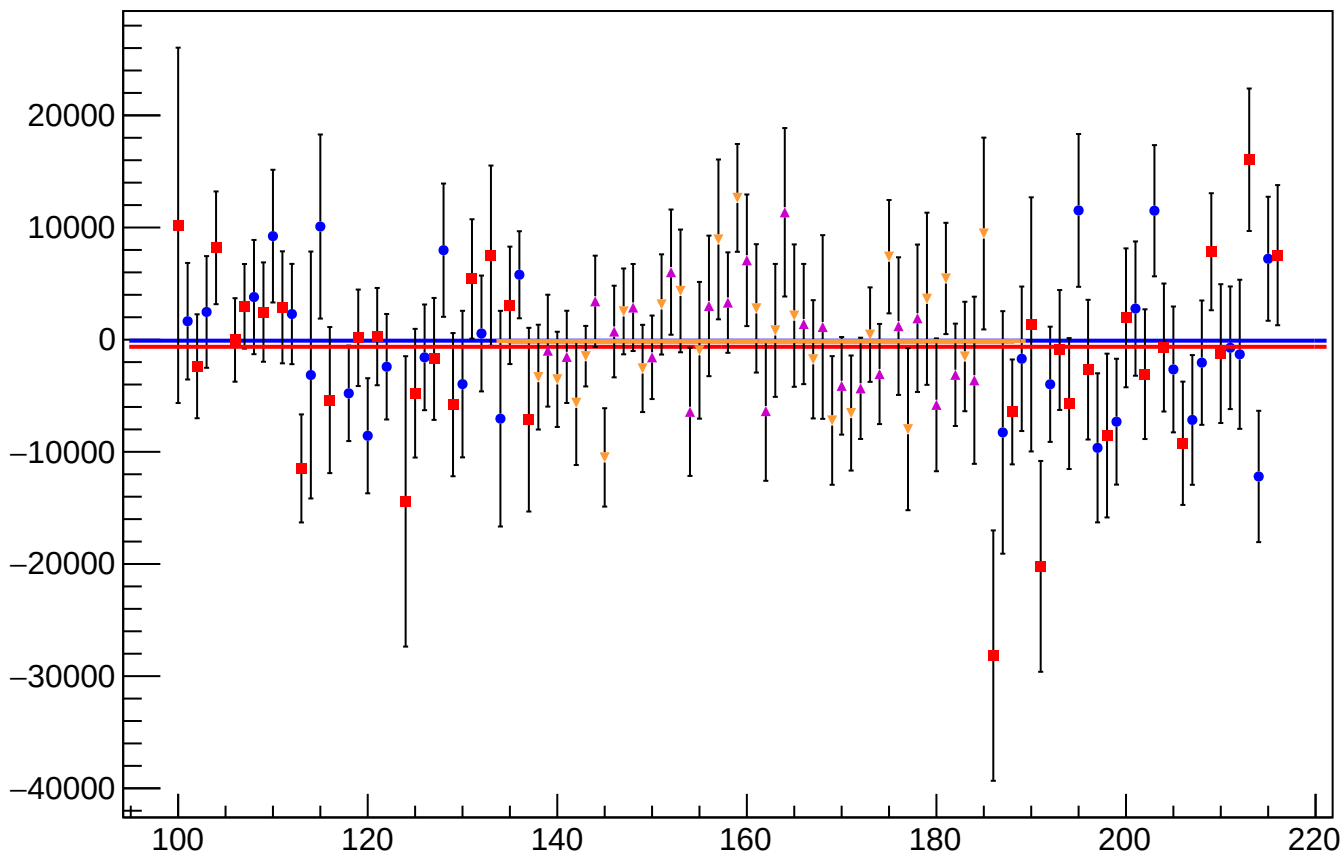
+ sign 1292.988 $\pm$ 0.148  $\chi^2$ /NDF: 761093.9/55

All: 1299.728 $\pm$ 0.106  $\chi^2$ /NDF: 1189433.6/11

- sign 1306.755 $\pm$ 0.151  $\chi^2$ /NDF: 424091.9/57



asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-89.755 \pm 1008.402$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.934 \pm 949.478$   $\chi^2/\text{NDF}$ : 45.2/34

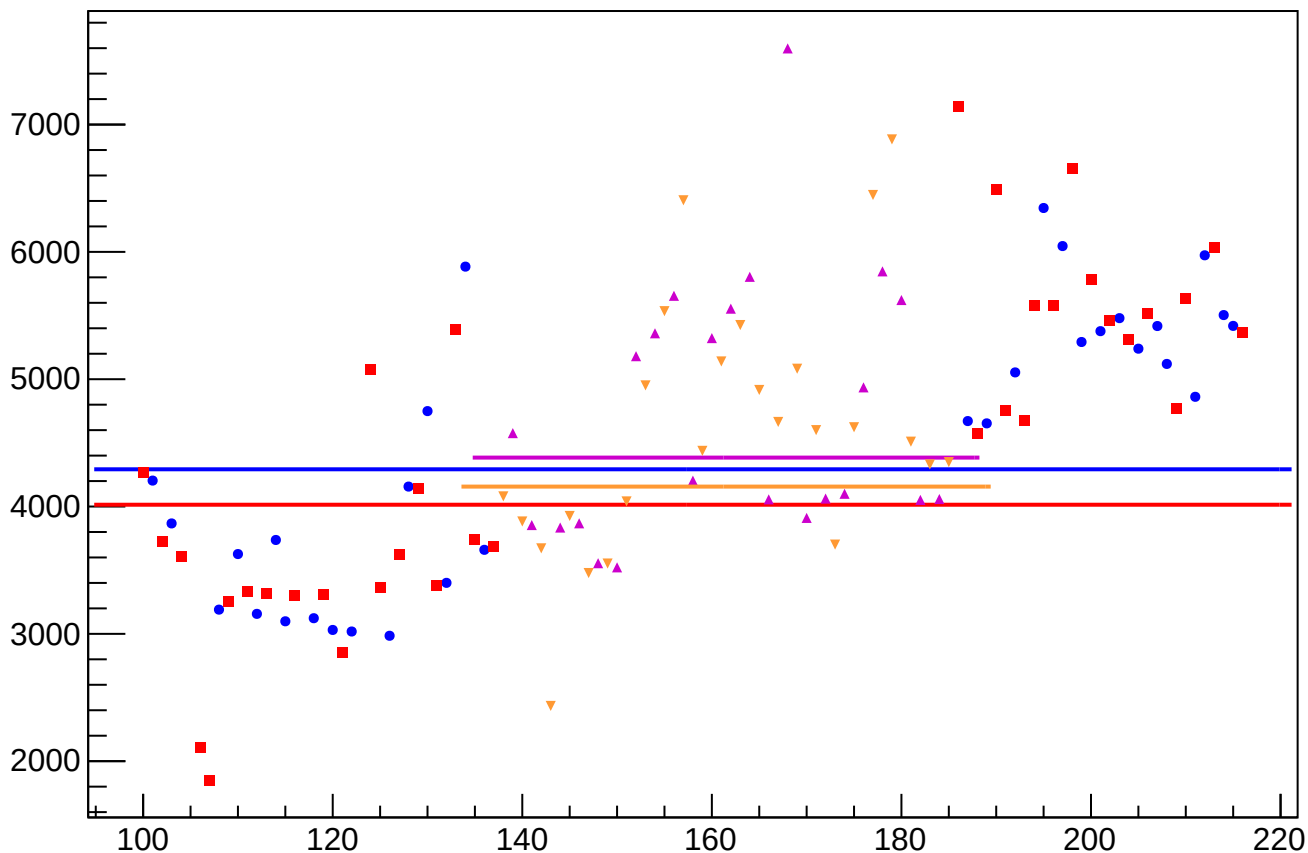
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.102 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.029 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4292.468 $\pm$ 0.713  $\chi^2$ /NDF: 2142105.7/30

Left Out: 4156.588 $\pm$ 0.691  $\chi^2$ /NDF:2080769.0/24

Right Out: 4014.168 $\pm$ 0.671  $\chi^2$ /NDF: 3581172.3/34

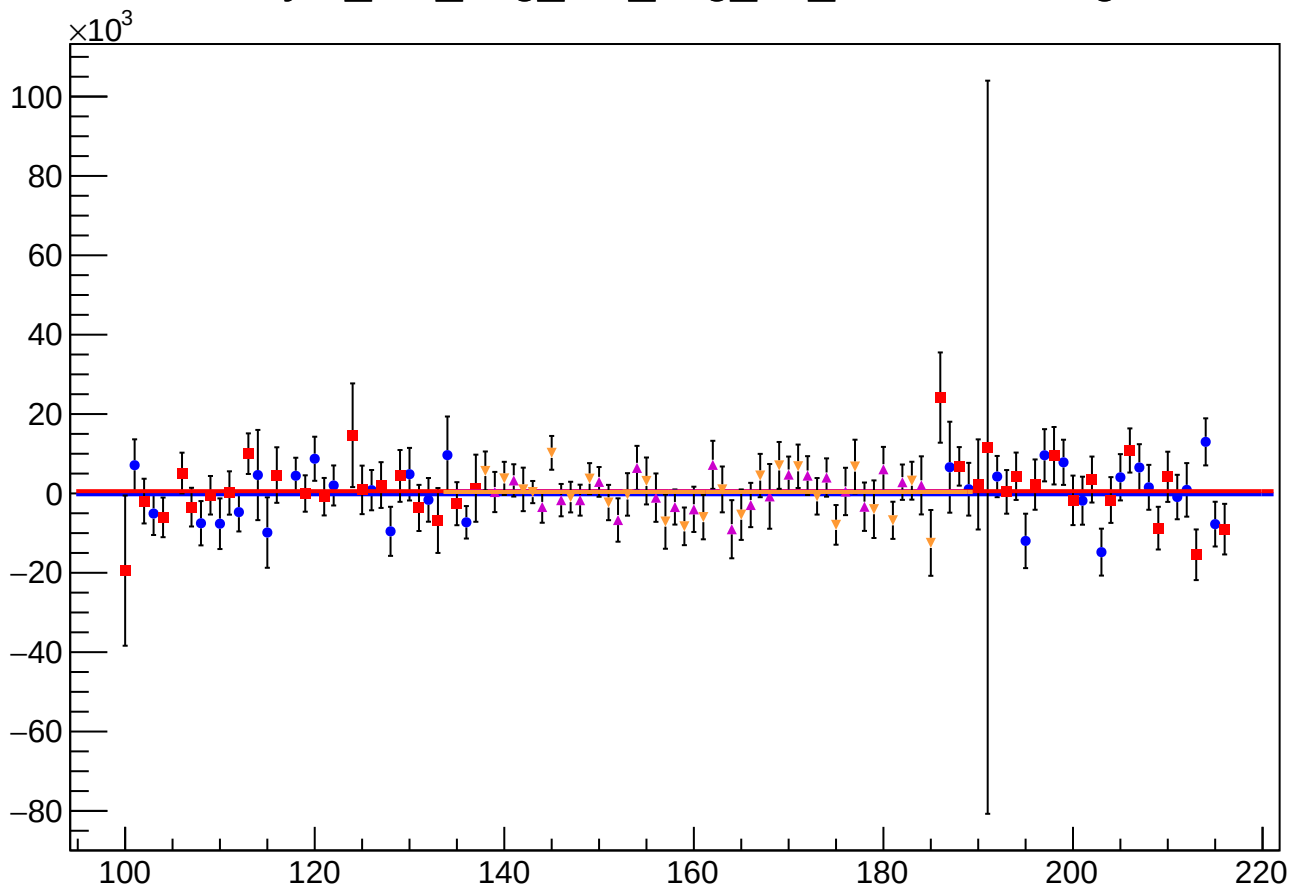
Left In: 4384.329 $\pm$ 0.739  $\chi^2$ /NDF:1255475.0/22

+ sign 4222.396 $\pm$ 0.496  $\chi^2$ /NDF: 4241601.7/55

All: 4201.966 $\pm$ 0.351  $\chi^2$ /NDF: 9219034.3/11

- sign 4181.472 $\pm$ 0.497  $\chi^2$ /NDF: 4974037.3/57

# asym\_at1\_avg\_at2\_avg\_dd\_mean vs Slug



Right In:  $-220.989 \pm 1060.049$   $\chi^2/\text{NDF}$ : 41.4/30

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $567.702 \pm 1026.015$   $\chi^2/\text{NDF}$ : 35.5/34

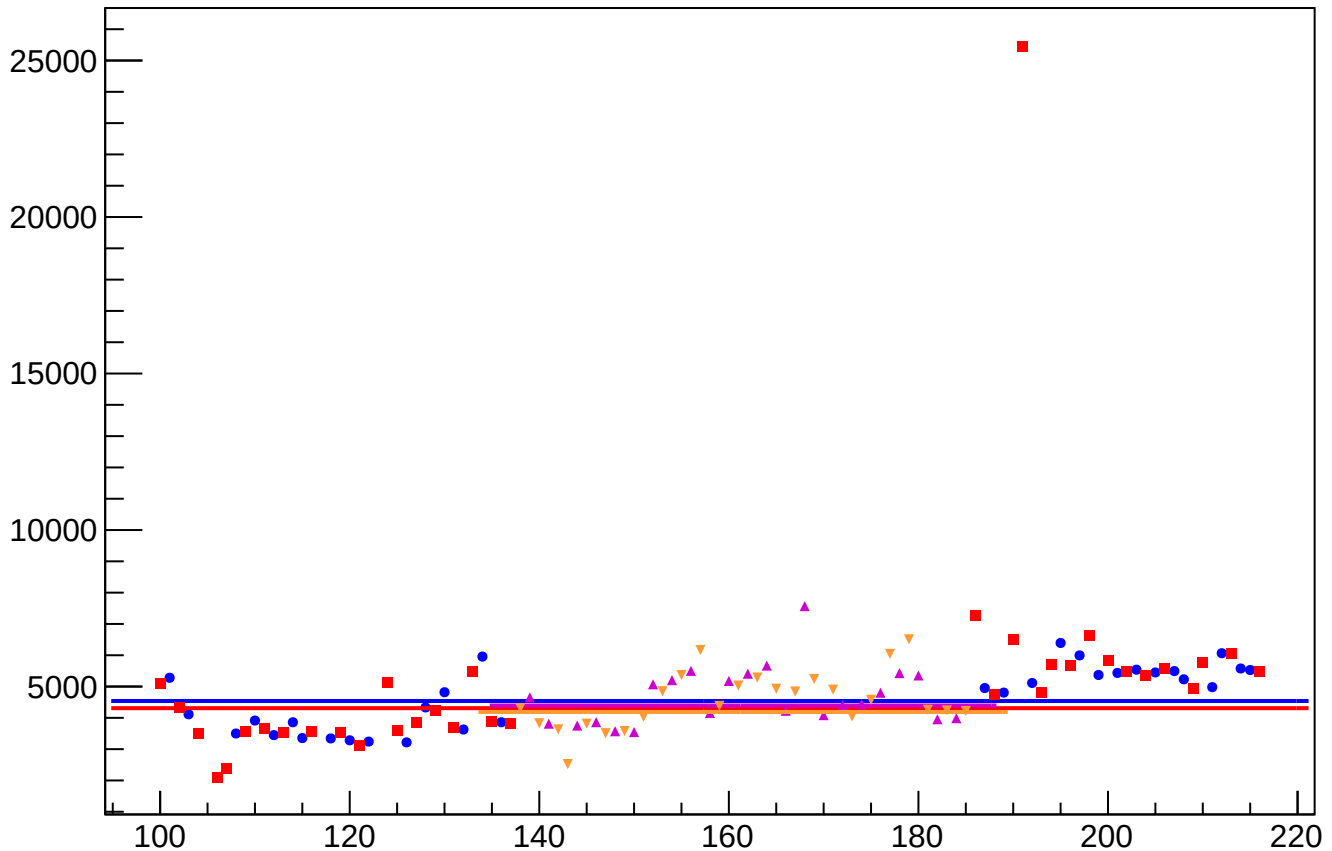
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $93.672 \pm 719.547$   $\chi^2/\text{NDF}$ : 69.2/55

All:  $309.682 \pm 513.150$   $\chi^2/\text{NDF}$ : 118.8/113

- sign  $533.246 \pm 732.021$   $\chi^2/\text{NDF}$ : 49.4/57

# asym\_at1\_avg\_at2\_avg\_dd\_rms vs Slug



Right In: 4538.146+/-0.750  $\chi^2/\text{NDF}$ : 1724125.7/30

Left Out: 4187.848+/-0.693  $\chi^2/\text{NDF}$ :1796345.9/24

Right Out: 4309.396+/-0.720  $\chi^2/\text{NDF}$ : 2840615.1/34

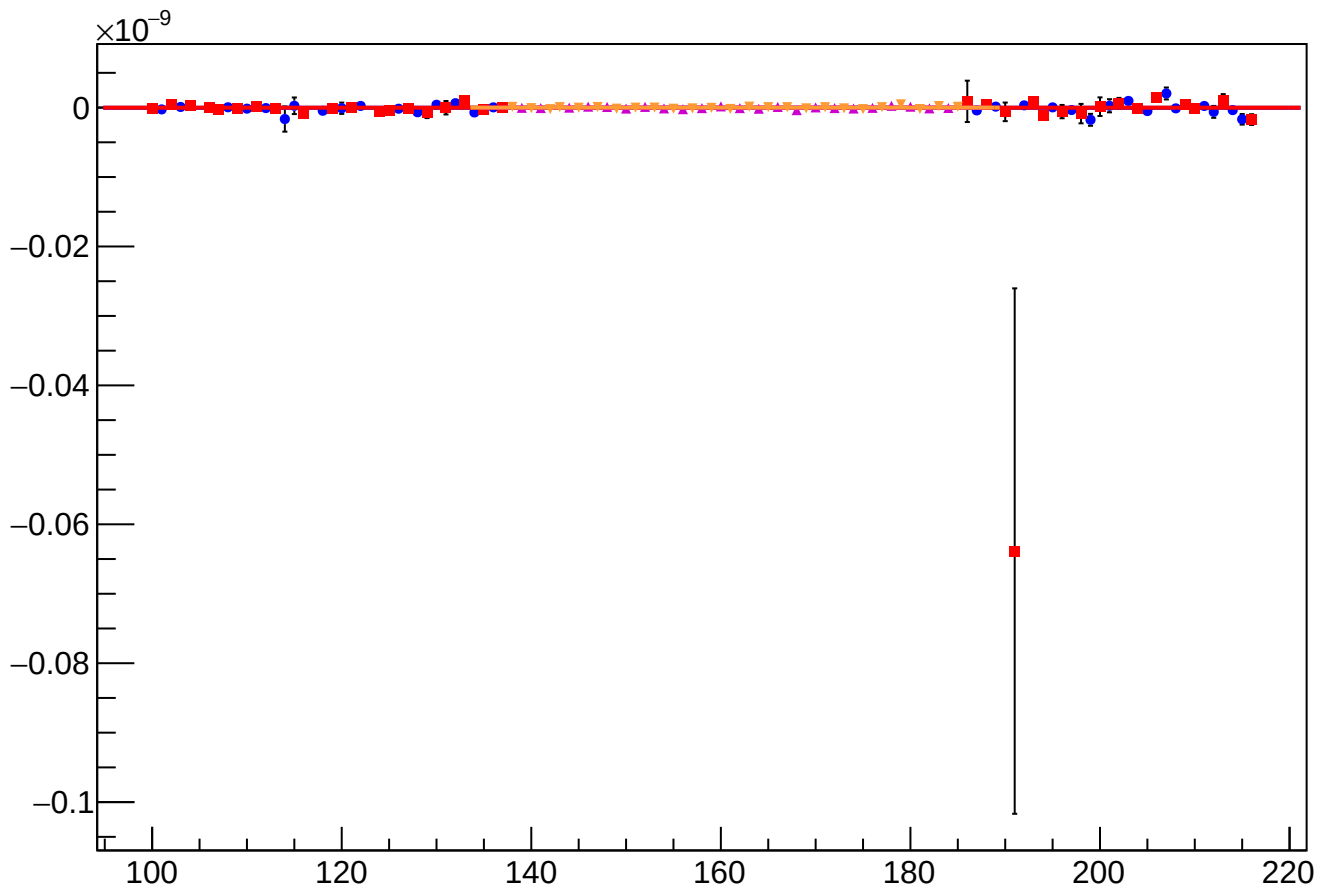
Left In: 4394.324+/-0.739  $\chi^2/\text{NDF}$ :1088394.9/22

+ sign 4349.249+/-0.509  $\chi^2/\text{NDF}$ : 3638244.4/55

All: 4349.989+/-0.362  $\chi^2/\text{NDF}$ : 7574040.4/11

- sign 4350.748+/-0.515  $\chi^2/\text{NDF}$ : 3935791.7/57

asym\_at1\_avg\_at2\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.4/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 30.5/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.3/34

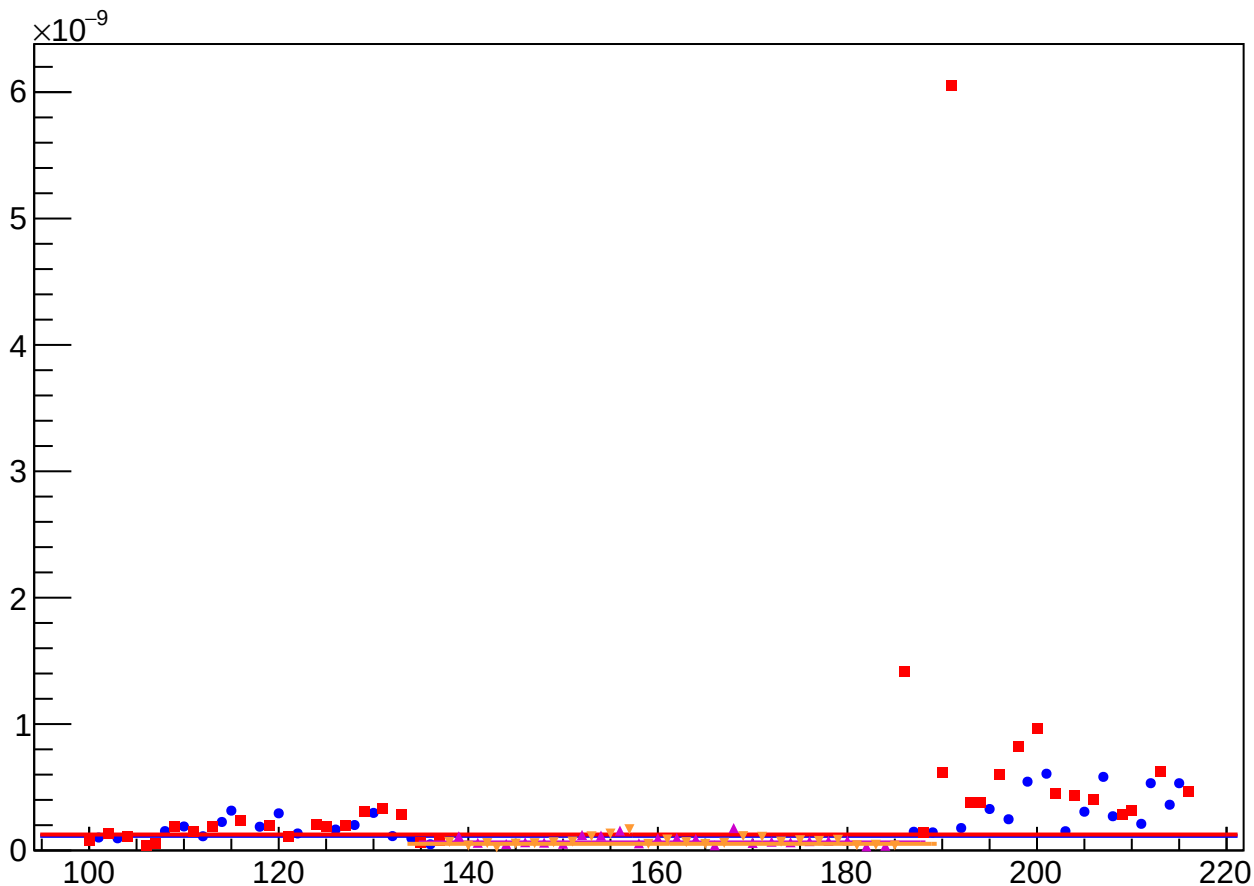
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 17.0/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 71.1/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 128.6/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 57.3/57

asym\_at1\_avg\_at2\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5930476.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2628519.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7898222.6/34

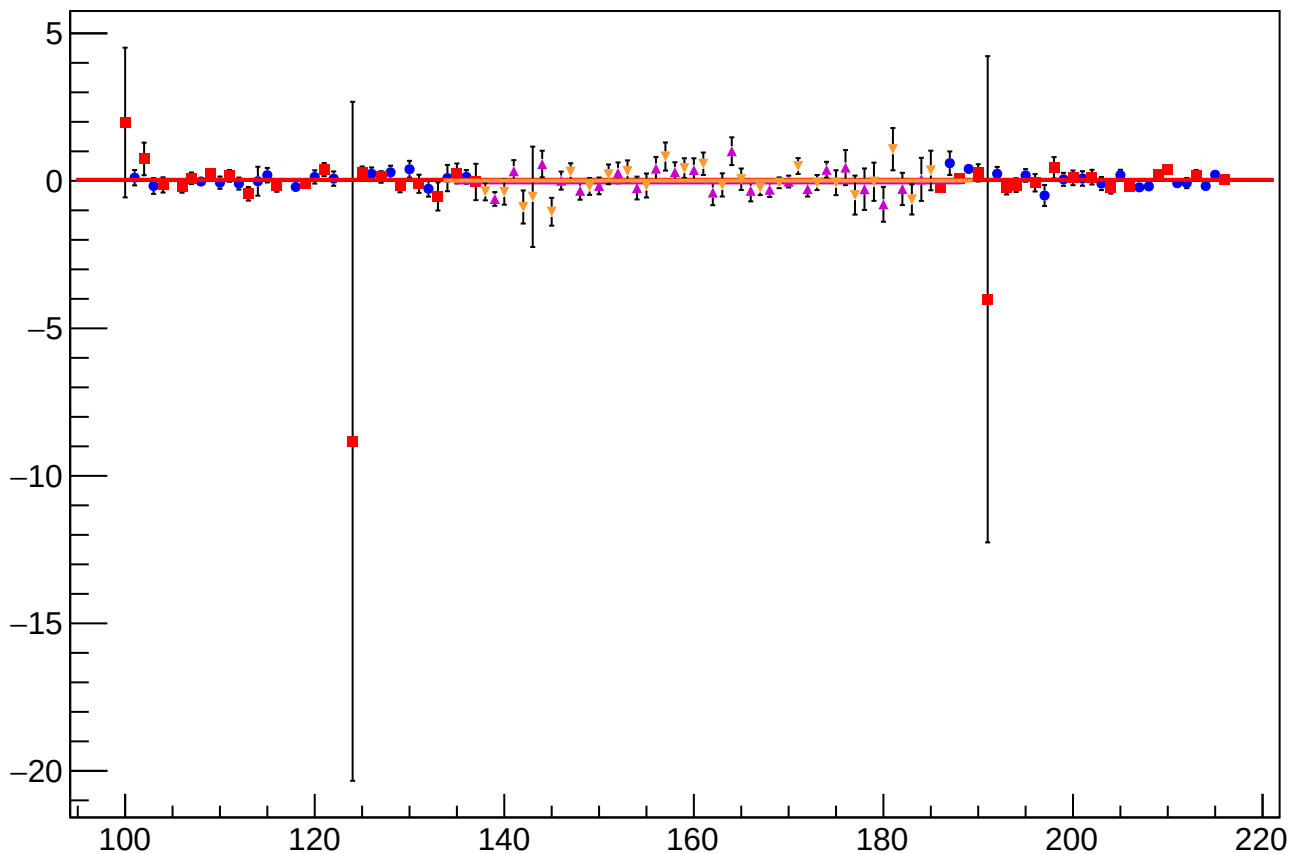
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1788279.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10866985.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22695732.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11541517.9/57

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

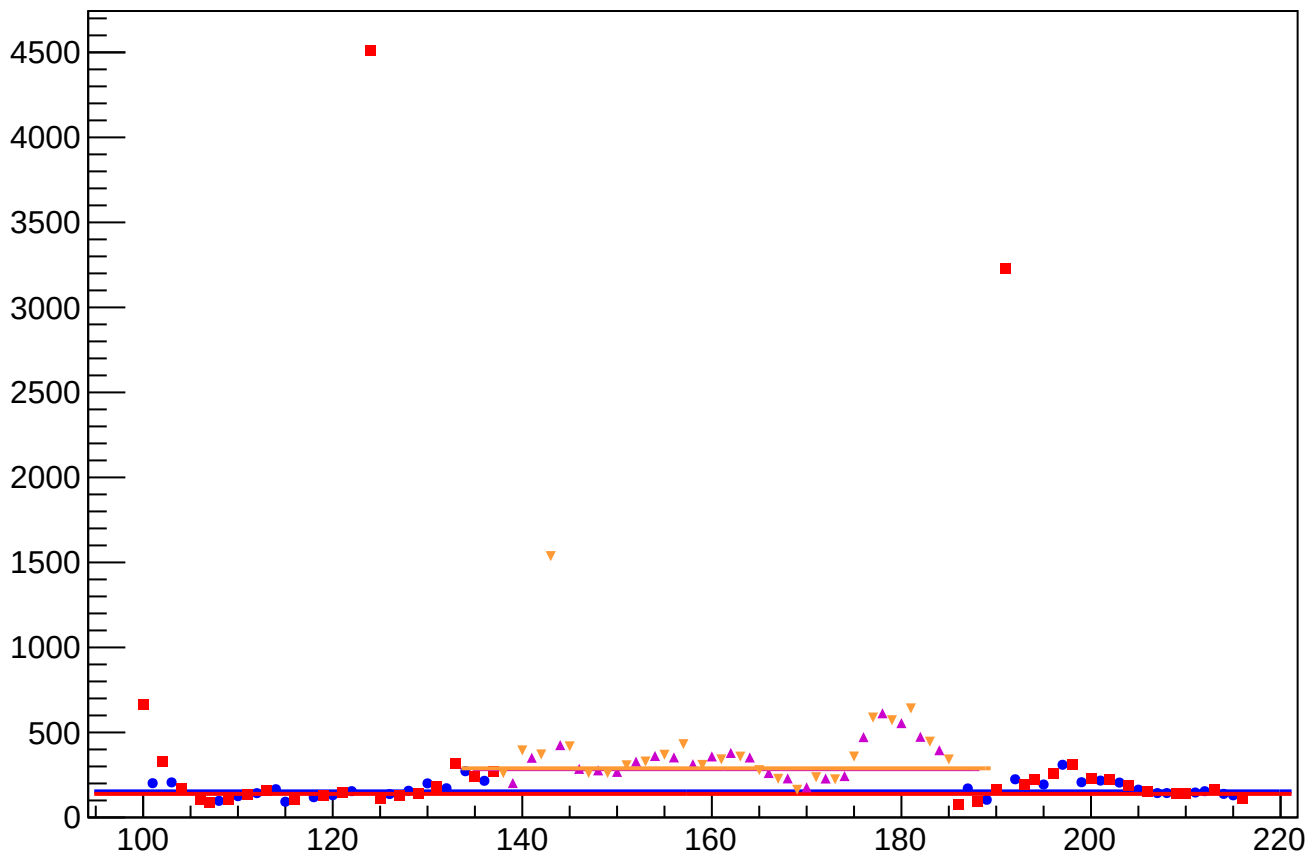
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.295 $\pm$ 0.026  $\chi^2$ /NDF: 2349343.2/30

Left Out: 288.922 $\pm$ 0.050  $\chi^2$ /NDF: 4648197.0/24

Right Out: 138.738 $\pm$ 0.024  $\chi^2$ /NDF: 4792212.8/34

Left In: 284.168 $\pm$ 0.050  $\chi^2$ /NDF: 3077521.1/22

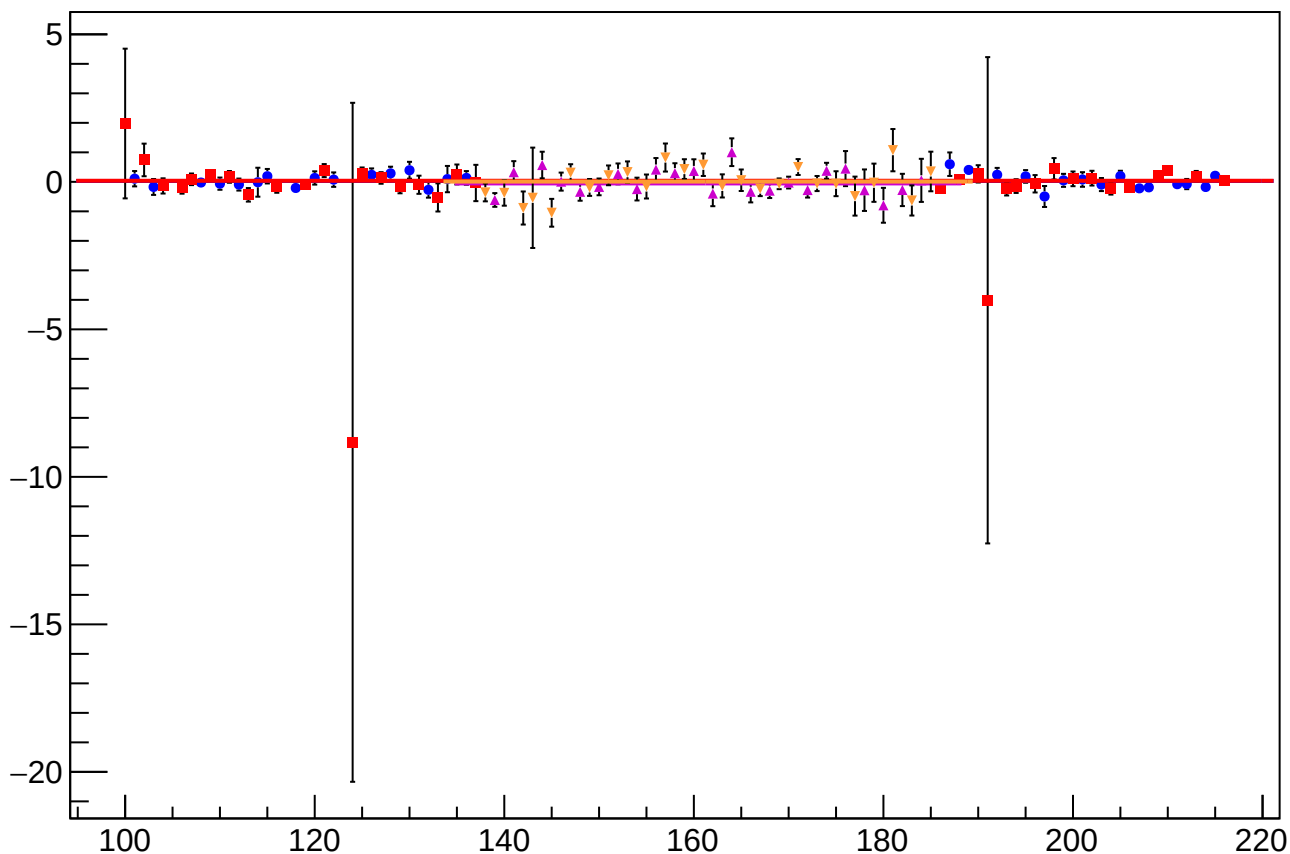
+ sign 182.019 $\pm$ 0.023  $\chi^2$ /NDF: 12746955.7/55

All: 174.101 $\pm$ 0.016  $\chi^2$ /NDF: 27716978.1/11

- sign 166.968 $\pm$ 0.022  $\chi^2$ /NDF: 14746883.6/57



asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

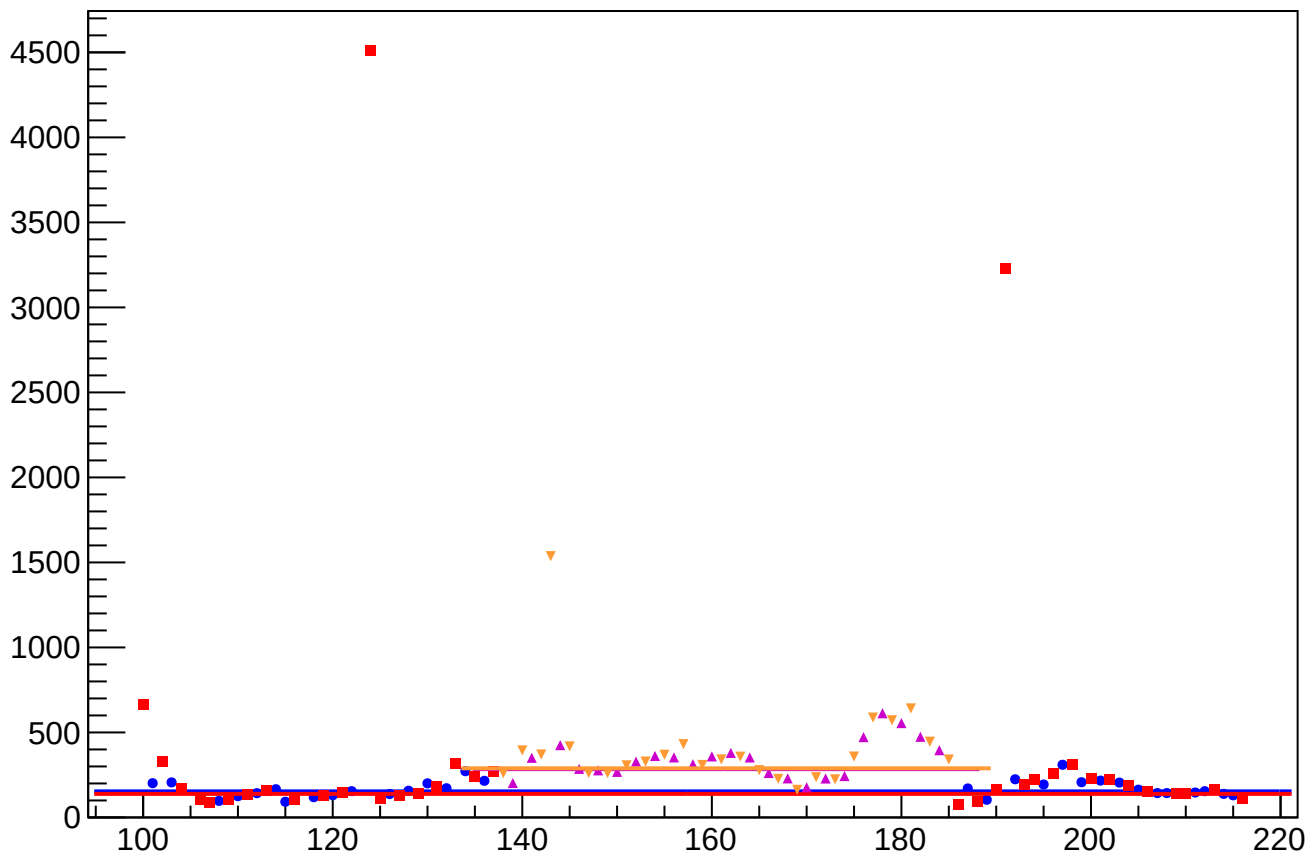
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_at1\_avg\_at2\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.295+/-0.026  $\chi^2/\text{NDF}$ : 2349343.2/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 138.738+/-0.024  $\chi^2/\text{NDF}$ : 4792212.8/34

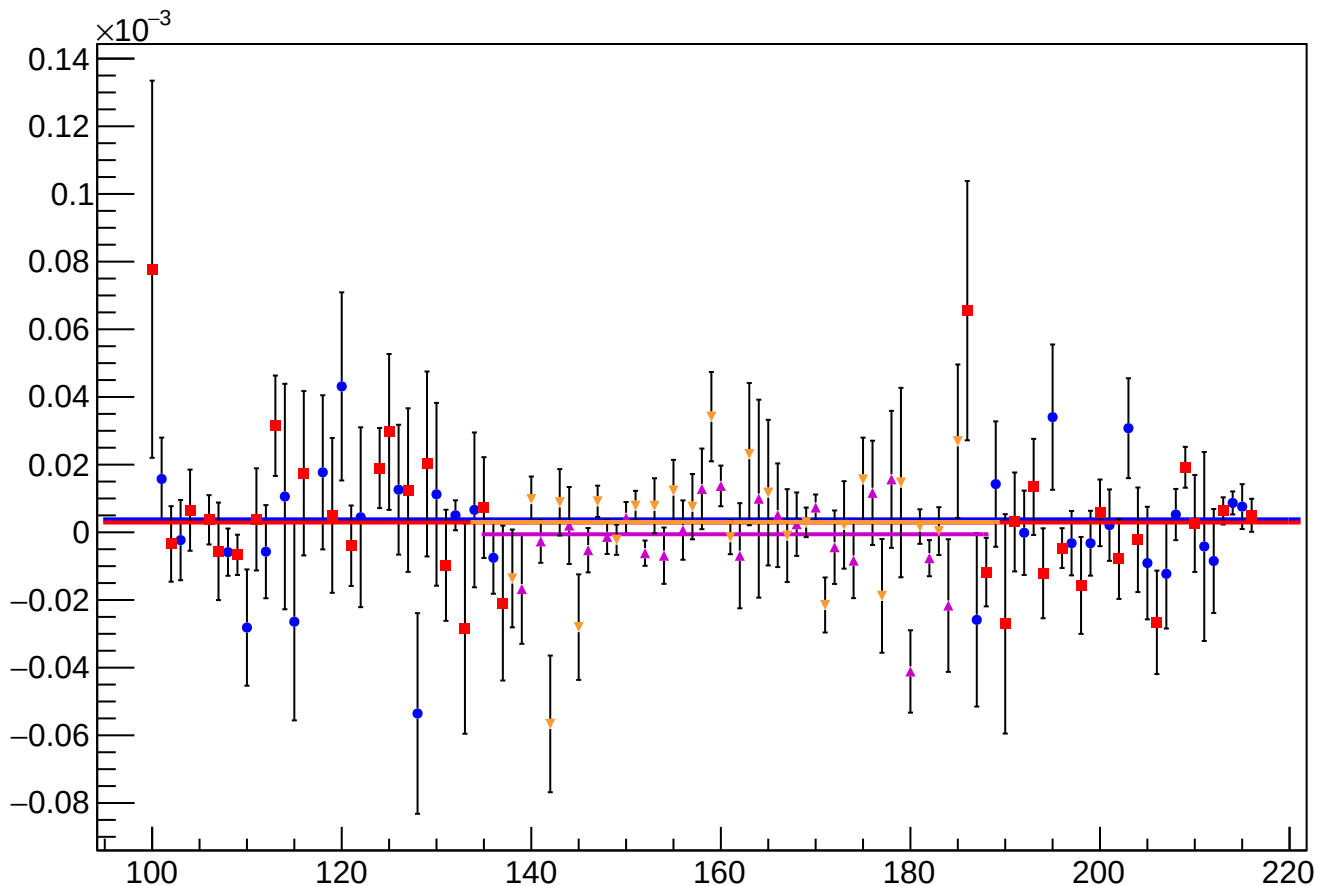
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12746955.7/55

All: 174.101+/-0.016  $\chi^2/\text{NDF}$ : 27716978.1/11

- sign 166.968+/-0.022  $\chi^2/\text{NDF}$ : 14746883.6/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:42.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/34

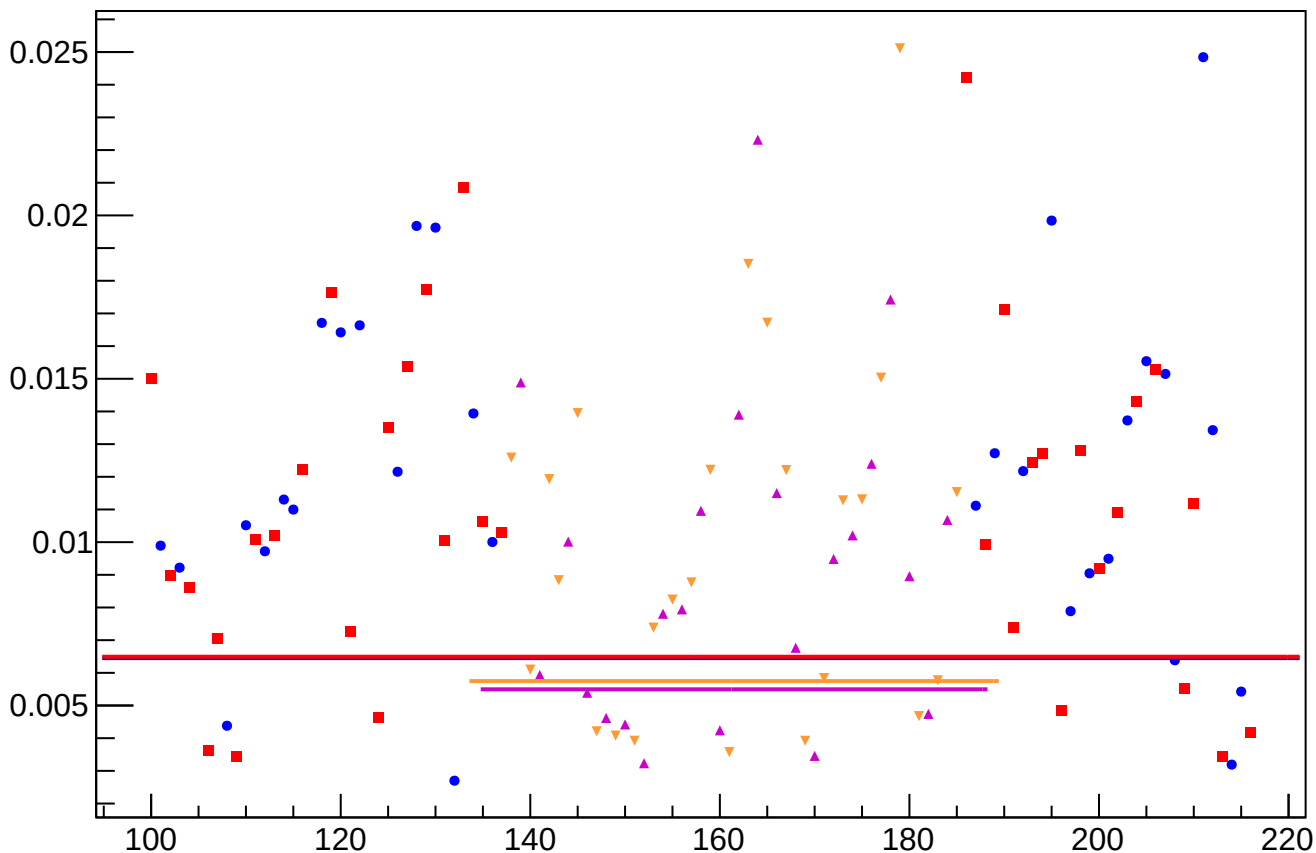
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:33.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 148.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.3/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 11320349.7/30

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8128513.8/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 9153023.7/34

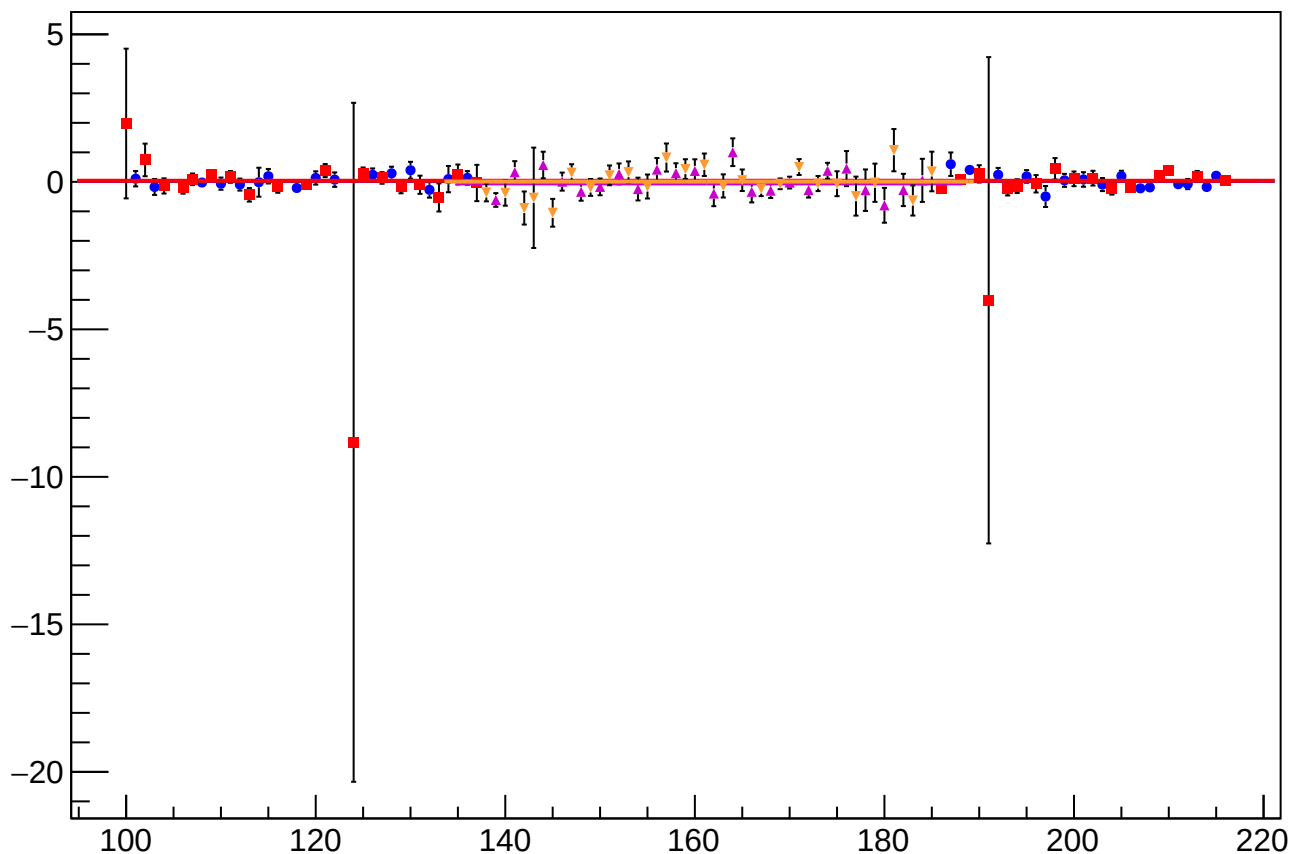
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6937299.0/22

+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 19625941.1/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 36100368.5/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 16465195.6/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

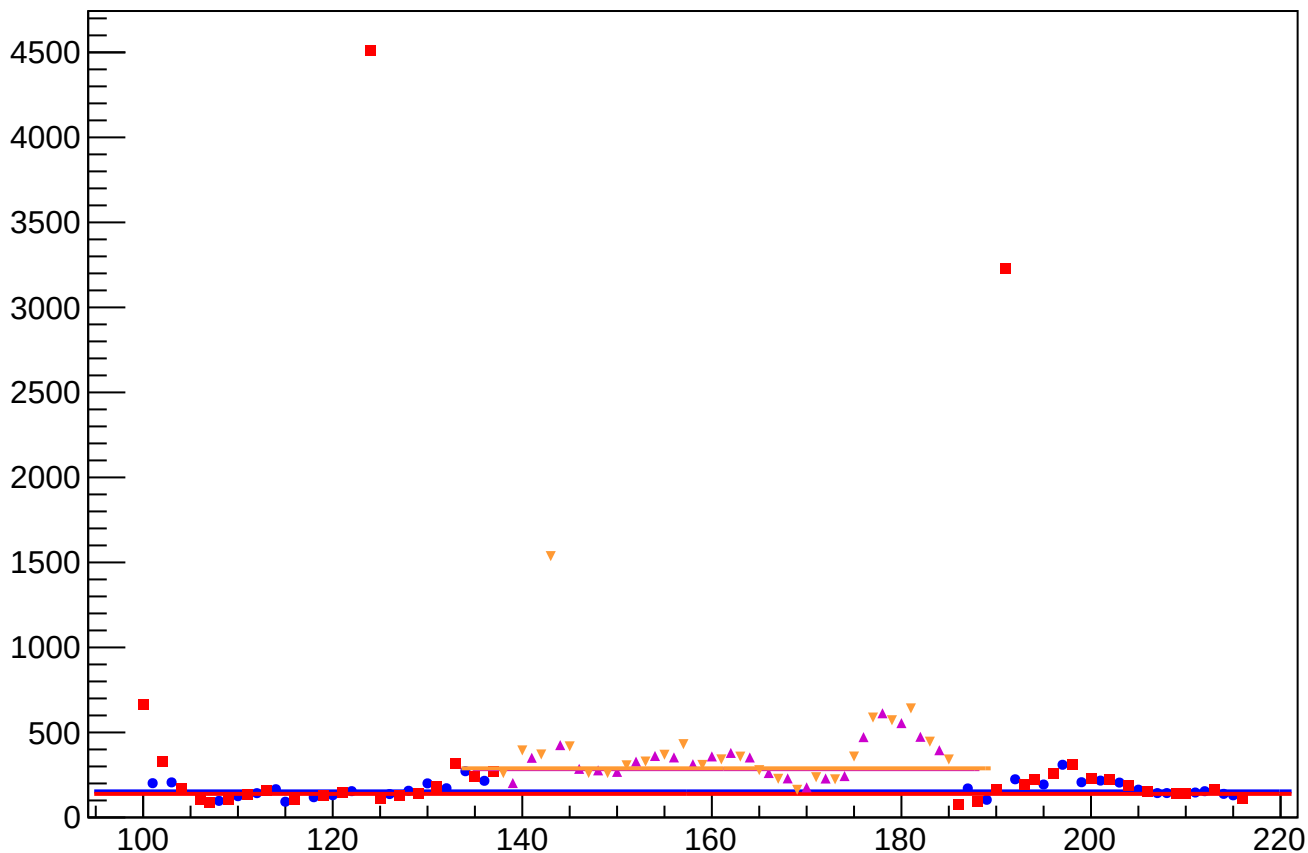
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.296+/-0.026  $\chi^2/\text{NDF}$ : 2349328.6/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 138.740+/-0.024  $\chi^2/\text{NDF}$ : 4792049.6/34

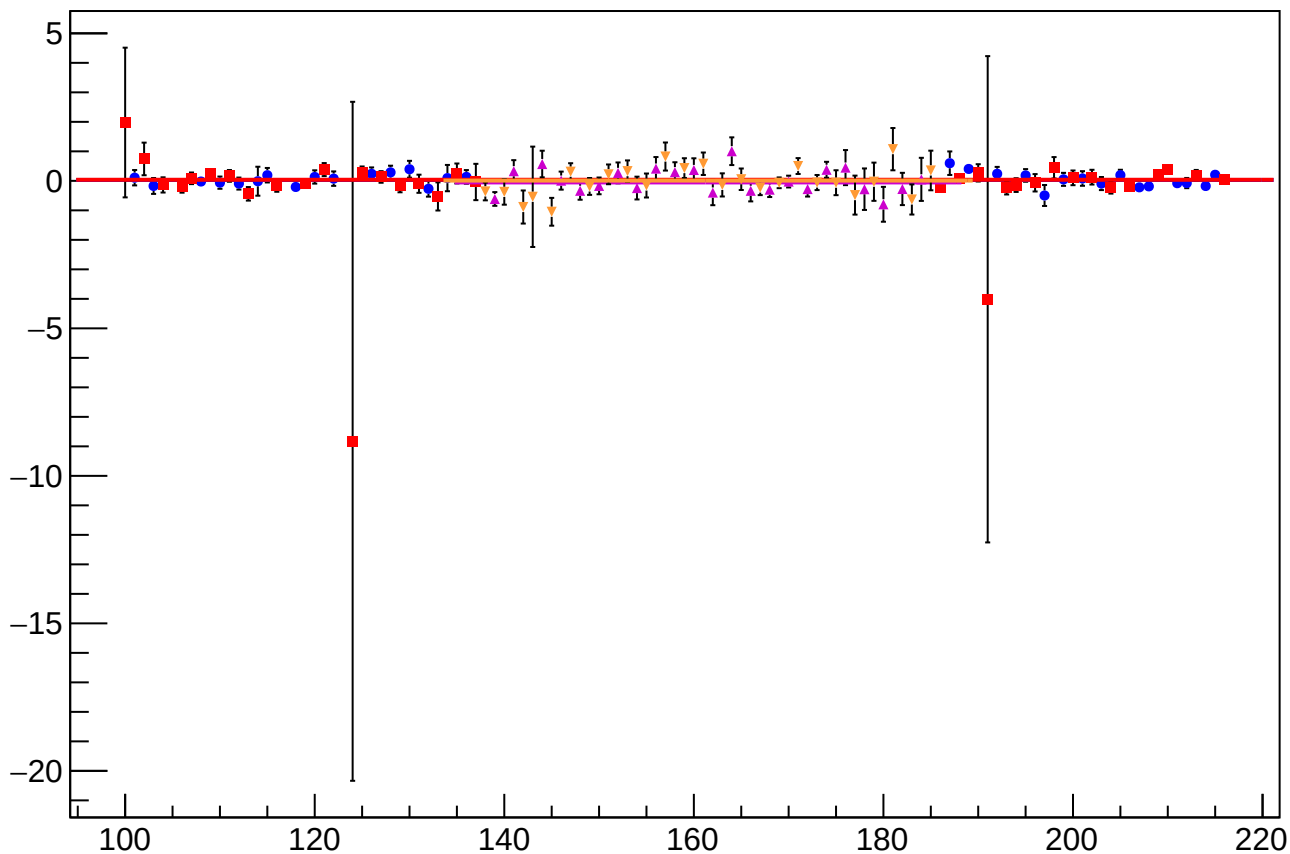
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12747066.0/55

All: 174.102+/-0.016  $\chi^2/\text{NDF}$ : 27716879.3/11

- sign 166.970+/-0.022  $\chi^2/\text{NDF}$ : 14746714.5/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

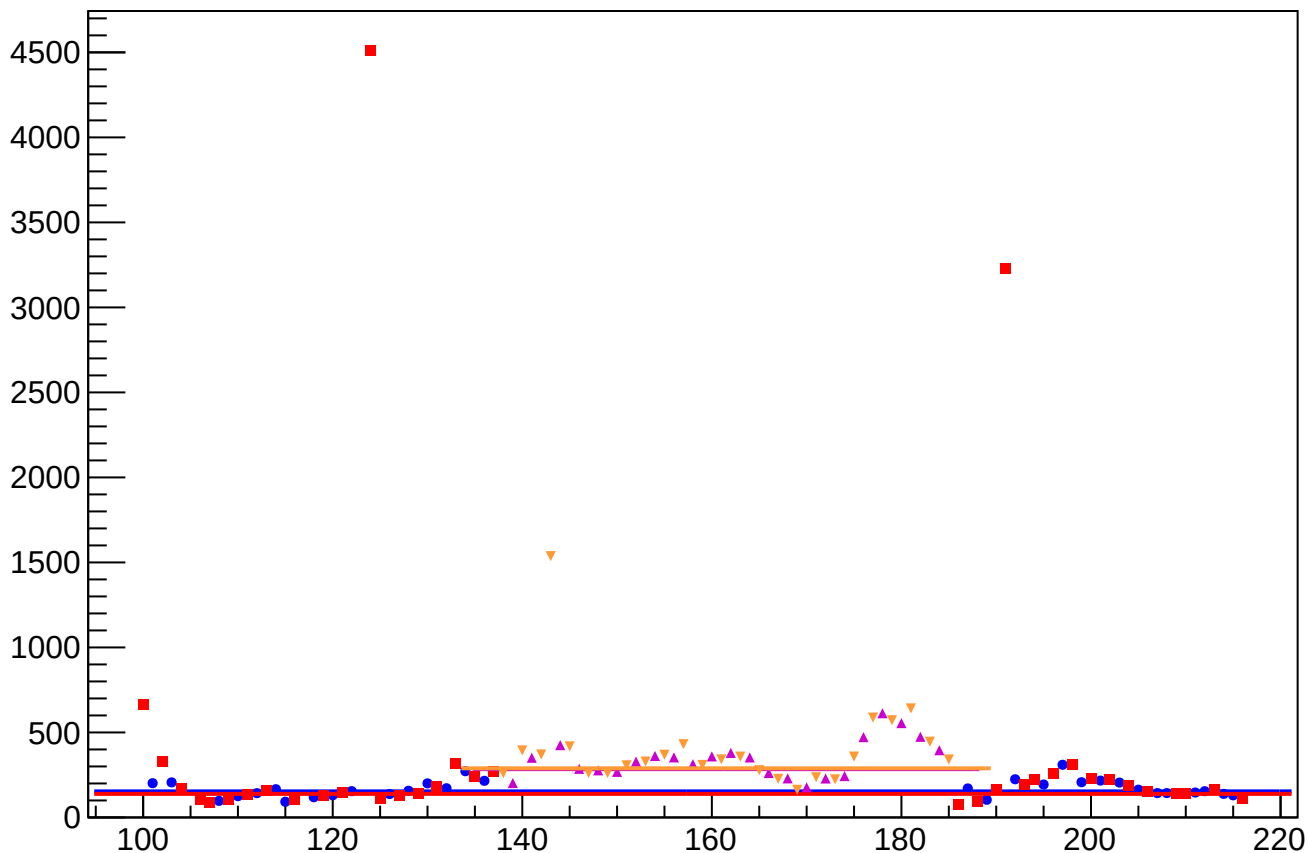
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.296+/-0.026  $\chi^2/\text{NDF}$ : 2349328.6/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 138.740+/-0.024  $\chi^2/\text{NDF}$ : 4792049.6/34

Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

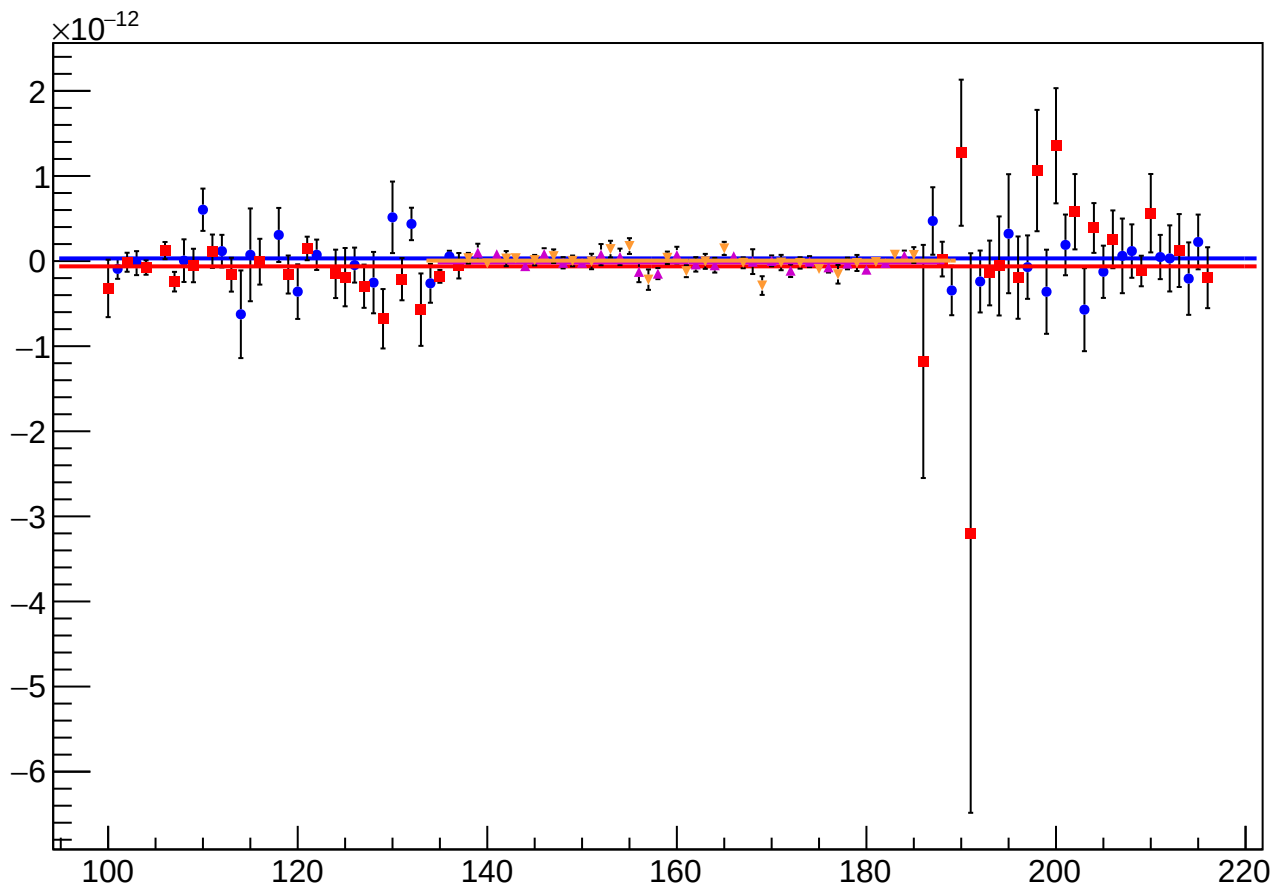
+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12747066.0/55

All: 174.102+/-0.016  $\chi^2/\text{NDF}$ : 27716879.3/11

- sign 166.970+/-0.022  $\chi^2/\text{NDF}$ : 14746714.5/57



asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.4/34

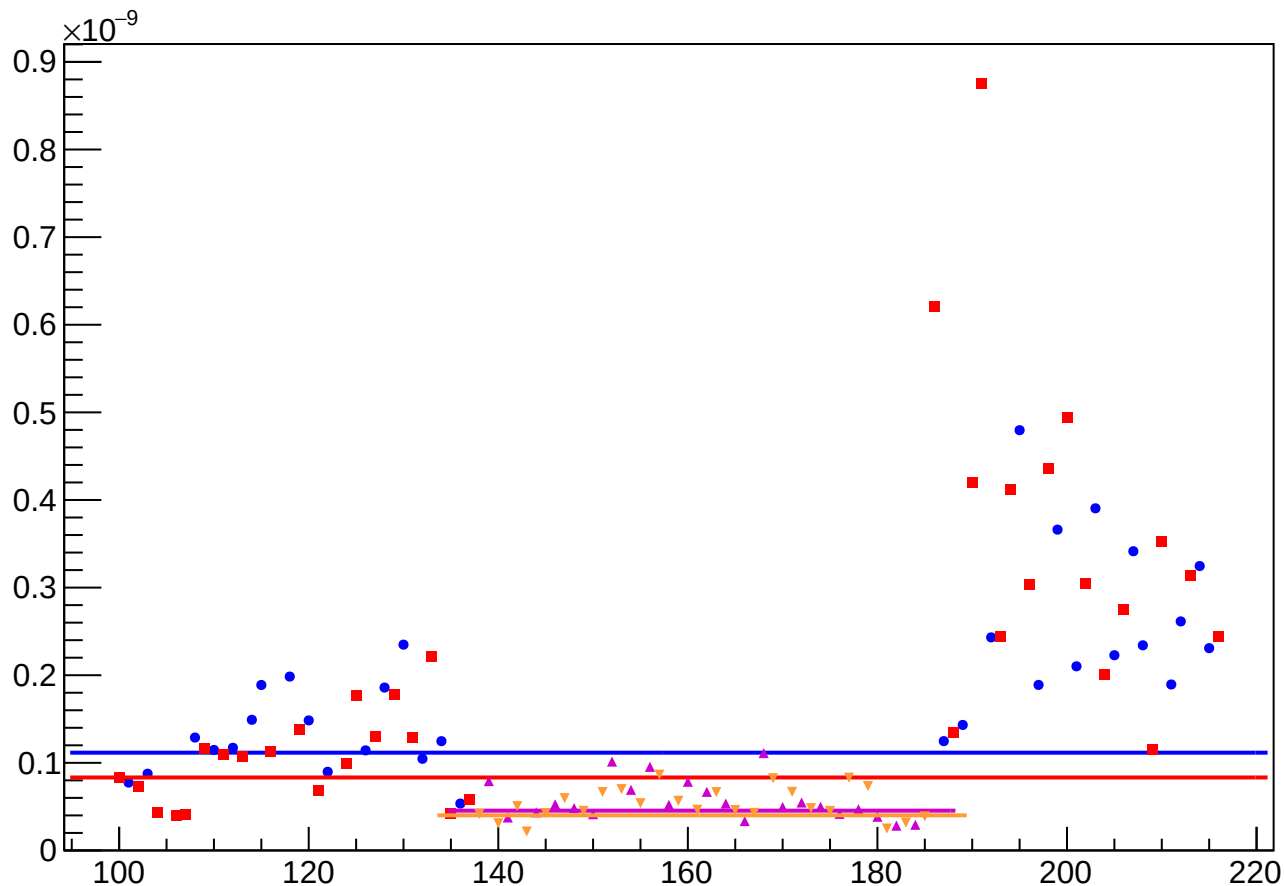
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.7/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 126.2/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.5/57

asym\_at1\_avg\_at2\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6898634.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3609934.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9399601.0/34

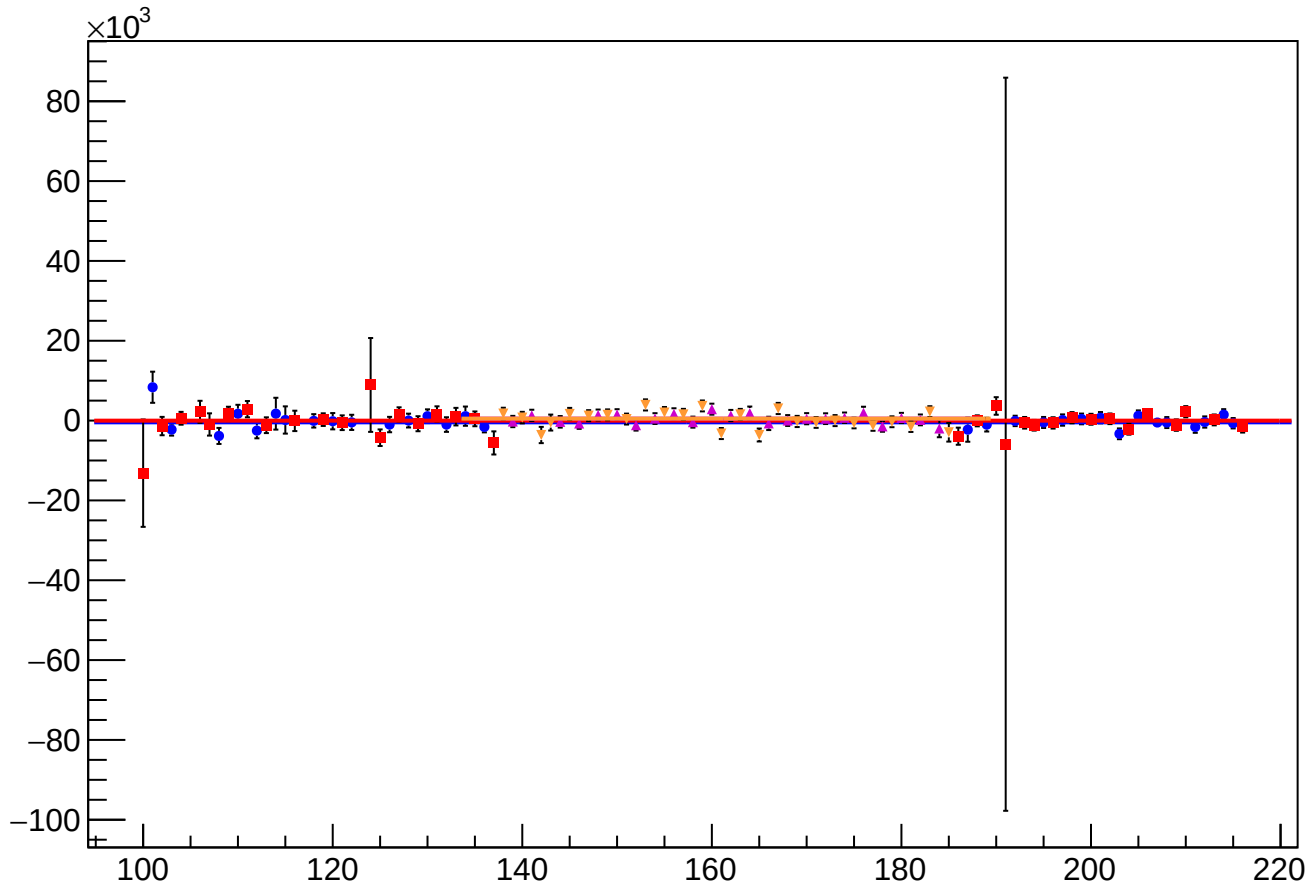
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2780344.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16657123.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31347011.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14543709.2/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-438.594 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.062 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-18.969 \pm 294.665$   $\chi^2/\text{NDF}$ : 32.2/34

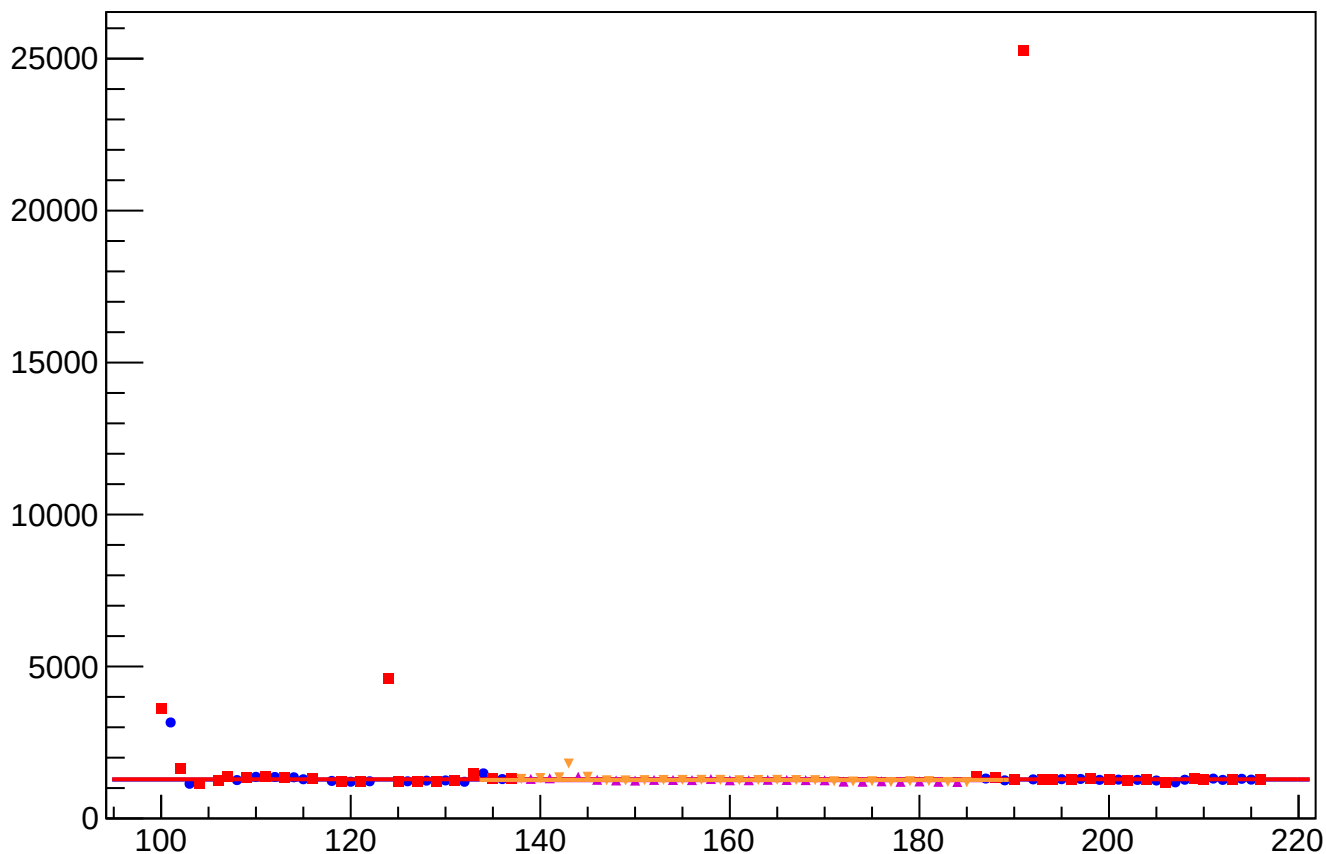
Left In:  $486.821 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.321 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $133.352 \pm 146.256$   $\chi^2/\text{NDF}$ : 125.1/113

- sign  $234.696 \pm 208.042$   $\chi^2/\text{NDF}$ : 48.1/57

# reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1278.671+/-0.207  $\chi^2/\text{NDF}$ : 530240.2/30

Left Out: 1266.967+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1288.416+/-0.208  $\chi^2/\text{NDF}$ : 483049.1/34

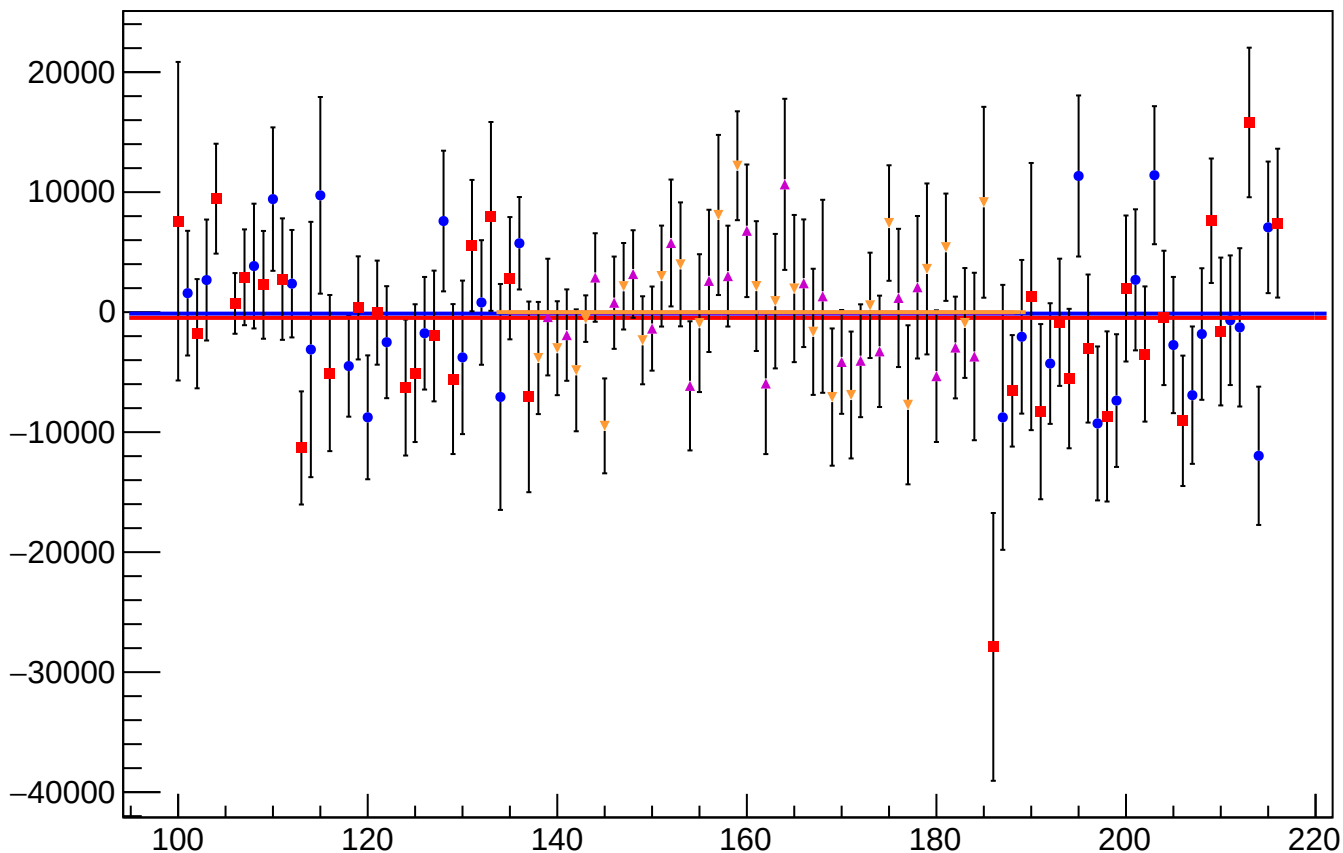
Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.4/22

+ sign 1272.724+/-0.145  $\chi^2/\text{NDF}$ : 719404.7/55

All: 1272.837+/-0.103  $\chi^2/\text{NDF}$ : 1250287.1/11

- sign 1272.952+/-0.147  $\chi^2/\text{NDF}$ : 530881.2/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_correction\_mean vs Slug



Right In:  $-123.063 \pm 1002.318$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-0.604 \pm 886.488$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-479.384 \pm 897.222$   $\chi^2/\text{NDF}$ : 43.7/34

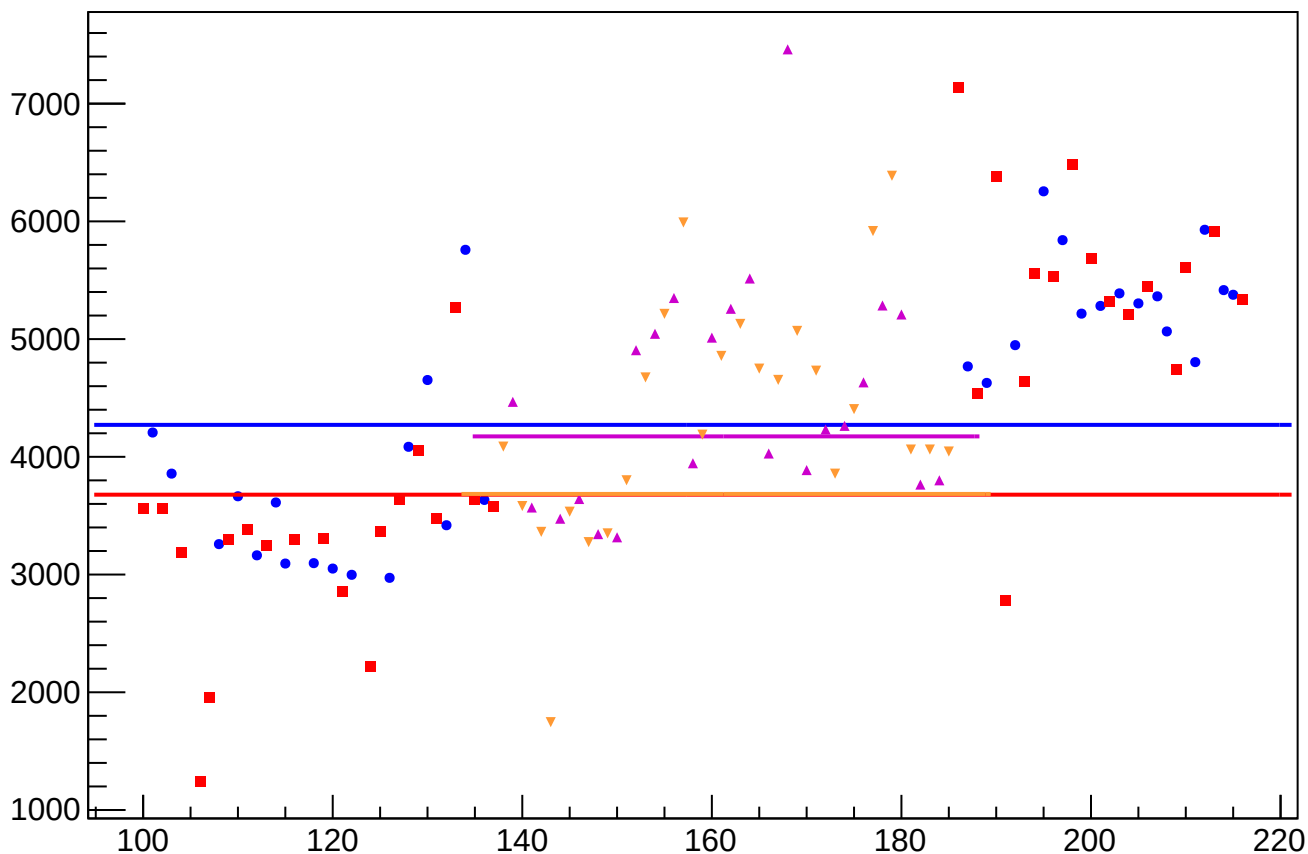
Left In:  $-31.593 \pm 995.348$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-54.352 \pm 664.035$   $\chi^2/\text{NDF}$ : 63.7/55

All:  $-166.094 \pm 470.388$   $\chi^2/\text{NDF}$ : 121.6/113

- sign  $-278.643 \pm 666.431$   $\chi^2/\text{NDF}$ : 57.8/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 4271.434+/-0.709  $\chi^2/\text{NDF}$ : 2039285.0/30

Left Out: 3684.769+/-0.627  $\chi^2/\text{NDF}$ : 3693646.6/24

Right Out: 3678.435+/-0.634  $\chi^2/\text{NDF}$ : 5224633.4/34

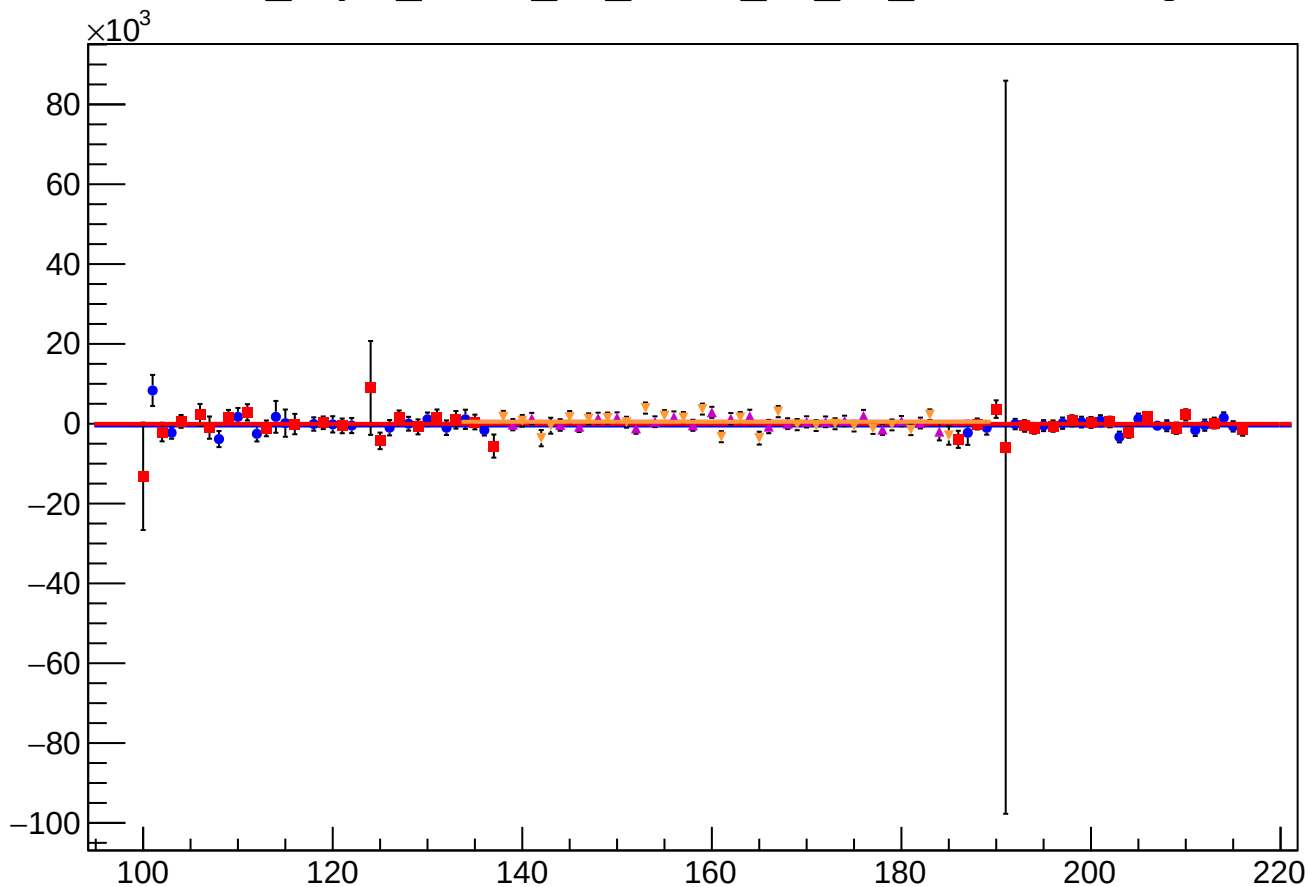
Left In: 4173.556+/-0.704  $\chi^2/\text{NDF}$ : 1274968.4/22

+ sign 3942.259+/-0.470  $\chi^2/\text{NDF}$ : 6117377.4/55

All: 3921.401+/-0.333  $\chi^2/\text{NDF}$ : 12893971.5/100

- sign 3900.393+/-0.471  $\chi^2/\text{NDF}$ : 6772633.5/57

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

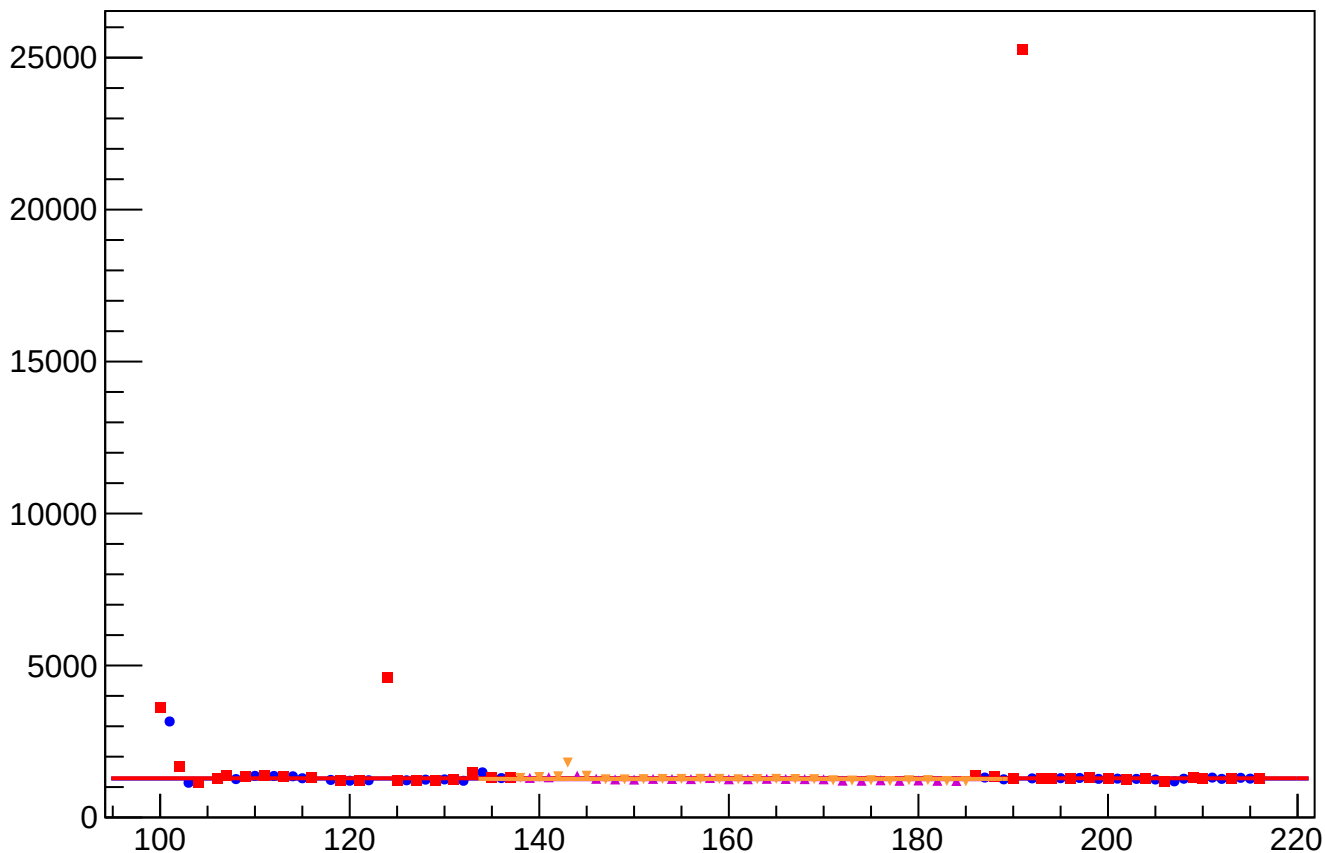
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

# cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1278.671+/-0.207  $\chi^2/\text{NDF}$ : 530241.7/30

Left Out: 1266.968+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1289.147+/-0.208  $\chi^2/\text{NDF}$ : 489951.7/34

Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.3/22

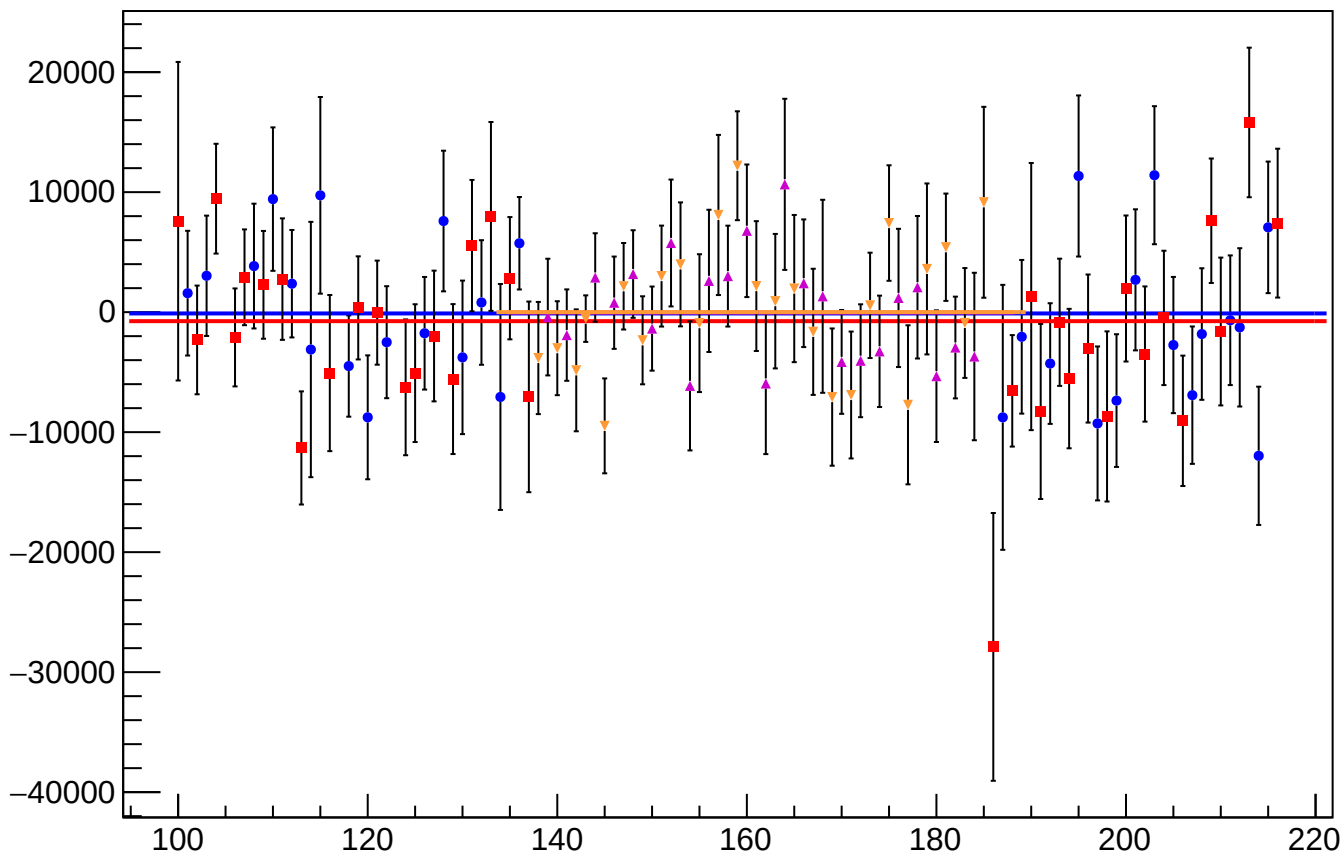
+ sign 1272.724+/-0.145  $\chi^2/\text{NDF}$ : 719406.1/55

All: 1273.013+/-0.103  $\chi^2/\text{NDF}$ : 1257719.6/11

- sign 1273.308+/-0.147  $\chi^2/\text{NDF}$ : 538305.5/57



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}$ : 29.1/24

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}$ : 43.6/34

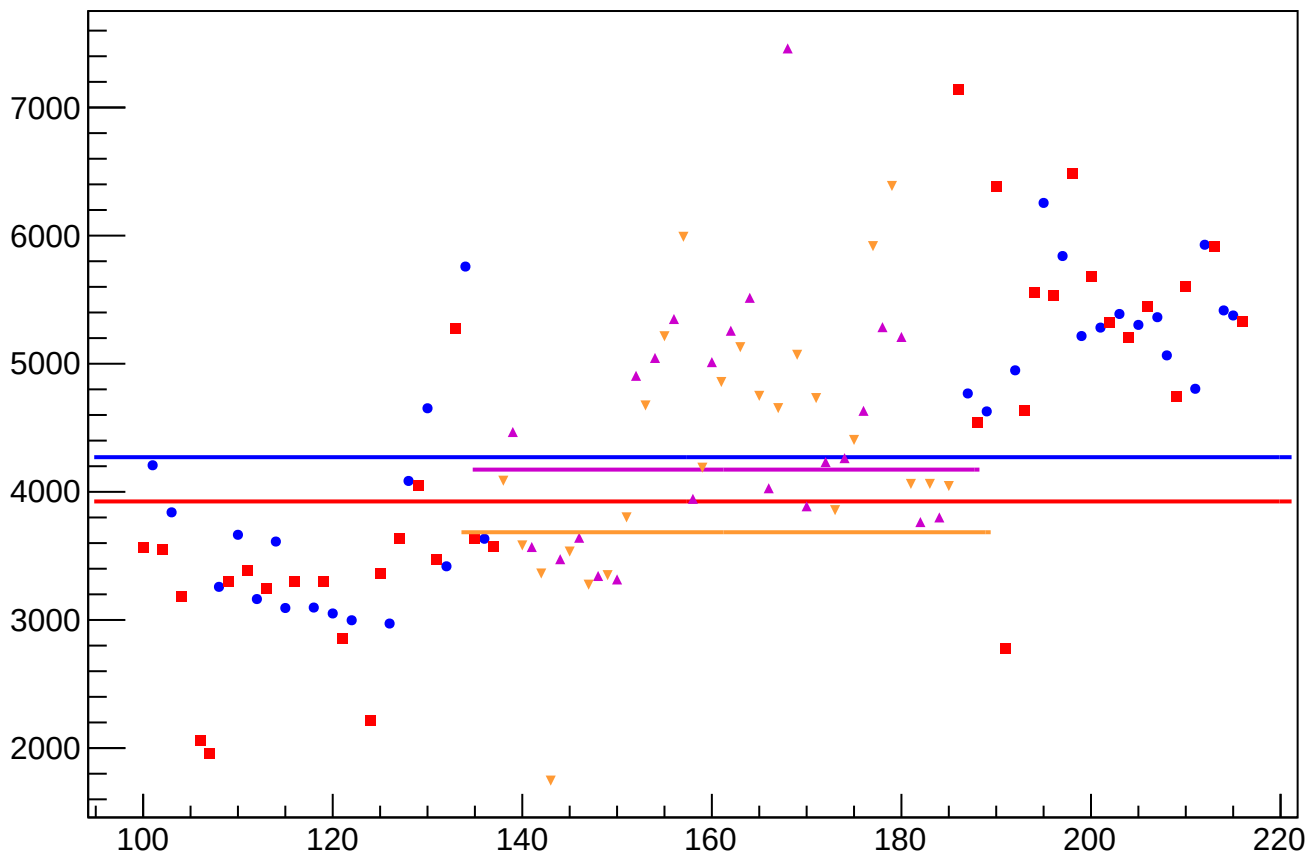
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}$ : 63.8/55

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}$ : 121.8/113

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}$ : 57.9/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 4270.610+/-0.709  $\chi^2$ /NDF: 2040584.0/30

Left Out: 3684.762+/-0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3925.142+/-0.660  $\chi^2$ /NDF: 3543440.7/34

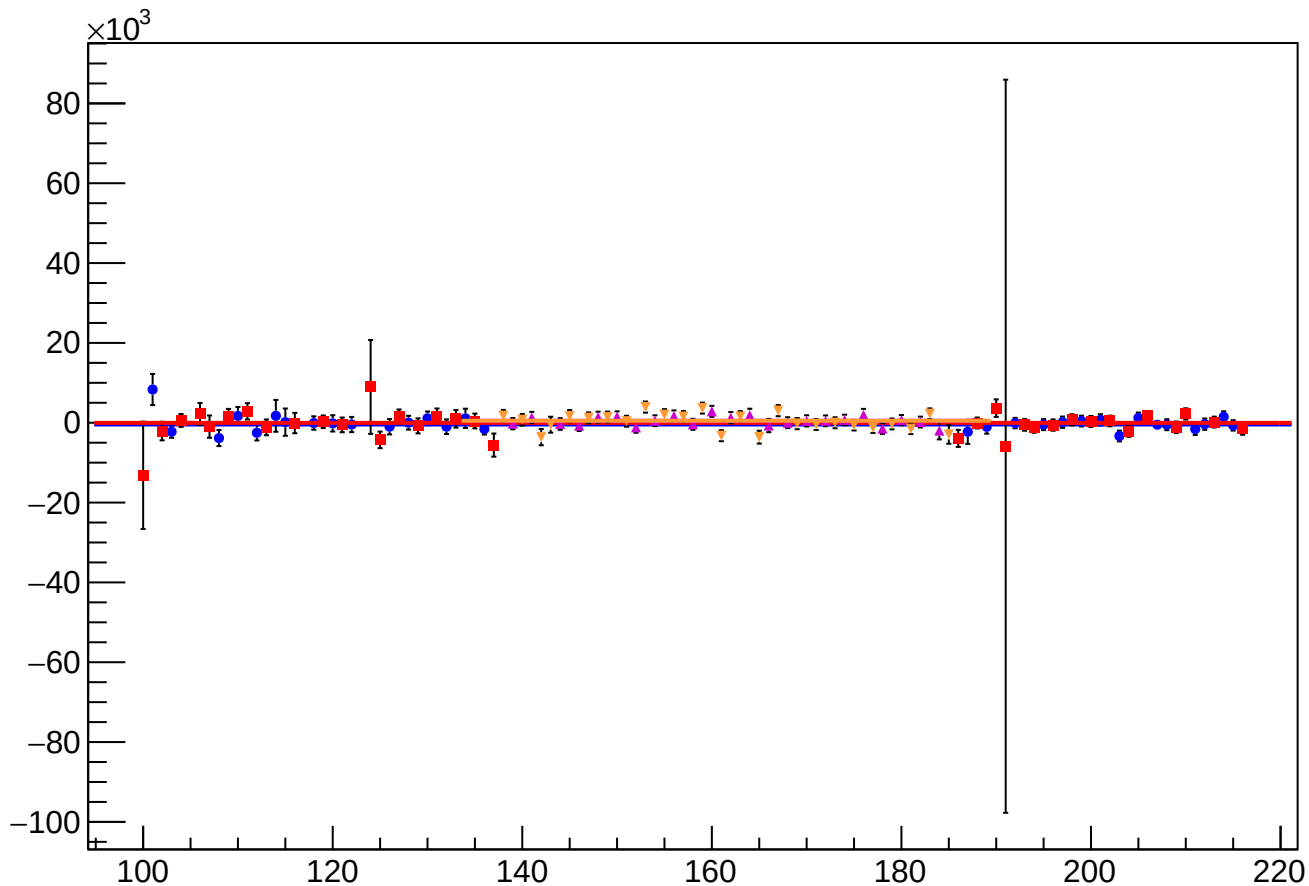
Left In: 4173.550+/-0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3941.950+/-0.470  $\chi^2$ /NDF: 6117732.5/55

All: 3990.434+/-0.336  $\chi^2$ /NDF: 11024271.5/100

- sign 4041.444+/-0.482  $\chi^2$ /NDF: 4884655.4/57

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-438.710 \pm 293.238$   $\chi^2/\text{NDF}$ : 24.5/30

Left Out:  $492.079 \pm 288.495$   $\chi^2/\text{NDF}$ : 46.9/24

Right Out:  $-29.588 \pm 294.736$   $\chi^2/\text{NDF}$ : 32.6/34

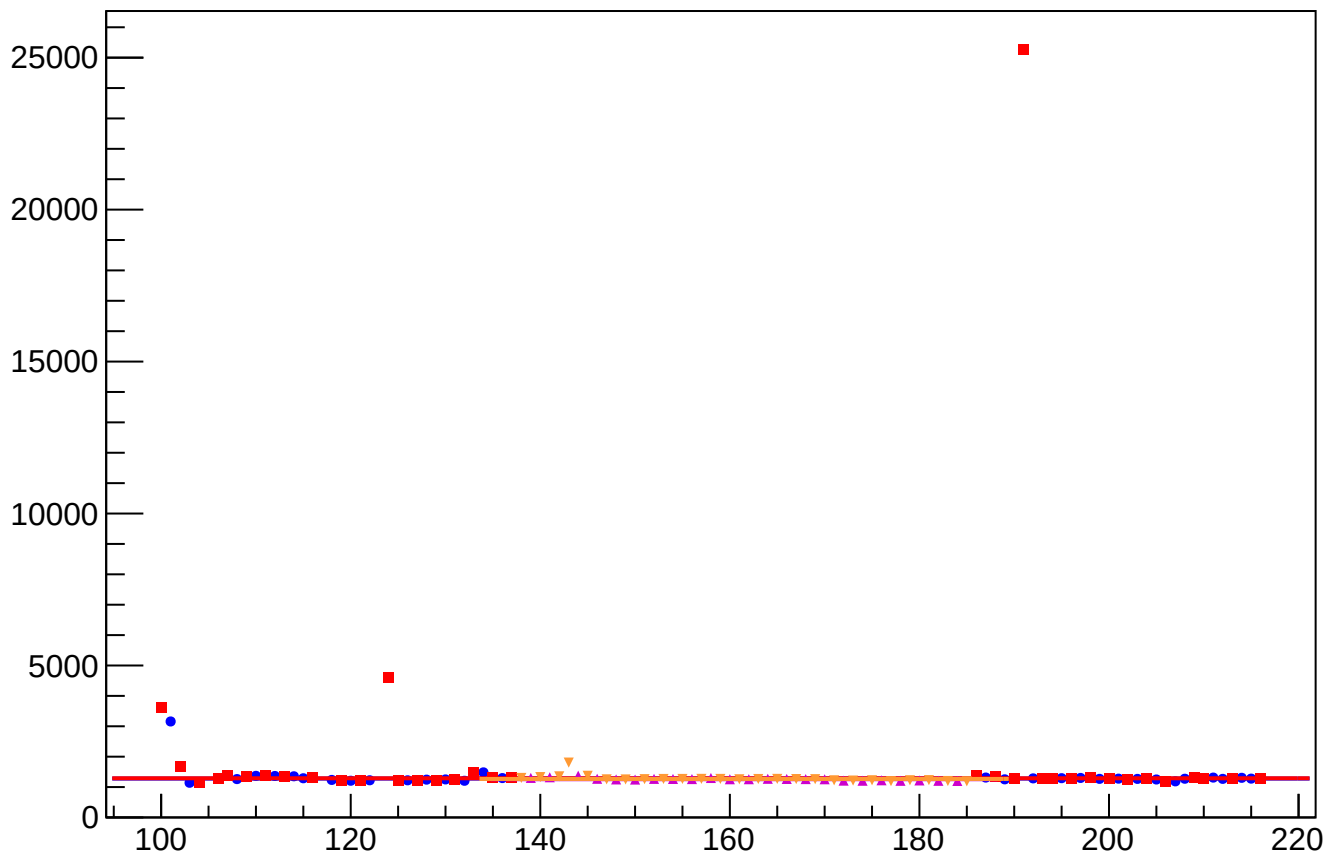
Left In:  $486.720 \pm 293.769$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $34.273 \pm 205.653$   $\chi^2/\text{NDF}$ : 76.5/55

All:  $130.705 \pm 146.265$   $\chi^2/\text{NDF}$ : 125.5/113

- sign  $229.414 \pm 208.067$   $\chi^2/\text{NDF}$ : 48.6/57

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1278.671+/-0.207  $\chi^2/\text{NDF}$ : 530241.7/30

Left Out: 1266.968+/-0.204  $\chi^2/\text{NDF}$ : 187545.6/24

Right Out: 1289.147+/-0.208  $\chi^2/\text{NDF}$ : 489951.7/34

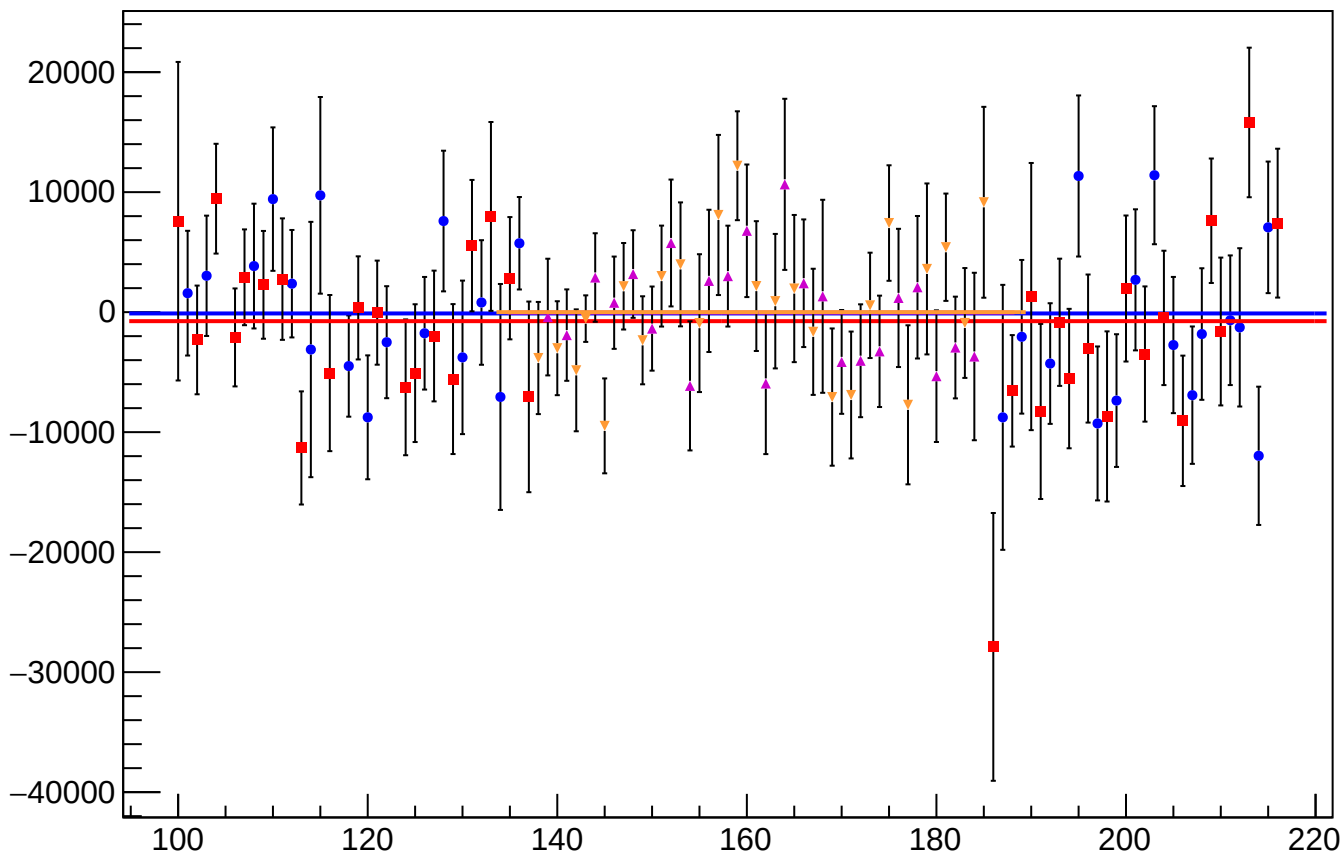
Left In: 1257.551+/-0.208  $\chi^2/\text{NDF}$ : 36816.3/22

+ sign 1272.724+/-0.145  $\chi^2/\text{NDF}$ : 719406.1/55

All: 1273.013+/-0.103  $\chi^2/\text{NDF}$ : 1257719.6/11

- sign 1273.308+/-0.147  $\chi^2/\text{NDF}$ : 538305.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-107.975 \pm 1002.121$   $\chi^2/\text{NDF}: 34.7/30$

Left Out:  $-0.541 \pm 886.487$   $\chi^2/\text{NDF}: 29.1/24$

Right Out:  $-750.776 \pm 933.915$   $\chi^2/\text{NDF}: 43.6/34$

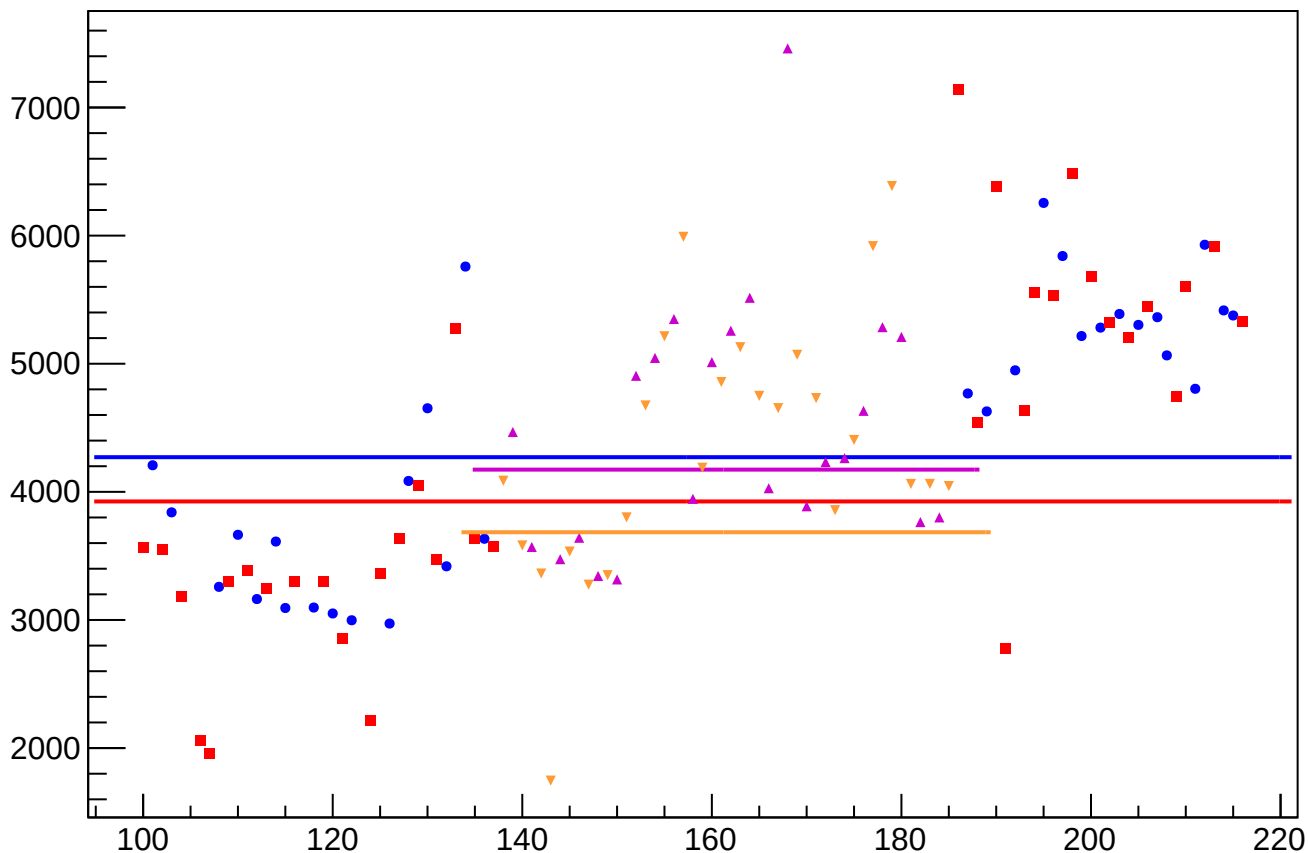
Left In:  $-31.597 \pm 995.347$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $-47.705 \pm 663.977$   $\chi^2/\text{NDF}: 63.8/55$

All:  $-226.232 \pm 475.428$   $\chi^2/\text{NDF}: 121.8/113$

- sign  $-414.064 \pm 681.060$   $\chi^2/\text{NDF}: 57.9/57$

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4270.610+/-0.709  $\chi^2$ /NDF: 2040584.0/30

Left Out: 3684.762+/-0.627  $\chi^2$ /NDF: 3693687.2/24

Right Out: 3925.142+/-0.660  $\chi^2$ /NDF: 3543440.7/34

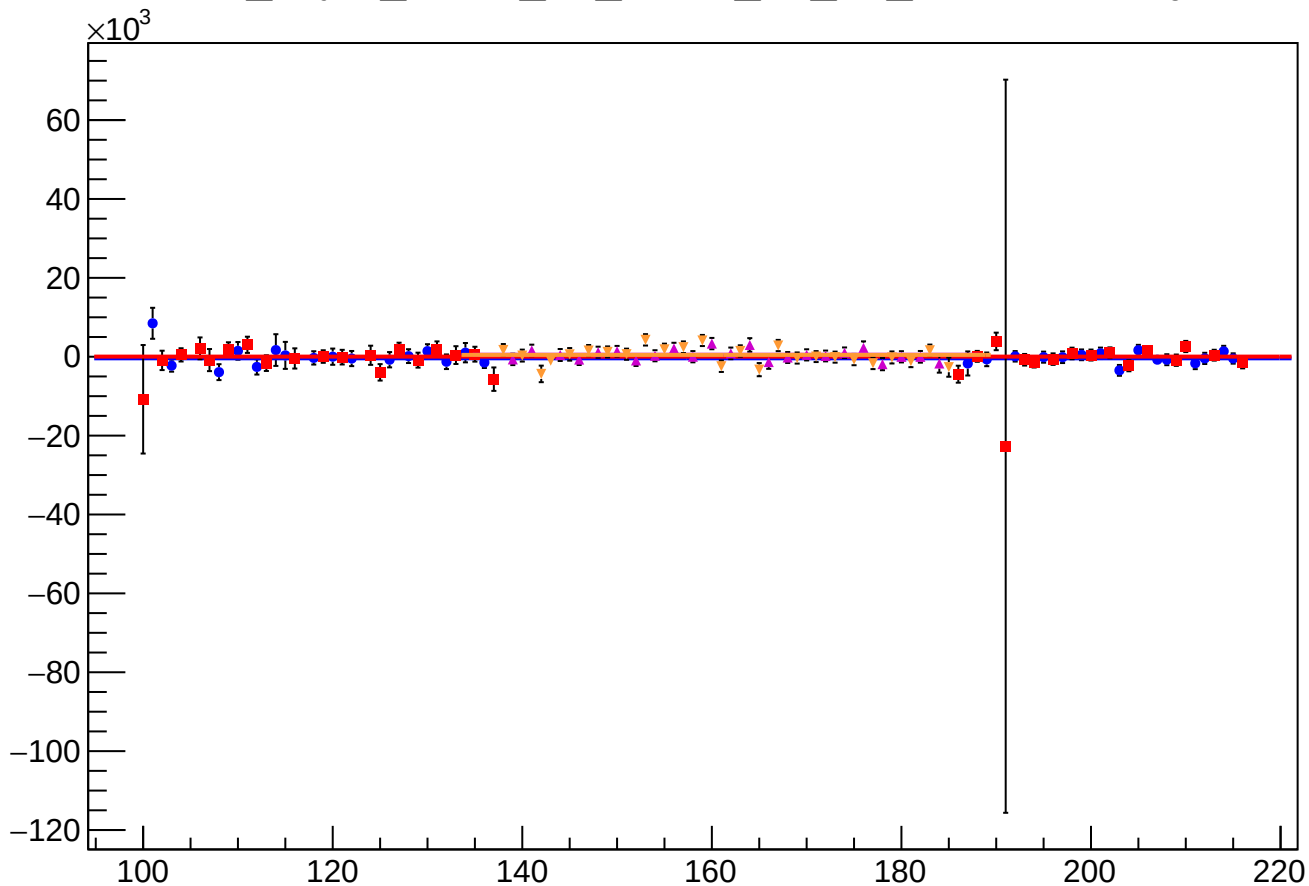
Left In: 4173.550+/-0.704  $\chi^2$ /NDF: 1274967.5/22

+ sign 3941.950+/-0.470  $\chi^2$ /NDF: 6117732.5/55

All: 3990.434+/-0.336  $\chi^2$ /NDF: 11024271.5/100

- sign 4041.444+/-0.482  $\chi^2$ /NDF: 4884655.4/57

# dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.929 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.504 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

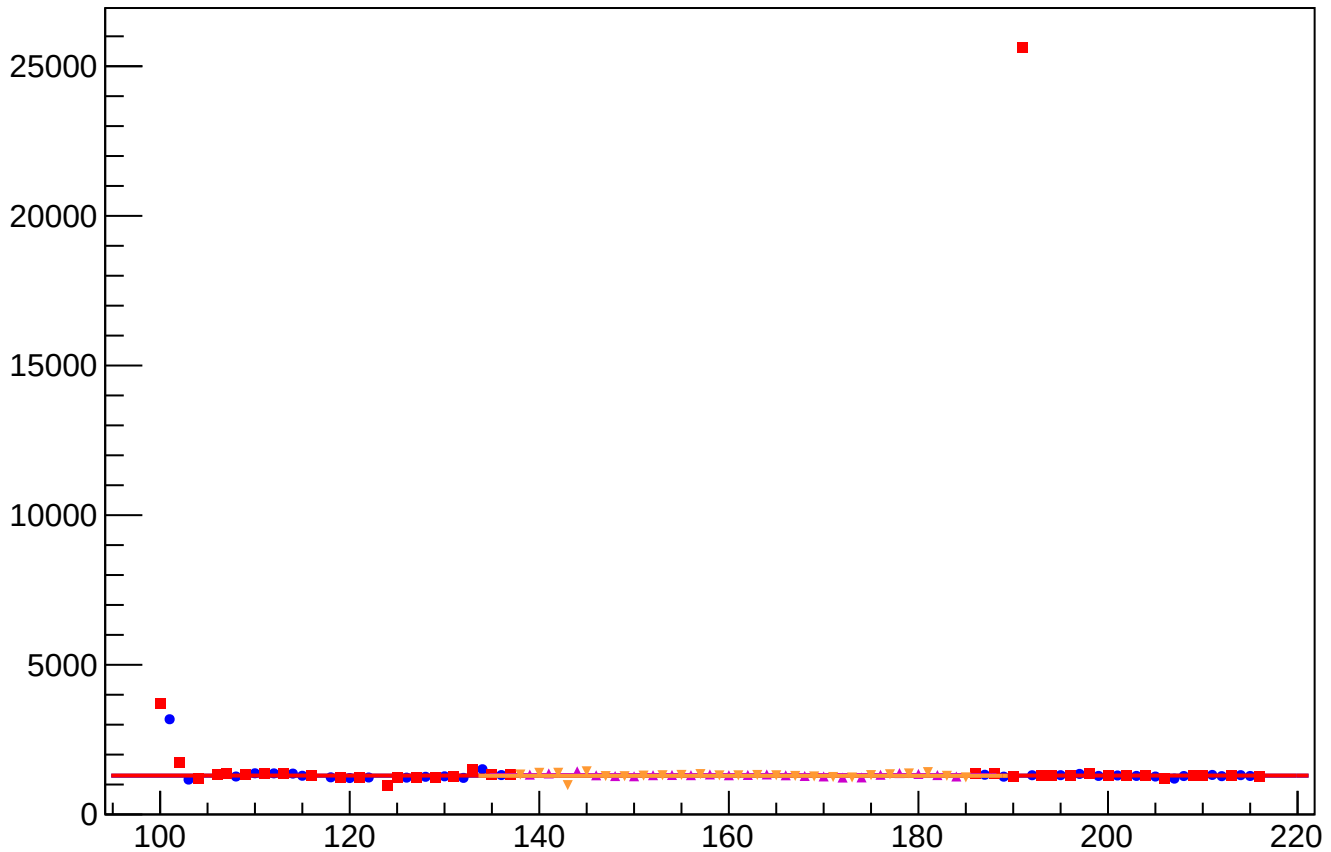
Left In:  $503.558 \pm 307.055$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.262 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.600 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1294.797 $\pm$ 0.210  $\chi^2$ /NDF: 530209.2/30

Left Out: 1291.211 $\pm$ 0.208  $\chi^2$ /NDF: 230735.1/24

Right Out: 1299.977 $\pm$ 0.210  $\chi^2$ /NDF: 378886.7/34

Left In: 1314.006 $\pm$ 0.217  $\chi^2$ /NDF: 43044.7/22

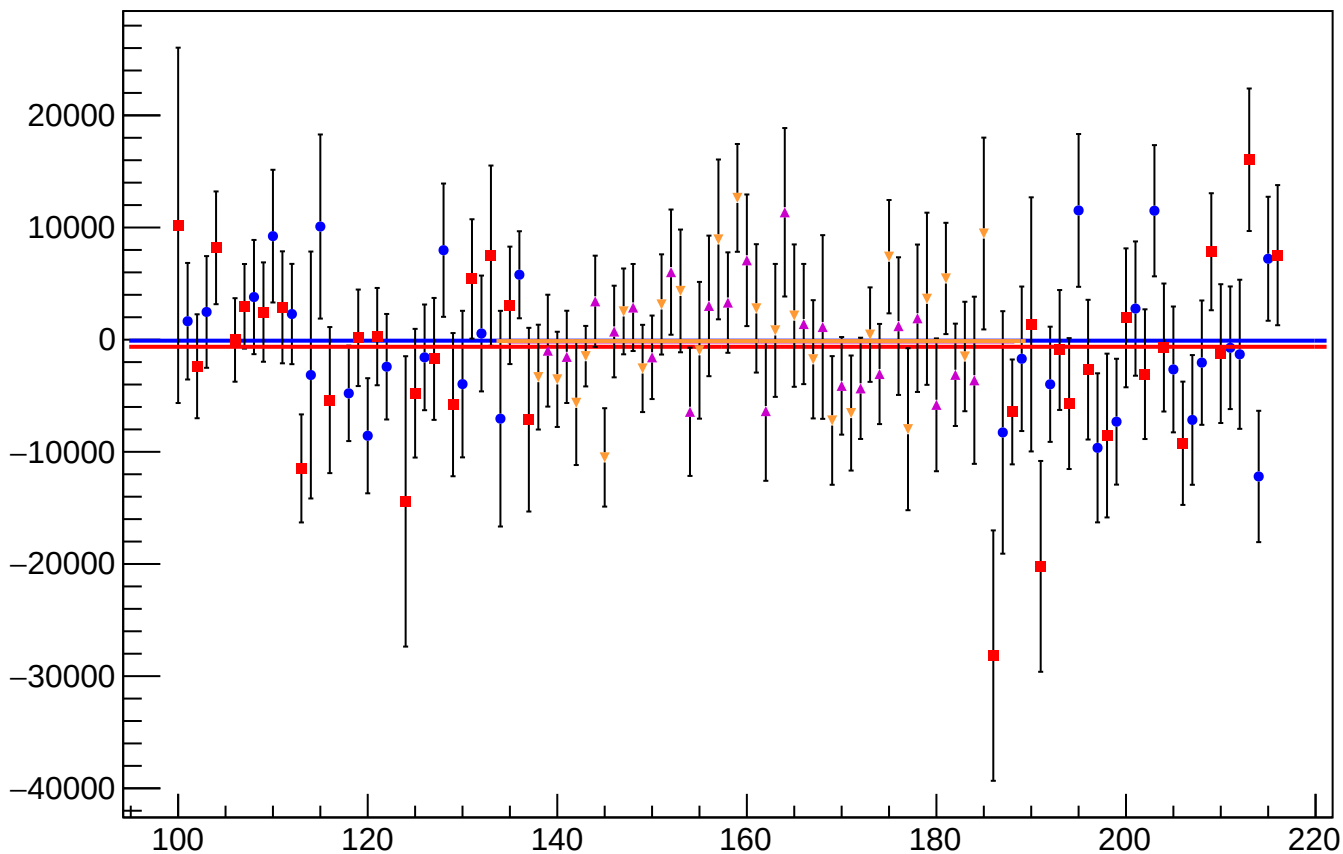
+ sign 1292.987 $\pm$ 0.148  $\chi^2$ /NDF: 761091.5/55

All: 1299.727 $\pm$ 0.106  $\chi^2$ /NDF: 1189428.5/11

- sign 1306.754 $\pm$ 0.151  $\chi^2$ /NDF: 424089.3/57



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_correction\_mean vs Slug



Right In:  $-89.752 \pm 1008.403$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.273 \pm 977.231$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.939 \pm 949.479$   $\chi^2/\text{NDF}$ : 45.2/34

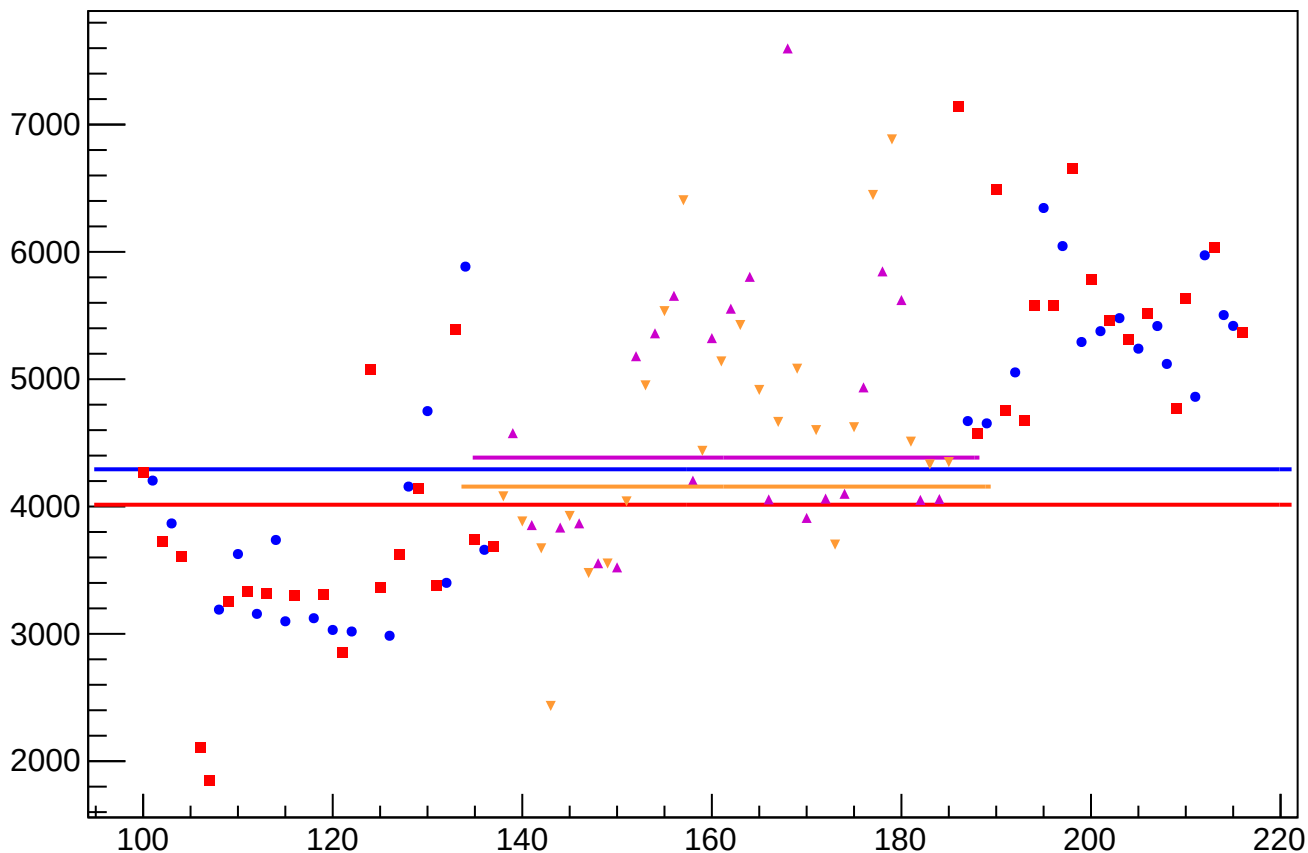
Left In:  $-159.452 \pm 1045.510$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.101 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.031 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 4292.473+/-0.713  $\chi^2/\text{NDF}$ : 2142067.4/30

Left Out: 4156.582+/-0.691  $\chi^2/\text{NDF}$ : 2080766.1/24

Right Out: 4014.174+/-0.671  $\chi^2/\text{NDF}$ : 3581136.8/34

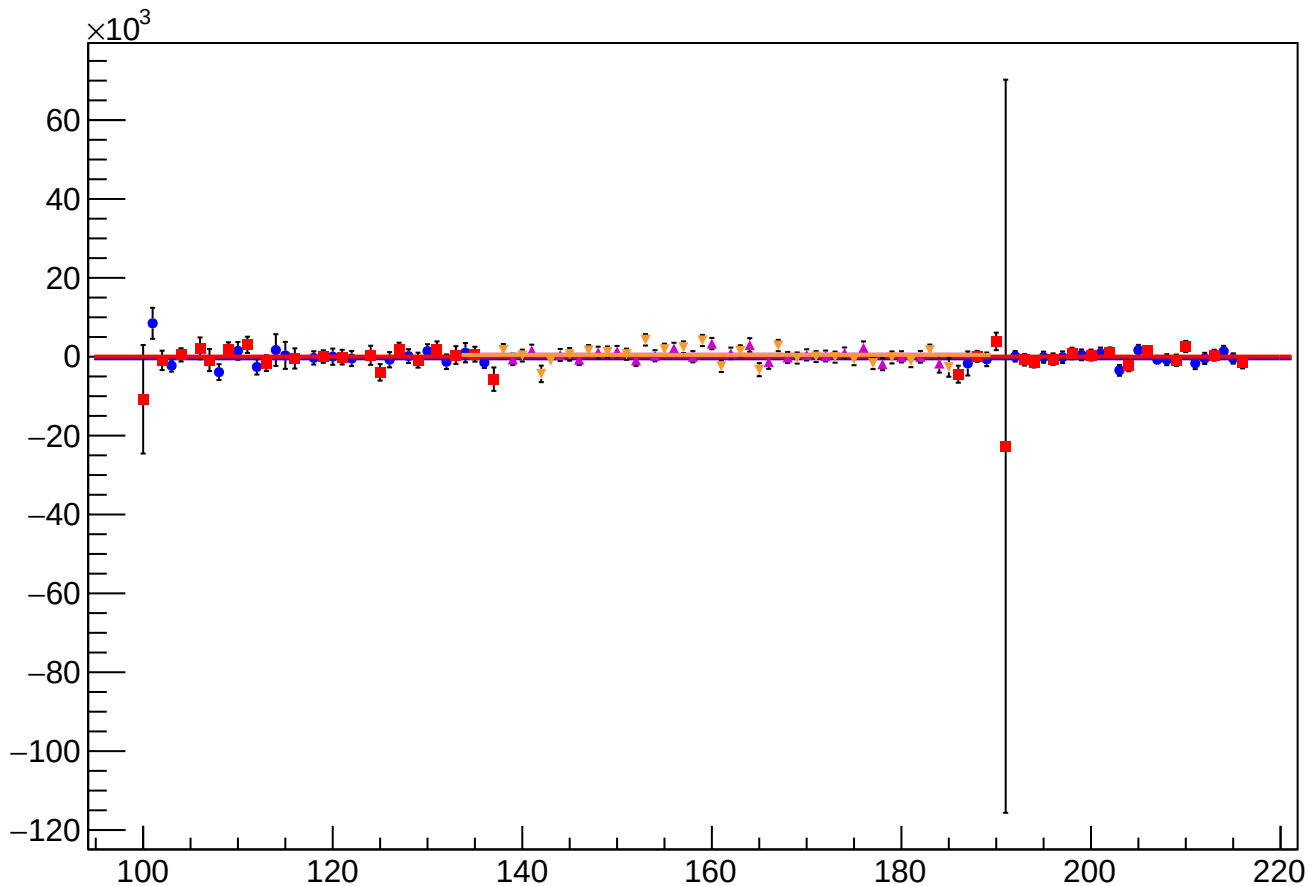
Left In: 4384.323+/-0.739  $\chi^2/\text{NDF}$ : 1255470.8/22

+ sign 4222.395+/-0.496  $\chi^2/\text{NDF}$ : 4241563.6/55

All: 4201.966+/-0.351  $\chi^2/\text{NDF}$ : 9218946.9/11

- sign 4181.472+/-0.497  $\chi^2/\text{NDF}$ : 4973988.3/57

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-403.378 \pm 296.962$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $467.933 \pm 294.257$   $\chi^2/\text{NDF}$ : 44.1/24

Right Out:  $31.505 \pm 296.938$   $\chi^2/\text{NDF}$ : 33.8/34

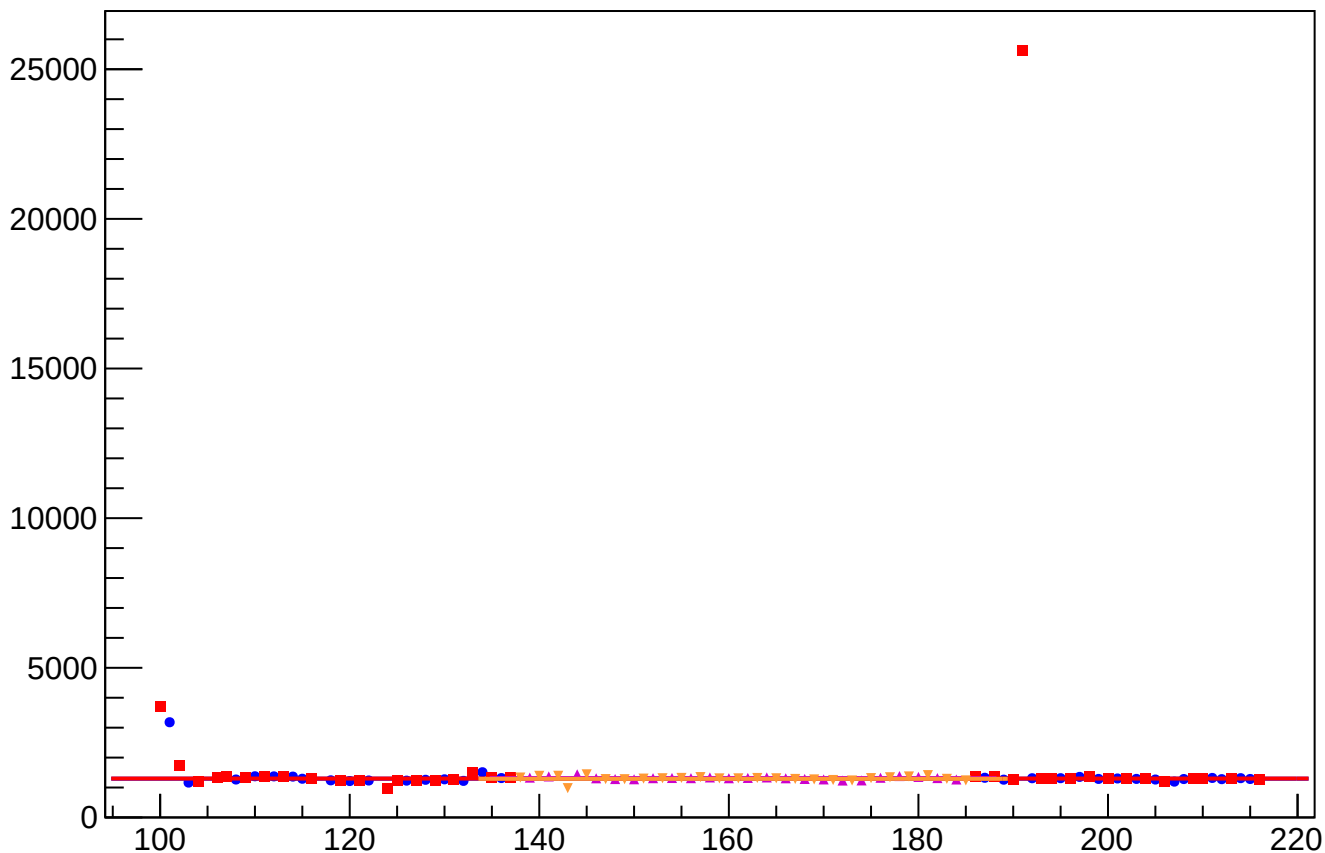
Left In:  $503.558 \pm 307.056$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $36.264 \pm 209.021$   $\chi^2/\text{NDF}$ : 74.1/55

All:  $145.602 \pm 149.343$   $\chi^2/\text{NDF}$ : 127.1/113

- sign  $259.626 \pm 213.454$   $\chi^2/\text{NDF}$ : 52.4/57

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 1294.797 $\pm$ 0.210  $\chi^2$ /NDF: 530209.3/30

Left Out: 1291.212 $\pm$ 0.208  $\chi^2$ /NDF: 230737.6/24

Right Out: 1299.977 $\pm$ 0.210  $\chi^2$ /NDF: 378886.8/34

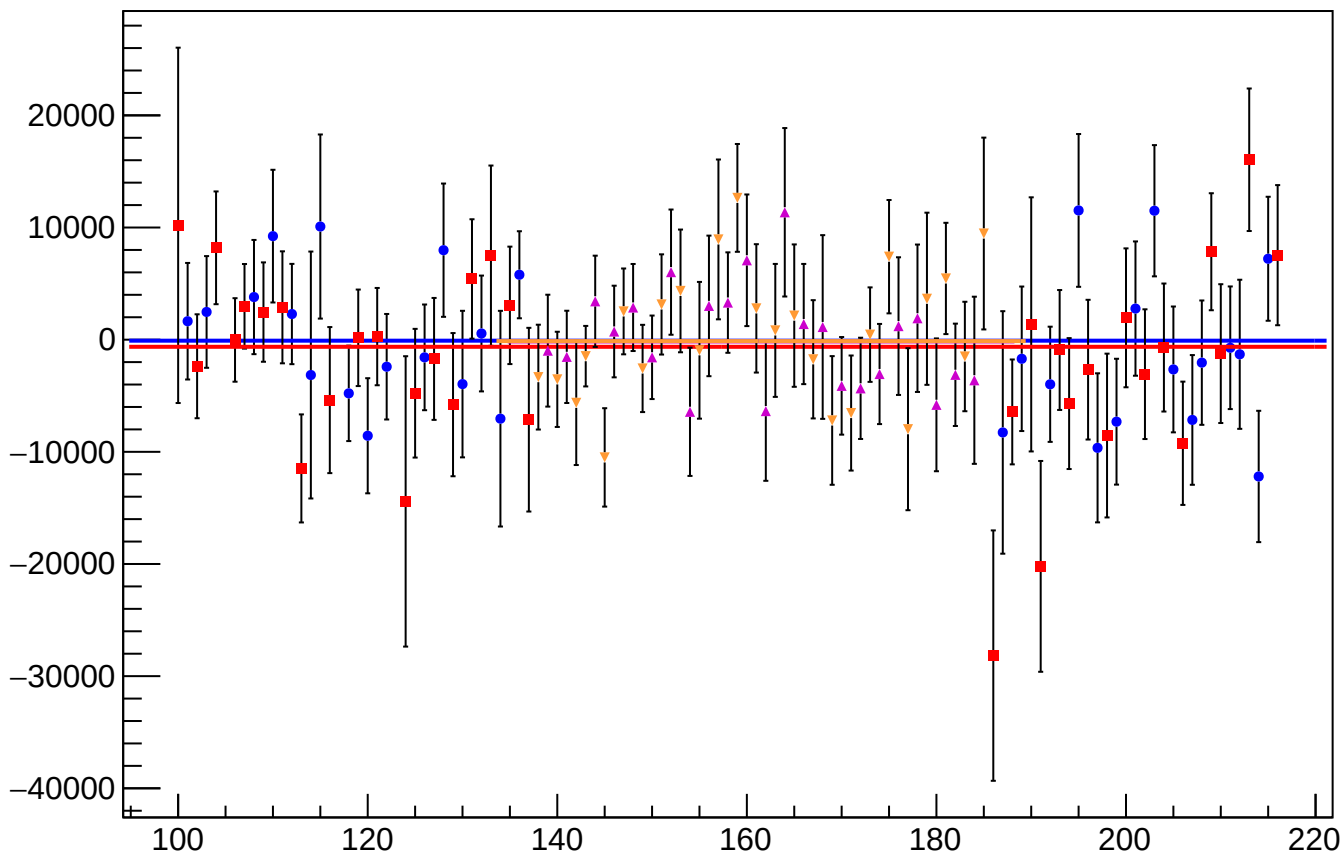
Left In: 1314.007 $\pm$ 0.217  $\chi^2$ /NDF: 43046.8/22

+ sign 1292.988 $\pm$ 0.148  $\chi^2$ /NDF: 761093.9/55

All: 1299.728 $\pm$ 0.106  $\chi^2$ /NDF: 1189433.6/11

- sign 1306.755 $\pm$ 0.151  $\chi^2$ /NDF: 424091.9/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-89.755 \pm 1008.402$   $\chi^2/\text{NDF}$ : 34.5/30

Left Out:  $-127.271 \pm 977.232$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-634.934 \pm 949.478$   $\chi^2/\text{NDF}$ : 45.2/34

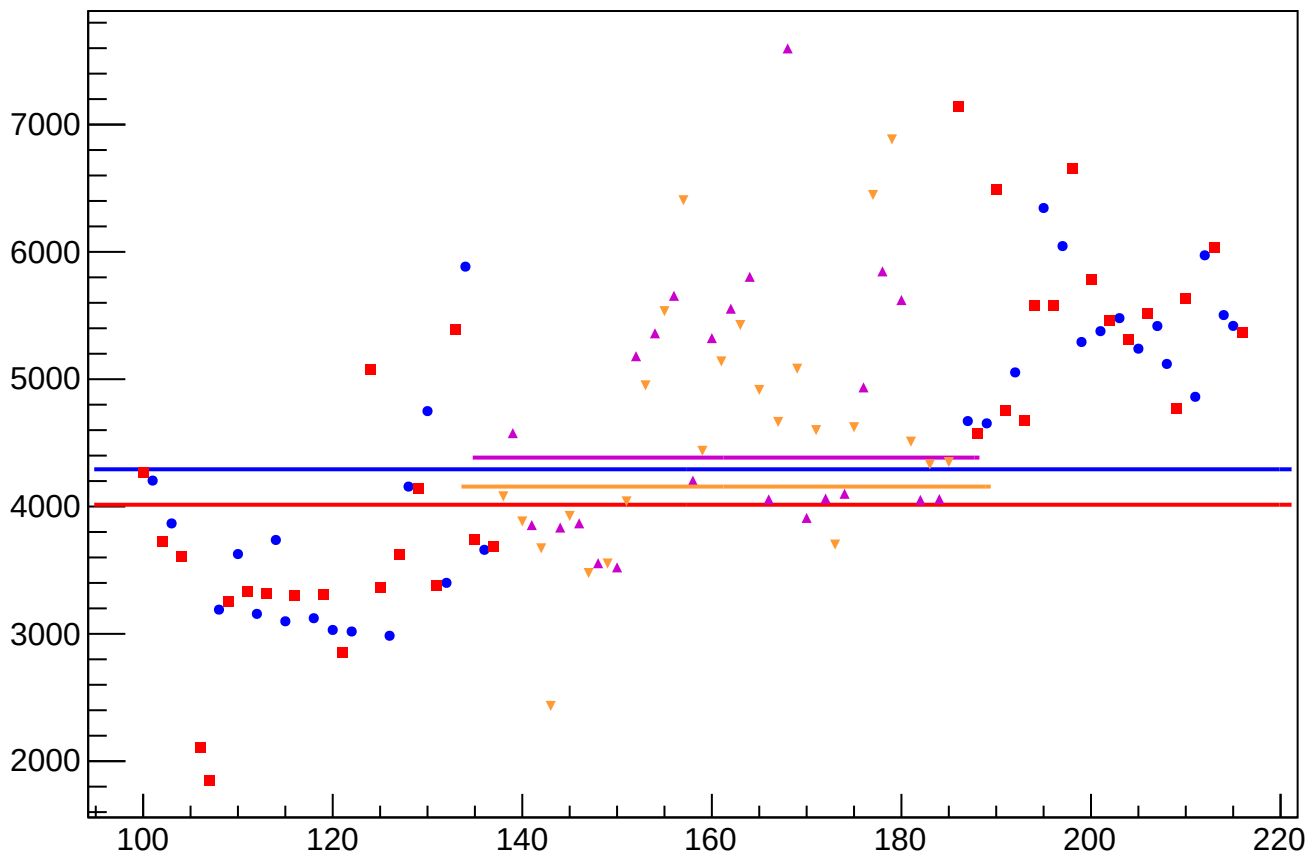
Left In:  $-159.454 \pm 1045.511$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-109.102 \pm 701.768$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-264.318 \pm 496.620$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-420.029 \pm 702.887$   $\chi^2/\text{NDF}$ : 59.1/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4292.468 $\pm$ 0.713  $\chi^2$ /NDF: 2142105.7/30

Left Out: 4156.588 $\pm$ 0.691  $\chi^2$ /NDF:2080769.0/24

Right Out: 4014.168 $\pm$ 0.671  $\chi^2$ /NDF: 3581172.3/34

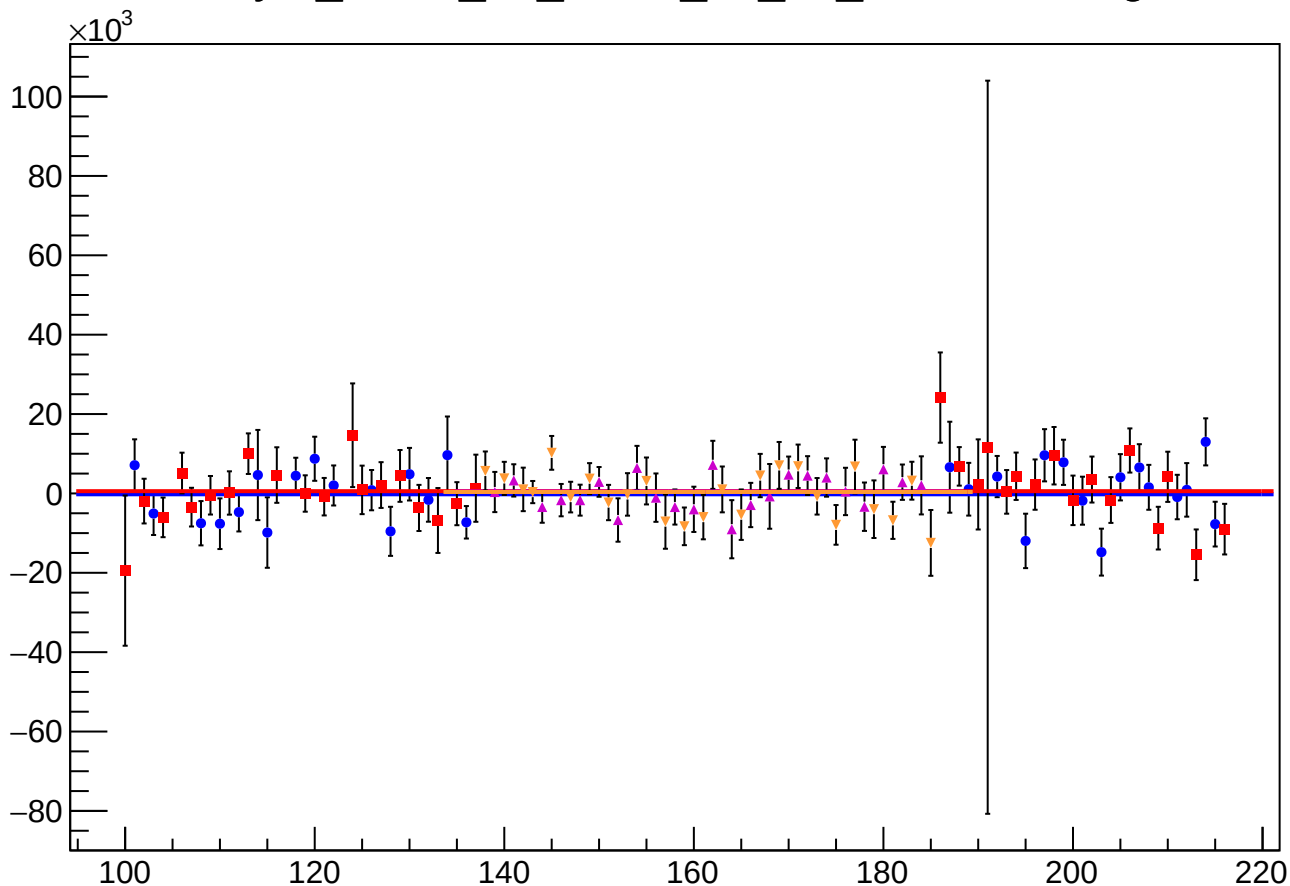
Left In: 4384.329 $\pm$ 0.739  $\chi^2$ /NDF:1255475.0/22

+ sign 4222.396 $\pm$ 0.496  $\chi^2$ /NDF: 4241601.7/55

All: 4201.966 $\pm$ 0.351  $\chi^2$ /NDF: 9219034.3/11

- sign 4181.472 $\pm$ 0.497  $\chi^2$ /NDF: 4974037.3/57

# asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_mean vs Slug



Right In:  $-220.989 \pm 1060.049$   $\chi^2/\text{NDF}$ : 41.4/30

Left Out:  $362.528 \pm 979.860$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $567.702 \pm 1026.015$   $\chi^2/\text{NDF}$ : 35.5/34

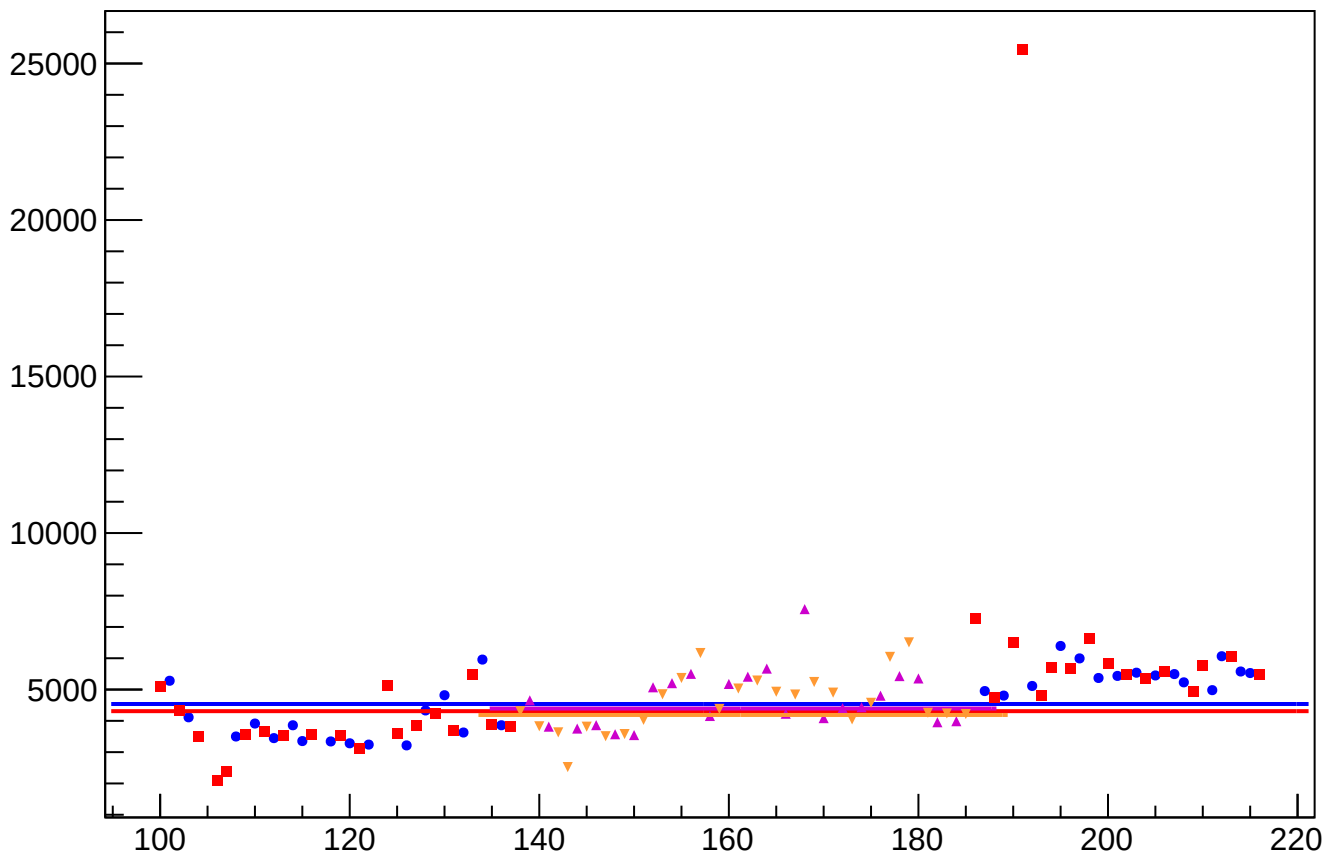
Left In:  $497.522 \pm 1044.707$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $93.672 \pm 719.547$   $\chi^2/\text{NDF}$ : 69.2/55

All:  $309.682 \pm 513.150$   $\chi^2/\text{NDF}$ : 118.8/113

- sign  $533.246 \pm 732.021$   $\chi^2/\text{NDF}$ : 49.4/57

# asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_rms vs Slug



Right In: 4538.146 $\pm$ 0.750  $\chi^2$ /NDF: 1724125.7/30

Left Out: 4187.848 $\pm$ 0.693  $\chi^2$ /NDF:1796345.9/24

Right Out: 4309.396 $\pm$ 0.720  $\chi^2$ /NDF: 2840615.1/34

Left In: 4394.324 $\pm$ 0.739  $\chi^2$ /NDF:1088394.9/22

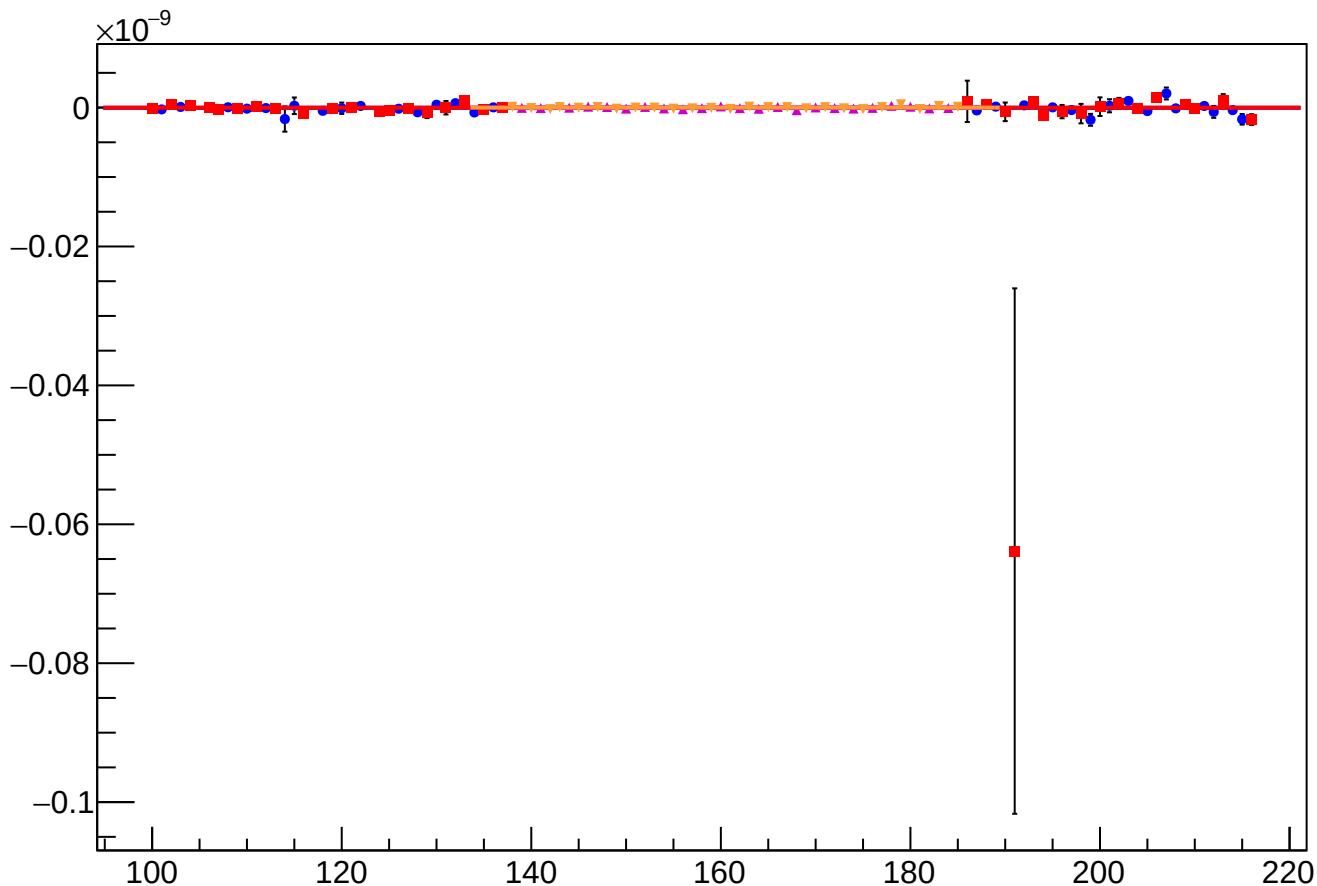
+ sign 4349.249 $\pm$ 0.509  $\chi^2$ /NDF: 3638244.4/55

All: 4349.989 $\pm$ 0.362  $\chi^2$ /NDF: 7574040.4/11

- sign 4350.748 $\pm$ 0.515  $\chi^2$ /NDF: 3935791.7/57



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 40.4/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:30.5/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 40.3/34

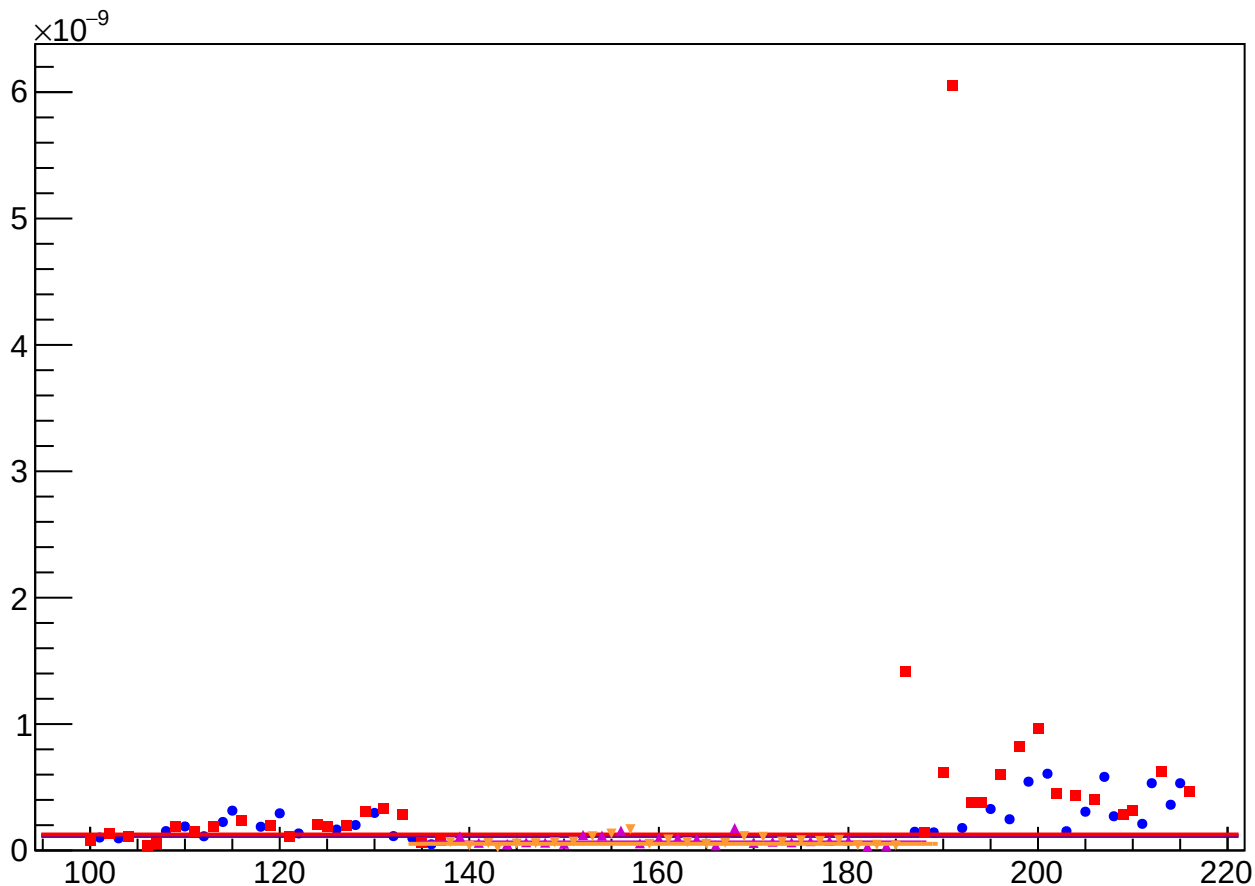
Left In: -0.000+/-0.000  $\chi^2$ /NDF:17.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 71.1/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 128.6/113

- sign -0.000+/-0.000  $\chi^2$ /NDF: 57.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5930476.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2628519.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7898222.6/34

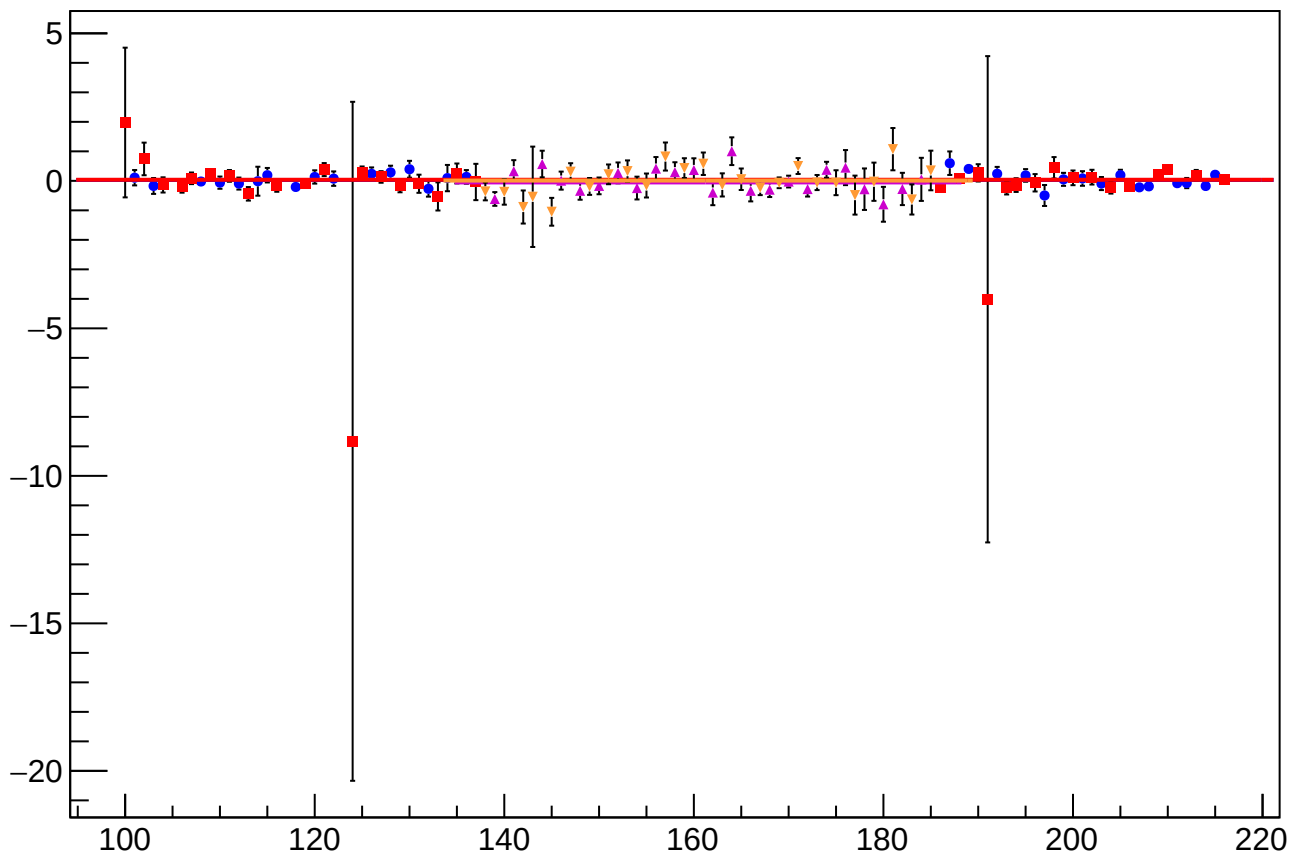
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1788279.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10866985.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22695732.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11541517.9/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

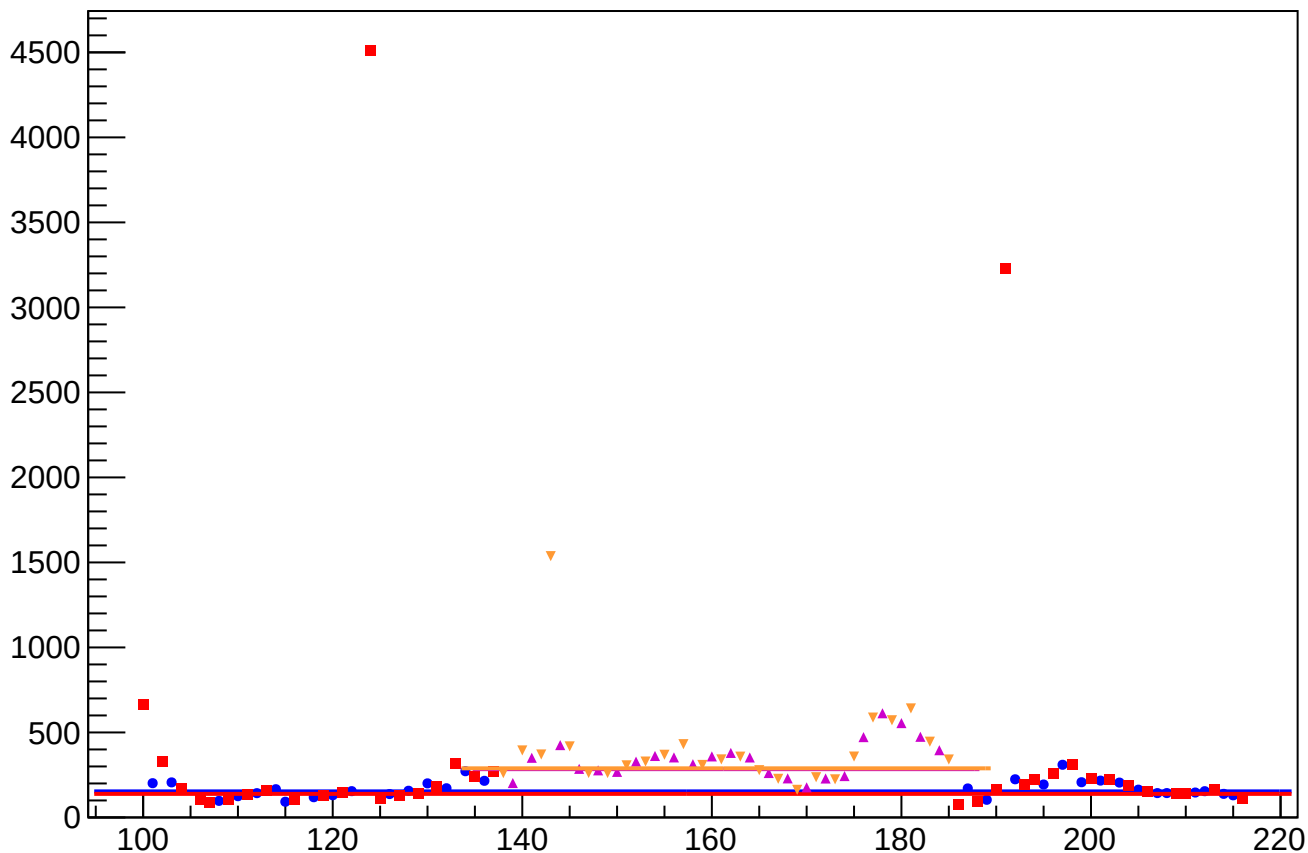
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.295+/-0.026  $\chi^2/\text{NDF}$ : 2349343.2/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 138.738+/-0.024  $\chi^2/\text{NDF}$ : 4792212.8/34

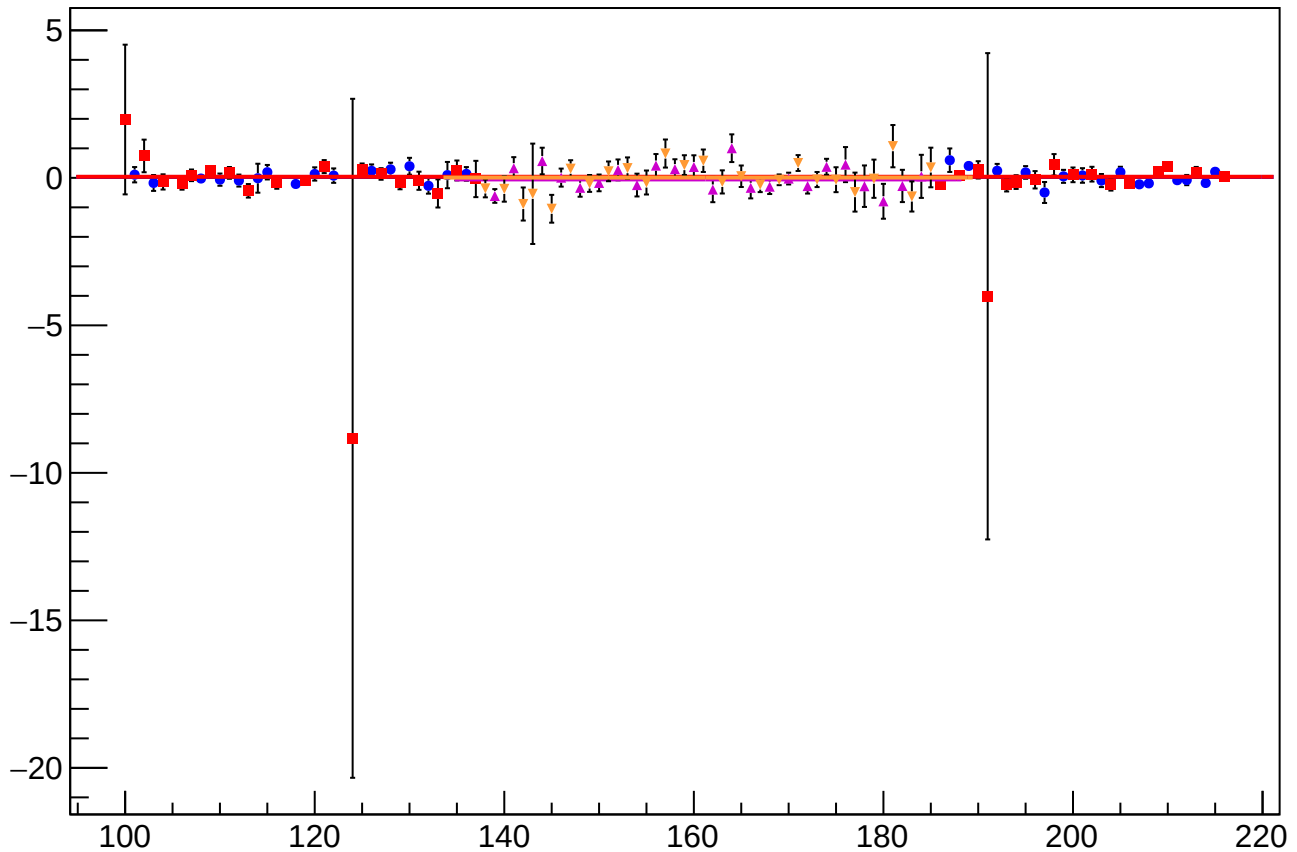
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12746955.7/55

All: 174.101+/-0.016  $\chi^2/\text{NDF}$ : 27716978.1/11

- sign 166.968+/-0.022  $\chi^2/\text{NDF}$ : 14746883.6/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

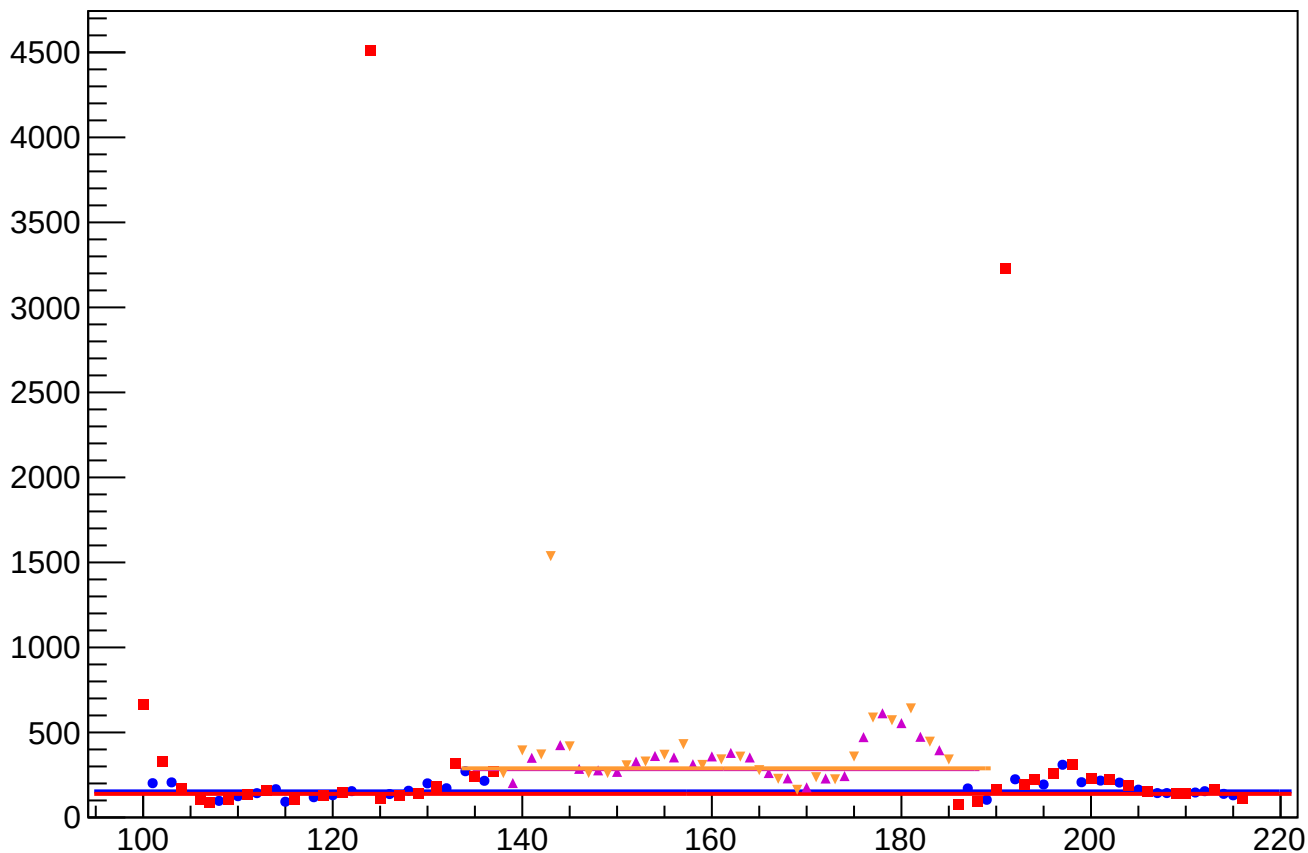
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.295+/-0.026  $\chi^2/\text{NDF}$ : 2349343.2/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648197.0/24

Right Out: 138.738+/-0.024  $\chi^2/\text{NDF}$ : 4792212.8/34

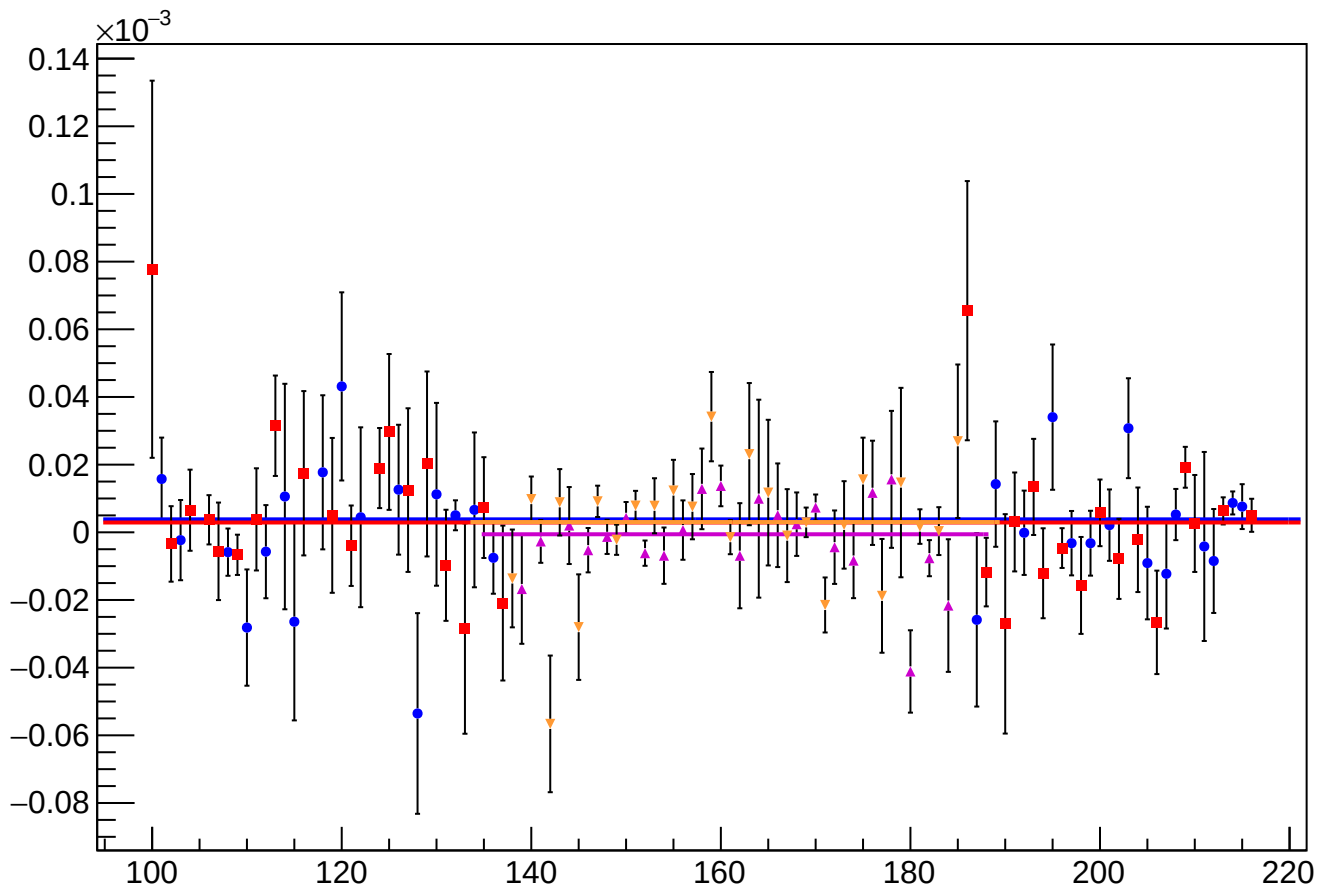
Left In: 284.168+/-0.050  $\chi^2/\text{NDF}$ : 3077521.1/22

+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12746955.7/55

All: 174.101+/-0.016  $\chi^2/\text{NDF}$ : 27716978.1/11

- sign 166.968+/-0.022  $\chi^2/\text{NDF}$ : 14746883.6/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/34

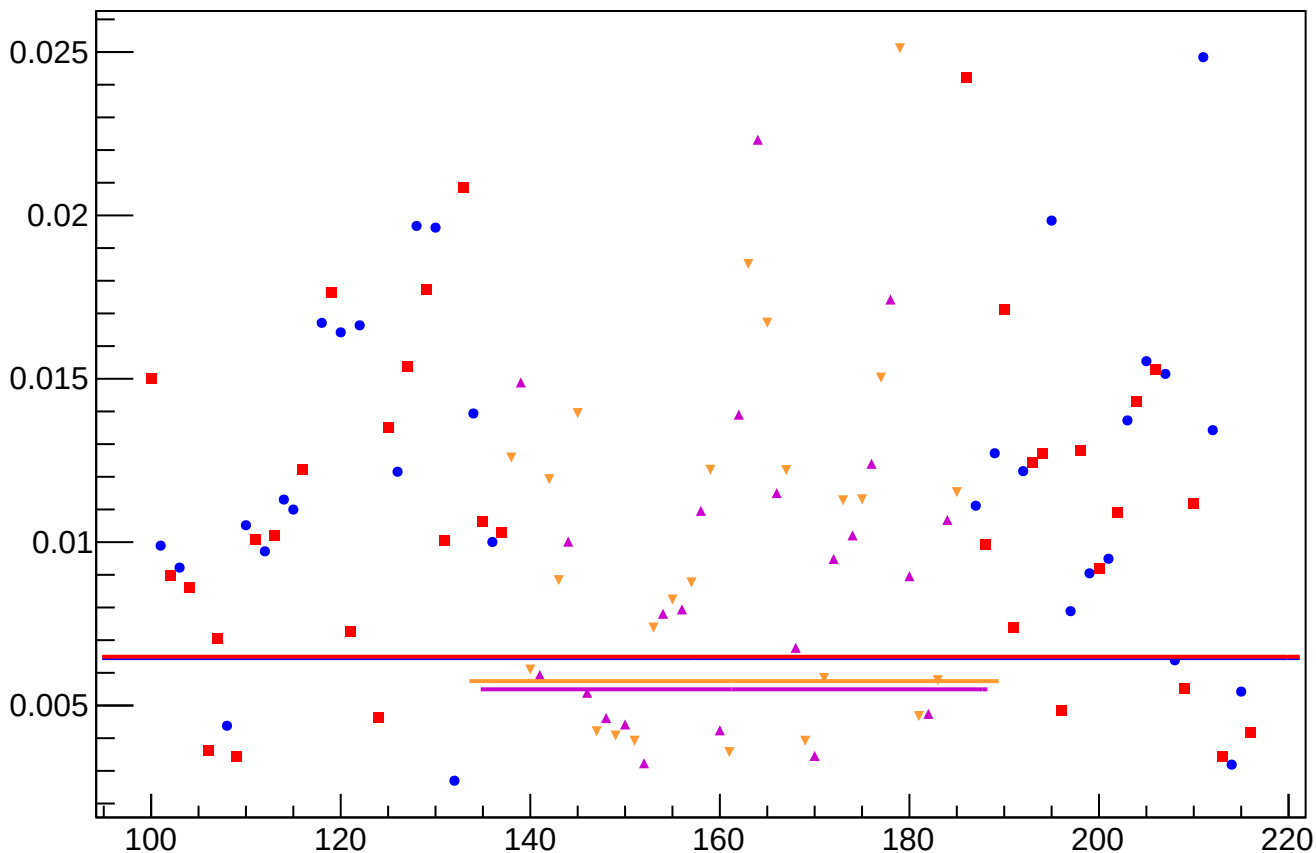
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 148.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 11320349.7/30

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8128513.8/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 9153023.7/34

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 6937299.0/22

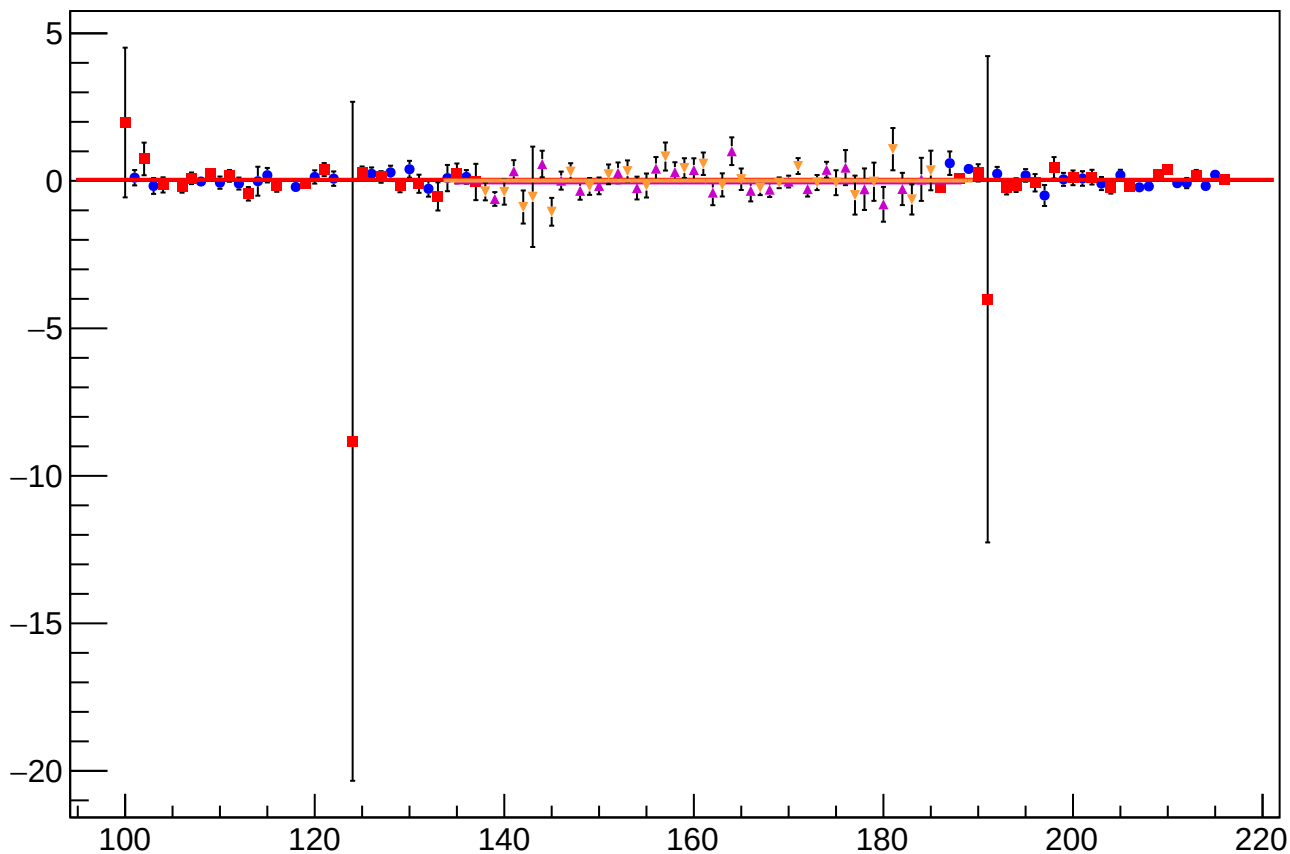
+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 19625941.1/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 36100368.5/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 16465195.6/57



asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

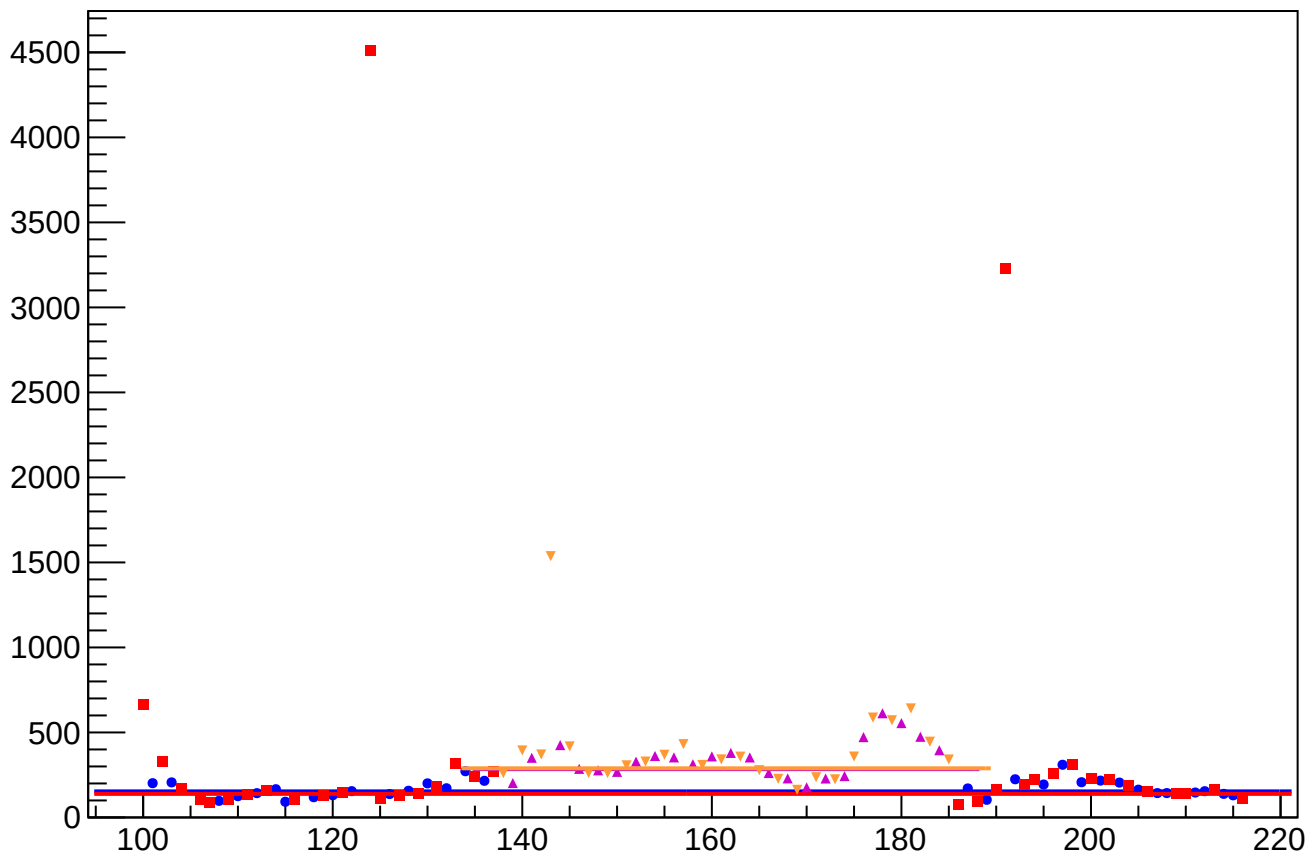
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.296+/-0.026  $\chi^2/\text{NDF}$ : 2349328.6/30

Left Out: 288.922+/-0.050  $\chi^2/\text{NDF}$ : 4648388.8/24

Right Out: 138.740+/-0.024  $\chi^2/\text{NDF}$ : 4792049.6/34

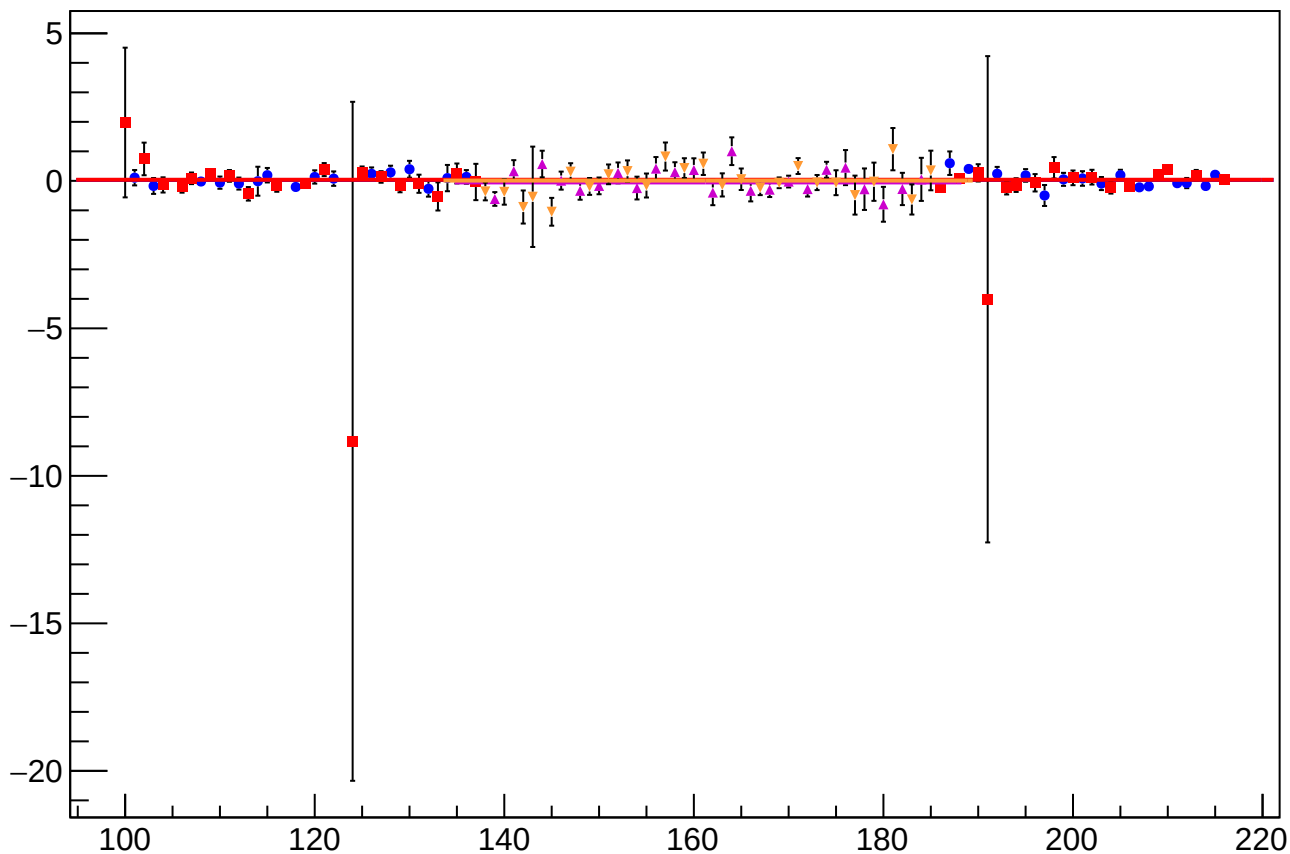
Left In: 284.170+/-0.050  $\chi^2/\text{NDF}$ : 3077626.7/22

+ sign 182.019+/-0.023  $\chi^2/\text{NDF}$ : 12747066.0/55

All: 174.102+/-0.016  $\chi^2/\text{NDF}$ : 27716879.3/11

- sign 166.970+/-0.022  $\chi^2/\text{NDF}$ : 14746714.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.037$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.009 \pm 0.071$   $\chi^2/\text{NDF}$ : 28.9/24

Right Out:  $0.036 \pm 0.035$   $\chi^2/\text{NDF}$ : 40.7/34

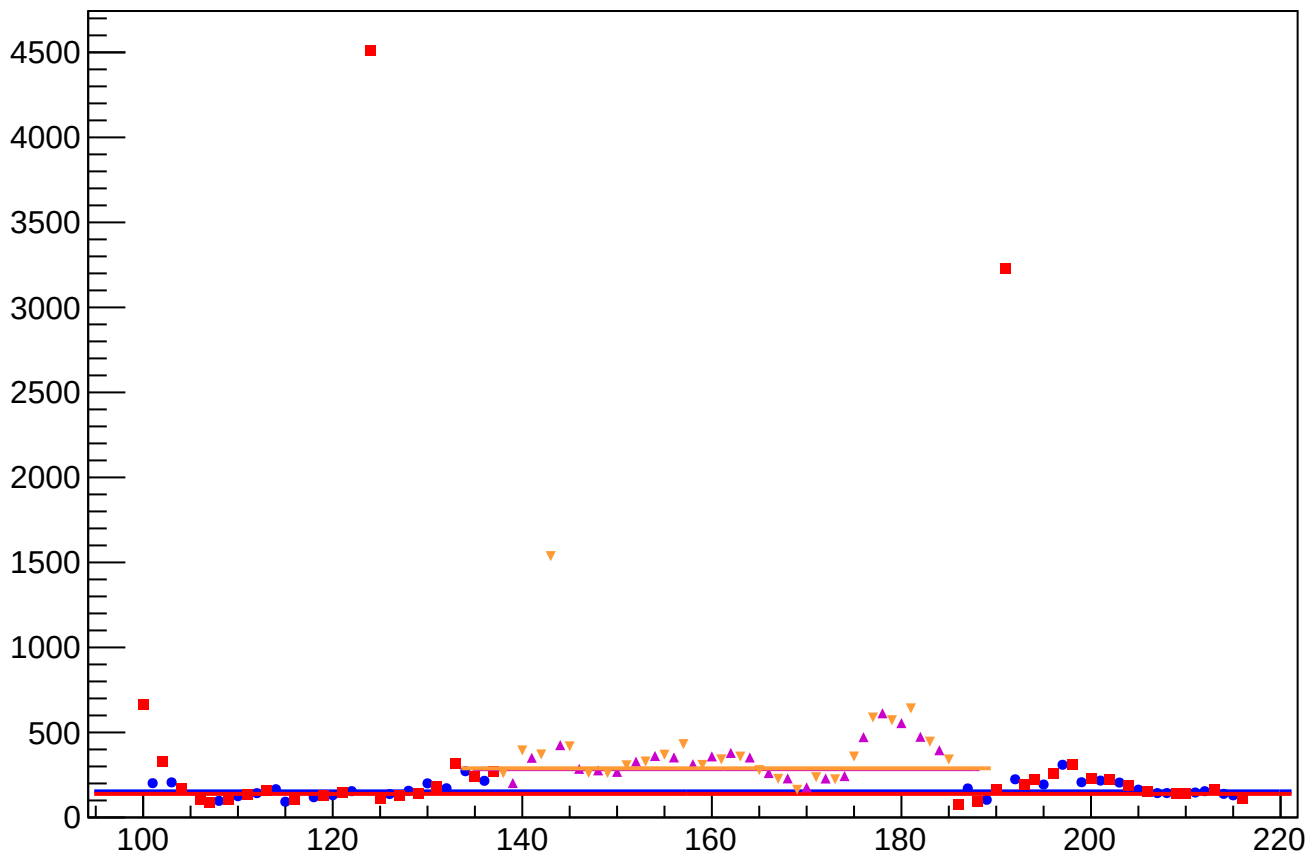
Left In:  $-0.053 \pm 0.070$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.025 \pm 0.033$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $0.022 \pm 0.022$   $\chi^2/\text{NDF}$ : 129.9/113

- sign  $0.019 \pm 0.031$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.296 $\pm$ 0.026  $\chi^2$ /NDF: 2349328.6/30

Left Out: 288.922 $\pm$ 0.050  $\chi^2$ /NDF: 4648388.8/24

Right Out: 138.740 $\pm$ 0.024  $\chi^2$ /NDF: 4792049.6/34

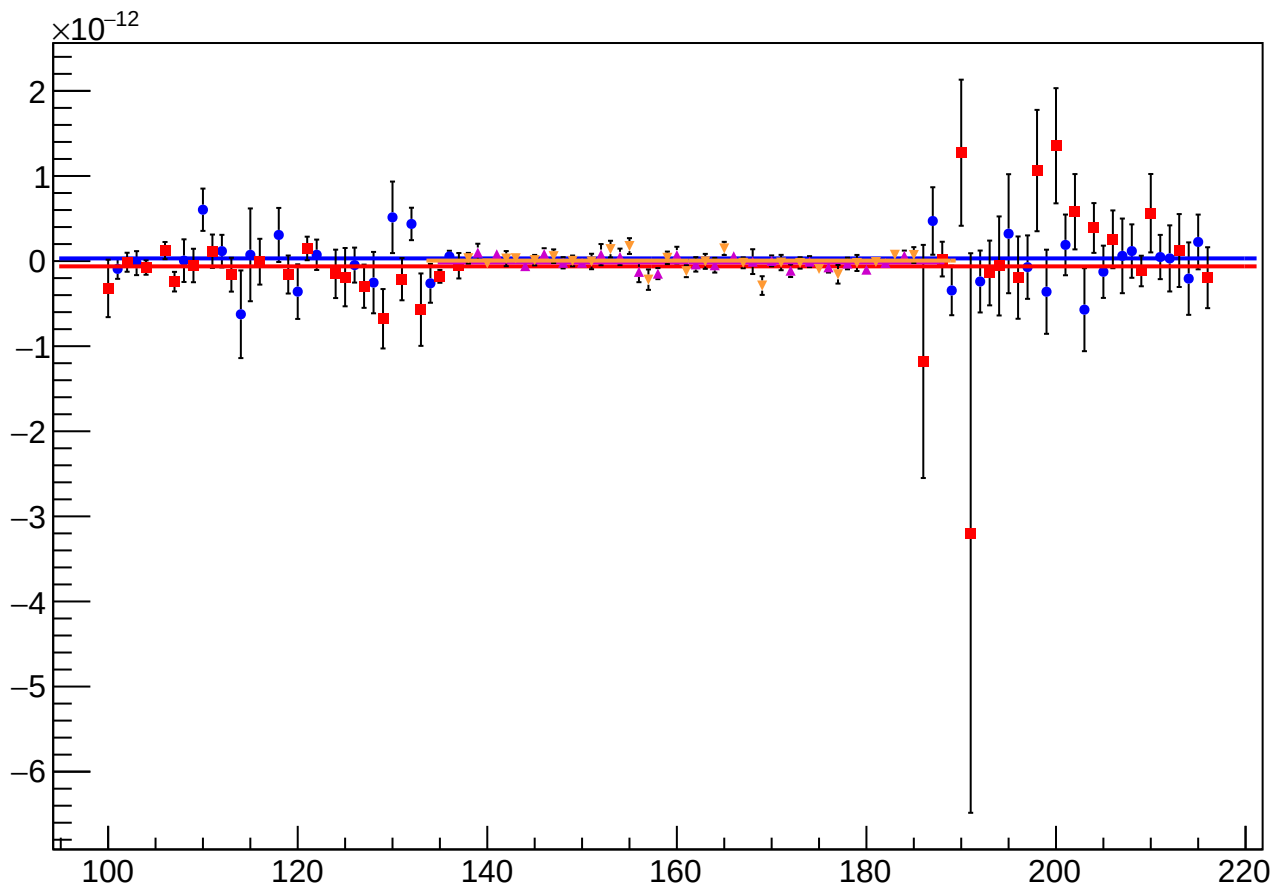
Left In: 284.170 $\pm$ 0.050  $\chi^2$ /NDF: 3077626.7/22

+ sign 182.019 $\pm$ 0.023  $\chi^2$ /NDF: 12747066.0/55

All: 174.102 $\pm$ 0.016  $\chi^2$ /NDF: 27716879.3/11

- sign 166.970 $\pm$ 0.022  $\chi^2$ /NDF: 14746714.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.4/34

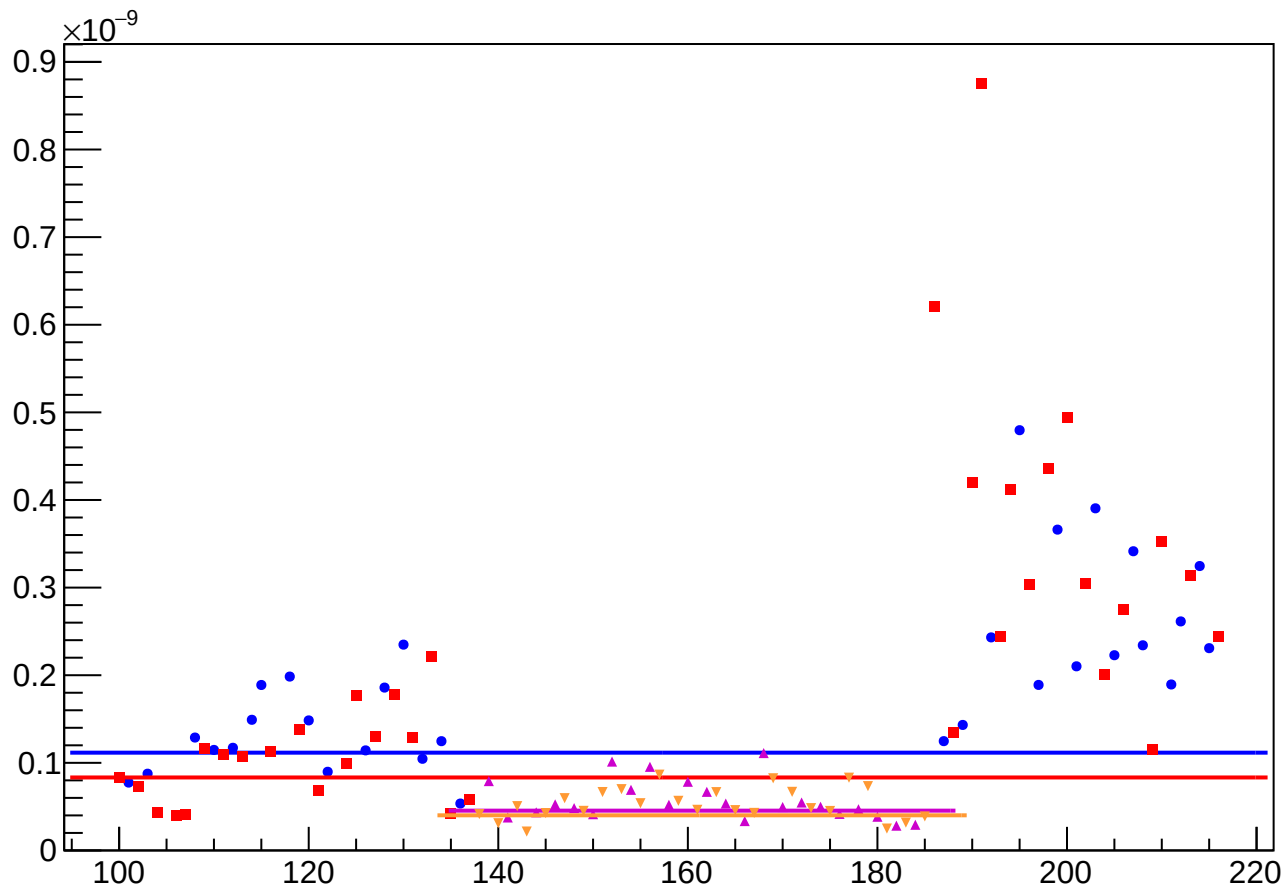
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.7/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 126.2/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6898634.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3609934.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9399601.0/34

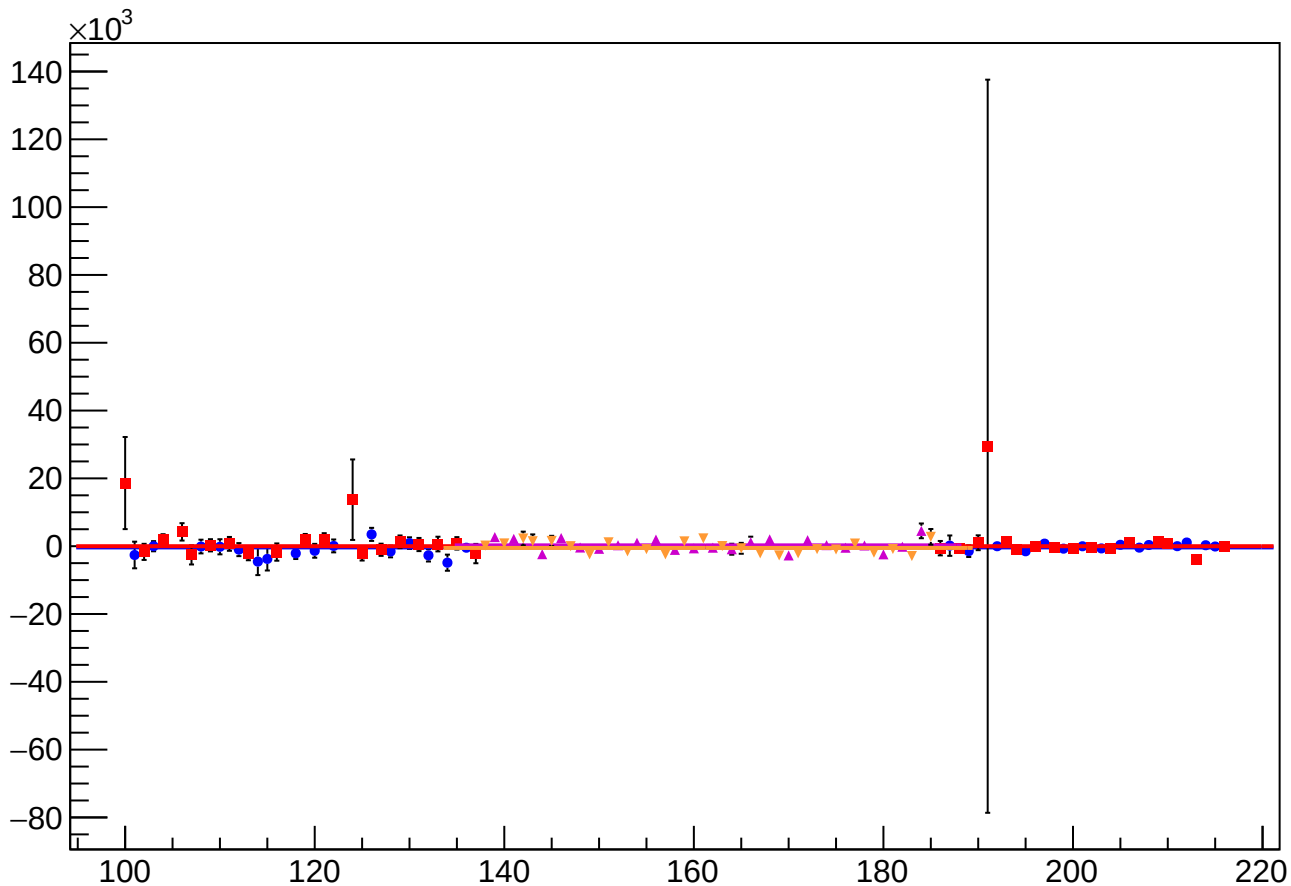
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2780344.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16657123.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31347011.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14543709.2/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -361.129+/-292.027  $\chi^2$ /NDF: 18.2/30

Left Out: -514.484+/-285.945  $\chi^2$ /NDF:30.9/24

Right Out: -5.203+/-293.245  $\chi^2$ /NDF: 29.8/34

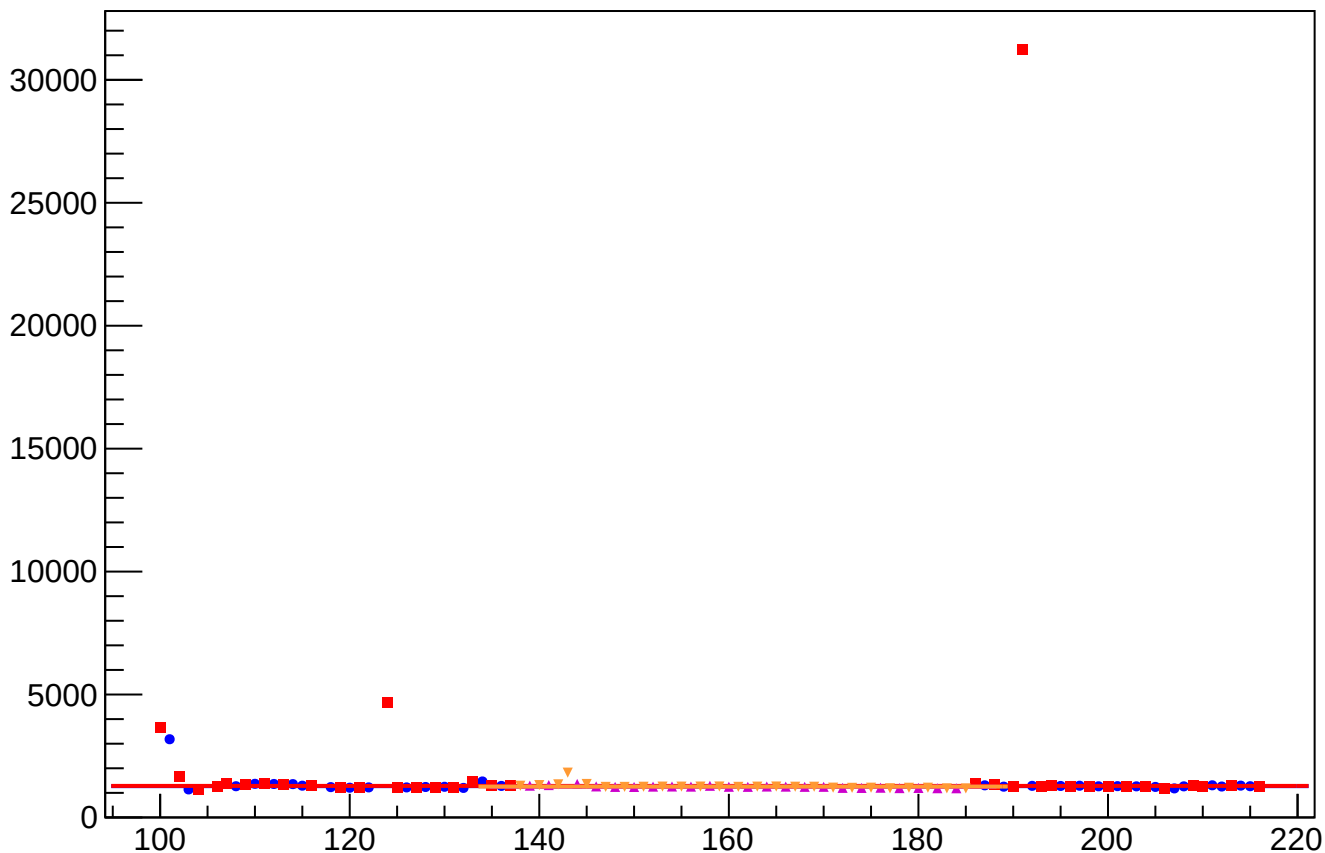
Left In: 242.686+/-291.166  $\chi^2$ /NDF:32.0/22

+ sign -439.421+/-204.310  $\chi^2$ /NDF: 49.3/55

All: -163.037+/-145.278  $\chi^2$ /NDF: 115.2/113

- sign 119.623+/-206.616  $\chi^2$ /NDF: 62.2/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1273.339 $\pm$ 0.206  $\chi^2$ /NDF: 534165.5/30

Left Out: 1255.514 $\pm$ 0.202  $\chi^2$ /NDF: 203124.1/24

Right Out: 1283.056 $\pm$ 0.207  $\chi^2$ /NDF: 508009.8/34

Left In: 1246.355 $\pm$ 0.206  $\chi^2$ /NDF: 39857.0/22

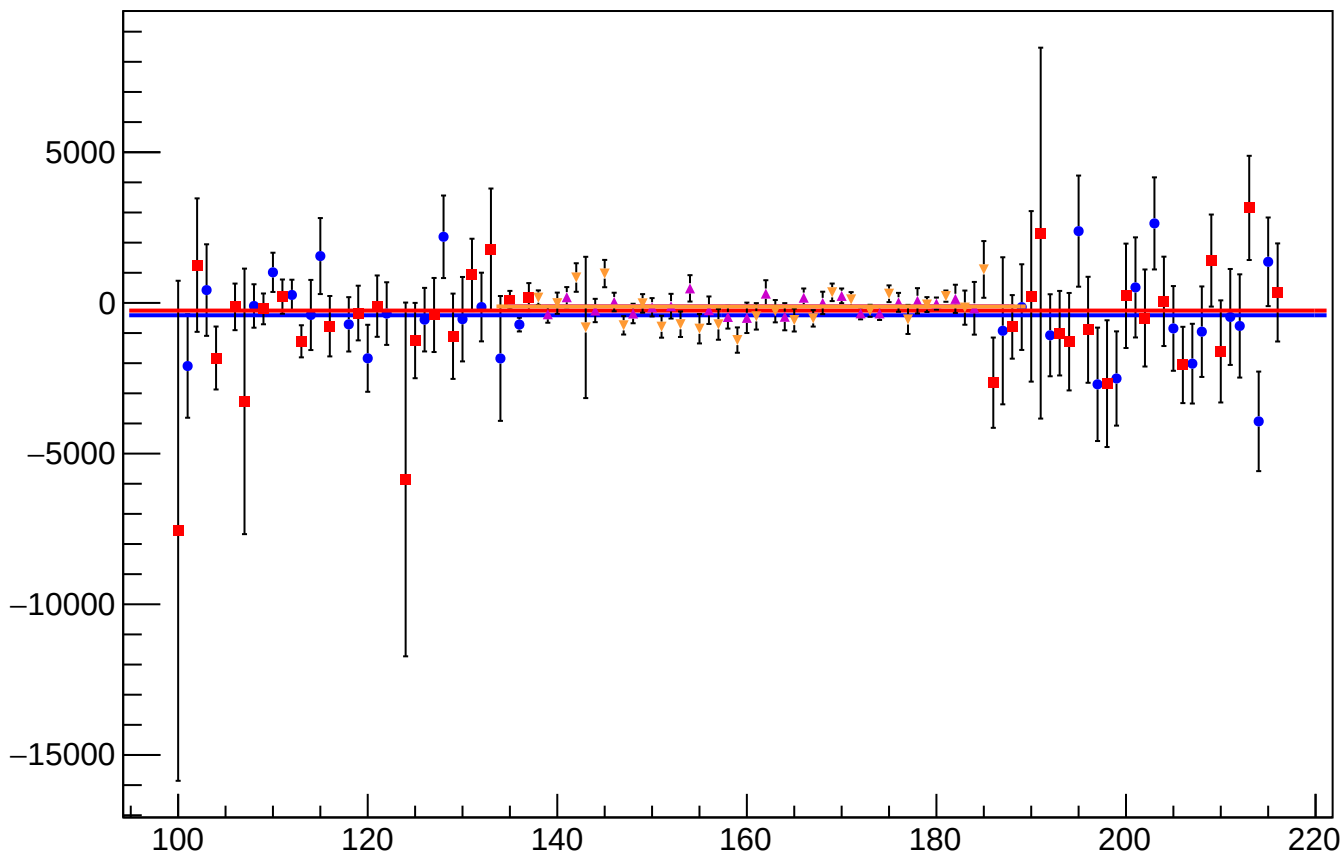
+ sign 1264.239 $\pm$ 0.144  $\chi^2$ /NDF: 741093.7/55

All: 1264.405 $\pm$ 0.103  $\chi^2$ /NDF: 1304738.5/11

- sign 1264.575 $\pm$ 0.146  $\chi^2$ /NDF: 563642.1/57



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-410.326 \pm 155.400$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-117.028 \pm 65.059$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-254.182 \pm 156.176$   $\chi^2/\text{NDF}$ : 28.0/34

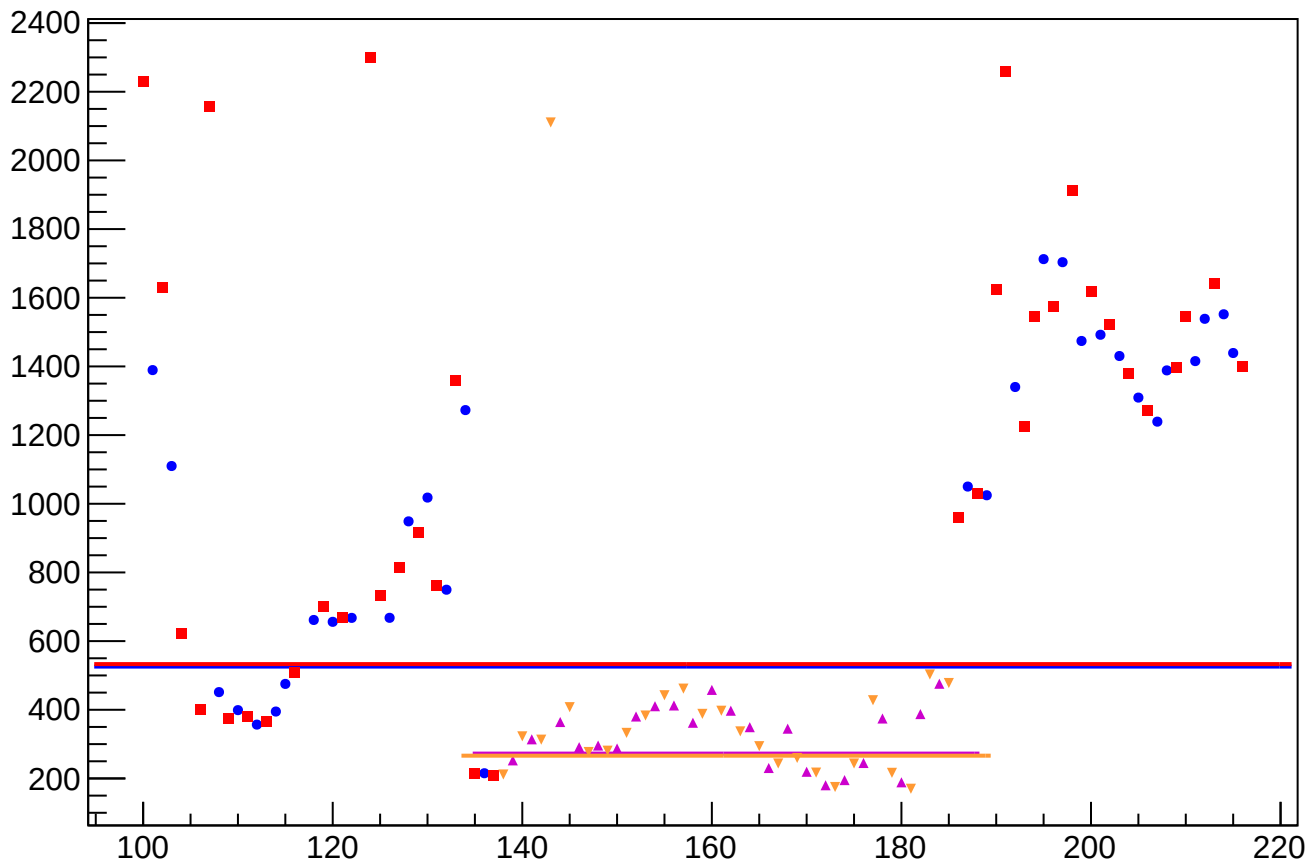
Left In:  $-107.341 \pm 67.001$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-160.769 \pm 60.012$   $\chi^2/\text{NDF}$ : 87.6/55

All:  $-145.861 \pm 42.976$   $\chi^2/\text{NDF}$ : 130.2/113

- sign  $-130.166 \pm 61.574$   $\chi^2/\text{NDF}$ : 42.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 525.804 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15268100.9/30

Left Out: 266.321 $\pm$ 0.046  $\chi^2/\text{NDF}$ : 4630130.4/24

Right Out: 533.052 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15123404.4/34

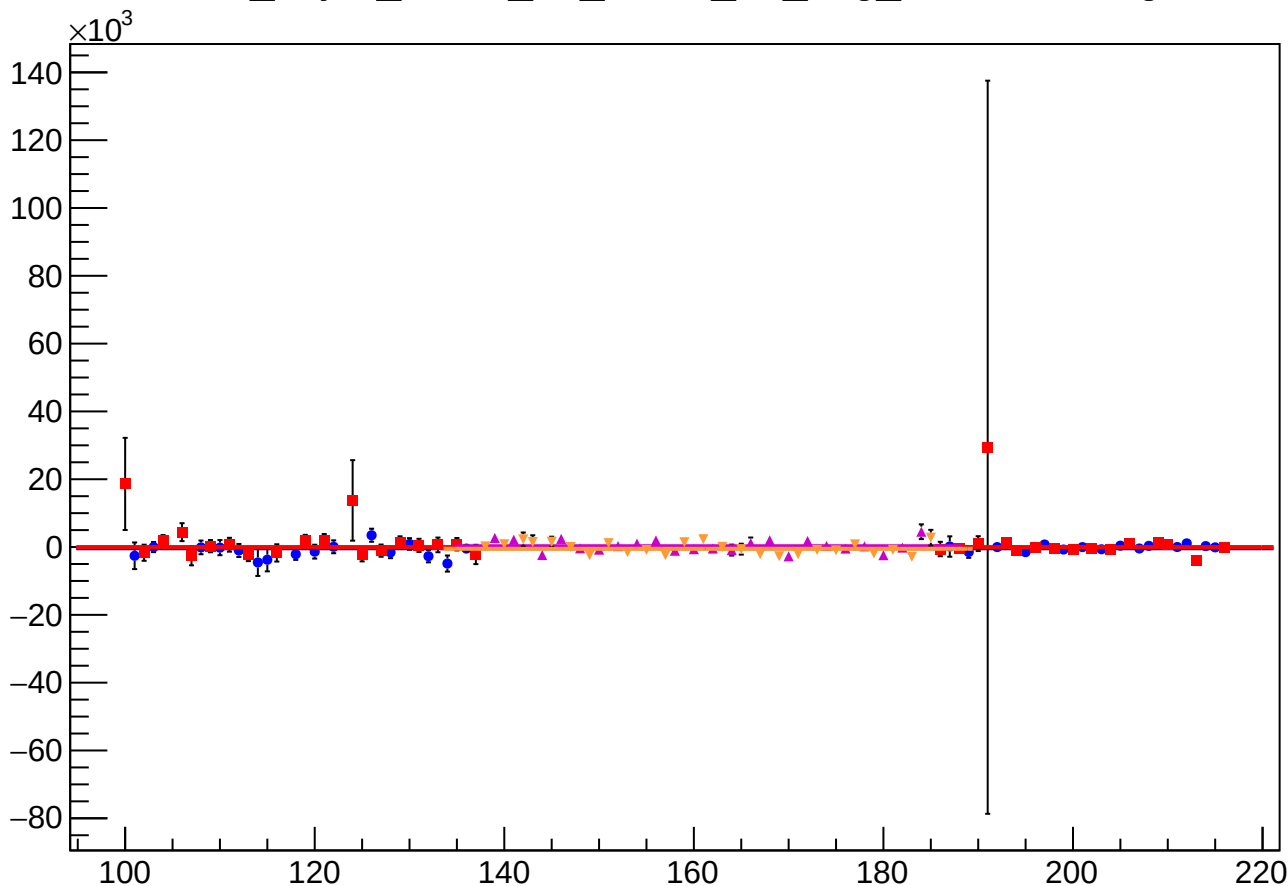
Left In: 272.368 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2887823.5/22

+ sign 305.018 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 24642956.4/55

All: 308.852 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 47377016.4/11

- sign 312.888 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 22717304.0/57

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In: -360.995 $\pm$ 292.027  $\chi^2$ /NDF: 18.2/30

Left Out: -514.430 $\pm$ 285.945  $\chi^2$ /NDF:30.9/24

Right Out: -6.429 $\pm$ 293.359  $\chi^2$ /NDF: 29.8/34

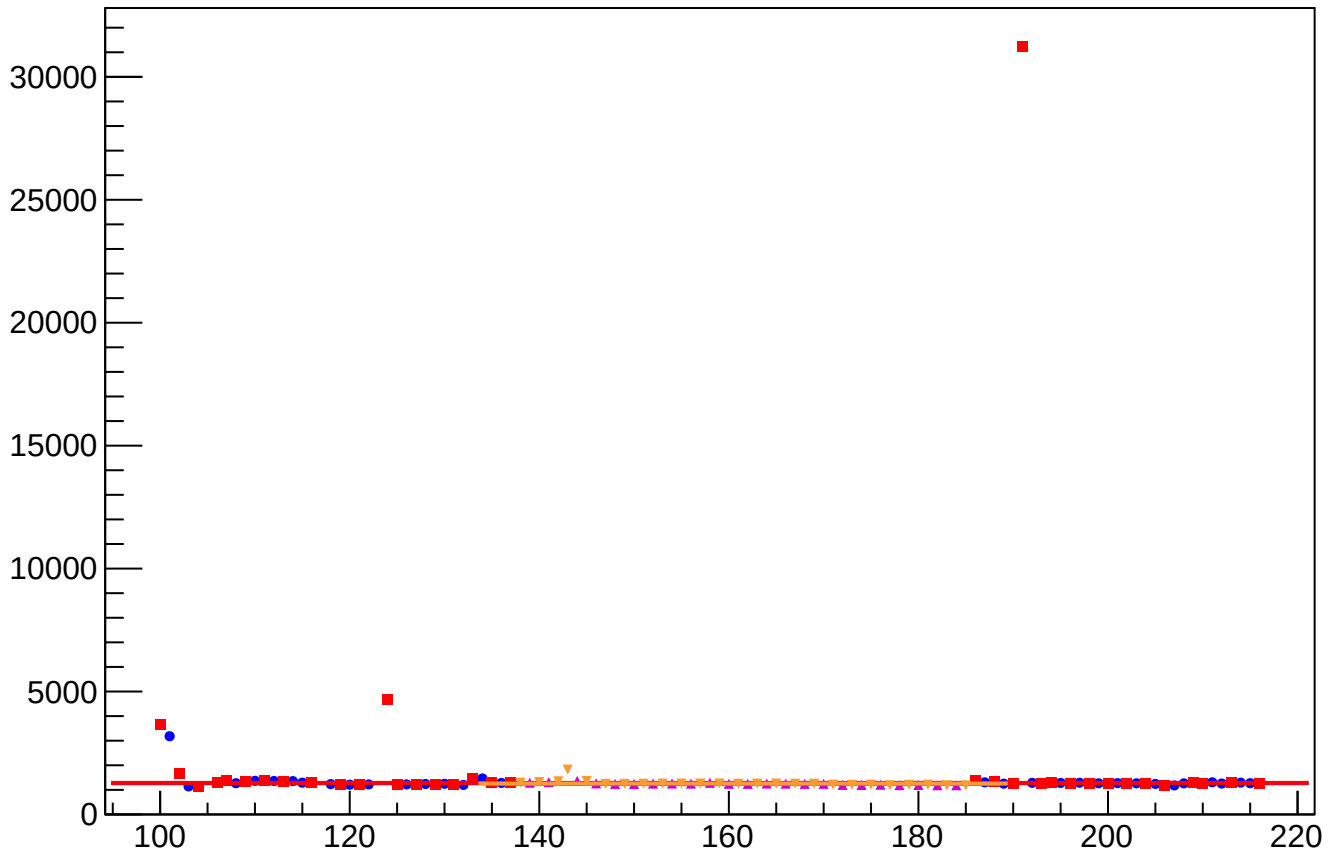
Left In: 242.663 $\pm$ 291.166  $\chi^2$ /NDF:32.0/22

+ sign -439.327 $\pm$ 204.310  $\chi^2$ /NDF: 49.3/55

All: -163.326 $\pm$ 145.292  $\chi^2$ /NDF: 115.2/113

- sign 119.051 $\pm$ 206.657  $\chi^2$ /NDF: 62.3/57

cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1273.339+/-0.206  $\chi^2/\text{NDF}$ : 534166.8/30

Left Out: 1255.514+/-0.202  $\chi^2/\text{NDF}$ : 203124.0/24

Right Out: 1283.573+/-0.207  $\chi^2/\text{NDF}$ : 508006.4/34

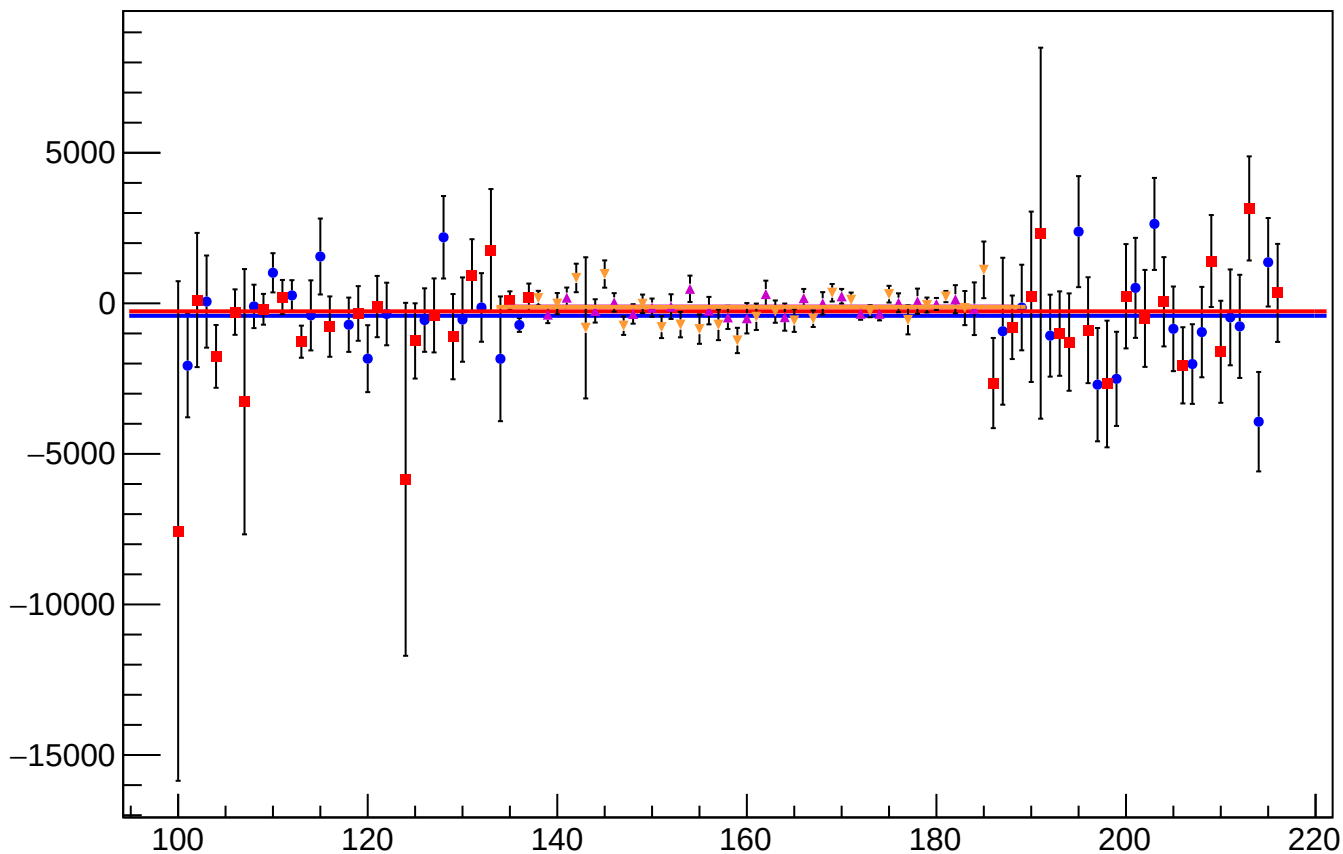
Left In: 1246.355+/-0.206  $\chi^2/\text{NDF}$ : 39857.0/22

+ sign 1264.239+/-0.144  $\chi^2/\text{NDF}$ : 741095.1/55

All: 1264.528+/-0.103  $\chi^2/\text{NDF}$ : 1305183.8/11

- sign 1264.824+/-0.146  $\chi^2/\text{NDF}$ : 564080.6/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-414.142 \pm 155.415$   $\chi^2/\text{NDF}$ : 35.9/30

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-265.254 \pm 156.022$   $\chi^2/\text{NDF}$ : 27.3/34

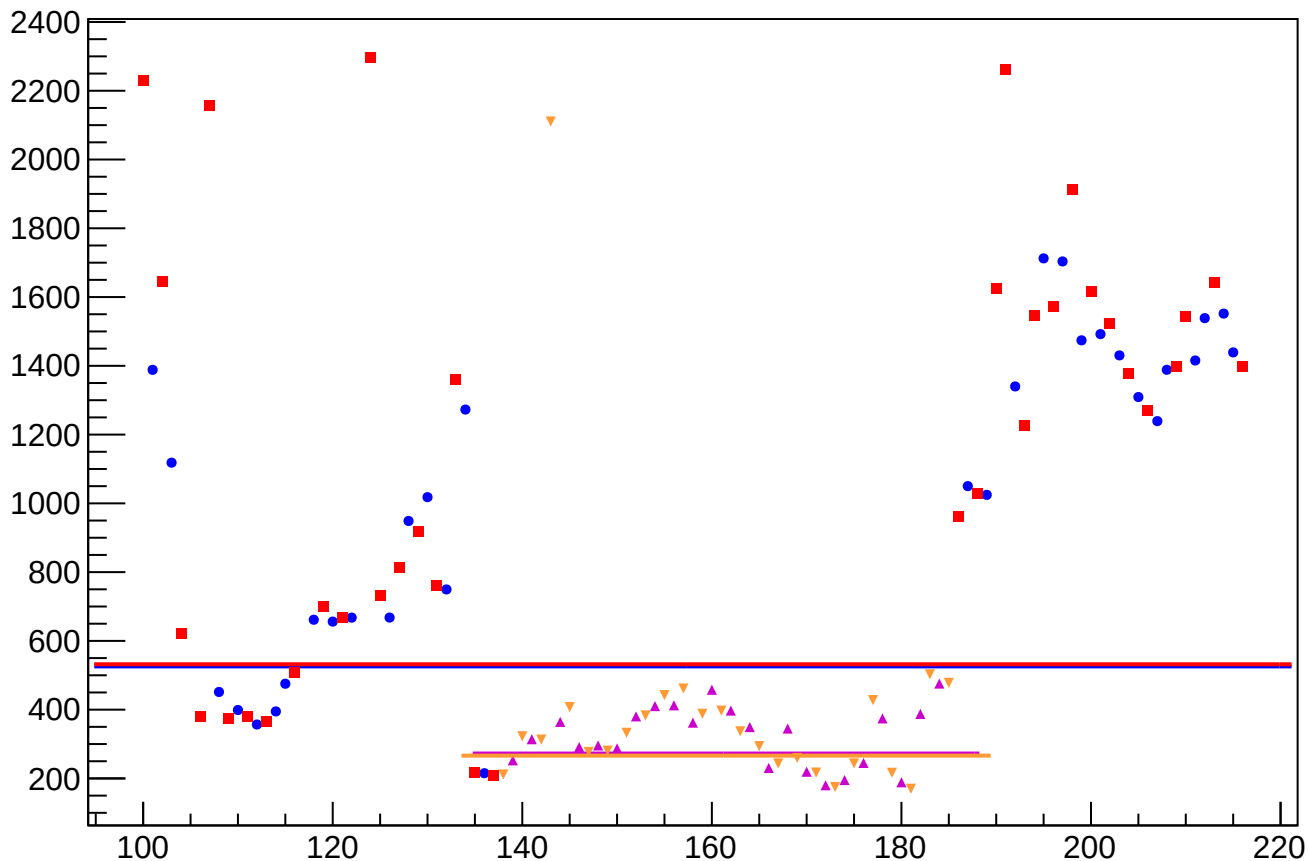
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-161.310 \pm 60.014$   $\chi^2/\text{NDF}$ : 87.5/55

All:  $-147.043 \pm 42.974$   $\chi^2/\text{NDF}$ : 129.5/113

- sign  $-132.029 \pm 61.566$   $\chi^2/\text{NDF}$ : 41.9/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 525.826 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15271071.4/30

Left Out: 266.326 $\pm$ 0.046  $\chi^2/\text{NDF}$ : 4630167.4/24

Right Out: 531.958 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15152273.7/34

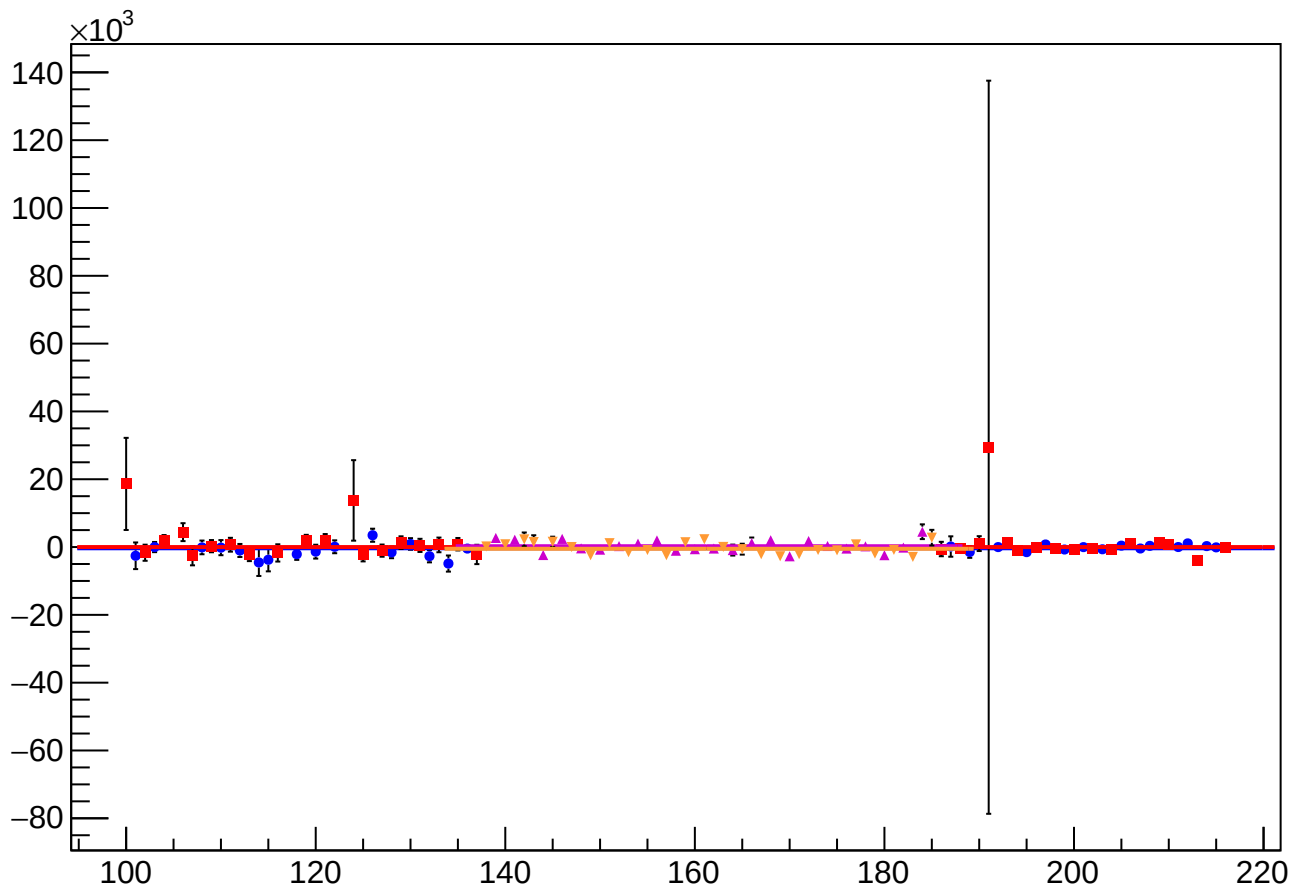
Left In: 272.378 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2887597.1/22

+ sign 305.021 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 24645734.9/55

All: 308.810 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 47376051.7/11

- sign 312.796 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 22713962.3/57

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In:  $-360.995 \pm 292.027$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-514.430 \pm 285.945$   $\chi^2/\text{NDF}$ : 30.9/24

Right Out:  $-6.429 \pm 293.359$   $\chi^2/\text{NDF}$ : 29.8/34

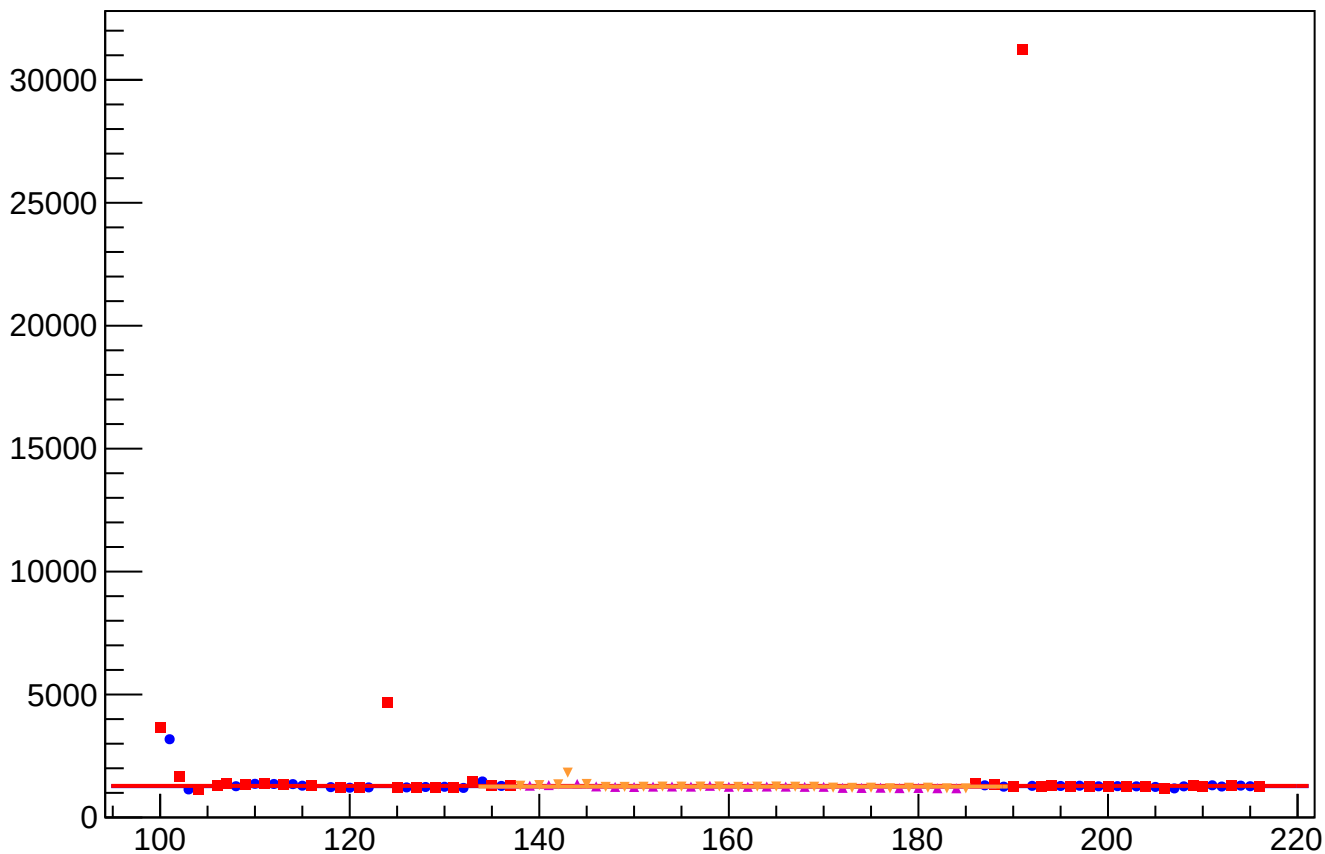
Left In:  $242.663 \pm 291.166$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $-439.327 \pm 204.310$   $\chi^2/\text{NDF}$ : 49.3/55

All:  $-163.326 \pm 145.292$   $\chi^2/\text{NDF}$ : 115.2/113

- sign  $119.051 \pm 206.657$   $\chi^2/\text{NDF}$ : 62.3/57

eigen\_cor\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1273.339+/-0.206  $\chi^2/\text{NDF}$ : 534166.8/30

Left Out: 1255.514+/-0.202  $\chi^2/\text{NDF}$ : 203124.0/24

Right Out: 1283.573+/-0.207  $\chi^2/\text{NDF}$ : 508006.4/34

Left In: 1246.355+/-0.206  $\chi^2/\text{NDF}$ : 39857.0/22

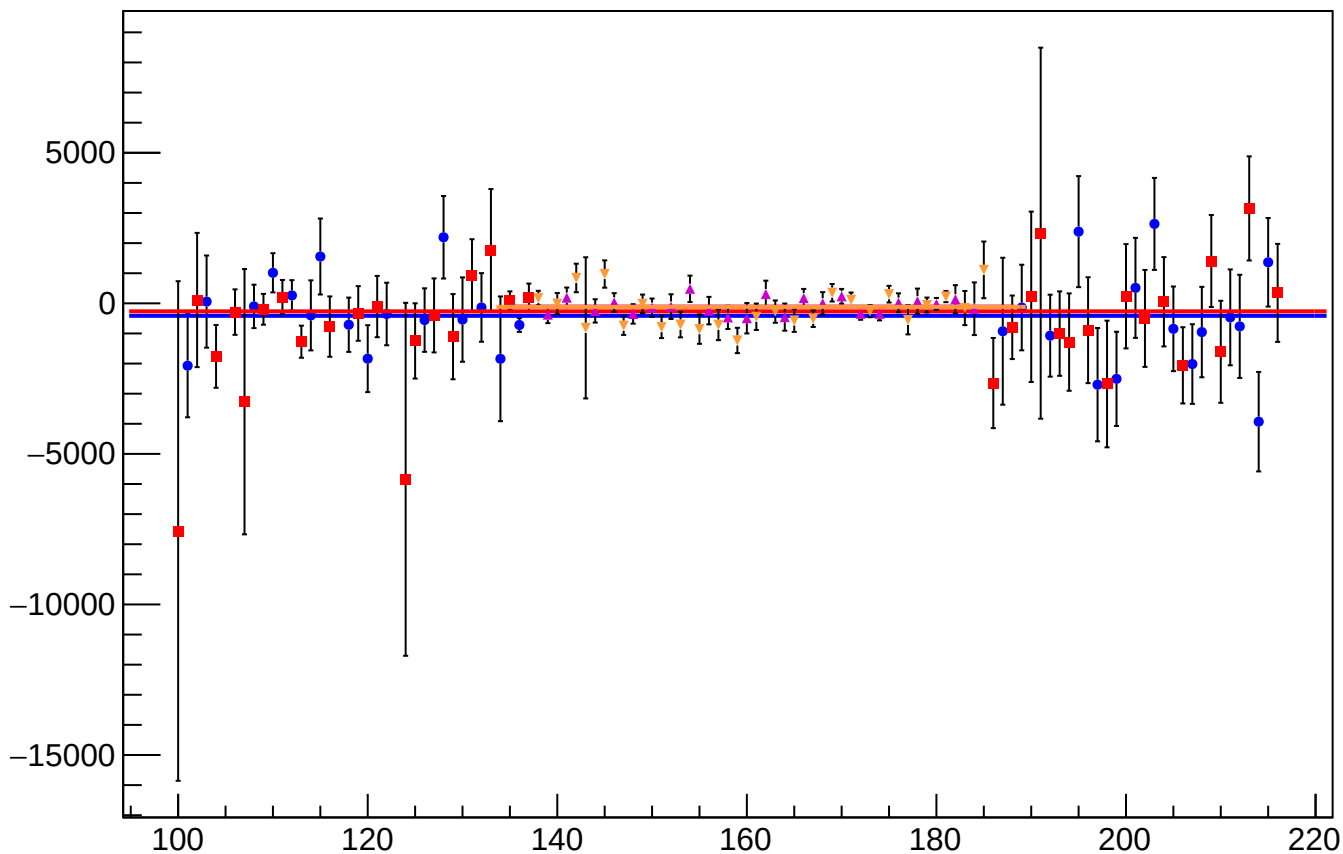
+ sign 1264.239+/-0.144  $\chi^2/\text{NDF}$ : 741095.1/55

All: 1264.528+/-0.103  $\chi^2/\text{NDF}$ : 1305183.8/11

- sign 1264.824+/-0.146  $\chi^2/\text{NDF}$ : 564080.6/57



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-414.142 \pm 155.415$   $\chi^2/\text{NDF}$ : 35.9/30

Left Out:  $-117.002 \pm 65.060$   $\chi^2/\text{NDF}$ : 48.4/24

Right Out:  $-265.254 \pm 156.022$   $\chi^2/\text{NDF}$ : 27.3/34

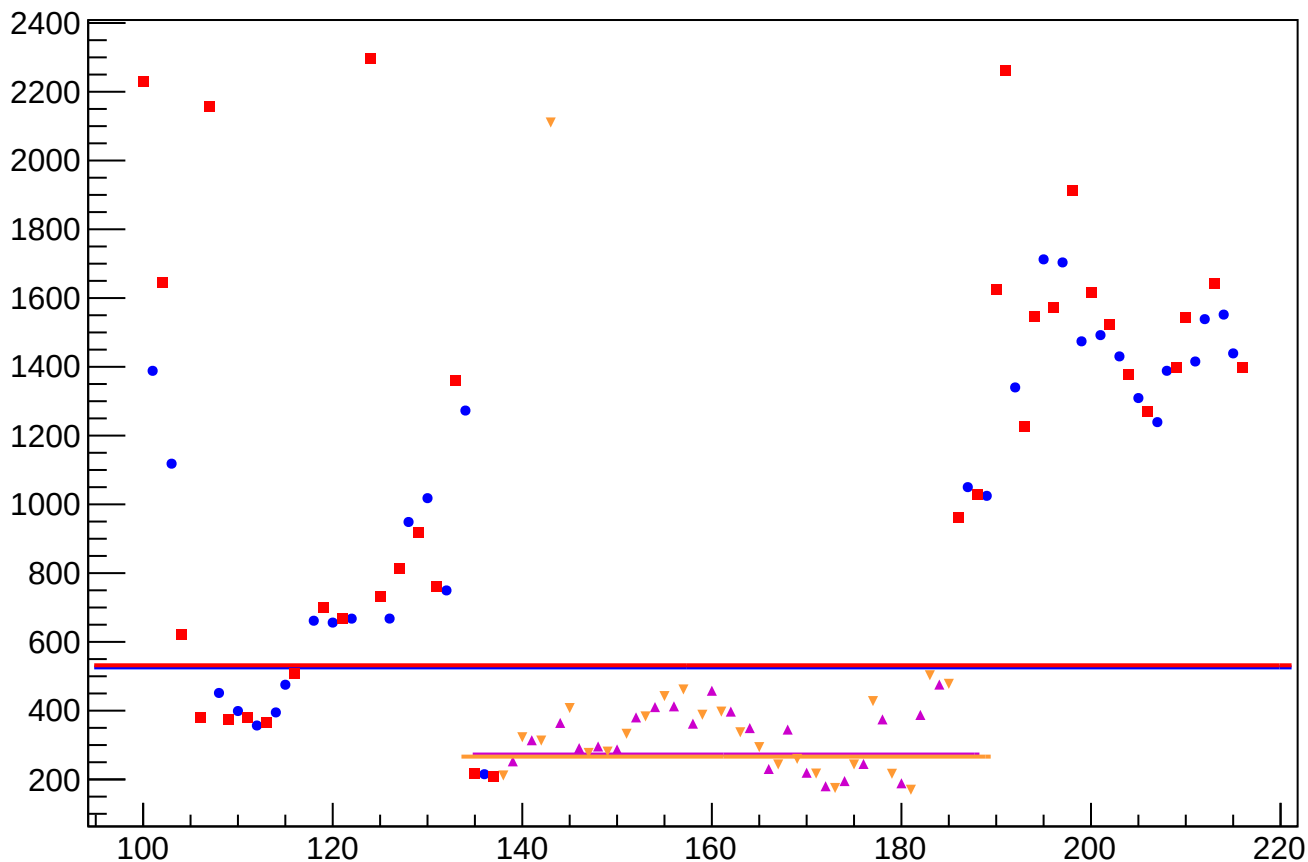
Left In:  $-107.459 \pm 67.003$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-161.310 \pm 60.014$   $\chi^2/\text{NDF}$ : 87.5/55

All:  $-147.043 \pm 42.974$   $\chi^2/\text{NDF}$ : 129.5/113

- sign  $-132.029 \pm 61.566$   $\chi^2/\text{NDF}$ : 41.9/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 525.826 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15271071.4/30

Left Out: 266.326 $\pm$ 0.046  $\chi^2/\text{NDF}$ : 4630167.4/24

Right Out: 531.958 $\pm$ 0.110  $\chi^2/\text{NDF}$ : 15152273.7/34

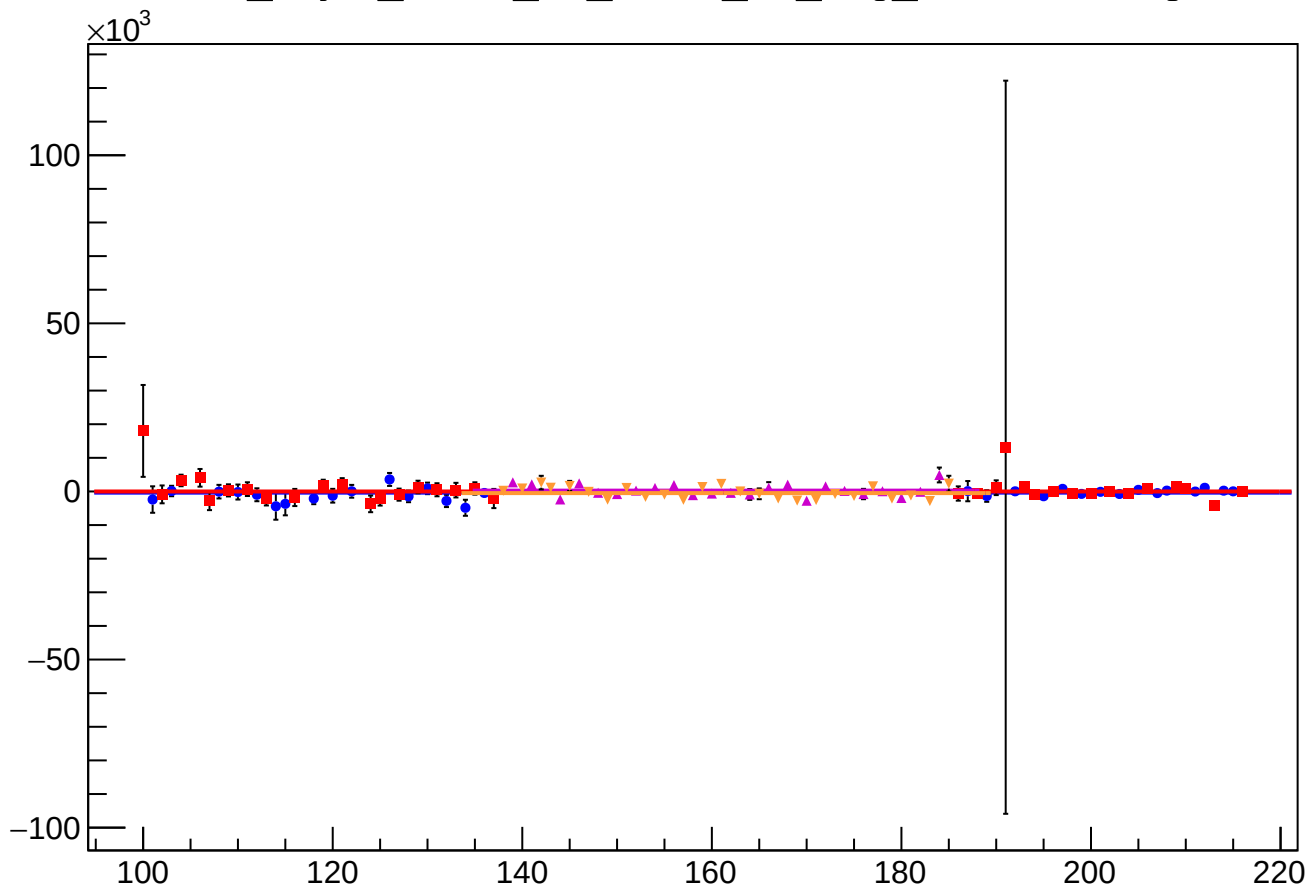
Left In: 272.378 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2887597.1/22

+ sign 305.021 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 24645734.9/55

All: 308.810 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 47376051.7/11

- sign 312.796 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 22713962.3/57

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In:  $-352.361 \pm 292.805$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-493.436 \pm 282.734$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-11.619 \pm 292.872$   $\chi^2/\text{NDF}$ : 31.8/34

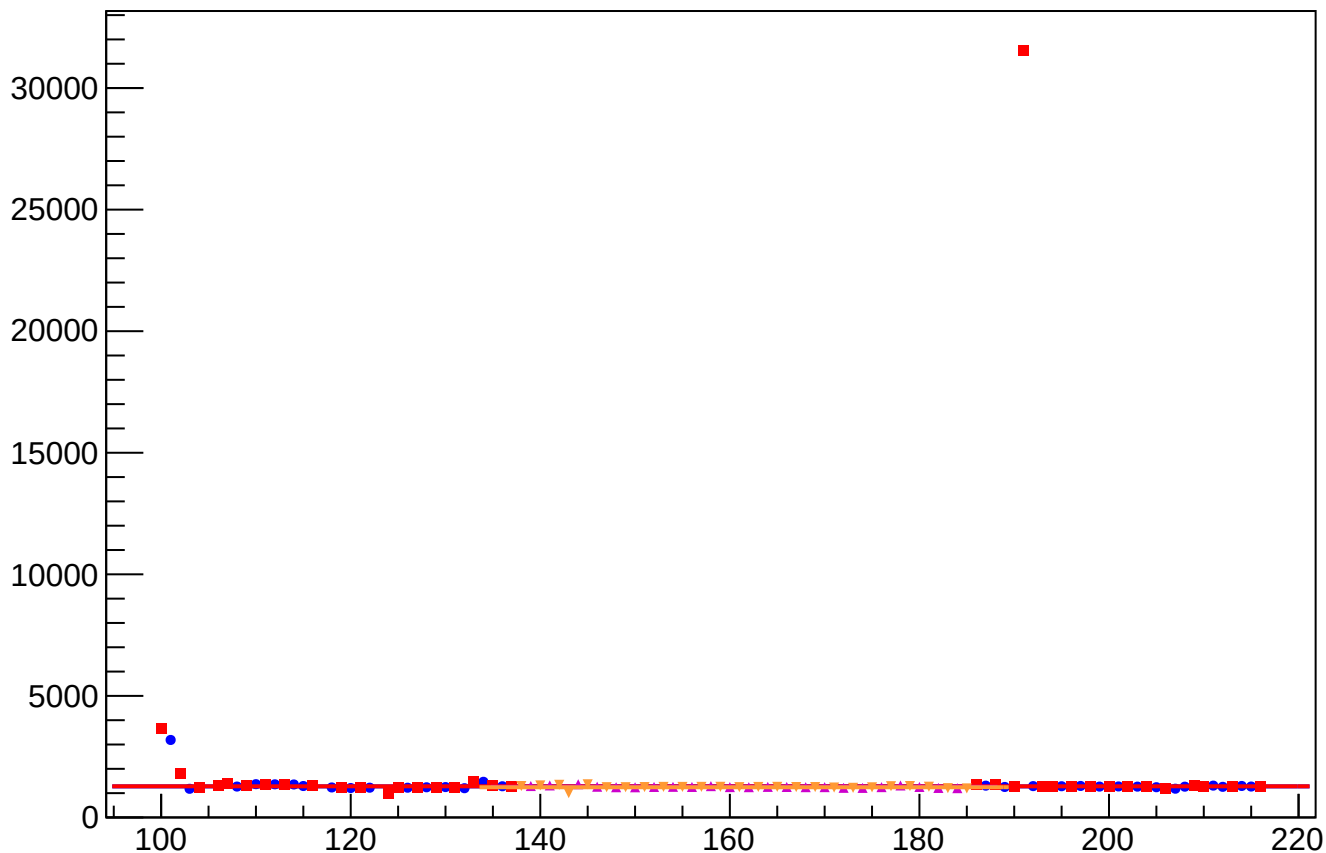
Left In:  $242.004 \pm 294.339$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-425.366 \pm 203.390$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $-160.945 \pm 145.287$   $\chi^2/\text{NDF}$ : 118.9/113

- sign  $114.558 \pm 207.609$   $\chi^2/\text{NDF}$ : 62.9/57

dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1276.803+/-0.207  $\chi^2/\text{NDF}$ : 526769.5/30

Left Out: 1242.539+/-0.200  $\chi^2/\text{NDF}$ : 130023.1/24

Right Out: 1281.503+/-0.207  $\chi^2/\text{NDF}$ : 388326.1/34

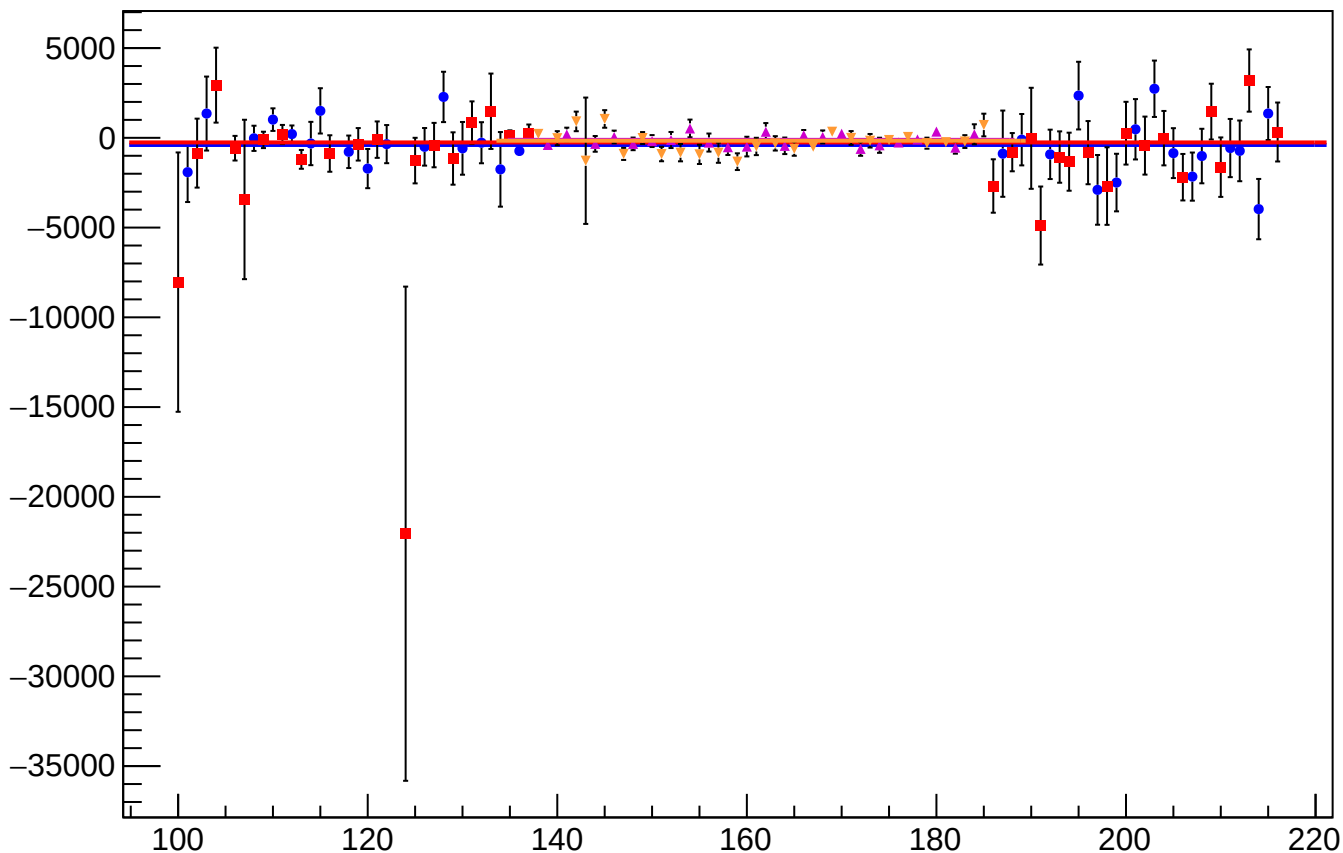
Left In: 1260.094+/-0.208  $\chi^2/\text{NDF}$ : 27932.1/22

+ sign 1259.072+/-0.144  $\chi^2/\text{NDF}$ : 670965.4/55

All: 1264.841+/-0.103  $\chi^2/\text{NDF}$ : 1095826.4/111

- sign 1270.852+/-0.147  $\chi^2/\text{NDF}$ : 421575.4/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-397.642 \pm 157.039$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-160.930 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-256.344 \pm 156.094$   $\chi^2/\text{NDF}$ : 34.1/34

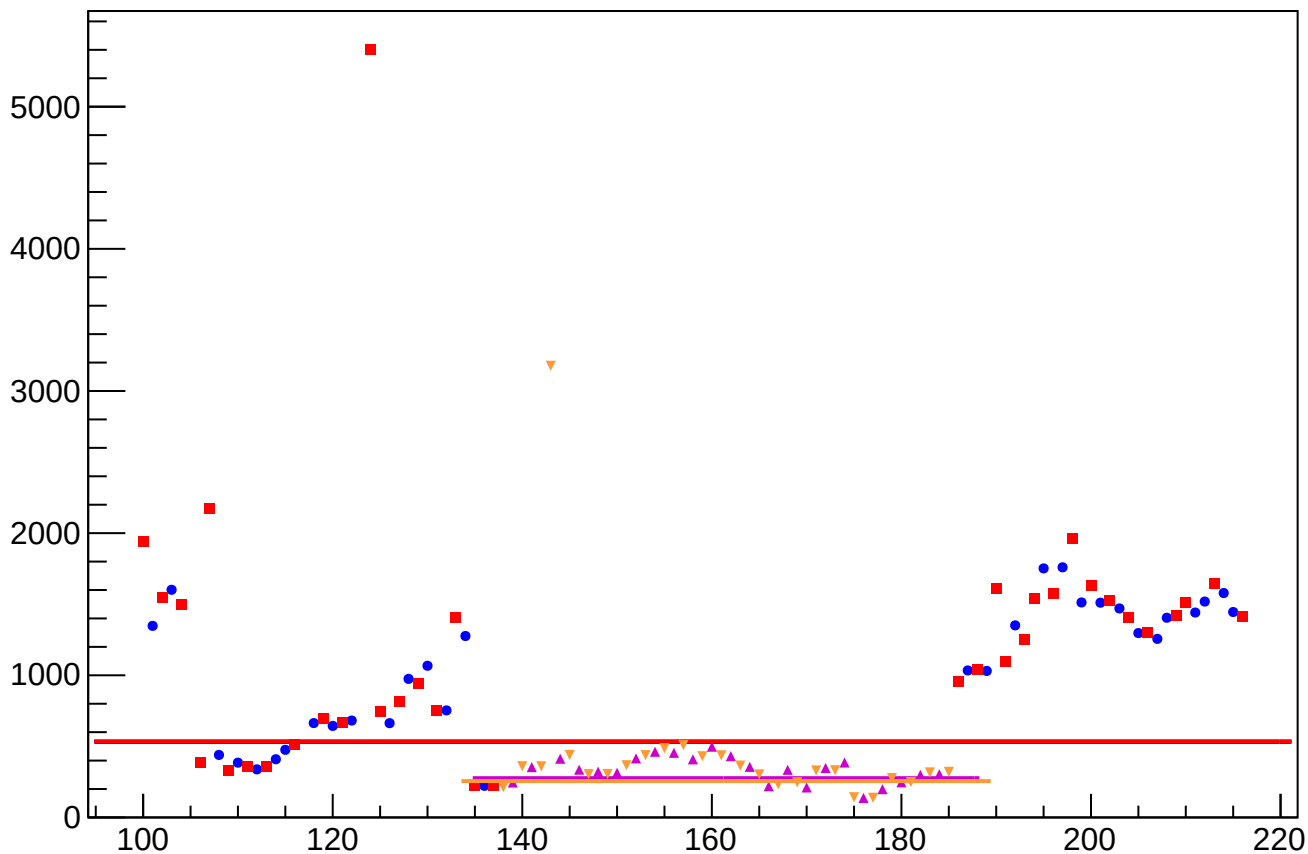
Left In:  $-113.722 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-194.765 \pm 59.372$   $\chi^2/\text{NDF}$ : 82.1/55

All:  $-167.562 \pm 43.204$   $\chi^2/\text{NDF}$ : 135.6/113

- sign  $-136.945 \pm 62.987$   $\chi^2/\text{NDF}$ : 53.0/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 531.606 $\pm$ 0.111  $\chi^2$ /NDF: 15407600.6/30

Left Out: 255.768 $\pm$ 0.045  $\chi^2$ /NDF: 6373929.4/24

Right Out: 535.953 $\pm$ 0.110  $\chi^2$ /NDF: 15662903.2/34

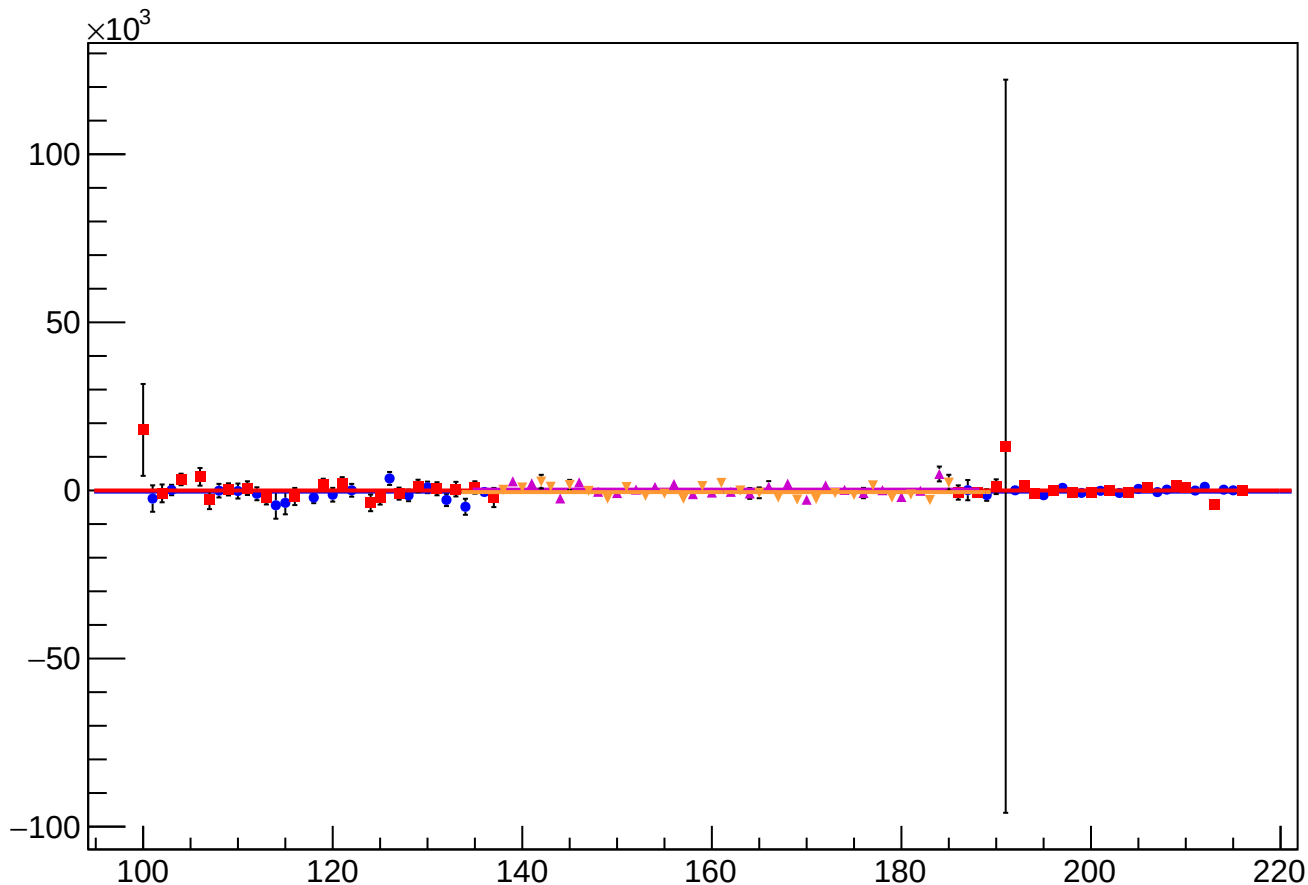
Left In: 276.298 $\pm$ 0.049  $\chi^2$ /NDF: 4027410.5/22

+ sign 295.197 $\pm$ 0.042  $\chi^2$ /NDF: 27070061.9/55

All: 306.197 $\pm$ 0.031  $\chi^2$ /NDF: 51539326.9/11

- sign 318.578 $\pm$ 0.045  $\chi^2$ /NDF: 24323338.5/57

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In:  $-352.360 \pm 292.805$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $-493.435 \pm 282.734$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-11.619 \pm 292.872$   $\chi^2/\text{NDF}$ : 31.8/34

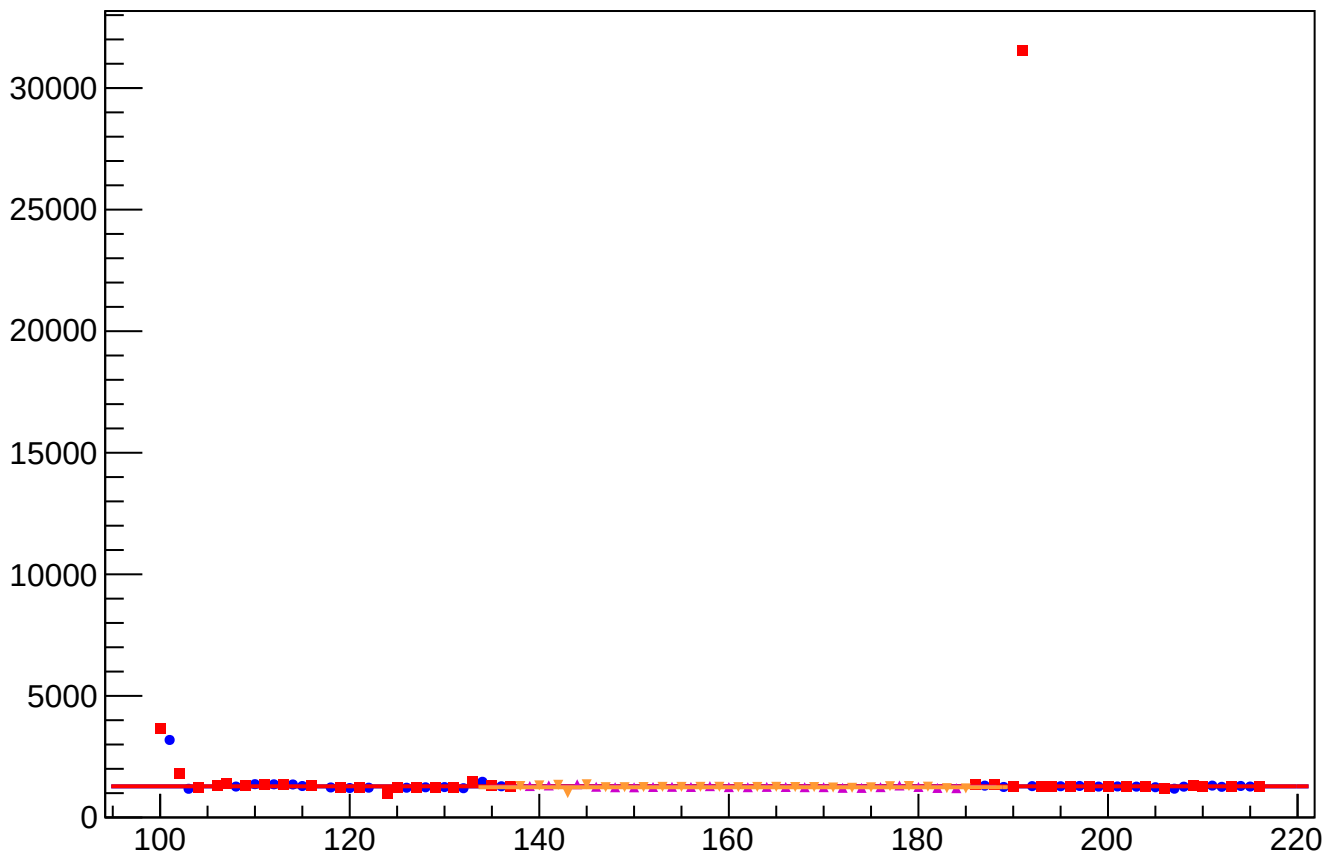
Left In:  $242.004 \pm 294.339$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-425.366 \pm 203.390$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $-160.944 \pm 145.287$   $\chi^2/\text{NDF}$ : 118.9/113

- sign  $114.559 \pm 207.609$   $\chi^2/\text{NDF}$ : 62.9/57

eigen\_dit\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1276.803 $\pm$ 0.207  $\chi^2$ /NDF: 526769.5/30

Left Out: 1242.539 $\pm$ 0.200  $\chi^2$ /NDF:130022.2/24

Right Out: 1281.503 $\pm$ 0.207  $\chi^2$ /NDF: 388326.4/34

Left In: 1260.094 $\pm$ 0.208  $\chi^2$ /NDF:27932.2/22

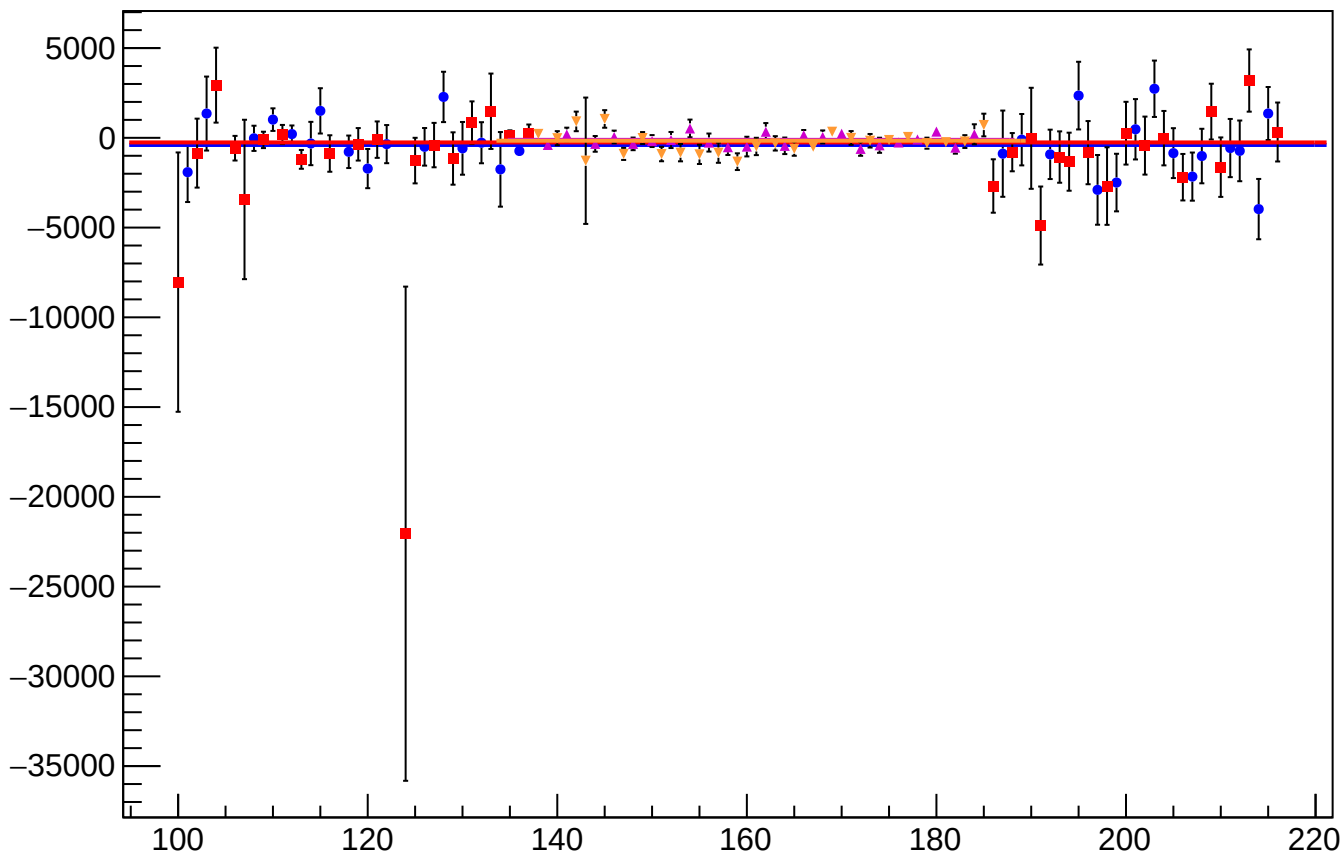
+ sign 1259.072 $\pm$ 0.144  $\chi^2$ /NDF: 670964.5/55

All: 1264.841 $\pm$ 0.103  $\chi^2$ /NDF: 1095825.9/11

- sign 1270.852 $\pm$ 0.147  $\chi^2$ /NDF: 421575.7/57



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-397.643 \pm 157.041$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-160.933 \pm 64.133$   $\chi^2/\text{NDF}$ : 43.8/24

Right Out:  $-256.351 \pm 156.096$   $\chi^2/\text{NDF}$ : 34.1/34

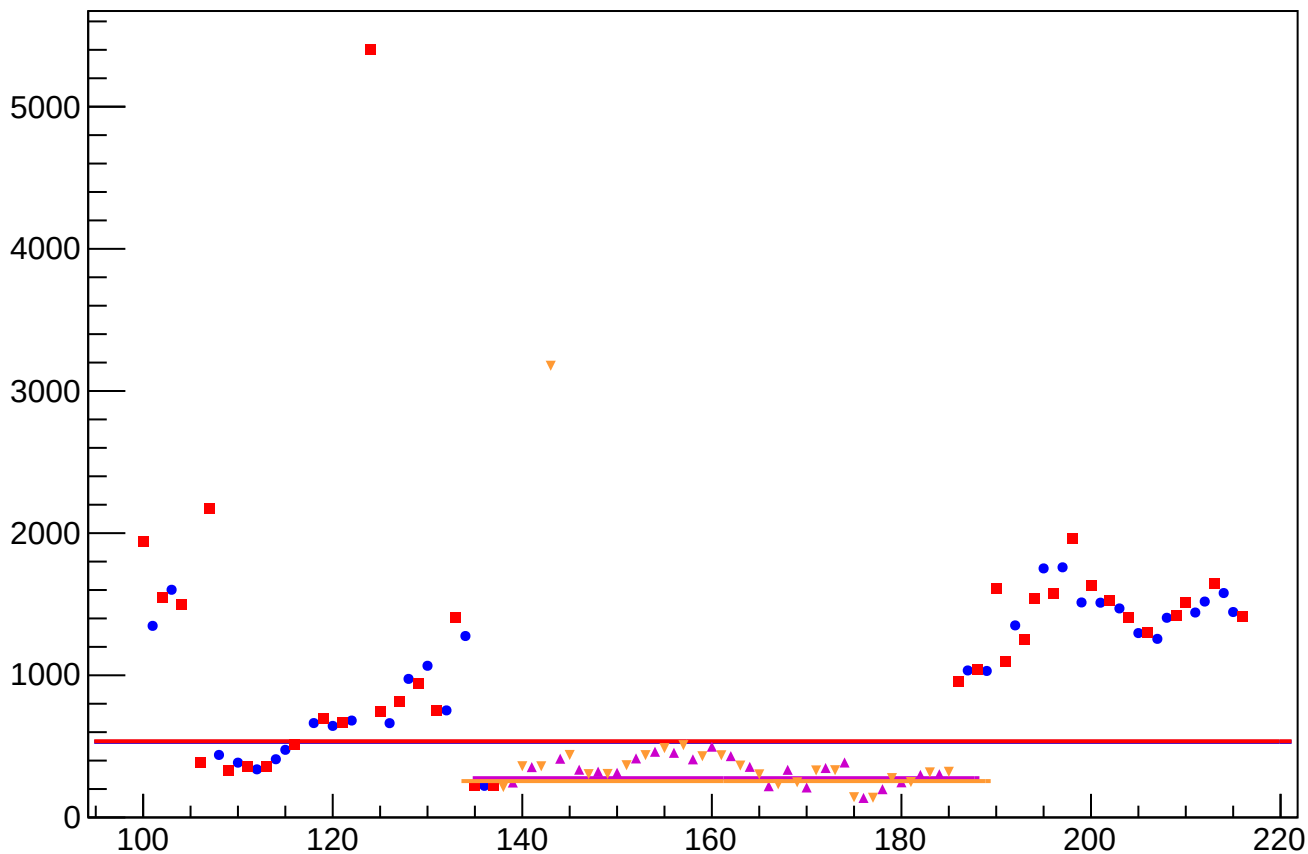
Left In:  $-113.720 \pm 68.841$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-194.768 \pm 59.373$   $\chi^2/\text{NDF}$ : 82.1/55

All:  $-167.563 \pm 43.204$   $\chi^2/\text{NDF}$ : 135.6/113

- sign  $-136.944 \pm 62.987$   $\chi^2/\text{NDF}$ : 53.0/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 531.619+/-0.111  $\chi^2/\text{NDF}$ : 15407153.4/30

Left Out: 255.770+/-0.045  $\chi^2/\text{NDF}$ : 6373829.7/24

Right Out: 535.963+/-0.110  $\chi^2/\text{NDF}$ : 15662571.9/34

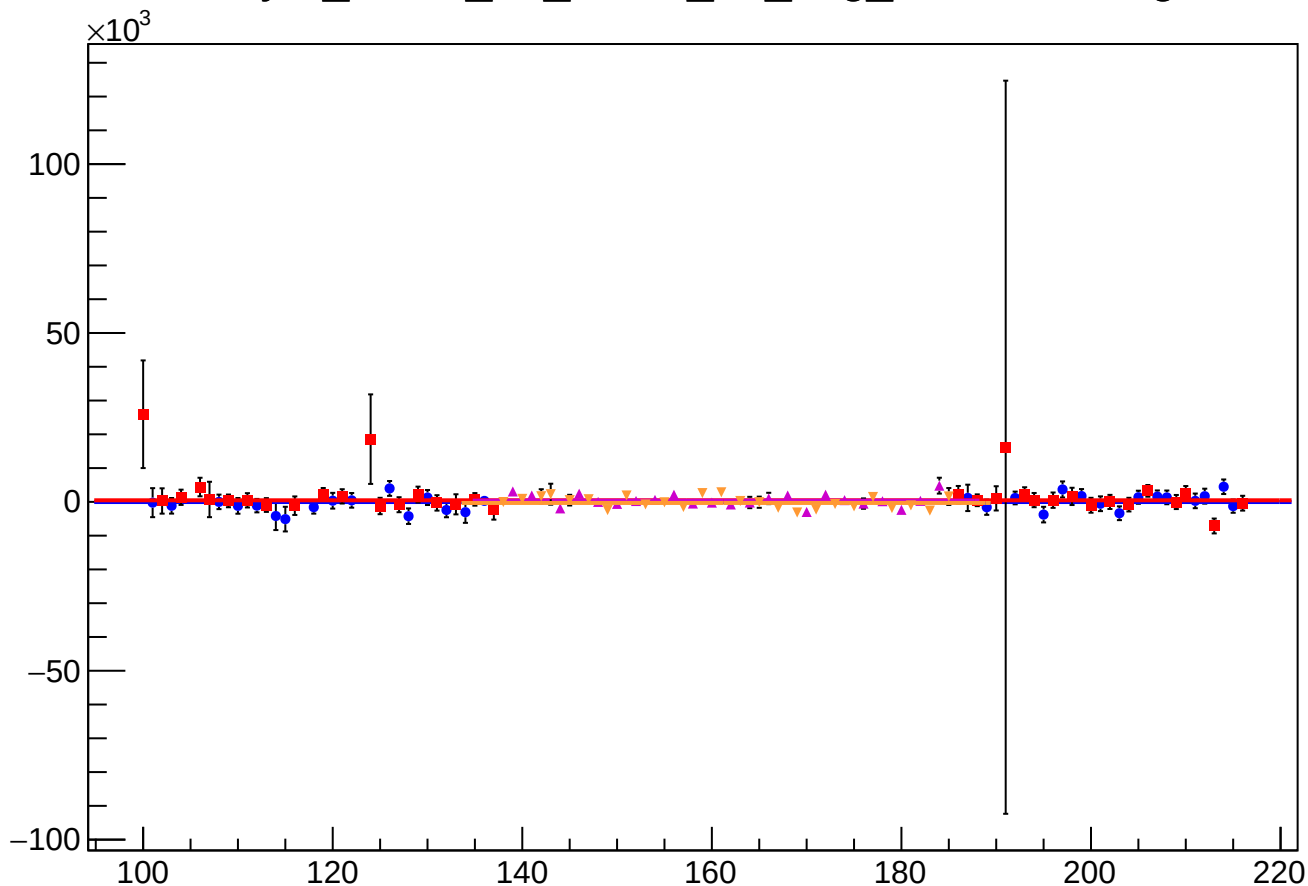
Left In: 276.299+/-0.049  $\chi^2/\text{NDF}$ : 4027371.0/22

+ sign 295.199+/-0.042  $\chi^2/\text{NDF}$ : 27069824.7/55

All: 306.199+/-0.031  $\chi^2/\text{NDF}$ : 51538956.0/11

- sign 318.579+/-0.045  $\chi^2/\text{NDF}$ : 24323217.6/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_mean vs Slug



Right In:  $-46.625 \pm 394.422$   $\chi^2/\text{NDF}$ : 30.2/30

Left Out:  $-319.744 \pm 298.271$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $467.927 \pm 397.010$   $\chi^2/\text{NDF}$ : 29.3/34

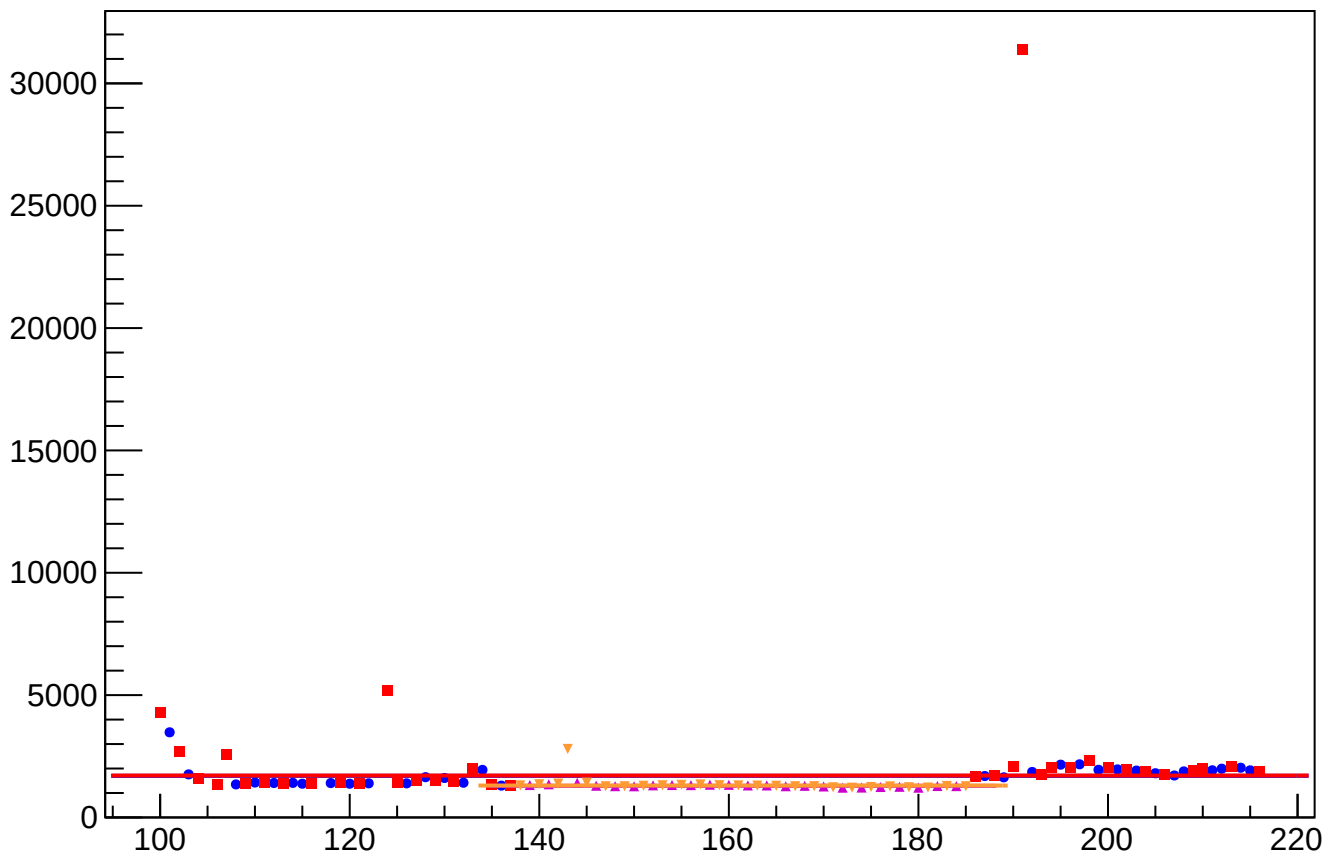
Left In:  $356.387 \pm 301.902$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-220.379 \pm 237.904$   $\chi^2/\text{NDF}$ : 62.1/55

All:  $85.328 \pm 169.069$   $\chi^2/\text{NDF}$ : 124.5/113

- sign  $397.255 \pm 240.312$   $\chi^2/\text{NDF}$ : 59.0/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_rms vs Slug



Right In: 1701.208+/-0.279  $\chi^2/\text{NDF}$ : 1279971.3/30

Left Out: 1304.156+/-0.211  $\chi^2/\text{NDF}$ : 519609.1/24

Right Out: 1712.842+/-0.281  $\chi^2/\text{NDF}$ : 1518390.6/34

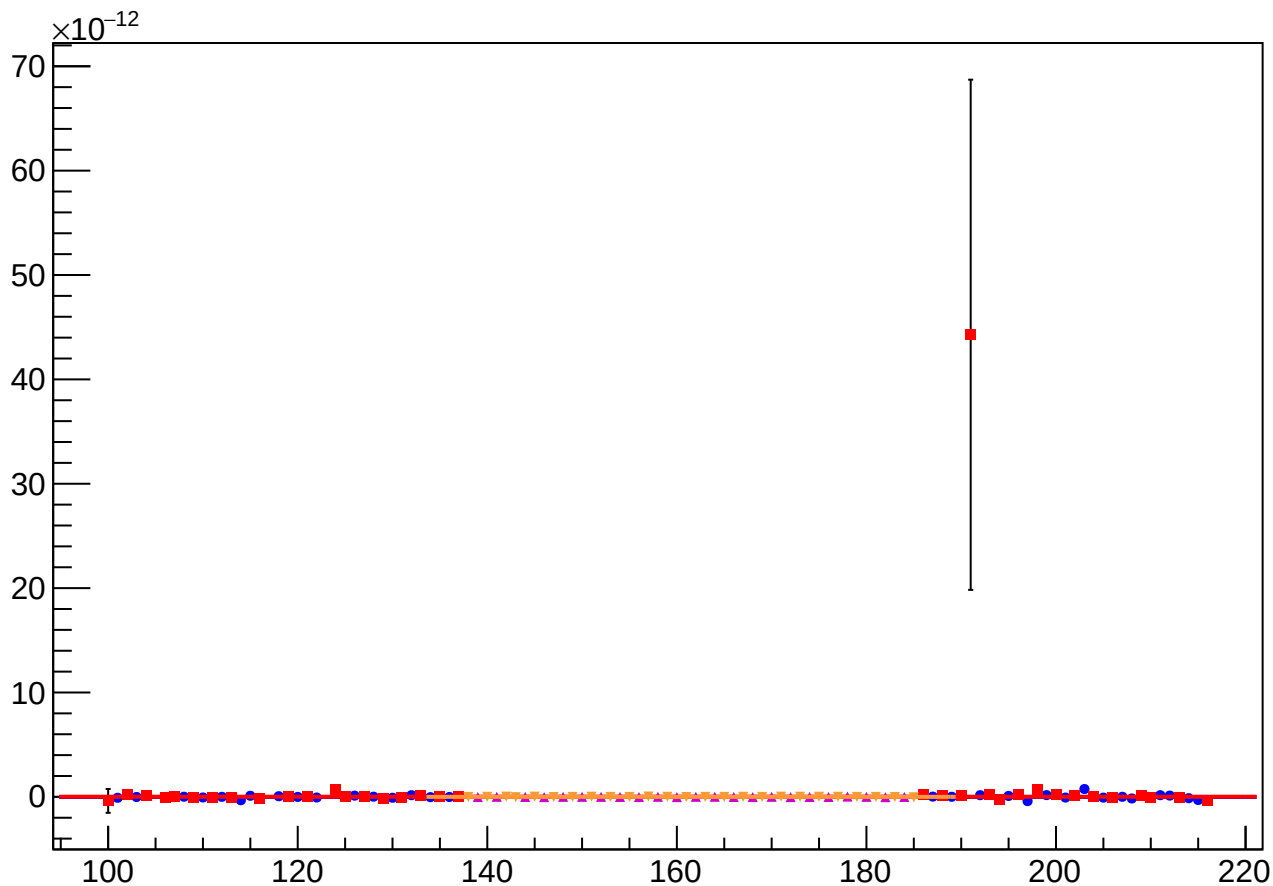
Left In: 1292.123+/-0.213  $\chi^2/\text{NDF}$ : 48343.1/22

+ sign 1448.610+/-0.168  $\chi^2/\text{NDF}$ : 3088973.2/55

All: 1447.453+/-0.120  $\chi^2/\text{NDF}$ : 6078886.2/11

- sign 1446.272+/-0.170  $\chi^2/\text{NDF}$ : 2989817.4/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 34.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 42.5/34

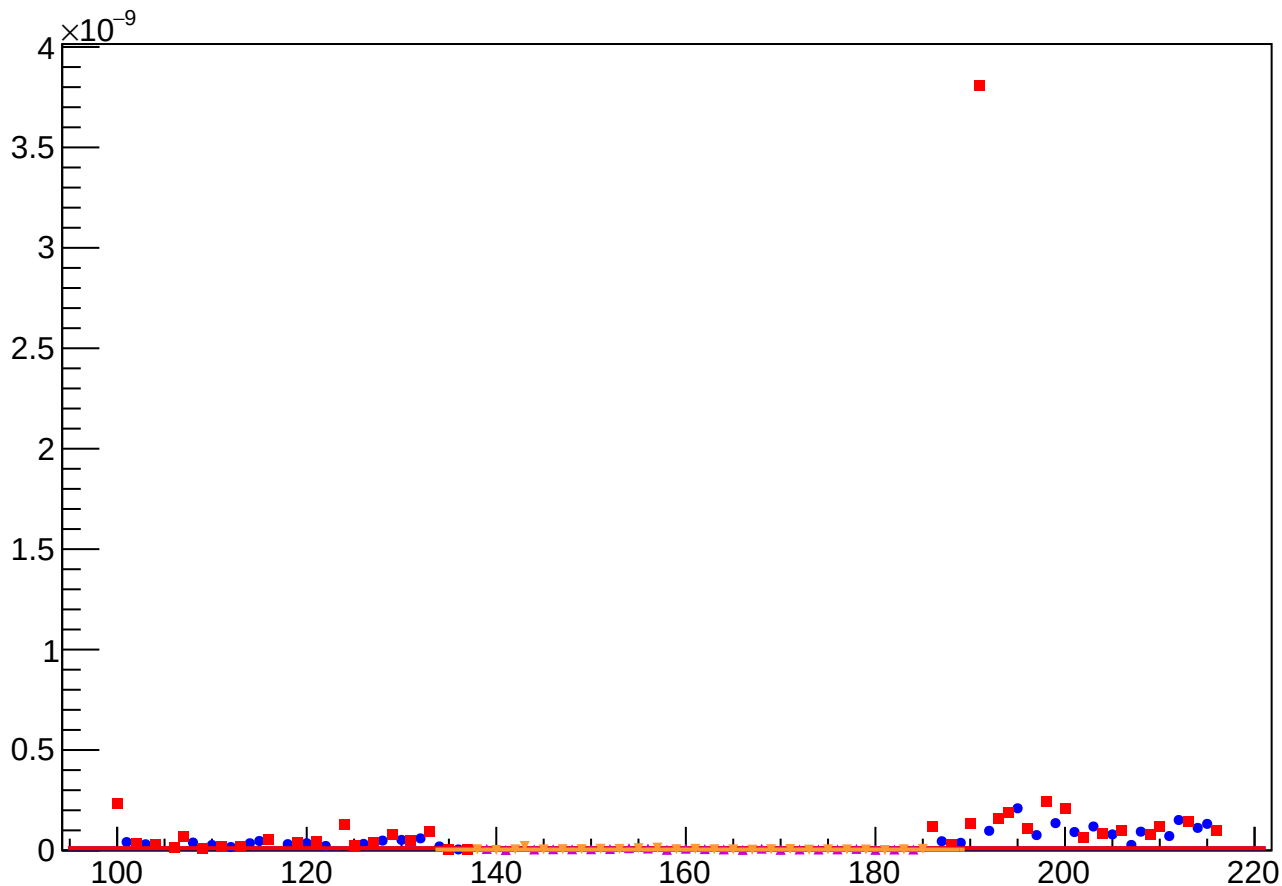
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.6/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 61.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 135.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 74.2/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10219502.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2715297.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11798540.9/34

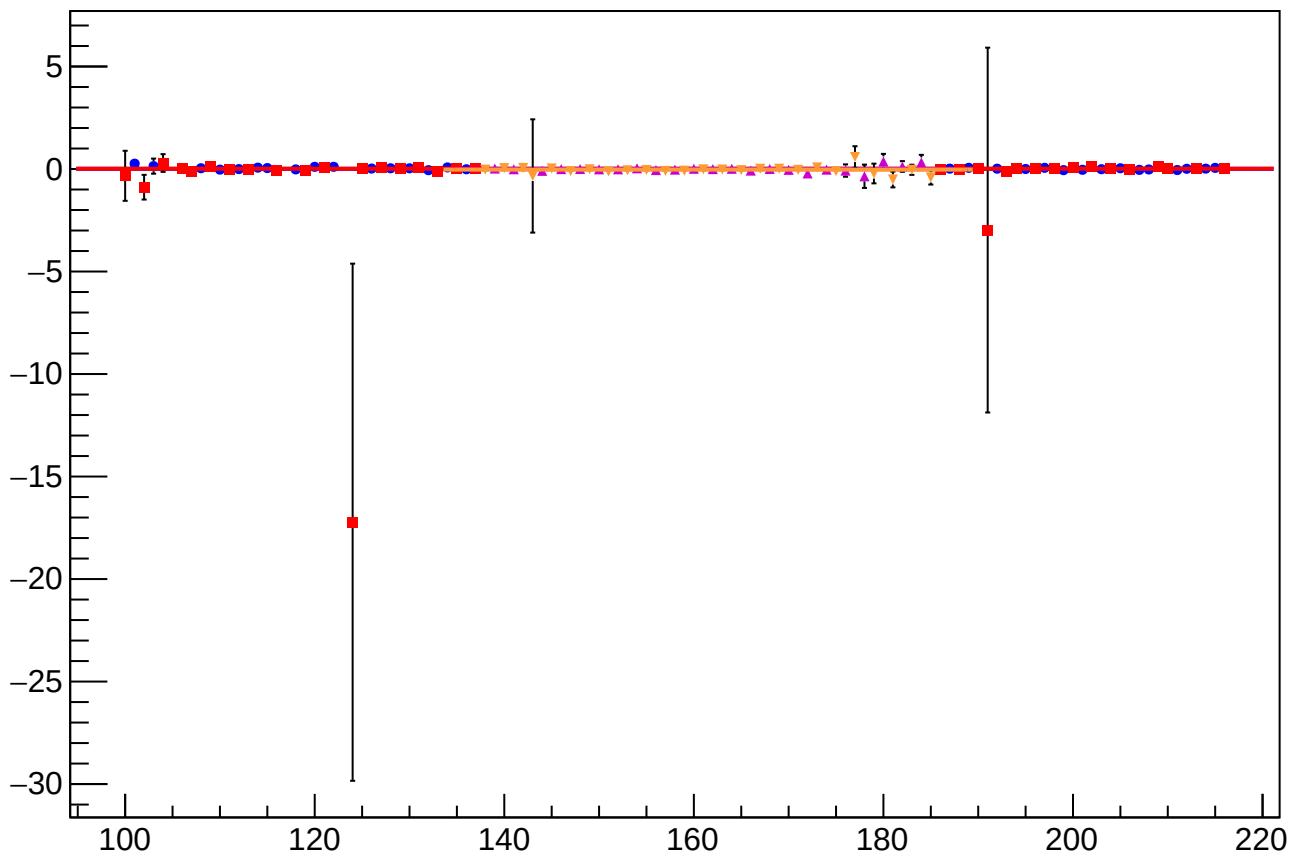
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1884808.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14253003.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29193300.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14916391.0/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

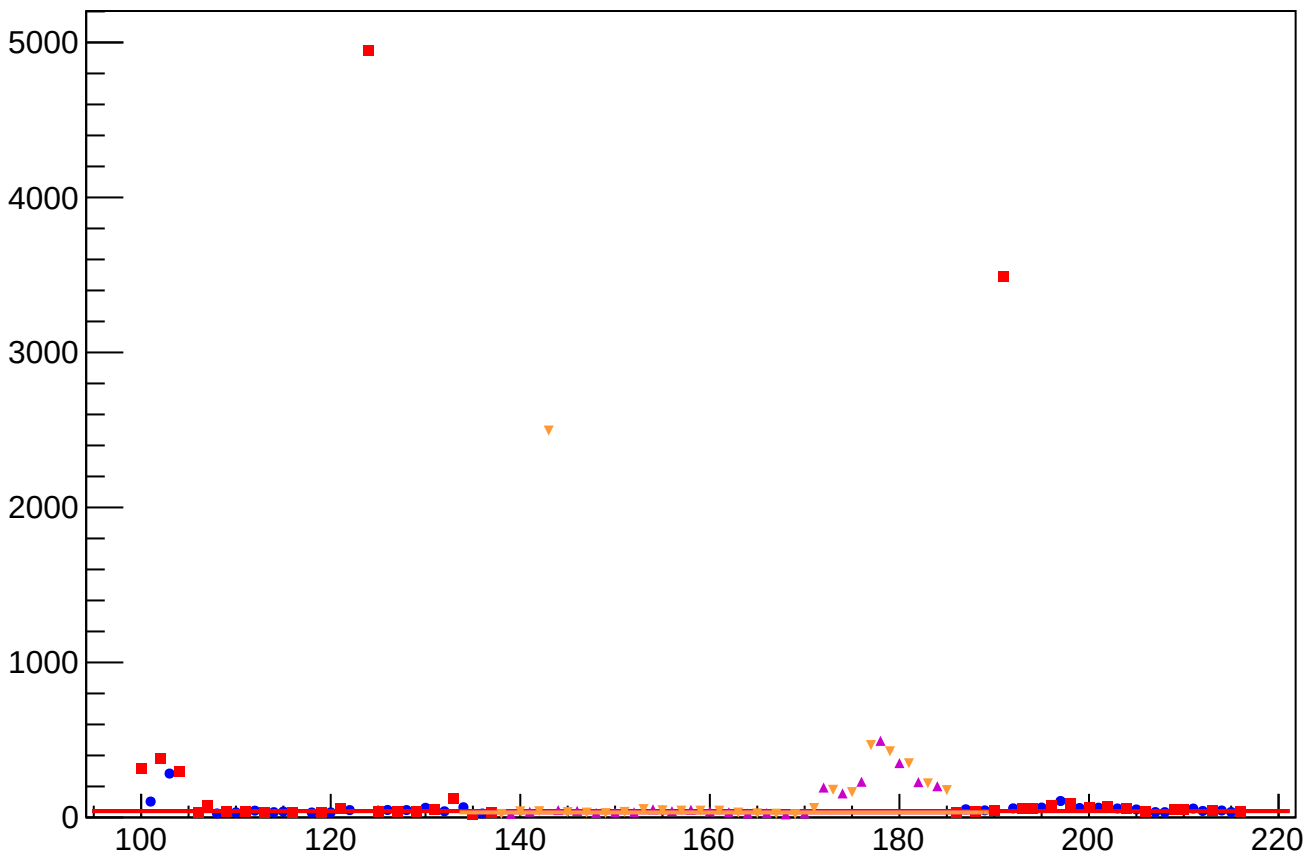
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.215+/-0.008  $\chi^2/\text{NDF}$ : 4315118.2/30

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ : 10871758.1/24

Right Out: 41.063+/-0.008  $\chi^2/\text{NDF}$ : 5538206.4/34

Left In: 32.738+/-0.007  $\chi^2/\text{NDF}$ : 8963240.8/22

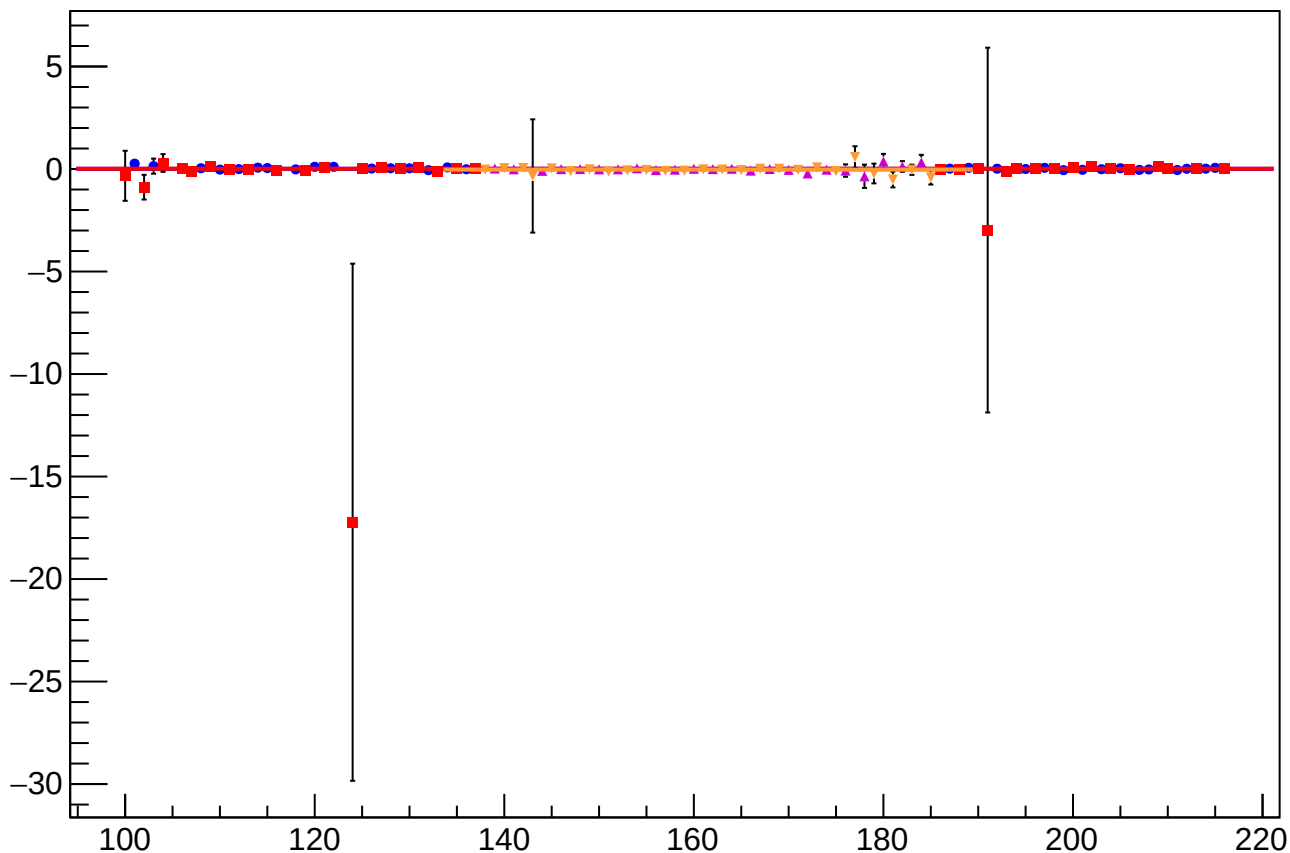
+ sign 36.397+/-0.005  $\chi^2/\text{NDF}$ : 15922736.6/55

All: 36.398+/-0.004  $\chi^2/\text{NDF}$ : 31099511.6/113

- sign 36.399+/-0.005  $\chi^2/\text{NDF}$ : 15176775.0/57



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

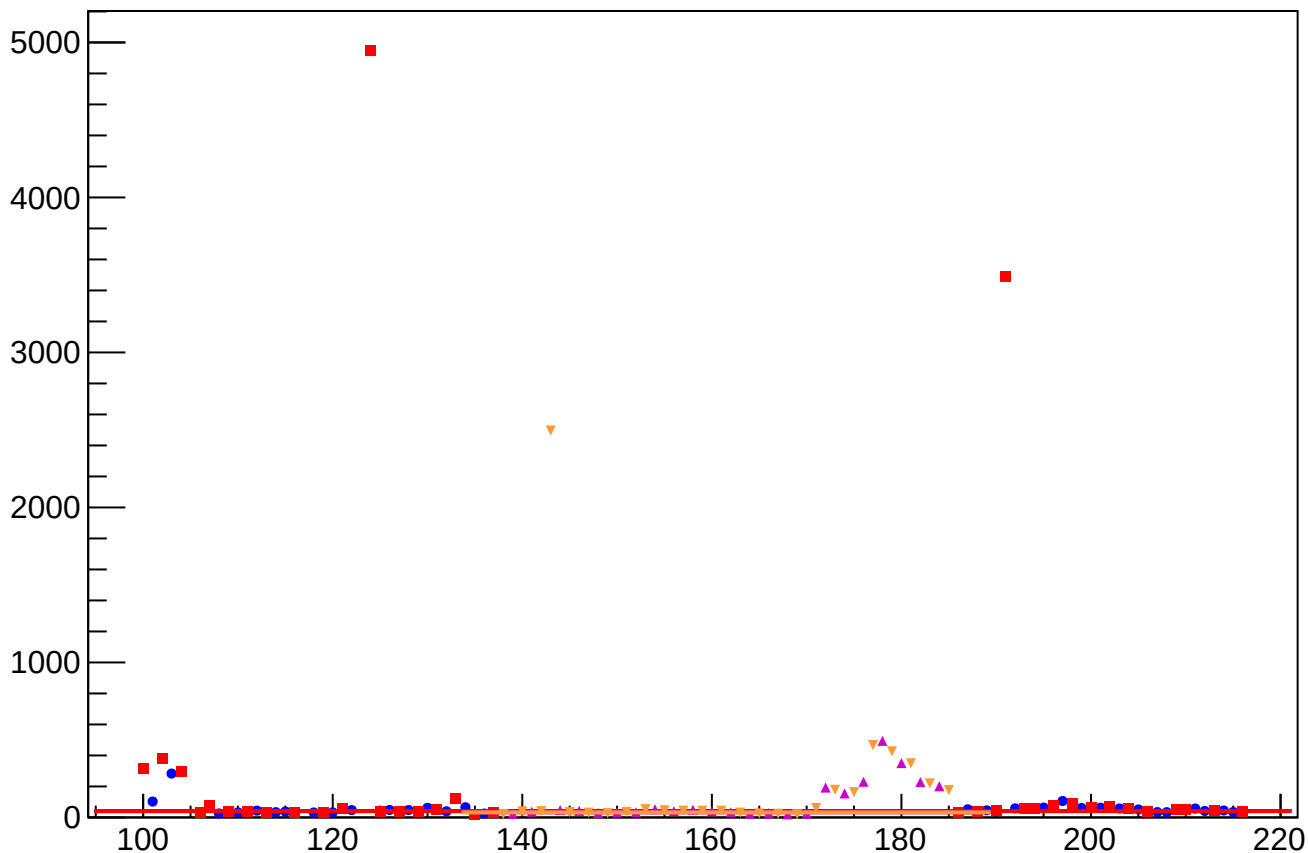
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.215 $\pm$ 0.008  $\chi^2$ /NDF: 4315118.2/30

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10871758.1/24

Right Out: 41.063 $\pm$ 0.008  $\chi^2$ /NDF: 5538206.4/34

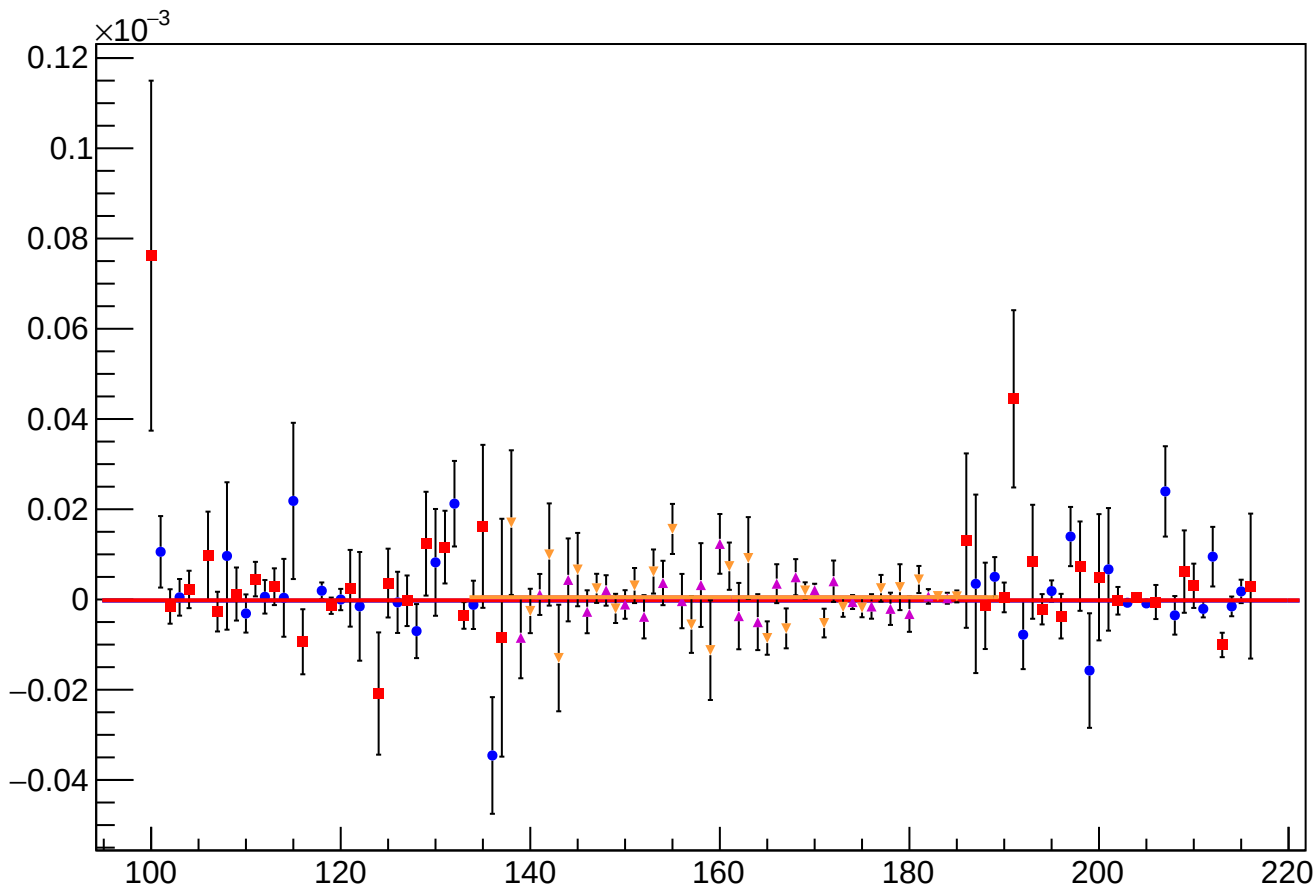
Left In: 32.738 $\pm$ 0.007  $\chi^2$ /NDF: 8963240.8/22

+ sign 36.397 $\pm$ 0.005  $\chi^2$ /NDF: 15922736.6/55

All: 36.398 $\pm$ 0.004  $\chi^2$ /NDF: 31099511.6/113

- sign 36.399 $\pm$ 0.005  $\chi^2$ /NDF: 15176775.0/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.9/34

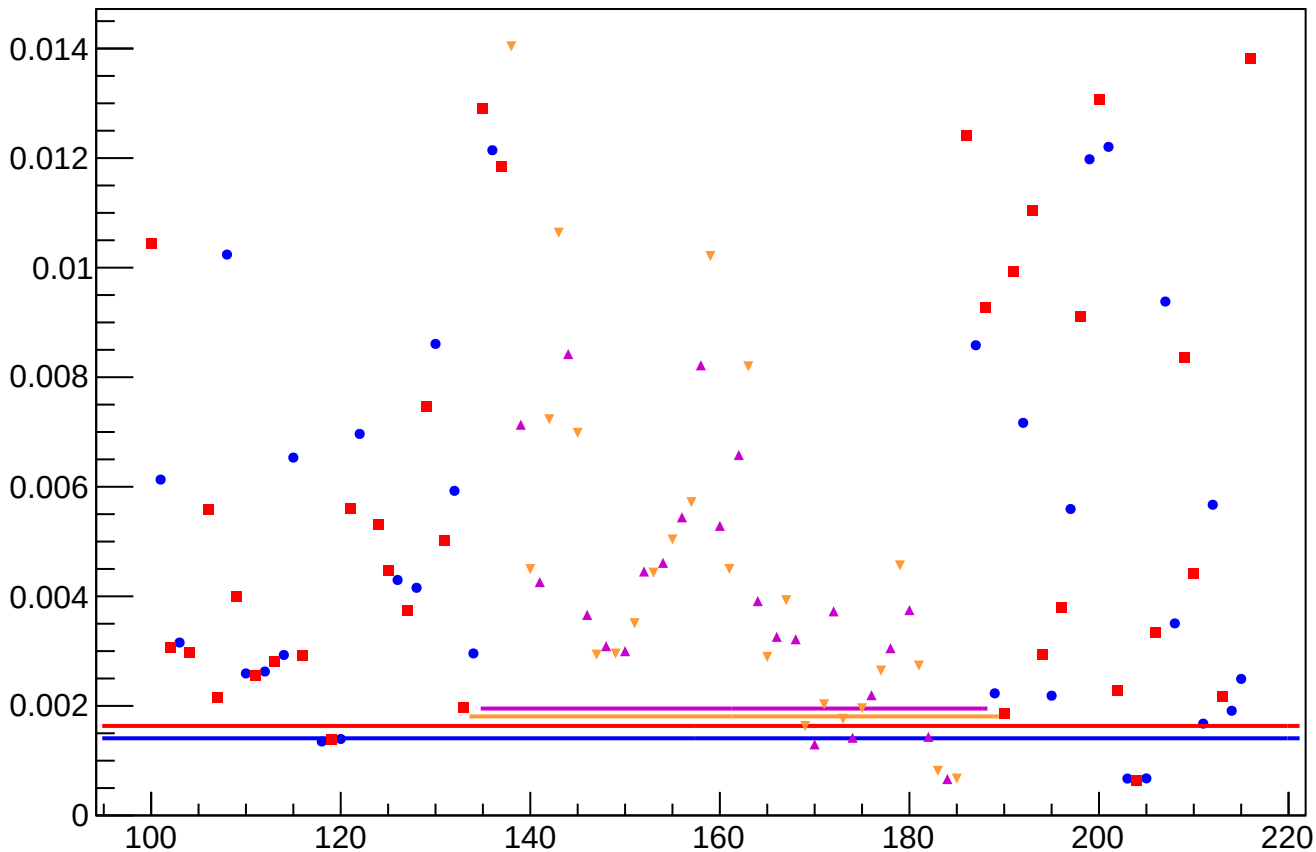
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 77.7/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 132.9/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.2/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17302056.9/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 14941257.4/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 18433235.9/34

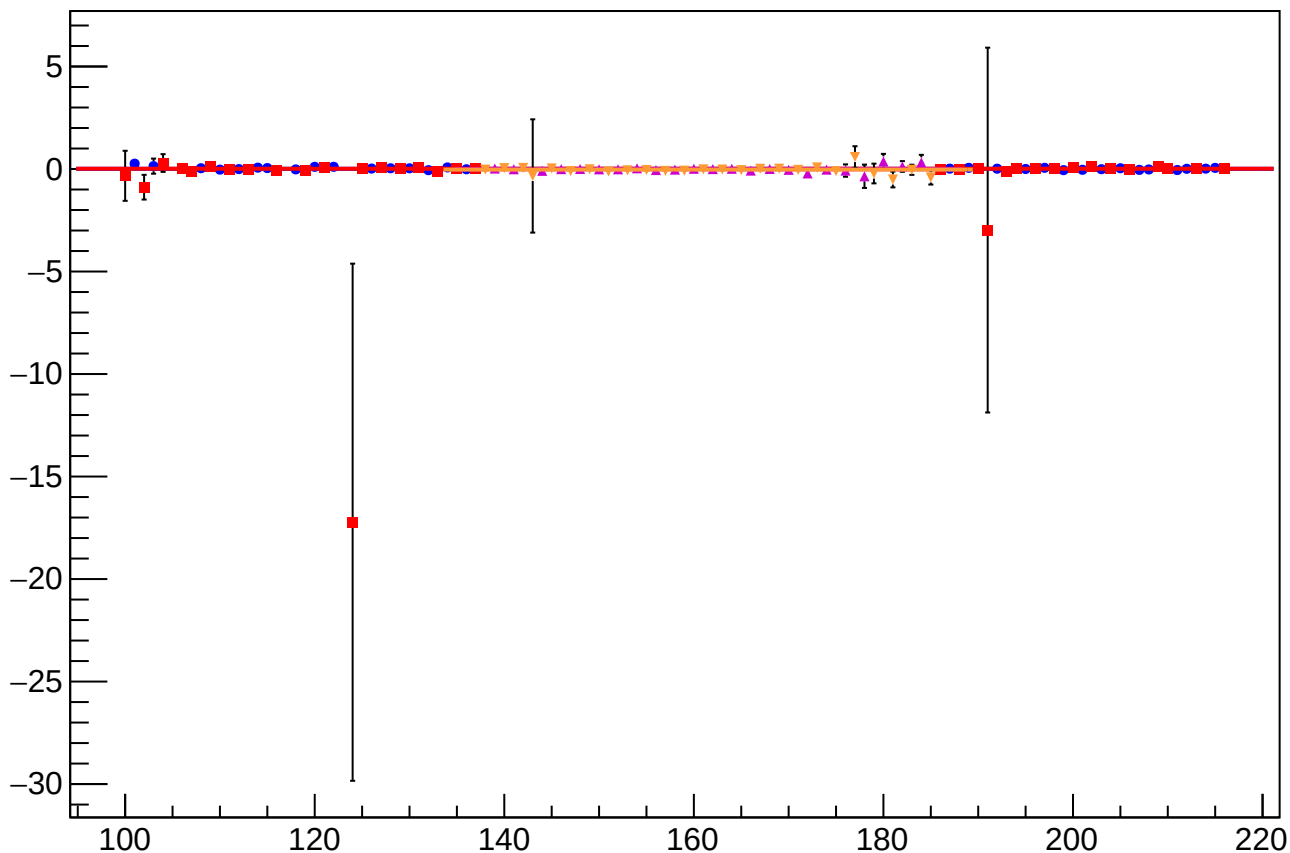
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11478607.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 32851733.0/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 63359157.6/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 30224730.5/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24

Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34

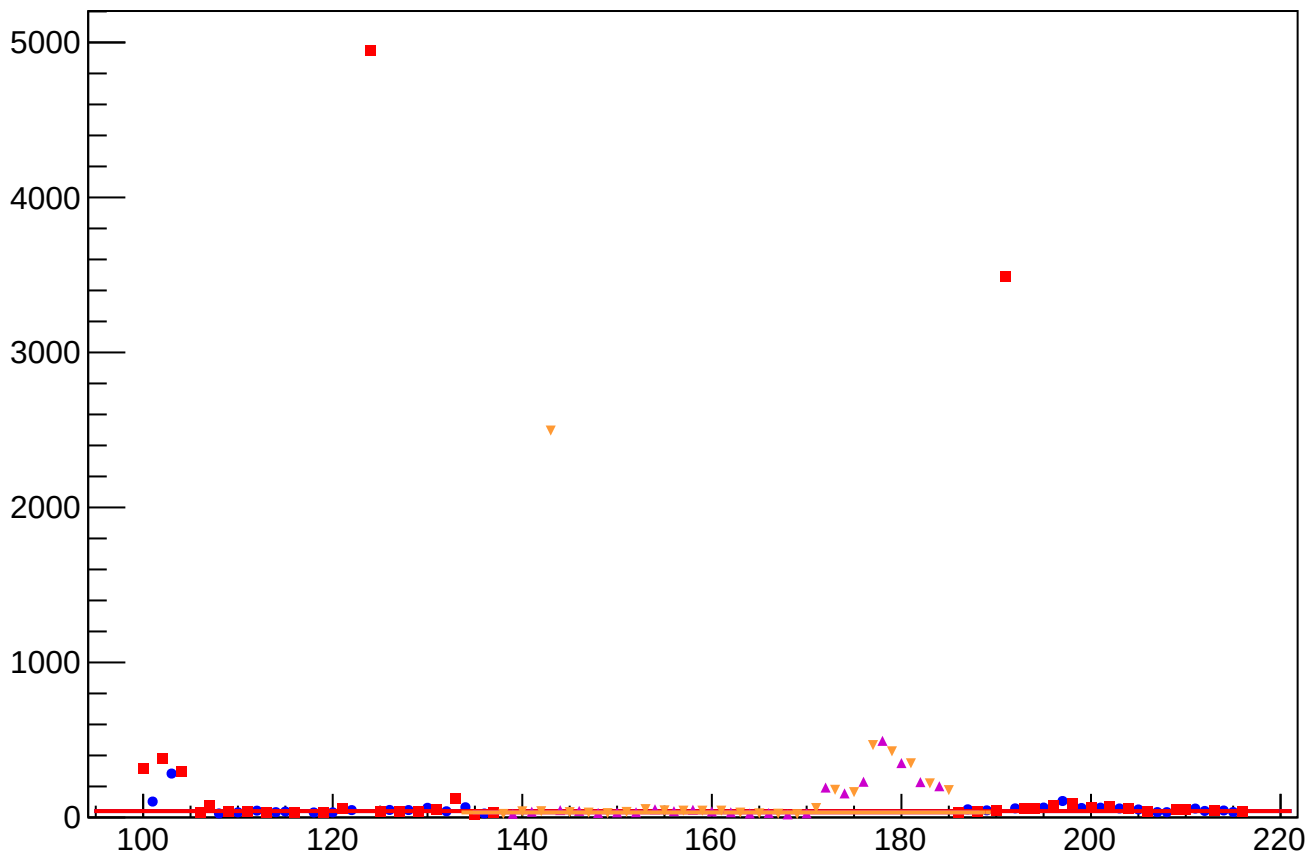
Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113

- sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.215+/-0.008  $\chi^2/\text{NDF}$ : 4314755.1/30

Left Out: 32.551+/-0.007  $\chi^2/\text{NDF}$ : 10872015.8/24

Right Out: 41.063+/-0.008  $\chi^2/\text{NDF}$ : 5538028.1/34

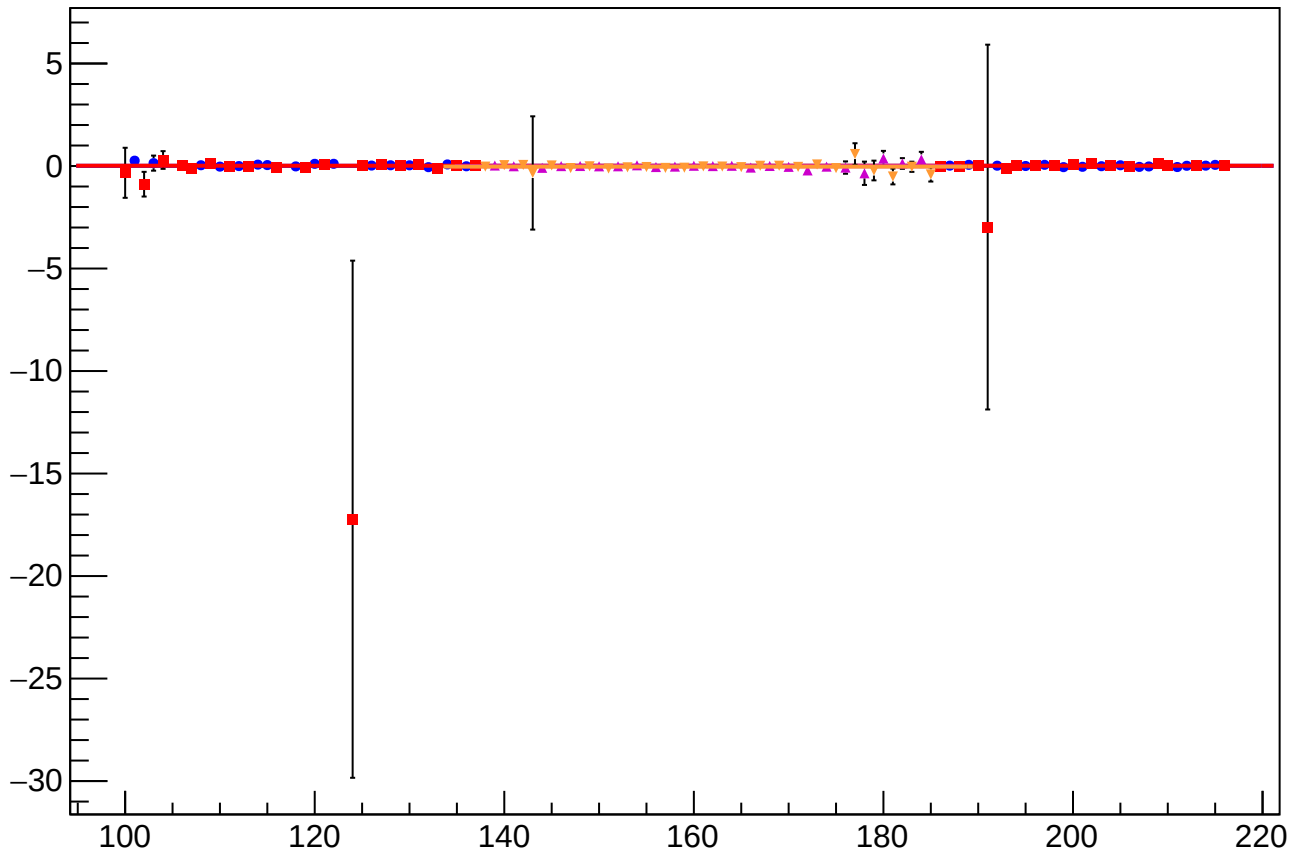
Left In: 32.737+/-0.007  $\chi^2/\text{NDF}$ : 8963873.9/22

+ sign 36.397+/-0.005  $\chi^2/\text{NDF}$ : 15922704.0/55

All: 36.397+/-0.004  $\chi^2/\text{NDF}$ : 31100137.4/113

- sign 36.398+/-0.005  $\chi^2/\text{NDF}$ : 15177433.4/57

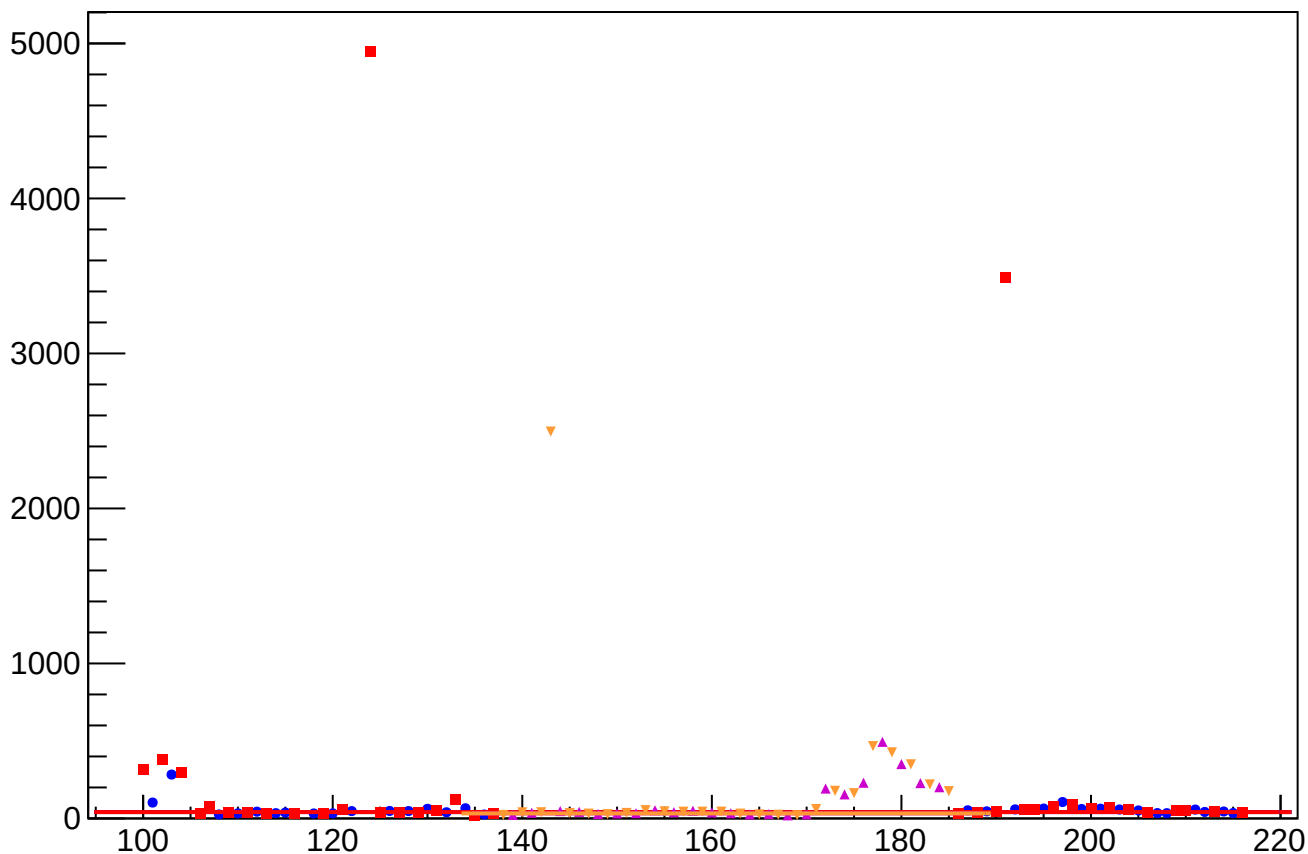
asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.009 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.6/30  
 Left Out:  $-0.028 \pm 0.010$   $\chi^2/\text{NDF}$ : 28.1/24  
 Right Out:  $0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 27.0/34  
 Left In:  $-0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 53.3/55  
 All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 98.0/113  
 - sign  $0.000 \pm 0.007$   $\chi^2/\text{NDF}$ : 43.3/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.215 $\pm$ 0.008  $\chi^2$ /NDF: 4314755.1/30

Left Out: 32.551 $\pm$ 0.007  $\chi^2$ /NDF: 10872015.8/24

Right Out: 41.063 $\pm$ 0.008  $\chi^2$ /NDF: 5538028.1/34

Left In: 32.737 $\pm$ 0.007  $\chi^2$ /NDF: 8963873.9/22

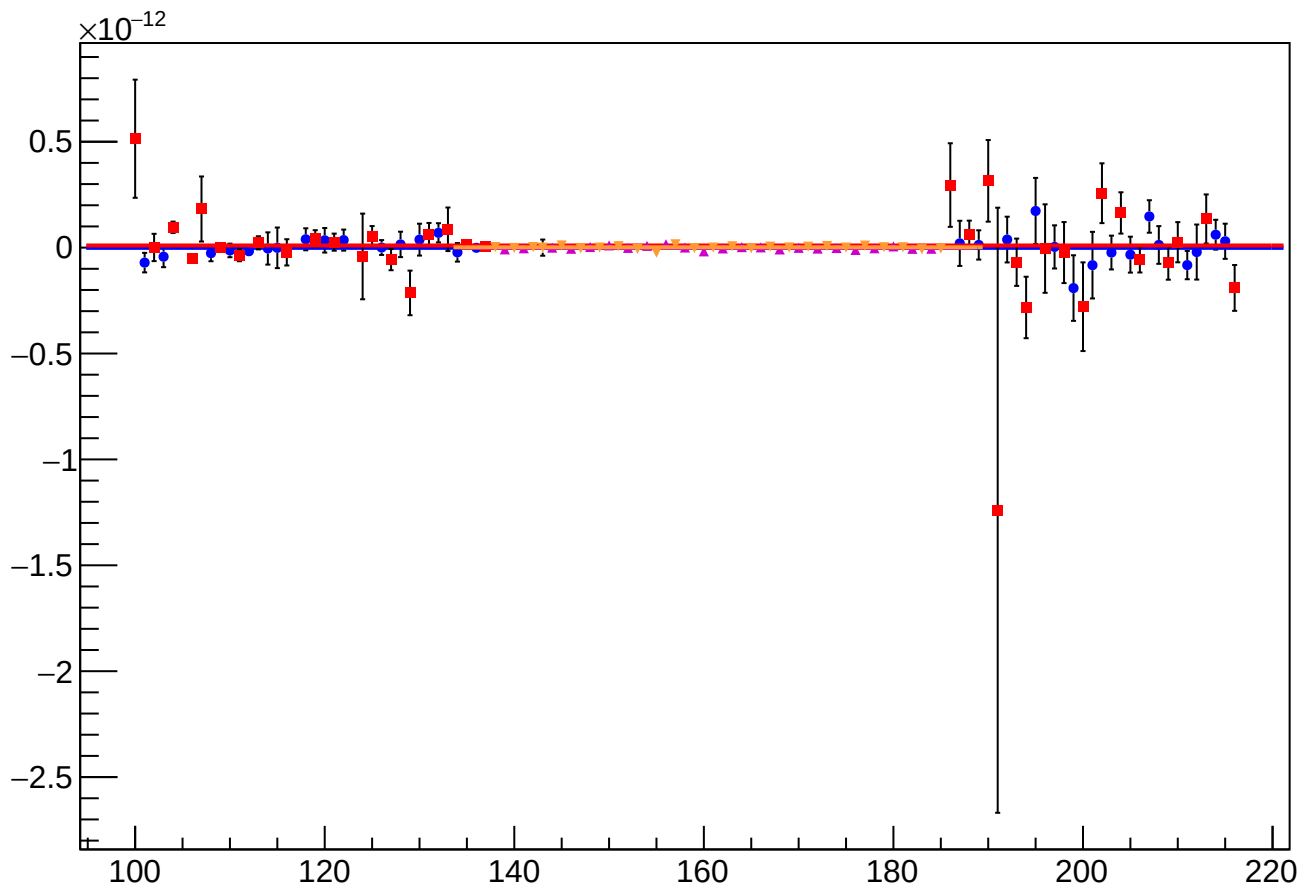
+ sign 36.397 $\pm$ 0.005  $\chi^2$ /NDF: 15922704.0/55

All: 36.397 $\pm$ 0.004  $\chi^2$ /NDF: 31100137.4/113

- sign 36.398 $\pm$ 0.005  $\chi^2$ /NDF: 15177433.4/57



asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.9/34

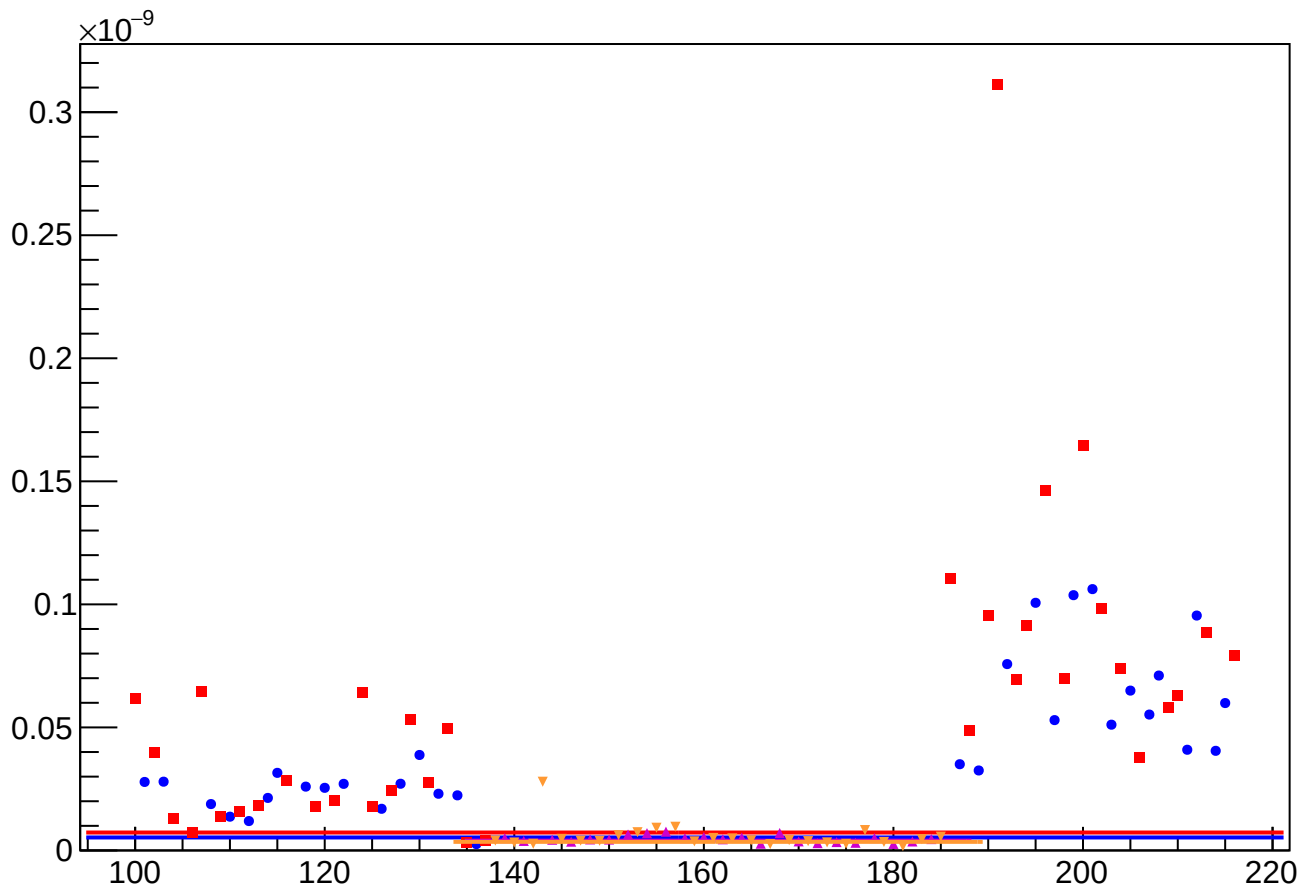
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.8/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.7/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 100.6/57

asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15898013.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4688121.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16298543.2/34

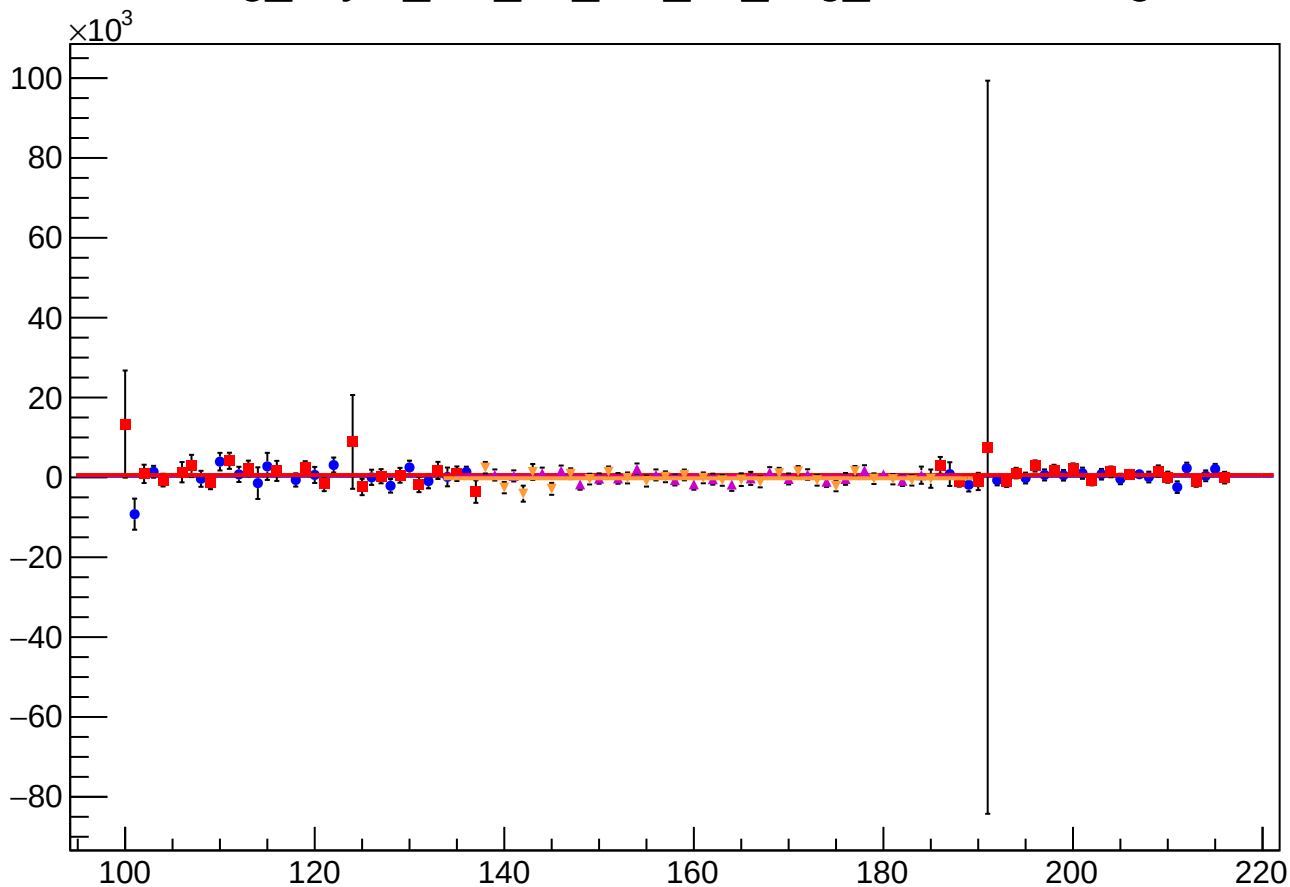
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2073078.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21090751.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40940656.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19570240.3/57

reg\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $411.603 \pm 288.956$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-220.721 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $583.776 \pm 290.120$   $\chi^2/\text{NDF}$ : 29.7/34

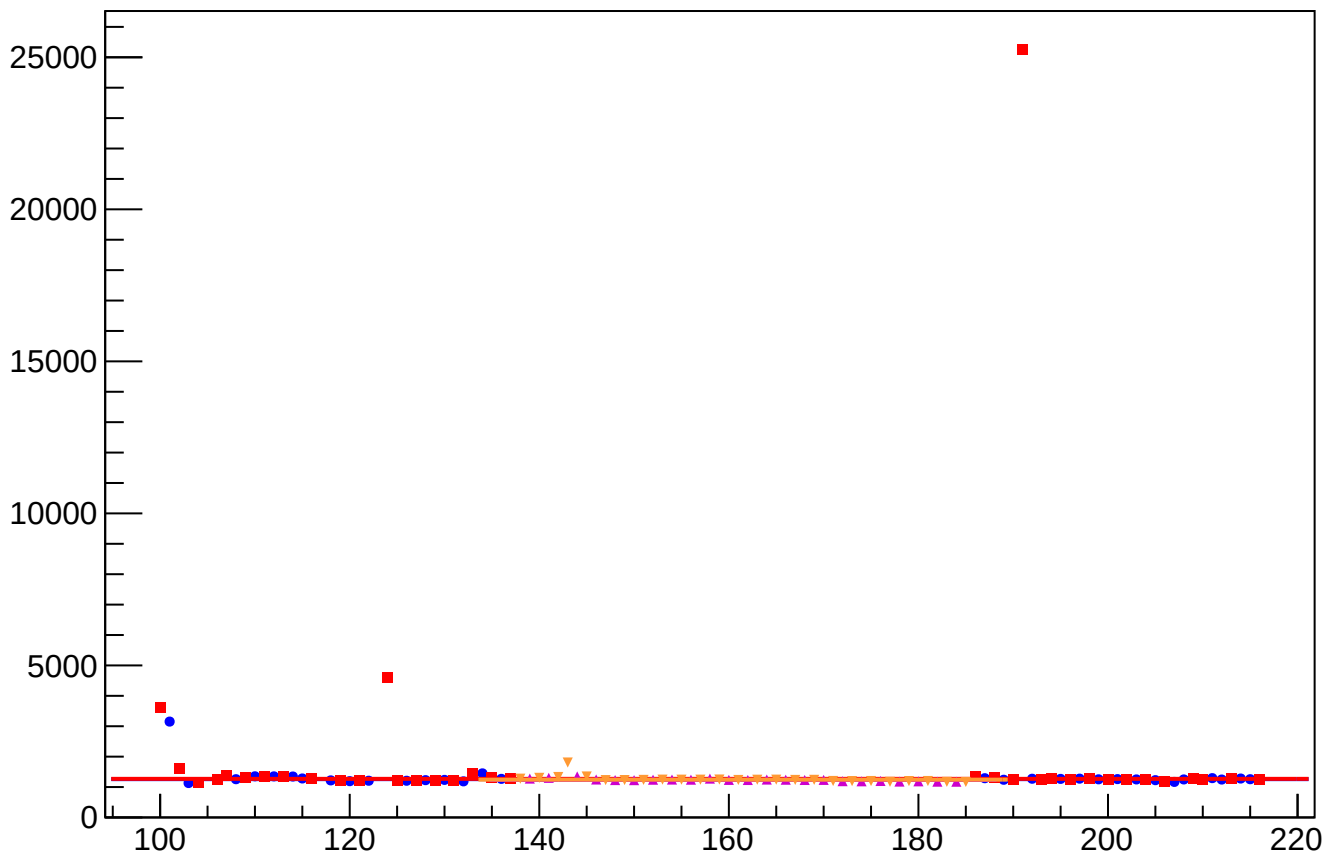
Left In:  $92.402 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $88.918 \pm 202.204$   $\chi^2/\text{NDF}$ : 54.6/55

All:  $211.316 \pm 143.774$   $\chi^2/\text{NDF}$ : 101.2/113

- sign  $336.472 \pm 204.470$   $\chi^2/\text{NDF}$ : 45.8/57

# reg\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1259.920 $\pm$ 0.204  $\chi^2$ /NDF: 535655.7/30

Left Out: 1242.825 $\pm$ 0.200  $\chi^2$ /NDF: 203299.1/24

Right Out: 1269.614 $\pm$ 0.205  $\chi^2$ /NDF: 487009.9/34

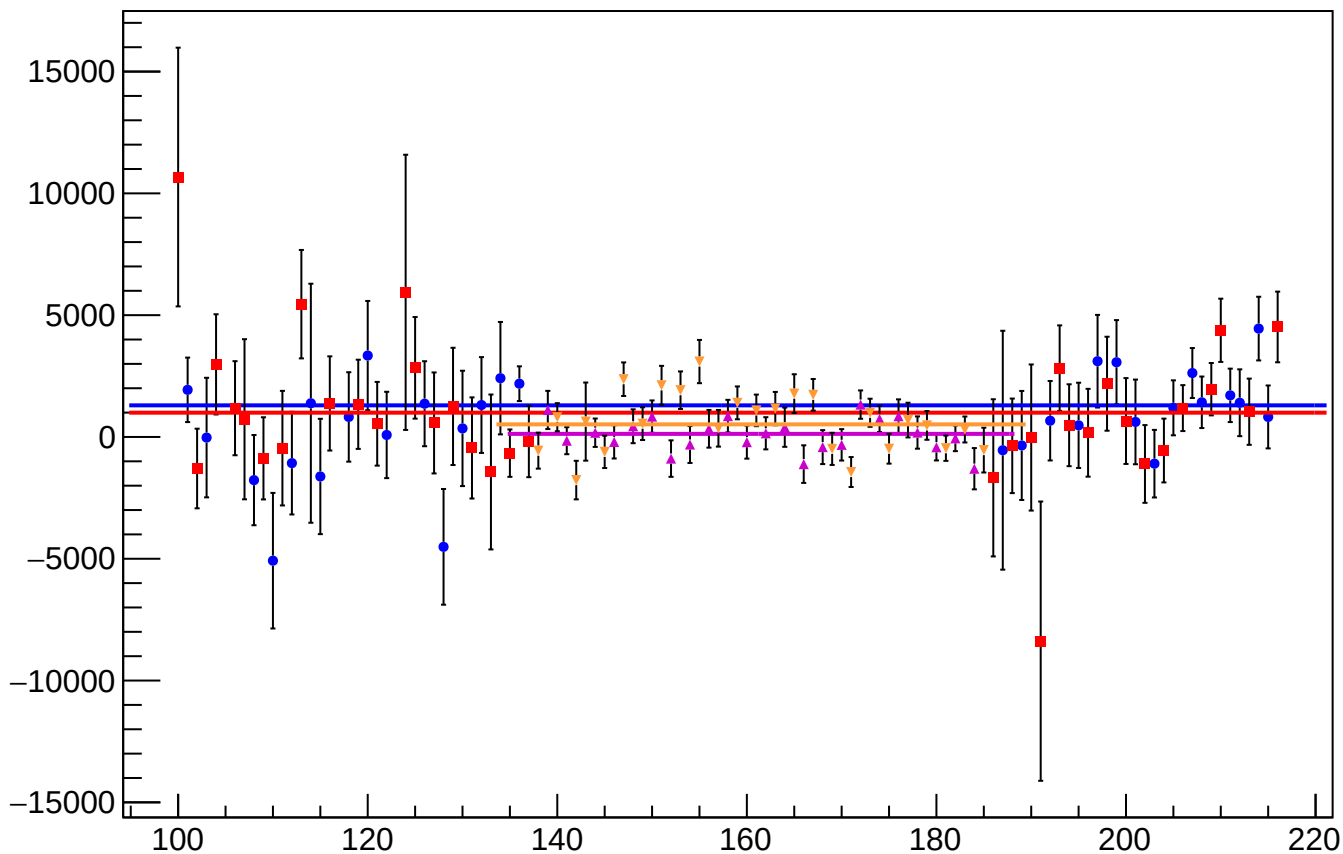
Left In: 1233.752 $\pm$ 0.204  $\chi^2$ /NDF: 39281.8/22

+ sign 1251.196 $\pm$ 0.143  $\chi^2$ /NDF: 742527.4/55

All: 1251.379 $\pm$ 0.102  $\chi^2$ /NDF: 1284202.3/11

- sign 1251.565 $\pm$ 0.145  $\chi^2$ /NDF: 541671.6/57

asym\_at1\_dd\_at2\_dd\_avg\_reg\_correction\_mean vs Slug



Right In: 1297.622 $\pm$ 276.313  $\chi^2$ /NDF: 34.5/30

Left Out: 516.792 $\pm$ 135.746  $\chi^2$ /NDF: 67.0/24

Right Out: 997.266 $\pm$ 290.822  $\chi^2$ /NDF: 40.7/34

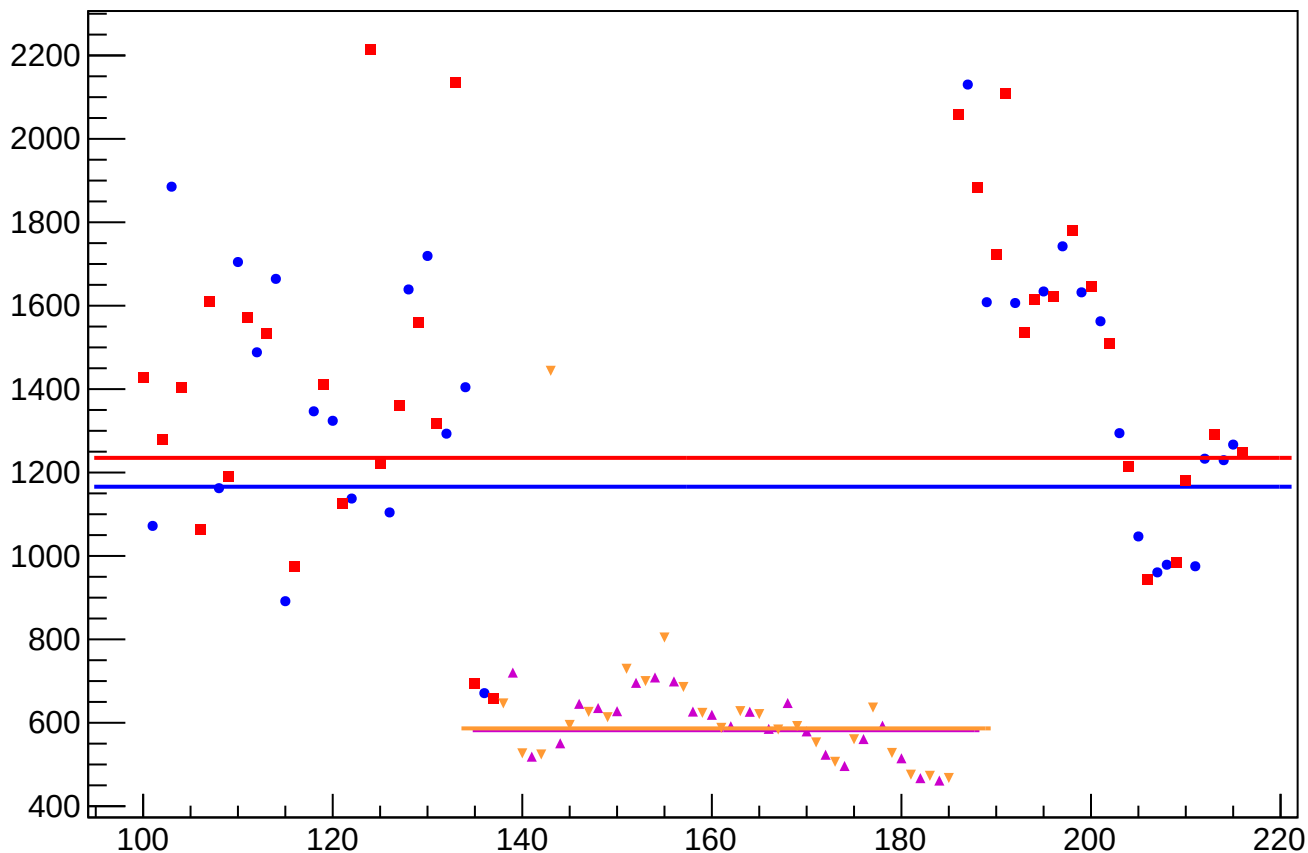
Left In: 126.569 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 668.607 $\pm$ 121.837  $\chi^2$ /NDF: 108.0/55

All: 480.484 $\pm$ 86.952  $\chi^2$ /NDF: 182.4/113

- sign 285.202 $\pm$ 124.134  $\chi^2$ /NDF: 69.6/57

asym\_at1\_dd\_at2\_dd\_avg\_reg\_correction\_rms vs Slug



Right In:  $1165.972 \pm 0.195$   $\chi^2/\text{NDF}: 2707490.2/30$

Left Out:  $586.557 \pm 0.096$   $\chi^2/\text{NDF}: 1202915.7/24$

Right Out:  $1235.161 \pm 0.206$   $\chi^2/\text{NDF}: 2737889.9/34$

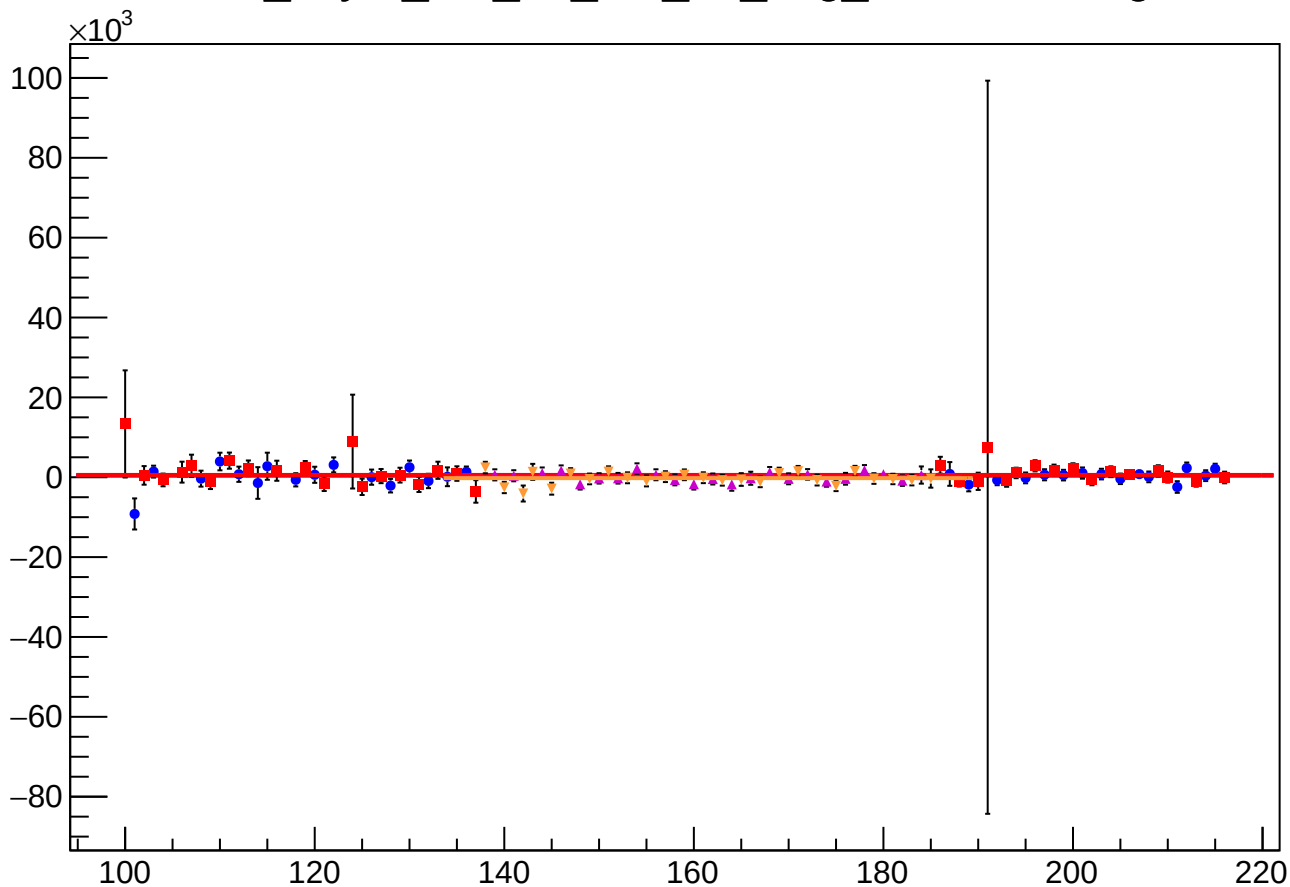
Left In:  $582.190 \pm 0.097$   $\chi^2/\text{NDF}: 559261.3/22$

+ sign  $699.211 \pm 0.086$   $\chi^2/\text{NDF}: 10994949.0/55$

All:  $700.165 \pm 0.061$   $\chi^2/\text{NDF}: 22537831.2/11$

- sign  $701.155 \pm 0.088$   $\chi^2/\text{NDF}: 11542632.3/57$

cor\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $411.786 \pm 288.956$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-220.755 \pm 283.055$   $\chi^2/\text{NDF}$ : 23.9/24

Right Out:  $576.384 \pm 290.300$   $\chi^2/\text{NDF}$ : 29.7/34

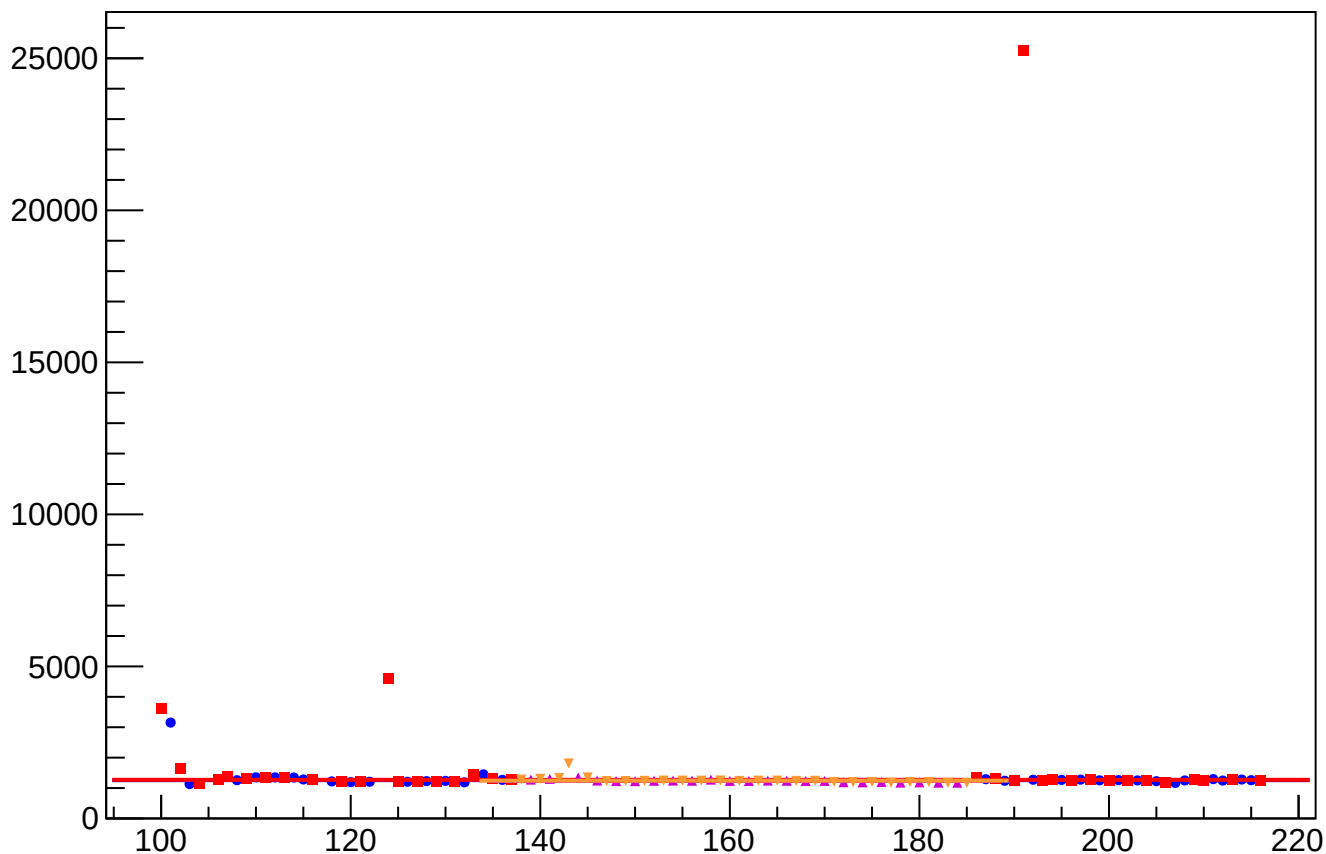
Left In:  $92.472 \pm 288.217$   $\chi^2/\text{NDF}$ : 14.7/22

+ sign  $88.990 \pm 202.204$   $\chi^2/\text{NDF}$ : 54.6/55

All:  $209.443 \pm 143.796$   $\chi^2/\text{NDF}$ : 101.1/113

- sign  $332.686 \pm 204.533$   $\chi^2/\text{NDF}$ : 45.8/57

# cor\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1259.920 $\pm$ 0.204  $\chi^2$ /NDF: 535657.1/30

Left Out: 1242.825 $\pm$ 0.200  $\chi^2$ /NDF: 203299.1/24

Right Out: 1270.431 $\pm$ 0.205  $\chi^2$ /NDF: 494194.9/34

Left In: 1233.752 $\pm$ 0.204  $\chi^2$ /NDF: 39281.7/22

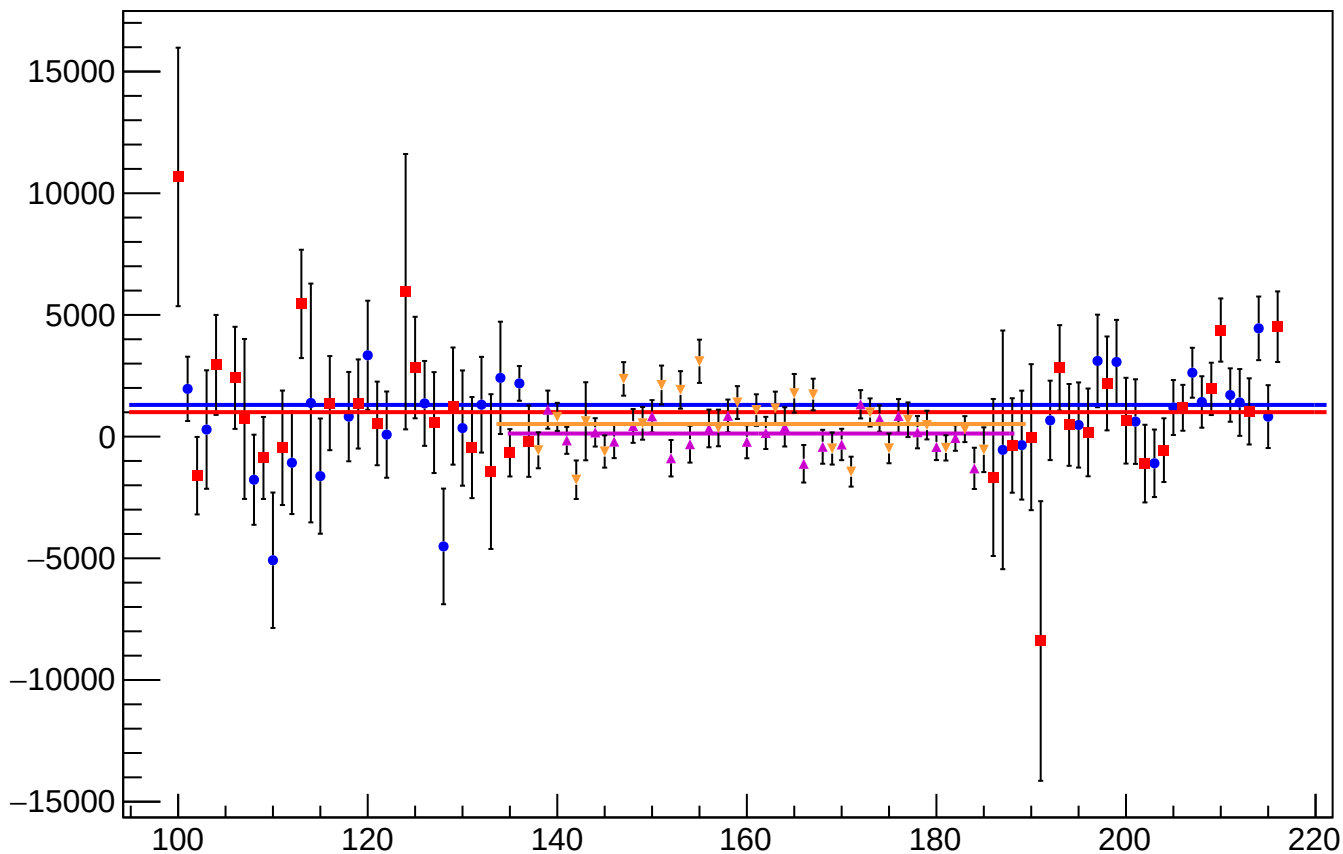
+ sign 1251.196 $\pm$ 0.143  $\chi^2$ /NDF: 742528.7/55

All: 1251.574 $\pm$ 0.102  $\chi^2$ /NDF: 1292098.0/11

- sign 1251.960 $\pm$ 0.145  $\chi^2$ /NDF: 549555.2/57



asym\_at1\_dd\_at2\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $1302.736 \pm 276.264$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $516.811 \pm 135.747$   $\chi^2/\text{NDF}$ : 67.0/24

Right Out:  $1005.629 \pm 291.069$   $\chi^2/\text{NDF}$ : 41.8/34

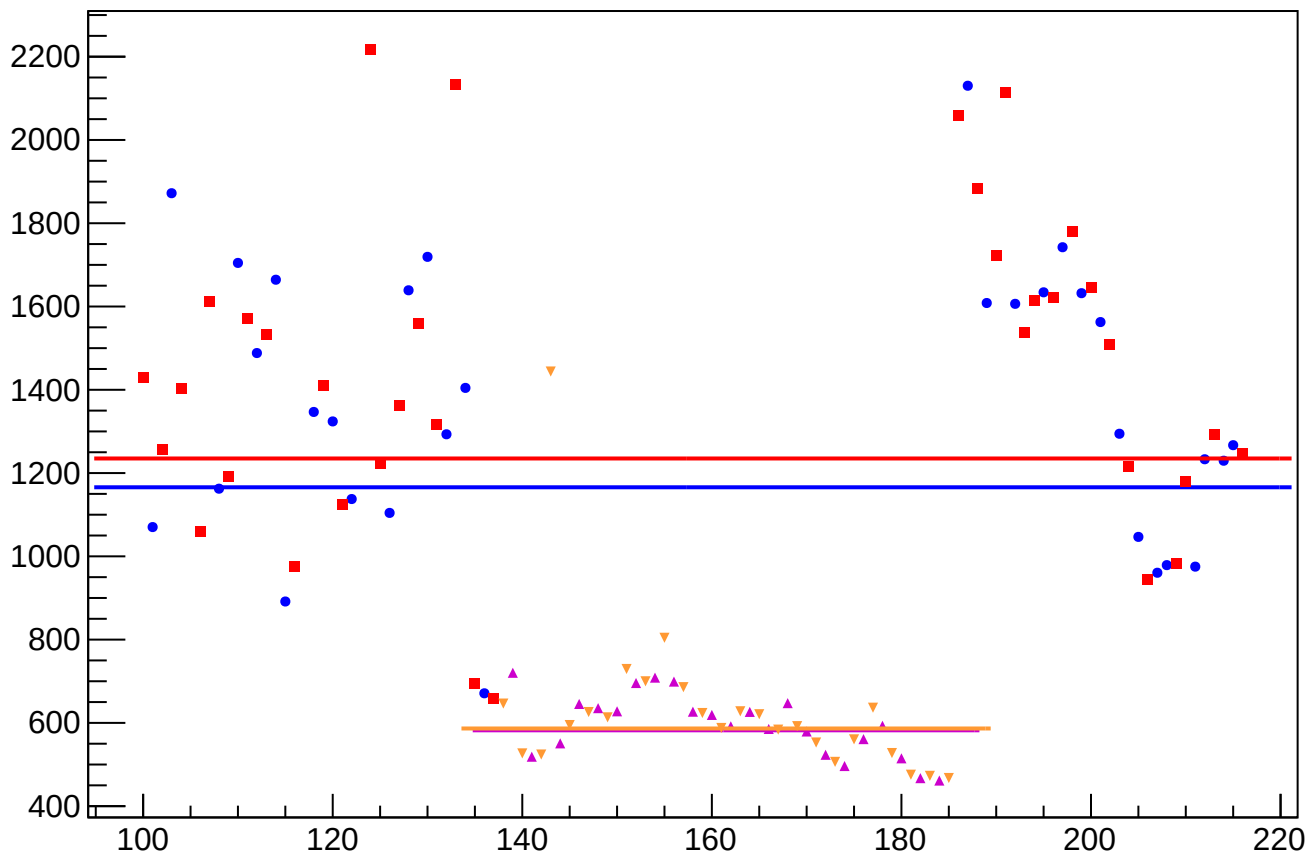
Left In:  $126.549 \pm 137.266$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $669.661 \pm 121.834$   $\chi^2/\text{NDF}$ : 108.0/55

All:  $481.686 \pm 86.958$   $\chi^2/\text{NDF}$ : 183.7/113

- sign  $286.486 \pm 124.153$   $\chi^2/\text{NDF}$ : 70.8/57

asym\_at1\_dd\_at2\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 1165.861 $\pm$ 0.195  $\chi^2$ /NDF: 2704419.4/30

Left Out: 586.562 $\pm$ 0.096  $\chi^2$ /NDF: 1202822.0/24

Right Out: 1235.016 $\pm$ 0.206  $\chi^2$ /NDF: 2735249.3/34

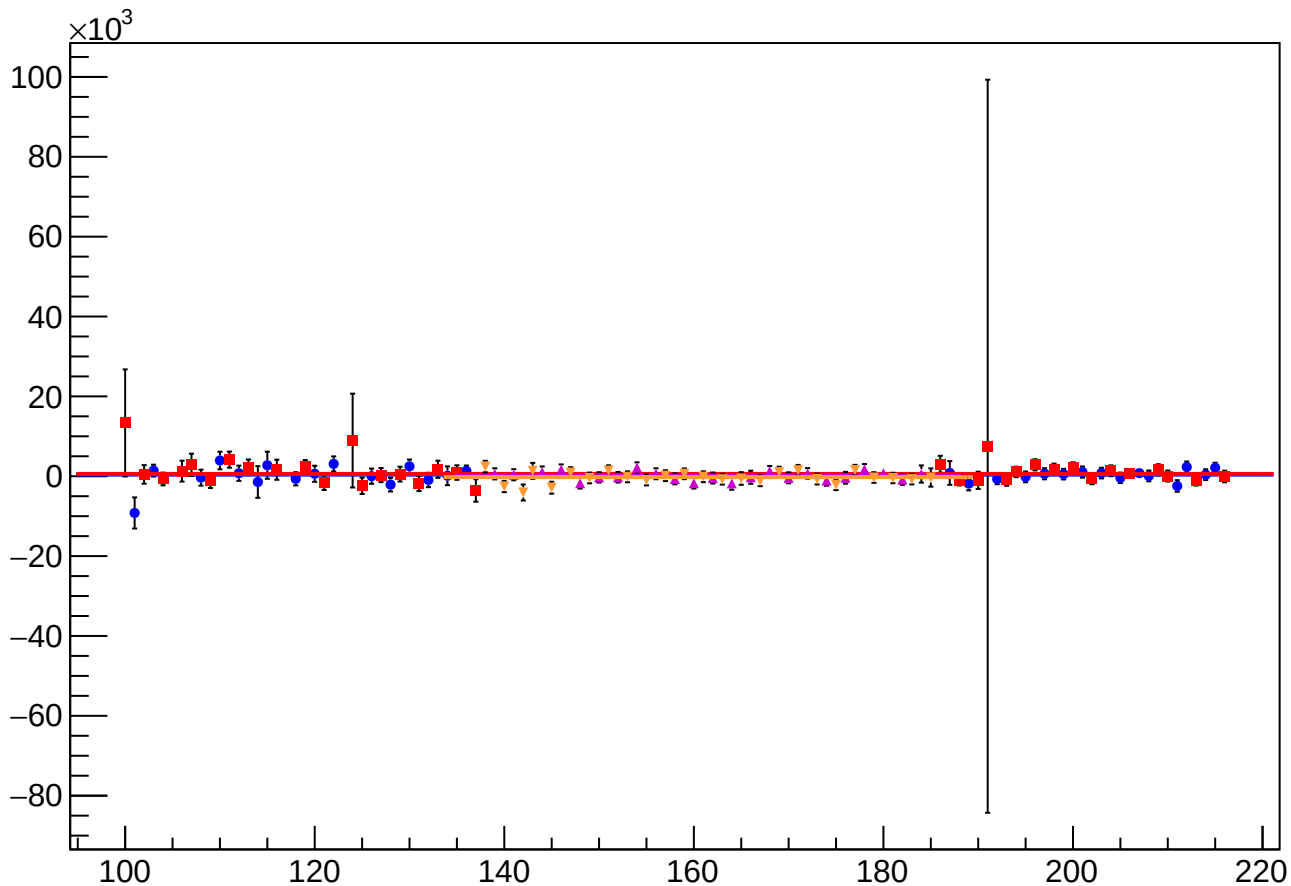
Left In: 582.189 $\pm$ 0.097  $\chi^2$ /NDF: 559258.0/22

+ sign 699.226 $\pm$ 0.086  $\chi^2$ /NDF: 10990935.8/55

All: 700.078 $\pm$ 0.061  $\chi^2$ /NDF: 22516050.3/11

- sign 700.962 $\pm$ 0.088  $\chi^2$ /NDF: 11524915.4/57

eigen\_cor\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In: 411.786 $\pm$ 288.956  $\chi^2$ /NDF: 28.2/30

Left Out: -220.755 $\pm$ 283.055  $\chi^2$ /NDF:23.9/24

Right Out: 576.384 $\pm$ 290.300  $\chi^2$ /NDF: 29.7/34

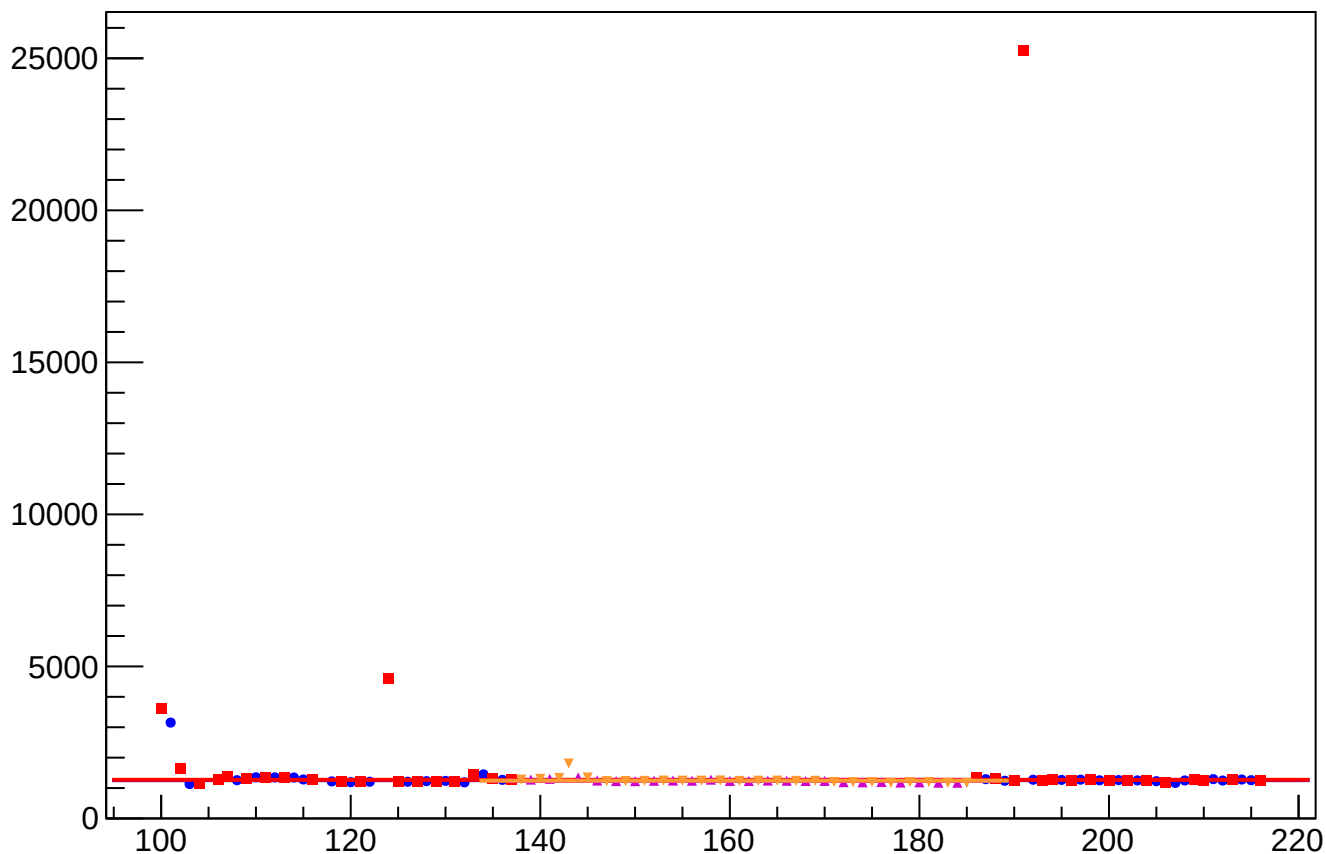
Left In: 92.472 $\pm$ 288.217  $\chi^2$ /NDF:14.7/22

+ sign 88.990 $\pm$ 202.204  $\chi^2$ /NDF: 54.6/55

All: 209.443 $\pm$ 143.796  $\chi^2$ /NDF: 101.1/113

- sign 332.686 $\pm$ 204.533  $\chi^2$ /NDF: 45.8/57

eigen\_cor\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1259.920 $\pm$ 0.204  $\chi^2$ /NDF: 535657.1/30

Left Out: 1242.825 $\pm$ 0.200  $\chi^2$ /NDF: 203299.1/24

Right Out: 1270.431 $\pm$ 0.205  $\chi^2$ /NDF: 494194.9/34

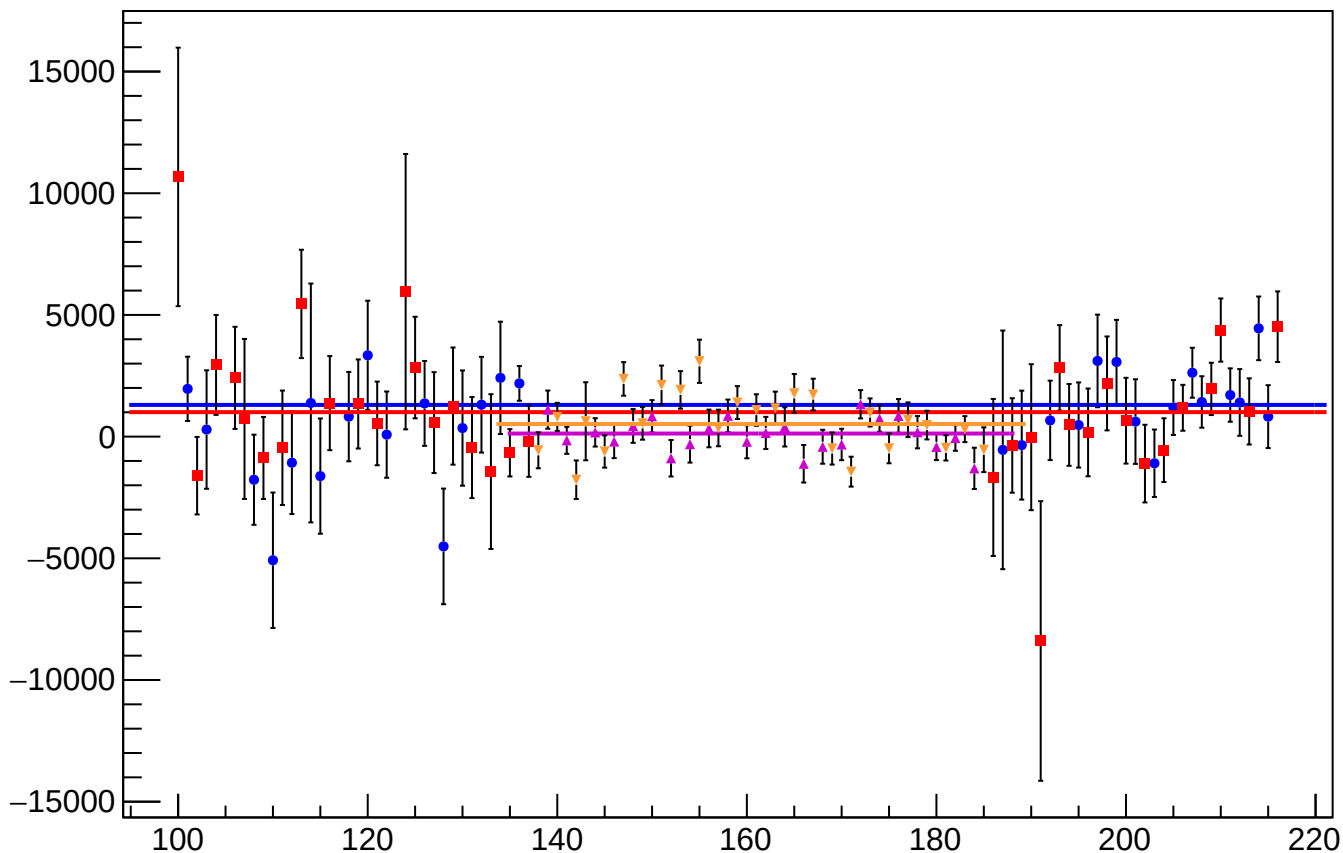
Left In: 1233.752 $\pm$ 0.204  $\chi^2$ /NDF: 39281.7/22

+ sign 1251.196 $\pm$ 0.143  $\chi^2$ /NDF: 742528.7/55

All: 1251.574 $\pm$ 0.102  $\chi^2$ /NDF: 1292098.0/11

- sign 1251.960 $\pm$ 0.145  $\chi^2$ /NDF: 549555.2/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 1302.736 $\pm$ 276.264  $\chi^2$ /NDF: 34.4/30

Left Out: 516.811 $\pm$ 135.747  $\chi^2$ /NDF: 67.0/24

Right Out: 1005.629 $\pm$ 291.069  $\chi^2$ /NDF: 41.8/34

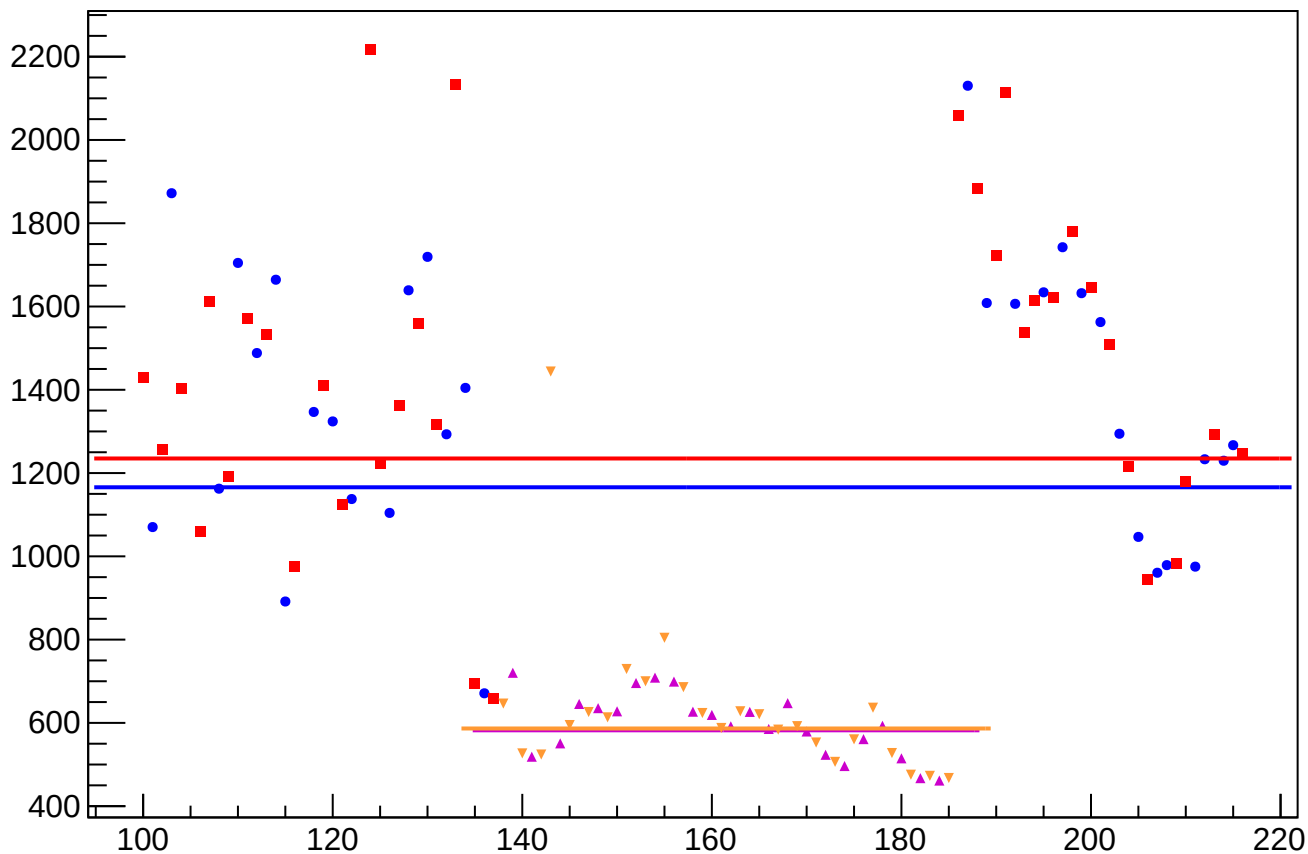
Left In: 126.549 $\pm$ 137.266  $\chi^2$ /NDF: 21.6/22

+ sign 669.661 $\pm$ 121.834  $\chi^2$ /NDF: 108.0/55

All: 481.686 $\pm$ 86.958  $\chi^2$ /NDF: 183.7/113

- sign 286.486 $\pm$ 124.153  $\chi^2$ /NDF: 70.8/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1165.861 $\pm$ 0.195  $\chi^2$ /NDF: 2704419.4/30

Left Out: 586.562 $\pm$ 0.096  $\chi^2$ /NDF: 1202822.0/24

Right Out: 1235.016 $\pm$ 0.206  $\chi^2$ /NDF: 2735249.3/34

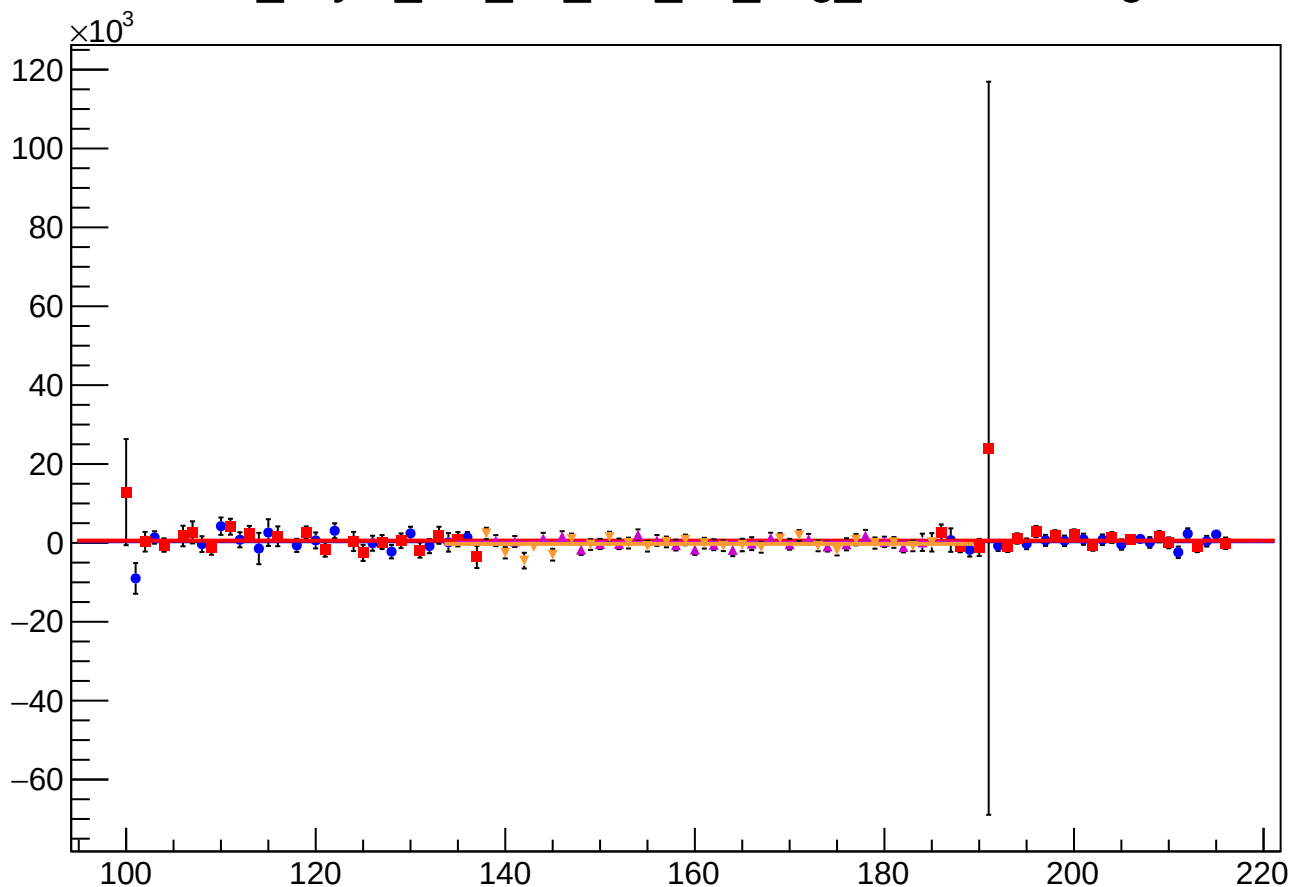
Left In: 582.189 $\pm$ 0.097  $\chi^2$ /NDF: 559258.0/22

+ sign 699.226 $\pm$ 0.086  $\chi^2$ /NDF: 10990935.8/55

All: 700.078 $\pm$ 0.061  $\chi^2$ /NDF: 22516050.3/11

- sign 700.962 $\pm$ 0.088  $\chi^2$ /NDF: 11524915.4/57

dit\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In: 420.174 $\pm$ 289.813  $\chi^2$ /NDF: 28.2/30

Left Out: -250.849 $\pm$ 279.923  $\chi^2$ /NDF:24.0/24

Right Out: 573.200 $\pm$ 289.660  $\chi^2$ /NDF: 29.2/34

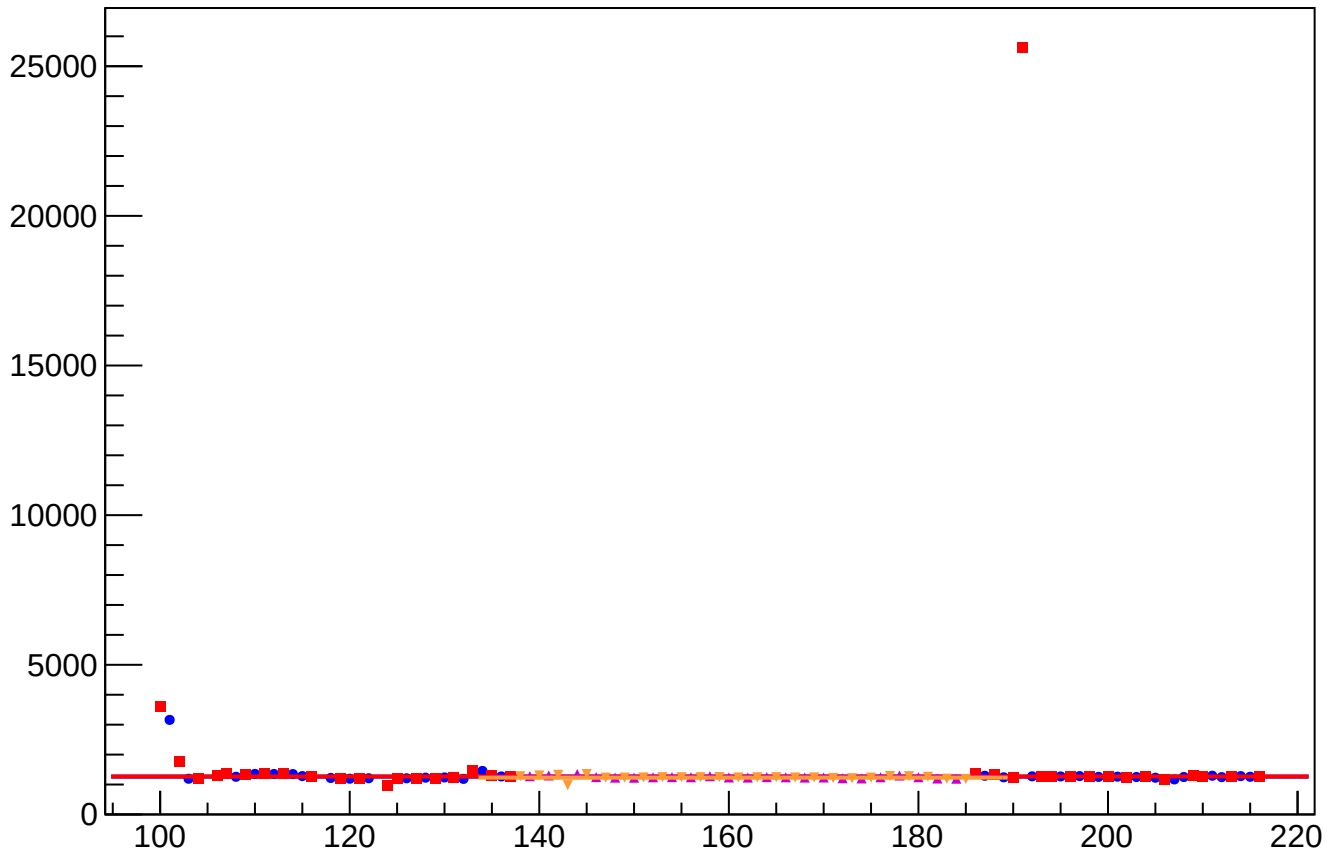
Left In: 74.881 $\pm$ 291.458  $\chi^2$ /NDF:14.0/22

+ sign 73.017 $\pm$ 201.341  $\chi^2$ /NDF: 55.0/55

All: 196.747 $\pm$ 143.802  $\chi^2$ /NDF: 100.4/113

- sign 325.582 $\pm$ 205.453  $\chi^2$ /NDF: 44.7/57

dit\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1263.810+/-0.205  $\chi^2/\text{NDF}$ : 525470.7/30

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141607.5/24

Right Out: 1269.111+/-0.205  $\chi^2/\text{NDF}$ : 385395.3/34

Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.8/22

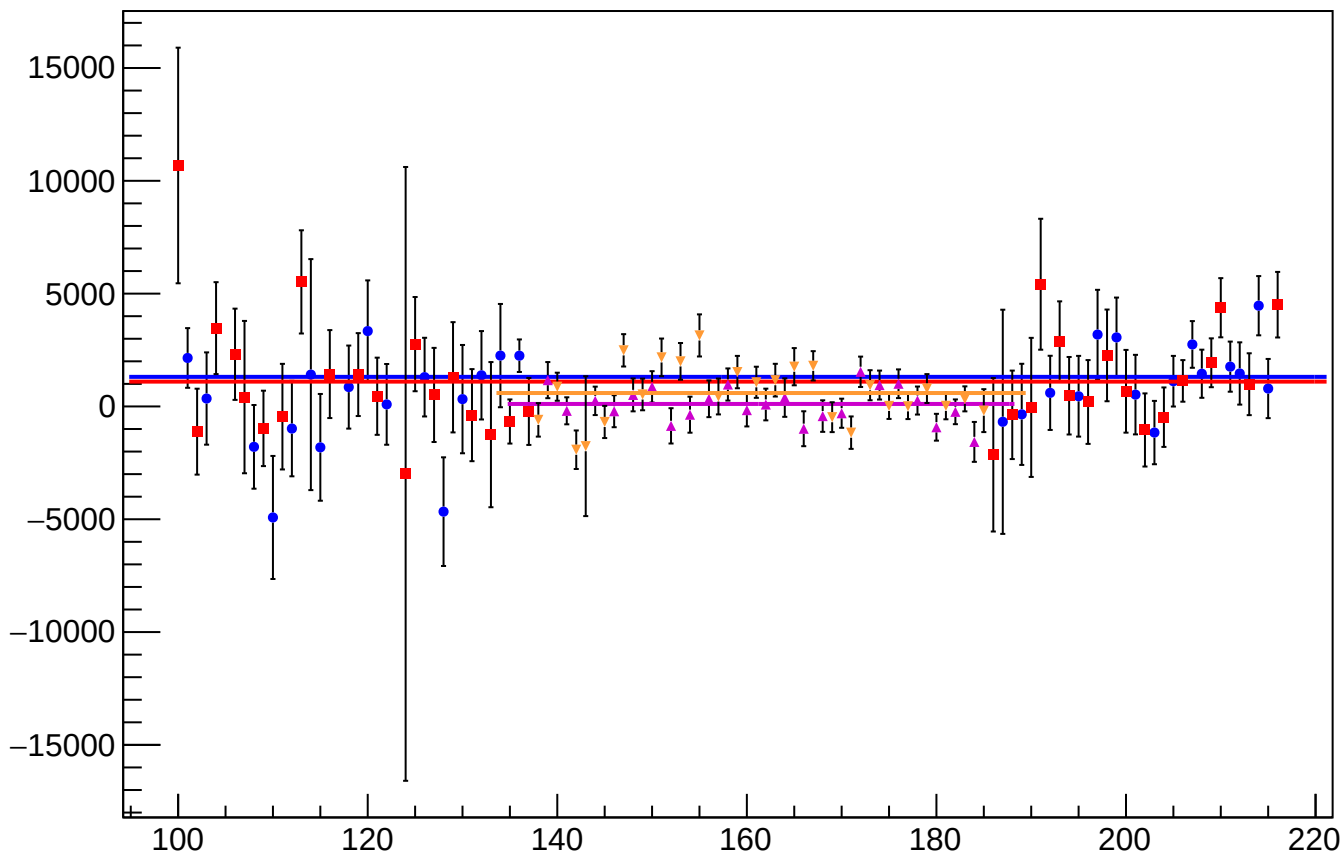
+ sign 1246.311+/-0.142  $\chi^2/\text{NDF}$ : 681172.2/55

All: 1252.289+/-0.102  $\chi^2/\text{NDF}$ : 1102894.0/11

- sign 1258.514+/-0.145  $\chi^2/\text{NDF}$ : 418122.8/57



asym\_at1\_dd\_at2\_dd\_avg\_dit\_correction\_mean vs Slug



Right In: 1311.254 $\pm$ 277.760  $\chi^2$ /NDF: 35.5/30

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 1100.510 $\pm$ 293.386  $\chi^2$ /NDF: 39.4/34

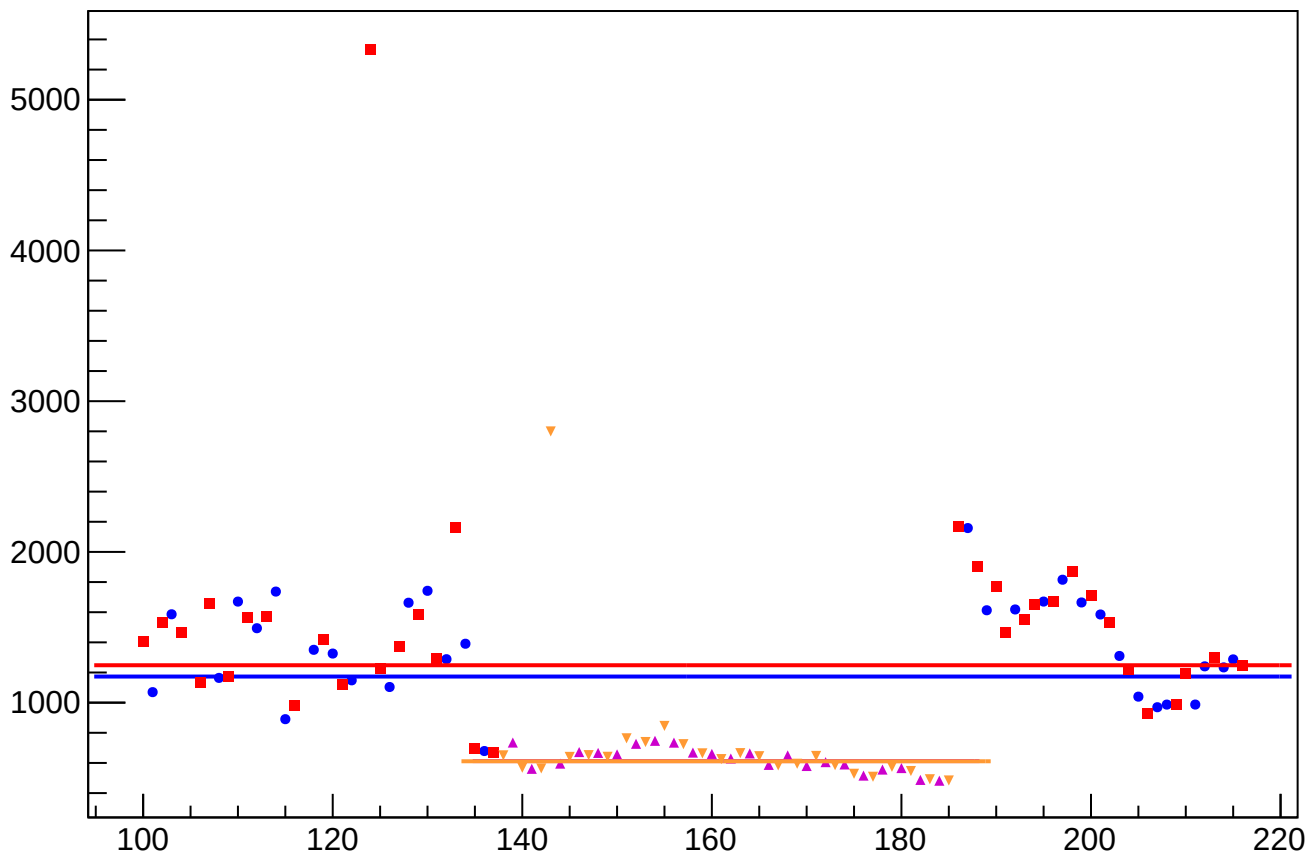
Left In: 110.252 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 743.627 $\pm$ 126.528  $\chi^2$ /NDF: 98.1/55

All: 528.319 $\pm$ 90.479  $\chi^2$ /NDF: 178.3/113

- sign 302.998 $\pm$ 129.437  $\chi^2$ /NDF: 74.3/57

asym\_at1\_dd\_at2\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 1173.201+/-0.196  $\chi^2/\text{NDF}$ : 2646017.2/30

Left Out: 611.087+/-0.101  $\chi^2/\text{NDF}$ : 1619322.3/24

Right Out: 1248.185+/-0.207  $\chi^2/\text{NDF}$ : 3030885.9/34

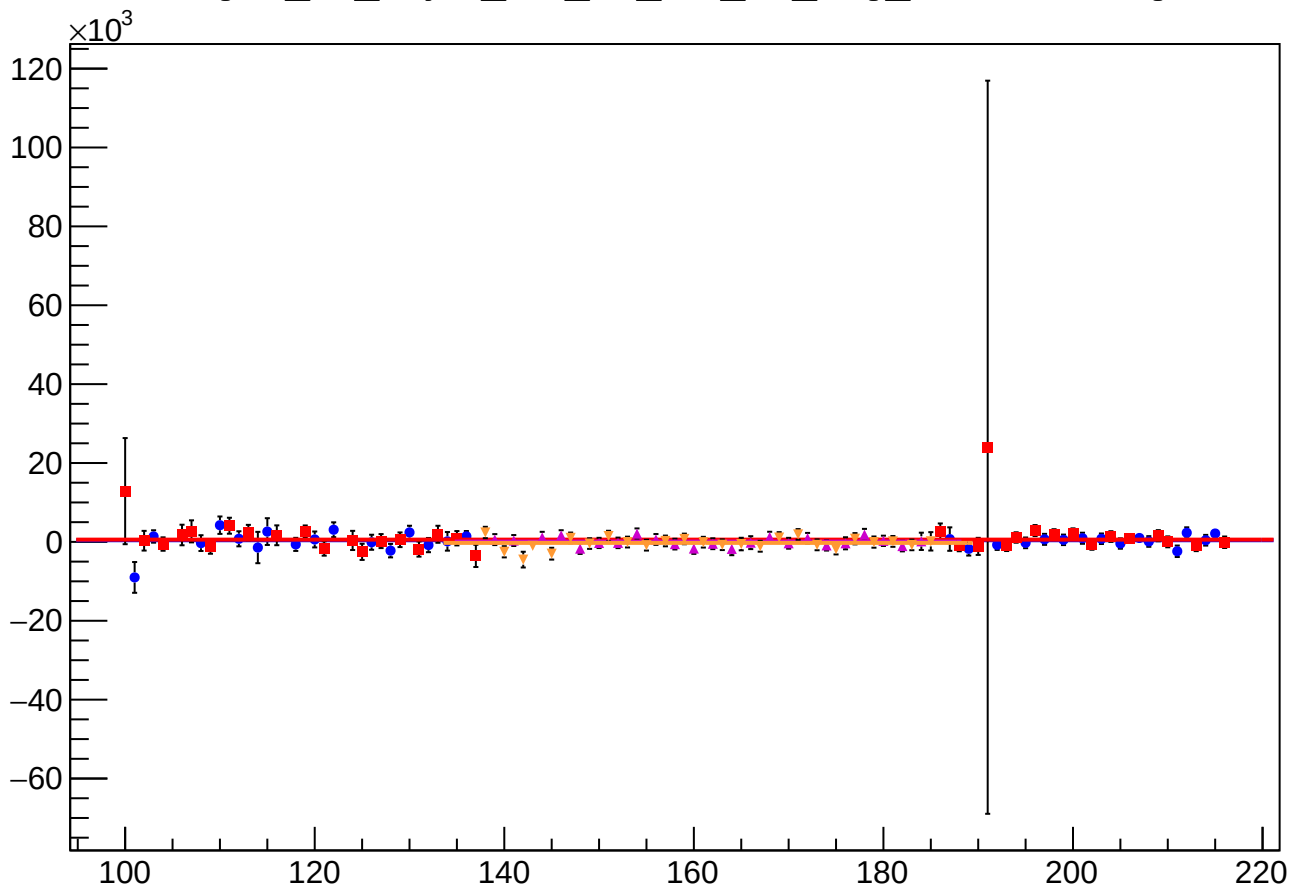
Left In: 612.399+/-0.102  $\chi^2/\text{NDF}$ : 508595.4/22

+ sign 727.729+/-0.089  $\chi^2/\text{NDF}$ : 10756695.9/55

All: 731.843+/-0.064  $\chi^2/\text{NDF}$ : 21864722.2/11

- sign 736.150+/-0.092  $\chi^2/\text{NDF}$ : 11103697.4/57

eigen\_dit\_asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $420.171 \pm 289.813$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-250.851 \pm 279.923$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $573.199 \pm 289.660$   $\chi^2/\text{NDF}$ : 29.2/34

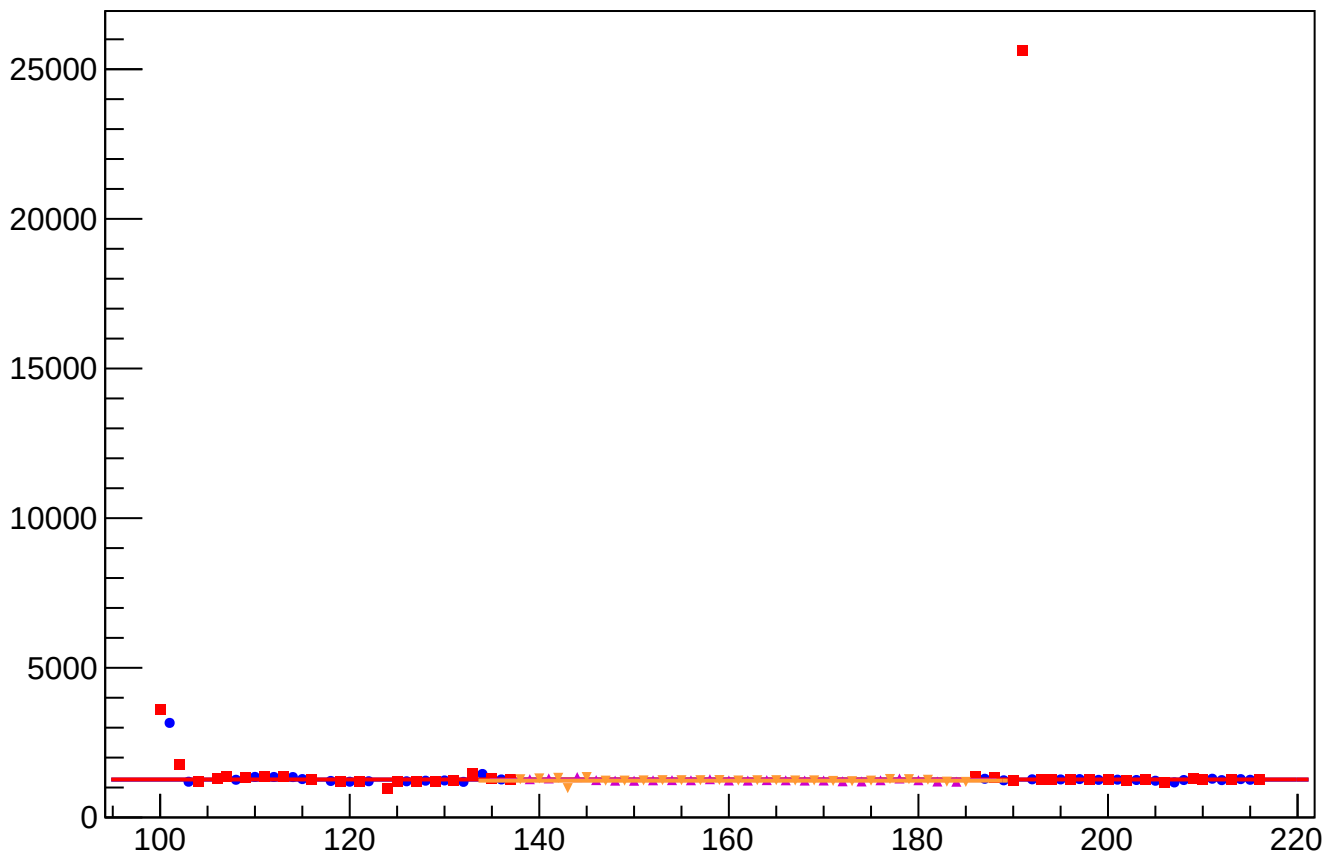
Left In:  $74.881 \pm 291.458$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $73.015 \pm 201.341$   $\chi^2/\text{NDF}$ : 55.0/55

All:  $196.745 \pm 143.801$   $\chi^2/\text{NDF}$ : 100.4/113

- sign  $325.582 \pm 205.453$   $\chi^2/\text{NDF}$ : 44.7/57

eigen\_dit\_asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1263.810+/-0.205  $\chi^2/\text{NDF}$ : 525470.8/30

Left Out: 1229.986+/-0.198  $\chi^2/\text{NDF}$ : 141606.6/24

Right Out: 1269.111+/-0.205  $\chi^2/\text{NDF}$ : 385395.1/34

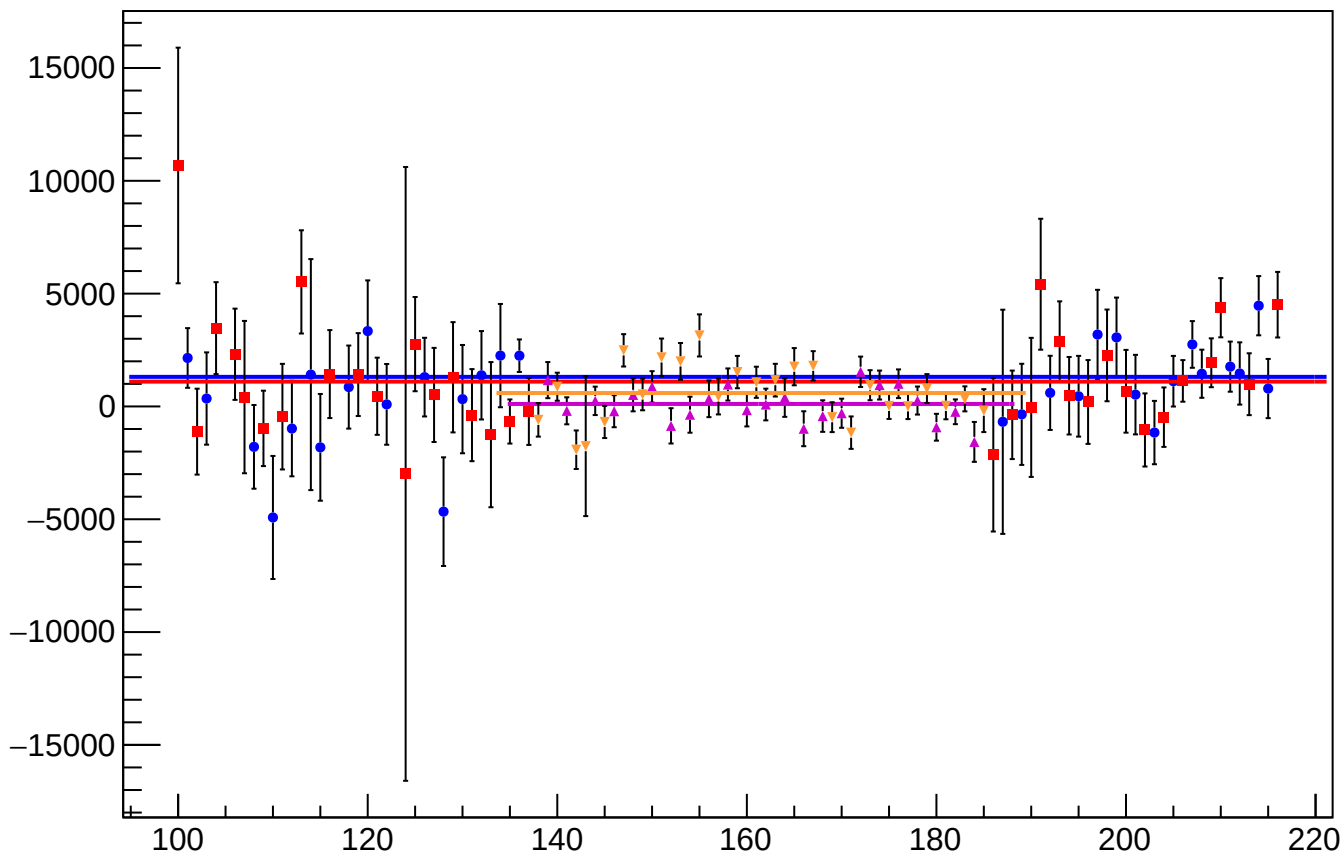
Left In: 1247.785+/-0.206  $\chi^2/\text{NDF}$ : 27340.7/22

+ sign 1246.311+/-0.142  $\chi^2/\text{NDF}$ : 681171.3/55

All: 1252.289+/-0.102  $\chi^2/\text{NDF}$ : 1102892.9/11

- sign 1258.514+/-0.145  $\chi^2/\text{NDF}$ : 418122.6/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 1311.253 $\pm$ 277.760  $\chi^2$ /NDF: 35.5/30

Left Out: 595.000 $\pm$ 142.130  $\chi^2$ /NDF: 57.3/24

Right Out: 1100.512 $\pm$ 293.386  $\chi^2$ /NDF: 39.4/34

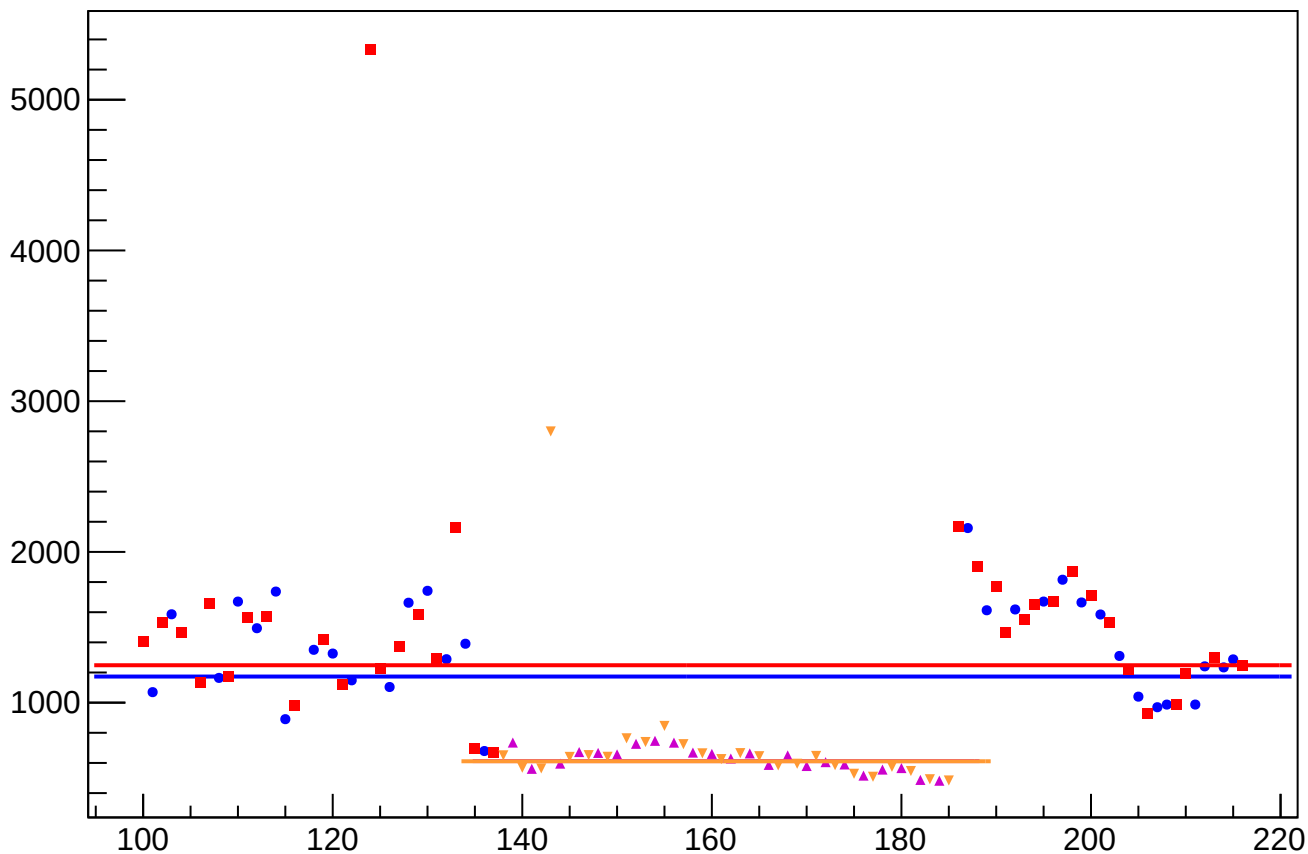
Left In: 110.251 $\pm$ 144.232  $\chi^2$ /NDF: 25.7/22

+ sign 743.626 $\pm$ 126.528  $\chi^2$ /NDF: 98.1/55

All: 528.319 $\pm$ 90.479  $\chi^2$ /NDF: 178.3/113

- sign 302.997 $\pm$ 129.437  $\chi^2$ /NDF: 74.3/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1173.202 $\pm$ 0.196  $\chi^2$ /NDF: 2645957.2/30

Left Out: 611.086 $\pm$ 0.101  $\chi^2$ /NDF: 1619319.5/24

Right Out: 1248.188 $\pm$ 0.207  $\chi^2$ /NDF: 3030829.1/34

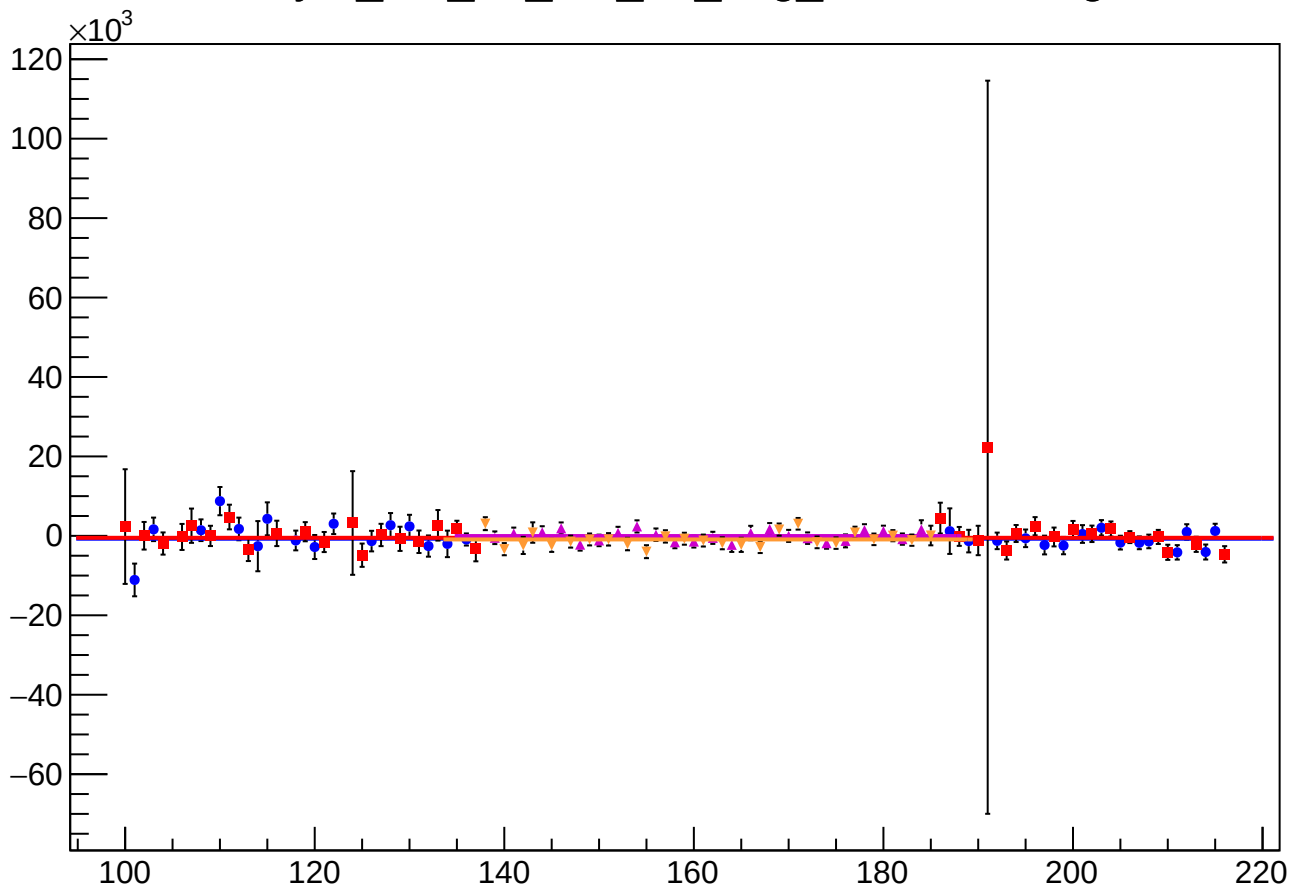
Left In: 612.398 $\pm$ 0.102  $\chi^2$ /NDF: 508597.7/22

+ sign 727.729 $\pm$ 0.089  $\chi^2$ /NDF: 10756662.0/55

All: 731.843 $\pm$ 0.064  $\chi^2$ /NDF: 21864704.4/11

- sign 736.149 $\pm$ 0.092  $\chi^2$ /NDF: 11103713.9/57

asym\_at1\_dd\_at2\_dd\_avg\_mean vs Slug



Right In:  $-721.502 \pm 419.243$   $\chi^2/\text{NDF}$ : 35.8/30

Left Out:  $-899.894 \pm 316.449$   $\chi^2/\text{NDF}$ : 29.8/24

Right Out:  $-491.109 \pm 430.291$   $\chi^2/\text{NDF}$ : 27.0/34

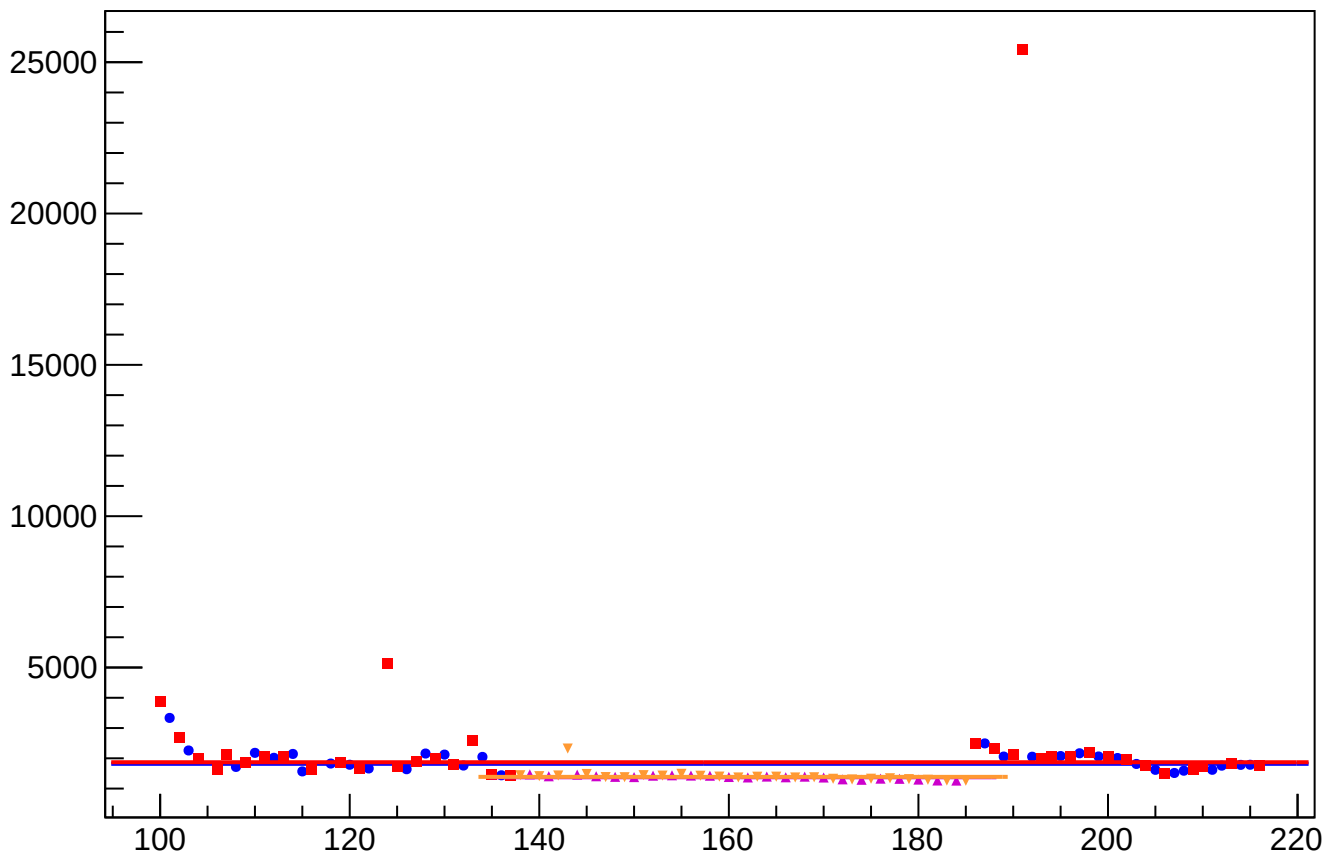
Left In:  $-48.178 \pm 320.929$   $\chi^2/\text{NDF}$ : 17.9/22

+ sign  $-835.147 \pm 252.575$   $\chi^2/\text{NDF}$ : 65.7/55

All:  $-526.595 \pm 180.230$   $\chi^2/\text{NDF}$ : 114.3/113

- sign  $-206.500 \pm 257.256$   $\chi^2/\text{NDF}$ : 45.6/57

## asym\_at1\_dd\_at2\_dd\_avg\_rms vs Slug



Right In: 1817.481+/-0.296     $\chi^2/\text{NDF}$ : 893605.4/30

Left Out: 1386.845+/-0.224     $\chi^2/\text{NDF}$ :339794.5/24

Right Out: 1870.202+/-0.304     $\chi^2/\text{NDF}$ : 1056819.0/34

Left In: 1373.217+/-0.227     $\chi^2/\text{NDF}$ :64467.6/22

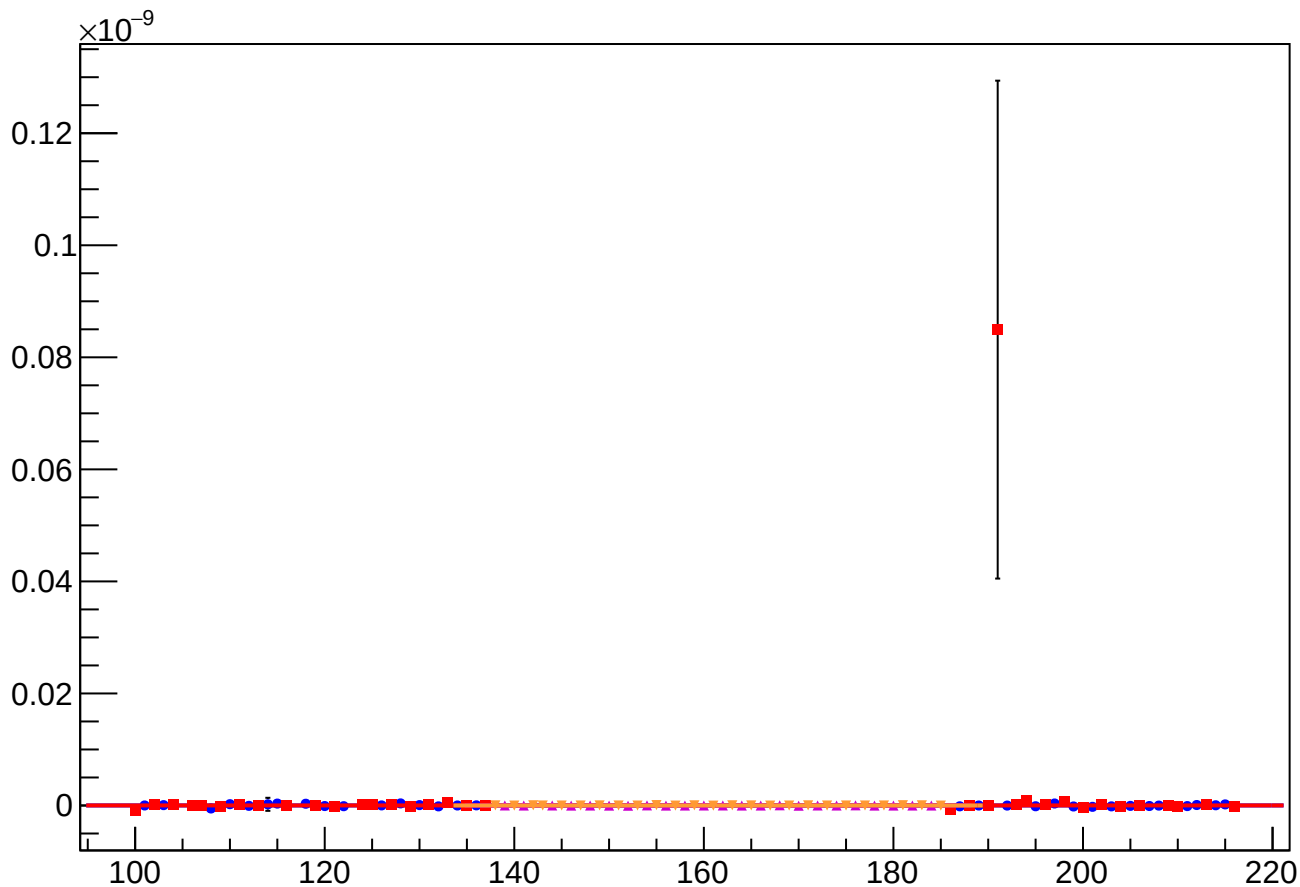
+ sign 1543.145+/-0.179     $\chi^2/\text{NDF}$ : 2577688.4/55

All:  $1546.932 \pm 0.127$      $\chi^2/\text{NDF}$ : 5414275.6/11

- sign 1550.861 $\pm$ 0.182     $\chi^2$ /NDF: 2835671.0/57



asym\_at1\_dd\_at2\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.7/34

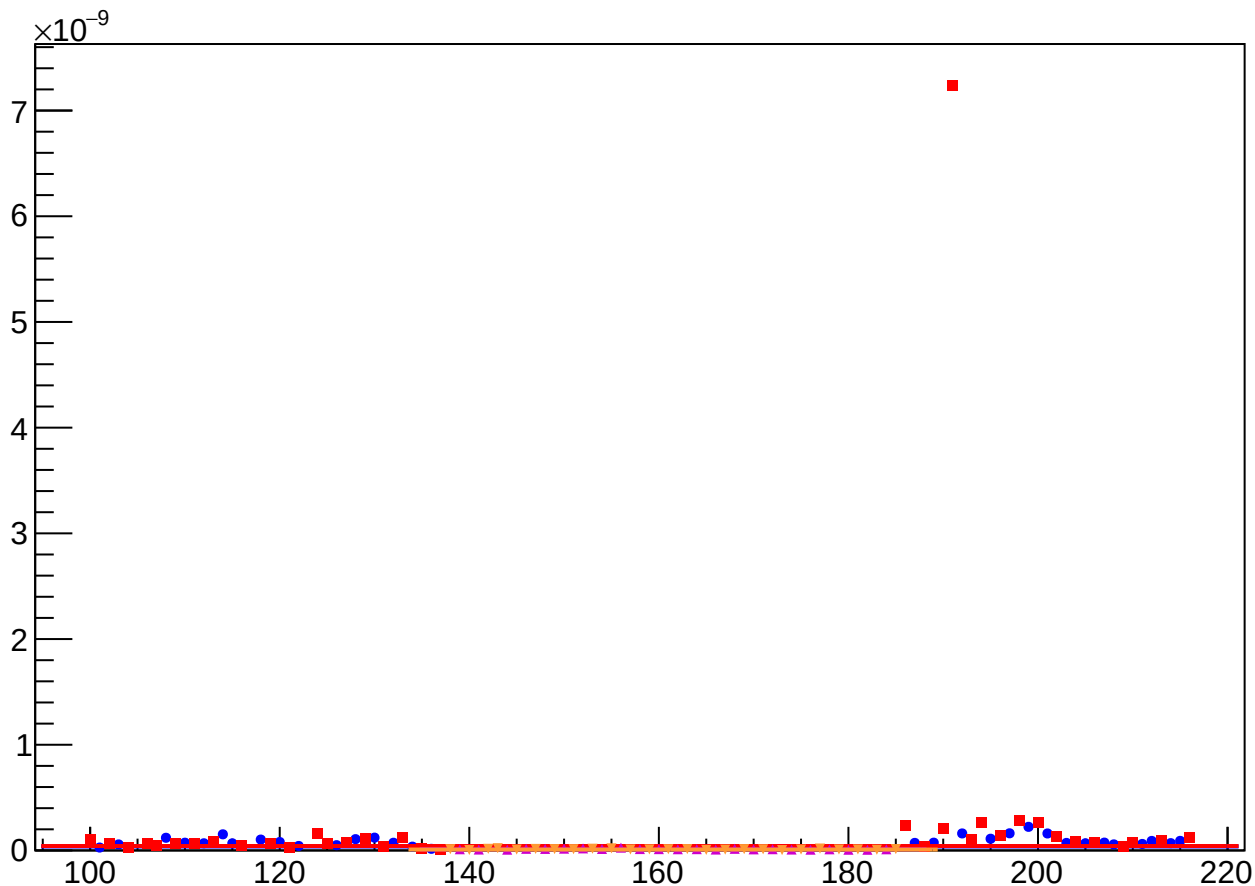
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 116.5/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 63.8/57

asym\_at1\_dd\_at2\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7003564.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2148494.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7281715.5/34

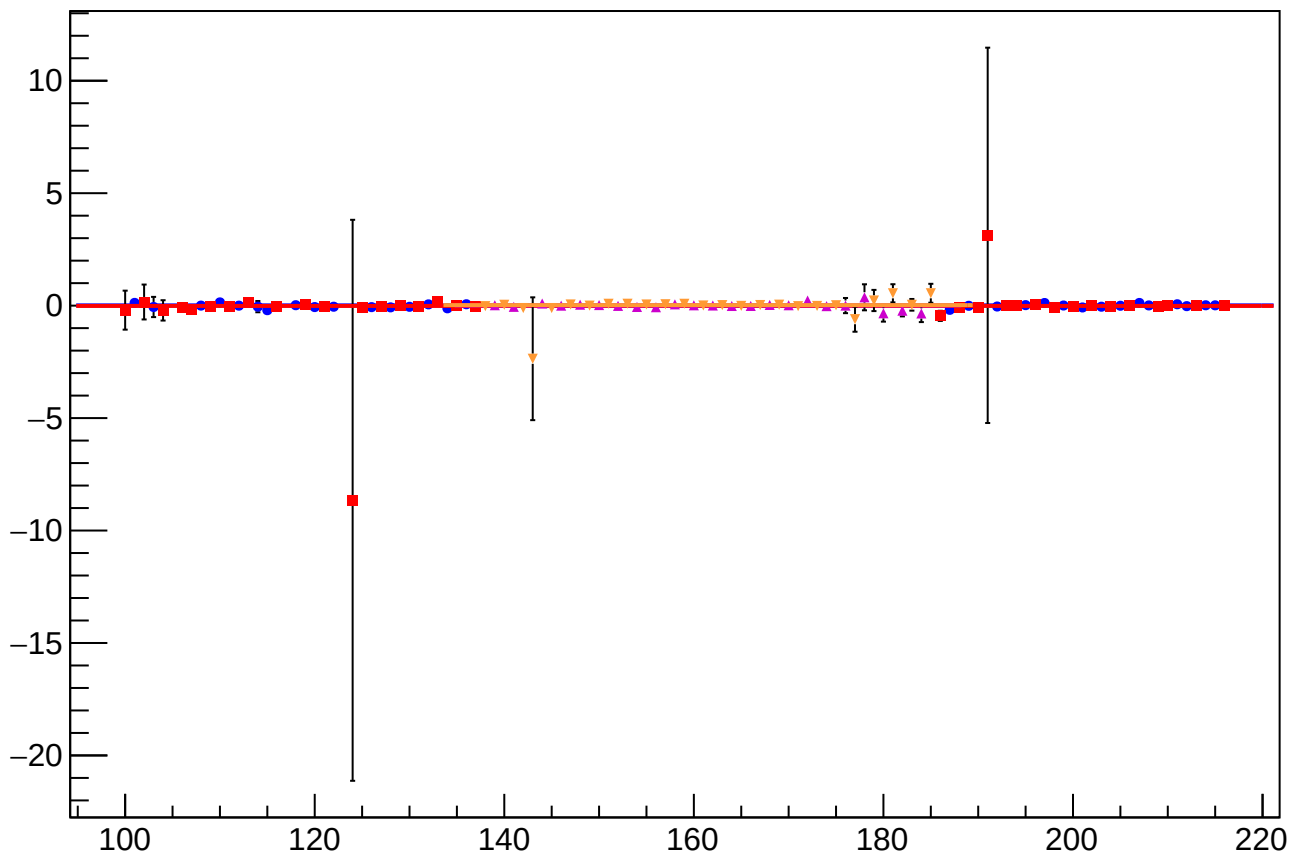
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1232395.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14921001.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28923133.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13734070.1/57

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}: 45.0/30$

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}: 22.8/24$

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}: 24.1/34$

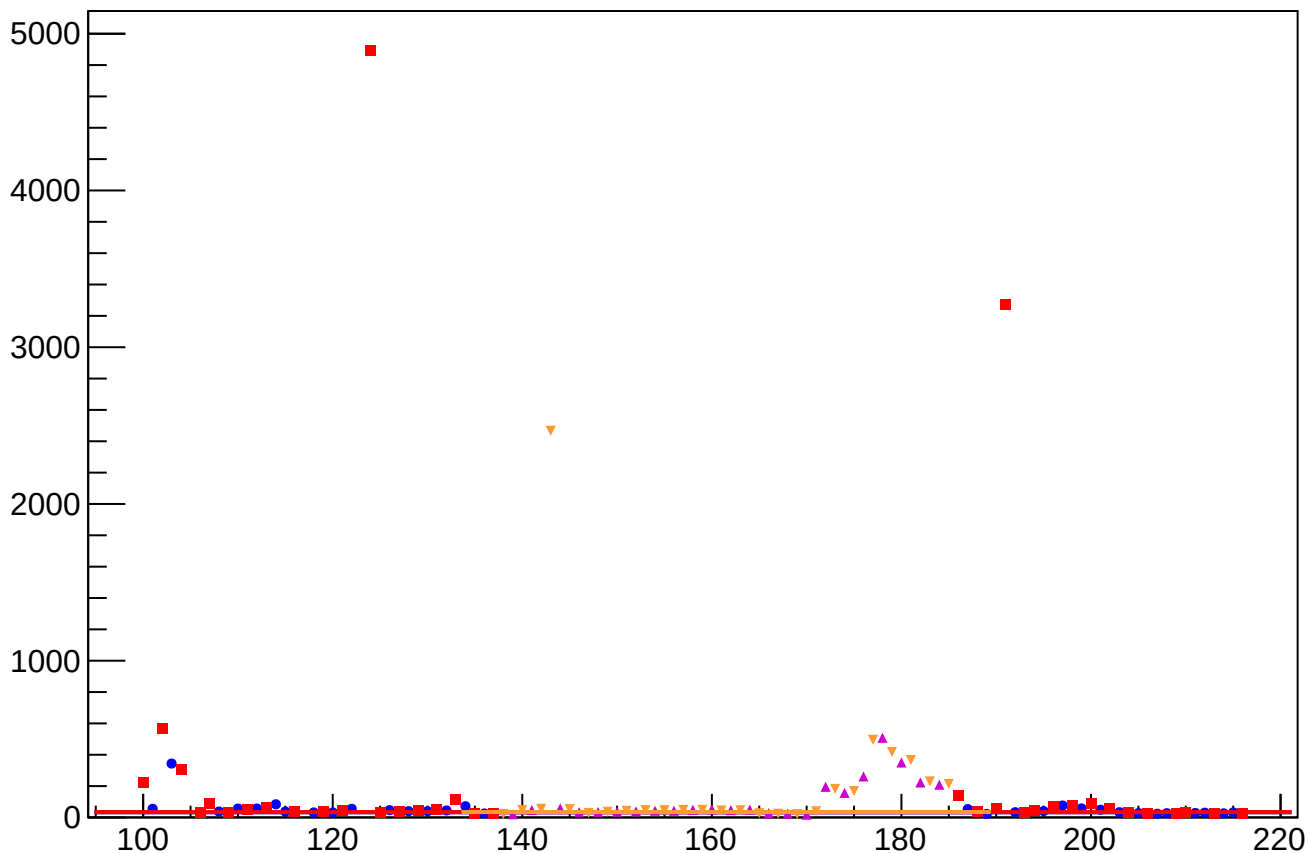
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}: 68.7/55$

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}: 114.2/113$

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 41.6/57$

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 32.929 $\pm$ 0.006  $\chi^2$ /NDF: 3733447.0/30

Left Out: 34.624 $\pm$ 0.007  $\chi^2$ /NDF: 11402451.4/24

Right Out: 33.892 $\pm$ 0.006  $\chi^2$ /NDF: 6693406.6/34

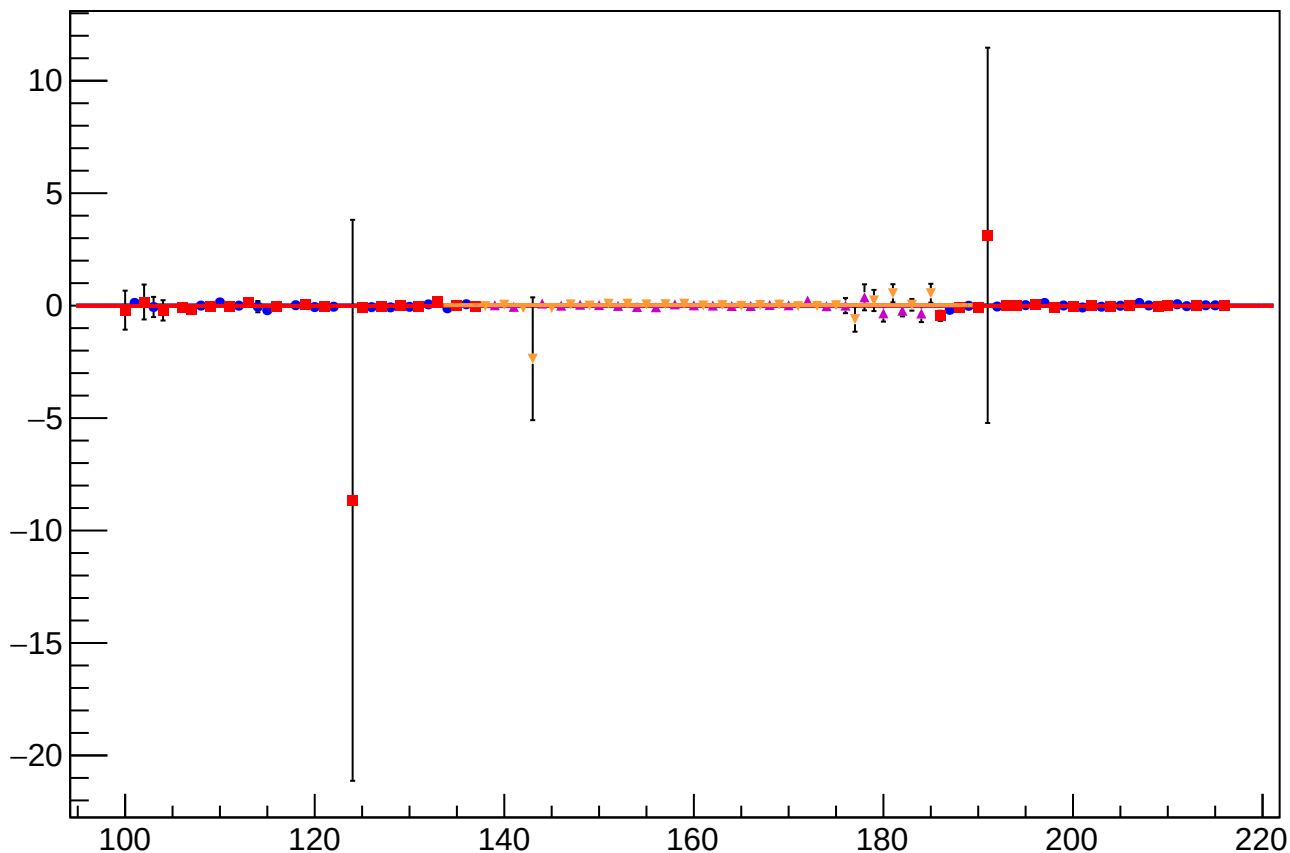
Left In: 33.592 $\pm$ 0.007  $\chi^2$ /NDF: 10067466.4/22

+ sign 33.635 $\pm$ 0.005  $\chi^2$ /NDF: 15168061.8/55

All: 33.693 $\pm$ 0.003  $\chi^2$ /NDF: 31930232.6/113

- sign 33.754 $\pm$ 0.005  $\chi^2$ /NDF: 16761854.1/57

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}: 45.0/30$

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}: 22.8/24$

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}: 24.1/34$

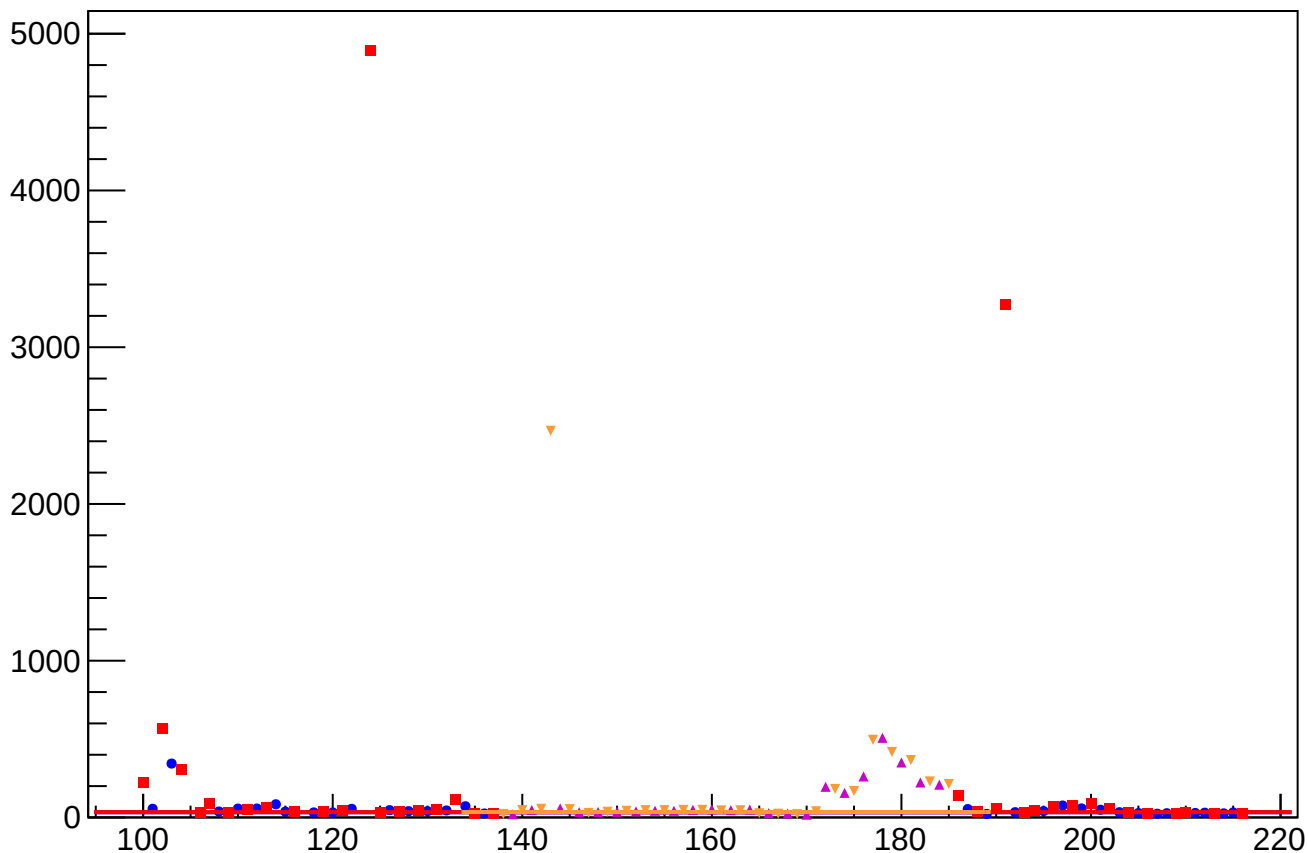
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 14.8/22$

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}: 68.7/55$

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}: 114.2/113$

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 41.6/57$

asym\_at1\_dd\_at2\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 32.929 $\pm$ 0.006  $\chi^2$ /NDF: 3733447.0/30

Left Out: 34.624 $\pm$ 0.007  $\chi^2$ /NDF: 11402451.4/24

Right Out: 33.892 $\pm$ 0.006  $\chi^2$ /NDF: 6693406.6/34

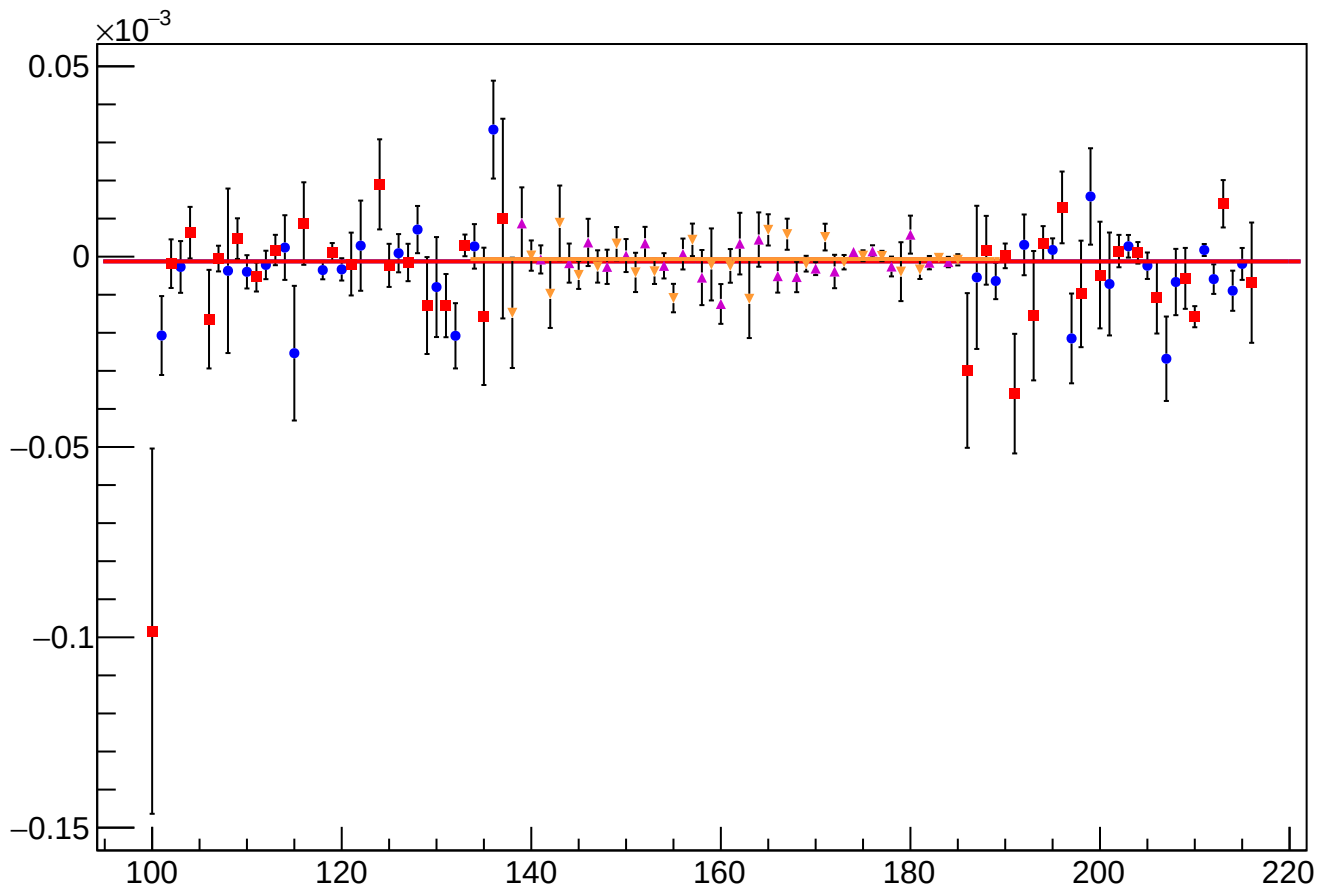
Left In: 33.592 $\pm$ 0.007  $\chi^2$ /NDF: 10067466.4/22

+ sign 33.635 $\pm$ 0.005  $\chi^2$ /NDF: 15168061.8/55

All: 33.693 $\pm$ 0.003  $\chi^2$ /NDF: 31930232.6/113

- sign 33.754 $\pm$ 0.005  $\chi^2$ /NDF: 16761854.1/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.0/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.8/34

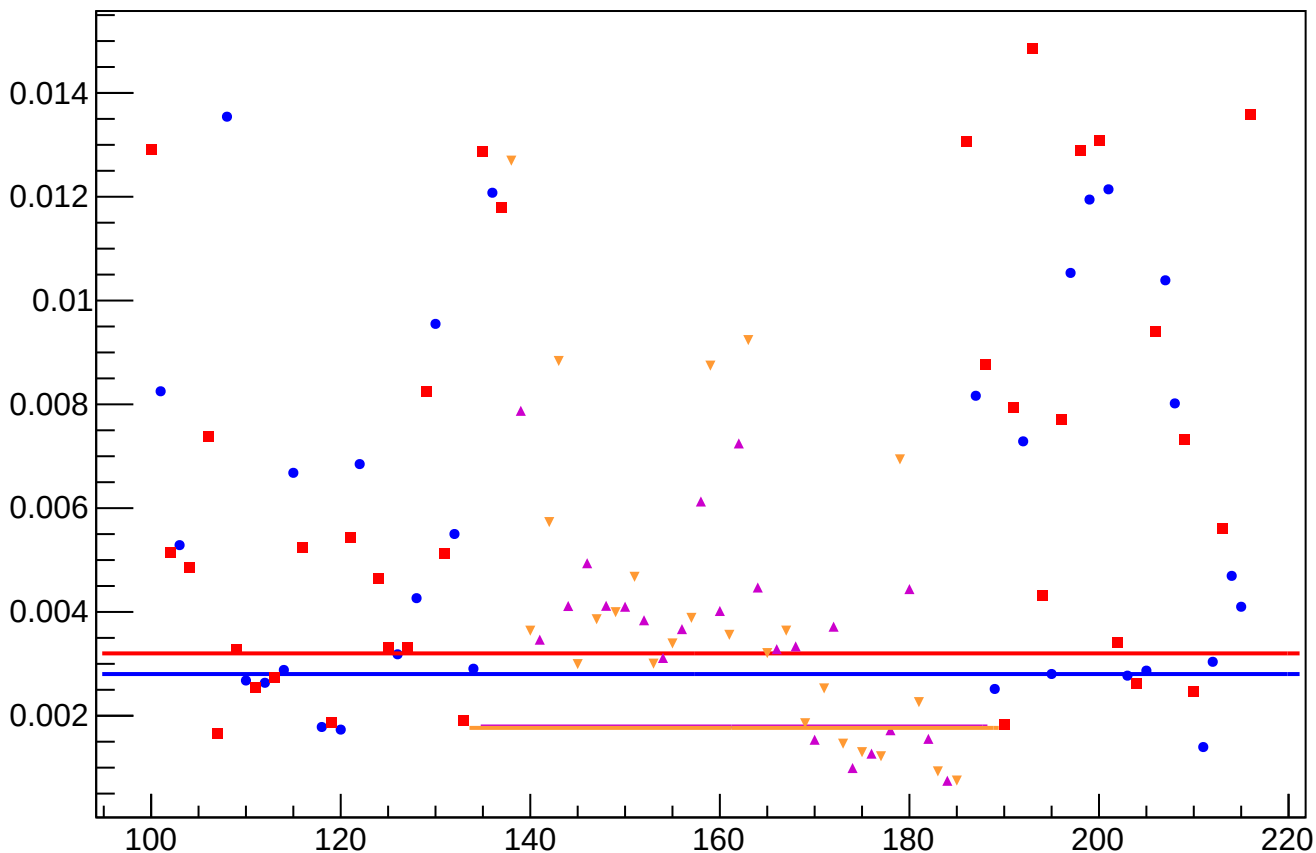
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 73.8/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 163.9/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 90.1/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11525264.3/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ :12926339.2/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11597526.8/34

Left In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ :10766932.4/22

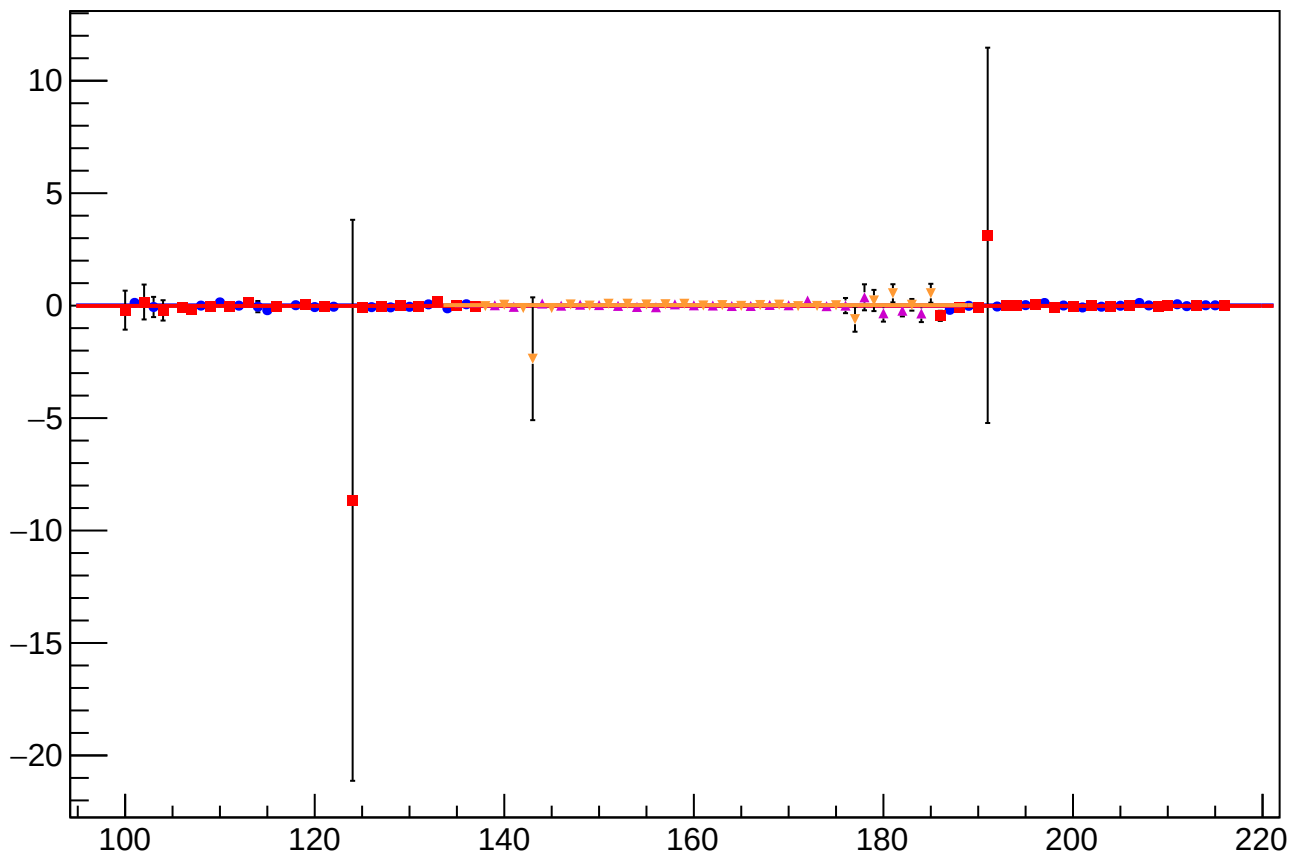
+ sign 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26826907.6/55

All: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 52929953.0/113

- sign 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26038590.4/57



asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.011 $\pm$ 0.009  $\chi^2$ /NDF: 45.0/30

Left Out: 0.023 $\pm$ 0.010  $\chi^2$ /NDF:22.8/24

Right Out: -0.013 $\pm$ 0.009  $\chi^2$ /NDF: 24.1/34

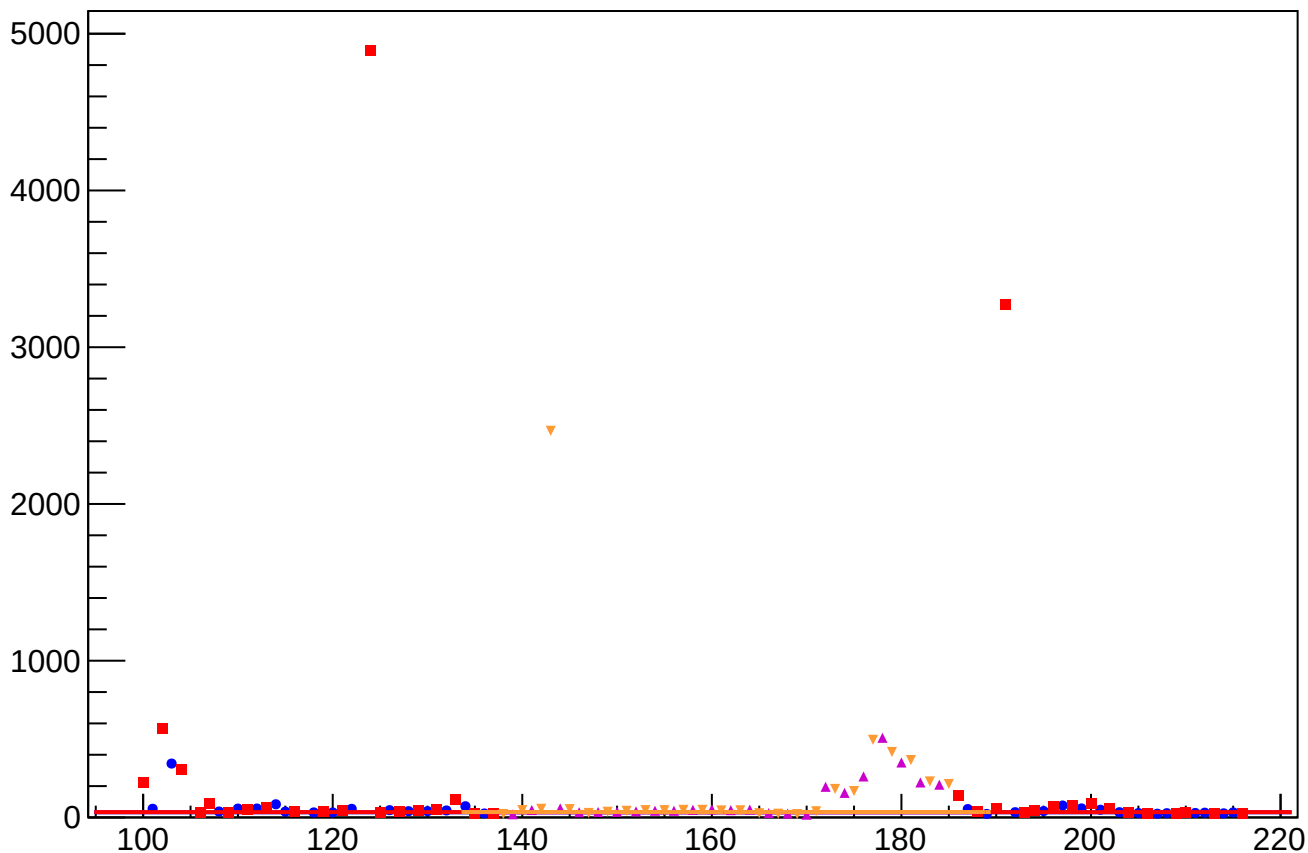
Left In: 0.010 $\pm$ 0.010  $\chi^2$ /NDF:14.8/22

+ sign 0.016 $\pm$ 0.007  $\chi^2$ /NDF: 68.7/55

All: 0.007 $\pm$ 0.005  $\chi^2$ /NDF: 114.2/113

- sign -0.002 $\pm$ 0.007  $\chi^2$ /NDF: 41.6/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 32.931+/-0.006  $\chi^2/\text{NDF}$ : 3732212.7/30

Left Out: 34.623+/-0.007  $\chi^2/\text{NDF}$ : 11402566.2/24

Right Out: 33.893+/-0.006  $\chi^2/\text{NDF}$ : 6693295.8/34

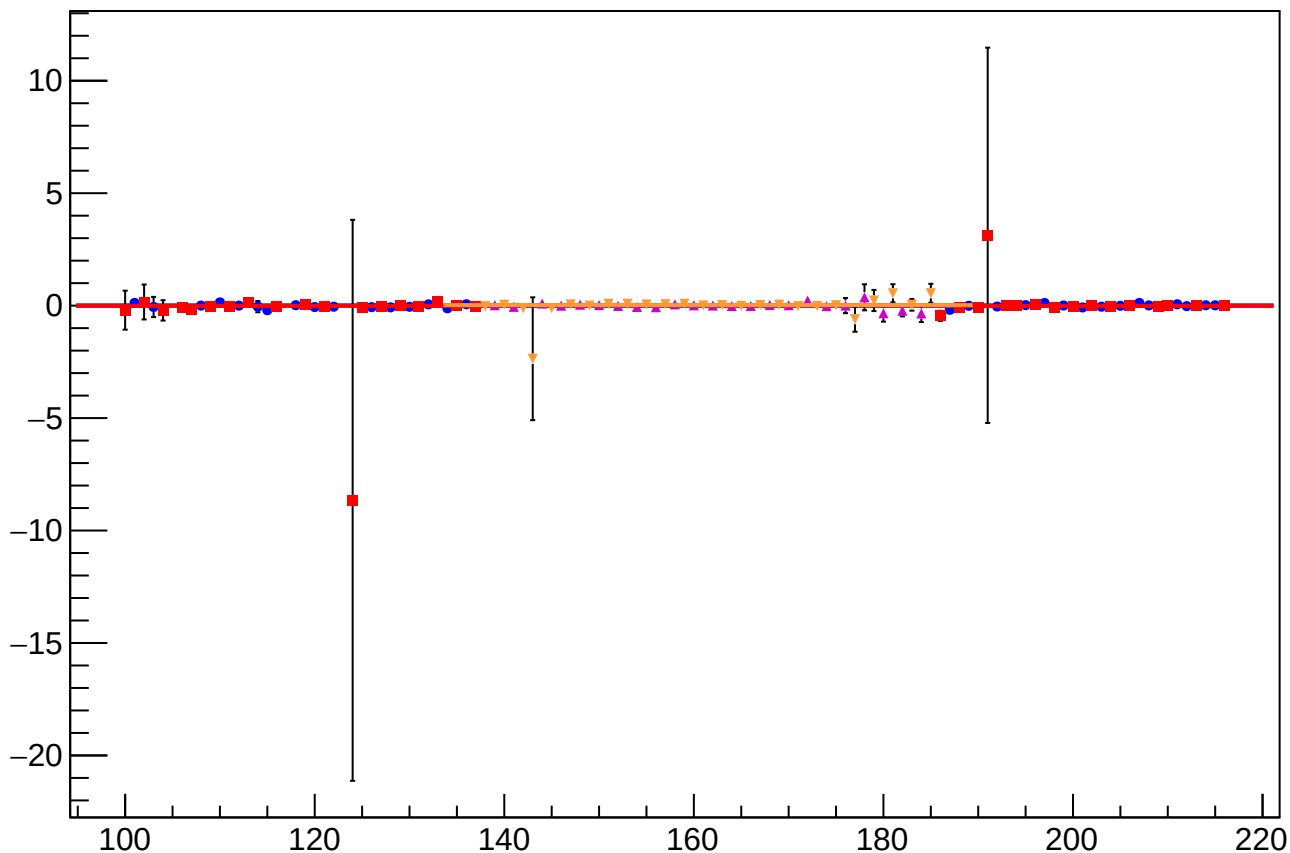
Left In: 33.595+/-0.007  $\chi^2/\text{NDF}$ : 10066196.6/22

+ sign 33.636+/-0.005  $\chi^2/\text{NDF}$ : 15166812.2/55

All: 33.695+/-0.003  $\chi^2/\text{NDF}$ : 31927591.9/113

- sign 33.755+/-0.005  $\chi^2/\text{NDF}$ : 16760461.6/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.009$   $\chi^2/\text{NDF}$ : 45.0/30

Left Out:  $0.023 \pm 0.010$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 24.1/34

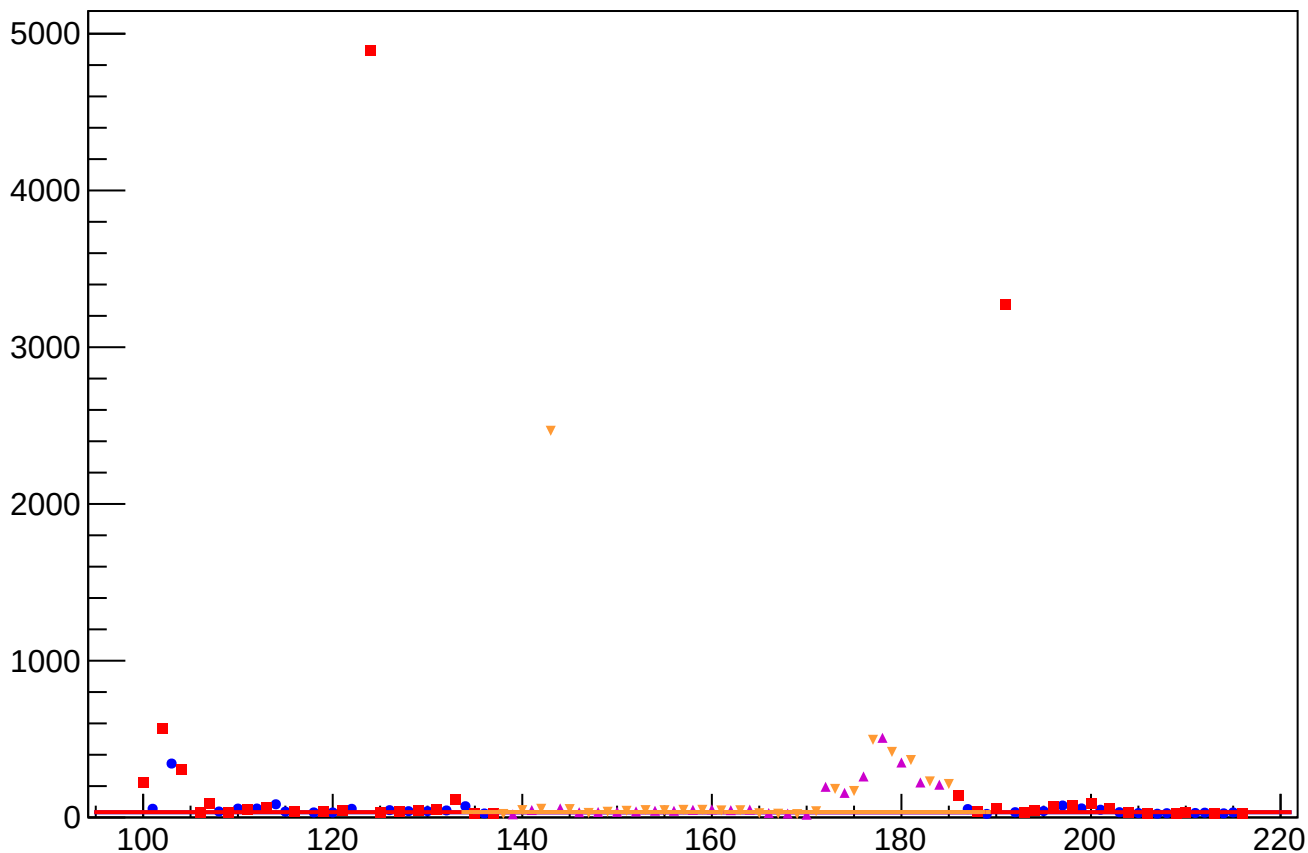
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $0.016 \pm 0.007$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 114.2/113

- sign  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 41.6/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 32.931+/-0.006  $\chi^2$ /NDF: 3732212.7/30

Left Out: 34.623+/-0.007  $\chi^2$ /NDF: 11402566.2/24

Right Out: 33.893+/-0.006  $\chi^2$ /NDF: 6693295.8/34

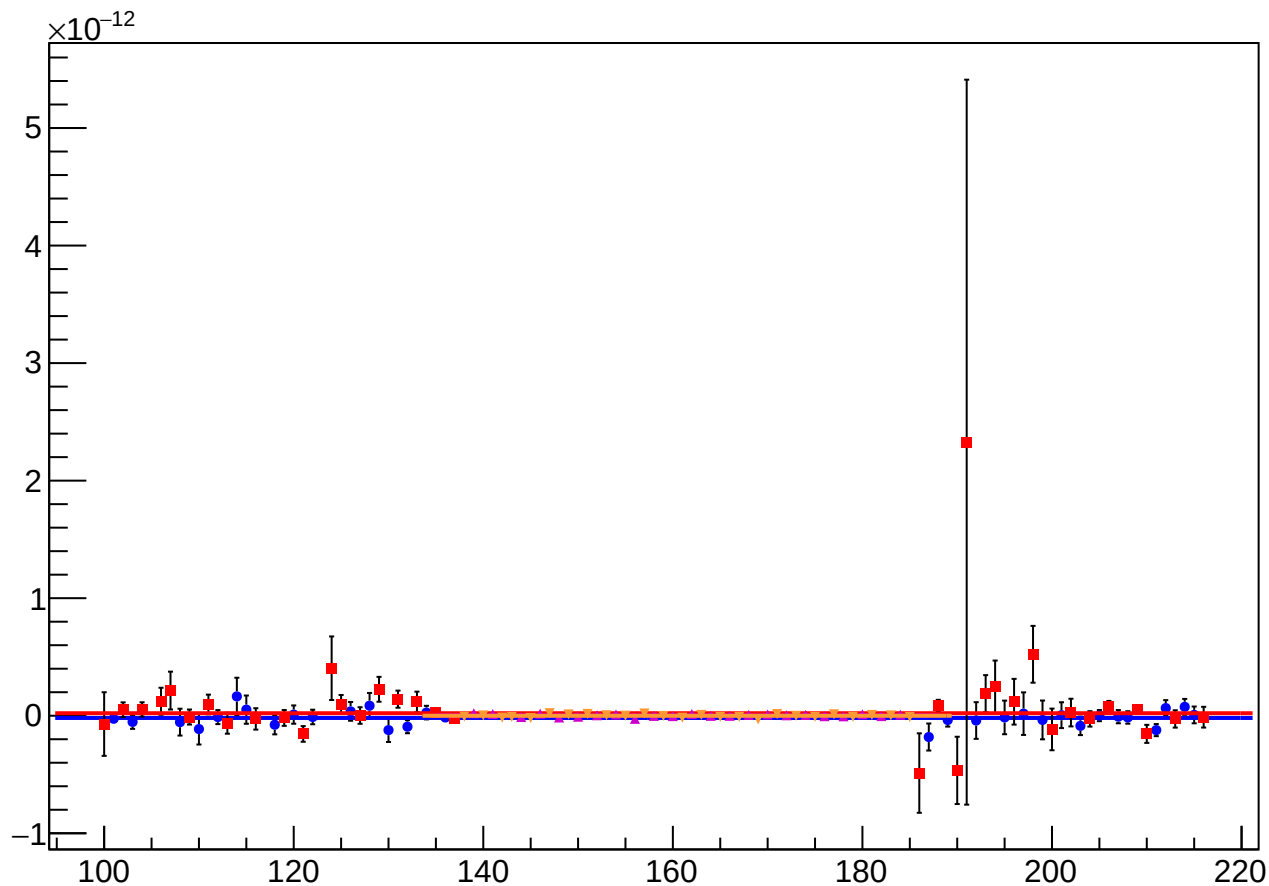
Left In: 33.595+/-0.007  $\chi^2$ /NDF: 10066196.6/22

+ sign 33.636+/-0.005  $\chi^2$ /NDF: 15166812.2/55

All: 33.695+/-0.003  $\chi^2$ /NDF: 31927591.9/113

- sign 33.755+/-0.005  $\chi^2$ /NDF: 16760461.6/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 19.1/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50.7/34

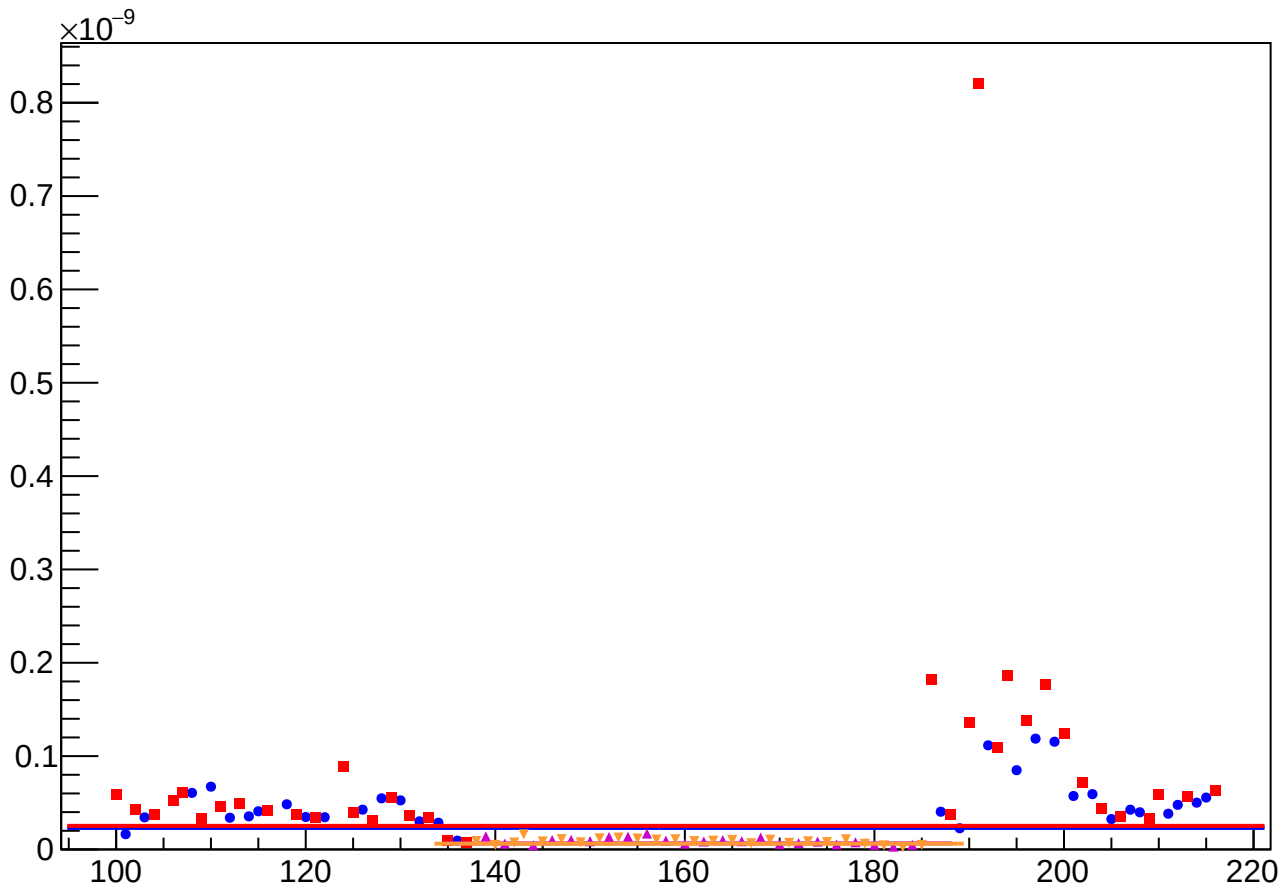
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.0/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 49.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 126.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 74.4/57

asym\_at1\_dd\_at2\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8535778.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5077918.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10867383.2/34

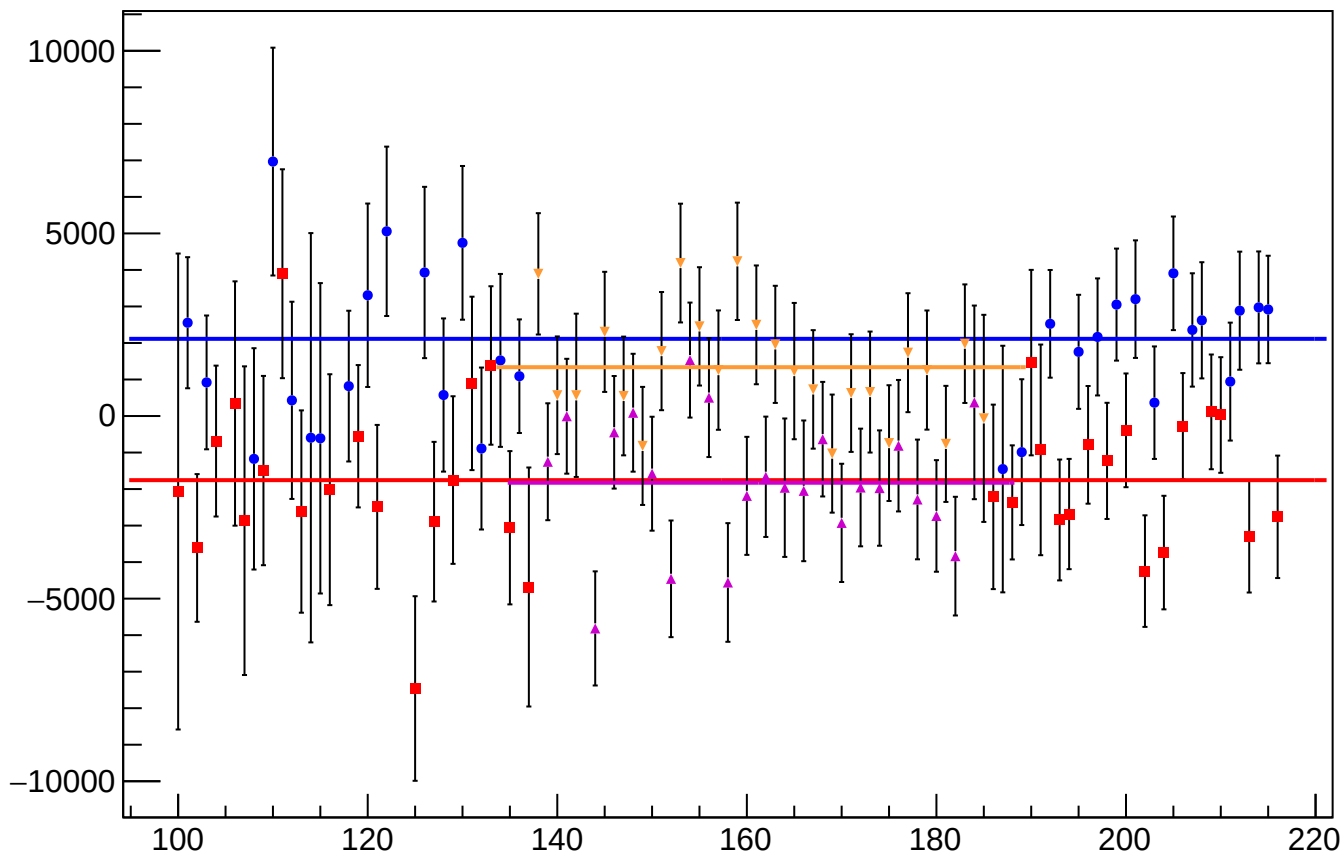
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3998320.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20722197.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42748715.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22006767.6/57

# reg\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2113.727 $\pm$ 337.826  $\chi^2$ /NDF: 21.0/30

Left Out: 1337.008 $\pm$ 341.012  $\chi^2$ /NDF:19.2/23

Right Out: -1756.140 $\pm$ 340.640  $\chi^2$ /NDF: 29.3/33

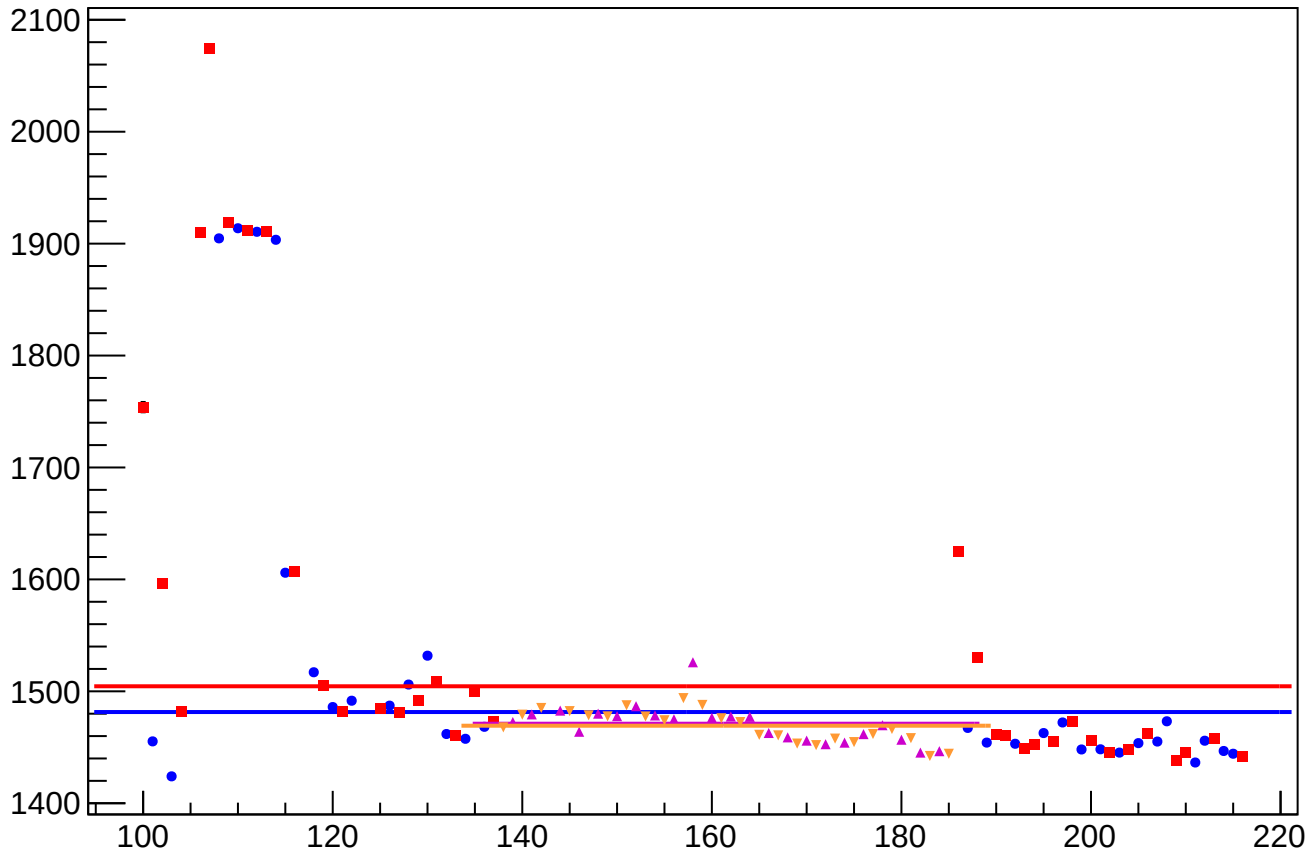
Left In: -1826.599 $\pm$ 343.483  $\chi^2$ /NDF:26.5/22

+ sign 1729.013 $\pm$ 239.998  $\chi^2$ /NDF: 42.8/54

All: -17.372 $\pm$ 170.361  $\chi^2$ /NDF: 205.3/111

- sign -1791.076 $\pm$ 241.868  $\chi^2$ /NDF: 55.8/56

# reg\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1481.490+/-0.239  $\chi^2/\text{NDF}$ : 156031.7/30

Left Out: 1469.267+/-0.241  $\chi^2/\text{NDF}$ : 3155.3/23

Right Out: 1504.502+/-0.241  $\chi^2/\text{NDF}$ : 245327.9/33

Left In: 1471.054+/-0.243  $\chi^2/\text{NDF}$ : 4642.4/22

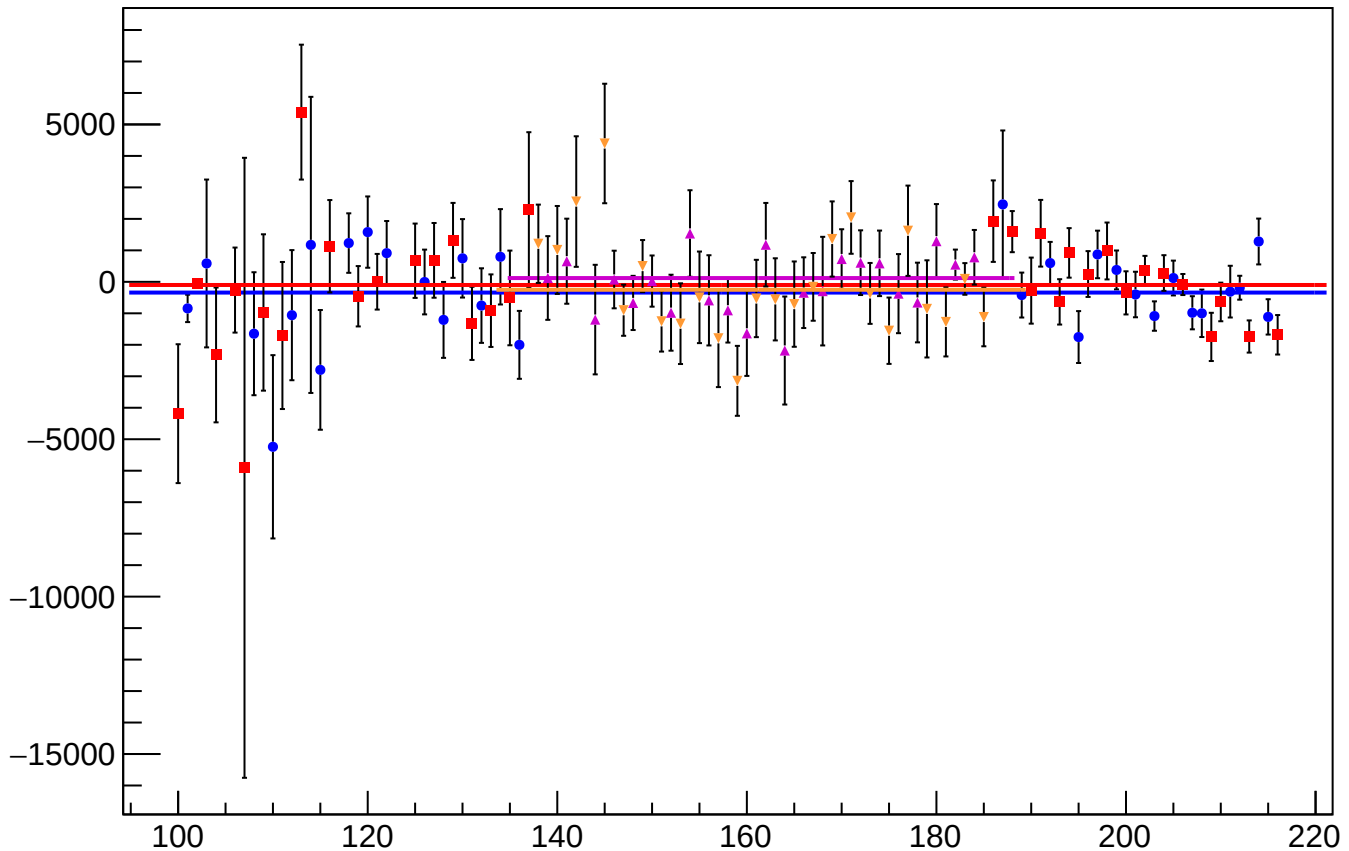
+ sign 1475.436+/-0.170  $\chi^2/\text{NDF}$ : 160484.0/54

All: 1481.628+/-0.120  $\chi^2/\text{NDF}$ : 422699.3/111

- sign 1487.917+/-0.171  $\chi^2/\text{NDF}$ : 259531.8/56



asym\_usl\_atl1\_avg\_reg\_correction\_mean vs Slug



Right In:  $-341.041 \pm 138.252$   $\chi^2/\text{NDF}$ : 41.0/30

Left Out:  $-251.610 \pm 218.369$   $\chi^2/\text{NDF}$ : 32.7/23

Right Out:  $-99.953 \pm 98.828$   $\chi^2/\text{NDF}$ : 57.0/33

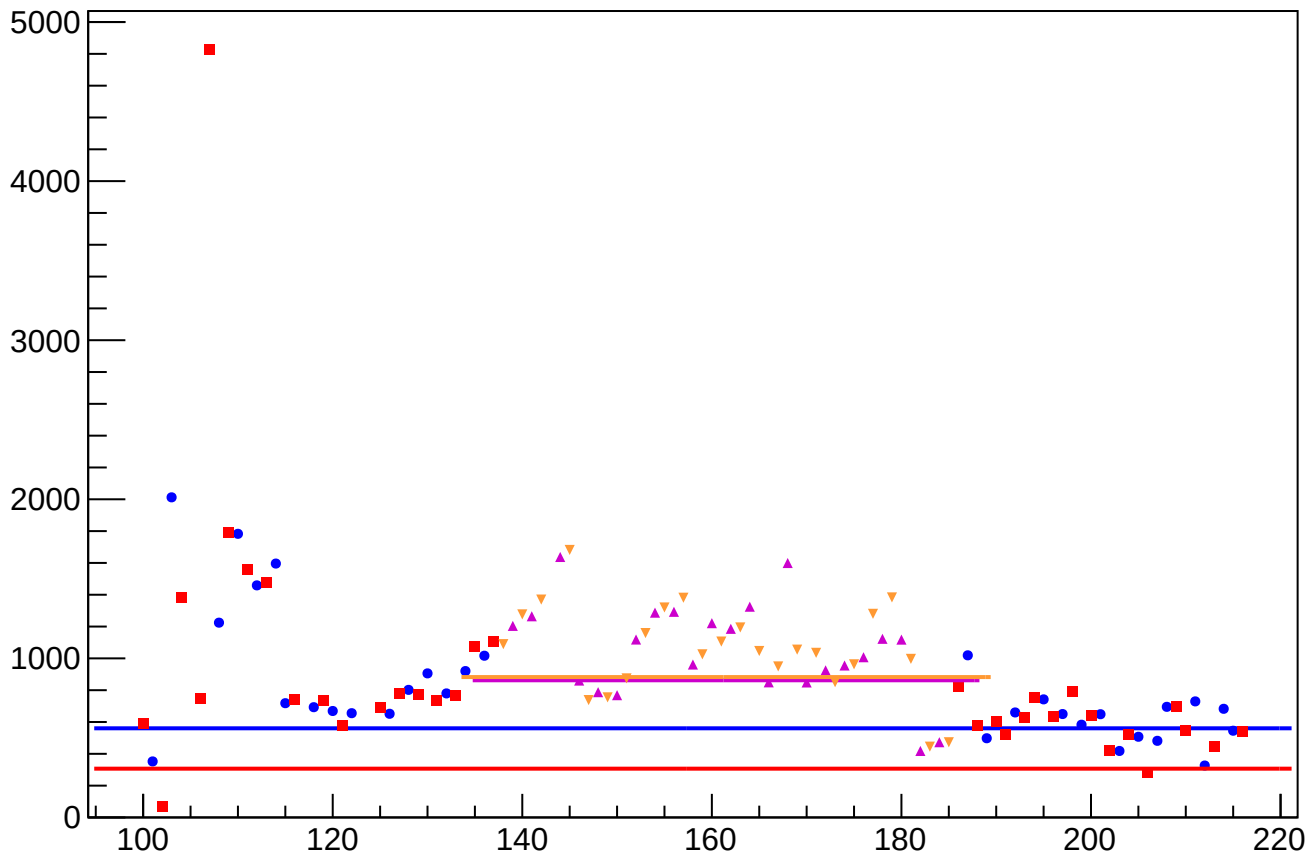
Left In:  $119.802 \pm 215.975$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-315.452 \pm 116.809$   $\chi^2/\text{NDF}$ : 73.8/54

All:  $-156.178 \pm 71.226$   $\chi^2/\text{NDF}$ : 147.5/111

- sign  $-61.905 \pm 89.866$   $\chi^2/\text{NDF}$ : 70.7/56

# asym\_usl\_atl1\_avg\_reg\_correction\_rms vs Slug



Right In: 560.419 $\pm$ 0.098  $\chi^2/\text{NDF}$ : 4497126.7/30

Left Out: 882.430 $\pm$ 0.154  $\chi^2/\text{NDF}$ : 3901279.8/23

Right Out: 306.684 $\pm$ 0.070  $\chi^2/\text{NDF}$ : 16980736.8/33

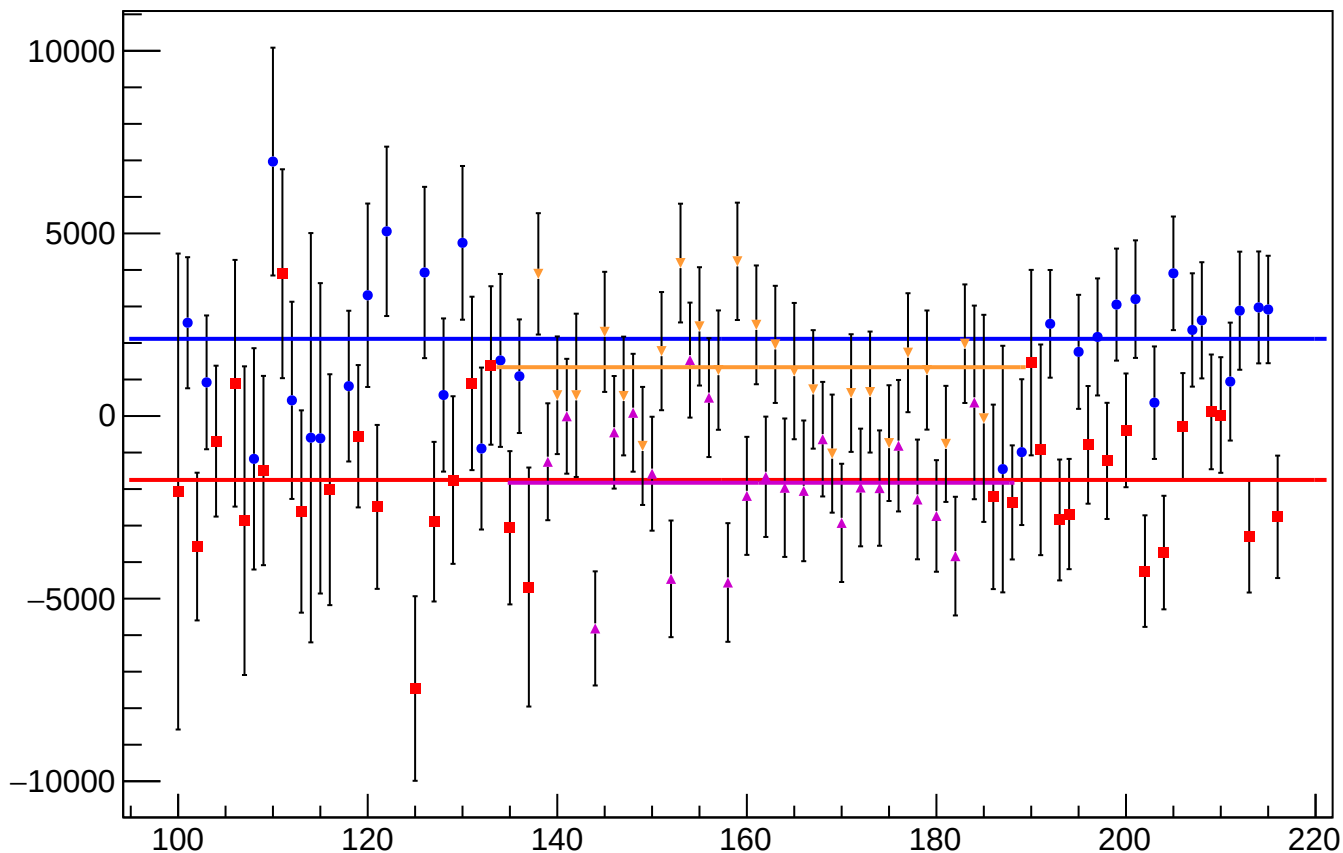
Left In: 862.298 $\pm$ 0.153  $\chi^2/\text{NDF}$ : 4369416.2/22

+ sign 652.558 $\pm$ 0.083  $\chi^2/\text{NDF}$ : 11502989.5/54

All: 495.714 $\pm$ 0.050  $\chi^2/\text{NDF}$ : 49537957.1/11

- sign 402.881 $\pm$ 0.064  $\chi^2/\text{NDF}$ : 32294842.6/56

# cor\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In:  $2113.800 \pm 337.826$   $\chi^2/\text{NDF}: 21.0/30$

Left Out:  $1337.018 \pm 341.012$   $\chi^2/\text{NDF}: 19.2/23$

Right Out:  $-1749.828 \pm 340.675$   $\chi^2/\text{NDF}: 29.5/33$

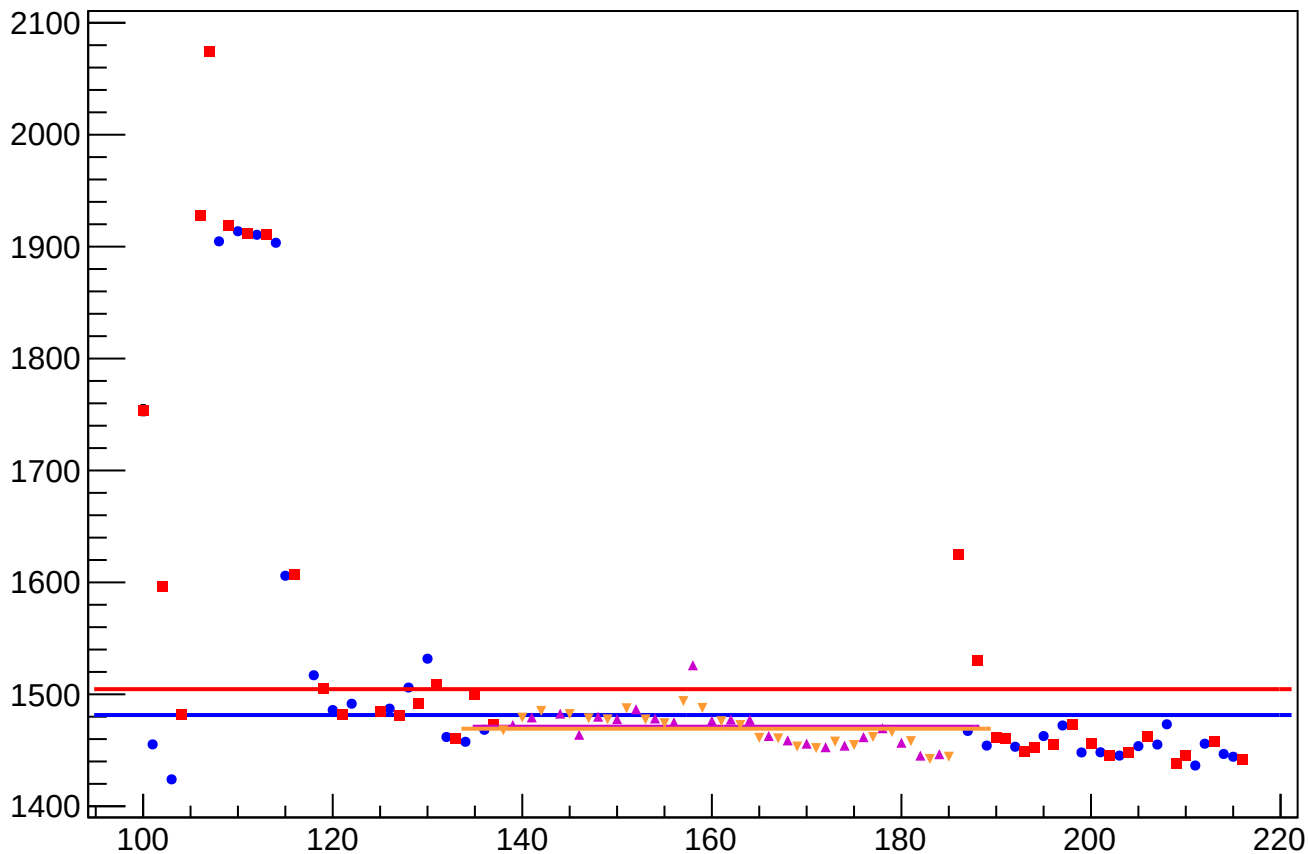
Left In:  $-1826.644 \pm 343.483$   $\chi^2/\text{NDF}: 26.5/22$

+ sign  $1729.055 \pm 239.998$   $\chi^2/\text{NDF}: 42.8/54$

All:  $-15.694 \pm 170.366$   $\chi^2/\text{NDF}: 205.3/111$

- sign  $-1787.921 \pm 241.880$   $\chi^2/\text{NDF}: 56.0/56$

# cor\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In:  $1481.490 \pm 0.239$   $\chi^2/\text{NDF}: 156031.7/30$

Left Out:  $1469.267 \pm 0.241$   $\chi^2/\text{NDF}: 3155.3/23$

Right Out:  $1504.613 \pm 0.241$   $\chi^2/\text{NDF}: 247450.1/33$

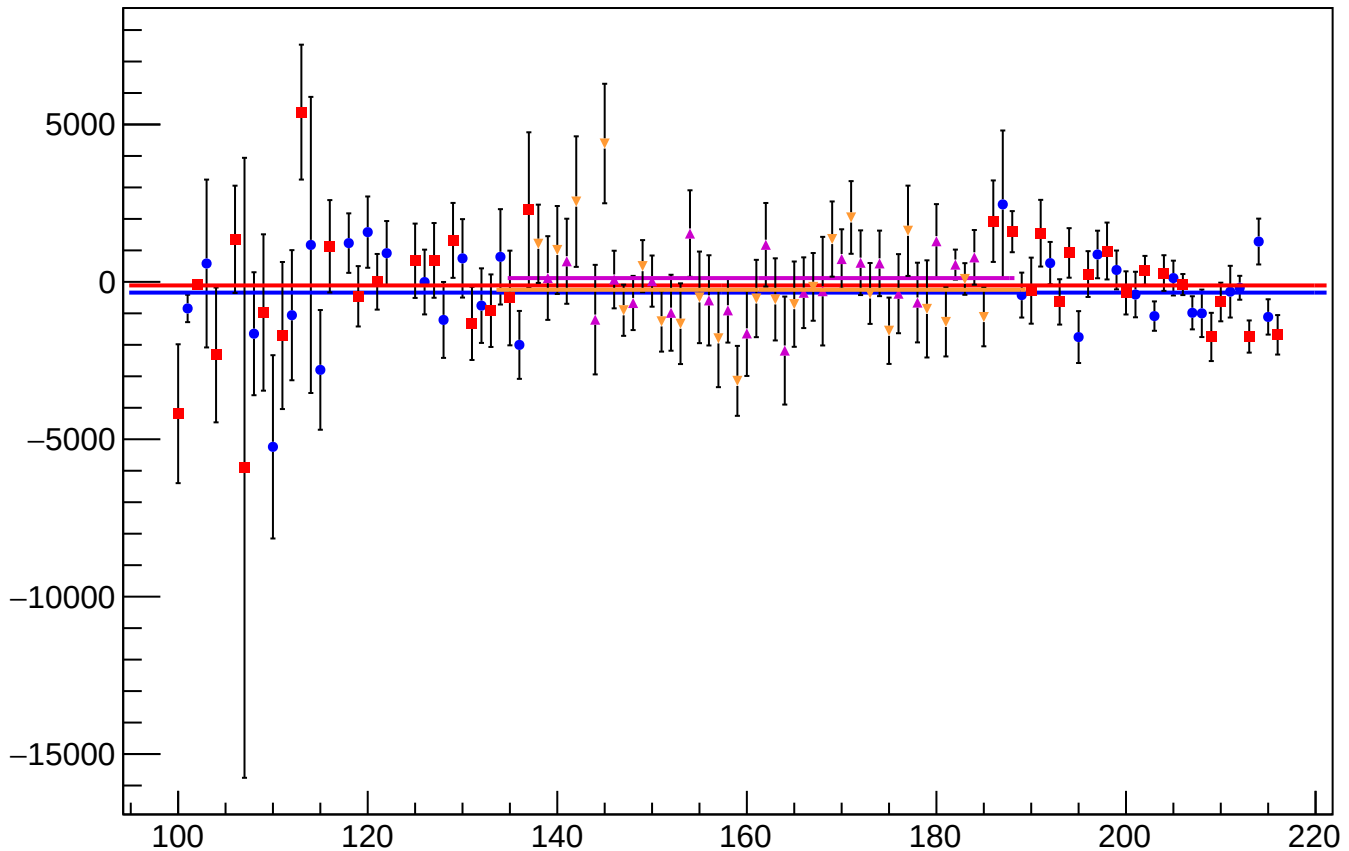
Left In:  $1471.054 \pm 0.243$   $\chi^2/\text{NDF}: 4642.4/22$

+ sign  $1475.436 \pm 0.170$   $\chi^2/\text{NDF}: 160484.0/54$

All:  $1481.655 \pm 0.120$   $\chi^2/\text{NDF}: 424907.6/111$

- sign  $1487.971 \pm 0.171$   $\chi^2/\text{NDF}: 261716.8/56$

asym\_usl\_atl1\_avg\_cor\_correction\_mean vs Slug



Right In:  $-341.053 \pm 138.249$   $\chi^2/\text{NDF}$ : 41.0/30

Left Out:  $-251.589 \pm 218.368$   $\chi^2/\text{NDF}$ : 32.7/23

Right Out:  $-113.167 \pm 103.436$   $\chi^2/\text{NDF}$ : 57.7/33

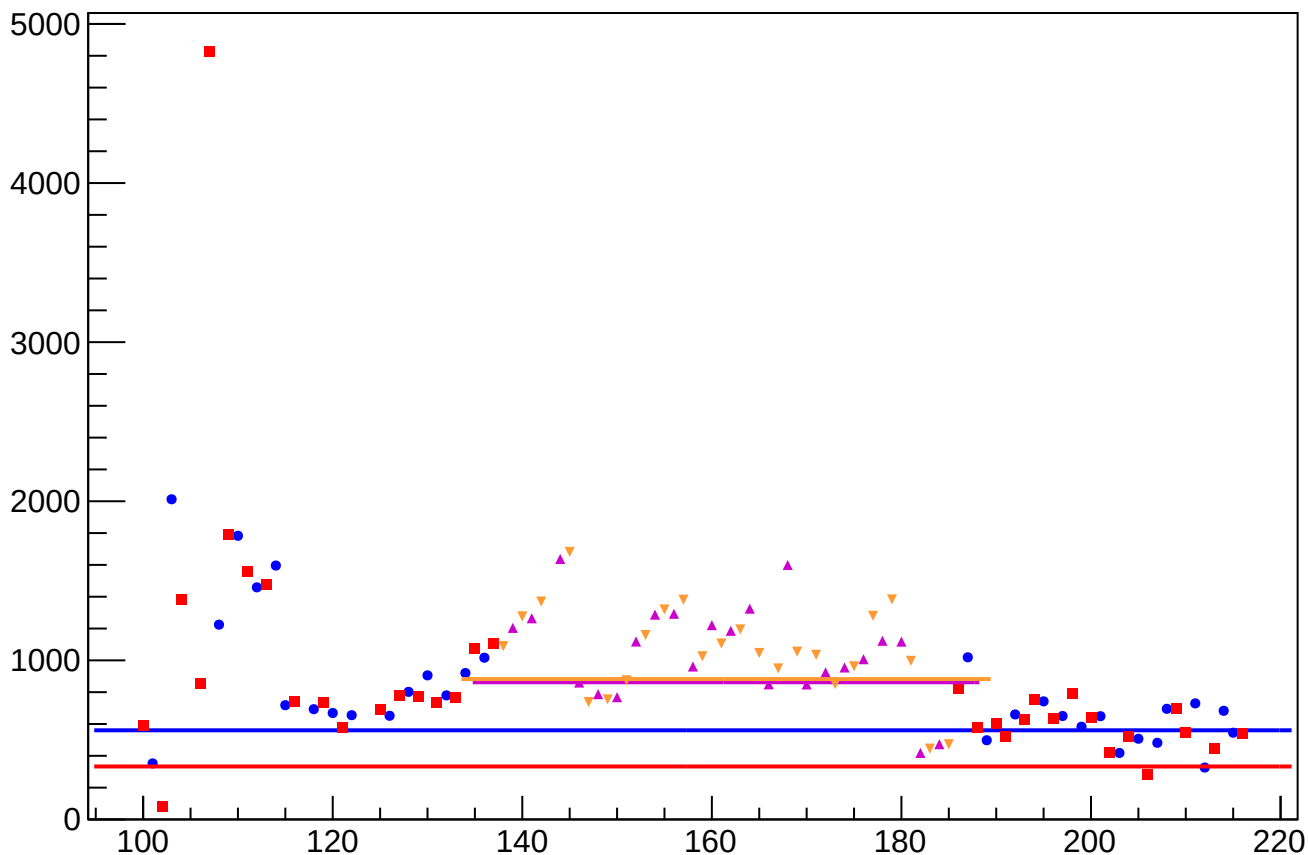
Left In:  $119.845 \pm 215.975$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-315.455 \pm 116.808$   $\chi^2/\text{NDF}$ : 73.8/54

All:  $-165.403 \pm 72.894$   $\chi^2/\text{NDF}$ : 148.0/111

- sign  $-69.693 \pm 93.289$   $\chi^2/\text{NDF}$ : 71.4/56

# asym\_usl\_atl1\_avg\_cor\_correction\_rms vs Slug



Right In: 560.403 $\pm$ 0.098  $\chi^2/\text{NDF}$ : 4497675.8/30

Left Out: 882.419 $\pm$ 0.154  $\chi^2/\text{NDF}$ : 3901620.8/23

Right Out: 332.967 $\pm$ 0.073  $\chi^2/\text{NDF}$ : 15452905.0/33

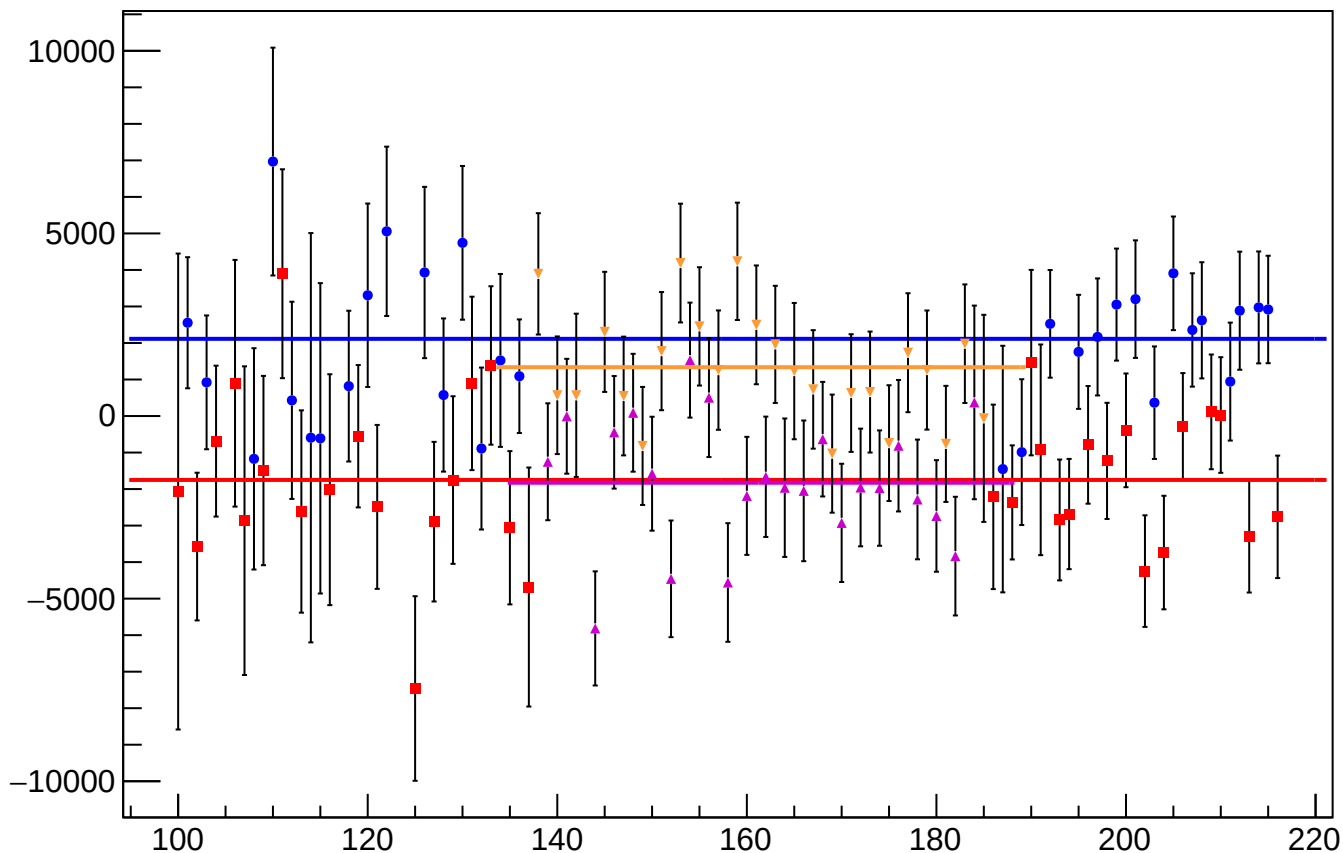
Left In: 862.300 $\pm$ 0.153  $\chi^2/\text{NDF}$ : 4369426.7/22

+ sign 652.542 $\pm$ 0.083  $\chi^2/\text{NDF}$ : 11504044.7/54

All: 517.721 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 45462592.8/1

- sign 431.726 $\pm$ 0.066  $\chi^2/\text{NDF}$ : 29594651.2/56

# eigen\_cor\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2113.800+/-337.826  $\chi^2/\text{NDF}$ : 21.0/30

Left Out: 1337.018+/-341.012  $\chi^2/\text{NDF}$ : 19.2/23

Right Out: -1749.828+/-340.675  $\chi^2/\text{NDF}$ : 29.5/33

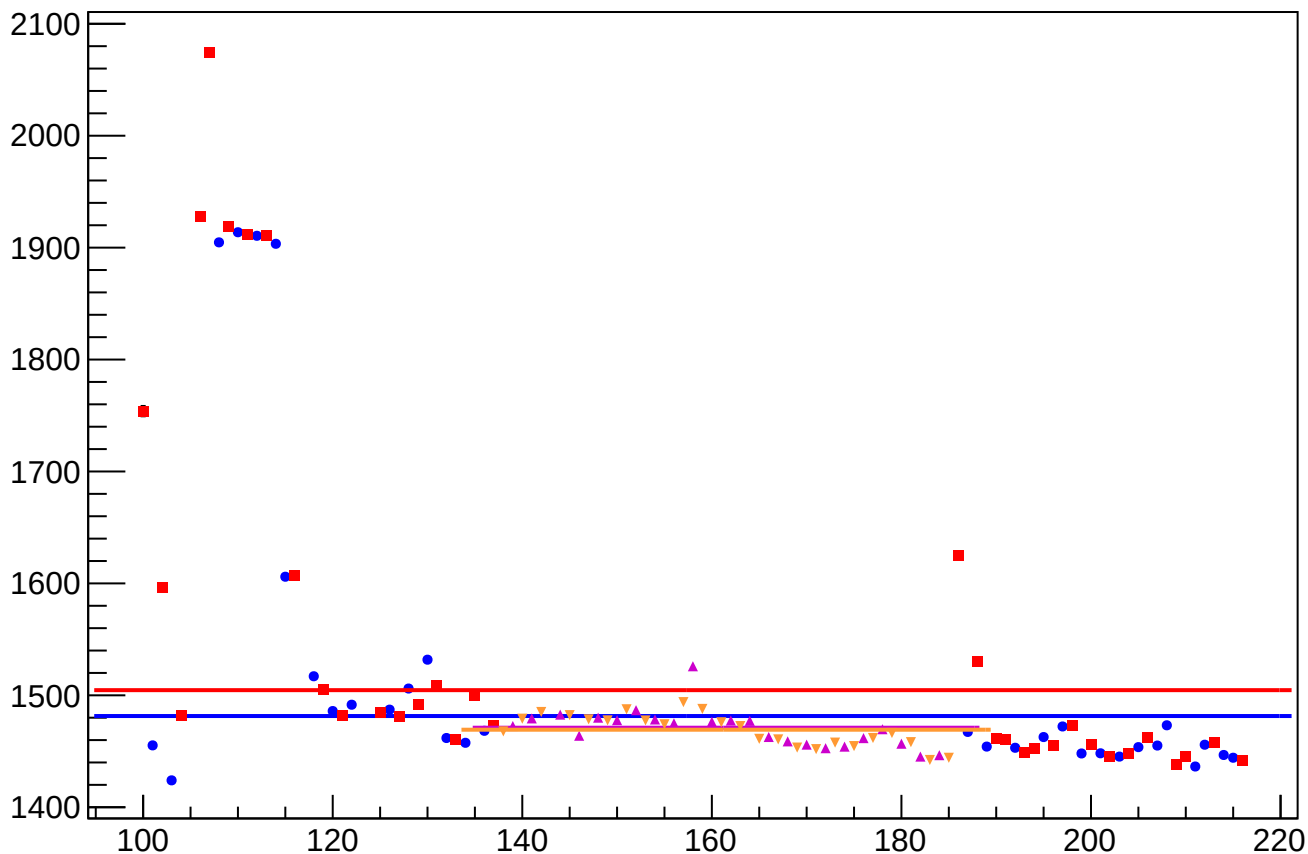
Left In: -1826.644+/-343.483  $\chi^2/\text{NDF}$ : 26.5/22

+ sign 1729.055+/-239.998  $\chi^2/\text{NDF}$ : 42.8/54

All: -15.694+/-170.366  $\chi^2/\text{NDF}$ : 205.3/111

- sign -1787.921+/-241.880  $\chi^2/\text{NDF}$ : 56.0/56

# eigen\_cor\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1481.490 +/- 0.239  $\chi^2/\text{NDF}$ : 156031.7/30

Left Out: 1469.267 +/- 0.241  $\chi^2/\text{NDF}$ : 3155.3/23

Right Out: 1504.613 +/- 0.241  $\chi^2/\text{NDF}$ : 247450.1/33

Left In: 1471.054 +/- 0.243  $\chi^2/\text{NDF}$ : 4642.4/22

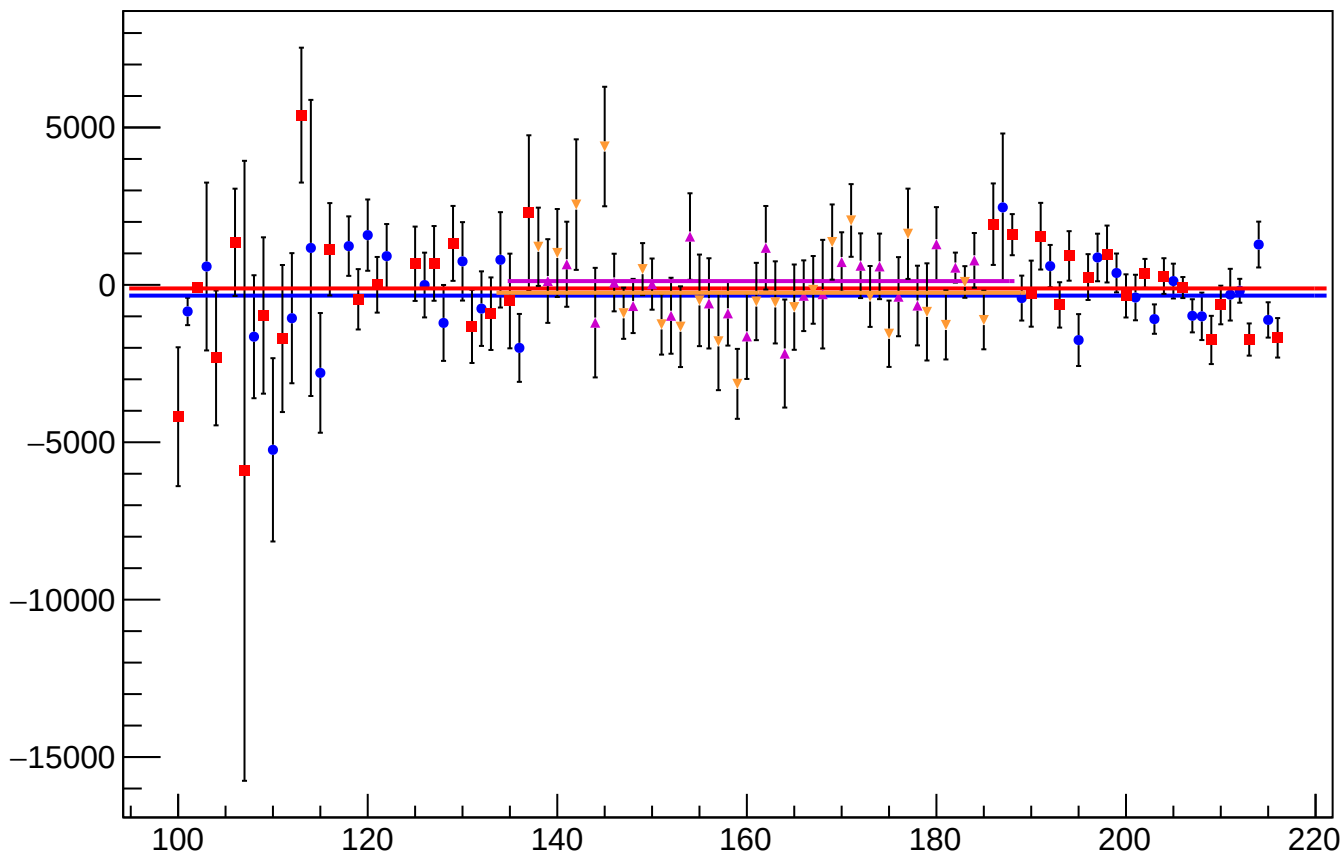
+ sign 1475.436 +/- 0.170  $\chi^2/\text{NDF}$ : 160484.0/54

All: 1481.655 +/- 0.120  $\chi^2/\text{NDF}$ : 424907.6/111

- sign 1487.971 +/- 0.171  $\chi^2/\text{NDF}$ : 261716.8/56



asym\_usl\_atl1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-341.053 \pm 138.249$   $\chi^2/\text{NDF}: 41.0/30$

Left Out:  $-251.589 \pm 218.368$   $\chi^2/\text{NDF}: 32.7/23$

Right Out:  $-113.167 \pm 103.436$   $\chi^2/\text{NDF}: 57.7/33$

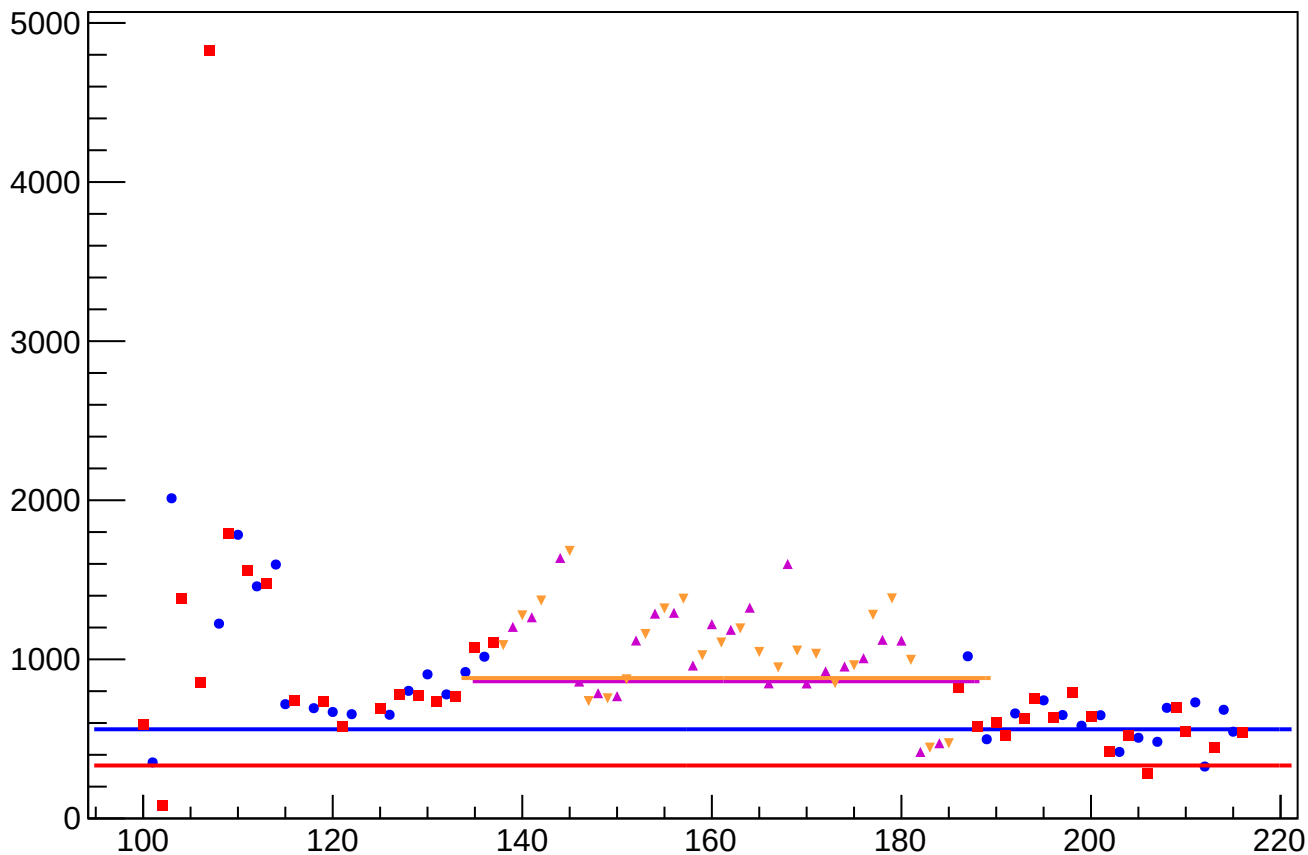
Left In:  $119.845 \pm 215.975$   $\chi^2/\text{NDF}: 12.8/22$

+ sign  $-315.455 \pm 116.808$   $\chi^2/\text{NDF}: 73.8/54$

All:  $-165.403 \pm 72.894$   $\chi^2/\text{NDF}: 148.0/111$

- sign  $-69.693 \pm 93.289$   $\chi^2/\text{NDF}: 71.4/56$

asym\_usl\_atl1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 560.403+/-0.098  $\chi^2/\text{NDF}$ : 4497675.8/30

Left Out: 882.419+/-0.154  $\chi^2/\text{NDF}$ : 3901620.8/23

Right Out: 332.967+/-0.073  $\chi^2/\text{NDF}$ : 15452905.0/33

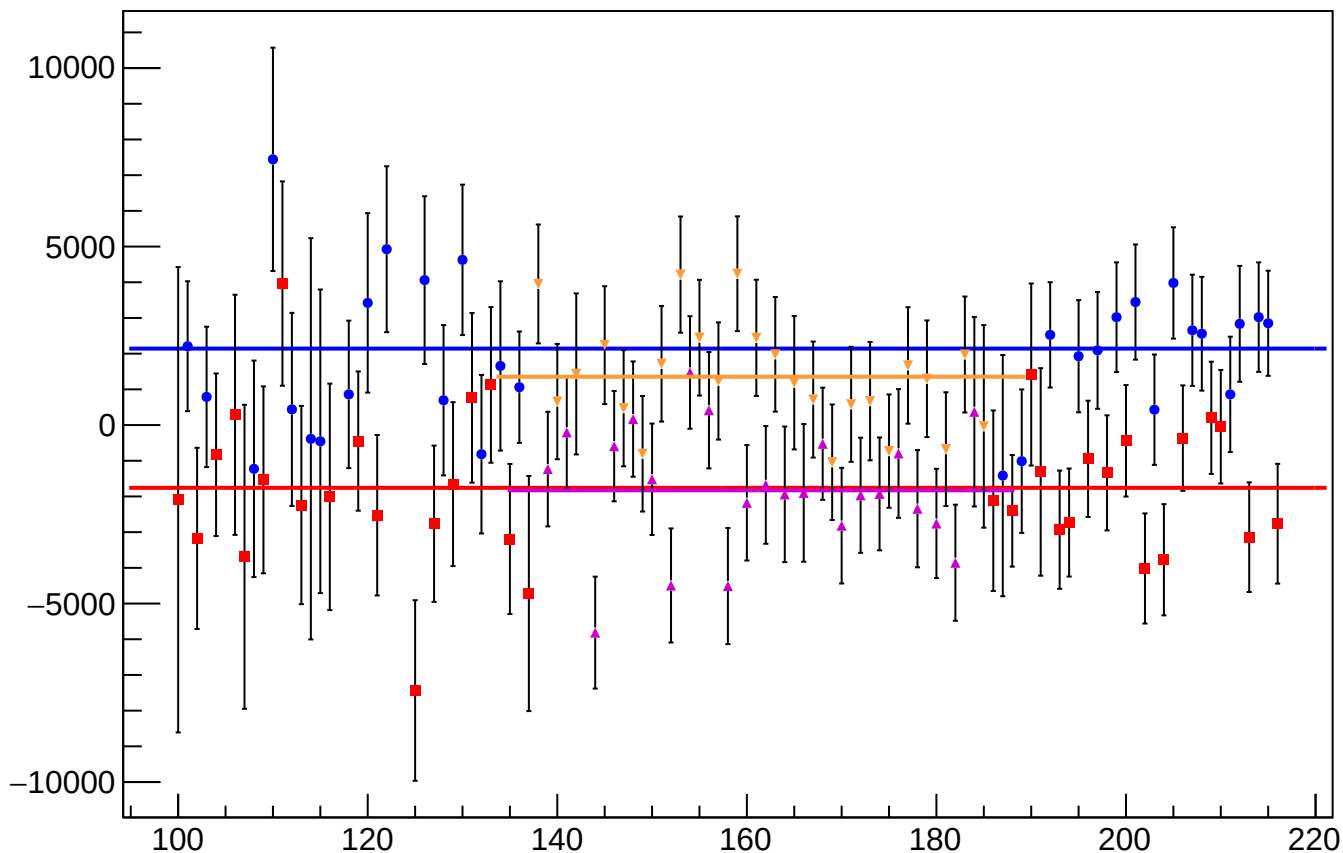
Left In: 862.300+/-0.153  $\chi^2/\text{NDF}$ : 4369426.7/22

+ sign 652.542+/-0.083  $\chi^2/\text{NDF}$ : 11504044.7/54

All: 517.721+/-0.052  $\chi^2/\text{NDF}$ : 45462592.8/1

- sign 431.726+/-0.066  $\chi^2/\text{NDF}$ : 29594651.2/56

dit\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In:  $2142.202 \pm 339.739$   $\chi^2/\text{NDF}$ : 21.3/30

Left Out:  $1353.686 \pm 341.570$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $-1758.068 \pm 344.708$   $\chi^2/\text{NDF}$ : 27.4/33

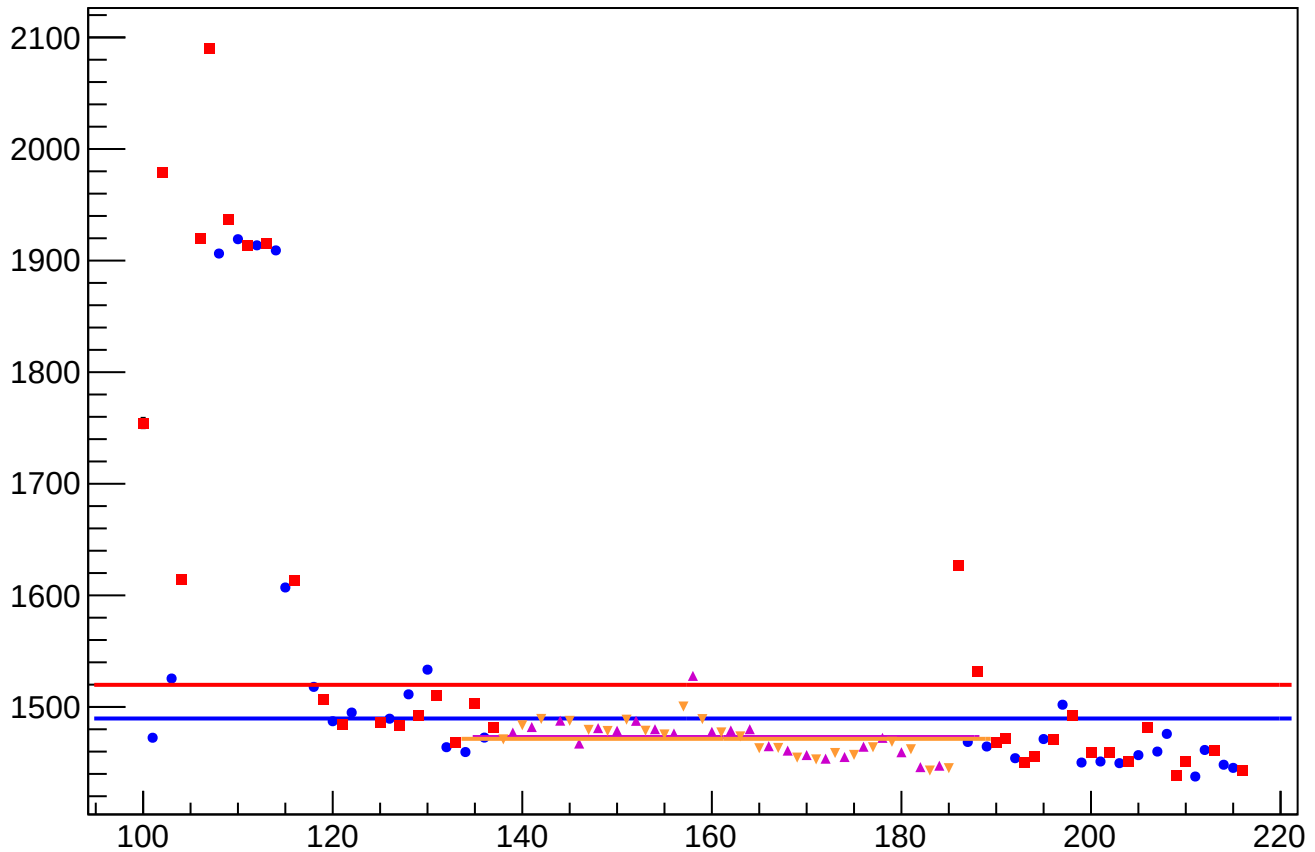
Left In:  $-1828.250 \pm 343.952$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $1750.063 \pm 240.876$   $\chi^2/\text{NDF}$ : 42.9/54

All:  $-2.556 \pm 171.238$   $\chi^2/\text{NDF}$ : 203.1/111

- sign  $-1793.236 \pm 243.478$   $\chi^2/\text{NDF}$ : 53.2/56

dit\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1489.664 $\pm$ 0.240  $\chi^2$ /NDF: 153874.2/30

Left Out: 1471.437 $\pm$ 0.242  $\chi^2$ /NDF: 3436.8/23

Right Out: 1519.824 $\pm$ 0.244  $\chi^2$ /NDF: 312176.2/33

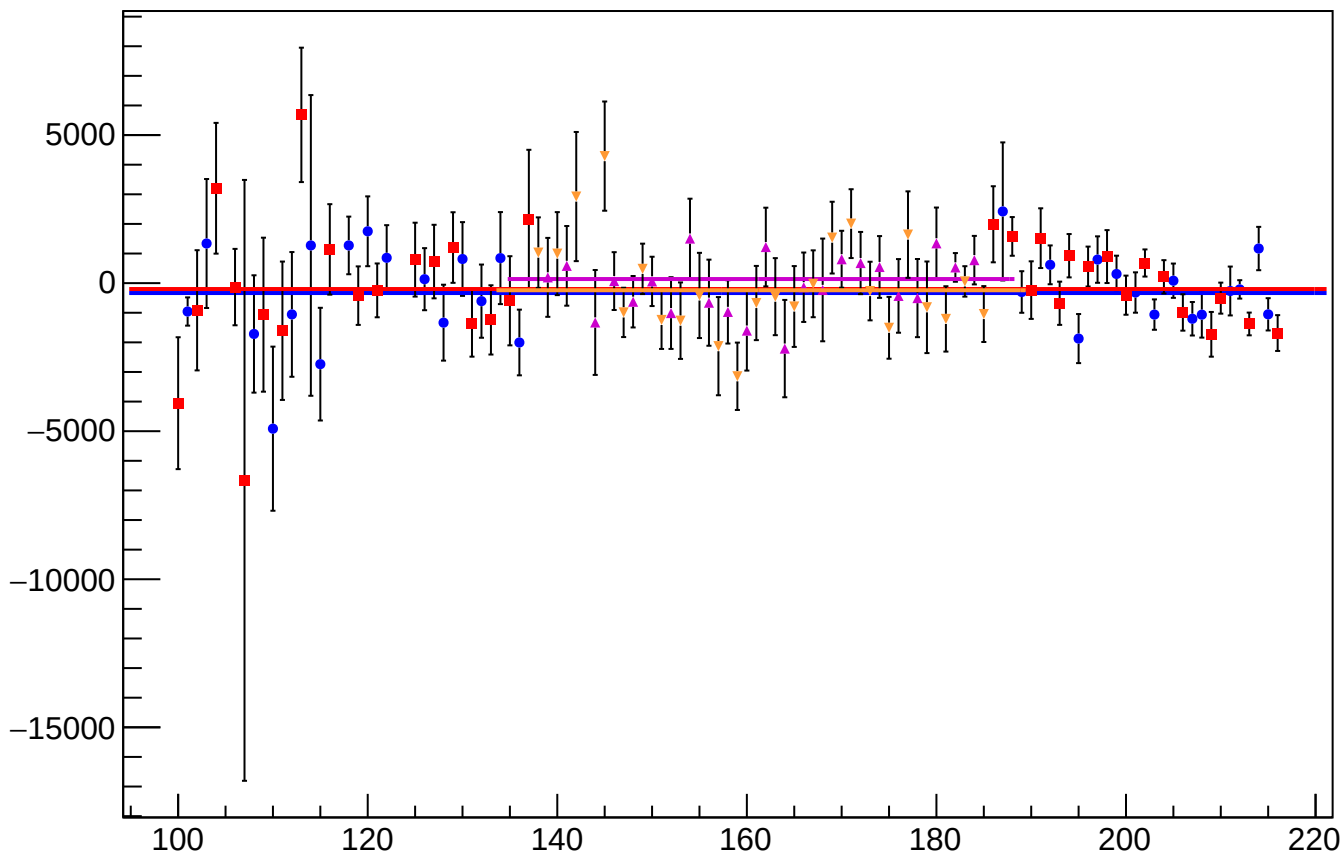
Left In: 1473.049 $\pm$ 0.243  $\chi^2$ /NDF: 4751.3/22

+ sign 1480.599 $\pm$ 0.170  $\chi^2$ /NDF: 160173.9/54

All: 1488.407 $\pm$ 0.121  $\chi^2$ /NDF: 499803.7/111

- sign 1496.385 $\pm$ 0.172  $\chi^2$ /NDF: 335381.2/56

asym\_usl\_atl1\_avg\_dit\_correction\_mean vs Slug



Right In:  $-334.294 \pm 137.110$   $\chi^2/\text{NDF}$ : 40.9/30

Left Out:  $-240.267 \pm 221.787$   $\chi^2/\text{NDF}$ : 32.4/23

Right Out:  $-198.775 \pm 143.536$   $\chi^2/\text{NDF}$ : 64.0/33

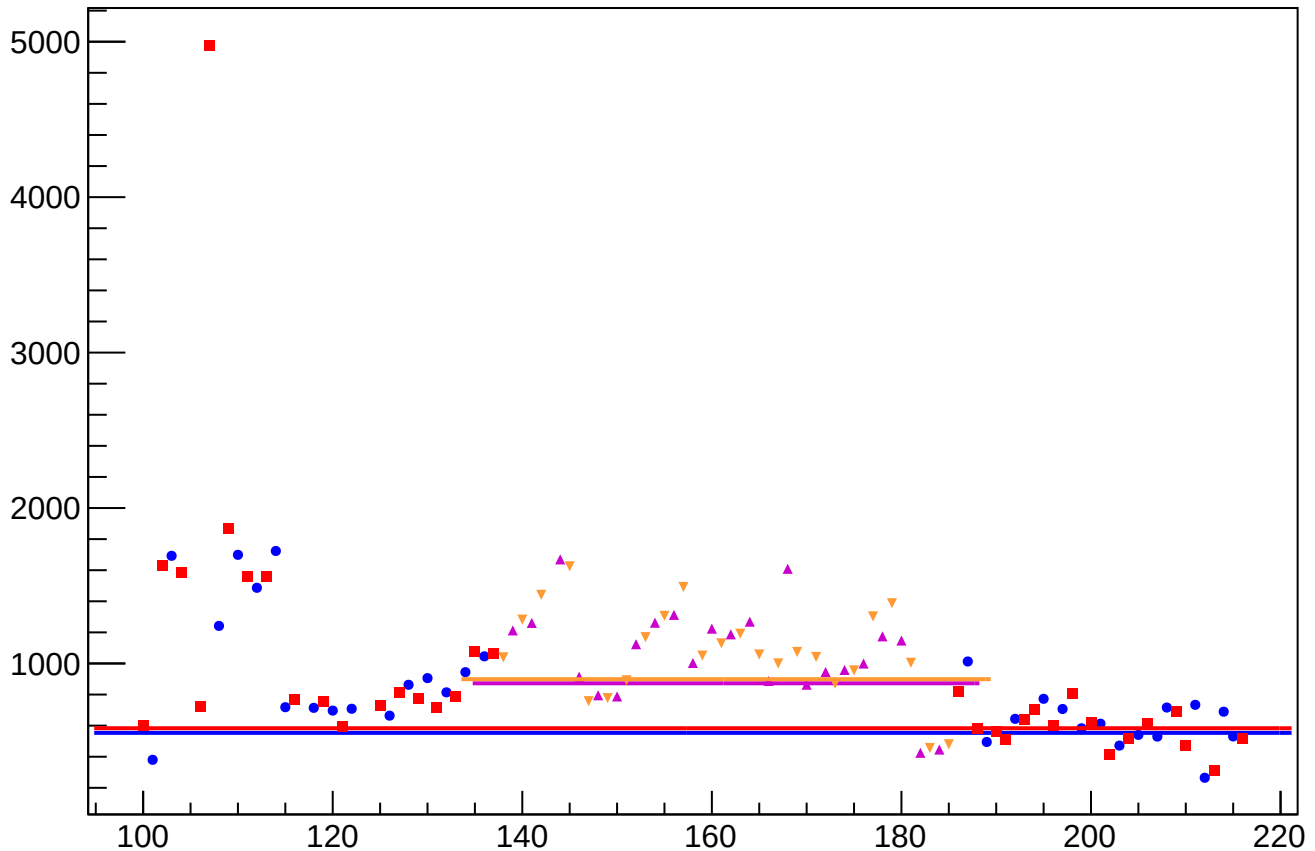
Left In:  $138.421 \pm 218.478$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-308.295 \pm 116.624$   $\chi^2/\text{NDF}$ : 73.5/54

All:  $-205.684 \pm 83.621$   $\chi^2/\text{NDF}$ : 153.8/111

- sign  $-97.113 \pm 119.963$   $\chi^2/\text{NDF}$ : 78.7/56

# asym\_usl\_atl1\_avg\_dit\_correction\_rms vs Slug



Right In: 553.586+/-0.097  $\chi^2/\text{NDF}$ : 5345142.6/30

Left Out: 898.849+/-0.157  $\chi^2/\text{NDF}$ : 3791528.8/23

Right Out: 583.312+/-0.101  $\chi^2/\text{NDF}$ : 4874169.3/33

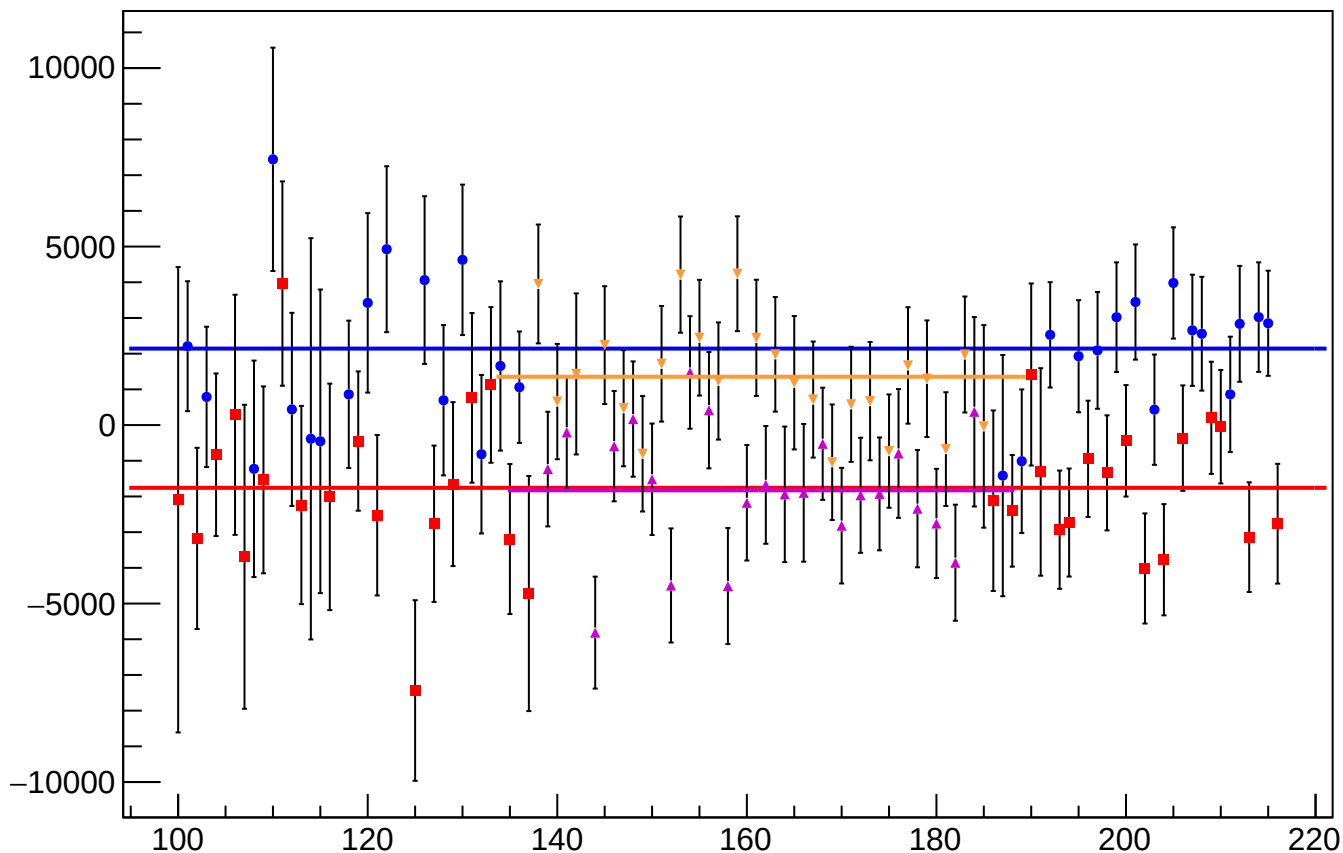
Left In: 872.472+/-0.154  $\chi^2/\text{NDF}$ : 4435516.3/22

+ sign 649.053+/-0.082  $\chi^2/\text{NDF}$ : 12643314.4/54

All: 659.470+/-0.059  $\chi^2/\text{NDF}$ : 24432998.1/11

- sign 670.492+/-0.085  $\chi^2/\text{NDF}$ : 11756843.2/56

# eigen\_dit\_asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2142.201+/-339.739  $\chi^2/\text{NDF}$ : 21.3/30

Left Out: 1353.684+/-341.570  $\chi^2/\text{NDF}$ : 18.9/23

Right Out: -1758.067+/-344.708  $\chi^2/\text{NDF}$ : 27.4/33

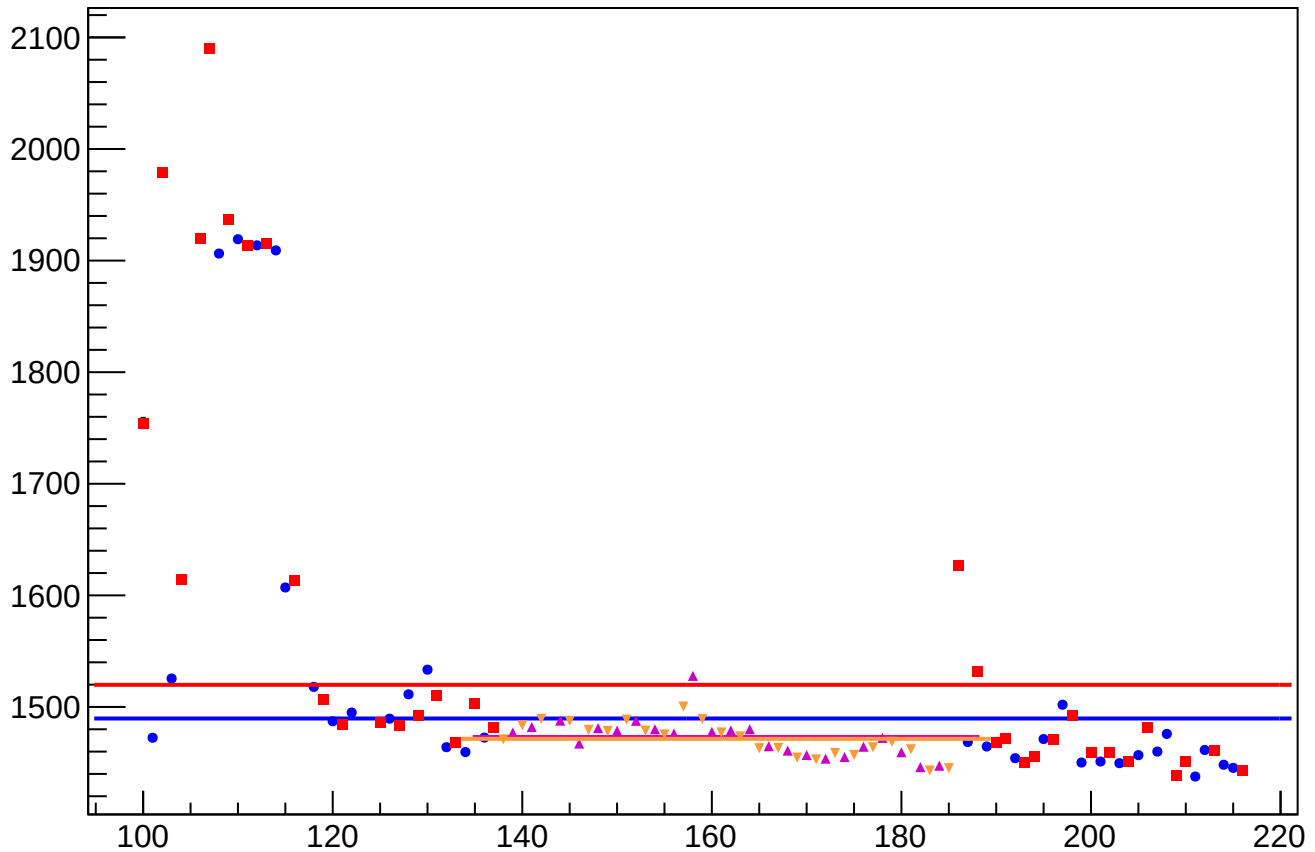
Left In: -1828.250+/-343.952  $\chi^2/\text{NDF}$ : 25.8/22

+ sign 1750.062+/-240.876  $\chi^2/\text{NDF}$ : 42.9/54

All: -2.557+/-171.238  $\chi^2/\text{NDF}$ : 203.1/111

- sign -1793.236+/-243.478  $\chi^2/\text{NDF}$ : 53.2/56

# eigen\_dit\_asym\_usl\_atl1\_avg\_rms vs Slug



Right In: 1489.664 $\pm$ 0.240  $\chi^2$ /NDF: 153874.1/30

Left Out: 1471.437 $\pm$ 0.242  $\chi^2$ /NDF:3436.8/23

+ sign 1480.599 $\pm$ 0.170  $\chi^2$ /NDF: 160173.7/54

Right Out: 1519.824 $\pm$ 0.244  $\chi^2$ /NDF: 312175.7/33

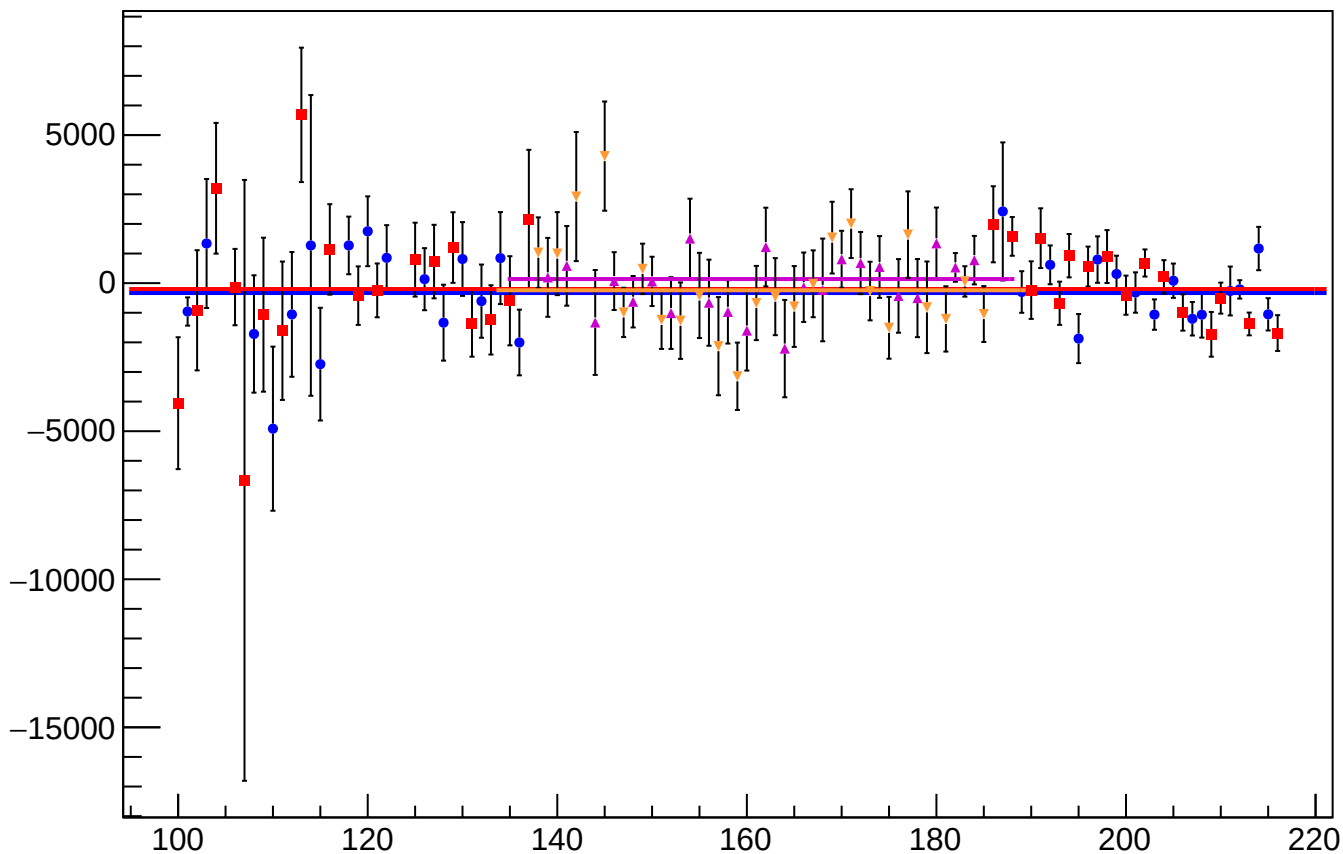
All: 1488.407 $\pm$ 0.121  $\chi^2$ /NDF: 499803.0/111

- sign 1496.385 $\pm$ 0.172  $\chi^2$ /NDF: 335380.6/56

Left In: 1473.049 $\pm$ 0.243  $\chi^2$ /NDF:4751.3/22



asym\_usl\_atl1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-334.294 \pm 137.110$   $\chi^2/\text{NDF}$ : 40.9/30

Left Out:  $-240.269 \pm 221.788$   $\chi^2/\text{NDF}$ : 32.4/23

Right Out:  $-198.775 \pm 143.536$   $\chi^2/\text{NDF}$ : 64.0/33

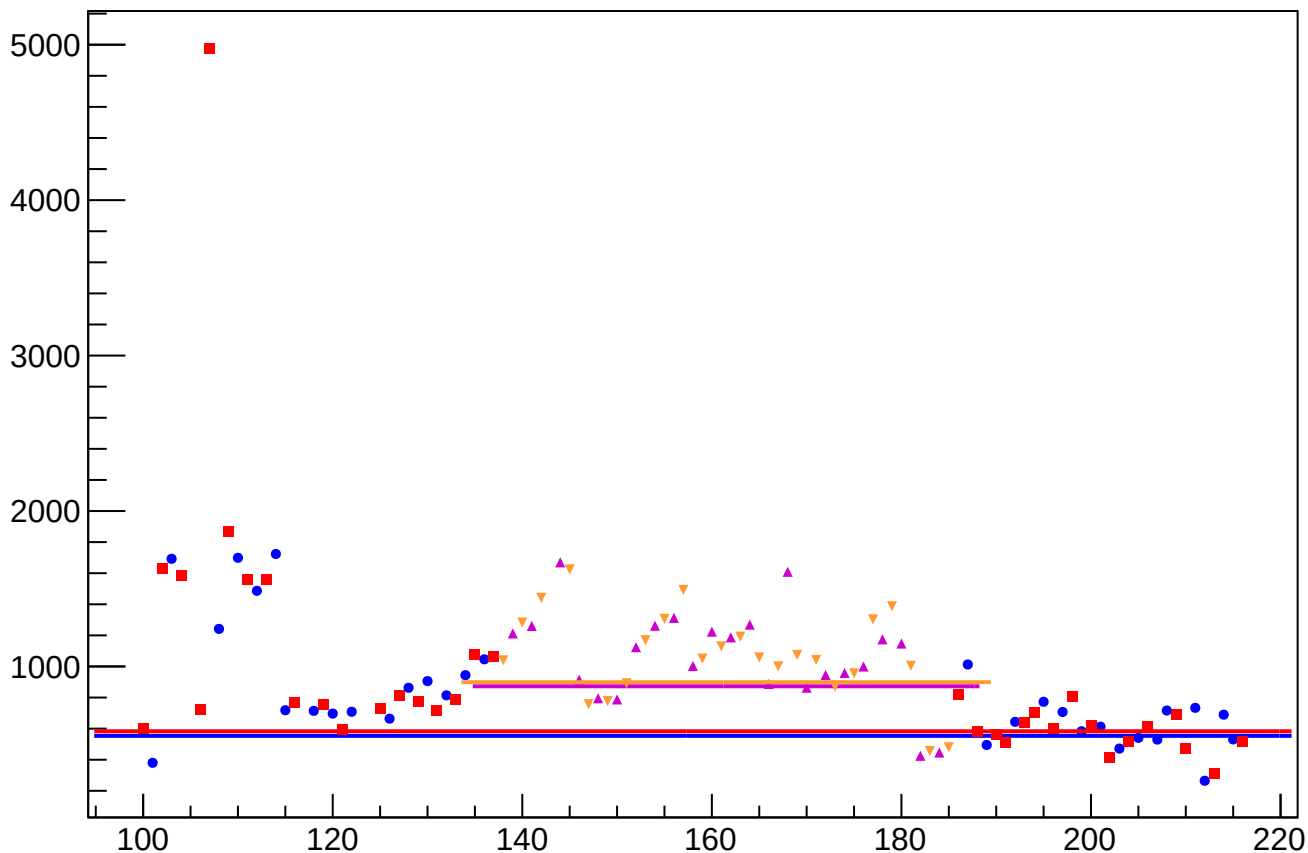
Left In:  $138.421 \pm 218.478$   $\chi^2/\text{NDF}$ : 13.0/22

+ sign  $-308.296 \pm 116.624$   $\chi^2/\text{NDF}$ : 73.5/54

All:  $-205.684 \pm 83.621$   $\chi^2/\text{NDF}$ : 153.8/111

- sign  $-97.113 \pm 119.963$   $\chi^2/\text{NDF}$ : 78.7/56

asym\_usl\_atl1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 553.586+/-0.097  $\chi^2/\text{NDF}$ : 5345138.6/30

Left Out: 898.850+/-0.157  $\chi^2/\text{NDF}$ : 3791537.4/23

Right Out: 583.313+/-0.101  $\chi^2/\text{NDF}$ : 4874166.3/33

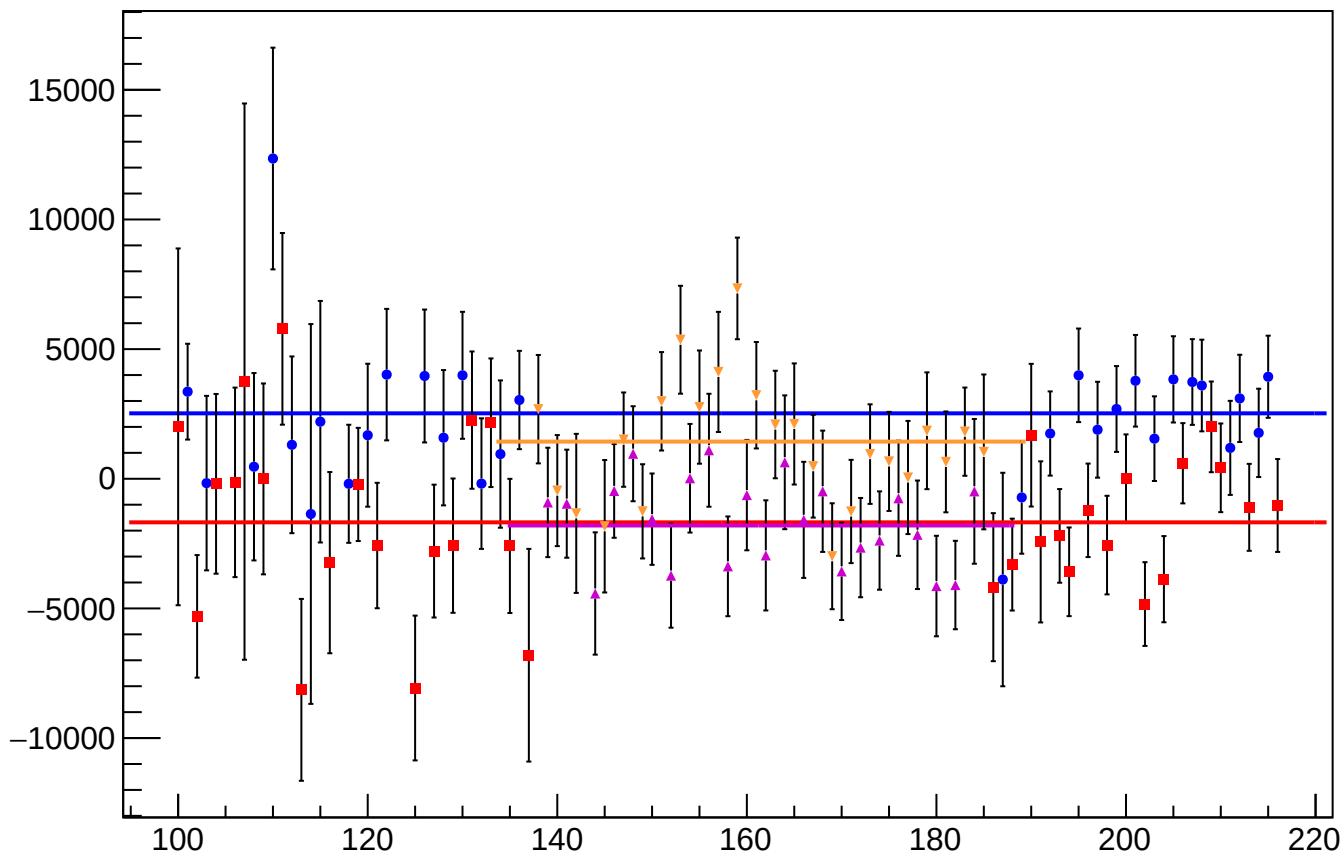
Left In: 872.473+/-0.154  $\chi^2/\text{NDF}$ : 4435524.1/22

+ sign 649.053+/-0.082  $\chi^2/\text{NDF}$ : 12643326.5/54

All: 659.470+/-0.059  $\chi^2/\text{NDF}$ : 24433020.3/11

- sign 670.492+/-0.085  $\chi^2/\text{NDF}$ : 11756852.8/56

# asym\_usl\_atl1\_avg\_mean vs Slug



Right In: 2523.576 $\pm$ 379.907  $\chi^2$ /NDF: 20.8/30

Left Out: 1433.314 $\pm$ 424.465  $\chi^2$ /NDF:29.4/23

Right Out: -1680.354 $\pm$ 384.732  $\chi^2$ /NDF: 43.2/33

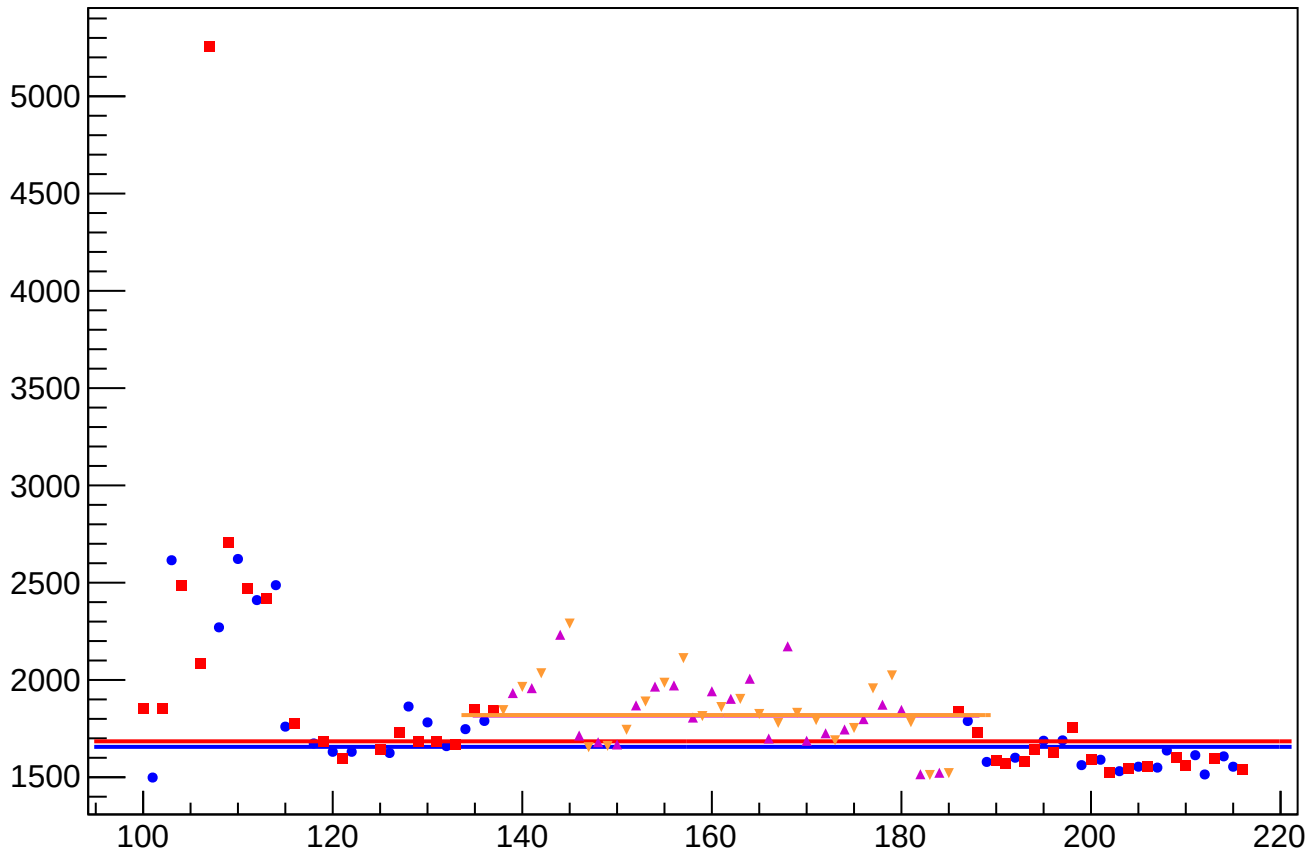
Left In: -1801.543 $\pm$ 426.483  $\chi^2$ /NDF:15.3/22

+ sign 2038.656 $\pm$ 283.082  $\chi^2$ /NDF: 53.8/54

All: 169.137 $\pm$ 201.078  $\chi^2$ /NDF: 200.4/111

- sign -1734.728 $\pm$ 285.670  $\chi^2$ /NDF: 58.6/56

# asym\_usl\_atl1\_avg\_rms vs Slug



Right In:  $1656.167 \pm 0.269$   $\chi^2/\text{NDF}$ : 562965.2/30

Left Out:  $1819.417 \pm 0.300$   $\chi^2/\text{NDF}$ : 295015.0/23

Right Out:  $1684.565 \pm 0.272$   $\chi^2/\text{NDF}$ : 824308.2/33

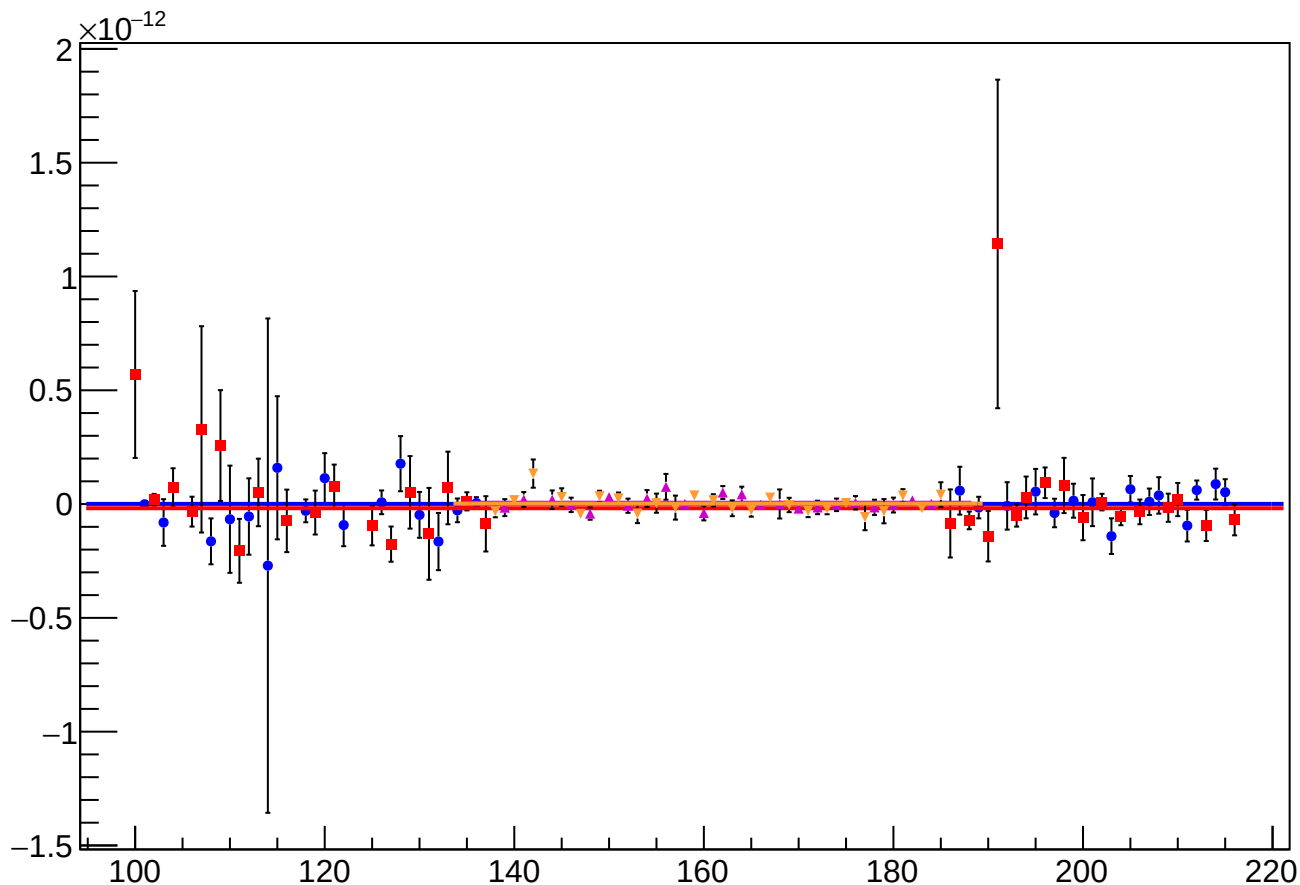
Left In:  $1817.142 \pm 0.302$   $\chi^2/\text{NDF}$ : 307103.2/22

+ sign  $1728.777 \pm 0.200$   $\chi^2/\text{NDF}$ : 1022237.3/54

All:  $1736.343 \pm 0.142$   $\chi^2/\text{NDF}$ : 2263086.9/11

- sign  $1744.048 \pm 0.202$   $\chi^2/\text{NDF}$ : 1237965.7/56

asym\_usl\_atl1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 23.0/30$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 29.3/23$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 31.6/33$

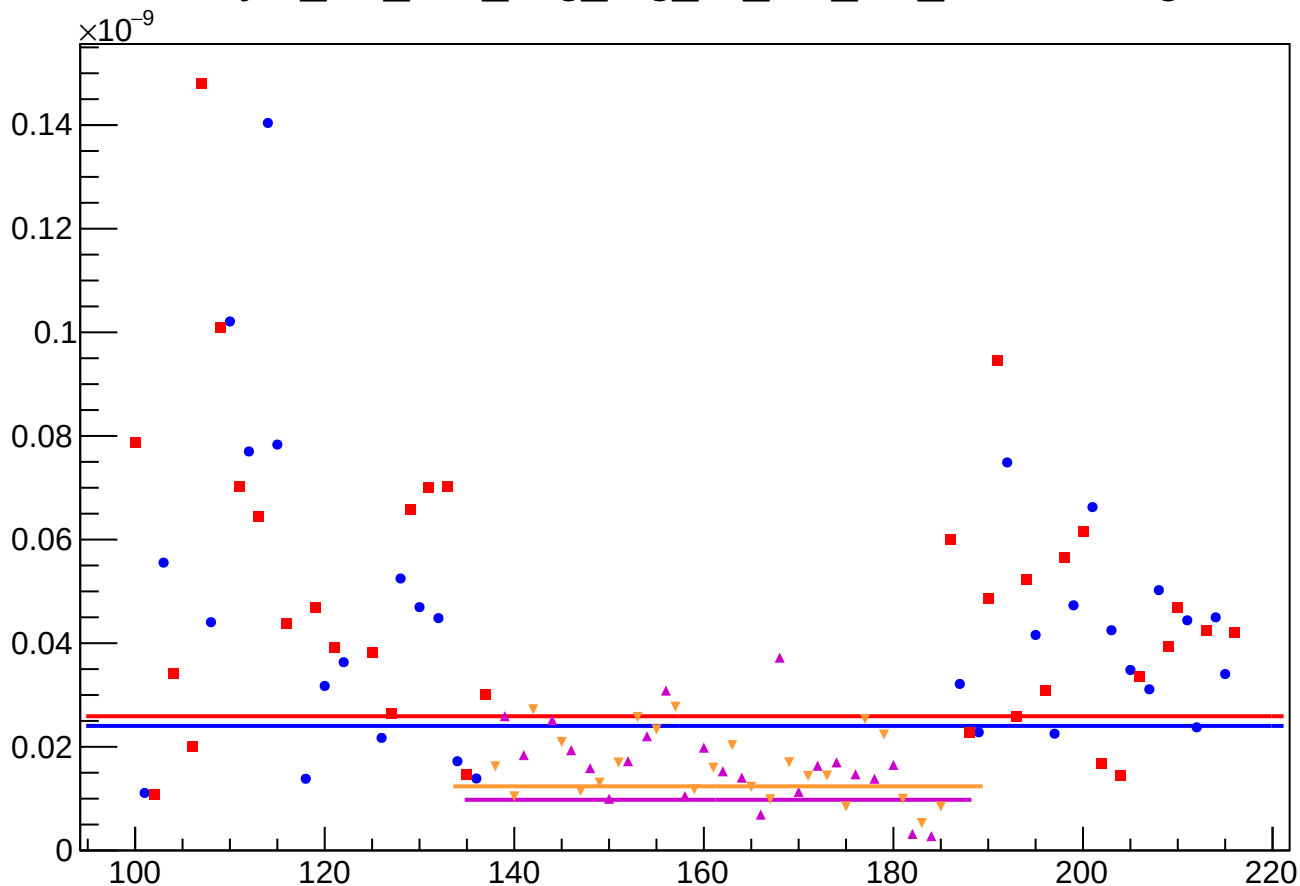
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 17.9/22$

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 52.3/54$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 105.8/111$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 53.5/56$

asym\_usl\_atl1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4263969.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1898110.3/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 3829185.1/33

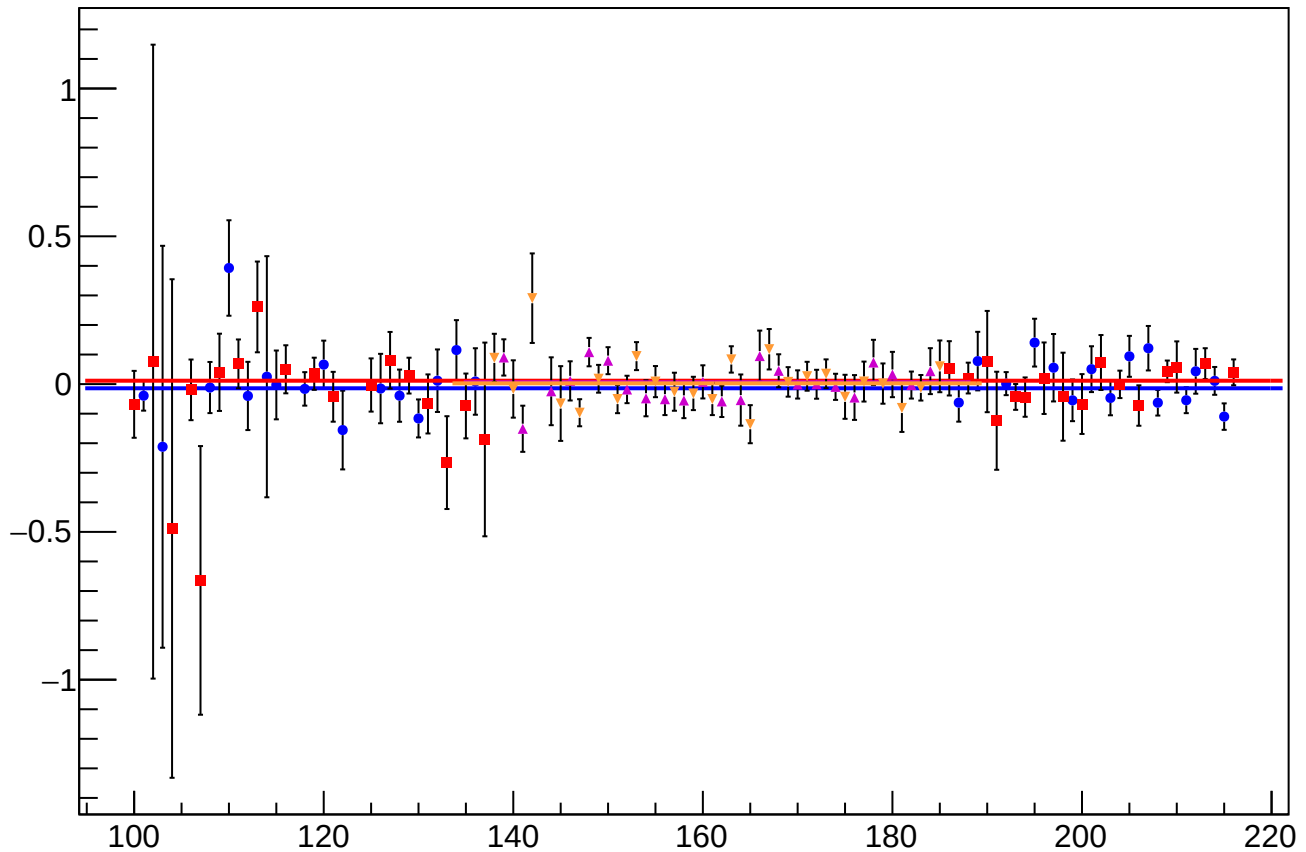
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4499862.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 8160798.2/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20322867.7/111

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11808324.6/56

asym\_usl\_atl1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.012$   $\chi^2/\text{NDF}$ : 33.4/30

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $0.011 \pm 0.013$   $\chi^2/\text{NDF}$ : 21.2/33

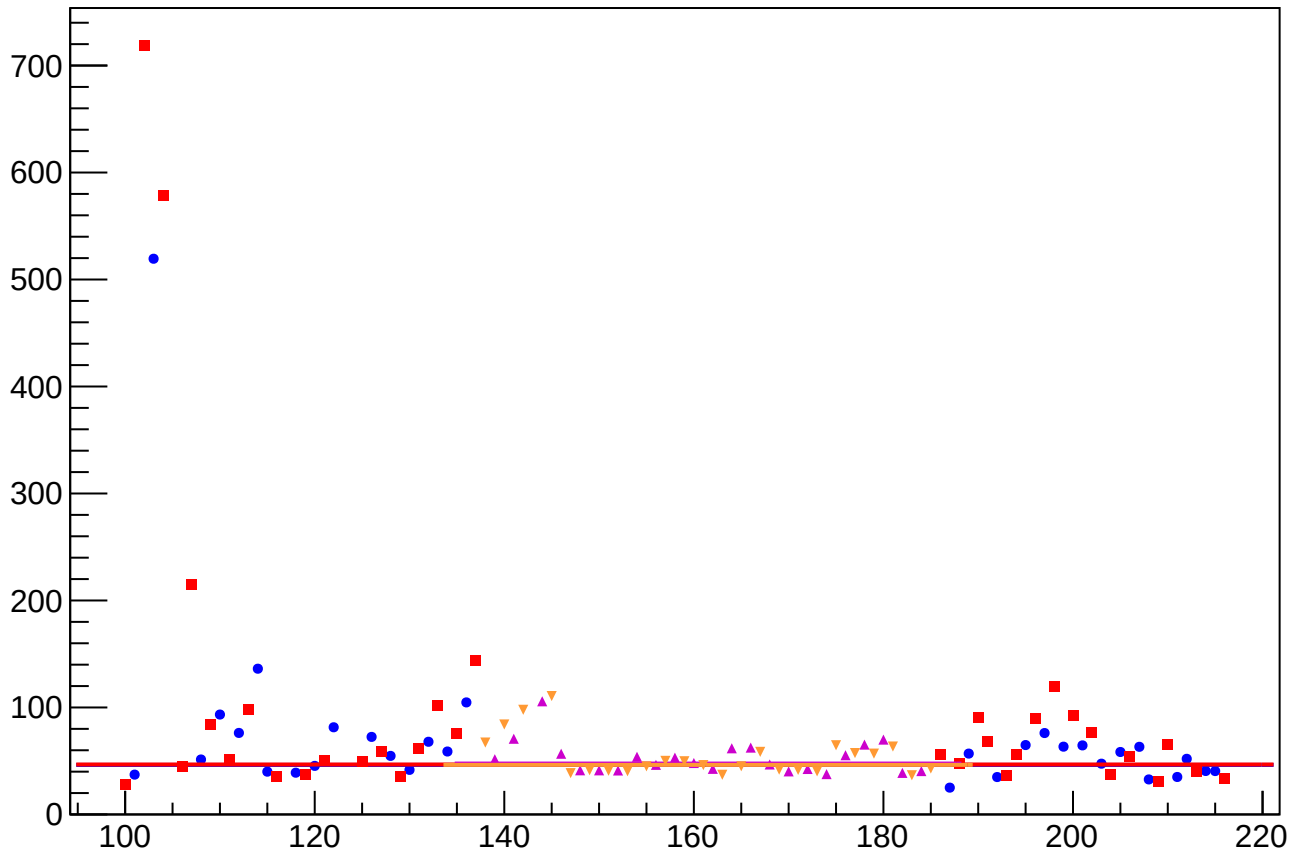
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 108.5/111

- sign  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 43.0/56

asym\_usl\_atl1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 46.287 $\pm$ 0.009  $\chi^2$ /NDF: 3845772.4/30

Left Out: 46.353 $\pm$ 0.008  $\chi^2$ /NDF: 1967753.2/23

Right Out: 46.684 $\pm$ 0.009  $\chi^2$ /NDF: 5599846.7/33

Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF: 1576196.2/22

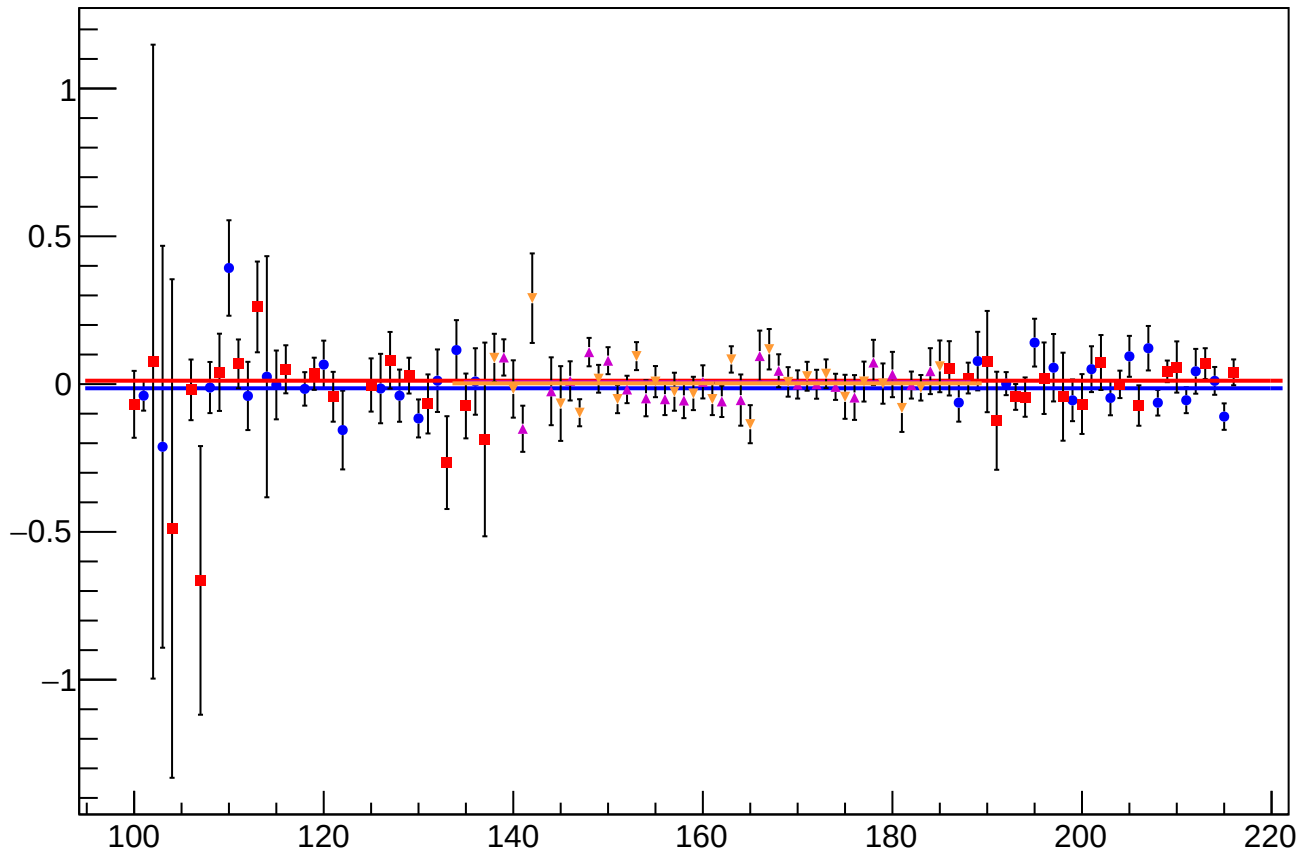
+ sign 46.322 $\pm$ 0.006  $\chi^2$ /NDF: 5813555.6/54

All: 46.729 $\pm$ 0.004  $\chi^2$ /NDF: 13003817.1/111

- sign 47.162 $\pm$ 0.006  $\chi^2$ /NDF: 7181042.6/56



asym\_usl\_atl1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.012$   $\chi^2/\text{NDF}$ : 33.4/30

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $0.011 \pm 0.013$   $\chi^2/\text{NDF}$ : 21.2/33

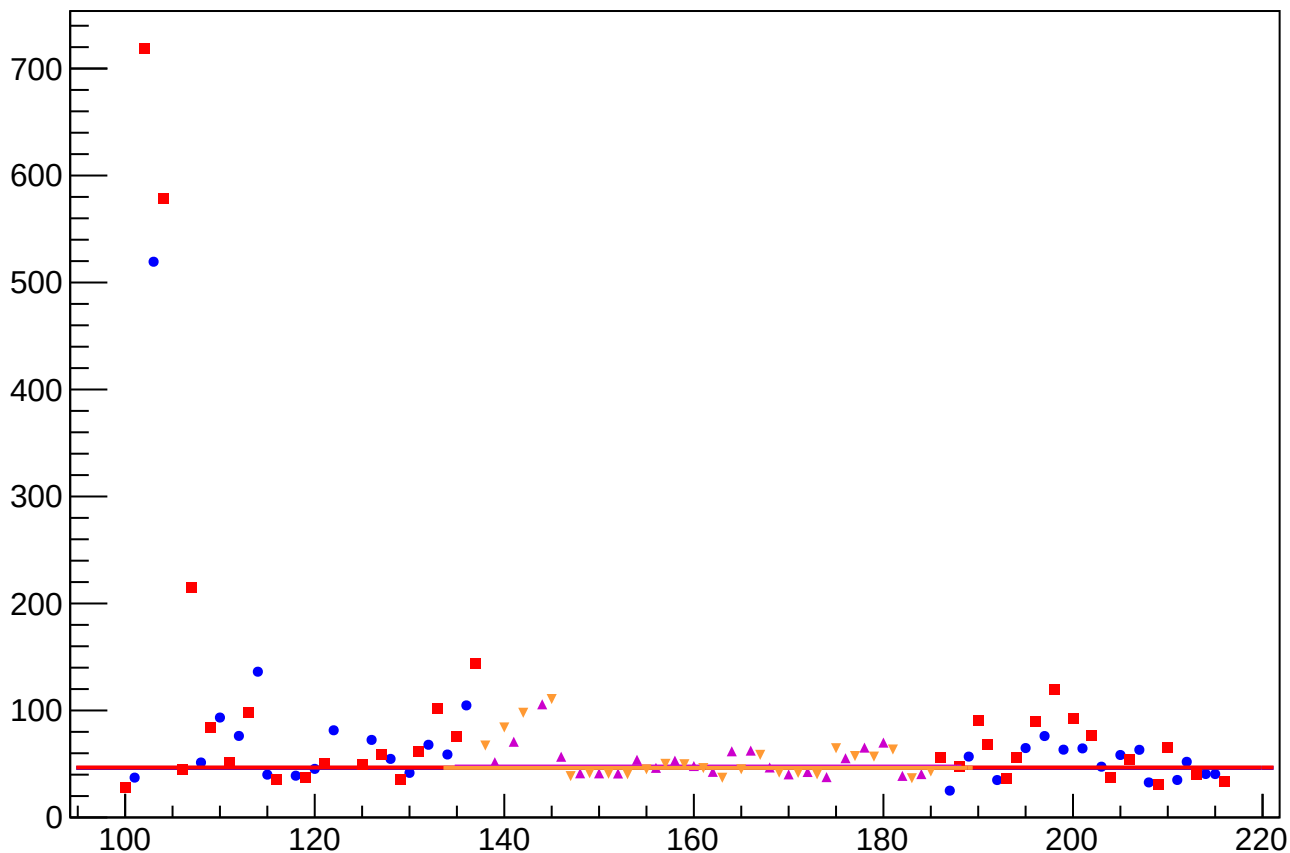
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 108.5/111

- sign  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 43.0/56

asym\_usl\_atl1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 46.287 $\pm$ 0.009  $\chi^2$ /NDF: 3845772.4/30

Left Out: 46.353 $\pm$ 0.008  $\chi^2$ /NDF: 1967753.2/23

Right Out: 46.684 $\pm$ 0.009  $\chi^2$ /NDF: 5599846.7/33

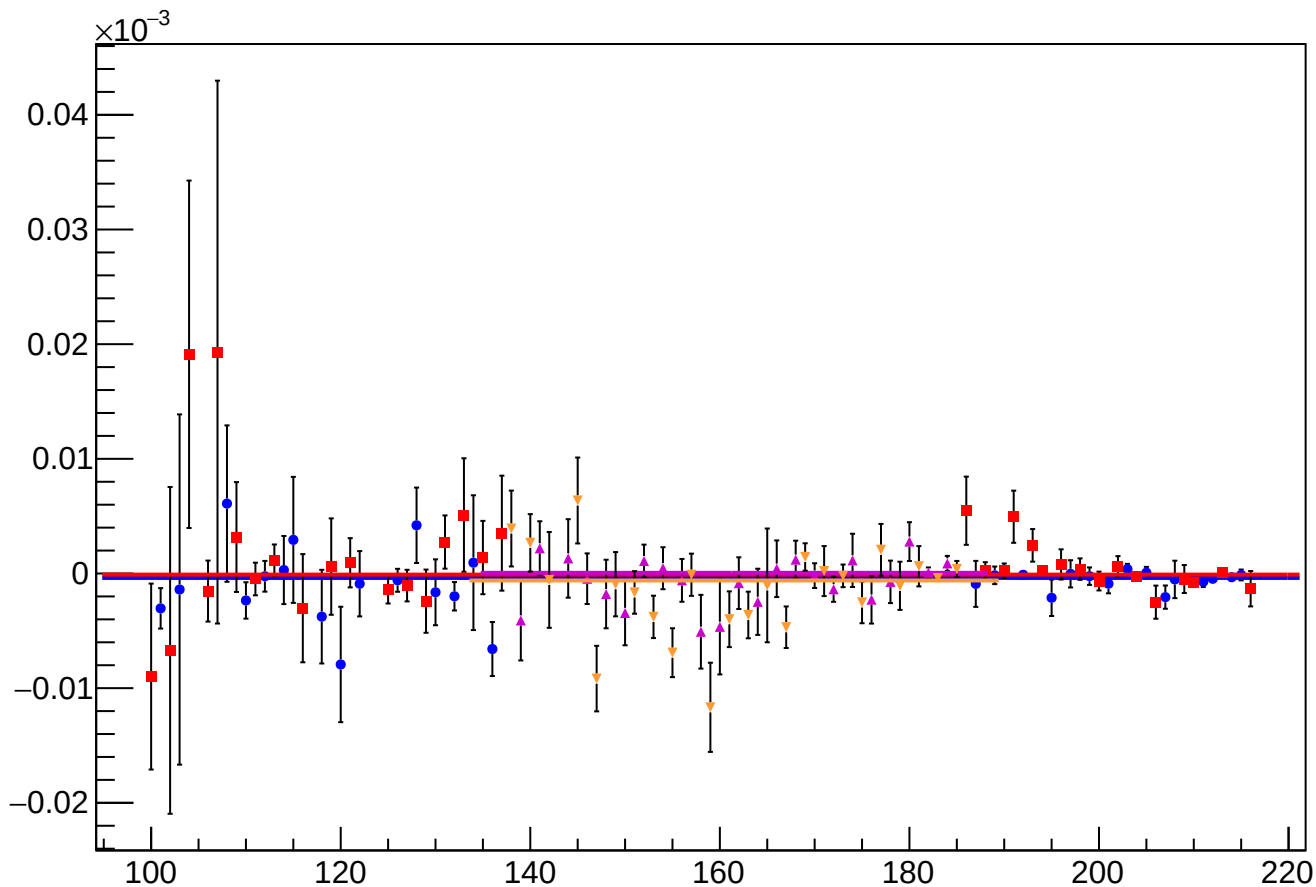
Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF: 1576196.2/22

+ sign 46.322 $\pm$ 0.006  $\chi^2$ /NDF: 5813555.6/54

All: 46.729 $\pm$ 0.004  $\chi^2$ /NDF: 13003817.1/111

- sign 47.162 $\pm$ 0.006  $\chi^2$ /NDF: 7181042.6/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.5/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.0/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.5/33

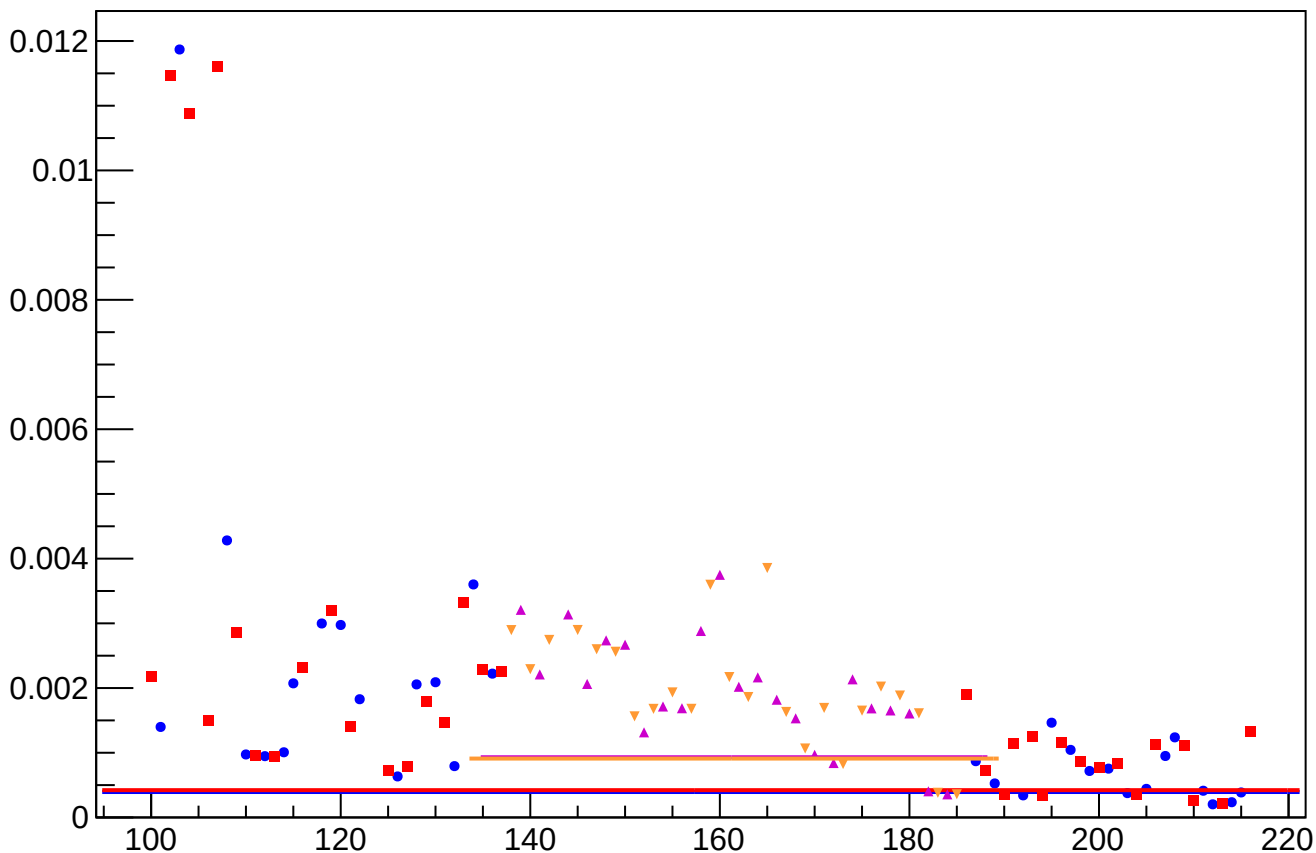
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 83.0/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 142.3/111

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.6/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14181898.8/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:14137356.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16239757.9/33

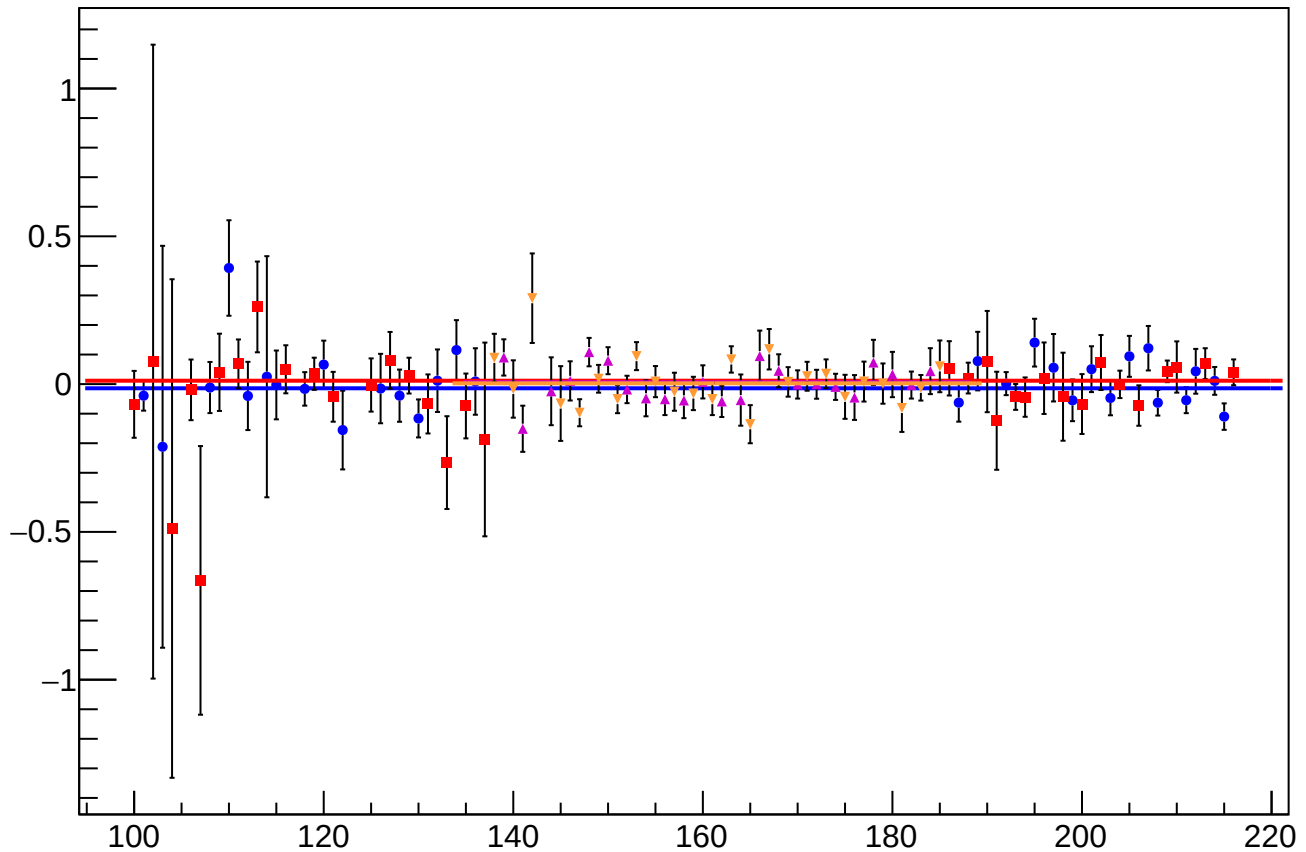
Left In: 0.001 $\pm$ 0.000  $\chi^2$ /NDF:13690985.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34139081.7/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69523997.8/111

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 35278078.5/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.012$   $\chi^2/\text{NDF}$ : 33.4/30

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $0.011 \pm 0.013$   $\chi^2/\text{NDF}$ : 21.2/33

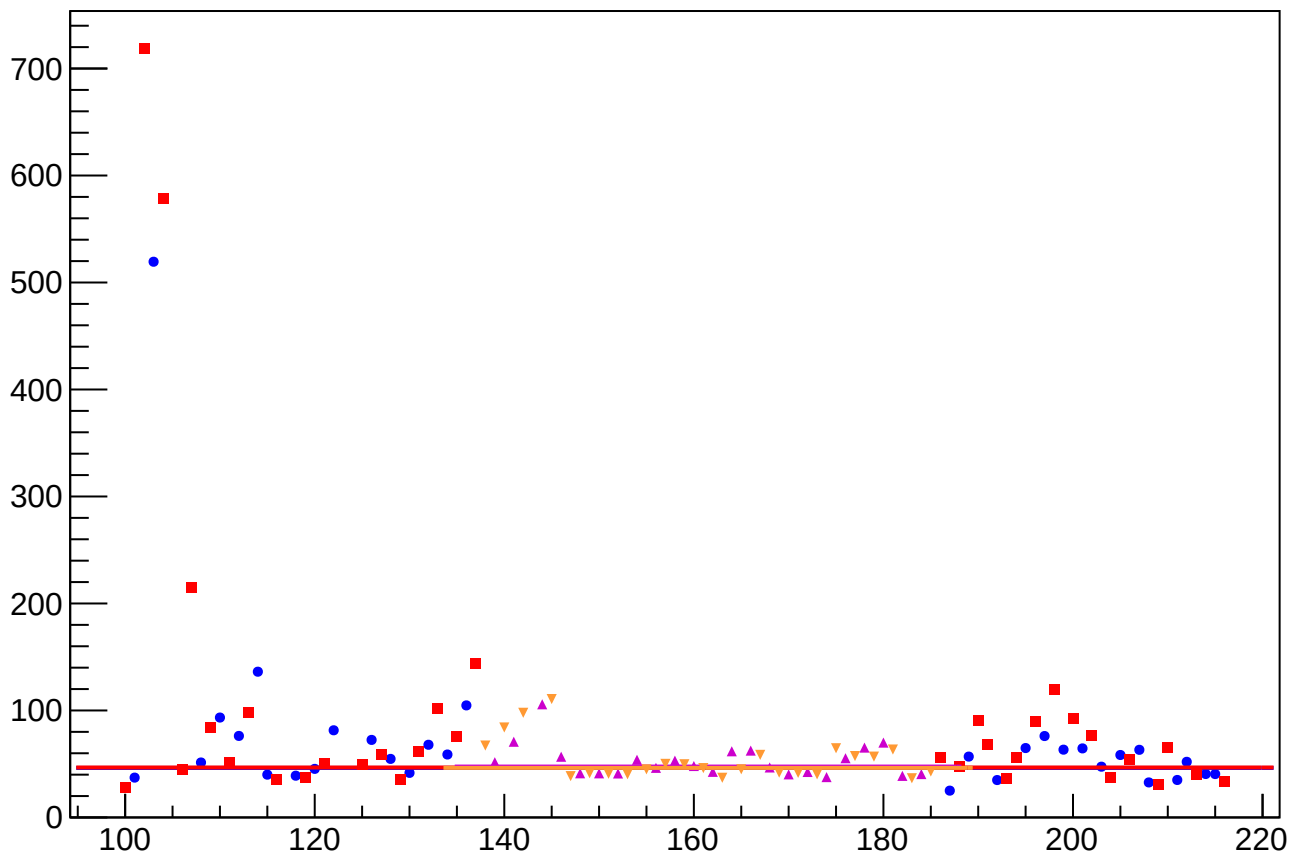
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 108.5/111

- sign  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 43.0/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 46.286 $\pm$ 0.009  $\chi^2$ /NDF: 3845790.6/30

Left Out: 46.354 $\pm$ 0.008  $\chi^2$ /NDF: 1967741.3/23

Right Out: 46.684 $\pm$ 0.009  $\chi^2$ /NDF: 5599827.2/33

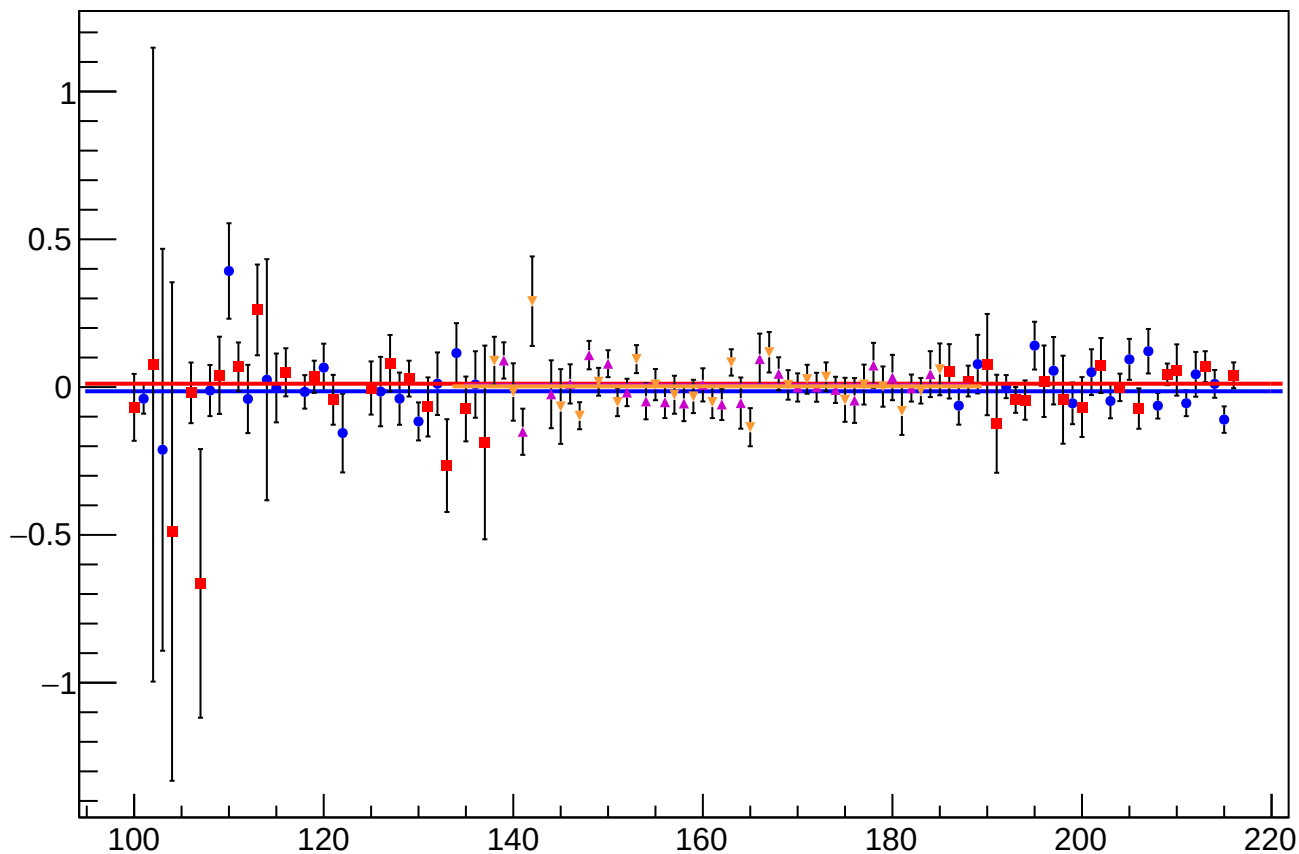
Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF: 1576204.5/22

+ sign 46.322 $\pm$ 0.006  $\chi^2$ /NDF: 5813562.1/54

All: 46.729 $\pm$ 0.004  $\chi^2$ /NDF: 13003812.7/11

- sign 47.162 $\pm$ 0.006  $\chi^2$ /NDF: 7181034.1/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.012$   $\chi^2/\text{NDF}$ : 33.4/30

Left Out:  $0.003 \pm 0.012$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $0.011 \pm 0.013$   $\chi^2/\text{NDF}$ : 21.2/33

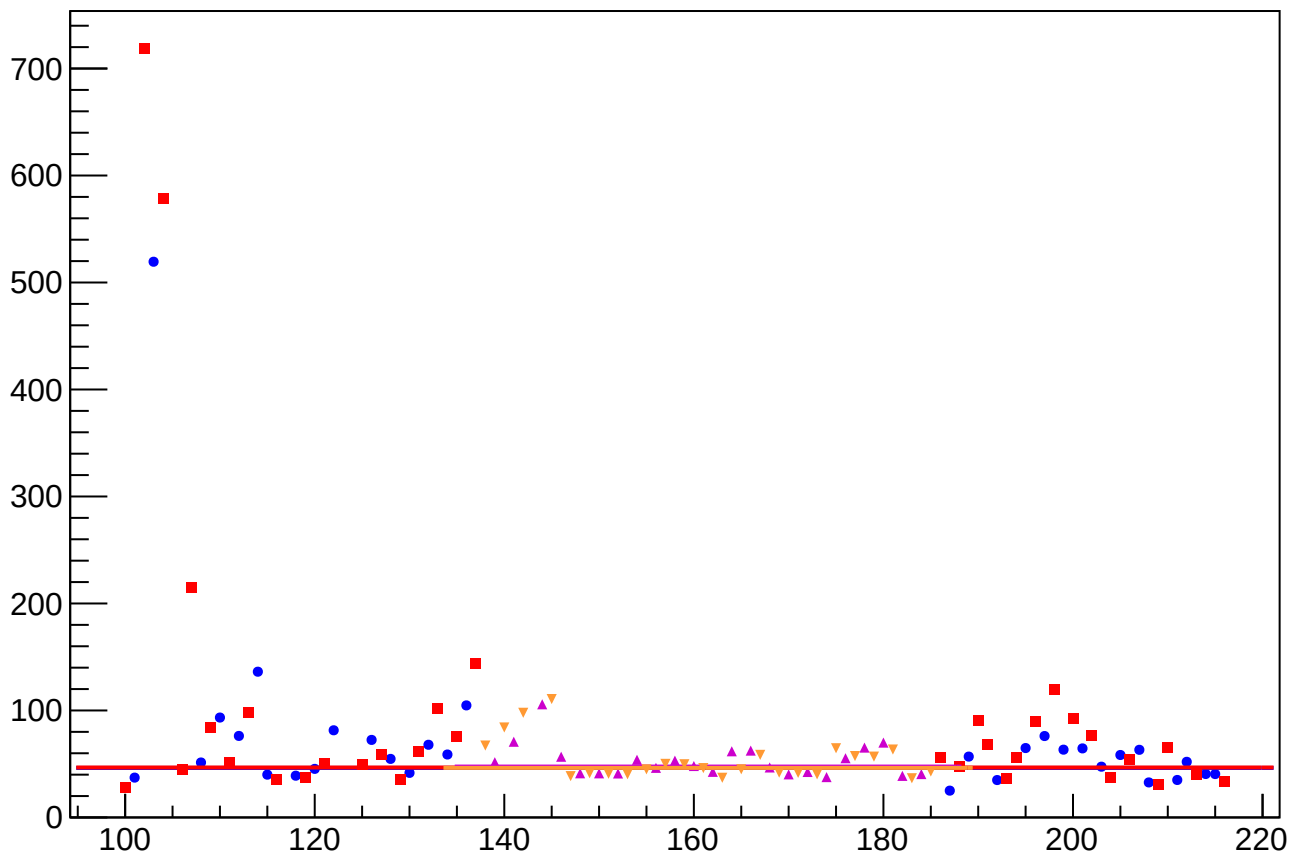
Left In:  $0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 21.6/22

+ sign  $-0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 108.5/111

- sign  $0.009 \pm 0.009$   $\chi^2/\text{NDF}$ : 43.0/56

asym\_usl\_atl1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 46.286 $\pm$ 0.009  $\chi^2$ /NDF: 3845790.6/30

Left Out: 46.354 $\pm$ 0.008  $\chi^2$ /NDF: 1967741.3/23

Right Out: 46.684 $\pm$ 0.009  $\chi^2$ /NDF: 5599827.2/33

Left In: 47.575 $\pm$ 0.009  $\chi^2$ /NDF: 1576204.5/22

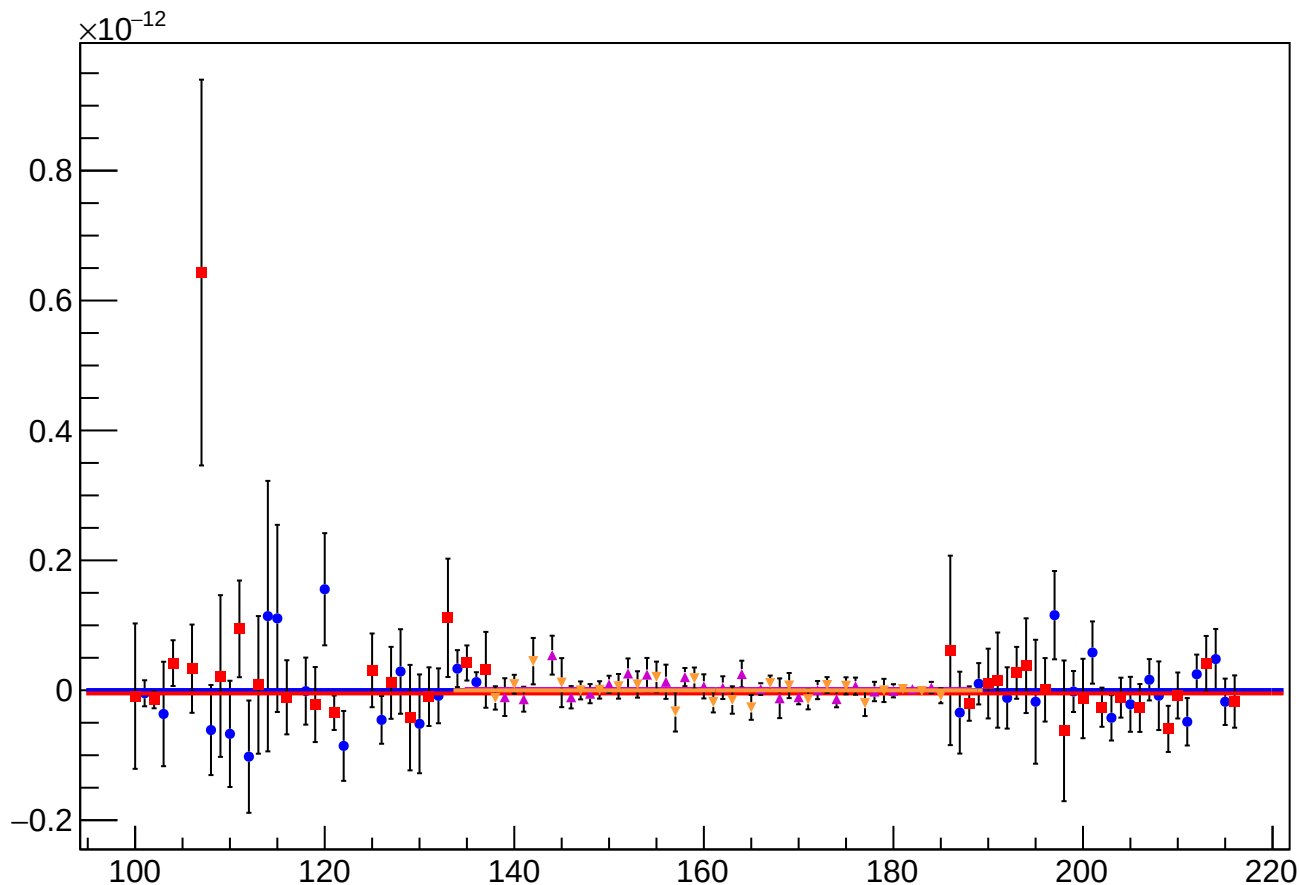
+ sign 46.322 $\pm$ 0.006  $\chi^2$ /NDF: 5813562.1/54

All: 46.729 $\pm$ 0.004  $\chi^2$ /NDF: 13003812.7/111

- sign 47.162 $\pm$ 0.006  $\chi^2$ /NDF: 7181034.1/56



asym\_usl\_atl1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 24.7/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:13.9/23

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 22.8/33

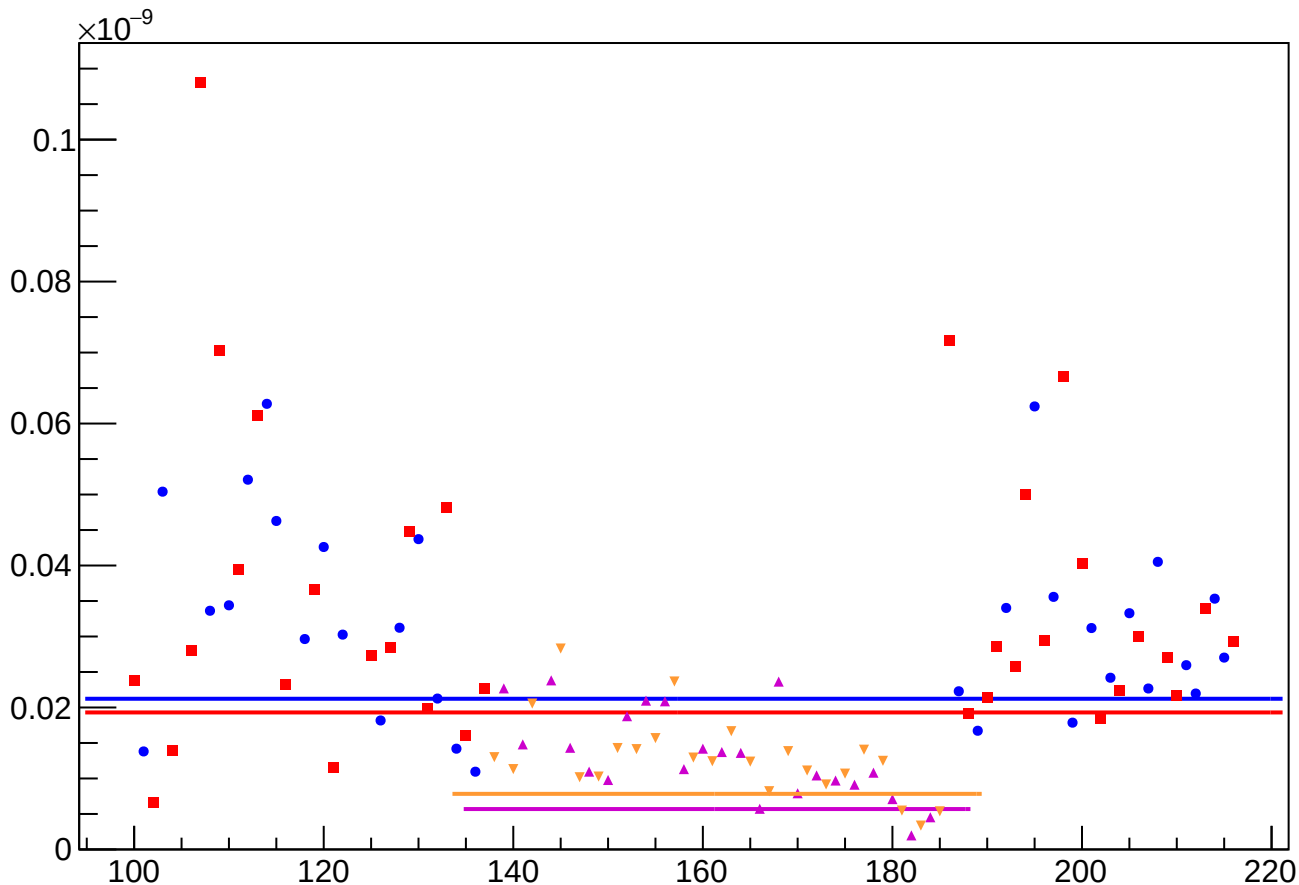
Left In: 0.000+/-0.000  $\chi^2$ /NDF:13.4/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 38.6/54

All: 0.000+/-0.000  $\chi^2$ /NDF: 75.8/111

- sign 0.000+/-0.000  $\chi^2$ /NDF: 37.1/56

asym\_usl\_atl1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4031781.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6422392.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5902894.6/33

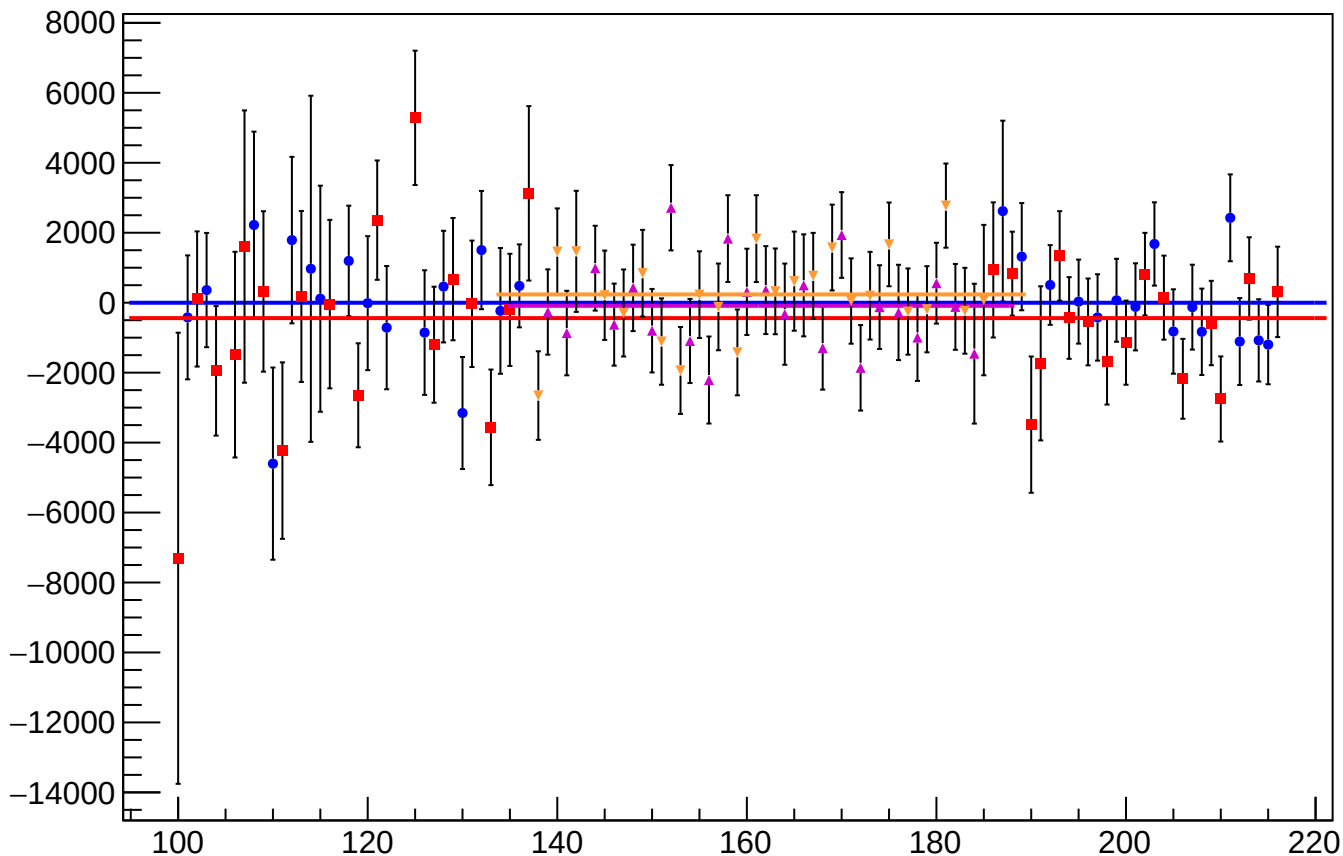
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11199324.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16974236.7/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 42680155.6/111

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24427905.7/56

# reg\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $-1.378 \pm 264.269$   $\chi^2/\text{NDF}$ : 21.7/30

Left Out:  $236.601 \pm 259.669$   $\chi^2/\text{NDF}$ : 22.7/23

Right Out:  $-440.956 \pm 266.486$   $\chi^2/\text{NDF}$ : 41.2/33

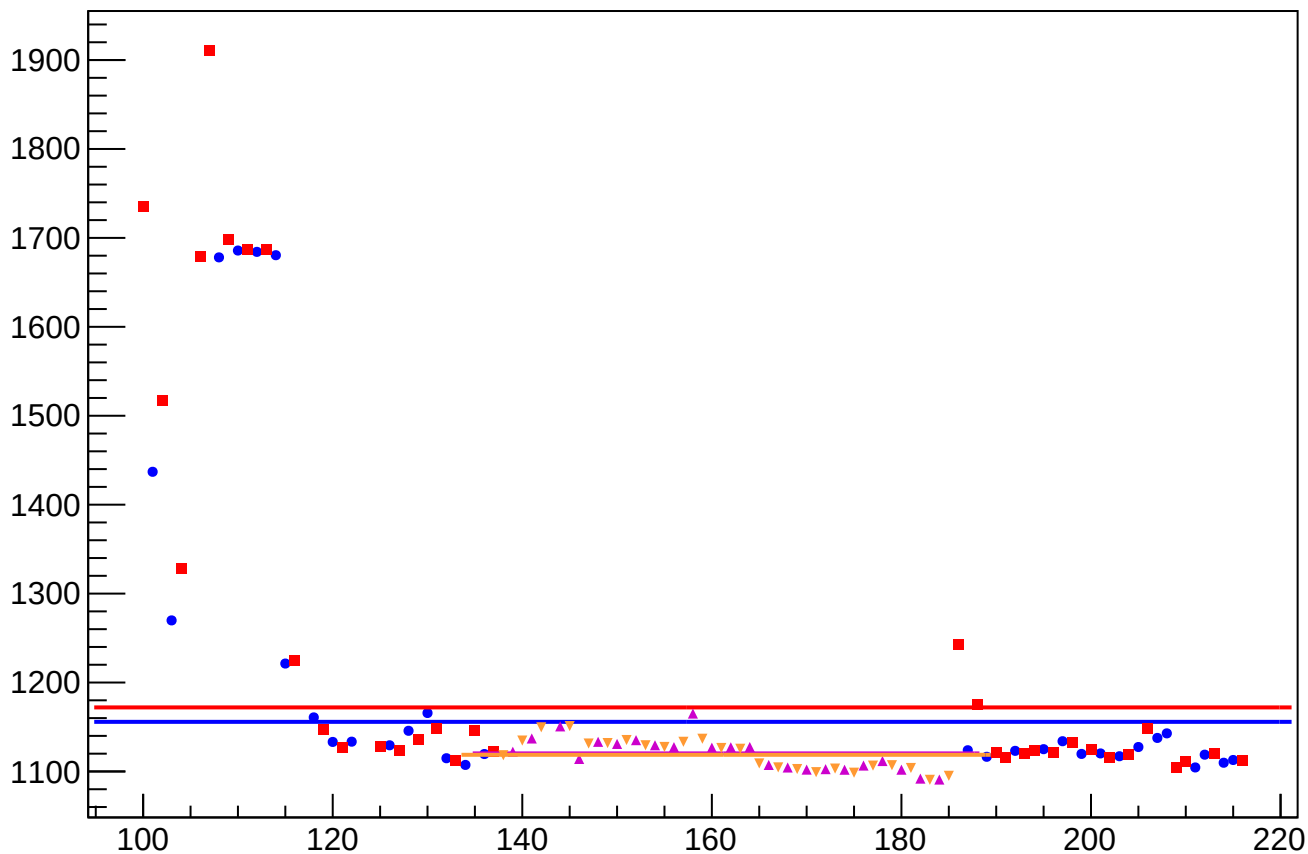
Left In:  $-88.380 \pm 261.602$   $\chi^2/\text{NDF}$ : 20.9/22

+ sign  $119.701 \pm 185.219$   $\chi^2/\text{NDF}$ : 44.8/54

All:  $-69.352 \pm 131.484$   $\chi^2/\text{NDF}$ : 109.9/111

- sign  $-261.408 \pm 186.683$   $\chi^2/\text{NDF}$ : 62.9/56

# reg\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1155.784 +/- 0.187  $\chi^2/\text{NDF}$ : 362356.3/30

Left Out: 1118.733 +/- 0.184  $\chi^2/\text{NDF}$ : 8205.0/23

Right Out: 1172.016 +/- 0.188  $\chi^2/\text{NDF}$ : 561995.4/33

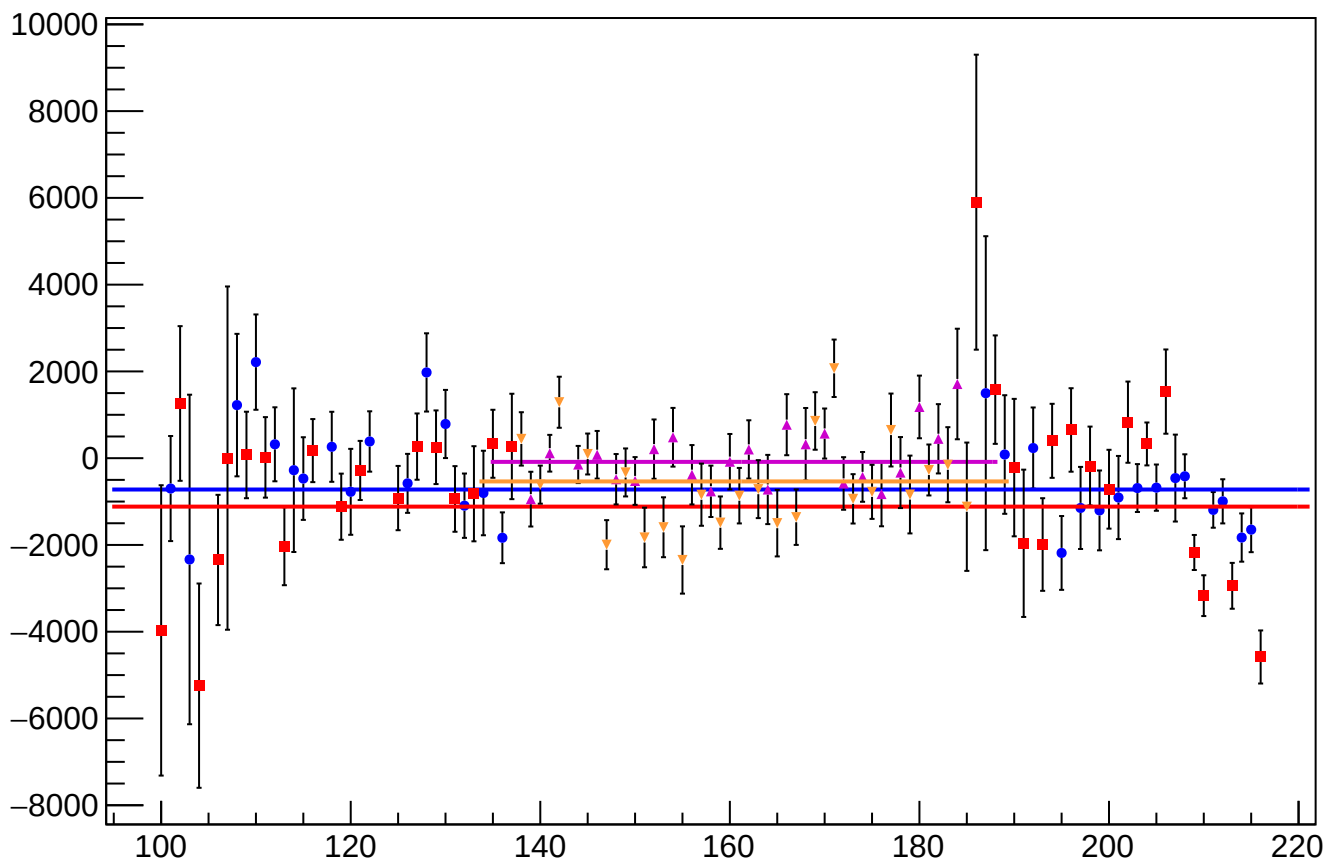
Left In: 1120.308 +/- 0.185  $\chi^2/\text{NDF}$ : 9479.7/22

+ sign 1136.933 +/- 0.131  $\chi^2/\text{NDF}$ : 390562.8/54

All: 1141.274 +/- 0.093  $\chi^2/\text{NDF}$ : 1002598.1/11

- sign 1145.684 +/- 0.132  $\chi^2/\text{NDF}$ : 609820.8/56

# asym\_usl\_atl1\_dd\_reg\_correction\_mean vs Slug



Right In:  $-722.266 \pm 134.747$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-535.899 \pm 130.646$   $\chi^2/\text{NDF}: 61.6/23$

Right Out:  $-1116.596 \pm 140.721$   $\chi^2/\text{NDF}: 133.9/33$

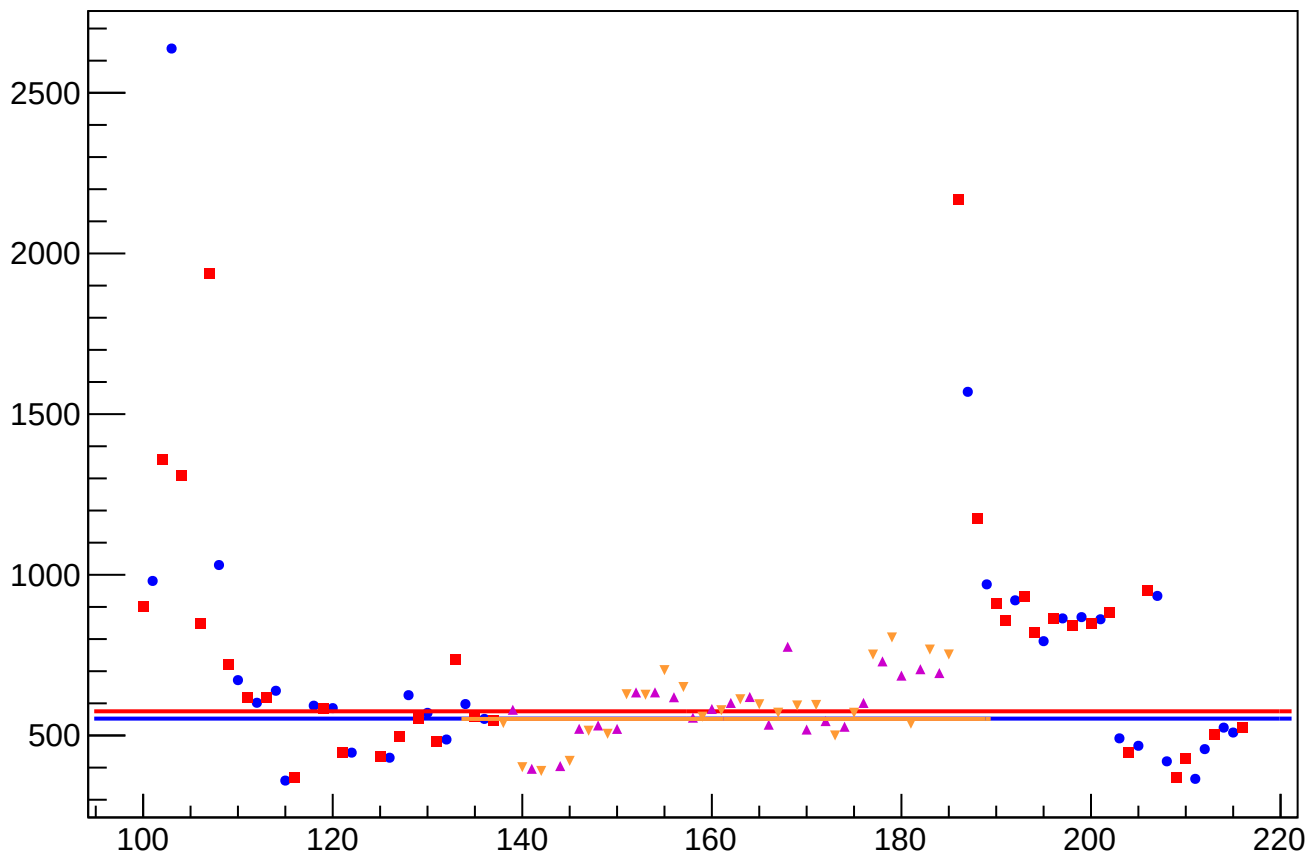
Left In:  $-85.254 \pm 130.966$   $\chi^2/\text{NDF}: 17.1/22$

+ sign  $-626.203 \pm 93.797$   $\chi^2/\text{NDF}: 107.9/54$

All:  $-595.752 \pm 67.046$   $\chi^2/\text{NDF}: 288.0/111$

- sign  $-563.940 \pm 95.870$   $\chi^2/\text{NDF}: 179.9/56$

# asym\_usl\_atl1\_dd\_reg\_correction\_rms vs Slug



Right In: 552.478+/-0.095  $\chi^2/\text{NDF}$ : 3775364.4/30

Left Out: 551.440+/-0.092  $\chi^2/\text{NDF}$ :1226616.4/23

Right Out: 575.198+/-0.100  $\chi^2/\text{NDF}$ : 4747219.3/33

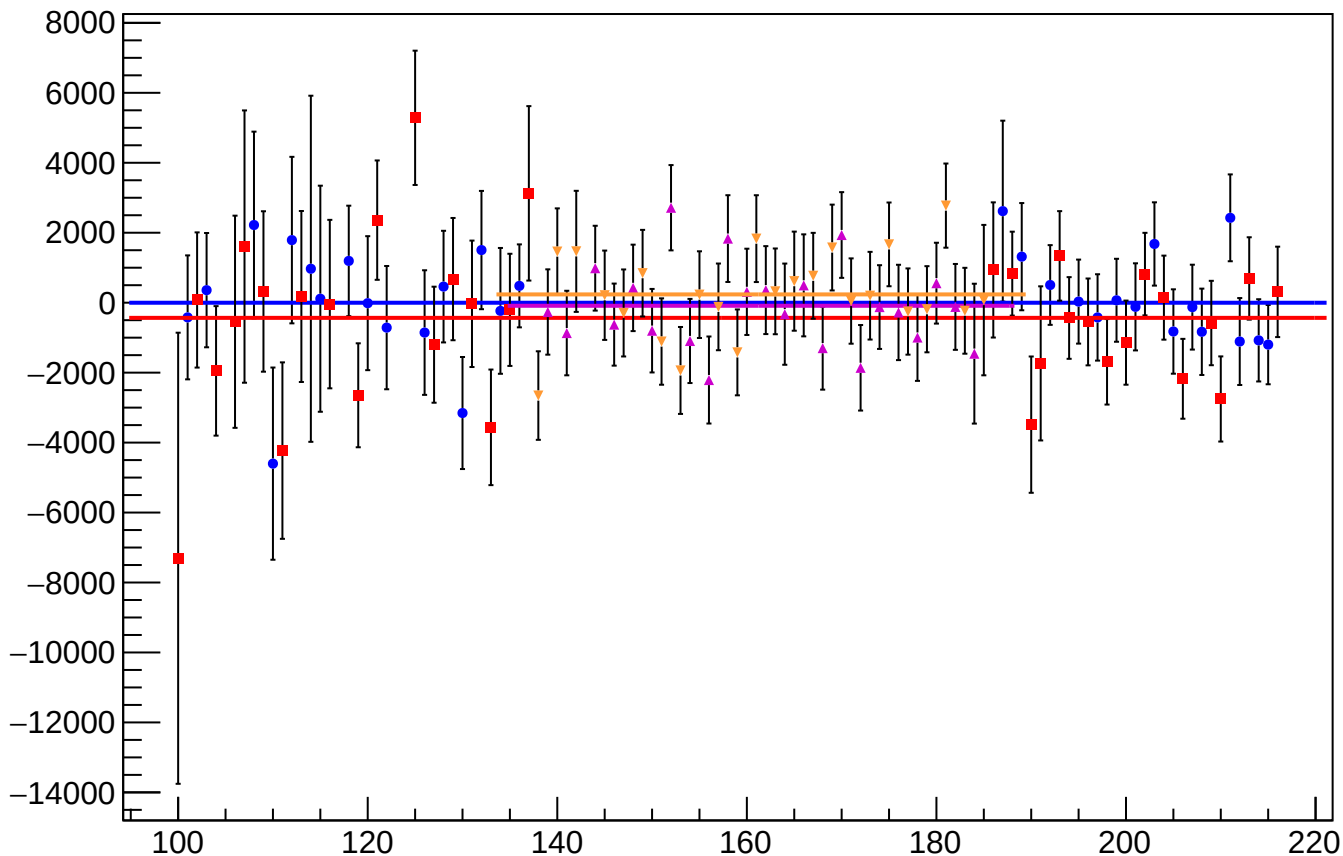
Left In: 551.336+/-0.093  $\chi^2/\text{NDF}$ :1061764.2/22

+ sign 551.943+/-0.066  $\chi^2/\text{NDF}$ : 5002042.0/54

All: 557.063+/-0.047  $\chi^2/\text{NDF}$ : 10854023.5/11

- sign 562.411+/-0.068  $\chi^2/\text{NDF}$ : 5839797.9/56

# cor\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $-1.511 \pm 264.269$   $\chi^2/\text{NDF}$ : 21.7/30

Left Out:  $236.642 \pm 259.669$   $\chi^2/\text{NDF}$ : 22.7/23

Right Out:  $-433.731 \pm 266.552$   $\chi^2/\text{NDF}$ : 41.0/33

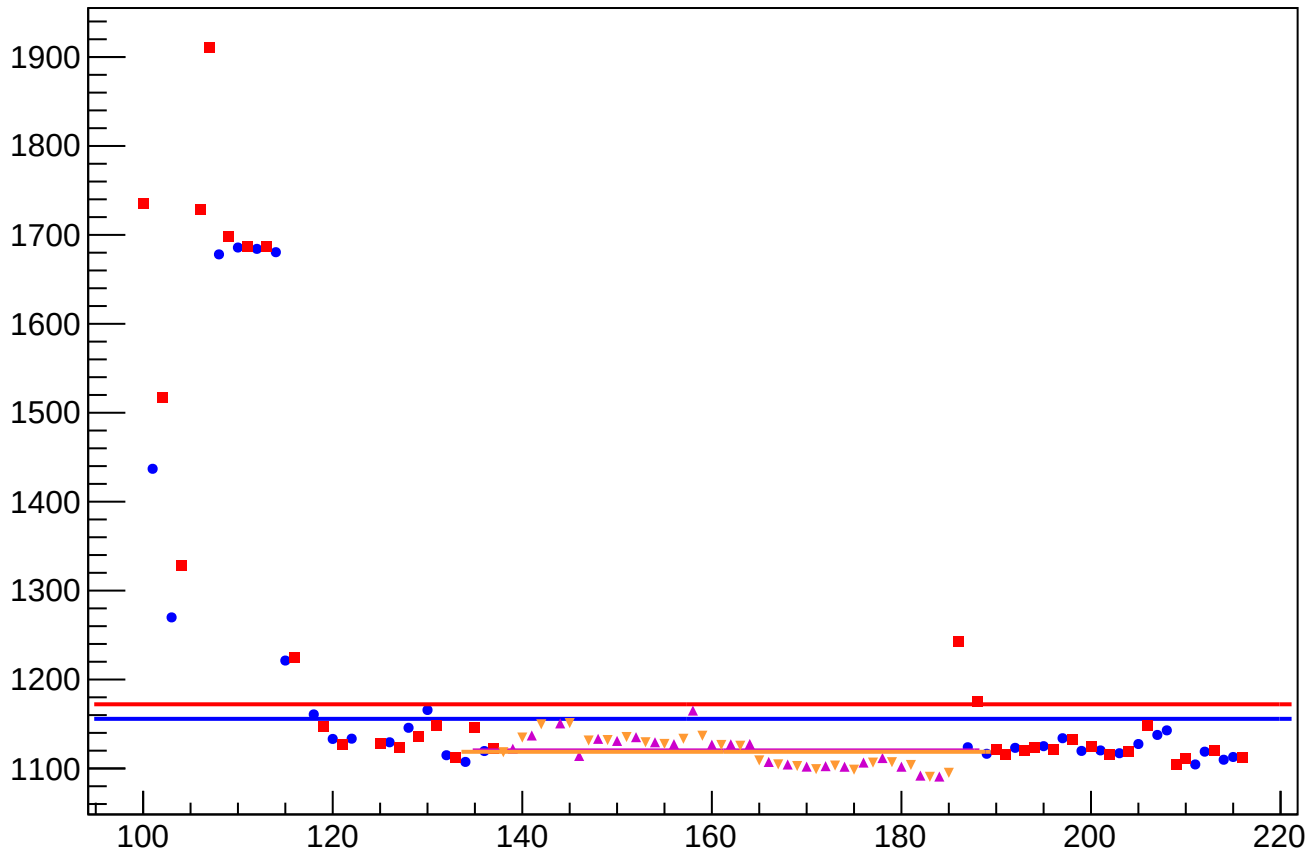
Left In:  $-88.370 \pm 261.602$   $\chi^2/\text{NDF}$ : 20.9/22

+ sign  $119.657 \pm 185.219$   $\chi^2/\text{NDF}$ : 44.8/54

All:  $-67.569 \pm 131.492$   $\chi^2/\text{NDF}$ : 109.7/111

- sign  $-257.814 \pm 186.706$   $\chi^2/\text{NDF}$ : 62.8/56

# cor\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In:  $1155.784 \pm 0.187$   $\chi^2/\text{NDF}$ : 362356.4/30

Left Out:  $1118.733 \pm 0.184$   $\chi^2/\text{NDF}$ : 8205.0/23

Right Out:  $1172.152 \pm 0.188$   $\chi^2/\text{NDF}$ : 569988.0/33

Left In:  $1120.308 \pm 0.185$   $\chi^2/\text{NDF}$ : 9479.7/22

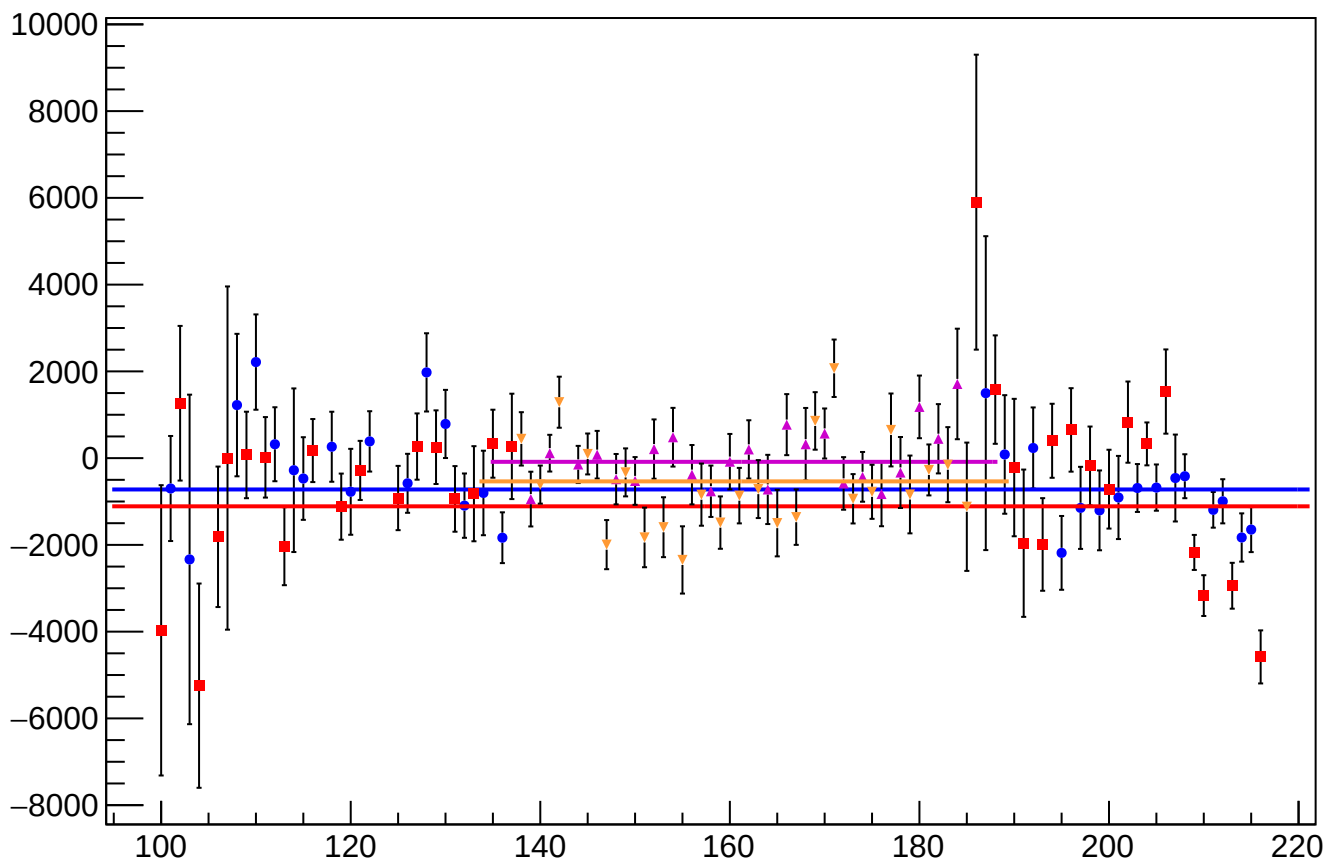
+ sign  $1136.933 \pm 0.131$   $\chi^2/\text{NDF}$ : 390562.9/54

All:  $1141.304 \pm 0.093$   $\chi^2/\text{NDF}$ : 1010813.9/111

- sign  $1145.744 \pm 0.132$   $\chi^2/\text{NDF}$ : 618006.1/56



asym\_usl\_atl1\_dd\_cor\_correction\_mean vs Slug



Right In:  $-722.266 \pm 134.747$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-535.930 \pm 130.646$   $\chi^2/\text{NDF}: 61.6/23$

Right Out:  $-1111.030 \pm 140.807$   $\chi^2/\text{NDF}: 133.5/33$

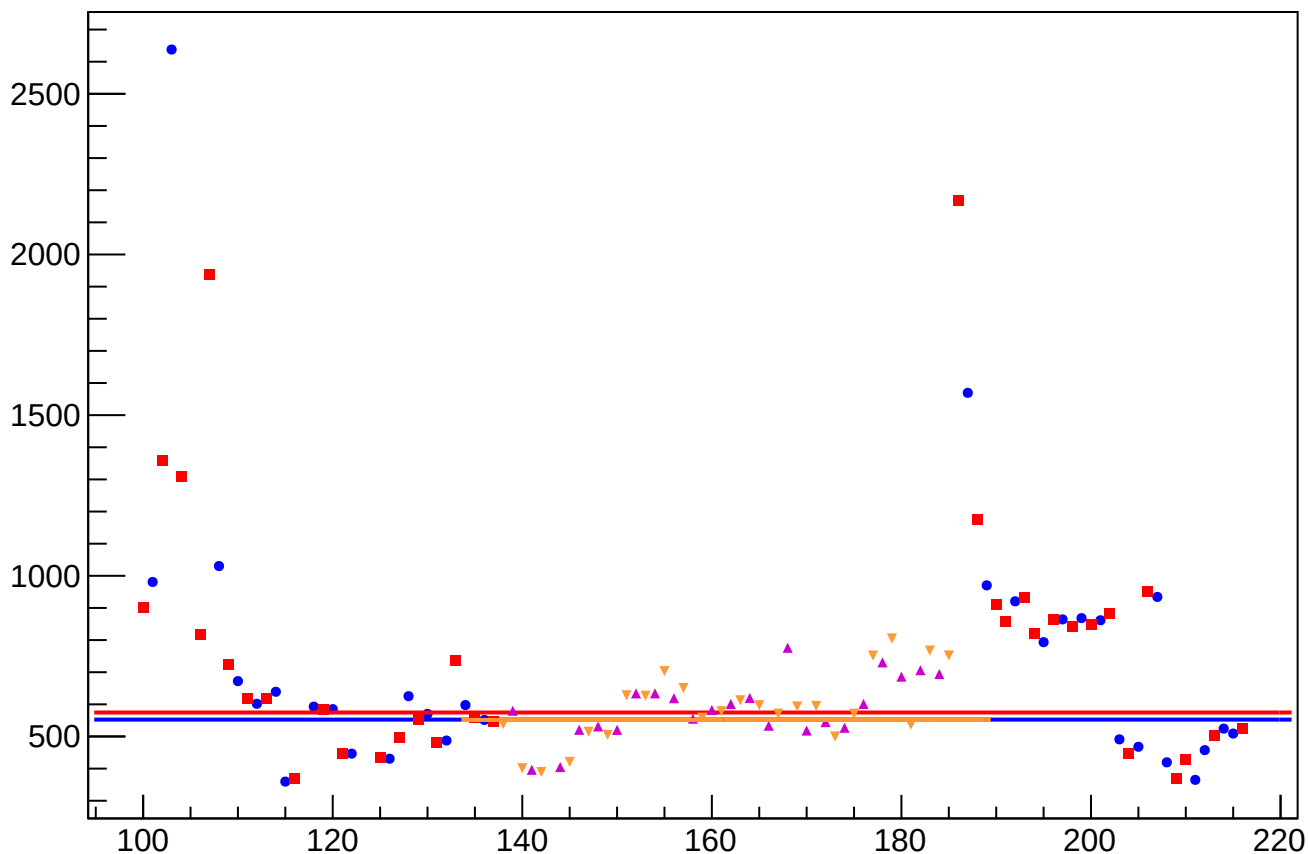
Left In:  $-85.243 \pm 130.966$   $\chi^2/\text{NDF}: 17.1/22$

+ sign  $-626.219 \pm 93.797$   $\chi^2/\text{NDF}: 107.9/54$

All:  $-594.351 \pm 67.055$   $\chi^2/\text{NDF}: 287.2/111$

- sign  $-561.039 \pm 95.897$   $\chi^2/\text{NDF}: 179.1/56$

# asym\_usl\_atl1\_dd\_cor\_correction\_rms vs Slug



Right In: 552.475+/-0.095  $\chi^2/\text{NDF}$ : 3775350.2/30

Left Out: 551.439+/-0.092  $\chi^2/\text{NDF}$ :1226632.2/23

Right Out: 574.622+/-0.100  $\chi^2/\text{NDF}$ : 4726187.3/33

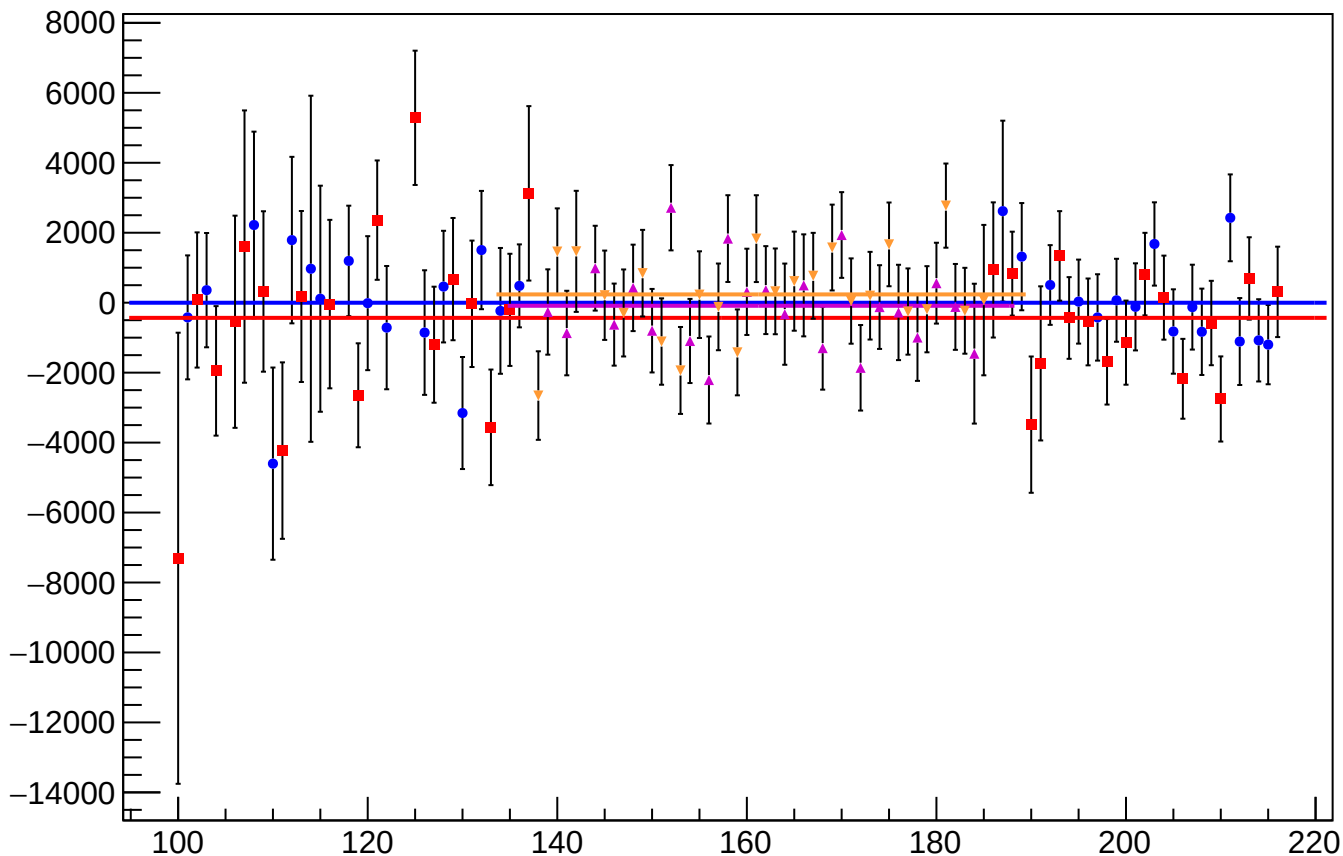
Left In: 551.335+/-0.093  $\chi^2/\text{NDF}$ :1061731.9/22

+ sign 551.941+/-0.066  $\chi^2/\text{NDF}$ : 5002043.3/54

All: 556.926+/-0.047  $\chi^2/\text{NDF}$ : 10830843.6/11

- sign 562.137+/-0.068  $\chi^2/\text{NDF}$ : 5817247.2/56

# eigen\_cor\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $-1.511 \pm 264.269$   $\chi^2/\text{NDF}$ : 21.7/30

Left Out:  $236.642 \pm 259.669$   $\chi^2/\text{NDF}$ : 22.7/23

Right Out:  $-433.731 \pm 266.552$   $\chi^2/\text{NDF}$ : 41.0/33

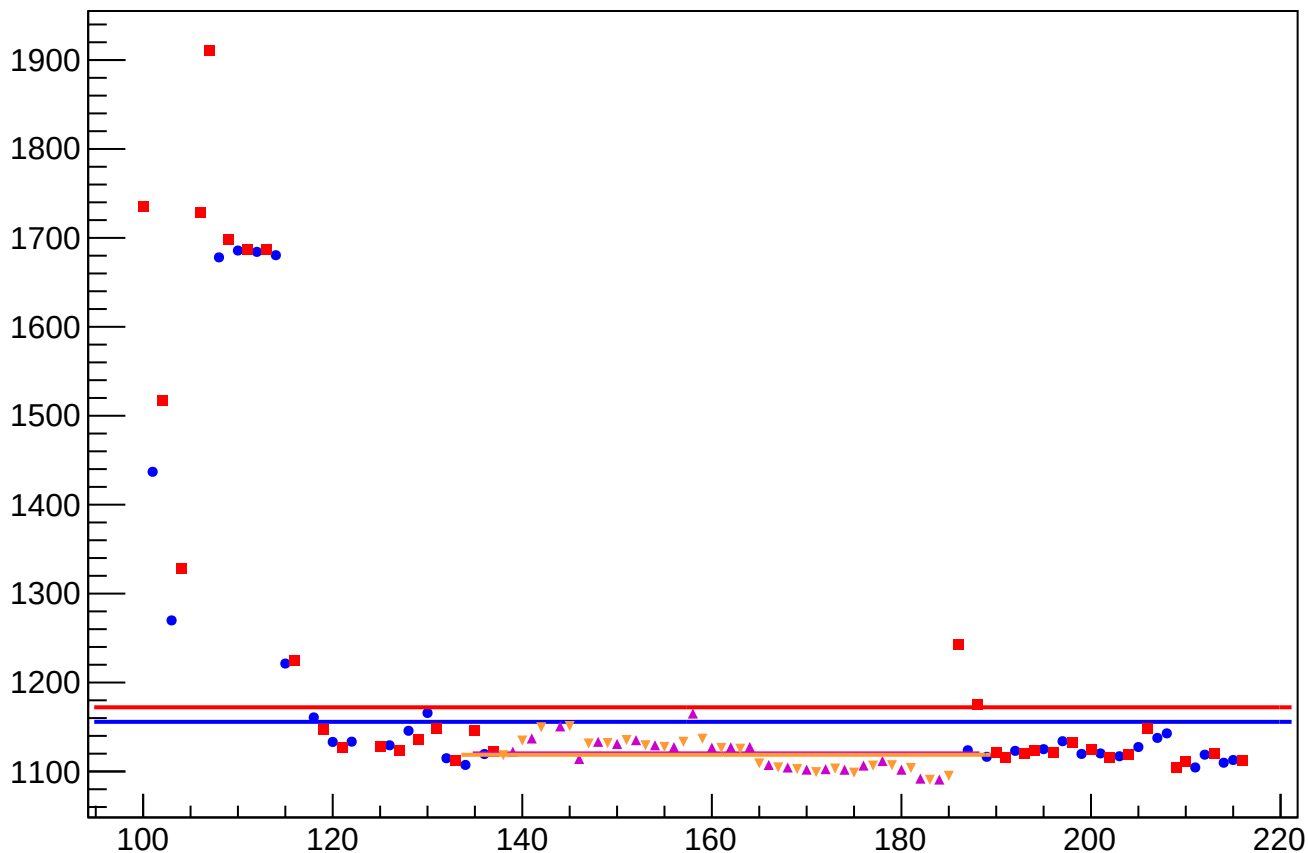
Left In:  $-88.370 \pm 261.602$   $\chi^2/\text{NDF}$ : 20.9/22

+ sign  $119.657 \pm 185.219$   $\chi^2/\text{NDF}$ : 44.8/54

All:  $-67.569 \pm 131.492$   $\chi^2/\text{NDF}$ : 109.7/111

- sign  $-257.814 \pm 186.706$   $\chi^2/\text{NDF}$ : 62.8/56

# eigen\_cor\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1155.784 $\pm$ 0.187  $\chi^2$ /NDF: 362356.4/30

Left Out: 1118.733 $\pm$ 0.184  $\chi^2$ /NDF: 8205.0/23

Right Out: 1172.152 $\pm$ 0.188  $\chi^2$ /NDF: 569988.0/33

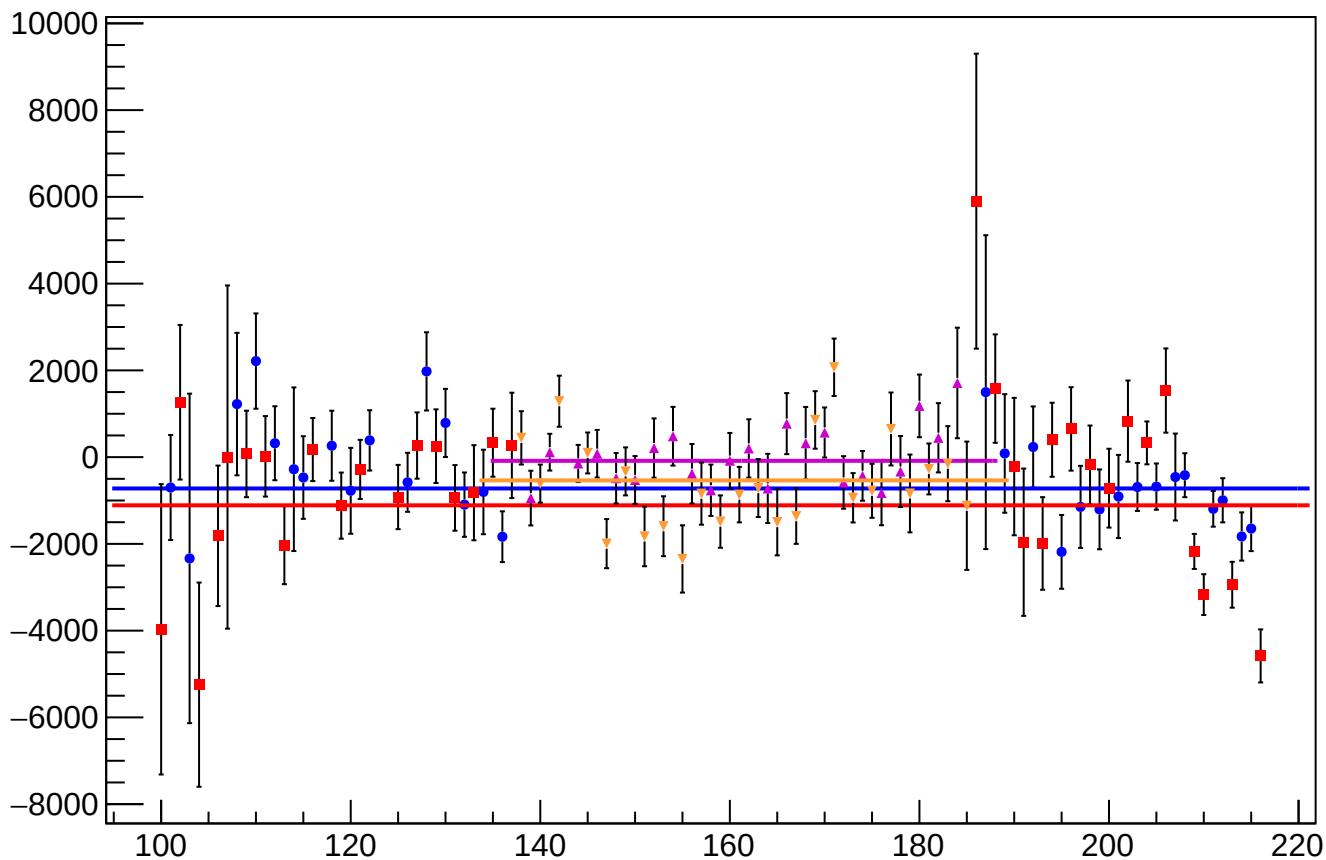
Left In: 1120.308 $\pm$ 0.185  $\chi^2$ /NDF: 9479.7/22

+ sign 1136.933 $\pm$ 0.131  $\chi^2$ /NDF: 390562.9/54

All: 1141.304 $\pm$ 0.093  $\chi^2$ /NDF: 1010813.9/11

- sign 1145.744 $\pm$ 0.132  $\chi^2$ /NDF: 618006.1/56

asym\_usl\_atl1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-722.266 \pm 134.747$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-535.930 \pm 130.646$   $\chi^2/\text{NDF}: 61.6/23$

Right Out:  $-1111.030 \pm 140.807$   $\chi^2/\text{NDF}: 133.5/33$

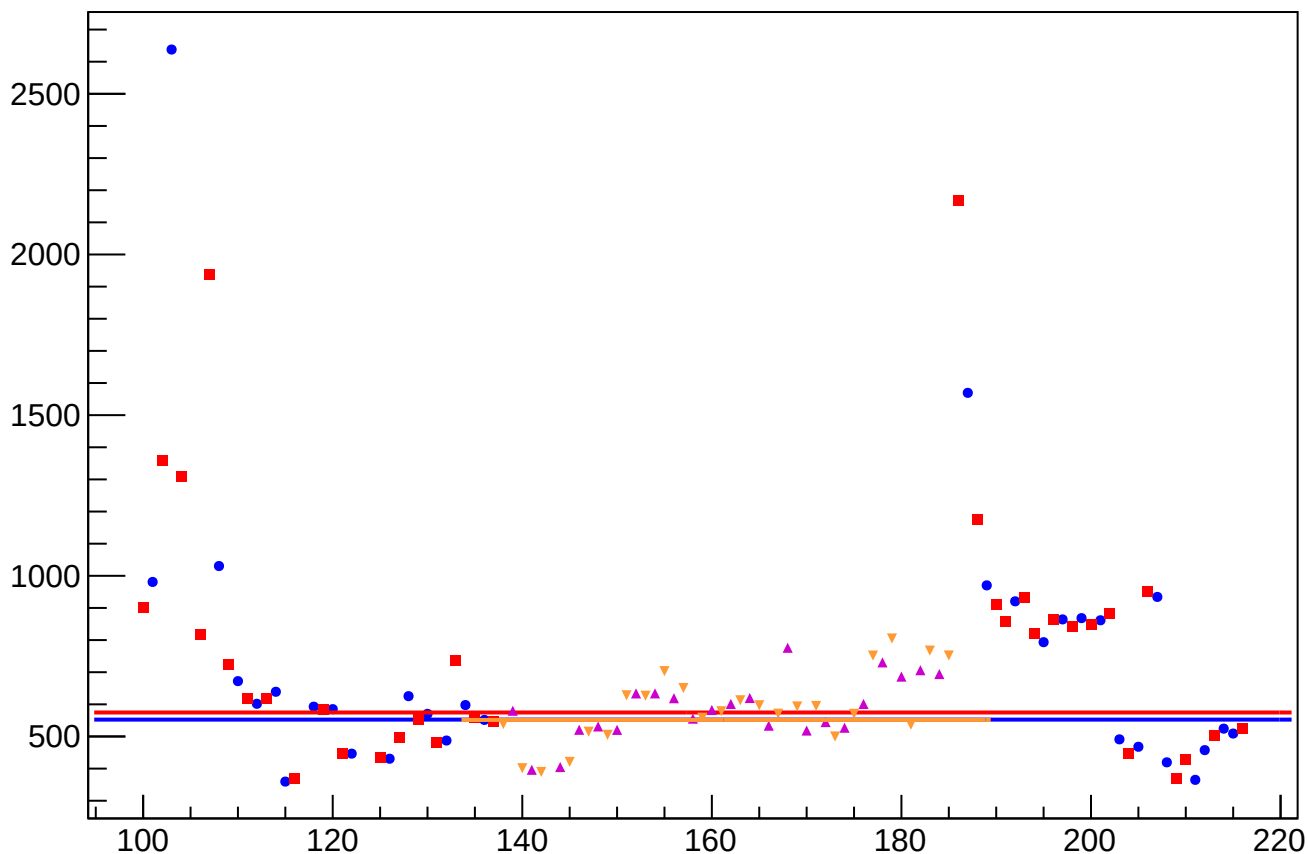
Left In:  $-85.243 \pm 130.966$   $\chi^2/\text{NDF}: 17.1/22$

+ sign  $-626.219 \pm 93.797$   $\chi^2/\text{NDF}: 107.9/54$

All:  $-594.351 \pm 67.055$   $\chi^2/\text{NDF}: 287.2/111$

- sign  $-561.039 \pm 95.897$   $\chi^2/\text{NDF}: 179.1/56$

asym\_usl\_atl1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 552.475+/-0.095  $\chi^2/\text{NDF}$ : 3775350.2/30

Left Out: 551.439+/-0.092  $\chi^2/\text{NDF}$ :1226632.2/23

Right Out: 574.622+/-0.100  $\chi^2/\text{NDF}$ : 4726187.3/33

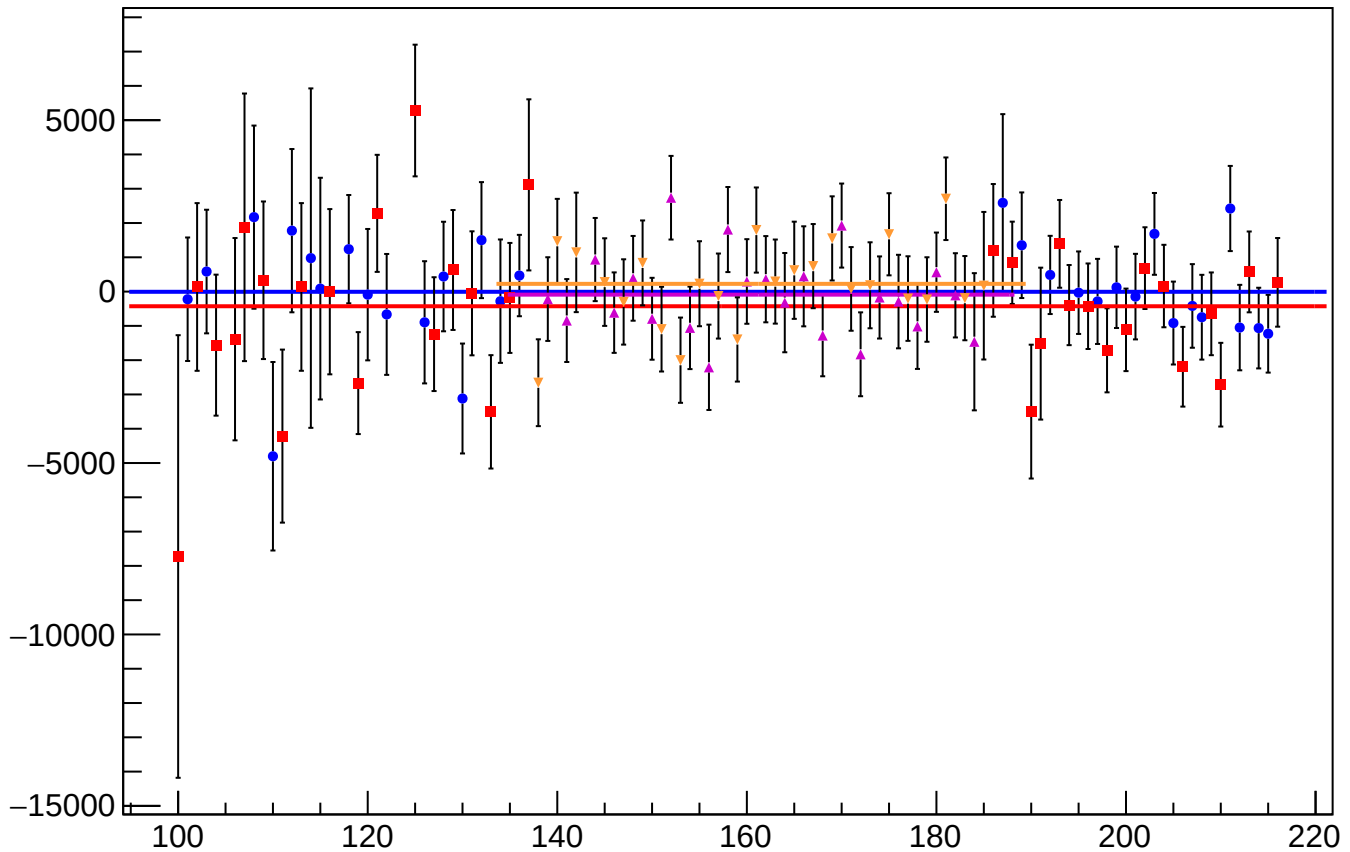
Left In: 551.335+/-0.093  $\chi^2/\text{NDF}$ :1061731.9/22

+ sign 551.941+/-0.066  $\chi^2/\text{NDF}$ : 5002043.3/54

All: 556.926+/-0.047  $\chi^2/\text{NDF}$ : 10830843.6/11

- sign 562.137+/-0.068  $\chi^2/\text{NDF}$ : 5817247.2/56

# dit\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $-5.850 \pm 265.394$   $\chi^2/\text{NDF}$ : 21.9/30

Left Out:  $225.663 \pm 259.829$   $\chi^2/\text{NDF}$ : 22.2/23

Right Out:  $-427.604 \pm 268.685$   $\chi^2/\text{NDF}$ : 40.3/33

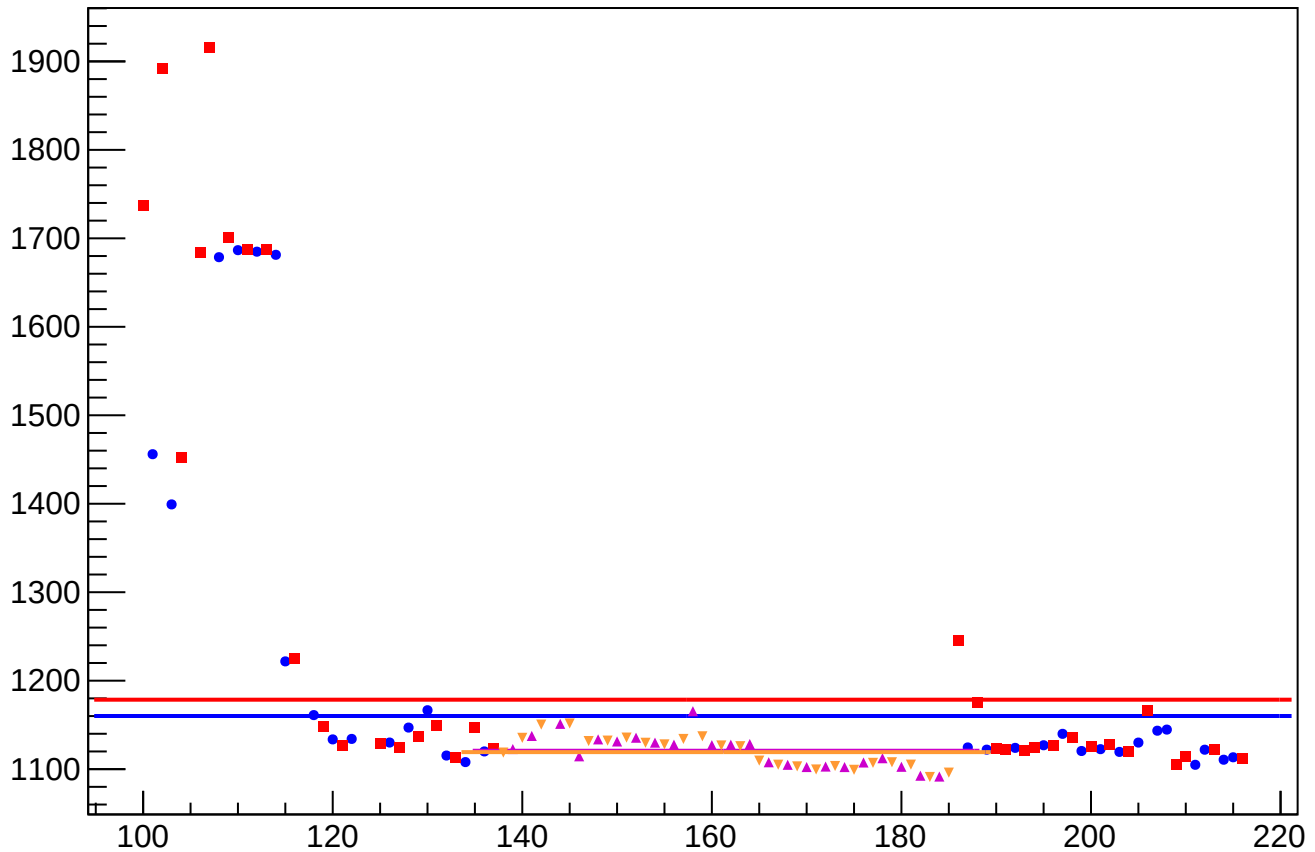
Left In:  $-89.078 \pm 261.717$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $112.359 \pm 185.663$   $\chi^2/\text{NDF}$ : 44.4/54

All:  $-68.988 \pm 131.920$   $\chi^2/\text{NDF}$ : 108.0/111

- sign  $-253.895 \pm 187.477$   $\chi^2/\text{NDF}$ : 61.7/56

# dit\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1160.079 $\pm$ 0.188  $\chi^2$ /NDF: 391600.8/30

Left Out: 1119.258 $\pm$ 0.184  $\chi^2$ /NDF: 8143.3/23

Right Out: 1178.512 $\pm$ 0.190  $\chi^2$ /NDF: 690743.8/33

Left In: 1120.800 $\pm$ 0.185  $\chi^2$ /NDF: 9426.5/22

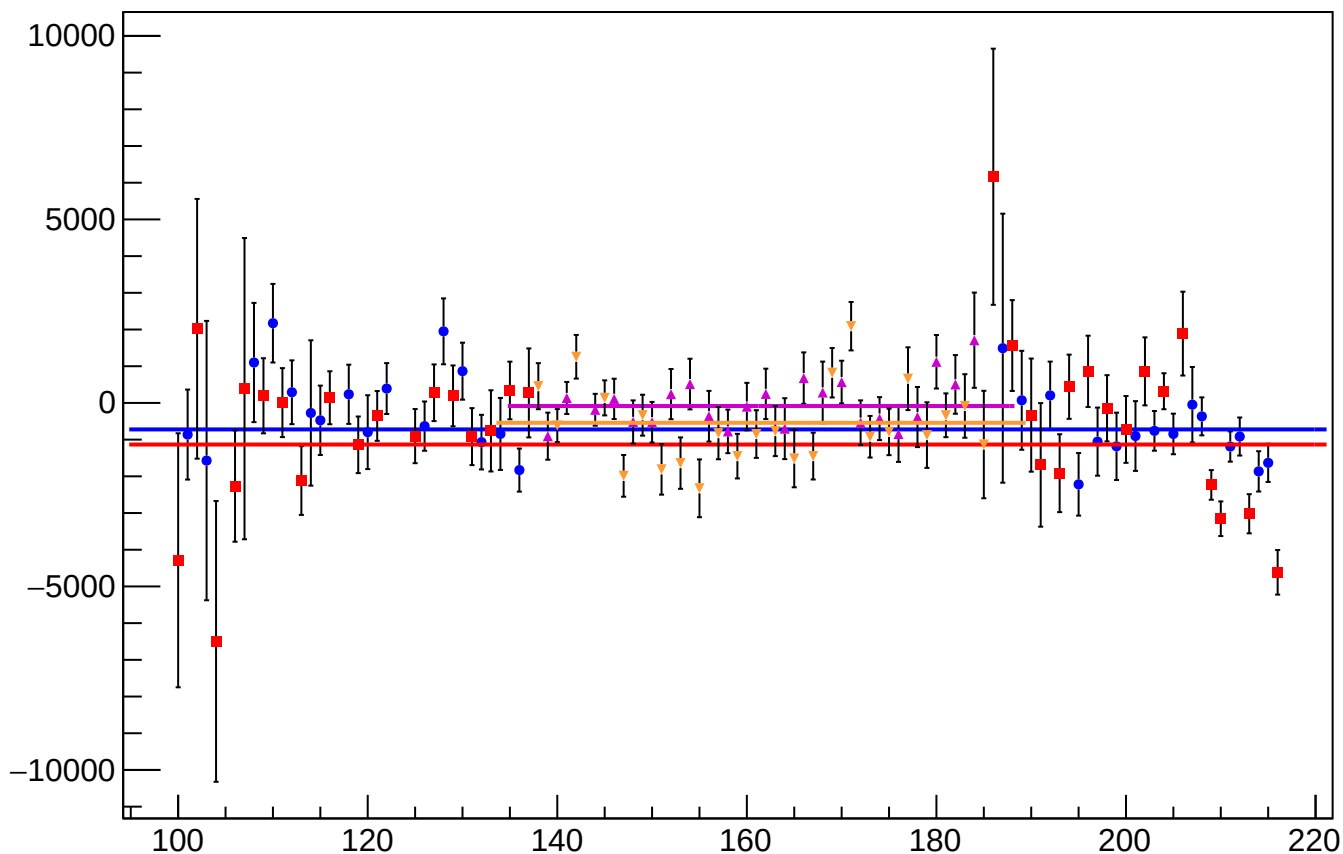
+ sign 1139.236 $\pm$ 0.131  $\chi^2$ /NDF: 423904.2/54

All: 1144.020 $\pm$ 0.093  $\chi^2$ /NDF: 1174103.9/11

- sign 1148.898 $\pm$ 0.133  $\chi^2$ /NDF: 747518.0/56



# asym\_usl\_atl1\_dd\_dit\_correction\_mean vs Slug



Right In: -721.752 $\pm$ 135.105  $\chi^2$ /NDF: 45.9/30

Left Out: -541.592 $\pm$ 132.012  $\chi^2$ /NDF:60.9/23

Right Out: -1133.761 $\pm$ 141.970  $\chi^2$ /NDF: 134.5/33

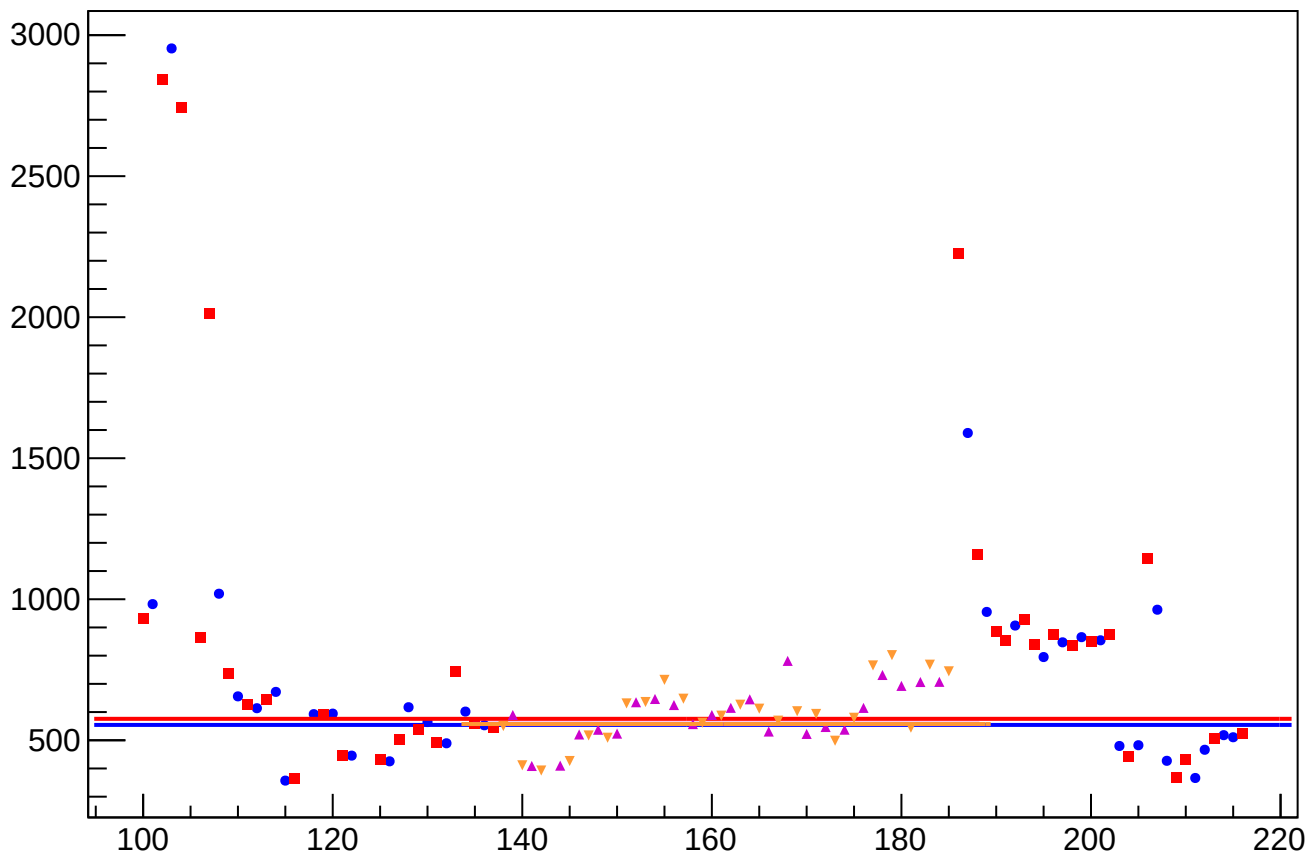
Left In: -84.122 $\pm$ 132.548  $\chi^2$ /NDF:16.4/22

+ sign -629.586 $\pm$ 94.421  $\chi^2$ /NDF: 107.7/54

All: -602.001 $\pm$ 67.620  $\chi^2$ /NDF: 288.0/111

- sign -572.958 $\pm$ 96.886  $\chi^2$ /NDF: 180.1/56

asym\_usl\_atl1\_dd\_dit\_correction\_rms vs Slug



Right In: 554.436 $\pm$ 0.096  $\chi^2$ /NDF: 3908291.9/30

Left Out: 557.592 $\pm$ 0.093  $\chi^2$ /NDF: 1193270.2/23

Right Out: 576.050 $\pm$ 0.100  $\chi^2$ /NDF: 5861406.8/33

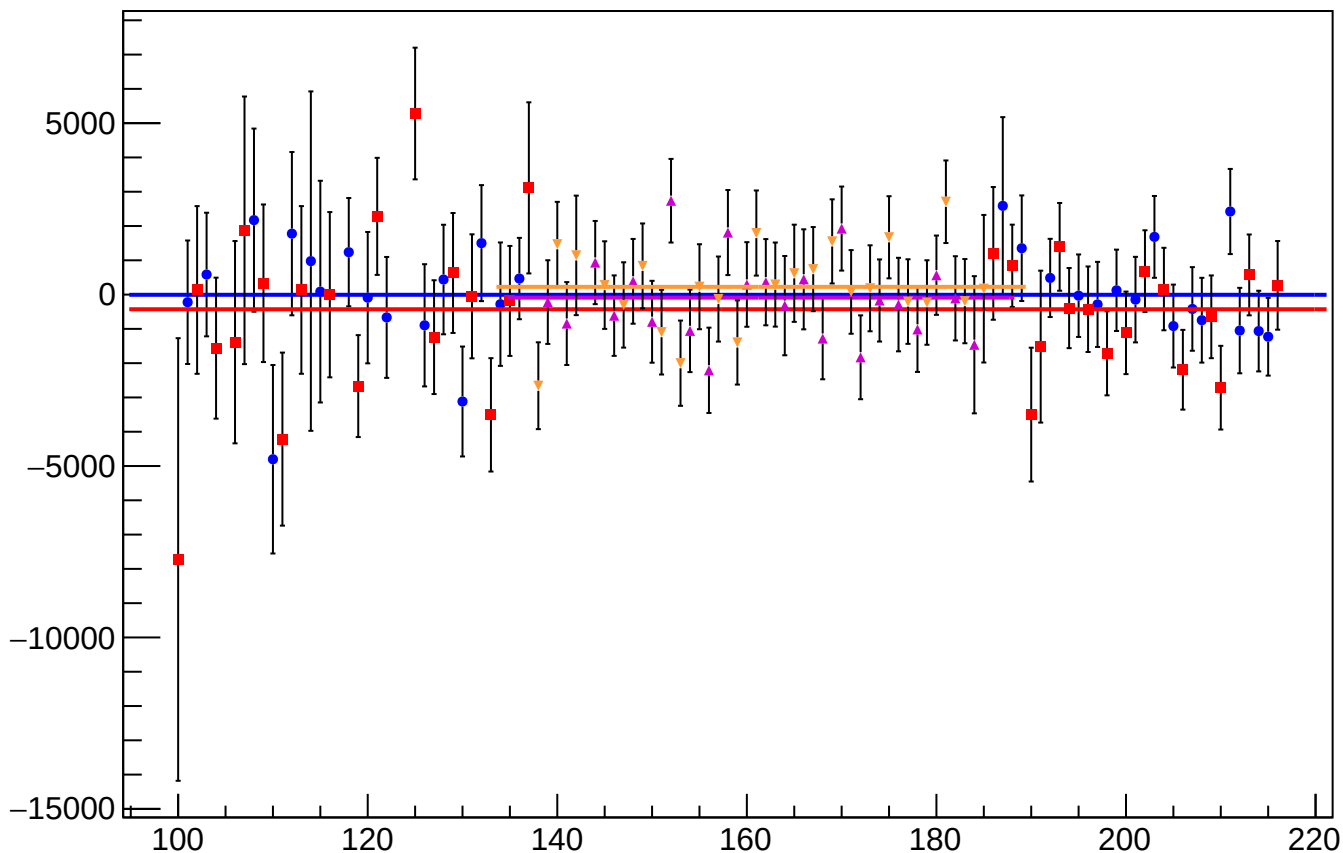
Left In: 558.393 $\pm$ 0.094  $\chi^2$ /NDF: 1027814.4/22

+ sign 556.050 $\pm$ 0.067  $\chi^2$ /NDF: 5102120.2/54

All: 561.197 $\pm$ 0.048  $\chi^2$ /NDF: 12020070.5/12

- sign 566.616 $\pm$ 0.069  $\chi^2$ /NDF: 6905750.7/56

# eigen\_dit\_asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $-5.848 \pm 265.394$   $\chi^2/\text{NDF}$ : 21.9/30

Left Out:  $225.661 \pm 259.829$   $\chi^2/\text{NDF}$ : 22.2/23

Right Out:  $-427.603 \pm 268.685$   $\chi^2/\text{NDF}$ : 40.3/33

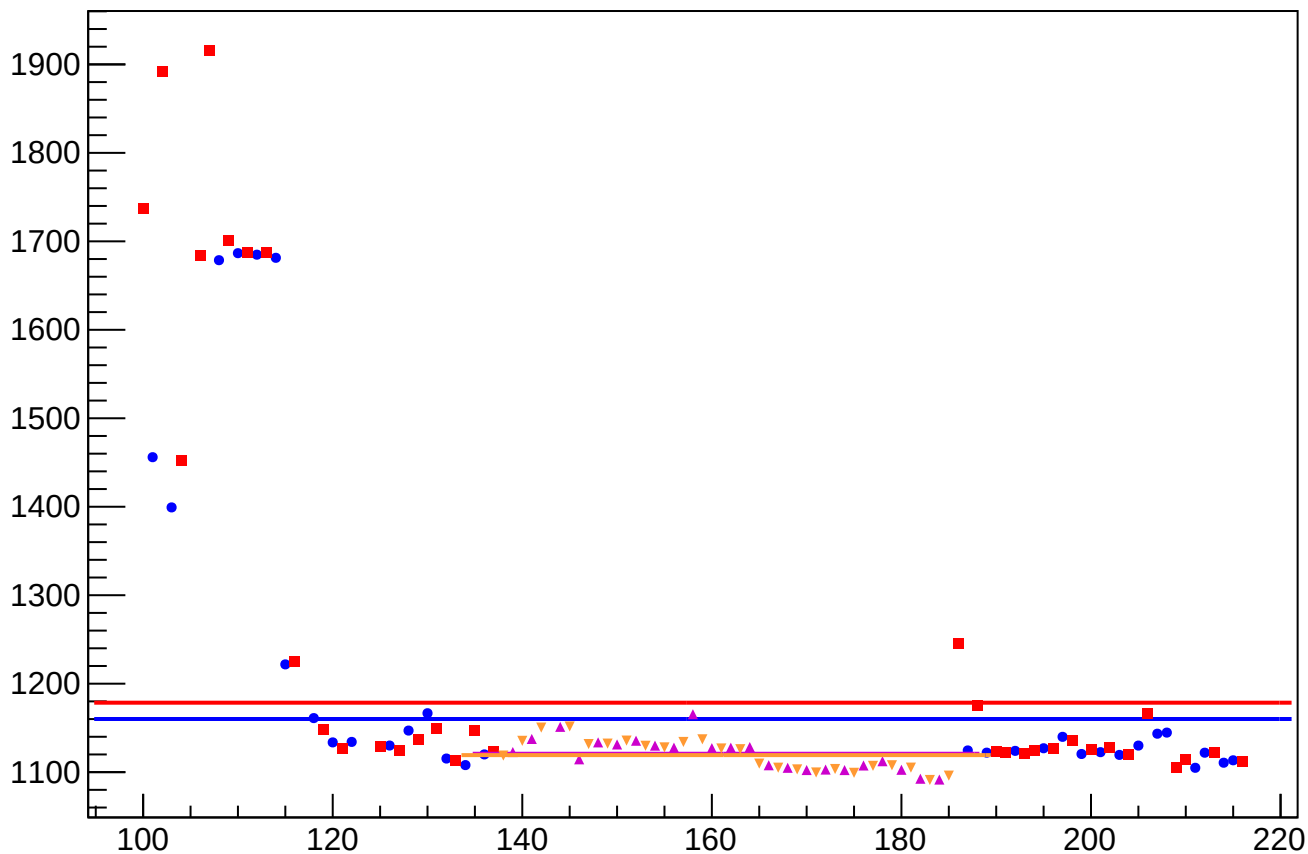
Left In:  $-89.079 \pm 261.717$   $\chi^2/\text{NDF}$ : 20.6/22

+ sign  $112.359 \pm 185.663$   $\chi^2/\text{NDF}$ : 44.4/54

All:  $-68.988 \pm 131.920$   $\chi^2/\text{NDF}$ : 108.0/111

- sign  $-253.894 \pm 187.477$   $\chi^2/\text{NDF}$ : 61.7/56

# eigen\_dit\_asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1160.079+/-0.188  $\chi^2/\text{NDF}$ : 391600.3/30

Left Out: 1119.258+/-0.184  $\chi^2/\text{NDF}$ : 8143.3/23

Right Out: 1178.512+/-0.190  $\chi^2/\text{NDF}$ : 690743.1/33

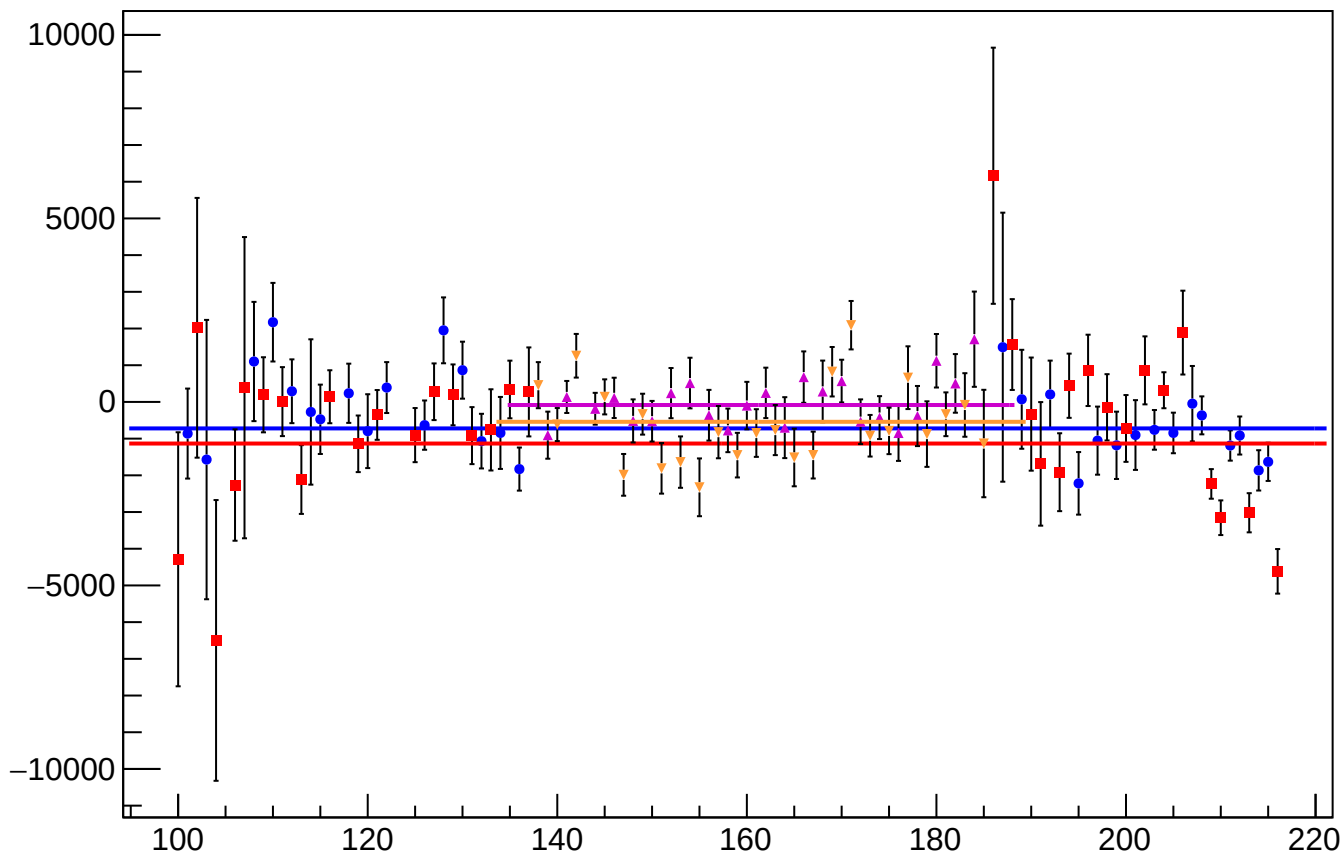
Left In: 1120.800+/-0.185  $\chi^2/\text{NDF}$ : 9426.5/22

+ sign 1139.236+/-0.131  $\chi^2/\text{NDF}$ : 423903.7/54

All: 1144.020+/-0.093  $\chi^2/\text{NDF}$ : 1174102.7/11

- sign 1148.898+/-0.133  $\chi^2/\text{NDF}$ : 747517.3/56

asym\_usl\_atl1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -721.752 $\pm$ 135.105  $\chi^2$ /NDF: 45.9/30

Left Out: -541.591 $\pm$ 132.012  $\chi^2$ /NDF:60.9/23

Right Out: -1133.761 $\pm$ 141.970  $\chi^2$ /NDF: 134.5/33

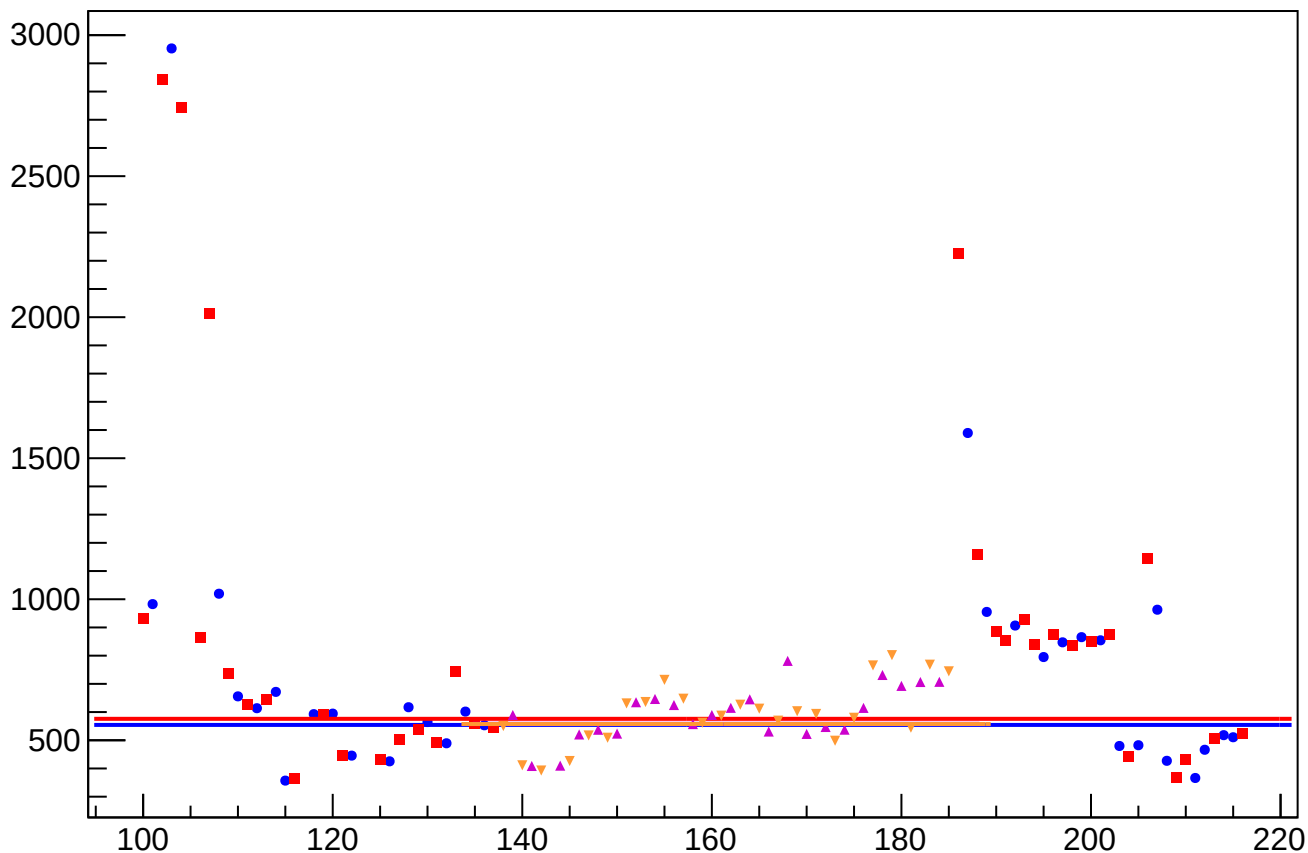
Left In: -84.122 $\pm$ 132.548  $\chi^2$ /NDF:16.4/22

+ sign -629.585 $\pm$ 94.421  $\chi^2$ /NDF: 107.7/54

All: -602.001 $\pm$ 67.620  $\chi^2$ /NDF: 288.0/111

- sign -572.958 $\pm$ 96.885  $\chi^2$ /NDF: 180.1/56

asym\_usl\_atl1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 554.436+/-0.096  $\chi^2/\text{NDF}$ : 3908294.7/30

Left Out: 557.591+/-0.093  $\chi^2/\text{NDF}$ : 1193291.2/23

Right Out: 576.050+/-0.100  $\chi^2/\text{NDF}$ : 5861414.8/33

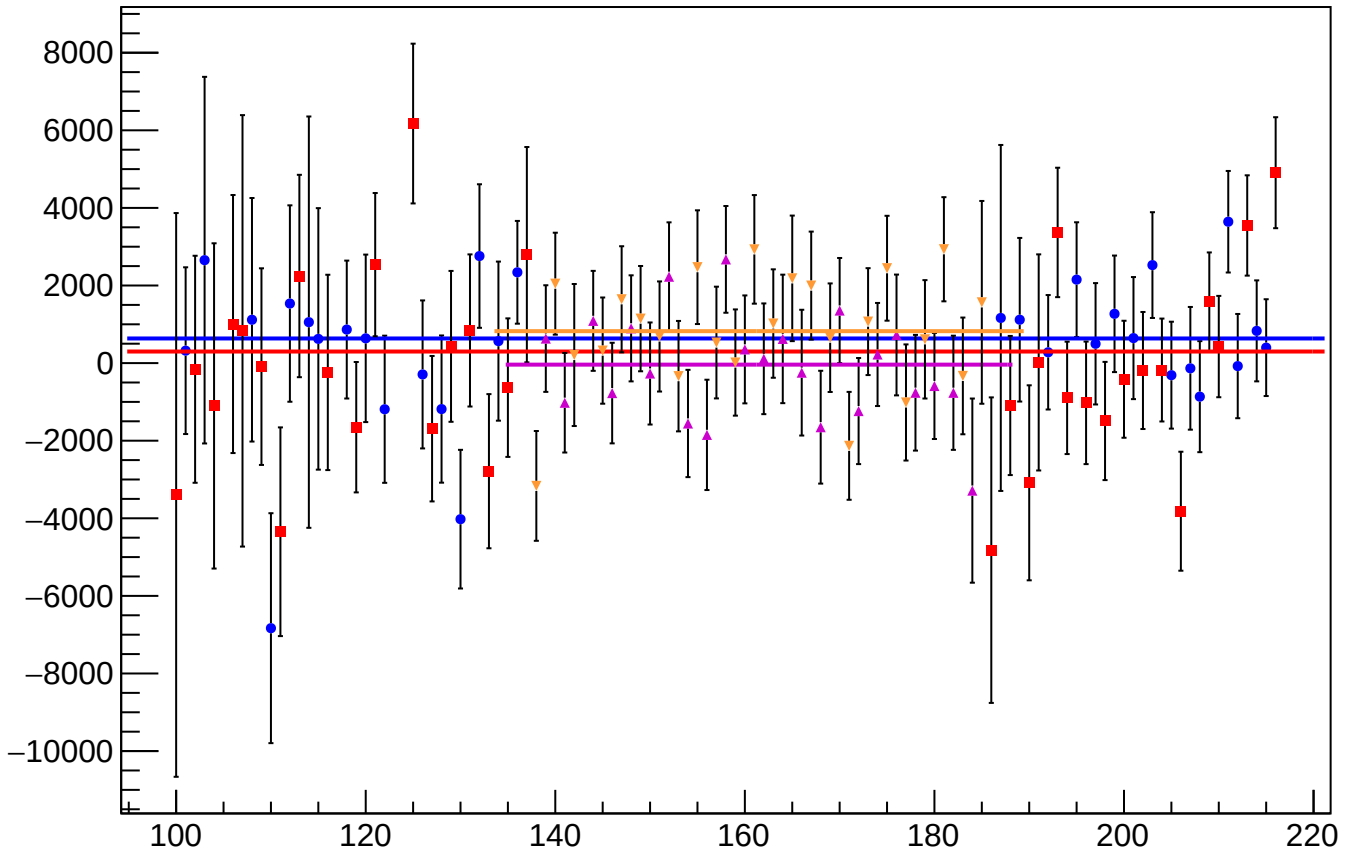
Left In: 558.392+/-0.094  $\chi^2/\text{NDF}$ : 1027828.9/22

+ sign 556.050+/-0.067  $\chi^2/\text{NDF}$ : 5102144.0/54

All: 561.197+/-0.048  $\chi^2/\text{NDF}$ : 12020117.6/11

- sign 566.616+/-0.069  $\chi^2/\text{NDF}$ : 6905773.8/56

# asym\_usl\_atl1\_dd\_mean vs Slug



Right In:  $634.911 \pm 311.521$   $\chi^2/\text{NDF}$ : 29.3/30

Left Out:  $823.319 \pm 294.835$   $\chi^2/\text{NDF}$ : 26.2/23

Right Out:  $298.312 \pm 319.444$   $\chi^2/\text{NDF}$ : 55.4/33

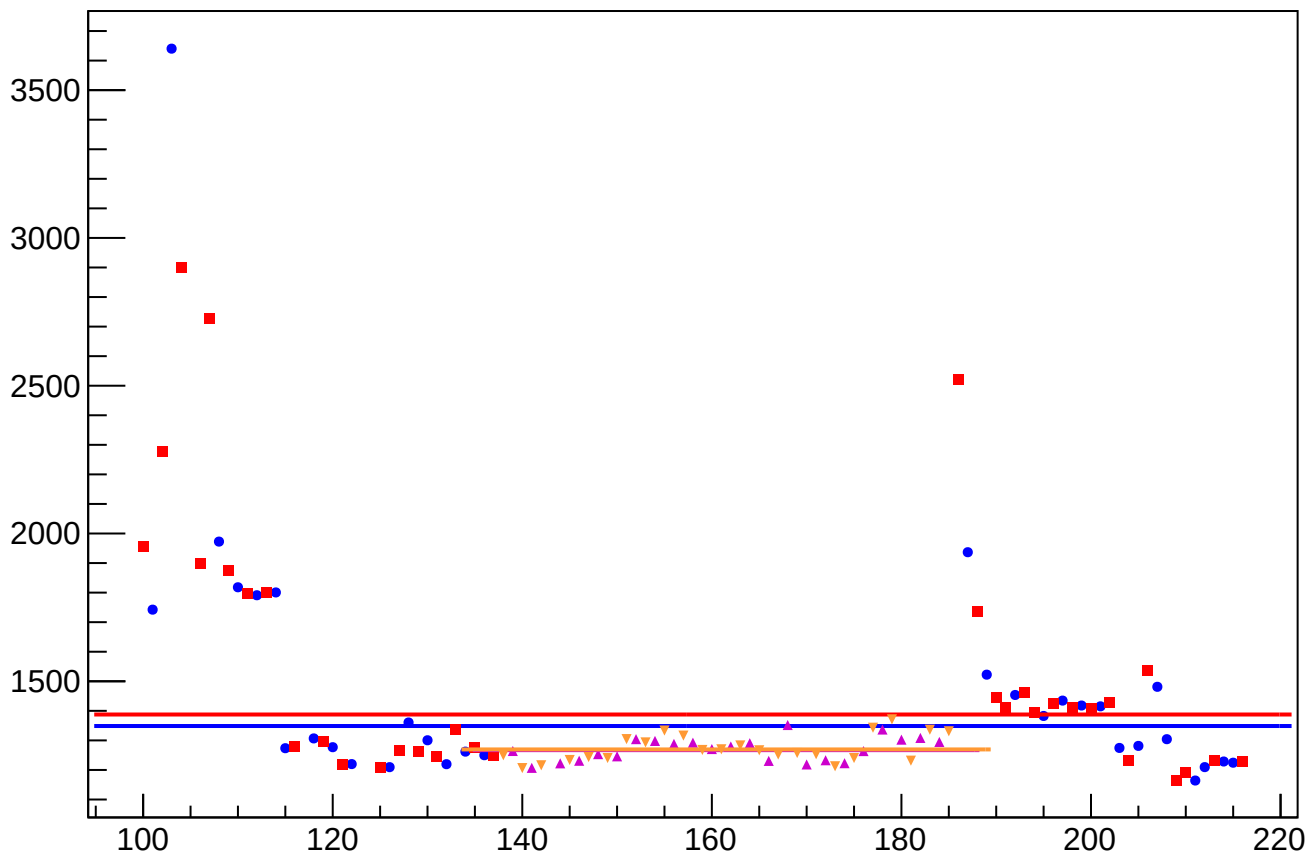
Left In:  $-39.696 \pm 296.006$   $\chi^2/\text{NDF}$ : 17.9/22

+ sign  $734.296 \pm 214.136$   $\chi^2/\text{NDF}$ : 55.7/54

All:  $429.652 \pm 152.461$   $\chi^2/\text{NDF}$ : 133.6/111

- sign  $116.454 \pm 217.121$   $\chi^2/\text{NDF}$ : 73.8/56

# asym\_usl\_atl1\_dd\_rms vs Slug



Right In: 1348.669+/-0.220  $\chi^2/\text{NDF}$ : 990784.4/30

Left Out: 1269.441+/-0.208  $\chi^2/\text{NDF}$ : 43040.3/23

Right Out: 1387.598+/-0.226  $\chi^2/\text{NDF}$ : 1329029.8/33

Left In: 1267.066+/-0.209  $\chi^2/\text{NDF}$ : 34547.0/22

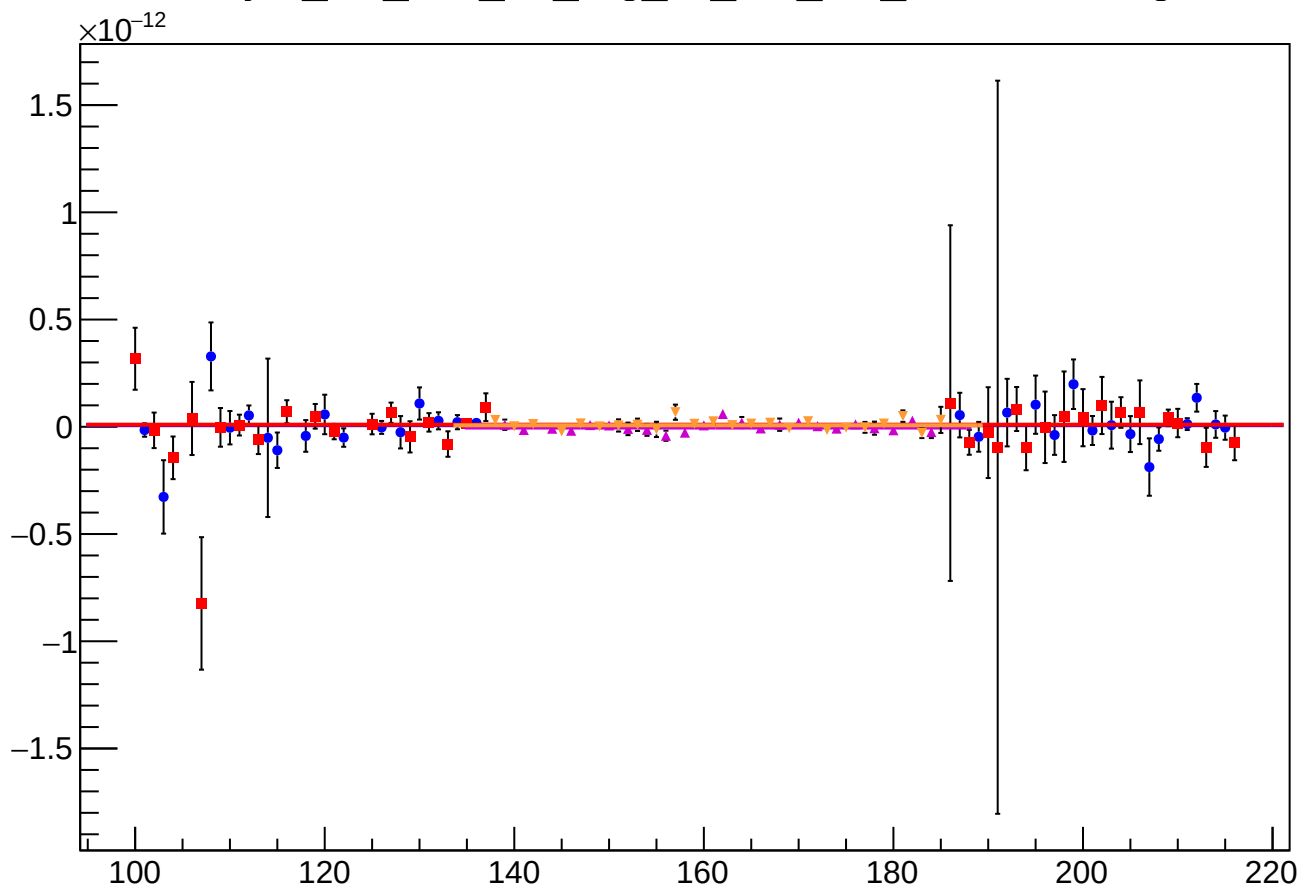
+ sign 1306.876+/-0.151  $\chi^2/\text{NDF}$ : 1102064.0/54

All: 1314.702+/-0.108  $\chi^2/\text{NDF}$ : 2624257.3/11

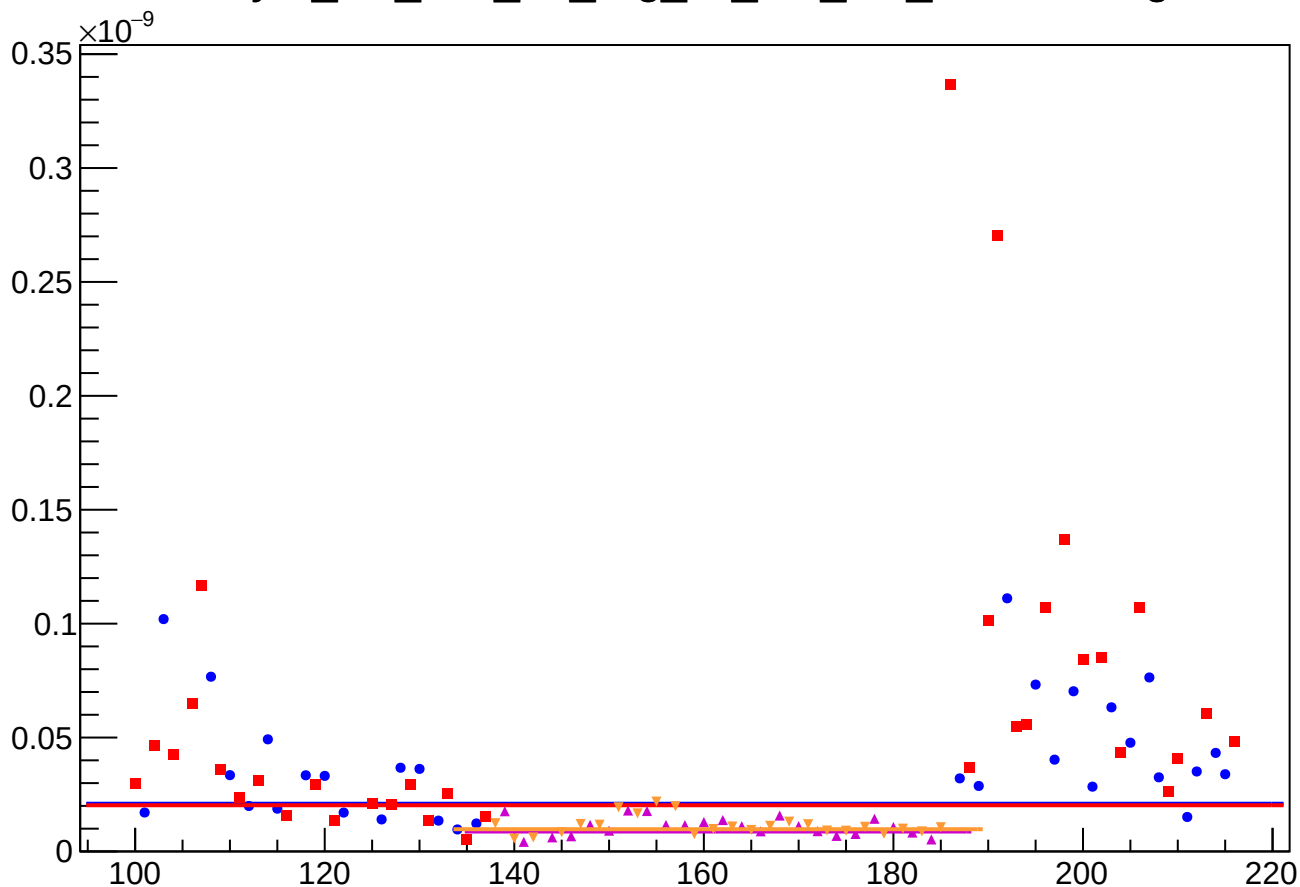
- sign 1322.749+/-0.154  $\chi^2/\text{NDF}$ : 1516775.1/56



asym\_usl\_atl1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



asym\_usl\_atl1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4851408.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1373738.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7979087.4/33

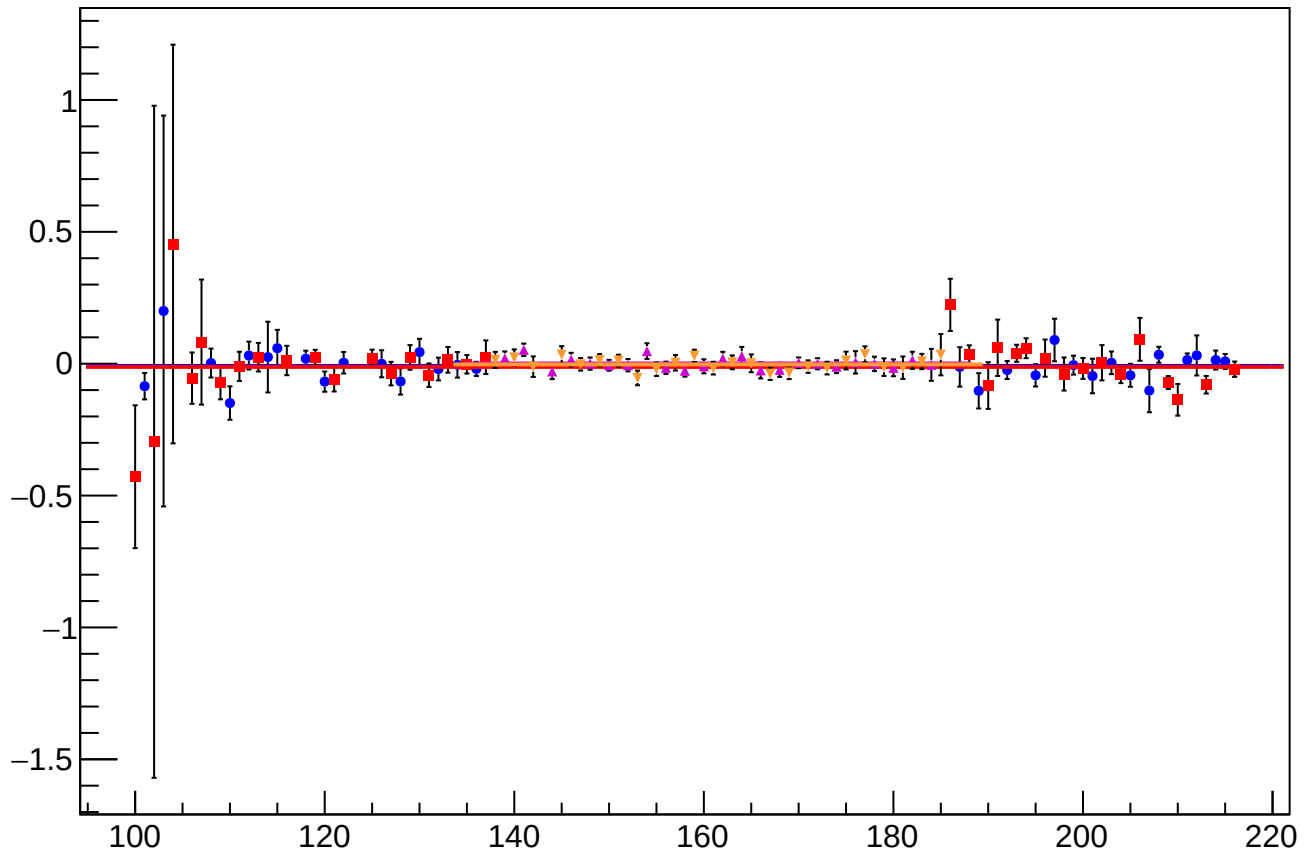
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1928867.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8754539.1/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21330348.7/111

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12447442.8/56

# asym\_usl\_atl1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: -0.008 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 25.6/30

Left Out: -0.003 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 16.3/23

Right Out: -0.012 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 42.1/33

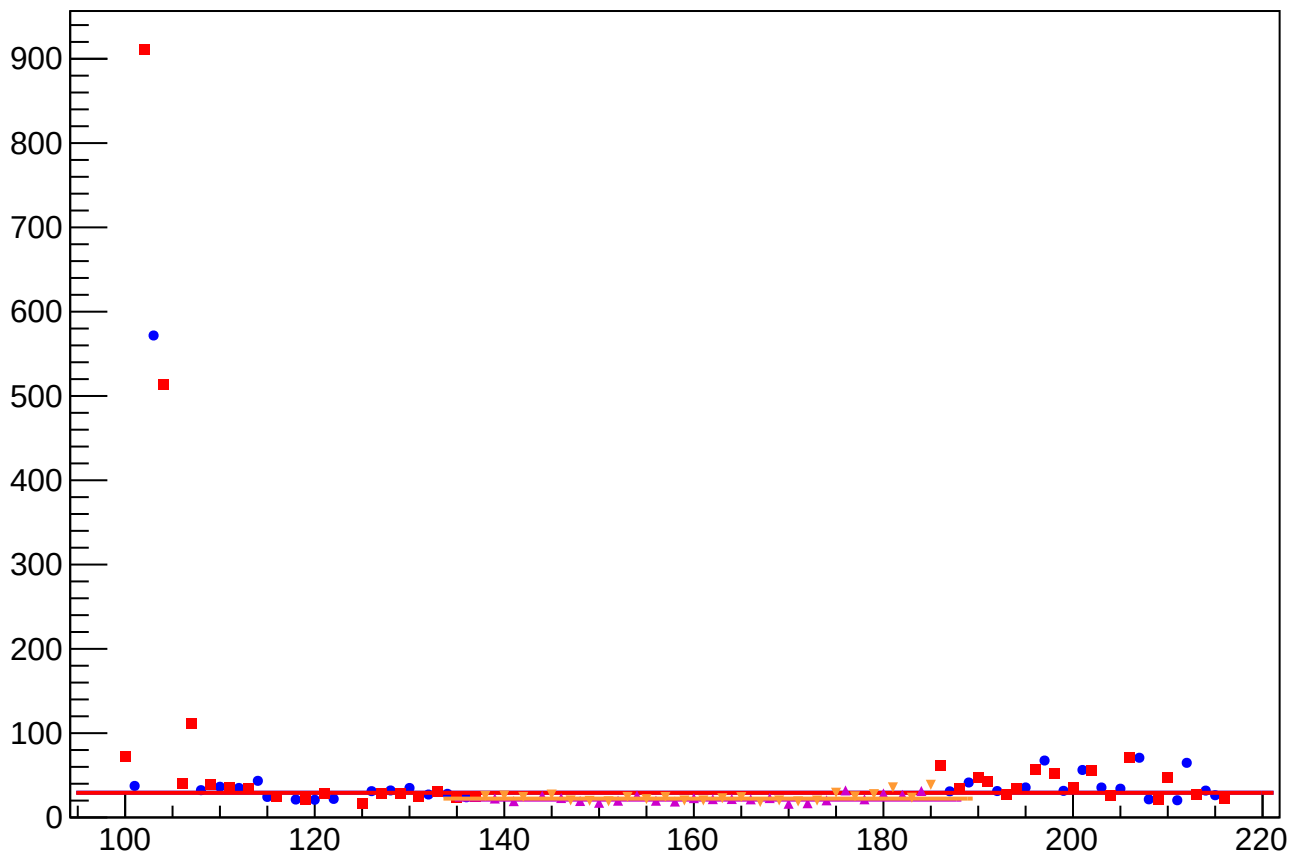
Left In: 0.001 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 14.9/22

+ sign -0.005 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 42.3/54

All: -0.004 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 101.1/111

- sign -0.003 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 58.8/56

# asym\_usl\_atl1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.368 $\pm$ 0.005  $\chi^2$ /NDF: 3973925.2/30

Left Out: 22.355 $\pm$ 0.004  $\chi^2$ /NDF: 816073.4/23

Right Out: 29.239 $\pm$ 0.006  $\chi^2$ /NDF: 5148044.3/33

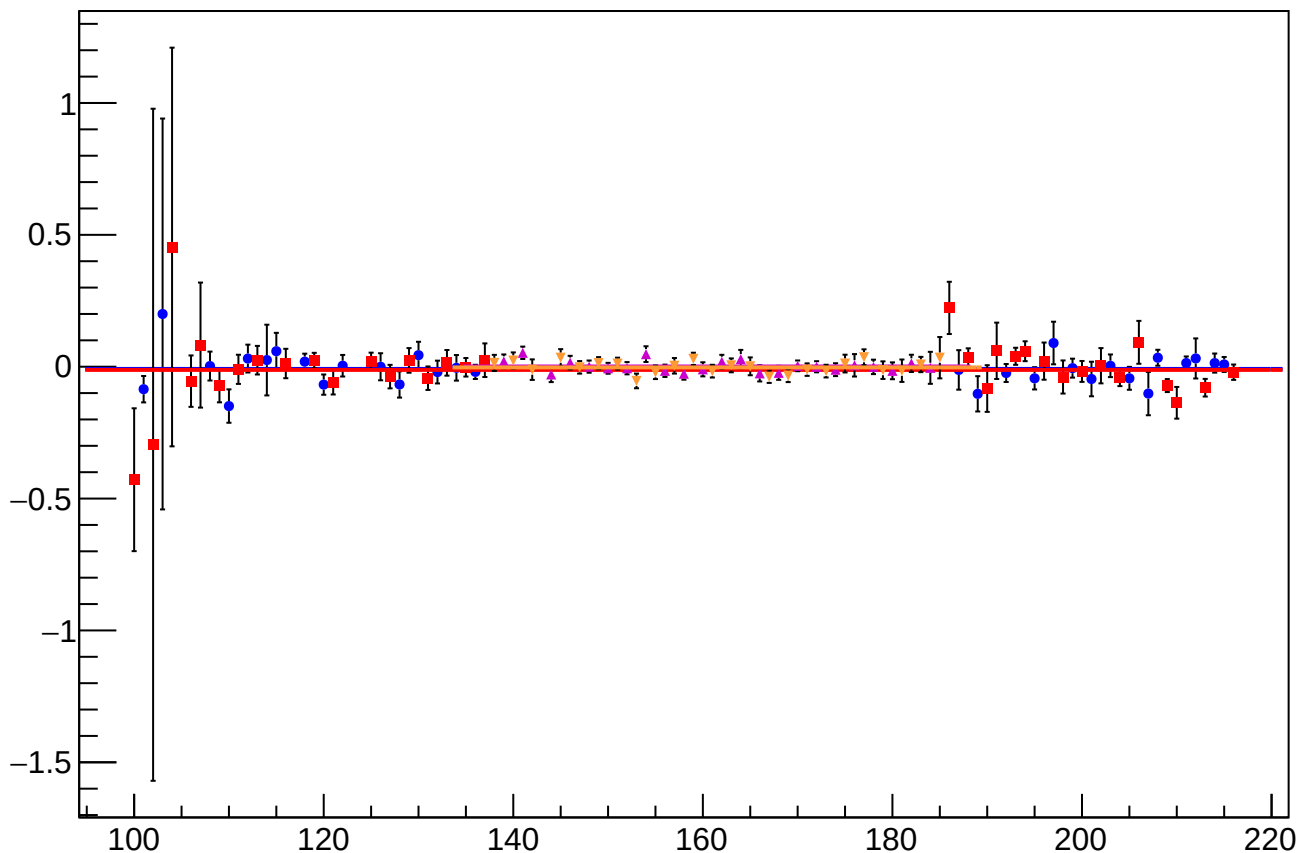
Left In: 21.099 $\pm$ 0.004  $\chi^2$ /NDF: 819255.8/22

+ sign 24.799 $\pm$ 0.003  $\chi^2$ /NDF: 5850875.1/54

All: 24.260 $\pm$ 0.002  $\chi^2$ /NDF: 13313153.3/111

- sign 23.743 $\pm$ 0.003  $\chi^2$ /NDF: 7408224.5/56

asym\_usl\_atl1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $-0.012 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.1/33

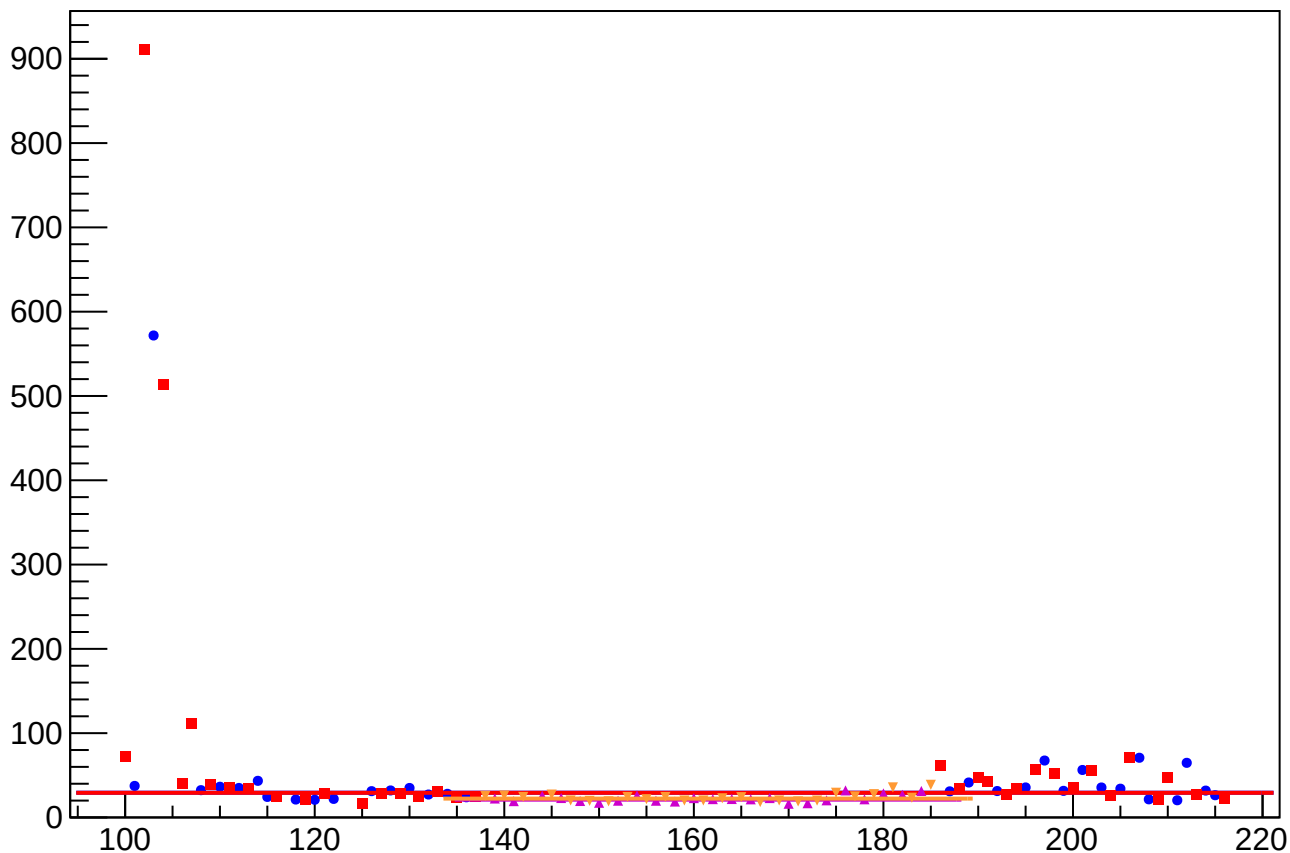
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 42.3/54

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.1/111

- sign  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.8/56

asym\_usl\_atl1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 29.368 $\pm$ 0.005  $\chi^2$ /NDF: 3973925.2/30

Left Out: 22.355 $\pm$ 0.004  $\chi^2$ /NDF: 816073.4/23

Right Out: 29.239 $\pm$ 0.006  $\chi^2$ /NDF: 5148044.3/33

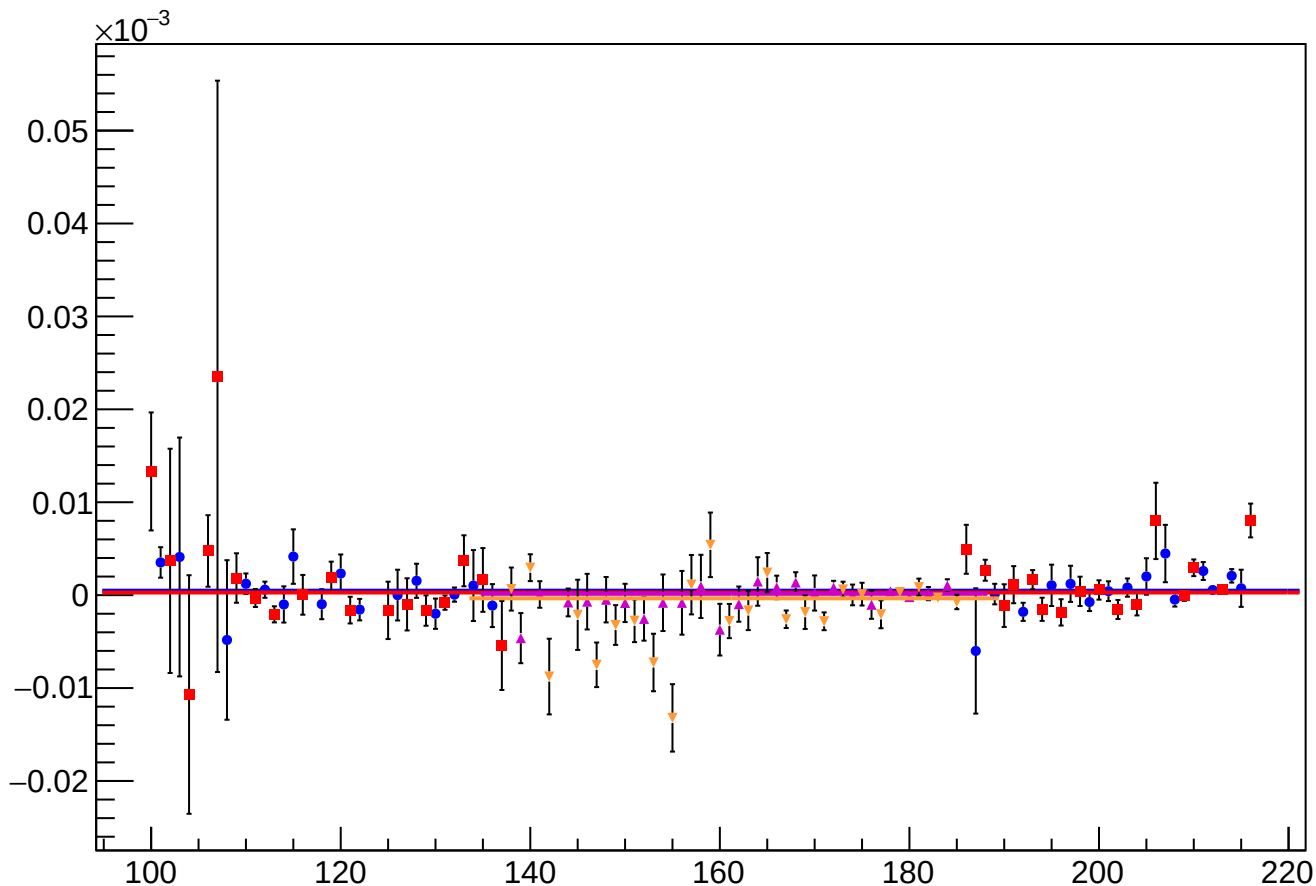
Left In: 21.099 $\pm$ 0.004  $\chi^2$ /NDF: 819255.8/22

+ sign 24.799 $\pm$ 0.003  $\chi^2$ /NDF: 5850875.1/54

All: 24.260 $\pm$ 0.002  $\chi^2$ /NDF: 13313153.3/111

- sign 23.743 $\pm$ 0.003  $\chi^2$ /NDF: 7408224.5/56

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.7/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:68.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 74.9/33

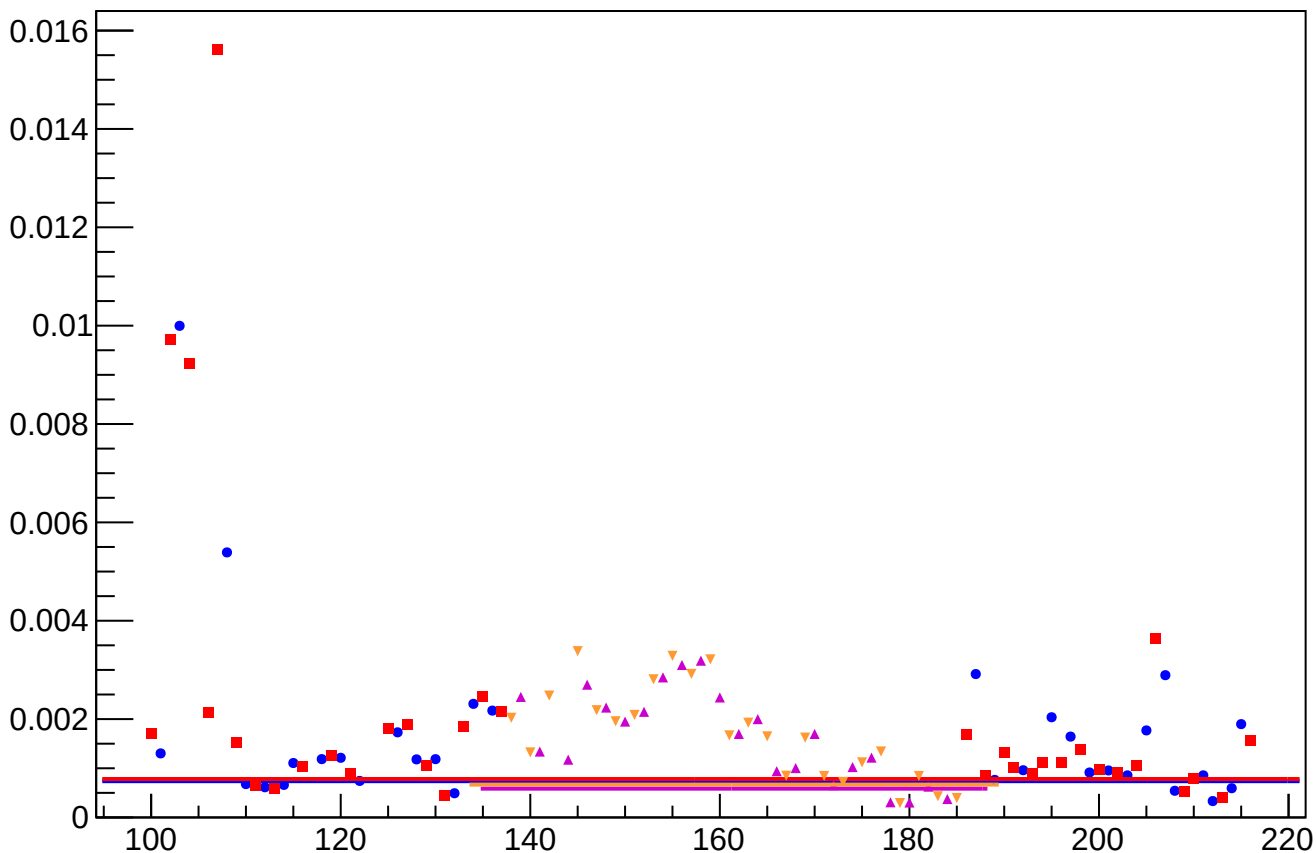
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.8/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 202.6/111

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 89.4/56

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10059907.6/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :15375915.0/23

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9182104.8/33

Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :15658683.6/22

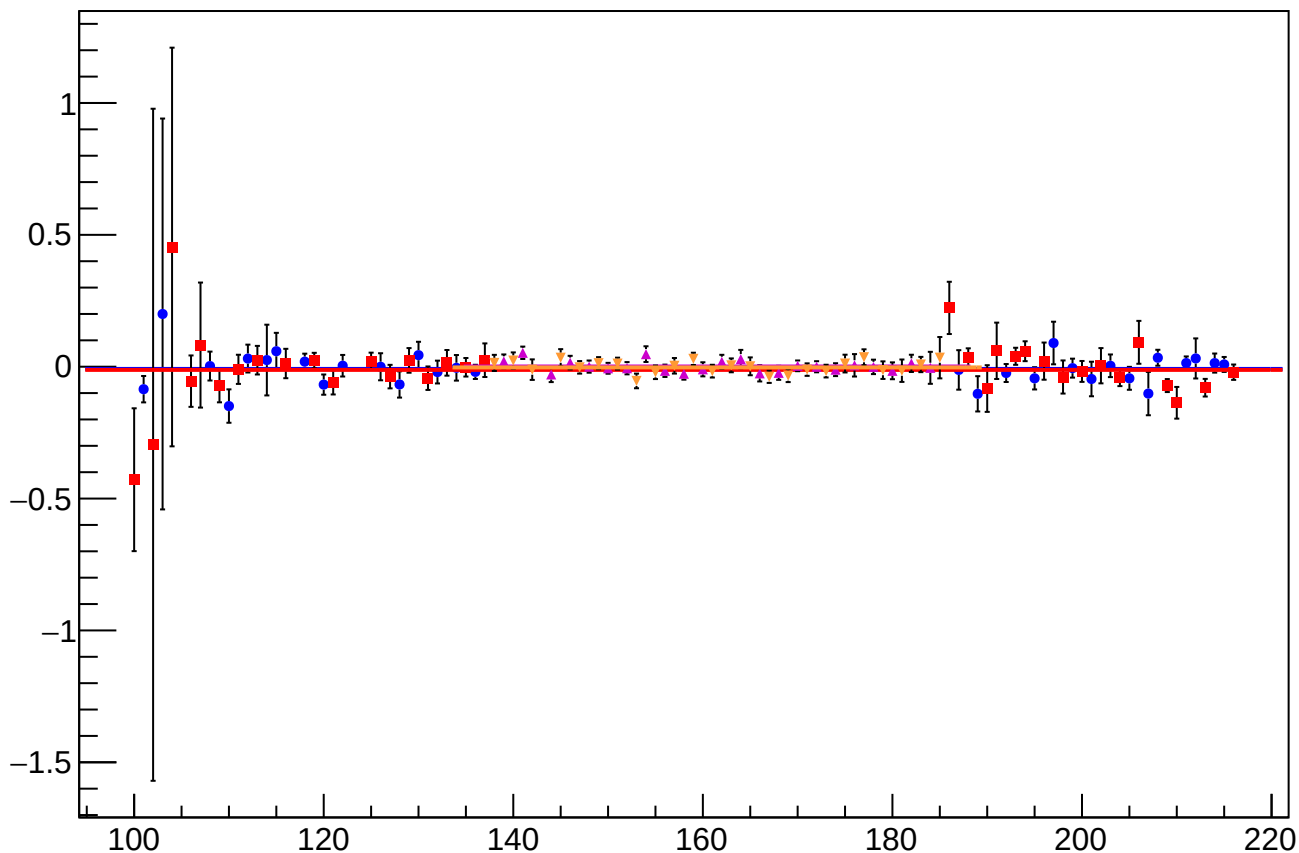
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 25550528.4/54

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 51385593.4/111

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 25782337.0/56



asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $-0.012 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.1/33

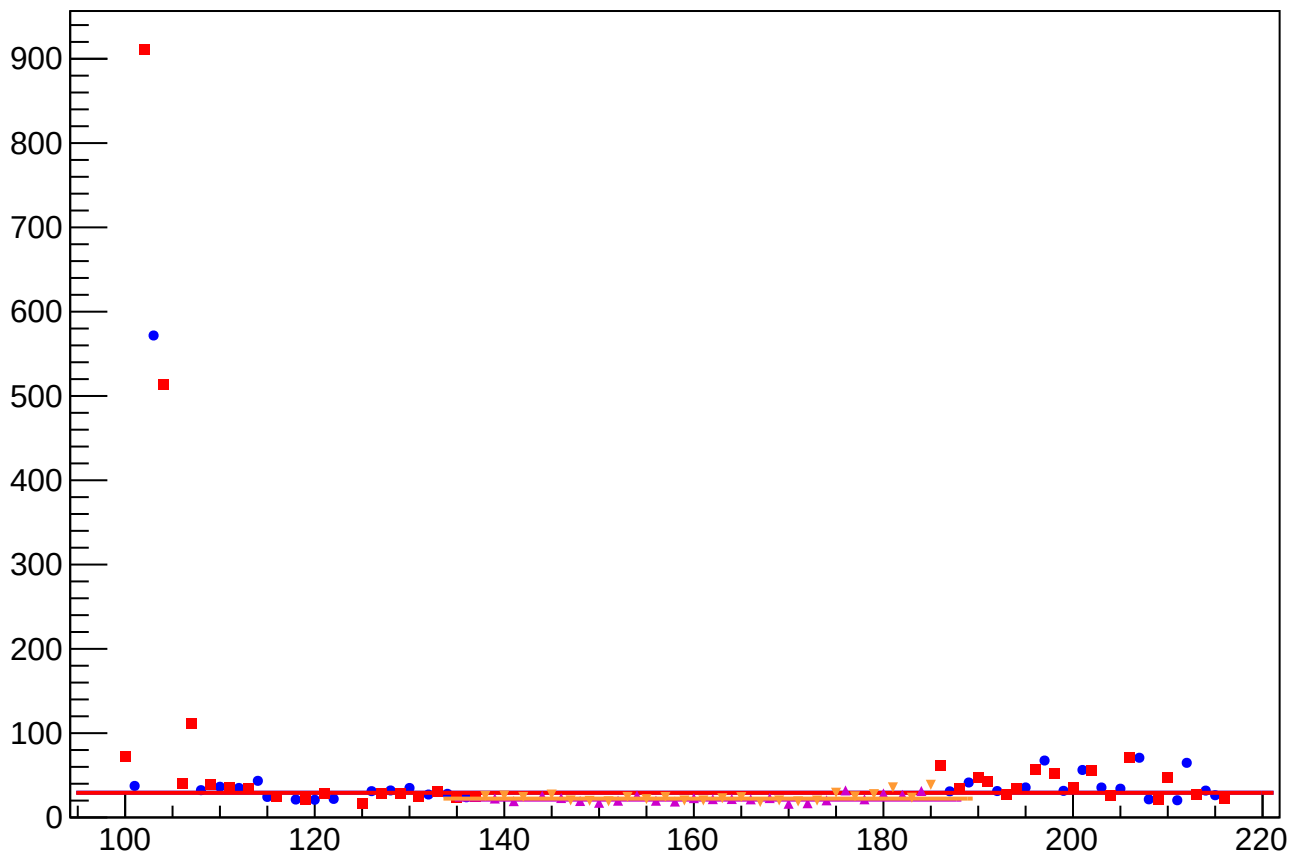
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 42.3/54

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.1/111

- sign  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.8/56

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.368 $\pm$ 0.005  $\chi^2$ /NDF: 3973979.1/30

Left Out: 22.355 $\pm$ 0.004  $\chi^2$ /NDF: 816044.6/23

Right Out: 29.239 $\pm$ 0.006  $\chi^2$ /NDF: 5148124.0/33

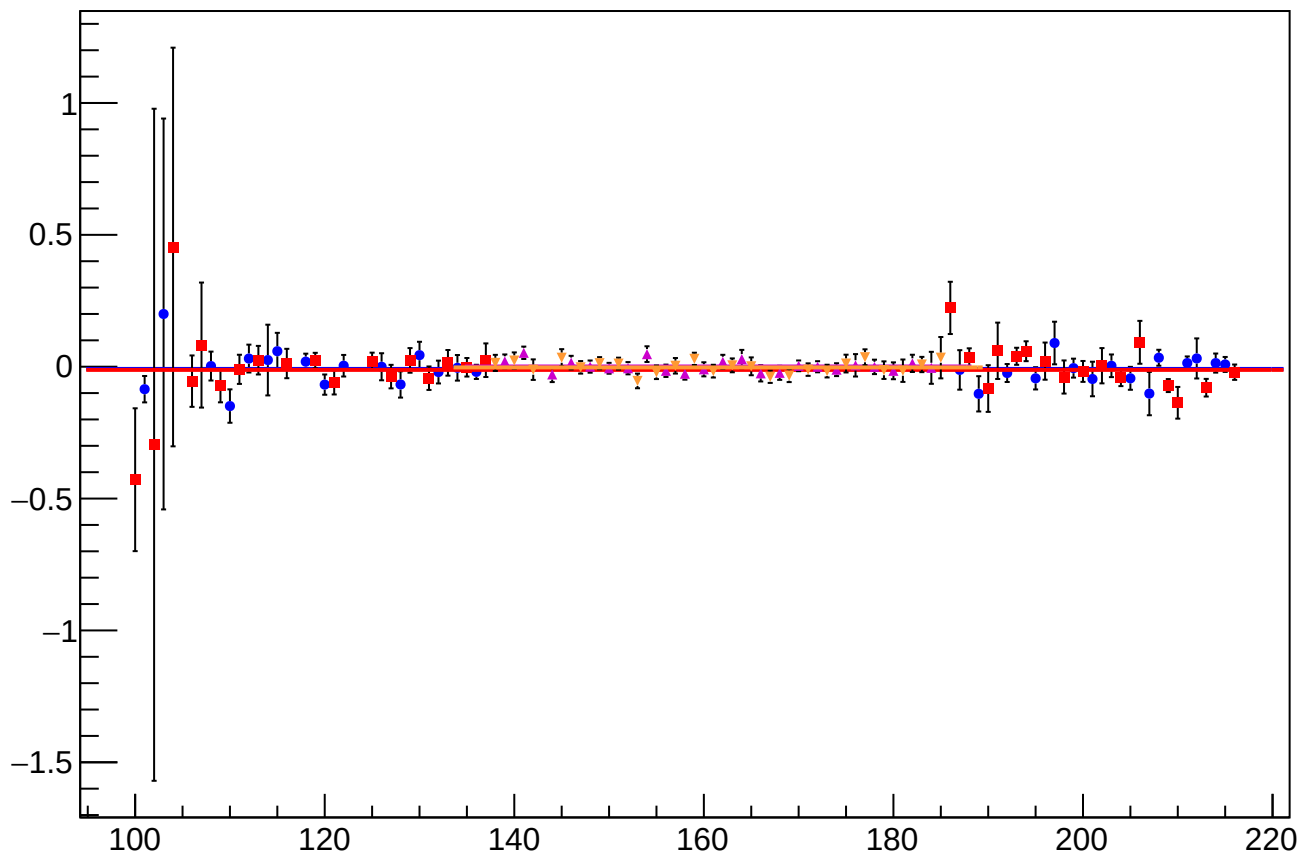
Left In: 21.099 $\pm$ 0.004  $\chi^2$ /NDF: 819268.9/22

+ sign 24.799 $\pm$ 0.003  $\chi^2$ /NDF: 5850926.6/54

All: 24.260 $\pm$ 0.002  $\chi^2$ /NDF: 13313303.6/111

- sign 23.743 $\pm$ 0.003  $\chi^2$ /NDF: 7408323.5/56

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $-0.003 \pm 0.006$   $\chi^2/\text{NDF}$ : 16.3/23

Right Out:  $-0.012 \pm 0.008$   $\chi^2/\text{NDF}$ : 42.1/33

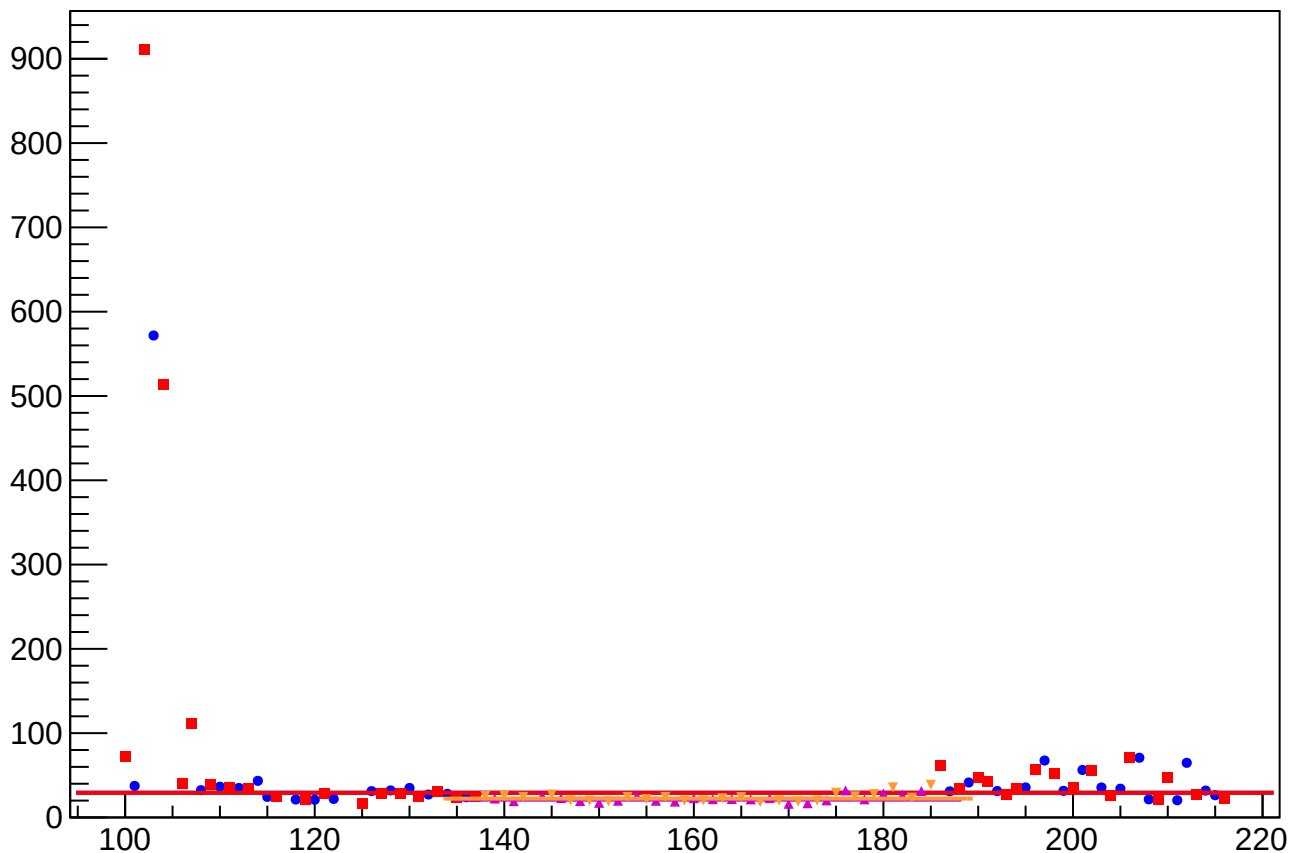
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.005 \pm 0.005$   $\chi^2/\text{NDF}$ : 42.3/54

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 101.1/111

- sign  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.8/56

asym\_usl\_atl1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 29.368 $\pm$ 0.005  $\chi^2$ /NDF: 3973979.1/30

Left Out: 22.355 $\pm$ 0.004  $\chi^2$ /NDF: 816044.6/23

Right Out: 29.239 $\pm$ 0.006  $\chi^2$ /NDF: 5148124.0/33

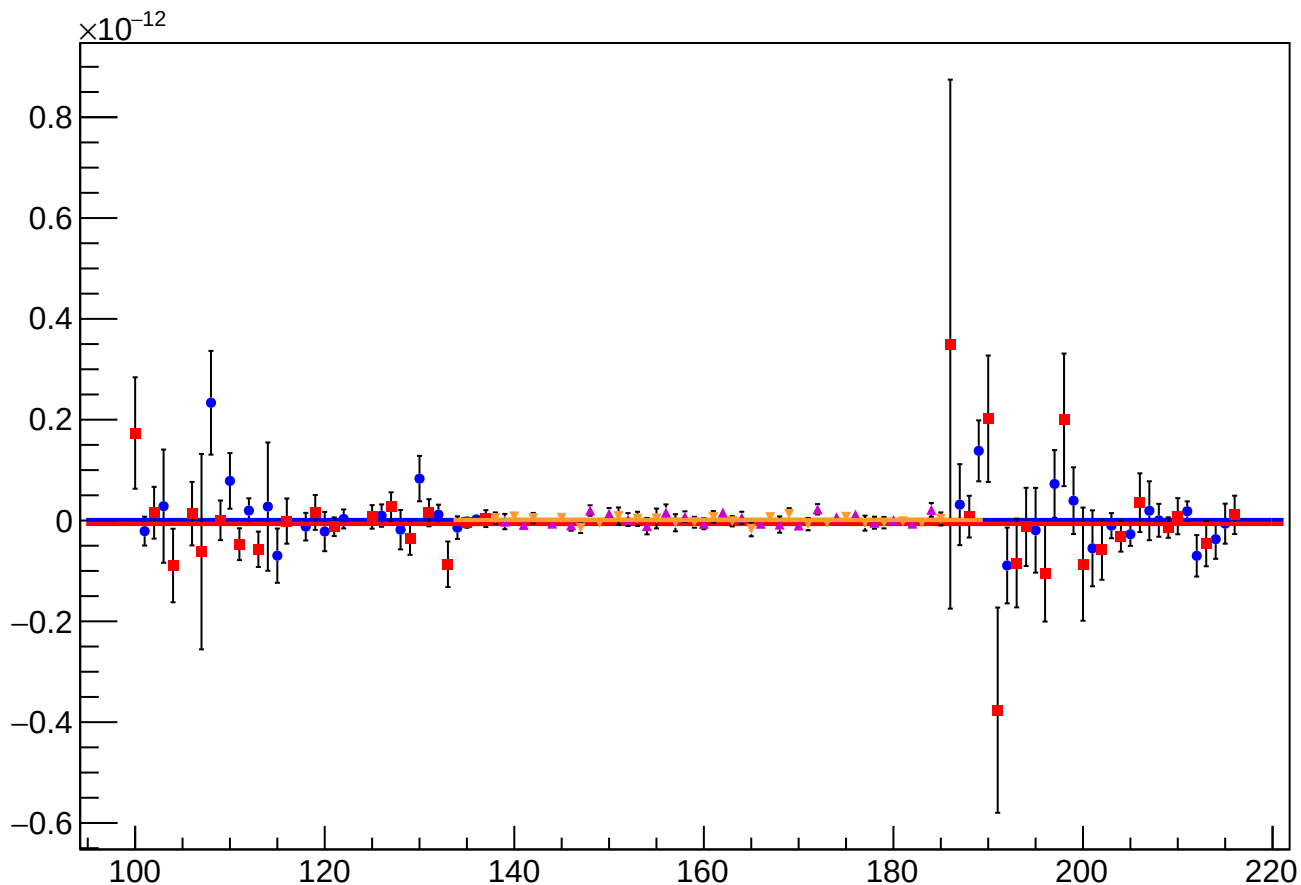
Left In: 21.099 $\pm$ 0.004  $\chi^2$ /NDF: 819268.9/22

+ sign 24.799 $\pm$ 0.003  $\chi^2$ /NDF: 5850926.6/54

All: 24.260 $\pm$ 0.002  $\chi^2$ /NDF: 13313303.6/111

- sign 23.743 $\pm$ 0.003  $\chi^2$ /NDF: 7408323.5/56

asym\_usl\_atl1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.5/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.9/33

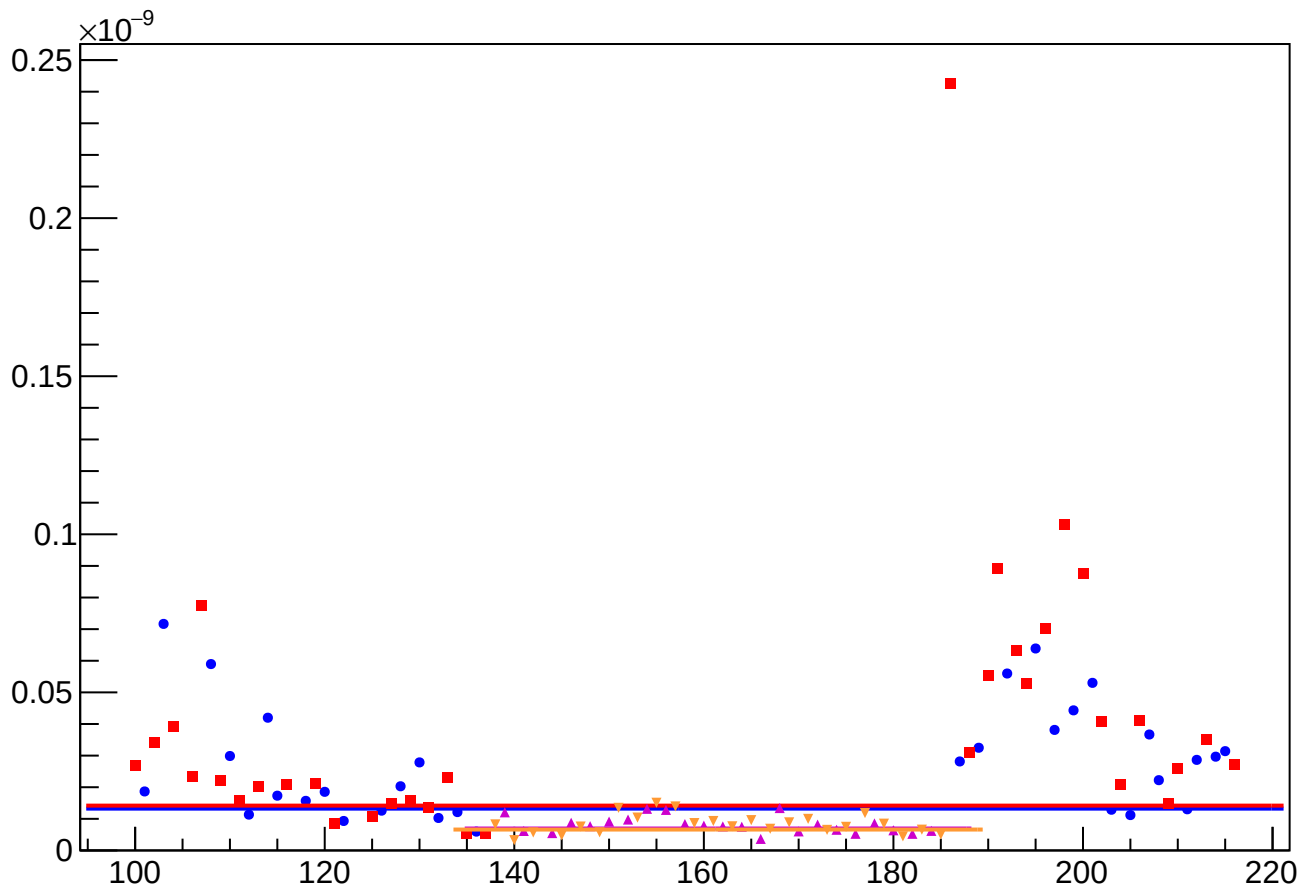
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.1/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.0/111

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.8/56

asym\_usl\_atl1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7725936.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3457171.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10044733.3/33

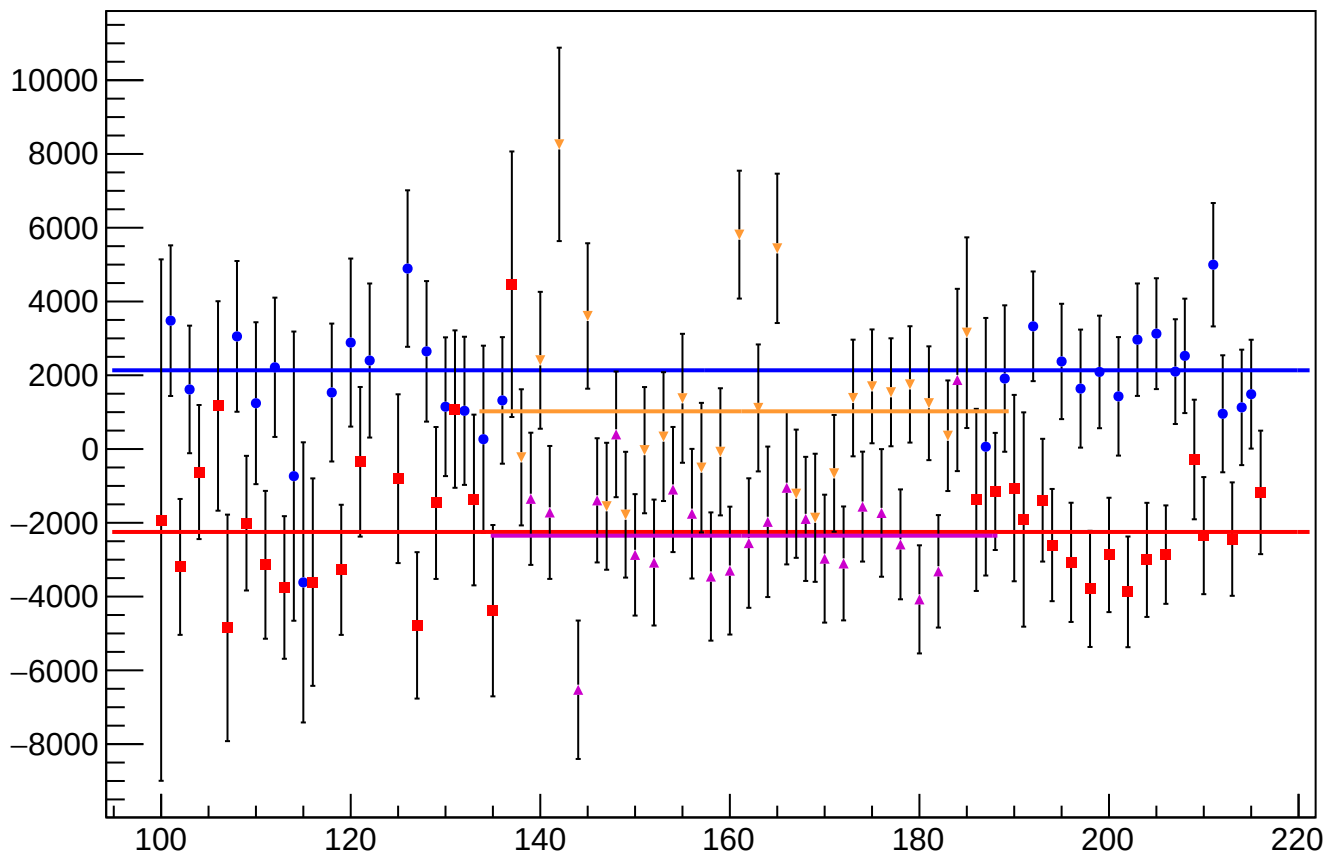
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2315472.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14269265.8/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29804151.3/111

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15507097.4/56

# reg\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2134.856 $\pm$ 324.799  $\chi^2$ /NDF: 13.3/30

Left Out: 1022.603 $\pm$ 353.459  $\chi^2$ /NDF:36.4/23

Right Out: -2248.245 $\pm$ 324.168  $\chi^2$ /NDF: 20.6/33

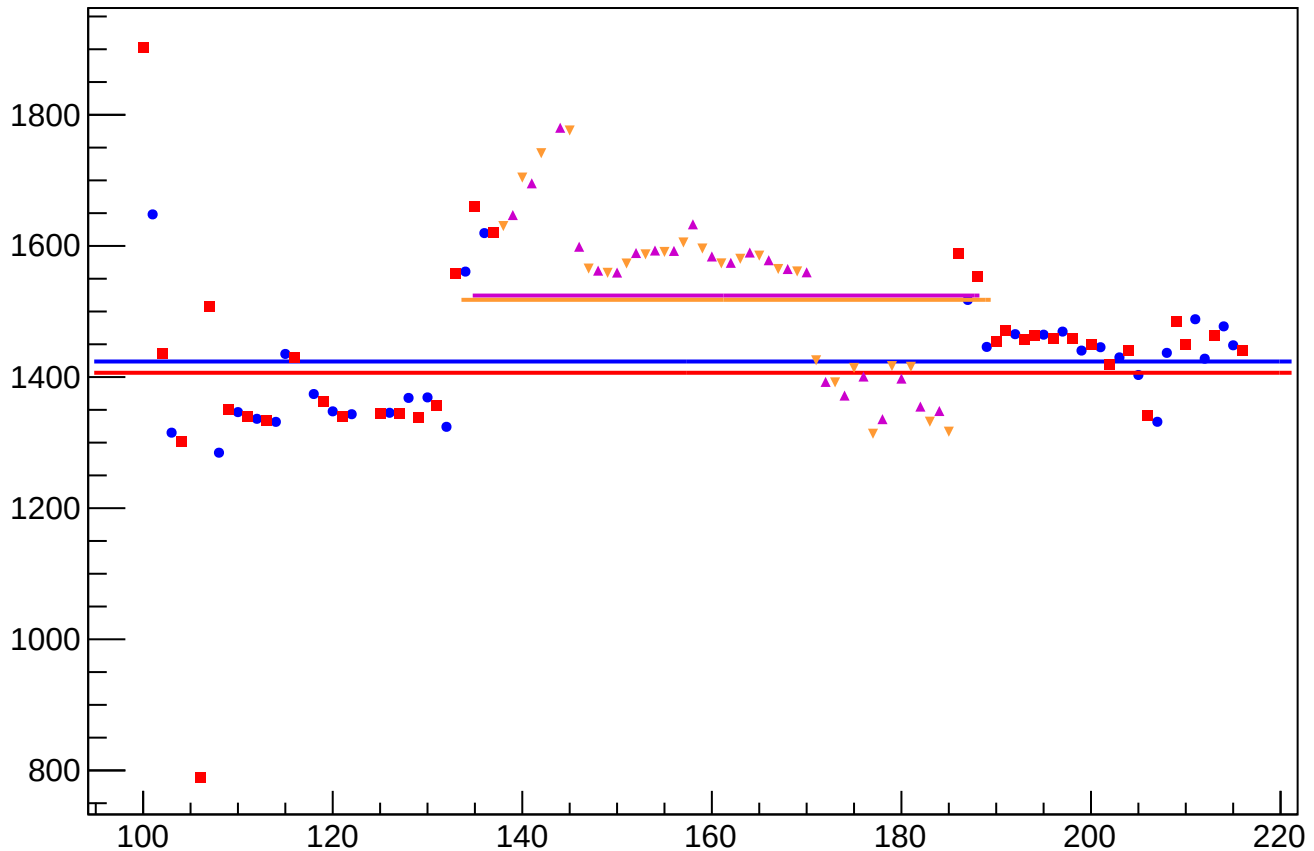
Left In: -2349.189 $\pm$ 357.068  $\chi^2$ /NDF:16.0/22

+ sign 1625.645 $\pm$ 239.159  $\chi^2$ /NDF: 55.1/54

All: -327.125 $\pm$ 169.412  $\chi^2$ /NDF: 225.6/111

- sign -2293.853 $\pm$ 240.012  $\chi^2$ /NDF: 36.7/56

# reg\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1423.736 $\pm$ 0.230  $\chi^2$ /NDF: 120419.3/30

Left Out: 1517.815 $\pm$ 0.250  $\chi^2$ /NDF: 233957.9/23

Right Out: 1406.535 $\pm$ 0.226  $\chi^2$ /NDF: 410457.8/33

Left In: 1524.314 $\pm$ 0.252  $\chi^2$ /NDF: 224321.2/22

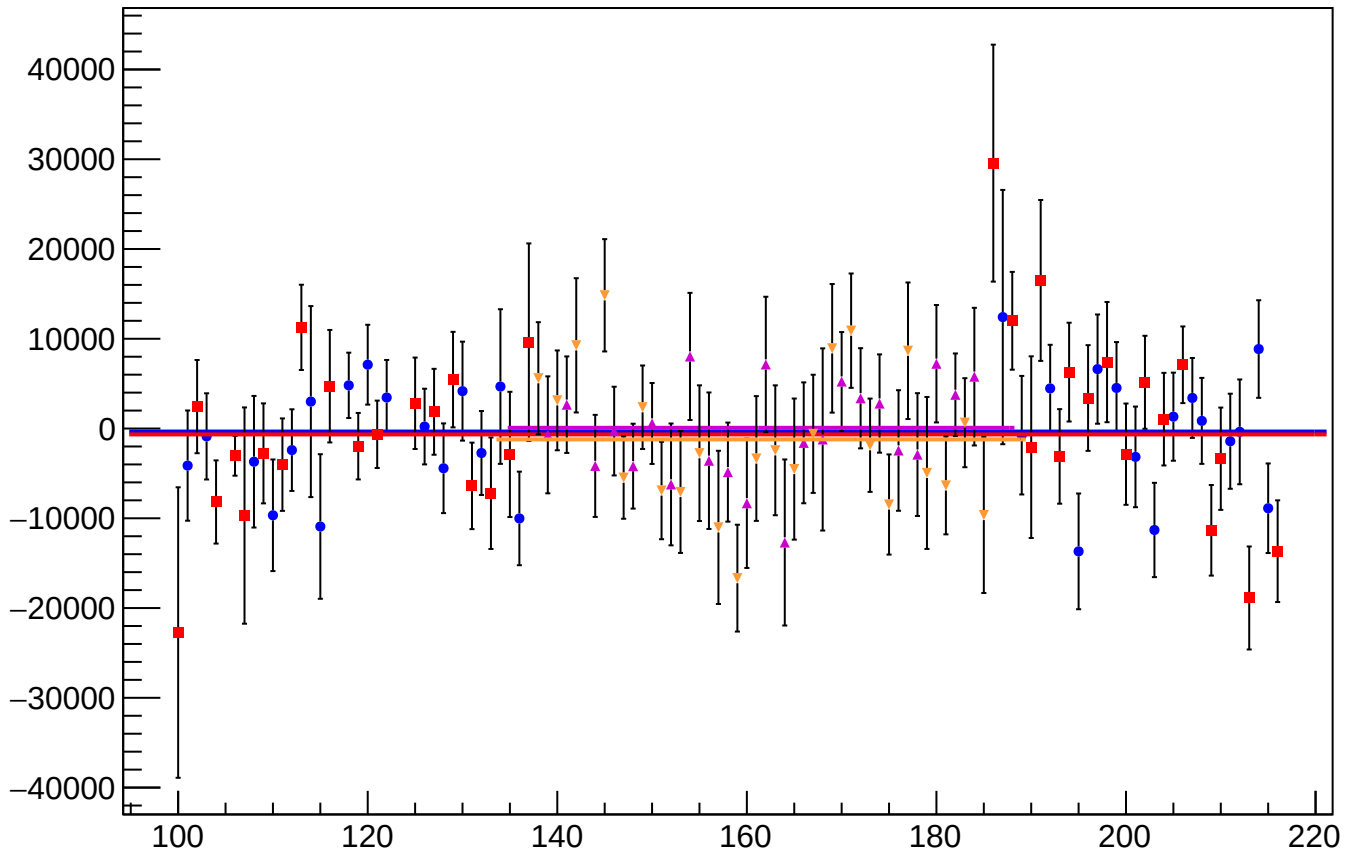
+ sign 1466.808 $\pm$ 0.169  $\chi^2$ /NDF: 431198.3/54

All: 1462.898 $\pm$ 0.119  $\chi^2$ /NDF: 1187686.2/118

- sign 1459.015 $\pm$ 0.169  $\chi^2$ /NDF: 755422.5/56



asym\_usl\_atl2\_avg\_reg\_correction\_mean vs Slug



Right In:  $-337.194 \pm 954.408$   $\chi^2/\text{NDF}$ : 35.5/30

Left Out:  $-1211.893 \pm 1268.315$   $\chi^2/\text{NDF}$ : 33.2/23

Right Out:  $-655.444 \pm 886.693$   $\chi^2/\text{NDF}$ : 62.8/33

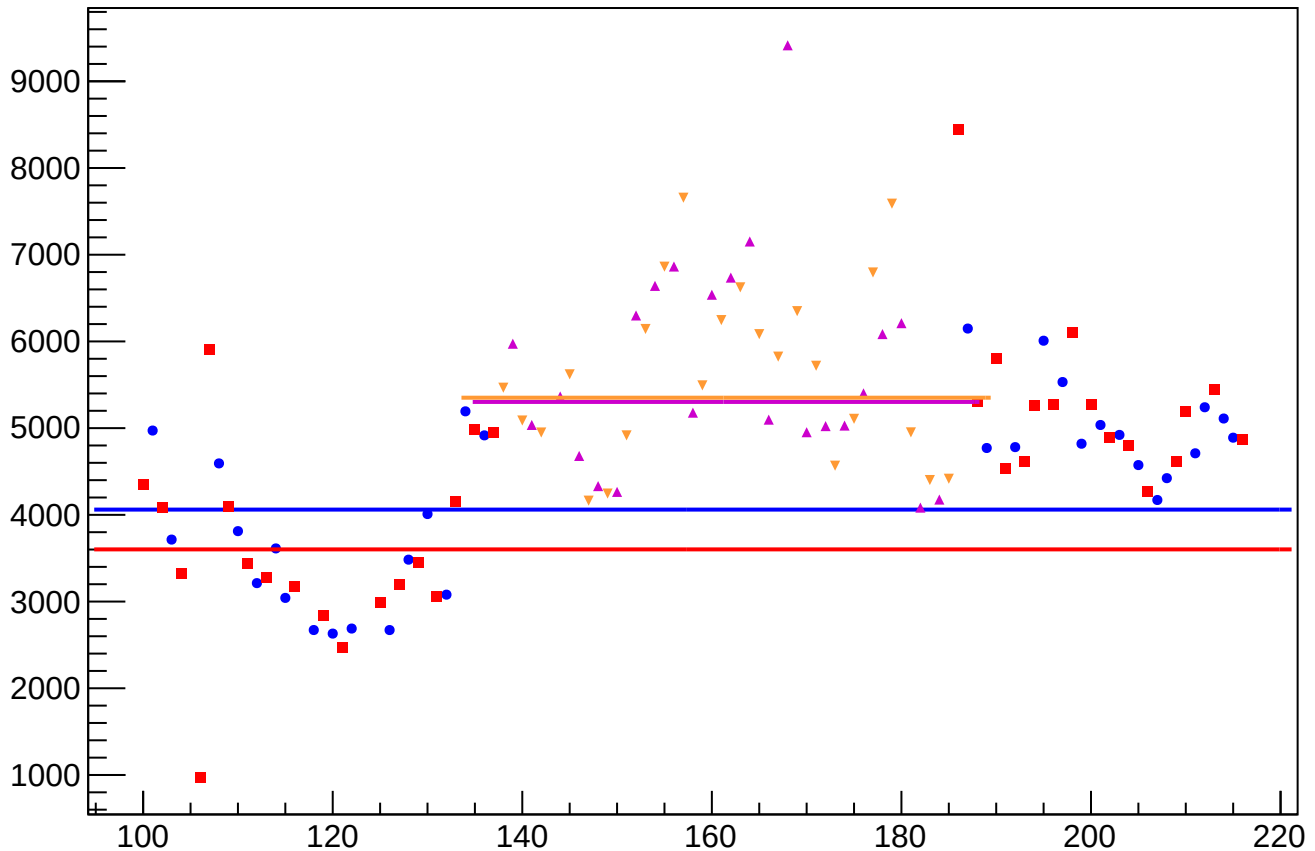
Left In:  $80.780 \pm 1264.327$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-653.428 \pm 762.610$   $\chi^2/\text{NDF}$ : 69.1/54

All:  $-527.150 \pm 525.810$   $\chi^2/\text{NDF}$ : 145.4/111

- sign  $-412.719 \pm 725.958$   $\chi^2/\text{NDF}$ : 76.2/56

# asym\_usl\_atl2\_avg\_reg\_correction\_rms vs Slug



Right In: 4060.596 $\pm$ 0.675     $\chi^2/\text{NDF}$ : 2152006.0/30

Left Out: 5351.126 $\pm$ 0.897     $\chi^2/\text{NDF}$ : 1066045.6/23

Right Out: 3601.693 $\pm$ 0.627     $\chi^2/\text{NDF}$ : 5704301.3/33

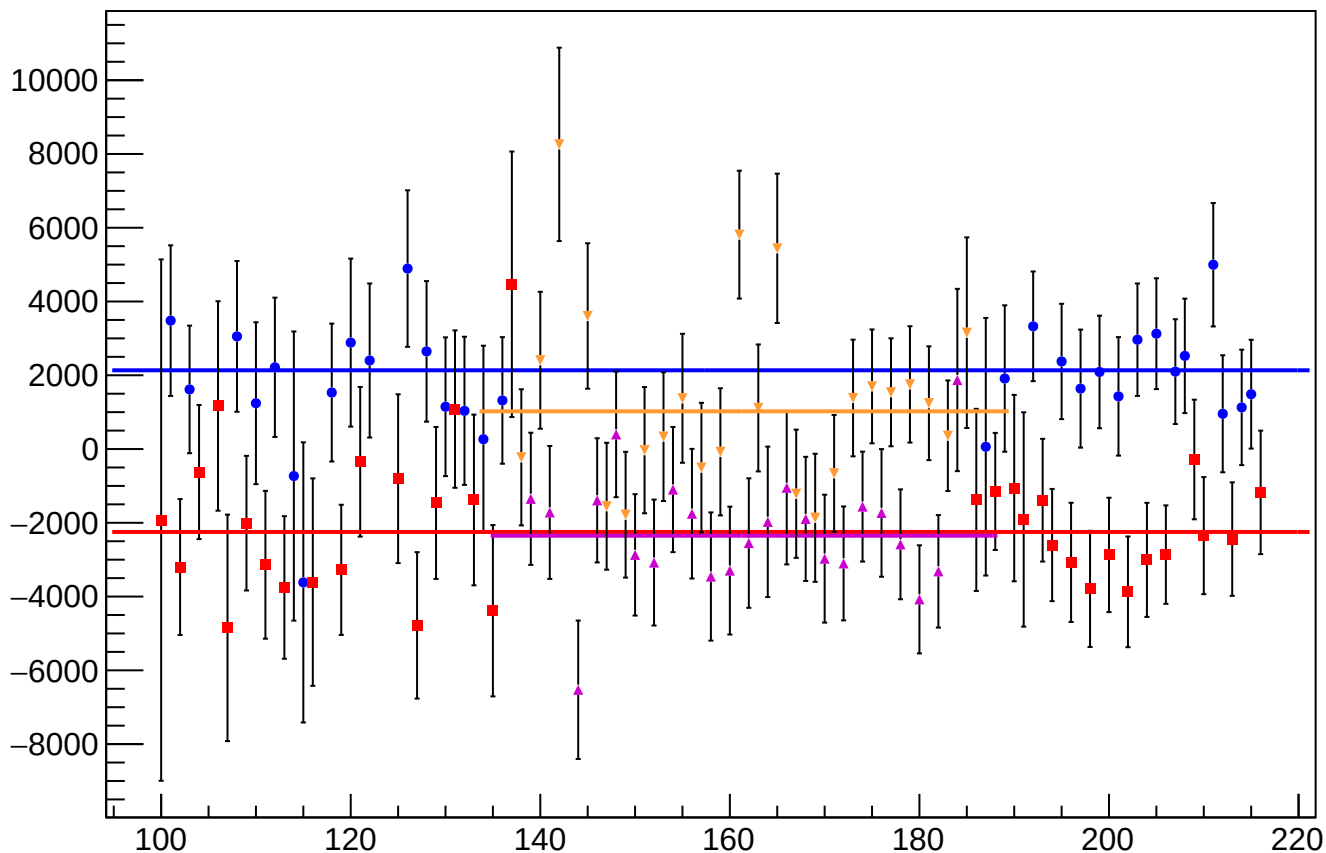
Left In: 5302.185 $\pm$ 0.894     $\chi^2/\text{NDF}$ : 1256309.3/22

+ sign 4527.168 $\pm$ 0.539     $\chi^2/\text{NDF}$ : 4540105.1/54

All: 4335.769 $\pm$ 0.372     $\chi^2/\text{NDF}$ : 14166000.8/...

- sign 4162.326 $\pm$ 0.513     $\chi^2/\text{NDF}$ : 9385752.7/56

# cor\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2134.825 $\pm$ 324.799  $\chi^2$ /NDF: 13.3/30

Left Out: 1022.634 $\pm$ 353.459  $\chi^2$ /NDF:36.4/23

Right Out: -2248.302 $\pm$ 324.169  $\chi^2$ /NDF: 20.6/33

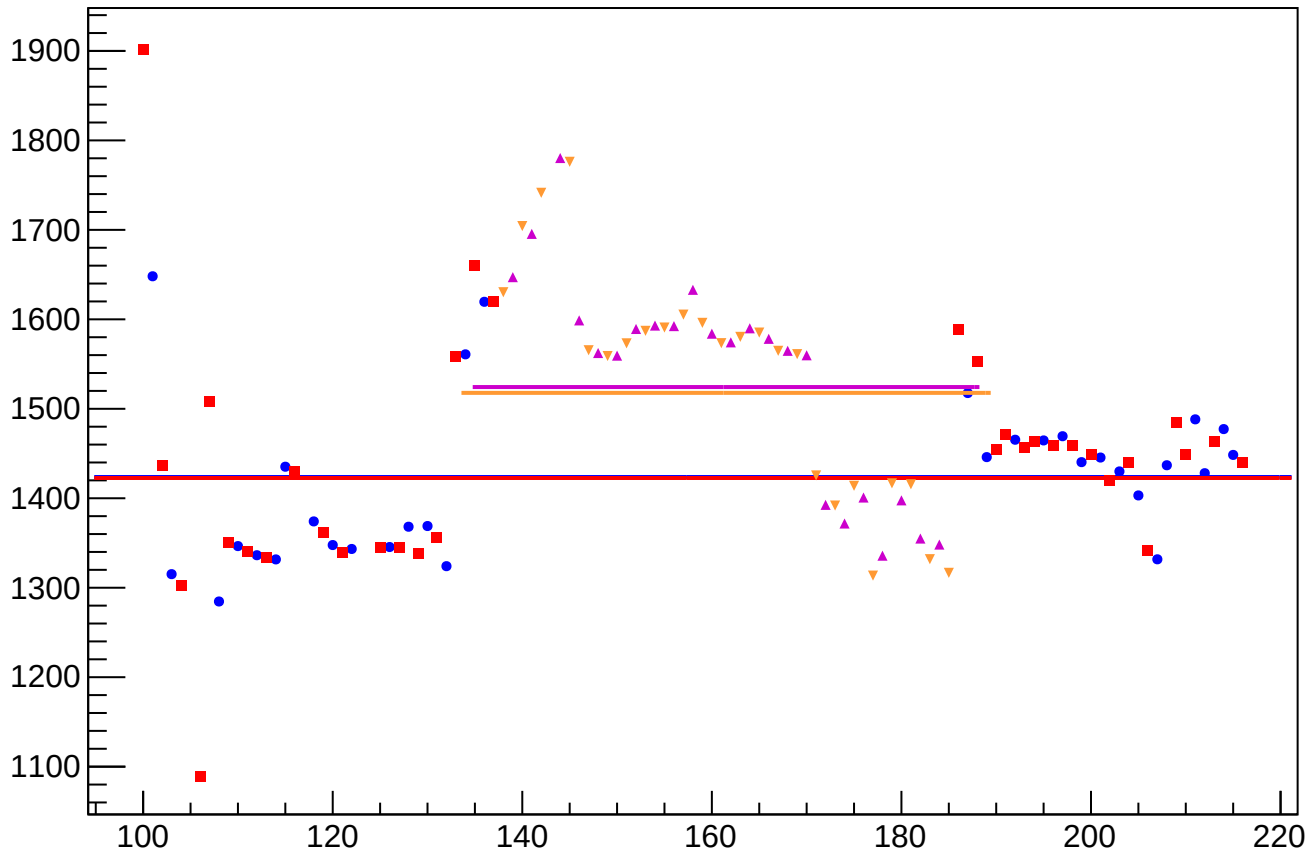
Left In: -2349.186 $\pm$ 357.068  $\chi^2$ /NDF:16.0/22

+ sign 1625.641 $\pm$ 239.159  $\chi^2$ /NDF: 55.1/54

All: -327.139 $\pm$ 169.412  $\chi^2$ /NDF: 225.6/111

- sign -2293.883 $\pm$ 240.012  $\chi^2$ /NDF: 36.7/56

# cor\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1423.736 $\pm$ 0.230  $\chi^2$ /NDF: 120419.3/30

Left Out: 1517.815 $\pm$ 0.250  $\chi^2$ /NDF: 233957.9/23

Right Out: 1422.668 $\pm$ 0.228  $\chi^2$ /NDF: 171529.7/33

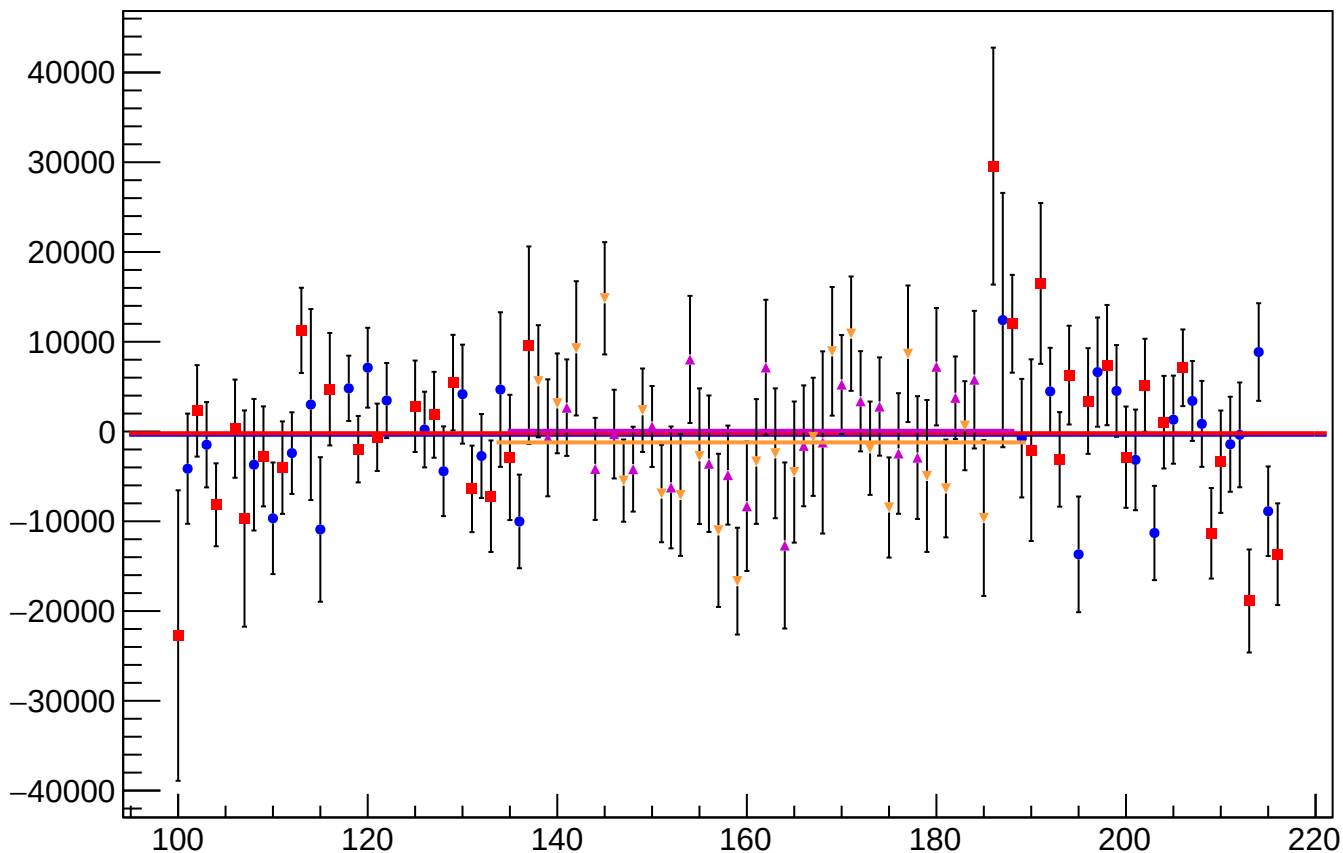
Left In: 1524.314 $\pm$ 0.252  $\chi^2$ /NDF: 224321.2/22

+ sign 1466.808 $\pm$ 0.169  $\chi^2$ /NDF: 431198.4/54

All: 1467.568 $\pm$ 0.120  $\chi^2$ /NDF: 916355.0/111

- sign 1468.330 $\pm$ 0.169  $\chi^2$ /NDF: 485116.1/56

asym\_usl\_atl2\_avg\_cor\_correction\_mean vs Slug



Right In:  $-361.963 \pm 954.013$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $-1211.889 \pm 1268.316$   $\chi^2/\text{NDF}$ : 33.2/23

Right Out:  $-187.306 \pm 952.114$   $\chi^2/\text{NDF}$ : 61.4/33

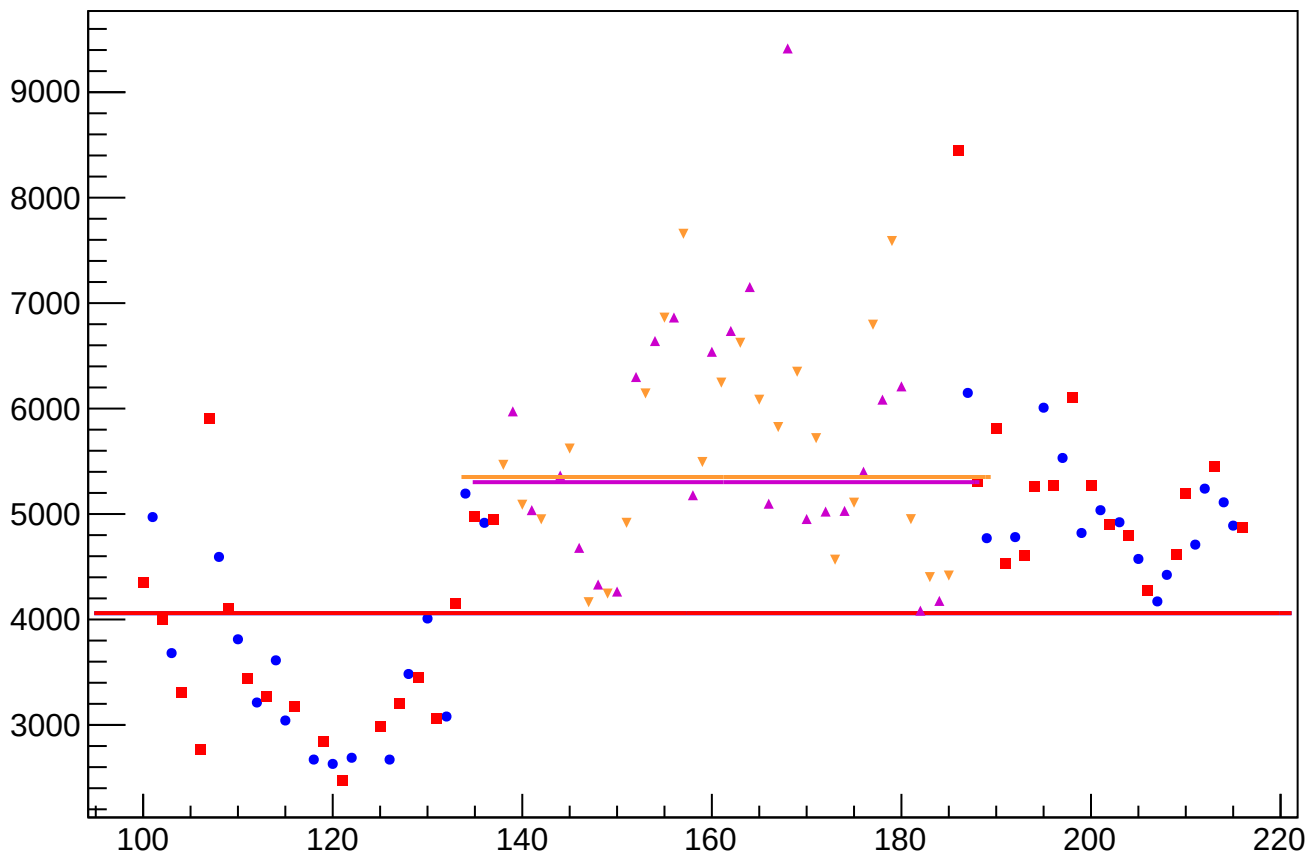
Left In:  $80.689 \pm 1264.325$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-669.079 \pm 762.409$   $\chi^2/\text{NDF}$ : 69.1/54

All:  $-379.003 \pm 538.454$   $\chi^2/\text{NDF}$ : 144.1/111

- sign  $-90.324 \pm 760.572$   $\chi^2/\text{NDF}$ : 74.7/56

# asym\_usl\_atl2\_avg\_cor\_correction\_rms vs Slug



Right In:  $4058.944 \pm 0.675$   $\chi^2/\text{NDF}: 2154282.0/30$

Left Out:  $5351.132 \pm 0.897$   $\chi^2/\text{NDF}: 1066039.6/23$

Right Out:  $4060.510 \pm 0.673$   $\chi^2/\text{NDF}: 2454555.3/33$

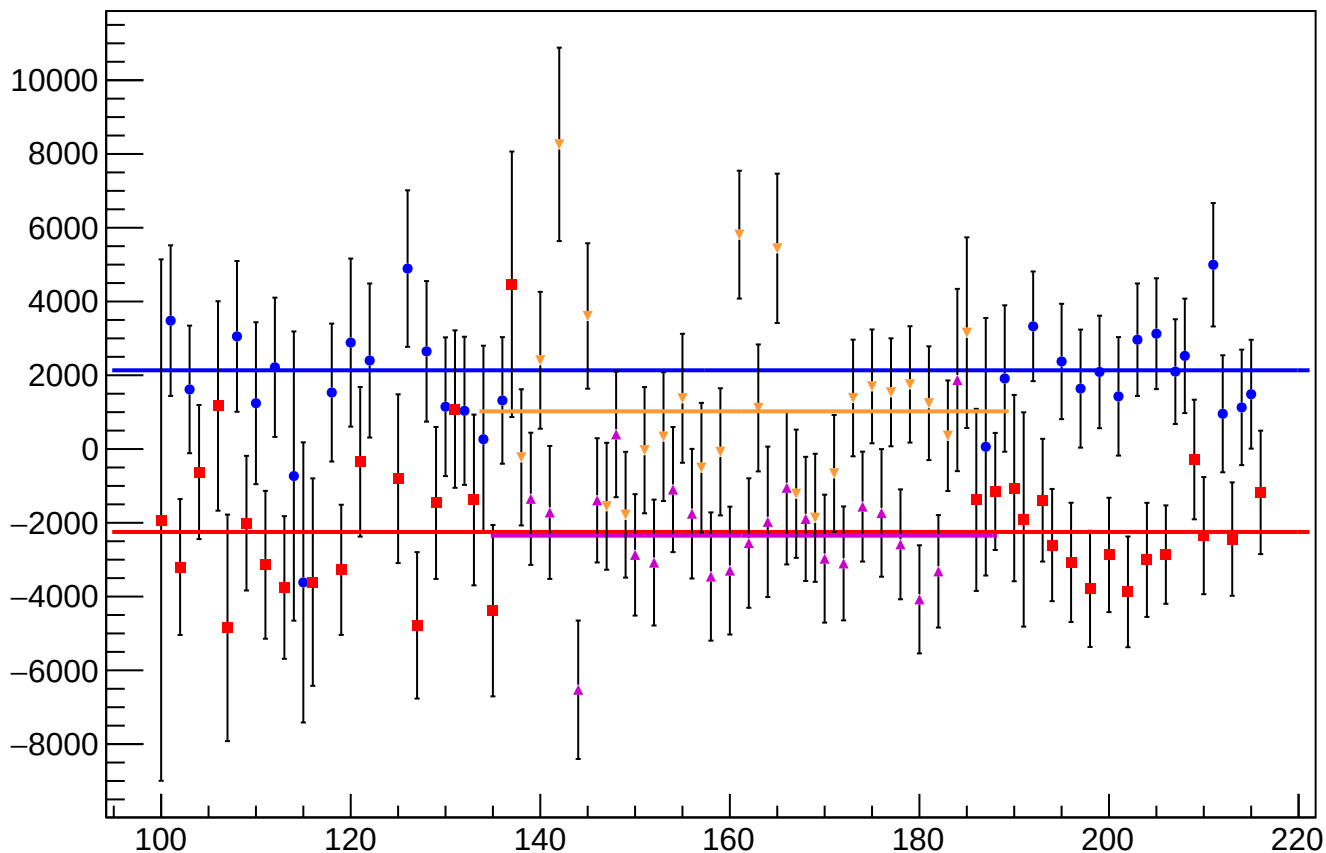
Left In:  $5302.177 \pm 0.894$   $\chi^2/\text{NDF}: 1256324.3/22$

+ sign  $4525.868 \pm 0.539$   $\chi^2/\text{NDF}: 4546167.7/54$

All:  $4517.836 \pm 0.381$   $\chi^2/\text{NDF}: 9488398.6/11$

- sign  $4509.843 \pm 0.538$   $\chi^2/\text{NDF}: 4941788.1/56$

# eigen\_cor\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2134.825 $\pm$ 324.799  $\chi^2$ /NDF: 13.3/30

Left Out: 1022.634 $\pm$ 353.459  $\chi^2$ /NDF: 36.4/23

Right Out: -2248.302 $\pm$ 324.169  $\chi^2$ /NDF: 20.6/33

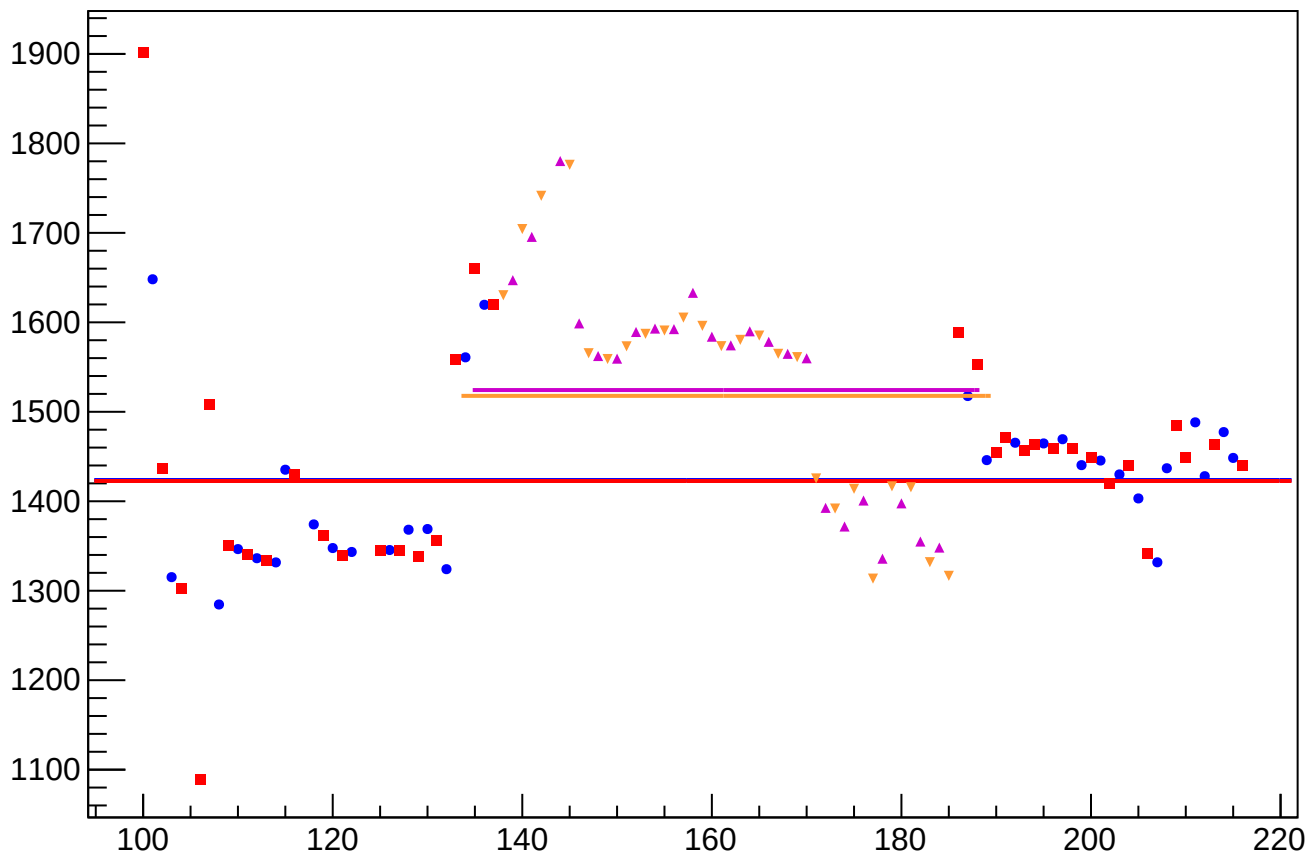
Left In: -2349.186 $\pm$ 357.068  $\chi^2$ /NDF: 16.0/22

+ sign 1625.641 $\pm$ 239.159  $\chi^2$ /NDF: 55.1/54

All: -327.139 $\pm$ 169.412  $\chi^2$ /NDF: 225.6/111

- sign -2293.883 $\pm$ 240.012  $\chi^2$ /NDF: 36.7/56

# eigen\_cor\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 1423.736 $\pm$ 0.230  $\chi^2$ /NDF: 120419.3/30

Left Out: 1517.815 $\pm$ 0.250  $\chi^2$ /NDF: 233957.9/23

Right Out: 1422.668 $\pm$ 0.228  $\chi^2$ /NDF: 171529.7/33

Left In: 1524.314 $\pm$ 0.252  $\chi^2$ /NDF: 224321.2/22

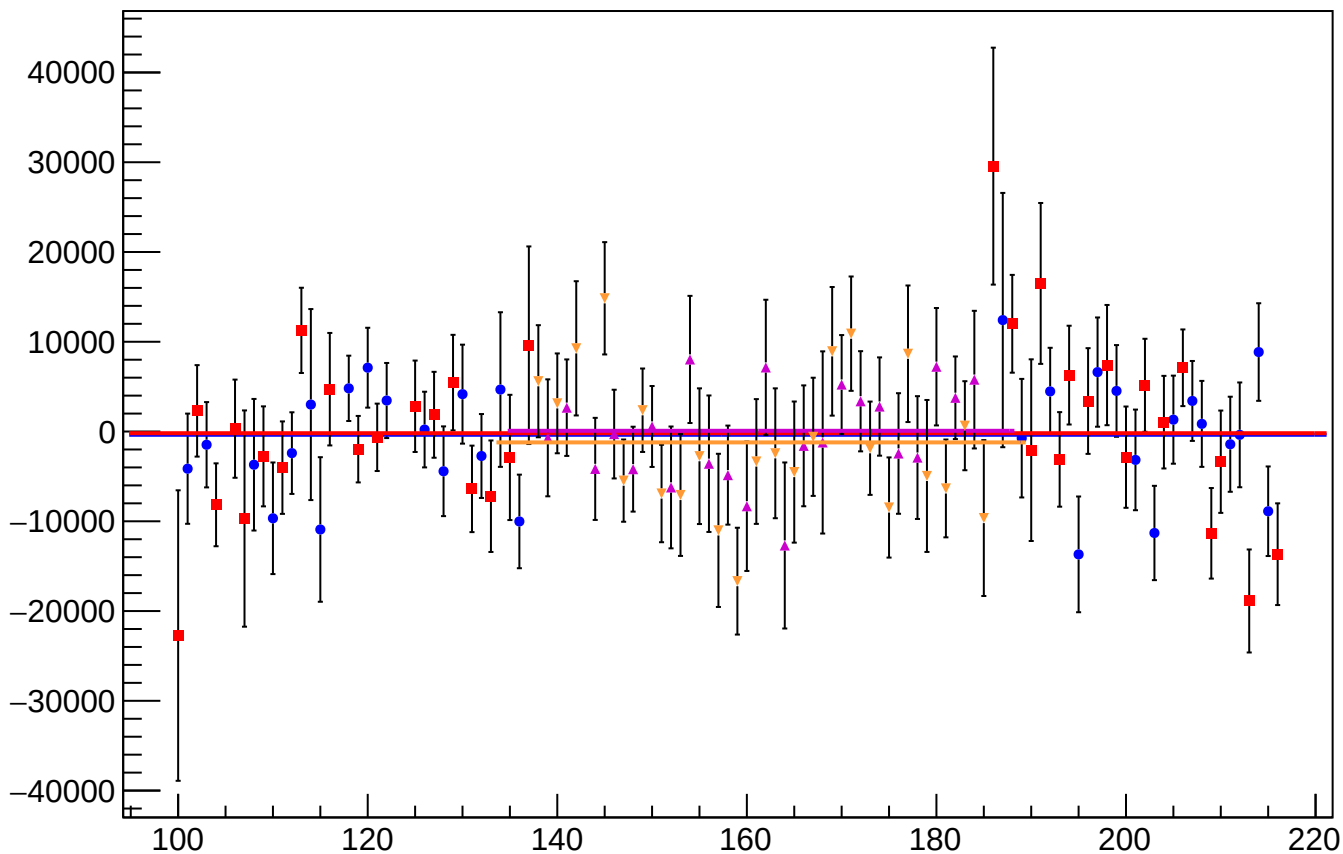
+ sign 1466.808 $\pm$ 0.169  $\chi^2$ /NDF: 431198.4/54

All: 1467.568 $\pm$ 0.120  $\chi^2$ /NDF: 916355.0/111

- sign 1468.330 $\pm$ 0.169  $\chi^2$ /NDF: 485116.1/56



asym\_usl\_atl2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-361.963 \pm 954.013$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $-1211.889 \pm 1268.316$   $\chi^2/\text{NDF}$ : 33.2/23

Right Out:  $-187.306 \pm 952.114$   $\chi^2/\text{NDF}$ : 61.4/33

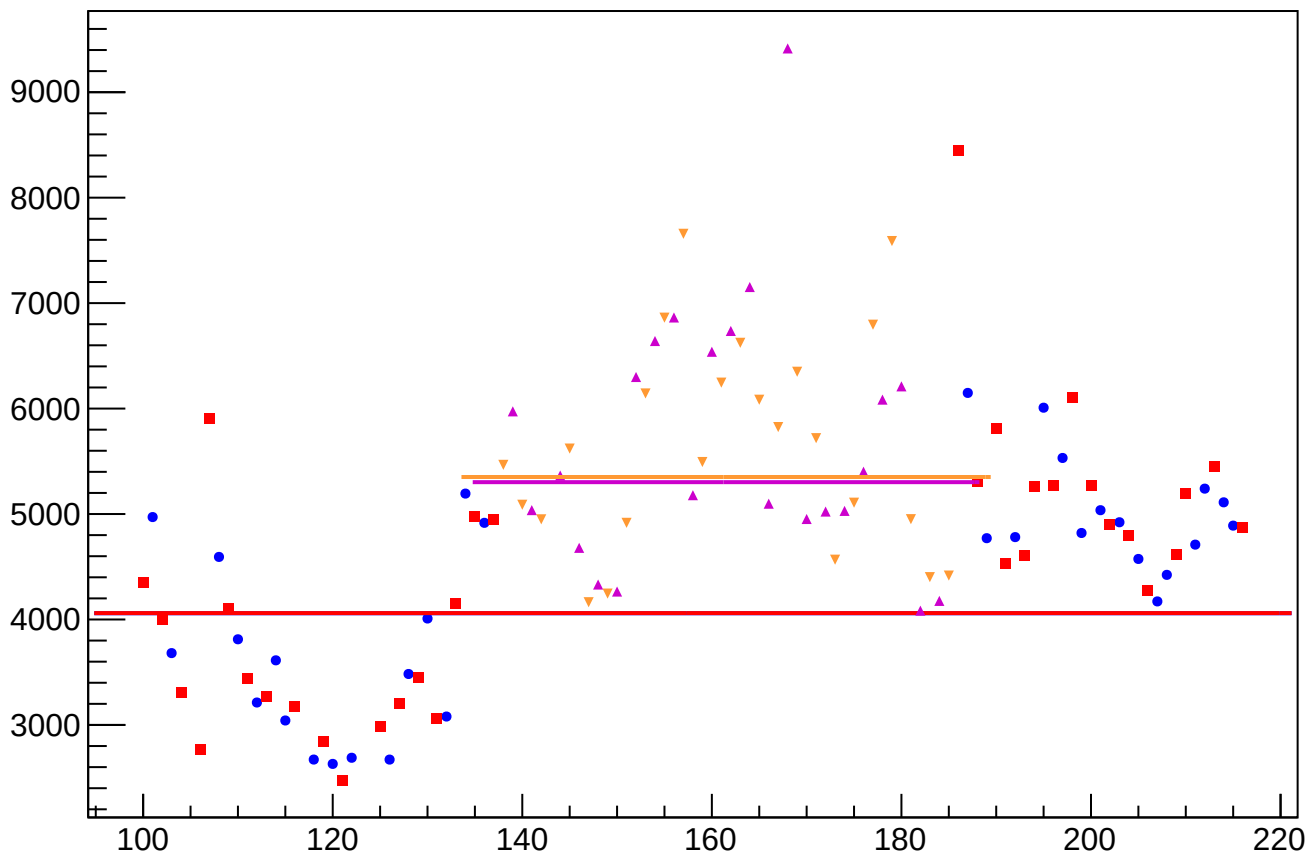
Left In:  $80.689 \pm 1264.325$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $-669.079 \pm 762.409$   $\chi^2/\text{NDF}$ : 69.1/54

All:  $-379.003 \pm 538.454$   $\chi^2/\text{NDF}$ : 144.1/111

- sign  $-90.324 \pm 760.572$   $\chi^2/\text{NDF}$ : 74.7/56

asym\_usl\_atl2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 4058.944+/-0.675  $\chi^2/\text{NDF}$ : 2154282.0/30

Left Out: 5351.132+/-0.897  $\chi^2/\text{NDF}$ : 1066039.6/23

Right Out: 4060.510+/-0.673  $\chi^2/\text{NDF}$ : 2454555.3/33

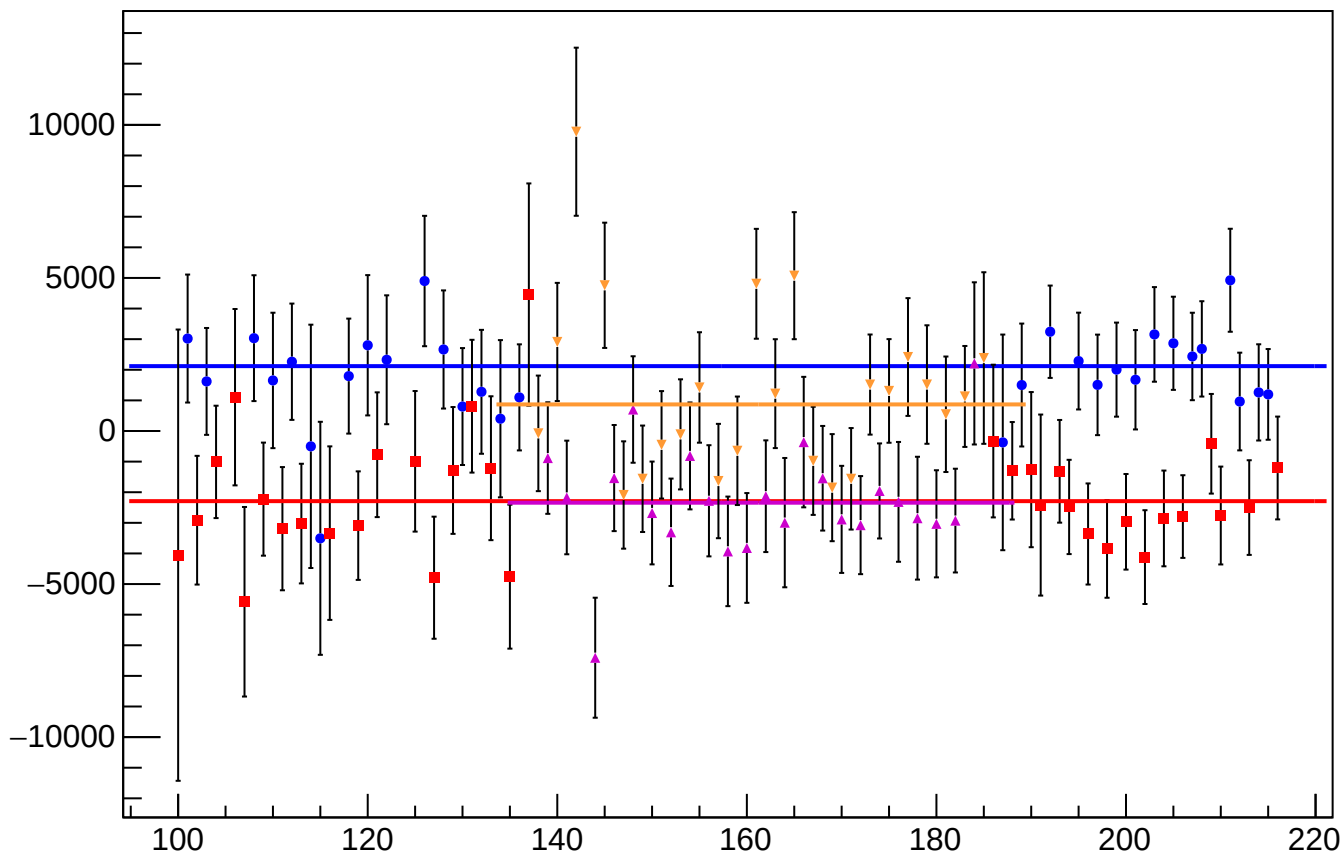
Left In: 5302.177+/-0.894  $\chi^2/\text{NDF}$ : 1256324.3/22

+ sign 4525.868+/-0.539  $\chi^2/\text{NDF}$ : 4546167.7/54

All: 4517.836+/-0.381  $\chi^2/\text{NDF}$ : 9488398.6/11

- sign 4509.843+/-0.538  $\chi^2/\text{NDF}$ : 4941788.1/56

dit\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2118.989 $\pm$ 327.910  $\chi^2$ /NDF: 12.7/30

Left Out: 868.415 $\pm$ 377.179  $\chi^2$ /NDF:39.7/23

Right Out: -2291.435 $\pm$ 328.391  $\chi^2$ /NDF: 20.0/33

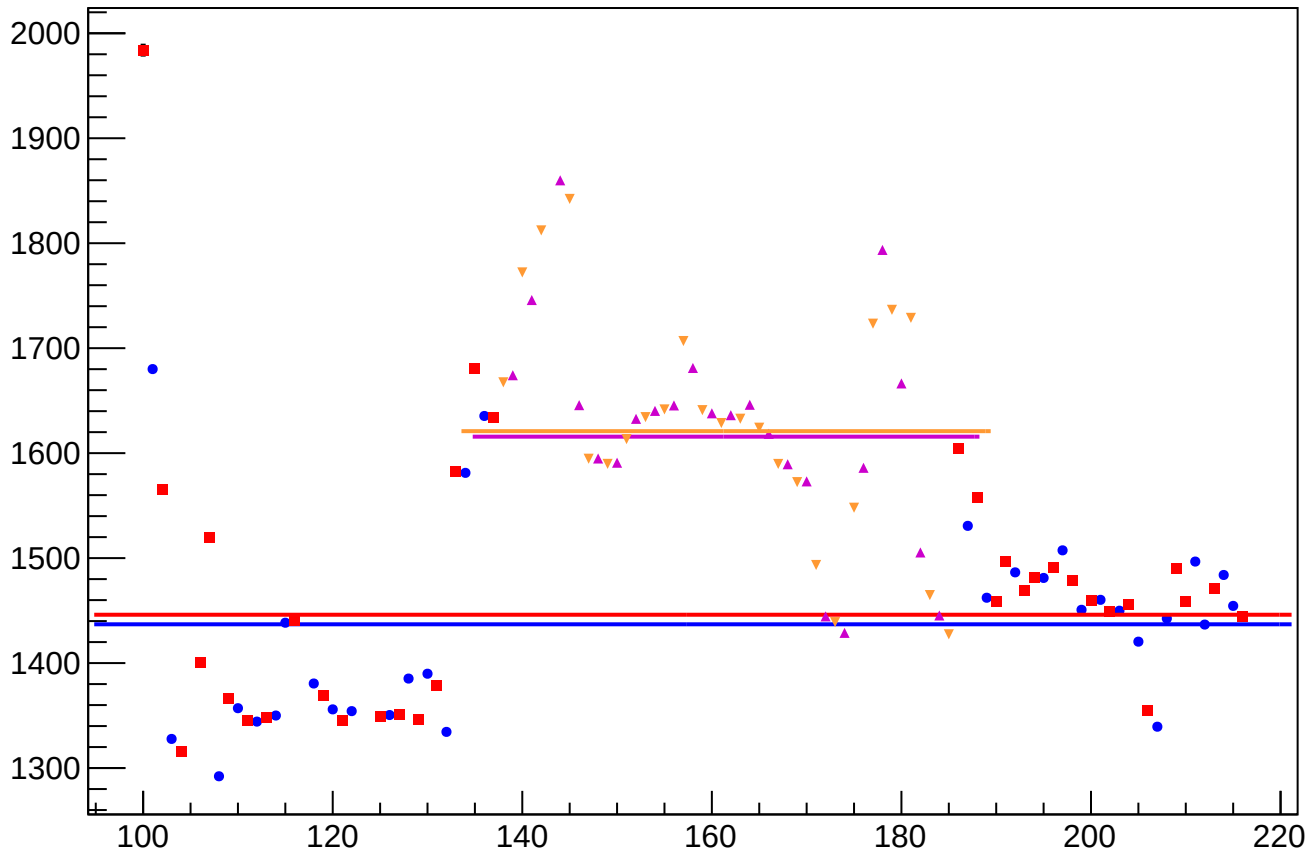
Left In: -2342.303 $\pm$ 378.114  $\chi^2$ /NDF:18.0/22

+ sign 1580.664 $\pm$ 247.466  $\chi^2$ /NDF: 58.7/54

All: -362.622 $\pm$ 175.151  $\chi^2$ /NDF: 220.3/111

- sign -2313.307 $\pm$ 247.937  $\chi^2$ /NDF: 38.0/56

# dit\_asym\_usl\_atl2\_avg\_rms vs Slug



Right In:  $1436.950 \pm 0.232$   $\chi^2/\text{NDF}: 128176.6/30$

Left Out:  $1620.945 \pm 0.267$   $\chi^2/\text{NDF}: 141985.5/23$

Right Out:  $1446.060 \pm 0.232$   $\chi^2/\text{NDF}: 131863.8/33$

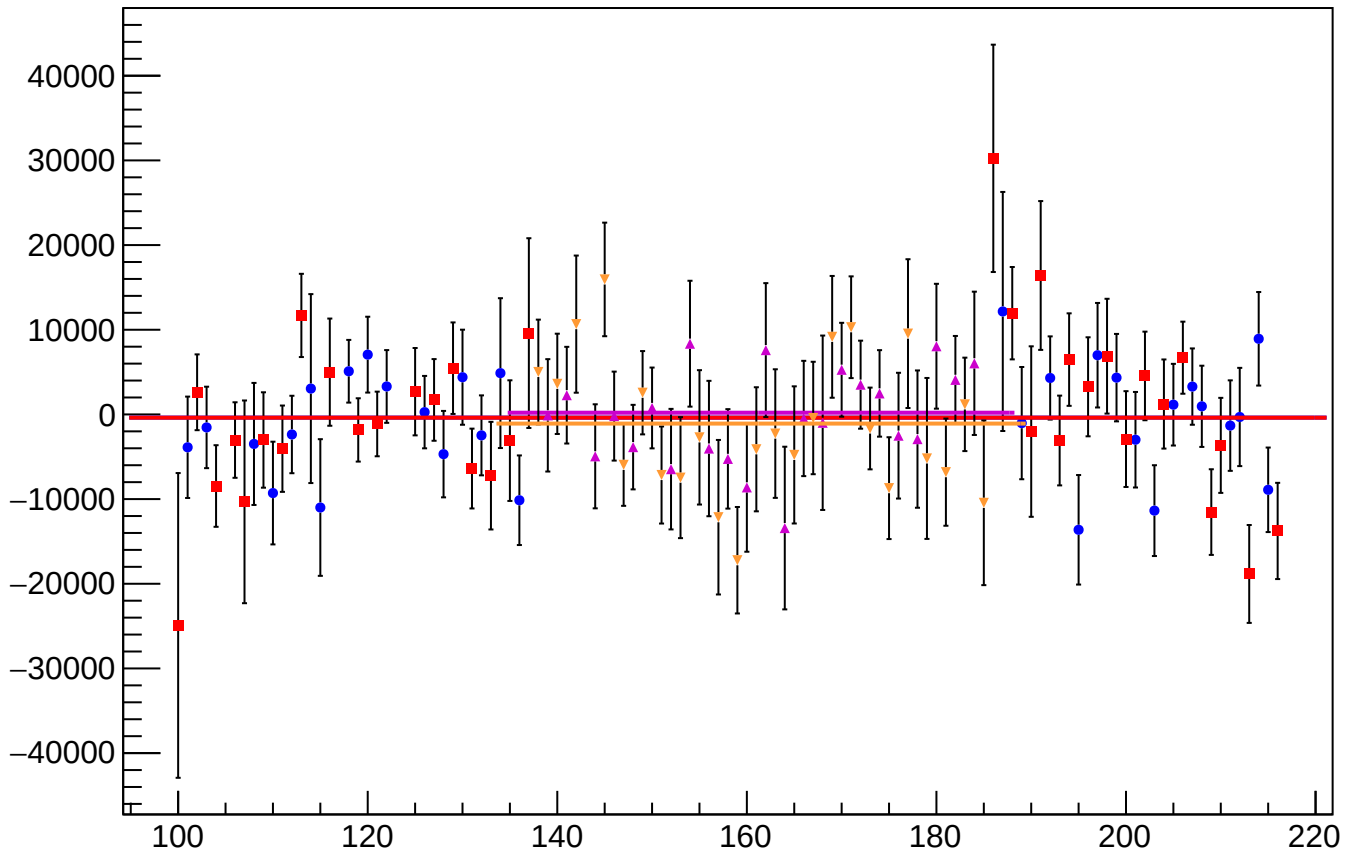
Left In:  $1615.705 \pm 0.267$   $\chi^2/\text{NDF}: 137139.2/22$

+ sign  $1516.153 \pm 0.175$   $\chi^2/\text{NDF}: 541224.5/54$

All:  $1517.533 \pm 0.124$   $\chi^2/\text{NDF}: 1040045.3/11$

- sign  $1518.916 \pm 0.175$   $\chi^2/\text{NDF}: 498696.2/56$

asym\_usl\_atl2\_avg\_dit\_correction\_mean vs Slug



Right In:  $-375.194 \pm 962.134$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $-1082.232 \pm 1332.403$   $\chi^2/\text{NDF}$ : 32.9/23

Right Out:  $-384.346 \pm 947.013$   $\chi^2/\text{NDF}$ : 61.5/33

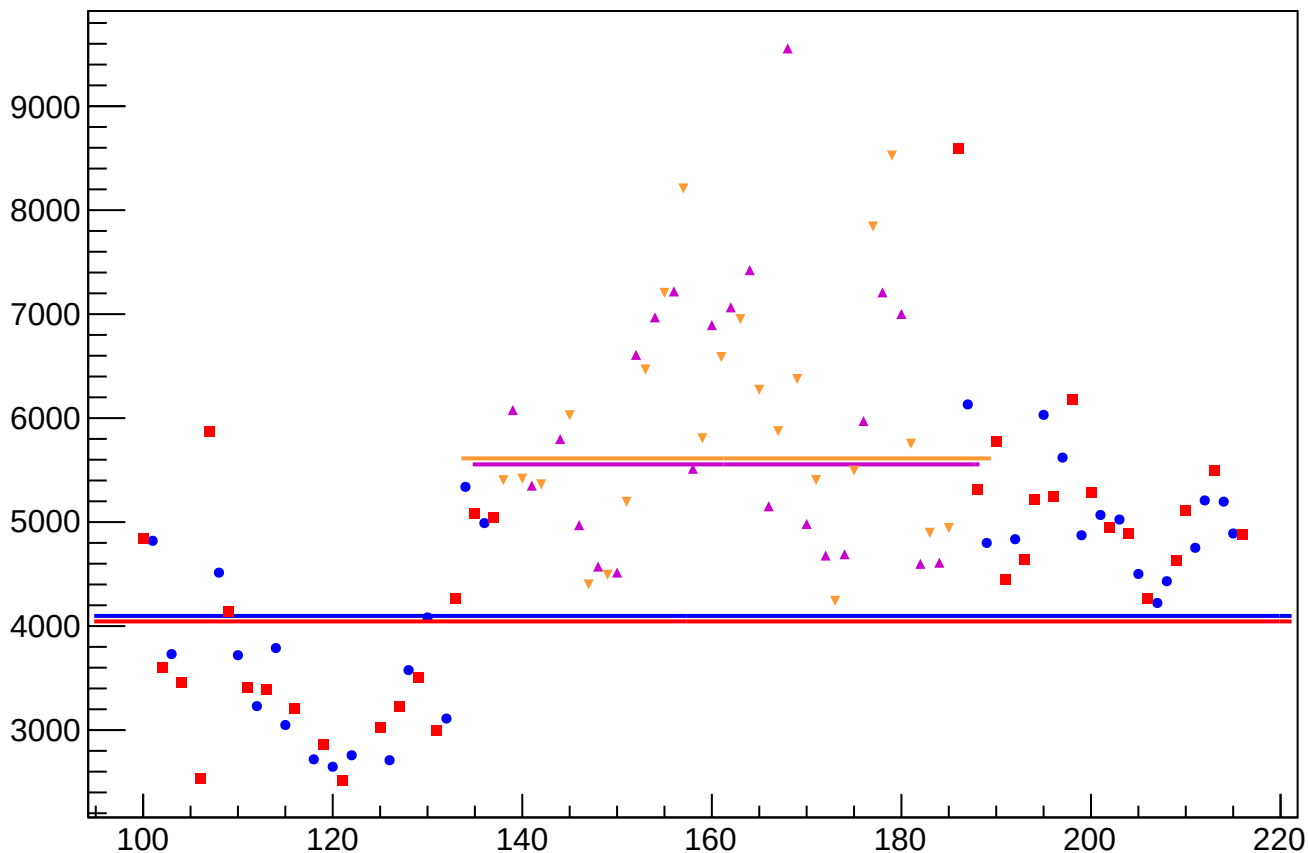
Left In:  $201.662 \pm 1326.173$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $-617.514 \pm 780.026$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $-399.381 \pm 548.230$   $\chi^2/\text{NDF}$ : 142.9/111

- sign  $-186.440 \pm 770.686$   $\chi^2/\text{NDF}$ : 74.5/56

# asym\_usl\_atl2\_avg\_dit\_correction\_rms vs Slug



Right In: 4097.755+/-0.680  $\chi^2/\text{NDF}$ : 2091338.3/30

Left Out: 5612.730+/-0.942  $\chi^2/\text{NDF}$ :1188118.0/23

Right Out: 4044.900+/-0.670  $\chi^2/\text{NDF}$ : 2548194.0/33

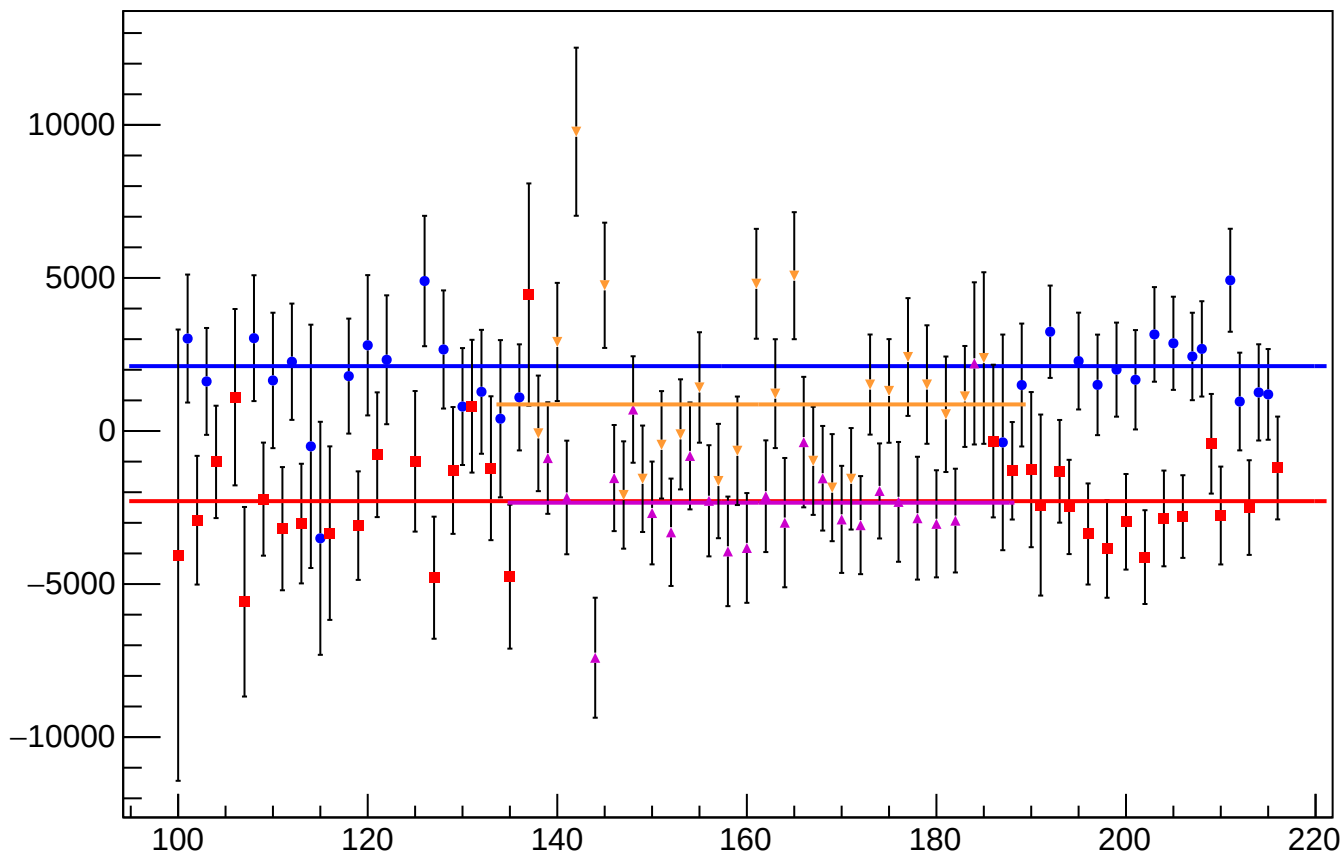
Left In: 5554.927+/-0.938  $\chi^2/\text{NDF}$ :1332970.4/22

+ sign 4616.976+/-0.552  $\chi^2/\text{NDF}$ : 4978937.9/54

All: 4585.546+/-0.388  $\chi^2/\text{NDF}$ : 10583800.3/100

- sign 4554.864+/-0.545  $\chi^2/\text{NDF}$ : 5598445.3/56

# eigen\_dit\_asym\_usl\_atl2\_avg\_mean vs Slug



Right In:  $2118.990 \pm 327.910$   $\chi^2/\text{NDF}: 12.7/30$

Left Out:  $868.410 \pm 377.180$   $\chi^2/\text{NDF}: 39.7/23$

Right Out:  $-2291.433 \pm 328.391$   $\chi^2/\text{NDF}: 20.0/33$

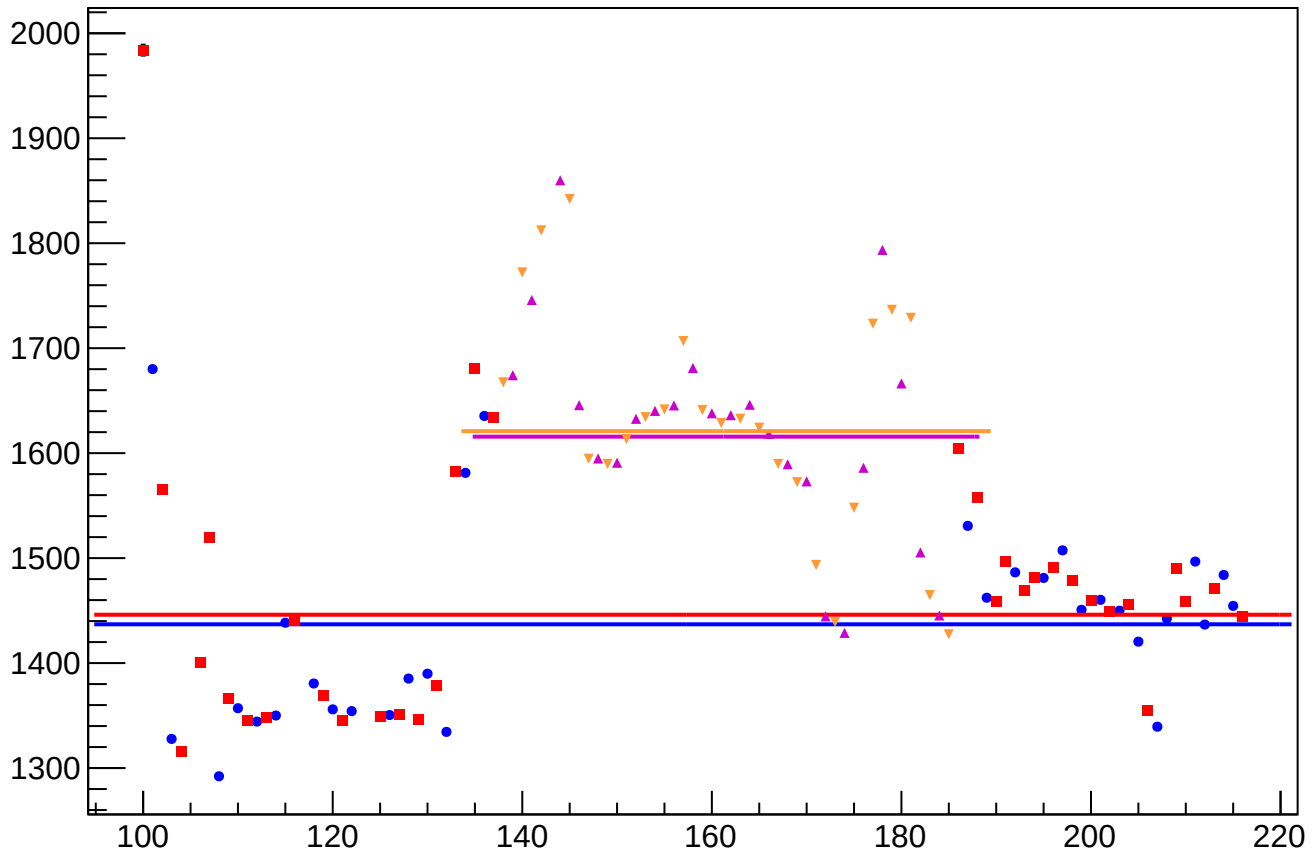
Left In:  $-2342.303 \pm 378.114$   $\chi^2/\text{NDF}: 18.0/22$

+ sign  $1580.662 \pm 247.466$   $\chi^2/\text{NDF}: 58.7/54$

All:  $-362.622 \pm 175.151$   $\chi^2/\text{NDF}: 220.3/111$

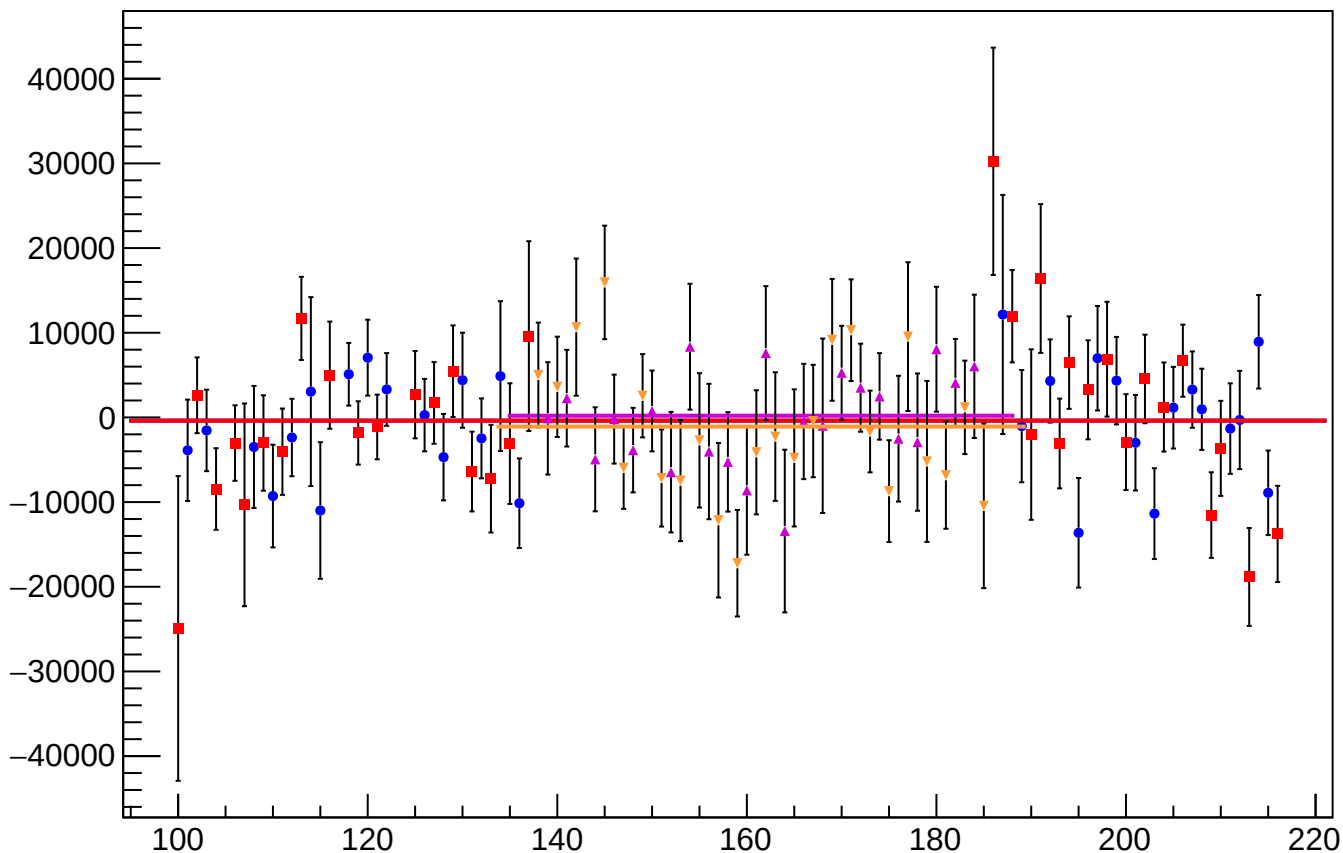
- sign  $-2313.305 \pm 247.937$   $\chi^2/\text{NDF}: 38.0/56$

# eigen\_dit\_asym\_usl\_atl2\_avg\_rms vs Slug





asym\_usl\_atl2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-375.189 \pm 962.134$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $-1082.239 \pm 1332.405$   $\chi^2/\text{NDF}$ : 32.9/23

Right Out:  $-384.350 \pm 947.013$   $\chi^2/\text{NDF}$ : 61.5/33

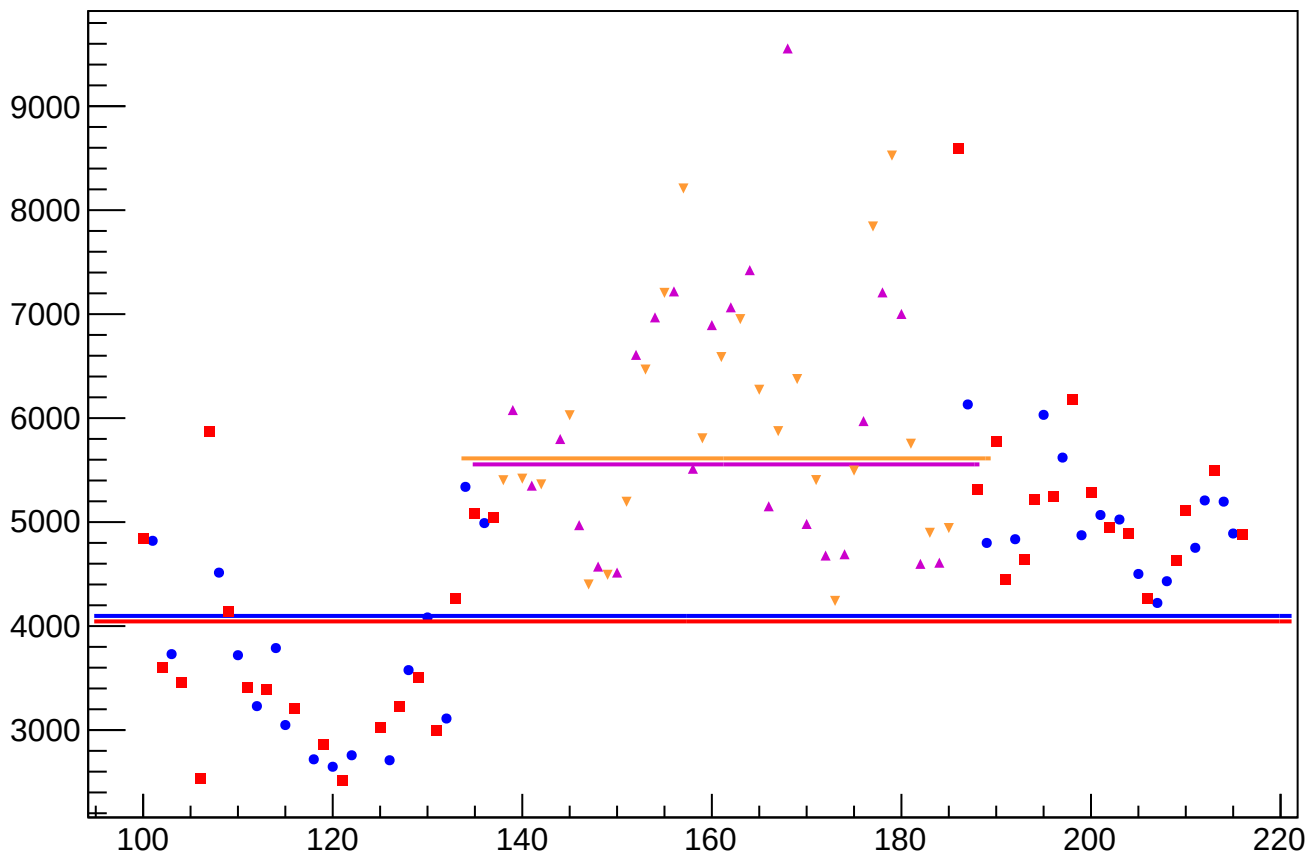
Left In:  $201.663 \pm 1326.175$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $-617.512 \pm 780.026$   $\chi^2/\text{NDF}$ : 68.2/54

All:  $-399.382 \pm 548.230$   $\chi^2/\text{NDF}$ : 142.9/111

- sign  $-186.443 \pm 770.686$   $\chi^2/\text{NDF}$ : 74.5/56

asym\_usl\_atl2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 4097.751+/-0.680  $\chi^2/\text{NDF}$ : 2091381.8/30

Left Out: 5612.739+/-0.942  $\chi^2/\text{NDF}$ : 1188118.8/23

Right Out: 4044.894+/-0.670  $\chi^2/\text{NDF}$ : 2548228.8/33

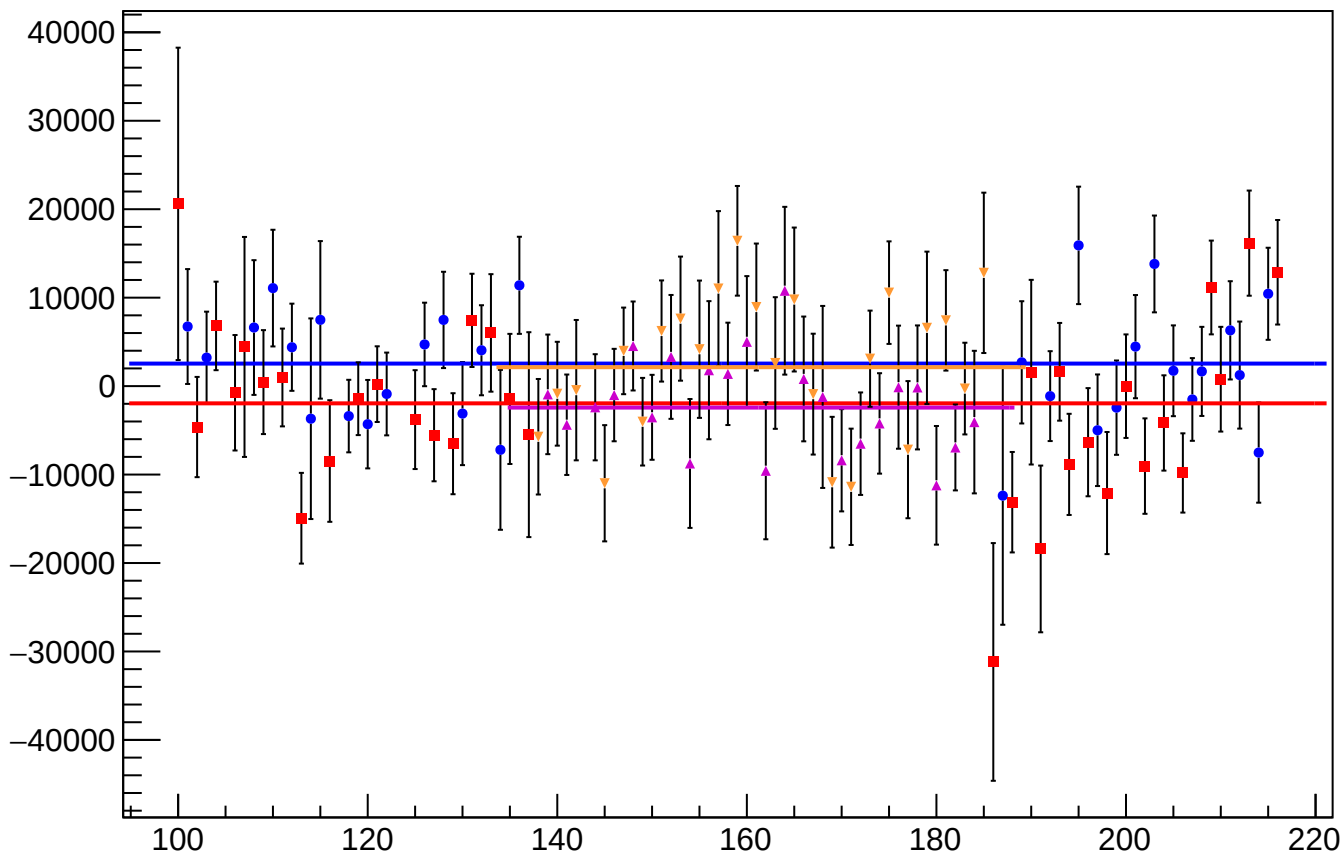
Left In: 5554.935+/-0.938  $\chi^2/\text{NDF}$ : 1332972.0/22

+ sign 4616.975+/-0.552  $\chi^2/\text{NDF}$ : 4979008.9/54

All: 4585.544+/-0.388  $\chi^2/\text{NDF}$ : 10583938.5/100

- sign 4554.861+/-0.545  $\chi^2/\text{NDF}$ : 5598512.0/56

# asym\_usl\_atl2\_avg\_mean vs Slug



Right In: 2547.007 $\pm$ 1020.148  $\chi^2$ /NDF: 32.5/30

Left Out: 2138.140 $\pm$ 1324.387  $\chi^2$ /NDF:30.7/23

Right Out: -1948.449 $\pm$ 1020.665  $\chi^2$ /NDF: 62.5/33

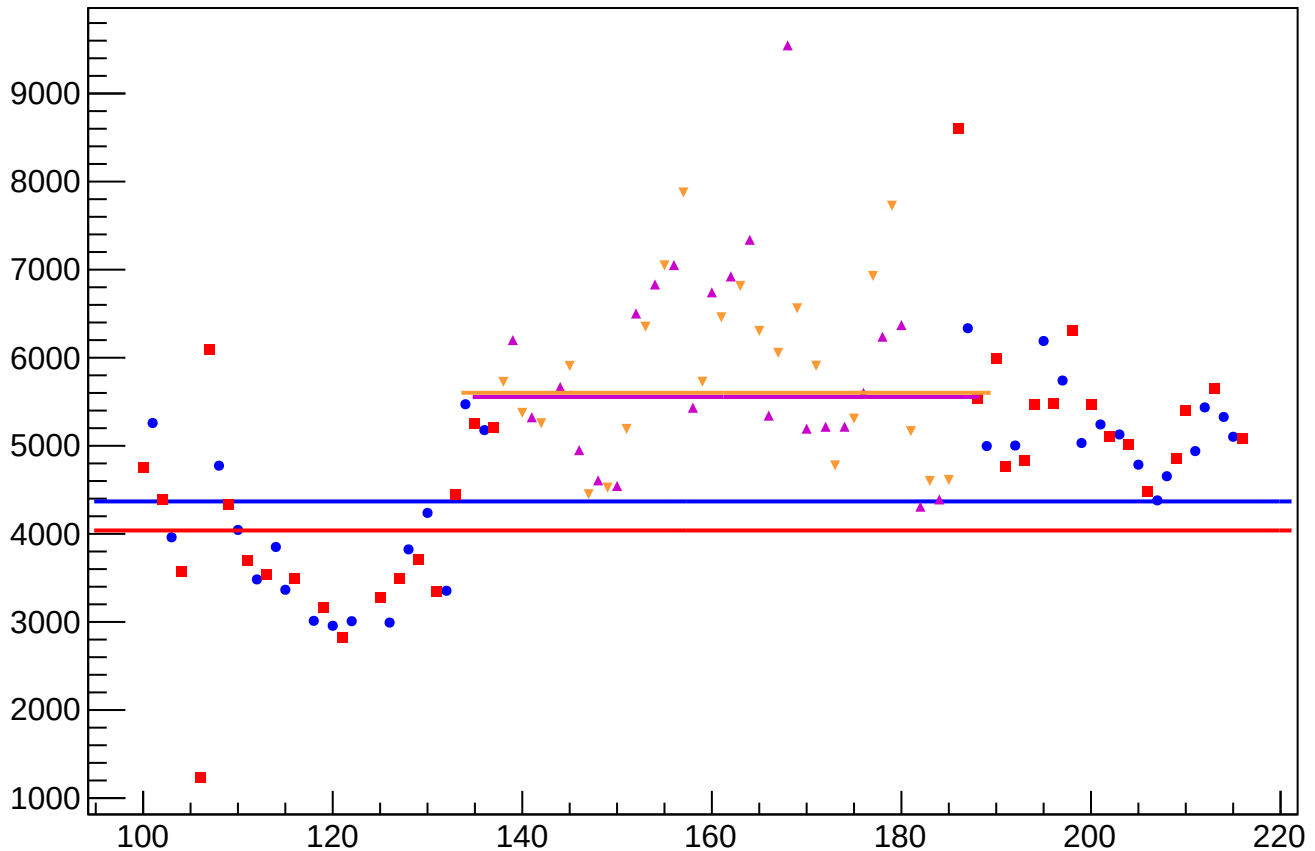
Left In: -2428.059 $\pm$ 1321.080  $\chi^2$ /NDF:12.9/22

+ sign 2394.751 $\pm$ 808.184  $\chi^2$ /NDF: 63.2/54

All: 132.122 $\pm$ 571.297  $\chi^2$ /NDF: 154.3/111

- sign -2127.723 $\pm$ 807.687  $\chi^2$ /NDF: 75.4/56

# asym\_usl\_atl2\_avg\_rms vs Slug



Right In: 4368.453+/-0.721  $\chi^2$ /NDF: 1689077.1/30

Left Out: 5602.266+/-0.936  $\chi^2$ /NDF: 940451.0/23

Right Out: 4038.583+/-0.687  $\chi^2$ /NDF: 4102139.5/33

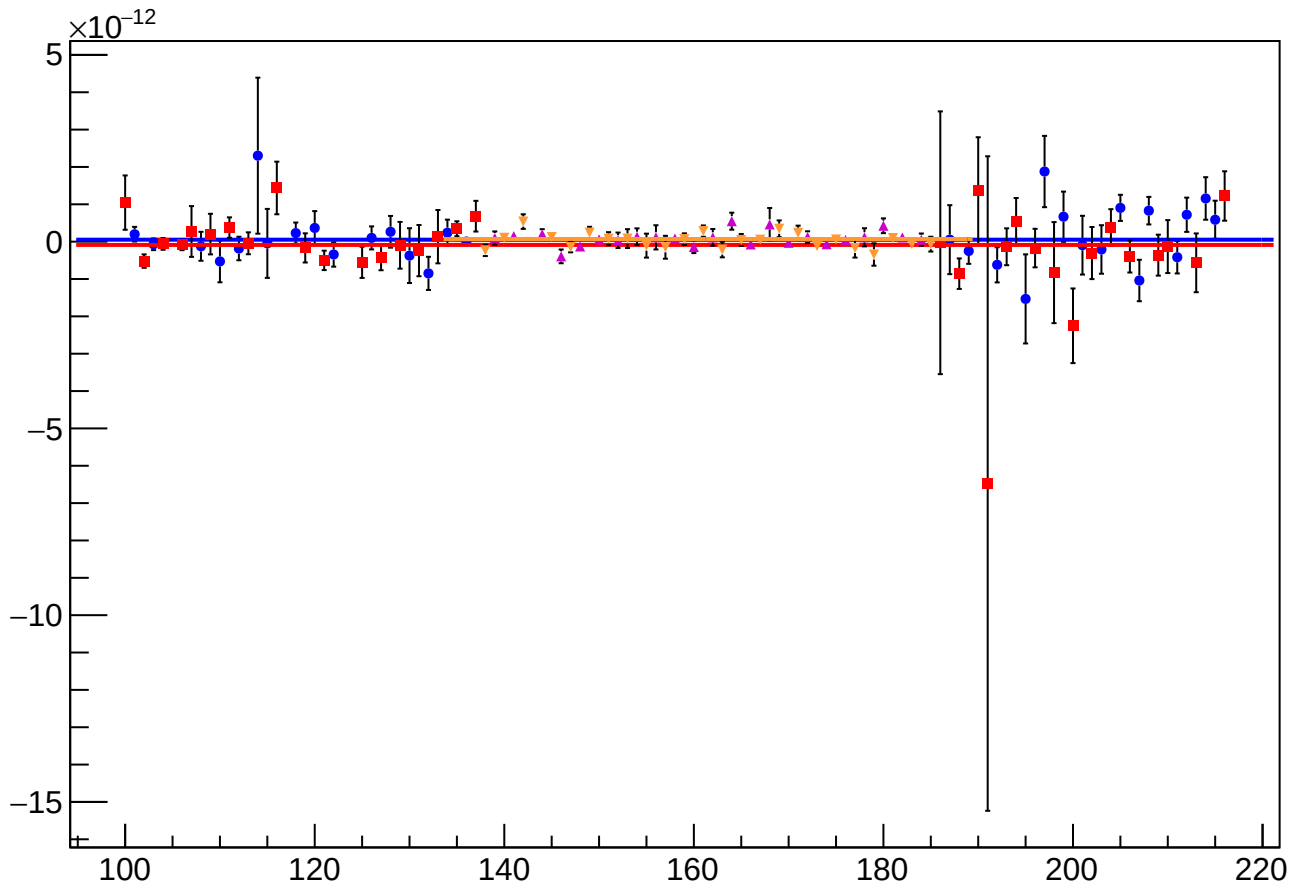
Left In: 5554.054+/-0.934  $\chi^2$ /NDF: 1112177.4/22

+ sign 4827.904+/-0.571  $\chi^2$ /NDF: 3718943.4/54

All: 4694.892+/-0.398  $\chi^2$ /NDF: 10746828.8/100

- sign 4570.214+/-0.553  $\chi^2$ /NDF: 6922931.9/56

asym\_usl\_atl2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.3/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.8/33

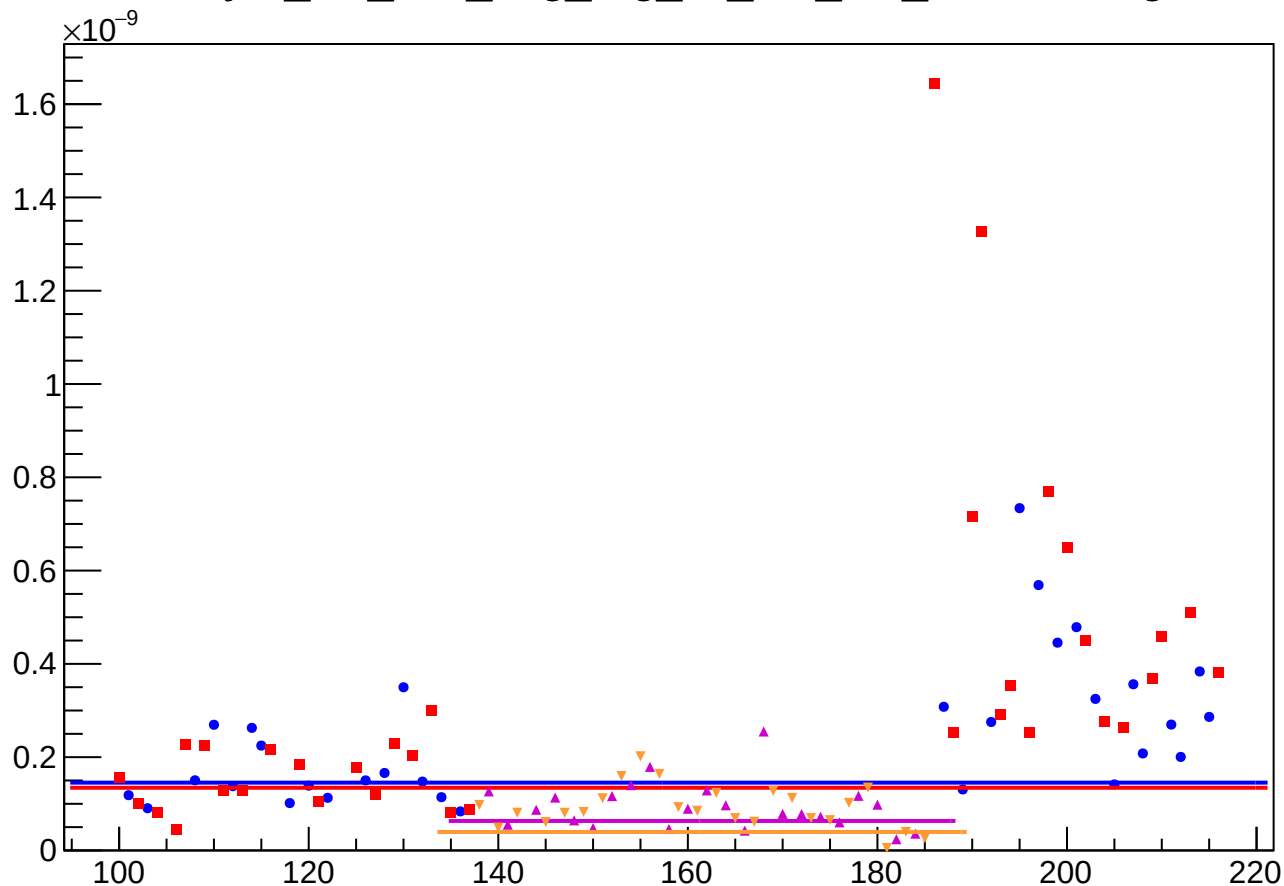
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.7/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 149.7/111

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.6/56

asym\_usl\_atl2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4123062.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6954816.0/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6378345.3/33

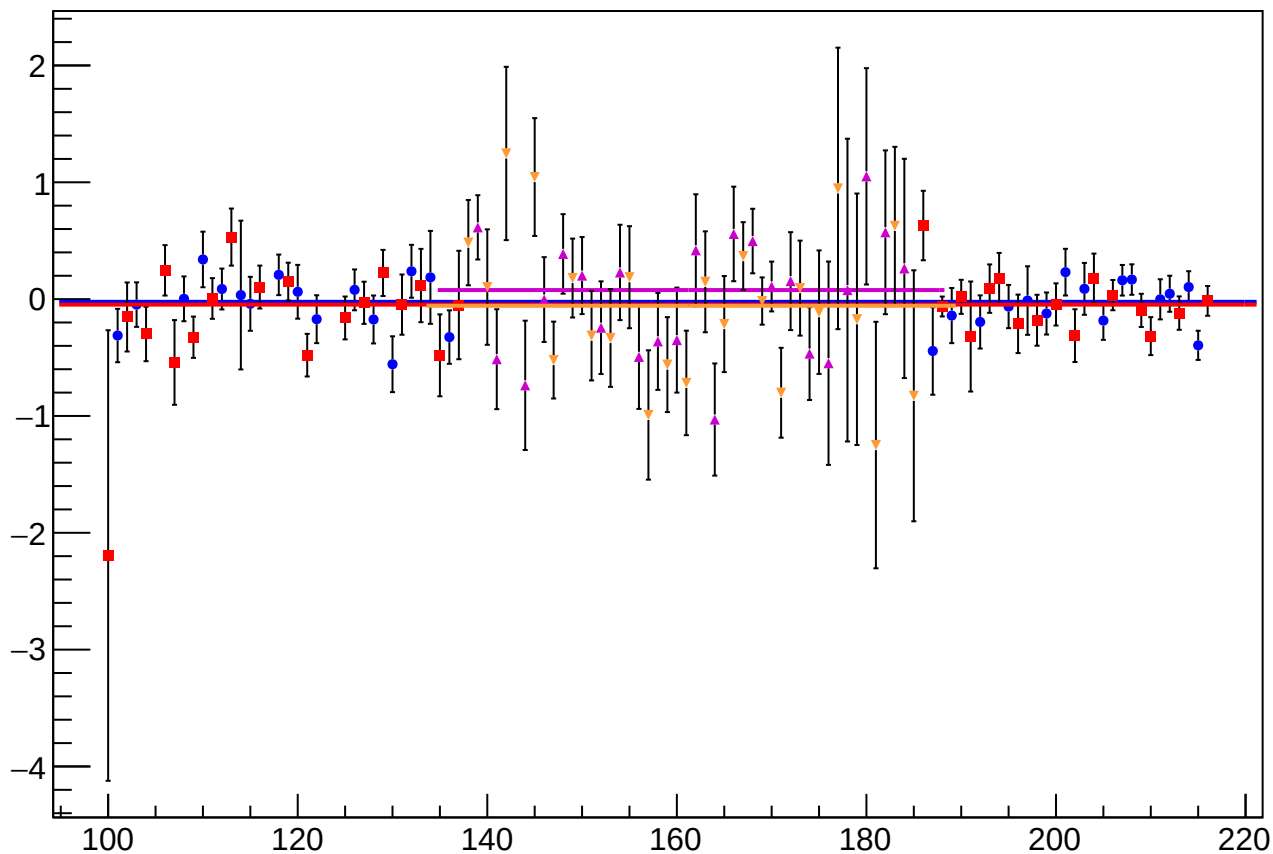
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2922990.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16231935.3/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28886918.5/111

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11568230.3/56

asym\_usl\_atl2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.034$   $\chi^2/\text{NDF}$ : 35.4/30

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.047 \pm 0.032$   $\chi^2/\text{NDF}$ : 40.4/33

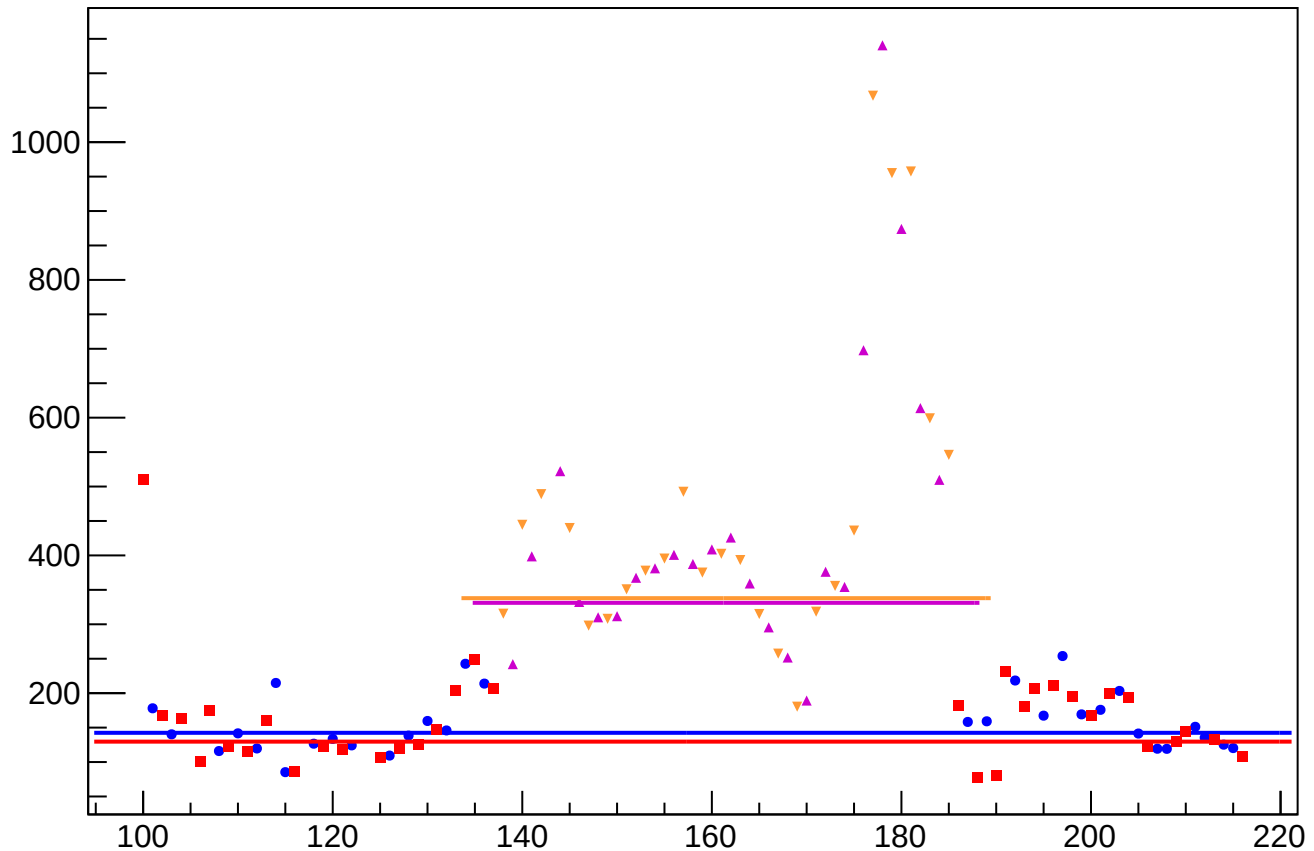
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.028 \pm 0.032$   $\chi^2/\text{NDF}$ : 65.9/54

All:  $-0.030 \pm 0.022$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $-0.031 \pm 0.030$   $\chi^2/\text{NDF}$ : 69.4/56

asym\_usl\_atl2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 142.446 $\pm$ 0.024  $\chi^2$ /NDF: 1750755.1/30

Left Out: 337.937 $\pm$ 0.060  $\chi^2$ /NDF: 4517129.8/23

Right Out: 129.629 $\pm$ 0.023  $\chi^2$ /NDF: 3281057.9/33

Left In: 331.158 $\pm$ 0.059  $\chi^2$ /NDF: 4106959.8/22

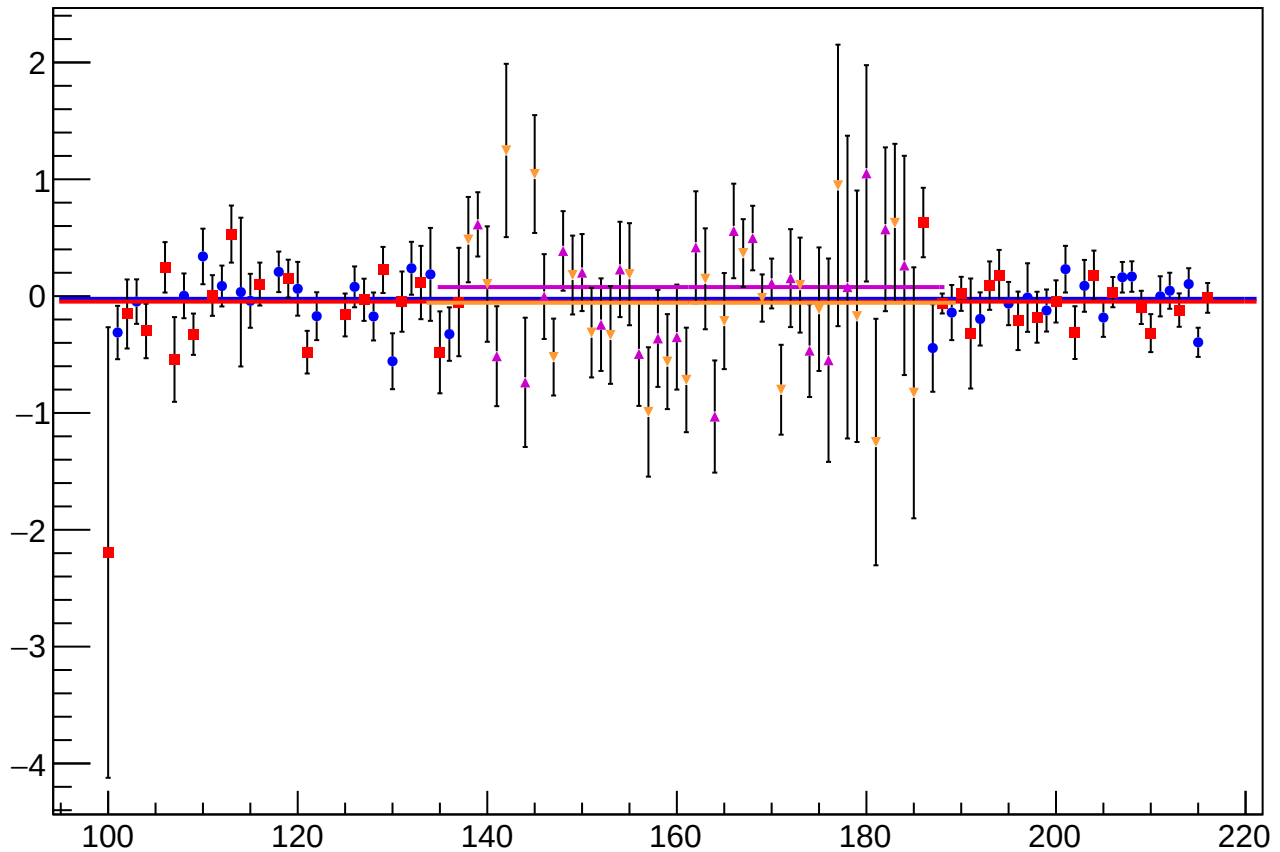
+ sign 169.564 $\pm$ 0.023  $\chi^2$ /NDF: 15281610.9/54

All: 162.106 $\pm$ 0.015  $\chi^2$ /NDF: 33050535.3/1

- sign 155.524 $\pm$ 0.021  $\chi^2$ /NDF: 17562219.4/56



asym\_usl\_atl2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.034$   $\chi^2/\text{NDF}$ : 35.4/30

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.047 \pm 0.032$   $\chi^2/\text{NDF}$ : 40.4/33

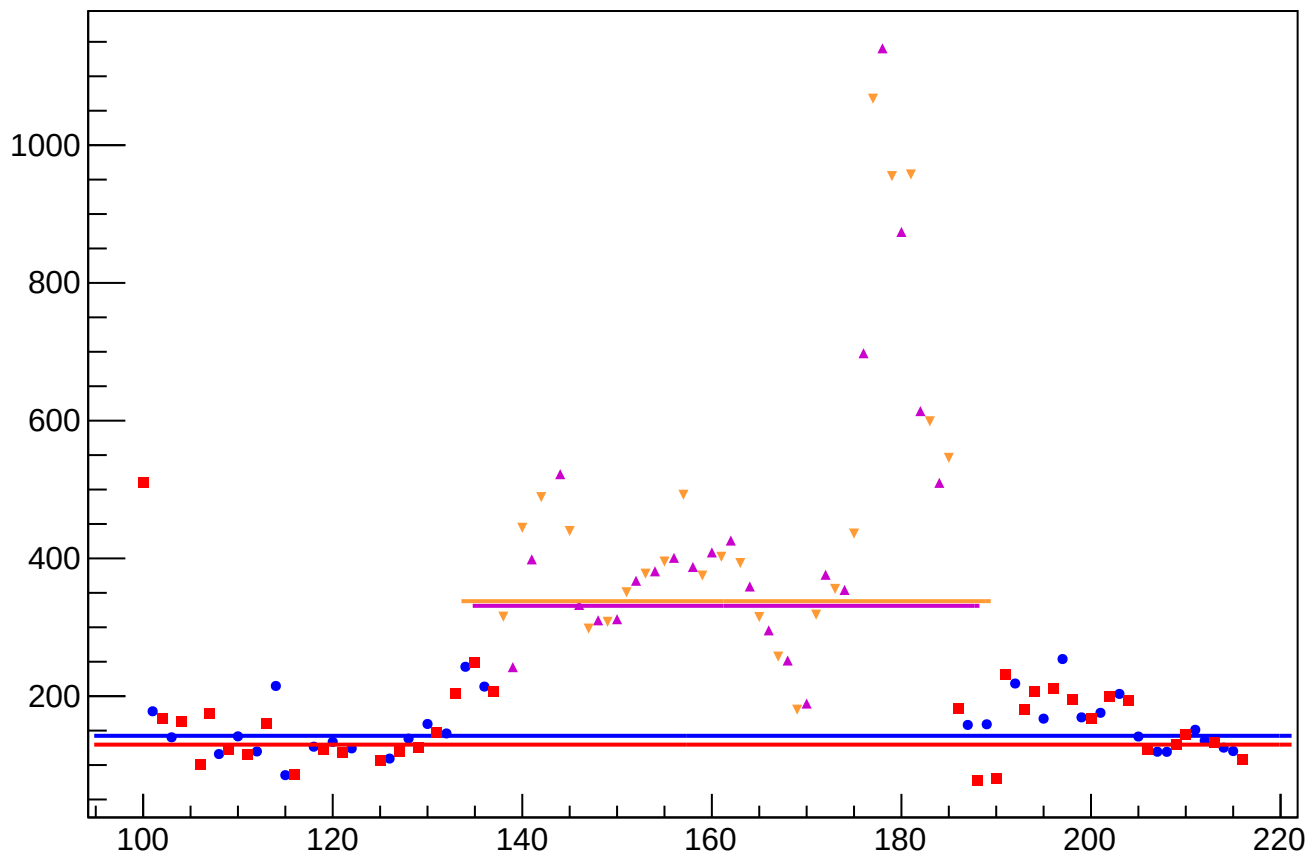
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.028 \pm 0.032$   $\chi^2/\text{NDF}$ : 65.9/54

All:  $-0.030 \pm 0.022$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $-0.031 \pm 0.030$   $\chi^2/\text{NDF}$ : 69.4/56

asym\_usl\_atl2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 142.446 $\pm$ 0.024  $\chi^2$ /NDF: 1750755.1/30

Left Out: 337.937 $\pm$ 0.060  $\chi^2$ /NDF: 4517129.8/23

Right Out: 129.629 $\pm$ 0.023  $\chi^2$ /NDF: 3281057.9/33

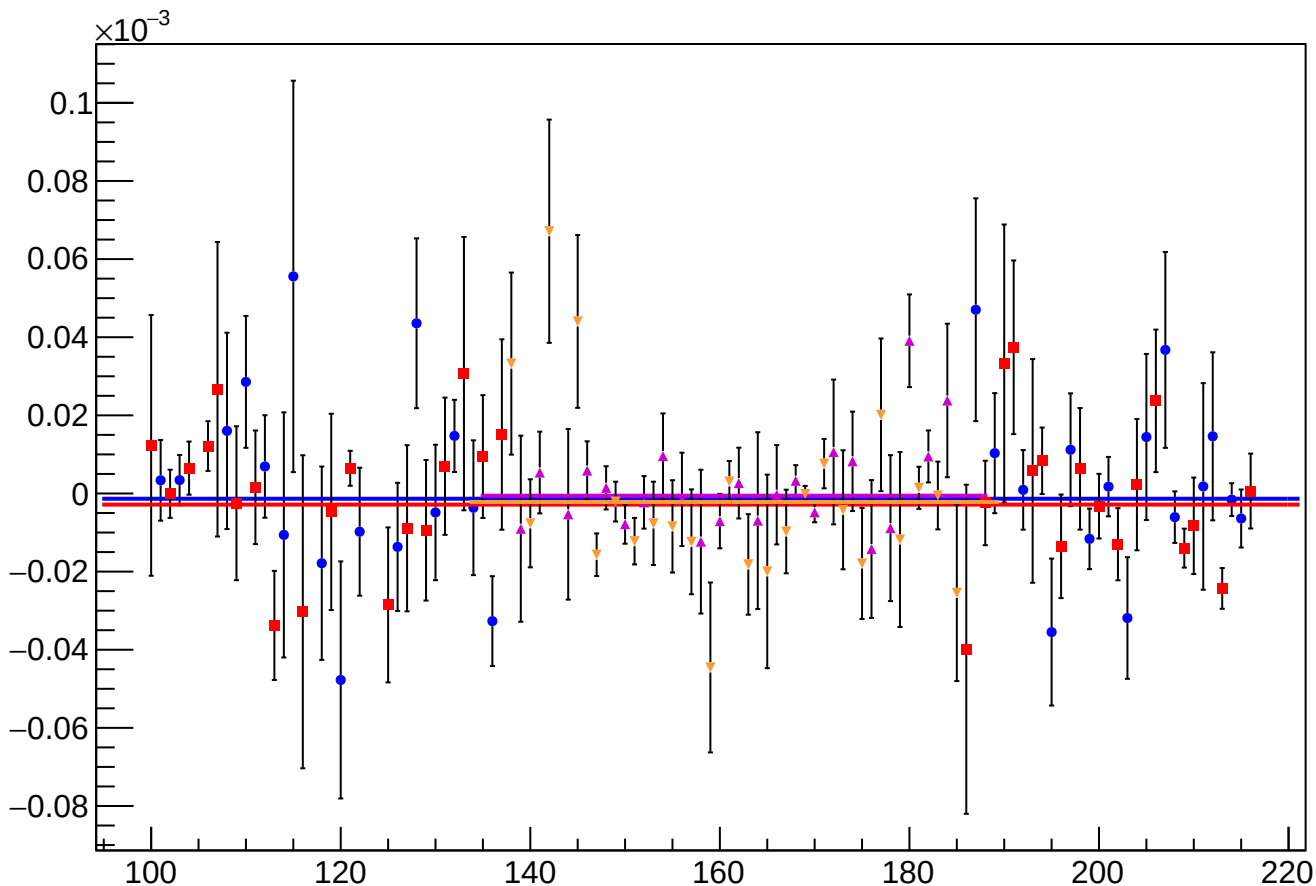
Left In: 331.158 $\pm$ 0.059  $\chi^2$ /NDF: 4106959.8/22

+ sign 169.564 $\pm$ 0.023  $\chi^2$ /NDF: 15281610.9/54

All: 162.106 $\pm$ 0.015  $\chi^2$ /NDF: 33050535.3/1

- sign 155.524 $\pm$ 0.021  $\chi^2$ /NDF: 17562219.4/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.9/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.1/33

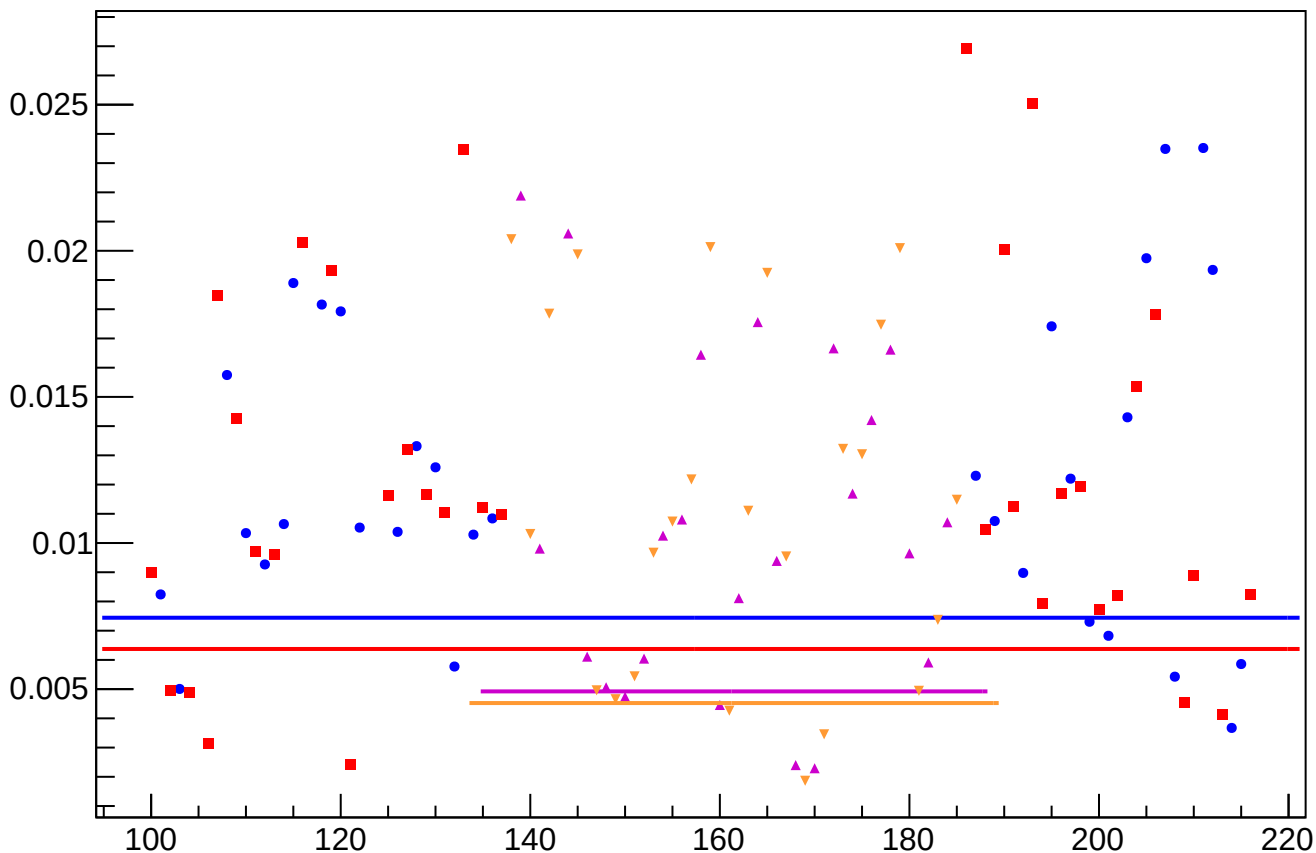
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 80.3/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 163.7/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 83.3/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 8216117.9/30

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:14239550.6/23

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 10139995.3/33

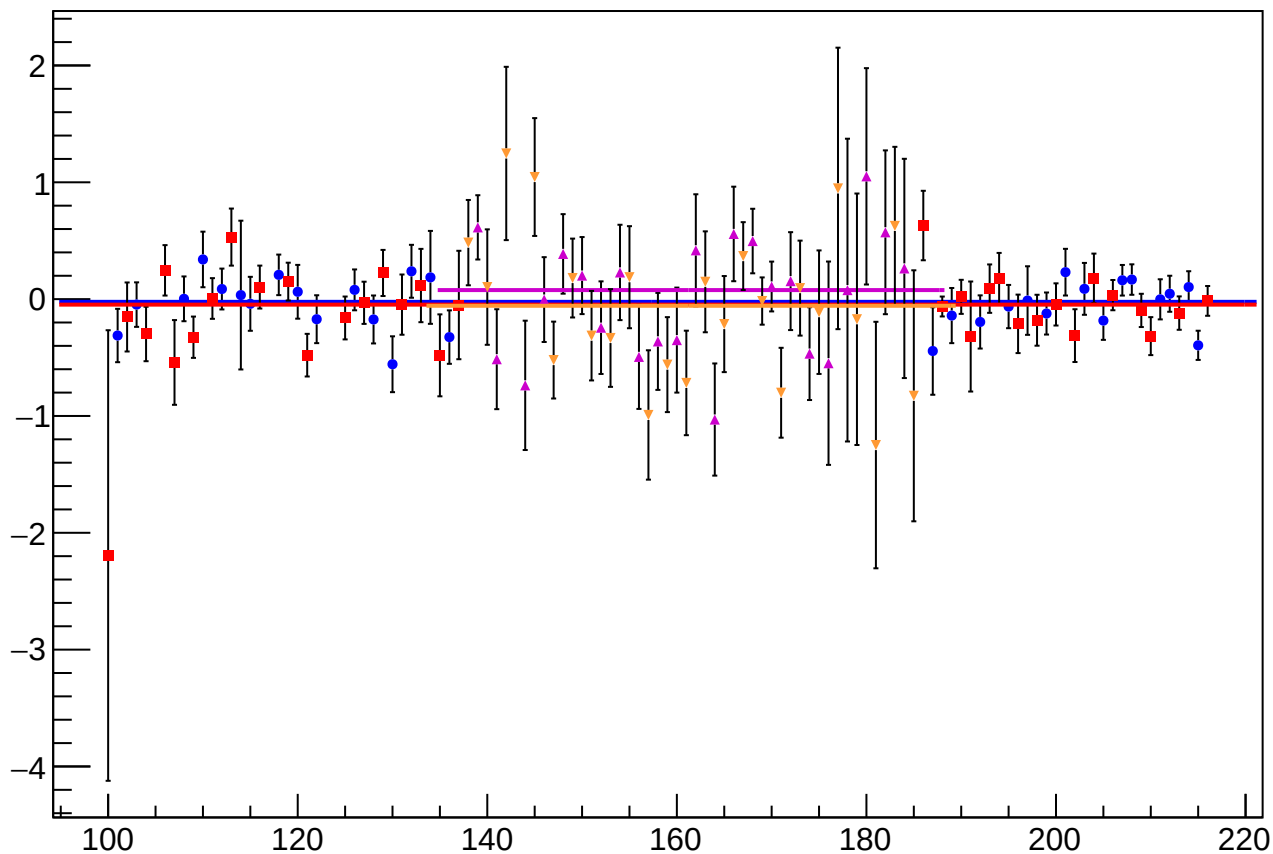
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:11626984.8/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 25317347.0/54

All: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 47873959.6/111

- sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 22555219.3/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.034$   $\chi^2/\text{NDF}$ : 35.4/30

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.047 \pm 0.032$   $\chi^2/\text{NDF}$ : 40.4/33

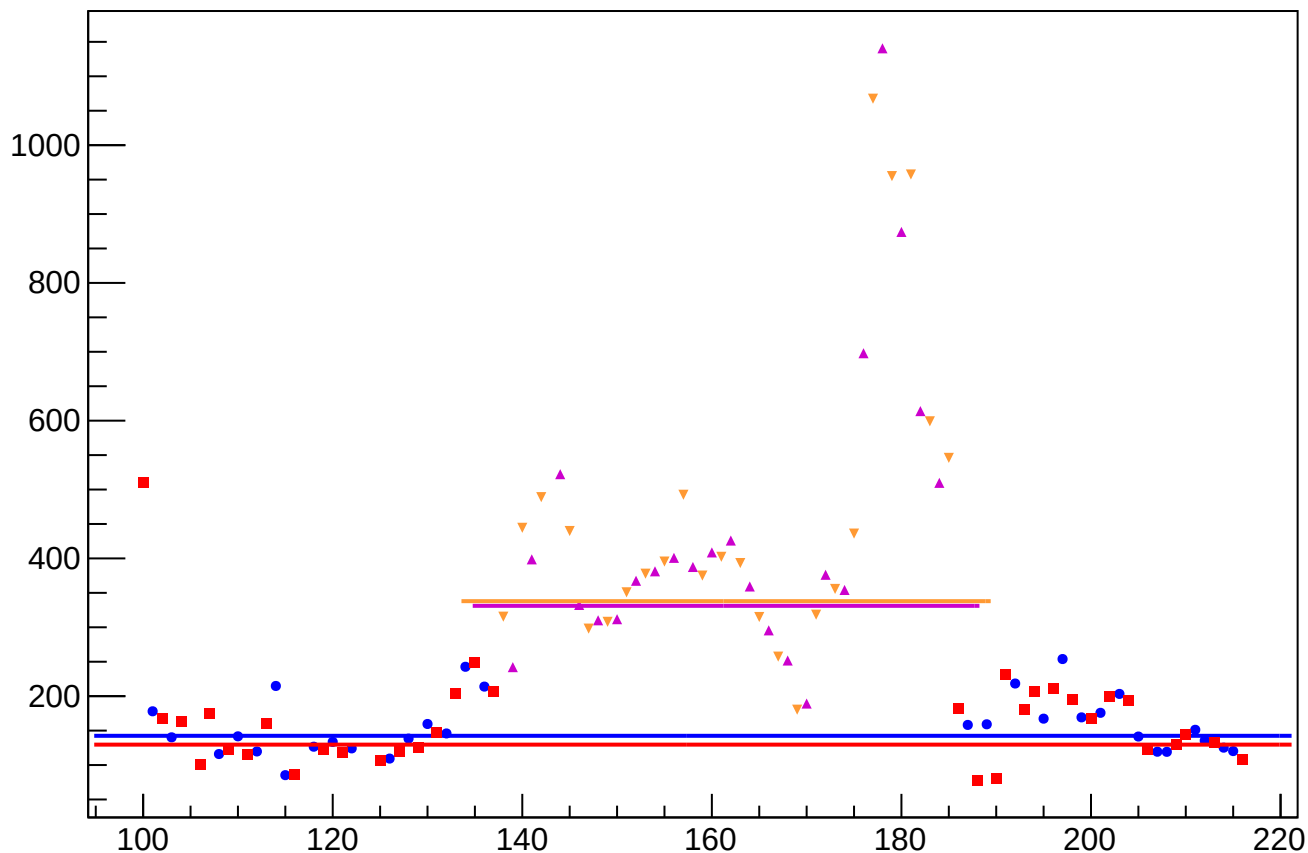
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.028 \pm 0.032$   $\chi^2/\text{NDF}$ : 65.9/54

All:  $-0.030 \pm 0.022$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $-0.031 \pm 0.030$   $\chi^2/\text{NDF}$ : 69.4/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 142.446+/-0.024  $\chi^2/\text{NDF}$ : 1750761.1/30

Left Out: 337.939+/-0.060  $\chi^2/\text{NDF}$ : 4517201.8/23

Right Out: 129.628+/-0.023  $\chi^2/\text{NDF}$ : 3281213.9/33

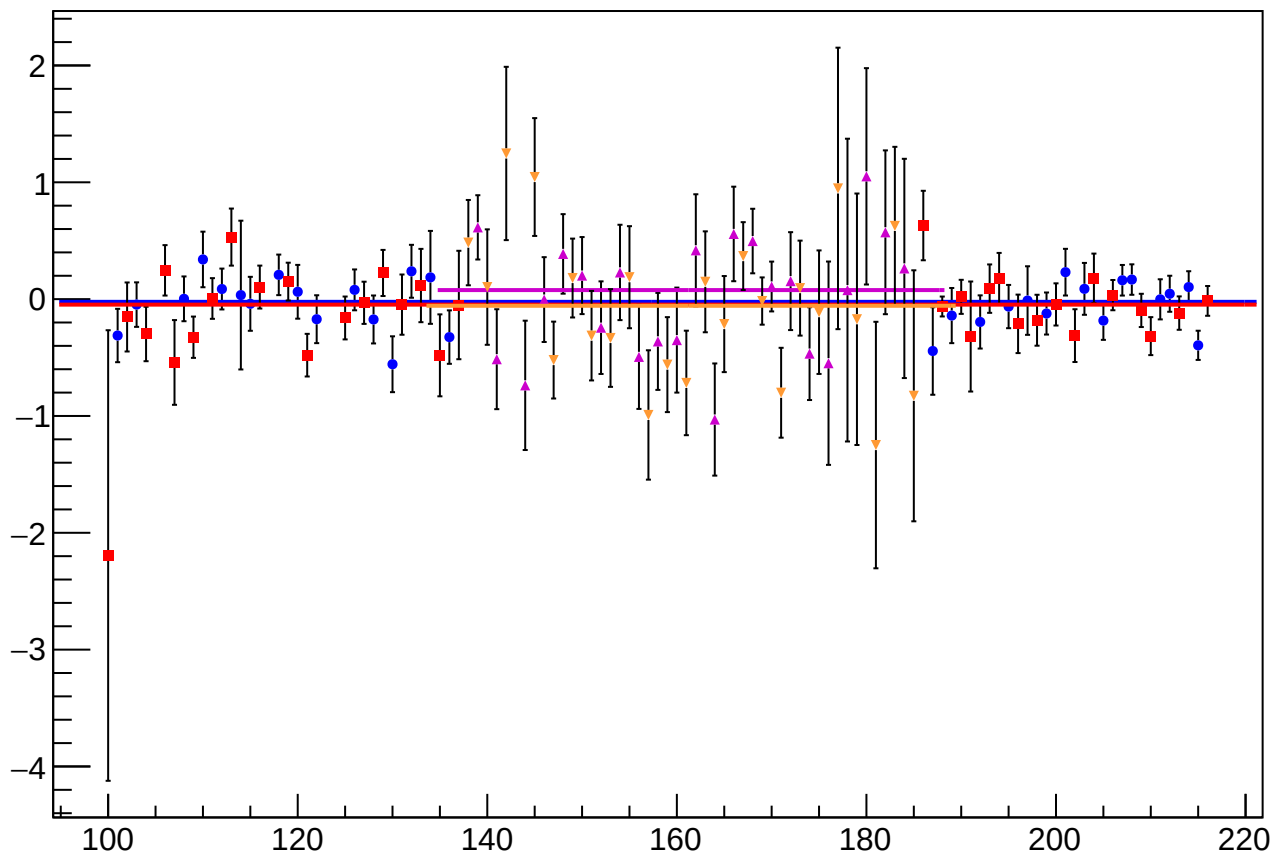
Left In: 331.161+/-0.059  $\chi^2/\text{NDF}$ : 4106963.1/22

+ sign 169.564+/-0.023  $\chi^2/\text{NDF}$ : 15281754.4/54

All: 162.105+/-0.015  $\chi^2/\text{NDF}$ : 33051181.7/11

- sign 155.523+/-0.021  $\chi^2/\text{NDF}$ : 17562672.8/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.023 \pm 0.034$   $\chi^2/\text{NDF}$ : 35.4/30

Left Out:  $-0.057 \pm 0.085$   $\chi^2/\text{NDF}$ : 30.4/23

Right Out:  $-0.047 \pm 0.032$   $\chi^2/\text{NDF}$ : 40.4/33

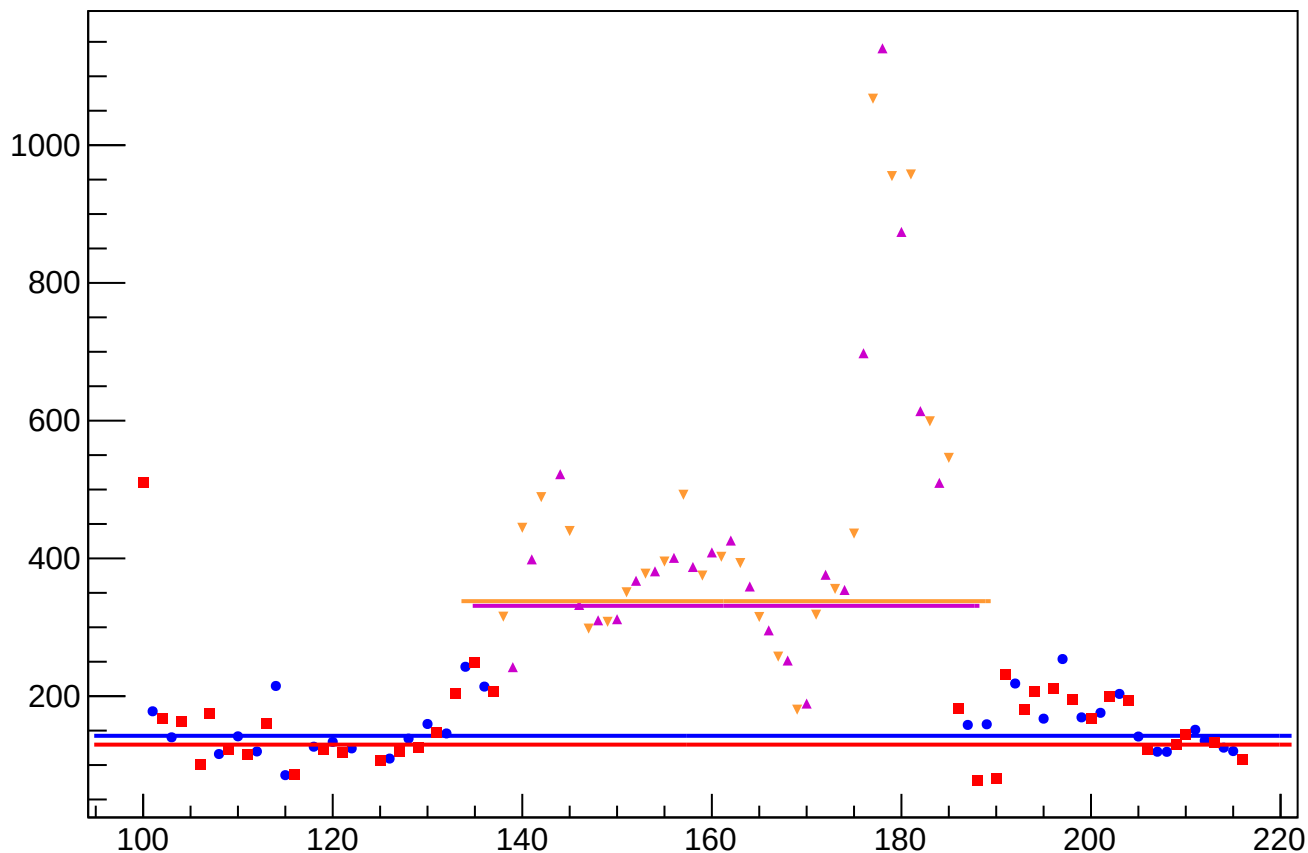
Left In:  $0.077 \pm 0.083$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $-0.028 \pm 0.032$   $\chi^2/\text{NDF}$ : 65.9/54

All:  $-0.030 \pm 0.022$   $\chi^2/\text{NDF}$ : 135.3/111

- sign  $-0.031 \pm 0.030$   $\chi^2/\text{NDF}$ : 69.4/56

asym\_usl\_atl2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 142.446 $\pm$ 0.024  $\chi^2$ /NDF: 1750761.1/30

Left Out: 337.939 $\pm$ 0.060  $\chi^2$ /NDF: 4517201.8/23

Right Out: 129.628 $\pm$ 0.023  $\chi^2$ /NDF: 3281213.9/33

Left In: 331.161 $\pm$ 0.059  $\chi^2$ /NDF: 4106963.1/22

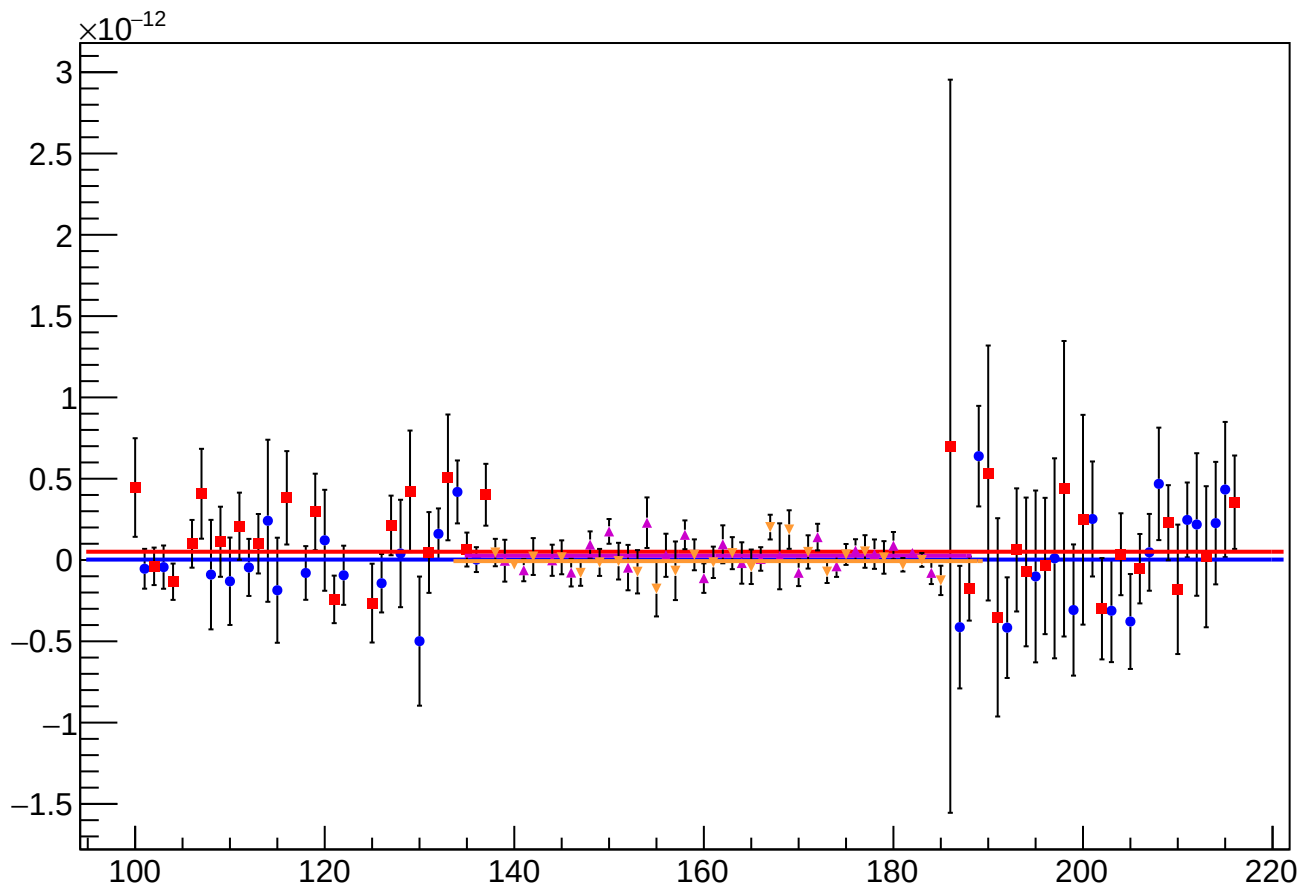
+ sign 169.564 $\pm$ 0.023  $\chi^2$ /NDF: 15281754.4/54

All: 162.105 $\pm$ 0.015  $\chi^2$ /NDF: 33051181.7/1

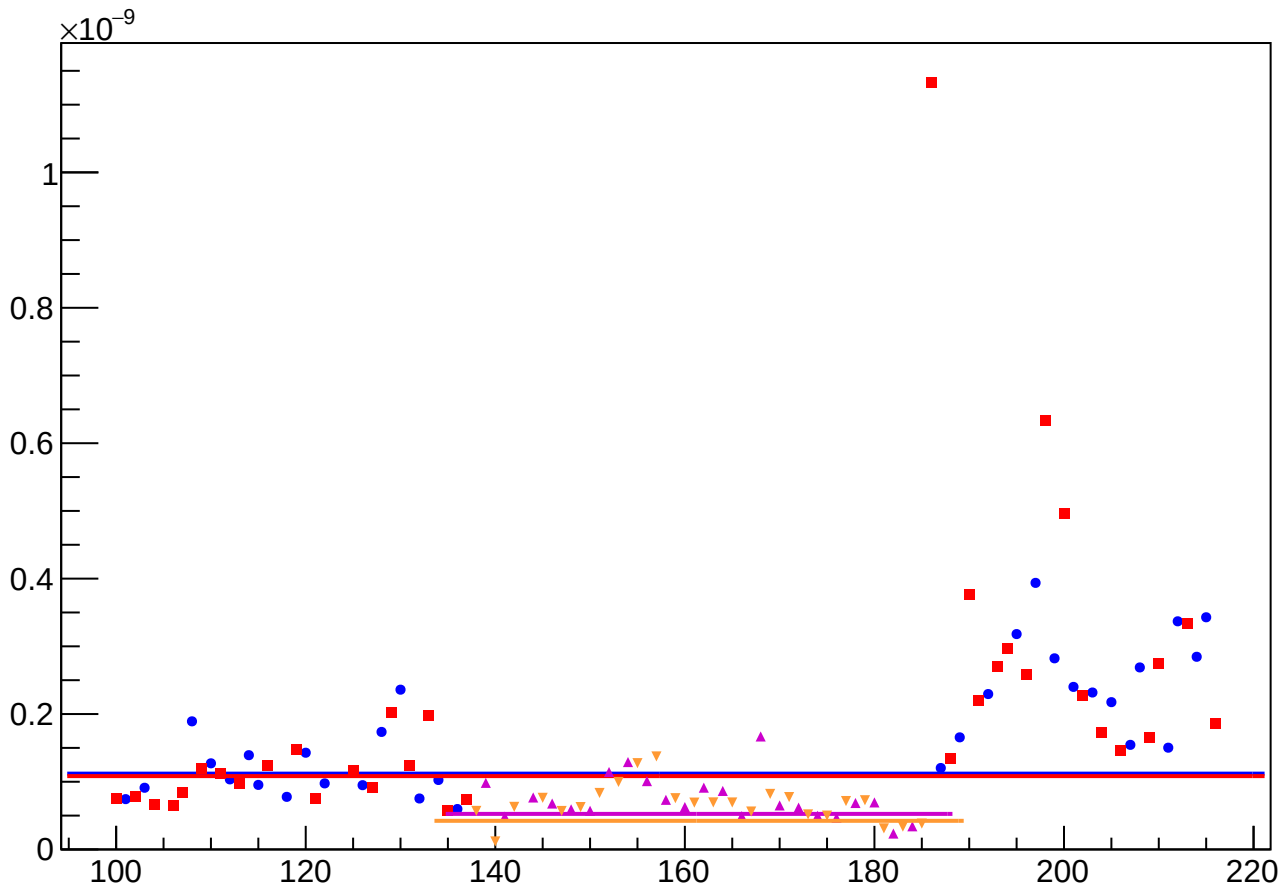
- sign 155.523 $\pm$ 0.021  $\chi^2$ /NDF: 17562672.8/56



asym\_usl\_atl2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



asym\_usl\_atl2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6153342.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6680117.5/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6344606.6/33

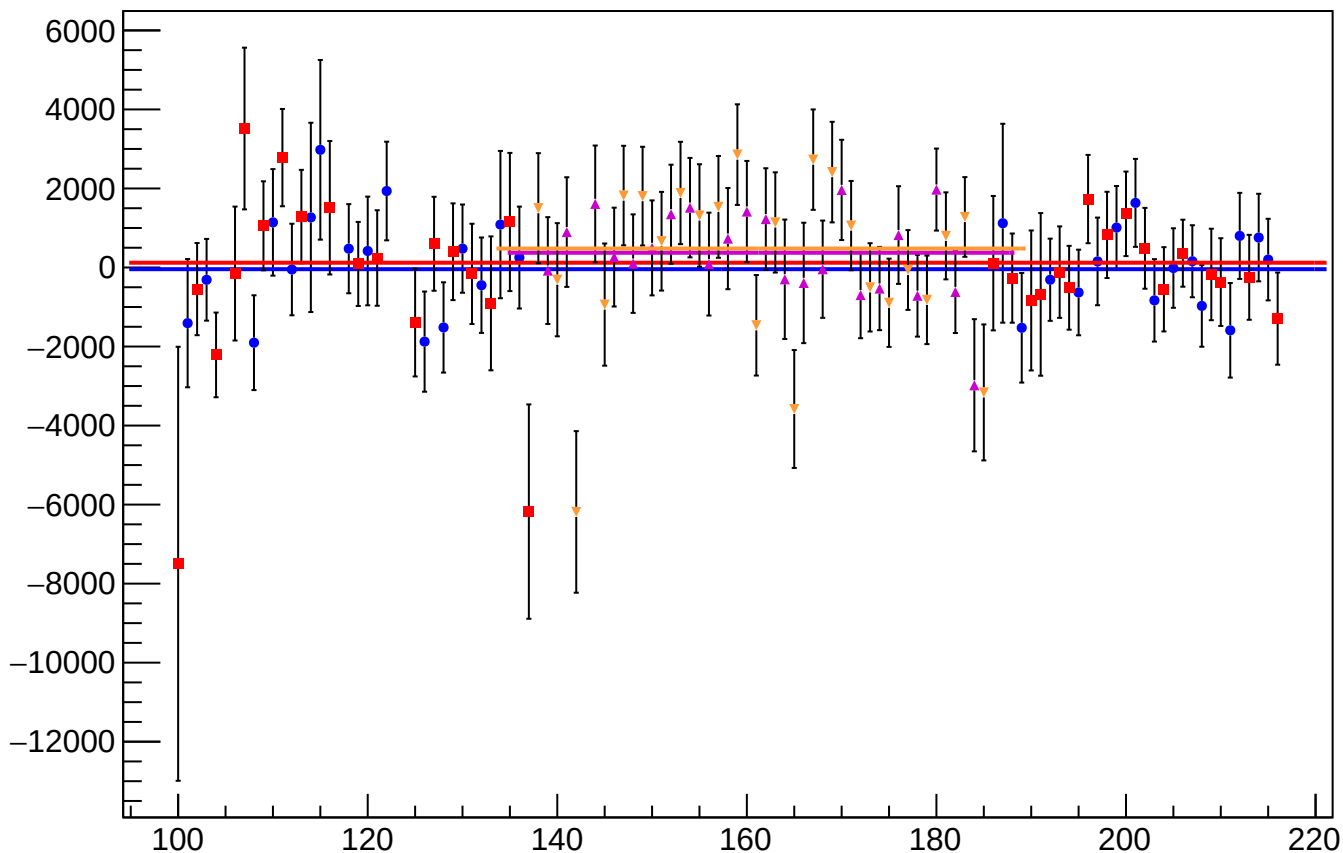
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4897147.5/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18686561.6/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34225563.0/111

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15000343.6/56

# reg\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-42.830 \pm 214.594$   $\chi^2/\text{NDF}$ : 22.7/30

Left Out:  $479.555 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $120.885 \pm 213.797$   $\chi^2/\text{NDF}$ : 31.6/33

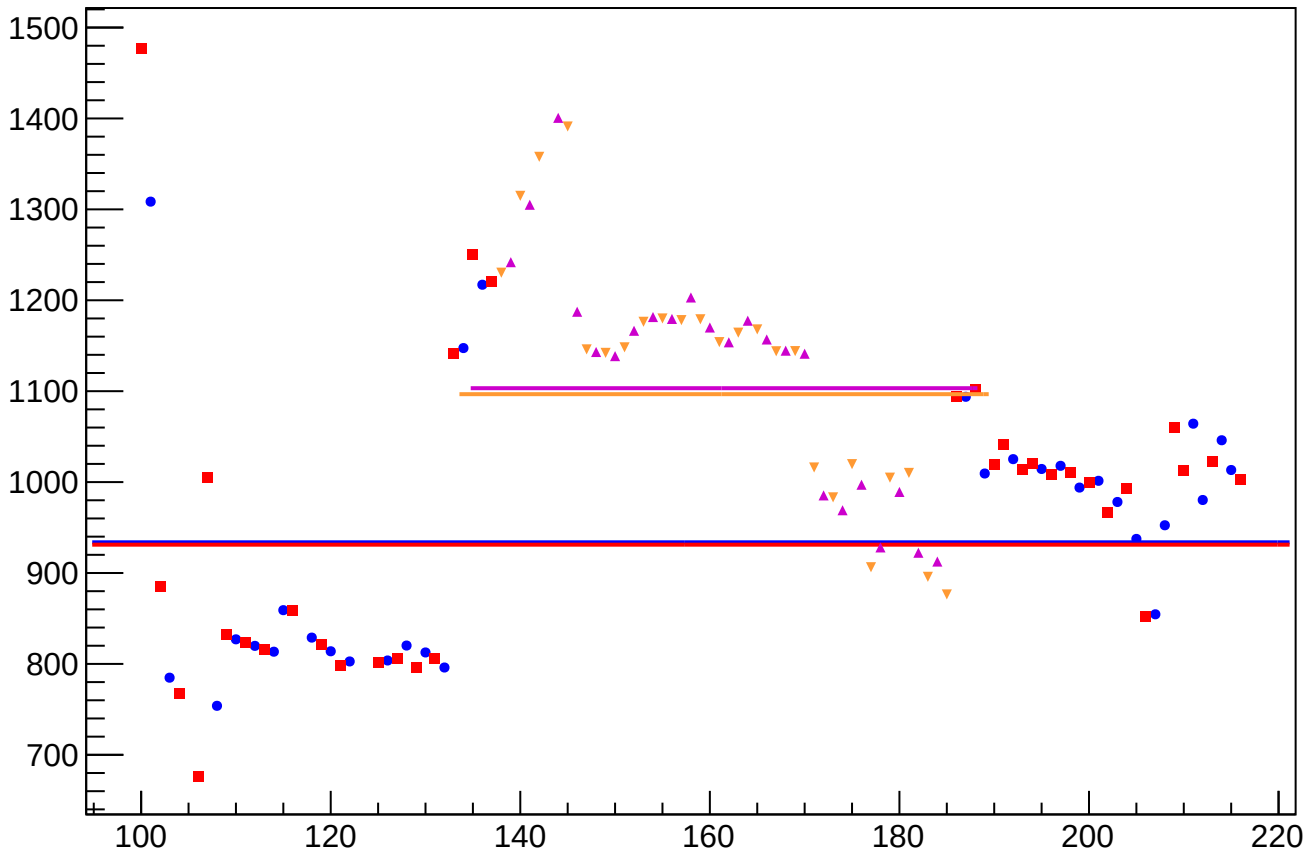
Left In:  $372.926 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $172.427 \pm 164.544$   $\chi^2/\text{NDF}$ : 70.3/54

All:  $197.590 \pm 116.497$   $\chi^2/\text{NDF}$ : 118.6/111

- sign  $222.880 \pm 164.960$   $\chi^2/\text{NDF}$ : 48.3/56

# reg\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 933.754+/-0.152  $\chi^2/\text{NDF}$ : 645166.1/30

Left Out: 1096.711+/-0.181  $\chi^2/\text{NDF}$ : 480498.6/23

Right Out: 931.173+/-0.150  $\chi^2/\text{NDF}$ : 664482.8/33

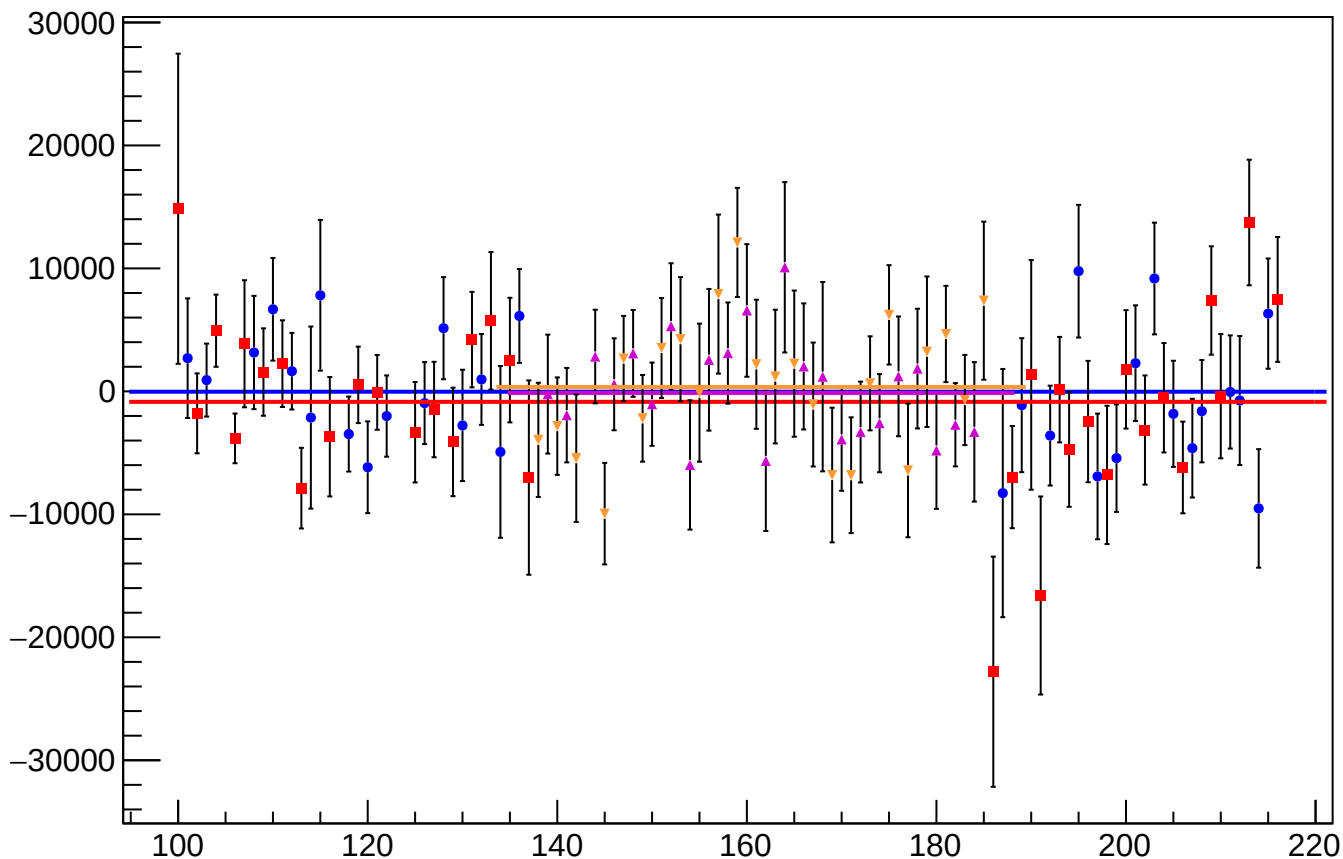
Left In: 1103.281+/-0.183  $\chi^2/\text{NDF}$ : 447540.4/22

+ sign 1000.903+/-0.116  $\chi^2/\text{NDF}$ : 1600898.5/54

All: 1000.633+/-0.082  $\chi^2/\text{NDF}$ : 3239762.3/11

- sign 1000.363+/-0.116  $\chi^2/\text{NDF}$ : 1638853.0/56

# asym\_usl\_atl2\_dd\_reg\_correction\_mean vs Slug



Right In:  $-28.573 \pm 764.437$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $357.729 \pm 934.220$   $\chi^2/\text{NDF}$ : 30.3/23

Right Out:  $-850.992 \pm 708.895$   $\chi^2/\text{NDF}$ : 50.5/33

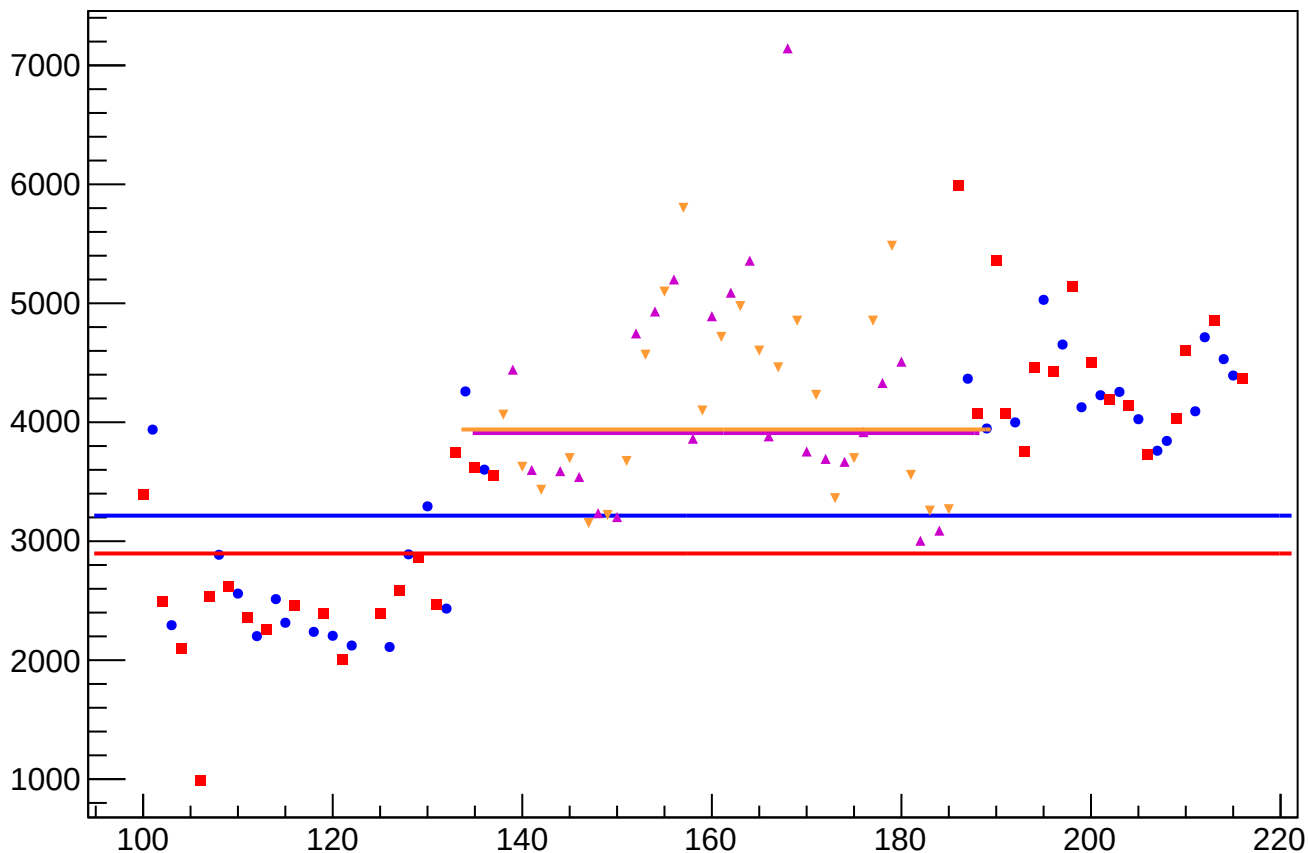
Left In:  $-126.696 \pm 932.645$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $126.349 \pm 591.618$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $-246.486 \pm 408.363$   $\chi^2/\text{NDF}$ : 130.8/111

- sign  $-585.769 \pm 564.371$   $\chi^2/\text{NDF}$ : 64.6/56

# asym\_usl\_atl2\_dd\_reg\_correction\_rms vs Slug



Right In: 3214.973+/-0.541  $\chi^2/\text{NDF}$ : 3008217.6/30

Left Out: 3939.261+/-0.661  $\chi^2/\text{NDF}$ : 1092666.9/23

Right Out: 2896.854+/-0.501  $\chi^2/\text{NDF}$ : 5363037.2/33

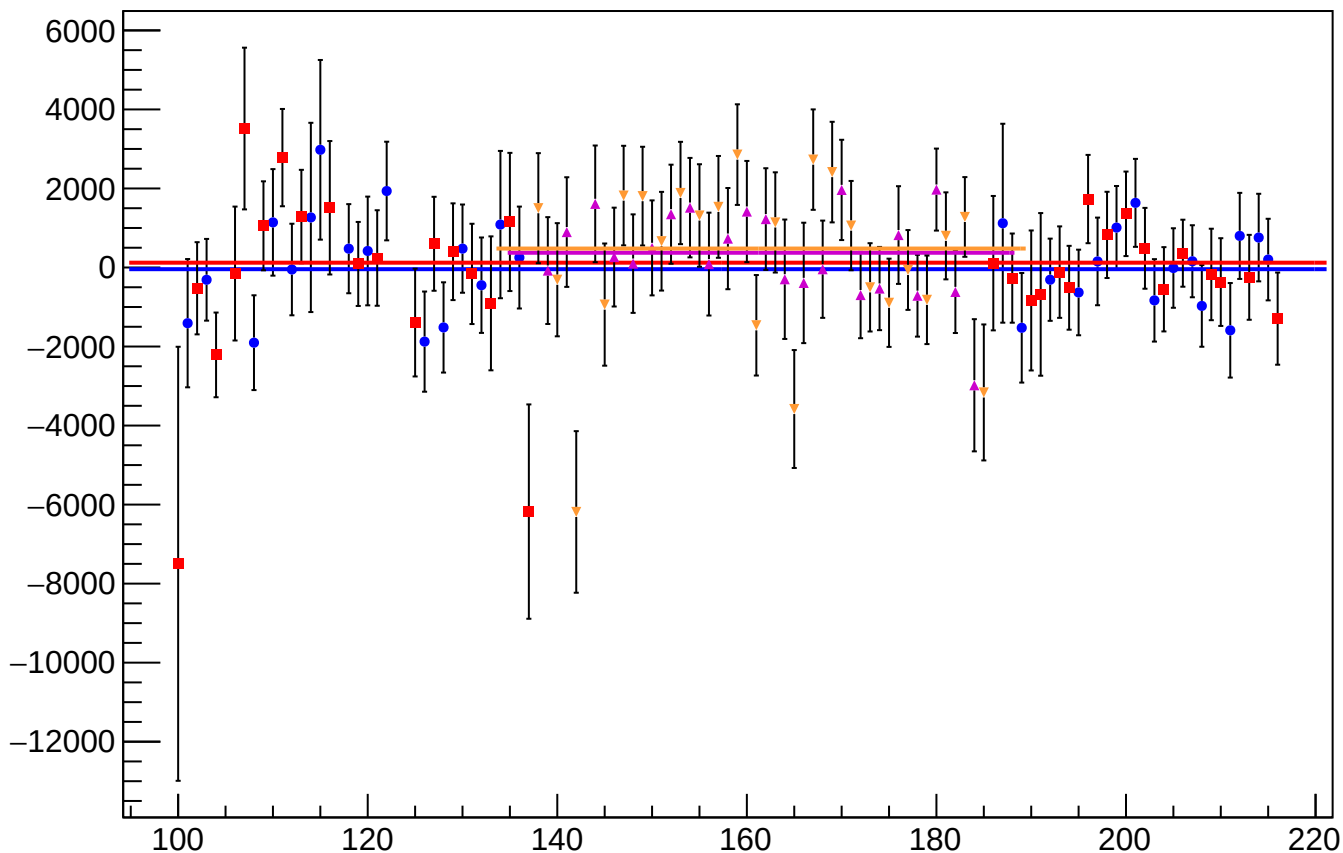
Left In: 3909.133+/-0.659  $\chi^2/\text{NDF}$ : 1300774.2/22

+ sign 3505.439+/-0.418  $\chi^2/\text{NDF}$ : 4820921.5/54

All: 3380.881+/-0.289  $\chi^2/\text{NDF}$ : 13147414.9/100

- sign 3267.532+/-0.399  $\chi^2/\text{NDF}$ : 8157165.7/56

# cor\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-42.829 \pm 214.594$   $\chi^2/\text{NDF}$ : 22.7/30

Left Out:  $479.583 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $121.612 \pm 213.798$   $\chi^2/\text{NDF}$ : 31.6/33

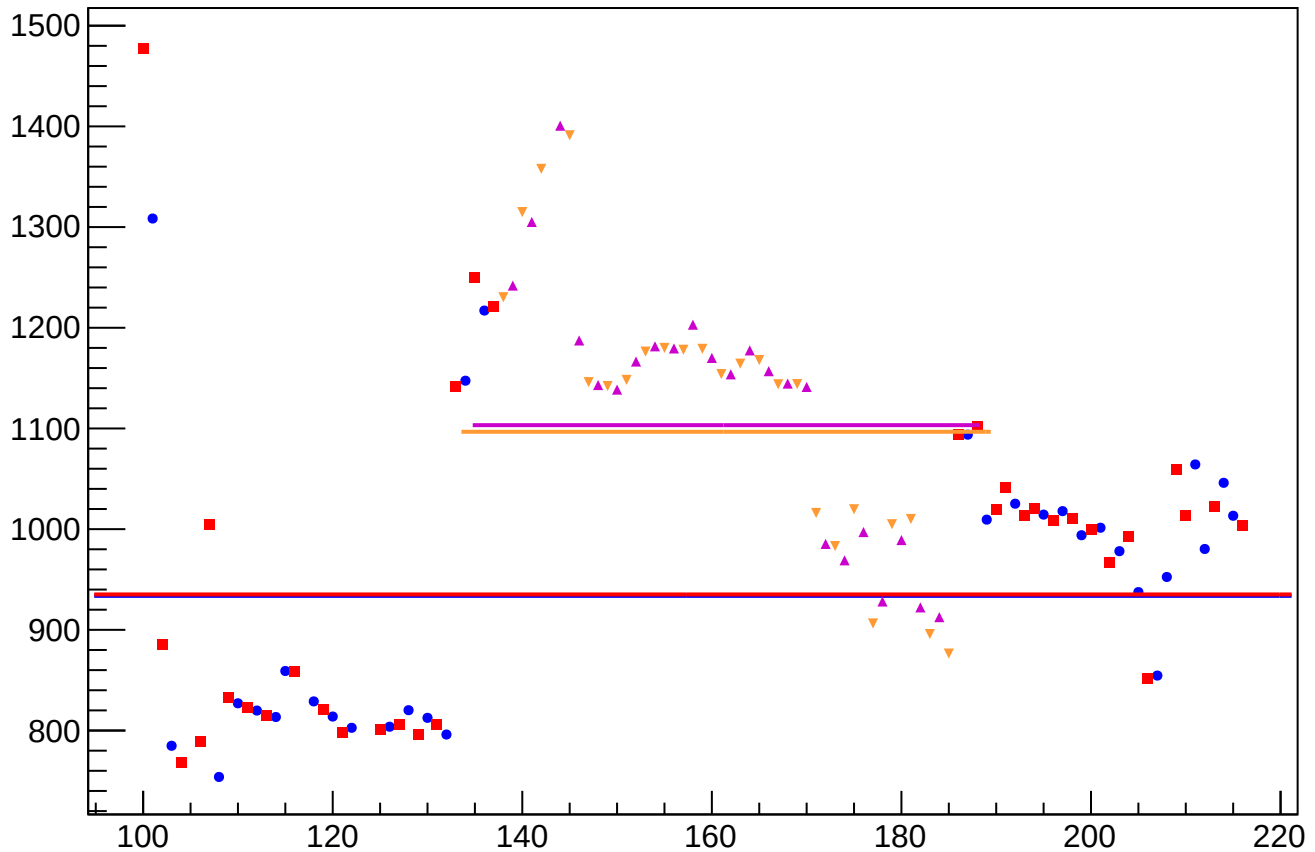
Left In:  $372.901 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $172.439 \pm 164.544$   $\chi^2/\text{NDF}$ : 70.3/54

All:  $197.806 \pm 116.497$   $\chi^2/\text{NDF}$ : 118.6/111

- sign  $223.303 \pm 164.961$   $\chi^2/\text{NDF}$ : 48.2/56

# cor\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In:  $933.754 \pm 0.152$   $\chi^2/\text{NDF}$ : 645166.0/30

Left Out:  $1096.711 \pm 0.181$   $\chi^2/\text{NDF}$ : 480498.6/23

Right Out:  $935.152 \pm 0.151$   $\chi^2/\text{NDF}$ : 604681.7/33

Left In:  $1103.281 \pm 0.183$   $\chi^2/\text{NDF}$ : 447540.3/22

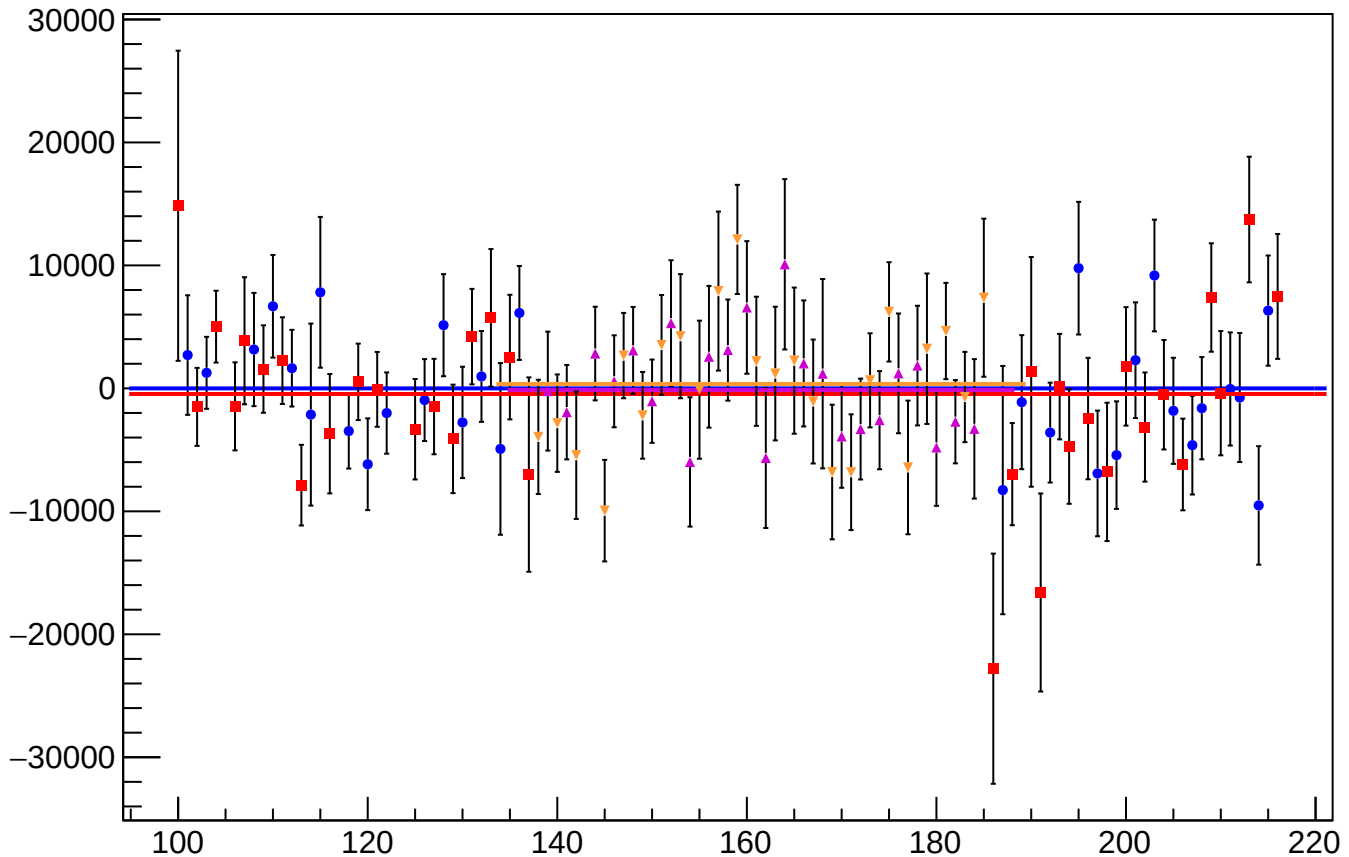
+ sign  $1000.903 \pm 0.116$   $\chi^2/\text{NDF}$ : 1600898.6/54

All:  $1001.952 \pm 0.082$   $\chi^2/\text{NDF}$ : 3154722.4/11

- sign  $1003.004 \pm 0.116$   $\chi^2/\text{NDF}$ : 1553661.0/56



# asym\_usl\_atl2\_dd\_cor\_correction\_mean vs Slug



Right In:  $-2.964 \pm 763.758$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $357.728 \pm 934.221$   $\chi^2/\text{NDF}$ : 30.3/23

Right Out:  $-457.549 \pm 739.344$   $\chi^2/\text{NDF}$ : 48.2/33

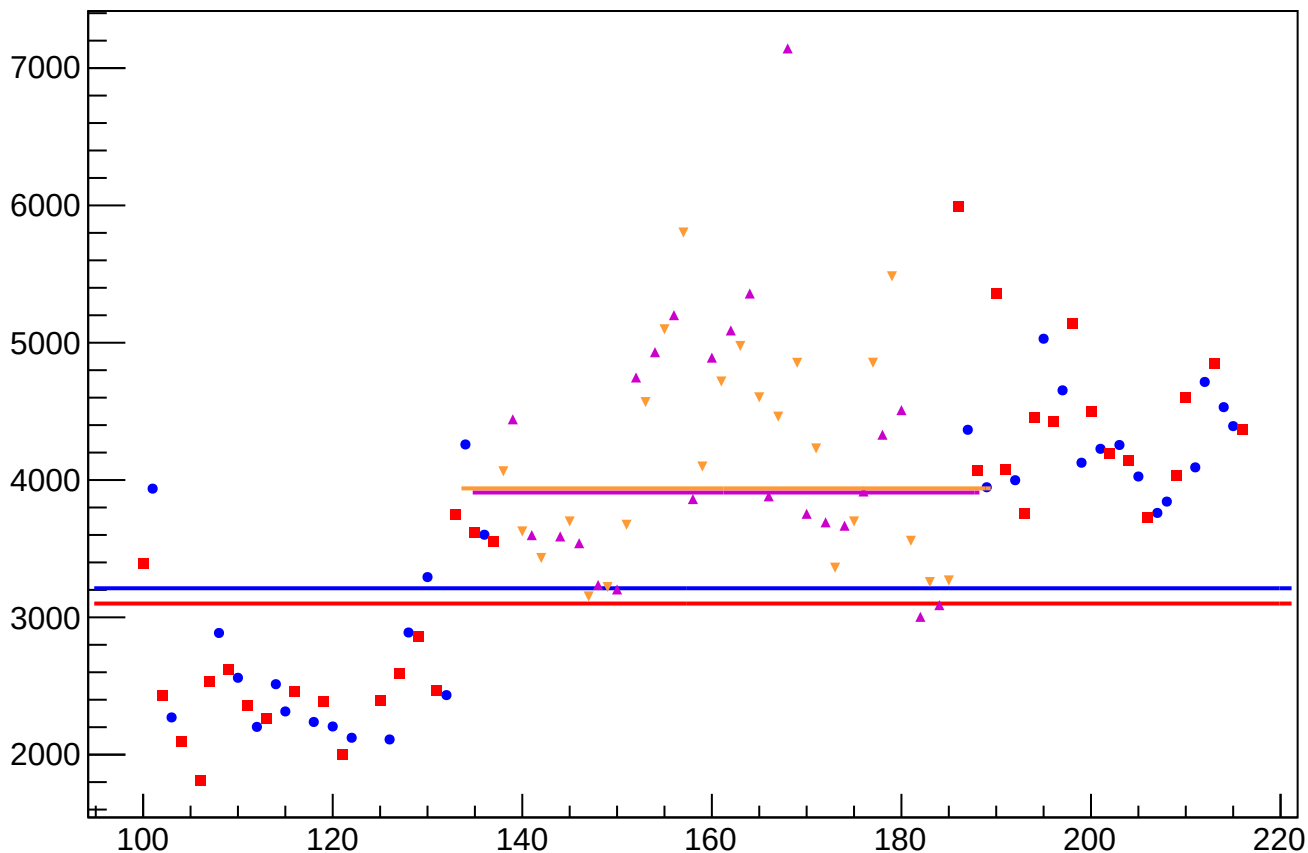
Left In:  $-126.635 \pm 932.644$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $141.533 \pm 591.304$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $-98.958 \pm 413.834$   $\chi^2/\text{NDF}$ : 127.8/111

- sign  $-329.845 \pm 579.377$   $\chi^2/\text{NDF}$ : 62.0/56

# asym\_usl\_atl2\_dd\_cor\_correction\_rms vs Slug



Right In: 3211.761 $\pm$ 0.540  $\chi^2/\text{NDF}$ : 3023267.5/30

Left Out: 3939.266 $\pm$ 0.661  $\chi^2/\text{NDF}$ : 1092657.5/23

Right Out: 3100.476 $\pm$ 0.523  $\chi^2/\text{NDF}$ : 3627832.0/33

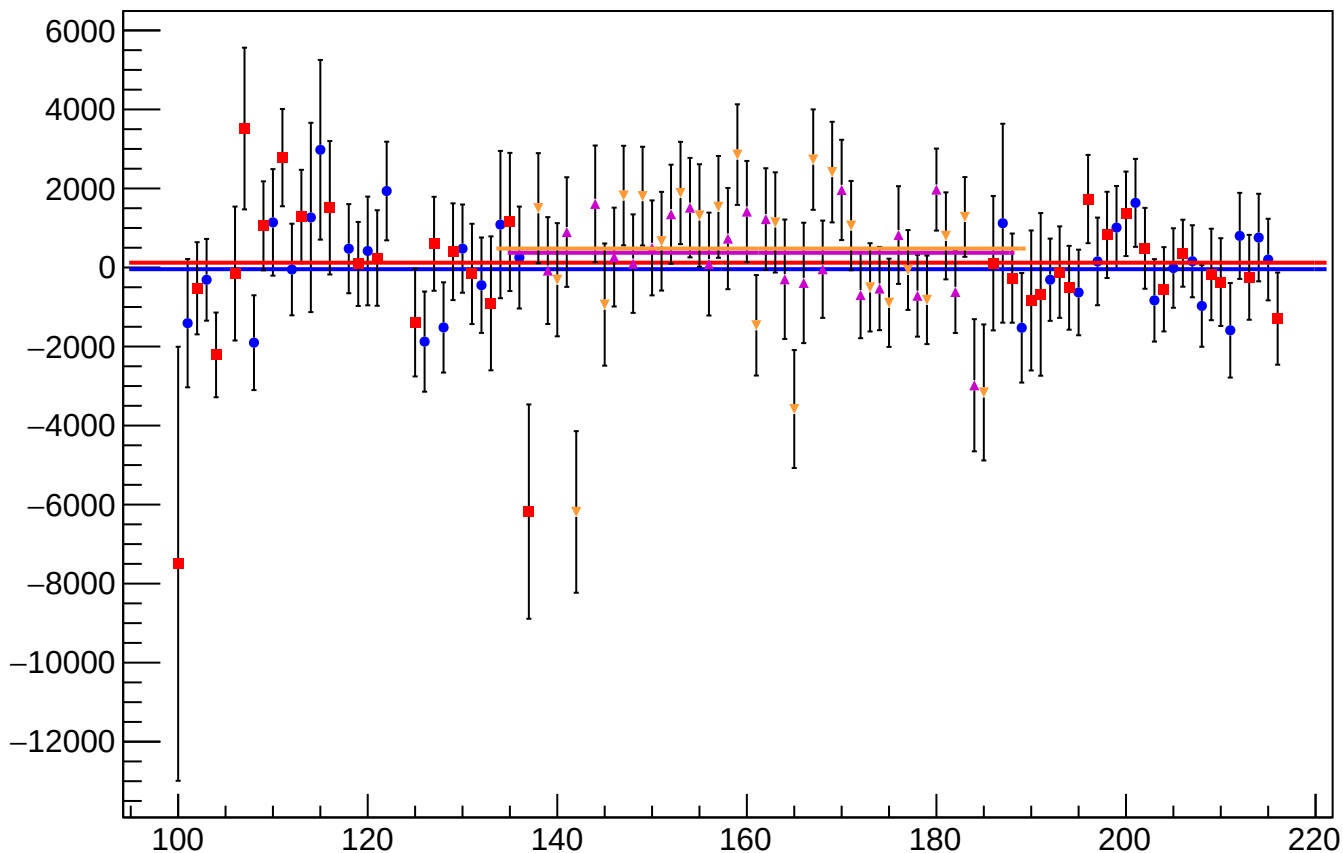
Left In: 3909.128 $\pm$ 0.659  $\chi^2/\text{NDF}$ : 1300782.7/22

+ sign 3503.206 $\pm$ 0.418  $\chi^2/\text{NDF}$ : 4842887.9/54

All: 3456.953 $\pm$ 0.293  $\chi^2/\text{NDF}$ : 10718804.8/100

- sign 3412.546 $\pm$ 0.410  $\chi^2/\text{NDF}$ : 5851929.9/56

# eigen\_cor\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-42.829 \pm 214.594$   $\chi^2/\text{NDF}$ : 22.7/30

Left Out:  $479.583 \pm 256.330$   $\chi^2/\text{NDF}$ : 45.2/23

Right Out:  $121.612 \pm 213.798$   $\chi^2/\text{NDF}$ : 31.6/33

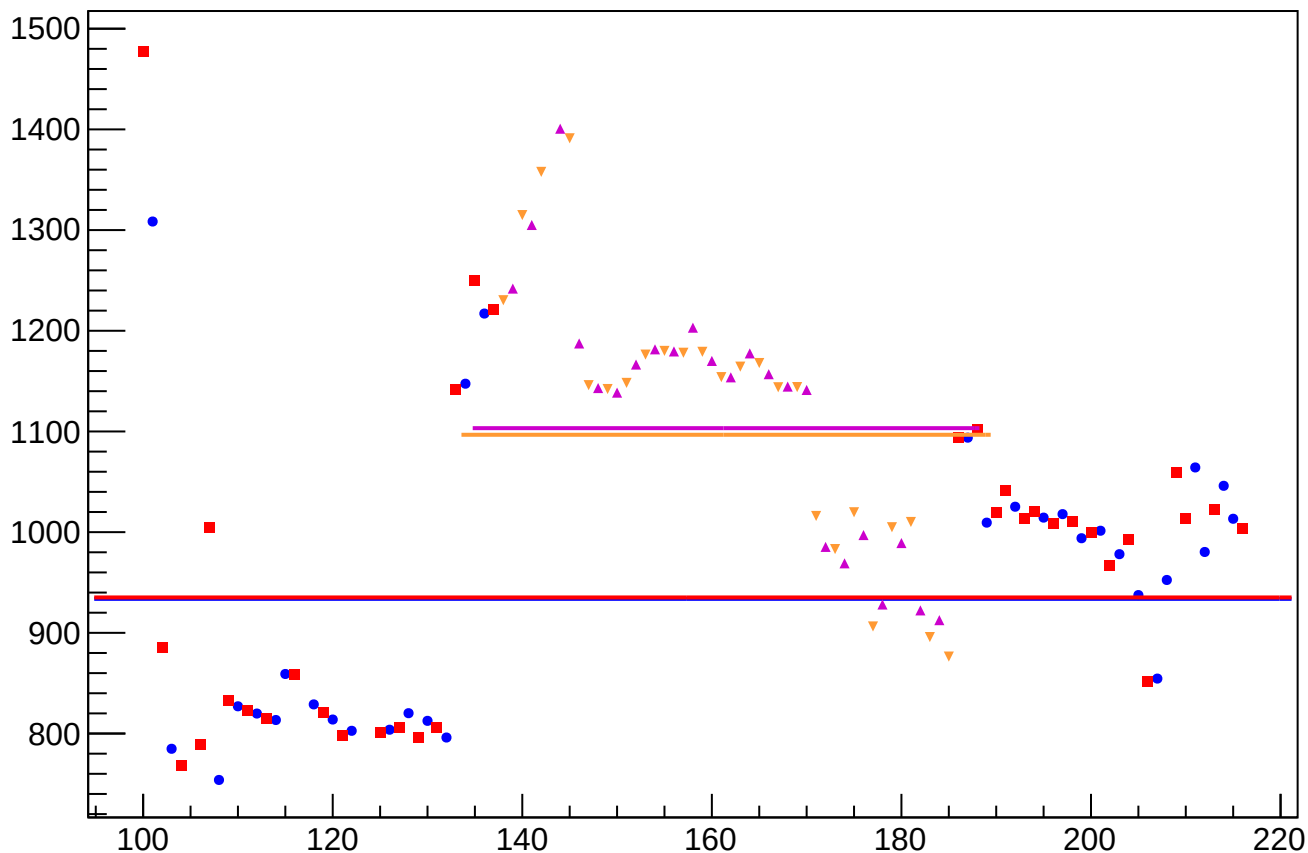
Left In:  $372.901 \pm 259.314$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $172.439 \pm 164.544$   $\chi^2/\text{NDF}$ : 70.3/54

All:  $197.806 \pm 116.497$   $\chi^2/\text{NDF}$ : 118.6/111

- sign  $223.303 \pm 164.961$   $\chi^2/\text{NDF}$ : 48.2/56

# eigen\_cor\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In:  $933.754 \pm 0.152$   $\chi^2/\text{NDF}$ : 645166.0/30

Left Out:  $1096.711 \pm 0.181$   $\chi^2/\text{NDF}$ : 480498.6/23

Right Out:  $935.152 \pm 0.151$   $\chi^2/\text{NDF}$ : 604681.7/33

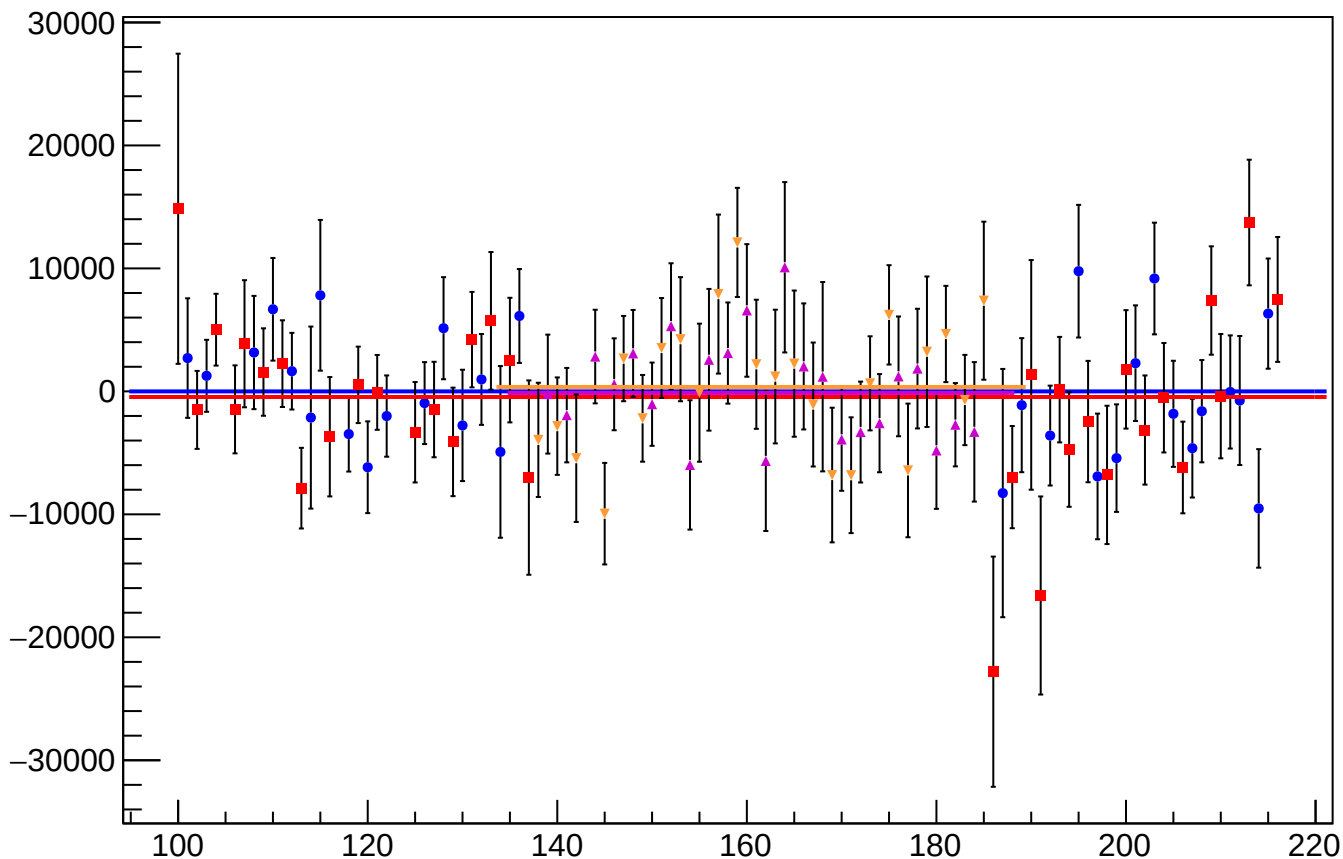
Left In:  $1103.281 \pm 0.183$   $\chi^2/\text{NDF}$ : 447540.3/22

+ sign  $1000.903 \pm 0.116$   $\chi^2/\text{NDF}$ : 1600898.6/54

All:  $1001.952 \pm 0.082$   $\chi^2/\text{NDF}$ : 3154722.4/11

- sign  $1003.004 \pm 0.116$   $\chi^2/\text{NDF}$ : 1553661.0/56

asym\_usl\_atl2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-2.964 \pm 763.758$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $357.728 \pm 934.221$   $\chi^2/\text{NDF}$ : 30.3/23

Right Out:  $-457.549 \pm 739.344$   $\chi^2/\text{NDF}$ : 48.2/33

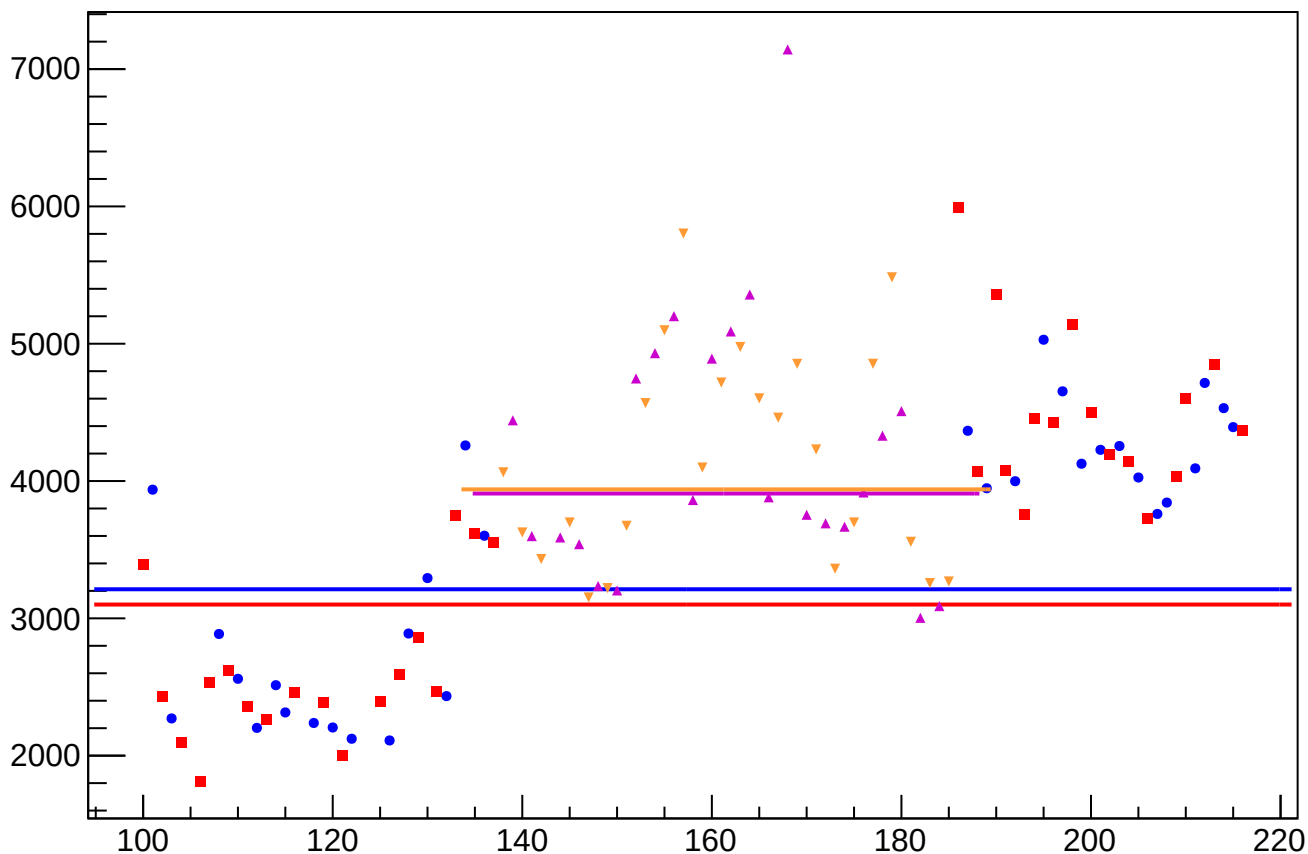
Left In:  $-126.635 \pm 932.644$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $141.533 \pm 591.304$   $\chi^2/\text{NDF}$ : 65.4/54

All:  $-98.958 \pm 413.834$   $\chi^2/\text{NDF}$ : 127.8/111

- sign  $-329.845 \pm 579.377$   $\chi^2/\text{NDF}$ : 62.0/56

asym\_usl\_atl2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 3211.761 $\pm$ 0.540  $\chi^2/\text{NDF}$ : 3023267.5/30

Left Out: 3939.266 $\pm$ 0.661  $\chi^2/\text{NDF}$ : 1092657.5/23

Right Out: 3100.476 $\pm$ 0.523  $\chi^2/\text{NDF}$ : 3627832.0/33

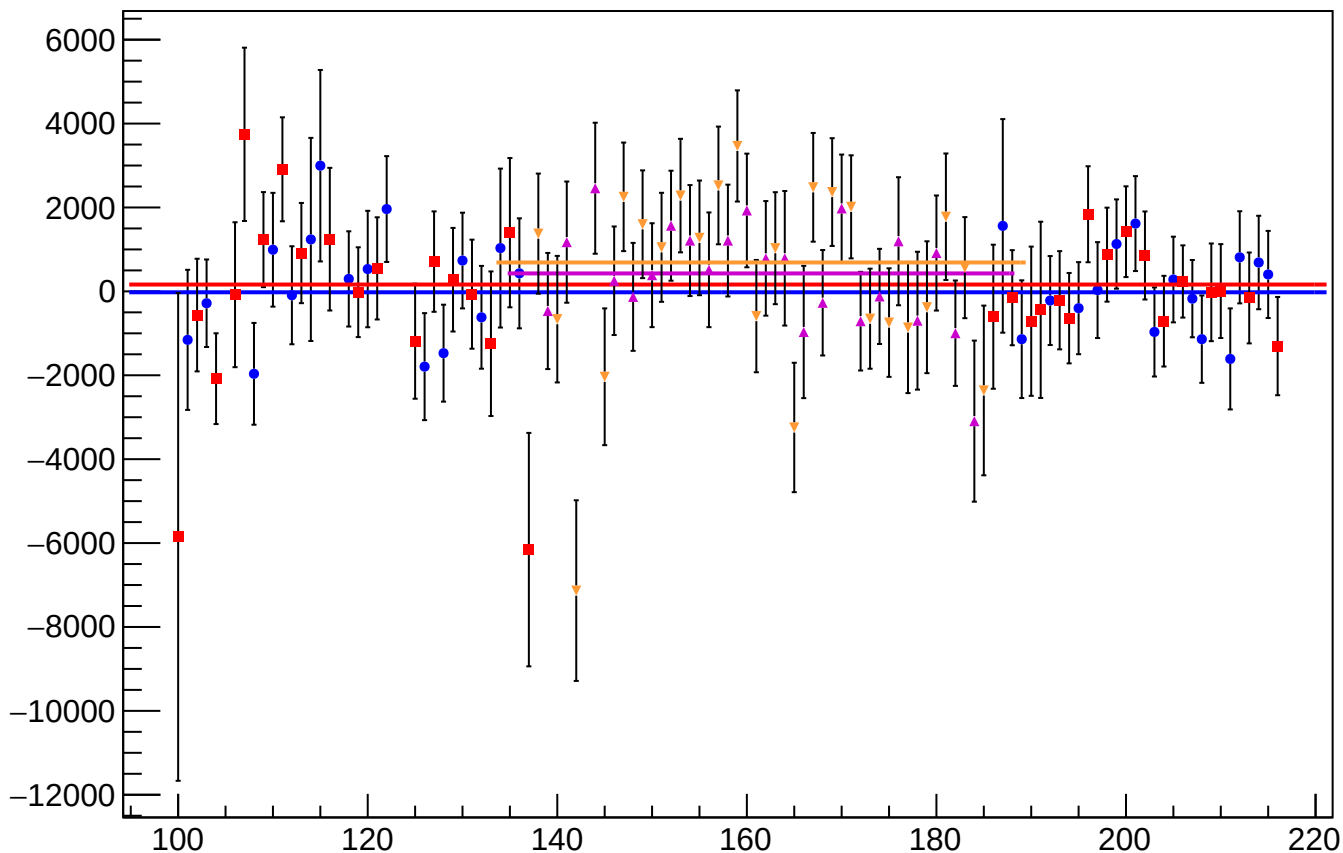
Left In: 3909.128 $\pm$ 0.659  $\chi^2/\text{NDF}$ : 1300782.7/22

+ sign 3503.206 $\pm$ 0.418  $\chi^2/\text{NDF}$ : 4842887.9/54

All: 3456.953 $\pm$ 0.293  $\chi^2/\text{NDF}$ : 10718804.8/100

- sign 3412.546 $\pm$ 0.410  $\chi^2/\text{NDF}$ : 5851929.9/56

# dit\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-21.483 \pm 217.251$   $\chi^2/\text{NDF}$ : 22.4/30

Left Out:  $689.087 \pm 284.388$   $\chi^2/\text{NDF}$ : 45.7/23

Right Out:  $163.225 \pm 217.246$   $\chi^2/\text{NDF}$ : 30.9/33

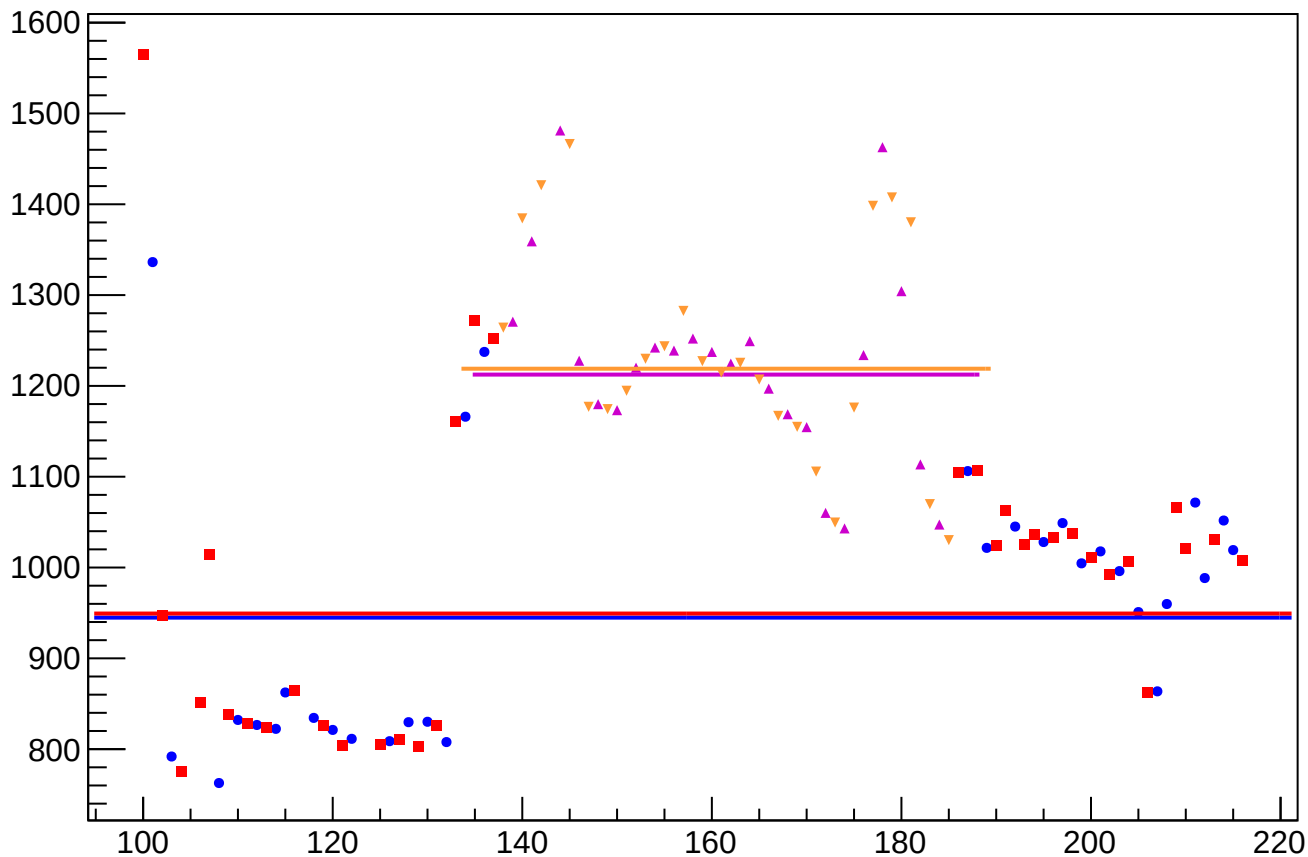
Left In:  $428.052 \pm 284.383$   $\chi^2/\text{NDF}$ : 14.6/22

+ sign  $240.376 \pm 172.640$   $\chi^2/\text{NDF}$ : 72.1/54

All:  $250.597 \pm 122.074$   $\chi^2/\text{NDF}$ : 118.1/111

- sign  $260.818 \pm 172.637$   $\chi^2/\text{NDF}$ : 46.1/56

# dit\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 944.840 $\pm$ 0.154  $\chi^2$ /NDF: 661164.1/30

Left Out: 1218.928 $\pm$ 0.201  $\chi^2$ /NDF:293874.9/23

Right Out: 949.326 $\pm$ 0.154  $\chi^2$ /NDF: 606395.2/33

Left In: 1212.447 $\pm$ 0.201  $\chi^2$ /NDF:260320.0/22

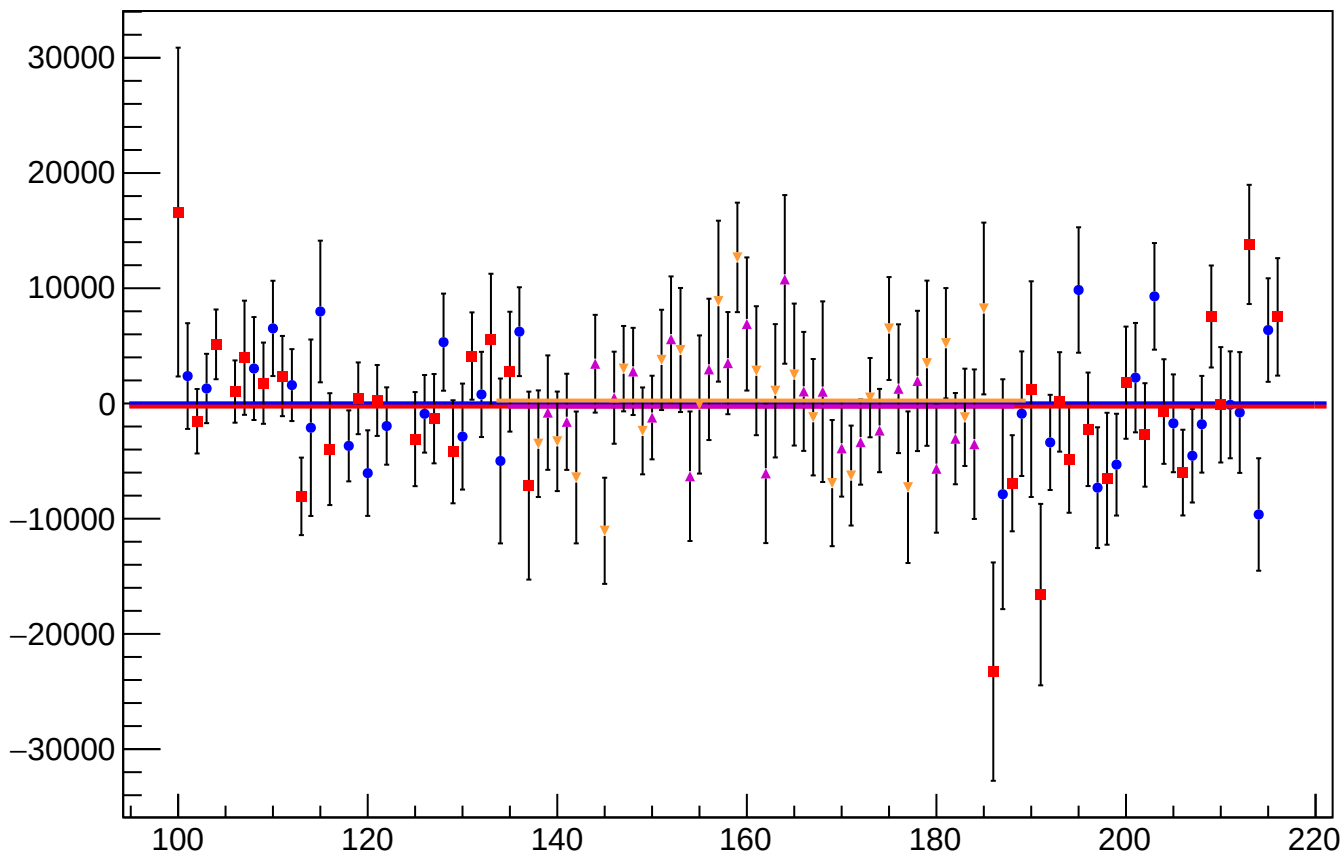
+ sign 1045.847 $\pm$ 0.122  $\chi^2$ /NDF: 2128174.5/54

All: 1046.042 $\pm$ 0.086  $\chi^2$ /NDF: 4076412.1/11

- sign 1046.238 $\pm$ 0.122  $\chi^2$ /NDF: 1948232.4/56



# asym\_usl\_atl2\_dd\_dit\_correction\_mean vs Slug



Right In:  $10.363 \pm 768.428$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $252.803 \pm 995.149$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $-270.113 \pm 725.844$   $\chi^2/\text{NDF}$ : 48.2/33

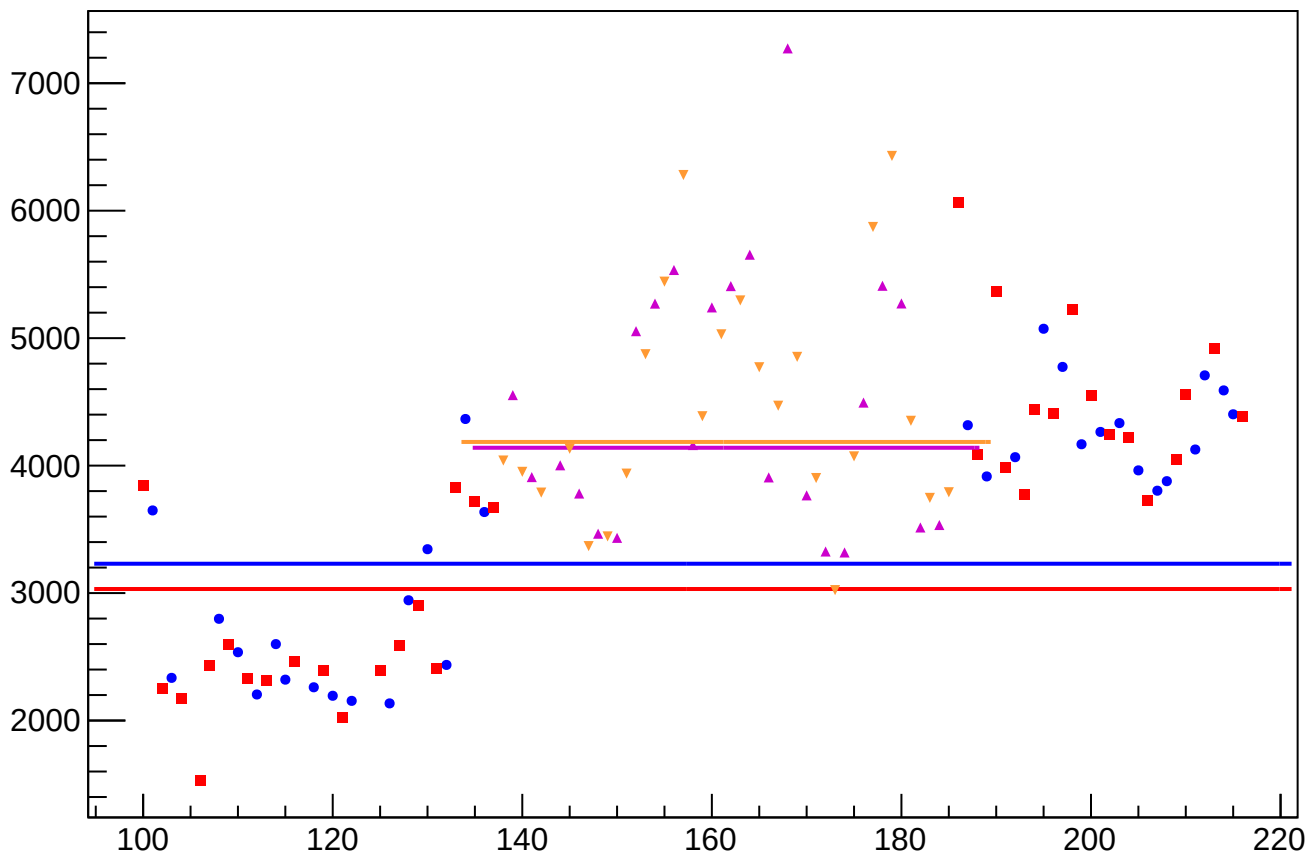
Left In:  $-266.235 \pm 990.083$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $100.922 \pm 608.208$   $\chi^2/\text{NDF}$ : 64.5/54

All:  $-90.984 \pm 421.768$   $\chi^2/\text{NDF}$ : 126.4/111

- sign  $-268.757 \pm 585.385$   $\chi^2/\text{NDF}$ : 61.7/56

# asym\_usl\_atl2\_dd\_dit\_correction\_rms vs Slug



Right In: 3230.234 $\pm$ 0.543  $\chi^2$ /NDF: 2999267.3/30

Left Out: 4185.656 $\pm$ 0.704  $\chi^2$ /NDF: 1271248.5/23

Right Out: 3031.912 $\pm$ 0.513  $\chi^2$ /NDF: 4143253.7/33

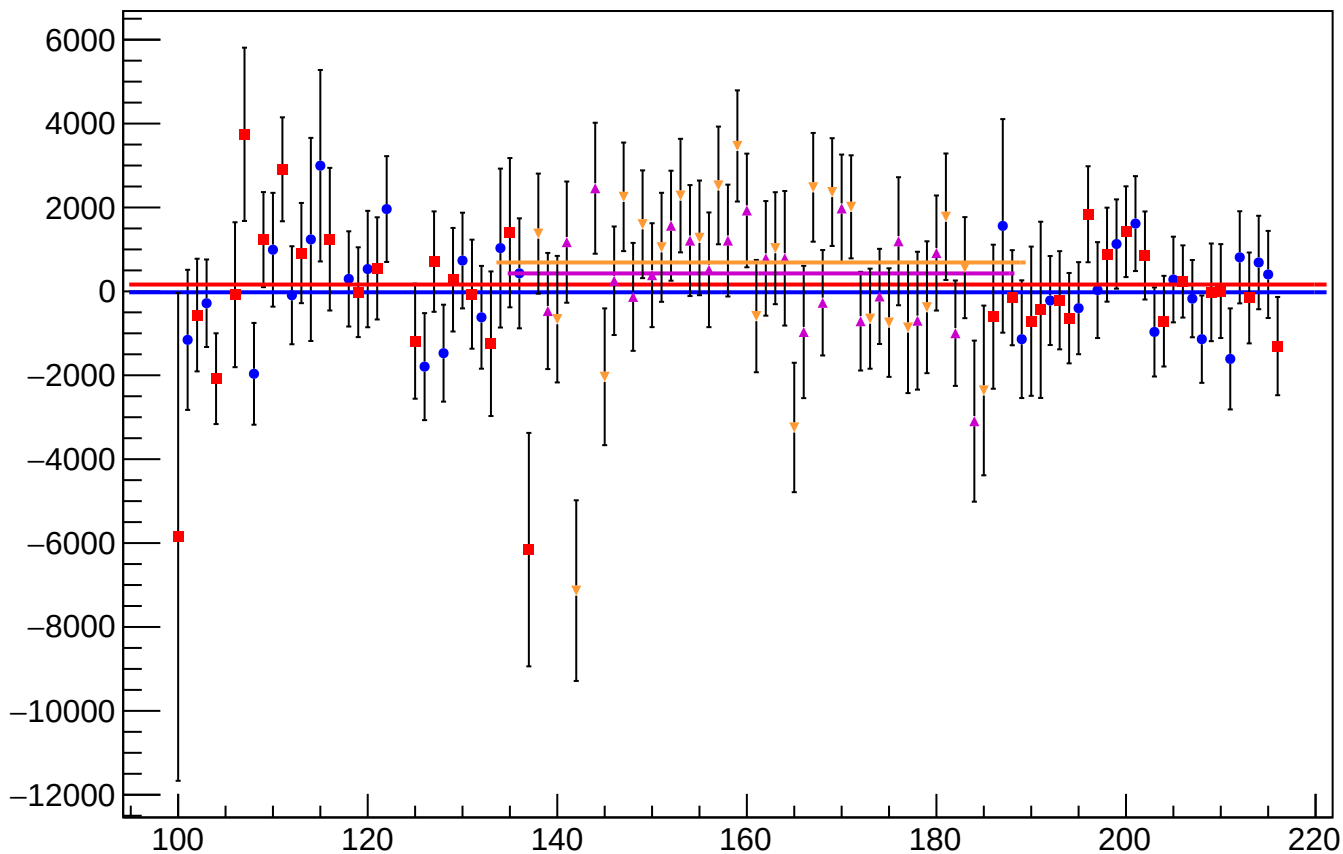
Left In: 4140.051 $\pm$ 0.700  $\chi^2$ /NDF: 1449924.0/22

+ sign 3587.114 $\pm$ 0.430  $\chi^2$ /NDF: 5425411.5/54

All: 3499.994 $\pm$ 0.298  $\chi^2$ /NDF: 12727206.8/100

- sign 3419.290 $\pm$ 0.414  $\chi^2$ /NDF: 7222745.9/56

# eigen\_dit\_asym\_usl\_atl2\_dd\_mean vs Slug



Right In:  $-21.485 \pm 217.251$   $\chi^2/\text{NDF}: 22.4/30$

Left Out:  $689.089 \pm 284.388$   $\chi^2/\text{NDF}: 45.7/23$

Right Out:  $163.225 \pm 217.246$   $\chi^2/\text{NDF}: 30.9/33$

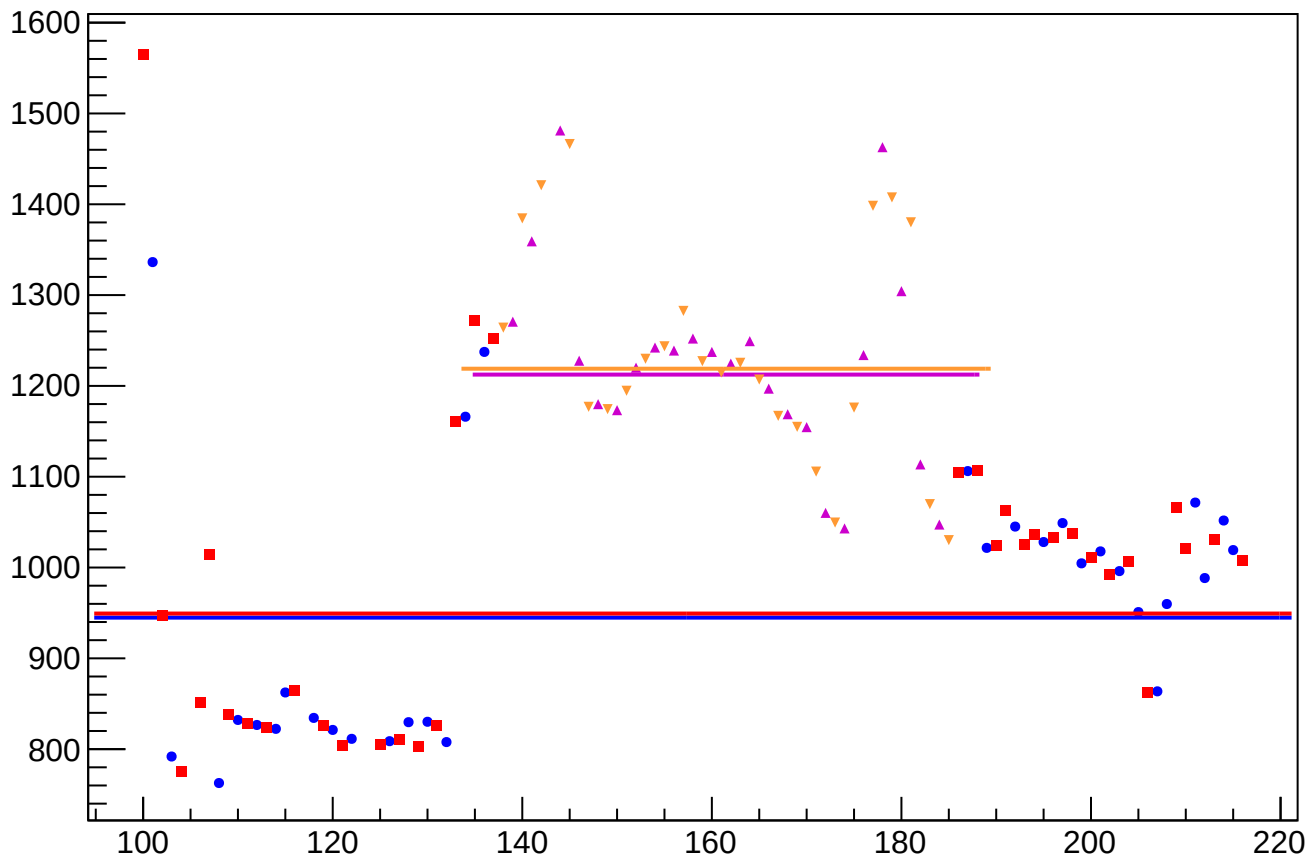
Left In:  $428.050 \pm 284.383$   $\chi^2/\text{NDF}: 14.6/22$

+ sign  $240.375 \pm 172.640$   $\chi^2/\text{NDF}: 72.1/54$

All:  $250.597 \pm 122.074$   $\chi^2/\text{NDF}: 118.1/111$

- sign  $260.818 \pm 172.637$   $\chi^2/\text{NDF}: 46.1/56$

# eigen\_dit\_asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 944.840 $\pm$ 0.154  $\chi^2$ /NDF: 661163.8/30

Left Out: 1218.929 $\pm$ 0.201  $\chi^2$ /NDF:293885.7/23

Right Out: 949.326 $\pm$ 0.154  $\chi^2$ /NDF: 606395.6/33

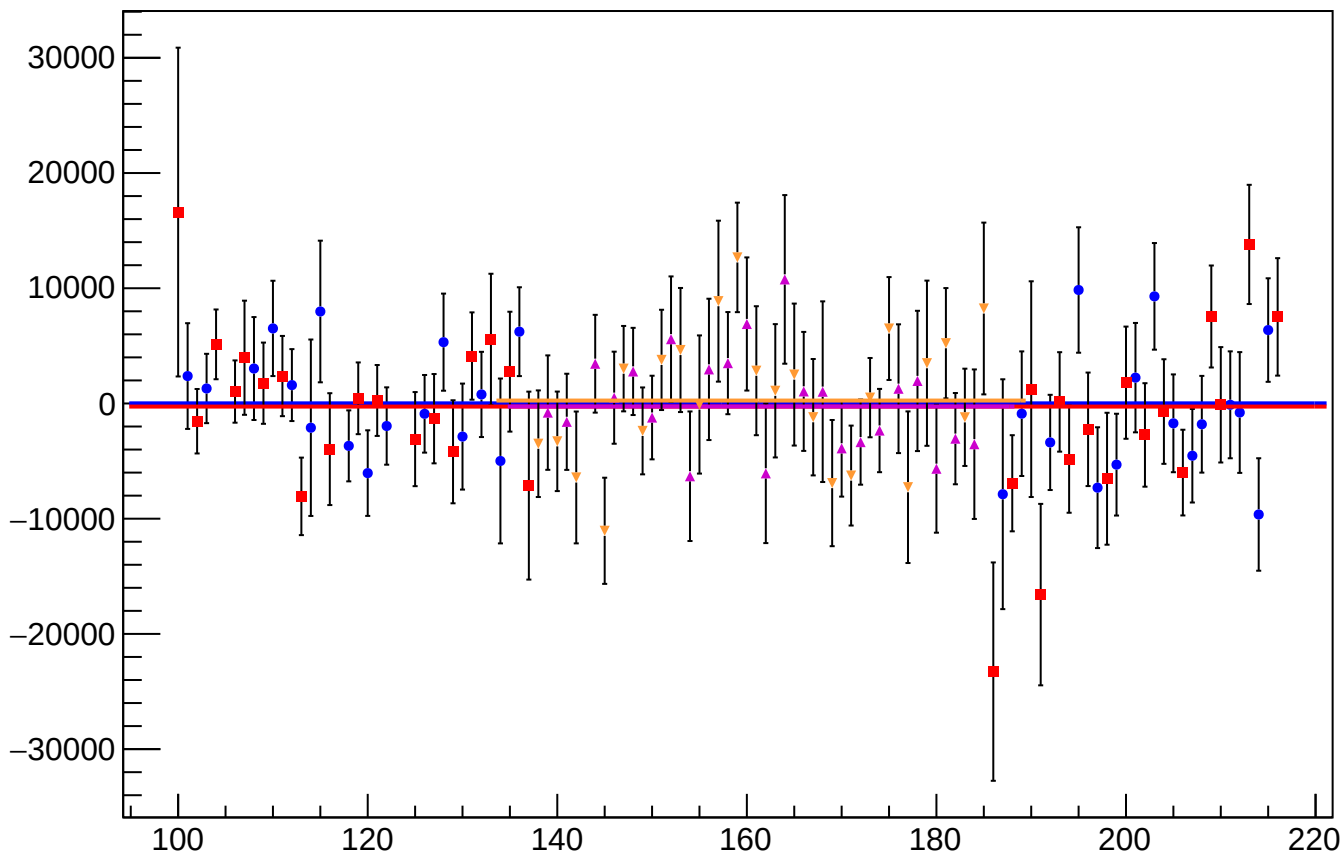
Left In: 1212.448 $\pm$ 0.201  $\chi^2$ /NDF:260330.4/22

+ sign 1045.847 $\pm$ 0.122  $\chi^2$ /NDF: 2128191.5/54

All: 1046.043 $\pm$ 0.086  $\chi^2$ /NDF: 4076446.5/11

- sign 1046.238 $\pm$ 0.122  $\chi^2$ /NDF: 1948249.9/56

asym\_usl\_atl2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $10.362 \pm 768.427$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $252.805 \pm 995.151$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $-270.109 \pm 725.843$   $\chi^2/\text{NDF}$ : 48.2/33

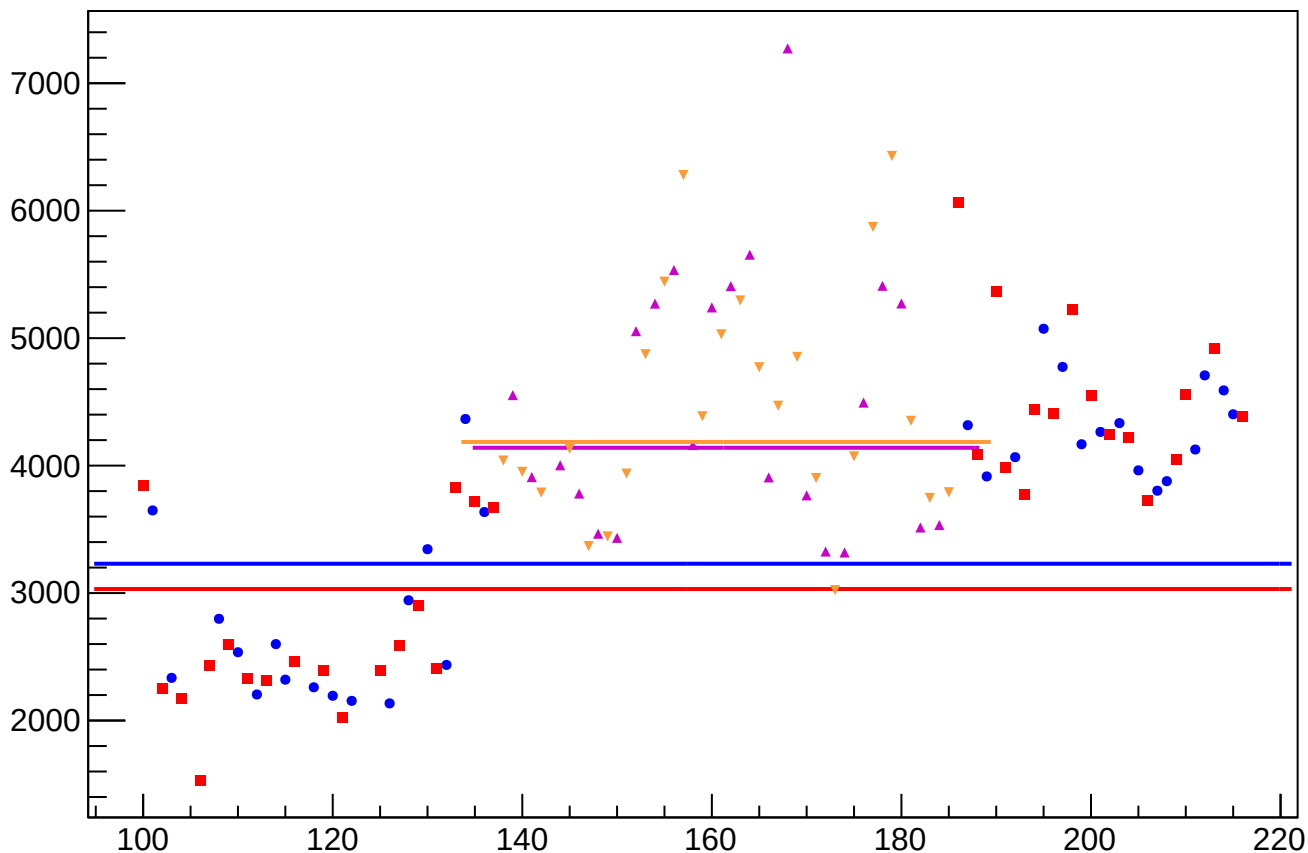
Left In:  $-266.236 \pm 990.085$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $100.922 \pm 608.208$   $\chi^2/\text{NDF}$ : 64.5/54

All:  $-90.983 \pm 421.768$   $\chi^2/\text{NDF}$ : 126.4/111

- sign  $-268.755 \pm 585.385$   $\chi^2/\text{NDF}$ : 61.7/56

asym\_usl\_atl2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 3230.228 $\pm$ 0.543  $\chi^2$ /NDF: 2999323.6/30

Left Out: 4185.664 $\pm$ 0.704  $\chi^2$ /NDF:1271247.4/23

Right Out: 3031.907 $\pm$ 0.513  $\chi^2$ /NDF: 4143298.3/33

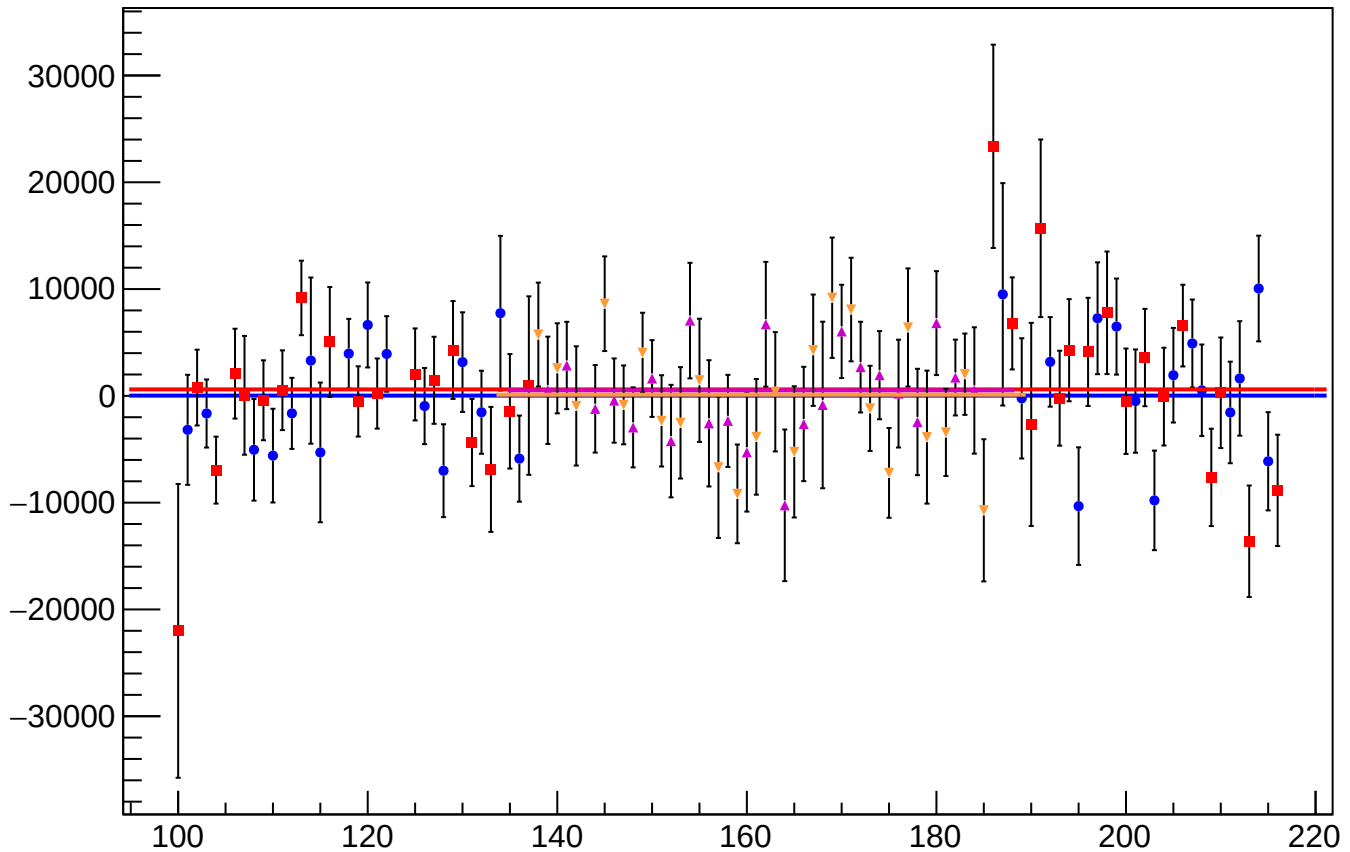
Left In: 4140.059 $\pm$ 0.700  $\chi^2$ /NDF:1449925.1/22

+ sign 3587.113 $\pm$ 0.430  $\chi^2$ /NDF: 5425496.9/54

All: 3499.992 $\pm$ 0.298  $\chi^2$ /NDF: 12727375.1/100

- sign 3419.287 $\pm$ 0.414  $\chi^2$ /NDF: 7222827.6/56

# asym\_usl\_atl2\_dd\_mean vs Slug



Right In: 23.440+/-800.438  $\chi^2/\text{NDF}$ : 37.6/30

Left Out: 108.966+/-975.598  $\chi^2/\text{NDF}$ : 28.0/23

Right Out: 604.067+/-780.422  $\chi^2/\text{NDF}$ : 50.5/33

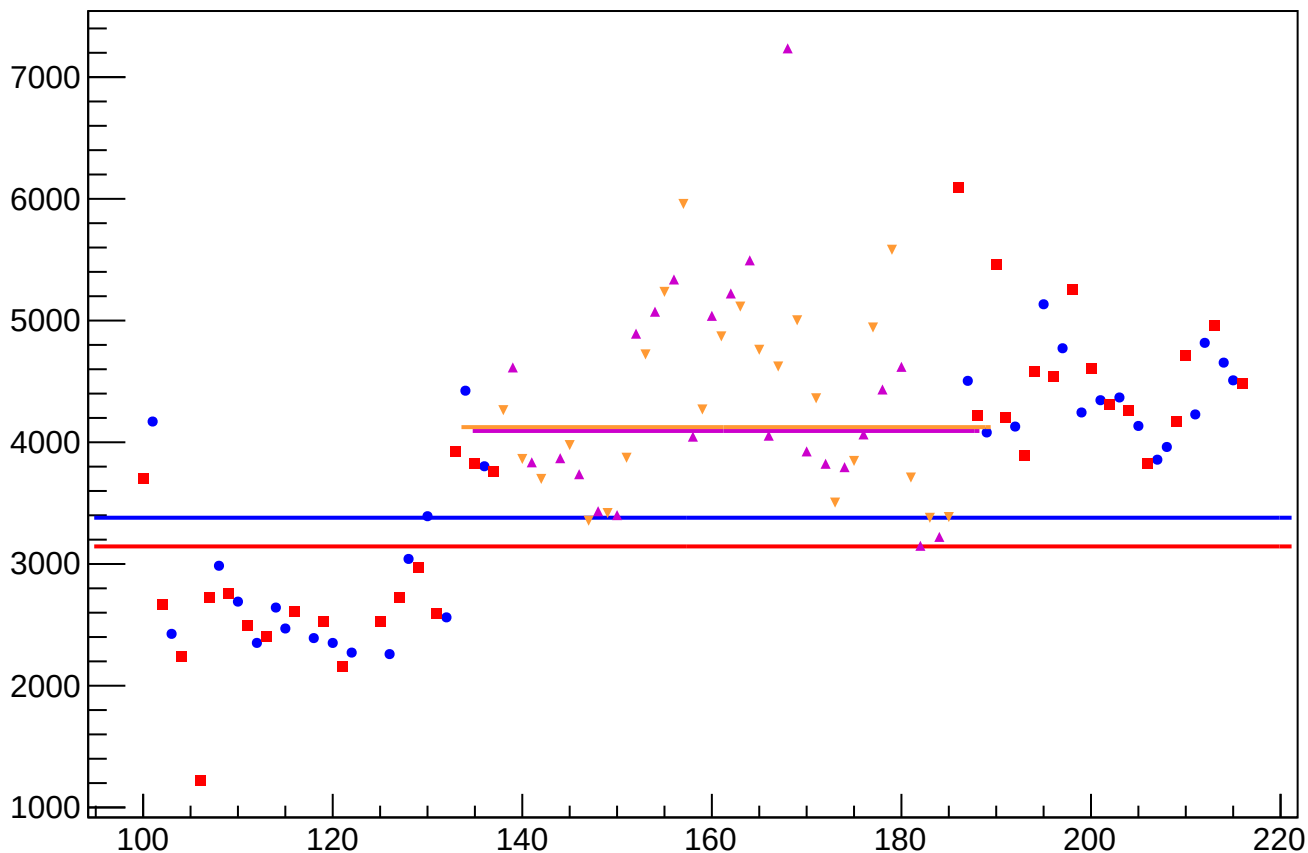
Left In: 509.024+/-974.173  $\chi^2/\text{NDF}$ : 13.5/22

+ sign 57.849+/-618.814  $\chi^2/\text{NDF}$ : 65.6/54

All: 316.418+/-434.084  $\chi^2/\text{NDF}$ : 130.0/111

- sign 566.914+/-609.076  $\chi^2/\text{NDF}$ : 64.0/56

# asym\_usl\_atl2\_dd\_rms vs Slug



Right In: 3380.214+/-0.566  $\chi^2/\text{NDF}$ : 2701292.0/30

Left Out: 4124.485+/-0.690  $\chi^2/\text{NDF}$ : 969929.3/23

Right Out: 3144.363+/-0.536  $\chi^2/\text{NDF}$ : 4276747.6/33

Left In: 4093.066+/-0.689  $\chi^2/\text{NDF}$ : 1162851.8/22

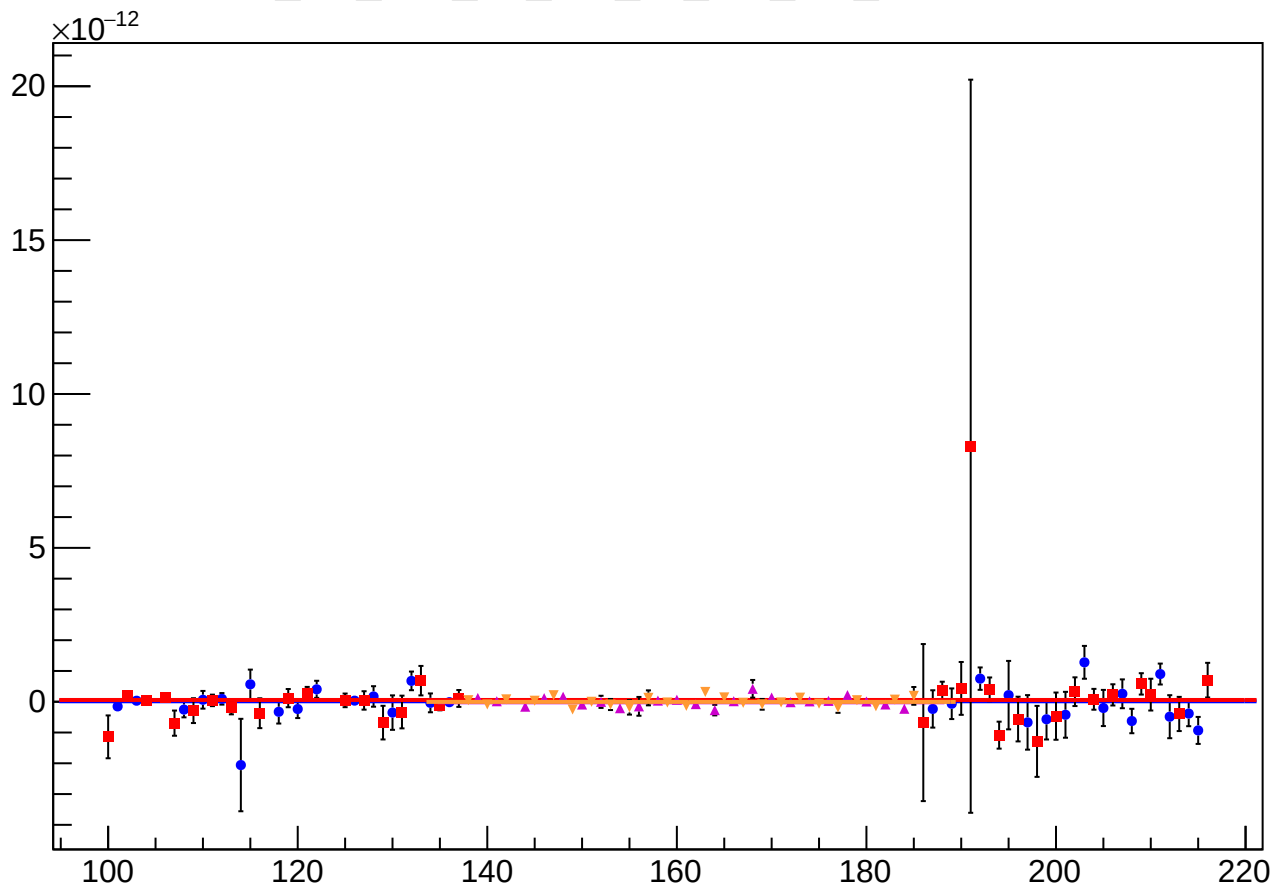
+ sign 3679.653+/-0.438  $\chi^2/\text{NDF}$ : 4366909.1/54

All: 3587.739+/-0.304  $\chi^2/\text{NDF}$ : 11073804.4/100

- sign 3501.893+/-0.423  $\chi^2/\text{NDF}$ : 6621560.5/56



asym\_usl\_atl2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.0/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.2/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/33

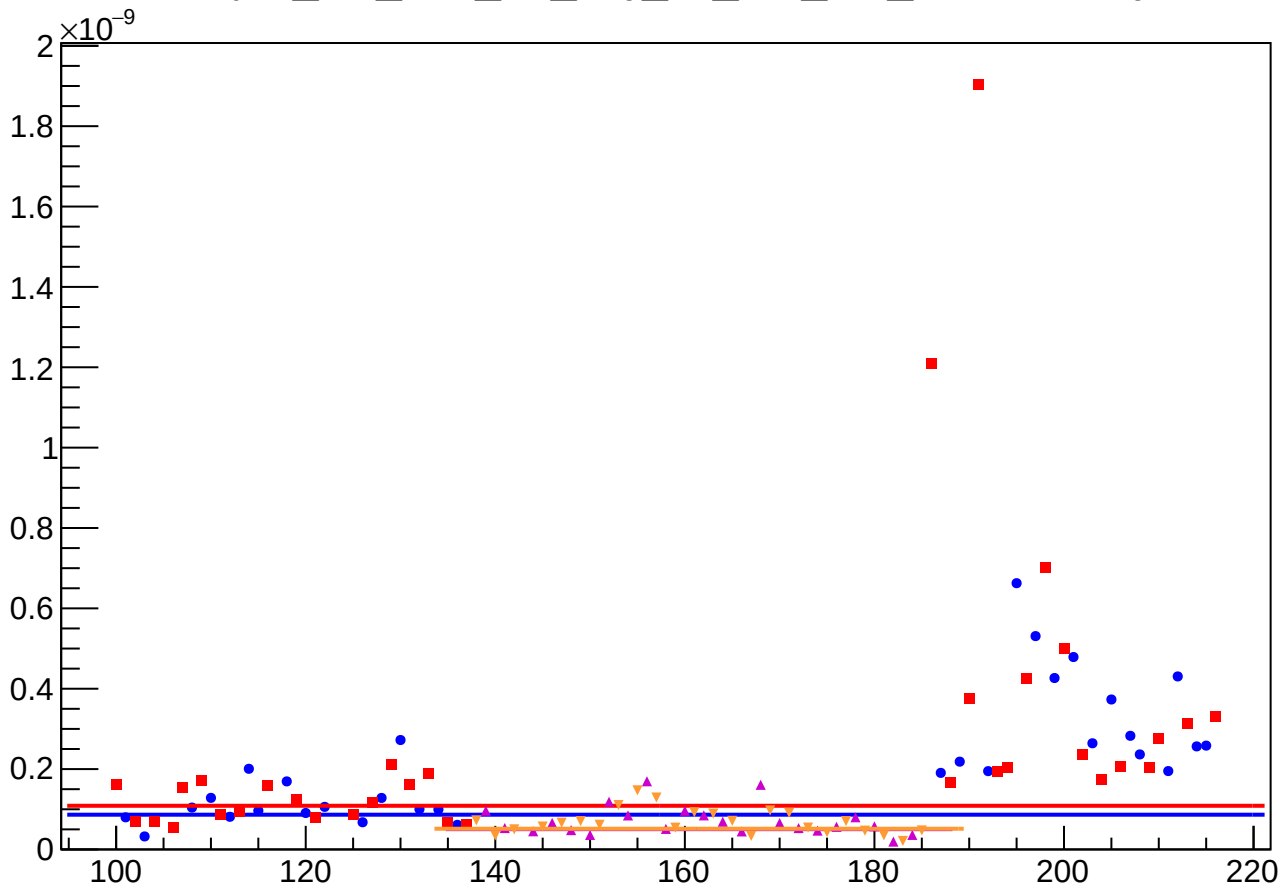
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.3/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 129.1/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.8/56

asym\_usl\_atl2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6874238.5/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2269565.3/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4787819.5/33

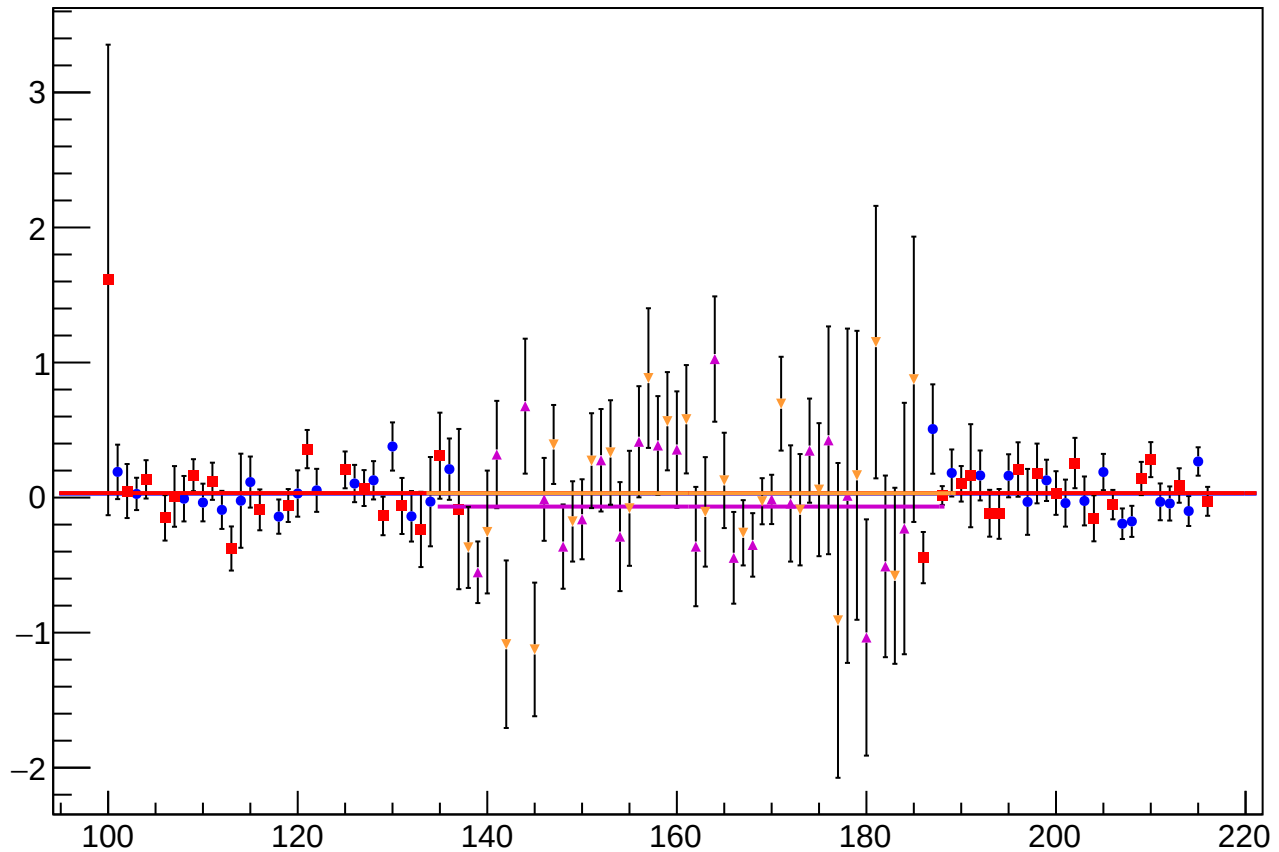
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2433650.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10234169.8/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19830224.4/111

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9593104.5/56

# asym\_usl\_atl2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.027$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.034 \pm 0.026$   $\chi^2/\text{NDF}$ : 39.7/33

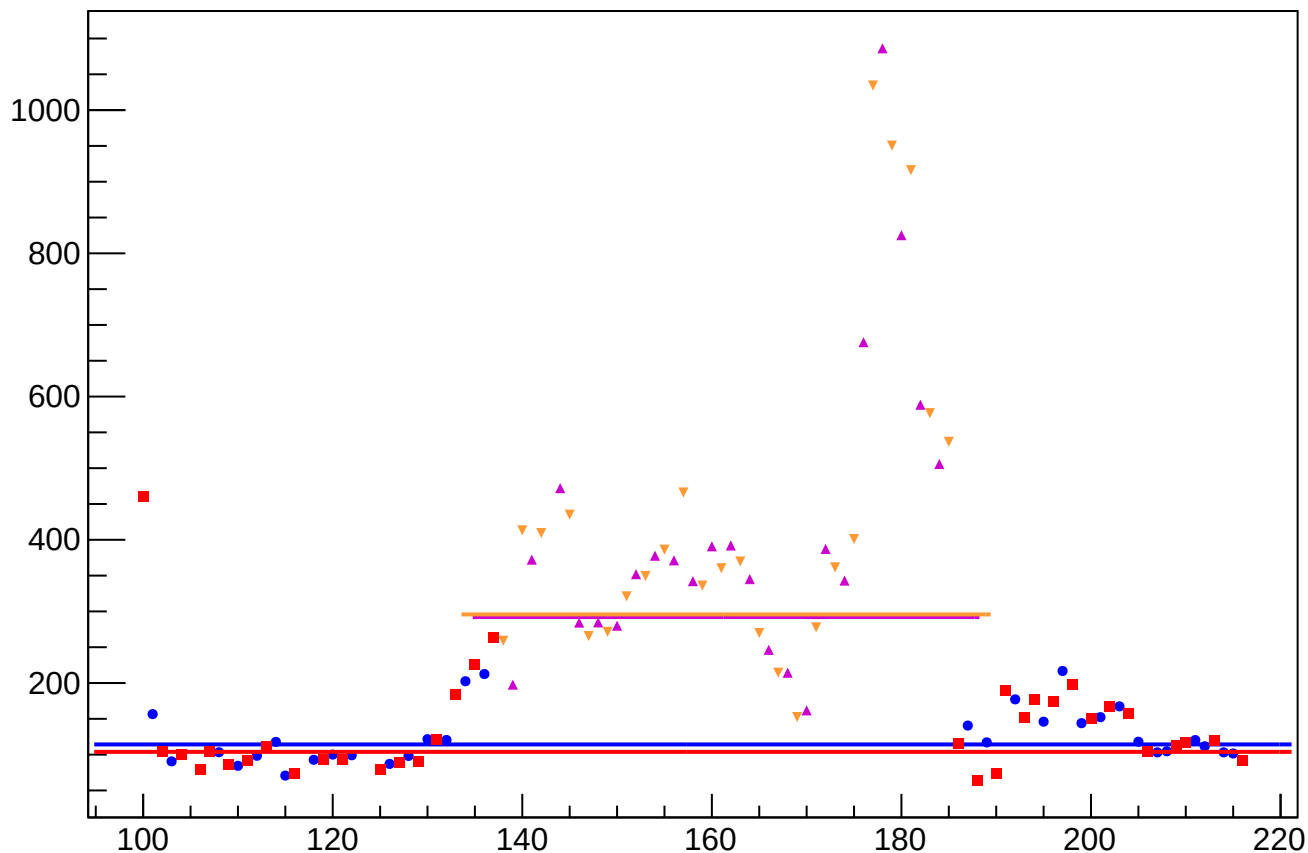
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.030 \pm 0.026$   $\chi^2/\text{NDF}$ : 59.8/54

All:  $0.026 \pm 0.018$   $\chi^2/\text{NDF}$ : 126.8/111

- sign  $0.023 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.9/56

# asym\_usl\_atl2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 114.249+/-0.019  $\chi^2/\text{NDF}$ : 2221614.1/30

Left Out: 295.798+/-0.054  $\chi^2/\text{NDF}$ : 5501077.8/23

Right Out: 103.892+/-0.018  $\chi^2/\text{NDF}$ : 3656995.4/33

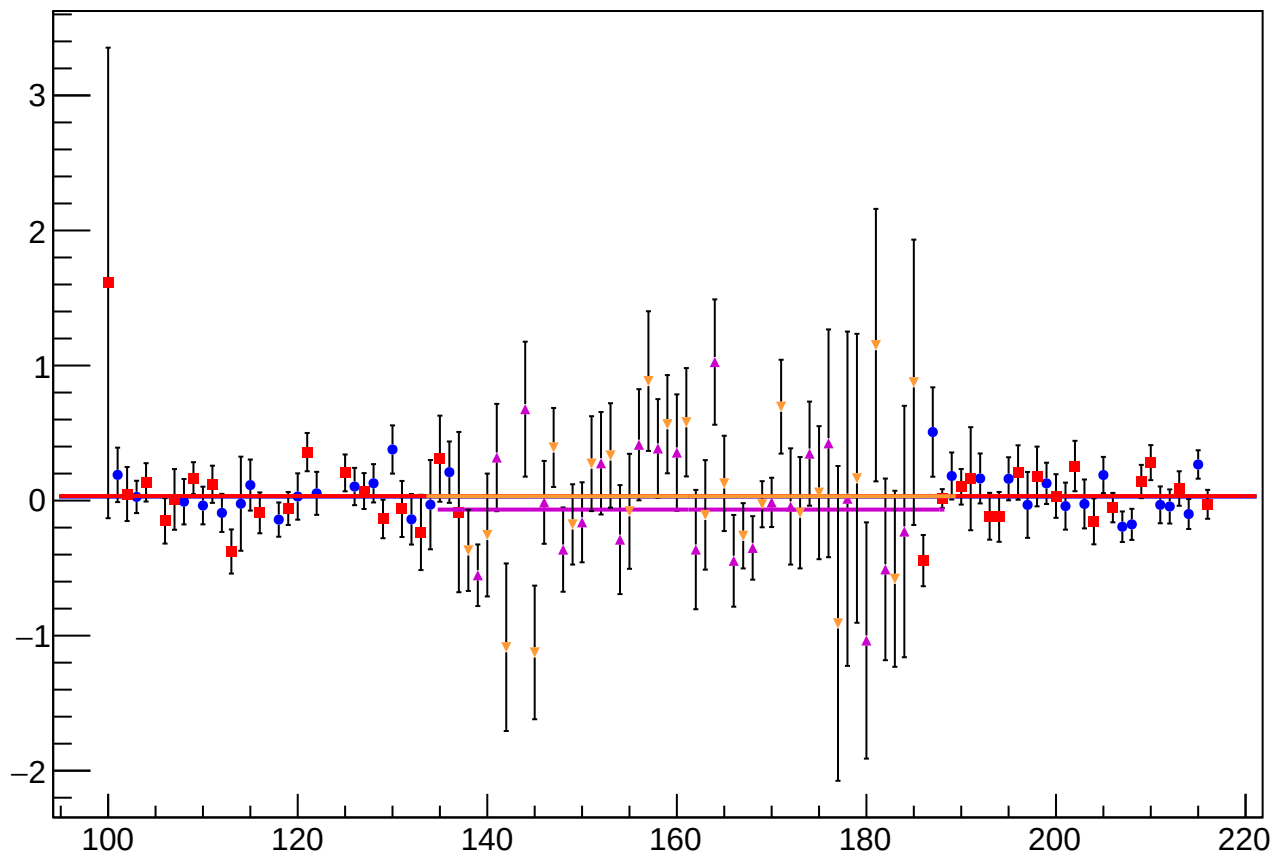
Left In: 292.100+/-0.053  $\chi^2/\text{NDF}$ : 5055737.7/22

+ sign 135.220+/-0.018  $\chi^2/\text{NDF}$ : 17815785.6/54

All: 129.057+/-0.012  $\chi^2/\text{NDF}$ : 38099677.7/11

- sign 123.644+/-0.017  $\chi^2/\text{NDF}$ : 20070024.4/56

asym\_usl\_atl2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.027$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.034 \pm 0.026$   $\chi^2/\text{NDF}$ : 39.7/33

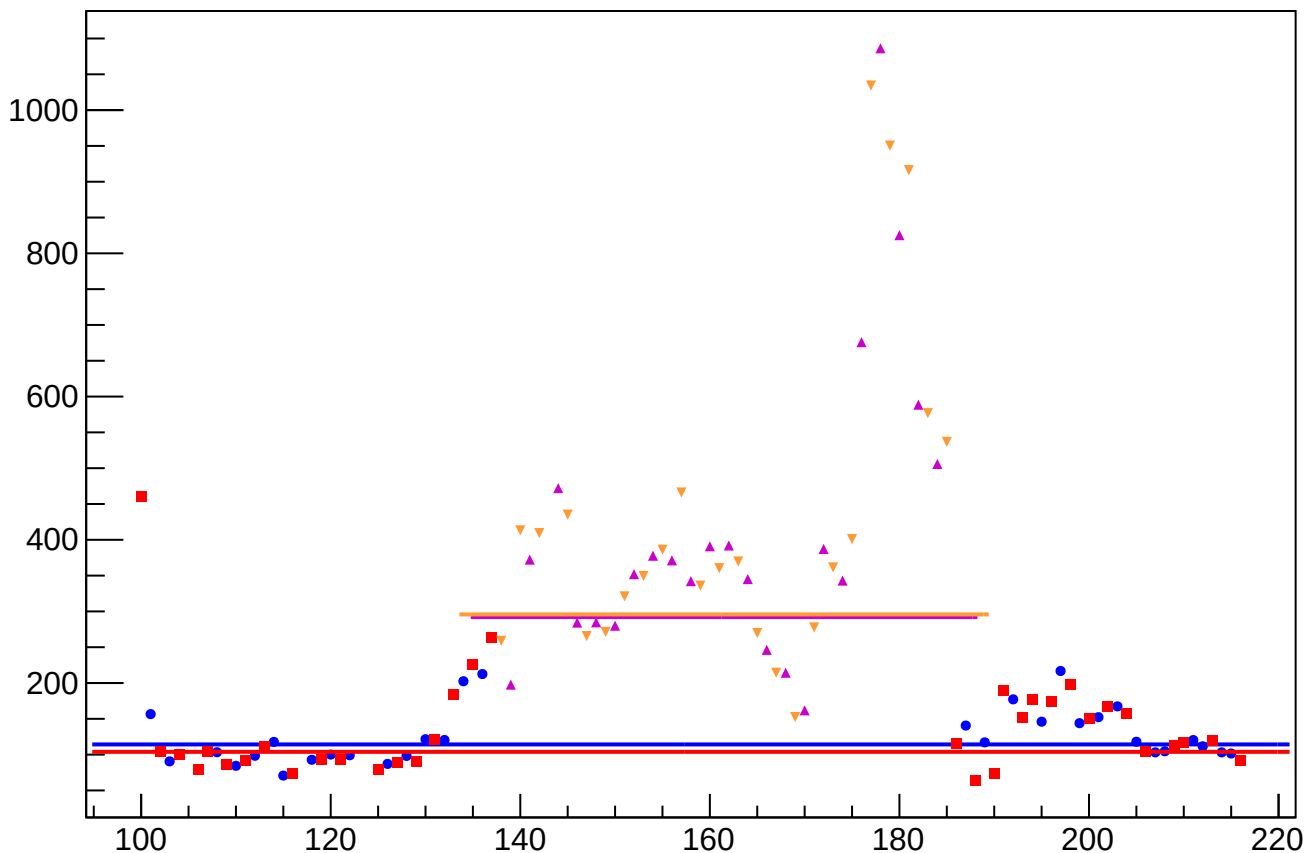
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.030 \pm 0.026$   $\chi^2/\text{NDF}$ : 59.8/54

All:  $0.026 \pm 0.018$   $\chi^2/\text{NDF}$ : 126.8/111

- sign  $0.023 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.9/56

asym\_usl\_atl2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 114.249 $\pm$ 0.019  $\chi^2$ /NDF: 2221614.1/30

Left Out: 295.798 $\pm$ 0.054  $\chi^2$ /NDF:5501077.8/23

Right Out: 103.892 $\pm$ 0.018  $\chi^2$ /NDF: 3656995.4/33

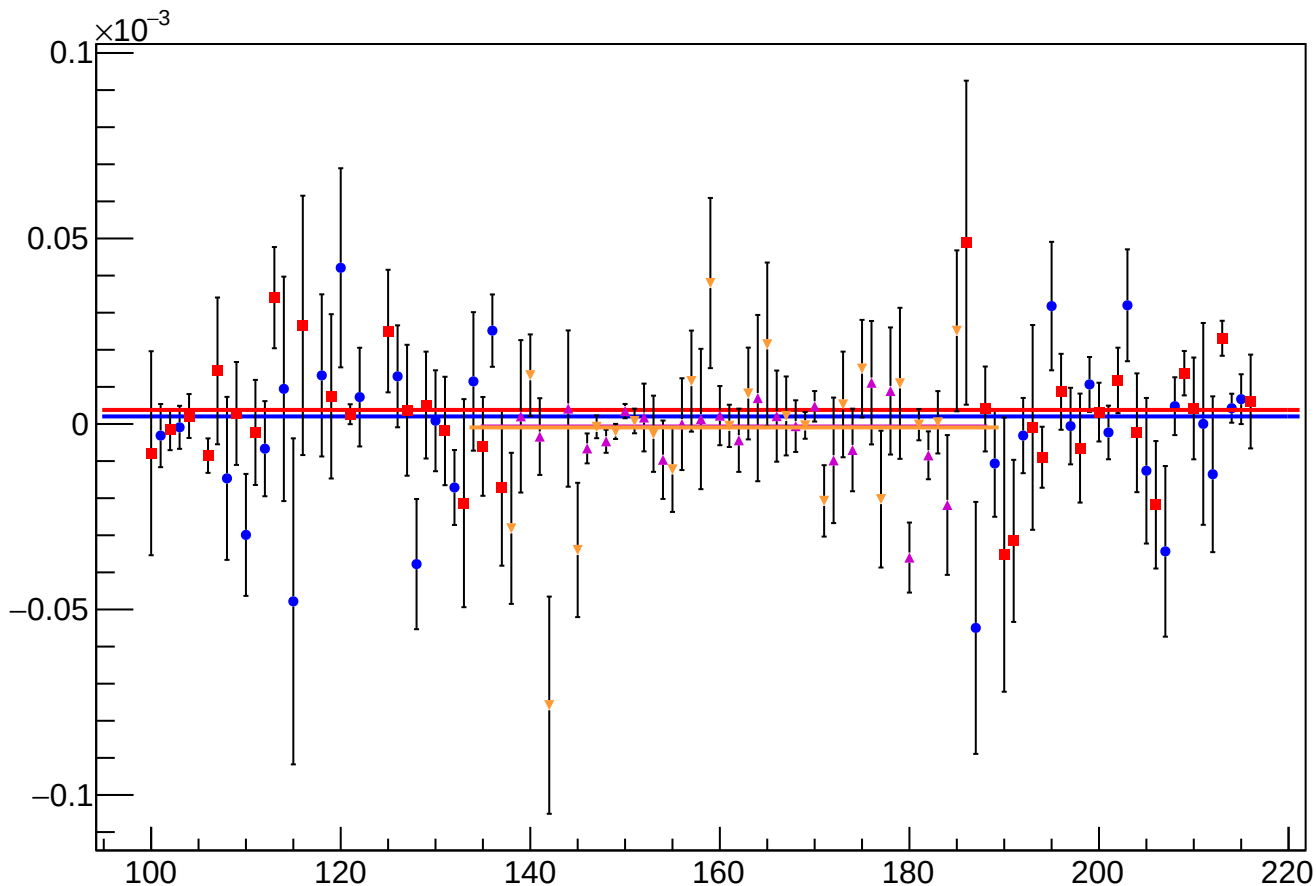
Left In: 292.100 $\pm$ 0.053  $\chi^2$ /NDF:5055737.7/22

+ sign 135.220 $\pm$ 0.018  $\chi^2$ /NDF: 17815785.6/54

All: 129.057 $\pm$ 0.012  $\chi^2$ /NDF: 38099677.7/1

- sign 123.644 $\pm$ 0.017  $\chi^2$ /NDF: 20070024.4/56

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.1/33

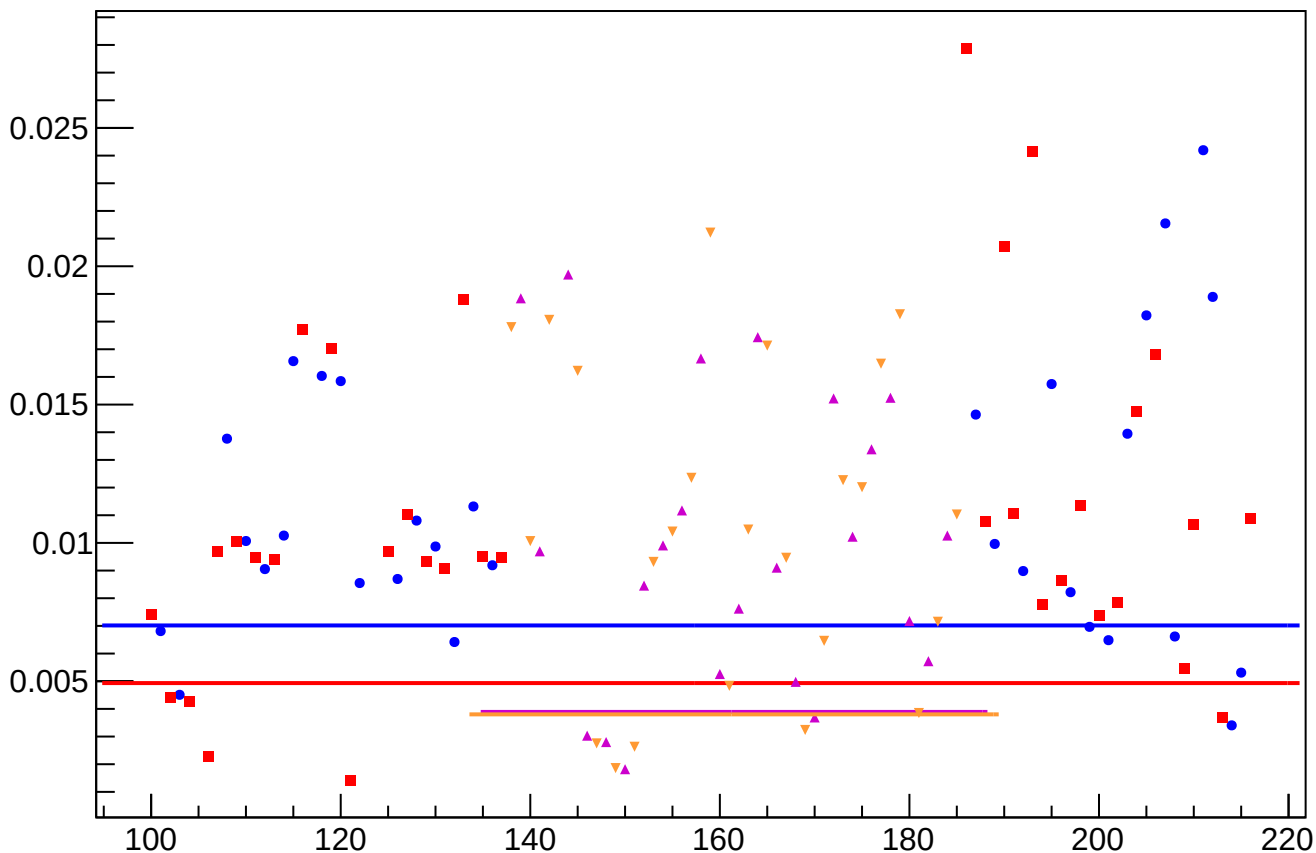
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.6/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 157.7/111

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 84.3/56

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 7769555.4/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:14624926.4/23

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 13929280.8/33

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:13523554.3/22

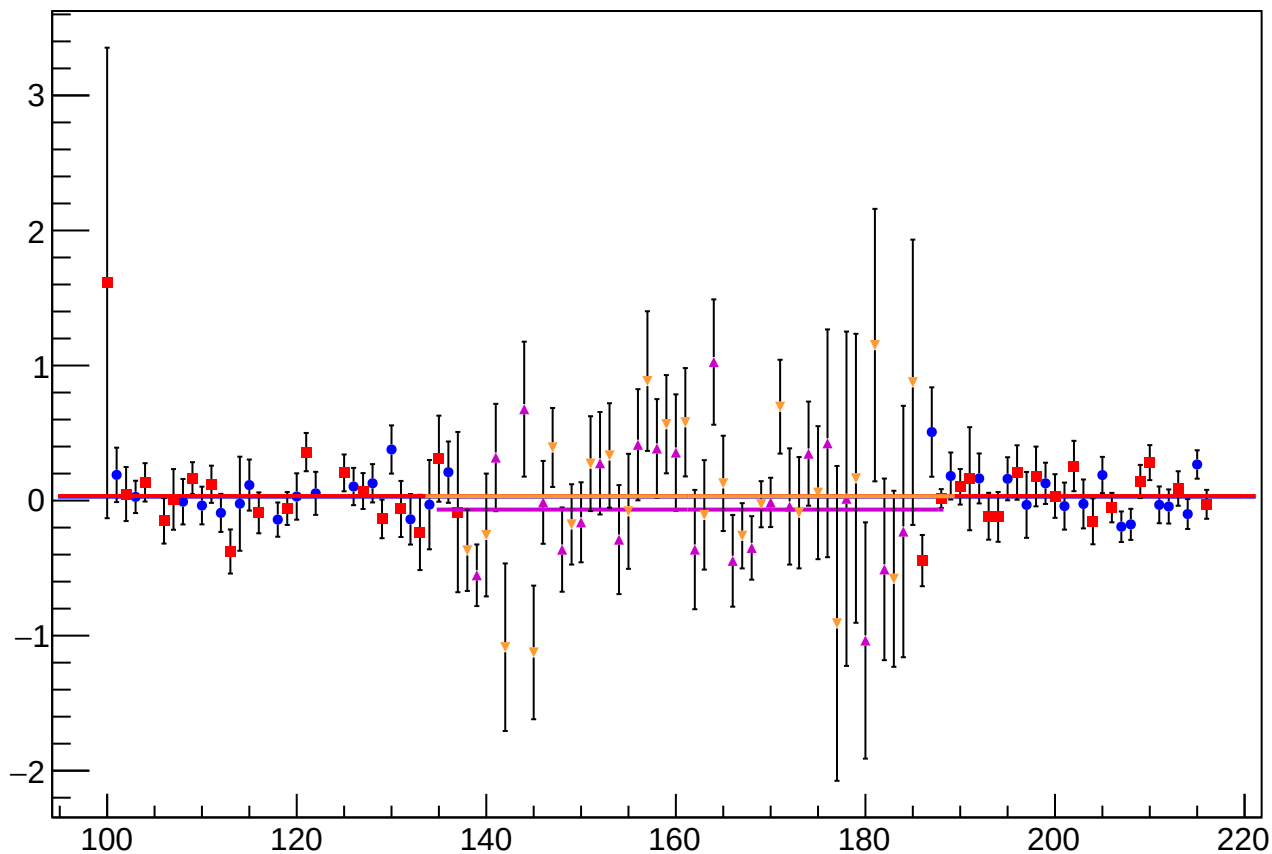
+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 26590211.2/54

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 54805443.1/111

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 28037697.1/56



asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.027$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.034 \pm 0.026$   $\chi^2/\text{NDF}$ : 39.7/33

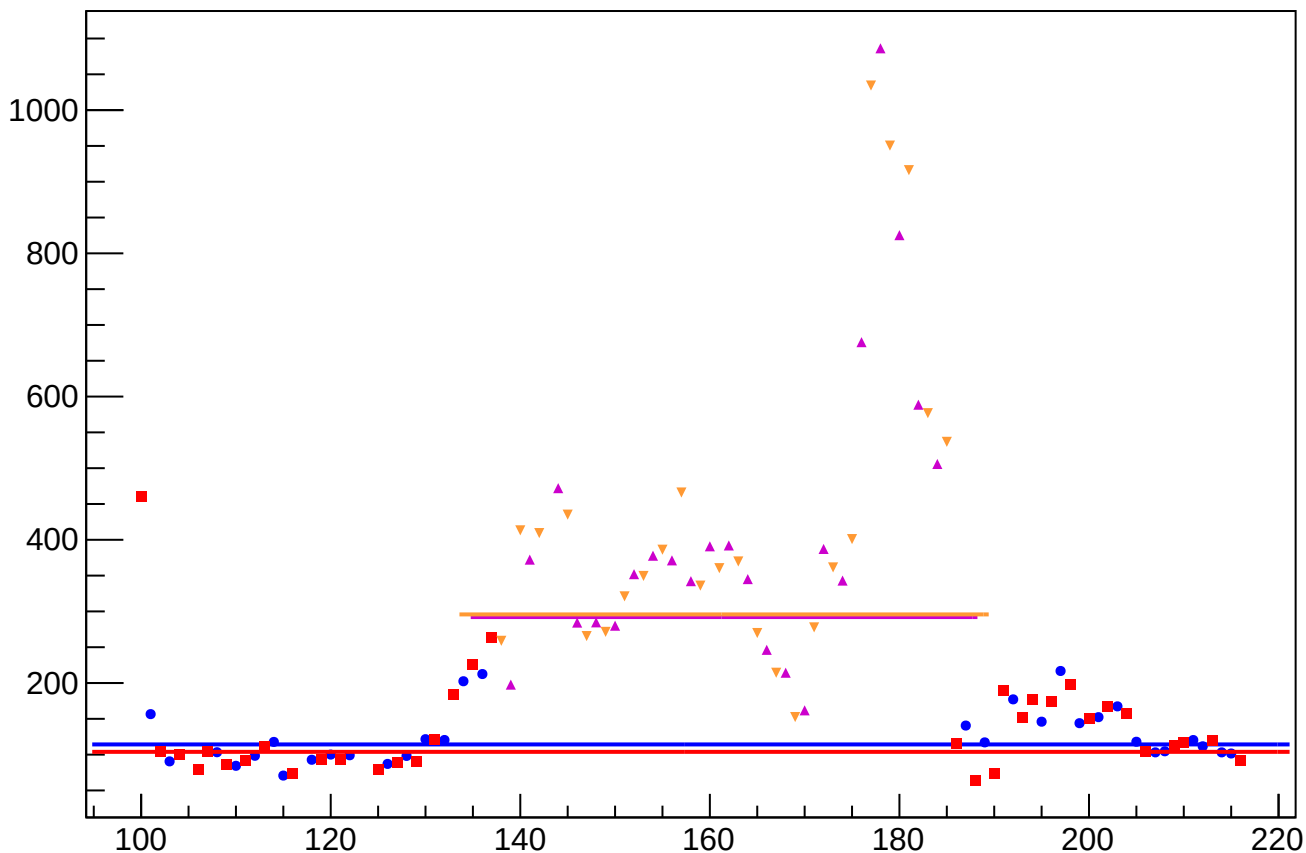
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.030 \pm 0.026$   $\chi^2/\text{NDF}$ : 59.8/54

All:  $0.026 \pm 0.018$   $\chi^2/\text{NDF}$ : 126.8/111

- sign  $0.023 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.9/56

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 114.250+/-0.019  $\chi^2/\text{NDF}$ : 2221589.8/30

Left Out: 295.800+/-0.054  $\chi^2/\text{NDF}$ : 5501139.3/23

Right Out: 103.891+/-0.018  $\chi^2/\text{NDF}$ : 3657176.6/33

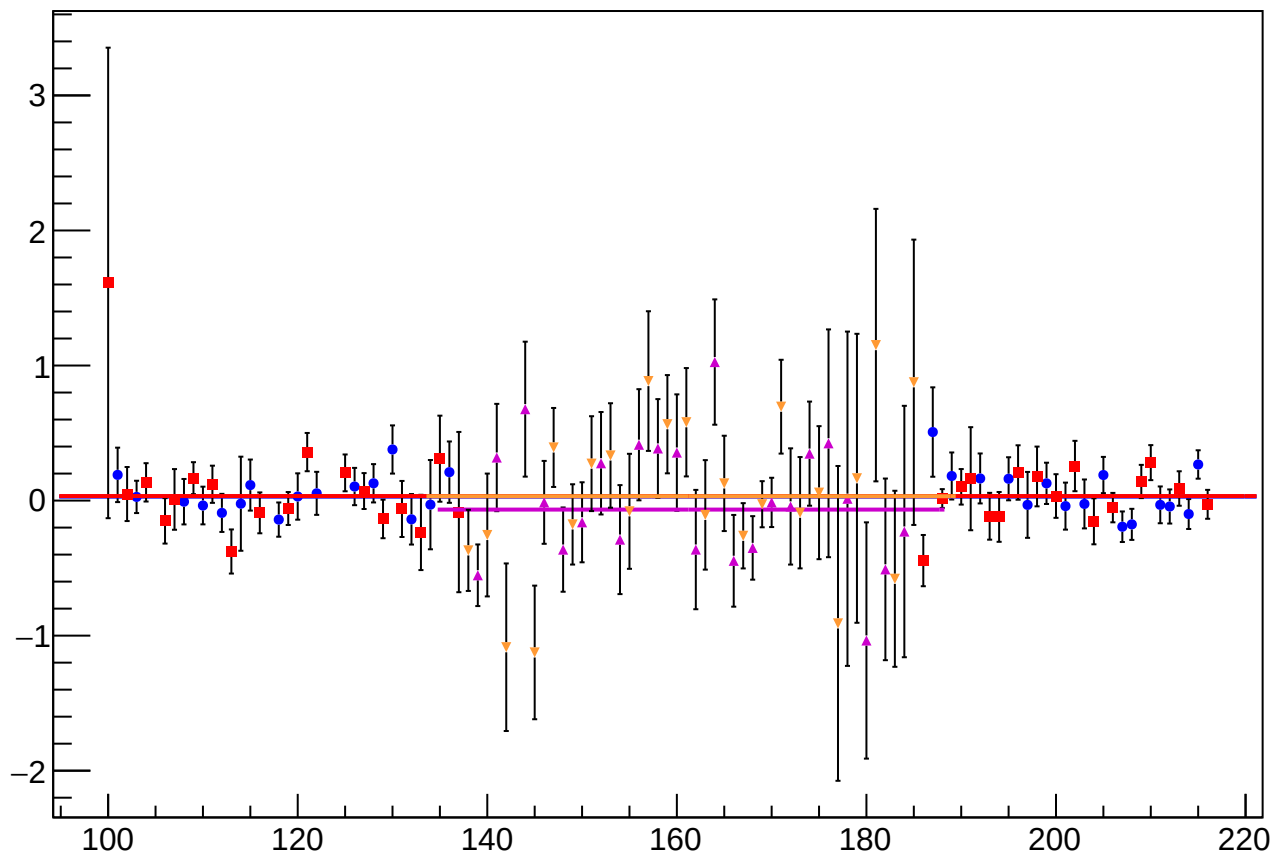
Left In: 292.103+/-0.053  $\chi^2/\text{NDF}$ : 5055695.7/22

+ sign 135.221+/-0.018  $\chi^2/\text{NDF}$ : 17815861.1/54

All: 129.056+/-0.012  $\chi^2/\text{NDF}$ : 38100321.9/11

- sign 123.643+/-0.017  $\chi^2/\text{NDF}$ : 20070524.8/56

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.027$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.032 \pm 0.076$   $\chi^2/\text{NDF}$ : 29.7/23

Right Out:  $0.034 \pm 0.026$   $\chi^2/\text{NDF}$ : 39.7/33

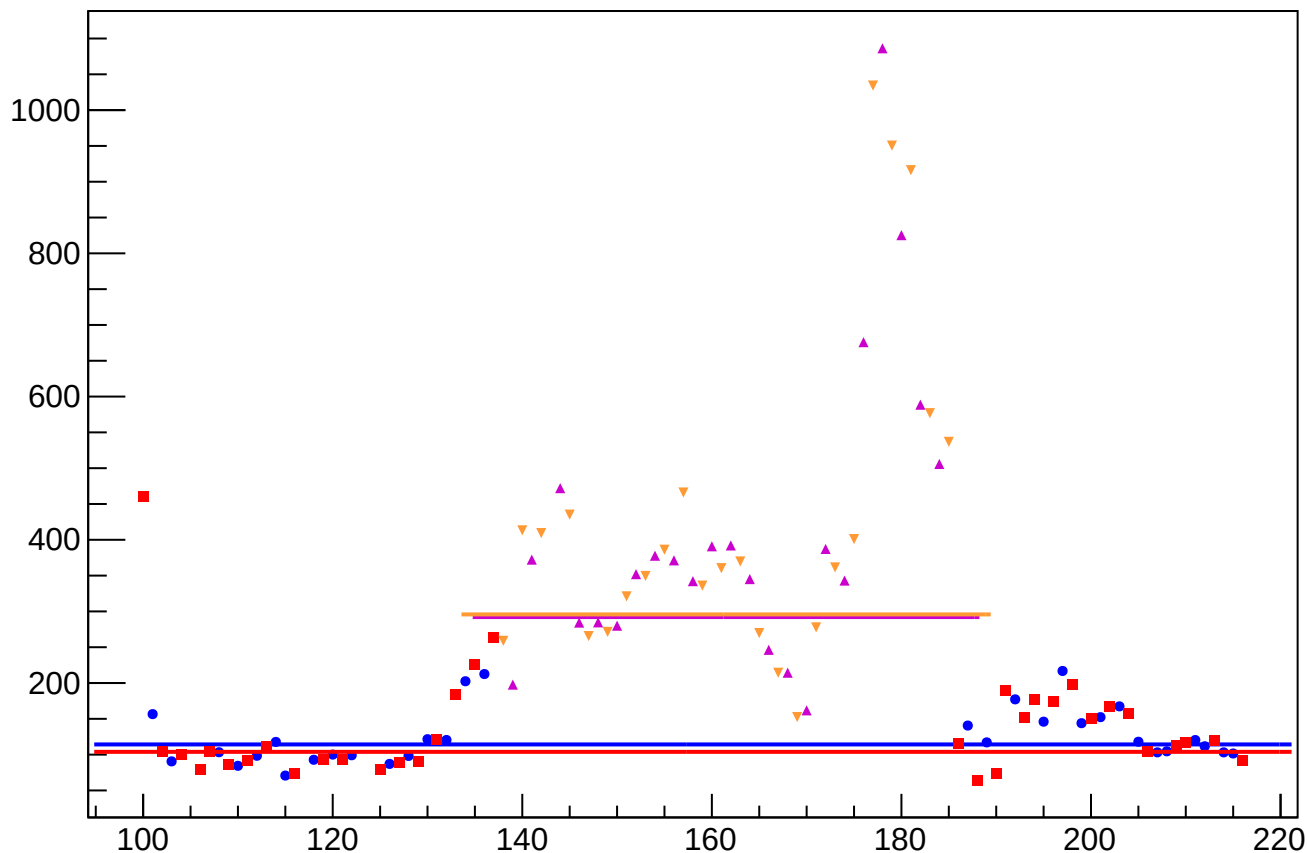
Left In:  $-0.067 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $0.030 \pm 0.026$   $\chi^2/\text{NDF}$ : 59.8/54

All:  $0.026 \pm 0.018$   $\chi^2/\text{NDF}$ : 126.8/111

- sign  $0.023 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.9/56

asym\_usl\_atl2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 114.250+/-0.019  $\chi^2/\text{NDF}$ : 2221589.8/30

Left Out: 295.800+/-0.054  $\chi^2/\text{NDF}$ : 5501139.3/23

Right Out: 103.891+/-0.018  $\chi^2/\text{NDF}$ : 3657176.6/33

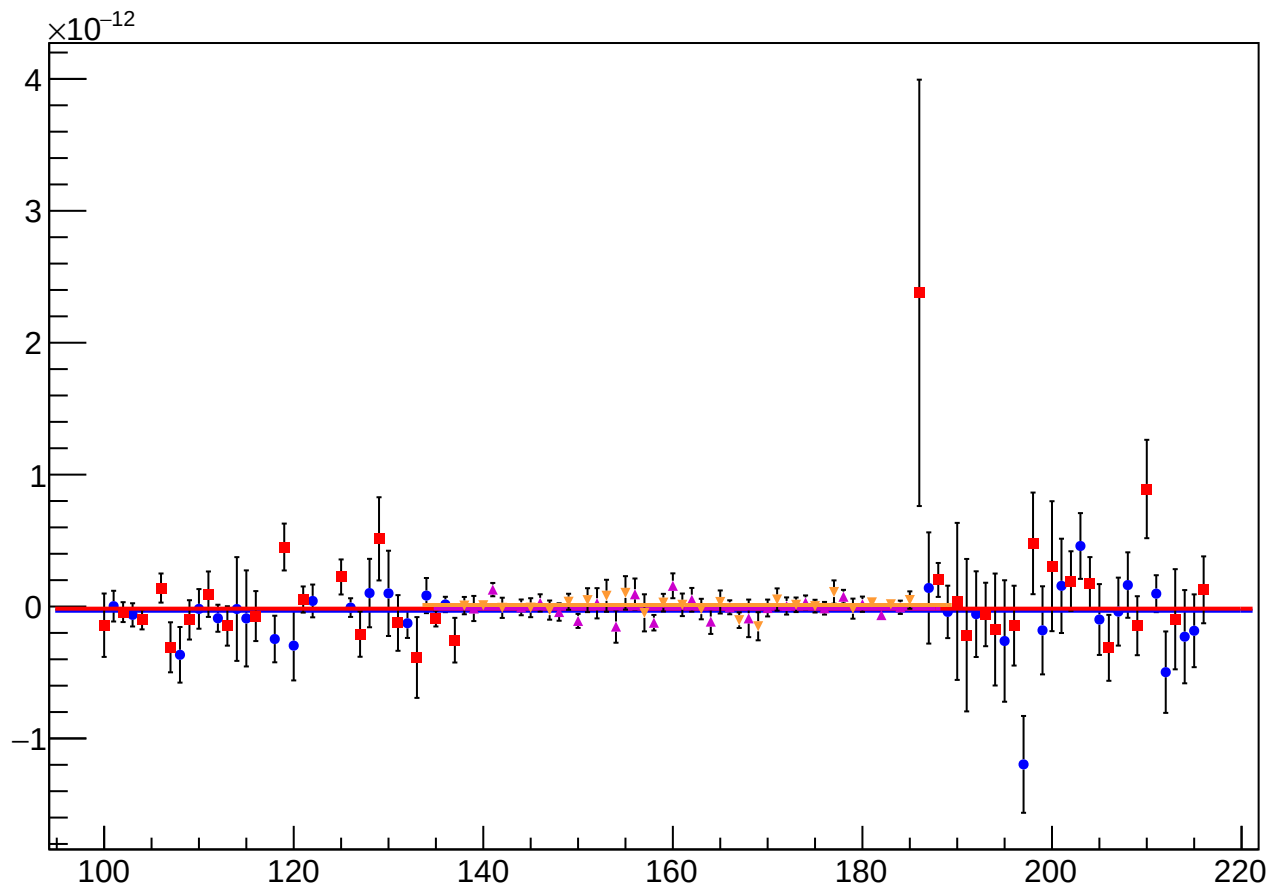
Left In: 292.103+/-0.053  $\chi^2/\text{NDF}$ : 5055695.7/22

+ sign 135.221+/-0.018  $\chi^2/\text{NDF}$ : 17815861.1/54

All: 129.056+/-0.012  $\chi^2/\text{NDF}$ : 38100321.9/11

- sign 123.643+/-0.017  $\chi^2/\text{NDF}$ : 20070524.8/56

asym\_usl\_atl2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.1/33

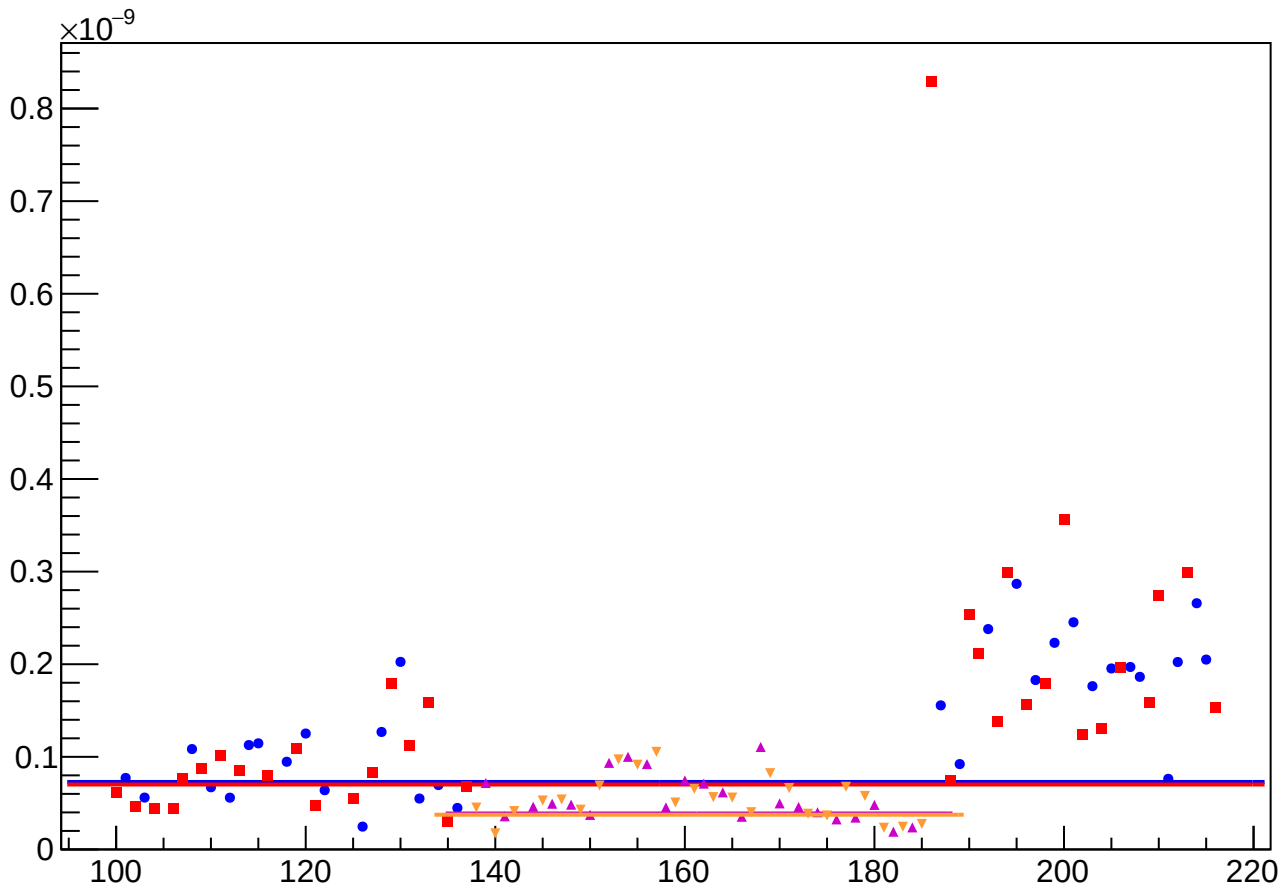
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.6/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 118.2/111

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 76.0/56

asym\_usl\_atl2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7354367.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4983727.4/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7440393.7/33

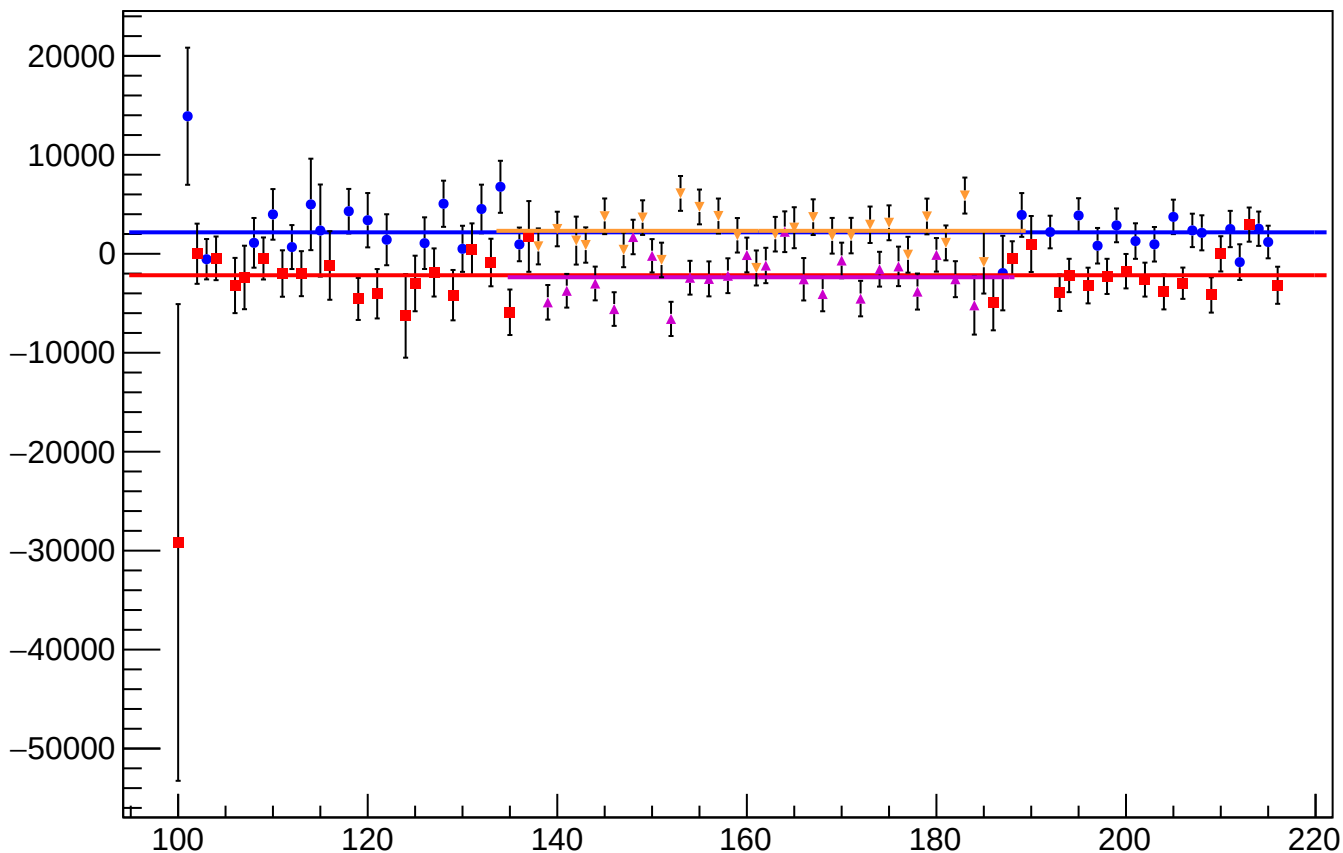
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4577795.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15182914.6/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 29526642.1/111

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14335086.9/56

# reg\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2169.244 $\pm$ 375.719  $\chi^2$ /NDF: 22.3/30

Left Out: 2321.067 $\pm$ 366.301  $\chi^2$ /NDF: 27.5/24

Right Out: -2167.827 $\pm$ 372.895  $\chi^2$ /NDF: 29.4/33

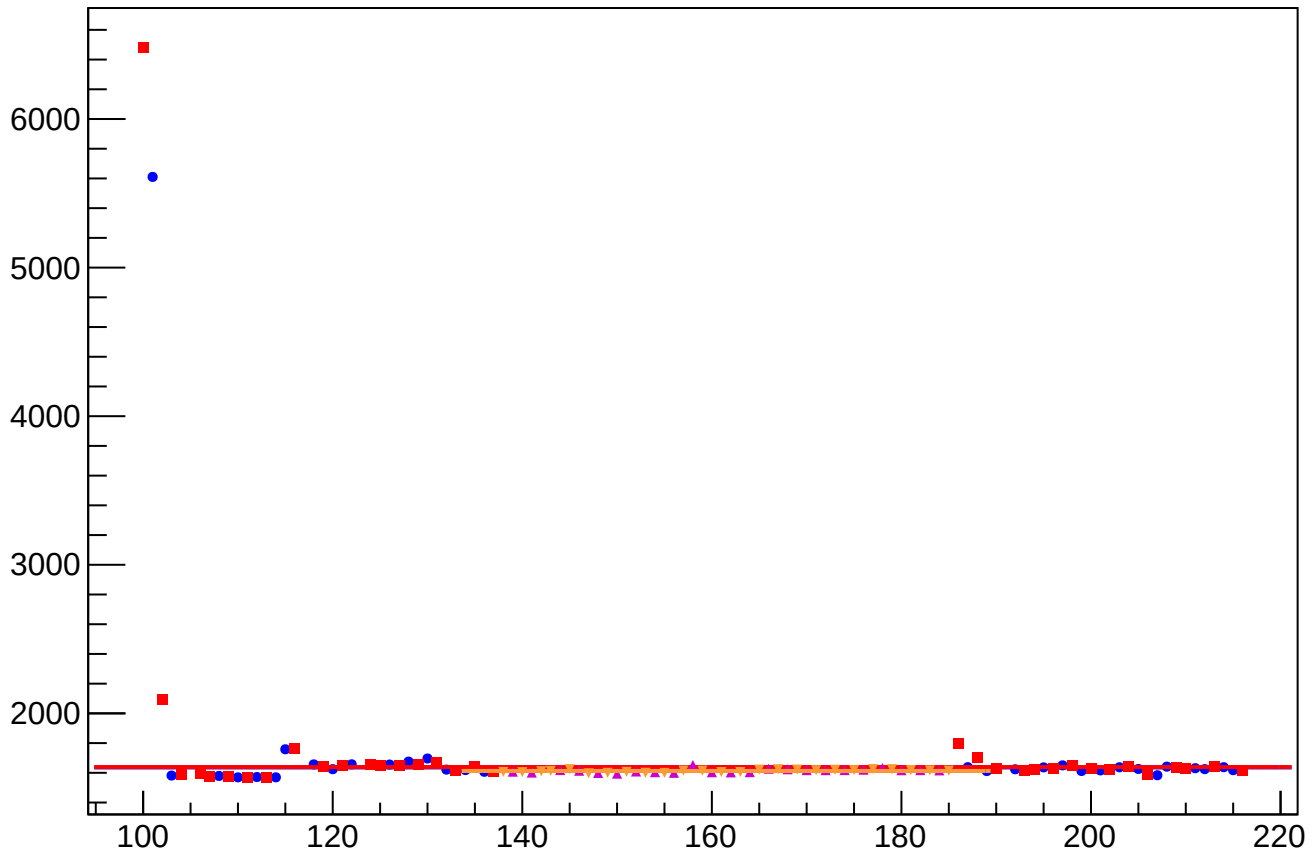
Left In: -2370.629 $\pm$ 376.798  $\chi^2$ /NDF: 33.7/22

+ sign 2247.082 $\pm$ 262.280  $\chi^2$ /NDF: 49.9/55

All: 13.131 $\pm$ 186.430  $\chi^2$ /NDF: 259.8/112

- sign -2268.172 $\pm$ 265.046  $\chi^2$ /NDF: 63.3/56

# reg\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1636.381+/-0.266  $\chi^2/\text{NDF}$ : 671813.7/30

Left Out: 1612.607+/-0.259  $\chi^2/\text{NDF}$ : 1172.5/24

Right Out: 1638.533+/-0.264  $\chi^2/\text{NDF}$ : 149178.5/33

Left In: 1613.793+/-0.266  $\chi^2/\text{NDF}$ : 2354.6/22

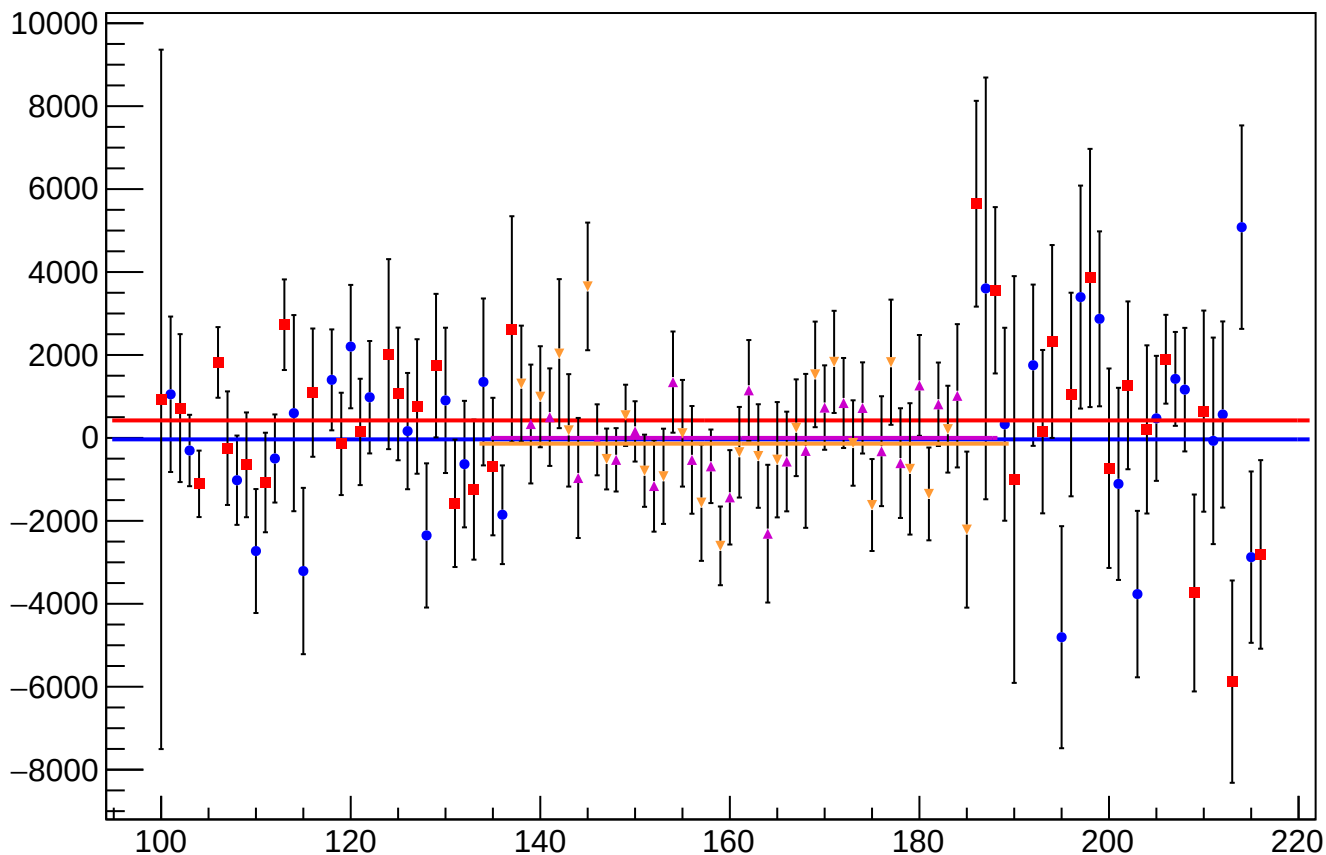
+ sign 1624.192+/-0.185  $\chi^2/\text{NDF}$ : 677091.5/55

All: 1625.231+/-0.132  $\chi^2/\text{NDF}$ : 833043.8/112

- sign 1626.292+/-0.187  $\chi^2/\text{NDF}$ : 155888.9/56



asym\_usr\_atr1\_avg\_reg\_correction\_mean vs Slug



Right In: -35.019 $\pm$ 284.734  $\chi^2/\text{NDF}$ : 37.0/30

Left Out: -139.022 $\pm$ 229.126  $\chi^2/\text{NDF}$ : 30.2/24

Right Out: 421.981 $\pm$ 271.018  $\chi^2/\text{NDF}$ : 41.9/33

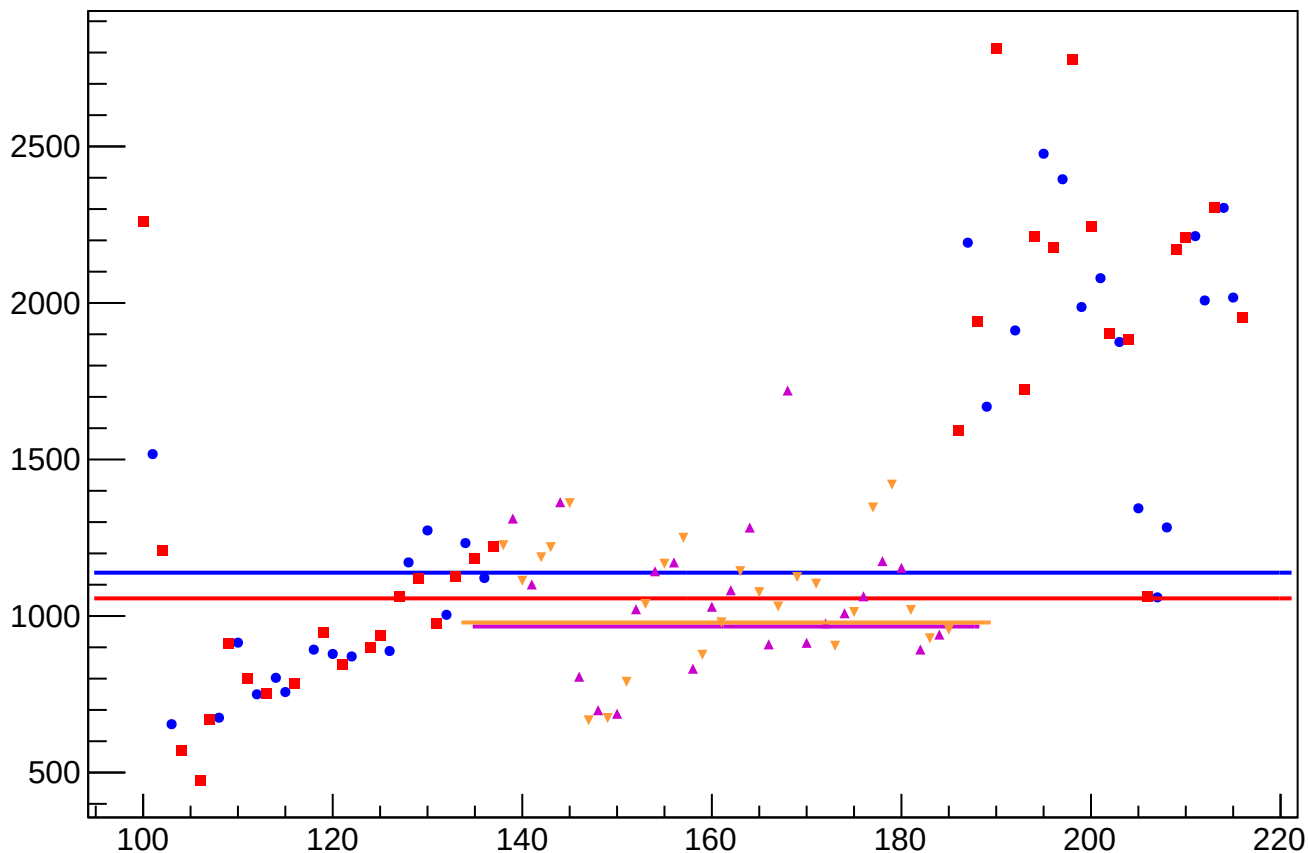
Left In: 0.092 $\pm$ 231.903  $\chi^2/\text{NDF}$ : 12.9/22

+ sign -98.145 $\pm$ 178.507  $\chi^2/\text{NDF}$ : 67.3/55

All: 41.936 $\pm$ 125.401  $\chi^2/\text{NDF}$ : 124.6/112

- sign 178.421 $\pm$ 176.202  $\chi^2/\text{NDF}$ : 56.1/56

asym\_usr\_atr1\_avg\_reg\_correction\_rms vs Slug



Right In: 1138.441 $\pm$ 0.201  $\chi^2$ /NDF: 5744997.8/30

Left Out: 979.294 $\pm$ 0.162  $\chi^2$ /NDF: 1630623.2/24

Right Out: 1056.336 $\pm$ 0.192  $\chi^2$ /NDF: 7727821.4/33

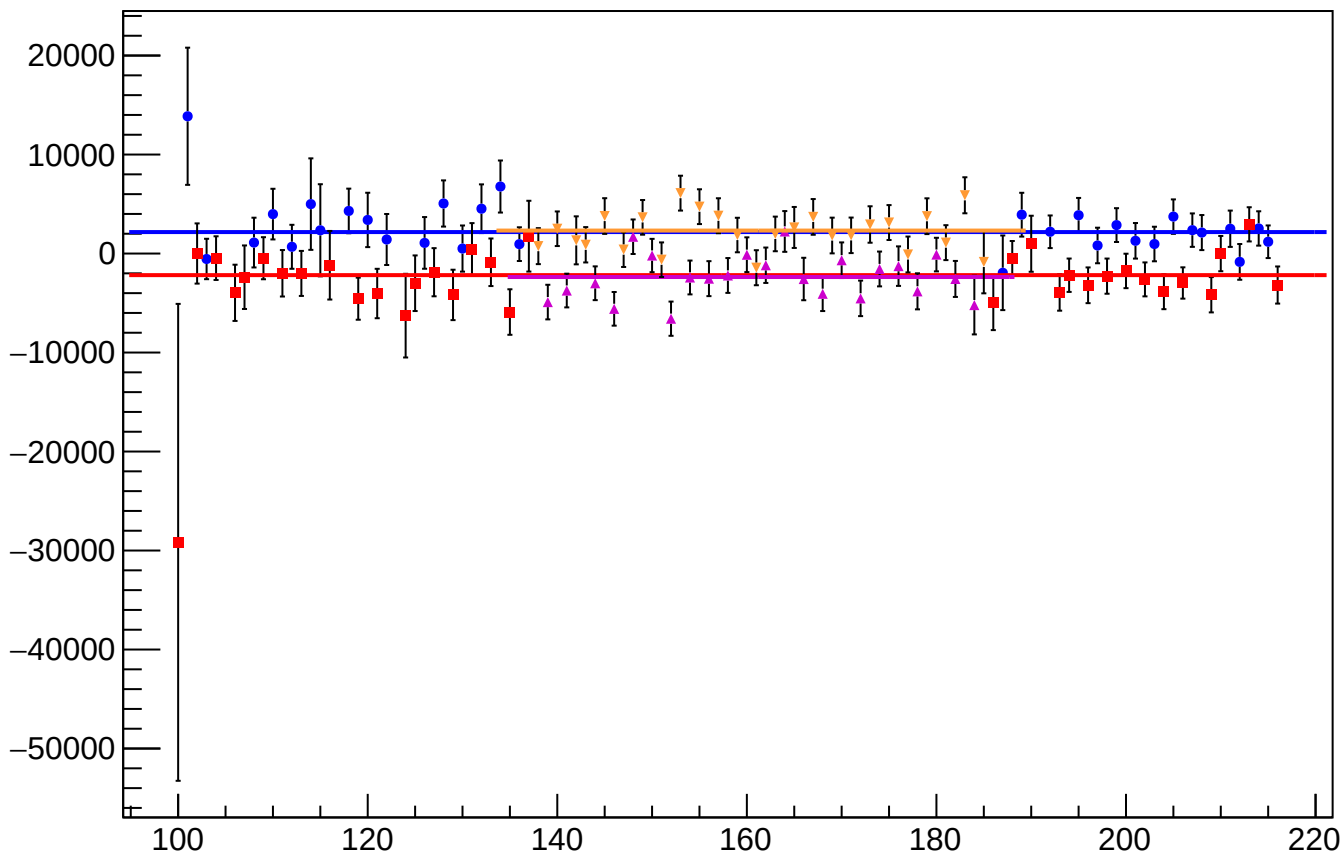
Left In: 966.526 $\pm$ 0.164  $\chi^2$ /NDF: 1602596.2/22

+ sign 1041.845 $\pm$ 0.126  $\chi^2$ /NDF: 7754854.0/55

All: 1022.924 $\pm$ 0.089  $\chi^2$ /NDF: 17256427.4/100

- sign 1004.488 $\pm$ 0.125  $\chi^2$ /NDF: 9457208.9/56

# cor\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2169.019 $\pm$ 375.719  $\chi^2$ /NDF: 22.3/30

Left Out: 2321.025 $\pm$ 366.301  $\chi^2$ /NDF: 27.5/24

Right Out: -2180.464 $\pm$ 373.009  $\chi^2$ /NDF: 29.7/33

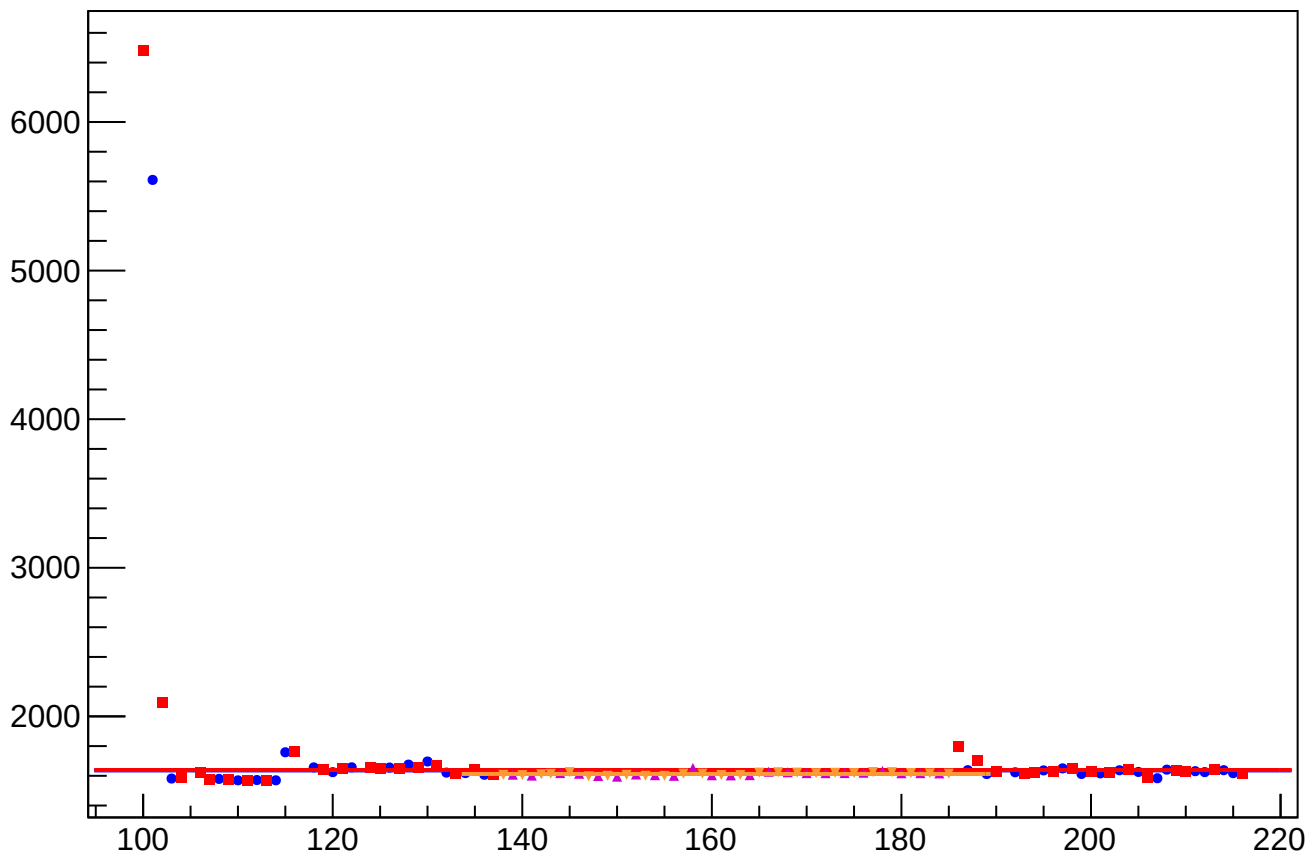
Left In: -2370.700 $\pm$ 376.798  $\chi^2$ /NDF: 33.7/22

+ sign 2246.951 $\pm$ 262.280  $\chi^2$ /NDF: 49.9/55

All: 10.226 $\pm$ 186.444  $\chi^2$ /NDF: 260.4/112

- sign -2274.621 $\pm$ 265.087  $\chi^2$ /NDF: 63.5/56

# cor\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1636.381 $\pm$ 0.266  $\chi^2$ /NDF: 671813.3/30

Left Out: 1612.607 $\pm$ 0.259  $\chi^2$ /NDF: 1172.5/24

Right Out: 1639.018 $\pm$ 0.264  $\chi^2$ /NDF: 148737.9/33

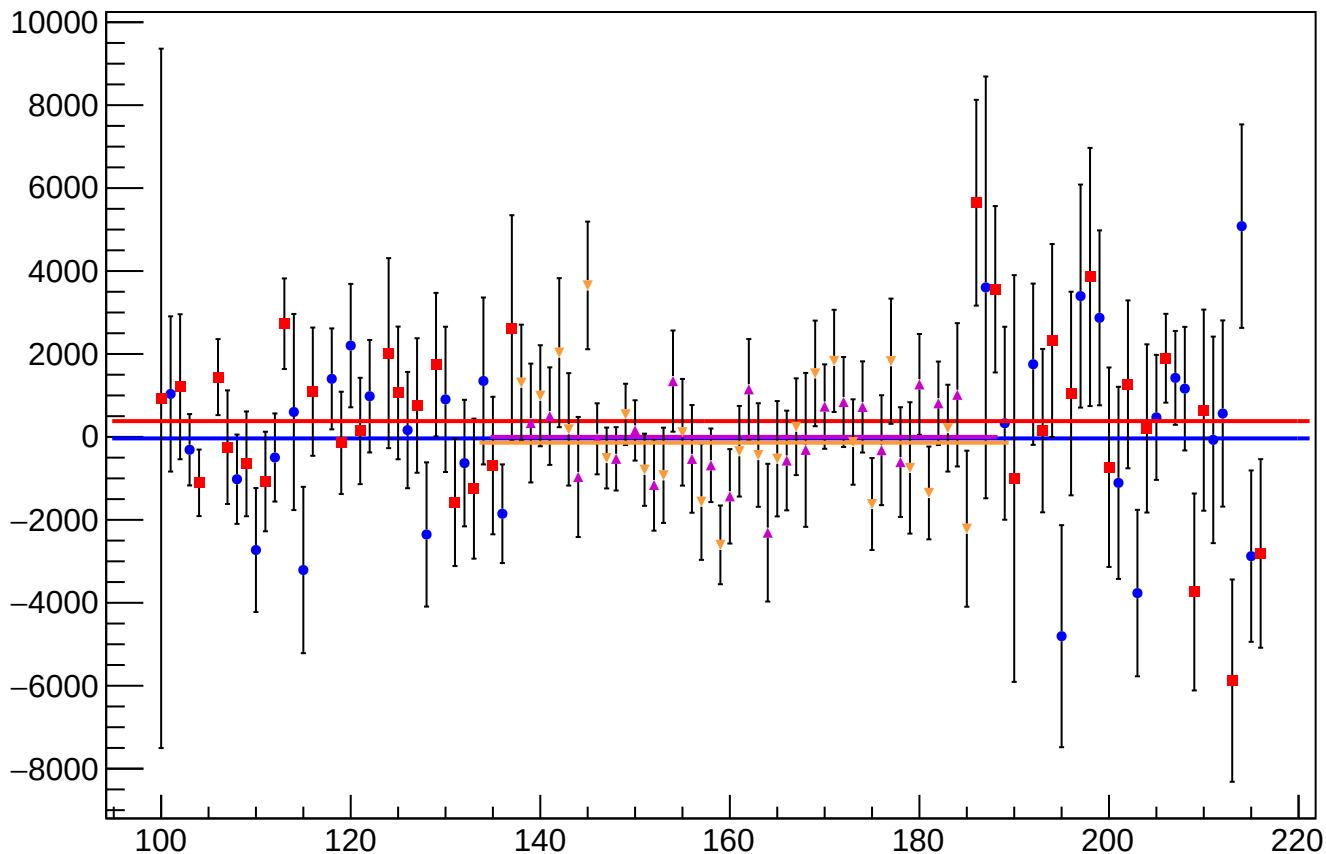
Left In: 1613.793 $\pm$ 0.266  $\chi^2$ /NDF: 2354.6/22

+ sign 1624.192 $\pm$ 0.185  $\chi^2$ /NDF: 677091.0/55

All: 1625.350 $\pm$ 0.132  $\chi^2$ /NDF: 832789.1/112

- sign 1626.533 $\pm$ 0.187  $\chi^2$ /NDF: 155619.3/56

asym\_usr\_atr1\_avg\_cor\_correction\_mean vs Slug



Right In:  $-35.971 \pm 284.708$   $\chi^2/\text{NDF}$ : 37.0/30

Left Out:  $-139.074 \pm 229.125$   $\chi^2/\text{NDF}$ : 30.2/24

Right Out:  $381.384 \pm 272.812$   $\chi^2/\text{NDF}$ : 40.5/33

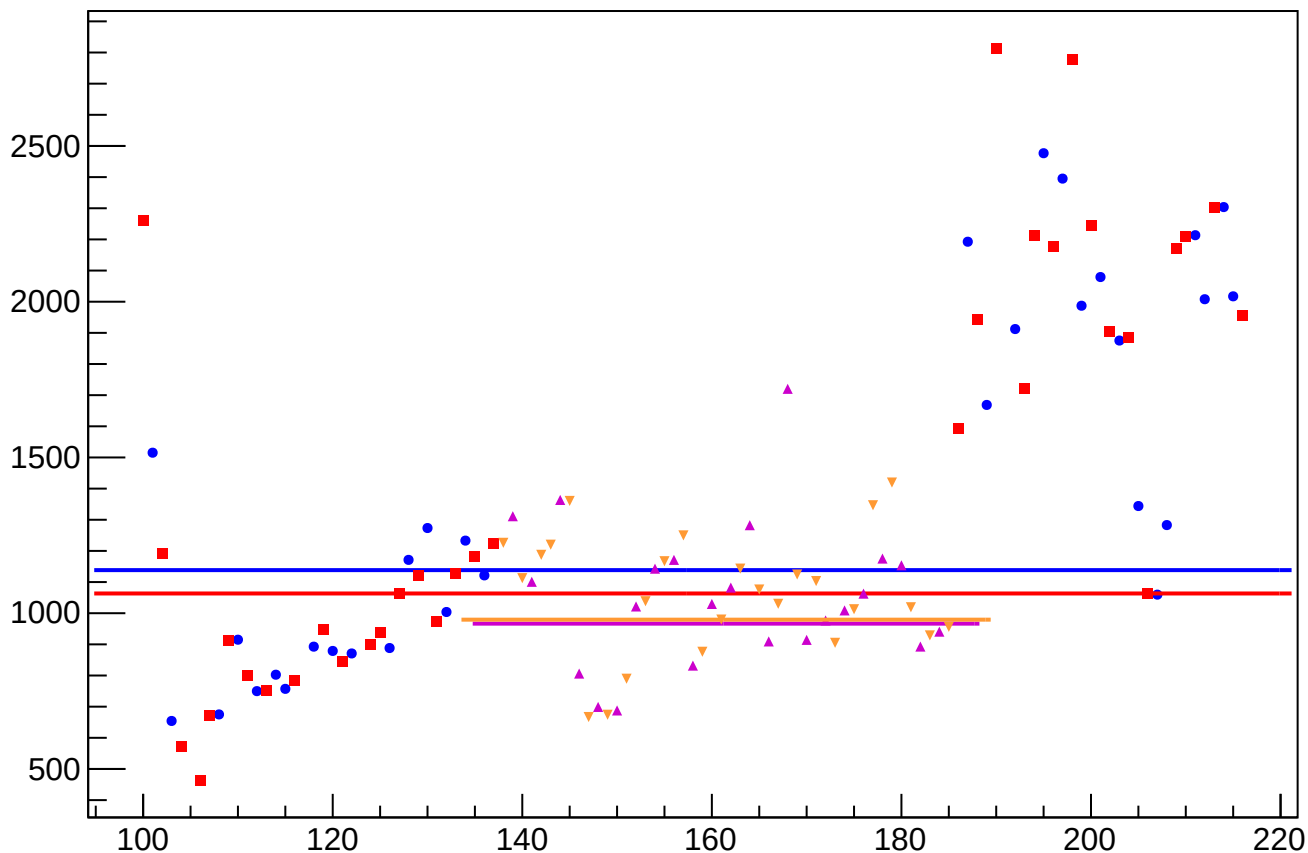
Left In:  $0.068 \pm 231.904$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $-98.546 \pm 178.500$   $\chi^2/\text{NDF}$ : 67.3/55

All:  $32.054 \pm 125.575$   $\chi^2/\text{NDF}$ : 122.9/112

- sign  $160.022 \pm 176.692$   $\chi^2/\text{NDF}$ : 54.5/56

asym\_usr\_atr1\_avg\_cor\_correction\_rms vs Slug



Right In: 1138.327+/-0.201  $\chi^2$ /NDF: 5745894.1/30

Left Out: 979.288+/-0.162  $\chi^2$ /NDF:1630731.2/24

Right Out: 1063.355+/-0.193  $\chi^2$ /NDF: 7624646.5/33

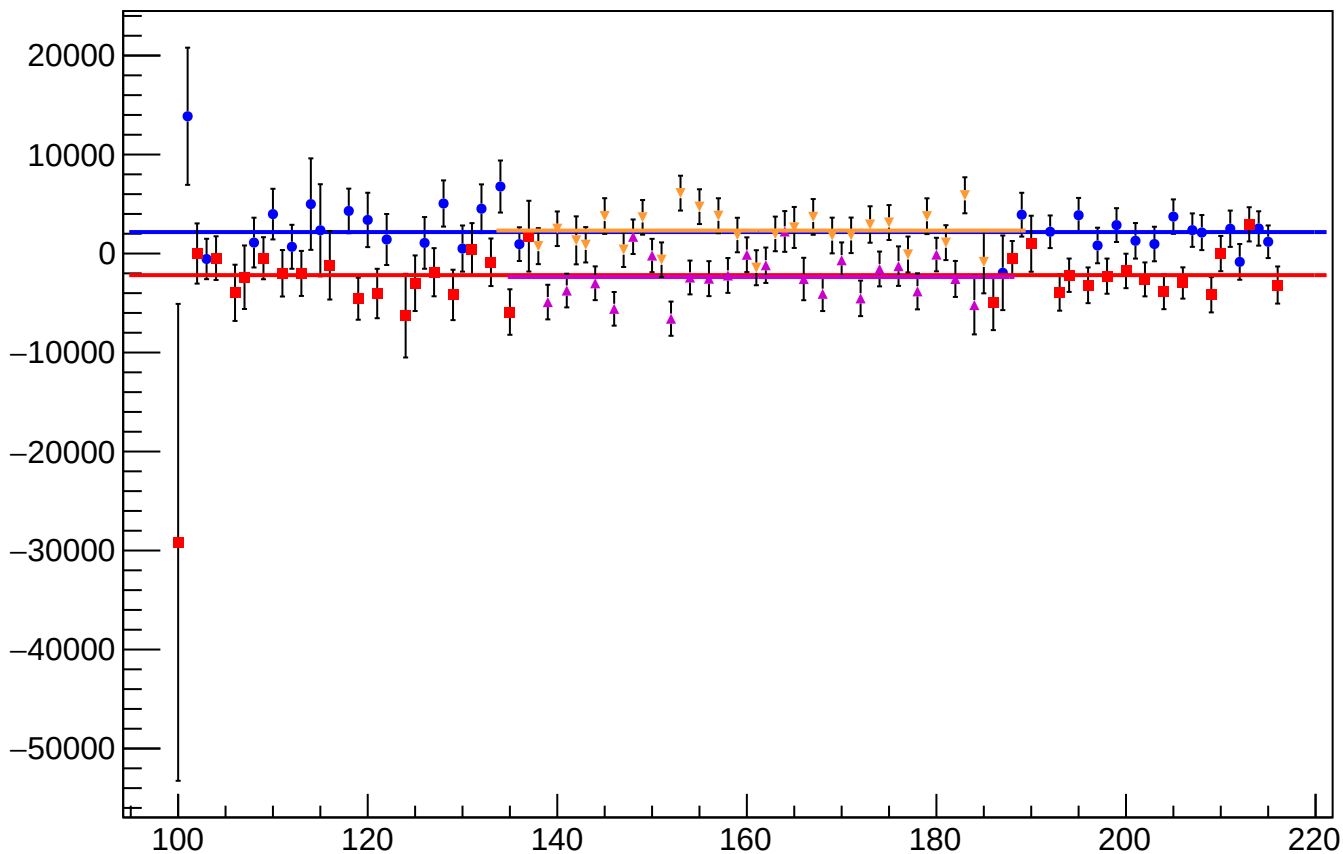
Left In: 966.531+/-0.164  $\chi^2$ /NDF:1602562.1/22

+ sign 1041.803+/-0.126  $\chi^2$ /NDF: 7755387.7/55

All: 1024.298+/-0.089  $\chi^2$ /NDF: 17166919.8/100

- sign 1007.147+/-0.125  $\chi^2$ /NDF: 9373453.6/56

# eigen\_cor\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In:  $2169.019 \pm 375.719$   $\chi^2/\text{NDF}$ : 22.3/30

Left Out:  $2321.025 \pm 366.301$   $\chi^2/\text{NDF}$ : 27.5/24

Right Out:  $-2180.464 \pm 373.009$   $\chi^2/\text{NDF}$ : 29.7/33

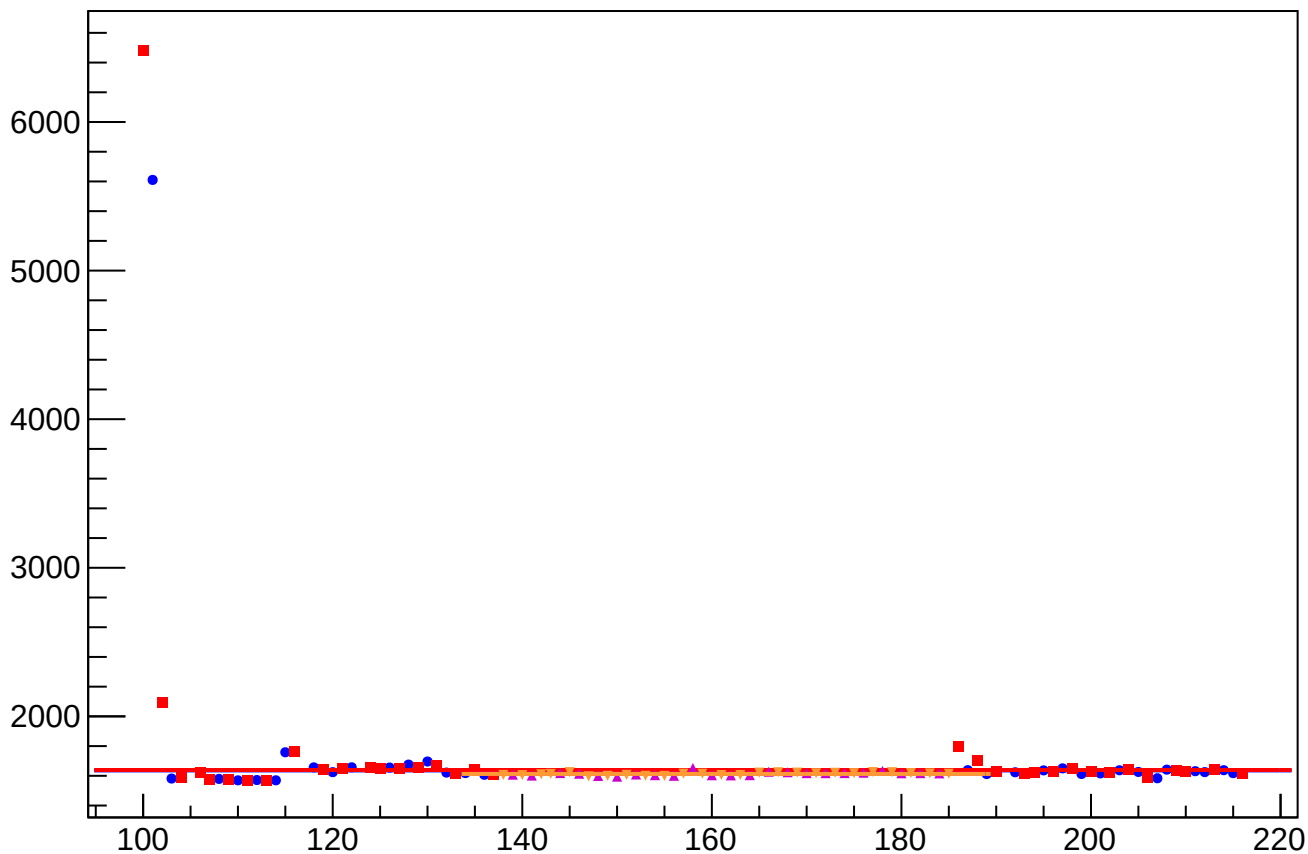
Left In:  $-2370.700 \pm 376.798$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $2246.951 \pm 262.280$   $\chi^2/\text{NDF}$ : 49.9/55

All:  $10.226 \pm 186.444$   $\chi^2/\text{NDF}$ : 260.4/112

- sign  $-2274.621 \pm 265.087$   $\chi^2/\text{NDF}$ : 63.5/56

# eigen\_cor\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1636.381+/-0.266  $\chi^2/\text{NDF}$ : 671813.3/30

Left Out: 1612.607+/-0.259  $\chi^2/\text{NDF}$ : 1172.5/24

Right Out: 1639.018+/-0.264  $\chi^2/\text{NDF}$ : 148737.9/33

Left In: 1613.793+/-0.266  $\chi^2/\text{NDF}$ : 2354.6/22

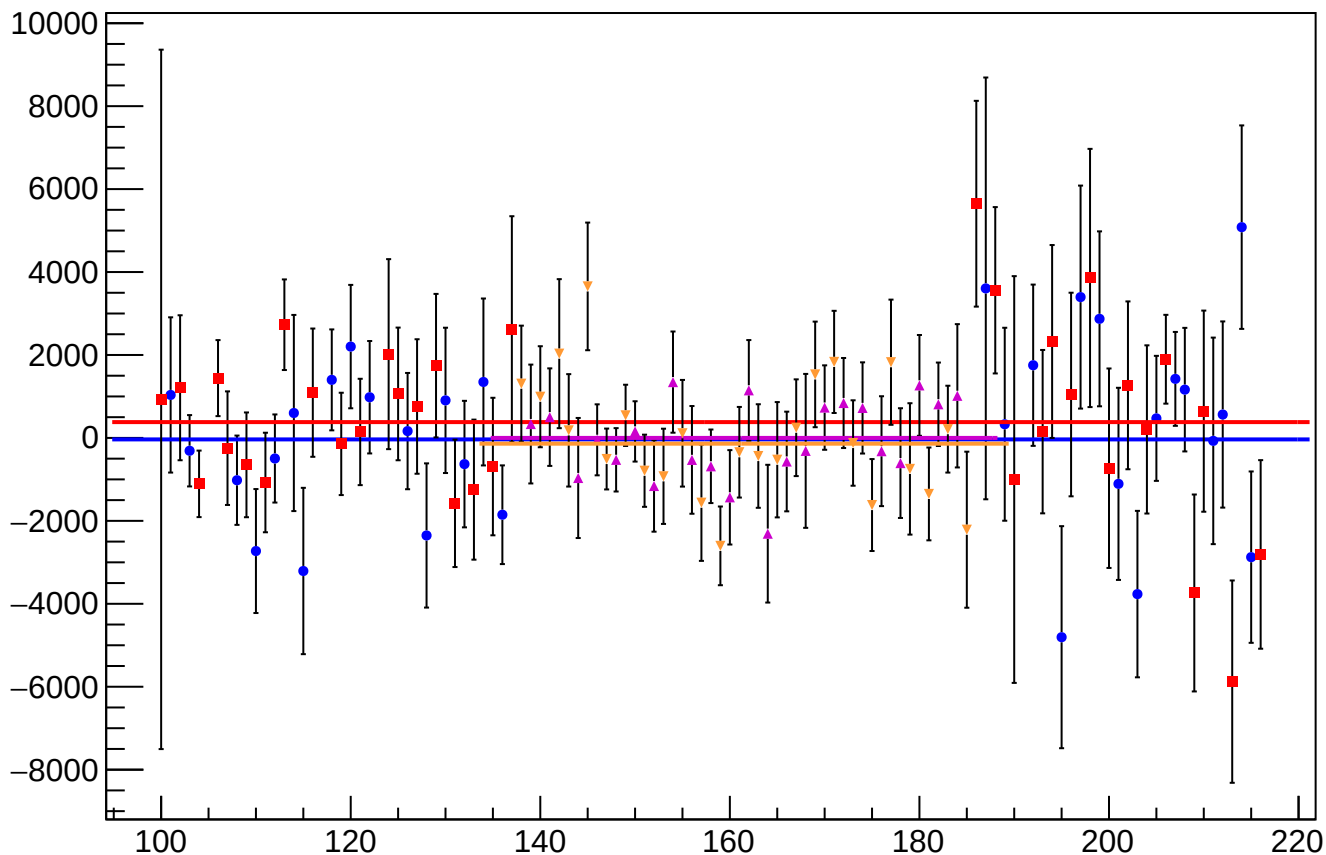
+ sign 1624.192+/-0.185  $\chi^2/\text{NDF}$ : 677091.0/55

All: 1625.350+/-0.132  $\chi^2/\text{NDF}$ : 832789.1/112

- sign 1626.533+/-0.187  $\chi^2/\text{NDF}$ : 155619.3/56



asym\_usr\_atr1\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-35.971 \pm 284.708$   $\chi^2/\text{NDF}$ : 37.0/30

Left Out:  $-139.074 \pm 229.125$   $\chi^2/\text{NDF}$ : 30.2/24

Right Out:  $381.384 \pm 272.812$   $\chi^2/\text{NDF}$ : 40.5/33

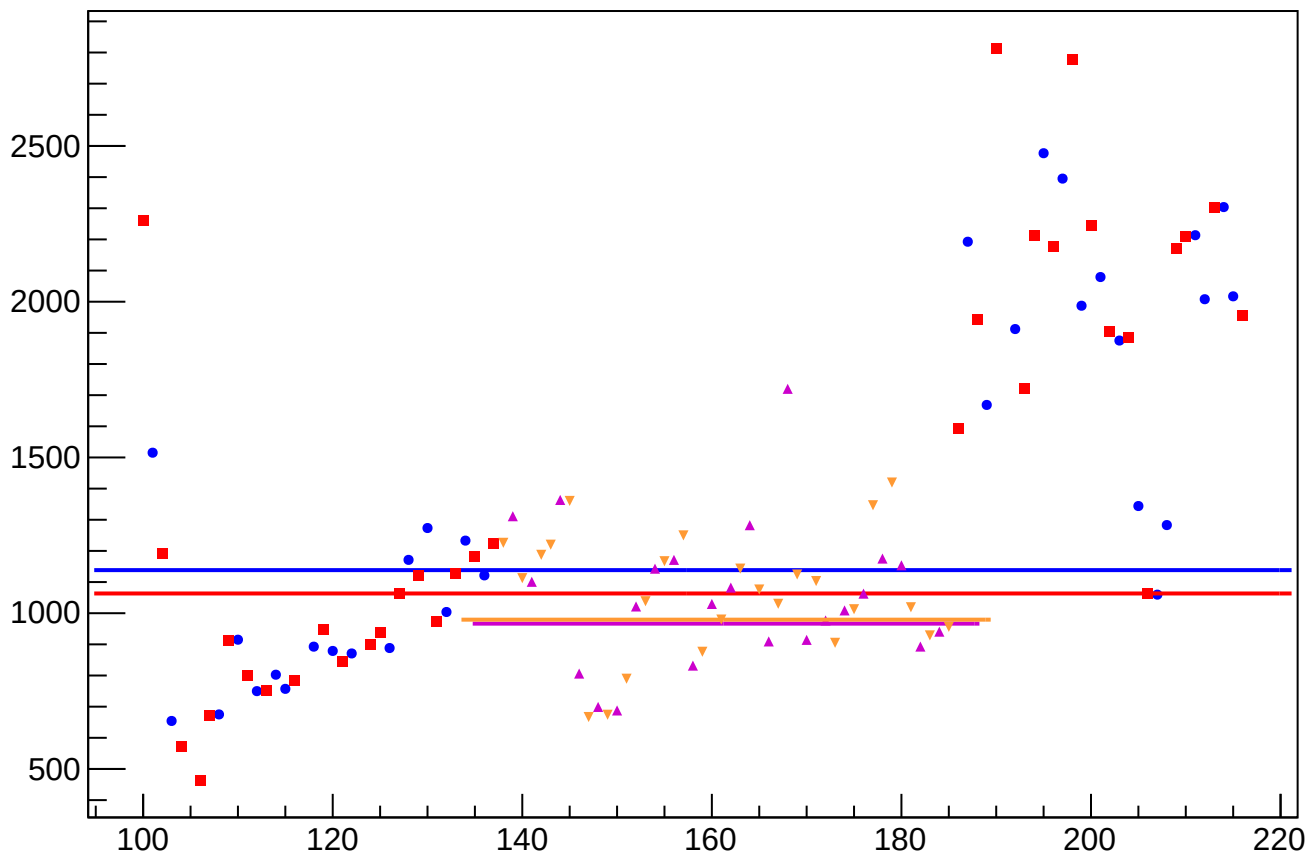
Left In:  $0.068 \pm 231.904$   $\chi^2/\text{NDF}$ : 12.9/22

+ sign  $-98.546 \pm 178.500$   $\chi^2/\text{NDF}$ : 67.3/55

All:  $32.054 \pm 125.575$   $\chi^2/\text{NDF}$ : 122.9/112

- sign  $160.022 \pm 176.692$   $\chi^2/\text{NDF}$ : 54.5/56

asym\_usr\_atr1\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1138.327+/-0.201  $\chi^2$ /NDF: 5745894.1/30

Left Out: 979.288+/-0.162  $\chi^2$ /NDF:1630731.2/24

Right Out: 1063.355+/-0.193  $\chi^2$ /NDF: 7624646.5/33

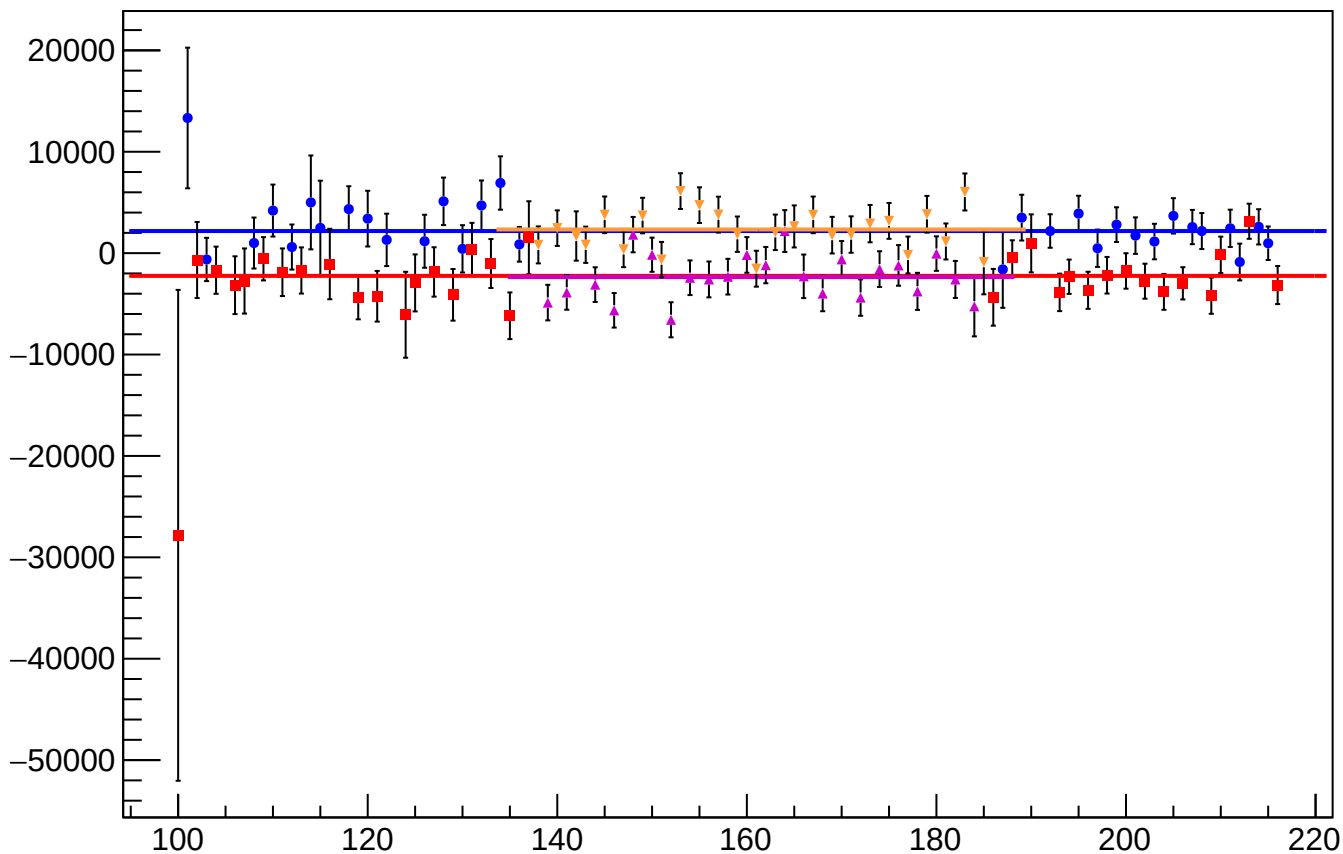
Left In: 966.531+/-0.164  $\chi^2$ /NDF:1602562.1/22

+ sign 1041.803+/-0.126  $\chi^2$ /NDF: 7755387.7/55

All: 1024.298+/-0.089  $\chi^2$ /NDF: 17166919.8/100

- sign 1007.147+/-0.125  $\chi^2$ /NDF: 9373453.6/56

# dit\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2179.778 $\pm$ 377.805  $\chi^2$ /NDF: 22.4/30

Left Out: 2334.840 $\pm$ 366.991  $\chi^2$ /NDF:28.3/24

Right Out: -2241.484 $\pm$ 376.138  $\chi^2$ /NDF: 28.5/33

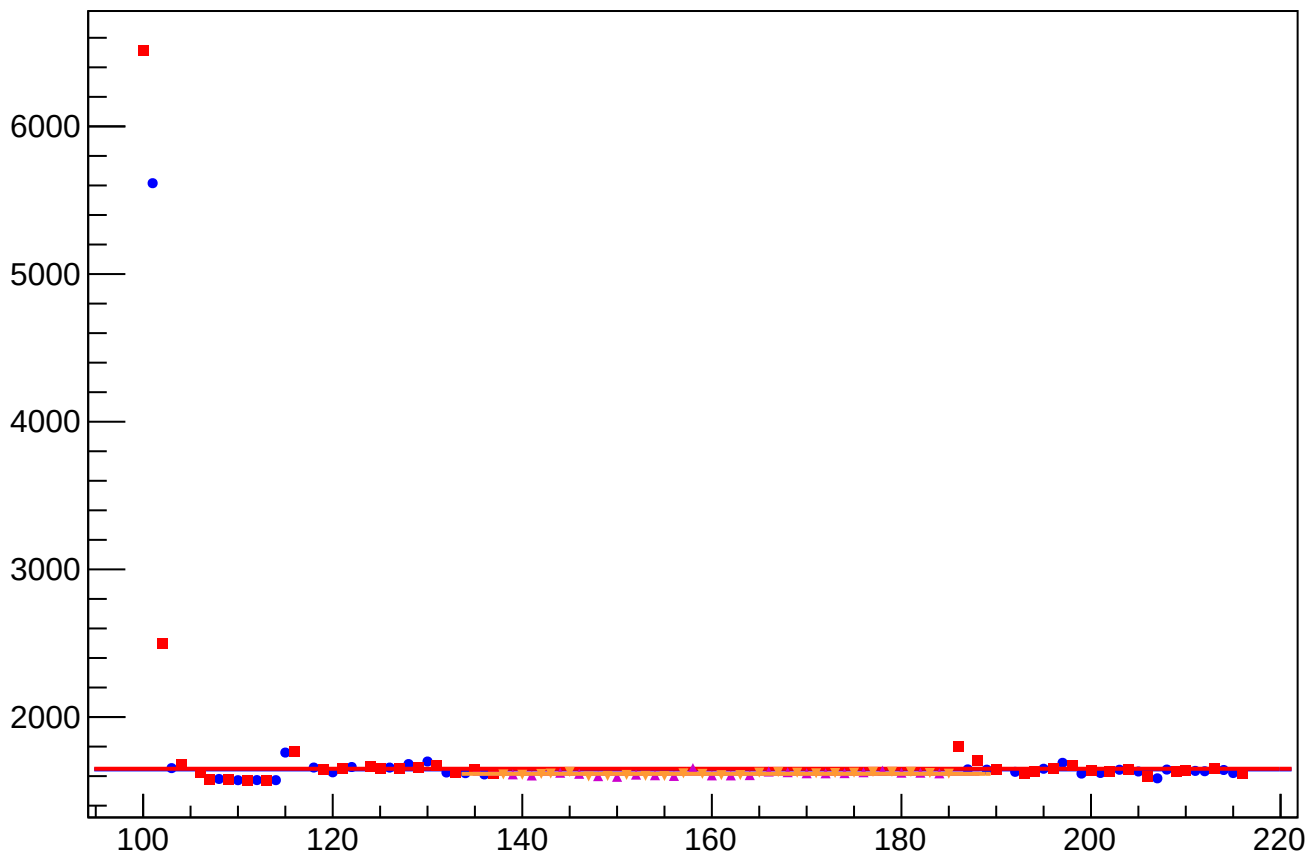
Left In: -2360.289 $\pm$ 377.400  $\chi^2$ /NDF:34.0/22

+ sign 2259.560 $\pm$ 263.242  $\chi^2$ /NDF: 50.7/55

All: 6.755 $\pm$ 187.252  $\chi^2$ /NDF: 261.5/112

- sign -2300.688 $\pm$ 266.415  $\chi^2$ /NDF: 62.6/56

dit\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1645.365+/-0.267  $\chi^2/\text{NDF}$ : 670669.3/30

Left Out: 1615.633+/-0.260  $\chi^2/\text{NDF}$ : 1447.2/24

Right Out: 1649.897+/-0.266  $\chi^2/\text{NDF}$ : 206287.2/33

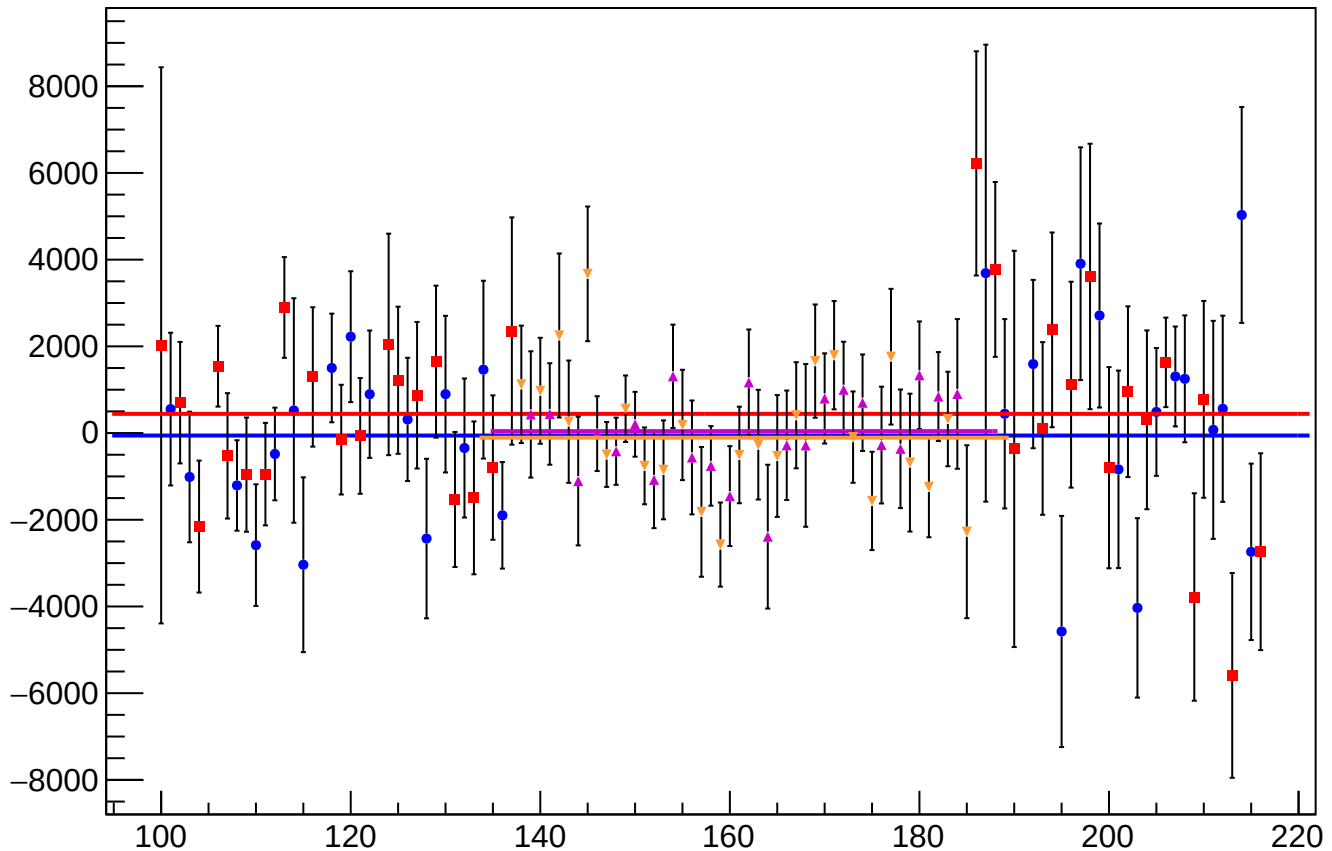
Left In: 1616.361+/-0.267  $\chi^2/\text{NDF}$ : 2557.7/22

+ sign 1630.067+/-0.186  $\chi^2/\text{NDF}$ : 678489.2/55

All: 1631.607+/-0.132  $\chi^2/\text{NDF}$ : 895395.3/112

- sign 1633.185+/-0.188  $\chi^2/\text{NDF}$ : 216767.5/56

# asym\_usr\_atr1\_avg\_dit\_correction\_mean vs Slug



Right In:  $-57.276 \pm 297.694$   $\chi^2/\text{NDF}: 36.6/30$

Left Out:  $-106.338 \pm 234.306$   $\chi^2/\text{NDF}: 29.0/24$

Right Out:  $443.070 \pm 286.817$   $\chi^2/\text{NDF}: 40.5/33$

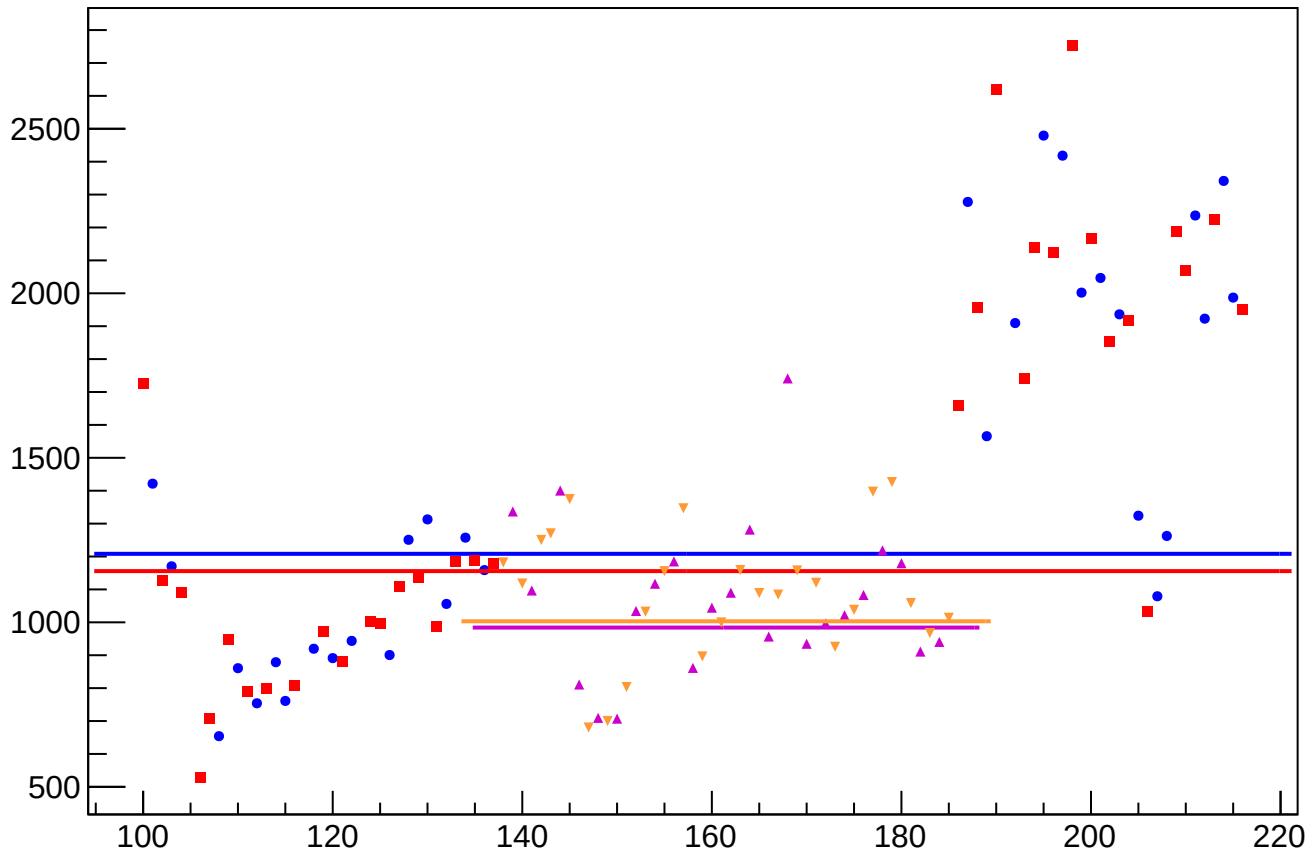
Left In:  $44.469 \pm 235.733$   $\chi^2/\text{NDF}: 12.8/22$

+ sign  $-87.571 \pm 184.118$   $\chi^2/\text{NDF}: 65.7/55$

All:  $60.401 \pm 129.477$   $\chi^2/\text{NDF}: 121.4/112$

- sign  $205.171 \pm 182.115$   $\chi^2/\text{NDF}: 54.4/56$

# asym\_usr\_atr1\_avg\_dit\_correction\_rms vs Slug



Right In: 1208.201+/-0.211  $\chi^2/\text{NDF}$ : 4952601.0/30

Left Out: 1003.101+/-0.166  $\chi^2/\text{NDF}$ : 1598415.6/24

Right Out: 1155.651+/-0.203  $\chi^2/\text{NDF}$ : 6137667.1/33

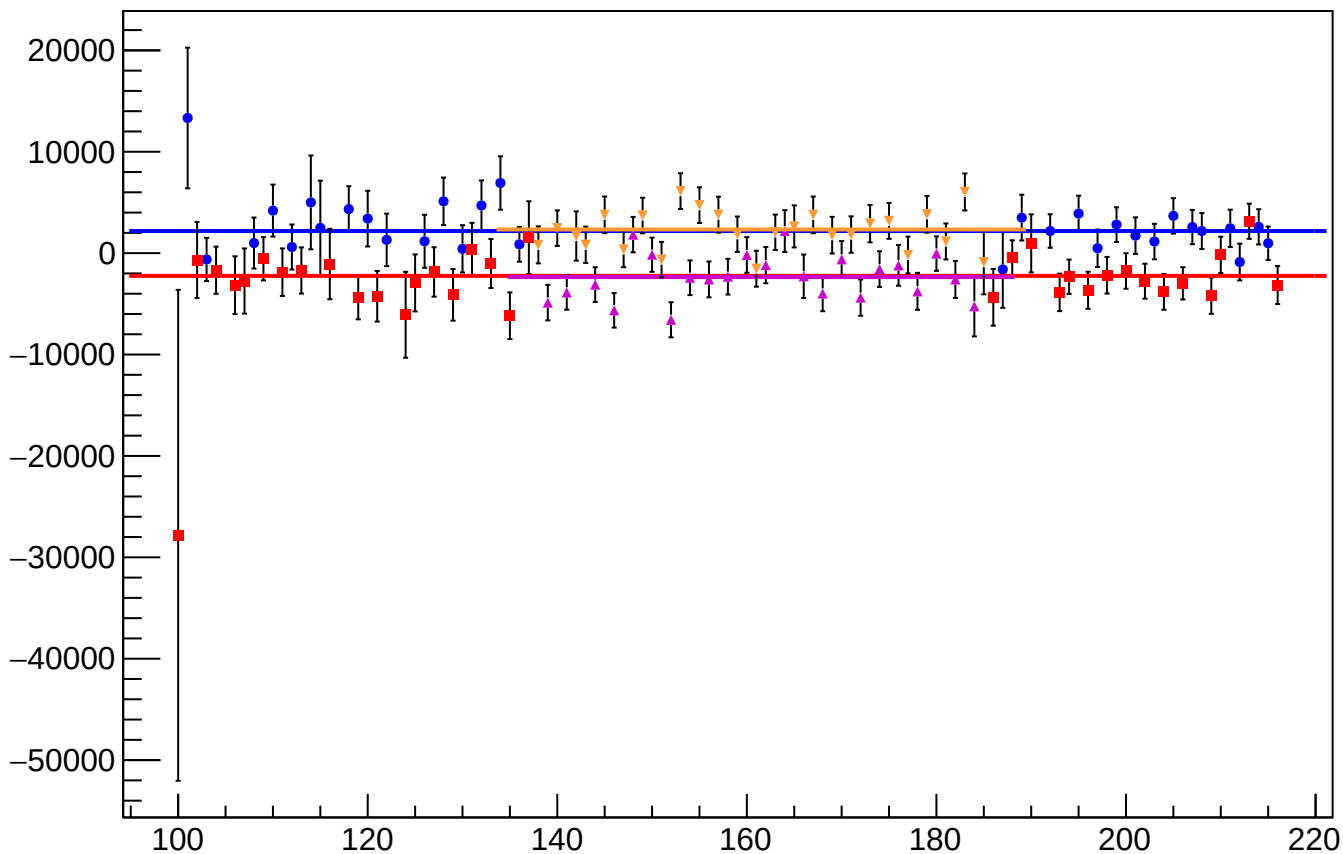
Left In: 984.053+/-0.167  $\chi^2/\text{NDF}$ : 1559561.5/22

+ sign 1081.555+/-0.130  $\chi^2/\text{NDF}$ : 7137214.4/55

All: 1067.241+/-0.092  $\chi^2/\text{NDF}$ : 15285622.2/100

- sign 1053.236+/-0.129  $\chi^2/\text{NDF}$ : 8124491.2/56

# eigen\_dit\_asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2179.779 $\pm$ 377.805  $\chi^2$ /NDF: 22.4/30

Left Out: 2334.839 $\pm$ 366.991  $\chi^2$ /NDF: 28.3/24

Right Out: -2241.484 $\pm$ 376.138  $\chi^2$ /NDF: 28.5/33

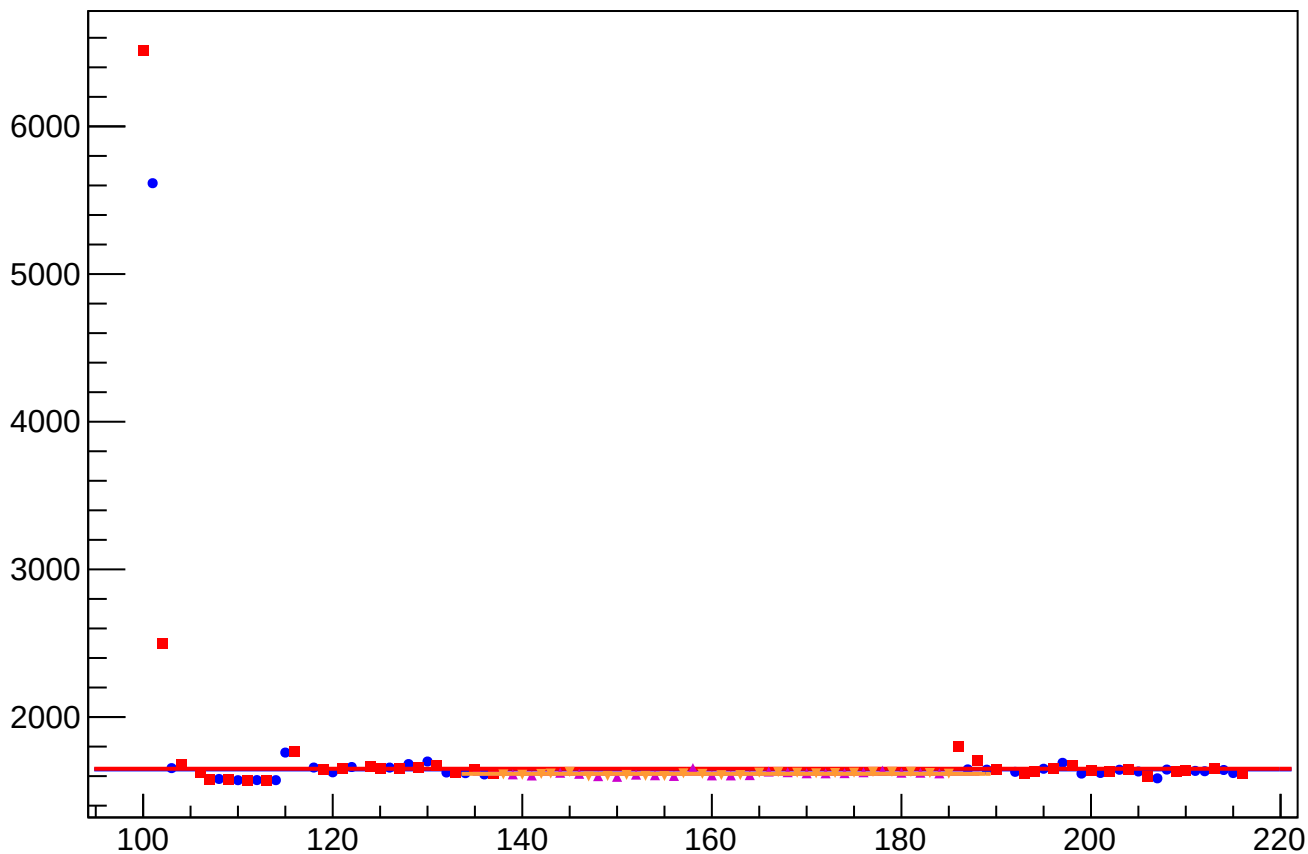
Left In: -2360.289 $\pm$ 377.400  $\chi^2$ /NDF: 34.0/22

+ sign 2259.560 $\pm$ 263.242  $\chi^2$ /NDF: 50.7/55

All: 6.755 $\pm$ 187.252  $\chi^2$ /NDF: 261.5/112

- sign -2300.687 $\pm$ 266.415  $\chi^2$ /NDF: 62.6/56

# eigen\_dit\_asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 1645.364+/-0.267  $\chi^2/\text{NDF}$ : 670669.3/30

Left Out: 1615.633+/-0.260  $\chi^2/\text{NDF}$ : 1447.2/24

Right Out: 1649.896+/-0.266  $\chi^2/\text{NDF}$ : 206287.1/33

Left In: 1616.361+/-0.267  $\chi^2/\text{NDF}$ : 2557.7/22

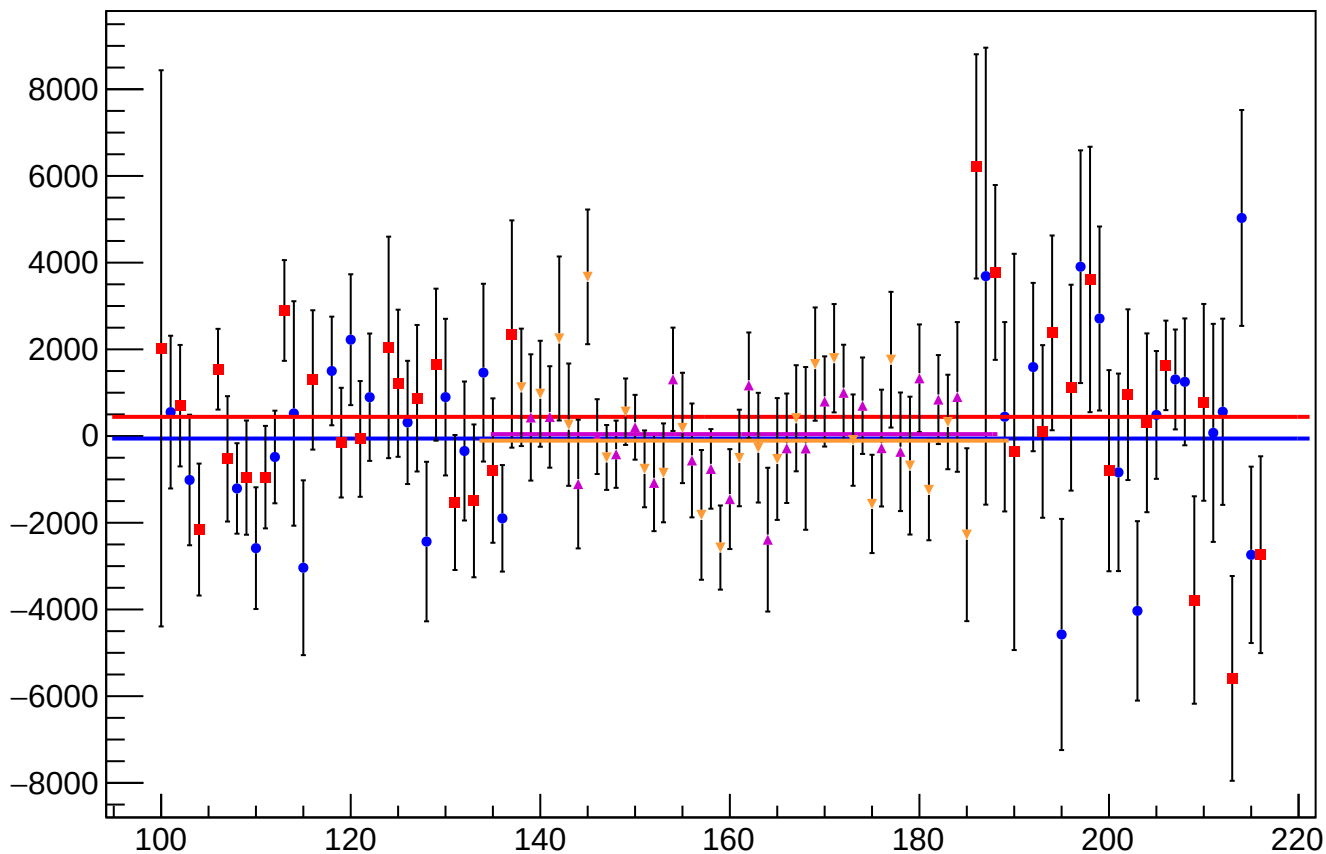
+ sign 1630.067+/-0.186  $\chi^2/\text{NDF}$ : 678489.2/55

All: 1631.607+/-0.132  $\chi^2/\text{NDF}$ : 895395.1/112

- sign 1633.185+/-0.188  $\chi^2/\text{NDF}$ : 216767.3/56



asym\_usr\_atr1\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-57.277 \pm 297.694$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $-106.340 \pm 234.307$   $\chi^2/\text{NDF}$ : 29.0/24

Right Out:  $443.068 \pm 286.816$   $\chi^2/\text{NDF}$ : 40.5/33

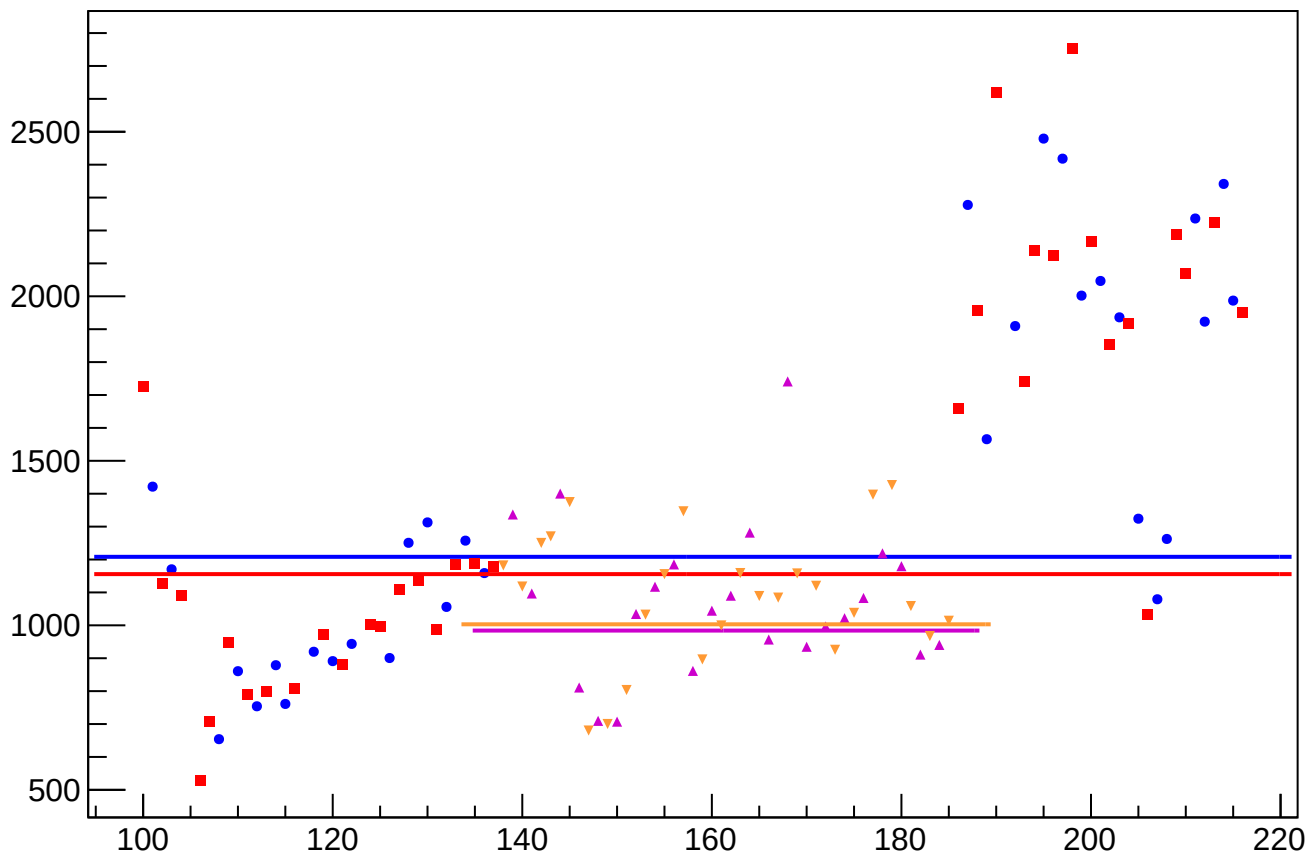
Left In:  $44.468 \pm 235.733$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-87.572 \pm 184.118$   $\chi^2/\text{NDF}$ : 65.7/55

All:  $60.400 \pm 129.477$   $\chi^2/\text{NDF}$ : 121.4/112

- sign  $205.171 \pm 182.116$   $\chi^2/\text{NDF}$ : 54.4/56

asym\_usr\_atr1\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1208.198 $\pm$ 0.211  $\chi^2$ /NDF: 4952657.9/30

Left Out: 1003.103 $\pm$ 0.166  $\chi^2$ /NDF: 1598417.7/24

Right Out: 1155.648 $\pm$ 0.203  $\chi^2$ /NDF: 6137706.0/33

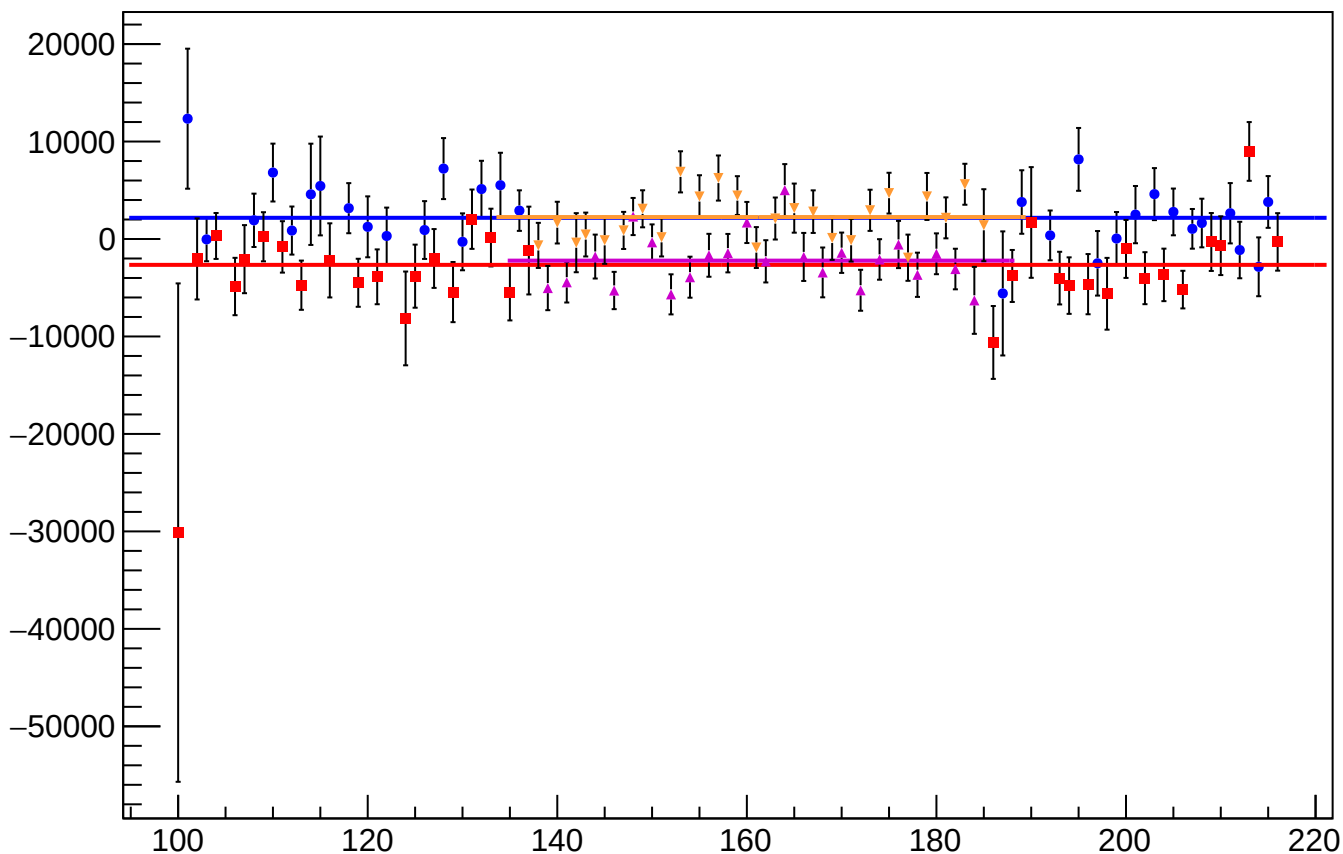
Left In: 984.055 $\pm$ 0.167  $\chi^2$ /NDF: 1559563.7/22

+ sign 1081.556 $\pm$ 0.130  $\chi^2$ /NDF: 7137243.8/55

All: 1067.241 $\pm$ 0.092  $\chi^2$ /NDF: 15285670.0/100

- sign 1053.236 $\pm$ 0.129  $\chi^2$ /NDF: 8124509.6/56

# asym\_usr\_atr1\_avg\_mean vs Slug



Right In: 2174.536 $\pm$ 516.218  $\chi^2$ /NDF: 26.7/30

Left Out: 2252.380 $\pm$ 442.213  $\chi^2$ /NDF:28.3/24

Right Out: -2653.728 $\pm$ 513.672  $\chi^2$ /NDF: 39.5/33

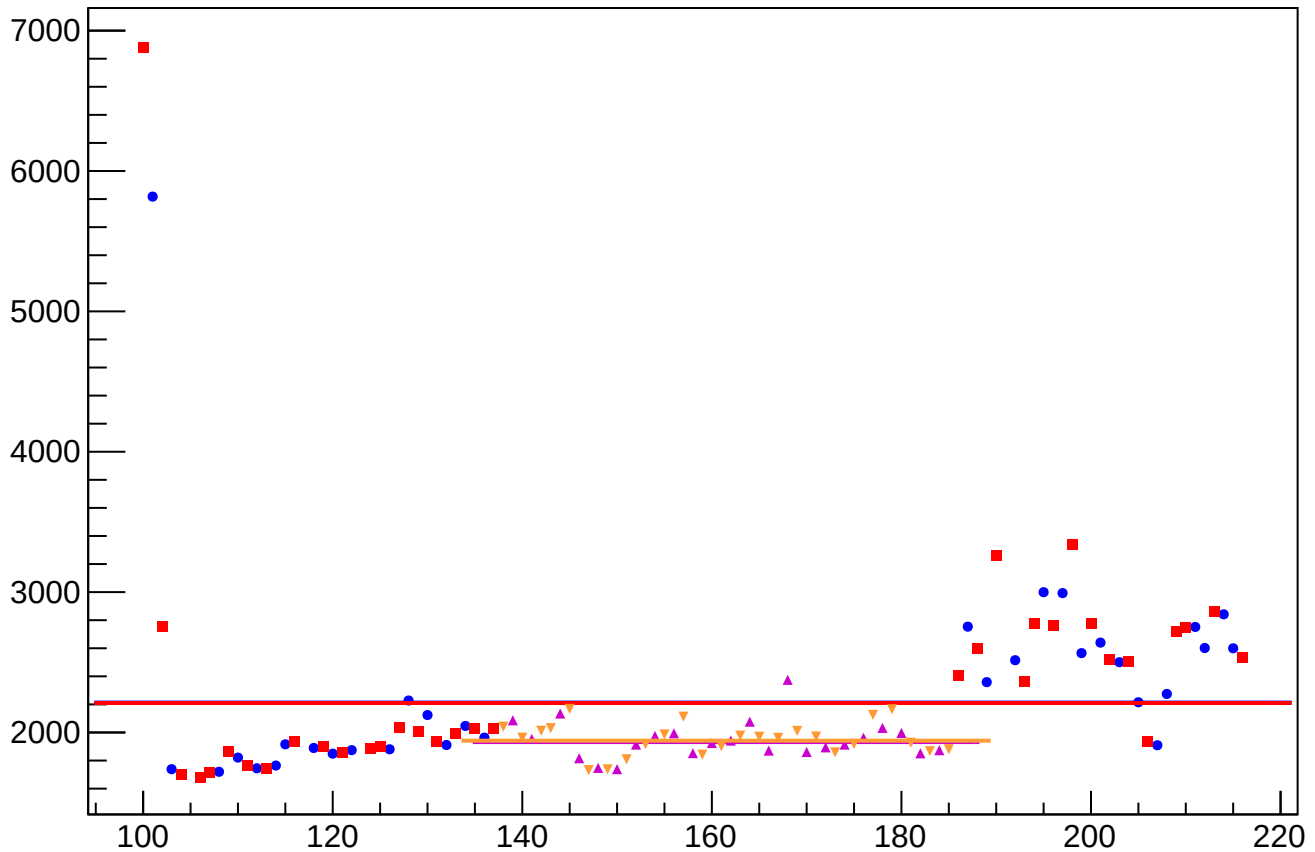
Left In: -2219.401 $\pm$ 452.286  $\chi^2$ /NDF:31.5/22

+ sign 2219.433 $\pm$ 335.836  $\chi^2$ /NDF: 55.0/55

All: -70.027 $\pm$ 238.741  $\chi^2$ /NDF: 220.4/112

- sign -2409.074 $\pm$ 339.454  $\chi^2$ /NDF: 71.4/56

# asym\_usr\_atr1\_avg\_rms vs Slug



Right In: 2212.943+/-0.365  $\chi^2/\text{NDF}$ : 1602222.1/30

Left Out: 1941.583+/-0.313  $\chi^2/\text{NDF}$ : 139011.4/24

+ sign 2056.434+/-0.237  $\chi^2/\text{NDF}$ : 2059982.6/55

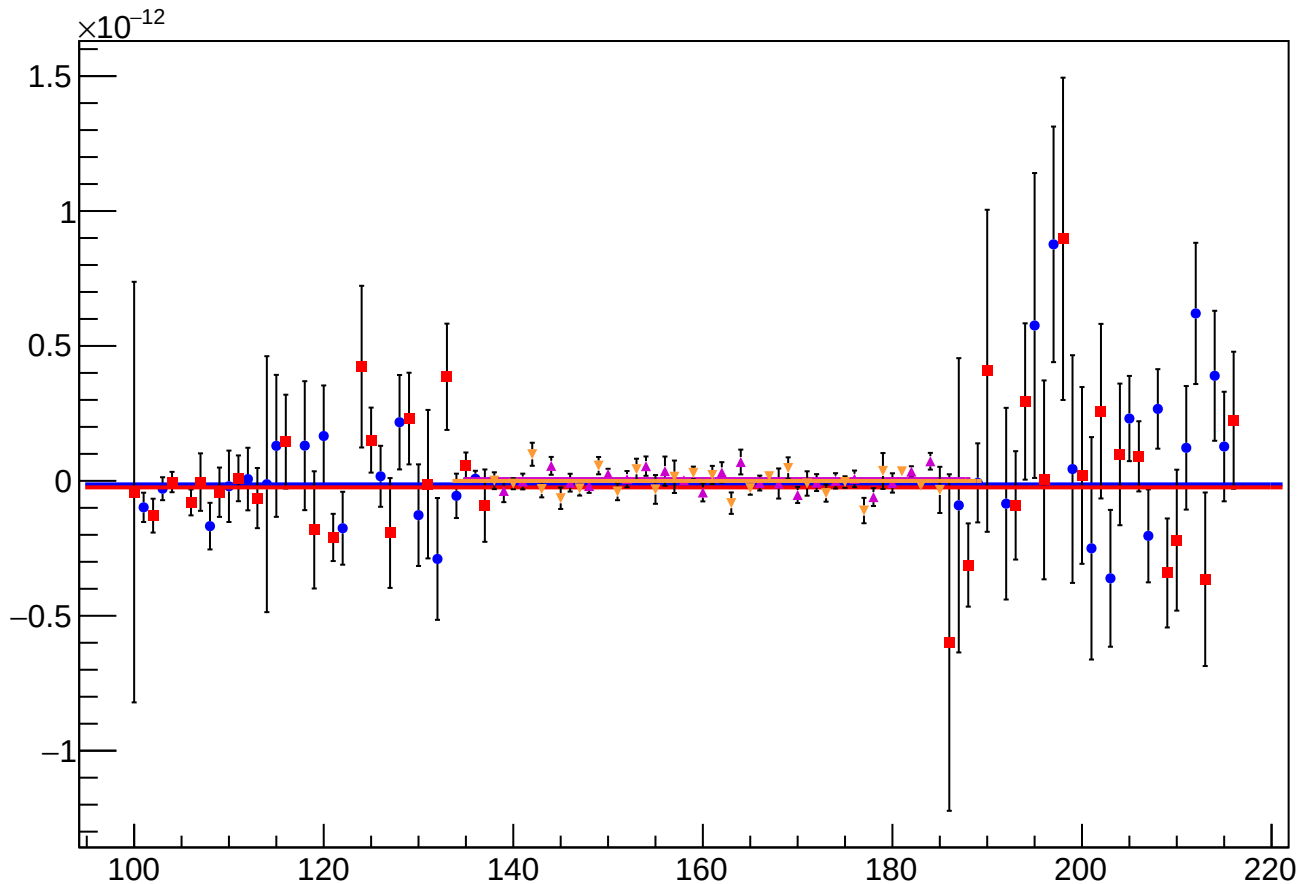
Right Out: 2210.012+/-0.363  $\chi^2/\text{NDF}$ : 1476542.6/33

All: 2054.886+/-0.169  $\chi^2/\text{NDF}$ : 4026939.5/11

- sign 2053.304+/-0.240  $\chi^2/\text{NDF}$ : 1966871.0/56

Left In: 1931.812+/-0.320  $\chi^2/\text{NDF}$ : 159877.0/22

asym\_usr\_atr1\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 37.5/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.3/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.9/33

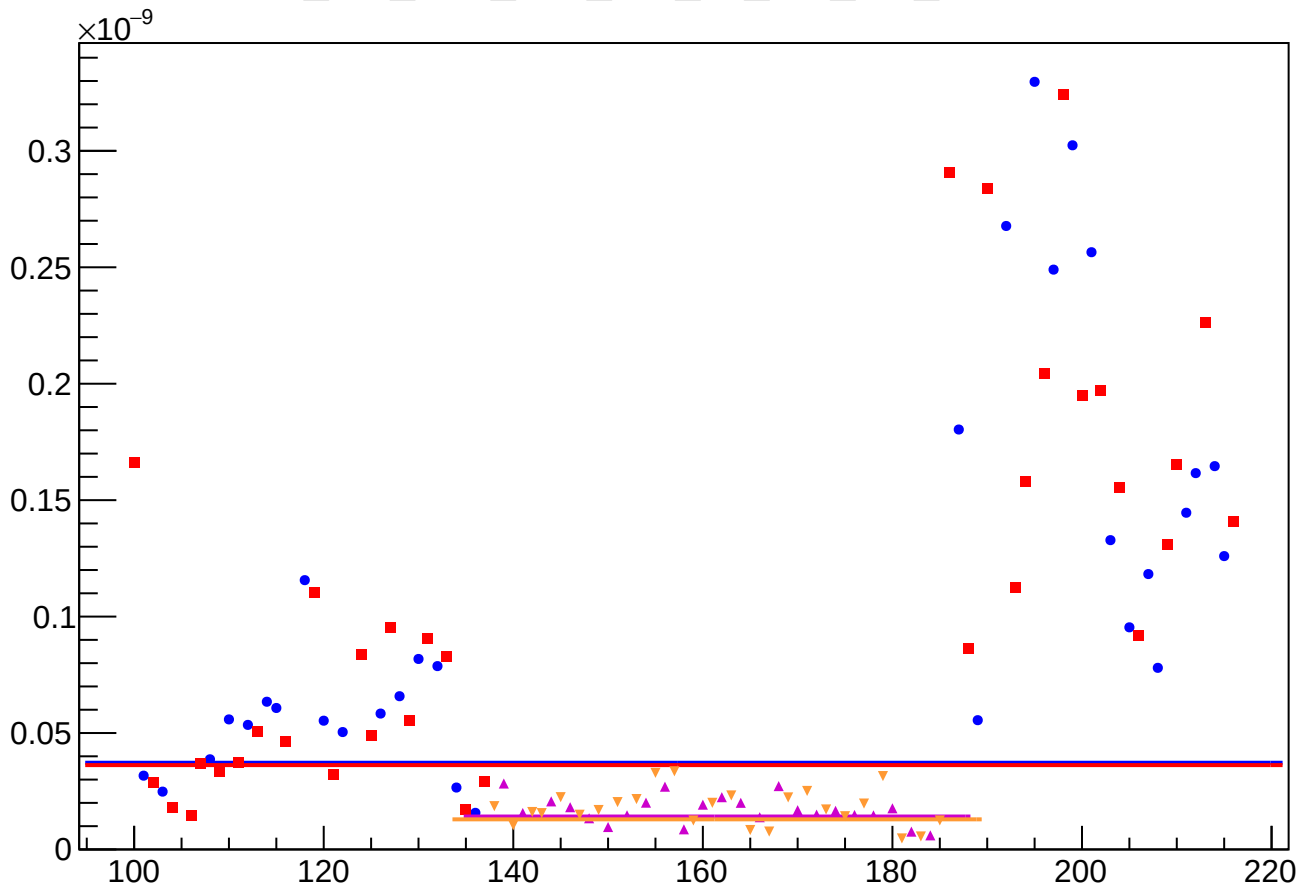
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.5/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 78.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 149.5/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 70.9/56

asym\_usr\_atr1\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8293301.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2826186.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8127388.1/33

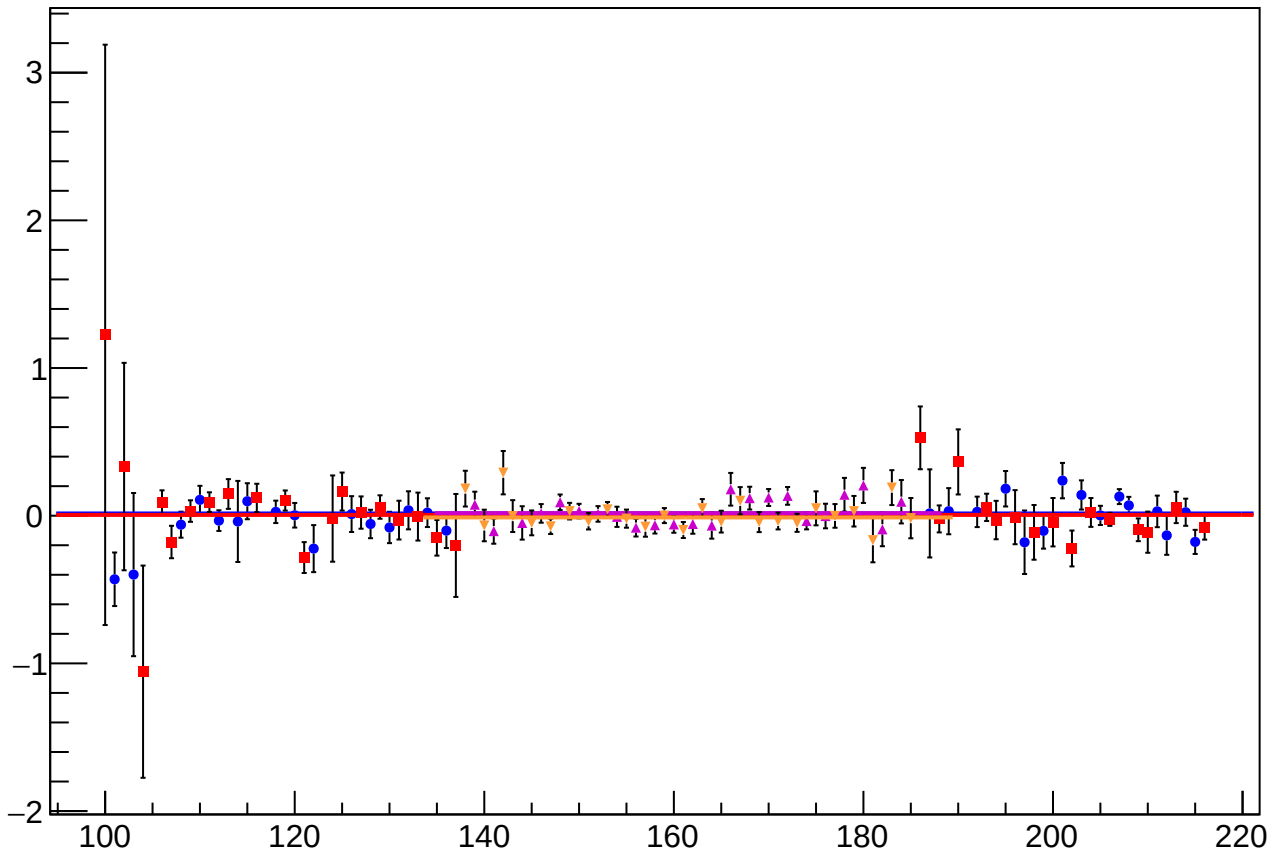
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1522273.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14363282.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26626261.2/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12215122.9/56

asym\_usr\_atr1\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.015+/-0.018  $\chi^2/\text{NDF}$ : 35.6/30

Left Out: -0.012+/-0.014  $\chi^2/\text{NDF}$ : 21.8/24

Right Out: 0.005+/-0.018  $\chi^2/\text{NDF}$ : 43.0/33

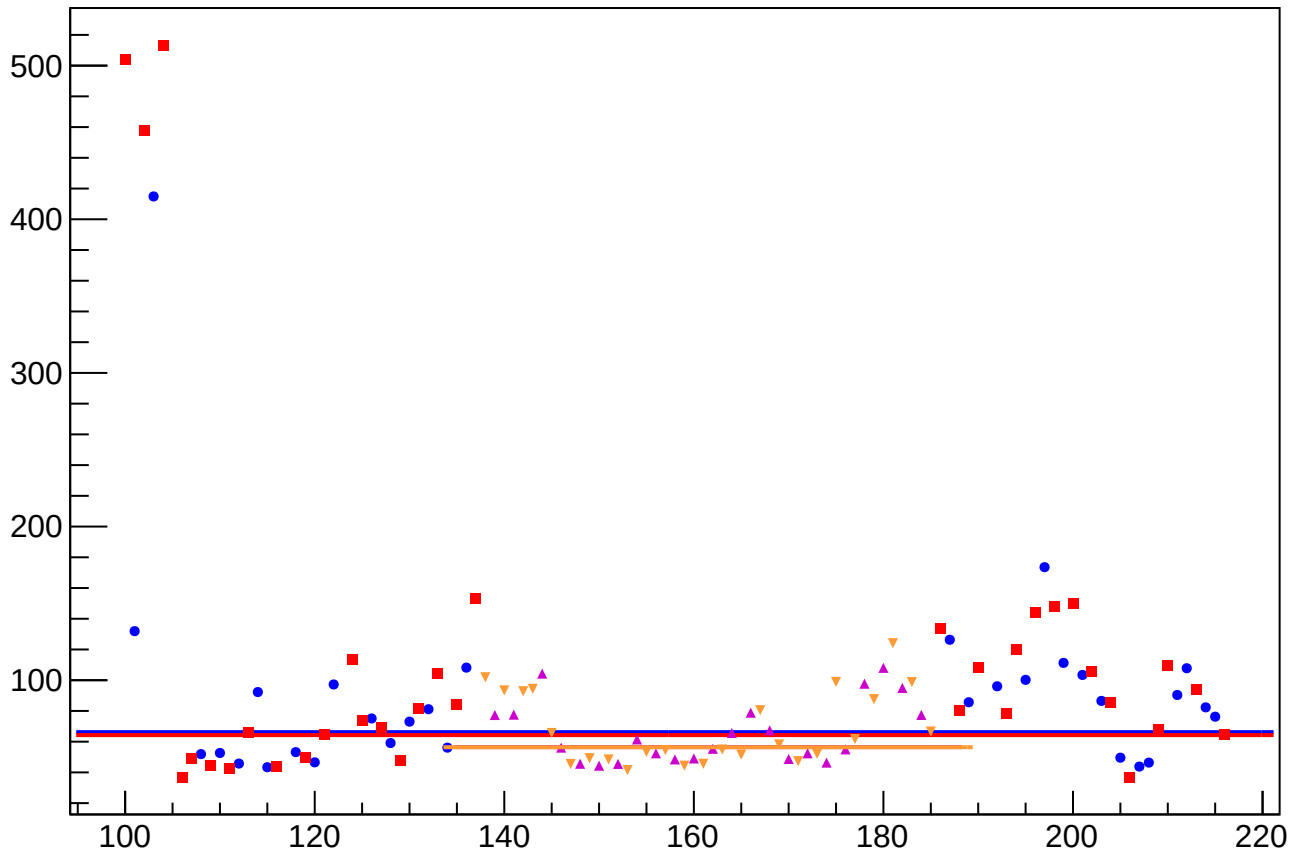
Left In: 0.017+/-0.014  $\chi^2/\text{NDF}$ : 30.6/22

+ sign -0.001+/-0.011  $\chi^2/\text{NDF}$ : 58.8/55

All: 0.006+/-0.008  $\chi^2/\text{NDF}$ : 133.4/112

- sign 0.012+/-0.011  $\chi^2/\text{NDF}$ : 73.9/56

asym\_usr\_atr1\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 66.189 $\pm$ 0.012  $\chi^2$ /NDF: 4638934.4/30

Left Out: 56.374 $\pm$ 0.010  $\chi^2$ /NDF: 2797305.0/24

Right Out: 64.268 $\pm$ 0.012  $\chi^2$ /NDF: 6404835.5/33

Left In: 56.467 $\pm$ 0.010  $\chi^2$ /NDF: 2140078.8/22

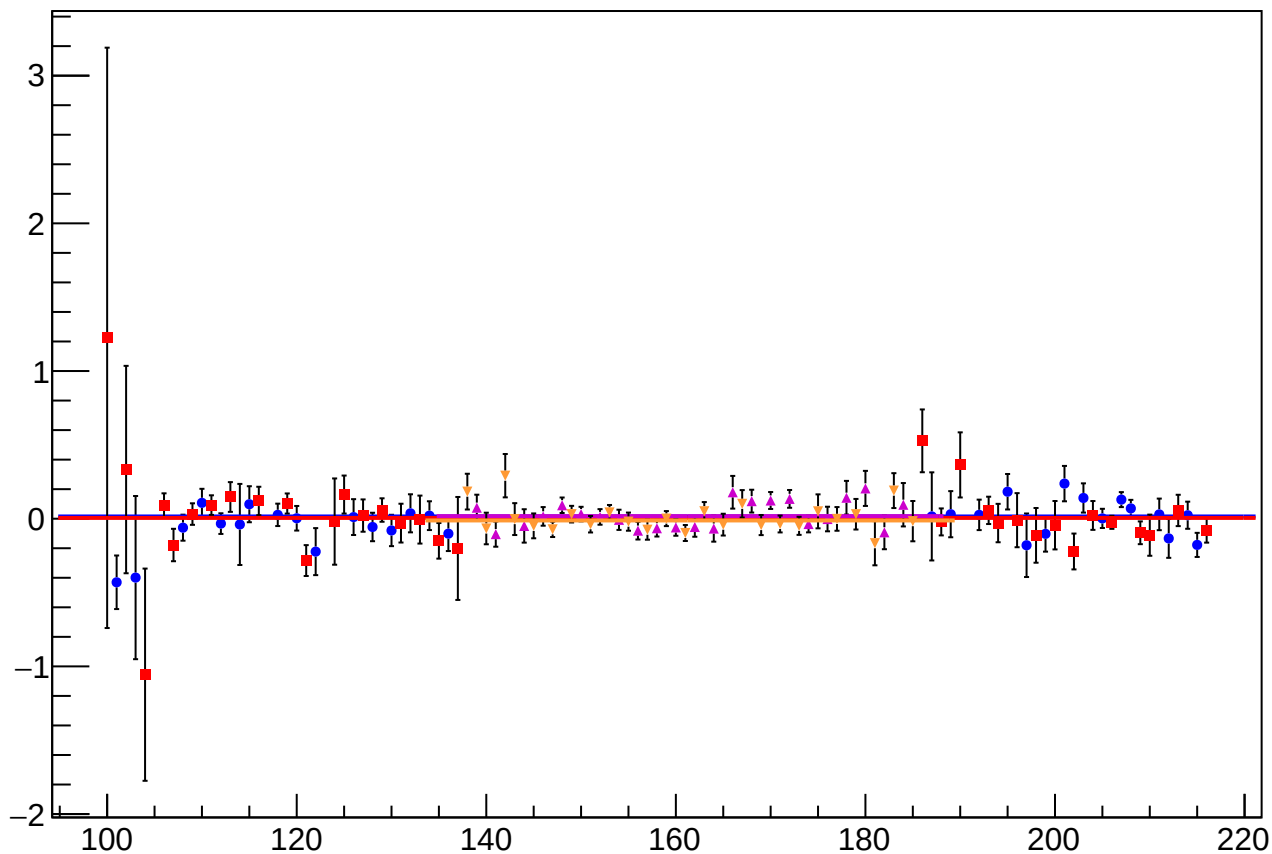
+ sign 60.286 $\pm$ 0.008  $\chi^2$ /NDF: 7810979.5/55

All: 59.954 $\pm$ 0.006  $\chi^2$ /NDF: 16593743.3/112

- sign 59.618 $\pm$ 0.008  $\chi^2$ /NDF: 8779163.0/56



asym\_usr\_atr1\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.015 $\pm$ 0.018  $\chi^2$ /NDF: 35.6/30

Left Out: -0.012 $\pm$ 0.014  $\chi^2$ /NDF:21.8/24

Right Out: 0.005 $\pm$ 0.018  $\chi^2$ /NDF: 43.0/33

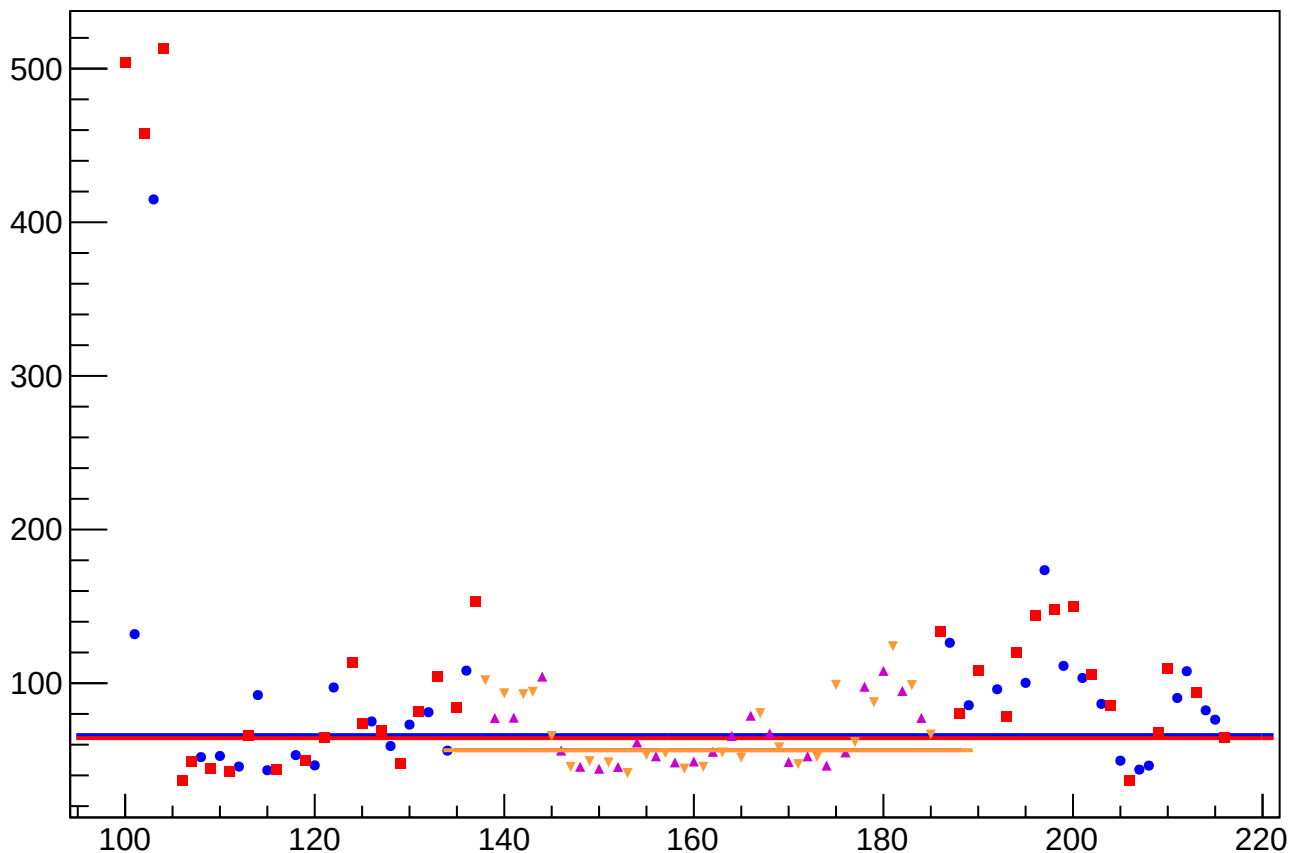
Left In: 0.017 $\pm$ 0.014  $\chi^2$ /NDF:30.6/22

+ sign -0.001 $\pm$ 0.011  $\chi^2$ /NDF: 58.8/55

All: 0.006 $\pm$ 0.008  $\chi^2$ /NDF: 133.4/112

- sign 0.012 $\pm$ 0.011  $\chi^2$ /NDF: 73.9/56

asym\_usr\_atr1\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 66.189 $\pm$ 0.012  $\chi^2$ /NDF: 4638934.4/30

Left Out: 56.374 $\pm$ 0.010  $\chi^2$ /NDF: 2797305.0/24

Right Out: 64.268 $\pm$ 0.012  $\chi^2$ /NDF: 6404835.5/33

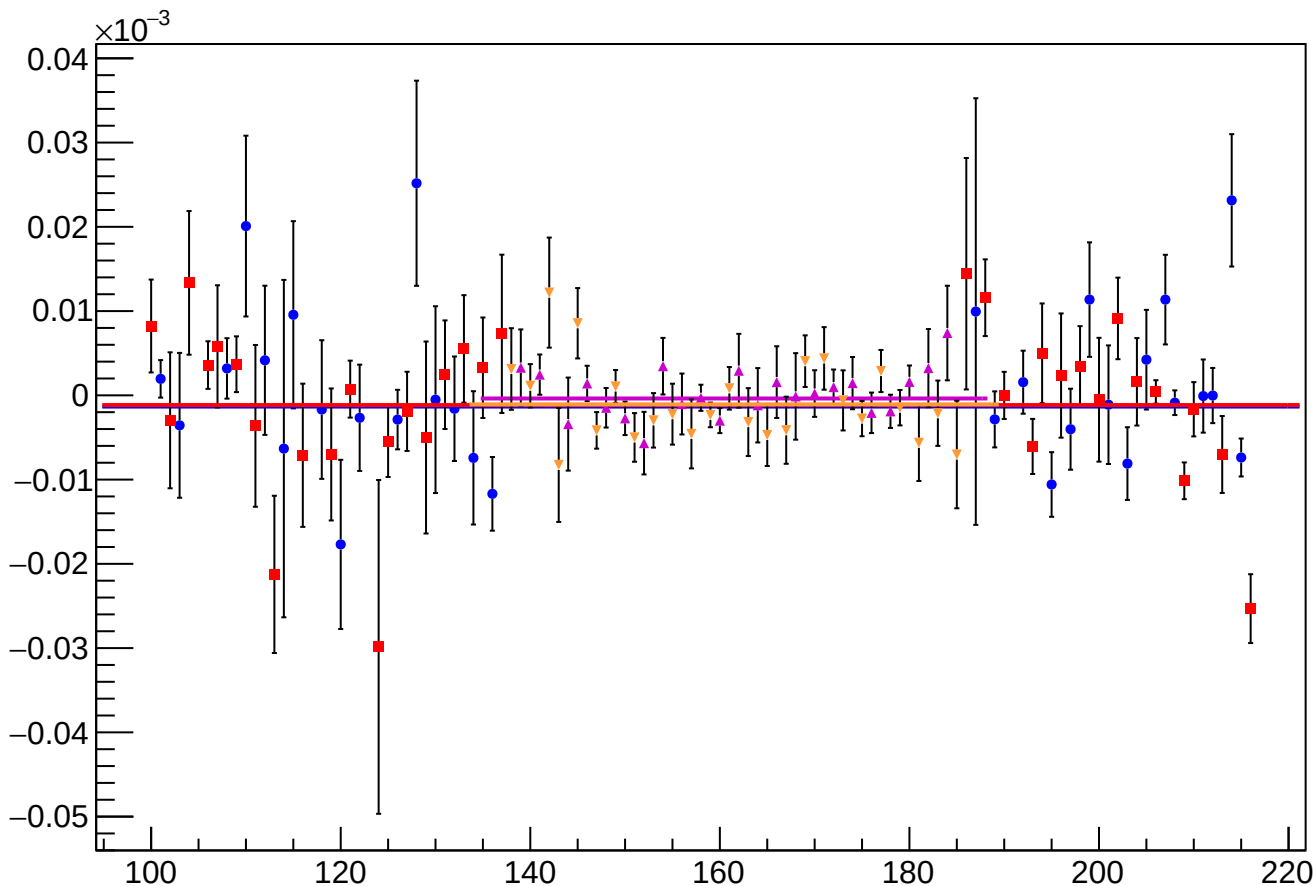
Left In: 56.467 $\pm$ 0.010  $\chi^2$ /NDF: 2140078.8/22

+ sign 60.286 $\pm$ 0.008  $\chi^2$ /NDF: 7810979.5/55

All: 59.954 $\pm$ 0.006  $\chi^2$ /NDF: 16593743.3/112

- sign 59.618 $\pm$ 0.008  $\chi^2$ /NDF: 8779163.0/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.0/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 97.3/33

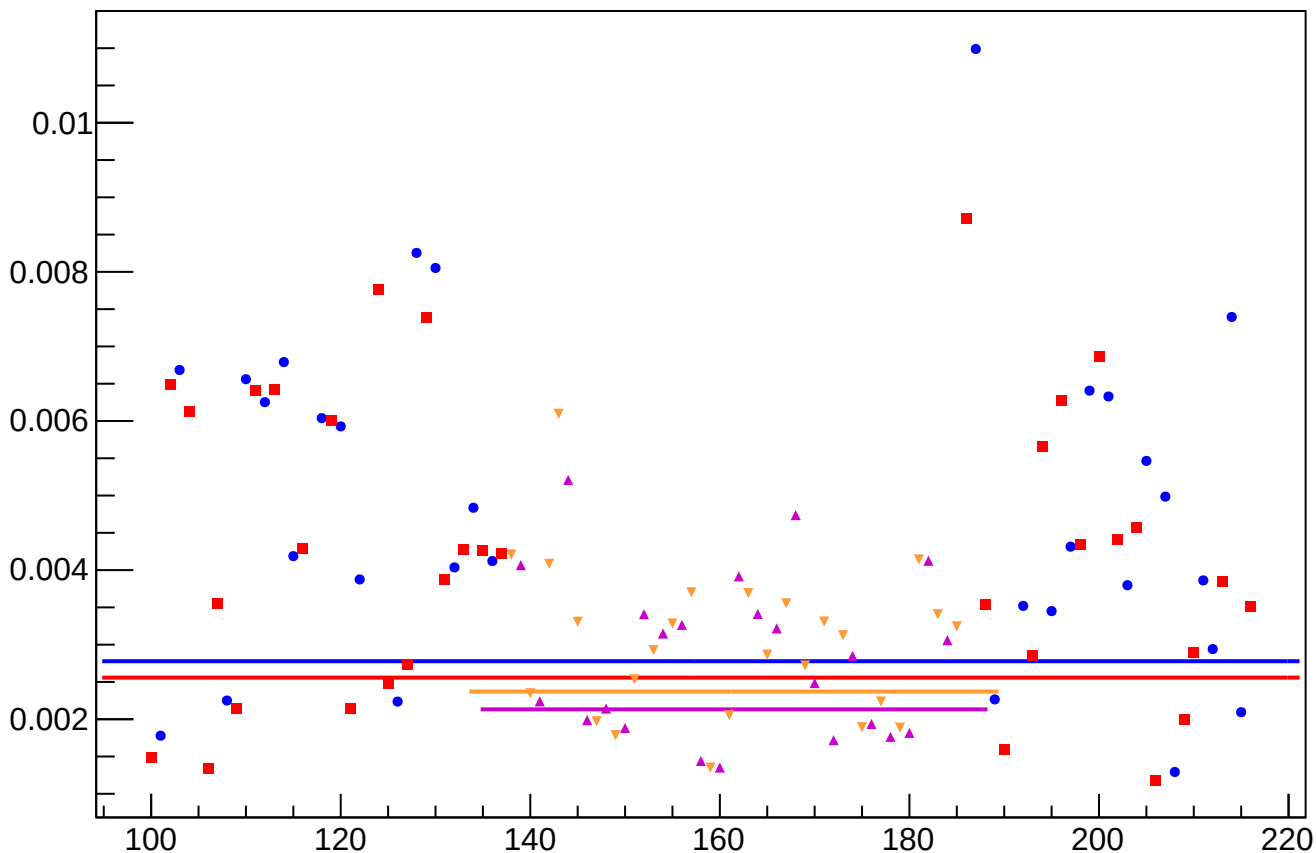
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 91.6/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 207.9/112

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 115.6/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 9022045.5/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 4161142.1/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 9241866.4/33

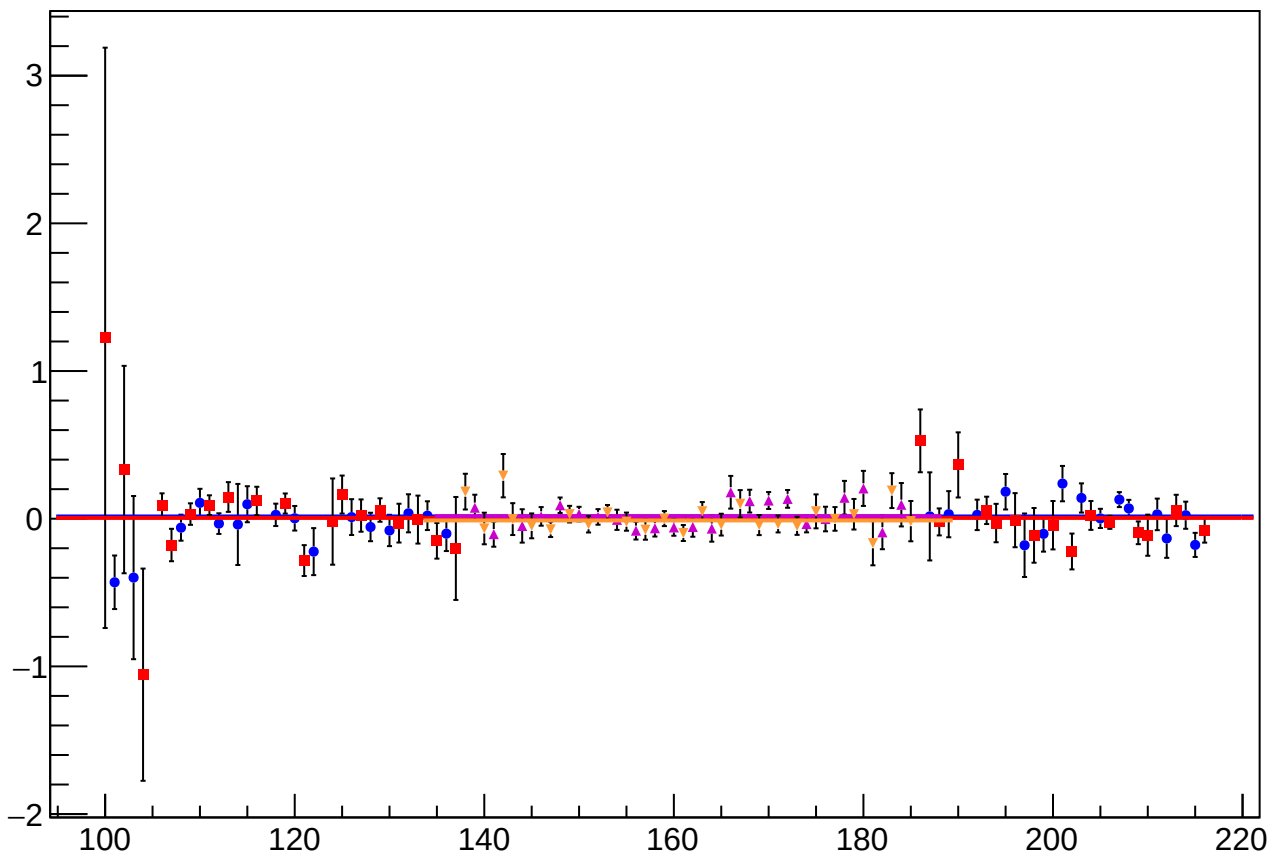
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 4521223.3/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 13555825.9/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 28069716.8/112

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 14227821.2/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.015 $\pm$ 0.018  $\chi^2$ /NDF: 35.6/30

Left Out: -0.012 $\pm$ 0.014  $\chi^2$ /NDF:21.8/24

Right Out: 0.005 $\pm$ 0.018  $\chi^2$ /NDF: 43.0/33

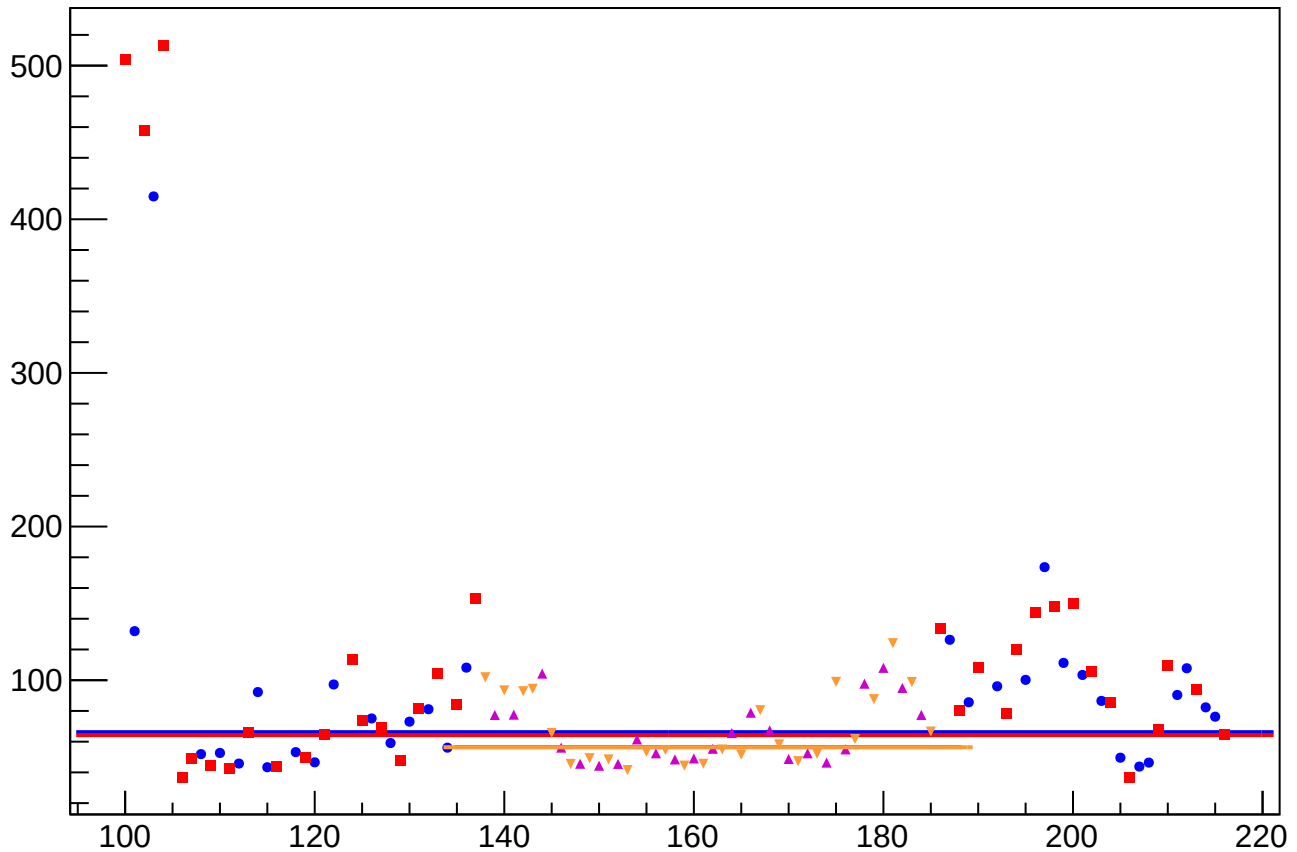
Left In: 0.017 $\pm$ 0.014  $\chi^2$ /NDF:30.6/22

+ sign -0.001 $\pm$ 0.011  $\chi^2$ /NDF: 58.8/55

All: 0.006 $\pm$ 0.008  $\chi^2$ /NDF: 133.4/112

- sign 0.012 $\pm$ 0.011  $\chi^2$ /NDF: 73.9/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 66.189 $\pm$ 0.012  $\chi^2$ /NDF: 4638898.3/30

Left Out: 56.374 $\pm$ 0.010  $\chi^2$ /NDF: 2797380.0/24

Right Out: 64.268 $\pm$ 0.012  $\chi^2$ /NDF: 6404881.6/33

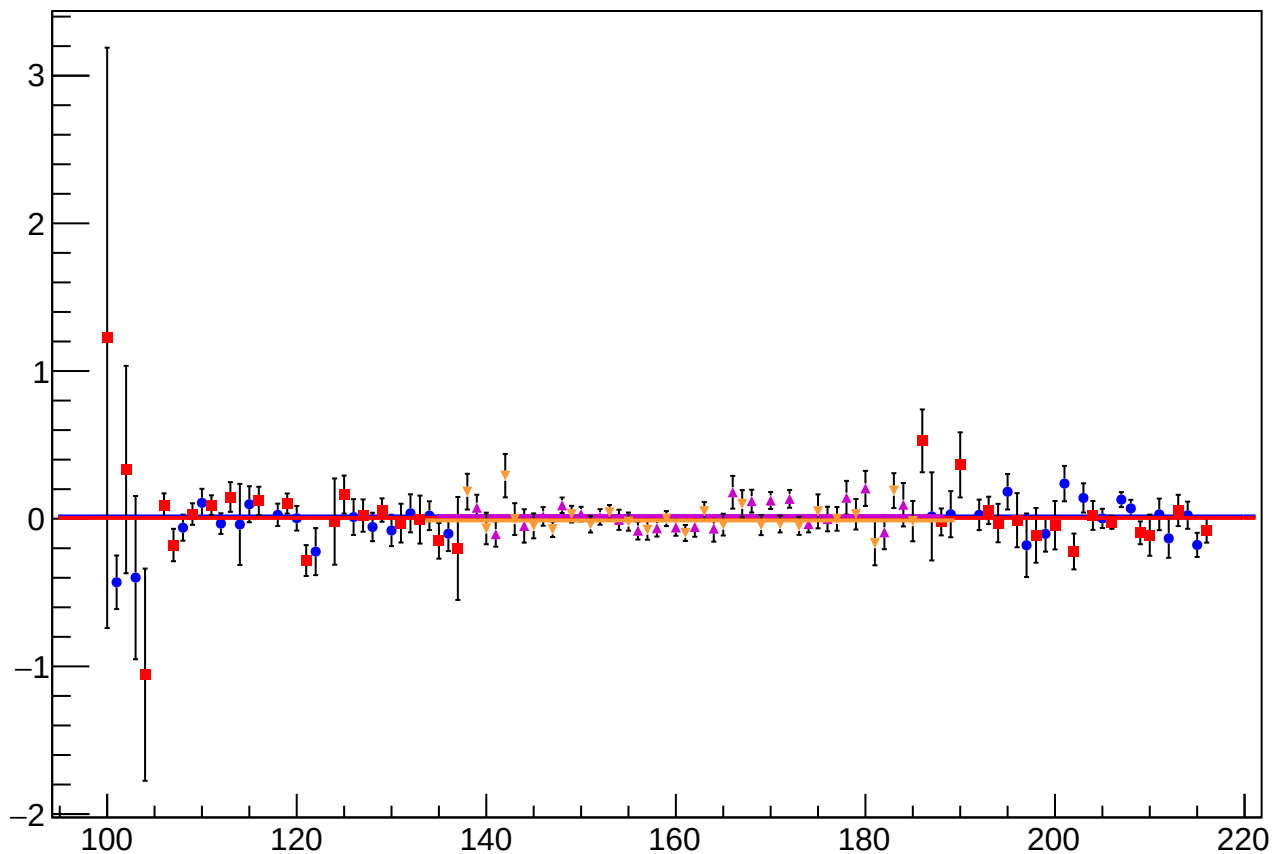
Left In: 56.467 $\pm$ 0.010  $\chi^2$ /NDF: 2140063.7/22

+ sign 60.286 $\pm$ 0.008  $\chi^2$ /NDF: 7810980.6/55

All: 59.954 $\pm$ 0.006  $\chi^2$ /NDF: 16593743.3/112

- sign 59.618 $\pm$ 0.008  $\chi^2$ /NDF: 8779160.7/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.015 $\pm$ 0.018  $\chi^2$ /NDF: 35.6/30

Left Out: -0.012 $\pm$ 0.014  $\chi^2$ /NDF:21.8/24

Right Out: 0.005 $\pm$ 0.018  $\chi^2$ /NDF: 43.0/33

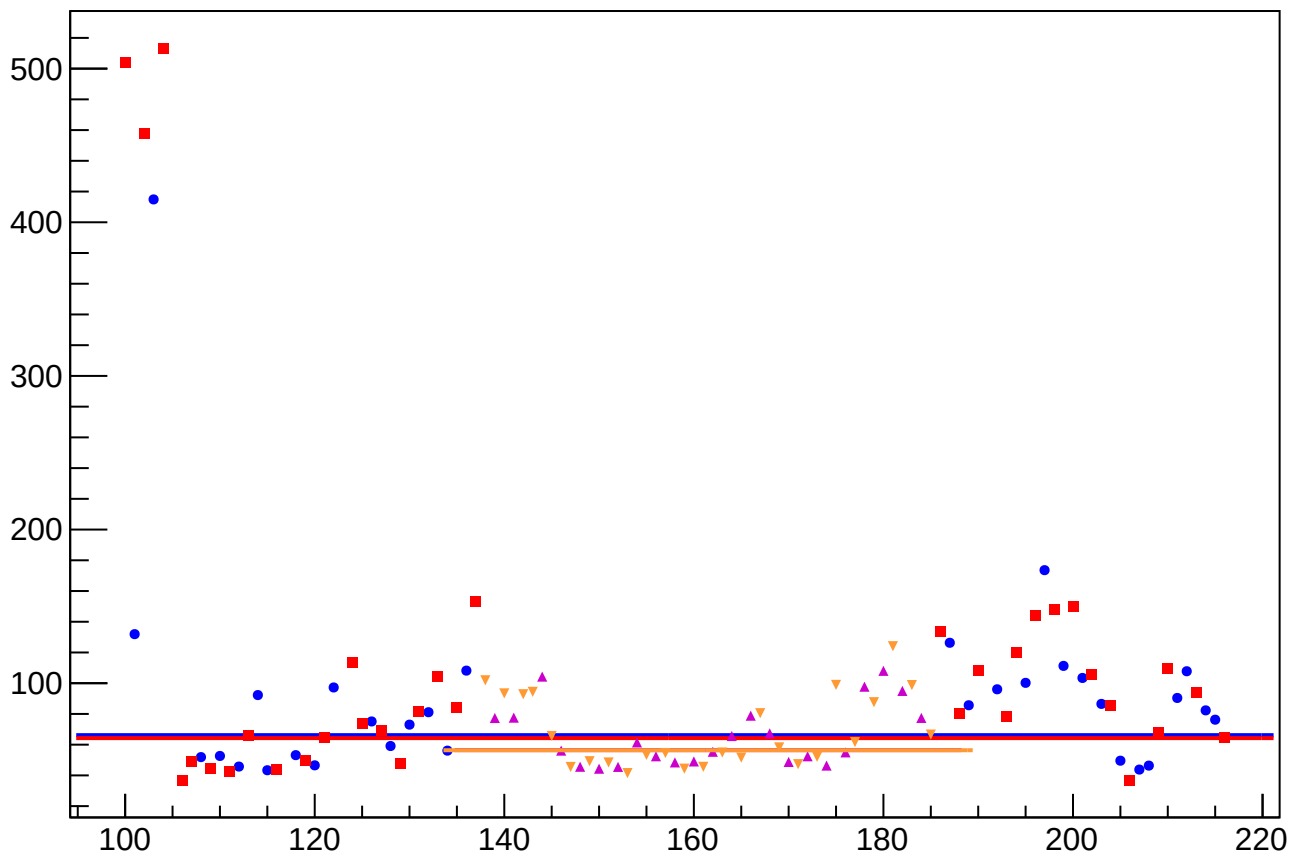
Left In: 0.017 $\pm$ 0.014  $\chi^2$ /NDF:30.6/22

+ sign -0.001 $\pm$ 0.011  $\chi^2$ /NDF: 58.8/55

All: 0.006 $\pm$ 0.008  $\chi^2$ /NDF: 133.4/112

- sign 0.012 $\pm$ 0.011  $\chi^2$ /NDF: 73.9/56

asym\_usr\_atr1\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 66.189+/-0.012  $\chi^2$ /NDF: 4638898.3/30

Left Out: 56.374+/-0.010  $\chi^2$ /NDF: 2797380.0/24

Right Out: 64.268+/-0.012  $\chi^2$ /NDF: 6404881.6/33

Left In: 56.467+/-0.010  $\chi^2$ /NDF: 2140063.7/22

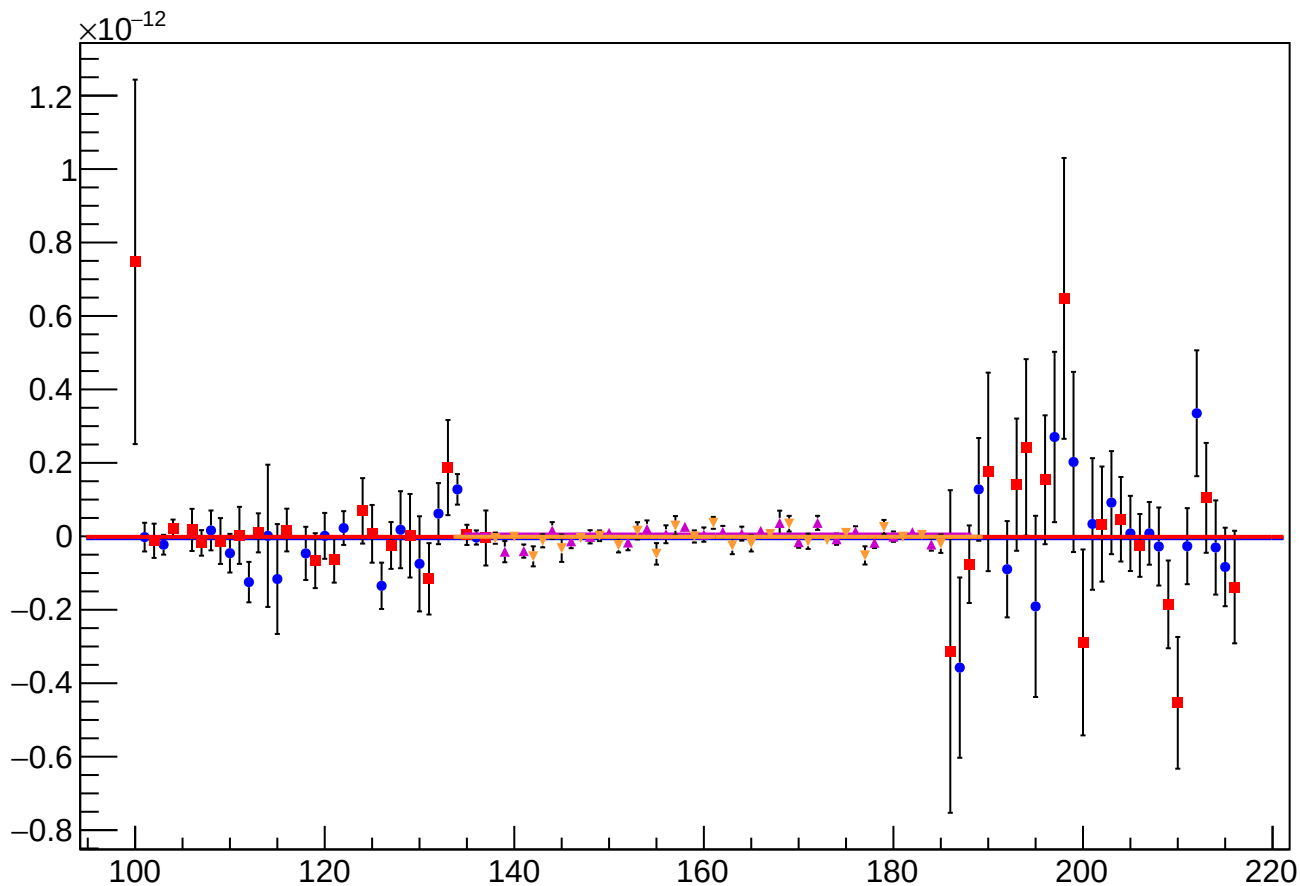
+ sign 60.286+/-0.008  $\chi^2$ /NDF: 7810980.6/55

All: 59.954+/-0.006  $\chi^2$ /NDF: 16593743.3/112

- sign 59.618+/-0.008  $\chi^2$ /NDF: 8779160.7/56



asym\_usr\_atr1\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.9/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.1/33

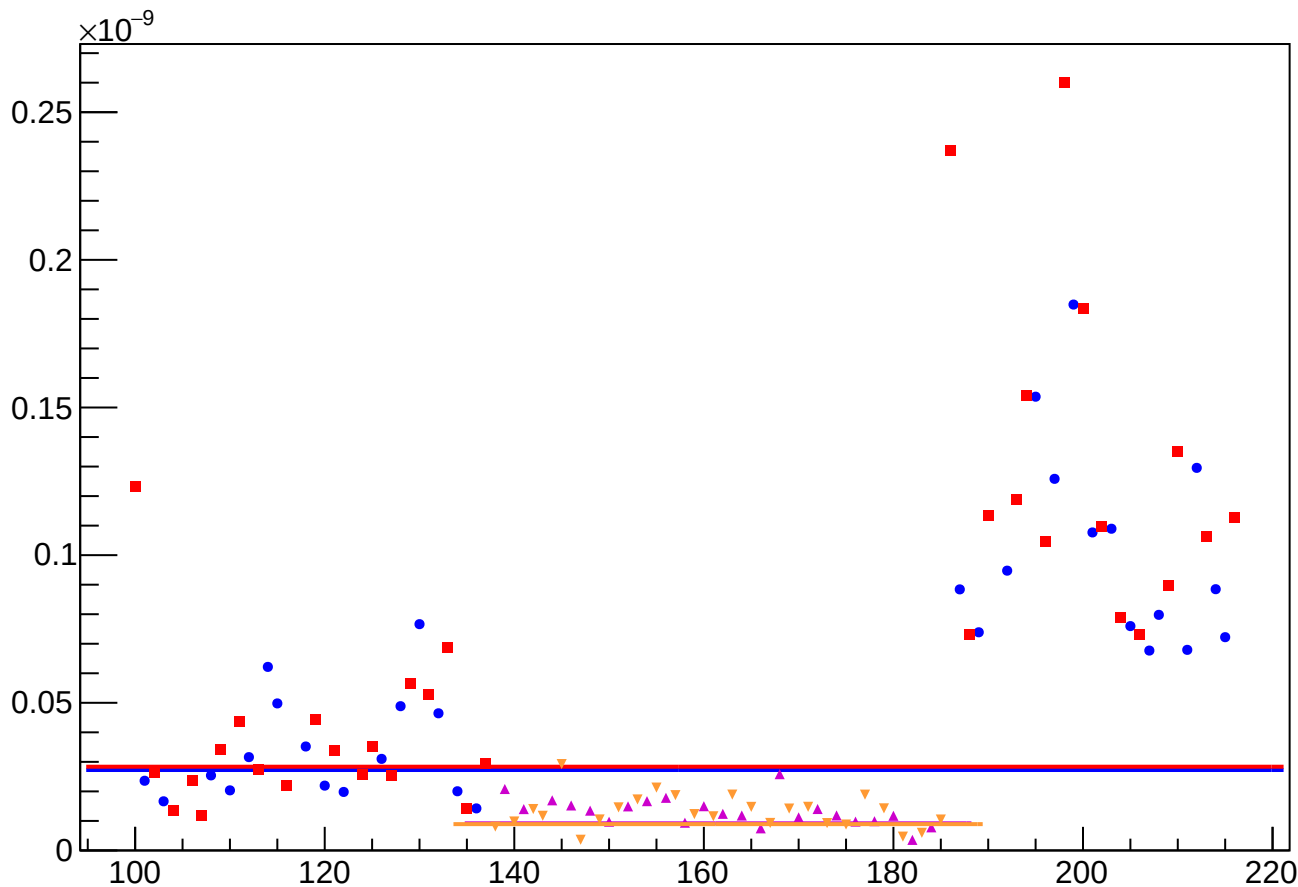
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 63.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 122.6/112

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.8/56

asym\_usr\_atr1\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8923691.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5051836.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10287729.2/33

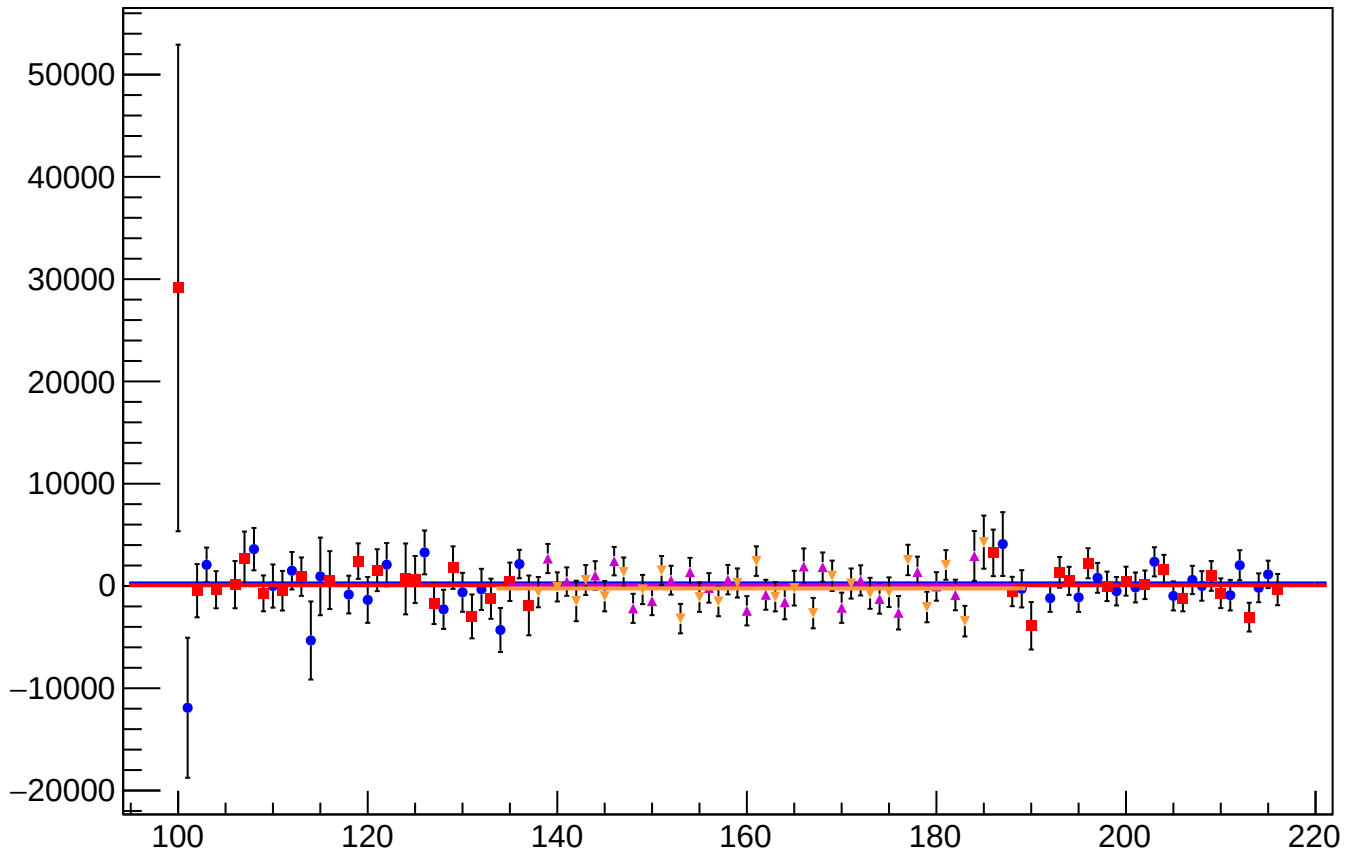
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5079391.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19424664.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40105295.5/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20672817.6/56

# reg\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 250.933 $\pm$ 307.237  $\chi^2$ /NDF: 31.4/30

Left Out: -240.873 $\pm$ 300.008  $\chi^2$ /NDF:31.7/24

Right Out: 75.653 $\pm$ 305.200  $\chi^2$ /NDF: 25.8/33

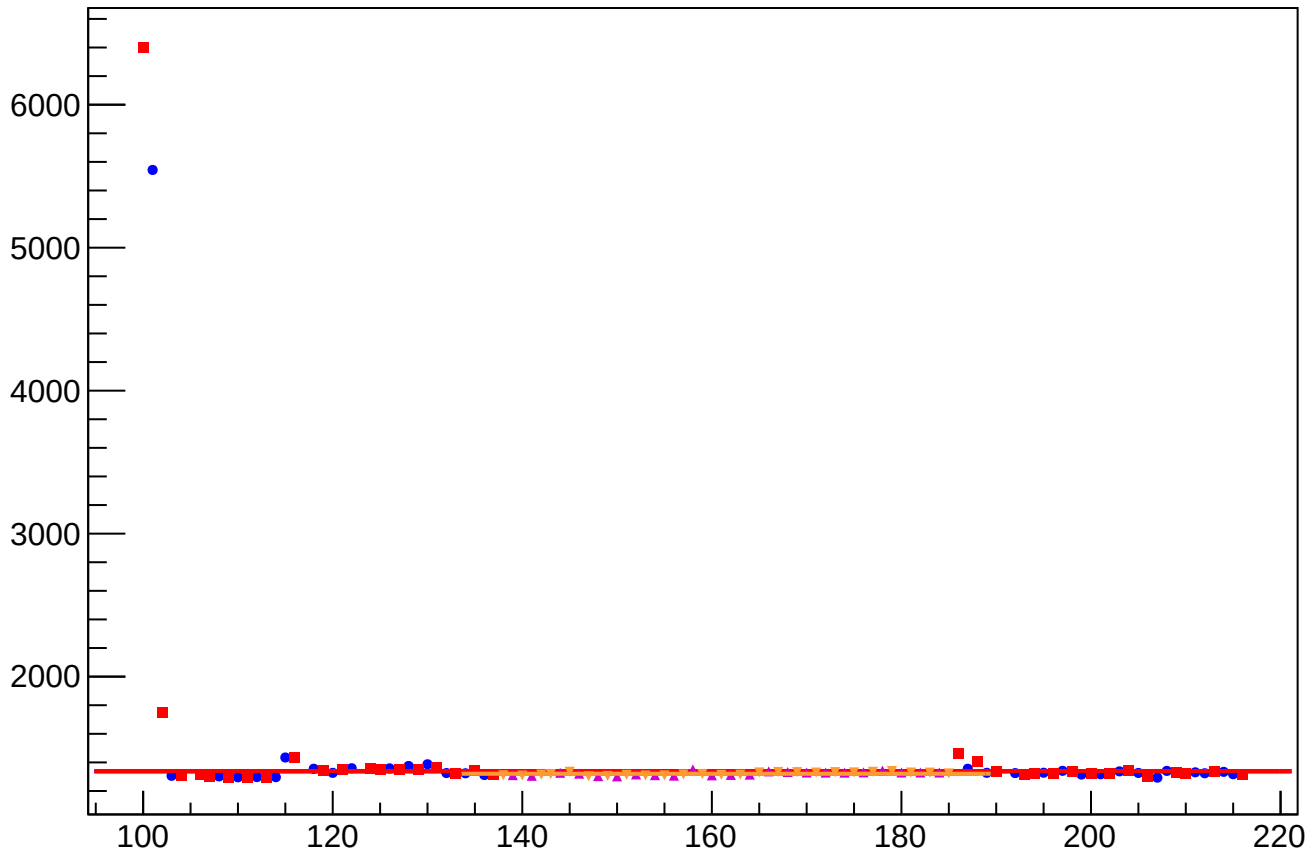
Left In: 39.122 $\pm$ 308.622  $\chi^2$ /NDF:27.1/22

+ sign -0.825 $\pm$ 214.648  $\chi^2$ /NDF: 64.4/55

All: 28.064 $\pm$ 152.607  $\chi^2$ /NDF: 117.4/112

- sign 57.591 $\pm$ 217.008  $\chi^2$ /NDF: 52.9/56

# reg\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1336.427+/-0.217  $\chi^2/\text{NDF}$ : 767080.2/30

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1340.039+/-0.216  $\chi^2/\text{NDF}$ : 162595.5/33

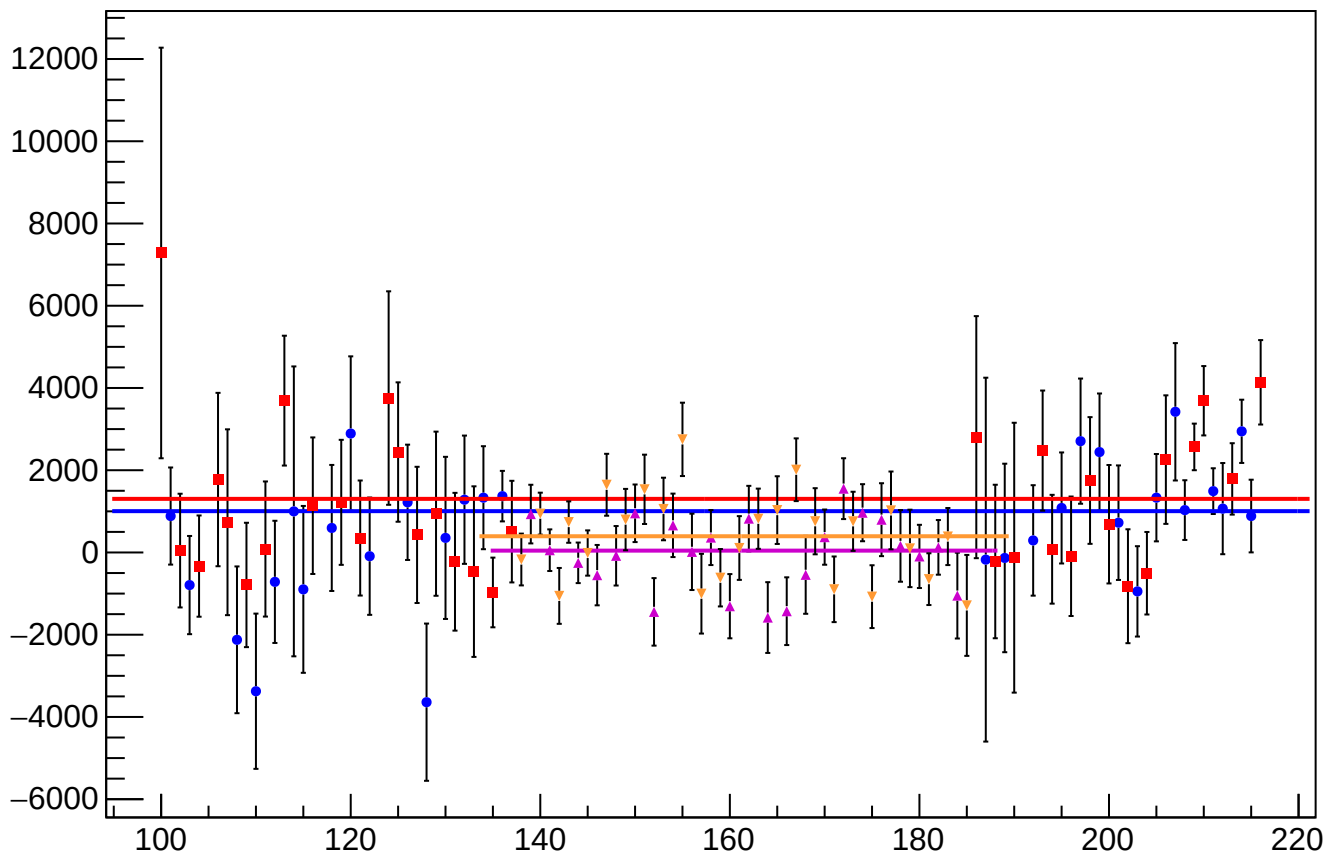
Left In: 1321.782+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

+ sign 1328.397+/-0.152  $\chi^2/\text{NDF}$ : 772351.4/55

All: 1329.690+/-0.108  $\chi^2/\text{NDF}$ : 942185.2/112

- sign 1331.012+/-0.153  $\chi^2/\text{NDF}$ : 169687.0/56

# asym\_usr\_atr1\_dd\_reg\_correction\_mean vs Slug



Right In: 1004.685 $\pm$ 210.802  $\chi^2$ /NDF: 36.5/30

Left Out: 394.550 $\pm$ 144.562  $\chi^2$ /NDF: 41.8/24

Right Out: 1303.586 $\pm$ 226.207  $\chi^2$ /NDF: 50.9/33

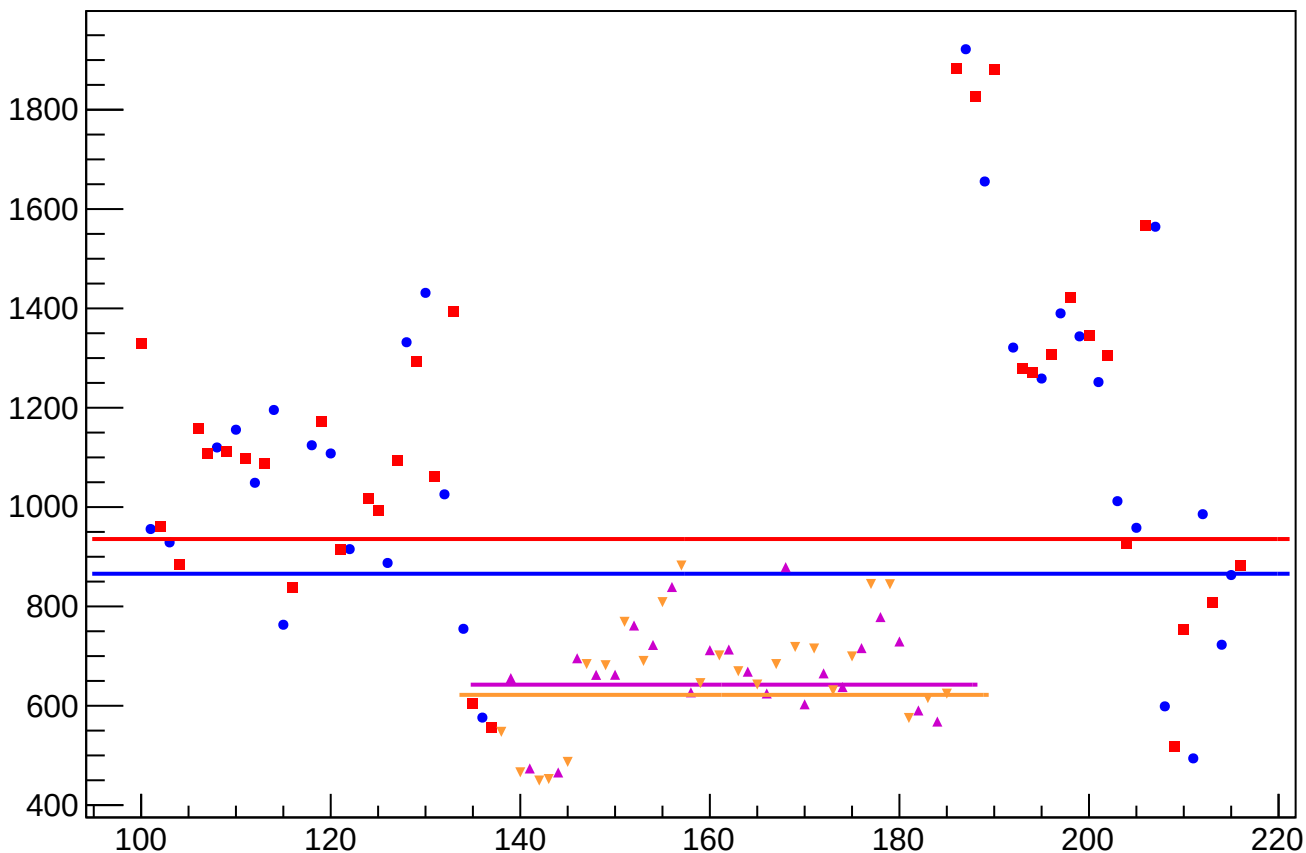
Left In: 44.777 $\pm$ 152.333  $\chi^2$ /NDF: 27.6/22

+ sign 589.706 $\pm$ 119.221  $\chi^2$ /NDF: 84.1/55

All: 518.034 $\pm$ 86.714  $\chi^2$ /NDF: 184.6/112

- sign 437.530 $\pm$ 126.353  $\chi^2$ /NDF: 99.8/56

asym\_usr\_atr1\_dd\_reg\_correction\_rms vs Slug



Right In: 865.794 $\pm$ 0.149  $\chi^2$ /NDF: 4039704.3/30

Left Out: 621.950 $\pm$ 0.102  $\chi^2$ /NDF:1383473.2/24

Right Out: 935.675 $\pm$ 0.160  $\chi^2$ /NDF: 4117975.9/33

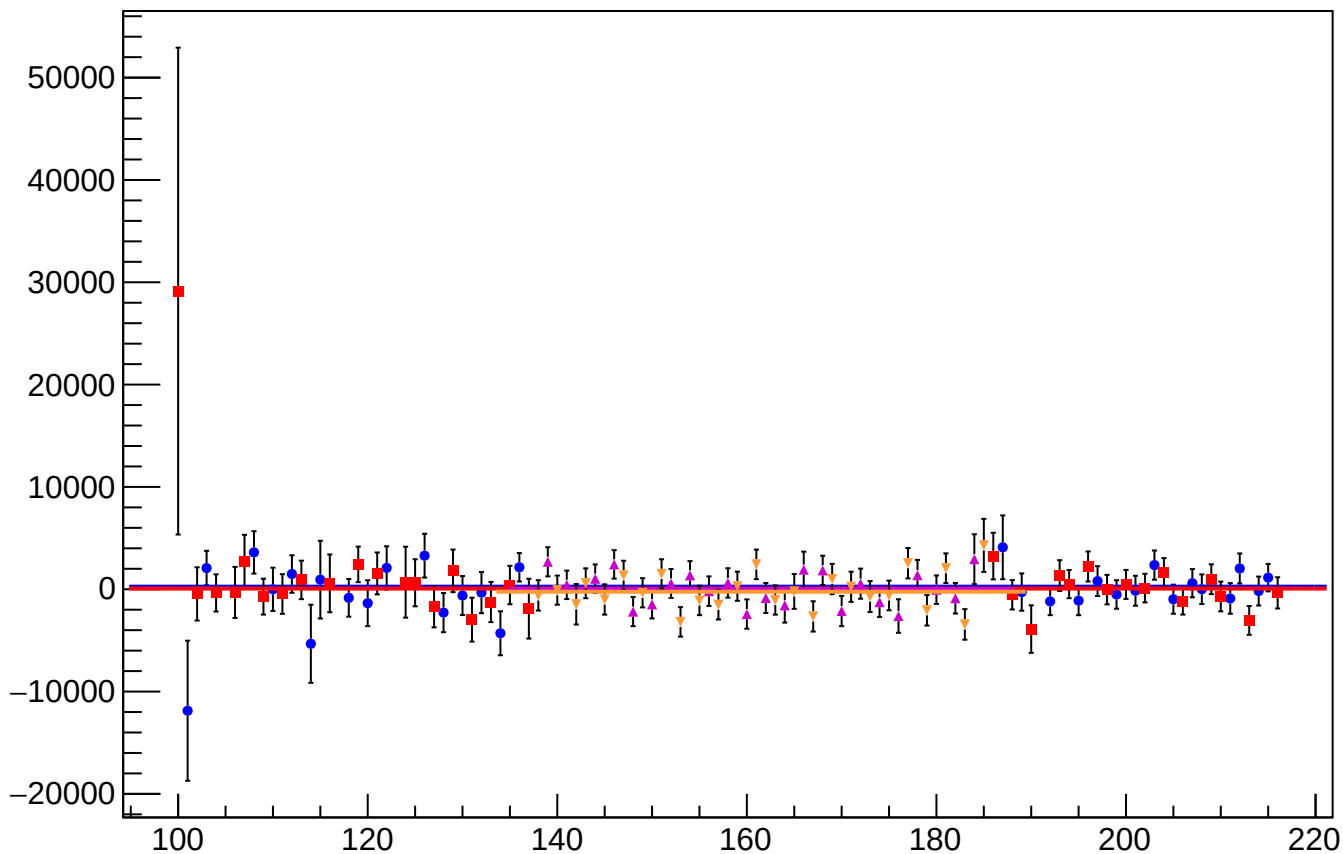
Left In: 642.470 $\pm$ 0.108  $\chi^2$ /NDF:926330.5/22

+ sign 699.945 $\pm$ 0.084  $\chi^2$ /NDF: 7243307.5/55

All: 715.962 $\pm$ 0.061  $\chi^2$ /NDF: 14676036.2/11

- sign 733.951 $\pm$ 0.089  $\chi^2$ /NDF: 7356092.0/56

# cor\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 251.040 $\pm$ 307.237  $\chi^2$ /NDF: 31.4/30

Left Out: -240.875 $\pm$ 300.008  $\chi^2$ /NDF:31.7/24

Right Out: 68.977 $\pm$ 305.585  $\chi^2$ /NDF: 25.8/33

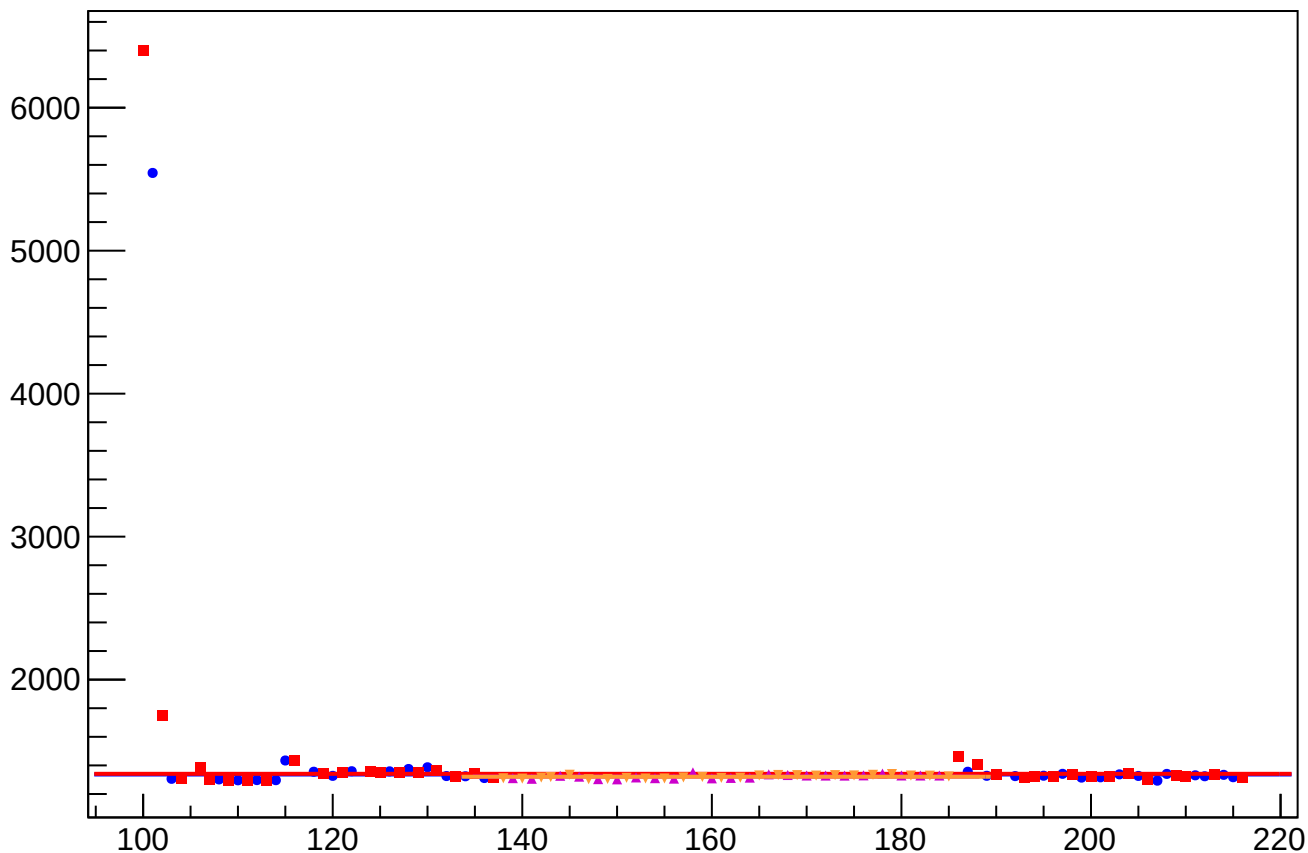
Left In: 39.193 $\pm$ 308.622  $\chi^2$ /NDF:27.1/22

+ sign -0.774 $\pm$ 214.648  $\chi^2$ /NDF: 64.4/55

All: 26.411 $\pm$ 152.655  $\chi^2$ /NDF: 117.4/112

- sign 54.232 $\pm$ 217.147  $\chi^2$ /NDF: 53.0/56

# cor\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1336.427+/-0.217  $\chi^2/\text{NDF}$ : 767079.3/30

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1341.165+/-0.216  $\chi^2/\text{NDF}$ : 163141.1/33

Left In: 1321.783+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

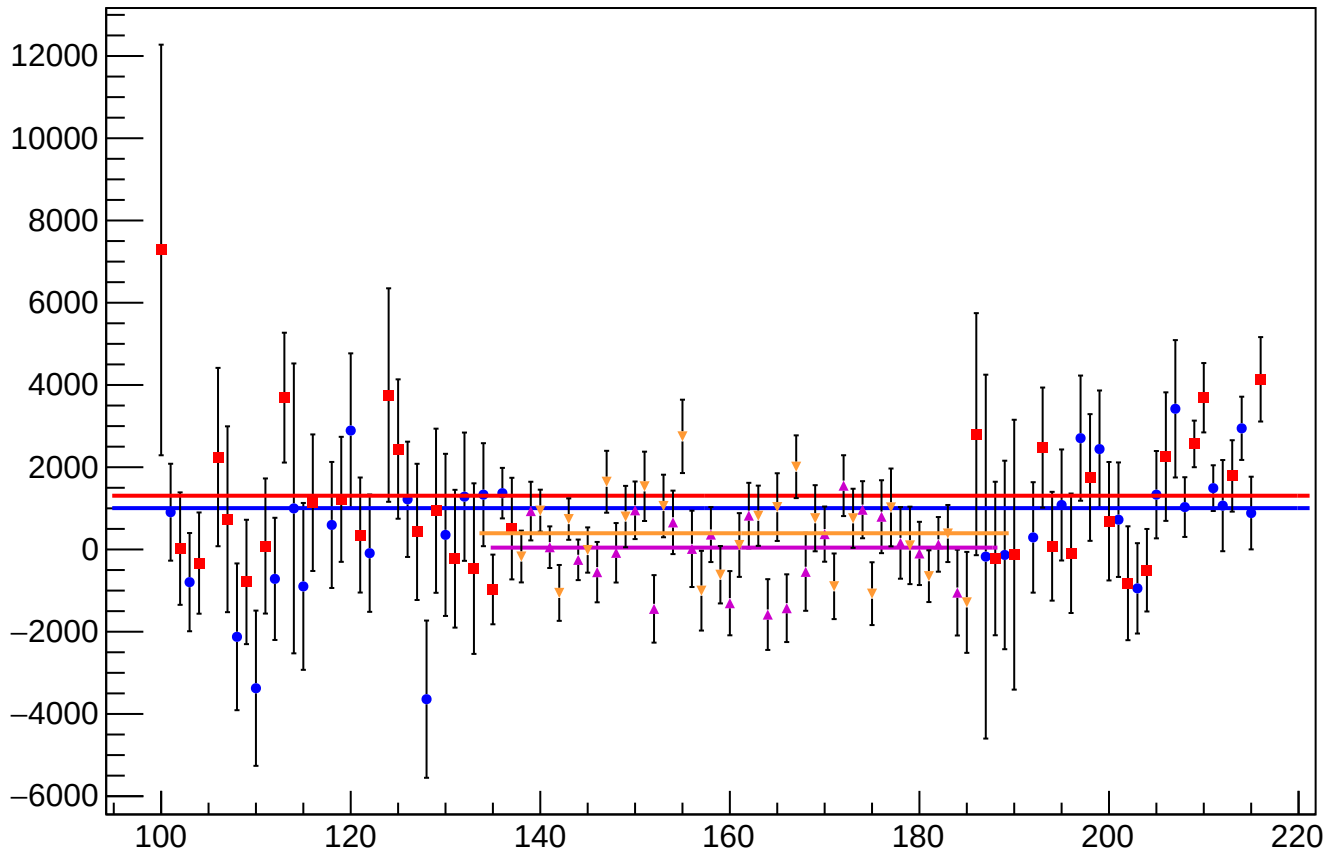
+ sign 1328.397+/-0.152  $\chi^2/\text{NDF}$ : 772350.4/55

All: 1329.965+/-0.108  $\chi^2/\text{NDF}$ : 943244.0/112

- sign 1331.570+/-0.154  $\chi^2/\text{NDF}$ : 170677.6/56



asym\_usr\_atr1\_dd\_cor\_correction\_mean vs Slug



Right In:  $1005.320 \pm 210.787$   $\chi^2/\text{NDF}$ : 36.5/30

Left Out:  $394.522 \pm 144.562$   $\chi^2/\text{NDF}$ : 41.8/24

Right Out:  $1307.046 \pm 226.208$   $\chi^2/\text{NDF}$ : 51.1/33

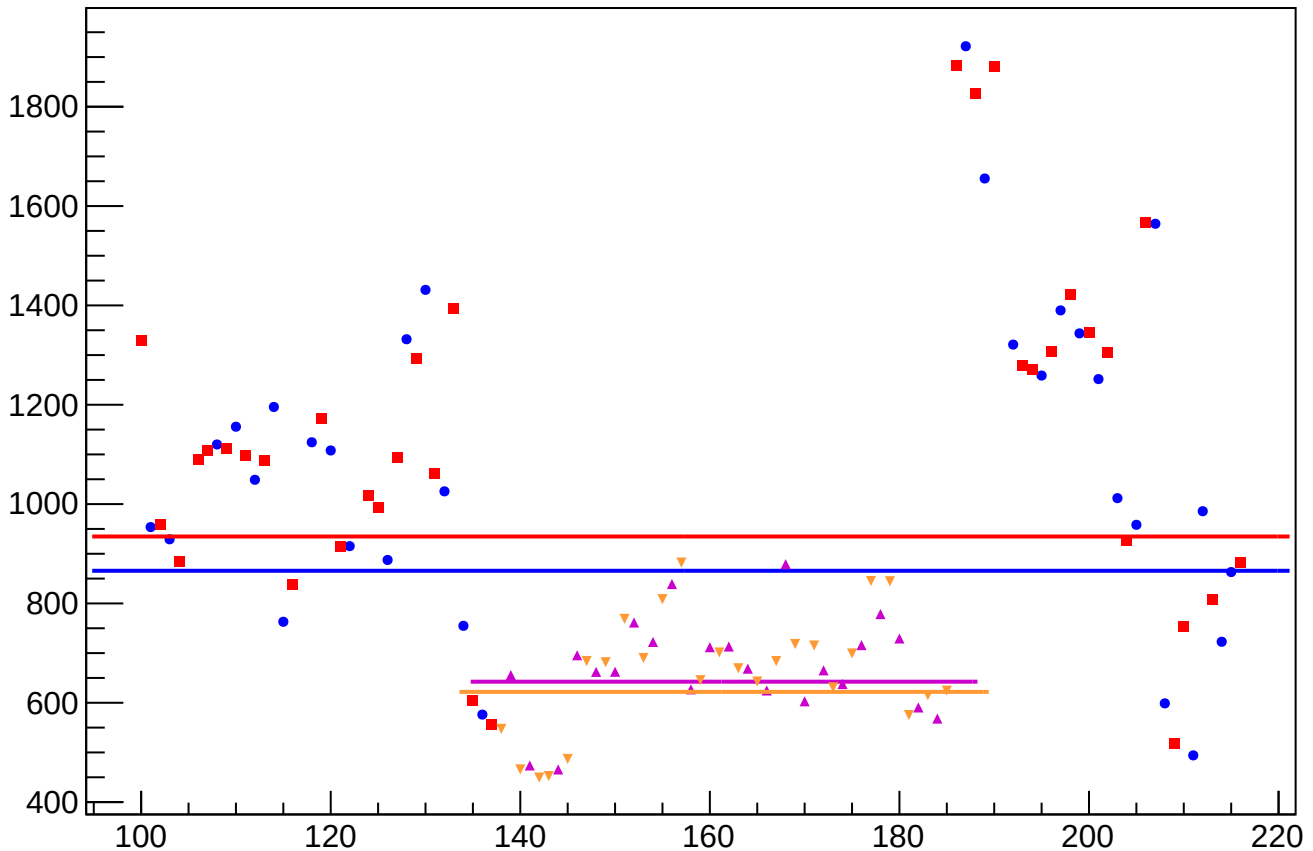
Left In:  $44.766 \pm 152.332$   $\chi^2/\text{NDF}$ : 27.6/22

+ sign  $589.909 \pm 119.218$   $\chi^2/\text{NDF}$ : 84.1/55

All:  $518.645 \pm 86.713$   $\chi^2/\text{NDF}$ : 185.0/112

- sign  $438.597 \pm 126.353$   $\chi^2/\text{NDF}$ : 100.1/56

asym\_usr\_atr1\_dd\_cor\_correction\_rms vs Slug



Right In: 865.739 $\pm$ 0.149  $\chi^2$ /NDF: 4039345.1/30

Left Out: 621.950 $\pm$ 0.102  $\chi^2$ /NDF:1383373.4/24

Right Out: 934.770 $\pm$ 0.160  $\chi^2$ /NDF: 4105969.1/33

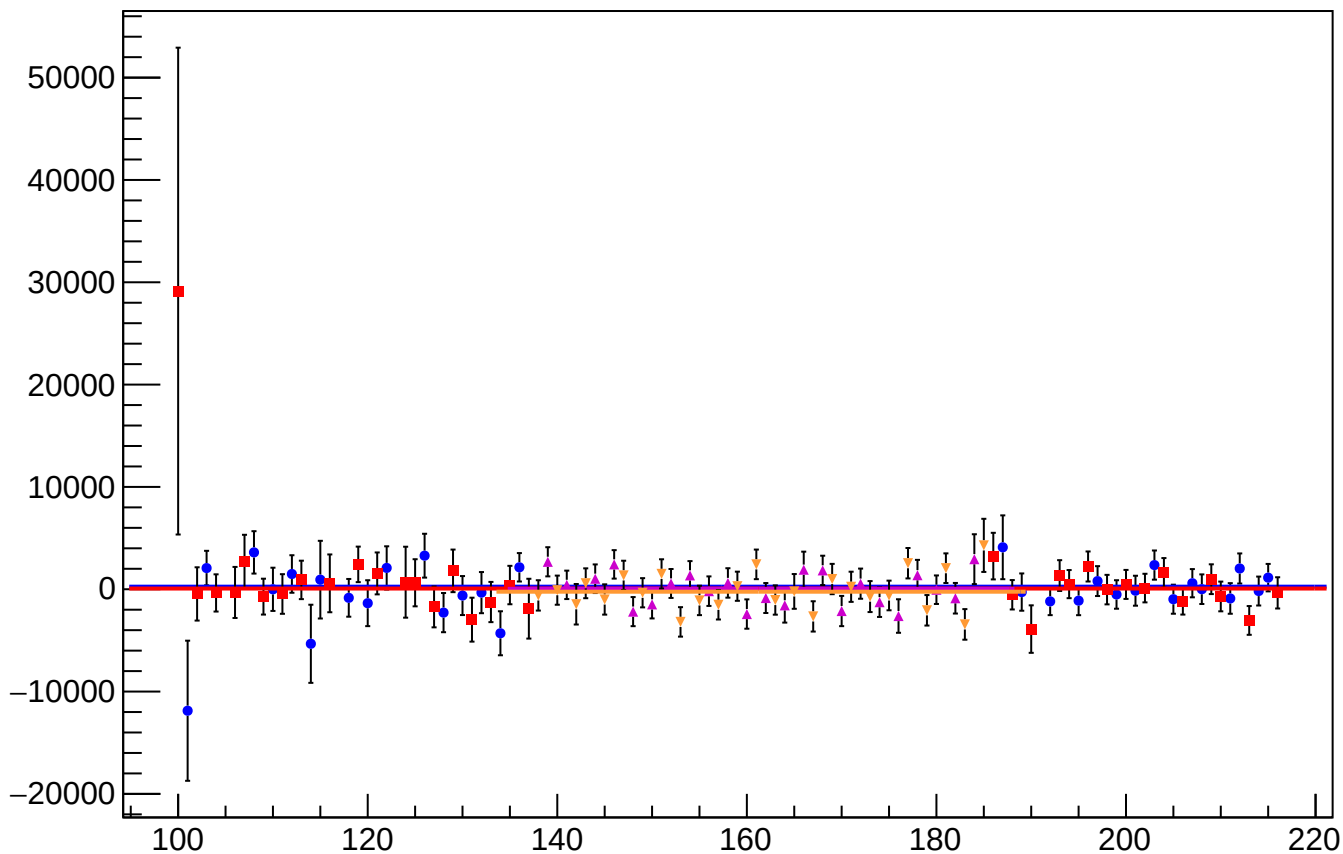
Left In: 642.465 $\pm$ 0.108  $\chi^2$ /NDF:926376.1/22

+ sign 699.935 $\pm$ 0.084  $\chi^2$ /NDF: 7242208.4/55

All: 715.821 $\pm$ 0.061  $\chi^2$ /NDF: 14647550.7/11

- sign 733.664 $\pm$ 0.089  $\chi^2$ /NDF: 7329947.0/56

# eigen\_cor\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 251.040 $\pm$ 307.237  $\chi^2$ /NDF: 31.4/30

Left Out: -240.875 $\pm$ 300.008  $\chi^2$ /NDF:31.7/24

Right Out: 68.977 $\pm$ 305.585  $\chi^2$ /NDF: 25.8/33

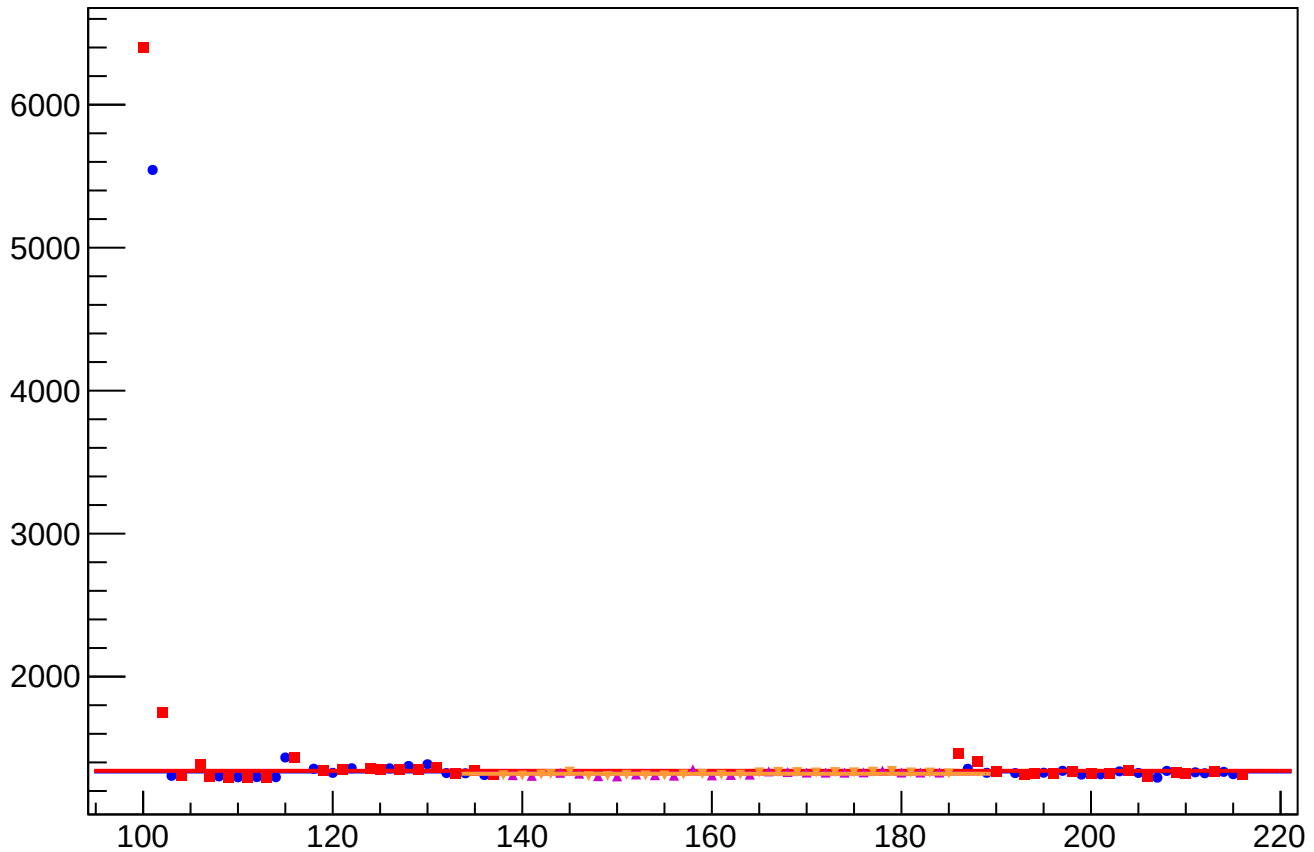
Left In: 39.193 $\pm$ 308.622  $\chi^2$ /NDF:27.1/22

+ sign -0.774 $\pm$ 214.648  $\chi^2$ /NDF: 64.4/55

All: 26.411 $\pm$ 152.655  $\chi^2$ /NDF: 117.4/112

- sign 54.232 $\pm$ 217.147  $\chi^2$ /NDF: 53.0/56

# eigen\_cor\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1336.427+/-0.217  $\chi^2/\text{NDF}$ : 767079.3/30

Left Out: 1320.740+/-0.212  $\chi^2/\text{NDF}$ : 2602.3/24

Right Out: 1341.165+/-0.216  $\chi^2/\text{NDF}$ : 163141.1/33

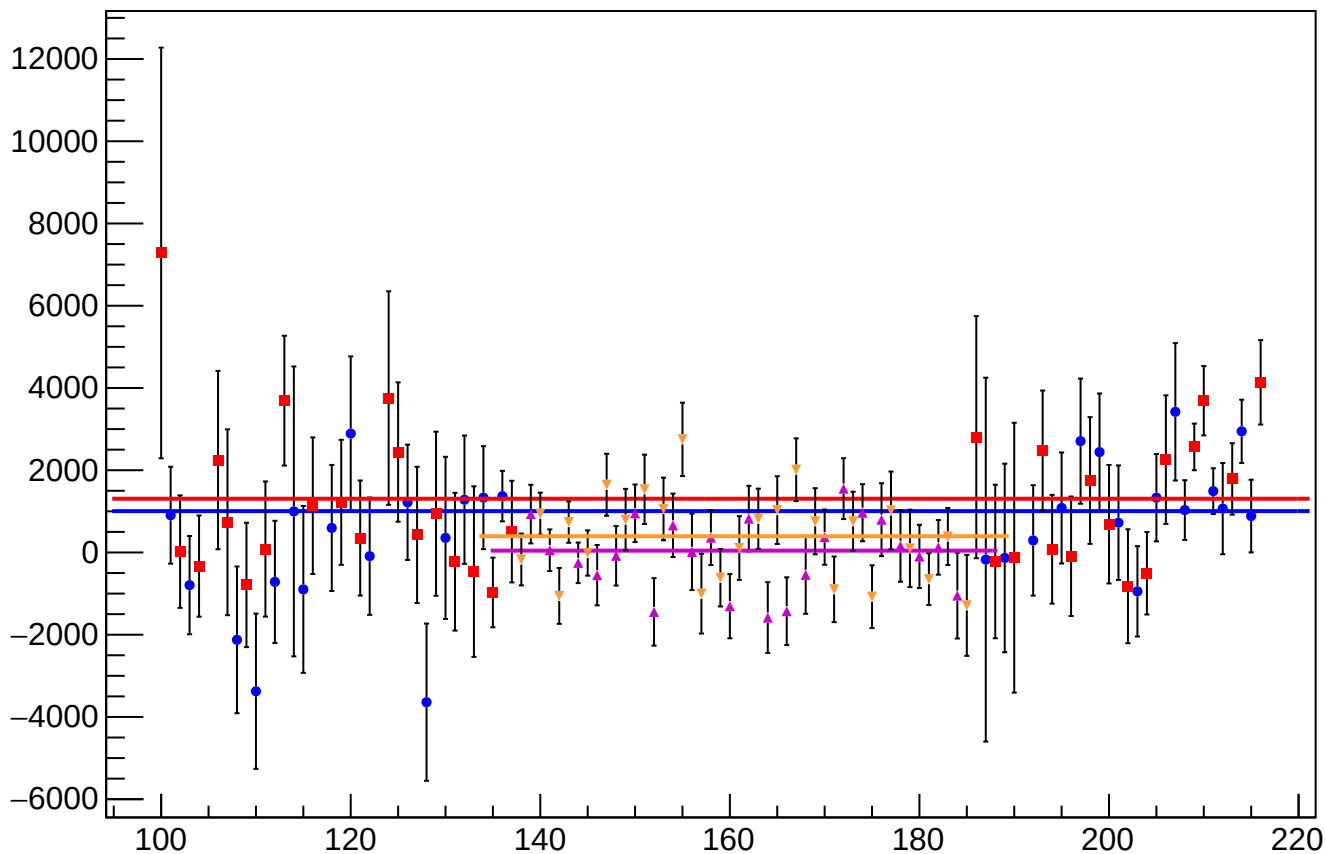
Left In: 1321.783+/-0.218  $\chi^2/\text{NDF}$ : 3553.3/22

+ sign 1328.397+/-0.152  $\chi^2/\text{NDF}$ : 772350.4/55

All: 1329.965+/-0.108  $\chi^2/\text{NDF}$ : 943244.0/112

- sign 1331.570+/-0.154  $\chi^2/\text{NDF}$ : 170677.6/56

asym\_usr\_atr1\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 1005.320 $\pm$ 210.787  $\chi^2/\text{NDF}$ : 36.5/30

Left Out: 394.522 $\pm$ 144.562  $\chi^2/\text{NDF}$ : 41.8/24

Right Out: 1307.046 $\pm$ 226.208  $\chi^2/\text{NDF}$ : 51.1/33

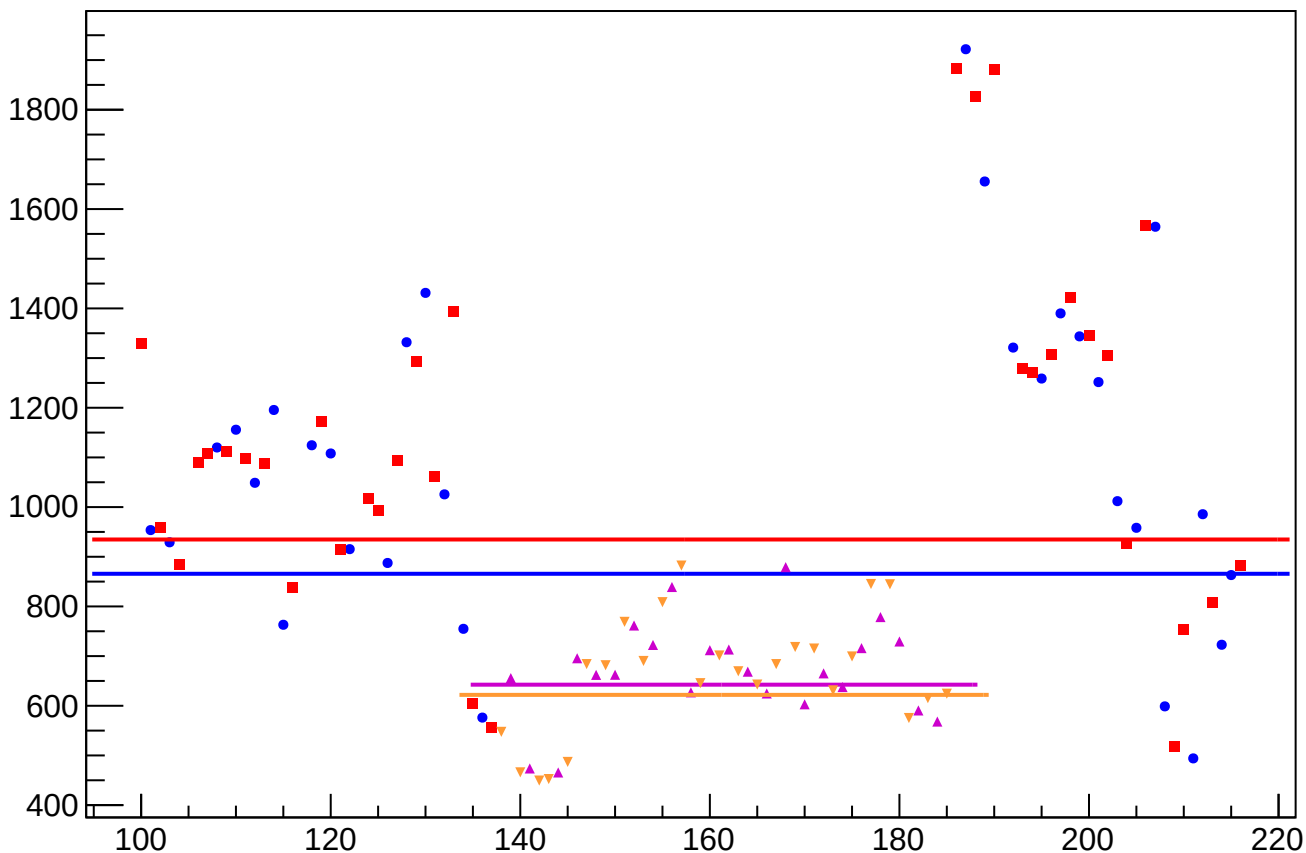
Left In: 44.766 $\pm$ 152.332  $\chi^2/\text{NDF}$ : 27.6/22

+ sign 589.909 $\pm$ 119.218  $\chi^2/\text{NDF}$ : 84.1/55

All: 518.645 $\pm$ 86.713  $\chi^2/\text{NDF}$ : 185.0/112

- sign 438.597 $\pm$ 126.353  $\chi^2/\text{NDF}$ : 100.1/56

asym\_usr\_atr1\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 865.739 $\pm$ 0.149  $\chi^2/\text{NDF}$ : 4039345.1/30

Left Out: 621.950 $\pm$ 0.102  $\chi^2/\text{NDF}$ :1383373.4/24

Right Out: 934.770 $\pm$ 0.160  $\chi^2/\text{NDF}$ : 4105969.1/33

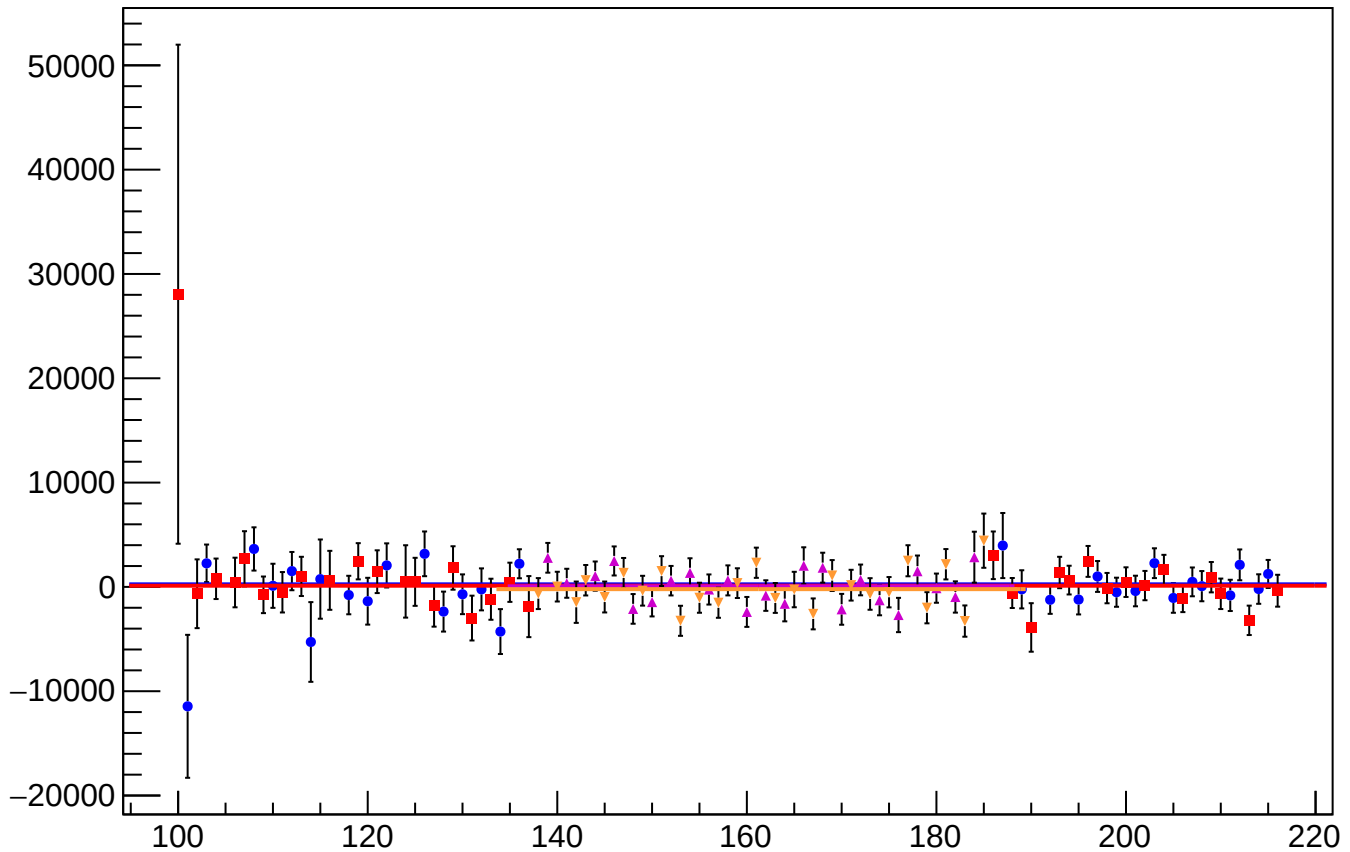
Left In: 642.465 $\pm$ 0.108  $\chi^2/\text{NDF}$ :926376.1/22

+ sign 699.935 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 7242208.4/55

All: 715.821 $\pm$ 0.061  $\chi^2/\text{NDF}$ : 14647550.7/11

- sign 733.664 $\pm$ 0.089  $\chi^2/\text{NDF}$ : 7329947.0/56

# dit\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 244.449 $\pm$ 308.502  $\chi^2$ /NDF: 31.6/30

Left Out: -215.033 $\pm$ 300.379  $\chi^2$ /NDF:31.3/24

Right Out: 114.403 $\pm$ 307.458  $\chi^2$ /NDF: 26.5/33

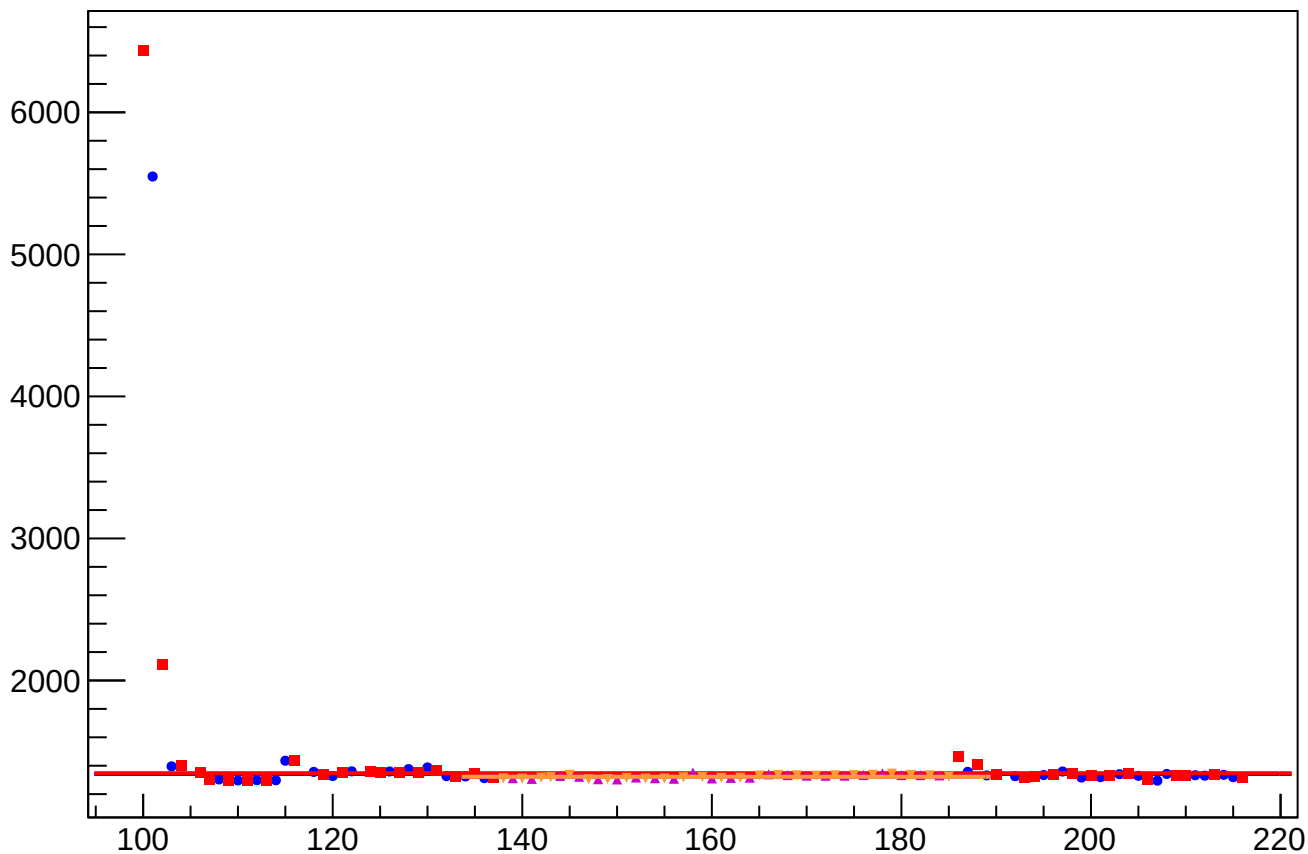
Left In: 50.244 $\pm$ 308.986  $\chi^2$ /NDF:27.8/22

+ sign 8.579 $\pm$ 215.215  $\chi^2$ /NDF: 64.0/55

All: 45.065 $\pm$ 153.136  $\chi^2$ /NDF: 118.4/112

- sign 82.483 $\pm$ 217.944  $\chi^2$ /NDF: 54.4/56

# dit\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1341.885+/-0.218  $\chi^2/\text{NDF}$ : 768104.6/30

Left Out: 1322.369+/-0.212  $\chi^2/\text{NDF}$ : 2931.9/24

Right Out: 1347.213+/-0.217  $\chi^2/\text{NDF}$ : 221376.5/33

Left In: 1323.337+/-0.218  $\chi^2/\text{NDF}$ : 3856.3/22

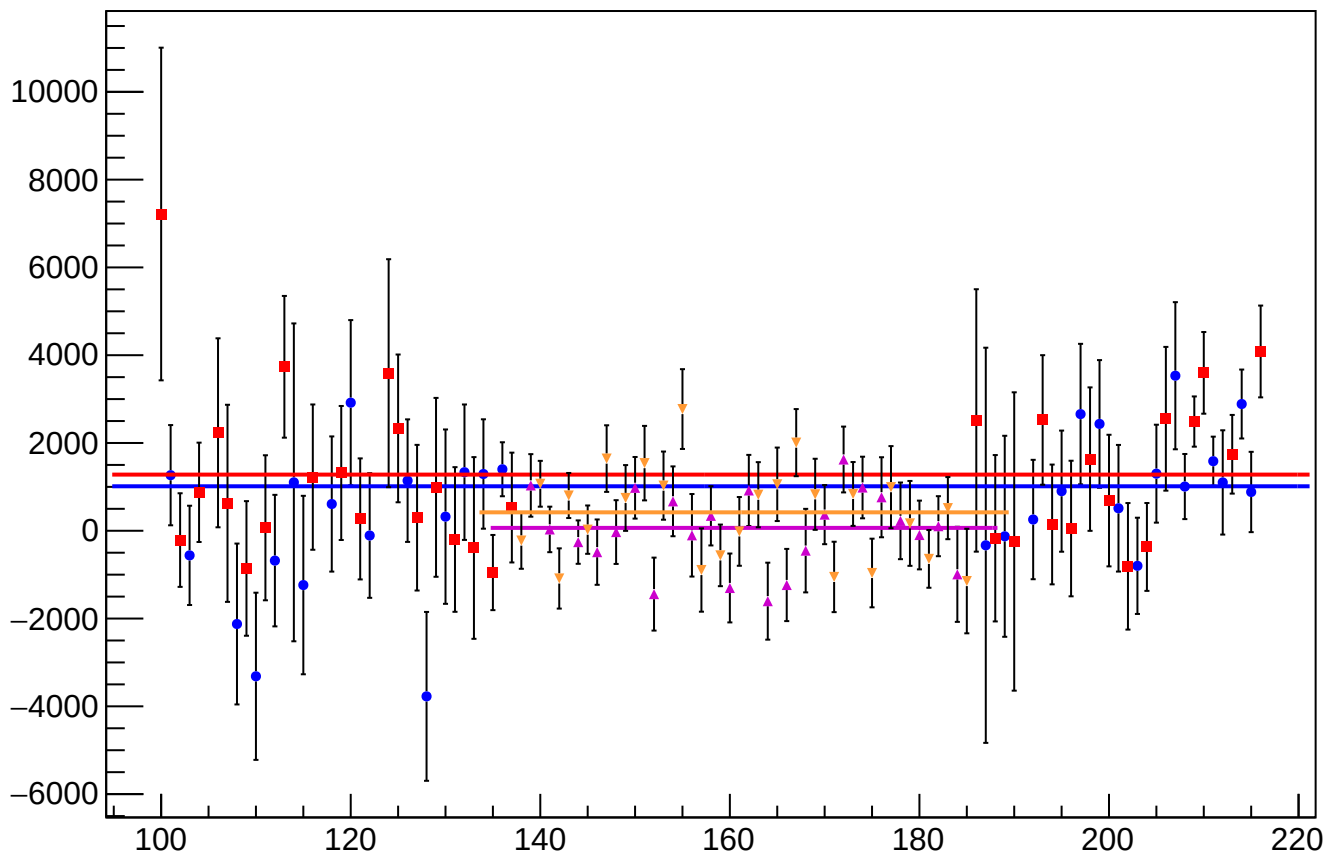
+ sign 1331.867+/-0.152  $\chi^2/\text{NDF}$ : 775145.3/55

All: 1333.579+/-0.108  $\chi^2/\text{NDF}$ : 1006634.5/111

- sign 1335.334+/-0.154  $\chi^2/\text{NDF}$ : 231232.9/56



# asym\_usr\_atr1\_dd\_dit\_correction\_mean vs Slug



Right In: 1013.475 $\pm$ 213.132  $\chi^2$ /NDF: 35.7/30

Left Out: 419.899 $\pm$ 146.436  $\chi^2$ /NDF: 41.5/24

Right Out: 1279.588 $\pm$ 227.742  $\chi^2$ /NDF: 47.1/33

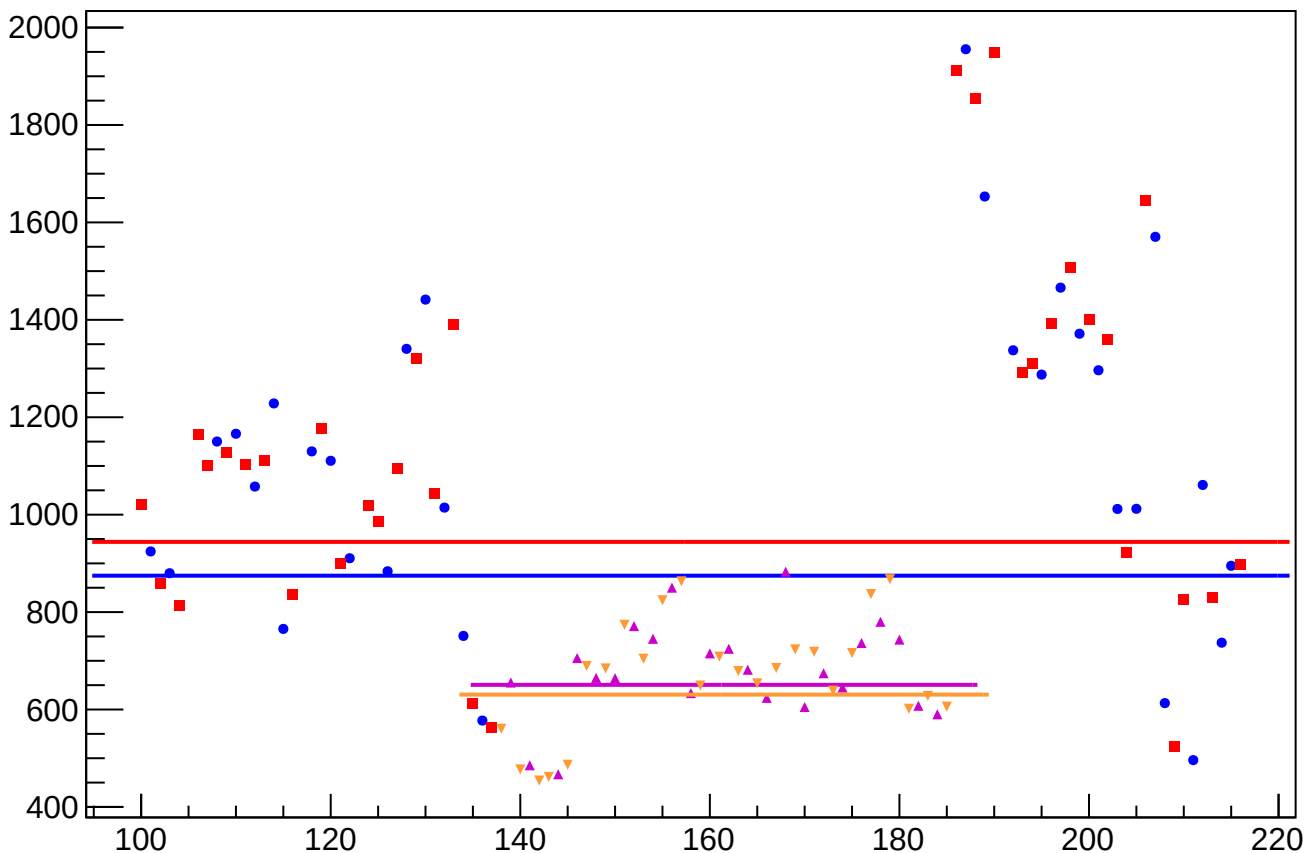
Left In: 65.405 $\pm$ 154.224  $\chi^2$ /NDF: 27.0/22

+ sign 610.247 $\pm$ 120.694  $\chi^2$ /NDF: 82.5/55

All: 533.294 $\pm$ 87.715  $\chi^2$ /NDF: 177.0/112

- sign 447.150 $\pm$ 127.699  $\chi^2$ /NDF: 93.6/56

# asym\_usr\_atr1\_dd\_dit\_correction\_rms vs Slug



Right In:  $874.753 \pm 0.151$   $\chi^2/\text{NDF}$ : 4140203.8/30

Left Out:  $630.592 \pm 0.104$   $\chi^2/\text{NDF}$ : 1328590.6/24

Right Out:  $944.146 \pm 0.161$   $\chi^2/\text{NDF}$ : 4248150.0/33

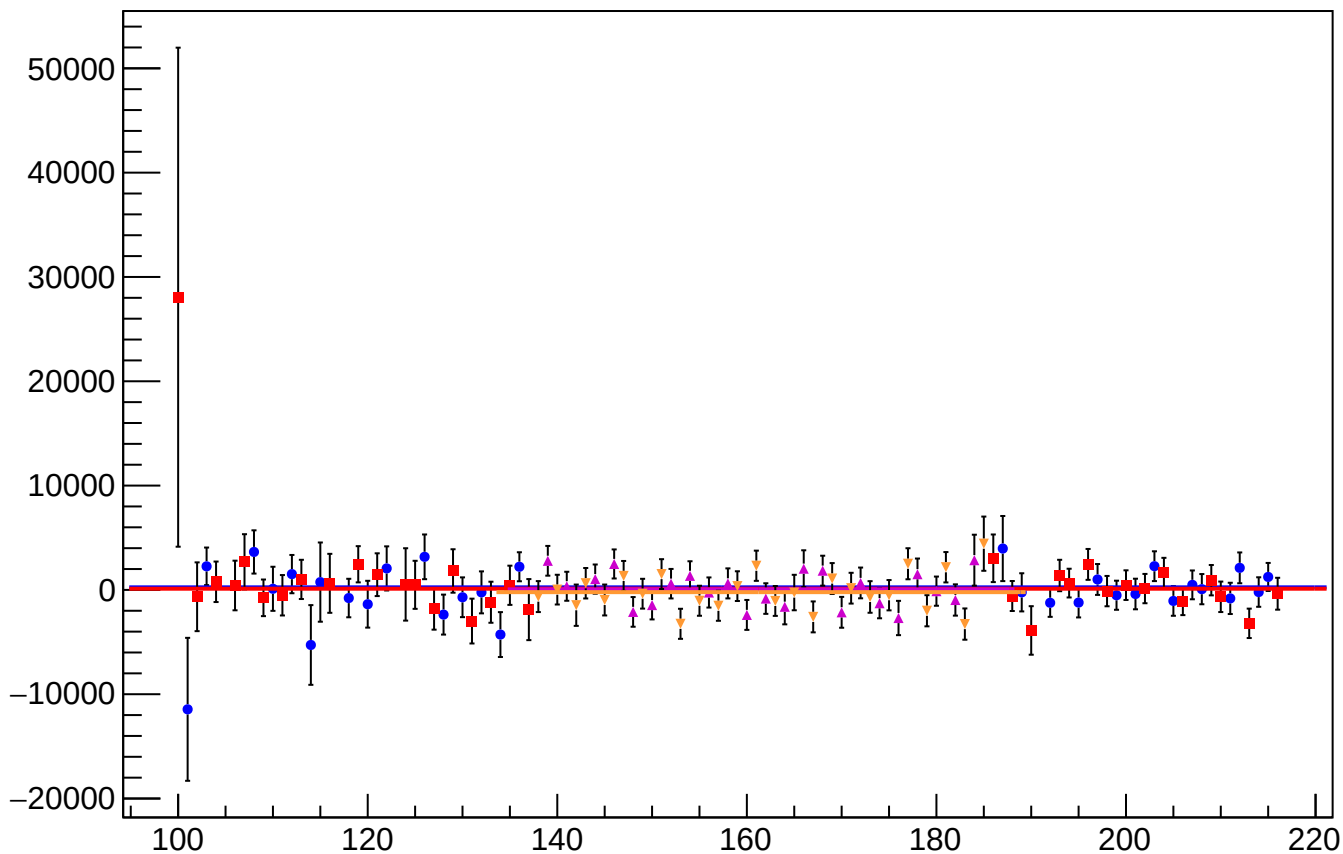
Left In:  $650.637 \pm 0.109$   $\chi^2/\text{NDF}$ : 922078.1/22

+ sign  $708.889 \pm 0.085$   $\chi^2/\text{NDF}$ : 7251830.8/55

All:  $724.944 \pm 0.062$   $\chi^2/\text{NDF}$ : 14774554.3/11

- sign  $742.917 \pm 0.090$   $\chi^2/\text{NDF}$ : 7447715.2/56

# eigen\_dit\_asym\_usr\_atr1\_dd\_mean vs Slug



Right In: 244.449 $\pm$ 308.502  $\chi^2$ /NDF: 31.6/30

Left Out: -215.035 $\pm$ 300.379  $\chi^2$ /NDF:31.3/24

Right Out: 114.401 $\pm$ 307.458  $\chi^2$ /NDF: 26.5/33

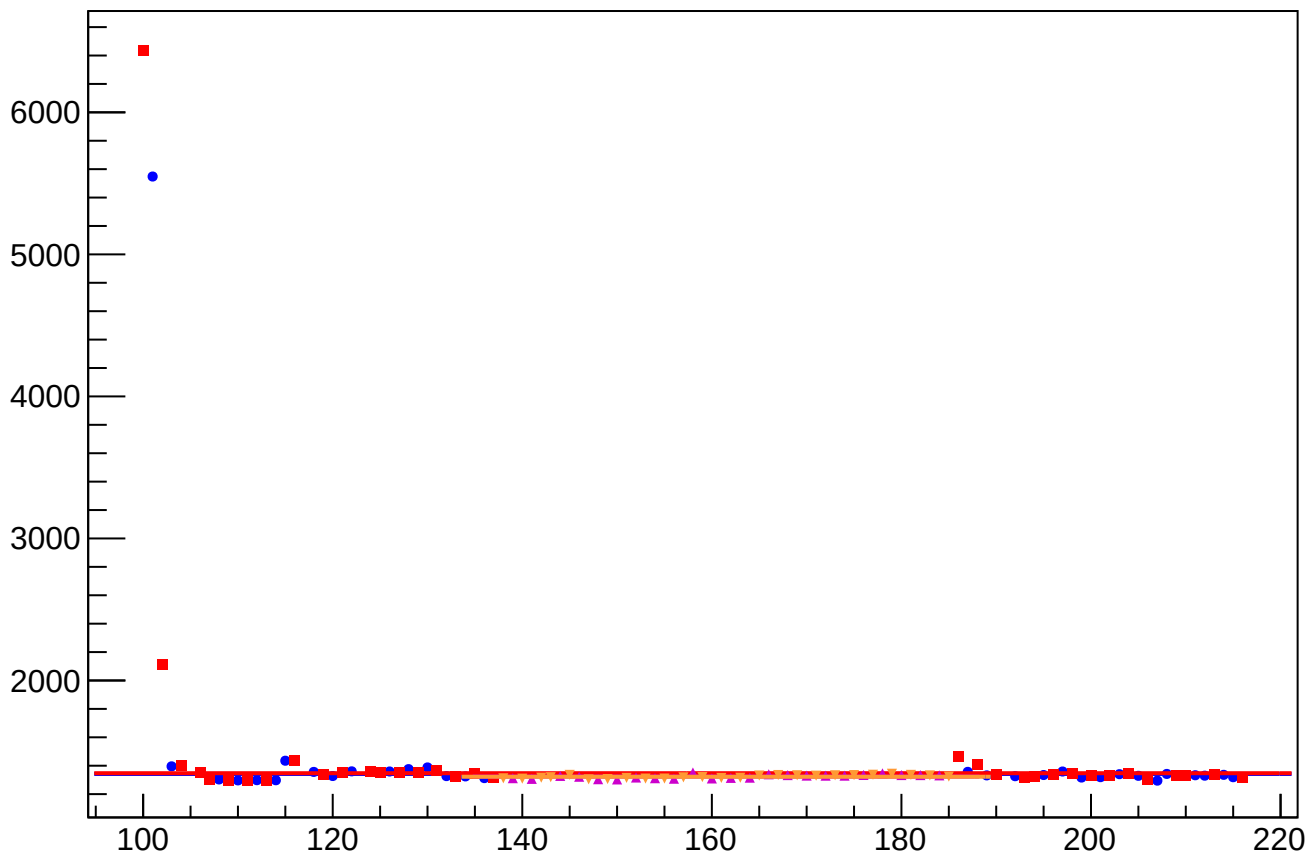
Left In: 50.244 $\pm$ 308.986  $\chi^2$ /NDF:27.8/22

+ sign 8.579 $\pm$ 215.215  $\chi^2$ /NDF: 64.0/55

All: 45.064 $\pm$ 153.136  $\chi^2$ /NDF: 118.4/112

- sign 82.482 $\pm$ 217.944  $\chi^2$ /NDF: 54.4/56

# eigen\_dit\_asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1341.885 $\pm$ 0.218  $\chi^2$ /NDF: 768104.5/30

Left Out: 1322.369 $\pm$ 0.212  $\chi^2$ /NDF: 2931.9/24

Right Out: 1347.213 $\pm$ 0.217  $\chi^2$ /NDF: 221376.4/33

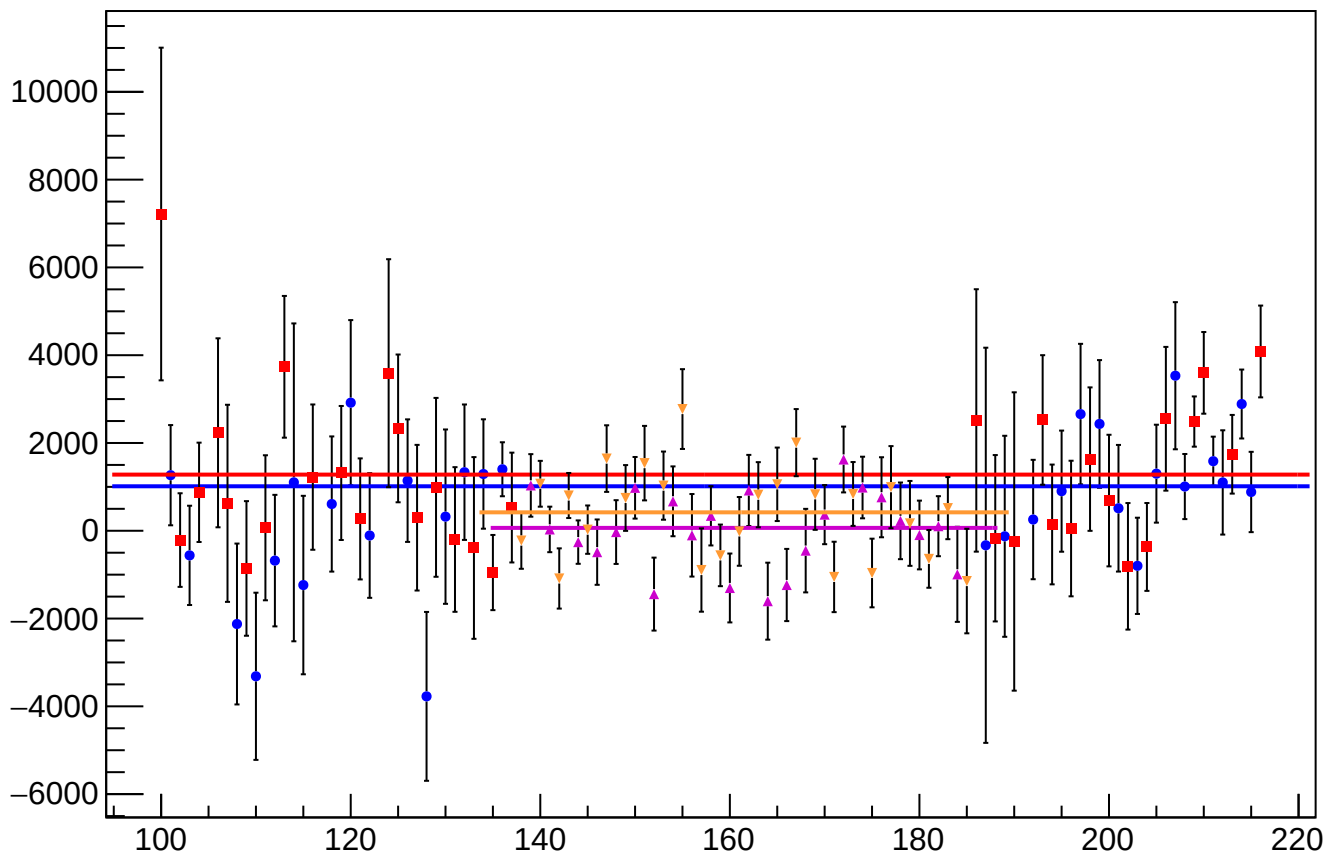
Left In: 1323.337 $\pm$ 0.218  $\chi^2$ /NDF: 3856.3/22

+ sign 1331.867 $\pm$ 0.152  $\chi^2$ /NDF: 775145.2/55

All: 1333.579 $\pm$ 0.108  $\chi^2$ /NDF: 1006634.4/11

- sign 1335.334 $\pm$ 0.154  $\chi^2$ /NDF: 231232.8/56

asym\_usr\_atr1\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $1013.472 \pm 213.132$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $419.899 \pm 146.436$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $1279.587 \pm 227.741$   $\chi^2/\text{NDF}$ : 47.1/33

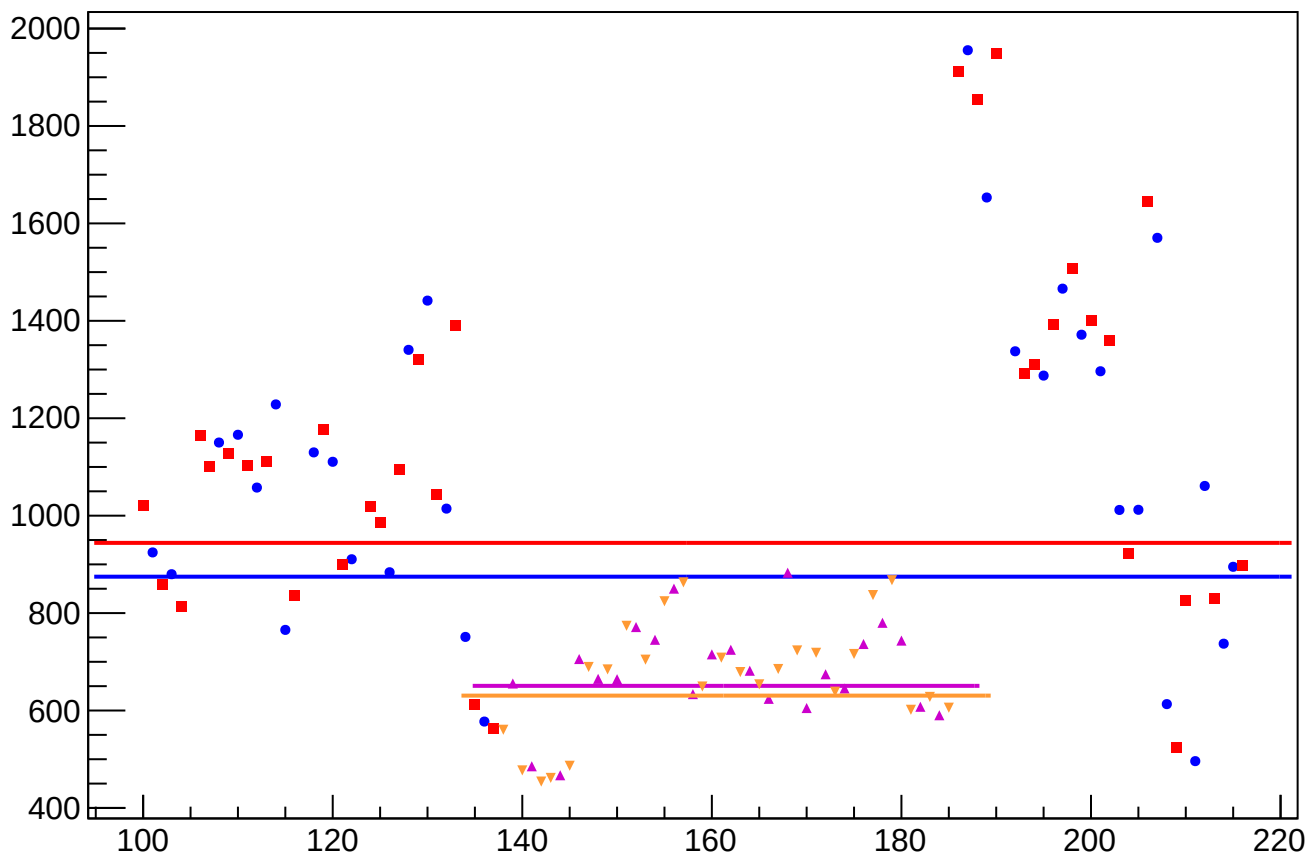
Left In:  $65.405 \pm 154.225$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $610.246 \pm 120.694$   $\chi^2/\text{NDF}$ : 82.5/55

All:  $533.295 \pm 87.715$   $\chi^2/\text{NDF}$ : 177.0/112

- sign  $447.151 \pm 127.699$   $\chi^2/\text{NDF}$ : 93.6/56

asym\_usr\_atr1\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 874.753 $\pm$ 0.151  $\chi^2/\text{NDF}$ : 4140197.6/30

Left Out: 630.592 $\pm$ 0.104  $\chi^2/\text{NDF}$ : 1328610.2/24

Right Out: 944.144 $\pm$ 0.161  $\chi^2/\text{NDF}$ : 4248176.9/33

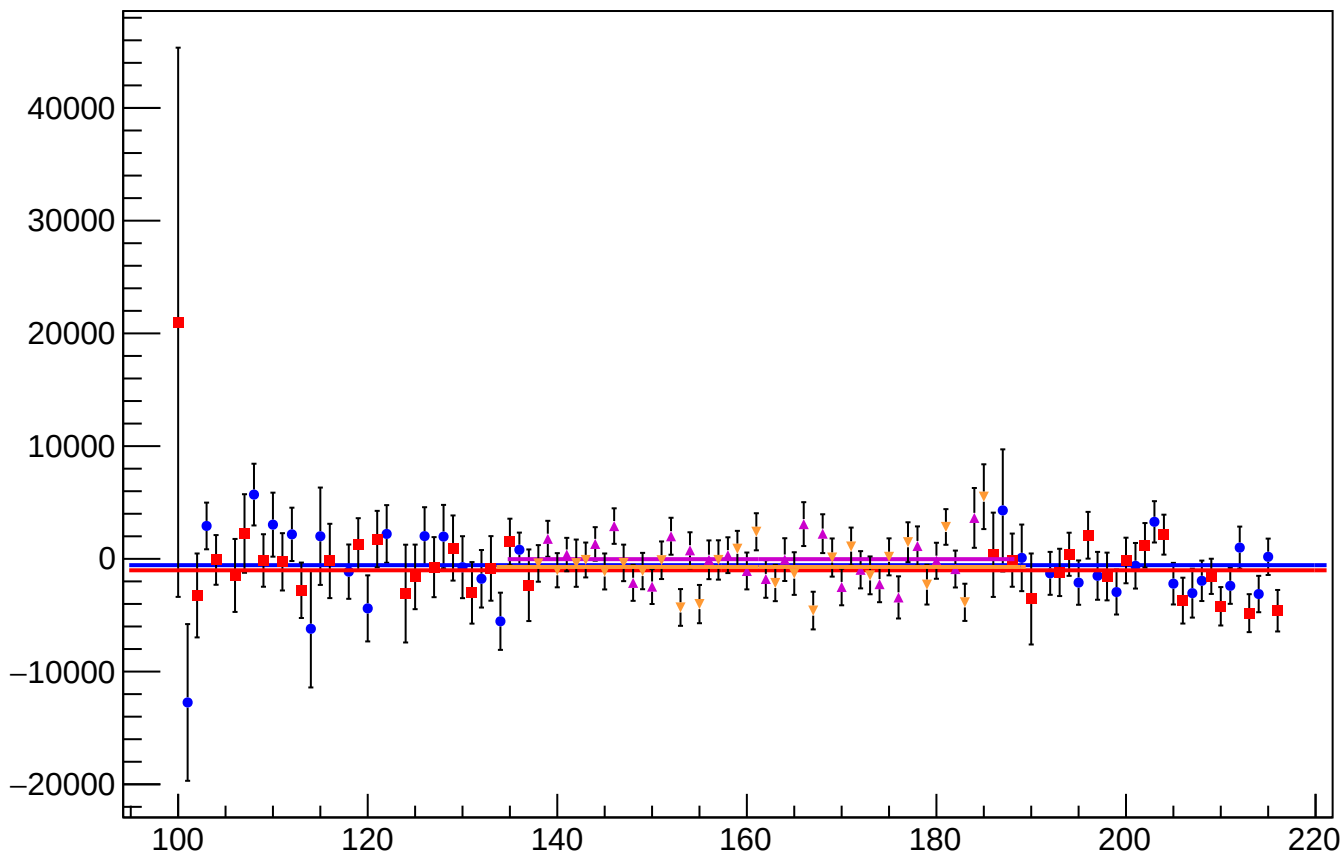
Left In: 650.638 $\pm$ 0.109  $\chi^2/\text{NDF}$ : 922087.6/22

+ sign 708.890 $\pm$ 0.085  $\chi^2/\text{NDF}$ : 7251828.6/55

All: 724.945 $\pm$ 0.062  $\chi^2/\text{NDF}$ : 14774541.4/11

- sign 742.918 $\pm$ 0.090  $\chi^2/\text{NDF}$ : 7447704.0/56

# asym\_usr\_atr1\_dd\_mean vs Slug



Right In:  $-559.966 \pm 397.287$   $\chi^2/\text{NDF}$ : 40.3/30

Left Out:  $-718.291 \pm 337.578$   $\chi^2/\text{NDF}$ : 37.7/24

Right Out:  $-1015.686 \pm 402.958$   $\chi^2/\text{NDF}$ : 30.7/33

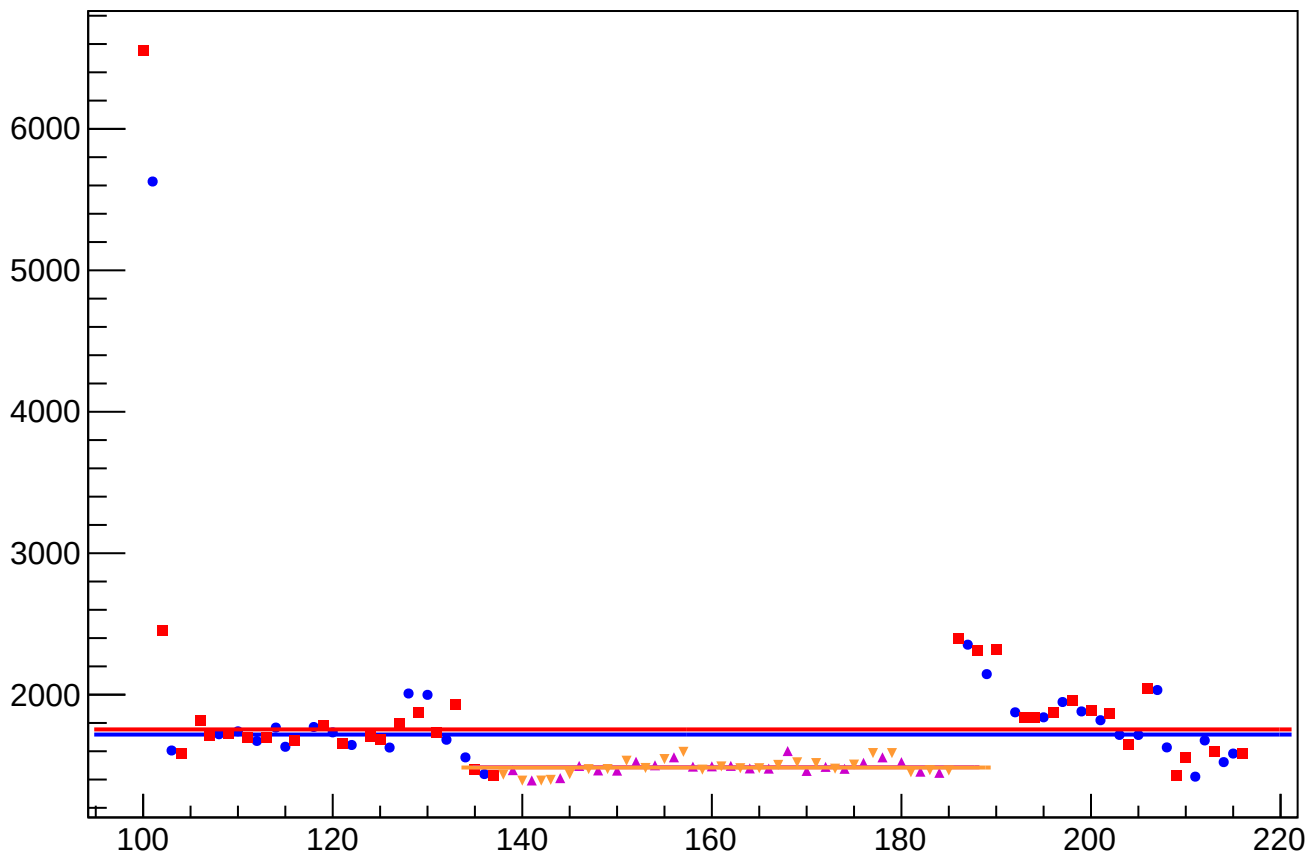
Left In:  $-27.514 \pm 347.415$   $\chi^2/\text{NDF}$ : 28.0/22

+ sign  $-651.908 \pm 257.251$   $\chi^2/\text{NDF}$ : 78.2/55

All:  $-552.672 \pm 183.945$   $\chi^2/\text{NDF}$ : 140.6/112

- sign  $-448.853 \pm 263.123$   $\chi^2/\text{NDF}$ : 62.1/56

# asym\_usr\_atr1\_dd\_rms vs Slug



Right In: 1718.070 $\pm$ 0.281  $\chi^2$ /NDF: 1057185.2/30

Left Out: 1484.960 $\pm$ 0.239  $\chi^2$ /NDF: 50905.1/24

Right Out: 1754.434 $\pm$ 0.285  $\chi^2$ /NDF: 693619.3/33

Left In: 1487.112 $\pm$ 0.246  $\chi^2$ /NDF: 34817.2/22

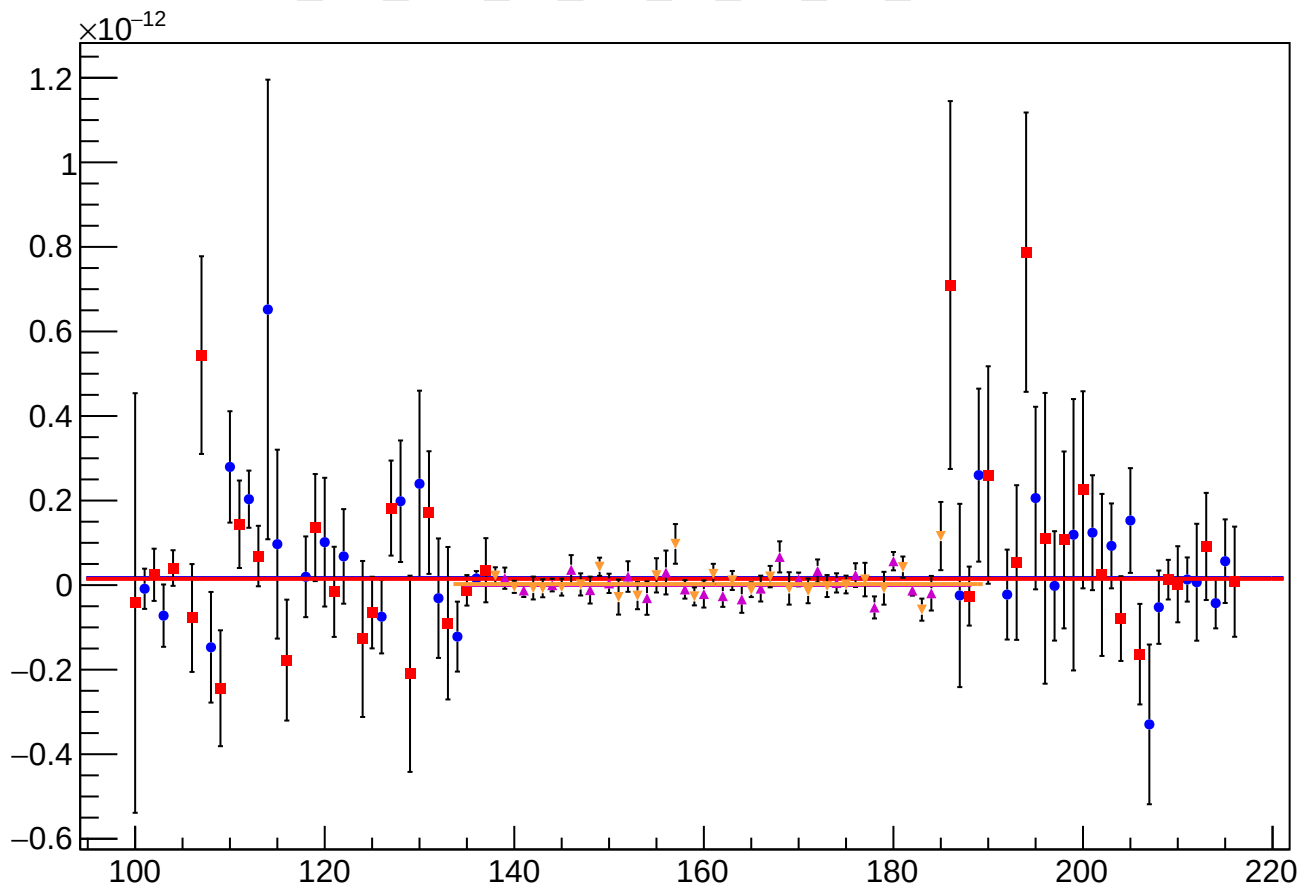
+ sign 1582.699 $\pm$ 0.182  $\chi^2$ /NDF: 1507952.1/55

All: 1591.689 $\pm$ 0.130  $\chi^2$ /NDF: 2746282.4/11

- sign 1601.094 $\pm$ 0.186  $\chi^2$ /NDF: 1233332.6/56



asym\_usr\_atr1\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.3/33

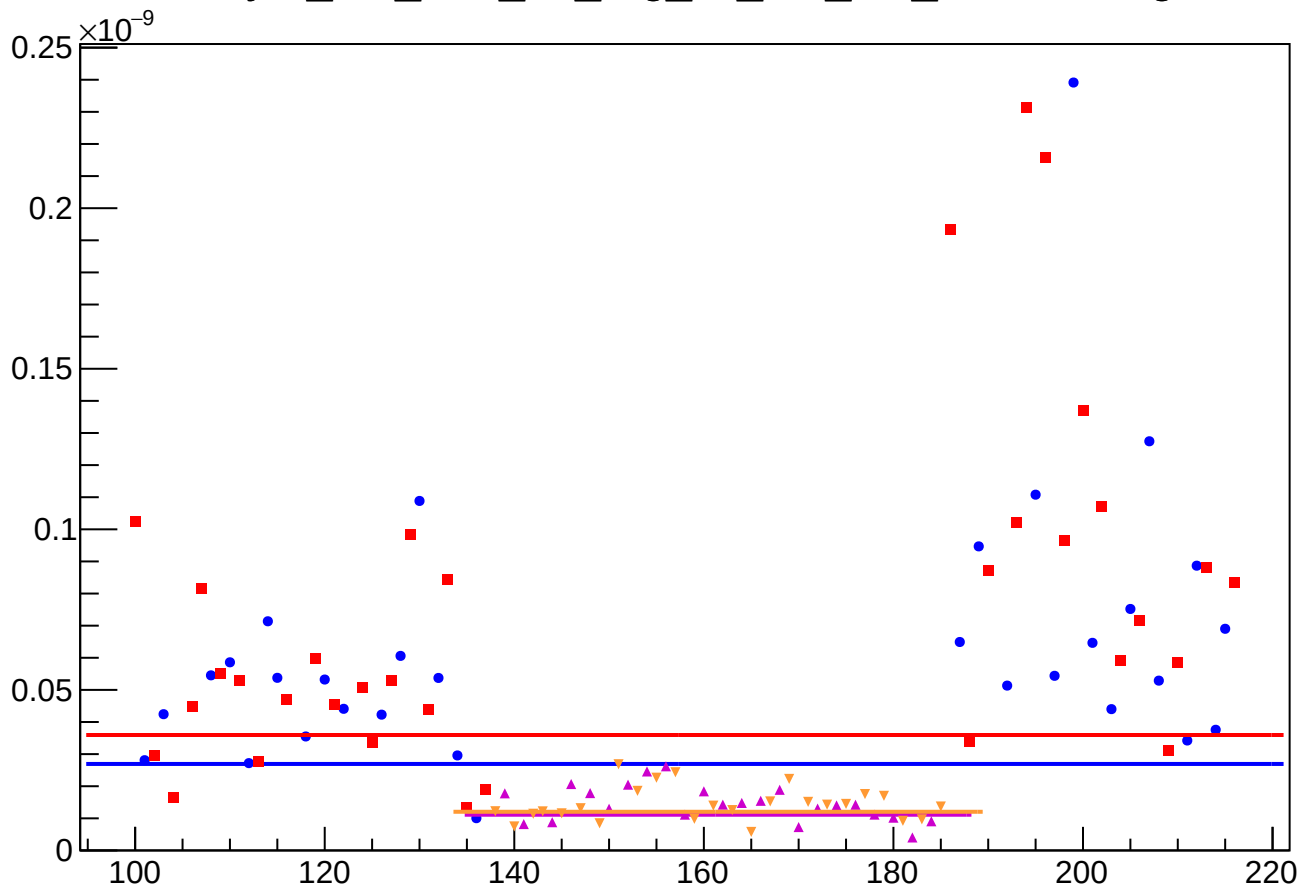
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 121.2/112

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.9/56

asym\_usr\_atr1\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6598664.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1520224.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5751859.6/33

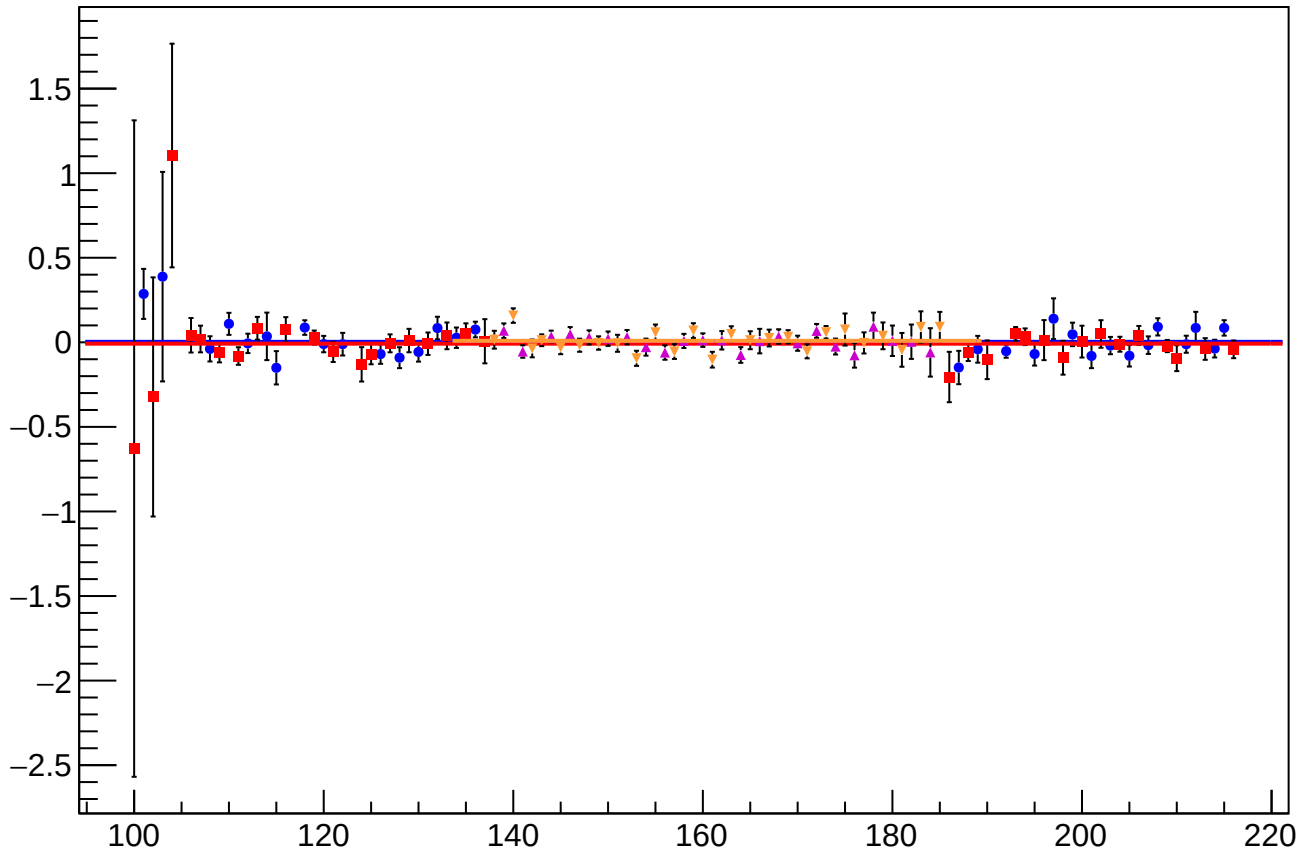
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2209676.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10519370.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22966206.5/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12417224.4/56

# asym\_usr\_atr1\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.011$   $\chi^2/\text{NDF}: 41.1/30$

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 25.2/33$

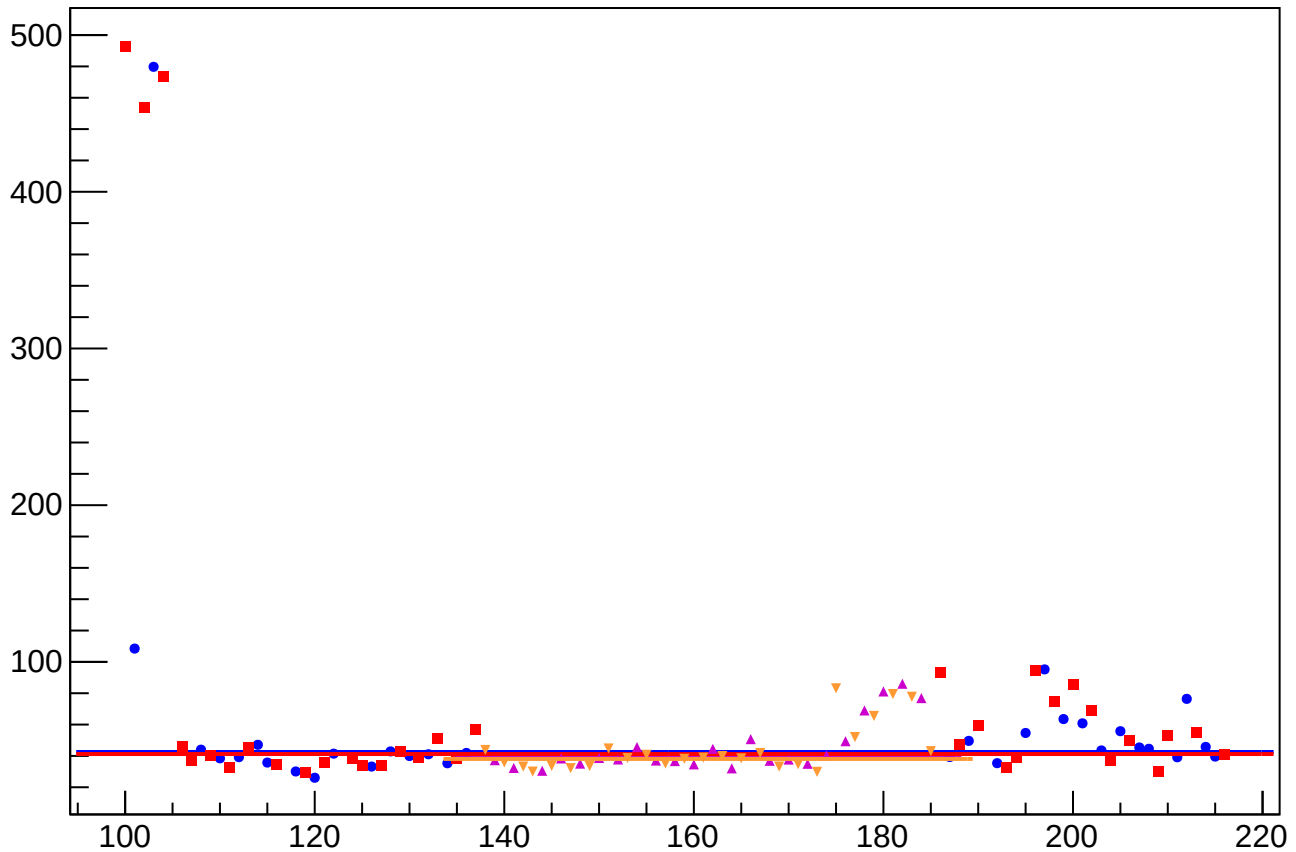
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}: 18.9/22$

+ sign  $0.006 \pm 0.007$   $\chi^2/\text{NDF}: 79.9/55$

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}: 125.4/112$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 45.2/56$

# asym\_usr\_atr1\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.491 $\pm$ 0.008  $\chi^2$ /NDF: 3123231.7/30

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF:1967115.3/24

Right Out: 41.205 $\pm$ 0.008  $\chi^2$ /NDF: 4181440.0/33

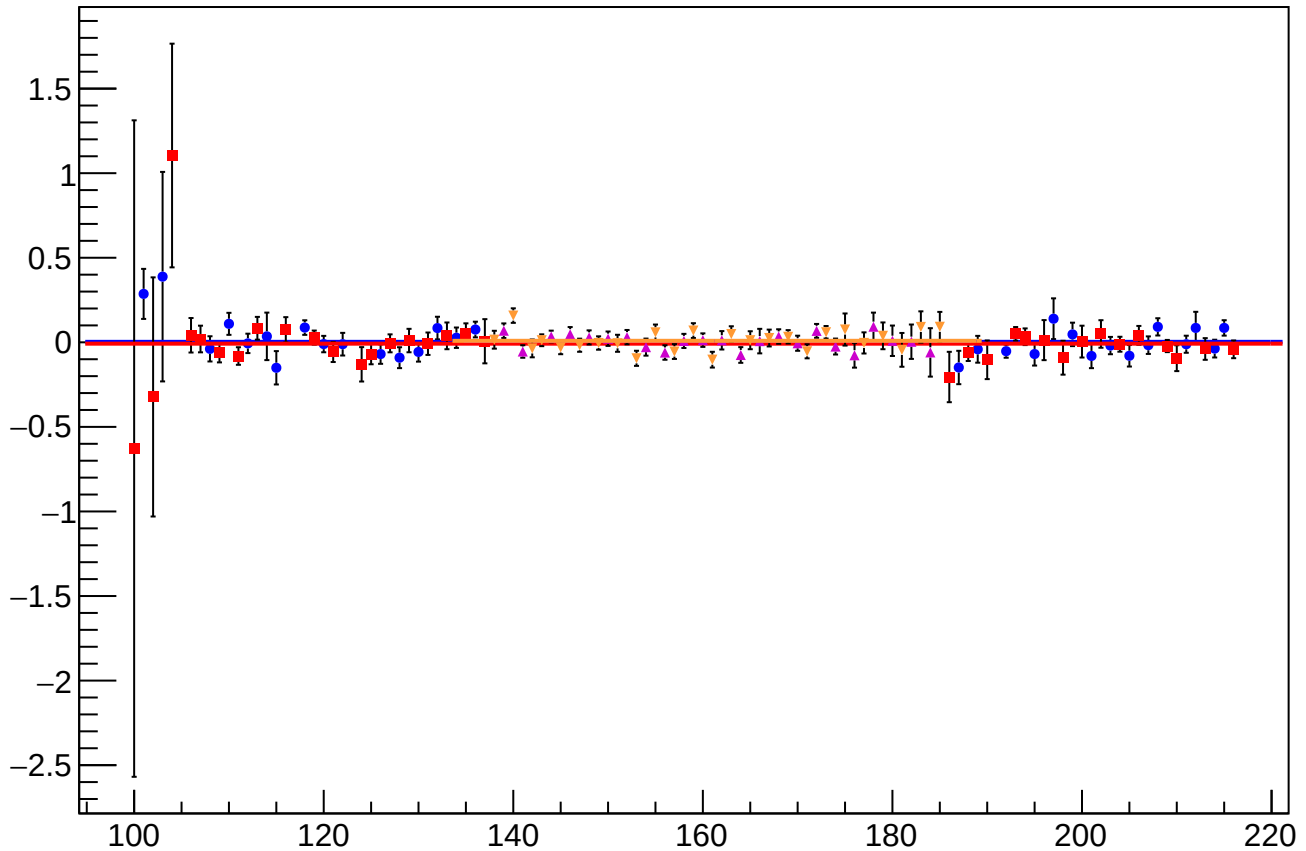
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF:1727664.7/22

+ sign 39.975 $\pm$ 0.005  $\chi^2$ /NDF: 5274678.6/55

All: 39.881 $\pm$ 0.004  $\chi^2$ /NDF: 11244819.3/112

- sign 39.782 $\pm$ 0.005  $\chi^2$ /NDF: 5969435.2/56

asym\_usr\_atr1\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.011$   $\chi^2/\text{NDF}: 41.1/30$

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 25.2/33$

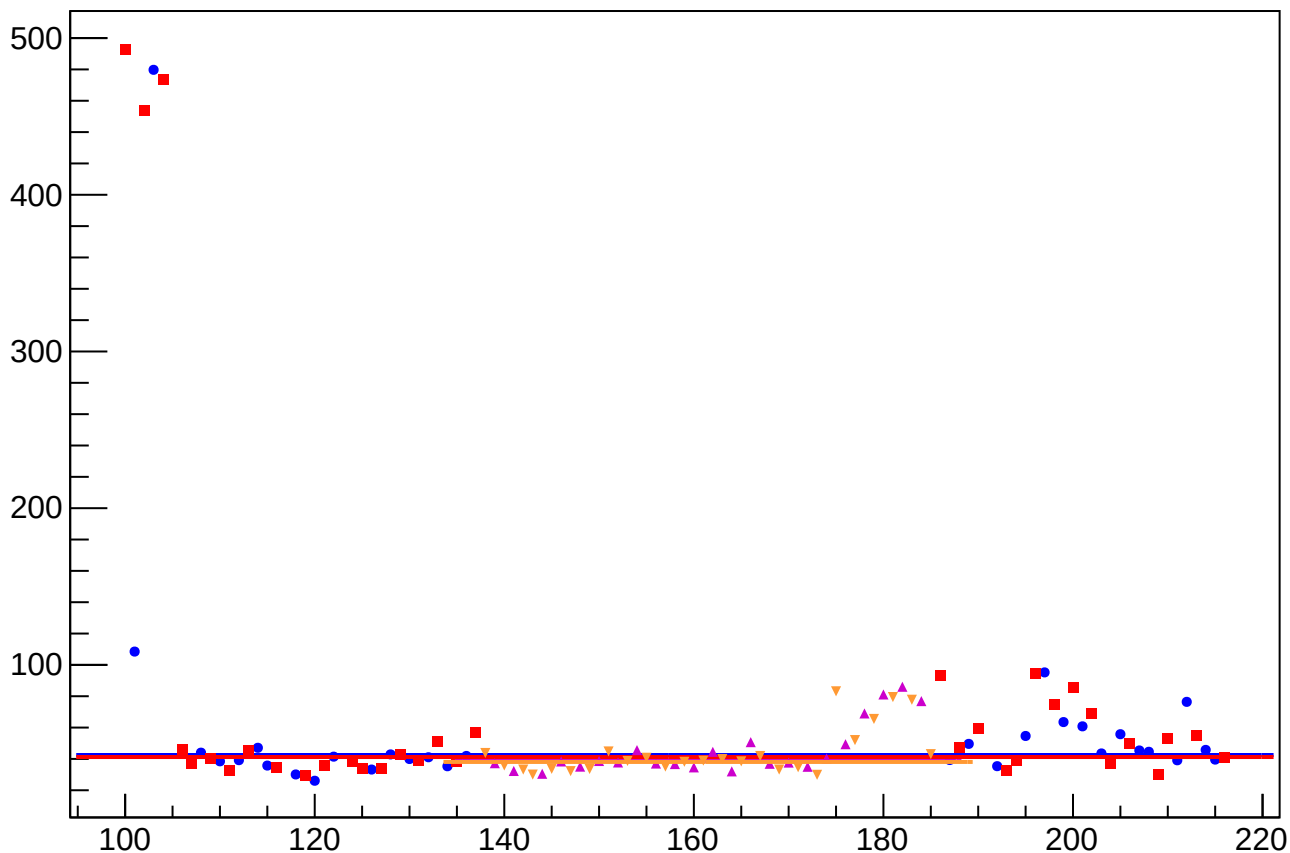
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}: 18.9/22$

+ sign  $0.006 \pm 0.007$   $\chi^2/\text{NDF}: 79.9/55$

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}: 125.4/112$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 45.2/56$

asym\_usr\_atr1\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.491+/-0.008  $\chi^2/\text{NDF}$ : 3123231.7/30

Left Out: 38.067+/-0.007  $\chi^2/\text{NDF}$ : 1967115.3/24

Right Out: 41.205+/-0.008  $\chi^2/\text{NDF}$ : 4181440.0/33

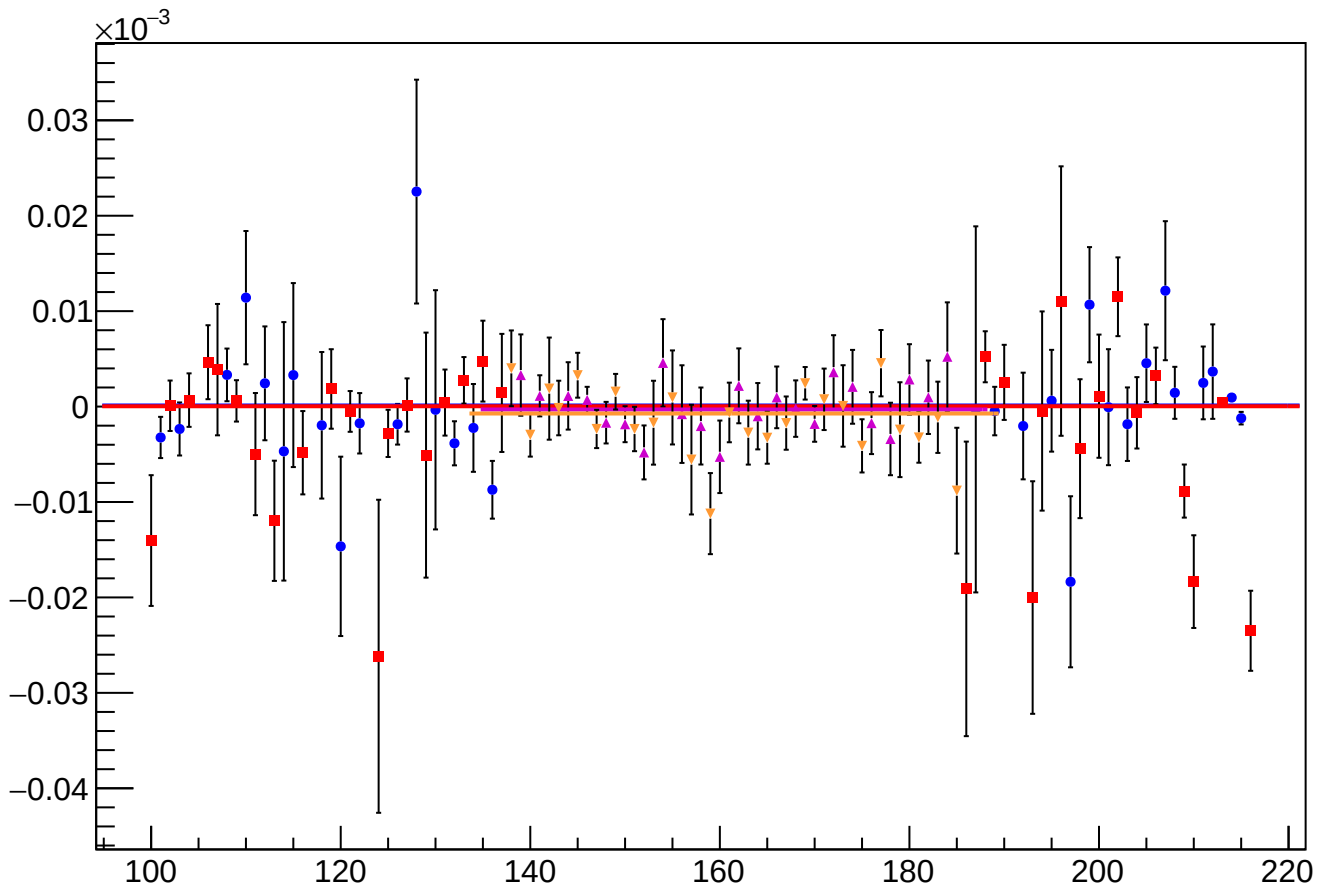
Left In: 38.630+/-0.007  $\chi^2/\text{NDF}$ : 1727664.7/22

+ sign 39.975+/-0.005  $\chi^2/\text{NDF}$ : 5274678.6/55

All: 39.881+/-0.004  $\chi^2/\text{NDF}$ : 11244819.3/112

- sign 39.782+/-0.005  $\chi^2/\text{NDF}$ : 5969435.2/56

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.8/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 93.5/33

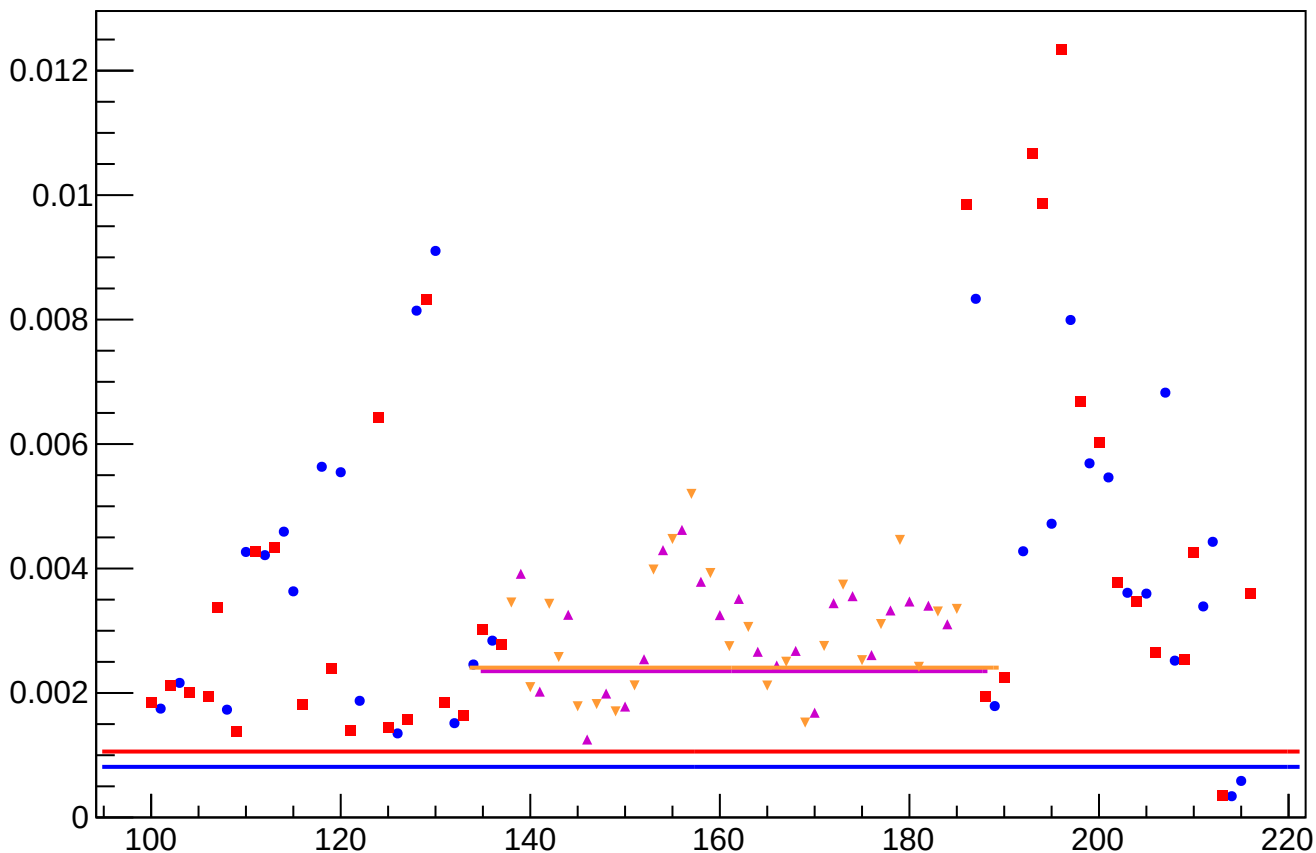
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.8/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 76.0/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 183.4/112

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 107.5/56

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 22461916.2/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3682960.0/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 20130669.5/33

Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4438139.5/22

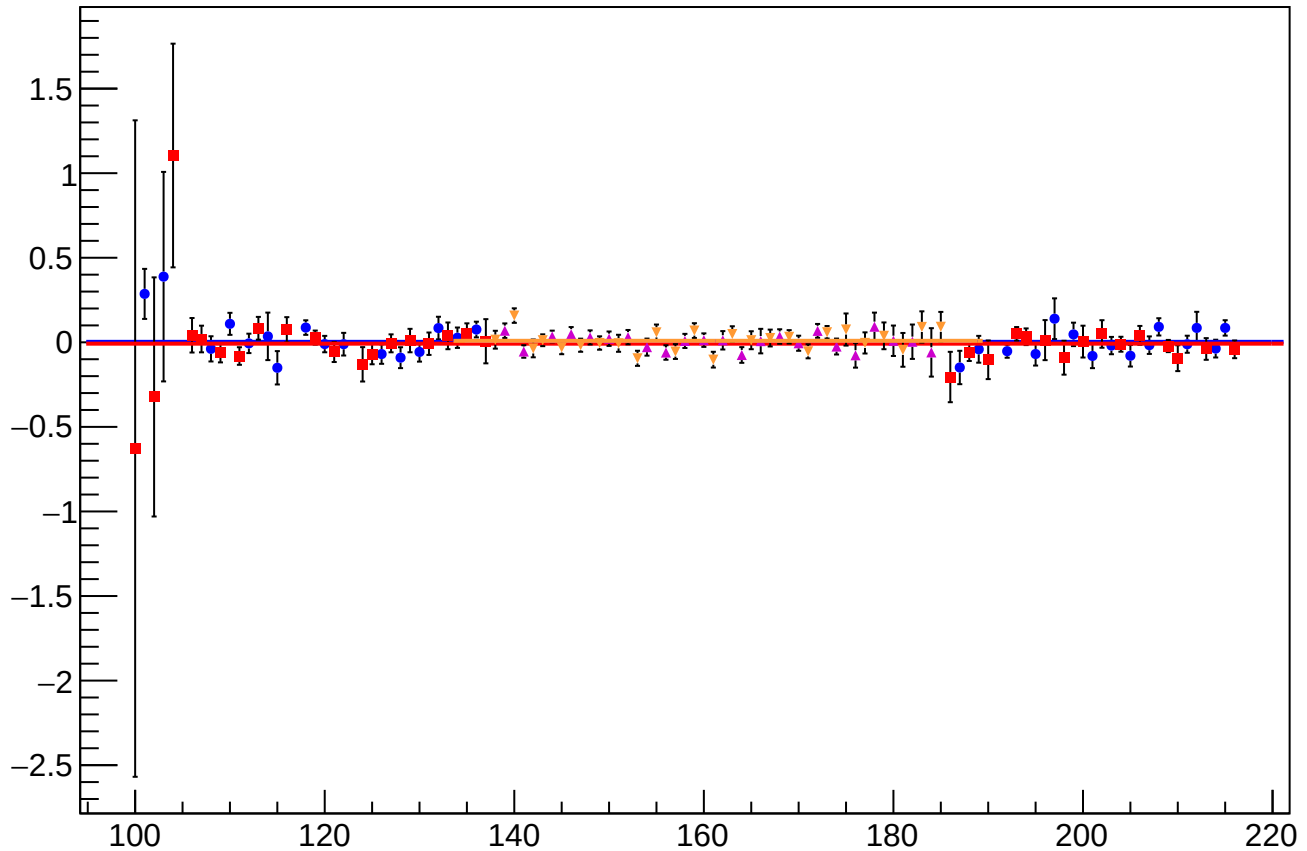
+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 37764622.4/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 69815048.2/112

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31174148.4/56



asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.011$   $\chi^2/\text{NDF}: 41.1/30$

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 25.2/33$

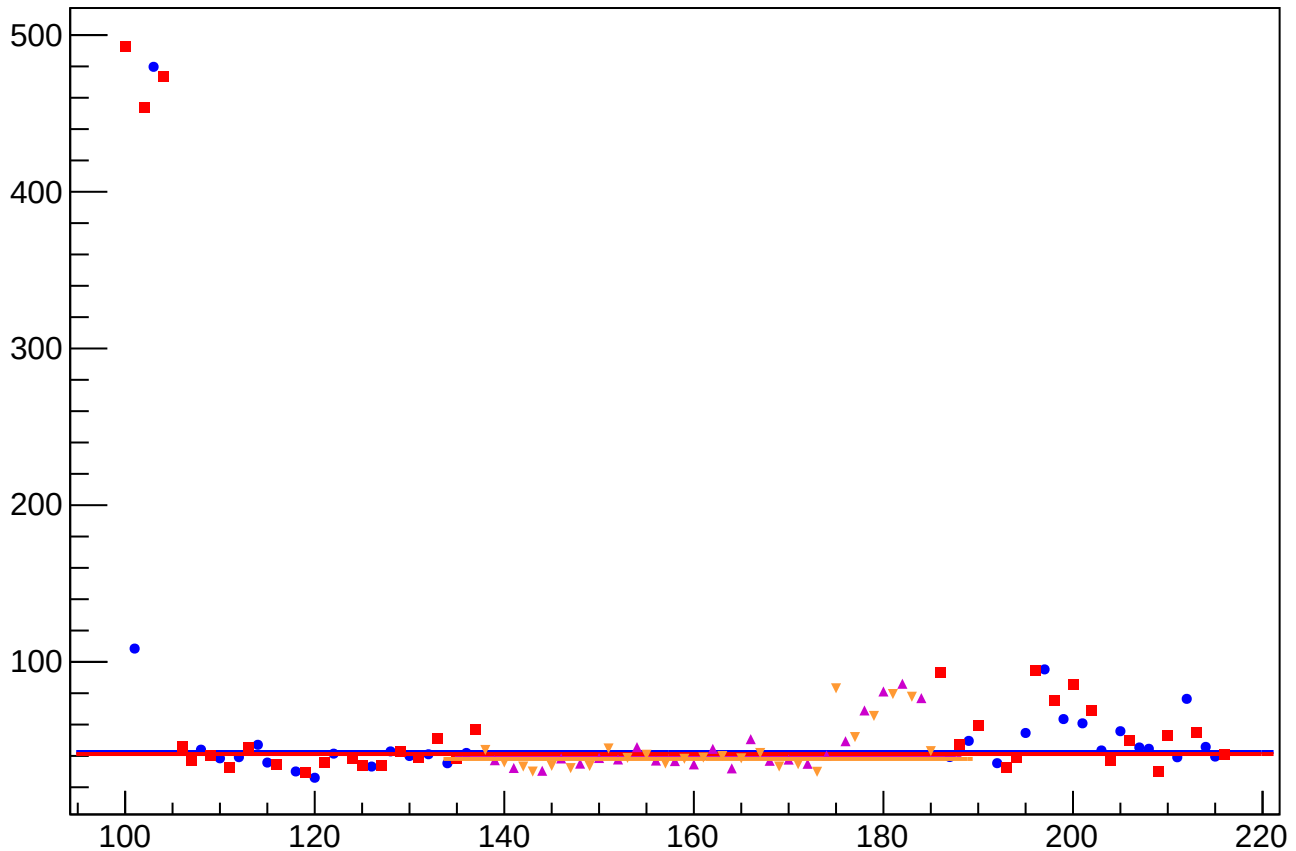
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}: 18.9/22$

+ sign  $0.006 \pm 0.007$   $\chi^2/\text{NDF}: 79.9/55$

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}: 125.4/112$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 45.2/56$

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 42.490 $\pm$ 0.008  $\chi^2$ /NDF: 3123460.6/30

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF: 1967110.9/24

Right Out: 41.202 $\pm$ 0.008  $\chi^2$ /NDF: 4181983.0/33

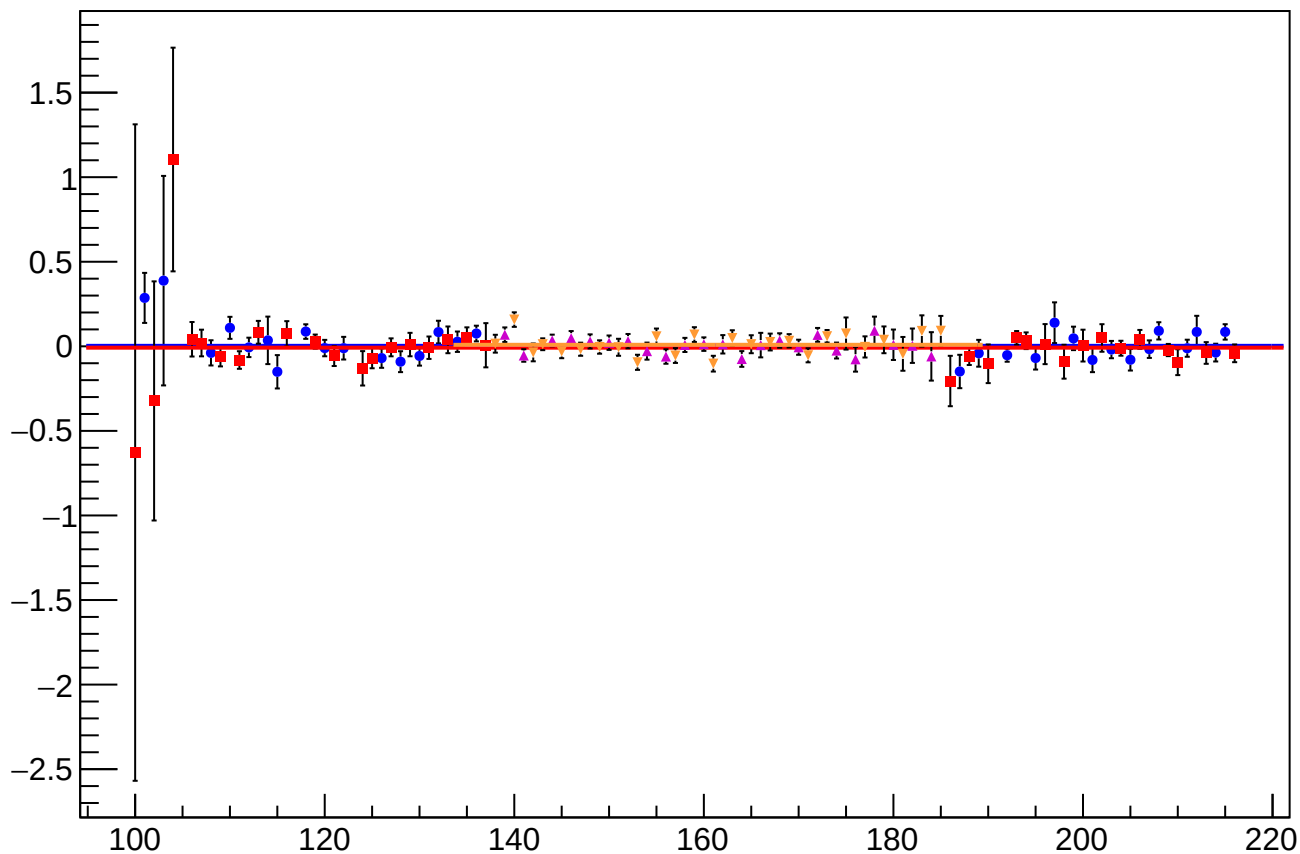
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF: 1727699.0/22

+ sign 39.975 $\pm$ 0.005  $\chi^2$ /NDF: 5274874.3/55

All: 39.880 $\pm$ 0.004  $\chi^2$ /NDF: 11245489.5/112

- sign 39.780 $\pm$ 0.005  $\chi^2$ /NDF: 5969901.8/56

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.011$   $\chi^2/\text{NDF}: 41.1/30$

Left Out:  $0.009 \pm 0.010$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}: 25.2/33$

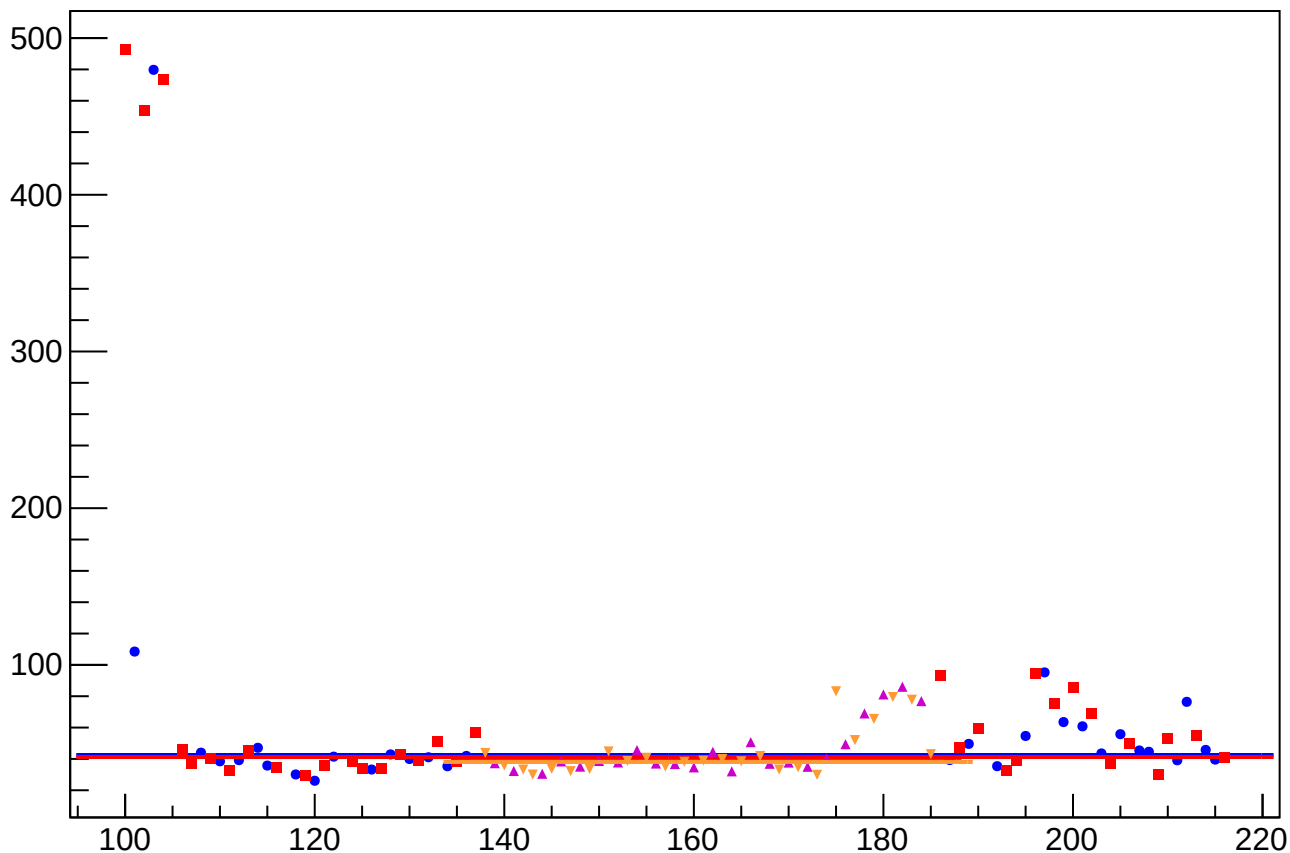
Left In:  $0.008 \pm 0.010$   $\chi^2/\text{NDF}: 18.9/22$

+ sign  $0.006 \pm 0.007$   $\chi^2/\text{NDF}: 79.9/55$

All:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}: 125.4/112$

- sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}: 45.2/56$

asym\_usr\_atr1\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 42.490 $\pm$ 0.008  $\chi^2$ /NDF: 3123460.6/30

Left Out: 38.067 $\pm$ 0.007  $\chi^2$ /NDF: 1967110.9/24

Right Out: 41.202 $\pm$ 0.008  $\chi^2$ /NDF: 4181983.0/33

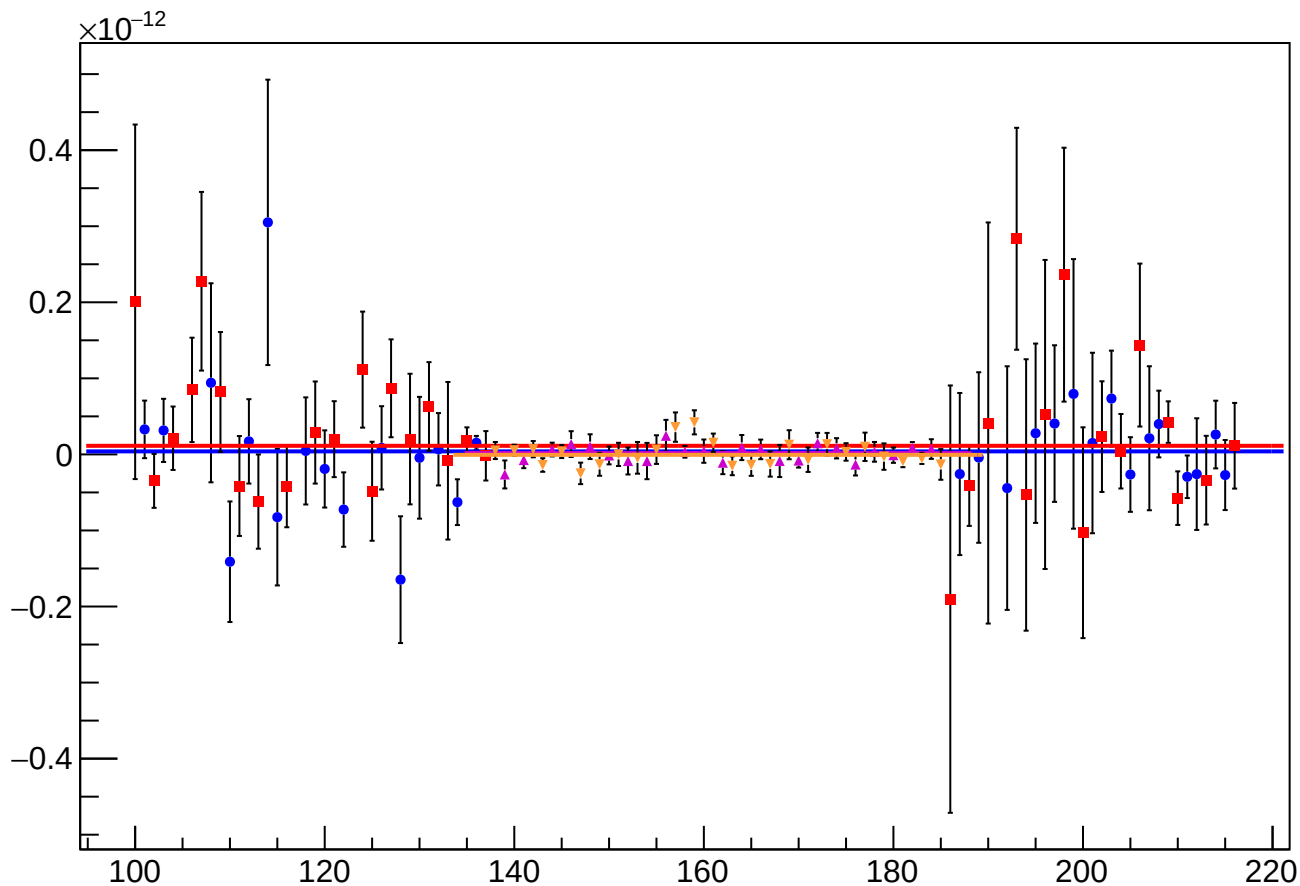
Left In: 38.630 $\pm$ 0.007  $\chi^2$ /NDF: 1727699.0/22

+ sign 39.975 $\pm$ 0.005  $\chi^2$ /NDF: 5274874.3/55

All: 39.880 $\pm$ 0.004  $\chi^2$ /NDF: 11245489.5/112

- sign 39.780 $\pm$ 0.005  $\chi^2$ /NDF: 5969901.8/56

asym\_usr\_atr1\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/33

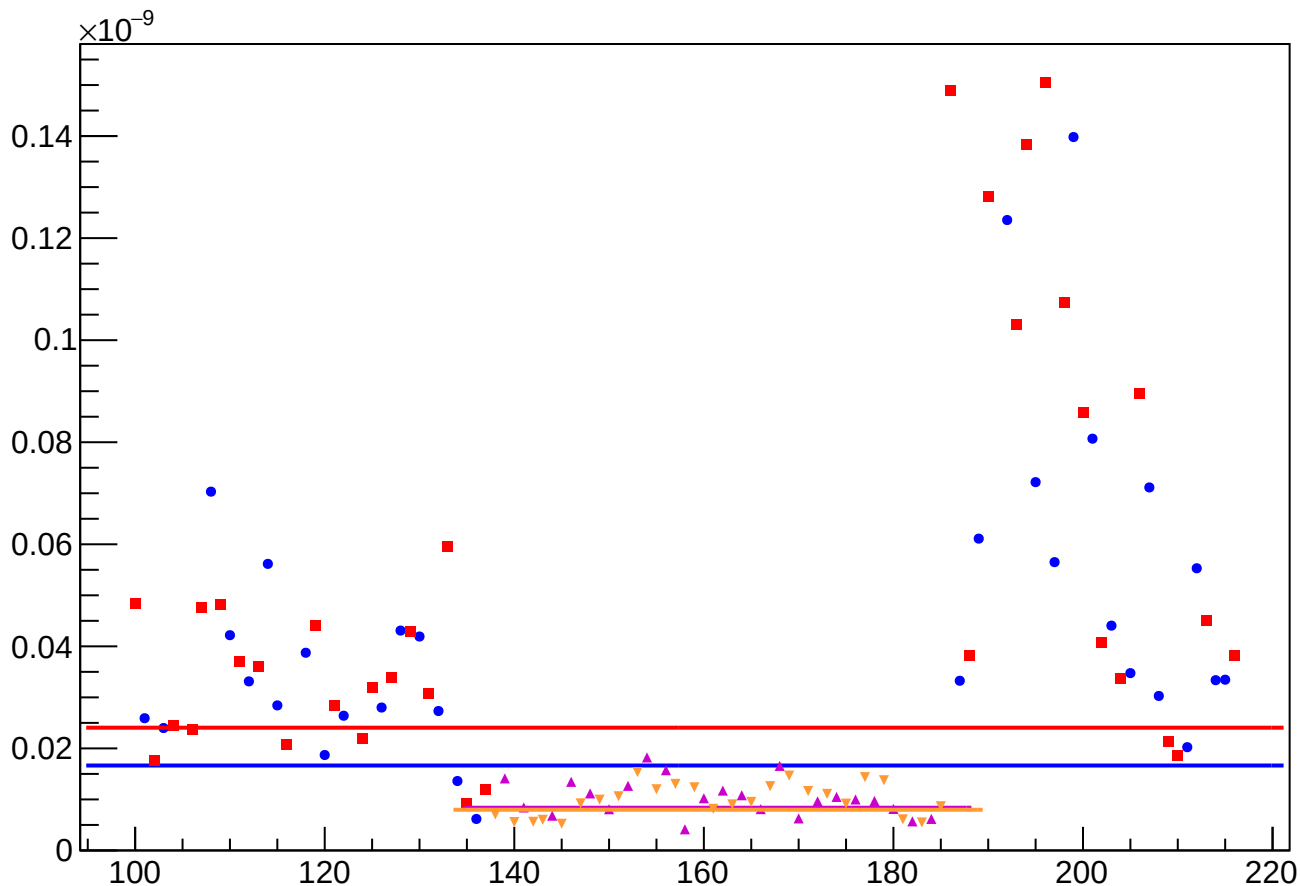
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.1/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 98.4/112

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.7/56

asym\_usr\_atr1\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10810598.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2831909.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8281965.8/33

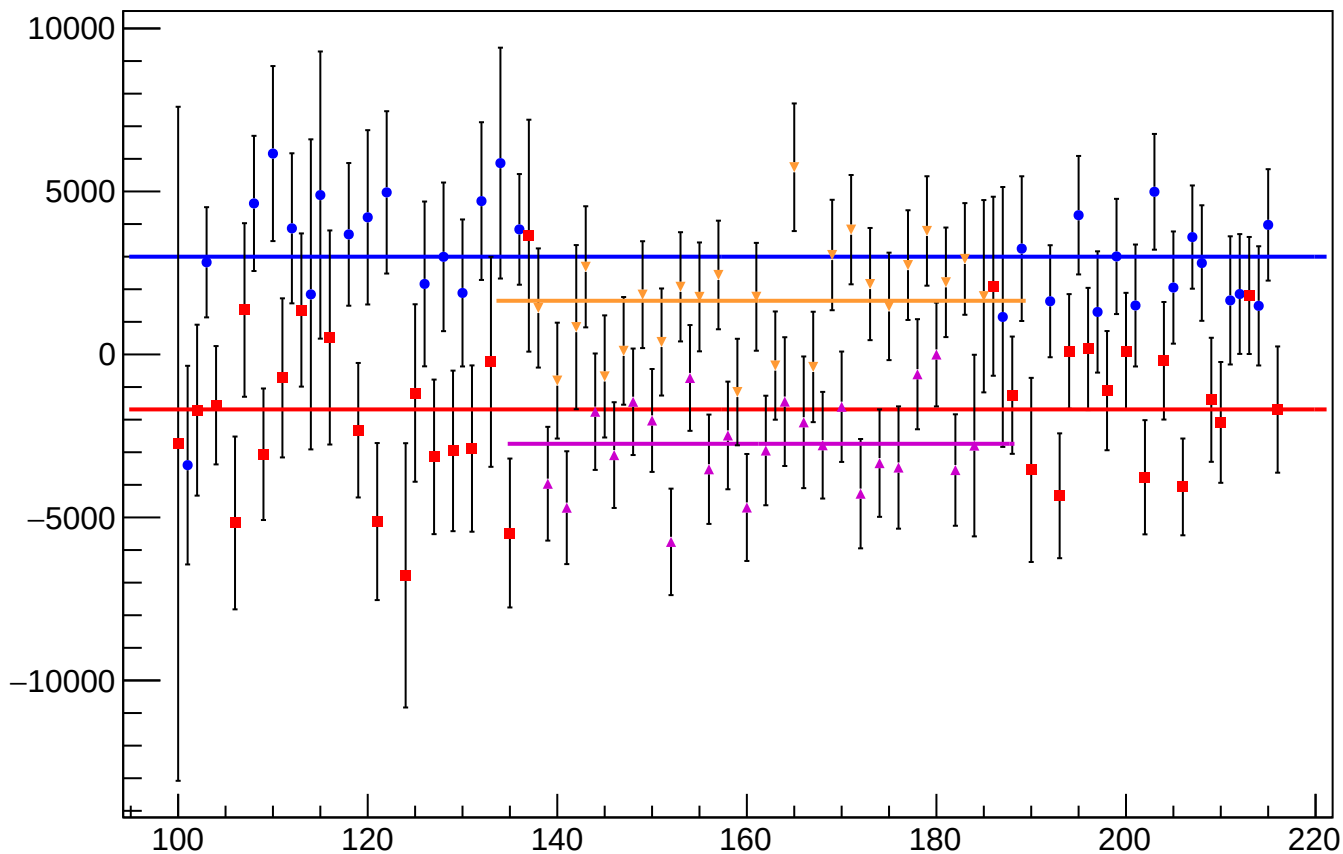
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2786396.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16538622.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33567814.0/112

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16948887.9/56

# reg\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 2998.616 $\pm$ 374.306  $\chi^2$ /NDF: 15.9/30

Left Out: 1646.402 $\pm$ 349.758  $\chi^2$ /NDF: 21.0/24

Right Out: -1686.148 $\pm$ 373.038  $\chi^2$ /NDF: 31.5/33

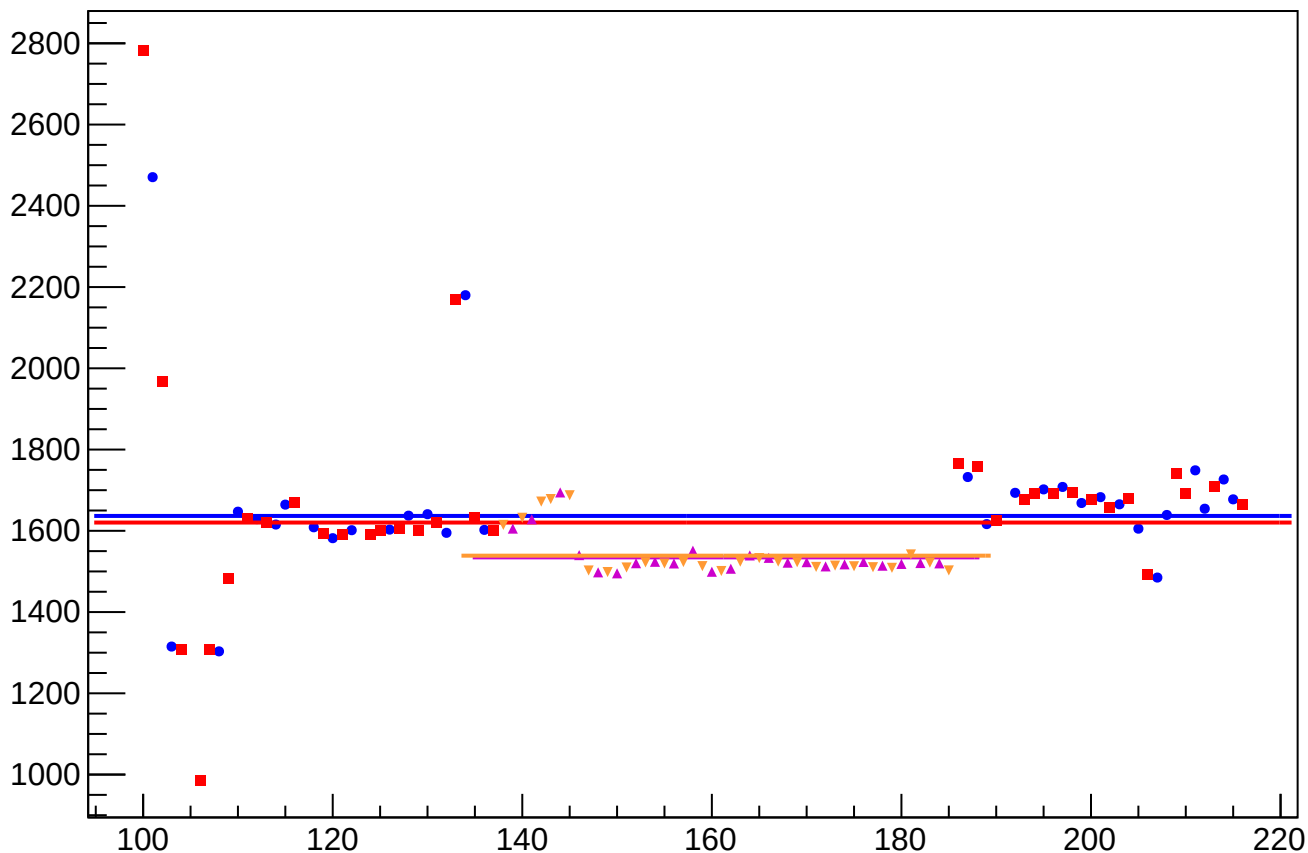
Left In: -2740.924 $\pm$ 358.458  $\chi^2$ /NDF: 16.4/22

+ sign 2276.718 $\pm$ 255.554  $\chi^2$ /NDF: 43.9/55

All: 46.662 $\pm$ 181.726  $\chi^2$ /NDF: 250.1/112

- sign -2234.552 $\pm$ 258.469  $\chi^2$ /NDF: 52.1/56

# reg\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In:  $1636.630 \pm 0.265$   $\chi^2/\text{NDF}: 367597.9/30$

Left Out:  $1538.810 \pm 0.247$   $\chi^2/\text{NDF}: 47056.2/24$

Right Out:  $1620.350 \pm 0.262$   $\chi^2/\text{NDF}: 475650.8/33$

Left In:  $1534.615 \pm 0.253$   $\chi^2/\text{NDF}: 31120.6/22$

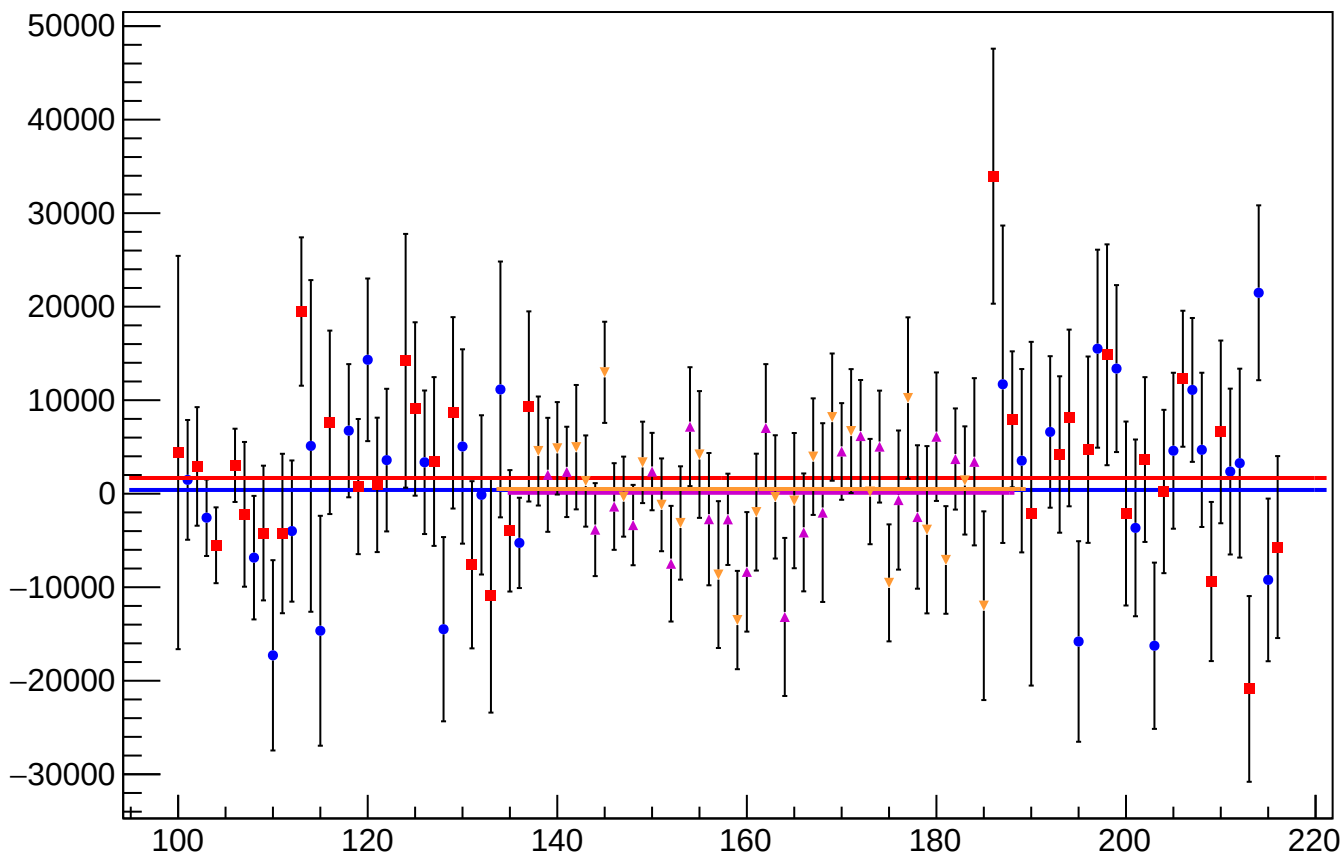
+ sign  $1584.407 \pm 0.181$   $\chi^2/\text{NDF}: 487577.6/55$

All:  $1580.271 \pm 0.128$   $\chi^2/\text{NDF}: 1050723.8/11$

- sign  $1576.067 \pm 0.182$   $\chi^2/\text{NDF}: 562089.7/56$



asym\_usr\_atr2\_avg\_reg\_correction\_mean vs Slug



Right In: 401.200 $\pm$ 1460.159  $\chi^2$ /NDF: 35.0/30

Left Out: 503.846 $\pm$ 1187.304  $\chi^2$ /NDF: 26.8/24

Right Out: 1680.940 $\pm$ 1374.736  $\chi^2$ /NDF: 33.9/33

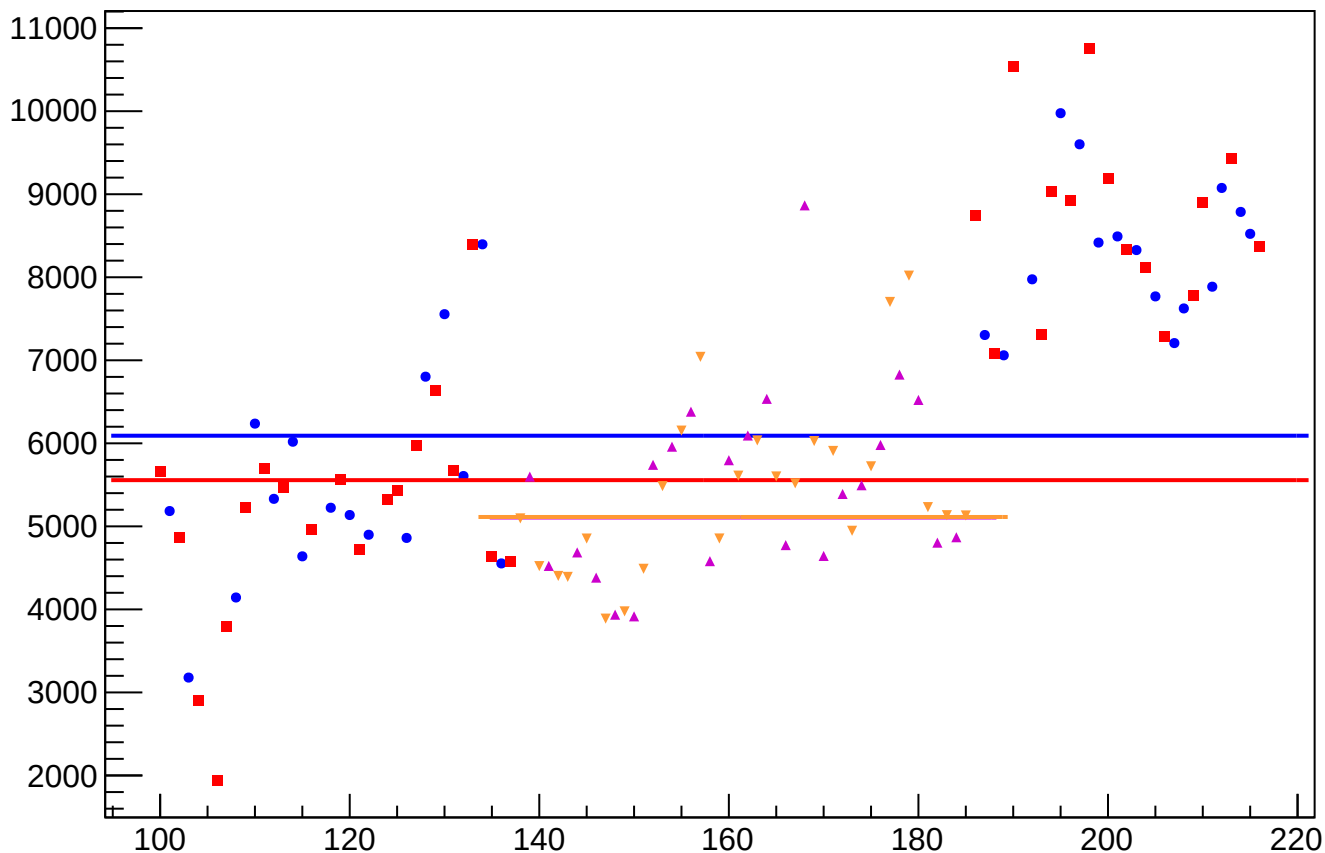
Left In: 97.910 $\pm$ 1217.585  $\chi^2$ /NDF: 14.9/22

+ sign 462.991 $\pm$ 921.198  $\chi^2$ /NDF: 61.8/55

All: 630.154 $\pm$ 647.923  $\chi^2$ /NDF: 111.4/112

- sign 793.810 $\pm$ 911.482  $\chi^2$ /NDF: 49.5/56

# asym\_usr\_atr2\_avg\_reg\_correction\_rms vs Slug



Right In: 6091.642 $\pm$ 1.032  $\chi^2$ /NDF: 3528678.8/30

Left Out: 5112.954 $\pm$ 0.840  $\chi^2$ /NDF:1159010.4/24

Right Out: 5556.622 $\pm$ 0.972  $\chi^2$ /NDF: 5836431.3/33

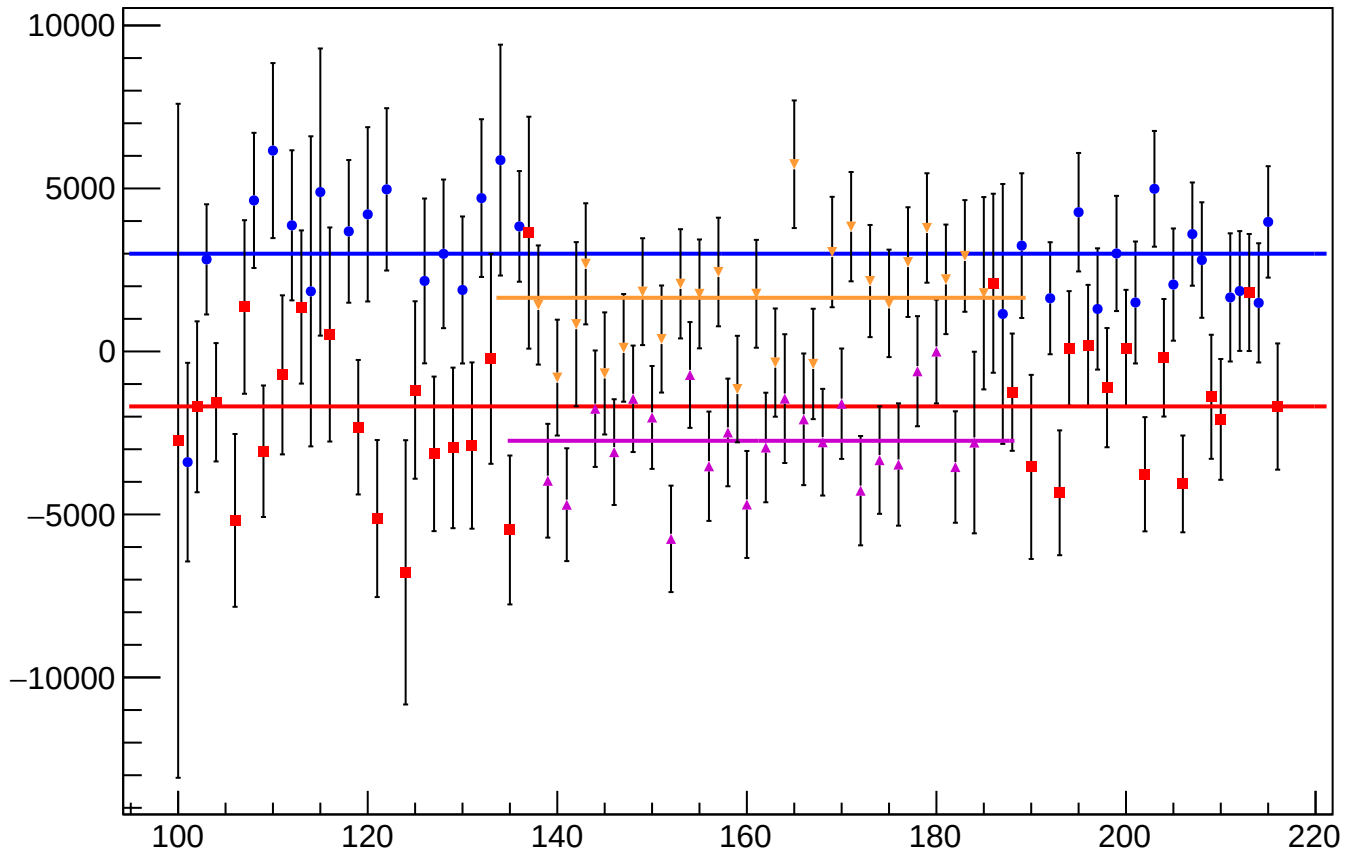
Left In: 5106.386 $\pm$ 0.861  $\chi^2$ /NDF:1251622.3/22

+ sign 5502.492 $\pm$ 0.651  $\chi^2$ /NDF: 5228568.6/55

All: 5402.350 $\pm$ 0.458  $\chi^2$ /NDF: 12483614.0/100

- sign 5304.310 $\pm$ 0.645  $\chi^2$ /NDF: 7208271.6/56

# cor\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In:  $2998.503 \pm 374.306$   $\chi^2/\text{NDF}$ : 15.9/30

Left Out:  $1646.294 \pm 349.758$   $\chi^2/\text{NDF}$ : 21.0/24

Right Out:  $-1686.170 \pm 373.039$   $\chi^2/\text{NDF}$ : 31.6/33

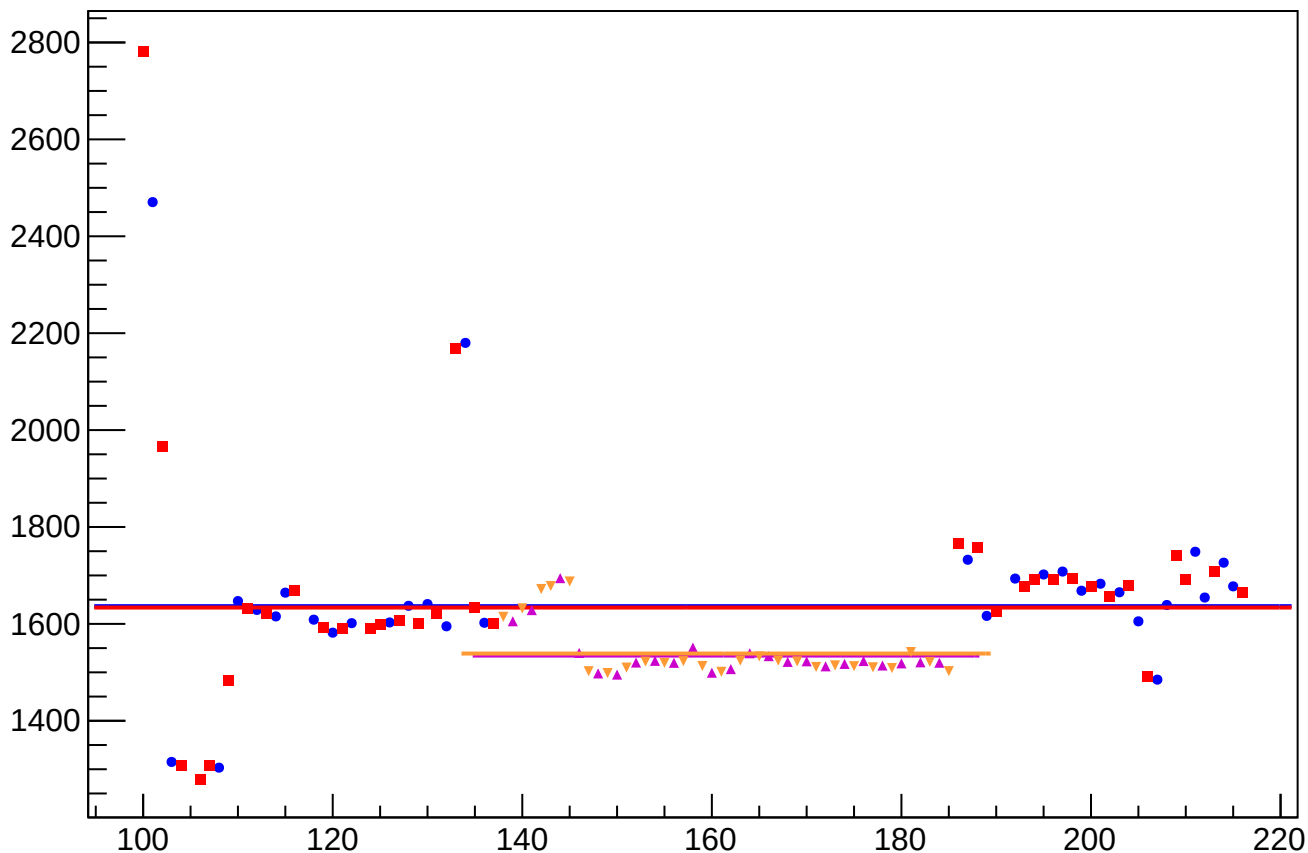
Left In:  $-2740.826 \pm 358.458$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $2276.608 \pm 255.554$   $\chi^2/\text{NDF}$ : 43.9/55

All:  $46.628 \pm 181.726$   $\chi^2/\text{NDF}$ : 250.1/112

- sign  $-2234.512 \pm 258.469$   $\chi^2/\text{NDF}$ : 52.2/56

# cor\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1636.630+/-0.265  $\chi^2/\text{NDF}$ : 367596.9/30

Left Out: 1538.810+/-0.247  $\chi^2/\text{NDF}$ : 47056.2/24

Right Out: 1633.737+/-0.263  $\chi^2/\text{NDF}$ : 317622.8/33

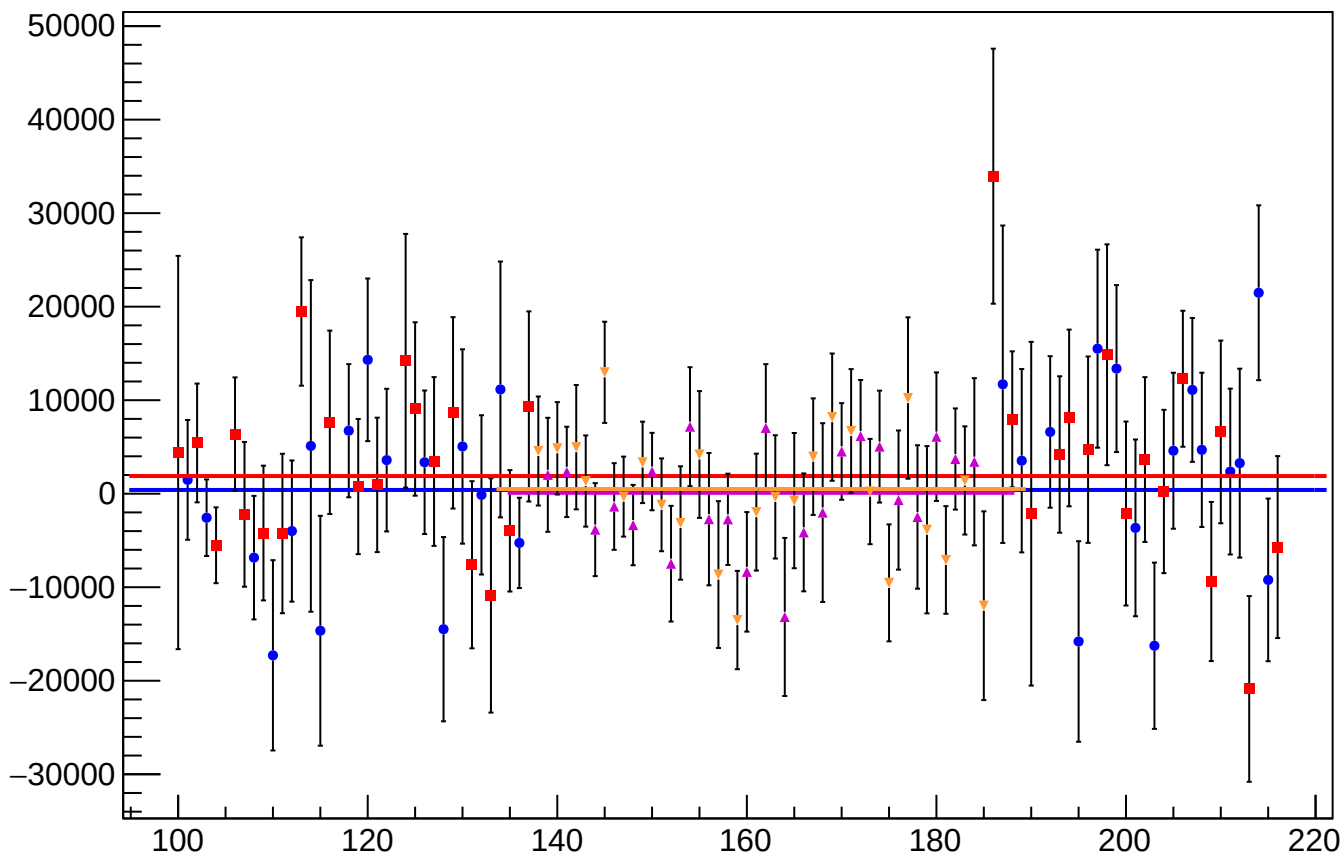
Left In: 1534.615+/-0.253  $\chi^2/\text{NDF}$ : 31120.6/22

+ sign 1584.408+/-0.181  $\chi^2/\text{NDF}$ : 487576.7/55

All: 1583.355+/-0.128  $\chi^2/\text{NDF}$ : 909929.5/112

- sign 1582.280+/-0.183  $\chi^2/\text{NDF}$ : 422284.2/56

asym\_usr\_atr2\_avg\_cor\_correction\_mean vs Slug



Right In:  $401.157 \pm 1460.178$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $503.849 \pm 1187.302$   $\chi^2/\text{NDF}$ : 26.8/24

Right Out:  $1888.692 \pm 1426.943$   $\chi^2/\text{NDF}$ : 34.6/33

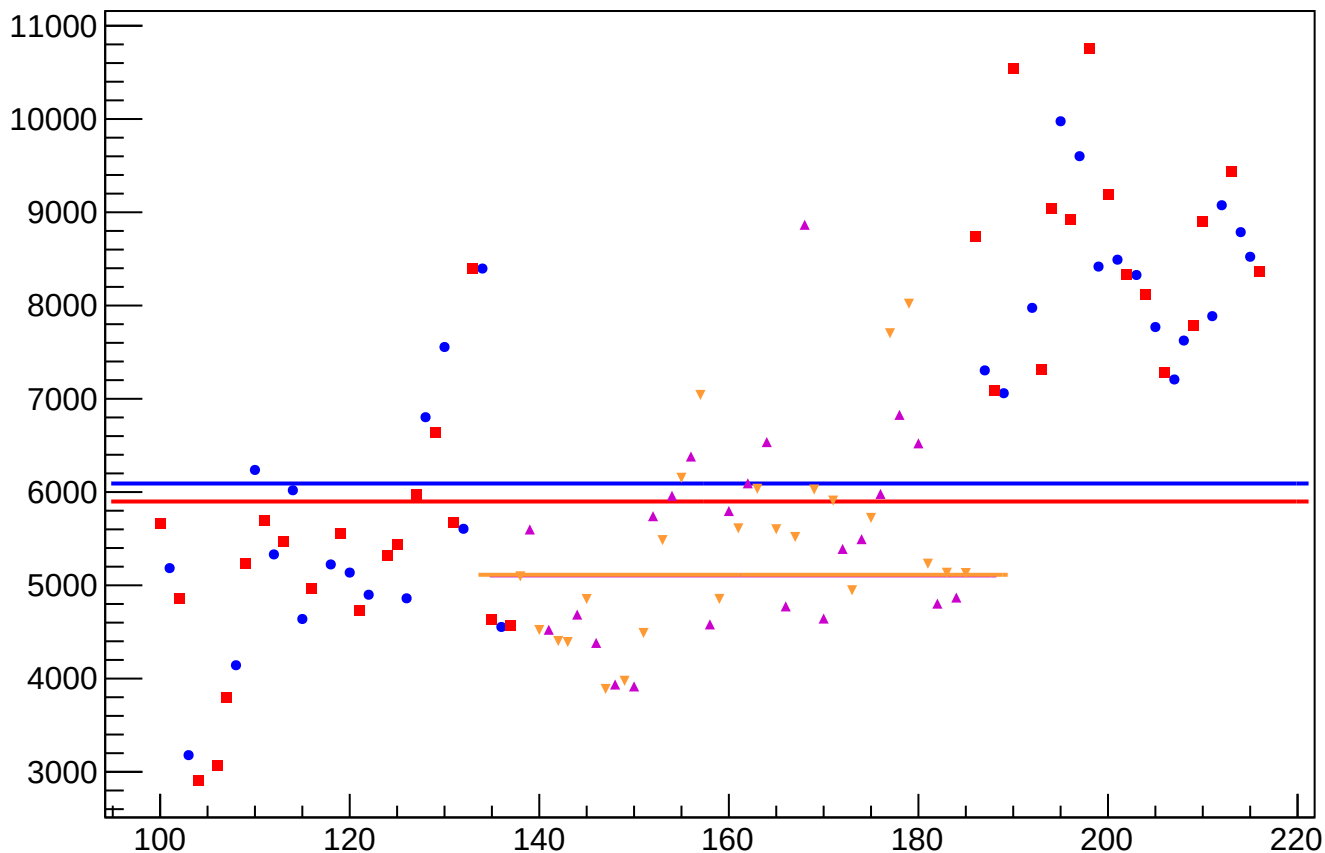
Left In:  $97.930 \pm 1217.585$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $462.976 \pm 921.202$   $\chi^2/\text{NDF}$ : 61.8/55

All:  $656.642 \pm 653.156$   $\chi^2/\text{NDF}$ : 112.3/112

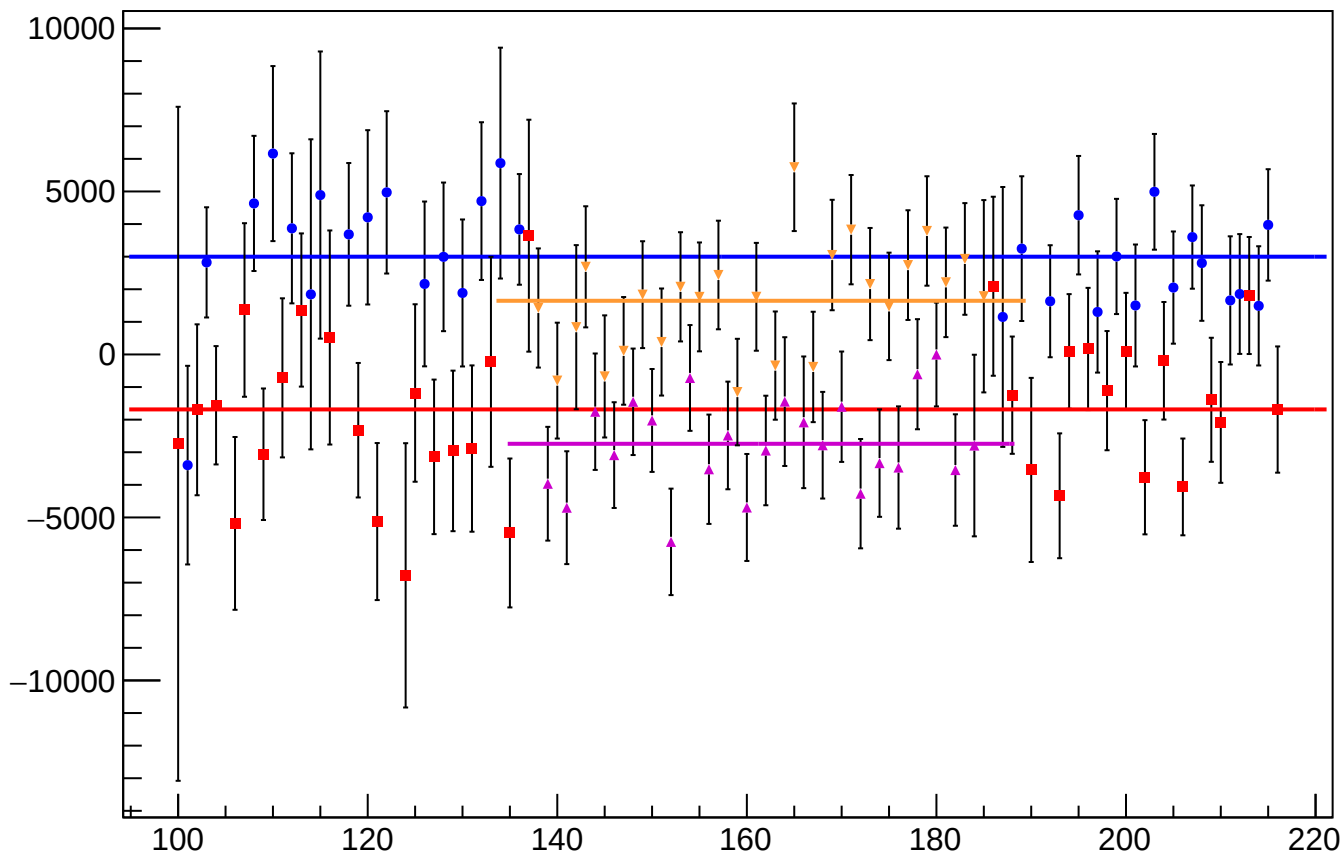
- sign  $852.425 \pm 926.224$   $\chi^2/\text{NDF}$ : 50.4/56

asym\_usr\_atr2\_avg\_cor\_correction\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 6091.759+/-1.033  | $\chi^2/\text{NDF}$ : 3528236.7/30 | + sign 5502.527+/-0.651 | $\chi^2/\text{NDF}$ : 5228269.0/55   |
| Left Out: 5112.947+/-0.840  | $\chi^2/\text{NDF}$ : 1159023.2/24 |                         |                                      |
| Right Out: 5898.728+/-1.009 | $\chi^2/\text{NDF}$ : 4352881.2/33 | All: 5471.543+/-0.462   | $\chi^2/\text{NDF}$ : 11194166.6/100 |
| Left In: 5106.384+/-0.861   | $\chi^2/\text{NDF}$ : 1251622.9/22 | - sign 5440.219+/-0.655 | $\chi^2/\text{NDF}$ : 5961347.6/56   |

# eigen\_cor\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 2998.503 $\pm$ 374.306  $\chi^2$ /NDF: 15.9/30

Left Out: 1646.294 $\pm$ 349.758  $\chi^2$ /NDF:21.0/24

Right Out: -1686.170 $\pm$ 373.039  $\chi^2$ /NDF: 31.6/33

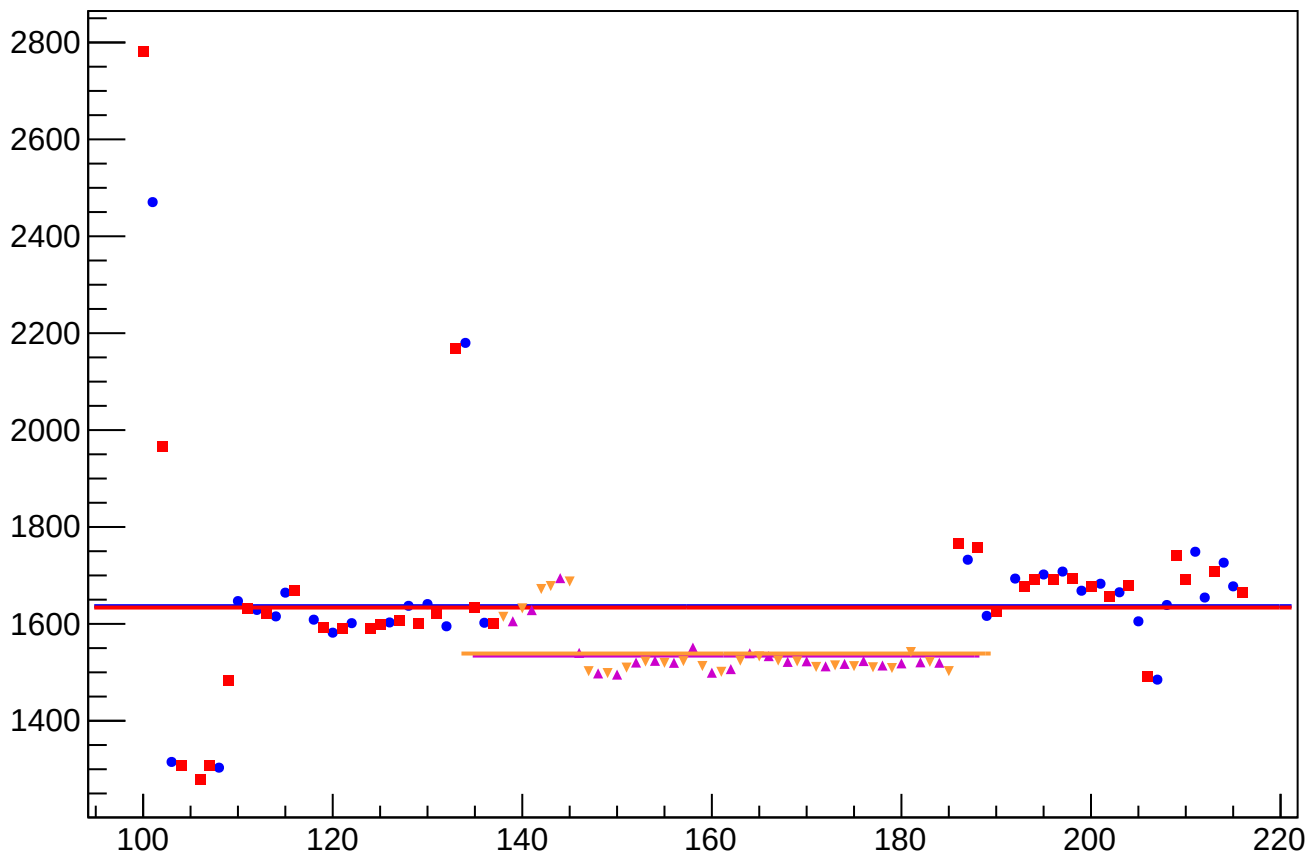
Left In: -2740.826 $\pm$ 358.458  $\chi^2$ /NDF:16.4/22

+ sign 2276.608 $\pm$ 255.554  $\chi^2$ /NDF: 43.9/55

All: 46.628 $\pm$ 181.726  $\chi^2$ /NDF: 250.1/112

- sign -2234.512 $\pm$ 258.469  $\chi^2$ /NDF: 52.2/56

# eigen\_cor\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1636.630 $\pm$ 0.265  $\chi^2$ /NDF: 367596.9/30

Left Out: 1538.810 $\pm$ 0.247  $\chi^2$ /NDF: 47056.2/24

Right Out: 1633.737 $\pm$ 0.263  $\chi^2$ /NDF: 317622.8/33

Left In: 1534.615 $\pm$ 0.253  $\chi^2$ /NDF: 31120.6/22

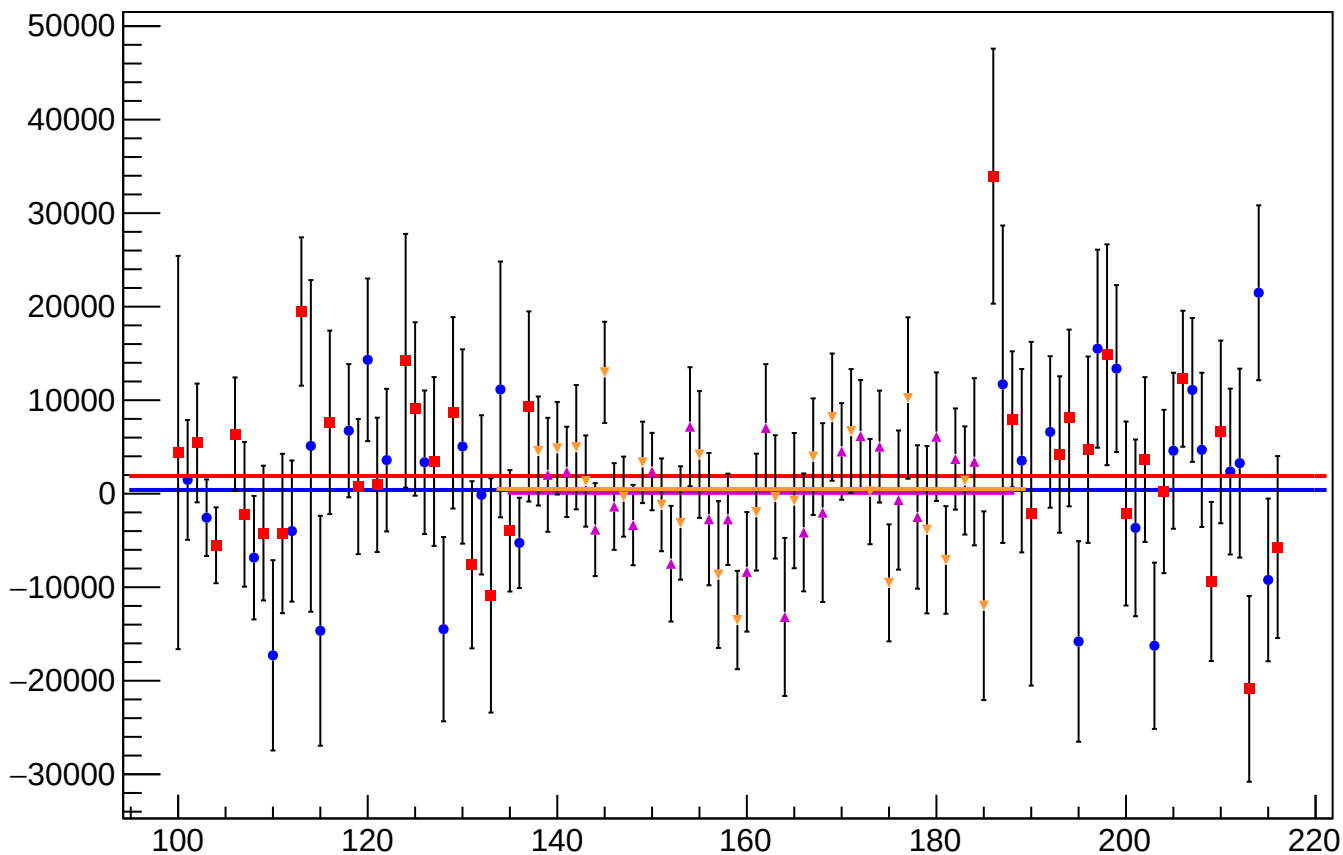
+ sign 1584.408 $\pm$ 0.181  $\chi^2$ /NDF: 487576.7/55

All: 1583.355 $\pm$ 0.128  $\chi^2$ /NDF: 909929.5/112

- sign 1582.280 $\pm$ 0.183  $\chi^2$ /NDF: 422284.2/56



asym\_usr\_atr2\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 401.157+/-1460.178  $\chi^2/\text{NDF}$ : 35.0/30

Left Out: 503.849+/-1187.302  $\chi^2/\text{NDF}$ : 26.8/24

Right Out: 1888.692+/-1426.943  $\chi^2/\text{NDF}$ : 34.6/33

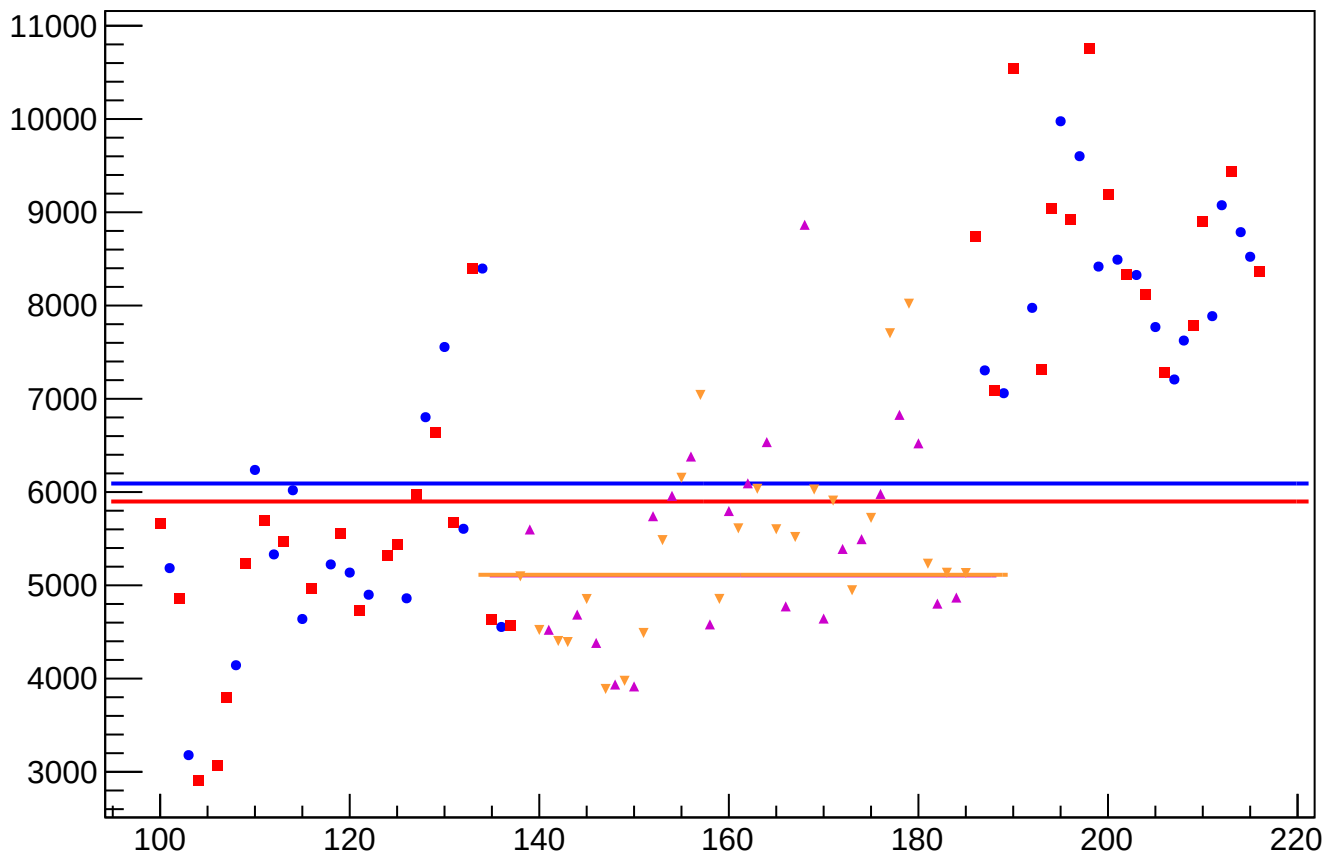
Left In: 97.930+/-1217.585  $\chi^2/\text{NDF}$ : 14.9/22

+ sign 462.976+/-921.202  $\chi^2/\text{NDF}$ : 61.8/55

All: 656.642+/-653.156  $\chi^2/\text{NDF}$ : 112.3/112

- sign 852.425+/-926.224  $\chi^2/\text{NDF}$ : 50.4/56

asym\_usr\_atr2\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 6091.759+/-1.033  $\chi^2/\text{NDF}$ : 3528236.7/30

Left Out: 5112.947+/-0.840  $\chi^2/\text{NDF}$ : 1159023.2/24

Right Out: 5898.728+/-1.009  $\chi^2/\text{NDF}$ : 4352881.2/33

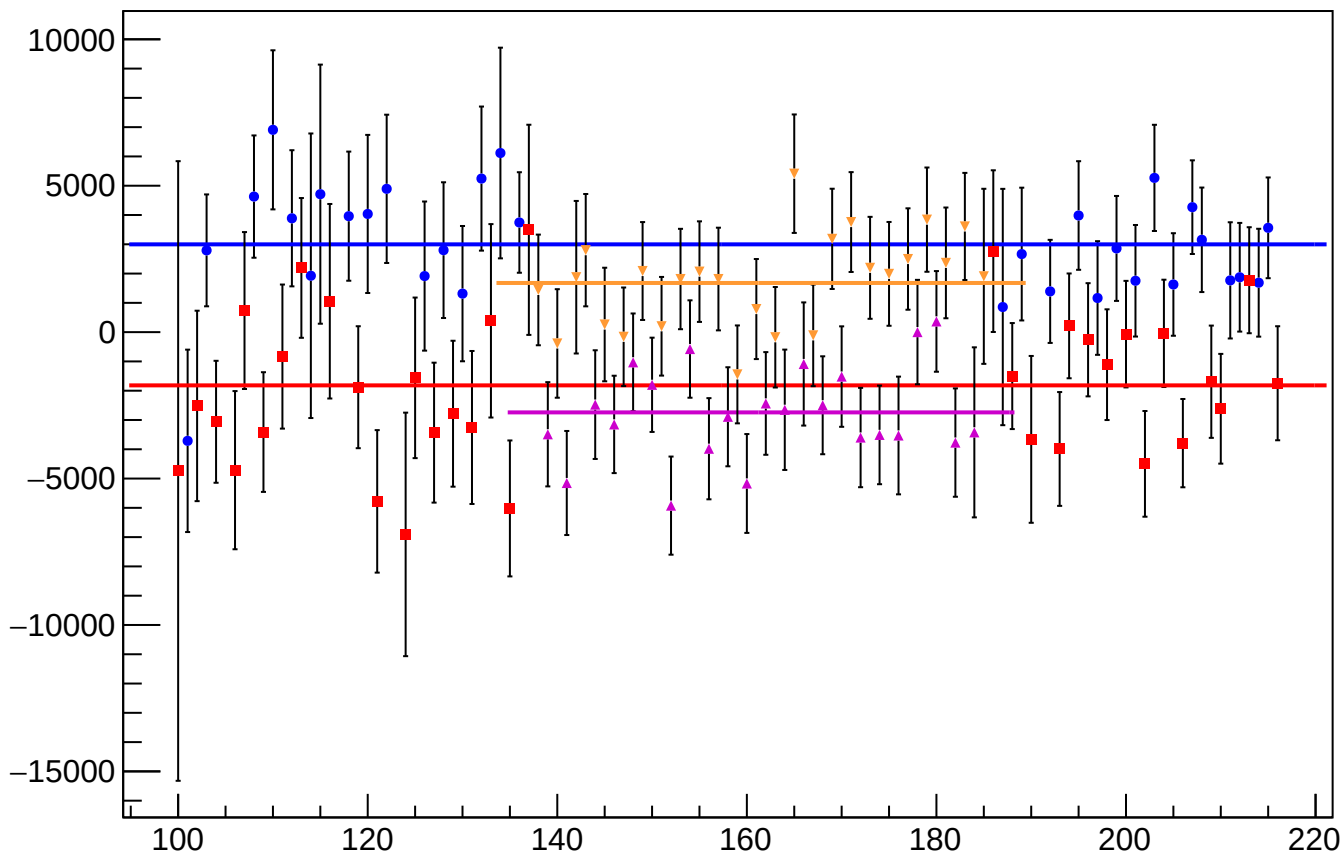
Left In: 5106.384+/-0.861  $\chi^2/\text{NDF}$ : 1251622.9/22

+ sign 5502.527+/-0.651  $\chi^2/\text{NDF}$ : 5228269.0/55

All: 5471.543+/-0.462  $\chi^2/\text{NDF}$ : 11194166.6/111

- sign 5440.219+/-0.655  $\chi^2/\text{NDF}$ : 5961347.6/56

# dit\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 2997.682 $\pm$ 381.695  $\chi^2$ /NDF: 18.0/30

Left Out: 1679.163 $\pm$ 362.391  $\chi^2$ /NDF:19.0/24

Right Out: -1817.744 $\pm$ 381.611  $\chi^2$ /NDF: 34.3/33

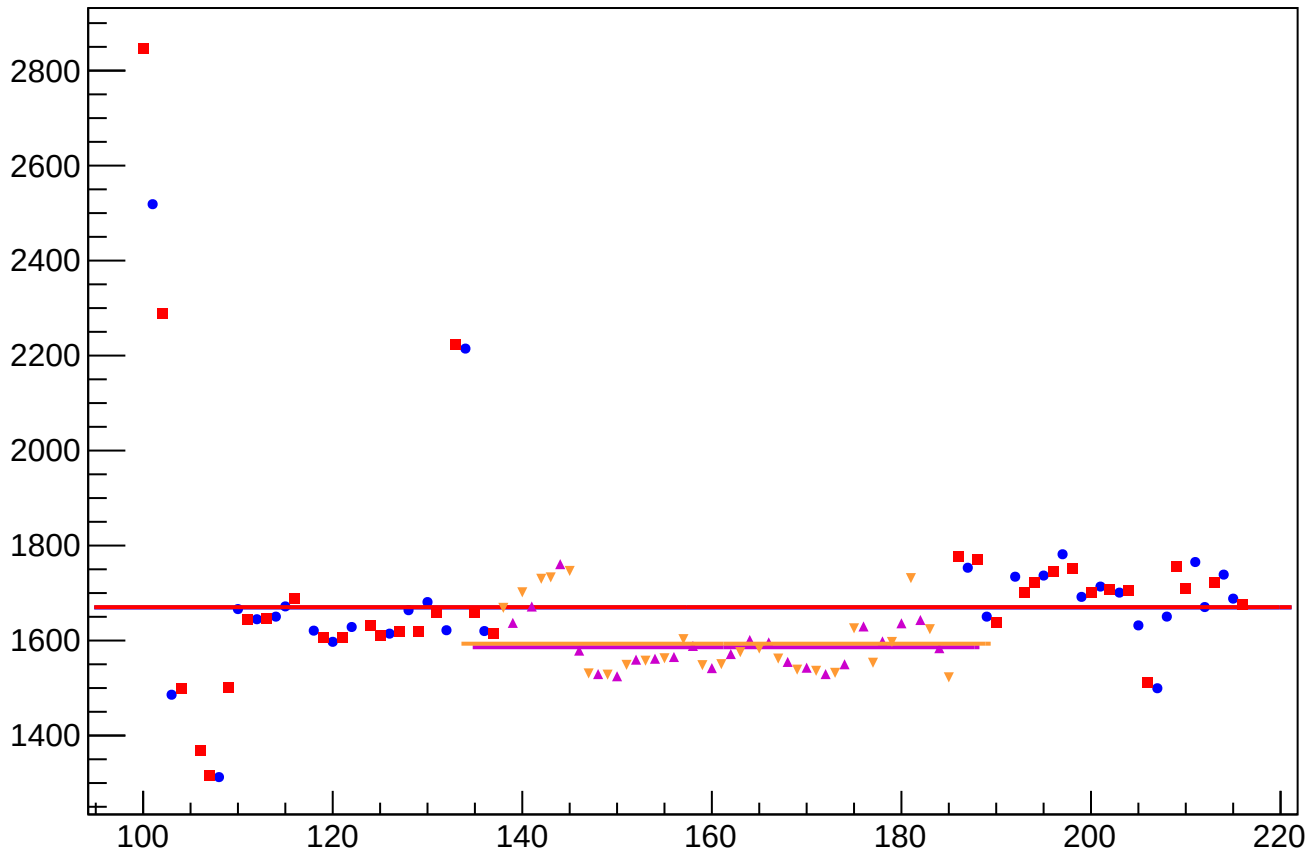
Left In: -2740.666 $\pm$ 370.604  $\chi^2$ /NDF:19.2/22

+ sign 2304.239 $\pm$ 262.809  $\chi^2$ /NDF: 43.2/55

All: 32.319 $\pm$ 186.904  $\chi^2$ /NDF: 250.9/112

- sign -2292.706 $\pm$ 265.863  $\chi^2$ /NDF: 56.5/56

# dit\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1669.596 $\pm$ 0.270  $\chi^2$ /NDF: 324686.6/30

Left Out: 1593.388 $\pm$ 0.256  $\chi^2$ /NDF: 71876.4/24

+ sign 1629.516 $\pm$ 0.186  $\chi^2$ /NDF: 438492.6/55

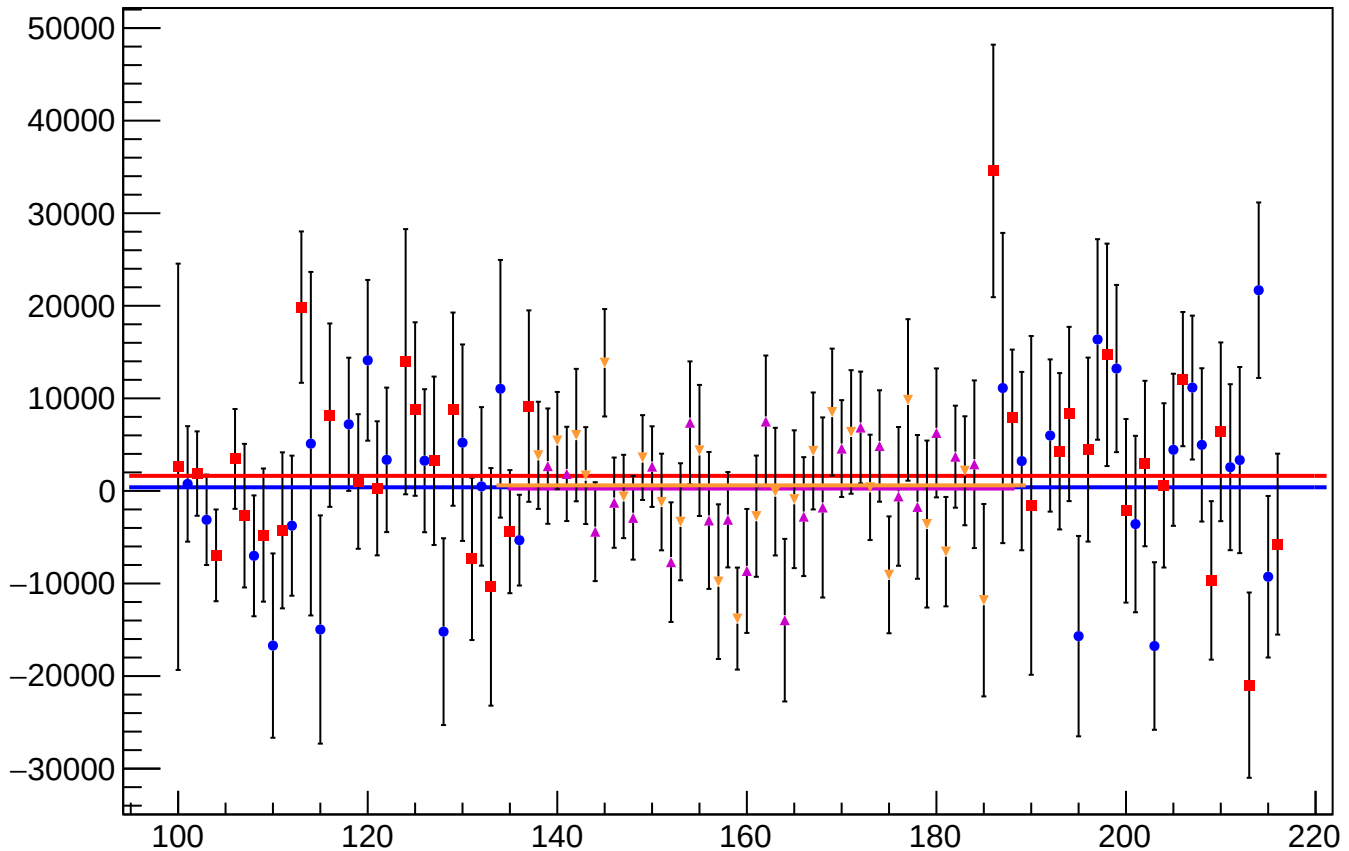
Right Out: 1670.331 $\pm$ 0.270  $\chi^2$ /NDF: 296884.9/33

All: 1628.225 $\pm$ 0.132  $\chi^2$ /NDF: 827770.6/112

Left In: 1585.918 $\pm$ 0.262  $\chi^2$ /NDF: 41915.3/22

- sign 1626.905 $\pm$ 0.188  $\chi^2$ /NDF: 389180.4/56

asym\_usr\_atr2\_avg\_dit\_correction\_mean vs Slug



Right In: 392.785 $\pm$ 1495.310  $\chi^2$ /NDF: 34.9/30

Left Out: 601.820 $\pm$ 1233.559  $\chi^2$ /NDF: 26.0/24

Right Out: 1626.638 $\pm$ 1420.364  $\chi^2$ /NDF: 33.7/33

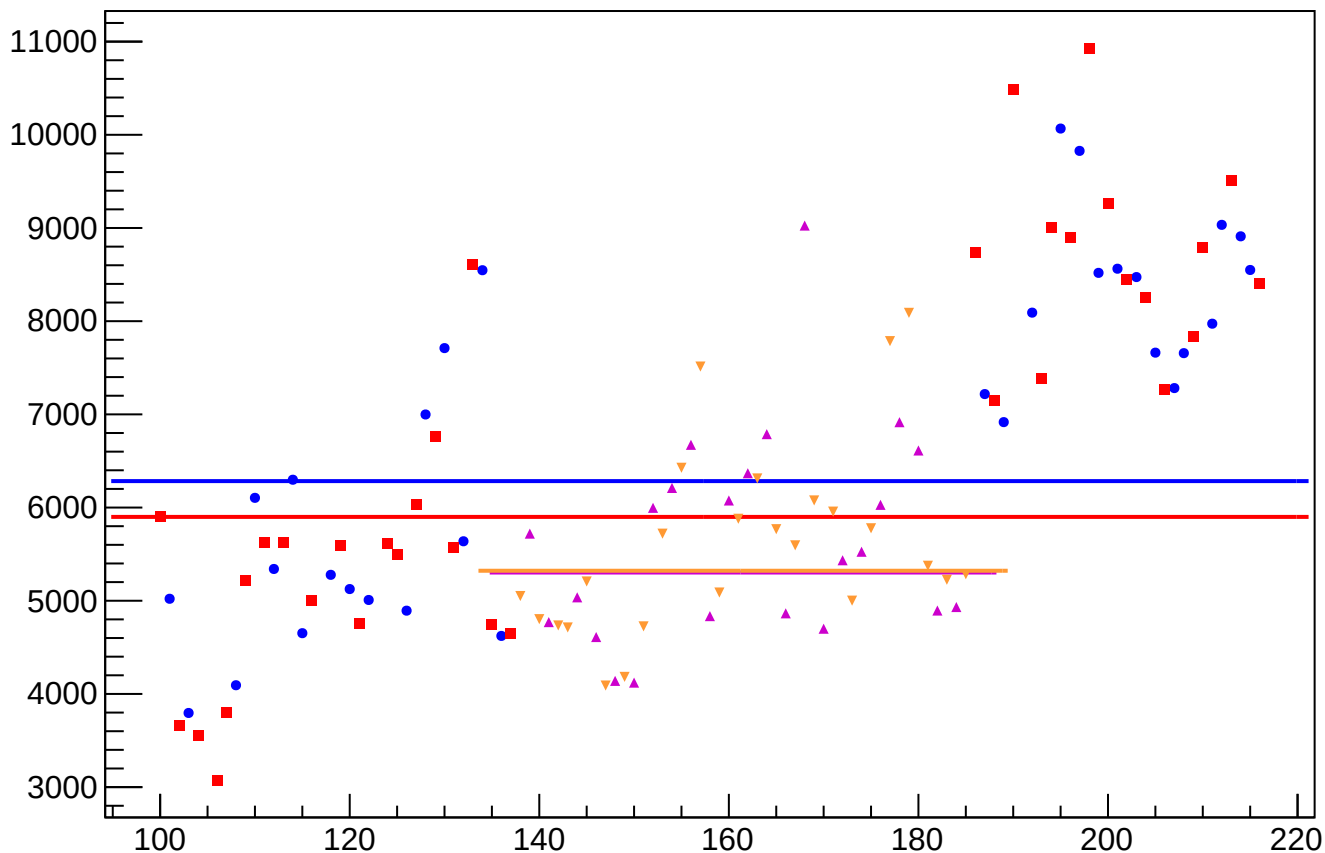
Left In: 255.905 $\pm$ 1262.607  $\chi^2$ /NDF: 14.6/22

+ sign 517.170 $\pm$ 951.557  $\chi^2$ /NDF: 60.9/55

All: 690.492 $\pm$ 670.044  $\chi^2$ /NDF: 109.8/112

- sign 860.951 $\pm$ 943.664  $\chi^2$ /NDF: 48.8/56

asym\_usr\_atr2\_avg\_dit\_correction\_rms vs Slug



Right In: 6283.872 $\pm$ 1.057  $\chi^2$ /NDF: 3003104.9/30

Left Out: 5321.956 $\pm$ 0.872  $\chi^2$ /NDF:1037009.2/24

Right Out: 5899.737 $\pm$ 1.004  $\chi^2$ /NDF: 4276025.8/33

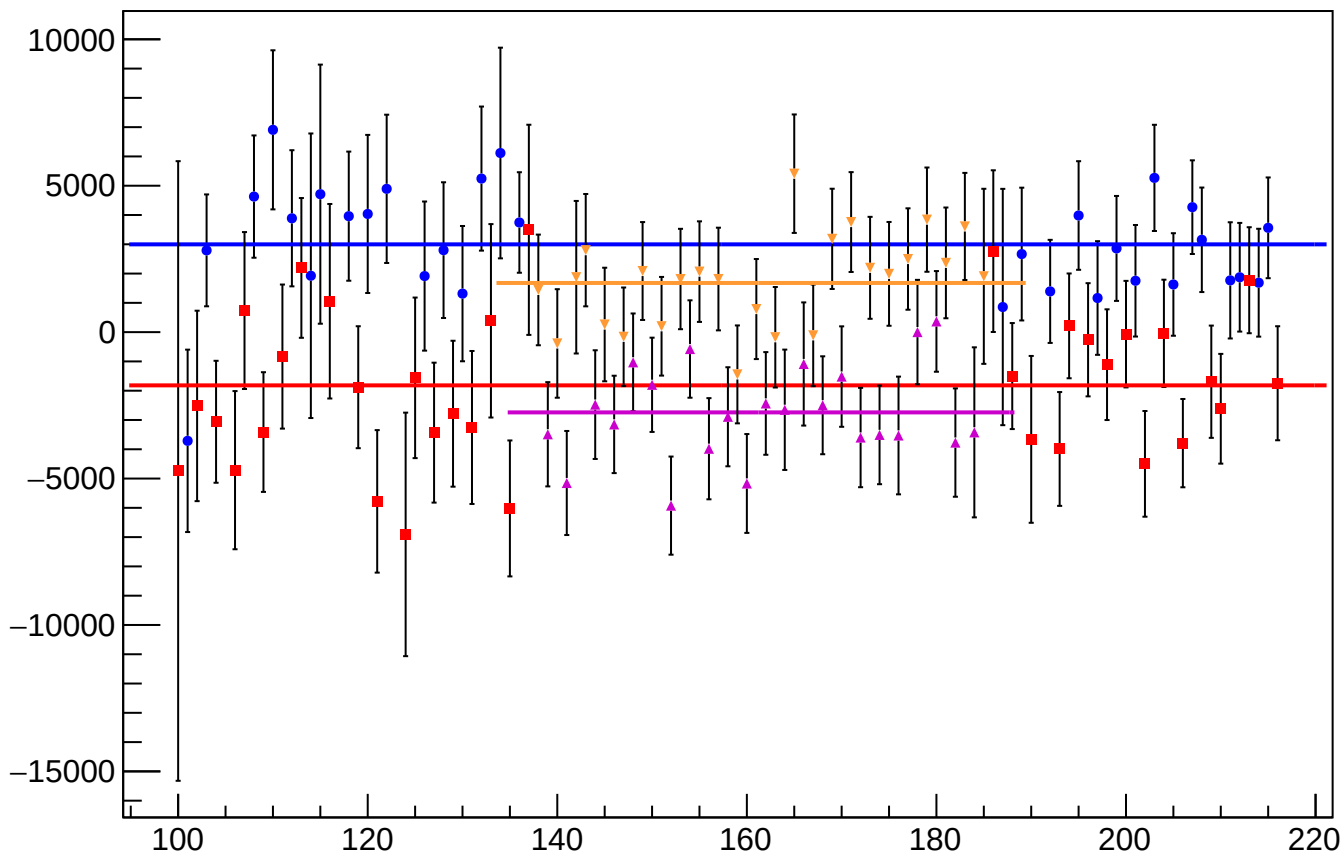
Left In: 5302.849 $\pm$ 0.893  $\chi^2$ /NDF:1152376.1/22

+ sign 5711.489 $\pm$ 0.673  $\chi^2$ /NDF: 4532597.2/55

All: 5638.299 $\pm$ 0.474  $\chi^2$ /NDF: 10181762.6/101

- sign 5566.318 $\pm$ 0.667  $\chi^2$ /NDF: 5625696.6/56

eigen\_dit\_asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 2997.679 $\pm$ 381.695  $\chi^2$ /NDF: 18.0/30

Left Out: 1679.156 $\pm$ 362.392  $\chi^2$ /NDF:19.0/24

Right Out: -1817.746 $\pm$ 381.611  $\chi^2$ /NDF: 34.3/33

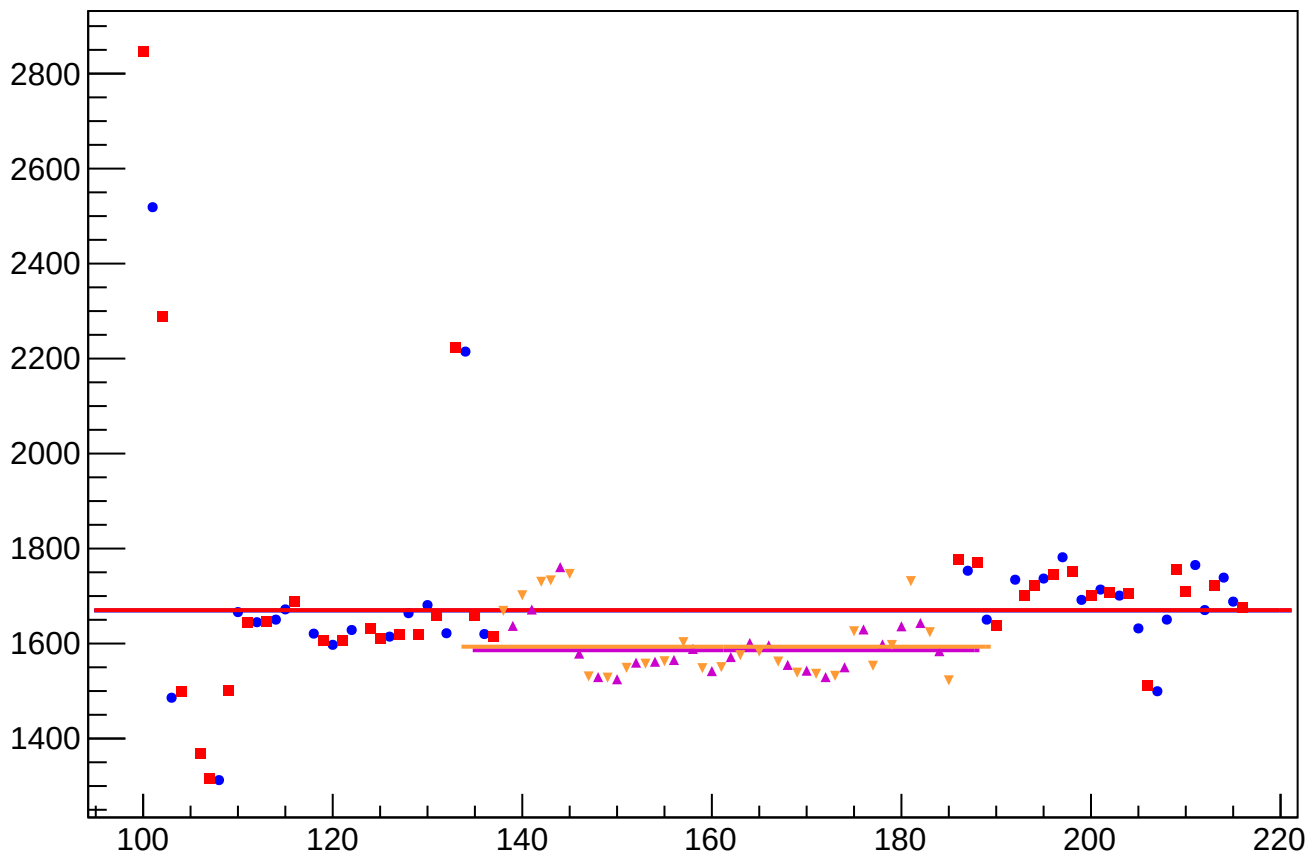
Left In: -2740.666 $\pm$ 370.605  $\chi^2$ /NDF:19.2/22

+ sign 2304.234 $\pm$ 262.809  $\chi^2$ /NDF: 43.2/55

All: 32.317 $\pm$ 186.904  $\chi^2$ /NDF: 250.9/112

- sign -2292.707 $\pm$ 265.863  $\chi^2$ /NDF: 56.5/56

# eigen\_dit\_asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 1669.595 $\pm$ 0.270  $\chi^2$ /NDF: 324686.9/30

Left Out: 1593.388 $\pm$ 0.256  $\chi^2$ /NDF: 71876.3/24

+ sign 1629.516 $\pm$ 0.186  $\chi^2$ /NDF: 438491.6/55

Right Out: 1670.331 $\pm$ 0.270  $\chi^2$ /NDF: 296884.9/33

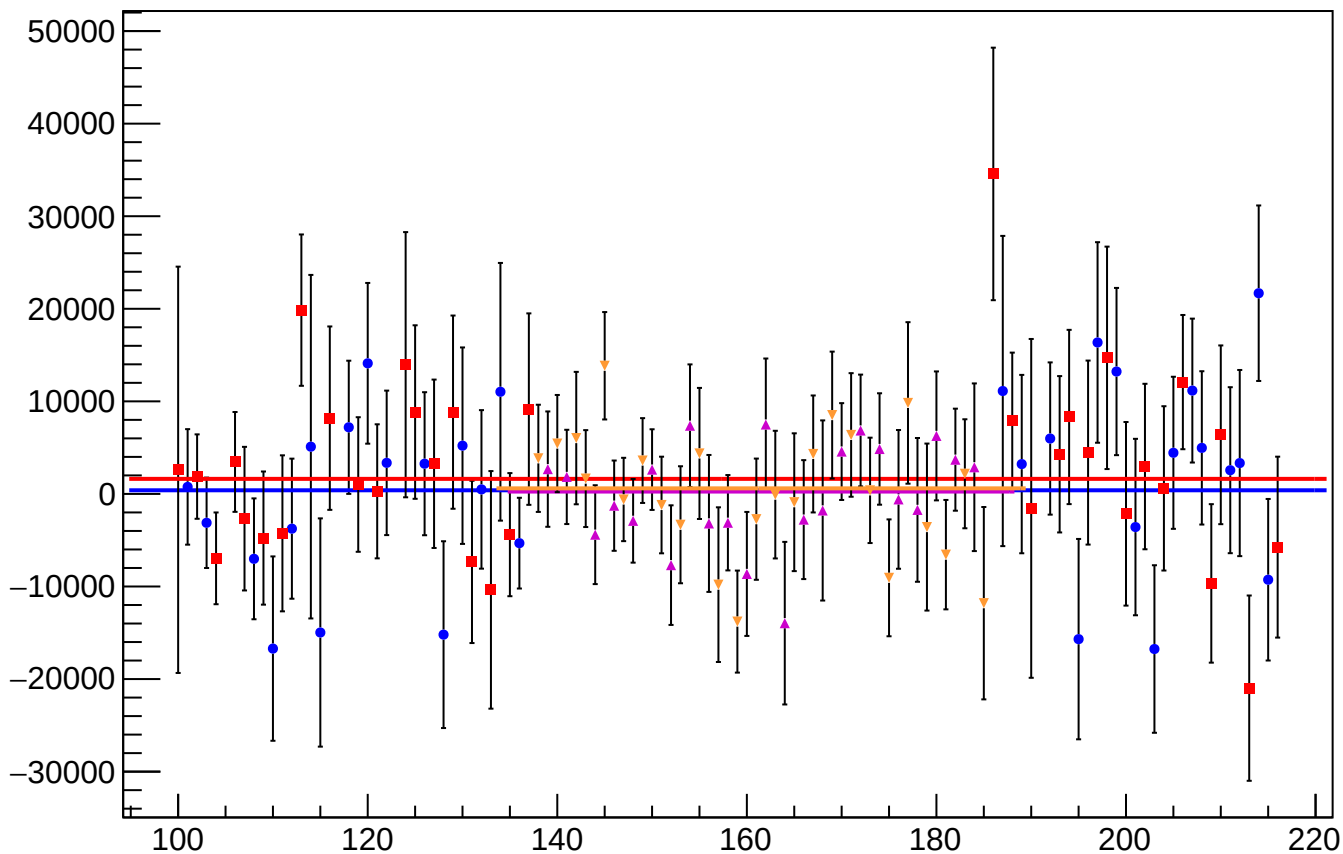
All: 1628.225 $\pm$ 0.132  $\chi^2$ /NDF: 827768.0/112

Left In: 1585.919 $\pm$ 0.262  $\chi^2$ /NDF: 41915.1/22

- sign 1626.905 $\pm$ 0.188  $\chi^2$ /NDF: 389178.9/56



asym\_usr\_atr2\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $392.789 \pm 1495.310$   $\chi^2/\text{NDF}: 34.9/30$

Left Out:  $601.817 \pm 1233.561$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $1626.635 \pm 1420.363$   $\chi^2/\text{NDF}: 33.7/33$

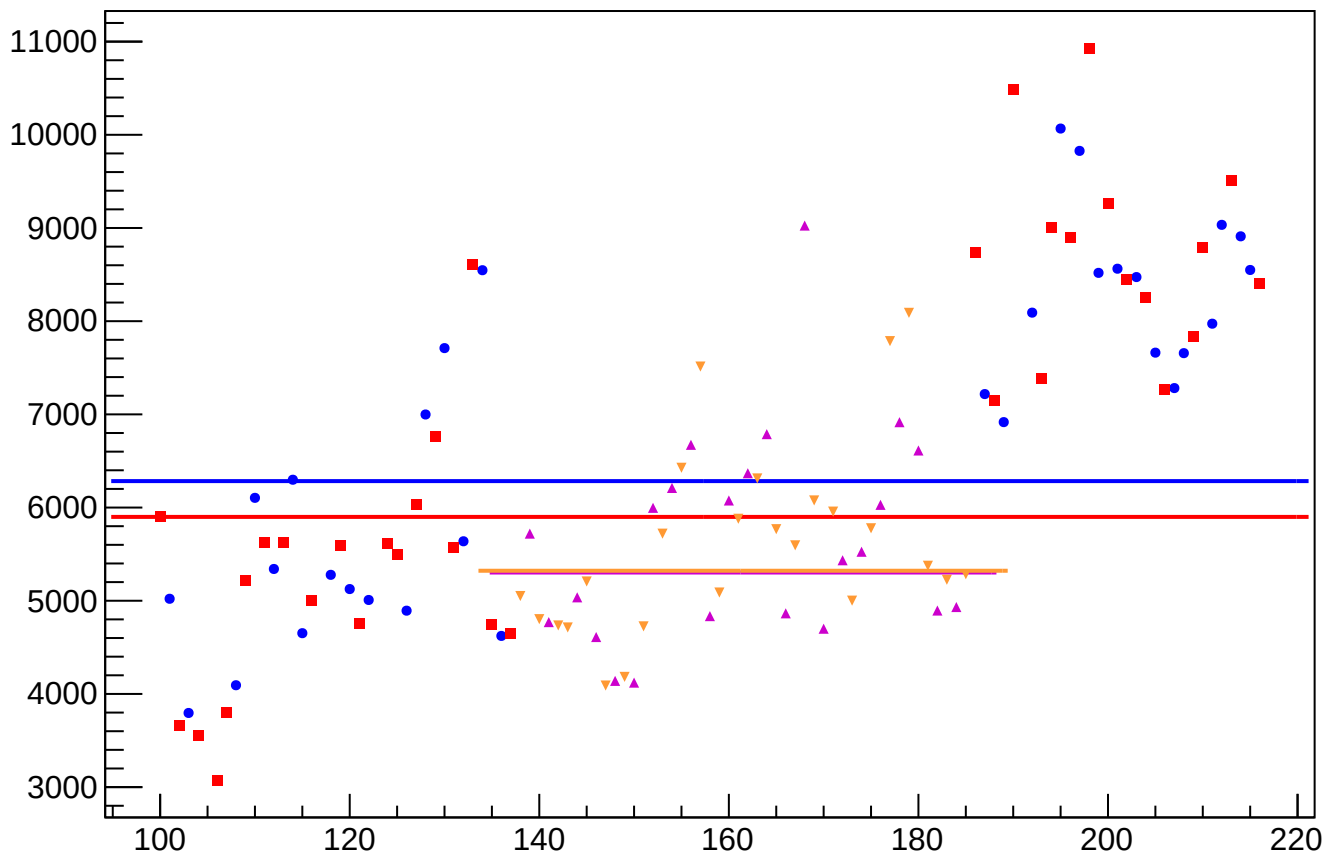
Left In:  $255.907 \pm 1262.609$   $\chi^2/\text{NDF}: 14.6/22$

+ sign  $517.170 \pm 951.558$   $\chi^2/\text{NDF}: 60.9/55$

All:  $690.493 \pm 670.045$   $\chi^2/\text{NDF}: 109.8/112$

- sign  $860.953 \pm 943.665$   $\chi^2/\text{NDF}: 48.8/56$

asym\_usr\_atr2\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 6283.868 $\pm$ 1.057  $\chi^2$ /NDF: 3003122.9/30

Left Out: 5321.965 $\pm$ 0.872  $\chi^2$ /NDF:1037011.4/24

Right Out: 5899.732 $\pm$ 1.004  $\chi^2$ /NDF: 4276045.2/33

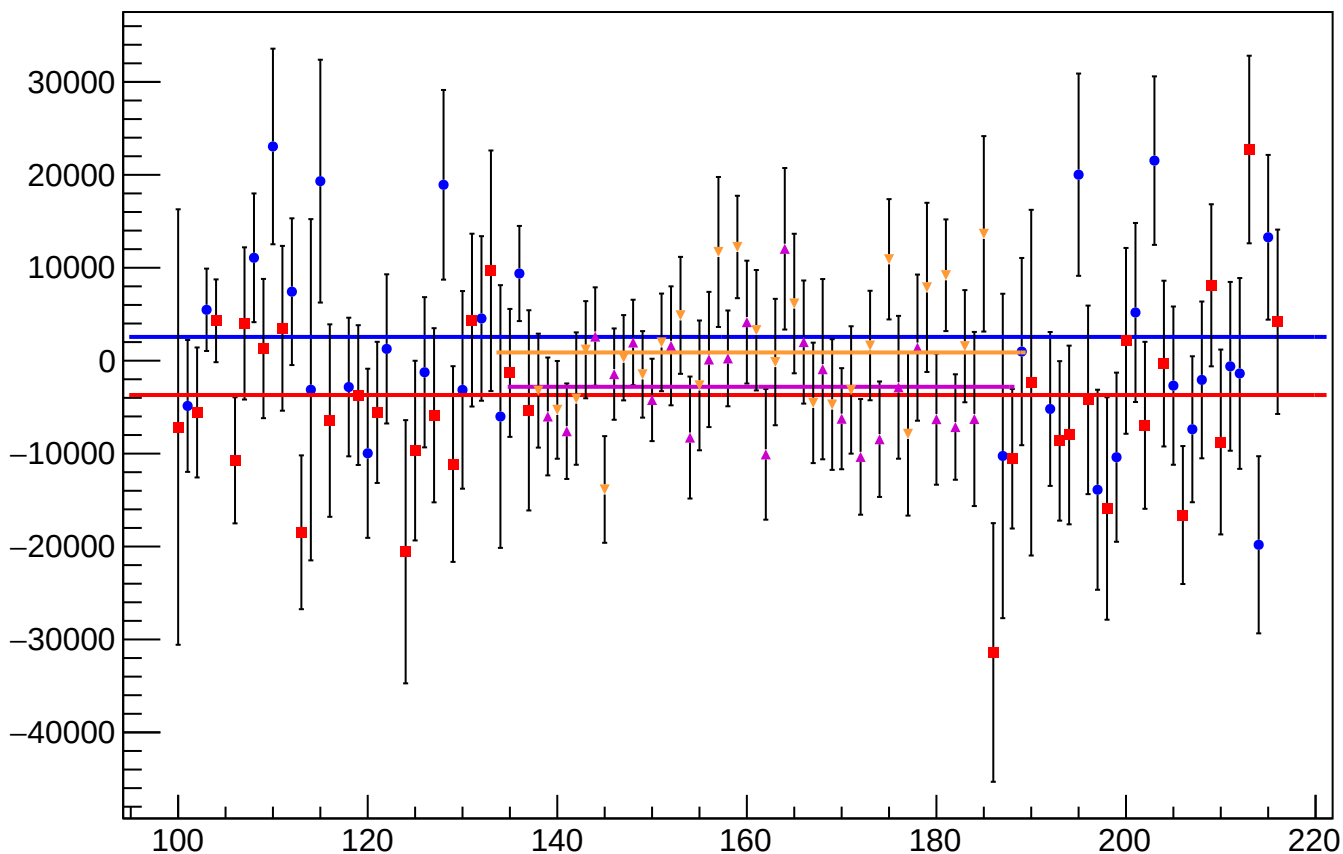
Left In: 5302.858 $\pm$ 0.893  $\chi^2$ /NDF:1152380.1/22

+ sign 5711.494 $\pm$ 0.673  $\chi^2$ /NDF: 4532603.5/55

All: 5638.303 $\pm$ 0.474  $\chi^2$ /NDF: 10181783.1/101

- sign 5566.321 $\pm$ 0.667  $\chi^2$ /NDF: 5625710.2/56

# asym\_usr\_atr2\_avg\_mean vs Slug



Right In: 2558.298 $\pm$ 1525.191  $\chi^2$ /NDF: 39.0/30

Left Out: 885.482 $\pm$ 1246.500  $\chi^2$ /NDF: 25.7/24

Right Out: -3693.511 $\pm$ 1498.529  $\chi^2$ /NDF: 33.6/33

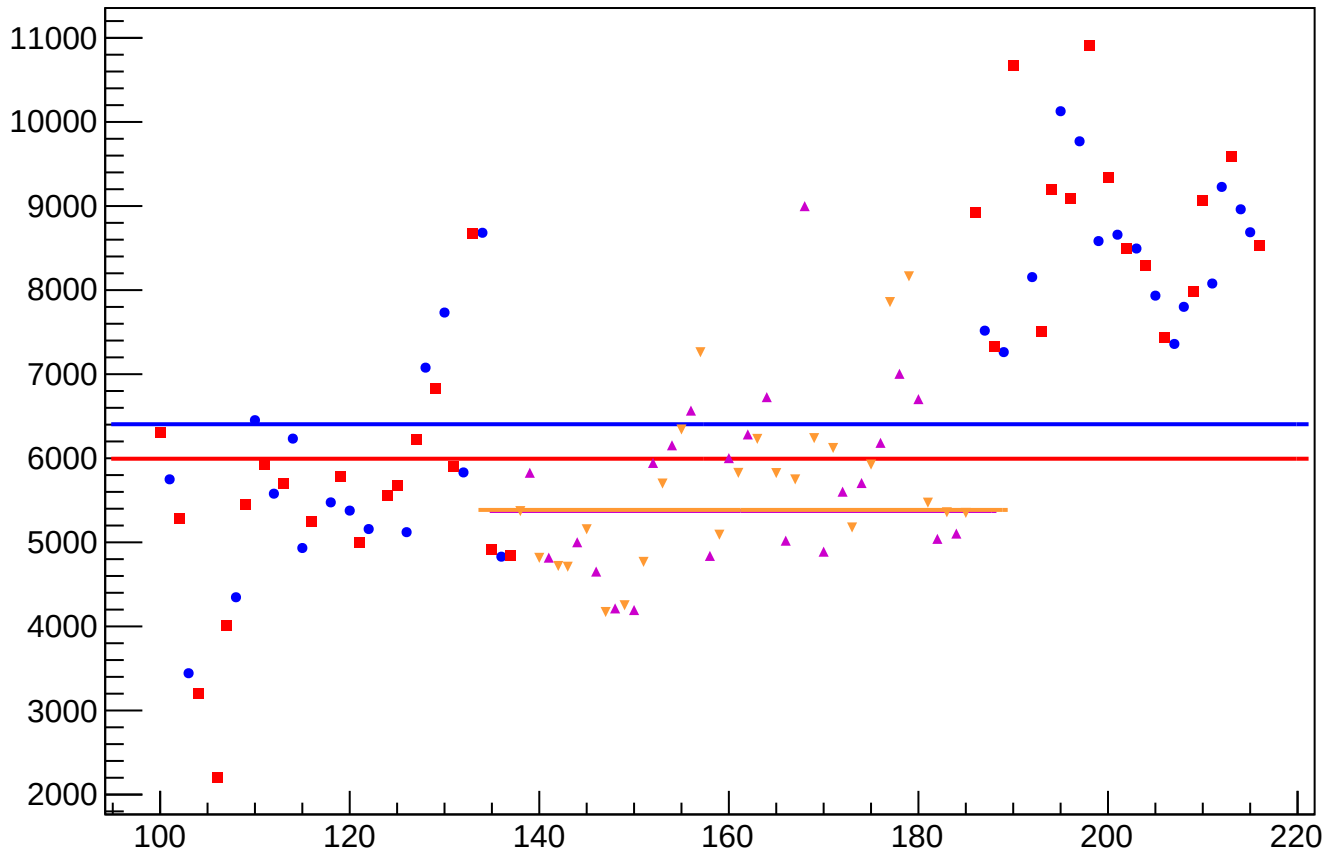
Left In: -2810.702 $\pm$ 1277.225  $\chi^2$ /NDF: 14.7/22

+ sign 1555.373 $\pm$ 965.167  $\chi^2$ /NDF: 65.4/55

All: -796.553 $\pm$ 684.898  $\chi^2$ /NDF: 125.8/112

- sign -3182.167 $\pm$ 972.055  $\chi^2$ /NDF: 48.5/56

# asym\_usr\_atr2\_avg\_rms vs Slug



Right In: 6404.788+/-1.078  $\chi^2/\text{NDF}$ : 3095035.9/30

Left Out: 5385.653+/-0.881  $\chi^2/\text{NDF}$ :987089.3/24

Right Out: 5994.522+/-1.033  $\chi^2/\text{NDF}$ : 4796605.0/33

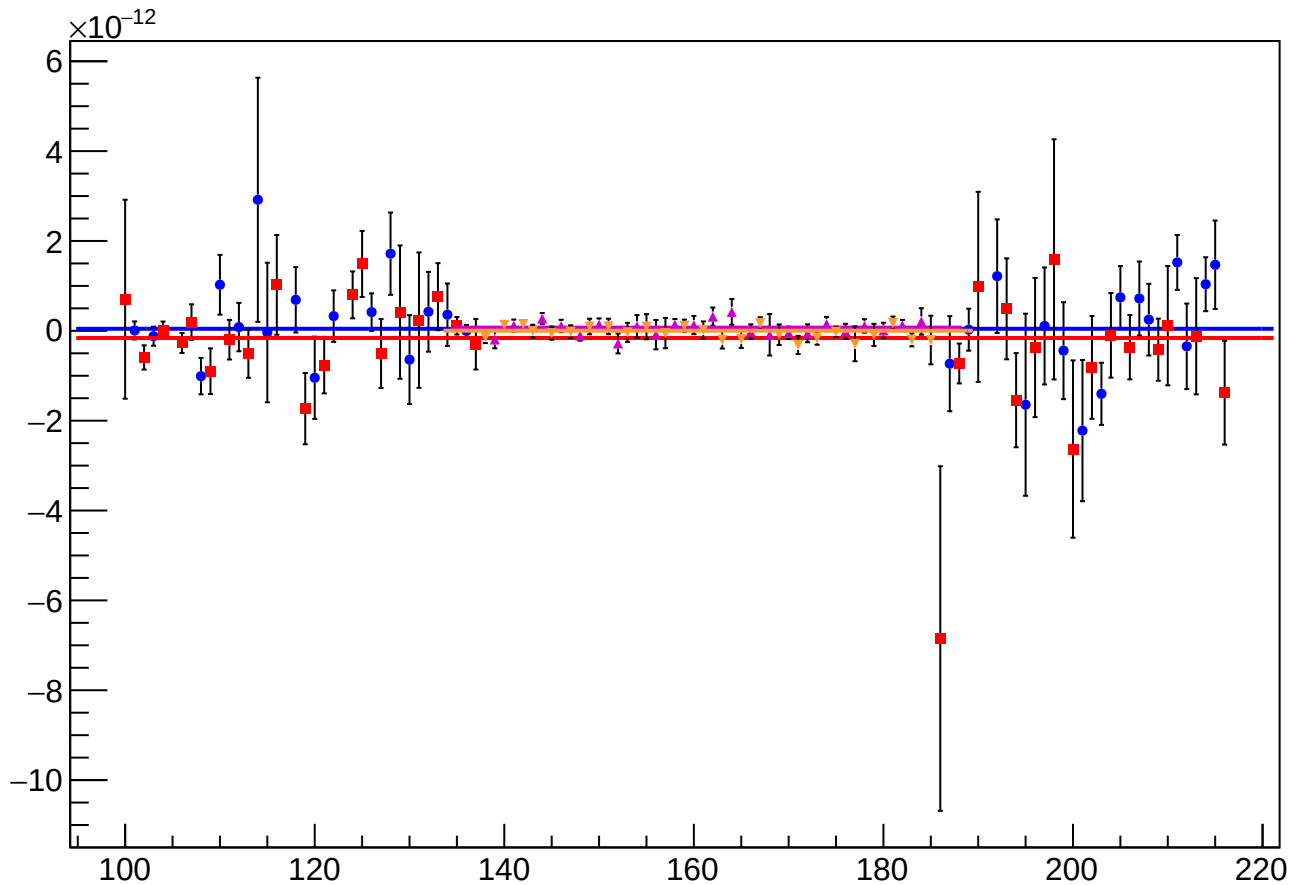
Left In: 5372.867+/-0.903  $\chi^2/\text{NDF}$ :1071821.2/22

+ sign 5793.773+/-0.682  $\chi^2/\text{NDF}$ : 4617508.7/55

All: 5717.652+/-0.482  $\chi^2/\text{NDF}$ : 10715907.6/100

- sign 5642.078+/-0.680  $\chi^2/\text{NDF}$ : 6073607.4/56

asym\_usr\_atr2\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.3/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.2/33

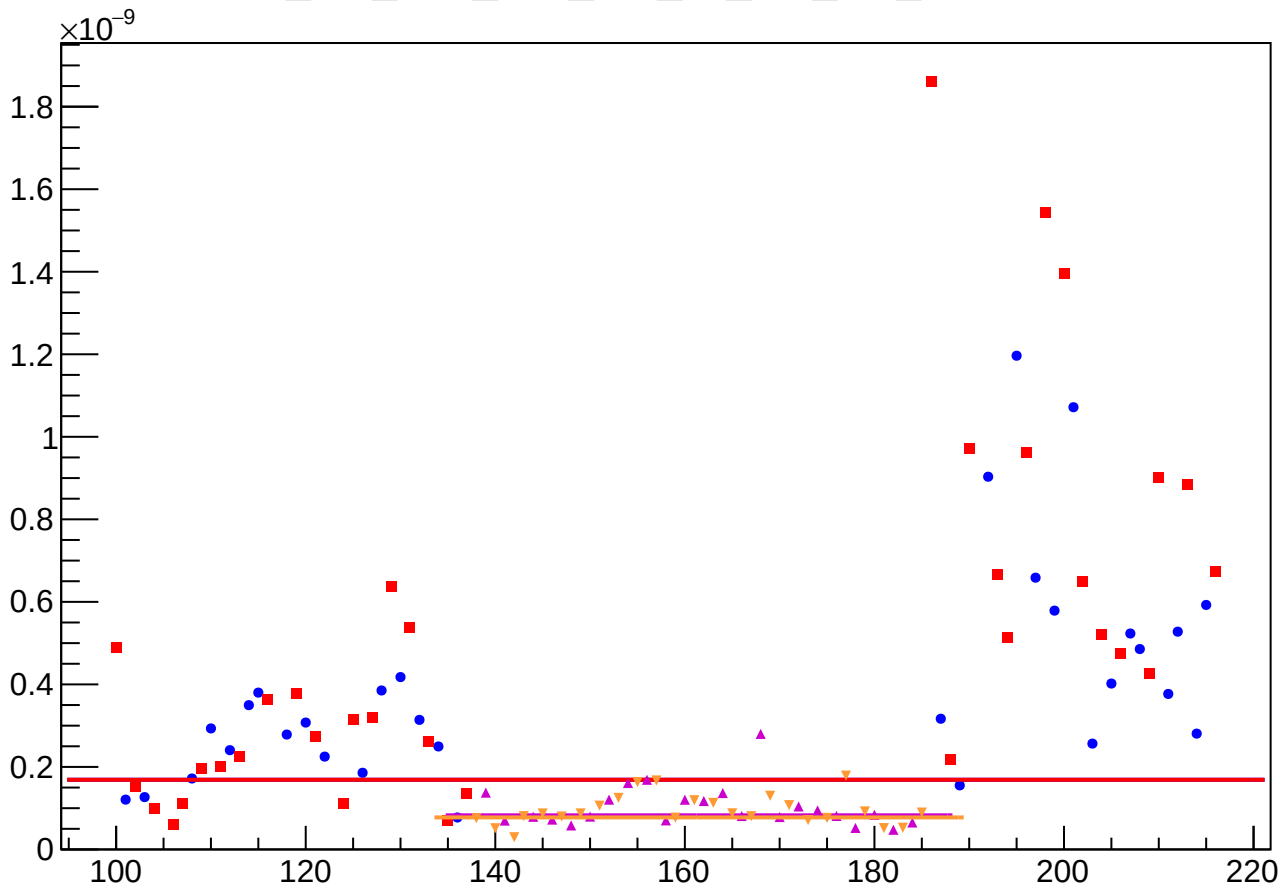
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.2/112

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.5/56

asym\_usr\_atr2\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6088548.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1642881.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8178830.2/33

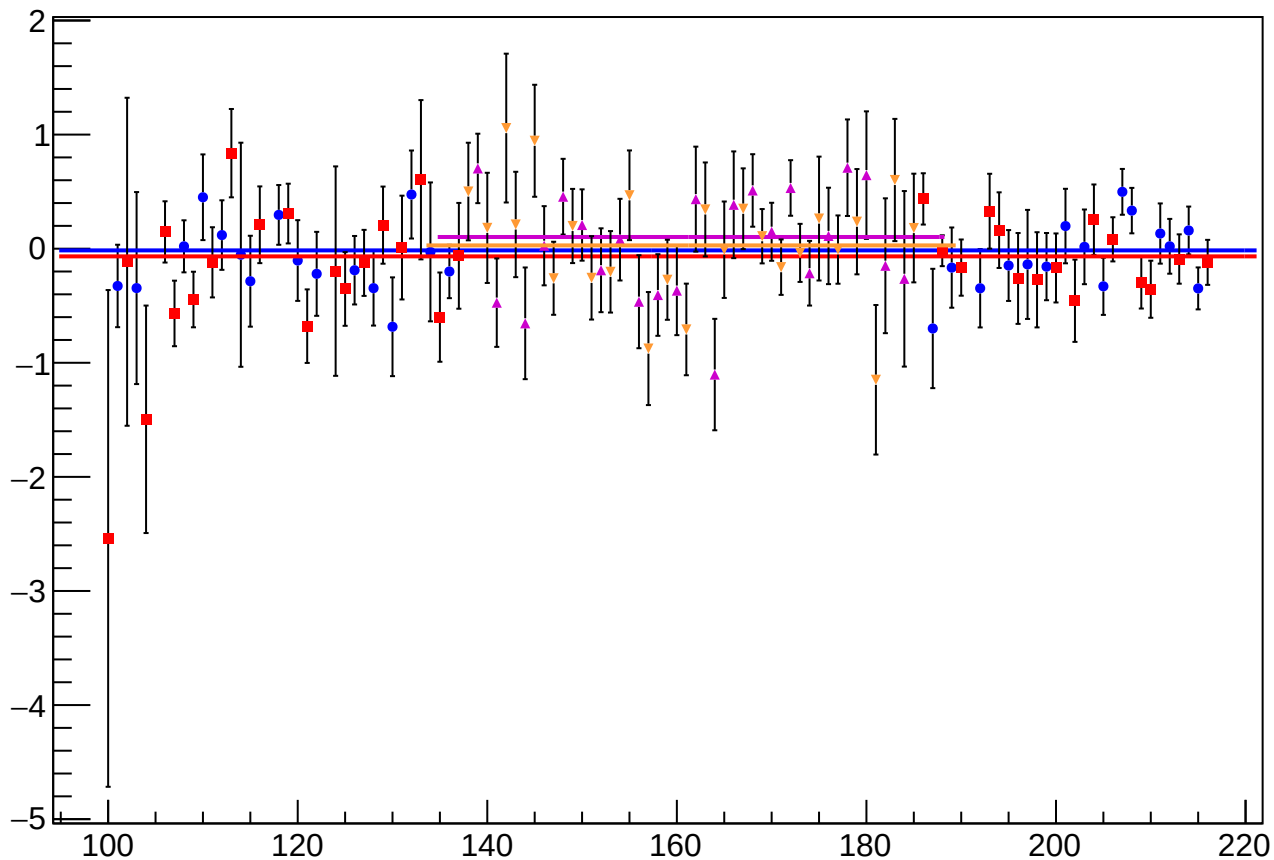
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1552521.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9984304.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21529288.1/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11520362.8/56

asym\_usr\_atr2\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.053$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.067 \pm 0.050$   $\chi^2/\text{NDF}$ : 38.7/33

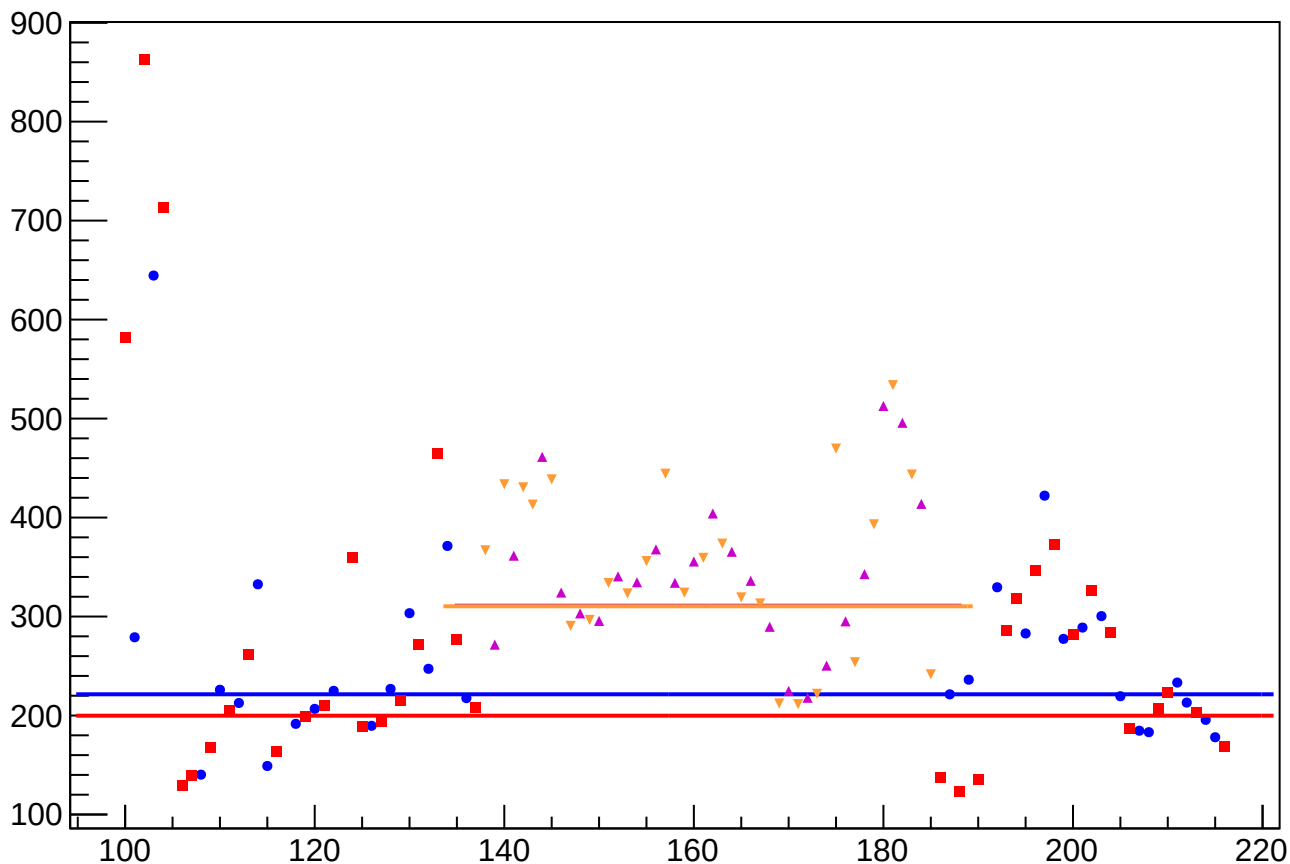
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.000 \pm 0.043$   $\chi^2/\text{NDF}$ : 55.7/55

All:  $-0.009 \pm 0.030$   $\chi^2/\text{NDF}$ : 130.2/112

- sign  $-0.017 \pm 0.042$   $\chi^2/\text{NDF}$ : 74.4/56

asym\_usr\_atr2\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 221.448 $\pm$ 0.038  $\chi^2$ /NDF: 2354036.7/30

Left Out: 310.359 $\pm$ 0.053  $\chi^2$ /NDF:2363086.4/24

Right Out: 199.830 $\pm$ 0.035  $\chi^2$ /NDF: 4409673.6/33

Left In: 310.960 $\pm$ 0.054  $\chi^2$ /NDF:1600370.0/22

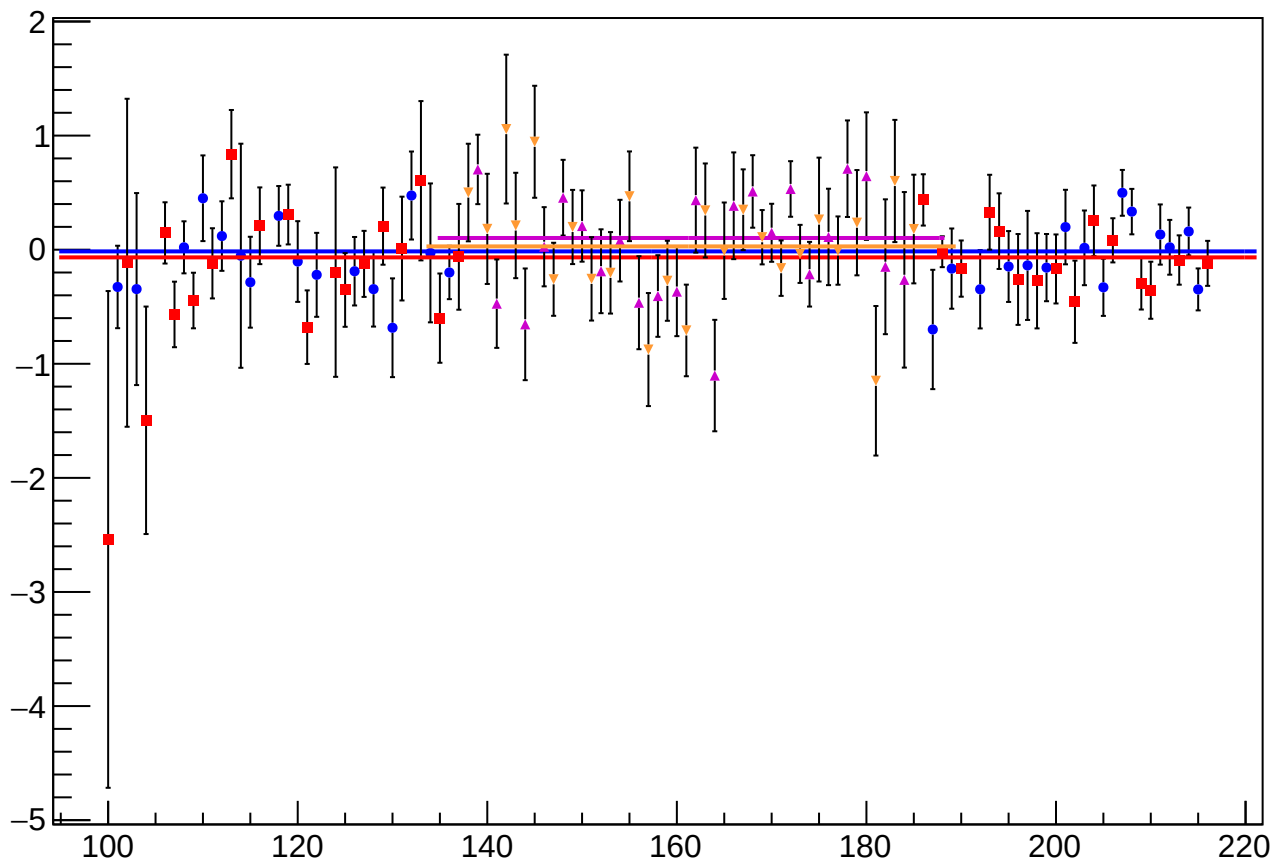
+ sign 251.457 $\pm$ 0.031  $\chi^2$ /NDF: 6595798.8/55

All: 241.866 $\pm$ 0.021  $\chi^2$ /NDF: 15773255.3/11

- sign 233.016 $\pm$ 0.029  $\chi^2$ /NDF: 8989460.0/56



asym\_usr\_atr2\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.053$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.067 \pm 0.050$   $\chi^2/\text{NDF}$ : 38.7/33

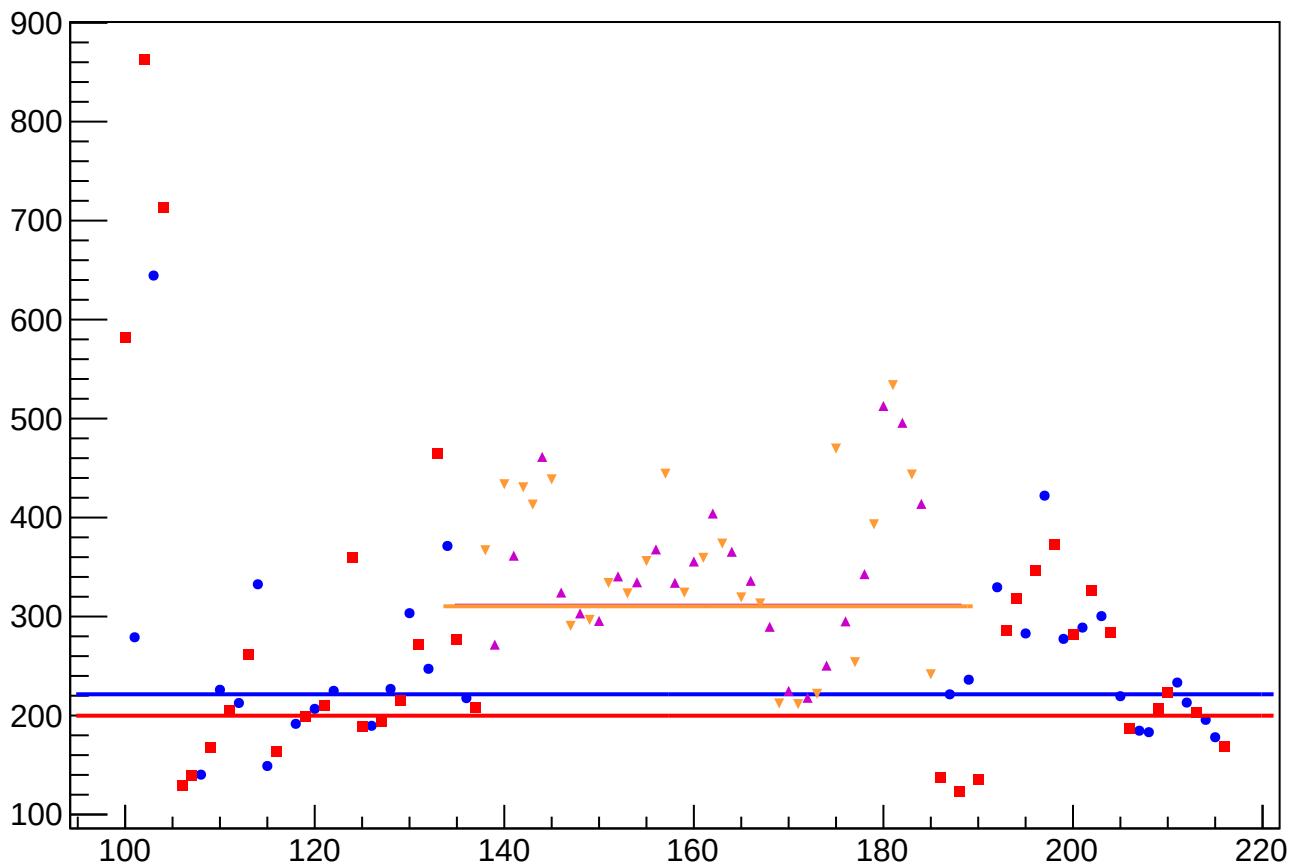
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.000 \pm 0.043$   $\chi^2/\text{NDF}$ : 55.7/55

All:  $-0.009 \pm 0.030$   $\chi^2/\text{NDF}$ : 130.2/112

- sign  $-0.017 \pm 0.042$   $\chi^2/\text{NDF}$ : 74.4/56

asym\_usr\_atr2\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 221.448 $\pm$ 0.038  $\chi^2$ /NDF: 2354036.7/30

Left Out: 310.359 $\pm$ 0.053  $\chi^2$ /NDF:2363086.4/24

Right Out: 199.830 $\pm$ 0.035  $\chi^2$ /NDF: 4409673.6/33

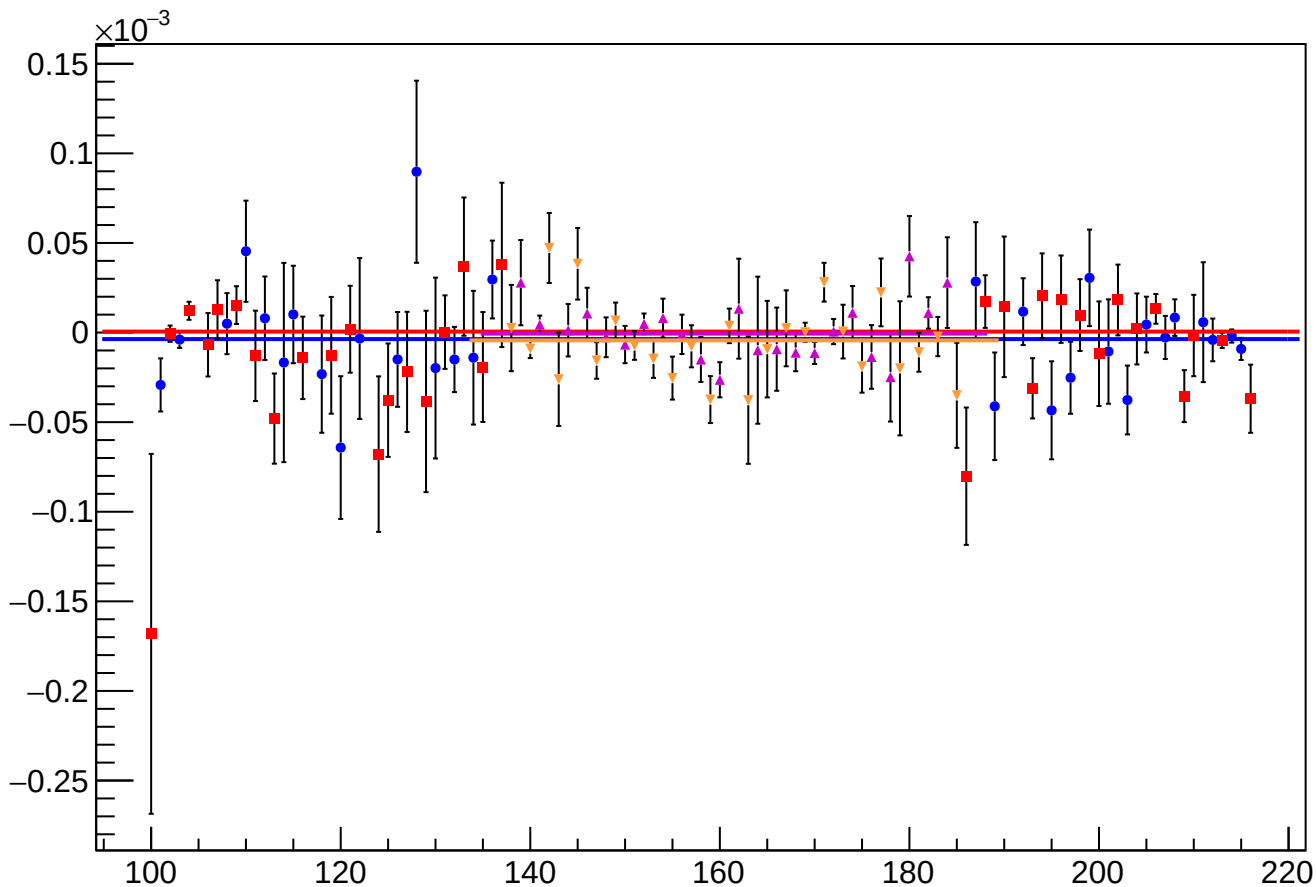
Left In: 310.960 $\pm$ 0.054  $\chi^2$ /NDF:1600370.0/22

+ sign 251.457 $\pm$ 0.031  $\chi^2$ /NDF: 6595798.8/55

All: 241.866 $\pm$ 0.021  $\chi^2$ /NDF: 15773255.3/11

- sign 233.016 $\pm$ 0.029  $\chi^2$ /NDF: 8989460.0/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.9/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 48.1/33

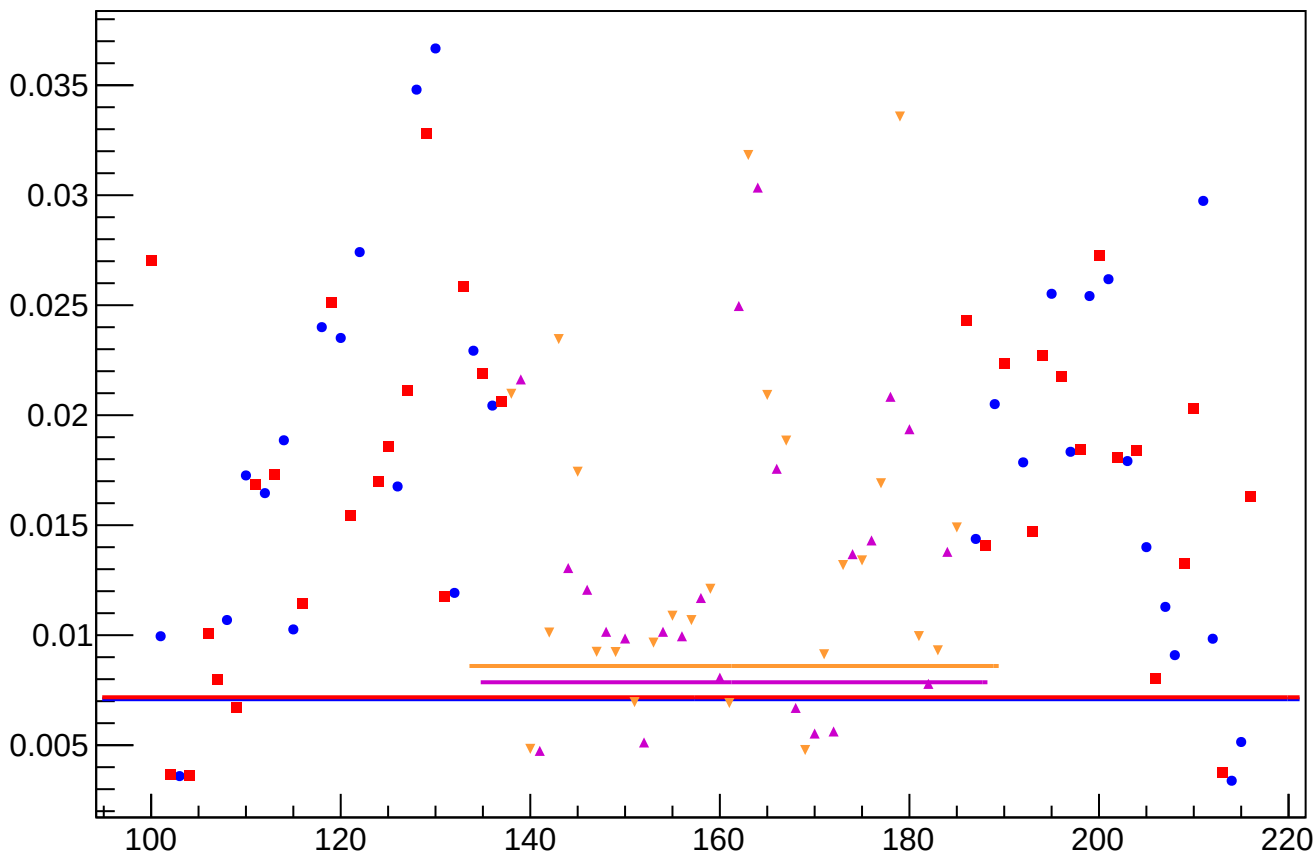
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.3/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 150.4/112

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.8/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 15184372.3/30

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 7653564.7/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 15013933.1/33

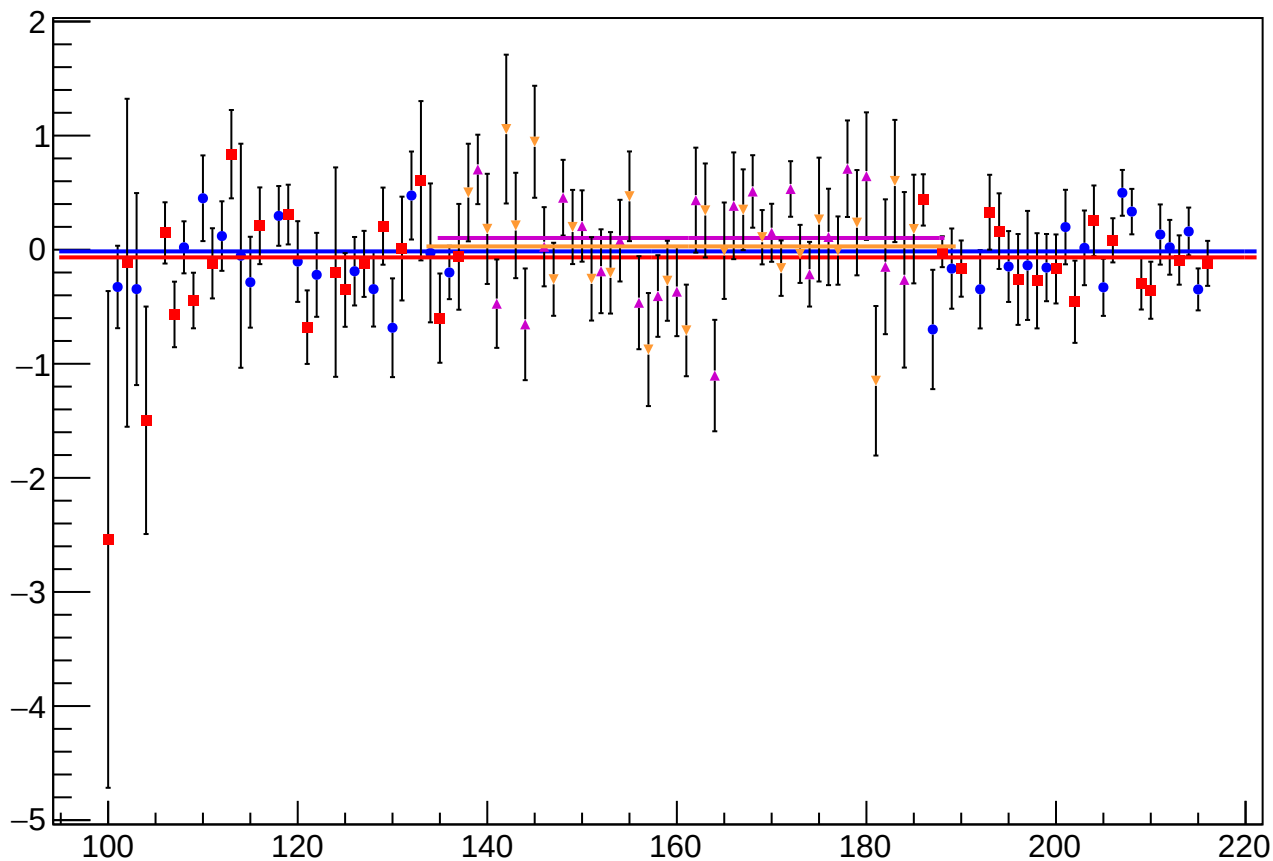
Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6779815.5/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 23304938.2/55

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 45238672.7/112

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 21895318.1/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.053$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.067 \pm 0.050$   $\chi^2/\text{NDF}$ : 38.7/33

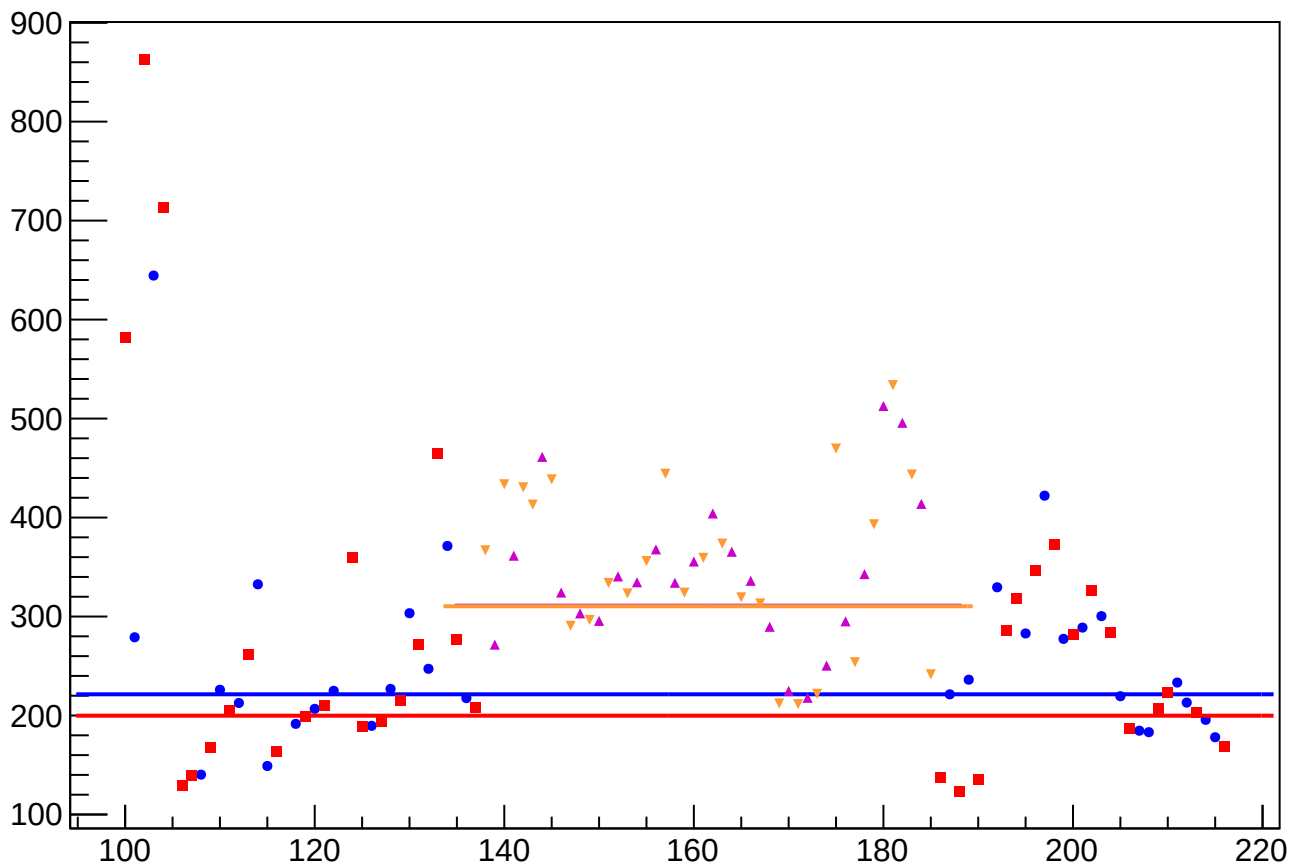
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.000 \pm 0.043$   $\chi^2/\text{NDF}$ : 55.7/55

All:  $-0.009 \pm 0.030$   $\chi^2/\text{NDF}$ : 130.2/112

- sign  $-0.017 \pm 0.042$   $\chi^2/\text{NDF}$ : 74.4/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 221.448 $\pm$ 0.038  $\chi^2$ /NDF: 2354038.2/30

Left Out: 310.362 $\pm$ 0.053  $\chi^2$ /NDF: 2363148.8/24

Right Out: 199.828 $\pm$ 0.035  $\chi^2$ /NDF: 4409814.8/33

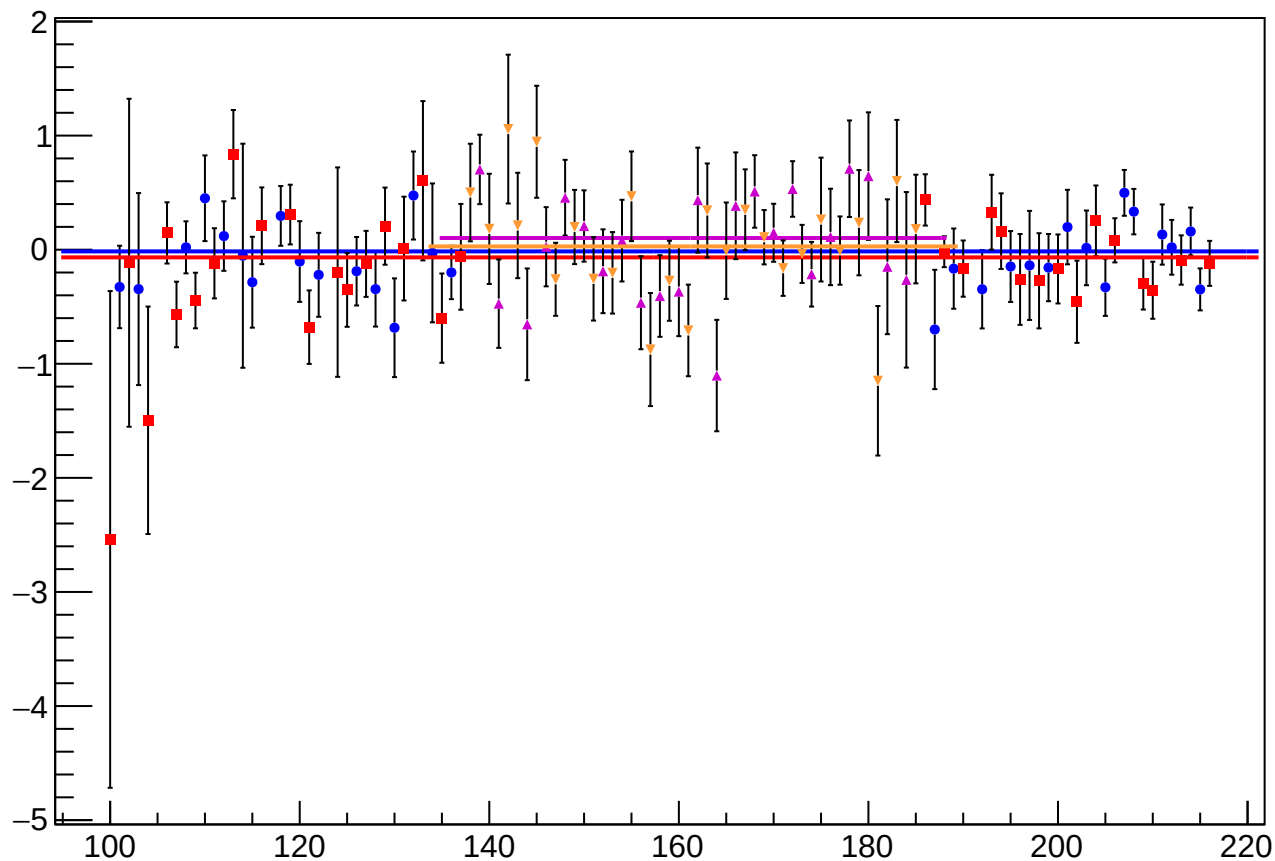
Left In: 310.963 $\pm$ 0.054  $\chi^2$ /NDF: 1600401.1/22

+ sign 251.458 $\pm$ 0.031  $\chi^2$ /NDF: 6595994.8/55

All: 241.865 $\pm$ 0.021  $\chi^2$ /NDF: 15773922.9/11

- sign 233.014 $\pm$ 0.029  $\chi^2$ /NDF: 8989897.5/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.015 \pm 0.053$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $0.029 \pm 0.075$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $-0.067 \pm 0.050$   $\chi^2/\text{NDF}$ : 38.7/33

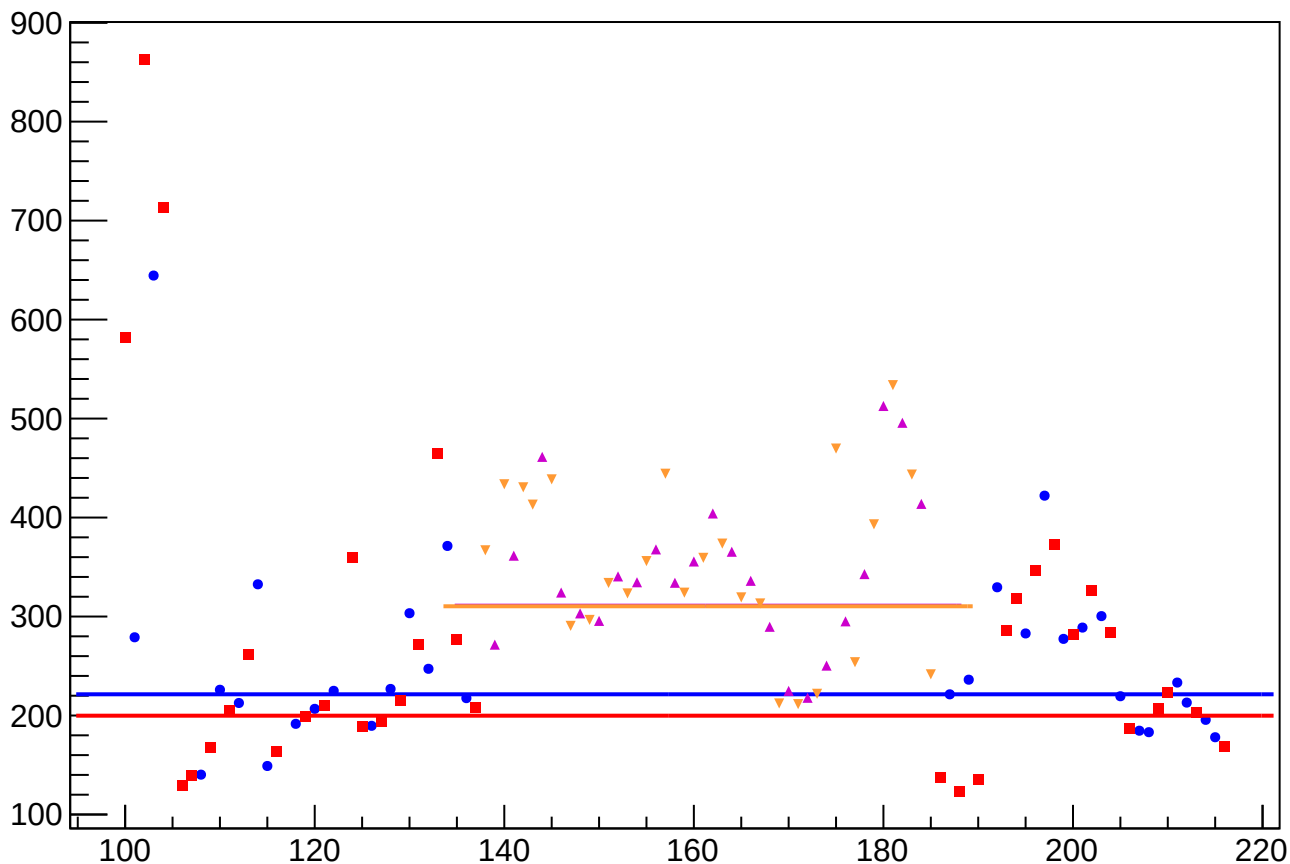
Left In:  $0.103 \pm 0.076$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.000 \pm 0.043$   $\chi^2/\text{NDF}$ : 55.7/55

All:  $-0.009 \pm 0.030$   $\chi^2/\text{NDF}$ : 130.2/112

- sign  $-0.017 \pm 0.042$   $\chi^2/\text{NDF}$ : 74.4/56

asym\_usr\_atr2\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 221.448 $\pm$ 0.038  $\chi^2$ /NDF: 2354038.2/30

Left Out: 310.362 $\pm$ 0.053  $\chi^2$ /NDF:2363148.8/24

Right Out: 199.828 $\pm$ 0.035  $\chi^2$ /NDF: 4409814.8/33

Left In: 310.963 $\pm$ 0.054  $\chi^2$ /NDF:1600401.1/22

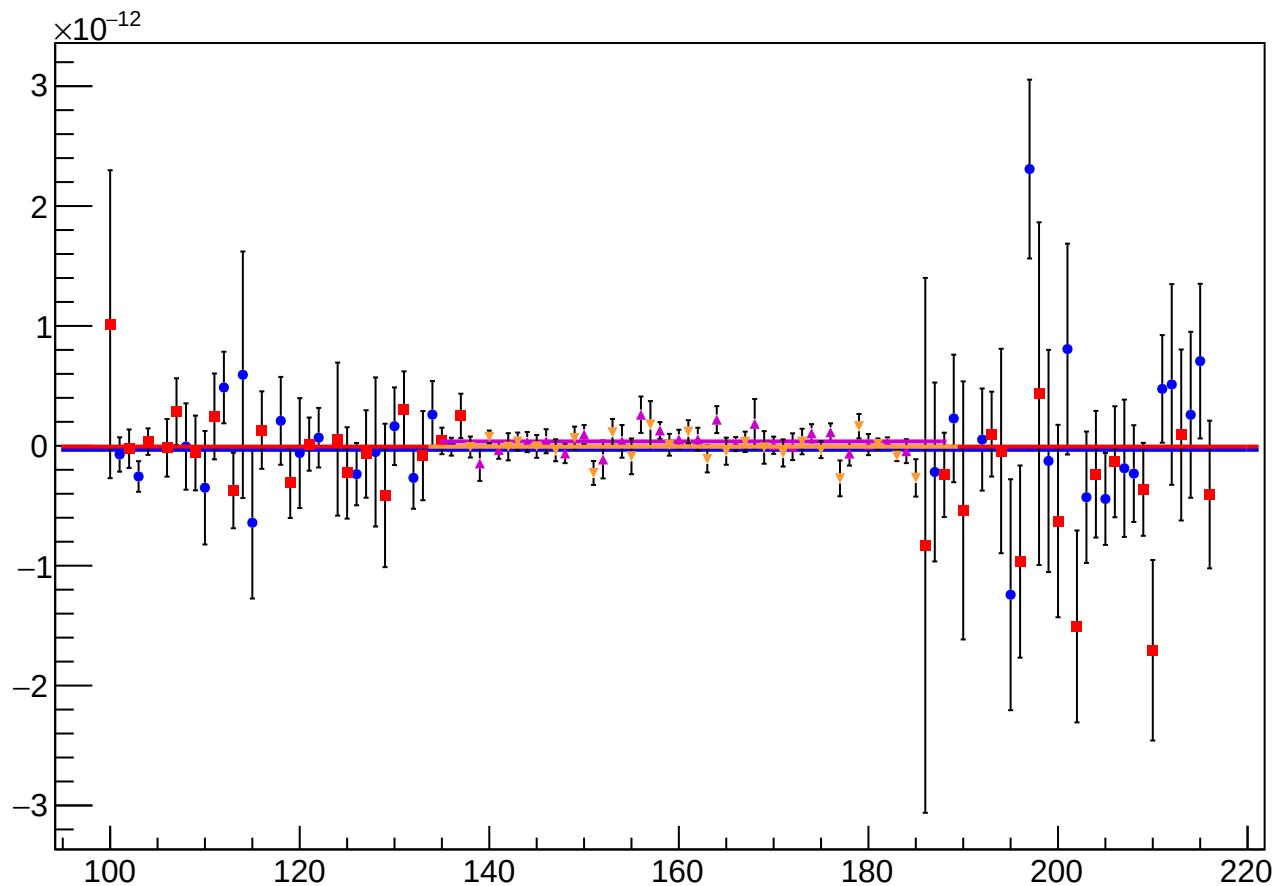
+ sign 251.458 $\pm$ 0.031  $\chi^2$ /NDF: 6595994.8/55

All: 241.865 $\pm$ 0.021  $\chi^2$ /NDF: 15773922.9/11

- sign 233.014 $\pm$ 0.029  $\chi^2$ /NDF: 8989897.5/56



asym\_usr\_atr2\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 29.4/30$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 25.8/24$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 22.1/33$

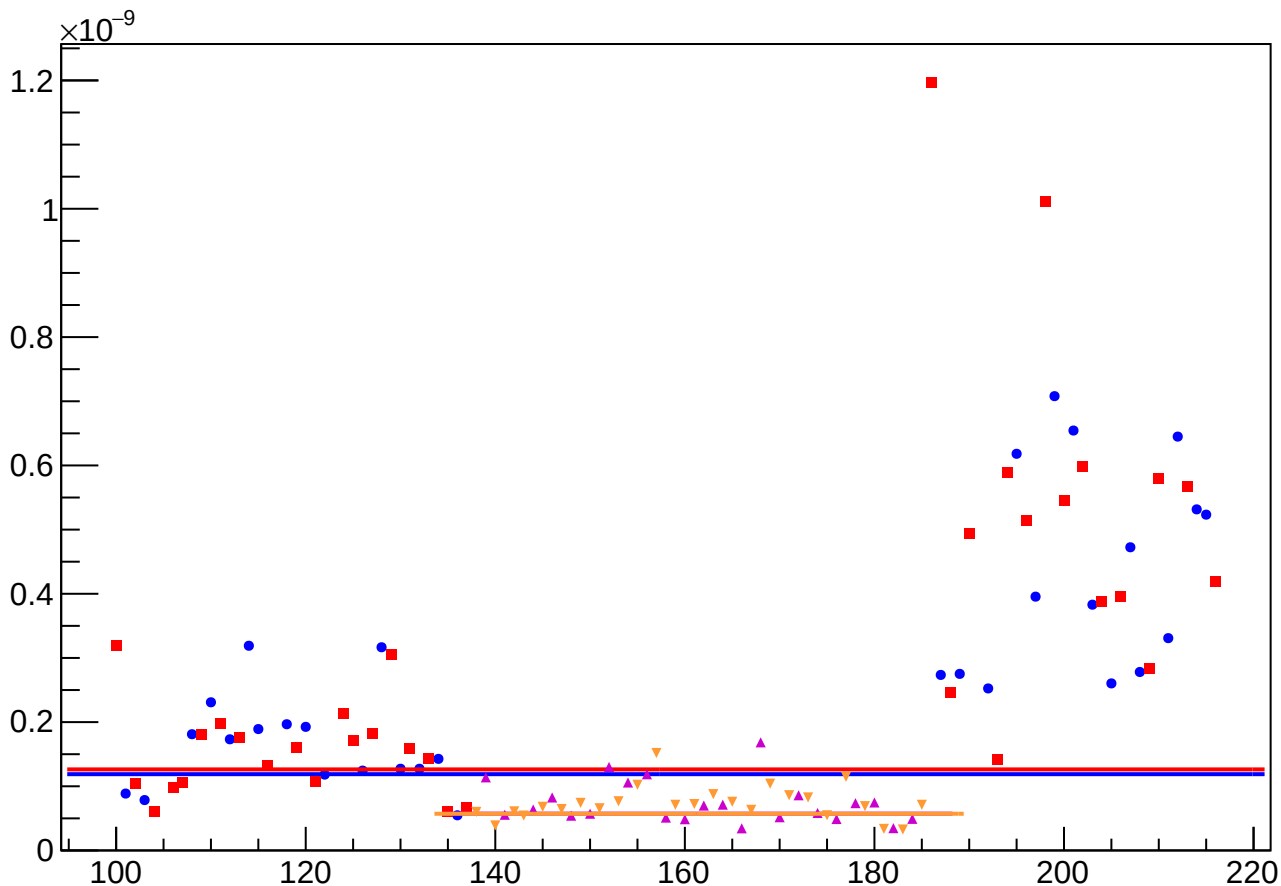
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 16.7/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 55.5/55$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 98.3/112$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 39.5/56$

asym\_usr\_atr2\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9833977.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3337849.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9714738.5/33

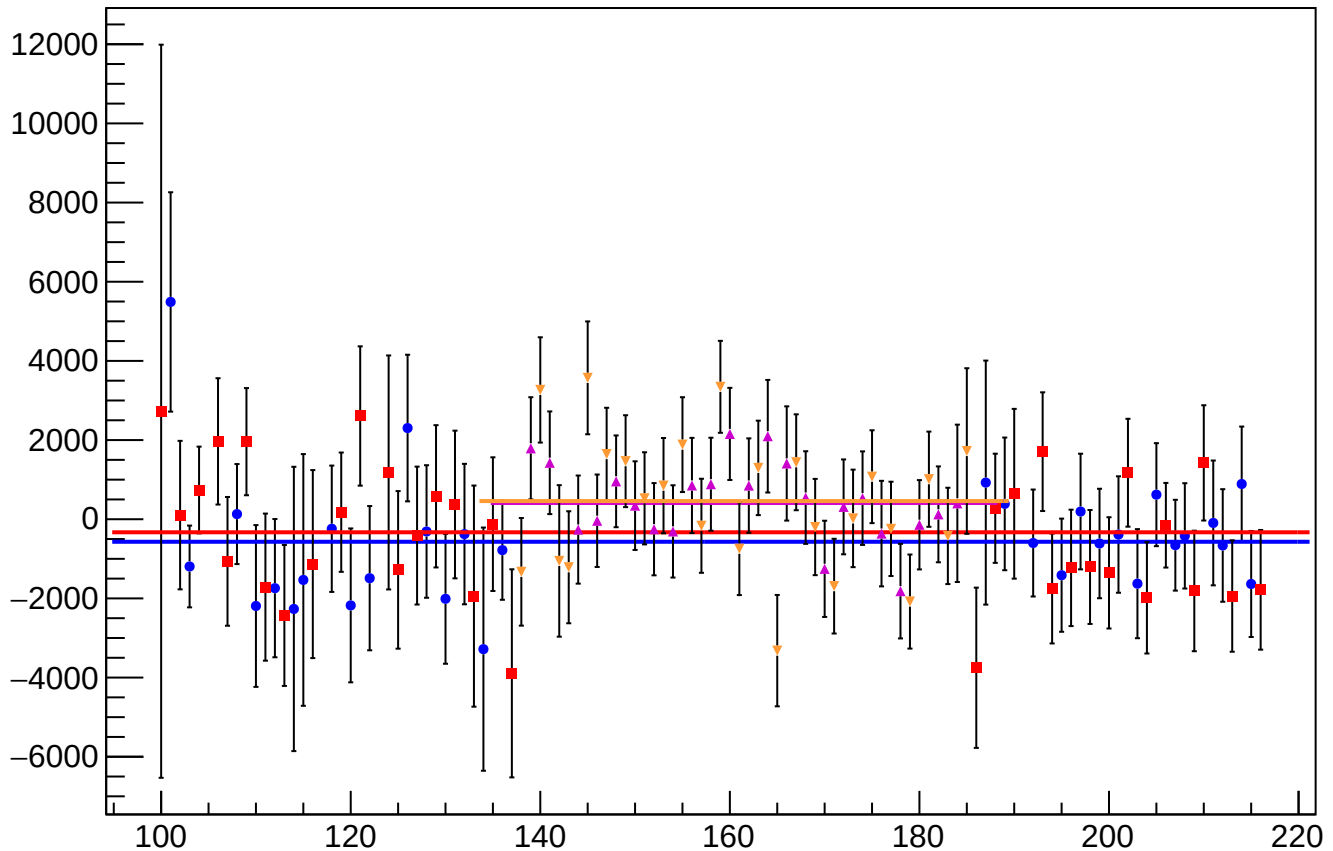
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3299416.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16179362.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32689190.8/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16507428.0/56

# reg\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-569.238 \pm 279.512$   $\chi^2/\text{NDF}$ : 16.2/30

Left Out:  $458.782 \pm 251.538$   $\chi^2/\text{NDF}$ : 42.1/24

Right Out:  $-329.605 \pm 276.559$   $\chi^2/\text{NDF}$ : 29.0/33

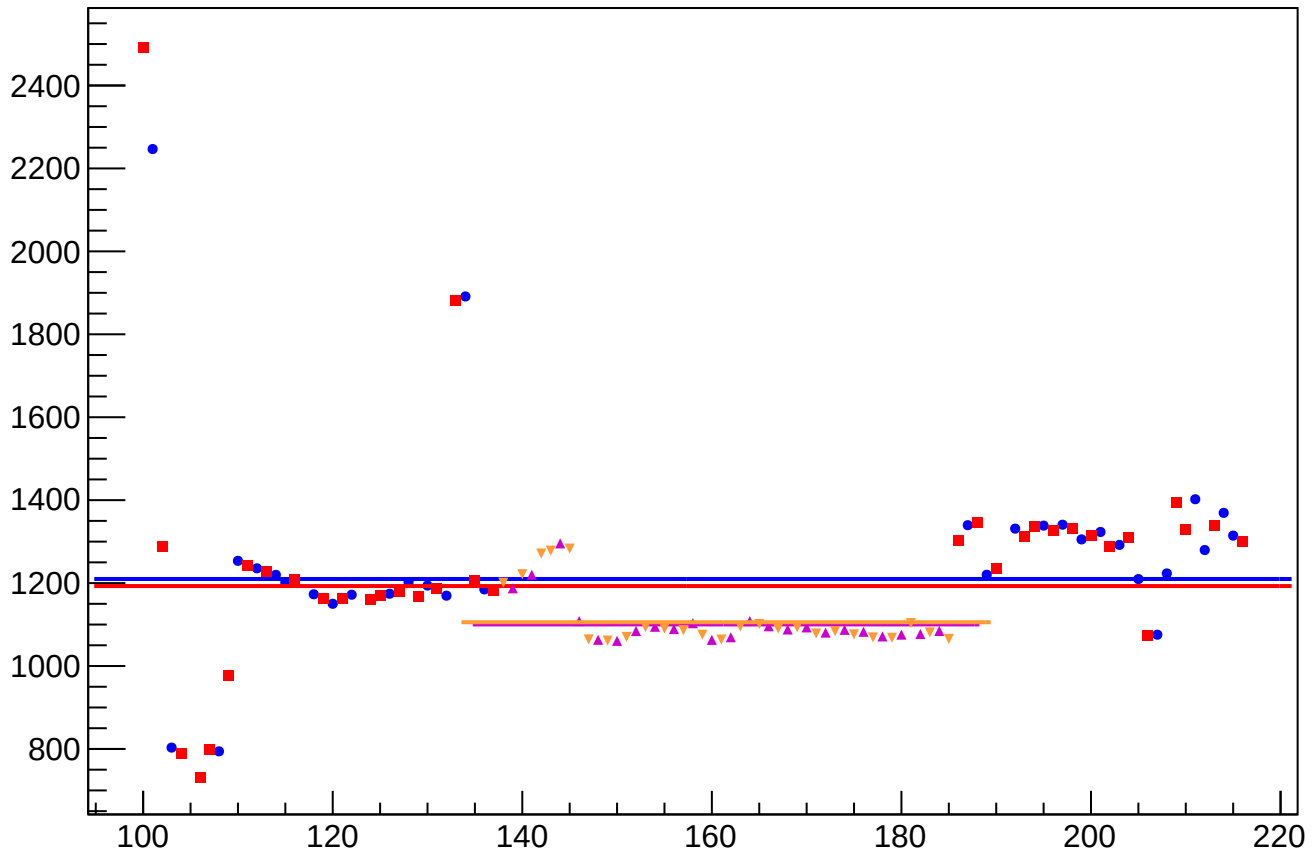
Left In:  $411.262 \pm 257.201$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-1.224 \pm 186.974$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $32.968 \pm 132.691$   $\chi^2/\text{NDF}$ : 112.3/112

- sign  $67.662 \pm 188.340$   $\chi^2/\text{NDF}$ : 46.5/56

# reg\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1209.919 $\pm$ 0.198     $\chi^2$ /NDF: 1092123.5/30

Left Out: 1105.549 $\pm$ 0.178     $\chi^2$ /NDF:121950.0/24

+ sign 1152.251 $\pm$ 0.132     $\chi^2$ /NDF: 1368150.5/55

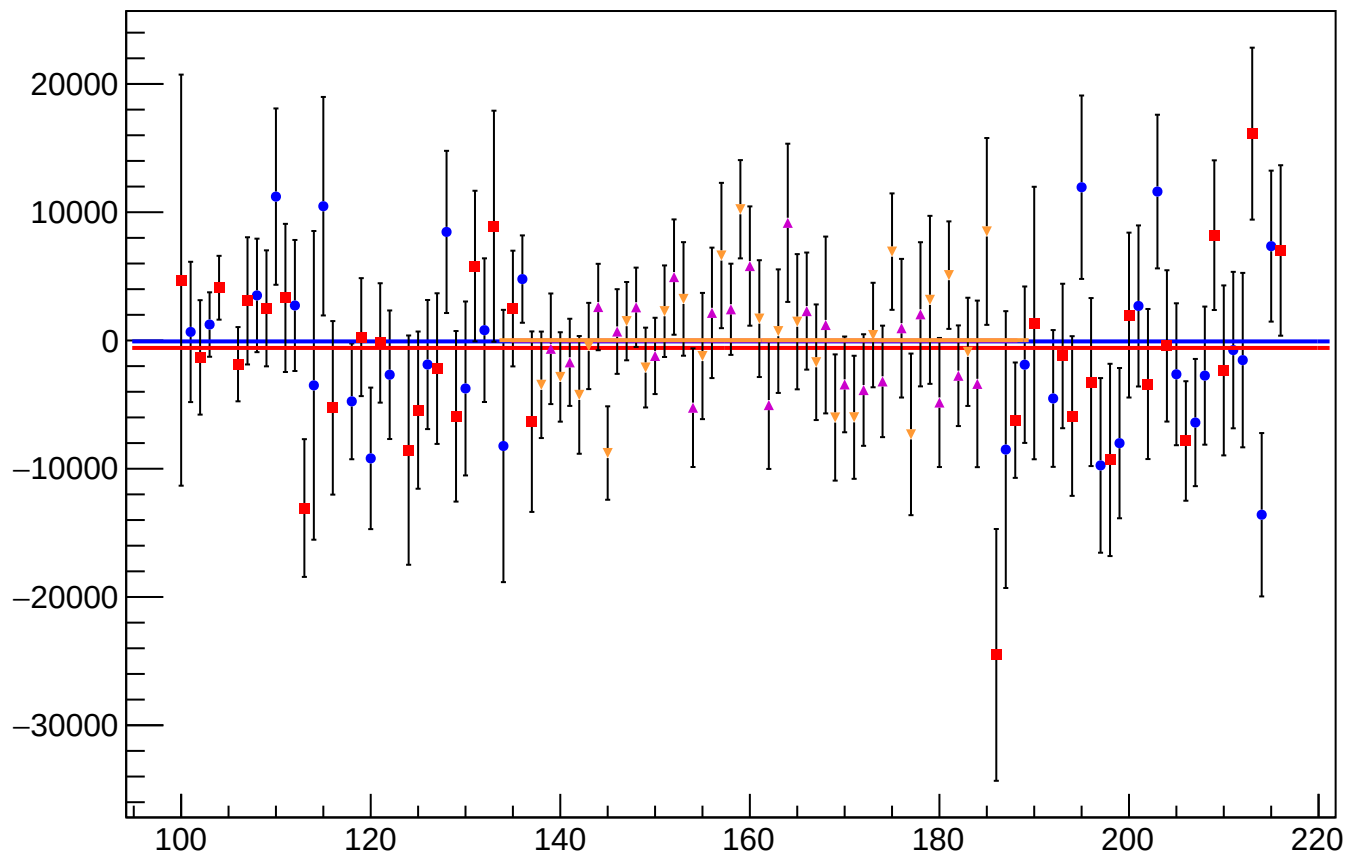
Right Out: 1192.850 $\pm$ 0.195     $\chi^2$ /NDF: 1066532.8/33

All: 1147.862 $\pm$ 0.094     $\chi^2$ /NDF: 2637598.6/11

Left In: 1100.350 $\pm$ 0.182     $\chi^2$ /NDF:80240.5/22

- sign 1143.423 $\pm$ 0.133     $\chi^2$ /NDF: 1267231.1/56

asym\_usr\_atr2\_dd\_reg\_correction\_mean vs Slug



Right In:  $-72.179 \pm 970.371$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $23.368 \pm 850.404$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-581.869 \pm 913.520$   $\chi^2/\text{NDF}$ : 39.3/33

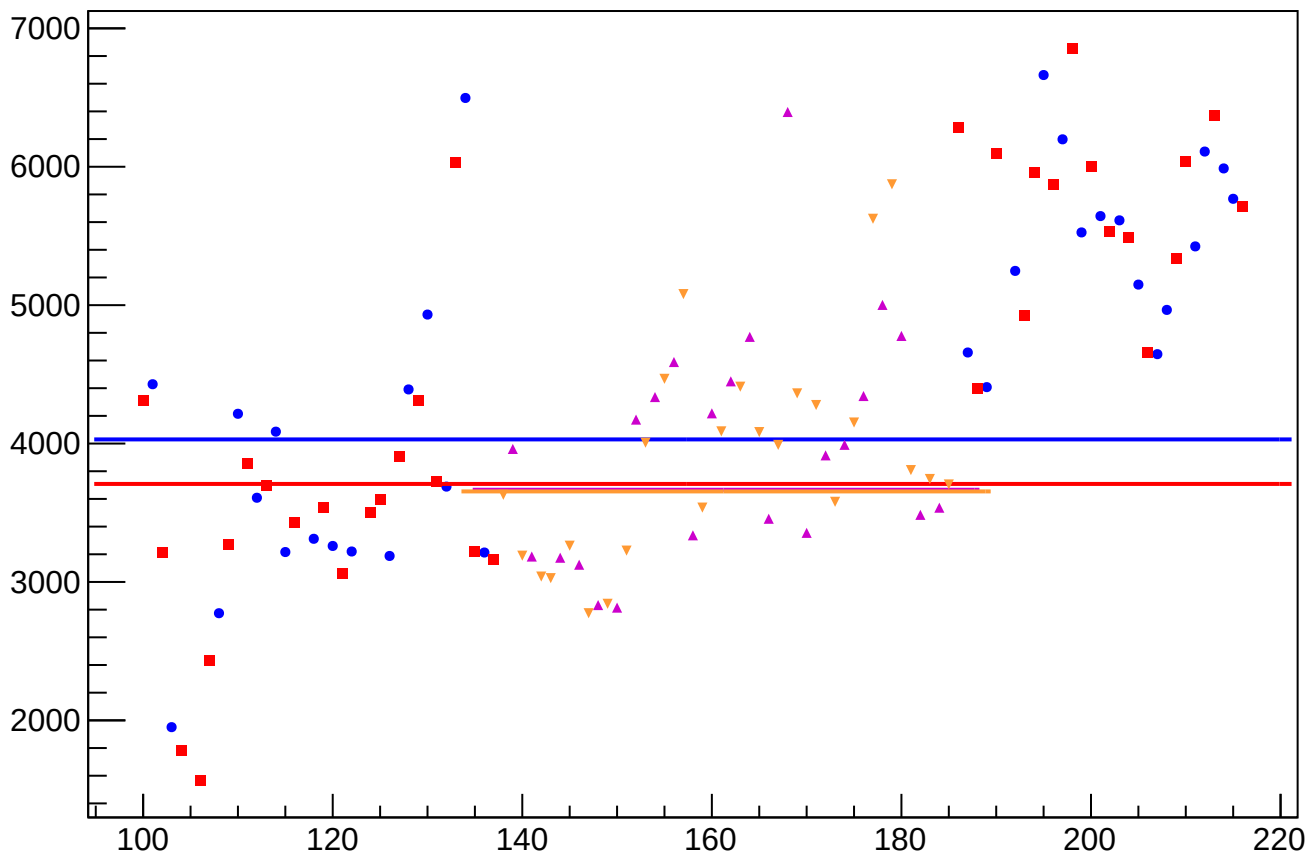
Left In:  $-6.317 \pm 875.256$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-18.137 \pm 639.560$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $-151.531 \pm 449.538$   $\chi^2/\text{NDF}$ : 116.9/112

- sign  $-281.787 \pm 631.994$   $\chi^2/\text{NDF}$ : 53.5/56

# asym\_usr\_atr2\_dd\_reg\_correction\_rms vs Slug



Right In: 4029.923+/-0.686  $\chi^2/\text{NDF}$ : 3867817.5/30

Left Out: 3654.198+/-0.601  $\chi^2/\text{NDF}$ : 1311761.6/24

Right Out: 3708.236+/-0.646  $\chi^2/\text{NDF}$ : 5532919.8/33

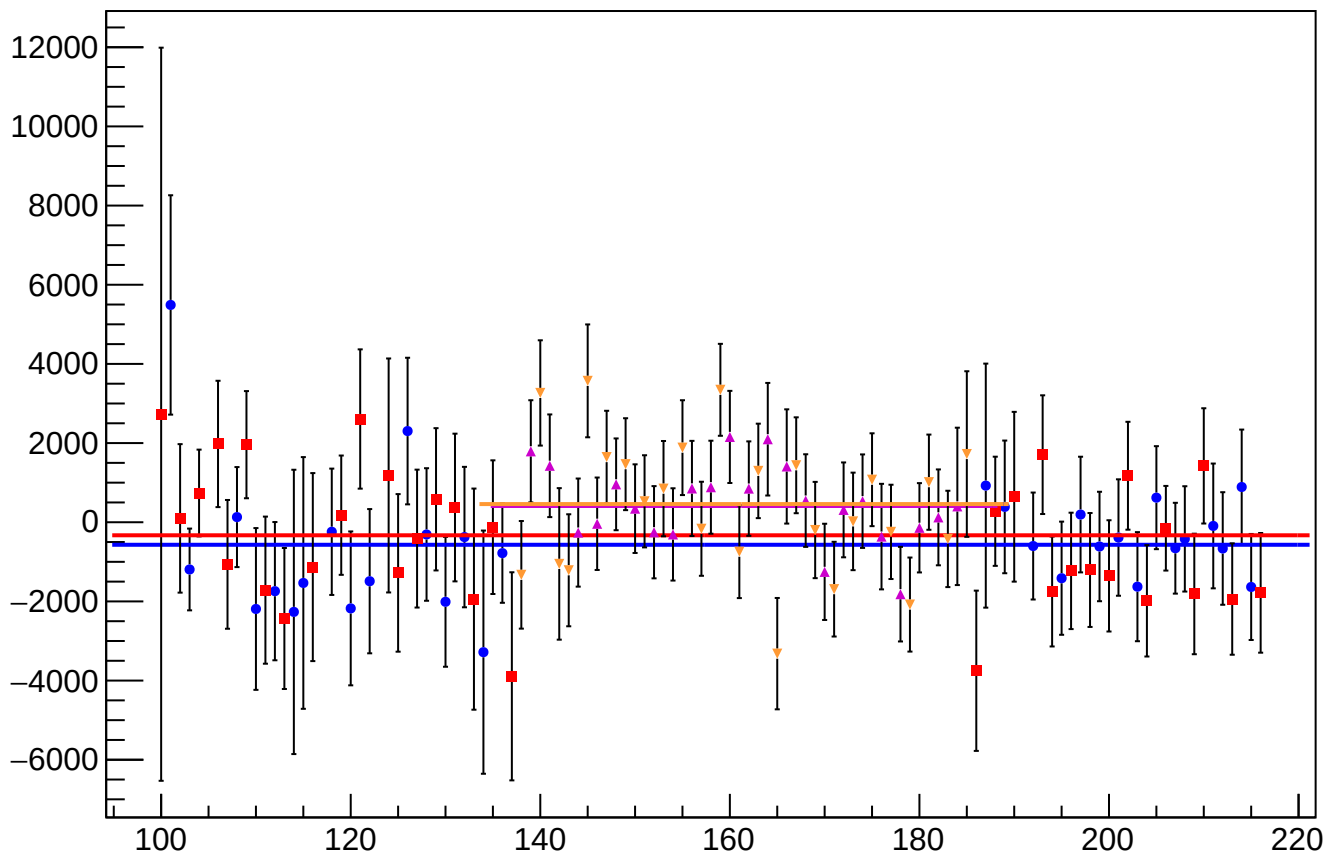
Left In: 3666.118+/-0.619  $\chi^2/\text{NDF}$ : 1343709.3/22

+ sign 3817.412+/-0.452  $\chi^2/\text{NDF}$ : 5349171.9/55

All: 3751.064+/-0.318  $\chi^2/\text{NDF}$ : 12270559.2/100

- sign 3686.277+/-0.447  $\chi^2/\text{NDF}$ : 6878845.8/56

# cor\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-569.258 \pm 279.512$   $\chi^2/\text{NDF}$ : 16.2/30

Left Out:  $458.844 \pm 251.538$   $\chi^2/\text{NDF}$ : 42.1/24

Right Out:  $-329.468 \pm 276.560$   $\chi^2/\text{NDF}$ : 29.0/33

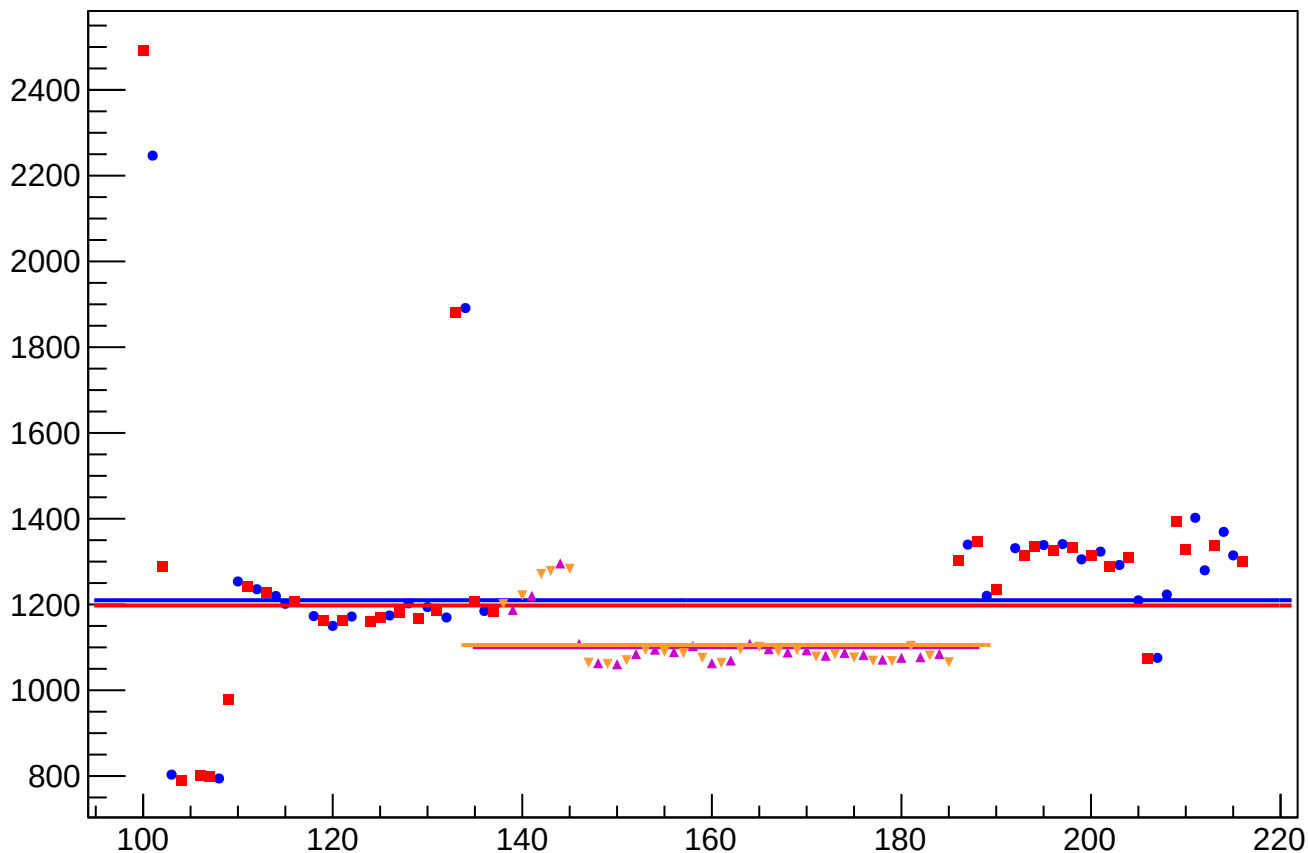
Left In:  $411.165 \pm 257.201$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-1.199 \pm 186.975$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $32.987 \pm 132.691$   $\chi^2/\text{NDF}$ : 112.4/112

- sign  $67.675 \pm 188.341$   $\chi^2/\text{NDF}$ : 46.5/56

cor\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1209.919+/-0.198  $\chi^2/\text{NDF}$ : 1092118.8/30

Left Out: 1105.549+/-0.178  $\chi^2/\text{NDF}$ : 121950.0/24

Right Out: 1197.740+/-0.195  $\chi^2/\text{NDF}$ : 984175.1/33

Left In: 1100.350+/-0.182  $\chi^2/\text{NDF}$ : 80240.5/22

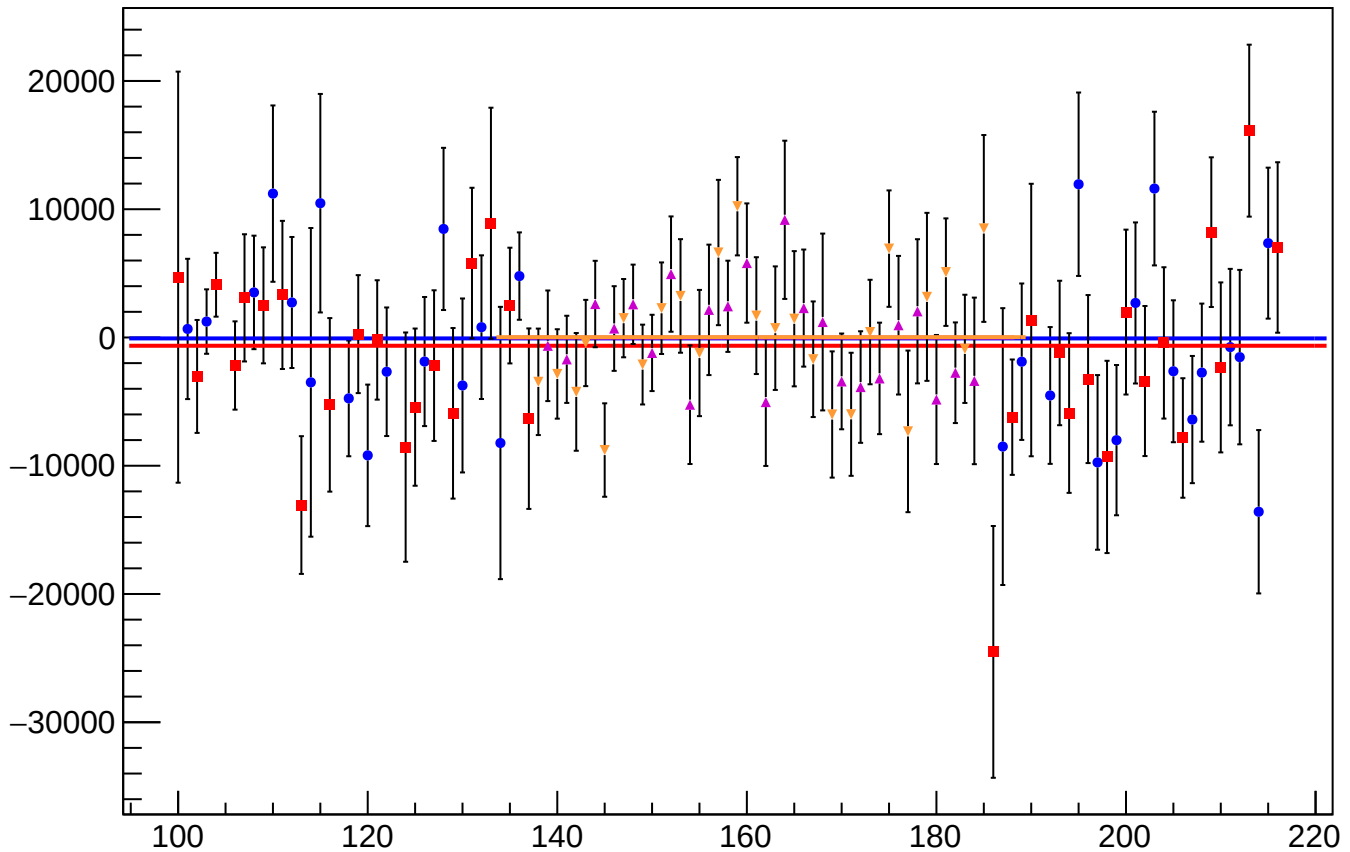
+ sign 1152.251+/-0.132  $\chi^2/\text{NDF}$ : 1368146.6/55

All: 1148.929+/-0.094  $\chi^2/\text{NDF}$ : 2566950.0/11

- sign 1145.560+/-0.133  $\chi^2/\text{NDF}$ : 1197531.3/56



# asym\_usr\_atr2\_dd\_cor\_correction\_mean vs Slug



Right In:  $-72.580 \pm 970.395$   $\chi^2/\text{NDF}: 34.8/30$

Left Out:  $23.365 \pm 850.403$   $\chi^2/\text{NDF}: 28.5/24$

Right Out:  $-645.150 \pm 926.616$   $\chi^2/\text{NDF}: 39.6/33$

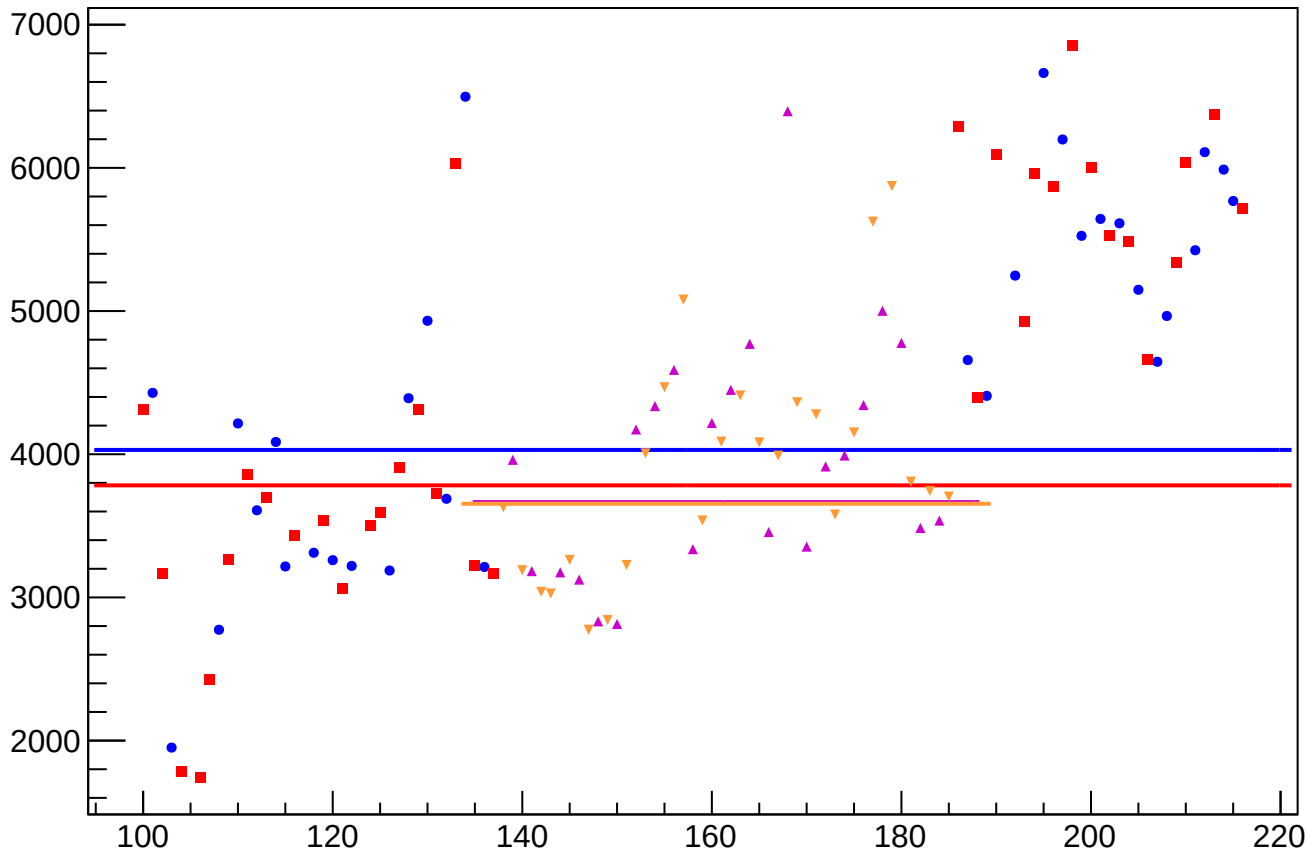
Left In:  $-6.368 \pm 875.255$   $\chi^2/\text{NDF}: 14.0/22$

+ sign  $-18.312 \pm 639.566$   $\chi^2/\text{NDF}: 63.3/55$

All:  $-163.684 \pm 451.076$   $\chi^2/\text{NDF}: 117.3/112$

- sign  $-307.566 \pm 636.282$   $\chi^2/\text{NDF}: 53.9/56$

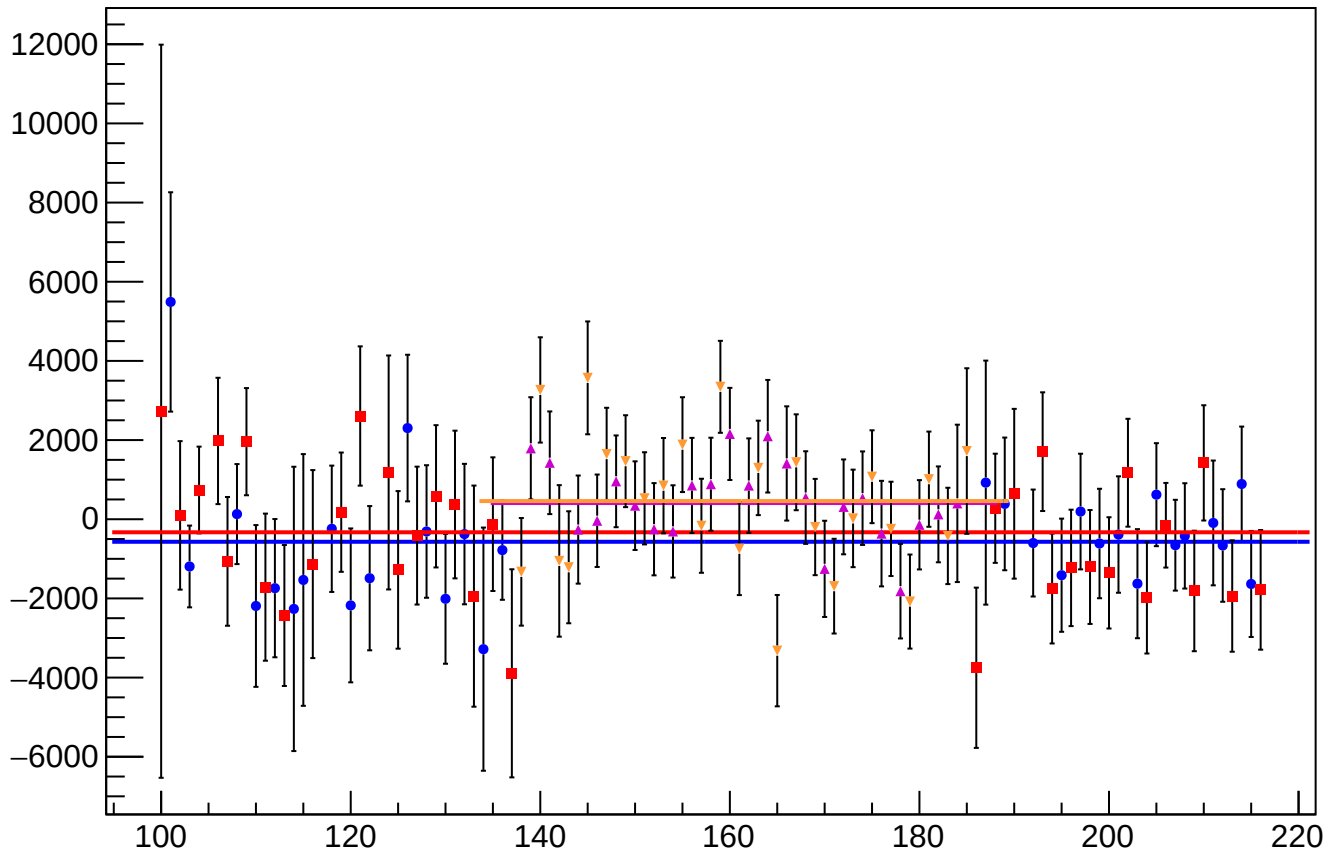
# asym\_usr\_atr2\_dd\_cor\_correction\_rms vs Slug



Right In: 4030.079±/0.686     $\chi^2/\text{NDF}$ : 3866879.2/30  
 Left Out: 3654.195±/0.601     $\chi^2/\text{NDF}$ :1311769.4/24  
 Right Out: 3782.593±/0.655     $\chi^2/\text{NDF}$ : 5081946.8/33  
 Left In: 3666.114±/0.619     $\chi^2/\text{NDF}$ :1343711.6/22

+ sign 3817.473±/0.452     $\chi^2/\text{NDF}$ : 5348379.6/55  
 All: 3769.006±/0.319     $\chi^2/\text{NDF}$ : 11813592.6/100  
 - sign 3721.036±/0.450     $\chi^2/\text{NDF}$ : 6442359.7/56

# eigen\_cor\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-569.258 \pm 279.512$   $\chi^2/\text{NDF}$ : 16.2/30

Left Out:  $458.844 \pm 251.538$   $\chi^2/\text{NDF}$ : 42.1/24

Right Out:  $-329.468 \pm 276.560$   $\chi^2/\text{NDF}$ : 29.0/33

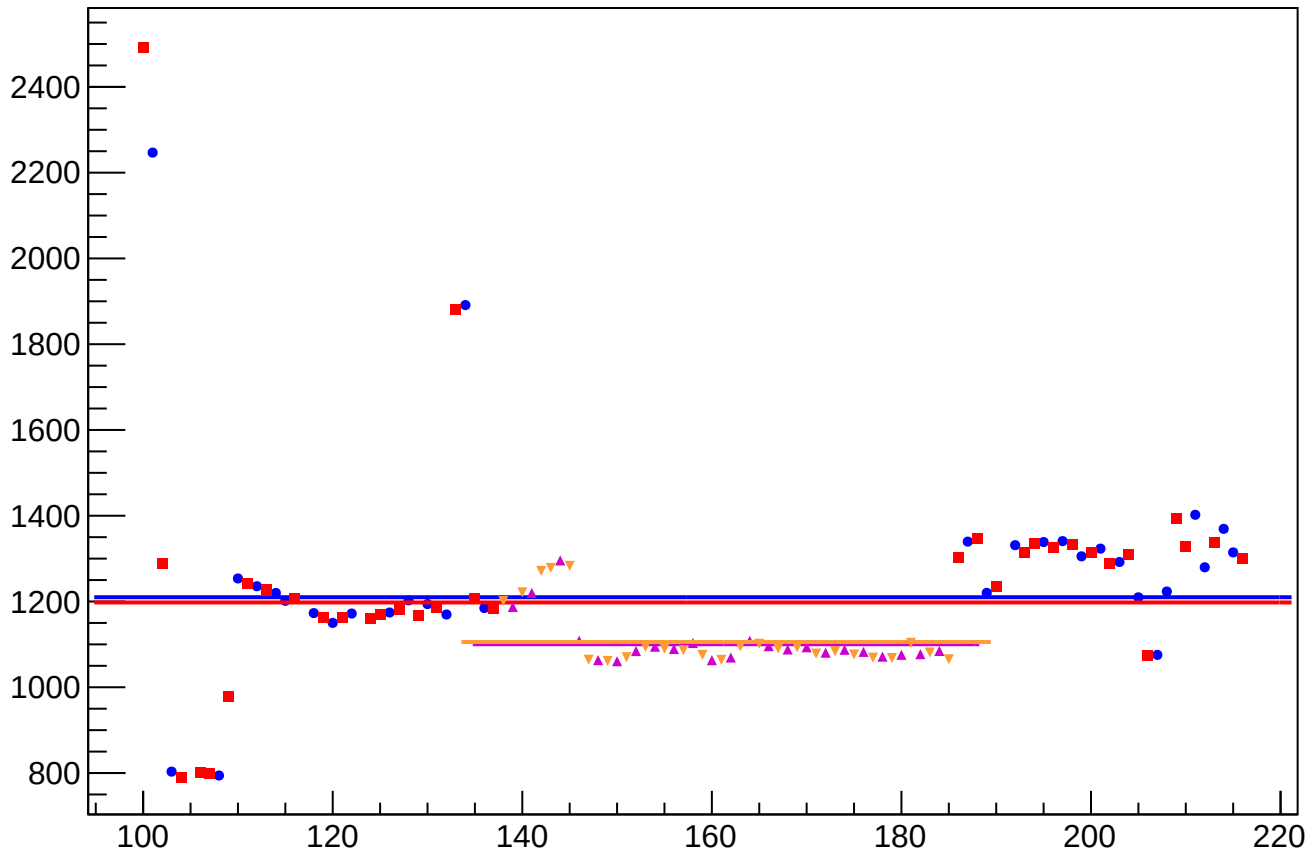
Left In:  $411.165 \pm 257.201$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-1.199 \pm 186.975$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $32.987 \pm 132.691$   $\chi^2/\text{NDF}$ : 112.4/112

- sign  $67.675 \pm 188.341$   $\chi^2/\text{NDF}$ : 46.5/56

# eigen\_cor\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1209.919+/-0.198  $\chi^2/\text{NDF}$ : 1092118.8/30

Left Out: 1105.549+/-0.178  $\chi^2/\text{NDF}$ :121950.0/24

Right Out: 1197.740+/-0.195  $\chi^2/\text{NDF}$ : 984175.1/33

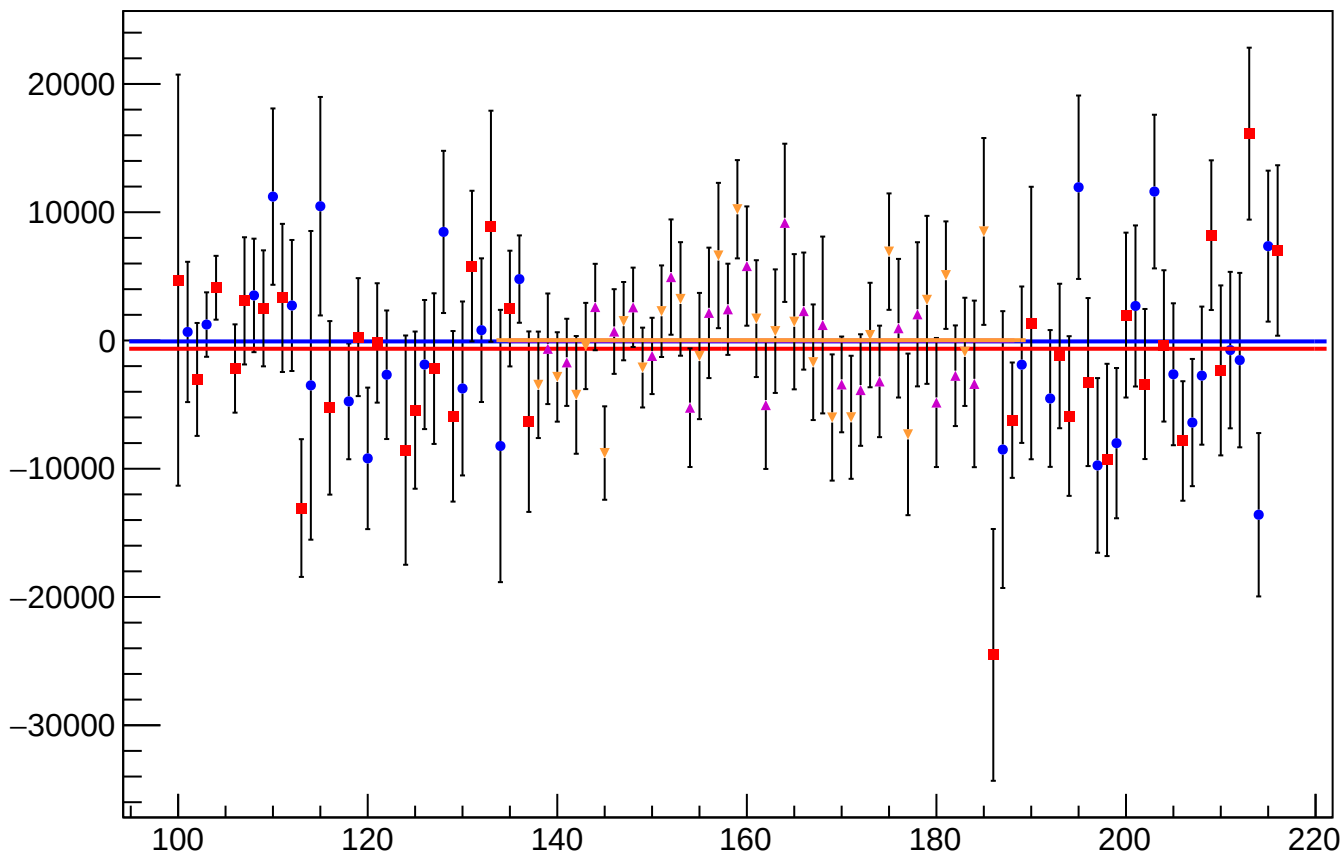
Left In: 1100.350+/-0.182  $\chi^2/\text{NDF}$ :80240.5/22

+ sign 1152.251+/-0.132  $\chi^2/\text{NDF}$ : 1368146.6/55

All: 1148.929+/-0.094  $\chi^2/\text{NDF}$ : 2566950.0/11

- sign 1145.560+/-0.133  $\chi^2/\text{NDF}$ : 1197531.3/56

asym\_usr\_atr2\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-72.580 \pm 970.395$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $23.365 \pm 850.403$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-645.150 \pm 926.616$   $\chi^2/\text{NDF}$ : 39.6/33

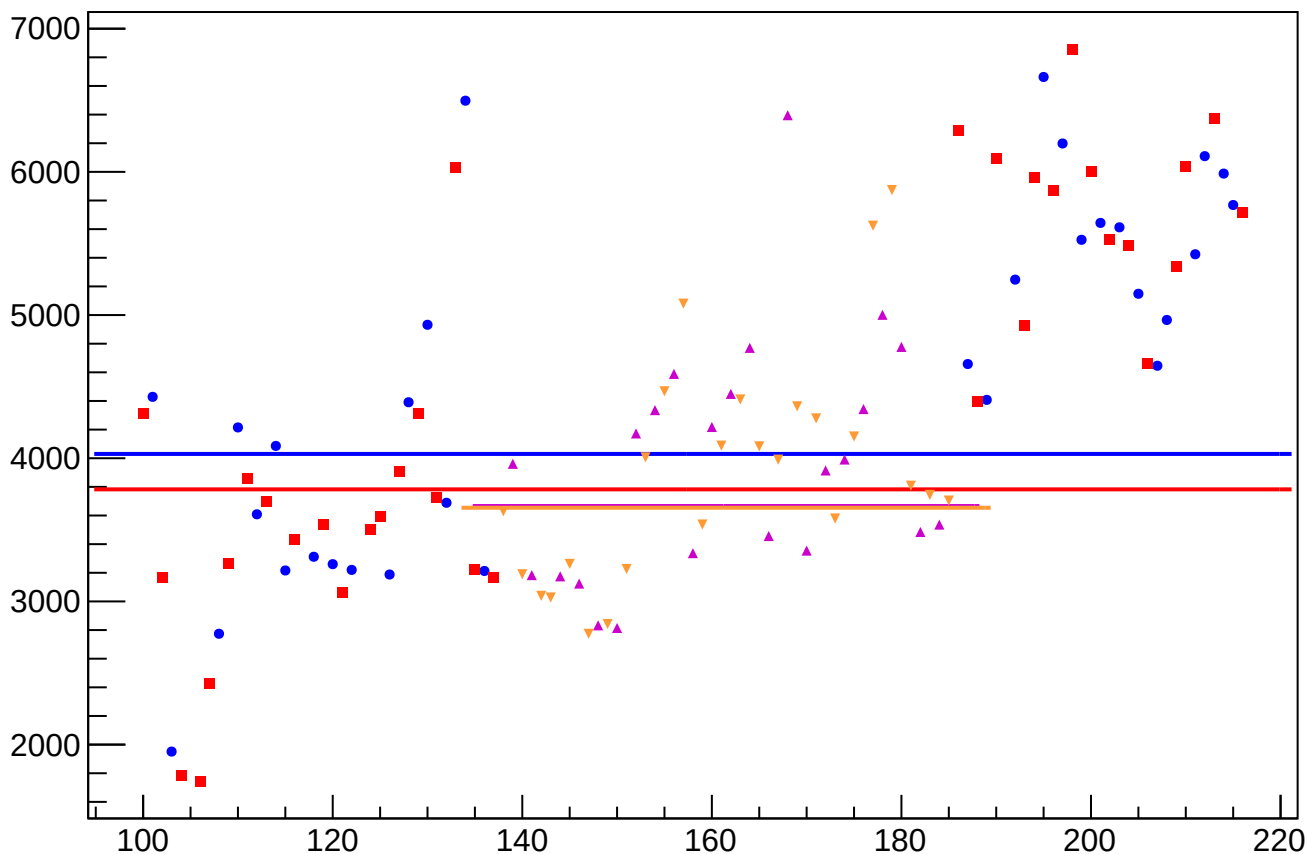
Left In:  $-6.368 \pm 875.255$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-18.312 \pm 639.566$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $-163.684 \pm 451.076$   $\chi^2/\text{NDF}$ : 117.3/112

- sign  $-307.566 \pm 636.282$   $\chi^2/\text{NDF}$ : 53.9/56

asym\_usr\_atr2\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 4030.079 $\pm$ 0.686  $\chi^2$ /NDF: 3866879.2/30

Left Out: 3654.195 $\pm$ 0.601  $\chi^2$ /NDF:1311769.4/24

Right Out: 3782.593 $\pm$ 0.655  $\chi^2$ /NDF: 5081946.8/33

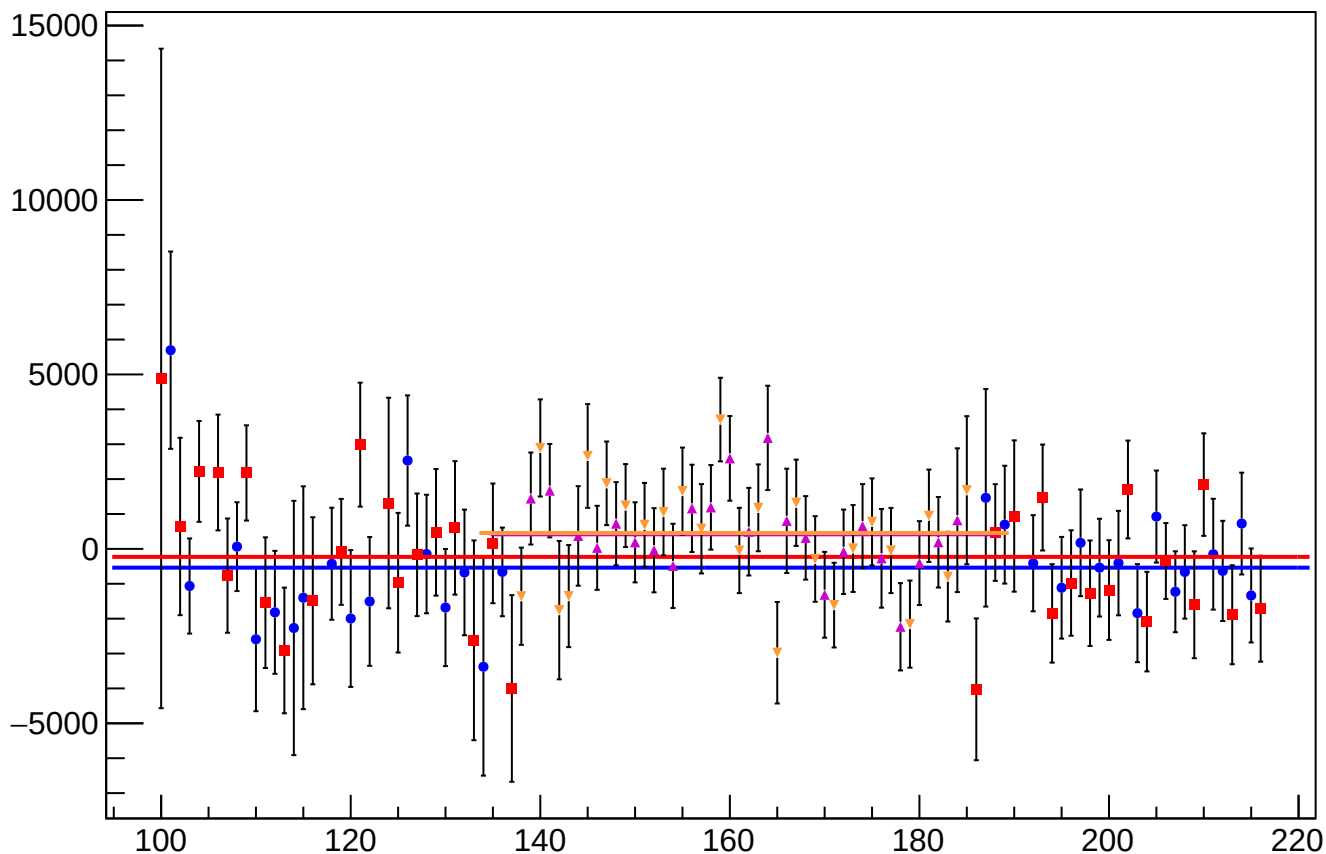
Left In: 3666.114 $\pm$ 0.619  $\chi^2$ /NDF:1343711.6/22

+ sign 3817.473 $\pm$ 0.452  $\chi^2$ /NDF: 5348379.6/55

All: 3769.006 $\pm$ 0.319  $\chi^2$ /NDF: 11813592.6/100

- sign 3721.036 $\pm$ 0.450  $\chi^2$ /NDF: 6442359.7/56

# dit\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-538.239 \pm 287.602$   $\chi^2/\text{NDF}$ : 16.9/30

Left Out:  $455.711 \pm 261.005$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-229.420 \pm 285.818$   $\chi^2/\text{NDF}$ : 34.9/33

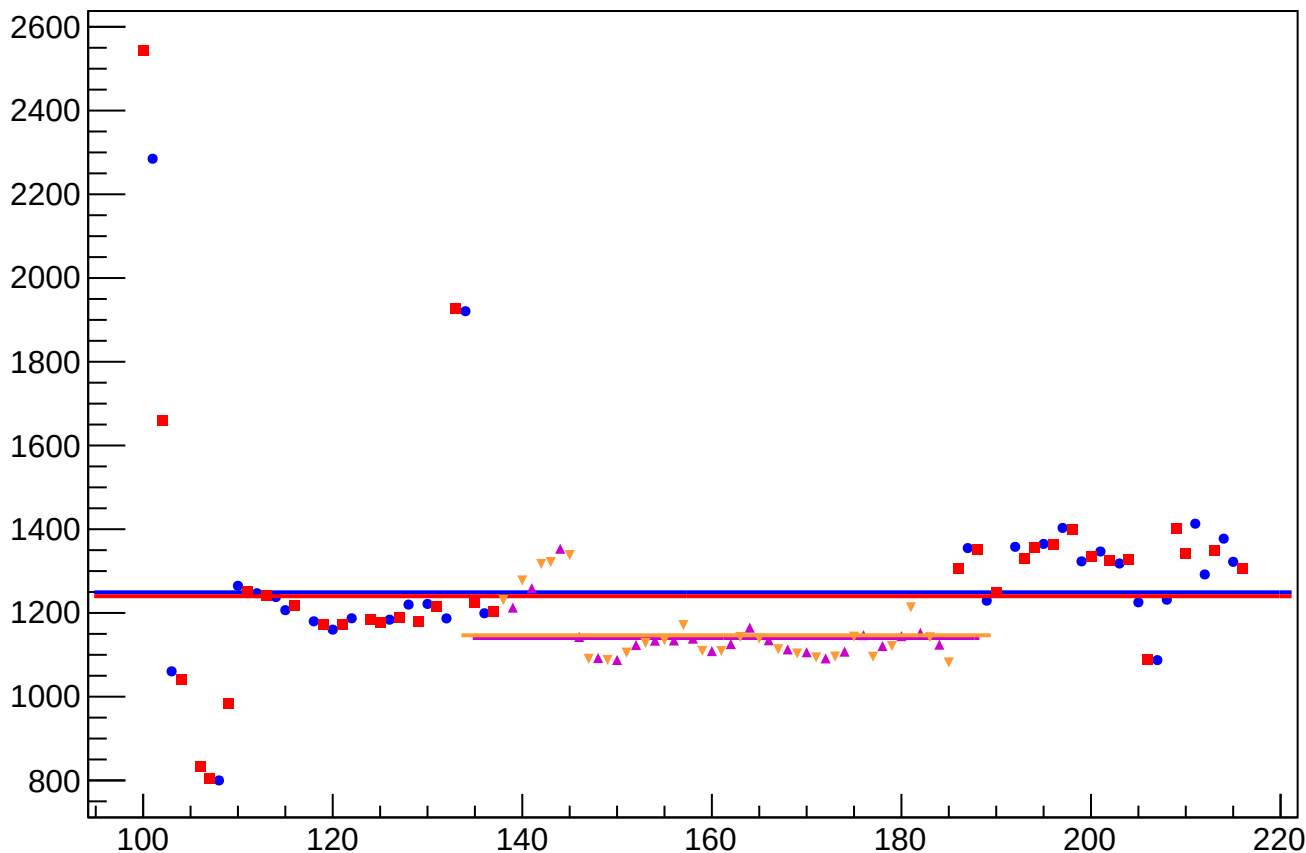
Left In:  $417.202 \pm 266.582$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $6.810 \pm 193.279$   $\chi^2/\text{NDF}$ : 59.6/55

All:  $61.124 \pm 137.255$   $\chi^2/\text{NDF}$ : 114.7/112

- sign  $116.380 \pm 194.948$   $\chi^2/\text{NDF}$ : 54.9/56

# dit\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1249.264 $\pm$ 0.203  $\chi^2$ /NDF: 819333.7/30

Left Out: 1146.614 $\pm$ 0.185  $\chi^2$ /NDF:141015.8/24

Right Out: 1239.928 $\pm$ 0.202  $\chi^2$ /NDF: 776156.0/33

Left In: 1140.168 $\pm$ 0.189  $\chi^2$ /NDF:84737.4/22

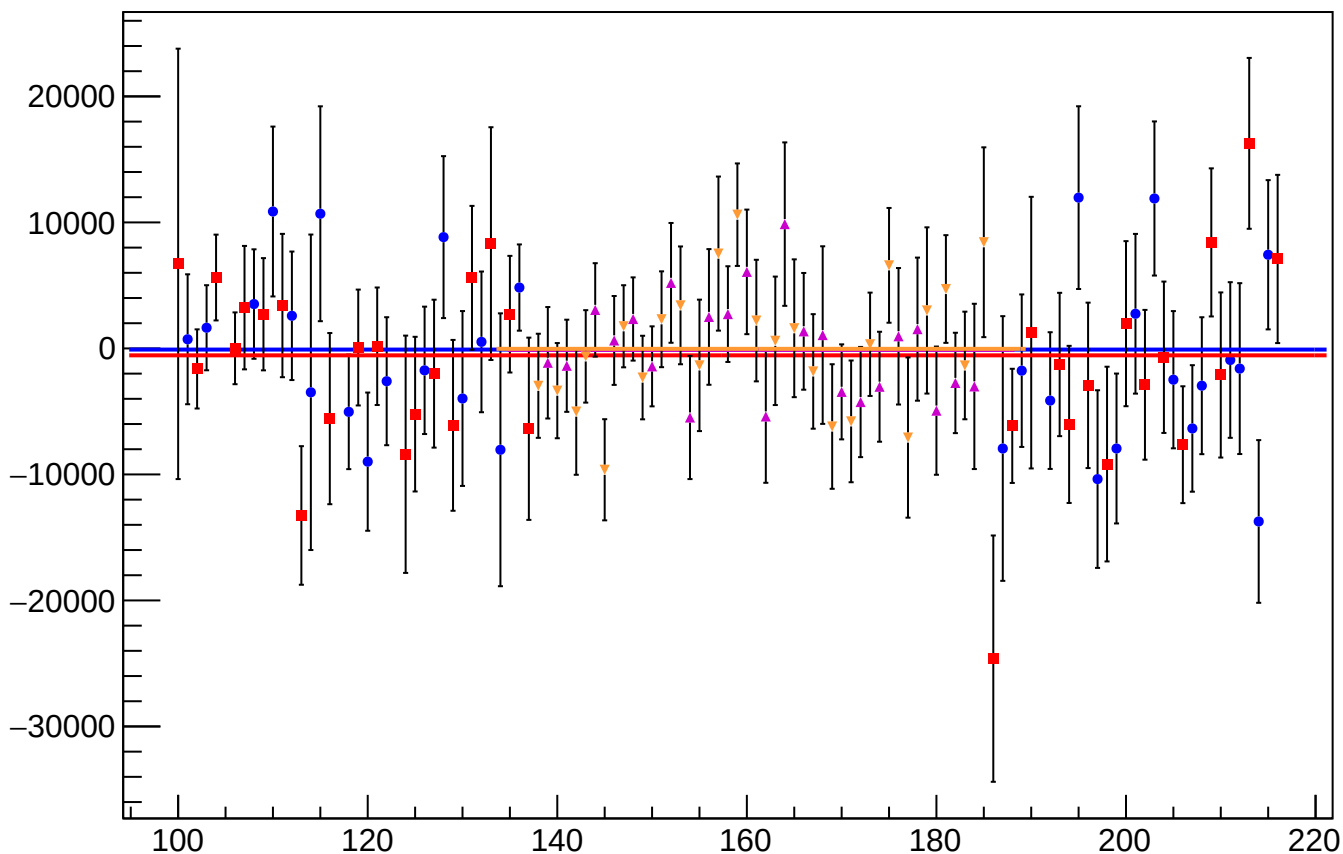
+ sign 1192.974 $\pm$ 0.137  $\chi^2$ /NDF: 1100062.7/55

All: 1189.808 $\pm$ 0.097  $\chi^2$ /NDF: 2092364.1/11

- sign 1186.588 $\pm$ 0.138  $\chi^2$ /NDF: 991219.0/56



# asym\_usr\_atr2\_dd\_dit\_correction\_mean vs Slug



Right In:  $-91.893 \pm 1006.737$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-33.549 \pm 891.370$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-549.482 \pm 924.968$   $\chi^2/\text{NDF}$ : 38.7/33

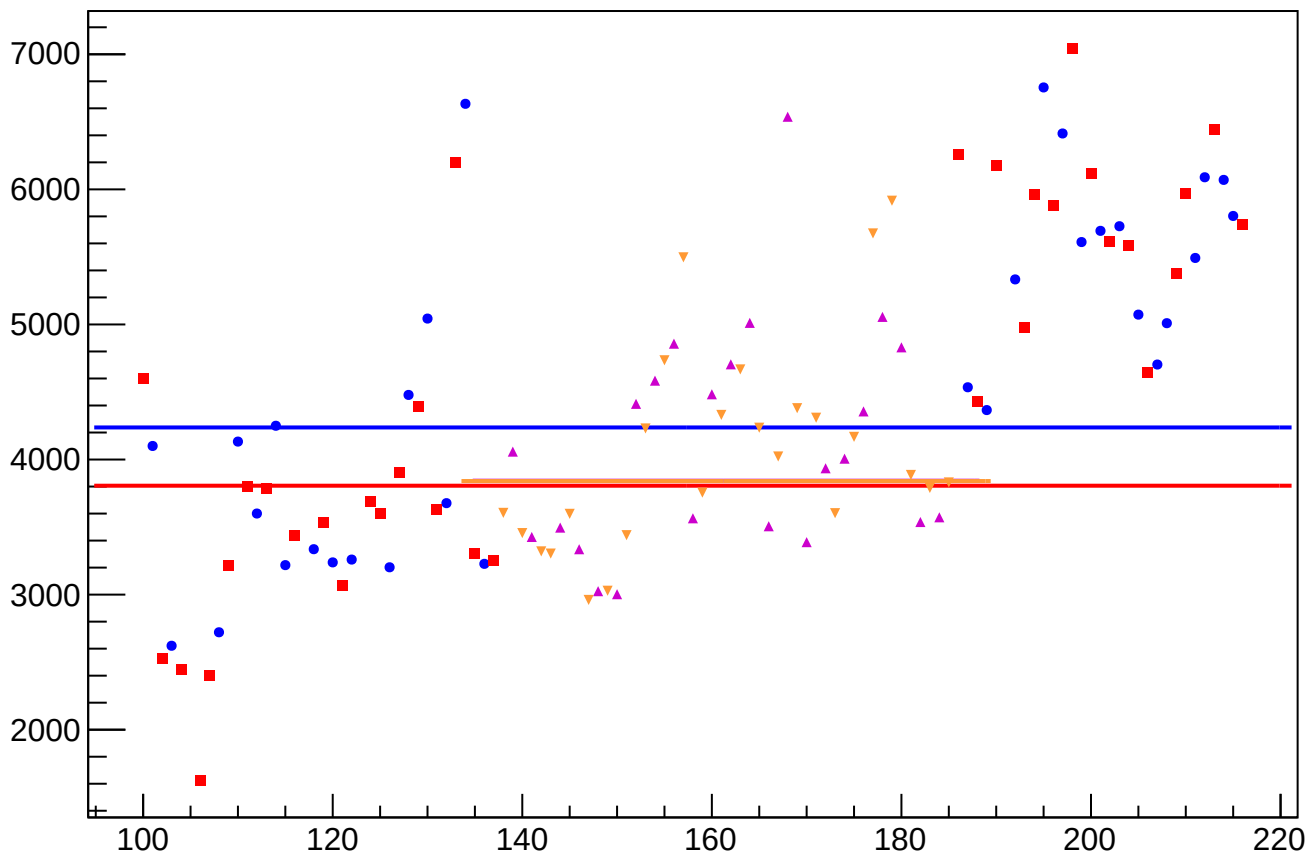
Left In:  $-121.051 \pm 915.714$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-59.188 \pm 667.372$   $\chi^2/\text{NDF}$ : 62.4/55

All:  $-199.603 \pm 465.917$   $\chi^2/\text{NDF}$ : 115.0/112

- sign  $-333.113 \pm 650.755$   $\chi^2/\text{NDF}$ : 52.6/56

# asym\_usr\_atr2\_dd\_dit\_correction\_rms vs Slug



Right In: 4237.566+/-0.712  $\chi^2/\text{NDF}$ : 2872629.1/30

Left Out: 3840.830+/-0.630  $\chi^2/\text{NDF}$ : 1118666.6/24

Right Out: 3806.263+/-0.654  $\chi^2/\text{NDF}$ : 4926218.8/33

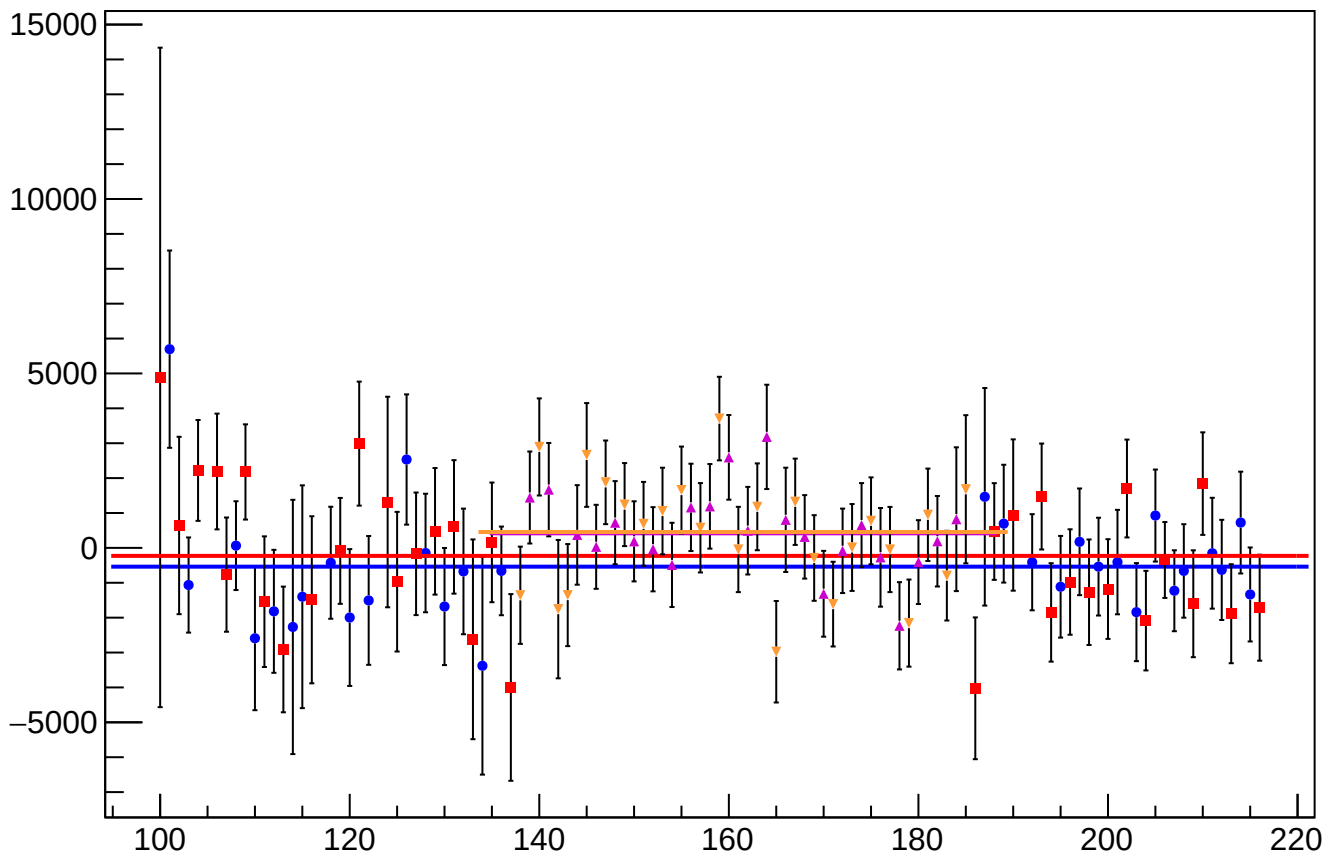
Left In: 3843.328+/-0.648  $\chi^2/\text{NDF}$ : 1196057.8/22

+ sign 4015.174+/-0.472  $\chi^2/\text{NDF}$ : 4165404.4/55

All: 3917.680+/-0.329  $\chi^2/\text{NDF}$ : 10372567.5/100

- sign 3824.982+/-0.460  $\chi^2/\text{NDF}$ : 6123898.5/56

# eigen\_dit\_asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-538.236 \pm 287.602$   $\chi^2/\text{NDF}$ : 16.9/30

Left Out:  $455.716 \pm 261.006$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-229.419 \pm 285.818$   $\chi^2/\text{NDF}$ : 34.9/33

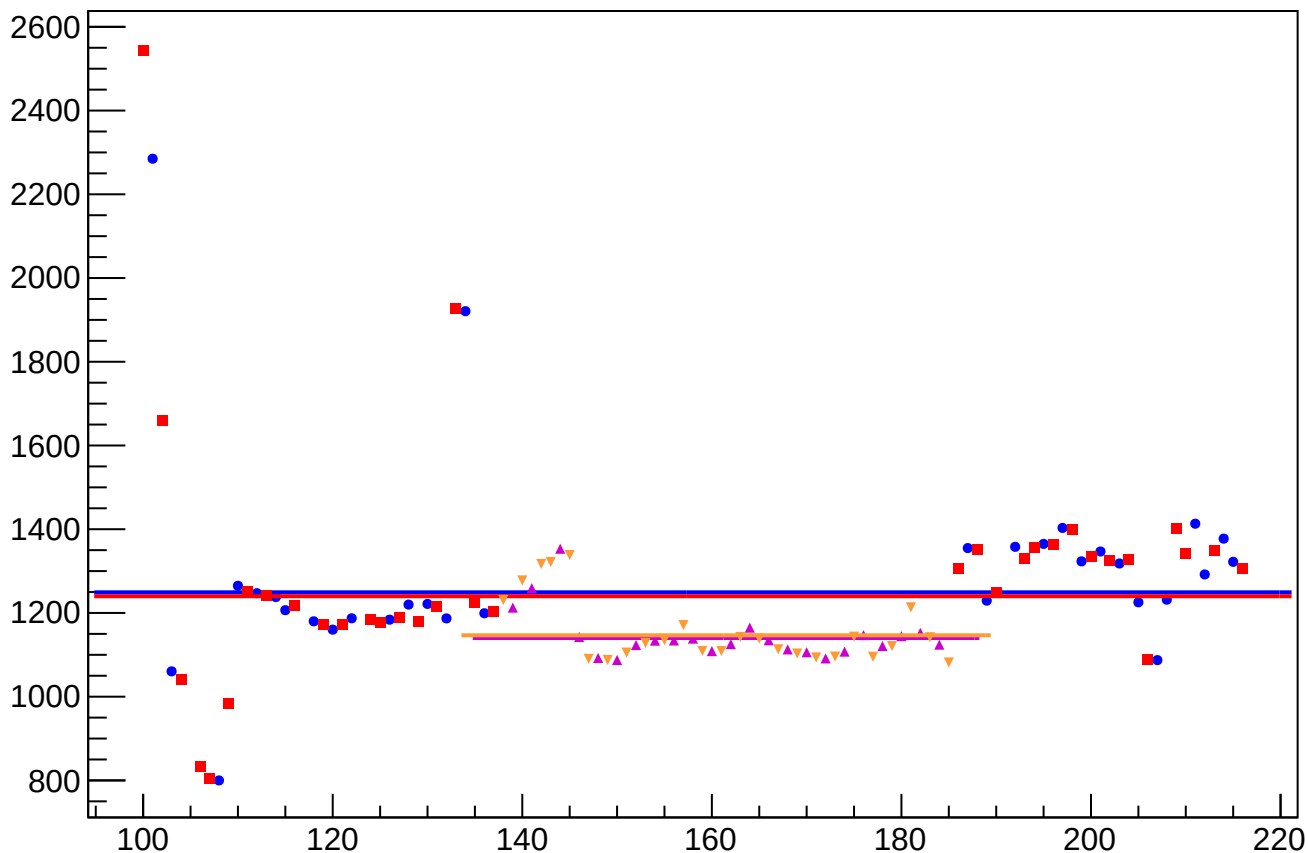
Left In:  $417.201 \pm 266.583$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $6.814 \pm 193.279$   $\chi^2/\text{NDF}$ : 59.6/55

All:  $61.126 \pm 137.255$   $\chi^2/\text{NDF}$ : 114.7/112

- sign  $116.380 \pm 194.948$   $\chi^2/\text{NDF}$ : 54.9/56

# eigen\_dit\_asym\_usr\_atr2\_dd\_rms vs Slug



Right In: 1249.264 $\pm$ 0.203  $\chi^2$ /NDF: 819334.6/30

Left Out: 1146.614 $\pm$ 0.185  $\chi^2$ /NDF:141015.8/24

Right Out: 1239.928 $\pm$ 0.202  $\chi^2$ /NDF: 776155.4/33

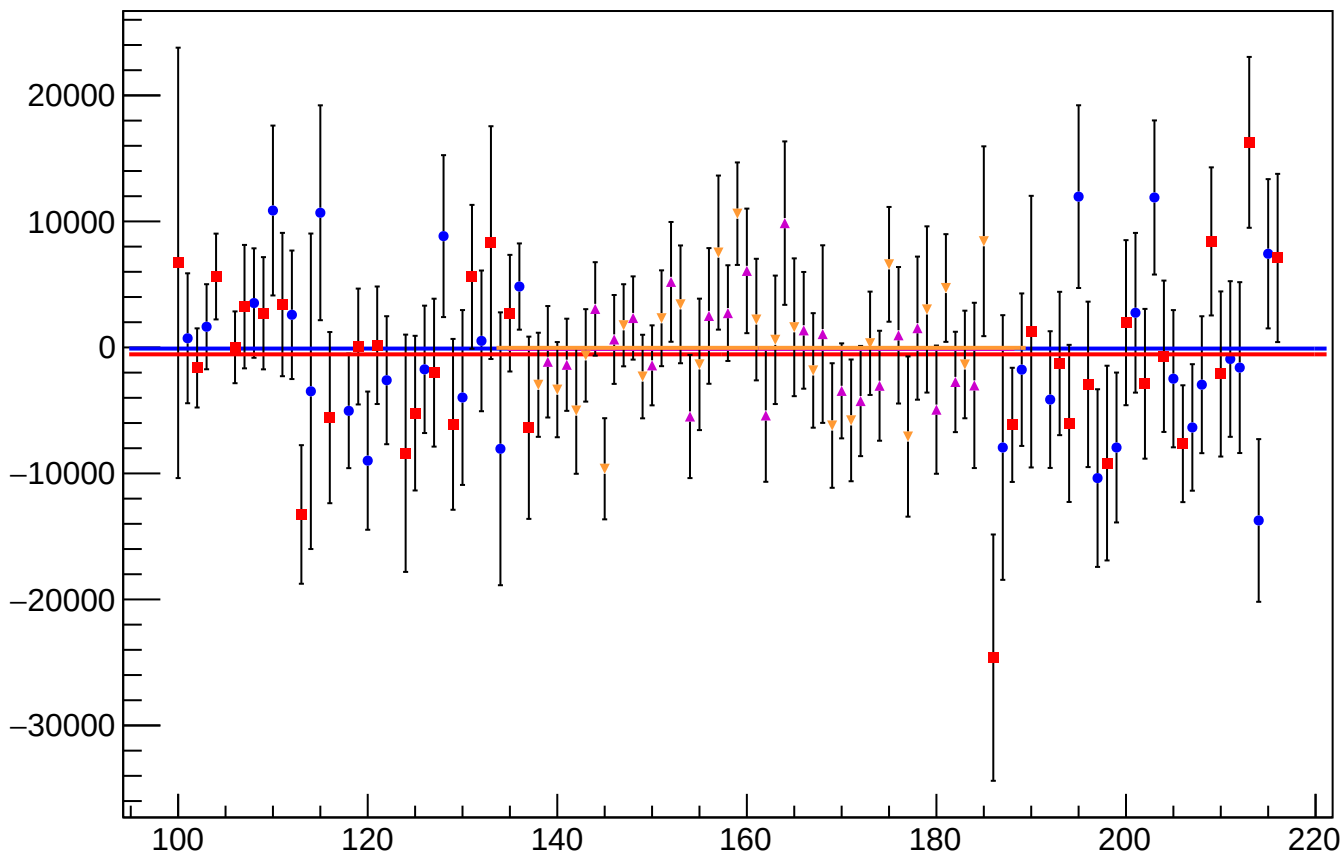
Left In: 1140.169 $\pm$ 0.189  $\chi^2$ /NDF:84737.2/22

+ sign 1192.974 $\pm$ 0.137  $\chi^2$ /NDF: 1100061.9/55

All: 1189.809 $\pm$ 0.097  $\chi^2$ /NDF: 2092360.7/11

- sign 1186.589 $\pm$ 0.138  $\chi^2$ /NDF: 991216.6/56

asym\_usr\_atr2\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-91.902 \pm 1006.737$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-33.548 \pm 891.372$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-549.477 \pm 924.967$   $\chi^2/\text{NDF}$ : 38.7/33

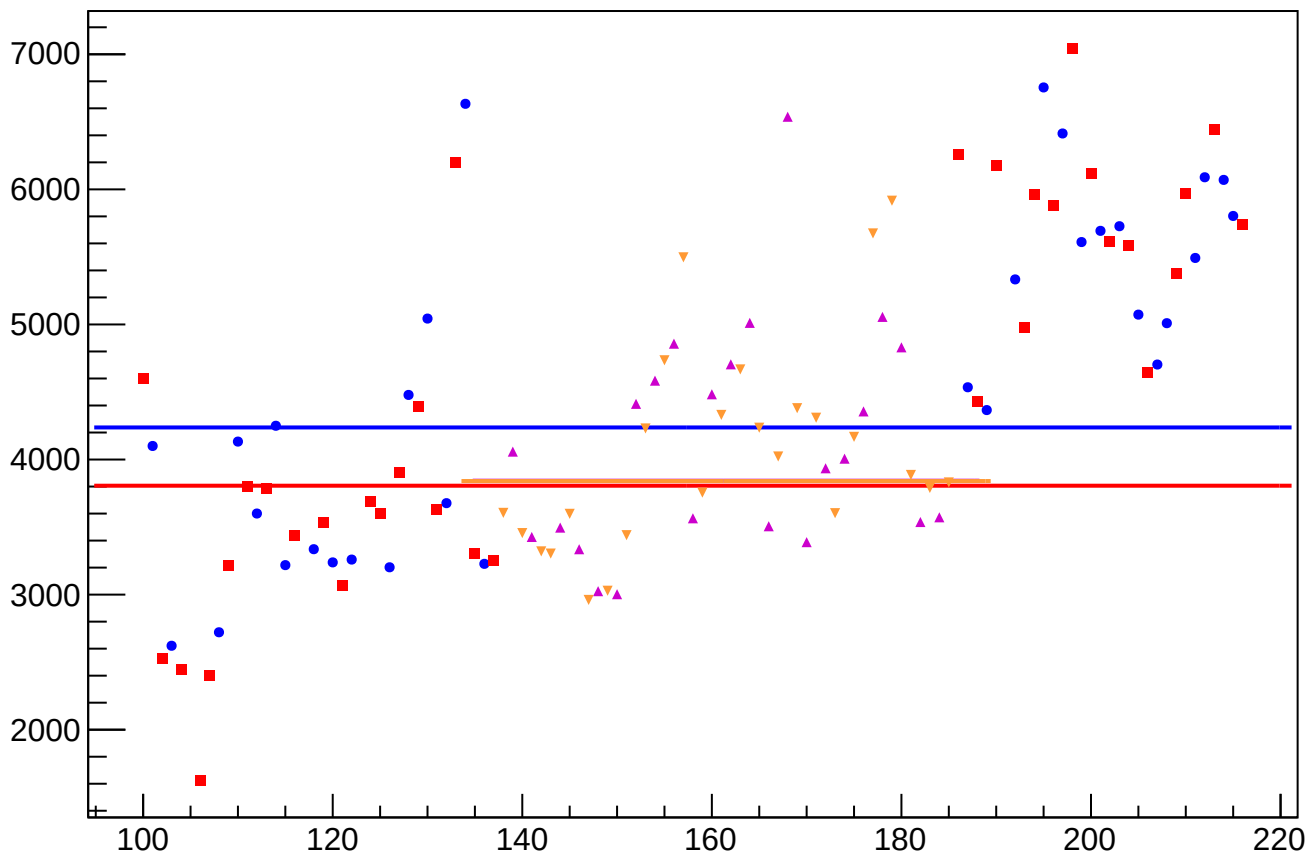
Left In:  $-121.054 \pm 915.716$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-59.191 \pm 667.372$   $\chi^2/\text{NDF}$ : 62.4/55

All:  $-199.604 \pm 465.917$   $\chi^2/\text{NDF}$ : 115.0/112

- sign  $-333.112 \pm 650.755$   $\chi^2/\text{NDF}$ : 52.6/56

asym\_usr\_atr2\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 4237.565 $\pm$ 0.712  $\chi^2/\text{NDF}$ : 2872644.6/30

Left Out: 3840.836 $\pm$ 0.630  $\chi^2/\text{NDF}$ : 1118668.2/24

Right Out: 3806.259 $\pm$ 0.654  $\chi^2/\text{NDF}$ : 4926248.6/33

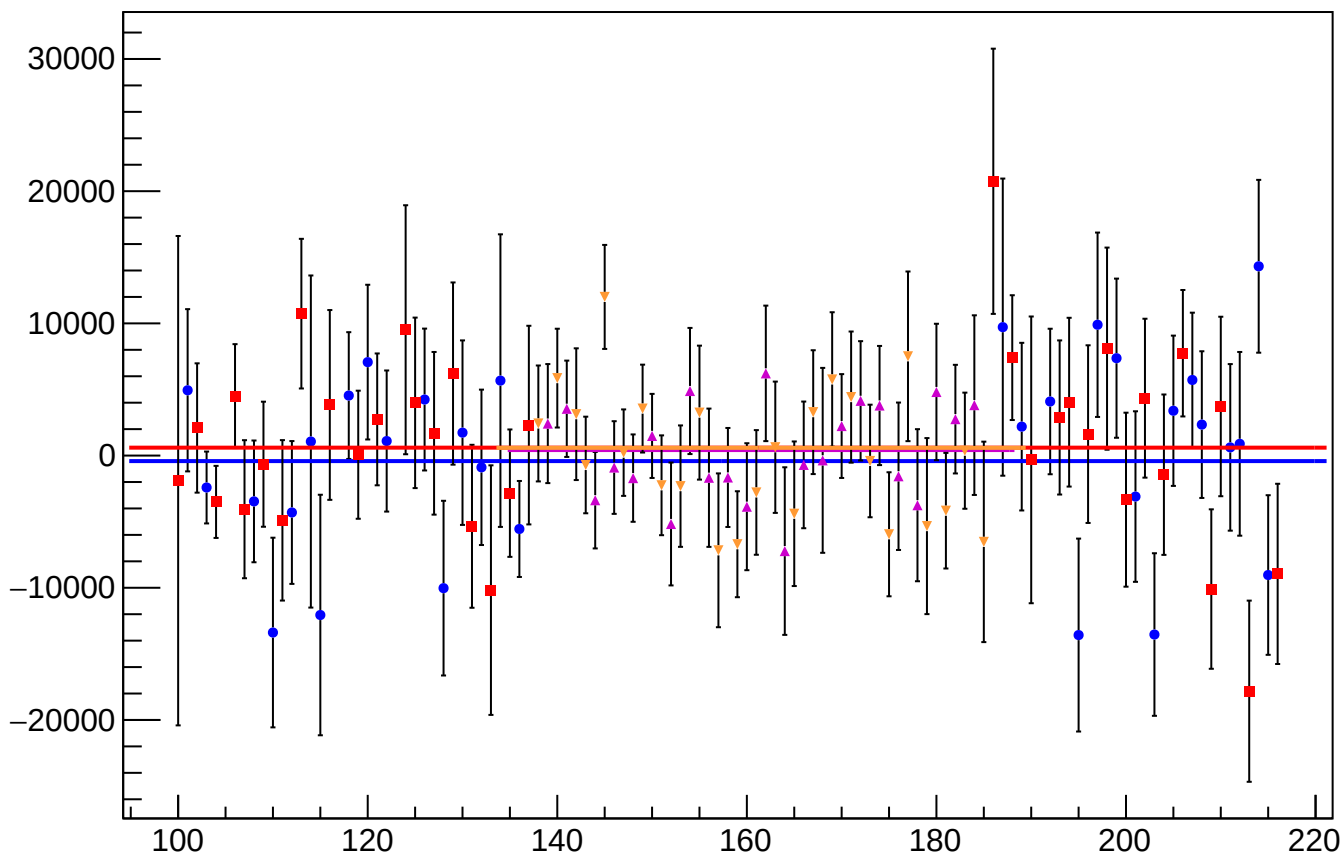
Left In: 3843.333 $\pm$ 0.648  $\chi^2/\text{NDF}$ : 1196061.6/22

+ sign 4015.176 $\pm$ 0.472  $\chi^2/\text{NDF}$ : 4165415.4/55

All: 3917.682 $\pm$ 0.329  $\chi^2/\text{NDF}$ : 10372614.6/103

- sign 3824.982 $\pm$ 0.460  $\chi^2/\text{NDF}$ : 6123932.9/56

# asym\_usr\_atr2\_dd\_mean vs Slug



Right In:  $-417.997 \pm 1019.512$   $\chi^2/\text{NDF}$ : 38.1/30

Left Out:  $583.278 \pm 894.900$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $599.220 \pm 981.830$   $\chi^2/\text{NDF}$ : 36.5/33

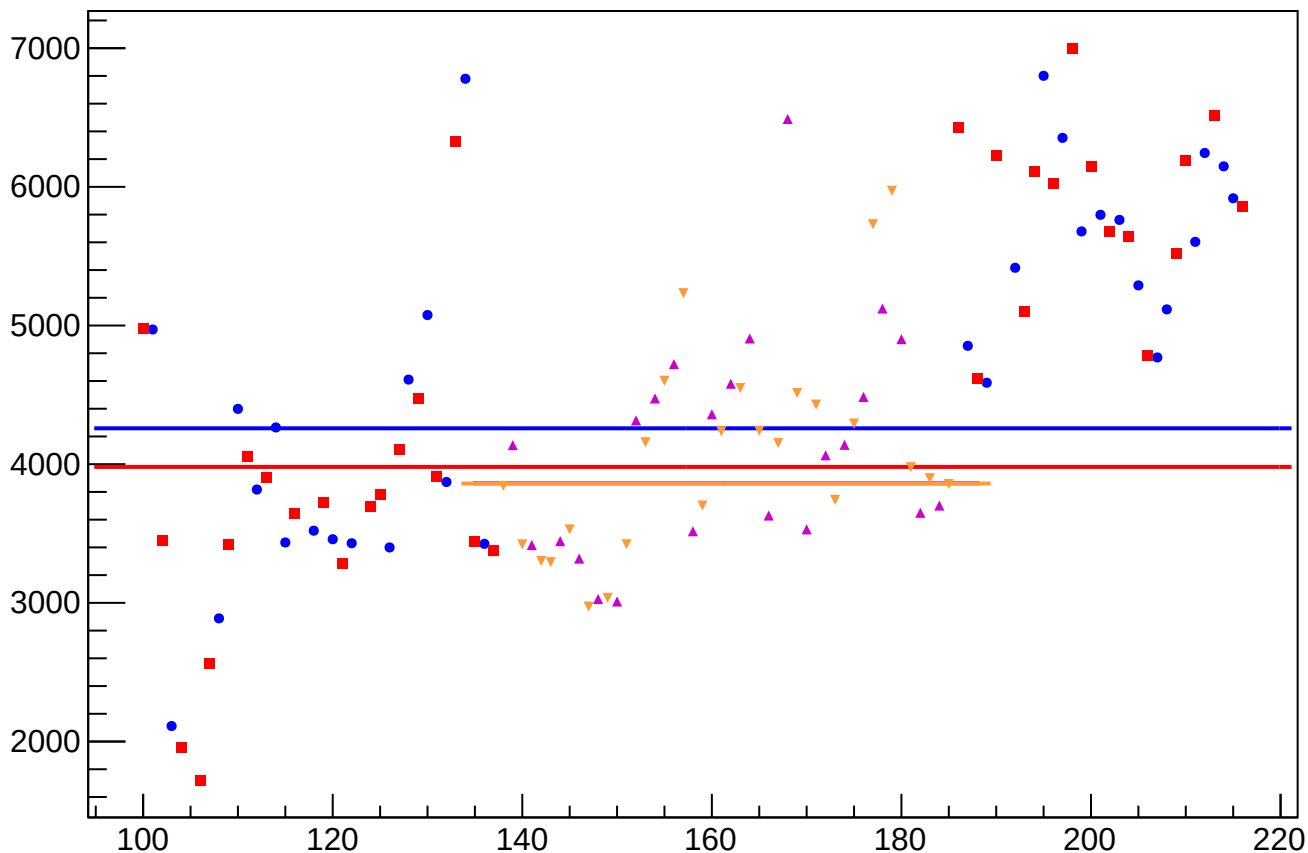
Left In:  $416.803 \pm 919.006$   $\chi^2/\text{NDF}$ : 12.5/22

+ sign  $147.540 \pm 672.556$   $\chi^2/\text{NDF}$ : 66.0/55

All:  $325.189 \pm 474.999$   $\chi^2/\text{NDF}$ : 115.2/112

- sign  $501.989 \pm 670.946$   $\chi^2/\text{NDF}$ : 49.0/56

# asym\_usr\_atr2\_dd\_rms vs Slug



Right In:  $4258.767 \pm 0.721$   $\chi^2/\text{NDF}$ : 3491006.6/30

Left Out:  $3860.536 \pm 0.633$   $\chi^2/\text{NDF}$ : 1097292.6/24

Right Out:  $3980.276 \pm 0.687$   $\chi^2/\text{NDF}$ : 4814262.7/33

Left In:  $3862.339 \pm 0.650$   $\chi^2/\text{NDF}$ : 1142179.8/22

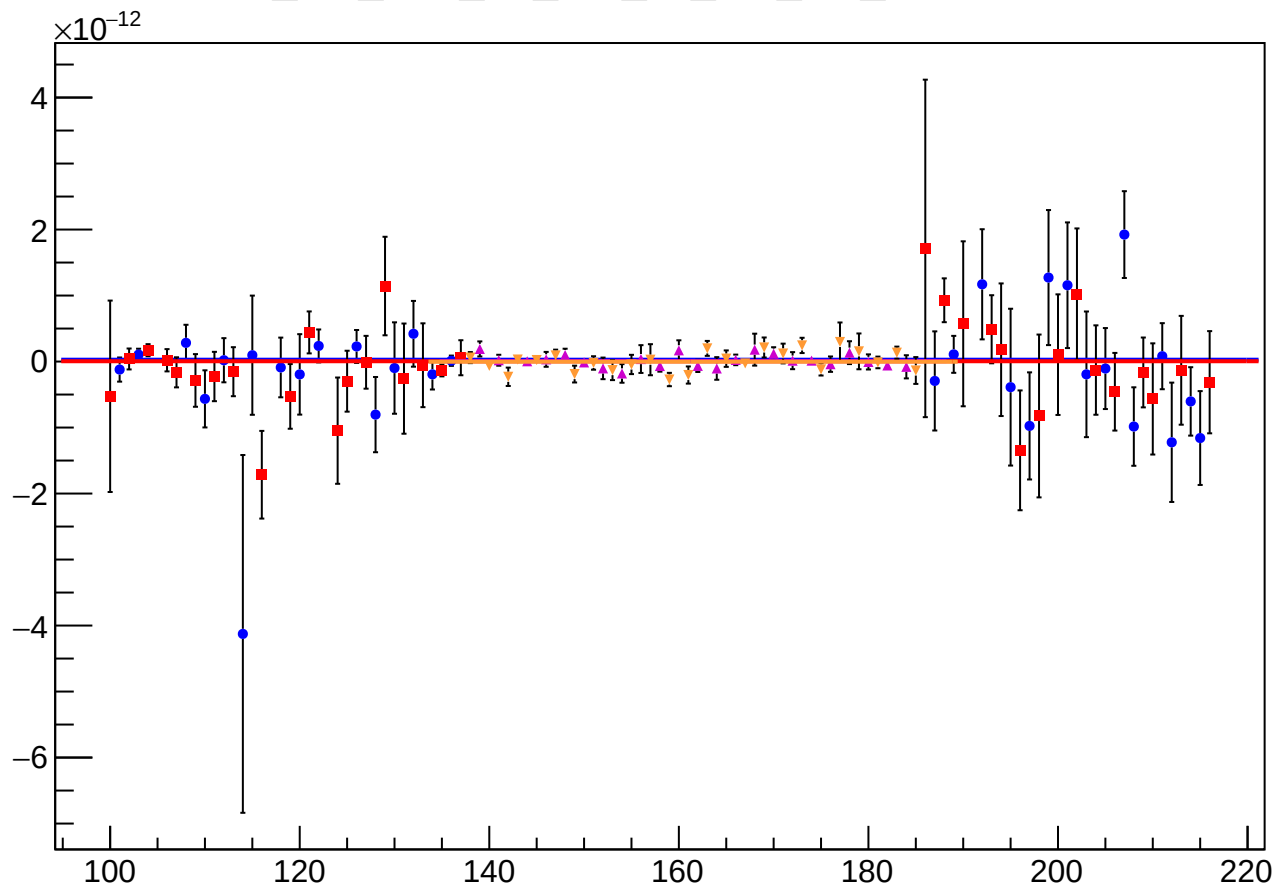
+ sign  $4033.840 \pm 0.476$   $\chi^2/\text{NDF}$ : 4760654.1/55

All:  $3975.512 \pm 0.335$   $\chi^2/\text{NDF}$ : 10762517.8/100

- sign  $3918.056 \pm 0.472$   $\chi^2/\text{NDF}$ : 5972003.2/56



# asym\_usr\_atr2\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.0/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.4/33

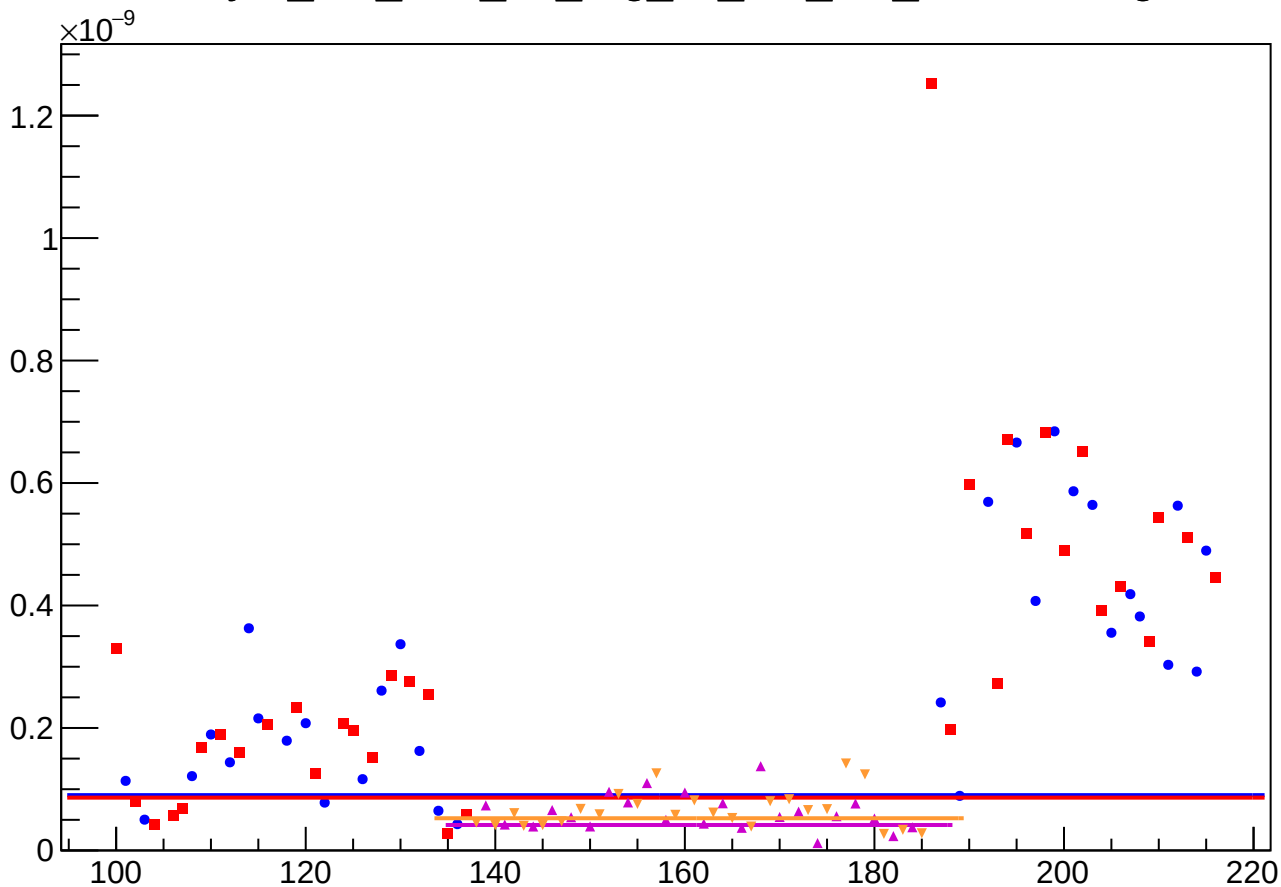
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 70.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 119.9/112

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.3/56

asym\_usr\_atr2\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8517779.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1611629.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9643251.4/33

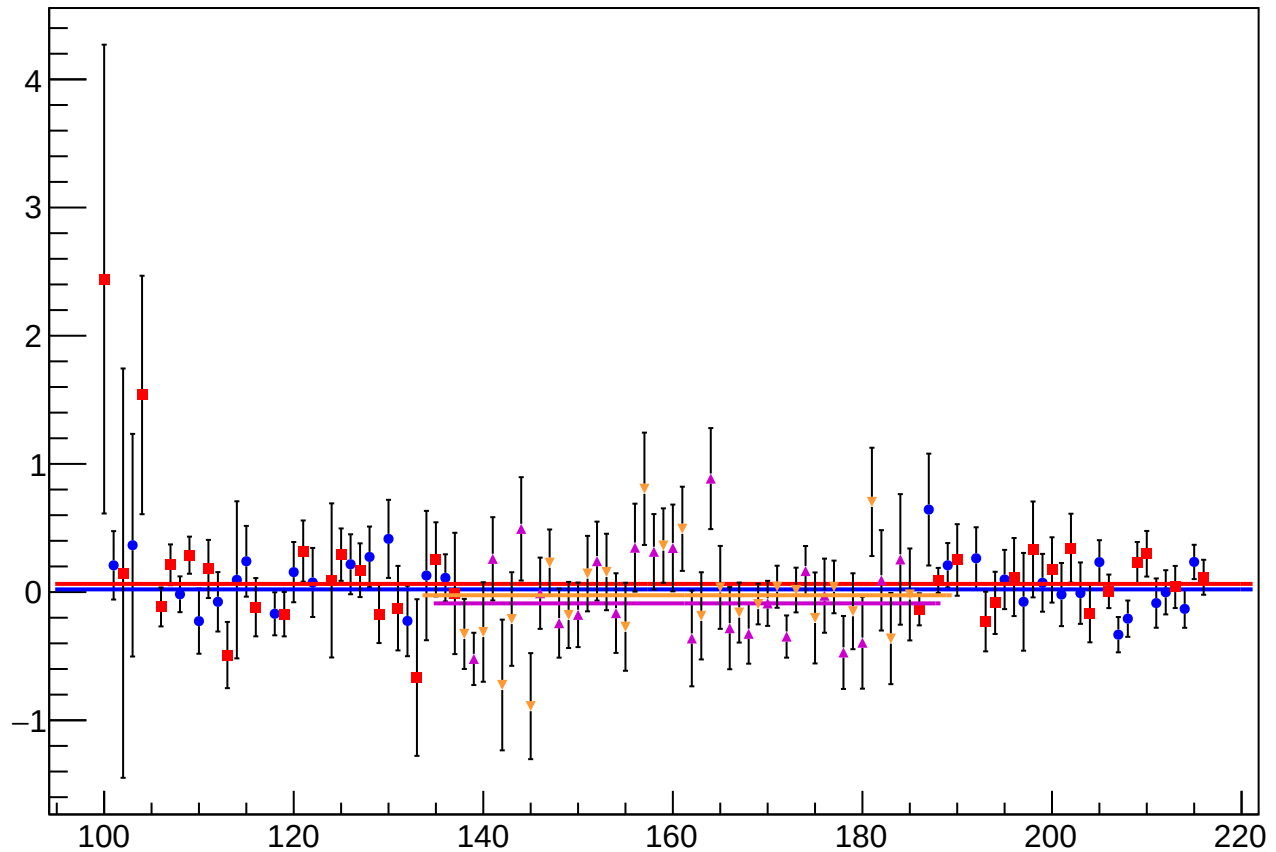
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2939628.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11206938.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25646622.1/112

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14085013.2/56

# asym\_usr\_atr2\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.021 \pm 0.037$   $\chi^2/\text{NDF}$ : 27.9/30

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.064 \pm 0.035$   $\chi^2/\text{NDF}$ : 33.2/33

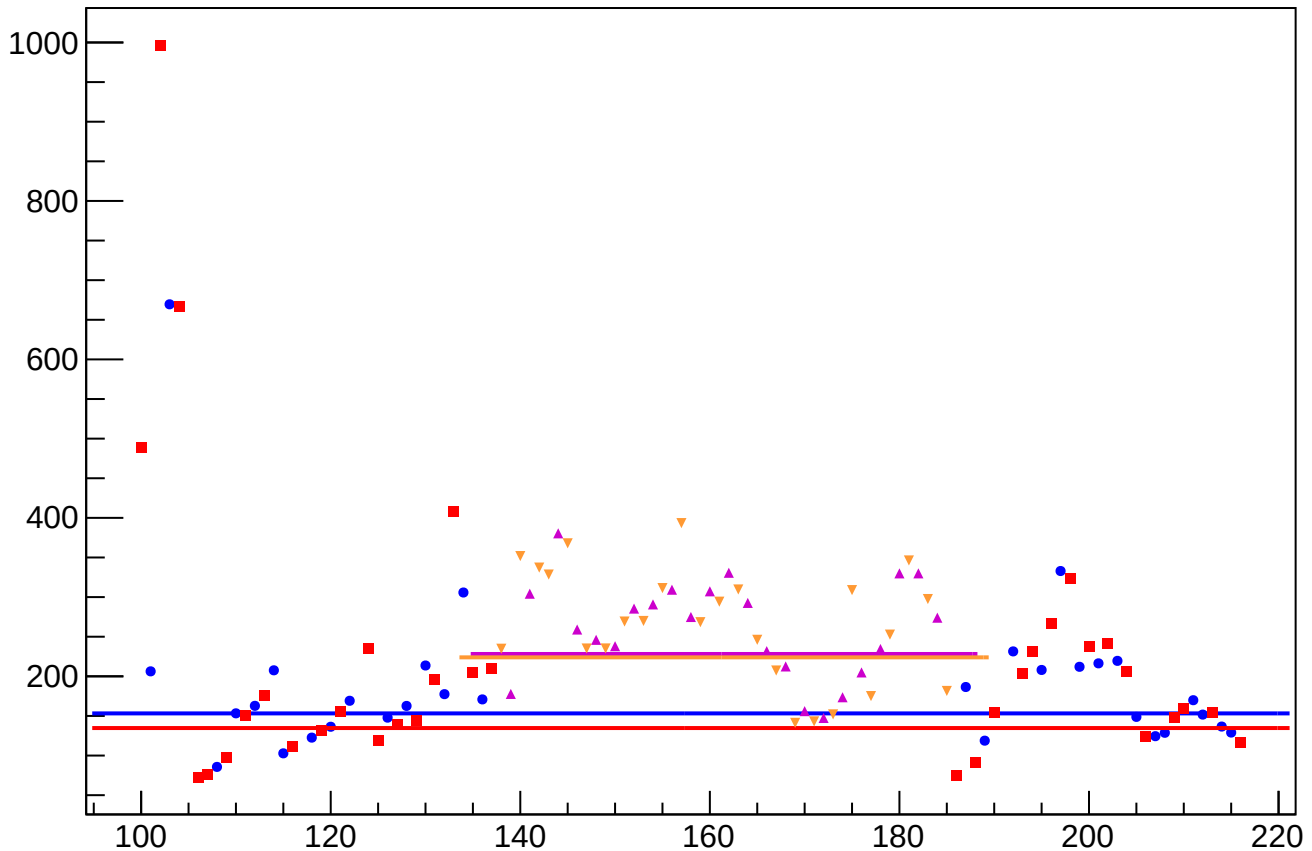
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.006 \pm 0.031$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $0.015 \pm 0.021$   $\chi^2/\text{NDF}$ : 121.1/112

- sign  $0.023 \pm 0.030$   $\chi^2/\text{NDF}$ : 68.5/56

asym\_usr\_atr2\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.213+/-0.027  $\chi^2/\text{NDF}$ : 3254764.4/30

Left Out: 223.945+/-0.039  $\chi^2/\text{NDF}$ : 3438444.8/24

Right Out: 134.723+/-0.024  $\chi^2/\text{NDF}$ : 6099233.5/33

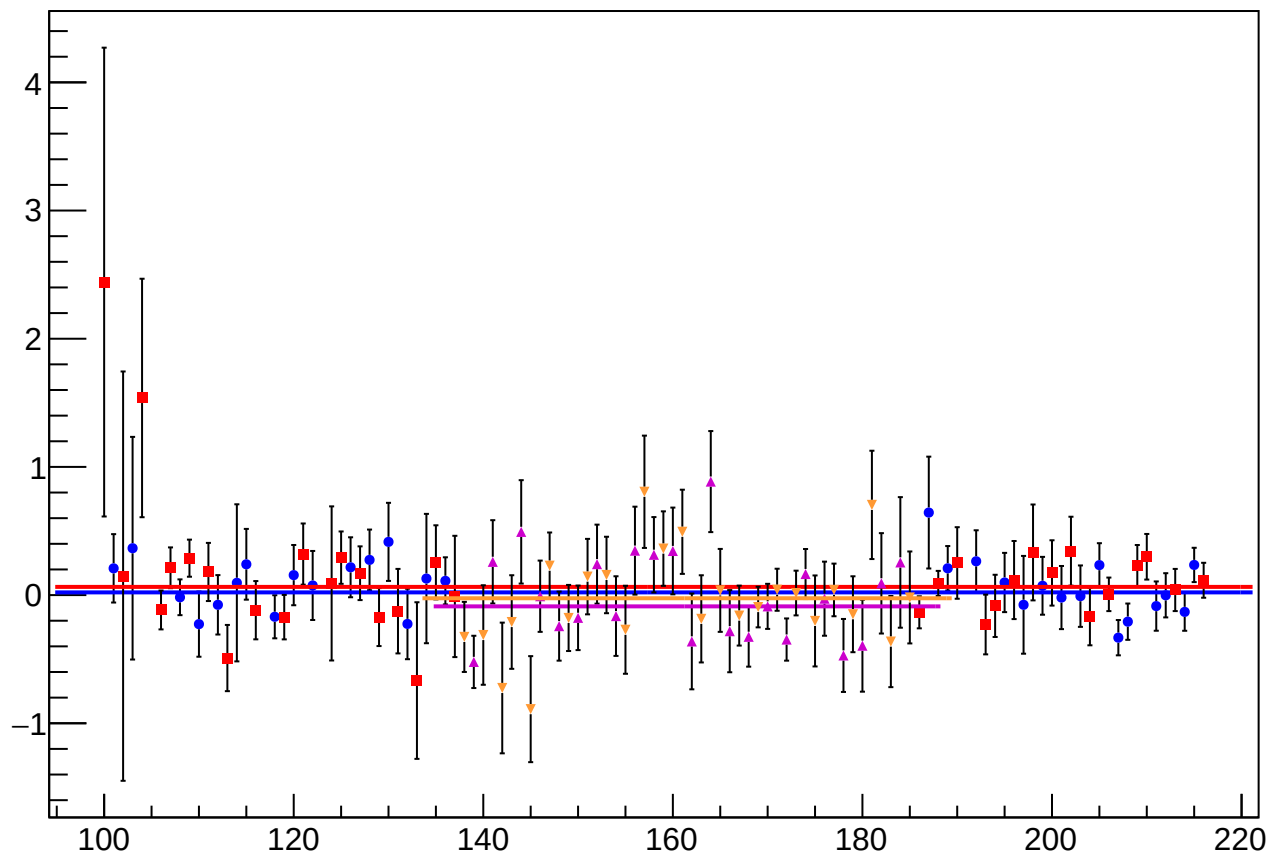
Left In: 228.199+/-0.040  $\chi^2/\text{NDF}$ : 2488915.3/22

+ sign 175.872+/-0.022  $\chi^2/\text{NDF}$ : 8974422.4/55

All: 167.609+/-0.015  $\chi^2/\text{NDF}$ : 21803413.1/11

- sign 160.076+/-0.021  $\chi^2/\text{NDF}$ : 12555636.5/56

asym\_usr\_atr2\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.021 \pm 0.037$   $\chi^2/\text{NDF}$ : 27.9/30

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.064 \pm 0.035$   $\chi^2/\text{NDF}$ : 33.2/33

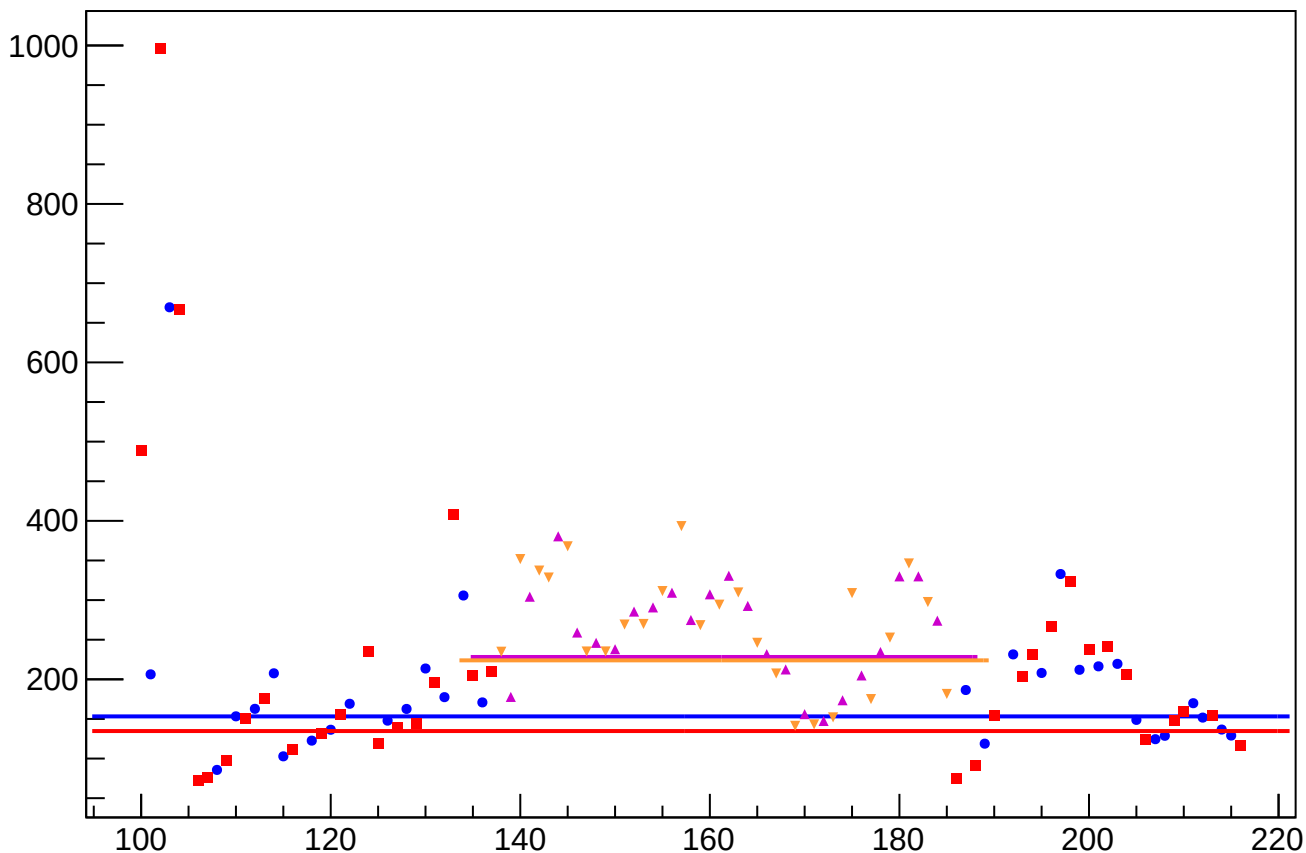
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.006 \pm 0.031$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $0.015 \pm 0.021$   $\chi^2/\text{NDF}$ : 121.1/112

- sign  $0.023 \pm 0.030$   $\chi^2/\text{NDF}$ : 68.5/56

asym\_usr\_atr2\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.213+/-0.027  $\chi^2/\text{NDF}$ : 3254764.4/30

Left Out: 223.945+/-0.039  $\chi^2/\text{NDF}$ : 3438444.8/24

Right Out: 134.723+/-0.024  $\chi^2/\text{NDF}$ : 6099233.5/33

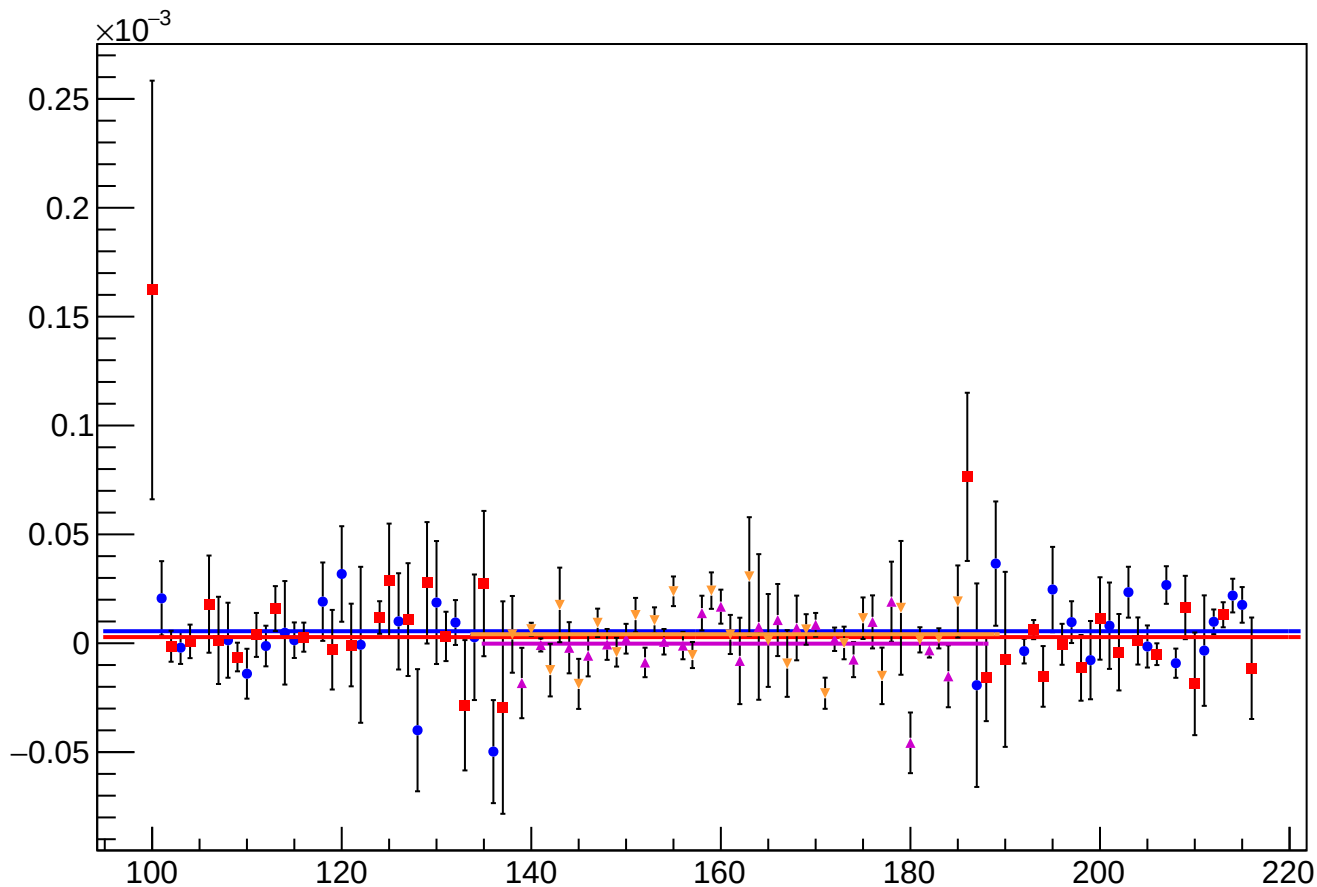
Left In: 228.199+/-0.040  $\chi^2/\text{NDF}$ : 2488915.3/22

+ sign 175.872+/-0.022  $\chi^2/\text{NDF}$ : 8974422.4/55

All: 167.609+/-0.015  $\chi^2/\text{NDF}$ : 21803413.1/11

- sign 160.076+/-0.021  $\chi^2/\text{NDF}$ : 12555636.5/56

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.7/33

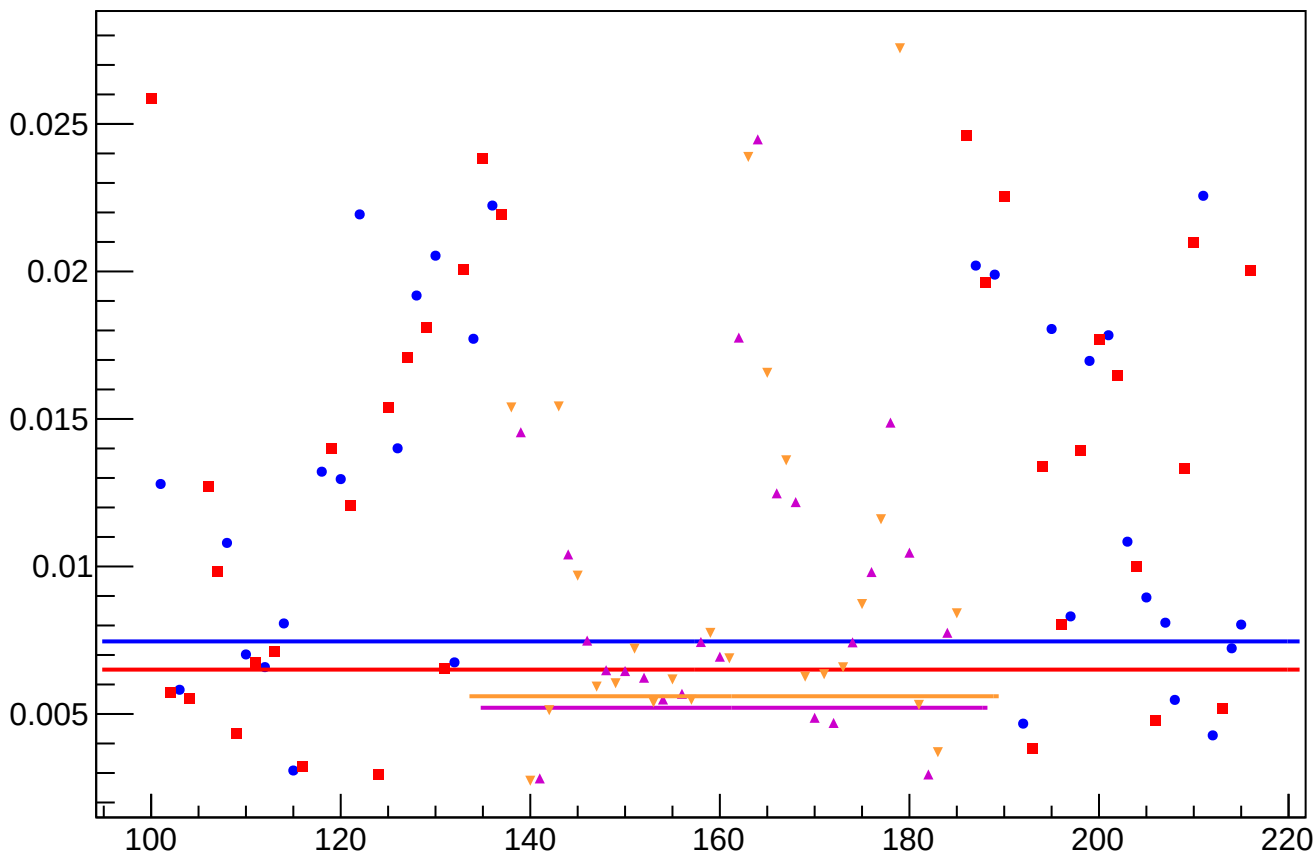
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 92.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 157.6/112

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.4/56

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8089514.7/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7769287.5/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11216017.4/33

Left In: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7460452.2/22

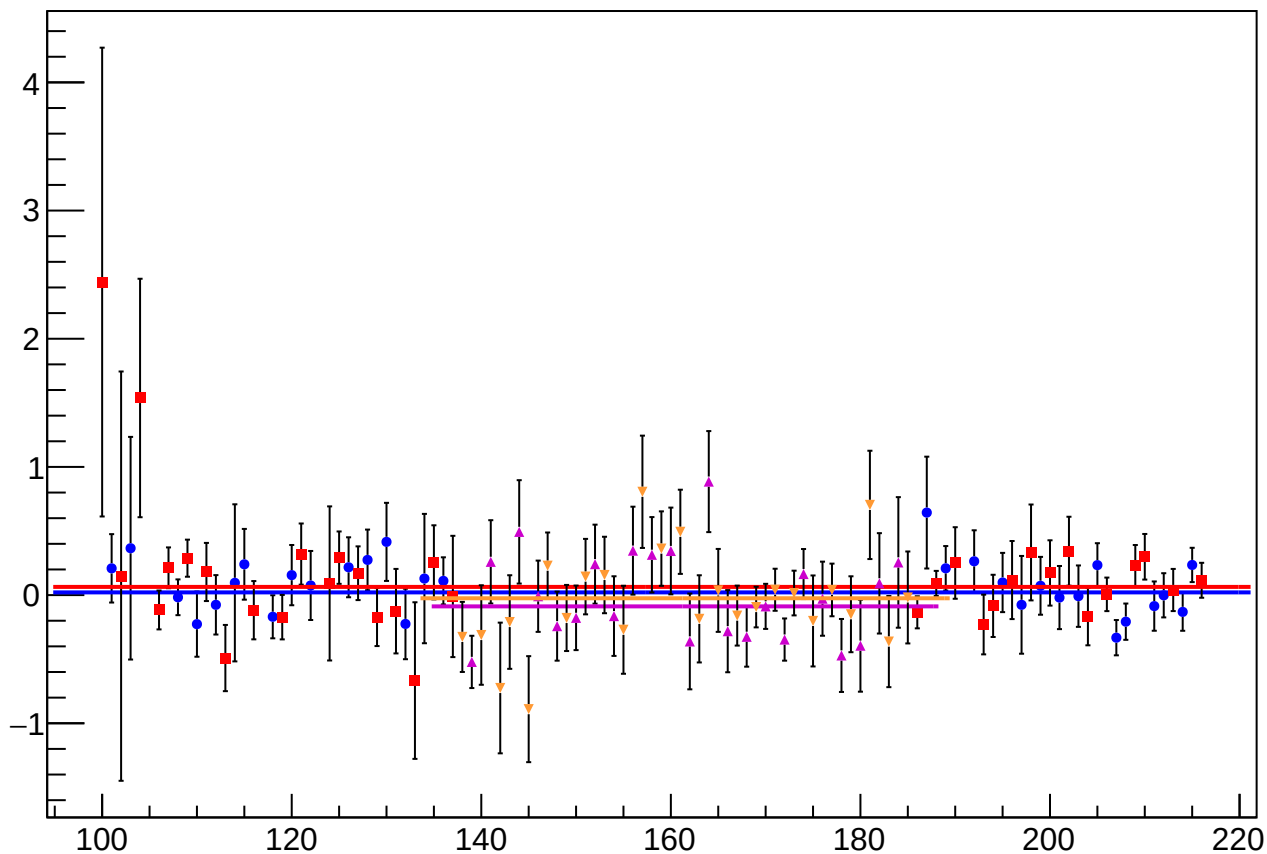
+ sign 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16991582.2/55

All: 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 36527878.5/112

- sign 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19314733.4/56



asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.021 \pm 0.037$   $\chi^2/\text{NDF}: 27.9/30$

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}: 24.1/24$

Right Out:  $0.064 \pm 0.035$   $\chi^2/\text{NDF}: 33.2/33$

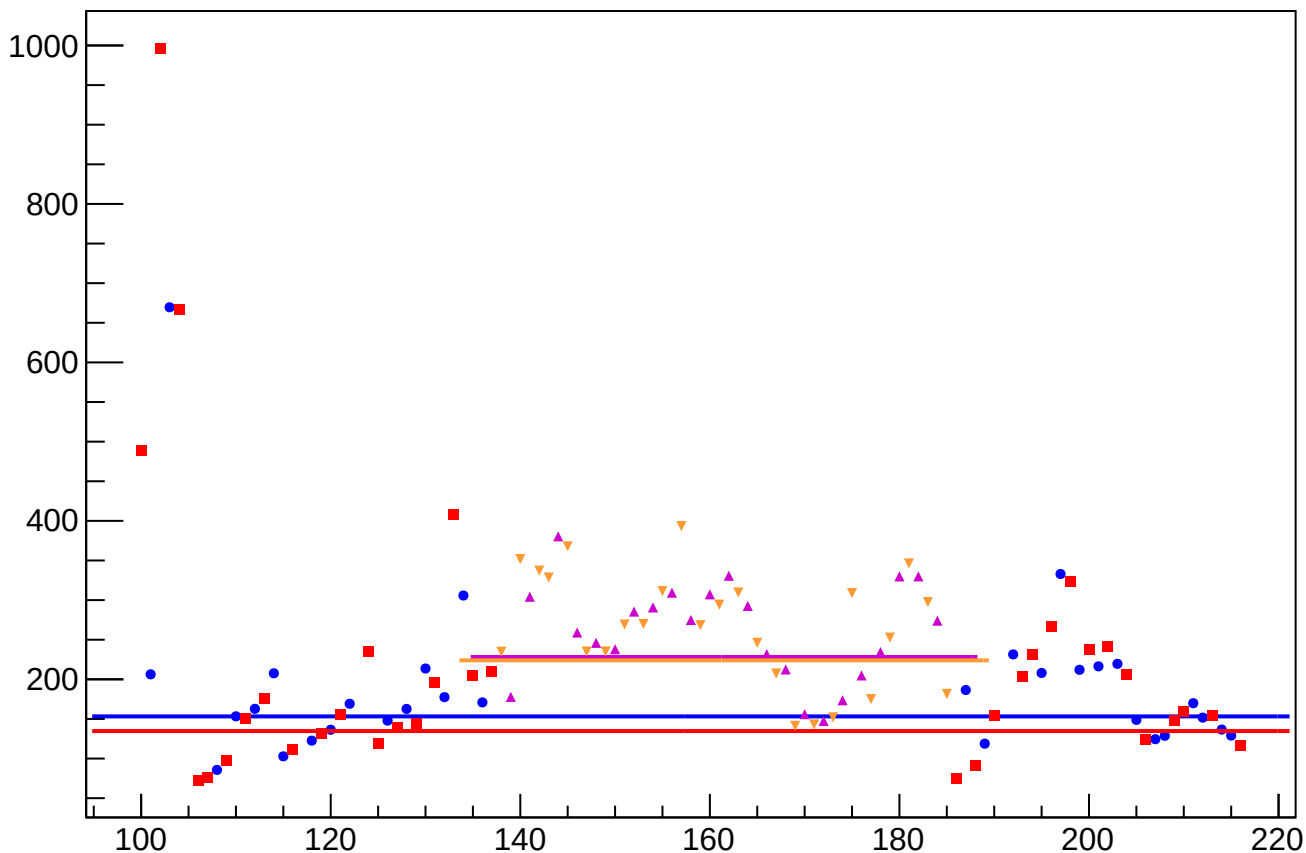
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}: 30.0/22$

+ sign  $0.006 \pm 0.031$   $\chi^2/\text{NDF}: 52.5/55$

All:  $0.015 \pm 0.021$   $\chi^2/\text{NDF}: 121.1/112$

- sign  $0.023 \pm 0.030$   $\chi^2/\text{NDF}: 68.5/56$

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 153.211+/-0.027  $\chi^2/\text{NDF}$ : 3254931.8/30

Left Out: 223.946+/-0.039  $\chi^2/\text{NDF}$ : 3438541.7/24

Right Out: 134.726+/-0.024  $\chi^2/\text{NDF}$ : 6098694.3/33

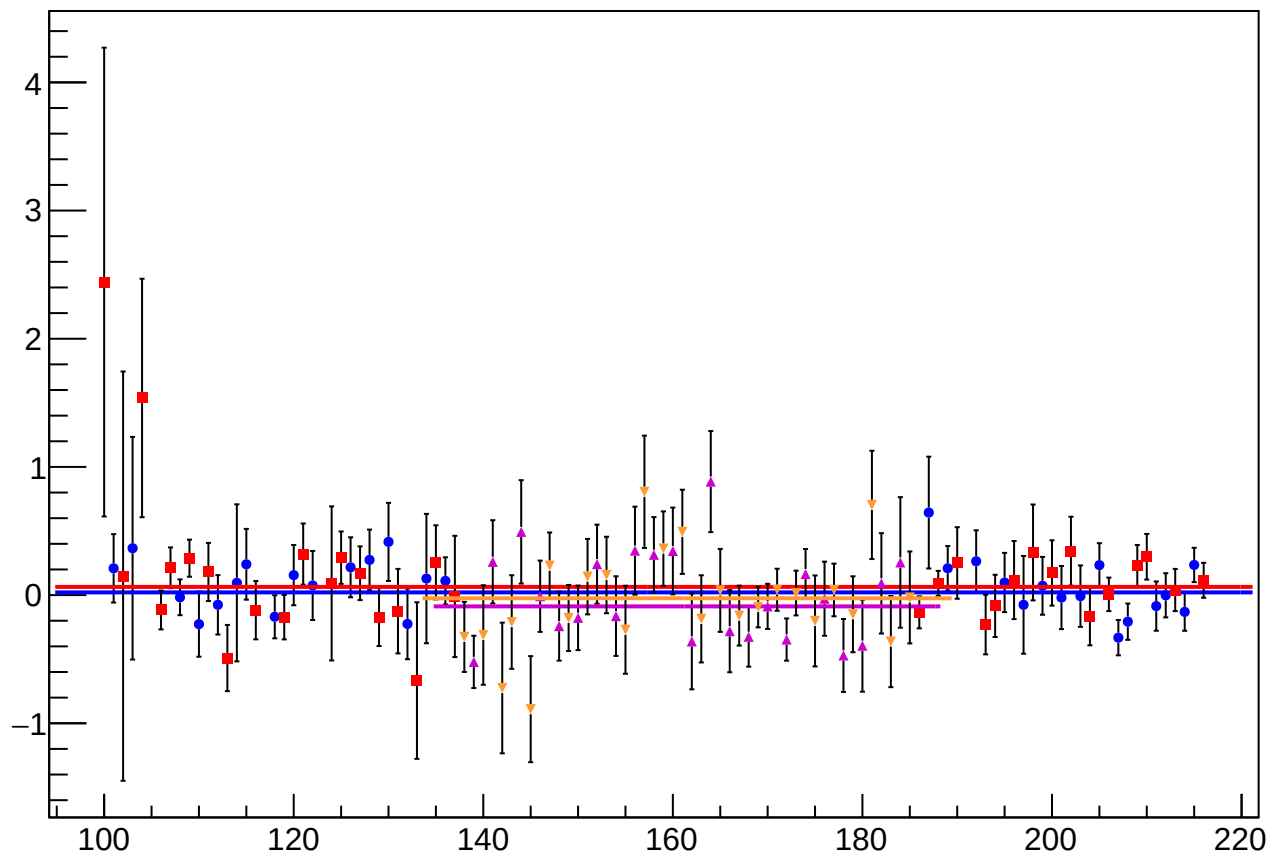
Left In: 228.201+/-0.040  $\chi^2/\text{NDF}$ : 2488951.6/22

+ sign 175.870+/-0.022  $\chi^2/\text{NDF}$ : 8974902.5/55

All: 167.610+/-0.015  $\chi^2/\text{NDF}$ : 21802989.2/11

- sign 160.079+/-0.021  $\chi^2/\text{NDF}$ : 12554902.0/56

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.021 \pm 0.037$   $\chi^2/\text{NDF}$ : 27.9/30

Left Out:  $-0.025 \pm 0.055$   $\chi^2/\text{NDF}$ : 24.1/24

Right Out:  $0.064 \pm 0.035$   $\chi^2/\text{NDF}$ : 33.2/33

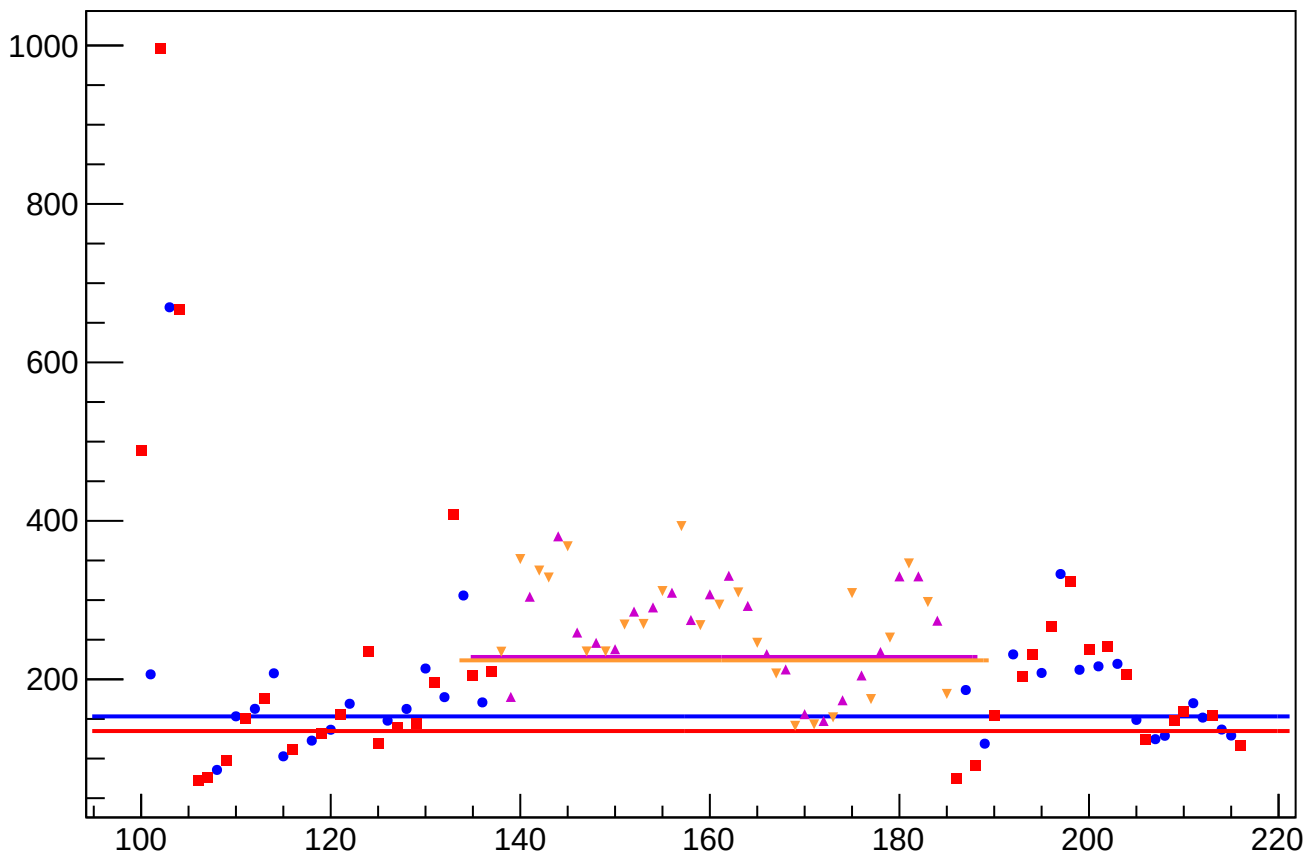
Left In:  $-0.088 \pm 0.057$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.006 \pm 0.031$   $\chi^2/\text{NDF}$ : 52.5/55

All:  $0.015 \pm 0.021$   $\chi^2/\text{NDF}$ : 121.1/112

- sign  $0.023 \pm 0.030$   $\chi^2/\text{NDF}$ : 68.5/56

asym\_usr\_atr2\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 153.211+/-0.027  $\chi^2/\text{NDF}$ : 3254931.8/30

Left Out: 223.946+/-0.039  $\chi^2/\text{NDF}$ : 3438541.7/24

Right Out: 134.726+/-0.024  $\chi^2/\text{NDF}$ : 6098694.3/33

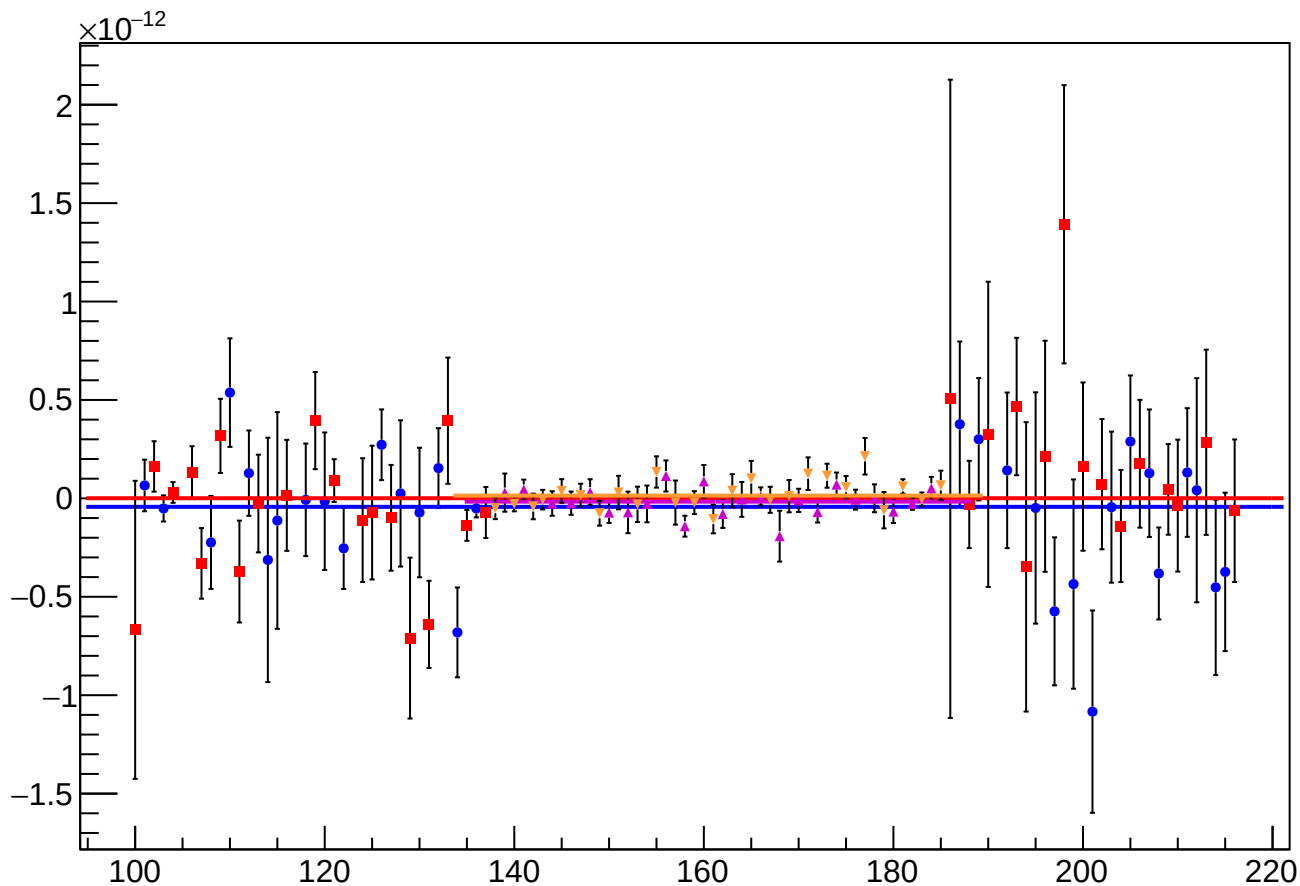
Left In: 228.201+/-0.040  $\chi^2/\text{NDF}$ : 2488951.6/22

+ sign 175.870+/-0.022  $\chi^2/\text{NDF}$ : 8974902.5/55

All: 167.610+/-0.015  $\chi^2/\text{NDF}$ : 21802989.2/11

- sign 160.079+/-0.021  $\chi^2/\text{NDF}$ : 12554902.0/56

asym\_usr\_atr2\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.3/33

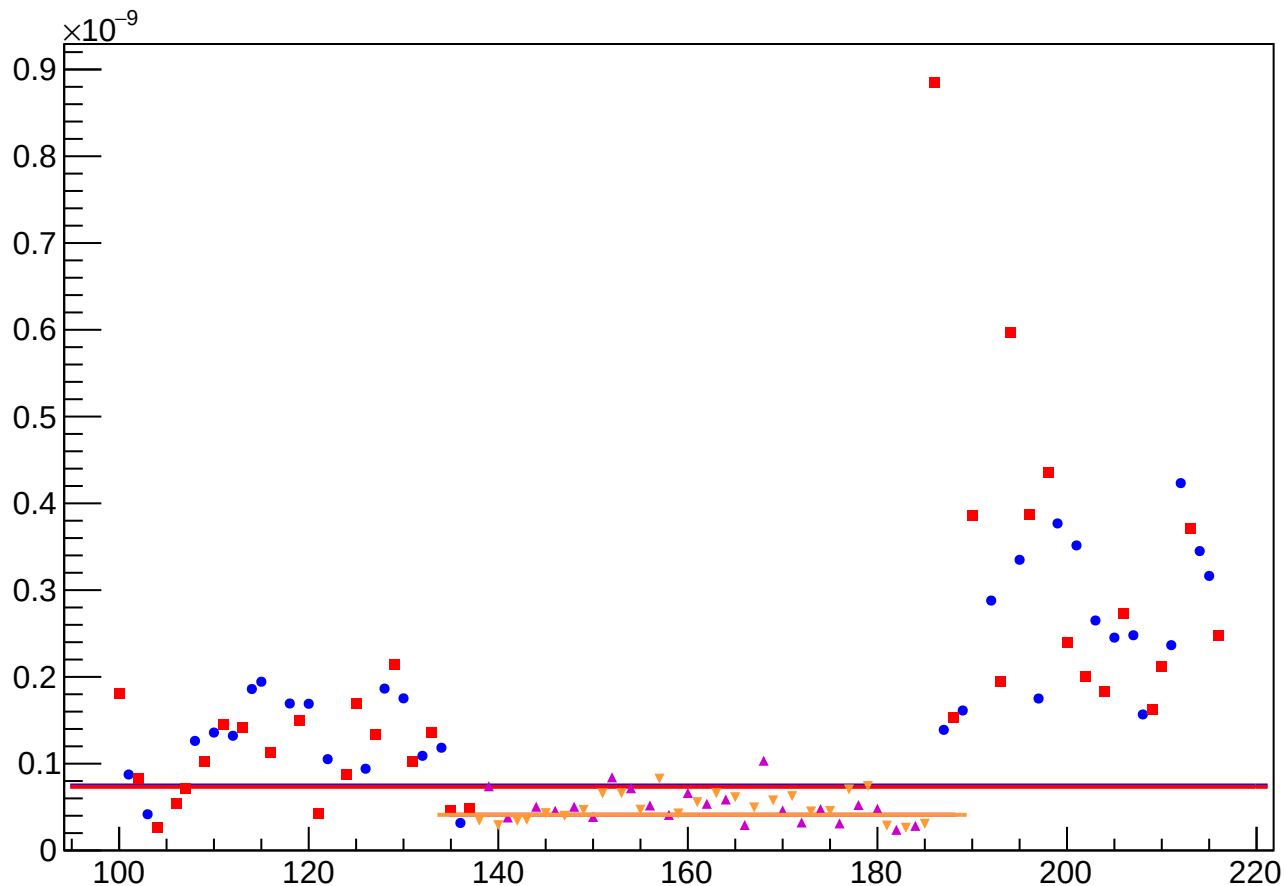
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.1/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 125.2/112

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.4/56

asym\_usr\_atr2\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10813184.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2644306.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10326300.8/33

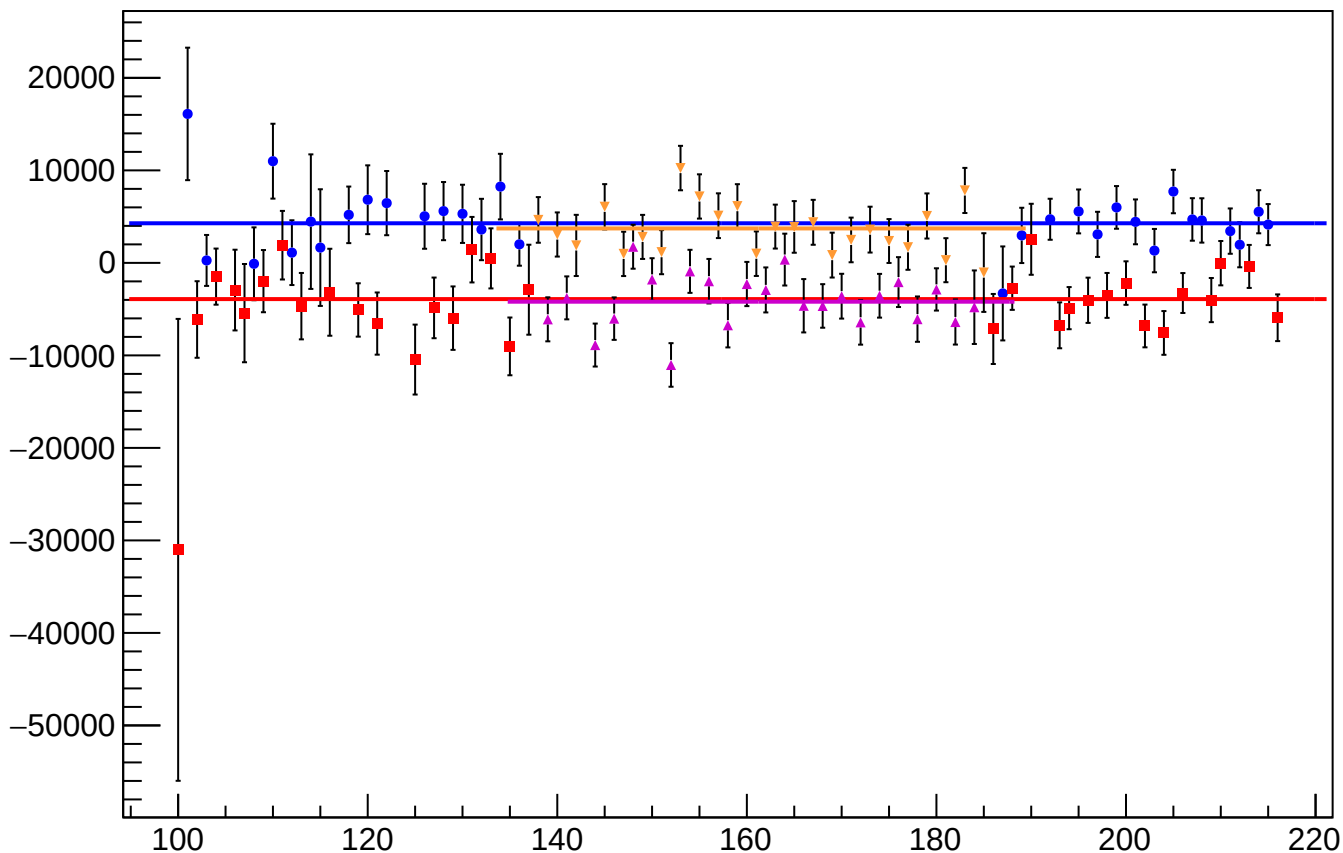
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2852113.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15577747.5/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30682377.2/112

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15104393.2/56

# reg\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4281.626 $\pm$ 512.084  $\chi^2$ /NDF: 22.0/30

Left Out: 3723.486 $\pm$ 507.155  $\chi^2$ /NDF:25.4/23

Right Out: -3913.978 $\pm$ 514.107  $\chi^2$ /NDF: 31.7/32

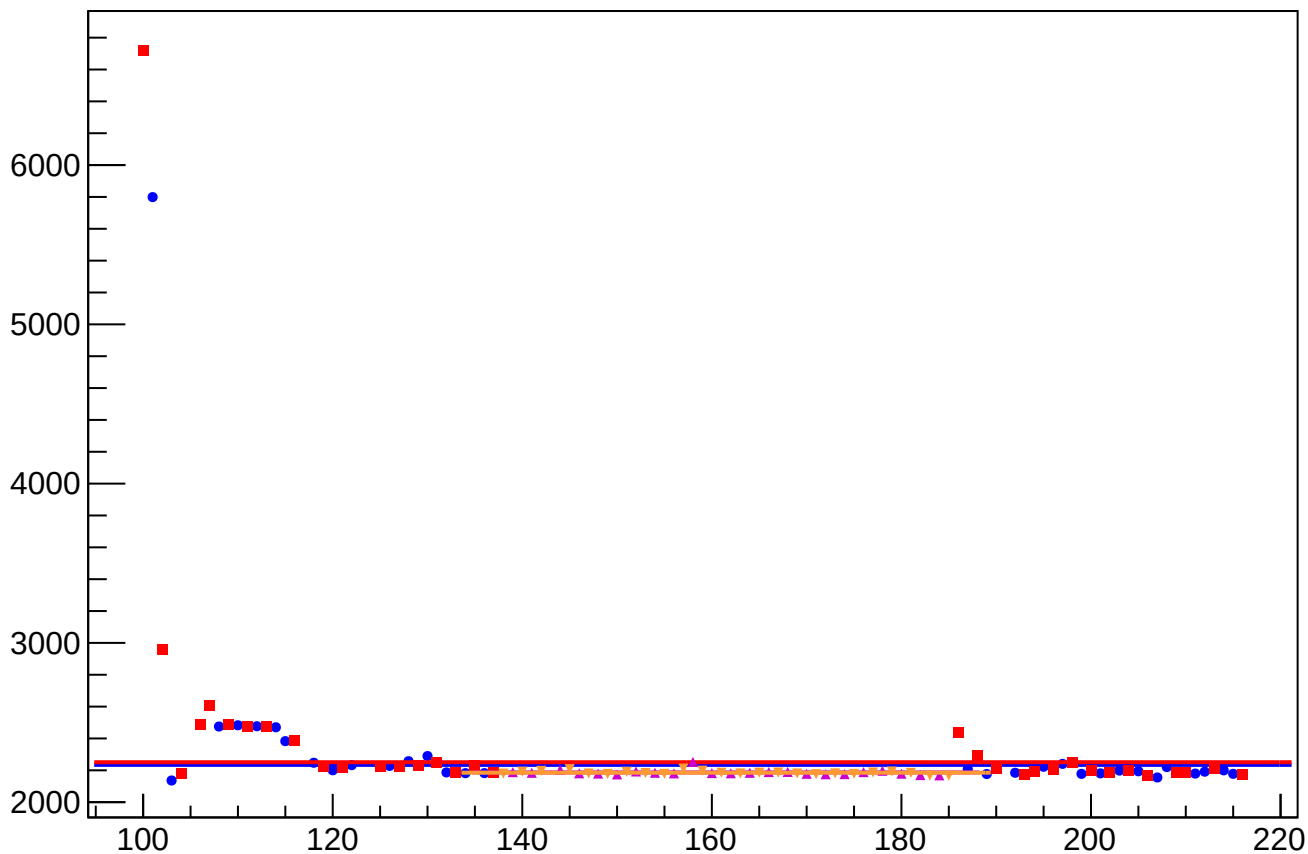
Left In: -4195.942 $\pm$ 510.578  $\chi^2$ /NDF:32.1/22

+ sign 3999.857 $\pm$ 360.343  $\chi^2$ /NDF: 48.1/54

All: -6.504 $\pm$ 255.481  $\chi^2$ /NDF: 360.6/110

- sign -4055.931 $\pm$ 362.274  $\chi^2$ /NDF: 63.9/55

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2234.149+/-0.362  $\chi^2/\text{NDF}$ : 539605.0/30

Left Out: 2185.133+/-0.359  $\chi^2/\text{NDF}$ : 815.1/23

Right Out: 2250.832+/-0.364  $\chi^2/\text{NDF}$ : 189101.3/32

Left In: 2186.745+/-0.361  $\chi^2/\text{NDF}$ : 2063.9/22

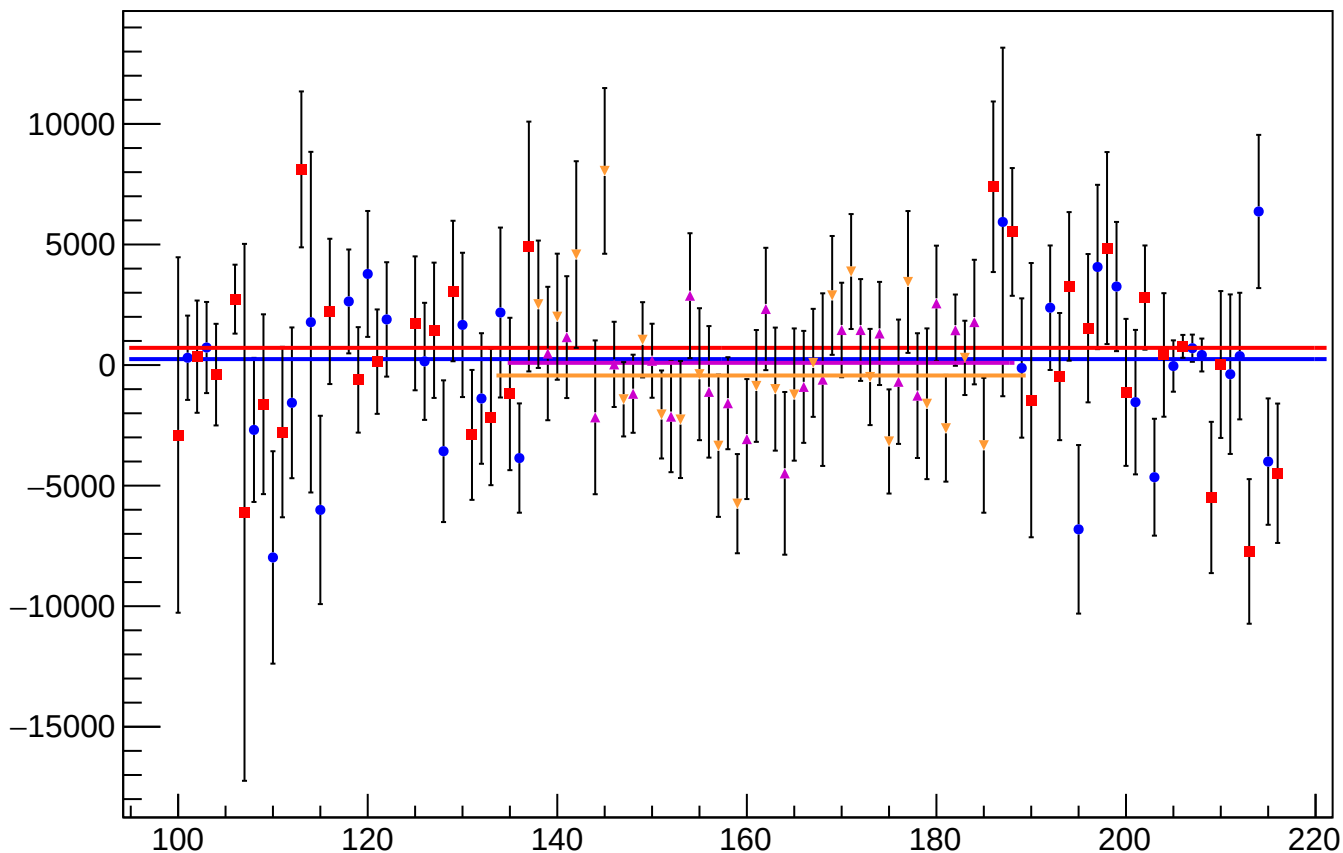
+ sign 2209.404+/-0.255  $\chi^2/\text{NDF}$ : 549670.9/54

All: 2213.961+/-0.181  $\chi^2/\text{NDF}$ : 757125.8/110

- sign 2218.568+/-0.256  $\chi^2/\text{NDF}$ : 206811.6/55



asym\_us\_avg\_at1lr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: 246.963 $\pm$ 318.747  $\chi^2$ /NDF: 36.4/30

Left Out: -432.286 $\pm$ 462.383  $\chi^2$ /NDF:31.3/23

Right Out: 713.518 $\pm$ 342.770  $\chi^2$ /NDF: 40.4/32

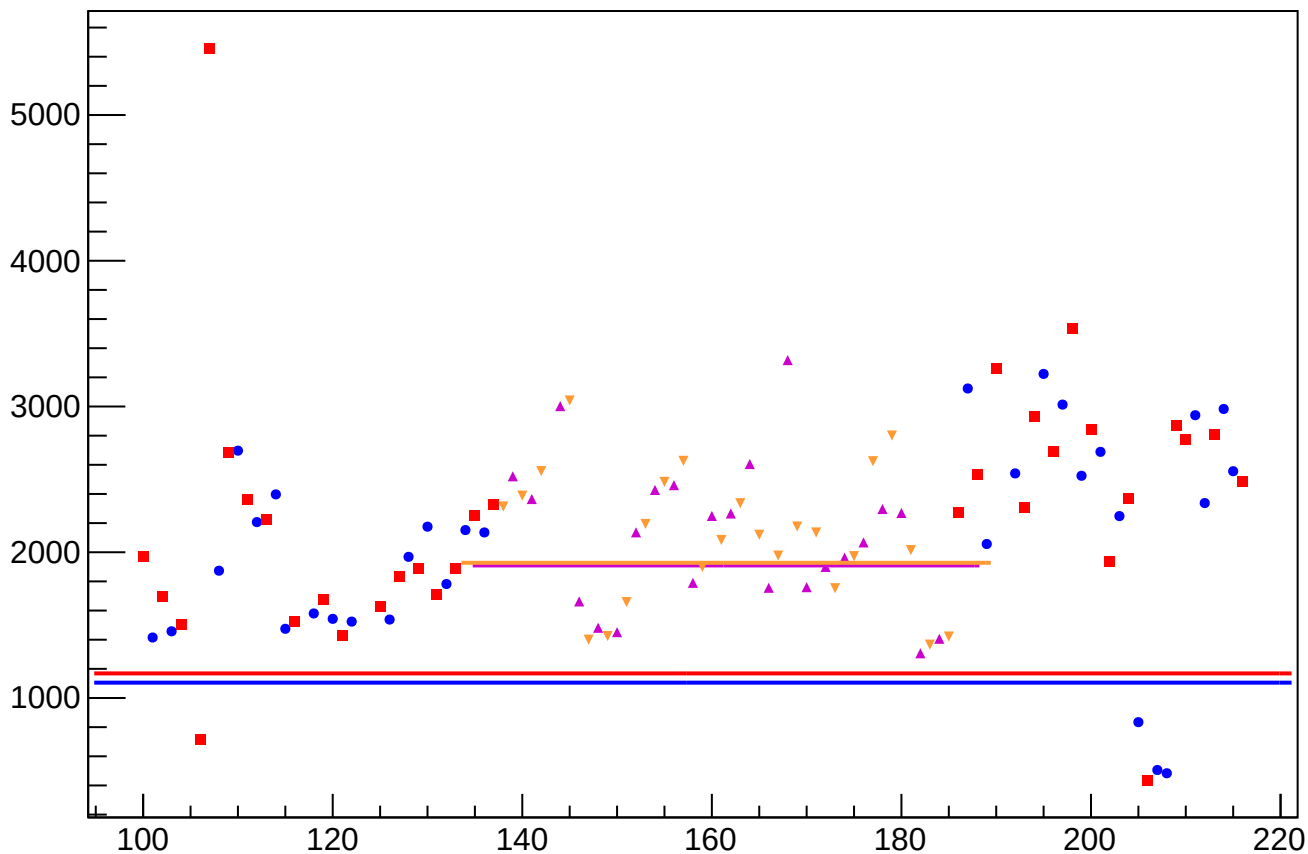
Left In: 92.649 $\pm$ 460.669  $\chi^2$ /NDF:12.8/22

+ sign 28.156 $\pm$ 262.433  $\chi^2$ /NDF: 69.1/54

All: 249.369 $\pm$ 189.855  $\chi^2$ /NDF: 125.0/110

- sign 492.271 $\pm$ 274.997  $\chi^2$ /NDF: 54.4/55

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_correction\_rms vs Slug



Right In: 1105.292+/-0.225  $\chi^2/\text{NDF}$ : 12616914.3/30

Left Out: 1927.660+/-0.327  $\chi^2/\text{NDF}$ : 1798383.1/23

Right Out: 1168.784+/-0.242  $\chi^2/\text{NDF}$ : 13947674.4/32

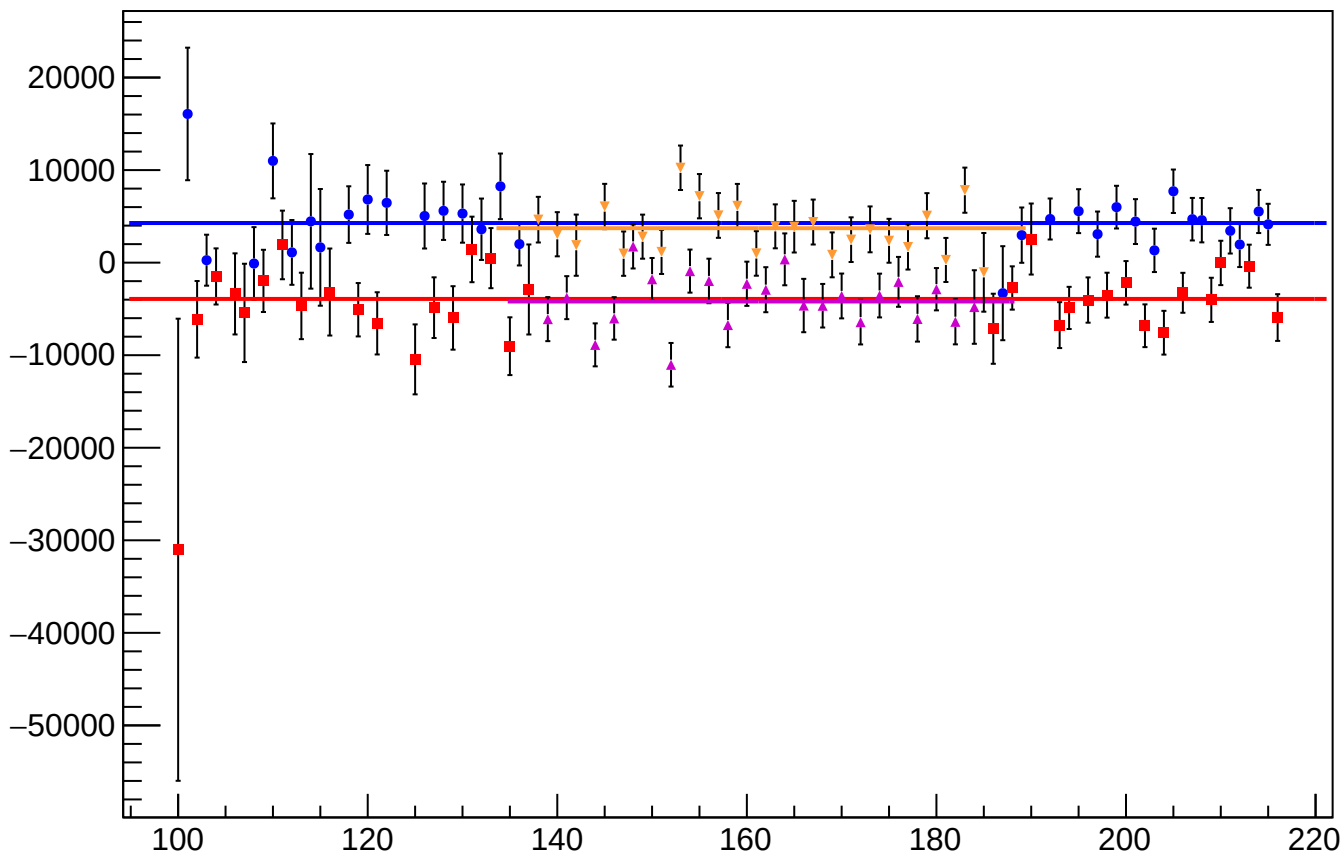
Left In: 1909.612+/-0.326  $\chi^2/\text{NDF}$ : 1942264.8/22

+ sign 1370.203+/-0.186  $\chi^2/\text{NDF}$ : 18703780.6/54

All: 1400.029+/-0.134  $\chi^2/\text{NDF}$ : 37977097.1/100

- sign 1432.779+/-0.194  $\chi^2/\text{NDF}$ : 19219117.4/55

# cor\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4281.403 $\pm$ 512.084  $\chi^2$ /NDF: 22.0/30

Left Out: 3723.433 $\pm$ 507.155  $\chi^2$ /NDF:25.4/23

Right Out: -3920.307 $\pm$ 514.138  $\chi^2$ /NDF: 31.7/32

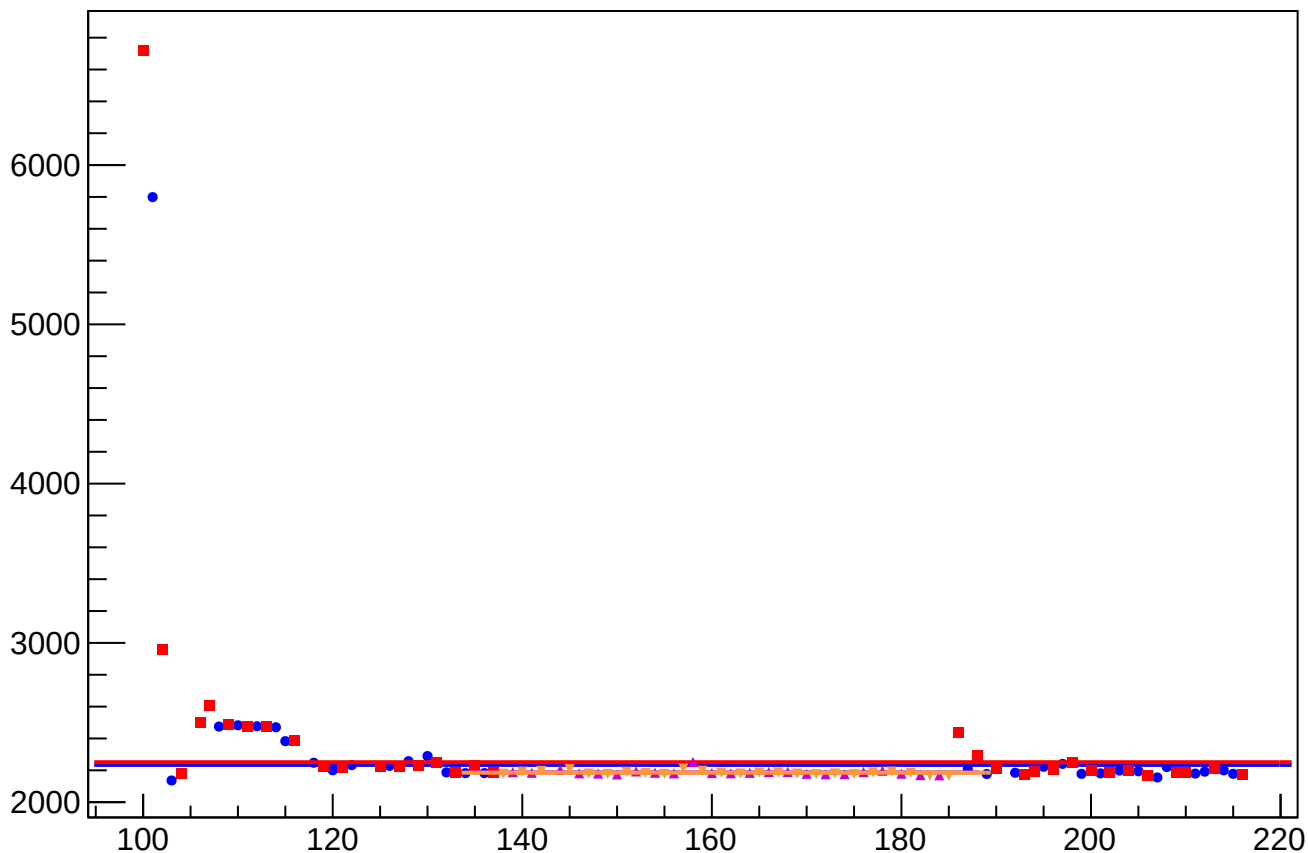
Left In: -4196.060 $\pm$ 510.578  $\chi^2$ /NDF:32.1/22

+ sign 3999.720 $\pm$ 360.343  $\chi^2$ /NDF: 48.0/54

All: -8.050 $\pm$ 255.485  $\chi^2$ /NDF: 360.7/110

- sign -4059.142 $\pm$ 362.285  $\chi^2$ /NDF: 63.9/55

# cor\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2234.149+/-0.362  $\chi^2/\text{NDF}$ : 539605.4/30

Left Out: 2185.133+/-0.359  $\chi^2/\text{NDF}$ : 815.1/23

Right Out: 2250.951+/-0.364  $\chi^2/\text{NDF}$ : 189596.3/32

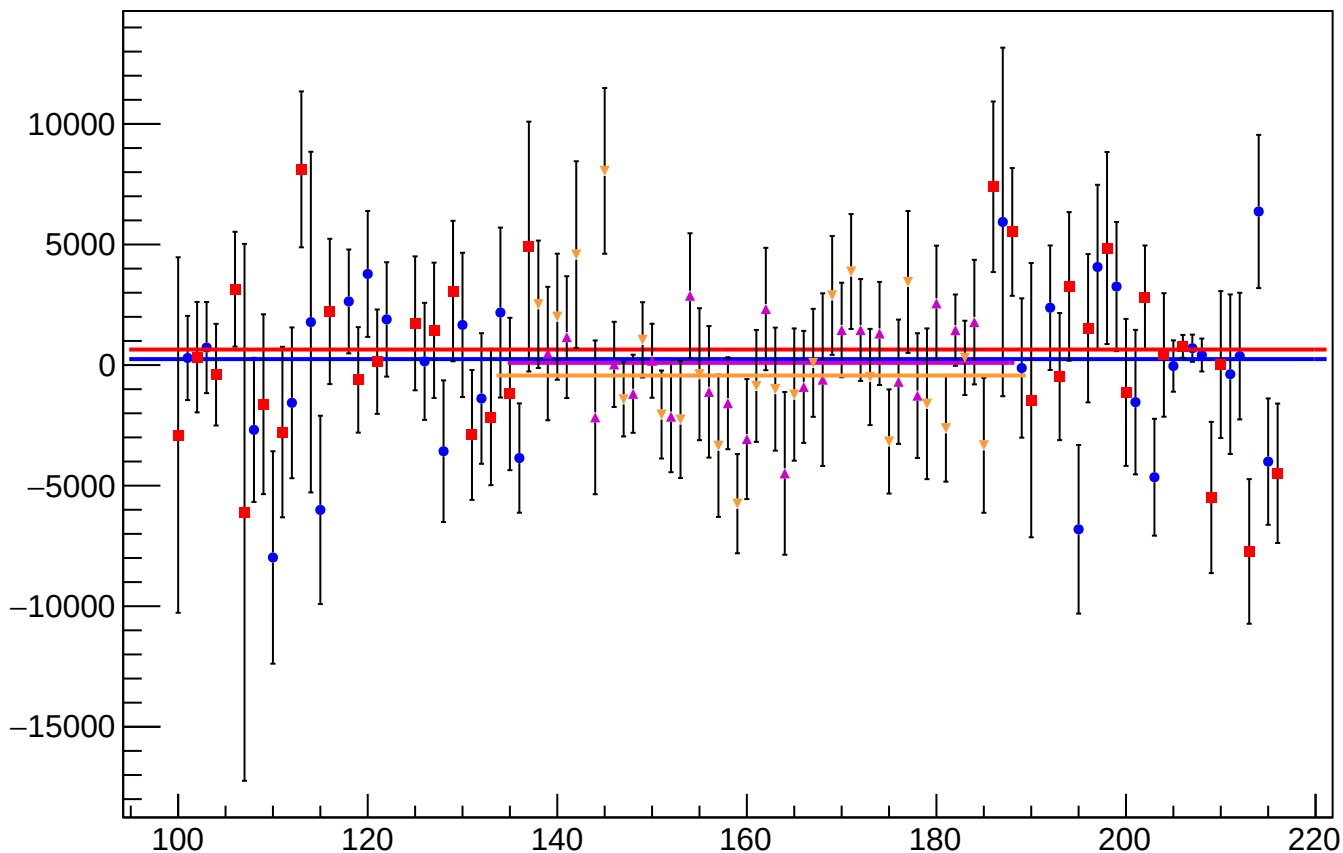
Left In: 2186.745+/-0.361  $\chi^2/\text{NDF}$ : 2063.9/22

+ sign 2209.404+/-0.255  $\chi^2/\text{NDF}$ : 549671.3/54

All: 2213.990+/-0.181  $\chi^2/\text{NDF}$ : 757686.5/110

- sign 2218.625+/-0.256  $\chi^2/\text{NDF}$ : 207363.8/55

asym\_us\_avg\_at1lr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In: 246.787 $\pm$ 318.727  $\chi^2$ /NDF: 36.4/30

Left Out: -432.320 $\pm$ 462.383  $\chi^2$ /NDF:31.3/23

Right Out: 644.431 $\pm$ 349.118  $\chi^2$ /NDF: 39.4/32

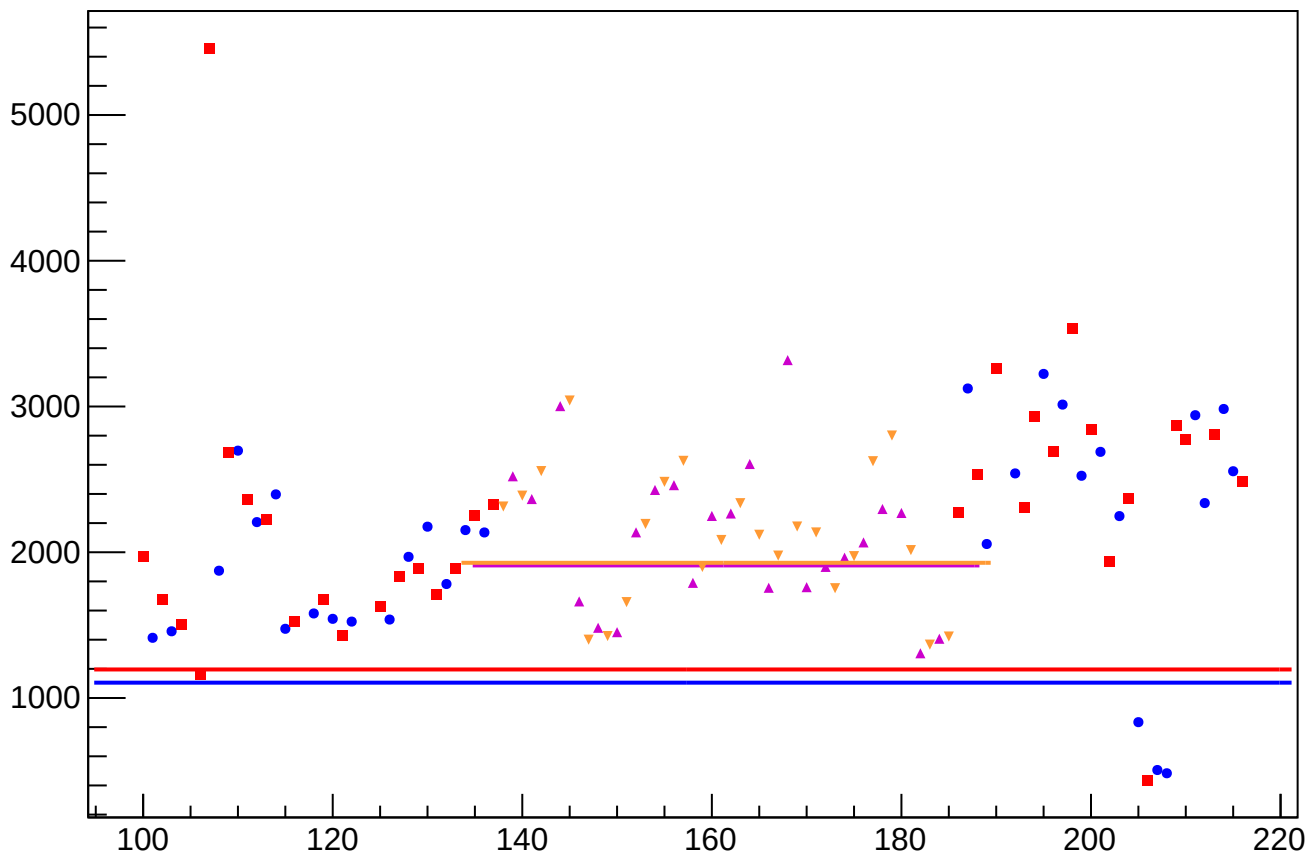
Left In: 92.604 $\pm$ 460.670  $\chi^2$ /NDF:12.8/22

+ sign 28.044 $\pm$ 262.422  $\chi^2$ /NDF: 69.1/54

All: 223.446 $\pm$ 190.908  $\chi^2$ /NDF: 123.4/110

- sign 443.118 $\pm$ 278.243  $\chi^2$ /NDF: 53.1/55

asym\_us\_avg\_at1lr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In: 1105.228 $\pm$ 0.225  $\chi^2$ /NDF: 12616836.0/30

Left Out: 1927.659 $\pm$ 0.327  $\chi^2$ /NDF: 1798407.2/23

Right Out: 1195.772 $\pm$ 0.247  $\chi^2$ /NDF: 13730279.3/32

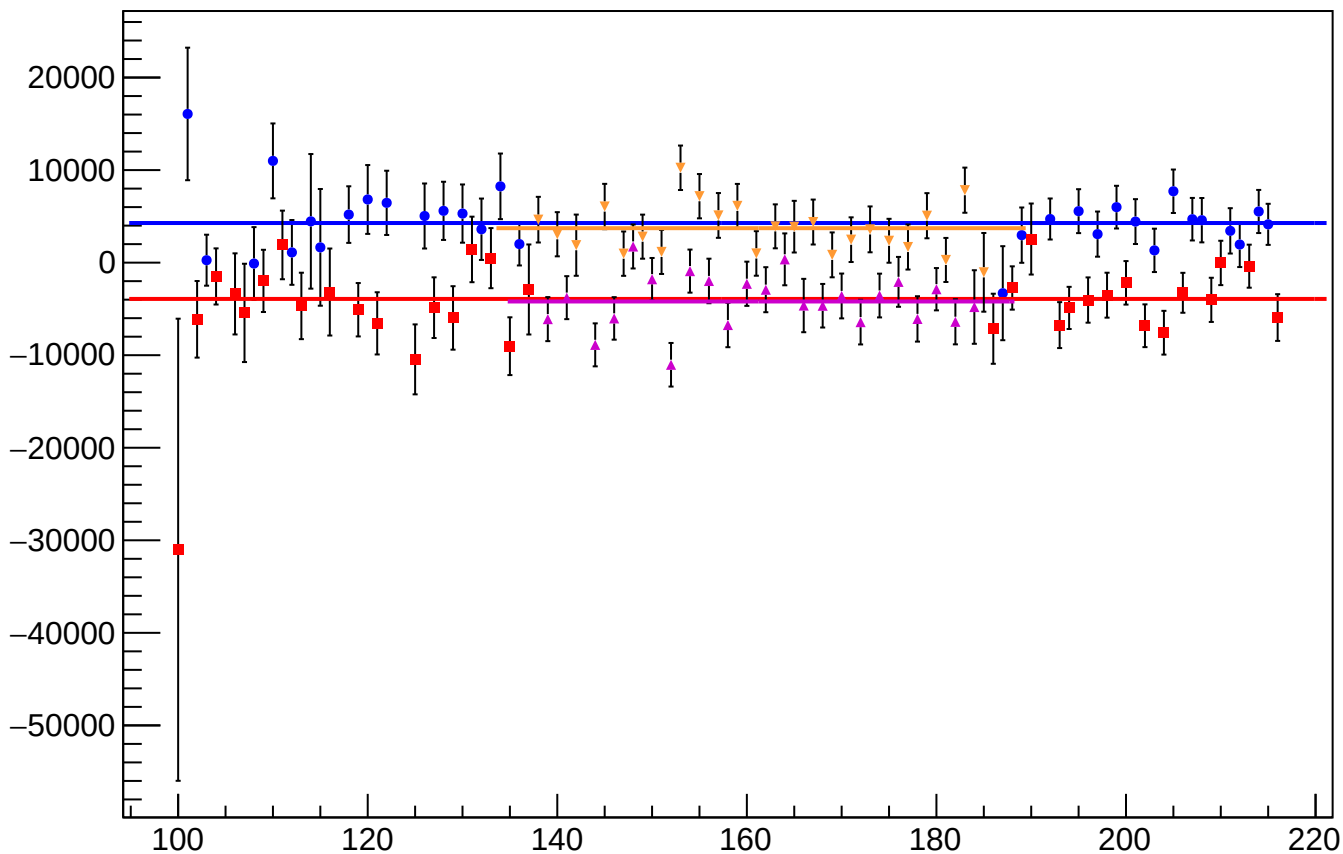
Left In: 1909.618 $\pm$ 0.326  $\chi^2$ /NDF: 1942286.8/22

+ sign 1370.137 $\pm$ 0.186  $\chi^2$ /NDF: 18704559.3/54

All: 1410.648 $\pm$ 0.135  $\chi^2$ /NDF: 37528807.4/100

- sign 1456.190 $\pm$ 0.197  $\chi^2$ /NDF: 18723003.0/55

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4281.403 $\pm$ 512.084  $\chi^2$ /NDF: 22.0/30

Left Out: 3723.433 $\pm$ 507.155  $\chi^2$ /NDF:25.4/23

Right Out: -3920.307 $\pm$ 514.138  $\chi^2$ /NDF: 31.7/32

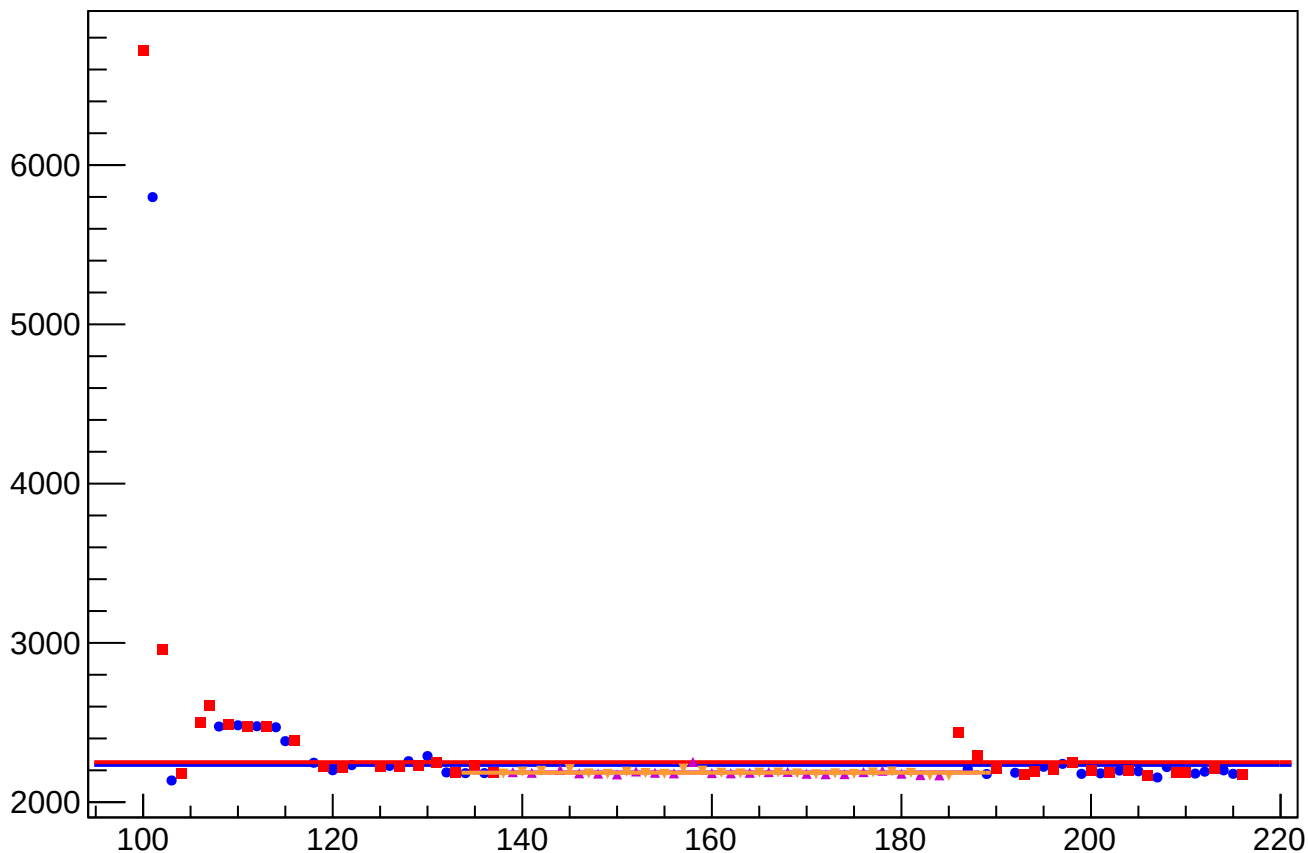
Left In: -4196.060 $\pm$ 510.578  $\chi^2$ /NDF:32.1/22

+ sign 3999.720 $\pm$ 360.343  $\chi^2$ /NDF: 48.0/54

All: -8.050 $\pm$ 255.485  $\chi^2$ /NDF: 360.7/110

- sign -4059.142 $\pm$ 362.285  $\chi^2$ /NDF: 63.9/55

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2234.149+/-0.362  $\chi^2/\text{NDF}$ : 539605.4/30

Left Out: 2185.133+/-0.359  $\chi^2/\text{NDF}$ : 815.1/23

Right Out: 2250.951+/-0.364  $\chi^2/\text{NDF}$ : 189596.3/32

Left In: 2186.745+/-0.361  $\chi^2/\text{NDF}$ : 2063.9/22

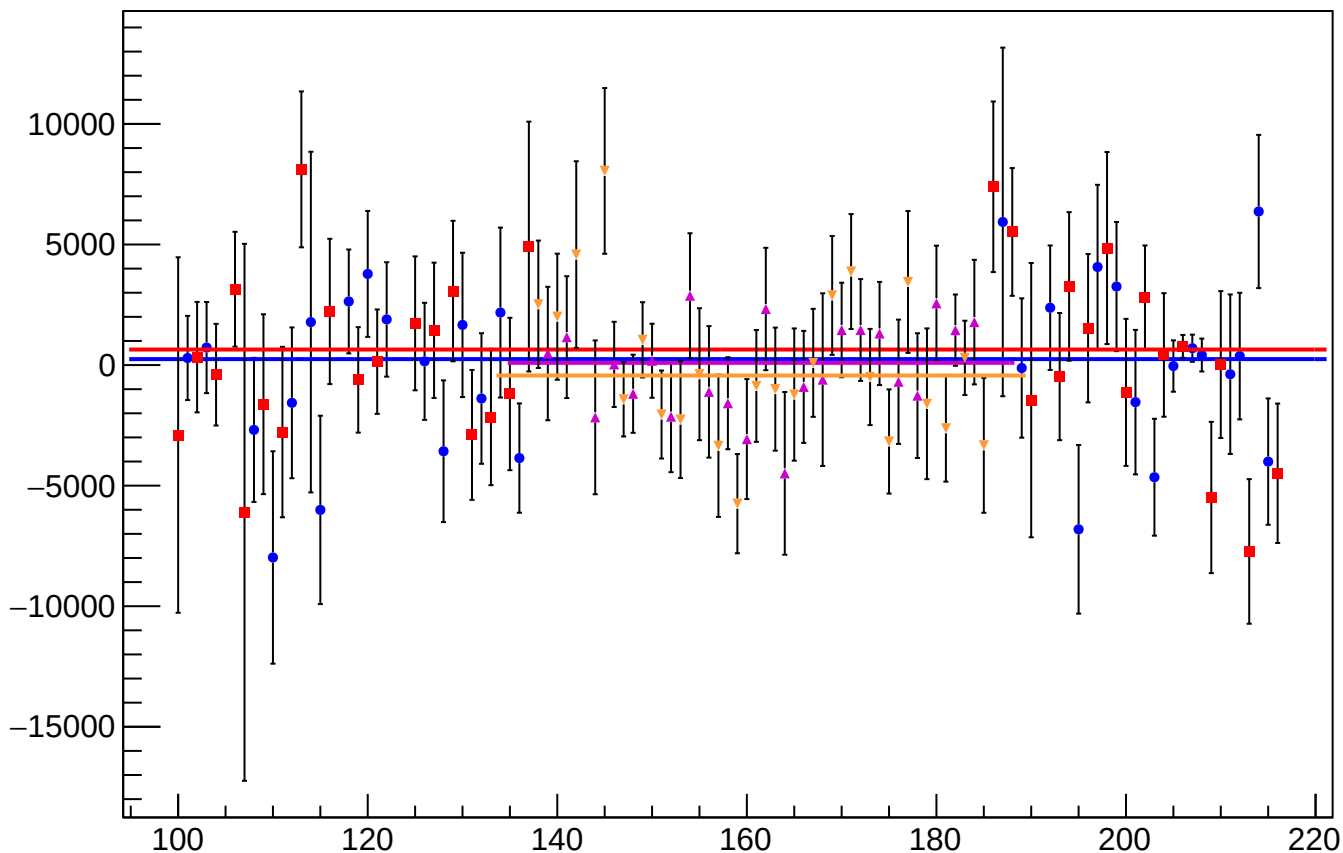
+ sign 2209.404+/-0.255  $\chi^2/\text{NDF}$ : 549671.3/54

All: 2213.990+/-0.181  $\chi^2/\text{NDF}$ : 757686.5/110

- sign 2218.625+/-0.256  $\chi^2/\text{NDF}$ : 207363.8/55



asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 246.787 $\pm$ 318.727  $\chi^2$ /NDF: 36.4/30

Left Out: -432.320 $\pm$ 462.383  $\chi^2$ /NDF:31.3/23

Right Out: 644.431 $\pm$ 349.118  $\chi^2$ /NDF: 39.4/32

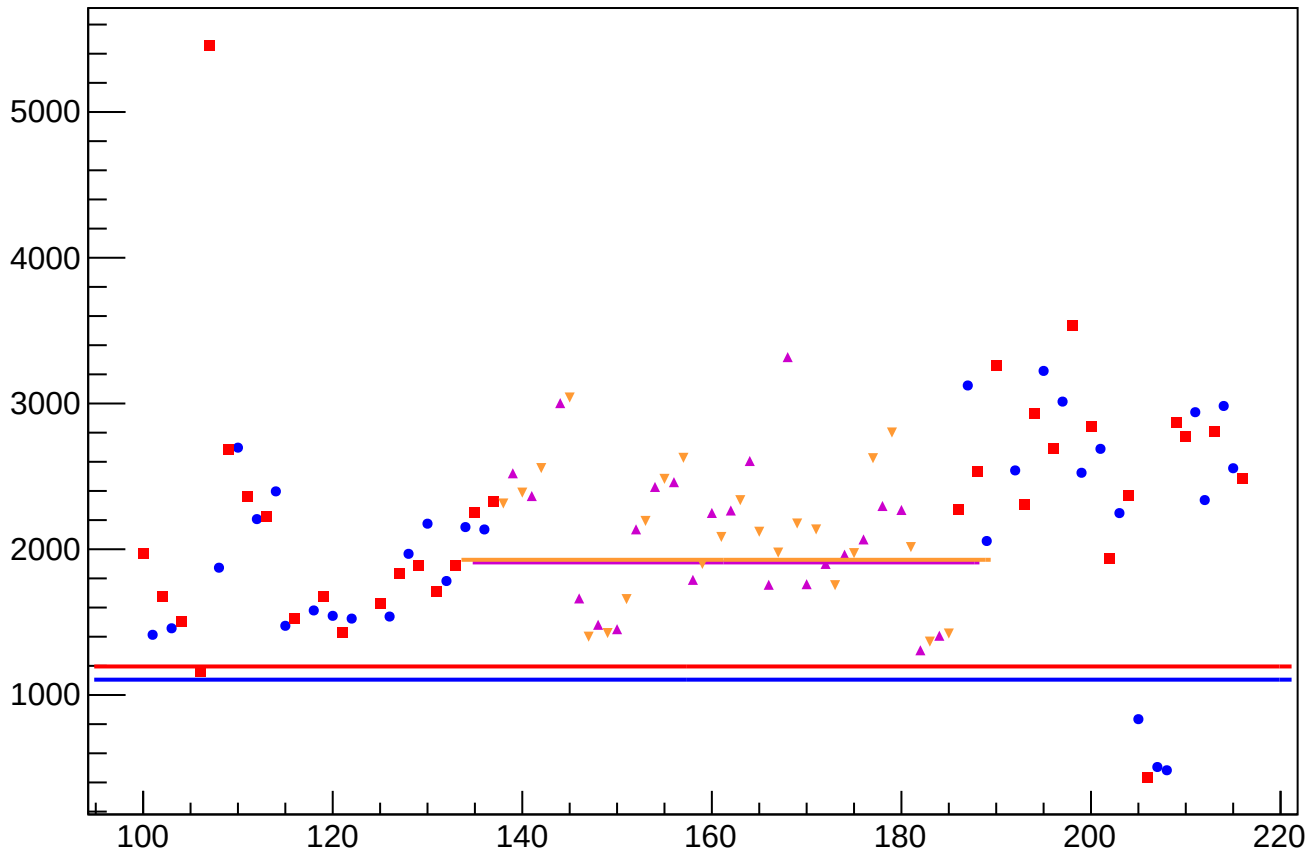
Left In: 92.604 $\pm$ 460.670  $\chi^2$ /NDF:12.8/22

+ sign 28.044 $\pm$ 262.422  $\chi^2$ /NDF: 69.1/54

All: 223.446 $\pm$ 190.908  $\chi^2$ /NDF: 123.4/110

- sign 443.118 $\pm$ 278.243  $\chi^2$ /NDF: 53.1/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1105.228 $\pm$ 0.225  $\chi^2$ /NDF: 12616836.0/30

Left Out: 1927.659 $\pm$ 0.327  $\chi^2$ /NDF: 1798407.2/23

Right Out: 1195.772 $\pm$ 0.247  $\chi^2$ /NDF: 13730279.3/32

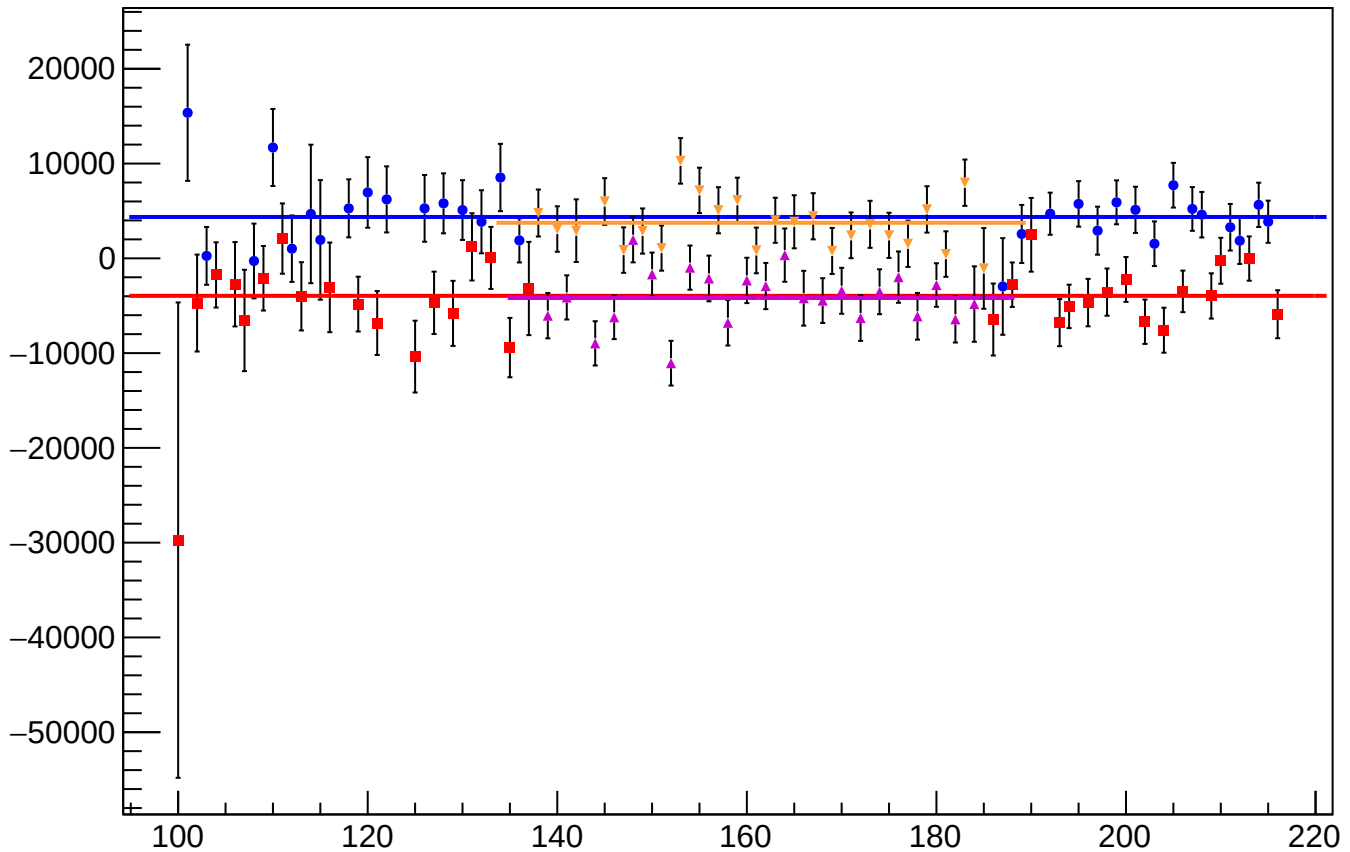
Left In: 1909.618 $\pm$ 0.326  $\chi^2$ /NDF: 1942286.8/22

+ sign 1370.137 $\pm$ 0.186  $\chi^2$ /NDF: 18704559.3/54

All: 1410.648 $\pm$ 0.135  $\chi^2$ /NDF: 37528807.4/100

- sign 1456.190 $\pm$ 0.197  $\chi^2$ /NDF: 18723003.0/55

dit\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4364.196 $\pm$ 516.847  $\chi^2$ /NDF: 22.4/30

Left Out: 3754.065 $\pm$ 508.568  $\chi^2$ /NDF: 25.7/23

Right Out: -3955.962 $\pm$ 521.052  $\chi^2$ /NDF: 30.6/32

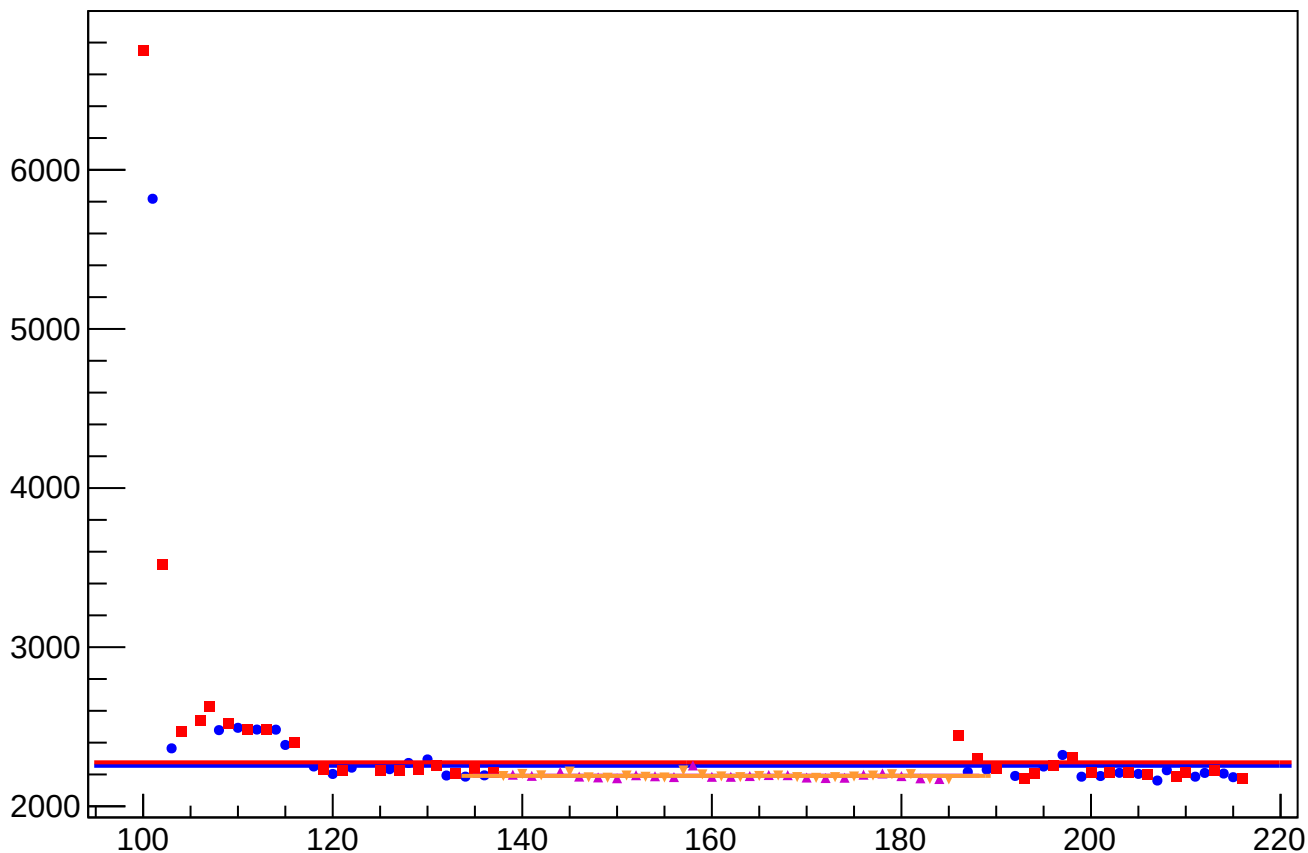
Left In: -4184.214 $\pm$ 511.864  $\chi^2$ /NDF: 32.7/22

+ sign 4054.205 $\pm$ 362.504  $\chi^2$ /NDF: 48.8/54

All: 20.568 $\pm$ 257.259  $\chi^2$ /NDF: 361.5/110

- sign -4072.118 $\pm$ 365.148  $\chi^2$ /NDF: 63.3/55

dit\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2254.539+/-0.365  $\chi^2/\text{NDF}$ : 539572.1/30

Left Out: 2191.147+/-0.360  $\chi^2/\text{NDF}$ : 1228.9/23

Right Out: 2276.249+/-0.368  $\chi^2/\text{NDF}$ : 257187.8/32

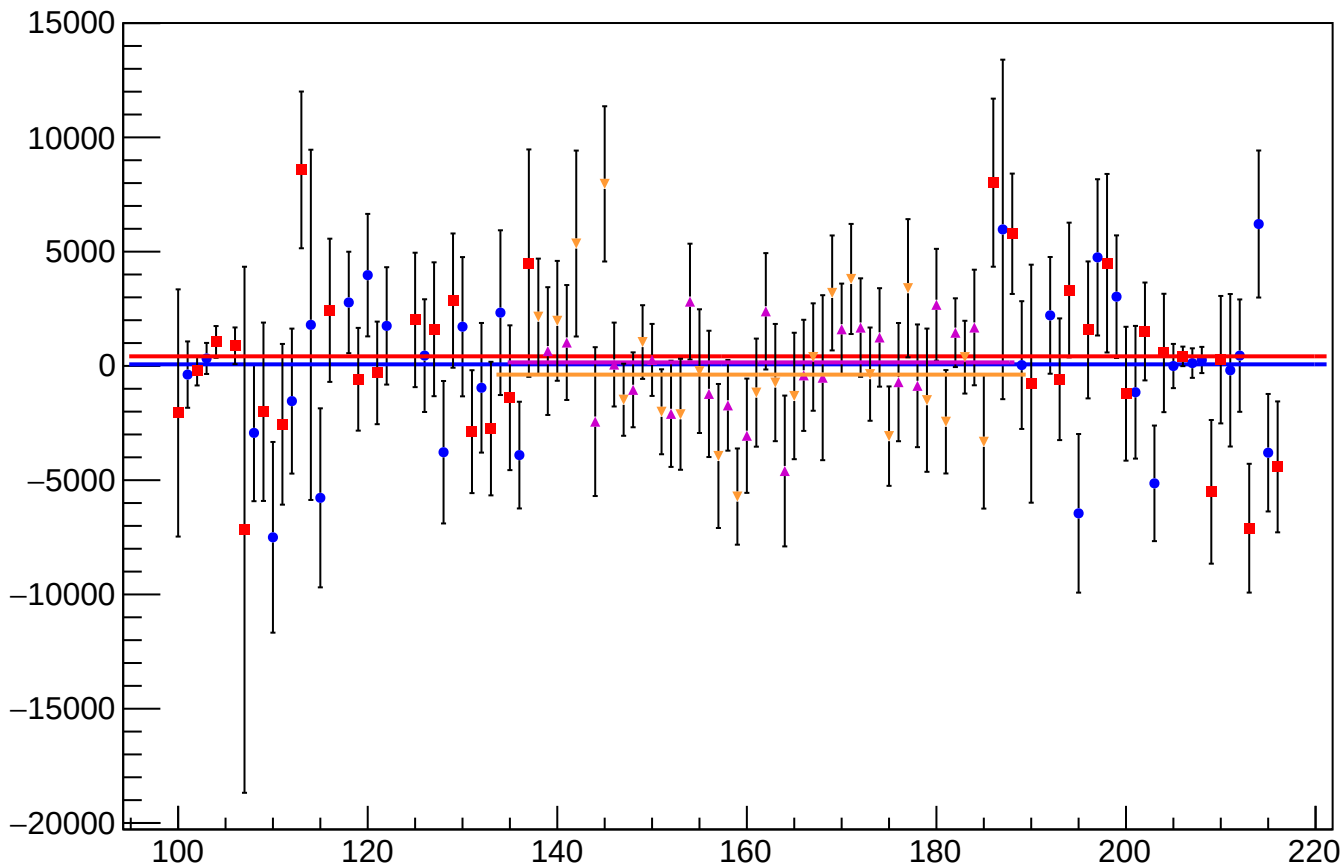
Left In: 2192.201+/-0.362  $\chi^2/\text{NDF}$ : 2281.8/22

+ sign 2222.331+/-0.256  $\chi^2/\text{NDF}$ : 556087.6/54

All: 2227.864+/-0.182  $\chi^2/\text{NDF}$ : 842977.8/110

- sign 2233.477+/-0.258  $\chi^2/\text{NDF}$ : 285951.6/55

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In:  $68.687 \pm 287.048$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $-380.488 \pm 471.481$   $\chi^2/\text{NDF}$ : 30.8/23

Right Out:  $419.418 \pm 260.572$   $\chi^2/\text{NDF}$ : 40.0/32

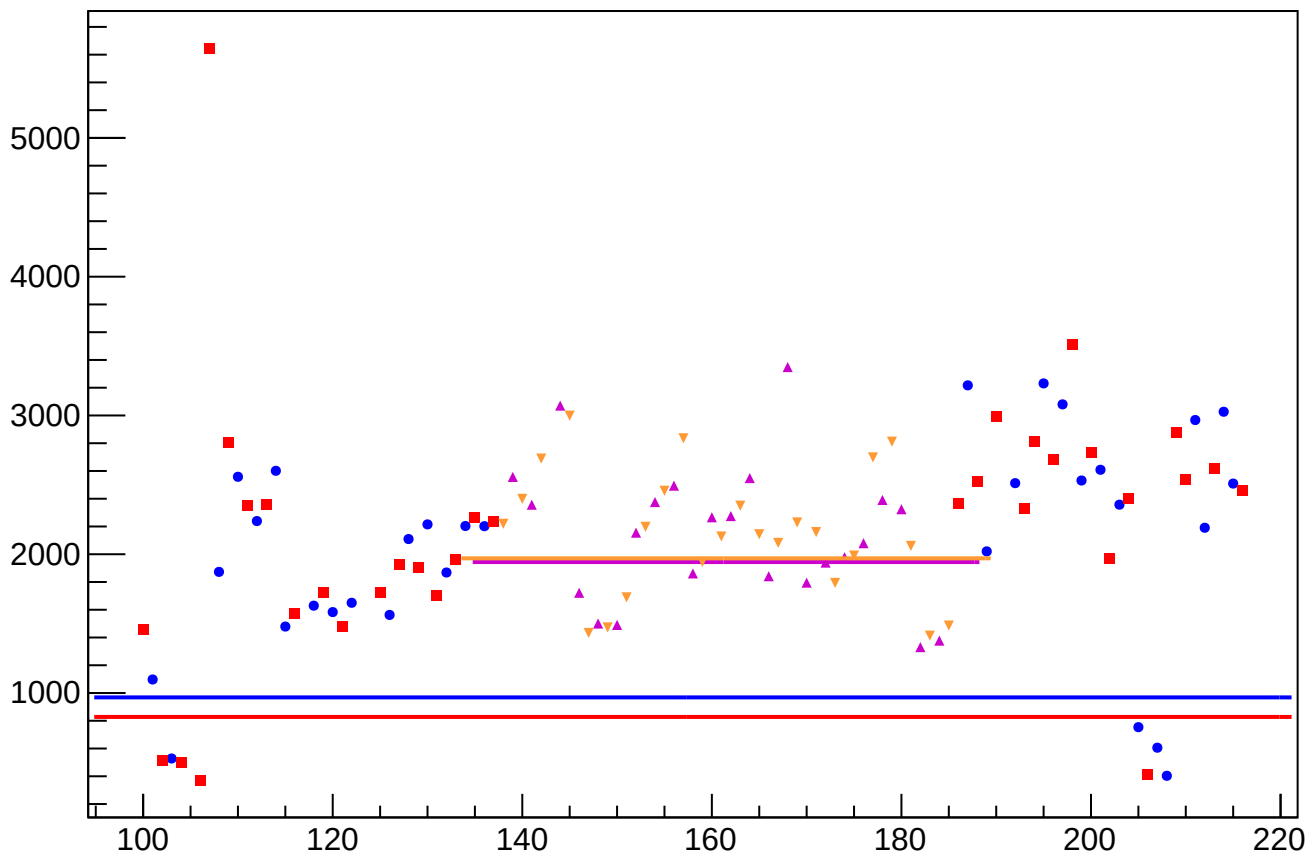
Left In:  $154.512 \pm 467.999$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $-52.782 \pm 245.182$   $\chi^2/\text{NDF}$ : 66.2/54

All:  $167.126 \pm 166.832$   $\chi^2/\text{NDF}$ : 120.8/110

- sign  $356.730 \pm 227.662$   $\chi^2/\text{NDF}$ : 53.1/55

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 968.415 $\pm$ 0.203  $\chi^2$ /NDF: 14063233.2/30

Left Out: 1970.655 $\pm$ 0.333  $\chi^2$ /NDF:1696659.6/23

Right Out: 827.614 $\pm$ 0.184  $\chi^2$ /NDF: 17557459.2/32

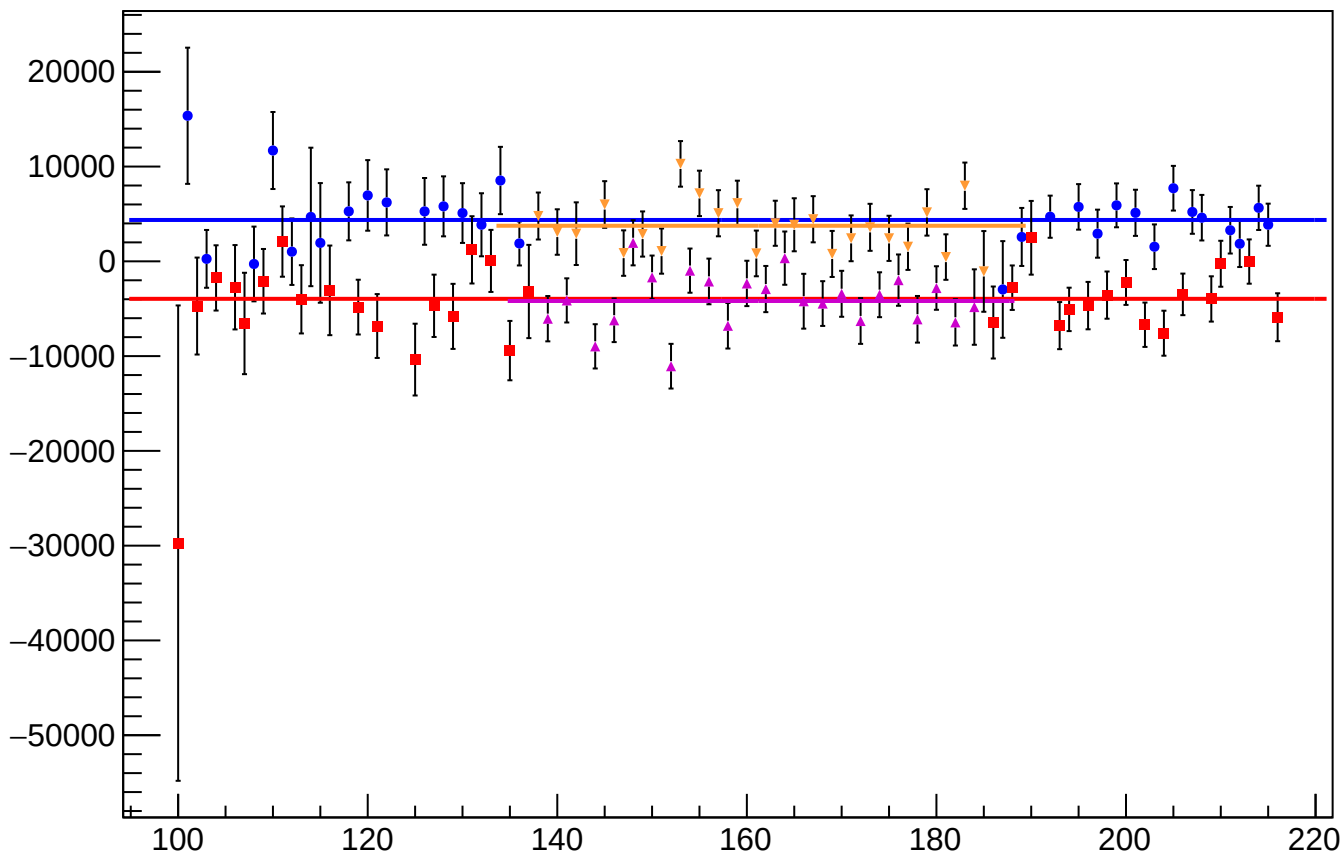
Left In: 1943.628 $\pm$ 0.331  $\chi^2$ /NDF:1882933.7/22

+ sign 1239.448 $\pm$ 0.173  $\chi^2$ /NDF: 22353373.8/54

All: 1160.112 $\pm$ 0.118  $\chi^2$ /NDF: 50865459.7/100

- sign 1091.710 $\pm$ 0.161  $\chi^2$ /NDF: 28122135.5/55

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4364.195 $\pm$ 516.847  $\chi^2$ /NDF: 22.4/30

Left Out: 3754.064 $\pm$ 508.568  $\chi^2$ /NDF: 25.7/23

Right Out: -3955.961 $\pm$ 521.052  $\chi^2$ /NDF: 30.6/32

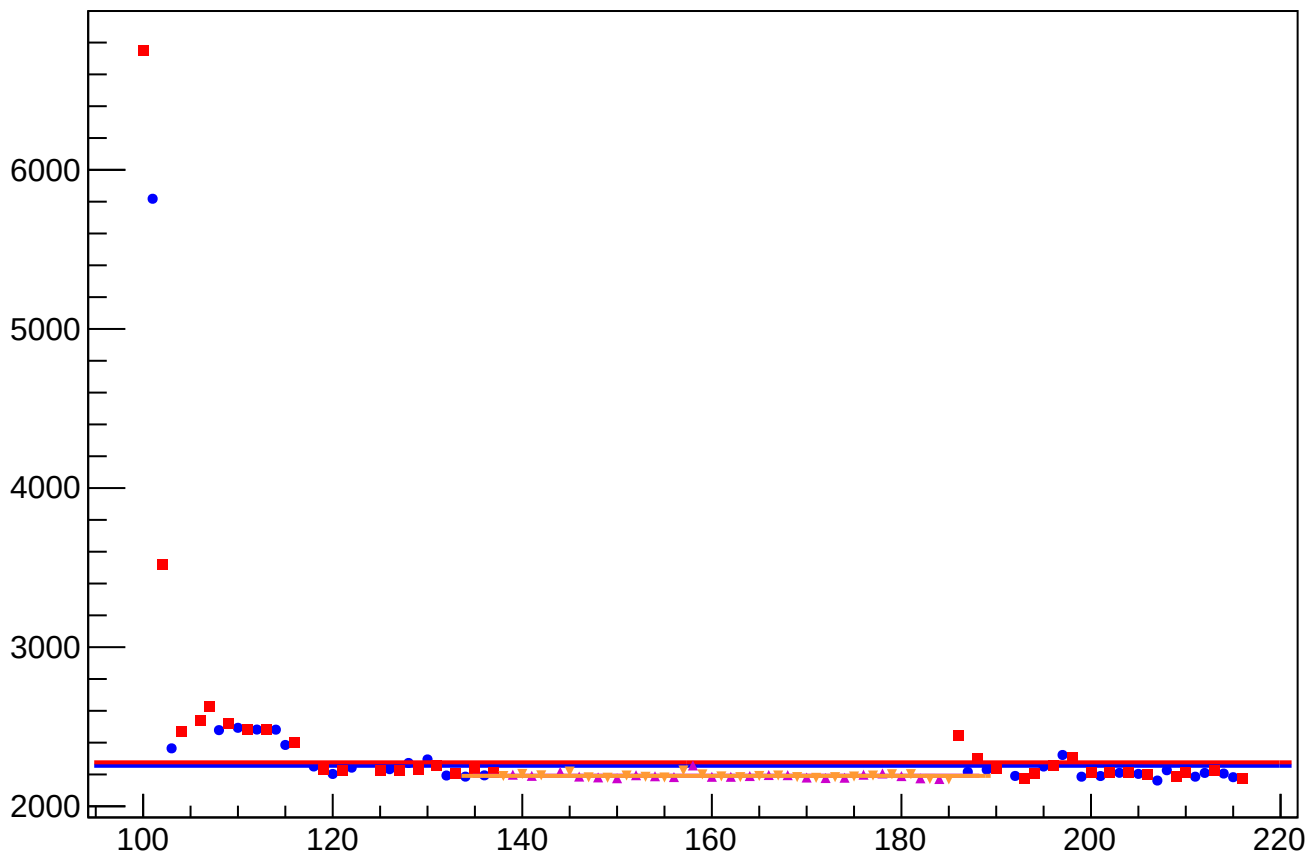
Left In: -4184.214 $\pm$ 511.864  $\chi^2$ /NDF: 32.7/22

+ sign 4054.203 $\pm$ 362.504  $\chi^2$ /NDF: 48.8/54

All: 20.567 $\pm$ 257.259  $\chi^2$ /NDF: 361.5/110

- sign -4072.118 $\pm$ 365.148  $\chi^2$ /NDF: 63.3/55

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 2254.539+/-0.365  $\chi^2/\text{NDF}$ : 539571.9/30

Left Out: 2191.147+/-0.360  $\chi^2/\text{NDF}$ : 1228.9/23

Right Out: 2276.249+/-0.368  $\chi^2/\text{NDF}$ : 257186.5/32

Left In: 2192.201+/-0.362  $\chi^2/\text{NDF}$ : 2281.8/22

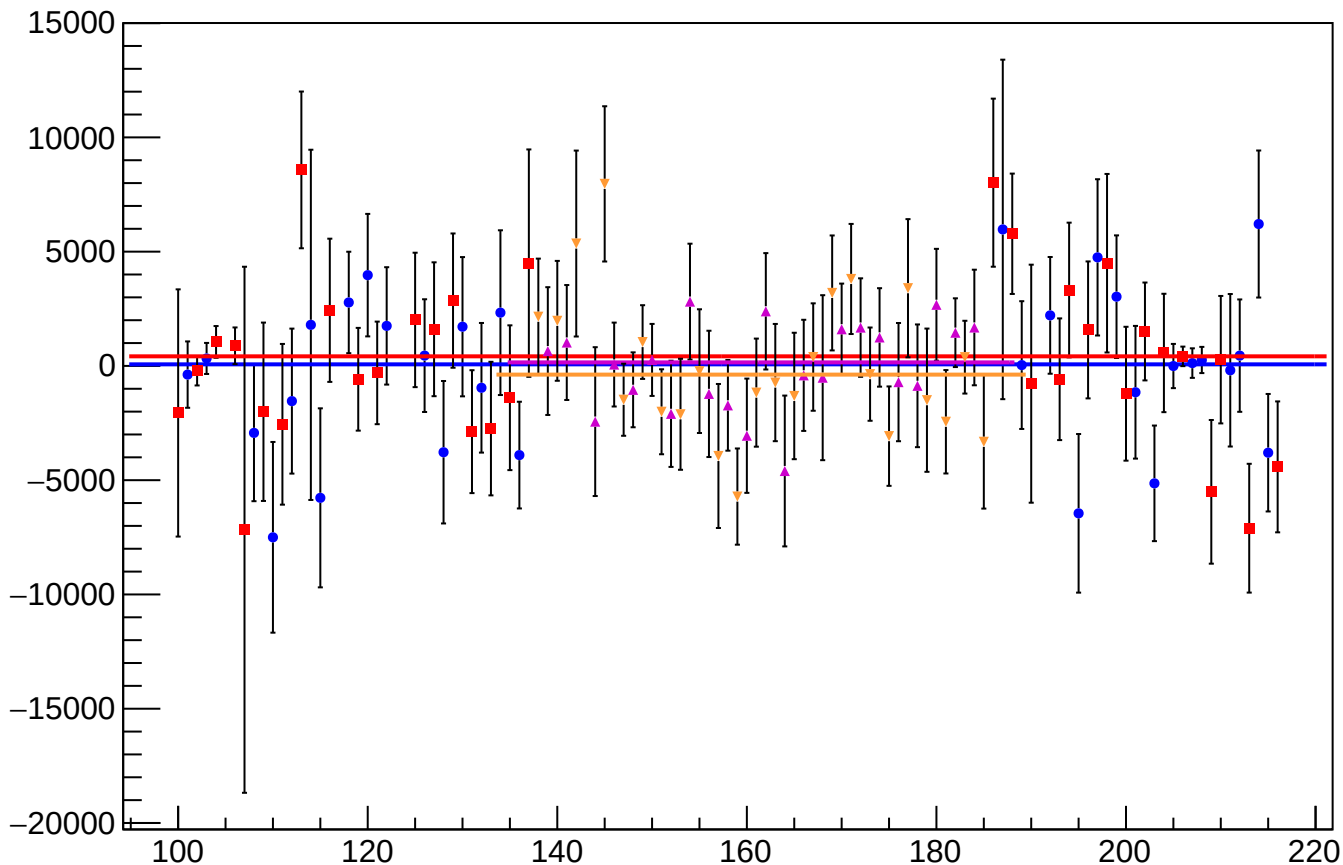
+ sign 2222.331+/-0.256  $\chi^2/\text{NDF}$ : 556087.4/54

All: 2227.864+/-0.182  $\chi^2/\text{NDF}$ : 842976.1/110

- sign 2233.477+/-0.258  $\chi^2/\text{NDF}$ : 285950.2/55



asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 68.684 $\pm$ 287.048  $\chi^2$ /NDF: 34.8/30

Left Out: -380.492 $\pm$ 471.482  $\chi^2$ /NDF:30.8/23

Right Out: 419.414 $\pm$ 260.573  $\chi^2$ /NDF: 40.0/32

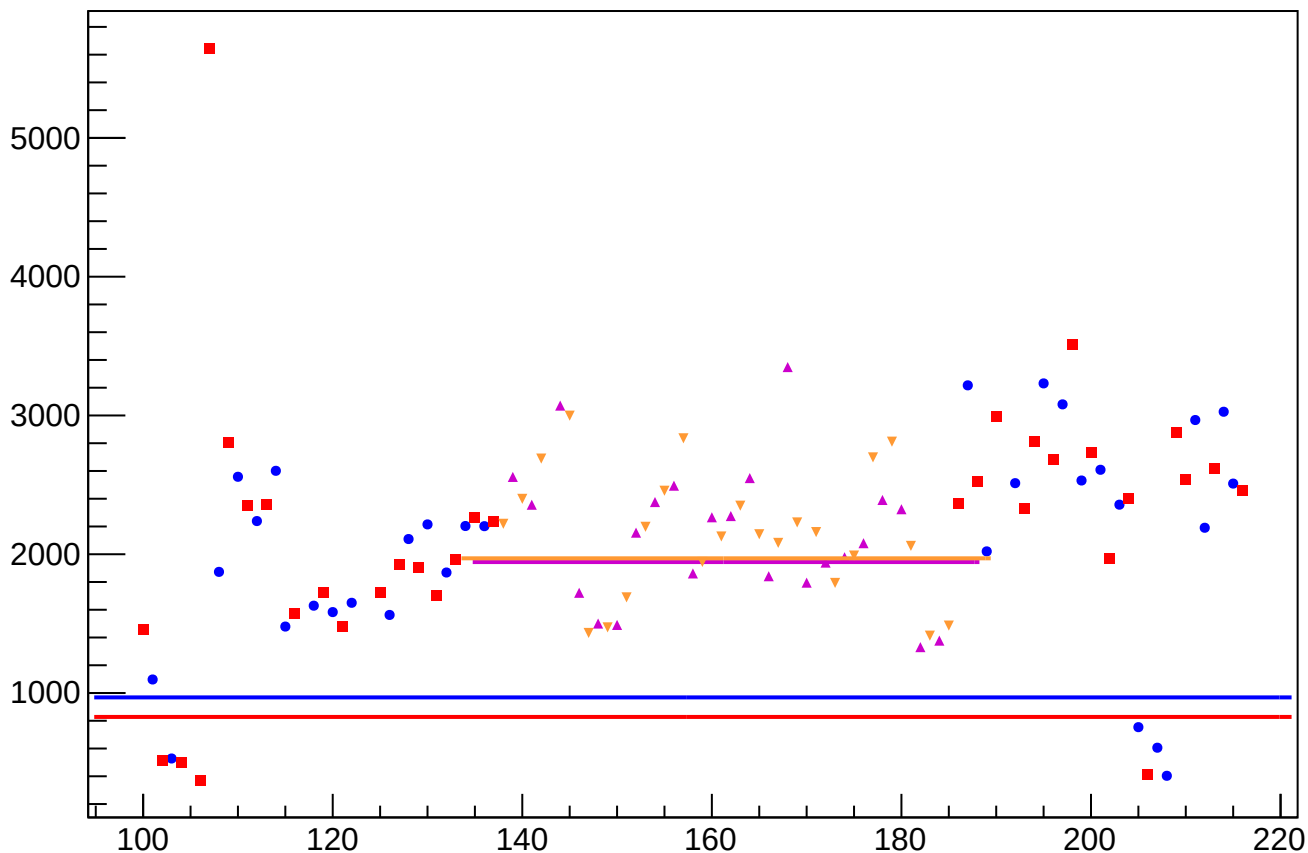
Left In: 154.512 $\pm$ 468.000  $\chi^2$ /NDF:12.8/22

+ sign -52.785 $\pm$ 245.182  $\chi^2$ /NDF: 66.2/54

All: 167.122 $\pm$ 166.832  $\chi^2$ /NDF: 120.8/110

- sign 356.727 $\pm$ 227.663  $\chi^2$ /NDF: 53.1/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 968.415 $\pm$ 0.203  $\chi^2$ /NDF: 14063253.8/30

Left Out: 1970.659 $\pm$ 0.333  $\chi^2$ /NDF:1696658.8/23

Right Out: 827.619 $\pm$ 0.184  $\chi^2$ /NDF: 17557380.7/32

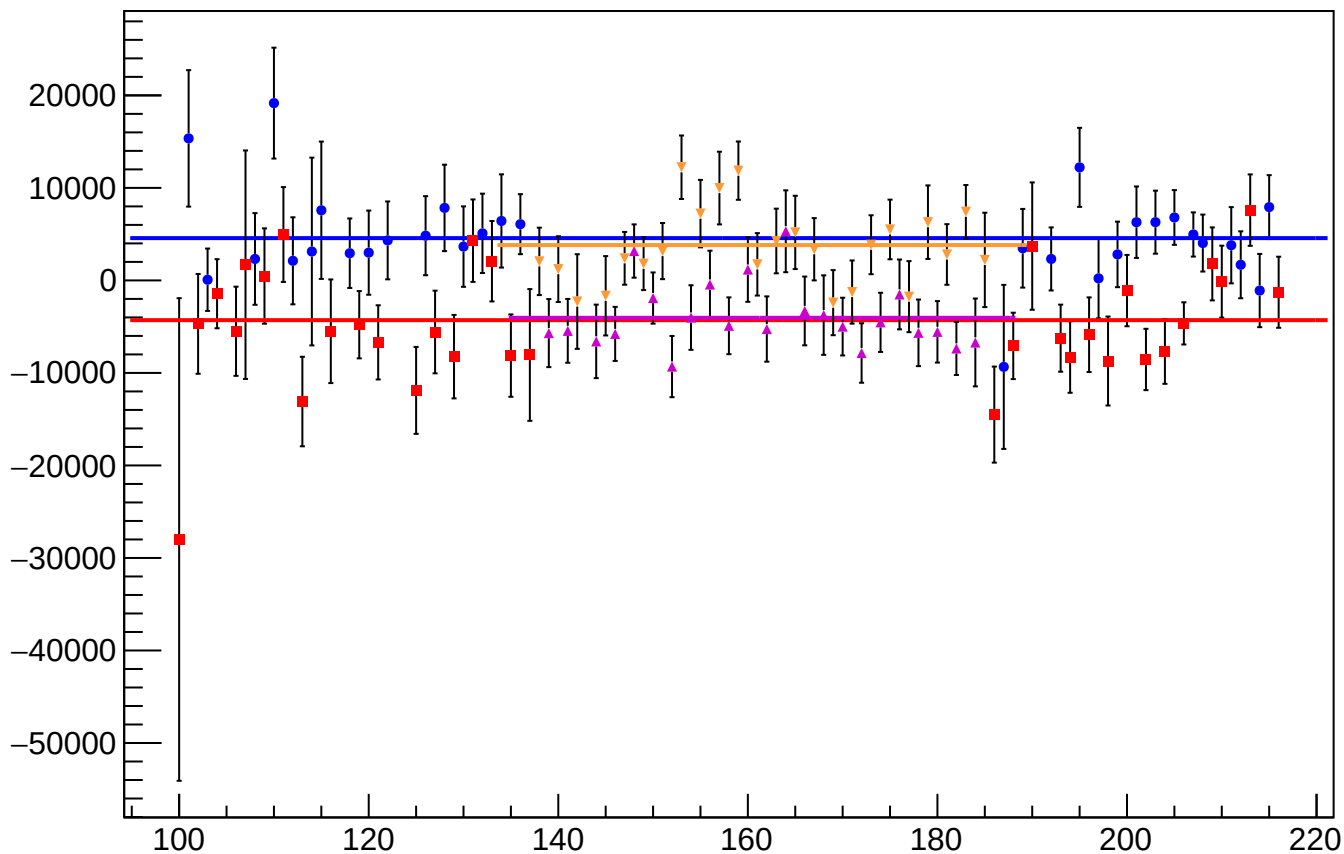
Left In: 1943.631 $\pm$ 0.331  $\chi^2$ /NDF:1882931.8/22

+ sign 1239.448 $\pm$ 0.173  $\chi^2$ /NDF: 22353423.8/54

All: 1160.116 $\pm$ 0.118  $\chi^2$ /NDF: 50865339.2/100

- sign 1091.715 $\pm$ 0.161  $\chi^2$ /NDF: 28121993.9/55

asym\_us\_avg\_at1lr\_avg\_avg\_mean vs Slug



Right In: 4571.450 $\pm$ 718.015  $\chi^2$ /NDF: 23.9/30

Left Out: 3817.837 $\pm$ 708.312  $\chi^2$ /NDF:30.9/23

Right Out: -4295.491 $\pm$ 736.281  $\chi^2$ /NDF: 45.0/32

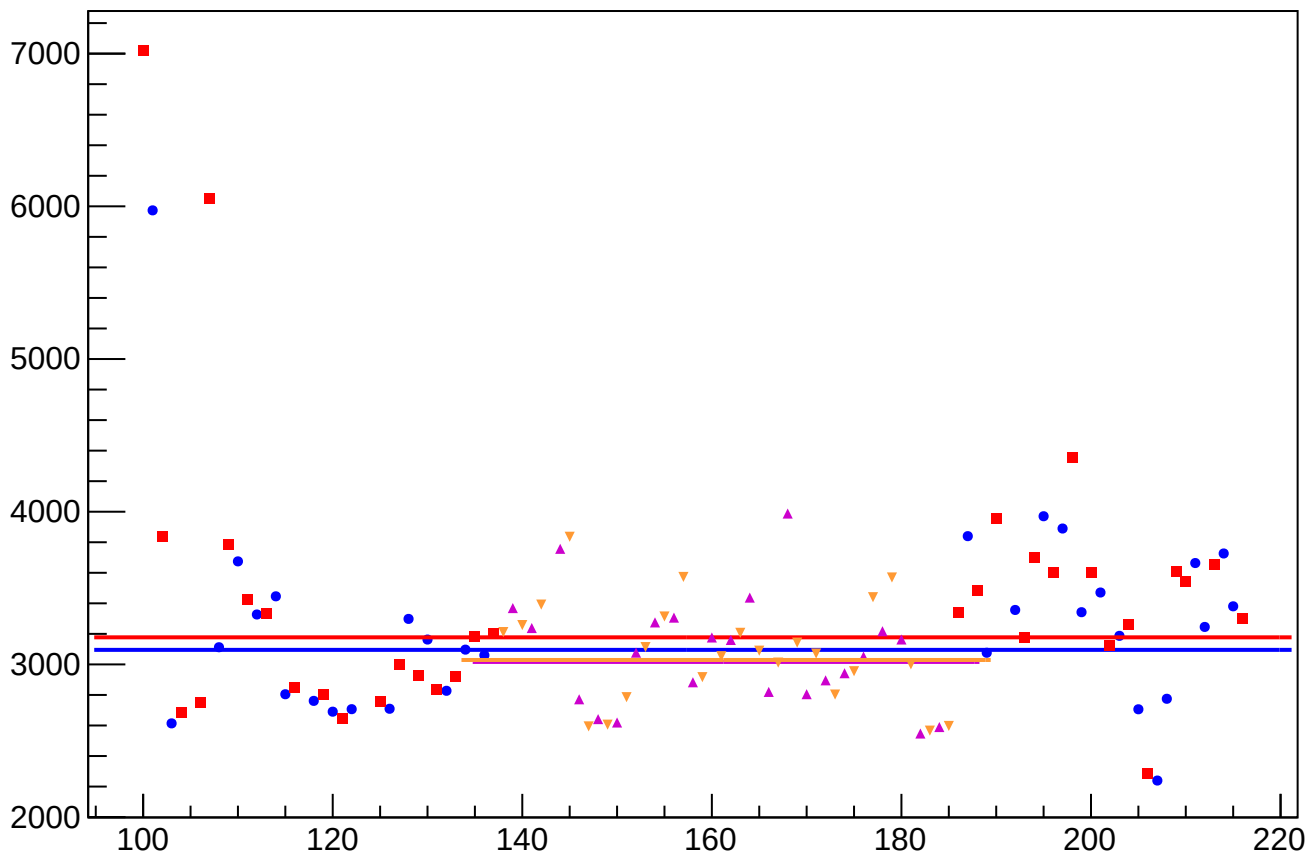
Left In: -4042.422 $\pm$ 709.573  $\chi^2$ /NDF:22.5/22

+ sign 4189.517 $\pm$ 504.248  $\chi^2$ /NDF: 55.3/54

All: 67.560 $\pm$ 358.894  $\chi^2$ /NDF: 258.3/110

- sign -4164.283 $\pm$ 510.925  $\chi^2$ /NDF: 67.5/55

# asym\_us\_avg\_at1lr\_avg\_avg\_rms vs Slug



Right In: 3095.231+/-0.508  $\chi^2/\text{NDF}$ : 1078476.2/30

Left Out: 3028.983+/-0.501  $\chi^2/\text{NDF}$ :397111.2/23

Right Out: 3177.339+/-0.521  $\chi^2/\text{NDF}$ : 999728.4/32

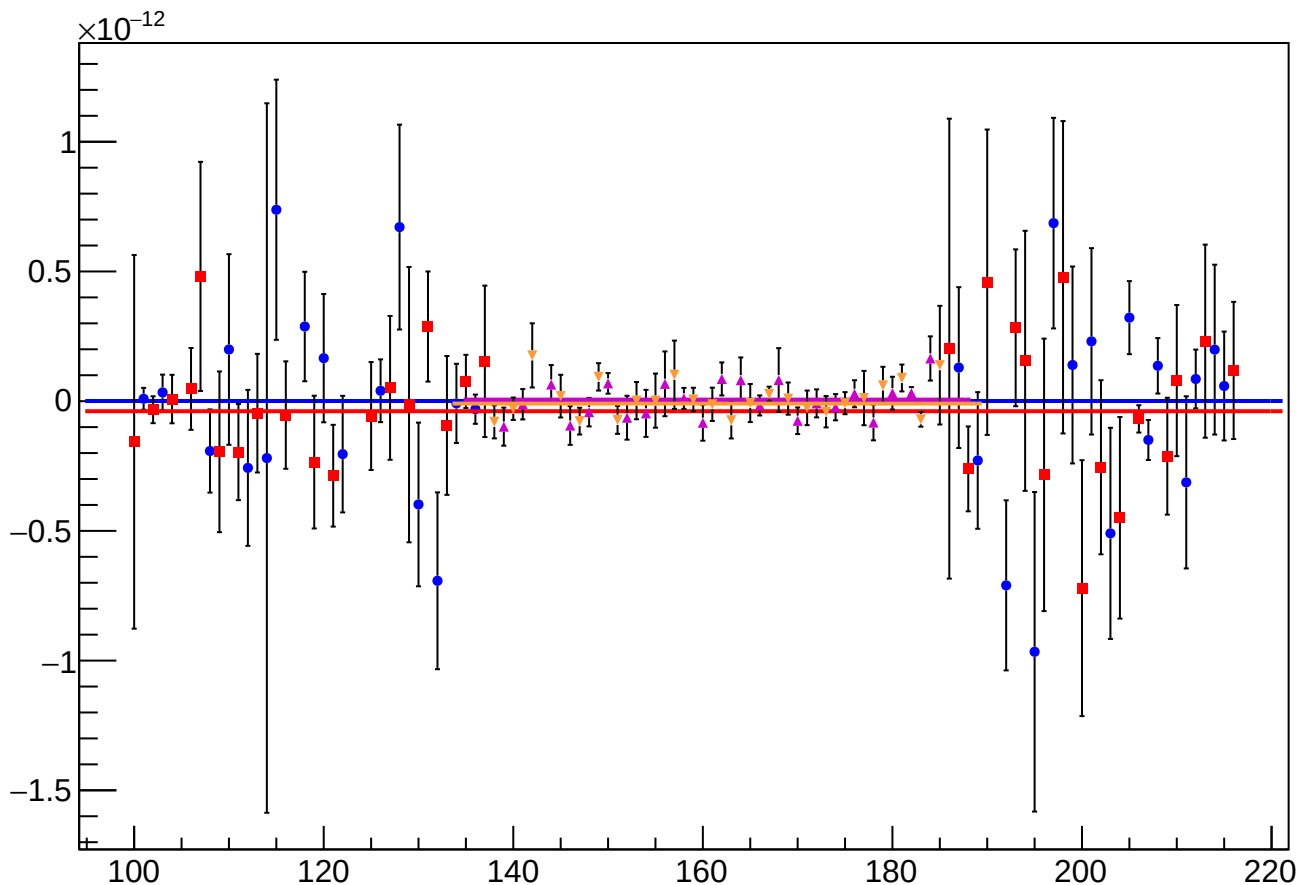
Left In: 3016.252+/-0.502  $\chi^2/\text{NDF}$ :439897.8/22

+ sign 3061.656+/-0.357  $\chi^2/\text{NDF}$ : 1484216.0/54

All: 3077.527+/-0.254  $\chi^2/\text{NDF}$ : 2977492.3/11

- sign 3093.821+/-0.361  $\chi^2/\text{NDF}$ : 1489261.0/55

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.7/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.2/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.6/32

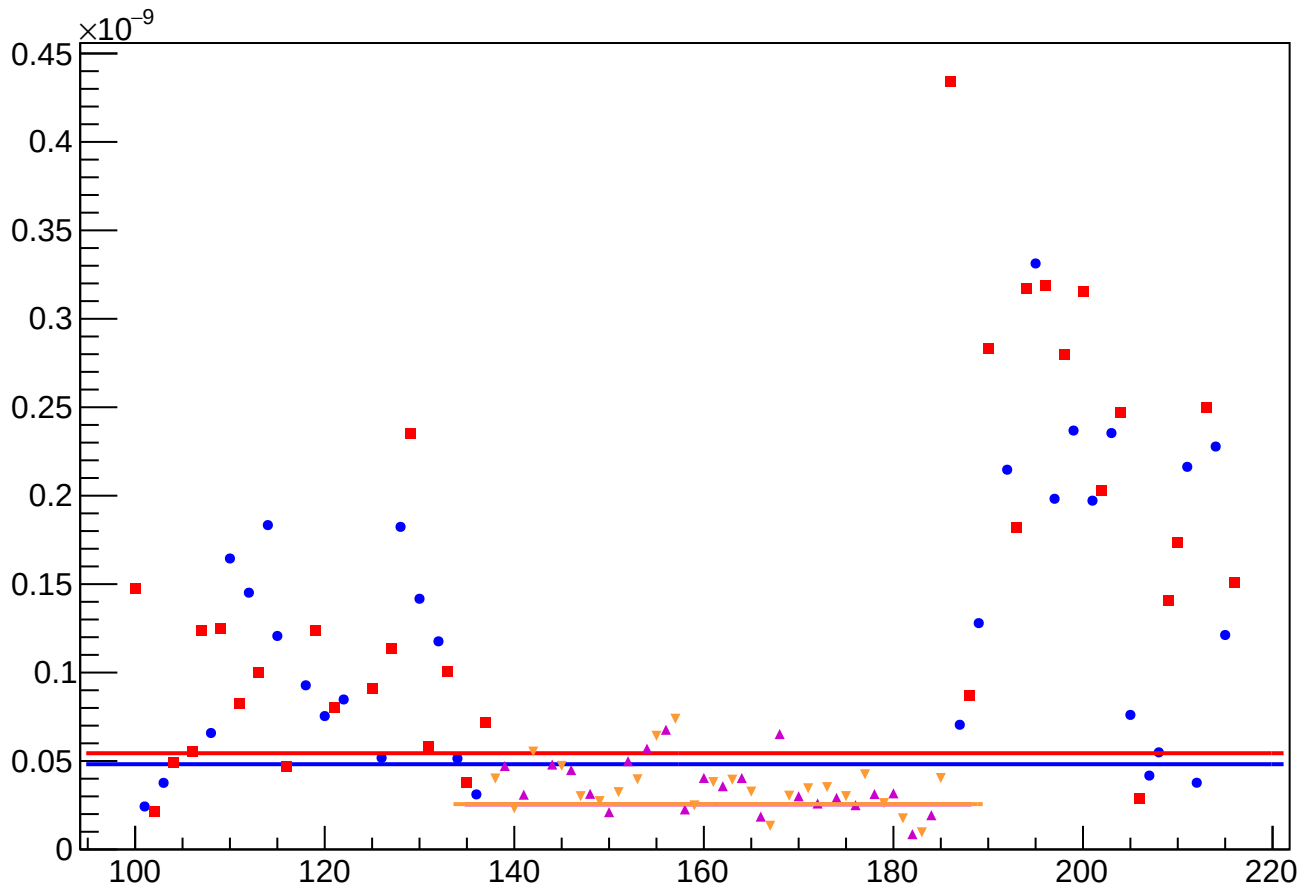
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.3/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 67.0/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.4/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6169920.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2439953.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7618212.4/32

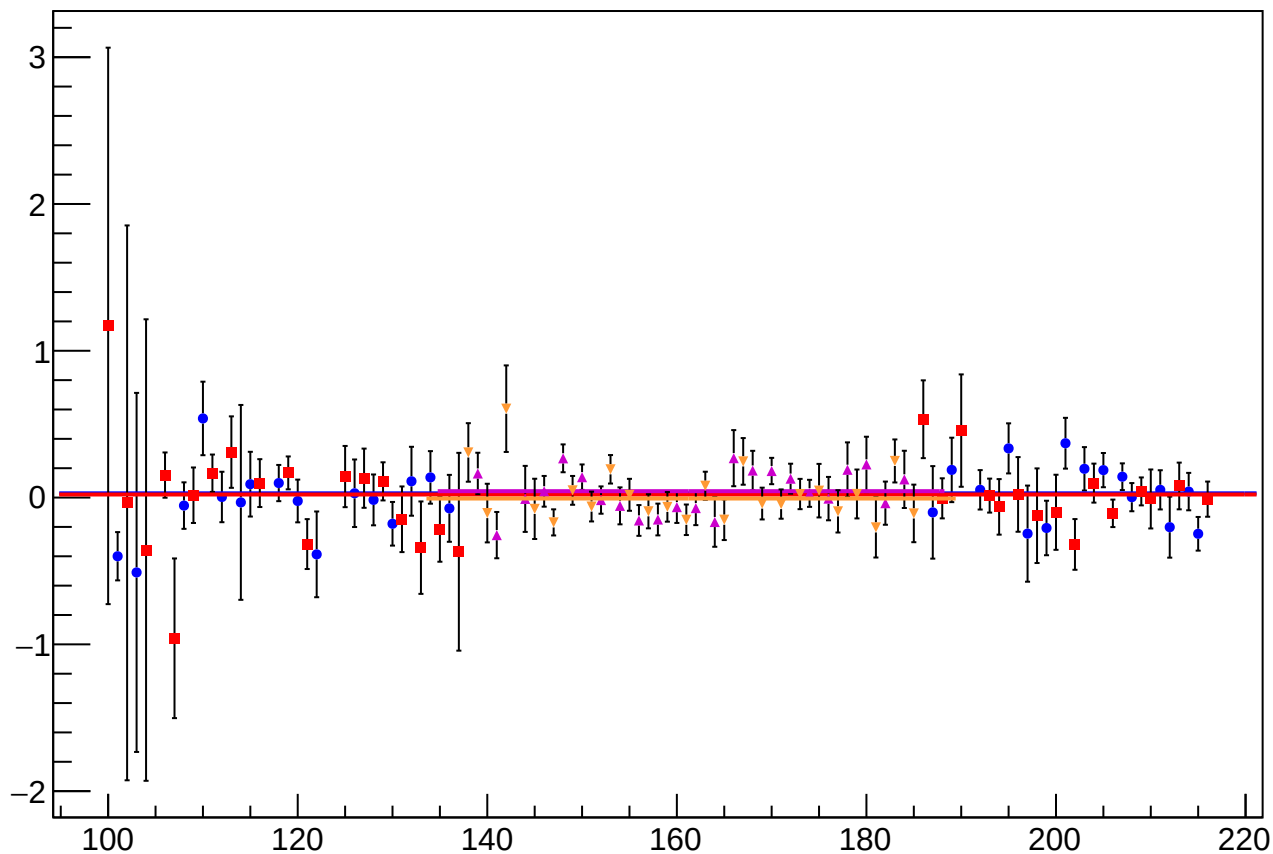
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2808054.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10131351.0/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22474743.5/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12342895.3/55

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.029$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 27.7/23

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}$ : 29.6/32

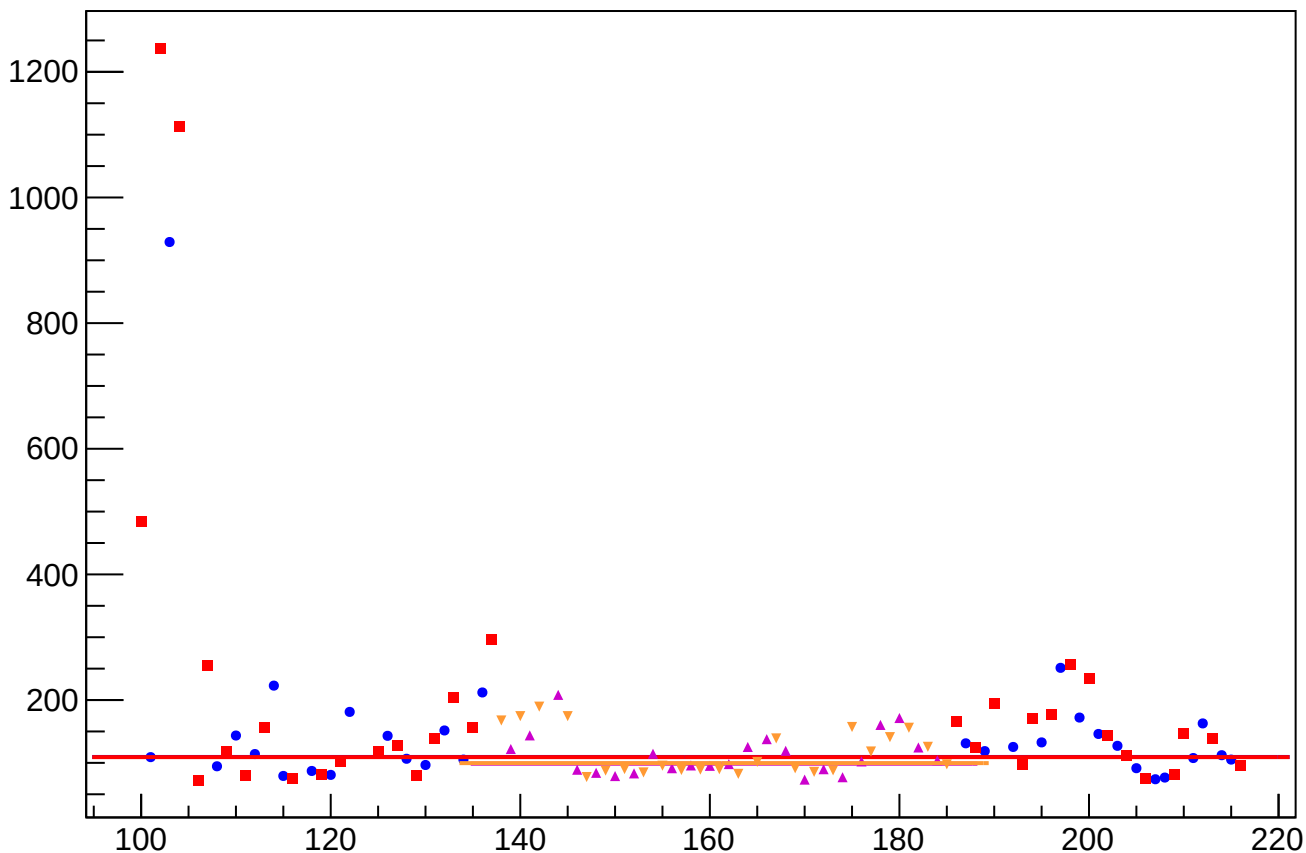
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $0.009 \pm 0.019$   $\chi^2/\text{NDF}$ : 67.2/54

All:  $0.021 \pm 0.014$   $\chi^2/\text{NDF}$ : 128.2/110

- sign  $0.034 \pm 0.019$   $\chi^2/\text{NDF}$ : 60.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 109.390 $\pm$ 0.020  $\chi^2$ /NDF: 3363359.0/30

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070986.6/23

Right Out: 109.150 $\pm$ 0.021  $\chi^2$ /NDF: 5019172.9/32

Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003365.1/22

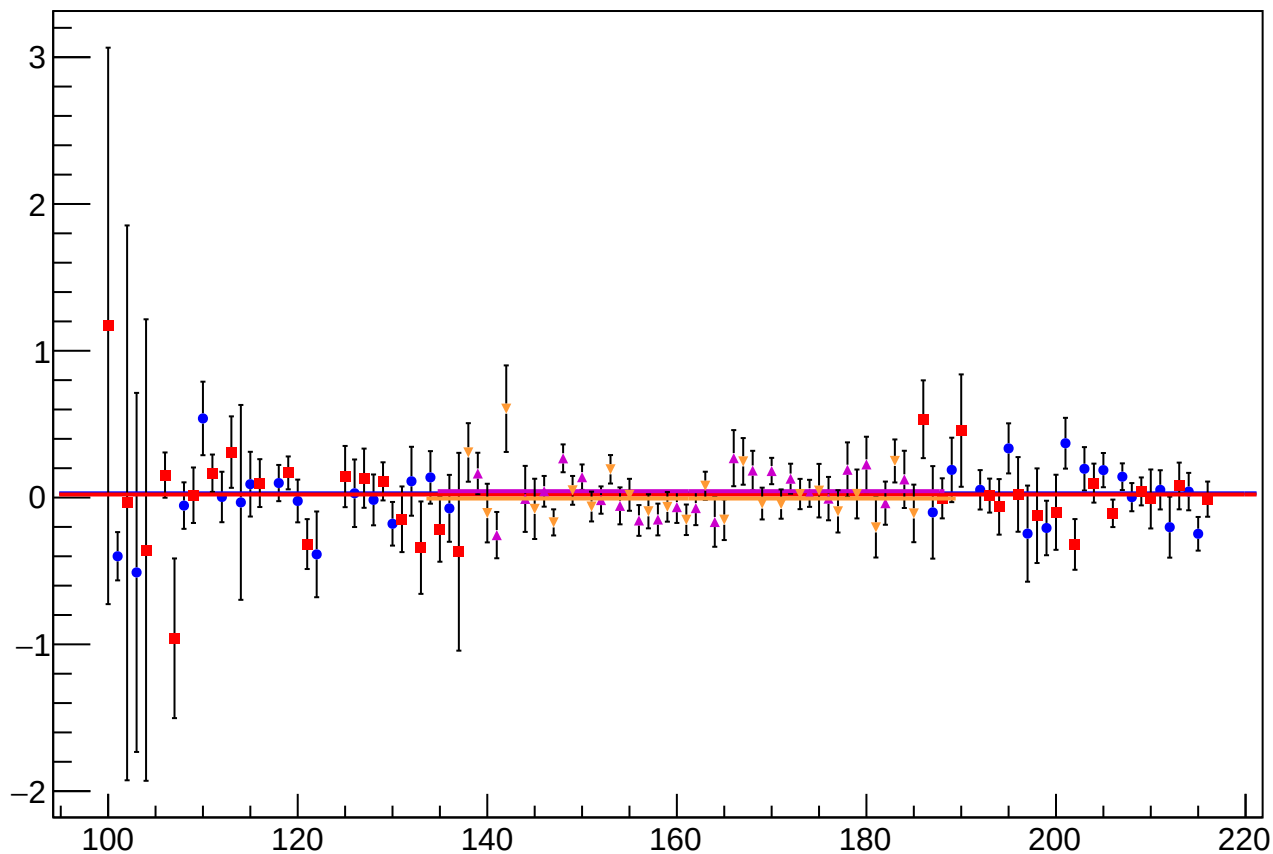
+ sign 103.848 $\pm$ 0.013  $\chi^2$ /NDF: 5564539.3/54

All: 103.437 $\pm$ 0.010  $\chi^2$ /NDF: 12734200.8/11

- sign 103.021 $\pm$ 0.014  $\chi^2$ /NDF: 7167786.5/55



asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.029$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 27.7/23

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}$ : 29.6/32

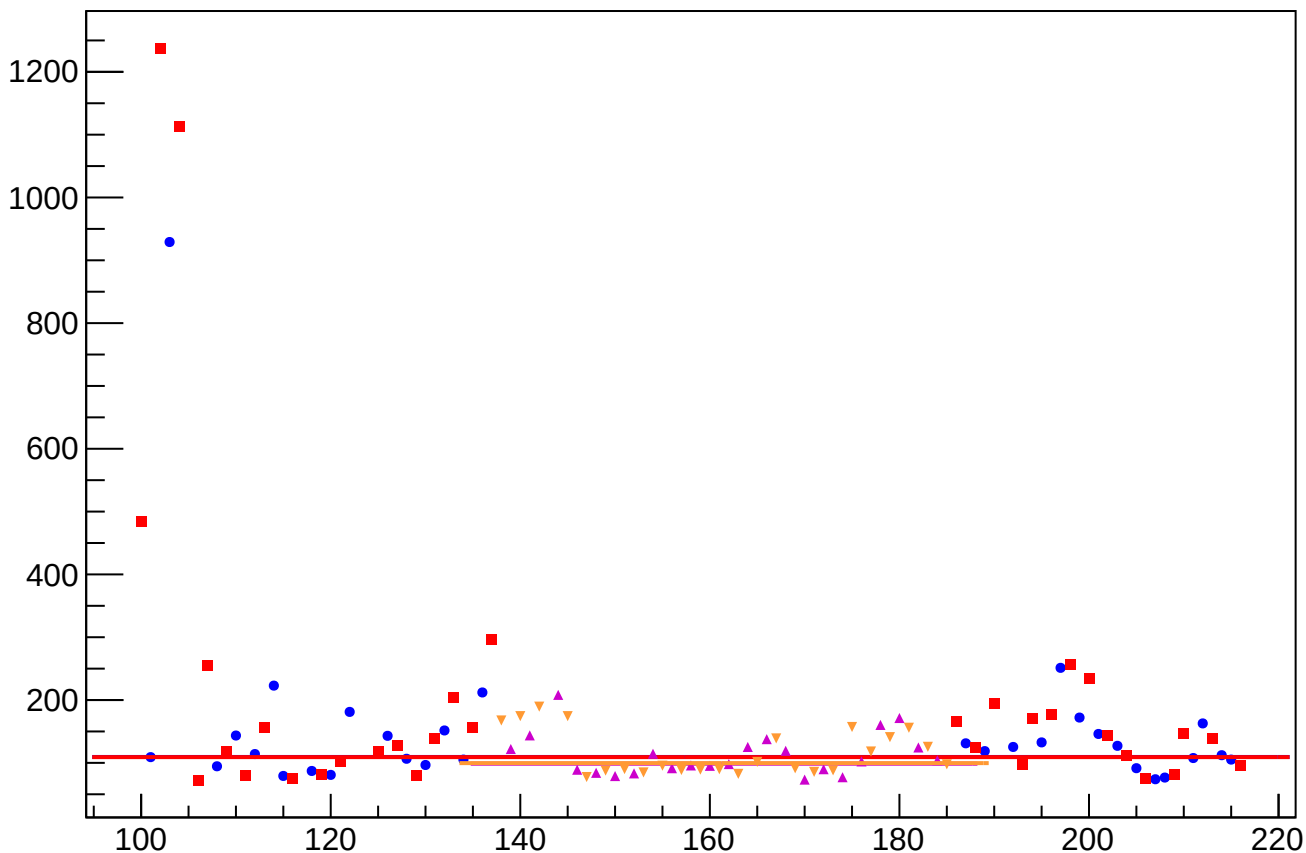
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $0.009 \pm 0.019$   $\chi^2/\text{NDF}$ : 67.2/54

All:  $0.021 \pm 0.014$   $\chi^2/\text{NDF}$ : 128.2/110

- sign  $0.034 \pm 0.019$   $\chi^2/\text{NDF}$ : 60.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 109.390 $\pm$ 0.020  $\chi^2$ /NDF: 3363359.0/30

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070986.6/23

Right Out: 109.150 $\pm$ 0.021  $\chi^2$ /NDF: 5019172.9/32

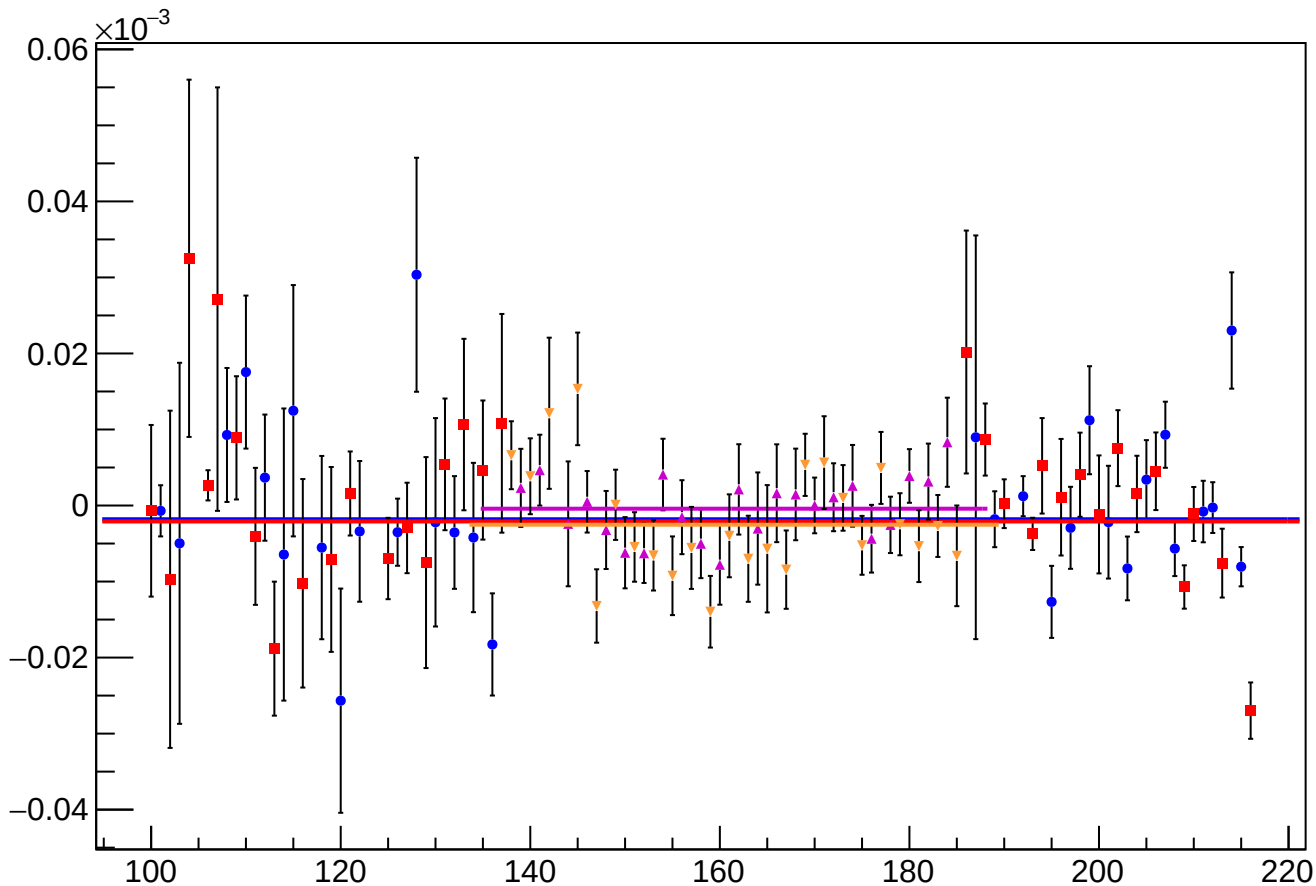
Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003365.1/22

+ sign 103.848 $\pm$ 0.013  $\chi^2$ /NDF: 5564539.3/54

All: 103.437 $\pm$ 0.010  $\chi^2$ /NDF: 12734200.8/11

- sign 103.021 $\pm$ 0.014  $\chi^2$ /NDF: 7167786.5/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.9/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:40.2/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 92.7/32

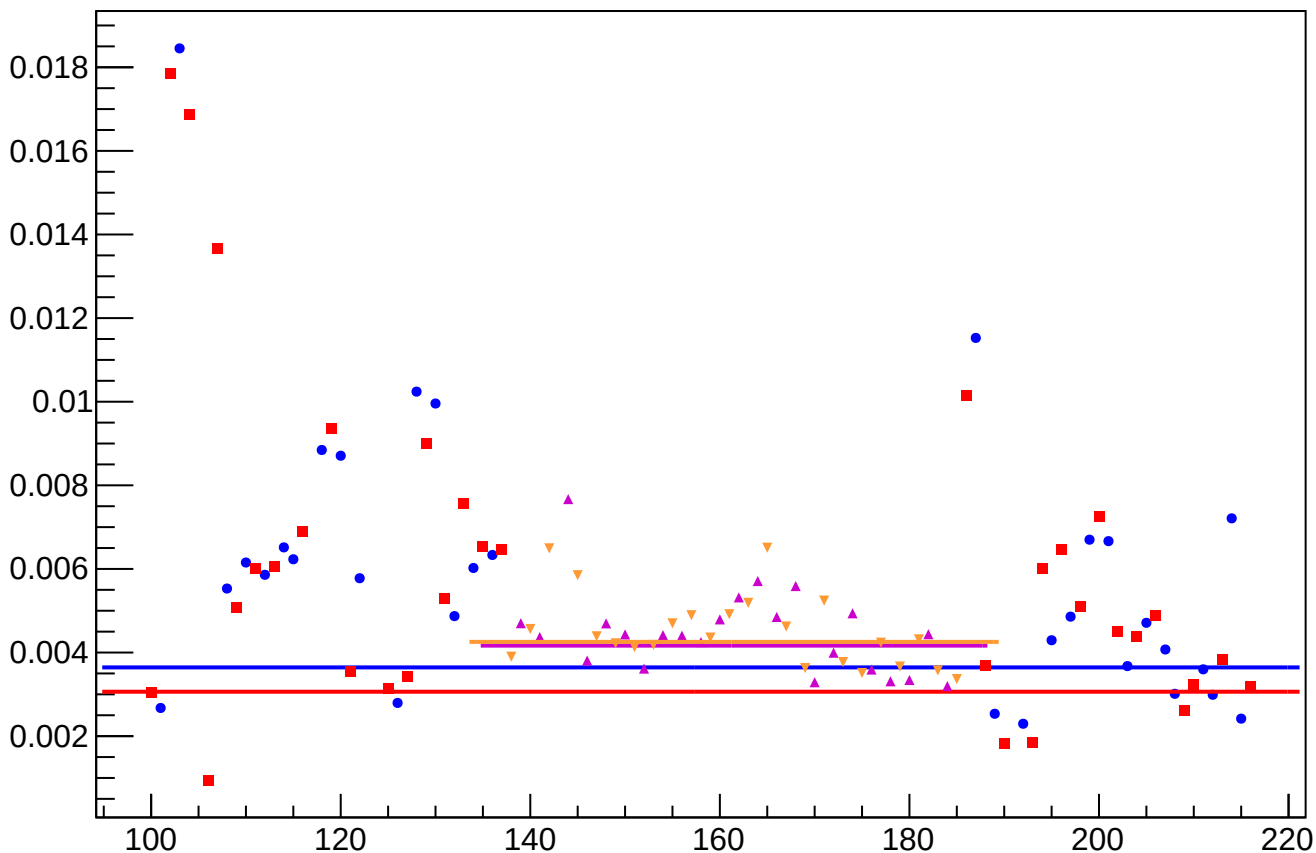
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 98.3/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 209.2/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 110.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6317632.1/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:833222.5/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10406615.5/32

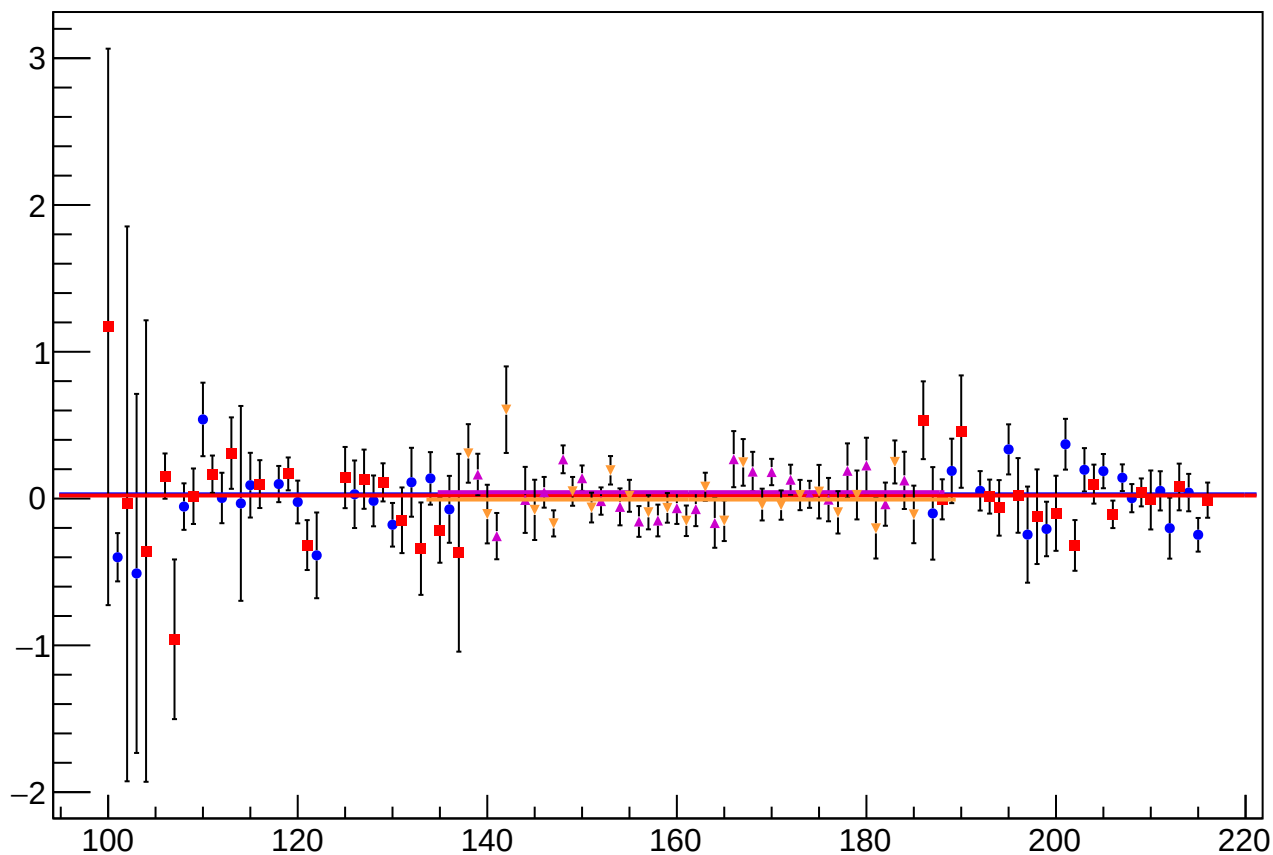
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1277434.2/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7543955.0/54

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 20983958.1/110

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 13095250.5/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.029 $\pm$ 0.029  $\chi^2$ /NDF: 38.6/30

Left Out: -0.007 $\pm$ 0.025  $\chi^2$ /NDF:27.7/23

Right Out: 0.021 $\pm$ 0.030  $\chi^2$ /NDF: 29.6/32

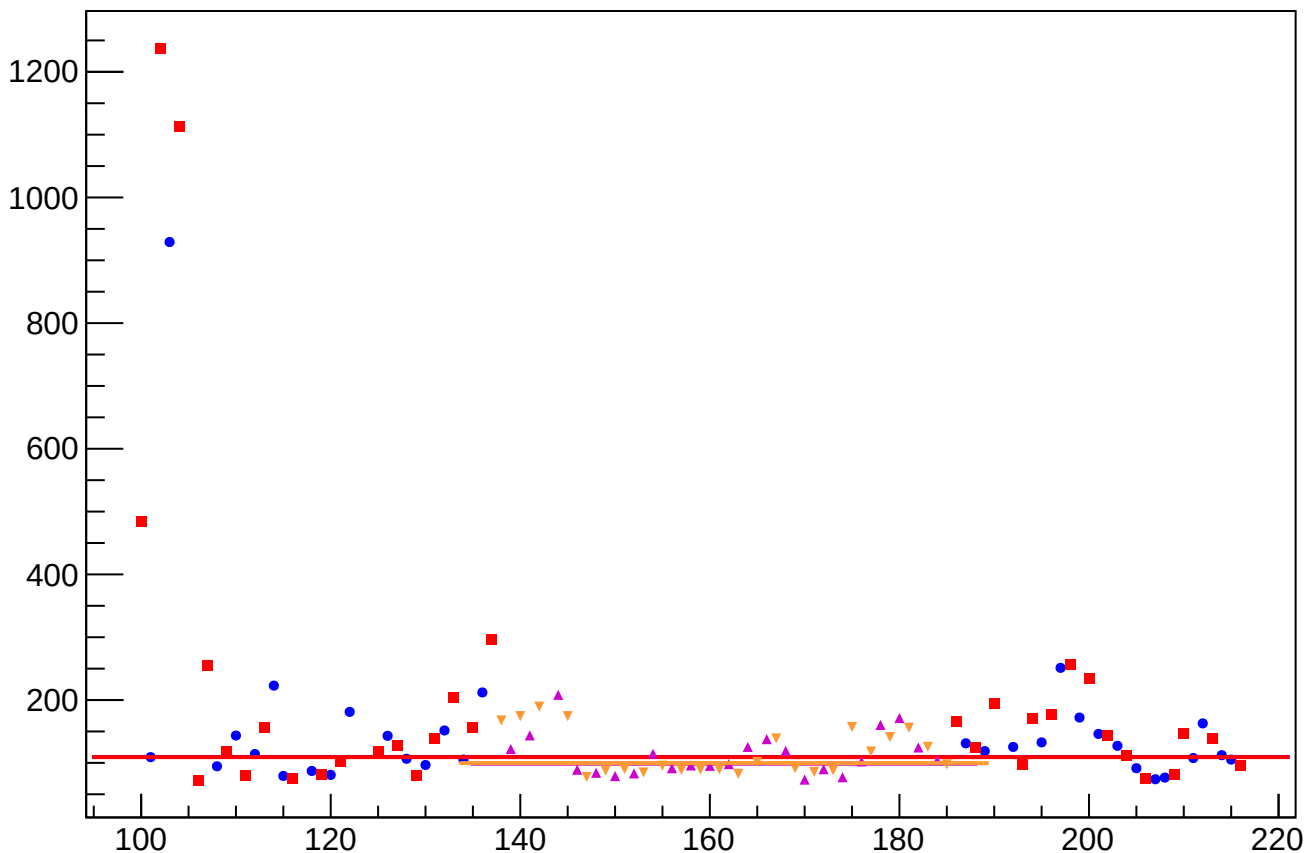
Left In: 0.044 $\pm$ 0.025  $\chi^2$ /NDF:30.3/22

+ sign 0.009 $\pm$ 0.019  $\chi^2$ /NDF: 67.2/54

All: 0.021 $\pm$ 0.014  $\chi^2$ /NDF: 128.2/110

- sign 0.034 $\pm$ 0.019  $\chi^2$ /NDF: 60.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 109.390 $\pm$ 0.020  $\chi^2$ /NDF: 3363284.1/30

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070951.9/23

Right Out: 109.149 $\pm$ 0.021  $\chi^2$ /NDF: 5019142.6/32

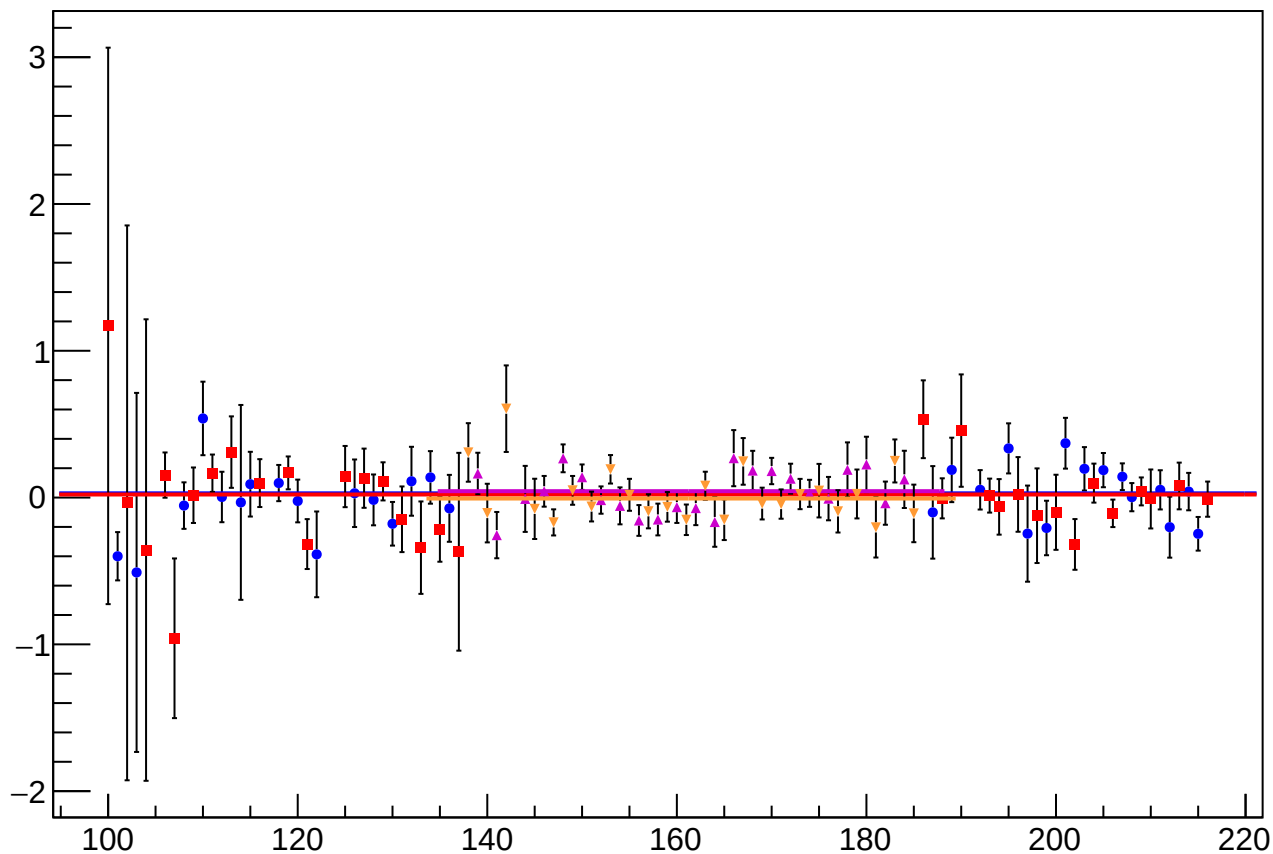
Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003332.7/22

+ sign 103.849 $\pm$ 0.013  $\chi^2$ /NDF: 5564410.4/54

All: 103.438 $\pm$ 0.010  $\chi^2$ /NDF: 12733994.1/11

- sign 103.021 $\pm$ 0.014  $\chi^2$ /NDF: 7167707.7/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.029 \pm 0.029$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-0.007 \pm 0.025$   $\chi^2/\text{NDF}$ : 27.7/23

Right Out:  $0.021 \pm 0.030$   $\chi^2/\text{NDF}$ : 29.6/32

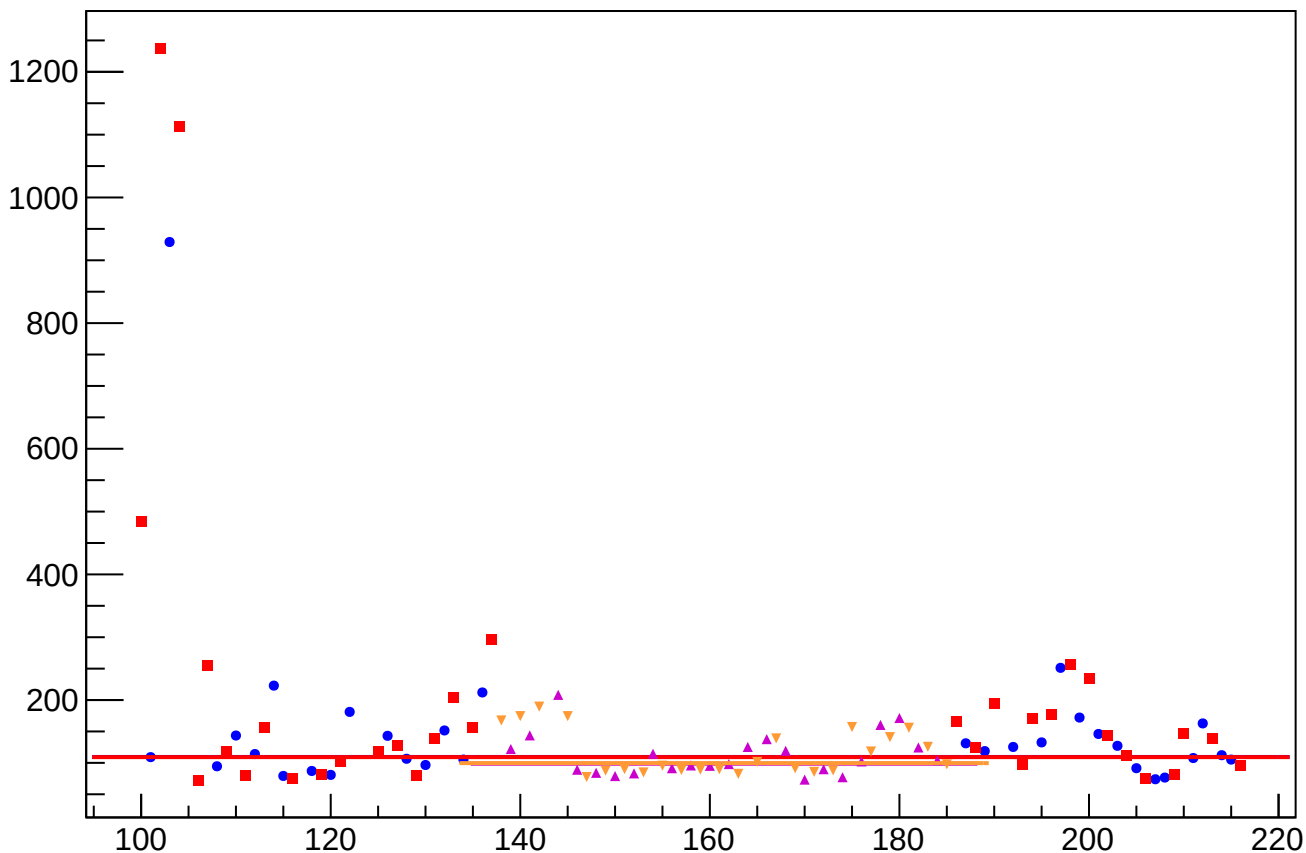
Left In:  $0.044 \pm 0.025$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $0.009 \pm 0.019$   $\chi^2/\text{NDF}$ : 67.2/54

All:  $0.021 \pm 0.014$   $\chi^2/\text{NDF}$ : 128.2/110

- sign  $0.034 \pm 0.019$   $\chi^2/\text{NDF}$ : 60.2/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 109.390 $\pm$ 0.020  $\chi^2$ /NDF: 3363284.1/30

Left Out: 99.590 $\pm$ 0.018  $\chi^2$ /NDF: 2070951.9/23

Right Out: 109.149 $\pm$ 0.021  $\chi^2$ /NDF: 5019142.6/32

Left In: 98.669 $\pm$ 0.018  $\chi^2$ /NDF: 2003332.7/22

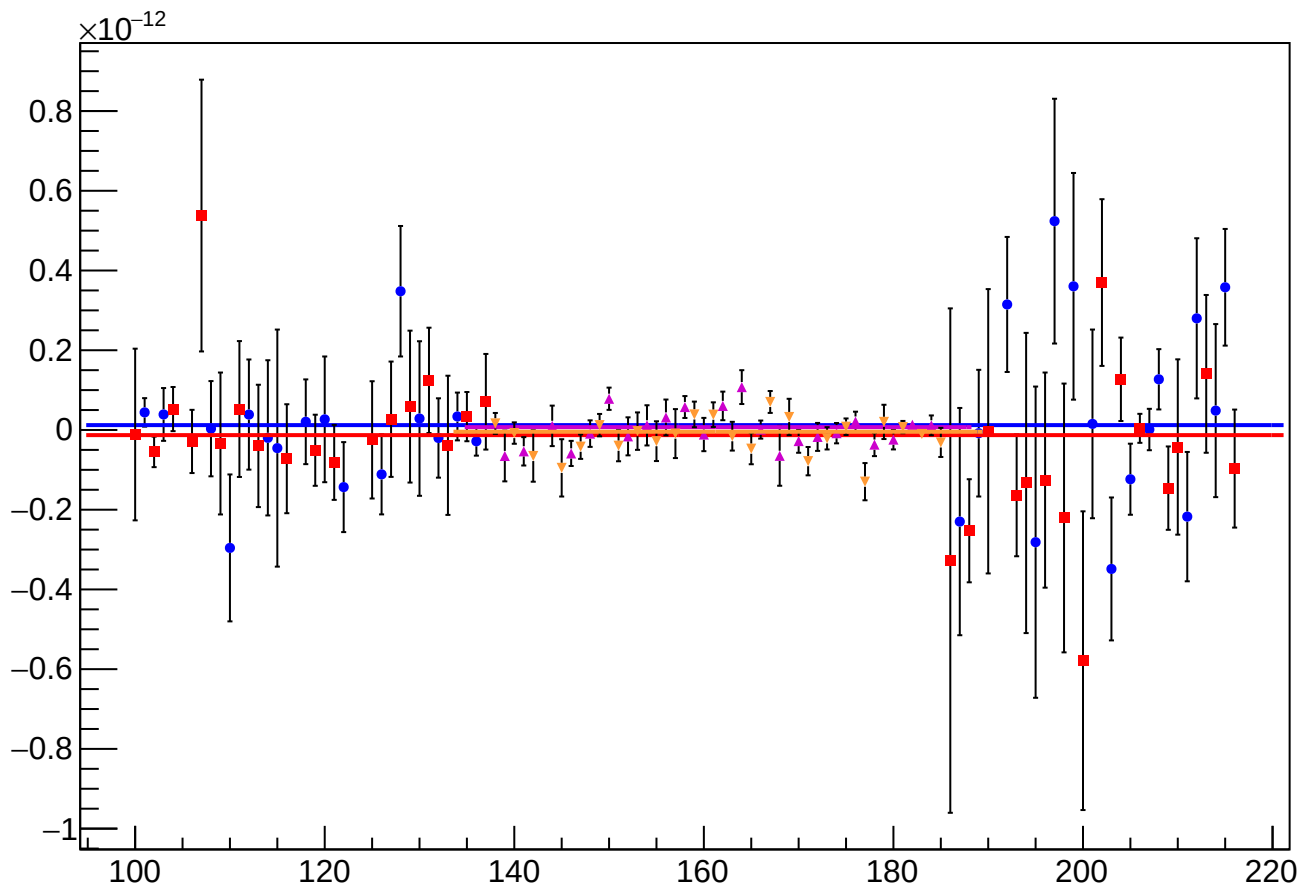
+ sign 103.849 $\pm$ 0.013  $\chi^2$ /NDF: 5564410.4/54

All: 103.438 $\pm$ 0.010  $\chi^2$ /NDF: 12733994.1/11

- sign 103.021 $\pm$ 0.014  $\chi^2$ /NDF: 7167707.7/55



asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:32.9/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.2/32

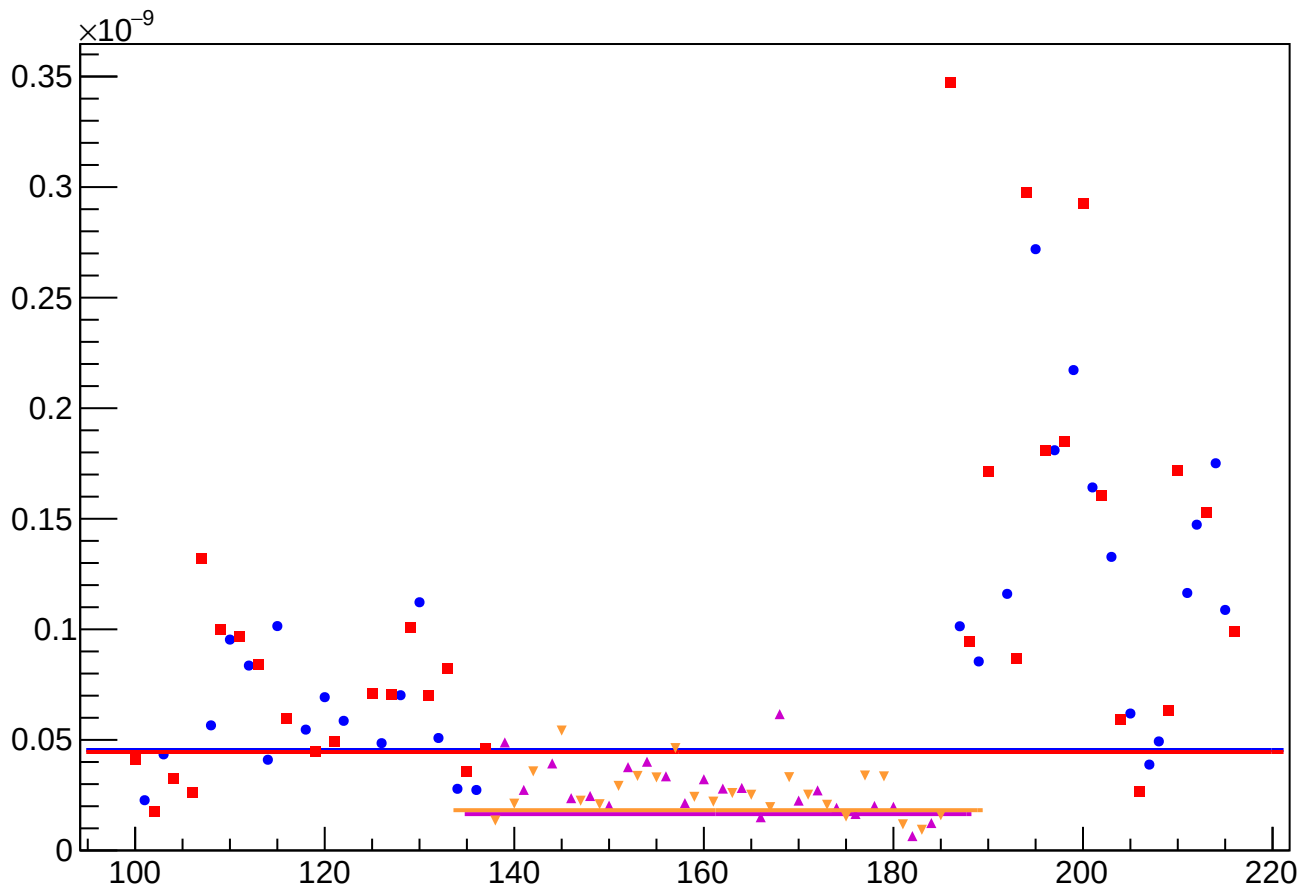
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:35.2/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 73.7/54

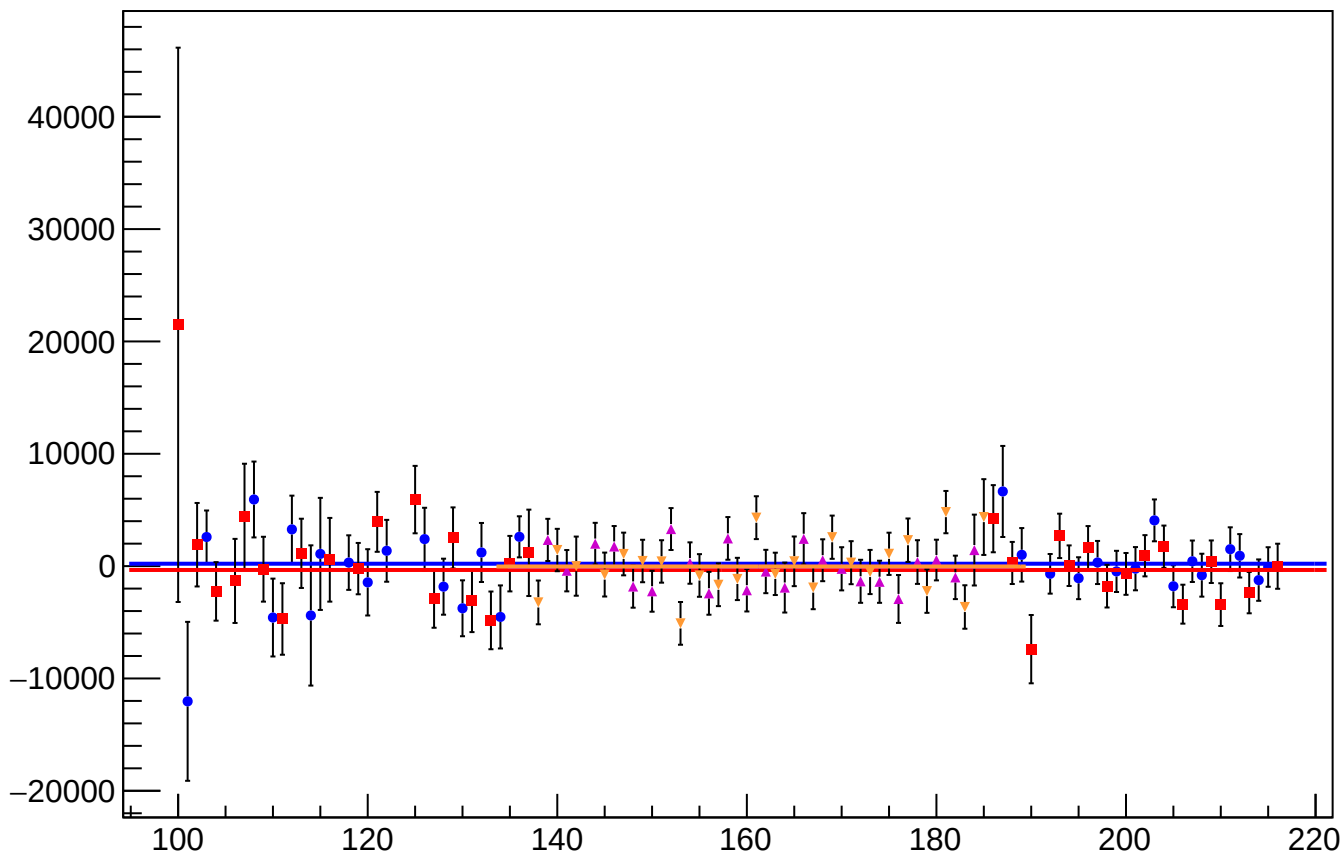
All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 135.5/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.7/55

asym\_us\_avg\_at1lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



# reg\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $213.319 \pm 409.525$   $\chi^2/\text{NDF}: 30.0/30$

Left Out:  $-34.799 \pm 401.970$   $\chi^2/\text{NDF}: 35.4/23$

Right Out:  $-343.173 \pm 412.209$   $\chi^2/\text{NDF}: 38.8/32$

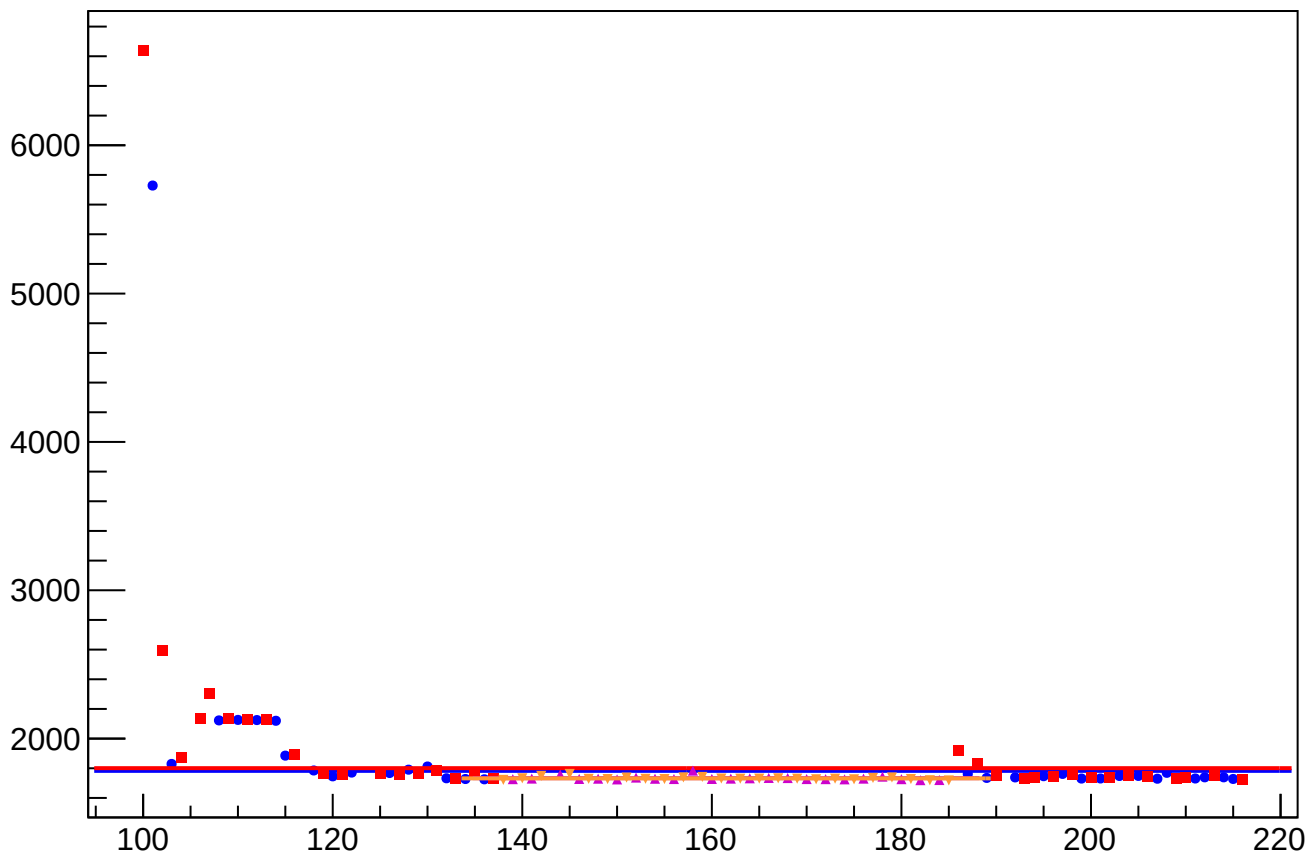
Left In:  $-52.796 \pm 404.703$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $86.950 \pm 286.870$   $\chi^2/\text{NDF}: 65.5/54$

All:  $-53.244 \pm 203.521$   $\chi^2/\text{NDF}: 124.5/110$

- sign  $-195.317 \pm 288.785$   $\chi^2/\text{NDF}: 58.5/55$

# reg\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1782.621+/-0.290  $\chi^2/\text{NDF}$ : 714473.8/30

Left Out: 1731.985+/-0.284  $\chi^2/\text{NDF}$ : 937.2/23

Right Out: 1800.693+/-0.291  $\chi^2/\text{NDF}$ : 315671.8/32

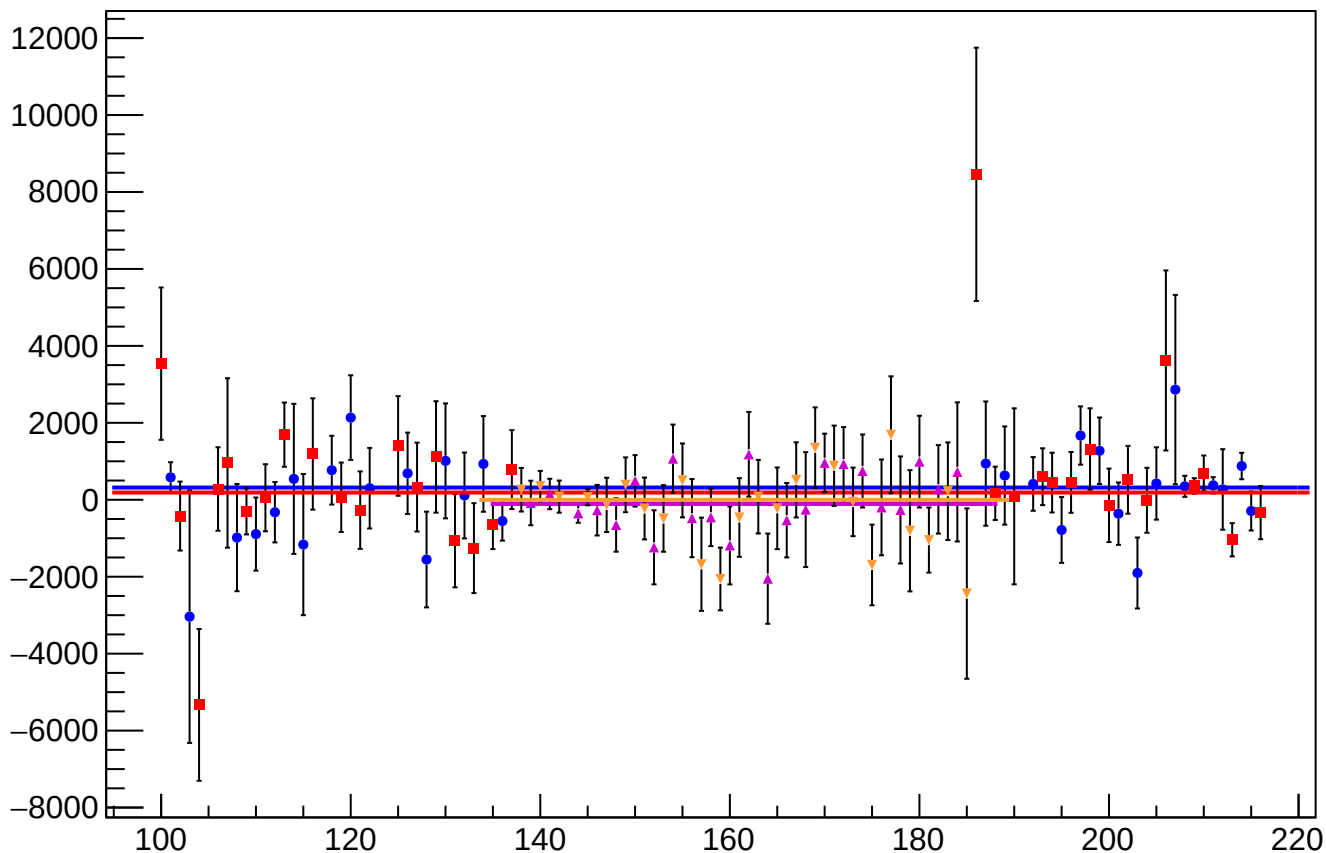
Left In: 1733.315+/-0.286  $\chi^2/\text{NDF}$ : 2230.5/22

+ sign 1756.832+/-0.203  $\chi^2/\text{NDF}$ : 730983.9/54

All: 1761.577+/-0.144  $\chi^2/\text{NDF}$ : 1077196.5/11

- sign 1766.385+/-0.204  $\chi^2/\text{NDF}$ : 345111.0/55

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $317.551 \pm 111.135$   $\chi^2/\text{NDF}: 32.2/30$

Left Out:  $-2.406 \pm 130.052$   $\chi^2/\text{NDF}: 20.3/23$

Right Out:  $188.112 \pm 122.396$   $\chi^2/\text{NDF}: 42.8/32$

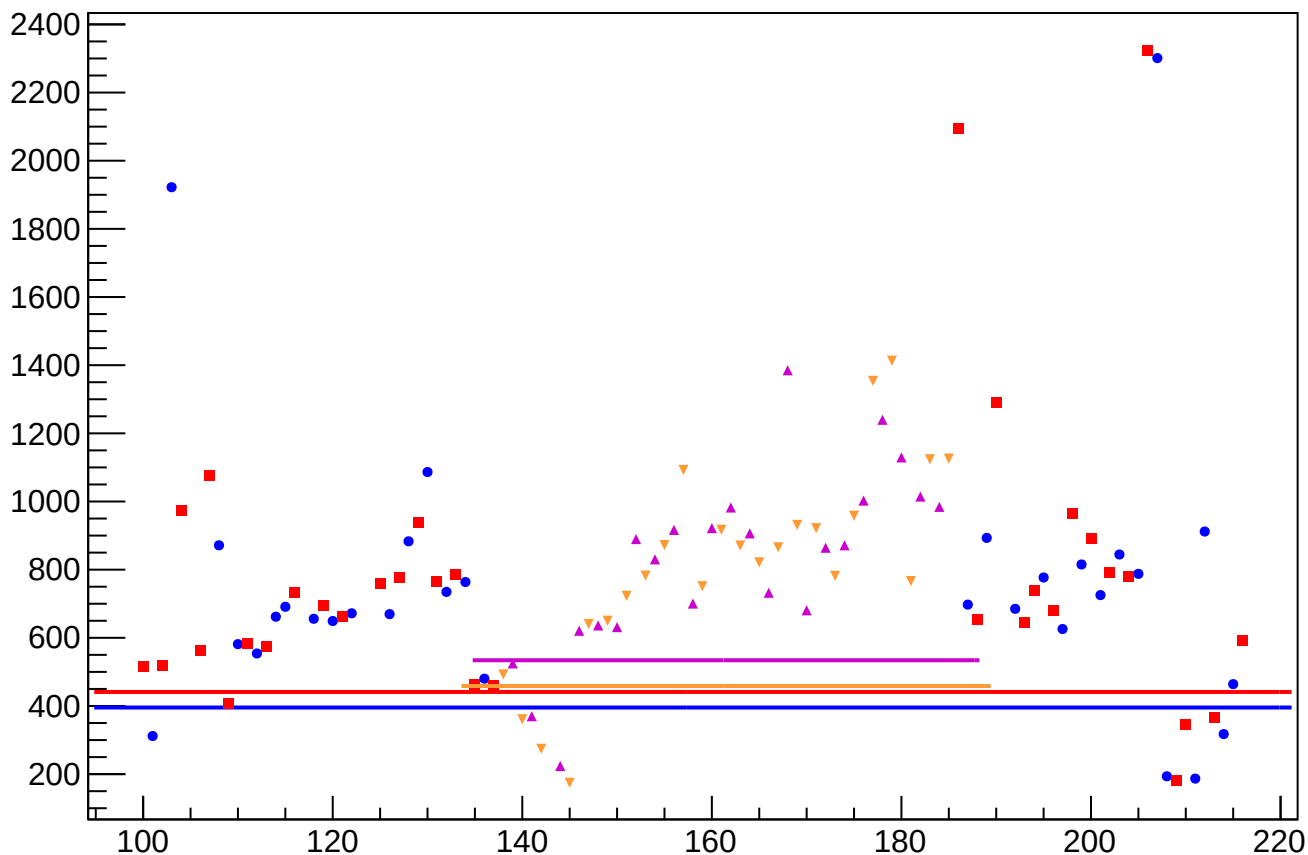
Left In:  $-108.386 \pm 143.315$   $\chi^2/\text{NDF}: 17.0/22$

+ sign  $182.514 \pm 84.488$   $\chi^2/\text{NDF}: 55.9/54$

All:  $128.549 \pm 62.558$   $\chi^2/\text{NDF}: 119.1/110$

- sign  $63.061 \pm 93.073$   $\chi^2/\text{NDF}: 62.3/55$

asym\_us\_avg\_at1lr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 395.501 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 10478667.6/30

Left Out: 458.579 $\pm$ 0.092  $\chi^2/\text{NDF}$ : 11426734.4/23

Right Out: 441.182 $\pm$ 0.087  $\chi^2/\text{NDF}$ : 9645786.7/32

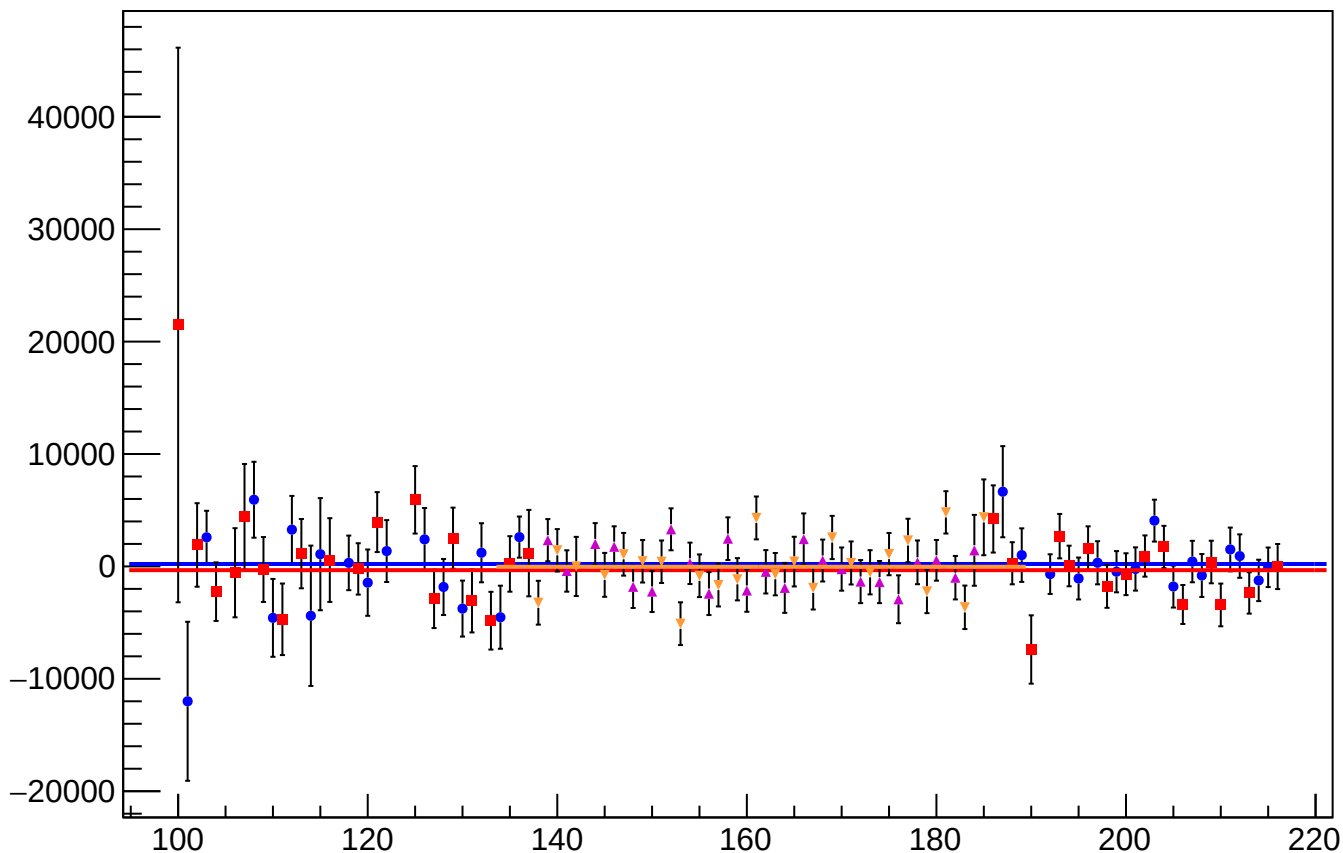
Left In: 534.161 $\pm$ 0.101  $\chi^2/\text{NDF}$ : 8443293.1/22

+ sign 422.123 $\pm$ 0.060  $\chi^2/\text{NDF}$ : 22177324.0/54

All: 448.449 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 41183001.2/11

- sign 480.397 $\pm$ 0.066  $\chi^2/\text{NDF}$ : 18575850.9/55

# cor\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In: 213.326 $\pm$ 409.525  $\chi^2$ /NDF: 29.9/30

Left Out: -34.742 $\pm$ 401.970  $\chi^2$ /NDF:35.4/23

Right Out: -333.616 $\pm$ 412.482  $\chi^2$ /NDF: 38.8/32

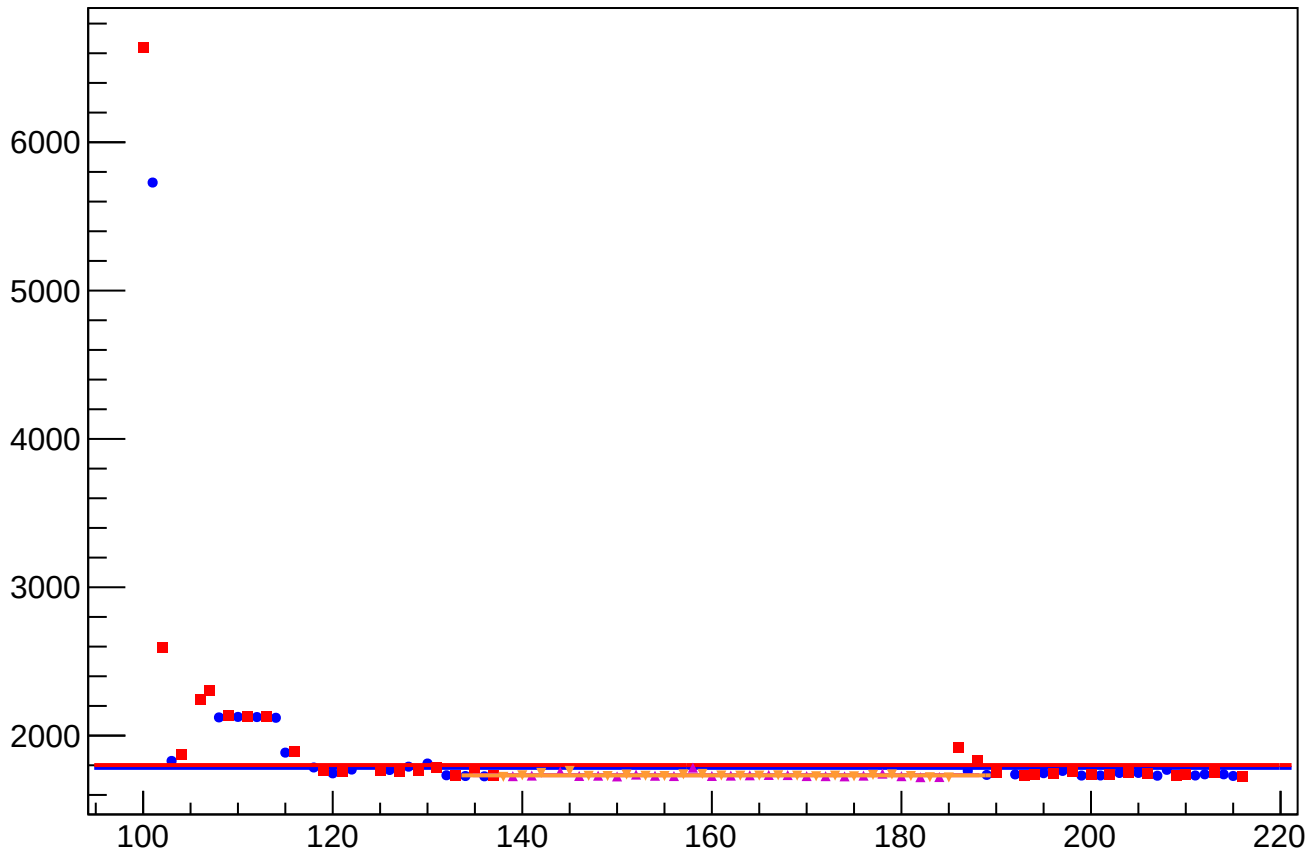
Left In: -52.714 $\pm$ 404.703  $\chi^2$ /NDF:19.4/22

+ sign 86.983 $\pm$ 286.870  $\chi^2$ /NDF: 65.5/54

All: -50.786 $\pm$ 203.554  $\chi^2$ /NDF: 124.4/110

- sign -190.491 $\pm$ 288.879  $\chi^2$ /NDF: 58.4/55

# cor\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1782.621+/-0.290  $\chi^2/\text{NDF}$ : 714473.6/30

Left Out: 1731.985+/-0.284  $\chi^2/\text{NDF}$ : 937.2/23

+ sign 1756.832+/-0.203  $\chi^2/\text{NDF}$ : 730983.7/54

Right Out: 1801.387+/-0.292  $\chi^2/\text{NDF}$ : 324298.7/32

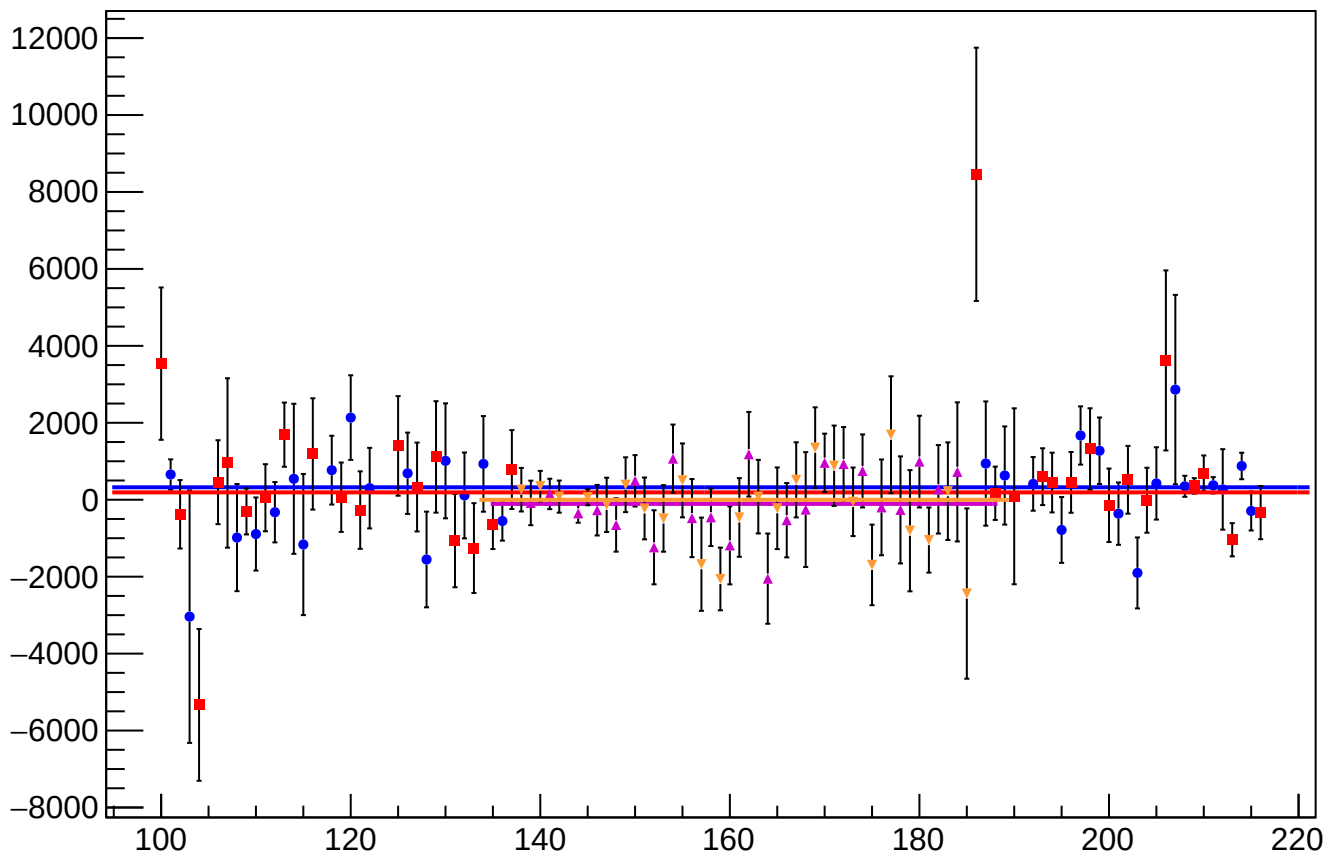
All: 1761.733+/-0.144  $\chi^2/\text{NDF}$ : 1086441.4/11

- sign 1766.703+/-0.204  $\chi^2/\text{NDF}$ : 354282.0/55

Left In: 1733.315+/-0.286  $\chi^2/\text{NDF}$ : 2230.5/22



asym\_us\_avg\_at1lr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In: 323.515 $\pm$ 111.121  $\chi^2$ /NDF: 32.5/30

Left Out: -2.529 $\pm$ 130.054  $\chi^2$ /NDF:20.3/23

Right Out: 191.058 $\pm$ 122.385  $\chi^2$ /NDF: 42.8/32

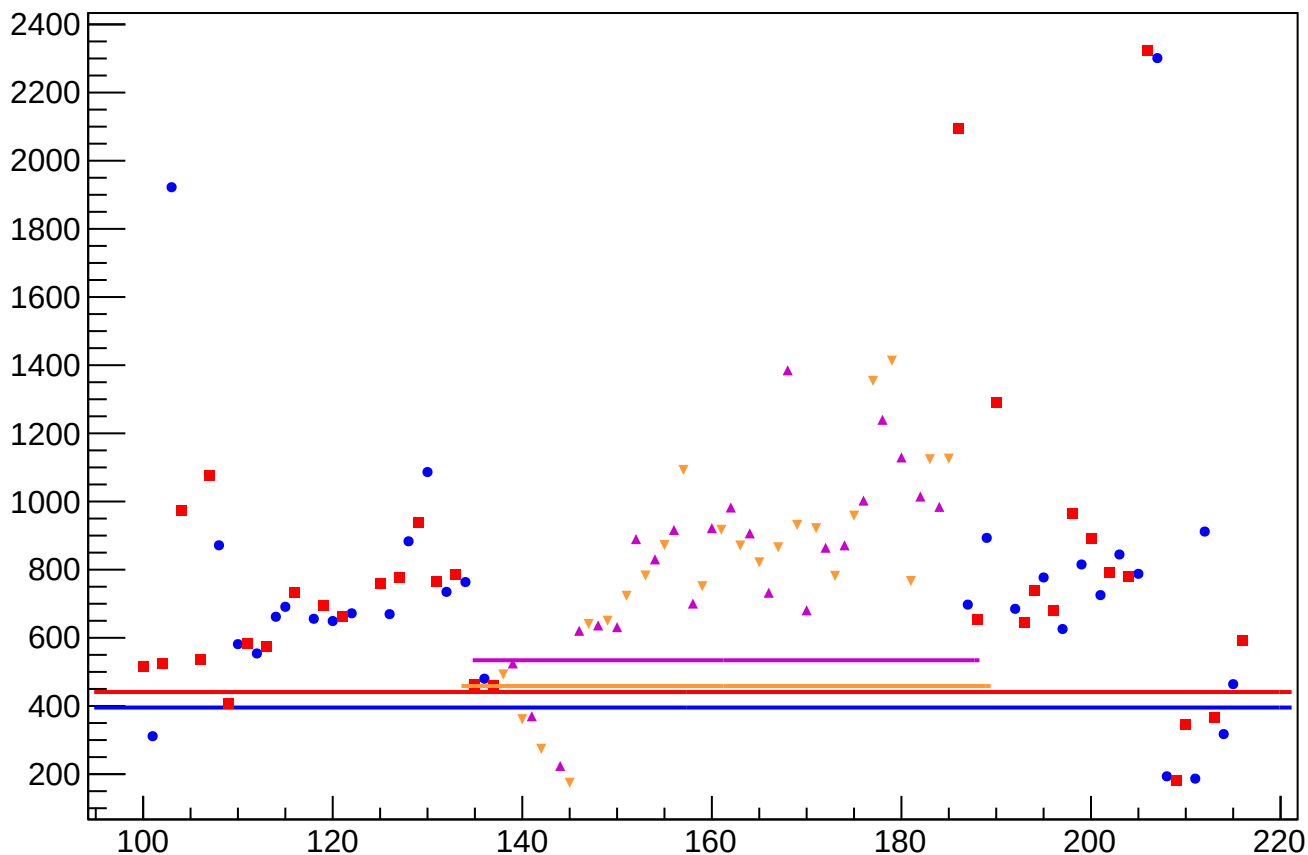
Left In: -108.358 $\pm$ 143.315  $\chi^2$ /NDF:17.0/22

+ sign 185.931 $\pm$ 84.483  $\chi^2$ /NDF: 56.4/54

All: 131.205 $\pm$ 62.554  $\chi^2$ /NDF: 119.6/110

- sign 64.790 $\pm$ 93.068  $\chi^2$ /NDF: 62.3/55

asym\_us\_avg\_at1lr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 395.424 $\pm$ 0.079  $\chi^2$ /NDF: 10480969.1/30

Left Out: 458.589 $\pm$ 0.092  $\chi^2$ /NDF: 11426319.1/23

Right Out: 440.953 $\pm$ 0.087  $\chi^2$ /NDF: 9639484.6/32

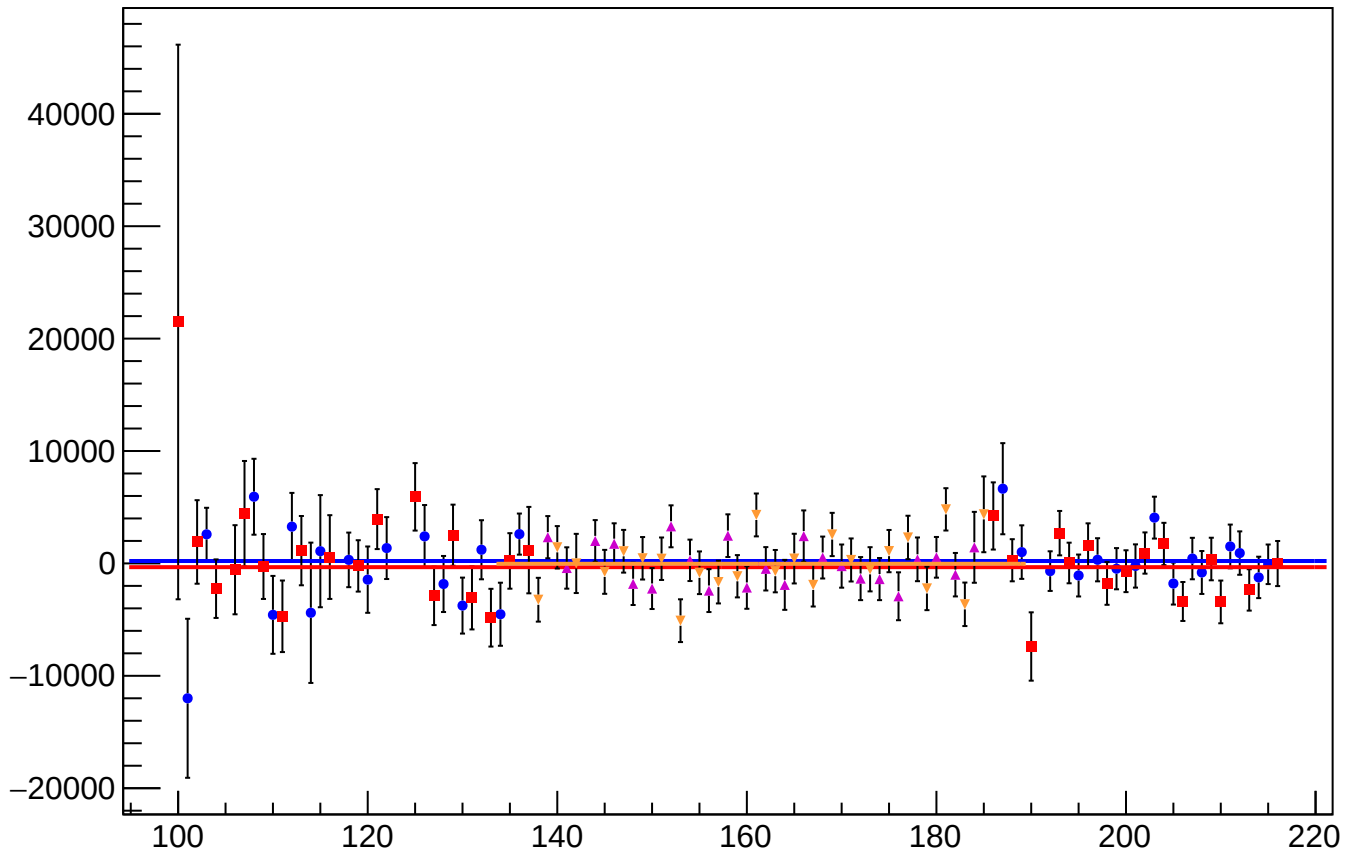
Left In: 534.168 $\pm$ 0.101  $\chi^2$ /NDF: 8442812.5/22

+ sign 422.078 $\pm$ 0.060  $\chi^2$ /NDF: 22179990.7/54

All: 448.364 $\pm$ 0.044  $\chi^2$ /NDF: 41180145.3/11

- sign 480.263 $\pm$ 0.066  $\chi^2$ /NDF: 18571581.2/55

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $213.326 \pm 409.525$   $\chi^2/\text{NDF}$ : 29.9/30

Left Out:  $-34.742 \pm 401.970$   $\chi^2/\text{NDF}$ : 35.4/23

Right Out:  $-333.616 \pm 412.482$   $\chi^2/\text{NDF}$ : 38.8/32

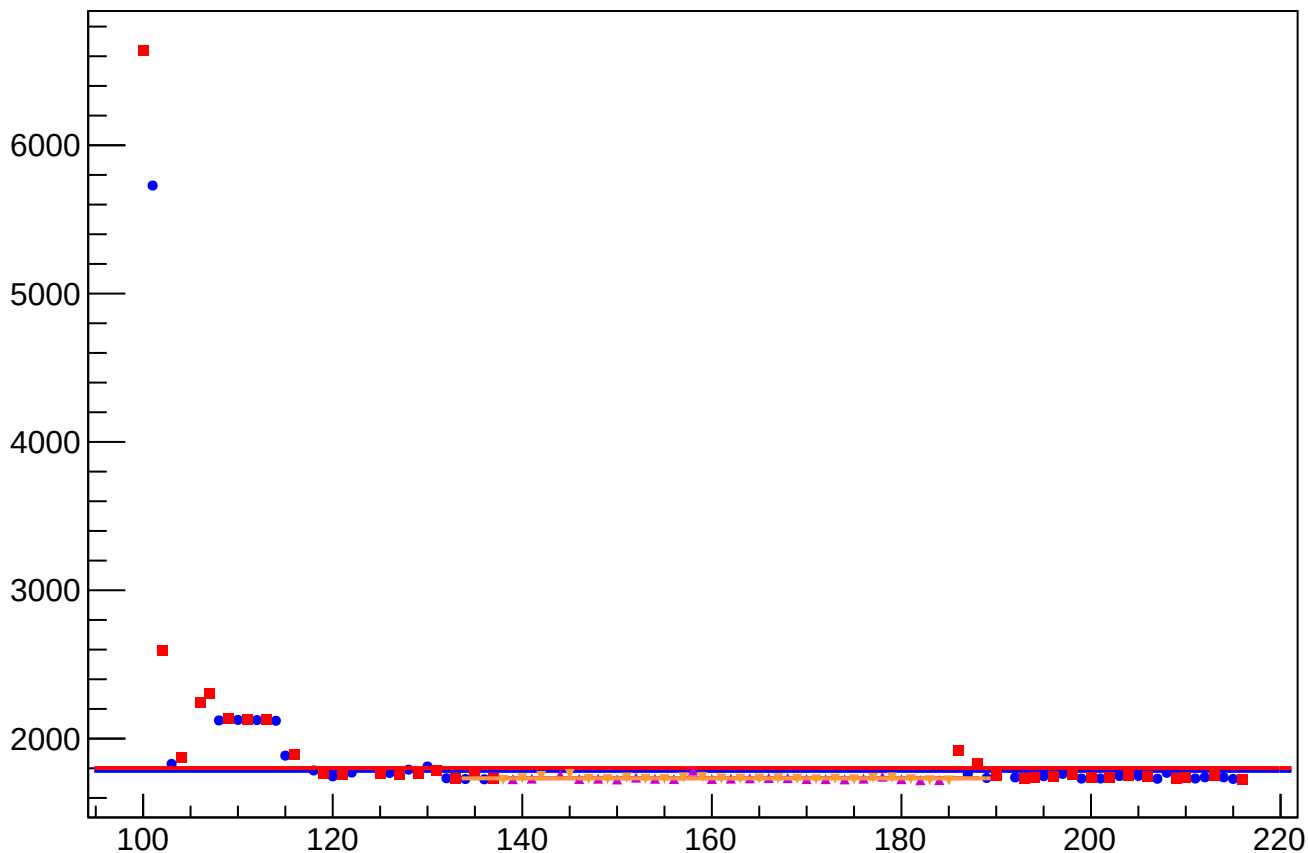
Left In:  $-52.714 \pm 404.703$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $86.983 \pm 286.870$   $\chi^2/\text{NDF}$ : 65.5/54

All:  $-50.786 \pm 203.554$   $\chi^2/\text{NDF}$ : 124.4/110

- sign  $-190.491 \pm 288.879$   $\chi^2/\text{NDF}$ : 58.4/55

eigen\_cor\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1782.621+/-0.290  $\chi^2/\text{NDF}$ : 714473.6/30

Left Out: 1731.985+/-0.284  $\chi^2/\text{NDF}$ : 937.2/23

Right Out: 1801.387+/-0.292  $\chi^2/\text{NDF}$ : 324298.7/32

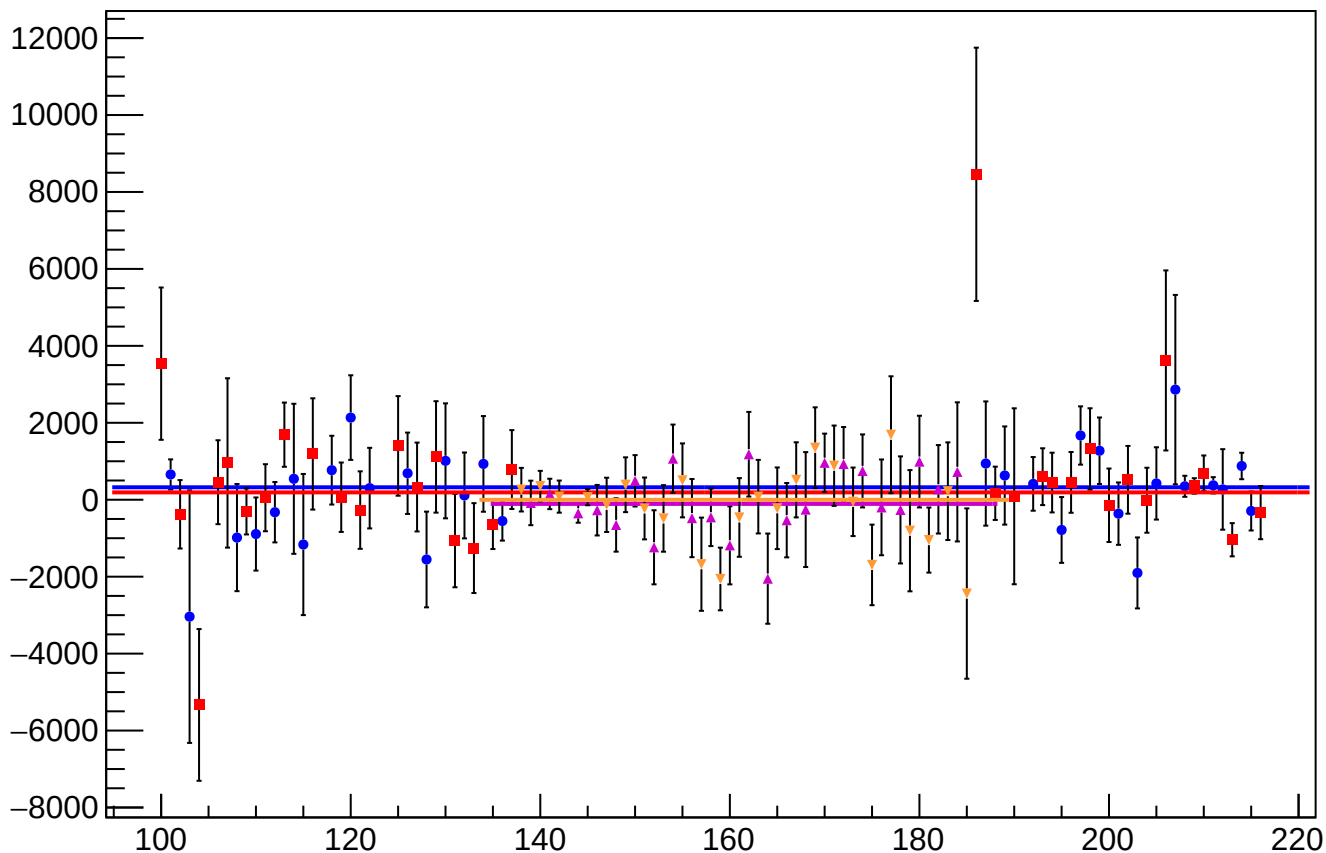
Left In: 1733.315+/-0.286  $\chi^2/\text{NDF}$ : 2230.5/22

+ sign 1756.832+/-0.203  $\chi^2/\text{NDF}$ : 730983.7/54

All: 1761.733+/-0.144  $\chi^2/\text{NDF}$ : 1086441.4/11

- sign 1766.703+/-0.204  $\chi^2/\text{NDF}$ : 354282.0/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 323.515 $\pm$ 111.121  $\chi^2$ /NDF: 32.5/30

Left Out: -2.529 $\pm$ 130.054  $\chi^2$ /NDF:20.3/23

Right Out: 191.058 $\pm$ 122.385  $\chi^2$ /NDF: 42.8/32

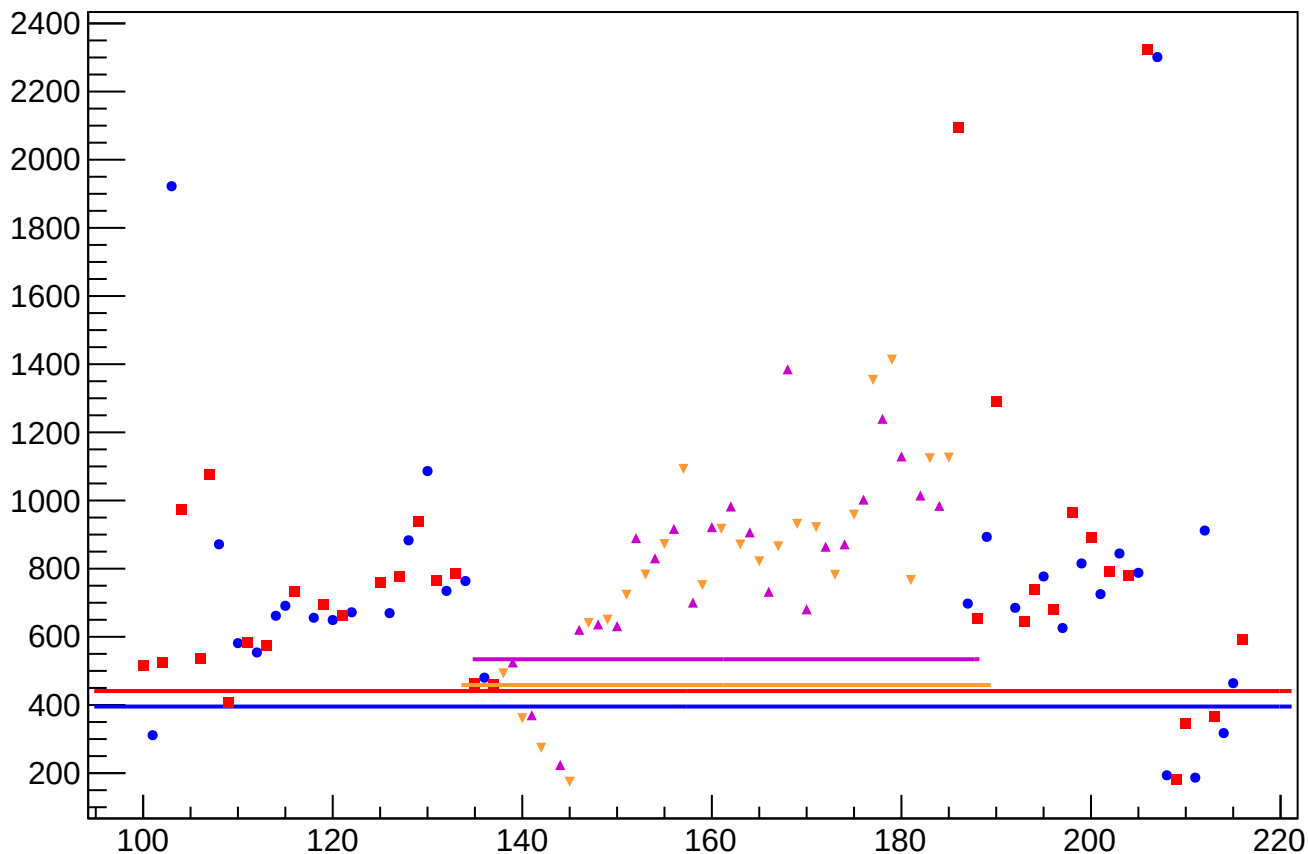
Left In: -108.358 $\pm$ 143.315  $\chi^2$ /NDF:17.0/22

+ sign 185.931 $\pm$ 84.483  $\chi^2$ /NDF: 56.4/54

All: 131.205 $\pm$ 62.554  $\chi^2$ /NDF: 119.6/110

- sign 64.790 $\pm$ 93.068  $\chi^2$ /NDF: 62.3/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 395.424 $\pm$ 0.079  $\chi^2$ /NDF: 10480969.1/30

Left Out: 458.589 $\pm$ 0.092  $\chi^2$ /NDF:11426319.1/23

Right Out: 440.953 $\pm$ 0.087  $\chi^2$ /NDF: 9639484.6/32

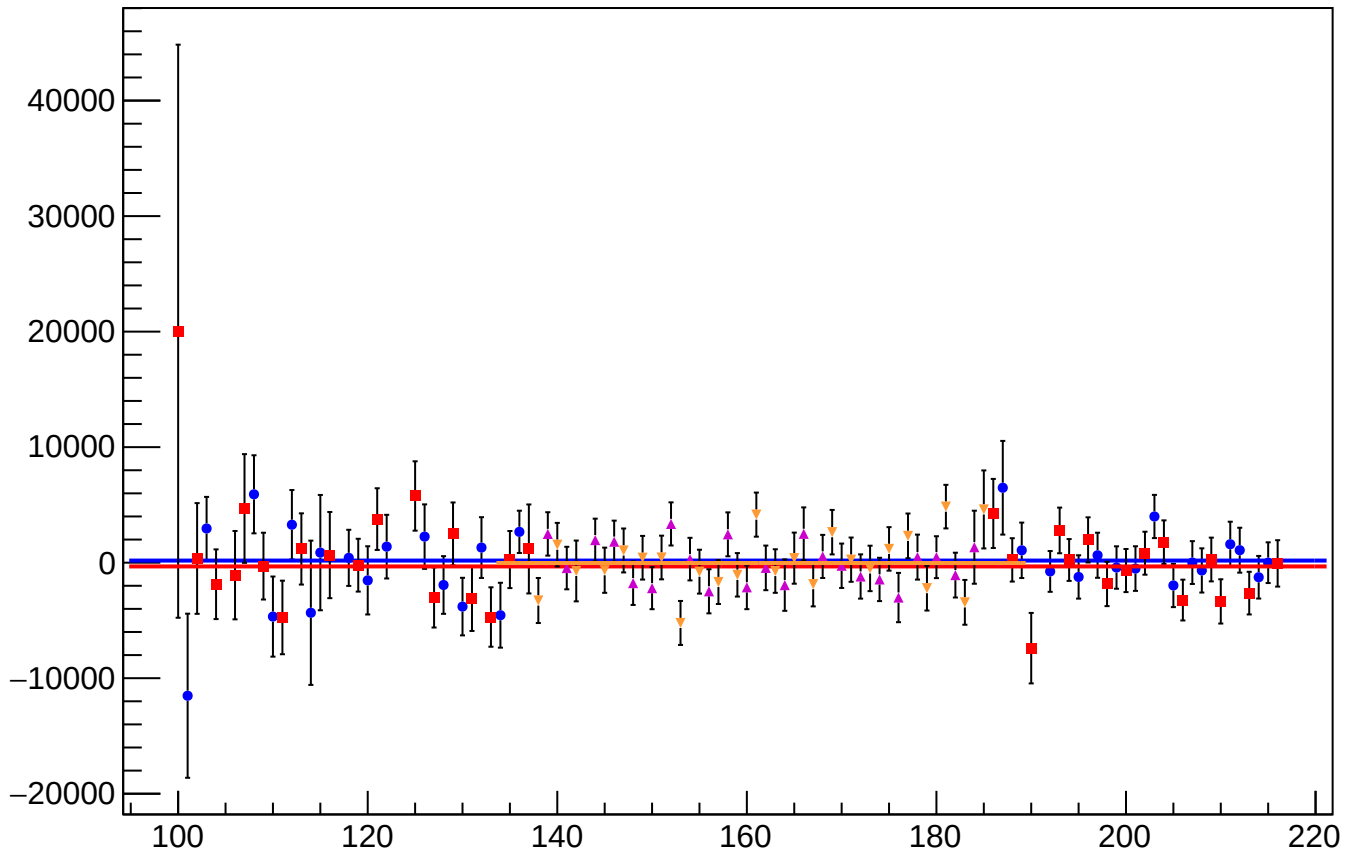
Left In: 534.168 $\pm$ 0.101  $\chi^2$ /NDF:8442812.5/22

+ sign 422.078 $\pm$ 0.060  $\chi^2$ /NDF: 22179990.7/54

All: 448.364 $\pm$ 0.044  $\chi^2$ /NDF: 41180145.3/11

- sign 480.263 $\pm$ 0.066  $\chi^2$ /NDF: 18571581.2/55

# dit\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $181.401 \pm 412.335$   $\chi^2/\text{NDF}: 30.2/30$

Left Out:  $-29.389 \pm 402.317$   $\chi^2/\text{NDF}: 35.4/23$

Right Out:  $-326.322 \pm 416.385$   $\chi^2/\text{NDF}: 38.0/32$

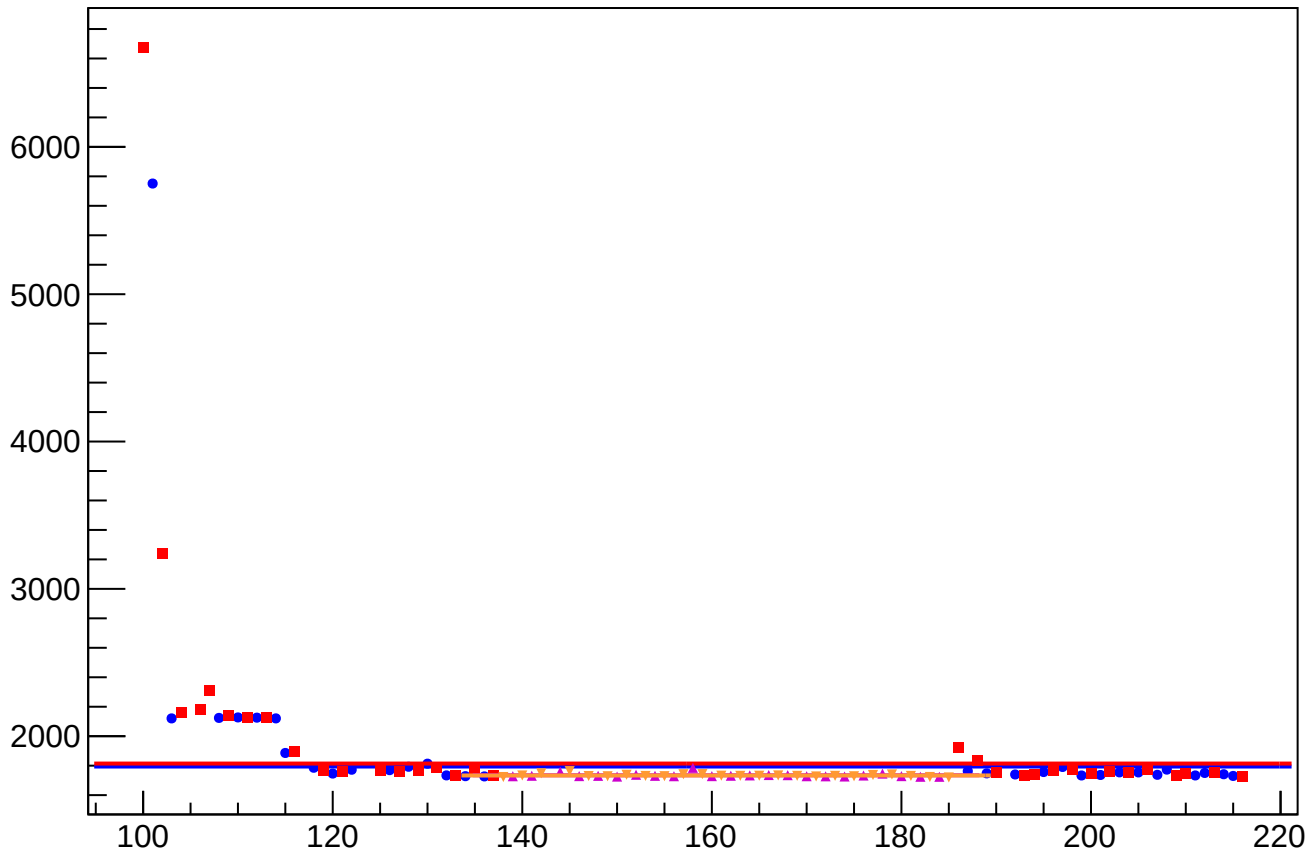
Left In:  $-42.465 \pm 405.052$   $\chi^2/\text{NDF}: 19.9/22$

+ sign  $73.415 \pm 287.958$   $\chi^2/\text{NDF}: 65.7/54$

All:  $-52.486 \pm 204.453$   $\chi^2/\text{NDF}: 124.3/110$

- sign  $-180.478 \pm 290.339$   $\chi^2/\text{NDF}: 58.1/55$

# dit\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1794.160+/-0.292  $\chi^2/\text{NDF}$ : 741621.1/30

Left Out: 1733.478+/-0.284  $\chi^2/\text{NDF}$ : 901.3/23

Right Out: 1814.238+/-0.294  $\chi^2/\text{NDF}$ : 426219.8/32

Left In: 1734.810+/-0.286  $\chi^2/\text{NDF}$ : 2175.7/22

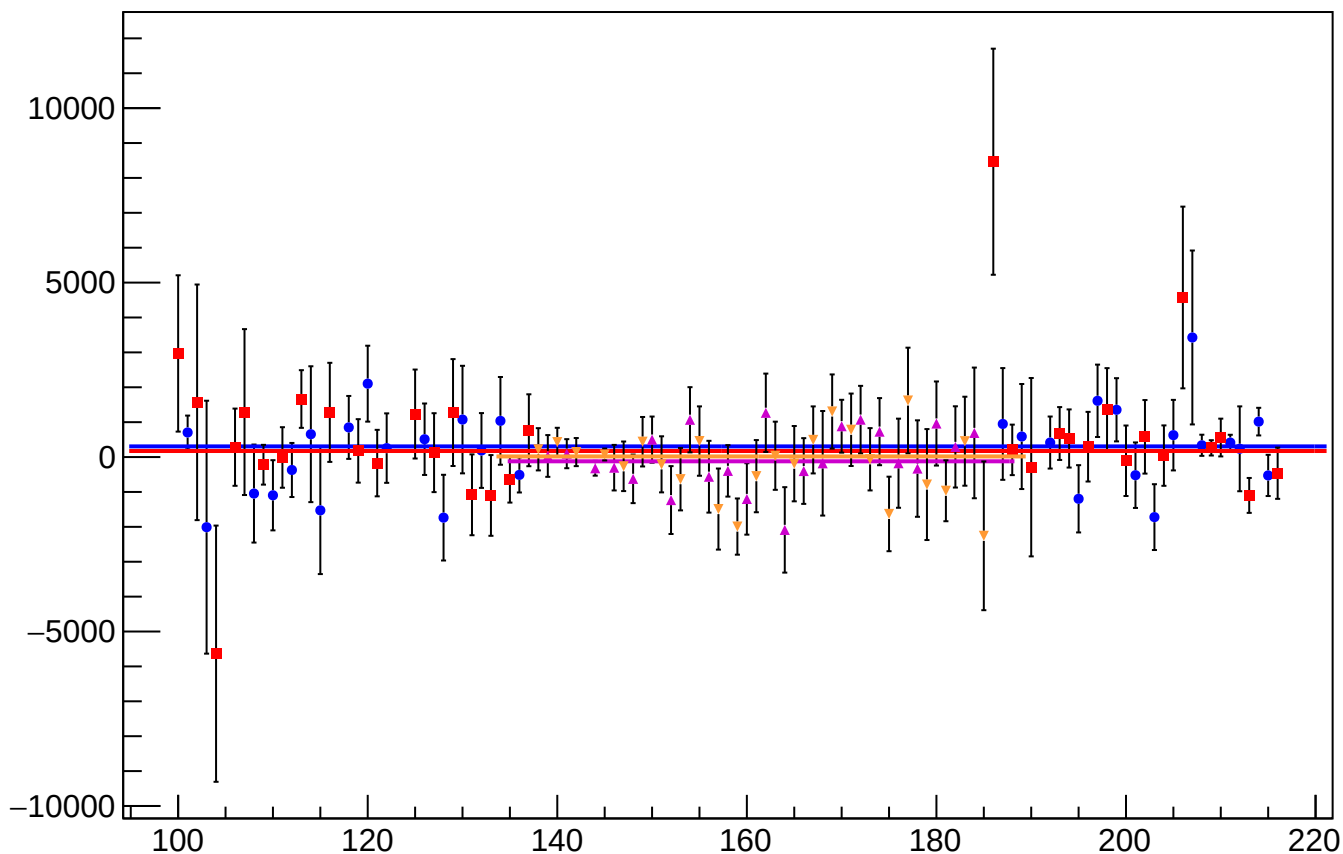
+ sign 1763.073+/-0.204  $\chi^2/\text{NDF}$ : 764712.4/54

All: 1768.208+/-0.145  $\chi^2/\text{NDF}$ : 1231782.9/11

- sign 1773.429+/-0.205  $\chi^2/\text{NDF}$ : 465787.9/55



asym\_us\_avg\_at1lr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In: 305.745 $\pm$ 120.657  $\chi^2$ /NDF: 33.0/30

Left Out: 18.027 $\pm$ 119.333  $\chi^2$ /NDF:19.4/23

Right Out: 173.395 $\pm$ 132.450  $\chi^2$ /NDF: 33.6/32

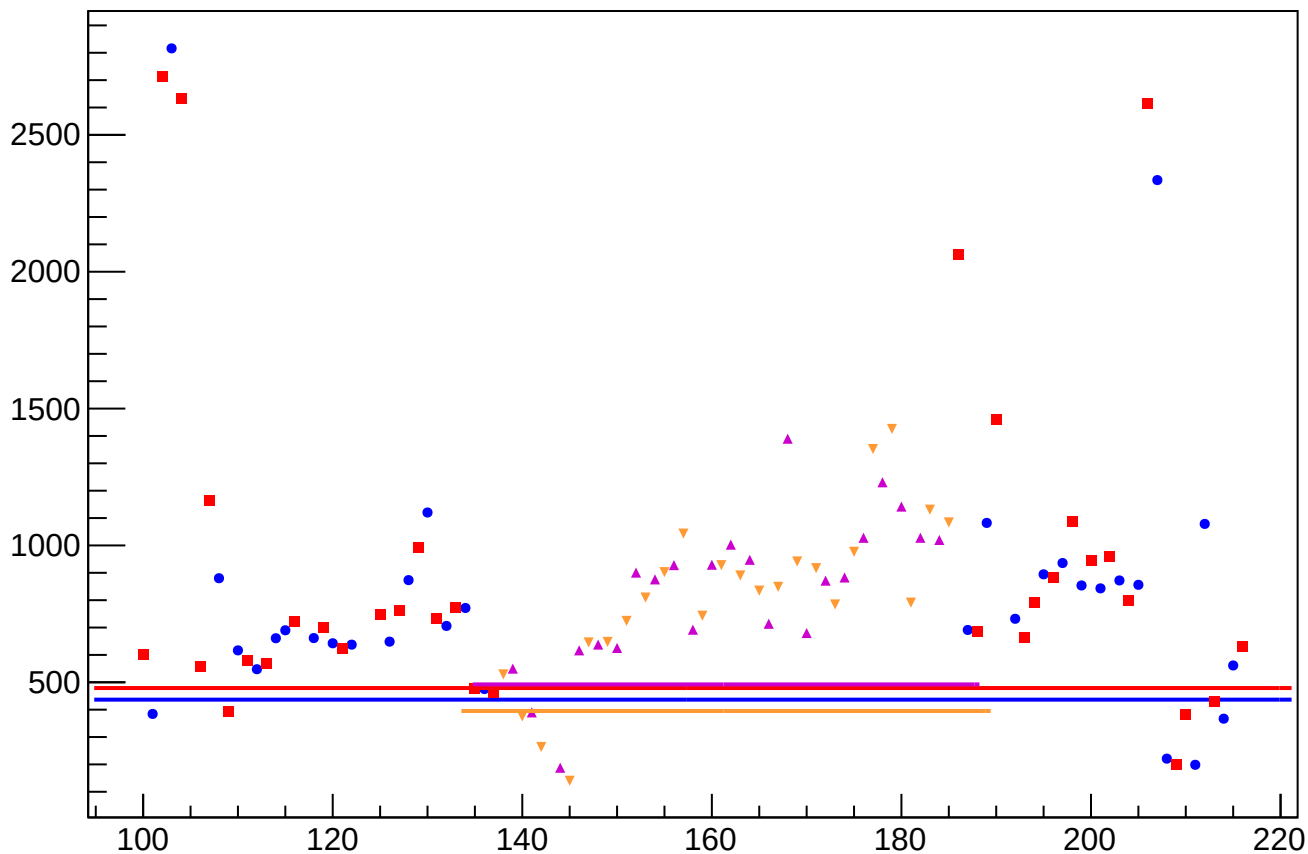
Left In: -121.705 $\pm$ 137.150  $\chi^2$ /NDF:16.5/22

+ sign 160.299 $\pm$ 84.845  $\chi^2$ /NDF: 55.3/54

All: 103.106 $\pm$ 63.362  $\chi^2$ /NDF: 108.8/110

- sign 30.988 $\pm$ 95.274  $\chi^2$ /NDF: 52.5/55

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 436.603 $\pm$ 0.085  $\chi^2$ /NDF: 10909513.6/30

Left Out: 395.188 $\pm$ 0.084  $\chi^2$ /NDF:14334419.9/23

Right Out: 478.970 $\pm$ 0.094  $\chi^2$ /NDF: 10772245.9/32

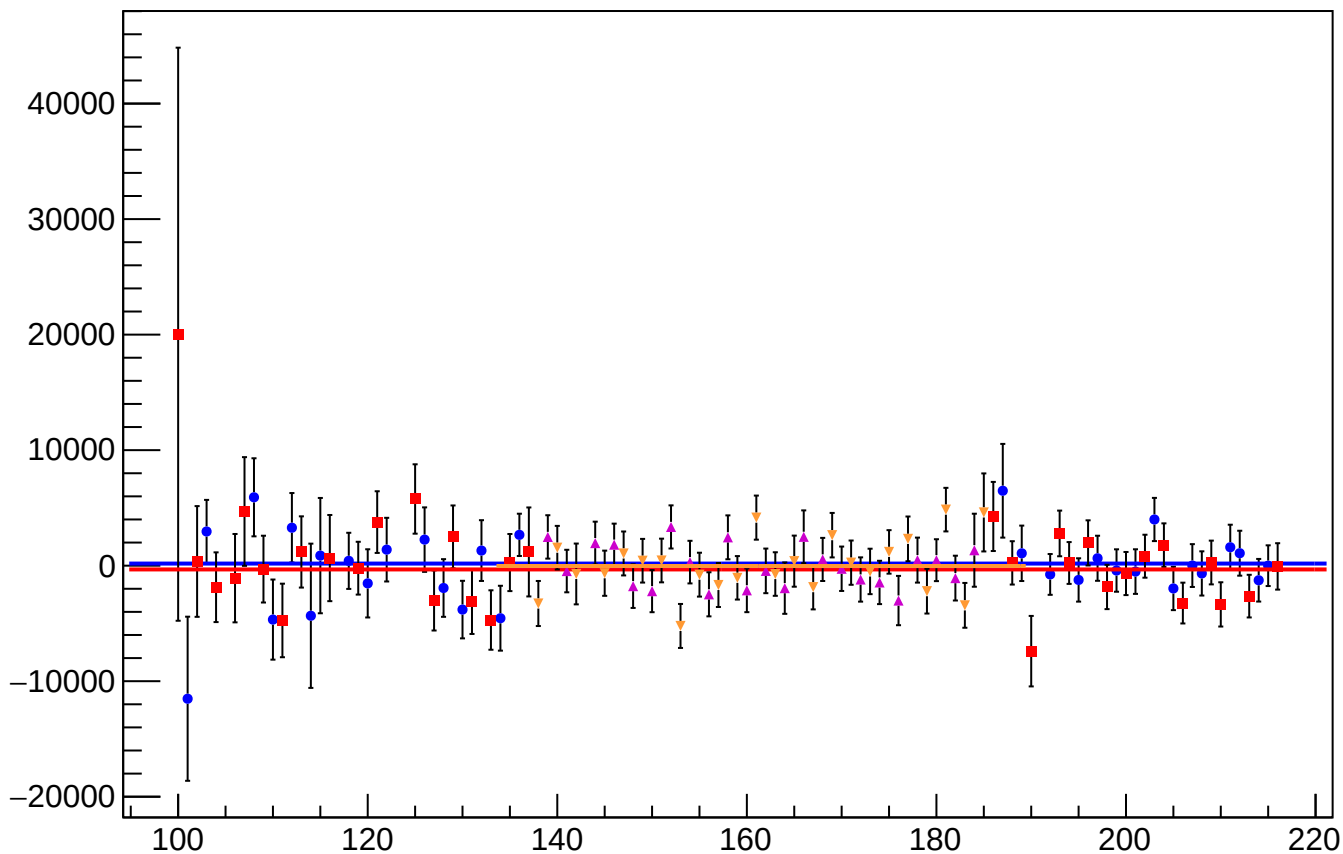
Left In: 492.294 $\pm$ 0.097  $\chi^2$ /NDF:10419498.8/22

+ sign 415.667 $\pm$ 0.060  $\chi^2$ /NDF: 25363048.7/54

All: 446.509 $\pm$ 0.045  $\chi^2$ /NDF: 47162089.3/11

- sign 485.400 $\pm$ 0.067  $\chi^2$ /NDF: 21201512.4/55

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $181.403 \pm 412.335$   $\chi^2/\text{NDF}$ : 30.2/30

Left Out:  $-29.392 \pm 402.317$   $\chi^2/\text{NDF}$ : 35.4/23

Right Out:  $-326.323 \pm 416.385$   $\chi^2/\text{NDF}$ : 38.0/32

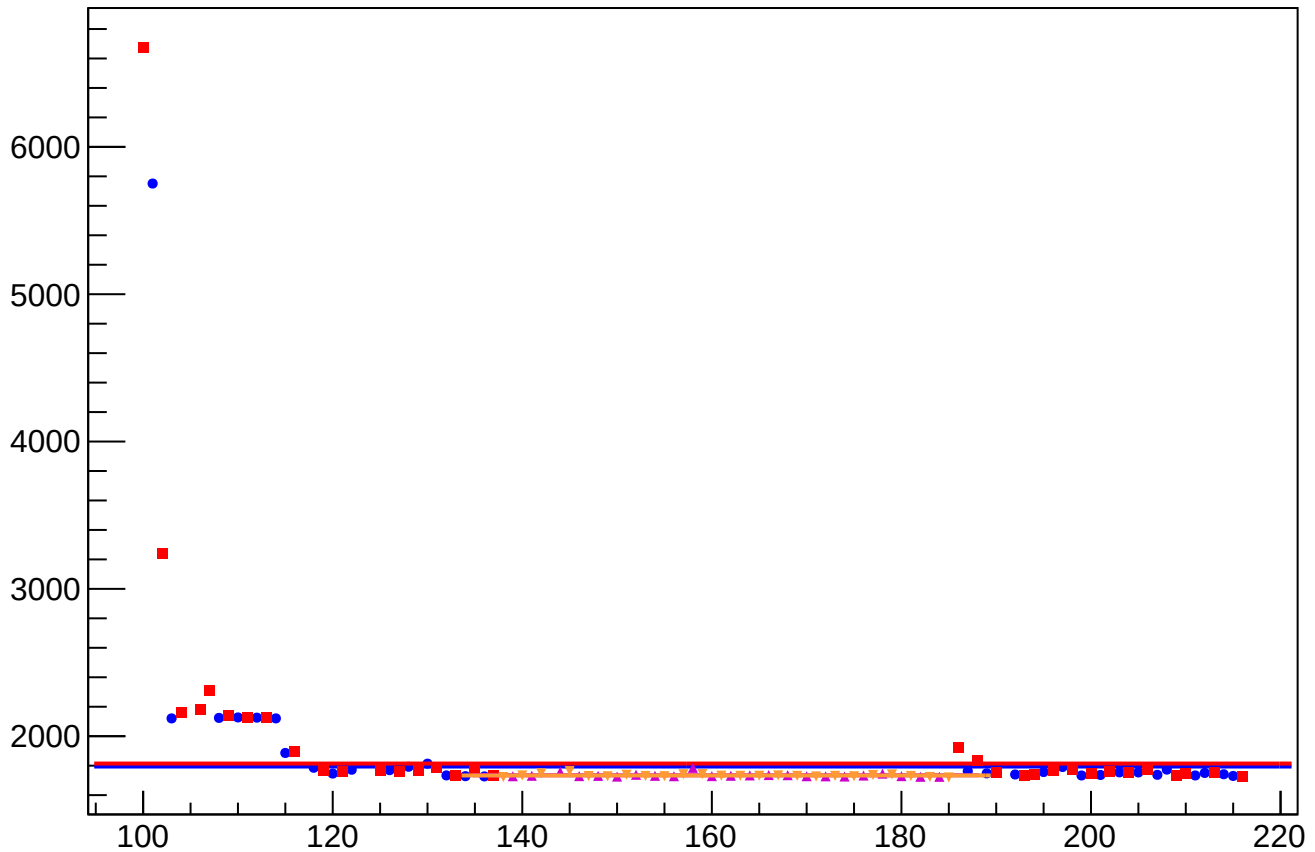
Left In:  $-42.465 \pm 405.052$   $\chi^2/\text{NDF}$ : 19.9/22

+ sign  $73.414 \pm 287.958$   $\chi^2/\text{NDF}$ : 65.7/54

All:  $-52.487 \pm 204.453$   $\chi^2/\text{NDF}$ : 124.3/110

- sign  $-180.478 \pm 290.339$   $\chi^2/\text{NDF}$ : 58.1/55

eigen\_dit\_asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1794.160 $\pm$ 0.292  $\chi^2/\text{NDF}$ : 741620.6/30

Left Out: 1733.478 $\pm$ 0.284  $\chi^2/\text{NDF}$ : 901.3/23

Right Out: 1814.238 $\pm$ 0.294  $\chi^2/\text{NDF}$ : 426218.8/32

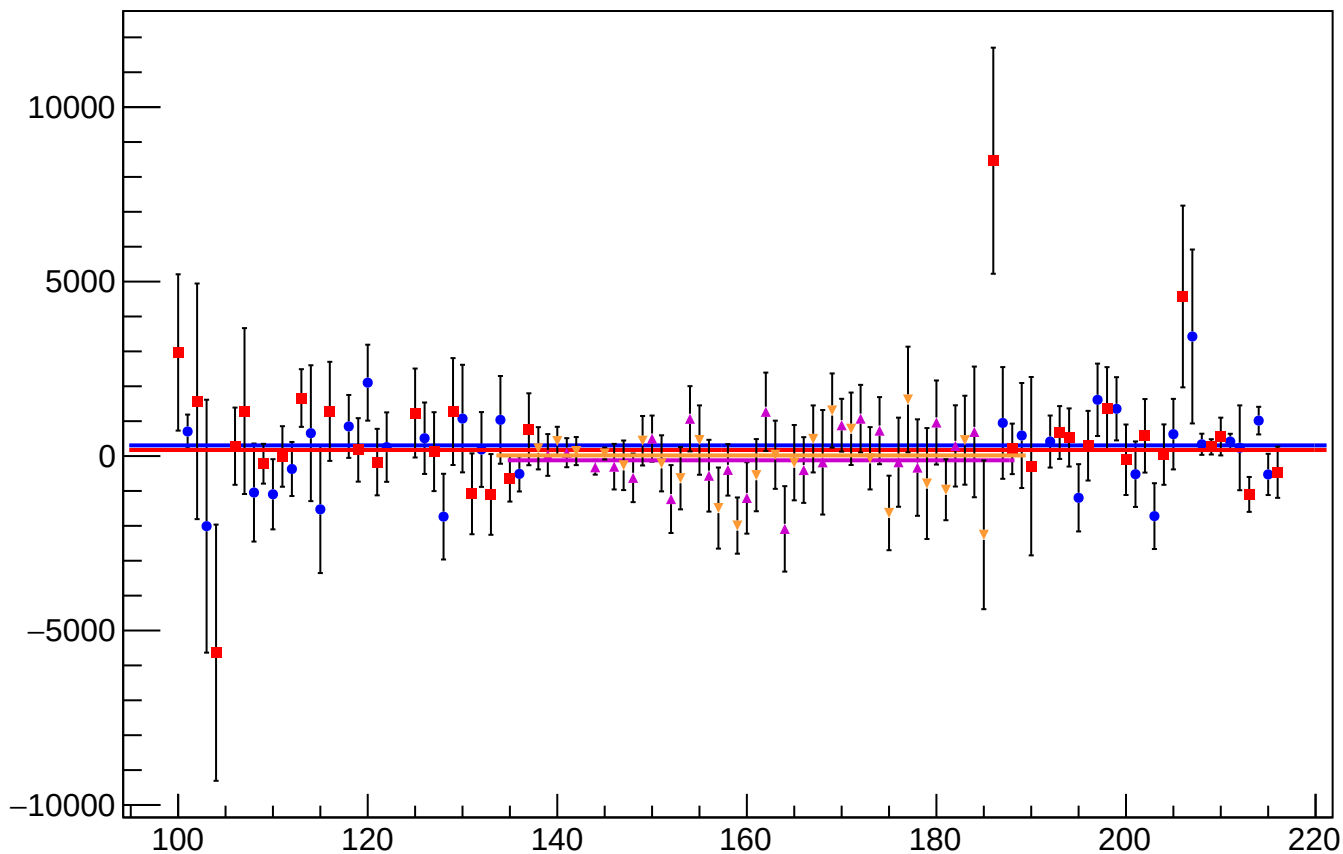
Left In: 1734.810 $\pm$ 0.286  $\chi^2/\text{NDF}$ : 2175.7/22

+ sign 1763.073 $\pm$ 0.204  $\chi^2/\text{NDF}$ : 764712.0/54

All: 1768.208 $\pm$ 0.145  $\chi^2/\text{NDF}$ : 1231781.6/11

- sign 1773.429 $\pm$ 0.205  $\chi^2/\text{NDF}$ : 465787.0/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 305.745 $\pm$ 120.657  $\chi^2$ /NDF: 33.0/30

Left Out: 18.026 $\pm$ 119.333  $\chi^2$ /NDF:19.4/23

Right Out: 173.391 $\pm$ 132.449  $\chi^2$ /NDF: 33.6/32

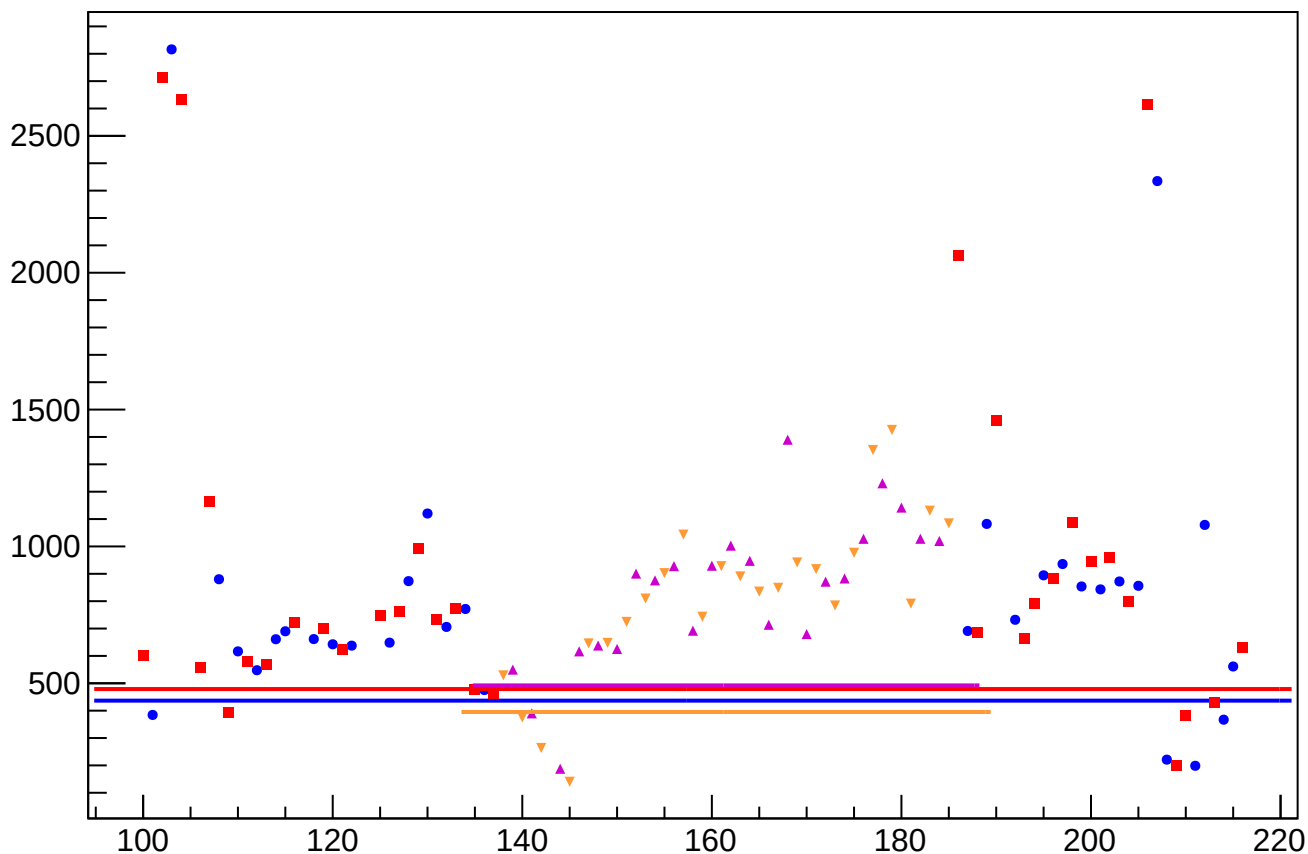
Left In: -121.706 $\pm$ 137.150  $\chi^2$ /NDF:16.5/22

+ sign 160.298 $\pm$ 84.846  $\chi^2$ /NDF: 55.3/54

All: 103.104 $\pm$ 63.362  $\chi^2$ /NDF: 108.8/110

- sign 30.987 $\pm$ 95.274  $\chi^2$ /NDF: 52.5/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 436.604 $\pm$ 0.085  $\chi^2$ /NDF: 10909444.0/30

Left Out: 395.188 $\pm$ 0.084  $\chi^2$ /NDF:14334464.6/23

Right Out: 478.966 $\pm$ 0.094  $\chi^2$ /NDF: 10772352.2/32

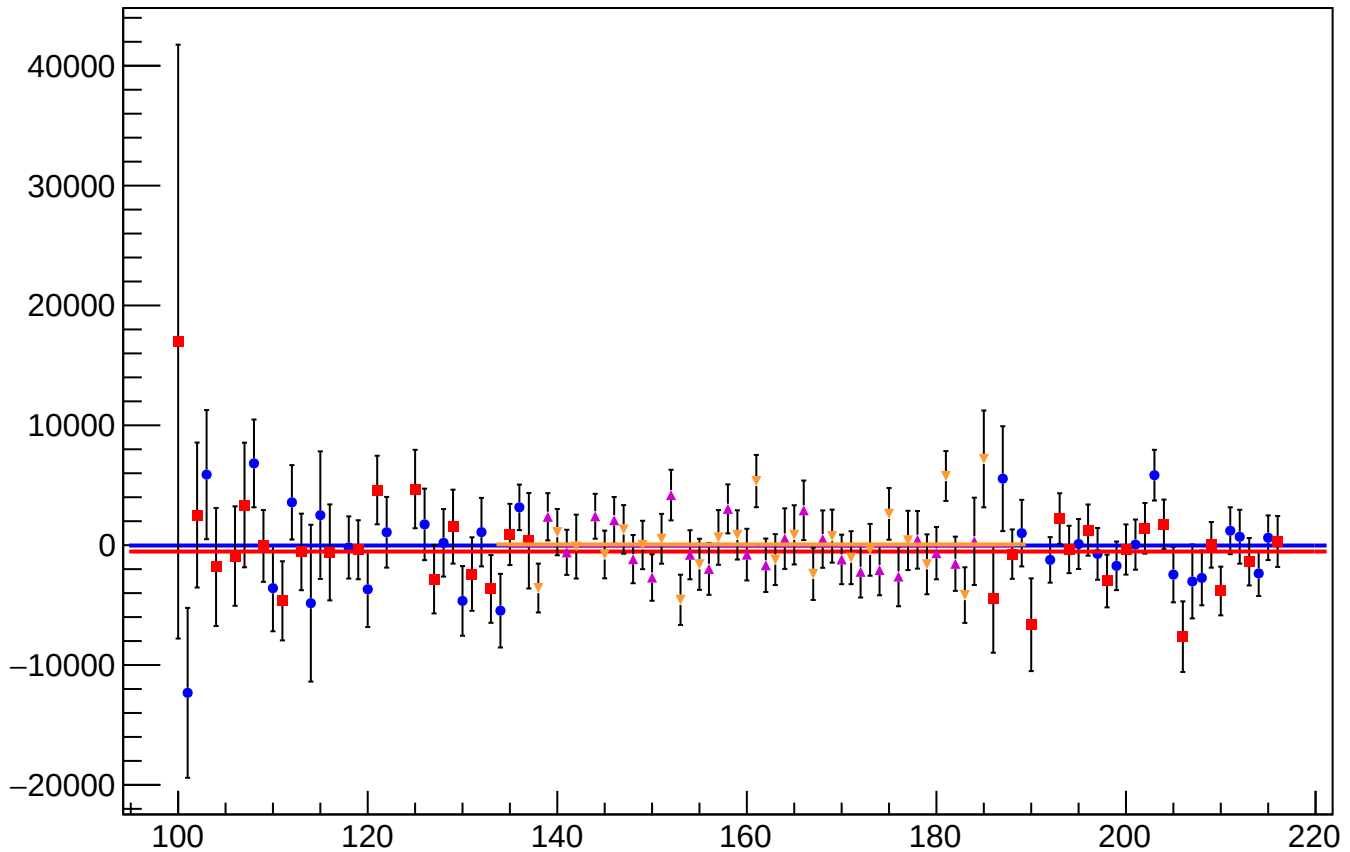
Left In: 492.295 $\pm$ 0.097  $\chi^2$ /NDF:10419523.2/22

+ sign 415.668 $\pm$ 0.060  $\chi^2$ /NDF: 25363030.0/54

All: 446.509 $\pm$ 0.045  $\chi^2$ /NDF: 47162168.0/11

- sign 485.398 $\pm$ 0.067  $\chi^2$ /NDF: 21201650.1/55

# asym\_us\_avg\_at1lr\_avg\_dd\_mean vs Slug



Right In:  $-28.887 \pm 460.935$   $\chi^2/\text{NDF}$ : 37.5/30

Left Out:  $66.661 \pm 449.750$   $\chi^2/\text{NDF}$ : 33.6/23

Right Out:  $-529.480 \pm 464.316$   $\chi^2/\text{NDF}$ : 29.6/32

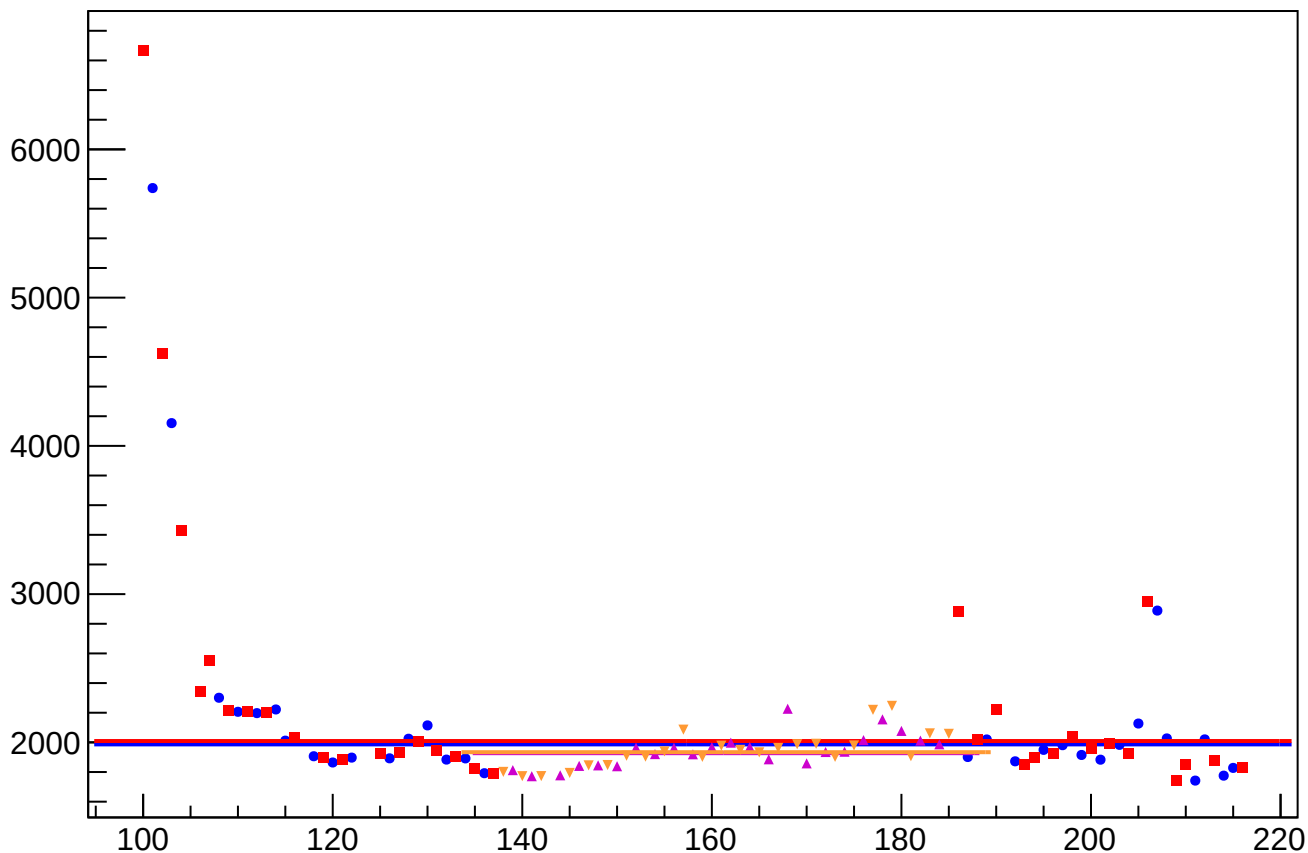
Left In:  $-25.575 \pm 450.755$   $\chi^2/\text{NDF}$ : 20.0/22

+ sign  $20.060 \pm 321.903$   $\chi^2/\text{NDF}$ : 71.2/54

All:  $-124.319 \pm 228.154$   $\chi^2/\text{NDF}$ : 121.8/110

- sign  $-270.061 \pm 323.420$   $\chi^2/\text{NDF}$ : 50.2/55

# asym\_us\_avg\_at1lr\_avg\_dd\_rms vs Slug



Right In: 1986.420+/-0.326  $\chi^2/\text{NDF}$ : 1223580.9/30

Left Out: 1933.804+/-0.318  $\chi^2/\text{NDF}$ : 128531.8/23

Right Out: 2009.054+/-0.328  $\chi^2/\text{NDF}$ : 1087530.8/32

Left In: 1927.125+/-0.319  $\chi^2/\text{NDF}$ : 116436.1/22

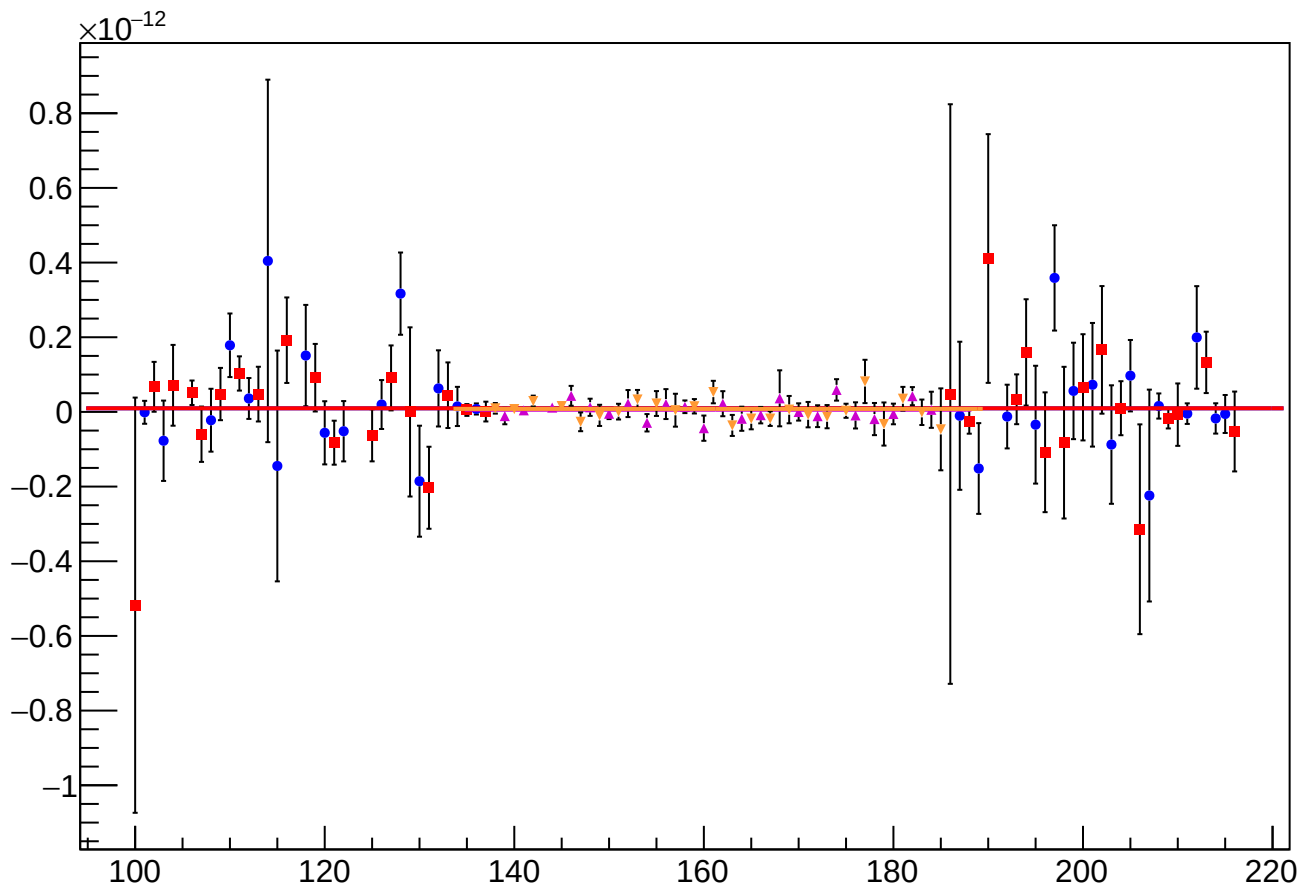
+ sign 1959.466+/-0.228  $\chi^2/\text{NDF}$ : 1365463.0/54

All: 1963.153+/-0.161  $\chi^2/\text{NDF}$ : 2602014.5/11

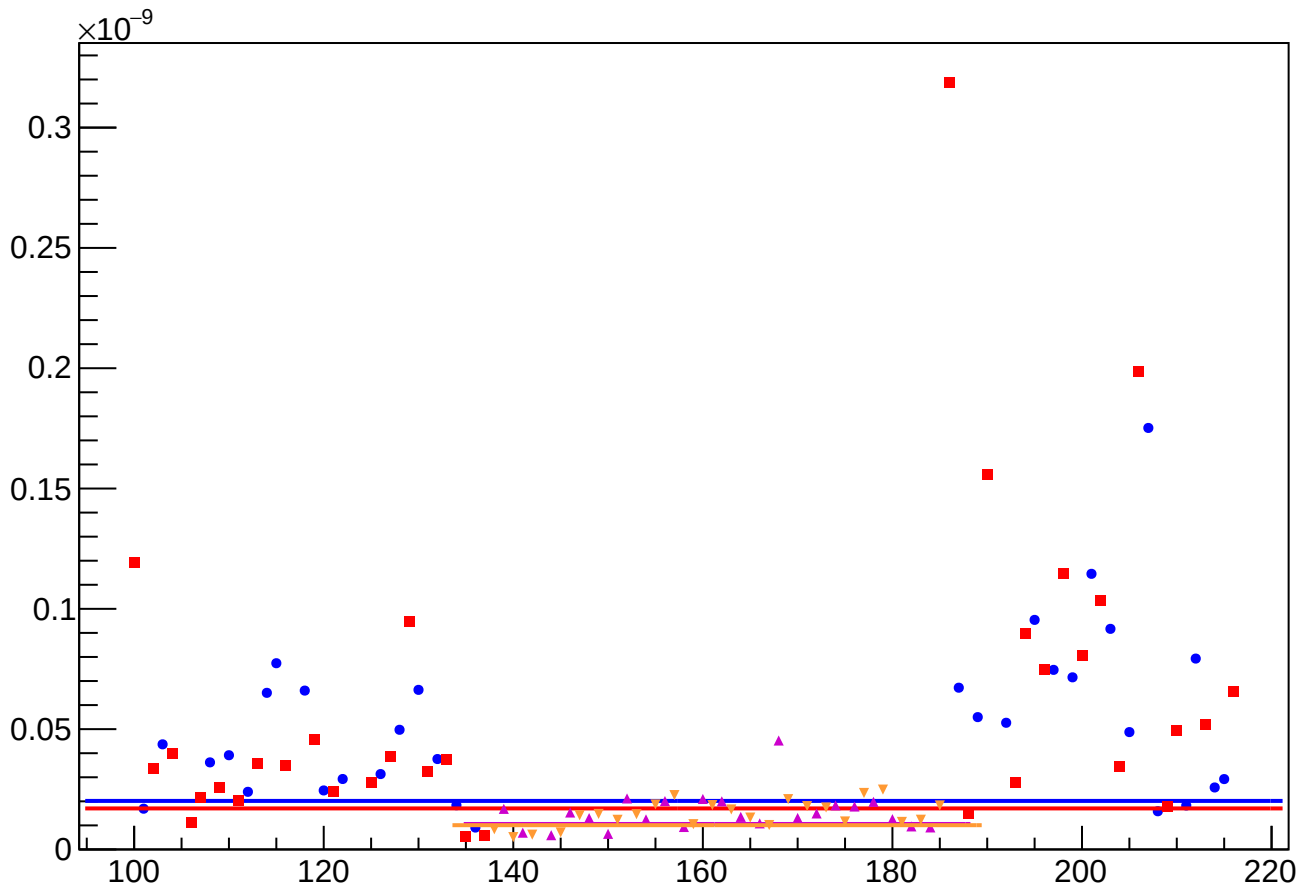
- sign 1966.876+/-0.229  $\chi^2/\text{NDF}$ : 1236024.2/55



asym\_us\_avg\_at1lr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



asym\_us\_avg\_at1lr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6190225.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2274817.9/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7692810.0/32

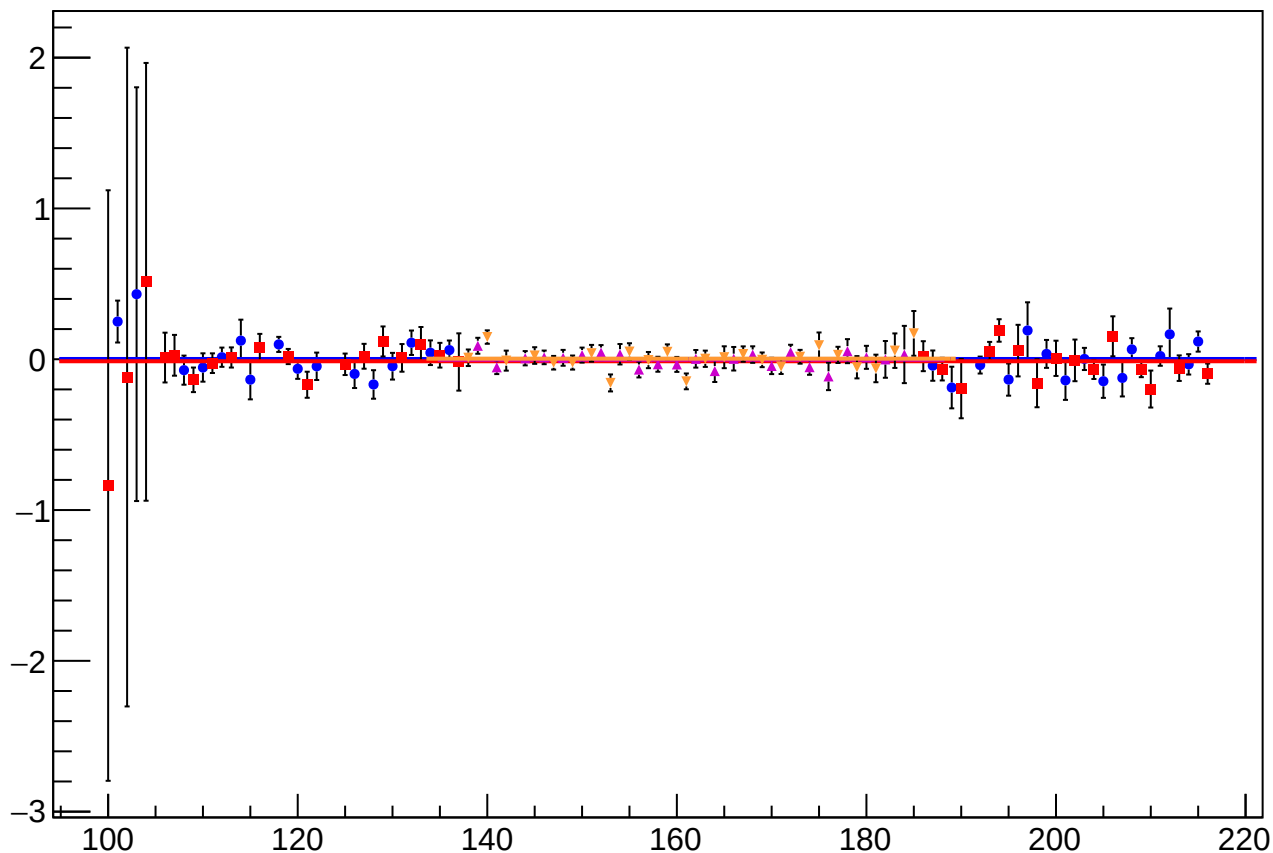
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2578668.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10353455.2/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21439082.6/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11085627.1/55

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.015$   $\chi^2/\text{NDF}: 33.0/30$

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 35.0/23$

Right Out:  $-0.013 \pm 0.015$   $\chi^2/\text{NDF}: 29.5/32$

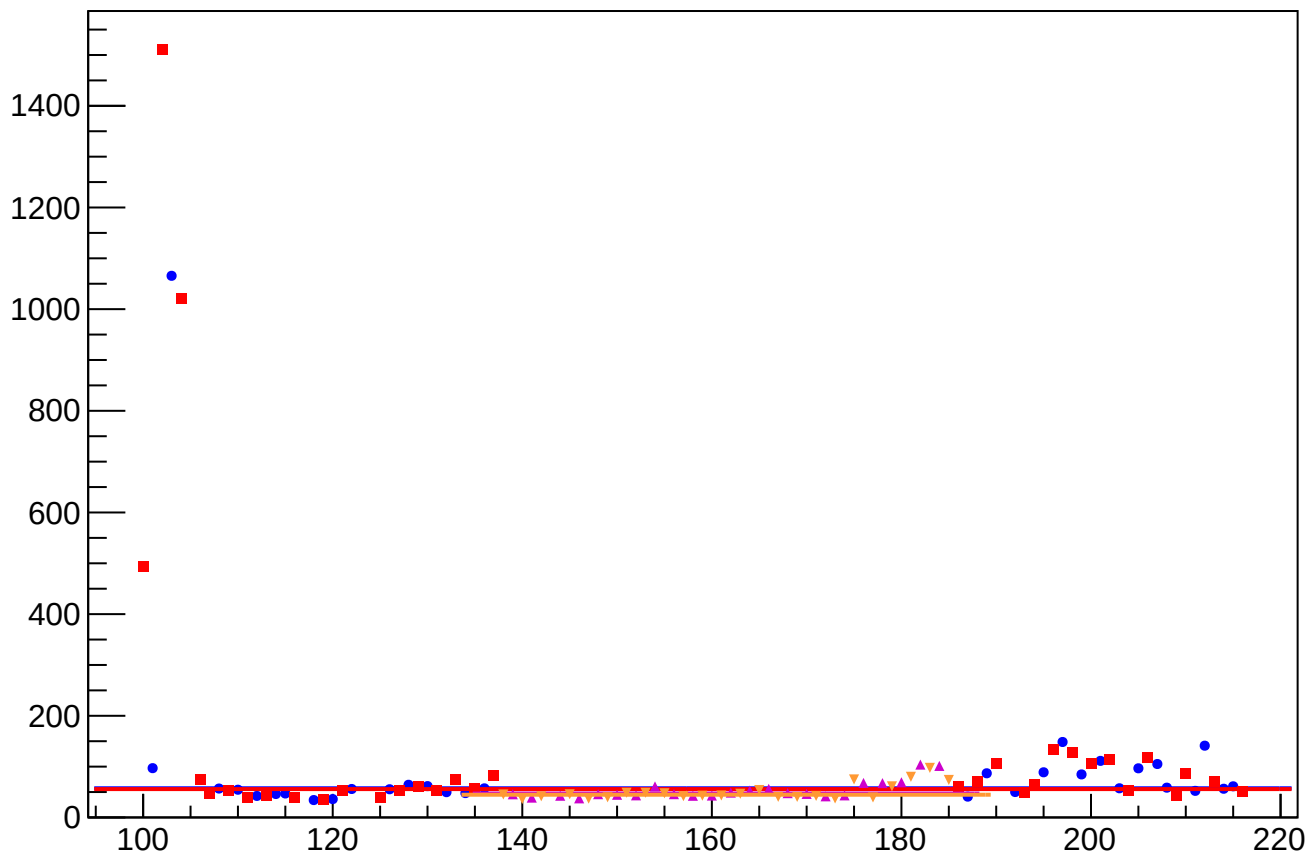
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 68.1/54$

All:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 112.9/110$

- sign  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 44.3/55$

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 57.379 $\pm$ 0.011  $\chi^2$ /NDF: 4479560.1/30

Left Out: 44.733 $\pm$ 0.008  $\chi^2$ /NDF: 1481436.4/23

Right Out: 55.809 $\pm$ 0.011  $\chi^2$ /NDF: 5276923.2/32

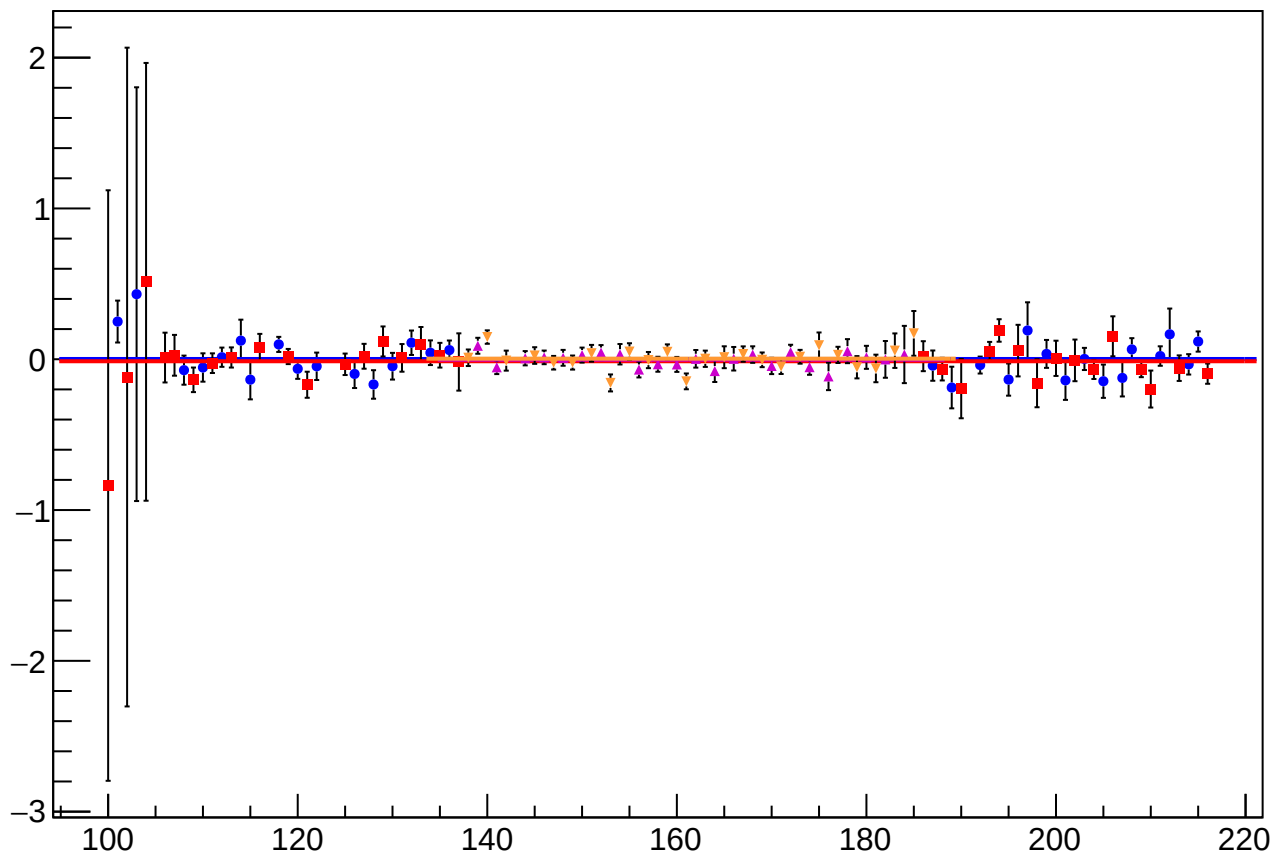
Left In: 47.033 $\pm$ 0.008  $\chi^2$ /NDF: 1383050.4/22

+ sign 49.299 $\pm$ 0.007  $\chi^2$ /NDF: 6833371.8/54

All: 49.810 $\pm$ 0.005  $\chi^2$ /NDF: 13913865.2/110

- sign 50.346 $\pm$ 0.007  $\chi^2$ /NDF: 7067852.5/55

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.015$   $\chi^2/\text{NDF}: 33.0/30$

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 35.0/23$

Right Out:  $-0.013 \pm 0.015$   $\chi^2/\text{NDF}: 29.5/32$

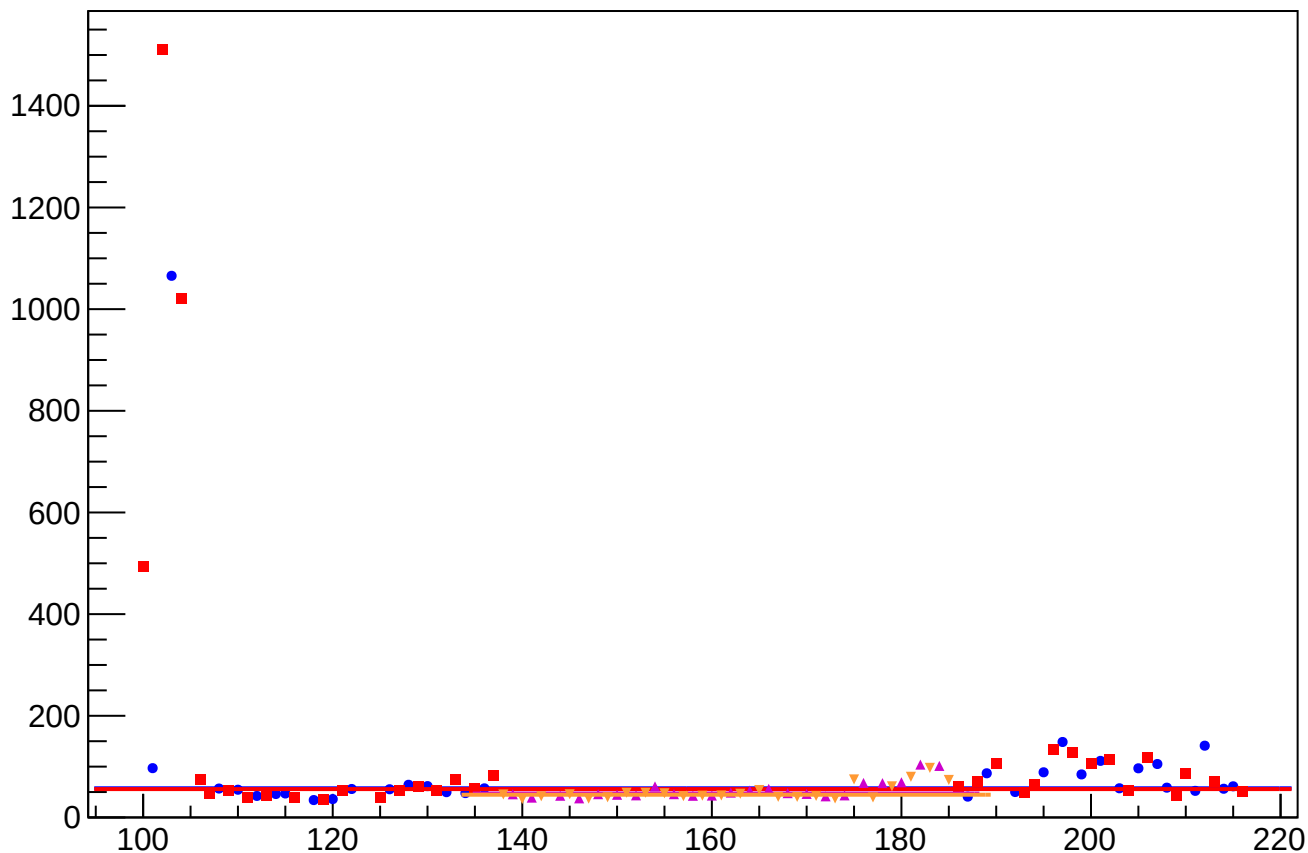
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 68.1/54$

All:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 112.9/110$

- sign  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 44.3/55$

asym\_us\_avg\_at1lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 57.379+/-0.011  $\chi^2/\text{NDF}$ : 4479560.1/30

Left Out: 44.733+/-0.008  $\chi^2/\text{NDF}$ : 1481436.4/23

Right Out: 55.809+/-0.011  $\chi^2/\text{NDF}$ : 5276923.2/32

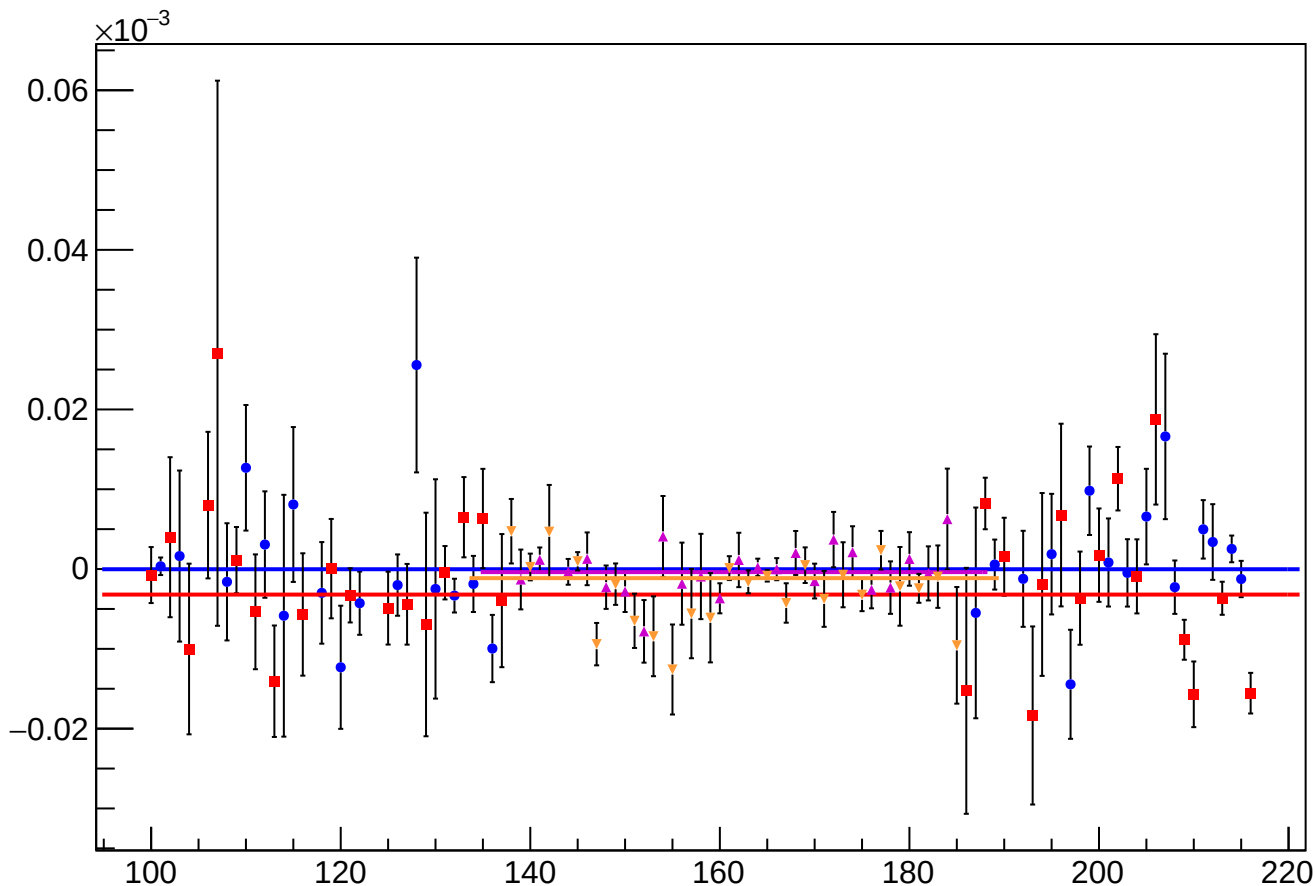
Left In: 47.033+/-0.008  $\chi^2/\text{NDF}$ : 1383050.4/22

+ sign 49.299+/-0.007  $\chi^2/\text{NDF}$ : 6833371.8/54

All: 49.810+/-0.005  $\chi^2/\text{NDF}$ : 13913865.2/110

- sign 50.346+/-0.007  $\chi^2/\text{NDF}$ : 7067852.5/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 37.1/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.7/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.8/32

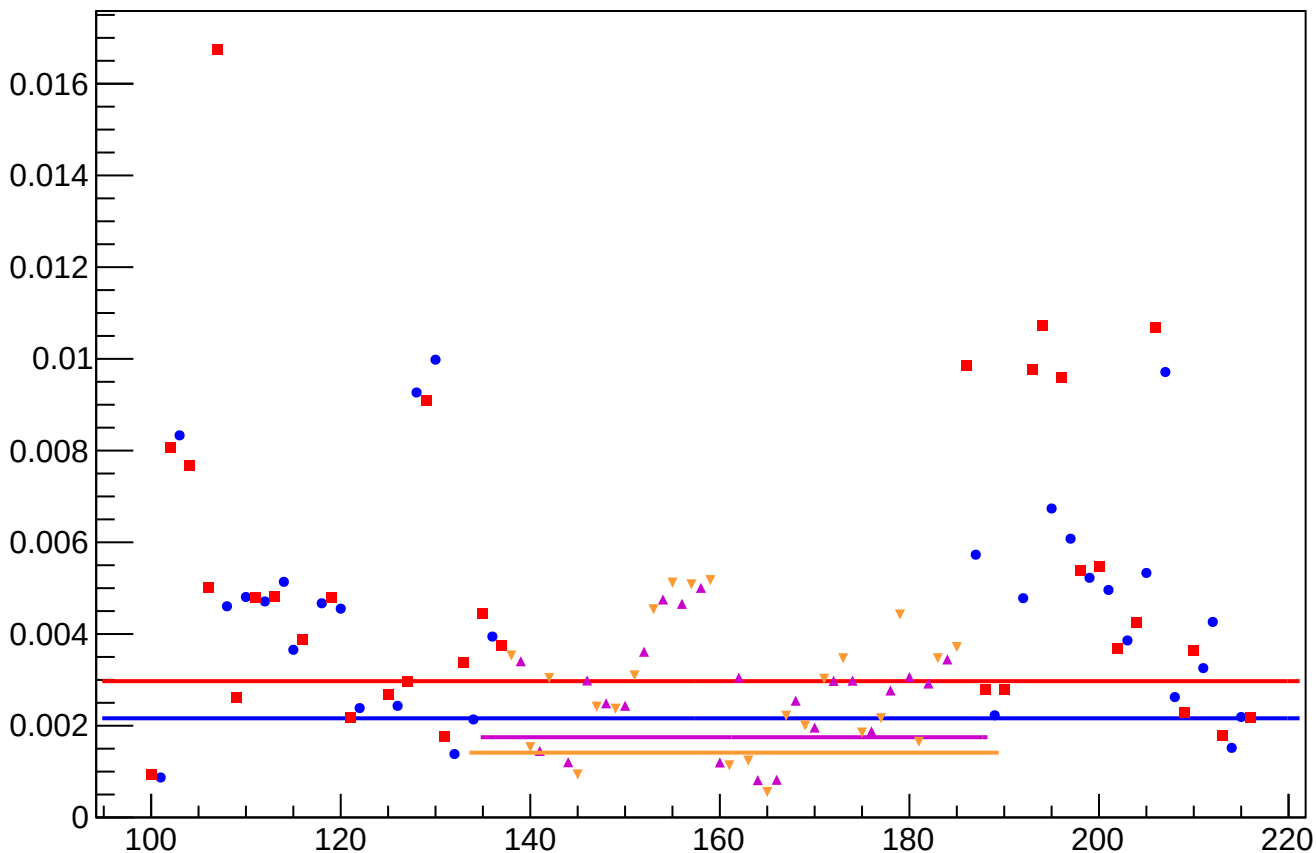
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16.3/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.1/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 188.5/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 113.0/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12529381.1/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11586658.8/23

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9118947.9/32

Left In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8238945.3/22

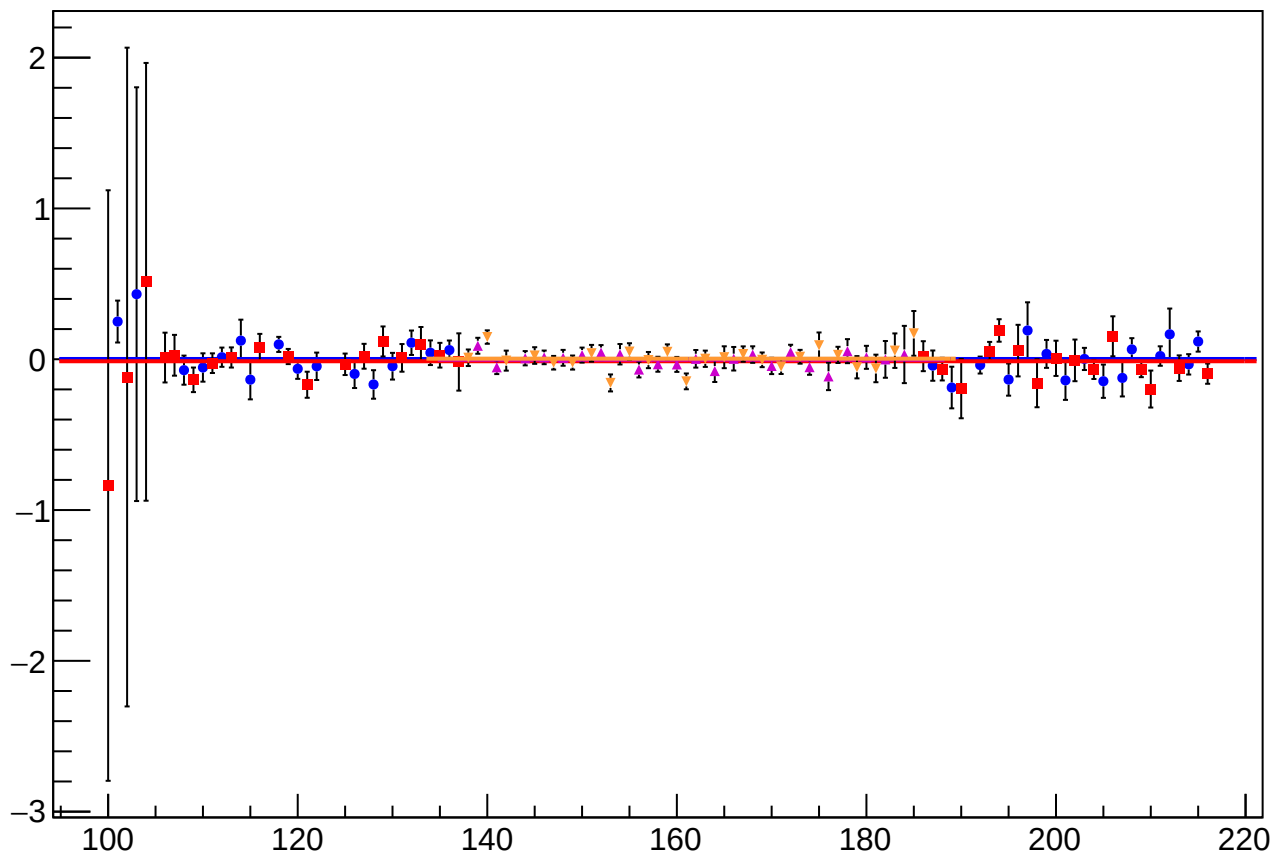
+ sign 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26118356.8/54

All: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 48201417.7/110

- sign 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20732879.9/55



asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.015$   $\chi^2/\text{NDF}: 33.0/30$

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 35.0/23$

Right Out:  $-0.013 \pm 0.015$   $\chi^2/\text{NDF}: 29.5/32$

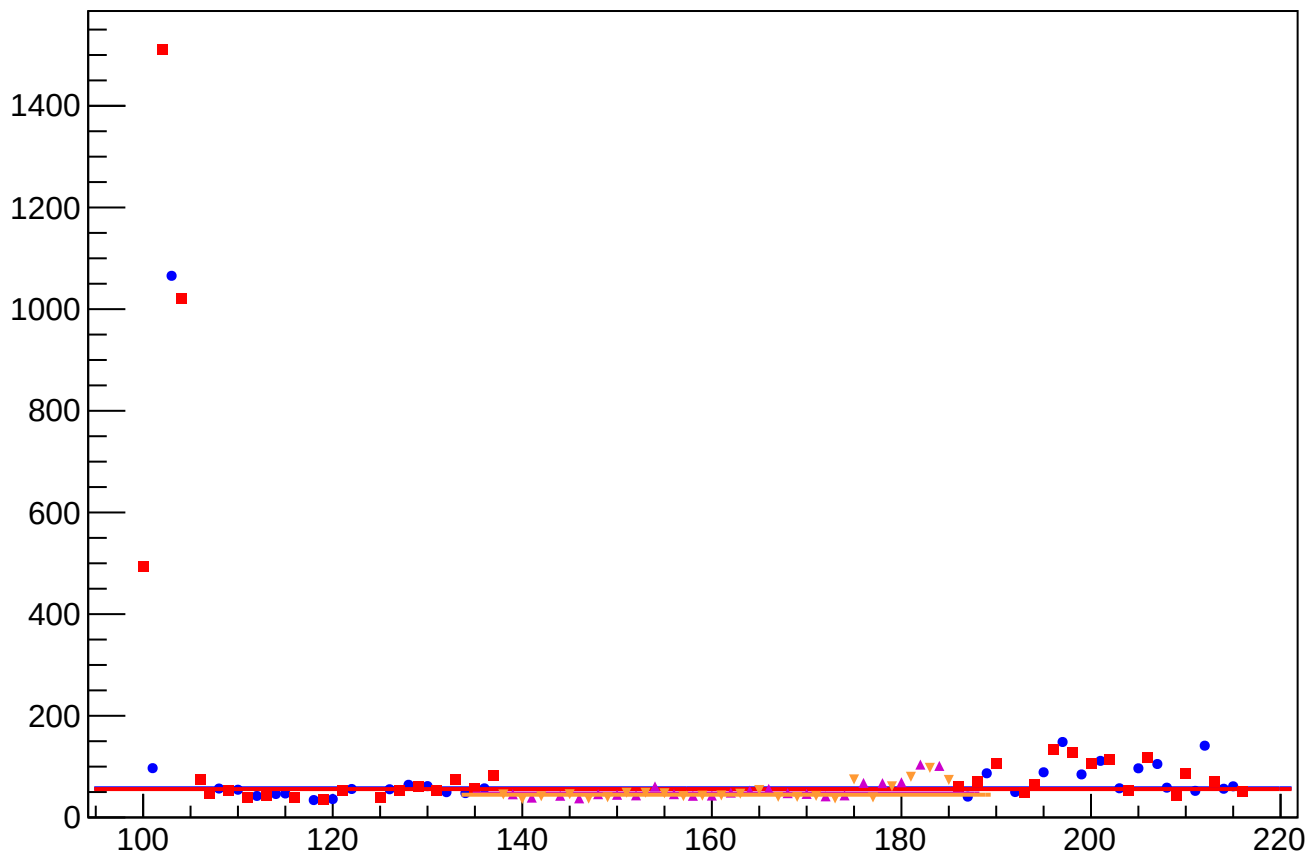
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 68.1/54$

All:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 112.9/110$

- sign  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 44.3/55$

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 57.379+/-0.011  $\chi^2/\text{NDF}$ : 4479638.9/30

Left Out: 44.733+/-0.008  $\chi^2/\text{NDF}$ : 1481436.0/23

Right Out: 55.808+/-0.011  $\chi^2/\text{NDF}$ : 5277109.5/32

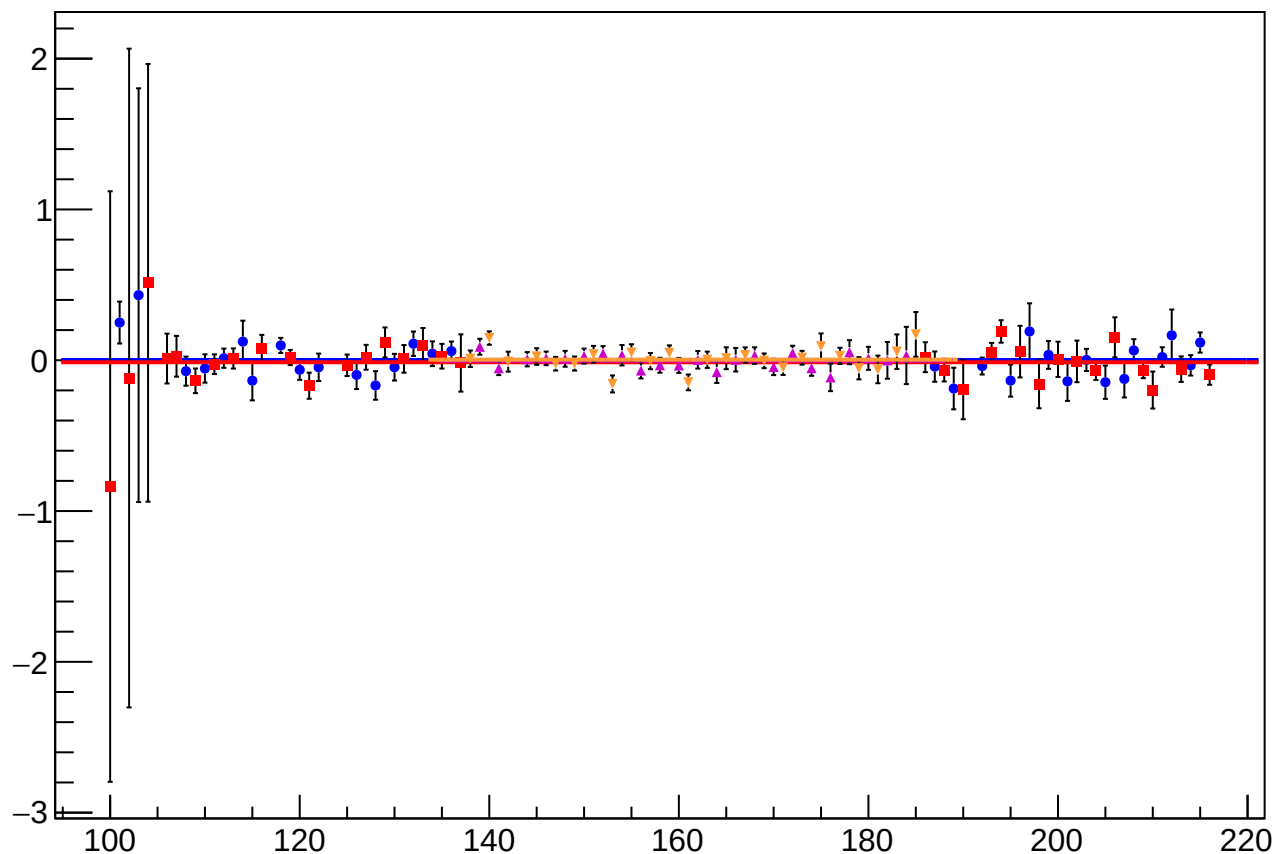
Left In: 47.033+/-0.008  $\chi^2/\text{NDF}$ : 1383121.1/22

+ sign 49.299+/-0.007  $\chi^2/\text{NDF}$ : 6833372.5/54

All: 49.810+/-0.005  $\chi^2/\text{NDF}$ : 13914060.1/110

- sign 50.346+/-0.007  $\chi^2/\text{NDF}$ : 7068057.2/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.002 \pm 0.015$   $\chi^2/\text{NDF}: 33.0/30$

Left Out:  $0.004 \pm 0.012$   $\chi^2/\text{NDF}: 35.0/23$

Right Out:  $-0.013 \pm 0.015$   $\chi^2/\text{NDF}: 29.5/32$

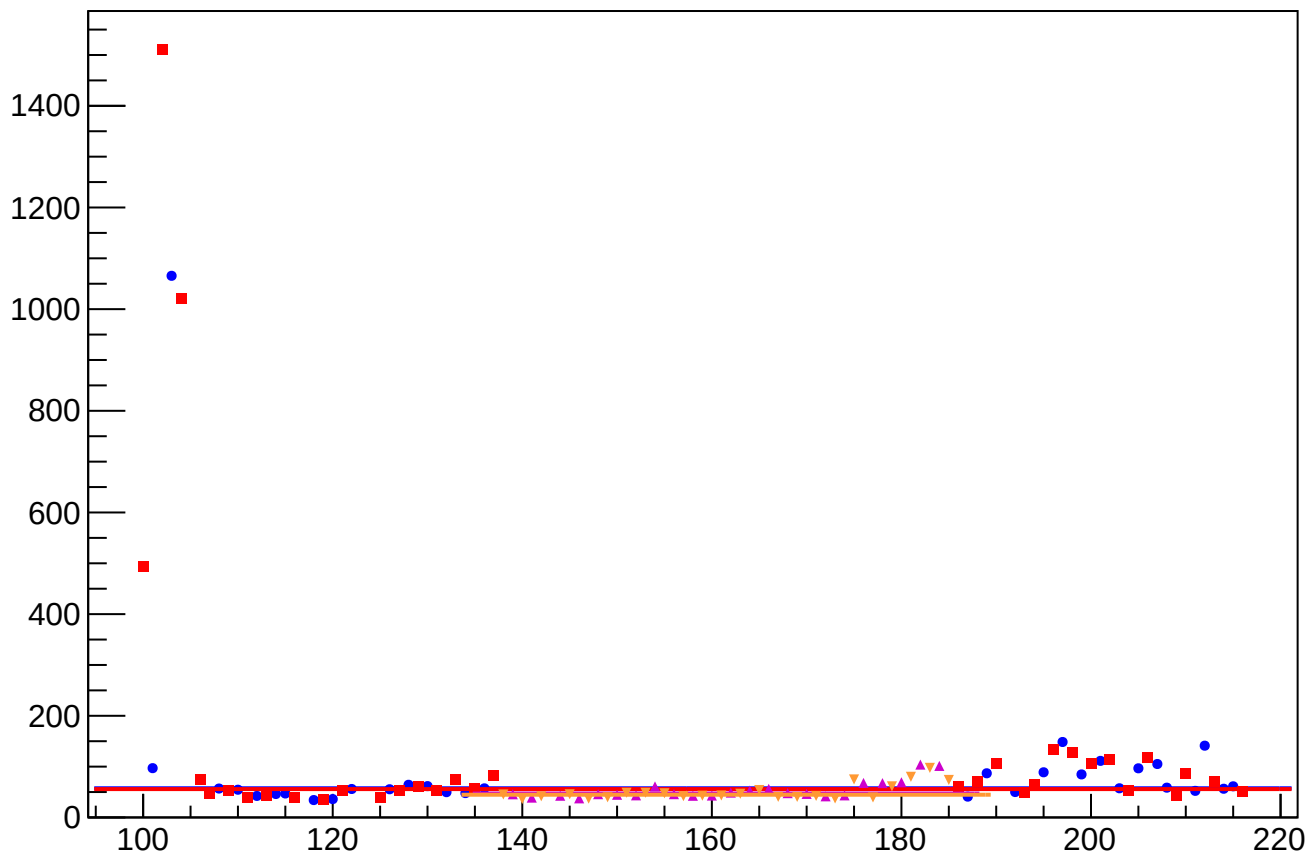
Left In:  $-0.003 \pm 0.012$   $\chi^2/\text{NDF}: 14.5/22$

+ sign  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 68.1/54$

All:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}: 112.9/110$

- sign  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 44.3/55$

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 57.379 $\pm$ 0.011  $\chi^2$ /NDF: 4479638.9/30

Left Out: 44.733 $\pm$ 0.008  $\chi^2$ /NDF: 1481436.0/23

Right Out: 55.808 $\pm$ 0.011  $\chi^2$ /NDF: 5277109.5/32

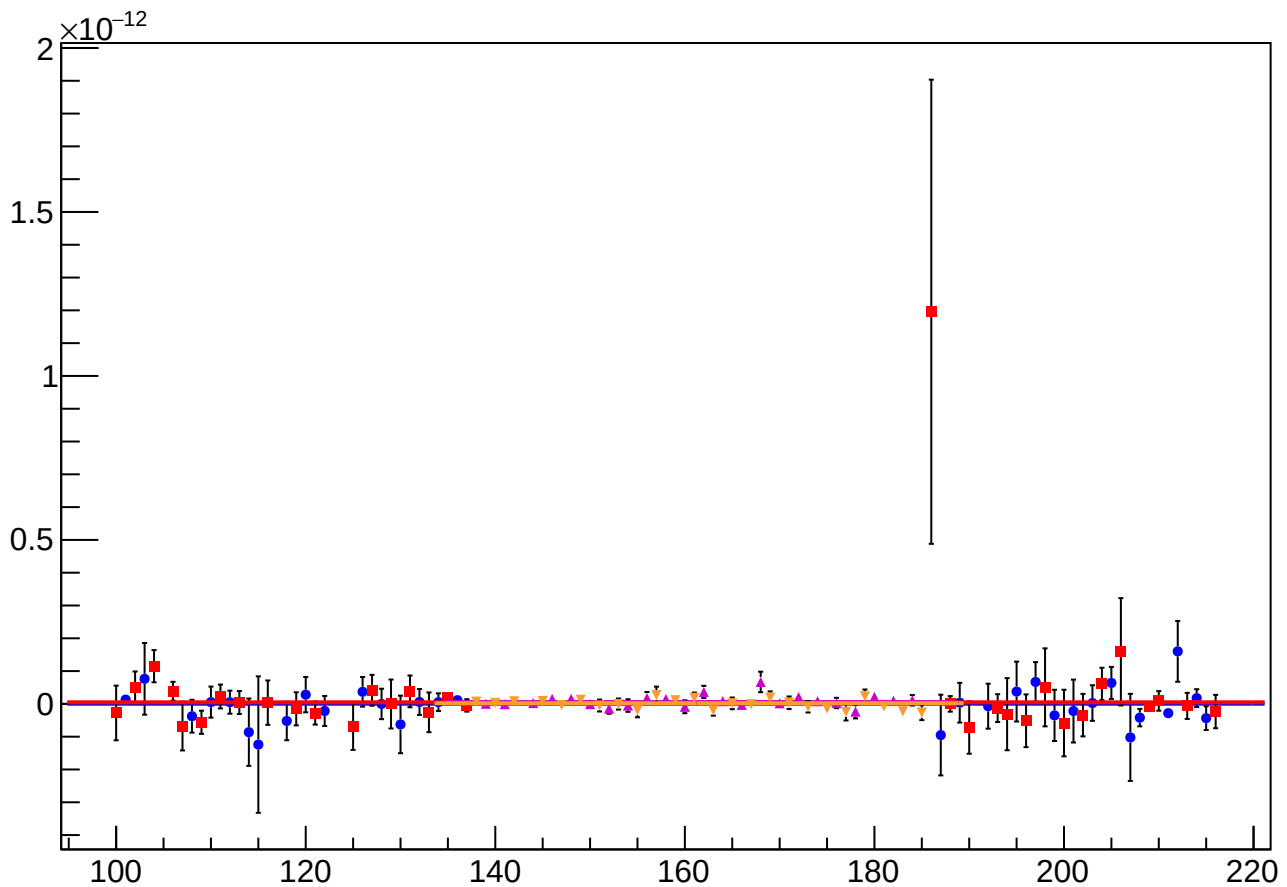
Left In: 47.033 $\pm$ 0.008  $\chi^2$ /NDF: 1383121.1/22

+ sign 49.299 $\pm$ 0.007  $\chi^2$ /NDF: 6833372.5/54

All: 49.810 $\pm$ 0.005  $\chi^2$ /NDF: 13914060.1/110

- sign 50.346 $\pm$ 0.007  $\chi^2$ /NDF: 7068057.2/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.6/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.9/32

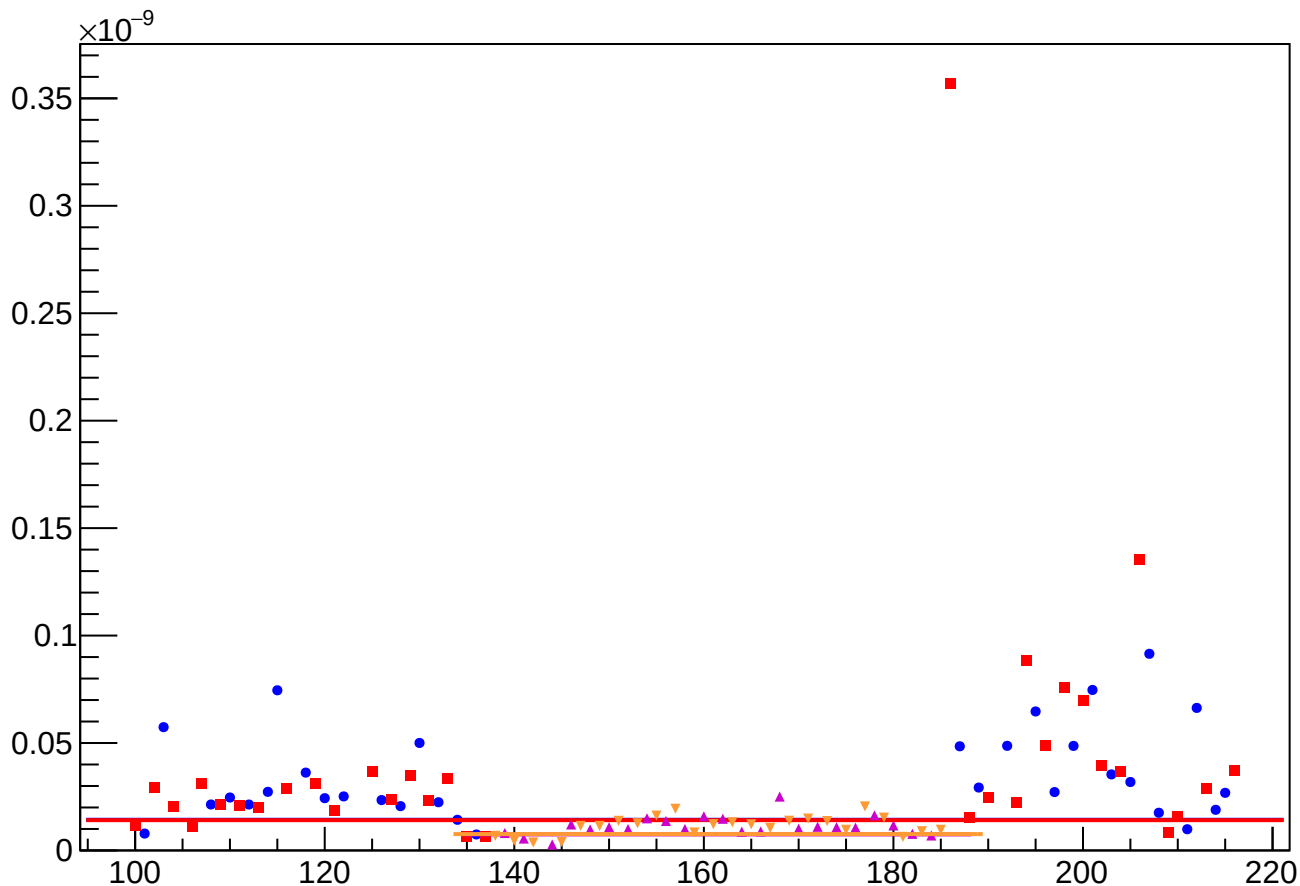
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 43.6/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 88.7/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 43.8/55

asym\_us\_avg\_at1lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8269984.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5568430.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9009573.7/32

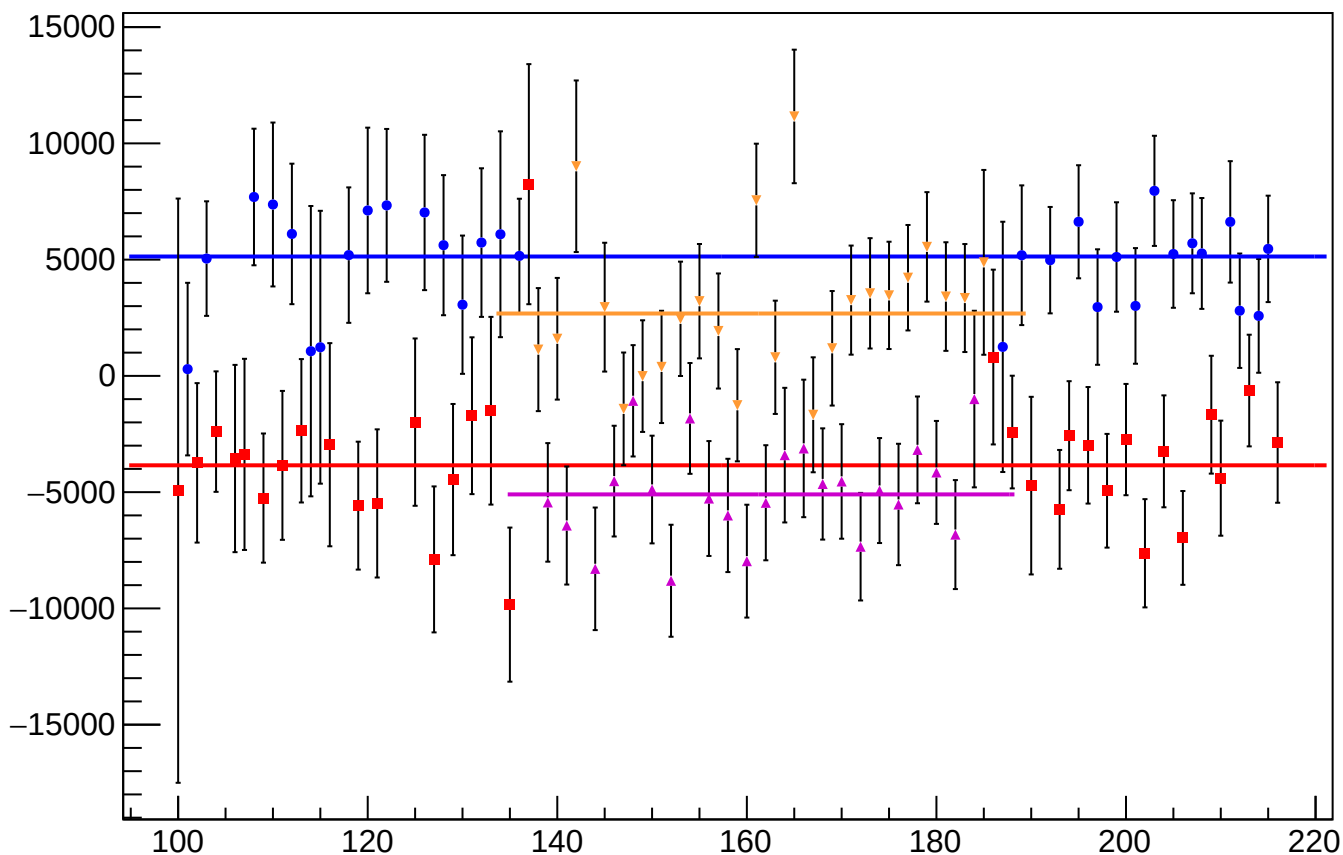
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5978033.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16309815.1/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33708012.0/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17389816.8/55

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In:  $5134.208 \pm 503.026$   $\chi^2/\text{NDF}$ : 11.7/30

Left Out:  $2682.870 \pm 512.020$   $\chi^2/\text{NDF}$ : 30.8/23

Right Out:  $-3845.716 \pm 505.185$   $\chi^2/\text{NDF}$ : 24.1/32

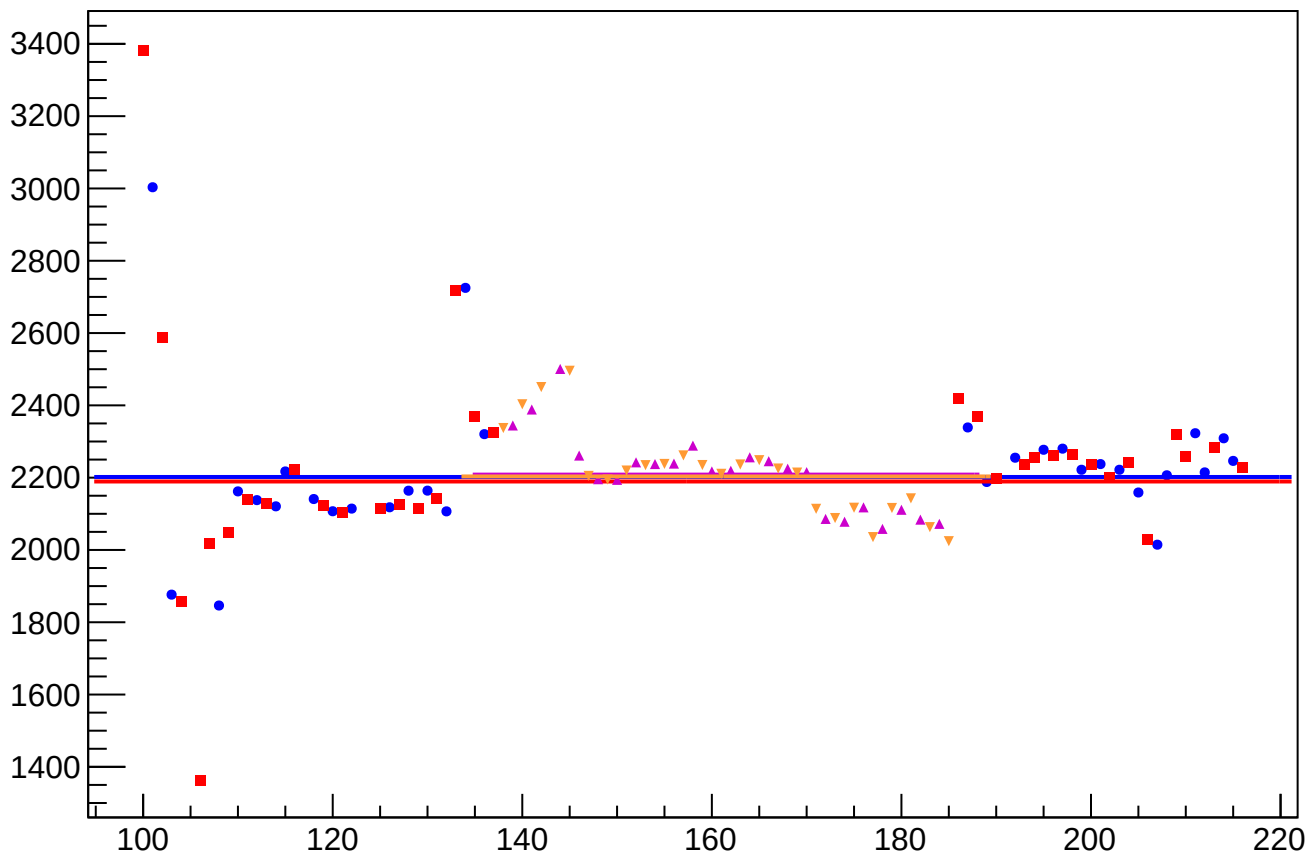
Left In:  $-5096.427 \pm 516.232$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $3930.258 \pm 358.831$   $\chi^2/\text{NDF}$ : 54.2/54

All:  $-237.646 \pm 254.517$   $\chi^2/\text{NDF}$ : 367.8/110

- sign  $-4457.546 \pm 361.062$   $\chi^2/\text{NDF}$ : 42.0/55

# reg\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2201.870+/-0.356  $\chi^2/\text{NDF}$ : 230849.1/30

Left Out: 2203.297+/-0.362  $\chi^2/\text{NDF}$ : 88208.3/23

Right Out: 2189.408+/-0.355  $\chi^2/\text{NDF}$ : 336451.6/32

Left In: 2208.379+/-0.365  $\chi^2/\text{NDF}$ : 80994.3/22

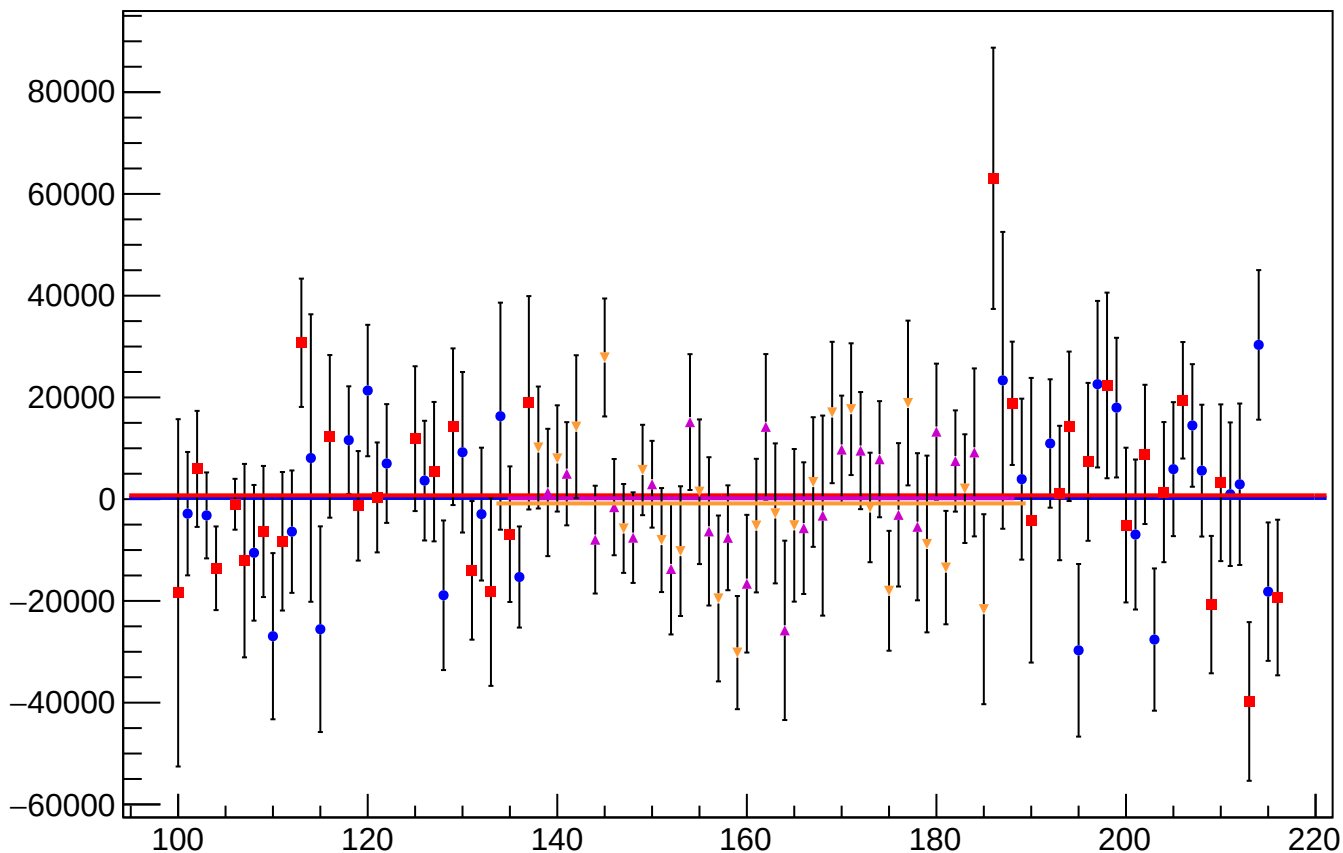
+ sign 2202.571+/-0.254  $\chi^2/\text{NDF}$ : 319065.4/54

All: 2200.605+/-0.180  $\chi^2/\text{NDF}$ : 738019.9/110

- sign 2198.629+/-0.254  $\chi^2/\text{NDF}$ : 418834.2/55



asym\_us\_avg\_at2lr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: 238.627 $\pm$ 2438.031  $\chi^2$ /NDF: 35.0/30

Left Out: -833.485 $\pm$ 2481.469  $\chi^2$ /NDF:29.5/23

Right Out: 752.834 $\pm$ 2217.455  $\chi^2$ /NDF: 40.7/32

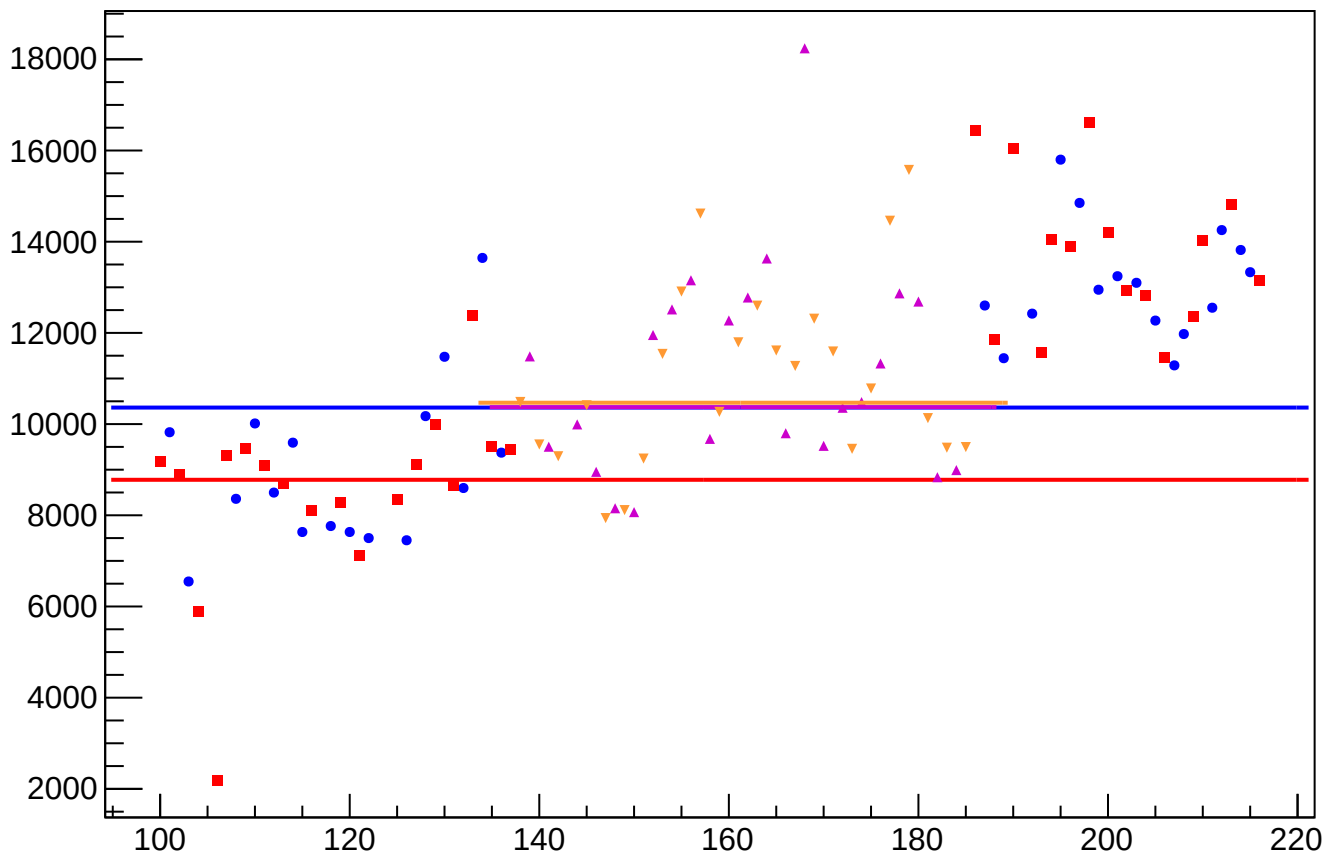
Left In: 182.426 $\pm$ 2471.223  $\chi^2$ /NDF:13.8/22

+ sign -287.963 $\pm$ 1739.102  $\chi^2$ /NDF: 64.6/54

All: 125.784 $\pm$ 1197.150  $\chi^2$ /NDF: 119.1/110

- sign 498.412 $\pm$ 1650.426  $\chi^2$ /NDF: 54.5/55

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_correction\_rms vs Slug



Right In: 10362.477+/-1.724  $\chi^2/\text{NDF}$ : 2219123.5/30

Left Out: 10468.677+/-1.755  $\chi^2/\text{NDF}$ : 1045257.2/23

Right Out: 8778.468+/-1.568  $\chi^2/\text{NDF}$ : 6823496.3/32

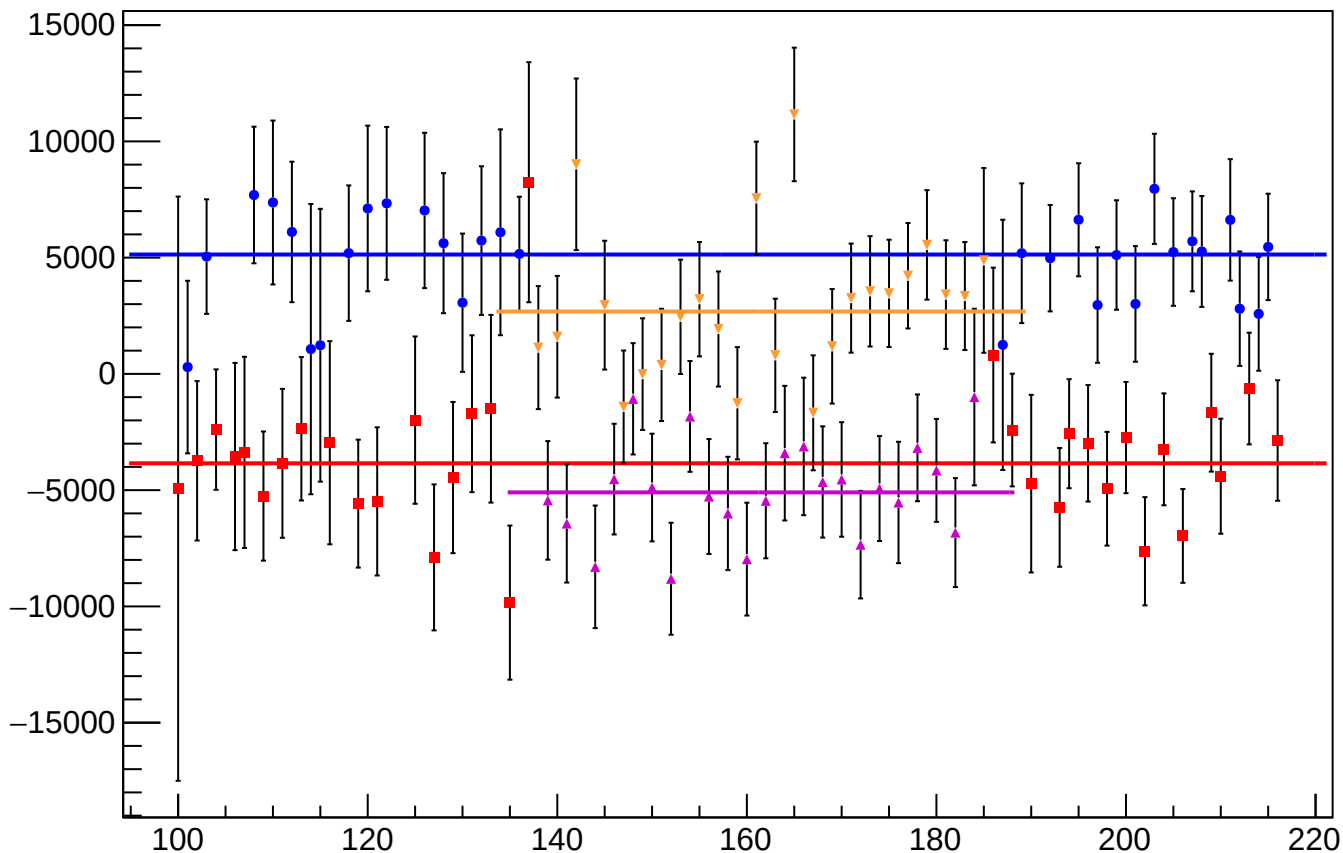
Left In: 10370.895+/-1.747  $\chi^2/\text{NDF}$ : 1203758.1/22

+ sign 10414.639+/-1.230  $\chi^2/\text{NDF}$ : 3266244.6/54

All: 9927.486+/-0.847  $\chi^2/\text{NDF}$ : 12051820.0/100

- sign 9488.746+/-1.167  $\chi^2/\text{NDF}$ : 8487307.5/55

# cor\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5134.227 $\pm$ 503.026  $\chi^2$ /NDF: 11.7/30

Left Out: 2682.792 $\pm$ 512.020  $\chi^2$ /NDF:30.8/23

Right Out: -3845.626 $\pm$ 505.185  $\chi^2$ /NDF: 24.1/32

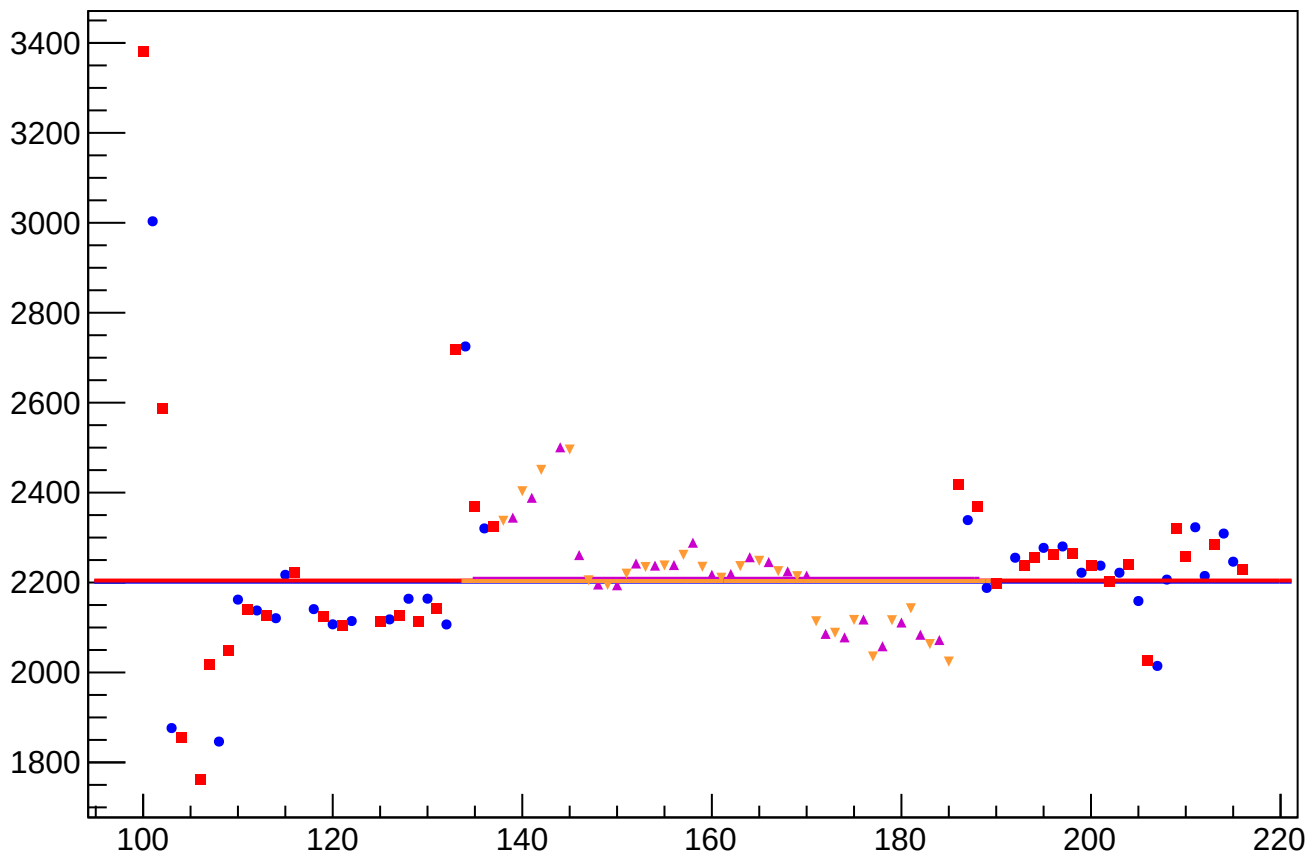
Left In: -5096.334 $\pm$ 516.232  $\chi^2$ /NDF:14.9/22

+ sign 3930.229 $\pm$ 358.831  $\chi^2$ /NDF: 54.2/54

All: -237.615 $\pm$ 254.517  $\chi^2$ /NDF: 367.8/110

- sign -4457.455 $\pm$ 361.062  $\chi^2$ /NDF: 42.0/55

# cor\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2201.870+/-0.356  $\chi^2/\text{NDF}$ : 230849.5/30

Left Out: 2203.297+/-0.362  $\chi^2/\text{NDF}$ : 88208.3/23

Right Out: 2204.427+/-0.357  $\chi^2/\text{NDF}$ : 210881.5/32

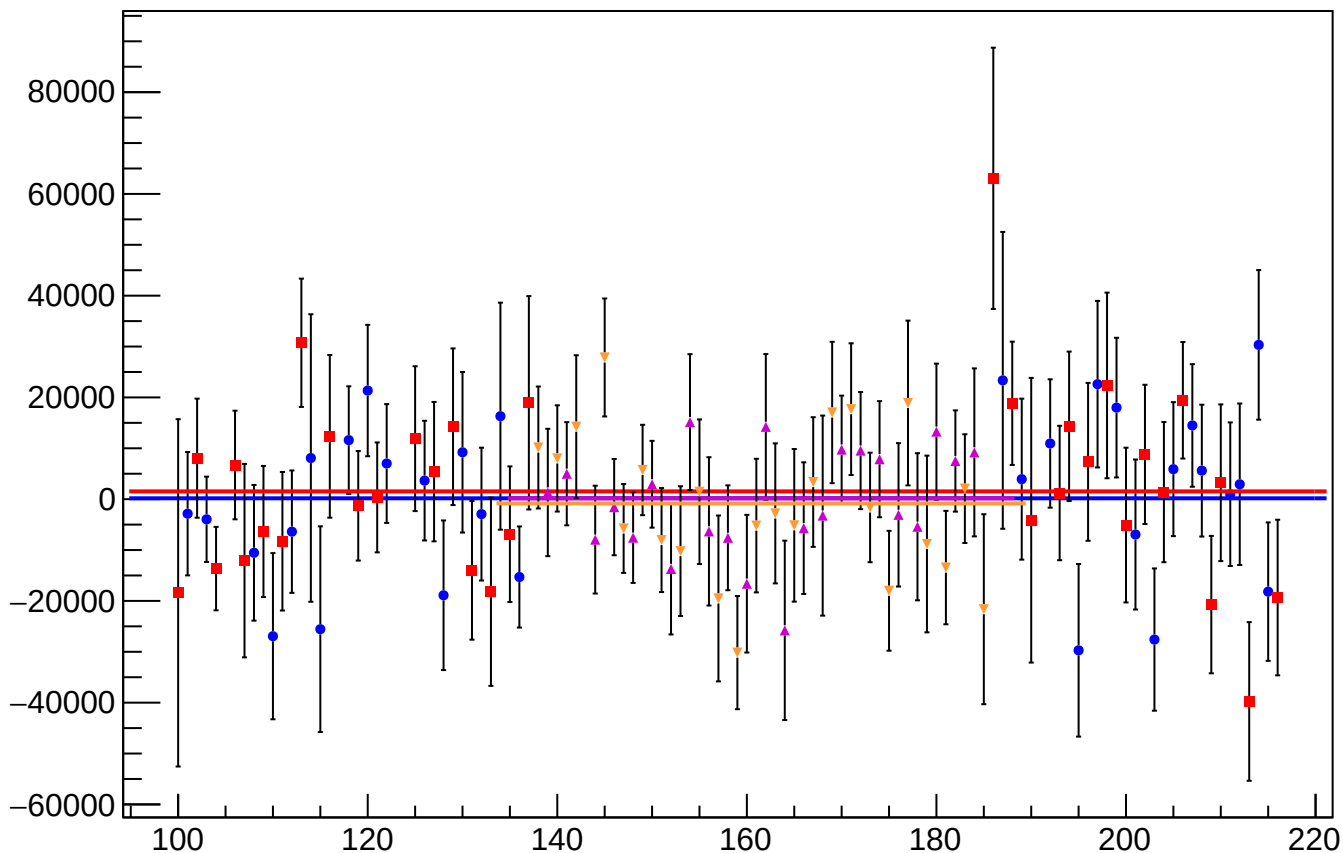
Left In: 2208.379+/-0.365  $\chi^2/\text{NDF}$ : 80994.3/22

+ sign 2202.571+/-0.254  $\chi^2/\text{NDF}$ : 319065.7/54

All: 2204.454+/-0.180  $\chi^2/\text{NDF}$ : 611112.3/110

- sign 2206.357+/-0.255  $\chi^2/\text{NDF}$ : 291935.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In:  $169.730 \pm 2436.469$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-833.458 \pm 2481.469$   $\chi^2/\text{NDF}$ : 29.5/23

Right Out:  $1532.198 \pm 2412.414$   $\chi^2/\text{NDF}$ : 41.0/32

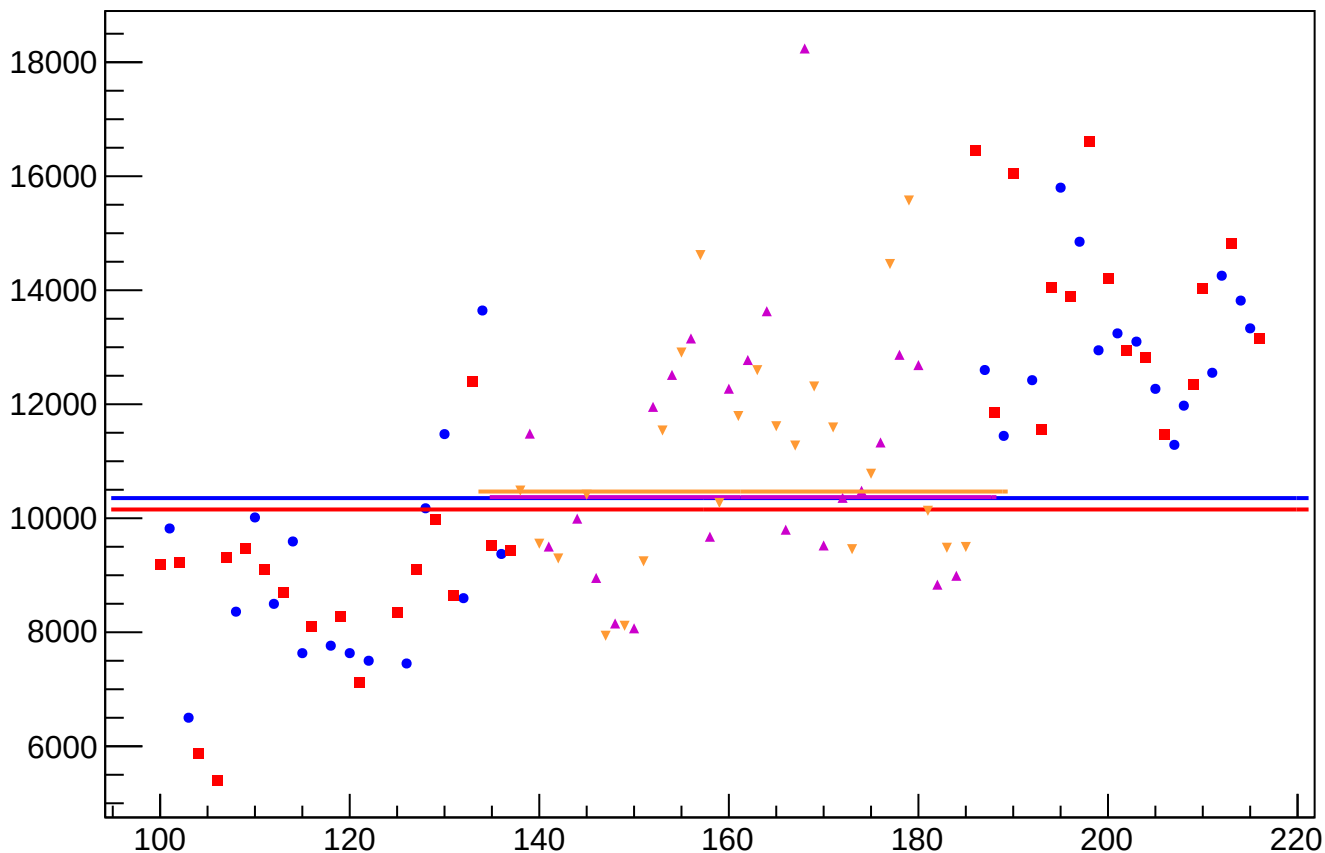
Left In:  $182.360 \pm 2471.221$   $\chi^2/\text{NDF}$ : 13.8/22

+ sign  $-322.686 \pm 1738.535$   $\chi^2/\text{NDF}$ : 64.7/54

All:  $279.664 \pm 1224.964$   $\chi^2/\text{NDF}$ : 119.8/110

- sign  $873.531 \pm 1726.250$   $\chi^2/\text{NDF}$ : 54.9/55

asym\_us\_avg\_at2lr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In:  $10353.579 \pm 1.723$   $\chi^2/\text{NDF}: 2235691.1/30$

Left Out:  $10468.676 \pm 1.755$   $\chi^2/\text{NDF}: 1045258.5/23$

Right Out:  $10153.888 \pm 1.706$   $\chi^2/\text{NDF}: 2897149.5/32$

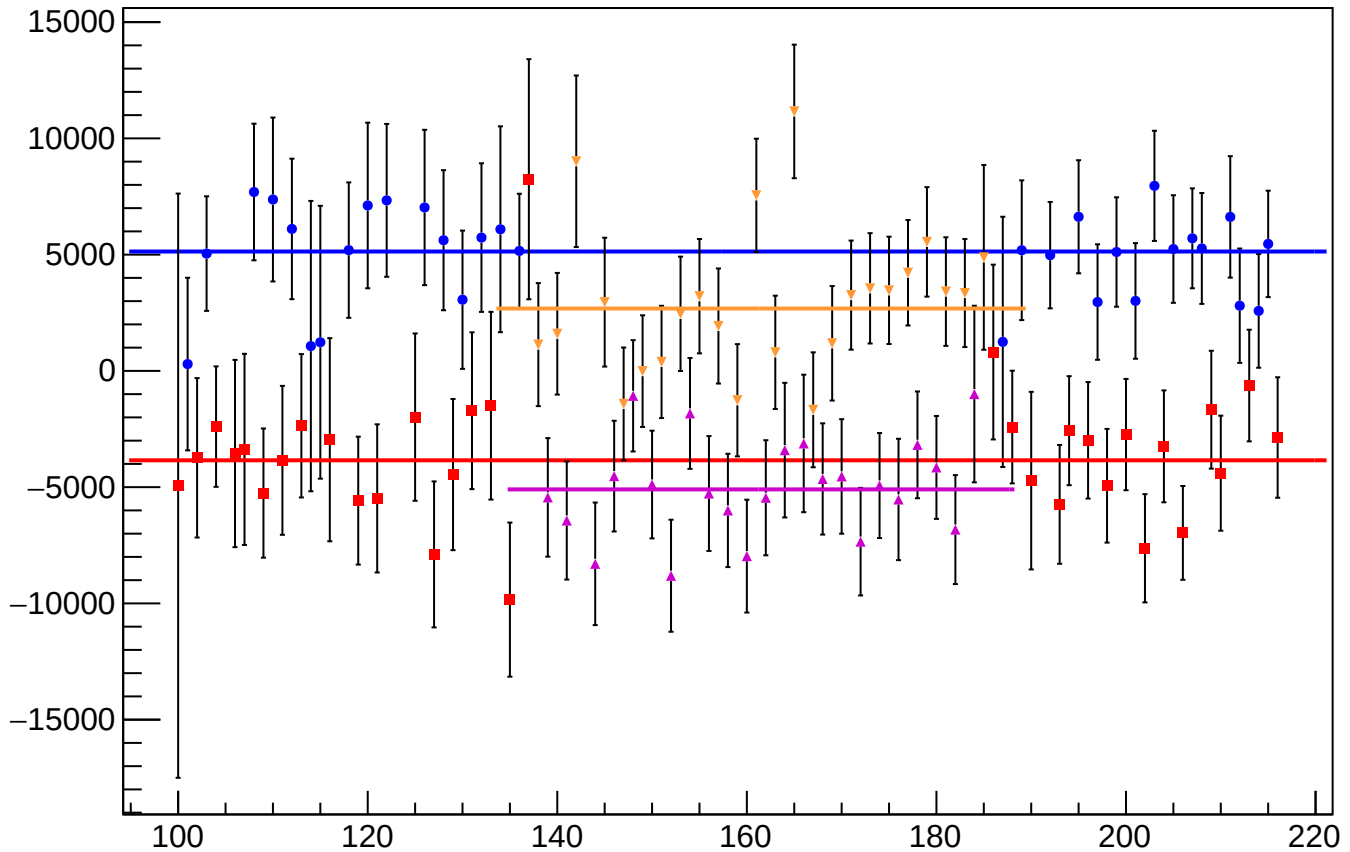
Left In:  $10370.886 \pm 1.747$   $\chi^2/\text{NDF}: 1203763.9/22$

+ sign  $10410.075 \pm 1.229$   $\chi^2/\text{NDF}: 3283140.3/54$

All:  $10334.392 \pm 0.866$   $\chi^2/\text{NDF}: 7399476.9/1$

- sign  $10259.774 \pm 1.221$   $\chi^2/\text{NDF}: 4108809.6/55$

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5134.227 $\pm$ 503.026  $\chi^2$ /NDF: 11.7/30

Left Out: 2682.792 $\pm$ 512.020  $\chi^2$ /NDF:30.8/23

Right Out: -3845.626 $\pm$ 505.185  $\chi^2$ /NDF: 24.1/32

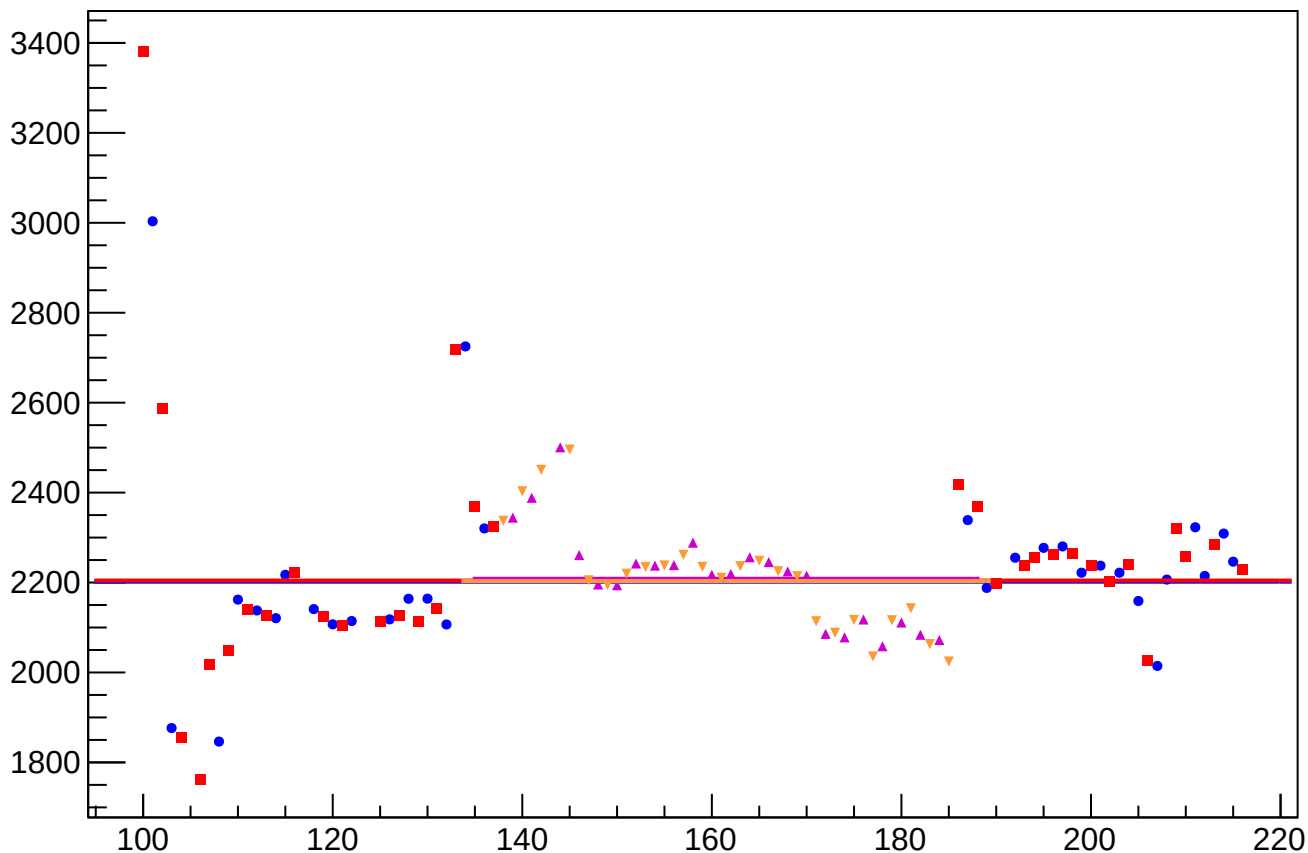
Left In: -5096.334 $\pm$ 516.232  $\chi^2$ /NDF:14.9/22

+ sign 3930.229 $\pm$ 358.831  $\chi^2$ /NDF: 54.2/54

All: -237.615 $\pm$ 254.517  $\chi^2$ /NDF: 367.8/110

- sign -4457.455 $\pm$ 361.062  $\chi^2$ /NDF: 42.0/55

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2201.870+/-0.356  $\chi^2/\text{NDF}$ : 230849.5/30

Left Out: 2203.297+/-0.362  $\chi^2/\text{NDF}$ : 88208.3/23

Right Out: 2204.427+/-0.357  $\chi^2/\text{NDF}$ : 210881.5/32

Left In: 2208.379+/-0.365  $\chi^2/\text{NDF}$ : 80994.3/22

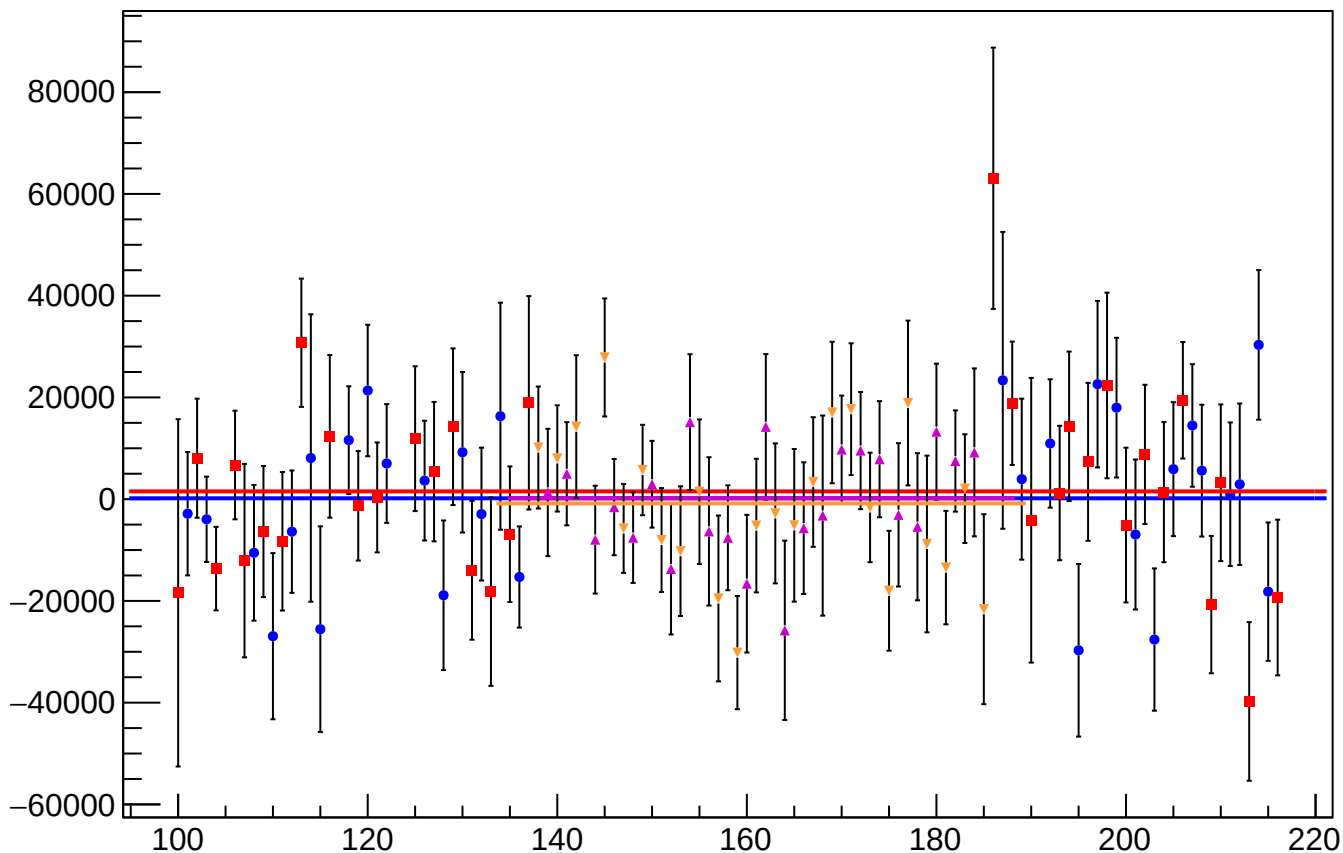
+ sign 2202.571+/-0.254  $\chi^2/\text{NDF}$ : 319065.7/54

All: 2204.454+/-0.180  $\chi^2/\text{NDF}$ : 611112.3/110

- sign 2206.357+/-0.255  $\chi^2/\text{NDF}$ : 291935.8/55



asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 169.730+/-2436.469  $\chi^2/\text{NDF}$ : 35.1/30

Left Out: -833.458+/-2481.469  $\chi^2/\text{NDF}$ : 29.5/23

Right Out: 1532.198+/-2412.414  $\chi^2/\text{NDF}$ : 41.0/32

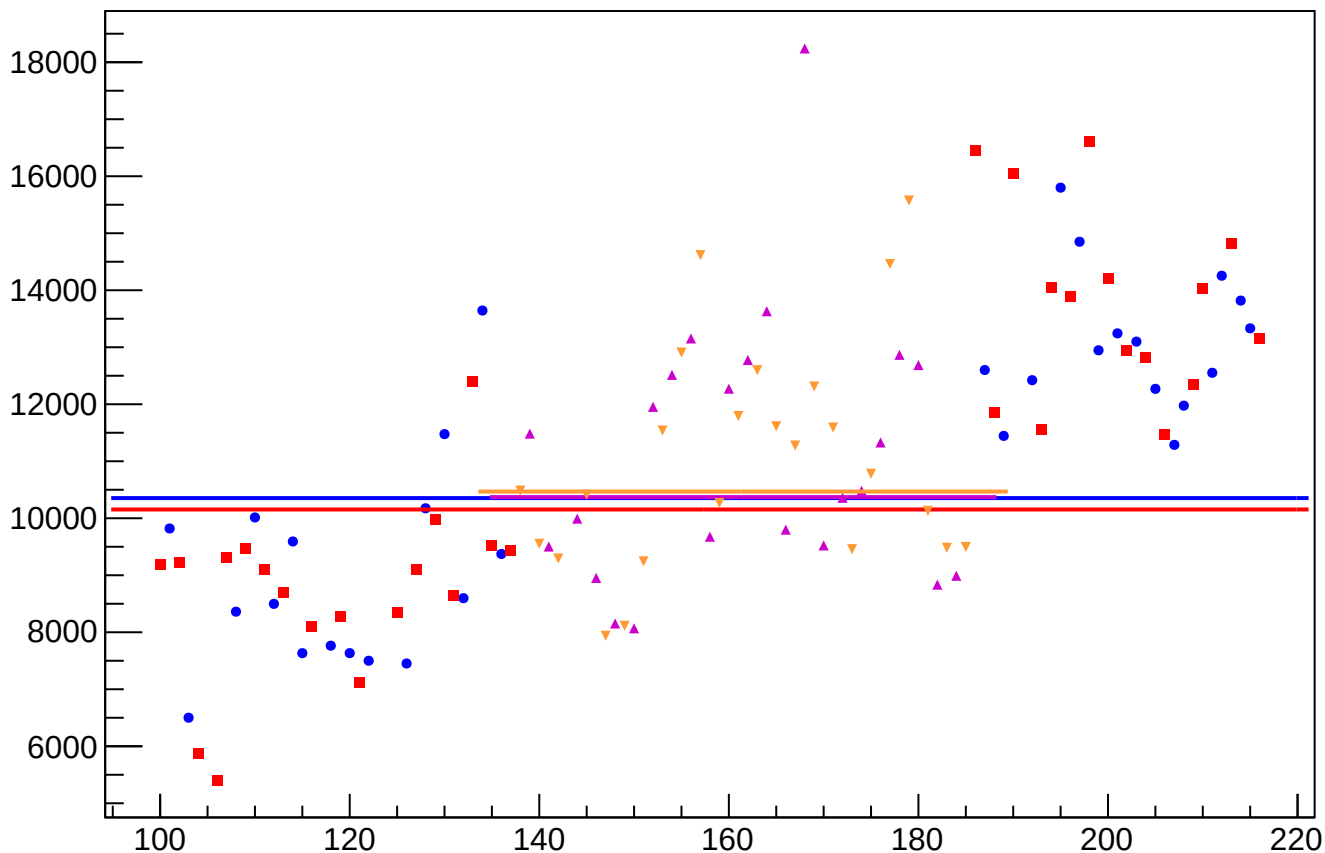
Left In: 182.360+/-2471.221  $\chi^2/\text{NDF}$ : 13.8/22

+ sign -322.686+/-1738.535  $\chi^2/\text{NDF}$ : 64.7/54

All: 279.664+/-1224.964  $\chi^2/\text{NDF}$ : 119.8/110

- sign 873.531+/-1726.250  $\chi^2/\text{NDF}$ : 54.9/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In:  $10353.579 \pm 1.723$   $\chi^2/\text{NDF}: 2235691.1/30$

Left Out:  $10468.676 \pm 1.755$   $\chi^2/\text{NDF}: 1045258.5/23$

Right Out:  $10153.888 \pm 1.706$   $\chi^2/\text{NDF}: 2897149.5/32$

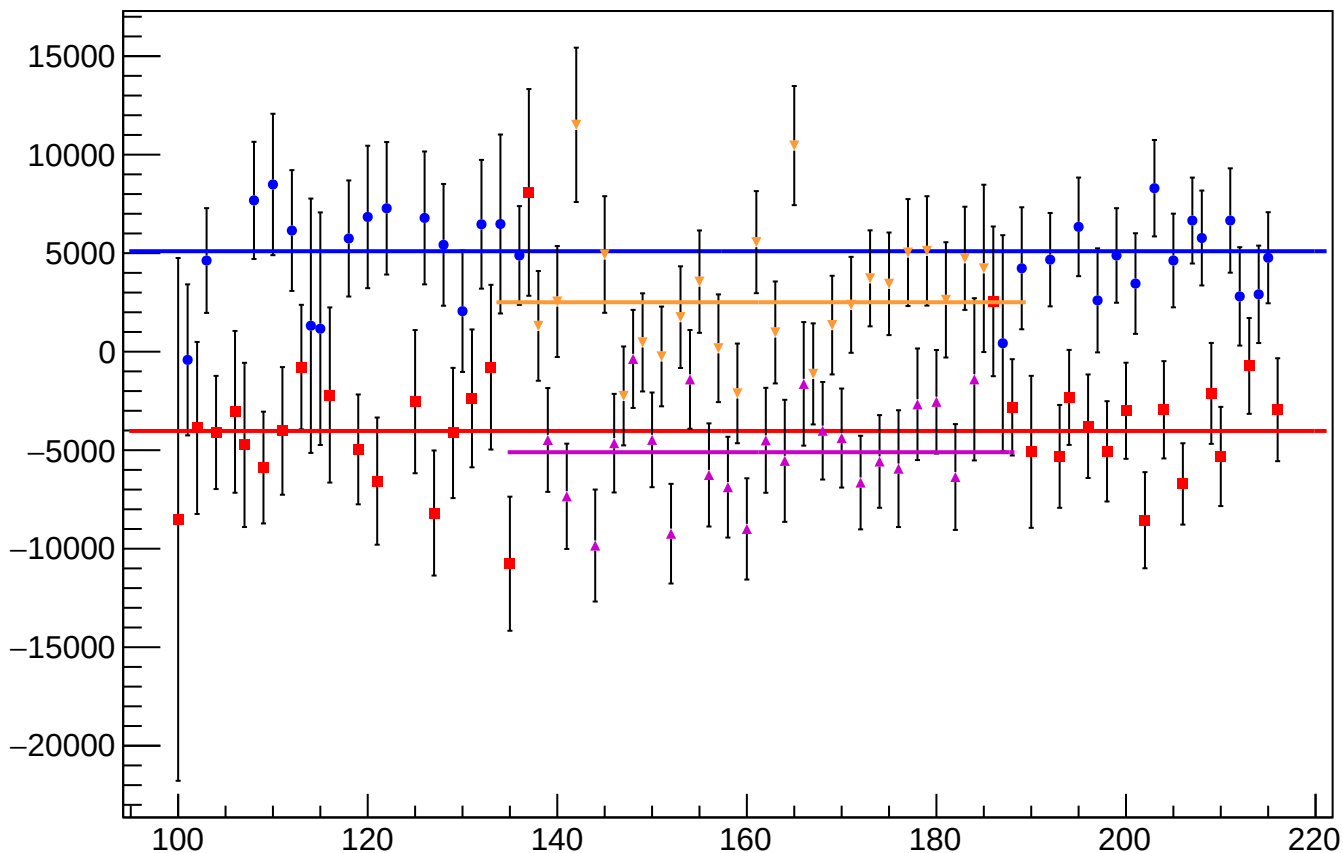
Left In:  $10370.886 \pm 1.747$   $\chi^2/\text{NDF}: 1203763.9/22$

+ sign  $10410.075 \pm 1.229$   $\chi^2/\text{NDF}: 3283140.3/54$

All:  $10334.392 \pm 0.866$   $\chi^2/\text{NDF}: 7399476.9/1$

- sign  $10259.774 \pm 1.221$   $\chi^2/\text{NDF}: 4108809.6/55$

dit\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5099.256 $\pm$ 515.366  $\chi^2$ /NDF: 13.6/30

Left Out: 2508.976 $\pm$ 551.601  $\chi^2$ /NDF: 29.8/23

Right Out: -4023.364 $\pm$ 519.723  $\chi^2$ /NDF: 27.1/32

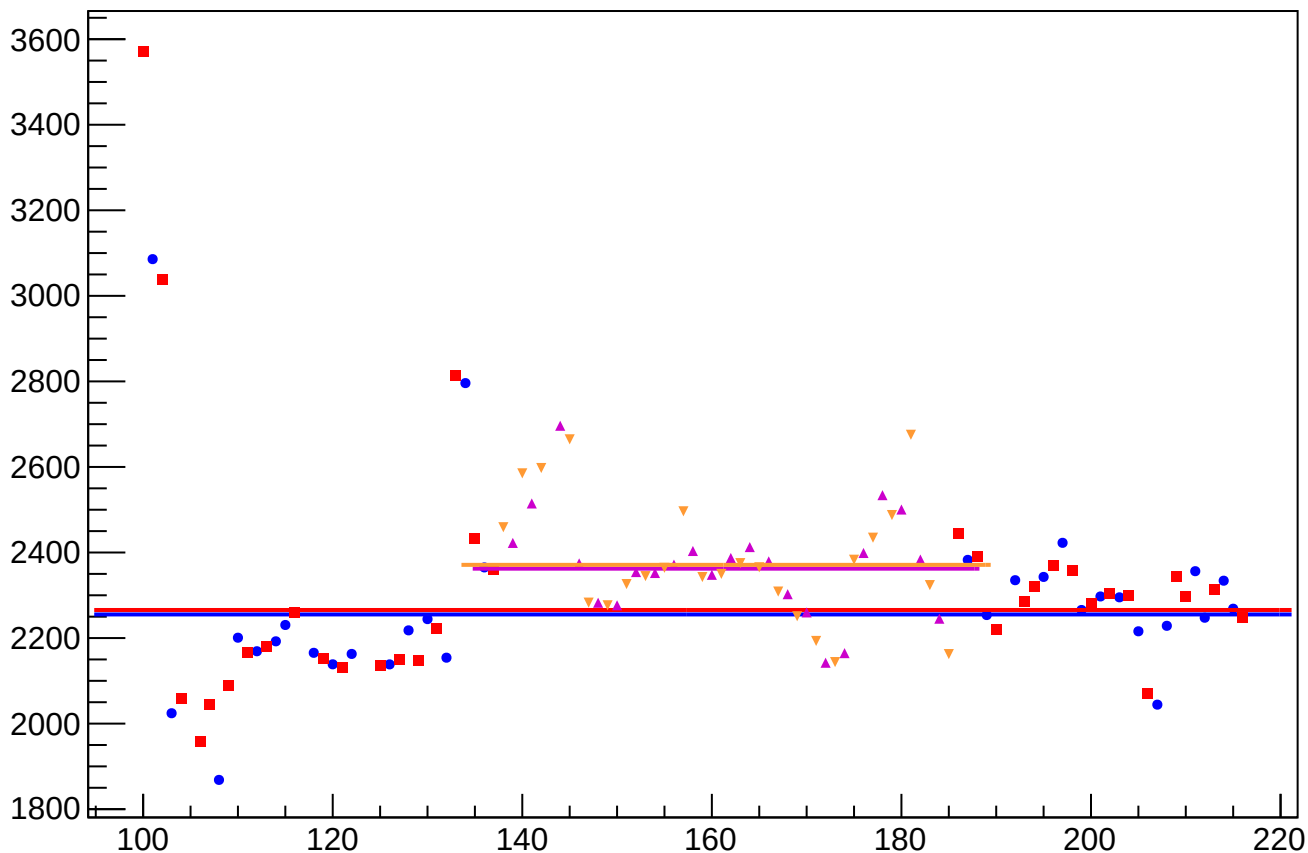
Left In: -5102.993 $\pm$ 552.583  $\chi^2$ /NDF: 19.9/22

+ sign 3891.982 $\pm$ 376.578  $\chi^2$ /NDF: 55.2/54

All: -296.698 $\pm$ 266.987  $\chi^2$ /NDF: 353.0/110

- sign -4530.126 $\pm$ 378.584  $\chi^2$ /NDF: 49.0/55

dit\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2255.205 $\pm$ 0.364  $\chi^2$ /NDF: 226893.1/30

Left Out: 2371.137 $\pm$ 0.390  $\chi^2$ /NDF: 116296.5/23

Right Out: 2265.633 $\pm$ 0.367  $\chi^2$ /NDF: 214365.1/32

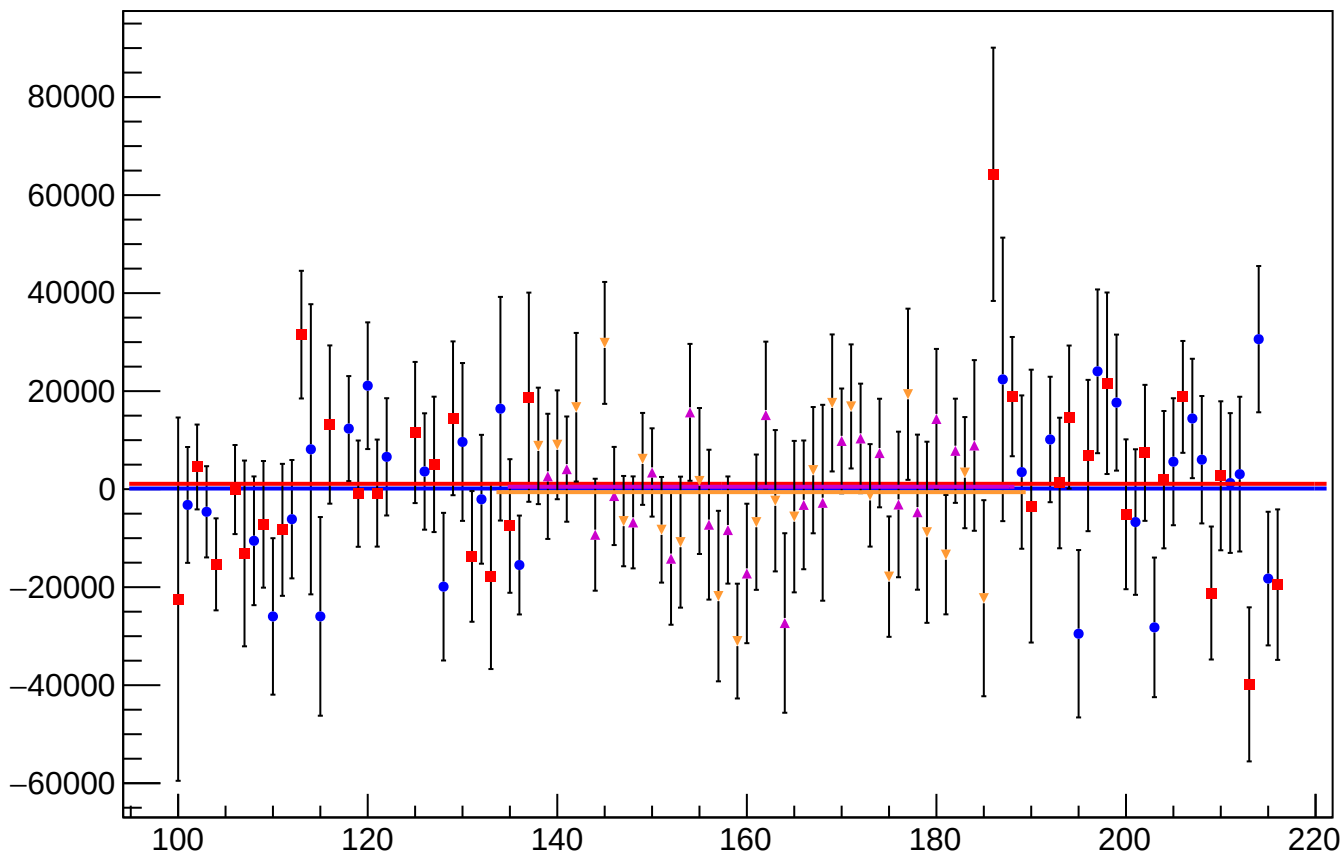
Left In: 2362.218 $\pm$ 0.391  $\chi^2$ /NDF: 91896.7/22

+ sign 2309.238 $\pm$ 0.266  $\chi^2$ /NDF: 390359.5/54

All: 2310.093 $\pm$ 0.189  $\chi^2$ /NDF: 729070.6/110

- sign 2310.957 $\pm$ 0.268  $\chi^2$ /NDF: 338690.4/55

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In: 129.293 $\pm$ 2470.166  $\chi^2$ /NDF: 34.9/30

Left Out: -608.283 $\pm$ 2589.919  $\chi^2$ /NDF:28.9/23

Right Out: 1090.824 $\pm$ 2384.906  $\chi^2$ /NDF: 40.3/32

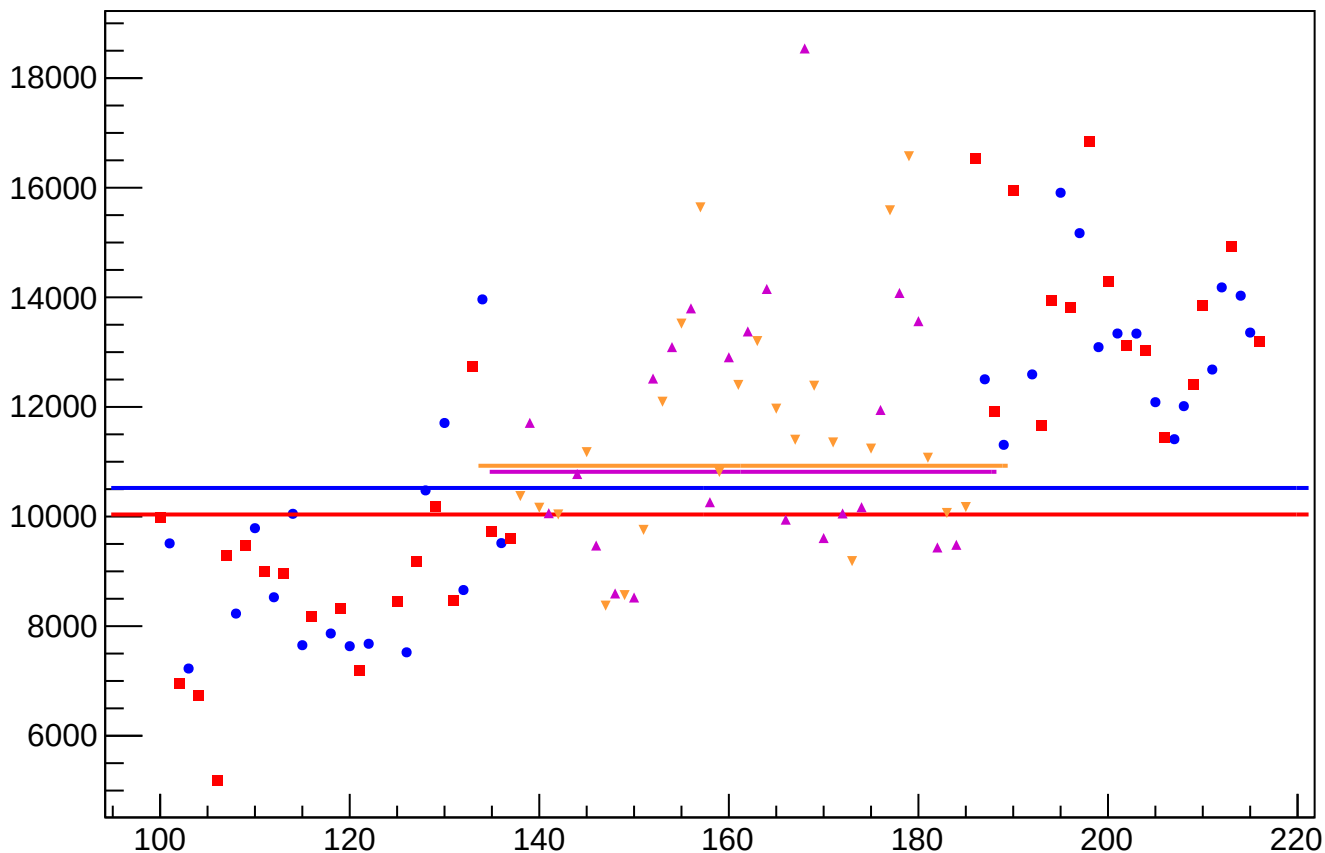
Left In: 490.044 $\pm$ 2577.213  $\chi^2$ /NDF:13.5/22

+ sign -222.049 $\pm$ 1787.508  $\chi^2$ /NDF: 63.8/54

All: 306.671 $\pm$ 1250.642  $\chi^2$ /NDF: 117.8/110

- sign 813.682 $\pm$ 1750.425  $\chi^2$ /NDF: 53.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 10521.589 $\pm$ 1.747  $\chi^2/\text{NDF}$ : 2061185.5/30

Left Out: 10926.860 $\pm$ 1.831  $\chi^2/\text{NDF}$ : 1057331.1/23

Right Out: 10037.638 $\pm$ 1.686  $\chi^2/\text{NDF}$ : 3085464.1/32

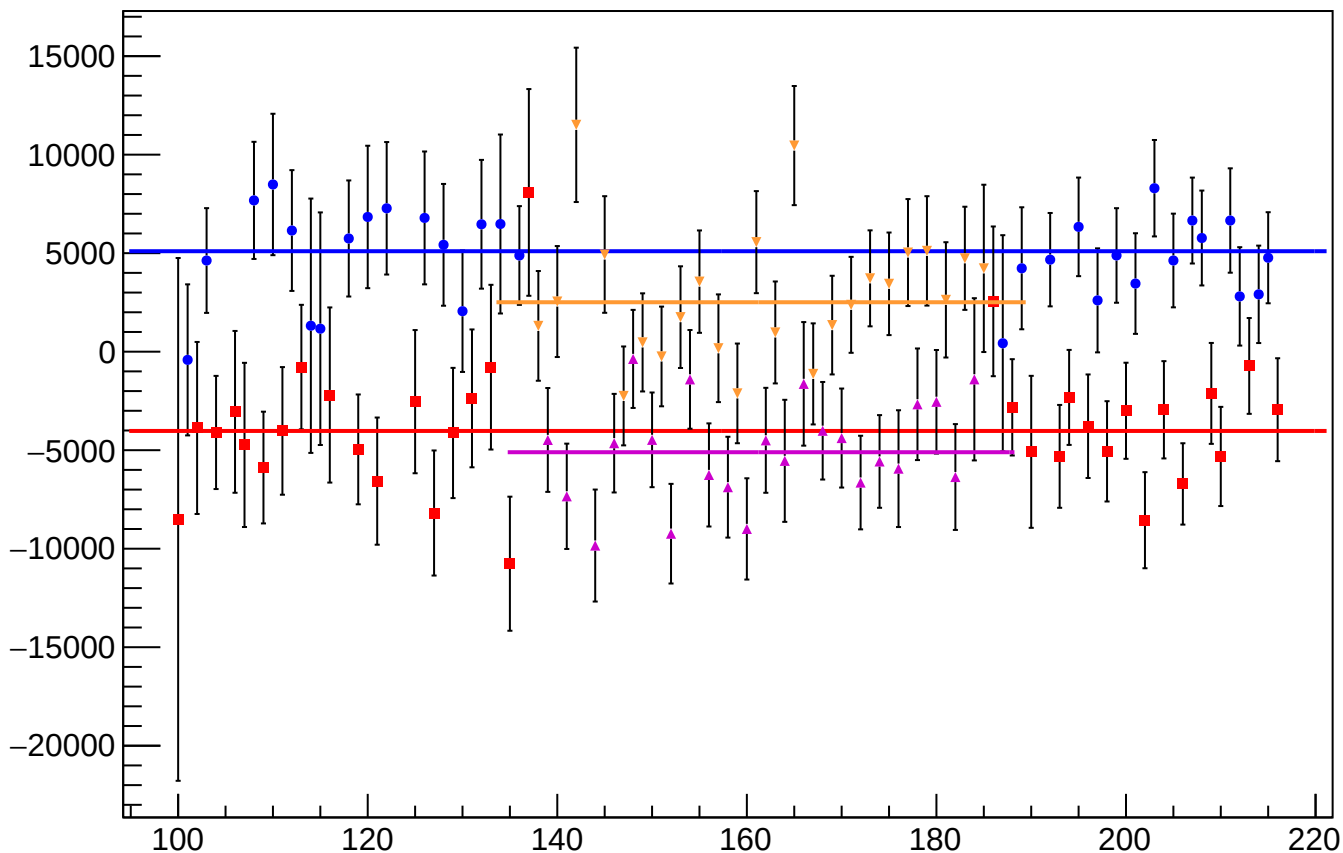
Left In: 10816.320 $\pm$ 1.822  $\chi^2/\text{NDF}$ : 1196820.9/22

+ sign 10714.639 $\pm$ 1.264  $\chi^2/\text{NDF}$ : 3144161.1/54

All: 10552.412 $\pm$ 0.884  $\chi^2/\text{NDF}$ : 7557070.6/55

- sign 10396.847 $\pm$ 1.238  $\chi^2/\text{NDF}$ : 4380639.5/55

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 5099.251 $\pm$ 515.366  $\chi^2$ /NDF: 13.6/30

Left Out: 2508.963 $\pm$ 551.602  $\chi^2$ /NDF: 29.8/23

Right Out: -4023.363 $\pm$ 519.723  $\chi^2$ /NDF: 27.1/32

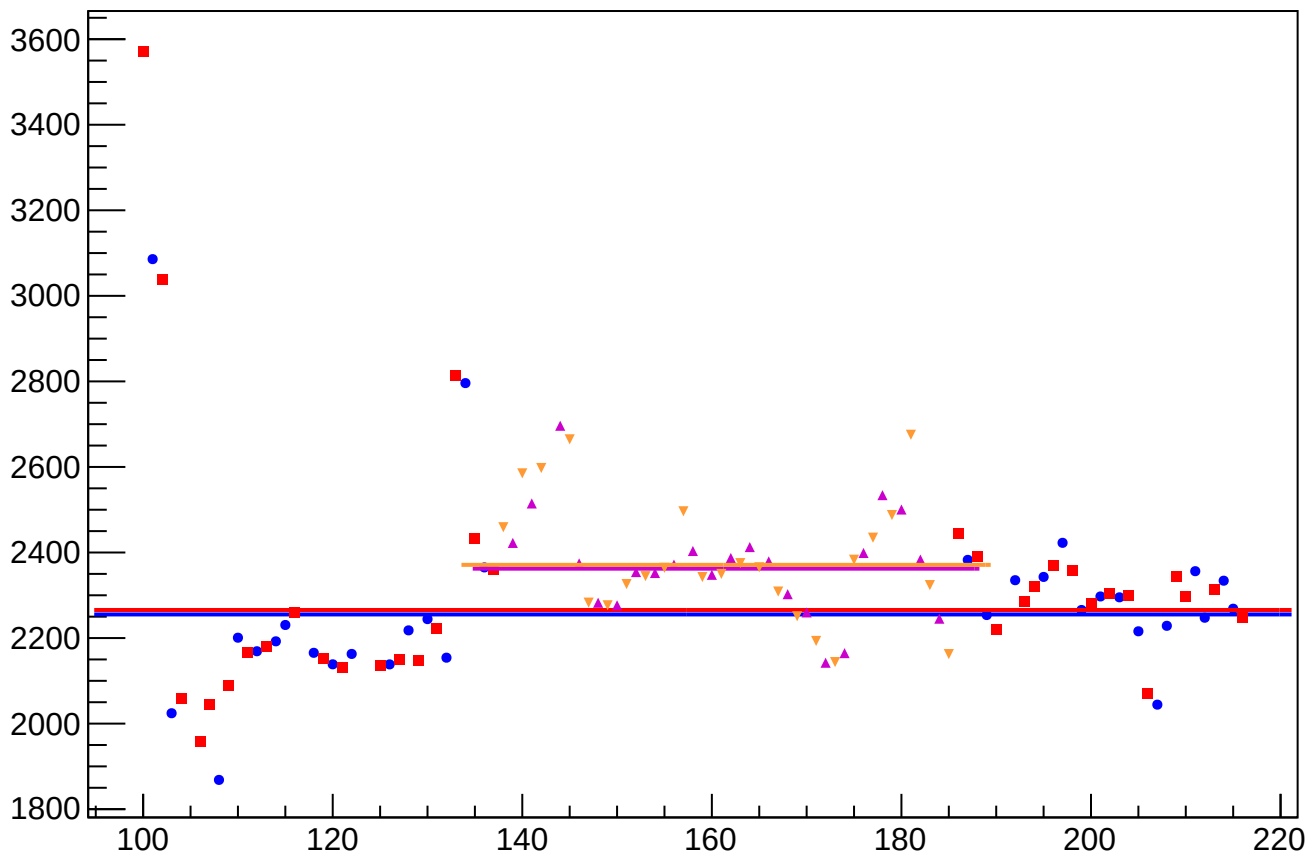
Left In: -5102.996 $\pm$ 552.584  $\chi^2$ /NDF: 19.9/22

+ sign 3891.975 $\pm$ 376.578  $\chi^2$ /NDF: 55.2/54

All: -296.701 $\pm$ 266.987  $\chi^2$ /NDF: 353.0/110

- sign -4530.125 $\pm$ 378.584  $\chi^2$ /NDF: 49.0/55

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 2255.204 $\pm$ 0.364  $\chi^2$ /NDF: 226893.4/30

Left Out: 2371.140 $\pm$ 0.390  $\chi^2$ /NDF: 116300.8/23

Right Out: 2265.633 $\pm$ 0.367  $\chi^2$ /NDF: 214365.6/32

Left In: 2362.221 $\pm$ 0.391  $\chi^2$ /NDF: 91901.3/22

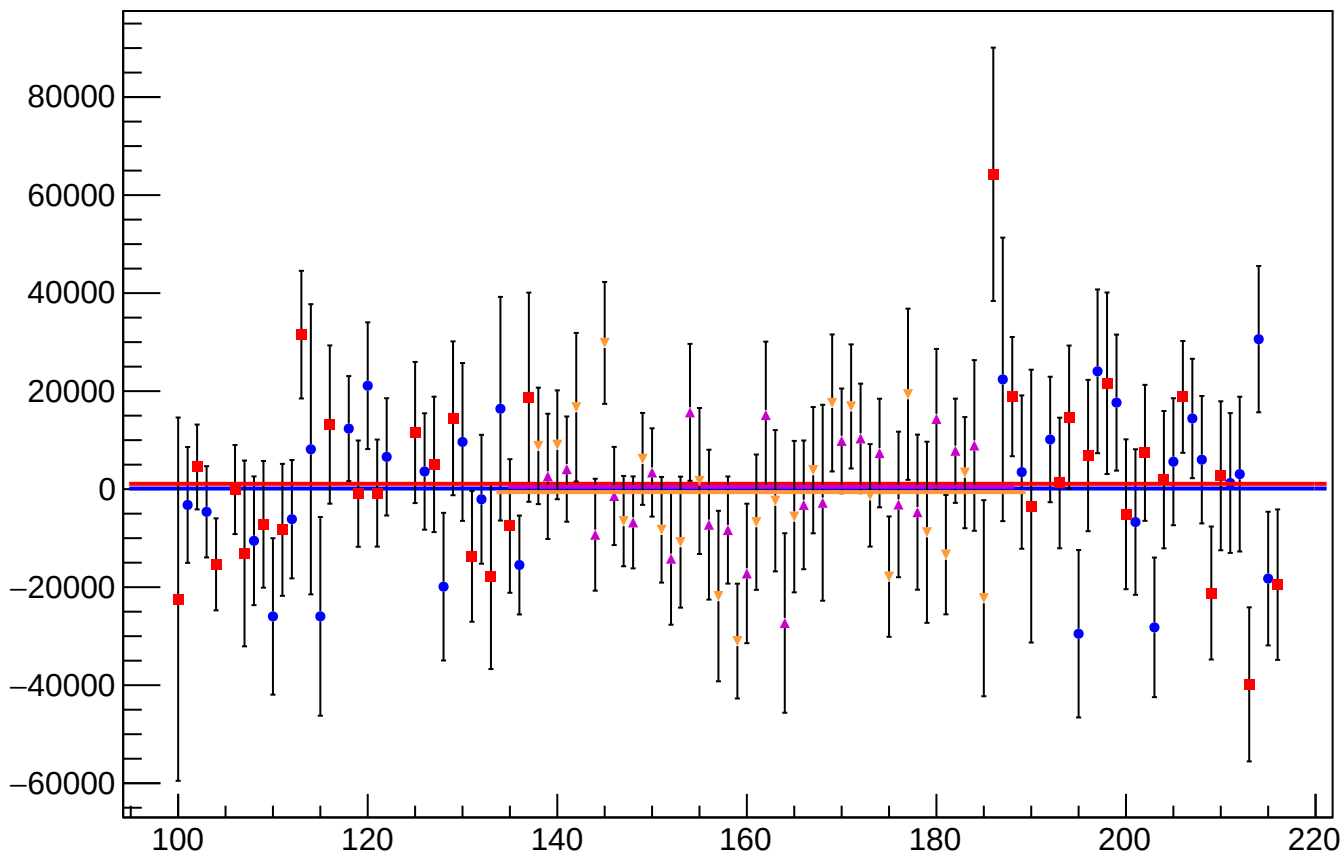
+ sign 2309.239 $\pm$ 0.266  $\chi^2$ /NDF: 390366.9/54

All: 2310.095 $\pm$ 0.189  $\chi^2$ /NDF: 729085.3/110

- sign 2310.959 $\pm$ 0.268  $\chi^2$ /NDF: 338697.7/55



asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 129.298 $\pm$ 2470.165  $\chi^2$ /NDF: 34.9/30

Left Out: -608.291 $\pm$ 2589.924  $\chi^2$ /NDF:28.9/23

Right Out: 1090.815 $\pm$ 2384.904  $\chi^2$ /NDF: 40.3/32

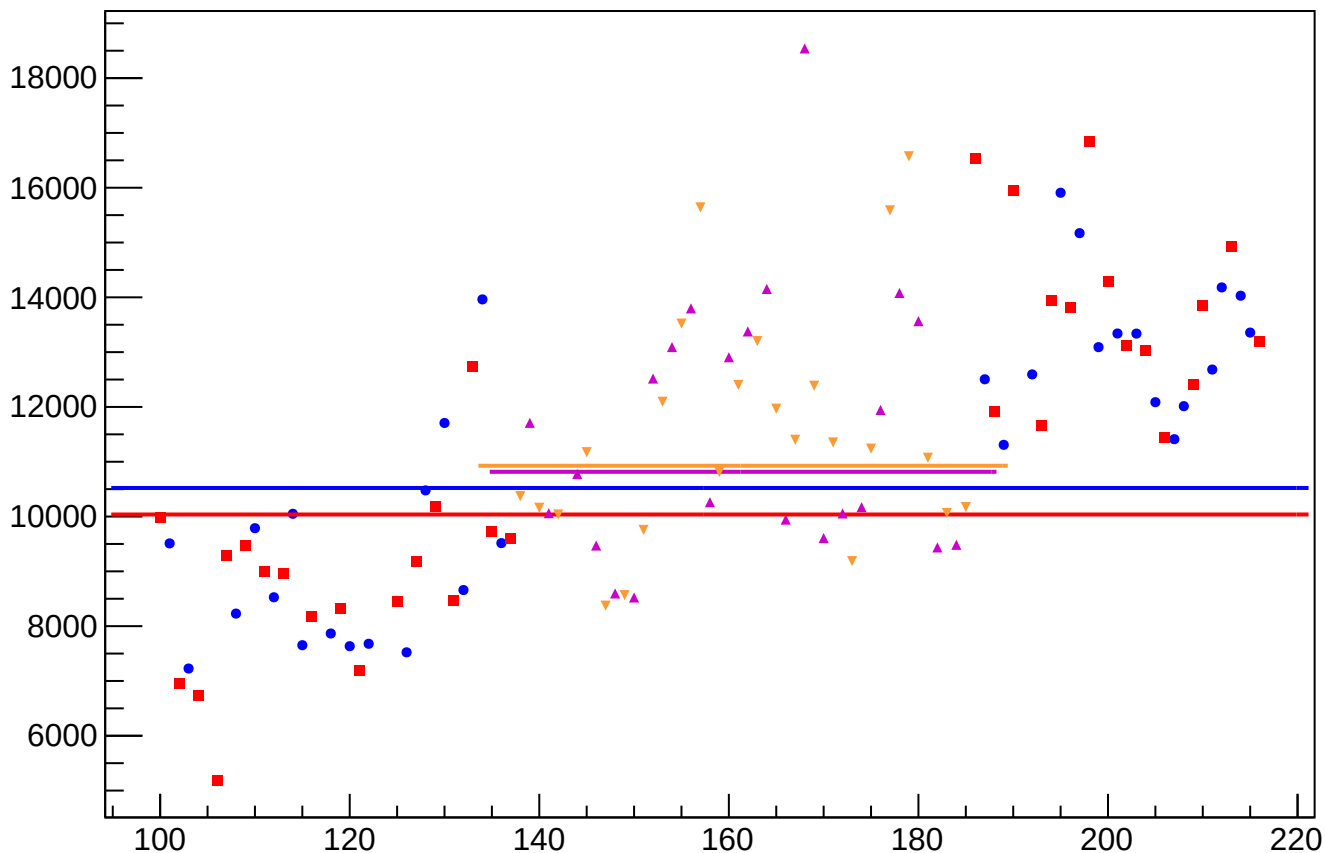
Left In: 490.047 $\pm$ 2577.218  $\chi^2$ /NDF:13.5/22

+ sign -222.049 $\pm$ 1787.509  $\chi^2$ /NDF: 63.8/54

All: 306.670 $\pm$ 1250.643  $\chi^2$ /NDF: 117.8/110

- sign 813.679 $\pm$ 1750.426  $\chi^2$ /NDF: 53.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In:  $10521.578 \pm 1.747$   $\chi^2/\text{NDF}: 2061219.0/30$

Left Out:  $10926.878 \pm 1.831$   $\chi^2/\text{NDF}: 1057333.6/23$

Right Out:  $10037.625 \pm 1.686$   $\chi^2/\text{NDF}: 3085492.1/32$

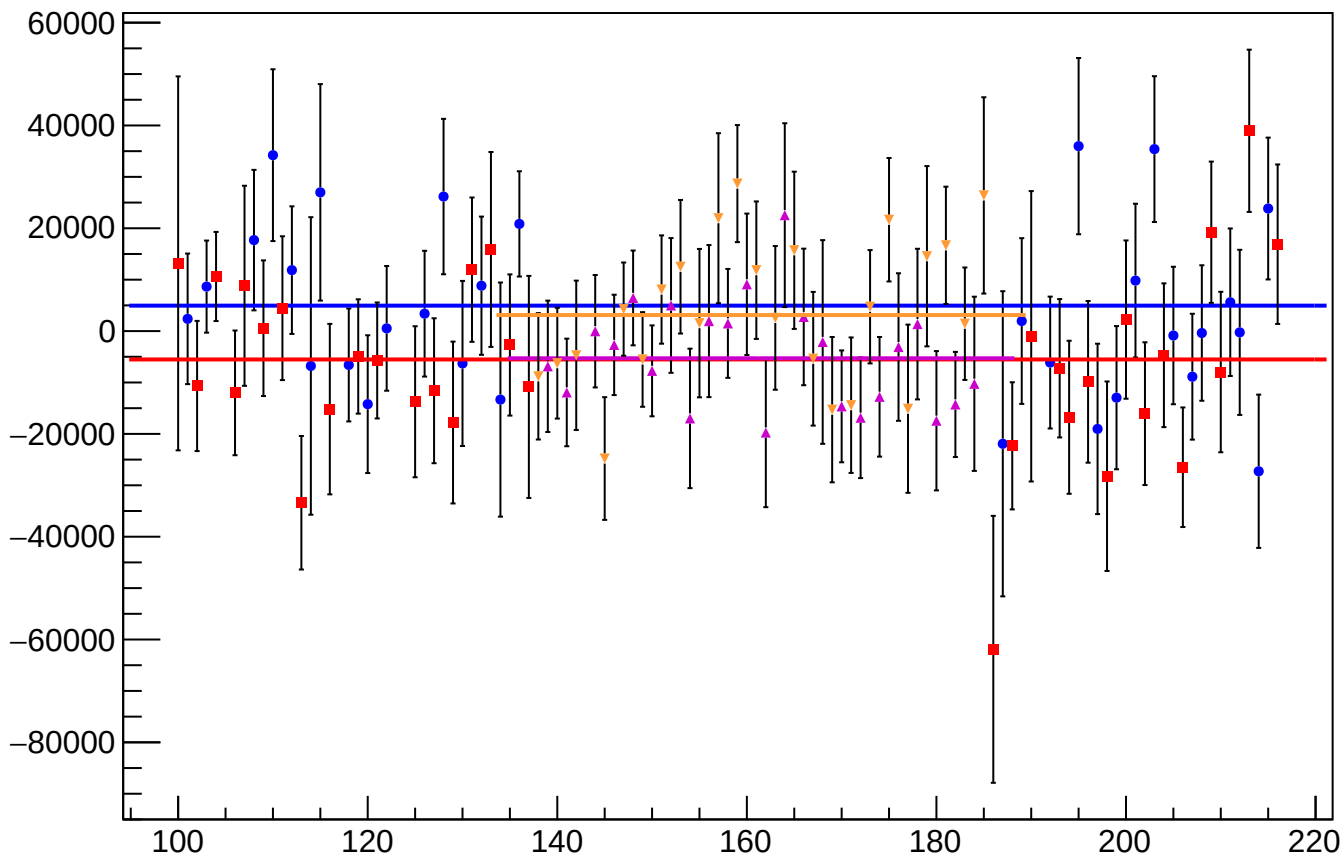
Left In:  $10816.337 \pm 1.822$   $\chi^2/\text{NDF}: 1196824.5/22$

+ sign  $10714.641 \pm 1.264$   $\chi^2/\text{NDF}: 3144200.5/54$

All:  $10552.413 \pm 0.884$   $\chi^2/\text{NDF}: 7557149.5/54$

- sign  $10396.847 \pm 1.238$   $\chi^2/\text{NDF}: 4380678.4/55$

asym\_us\_avg\_at2lr\_avg\_avg\_mean vs Slug



Right In: 4949.175 $\pm$ 2505.131  $\chi^2$ /NDF: 36.2/30

Left Out: 3119.161 $\pm$ 2542.855  $\chi^2$ /NDF: 27.4/23

Right Out: -5520.615 $\pm$ 2493.098  $\chi^2$ /NDF: 40.6/32

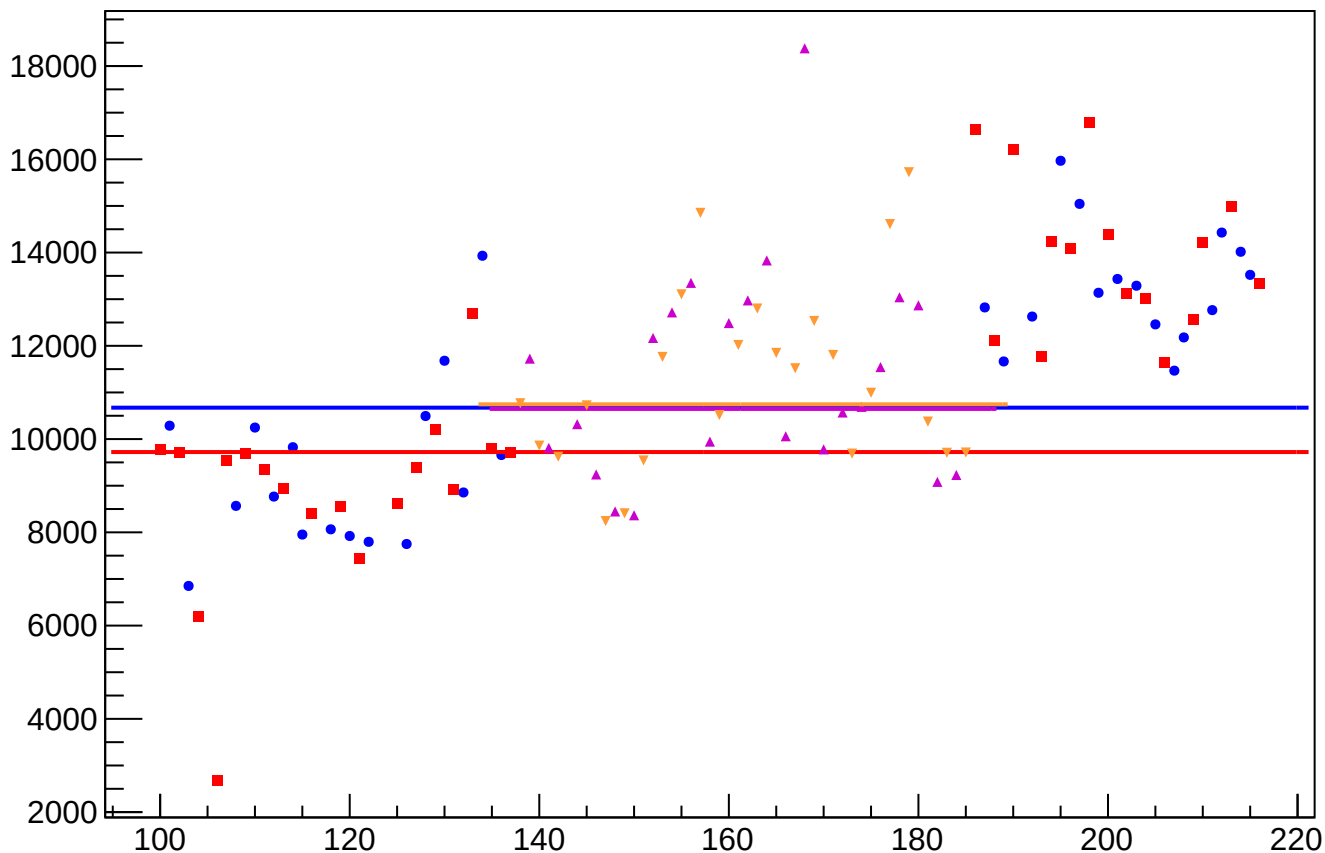
Left In: -5290.718 $\pm$ 2532.995  $\chi^2$ /NDF: 13.3/22

+ sign 4047.843 $\pm$ 1784.583  $\chi^2$ /NDF: 63.9/54

All: -700.423 $\pm$ 1259.139  $\chi^2$ /NDF: 132.0/110

- sign -5407.491 $\pm$ 1776.824  $\chi^2$ /NDF: 53.9/55

# asym\_us\_avg\_at2lr\_avg\_avg\_rms vs Slug



Right In: 10673.638+/-1.771  $\chi^2/\text{NDF}$ : 2027538.9/30

Left Out: 10745.331+/-1.798  $\chi^2/\text{NDF}$ : 964618.1/23

Right Out: 9721.911+/-1.685  $\chi^2/\text{NDF}$ : 4771785.9/32

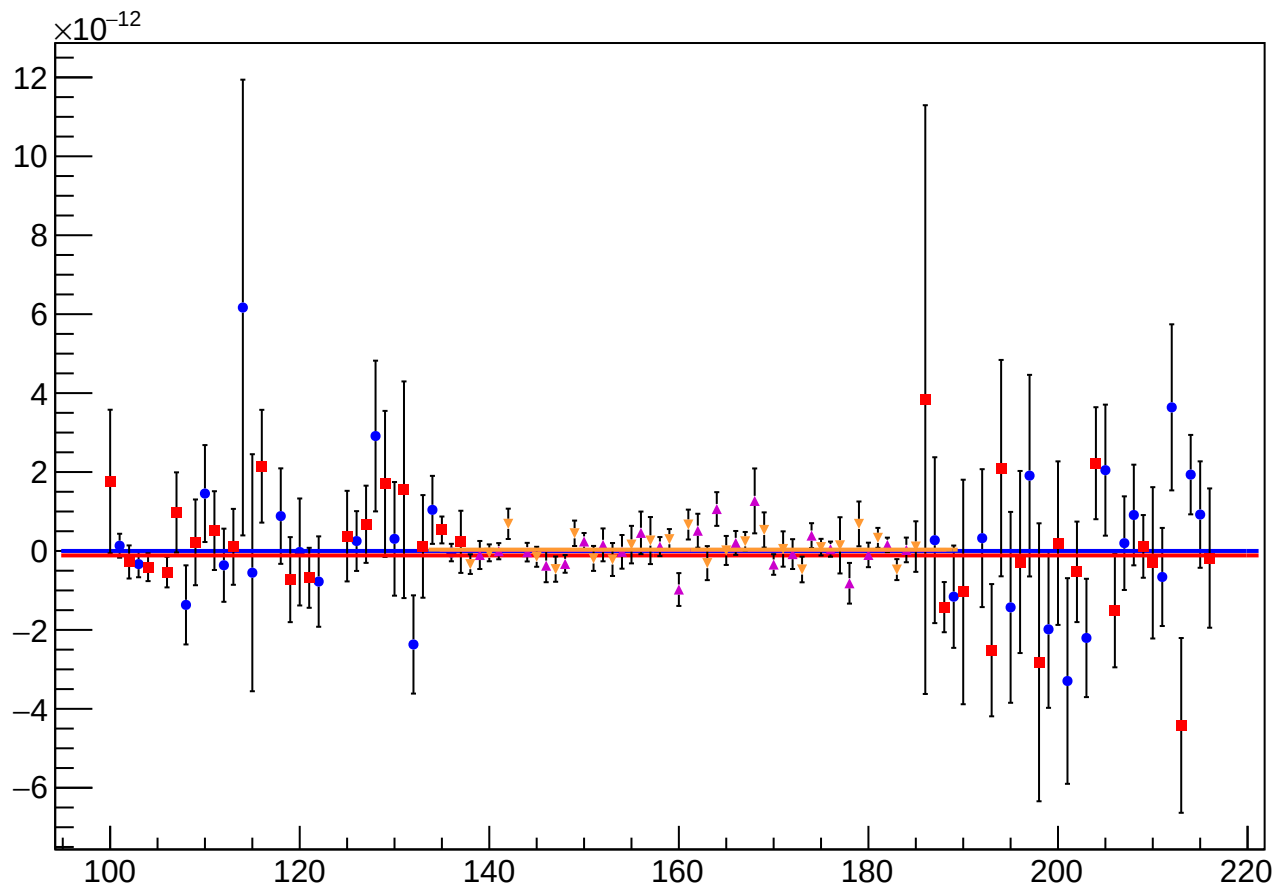
Left In: 10646.477+/-1.791  $\chi^2/\text{NDF}$ : 1114064.0/22

+ sign 10708.949+/-1.262  $\chi^2/\text{NDF}$ : 2992963.8/54

All: 10424.723+/-0.880  $\chi^2/\text{NDF}$ : 9118903.4/100

- sign 10155.925+/-1.227  $\chi^2/\text{NDF}$ : 6027228.5/55

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.3/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.8/32

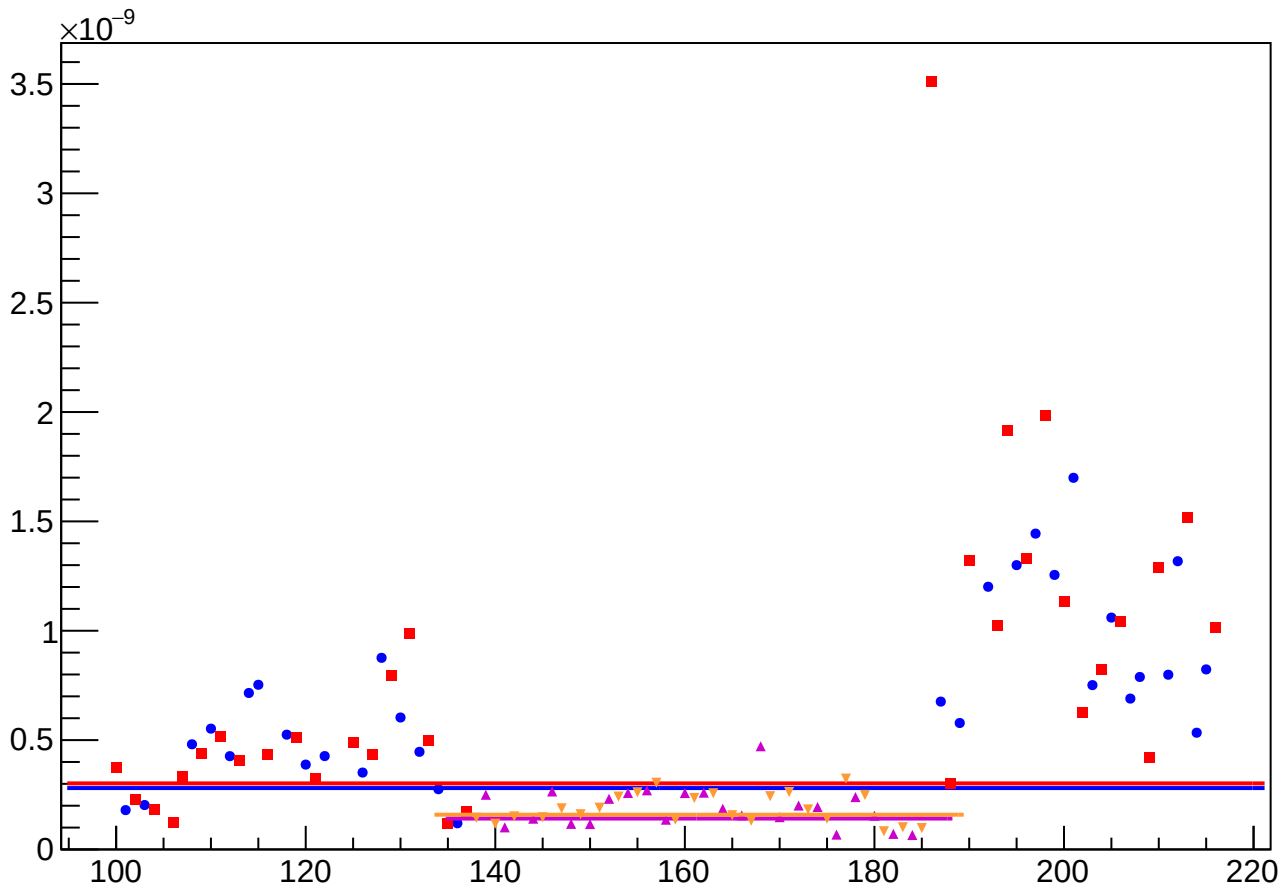
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.7/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 115.2/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.5/55

asym\_us\_avg\_at2lr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7202183.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1297018.7/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 7291766.0/32

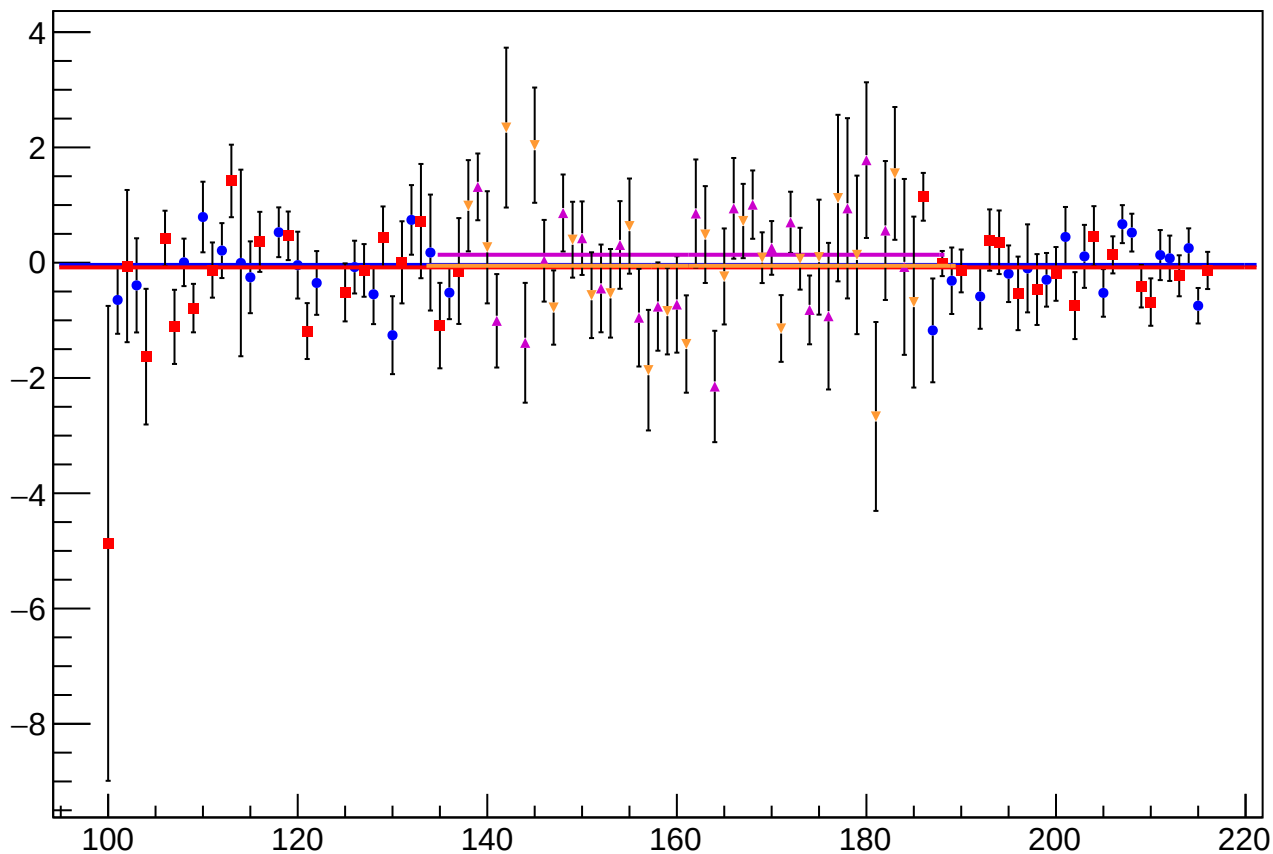
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2396288.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9842160.0/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21739226.8/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11810648.2/55

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.087$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.082 \pm 0.082$   $\chi^2/\text{NDF}$ : 44.4/32

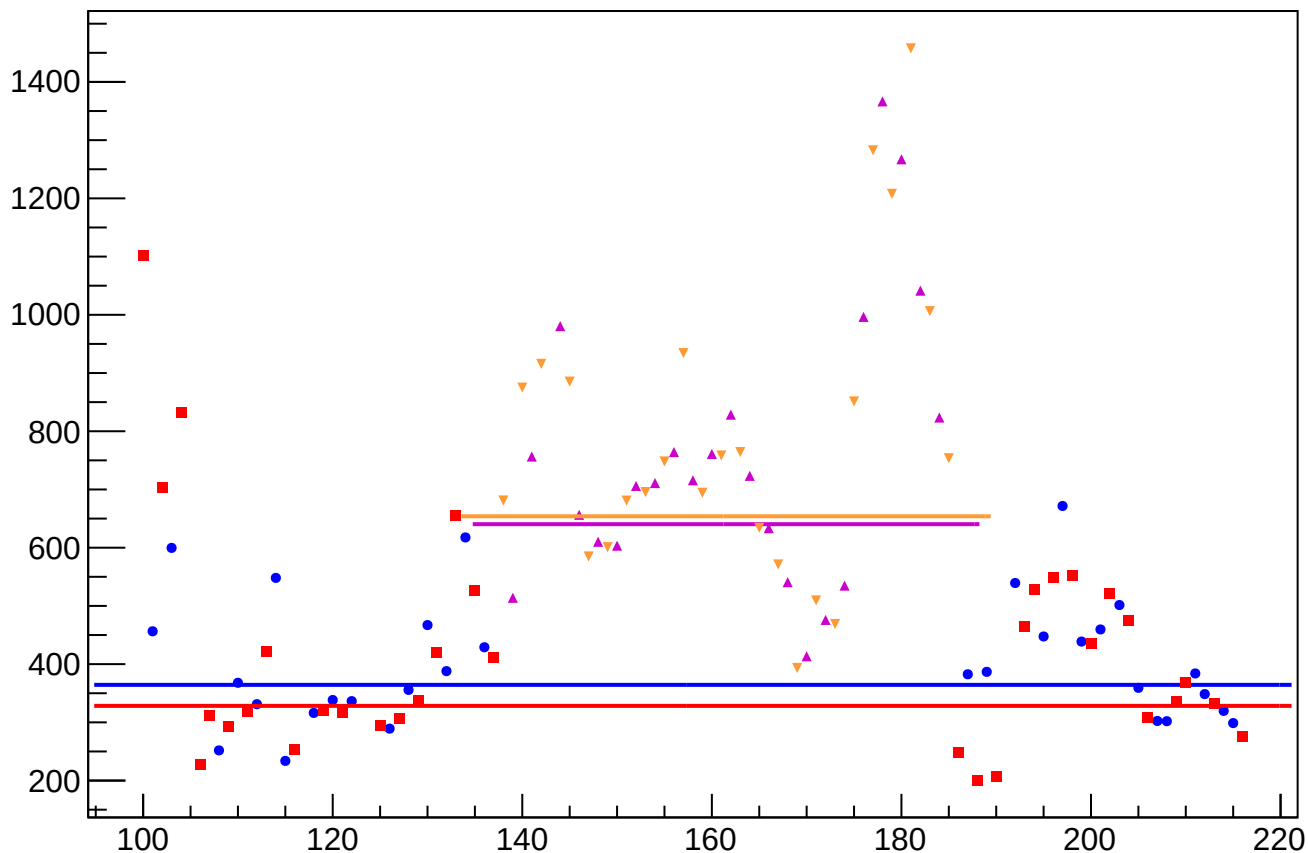
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.042 \pm 0.077$   $\chi^2/\text{NDF}$ : 62.0/54

All:  $-0.038 \pm 0.053$   $\chi^2/\text{NDF}$ : 137.9/110

- sign  $-0.035 \pm 0.072$   $\chi^2/\text{NDF}$ : 75.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $364.407 \pm 0.062$   $\chi^2/\text{NDF}: 1890909.1/30$

Left Out:  $653.930 \pm 0.114$   $\chi^2/\text{NDF}: 3124472.6/23$

Right Out:  $328.318 \pm 0.058$   $\chi^2/\text{NDF}: 3663972.6/32$

Left In:  $640.392 \pm 0.112$   $\chi^2/\text{NDF}: 2647967.4/22$

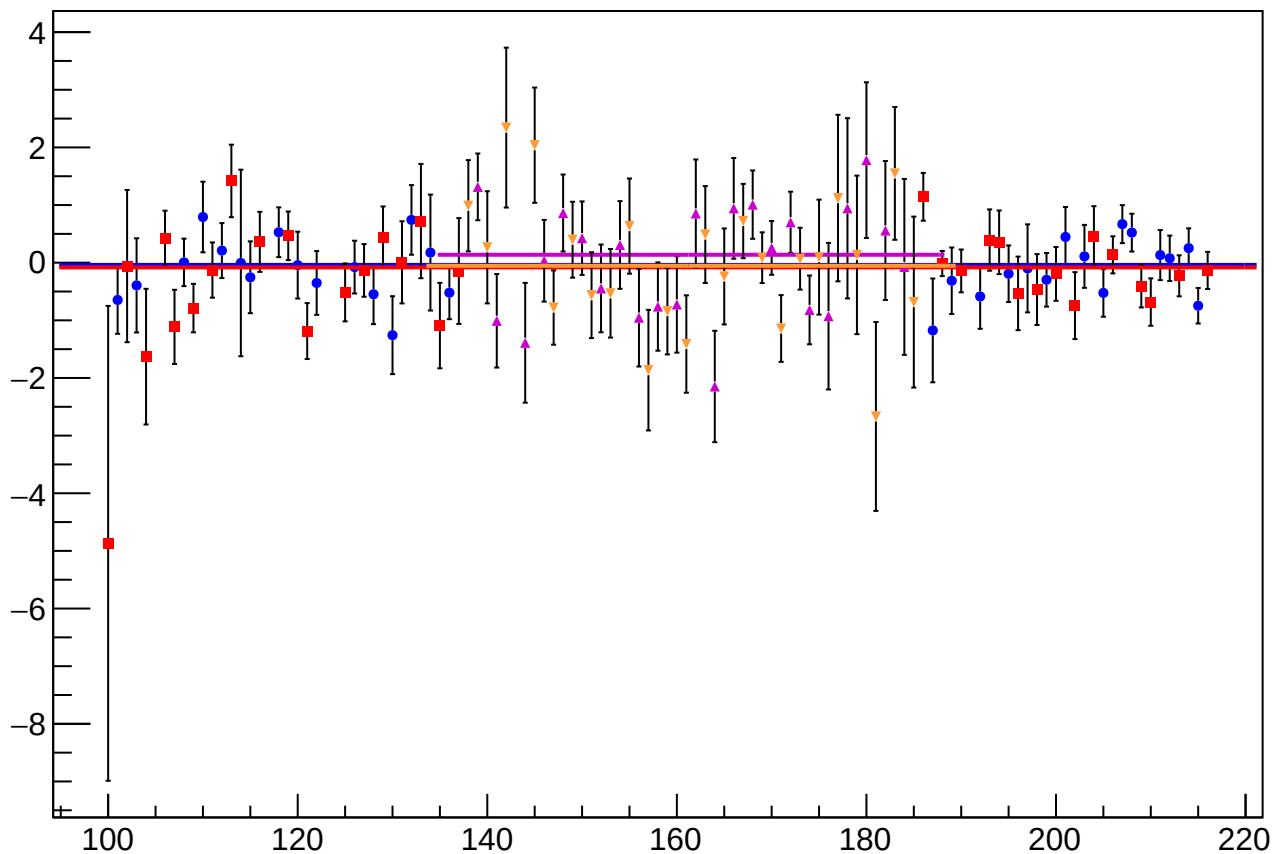
+ sign  $429.990 \pm 0.054$   $\chi^2/\text{NDF}: 9997695.6/54$

All:  $410.991 \pm 0.037$   $\chi^2/\text{NDF}: 22710211.4/1$

- sign  $394.070 \pm 0.051$   $\chi^2/\text{NDF}: 12480997.6/55$



asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.087$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.082 \pm 0.082$   $\chi^2/\text{NDF}$ : 44.4/32

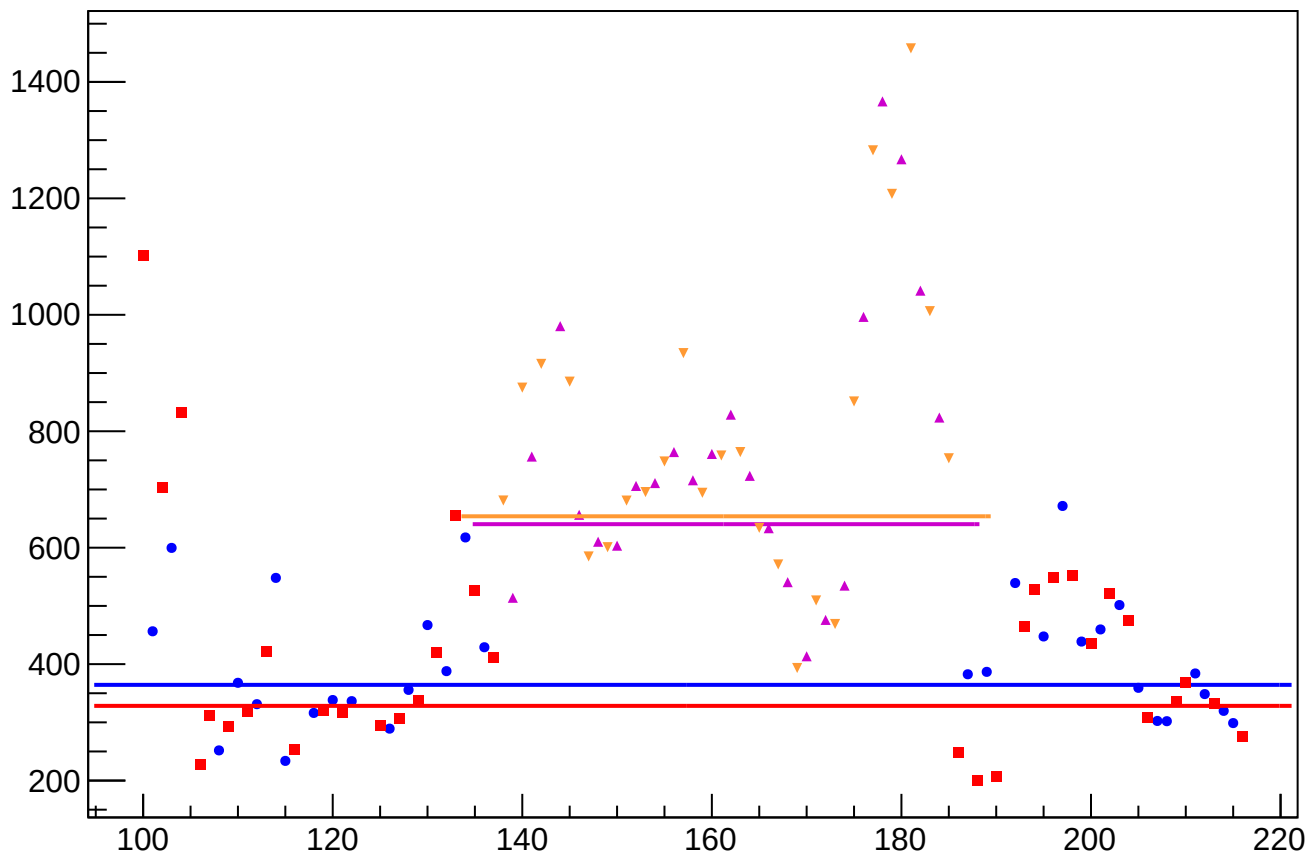
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.042 \pm 0.077$   $\chi^2/\text{NDF}$ : 62.0/54

All:  $-0.038 \pm 0.053$   $\chi^2/\text{NDF}$ : 137.9/110

- sign  $-0.035 \pm 0.072$   $\chi^2/\text{NDF}$ : 75.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 364.407 $\pm$ 0.062  $\chi^2$ /NDF: 1890909.1/30

Left Out: 653.930 $\pm$ 0.114  $\chi^2$ /NDF:3124472.6/23

Right Out: 328.318 $\pm$ 0.058  $\chi^2$ /NDF: 3663972.6/32

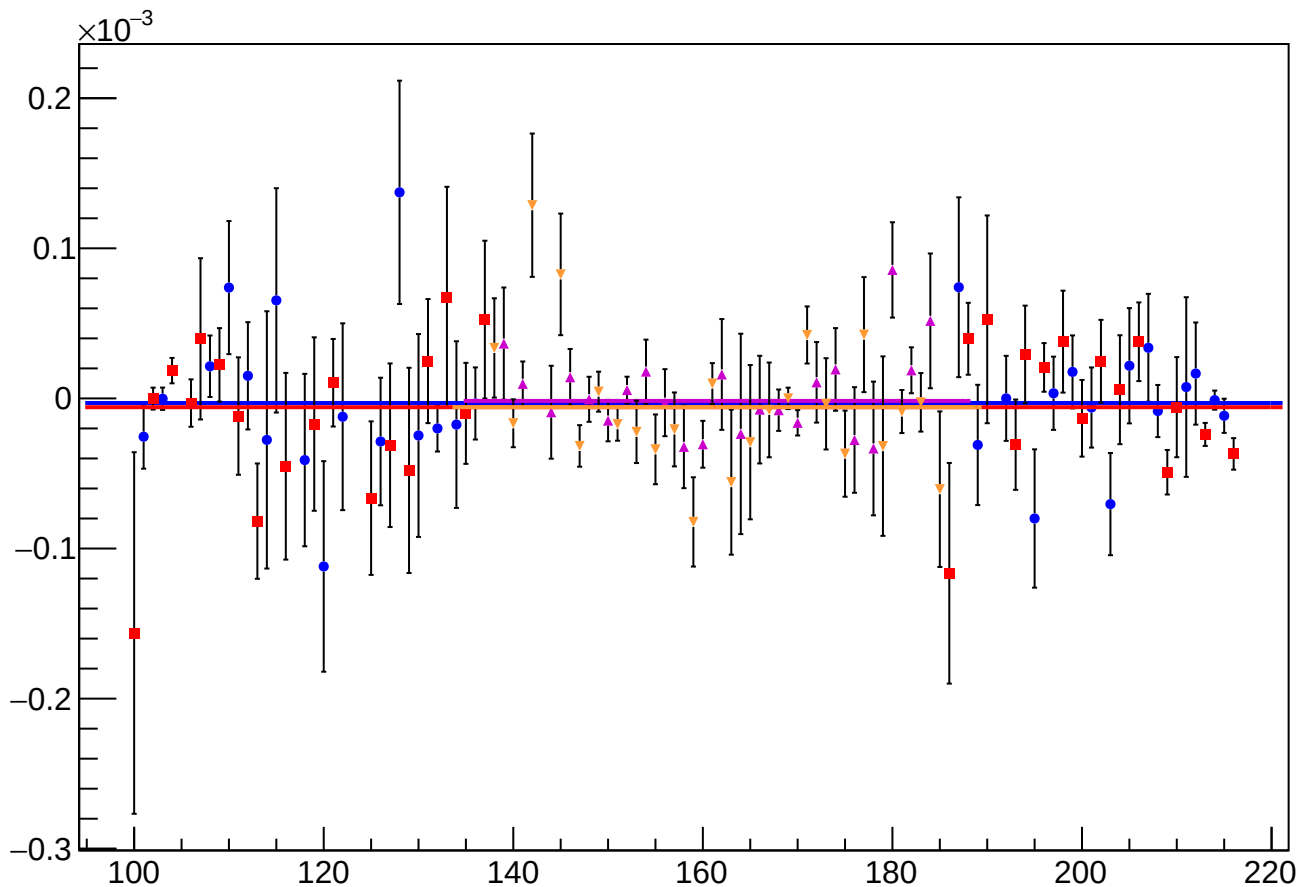
Left In: 640.392 $\pm$ 0.112  $\chi^2$ /NDF:2647967.4/22

+ sign 429.990 $\pm$ 0.054  $\chi^2$ /NDF: 9997695.6/54

All: 410.991 $\pm$ 0.037  $\chi^2$ /NDF: 22710211.4/11

- sign 394.070 $\pm$ 0.051  $\chi^2$ /NDF: 12480997.6/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.3/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.6/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 61.9/32

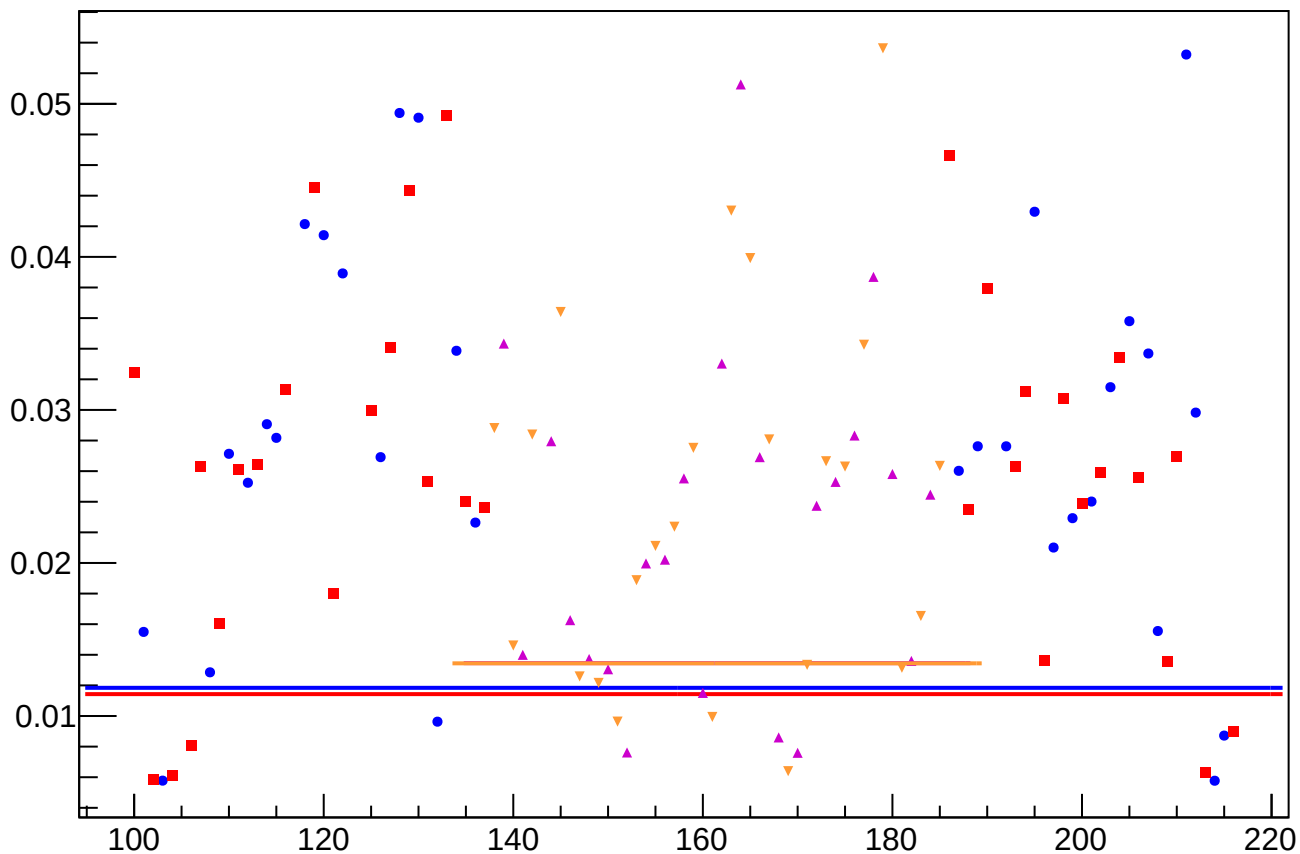
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.2/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 158.4/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 88.2/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 14354154.3/30

Left Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:8856192.5/23

Right Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 13083659.2/32

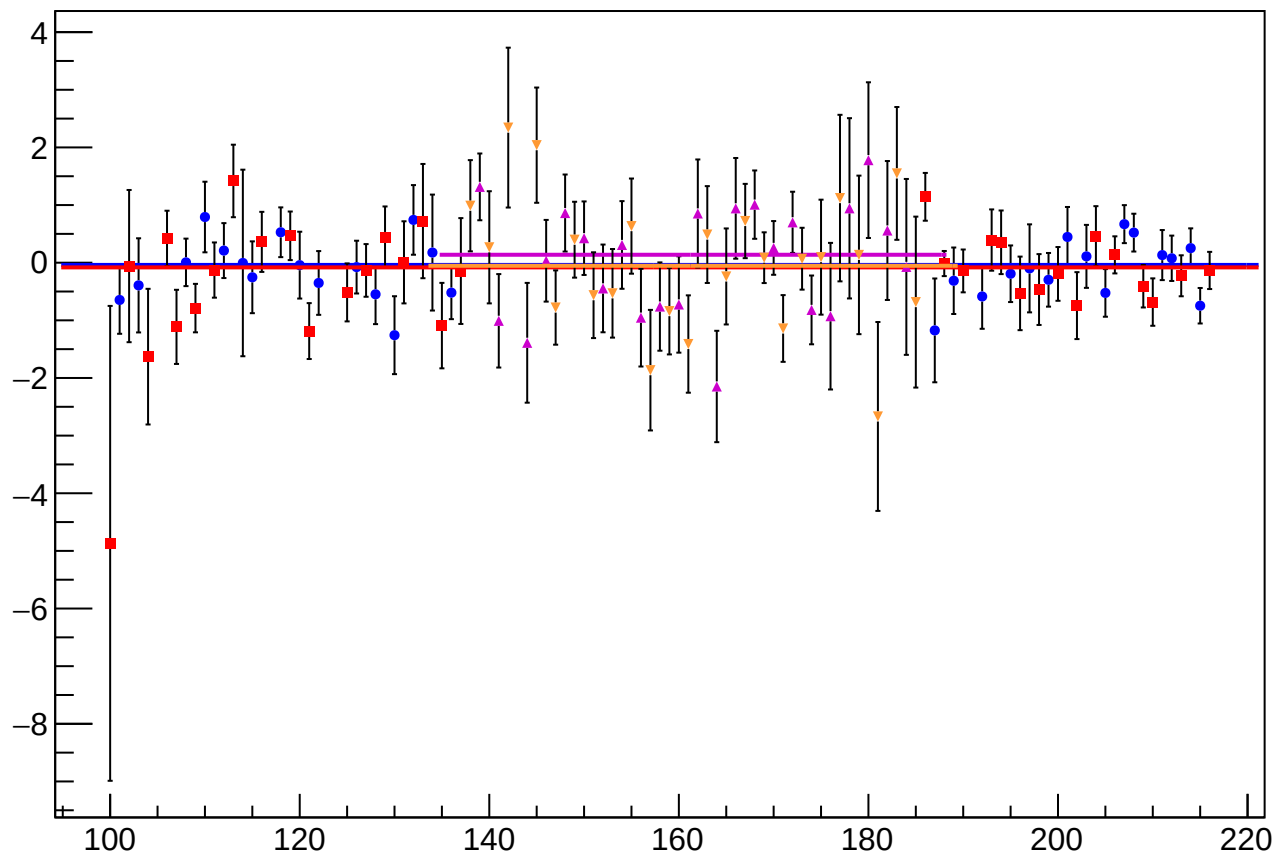
Left In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF:7548263.6/22

+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 23404222.1/54

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 44376839.8/110

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 20960322.5/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.087$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.082 \pm 0.082$   $\chi^2/\text{NDF}$ : 44.4/32

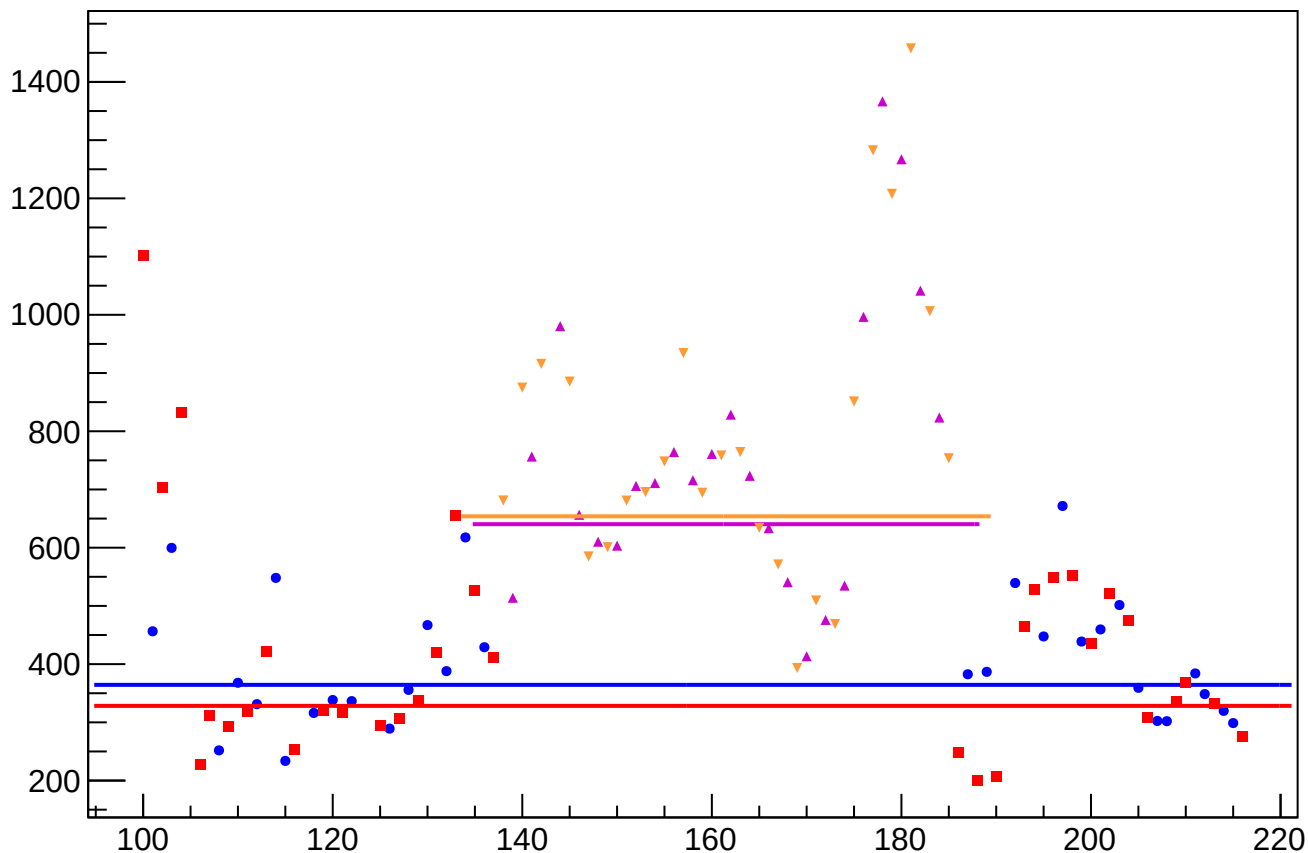
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.042 \pm 0.077$   $\chi^2/\text{NDF}$ : 62.0/54

All:  $-0.038 \pm 0.053$   $\chi^2/\text{NDF}$ : 137.9/110

- sign  $-0.035 \pm 0.072$   $\chi^2/\text{NDF}$ : 75.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 364.407 $\pm$ 0.062  $\chi^2$ /NDF: 1890902.6/30

Left Out: 653.930 $\pm$ 0.114  $\chi^2$ /NDF:3124692.9/23

Right Out: 328.313 $\pm$ 0.058  $\chi^2$ /NDF: 3664171.7/32

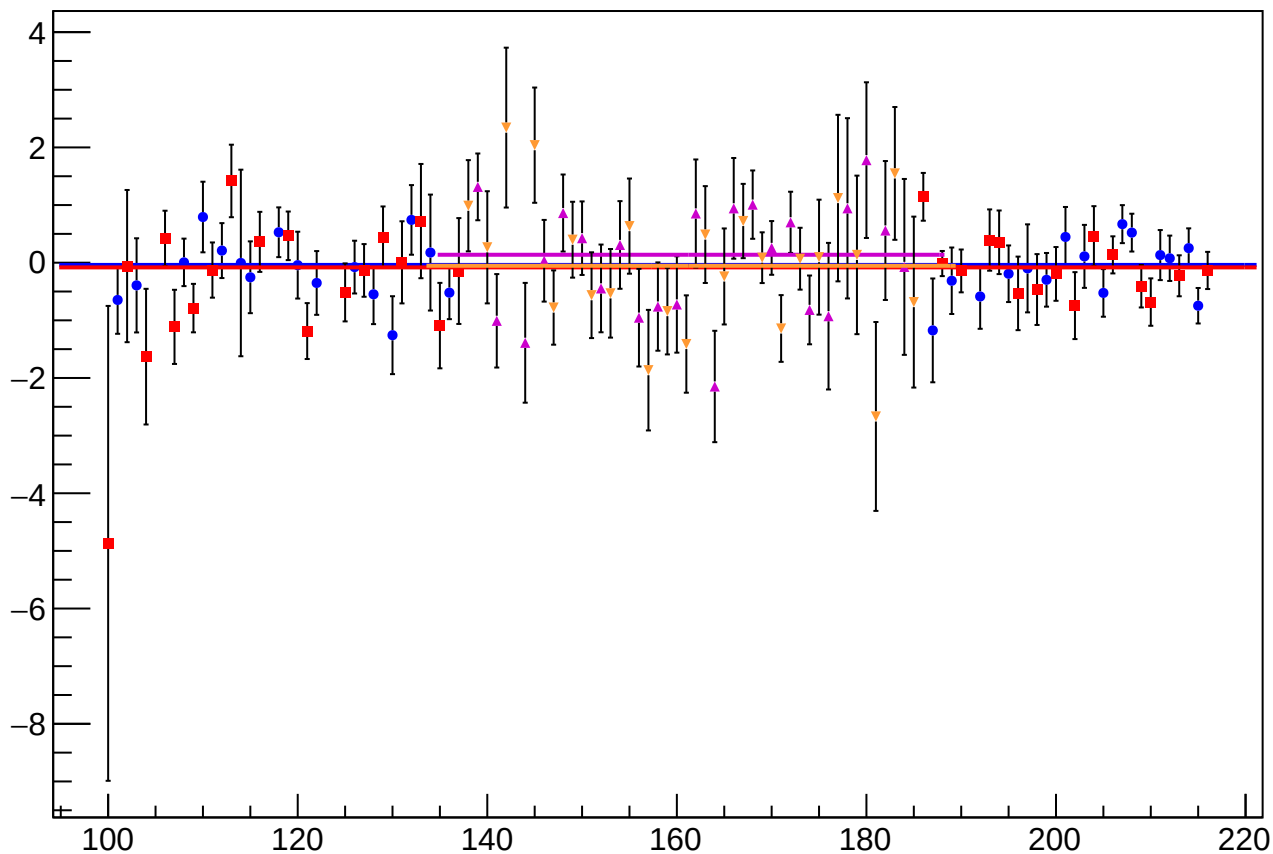
Left In: 640.395 $\pm$ 0.112  $\chi^2$ /NDF:2648118.2/22

+ sign 429.990 $\pm$ 0.054  $\chi^2$ /NDF: 9997898.7/54

All: 410.988 $\pm$ 0.037  $\chi^2$ /NDF: 22711088.9/1

- sign 394.065 $\pm$ 0.051  $\chi^2$ /NDF: 12481611.6/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.039 \pm 0.087$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $-0.053 \pm 0.161$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.082 \pm 0.082$   $\chi^2/\text{NDF}$ : 44.4/32

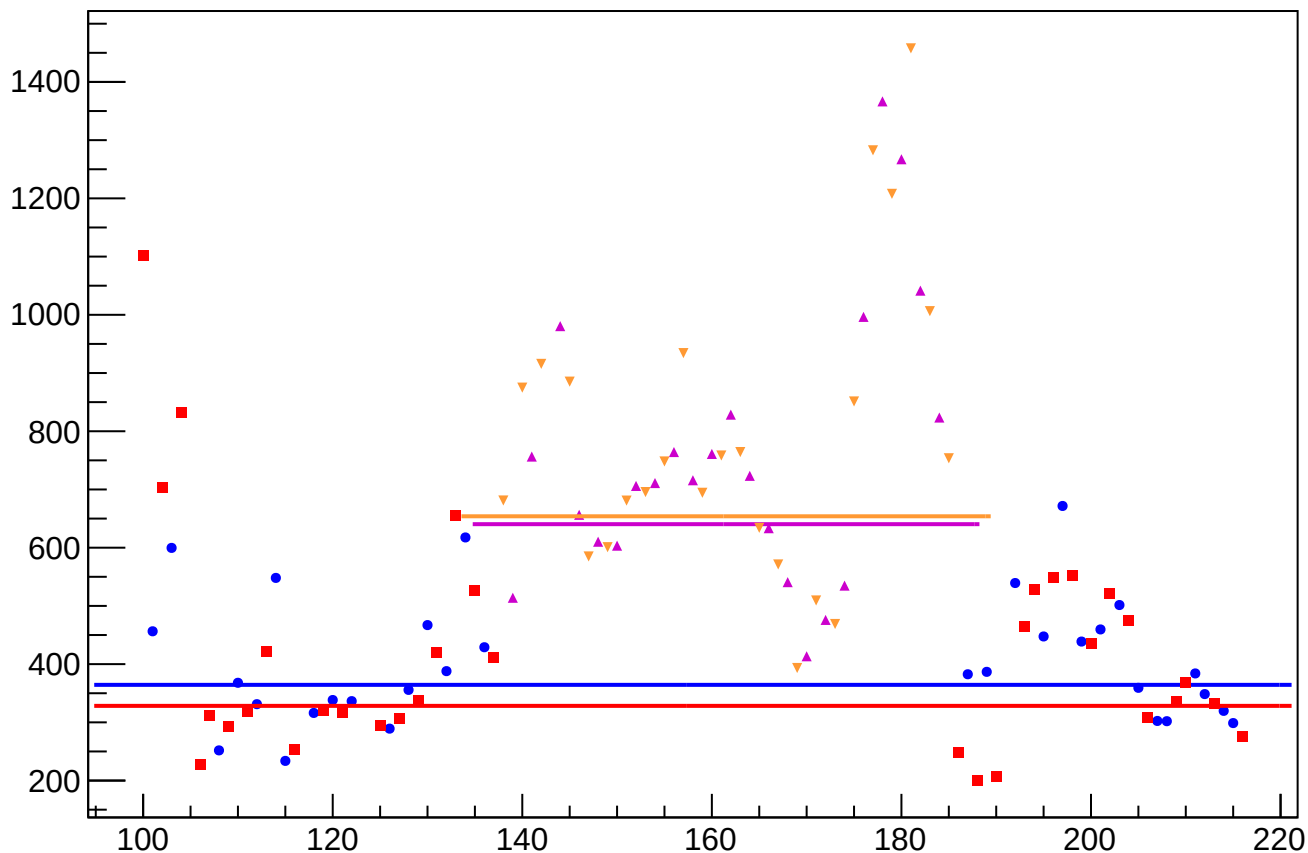
Left In:  $0.138 \pm 0.158$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-0.042 \pm 0.077$   $\chi^2/\text{NDF}$ : 62.0/54

All:  $-0.038 \pm 0.053$   $\chi^2/\text{NDF}$ : 137.9/110

- sign  $-0.035 \pm 0.072$   $\chi^2/\text{NDF}$ : 75.8/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $364.407 \pm 0.062$   $\chi^2/\text{NDF}: 1890902.6/30$

Left Out:  $653.930 \pm 0.114$   $\chi^2/\text{NDF}: 3124692.9/23$

Right Out:  $328.313 \pm 0.058$   $\chi^2/\text{NDF}: 3664171.7/32$

Left In:  $640.395 \pm 0.112$   $\chi^2/\text{NDF}: 2648118.2/22$

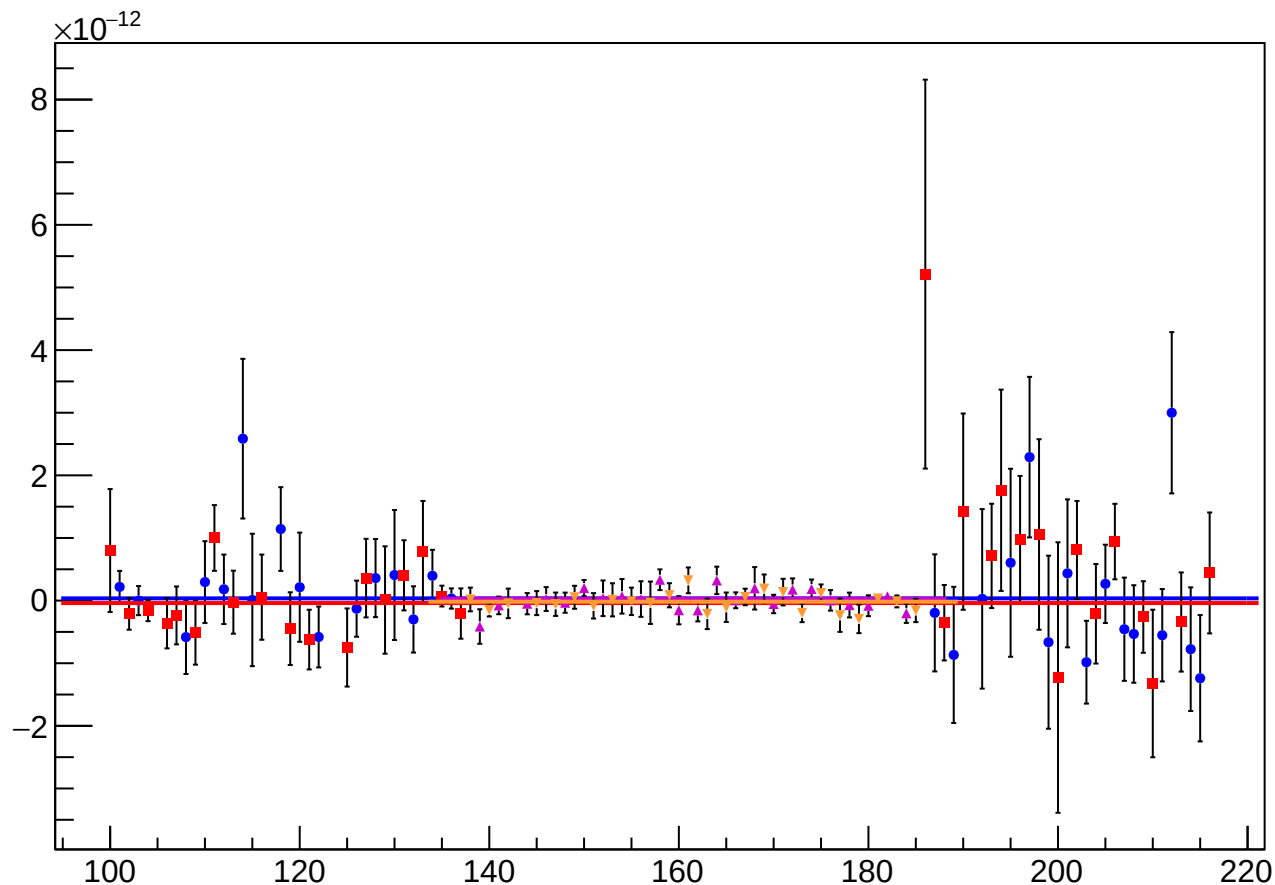
+ sign  $429.990 \pm 0.054$   $\chi^2/\text{NDF}: 9997898.7/54$

All:  $410.988 \pm 0.037$   $\chi^2/\text{NDF}: 22711088.9/11$

- sign  $394.065 \pm 0.051$   $\chi^2/\text{NDF}: 12481611.6/55$



asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.9/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:13.1/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.8/32

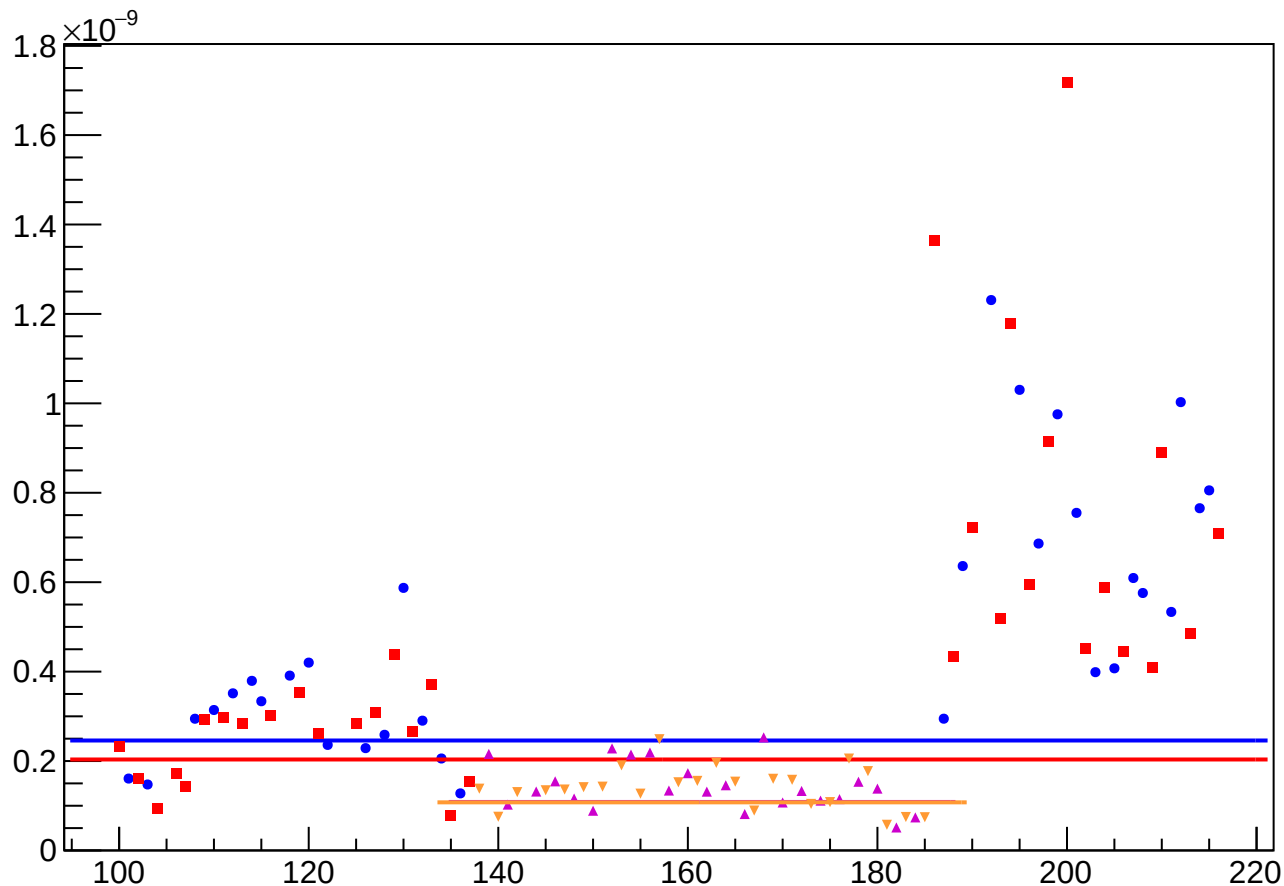
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:17.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.3/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.1/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.3/55

asym\_us\_avg\_at2lr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8291272.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3452023.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9092370.8/32

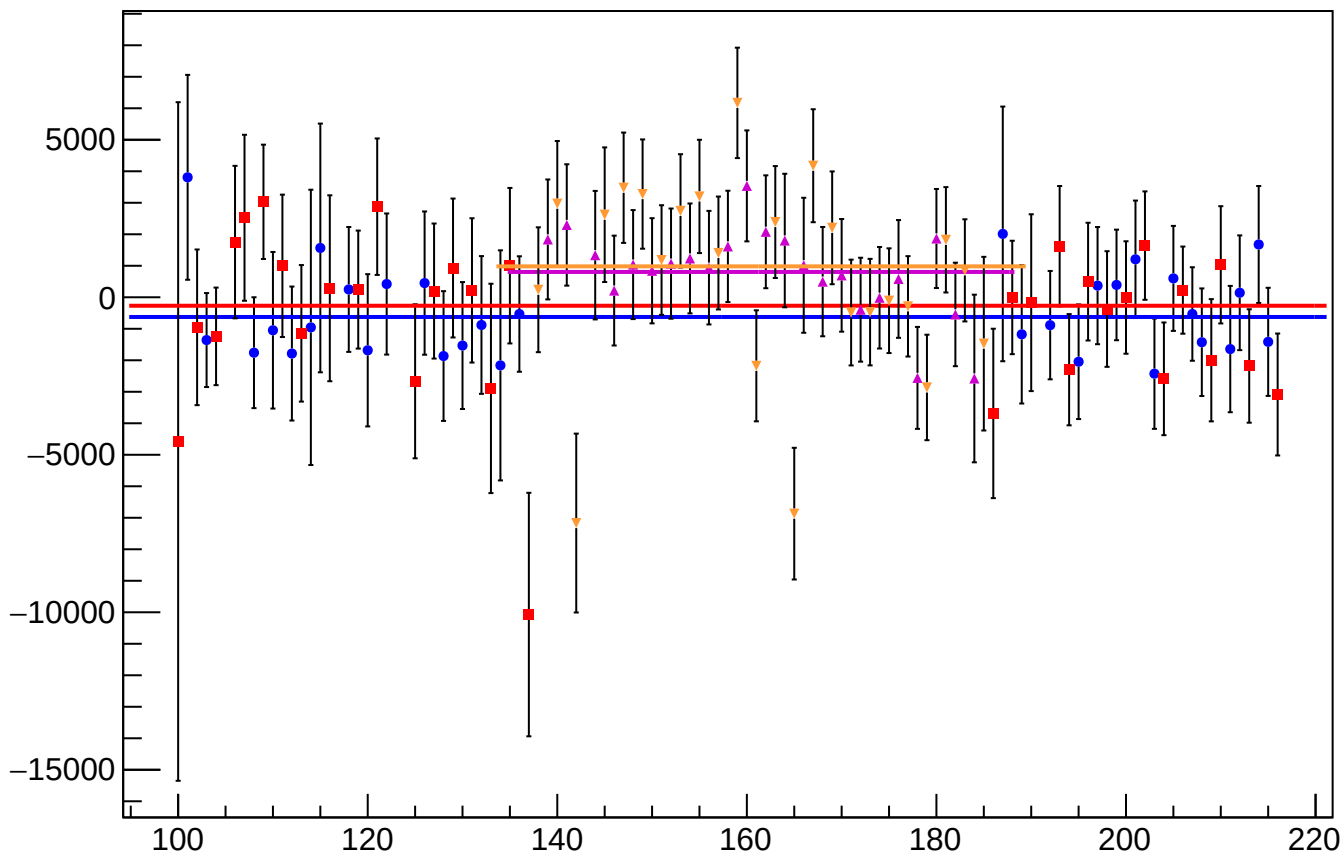
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3869719.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15946859.8/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31317297.7/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15366760.3/55

# reg\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-625.484 \pm 359.895$   $\chi^2/\text{NDF}$ : 11.5/30

Left Out:  $981.627 \pm 370.843$   $\chi^2/\text{NDF}$ : 55.5/23

Right Out:  $-268.822 \pm 360.373$   $\chi^2/\text{NDF}$ : 28.8/32

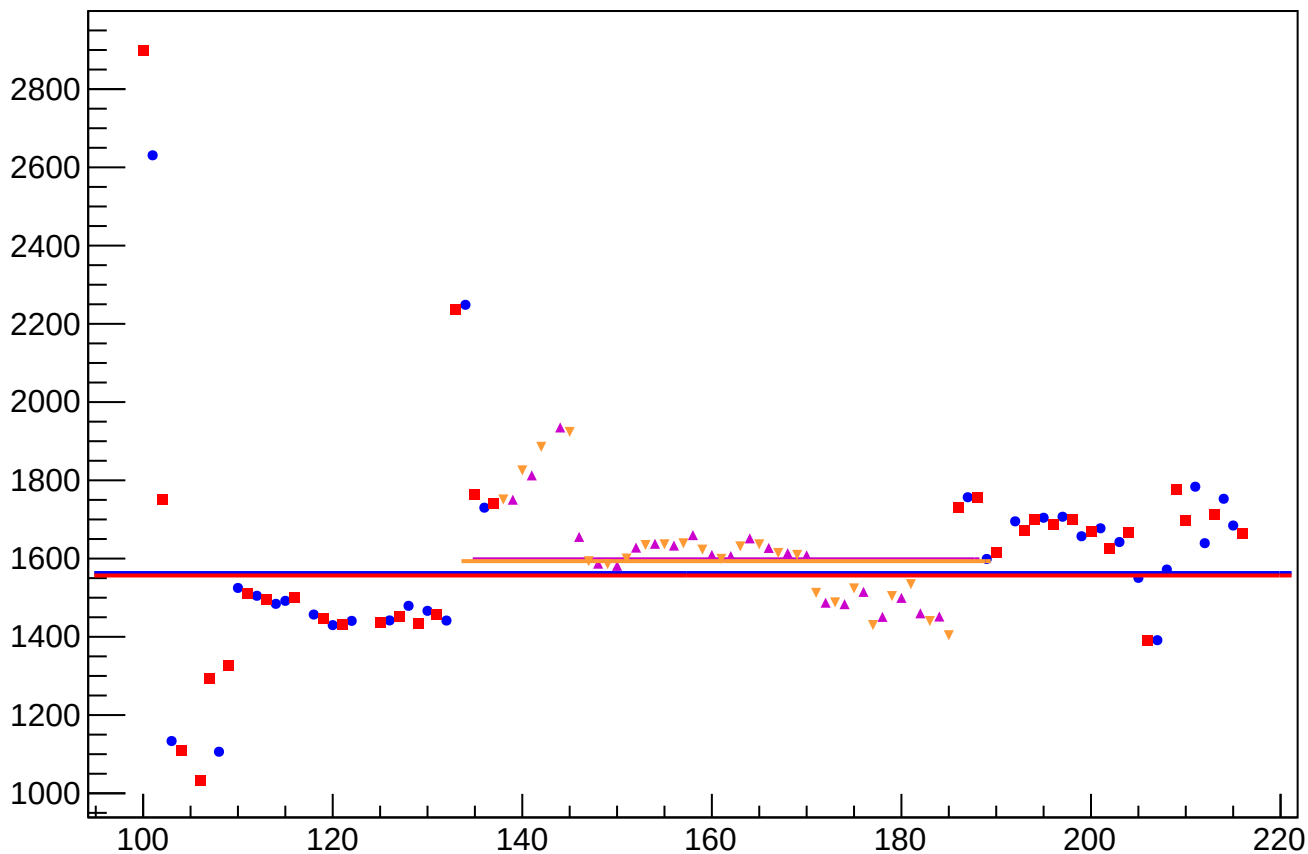
Left In:  $803.908 \pm 374.066$   $\chi^2/\text{NDF}$ : 12.4/22

+ sign  $153.999 \pm 258.268$   $\chi^2/\text{NDF}$ : 76.7/54

All:  $200.547 \pm 183.067$   $\chi^2/\text{NDF}$ : 122.3/110

- sign  $247.551 \pm 259.528$   $\chi^2/\text{NDF}$ : 45.5/55

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1563.013 $\pm$ 0.254  $\chi^2$ /NDF: 787750.5/30

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF: 187613.7/23

Right Out: 1556.769 $\pm$ 0.254  $\chi^2$ /NDF: 704088.3/32

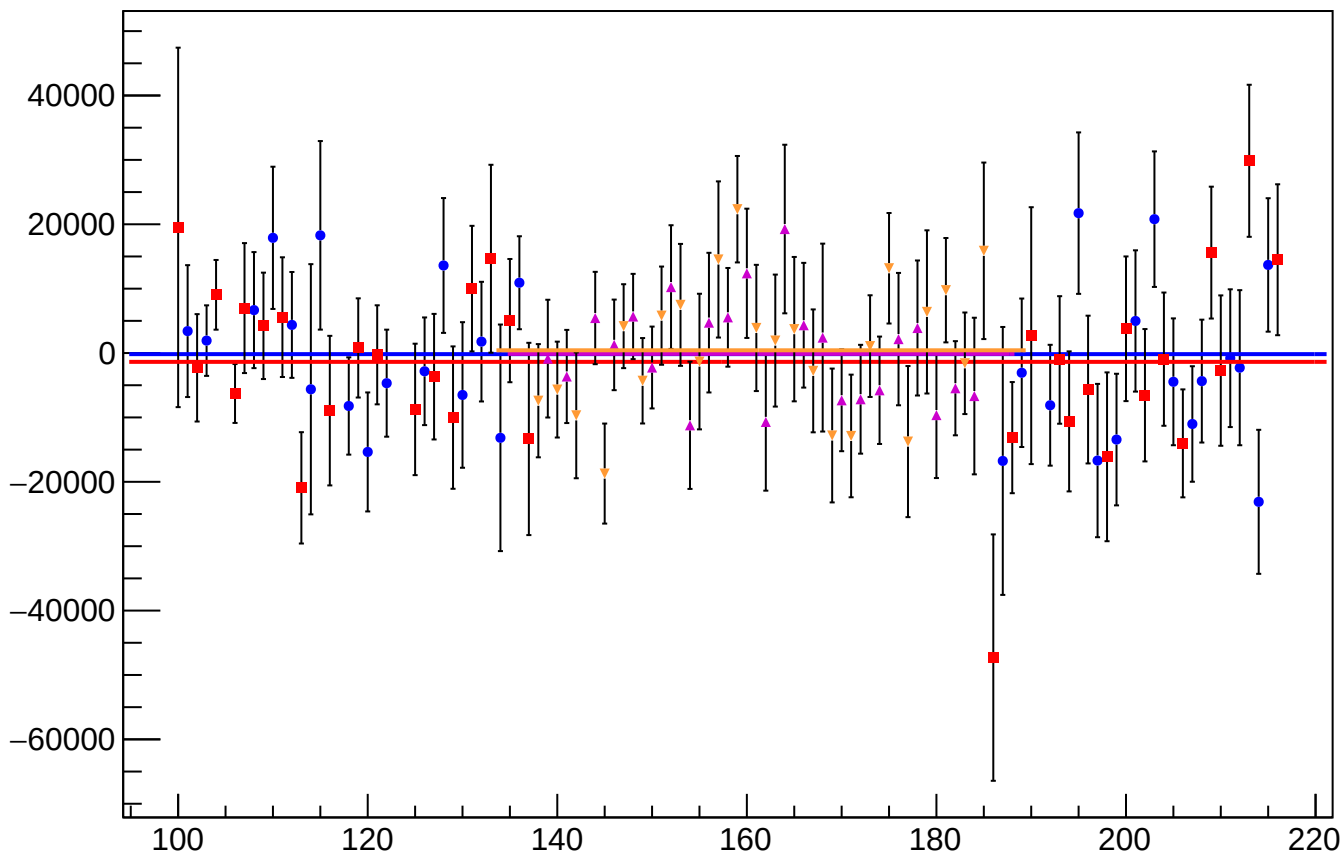
Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF: 169157.7/22

+ sign 1577.791 $\pm$ 0.183  $\chi^2$ /NDF: 982316.8/54

All: 1577.201 $\pm$ 0.129  $\chi^2$ /NDF: 1868297.9/11

- sign 1576.607 $\pm$ 0.183  $\chi^2$ /NDF: 885960.2/55

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-169.244 \pm 1760.737$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $426.701 \pm 1819.878$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-1368.296 \pm 1643.685$   $\chi^2/\text{NDF}$ : 41.7/32

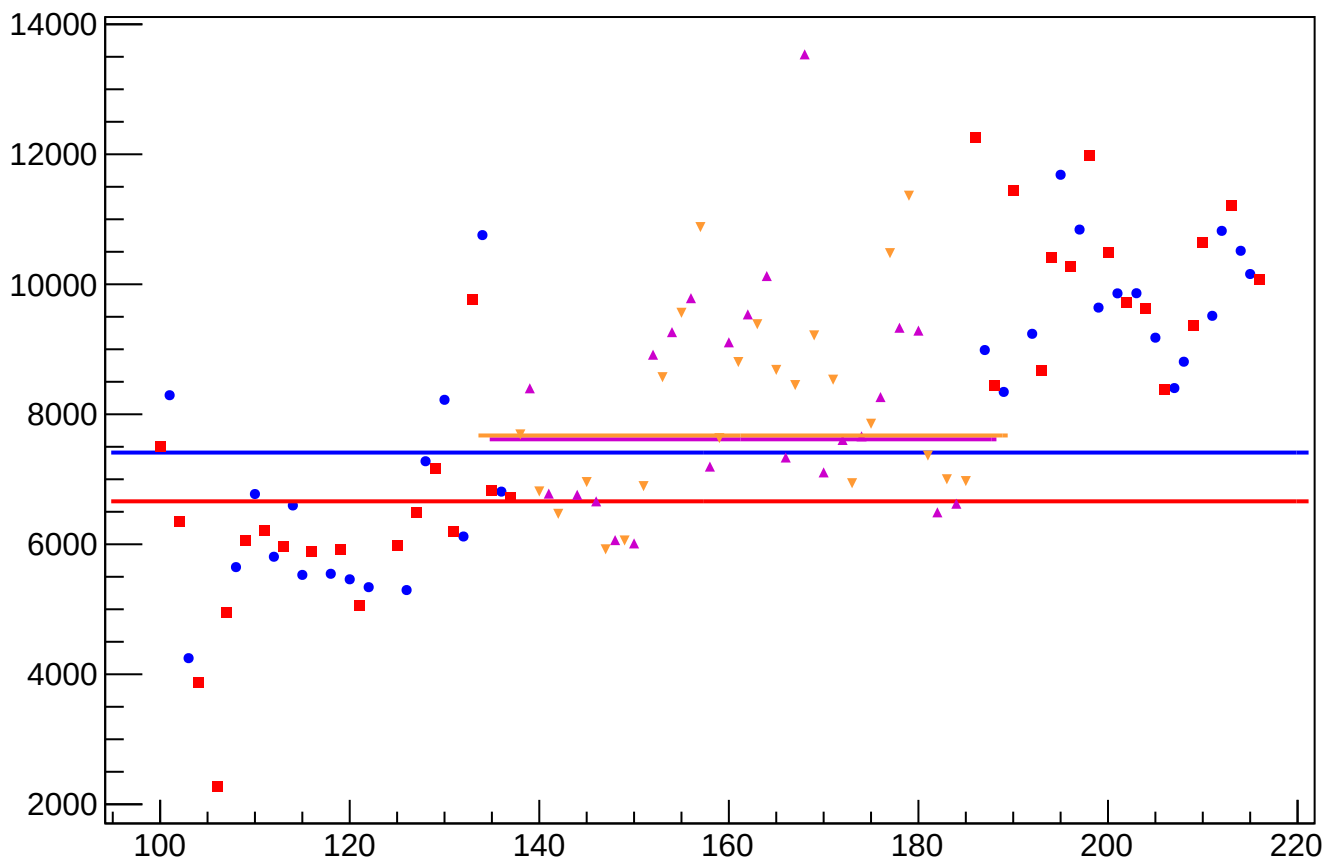
Left In:  $-126.369 \pm 1814.830$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $118.888 \pm 1265.421$   $\chi^2/\text{NDF}$ : 64.3/54

All:  $-362.472 \pm 877.648$   $\chi^2/\text{NDF}$ : 120.4/110

- sign  $-808.640 \pm 1218.285$   $\chi^2/\text{NDF}$ : 55.9/55

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 7411.069+/-1.245  $\chi^2/\text{NDF}$ : 2941886.0/30

Left Out: 7674.060+/-1.287  $\chi^2/\text{NDF}$ : 1076713.7/23

Right Out: 6660.885+/-1.162  $\chi^2/\text{NDF}$ : 5403485.3/32

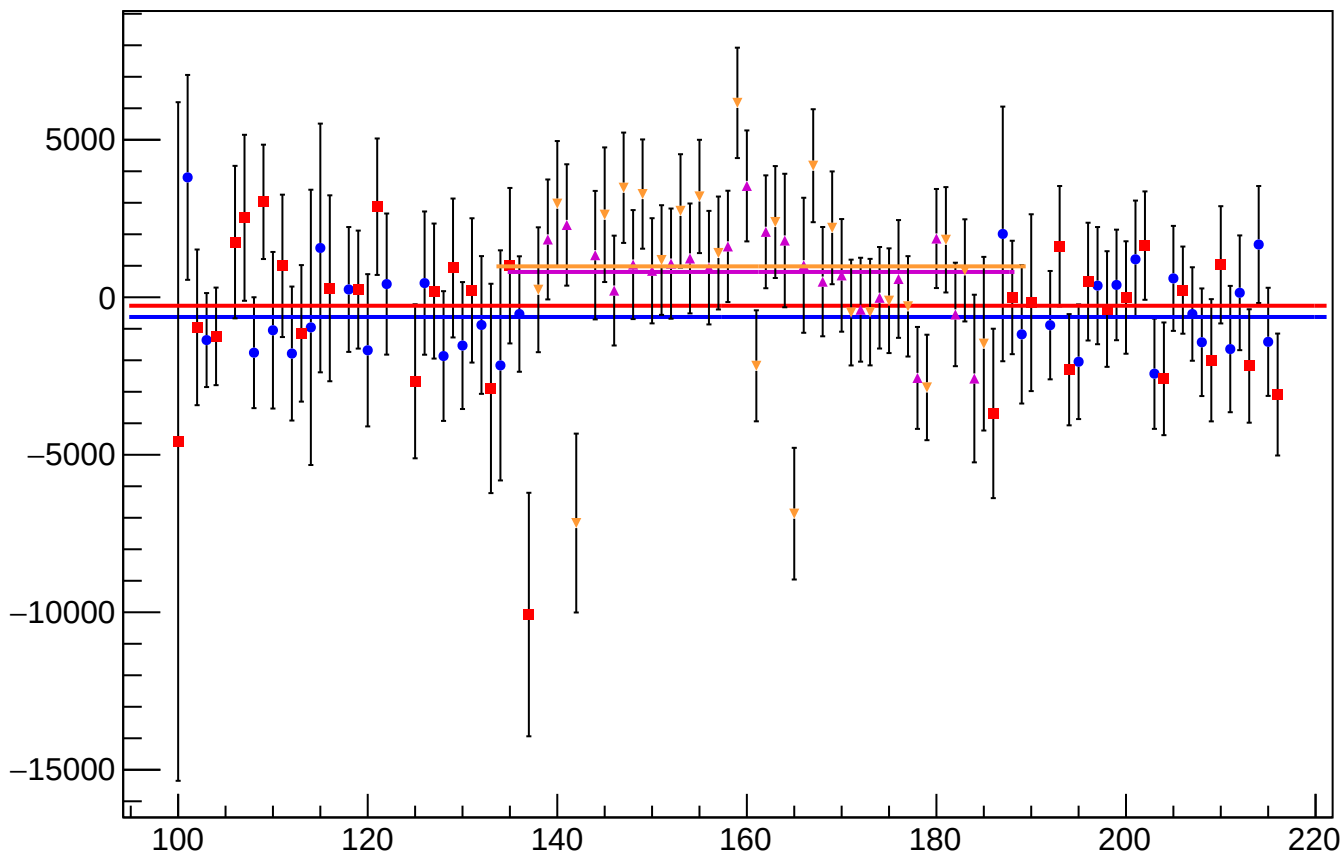
Left In: 7614.974+/-1.283  $\chi^2/\text{NDF}$ : 1224520.2/22

+ sign 7538.222+/-0.895  $\chi^2/\text{NDF}$ : 4040172.6/54

All: 7306.039+/-0.621  $\chi^2/\text{NDF}$ : 11101584.7/1

- sign 7090.831+/-0.861  $\chi^2/\text{NDF}$ : 6931671.3/55

cor\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-625.523 \pm 359.895$   $\chi^2/\text{NDF}$ : 11.5/30

Left Out:  $981.712 \pm 370.843$   $\chi^2/\text{NDF}$ : 55.6/23

Right Out:  $-268.865 \pm 360.373$   $\chi^2/\text{NDF}$ : 28.8/32

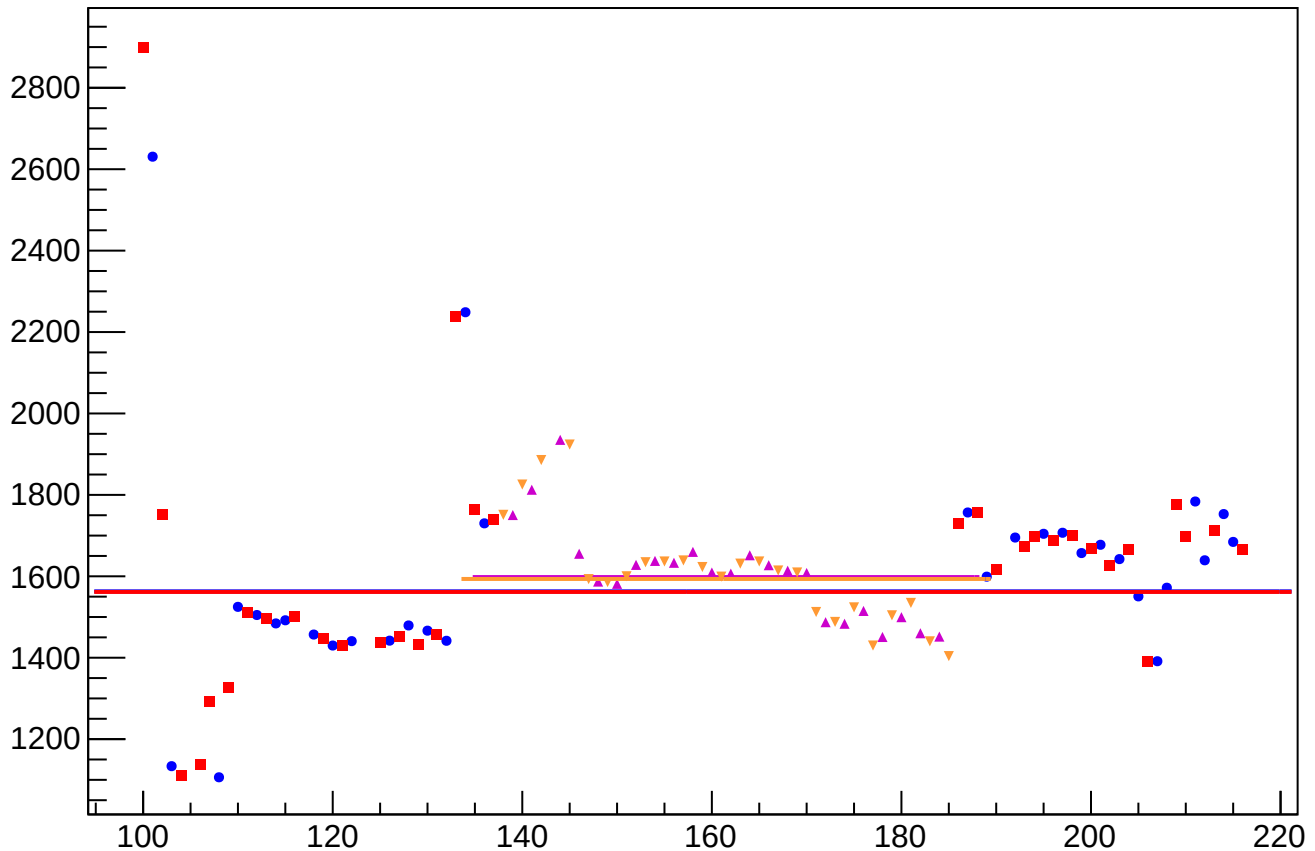
Left In:  $803.783 \pm 374.066$   $\chi^2/\text{NDF}$ : 12.4/22

+ sign  $154.020 \pm 258.268$   $\chi^2/\text{NDF}$ : 76.7/54

All:  $200.517 \pm 183.067$   $\chi^2/\text{NDF}$ : 122.3/110

- sign  $247.468 \pm 259.528$   $\chi^2/\text{NDF}$ : 45.5/55

cor\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1563.013 $\pm$ 0.254  $\chi^2$ /NDF: 787750.9/30

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF: 187613.7/23

Right Out: 1561.602 $\pm$ 0.255  $\chi^2$ /NDF: 648533.9/32

Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF: 169157.7/22

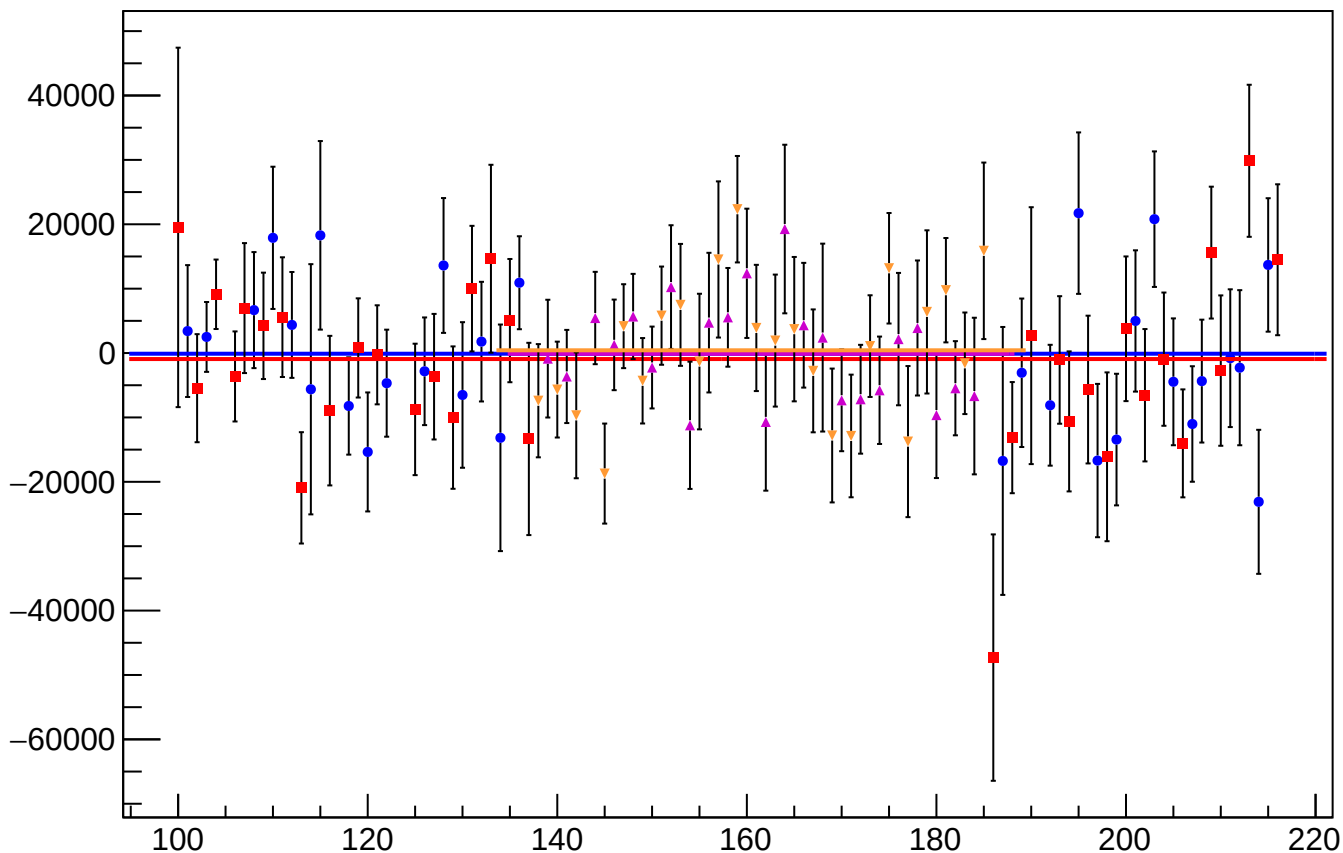
+ sign 1577.791 $\pm$ 0.183  $\chi^2$ /NDF: 982317.2/54

All: 1578.473 $\pm$ 0.129  $\chi^2$ /NDF: 1809931.4/11

- sign 1579.162 $\pm$ 0.183  $\chi^2$ /NDF: 827586.2/55



asym\_us\_avg\_at2lr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-104.856 \pm 1758.972$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $426.702 \pm 1819.879$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-932.172 \pm 1707.994$   $\chi^2/\text{NDF}$ : 40.9/32

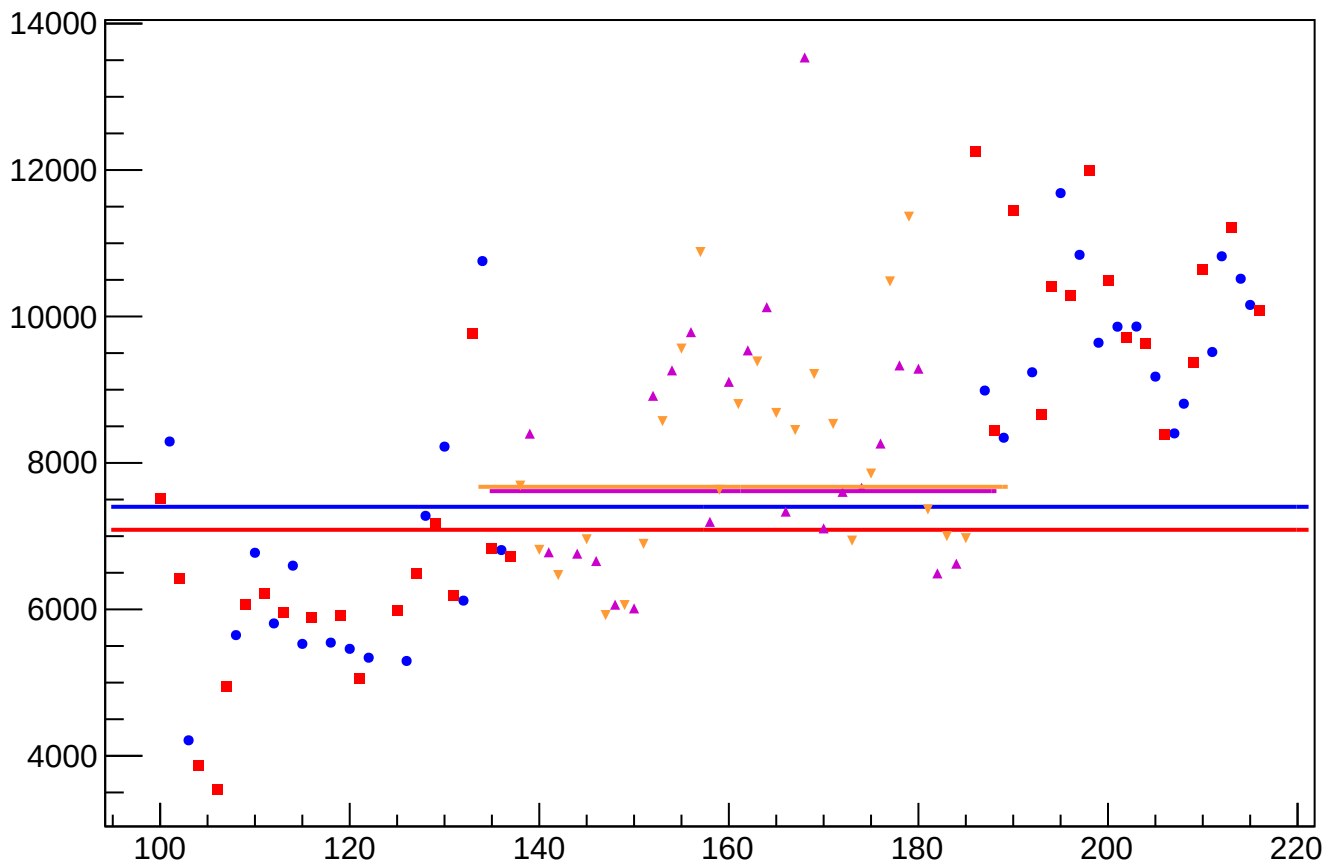
Left In:  $-126.376 \pm 1814.828$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $151.879 \pm 1264.765$   $\chi^2/\text{NDF}$ : 64.4/54

All:  $-206.804 \pm 886.815$   $\chi^2/\text{NDF}$ : 119.4/110

- sign  $-553.688 \pm 1243.788$   $\chi^2/\text{NDF}$ : 54.9/55

asym\_us\_avg\_at2lr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 7400.969+/-1.244  $\chi^2/\text{NDF}$ : 2970168.1/30

Left Out: 7674.063+/-1.287  $\chi^2/\text{NDF}$ : 1076712.6/23

Right Out: 7086.964+/-1.208  $\chi^2/\text{NDF}$ : 3841008.4/32

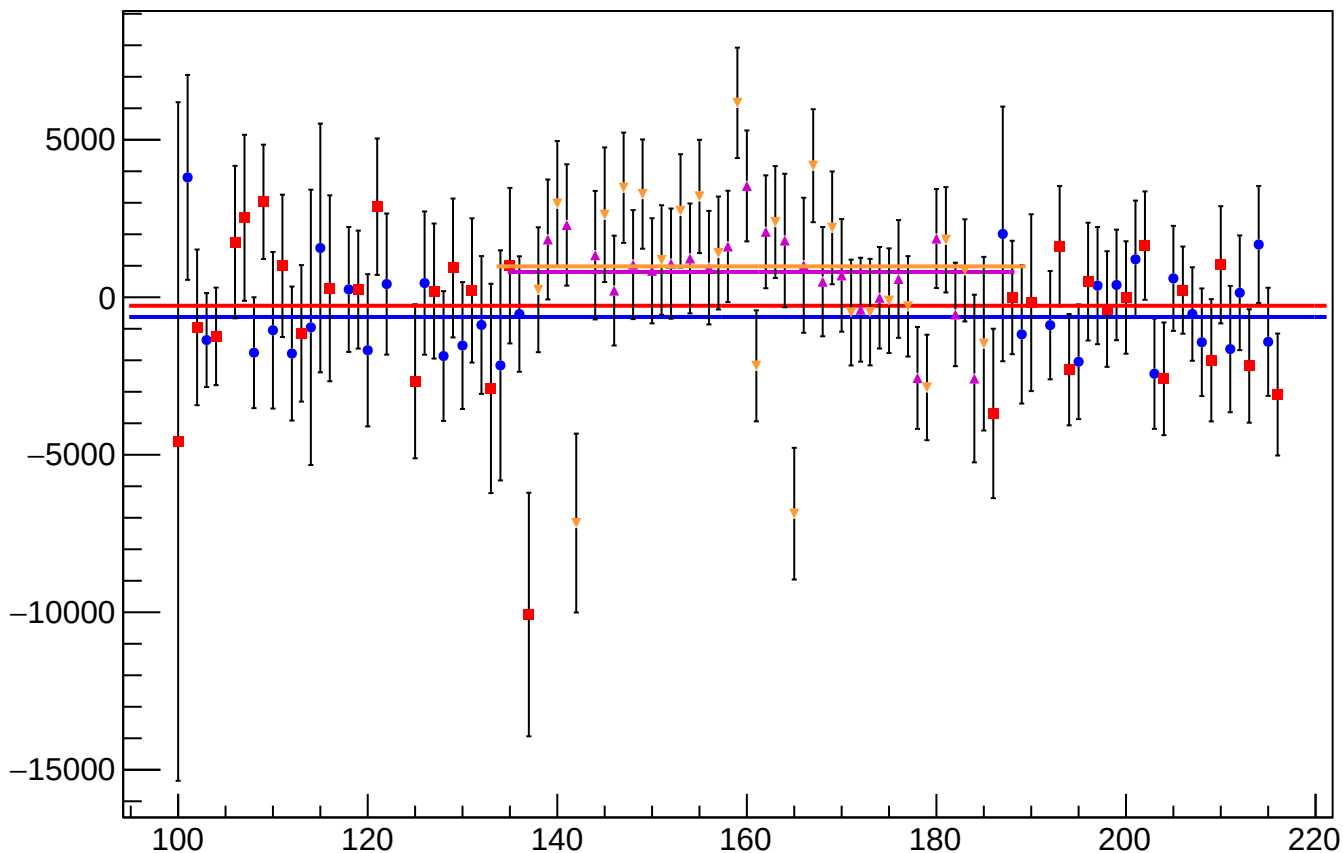
Left In: 7614.964+/-1.283  $\chi^2/\text{NDF}$ : 1224525.6/22

+ sign 7532.869+/-0.894  $\chi^2/\text{NDF}$ : 4070165.4/54

All: 7432.263+/-0.627  $\chi^2/\text{NDF}$ : 9250366.5/11

- sign 7334.966+/-0.879  $\chi^2/\text{NDF}$ : 5155307.5/55

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-625.523 \pm 359.895$   $\chi^2/\text{NDF}: 11.5/30$

Left Out:  $981.712 \pm 370.843$   $\chi^2/\text{NDF}: 55.6/23$

Right Out:  $-268.865 \pm 360.373$   $\chi^2/\text{NDF}: 28.8/32$

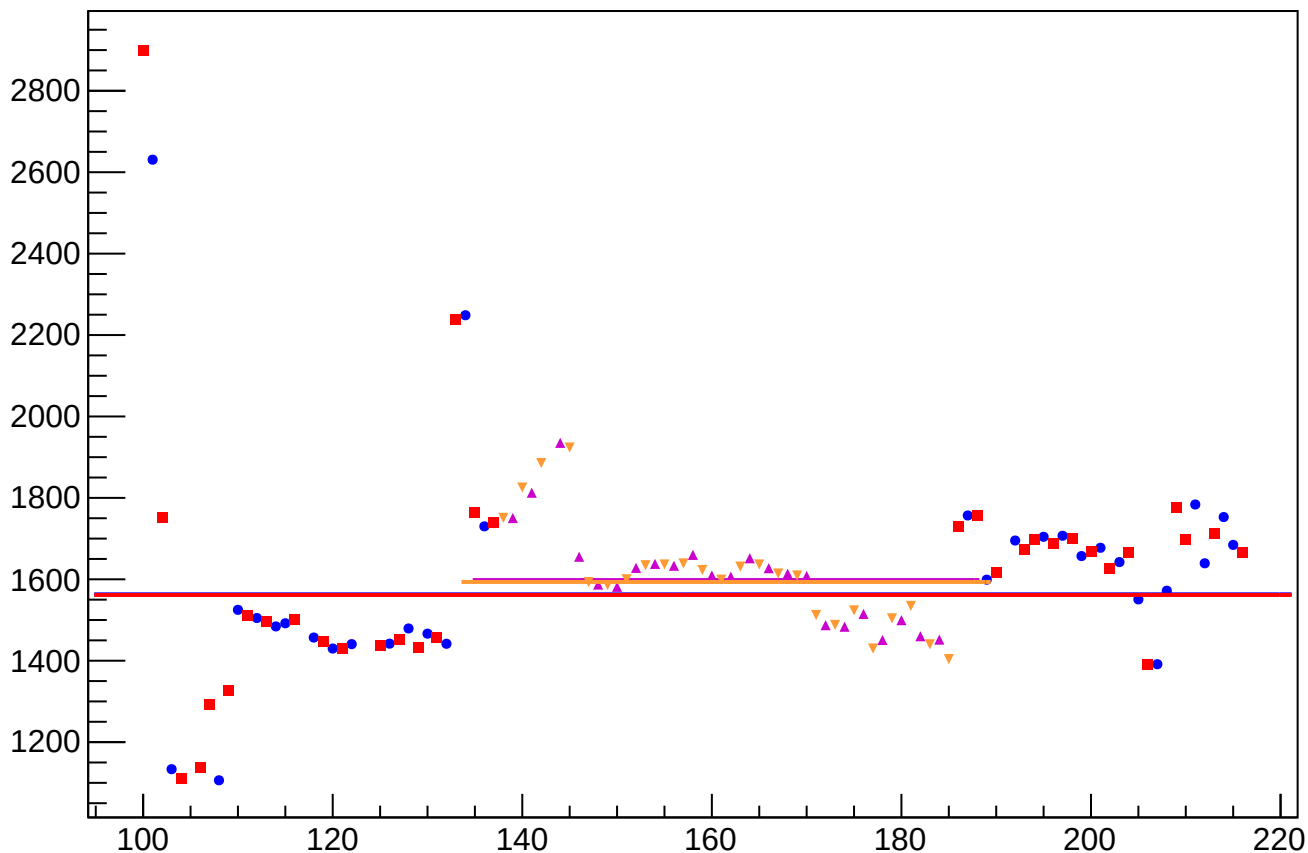
Left In:  $803.783 \pm 374.066$   $\chi^2/\text{NDF}: 12.4/22$

+ sign  $154.020 \pm 258.268$   $\chi^2/\text{NDF}: 76.7/54$

All:  $200.517 \pm 183.067$   $\chi^2/\text{NDF}: 122.3/110$

- sign  $247.468 \pm 259.528$   $\chi^2/\text{NDF}: 45.5/55$

eigen\_cor\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1563.013 $\pm$ 0.254  $\chi^2$ /NDF: 787750.9/30

Left Out: 1593.482 $\pm$ 0.262  $\chi^2$ /NDF: 187613.7/23

Right Out: 1561.602 $\pm$ 0.255  $\chi^2$ /NDF: 648533.9/32

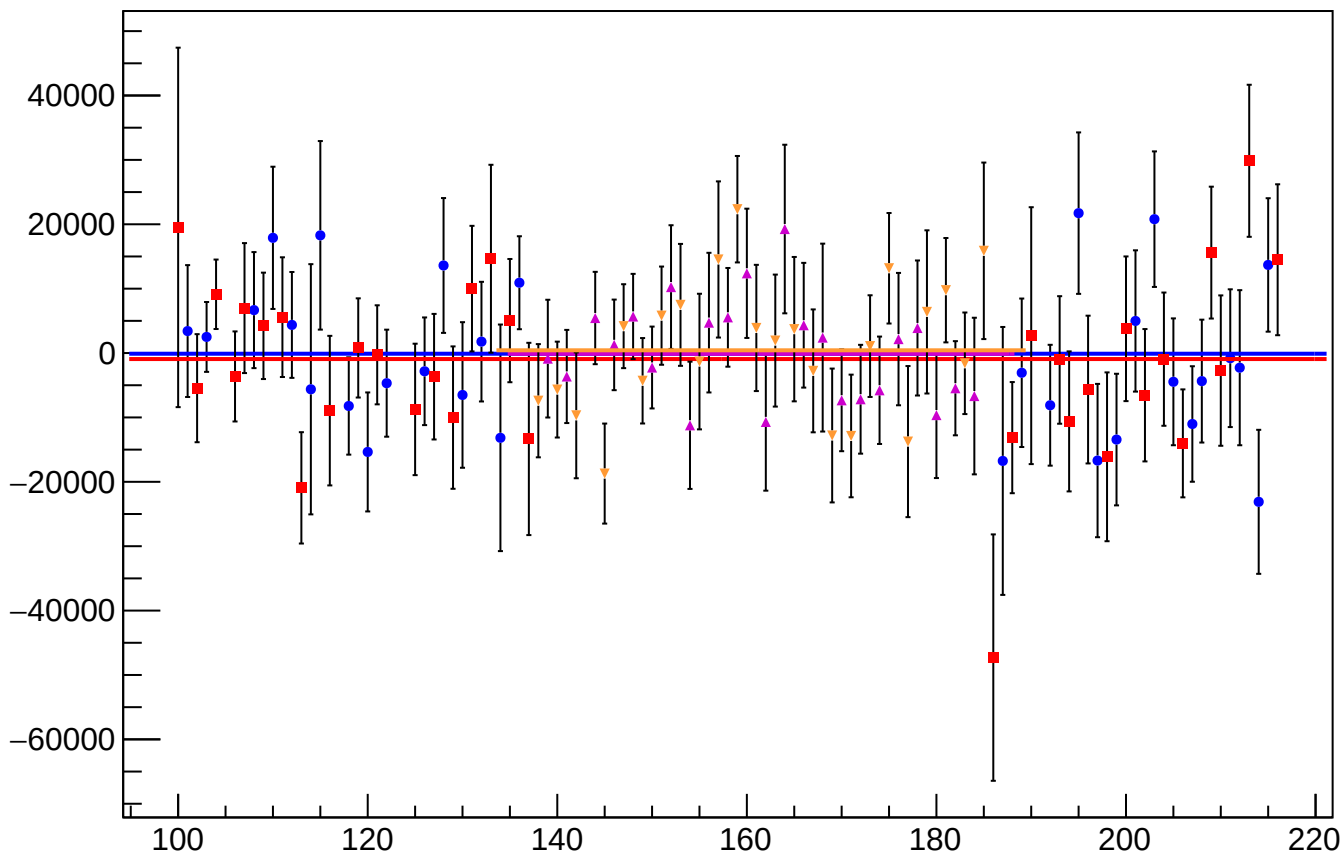
Left In: 1598.119 $\pm$ 0.265  $\chi^2$ /NDF: 169157.7/22

+ sign 1577.791 $\pm$ 0.183  $\chi^2$ /NDF: 982317.2/54

All: 1578.473 $\pm$ 0.129  $\chi^2$ /NDF: 1809931.4/11

- sign 1579.162 $\pm$ 0.183  $\chi^2$ /NDF: 827586.2/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-104.856 \pm 1758.972$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $426.702 \pm 1819.879$   $\chi^2/\text{NDF}$ : 29.4/23

Right Out:  $-932.172 \pm 1707.994$   $\chi^2/\text{NDF}$ : 40.9/32

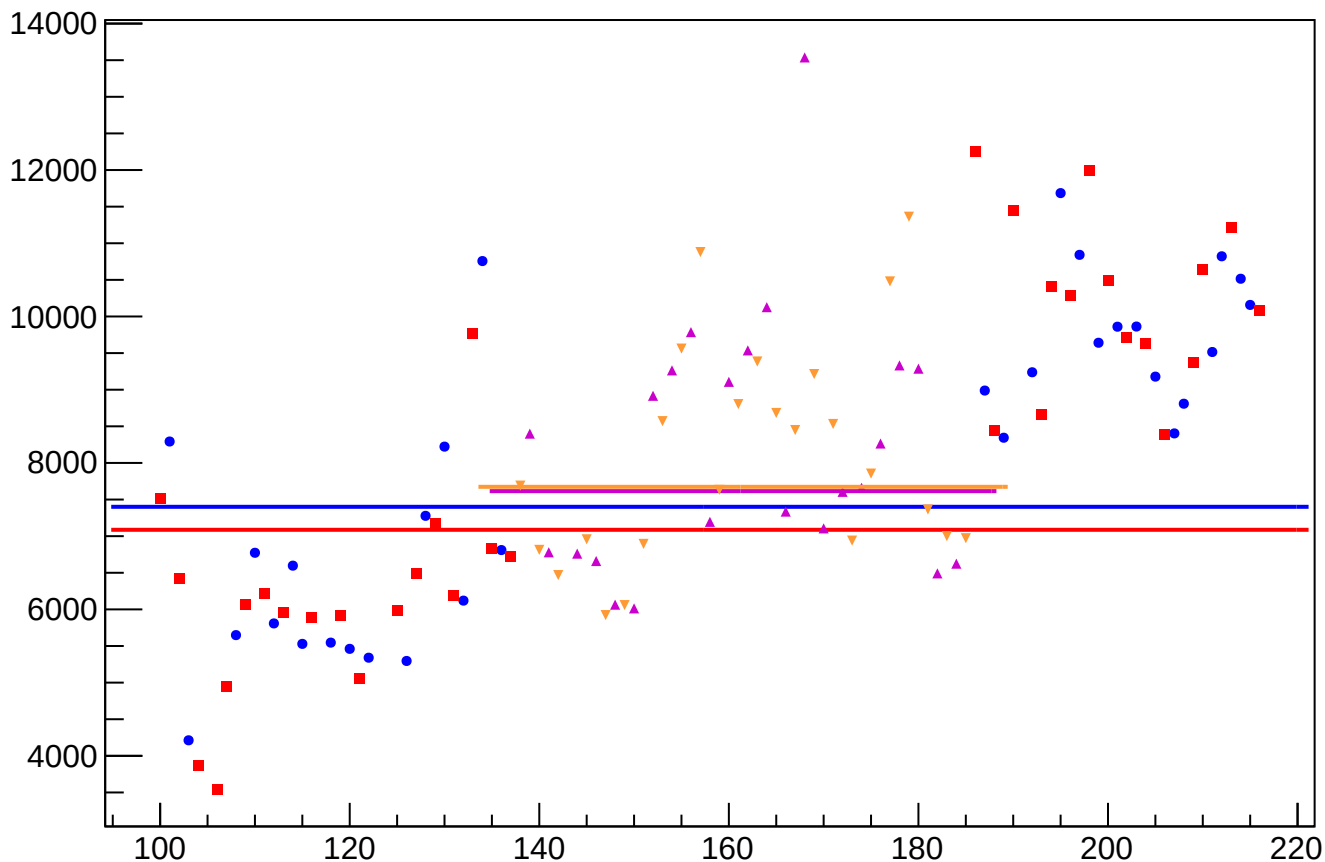
Left In:  $-126.376 \pm 1814.828$   $\chi^2/\text{NDF}$ : 13.9/22

+ sign  $151.879 \pm 1264.765$   $\chi^2/\text{NDF}$ : 64.4/54

All:  $-206.804 \pm 886.815$   $\chi^2/\text{NDF}$ : 119.4/110

- sign  $-553.688 \pm 1243.788$   $\chi^2/\text{NDF}$ : 54.9/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 7400.969+/-1.244  $\chi^2/\text{NDF}$ : 2970168.1/30

Left Out: 7674.063+/-1.287  $\chi^2/\text{NDF}$ : 1076712.6/23

Right Out: 7086.964+/-1.208  $\chi^2/\text{NDF}$ : 3841008.4/32

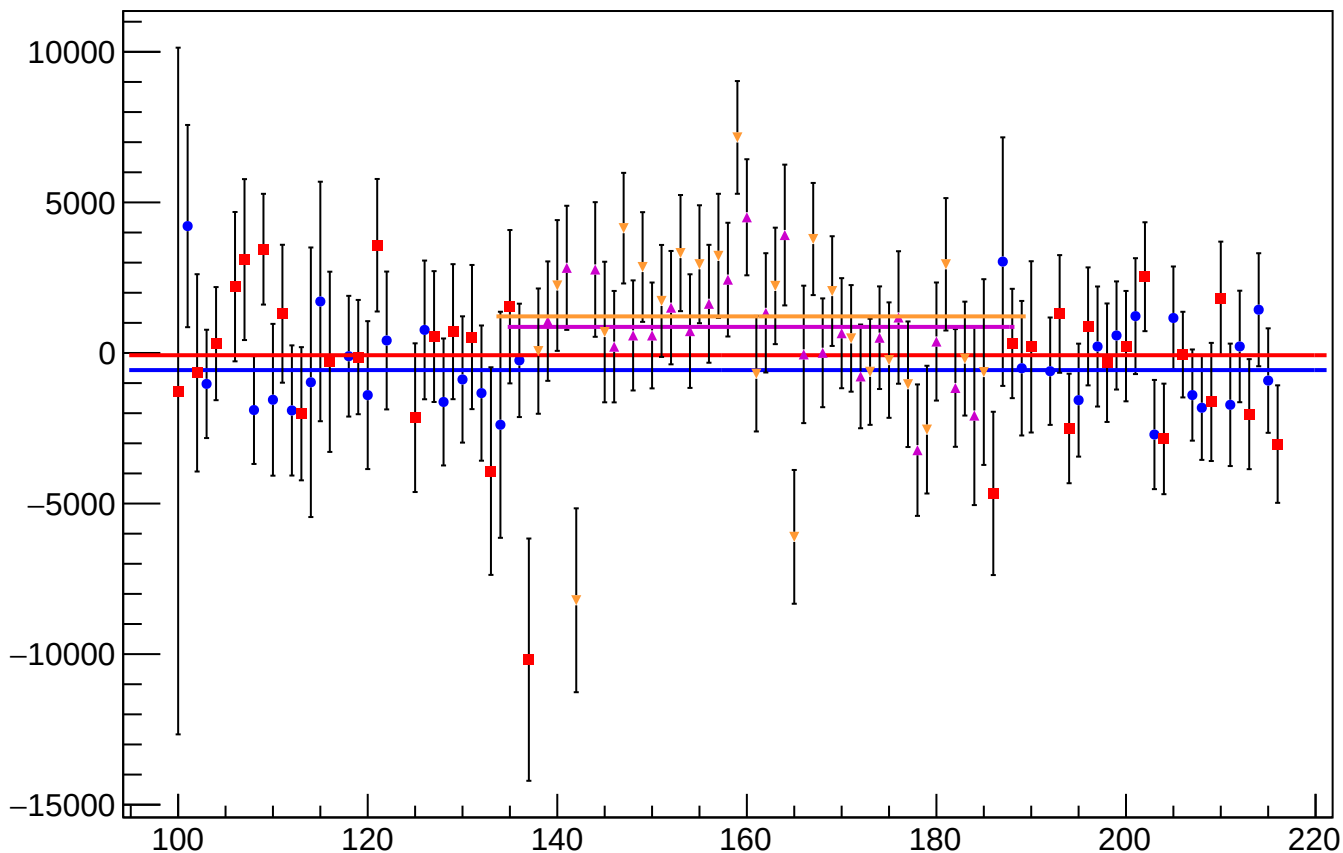
Left In: 7614.964+/-1.283  $\chi^2/\text{NDF}$ : 1224525.6/22

+ sign 7532.869+/-0.894  $\chi^2/\text{NDF}$ : 4070165.4/54

All: 7432.263+/-0.627  $\chi^2/\text{NDF}$ : 9250366.5/11

- sign 7334.966+/-0.879  $\chi^2/\text{NDF}$ : 5155307.5/55

# dit\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In: -568.310 $\pm$ 371.423  $\chi^2$ /NDF: 12.3/30

Left Out: 1215.353 $\pm$ 409.584  $\chi^2$ /NDF: 48.5/23

Right Out: -74.224 $\pm$ 373.543  $\chi^2$ /NDF: 33.7/32

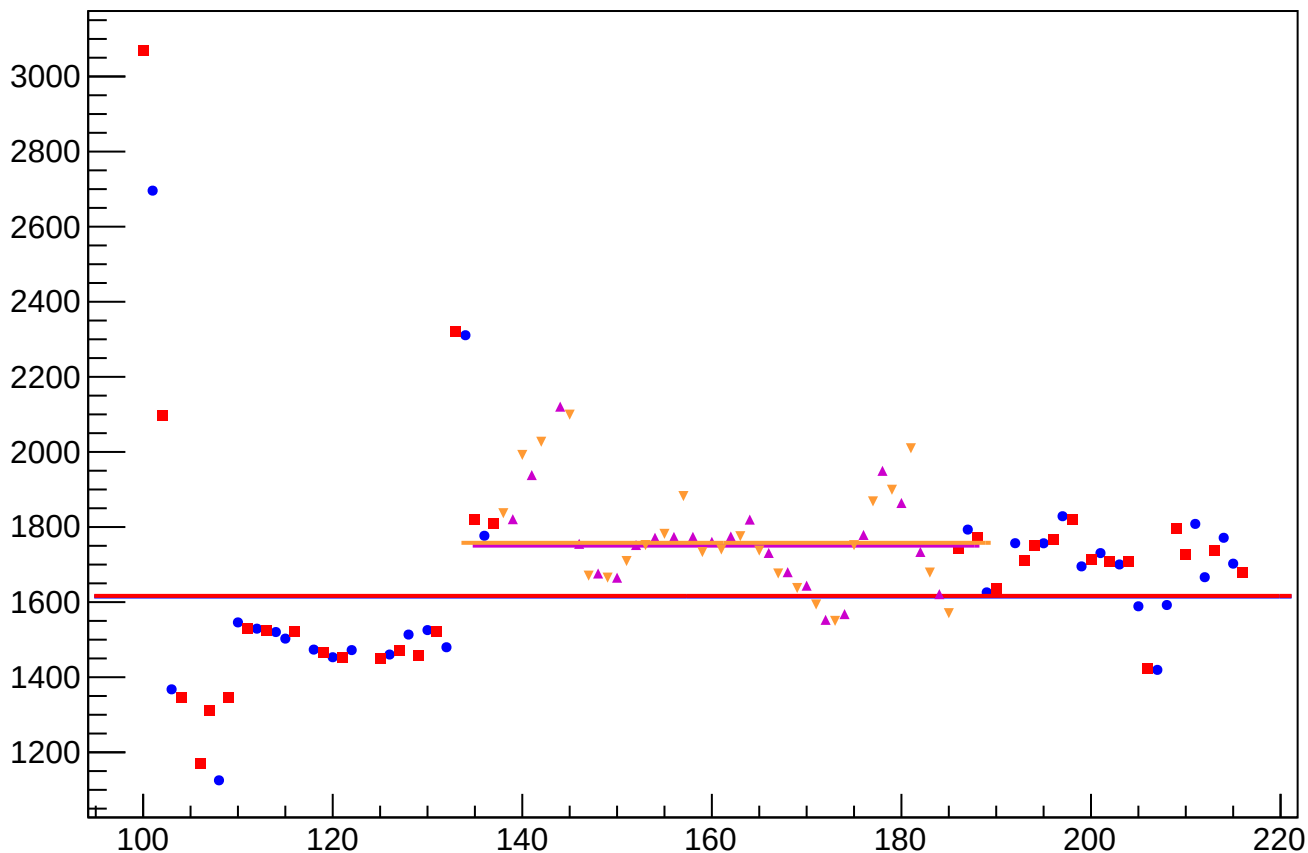
Left In: 866.022 $\pm$ 410.038  $\chi^2$ /NDF: 15.1/22

+ sign 236.577 $\pm$ 275.140  $\chi^2$ /NDF: 71.1/54

All: 294.180 $\pm$ 194.905  $\chi^2$ /NDF: 122.9/110

- sign 352.202 $\pm$ 276.138  $\chi^2$ /NDF: 51.7/55

# dit\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1614.893 $\pm$ 0.263  $\chi^2$ /NDF: 675500.5/30

Left Out: 1757.965 $\pm$ 0.290  $\chi^2$ /NDF: 213284.1/23

Right Out: 1616.638 $\pm$ 0.264  $\chi^2$ /NDF: 570959.1/32

Left In: 1750.477 $\pm$ 0.290  $\chi^2$ /NDF: 171889.4/22

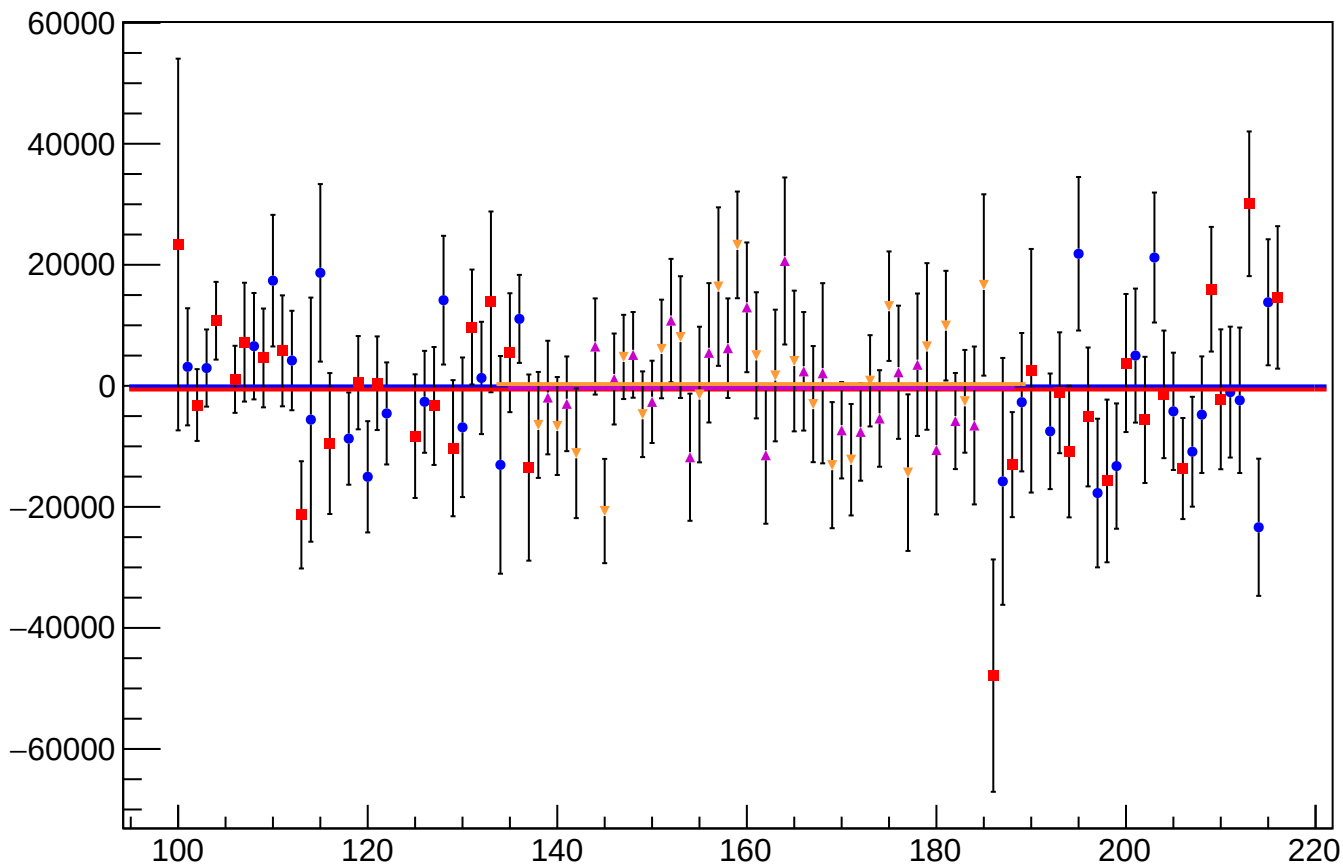
+ sign 1679.455 $\pm$ 0.195  $\chi^2$ /NDF: 1022697.9/54

All: 1678.396 $\pm$ 0.138  $\chi^2$ /NDF: 1882063.3/11

- sign 1677.329 $\pm$ 0.195  $\chi^2$ /NDF: 859305.9/55



asym\_us\_avg\_at2lr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $-93.659 \pm 1790.683$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $284.925 \pm 1920.134$   $\chi^2/\text{NDF}$ : 28.7/23

Right Out:  $-606.877 \pm 1673.921$   $\chi^2/\text{NDF}$ : 40.4/32

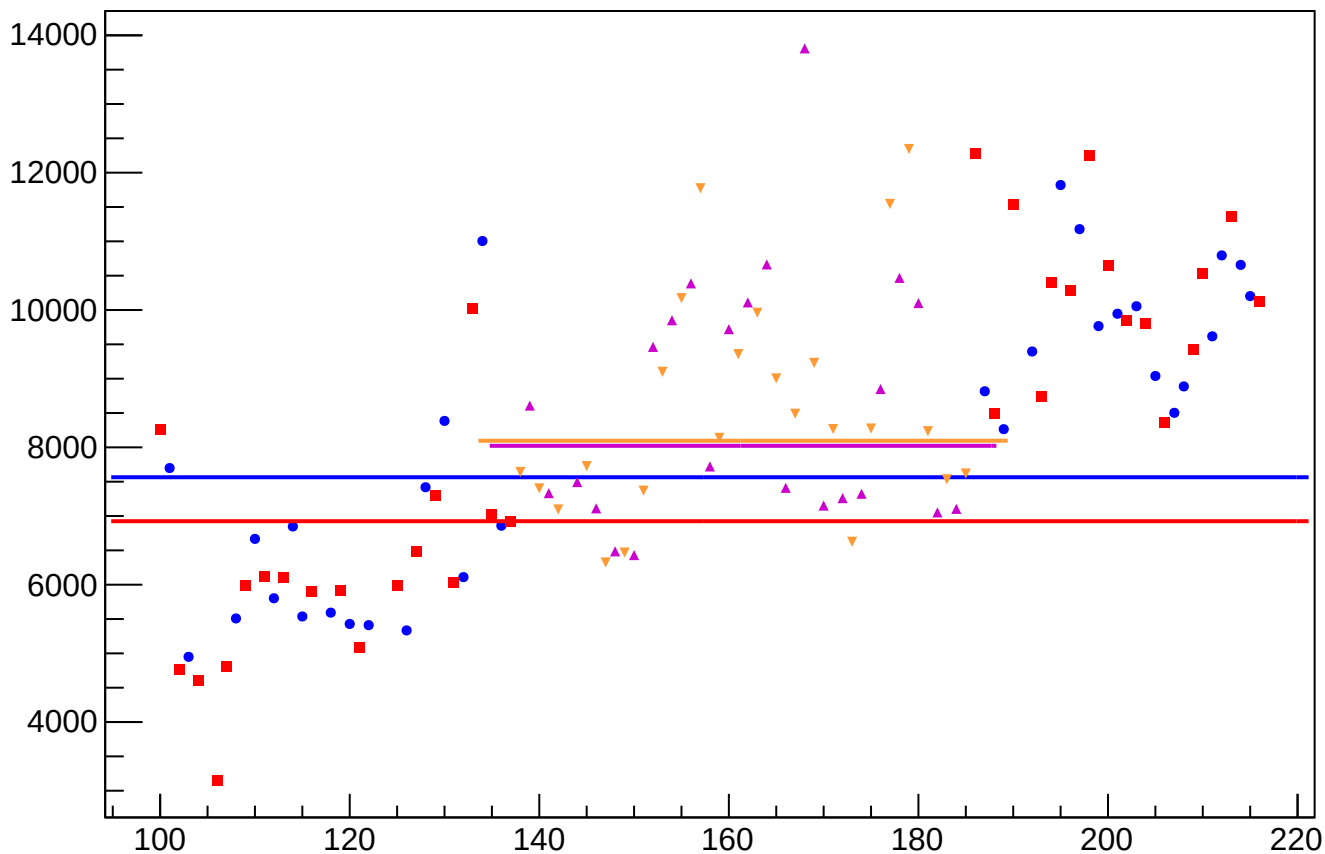
Left In:  $-382.660 \pm 1912.385$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $82.442 \pm 1309.579$   $\chi^2/\text{NDF}$ : 63.4/54

All:  $-225.106 \pm 907.813$   $\chi^2/\text{NDF}$ : 117.5/110

- sign  $-509.612 \pm 1259.563$   $\chi^2/\text{NDF}$ : 54.0/55

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 7564.737 $\pm$ 1.266  $\chi^2/\text{NDF}$ : 2633278.3/30

Left Out: 8096.821 $\pm$ 1.358  $\chi^2/\text{NDF}$ : 1087790.8/23

Right Out: 6924.637 $\pm$ 1.184  $\chi^2/\text{NDF}$ : 4294740.2/32

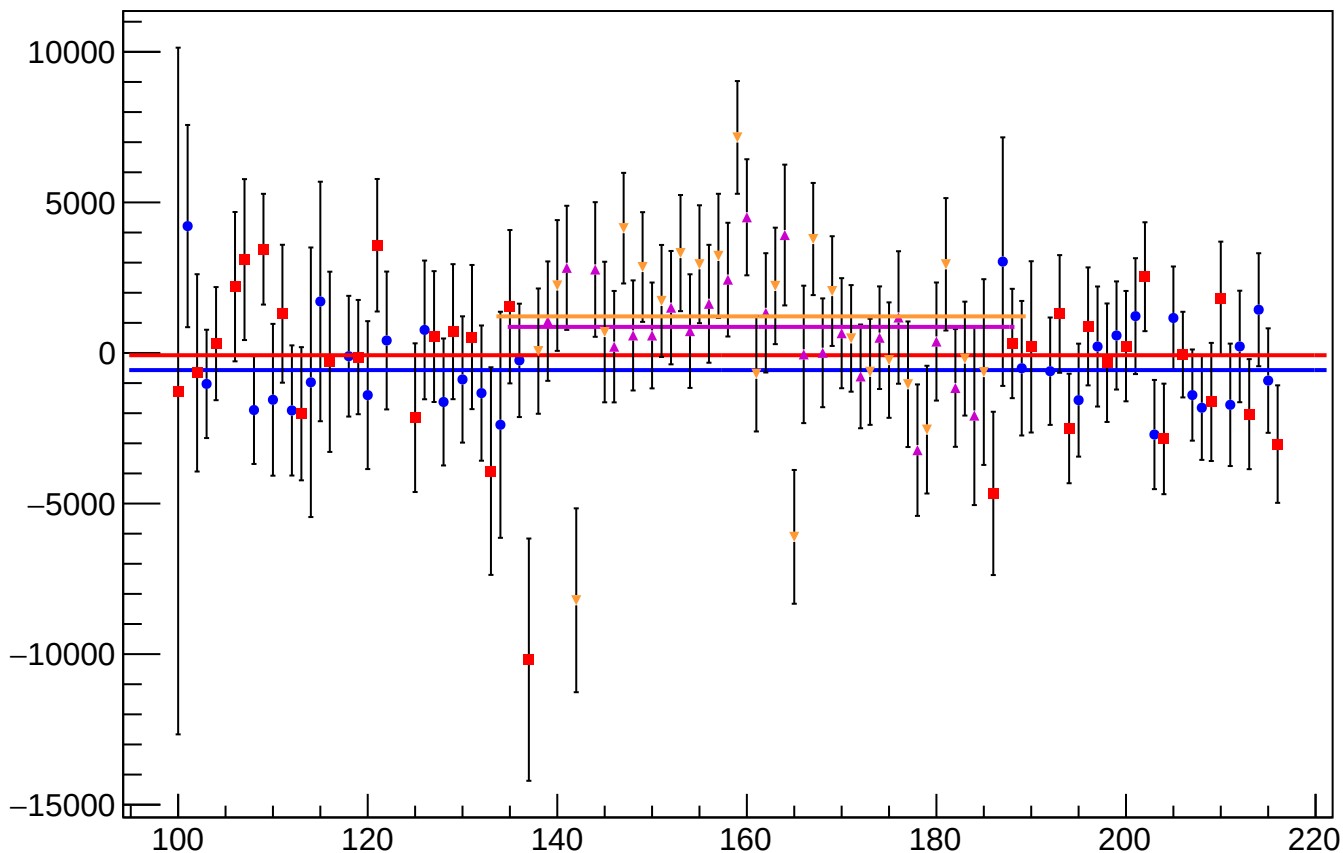
Left In: 8022.726 $\pm$ 1.352  $\chi^2/\text{NDF}$ : 1225549.2/22

+ sign 7812.240 $\pm$ 0.926  $\chi^2/\text{NDF}$ : 3803208.9/54

All: 7598.611 $\pm$ 0.642  $\chi^2/\text{NDF}$ : 9799311.1/11

- sign 7400.988 $\pm$ 0.891  $\chi^2/\text{NDF}$ : 5893646.7/55

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-568.306 \pm 371.423$   $\chi^2/\text{NDF}$ : 12.3/30

Left Out:  $1215.361 \pm 409.585$   $\chi^2/\text{NDF}$ : 48.5/23

Right Out:  $-74.223 \pm 373.543$   $\chi^2/\text{NDF}$ : 33.7/32

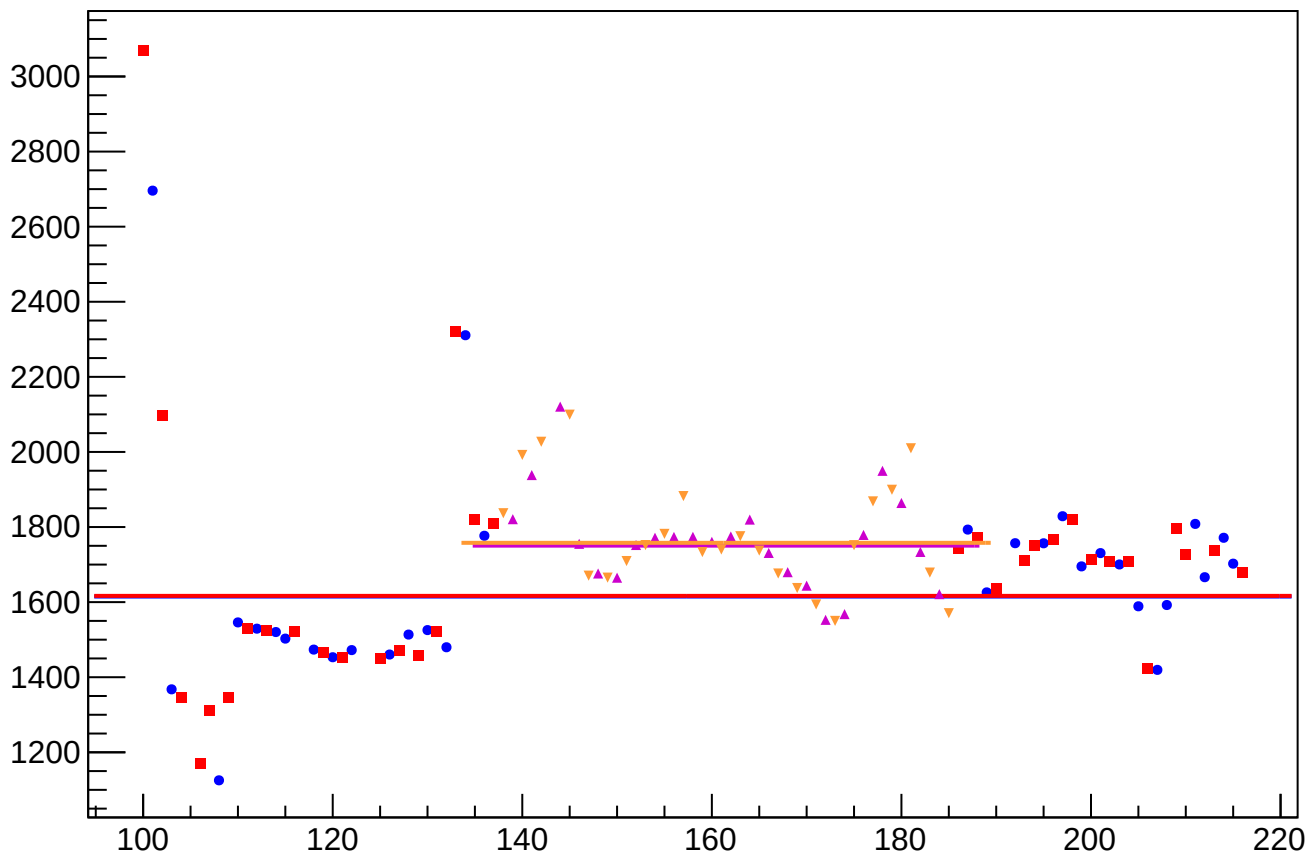
Left In:  $866.021 \pm 410.039$   $\chi^2/\text{NDF}$ : 15.1/22

+ sign  $236.582 \pm 275.141$   $\chi^2/\text{NDF}$ : 71.1/54

All:  $294.182 \pm 194.905$   $\chi^2/\text{NDF}$ : 122.9/110

- sign  $352.201 \pm 276.138$   $\chi^2/\text{NDF}$ : 51.7/55

eigen\_dit\_asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 1614.893 $\pm$ 0.263  $\chi^2$ /NDF: 675500.5/30

Left Out: 1757.968 $\pm$ 0.290  $\chi^2$ /NDF: 213292.2/23

Right Out: 1616.638 $\pm$ 0.264  $\chi^2$ /NDF: 570960.1/32

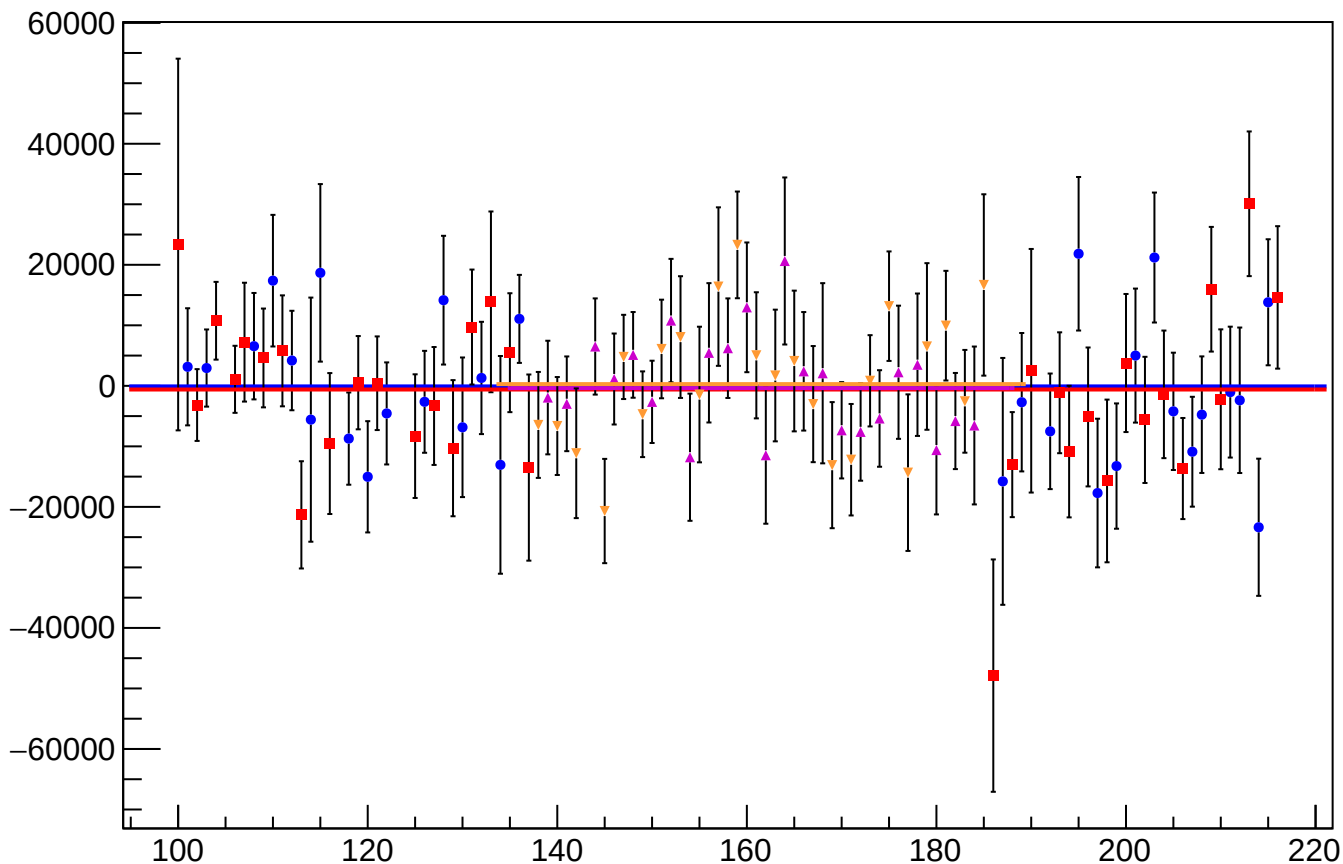
Left In: 1750.480 $\pm$ 0.290  $\chi^2$ /NDF: 171897.3/22

+ sign 1679.456 $\pm$ 0.195  $\chi^2$ /NDF: 1022710.9/54

All: 1678.397 $\pm$ 0.138  $\chi^2$ /NDF: 1882089.8/11

- sign 1677.330 $\pm$ 0.195  $\chi^2$ /NDF: 859319.4/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-93.666 \pm 1790.682$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $284.927 \pm 1920.138$   $\chi^2/\text{NDF}$ : 28.7/23

Right Out:  $-606.870 \pm 1673.920$   $\chi^2/\text{NDF}$ : 40.4/32

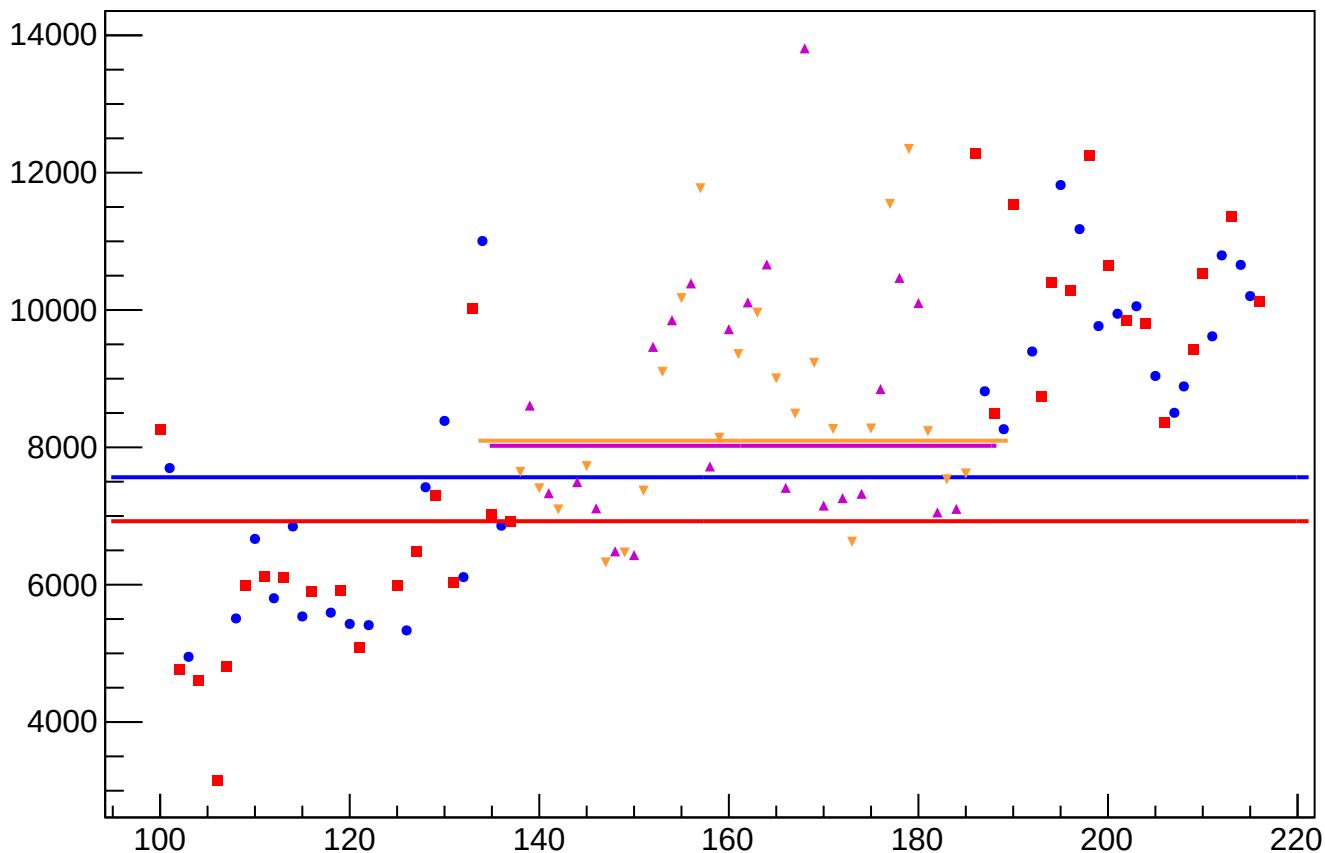
Left In:  $-382.663 \pm 1912.388$   $\chi^2/\text{NDF}$ : 13.6/22

+ sign  $82.439 \pm 1309.579$   $\chi^2/\text{NDF}$ : 63.4/54

All:  $-225.107 \pm 907.813$   $\chi^2/\text{NDF}$ : 117.5/110

- sign  $-509.609 \pm 1259.564$   $\chi^2/\text{NDF}$ : 54.0/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 7564.729 $\pm$ 1.266  $\chi^2/\text{NDF}$ : 2633314.0/30

Left Out: 8096.833 $\pm$ 1.358  $\chi^2/\text{NDF}$ : 1087793.4/23

Right Out: 6924.628 $\pm$ 1.184  $\chi^2/\text{NDF}$ : 4294773.4/32

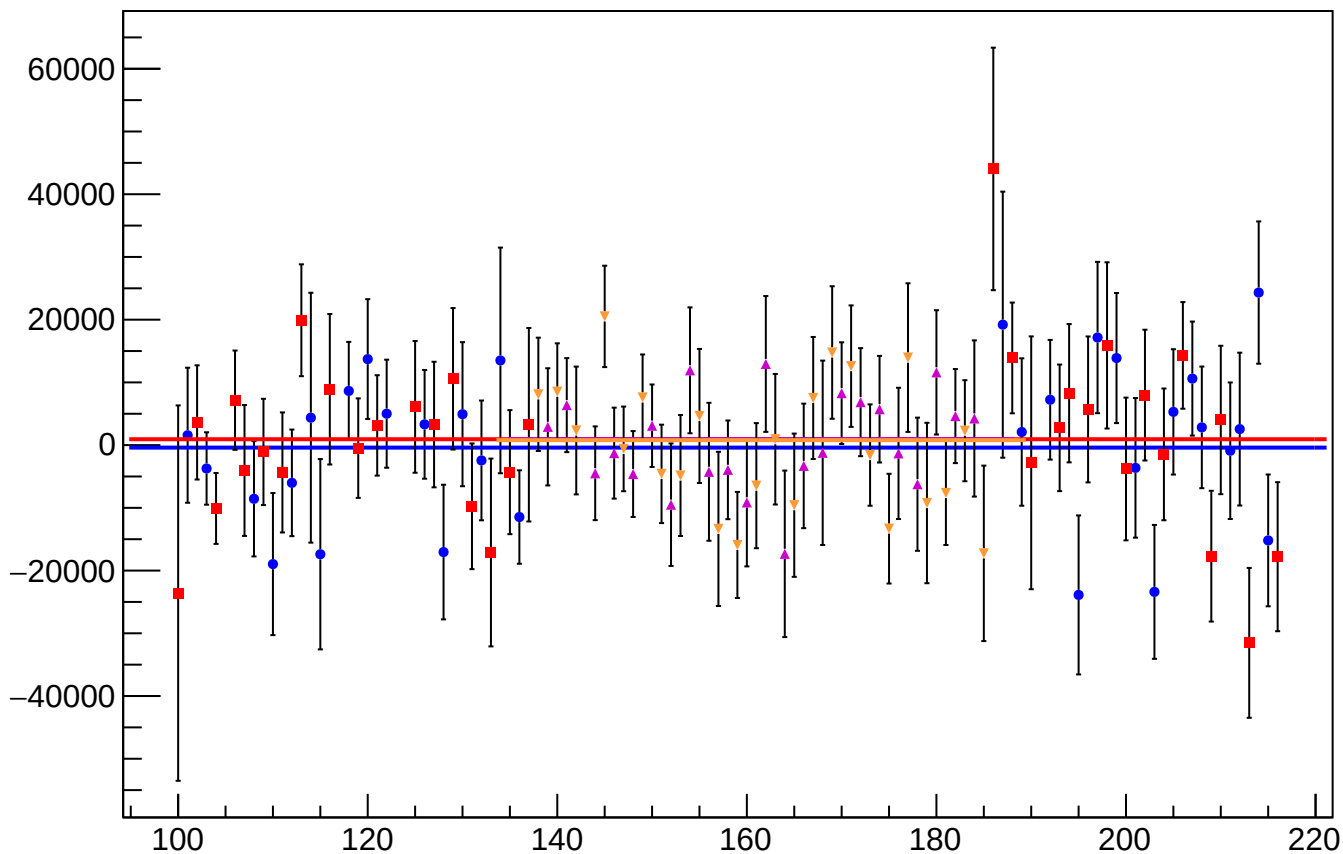
Left In: 8022.738 $\pm$ 1.352  $\chi^2/\text{NDF}$ : 1225553.6/22

+ sign 7812.241 $\pm$ 0.926  $\chi^2/\text{NDF}$ : 3803253.2/54

All: 7598.610 $\pm$ 0.642  $\chi^2/\text{NDF}$ : 9799408.1/11

- sign 7400.986 $\pm$ 0.891  $\chi^2/\text{NDF}$ : 5893698.1/55

# asym\_us\_avg\_at2lr\_avg\_dd\_mean vs Slug



Right In:  $-395.398 \pm 1808.060$   $\chi^2/\text{NDF}: 37.6/30$

Left Out:  $791.264 \pm 1865.111$   $\chi^2/\text{NDF}: 27.2/23$

Right Out:  $939.908 \pm 1765.882$   $\chi^2/\text{NDF}: 40.1/32$

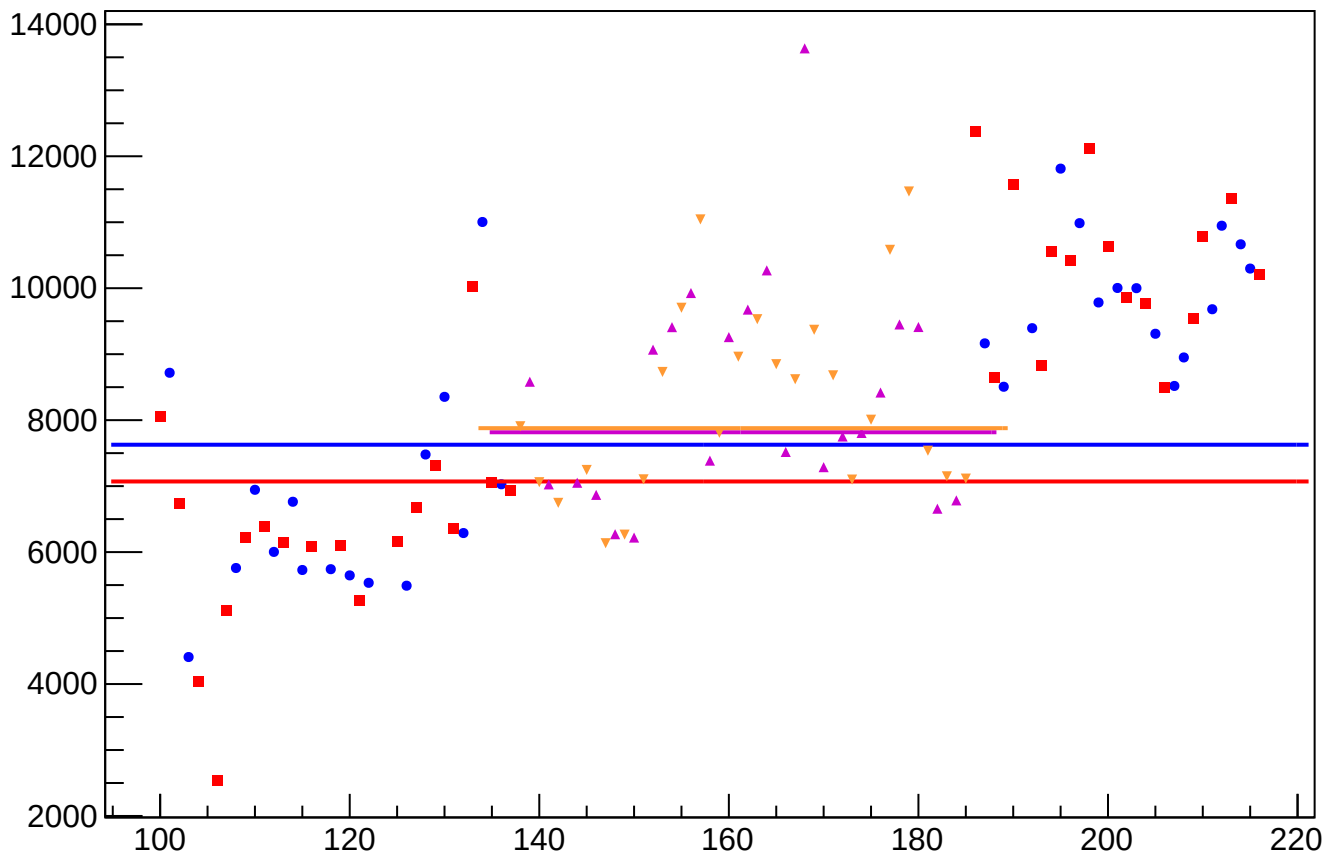
Left In:  $963.967 \pm 1859.926$   $\chi^2/\text{NDF}: 12.8/22$

+ sign  $179.507 \pm 1298.192$   $\chi^2/\text{NDF}: 65.0/54$

All:  $570.668 \pm 911.686$   $\chi^2/\text{NDF}: 118.1/110$

- sign  $951.314 \pm 1280.623$   $\chi^2/\text{NDF}: 52.9/55$

asym\_us\_avg\_at2lr\_avg\_dd\_rms vs Slug



Right In: 7627.527 $\pm$ 1.278  $\chi^2$ /NDF: 2758758.6/30

Left Out: 7878.482 $\pm$ 1.319  $\chi^2$ /NDF:990058.5/23

Right Out: 7070.516 $\pm$ 1.220  $\chi^2$ /NDF: 4502658.0/32

Left In: 7816.447 $\pm$ 1.315  $\chi^2$ /NDF:1132368.2/22

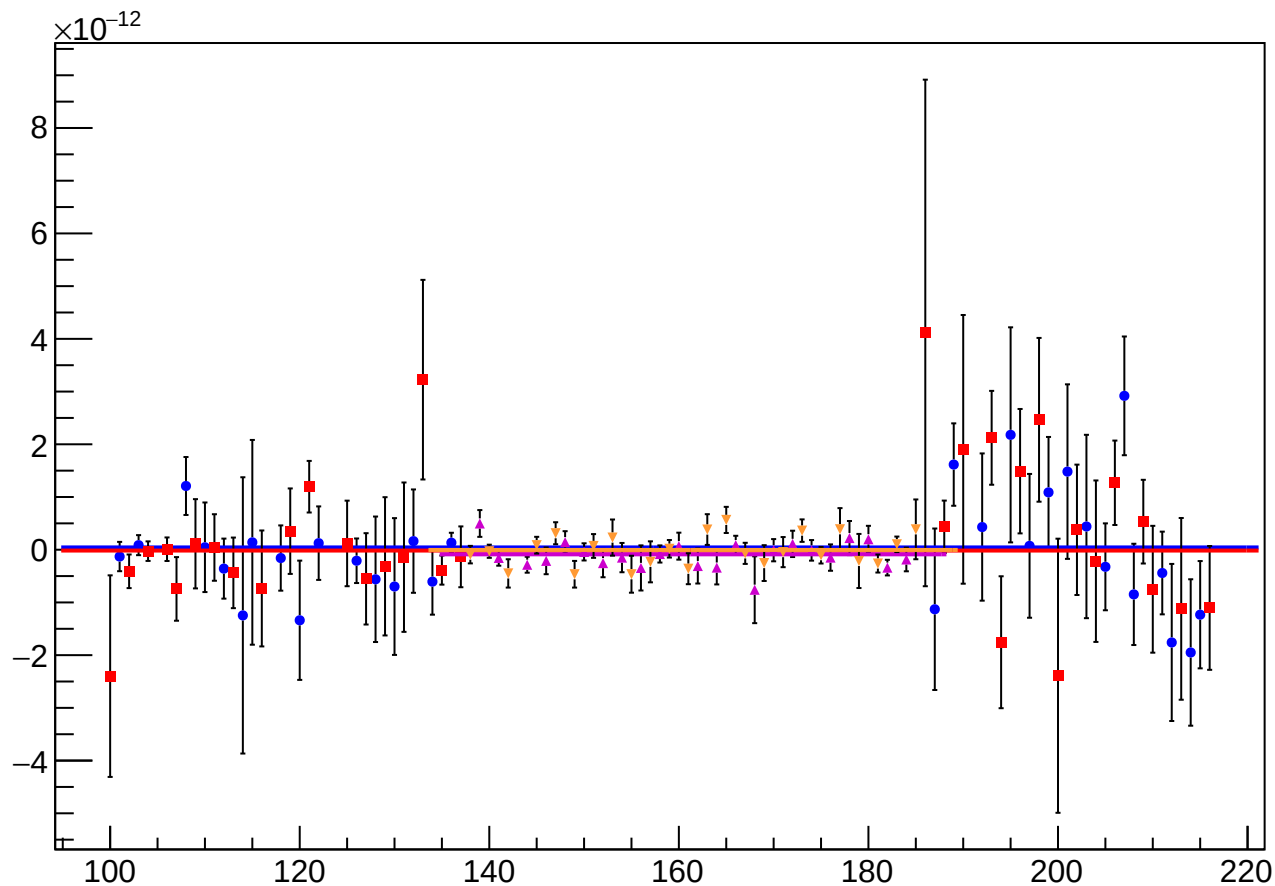
+ sign 7749.107 $\pm$ 0.918  $\chi^2$ /NDF: 3767483.7/54

All: 7577.971 $\pm$ 0.641  $\chi^2$ /NDF: 9643172.3/11

- sign 7415.505 $\pm$ 0.894  $\chi^2$ /NDF: 5807936.1/55



asym\_us\_avg\_at2lr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.2/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.6/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.7/32

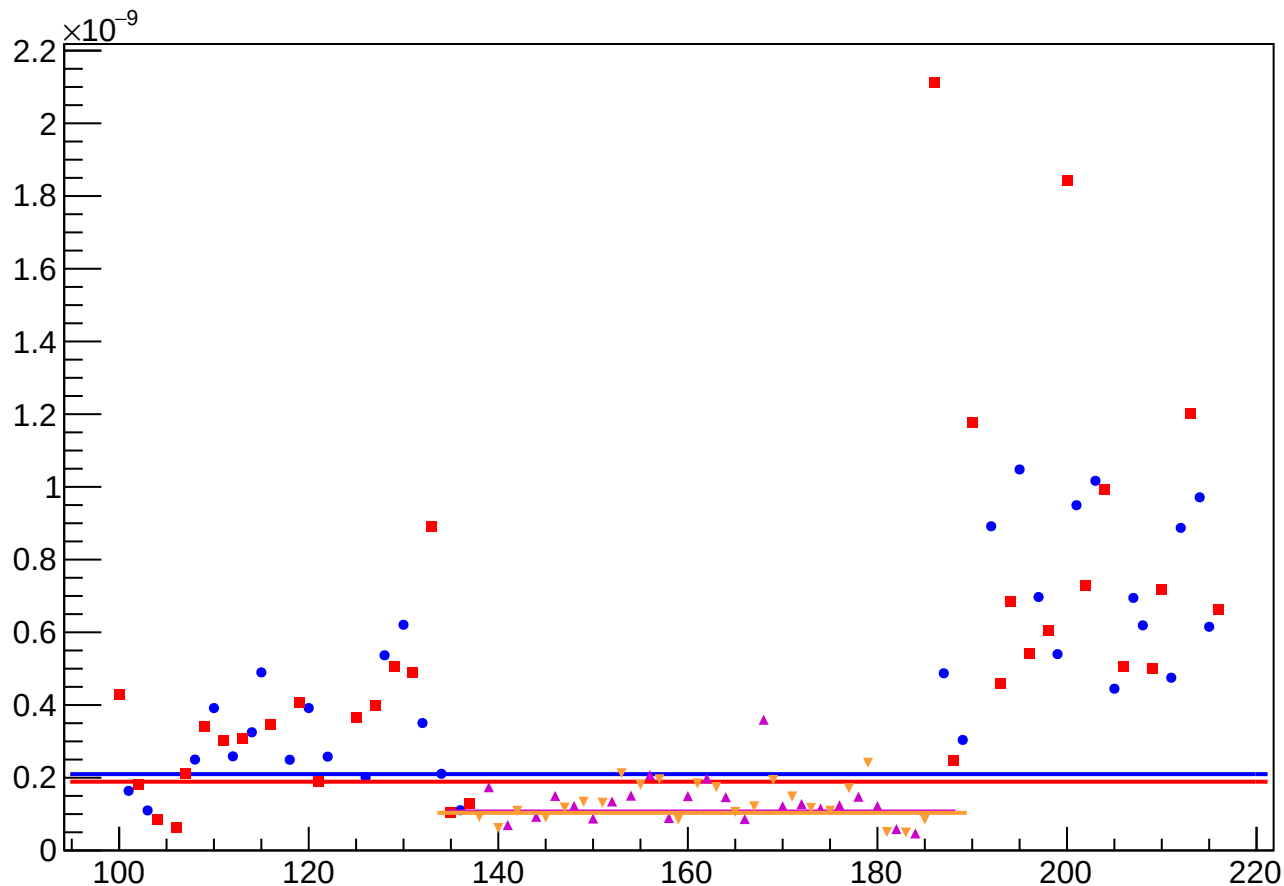
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.0/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.4/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.5/55

asym\_us\_avg\_at2lr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 6434246.8/30

Left Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 1905146.0/23

Right Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 7830479.4/32

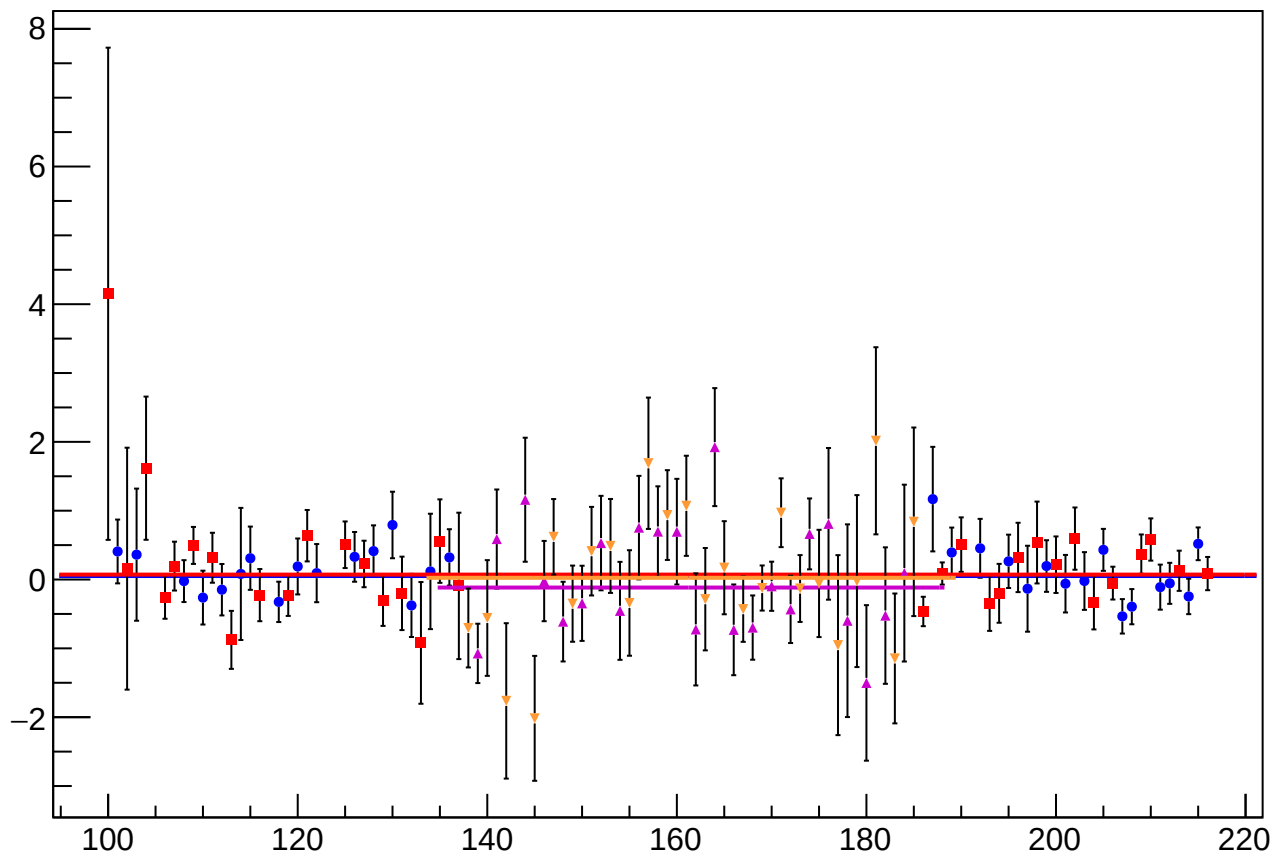
Left In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 1596017.6/22

+ sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 10312024.2/54

All: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 20929490.8/110

- sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 10617343.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.051 \pm 0.066$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $0.025 \pm 0.134$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.071 \pm 0.060$   $\chi^2/\text{NDF}$ : 38.4/32

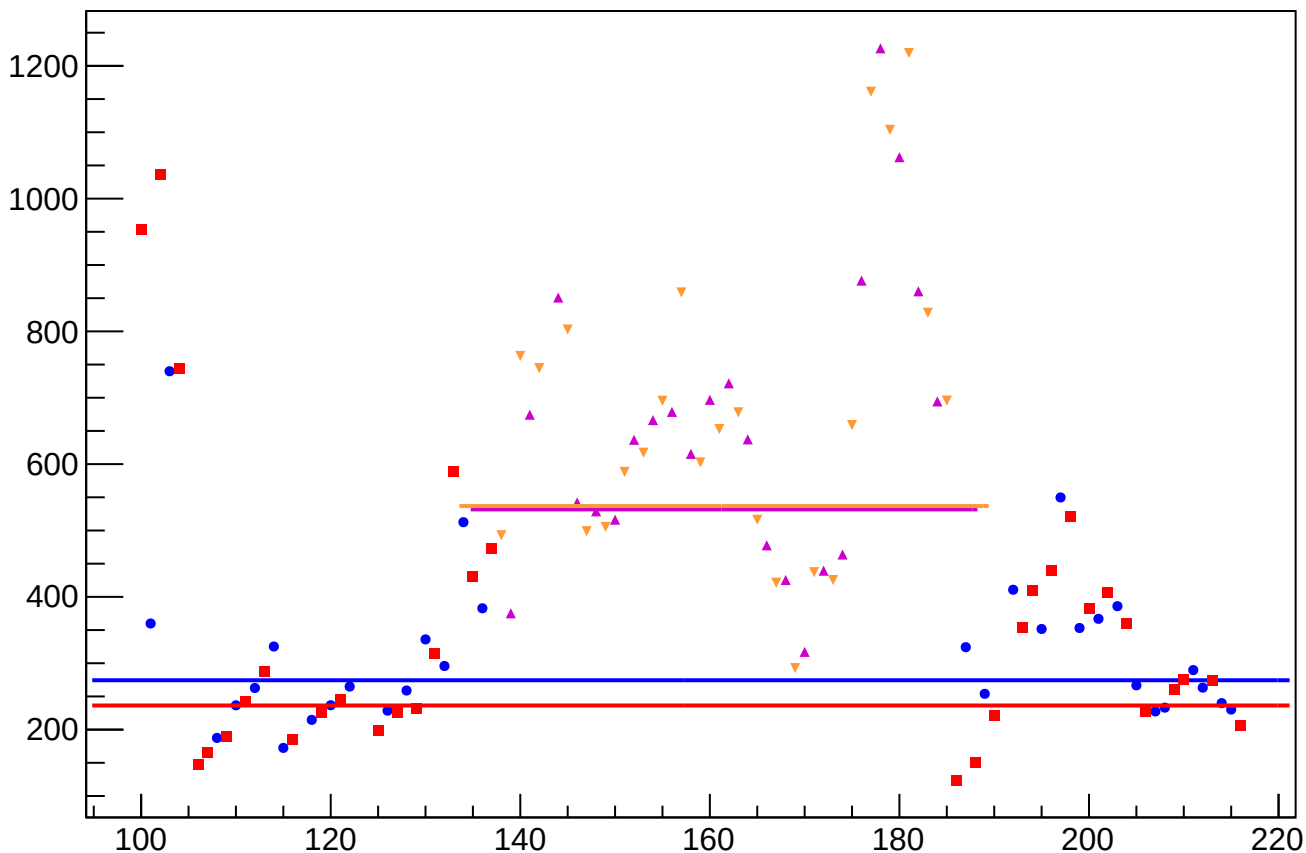
Left In:  $-0.117 \pm 0.132$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.059$   $\chi^2/\text{NDF}$ : 58.3/54

All:  $0.042 \pm 0.040$   $\chi^2/\text{NDF}$ : 126.1/110

- sign  $0.039 \pm 0.055$   $\chi^2/\text{NDF}$ : 67.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 274.363 $\pm$ 0.047  $\chi^2$ /NDF: 2551565.3/30

Left Out: 536.821 $\pm$ 0.095  $\chi^2$ /NDF: 3963242.1/23

Right Out: 236.350 $\pm$ 0.042  $\chi^2$ /NDF: 5301432.1/32

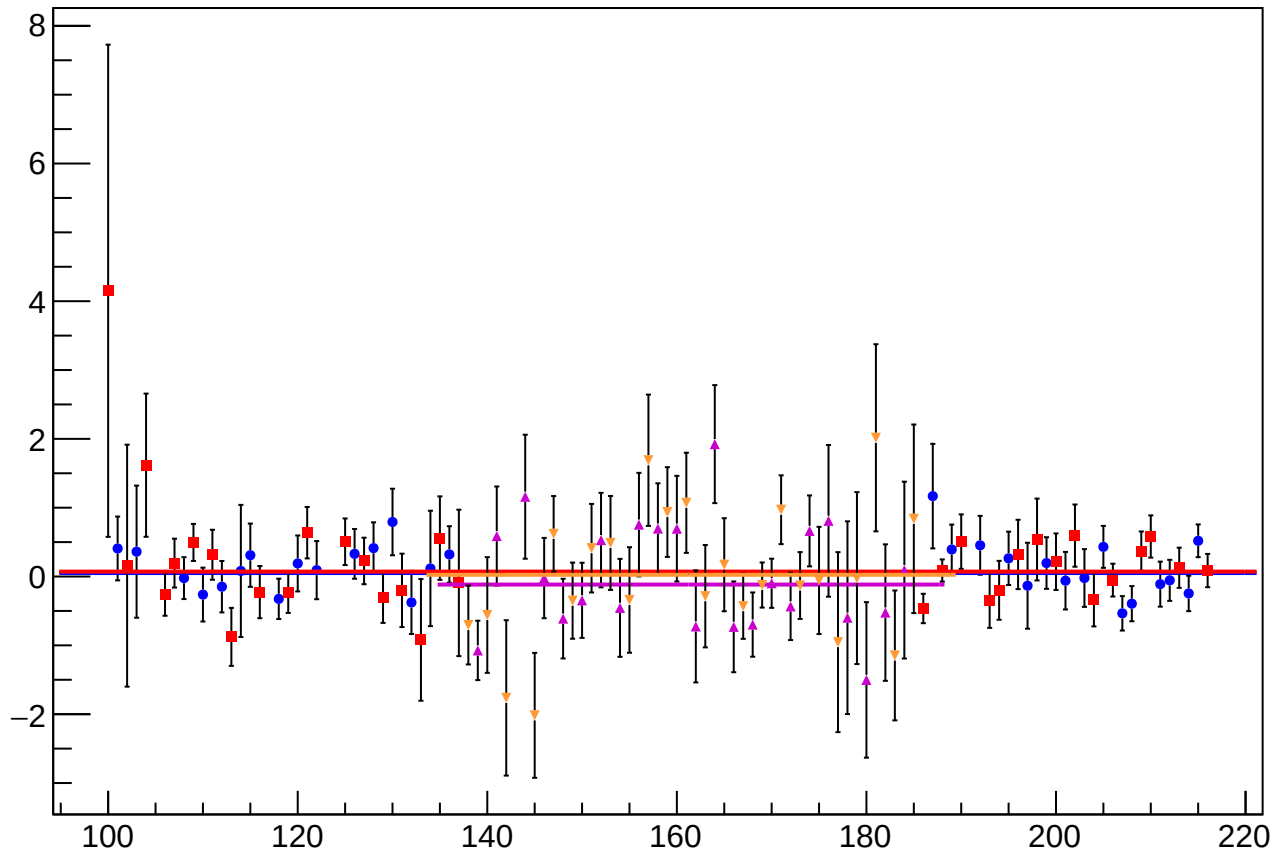
Left In: 531.769 $\pm$ 0.094  $\chi^2$ /NDF: 3381209.0/22

+ sign 325.800 $\pm$ 0.042  $\chi^2$ /NDF: 12686390.4/54

All: 304.663 $\pm$ 0.028  $\chi^2$ /NDF: 30091395.8/1

- sign 286.695 $\pm$ 0.039  $\chi^2$ /NDF: 16935024.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.051 \pm 0.066$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $0.025 \pm 0.134$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.071 \pm 0.060$   $\chi^2/\text{NDF}$ : 38.4/32

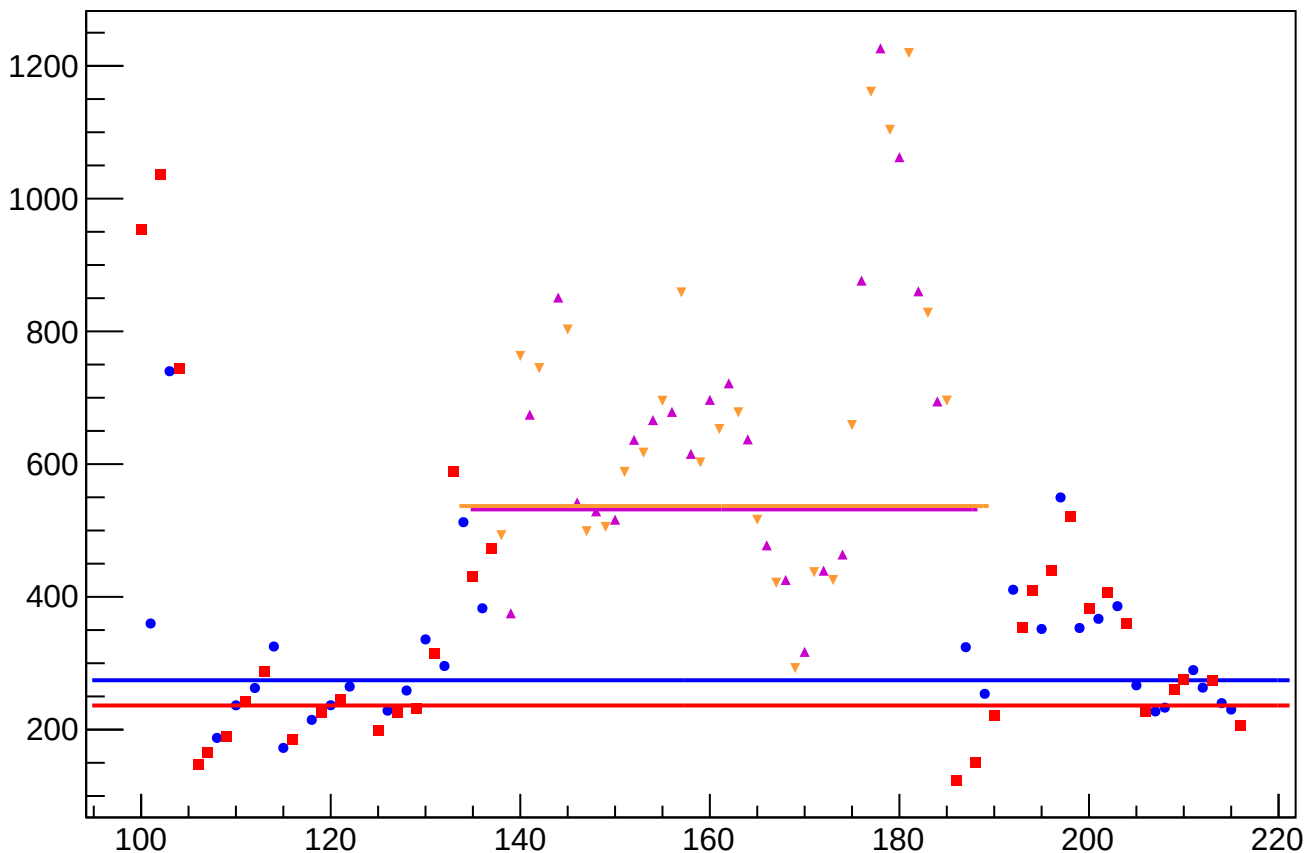
Left In:  $-0.117 \pm 0.132$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.059$   $\chi^2/\text{NDF}$ : 58.3/54

All:  $0.042 \pm 0.040$   $\chi^2/\text{NDF}$ : 126.1/110

- sign  $0.039 \pm 0.055$   $\chi^2/\text{NDF}$ : 67.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 274.363 $\pm$ 0.047  $\chi^2/\text{NDF}$ : 2551565.3/30

Left Out: 536.821 $\pm$ 0.095  $\chi^2/\text{NDF}$ : 3963242.1/23

Right Out: 236.350 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 5301432.1/32

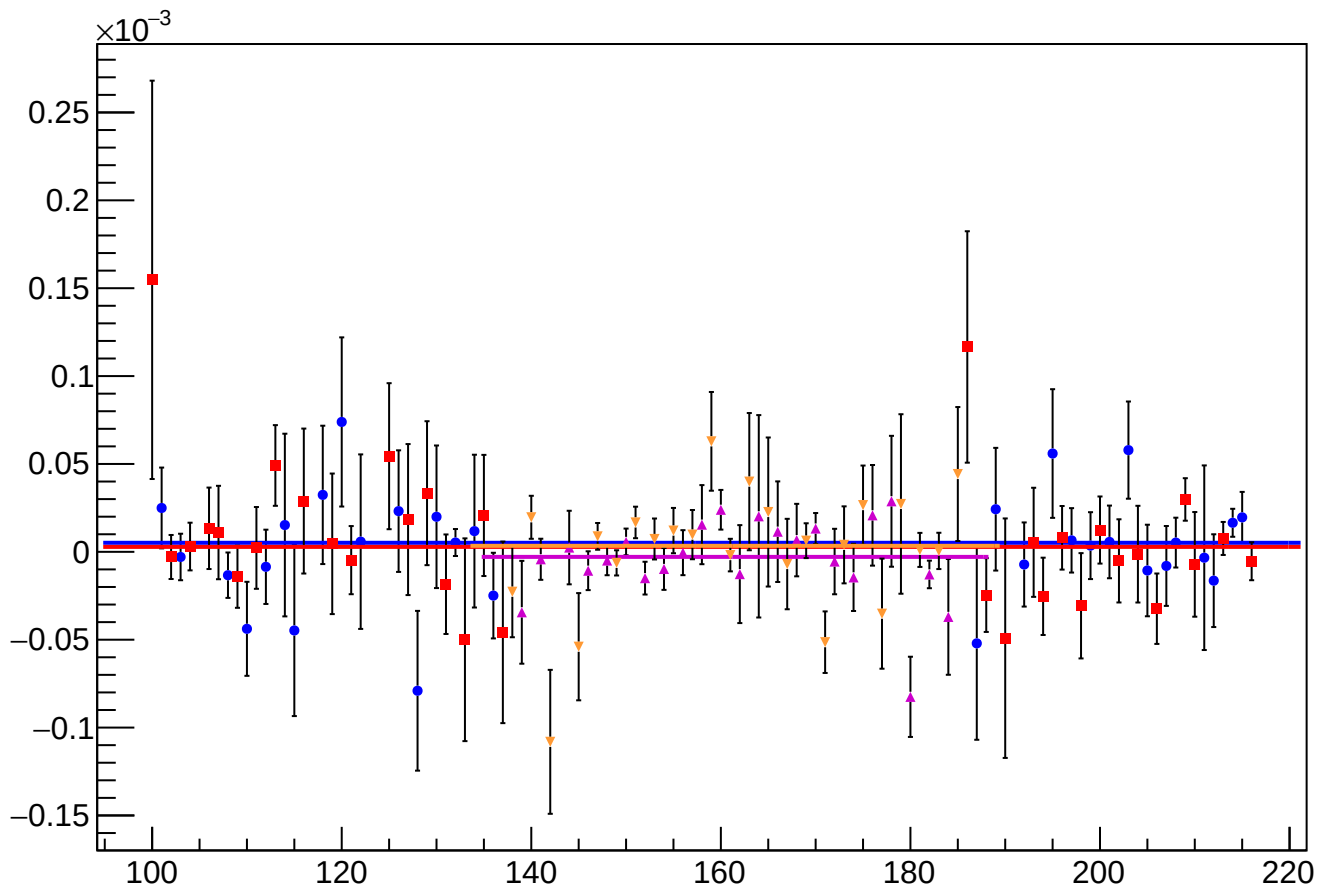
Left In: 531.769 $\pm$ 0.094  $\chi^2/\text{NDF}$ : 3381209.0/22

+ sign 325.800 $\pm$ 0.042  $\chi^2/\text{NDF}$ : 12686390.4/54

All: 304.663 $\pm$ 0.028  $\chi^2/\text{NDF}$ : 30091395.8/1

- sign 286.695 $\pm$ 0.039  $\chi^2/\text{NDF}$ : 16935024.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.3/32

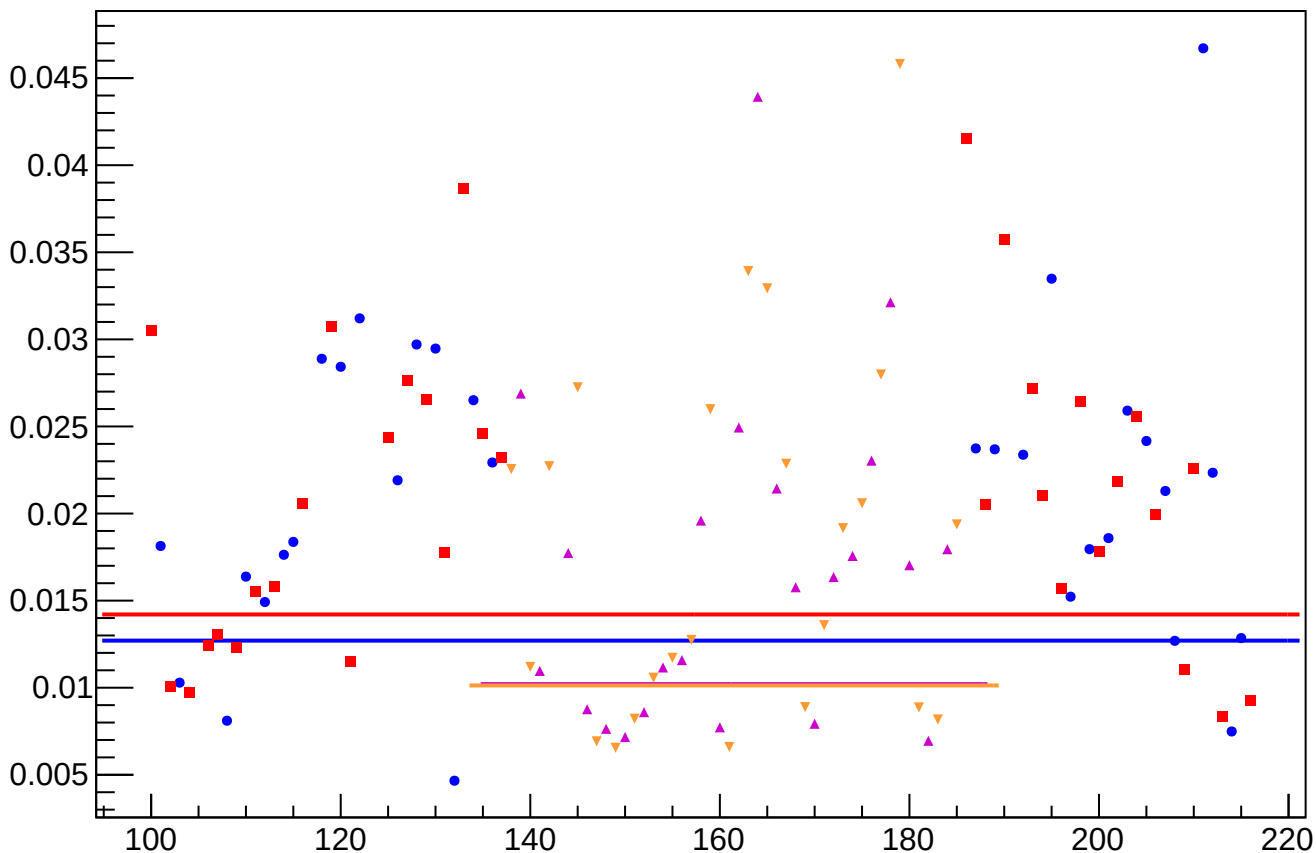
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.8/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 133.3/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.0/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 9645119.1/30

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 7812047.6/23

Right Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF: 5971756.1/32

Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 6075883.8/22

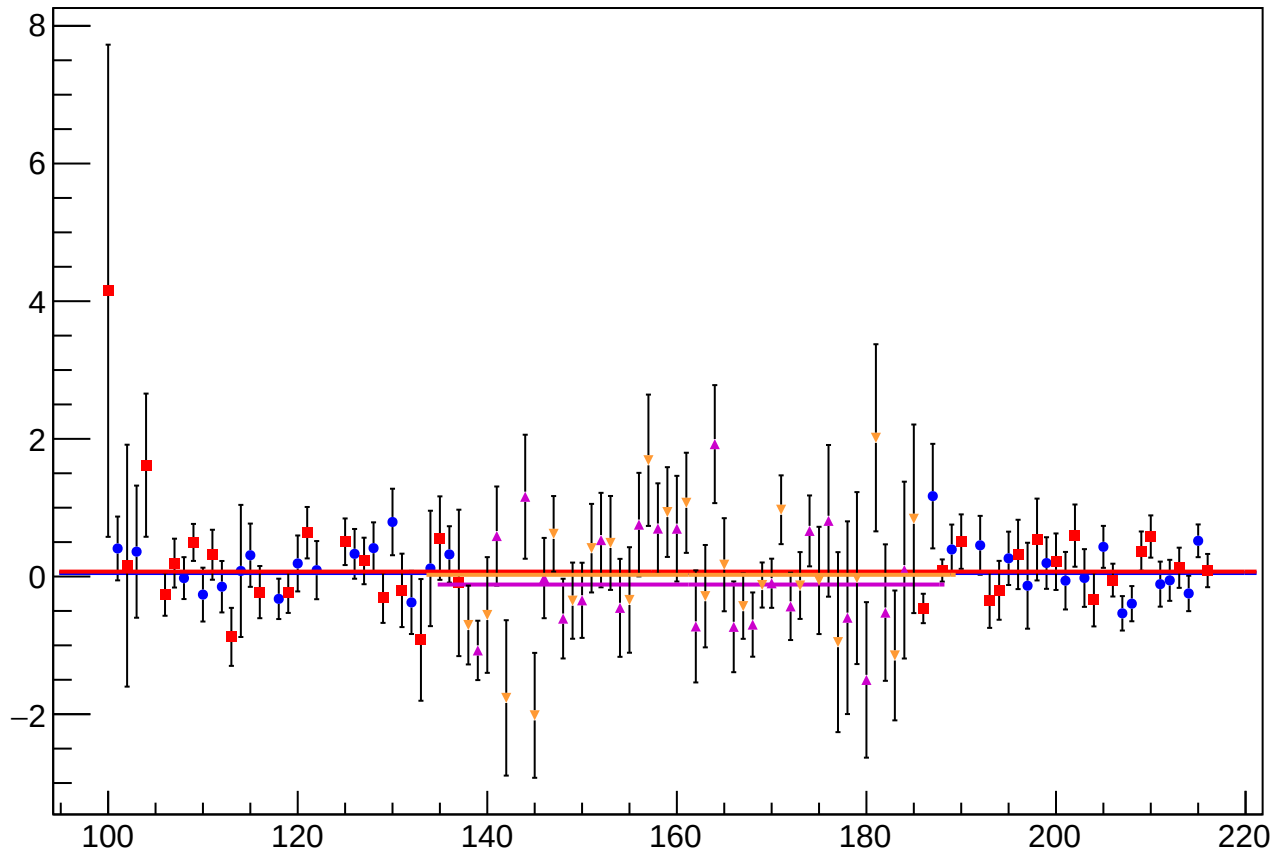
+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 18140826.7/54

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 31796678.4/110

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 13589038.6/55



asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.051 \pm 0.066$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $0.025 \pm 0.134$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.072 \pm 0.060$   $\chi^2/\text{NDF}$ : 38.4/32

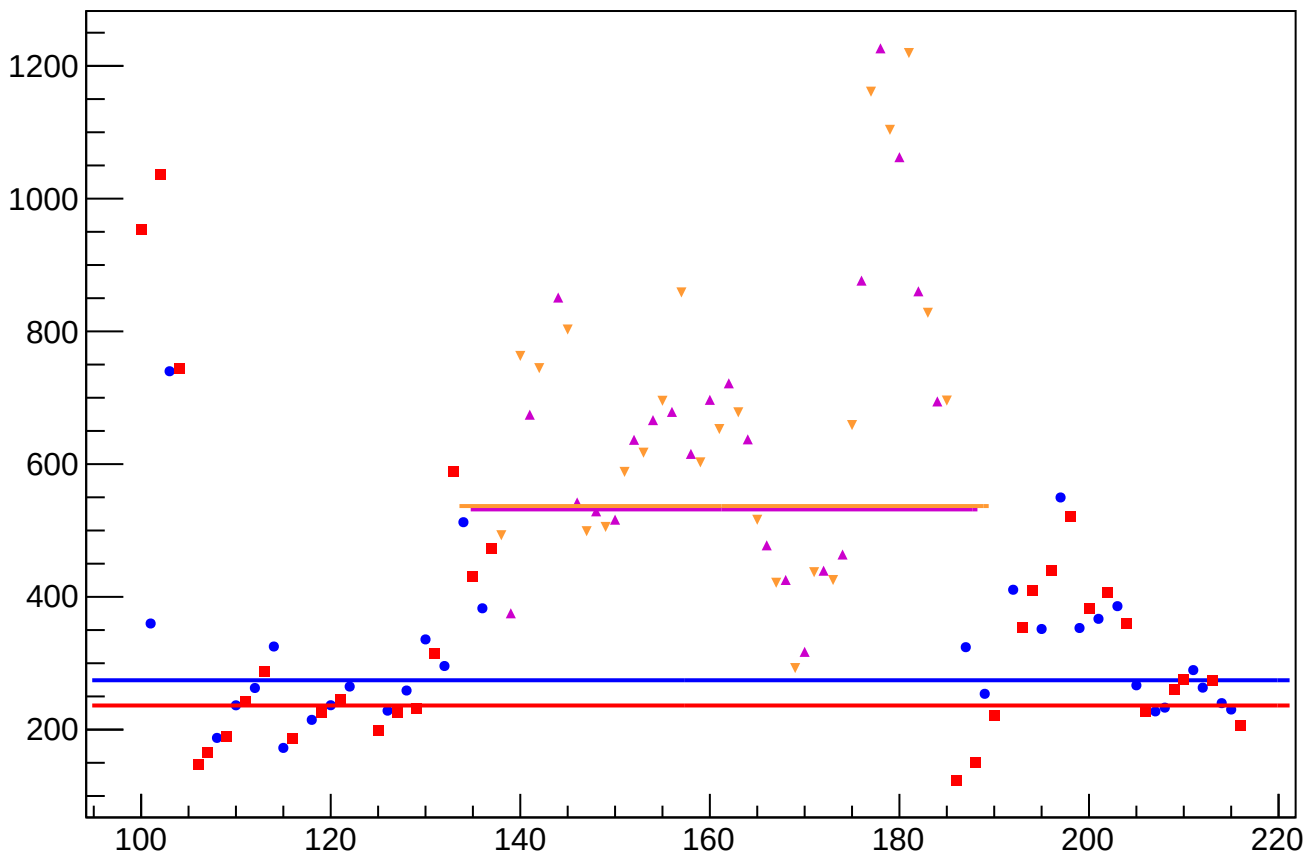
Left In:  $-0.117 \pm 0.132$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.059$   $\chi^2/\text{NDF}$ : 58.3/54

All:  $0.042 \pm 0.040$   $\chi^2/\text{NDF}$ : 126.1/110

- sign  $0.039 \pm 0.055$   $\chi^2/\text{NDF}$ : 67.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 274.362 $\pm$ 0.047  $\chi^2$ /NDF: 2551576.4/30

Left Out: 536.822 $\pm$ 0.095  $\chi^2$ /NDF:3963422.5/23

Right Out: 236.347 $\pm$ 0.042  $\chi^2$ /NDF: 5301562.2/32

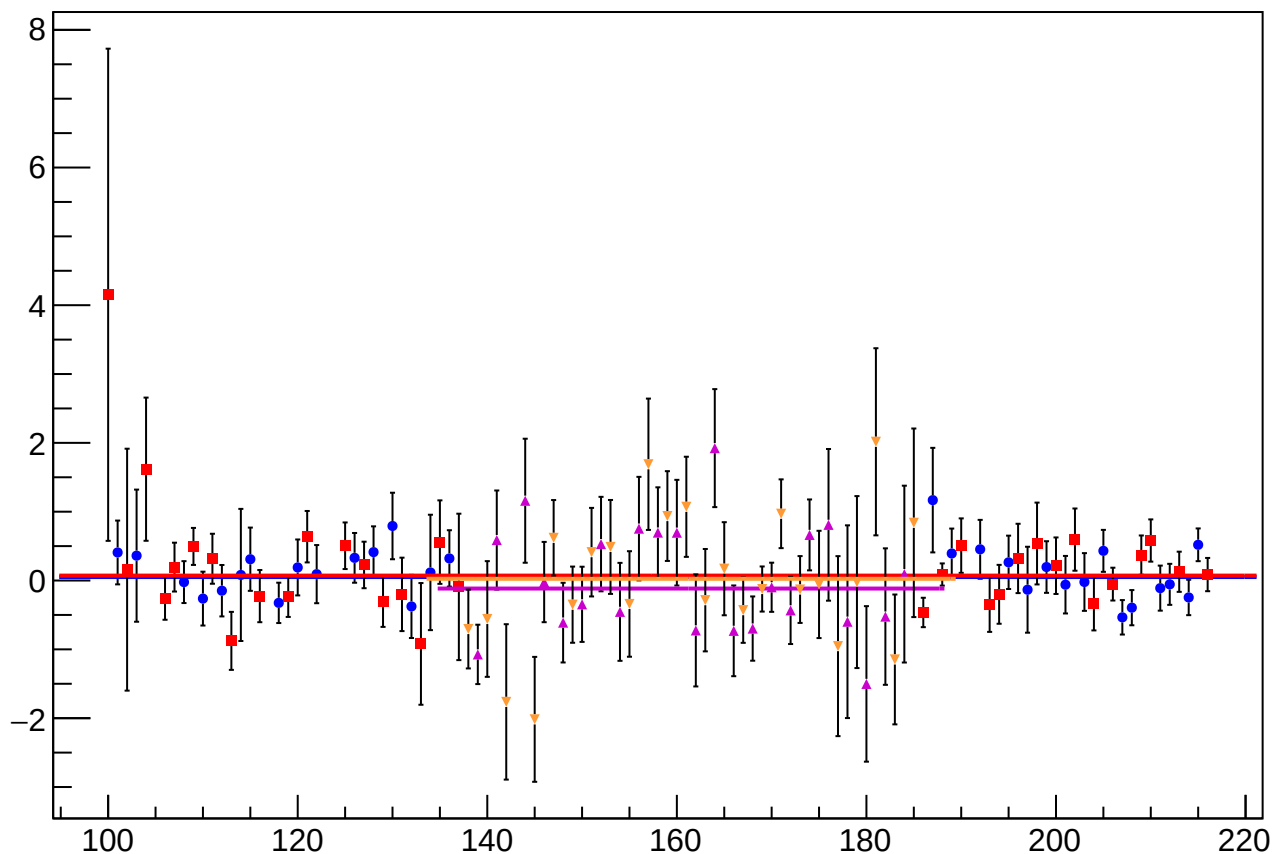
Left In: 531.773 $\pm$ 0.094  $\chi^2$ /NDF:3381293.8/22

+ sign 325.799 $\pm$ 0.042  $\chi^2$ /NDF: 12686636.5/54

All: 304.661 $\pm$ 0.028  $\chi^2$ /NDF: 30092117.7/1

- sign 286.692 $\pm$ 0.039  $\chi^2$ /NDF: 16935469.6/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.051 \pm 0.066$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $0.025 \pm 0.134$   $\chi^2/\text{NDF}$ : 29.1/23

Right Out:  $0.072 \pm 0.060$   $\chi^2/\text{NDF}$ : 38.4/32

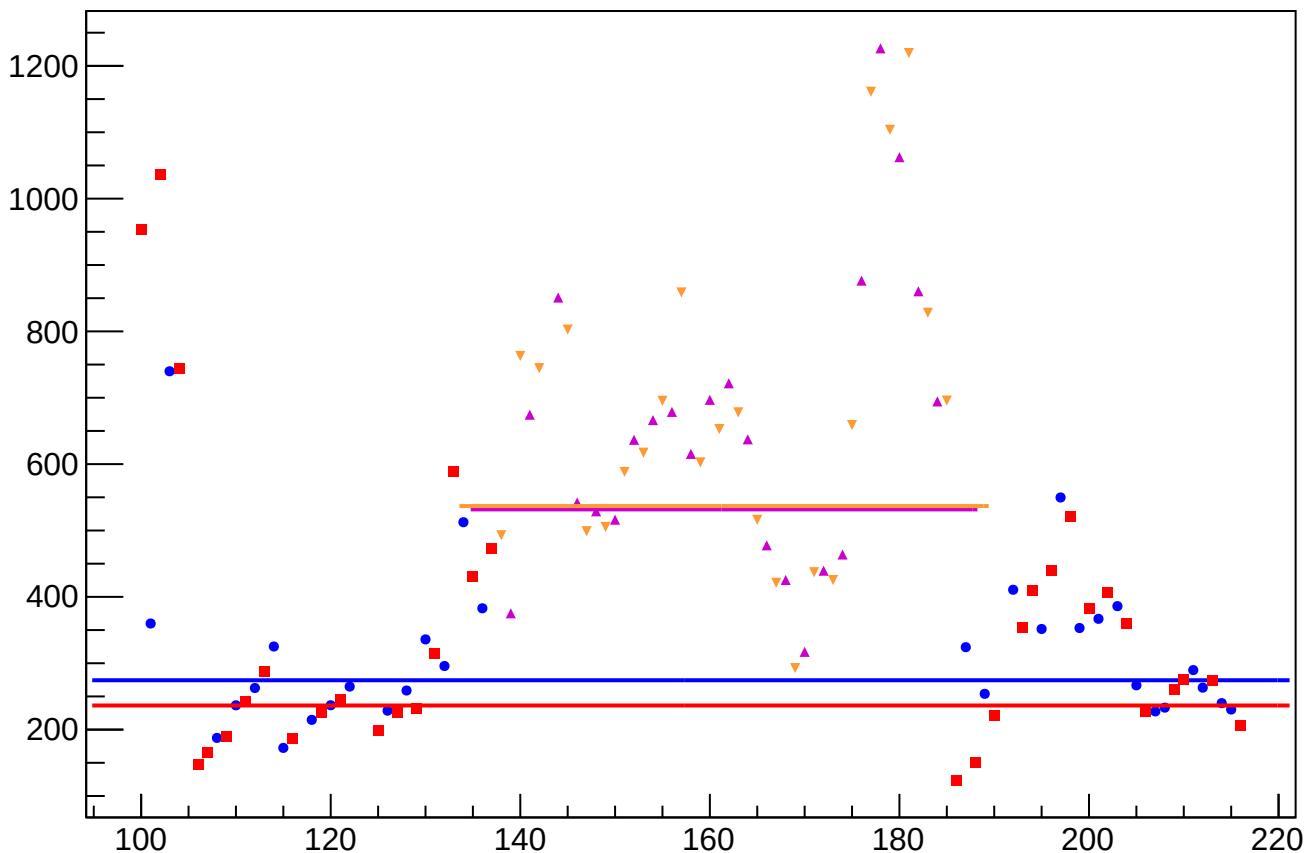
Left In:  $-0.117 \pm 0.132$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $0.046 \pm 0.059$   $\chi^2/\text{NDF}$ : 58.3/54

All:  $0.042 \pm 0.040$   $\chi^2/\text{NDF}$ : 126.1/110

- sign  $0.039 \pm 0.055$   $\chi^2/\text{NDF}$ : 67.8/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 274.362 $\pm$ 0.047  $\chi^2$ /NDF: 2551576.4/30

Left Out: 536.822 $\pm$ 0.095  $\chi^2$ /NDF:3963422.5/23

Right Out: 236.347 $\pm$ 0.042  $\chi^2$ /NDF: 5301562.2/32

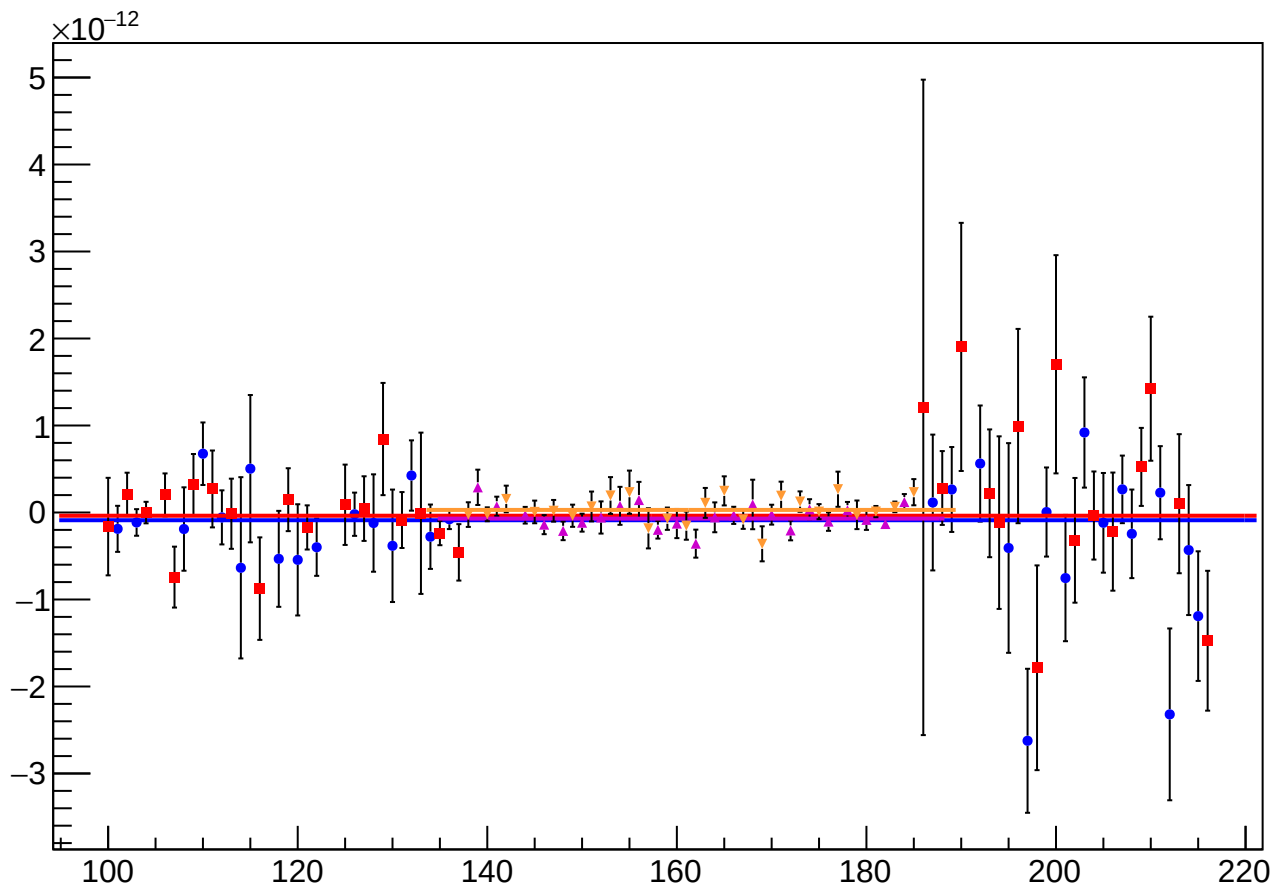
Left In: 531.773 $\pm$ 0.094  $\chi^2$ /NDF:3381293.8/22

+ sign 325.799 $\pm$ 0.042  $\chi^2$ /NDF: 12686636.5/54

All: 304.661 $\pm$ 0.028  $\chi^2$ /NDF: 30092117.7/1

- sign 286.692 $\pm$ 0.039  $\chi^2$ /NDF: 16935469.6/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.6/32

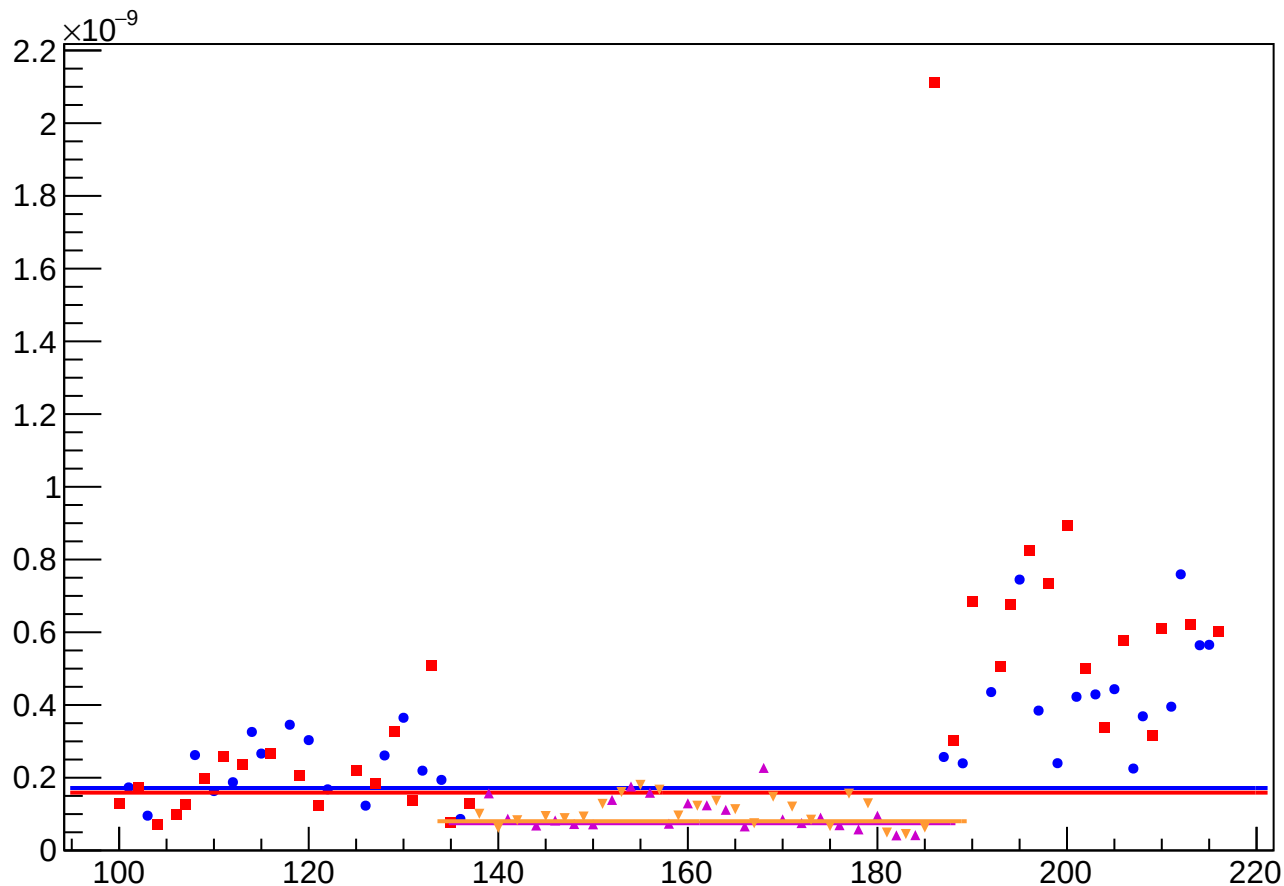
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.4/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.7/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 115.5/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.3/55

asym\_us\_avg\_at2lr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6919947.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3732870.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10139942.6/32

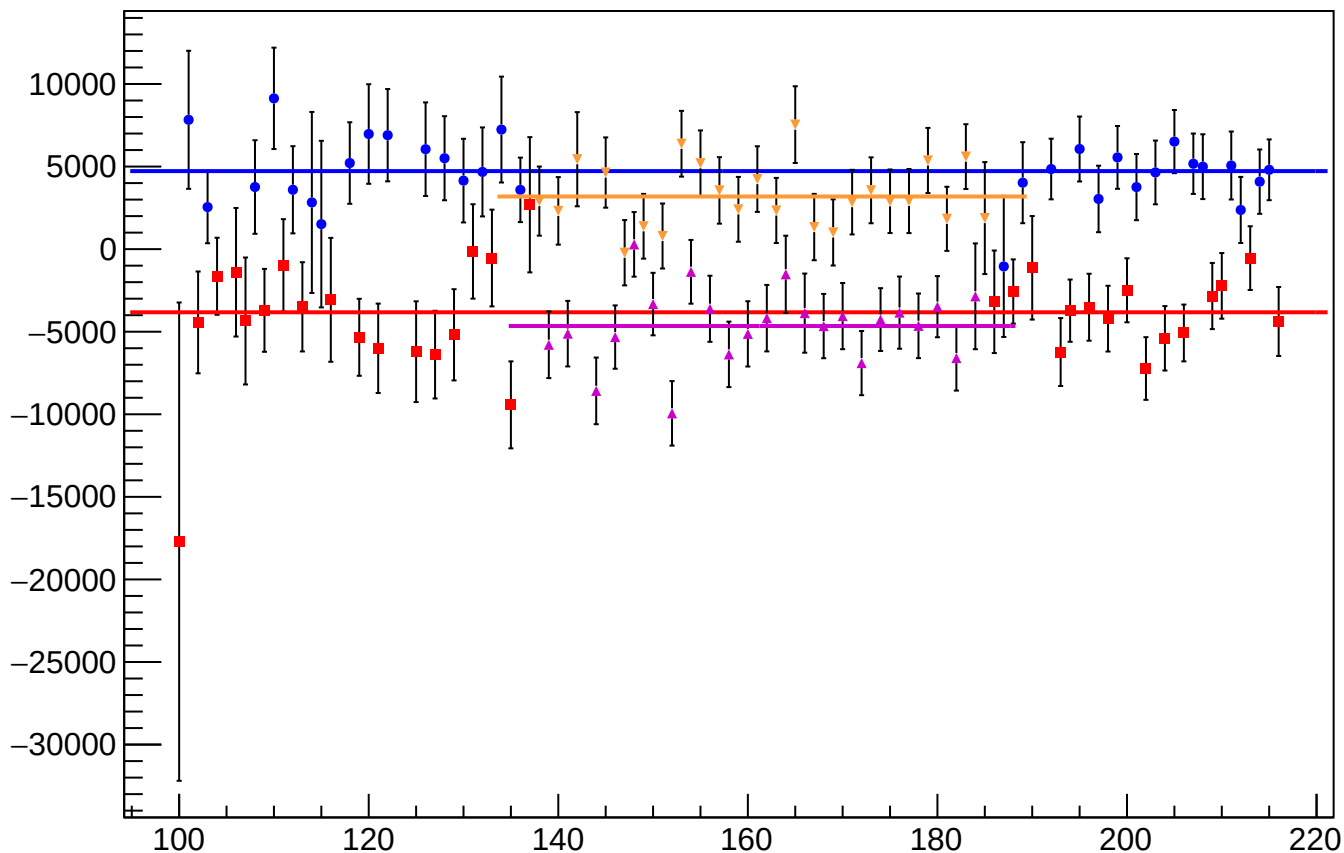
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3665599.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14283634.3/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 31503895.9/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17129135.5/55

# reg\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4725.359 $\pm$ 417.368  $\chi^2$ /NDF: 12.9/30

Left Out: 3187.125 $\pm$ 418.619  $\chi^2$ /NDF:19.9/23

Right Out: -3824.245 $\pm$ 419.059  $\chi^2$ /NDF: 27.5/32

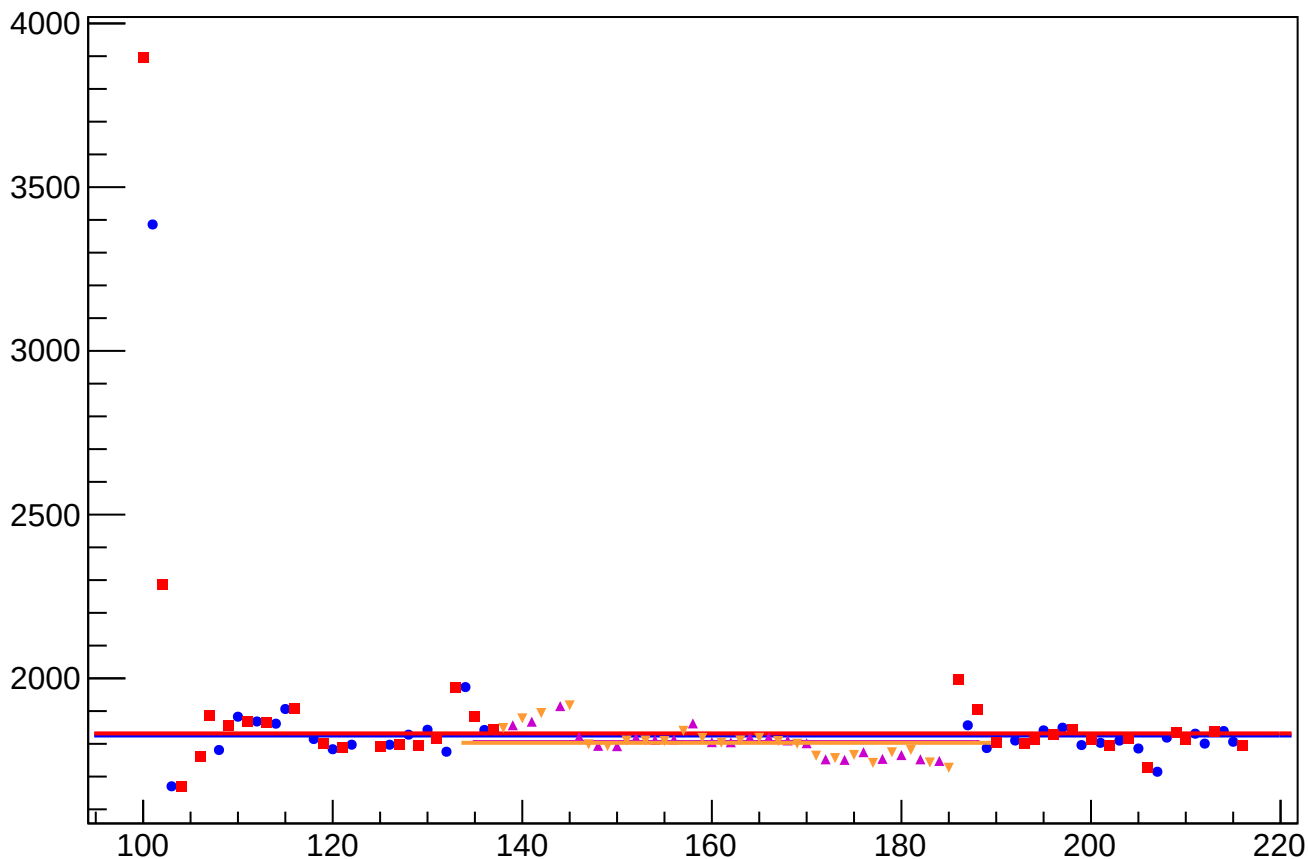
Left In: -4655.206 $\pm$ 421.691  $\chi^2$ /NDF:27.7/22

+ sign 3958.543 $\pm$ 295.565  $\chi^2$ /NDF: 39.5/54

All: -116.056 $\pm$ 209.588  $\chi^2$ /NDF: 479.0/110

- sign -4237.123 $\pm$ 297.246  $\chi^2$ /NDF: 57.2/55

# reg\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1825.444+/-0.295  $\chi^2/\text{NDF}$ : 307928.9/30

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ :20641.1/23

Right Out: 1831.843+/-0.296  $\chi^2/\text{NDF}$ : 122206.1/32

Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ :19314.7/22

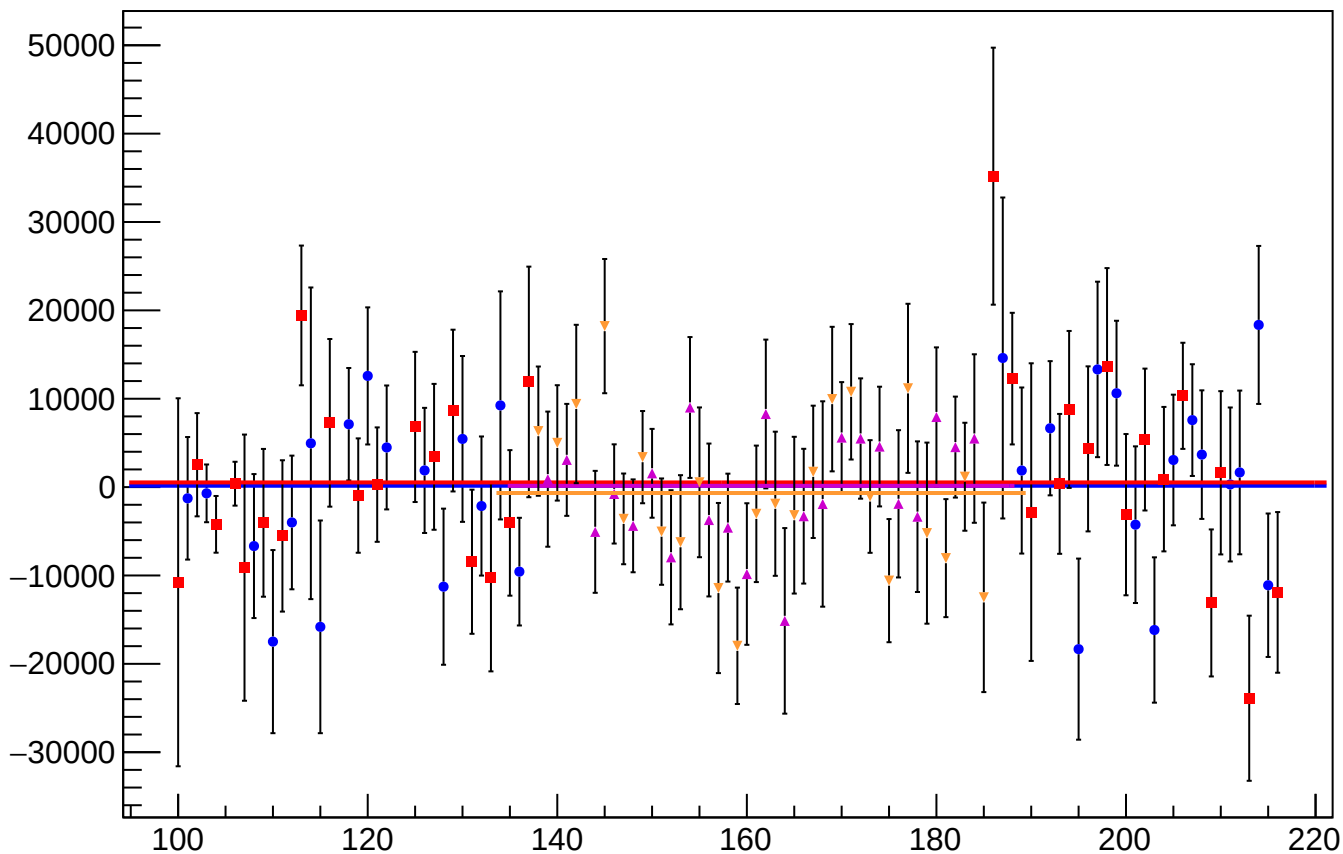
+ sign 1814.312+/-0.209  $\chi^2/\text{NDF}$ : 331423.6/54

All: 1816.543+/-0.148  $\chi^2/\text{NDF}$ : 477087.1/110

- sign 1818.797+/-0.210  $\chi^2/\text{NDF}$ : 145434.4/55



asym\_us\_avg\_atlr\_avg\_avg\_reg\_correction\_mean vs Slug



Right In: 153.477+/-1373.885  $\chi^2/\text{NDF}$ : 35.3/30

Left Out: -667.243+/-1478.798  $\chi^2/\text{NDF}$ :29.8/23

Right Out: 528.920+/-1214.779  $\chi^2/\text{NDF}$ : 40.1/32

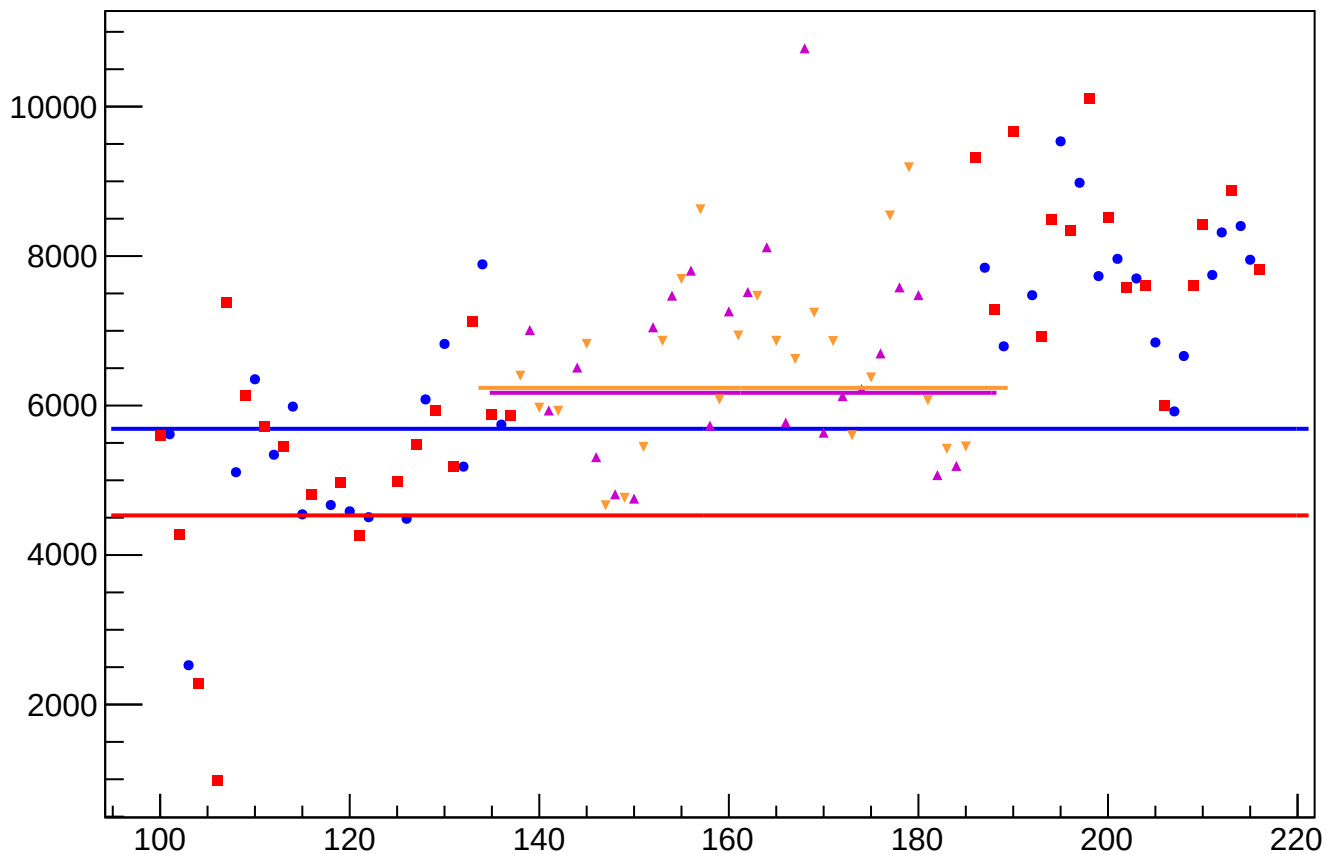
Left In: 143.435+/-1471.371  $\chi^2/\text{NDF}$ :13.6/22

+ sign -226.740+/-1006.531  $\chi^2/\text{NDF}$ : 65.2/54

All: 94.454+/-685.733  $\chi^2/\text{NDF}$ : 119.1/110

- sign 372.667+/-936.767  $\chi^2/\text{NDF}$ : 53.7/55

asym\_us\_avg\_atlr\_avg\_avg\_reg\_correction\_rms vs Slug



Right In: 5688.964+/-0.971  $\chi^2/\text{NDF}$ : 3965055.0/30

Left Out: 6236.636+/-1.046  $\chi^2/\text{NDF}$ : 1067659.4/23

Right Out: 4530.282+/-0.859  $\chi^2/\text{NDF}$ : 10080216.1/32

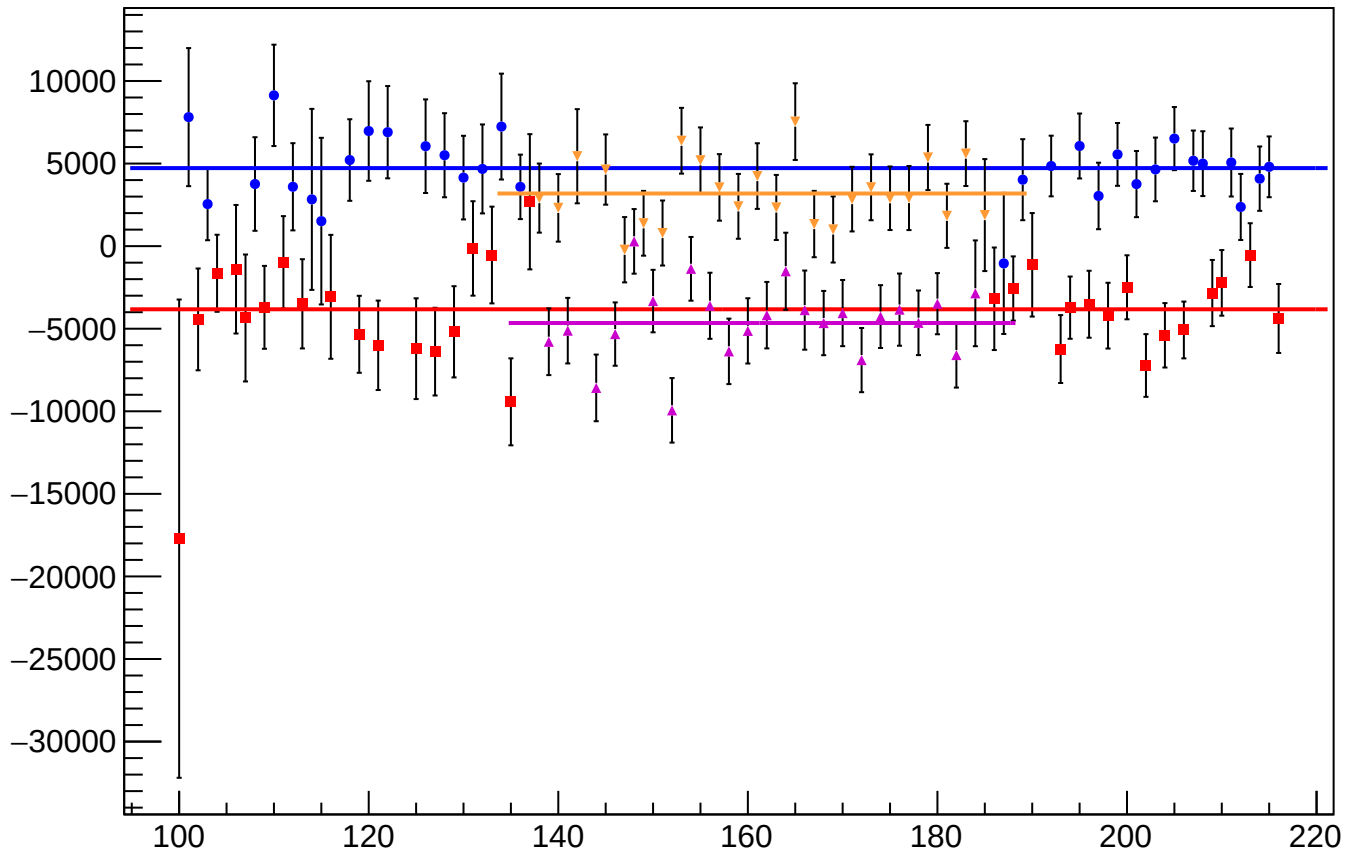
Left In: 6170.791+/-1.040  $\chi^2/\text{NDF}$ : 1237554.5/22

+ sign 5942.686+/-0.712  $\chi^2/\text{NDF}$ : 5179947.9/54

All: 5542.167+/-0.485  $\chi^2/\text{NDF}$ : 18567169.6/100

- sign 5195.245+/-0.662  $\chi^2/\text{NDF}$ : 12796239.5/55

# cor\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4725.173+/-417.368  $\chi^2/\text{NDF}$ : 12.9/30

Left Out: 3187.056+/-418.619  $\chi^2/\text{NDF}$ : 19.9/23

Right Out: -3824.173+/-419.059  $\chi^2/\text{NDF}$ : 27.5/32

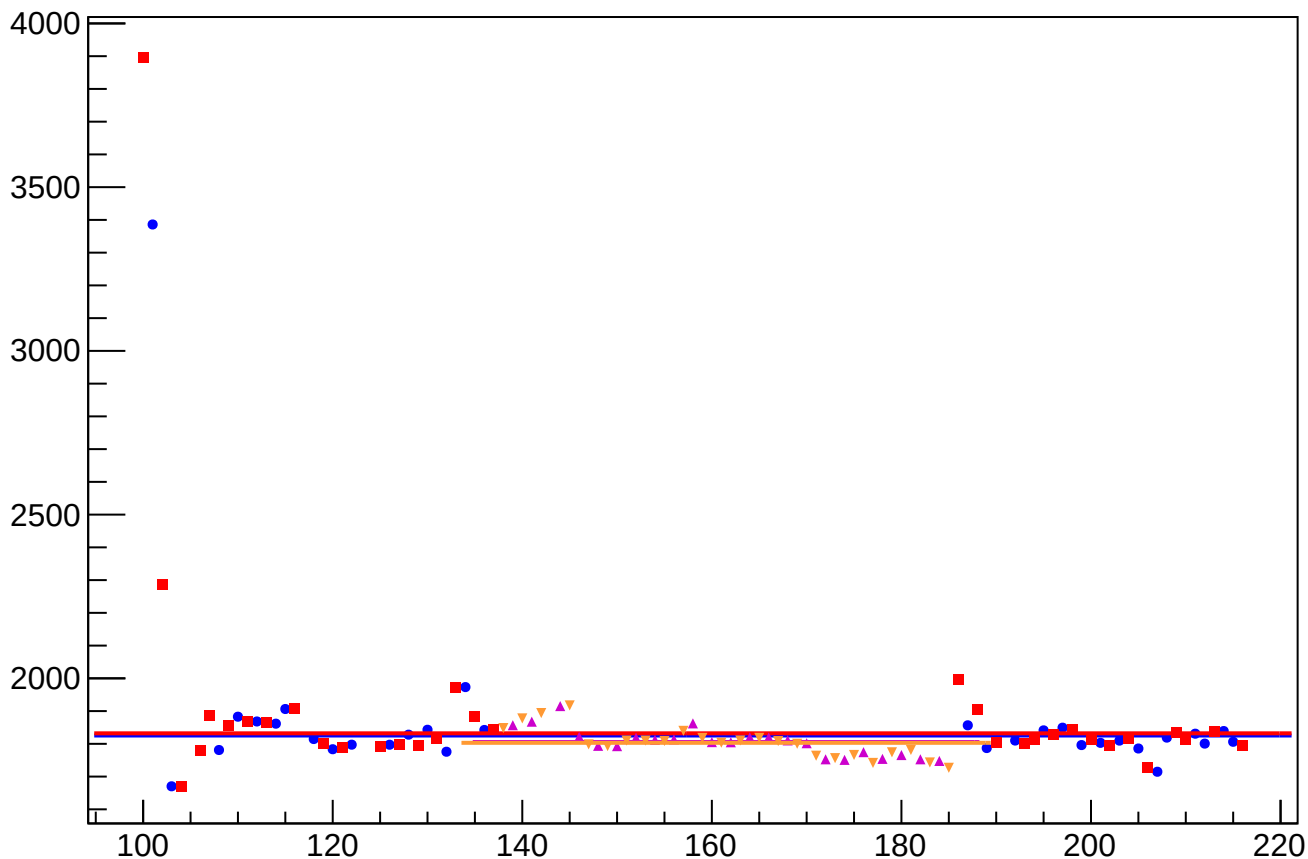
Left In: -4655.225+/-421.691  $\chi^2/\text{NDF}$ : 27.7/22

+ sign 3958.415+/-295.565  $\chi^2/\text{NDF}$ : 39.5/54

All: -116.107+/-209.588  $\chi^2/\text{NDF}$ : 479.0/110

- sign -4237.097+/-297.246  $\chi^2/\text{NDF}$ : 57.2/55

cor\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1825.444+/-0.295  $\chi^2/\text{NDF}$ : 307930.8/30

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ : 20641.1/23

Right Out: 1832.095+/-0.296  $\chi^2/\text{NDF}$ : 121862.8/32

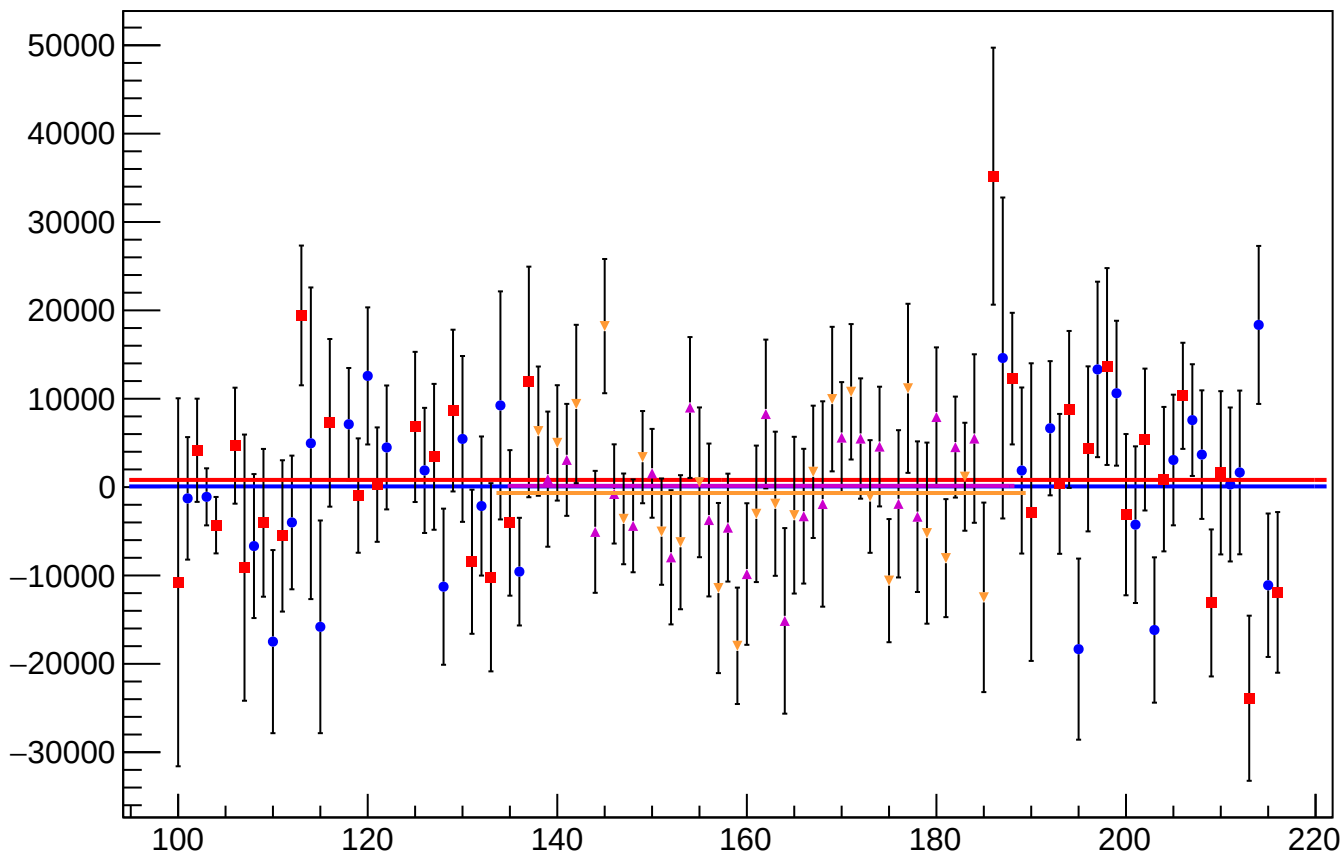
Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ : 19314.6/22

+ sign 1814.313+/-0.209  $\chi^2/\text{NDF}$ : 331425.5/54

All: 1816.606+/-0.148  $\chi^2/\text{NDF}$ : 476833.6/110

- sign 1818.923+/-0.210  $\chi^2/\text{NDF}$ : 145166.1/55

asym\_us\_avg\_atlr\_avg\_avg\_cor\_correction\_mean vs Slug



Right In: 78.341 $\pm$ 1370.900  $\chi^2$ /NDF: 35.3/30

Left Out: -667.245 $\pm$ 1478.798  $\chi^2$ /NDF:29.8/23

Right Out: 814.177 $\pm$ 1361.549  $\chi^2$ /NDF: 40.8/32

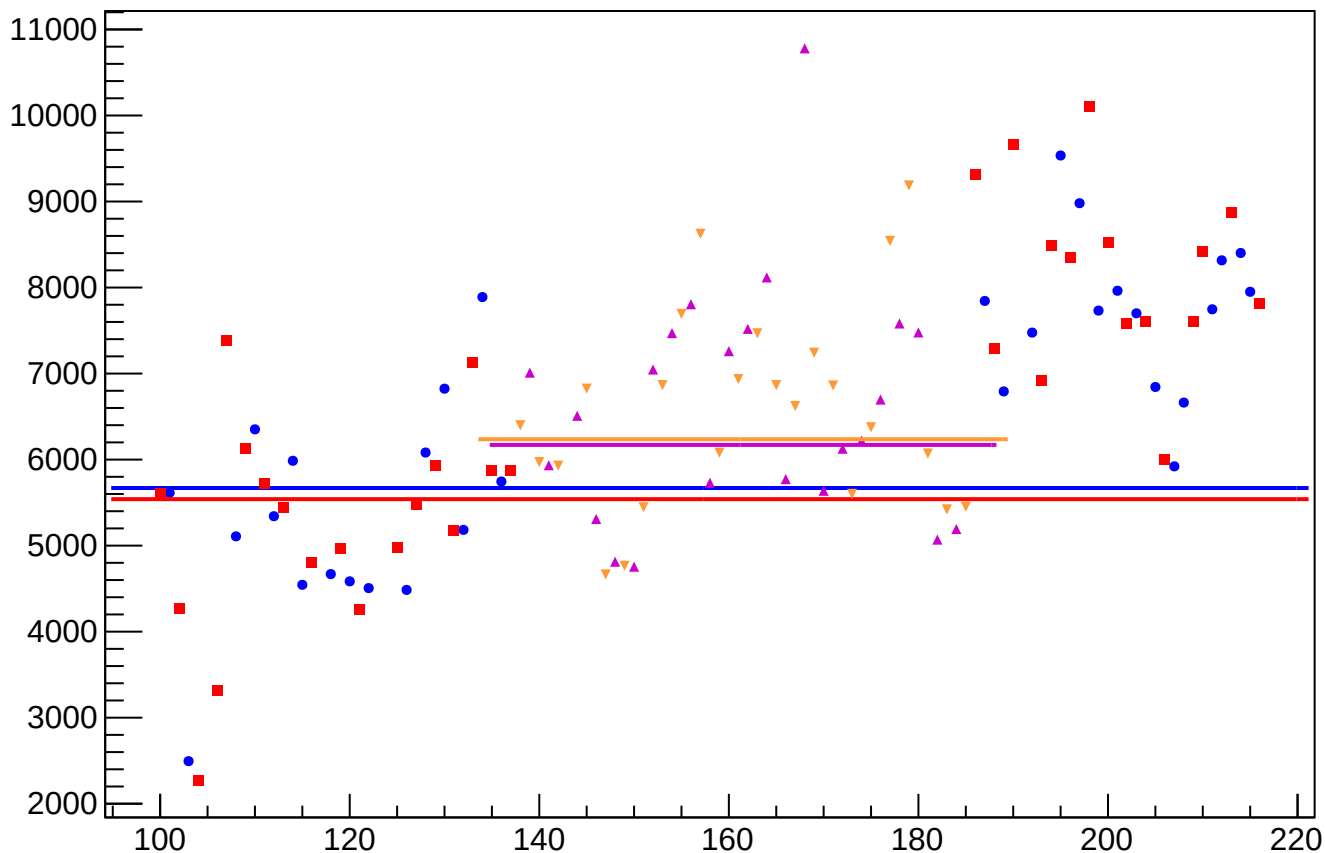
Left In: 143.369 $\pm$ 1471.371  $\chi^2$ /NDF:13.6/22

+ sign -266.262 $\pm$ 1005.356  $\chi^2$ /NDF: 65.3/54

All: 121.555 $\pm$ 708.755  $\chi^2$ /NDF: 120.0/110

- sign 504.739 $\pm$ 999.332  $\chi^2$ /NDF: 54.5/55

asym\_us\_avg\_atlr\_avg\_avg\_cor\_correction\_rms vs Slug



Right In: 5669.673 $\pm$ 0.969  $\chi^2/\text{NDF}$ : 4048300.7/30

Left Out: 6236.635 $\pm$ 1.046  $\chi^2/\text{NDF}$ : 1067665.4/23

Right Out: 5540.228 $\pm$ 0.963  $\chi^2/\text{NDF}$ : 4976797.6/32

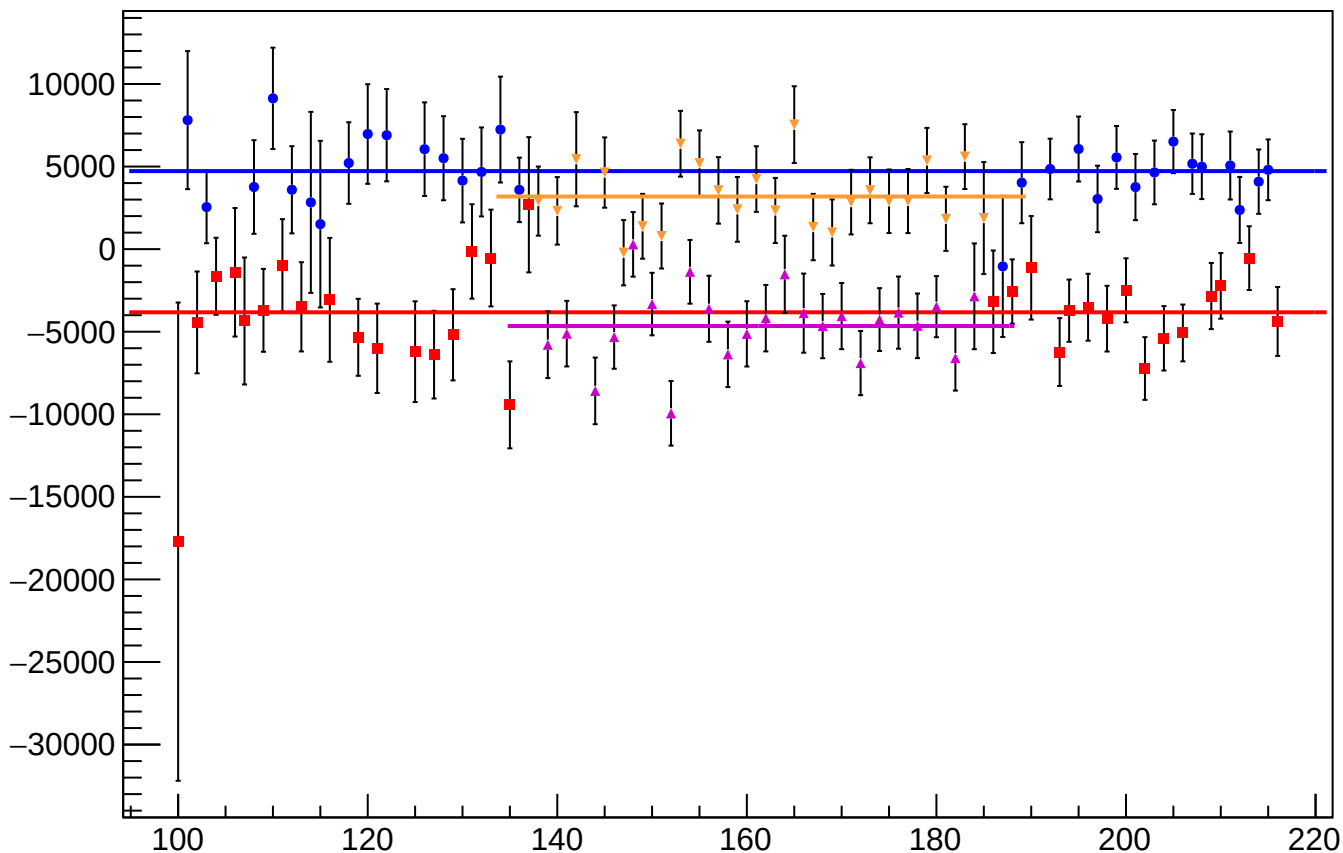
Left In: 6170.789 $\pm$ 1.040  $\chi^2/\text{NDF}$ : 1237564.5/22

+ sign 5931.718 $\pm$ 0.711  $\chi^2/\text{NDF}$ : 5274072.1/54

All: 5881.107 $\pm$ 0.501  $\chi^2/\text{NDF}$ : 11696387.0/1

- sign 5831.100 $\pm$ 0.707  $\chi^2/\text{NDF}$ : 6412238.4/55

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4725.173+/-417.368  $\chi^2/\text{NDF}$ : 12.9/30

Left Out: 3187.056+/-418.619  $\chi^2/\text{NDF}$ : 19.9/23

Right Out: -3824.173+/-419.059  $\chi^2/\text{NDF}$ : 27.5/32

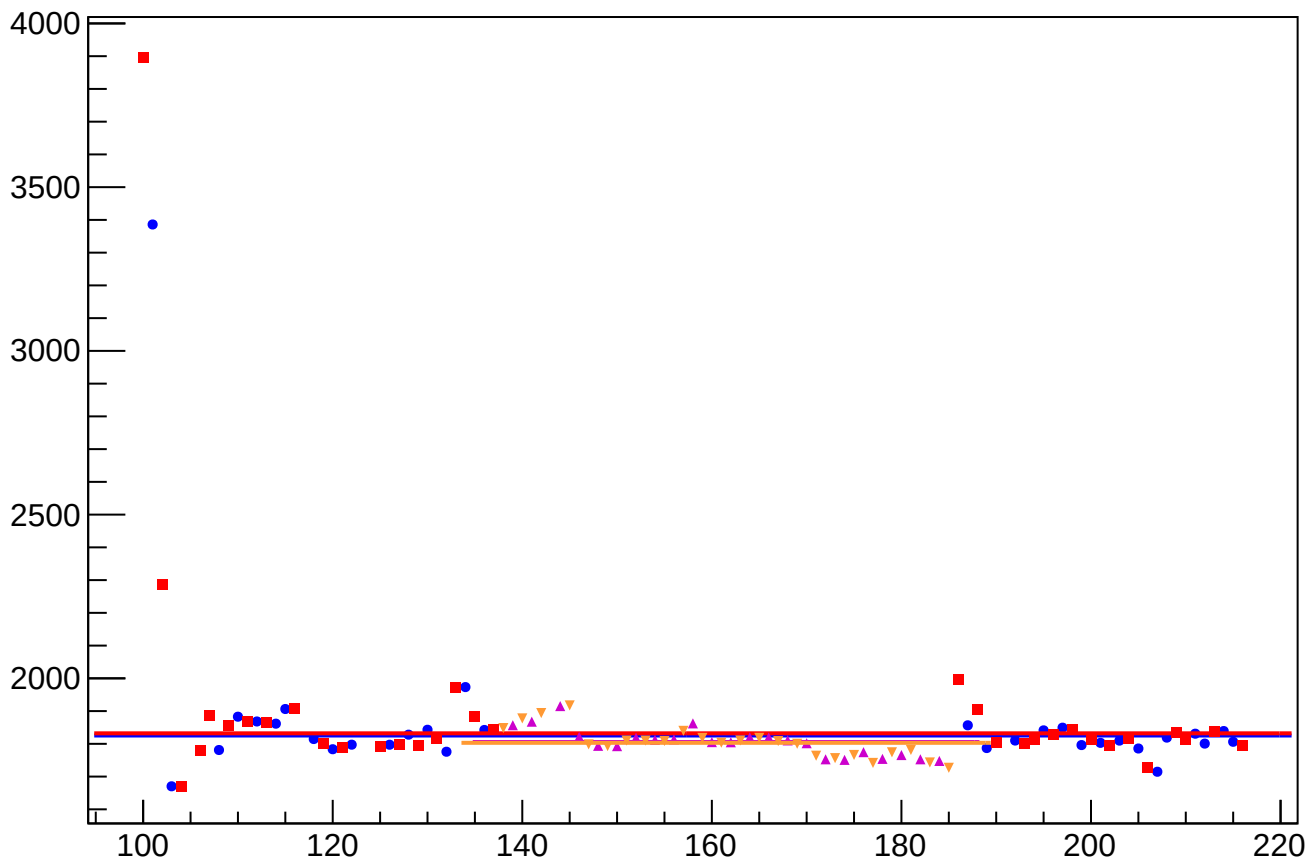
Left In: -4655.225+/-421.691  $\chi^2/\text{NDF}$ : 27.7/22

+ sign 3958.415+/-295.565  $\chi^2/\text{NDF}$ : 39.5/54

All: -116.107+/-209.588  $\chi^2/\text{NDF}$ : 479.0/110

- sign -4237.097+/-297.246  $\chi^2/\text{NDF}$ : 57.2/55

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1825.444+/-0.295  $\chi^2/\text{NDF}$ : 307930.8/30

Left Out: 1803.115+/-0.296  $\chi^2/\text{NDF}$ : 20641.1/23

Right Out: 1832.095+/-0.296  $\chi^2/\text{NDF}$ : 121862.8/32

Left In: 1805.559+/-0.298  $\chi^2/\text{NDF}$ : 19314.6/22

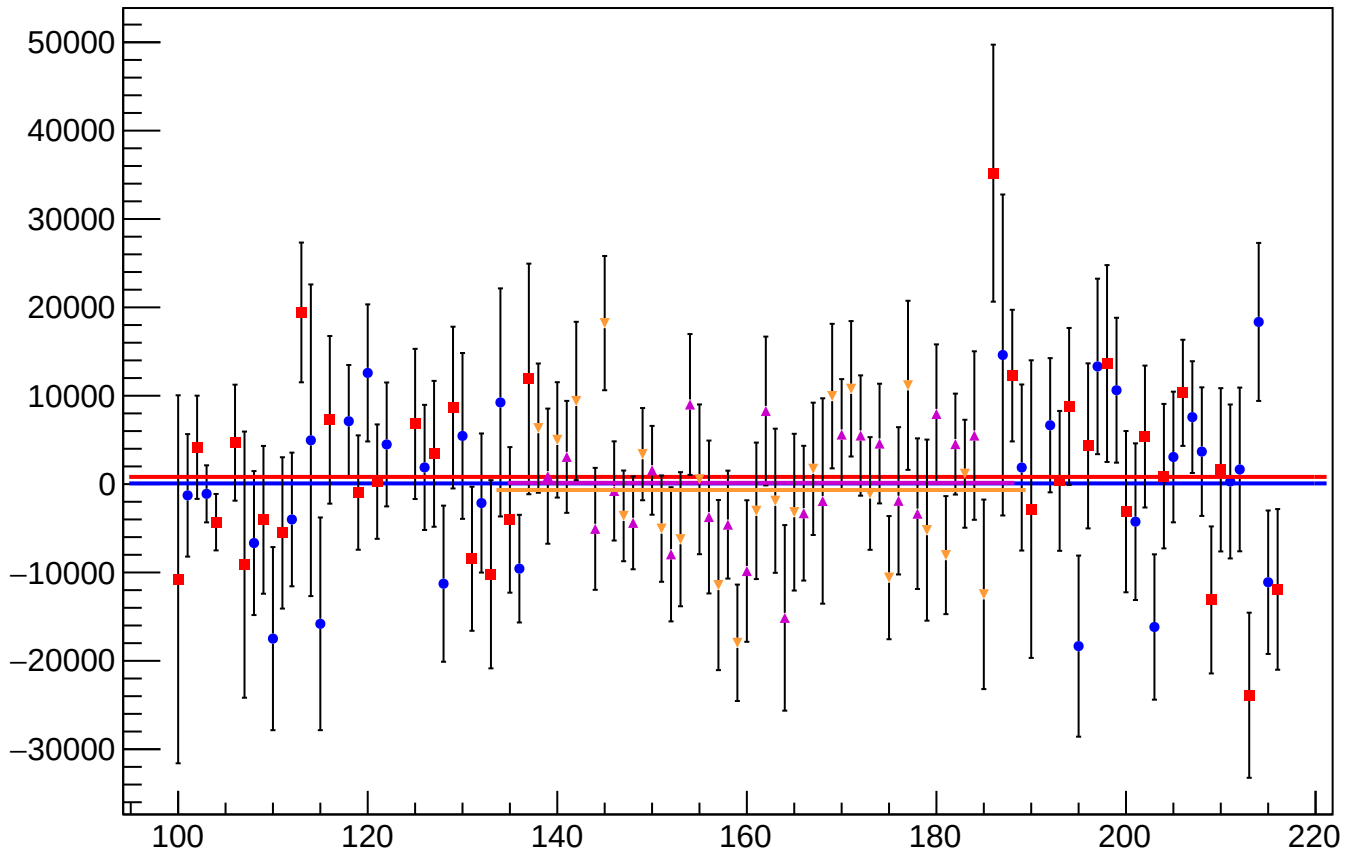
+ sign 1814.313+/-0.209  $\chi^2/\text{NDF}$ : 331425.5/54

All: 1816.606+/-0.148  $\chi^2/\text{NDF}$ : 476833.6/110

- sign 1818.923+/-0.210  $\chi^2/\text{NDF}$ : 145166.1/55



asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: 78.341+/-1370.900  $\chi^2/\text{NDF}$ : 35.3/30

Left Out: -667.245+/-1478.798  $\chi^2/\text{NDF}$ : 29.8/23

Right Out: 814.177+/-1361.549  $\chi^2/\text{NDF}$ : 40.8/32

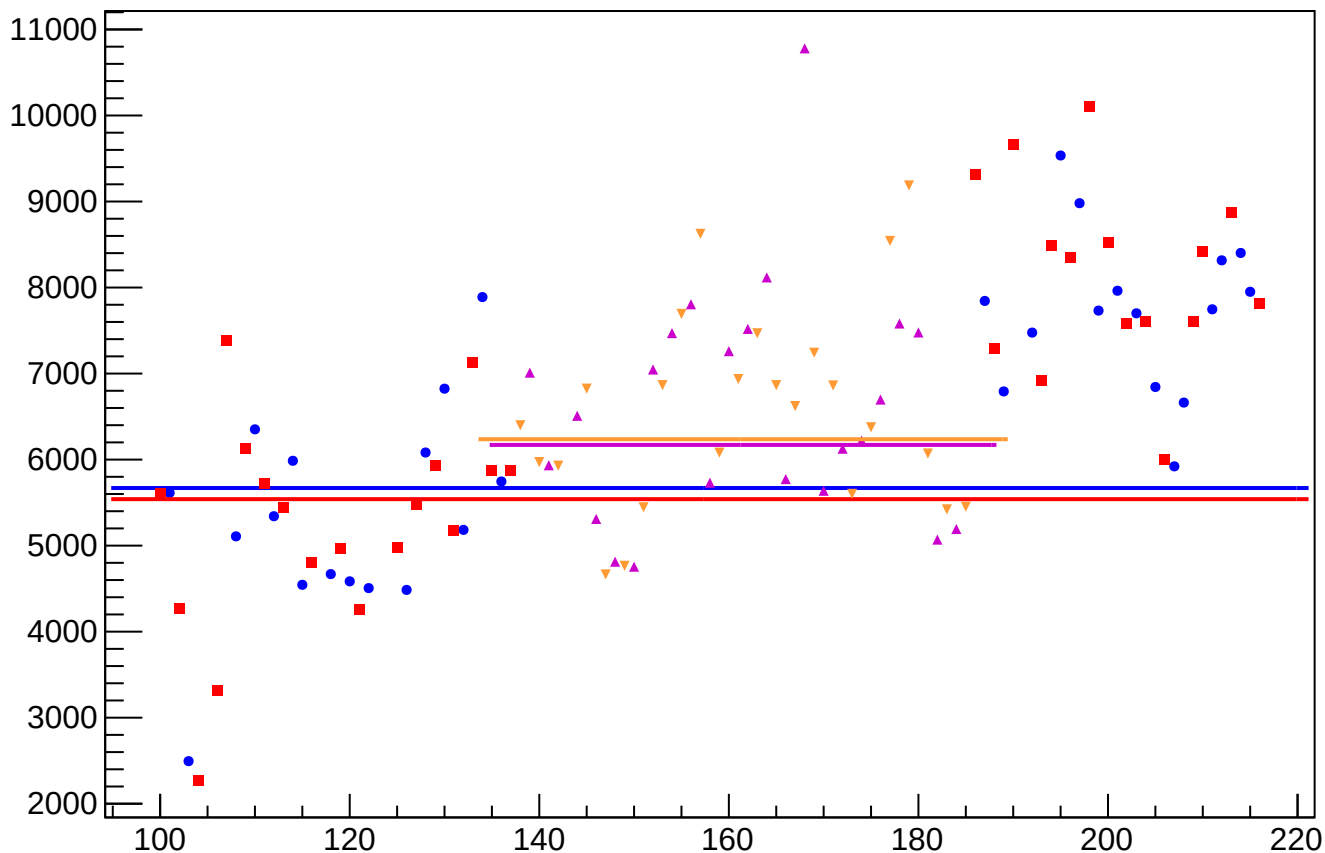
Left In: 143.369+/-1471.371  $\chi^2/\text{NDF}$ : 13.6/22

+ sign -266.262+/-1005.356  $\chi^2/\text{NDF}$ : 65.3/54

All: 121.555+/-708.755  $\chi^2/\text{NDF}$ : 120.0/110

- sign 504.739+/-999.332  $\chi^2/\text{NDF}$ : 54.5/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 5669.673 $\pm$ 0.969  $\chi^2/\text{NDF}$ : 4048300.7/30

Left Out: 6236.635 $\pm$ 1.046  $\chi^2/\text{NDF}$ : 1067665.4/23

Right Out: 5540.228 $\pm$ 0.963  $\chi^2/\text{NDF}$ : 4976797.6/32

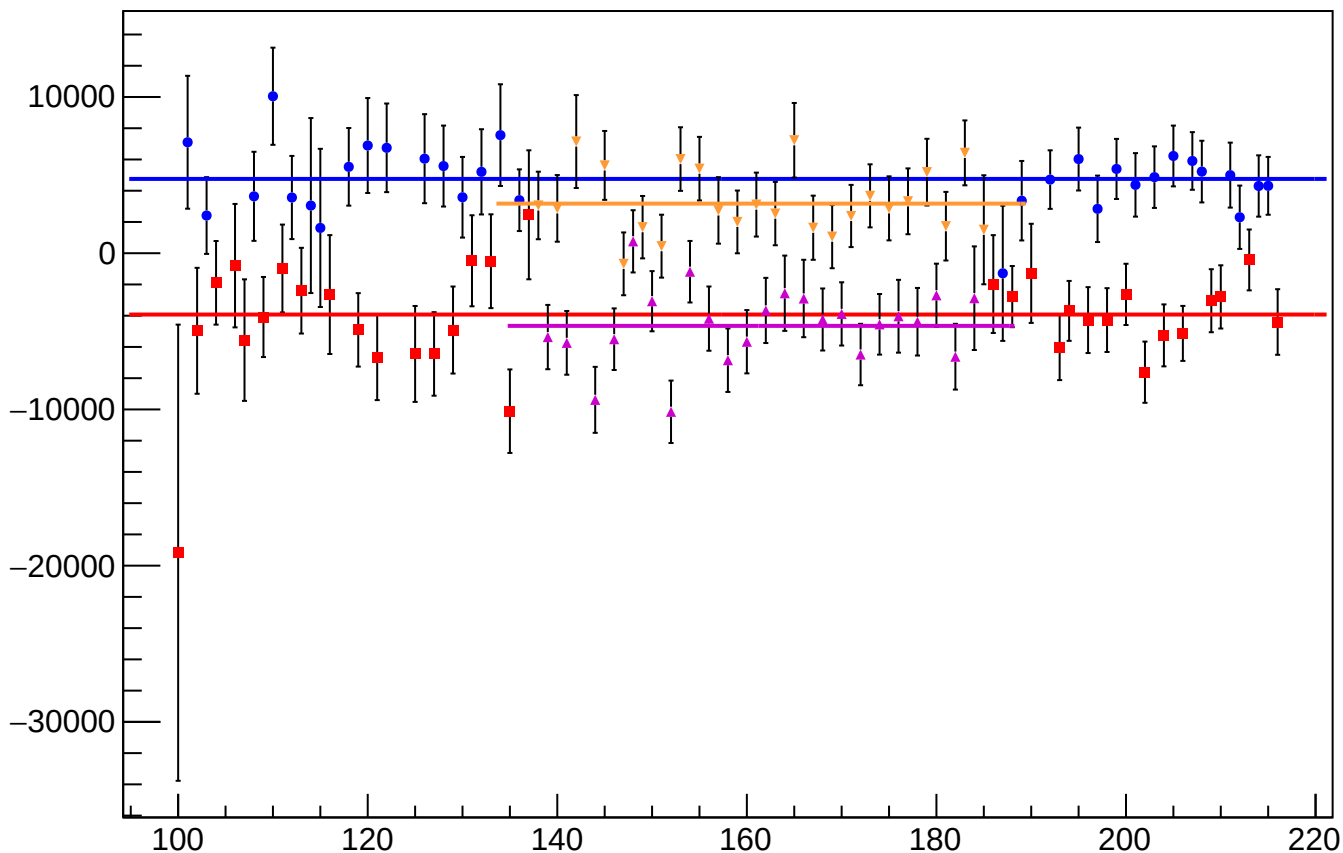
Left In: 6170.789 $\pm$ 1.040  $\chi^2/\text{NDF}$ : 1237564.5/22

+ sign 5931.718 $\pm$ 0.711  $\chi^2/\text{NDF}$ : 5274072.1/54

All: 5881.107 $\pm$ 0.501  $\chi^2/\text{NDF}$ : 11696387.0/1

- sign 5831.100 $\pm$ 0.707  $\chi^2/\text{NDF}$ : 6412238.4/55

dit\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4756.269+/-425.133  $\chi^2/\text{NDF}$ : 14.0/30

Left Out: 3174.550+/-434.815  $\chi^2/\text{NDF}$ : 21.6/23

Right Out: -3925.826+/-428.646  $\chi^2/\text{NDF}$ : 28.6/32

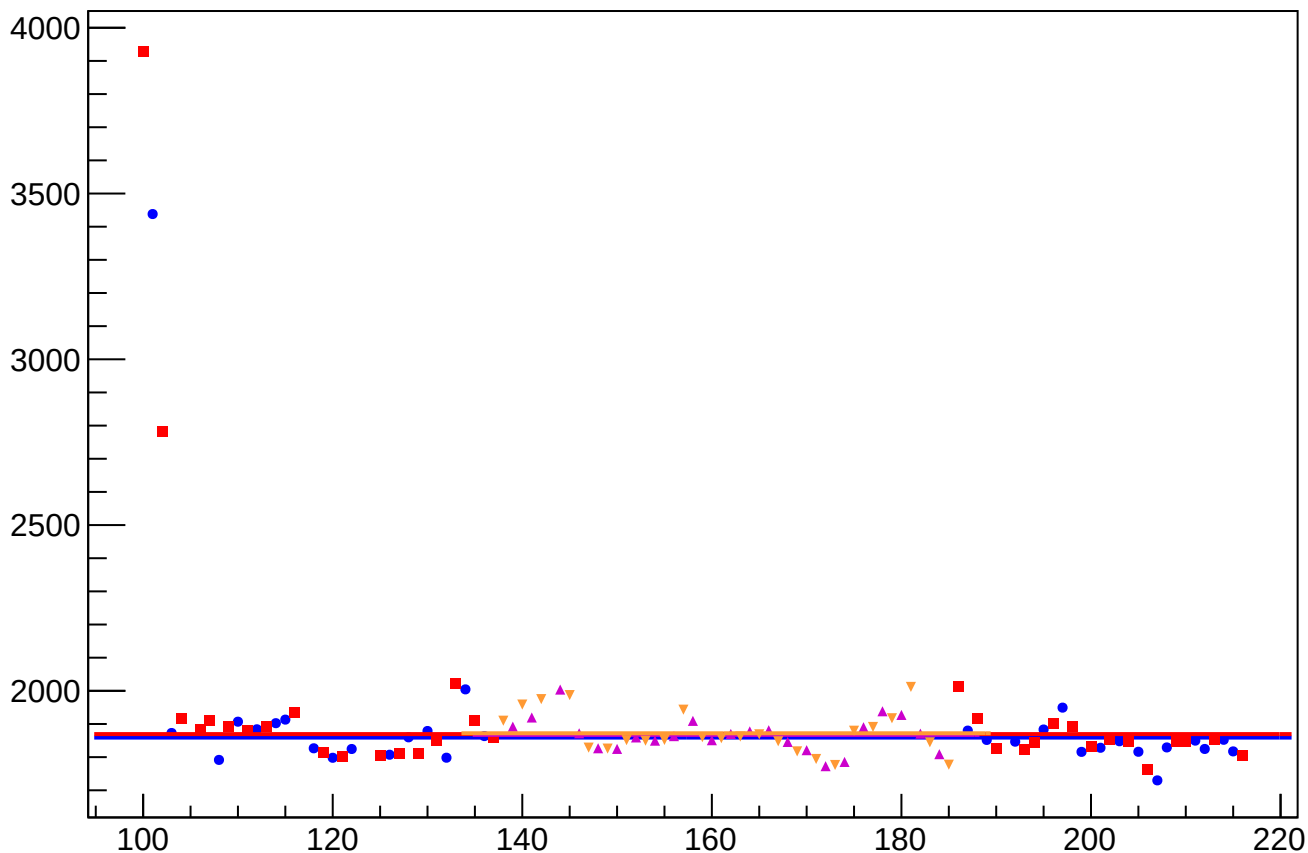
Left In: -4650.461+/-436.198  $\chi^2/\text{NDF}$ : 30.5/22

+ sign 3983.215+/-303.980  $\chi^2/\text{NDF}$ : 42.3/54

All: -125.531+/-215.564  $\chi^2/\text{NDF}$ : 470.4/110

- sign -4281.816+/-305.733  $\chi^2/\text{NDF}$ : 60.5/55

dit\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1859.002 $\pm$ 0.301  $\chi^2$ /NDF: 303506.5/30

Left Out: 1871.979 $\pm$ 0.307  $\chi^2$ /NDF: 37154.8/23

Right Out: 1869.534 $\pm$ 0.303  $\chi^2$ /NDF: 173333.4/32

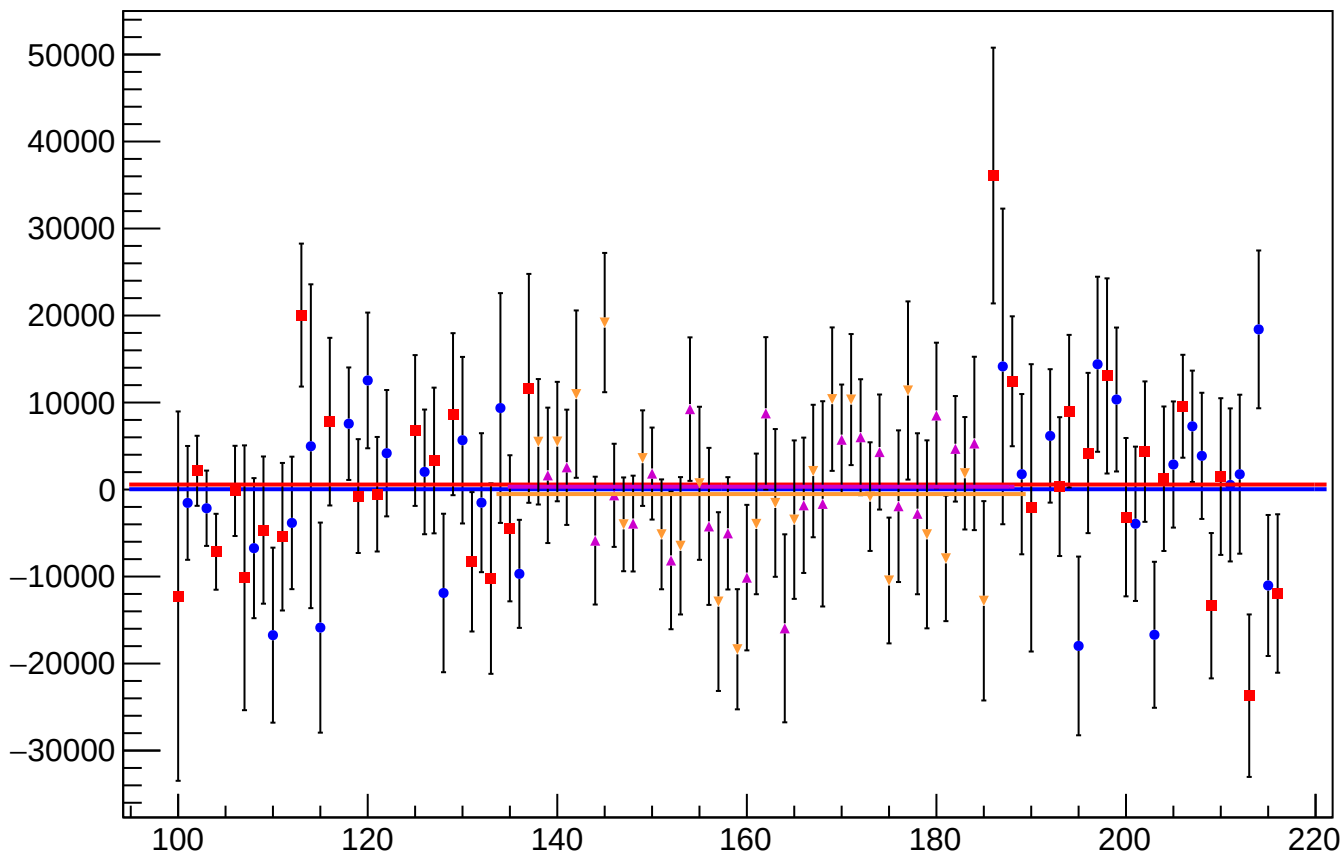
Left In: 1867.079 $\pm$ 0.308  $\chi^2$ /NDF: 27246.7/22

+ sign 1865.345 $\pm$ 0.215  $\chi^2$ /NDF: 341572.1/54

All: 1866.828 $\pm$ 0.152  $\chi^2$ /NDF: 542280.2/110

- sign 1868.328 $\pm$ 0.216  $\chi^2$ /NDF: 200612.3/55

asym\_us\_avg\_atlr\_avg\_avg\_dit\_correction\_mean vs Slug



Right In: 34.954+/-1434.929  $\chi^2/\text{NDF}$ : 35.1/30

Left Out: -520.262+/-1536.784  $\chi^2/\text{NDF}$ : 29.2/23

Right Out: 573.504+/-1365.508  $\chi^2/\text{NDF}$ : 40.8/32

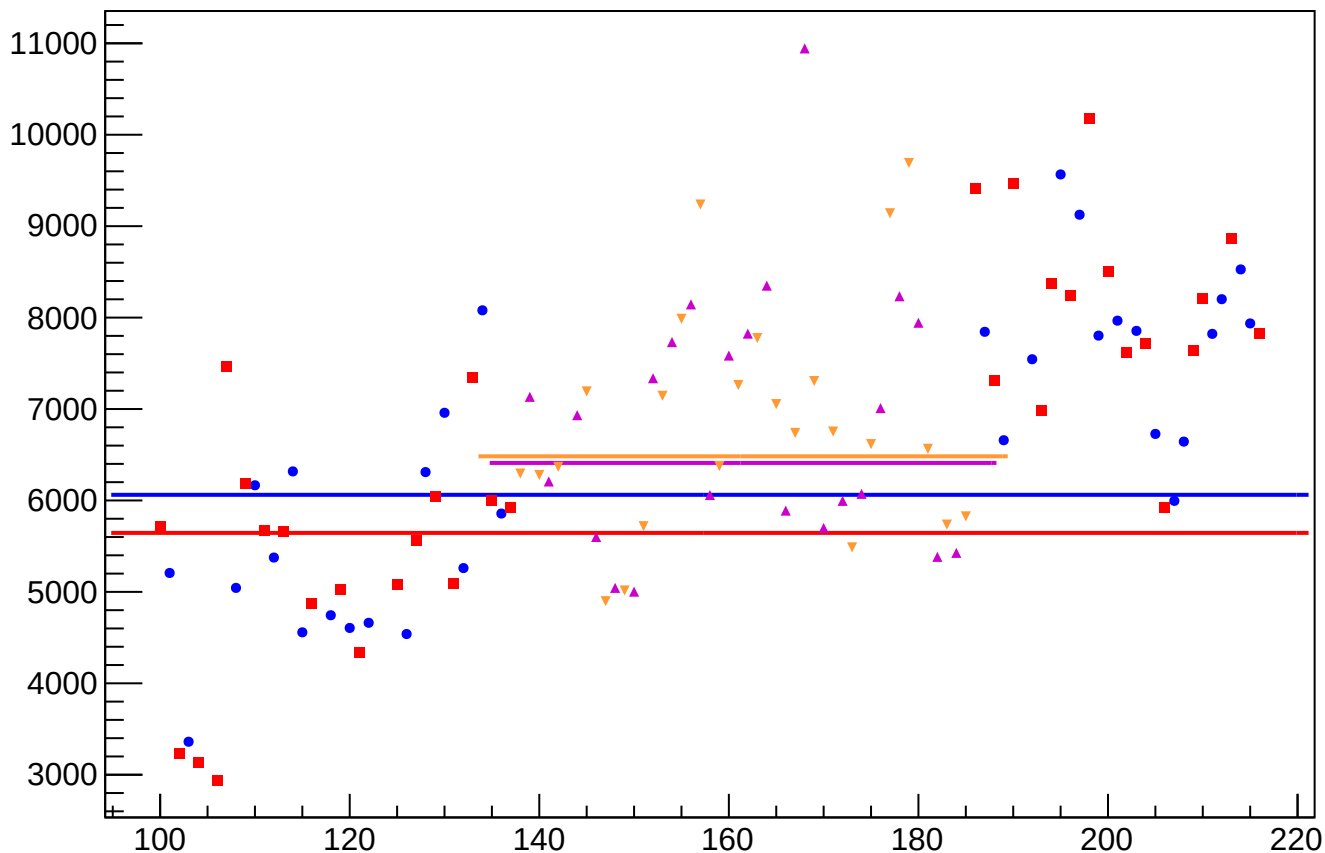
Left In: 324.625+/-1527.995  $\chi^2/\text{NDF}$ : 13.4/22

+ sign -223.647+/-1048.809  $\chi^2/\text{NDF}$ : 64.4/54

All: 129.848+/-730.550  $\chi^2/\text{NDF}$ : 118.8/110

- sign 462.997+/-1018.178  $\chi^2/\text{NDF}$ : 54.2/55

asym\_us\_avg\_atlr\_avg\_avg\_dit\_correction\_rms vs Slug



Right In: 6061.650+/-1.015  $\chi^2/\text{NDF}$ : 2565378.7/30

Left Out: 6482.730+/-1.087  $\chi^2/\text{NDF}$ : 1074584.9/23

Right Out: 5645.175+/-0.966  $\chi^2/\text{NDF}$ : 4299226.7/32

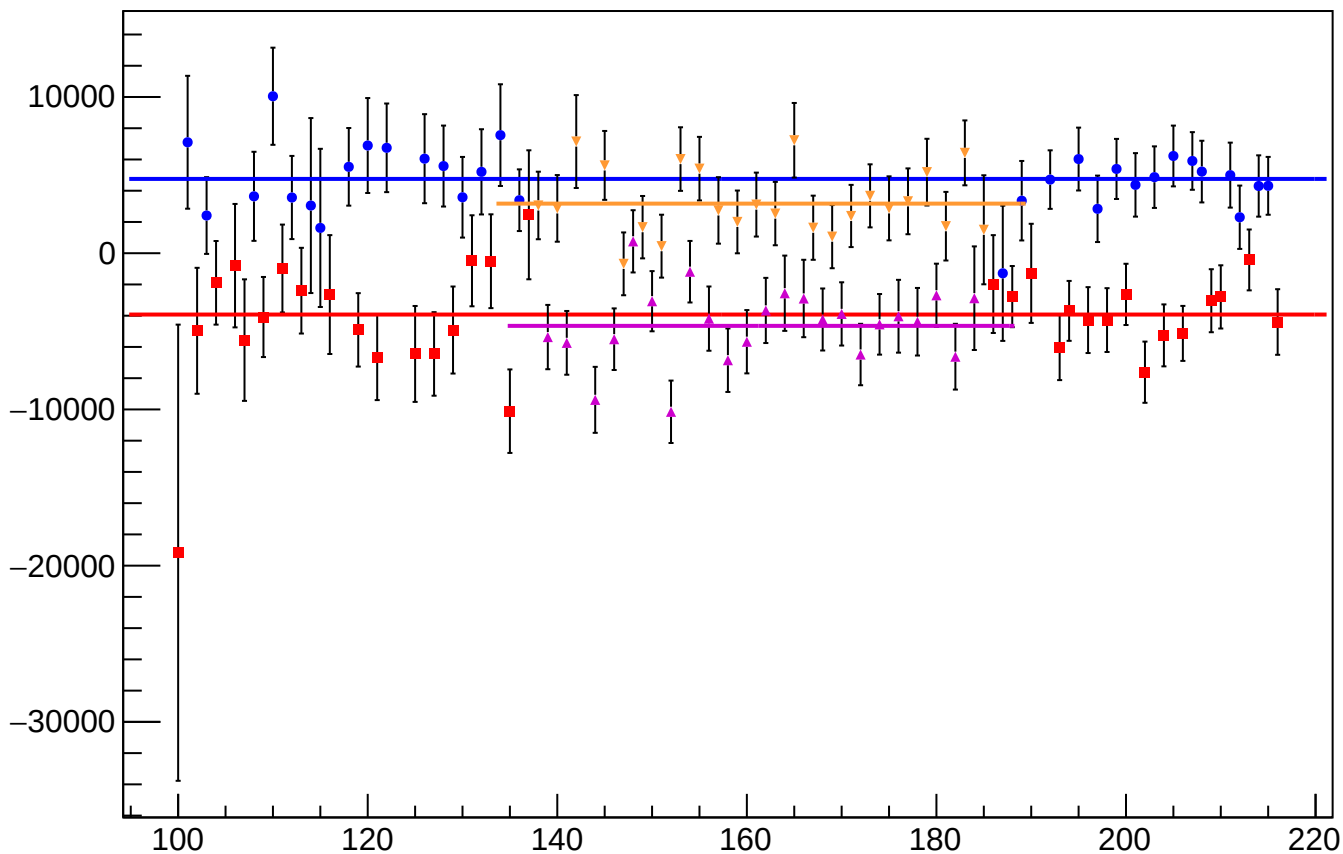
Left In: 6410.419+/-1.080  $\chi^2/\text{NDF}$ : 1219830.0/22

+ sign 6257.774+/-0.742  $\chi^2/\text{NDF}$ : 3720180.2/54

All: 6117.325+/-0.517  $\chi^2/\text{NDF}$ : 9587801.4/11

- sign 5984.959+/-0.720  $\chi^2/\text{NDF}$ : 5797954.2/55

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4756.266 $\pm$ 425.133  $\chi^2$ /NDF: 14.0/30

Left Out: 3174.543 $\pm$ 434.815  $\chi^2$ /NDF:21.6/23

Right Out: -3925.823 $\pm$ 428.646  $\chi^2$ /NDF: 28.6/32

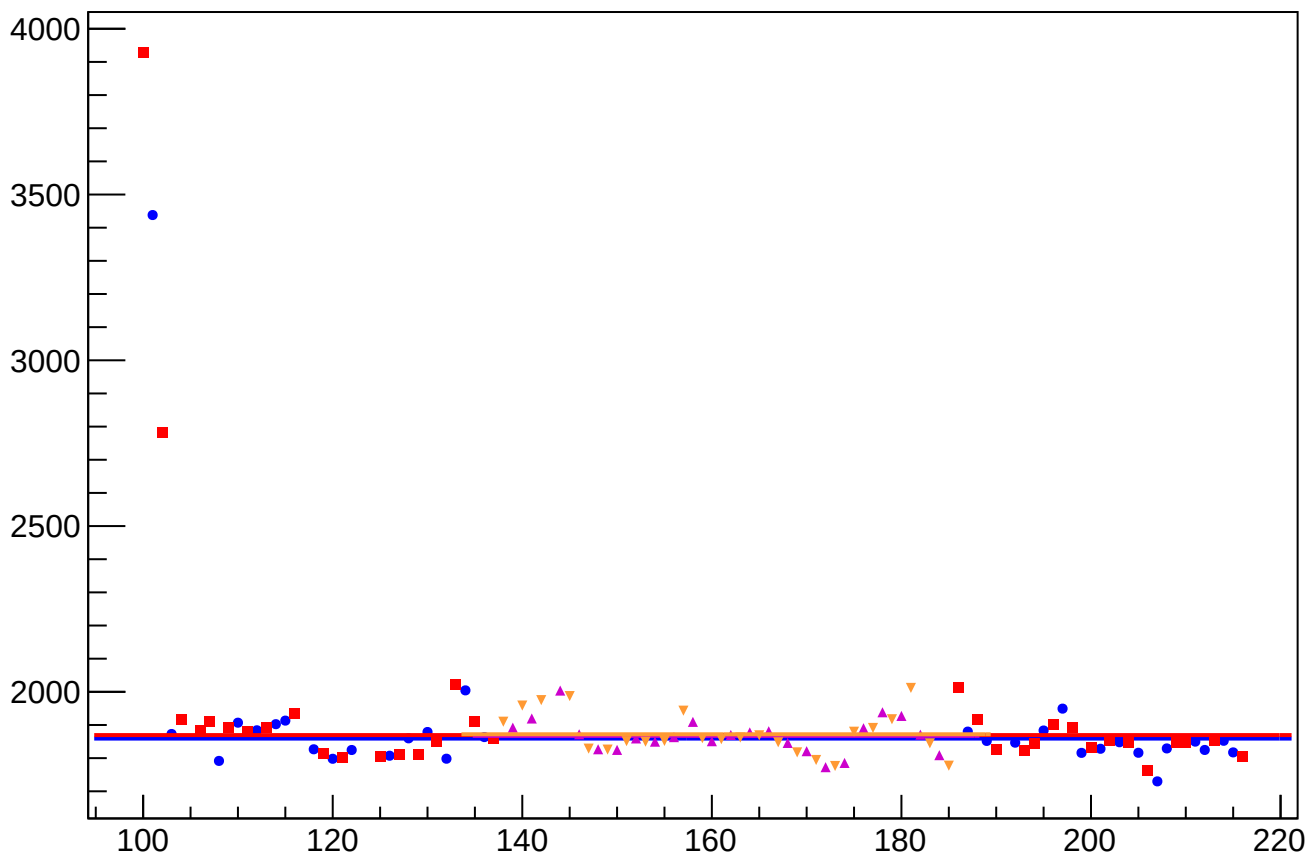
Left In: -4650.462 $\pm$ 436.198  $\chi^2$ /NDF:30.5/22

+ sign 3983.211 $\pm$ 303.980  $\chi^2$ /NDF: 42.3/54

All: -125.532 $\pm$ 215.564  $\chi^2$ /NDF: 470.4/110

- sign -4281.815 $\pm$ 305.734  $\chi^2$ /NDF: 60.5/55

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 1859.002 $\pm$ 0.301  $\chi^2$ /NDF: 303506.6/30

Left Out: 1871.981 $\pm$ 0.307  $\chi^2$ /NDF: 37155.9/23

Right Out: 1869.533 $\pm$ 0.303  $\chi^2$ /NDF: 173332.5/32

Left In: 1867.080 $\pm$ 0.308  $\chi^2$ /NDF: 27247.8/22

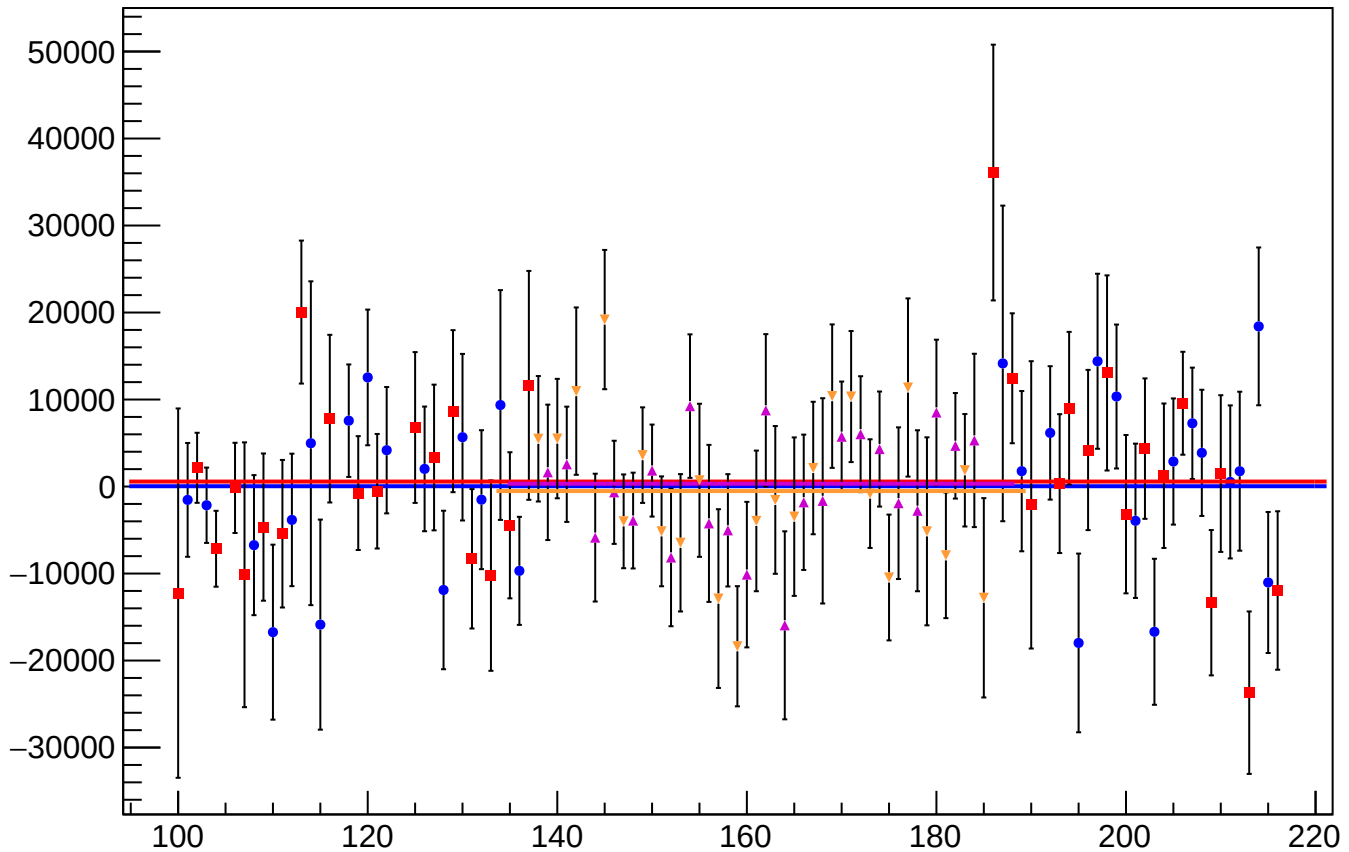
+ sign 1865.345 $\pm$ 0.215  $\chi^2$ /NDF: 341573.5/54

All: 1866.829 $\pm$ 0.152  $\chi^2$ /NDF: 542281.8/110

- sign 1868.329 $\pm$ 0.216  $\chi^2$ /NDF: 200612.5/55



asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: 34.955+/-1434.928  $\chi^2/\text{NDF}$ : 35.1/30

Left Out: -520.268+/-1536.787  $\chi^2/\text{NDF}$ : 29.2/23

Right Out: 573.499+/-1365.507  $\chi^2/\text{NDF}$ : 40.8/32

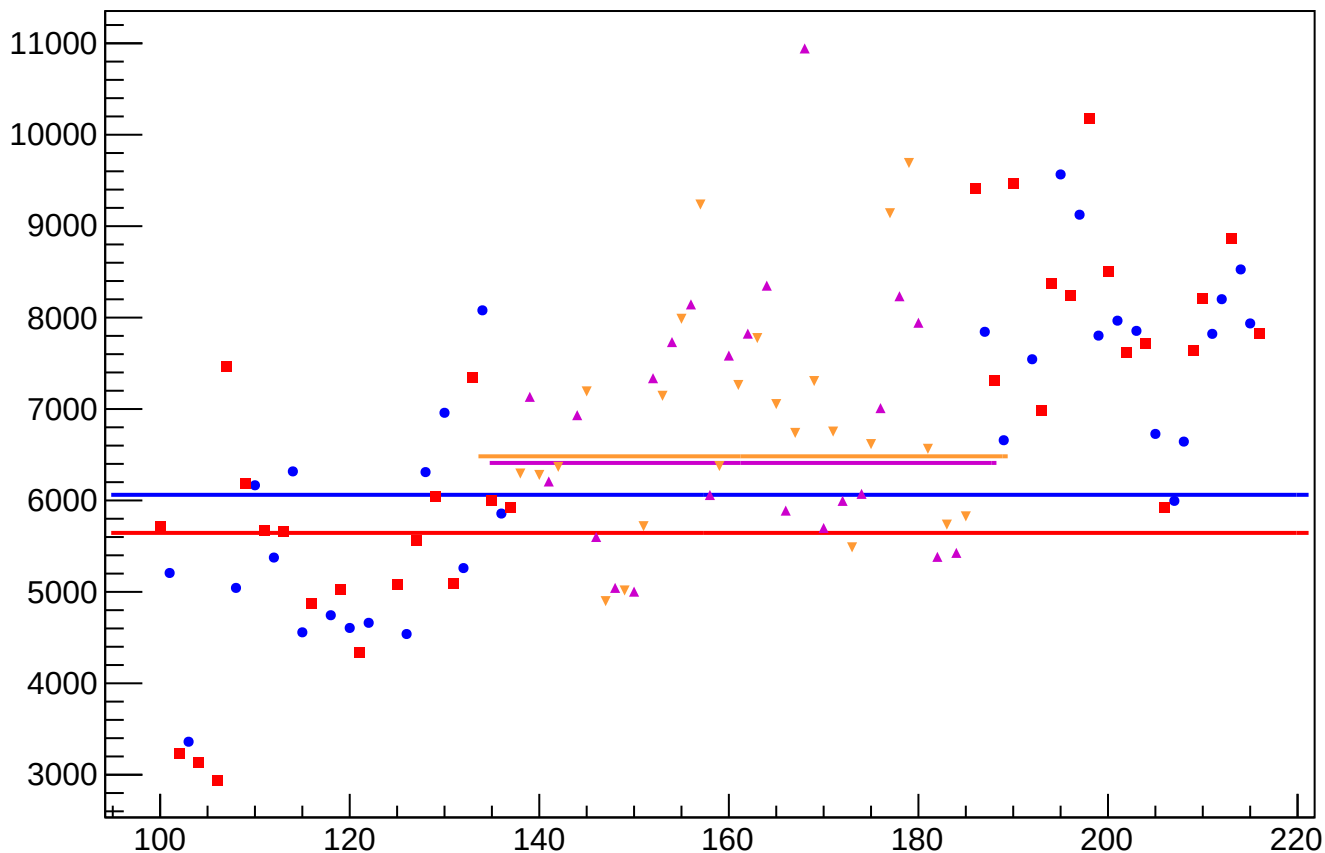
Left In: 324.626+/-1527.998  $\chi^2/\text{NDF}$ : 13.4/22

+ sign -223.648+/-1048.810  $\chi^2/\text{NDF}$ : 64.4/54

All: 129.847+/-730.550  $\chi^2/\text{NDF}$ : 118.8/110

- sign 462.995+/-1018.178  $\chi^2/\text{NDF}$ : 54.2/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 6061.643 $\pm$ 1.015  $\chi^2$ /NDF: 2565413.2/30

Left Out: 6482.740 $\pm$ 1.087  $\chi^2$ /NDF:1074587.3/23

Right Out: 5645.166 $\pm$ 0.966  $\chi^2$ /NDF: 4299261.4/32

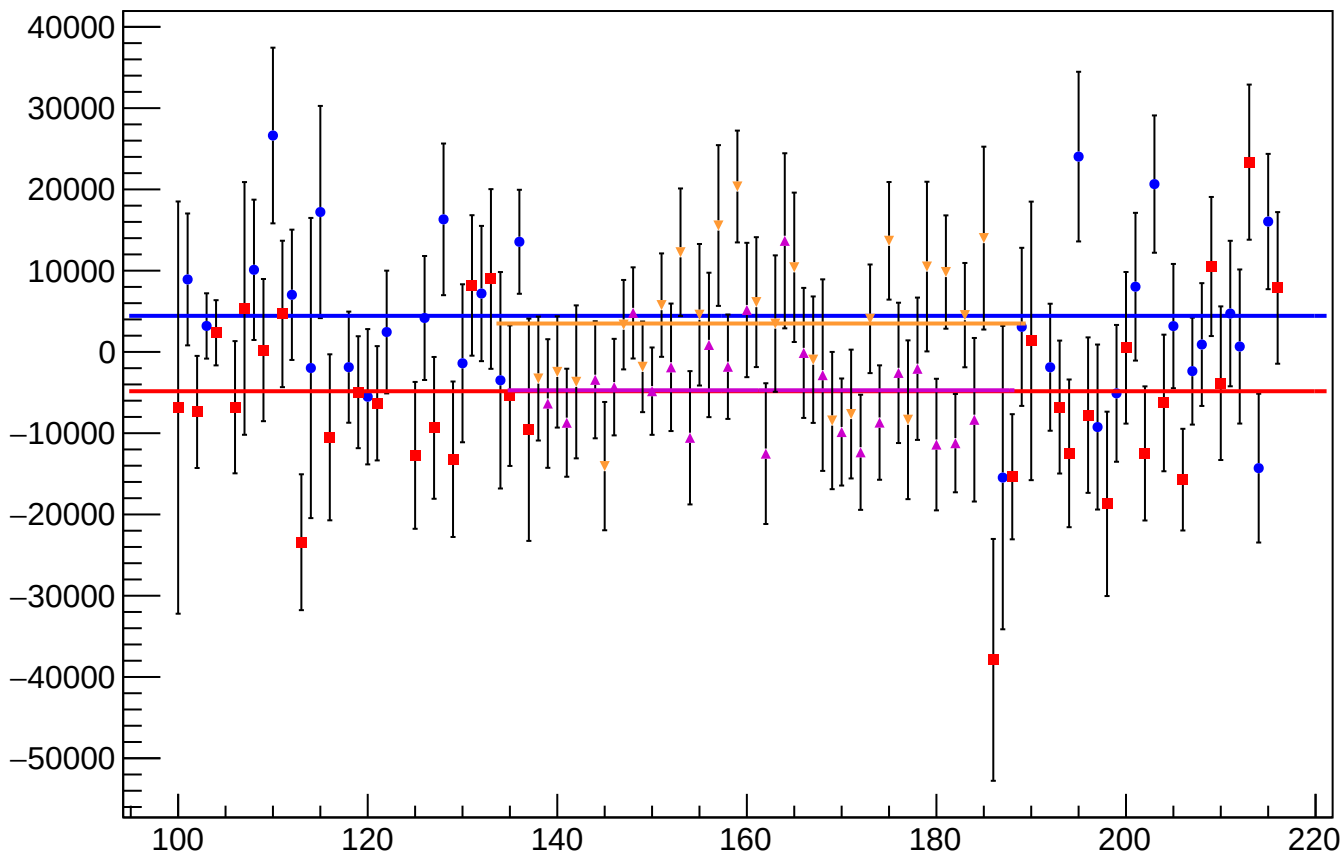
Left In: 6410.429 $\pm$ 1.080  $\chi^2$ /NDF:1219833.0/22

+ sign 6257.775 $\pm$ 0.742  $\chi^2$ /NDF: 3720223.8/54

All: 6117.324 $\pm$ 0.517  $\chi^2$ /NDF: 9587897.8/11

- sign 5984.957 $\pm$ 0.720  $\chi^2$ /NDF: 5798005.8/55

# asym\_us\_avg\_atlr\_avg\_avg\_mean vs Slug



Right In: 4441.587 $\pm$ 1479.126  $\chi^2$ /NDF: 32.9/30

Left Out: 3497.162 $\pm$ 1545.839  $\chi^2$ /NDF:27.5/23

Right Out: -4836.229 $\pm$ 1482.761  $\chi^2$ /NDF: 43.7/32

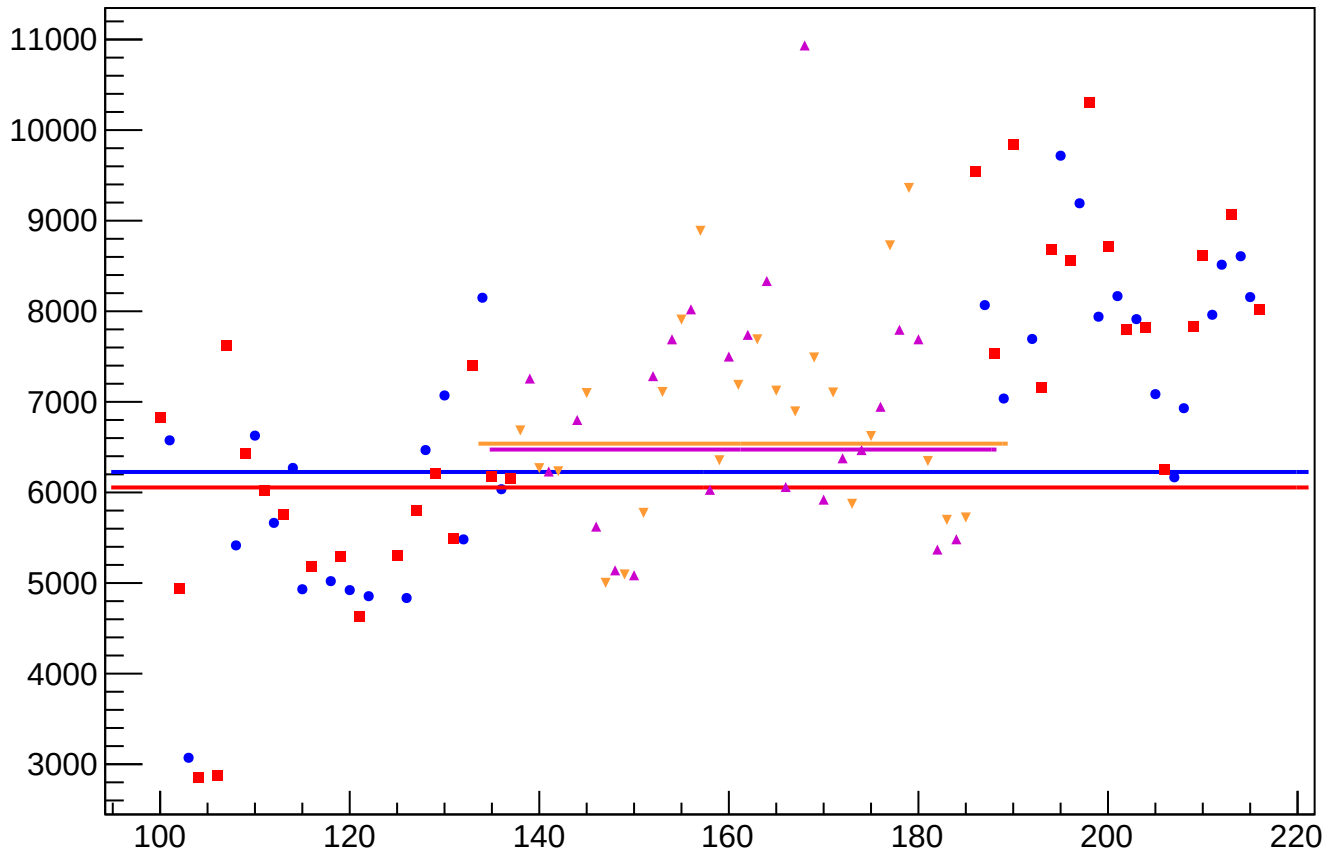
Left In: -4719.535 $\pm$ 1539.177  $\chi^2$ /NDF:14.3/22

+ sign 3990.193 $\pm$ 1068.707  $\chi^2$ /NDF: 60.6/54

All: -398.417 $\pm$ 755.390  $\chi^2$ /NDF: 152.2/110

- sign -4780.060 $\pm$ 1067.858  $\chi^2$ /NDF: 57.9/55

# asym\_us\_avg\_atlr\_avg\_avg\_rms vs Slug



Right In: 6226.010 $\pm$ 1.046  $\chi^2$ /NDF: 2835121.4/30

Left Out: 6538.706 $\pm$ 1.093  $\chi^2$ /NDF: 920612.0/23

Right Out: 6055.122 $\pm$ 1.036  $\chi^2$ /NDF: 3828280.8/32

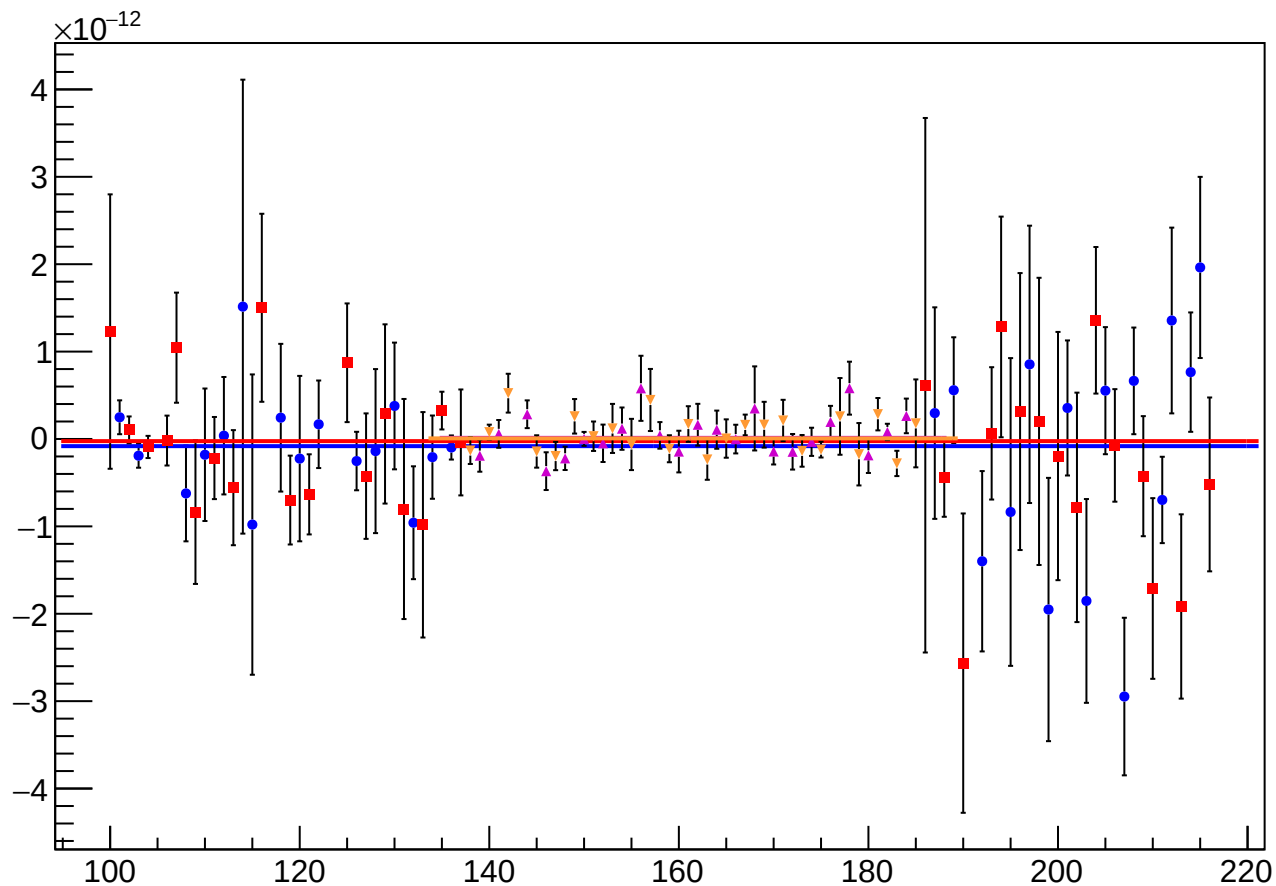
Left In: 6473.481 $\pm$ 1.088  $\chi^2$ /NDF: 1071757.3/22

+ sign 6375.464 $\pm$ 0.756  $\chi^2$ /NDF: 3798456.0/54

All: 6314.267 $\pm$ 0.532  $\chi^2$ /NDF: 8789055.0/11

- sign 6253.941 $\pm$ 0.750  $\chi^2$ /NDF: 4977576.2/55

asym\_us\_avg\_atlr\_avg\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 36.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.2/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 31.3/32

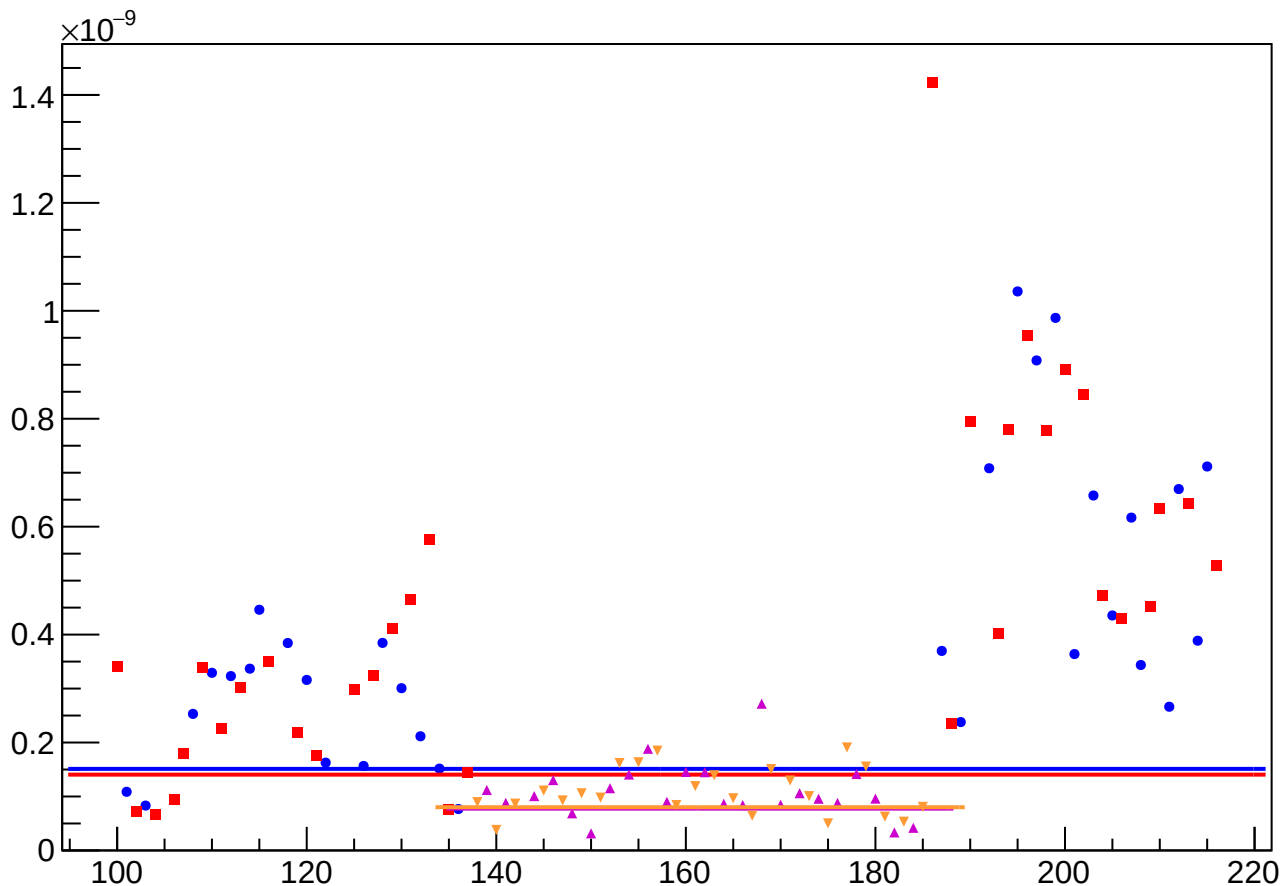
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.0/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 65.3/54

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 120.9/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 55.5/55

asym\_us\_avg\_atlr\_avg\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7230171.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2153227.2/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8326741.3/32

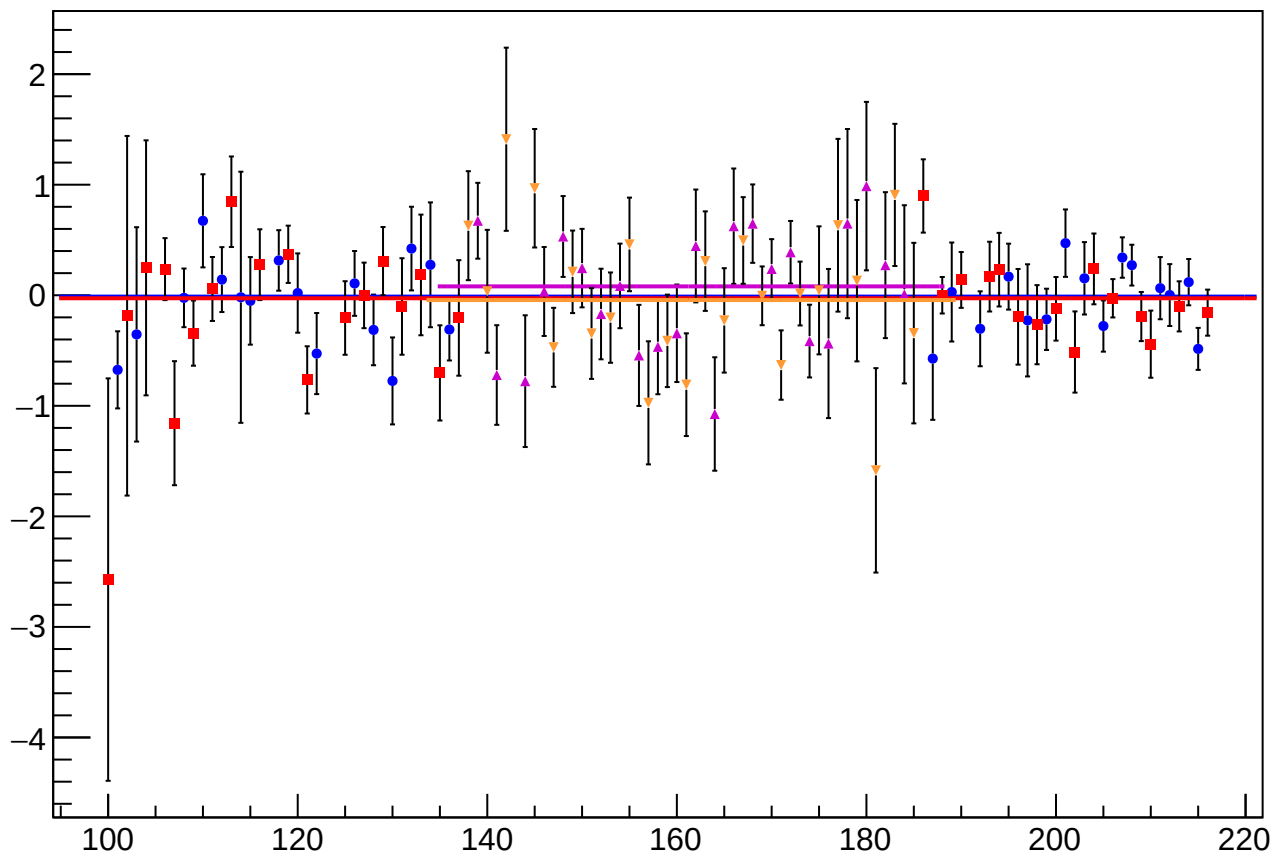
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2642331.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10918688.1/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23118208.7/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12179477.3/55

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.054$   $\chi^2/\text{NDF}$ : 37.3/30

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $-0.027 \pm 0.053$   $\chi^2/\text{NDF}$ : 41.4/32

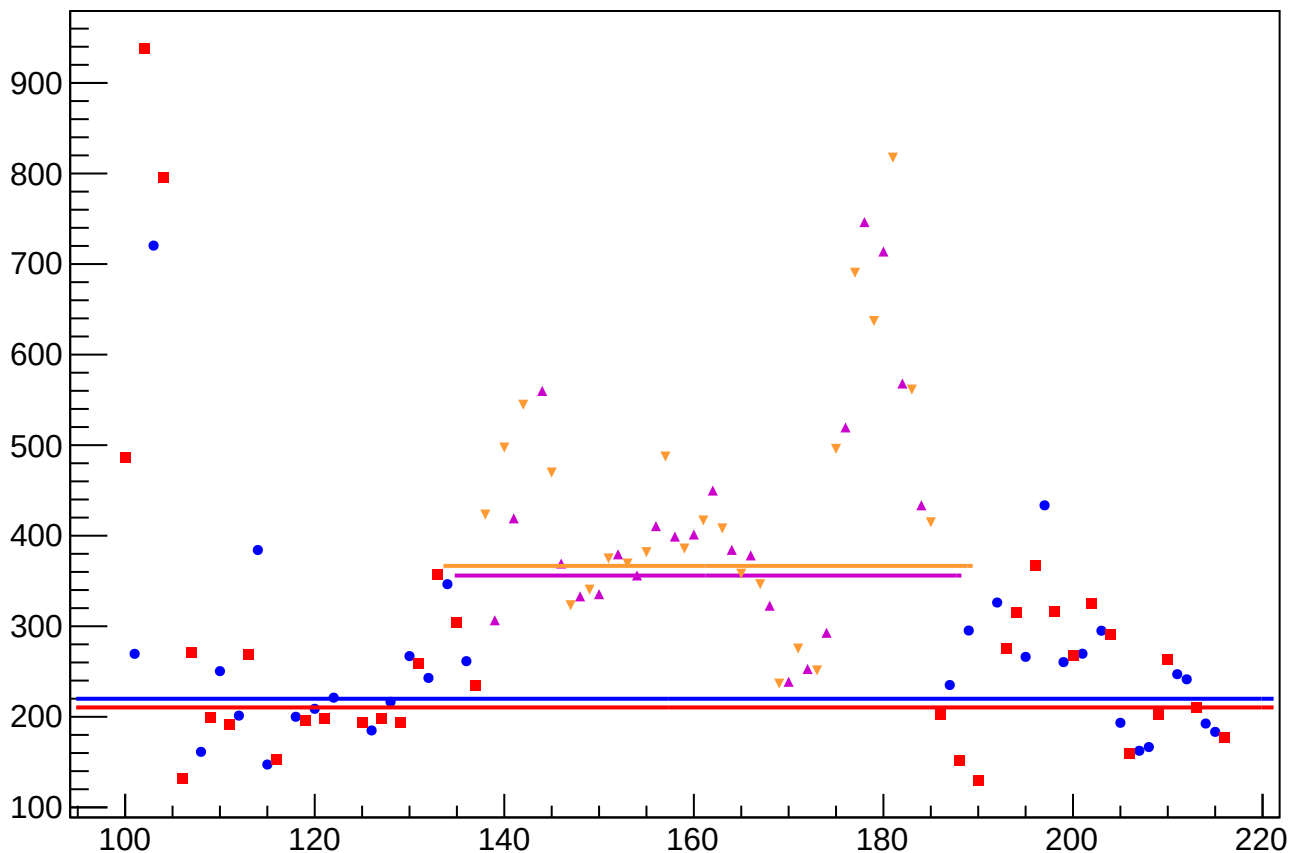
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.020 \pm 0.046$   $\chi^2/\text{NDF}$ : 68.4/54

All:  $-0.009 \pm 0.032$   $\chi^2/\text{NDF}$ : 141.4/110

- sign  $0.001 \pm 0.045$   $\chi^2/\text{NDF}$ : 72.9/55

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 219.932 $\pm$ 0.038  $\chi^2$ /NDF: 2408898.6/30

Left Out: 366.670 $\pm$ 0.064  $\chi^2$ /NDF:2841071.8/23

Right Out: 210.336 $\pm$ 0.037  $\chi^2$ /NDF: 3417825.9/32

Left In: 355.992 $\pm$ 0.062  $\chi^2$ /NDF:2420701.1/22

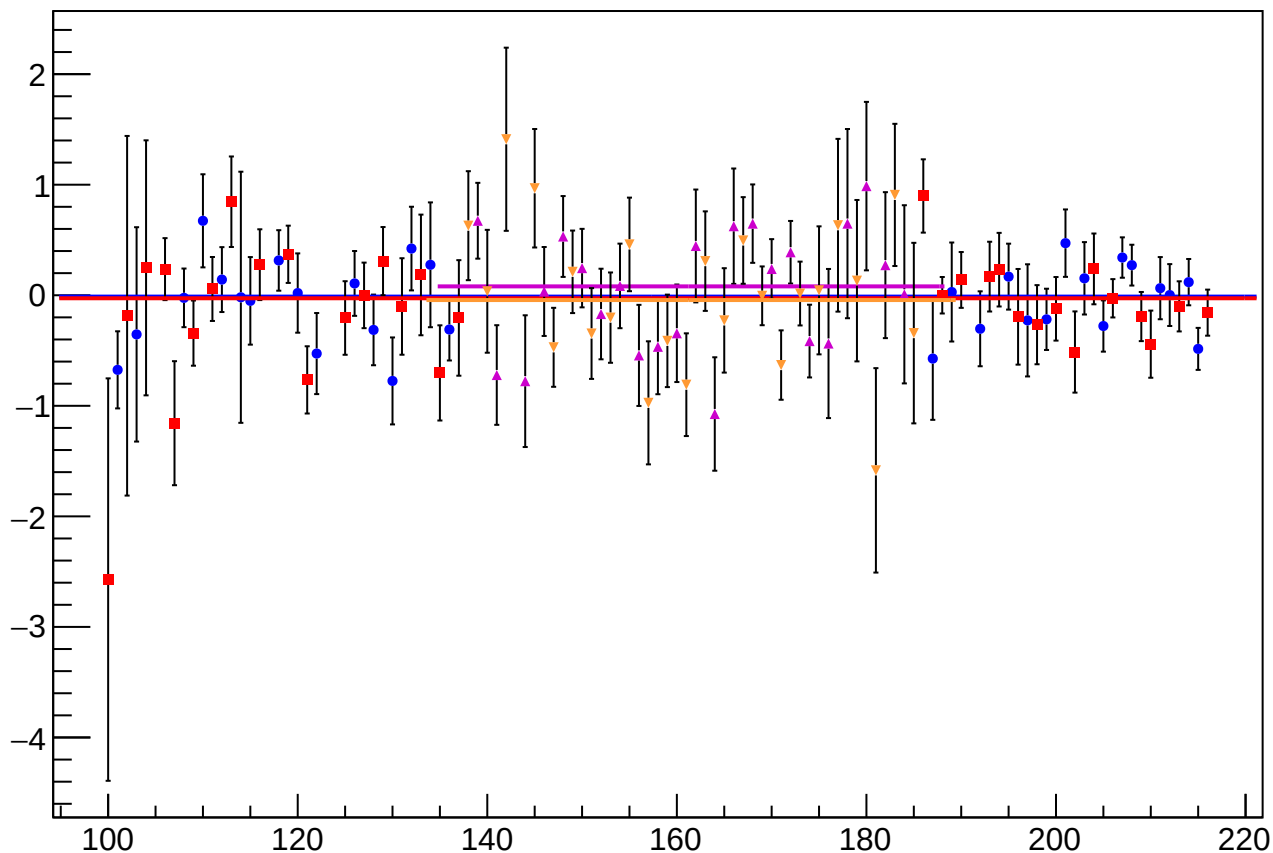
+ sign 258.214 $\pm$ 0.033  $\chi^2$ /NDF: 9139987.8/54

All: 253.442 $\pm$ 0.023  $\chi^2$ /NDF: 19070683.2/11

- sign 248.885 $\pm$ 0.032  $\chi^2$ /NDF: 9888994.4/55



asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.054$   $\chi^2/\text{NDF}$ : 37.3/30

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $-0.027 \pm 0.053$   $\chi^2/\text{NDF}$ : 41.4/32

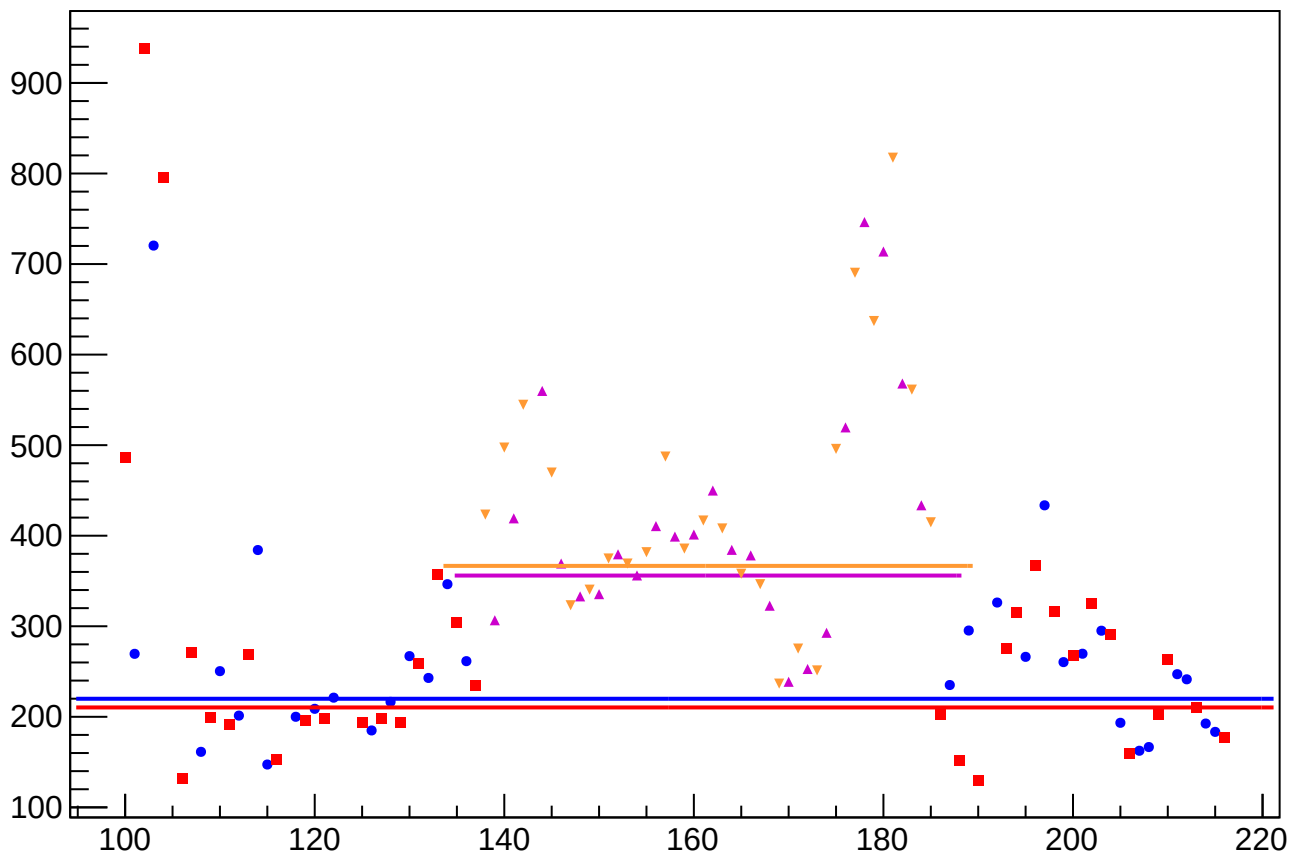
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.020 \pm 0.046$   $\chi^2/\text{NDF}$ : 68.4/54

All:  $-0.009 \pm 0.032$   $\chi^2/\text{NDF}$ : 141.4/110

- sign  $0.001 \pm 0.045$   $\chi^2/\text{NDF}$ : 72.9/55

asym\_us\_avg\_atlr\_avg\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 219.932 $\pm$ 0.038  $\chi^2$ /NDF: 2408898.6/30

Left Out: 366.670 $\pm$ 0.064  $\chi^2$ /NDF:2841071.8/23

Right Out: 210.336 $\pm$ 0.037  $\chi^2$ /NDF: 3417825.9/32

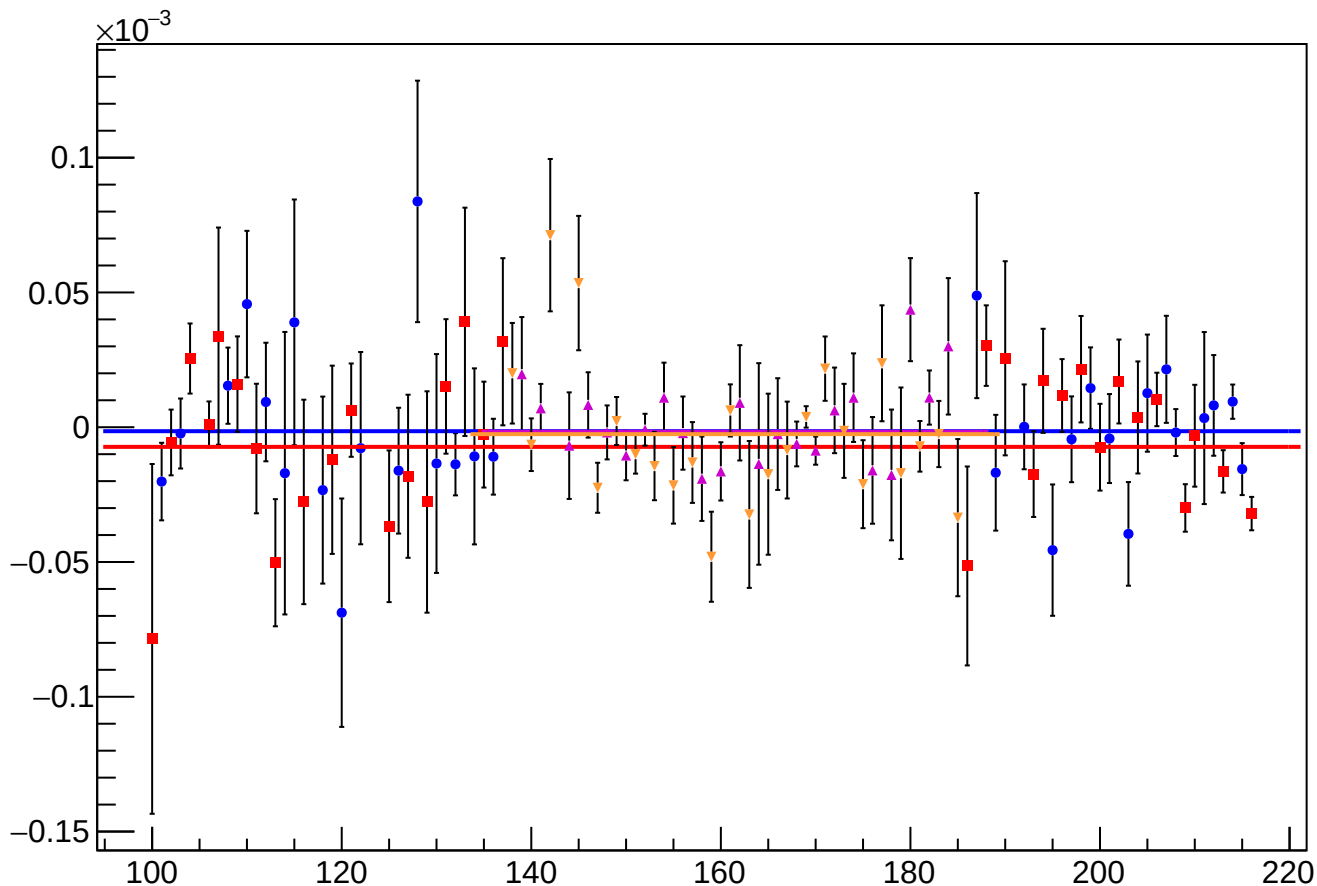
Left In: 355.992 $\pm$ 0.062  $\chi^2$ /NDF:2420701.1/22

+ sign 258.214 $\pm$ 0.033  $\chi^2$ /NDF: 9139987.8/54

All: 253.442 $\pm$ 0.023  $\chi^2$ /NDF: 19070683.2/1

- sign 248.885 $\pm$ 0.032  $\chi^2$ /NDF: 9888994.4/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 33.8/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 43.5/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 65.2/32

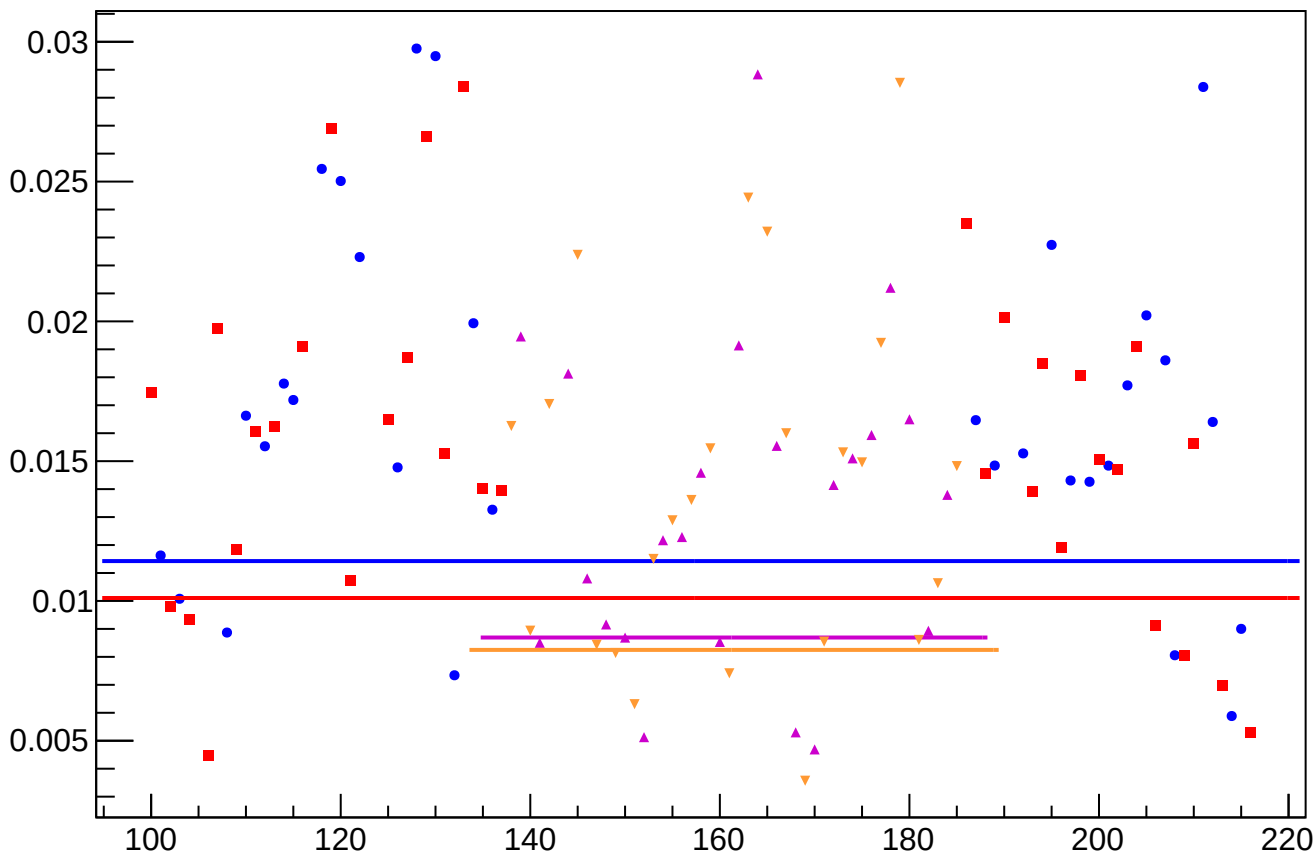
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.7/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 77.4/54

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 166.5/110

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 88.5/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 6518945.0/30

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:8879581.2/23

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 7043935.3/32

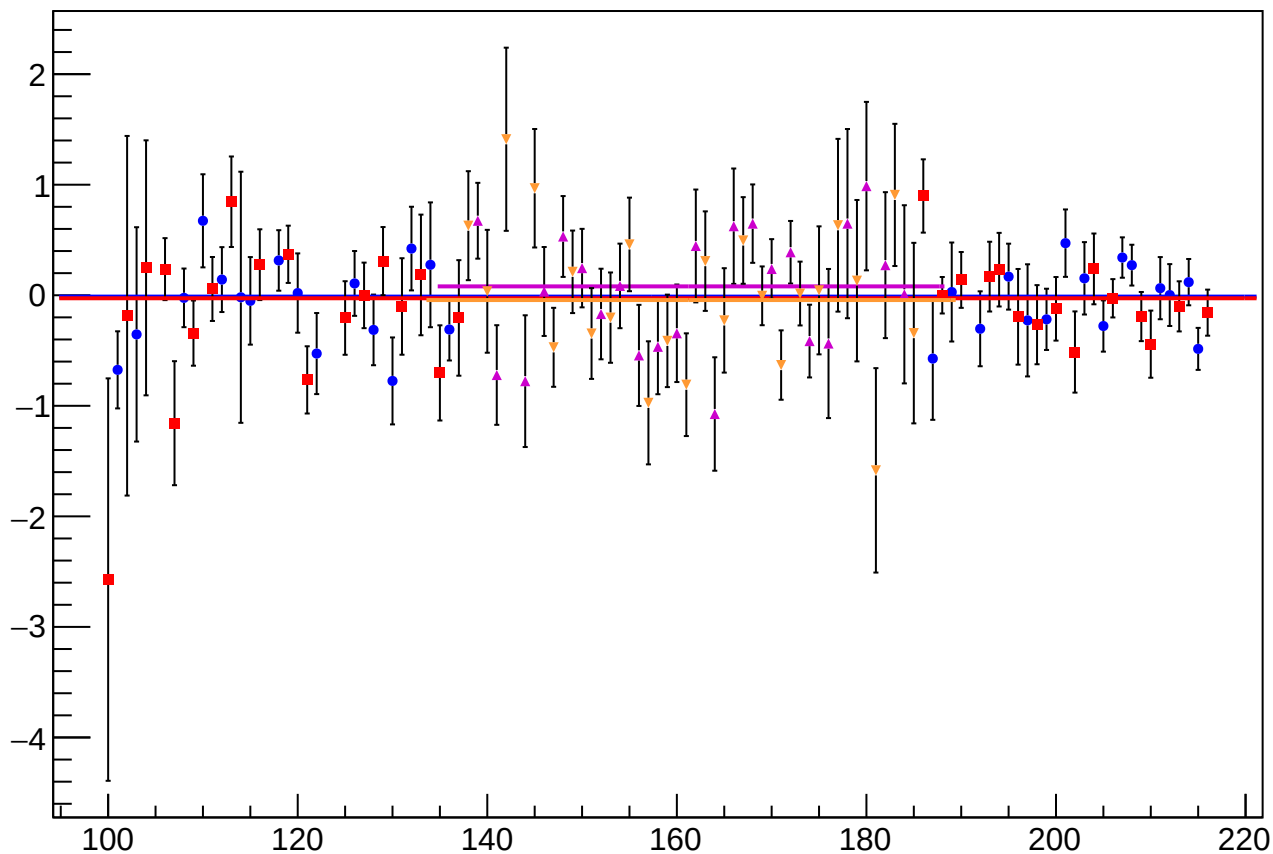
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:6875072.4/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 16891210.6/54

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 31139223.6/110

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 14242556.2/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.054$   $\chi^2/\text{NDF}$ : 37.3/30

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $-0.027 \pm 0.053$   $\chi^2/\text{NDF}$ : 41.4/32

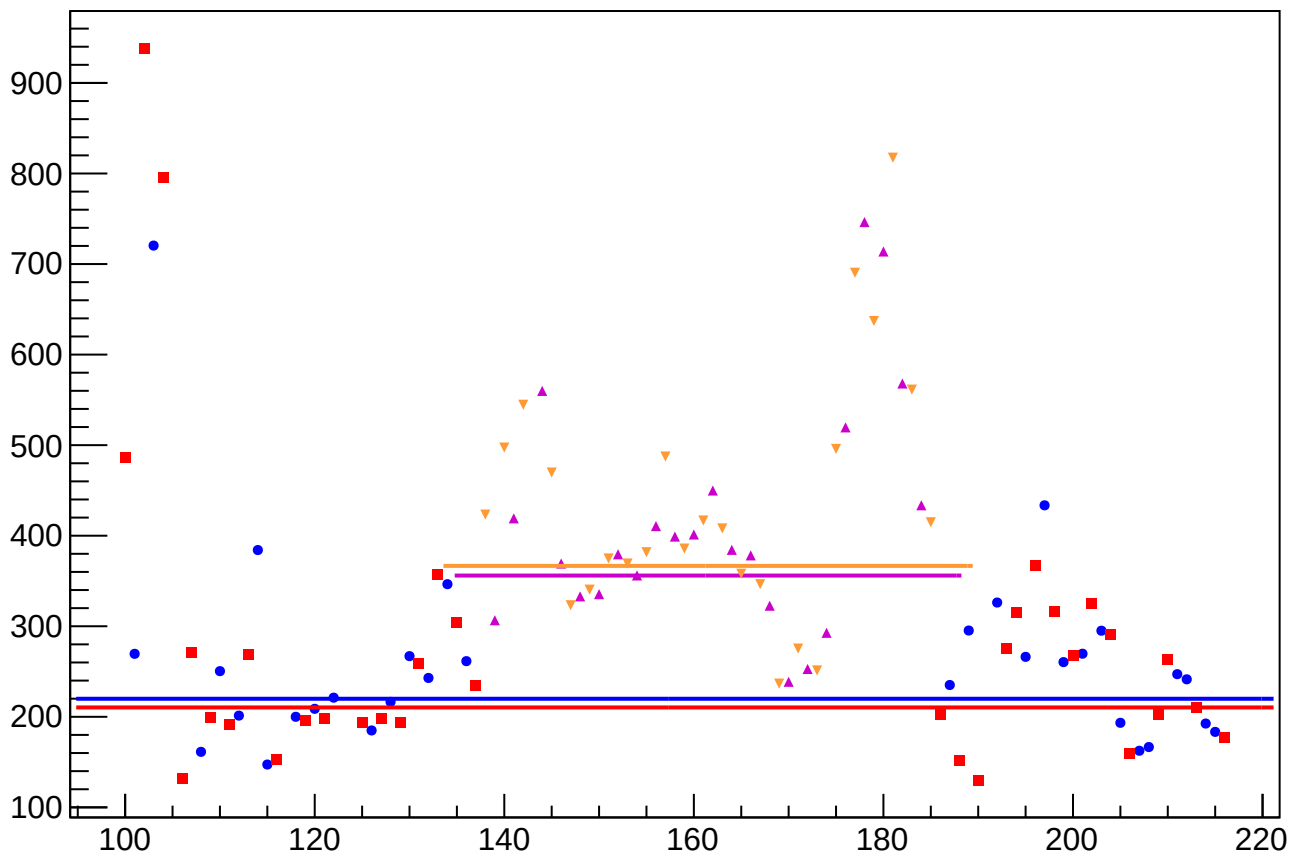
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.020 \pm 0.046$   $\chi^2/\text{NDF}$ : 68.4/54

All:  $-0.009 \pm 0.032$   $\chi^2/\text{NDF}$ : 141.4/110

- sign  $0.001 \pm 0.045$   $\chi^2/\text{NDF}$ : 72.9/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 219.931+/-0.038  $\chi^2/\text{NDF}$ : 2408934.5/30

Left Out: 366.671+/-0.064  $\chi^2/\text{NDF}$ : 2841292.6/23

Right Out: 210.333+/-0.037  $\chi^2/\text{NDF}$ : 3417888.0/32

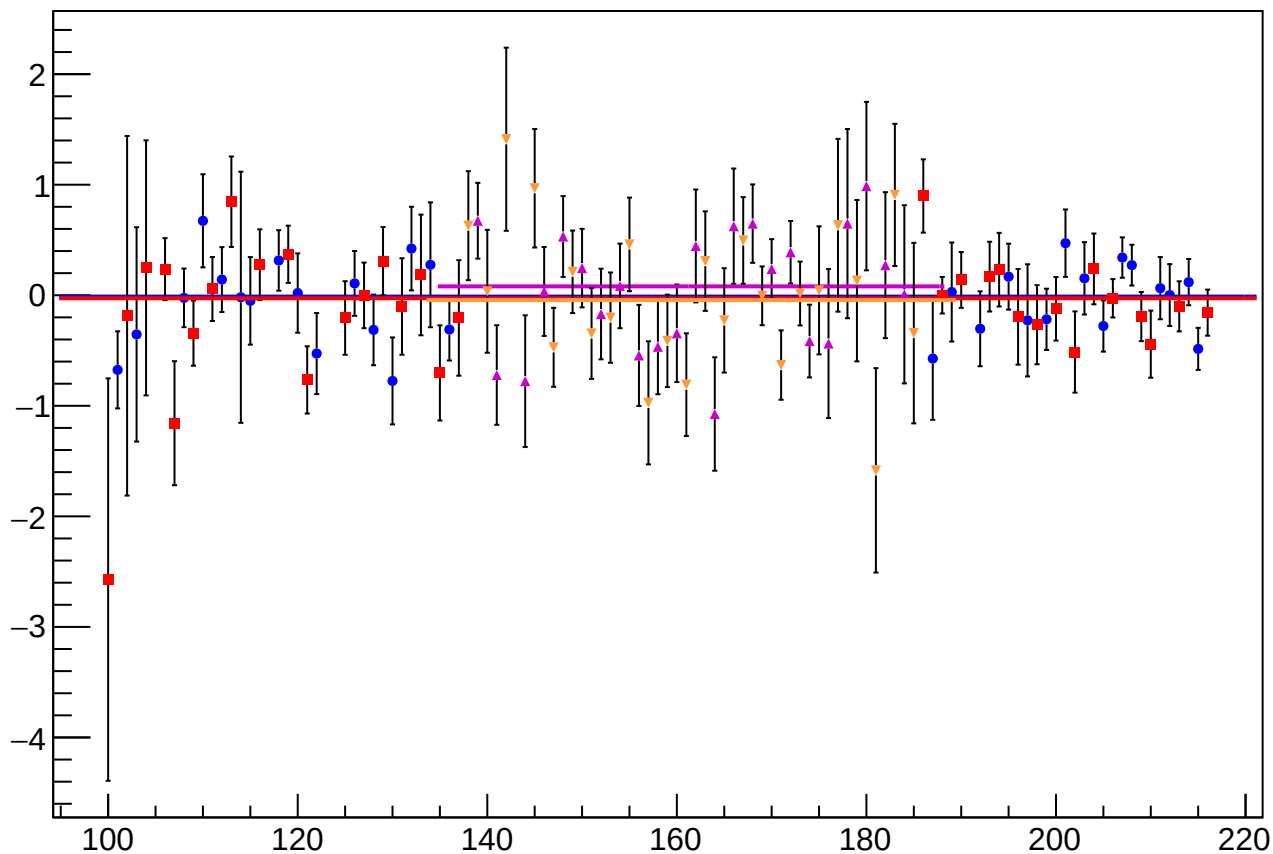
Left In: 355.993+/-0.062  $\chi^2/\text{NDF}$ : 2420863.3/22

+ sign 258.212+/-0.033  $\chi^2/\text{NDF}$ : 9140316.4/54

All: 253.440+/-0.023  $\chi^2/\text{NDF}$ : 19071451.6/11

- sign 248.883+/-0.032  $\chi^2/\text{NDF}$ : 9889424.6/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.012 \pm 0.054$   $\chi^2/\text{NDF}$ : 37.3/30

Left Out:  $-0.043 \pm 0.090$   $\chi^2/\text{NDF}$ : 31.0/23

Right Out:  $-0.027 \pm 0.053$   $\chi^2/\text{NDF}$ : 41.4/32

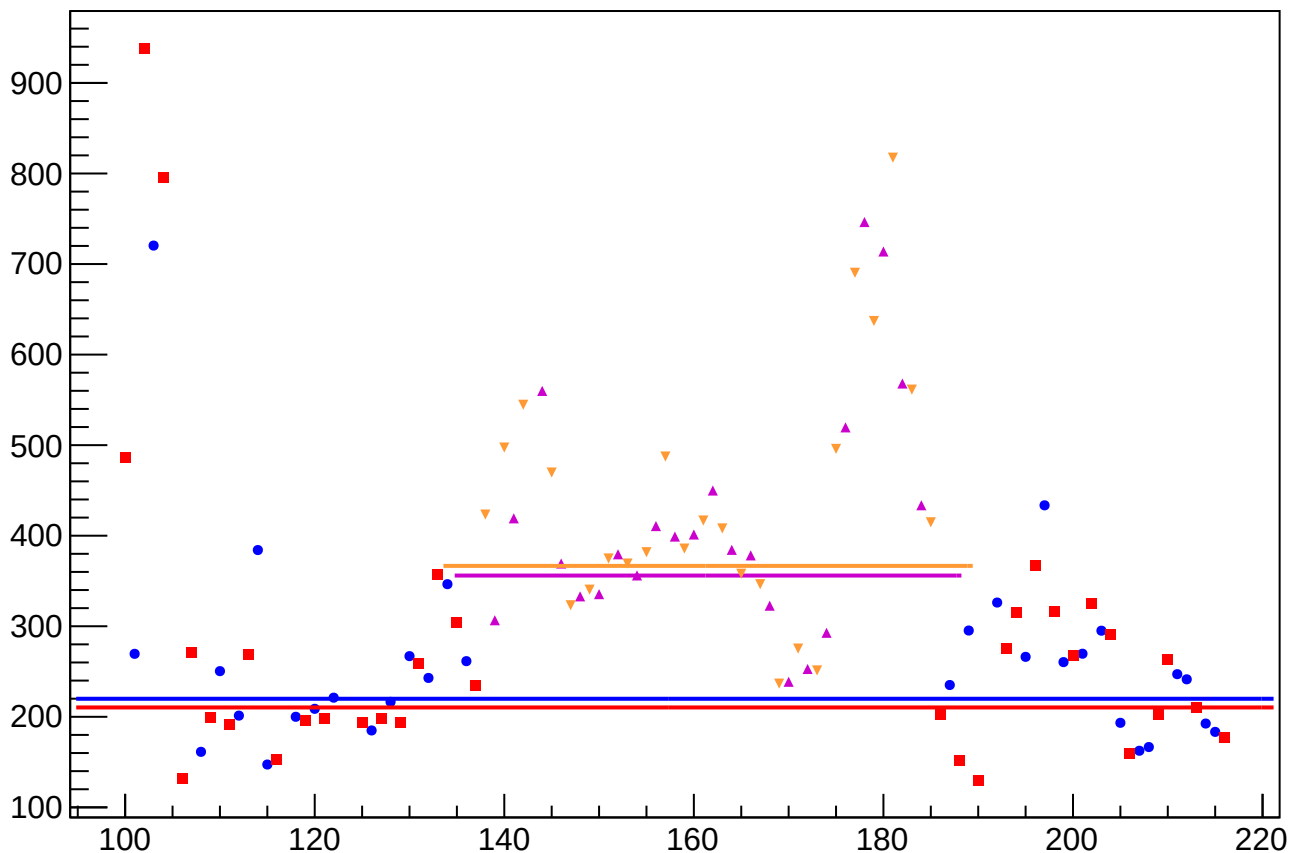
Left In:  $0.080 \pm 0.088$   $\chi^2/\text{NDF}$ : 30.3/22

+ sign  $-0.020 \pm 0.046$   $\chi^2/\text{NDF}$ : 68.4/54

All:  $-0.009 \pm 0.032$   $\chi^2/\text{NDF}$ : 141.4/110

- sign  $0.001 \pm 0.045$   $\chi^2/\text{NDF}$ : 72.9/55

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 219.931+/-0.038  $\chi^2/\text{NDF}$ : 2408934.5/30

Left Out: 366.671+/-0.064  $\chi^2/\text{NDF}$ :2841292.6/23

Right Out: 210.333+/-0.037  $\chi^2/\text{NDF}$ : 3417888.0/32

Left In: 355.993+/-0.062  $\chi^2/\text{NDF}$ :2420863.3/22

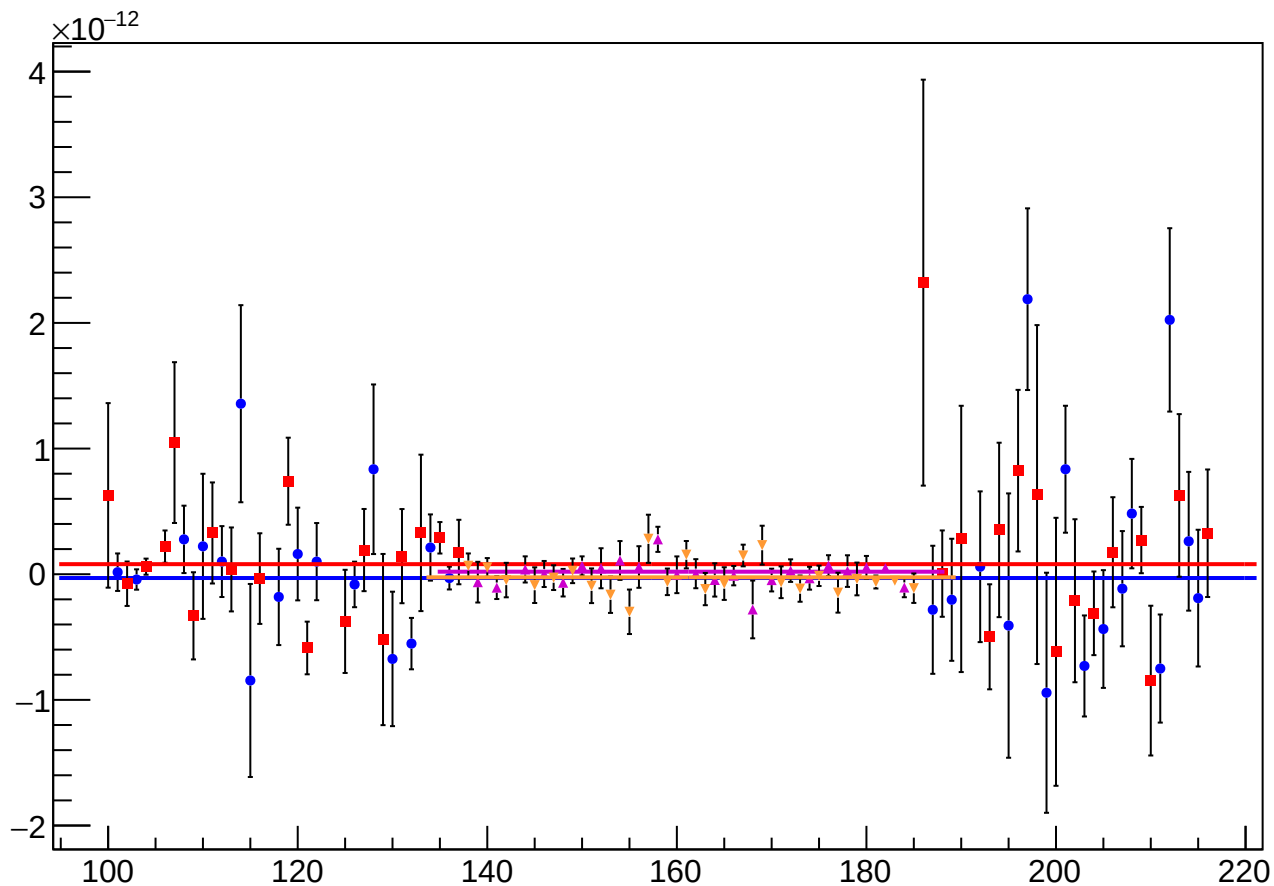
+ sign 258.212+/-0.033  $\chi^2/\text{NDF}$ : 9140316.4/54

All: 253.440+/-0.023  $\chi^2/\text{NDF}$ : 19071451.6/11

- sign 248.883+/-0.032  $\chi^2/\text{NDF}$ : 9889424.6/55



asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 47.3/30$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 21.9/23$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 37.4/32$

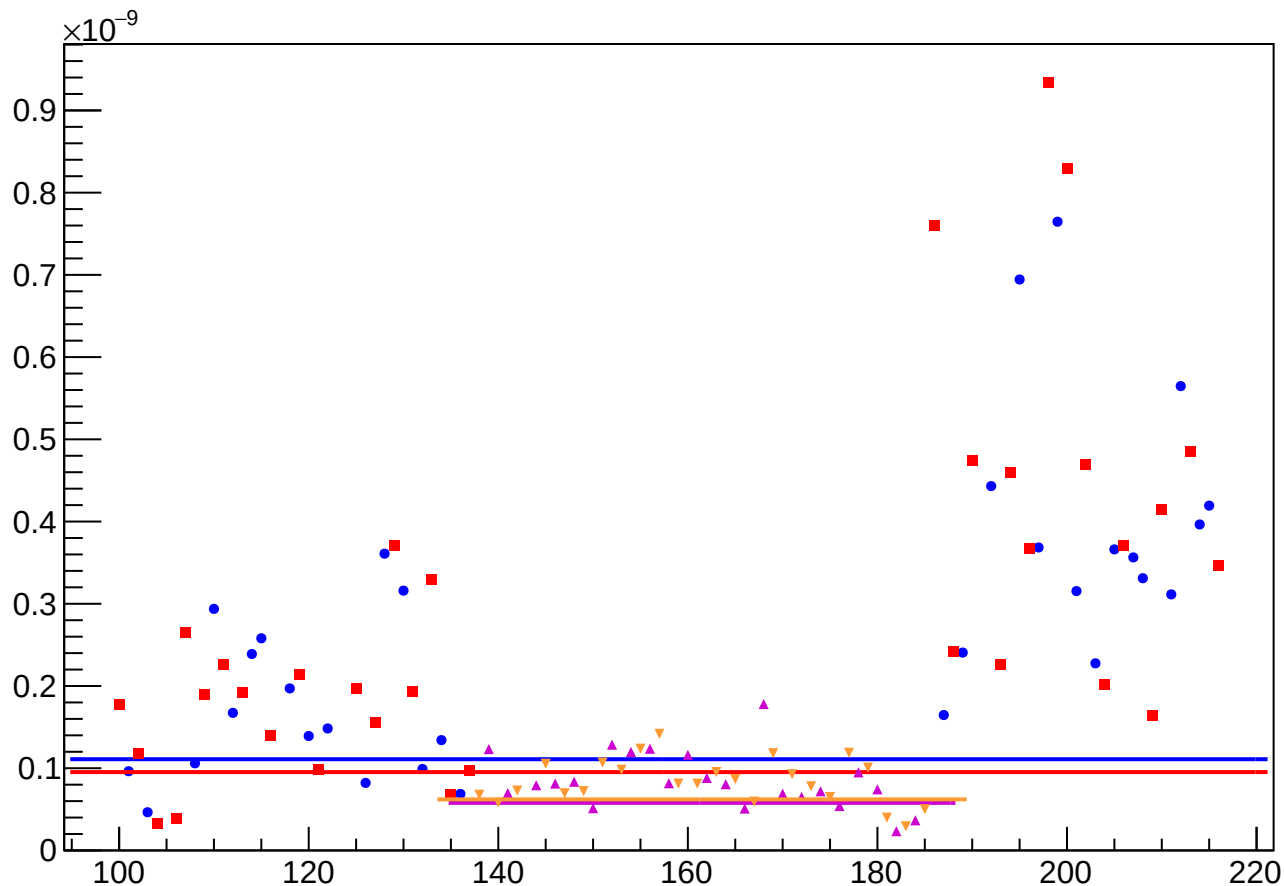
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 17.2/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 69.2/54$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 130.7/110$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 56.3/55$

asym\_us\_avg\_atlr\_avg\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10053002.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:4100152.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11697035.3/32

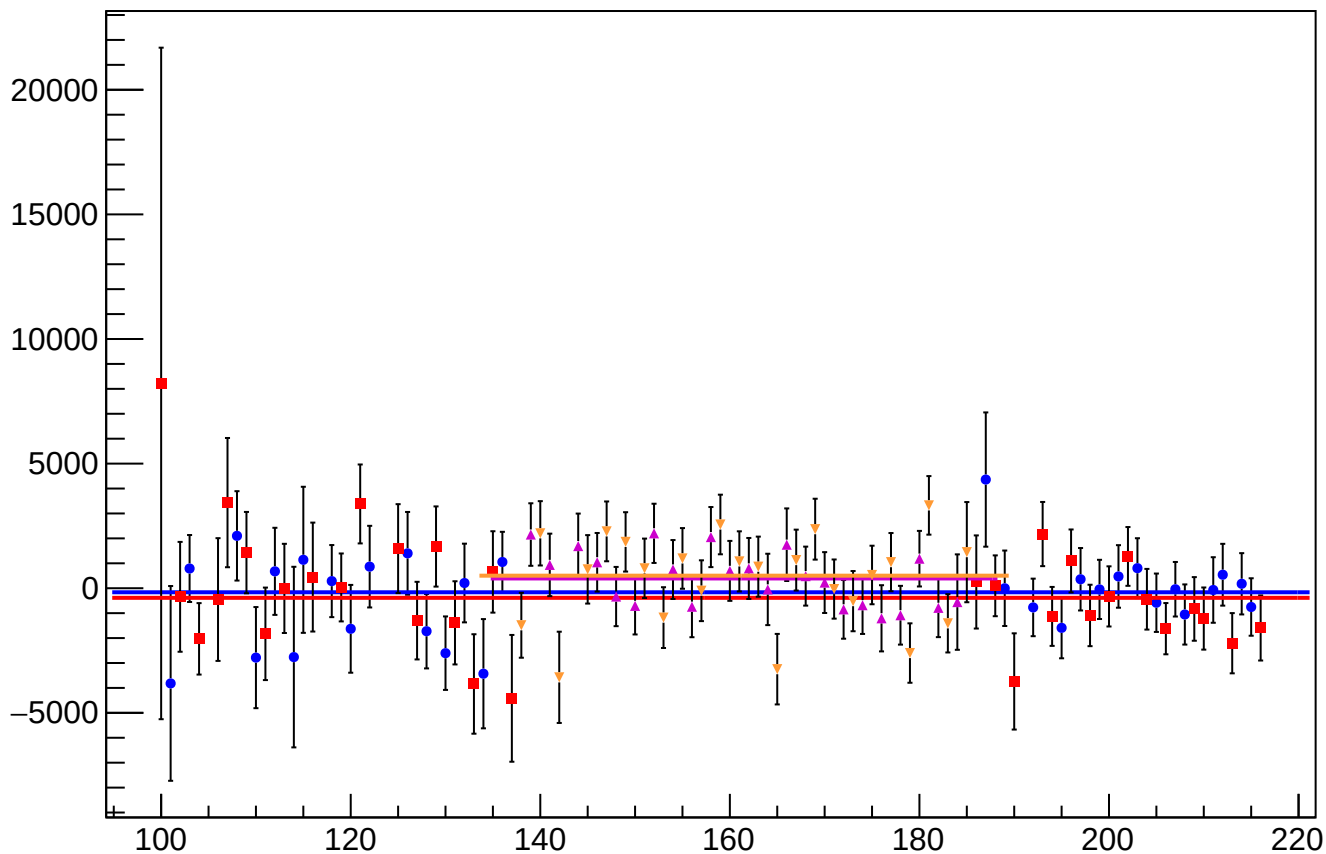
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:5512617.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16181397.9/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34847723.3/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18550560.7/55

# reg\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-162.658 \pm 258.270$   $\chi^2/\text{NDF}$ : 21.7/30

Left Out:  $503.606 \pm 255.531$   $\chi^2/\text{NDF}$ : 44.6/23

Right Out:  $-384.893 \pm 260.157$   $\chi^2/\text{NDF}$ : 37.6/32

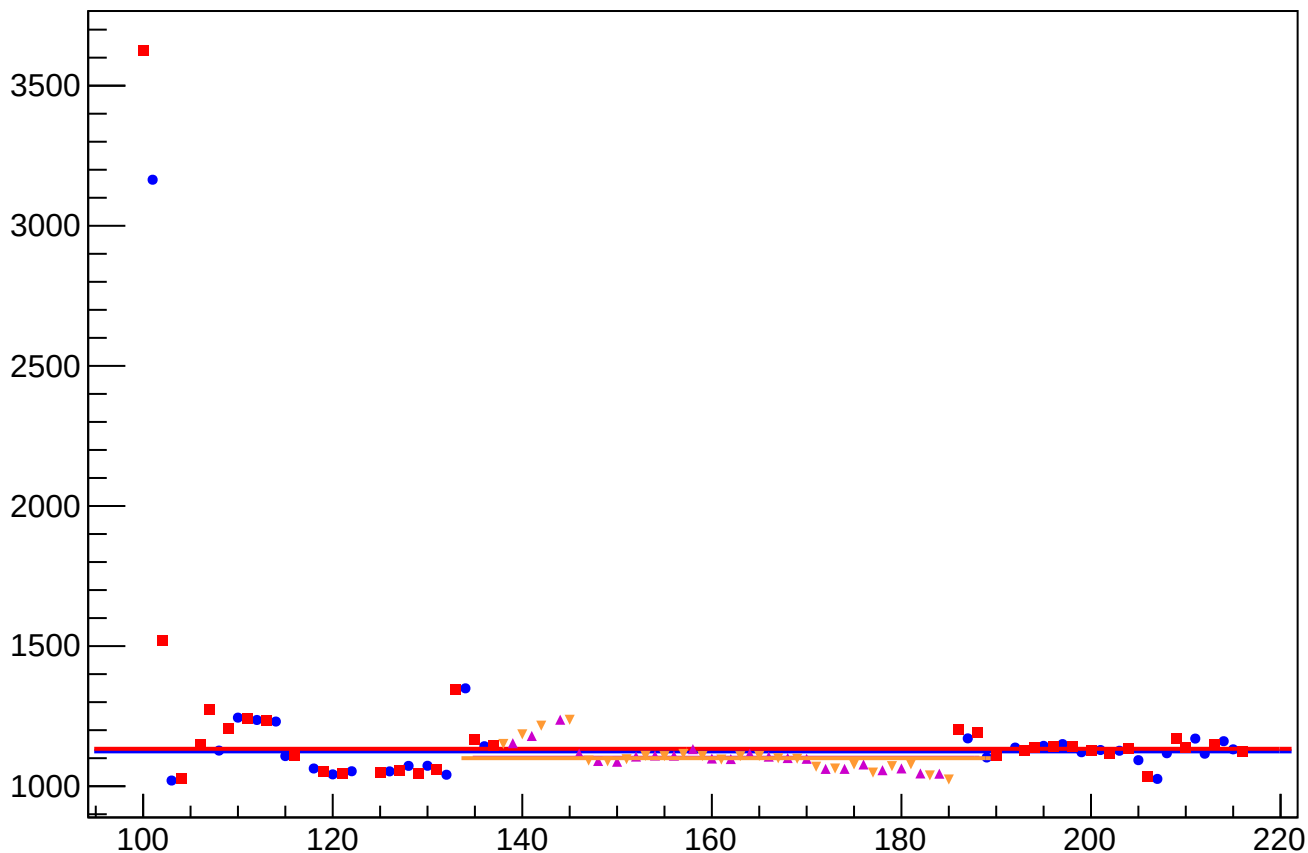
Left In:  $391.701 \pm 257.386$   $\chi^2/\text{NDF}$ : 17.8/22

+ sign  $174.026 \pm 181.648$   $\chi^2/\text{NDF}$ : 69.6/54

All:  $91.398 \pm 128.910$   $\chi^2/\text{NDF}$ : 130.0/110

- sign  $7.562 \pm 182.971$   $\chi^2/\text{NDF}$ : 60.0/55

# reg\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1124.336+/-0.183  $\chi^2/\text{NDF}$ : 646177.9/30

Left Out: 1100.063+/-0.181  $\chi^2/\text{NDF}$ : 58733.9/23

Right Out: 1133.503+/-0.184  $\chi^2/\text{NDF}$ : 249485.9/32

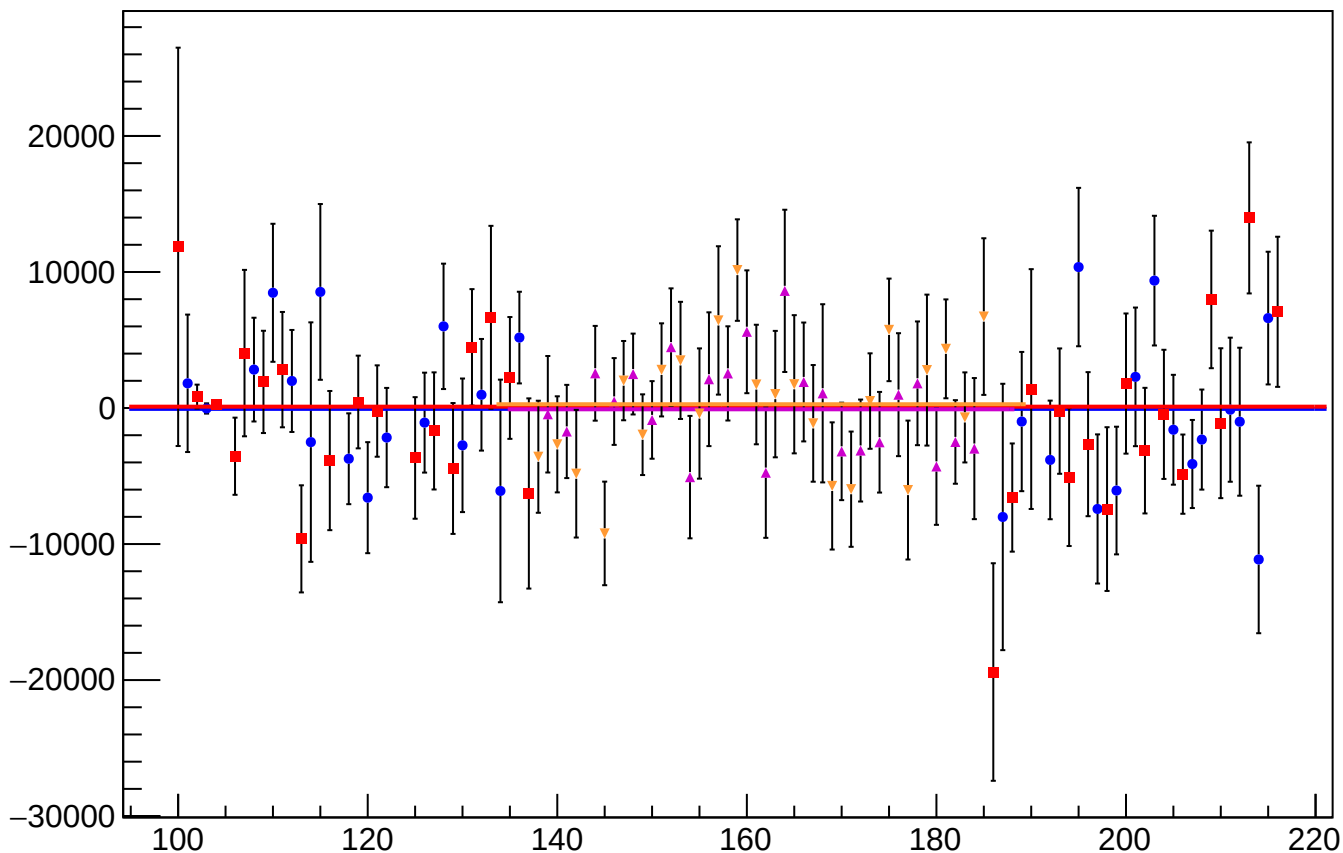
Left In: 1101.530+/-0.182  $\chi^2/\text{NDF}$ : 52145.9/22

+ sign 1112.070+/-0.128  $\chi^2/\text{NDF}$ : 713838.5/54

All: 1114.695+/-0.091  $\chi^2/\text{NDF}$ : 1031587.5/11

- sign 1117.356+/-0.129  $\chi^2/\text{NDF}$ : 316908.3/55

asym\_us\_avg\_atlr\_avg\_dd\_reg\_correction\_mean vs Slug



Right In:  $-63.681 \pm 343.287$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $277.507 \pm 820.501$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $99.264 \pm 312.541$   $\chi^2/\text{NDF}$ : 41.2/32

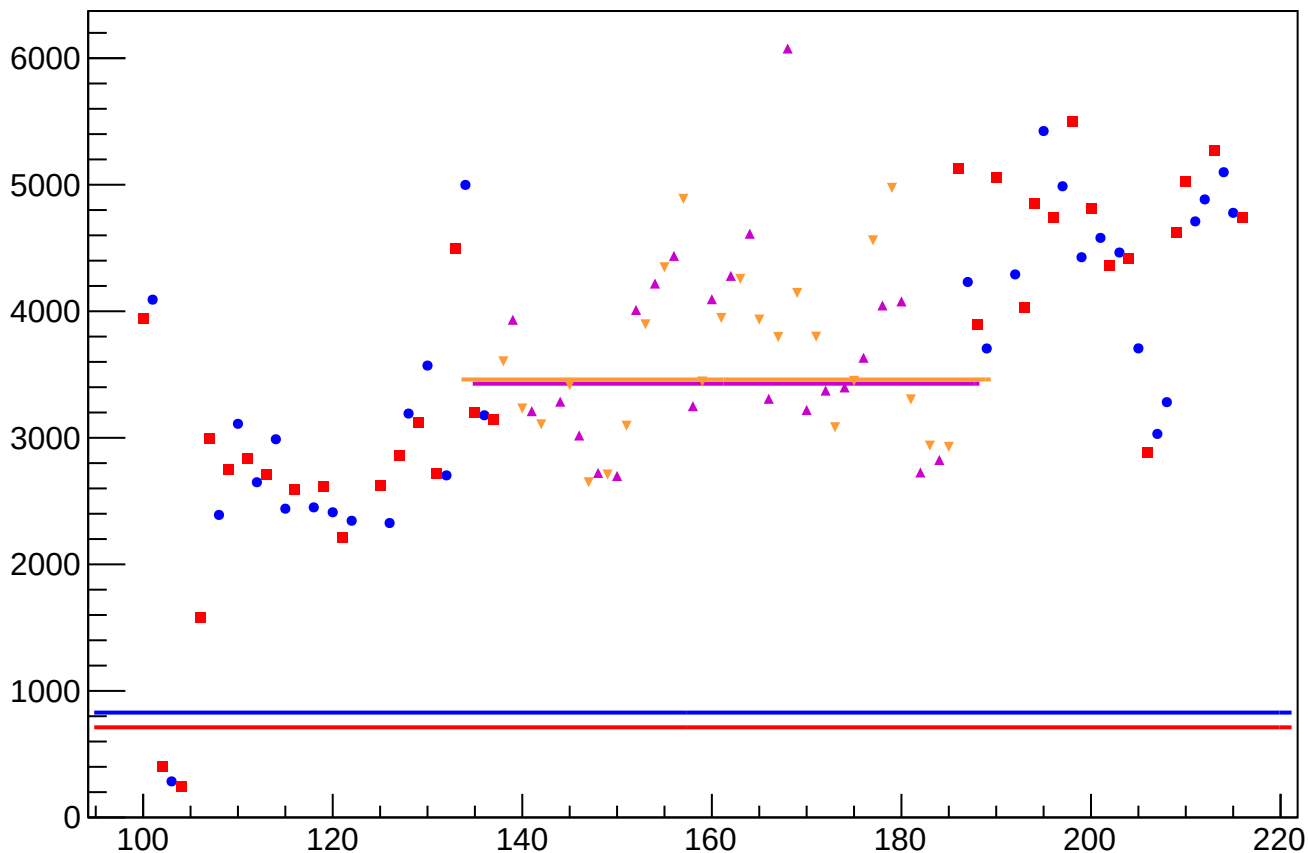
Left In:  $-94.734 \pm 817.223$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-12.854 \pm 316.687$   $\chi^2/\text{NDF}$ : 65.3/54

All:  $34.377 \pm 214.641$   $\chi^2/\text{NDF}$ : 120.3/110

- sign  $74.510 \pm 291.921$   $\chi^2/\text{NDF}$ : 55.0/55

asym\_us\_avg\_atlr\_avg\_dd\_reg\_correction\_rms vs Slug



Right In: 828.757 $\pm$ 0.243  $\chi^2$ /NDF: 26469173.2/30

Left Out: 3461.259 $\pm$ 0.580  $\chi^2$ /NDF:1058687.1/23

Right Out: 712.344 $\pm$ 0.221  $\chi^2$ /NDF: 27082470.5/32

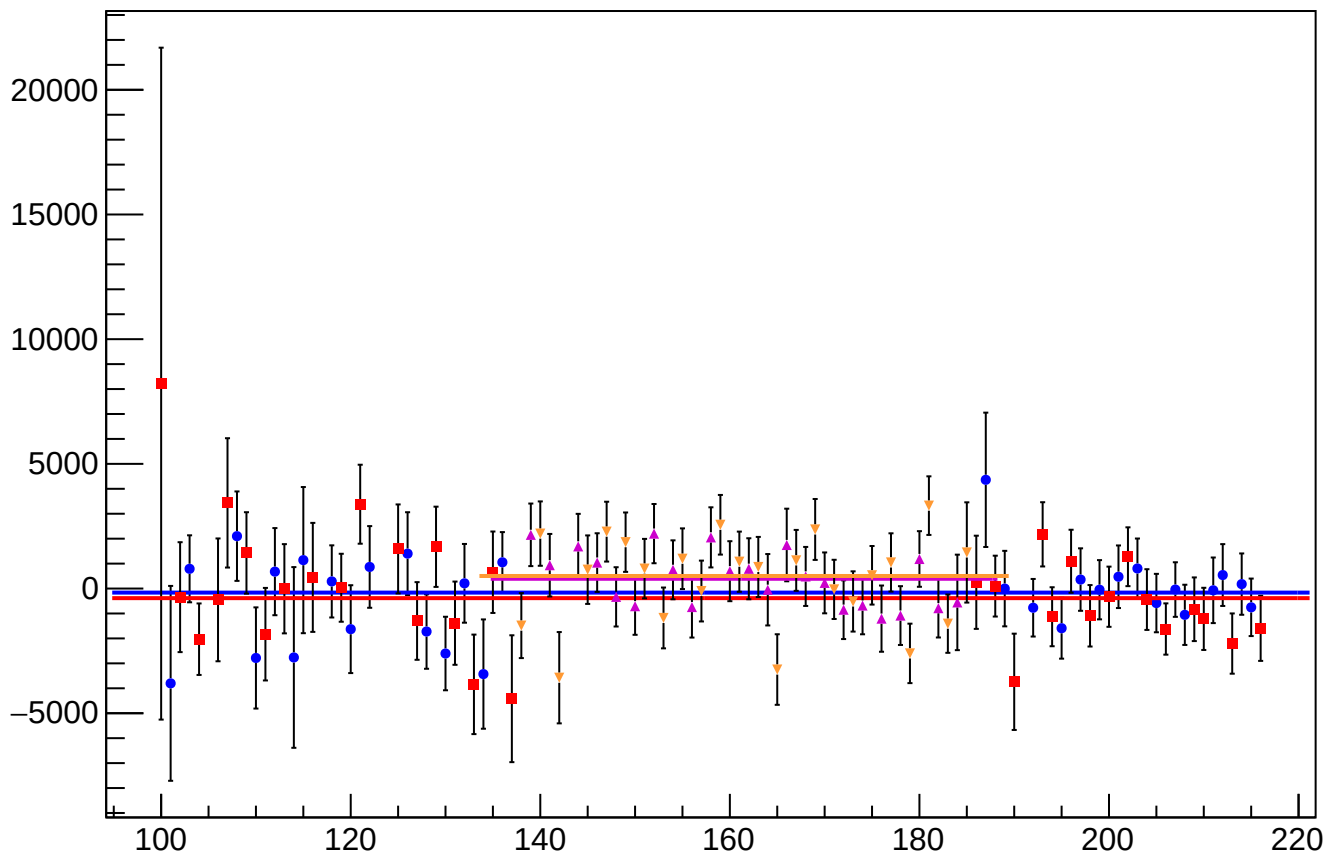
Left In: 3427.860 $\pm$ 0.578  $\chi^2$ /NDF:1243133.8/22

+ sign 1220.923 $\pm$ 0.224  $\chi^2$ /NDF: 45048646.5/54

All: 1133.298 $\pm$ 0.152  $\chi^2$ /NDF: 92922497.4/100

- sign 1058.842 $\pm$ 0.206  $\chi^2$ /NDF: 47590629.1/55

# cor\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-162.608 \pm 258.270$   $\chi^2/\text{NDF}$ : 21.7/30

Left Out:  $503.679 \pm 255.531$   $\chi^2/\text{NDF}$ : 44.6/23

Right Out:  $-384.921 \pm 260.157$   $\chi^2/\text{NDF}$ : 37.6/32

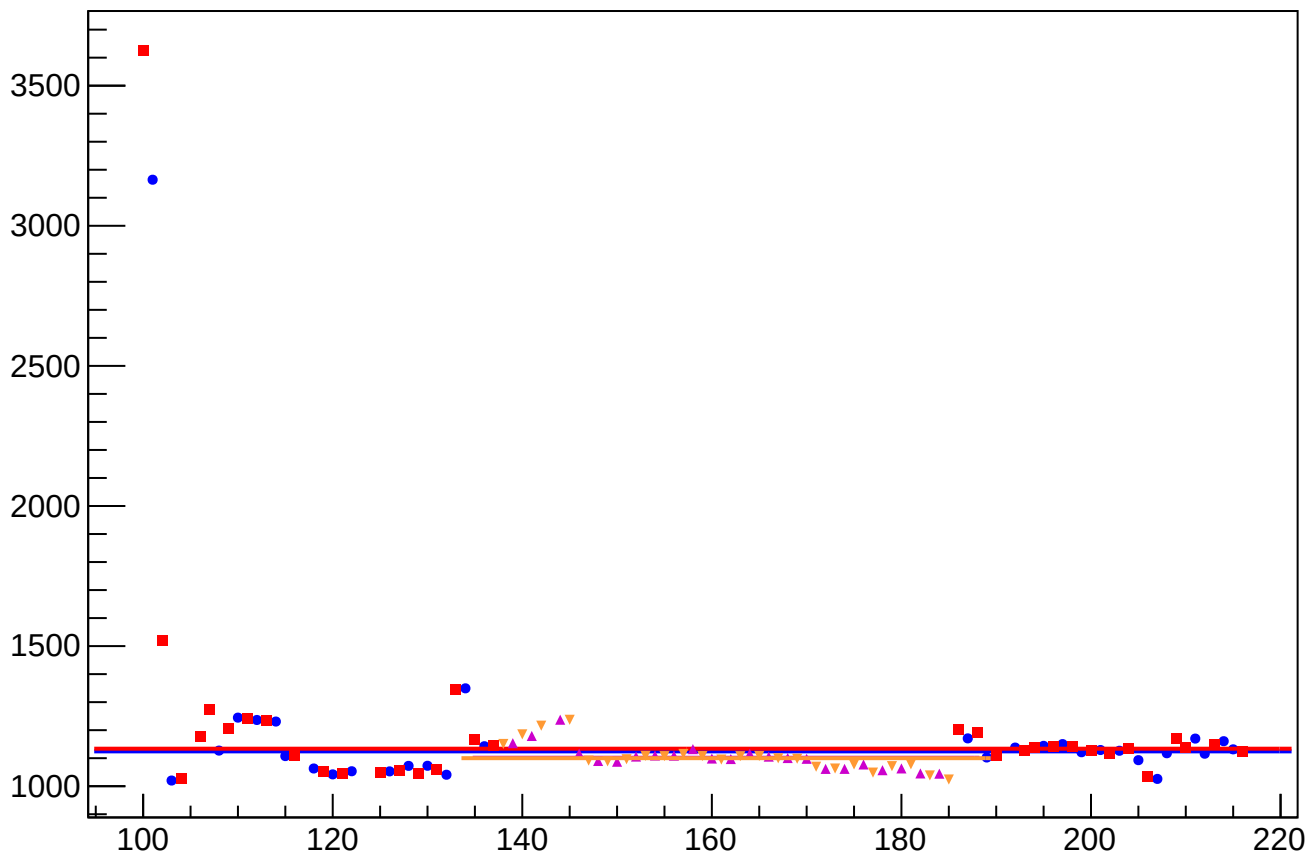
Left In:  $391.689 \pm 257.386$   $\chi^2/\text{NDF}$ : 17.8/22

+ sign  $174.088 \pm 181.648$   $\chi^2/\text{NDF}$ : 69.6/54

All:  $91.419 \pm 128.910$   $\chi^2/\text{NDF}$ : 130.0/110

- sign  $7.542 \pm 182.971$   $\chi^2/\text{NDF}$ : 60.0/55

# cor\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1124.336 $\pm$ 0.183  $\chi^2$ /NDF: 646179.0/30

Left Out: 1100.063 $\pm$ 0.181  $\chi^2$ /NDF: 58733.9/23

Right Out: 1133.850 $\pm$ 0.184  $\chi^2$ /NDF: 250103.4/32

Left In: 1101.530 $\pm$ 0.182  $\chi^2$ /NDF: 52145.9/22

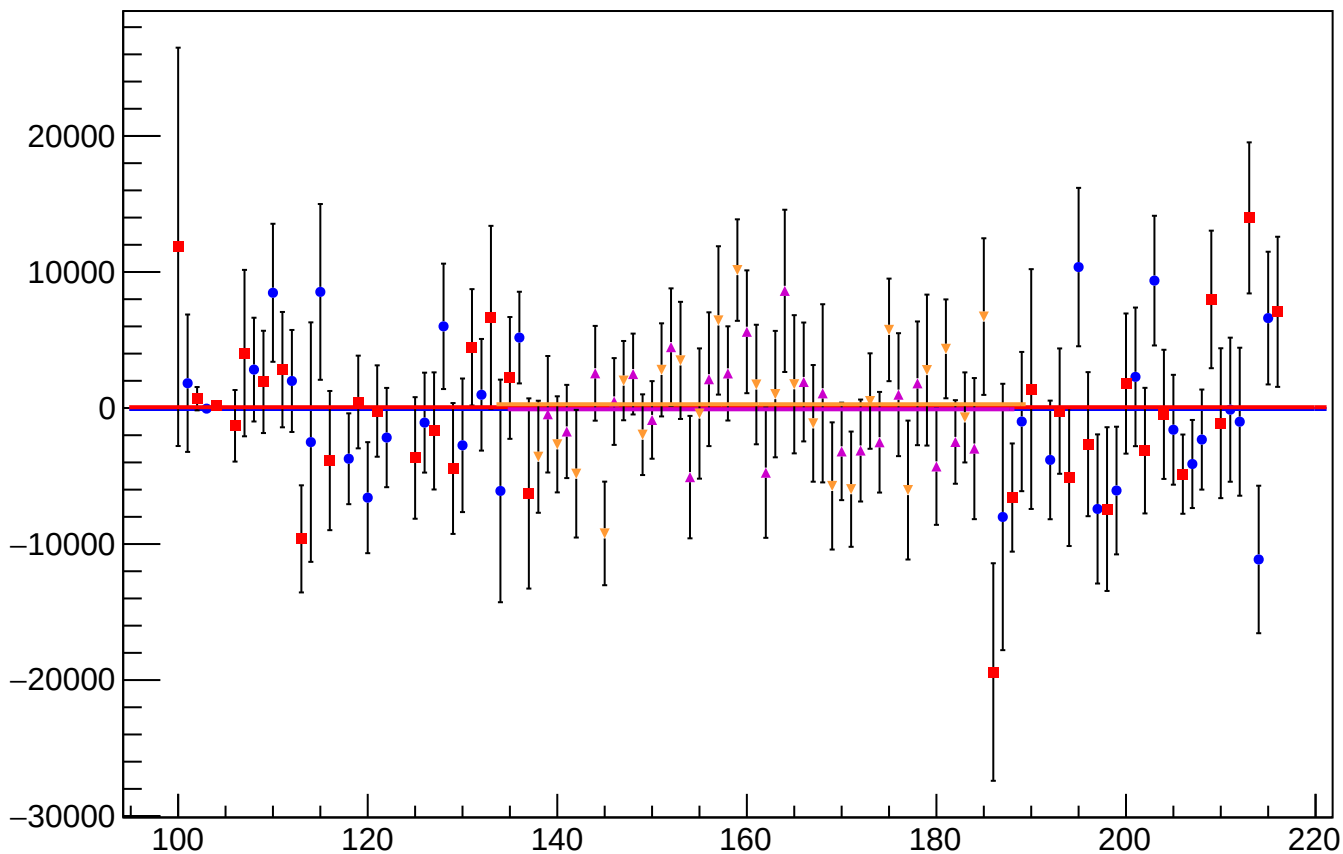
+ sign 1112.070 $\pm$ 0.128  $\chi^2$ /NDF: 713839.5/54

All: 1114.776 $\pm$ 0.091  $\chi^2$ /NDF: 1032584.6/11

- sign 1117.520 $\pm$ 0.129  $\chi^2$ /NDF: 317851.5/55



asym\_us\_avg\_atlr\_avg\_dd\_cor\_correction\_mean vs Slug



Right In:  $-72.306 \pm 331.630$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $277.536 \pm 820.502$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $59.612 \pm 307.823$   $\chi^2/\text{NDF}$ : 39.5/32

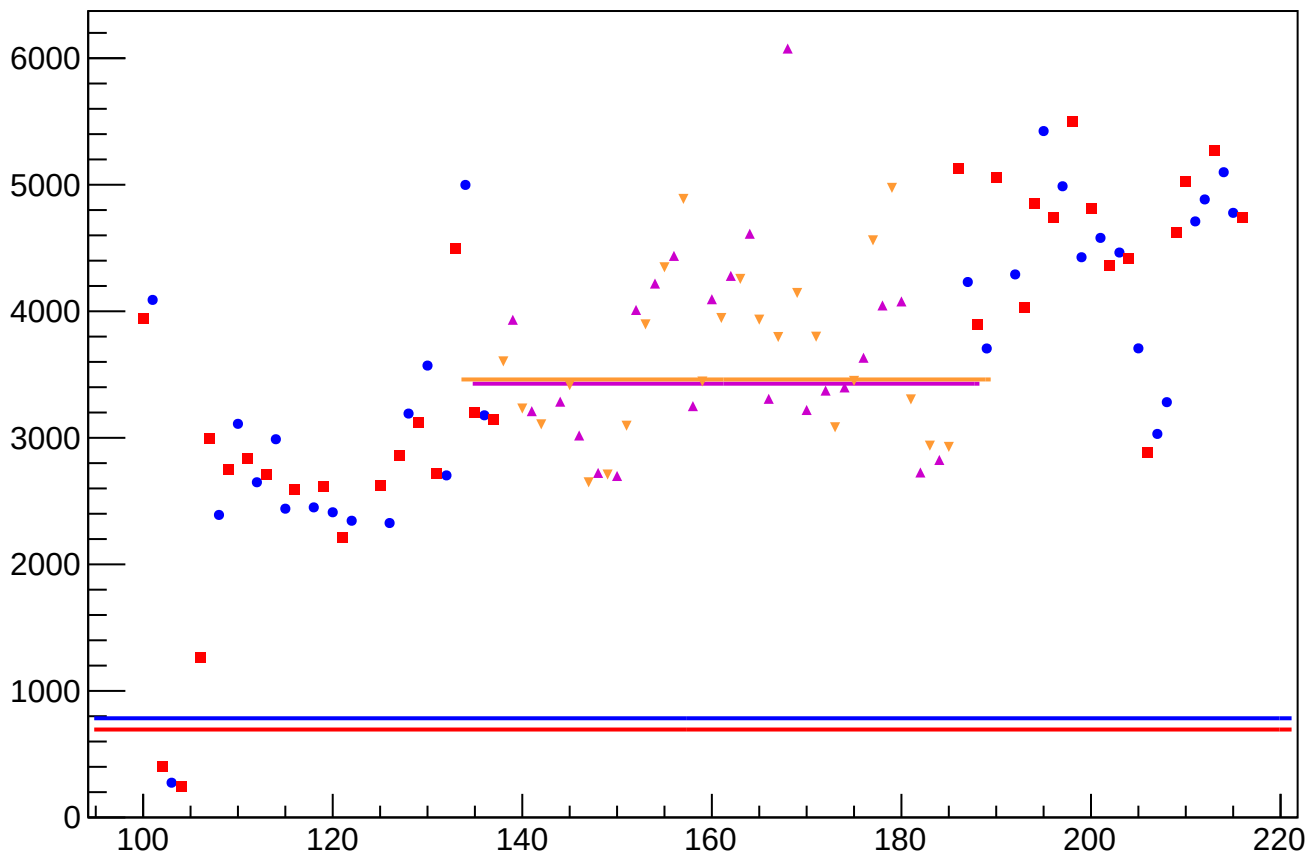
Left In:  $-94.742 \pm 817.222$   $\chi^2/\text{NDF}$ : 13.7/22

+ sign  $-23.180 \pm 307.466$   $\chi^2/\text{NDF}$ : 65.3/54

All:  $10.697 \pm 210.217$   $\chi^2/\text{NDF}$ : 118.6/110

- sign  $40.433 \pm 288.065$   $\chi^2/\text{NDF}$ : 53.2/55

asym\_us\_avg\_atlr\_avg\_dd\_cor\_correction\_rms vs Slug



Right In: 783.789+/-0.234  $\chi^2/\text{NDF}$ : 26964300.7/30

Left Out: 3461.261+/-0.580  $\chi^2/\text{NDF}$ : 1058691.8/23

Right Out: 694.831+/-0.218  $\chi^2/\text{NDF}$ : 27139696.5/32

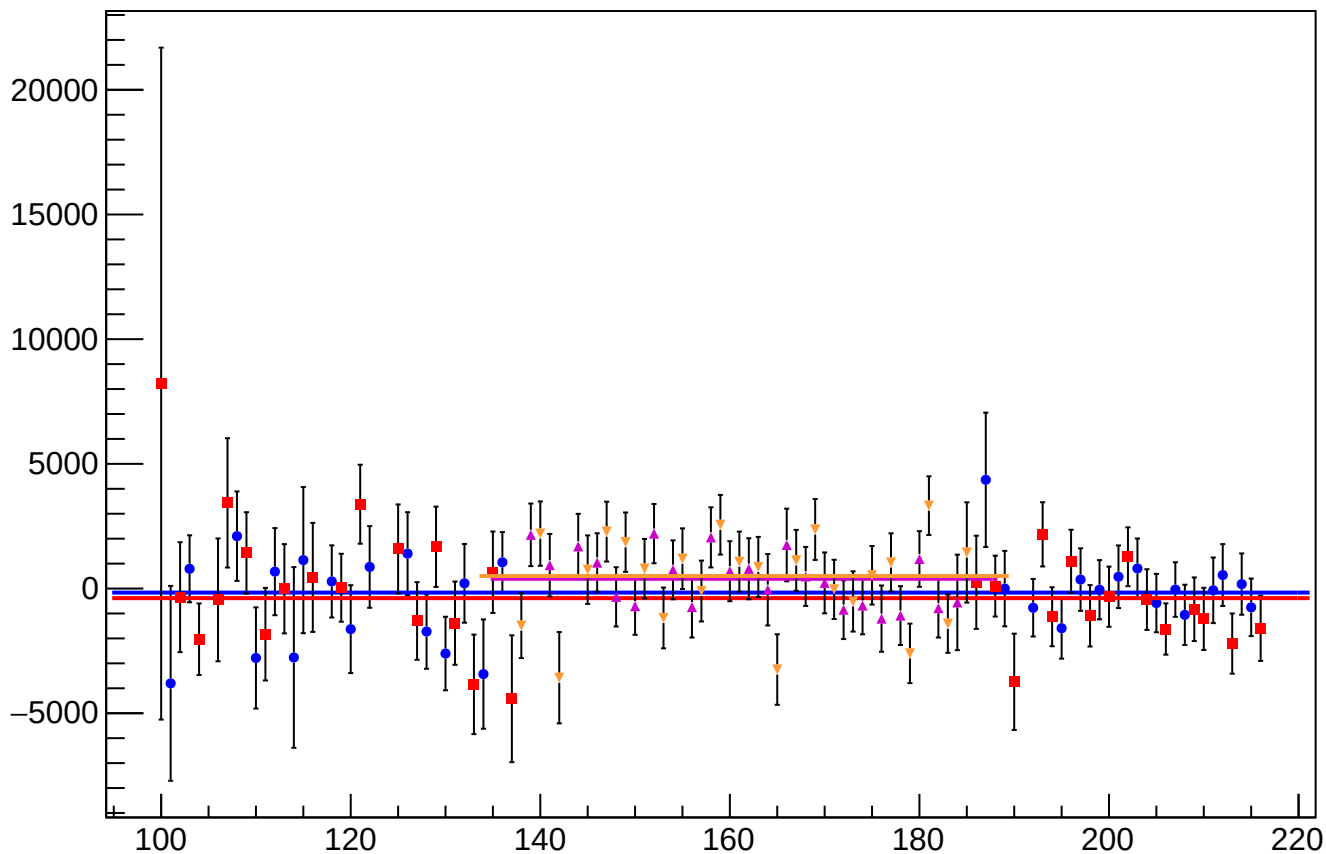
Left In: 3427.857+/-0.578  $\chi^2/\text{NDF}$ : 1243147.4/22

+ sign 1159.764+/-0.217  $\chi^2/\text{NDF}$ : 46329535.6/54

All: 1093.010+/-0.149  $\chi^2/\text{NDF}$ : 94478602.0/100

- sign 1034.413+/-0.204  $\chi^2/\text{NDF}$ : 47972036.7/55

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-162.608 \pm 258.270$   $\chi^2/\text{NDF}: 21.7/30$

Left Out:  $503.679 \pm 255.531$   $\chi^2/\text{NDF}: 44.6/23$

Right Out:  $-384.921 \pm 260.157$   $\chi^2/\text{NDF}: 37.6/32$

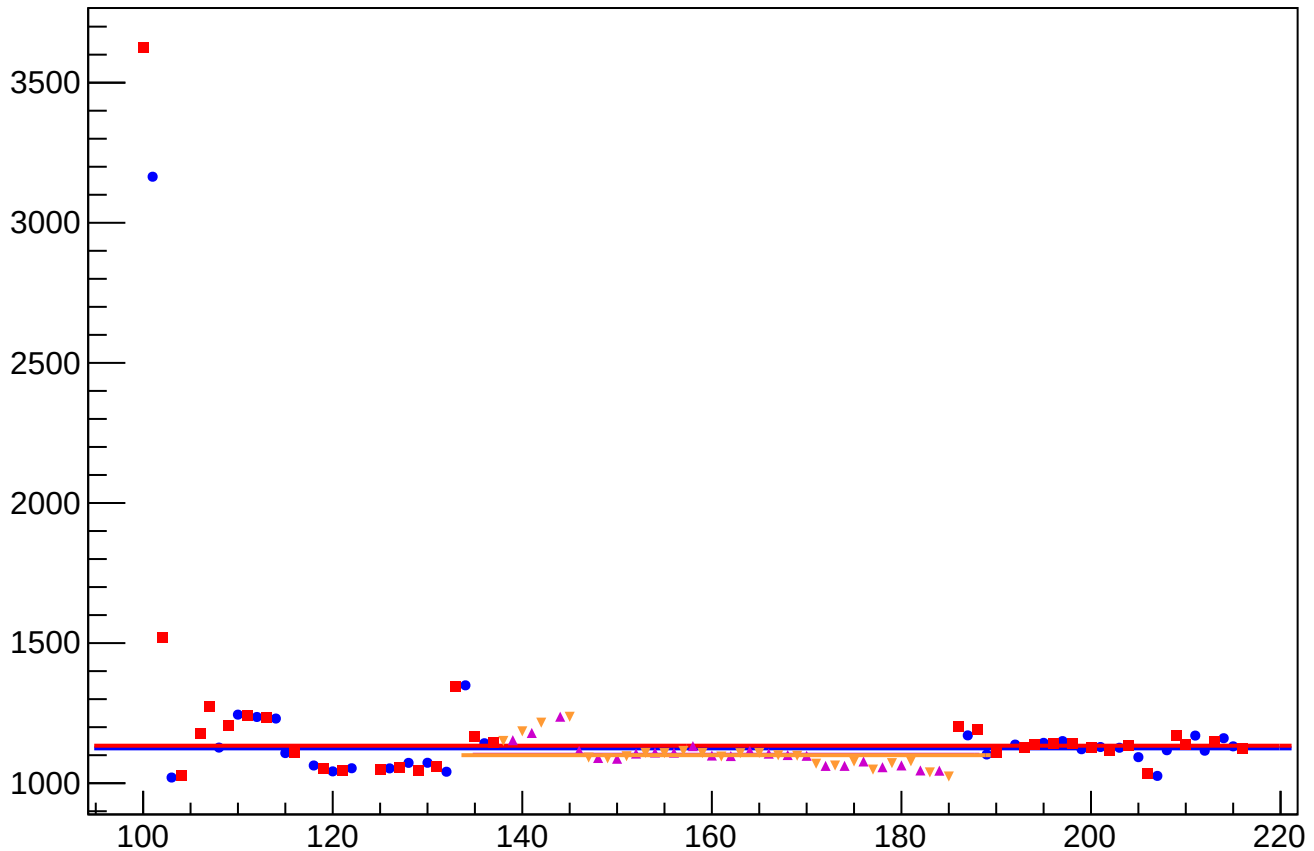
Left In:  $391.689 \pm 257.386$   $\chi^2/\text{NDF}: 17.8/22$

+ sign  $174.088 \pm 181.648$   $\chi^2/\text{NDF}: 69.6/54$

All:  $91.419 \pm 128.910$   $\chi^2/\text{NDF}: 130.0/110$

- sign  $7.542 \pm 182.971$   $\chi^2/\text{NDF}: 60.0/55$

eigen\_cor\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1124.336 $\pm$ 0.183  $\chi^2$ /NDF: 646179.0/30

Left Out: 1100.063 $\pm$ 0.181  $\chi^2$ /NDF: 58733.9/23

Right Out: 1133.850 $\pm$ 0.184  $\chi^2$ /NDF: 250103.4/32

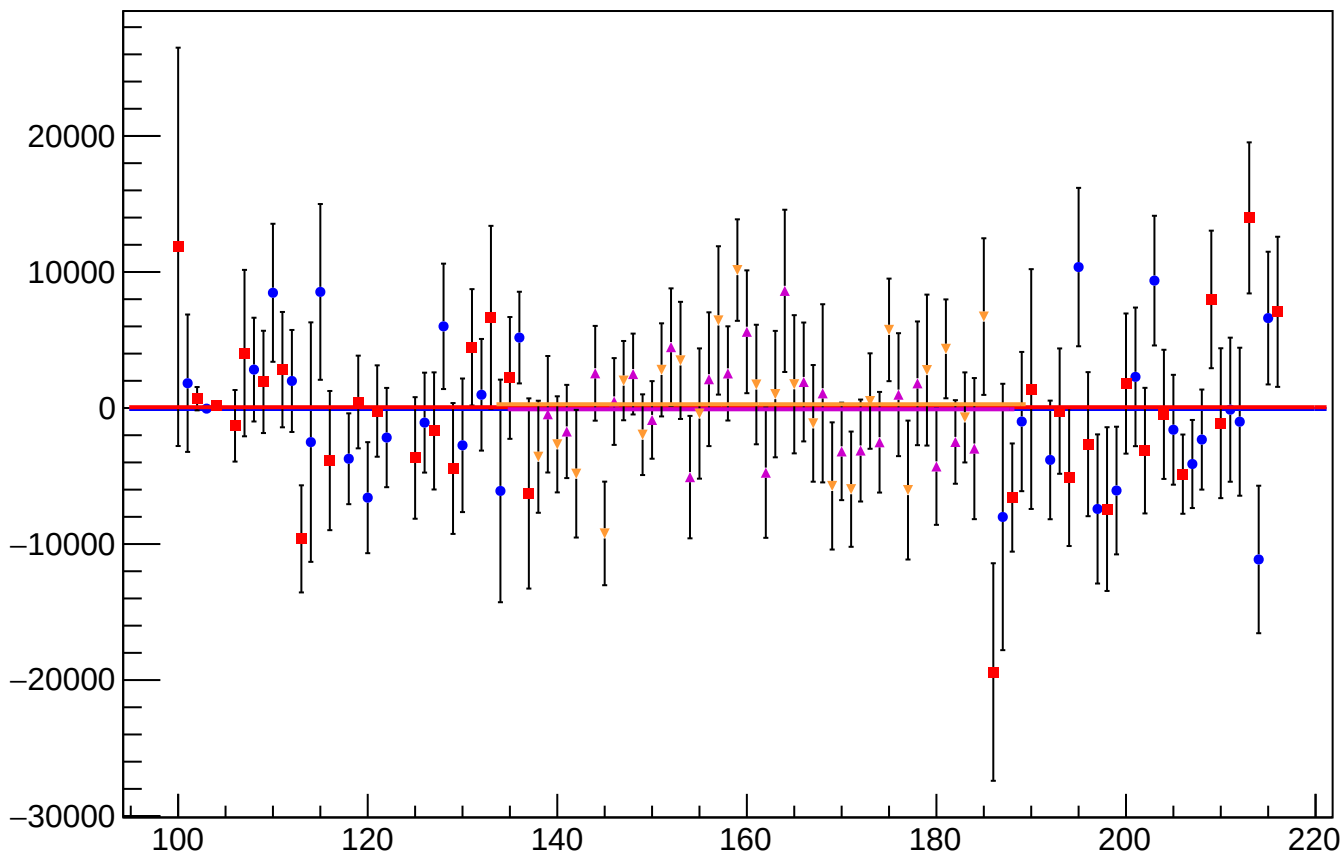
Left In: 1101.530 $\pm$ 0.182  $\chi^2$ /NDF: 52145.9/22

+ sign 1112.070 $\pm$ 0.128  $\chi^2$ /NDF: 713839.5/54

All: 1114.776 $\pm$ 0.091  $\chi^2$ /NDF: 1032584.6/11

- sign 1117.520 $\pm$ 0.129  $\chi^2$ /NDF: 317851.5/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: -72.306+/-331.630  $\chi^2/\text{NDF}$ : 35.3/30

Left Out: 277.536+/-820.502  $\chi^2/\text{NDF}$ : 29.9/23

Right Out: 59.612+/-307.823  $\chi^2/\text{NDF}$ : 39.5/32

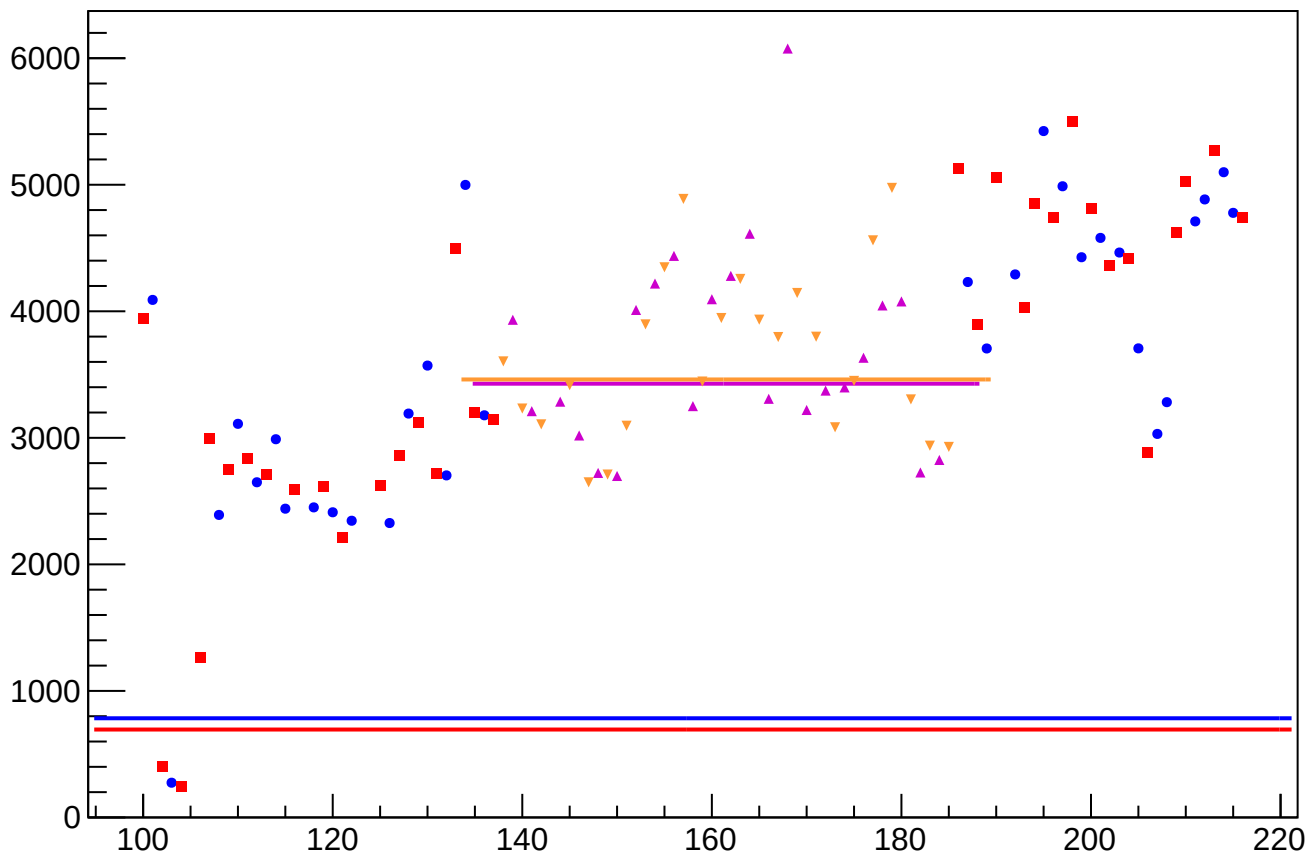
Left In: -94.742+/-817.222  $\chi^2/\text{NDF}$ : 13.7/22

+ sign -23.180+/-307.466  $\chi^2/\text{NDF}$ : 65.3/54

All: 10.697+/-210.217  $\chi^2/\text{NDF}$ : 118.6/110

- sign 40.433+/-288.065  $\chi^2/\text{NDF}$ : 53.2/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 783.789+/-0.234  $\chi^2/\text{NDF}$ : 26964300.7/30

Left Out: 3461.261+/-0.580  $\chi^2/\text{NDF}$ : 1058691.8/23

Right Out: 694.831+/-0.218  $\chi^2/\text{NDF}$ : 27139696.5/32

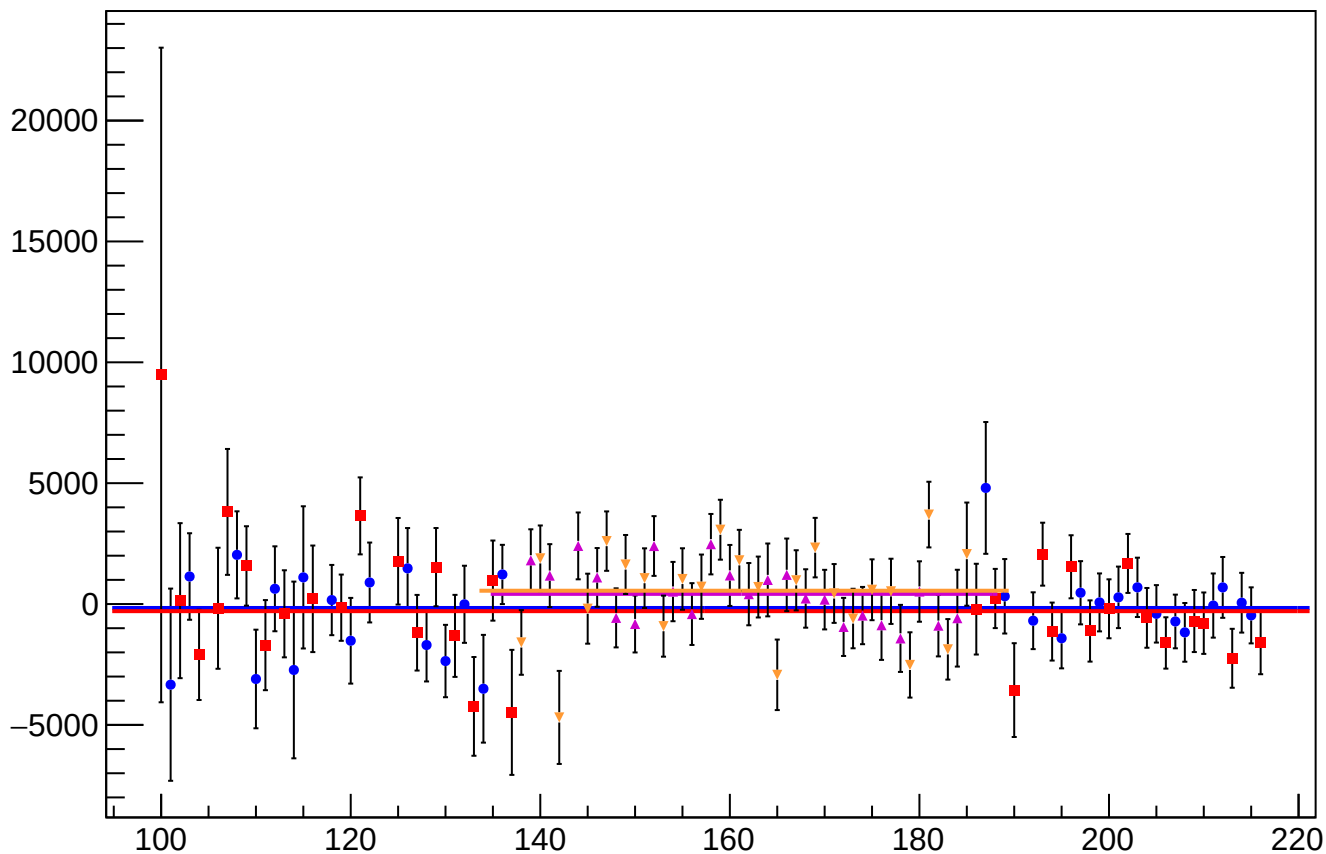
Left In: 3427.857+/-0.578  $\chi^2/\text{NDF}$ : 1243147.4/22

+ sign 1159.764+/-0.217  $\chi^2/\text{NDF}$ : 46329535.6/54

All: 1093.010+/-0.149  $\chi^2/\text{NDF}$ : 94478602.0/100

- sign 1034.413+/-0.204  $\chi^2/\text{NDF}$ : 47972036.7/55

# dit\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-163.243 \pm 263.671$   $\chi^2/\text{NDF}: 21.4/30$

Left Out:  $550.661 \pm 269.206$   $\chi^2/\text{NDF}: 45.2/23$

Right Out:  $-294.585 \pm 266.526$   $\chi^2/\text{NDF}: 39.4/32$

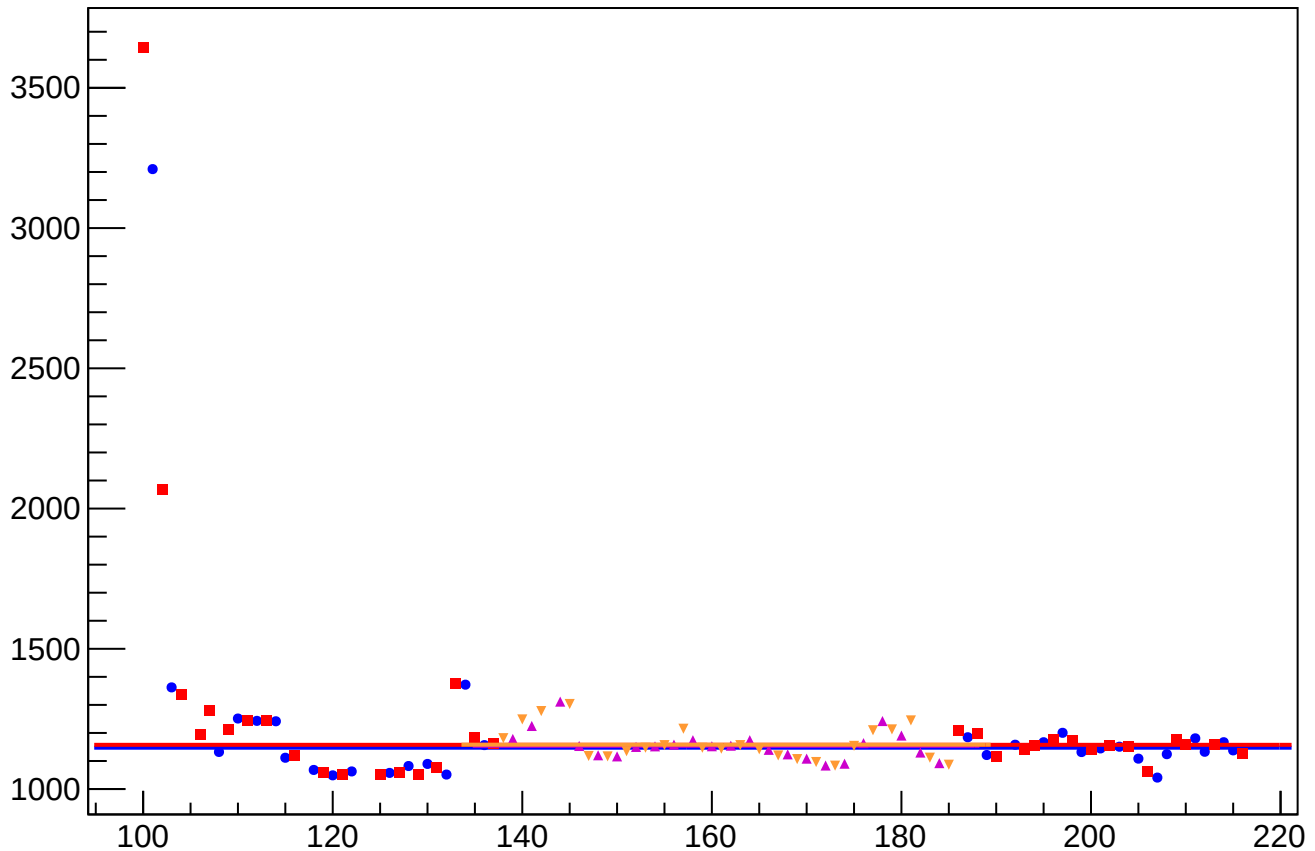
Left In:  $421.023 \pm 269.815$   $\chi^2/\text{NDF}: 18.0/22$

+ sign  $186.295 \pm 188.370$   $\chi^2/\text{NDF}: 70.2/54$

All:  $122.982 \pm 133.636$   $\chi^2/\text{NDF}: 131.4/110$

- sign  $58.831 \pm 189.615$   $\chi^2/\text{NDF}: 61.0/55$

# dit\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1147.389+/-0.186  $\chi^2/\text{NDF}$ : 666500.1/30

Left Out: 1158.177+/-0.190  $\chi^2/\text{NDF}$ : 84111.8/23

Right Out: 1157.667+/-0.188  $\chi^2/\text{NDF}$ : 357094.6/32

Left In: 1154.231+/-0.191  $\chi^2/\text{NDF}$ : 66476.9/22

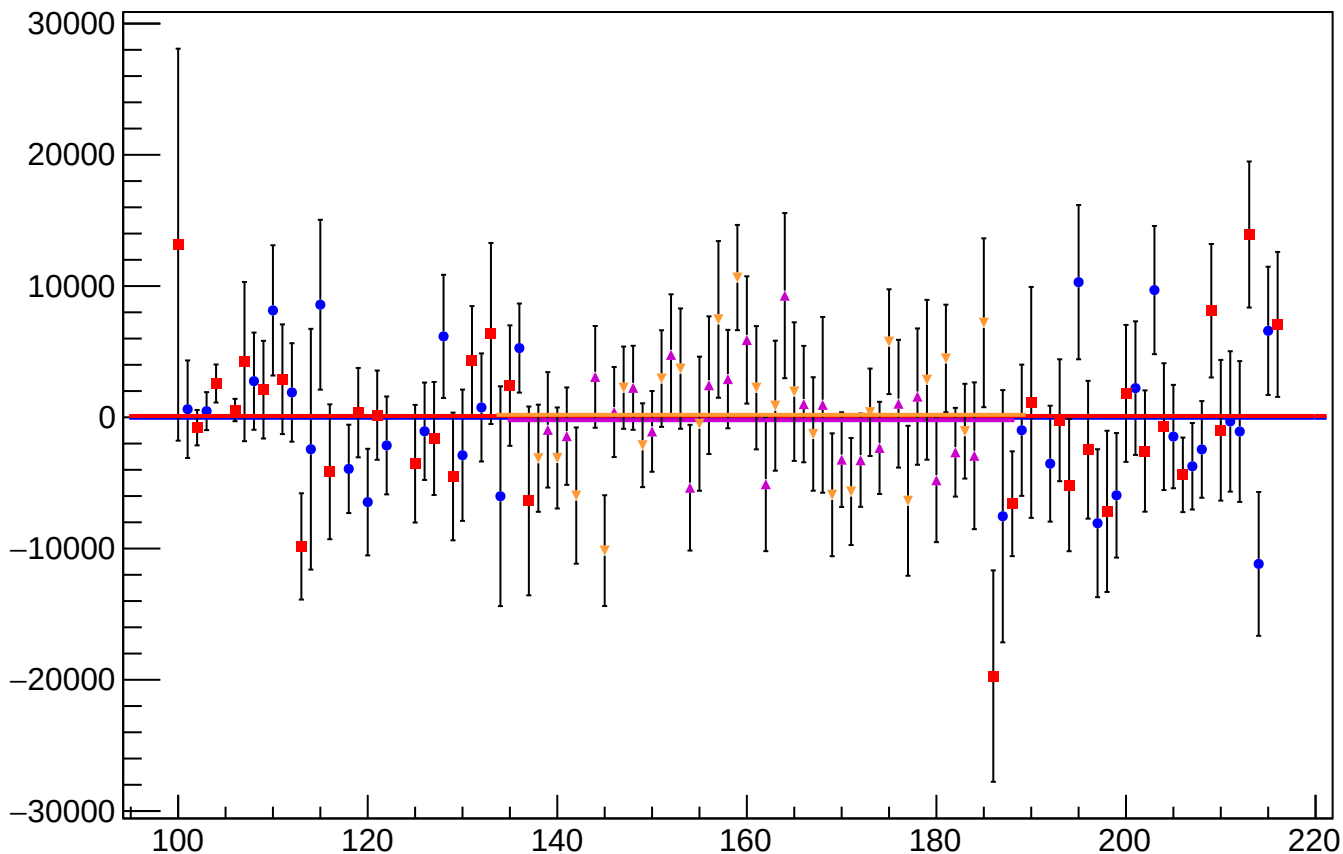
+ sign 1152.671+/-0.133  $\chi^2/\text{NDF}$ : 752251.2/54

All: 1154.310+/-0.094  $\chi^2/\text{NDF}$ : 1176291.9/117

- sign 1155.970+/-0.134  $\chi^2/\text{NDF}$ : 423735.9/55



asym\_us\_avg\_atlr\_avg\_dd\_dit\_correction\_mean vs Slug



Right In:  $-35.149 \pm 712.209$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $189.735 \pm 869.432$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $103.696 \pm 516.299$   $\chi^2/\text{NDF}$ : 41.8/32

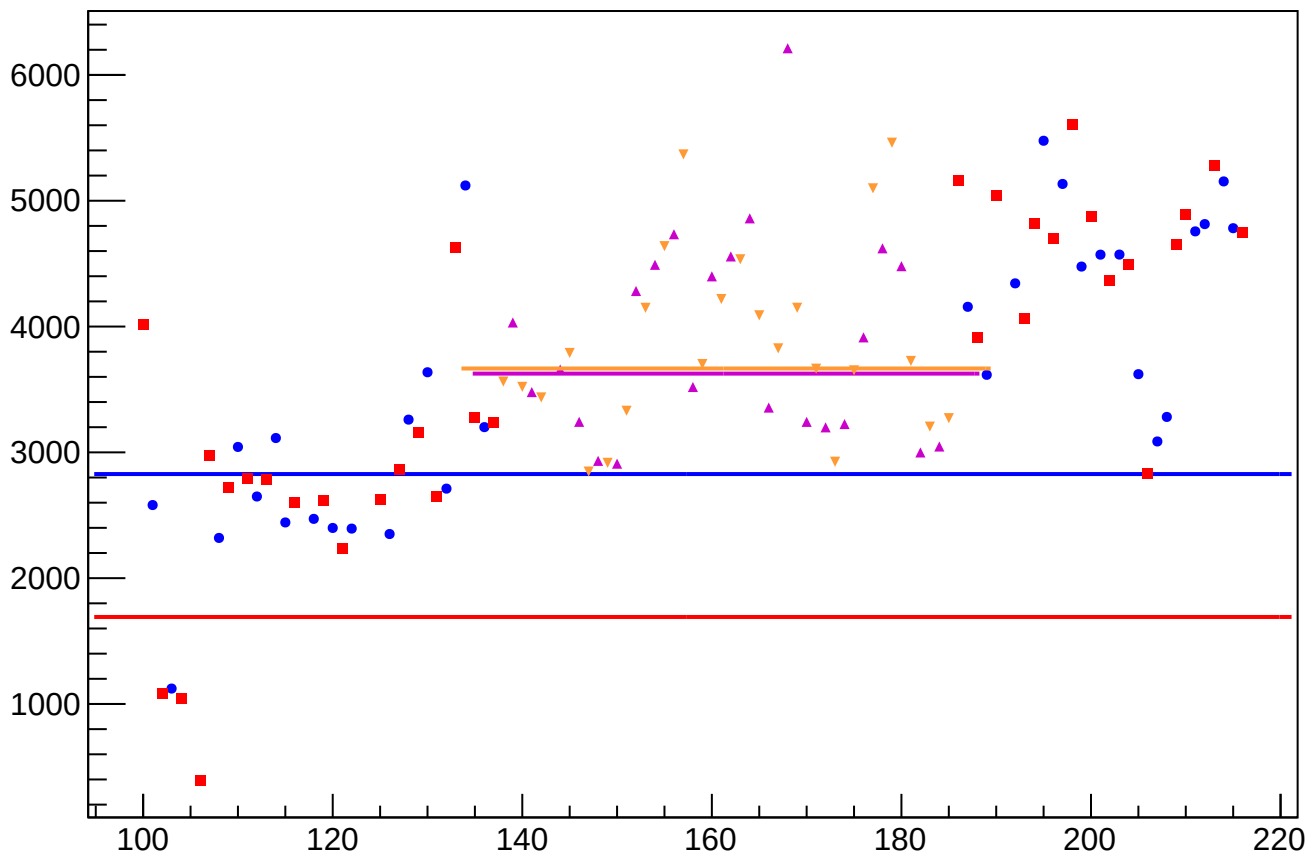
Left In:  $-221.361 \pm 864.775$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $55.157 \pm 550.953$   $\chi^2/\text{NDF}$ : 64.1/54

All:  $32.771 \pm 345.383$   $\chi^2/\text{NDF}$ : 119.4/110

- sign  $18.278 \pm 443.302$   $\chi^2/\text{NDF}$ : 55.3/55

asym\_us\_avg\_atlr\_avg\_dd\_dit\_correction\_rms vs Slug



Right In: 2827.533 $\pm$ 0.504  $\chi^2$ /NDF: 6324315.8/30

Left Out: 3666.536 $\pm$ 0.615  $\chi^2$ /NDF:1095831.4/23

Right Out: 1691.546 $\pm$ 0.365  $\chi^2$ /NDF: 16792277.2/32

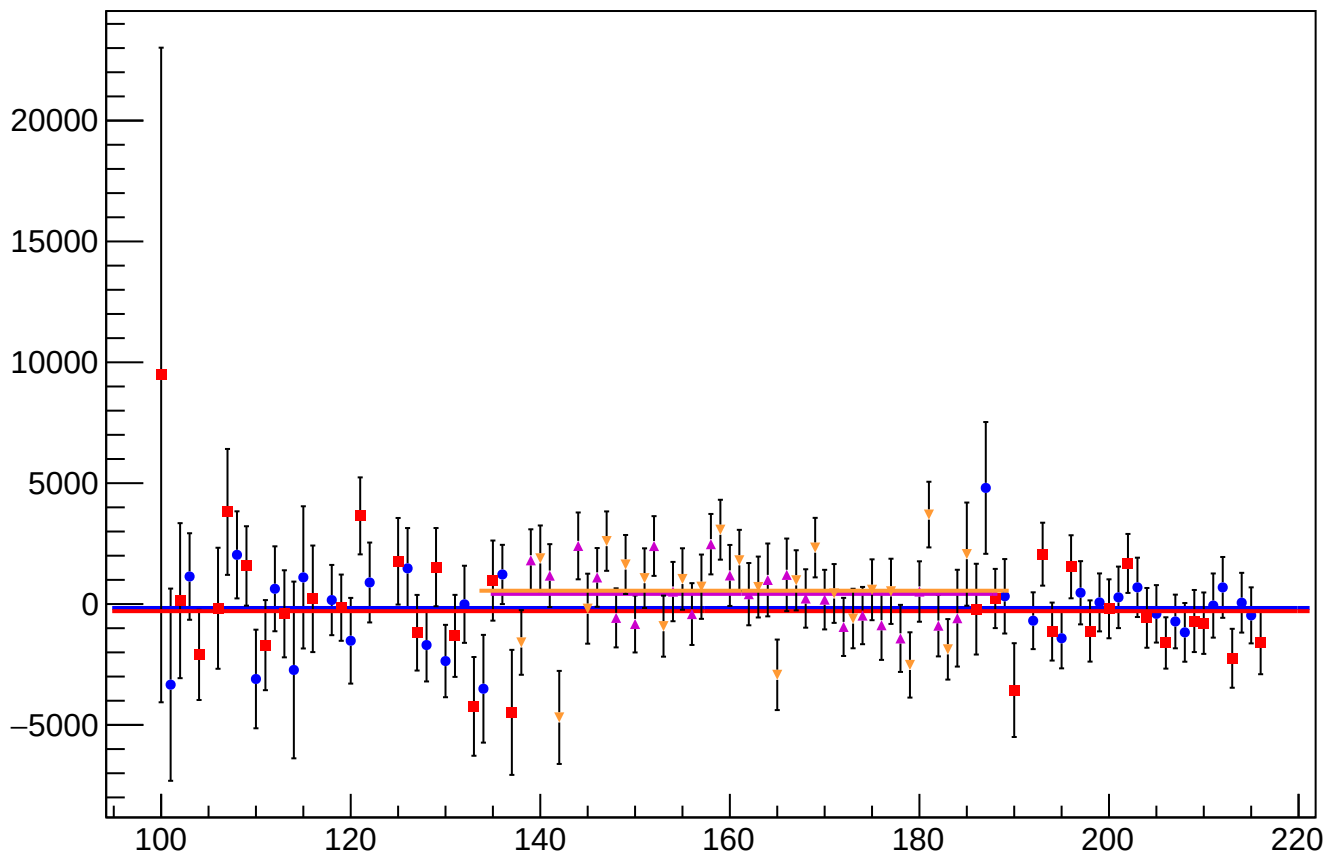
Left In: 3625.940 $\pm$ 0.611  $\chi^2$ /NDF:1257928.4/22

+ sign 3164.449 $\pm$ 0.390  $\chi^2$ /NDF: 8534700.8/54

All: 2578.930 $\pm$ 0.244  $\chi^2$ /NDF: 37683596.4/100

- sign 2199.867 $\pm$ 0.313  $\chi^2$ /NDF: 25427722.0/55

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $-163.240 \pm 263.671$   $\chi^2/\text{NDF}: 21.4/30$

Left Out:  $550.663 \pm 269.206$   $\chi^2/\text{NDF}: 45.2/23$

Right Out:  $-294.586 \pm 266.526$   $\chi^2/\text{NDF}: 39.4/32$

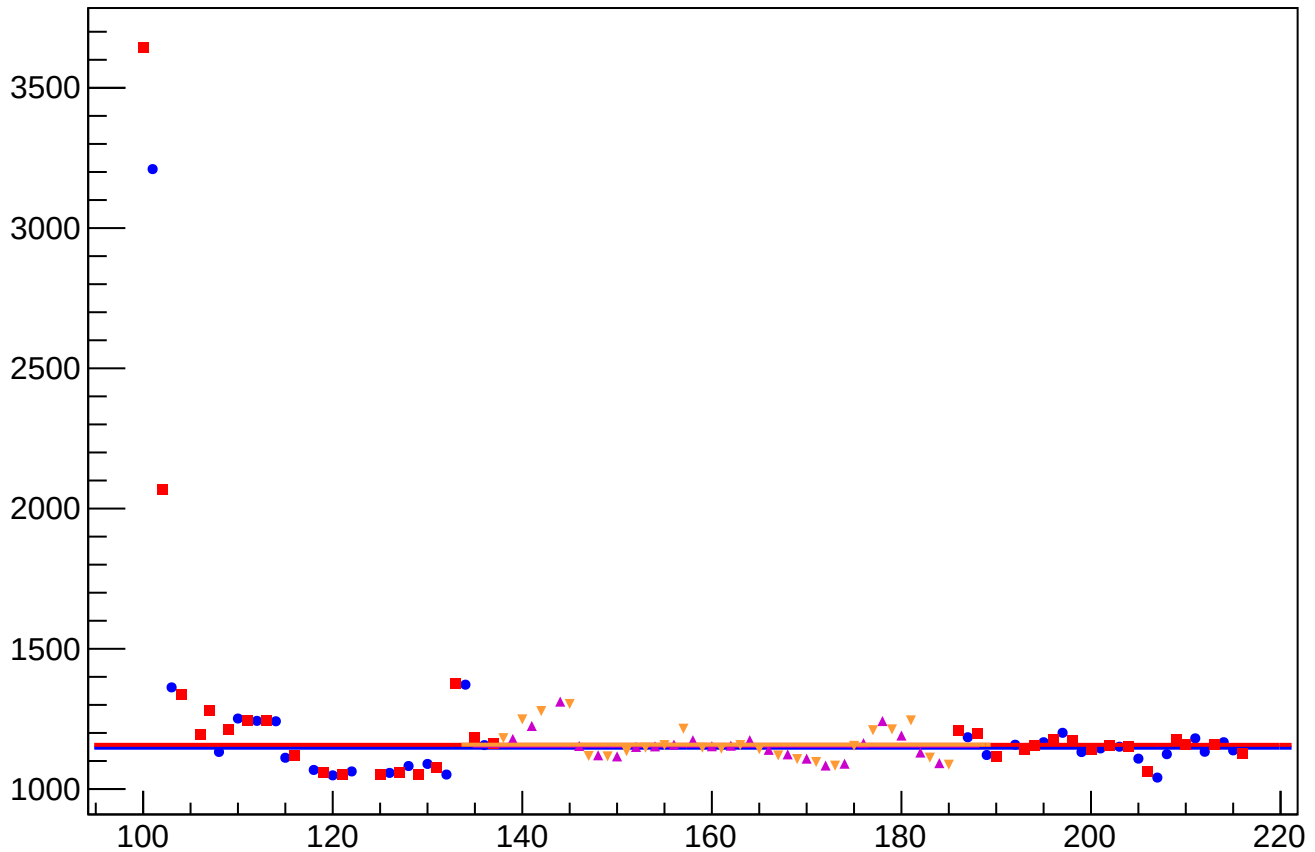
Left In:  $421.022 \pm 269.815$   $\chi^2/\text{NDF}: 18.0/22$

+ sign  $186.297 \pm 188.370$   $\chi^2/\text{NDF}: 70.2/54$

All:  $122.983 \pm 133.636$   $\chi^2/\text{NDF}: 131.4/110$

- sign  $58.830 \pm 189.615$   $\chi^2/\text{NDF}: 61.0/55$

eigen\_dit\_asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 1147.388+/-0.186  $\chi^2/\text{NDF}$ : 666500.5/30

Left Out: 1158.178+/-0.190  $\chi^2/\text{NDF}$ : 84114.3/23

+ sign 1152.671+/-0.133  $\chi^2/\text{NDF}$ : 752254.4/54

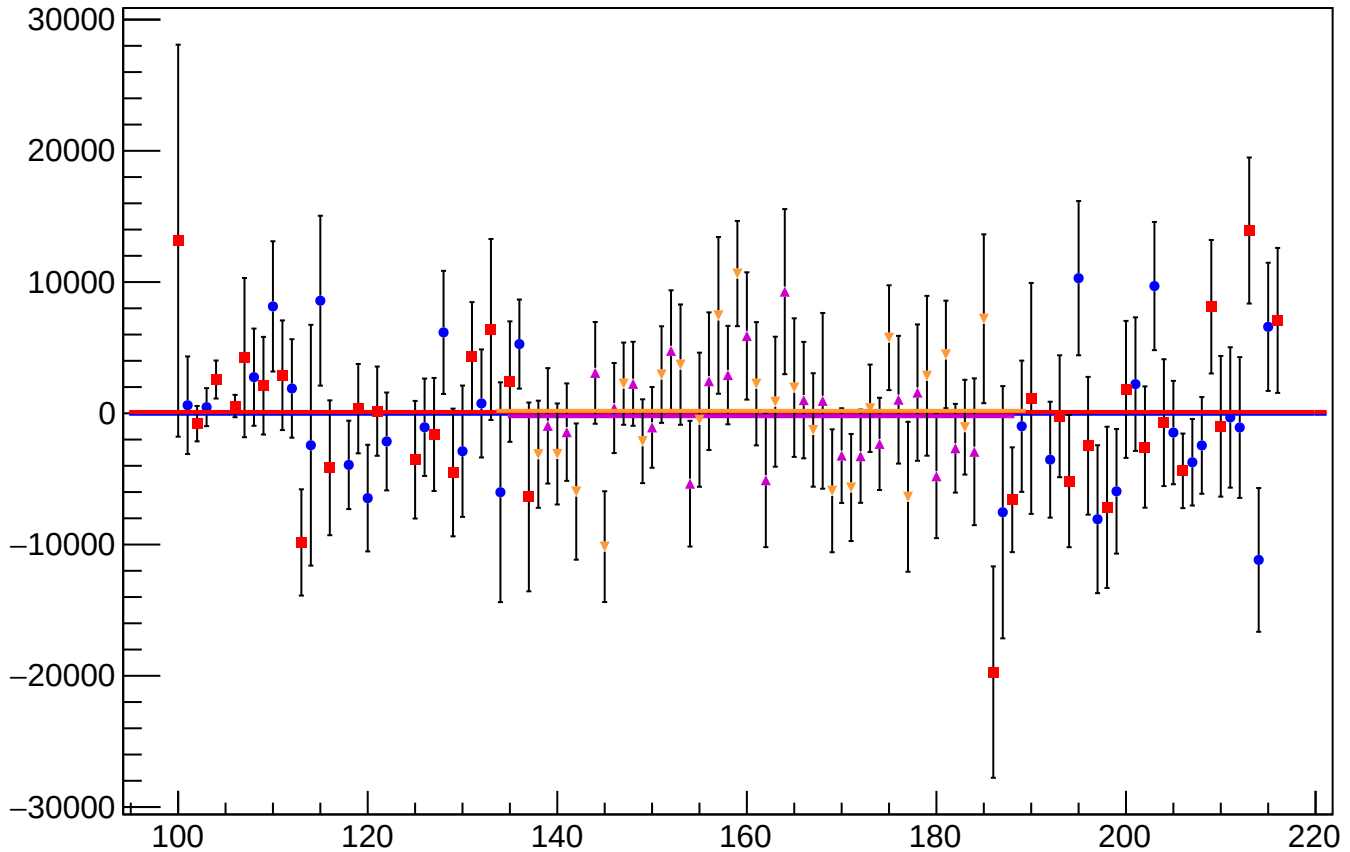
Right Out: 1157.667+/-0.188  $\chi^2/\text{NDF}$ : 357094.4/32

All: 1154.310+/-0.094  $\chi^2/\text{NDF}$ : 1176297.4/117

- sign 1155.971+/-0.134  $\chi^2/\text{NDF}$ : 423738.1/55

Left In: 1154.232+/-0.191  $\chi^2/\text{NDF}$ : 66479.5/22

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-35.151 \pm 712.208$   $\chi^2/\text{NDF}$ : 34.8/30

Left Out:  $189.735 \pm 869.434$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $103.703 \pm 516.294$   $\chi^2/\text{NDF}$ : 41.8/32

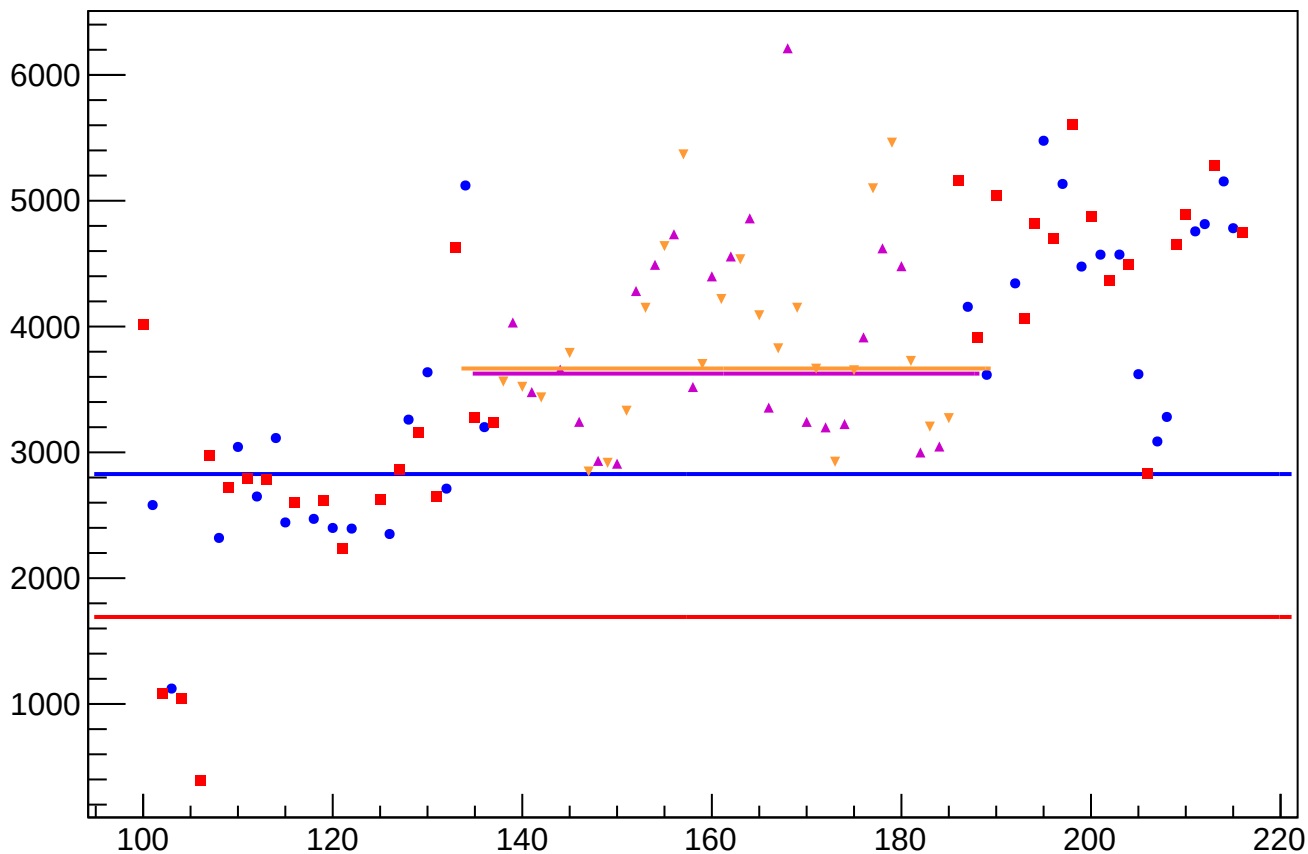
Left In:  $-221.363 \pm 864.776$   $\chi^2/\text{NDF}$ : 13.4/22

+ sign  $55.155 \pm 550.954$   $\chi^2/\text{NDF}$ : 64.1/54

All:  $32.773 \pm 345.382$   $\chi^2/\text{NDF}$ : 119.4/110

- sign  $18.284 \pm 443.299$   $\chi^2/\text{NDF}$ : 55.3/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 2827.530 $\pm$ 0.504  $\chi^2$ /NDF: 6324345.0/30

Left Out: 3666.541 $\pm$ 0.615  $\chi^2$ /NDF: 1095834.2/23

Right Out: 1691.516 $\pm$ 0.365  $\chi^2$ /NDF: 16792611.0/32

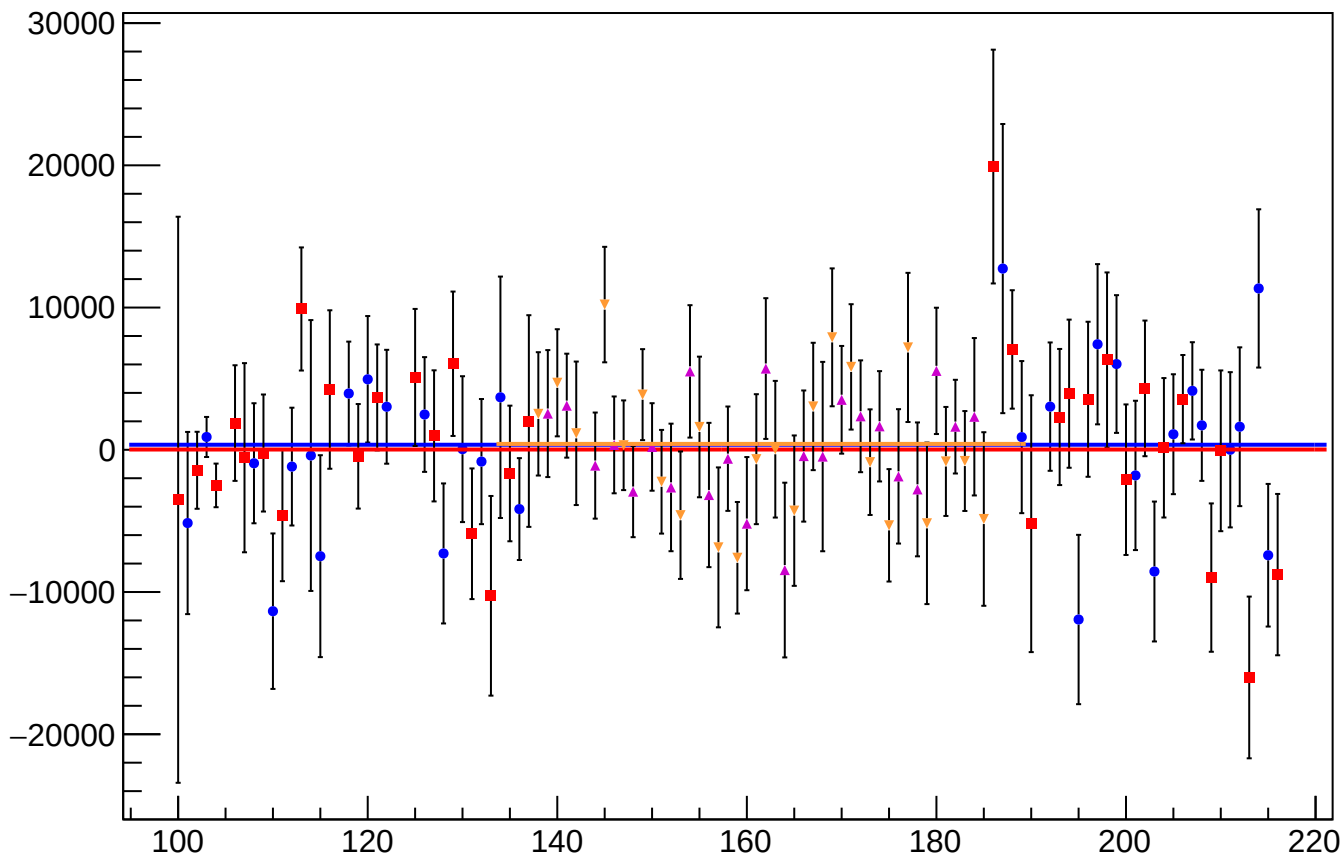
Left In: 3625.945 $\pm$ 0.611  $\chi^2$ /NDF: 1257933.0/22

+ sign 3164.449 $\pm$ 0.390  $\chi^2$ /NDF: 8534752.4/54

All: 2578.909 $\pm$ 0.244  $\chi^2$ /NDF: 37684515.6/100

- sign 2199.838 $\pm$ 0.313  $\chi^2$ /NDF: 25428348.1/55

asym\_us\_avg\_atlr\_avg\_dd\_mean vs Slug



Right In:  $354.518 \pm 745.681$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $413.494 \pm 865.331$   $\chi^2/\text{NDF}$ : 27.2/23

Right Out:  $18.366 \pm 740.394$   $\chi^2/\text{NDF}$ : 44.5/32

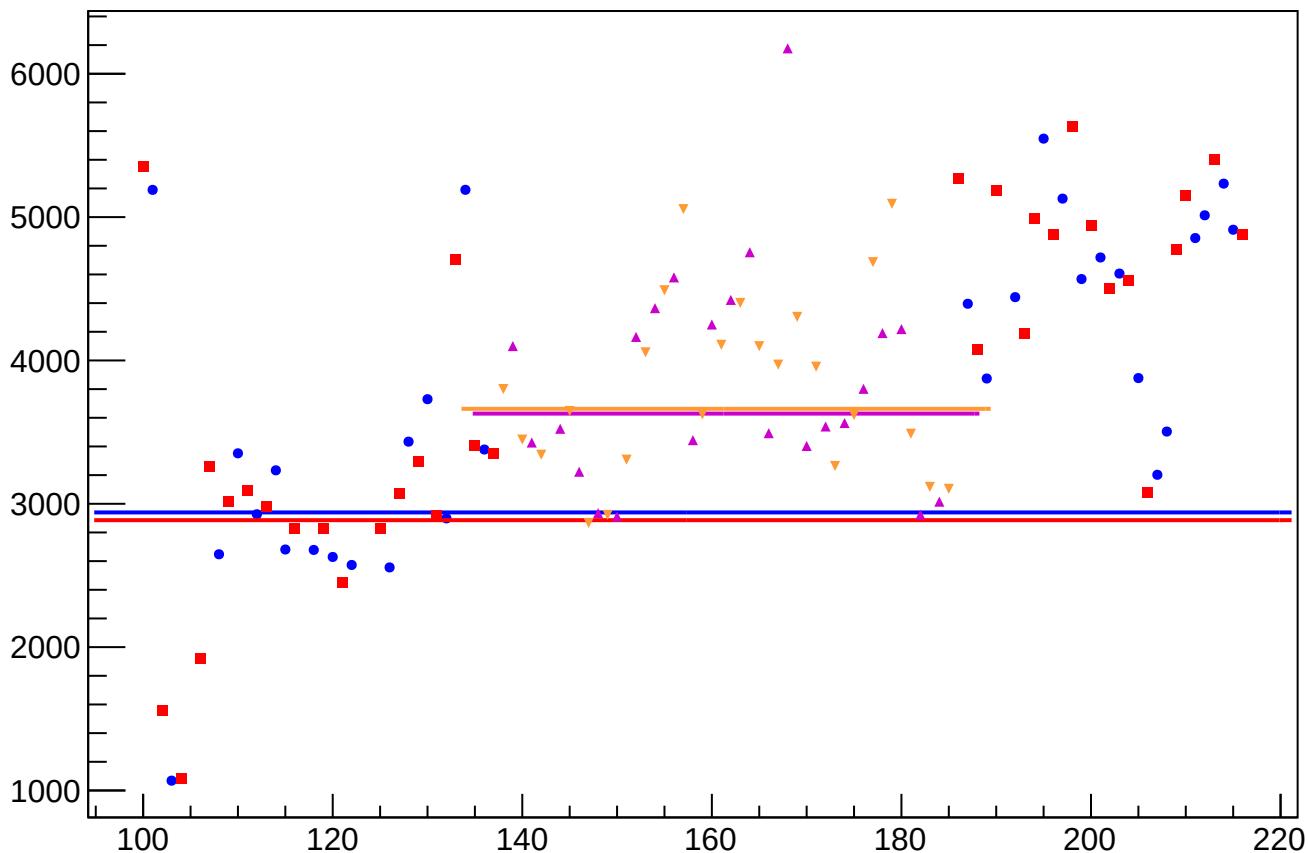
Left In:  $403.543 \pm 862.437$   $\chi^2/\text{NDF}$ : 12.3/22

+ sign  $379.650 \pm 564.881$   $\chi^2/\text{NDF}$ : 61.3/54

All:  $280.177 \pm 398.329$   $\chi^2/\text{NDF}$ : 118.3/110

- sign  $181.795 \pm 561.775$   $\chi^2/\text{NDF}$ : 56.9/55

# asym\_us\_avg\_atlr\_avg\_dd\_rms vs Slug



Right In: 2939.732 $\pm$ 0.527  $\chi^2$ /NDF: 7114094.9/30

Left Out: 3662.662 $\pm$ 0.612  $\chi^2$ /NDF: 893468.3/23

Right Out: 2885.683 $\pm$ 0.523  $\chi^2$ /NDF: 7221519.5/32

Left In: 3629.184 $\pm$ 0.610  $\chi^2$ /NDF: 1054949.6/22

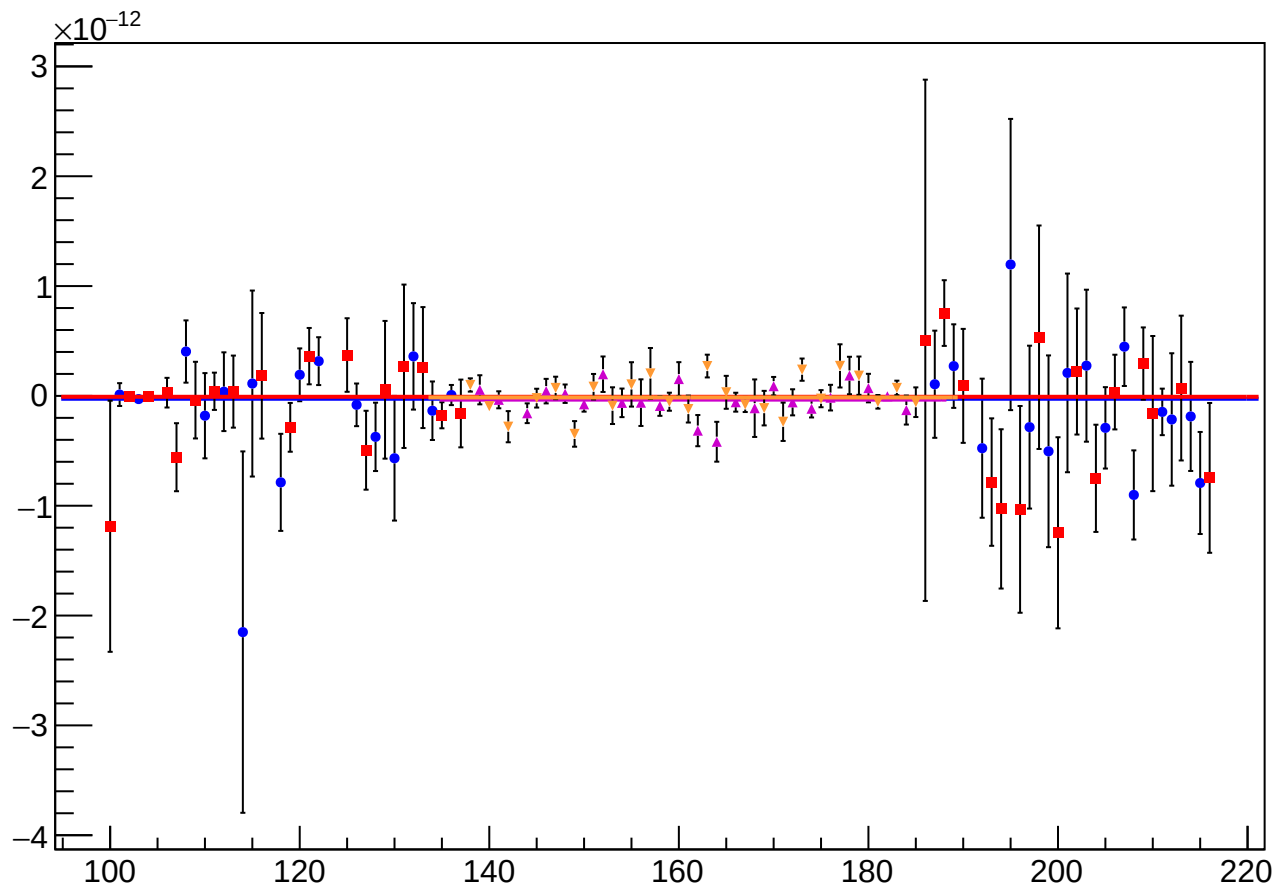
+ sign 3247.799 $\pm$ 0.399  $\chi^2$ /NDF: 8808624.6/54

All: 3224.024 $\pm$ 0.282  $\chi^2$ /NDF: 17949048.9/100

- sign 3200.555 $\pm$ 0.397  $\chi^2$ /NDF: 9133384.2/55



asym\_us\_avg\_atlr\_avg\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.7/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.3/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.4/32

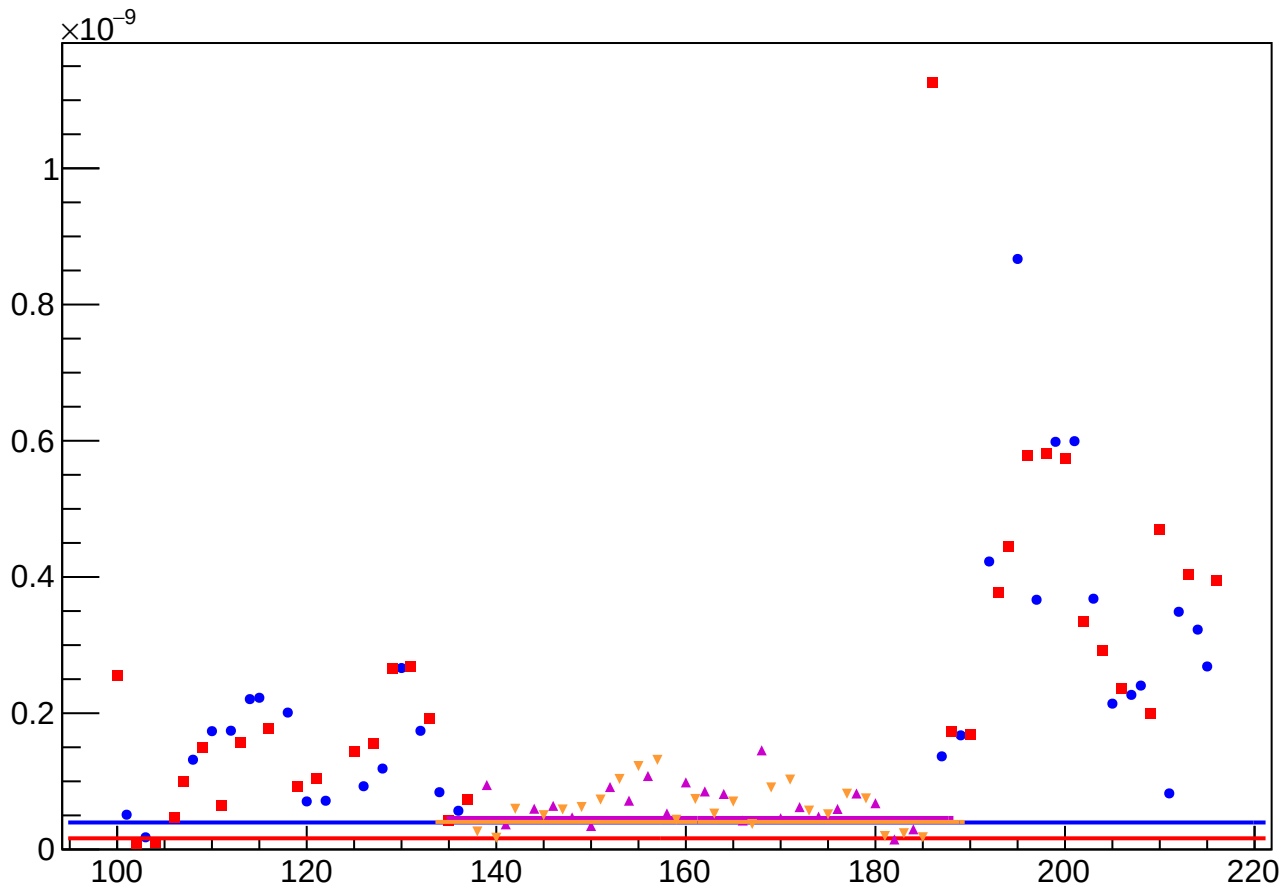
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 72.1/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 128.4/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.3/55

asym\_us\_avg\_atlr\_avg\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10700359.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3432253.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13371905.8/32

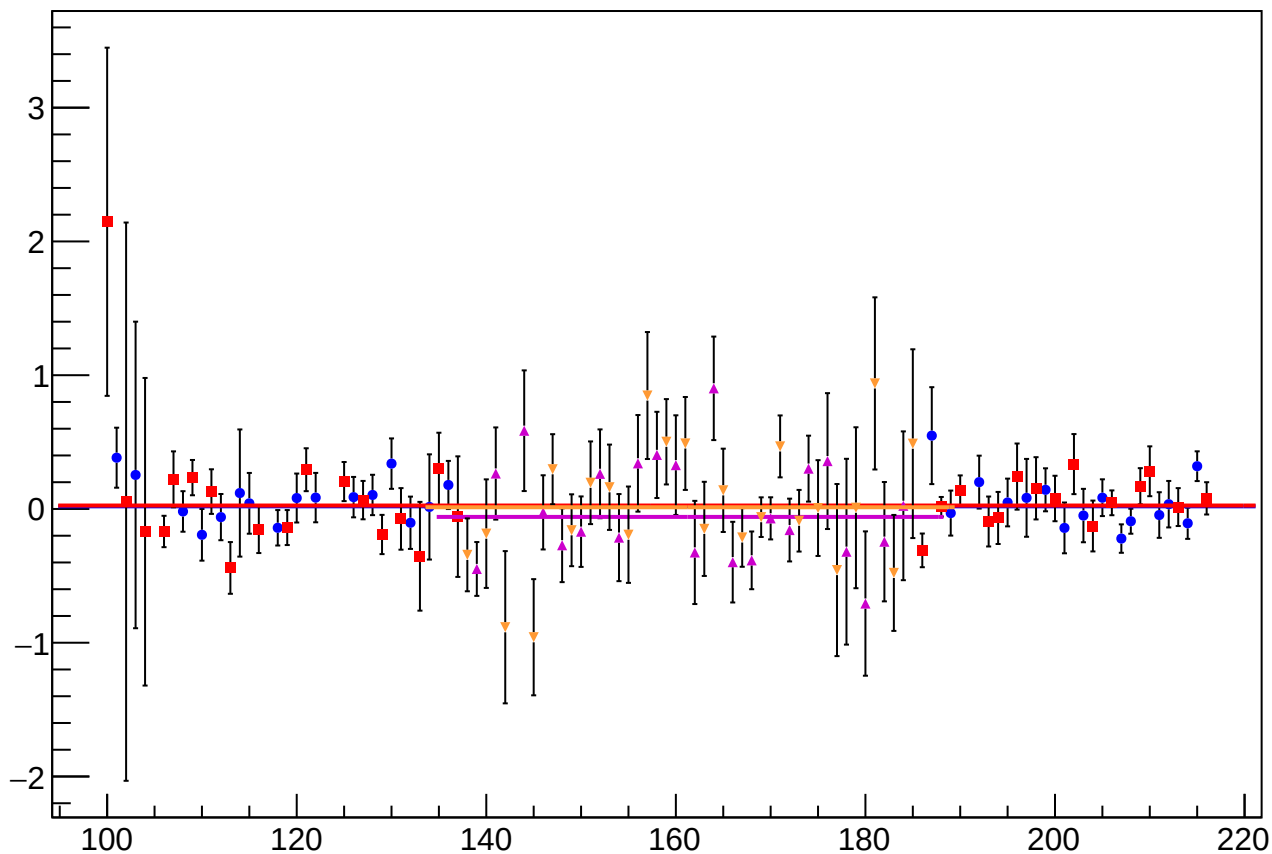
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2954466.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14134065.8/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34283973.5/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19171999.2/55

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.030$   $\chi^2/\text{NDF}: 30.5/30$

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}: 29.3/23$

Right Out:  $0.026 \pm 0.027$   $\chi^2/\text{NDF}: 42.0/32$

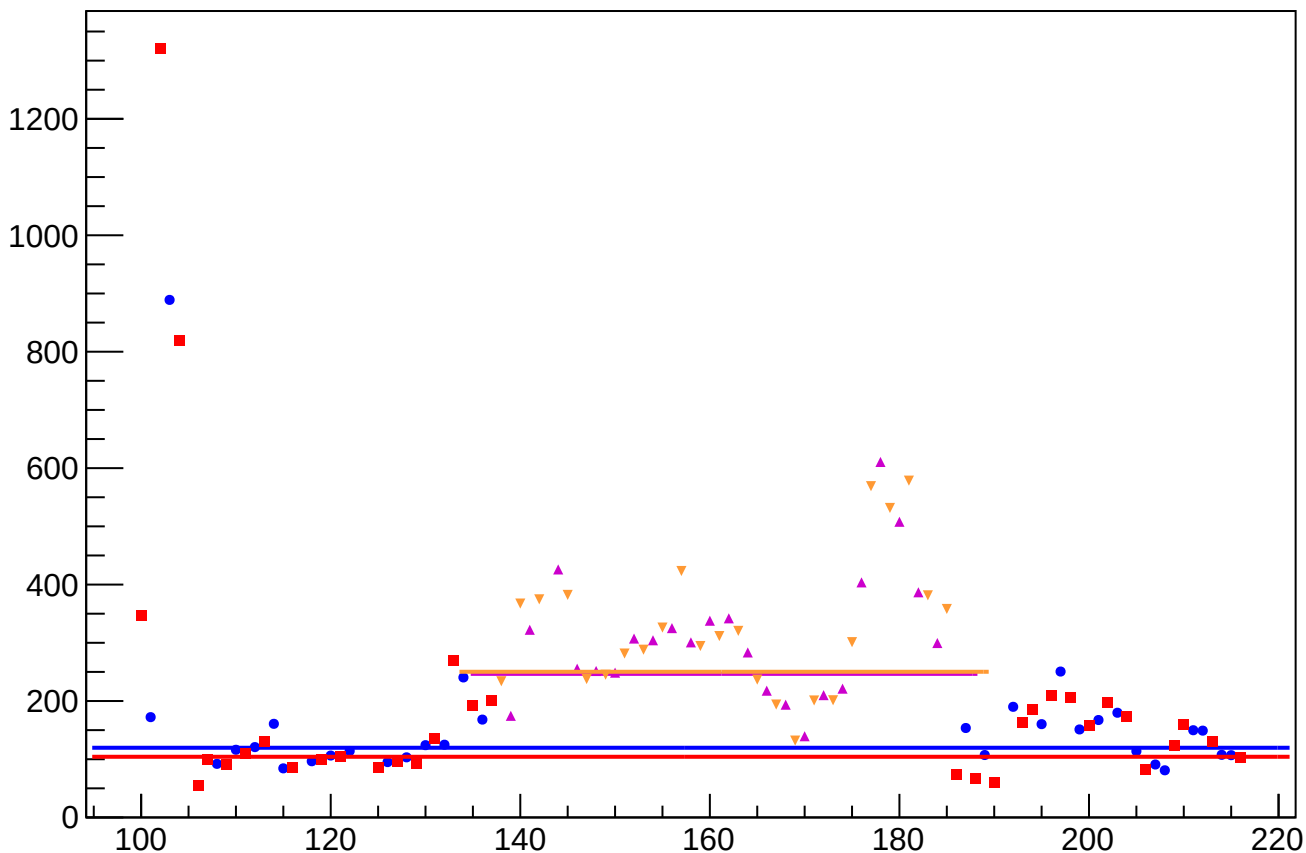
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $0.018 \pm 0.027$   $\chi^2/\text{NDF}: 59.8/54$

All:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}: 131.3/110$

- sign  $0.012 \pm 0.025$   $\chi^2/\text{NDF}: 71.5/55$

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 119.721 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 3462882.6/30

Left Out: 250.247 $\pm$ 0.045  $\chi^2/\text{NDF}$ : 4353162.7/23

Right Out: 104.229 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 6123765.6/32

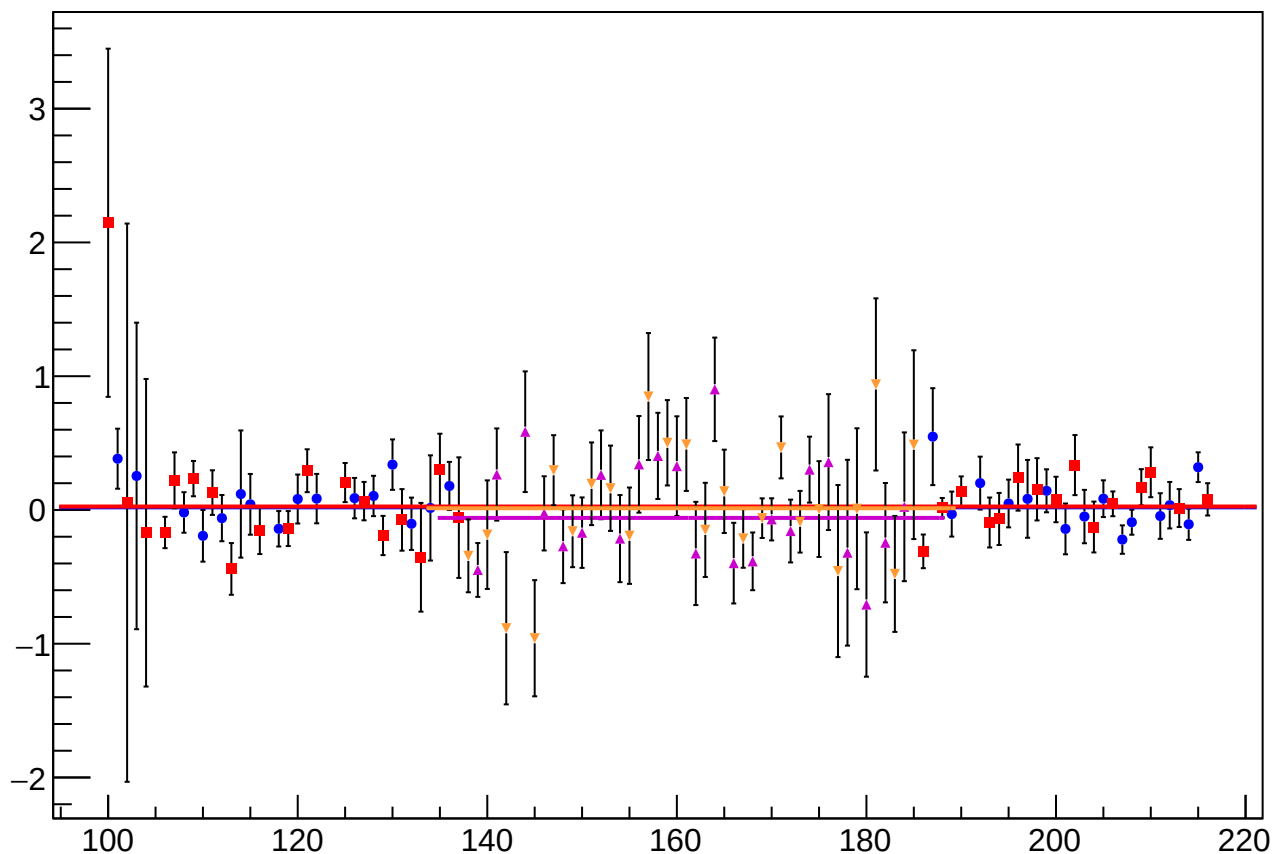
Left In: 246.630 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 3773083.4/22

+ sign 143.601 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 14828655.0/54

All: 134.779 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 33966088.5/1

- sign 127.234 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 18739873.8/55

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.030$   $\chi^2/\text{NDF}: 30.5/30$

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}: 29.3/23$

Right Out:  $0.026 \pm 0.027$   $\chi^2/\text{NDF}: 42.0/32$

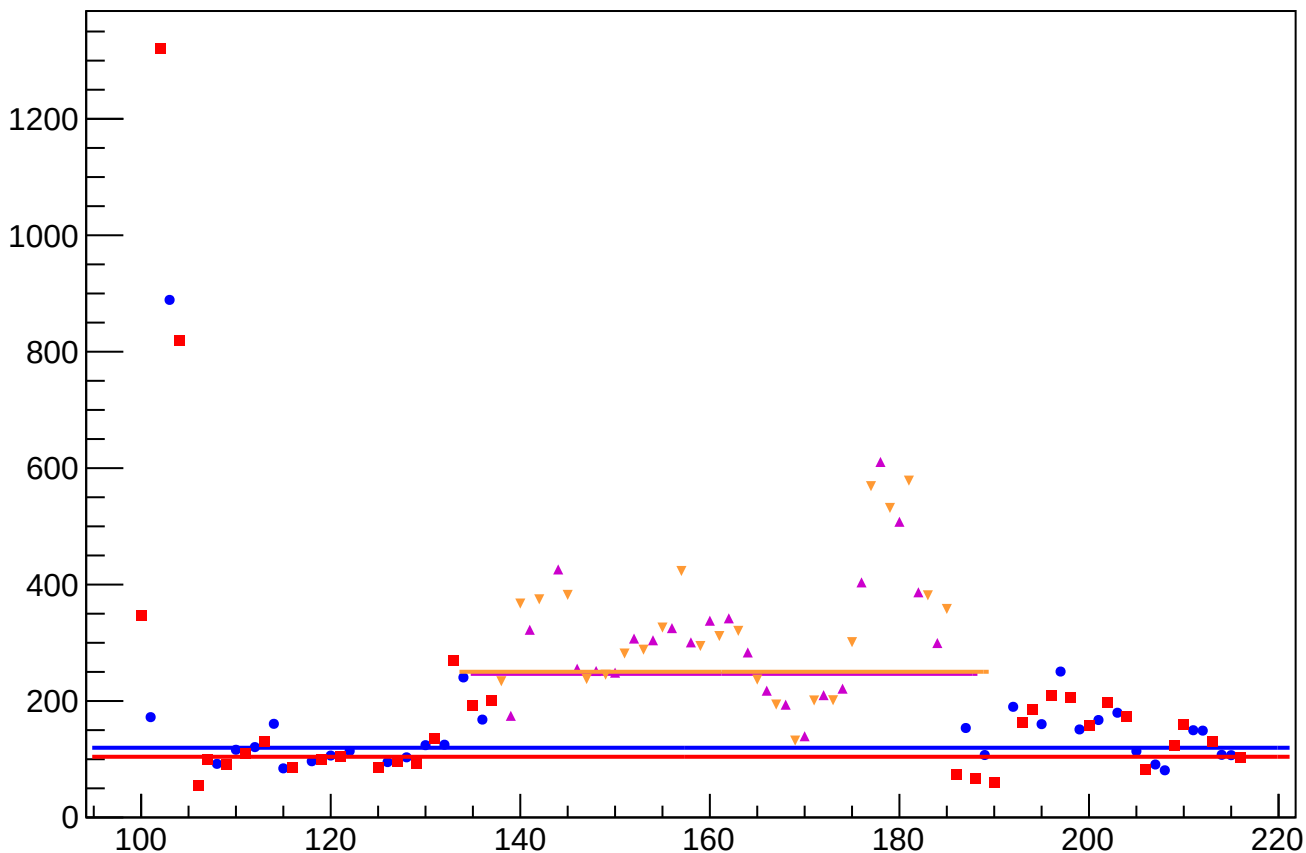
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $0.018 \pm 0.027$   $\chi^2/\text{NDF}: 59.8/54$

All:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}: 131.3/110$

- sign  $0.012 \pm 0.025$   $\chi^2/\text{NDF}: 71.5/55$

asym\_us\_avg\_atlr\_avg\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $119.721 \pm 0.021$   $\chi^2/\text{NDF}: 3462882.6/30$

Left Out:  $250.247 \pm 0.045$   $\chi^2/\text{NDF}: 4353162.7/23$

Right Out:  $104.229 \pm 0.019$   $\chi^2/\text{NDF}: 6123765.6/32$

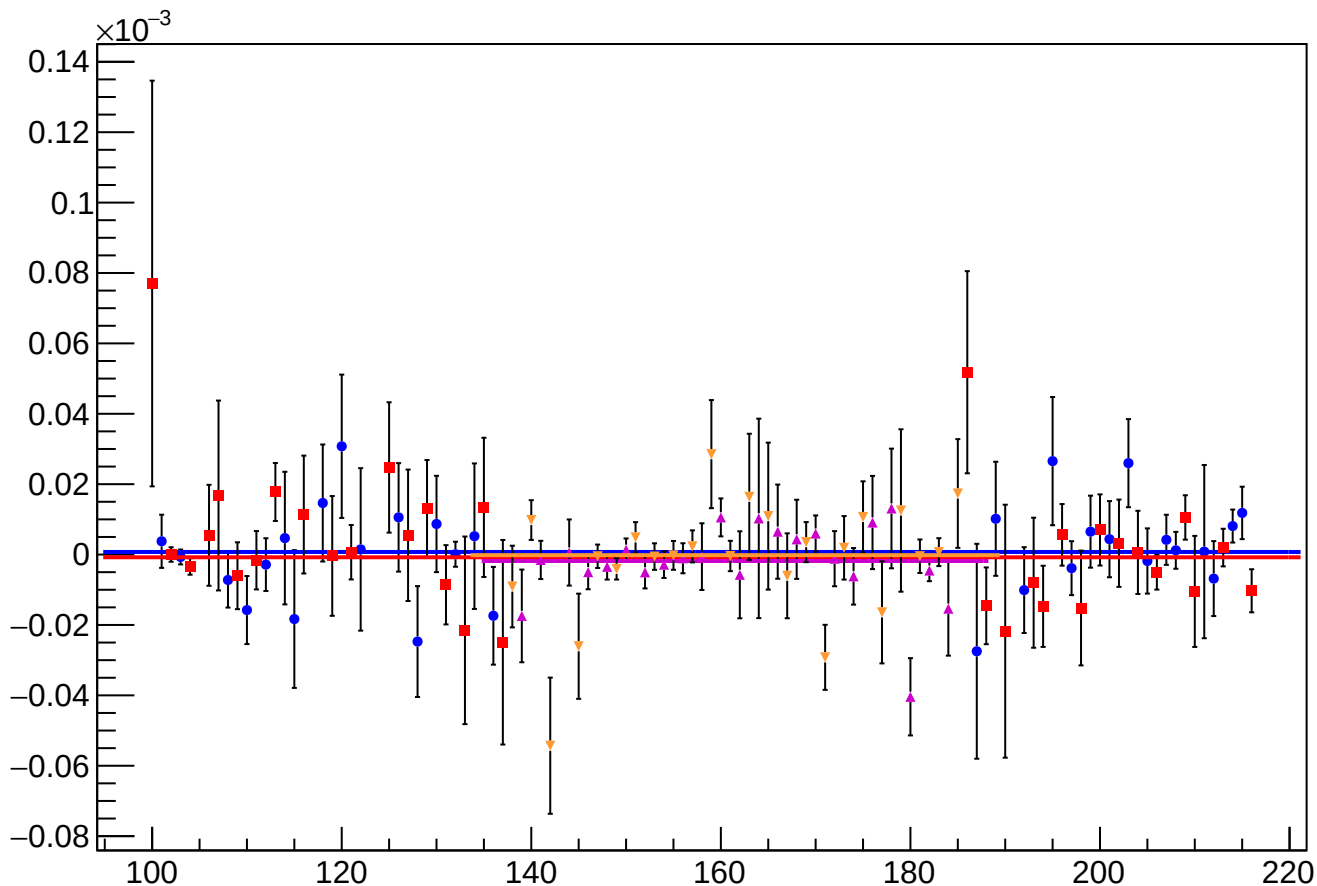
Left In:  $246.630 \pm 0.044$   $\chi^2/\text{NDF}: 3773083.4/22$

+ sign  $143.601 \pm 0.019$   $\chi^2/\text{NDF}: 14828655.0/54$

All:  $134.779 \pm 0.013$   $\chi^2/\text{NDF}: 33966088.5/1$

- sign  $127.234 \pm 0.018$   $\chi^2/\text{NDF}: 18739873.8/55$

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.2/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.2/23

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.0/32

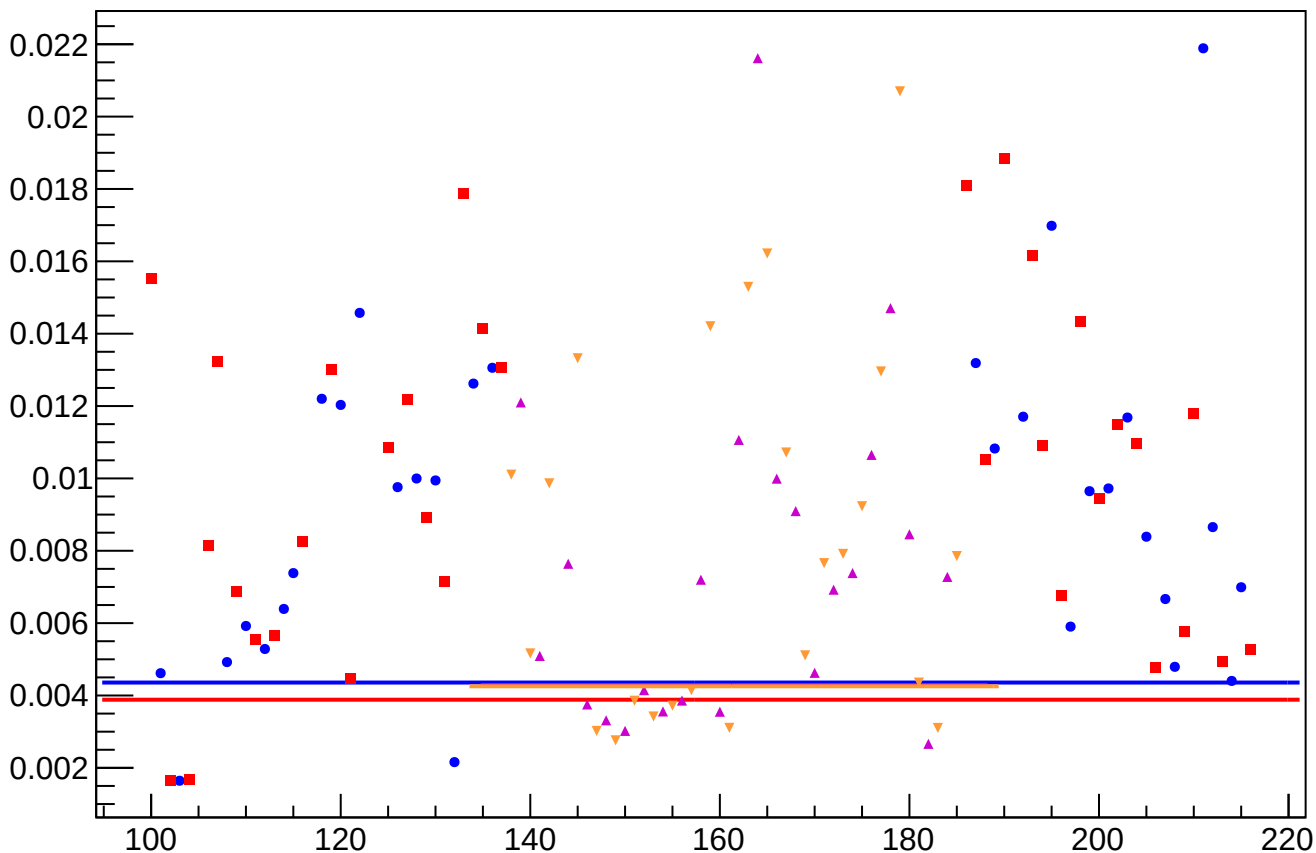
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.6/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 126.8/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.7/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 13454912.0/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:8492565.6/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 15337794.4/32

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:6598609.8/22

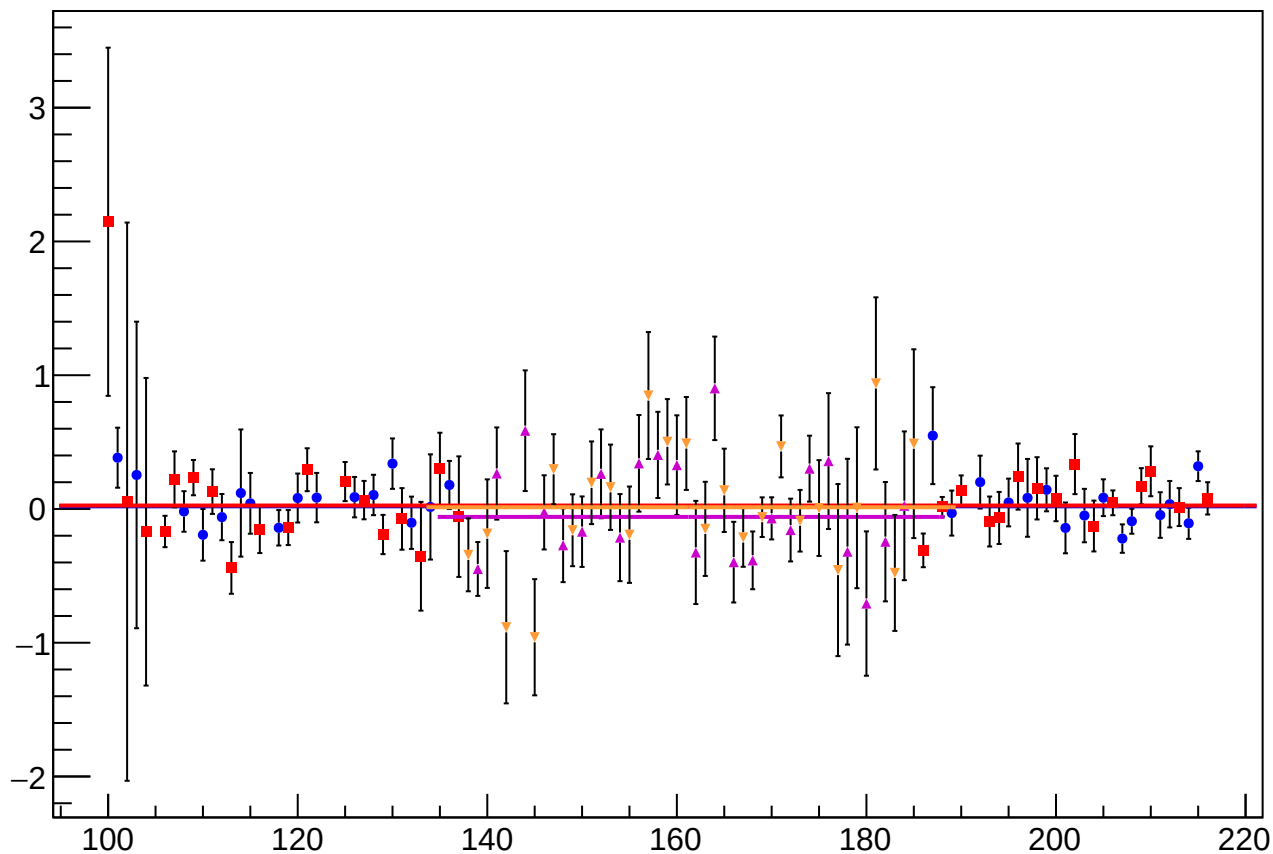
+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 21954546.3/54

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 44070199.9/110

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 22052887.8/55



asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.030$   $\chi^2/\text{NDF}$ : 30.5/30

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}$ : 29.3/23

Right Out:  $0.026 \pm 0.027$   $\chi^2/\text{NDF}$ : 42.0/32

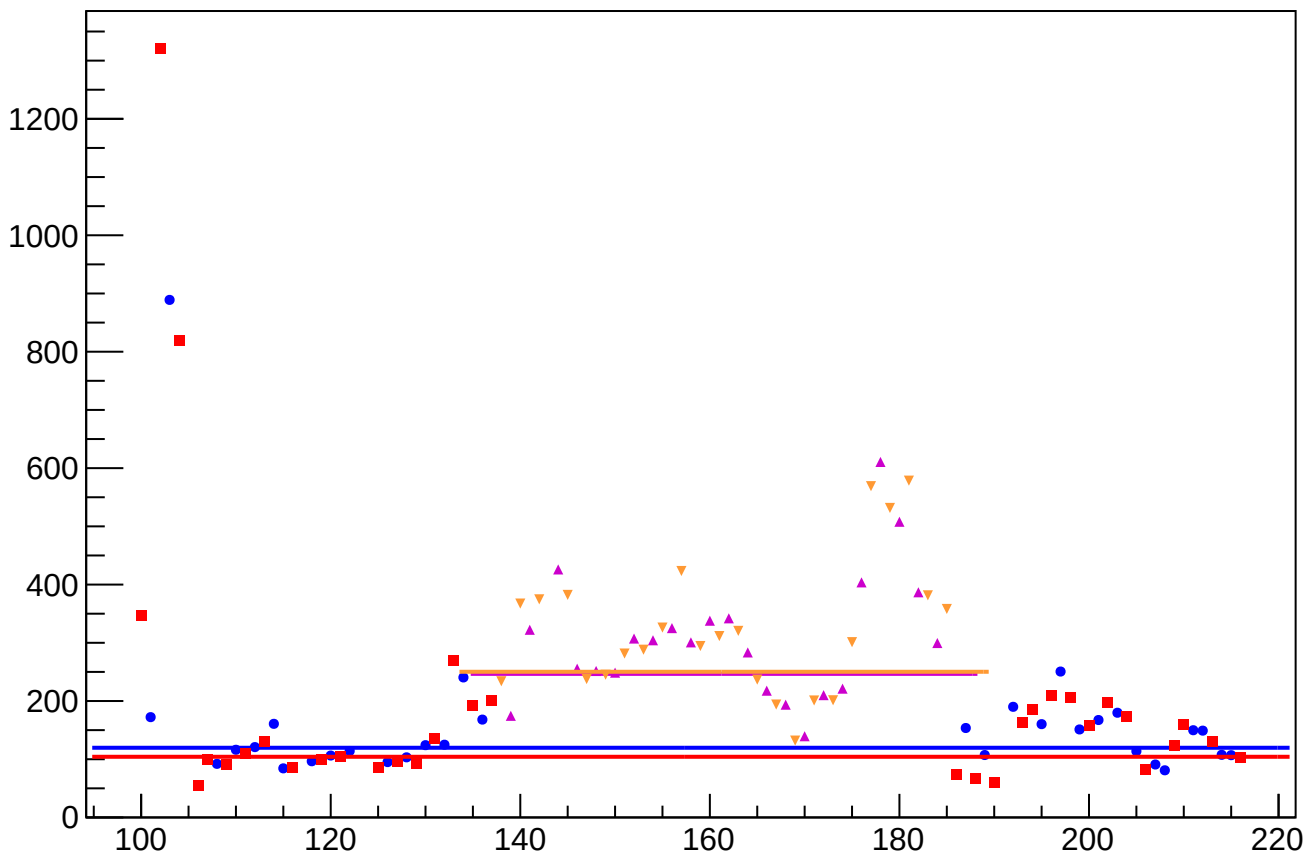
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $0.018 \pm 0.027$   $\chi^2/\text{NDF}$ : 59.8/54

All:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}$ : 131.3/110

- sign  $0.012 \pm 0.025$   $\chi^2/\text{NDF}$ : 71.5/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 119.720 $\pm$ 0.021  $\chi^2$ /NDF: 3462969.3/30

Left Out: 250.248 $\pm$ 0.045  $\chi^2$ /NDF: 4353323.9/23

Right Out: 104.225 $\pm$ 0.019  $\chi^2$ /NDF: 6124340.5/32

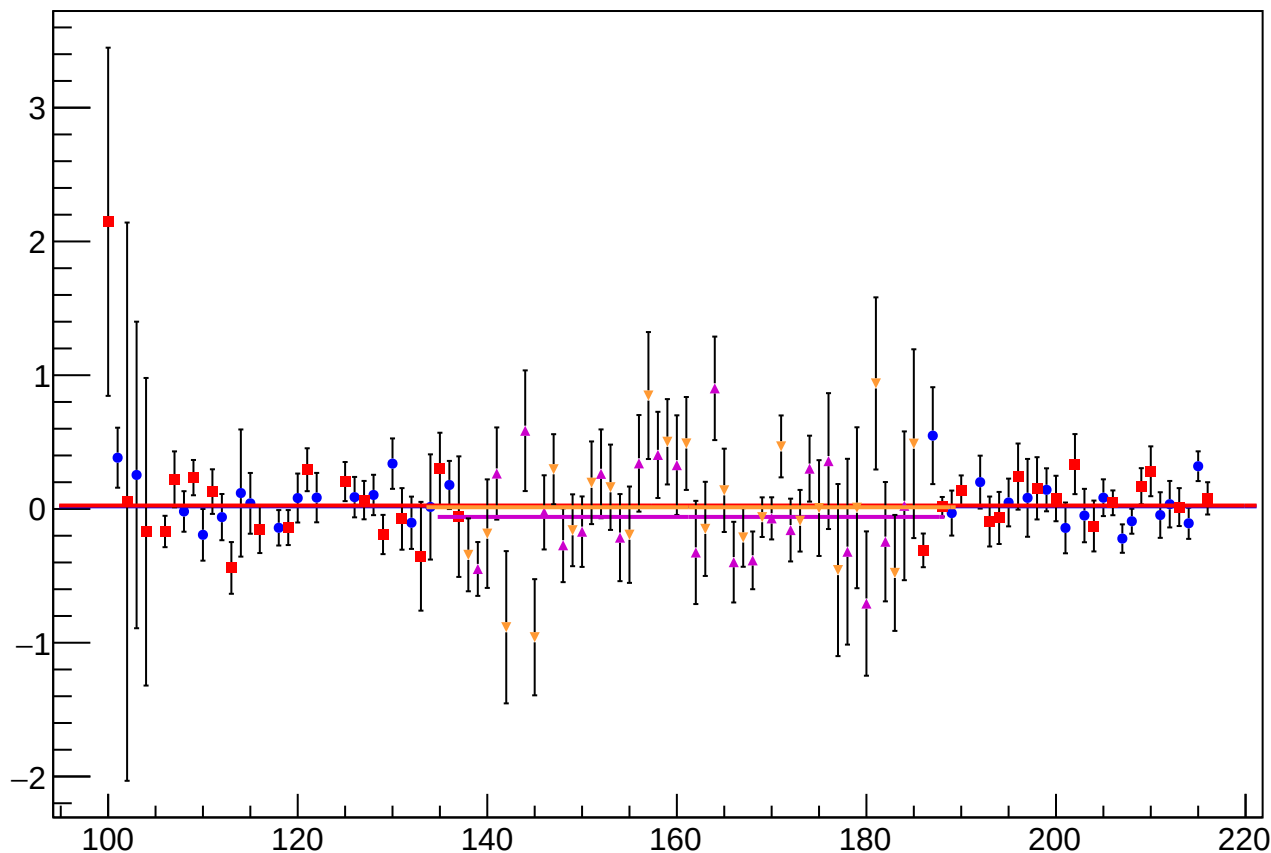
Left In: 246.632 $\pm$ 0.044  $\chi^2$ /NDF: 3773144.3/22

+ sign 143.599 $\pm$ 0.019  $\chi^2$ /NDF: 14829053.4/54

All: 134.776 $\pm$ 0.013  $\chi^2$ /NDF: 33967921.2/1

- sign 127.230 $\pm$ 0.018  $\chi^2$ /NDF: 18741157.5/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.030$   $\chi^2/\text{NDF}: 30.5/30$

Left Out:  $0.013 \pm 0.063$   $\chi^2/\text{NDF}: 29.3/23$

Right Out:  $0.026 \pm 0.027$   $\chi^2/\text{NDF}: 42.0/32$

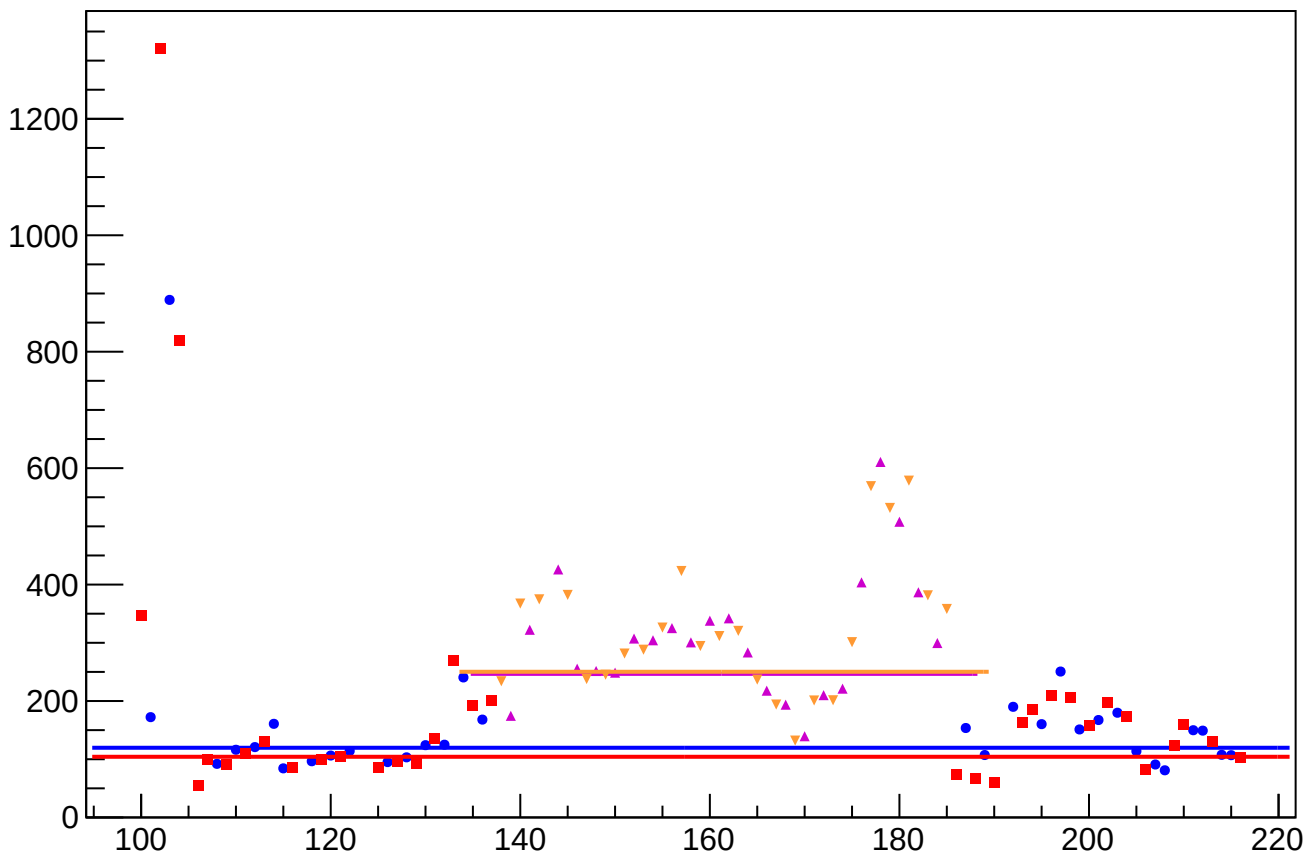
Left In:  $-0.059 \pm 0.062$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $0.018 \pm 0.027$   $\chi^2/\text{NDF}: 59.8/54$

All:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}: 131.3/110$

- sign  $0.012 \pm 0.025$   $\chi^2/\text{NDF}: 71.5/55$

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 119.720 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 3462969.3/30

Left Out: 250.248 $\pm$ 0.045  $\chi^2/\text{NDF}$ : 4353323.9/23

Right Out: 104.225 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 6124340.5/32

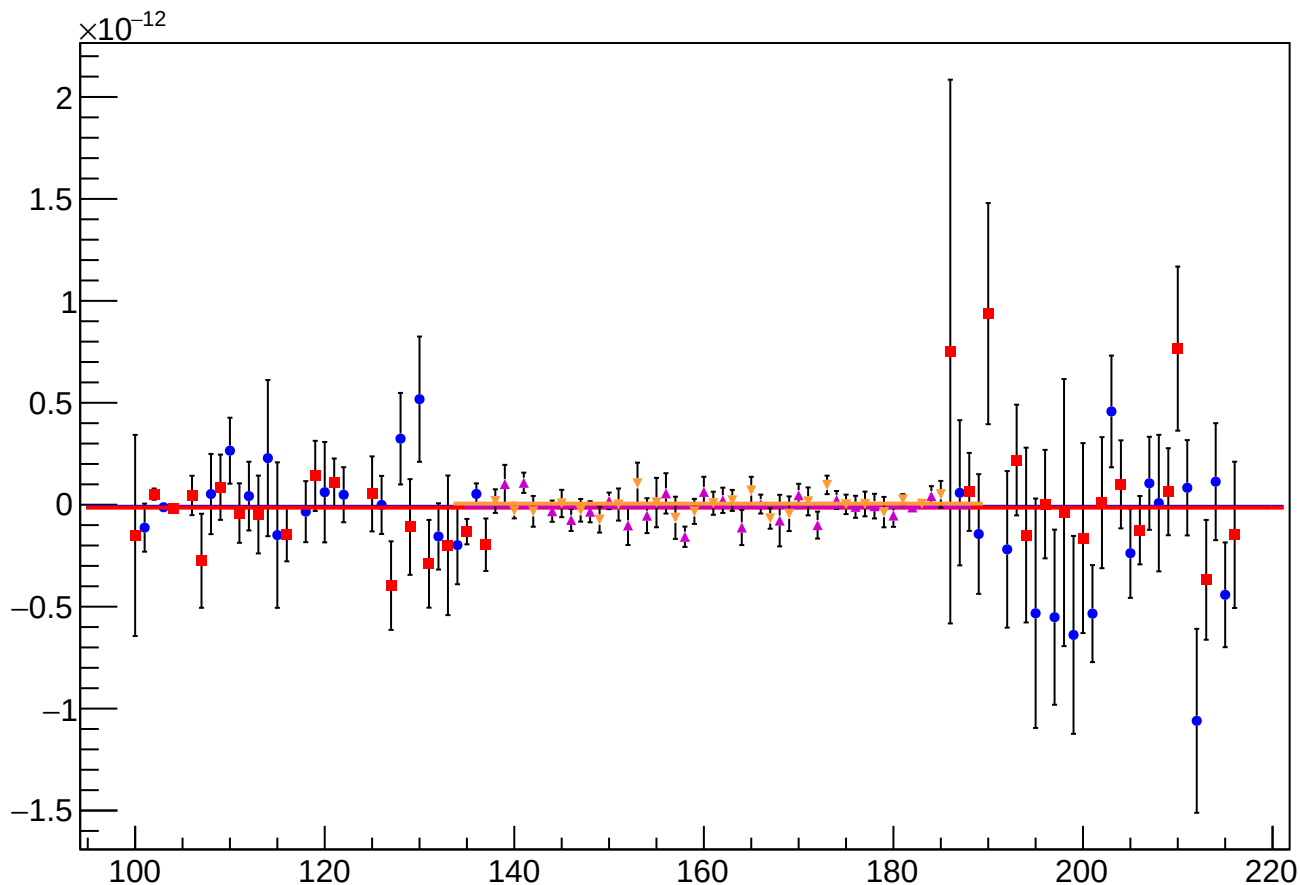
Left In: 246.632 $\pm$ 0.044  $\chi^2/\text{NDF}$ : 3773144.3/22

+ sign 143.599 $\pm$ 0.019  $\chi^2/\text{NDF}$ : 14829053.4/54

All: 134.776 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 33967921.2/11

- sign 127.230 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 18741157.5/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 35.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13.8/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.6/32

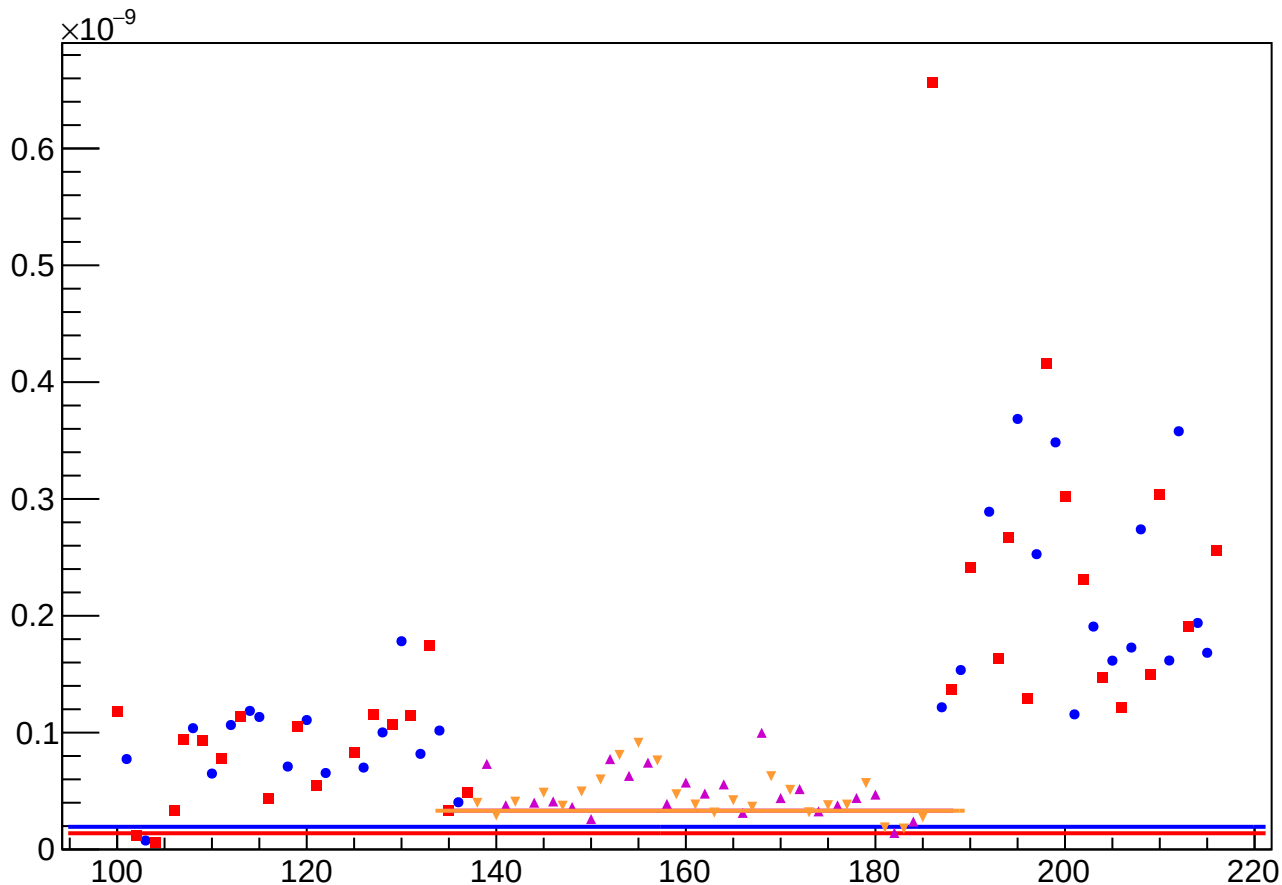
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.9/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 50.2/54

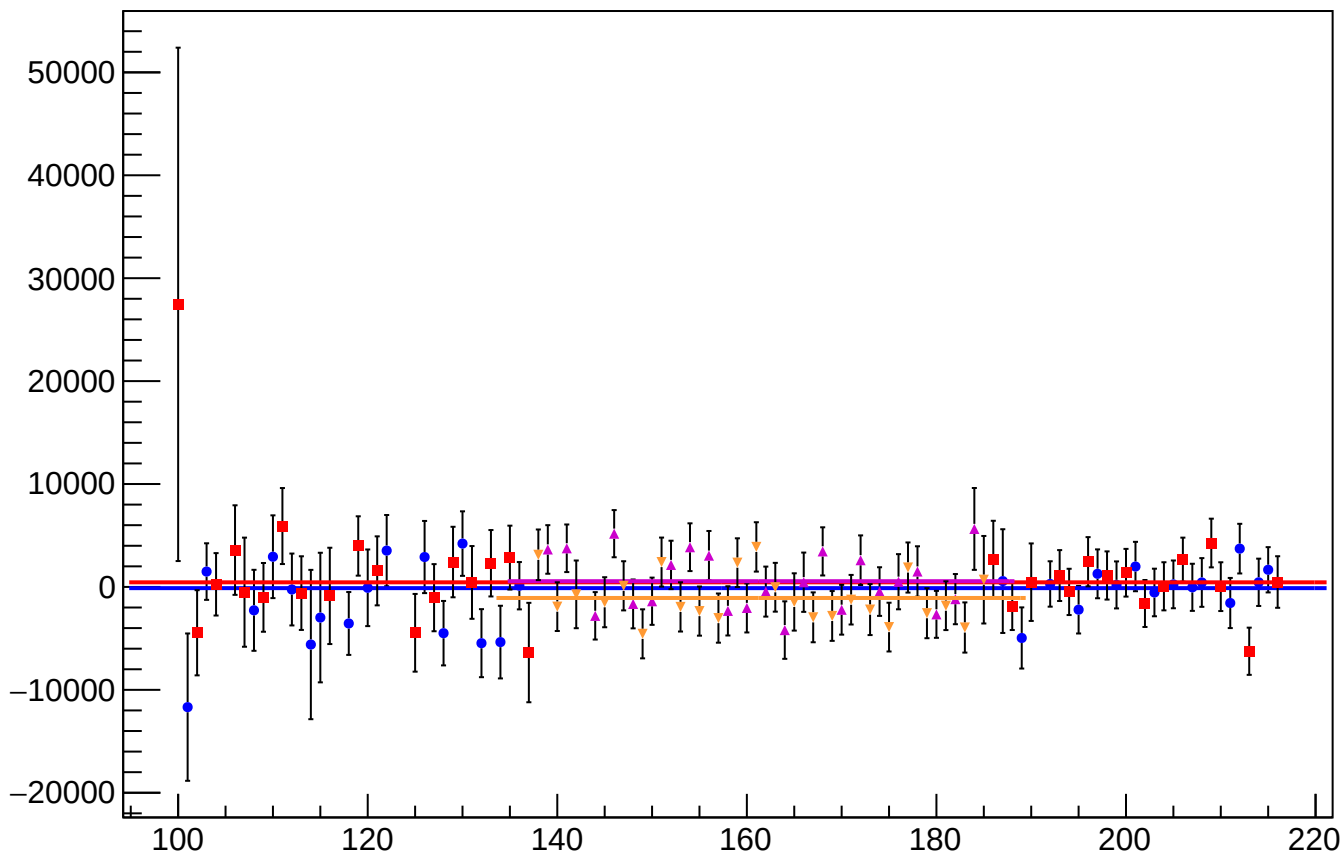
All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 111.9/110

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 60.6/55

asym\_us\_avg\_atlr\_avg\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-117.313 \pm 507.696$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $-1072.863 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $447.268 \pm 509.235$   $\chi^2/\text{NDF}$ : 28.0/32

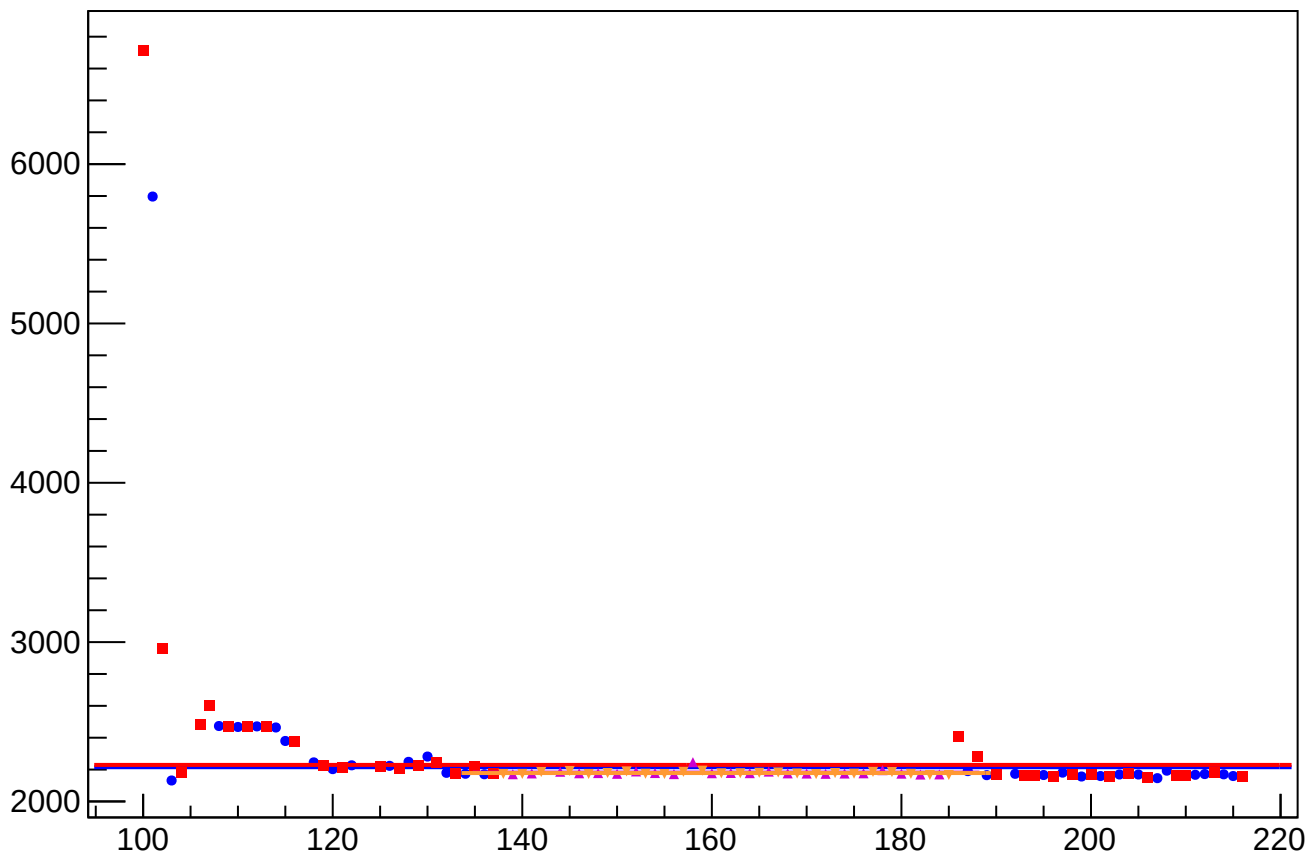
Left In:  $557.052 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-597.126 \pm 358.229$   $\chi^2/\text{NDF}$ : 48.1/54

All:  $-50.306 \pm 253.956$   $\chi^2/\text{NDF}$ : 109.6/110

- sign  $502.163 \pm 360.074$   $\chi^2/\text{NDF}$ : 56.8/55

# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2214.866+/-0.359  $\chi^2/\text{NDF}$ : 548225.3/30

Left Out: 2178.244+/-0.357  $\chi^2/\text{NDF}$ : 389.1/23

Right Out: 2229.281+/-0.360  $\chi^2/\text{NDF}$ : 199862.3/32

Left In: 2180.919+/-0.360  $\chi^2/\text{NDF}$ : 1866.2/22

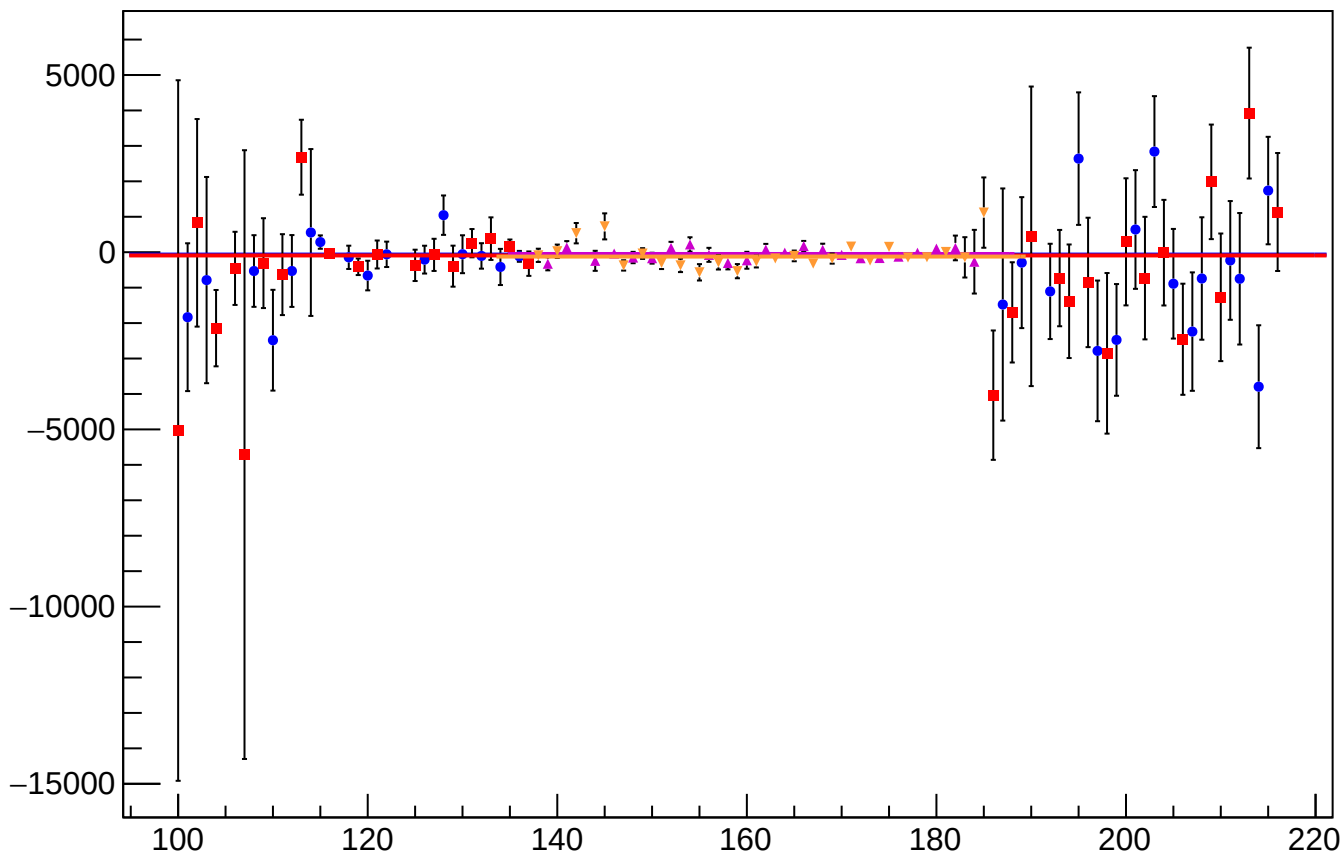
+ sign 2196.477+/-0.253  $\chi^2/\text{NDF}$ : 553840.0/54

All: 2200.766+/-0.180  $\chi^2/\text{NDF}$ : 765164.4/110

- sign 2205.098+/-0.255  $\chi^2/\text{NDF}$ : 210748.3/55



asym\_us\_dd\_at1lr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-66.766 \pm 89.031$   $\chi^2/\text{NDF}$ : 33.5/30

Left Out:  $-123.007 \pm 31.408$   $\chi^2/\text{NDF}$ : 43.8/23

Right Out:  $-91.452 \pm 80.986$   $\chi^2/\text{NDF}$ : 36.0/32

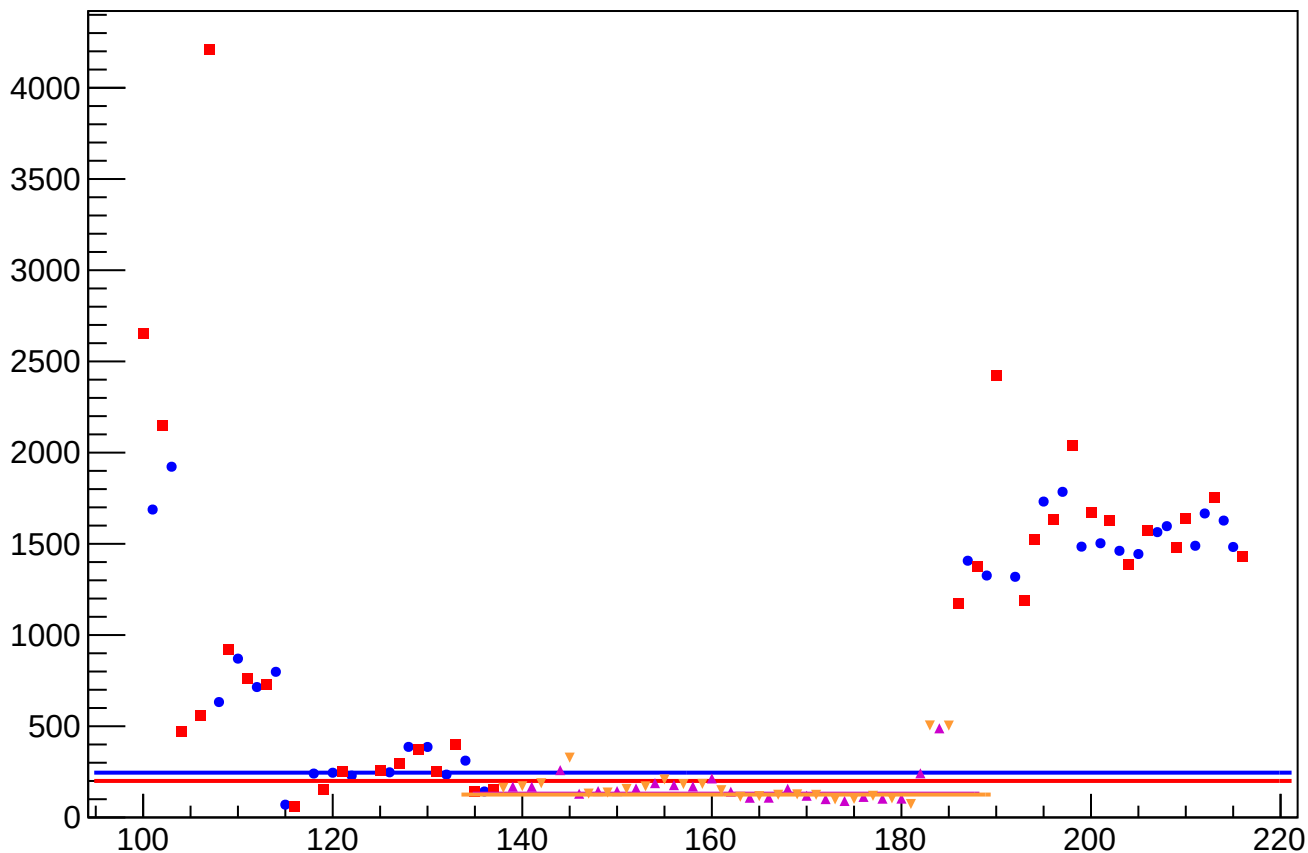
Left In:  $-50.317 \pm 32.545$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $-116.783 \pm 29.619$   $\chi^2/\text{NDF}$ : 77.6/54

All:  $-86.997 \pm 21.145$   $\chi^2/\text{NDF}$ : 134.2/110

- sign  $-56.036 \pm 30.198$   $\chi^2/\text{NDF}$ : 54.5/55

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 245.595 $\pm$ 0.063  $\chi^2$ /NDF: 22575763.6/30

Left Out: 125.506 $\pm$ 0.022  $\chi^2$ /NDF: 3942746.1/23

Right Out: 200.179 $\pm$ 0.057  $\chi^2$ /NDF: 24790632.6/32

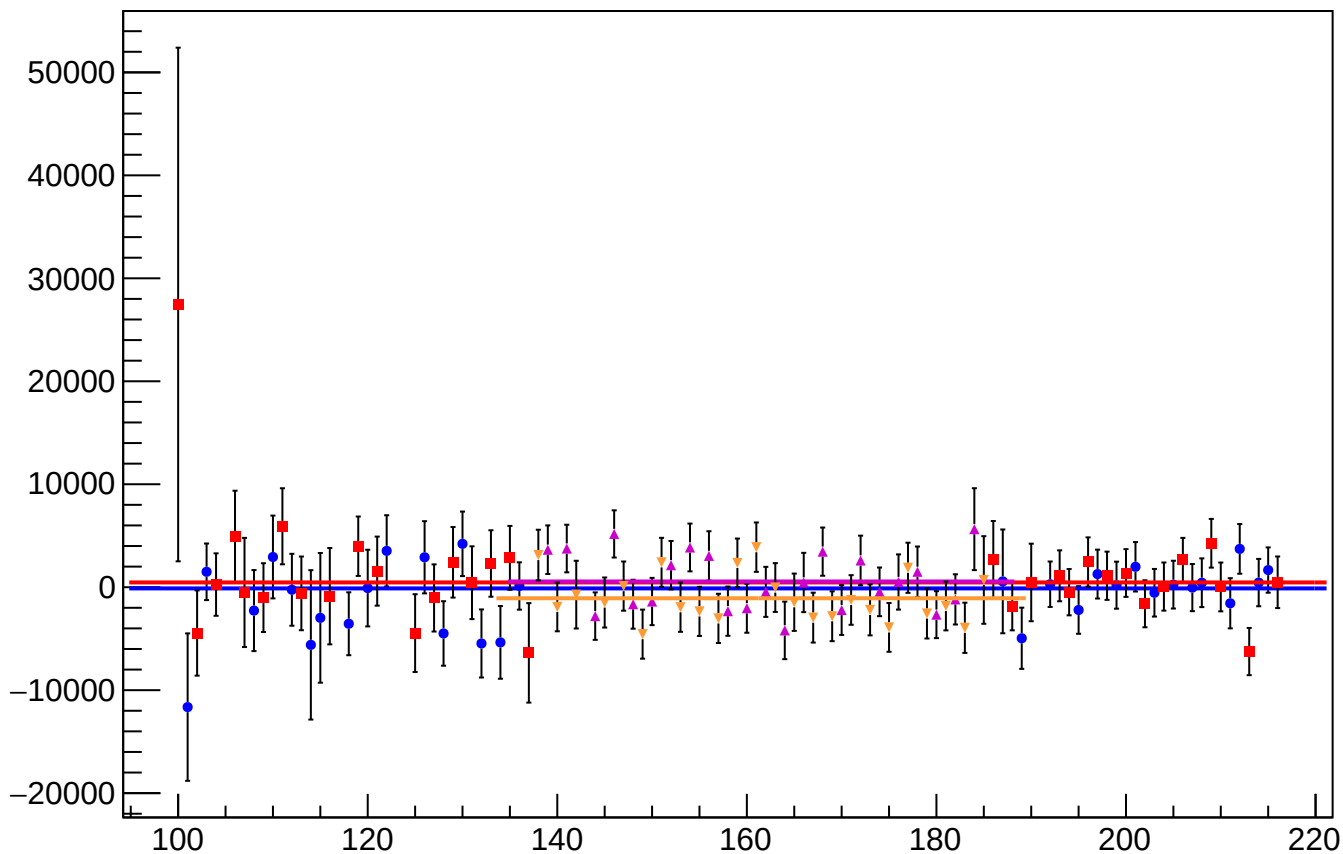
Left In: 130.436 $\pm$ 0.023  $\chi^2$ /NDF: 2679692.6/22

+ sign 138.797 $\pm$ 0.021  $\chi^2$ /NDF: 29754559.2/54

All: 139.452 $\pm$ 0.015  $\chi^2$ /NDF: 58503895.7/11

- sign 140.133 $\pm$ 0.021  $\chi^2$ /NDF: 28747342.3/55

# cor\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-116.921 \pm 507.696$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $-1072.795 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $463.261 \pm 509.380$   $\chi^2/\text{NDF}$ : 28.5/32

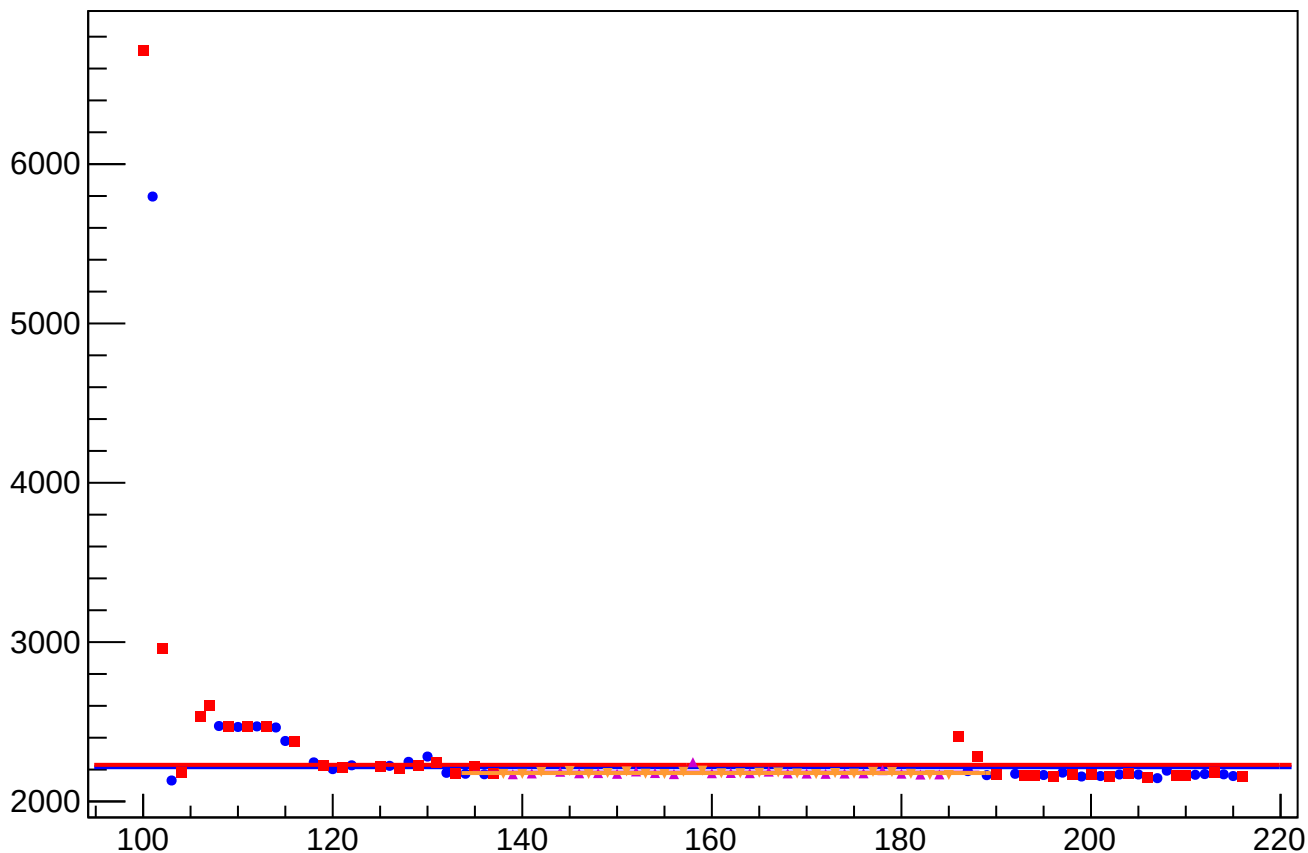
Left In:  $557.079 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-596.897 \pm 358.229$   $\chi^2/\text{NDF}$ : 48.1/54

All:  $-46.279 \pm 253.974$   $\chi^2/\text{NDF}$ : 110.1/110

- sign  $510.186 \pm 360.125$   $\chi^2/\text{NDF}$ : 57.2/55

# cor\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2214.866 $\pm$ 0.359  $\chi^2$ /NDF: 548225.6/30

Left Out: 2178.244 $\pm$ 0.357  $\chi^2$ /NDF: 389.1/23

Right Out: 2229.802 $\pm$ 0.360  $\chi^2$ /NDF: 202451.1/32

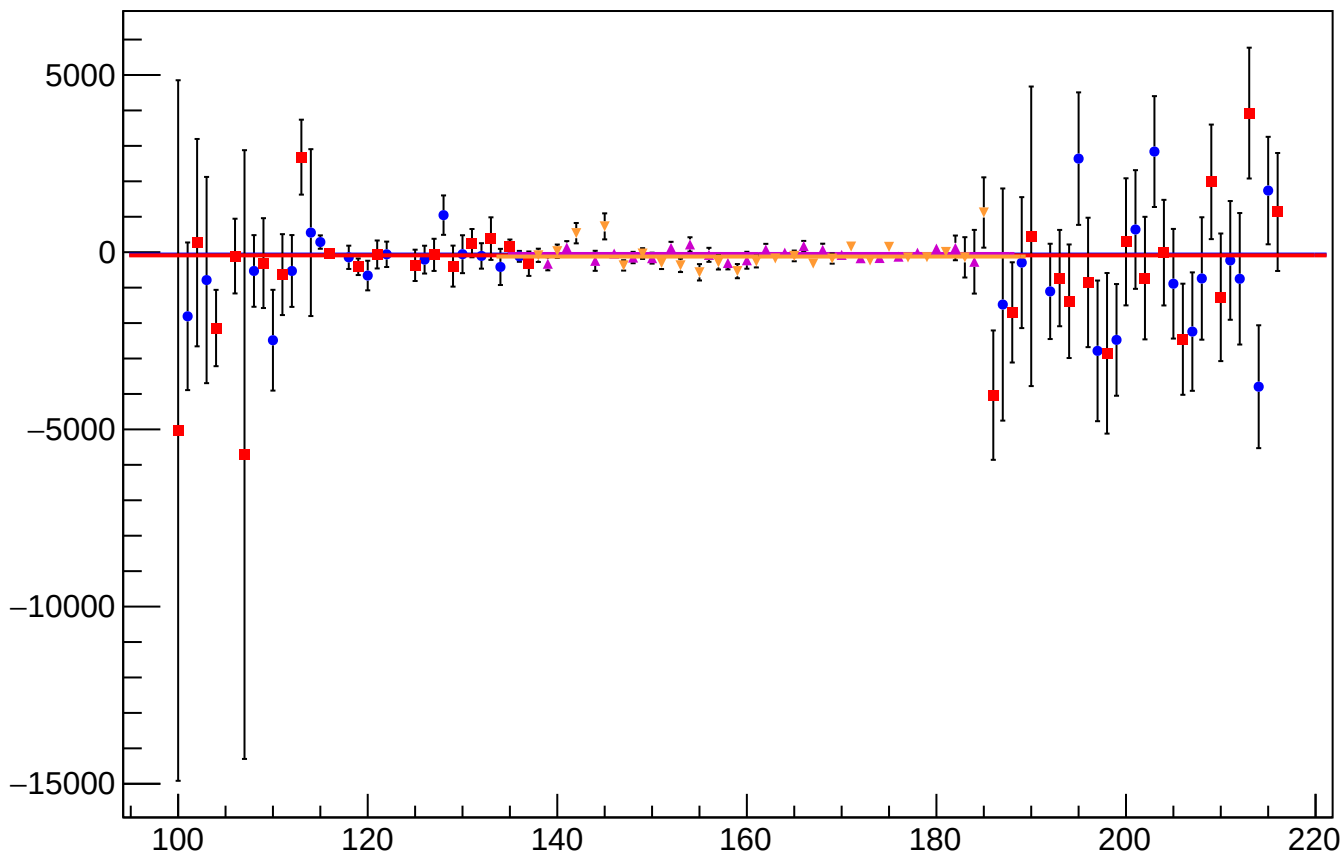
Left In: 2180.919 $\pm$ 0.360  $\chi^2$ /NDF: 1866.2/22

+ sign 2196.477 $\pm$ 0.253  $\chi^2$ /NDF: 553840.3/54

All: 2200.891 $\pm$ 0.180  $\chi^2$ /NDF: 767980.8/110

- sign 2205.352 $\pm$ 0.255  $\chi^2$ /NDF: 213530.0/55

asym\_us\_dd\_at1lr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-66.803 \pm 89.036$   $\chi^2/\text{NDF}: 33.5/30$

Left Out:  $-122.928 \pm 31.408$   $\chi^2/\text{NDF}: 43.8/23$

Right Out:  $-89.495 \pm 80.927$   $\chi^2/\text{NDF}: 35.8/32$

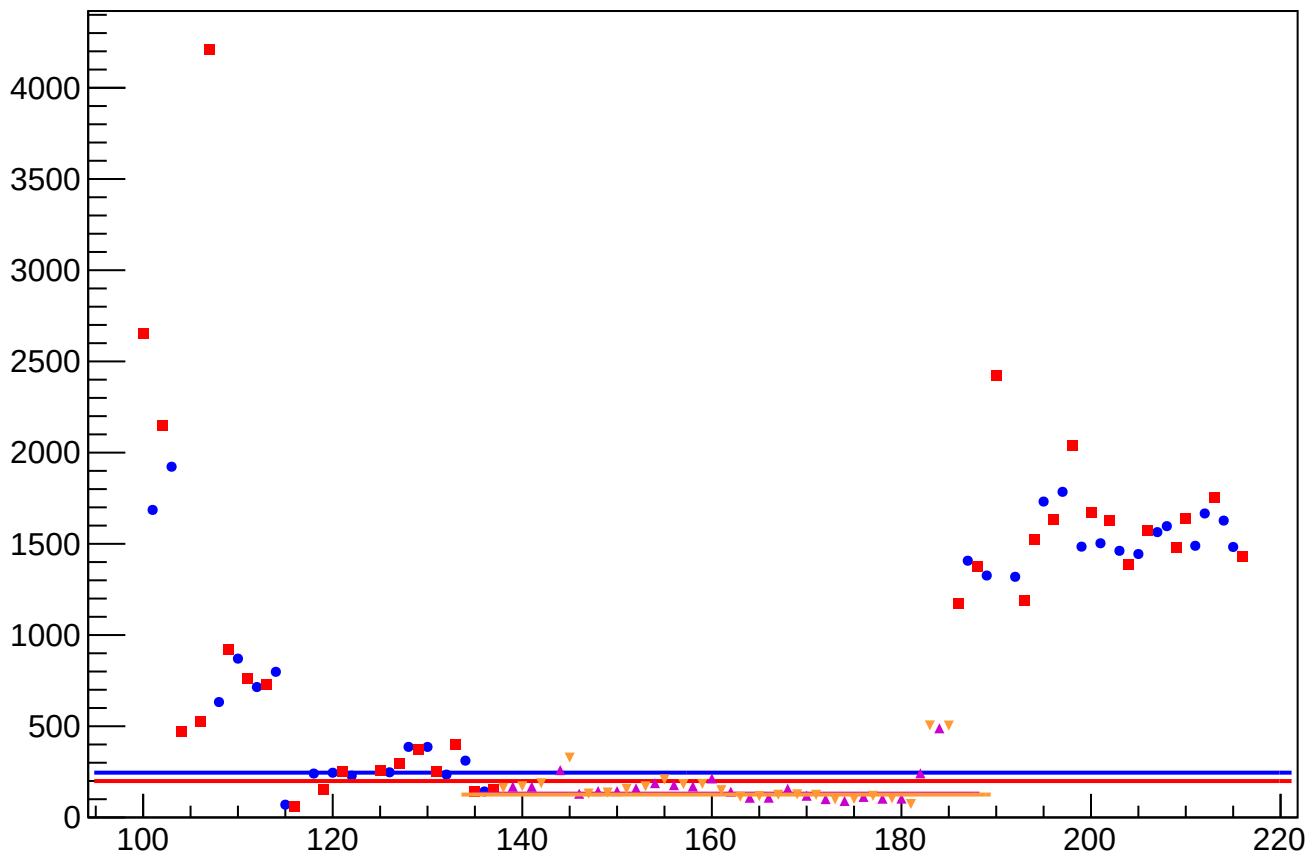
Left In:  $-50.209 \pm 32.548$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-116.717 \pm 29.619$   $\chi^2/\text{NDF}: 77.6/54$

All:  $-86.788 \pm 21.145$   $\chi^2/\text{NDF}: 133.9/110$

- sign  $-55.679 \pm 30.197$   $\chi^2/\text{NDF}: 54.2/55$

asym\_us\_dd\_at1lr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 245.625 $\pm$ 0.063  $\chi^2$ /NDF: 22573942.4/30

Left Out: 125.503 $\pm$ 0.022  $\chi^2$ /NDF: 3943570.9/23

Right Out: 199.576 $\pm$ 0.057  $\chi^2$ /NDF: 24760790.2/32

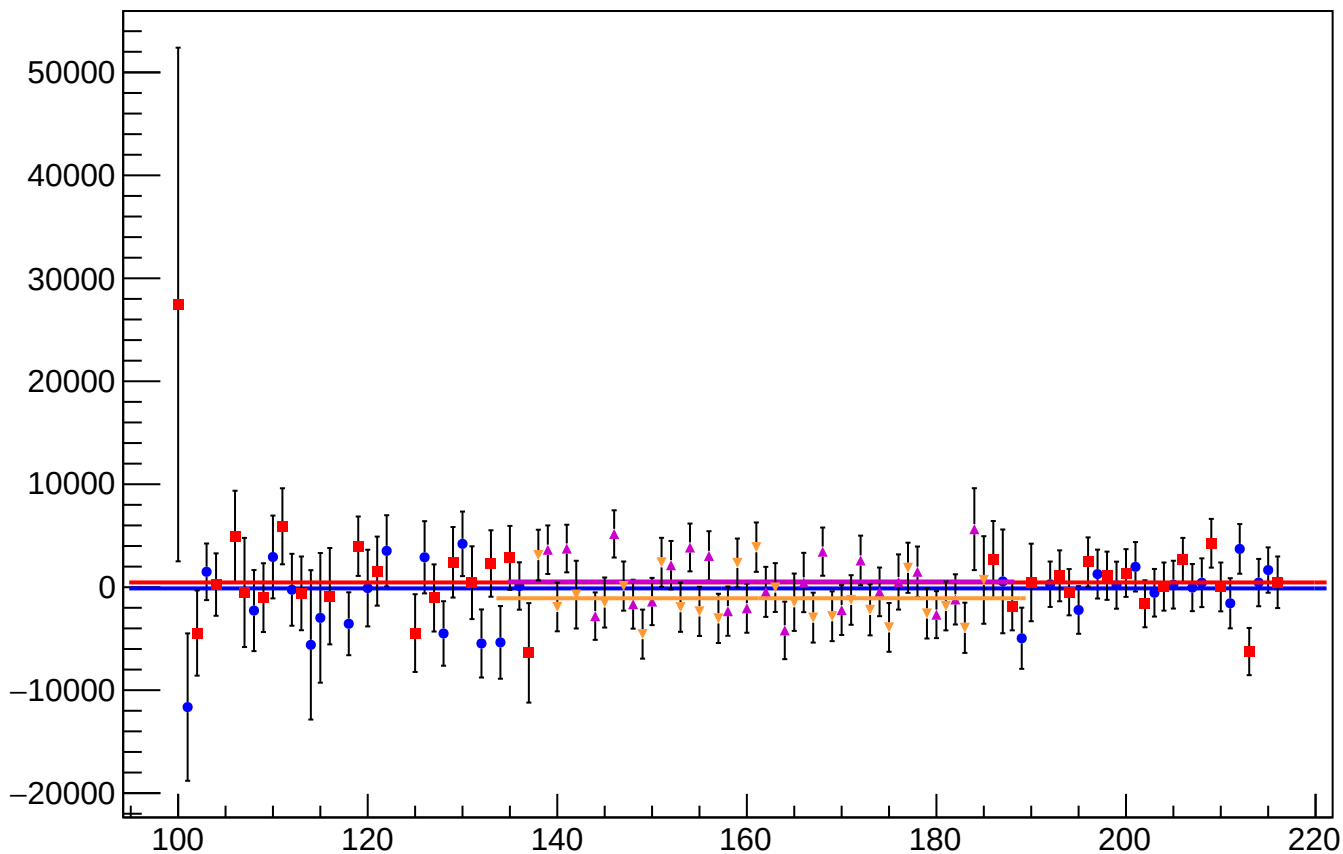
Left In: 130.451 $\pm$ 0.023  $\chi^2$ /NDF: 2679365.4/22

+ sign 138.796 $\pm$ 0.021  $\chi^2$ /NDF: 29755024.3/54

All: 139.423 $\pm$ 0.015  $\chi^2$ /NDF: 58453050.2/11

- sign 140.076 $\pm$ 0.021  $\chi^2$ /NDF: 28696195.3/55

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-116.921 \pm 507.696$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $-1072.795 \pm 505.534$   $\chi^2/\text{NDF}$ : 21.6/23

Right Out:  $463.261 \pm 509.380$   $\chi^2/\text{NDF}$ : 28.5/32

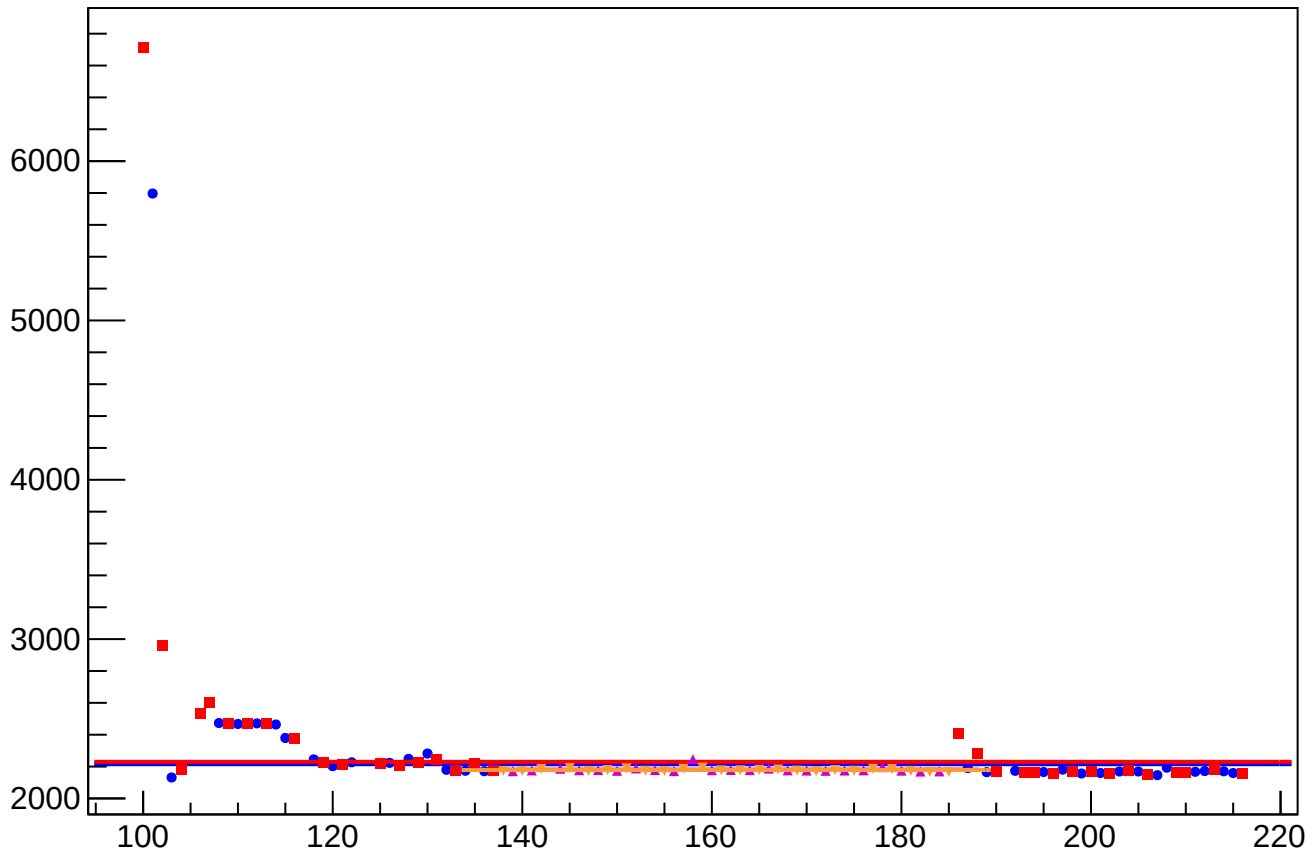
Left In:  $557.079 \pm 509.208$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-596.897 \pm 358.229$   $\chi^2/\text{NDF}$ : 48.1/54

All:  $-46.279 \pm 253.974$   $\chi^2/\text{NDF}$ : 110.1/110

- sign  $510.186 \pm 360.125$   $\chi^2/\text{NDF}$ : 57.2/55

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2214.866+/-0.359  $\chi^2/\text{NDF}$ : 548225.6/30

Left Out: 2178.244+/-0.357  $\chi^2/\text{NDF}$ : 389.1/23

+ sign 2196.477+/-0.253  $\chi^2/\text{NDF}$ : 553840.3/54

Right Out: 2229.802+/-0.360  $\chi^2/\text{NDF}$ : 202451.1/32

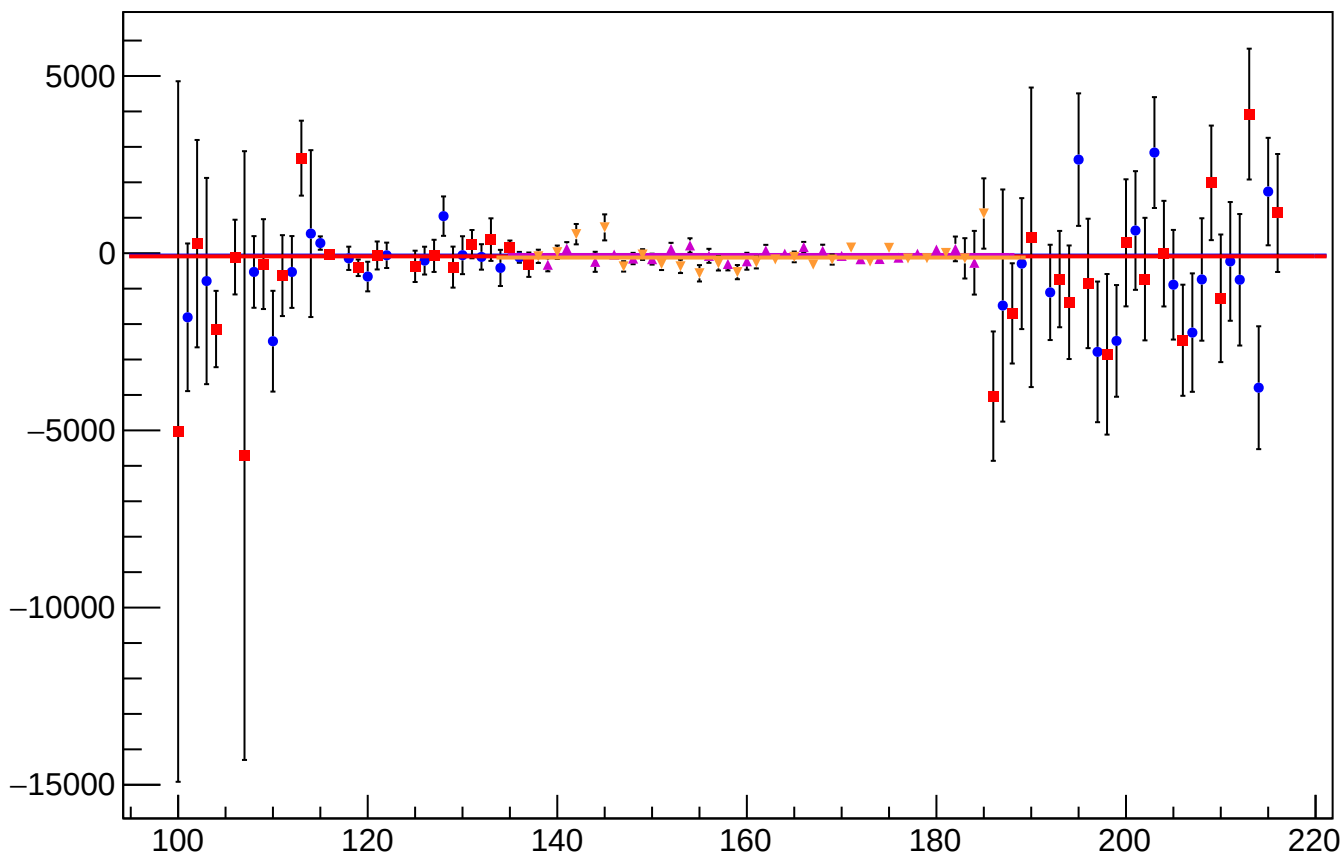
All: 2200.891+/-0.180  $\chi^2/\text{NDF}$ : 767980.8/110

- sign 2205.352+/-0.255  $\chi^2/\text{NDF}$ : 213530.0/55

Left In: 2180.919+/-0.360  $\chi^2/\text{NDF}$ : 1866.2/22



asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-66.803 \pm 89.036$   $\chi^2/\text{NDF}$ : 33.5/30

Left Out:  $-122.928 \pm 31.408$   $\chi^2/\text{NDF}$ : 43.8/23

Right Out:  $-89.495 \pm 80.927$   $\chi^2/\text{NDF}$ : 35.8/32

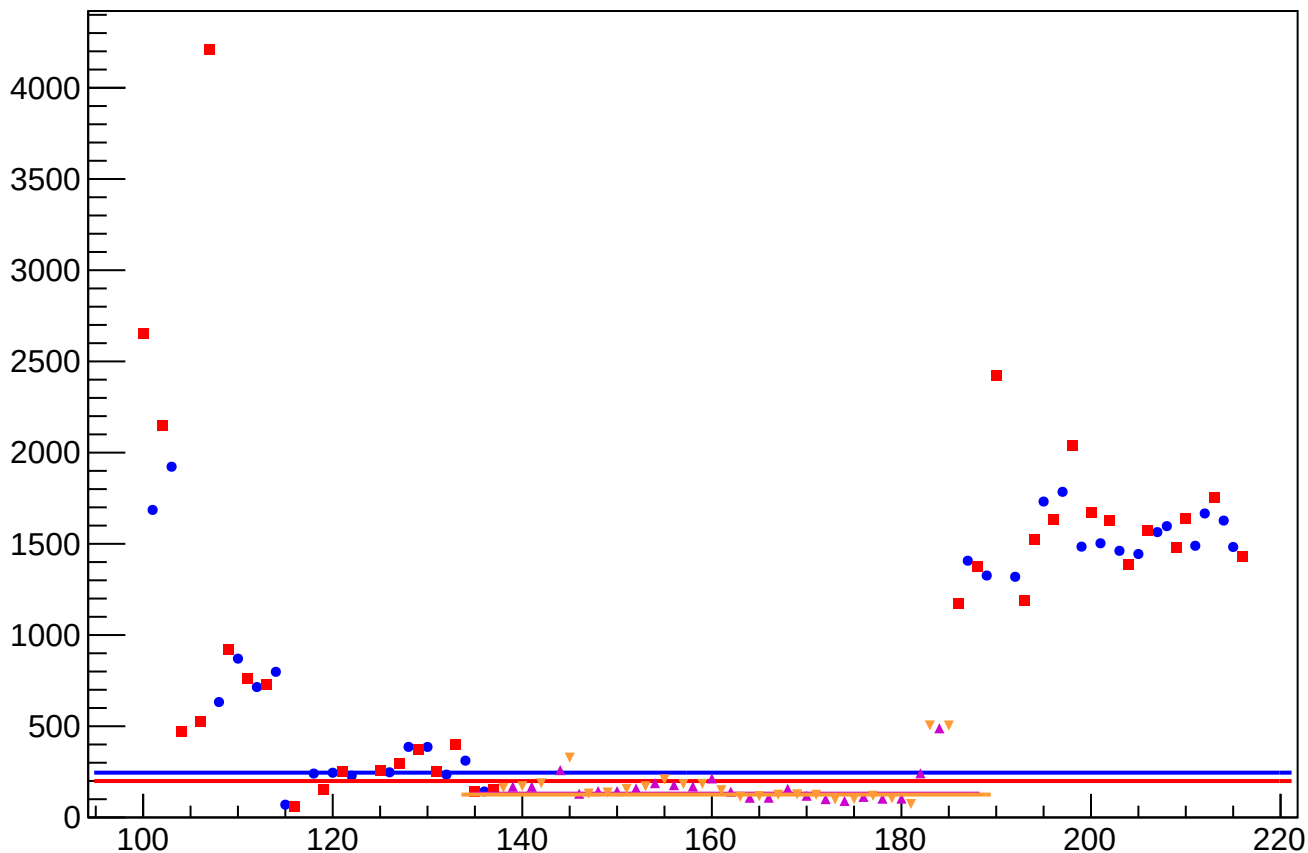
Left In:  $-50.209 \pm 32.548$   $\chi^2/\text{NDF}$ : 18.3/22

+ sign  $-116.717 \pm 29.619$   $\chi^2/\text{NDF}$ : 77.6/54

All:  $-86.788 \pm 21.145$   $\chi^2/\text{NDF}$ : 133.9/110

- sign  $-55.679 \pm 30.197$   $\chi^2/\text{NDF}$ : 54.2/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 245.625 $\pm$ 0.063  $\chi^2$ /NDF: 22573942.4/30

Left Out: 125.503 $\pm$ 0.022  $\chi^2$ /NDF: 3943570.9/23

Right Out: 199.576 $\pm$ 0.057  $\chi^2$ /NDF: 24760790.2/32

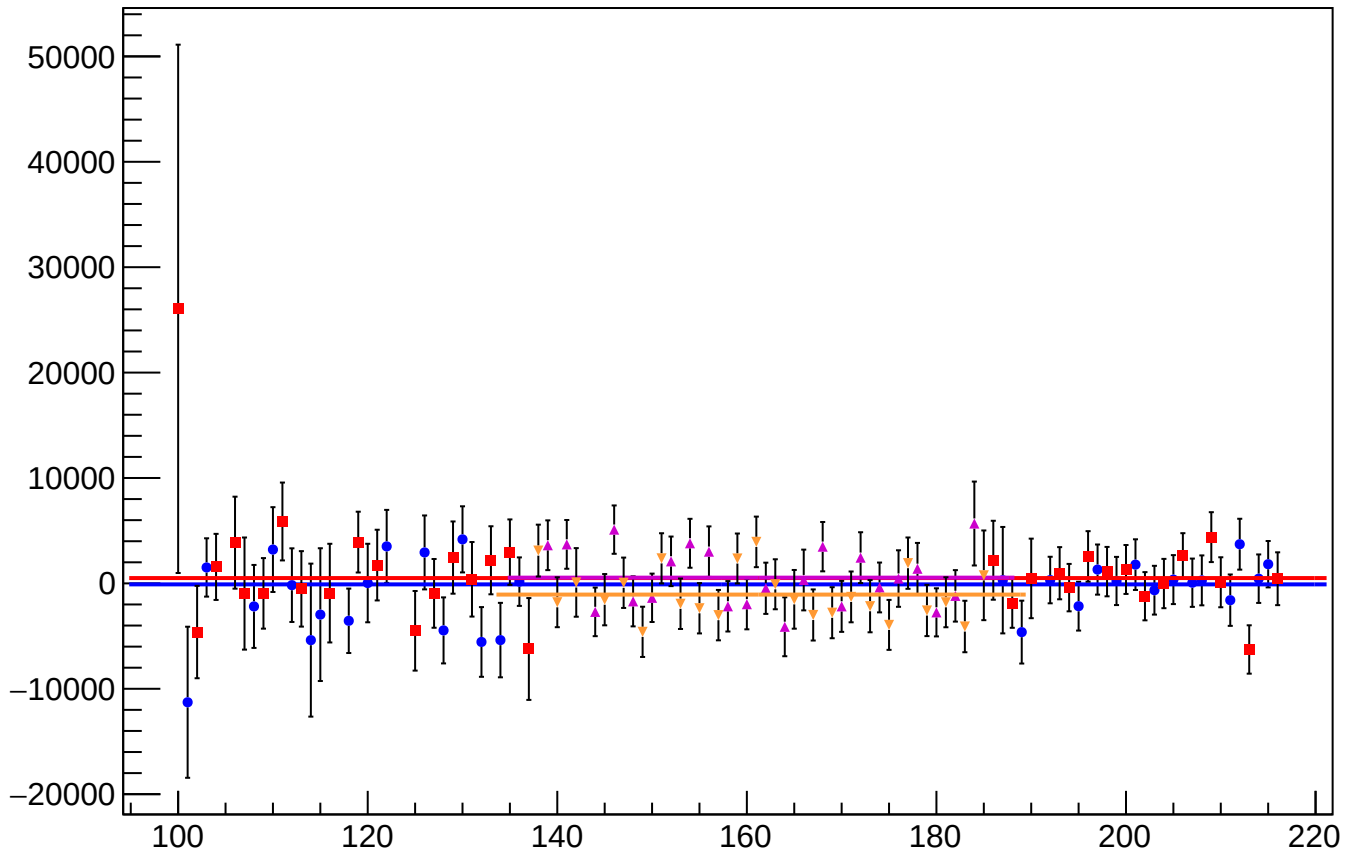
Left In: 130.451 $\pm$ 0.023  $\chi^2$ /NDF: 2679365.4/22

+ sign 138.796 $\pm$ 0.021  $\chi^2$ /NDF: 29755024.3/54

All: 139.423 $\pm$ 0.015  $\chi^2$ /NDF: 58453050.2/11

- sign 140.076 $\pm$ 0.021  $\chi^2$ /NDF: 28696195.3/55

# dit\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-93.872 \pm 508.228$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $-1062.372 \pm 505.627$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $504.621 \pm 510.669$   $\chi^2/\text{NDF}$ : 27.7/32

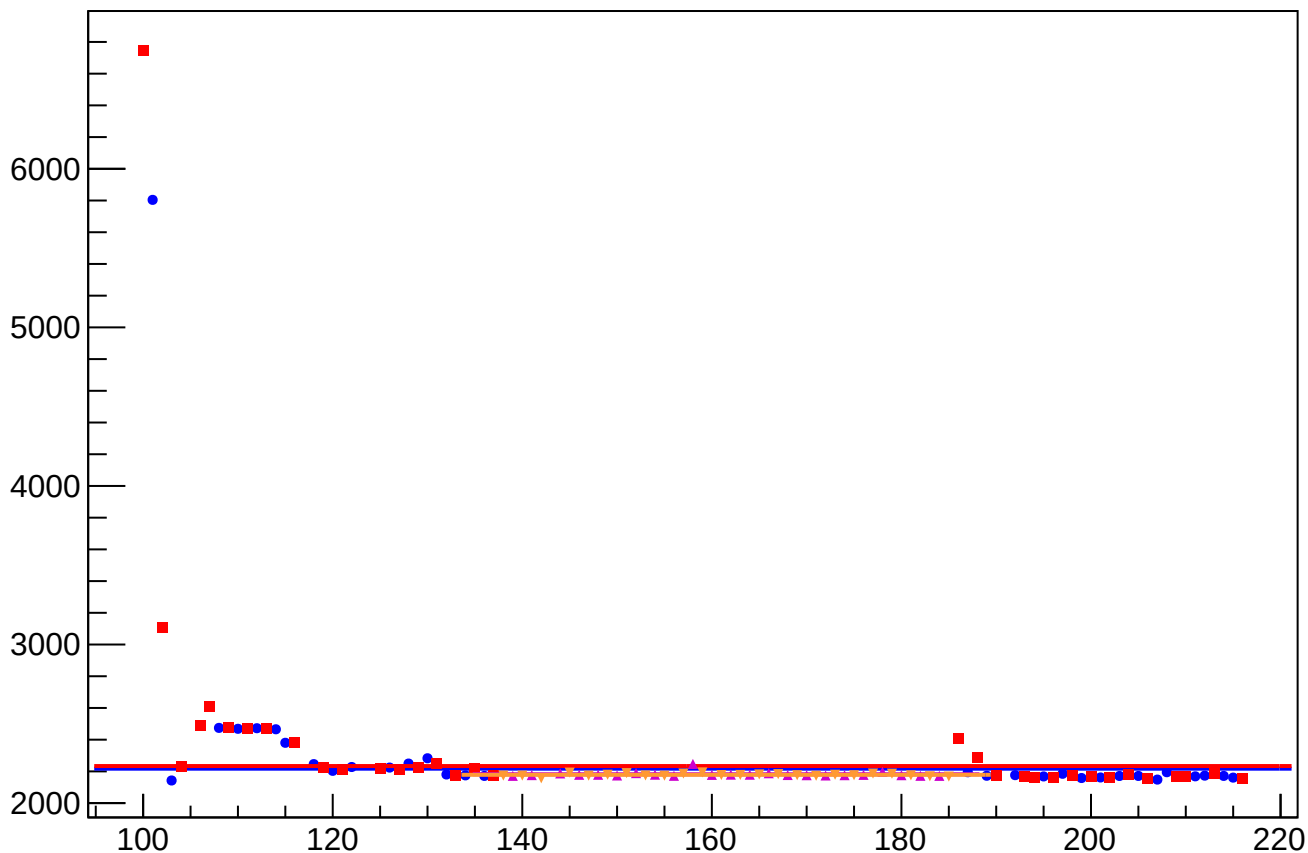
Left In:  $544.260 \pm 509.433$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $-580.607 \pm 358.448$   $\chi^2/\text{NDF}$ : 48.0/54

All:  $-31.458 \pm 254.239$   $\chi^2/\text{NDF}$ : 108.3/110

- sign  $524.489 \pm 360.660$   $\chi^2/\text{NDF}$ : 55.6/55

# dit\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2217.105+/-0.359  $\chi^2/\text{NDF}$ : 547674.9/30

Left Out: 2178.503+/-0.358  $\chi^2/\text{NDF}$ : 456.1/23

Right Out: 2233.656+/-0.361  $\chi^2/\text{NDF}$ : 218328.3/32

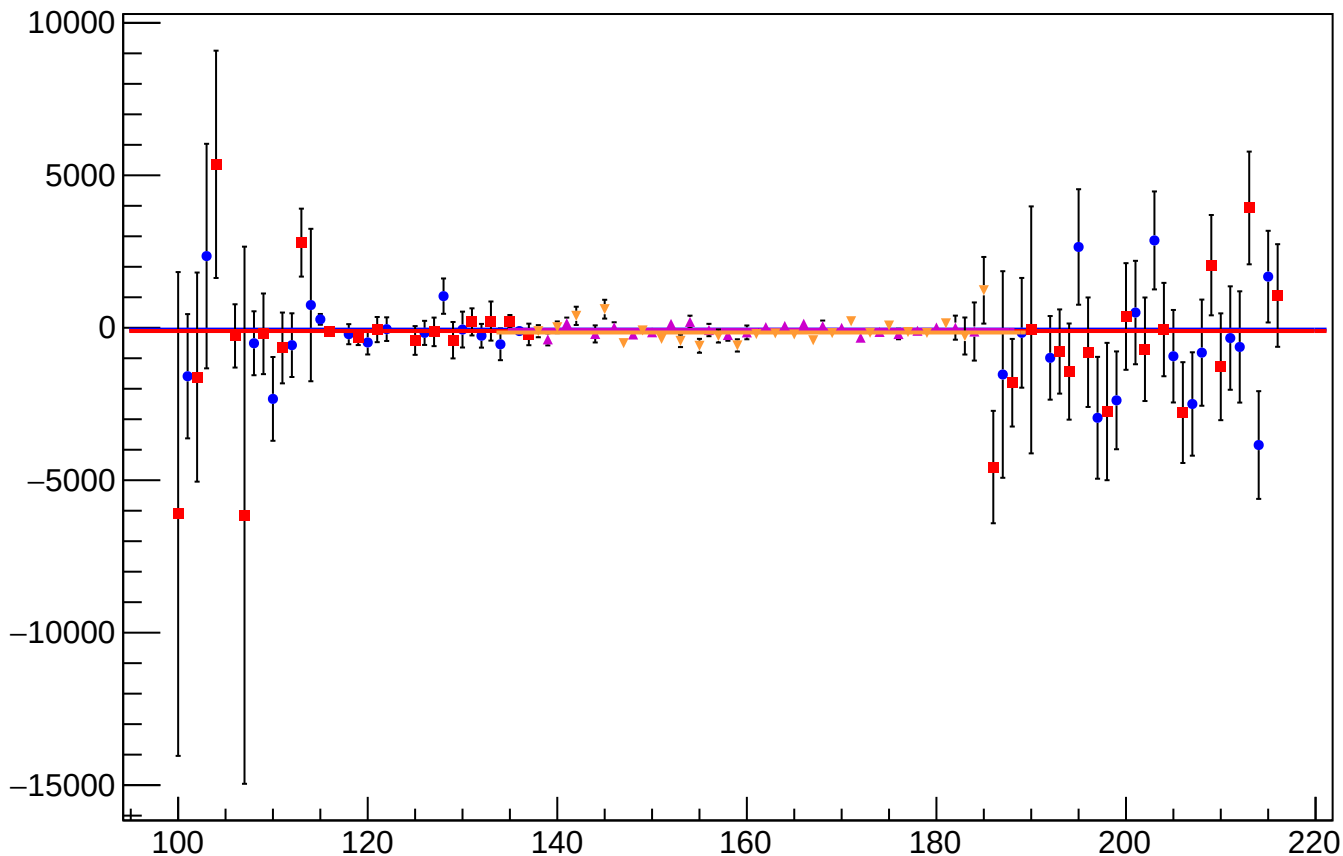
Left In: 2181.882+/-0.360  $\chi^2/\text{NDF}$ : 1838.2/22

+ sign 2197.705+/-0.253  $\chi^2/\text{NDF}$ : 553929.5/54

All: 2202.675+/-0.180  $\chi^2/\text{NDF}$ : 785173.2/110

- sign 2207.706+/-0.255  $\chi^2/\text{NDF}$ : 230469.9/55

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-60.462 \pm 90.459$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $-154.725 \pm 34.061$   $\chi^2/\text{NDF}$ : 47.3/23

Right Out:  $-106.806 \pm 84.511$   $\chi^2/\text{NDF}$ : 35.0/32

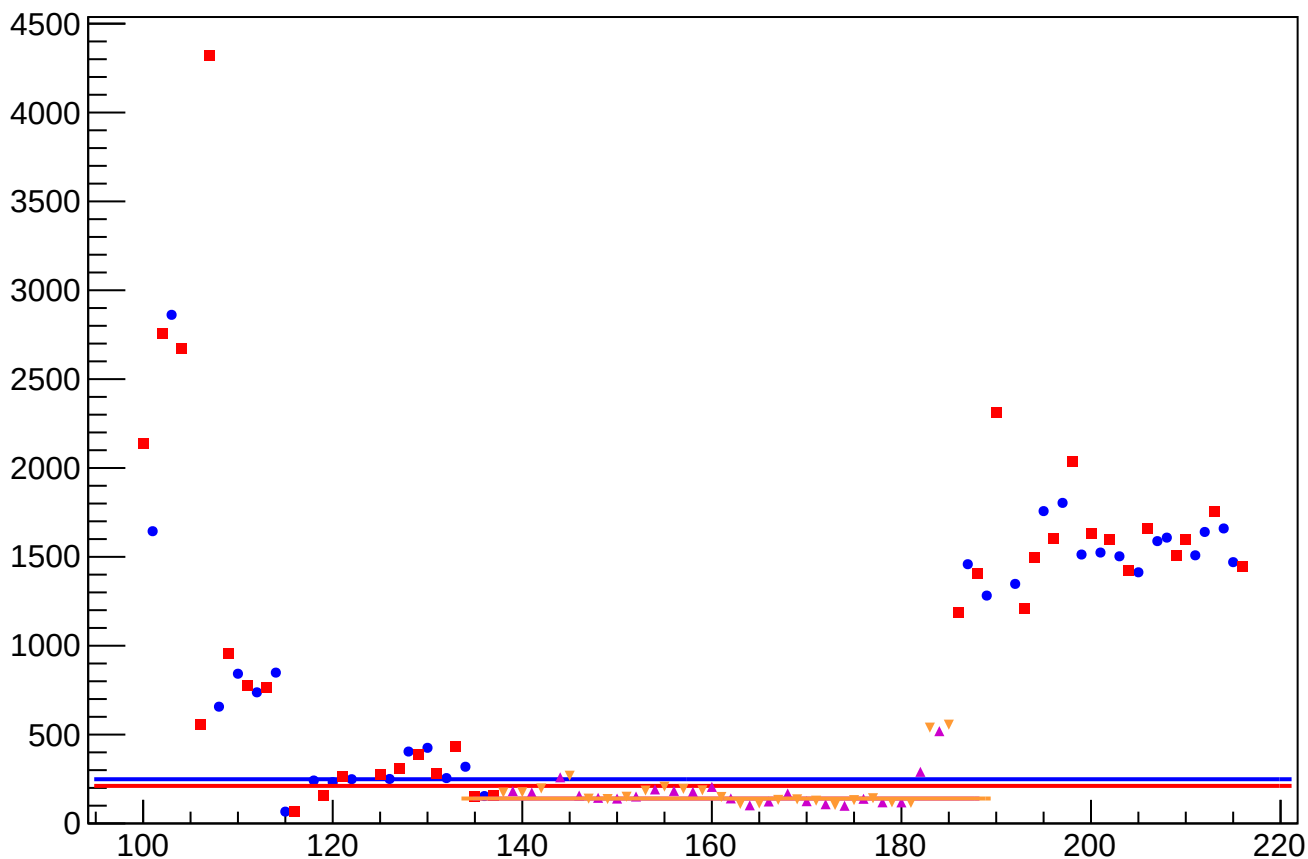
Left In:  $-70.142 \pm 34.204$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $-143.020 \pm 31.876$   $\chi^2/\text{NDF}$ : 81.3/54

All:  $-108.980 \pm 22.479$   $\chi^2/\text{NDF}$ : 137.6/110

- sign  $-75.302 \pm 31.706$   $\chi^2/\text{NDF}$ : 54.1/55

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 248.826 $\pm$ 0.064  $\chi^2$ /NDF: 23118857.7/30

Left Out: 140.319 $\pm$ 0.024  $\chi^2$ /NDF: 2760284.0/23

Right Out: 211.293 $\pm$ 0.060  $\chi^2$ /NDF: 25497964.8/32

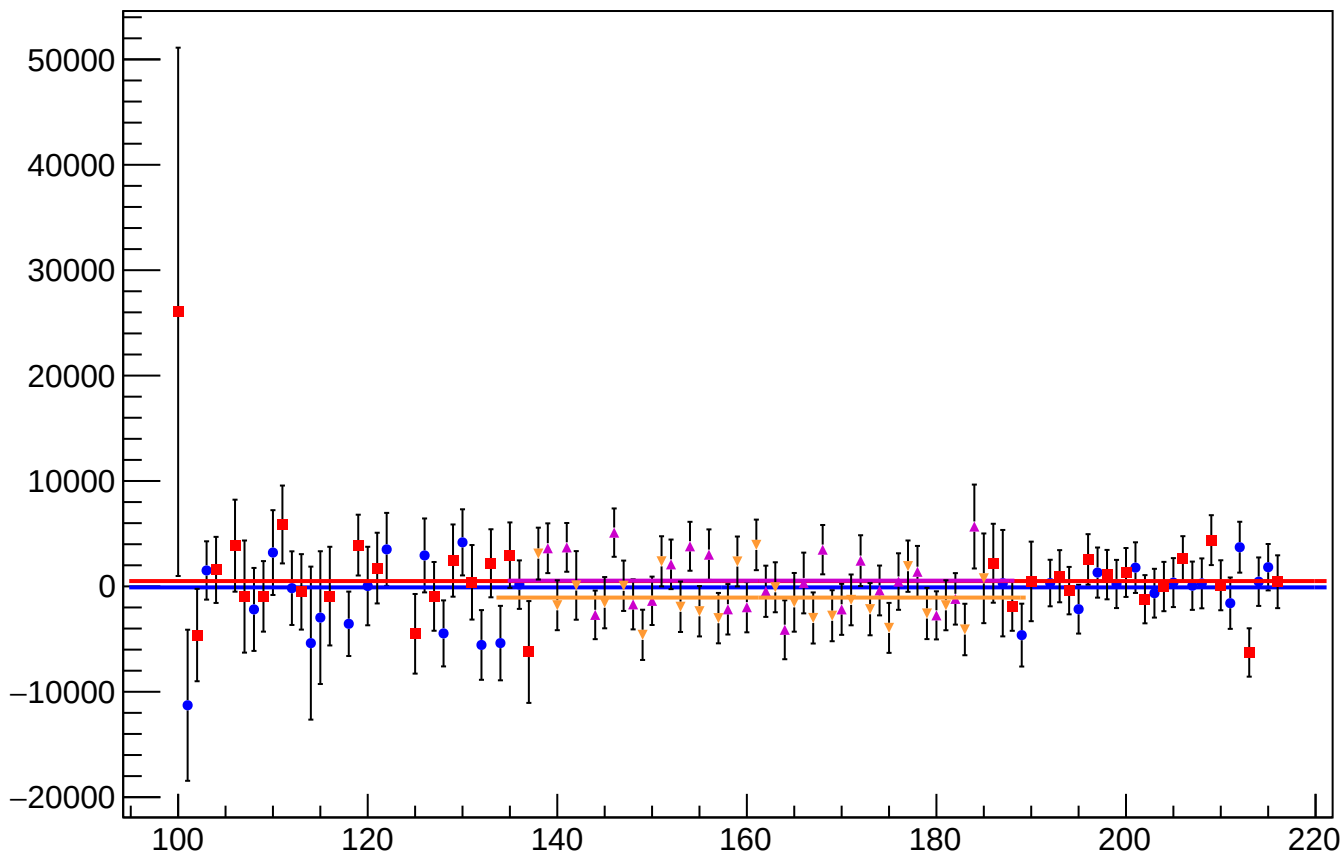
Left In: 139.979 $\pm$ 0.024  $\chi^2$ /NDF: 2412455.4/22

+ sign 153.792 $\pm$ 0.023  $\chi^2$ /NDF: 28399500.5/54

All: 151.894 $\pm$ 0.016  $\chi^2$ /NDF: 57547719.6/11

- sign 150.016 $\pm$ 0.022  $\chi^2$ /NDF: 29134111.5/55

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In:  $-93.874 \pm 508.228$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $-1062.373 \pm 505.627$   $\chi^2/\text{NDF}$ : 21.9/23

Right Out:  $504.621 \pm 510.669$   $\chi^2/\text{NDF}$ : 27.7/32

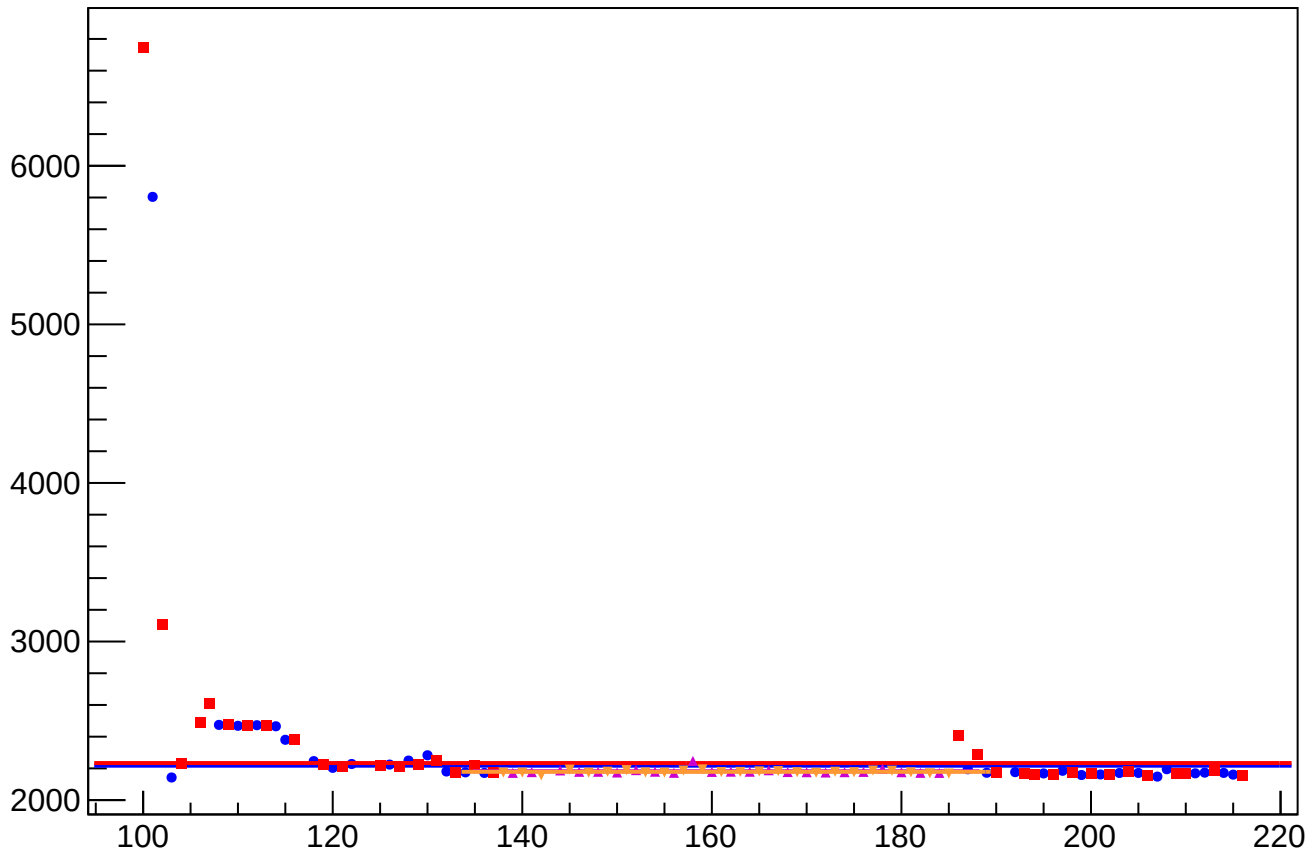
Left In:  $544.259 \pm 509.433$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $-580.609 \pm 358.448$   $\chi^2/\text{NDF}$ : 48.0/54

All:  $-31.459 \pm 254.239$   $\chi^2/\text{NDF}$ : 108.3/110

- sign  $524.488 \pm 360.660$   $\chi^2/\text{NDF}$ : 55.6/55

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2217.105+/-0.359  $\chi^2/\text{NDF}$ : 547674.9/30

Left Out: 2178.503+/-0.358  $\chi^2/\text{NDF}$ : 456.1/23

Right Out: 2233.656+/-0.361  $\chi^2/\text{NDF}$ : 218328.2/32

Left In: 2181.882+/-0.360  $\chi^2/\text{NDF}$ : 1838.2/22

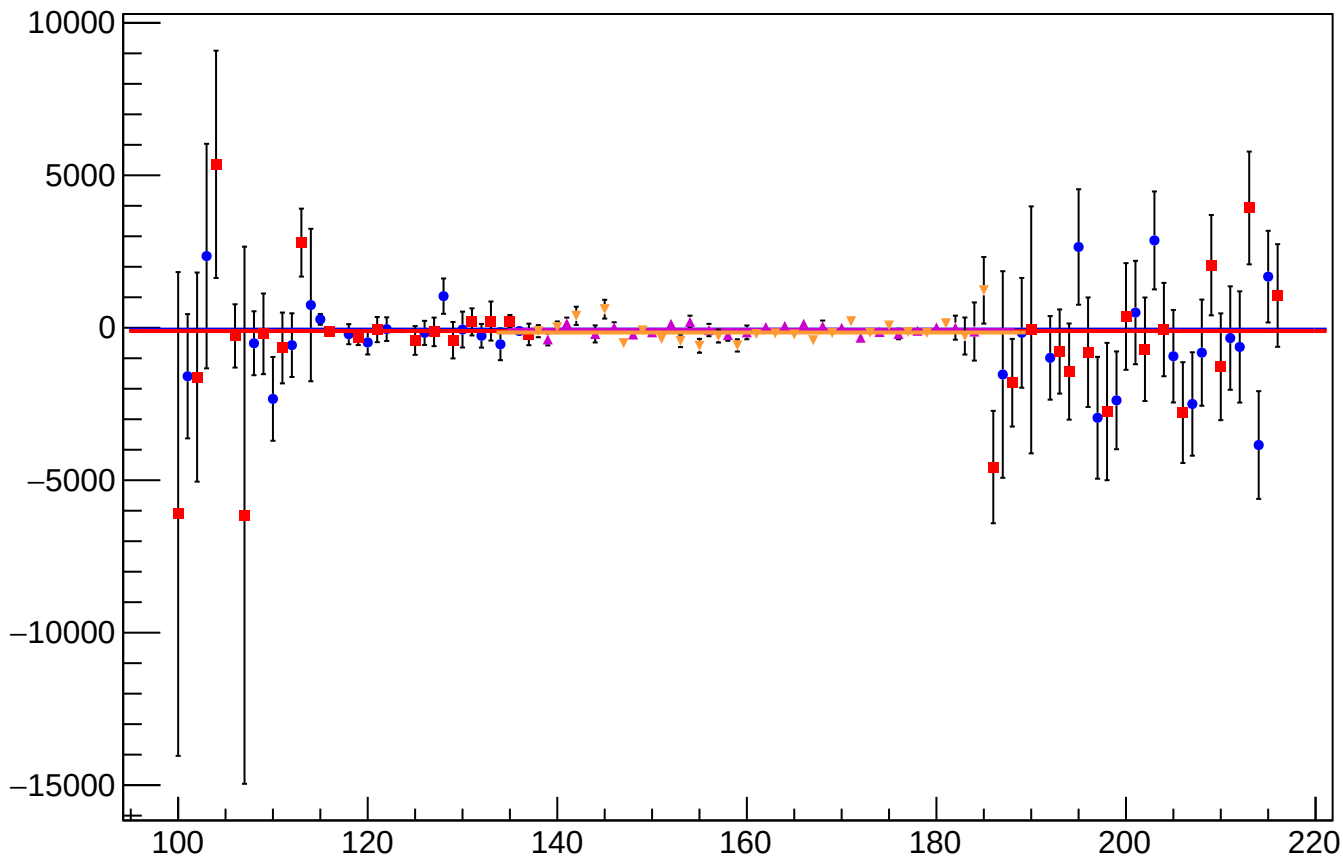
+ sign 2197.705+/-0.253  $\chi^2/\text{NDF}$ : 553929.5/54

All: 2202.675+/-0.180  $\chi^2/\text{NDF}$ : 785173.0/110

- sign 2207.706+/-0.255  $\chi^2/\text{NDF}$ : 230469.8/55



asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-60.459 \pm 90.458$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $-154.726 \pm 34.061$   $\chi^2/\text{NDF}$ : 47.3/23

Right Out:  $-106.807 \pm 84.511$   $\chi^2/\text{NDF}$ : 35.0/32

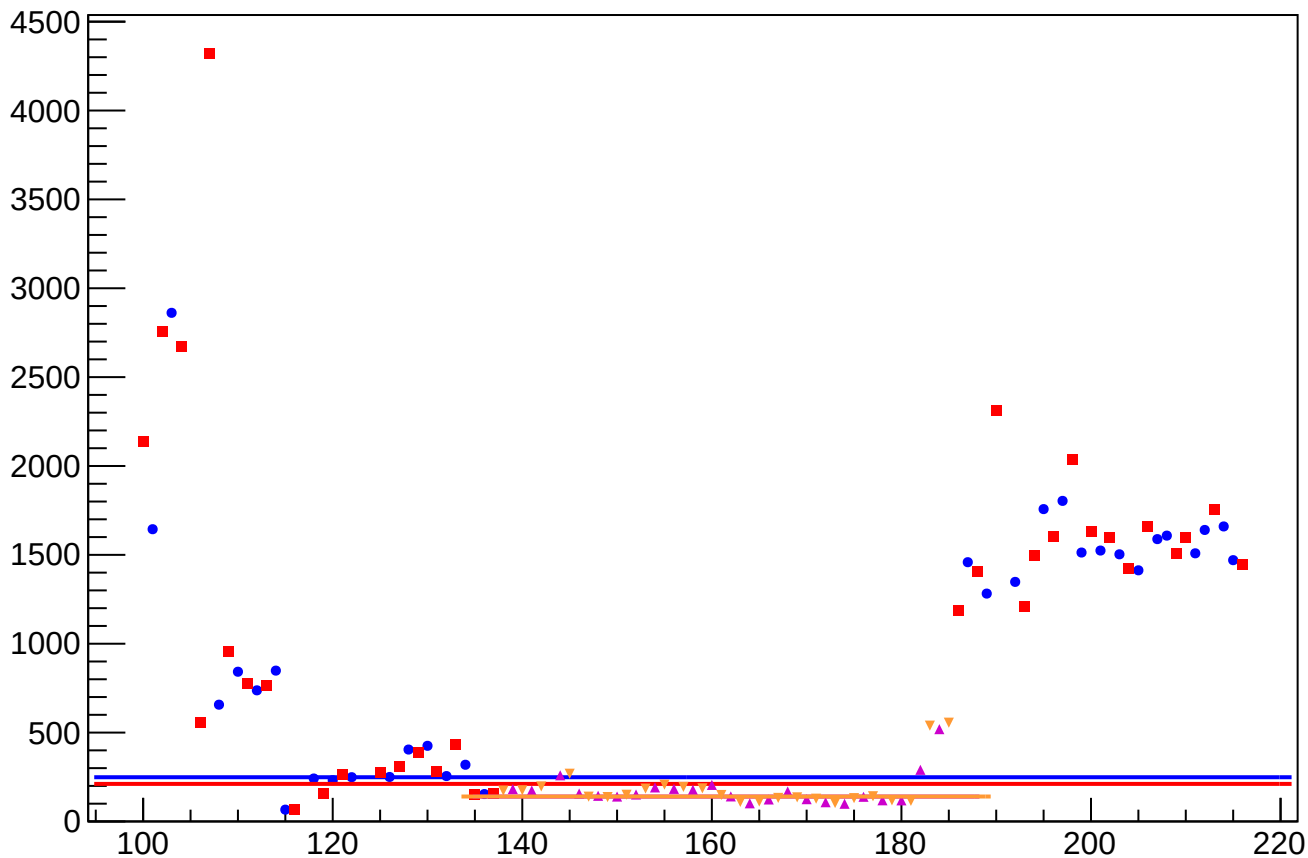
Left In:  $-70.141 \pm 34.204$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $-143.021 \pm 31.876$   $\chi^2/\text{NDF}$ : 81.3/54

All:  $-108.980 \pm 22.479$   $\chi^2/\text{NDF}$ : 137.6/110

- sign  $-75.302 \pm 31.706$   $\chi^2/\text{NDF}$ : 54.1/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 248.823 $\pm$ 0.064  $\chi^2/\text{NDF}$ : 23118979.1/30

Left Out: 140.319 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 2760280.2/23

Right Out: 211.290 $\pm$ 0.060  $\chi^2/\text{NDF}$ : 25498102.3/32

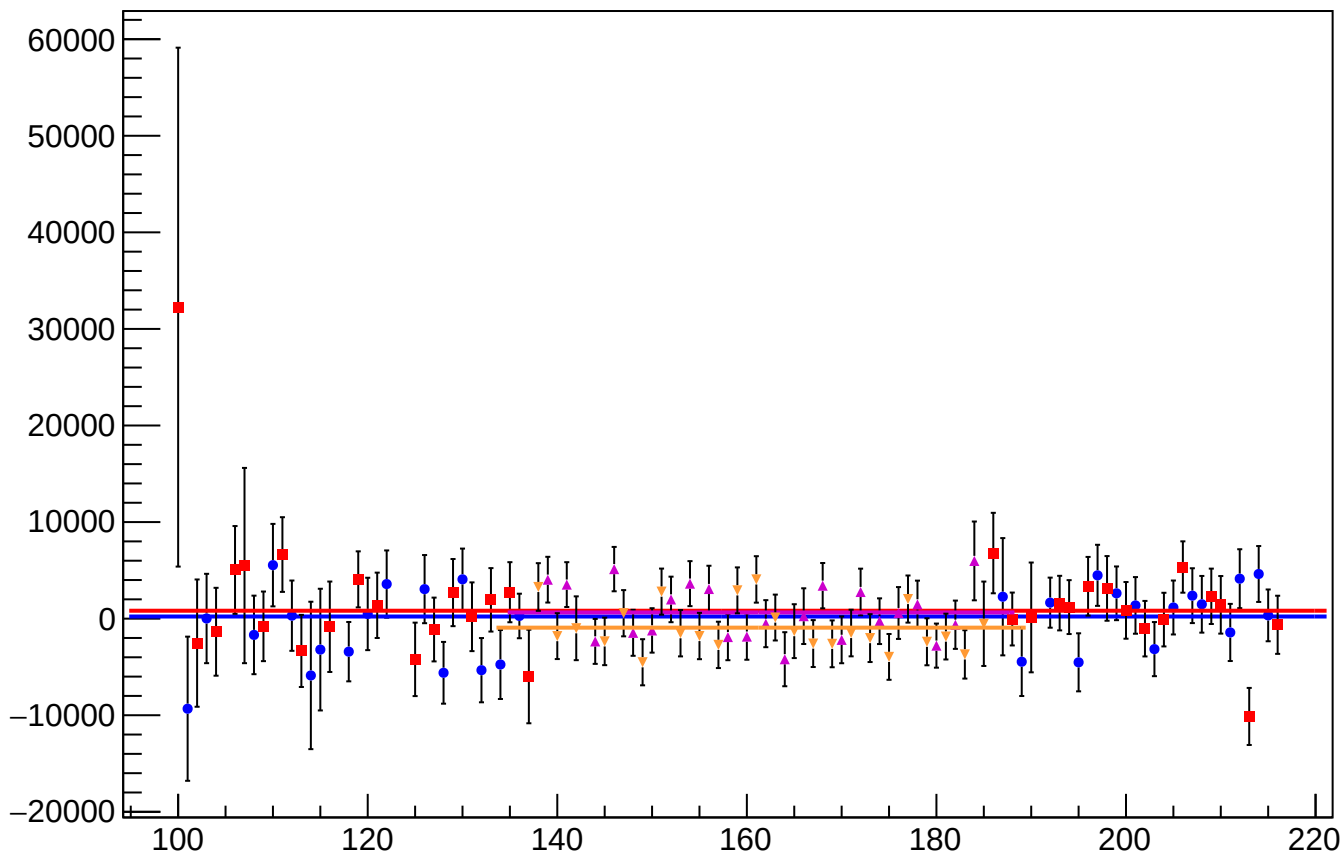
Left In: 139.979 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 2412509.5/22

+ sign 153.792 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 28399486.6/54

All: 151.894 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 57547804.4/11

- sign 150.016 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 29134208.0/55

# asym\_us\_dd\_at1lr\_dd\_avg\_mean vs Slug



Right In: 221.754 $\pm$ 589.361  $\chi^2$ /NDF: 30.8/30

Left Out: -932.002 $\pm$ 507.717  $\chi^2$ /NDF:22.4/23

Right Out: 820.901 $\pm$ 597.597  $\chi^2$ /NDF: 34.1/32

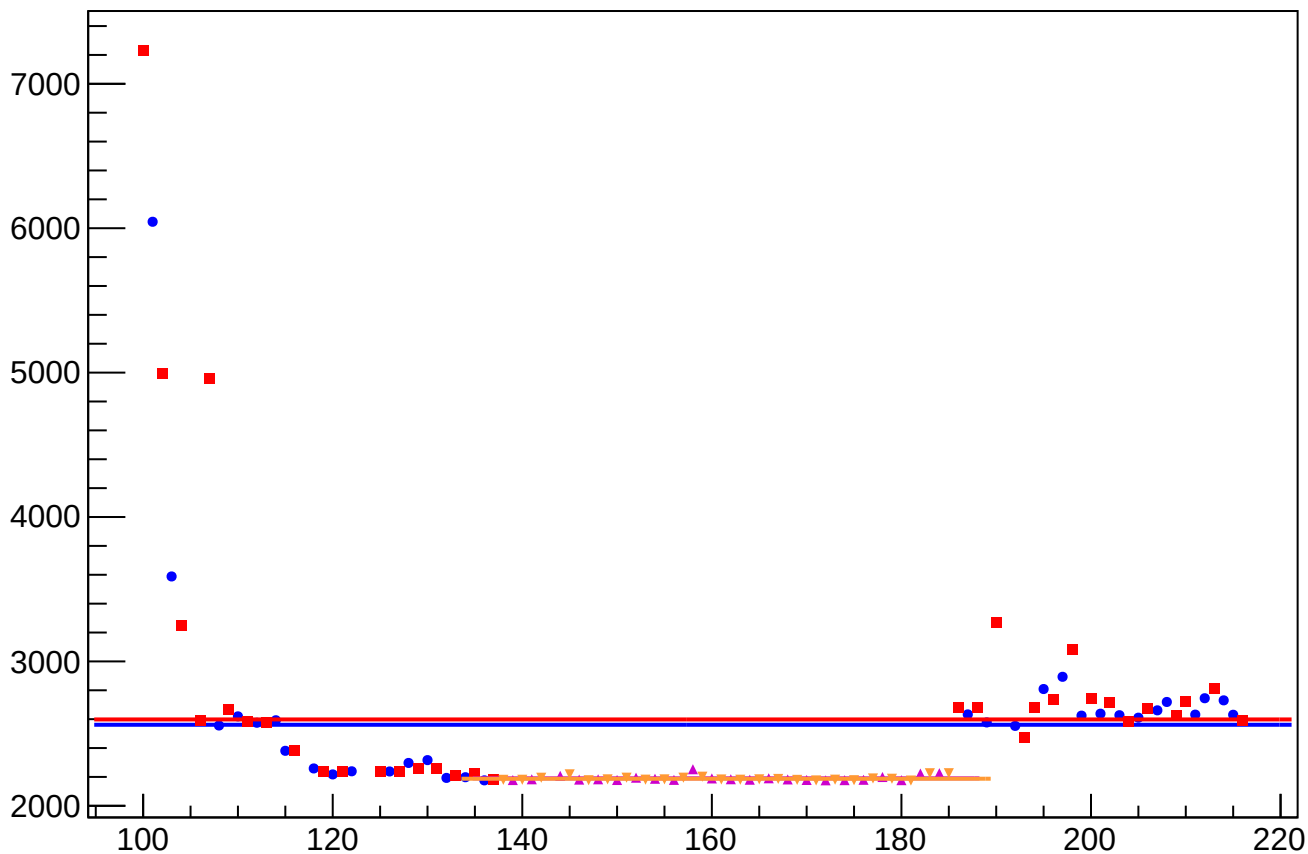
Left In: 642.773 $\pm$ 511.372  $\chi^2$ /NDF:27.0/22

+ sign -440.513 $\pm$ 384.664  $\chi^2$ /NDF: 55.4/54

All: 132.975 $\pm$ 273.357  $\chi^2$ /NDF: 121.0/110

- sign 718.070 $\pm$ 388.537  $\chi^2$ /NDF: 61.1/55

# asym\_us\_dd\_at1lr\_dd\_avg\_rms vs Slug



Right In: 2561.259 $\pm$ 0.417  $\chi^2$ /NDF: 797914.3/30

Left Out: 2187.620 $\pm$ 0.359  $\chi^2$ /NDF:1342.1/23

Right Out: 2598.138 $\pm$ 0.423  $\chi^2$ /NDF: 789725.0/32

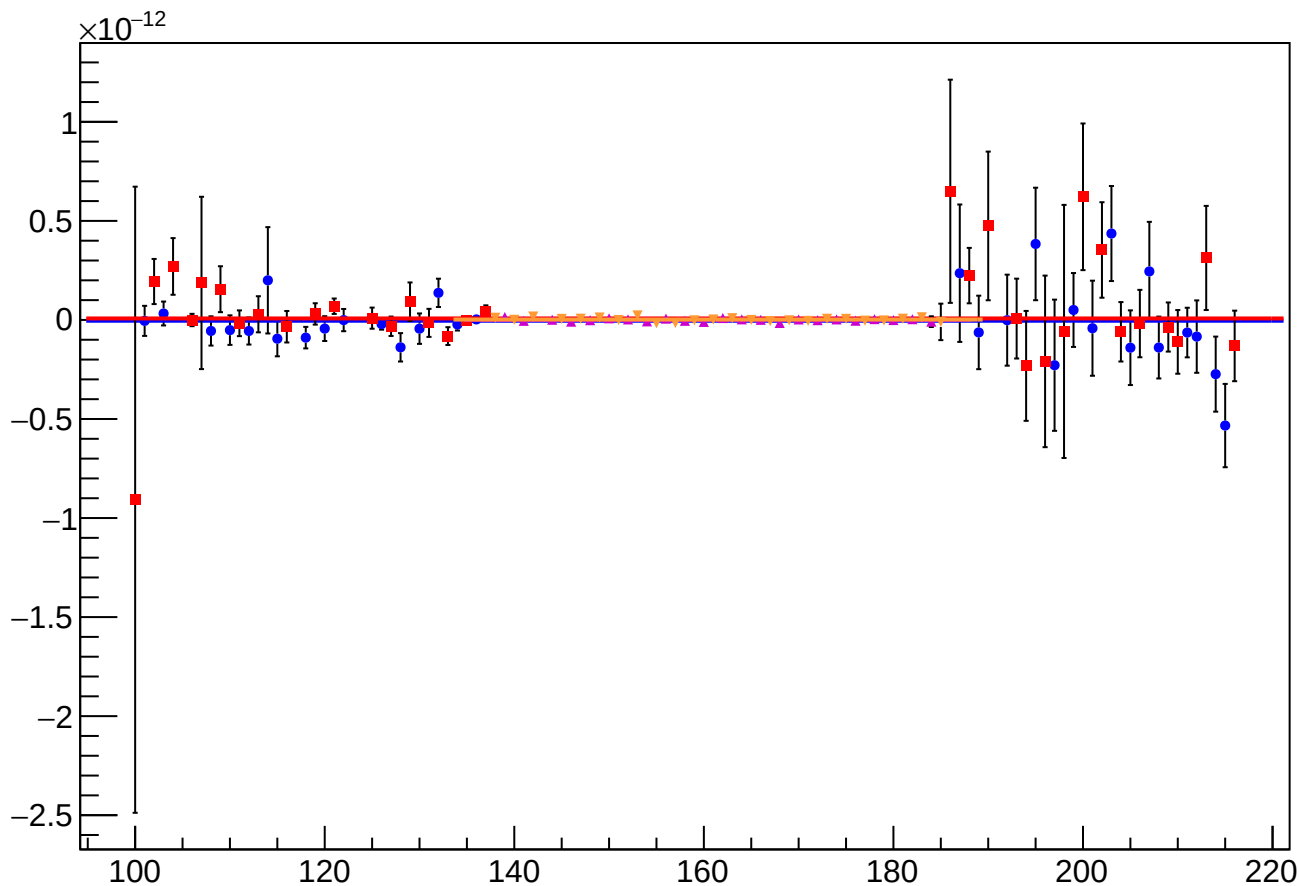
Left In: 2190.163 $\pm$ 0.362  $\chi^2$ /NDF:2542.8/22

+ sign 2346.786 $\pm$ 0.272  $\chi^2$ /NDF: 1260670.1/54

All: 2354.624 $\pm$ 0.193  $\chi^2$ /NDF: 2592725.0/11

- sign 2362.620 $\pm$ 0.275  $\chi^2$ /NDF: 1330377.4/55

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.4/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.8/32

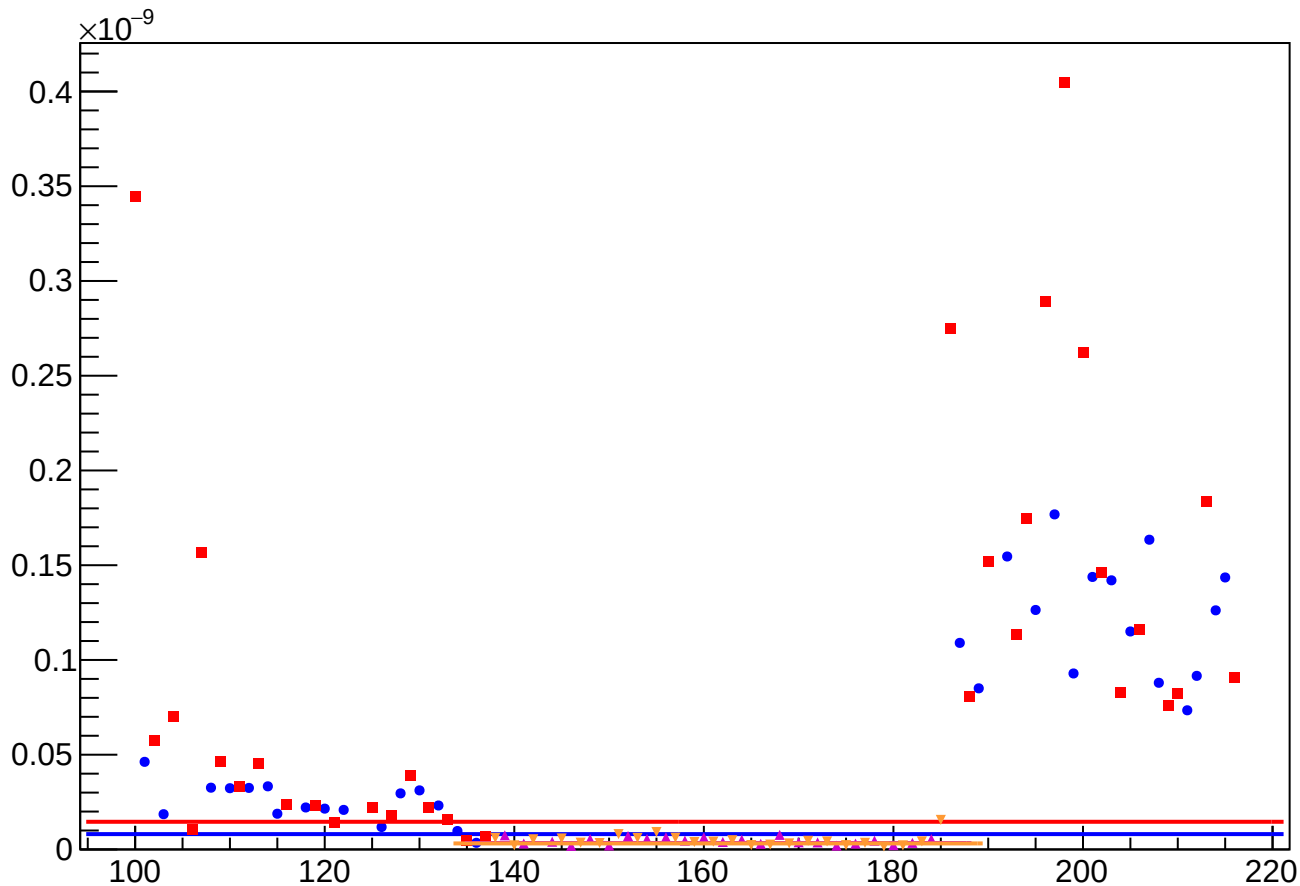
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.3/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.2/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.7/55

asym\_us\_dd\_at1lr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11346439.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2065501.9/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11409188.8/32

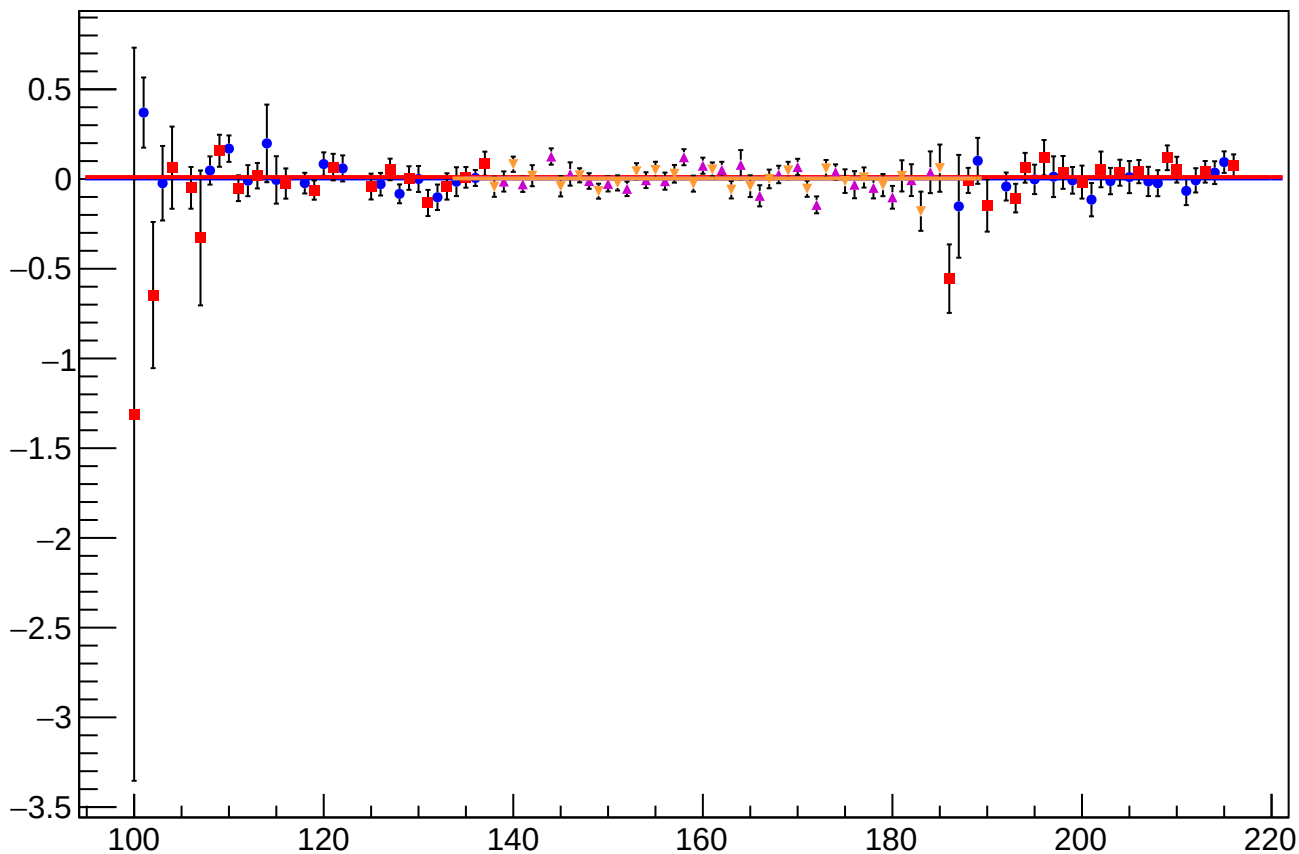
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1703481.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14583217.0/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30376686.1/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15764454.3/55

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.7/30

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 35.3/32

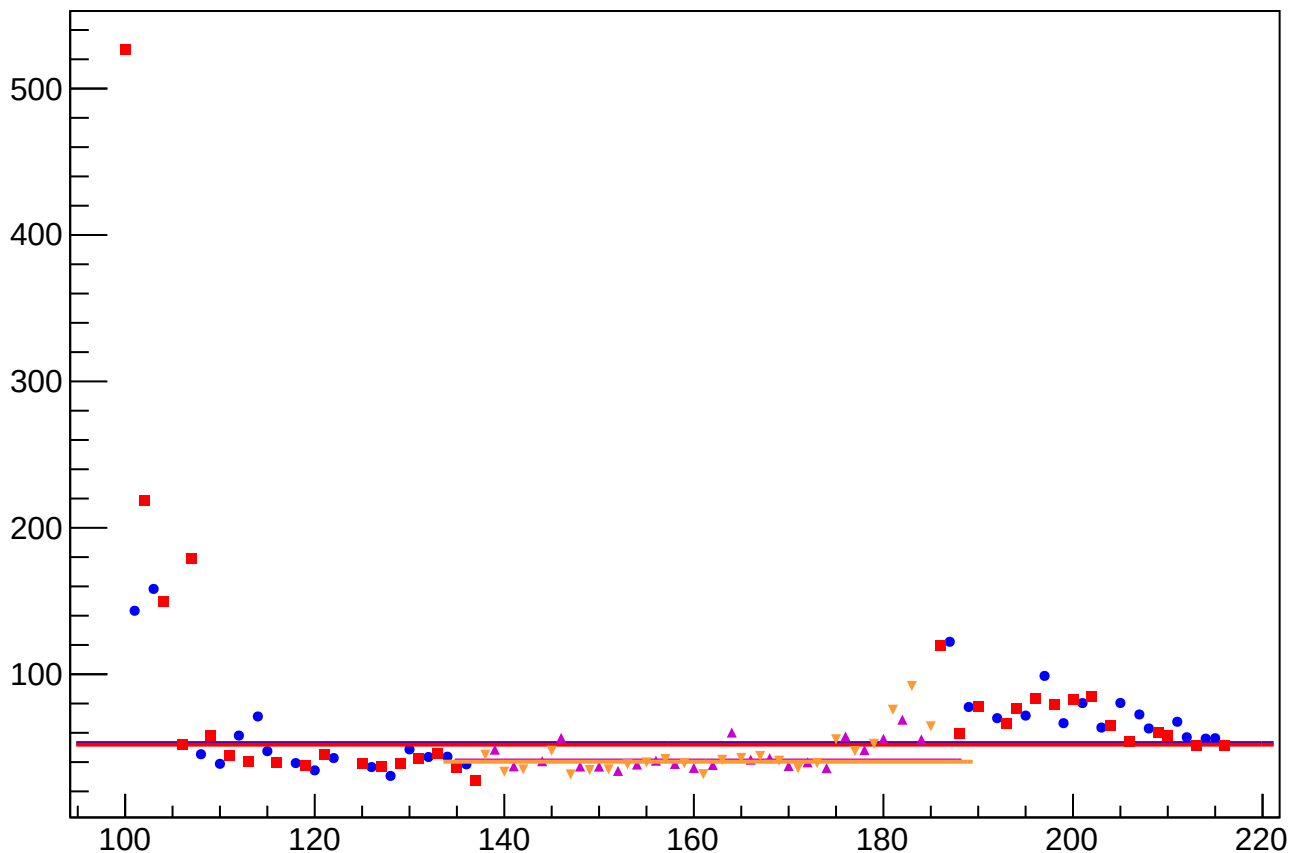
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 45.5/54

All:  $0.005 \pm 0.006$   $\chi^2/\text{NDF}$ : 122.5/110

- sign  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 76.8/55

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 52.946 $\pm$ 0.010  $\chi^2$ /NDF: 3583139.9/30

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489065.3/23

Right Out: 51.941 $\pm$ 0.010  $\chi^2$ /NDF: 3573357.4/32

Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926843.9/22

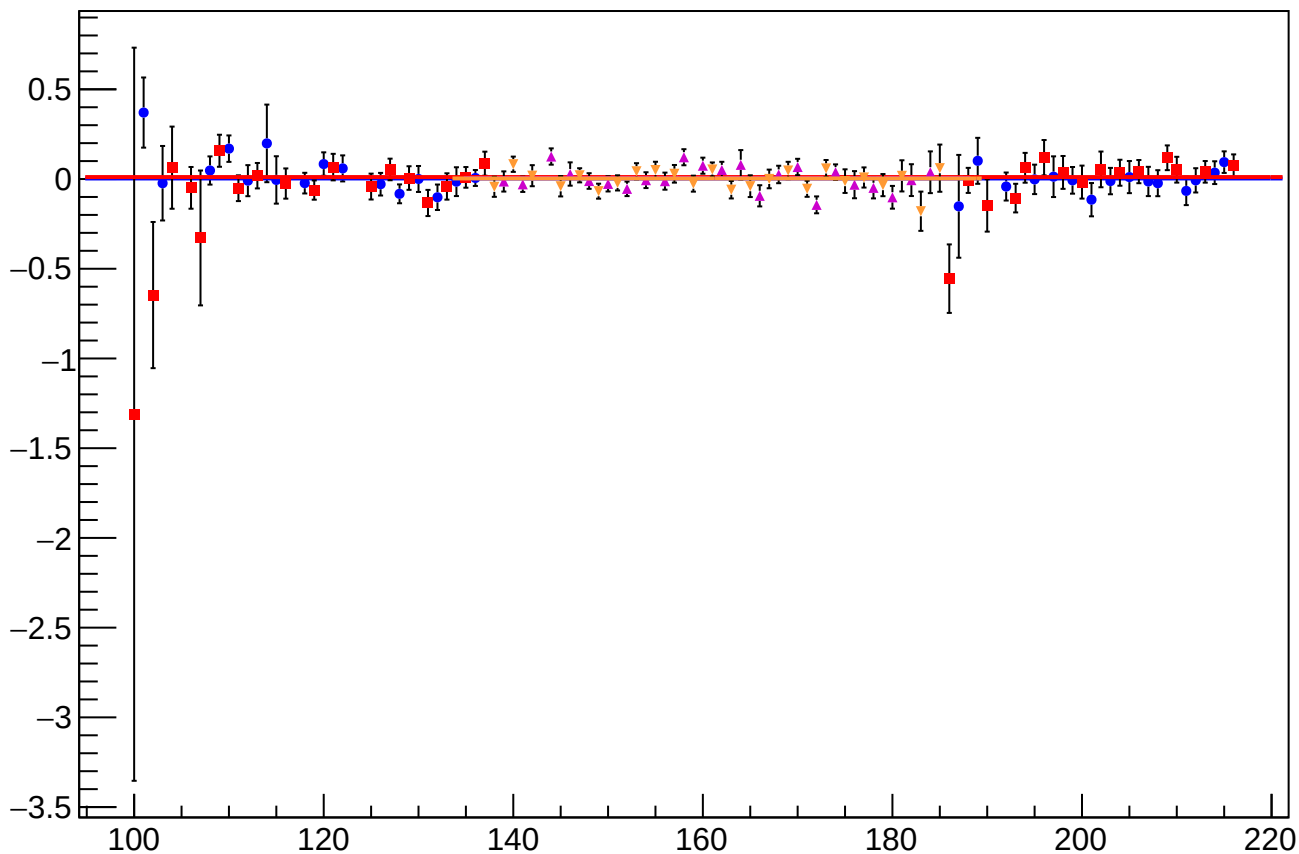
+ sign 44.884 $\pm$ 0.006  $\chi^2$ /NDF: 6157723.9/54

All: 44.991 $\pm$ 0.004  $\chi^2$ /NDF: 11441072.8/110

- sign 45.101 $\pm$ 0.006  $\chi^2$ /NDF: 5282666.3/55



asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.7/30

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 35.3/32

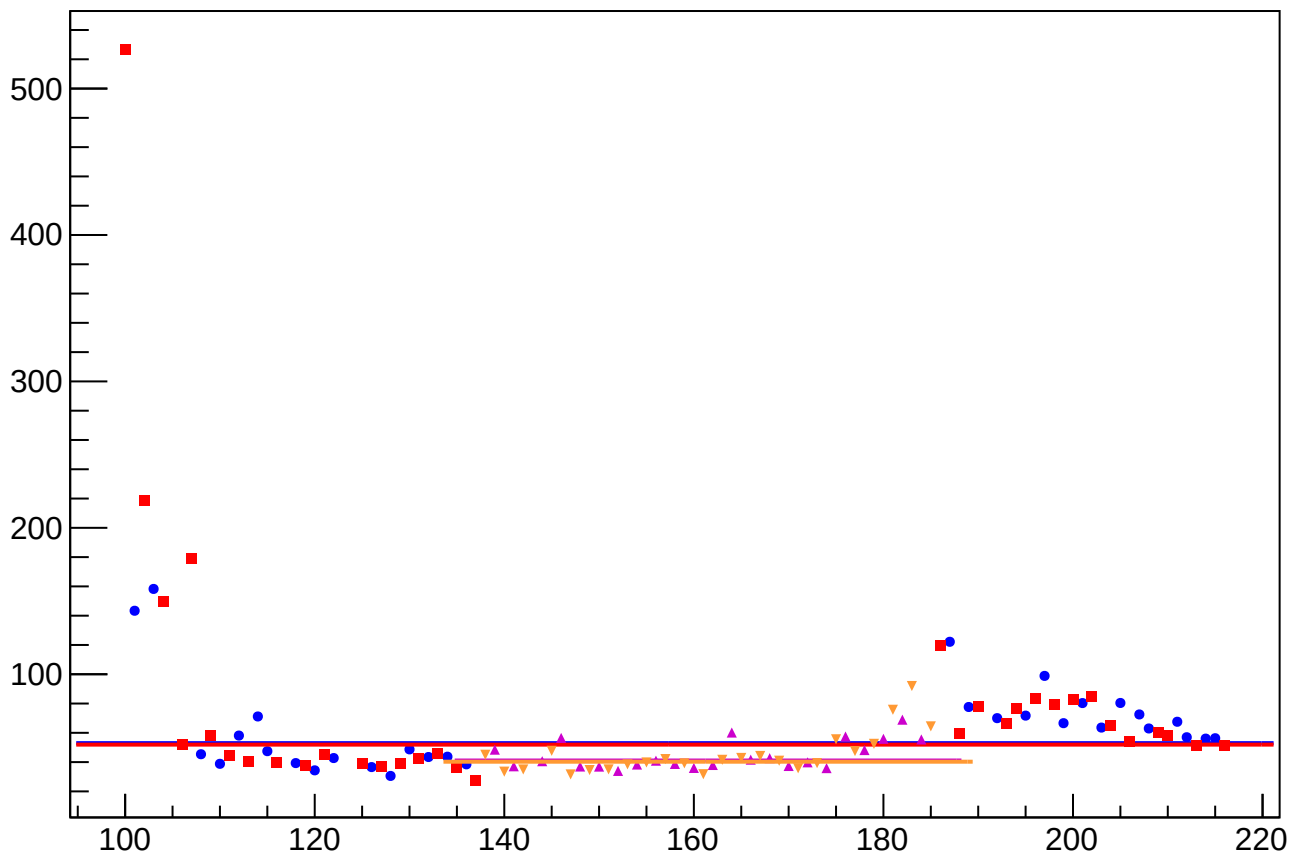
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 45.5/54

All:  $0.005 \pm 0.006$   $\chi^2/\text{NDF}$ : 122.5/110

- sign  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 76.8/55

asym\_us\_dd\_at1lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 52.946 $\pm$ 0.010  $\chi^2$ /NDF: 3583139.9/30

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489065.3/23

Right Out: 51.941 $\pm$ 0.010  $\chi^2$ /NDF: 3573357.4/32

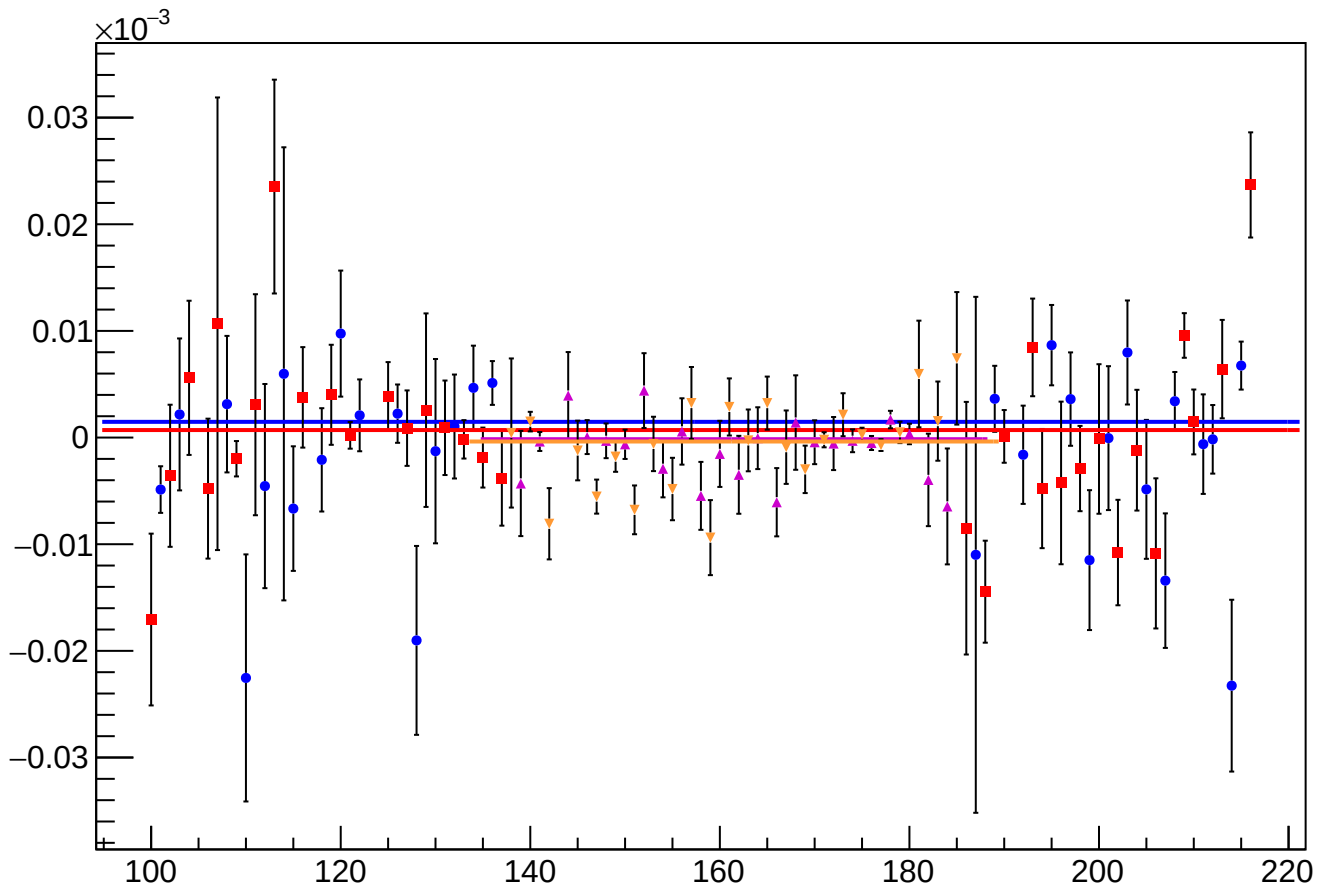
Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926843.9/22

+ sign 44.884 $\pm$ 0.006  $\chi^2$ /NDF: 6157723.9/54

All: 44.991 $\pm$ 0.004  $\chi^2$ /NDF: 11441072.8/110

- sign 45.101 $\pm$ 0.006  $\chi^2$ /NDF: 5282666.3/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.3/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 84.1/32

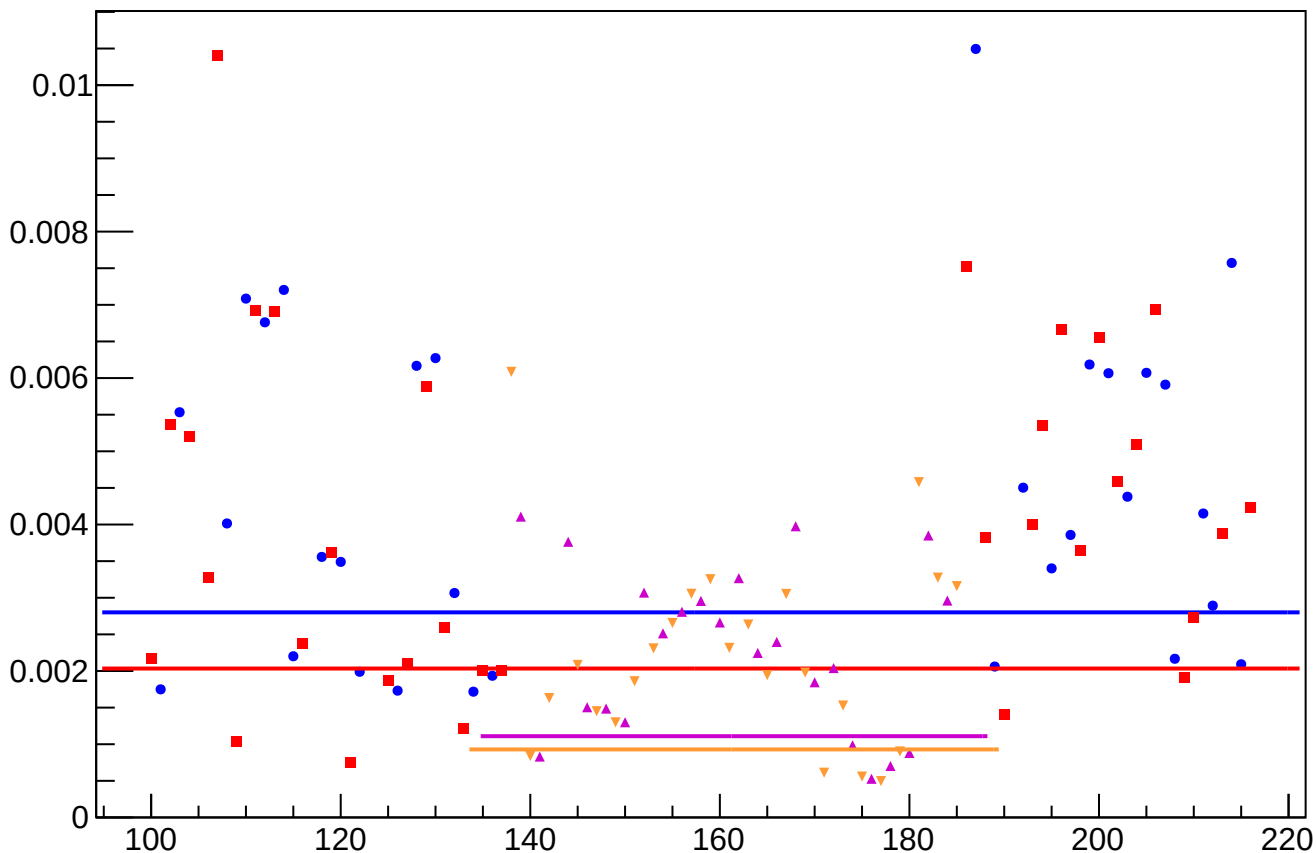
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.9/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.0/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 222.8/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 105.6/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7308322.9/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :12568645.9/23

Right Out: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12784816.1/32

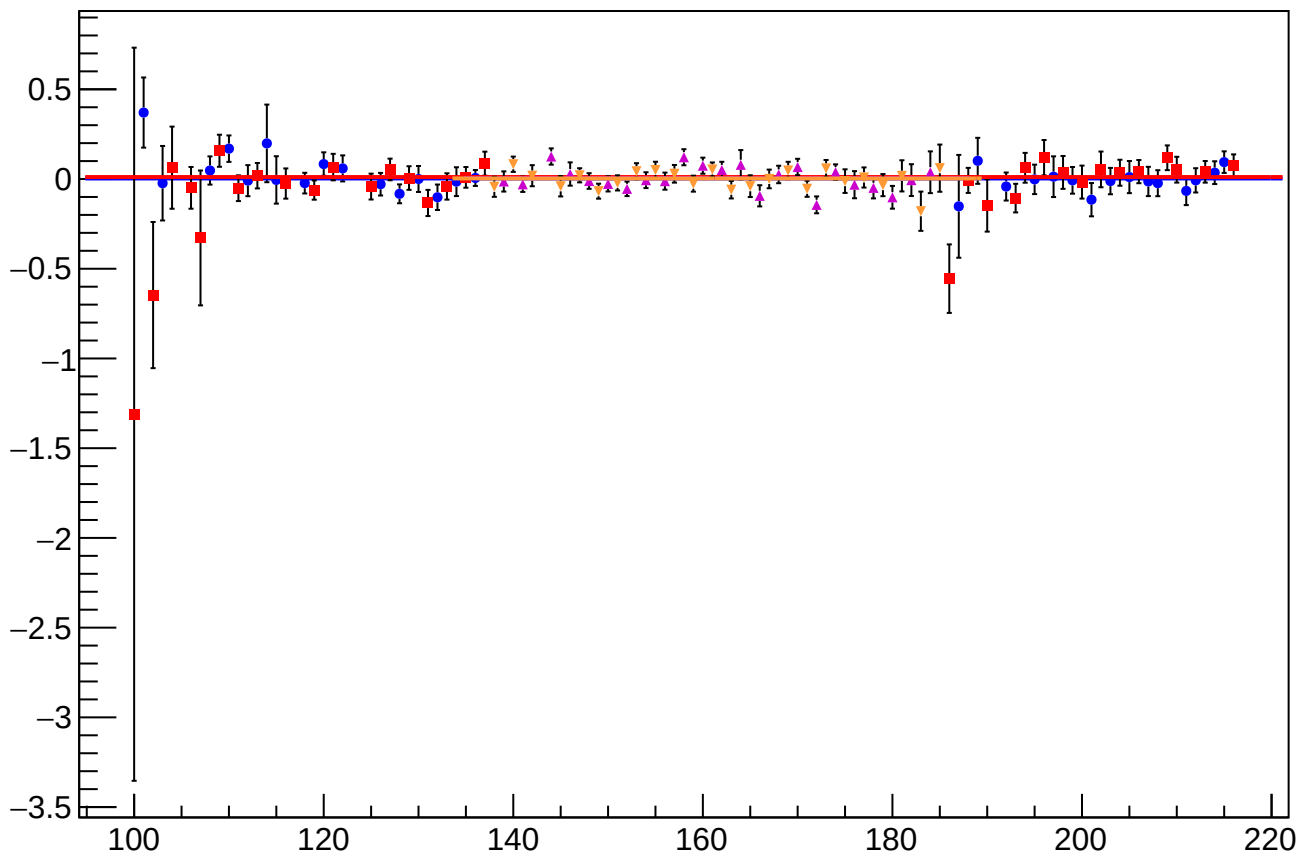
Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ :10930077.0/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 31298477.5/54

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 59080453.4/110

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27469388.7/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.7/30

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 35.3/32

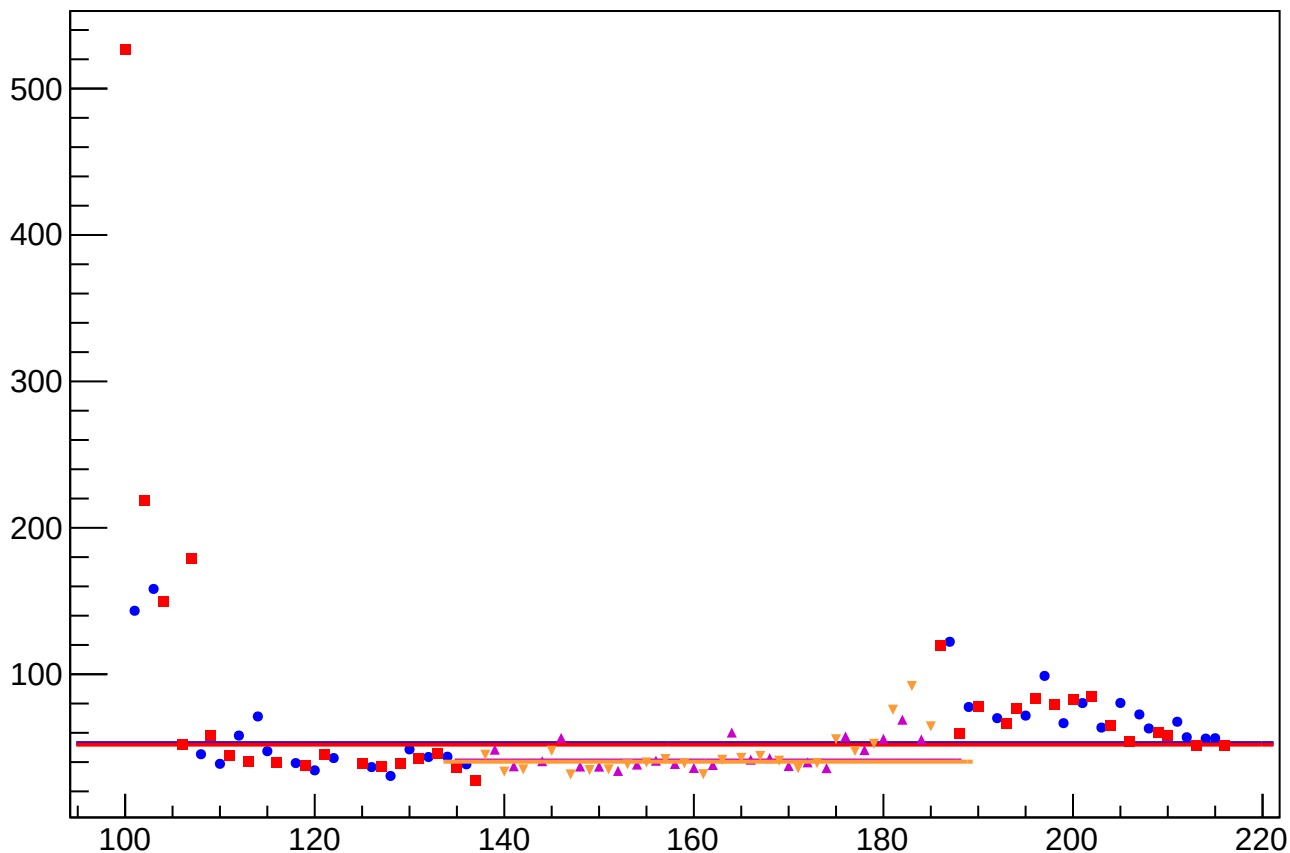
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 45.5/54

All:  $0.005 \pm 0.006$   $\chi^2/\text{NDF}$ : 122.5/110

- sign  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 76.8/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 52.944 $\pm$ 0.010  $\chi^2$ /NDF: 3583785.5/30

Left Out: 40.277 $\pm$ 0.007  $\chi^2$ /NDF: 1489049.7/23

Right Out: 51.942 $\pm$ 0.010  $\chi^2$ /NDF: 3573320.4/32

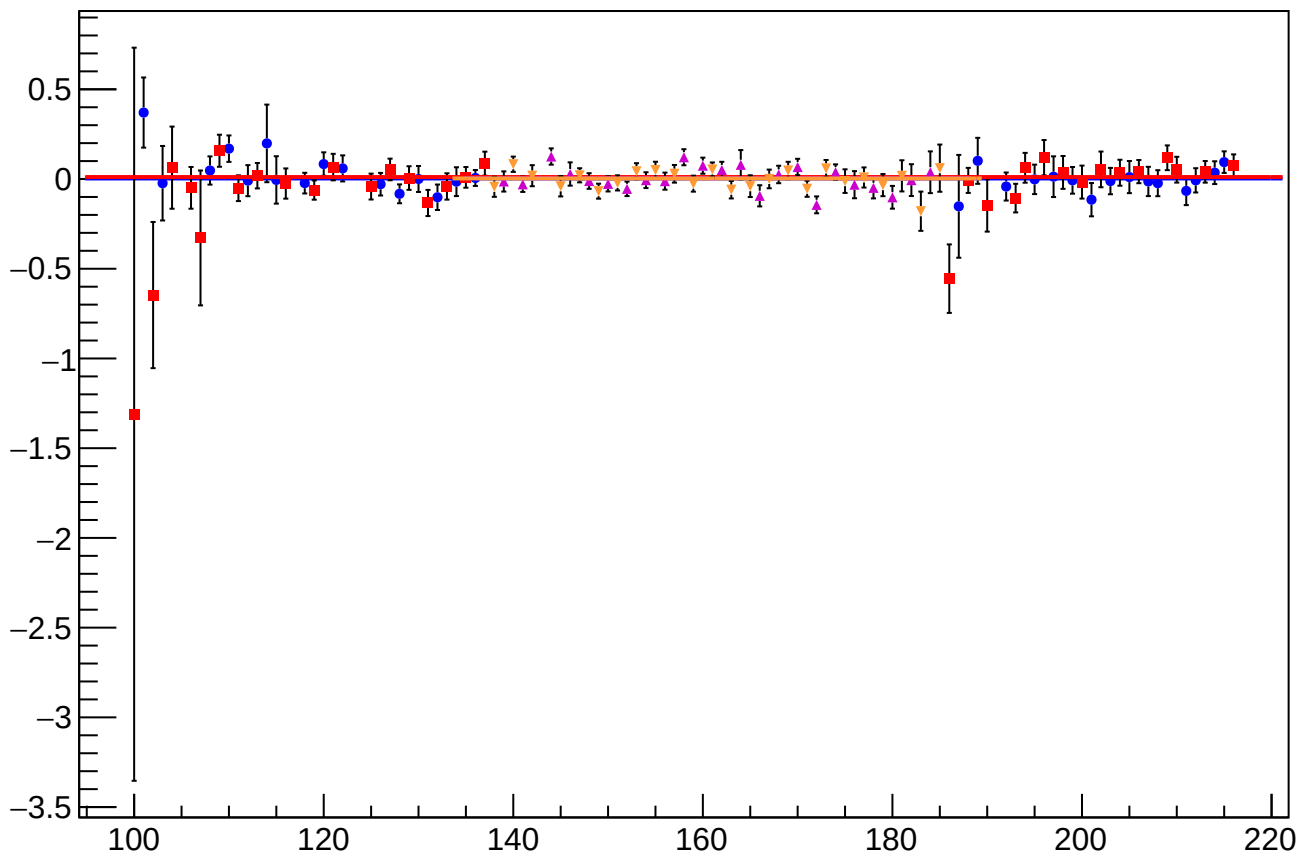
Left In: 41.082 $\pm$ 0.007  $\chi^2$ /NDF: 926883.3/22

+ sign 44.883 $\pm$ 0.006  $\chi^2$ /NDF: 6158063.2/54

All: 44.991 $\pm$ 0.004  $\chi^2$ /NDF: 11441502.0/110

- sign 45.102 $\pm$ 0.006  $\chi^2$ /NDF: 5282752.0/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.014$   $\chi^2/\text{NDF}$ : 23.7/30

Left Out:  $0.003 \pm 0.010$   $\chi^2/\text{NDF}$ : 21.8/23

Right Out:  $0.011 \pm 0.014$   $\chi^2/\text{NDF}$ : 35.3/32

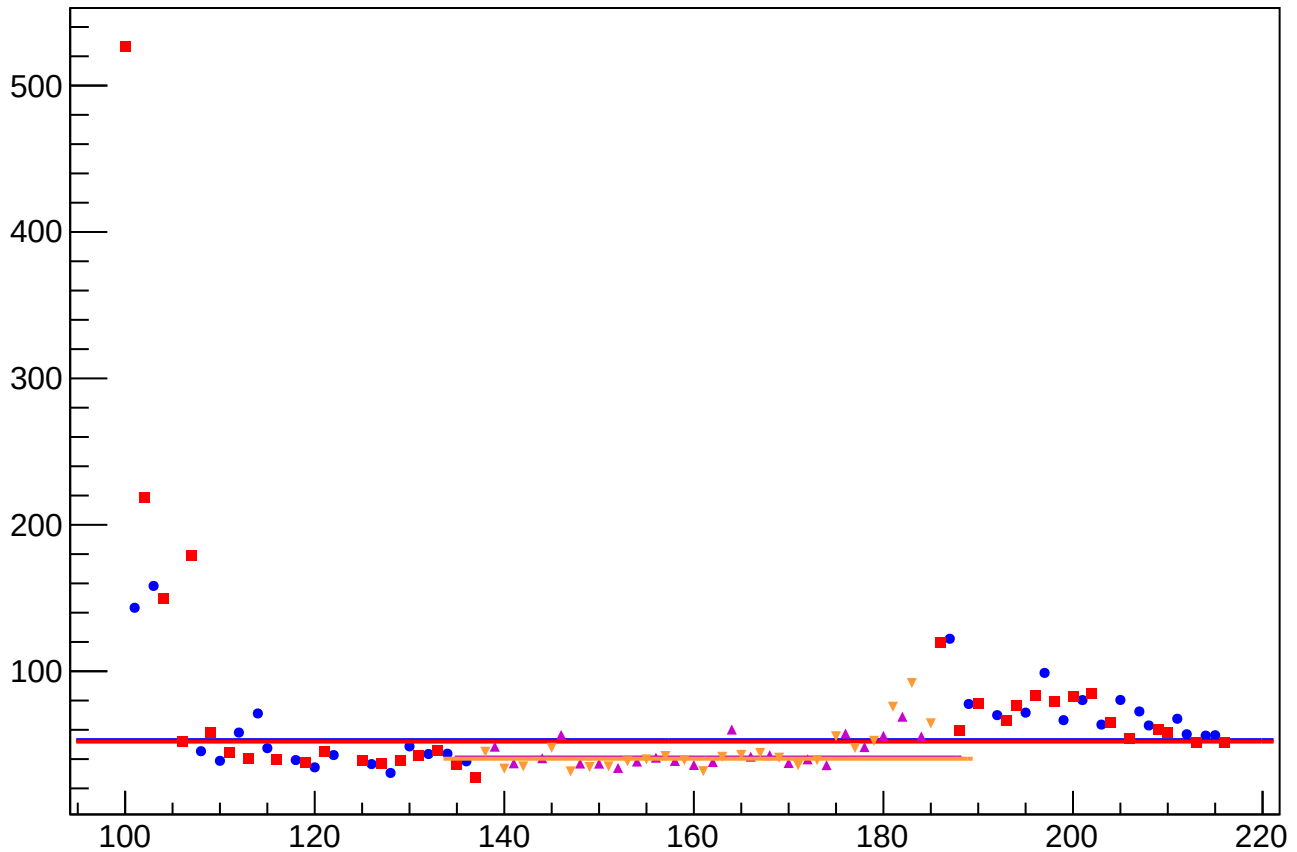
Left In:  $0.005 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.4/22

+ sign  $0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 45.5/54

All:  $0.005 \pm 0.006$   $\chi^2/\text{NDF}$ : 122.5/110

- sign  $0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 76.8/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 52.944 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 3583785.5/30

Left Out: 40.277 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 1489049.7/23

Right Out: 51.942 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 3573320.4/32

Left In: 41.082 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 926883.3/22

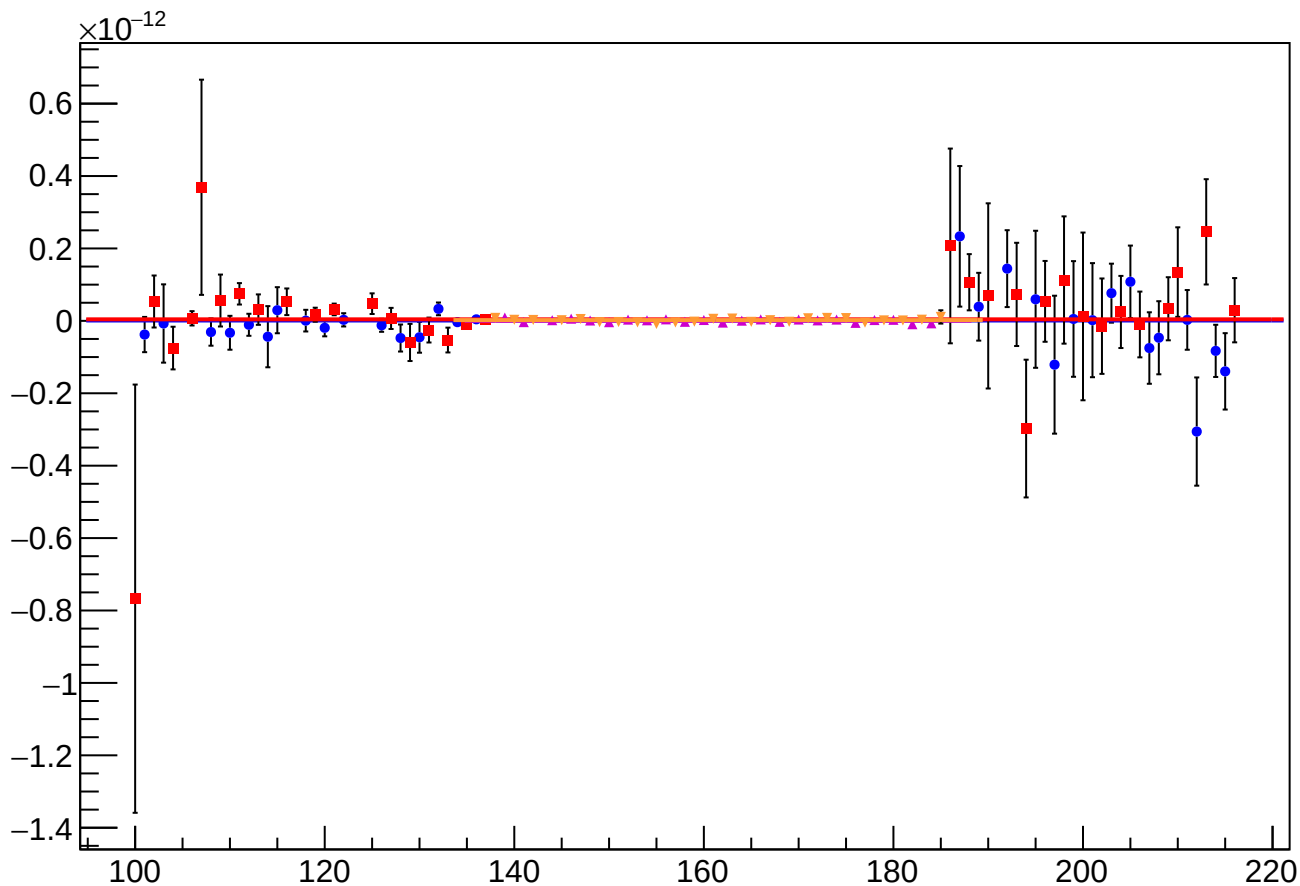
+ sign 44.883 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 6158063.2/54

All: 44.991 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 11441502.0/110

- sign 45.102 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 5282752.0/55



asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.7/32

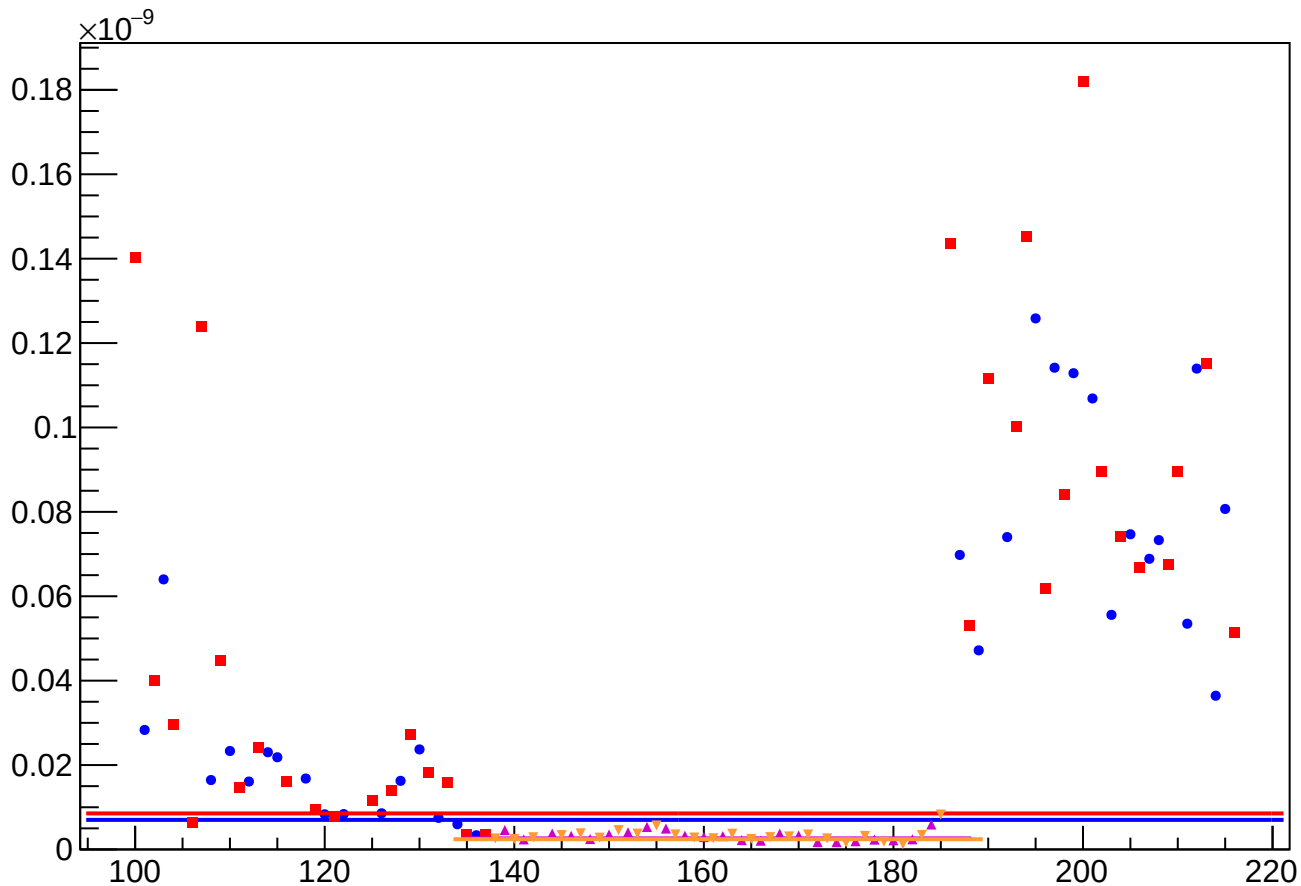
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.9/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 114.2/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.5/55

asym\_us\_dd\_at1lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14202304.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2792453.3/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15087862.4/32

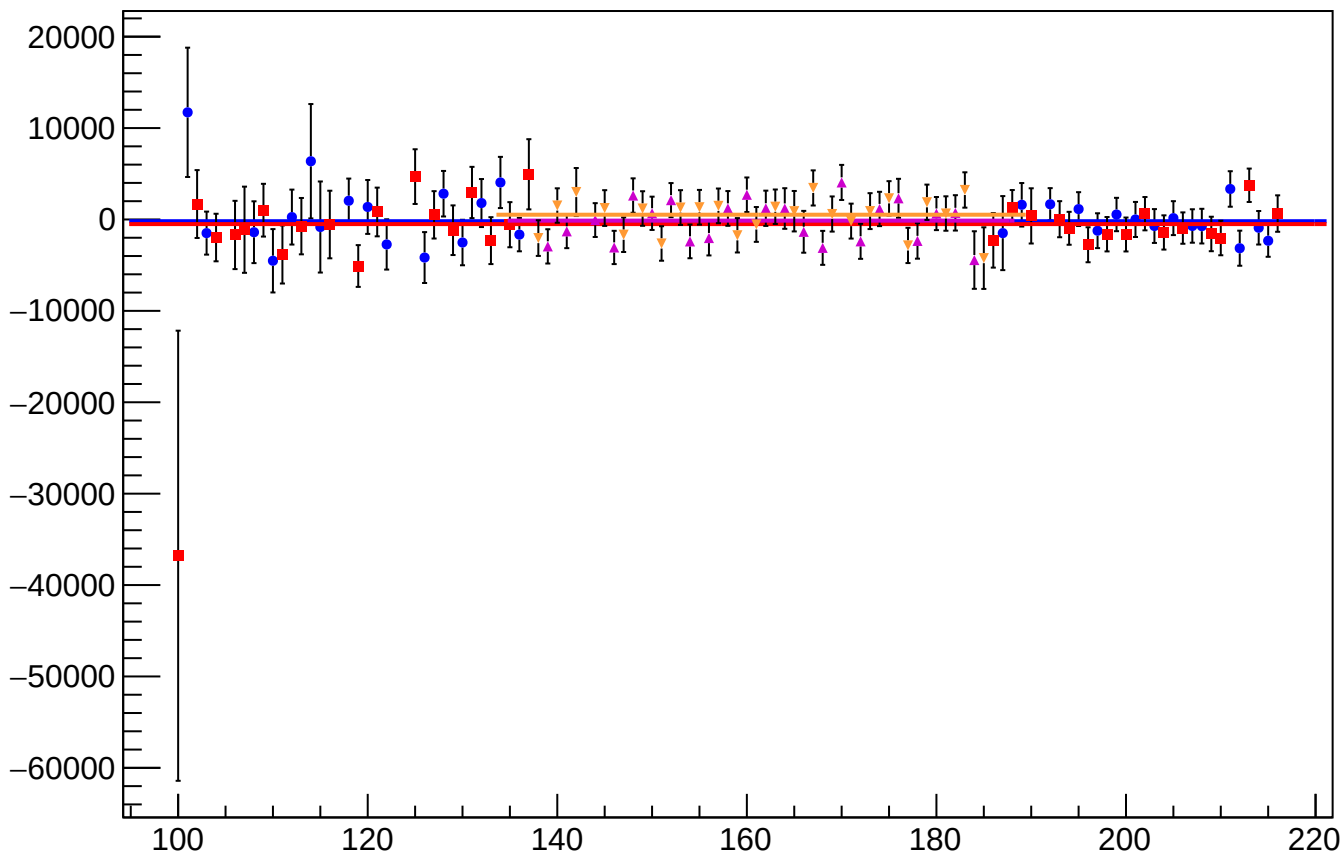
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1949059.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19662633.0/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 39842308.5/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20126317.3/55

# reg\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: -189.273 $\pm$ 408.073  $\chi^2$ /NDF: 26.2/30

Left Out: 519.929 $\pm$ 401.705  $\chi^2$ /NDF: 20.8/23

Right Out: -506.571 $\pm$ 410.558  $\chi^2$ /NDF: 27.0/32

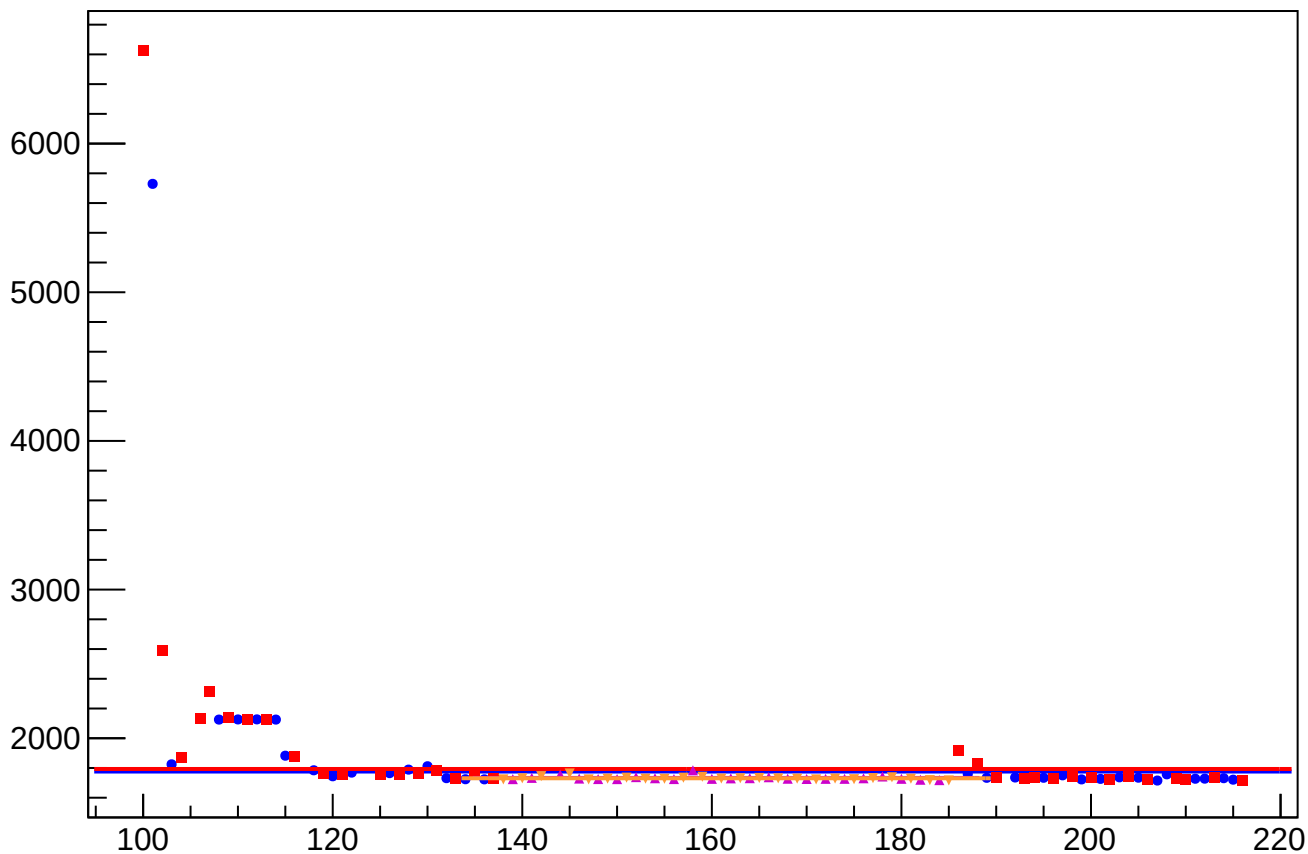
Left In: -126.031 $\pm$ 404.630  $\chi^2$ /NDF: 29.5/22

+ sign 170.905 $\pm$ 286.273  $\chi^2$ /NDF: 48.5/54

All: -69.699 $\pm$ 203.100  $\chi^2$ /NDF: 106.8/110

- sign -313.534 $\pm$ 288.189  $\chi^2$ /NDF: 56.9/55

# reg\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1776.169+/-0.289  $\chi^2/\text{NDF}$ : 721084.3/30

Left Out: 1730.847+/-0.284  $\chi^2/\text{NDF}$ : 969.7/23

Right Out: 1793.282+/-0.290  $\chi^2/\text{NDF}$ : 323118.7/32

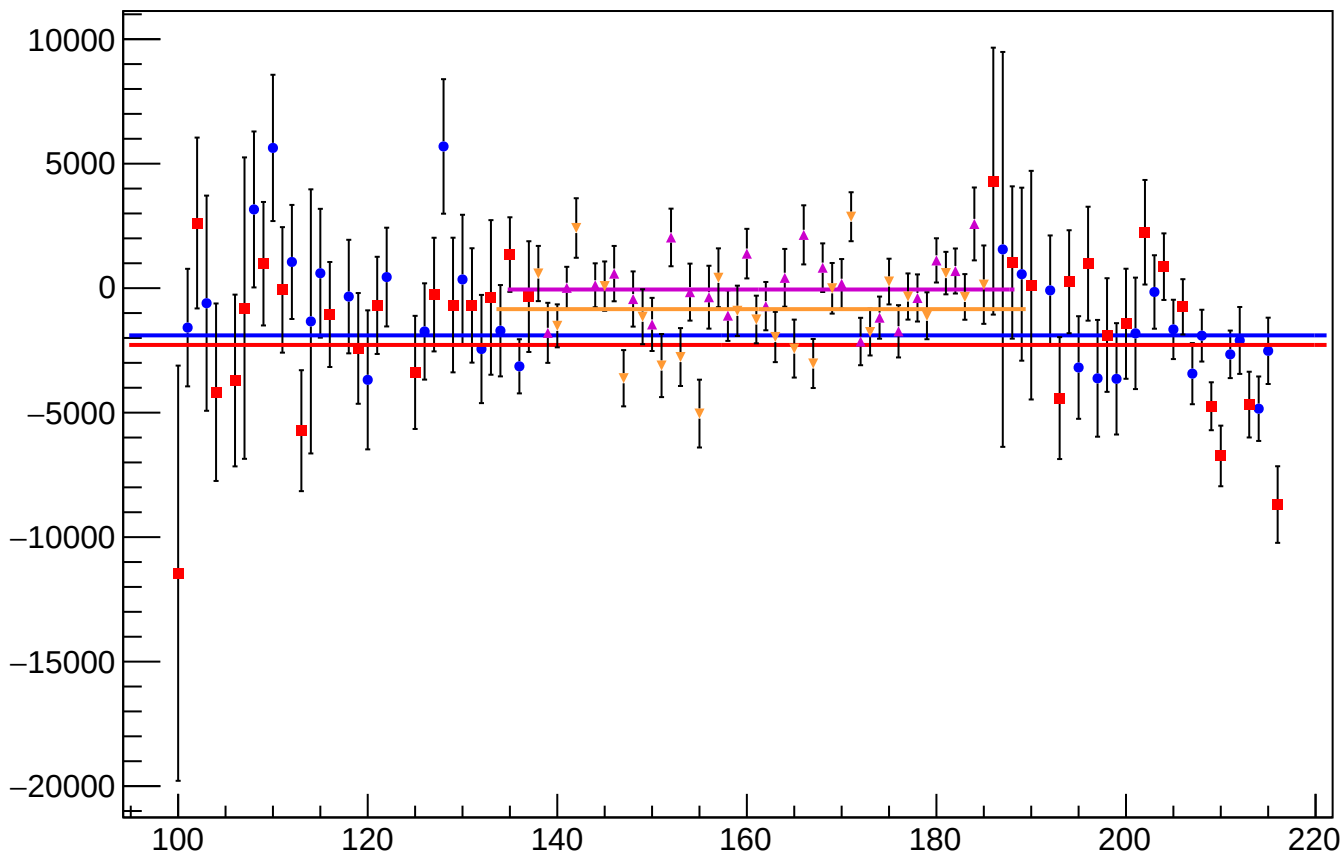
Left In: 1733.007+/-0.286  $\chi^2/\text{NDF}$ : 2237.4/22

+ sign 1753.151+/-0.202  $\chi^2/\text{NDF}$ : 734582.9/54

All: 1757.897+/-0.144  $\chi^2/\text{NDF}$ : 1082912.6/11

- sign 1762.706+/-0.204  $\chi^2/\text{NDF}$ : 347223.1/55

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: -1896.254 $\pm$ 316.355  $\chi^2$ /NDF: 36.1/30

Left Out: -842.437 $\pm$ 210.852  $\chi^2$ /NDF: 62.7/23

Right Out: -2280.653 $\pm$ 343.891  $\chi^2$ /NDF: 78.3/32

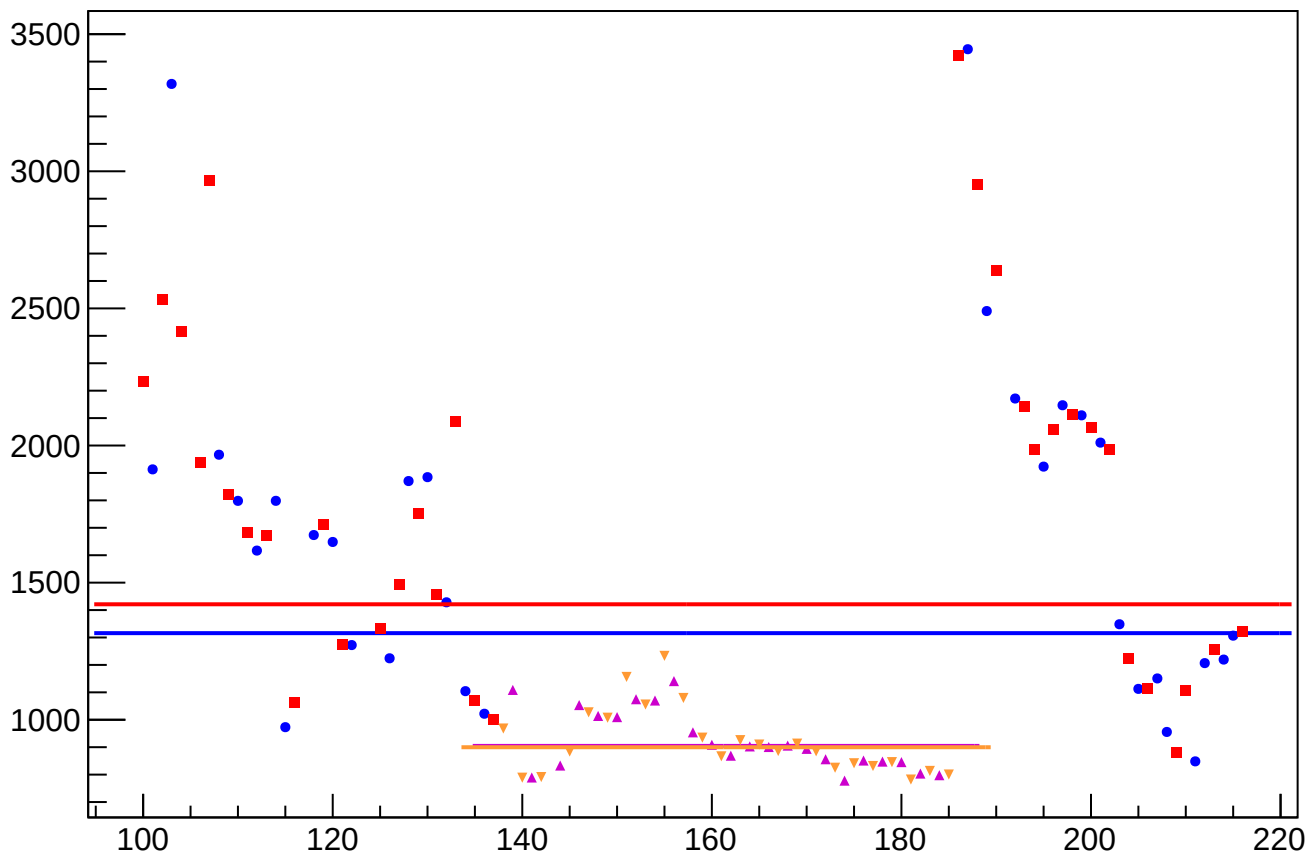
Left In: -53.905 $\pm$ 212.966  $\chi^2$ /NDF: 30.6/22

+ sign -1166.579 $\pm$ 175.453  $\chi^2$ /NDF: 106.5/54

All: -926.660 $\pm$ 125.999  $\chi^2$ /NDF: 249.6/110

- sign -671.165 $\pm$ 181.058  $\chi^2$ /NDF: 139.2/55

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 1315.848 $\pm$ 0.224  $\chi^2$ /NDF: 3607920.3/30

Left Out: 899.811 $\pm$ 0.149  $\chi^2$ /NDF: 495328.4/23

Right Out: 1421.092 $\pm$ 0.243  $\chi^2$ /NDF: 3960462.7/32

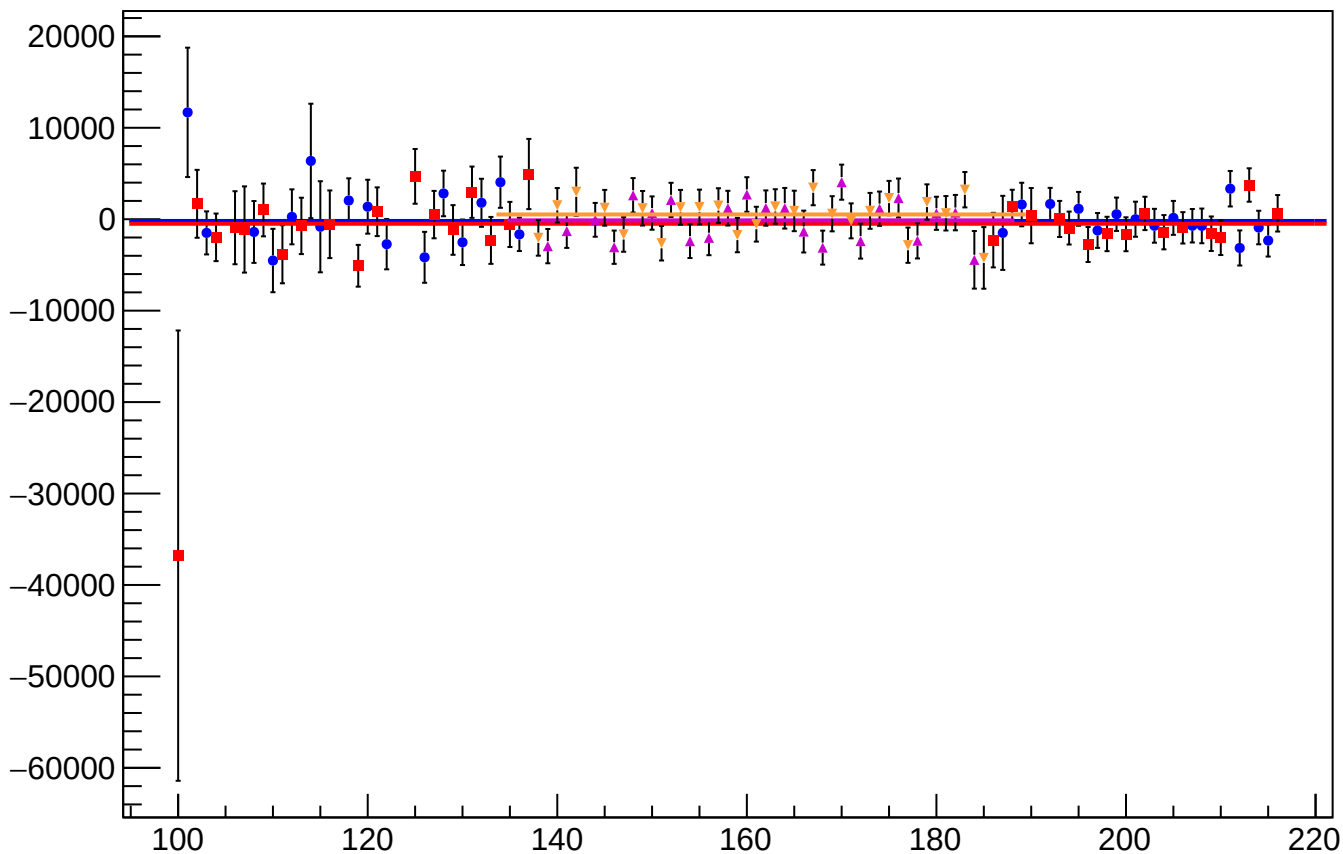
Left In: 904.656 $\pm$ 0.151  $\chi^2$ /NDF: 452251.7/22

+ sign 1027.780 $\pm$ 0.124  $\chi^2$ /NDF: 6498257.1/54

All: 1037.482 $\pm$ 0.089  $\chi^2$ /NDF: 14183766.6/100

- sign 1047.813 $\pm$ 0.128  $\chi^2$ /NDF: 7672881.6/55

# cor\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $-189.582 \pm 408.073$   $\chi^2/\text{NDF}$ : 26.2/30

Left Out:  $519.957 \pm 401.705$   $\chi^2/\text{NDF}$ : 20.8/23

Right Out:  $-496.799 \pm 410.869$   $\chi^2/\text{NDF}$ : 26.9/32

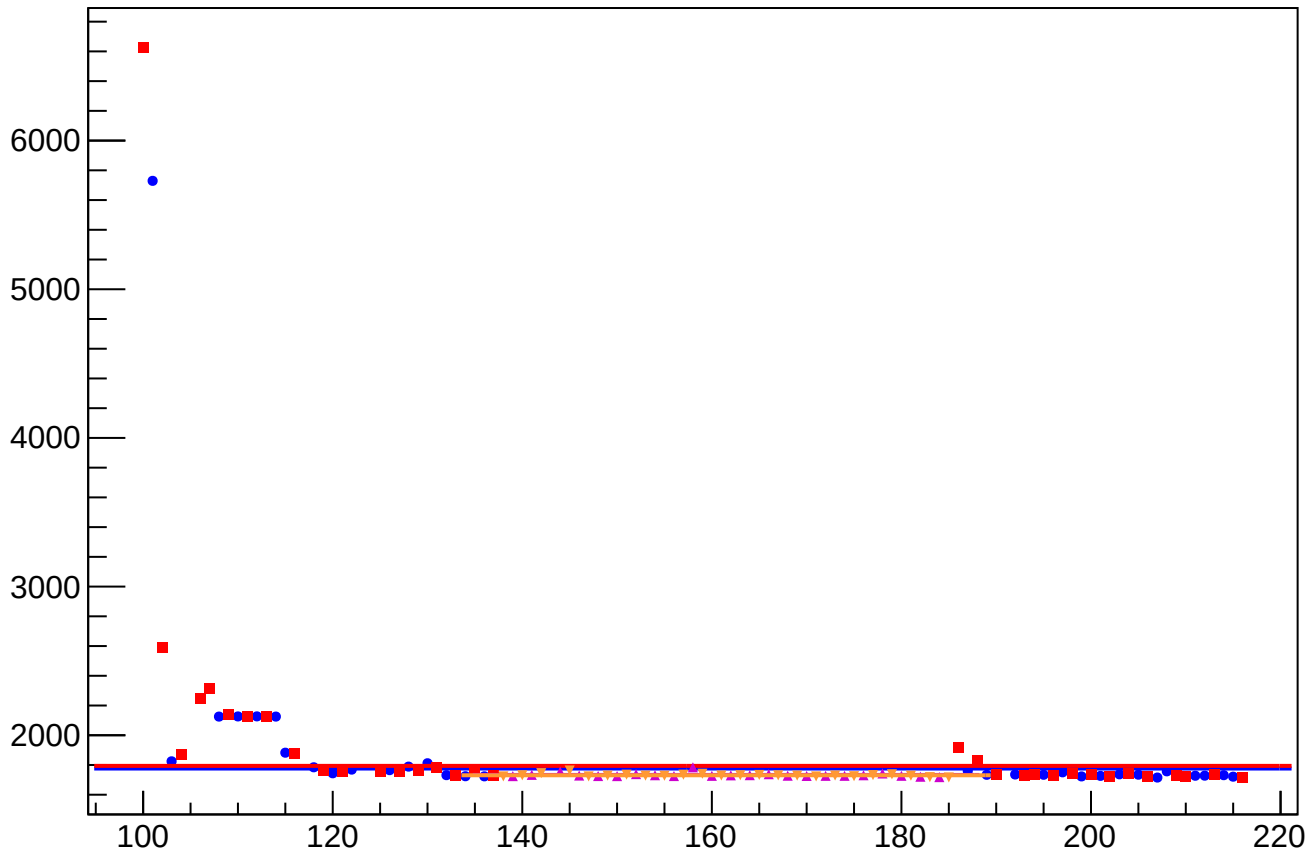
Left In:  $-126.091 \pm 404.630$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $170.767 \pm 286.273$   $\chi^2/\text{NDF}$ : 48.5/54

All:  $-67.233 \pm 203.138$   $\chi^2/\text{NDF}$ : 106.6/110

- sign  $-308.609 \pm 288.297$   $\chi^2/\text{NDF}$ : 56.7/55

# cor\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1776.169 $\pm$ 0.289  $\chi^2$ /NDF: 721084.1/30

Left Out: 1730.847 $\pm$ 0.284  $\chi^2$ /NDF: 969.7/23

Right Out: 1794.002 $\pm$ 0.291  $\chi^2$ /NDF: 332677.1/32

Left In: 1733.007 $\pm$ 0.286  $\chi^2$ /NDF: 2237.4/22

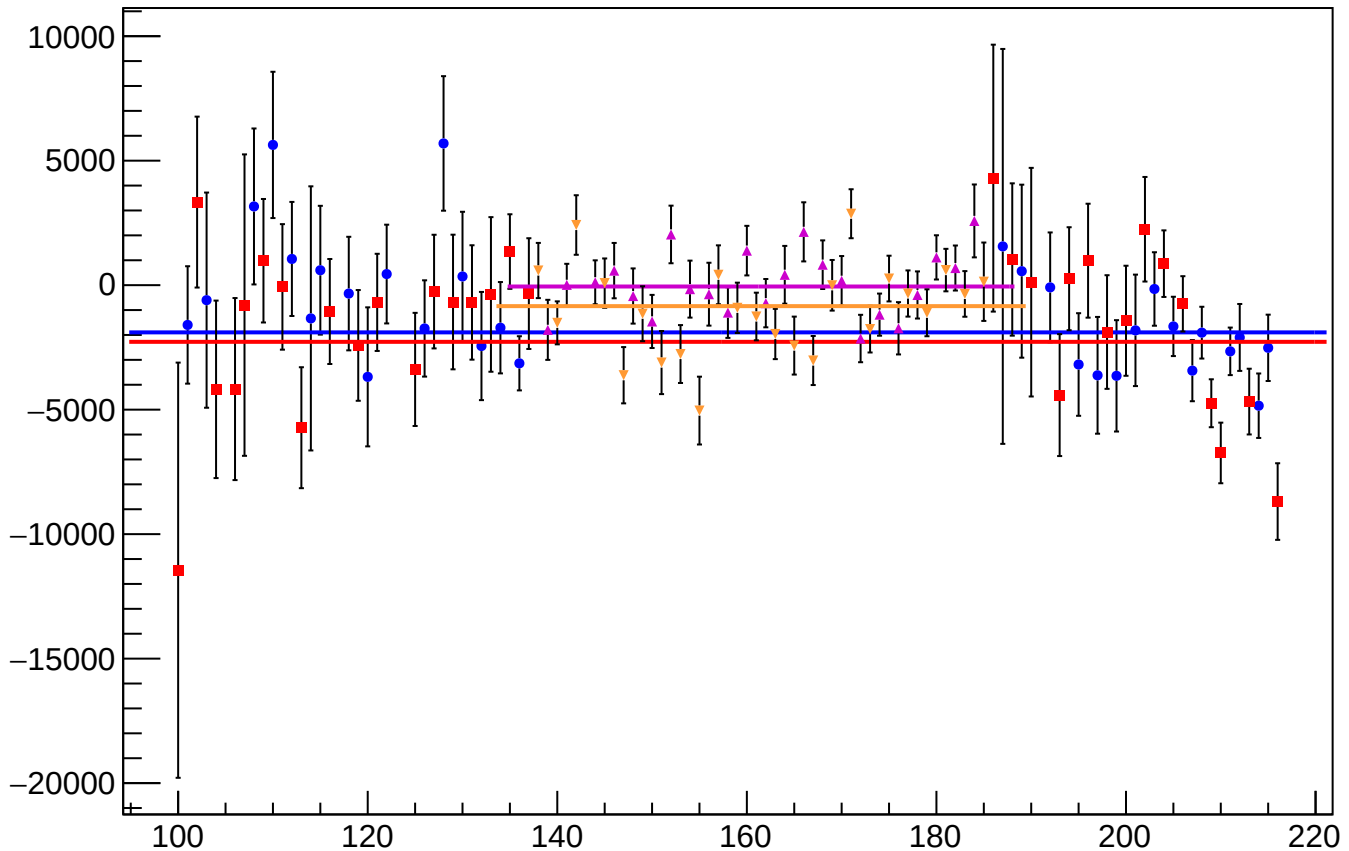
+ sign 1753.151 $\pm$ 0.202  $\chi^2$ /NDF: 734582.8/54

All: 1758.060 $\pm$ 0.144  $\chi^2$ /NDF: 1093057.4/11

- sign 1763.038 $\pm$ 0.204  $\chi^2$ /NDF: 357290.3/55



asym\_us\_dd\_at1lr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In:  $-1896.452 \pm 316.346$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-842.473 \pm 210.853$   $\chi^2/\text{NDF}$ : 62.7/23

Right Out:  $-2276.013 \pm 344.077$   $\chi^2/\text{NDF}$ : 79.0/32

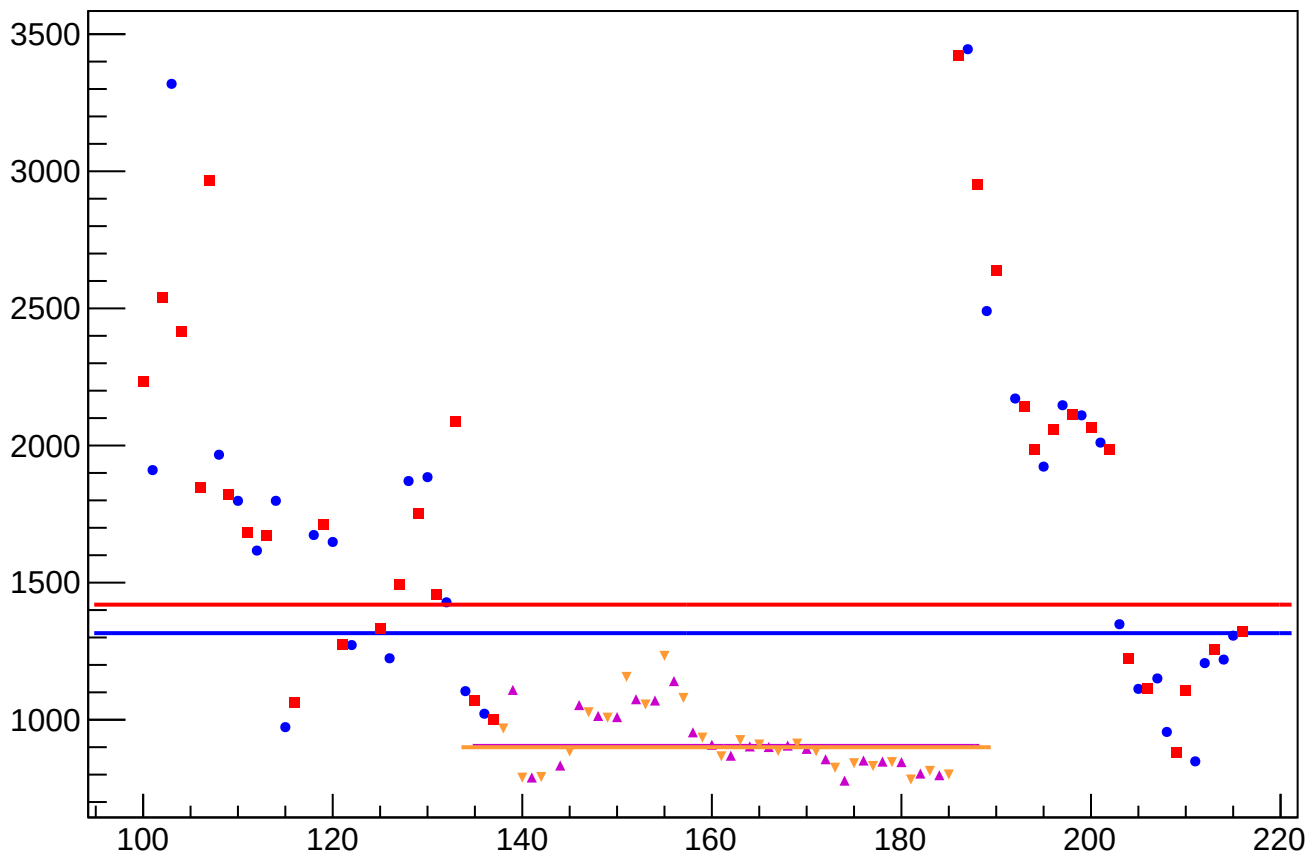
Left In:  $-53.927 \pm 212.965$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-1166.679 \pm 175.452$   $\chi^2/\text{NDF}$ : 106.5/54

All:  $-925.899 \pm 126.008$   $\chi^2/\text{NDF}$ : 250.2/110

- sign  $-669.409 \pm 181.085$   $\chi^2/\text{NDF}$ : 139.8/55

asym\_us\_dd\_at1lr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 1315.823 $\pm$ 0.224  $\chi^2/\text{NDF}$ : 3607243.2/30

Left Out: 899.814 $\pm$ 0.149  $\chi^2/\text{NDF}$ : 495276.2/23

Right Out: 1419.736 $\pm$ 0.243  $\chi^2/\text{NDF}$ : 3944403.7/32

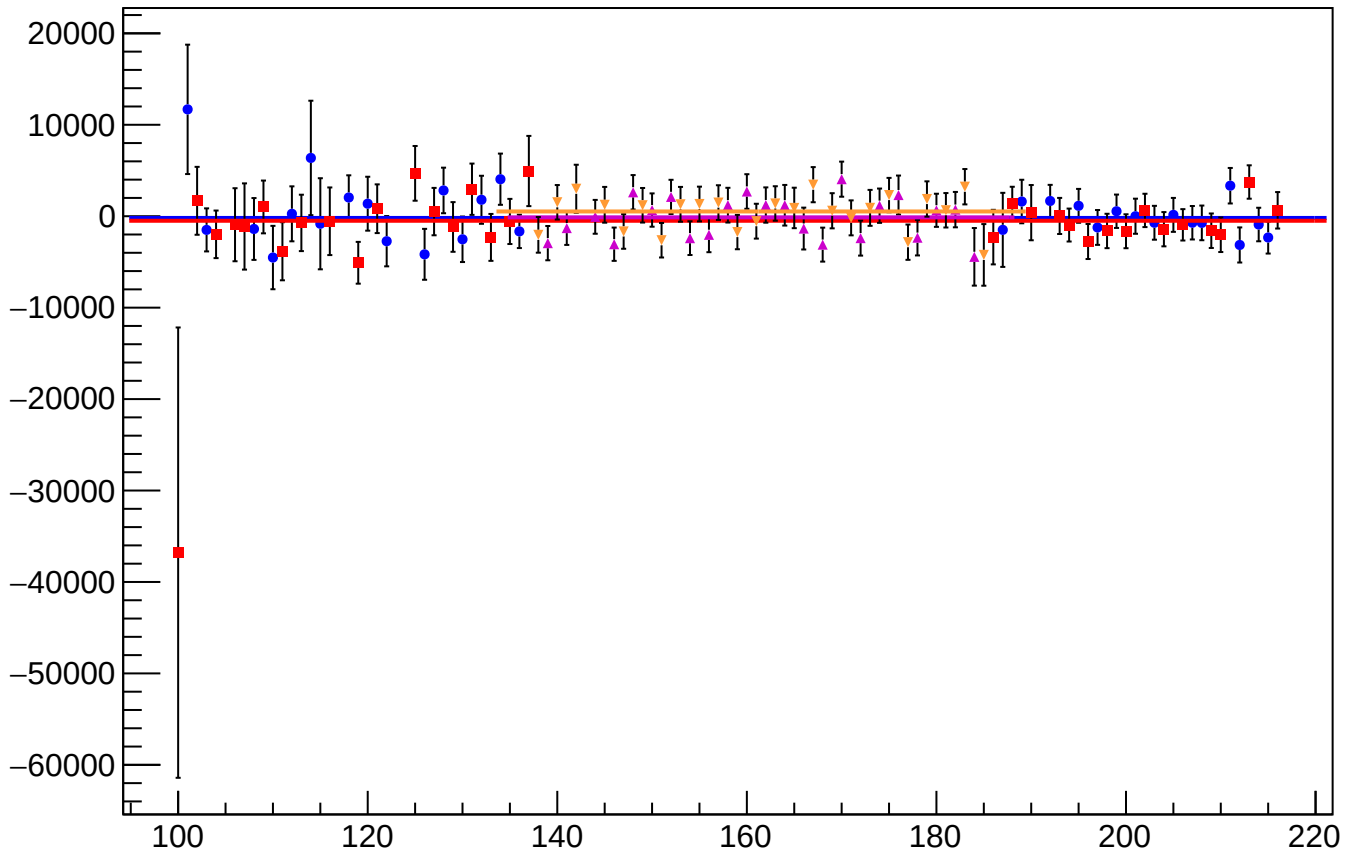
Left In: 904.653 $\pm$ 0.151  $\chi^2/\text{NDF}$ : 452259.2/22

+ sign 1027.780 $\pm$ 0.124  $\chi^2/\text{NDF}$ : 6497303.8/54

All: 1037.242 $\pm$ 0.089  $\chi^2/\text{NDF}$ : 14146558.3/100

- sign 1047.323 $\pm$ 0.128  $\chi^2/\text{NDF}$ : 7637239.1/55

# eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $-189.582 \pm 408.073$   $\chi^2/\text{NDF}$ : 26.2/30

Left Out:  $519.957 \pm 401.705$   $\chi^2/\text{NDF}$ : 20.8/23

Right Out:  $-496.799 \pm 410.869$   $\chi^2/\text{NDF}$ : 26.9/32

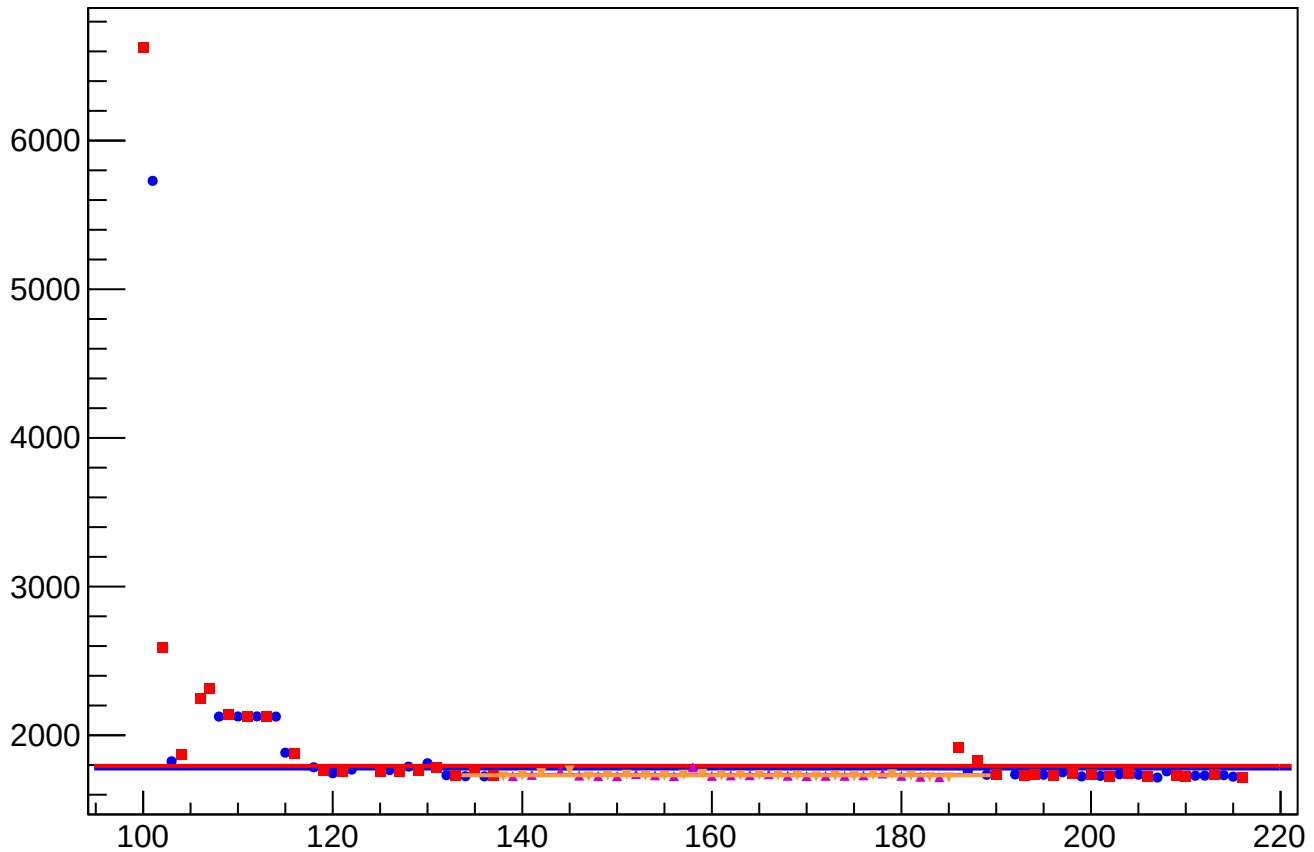
Left In:  $-126.091 \pm 404.630$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $170.767 \pm 286.273$   $\chi^2/\text{NDF}$ : 48.5/54

All:  $-67.233 \pm 203.138$   $\chi^2/\text{NDF}$ : 106.6/110

- sign  $-308.609 \pm 288.297$   $\chi^2/\text{NDF}$ : 56.7/55

eigen\_cor\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1776.169+/-0.289  $\chi^2/\text{NDF}$ : 721084.1/30

Left Out: 1730.847+/-0.284  $\chi^2/\text{NDF}$ : 969.7/23

Right Out: 1794.002+/-0.291  $\chi^2/\text{NDF}$ : 332677.1/32

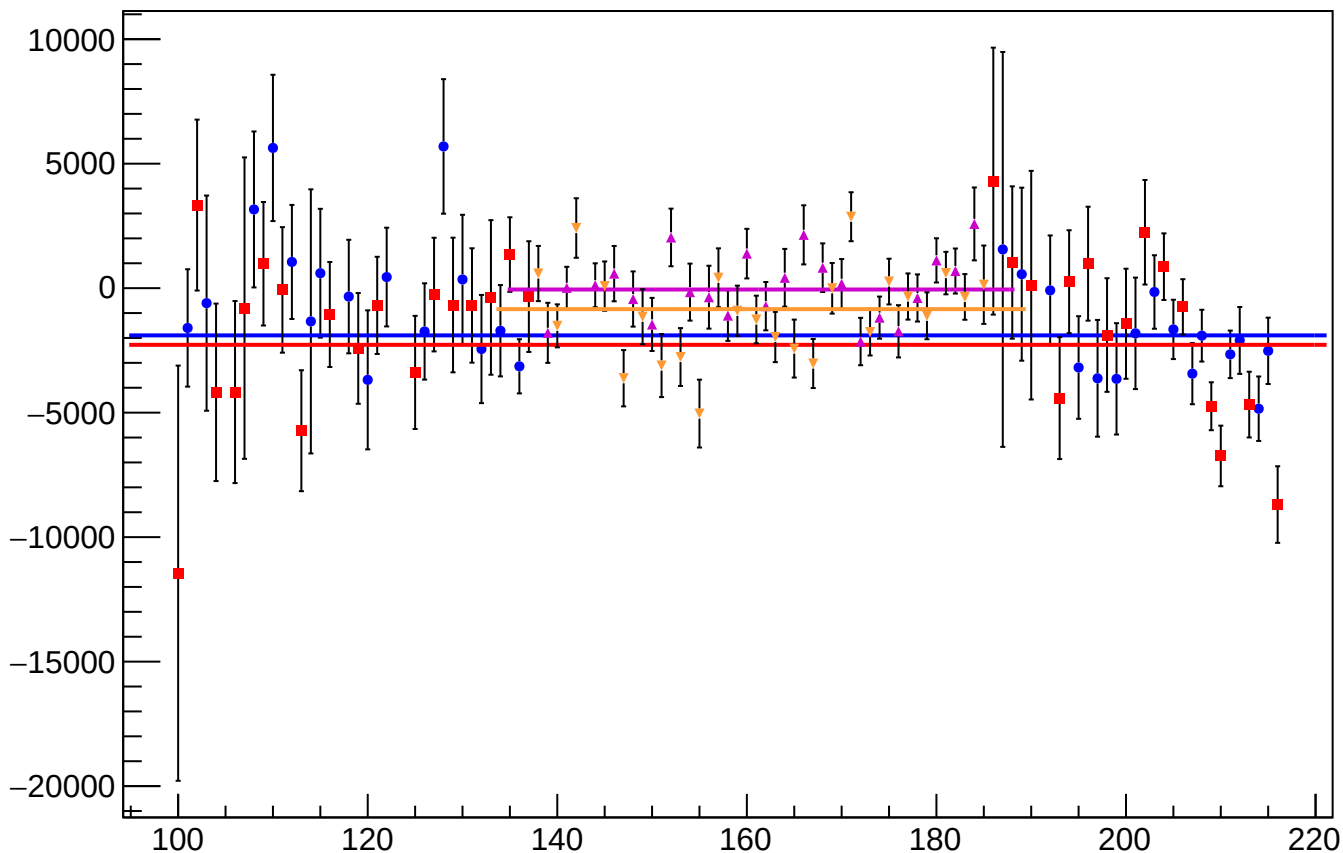
Left In: 1733.007+/-0.286  $\chi^2/\text{NDF}$ : 2237.4/22

+ sign 1753.151+/-0.202  $\chi^2/\text{NDF}$ : 734582.8/54

All: 1758.060+/-0.144  $\chi^2/\text{NDF}$ : 1093057.4/11

- sign 1763.038+/-0.204  $\chi^2/\text{NDF}$ : 357290.3/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1896.452 \pm 316.346$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-842.473 \pm 210.853$   $\chi^2/\text{NDF}$ : 62.7/23

Right Out:  $-2276.013 \pm 344.077$   $\chi^2/\text{NDF}$ : 79.0/32

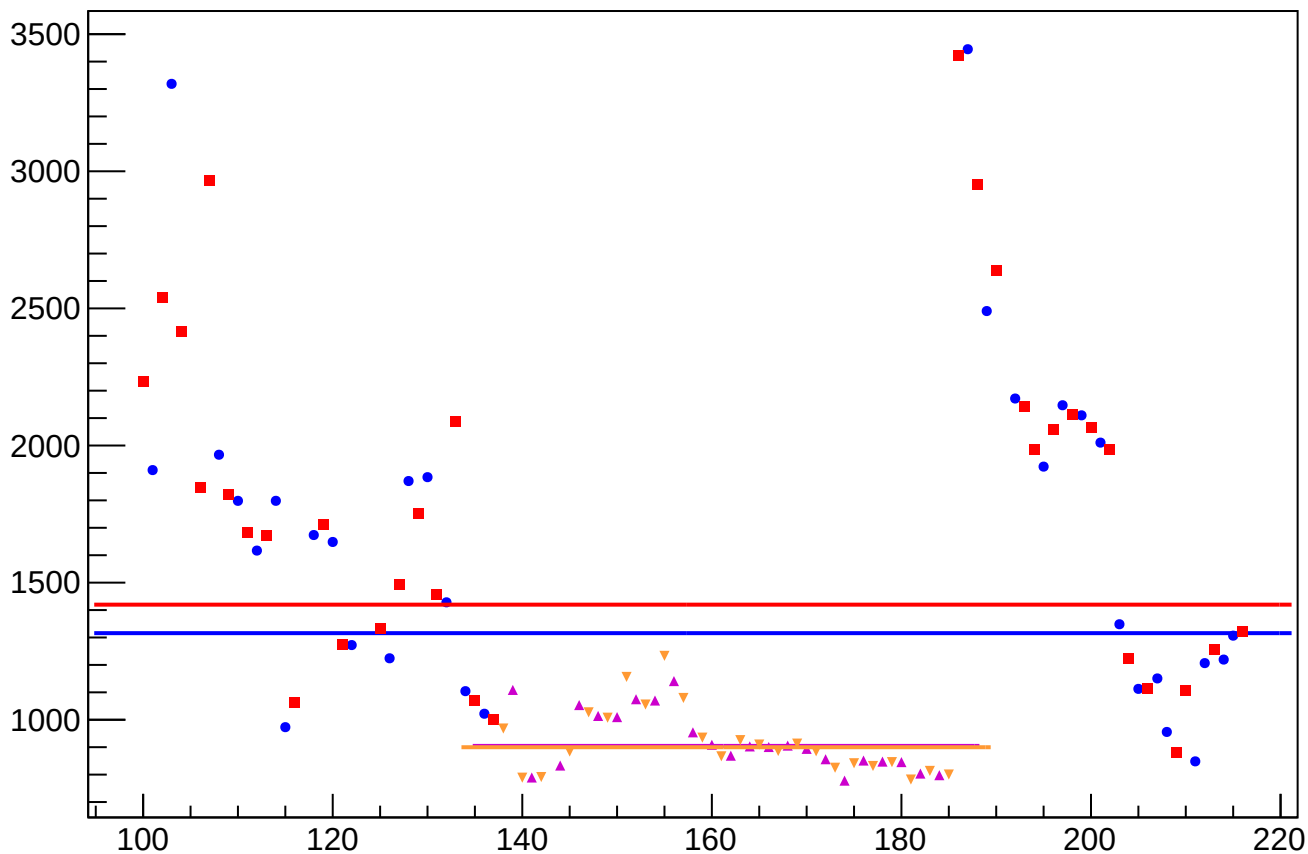
Left In:  $-53.927 \pm 212.965$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $-1166.679 \pm 175.452$   $\chi^2/\text{NDF}$ : 106.5/54

All:  $-925.899 \pm 126.008$   $\chi^2/\text{NDF}$ : 250.2/110

- sign  $-669.409 \pm 181.085$   $\chi^2/\text{NDF}$ : 139.8/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1315.823+/-0.224  $\chi^2/\text{NDF}$ : 3607243.2/30

Left Out: 899.814+/-0.149  $\chi^2/\text{NDF}$ : 495276.2/23

+ sign 1027.780+/-0.124  $\chi^2/\text{NDF}$ : 6497303.8/54

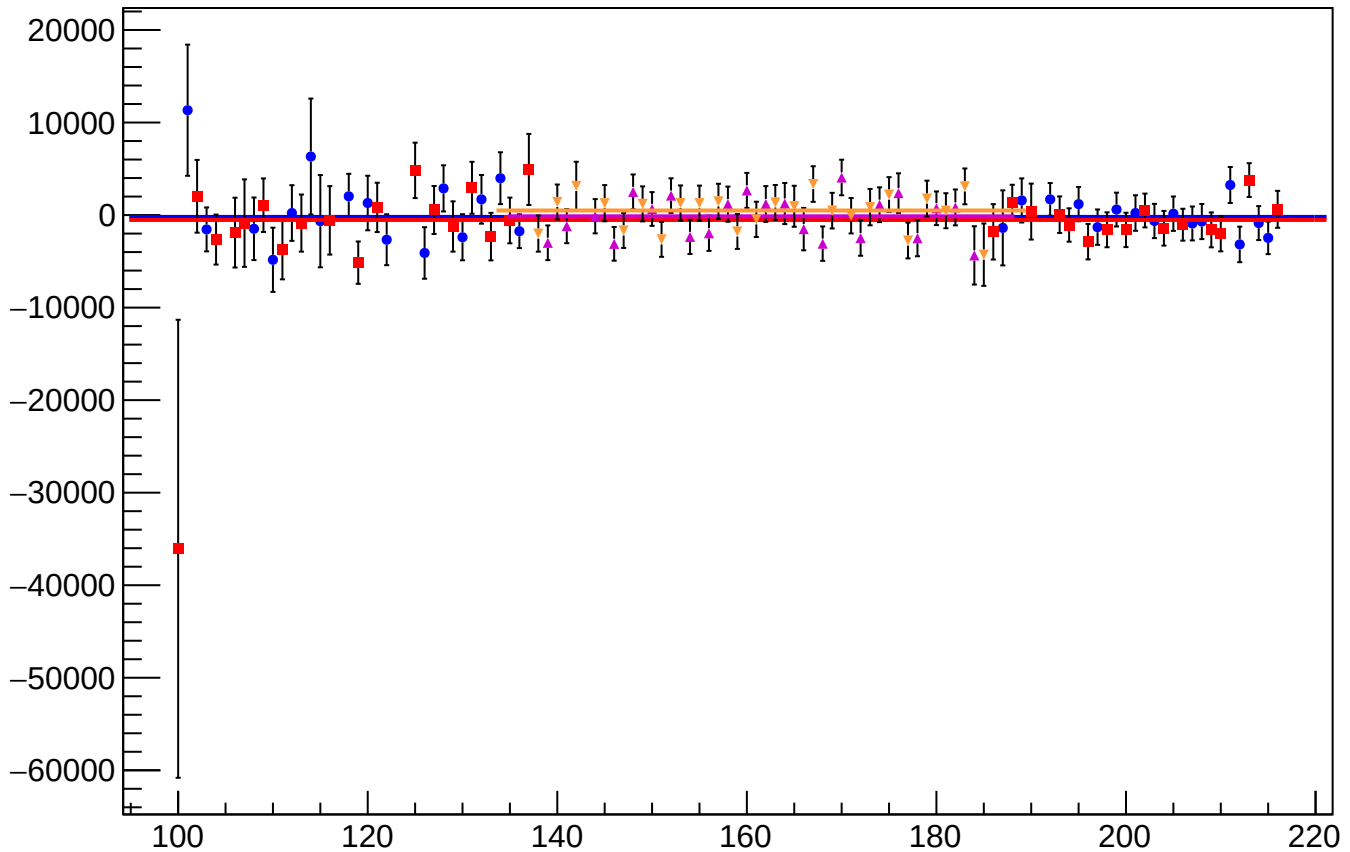
Right Out: 1419.736+/-0.243  $\chi^2/\text{NDF}$ : 3944403.7/32

All: 1037.242+/-0.089  $\chi^2/\text{NDF}$ : 14146558.3/100

- sign 1047.323+/-0.128  $\chi^2/\text{NDF}$ : 7637239.1/55

Left In: 904.653+/-0.151  $\chi^2/\text{NDF}$ : 452259.2/22

# dit\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $-200.119 \pm 408.483$   $\chi^2/\text{NDF}$ : 26.2/30

Left Out:  $494.897 \pm 402.069$   $\chi^2/\text{NDF}$ : 20.1/23

Right Out:  $-527.165 \pm 411.671$   $\chi^2/\text{NDF}$ : 27.5/32

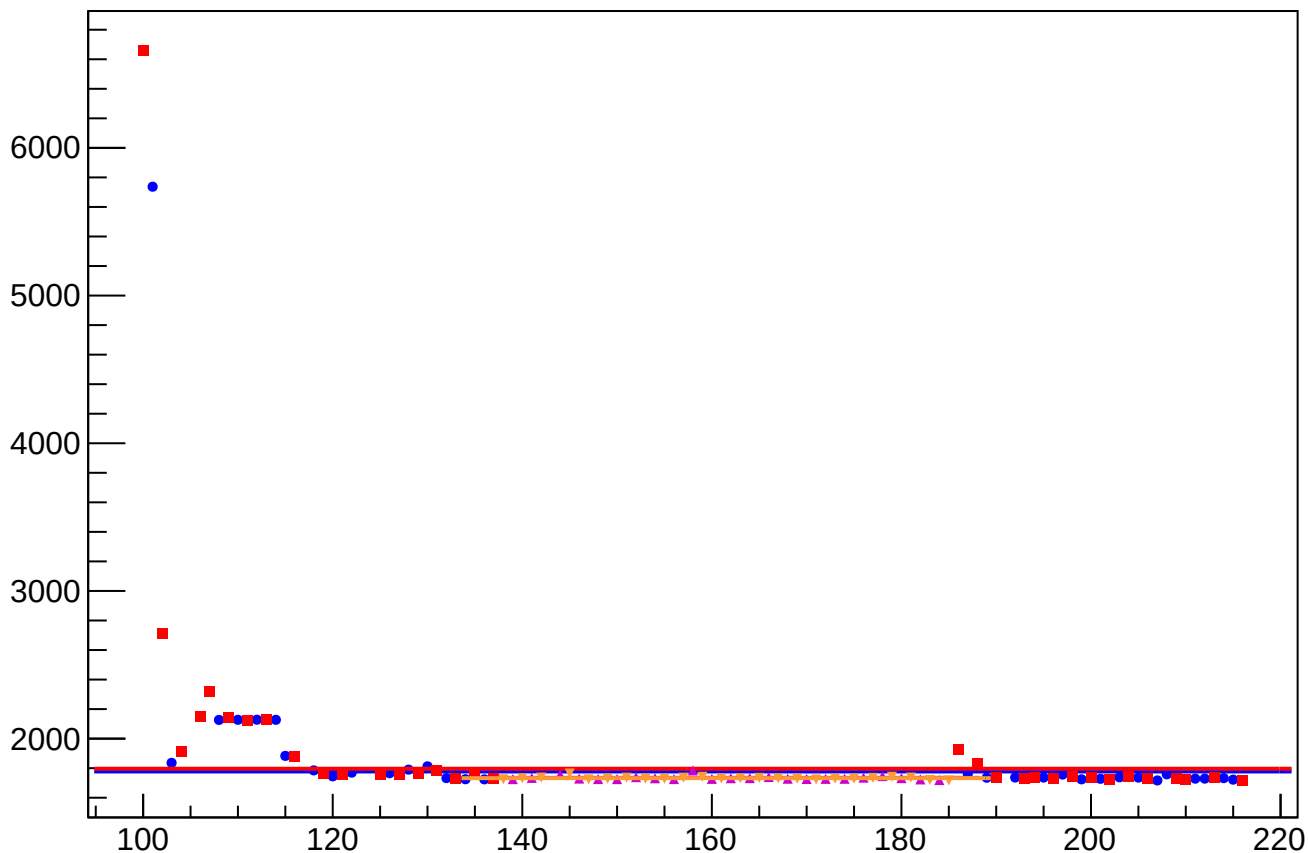
Left In:  $-137.162 \pm 404.995$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $152.888 \pm 286.547$   $\chi^2/\text{NDF}$ : 47.8/54

All:  $-86.234 \pm 203.378$   $\chi^2/\text{NDF}$ : 106.7/110

- sign  $-328.975 \pm 288.706$   $\chi^2/\text{NDF}$ : 57.6/55

# dit\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1777.840+/-0.289  $\chi^2/\text{NDF}$ : 721583.2/30

Left Out: 1732.389+/-0.284  $\chi^2/\text{NDF}$ : 910.8/23

Right Out: 1796.185+/-0.291  $\chi^2/\text{NDF}$ : 343549.8/32

Left In: 1734.568+/-0.286  $\chi^2/\text{NDF}$ : 2215.7/22

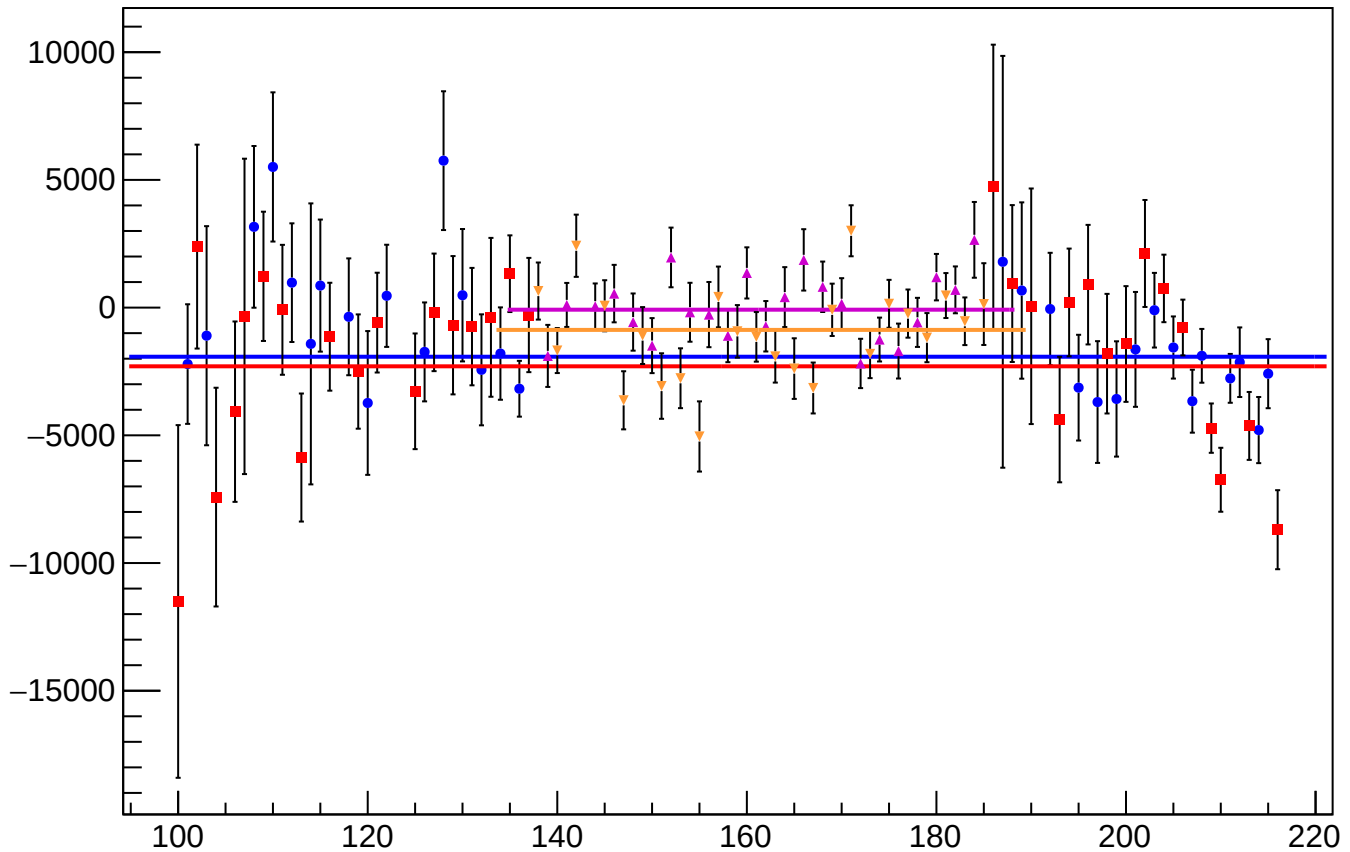
+ sign 1754.755+/-0.203  $\chi^2/\text{NDF}$ : 735070.5/54

All: 1759.776+/-0.144  $\chi^2/\text{NDF}$ : 1104842.2/110

- sign 1764.873+/-0.204  $\chi^2/\text{NDF}$ : 368534.2/55



asym\_us\_dd\_at1lr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In:  $-1923.037 \pm 318.053$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $-872.827 \pm 214.008$   $\chi^2/\text{NDF}$ : 62.0/23

Right Out:  $-2298.455 \pm 346.542$   $\chi^2/\text{NDF}$ : 77.5/32

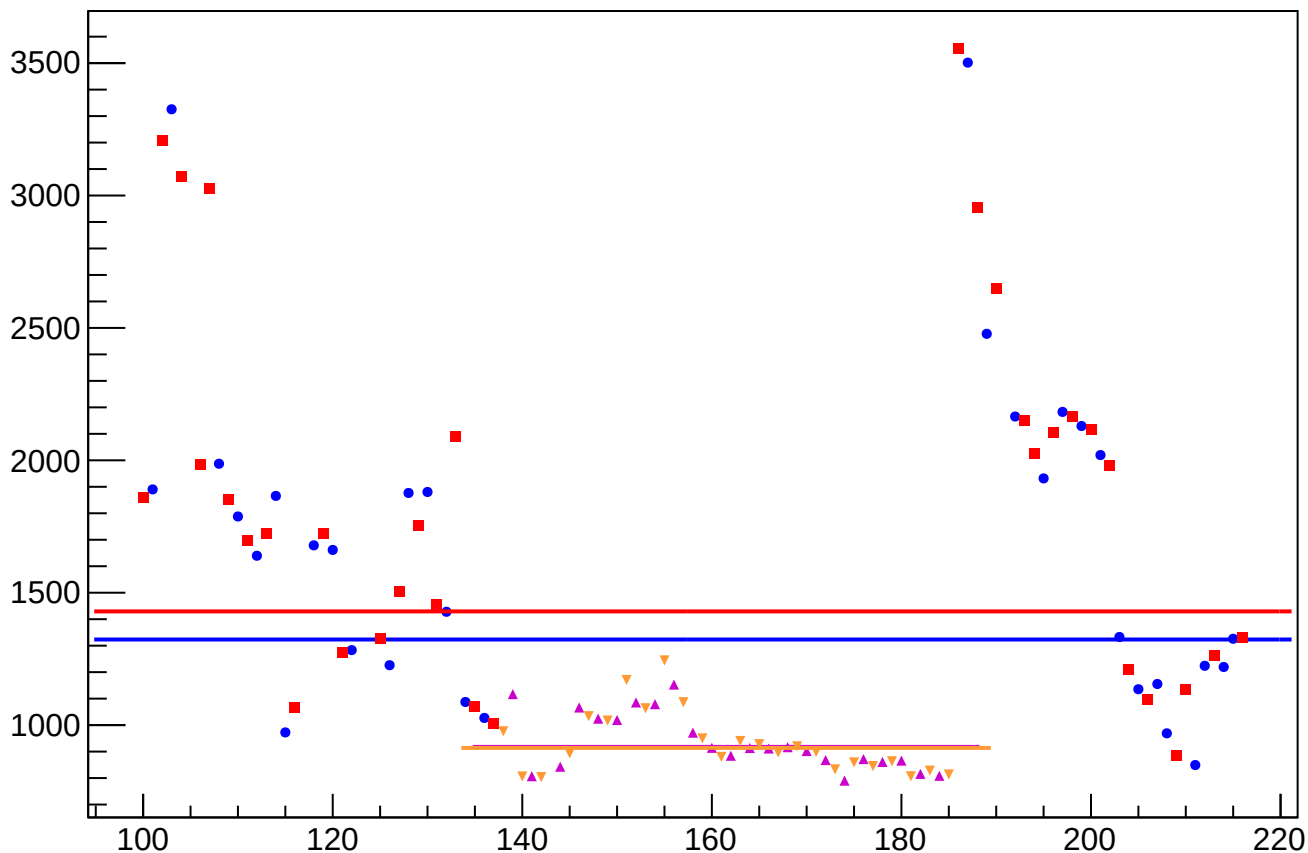
Left In:  $-81.519 \pm 215.913$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-1200.126 \pm 177.555$   $\chi^2/\text{NDF}$ : 106.4/54

All:  $-958.668 \pm 127.518$   $\chi^2/\text{NDF}$ : 247.2/110

- sign  $-701.461 \pm 183.254$   $\chi^2/\text{NDF}$ : 137.0/55

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 1323.303 $\pm$ 0.225  $\chi^2$ /NDF: 3598668.8/30

Left Out: 913.899 $\pm$ 0.151  $\chi^2$ /NDF: 462850.2/23

Right Out: 1429.459 $\pm$ 0.245  $\chi^2$ /NDF: 4380258.3/32

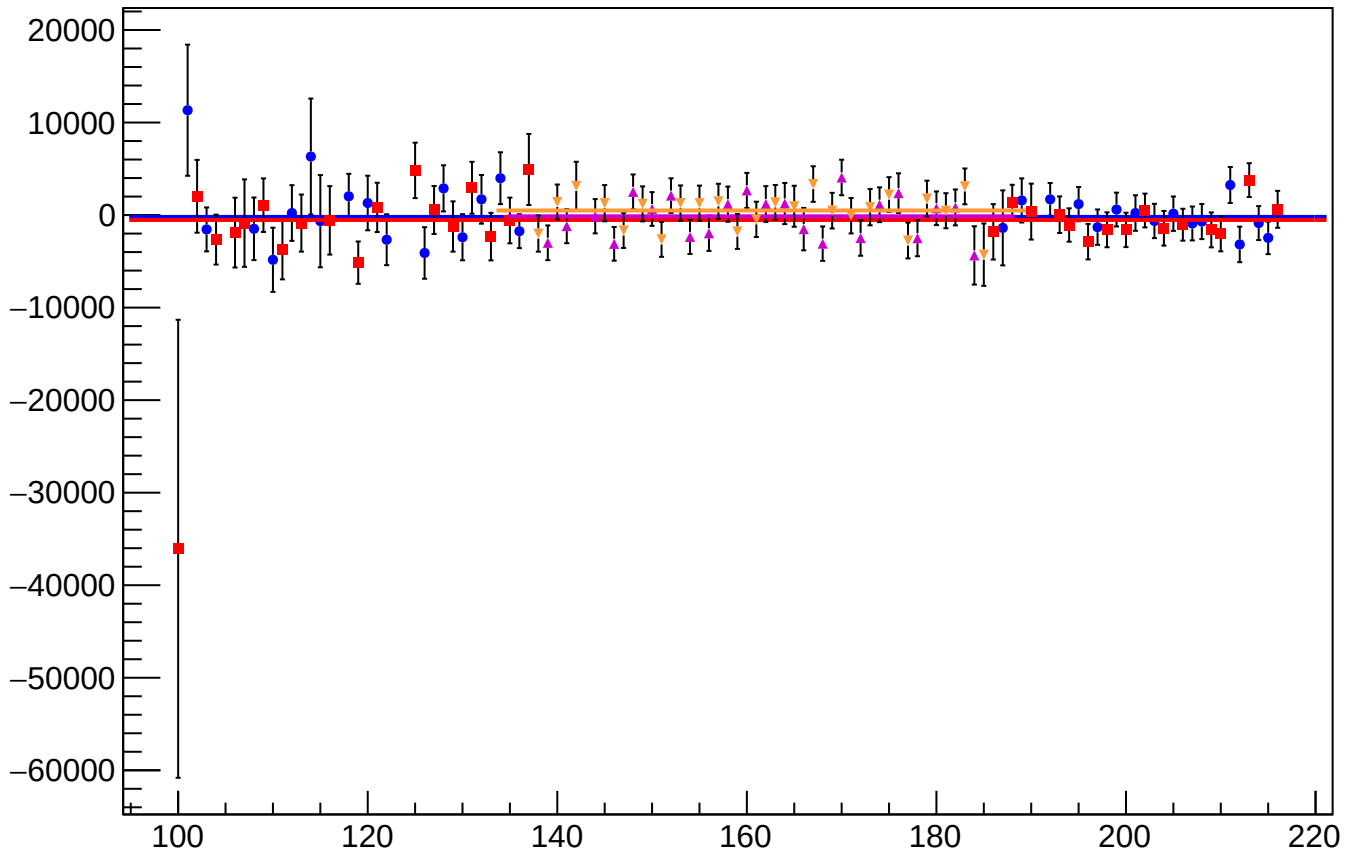
Left In: 917.674 $\pm$ 0.153  $\chi^2$ /NDF: 430498.5/22

+ sign 1041.490 $\pm$ 0.126  $\chi^2$ /NDF: 6342621.8/54

All: 1050.835 $\pm$ 0.090  $\chi^2$ /NDF: 14307090.6/1

- sign 1060.789 $\pm$ 0.130  $\chi^2$ /NDF: 7953027.7/55

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In:  $-200.118 \pm 408.483$   $\chi^2/\text{NDF}$ : 26.2/30

Left Out:  $494.897 \pm 402.069$   $\chi^2/\text{NDF}$ : 20.1/23

Right Out:  $-527.162 \pm 411.671$   $\chi^2/\text{NDF}$ : 27.5/32

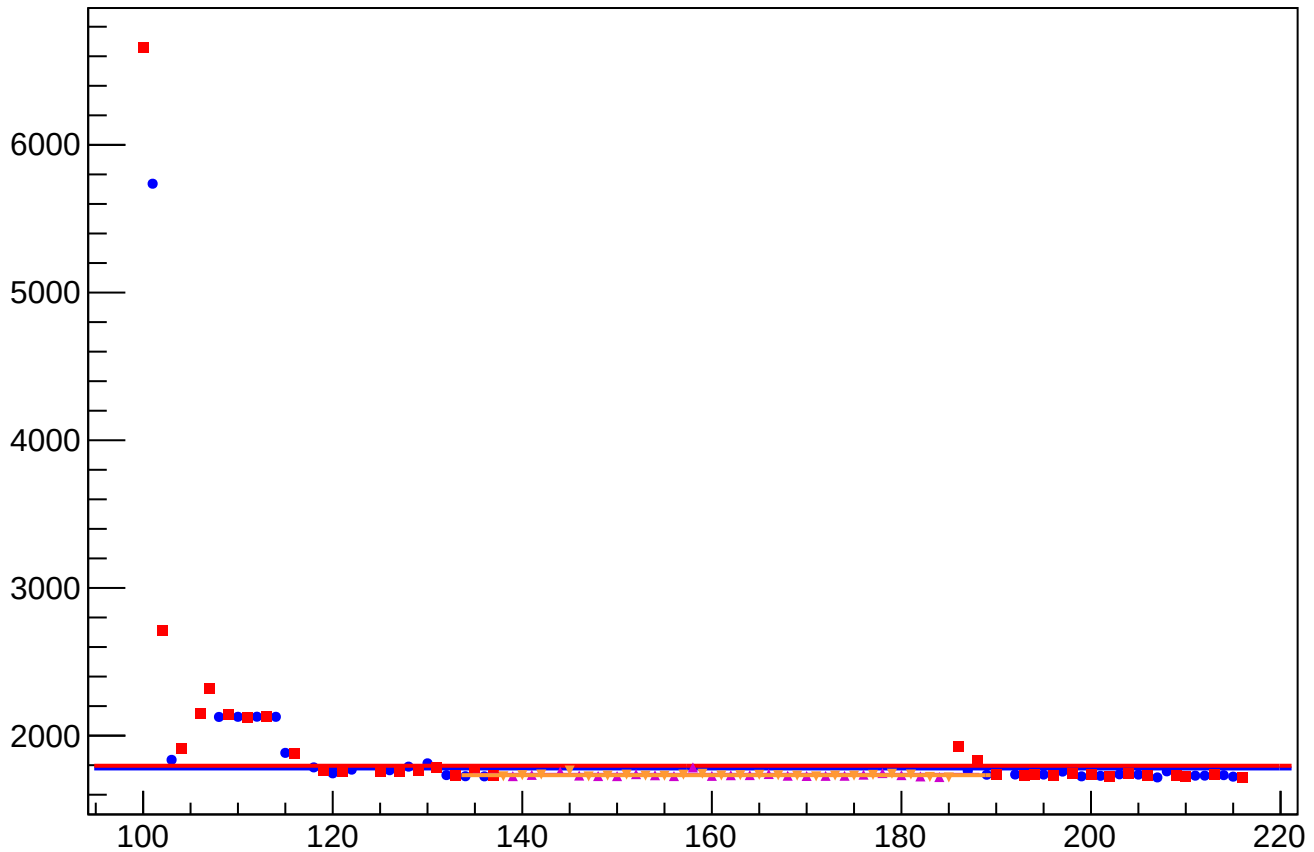
Left In:  $-137.163 \pm 404.995$   $\chi^2/\text{NDF}$ : 29.6/22

+ sign  $152.889 \pm 286.547$   $\chi^2/\text{NDF}$ : 47.8/54

All:  $-86.234 \pm 203.378$   $\chi^2/\text{NDF}$ : 106.7/110

- sign  $-328.974 \pm 288.706$   $\chi^2/\text{NDF}$ : 57.6/55

eigen\_dit\_asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 1777.840+/-0.289  $\chi^2/\text{NDF}$ : 721583.1/30

Left Out: 1732.389+/-0.284  $\chi^2/\text{NDF}$ : 910.8/23

Right Out: 1796.185+/-0.291  $\chi^2/\text{NDF}$ : 343549.5/32

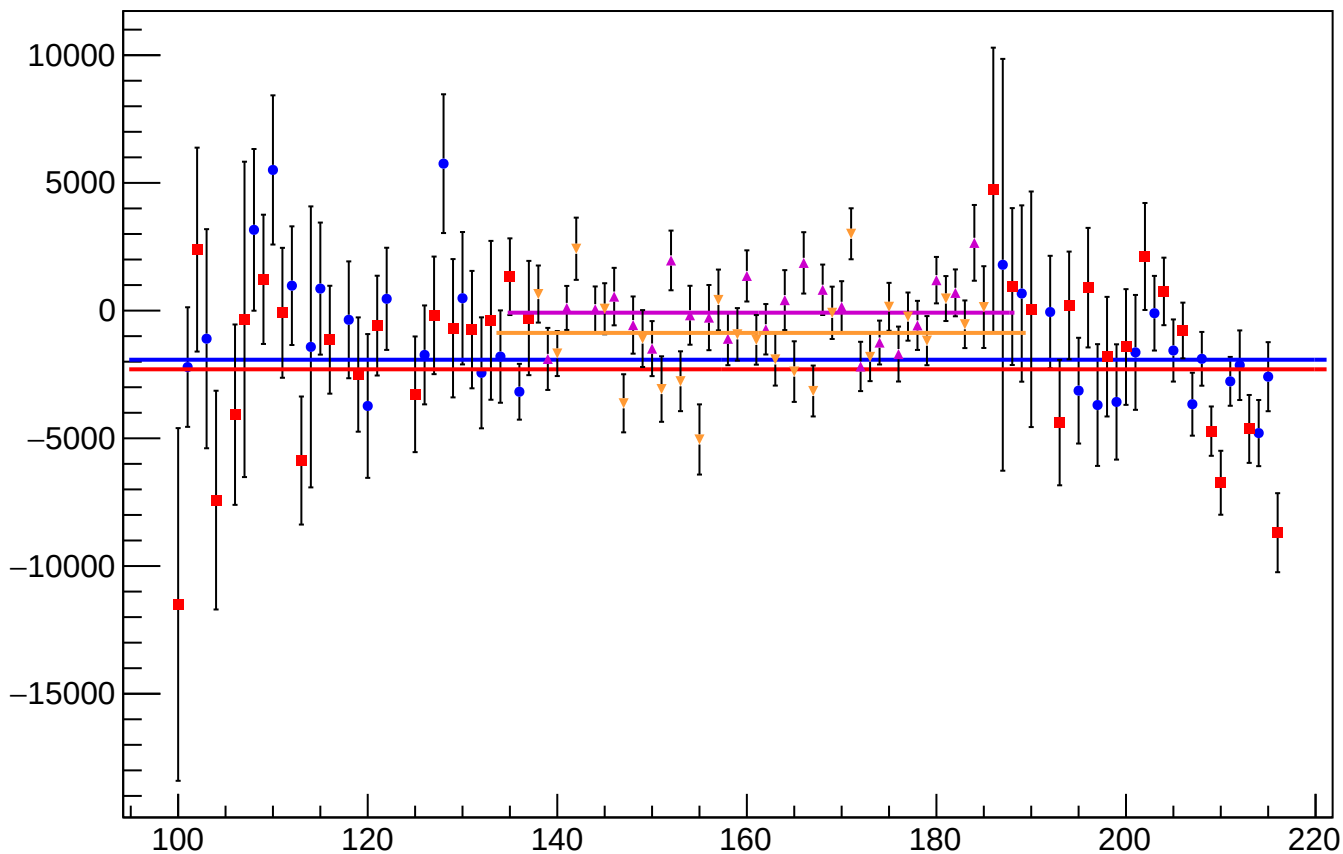
Left In: 1734.568+/-0.286  $\chi^2/\text{NDF}$ : 2215.7/22

+ sign 1754.755+/-0.203  $\chi^2/\text{NDF}$ : 735070.5/54

All: 1759.776+/-0.144  $\chi^2/\text{NDF}$ : 1104841.8/11

- sign 1764.873+/-0.204  $\chi^2/\text{NDF}$ : 368533.9/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1923.033 \pm 318.053$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $-872.826 \pm 214.008$   $\chi^2/\text{NDF}$ : 62.0/23

Right Out:  $-2298.457 \pm 346.541$   $\chi^2/\text{NDF}$ : 77.5/32

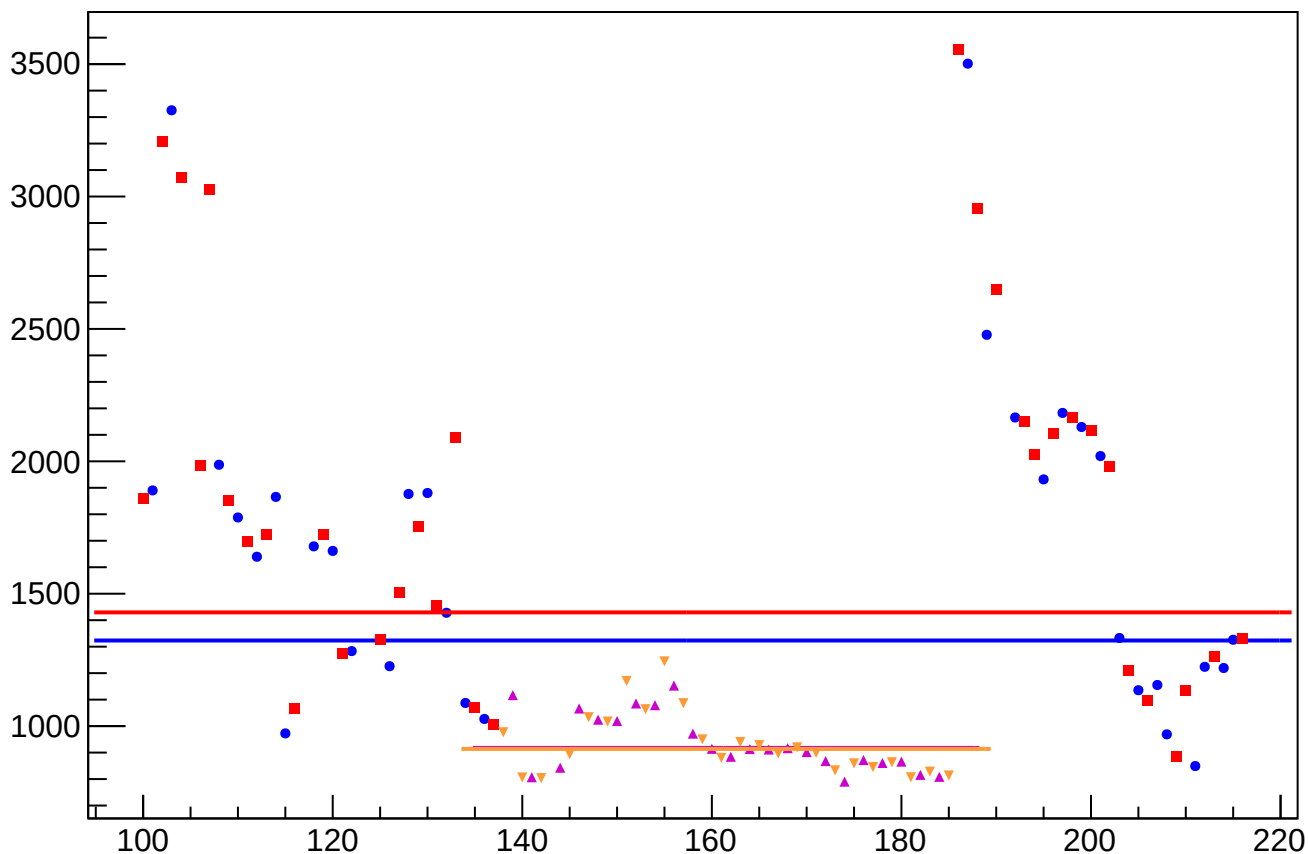
Left In:  $-81.518 \pm 215.913$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-1200.124 \pm 177.555$   $\chi^2/\text{NDF}$ : 106.4/54

All:  $-958.667 \pm 127.518$   $\chi^2/\text{NDF}$ : 247.2/110

- sign  $-701.461 \pm 183.254$   $\chi^2/\text{NDF}$ : 137.0/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1323.302 $\pm$ 0.225  $\chi^2$ /NDF: 3598663.1/30

Left Out: 913.898 $\pm$ 0.151  $\chi^2$ /NDF: 462858.6/23

Right Out: 1429.456 $\pm$ 0.245  $\chi^2$ /NDF: 4380275.0/32

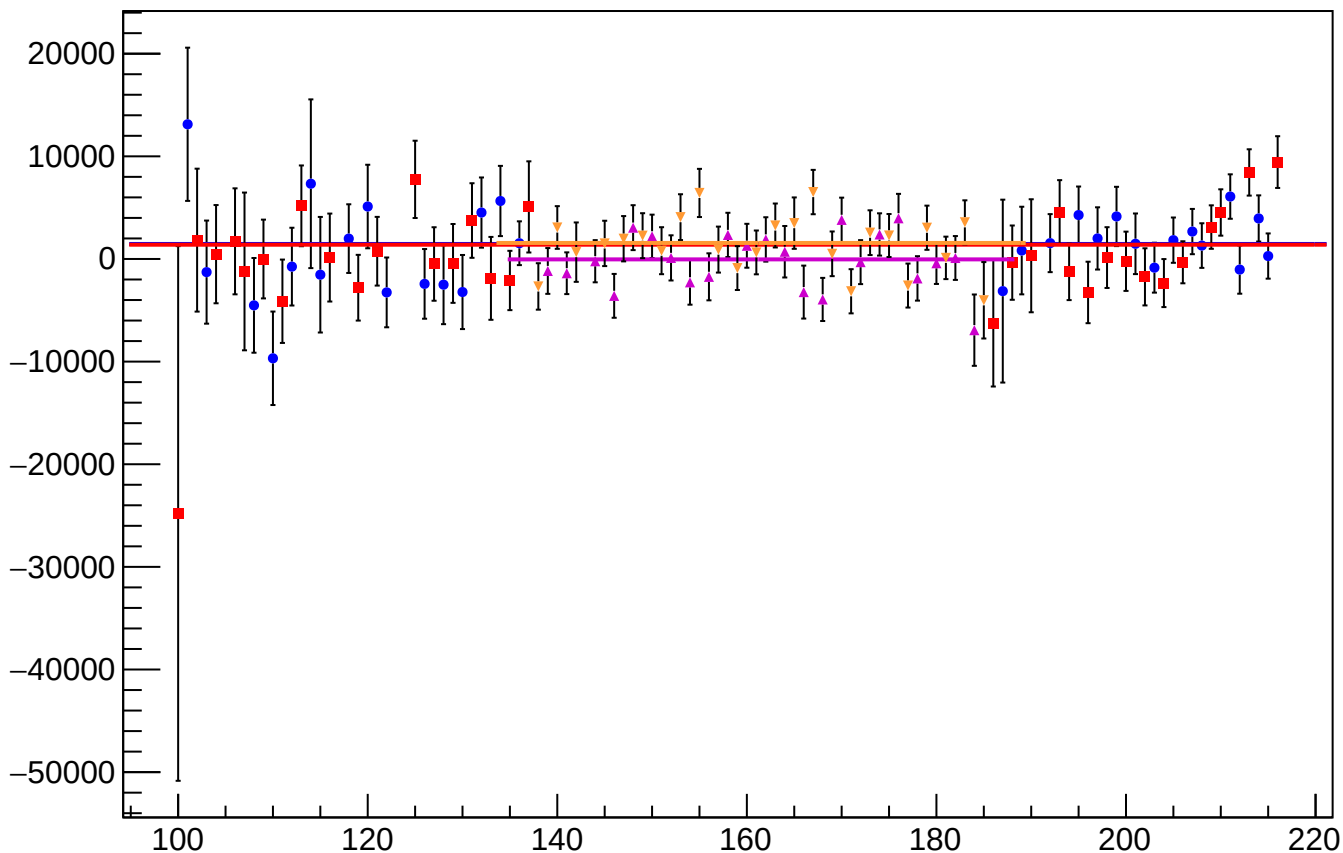
Left In: 917.674 $\pm$ 0.153  $\chi^2$ /NDF: 430509.1/22

+ sign 1041.489 $\pm$ 0.126  $\chi^2$ /NDF: 6342620.3/54

All: 1050.834 $\pm$ 0.090  $\chi^2$ /NDF: 14307096.9/100

- sign 1060.788 $\pm$ 0.130  $\chi^2$ /NDF: 7953036.0/55

# asym\_us\_dd\_at1lr\_dd\_dd\_mean vs Slug



Right In: 1461.050 $\pm$ 543.759  $\chi^2$ /NDF: 31.3/30

Left Out: 1561.357 $\pm$ 456.883  $\chi^2$ /NDF:31.2/23

Right Out: 1389.868 $\pm$ 566.512  $\chi^2$ /NDF: 46.2/32

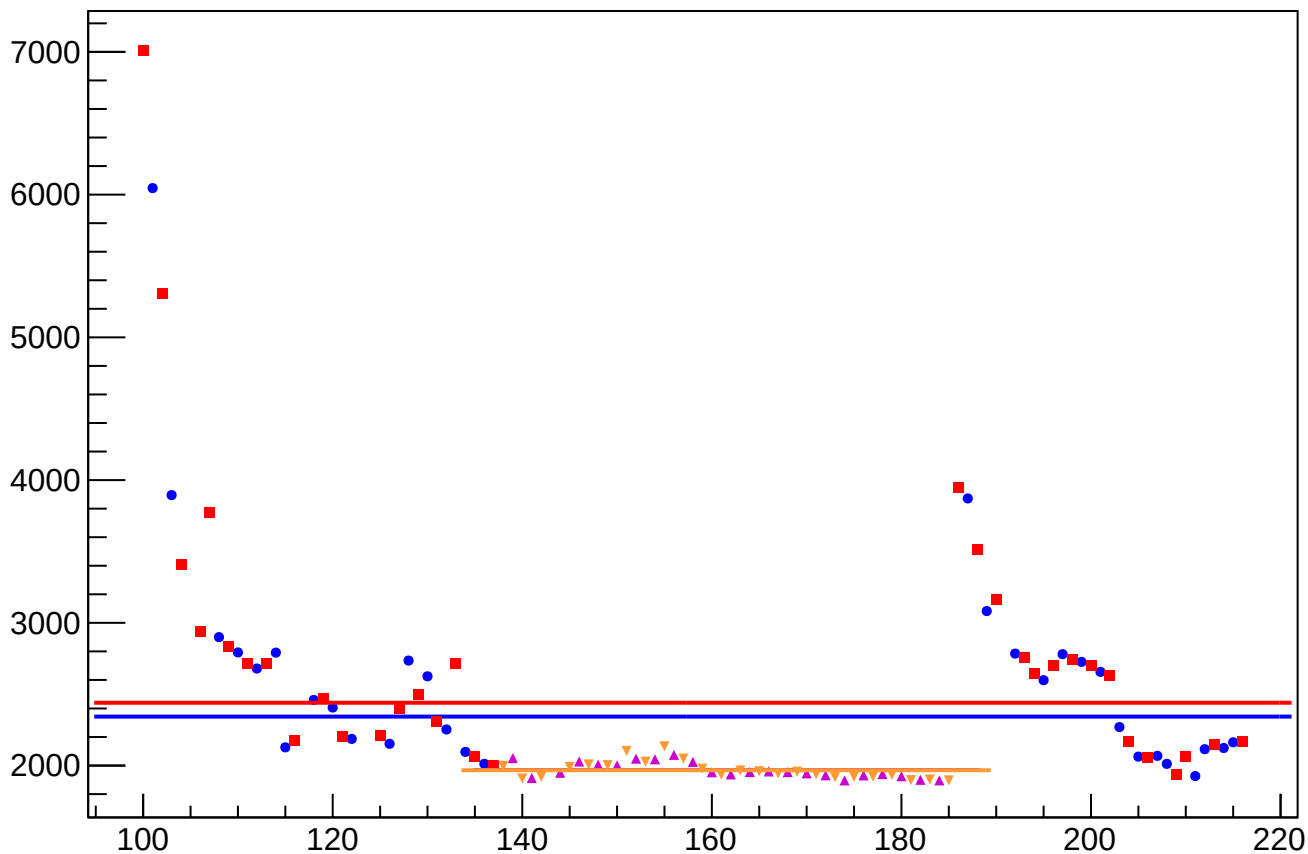
Left In: -39.885 $\pm$ 459.938  $\chi^2$ /NDF:27.8/22

+ sign 1519.847 $\pm$ 349.798  $\chi^2$ /NDF: 62.5/54

All: 1034.193 $\pm$ 249.877  $\chi^2$ /NDF: 144.3/110

- sign 528.126 $\pm$ 357.073  $\chi^2$ /NDF: 77.8/55

# asym\_us\_dd\_at1lr\_dd\_dd\_rms vs Slug



Right In: 2343.118+/-0.384  $\chi^2/\text{NDF}$ : 1383662.6/30

Left Out: 1967.416+/-0.323  $\chi^2/\text{NDF}$ : 34217.6/23

Right Out: 2440.271+/-0.401  $\chi^2/\text{NDF}$ : 1437204.4/32

Left In: 1969.022+/-0.325  $\chi^2/\text{NDF}$ : 26523.0/22

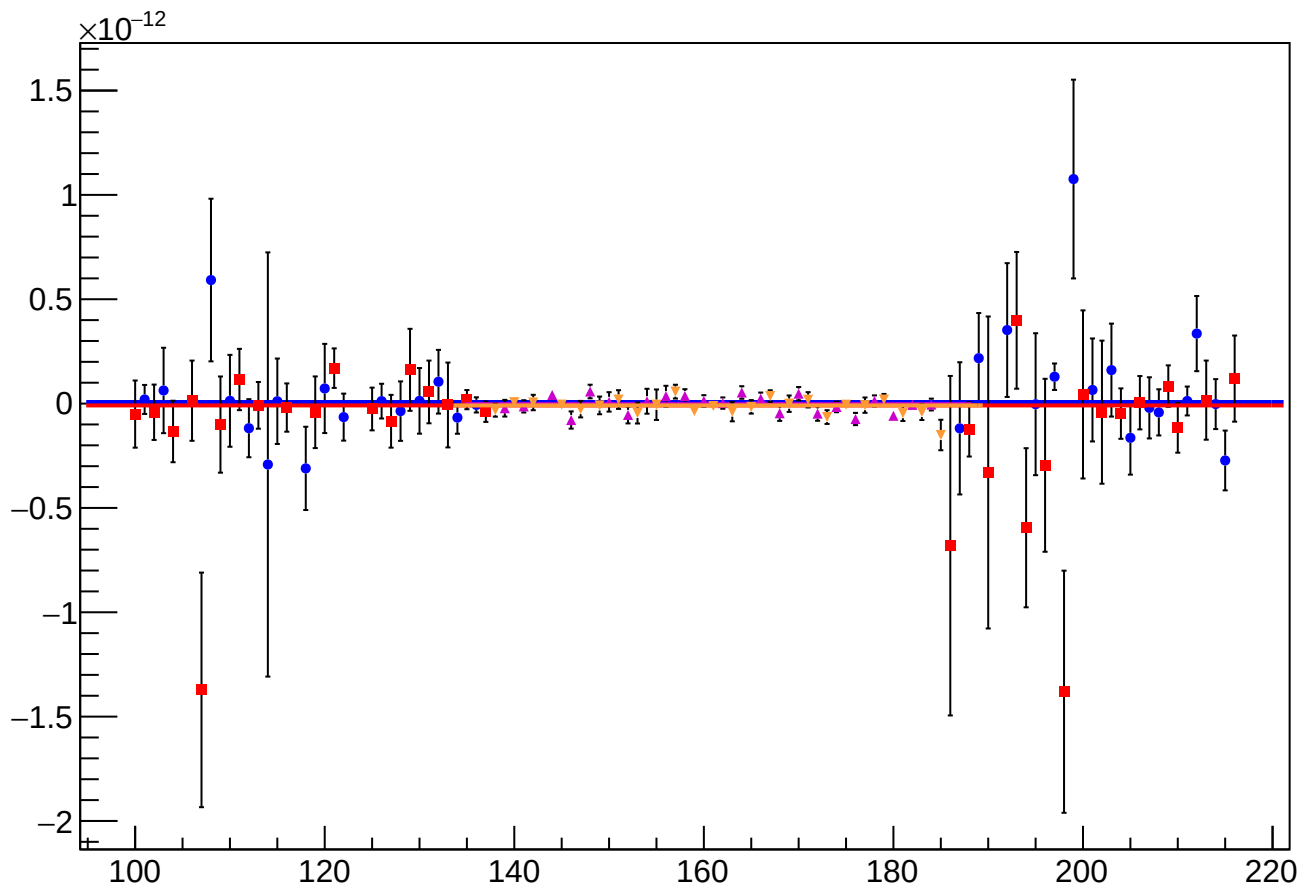
+ sign 2122.892+/-0.247  $\chi^2/\text{NDF}$ : 1977547.8/54

All: 2139.223+/-0.177  $\chi^2/\text{NDF}$ : 4284299.4/11

- sign 2156.240+/-0.252  $\chi^2/\text{NDF}$ : 2297850.1/55



asym\_us\_dd\_at1lr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.8/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.1/32

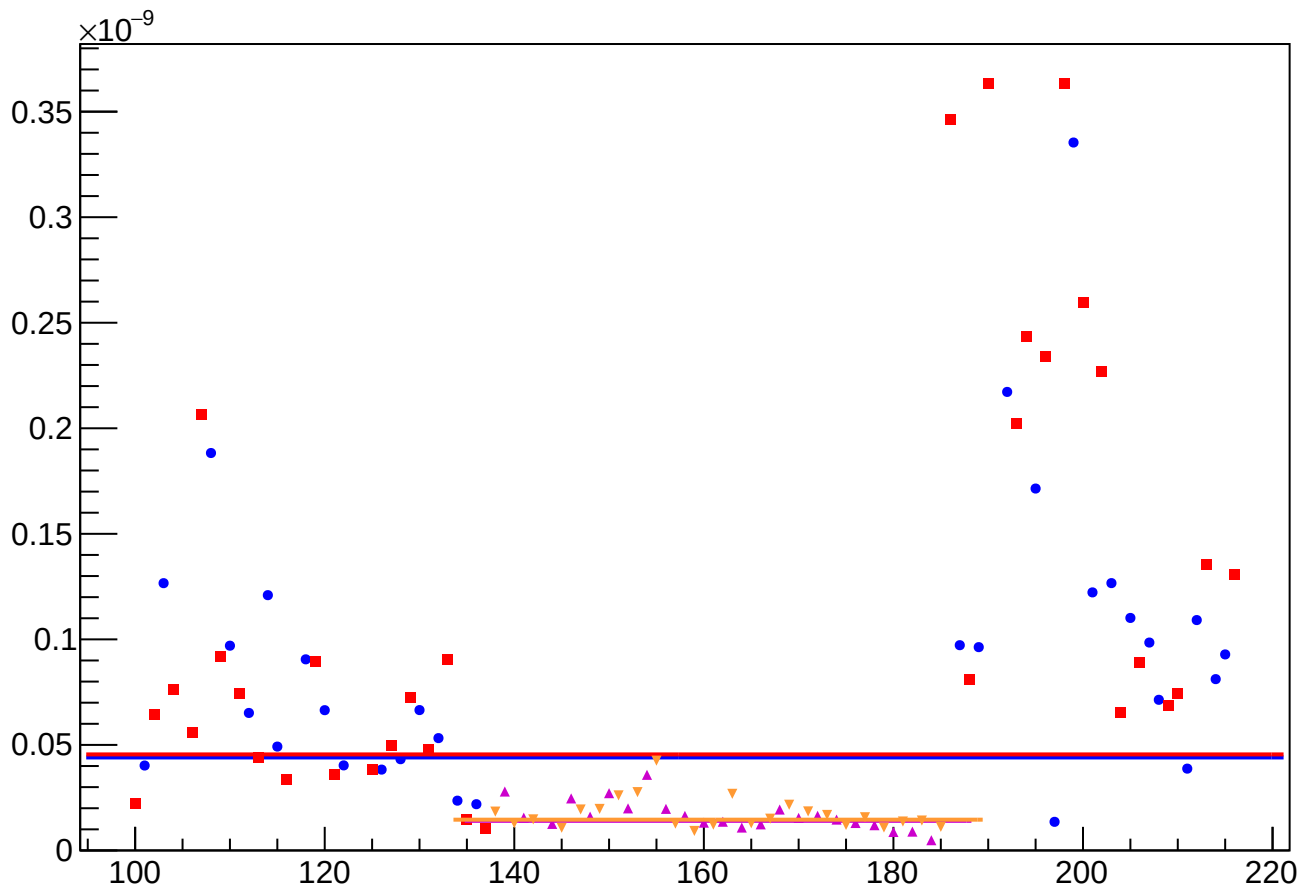
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.1/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 115.4/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.2/55

asym\_us\_dd\_at1lr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5951644.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1178225.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7962130.8/32

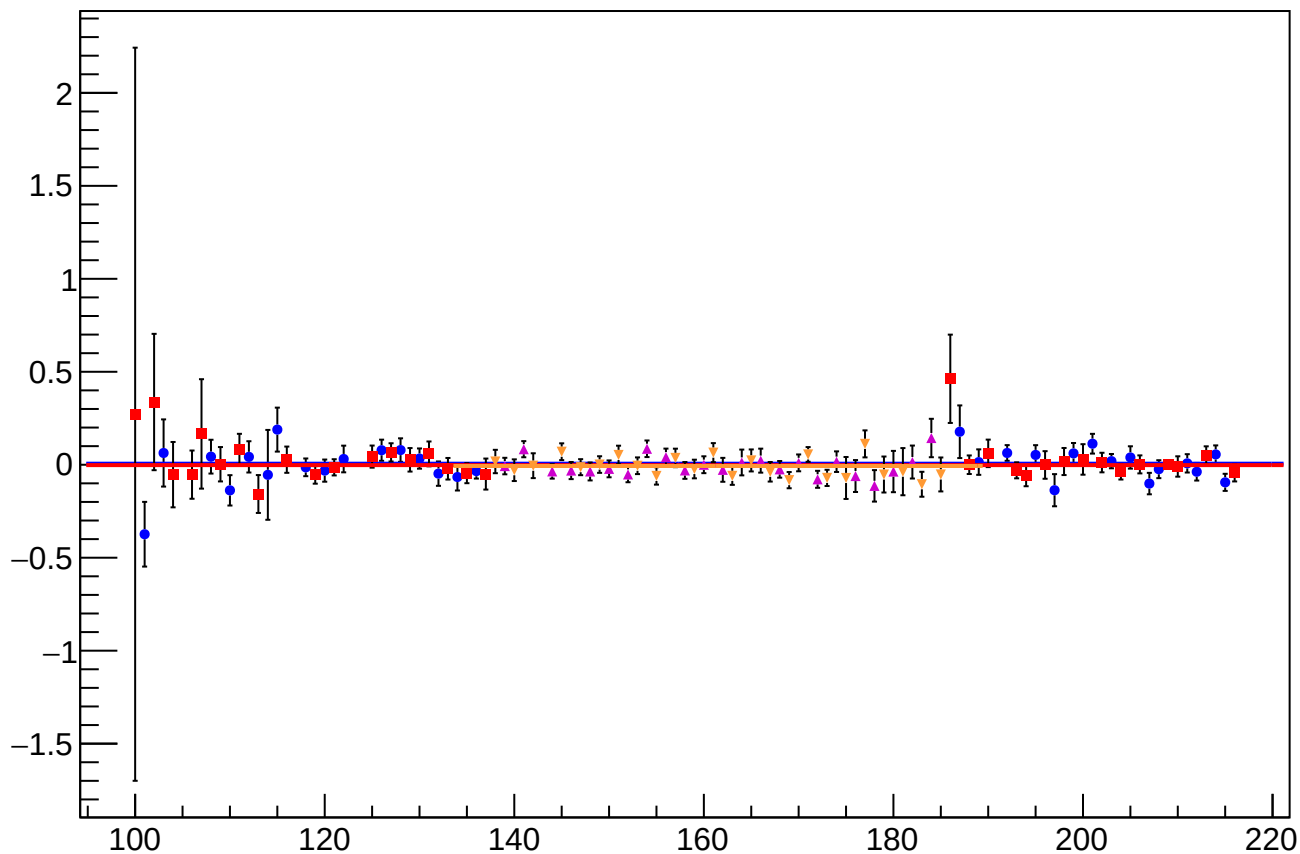
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1430937.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11092477.0/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24410418.0/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13297116.8/55

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 40.2/30

Left Out:  $-0.007 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.9/23

Right Out:  $-0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 20.0/32

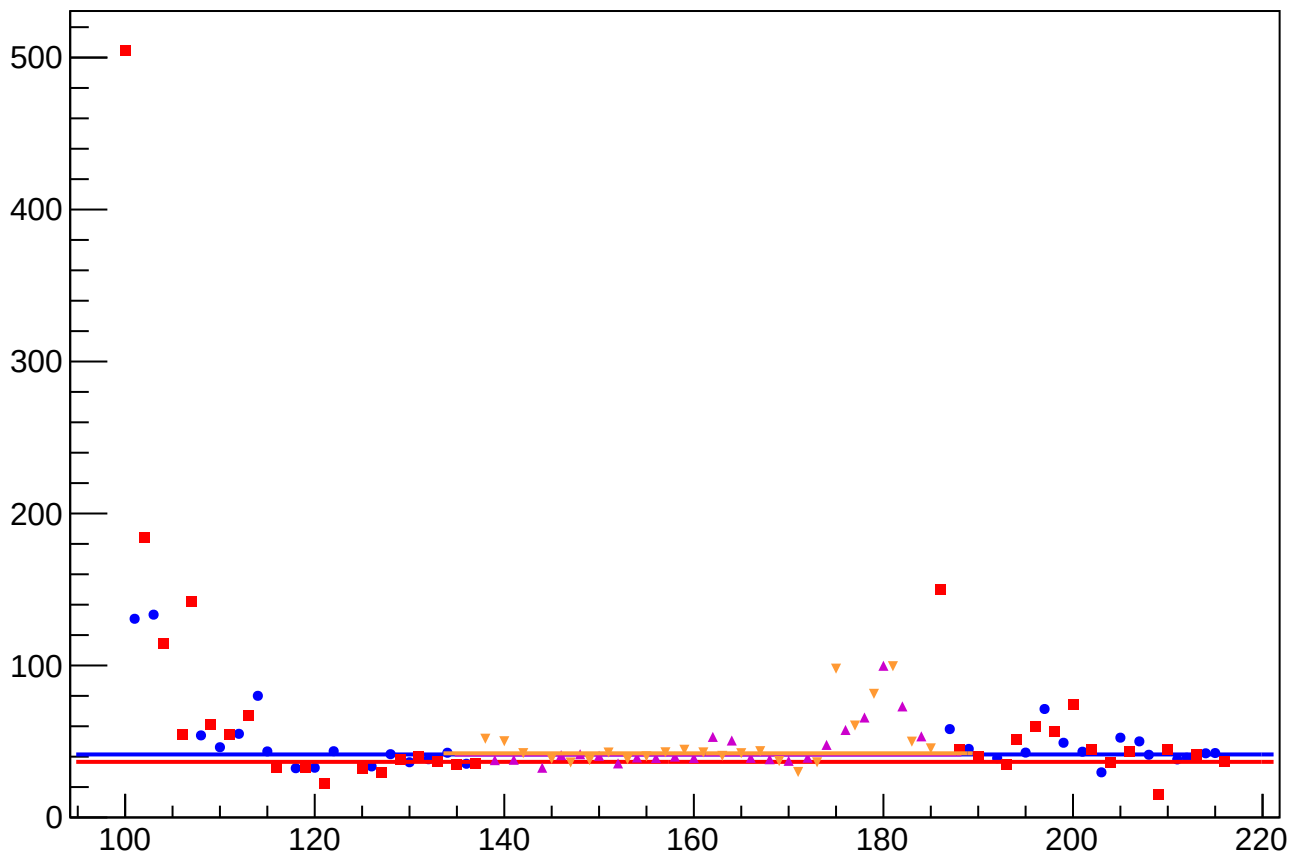
Left In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 20.1/22

+ sign  $-0.000 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.8/54

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.0/110

- sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.1/55

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.459+/-0.008  $\chi^2/\text{NDF}$ : 2053309.6/30

Left Out: 42.208+/-0.008  $\chi^2/\text{NDF}$ : 1819371.1/23

Right Out: 36.575+/-0.007  $\chi^2/\text{NDF}$ : 4898884.4/32

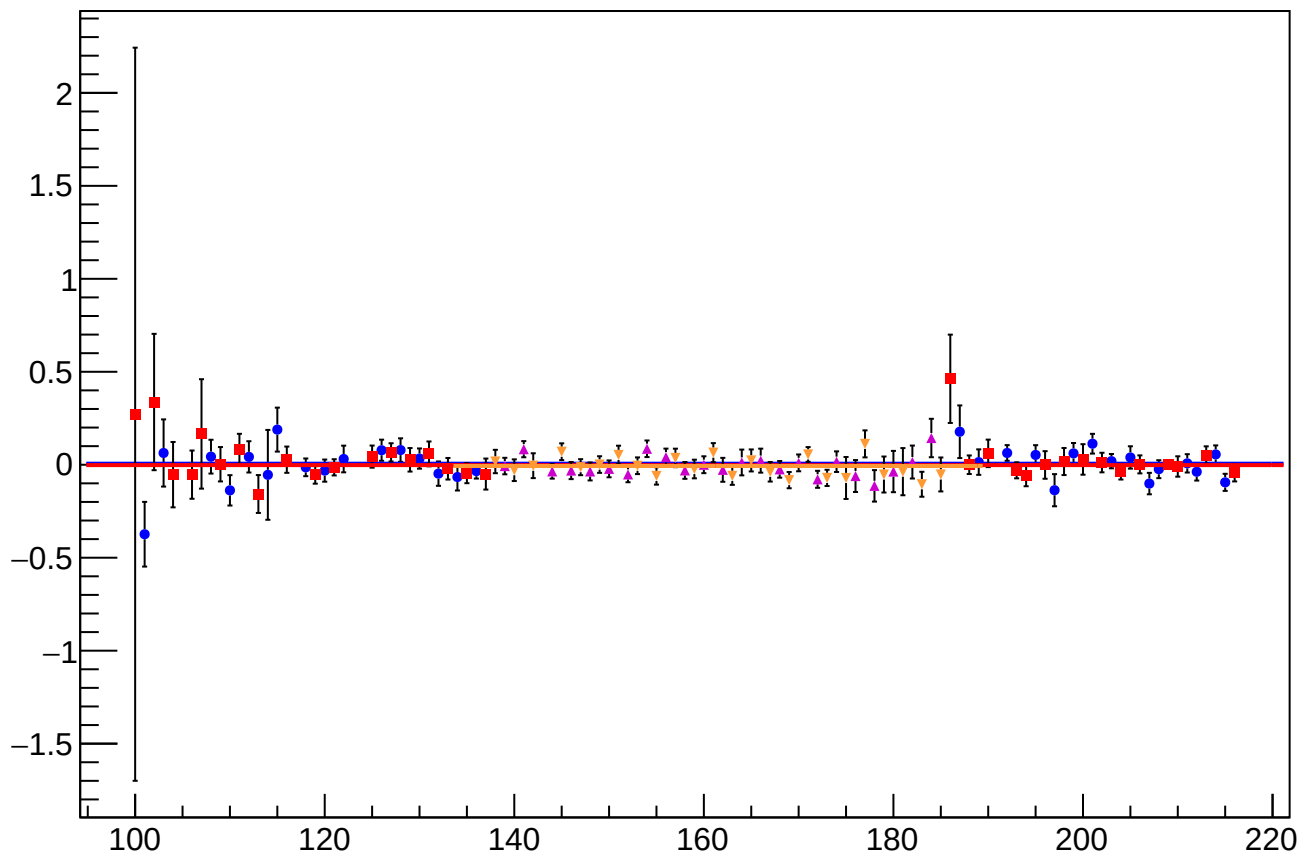
Left In: 41.421+/-0.008  $\chi^2/\text{NDF}$ : 1412177.5/22

+ sign 41.823+/-0.005  $\chi^2/\text{NDF}$ : 3877521.1/54

All: 40.290+/-0.004  $\chi^2/\text{NDF}$ : 10561129.4/110

- sign 38.854+/-0.005  $\chi^2/\text{NDF}$ : 6526575.3/55

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.011$   $\chi^2/\text{NDF}: 40.2/30$

Left Out:  $-0.007 \pm 0.011$   $\chi^2/\text{NDF}: 23.9/23$

Right Out:  $-0.002 \pm 0.010$   $\chi^2/\text{NDF}: 20.0/32$

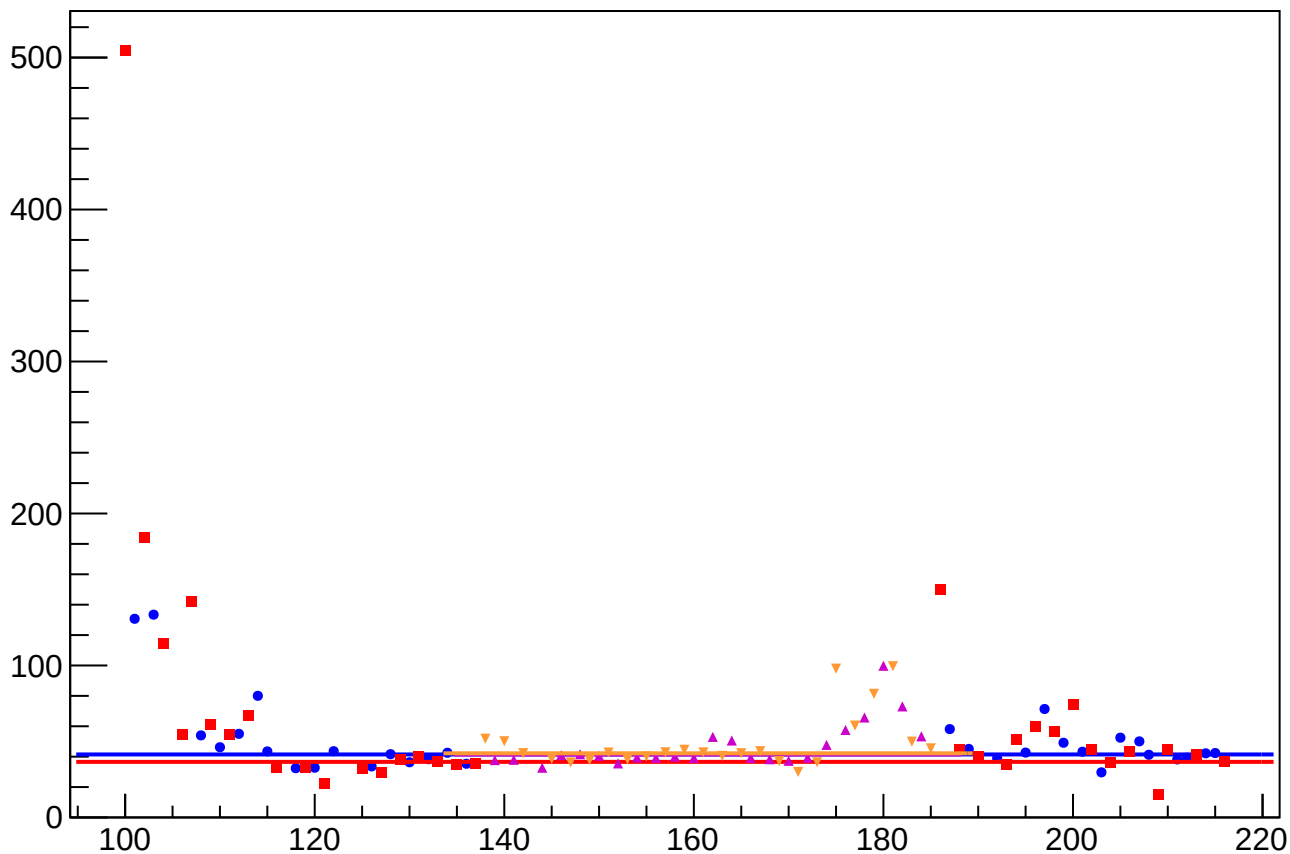
Left In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}: 20.1/22$

+ sign  $-0.000 \pm 0.008$   $\chi^2/\text{NDF}: 64.8/54$

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}: 105.0/110$

- sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}: 40.1/55$

asym\_us\_dd\_at1lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.459+/-0.008  $\chi^2/\text{NDF}$ : 2053309.6/30

Left Out: 42.208+/-0.008  $\chi^2/\text{NDF}$ : 1819371.1/23

Right Out: 36.575+/-0.007  $\chi^2/\text{NDF}$ : 4898884.4/32

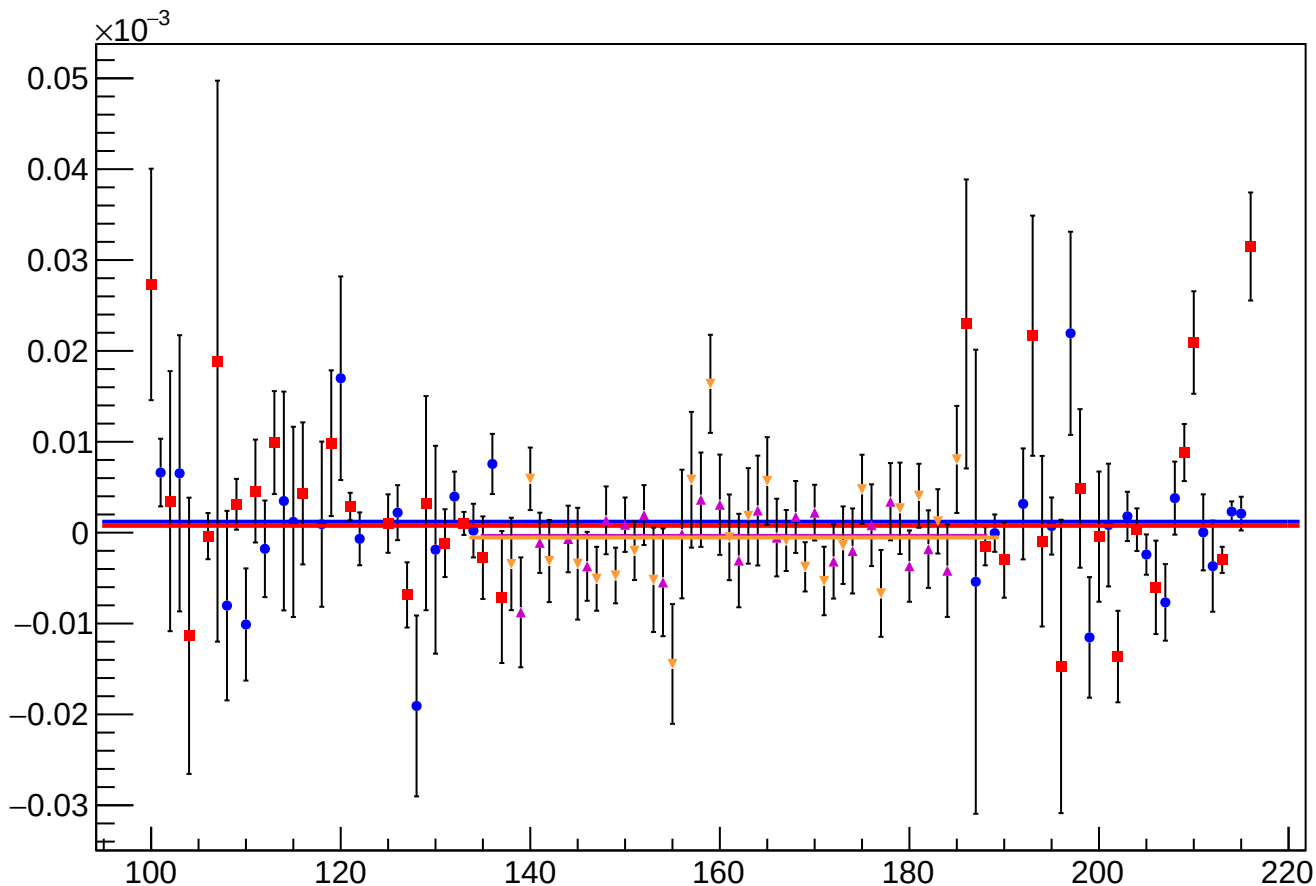
Left In: 41.421+/-0.008  $\chi^2/\text{NDF}$ : 1412177.5/22

+ sign 41.823+/-0.005  $\chi^2/\text{NDF}$ : 3877521.1/54

All: 40.290+/-0.004  $\chi^2/\text{NDF}$ : 10561129.4/110

- sign 38.854+/-0.005  $\chi^2/\text{NDF}$ : 6526575.3/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.8/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:36.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 89.9/32

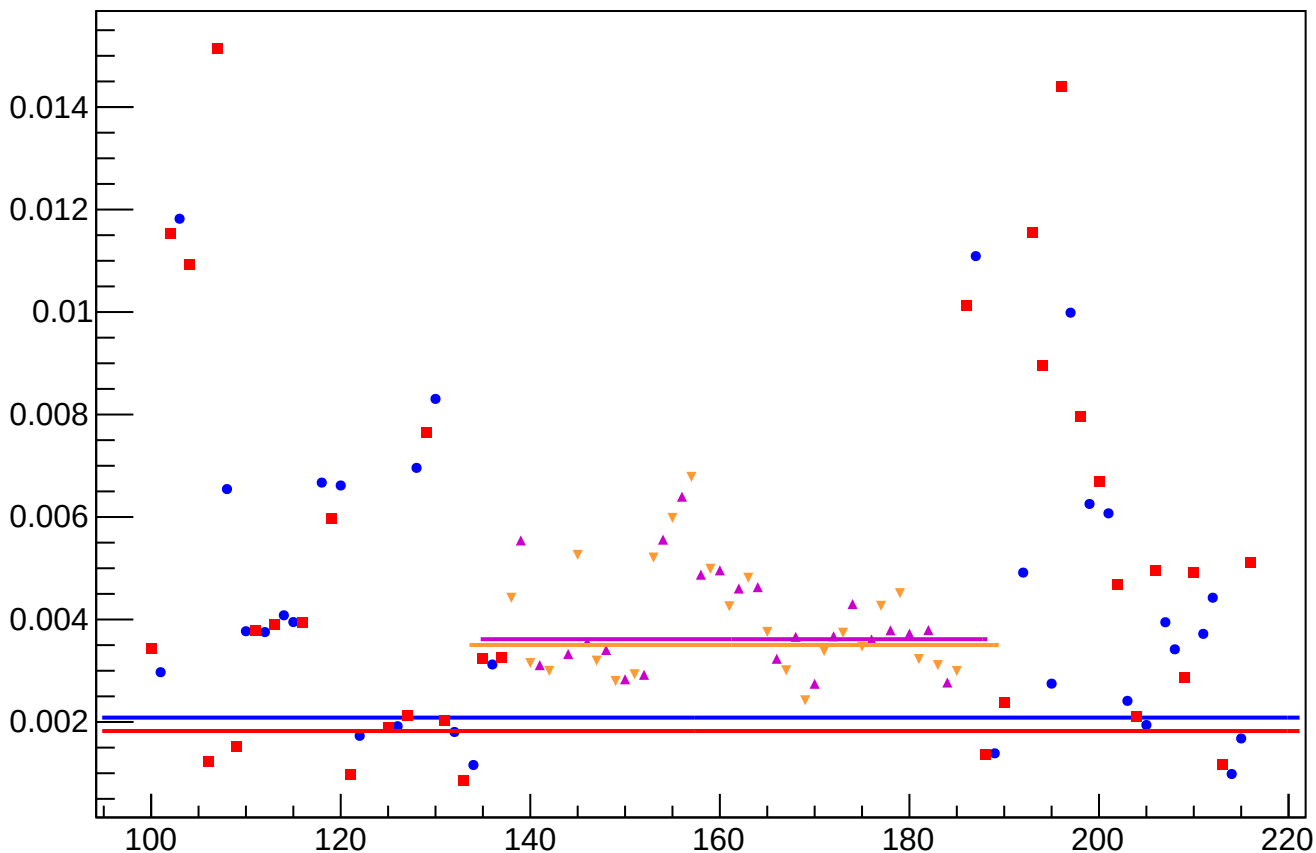
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:9.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.4/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 176.2/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 100.7/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11002276.4/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:2190693.7/23

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 15267970.0/32

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1668896.2/22

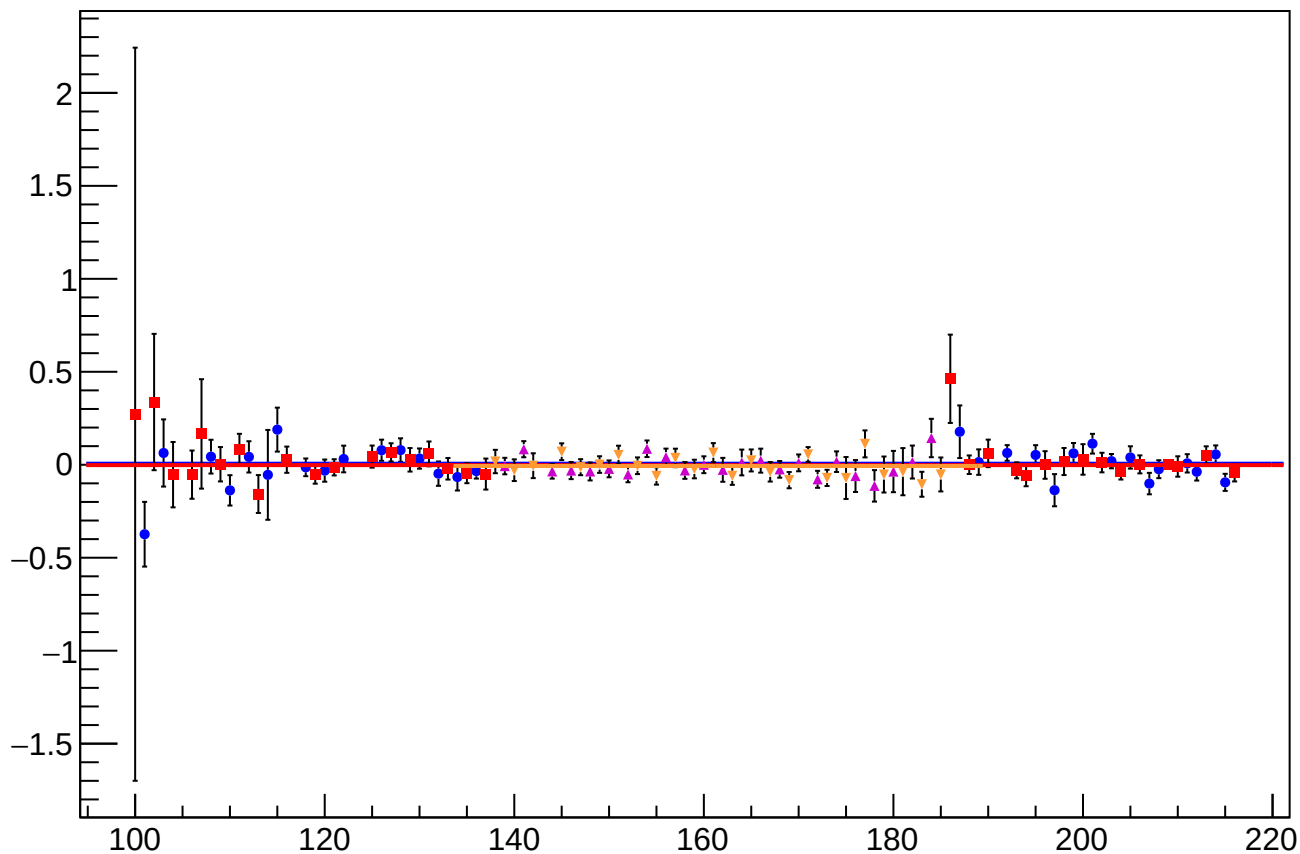
+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 16960282.8/54

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 39928588.4/110

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 22816250.8/55



asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.011$   $\chi^2/\text{NDF}: 40.2/30$

Left Out:  $-0.007 \pm 0.011$   $\chi^2/\text{NDF}: 23.9/23$

Right Out:  $-0.002 \pm 0.010$   $\chi^2/\text{NDF}: 20.0/32$

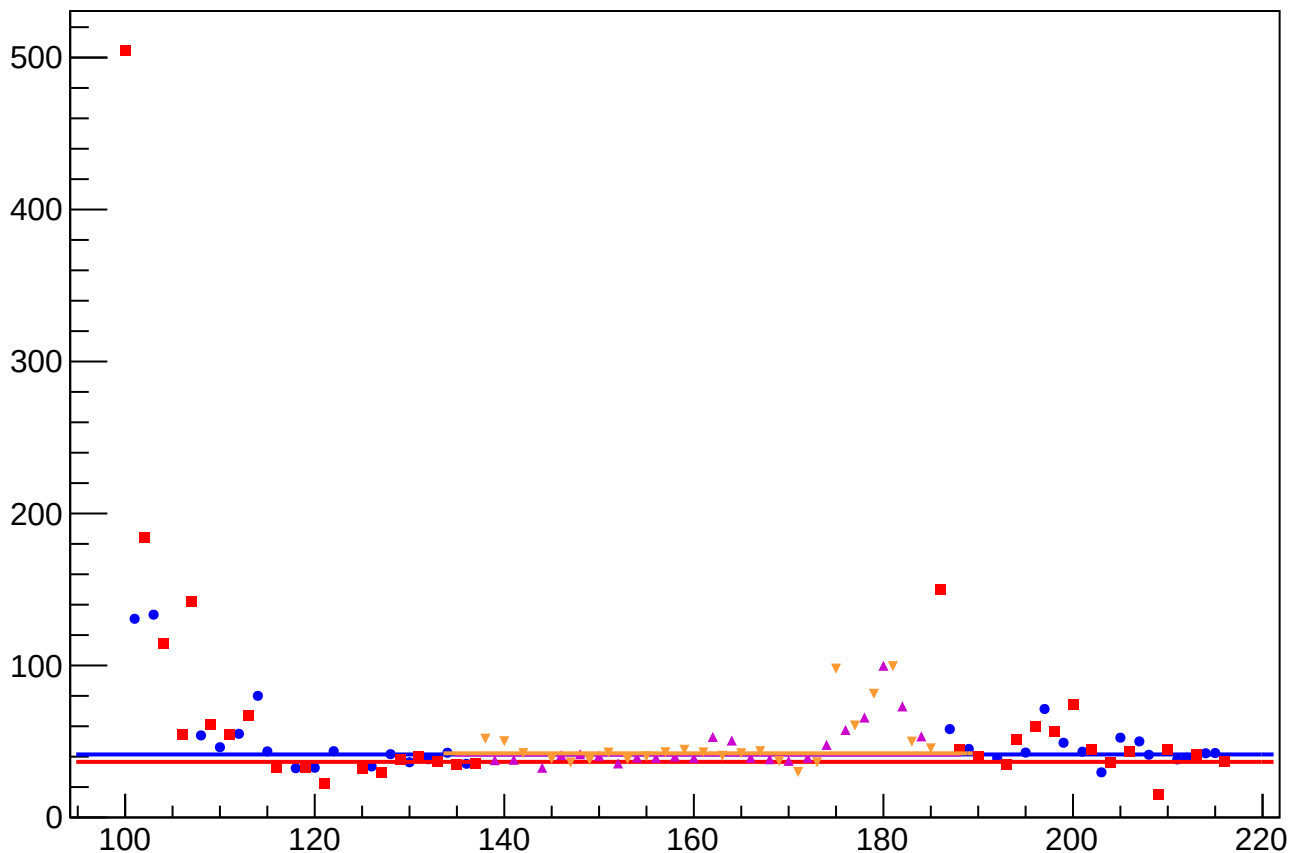
Left In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}: 20.1/22$

+ sign  $-0.000 \pm 0.008$   $\chi^2/\text{NDF}: 64.8/54$

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}: 105.0/110$

- sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}: 40.1/55$

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.459+/-0.008  $\chi^2/\text{NDF}$ : 2053224.4/30

Left Out: 42.208+/-0.008  $\chi^2/\text{NDF}$ : 1819378.3/23

Right Out: 36.579+/-0.007  $\chi^2/\text{NDF}$ : 4896354.9/32

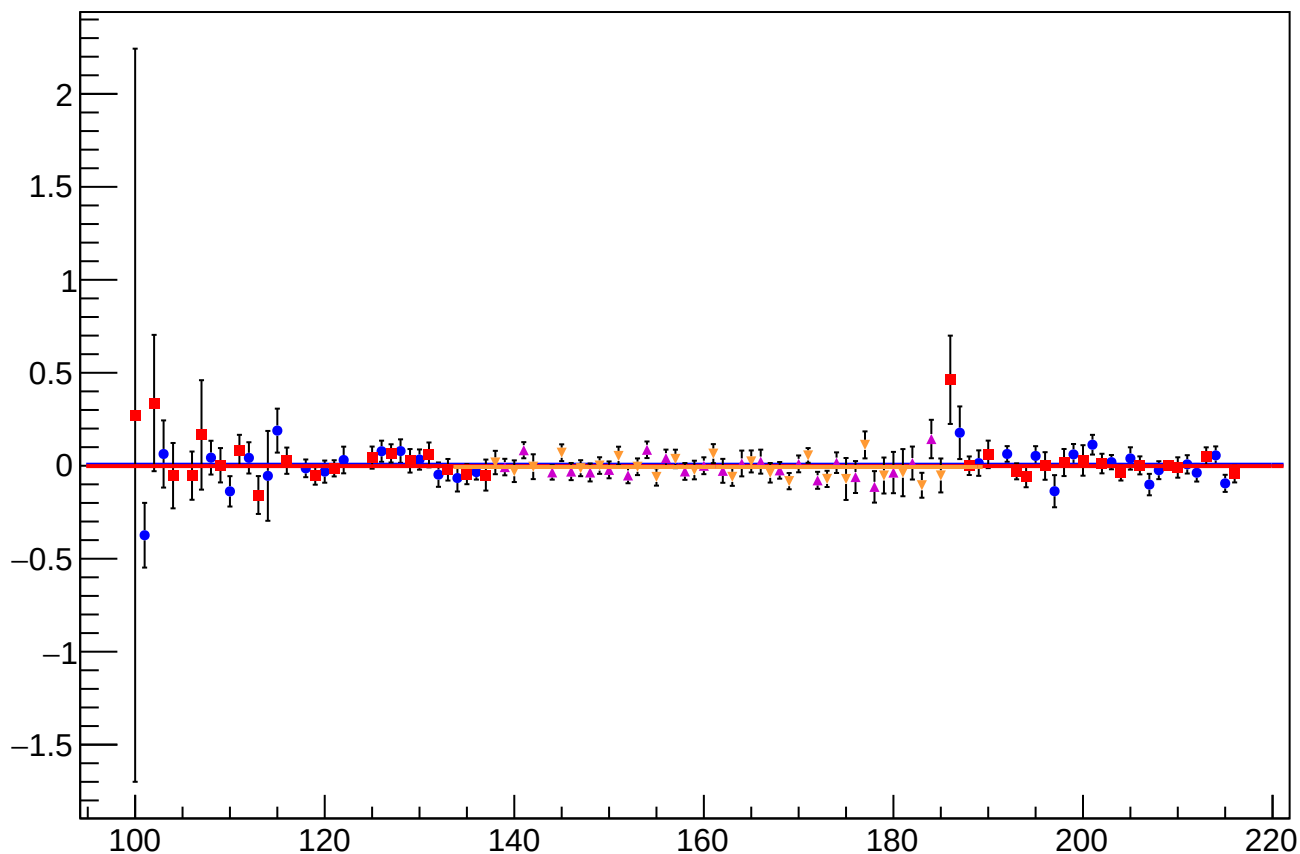
Left In: 41.421+/-0.008  $\chi^2/\text{NDF}$ : 1412111.4/22

+ sign 41.823+/-0.005  $\chi^2/\text{NDF}$ : 3877436.4/54

All: 40.291+/-0.004  $\chi^2/\text{NDF}$ : 10557849.8/110

- sign 38.856+/-0.005  $\chi^2/\text{NDF}$ : 6523612.4/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 40.2/30

Left Out:  $-0.007 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.9/23

Right Out:  $-0.002 \pm 0.010$   $\chi^2/\text{NDF}$ : 20.0/32

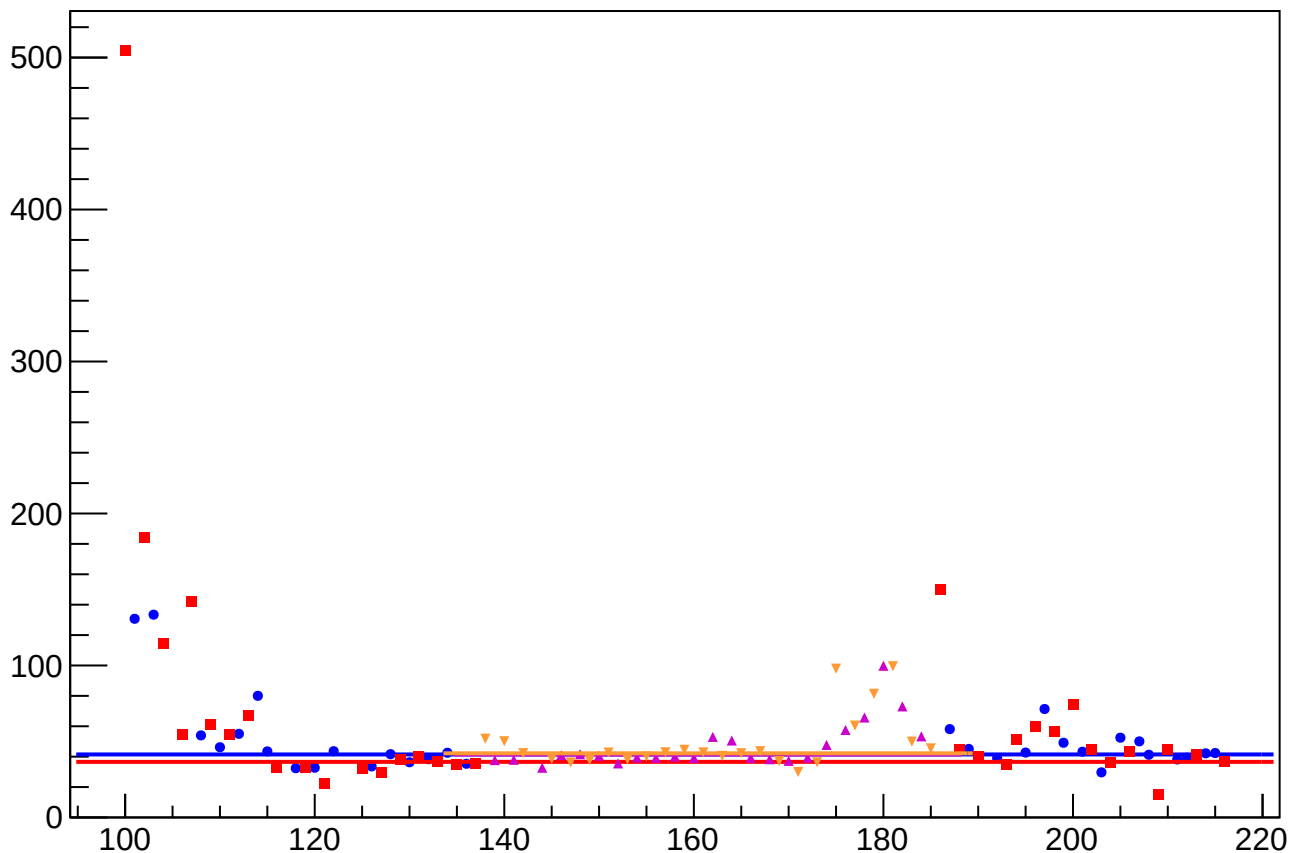
Left In:  $-0.006 \pm 0.011$   $\chi^2/\text{NDF}$ : 20.1/22

+ sign  $-0.000 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.8/54

All:  $-0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 105.0/110

- sign  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 40.1/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.459+/-0.008  $\chi^2/\text{NDF}$ : 2053224.4/30

Left Out: 42.208+/-0.008  $\chi^2/\text{NDF}$ : 1819378.3/23

Right Out: 36.579+/-0.007  $\chi^2/\text{NDF}$ : 4896354.9/32

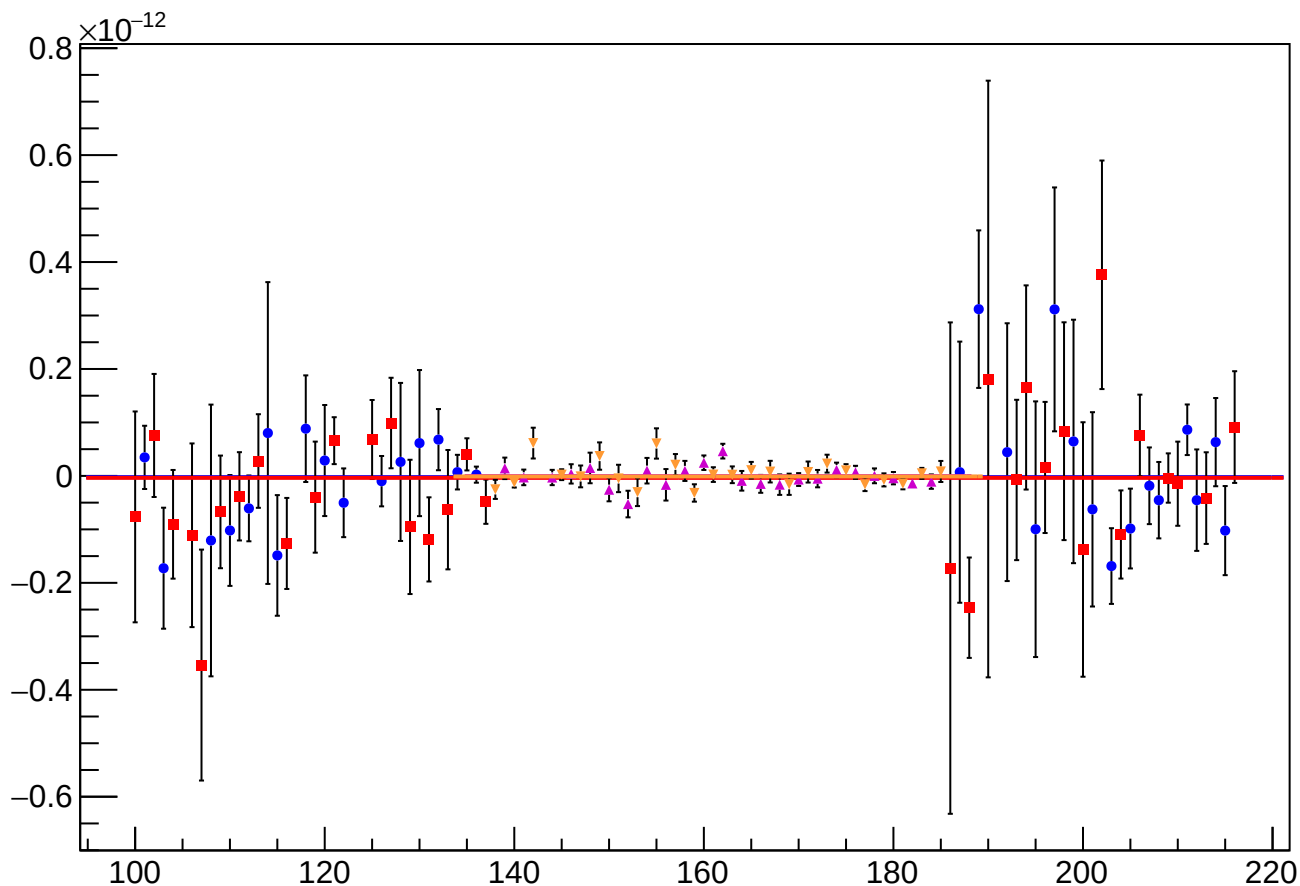
Left In: 41.421+/-0.008  $\chi^2/\text{NDF}$ : 1412111.4/22

+ sign 41.823+/-0.005  $\chi^2/\text{NDF}$ : 3877436.4/54

All: 40.291+/-0.004  $\chi^2/\text{NDF}$ : 10557849.8/110

- sign 38.856+/-0.005  $\chi^2/\text{NDF}$ : 6523612.4/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 30.1/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.5/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 33.6/32

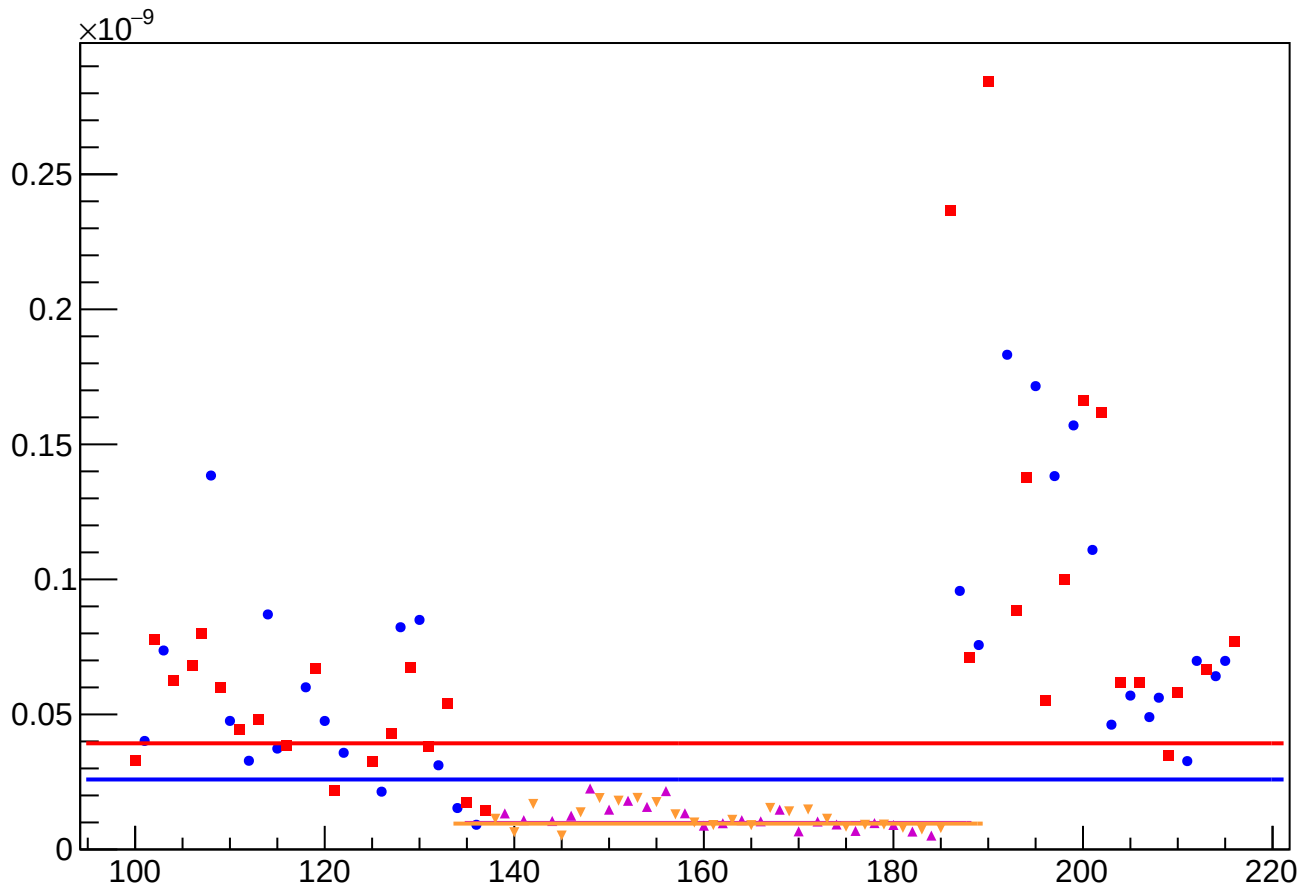
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.3/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 59.6/54

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 121.6/110

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 62.0/55

asym\_us\_dd\_at1lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10961222.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2445128.6/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7063018.1/32

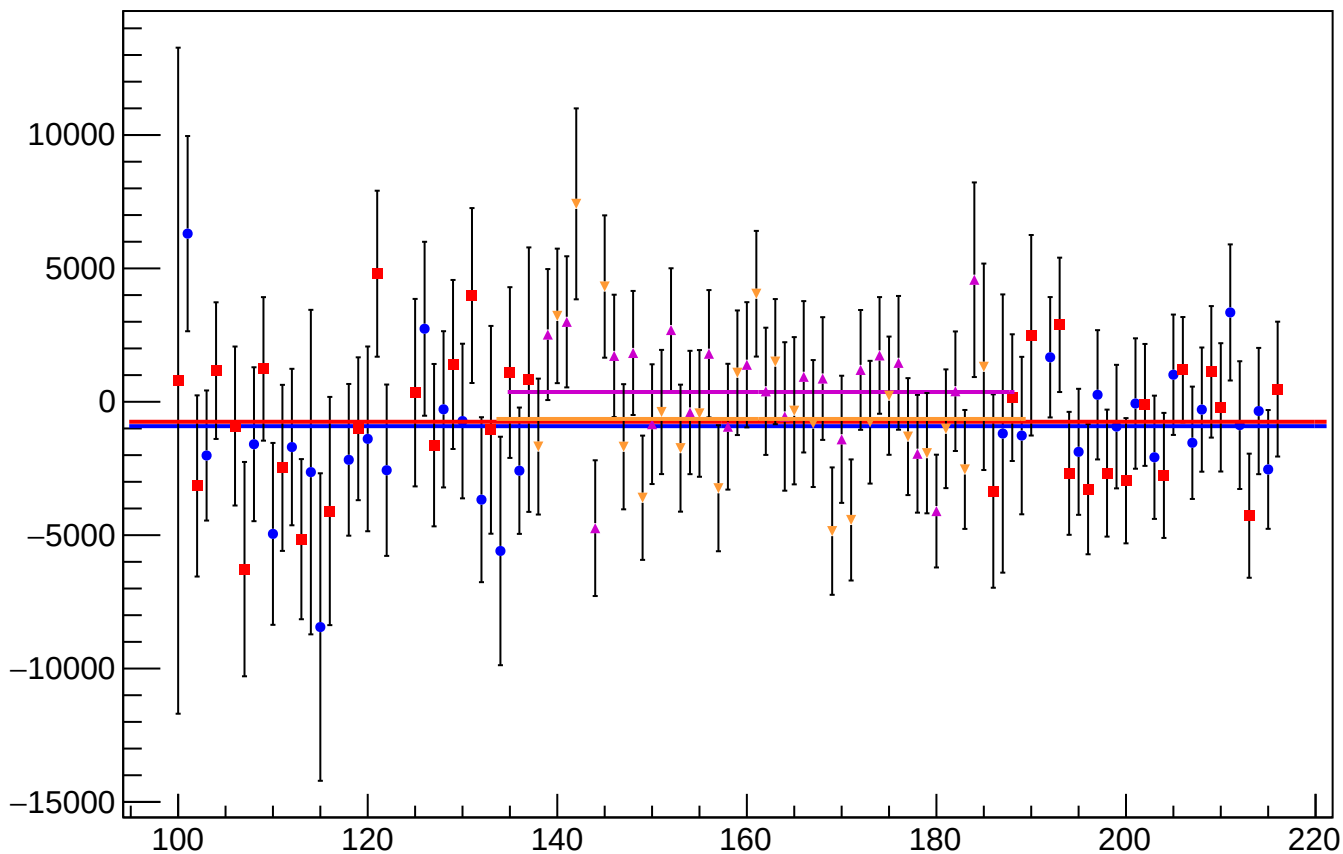
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2250638.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17955641.0/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35860805.7/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17887442.9/55

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-914.343 \pm 491.061$   $\chi^2/\text{NDF}$ : 18.1/30

Left Out:  $-643.811 \pm 493.681$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $-748.936 \pm 490.292$   $\chi^2/\text{NDF}$ : 24.7/32

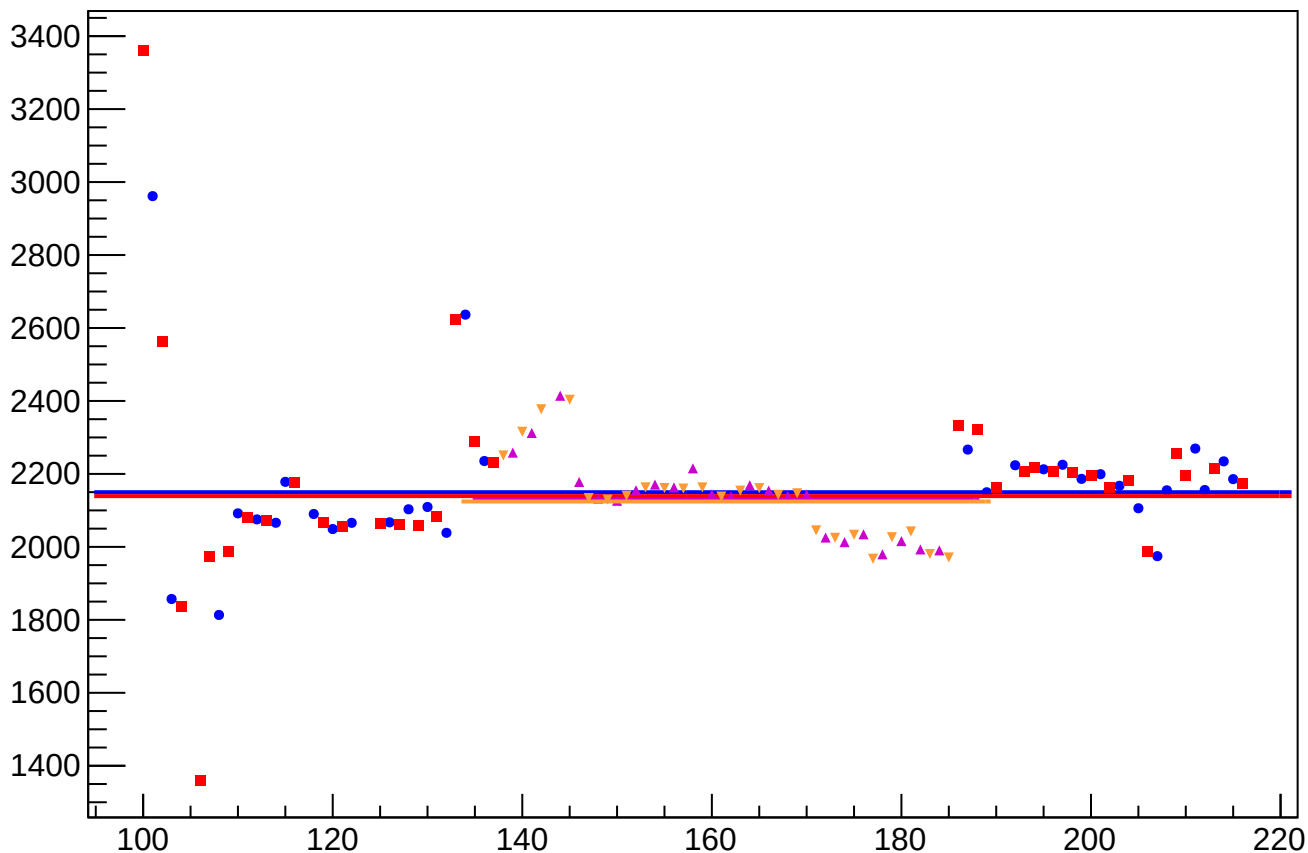
Left In:  $366.759 \pm 497.896$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-779.797 \pm 348.155$   $\chi^2/\text{NDF}$ : 45.3/54

All:  $-490.726 \pm 246.603$   $\chi^2/\text{NDF}$ : 91.2/110

- sign  $-199.674 \pm 349.346$   $\chi^2/\text{NDF}$ : 44.5/55

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2149.828 $\pm$ 0.347  $\chi^2$ /NDF: 223877.9/30

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

Right Out: 2139.122 $\pm$ 0.347  $\chi^2$ /NDF: 315630.8/32

Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.5/22

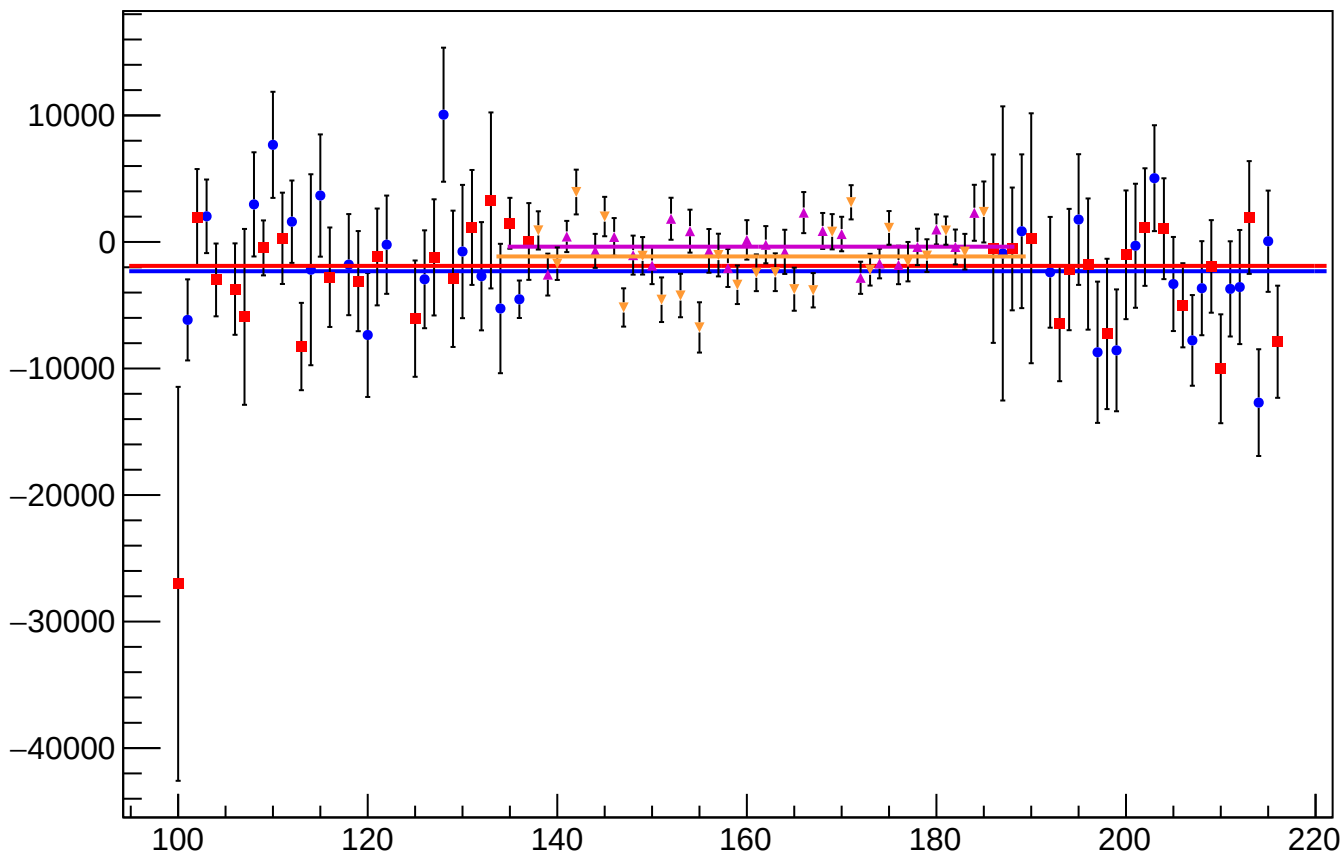
+ sign 2137.200 $\pm$ 0.246  $\chi^2$ /NDF: 315721.3/54

All: 2135.895 $\pm$ 0.174  $\chi^2$ /NDF: 717111.6/110

- sign 2134.580 $\pm$ 0.247  $\chi^2$ /NDF: 401333.9/55



asym\_us\_dd\_at2lr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In: -2313.070 $\pm$ 689.460  $\chi^2$ /NDF: 39.8/30

Left Out: -1144.817 $\pm$ 302.488  $\chi^2$ /NDF: 67.5/23

Right Out: -1890.380 $\pm$ 688.126  $\chi^2$ /NDF: 23.8/32

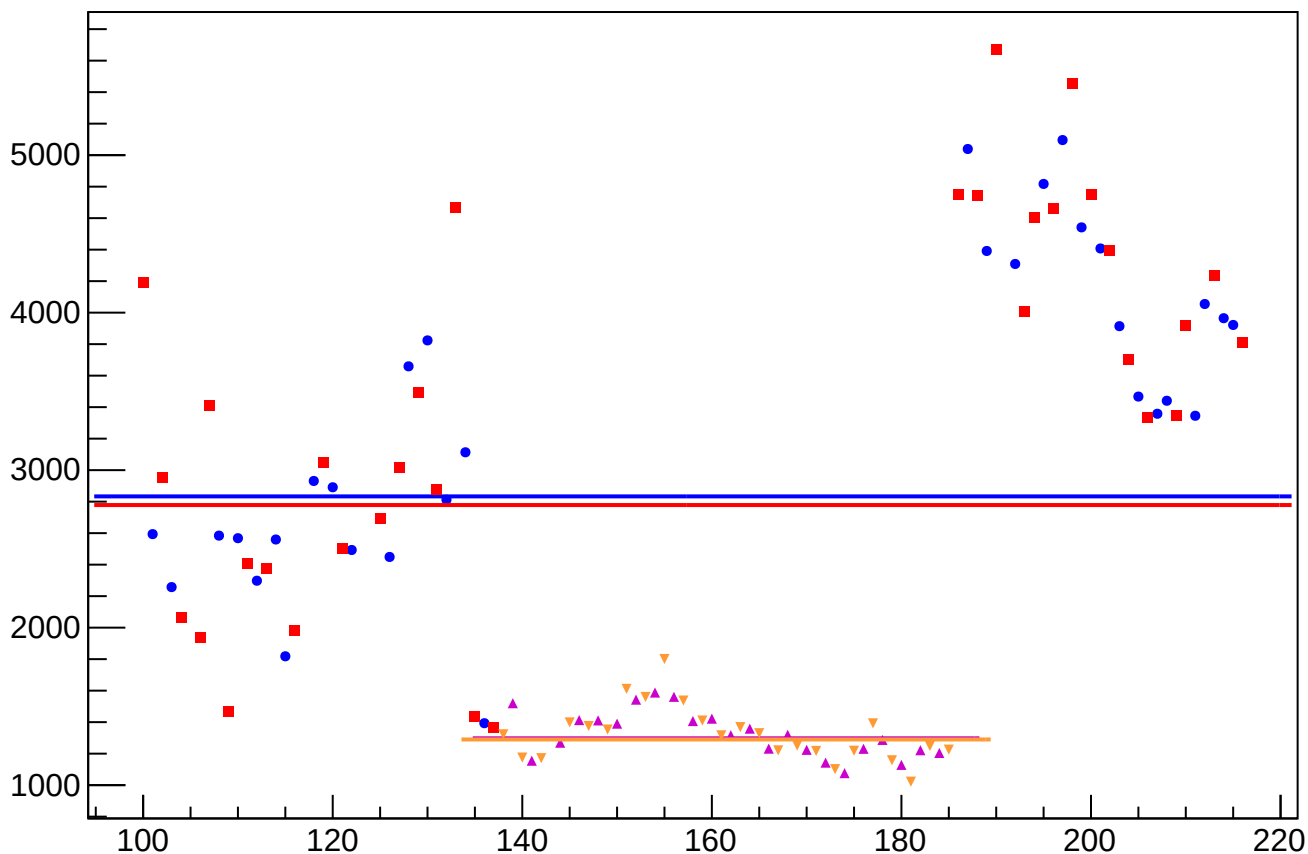
Left In: -373.302 $\pm$ 305.378  $\chi^2$ /NDF: 20.3/22

+ sign -1333.391 $\pm$ 277.001  $\chi^2$ /NDF: 109.7/54

All: -980.870 $\pm$ 196.616  $\chi^2$ /NDF: 161.2/110

- sign -622.919 $\pm$ 279.126  $\chi^2$ /NDF: 48.2/55

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 2833.401 $\pm$ 0.488  $\chi^2$ /NDF: 4579287.6/30

Left Out: 1290.029 $\pm$ 0.214  $\chi^2$ /NDF: 567950.9/23

Right Out: 2778.437 $\pm$ 0.487  $\chi^2$ /NDF: 5617613.8/32

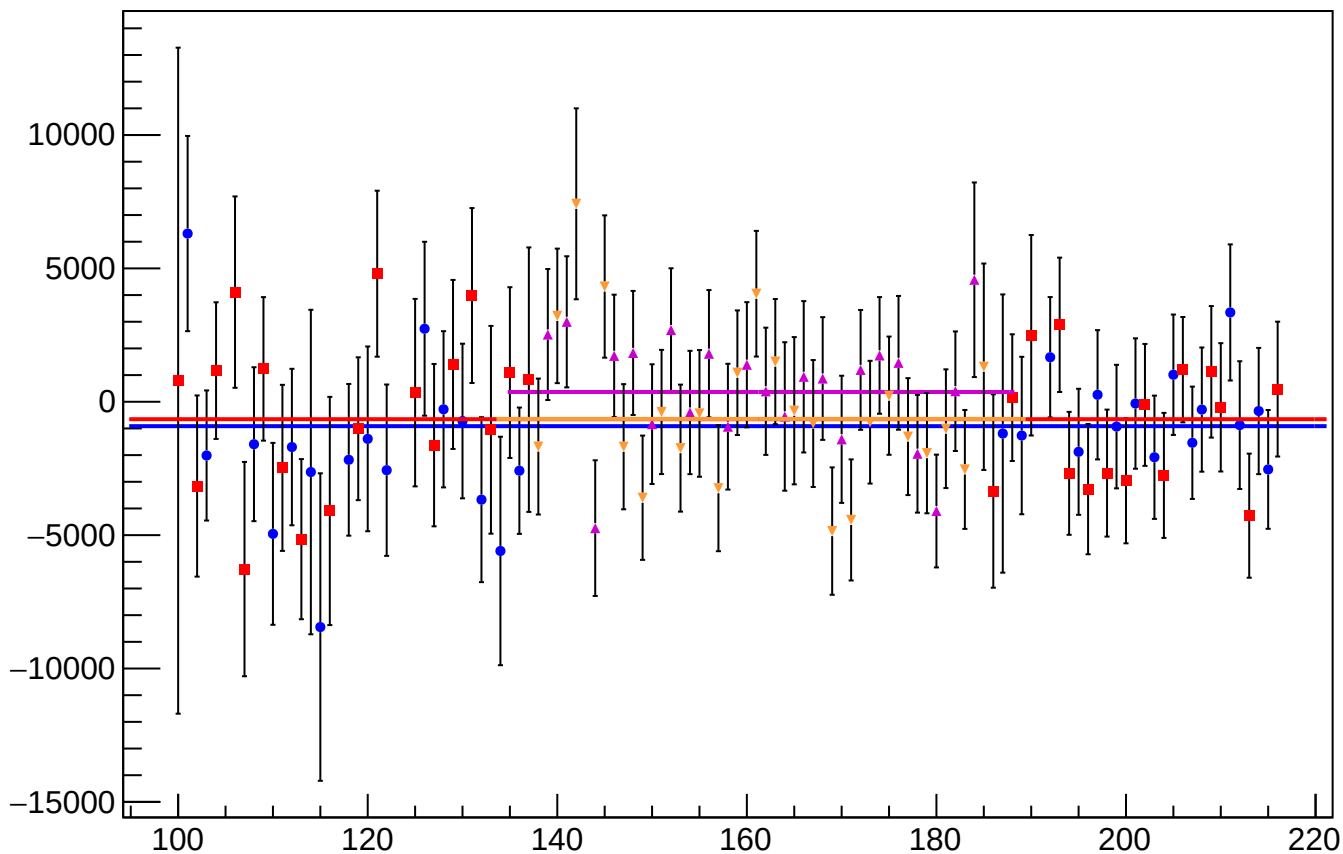
Left In: 1297.454 $\pm$ 0.216  $\chi^2$ /NDF: 433995.4/22

+ sign 1539.153 $\pm$ 0.196  $\chi^2$ /NDF: 13551505.3/54

All: 1540.135 $\pm$ 0.139  $\chi^2$ /NDF: 27342812.2/100

- sign 1541.132 $\pm$ 0.197  $\chi^2$ /NDF: 13791256.3/55

# cor\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-914.384 \pm 491.061$   $\chi^2/\text{NDF}$ : 18.1/30

Left Out:  $-643.673 \pm 493.681$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $-653.137 \pm 492.361$   $\chi^2/\text{NDF}$ : 26.5/32

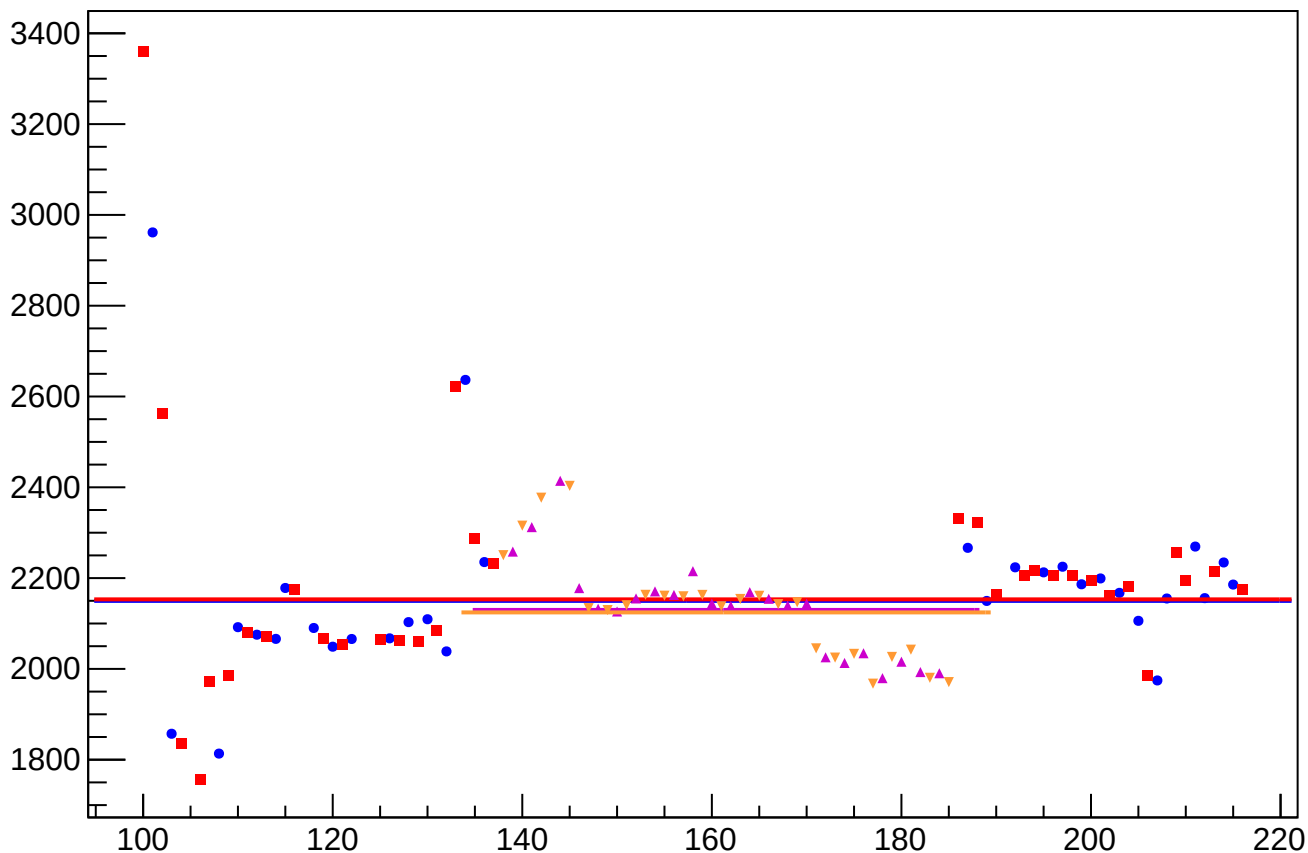
Left In:  $366.649 \pm 497.896$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-779.749 \pm 348.155$   $\chi^2/\text{NDF}$ : 45.3/54

All:  $-466.096 \pm 246.865$   $\chi^2/\text{NDF}$ : 92.9/110

- sign  $-148.944 \pm 350.093$   $\chi^2/\text{NDF}$ : 45.9/55

# cor\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2149.828 $\pm$ 0.347  $\chi^2$ /NDF: 223878.3/30

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

Right Out: 2153.152 $\pm$ 0.348  $\chi^2$ /NDF: 200400.7/32

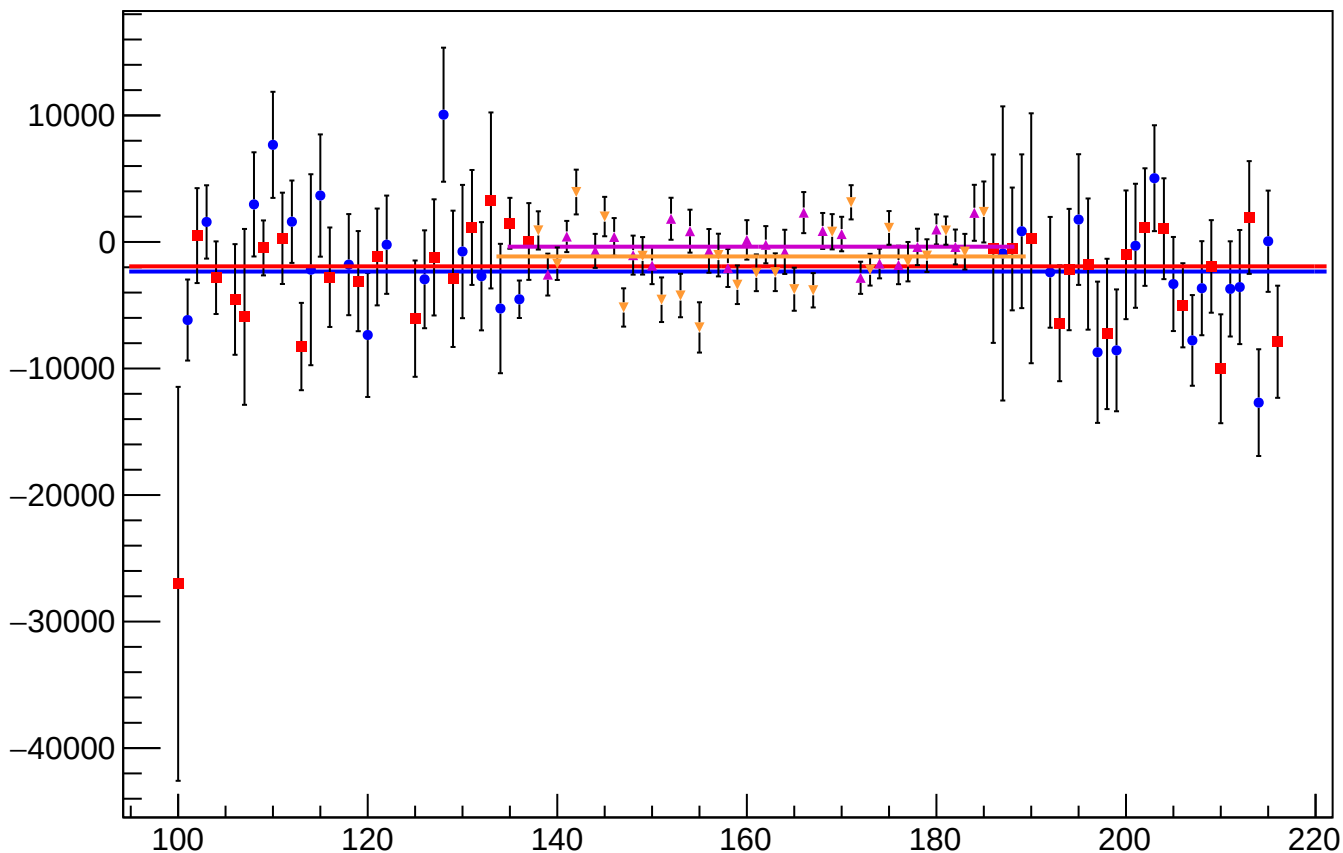
Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.4/22

+ sign 2137.200 $\pm$ 0.246  $\chi^2$ /NDF: 315721.6/54

All: 2139.415 $\pm$ 0.175  $\chi^2$ /NDF: 603845.4/110

- sign 2141.654 $\pm$ 0.248  $\chi^2$ /NDF: 287961.0/55

asym\_us\_dd\_at2lr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-2337.154 \pm 689.311$   $\chi^2/\text{NDF}$ : 39.4/30

Left Out:  $-1144.779 \pm 302.490$   $\chi^2/\text{NDF}$ : 67.5/23

Right Out:  $-1926.738 \pm 691.763$   $\chi^2/\text{NDF}$ : 23.3/32

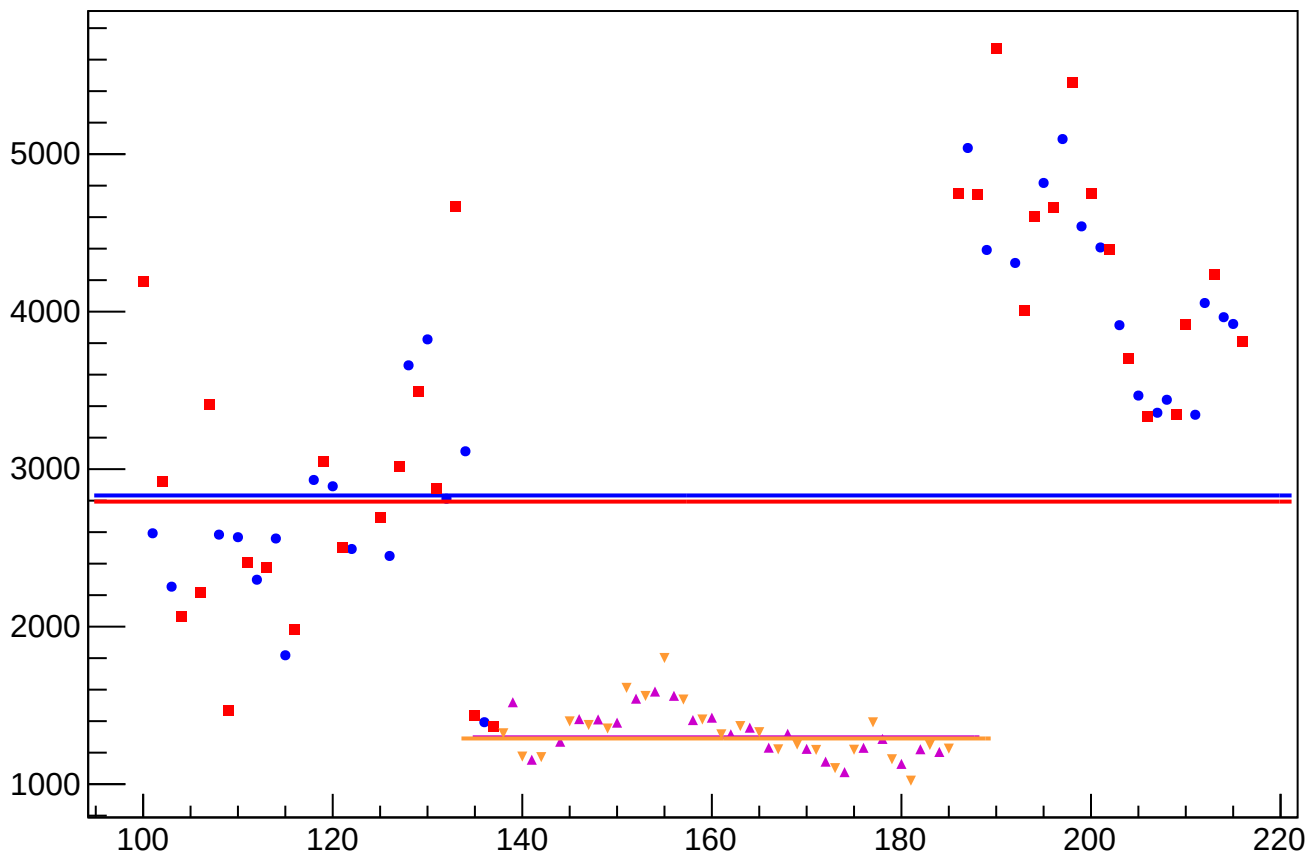
Left In:  $-373.186 \pm 305.379$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1337.319 \pm 276.993$   $\chi^2/\text{NDF}$ : 109.4/54

All:  $-984.974 \pm 196.698$   $\chi^2/\text{NDF}$ : 160.5/110

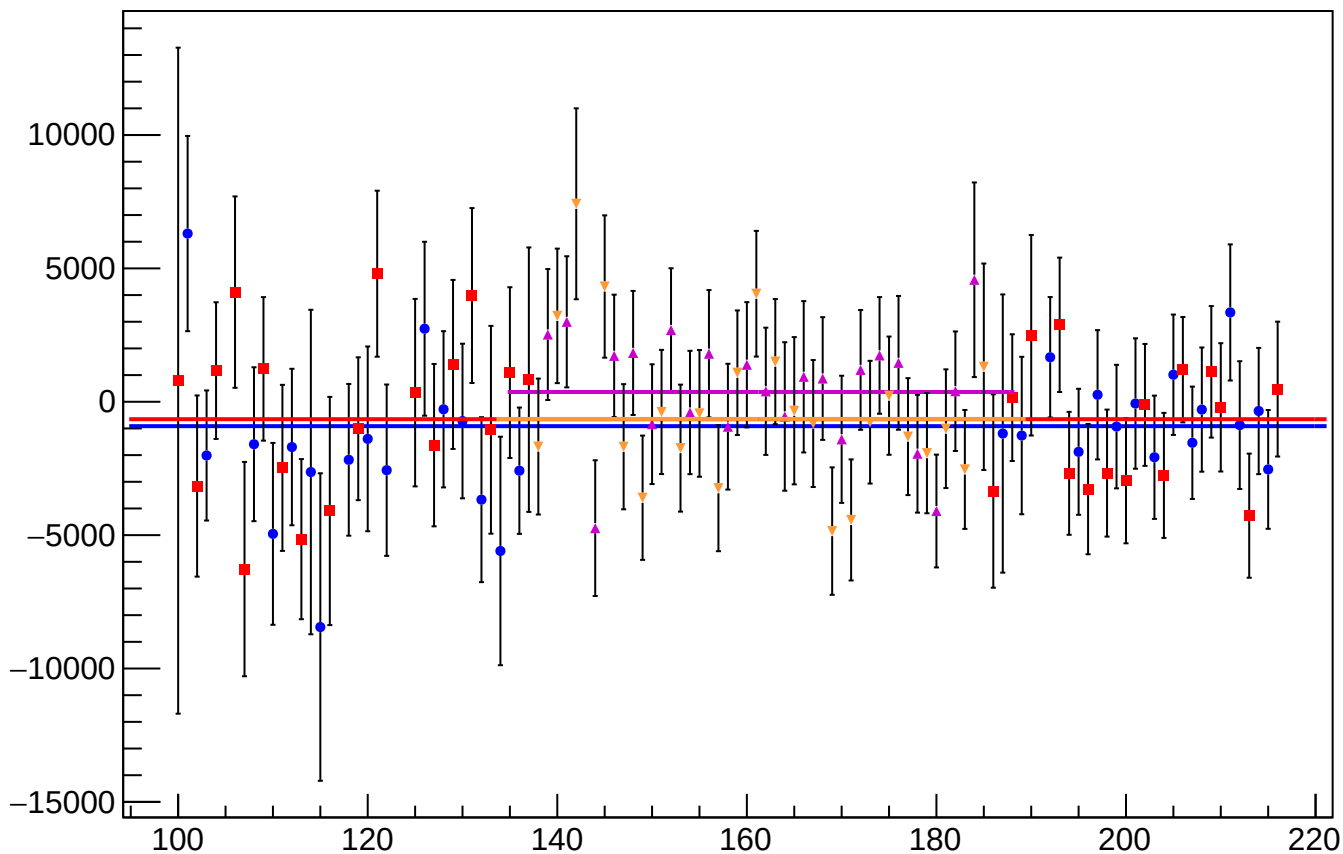
- sign  $-626.562 \pm 279.368$   $\chi^2/\text{NDF}$ : 47.8/55

asym\_us\_dd\_at2lr\_dd\_avg\_cor\_correction\_rms vs Slug



|                                 |                             |                             |                              |
|---------------------------------|-----------------------------|-----------------------------|------------------------------|
| Right In: 2832.916 $\pm$ 0.487  | $\chi^2$ /NDF: 4580887.1/30 | + sign 1539.178 $\pm$ 0.196 | $\chi^2$ /NDF: 13550655.1/54 |
| Left Out: 1290.041 $\pm$ 0.214  | $\chi^2$ /NDF: 567883.5/23  | All: 1540.339 $\pm$ 0.139   | $\chi^2$ /NDF: 27359452.6/1  |
| Right Out: 2793.900 $\pm$ 0.489 | $\chi^2$ /NDF: 5542008.9/32 | - sign 1541.519 $\pm$ 0.198 | $\chi^2$ /NDF: 13808726.6/55 |
| Left In: 1297.458 $\pm$ 0.216   | $\chi^2$ /NDF: 434006.2/22  |                             |                              |

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-914.384 \pm 491.061$   $\chi^2/\text{NDF}$ : 18.1/30

Left Out:  $-643.673 \pm 493.681$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $-653.137 \pm 492.361$   $\chi^2/\text{NDF}$ : 26.5/32

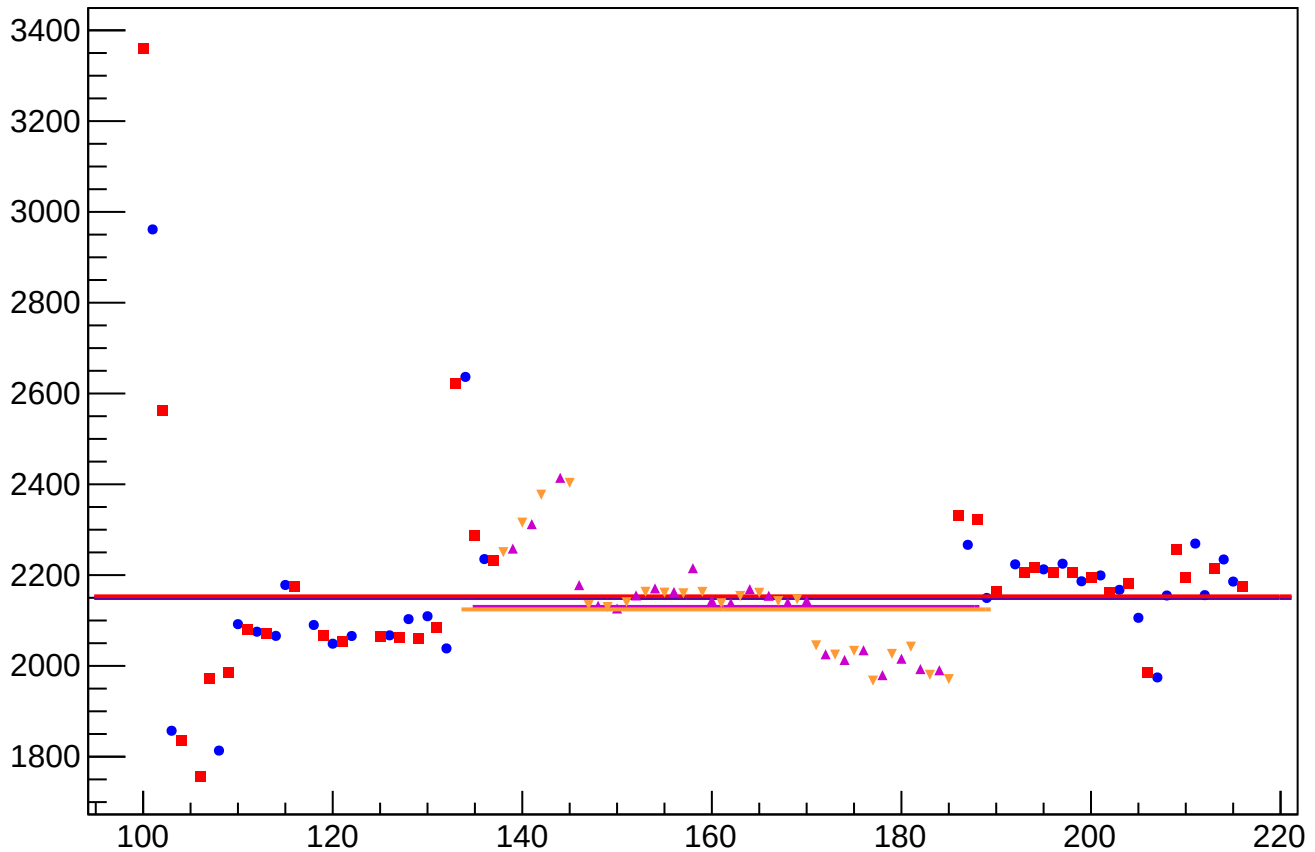
Left In:  $366.649 \pm 497.896$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-779.749 \pm 348.155$   $\chi^2/\text{NDF}$ : 45.3/54

All:  $-466.096 \pm 246.865$   $\chi^2/\text{NDF}$ : 92.9/110

- sign  $-148.944 \pm 350.093$   $\chi^2/\text{NDF}$ : 45.9/55

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2149.828 $\pm$ 0.347  $\chi^2$ /NDF: 223878.3/30

Left Out: 2124.437 $\pm$ 0.349  $\chi^2$ /NDF: 89184.0/23

+ sign 2137.200 $\pm$ 0.246  $\chi^2$ /NDF: 315721.6/54

Right Out: 2153.152 $\pm$ 0.348  $\chi^2$ /NDF: 200400.7/32

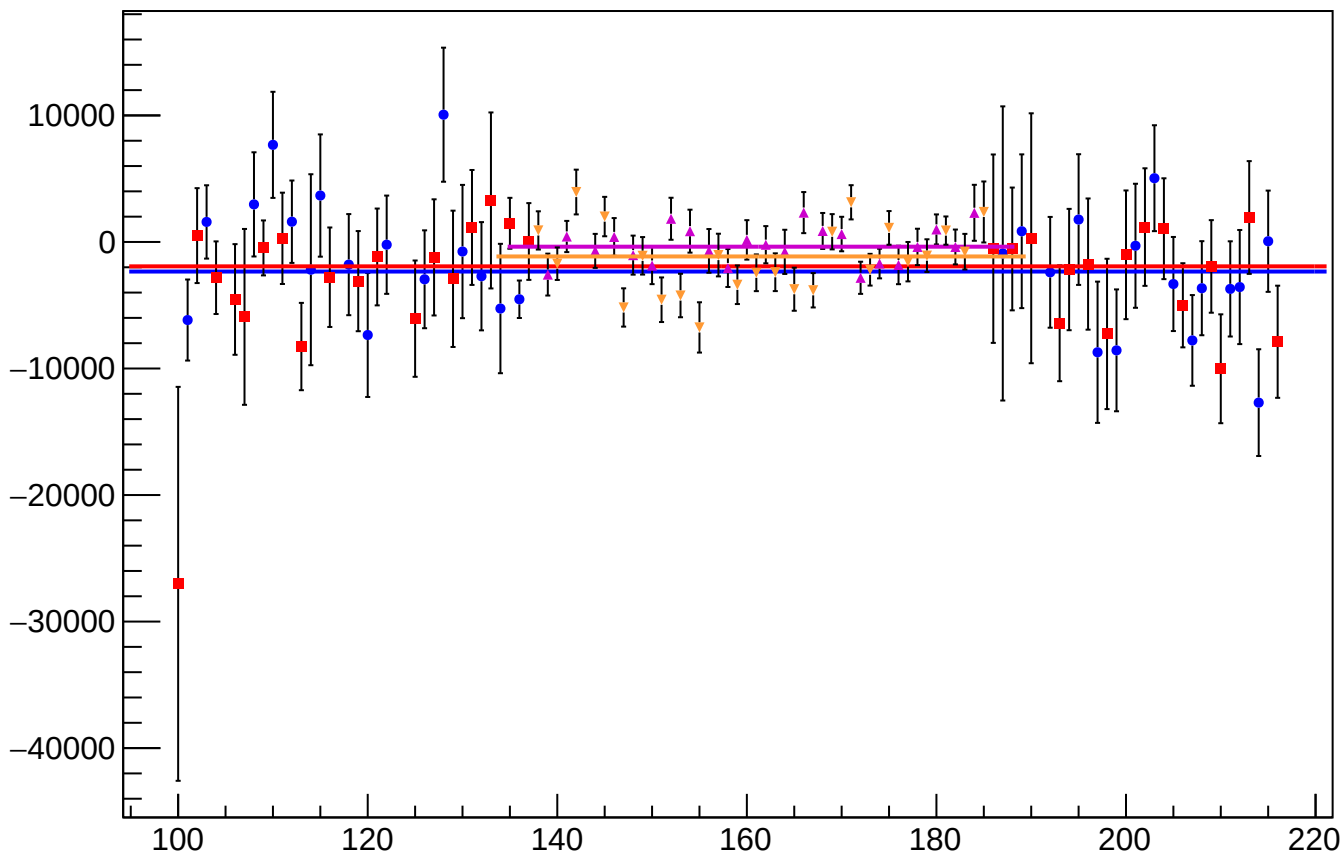
All: 2139.415 $\pm$ 0.175  $\chi^2$ /NDF: 603845.4/110

Left In: 2129.897 $\pm$ 0.352  $\chi^2$ /NDF: 85354.4/22

- sign 2141.654 $\pm$ 0.248  $\chi^2$ /NDF: 287961.0/55



asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-2337.154 \pm 689.311$   $\chi^2/\text{NDF}$ : 39.4/30

Left Out:  $-1144.779 \pm 302.490$   $\chi^2/\text{NDF}$ : 67.5/23

Right Out:  $-1926.738 \pm 691.763$   $\chi^2/\text{NDF}$ : 23.3/32

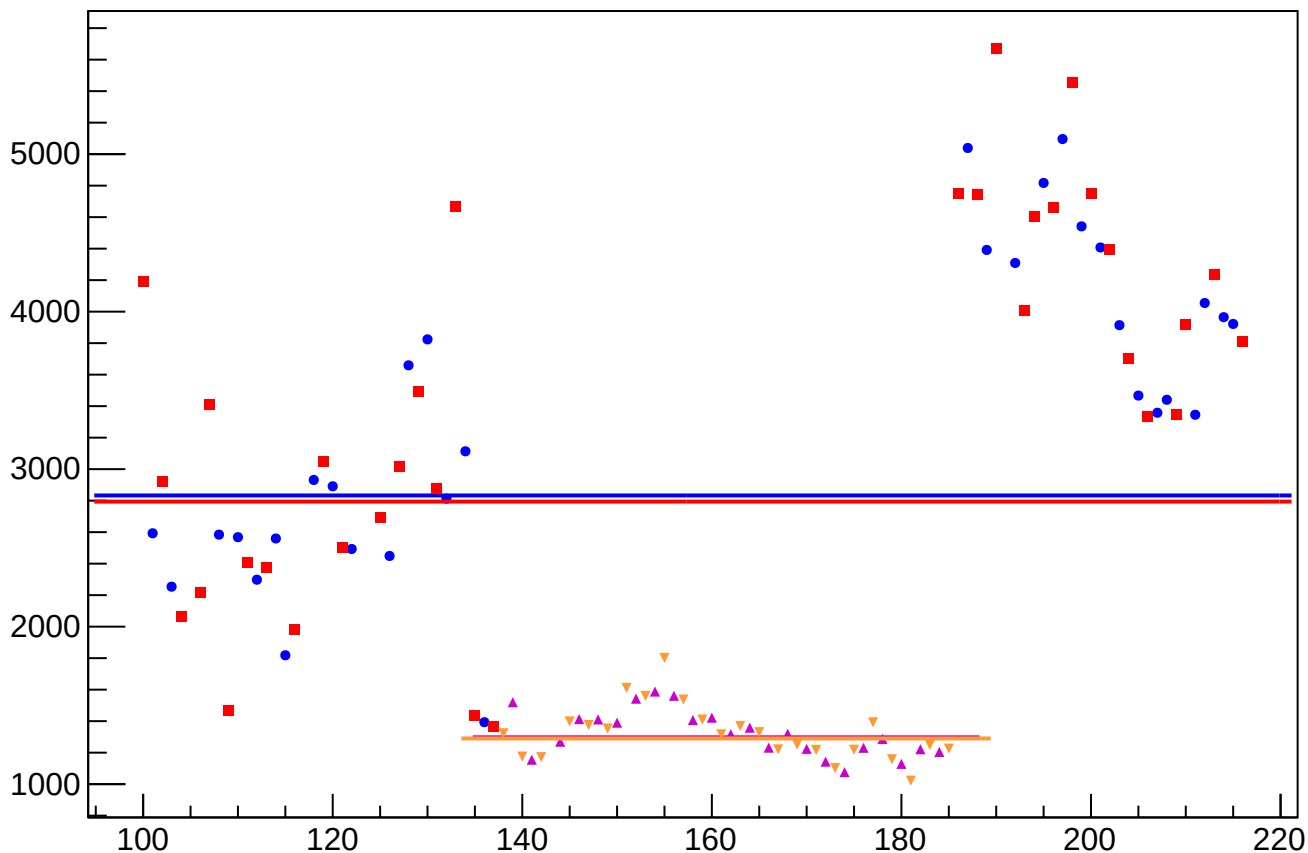
Left In:  $-373.186 \pm 305.379$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $-1337.319 \pm 276.993$   $\chi^2/\text{NDF}$ : 109.4/54

All:  $-984.974 \pm 196.698$   $\chi^2/\text{NDF}$ : 160.5/110

- sign  $-626.562 \pm 279.368$   $\chi^2/\text{NDF}$ : 47.8/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In:  $2832.916 \pm 0.487$   $\chi^2/\text{NDF}: 4580887.1/30$

Left Out:  $1290.041 \pm 0.214$   $\chi^2/\text{NDF}: 567883.5/23$

Right Out:  $2793.900 \pm 0.489$   $\chi^2/\text{NDF}: 5542008.9/32$

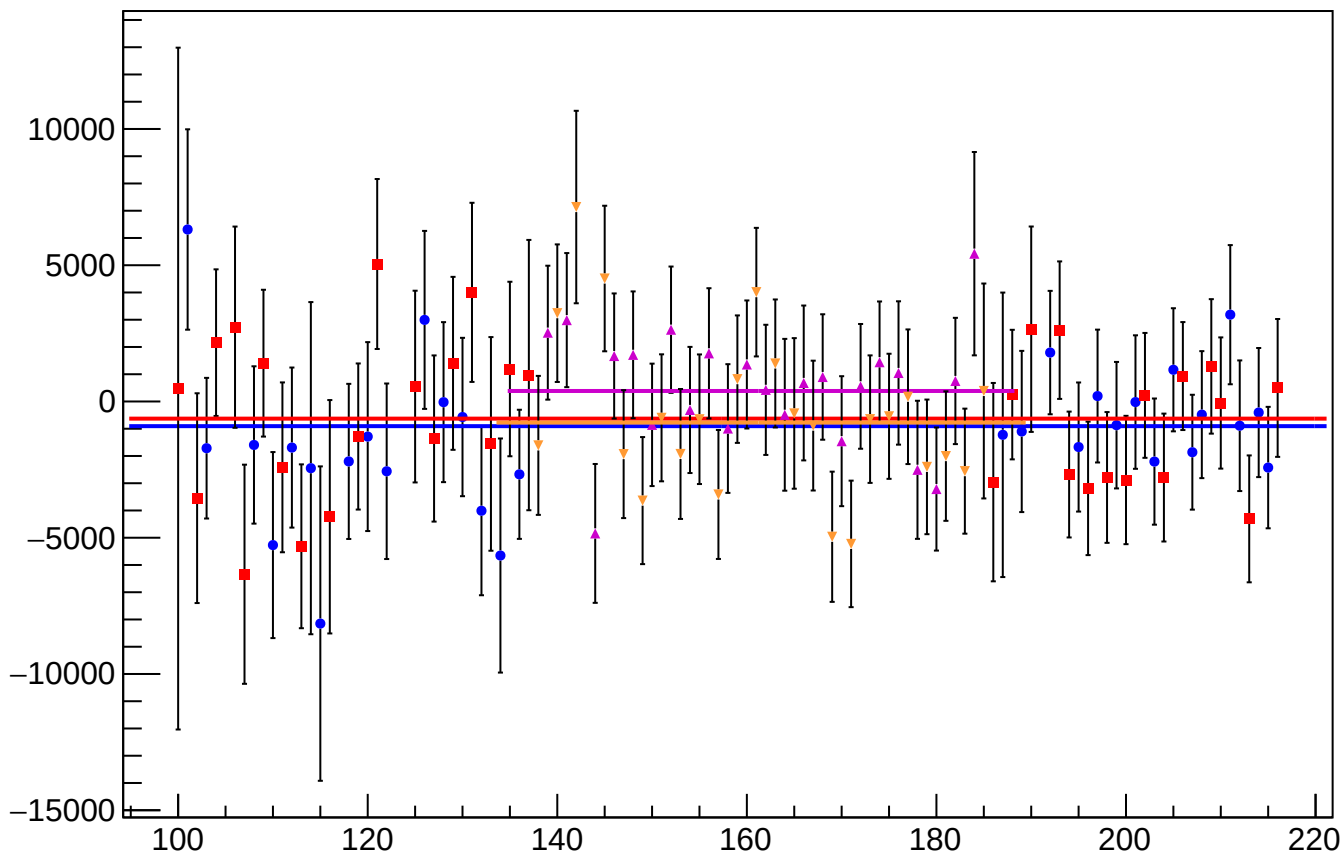
Left In:  $1297.458 \pm 0.216$   $\chi^2/\text{NDF}: 434006.2/22$

+ sign  $1539.178 \pm 0.196$   $\chi^2/\text{NDF}: 13550655.1/54$

All:  $1540.339 \pm 0.139$   $\chi^2/\text{NDF}: 27359452.6/100$

- sign  $1541.519 \pm 0.198$   $\chi^2/\text{NDF}: 13808726.6/55$

# dit\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-905.427 \pm 493.012$   $\chi^2/\text{NDF}$ : 18.5/30

Left Out:  $-773.579 \pm 502.816$   $\chi^2/\text{NDF}$ : 28.6/23

Right Out:  $-629.493 \pm 495.609$   $\chi^2/\text{NDF}$ : 26.5/32

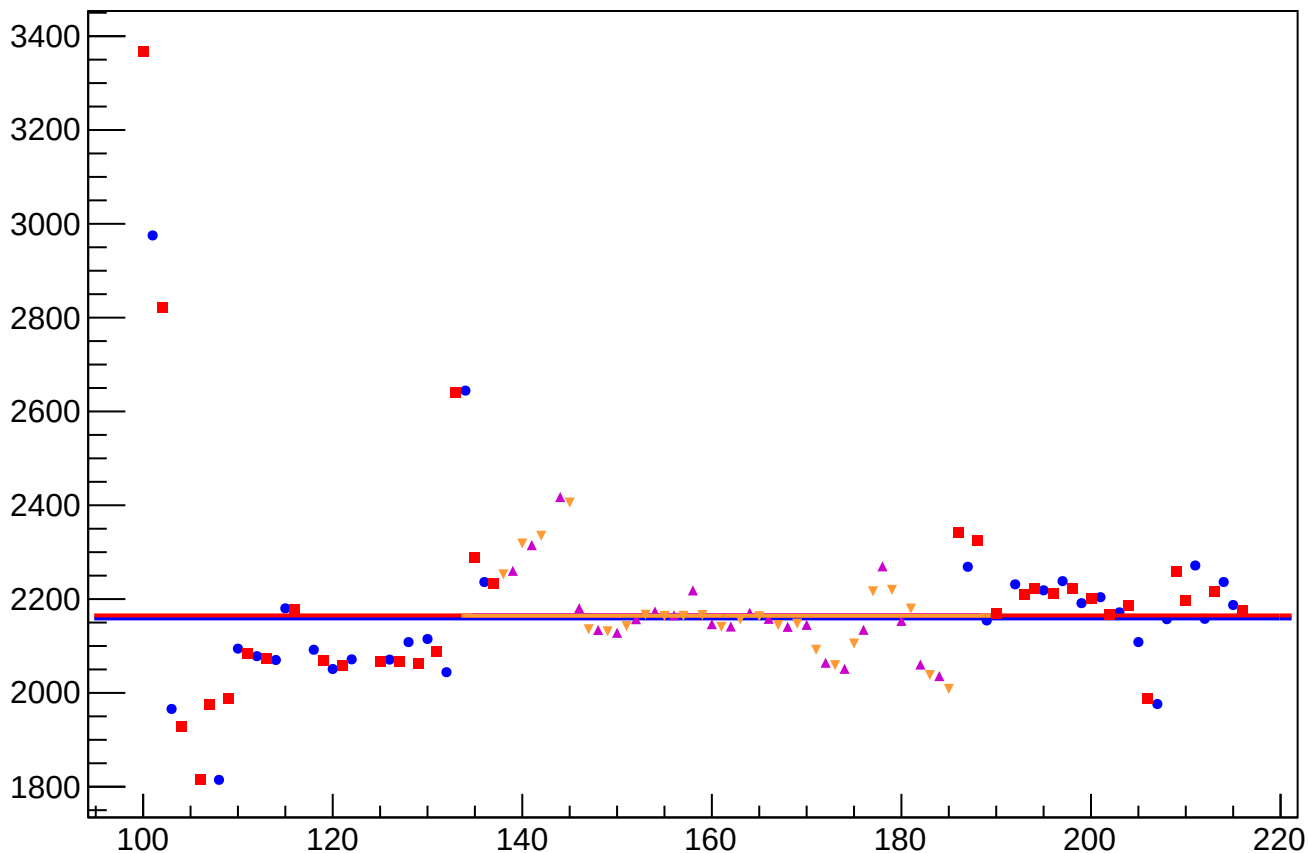
Left In:  $385.269 \pm 506.052$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $-840.801 \pm 352.027$   $\chi^2/\text{NDF}$ : 47.1/54

All:  $-488.807 \pm 249.644$   $\chi^2/\text{NDF}$ : 93.3/110

- sign  $-132.691 \pm 354.083$   $\chi^2/\text{NDF}$ : 44.2/55

dit\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2158.810 $\pm$ 0.349  $\chi^2$ /NDF: 208188.3/30

Left Out: 2164.532 $\pm$ 0.356  $\chi^2$ /NDF: 50676.3/23

Right Out: 2165.166 $\pm$ 0.350  $\chi^2$ /NDF: 209036.5/32

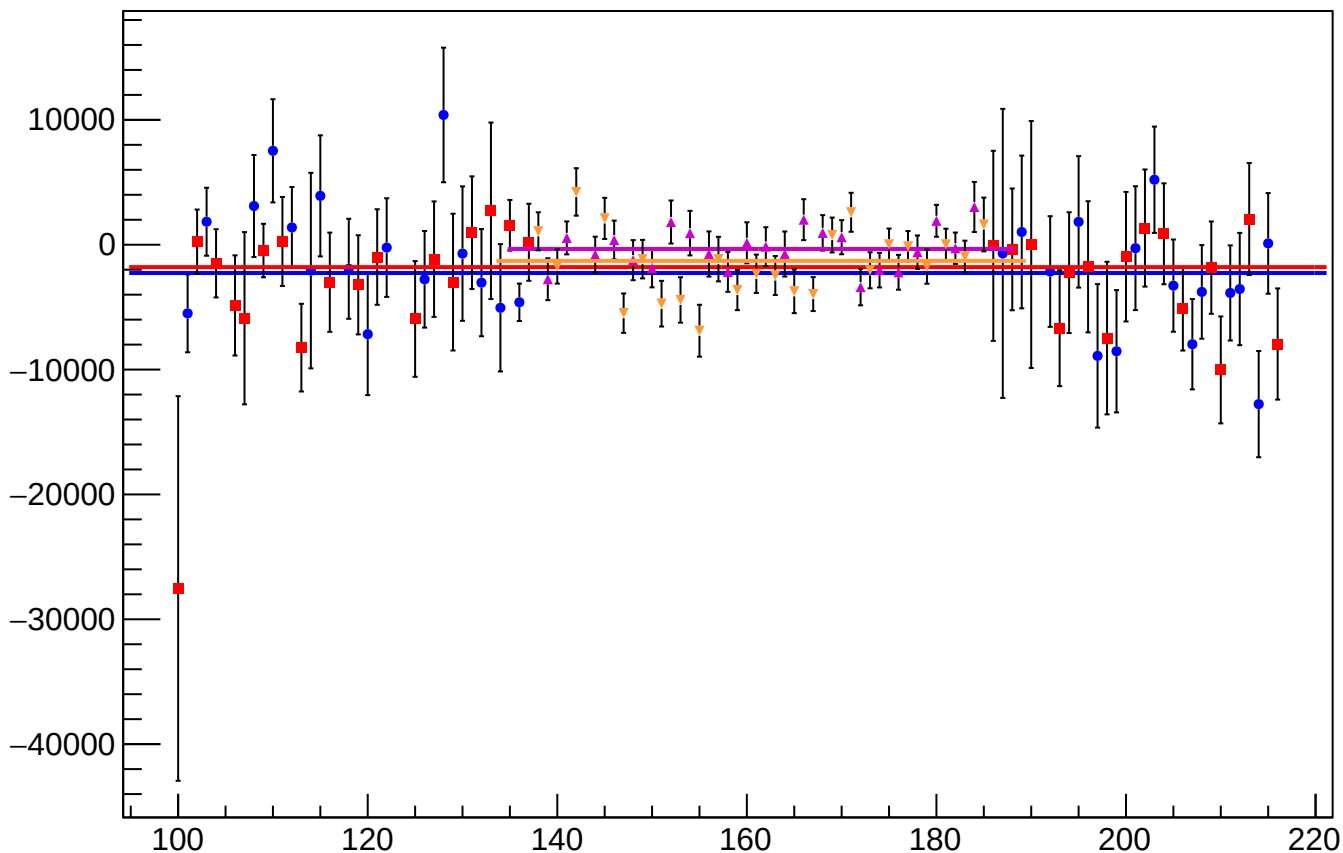
Left In: 2165.643 $\pm$ 0.358  $\chi^2$ /NDF: 52124.5/22

+ sign 2161.615 $\pm$ 0.249  $\chi^2$ /NDF: 258996.6/54

All: 2163.496 $\pm$ 0.177  $\chi^2$ /NDF: 520273.4/110

- sign 2165.400 $\pm$ 0.250  $\chi^2$ /NDF: 261161.8/55

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In:  $-2266.092 \pm 690.415$   $\chi^2/\text{NDF}$ : 39.8/30

Left Out:  $-1293.716 \pm 310.622$   $\chi^2/\text{NDF}$ : 58.7/23

Right Out:  $-1794.735 \pm 678.620$   $\chi^2/\text{NDF}$ : 23.9/32

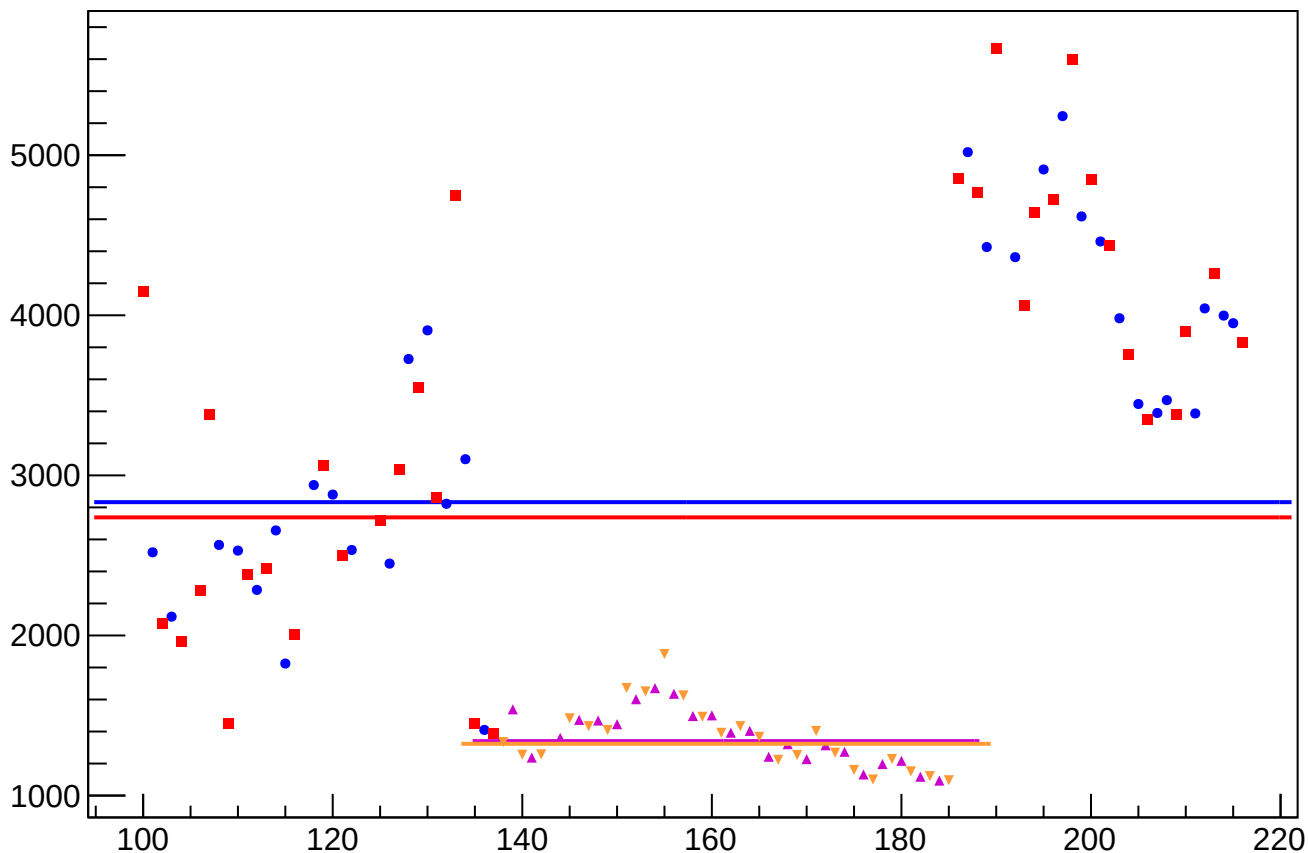
Left In:  $-341.259 \pm 315.566$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-1457.406 \pm 283.273$   $\chi^2/\text{NDF}$ : 100.1/54

All:  $-1032.862 \pm 201.311$   $\chi^2/\text{NDF}$ : 157.2/110

- sign  $-599.674 \pm 286.142$   $\chi^2/\text{NDF}$ : 52.5/55

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In:  $2832.772 \pm 0.488$   $\chi^2/\text{NDF}: 4685468.5/30$

Left Out:  $1323.402 \pm 0.220$   $\chi^2/\text{NDF}: 663859.2/23$

Right Out:  $2737.739 \pm 0.480$   $\chi^2/\text{NDF}: 5823760.8/32$

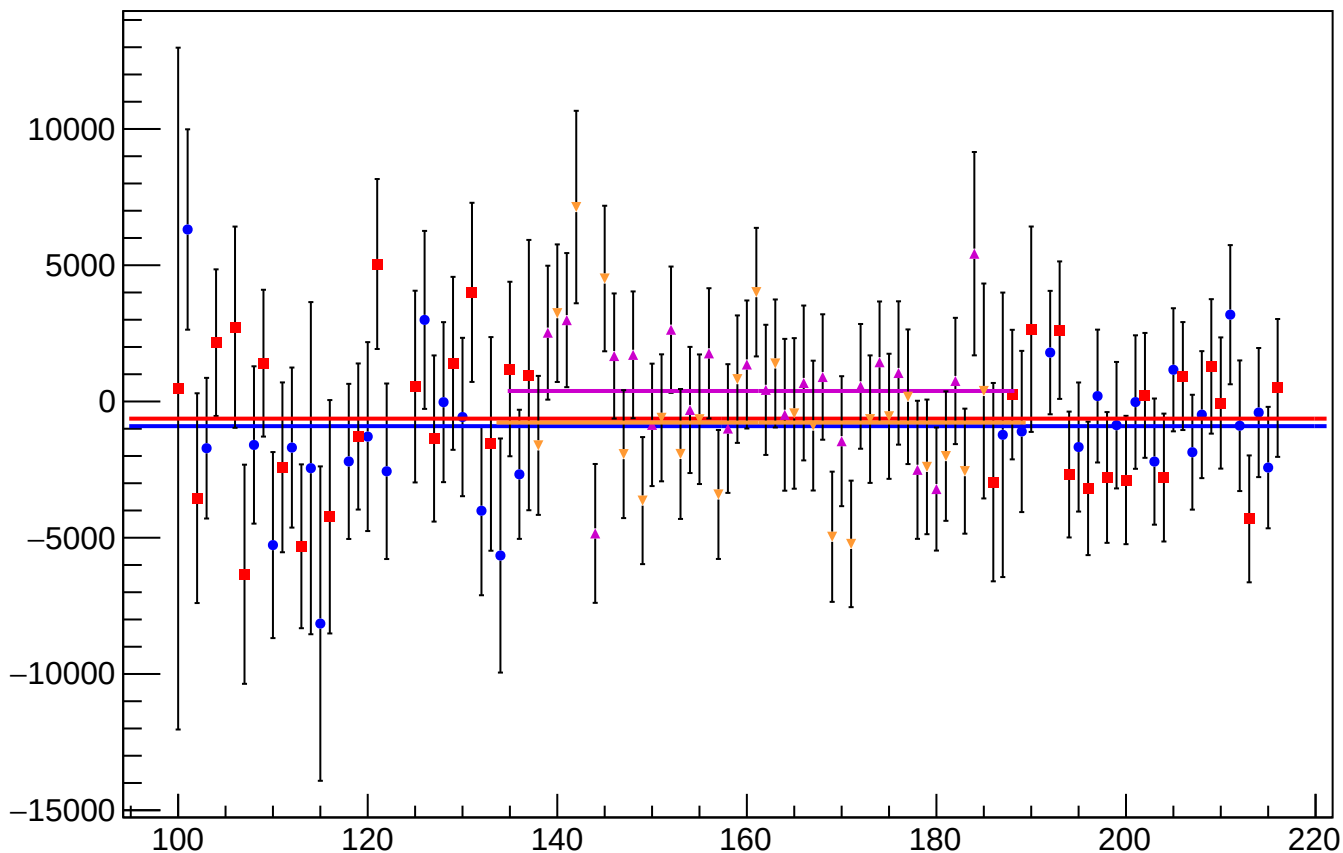
Left In:  $1340.084 \pm 0.223$   $\chi^2/\text{NDF}: 494267.4/22$

+ sign  $1577.491 \pm 0.200$   $\chi^2/\text{NDF}: 13298954.8/54$

All:  $1582.977 \pm 0.142$   $\chi^2/\text{NDF}: 26593735.4/100$

- sign  $1588.575 \pm 0.202$   $\chi^2/\text{NDF}: 13293265.0/55$

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In:  $-905.423 \pm 493.012$   $\chi^2/\text{NDF}$ : 18.5/30

Left Out:  $-773.576 \pm 502.816$   $\chi^2/\text{NDF}$ : 28.6/23

Right Out:  $-629.489 \pm 495.609$   $\chi^2/\text{NDF}$ : 26.5/32

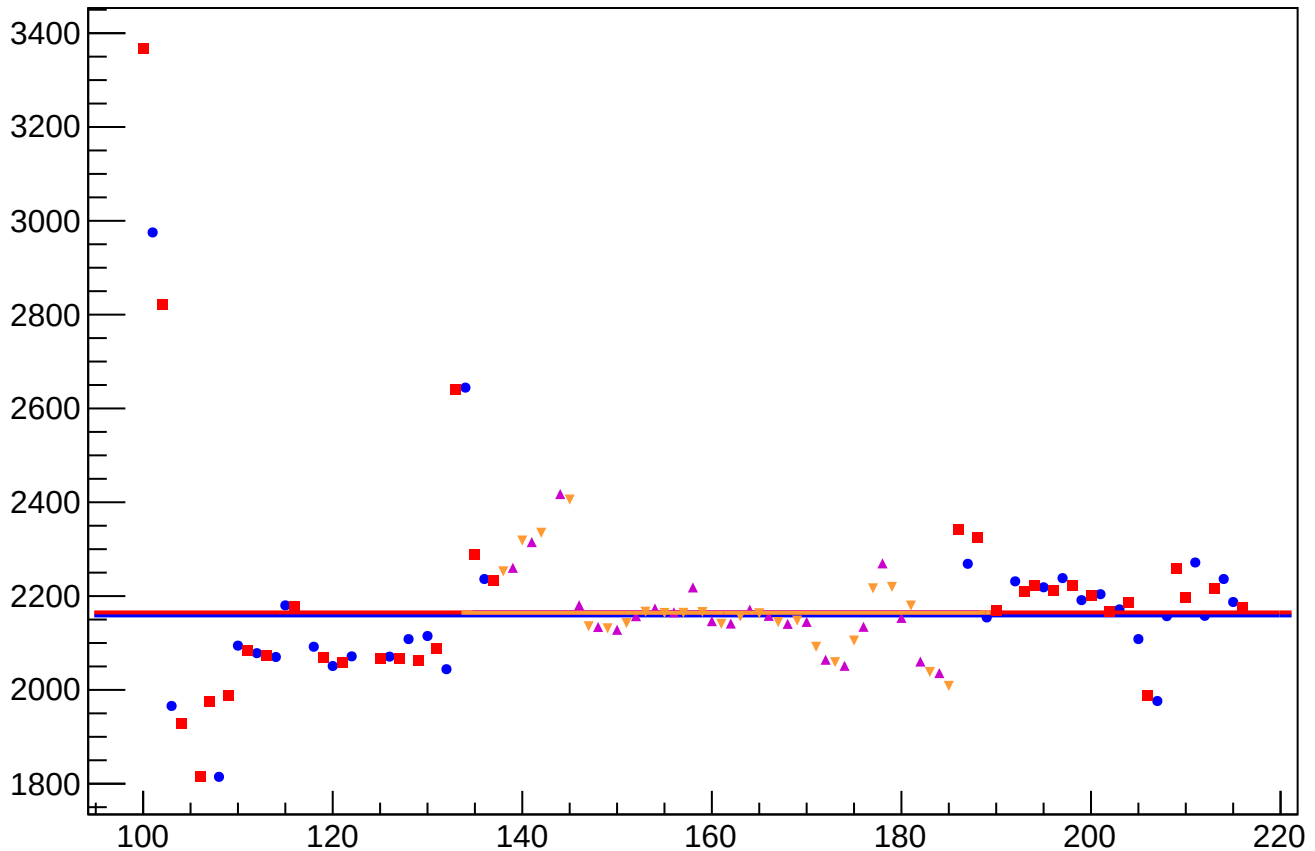
Left In:  $385.269 \pm 506.052$   $\chi^2/\text{NDF}$ : 15.6/22

+ sign  $-840.797 \pm 352.027$   $\chi^2/\text{NDF}$ : 47.1/54

All:  $-488.805 \pm 249.644$   $\chi^2/\text{NDF}$ : 93.3/110

- sign  $-132.689 \pm 354.083$   $\chi^2/\text{NDF}$ : 44.2/55

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



Right In: 2158.810+/-0.349  $\chi^2/\text{NDF}$ : 208188.3/30

Left Out: 2164.532+/-0.356  $\chi^2/\text{NDF}$ : 50676.3/23

Right Out: 2165.166+/-0.350  $\chi^2/\text{NDF}$ : 209036.4/32

Left In: 2165.643+/-0.358  $\chi^2/\text{NDF}$ : 52124.4/22

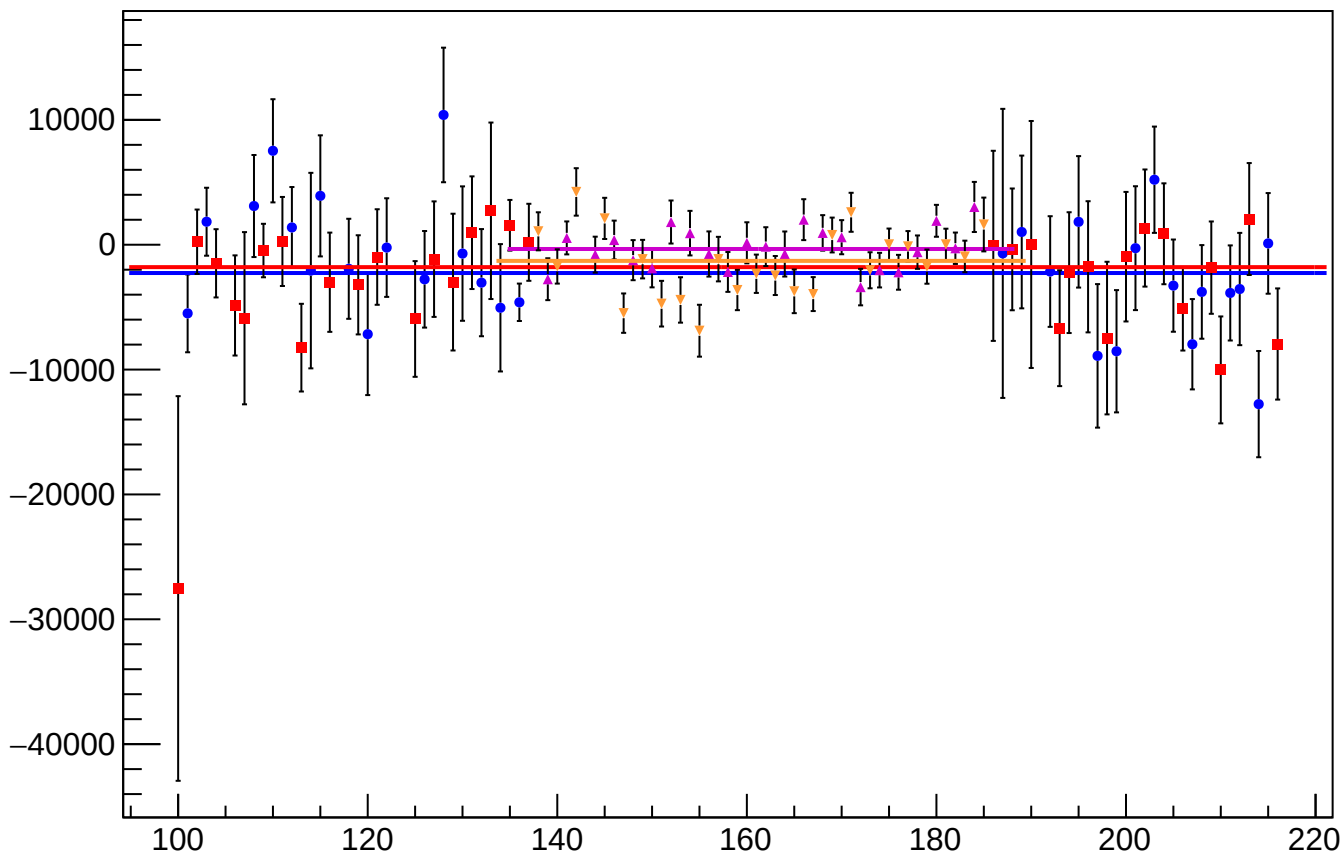
+ sign 2161.615+/-0.249  $\chi^2/\text{NDF}$ : 258996.6/54

All: 2163.496+/-0.177  $\chi^2/\text{NDF}$ : 520273.3/110

- sign 2165.400+/-0.250  $\chi^2/\text{NDF}$ : 261161.7/55



asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-2266.087 \pm 690.416$   $\chi^2/\text{NDF}$ : 39.8/30

Left Out:  $-1293.717 \pm 310.622$   $\chi^2/\text{NDF}$ : 58.7/23

Right Out:  $-1794.746 \pm 678.622$   $\chi^2/\text{NDF}$ : 23.9/32

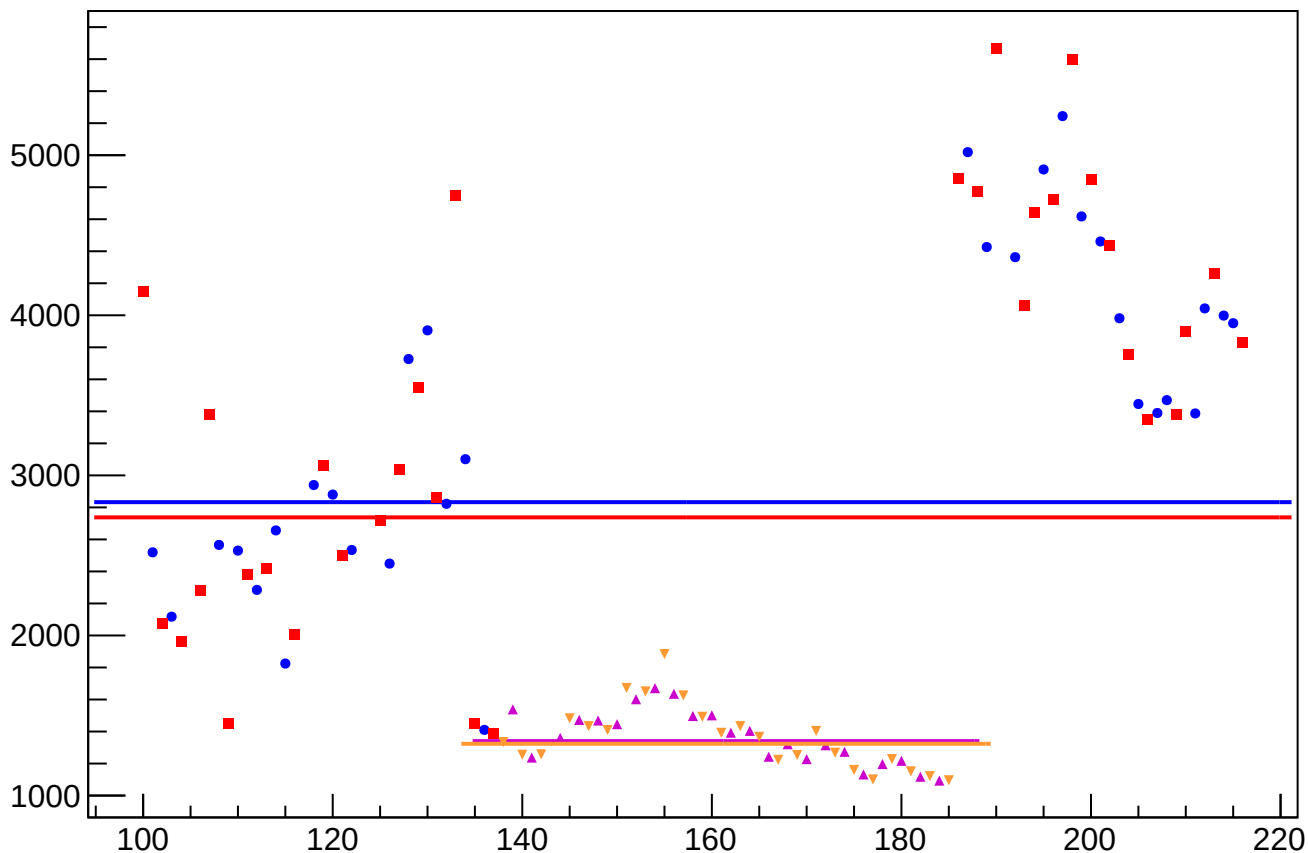
Left In:  $-341.256 \pm 315.566$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-1457.406 \pm 283.273$   $\chi^2/\text{NDF}$ : 100.1/54

All:  $-1032.860 \pm 201.311$   $\chi^2/\text{NDF}$ : 157.2/110

- sign  $-599.672 \pm 286.142$   $\chi^2/\text{NDF}$ : 52.5/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In:  $2832.782 \pm 0.488$   $\chi^2/\text{NDF}: 4685359.5/30$

Left Out:  $1323.402 \pm 0.220$   $\chi^2/\text{NDF}: 663857.6/23$

Right Out:  $2737.751 \pm 0.480$   $\chi^2/\text{NDF}: 5823664.7/32$

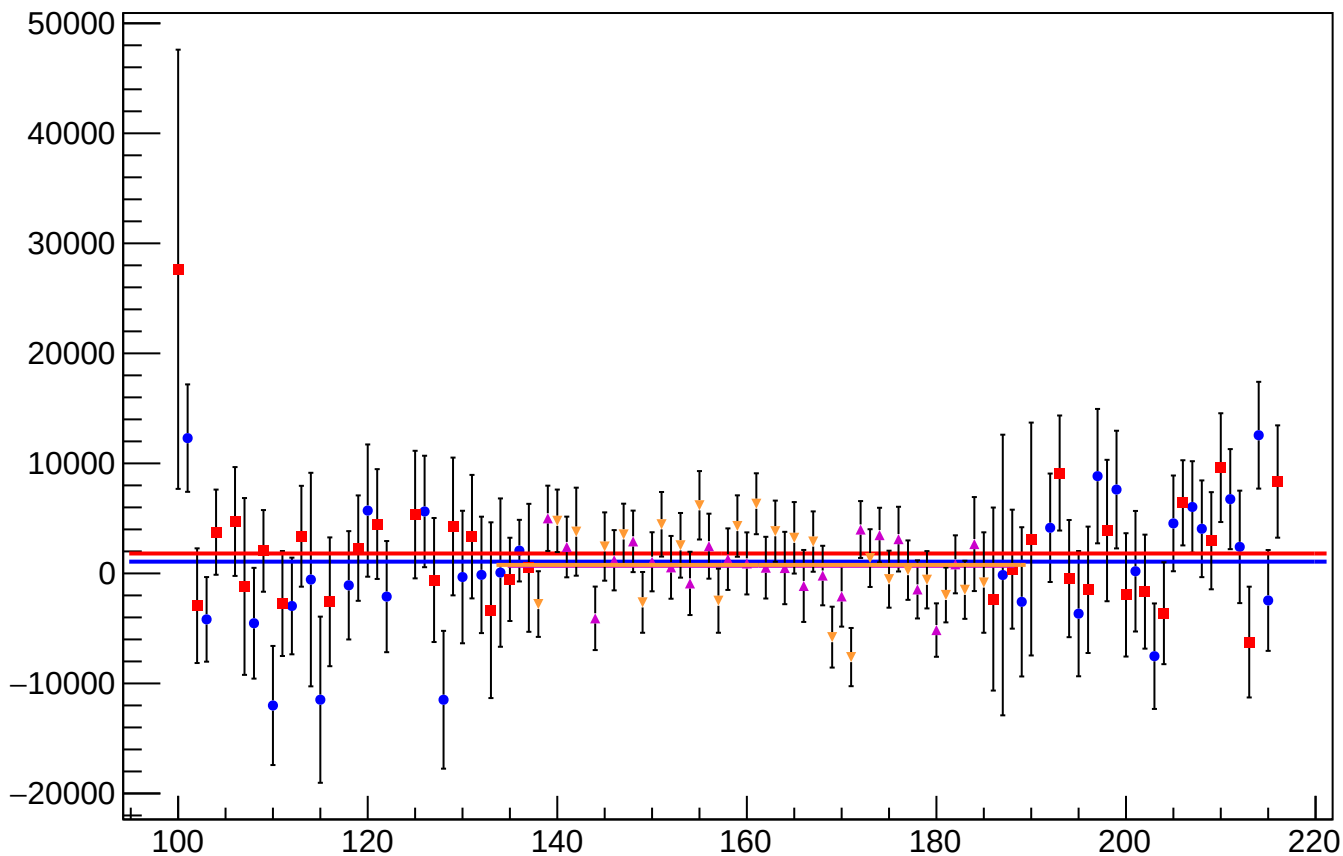
Left In:  $1340.083 \pm 0.223$   $\chi^2/\text{NDF}: 494276.1/22$

+ sign  $1577.492 \pm 0.200$   $\chi^2/\text{NDF}: 13298928.3/54$

All:  $1582.977 \pm 0.142$   $\chi^2/\text{NDF}: 26593725.5/100$

- sign  $1588.574 \pm 0.202$   $\chi^2/\text{NDF}: 13293282.0/55$

# asym\_us\_dd\_at2lr\_dd\_avg\_mean vs Slug



Right In: 1068.976 $\pm$ 903.063  $\chi^2$ /NDF: 42.2/30

Left Out: 774.788 $\pm$ 583.692  $\chi^2$ /NDF: 39.3/23

Right Out: 1810.179 $\pm$ 909.293  $\chi^2$ /NDF: 20.1/32

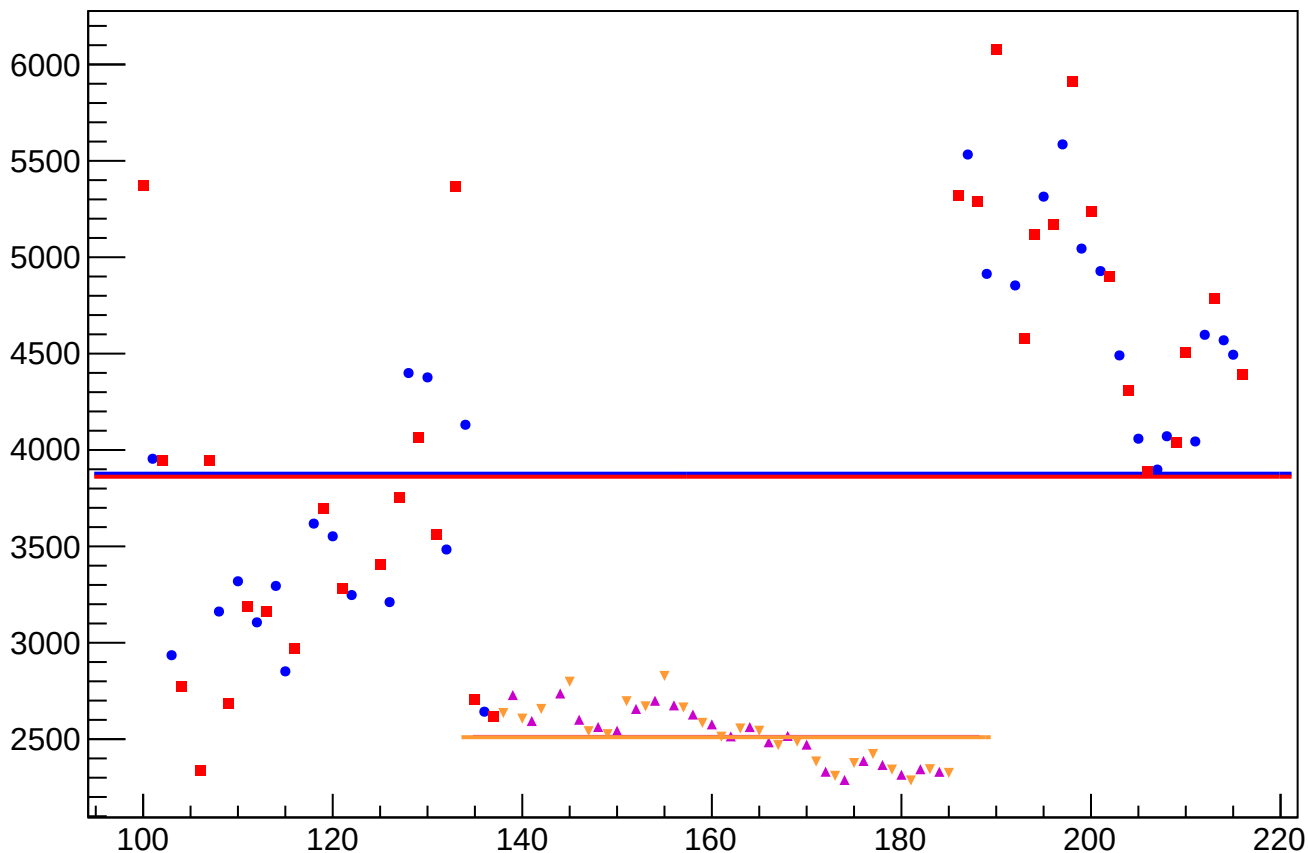
Left In: 689.981 $\pm$ 587.431  $\chi^2$ /NDF: 18.3/22

+ sign 861.474 $\pm$ 490.210  $\chi^2$ /NDF: 81.6/54

All: 940.138 $\pm$ 347.760  $\chi^2$ /NDF: 121.2/110

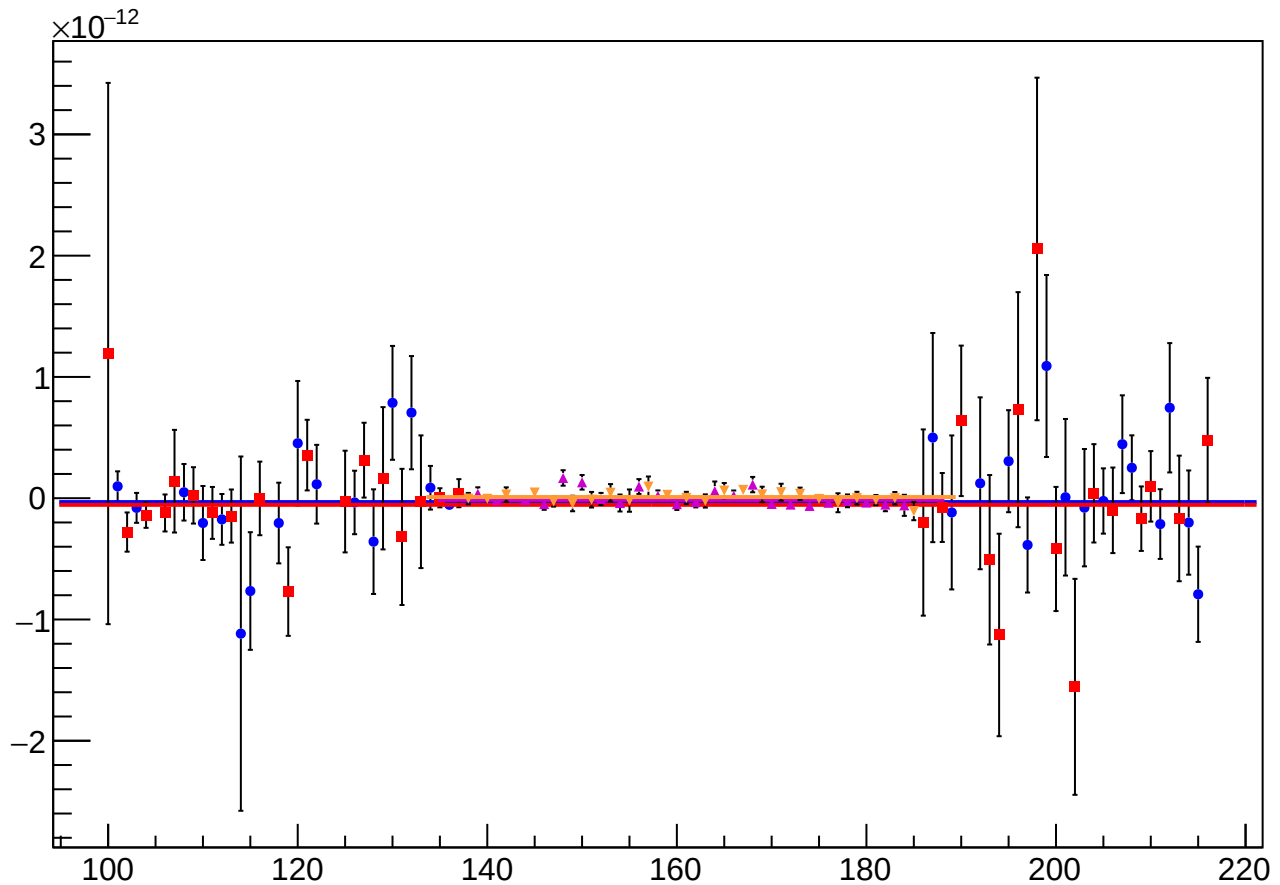
- sign 1019.835 $\pm$ 493.421  $\chi^2$ /NDF: 39.5/55

# asym\_us\_dd\_at2lr\_dd\_avg\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 3877.082+/-0.639  | $\chi^2/\text{NDF}$ : 1566722.8/30 | + sign 2912.879+/-0.347 | $\chi^2/\text{NDF}$ : 4927835.2/54   |
| Left Out: 2510.069+/-0.413  | $\chi^2/\text{NDF}$ : 128632.5/23  | All: 2910.989+/-0.246   | $\chi^2/\text{NDF}$ : 10334902.4/103 |
| Right Out: 3861.391+/-0.643 | $\chi^2/\text{NDF}$ : 2184145.1/32 | - sign 2909.073+/-0.349 | $\chi^2/\text{NDF}$ : 5407007.3/55   |
| Left In: 2511.613+/-0.415   | $\chi^2/\text{NDF}$ : 113485.5/22  |                         |                                      |

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12.2/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.8/32

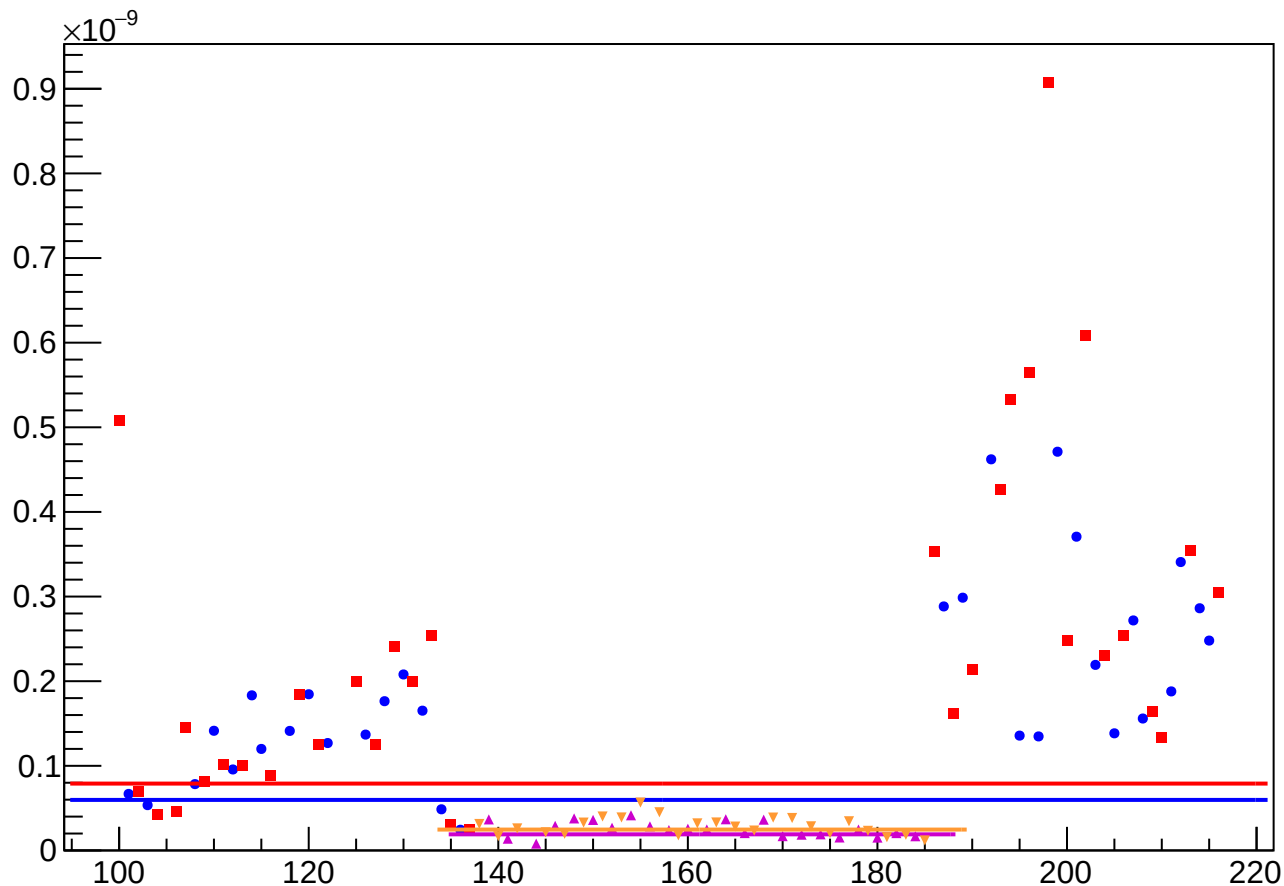
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.9/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 98.4/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.7/55

asym\_us\_dd\_at2lr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8099944.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1413212.9/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8289160.6/32

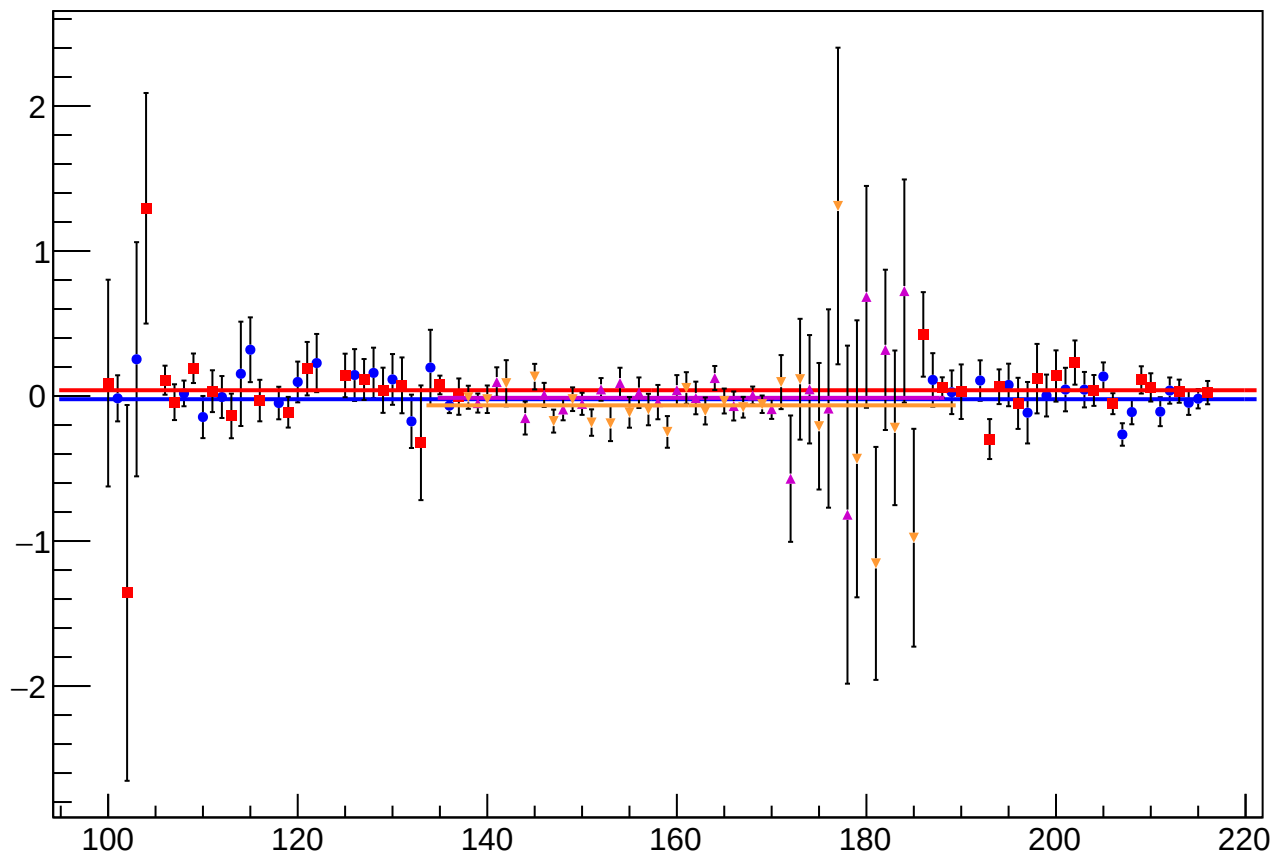
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2190334.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11613939.1/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26733242.9/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14657750.9/55

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 28.0/30

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.040 \pm 0.021$   $\chi^2/\text{NDF}$ : 25.5/32

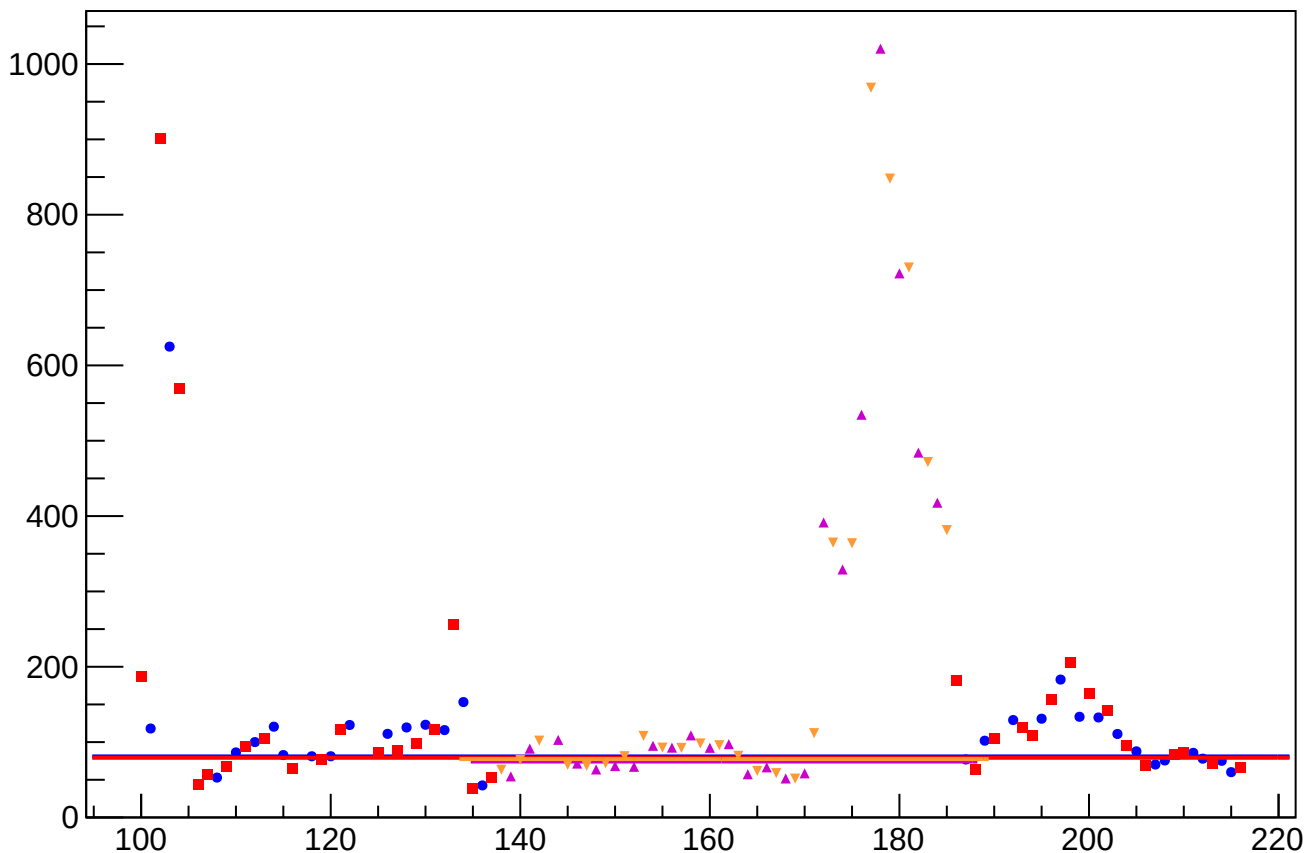
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.042 \pm 0.015$   $\chi^2/\text{NDF}$ : 52.3/54

All:  $-0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 102.9/110

- sign  $0.014 \pm 0.015$   $\chi^2/\text{NDF}$ : 43.7/55

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 80.984 $\pm$ 0.015  $\chi^2$ /NDF: 4834765.1/30

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF: 8331194.0/23

Right Out: 79.215 $\pm$ 0.015  $\chi^2$ /NDF: 6139343.1/32

Left In: 74.216 $\pm$ 0.015  $\chi^2$ /NDF: 8514080.5/22

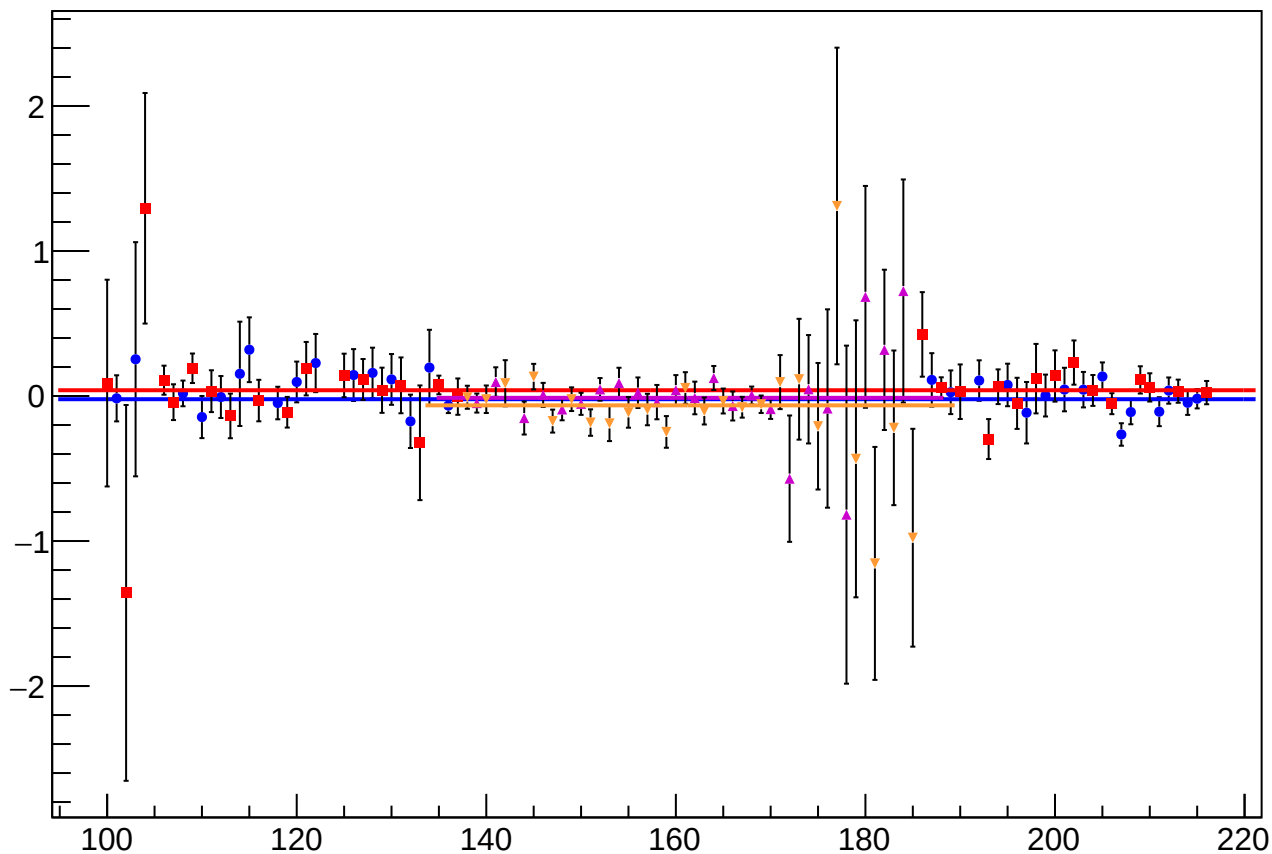
+ sign 79.367 $\pm$ 0.011  $\chi^2$ /NDF: 13191858.2/54

All: 78.031 $\pm$ 0.007  $\chi^2$ /NDF: 27932514.5/110

- sign 76.744 $\pm$ 0.011  $\chi^2$ /NDF: 14710054.9/55



asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 28.0/30

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.040 \pm 0.021$   $\chi^2/\text{NDF}$ : 25.5/32

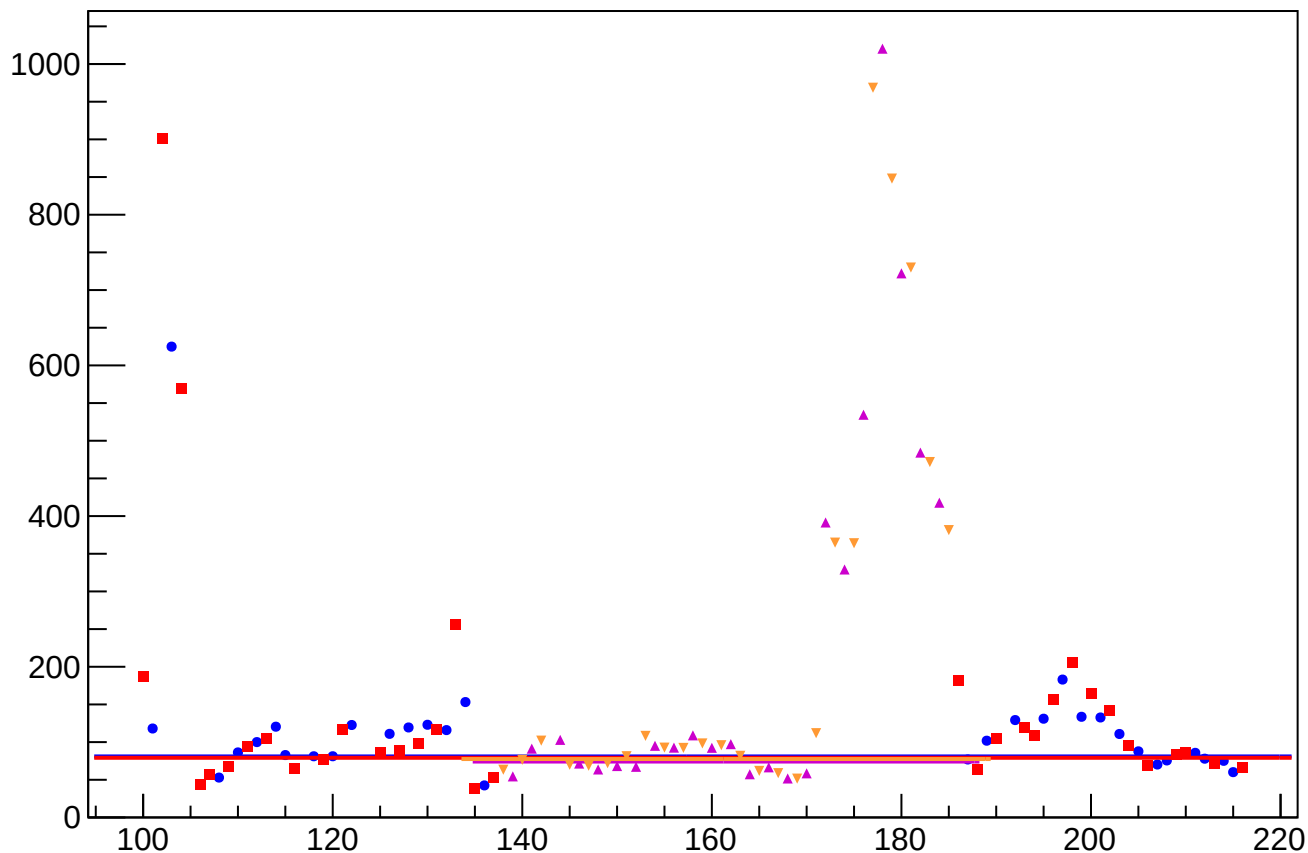
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.042 \pm 0.015$   $\chi^2/\text{NDF}$ : 52.3/54

All:  $-0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 102.9/110

- sign  $0.014 \pm 0.015$   $\chi^2/\text{NDF}$ : 43.7/55

asym\_us\_dd\_at2lr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 80.984 $\pm$ 0.015  $\chi^2$ /NDF: 4834765.1/30

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF: 8331194.0/23

Right Out: 79.215 $\pm$ 0.015  $\chi^2$ /NDF: 6139343.1/32

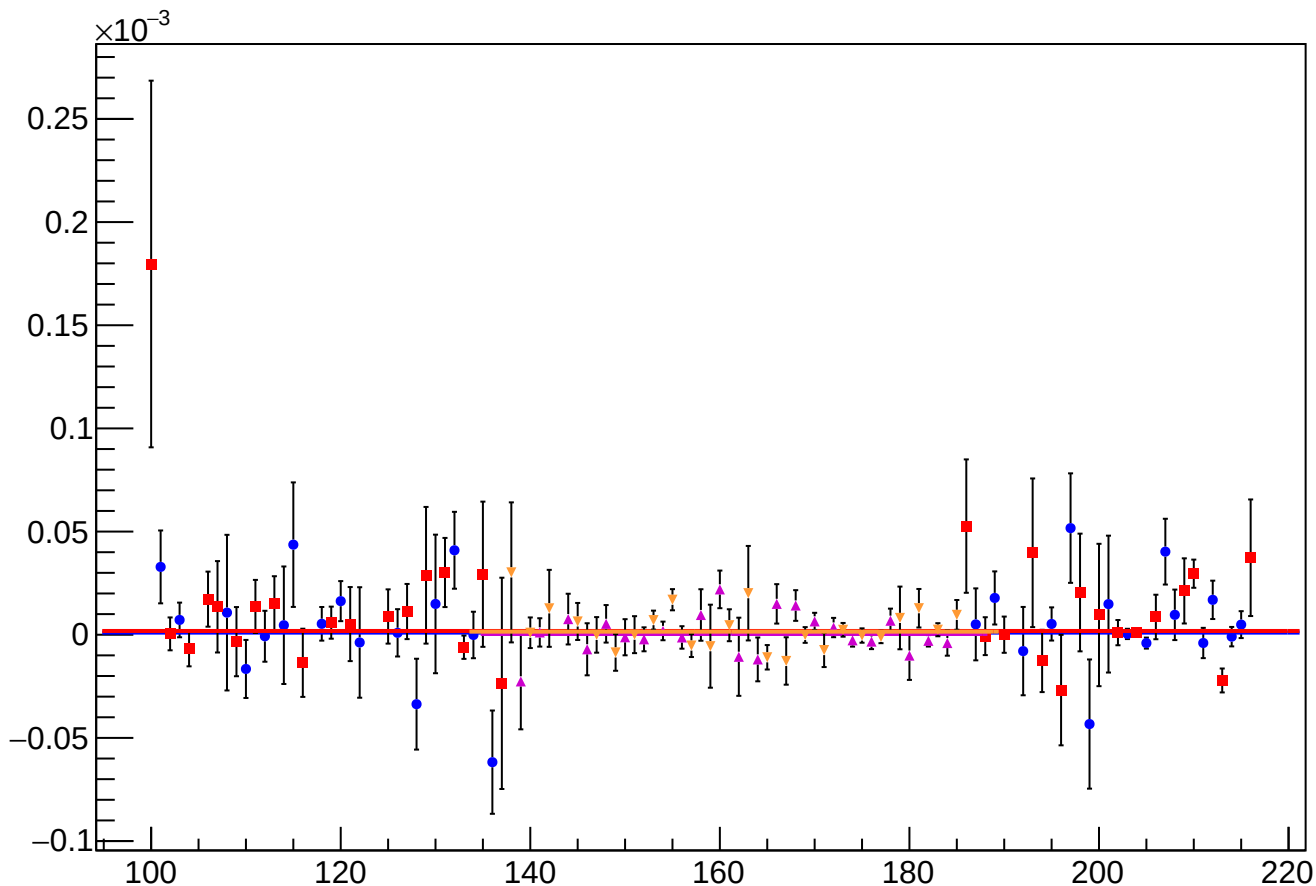
Left In: 74.216 $\pm$ 0.015  $\chi^2$ /NDF: 8514080.5/22

+ sign 79.367 $\pm$ 0.011  $\chi^2$ /NDF: 13191858.2/54

All: 78.031 $\pm$ 0.007  $\chi^2$ /NDF: 27932514.5/110

- sign 76.744 $\pm$ 0.011  $\chi^2$ /NDF: 14710054.9/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.1/23

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.3/32

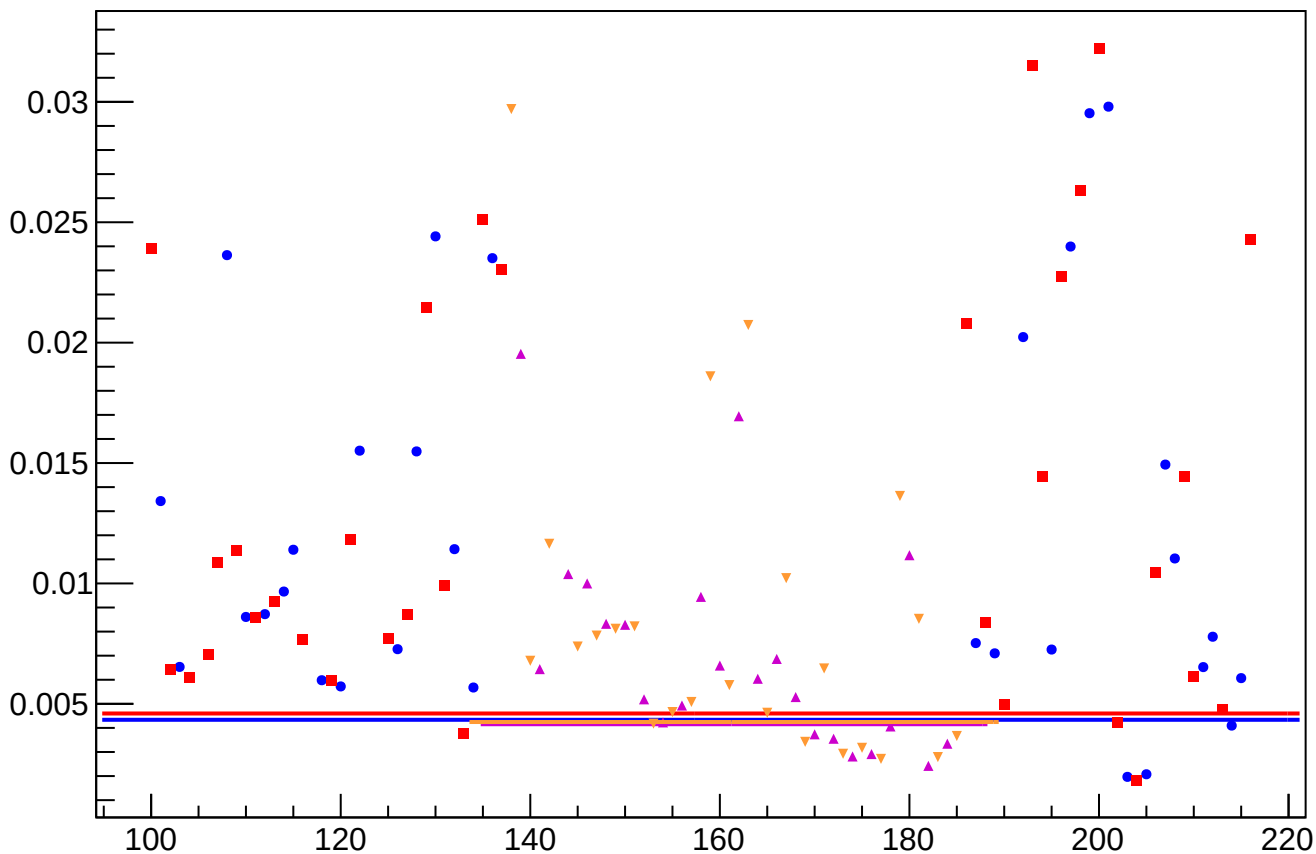
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.1/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 158.7/110

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 85.5/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 15549791.9/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:8650909.7/23

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 24205960.0/54

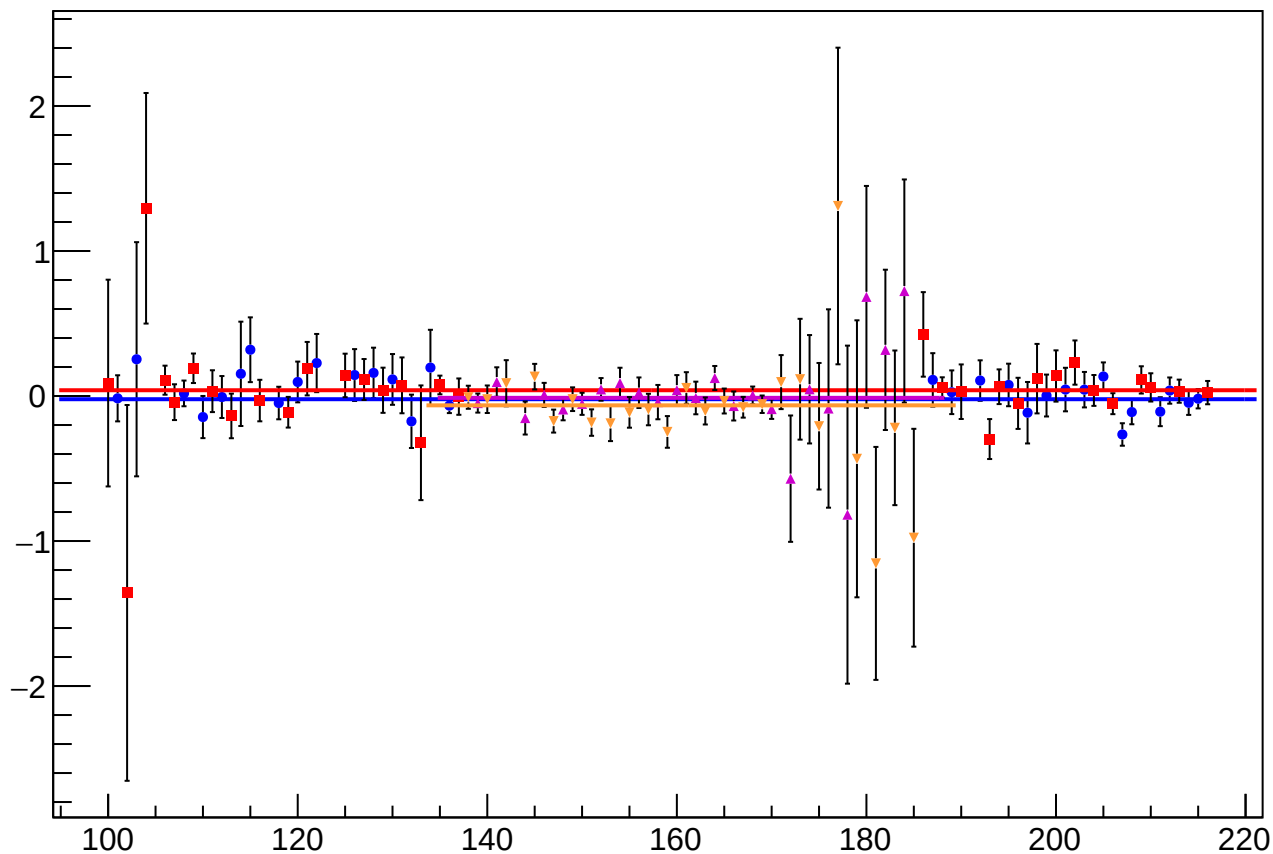
Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 15838254.3/32

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 47047100.3/110

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 22838192.8/55

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:6886421.5/22

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.040 \pm 0.021$   $\chi^2/\text{NDF}$ : 25.5/32

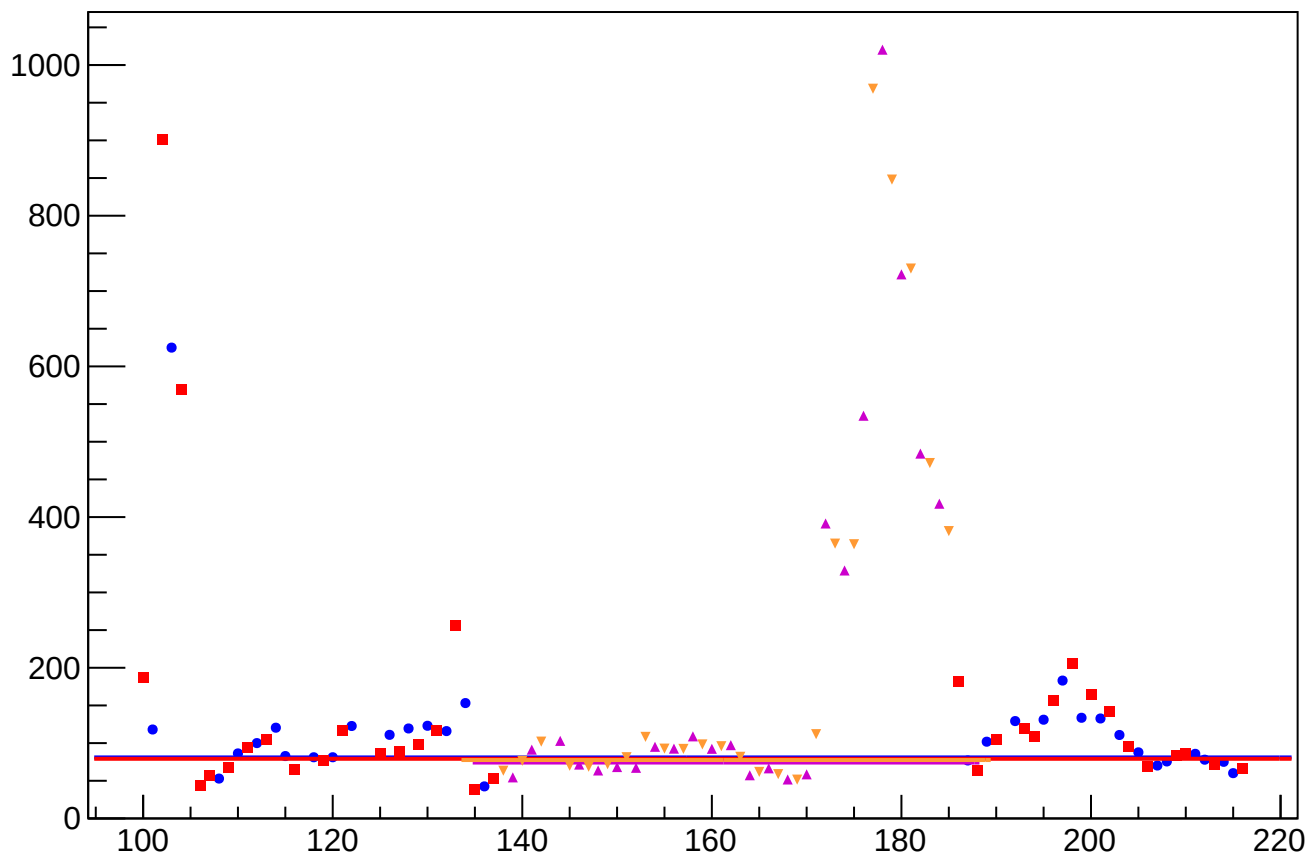
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.042 \pm 0.015$   $\chi^2/\text{NDF}$ : 52.3/54

All:  $-0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 102.9/110

- sign  $0.014 \pm 0.015$   $\chi^2/\text{NDF}$ : 43.7/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 80.995 $\pm$ 0.015  $\chi^2$ /NDF: 4831787.7/30

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF:8331106.7/23

Right Out: 79.210 $\pm$ 0.015  $\chi^2$ /NDF: 6140823.9/32

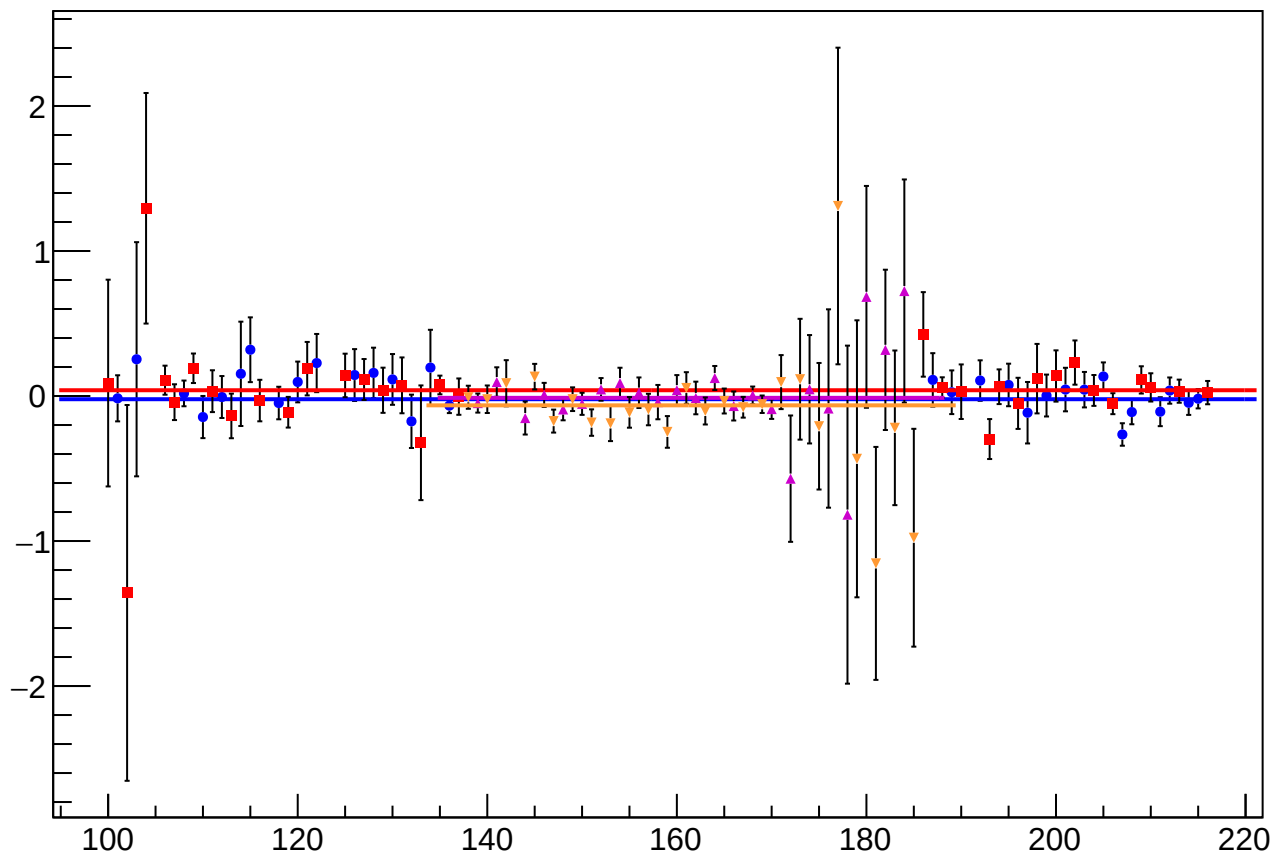
Left In: 74.217 $\pm$ 0.015  $\chi^2$ /NDF:8513791.3/22

+ sign 79.372 $\pm$ 0.011  $\chi^2$ /NDF: 13188959.5/54

All: 78.032 $\pm$ 0.007  $\chi^2$ /NDF: 27930835.9/110

- sign 76.742 $\pm$ 0.011  $\chi^2$ /NDF: 14711105.2/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.022 \pm 0.021$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $-0.064 \pm 0.022$   $\chi^2/\text{NDF}$ : 22.3/23

Right Out:  $0.040 \pm 0.021$   $\chi^2/\text{NDF}$ : 25.5/32

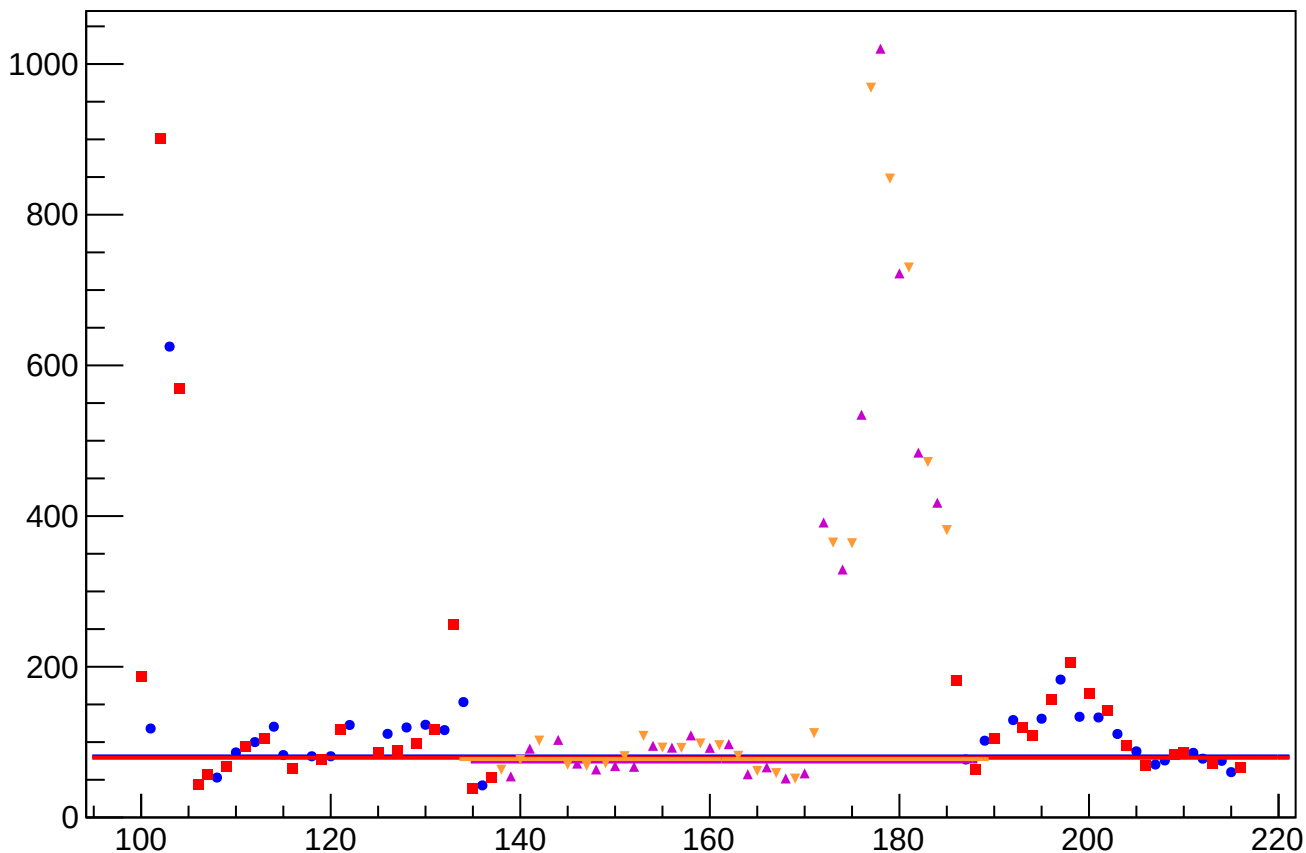
Left In:  $-0.013 \pm 0.021$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.042 \pm 0.015$   $\chi^2/\text{NDF}$ : 52.3/54

All:  $-0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 102.9/110

- sign  $0.014 \pm 0.015$   $\chi^2/\text{NDF}$ : 43.7/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 80.995 $\pm$ 0.015  $\chi^2$ /NDF: 4831787.7/30

Left Out: 77.533 $\pm$ 0.016  $\chi^2$ /NDF:8331106.7/23

Right Out: 79.210 $\pm$ 0.015  $\chi^2$ /NDF: 6140823.9/32

Left In: 74.217 $\pm$ 0.015  $\chi^2$ /NDF:8513791.3/22

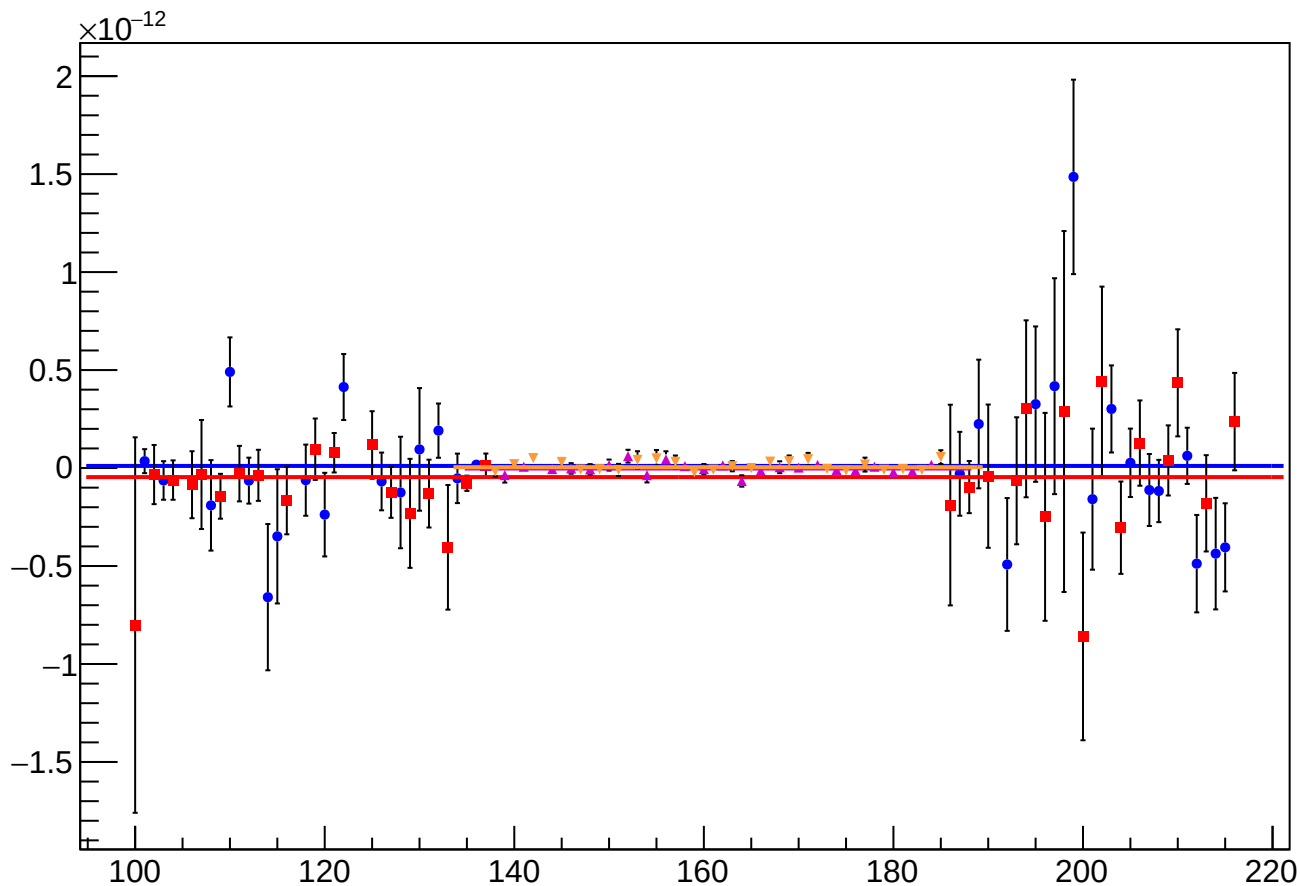
+ sign 79.372 $\pm$ 0.011  $\chi^2$ /NDF: 13188959.5/54

All: 78.032 $\pm$ 0.007  $\chi^2$ /NDF: 27930835.9/110

- sign 76.742 $\pm$ 0.011  $\chi^2$ /NDF: 14711105.2/55



asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.2/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.7/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.3/32

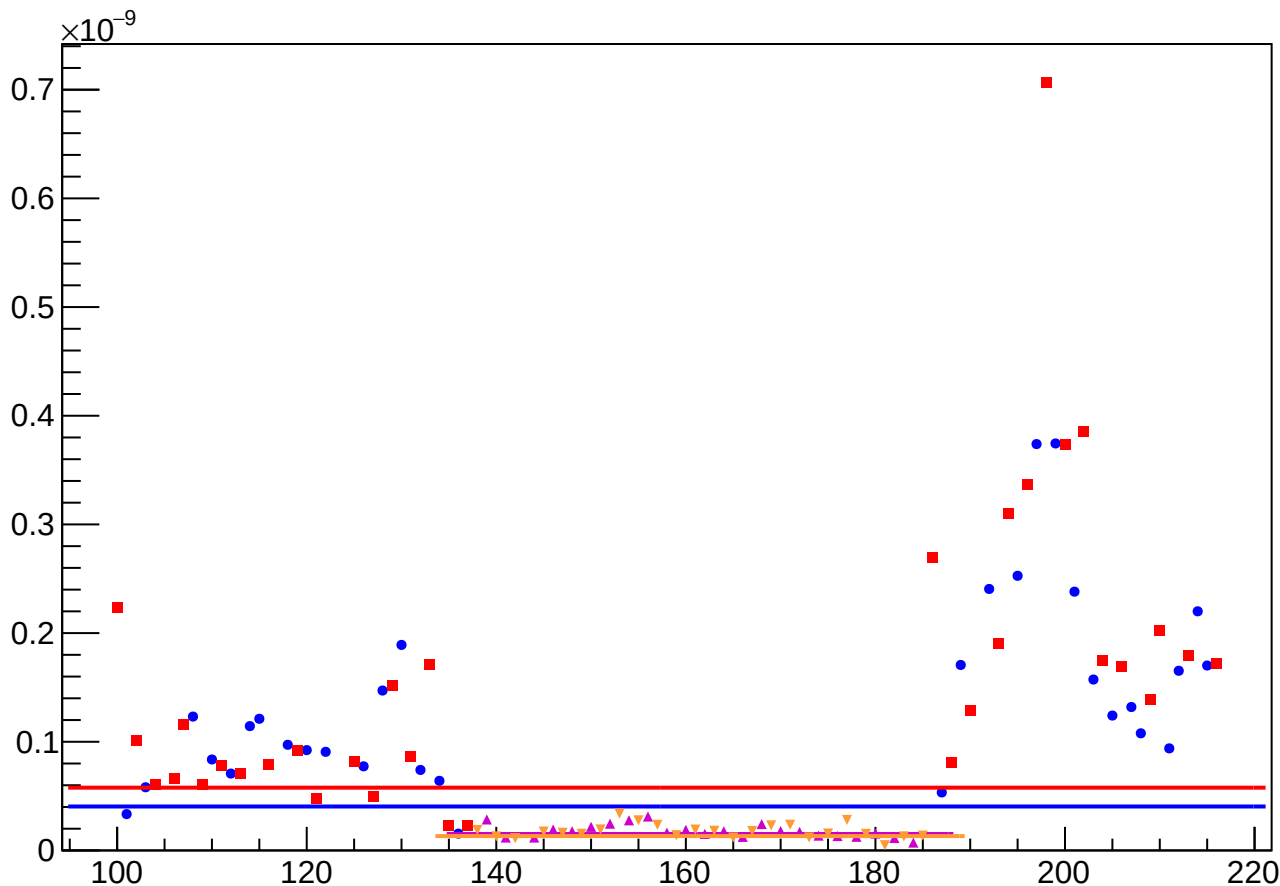
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 71.0/54

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 114.3/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.2/55

asym\_us\_dd\_at2lr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12634810.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4237321.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10883694.6/32

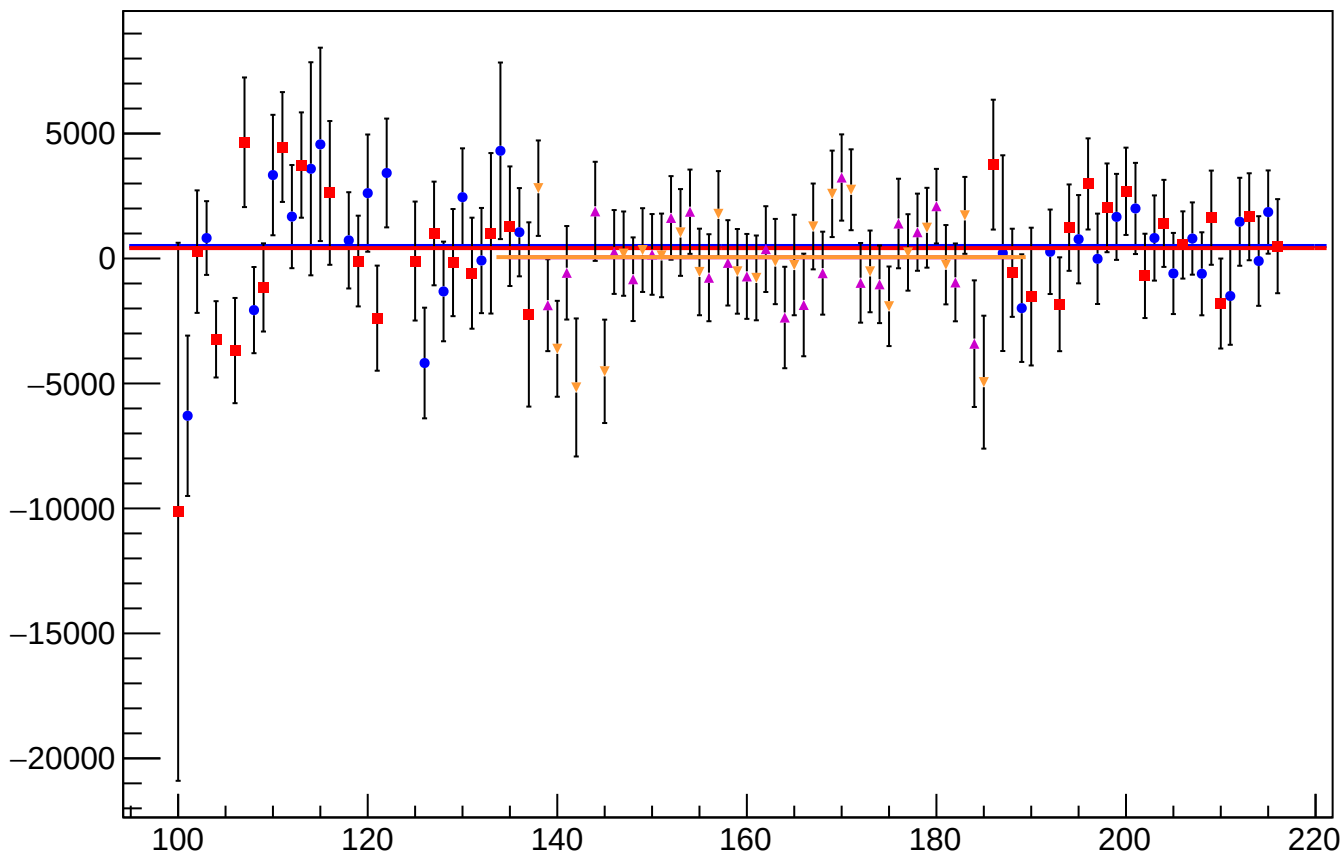
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2148796.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21025610.9/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40718614.0/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19460702.2/55

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $500.865 \pm 350.376$   $\chi^2/\text{NDF}$ : 26.1/30

Left Out:  $54.770 \pm 356.375$   $\chi^2/\text{NDF}$ : 28.5/23

Right Out:  $415.523 \pm 350.092$   $\chi^2/\text{NDF}$ : 35.2/32

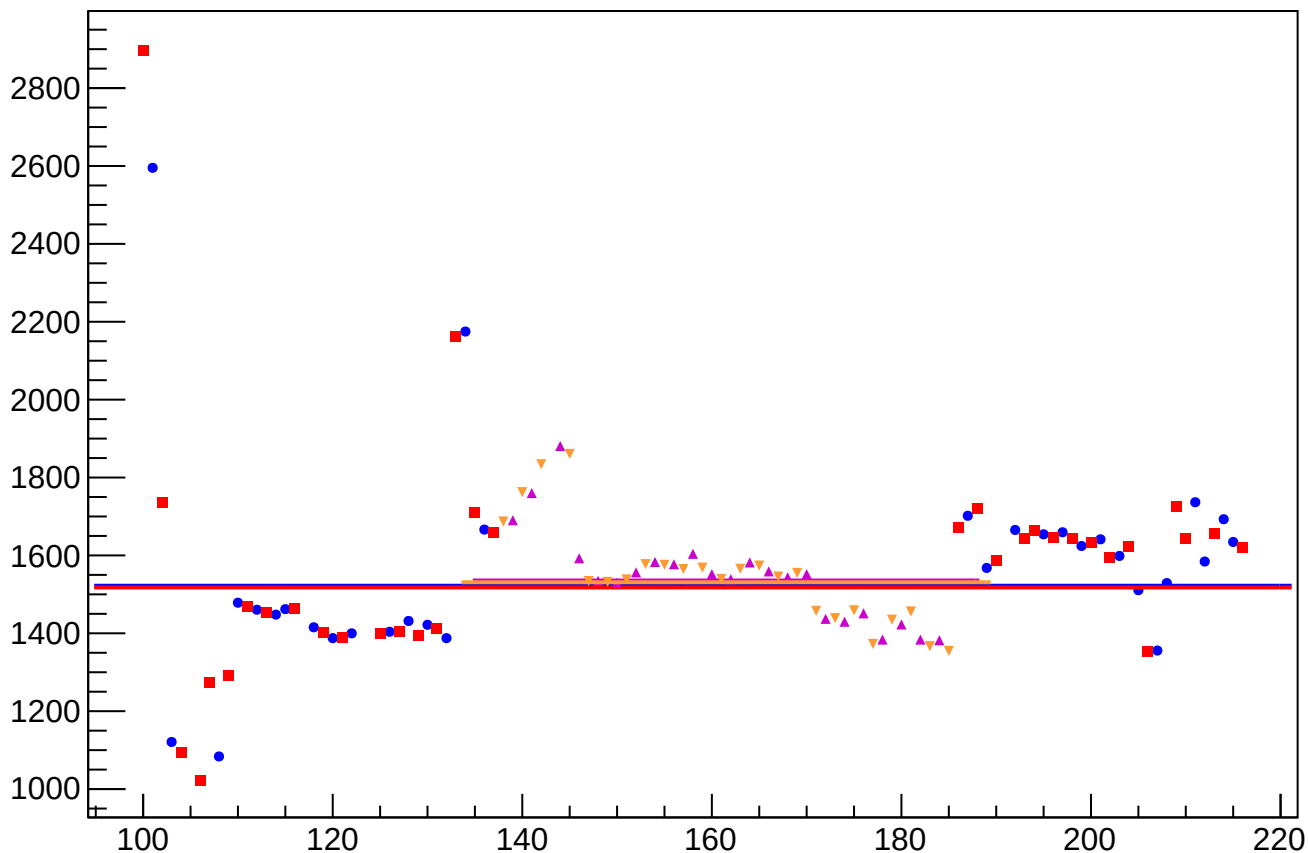
Left In:  $48.177 \pm 359.531$   $\chi^2/\text{NDF}$ : 16.8/22

+ sign  $281.604 \pm 249.847$   $\chi^2/\text{NDF}$ : 55.3/54

All:  $259.257 \pm 177.013$   $\chi^2/\text{NDF}$ : 107.8/110

- sign  $236.735 \pm 250.823$   $\chi^2/\text{NDF}$ : 52.5/55

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1522.104+/-0.248  $\chi^2/\text{NDF}$ : 770636.2/30

Left Out: 1530.976+/-0.252  $\chi^2/\text{NDF}$ : 203539.8/23

Right Out: 1517.730+/-0.248  $\chi^2/\text{NDF}$ : 683069.2/32

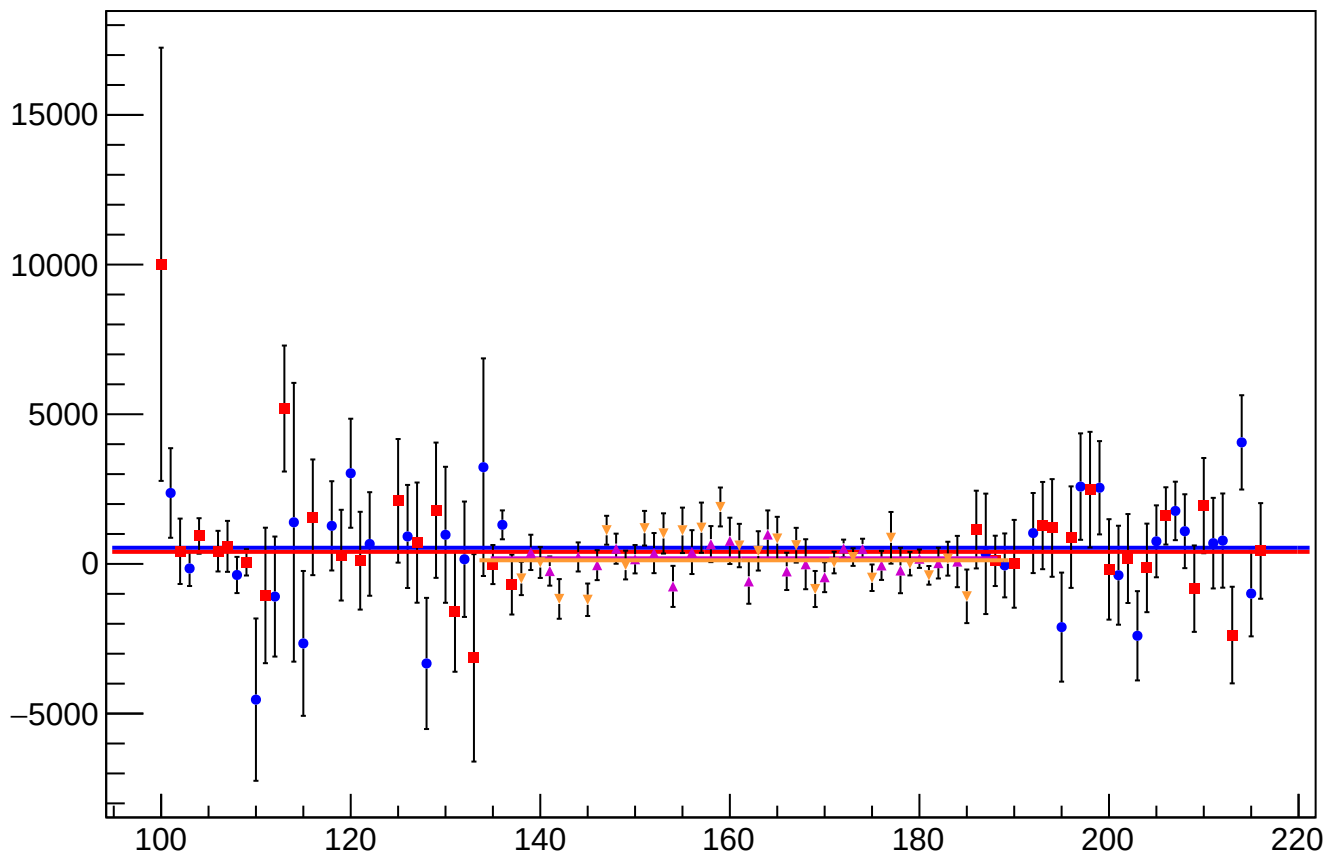
Left In: 1535.551+/-0.254  $\chi^2/\text{NDF}$ : 192432.7/22

+ sign 1526.464+/-0.177  $\chi^2/\text{NDF}$ : 974806.2/54

All: 1526.434+/-0.125  $\chi^2/\text{NDF}$ : 1852830.4/11

- sign 1526.403+/-0.177  $\chi^2/\text{NDF}$ : 878024.1/55

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In: 539.757 $\pm$ 219.300  $\chi^2$ /NDF: 37.2/30

Left Out: 121.327 $\pm$ 105.060  $\chi^2$ /NDF: 43.6/23

Right Out: 402.884 $\pm$ 195.192  $\chi^2$ /NDF: 22.8/32

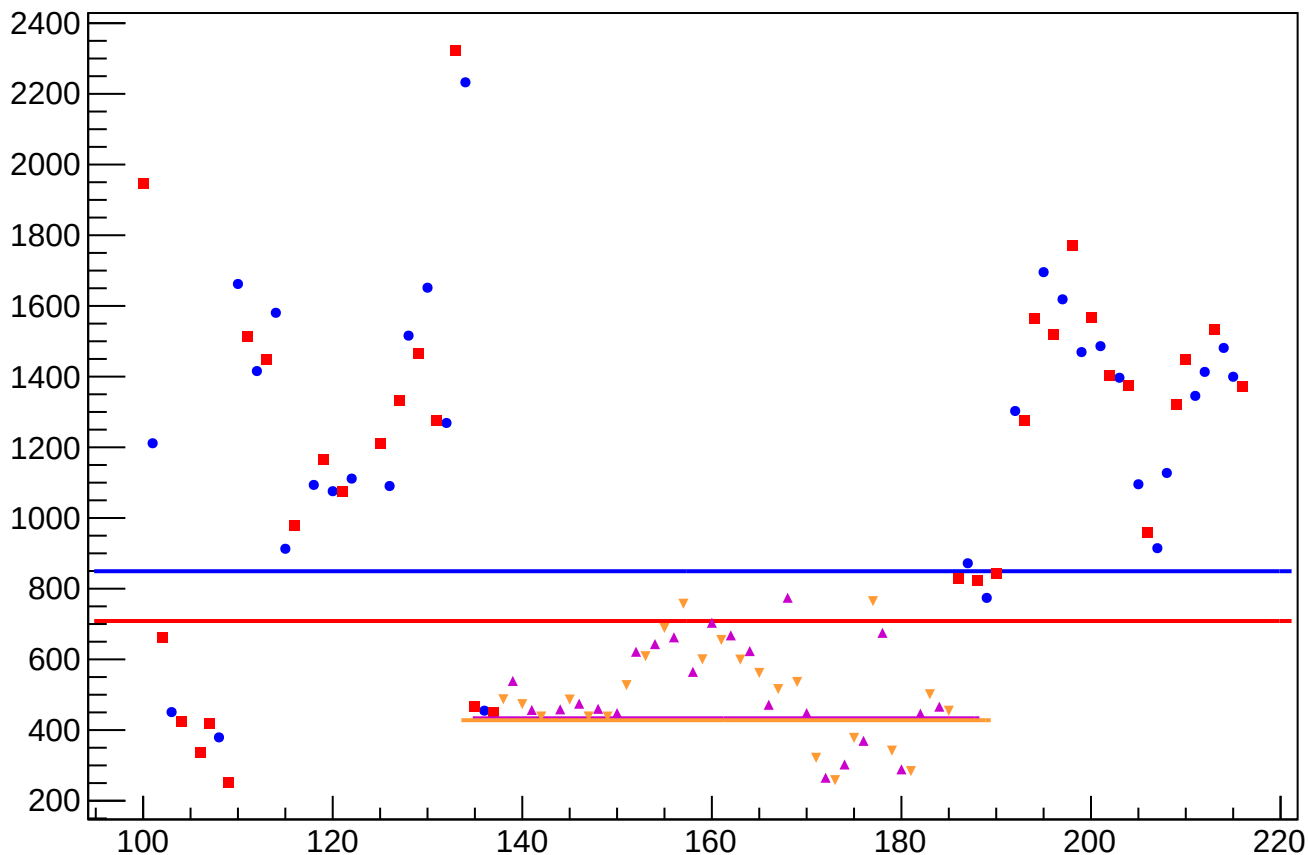
Left In: 186.828 $\pm$ 106.975  $\chi^2$ /NDF: 11.6/22

+ sign 199.434 $\pm$ 94.748  $\chi^2$ /NDF: 83.8/54

All: 218.269 $\pm$ 66.663  $\chi^2$ /NDF: 119.3/110

- sign 236.733 $\pm$ 93.811  $\chi^2$ /NDF: 35.4/55

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 849.436 $\pm$ 0.155  $\chi^2$ /NDF: 8171713.4/30

Left Out: 427.814 $\pm$ 0.074  $\chi^2$ /NDF: 3188159.5/23

Right Out: 708.572 $\pm$ 0.138  $\chi^2$ /NDF: 11049353.8/32

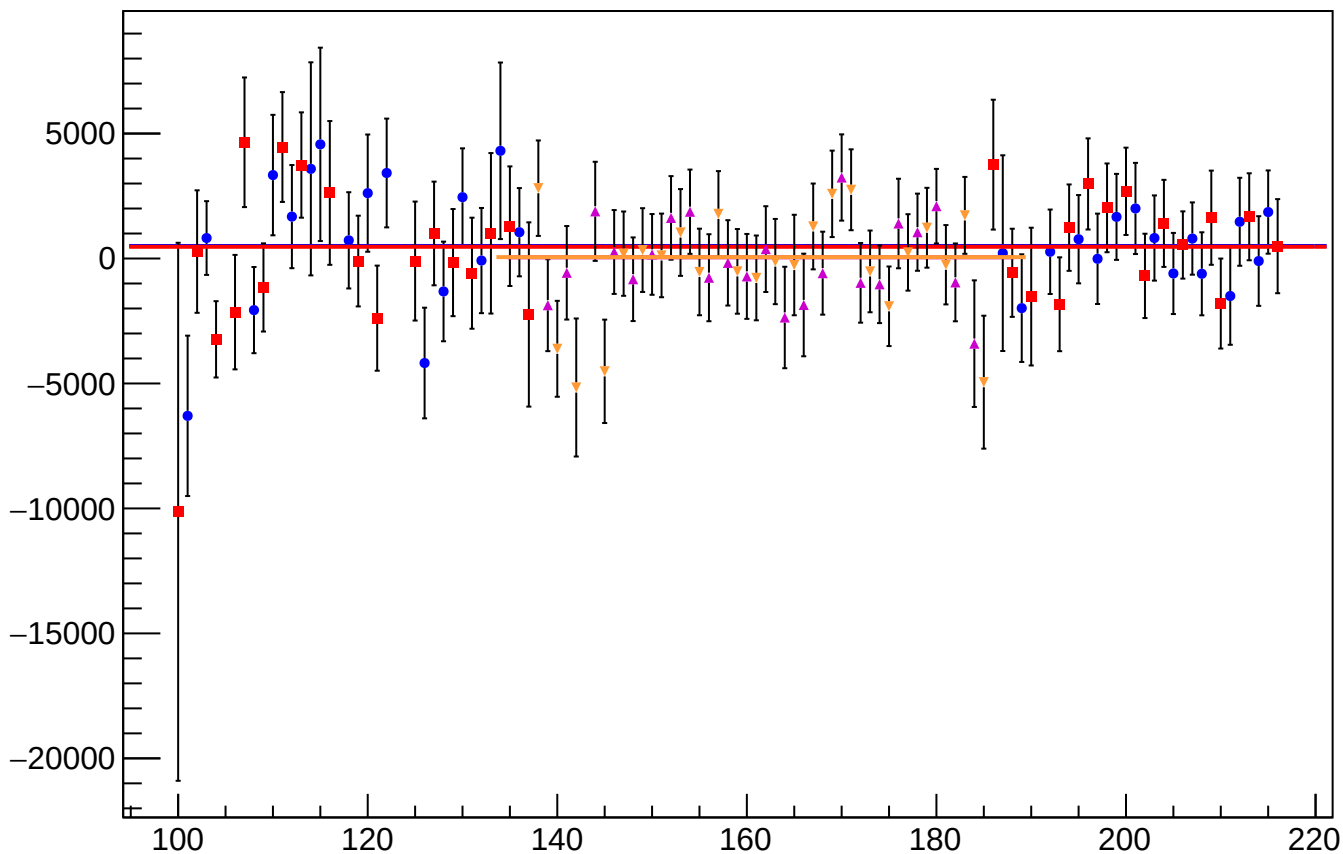
Left In: 433.283 $\pm$ 0.076  $\chi^2$ /NDF: 3247998.9/22

+ sign 506.516 $\pm$ 0.067  $\chi^2$ /NDF: 17372517.4/54

All: 501.645 $\pm$ 0.047  $\chi^2$ /NDF: 34739610.5/11

- sign 496.870 $\pm$ 0.066  $\chi^2$ /NDF: 17356624.9/55

# cor\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In: 500.893 $\pm$ 350.376  $\chi^2$ /NDF: 26.1/30

Left Out: 54.734 $\pm$ 356.375  $\chi^2$ /NDF:28.5/23

Right Out: 469.335 $\pm$ 350.844  $\chi^2$ /NDF: 32.6/32

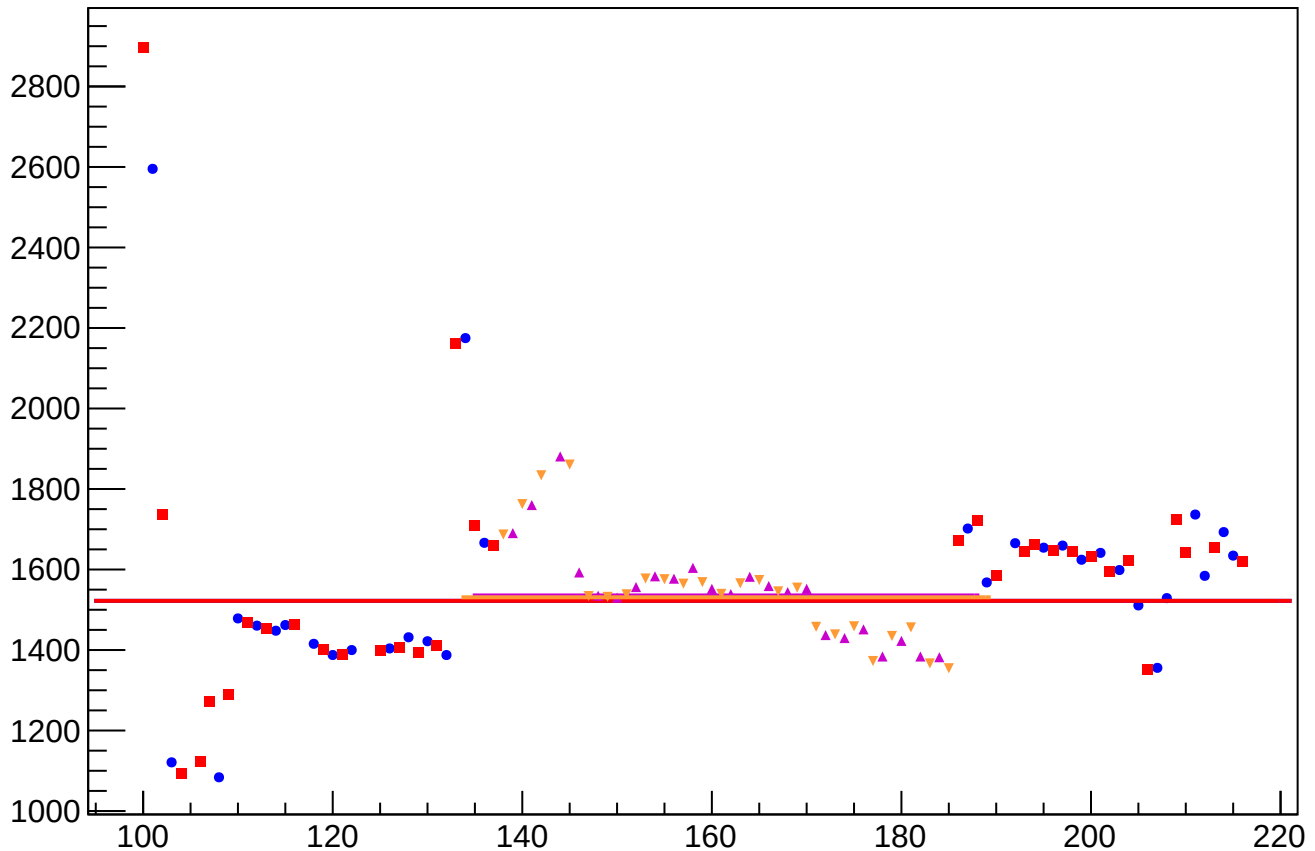
Left In: 48.256 $\pm$ 359.531  $\chi^2$ /NDF:16.8/22

+ sign 281.600 $\pm$ 249.847  $\chi^2$ /NDF: 55.3/54

All: 272.816 $\pm$ 177.109  $\chi^2$ /NDF: 105.4/110

- sign 263.944 $\pm$ 251.099  $\chi^2$ /NDF: 50.1/55

# cor\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1522.104 $\pm$ 0.248  $\chi^2$ /NDF: 770636.5/30

Left Out: 1530.976 $\pm$ 0.252  $\chi^2$ /NDF: 203539.7/23

Right Out: 1522.184 $\pm$ 0.248  $\chi^2$ /NDF: 631952.4/32

Left In: 1535.551 $\pm$ 0.254  $\chi^2$ /NDF: 192432.7/22

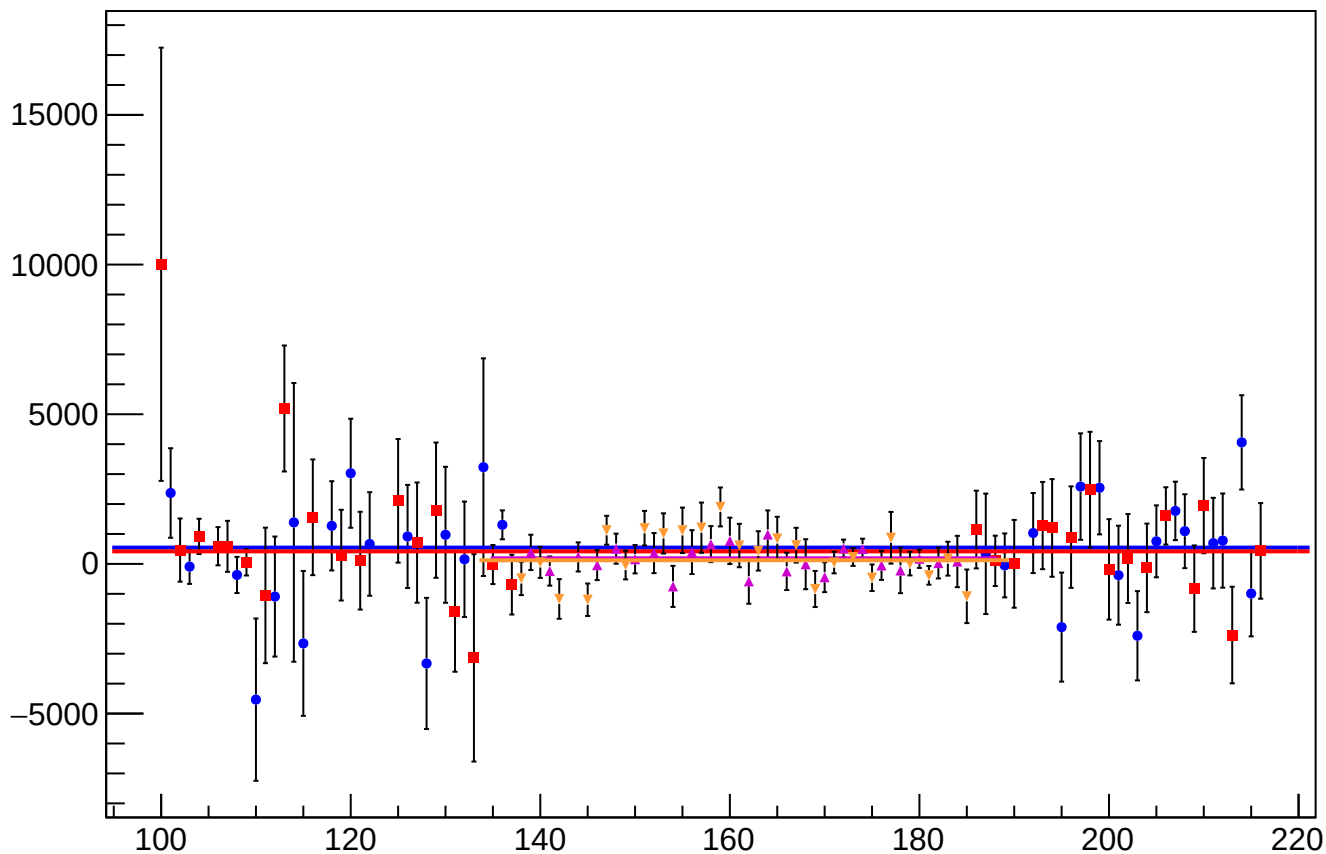
+ sign 1526.464 $\pm$ 0.177  $\chi^2$ /NDF: 974806.6/54

All: 1527.579 $\pm$ 0.125  $\chi^2$ /NDF: 1800687.6/11

- sign 1528.704 $\pm$ 0.178  $\chi^2$ /NDF: 825801.1/55



asym\_us\_dd\_at2lr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: 544.687 $\pm$ 218.706  $\chi^2$ /NDF: 37.0/30

Left Out: 121.325 $\pm$ 105.060  $\chi^2$ /NDF: 43.7/23

Right Out: 418.908 $\pm$ 193.793  $\chi^2$ /NDF: 22.9/32

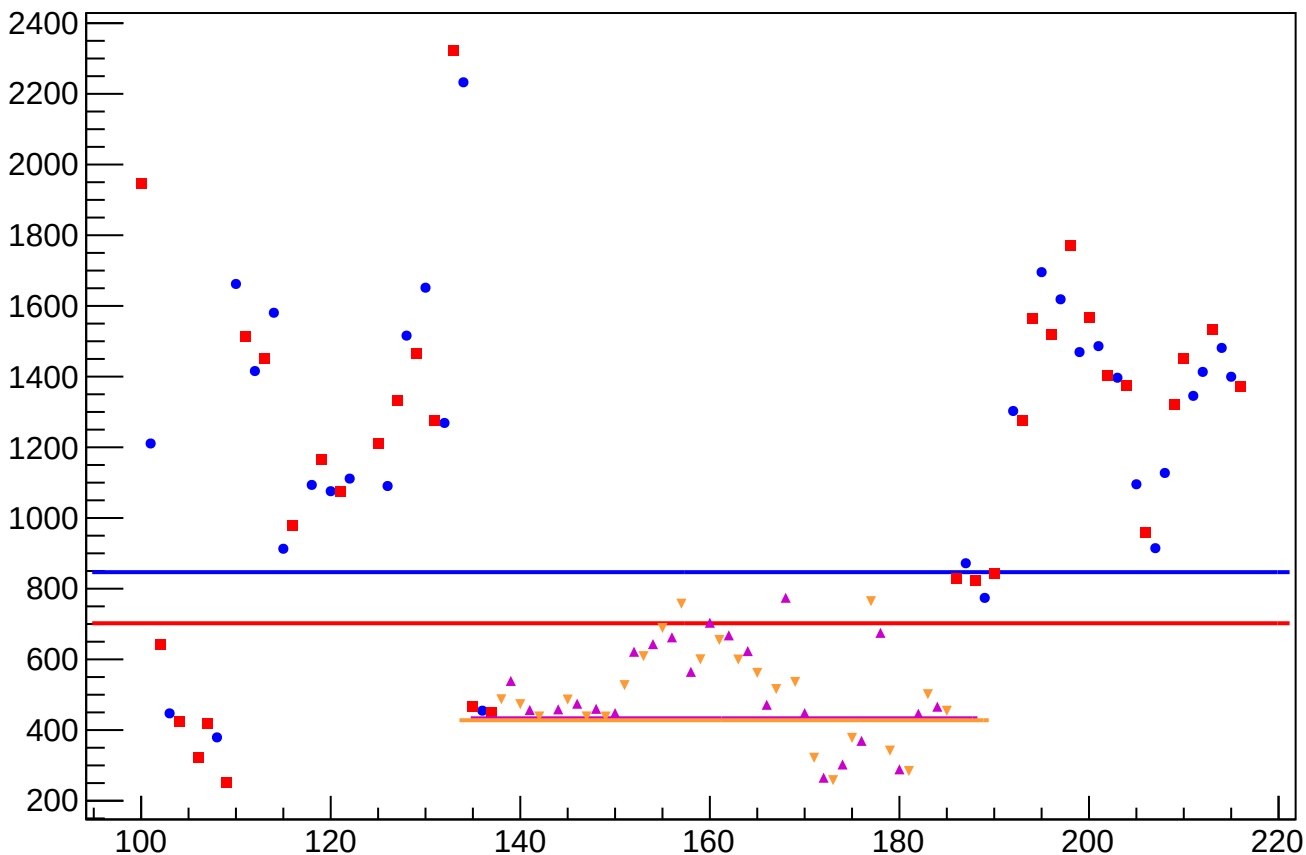
Left In: 187.037 $\pm$ 106.975  $\chi^2$ /NDF: 11.6/22

+ sign 200.702 $\pm$ 94.700  $\chi^2$ /NDF: 83.7/54

All: 221.171 $\pm$ 66.590  $\chi^2$ /NDF: 119.4/110

- sign 241.190 $\pm$ 93.654  $\chi^2$ /NDF: 35.6/55

asym\_us\_dd\_at2lr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In:  $846.767 \pm 0.155$   $\chi^2/\text{NDF}$ : 8224113.9/30

Left Out:  $427.814 \pm 0.074$   $\chi^2/\text{NDF}$ : 3188396.1/23

Right Out:  $702.192 \pm 0.137$   $\chi^2/\text{NDF}$ : 11185028.7/32

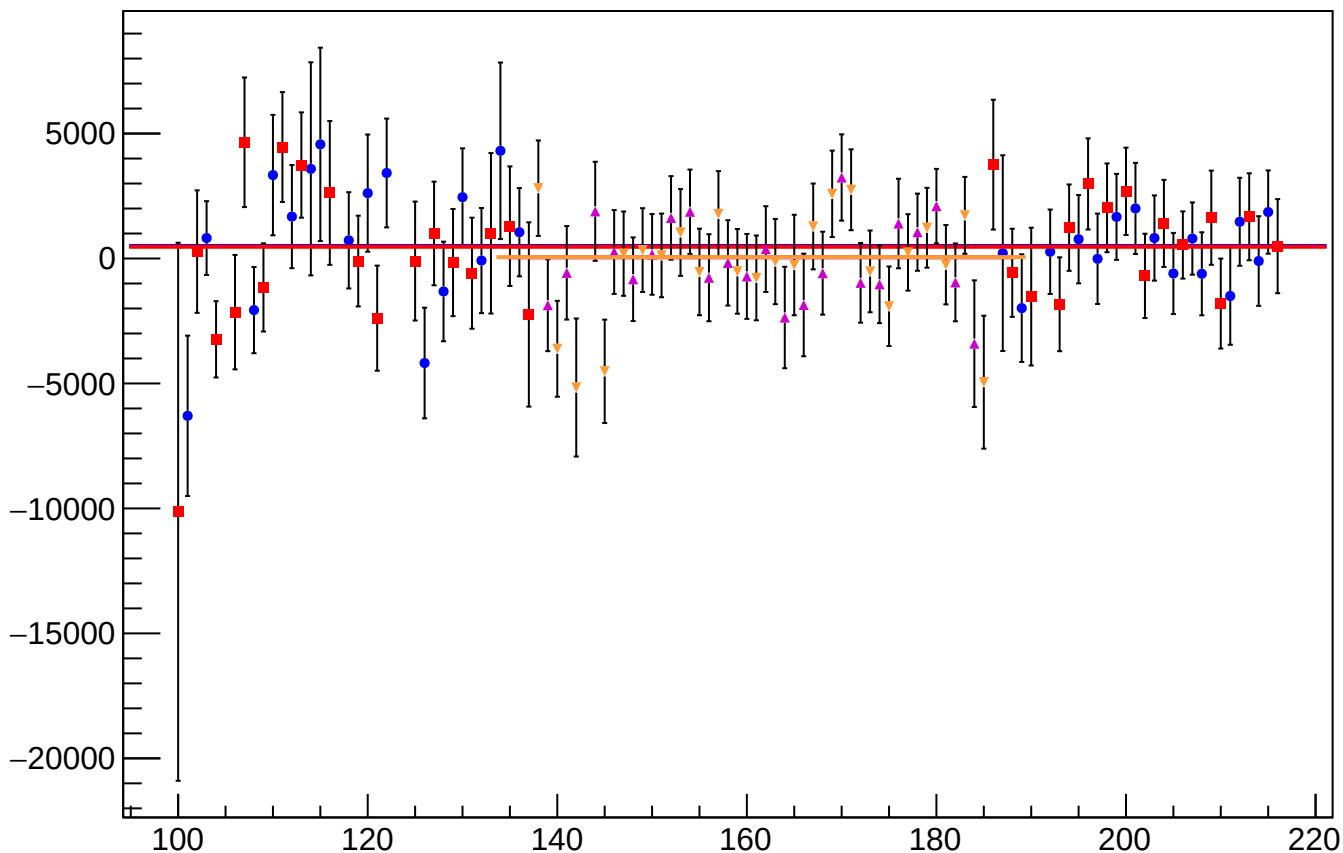
Left In:  $433.285 \pm 0.076$   $\chi^2/\text{NDF}$ : 3247871.5/22

+ sign  $506.364 \pm 0.067$   $\chi^2/\text{NDF}$ : 17375508.1/54

All:  $501.169 \pm 0.047$   $\chi^2/\text{NDF}$ : 34771817.9/11

- sign  $496.088 \pm 0.066$   $\chi^2/\text{NDF}$ : 17384403.6/55

# eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In: 500.893 $\pm$ 350.376  $\chi^2$ /NDF: 26.1/30

Left Out: 54.734 $\pm$ 356.375  $\chi^2$ /NDF:28.5/23

Right Out: 469.335 $\pm$ 350.844  $\chi^2$ /NDF: 32.6/32

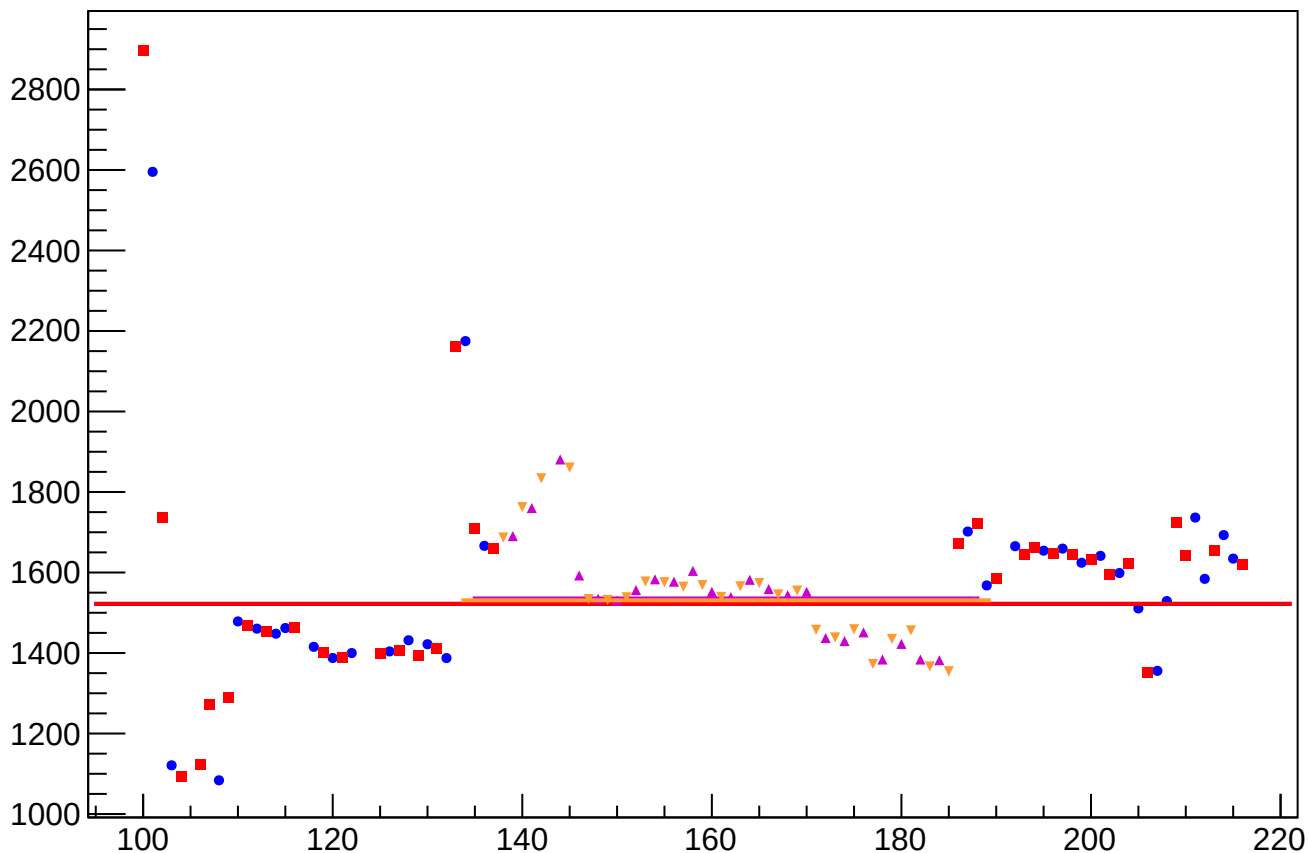
Left In: 48.256 $\pm$ 359.531  $\chi^2$ /NDF:16.8/22

+ sign 281.600 $\pm$ 249.847  $\chi^2$ /NDF: 55.3/54

All: 272.816 $\pm$ 177.109  $\chi^2$ /NDF: 105.4/110

- sign 263.944 $\pm$ 251.099  $\chi^2$ /NDF: 50.1/55

eigen\_cor\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1522.104 $\pm$ 0.248  $\chi^2$ /NDF: 770636.5/30

Left Out: 1530.976 $\pm$ 0.252  $\chi^2$ /NDF: 203539.7/23

Right Out: 1522.184 $\pm$ 0.248  $\chi^2$ /NDF: 631952.4/32

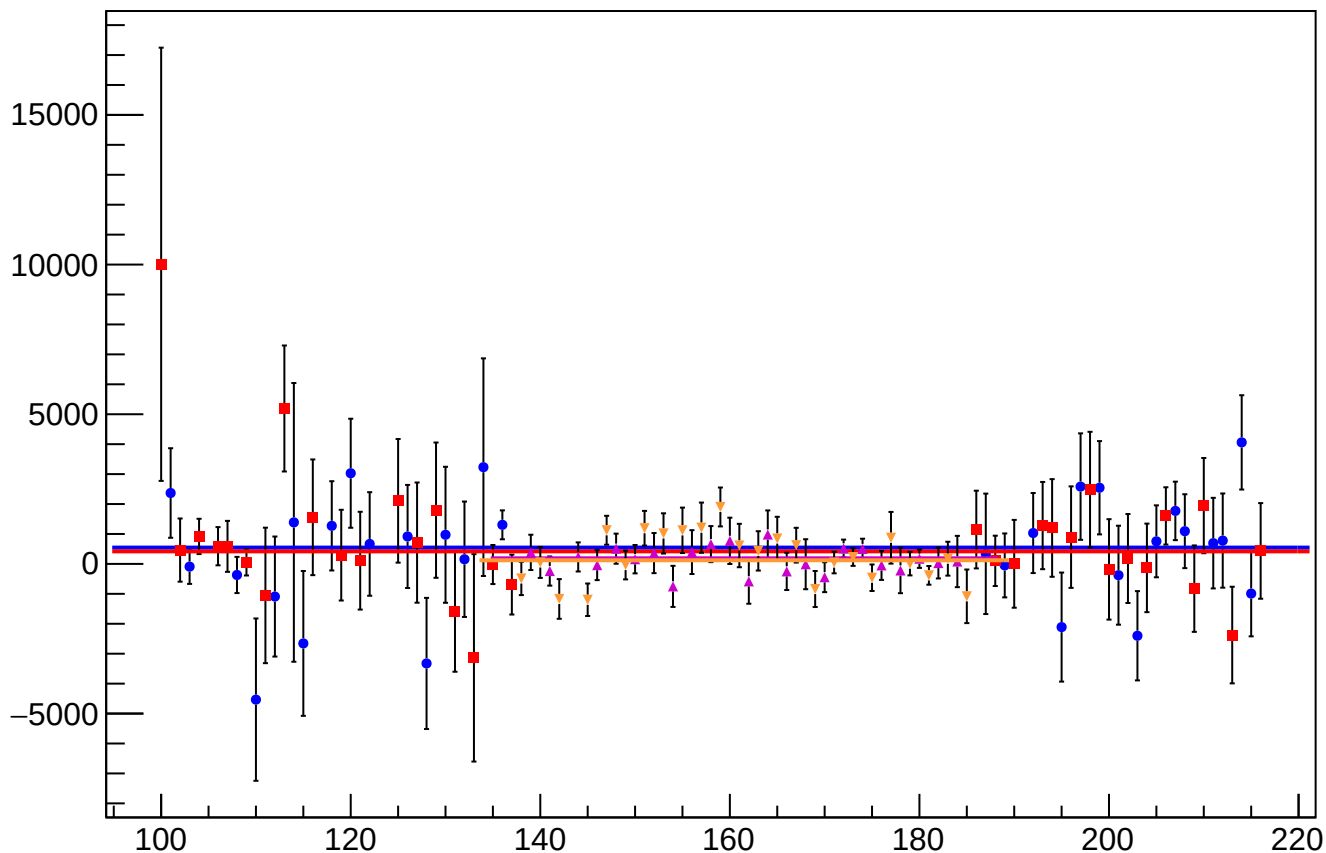
Left In: 1535.551 $\pm$ 0.254  $\chi^2$ /NDF: 192432.7/22

+ sign 1526.464 $\pm$ 0.177  $\chi^2$ /NDF: 974806.6/54

All: 1527.579 $\pm$ 0.125  $\chi^2$ /NDF: 1800687.6/11

- sign 1528.704 $\pm$ 0.178  $\chi^2$ /NDF: 825801.1/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $544.687 \pm 218.706$   $\chi^2/\text{NDF}: 37.0/30$

Left Out:  $121.325 \pm 105.060$   $\chi^2/\text{NDF}: 43.7/23$

Right Out:  $418.908 \pm 193.793$   $\chi^2/\text{NDF}: 22.9/32$

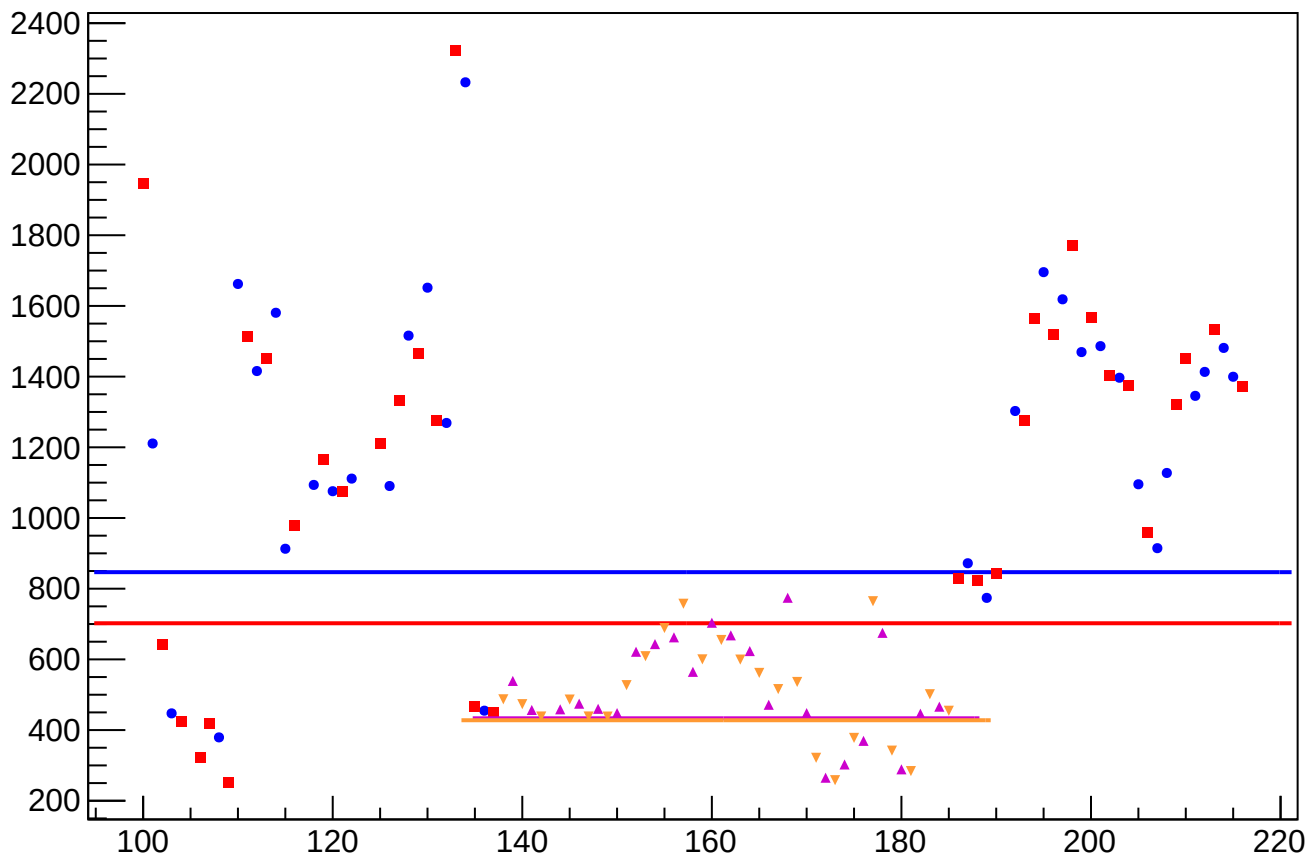
Left In:  $187.037 \pm 106.975$   $\chi^2/\text{NDF}: 11.6/22$

+ sign  $200.702 \pm 94.700$   $\chi^2/\text{NDF}: 83.7/54$

All:  $221.171 \pm 66.590$   $\chi^2/\text{NDF}: 119.4/110$

- sign  $241.190 \pm 93.654$   $\chi^2/\text{NDF}: 35.6/55$

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $846.767 \pm 0.155$   $\chi^2/\text{NDF}$ : 8224113.9/30

Left Out:  $427.814 \pm 0.074$   $\chi^2/\text{NDF}$ : 3188396.1/23

Right Out:  $702.192 \pm 0.137$   $\chi^2/\text{NDF}$ : 11185028.7/32

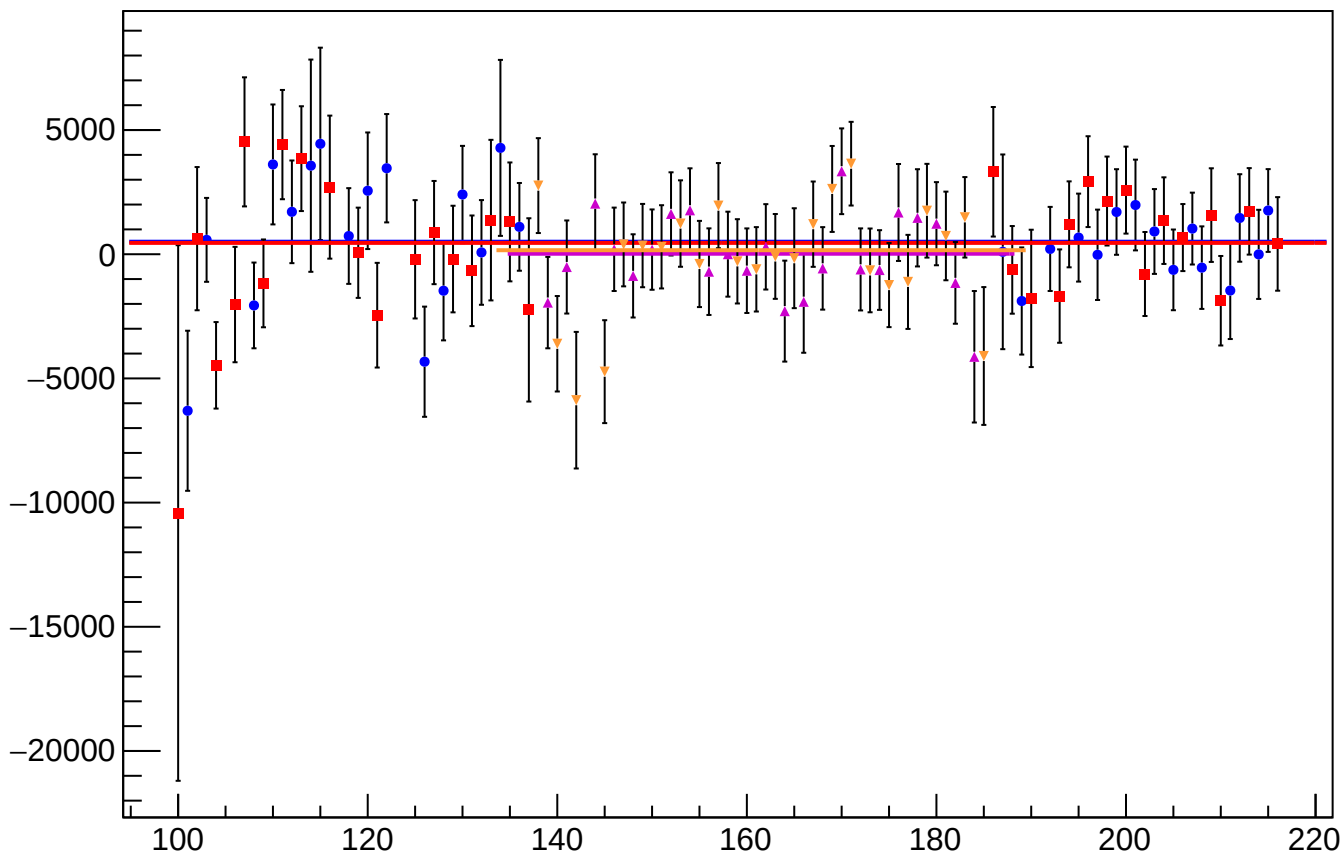
Left In:  $433.285 \pm 0.076$   $\chi^2/\text{NDF}$ : 3247871.5/22

+ sign  $506.364 \pm 0.067$   $\chi^2/\text{NDF}$ : 17375508.1/54

All:  $501.169 \pm 0.047$   $\chi^2/\text{NDF}$ : 34771817.9/11

- sign  $496.088 \pm 0.066$   $\chi^2/\text{NDF}$ : 17384403.6/55

# dit\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $503.610 \pm 353.263$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $161.591 \pm 368.366$   $\chi^2/\text{NDF}$ : 29.9/23

Right Out:  $456.893 \pm 354.798$   $\chi^2/\text{NDF}$ : 34.4/32

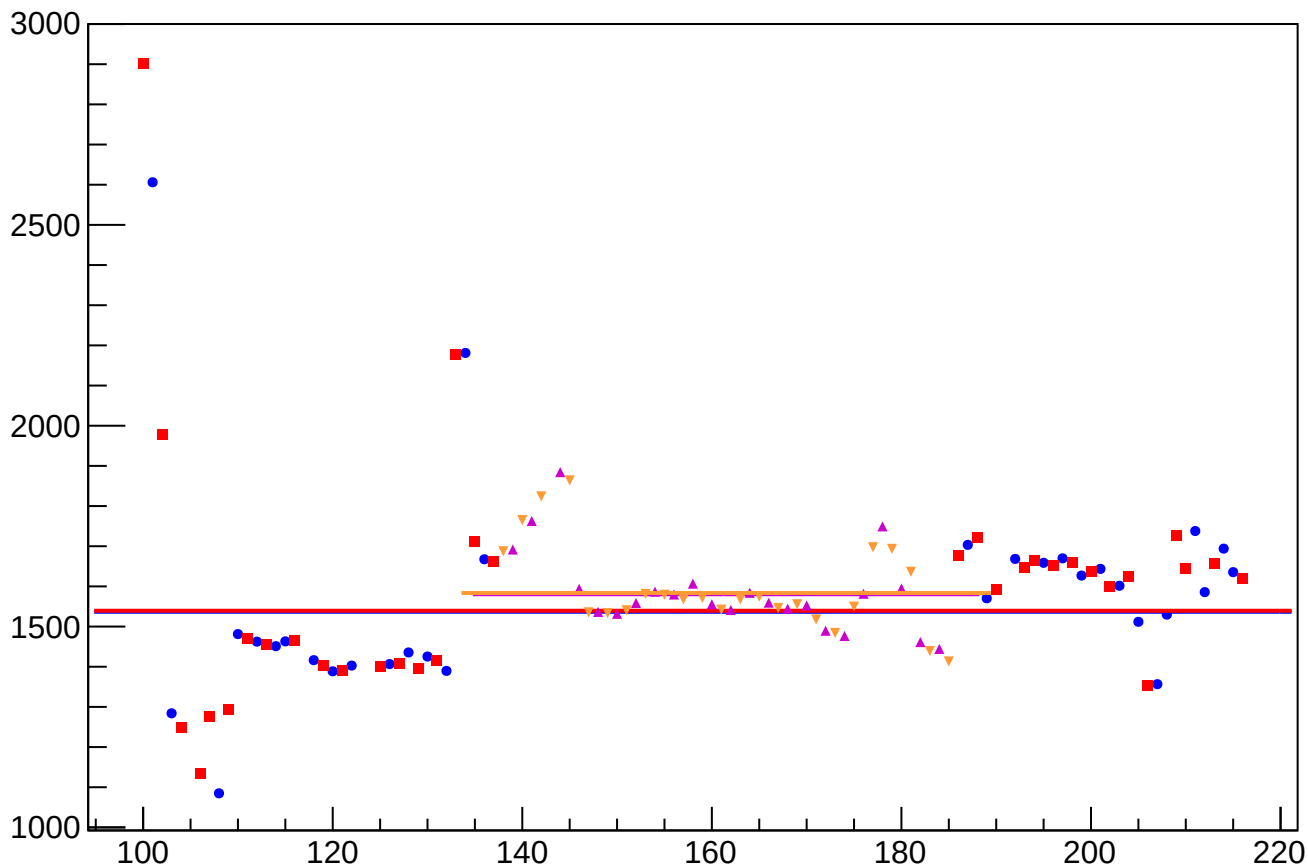
Left In:  $20.252 \pm 369.781$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $339.755 \pm 254.967$   $\chi^2/\text{NDF}$ : 56.7/54

All:  $293.865 \pm 180.657$   $\chi^2/\text{NDF}$ : 107.8/110

- sign  $247.598 \pm 256.013$   $\chi^2/\text{NDF}$ : 51.1/55

dit\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1536.841 $\pm$ 0.250  $\chi^2$ /NDF: 664101.0/30

Left Out: 1583.673 $\pm$ 0.260  $\chi^2$ /NDF: 133583.1/23

Right Out: 1539.375 $\pm$ 0.251  $\chi^2$ /NDF: 554564.0/32

Left In: 1580.464 $\pm$ 0.261  $\chi^2$ /NDF: 125745.6/22

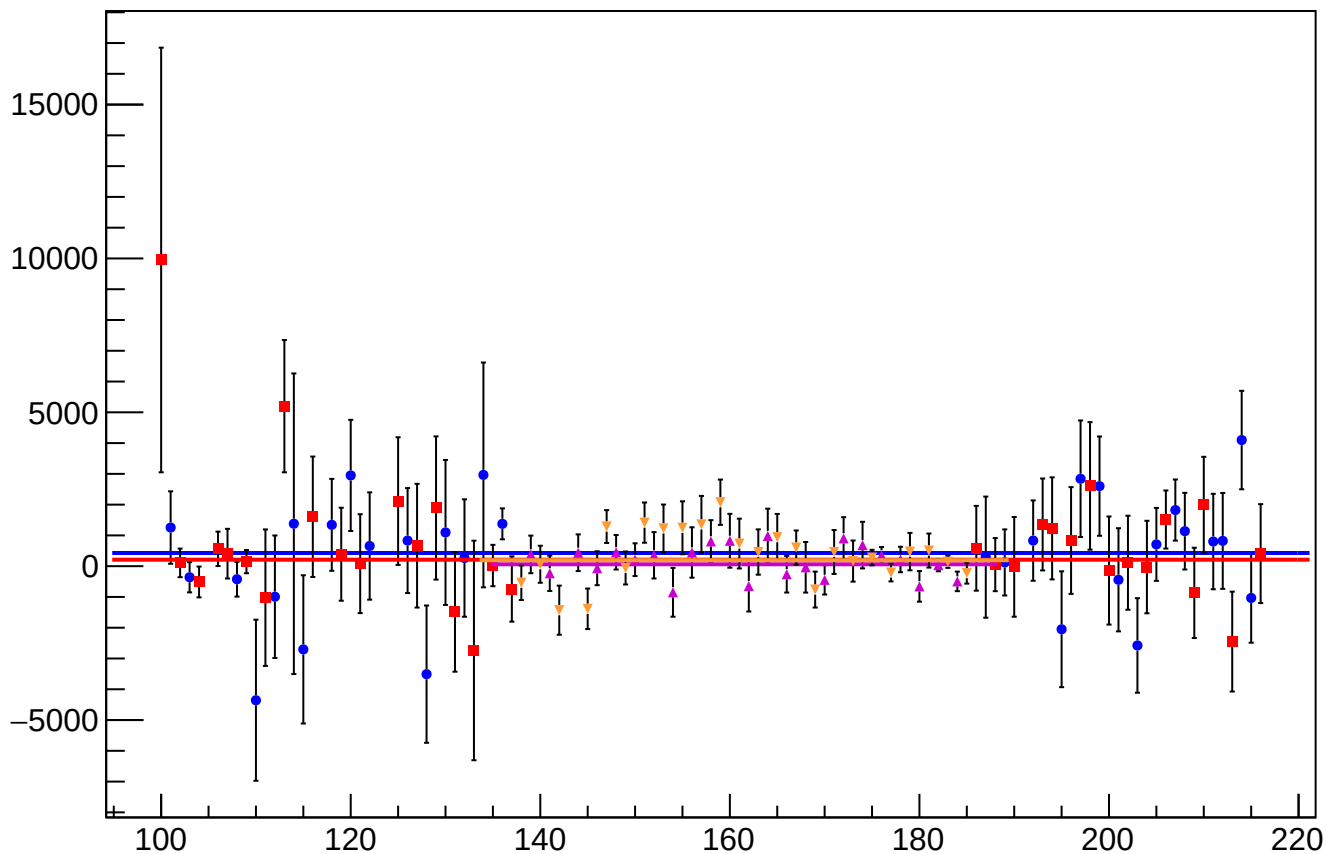
+ sign 1559.277 $\pm$ 0.180  $\chi^2$ /NDF: 814523.9/54

All: 1559.174 $\pm$ 0.128  $\chi^2$ /NDF: 1507692.1/11

- sign 1559.070 $\pm$ 0.181  $\chi^2$ /NDF: 693167.6/55



asym\_us\_dd\_at2lr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In:  $428.832 \pm 212.093$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $193.307 \pm 95.894$   $\chi^2/\text{NDF}$ : 40.1/23

Right Out:  $210.656 \pm 172.425$   $\chi^2/\text{NDF}$ : 23.7/32

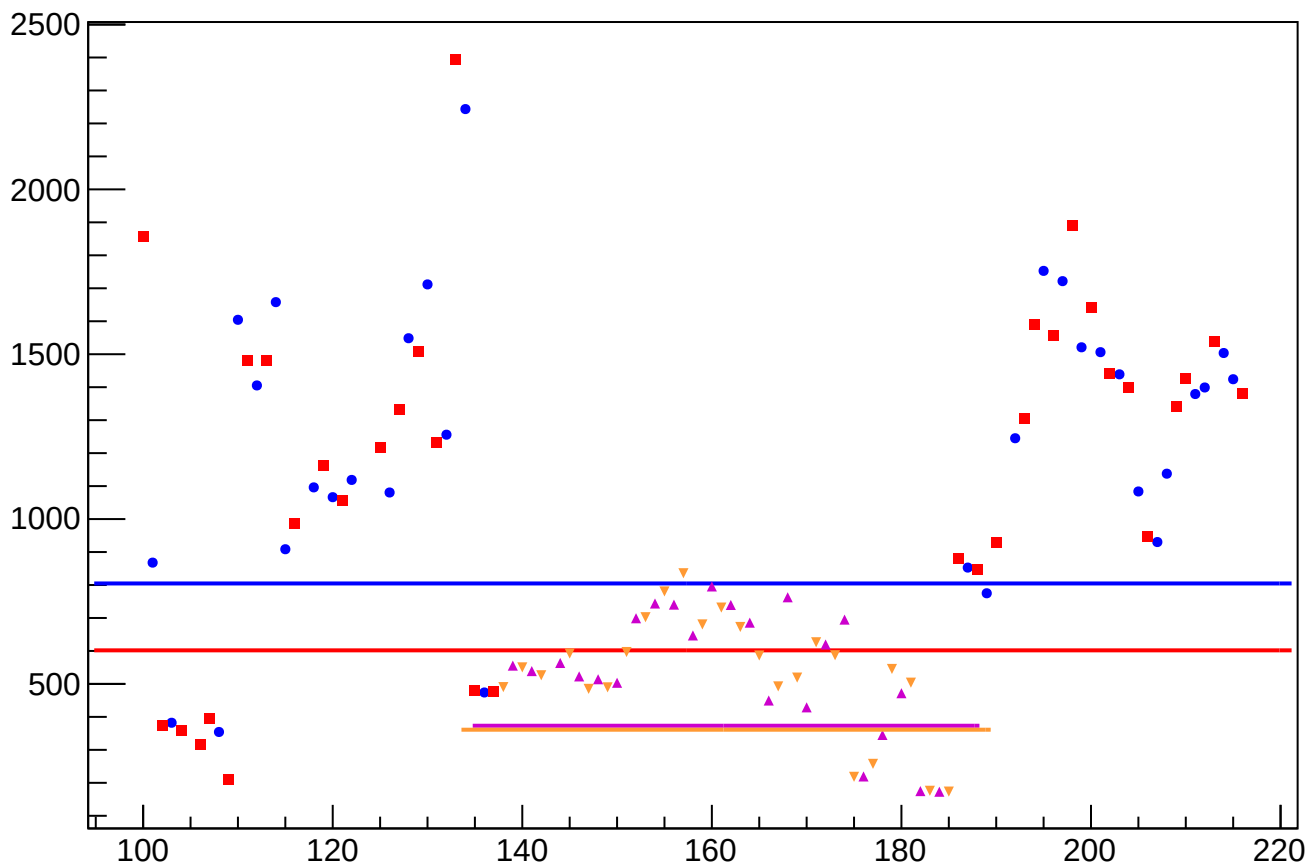
Left In:  $62.183 \pm 99.717$   $\chi^2/\text{NDF}$ : 17.0/22

+ sign  $233.282 \pm 87.378$   $\chi^2/\text{NDF}$ : 79.9/54

All:  $165.524 \pm 61.408$   $\chi^2/\text{NDF}$ : 122.3/110

- sign  $99.395 \pm 86.321$   $\chi^2/\text{NDF}$ : 41.2/55

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 804.712 $\pm$ 0.150  $\chi^2$ /NDF: 9122335.3/30

Left Out: 361.100 $\pm$ 0.068  $\chi^2$ /NDF: 8183123.9/23

Right Out: 601.822 $\pm$ 0.122  $\chi^2$ /NDF: 13726732.6/32

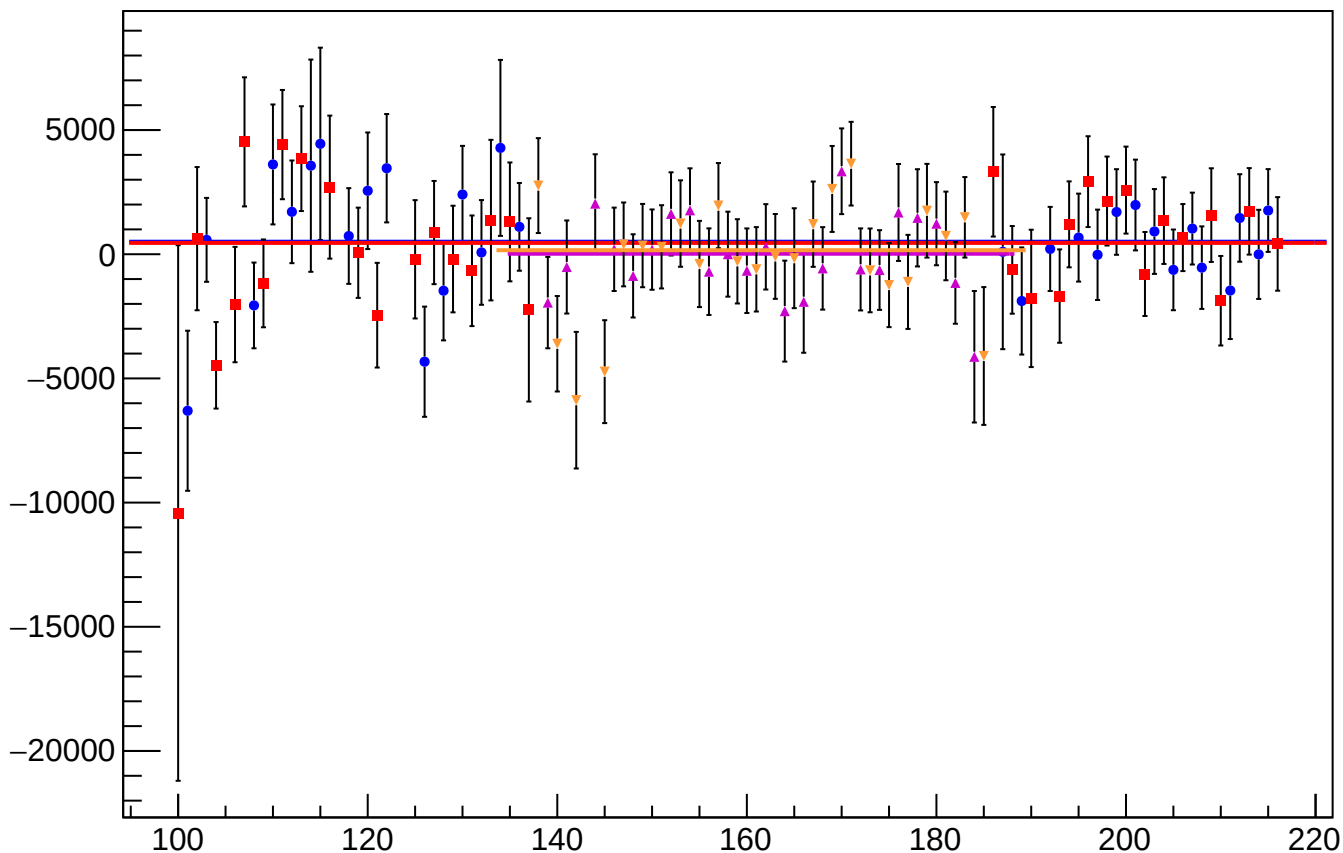
Left In: 373.140 $\pm$ 0.071  $\chi^2$ /NDF: 8207354.5/22

+ sign 436.392 $\pm$ 0.062  $\chi^2$ /NDF: 24569947.4/54

All: 433.387 $\pm$ 0.043  $\chi^2$ /NDF: 49144975.2/11

- sign 430.455 $\pm$ 0.061  $\chi^2$ /NDF: 24570354.8/55

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In: 503.604 $\pm$ 353.263  $\chi^2$ /NDF: 26.3/30

Left Out: 161.587 $\pm$ 368.366  $\chi^2$ /NDF: 29.9/23

Right Out: 456.892 $\pm$ 354.798  $\chi^2$ /NDF: 34.4/32

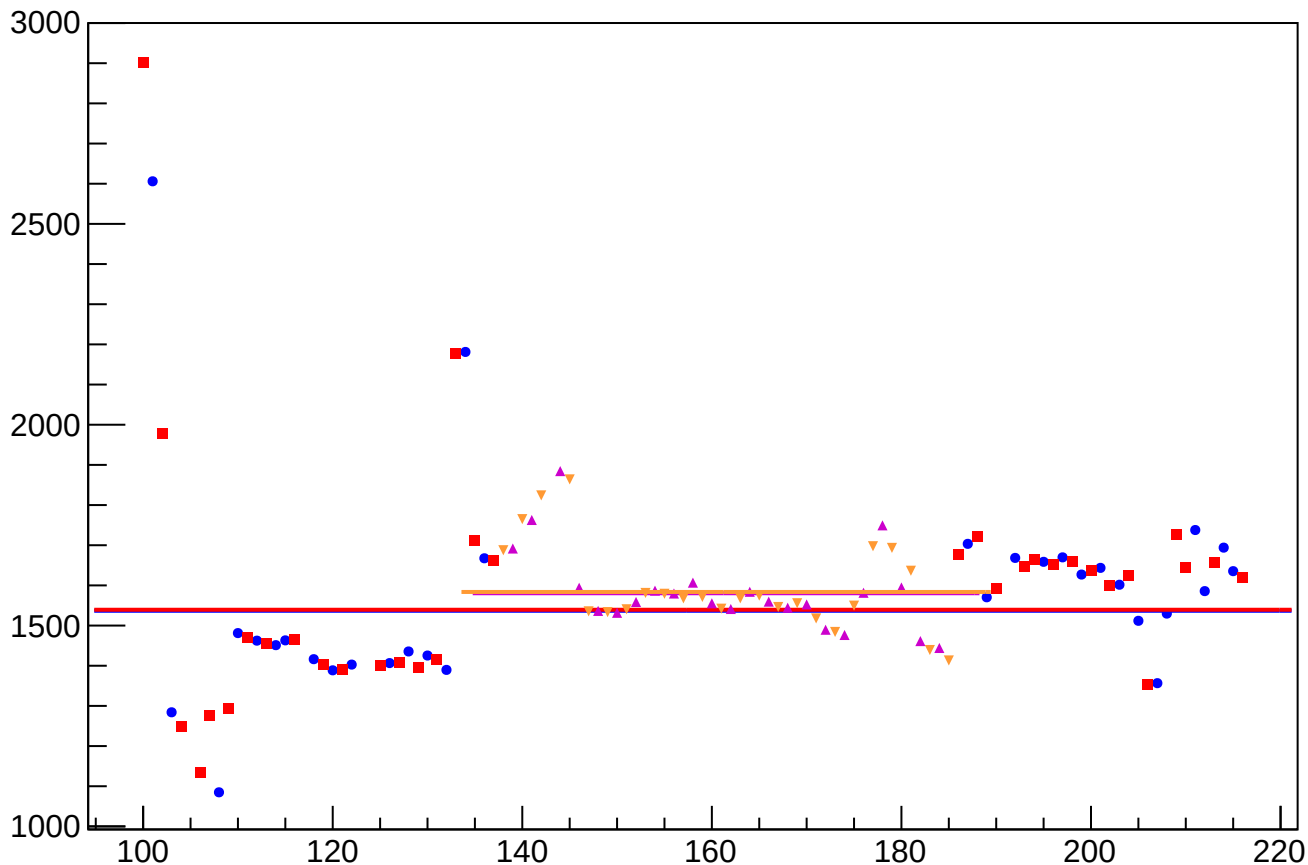
Left In: 20.250 $\pm$ 369.781  $\chi^2$ /NDF: 16.0/22

+ sign 339.750 $\pm$ 254.967  $\chi^2$ /NDF: 56.7/54

All: 293.862 $\pm$ 180.657  $\chi^2$ /NDF: 107.8/110

- sign 247.596 $\pm$ 256.013  $\chi^2$ /NDF: 51.1/55

eigen\_dit\_asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1536.841 $\pm$ 0.250  $\chi^2$ /NDF: 664100.6/30

Left Out: 1583.673 $\pm$ 0.260  $\chi^2$ /NDF: 133583.3/23

Right Out: 1539.374 $\pm$ 0.251  $\chi^2$ /NDF: 554564.0/32

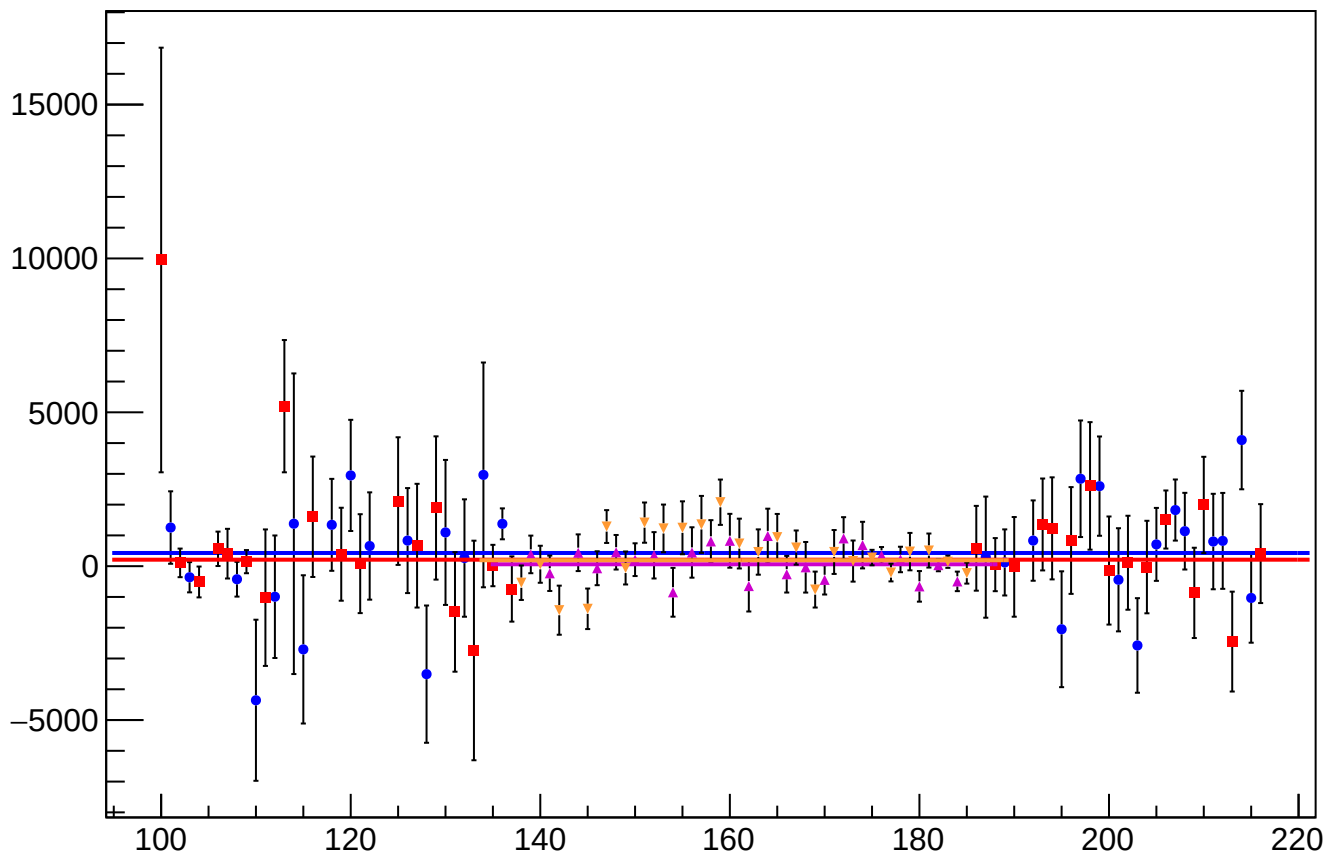
Left In: 1580.464 $\pm$ 0.261  $\chi^2$ /NDF: 125745.6/22

+ sign 1559.277 $\pm$ 0.180  $\chi^2$ /NDF: 814523.4/54

All: 1559.174 $\pm$ 0.128  $\chi^2$ /NDF: 1507691.5/11

- sign 1559.070 $\pm$ 0.181  $\chi^2$ /NDF: 693167.4/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 428.828 $\pm$ 212.093  $\chi^2$ /NDF: 38.8/30

Left Out: 193.312 $\pm$ 95.894  $\chi^2$ /NDF:40.1/23

Right Out: 210.654 $\pm$ 172.426  $\chi^2$ /NDF: 23.7/32

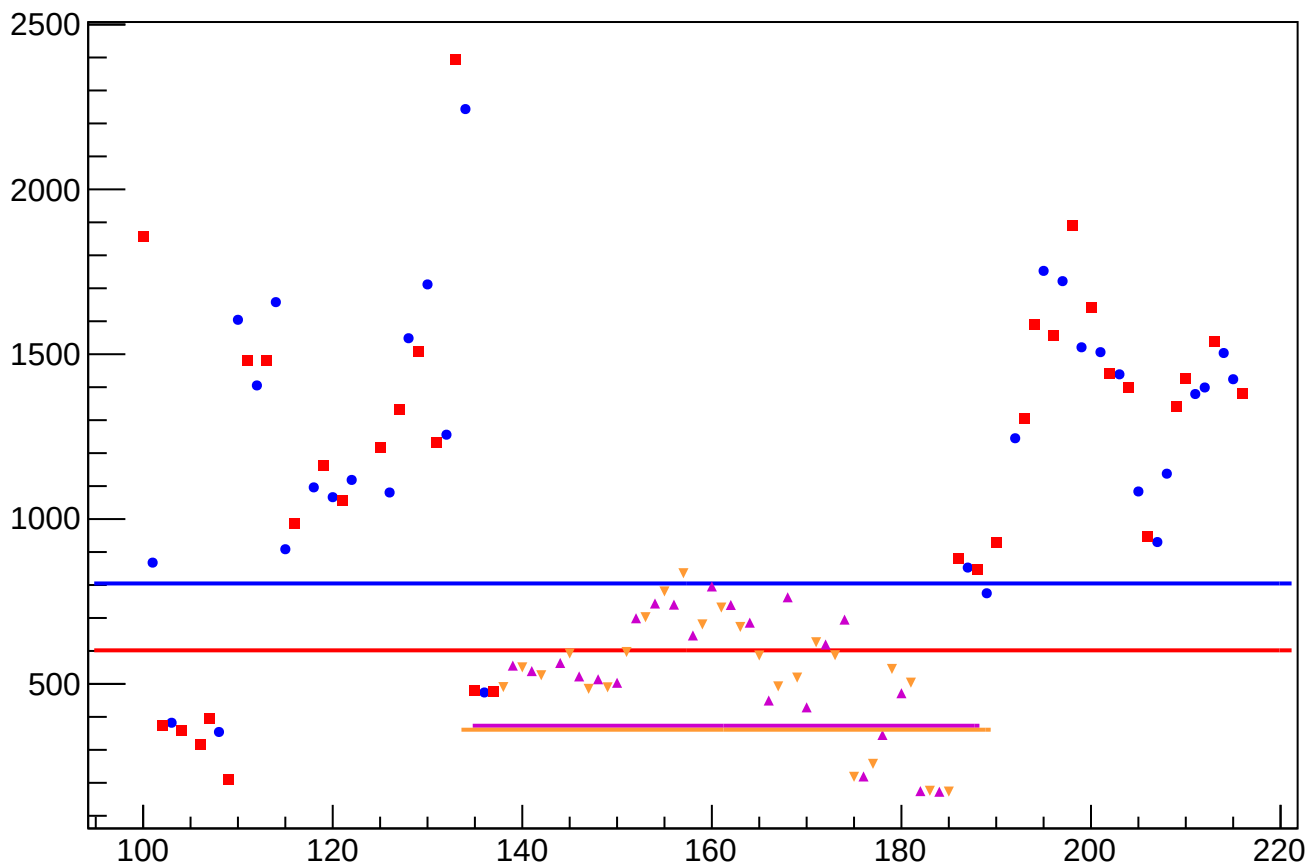
Left In: 62.181 $\pm$ 99.718  $\chi^2$ /NDF:17.0/22

+ sign 233.286 $\pm$ 87.378  $\chi^2$ /NDF: 79.9/54

All: 165.525 $\pm$ 61.409  $\chi^2$ /NDF: 122.3/110

- sign 99.393 $\pm$ 86.322  $\chi^2$ /NDF: 41.2/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 804.709+/-0.150  $\chi^2/\text{NDF}$ : 9122352.8/30

Left Out: 361.103+/-0.068  $\chi^2/\text{NDF}$ : 8182968.2/23

Right Out: 601.829+/-0.122  $\chi^2/\text{NDF}$ : 13726549.9/32

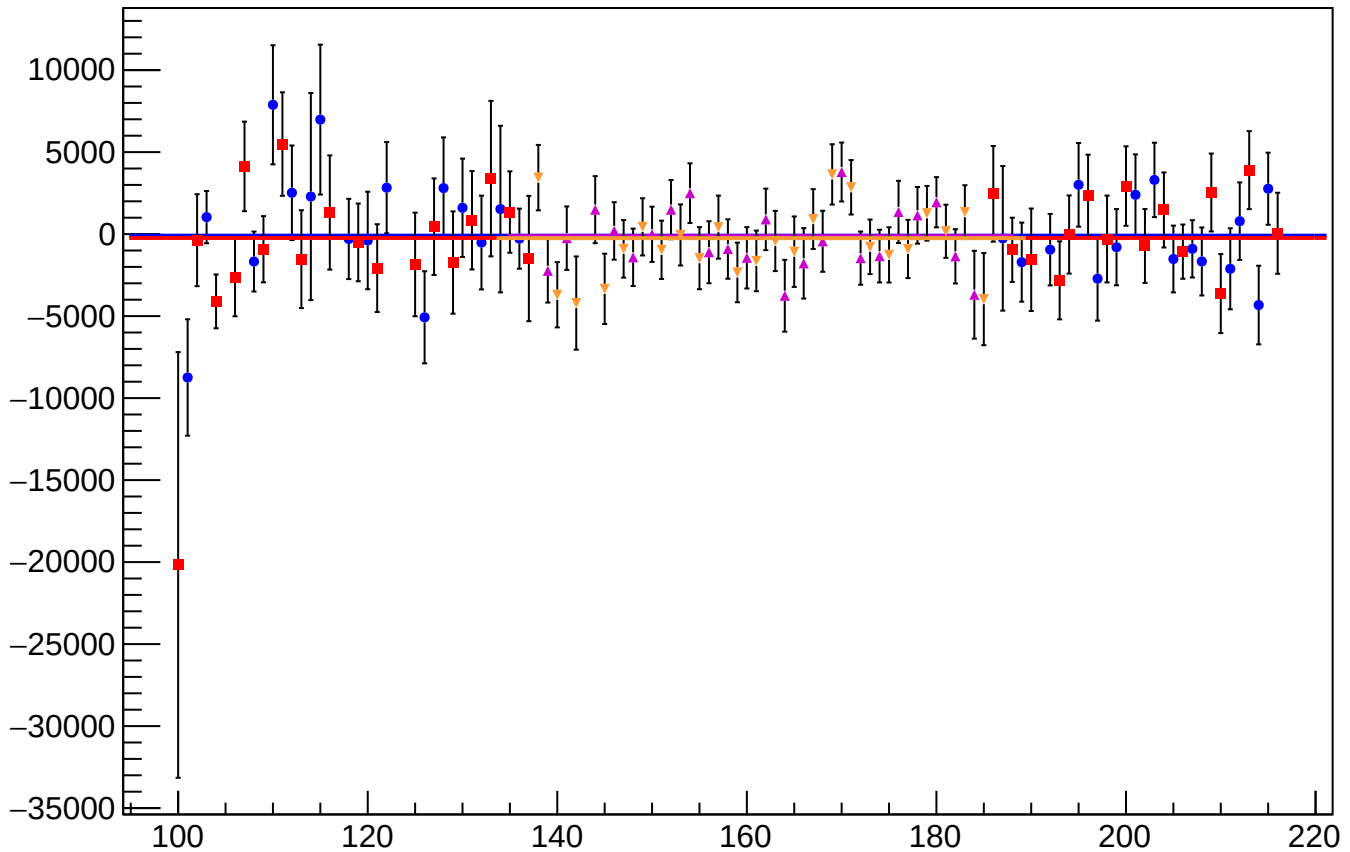
Left In: 373.145+/-0.071  $\chi^2/\text{NDF}$ : 8207110.6/22

+ sign 436.396+/-0.062  $\chi^2/\text{NDF}$ : 24569619.1/54

All: 433.392+/-0.043  $\chi^2/\text{NDF}$ : 49144224.4/11

- sign 430.460+/-0.061  $\chi^2/\text{NDF}$ : 24569934.9/55

# asym\_us\_dd\_at2lr\_dd\_dd\_mean vs Slug



Right In:  $-95.862 \pm 444.428$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $-247.110 \pm 378.224$   $\chi^2/\text{NDF}$ : 26.0/23

Right Out:  $-233.464 \pm 441.605$   $\chi^2/\text{NDF}$ : 29.9/32

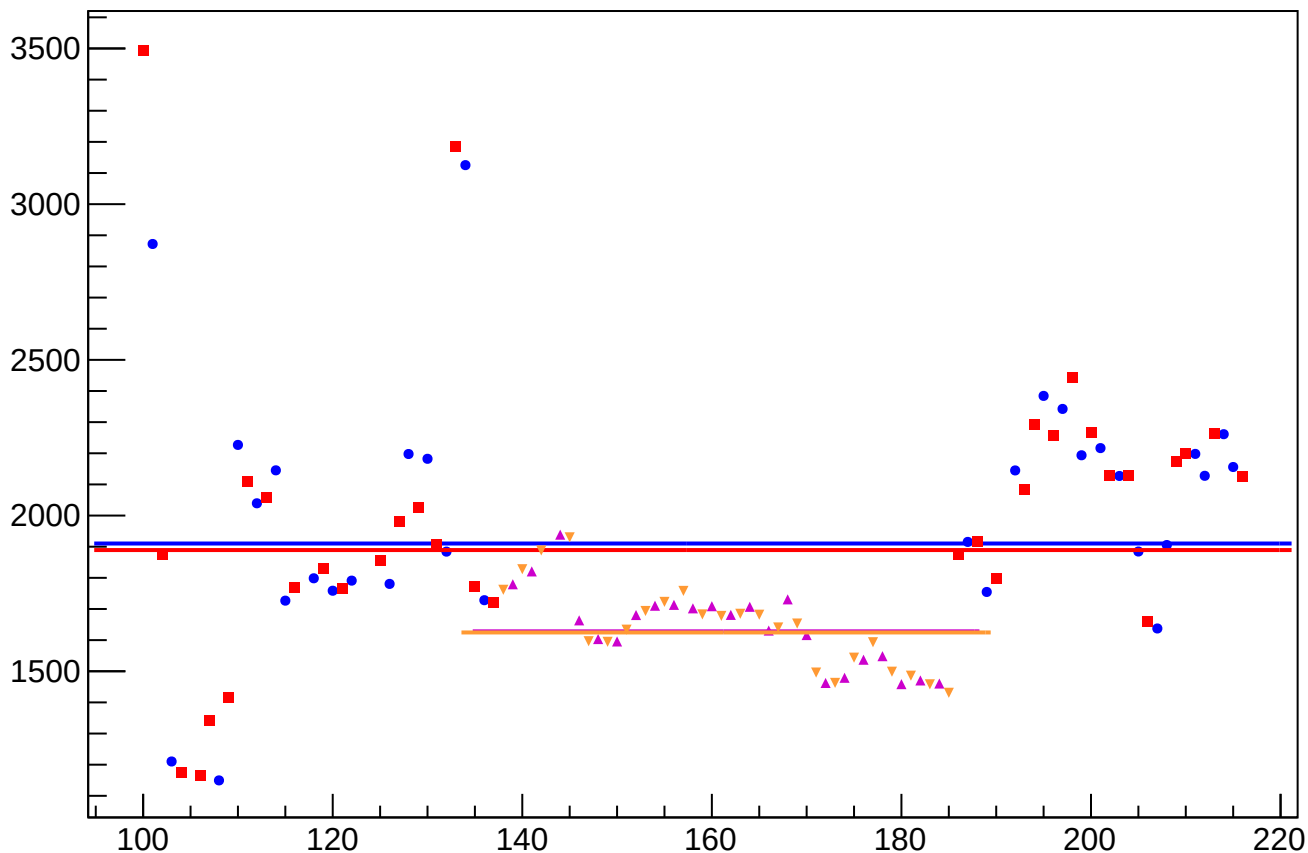
Left In:  $-126.114 \pm 381.305$   $\chi^2/\text{NDF}$ : 21.2/22

+ sign  $-183.579 \pm 288.037$   $\chi^2/\text{NDF}$ : 60.5/54

All:  $-177.783 \pm 203.874$   $\chi^2/\text{NDF}$ : 111.6/110

- sign  $-171.964 \pm 288.607$   $\chi^2/\text{NDF}$ : 51.1/55

# asym\_us\_dd\_at2lr\_dd\_dd\_rms vs Slug



Right In: 1910.240+/-0.314  $\chi^2/\text{NDF}$ : 1487760.8/30

Left Out: 1624.614+/-0.267  $\chi^2/\text{NDF}$ : 207257.7/23

Right Out: 1889.223+/-0.312  $\chi^2/\text{NDF}$ : 1436936.3/32

Left In: 1628.221+/-0.270  $\chi^2/\text{NDF}$ : 204880.6/22

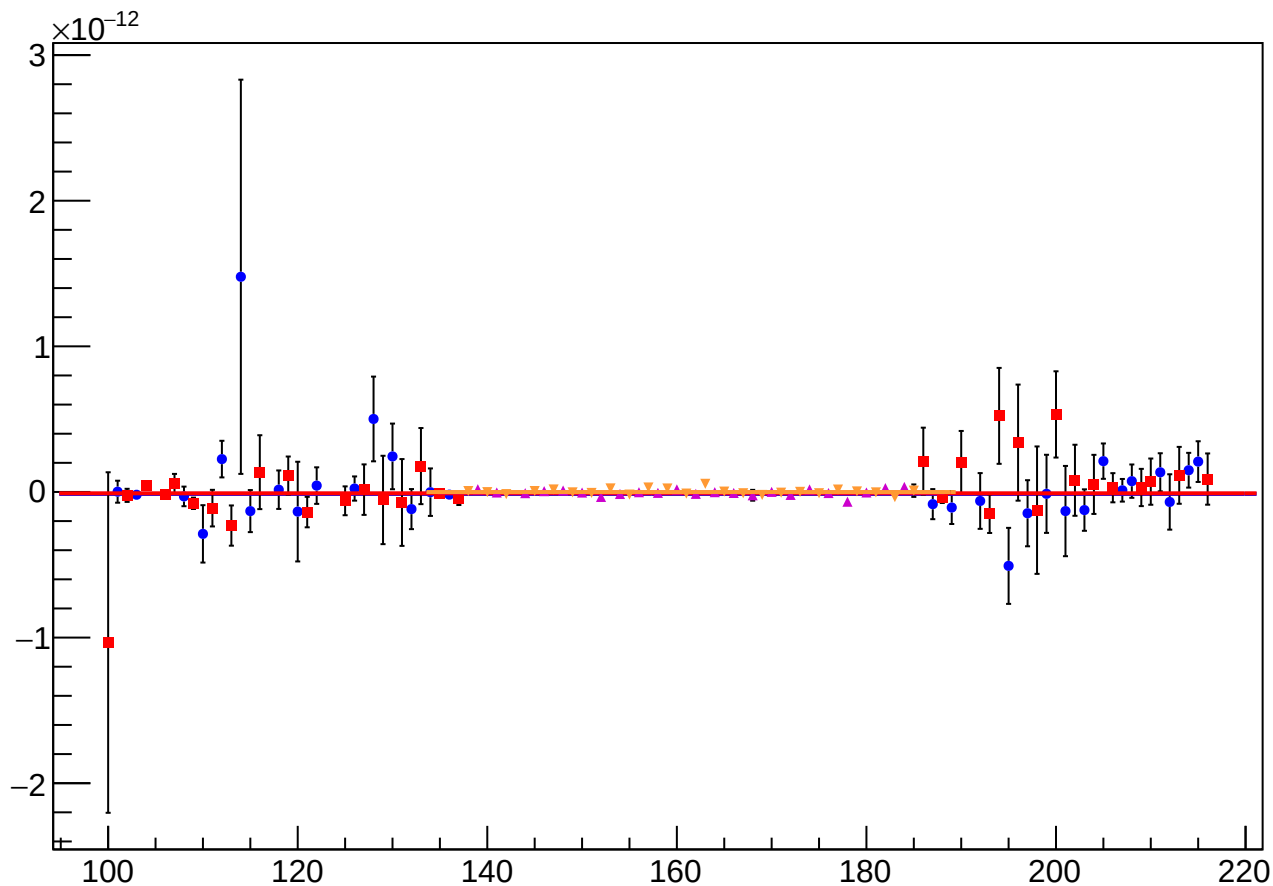
+ sign 1744.589+/-0.204  $\chi^2/\text{NDF}$ : 2174109.3/54

All: 1742.149+/-0.144  $\chi^2/\text{NDF}$ : 4216449.9/11

- sign 1739.699+/-0.204  $\chi^2/\text{NDF}$ : 2042052.9/55



asym\_us\_dd\_at2lr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.1/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.6/23

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.3/32

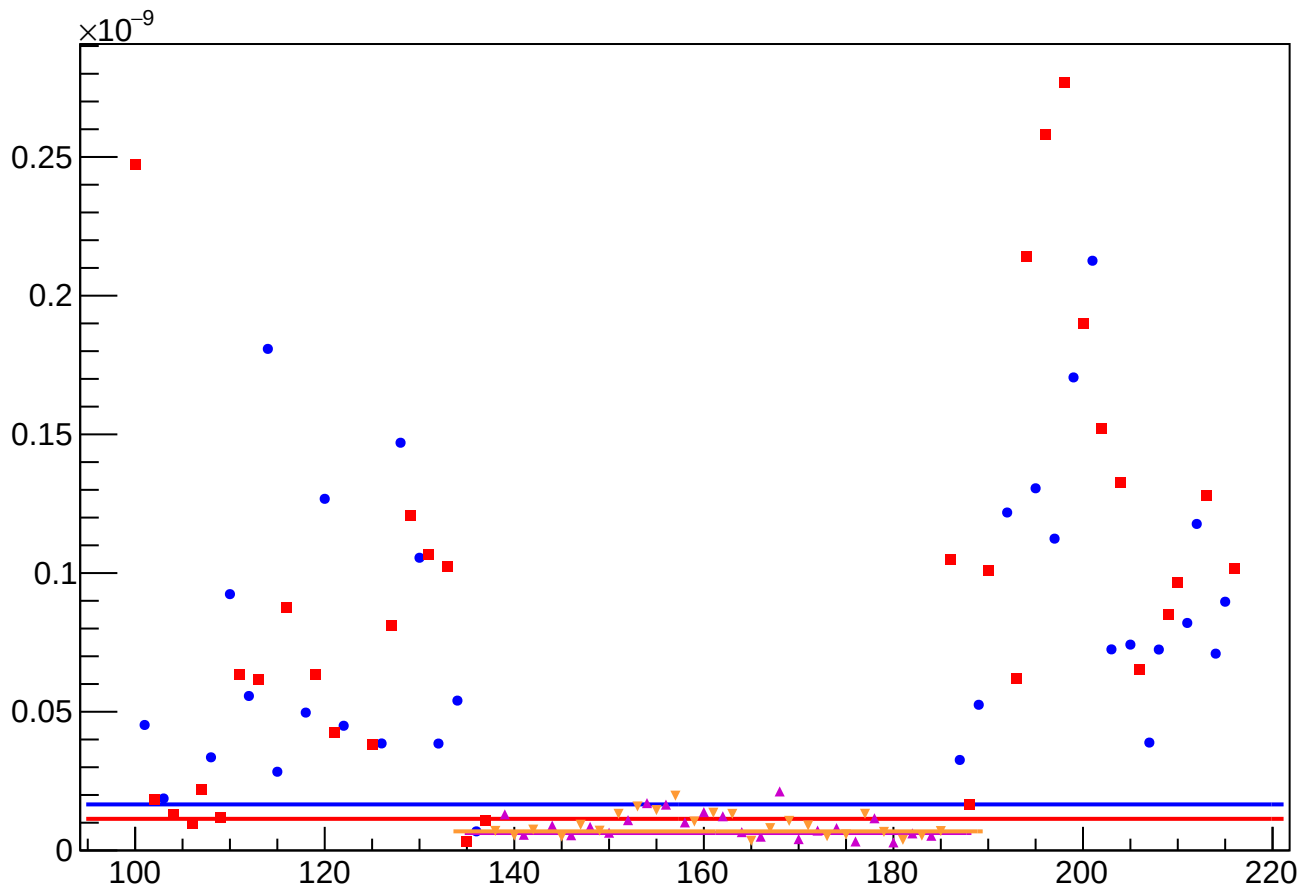
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.3/54

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 106.6/110

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/55

asym\_us\_dd\_at2lr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10303792.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2256547.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12196352.9/32

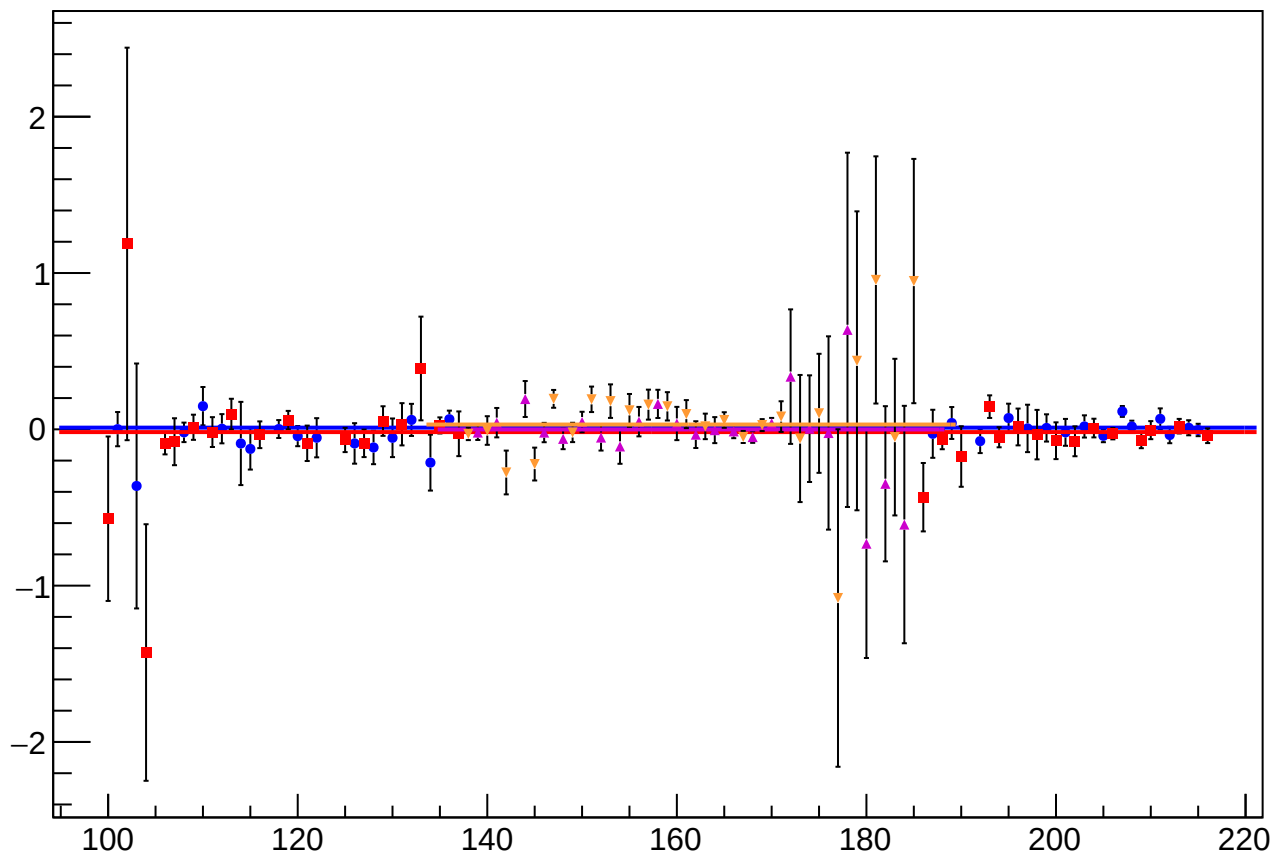
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2888385.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14352044.8/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30220729.6/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15762613.7/55

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 27.1/32

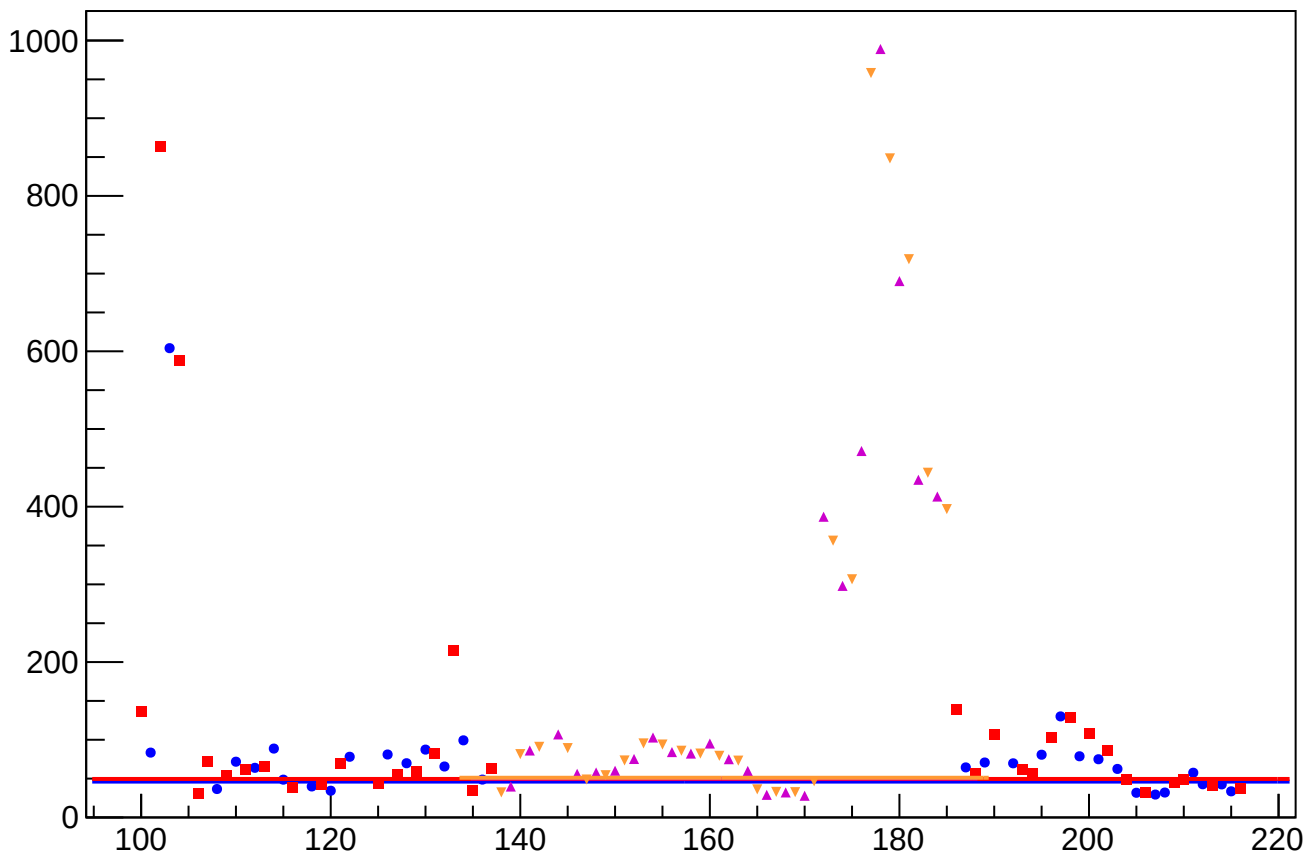
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.018 \pm 0.010$   $\chi^2/\text{NDF}$ : 65.8/54

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.9/110

- sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 43.8/55

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 46.167 $\pm$ 0.009  $\chi^2$ /NDF: 5548457.3/30

Left Out: 51.081 $\pm$ 0.011  $\chi^2$ /NDF: 11736636.7/23

Right Out: 49.547 $\pm$ 0.009  $\chi^2$ /NDF: 5982179.7/32

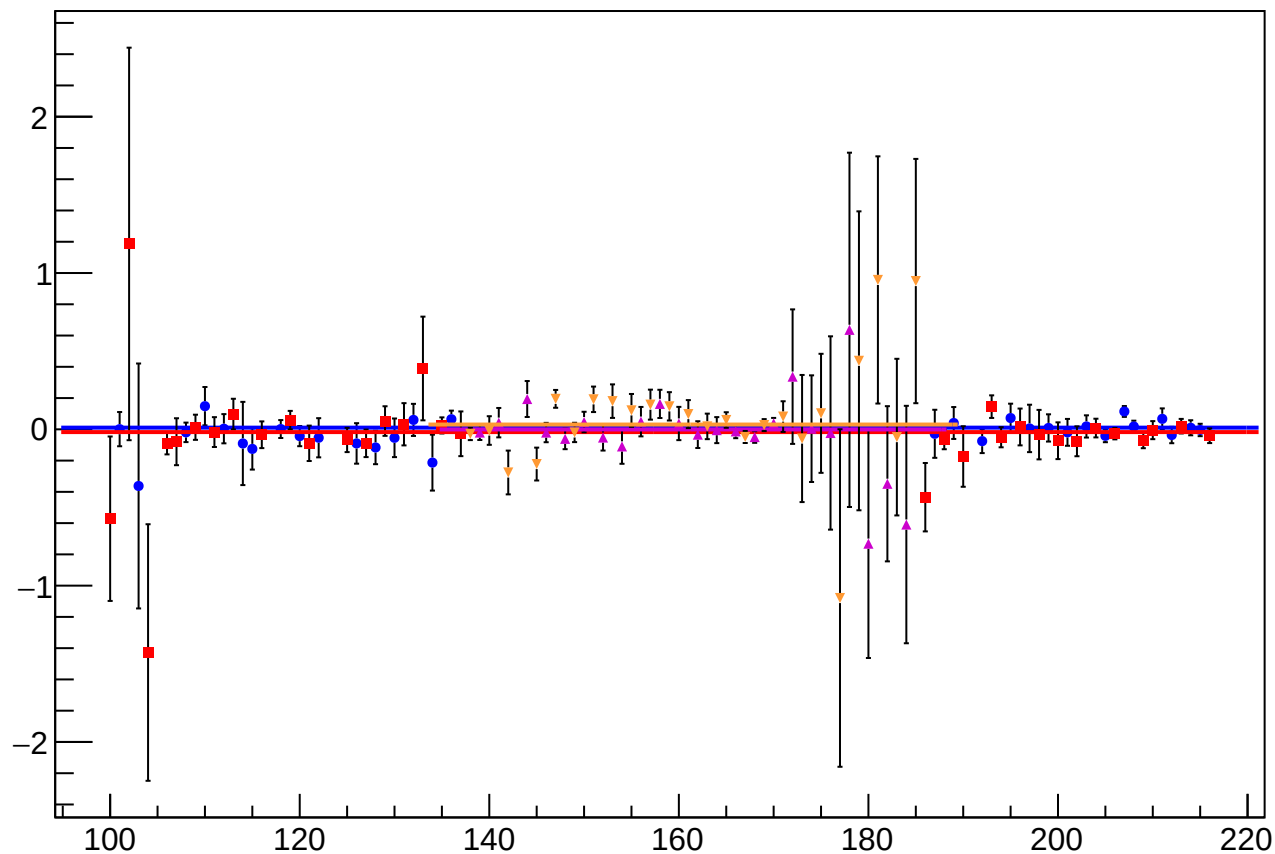
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195723.8/22

+ sign 48.070 $\pm$ 0.007  $\chi^2$ /NDF: 17408709.8/54

All: 48.926 $\pm$ 0.005  $\chi^2$ /NDF: 35621886.2/110

- sign 49.849 $\pm$ 0.007  $\chi^2$ /NDF: 18180326.6/55

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/30$

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}: 41.5/23$

Right Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}: 27.1/32$

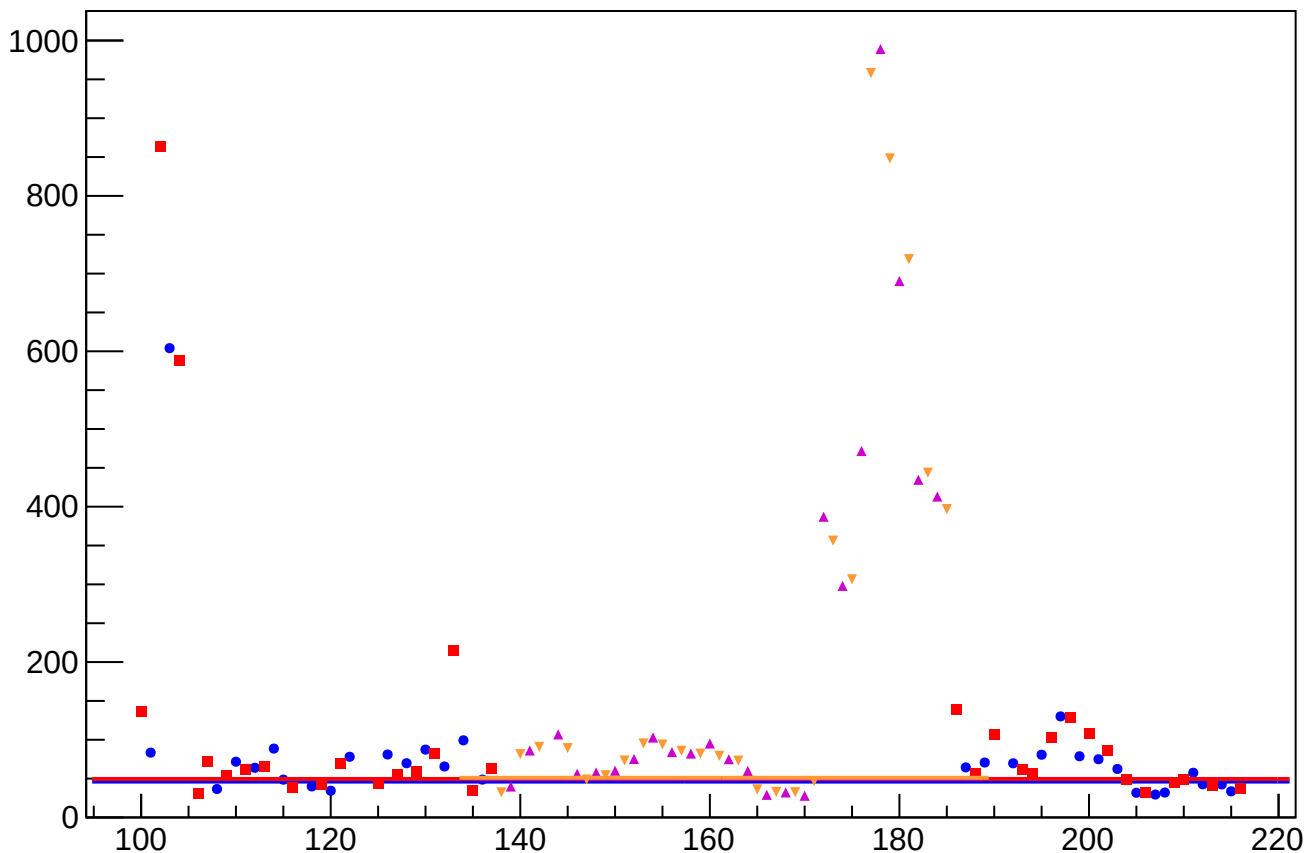
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}: 16.0/22$

+ sign  $0.018 \pm 0.010$   $\chi^2/\text{NDF}: 65.8/54$

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 113.9/110$

- sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}: 43.8/55$

asym\_us\_dd\_at2lr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 46.167 $\pm$ 0.009  $\chi^2$ /NDF: 5548457.3/30

Left Out: 51.081 $\pm$ 0.011  $\chi^2$ /NDF: 11736636.7/23

Right Out: 49.547 $\pm$ 0.009  $\chi^2$ /NDF: 5982179.7/32

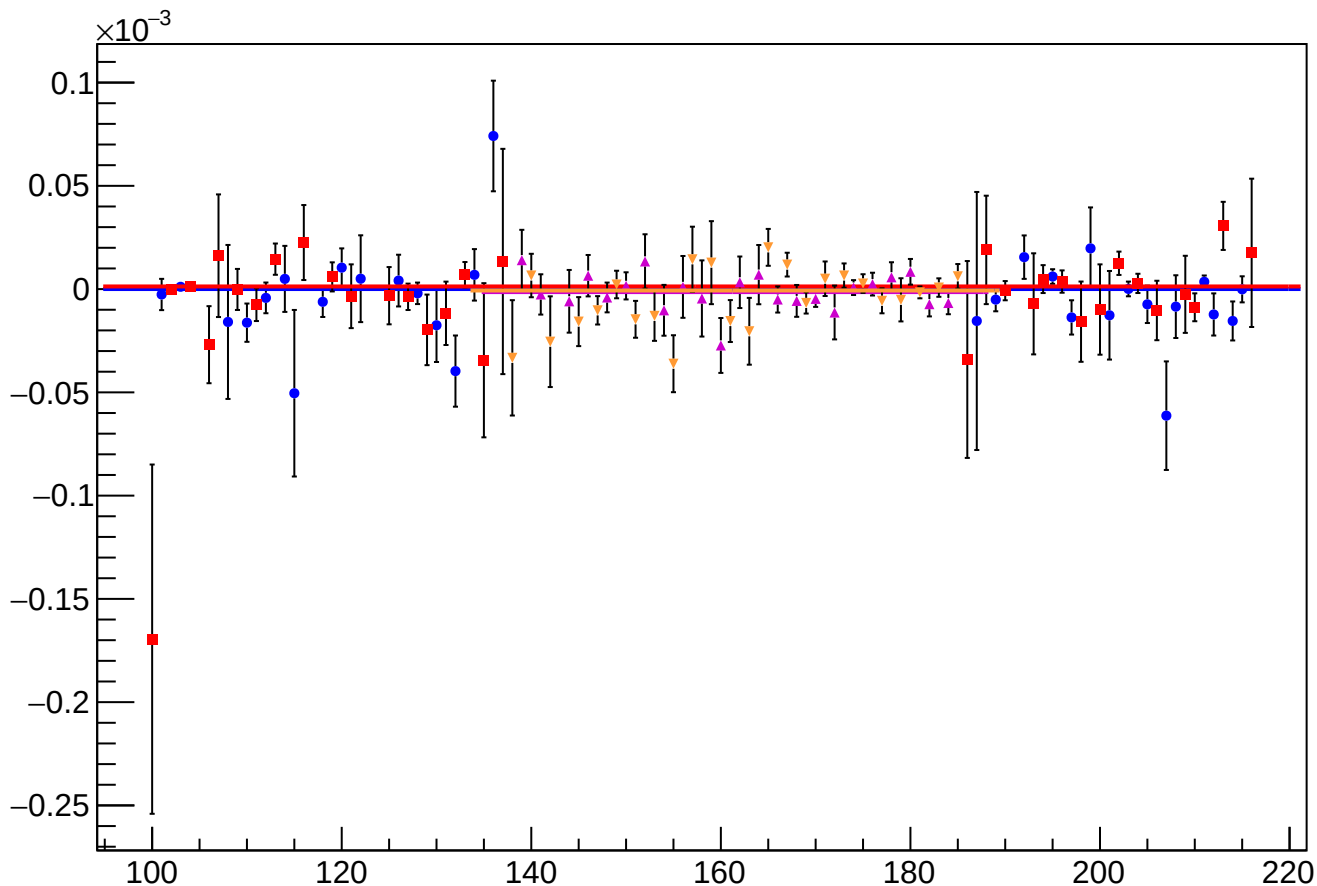
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195723.8/22

+ sign 48.070 $\pm$ 0.007  $\chi^2$ /NDF: 17408709.8/54

All: 48.926 $\pm$ 0.005  $\chi^2$ /NDF: 35621886.2/110

- sign 49.849 $\pm$ 0.007  $\chi^2$ /NDF: 18180326.6/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 44.1/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.5/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34.4/32

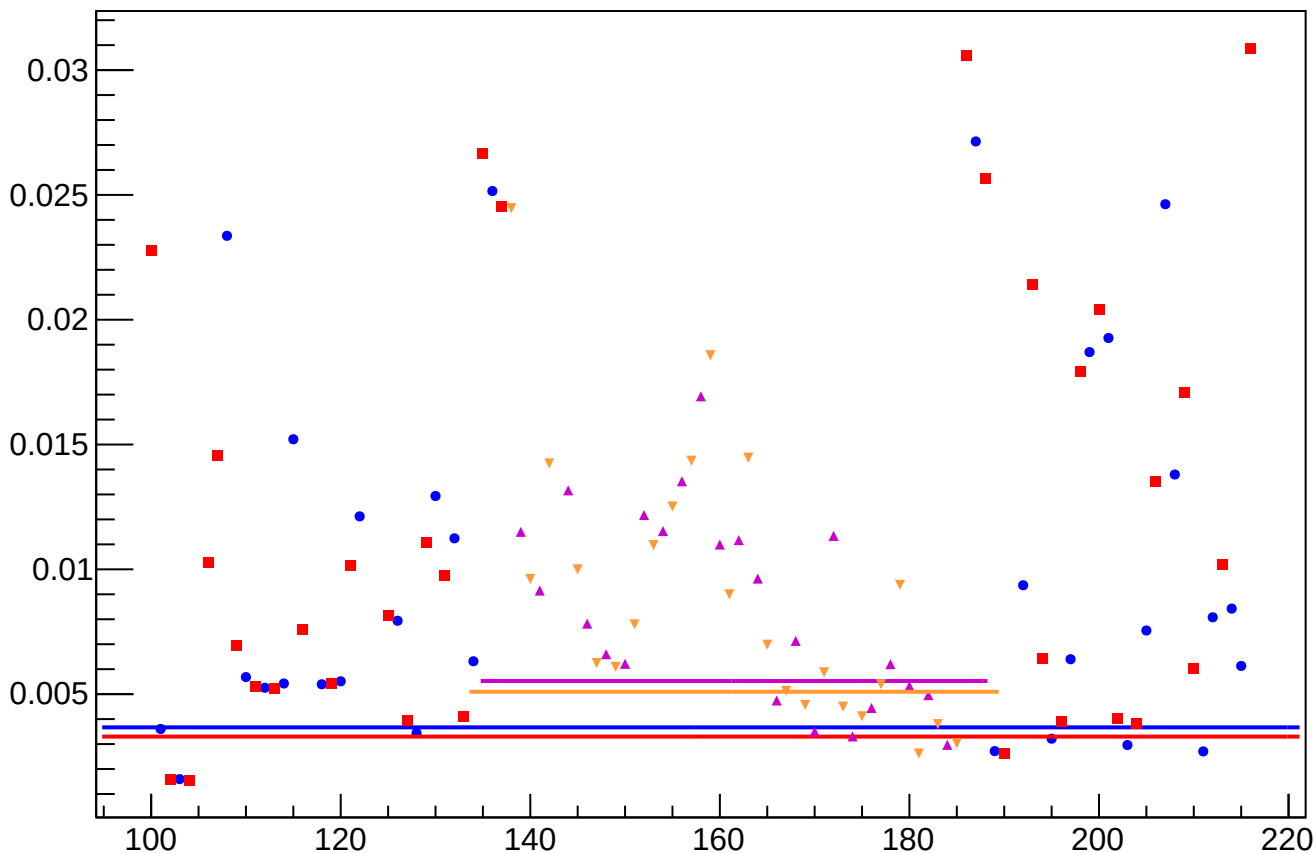
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.4/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 82.8/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 136.0/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 53.0/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 13414506.1/30

Left Out:  $0.005 \pm 0.000$   $\chi^2/\text{NDF}$ : 8380878.9/23

Right Out:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 17386615.9/32

Left In:  $0.006 \pm 0.000$   $\chi^2/\text{NDF}$ : 6892708.8/22

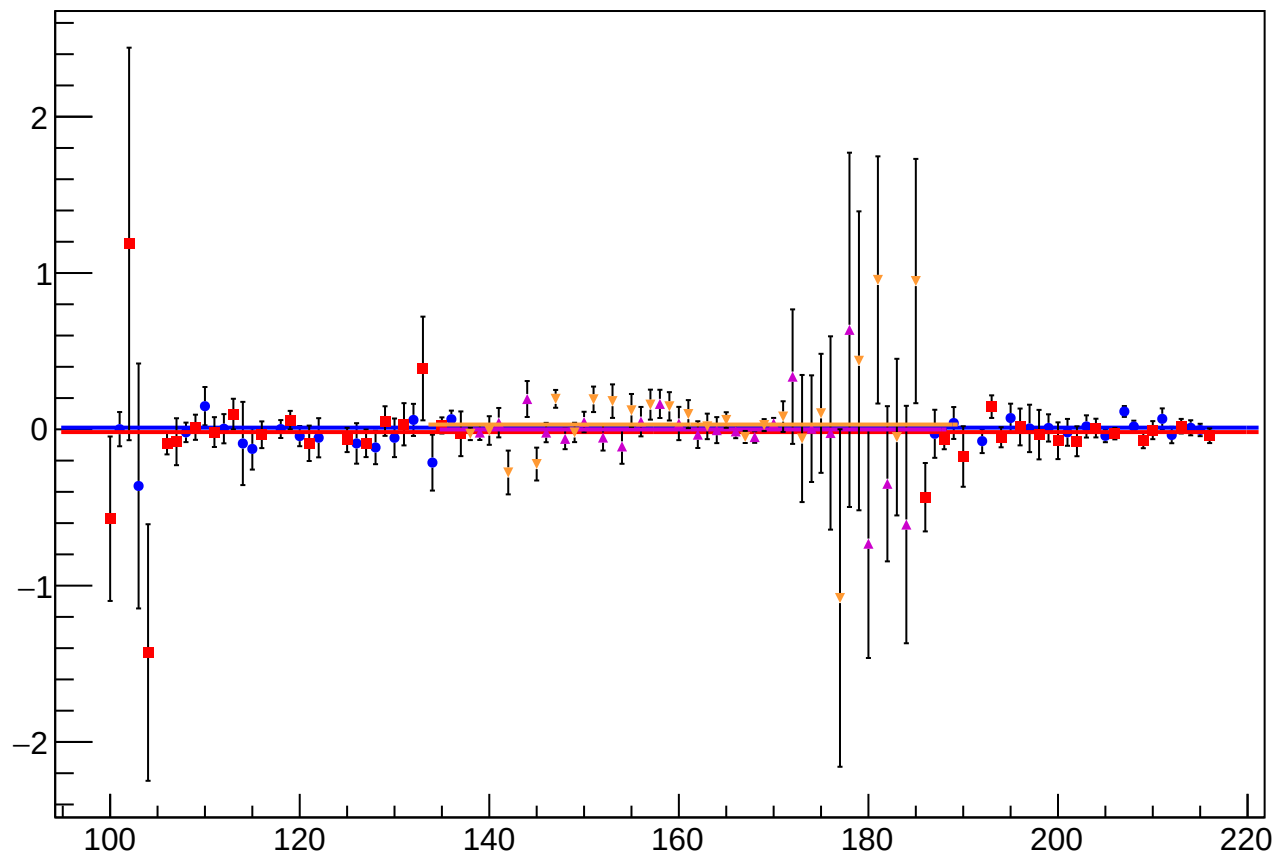
+ sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 23052688.0/54

All:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 50242994.1/110

- sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 27147844.4/55



asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 27.1/32

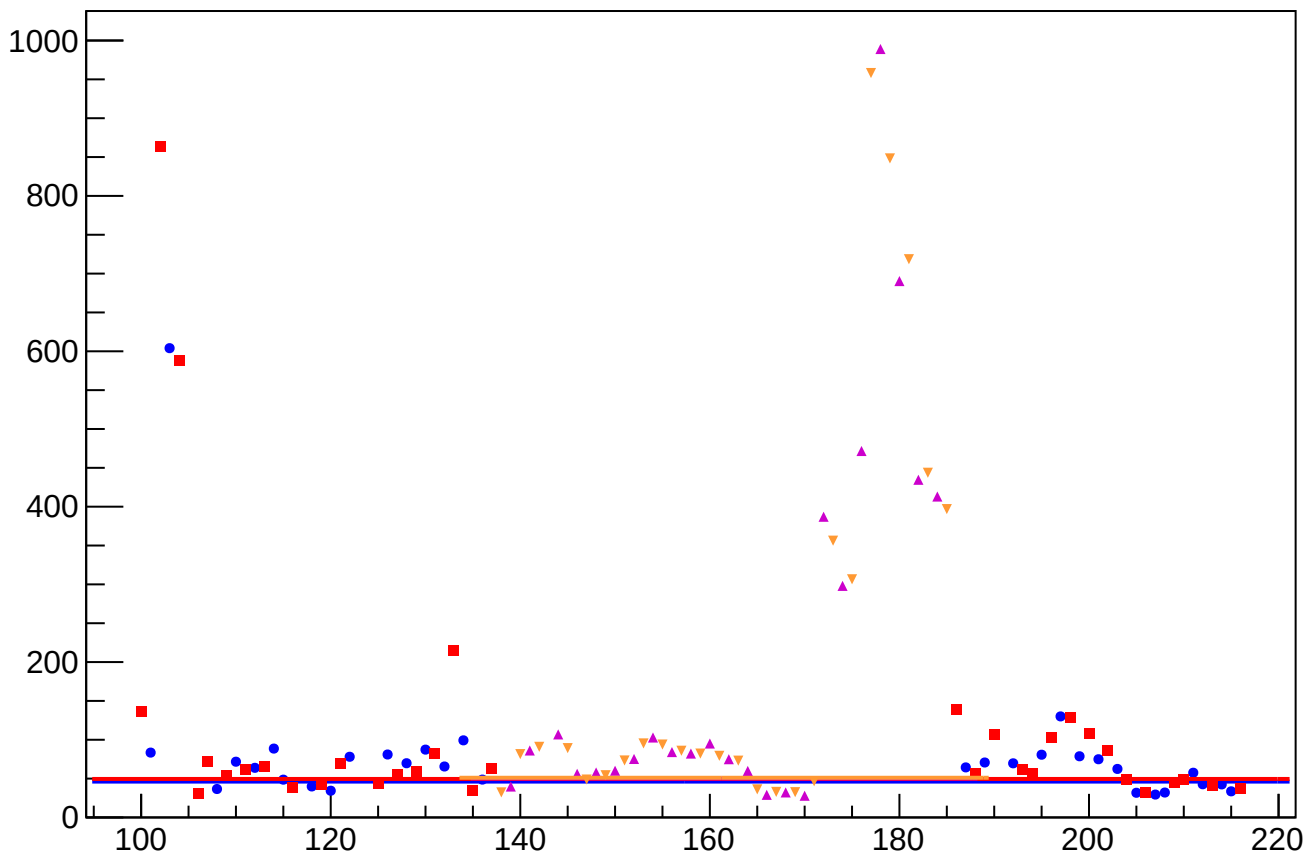
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.018 \pm 0.010$   $\chi^2/\text{NDF}$ : 65.8/54

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.9/110

- sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 43.8/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 46.166 $\pm$ 0.009  $\chi^2$ /NDF: 5548510.6/30

Left Out: 51.083 $\pm$ 0.011  $\chi^2$ /NDF: 11735805.5/23

Right Out: 49.549 $\pm$ 0.009  $\chi^2$ /NDF: 5981852.3/32

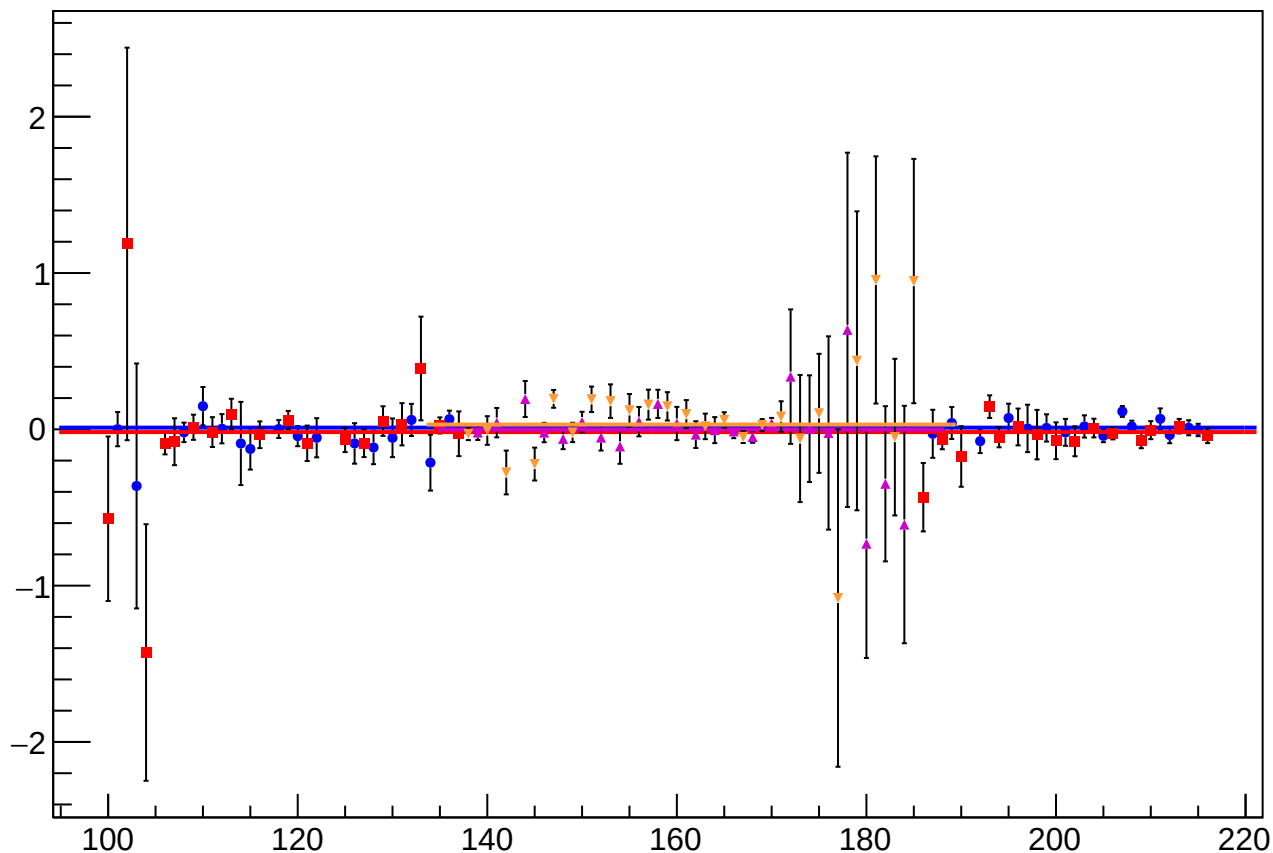
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195665.4/22

+ sign 48.071 $\pm$ 0.007  $\chi^2$ /NDF: 17408055.1/54

All: 48.927 $\pm$ 0.005  $\chi^2$ /NDF: 35620838.9/110

- sign 49.850 $\pm$ 0.007  $\chi^2$ /NDF: 18179929.9/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 41.5/23

Right Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 27.1/32

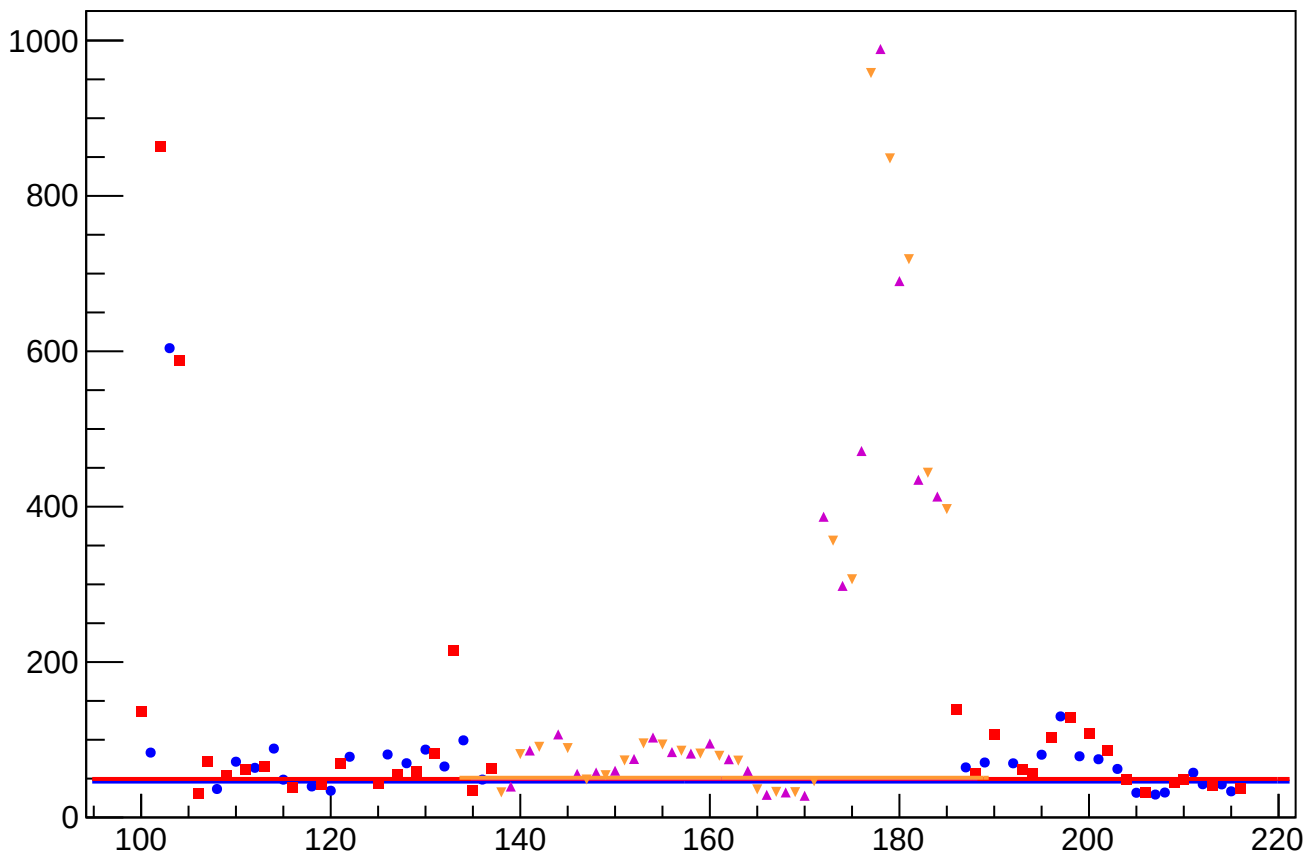
Left In:  $-0.001 \pm 0.015$   $\chi^2/\text{NDF}$ : 16.0/22

+ sign  $0.018 \pm 0.010$   $\chi^2/\text{NDF}$ : 65.8/54

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 113.9/110

- sign  $-0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 43.8/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 46.166 $\pm$ 0.009  $\chi^2$ /NDF: 5548510.6/30

Left Out: 51.083 $\pm$ 0.011  $\chi^2$ /NDF: 11735805.5/23

Right Out: 49.549 $\pm$ 0.009  $\chi^2$ /NDF: 5981852.3/32

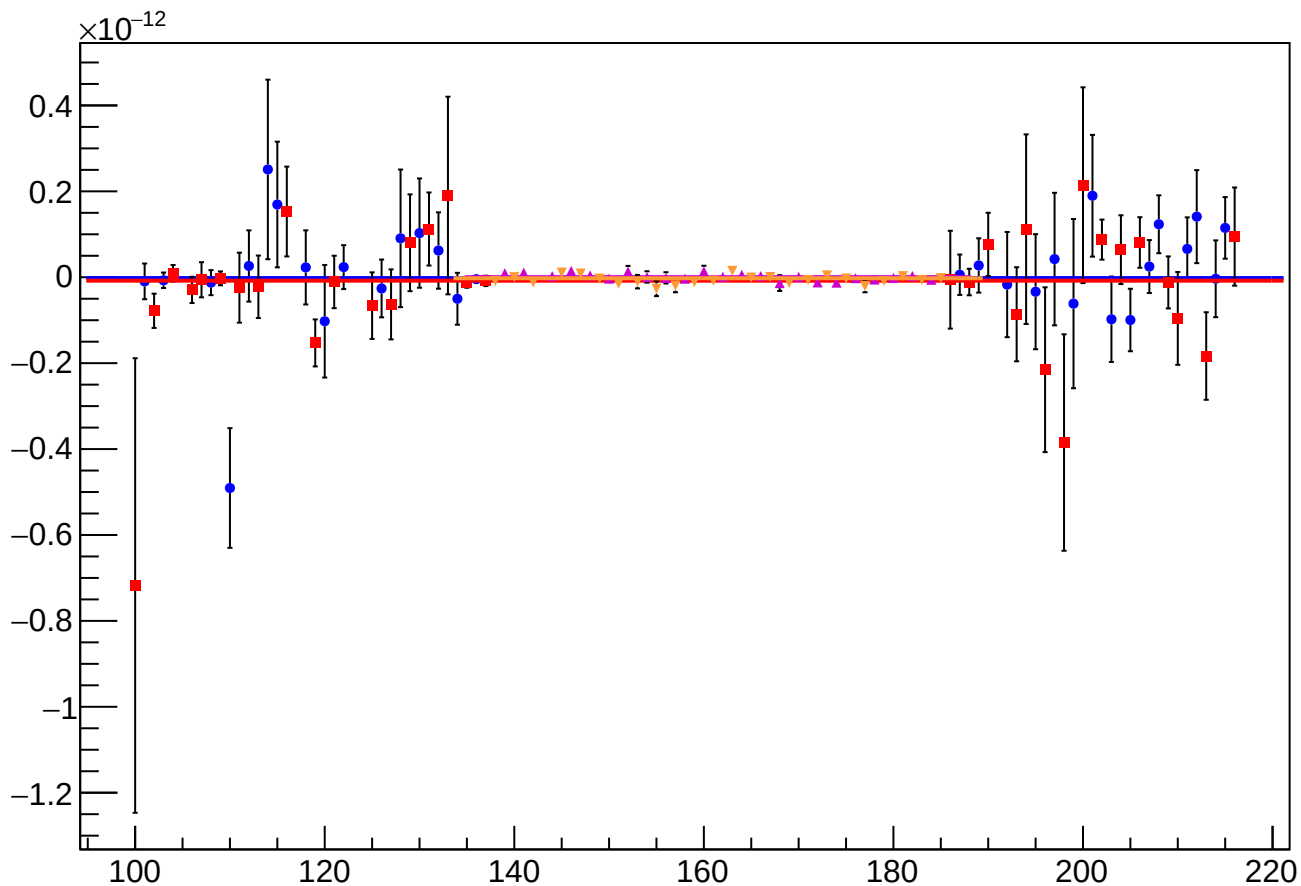
Left In: 50.251 $\pm$ 0.011  $\chi^2$ /NDF: 12195665.4/22

+ sign 48.071 $\pm$ 0.007  $\chi^2$ /NDF: 17408055.1/54

All: 48.927 $\pm$ 0.005  $\chi^2$ /NDF: 35620838.9/110

- sign 49.850 $\pm$ 0.007  $\chi^2$ /NDF: 18179929.9/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.8/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 22.2/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.5/32

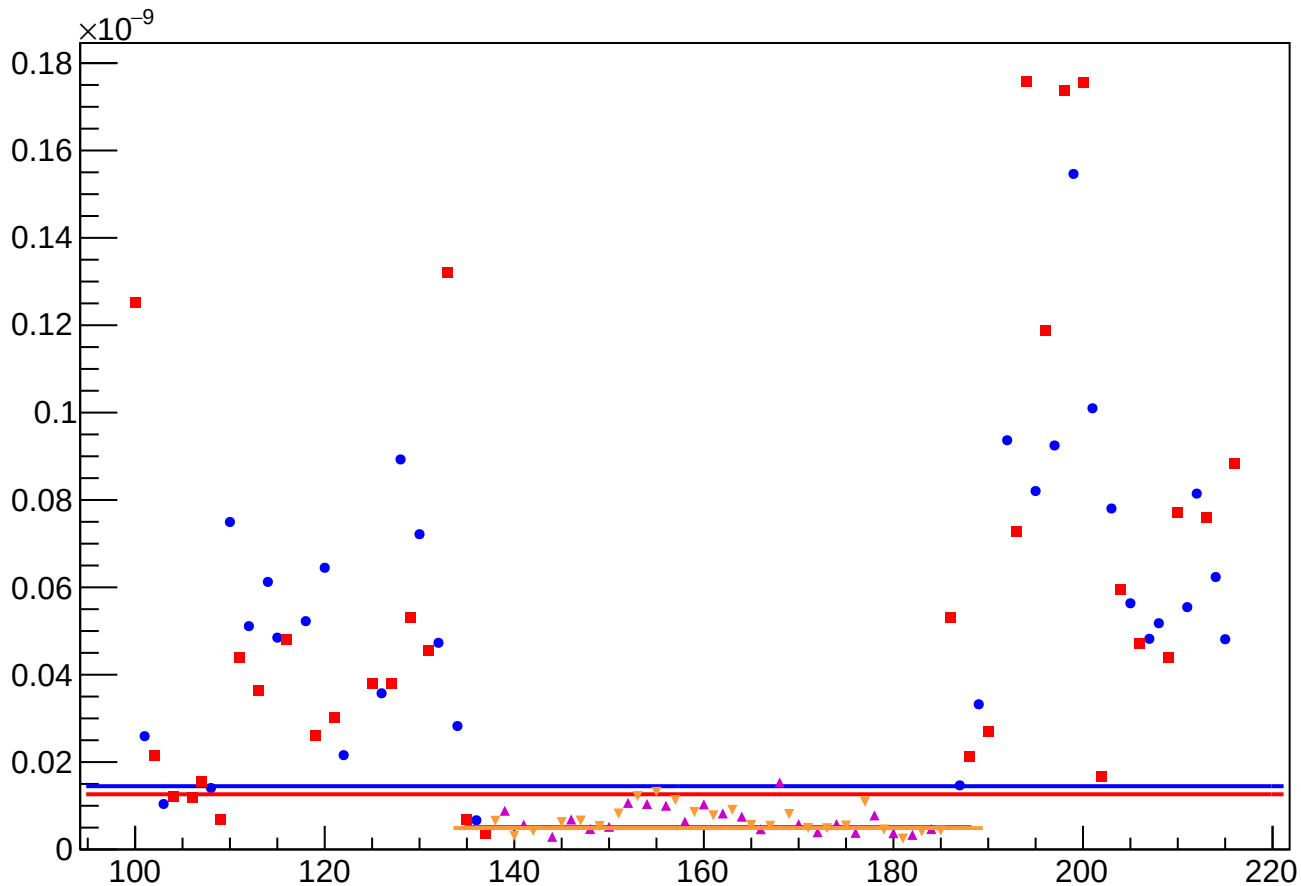
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18.2/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 55.0/54

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 114.3/110

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 58.4/55

asym\_us\_dd\_at2lr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14076876.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4312108.9/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13445193.7/32

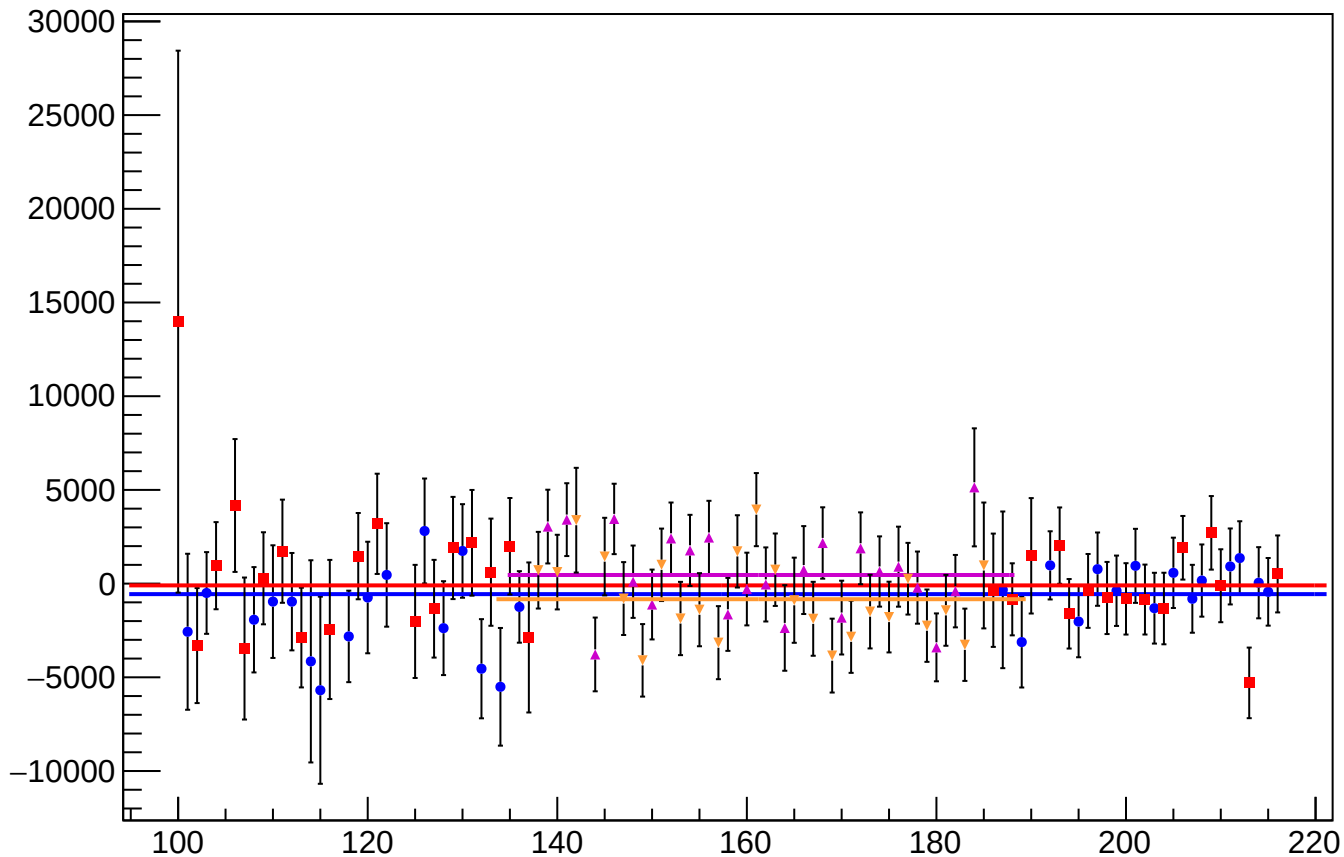
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3777059.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22518063.8/54

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 42612857.2/110

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20080047.8/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-561.496 \pm 410.374$   $\chi^2/\text{NDF}$ : 16.5/30

Left Out:  $-832.582 \pm 410.448$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $-94.880 \pm 411.354$   $\chi^2/\text{NDF}$ : 25.6/32

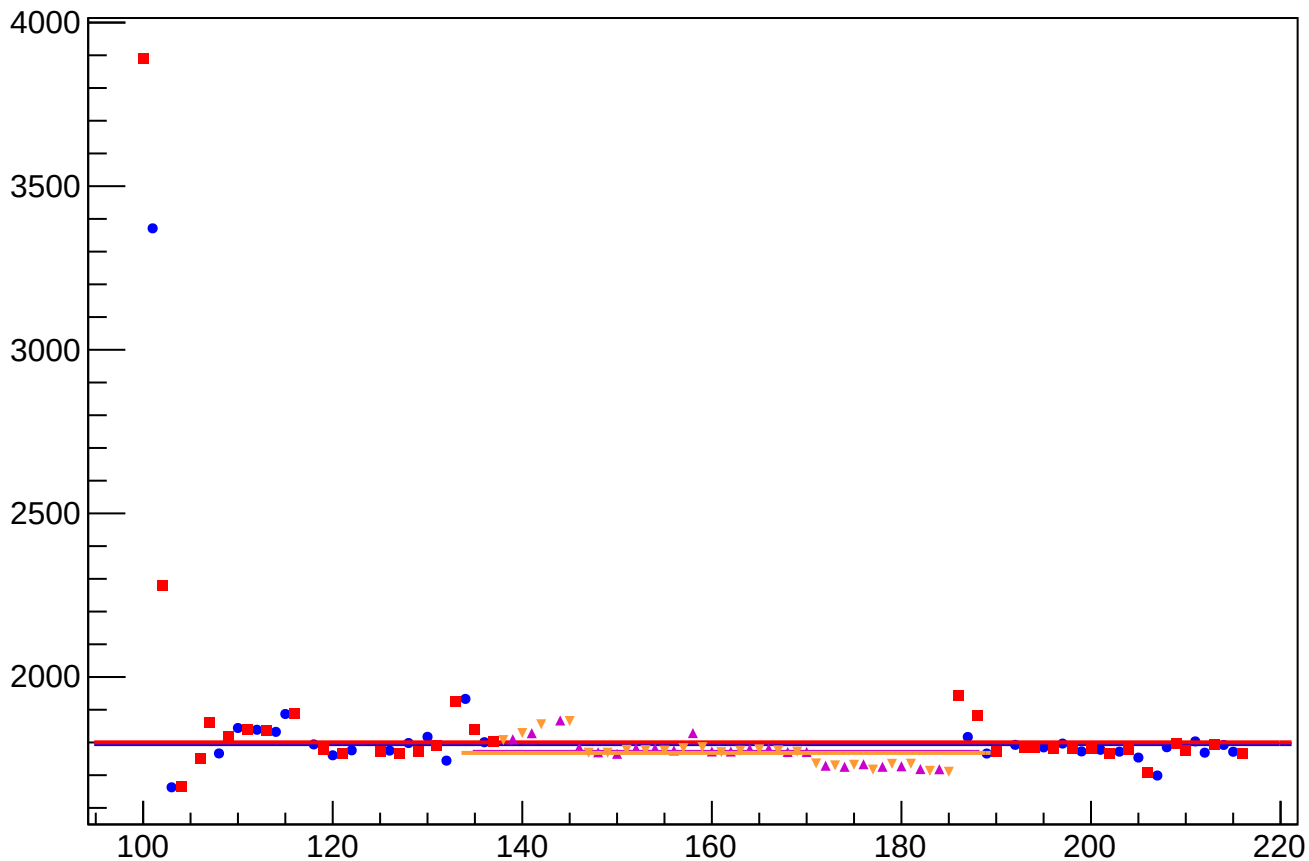
Left In:  $459.594 \pm 413.637$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-697.015 \pm 290.204$   $\chi^2/\text{NDF}$ : 42.1/54

All:  $-260.315 \pm 205.724$   $\chi^2/\text{NDF}$ : 100.5/110

- sign  $180.823 \pm 291.675$   $\chi^2/\text{NDF}$ : 53.8/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1794.939 $\pm$ 0.290  $\chi^2$ /NDF: 310010.9/30

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1800.396 $\pm$ 0.291  $\chi^2$ /NDF: 122901.5/32

Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

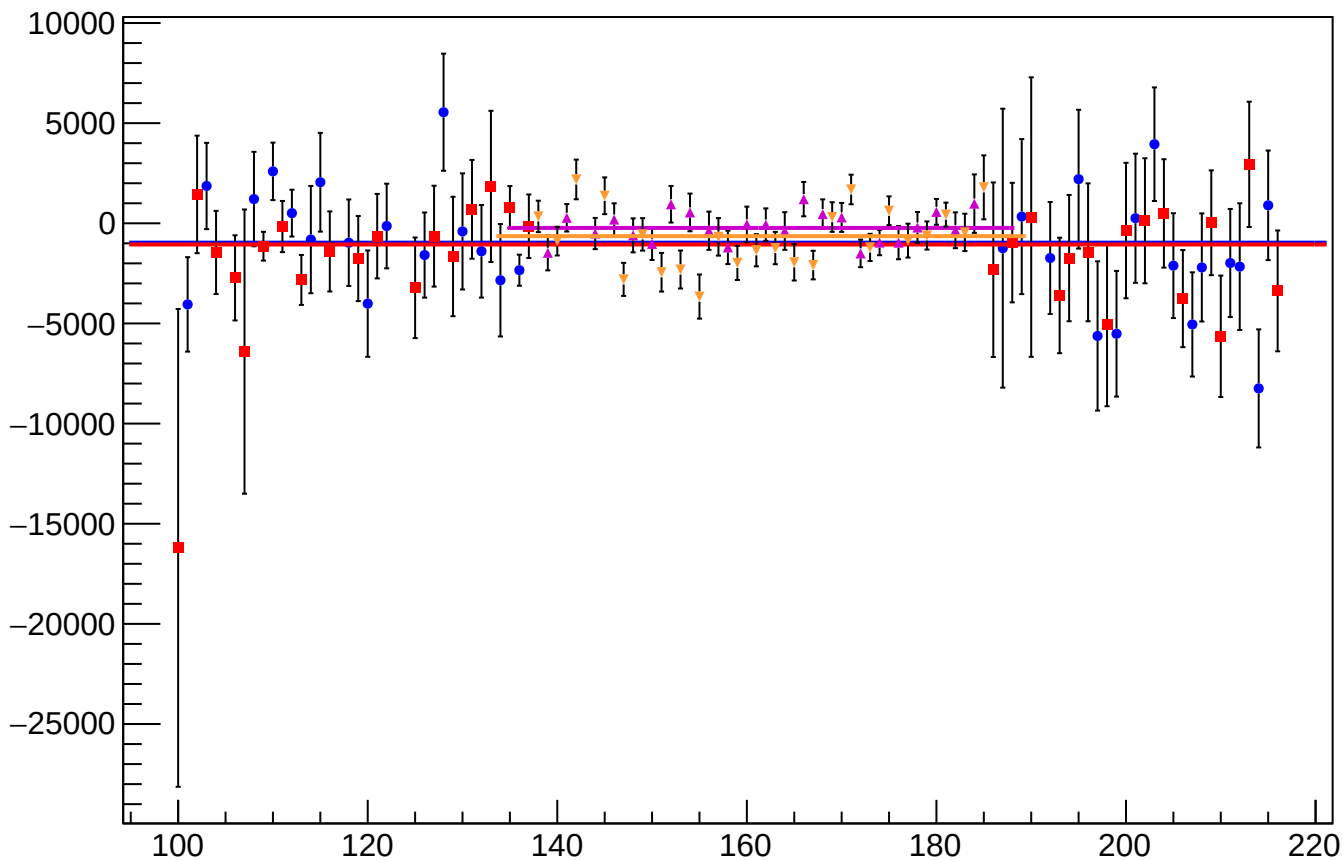
+ sign 1781.535 $\pm$ 0.205  $\chi^2$ /NDF: 330637.6/54

All: 1783.700 $\pm$ 0.145  $\chi^2$ /NDF: 475192.2/110

- sign 1785.887 $\pm$ 0.206  $\chi^2$ /NDF: 144330.7/55



asym\_us\_dd\_atlr\_dd\_avg\_reg\_correction\_mean vs Slug



Right In:  $-966.574 \pm 385.609$   $\chi^2/\text{NDF}$ : 41.3/30

Left Out:  $-641.029 \pm 166.449$   $\chi^2/\text{NDF}$ : 66.7/23

Right Out:  $-1058.565 \pm 354.085$   $\chi^2/\text{NDF}$ : 20.1/32

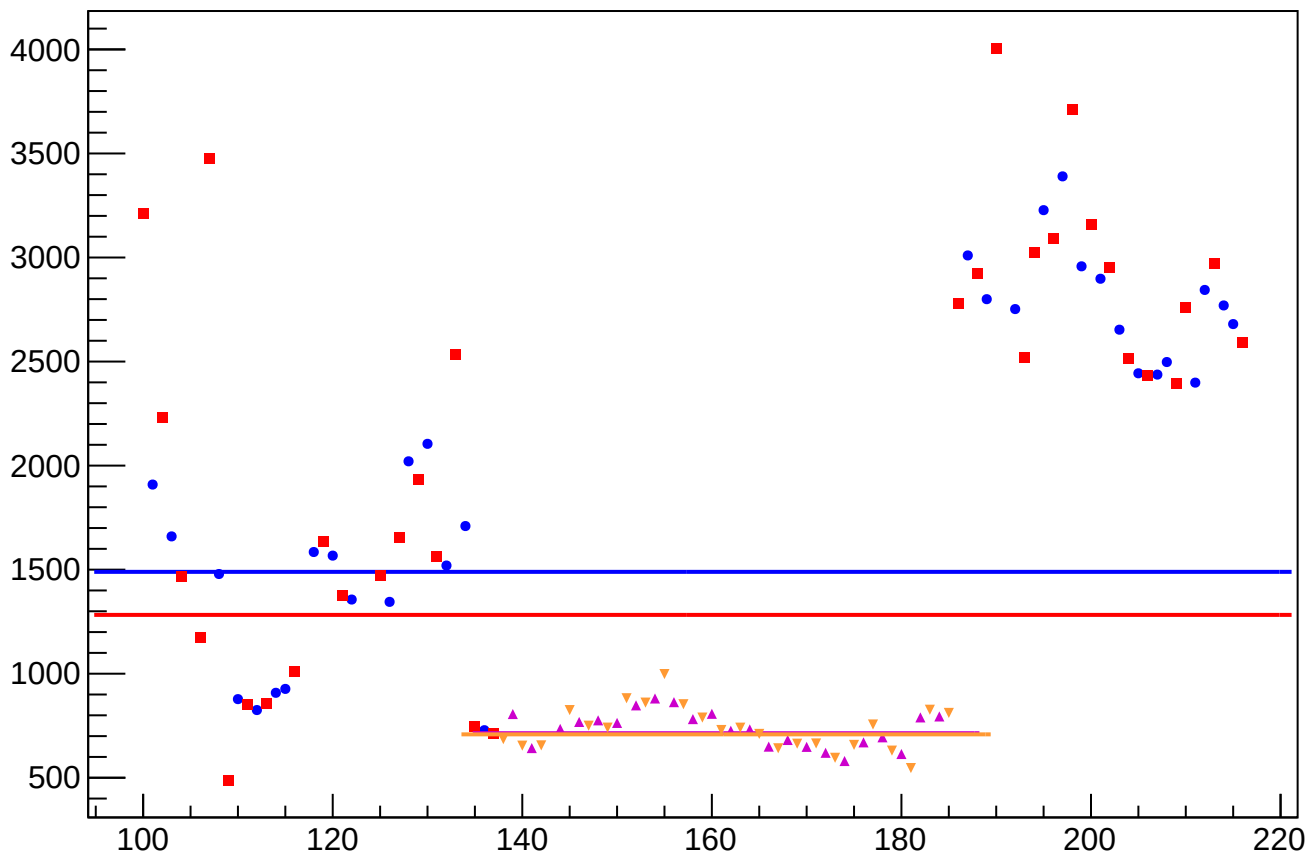
Left In:  $-230.653 \pm 168.319$   $\chi^2/\text{NDF}$ : 19.9/22

+ sign  $-692.159 \pm 152.820$   $\chi^2/\text{NDF}$ : 108.6/54

All:  $-536.893 \pm 107.775$   $\chi^2/\text{NDF}$ : 155.1/110

- sign  $-383.254 \pm 152.017$   $\chi^2/\text{NDF}$ : 44.5/55

asym\_us\_dd\_atlr\_dd\_avg\_reg\_correction\_rms vs Slug



Right In: 1489.422+/-0.273  $\chi^2/\text{NDF}$ : 8477610.1/30

Left Out: 708.503+/-0.118  $\chi^2/\text{NDF}$ : 700473.3/23

Right Out: 1282.593+/-0.250  $\chi^2/\text{NDF}$ : 1190596.9/32

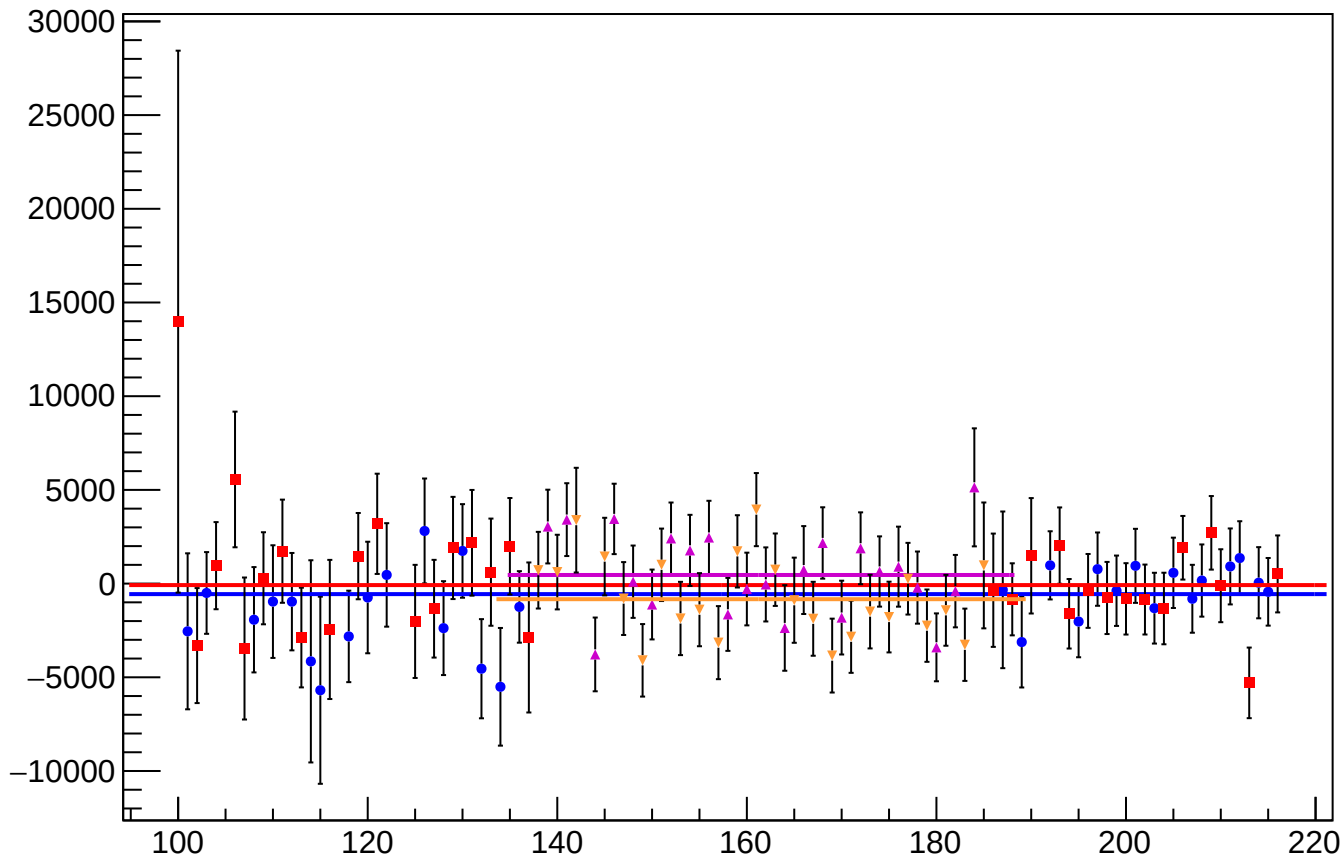
Left In: 714.162+/-0.119  $\chi^2/\text{NDF}$ : 497246.5/22

+ sign 831.154+/-0.108  $\chi^2/\text{NDF}$ : 16092337.4/54

All: 825.012+/-0.076  $\chi^2/\text{NDF}$ : 32705882.5/11

- sign 818.935+/-0.107  $\chi^2/\text{NDF}$ : 16607118.8/55

cor\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-561.278 \pm 410.374$   $\chi^2/\text{NDF}$ : 16.5/30

Left Out:  $-832.476 \pm 410.448$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $-79.290 \pm 411.467$   $\chi^2/\text{NDF}$ : 26.6/32

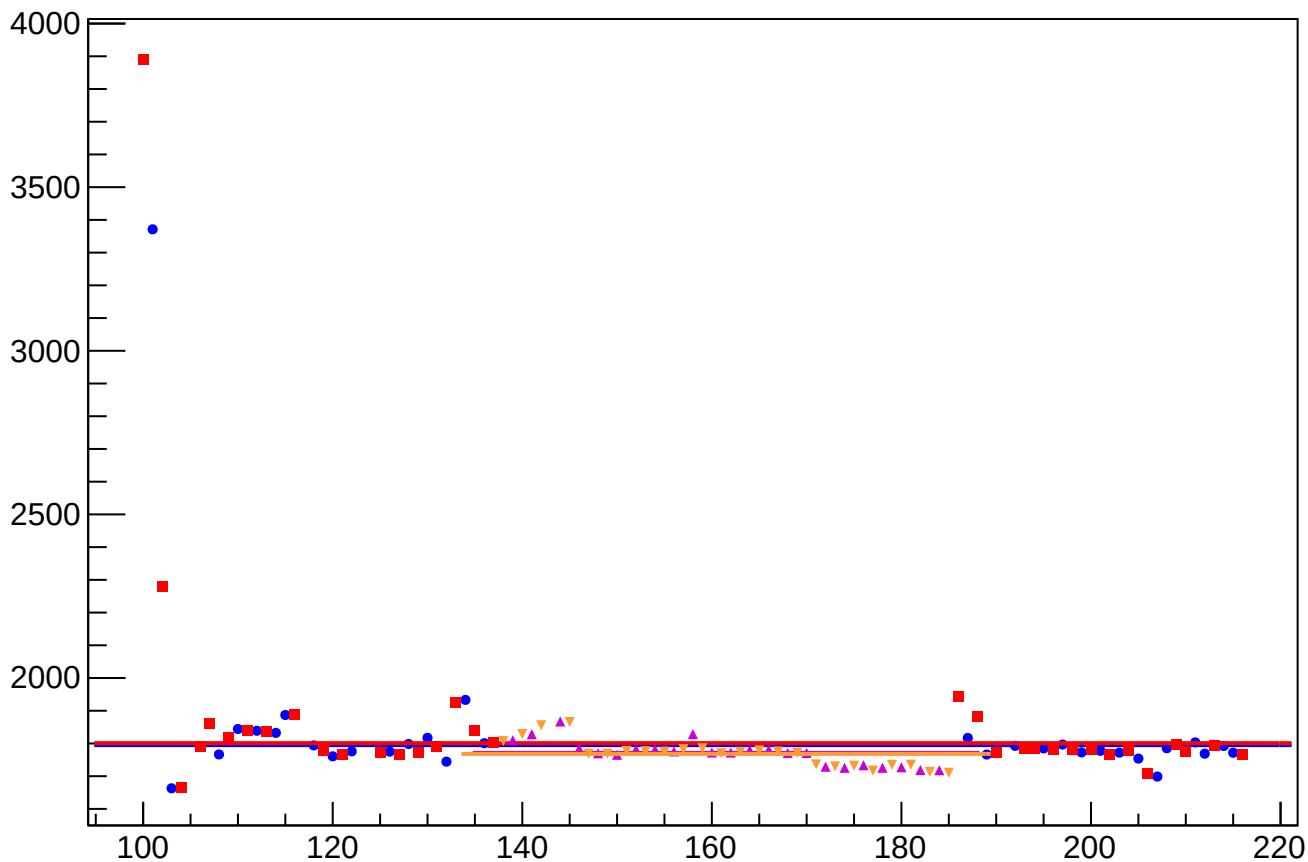
Left In:  $459.554 \pm 413.637$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-696.853 \pm 290.204$   $\chi^2/\text{NDF}$ : 42.1/54

All:  $-256.369 \pm 205.738$   $\chi^2/\text{NDF}$ : 101.5/110

- sign  $188.714 \pm 291.716$   $\chi^2/\text{NDF}$ : 54.7/55

# cor\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1794.939 $\pm$ 0.290  $\chi^2$ /NDF: 310012.7/30

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1800.952 $\pm$ 0.291  $\chi^2$ /NDF: 122515.4/32

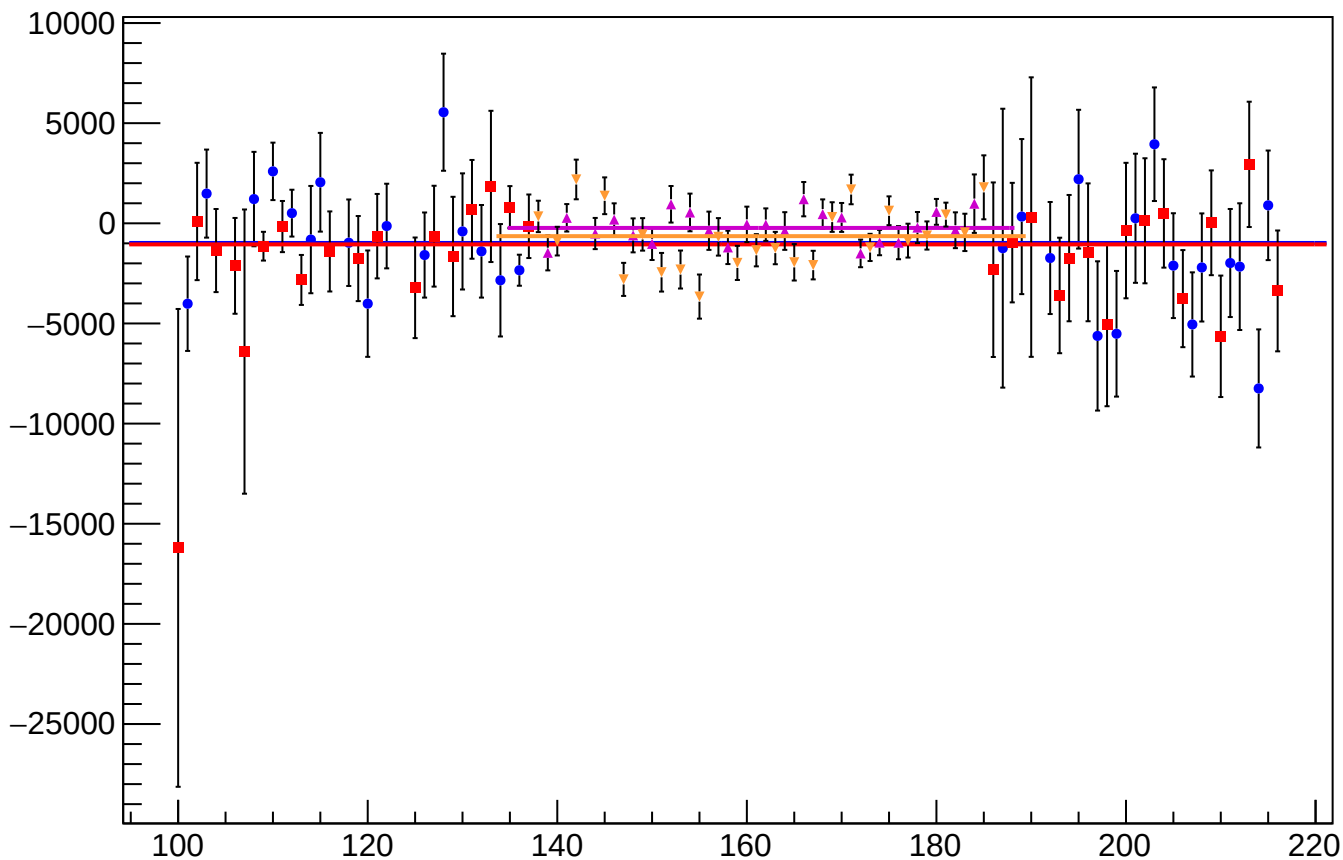
Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

+ sign 1781.535 $\pm$ 0.205  $\chi^2$ /NDF: 330639.4/54

All: 1783.837 $\pm$ 0.145  $\chi^2$ /NDF: 475028.1/110

- sign 1786.163 $\pm$ 0.206  $\chi^2$ /NDF: 144135.7/55

asym\_us\_dd\_atlr\_dd\_avg\_cor\_correction\_mean vs Slug



Right In:  $-981.152 \pm 385.855$   $\chi^2/\text{NDF}$ : 40.8/30

Left Out:  $-641.004 \pm 166.450$   $\chi^2/\text{NDF}$ : 66.7/23

Right Out:  $-1052.244 \pm 355.099$   $\chi^2/\text{NDF}$ : 19.0/32

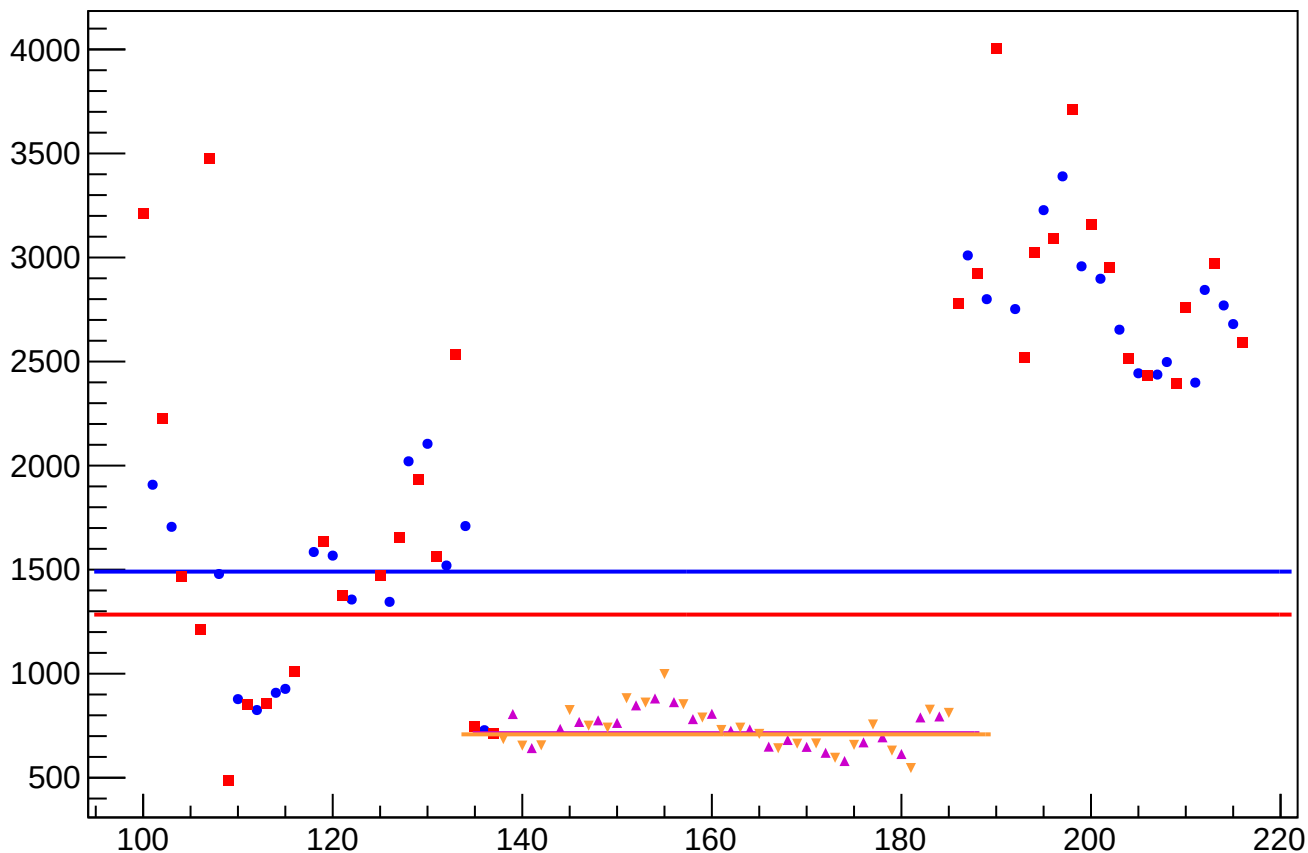
Left In:  $-230.572 \pm 168.320$   $\chi^2/\text{NDF}$ : 19.9/22

+ sign  $-694.371 \pm 152.836$   $\chi^2/\text{NDF}$ : 108.1/54

All:  $-537.088 \pm 107.810$   $\chi^2/\text{NDF}$ : 153.6/110

- sign  $-381.319 \pm 152.098$   $\chi^2/\text{NDF}$ : 43.4/55

asym\_us\_dd\_atlr\_dd\_avg\_cor\_correction\_rms vs Slug



Right In: 1490.614+/-0.273  $\chi^2/\text{NDF}$ : 8484109.6/30

Left Out: 708.508+/-0.118  $\chi^2/\text{NDF}$ : 700448.7/23

Right Out: 1284.031+/-0.251  $\chi^2/\text{NDF}$ : 11901099.5/32

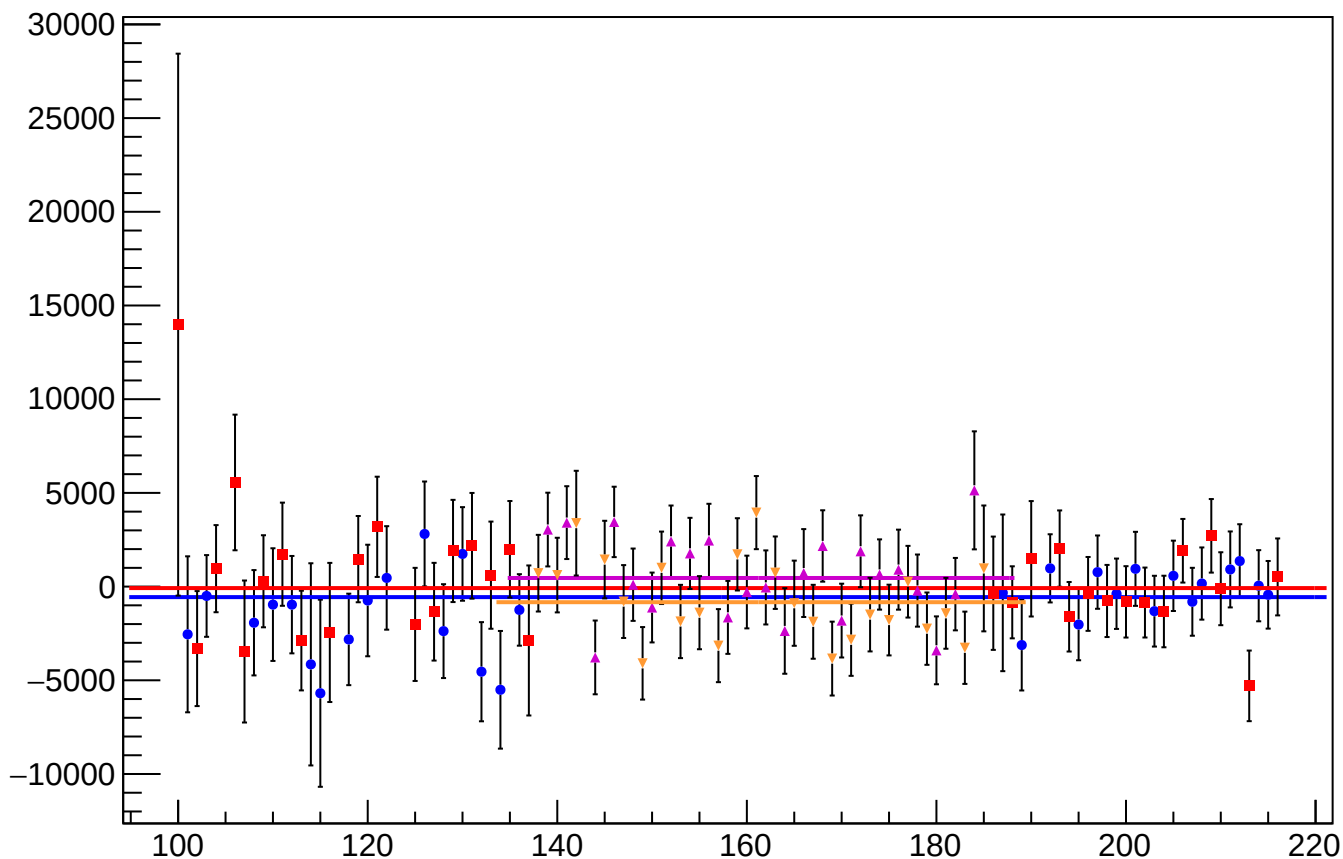
Left In: 714.168+/-0.119  $\chi^2/\text{NDF}$ : 497252.3/22

+ sign 831.216+/-0.108  $\chi^2/\text{NDF}$ : 16112362.7/54

All: 824.936+/-0.076  $\chi^2/\text{NDF}$ : 32723228.7/11

- sign 818.717+/-0.108  $\chi^2/\text{NDF}$ : 16604146.3/55

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-561.278 \pm 410.374$   $\chi^2/\text{NDF}$ : 16.5/30

Left Out:  $-832.476 \pm 410.448$   $\chi^2/\text{NDF}$ : 25.4/23

Right Out:  $-79.290 \pm 411.467$   $\chi^2/\text{NDF}$ : 26.6/32

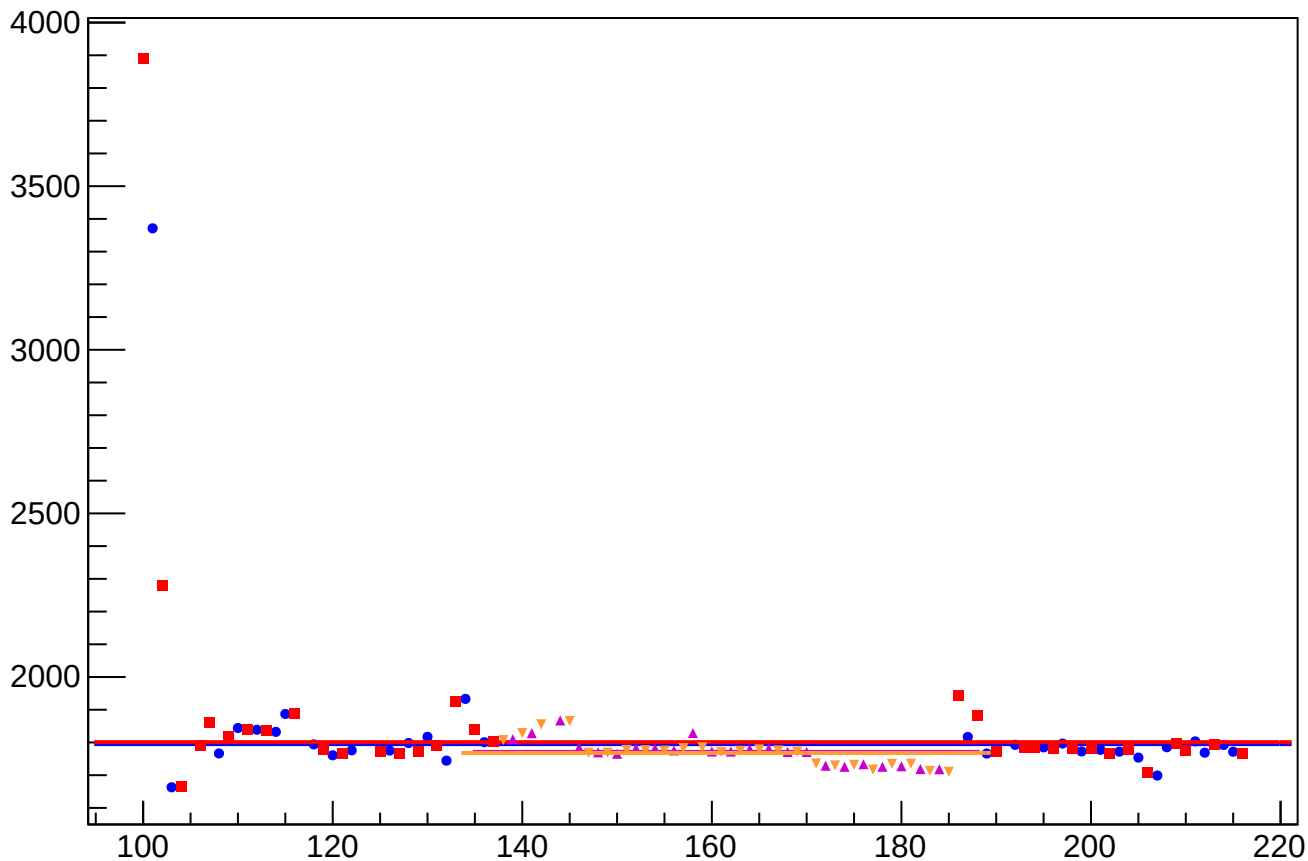
Left In:  $459.554 \pm 413.637$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-696.853 \pm 290.204$   $\chi^2/\text{NDF}$ : 42.1/54

All:  $-256.369 \pm 205.738$   $\chi^2/\text{NDF}$ : 101.5/110

- sign  $188.714 \pm 291.716$   $\chi^2/\text{NDF}$ : 54.7/55

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1794.939 $\pm$ 0.290  $\chi^2$ /NDF: 310012.7/30

Left Out: 1768.125 $\pm$ 0.290  $\chi^2$ /NDF:16358.2/23

Right Out: 1800.952 $\pm$ 0.291  $\chi^2$ /NDF: 122515.4/32

Left In: 1771.217 $\pm$ 0.292  $\chi^2$ /NDF:16425.7/22

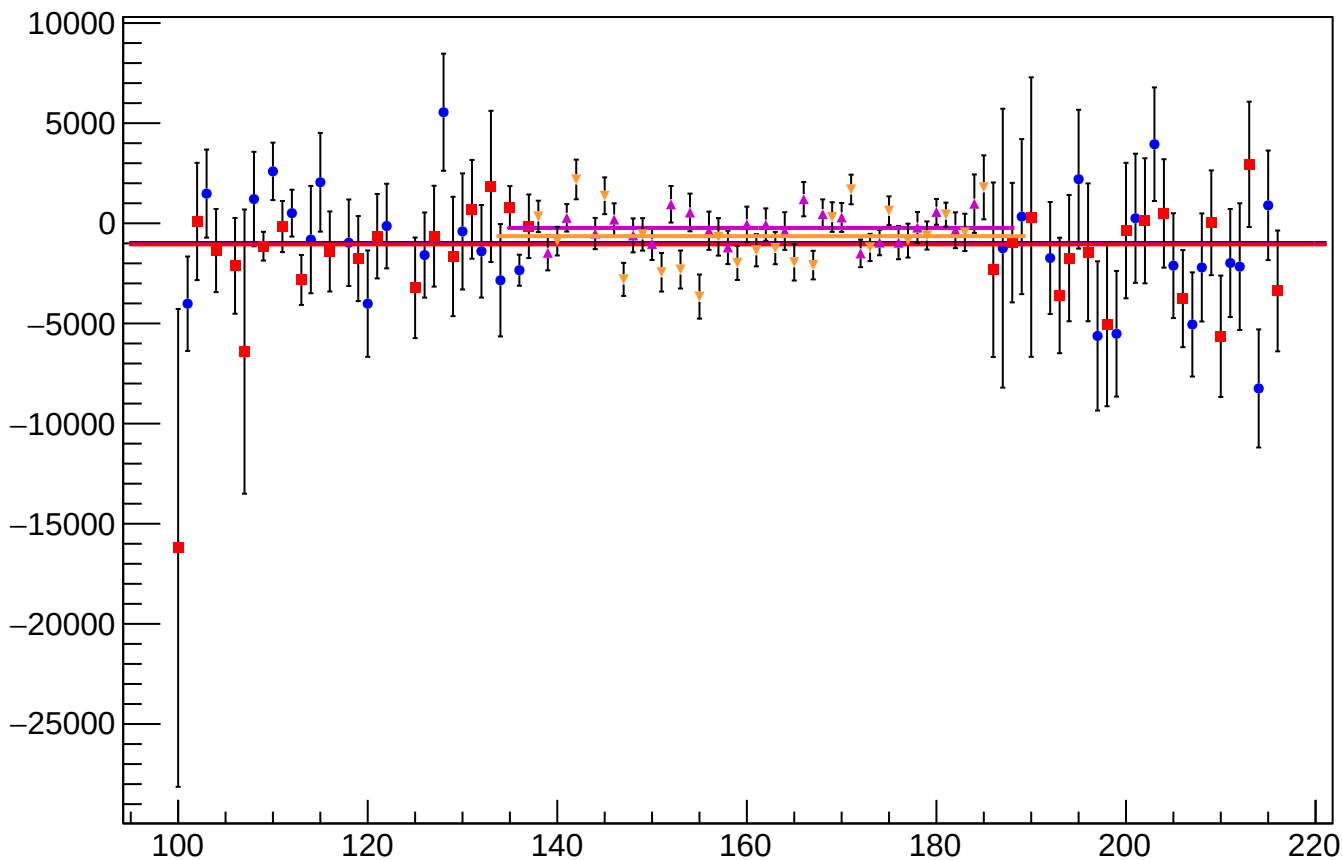
+ sign 1781.535 $\pm$ 0.205  $\chi^2$ /NDF: 330639.4/54

All: 1783.837 $\pm$ 0.145  $\chi^2$ /NDF: 475028.1/110

- sign 1786.163 $\pm$ 0.206  $\chi^2$ /NDF: 144135.7/55



asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -981.152+/-385.855  $\chi^2/\text{NDF}$ : 40.8/30

Left Out: -641.004+/-166.450  $\chi^2/\text{NDF}$ : 66.7/23

Right Out: -1052.244+/-355.099  $\chi^2/\text{NDF}$ : 19.0/32

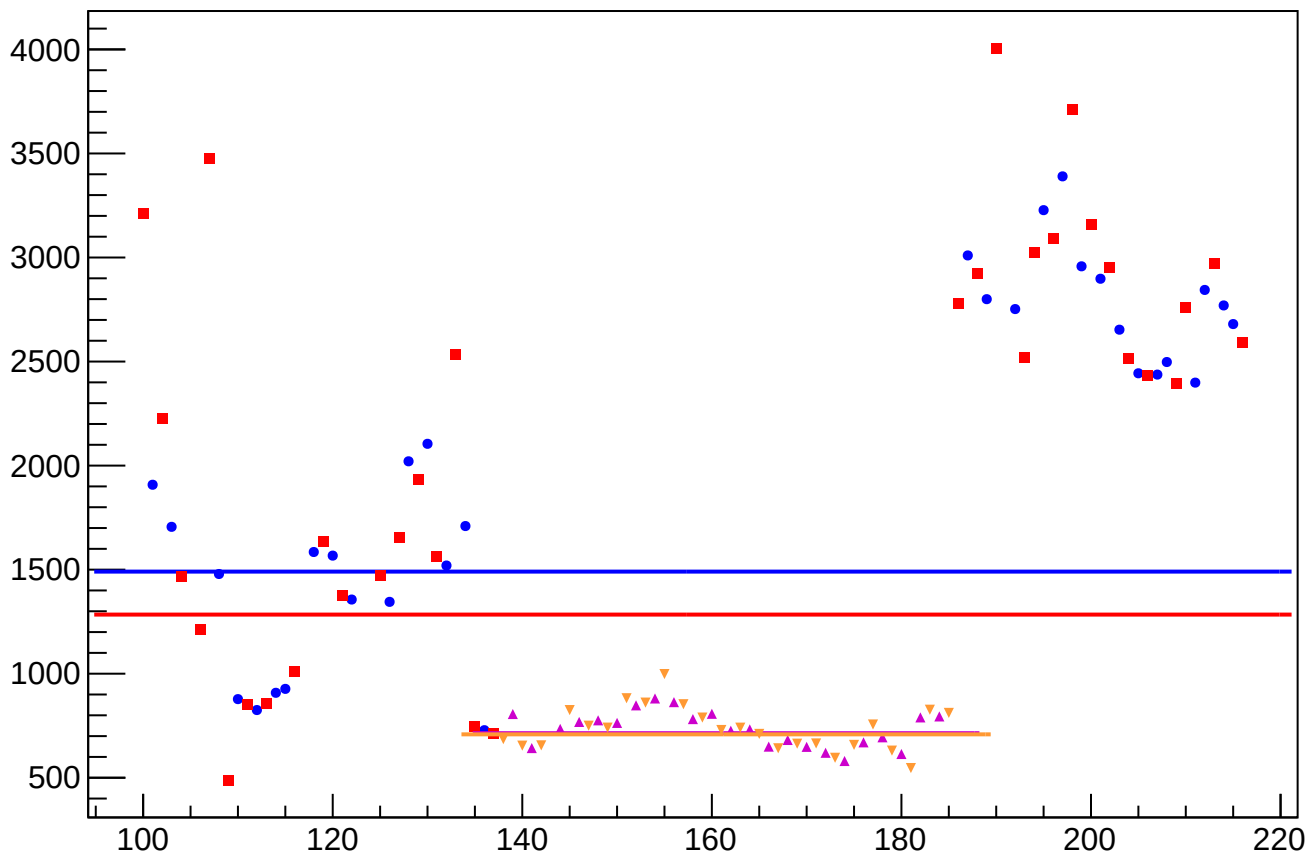
Left In: -230.572+/-168.320  $\chi^2/\text{NDF}$ : 19.9/22

+ sign -694.371+/-152.836  $\chi^2/\text{NDF}$ : 108.1/54

All: -537.088+/-107.810  $\chi^2/\text{NDF}$ : 153.6/110

- sign -381.319+/-152.098  $\chi^2/\text{NDF}$ : 43.4/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1490.614 $\pm$ 0.273  $\chi^2$ /NDF: 8484109.6/30

Left Out: 708.508 $\pm$ 0.118  $\chi^2$ /NDF: 700448.7/23

Right Out: 1284.031 $\pm$ 0.251  $\chi^2$ /NDF: 11901099.5/32

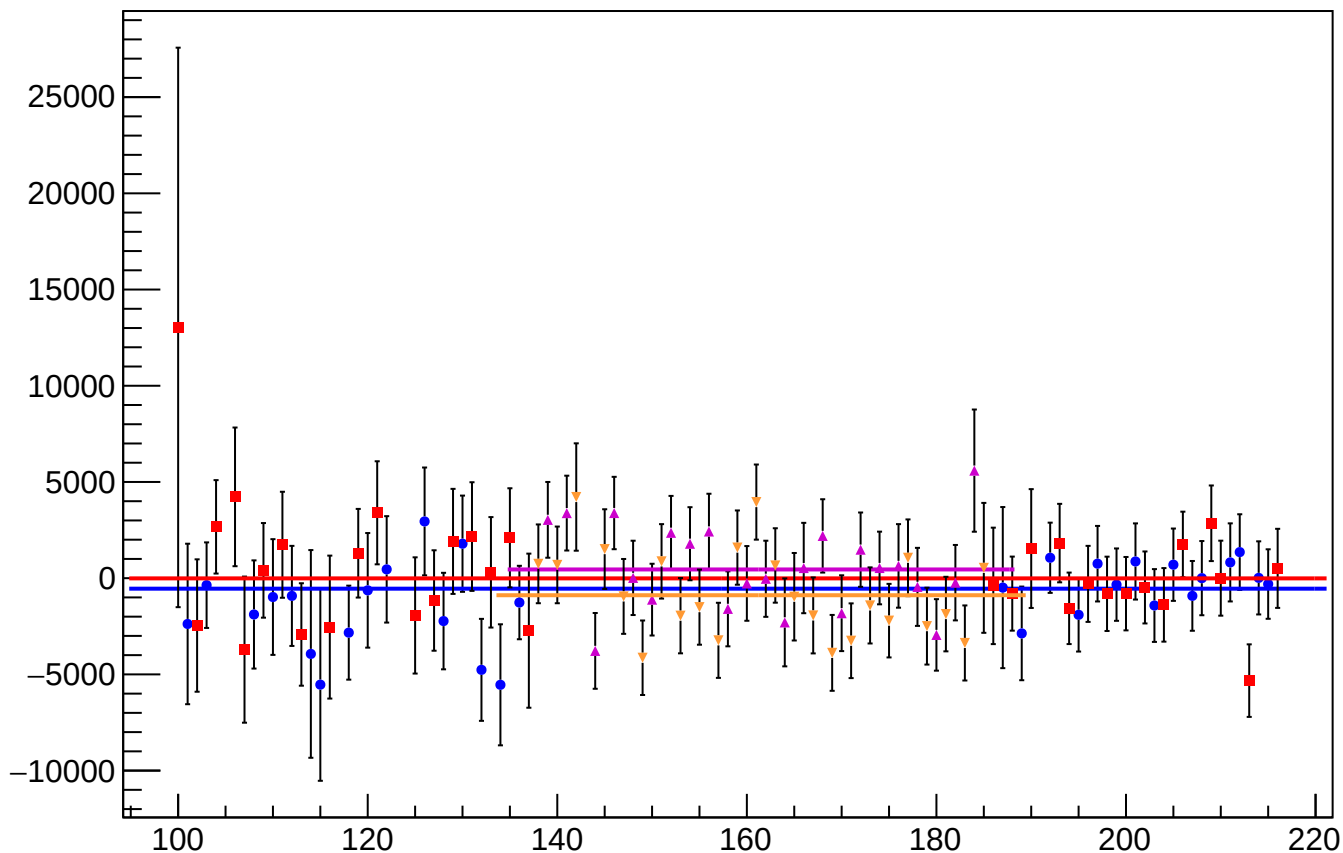
Left In: 714.168 $\pm$ 0.119  $\chi^2$ /NDF: 497252.3/22

+ sign 831.216 $\pm$ 0.108  $\chi^2$ /NDF: 16112362.7/54

All: 824.936 $\pm$ 0.076  $\chi^2$ /NDF: 32723228.7/11

- sign 818.717 $\pm$ 0.108  $\chi^2$ /NDF: 16604146.3/55

# dit\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-545.796 \pm 411.224$   $\chi^2/\text{NDF}$ : 16.4/30

Left Out:  $-886.354 \pm 413.227$   $\chi^2/\text{NDF}$ : 28.1/23

Right Out:  $-10.751 \pm 413.353$   $\chi^2/\text{NDF}$ : 25.8/32

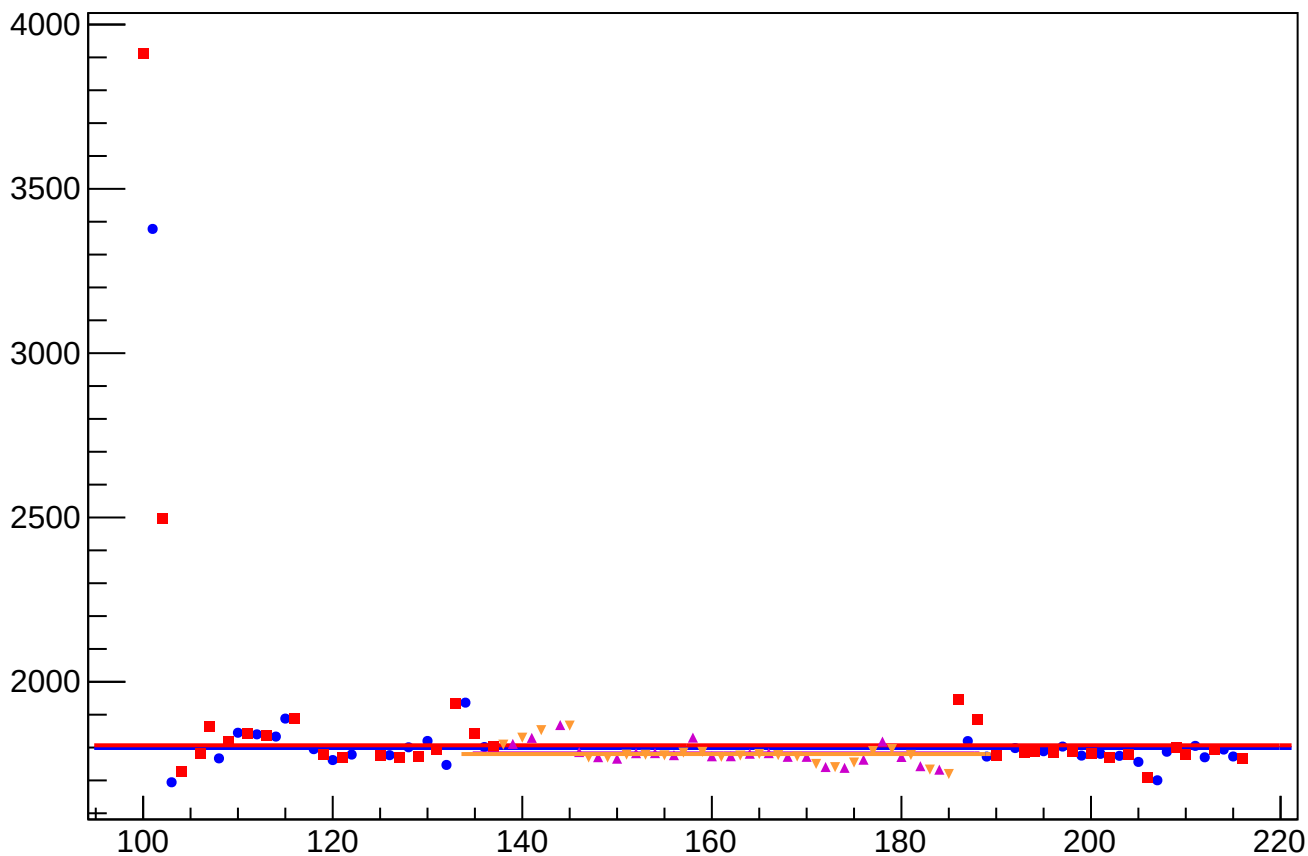
Left In:  $453.237 \pm 416.200$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $-715.248 \pm 291.485$   $\chi^2/\text{NDF}$ : 44.9/54

All:  $-250.679 \pm 206.745$   $\chi^2/\text{NDF}$ : 102.2/110

- sign  $219.651 \pm 293.286$   $\chi^2/\text{NDF}$ : 52.3/55

dit\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 1798.678 $\pm$ 0.291  $\chi^2$ /NDF: 307467.5/30

Left Out: 1780.220 $\pm$ 0.292  $\chi^2$ /NDF: 10380.2/23

Right Out: 1806.837 $\pm$ 0.292  $\chi^2$ /NDF: 150542.0/32

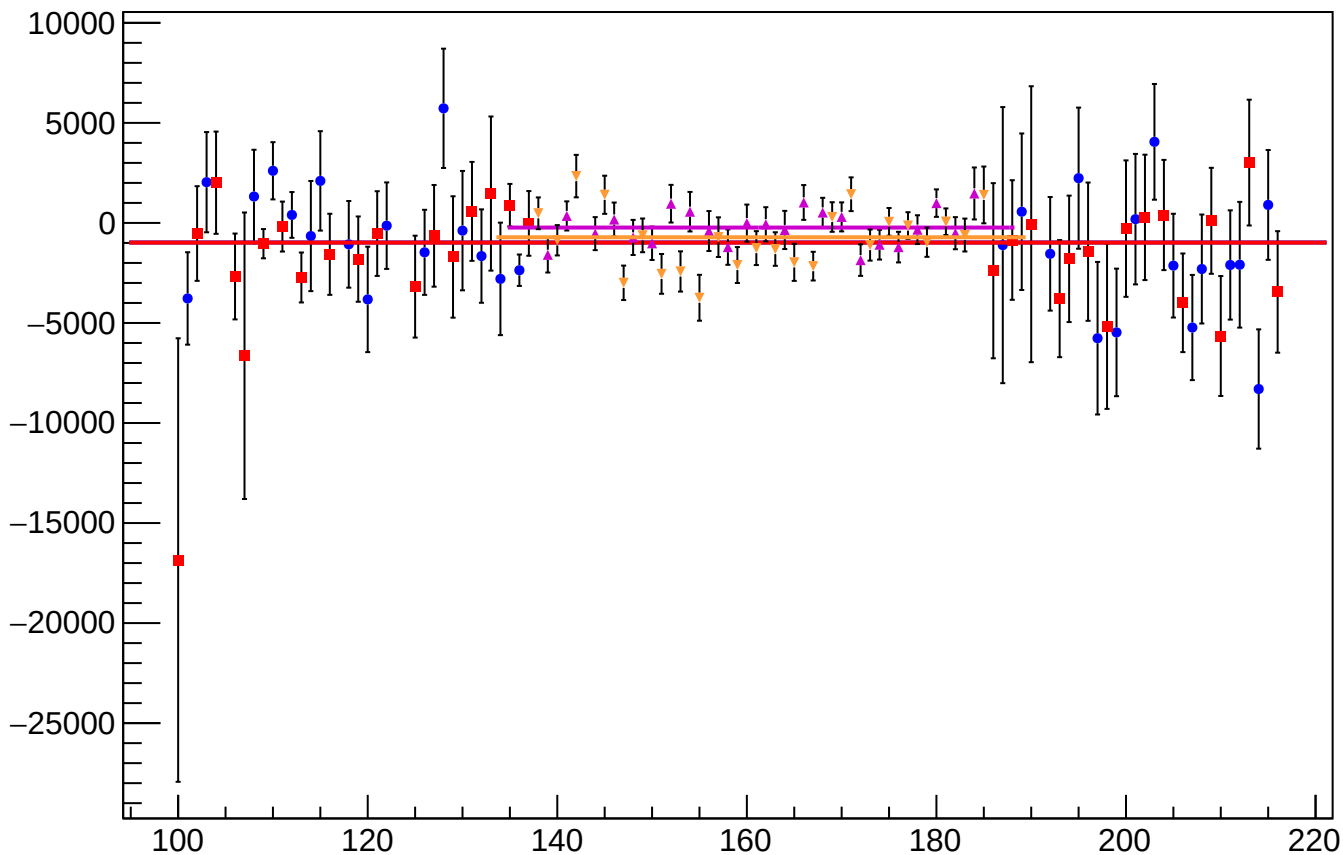
Left In: 1782.298 $\pm$ 0.294  $\chi^2$ /NDF: 11232.1/22

+ sign 1789.494 $\pm$ 0.206  $\chi^2$ /NDF: 319852.5/54

All: 1792.057 $\pm$ 0.146  $\chi^2$ /NDF: 485437.9/110

- sign 1794.652 $\pm$ 0.207  $\chi^2$ /NDF: 165274.2/55

asym\_us\_dd\_atlr\_dd\_avg\_dit\_correction\_mean vs Slug



Right In: -977.301 $\pm$ 388.954     $\chi^2$ /NDF: 40.8/30

Left Out: -716.600 $\pm$ 170.602     $\chi^2$ /NDF: 59.4/23

Right Out: -983.053 $\pm$ 357.345     $\chi^2$ /NDF: 21.4/32

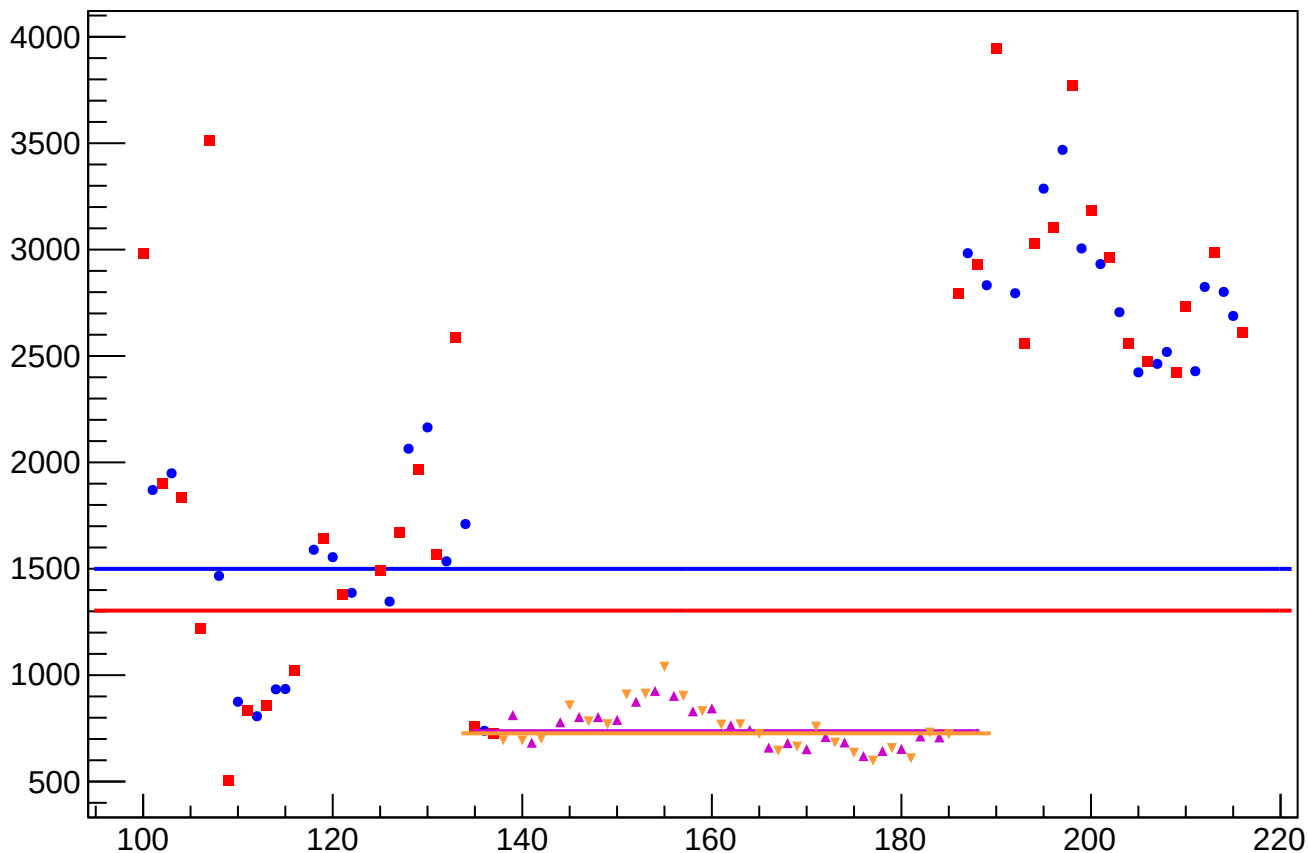
Left In: -231.320 $\pm$ 173.436     $\chi^2$ /NDF: 24.1/22

+ sign -758.662 $\pm$ 156.234     $\chi^2$ /NDF: 100.6/54

All: -566.398 $\pm$ 110.402     $\chi^2$ /NDF: 152.7/110

- sign -374.638 $\pm$ 156.029     $\chi^2$ /NDF: 49.1/55

asym\_us\_dd\_atlr\_dd\_avg\_dit\_correction\_rms vs Slug



Right In: 1499.587+/-0.275  $\chi^2/\text{NDF}$ : 8619770.8/30

Left Out: 726.604+/-0.121  $\chi^2/\text{NDF}$ : 684784.1/23

Right Out: 1303.378+/-0.253  $\chi^2/\text{NDF}$ : 11779900.3/32

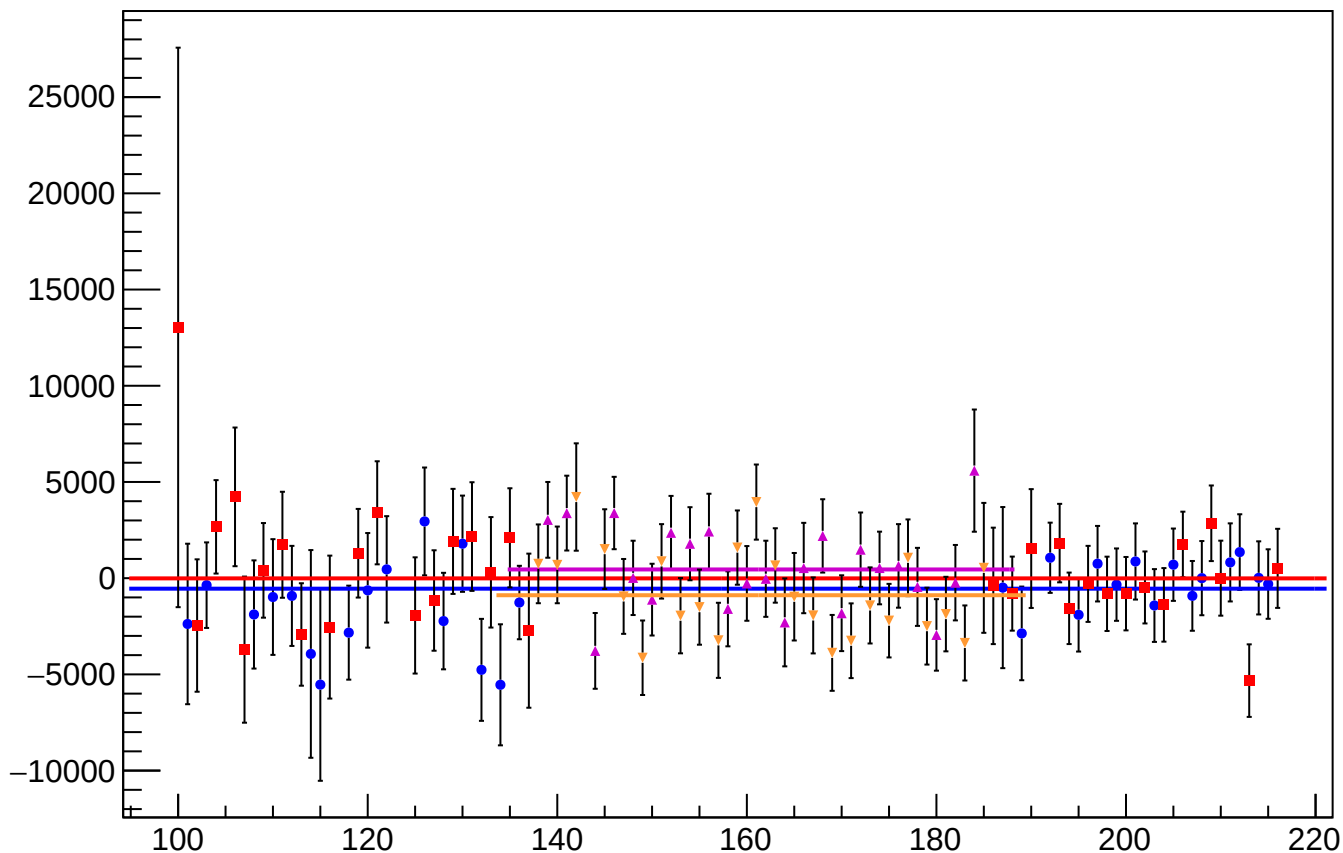
Left In: 736.709+/-0.123  $\chi^2/\text{NDF}$ : 465041.6/22

+ sign 851.322+/-0.110  $\chi^2/\text{NDF}$ : 15929089.3/54

All: 848.029+/-0.078  $\chi^2/\text{NDF}$ : 32246306.3/11

- sign 844.745+/-0.110  $\chi^2/\text{NDF}$ : 16315442.5/55

eigen\_dit\_asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $-545.796 \pm 411.224$   $\chi^2/\text{NDF}$ : 16.4/30

Left Out:  $-886.352 \pm 413.227$   $\chi^2/\text{NDF}$ : 28.1/23

Right Out:  $-10.749 \pm 413.353$   $\chi^2/\text{NDF}$ : 25.8/32

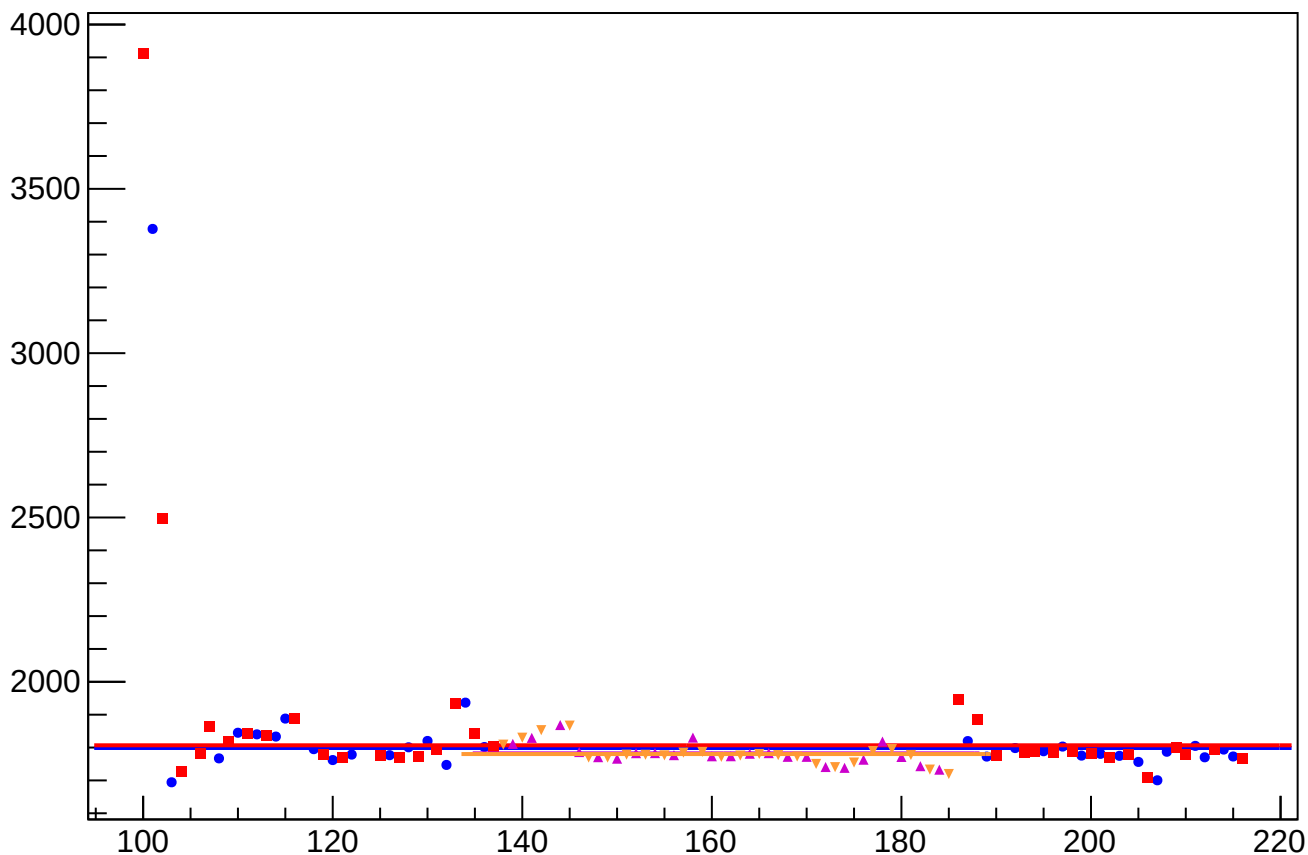
Left In:  $453.236 \pm 416.200$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $-715.247 \pm 291.485$   $\chi^2/\text{NDF}$ : 44.9/54

All:  $-250.678 \pm 206.745$   $\chi^2/\text{NDF}$ : 102.2/110

- sign  $219.651 \pm 293.286$   $\chi^2/\text{NDF}$ : 52.3/55

eigen\_dit\_asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In:  $1798.678 \pm 0.291$   $\chi^2/\text{NDF}: 307467.4/30$

Left Out:  $1780.220 \pm 0.292$   $\chi^2/\text{NDF}: 10380.2/23$

Right Out:  $1806.837 \pm 0.292$   $\chi^2/\text{NDF}: 150542.0/32$

Left In:  $1782.298 \pm 0.294$   $\chi^2/\text{NDF}: 11232.1/22$

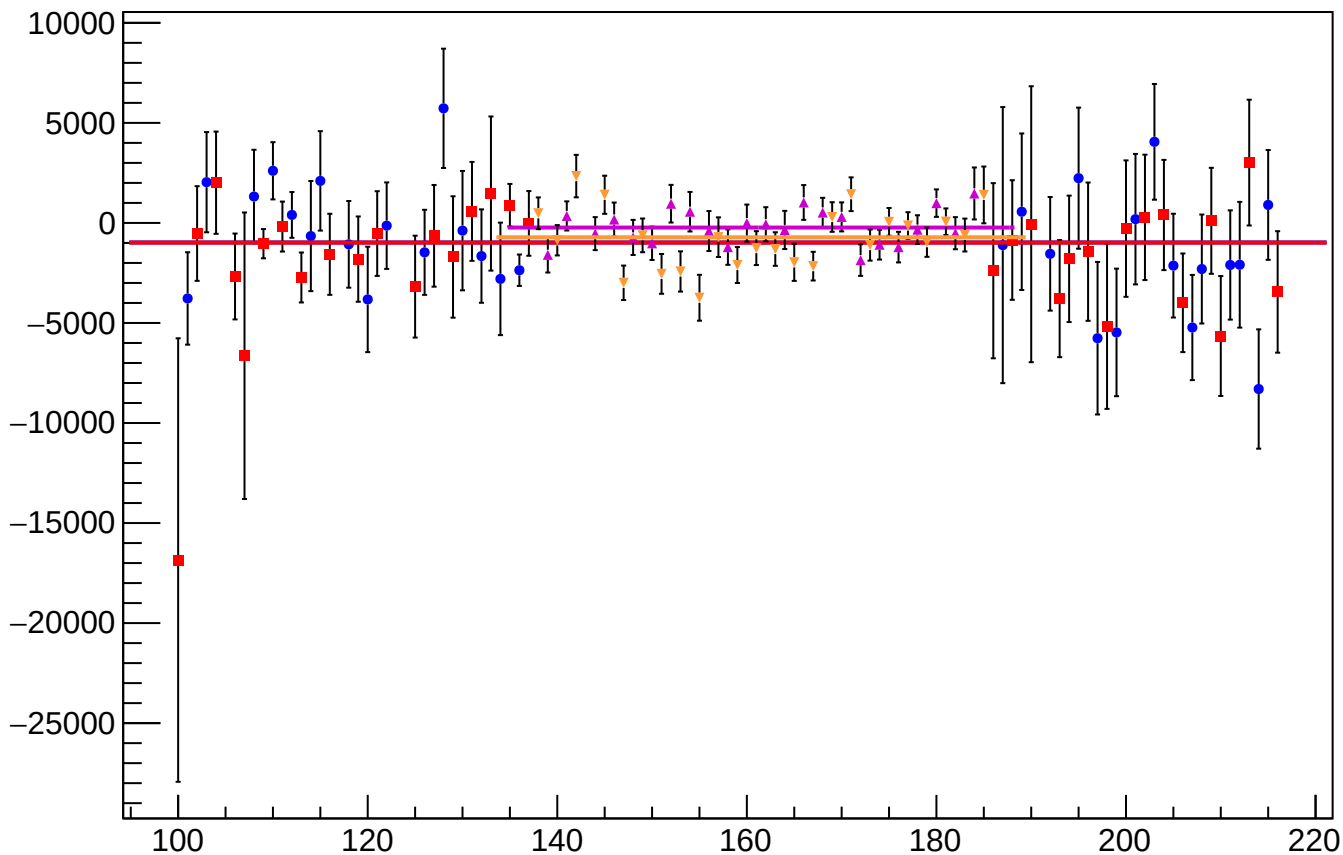
+ sign  $1789.494 \pm 0.206$   $\chi^2/\text{NDF}: 319852.5/54$

All:  $1792.057 \pm 0.146$   $\chi^2/\text{NDF}: 485438.0/110$

- sign  $1794.652 \pm 0.207$   $\chi^2/\text{NDF}: 165274.3/55$



asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-977.291 \pm 388.955$   $\chi^2/\text{NDF}$ : 40.8/30

Left Out:  $-716.601 \pm 170.602$   $\chi^2/\text{NDF}$ : 59.4/23

Right Out:  $-983.058 \pm 357.346$   $\chi^2/\text{NDF}$ : 21.4/32

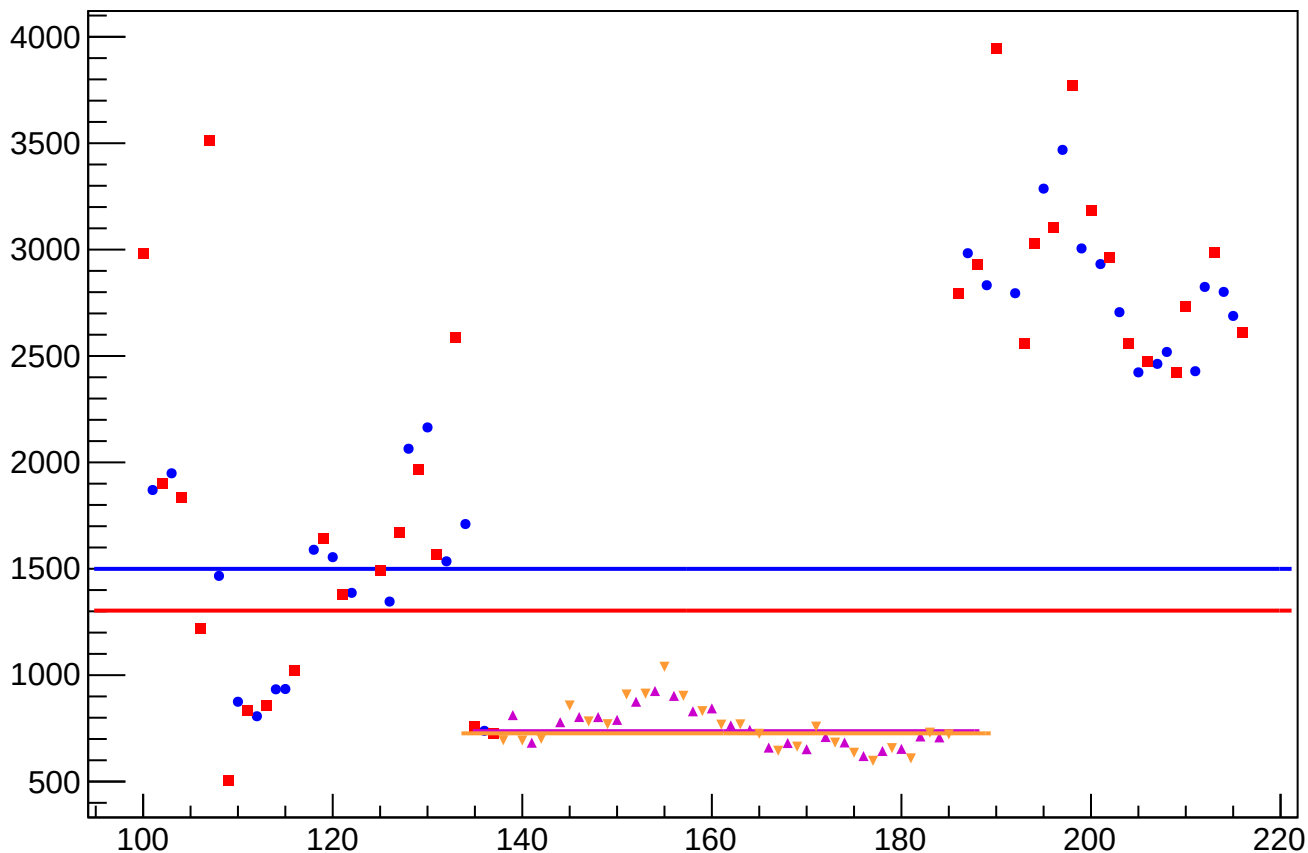
Left In:  $-231.318 \pm 173.435$   $\chi^2/\text{NDF}$ : 24.1/22

+ sign  $-758.662 \pm 156.234$   $\chi^2/\text{NDF}$ : 100.6/54

All:  $-566.397 \pm 110.402$   $\chi^2/\text{NDF}$ : 152.7/110

- sign  $-374.637 \pm 156.029$   $\chi^2/\text{NDF}$ : 49.1/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1499.590+/-0.275  $\chi^2/\text{NDF}$ : 8619713.3/30

Left Out: 726.605+/-0.121  $\chi^2/\text{NDF}$ : 684780.2/23

+ sign 851.322+/-0.110  $\chi^2/\text{NDF}$ : 15929061.5/54

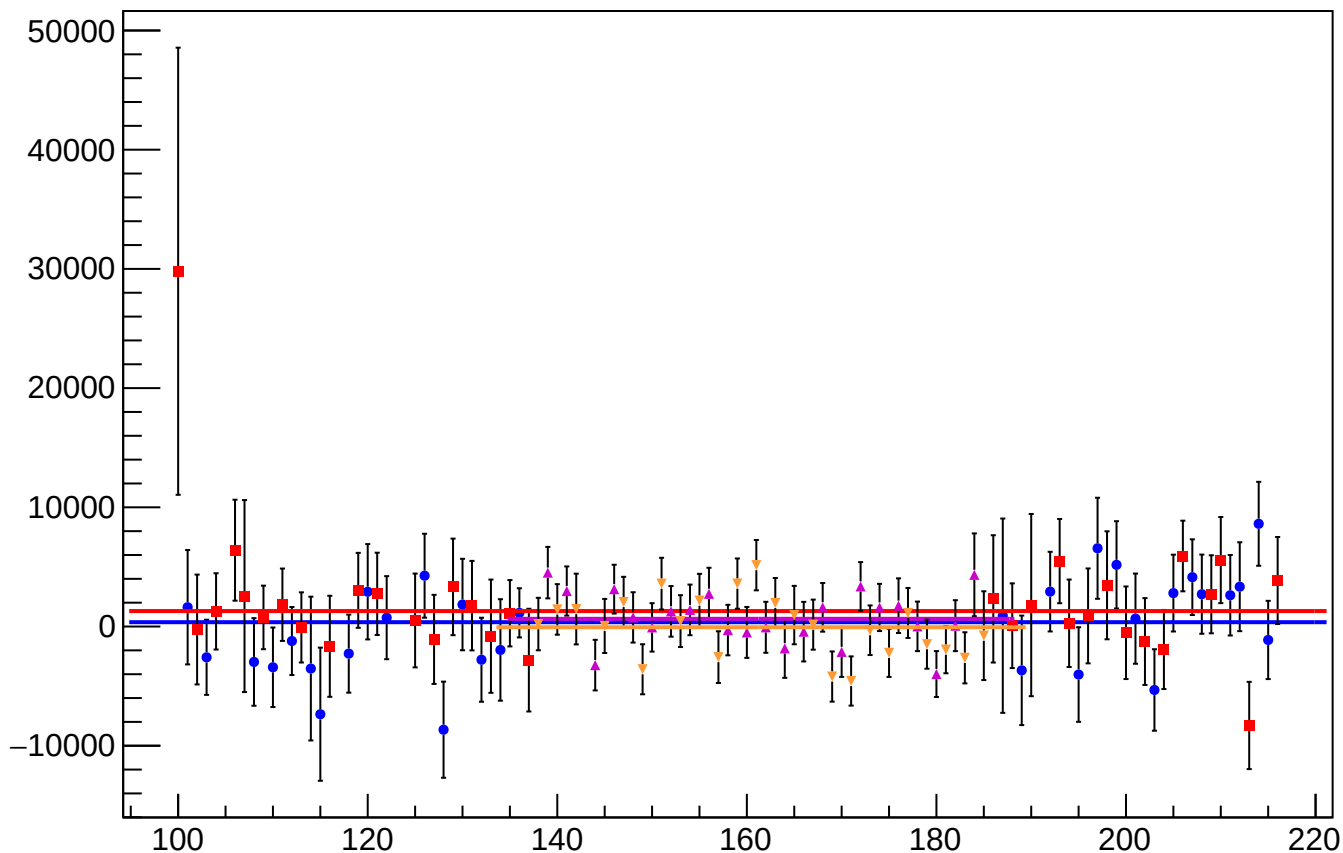
Right Out: 1303.380+/-0.253  $\chi^2/\text{NDF}$ : 11779859.9/32

All: 848.029+/-0.078  $\chi^2/\text{NDF}$ : 32246289.2/11

- sign 844.744+/-0.110  $\chi^2/\text{NDF}$ : 16315452.8/55

Left In: 736.709+/-0.123  $\chi^2/\text{NDF}$ : 465053.4/22

# asym\_us\_dd\_atlr\_dd\_avg\_mean vs Slug



Right In:  $363.447 \pm 641.428$   $\chi^2/\text{NDF}$ : 32.9/30

Left Out:  $-59.589 \pm 445.601$   $\chi^2/\text{NDF}$ : 33.0/23

Right Out:  $1298.090 \pm 647.701$   $\chi^2/\text{NDF}$ : 21.9/32

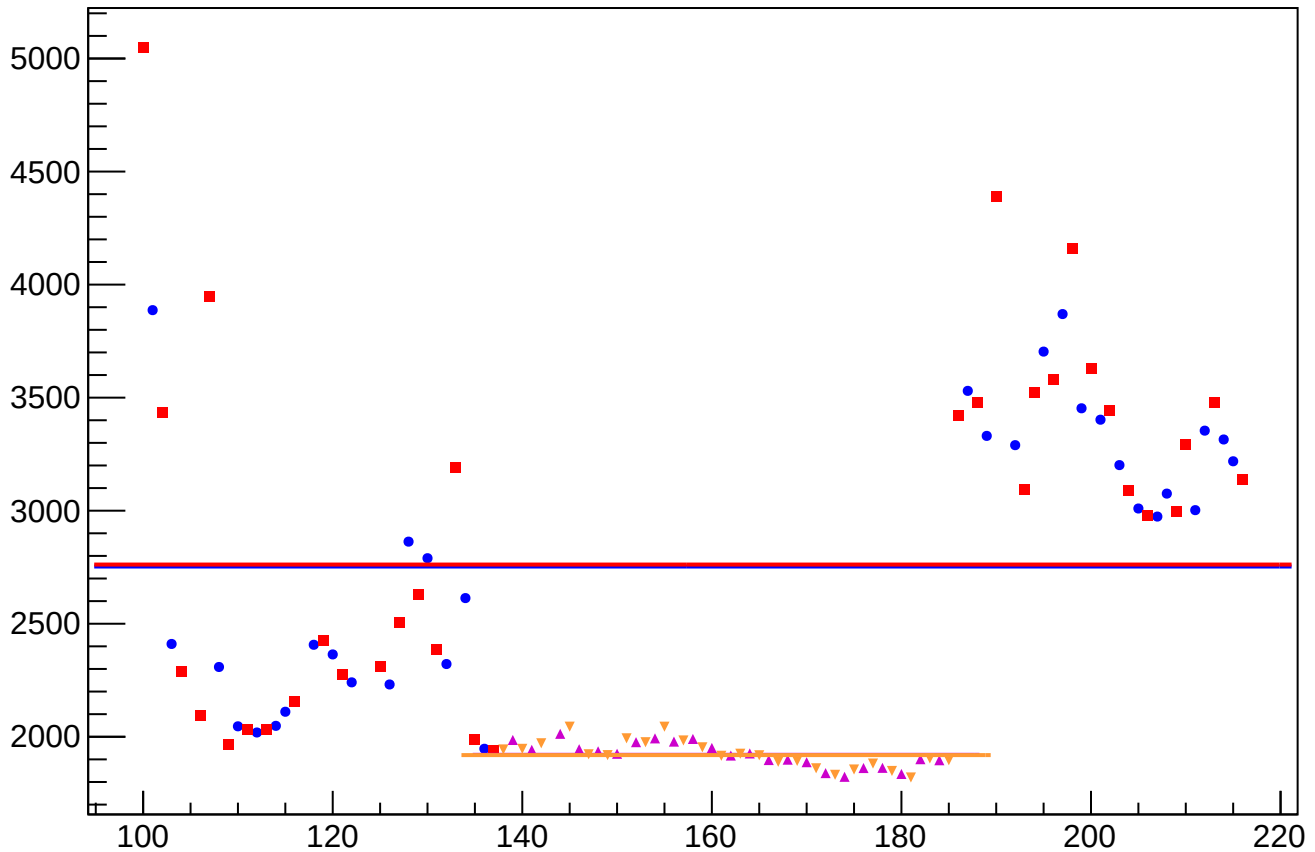
Left In:  $646.910 \pm 448.538$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $78.115 \pm 365.959$   $\chi^2/\text{NDF}$ : 66.2/54

All:  $465.083 \pm 259.753$   $\chi^2/\text{NDF}$ : 114.7/110

- sign  $857.975 \pm 368.750$   $\chi^2/\text{NDF}$ : 46.2/55

# asym\_us\_dd\_atlr\_dd\_avg\_rms vs Slug



Right In: 2753.066+/-0.454  $\chi^2/\text{NDF}$ : 1625194.5/30

Left Out: 1918.975+/-0.315  $\chi^2/\text{NDF}$ : 35574.5/23

Right Out: 2761.747+/-0.458  $\chi^2/\text{NDF}$ : 1965512.8/32

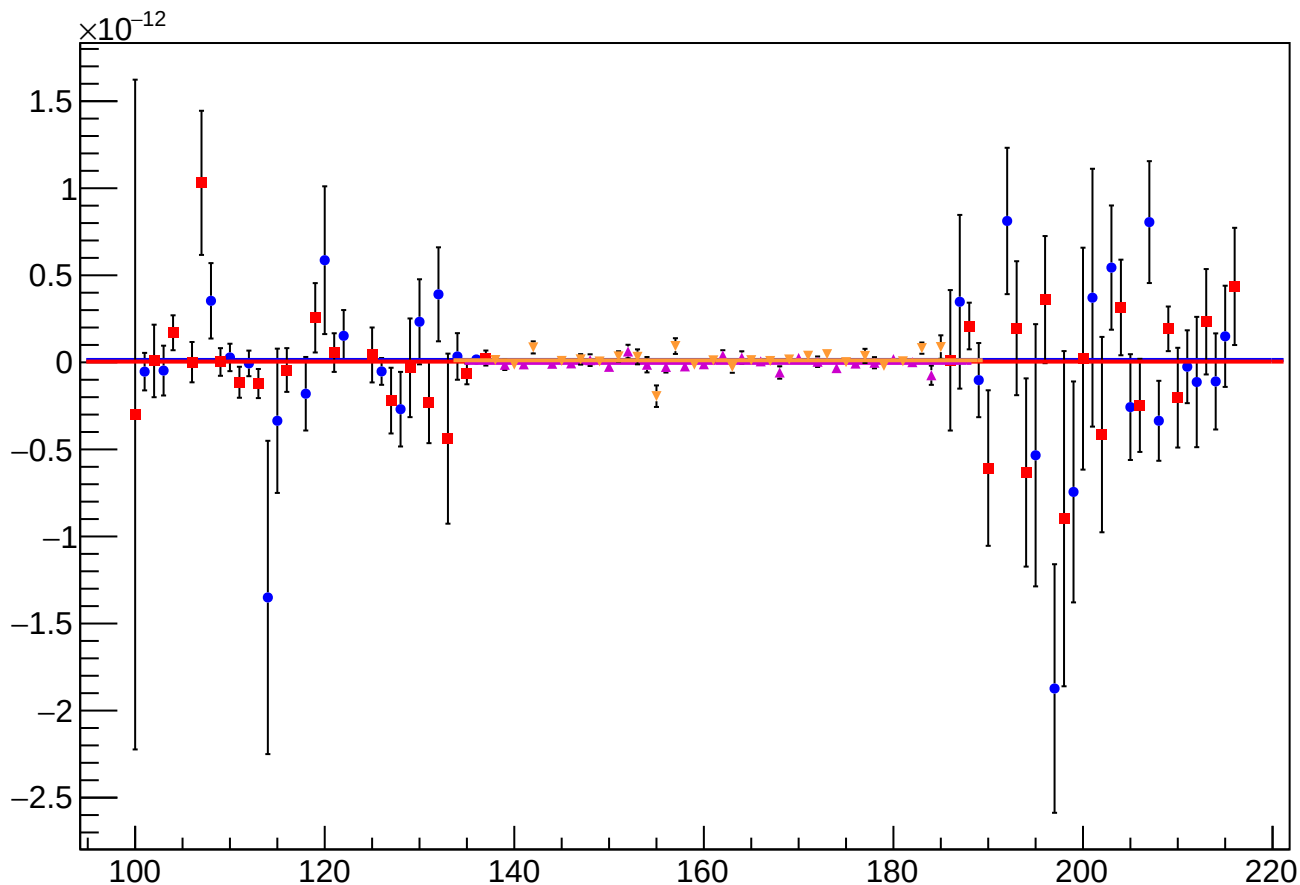
Left In: 1920.214+/-0.317  $\chi^2/\text{NDF}$ : 29912.0/22

+ sign 2190.485+/-0.259  $\chi^2/\text{NDF}$ : 3941821.2/54

All: 2191.723+/-0.184  $\chi^2/\text{NDF}$ : 8219161.7/11

- sign 2192.980+/-0.261  $\chi^2/\text{NDF}$ : 4277294.4/55

asym\_us\_dd\_atlr\_dd\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:38.1/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.1/32

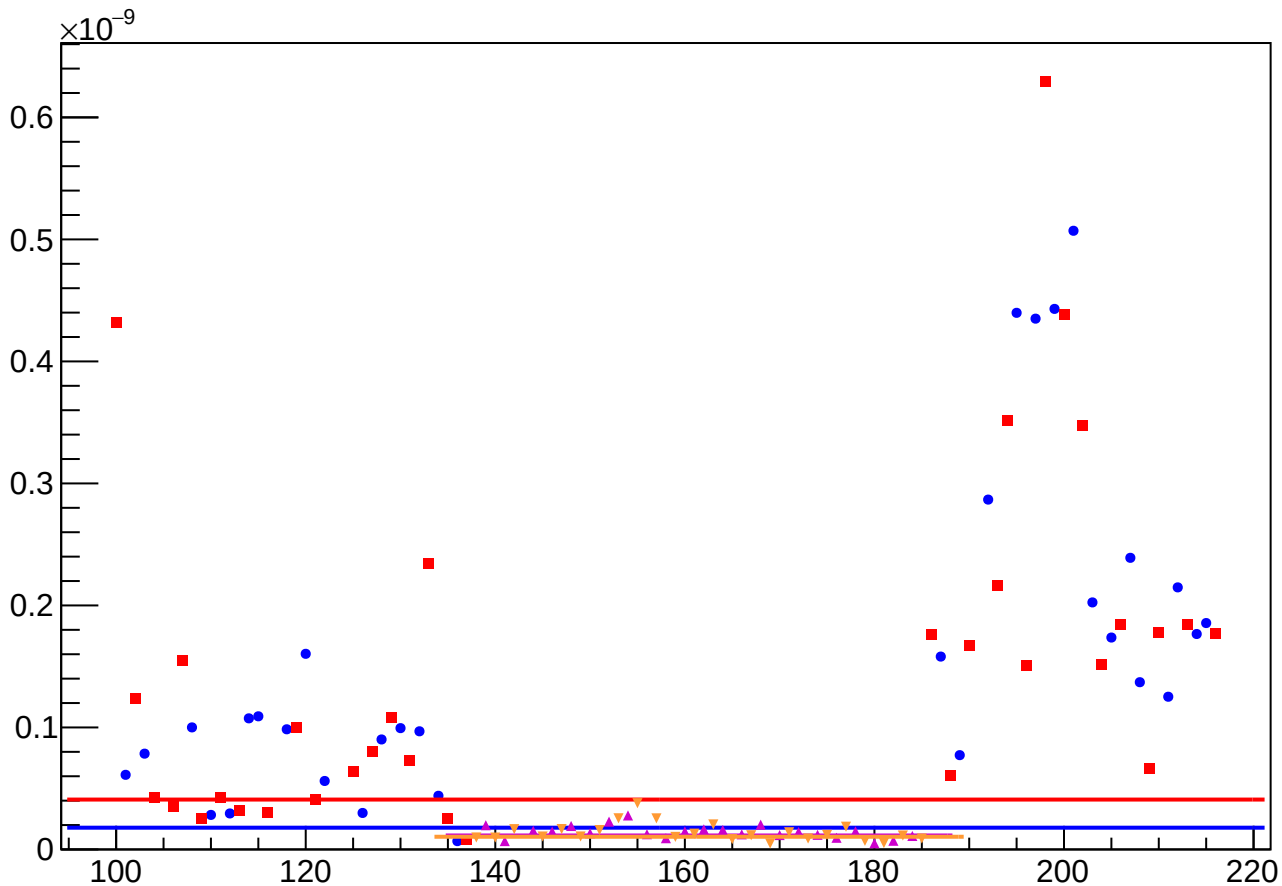
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 77.6/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 137.3/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.8/55

asym\_us\_dd\_atlr\_dd\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12629396.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2075235.5/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8742061.7/32

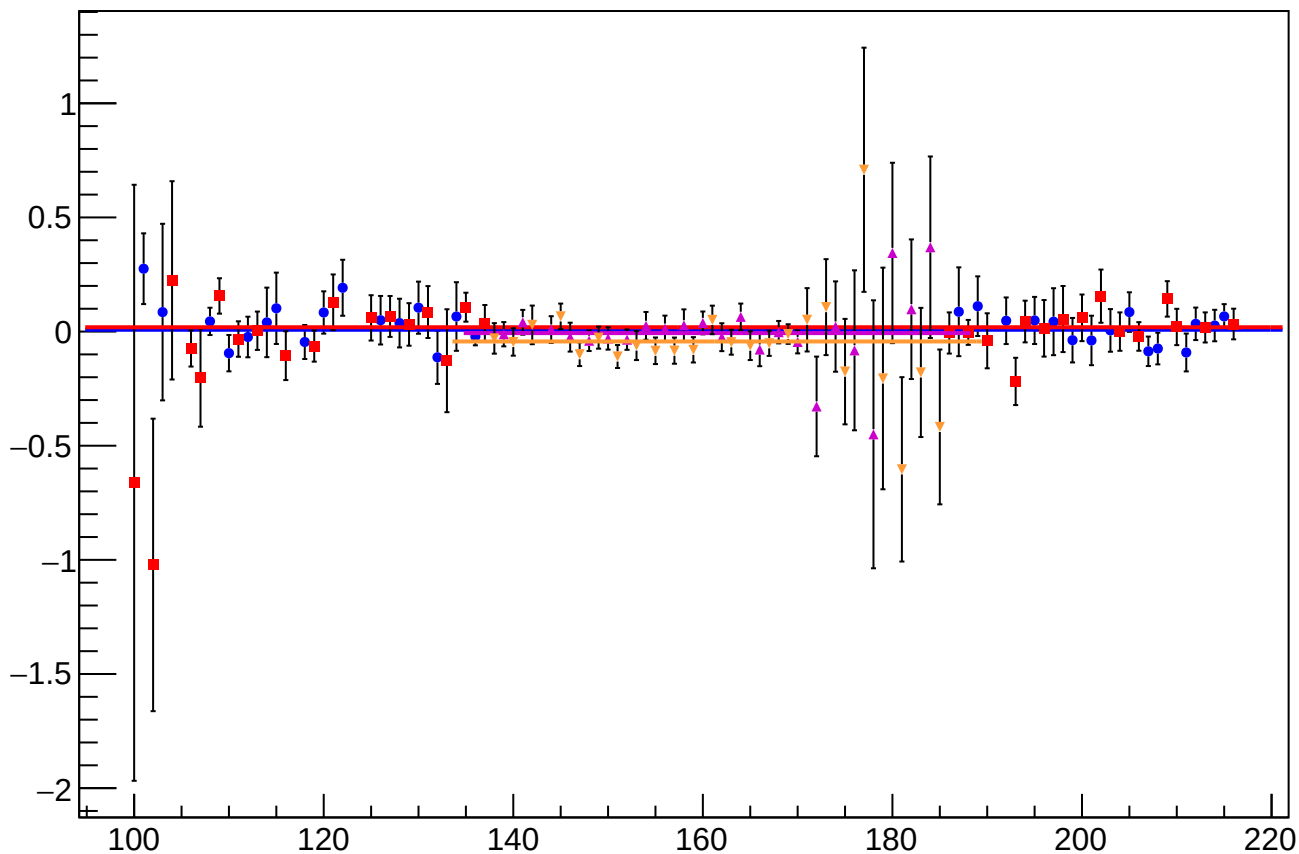
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1894438.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15222683.2/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29175417.2/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13829030.6/55

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 20.5/30

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.019 \pm 0.016$   $\chi^2/\text{NDF}$ : 26.5/32

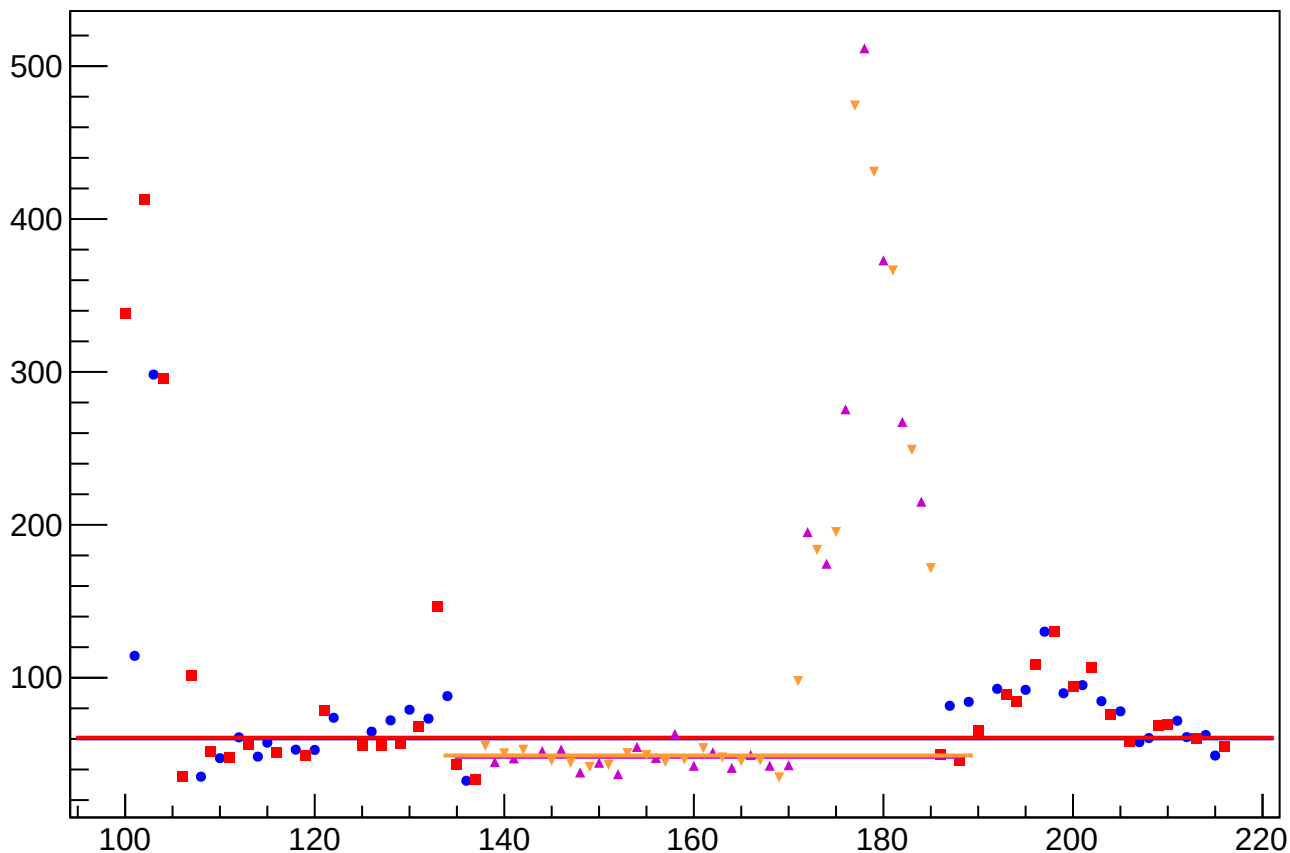
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.020 \pm 0.010$   $\chi^2/\text{NDF}$ : 45.4/54

All:  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 87.6/110

- sign  $0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.3/55

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 60.377 $\pm$ 0.011  $\chi^2$ /NDF: 4335136.9/30

Left Out: 49.180 $\pm$ 0.010  $\chi^2$ /NDF: 7250092.4/23

Right Out: 60.807 $\pm$ 0.011  $\chi^2$ /NDF: 4335284.6/32

Left In: 48.307 $\pm$ 0.010  $\chi^2$ /NDF: 7040663.5/22

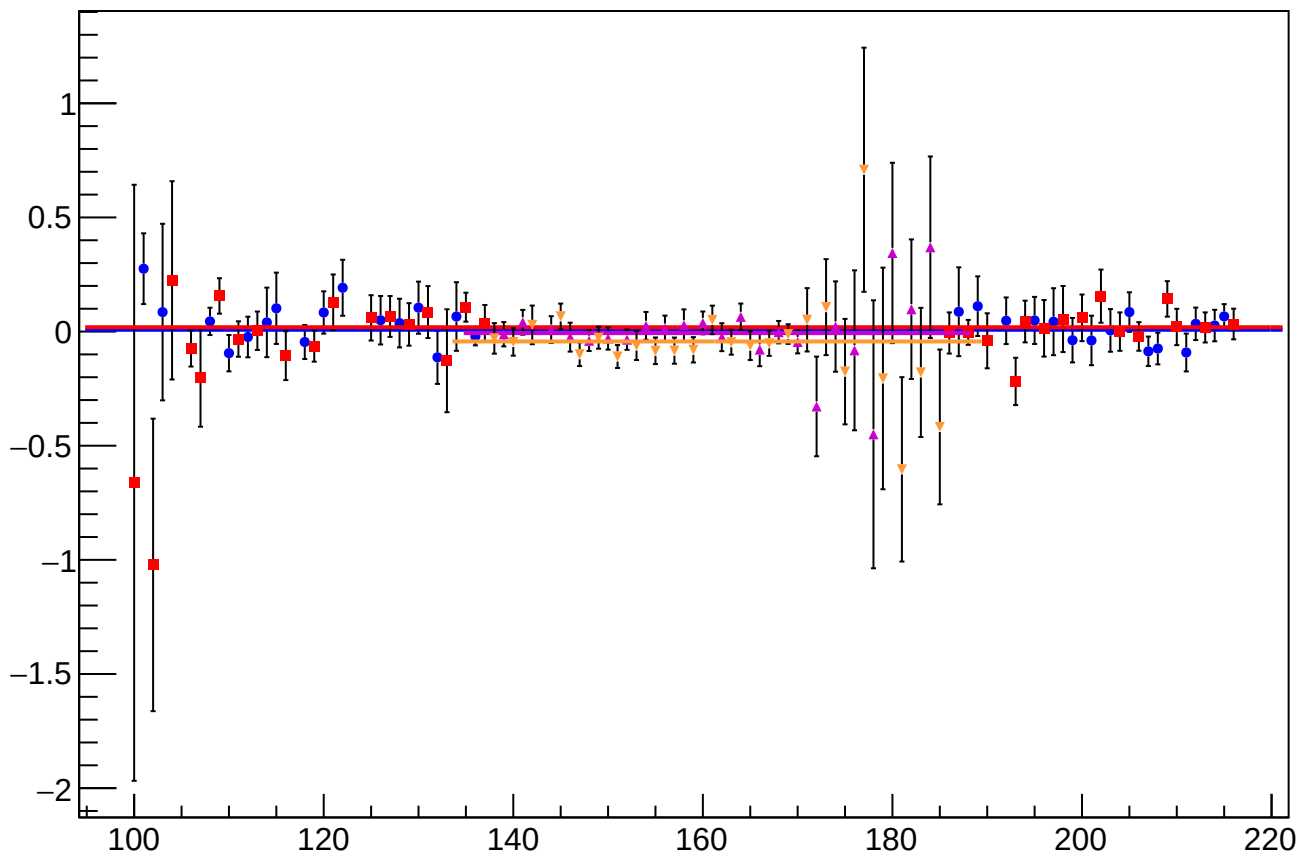
+ sign 54.196 $\pm$ 0.007  $\chi^2$ /NDF: 12166130.2/54

All: 53.915 $\pm$ 0.005  $\chi^2$ /NDF: 24273944.5/110

- sign 53.638 $\pm$ 0.007  $\chi^2$ /NDF: 12104875.2/55



asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.008 $\pm$ 0.015  $\chi^2$ /NDF: 20.5/30

Left Out: -0.043 $\pm$ 0.014  $\chi^2$ /NDF: 18.9/23

Right Out: 0.019 $\pm$ 0.016  $\chi^2$ /NDF: 26.5/32

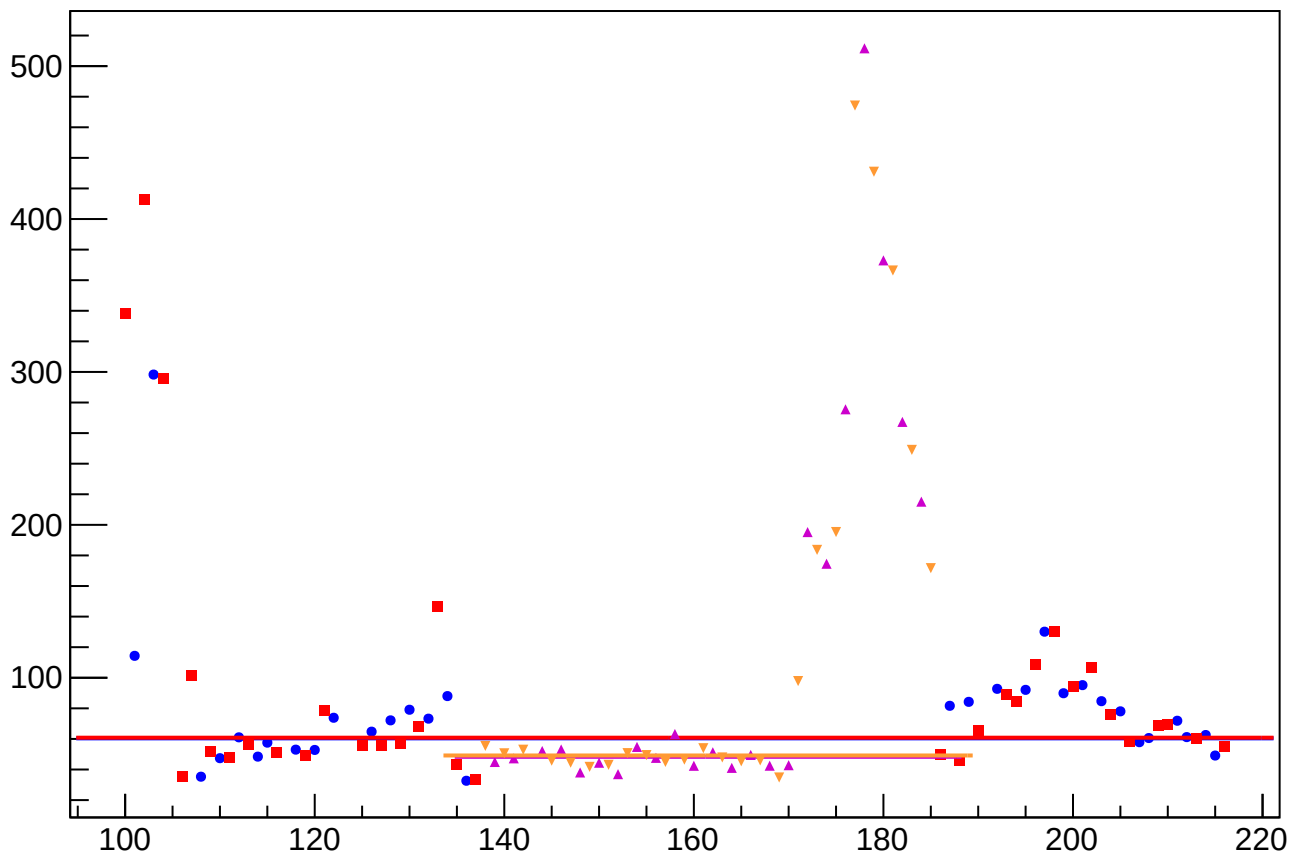
Left In: -0.007 $\pm$ 0.014  $\chi^2$ /NDF: 11.3/22

+ sign -0.020 $\pm$ 0.010  $\chi^2$ /NDF: 45.4/54

All: -0.008 $\pm$ 0.007  $\chi^2$ /NDF: 87.6/110

- sign 0.004 $\pm$ 0.010  $\chi^2$ /NDF: 39.3/55

asym\_us\_dd\_atlr\_dd\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 60.377 $\pm$ 0.011  $\chi^2$ /NDF: 4335136.9/30

Left Out: 49.180 $\pm$ 0.010  $\chi^2$ /NDF: 7250092.4/23

Right Out: 60.807 $\pm$ 0.011  $\chi^2$ /NDF: 4335284.6/32

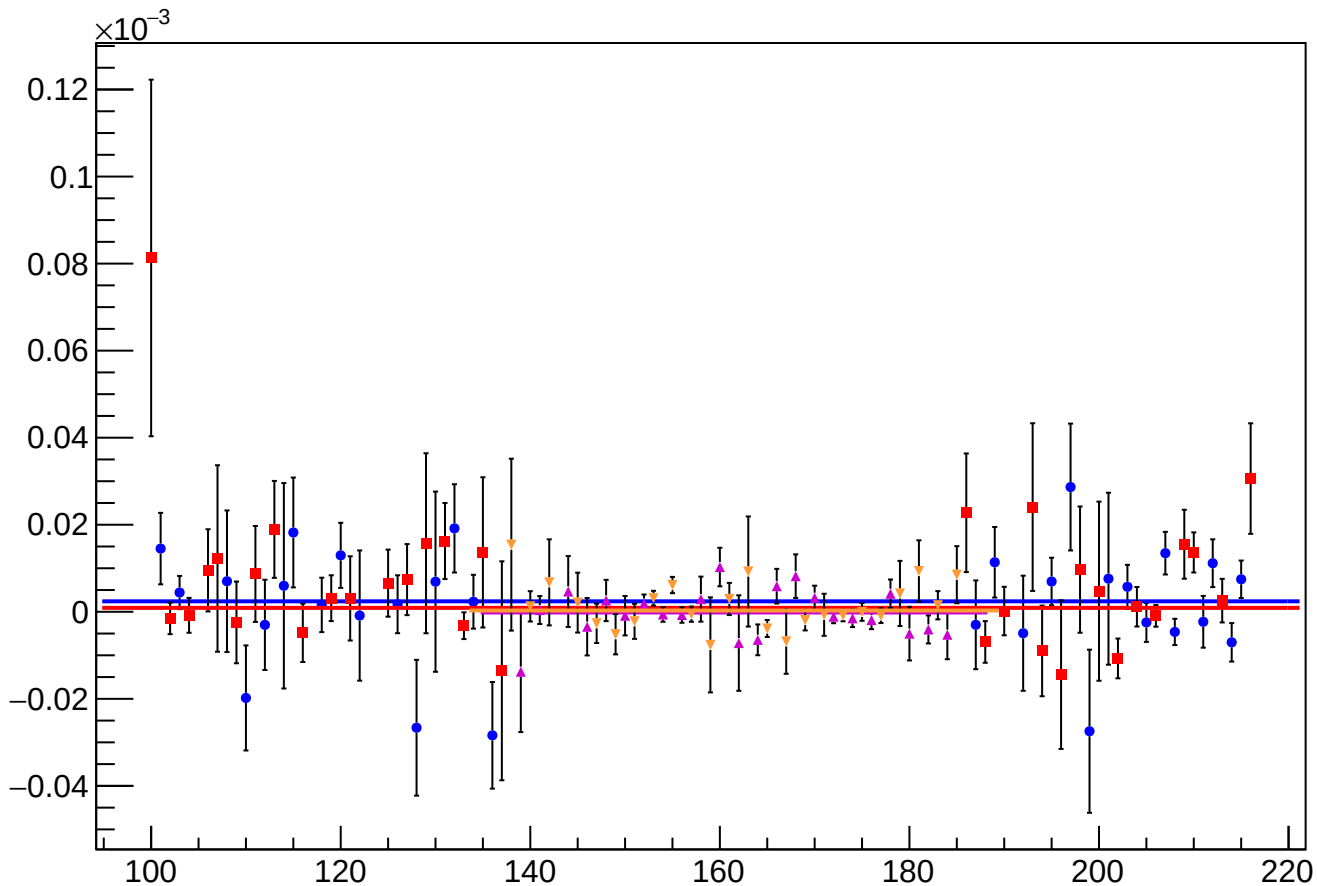
Left In: 48.307 $\pm$ 0.010  $\chi^2$ /NDF: 7040663.5/22

+ sign 54.196 $\pm$ 0.007  $\chi^2$ /NDF: 12166130.2/54

All: 53.915 $\pm$ 0.005  $\chi^2$ /NDF: 24273944.5/110

- sign 53.638 $\pm$ 0.007  $\chi^2$ /NDF: 12104875.2/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.7/32

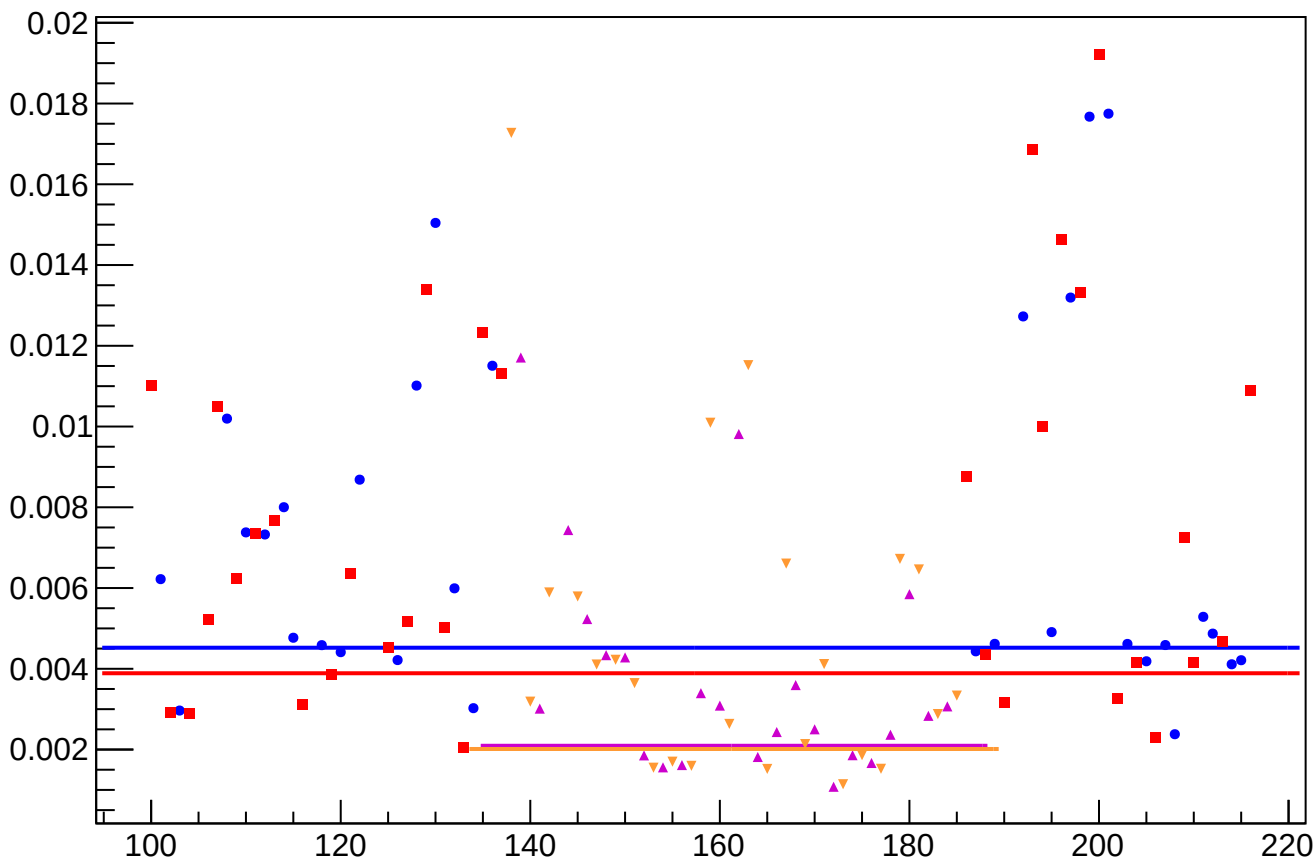
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 83.4/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 159.8/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 75.8/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7257638.6/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 10262318.5/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9693050.2/32

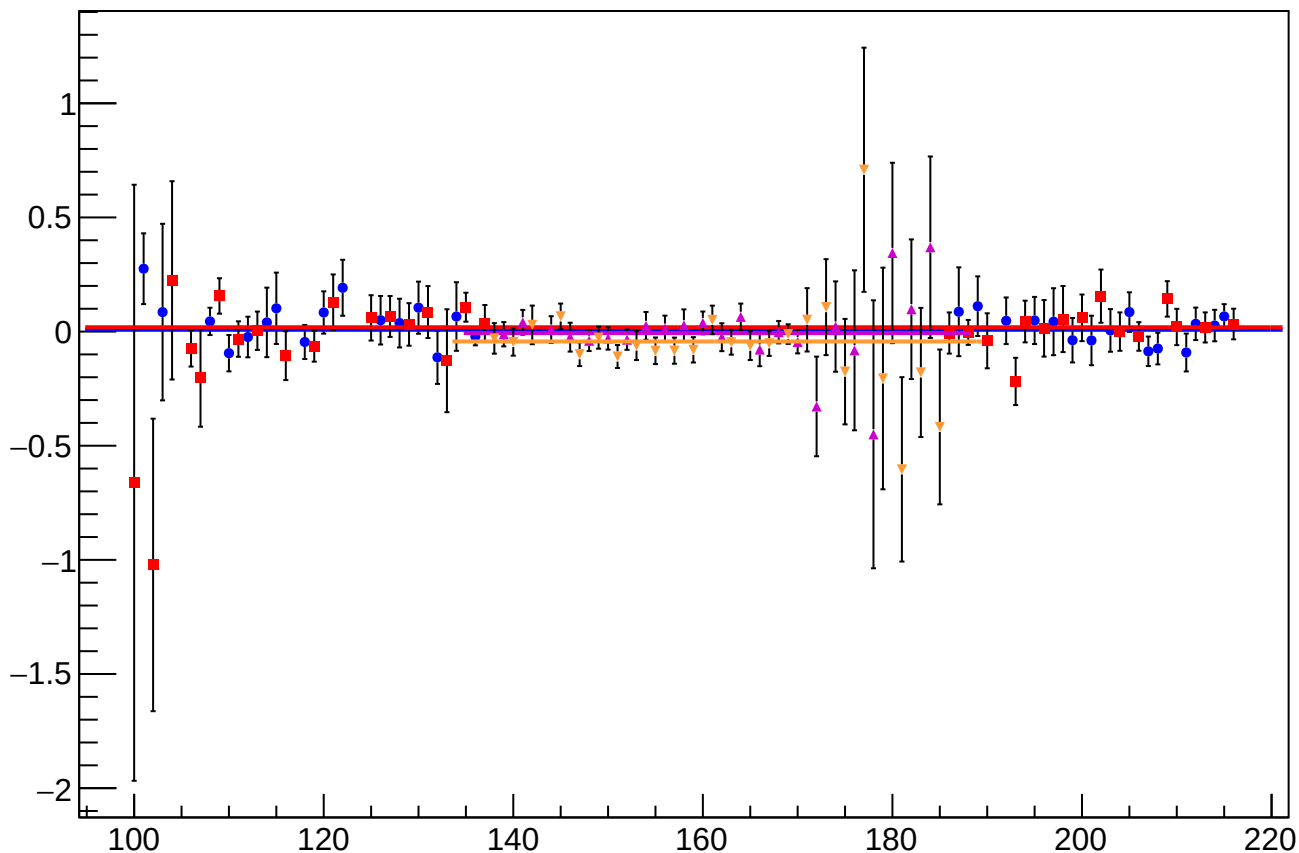
Left In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7141979.6/22

+ sign 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 24820539.7/54

All: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 45949930.0/110

- sign 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21118822.6/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 20.5/30

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.019 \pm 0.016$   $\chi^2/\text{NDF}$ : 26.5/32

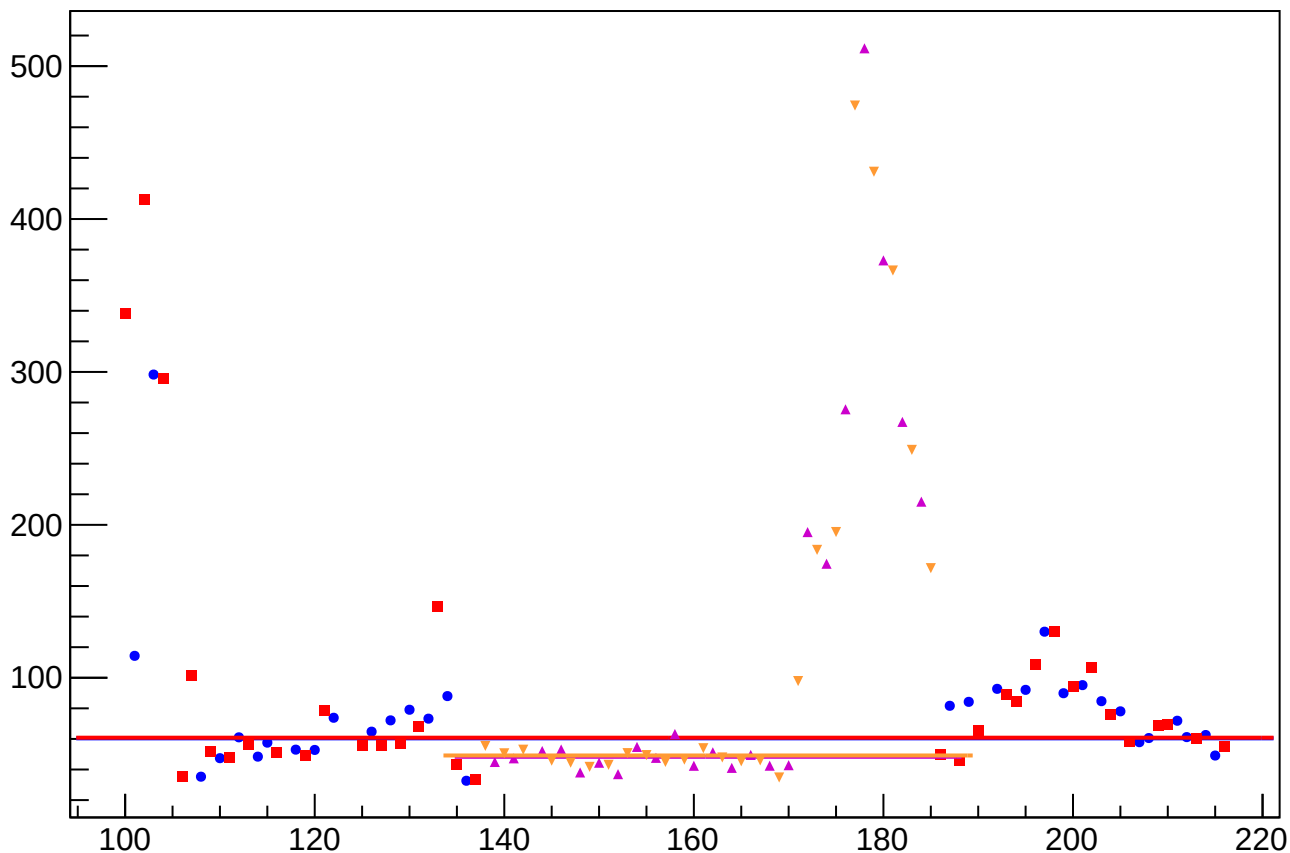
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.020 \pm 0.010$   $\chi^2/\text{NDF}$ : 45.4/54

All:  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 87.6/110

- sign  $0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.3/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 60.377 $\pm$ 0.011  $\chi^2$ /NDF: 4334966.0/30

Left Out: 49.180 $\pm$ 0.010  $\chi^2$ /NDF: 7250102.5/23

Right Out: 60.808 $\pm$ 0.011  $\chi^2$ /NDF: 4335136.9/32

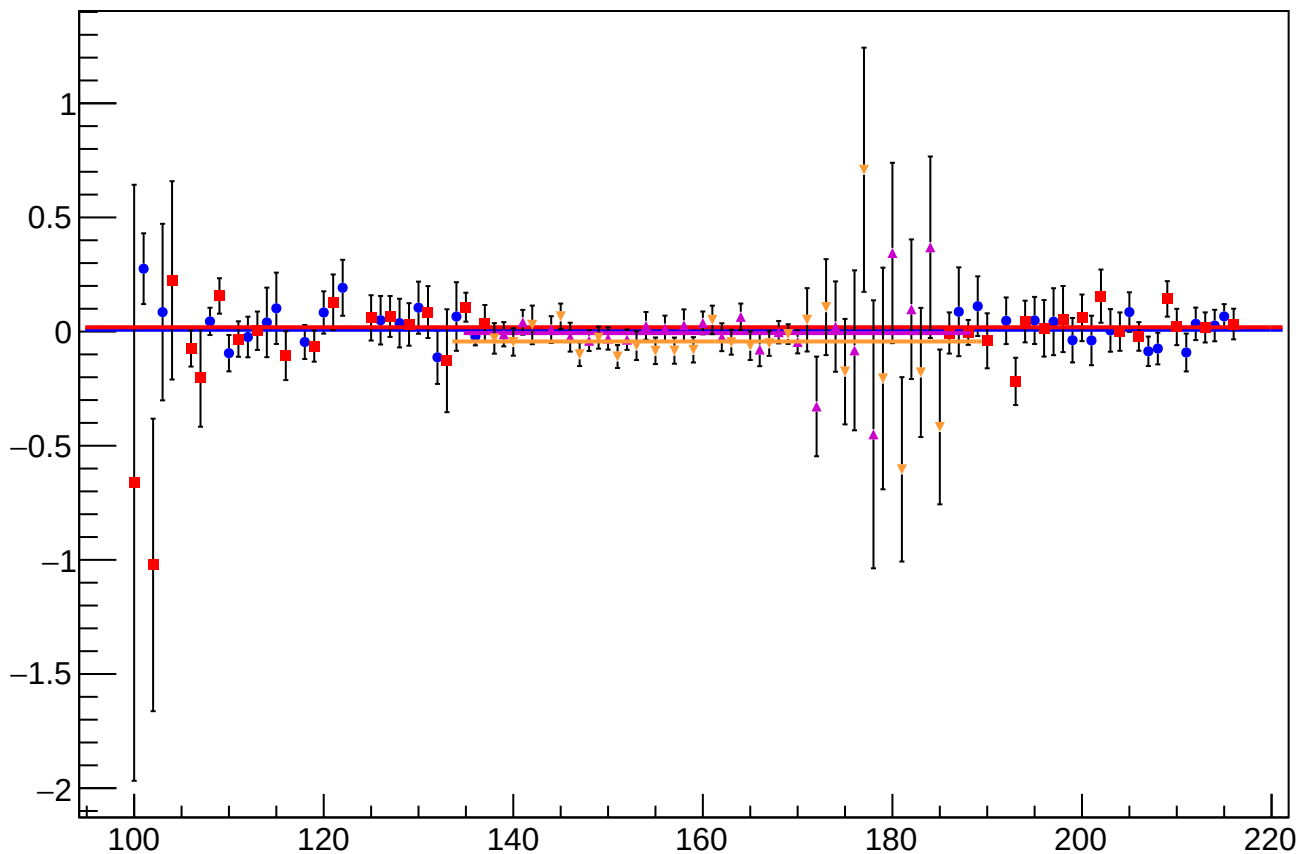
Left In: 48.307 $\pm$ 0.010  $\chi^2$ /NDF: 7040585.4/22

+ sign 54.196 $\pm$ 0.007  $\chi^2$ /NDF: 12166036.2/54

All: 53.915 $\pm$ 0.005  $\chi^2$ /NDF: 24273650.9/110

- sign 53.639 $\pm$ 0.007  $\chi^2$ /NDF: 12104680.9/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.015$   $\chi^2/\text{NDF}$ : 20.5/30

Left Out:  $-0.043 \pm 0.014$   $\chi^2/\text{NDF}$ : 18.9/23

Right Out:  $0.019 \pm 0.016$   $\chi^2/\text{NDF}$ : 26.5/32

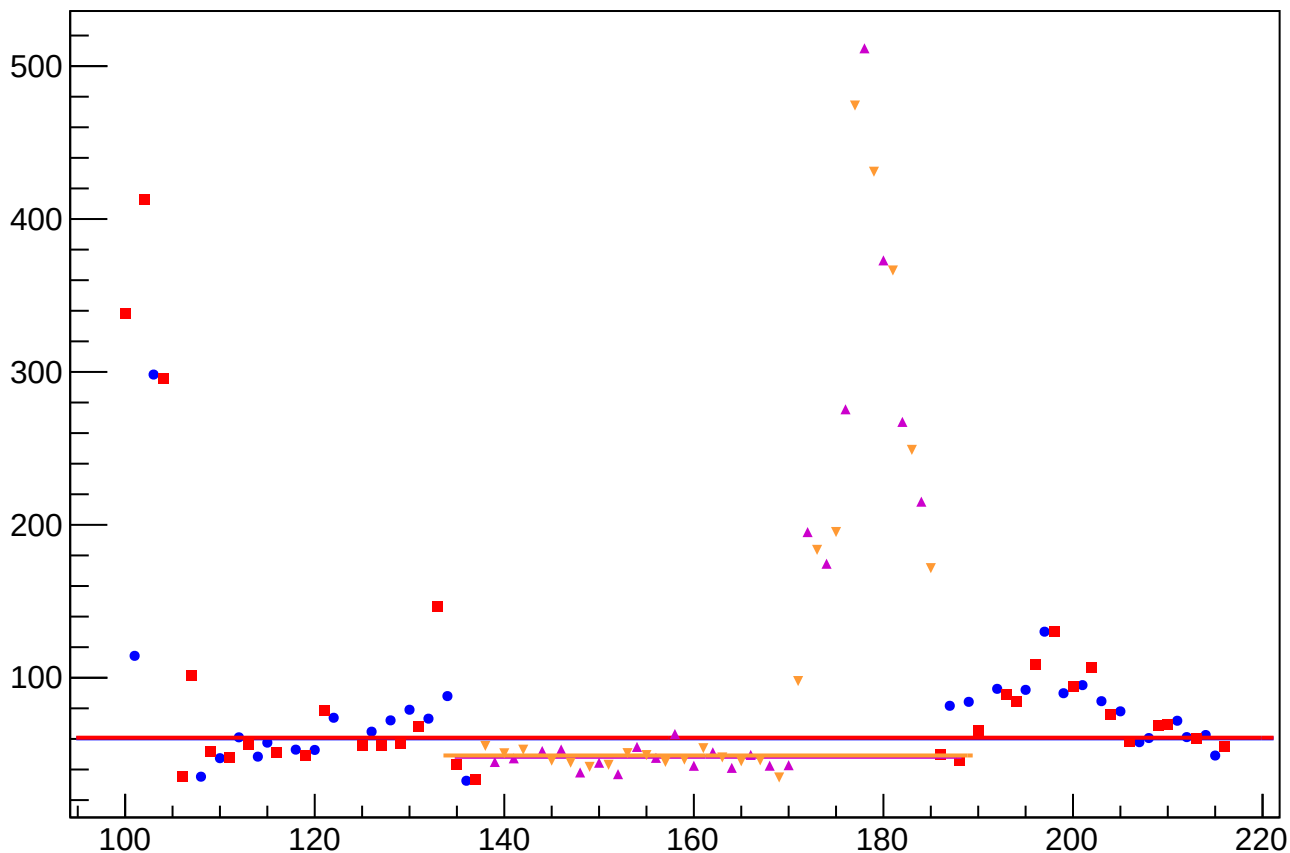
Left In:  $-0.007 \pm 0.014$   $\chi^2/\text{NDF}$ : 11.3/22

+ sign  $-0.020 \pm 0.010$   $\chi^2/\text{NDF}$ : 45.4/54

All:  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 87.6/110

- sign  $0.004 \pm 0.010$   $\chi^2/\text{NDF}$ : 39.3/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 60.377+/-0.011  $\chi^2/\text{NDF}$ : 4334966.0/30

Left Out: 49.180+/-0.010  $\chi^2/\text{NDF}$ : 7250102.5/23

Right Out: 60.808+/-0.011  $\chi^2/\text{NDF}$ : 4335136.9/32

Left In: 48.307+/-0.010  $\chi^2/\text{NDF}$ : 7040585.4/22

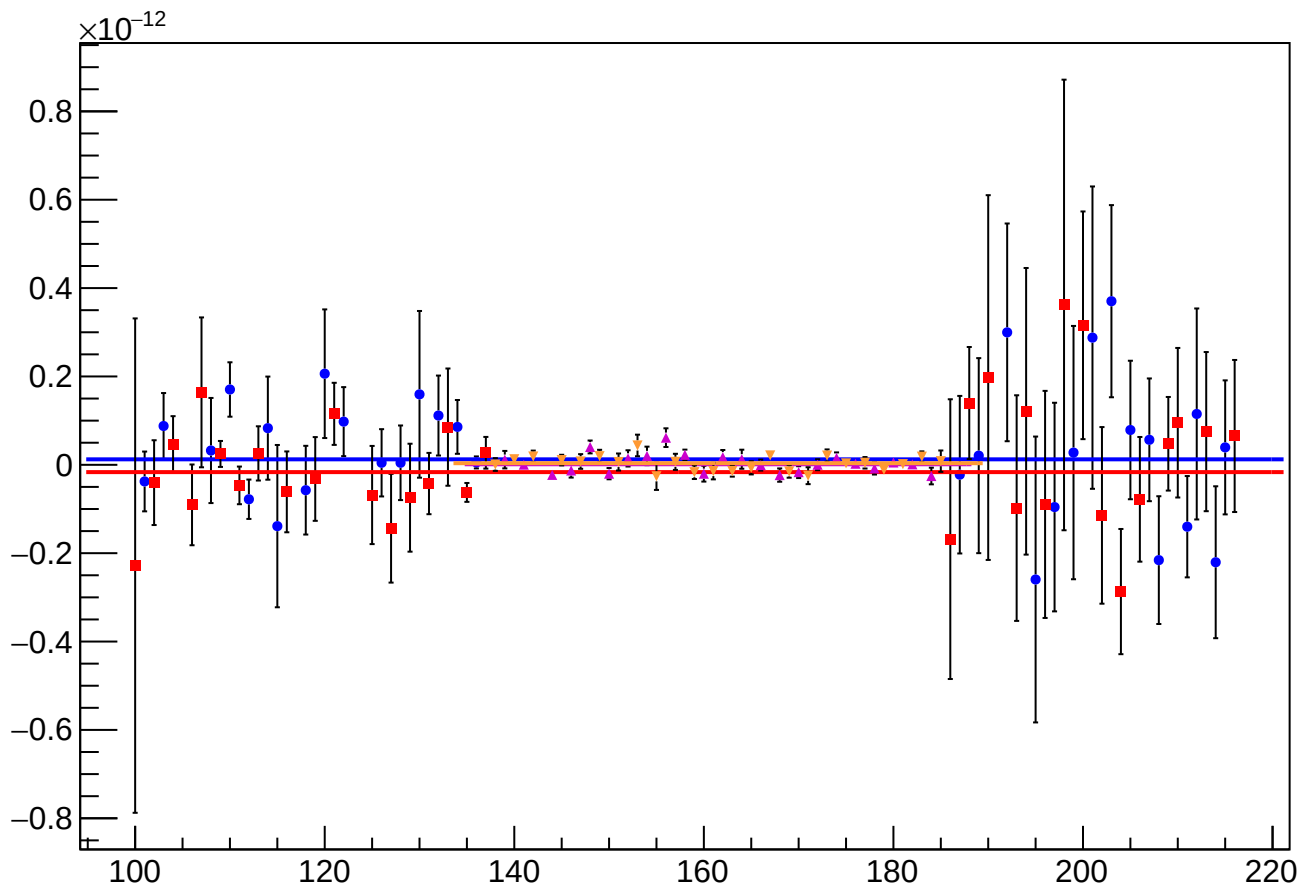
+ sign 54.196+/-0.007  $\chi^2/\text{NDF}$ : 12166036.2/54

All: 53.915+/-0.005  $\chi^2/\text{NDF}$ : 24273650.9/110

- sign 53.639+/-0.007  $\chi^2/\text{NDF}$ : 12104680.9/55



asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24.6/23

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.0/32

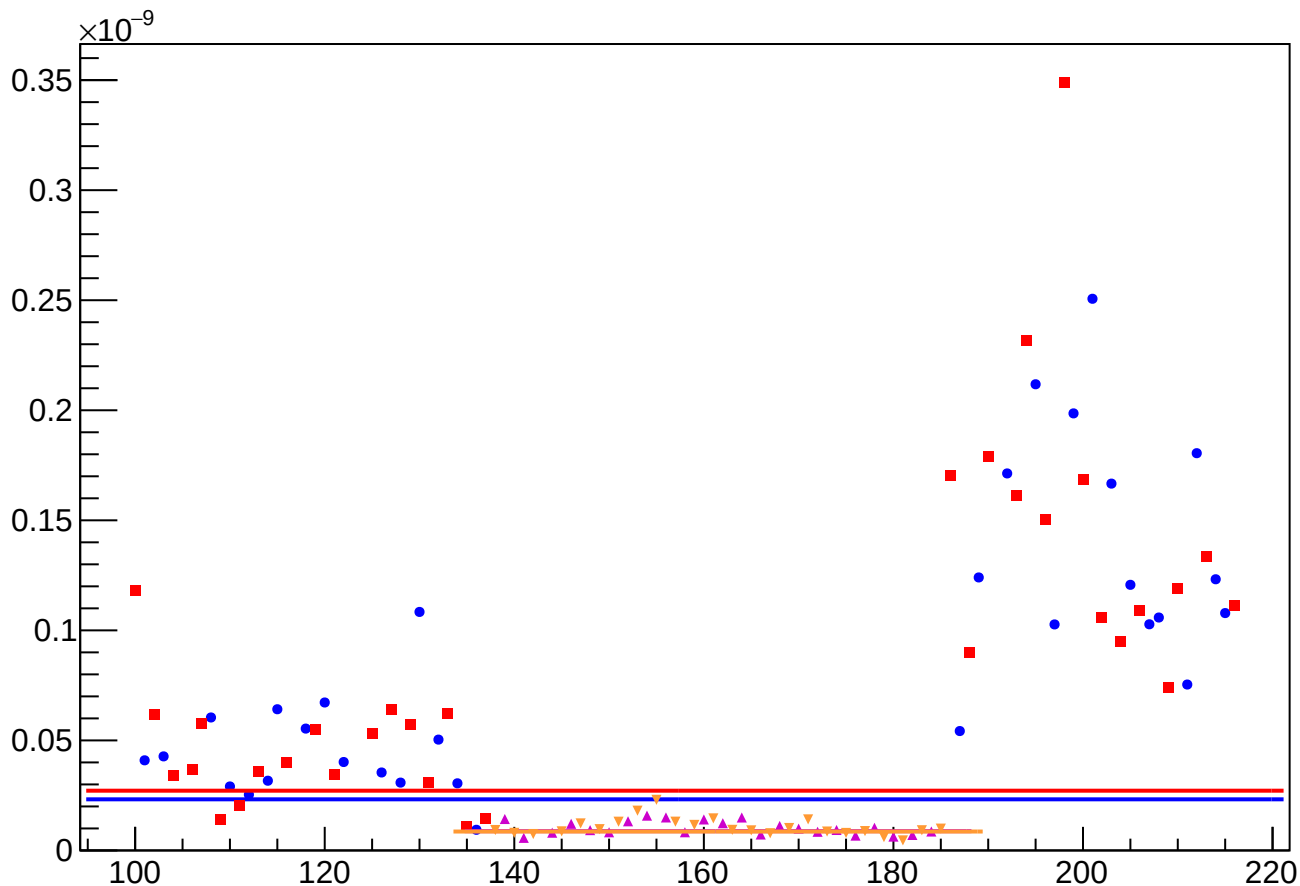
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 57.8/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 128.9/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 70.1/55

asym\_us\_dd\_atlr\_dd\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13114281.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2499872.6/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11051947.6/32

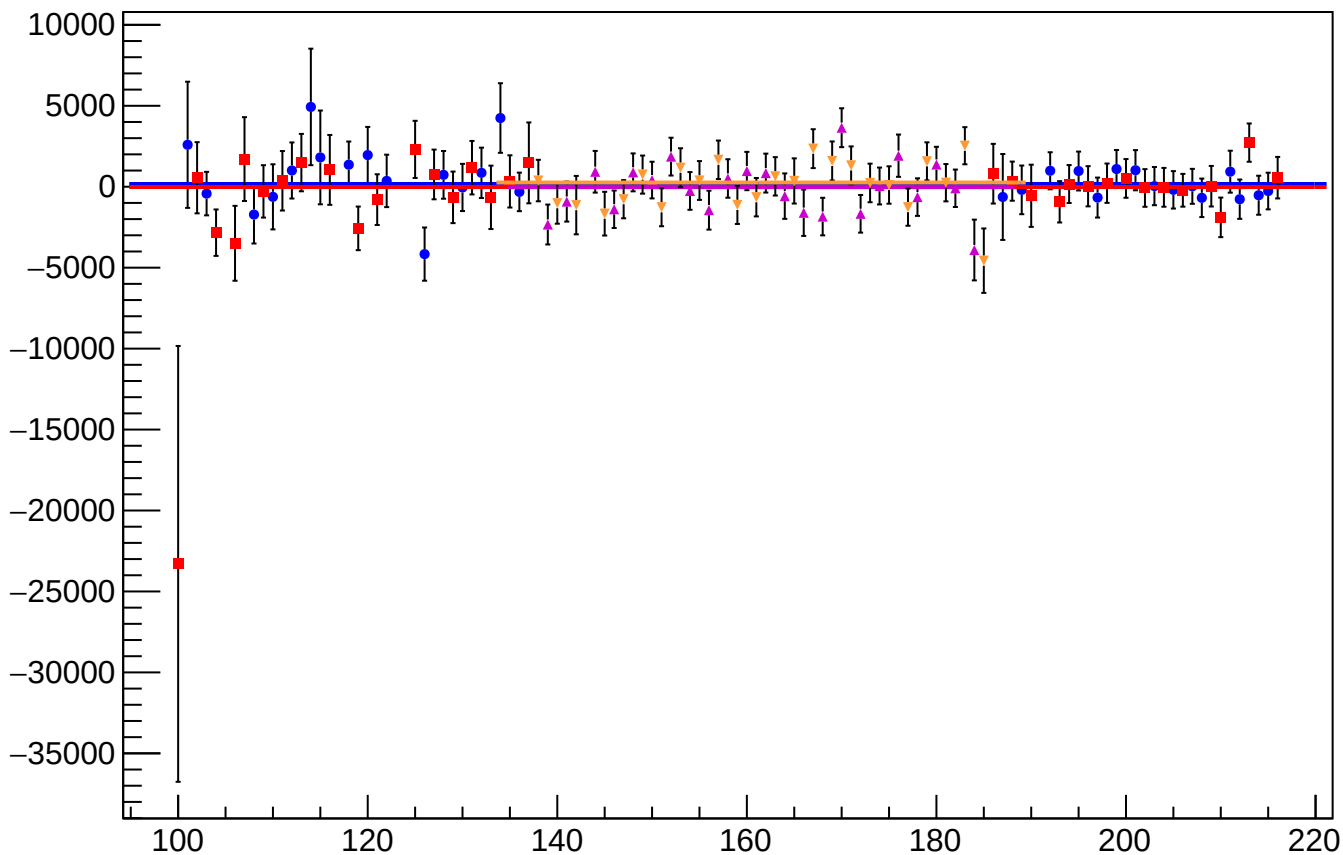
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1954811.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18950102.0/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36356674.7/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17399378.7/55

# reg\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 168.698 $\pm$ 254.903  $\chi^2/\text{NDF}$ : 21.7/30

Left Out: 260.650 $\pm$ 251.401  $\chi^2/\text{NDF}$ : 28.2/23

Right Out: -17.583 $\pm$ 256.720  $\chi^2/\text{NDF}$ : 26.8/32

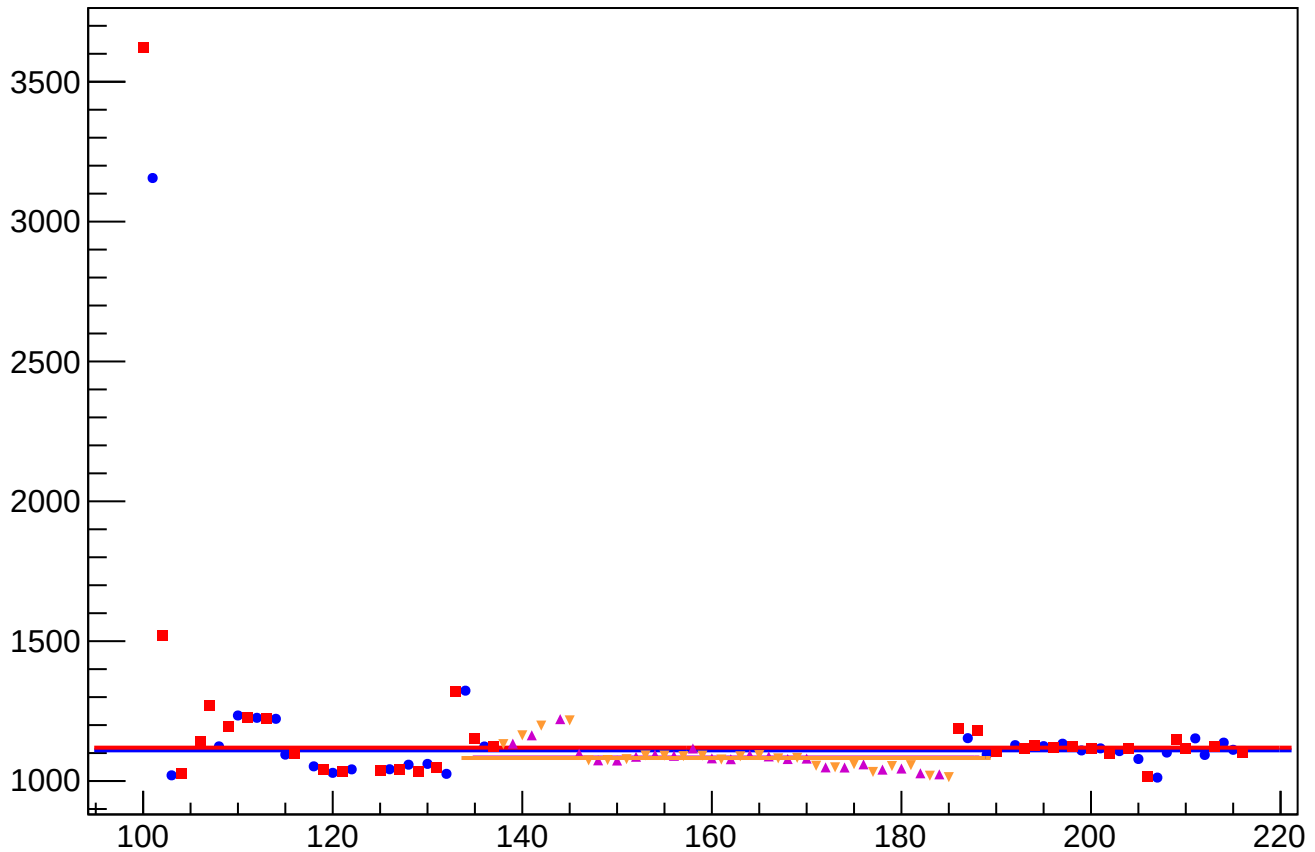
Left In: -22.368 $\pm$ 253.332  $\chi^2/\text{NDF}$ : 35.8/22

+ sign 215.310 $\pm$ 178.993  $\chi^2/\text{NDF}$ : 50.0/54

All: 98.520 $\pm$ 127.033  $\chi^2/\text{NDF}$ : 113.5/110

- sign -20.008 $\pm$ 180.319  $\chi^2/\text{NDF}$ : 62.6/55

# reg\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1109.705 $\pm$ 0.180  $\chi^2$ /NDF: 647644.5/30

Left Out: 1082.308 $\pm$ 0.178  $\chi^2$ /NDF: 57873.0/23

Right Out: 1119.326 $\pm$ 0.182  $\chi^2$ /NDF: 252912.5/32

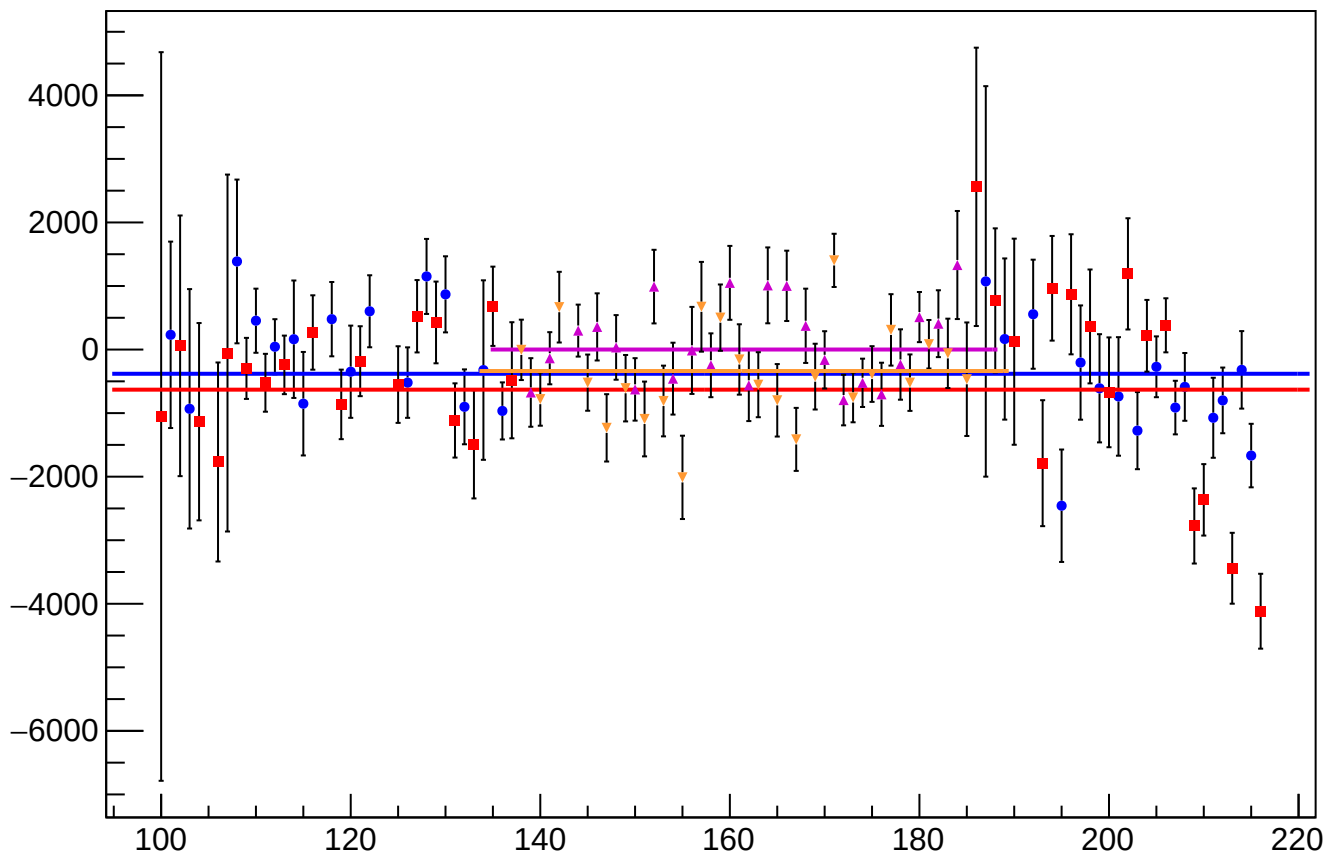
Left In: 1084.166 $\pm$ 0.179  $\chi^2$ /NDF: 53438.8/22

+ sign 1095.817 $\pm$ 0.127  $\chi^2$ /NDF: 717229.4/54

All: 1098.644 $\pm$ 0.090  $\chi^2$ /NDF: 1043592.3/11

- sign 1101.512 $\pm$ 0.128  $\chi^2$ /NDF: 325357.8/55

asym\_us\_dd\_atlr\_dd\_dd\_reg\_correction\_mean vs Slug



Right In:  $-381.004 \pm 115.640$   $\chi^2/\text{NDF}: 45.2/30$

Left Out:  $-337.727 \pm 102.601$   $\chi^2/\text{NDF}: 48.8/23$

Right Out:  $-630.961 \pm 118.969$   $\chi^2/\text{NDF}: 126.3/32$

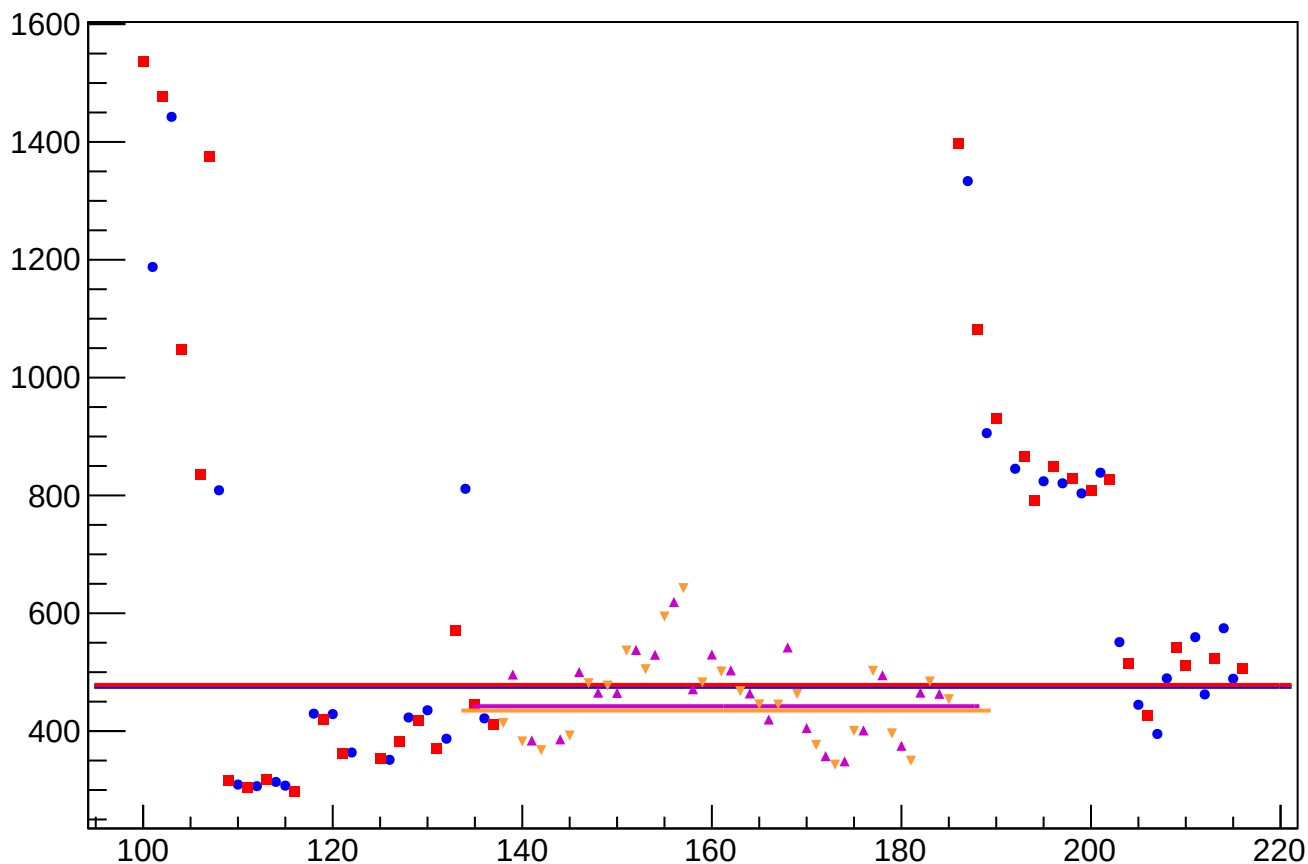
Left In:  $0.547 \pm 104.733$   $\chi^2/\text{NDF}: 31.9/22$

+ sign  $-356.789 \pm 76.748$   $\chi^2/\text{NDF}: 94.0/54$

All:  $-316.964 \pm 54.916$   $\chi^2/\text{NDF}: 268.7/110$

- sign  $-275.181 \pm 78.611$   $\chi^2/\text{NDF}: 174.1/55$

asym\_us\_dd\_atlr\_dd\_dd\_reg\_correction\_rms vs Slug



Right In: 475.120 $\pm$ 0.082  $\chi^2$ /NDF: 4377941.0/30

Left Out: 434.858 $\pm$ 0.073  $\chi^2$ /NDF: 878416.4/23

Right Out: 478.369 $\pm$ 0.084  $\chi^2$ /NDF: 5432535.4/32

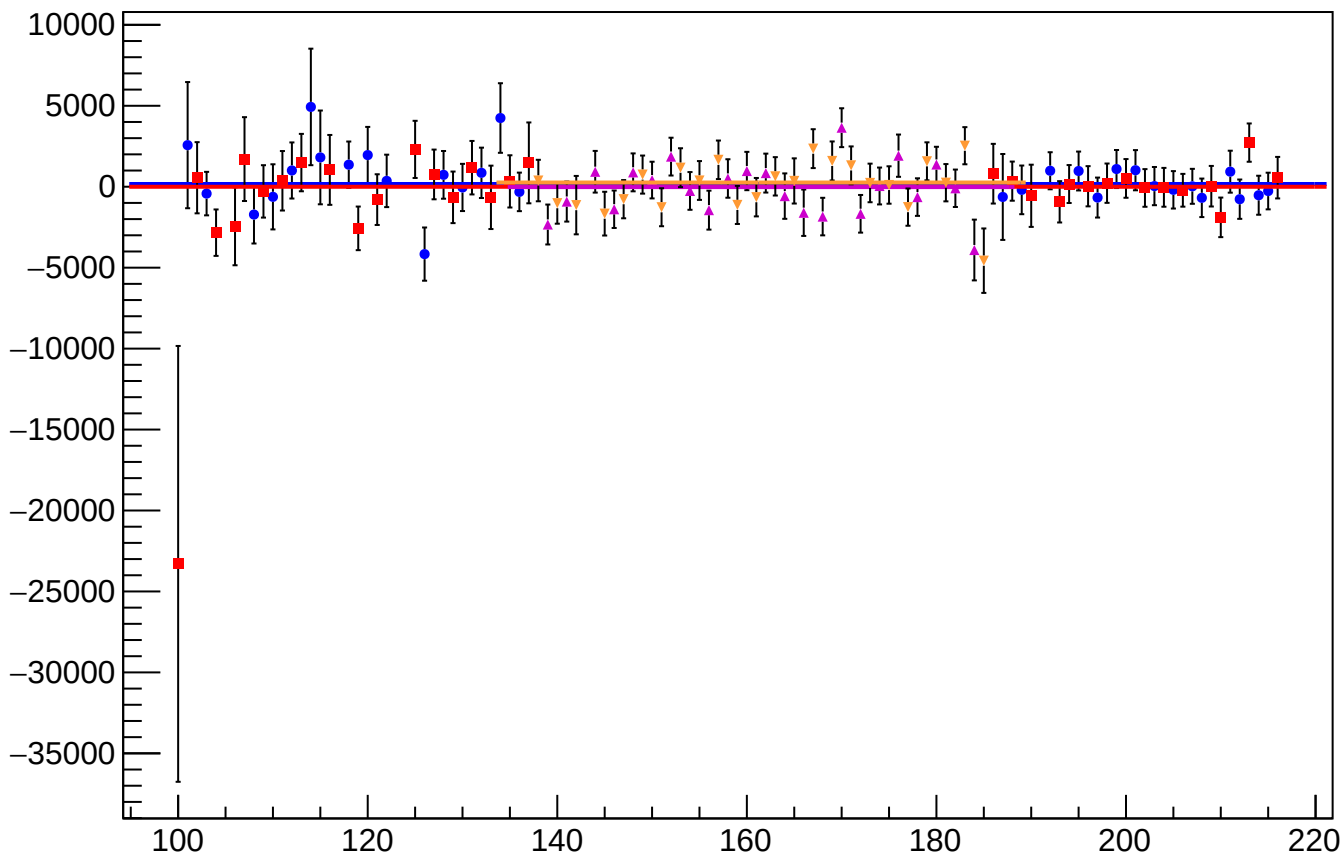
Left In: 442.209 $\pm$ 0.074  $\chi^2$ /NDF: 825972.2/22

+ sign 452.592 $\pm$ 0.054  $\chi^2$ /NDF: 5392009.4/54

All: 455.230 $\pm$ 0.039  $\chi^2$ /NDF: 11759455.0/11

- sign 457.997 $\pm$ 0.056  $\chi^2$ /NDF: 6362605.6/55

# cor\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 168.576 $\pm$ 254.903  $\chi^2$ /NDF: 21.7/30

Left Out: 260.639 $\pm$ 251.401  $\chi^2$ /NDF:28.2/23

Right Out: -2.296 $\pm$ 256.842  $\chi^2$ /NDF: 25.6/32

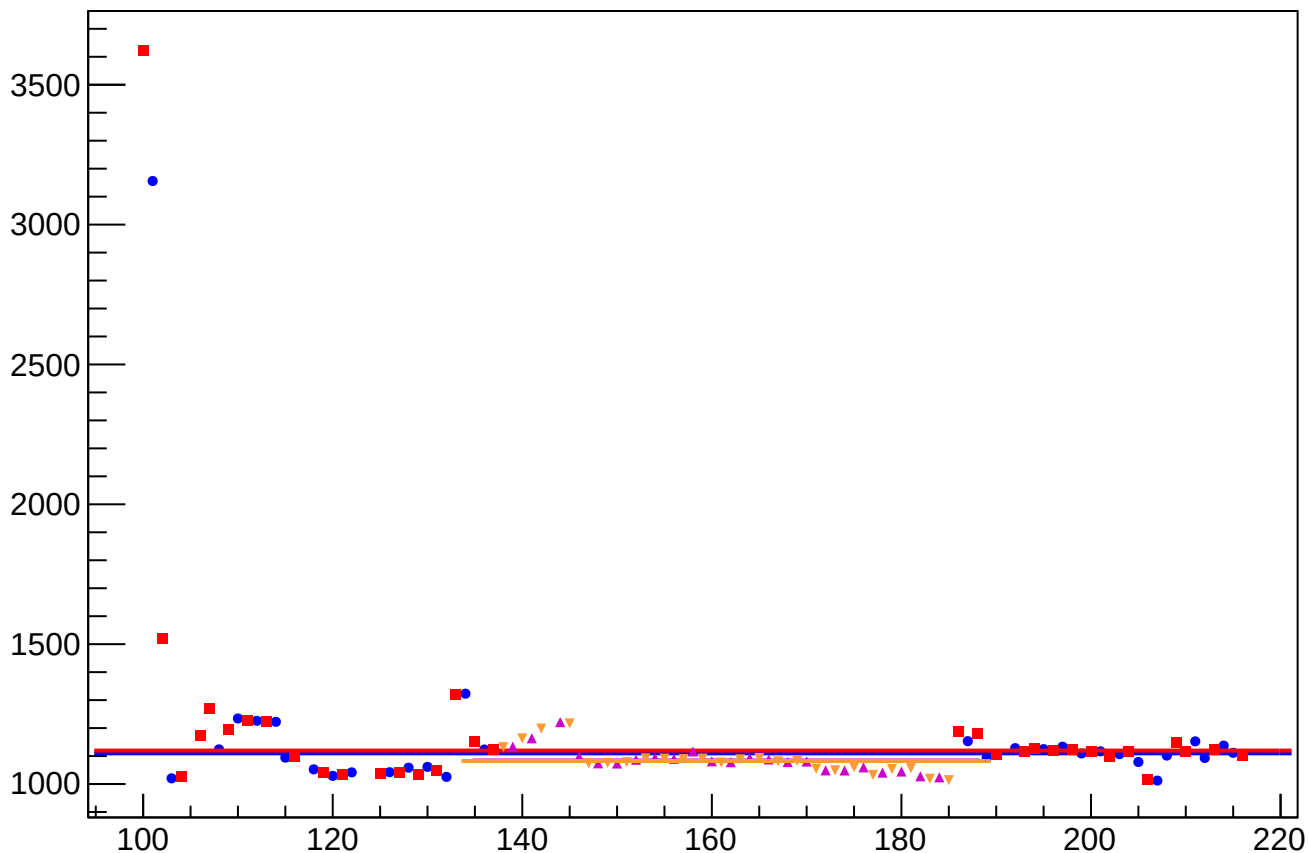
Left In: -22.362 $\pm$ 253.332  $\chi^2$ /NDF:35.8/22

+ sign 215.245 $\pm$ 178.993  $\chi^2$ /NDF: 50.0/54

All: 102.256 $\pm$ 127.048  $\chi^2$ /NDF: 112.2/110

- sign -12.467 $\pm$ 180.361  $\chi^2$ /NDF: 61.4/55

cor\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1109.705 $\pm$ 0.180  $\chi^2$ /NDF: 647645.5/30

Left Out: 1082.308 $\pm$ 0.178  $\chi^2$ /NDF: 57873.0/23

Right Out: 1119.662 $\pm$ 0.182  $\chi^2$ /NDF: 253690.8/32

Left In: 1084.166 $\pm$ 0.179  $\chi^2$ /NDF: 53438.8/22

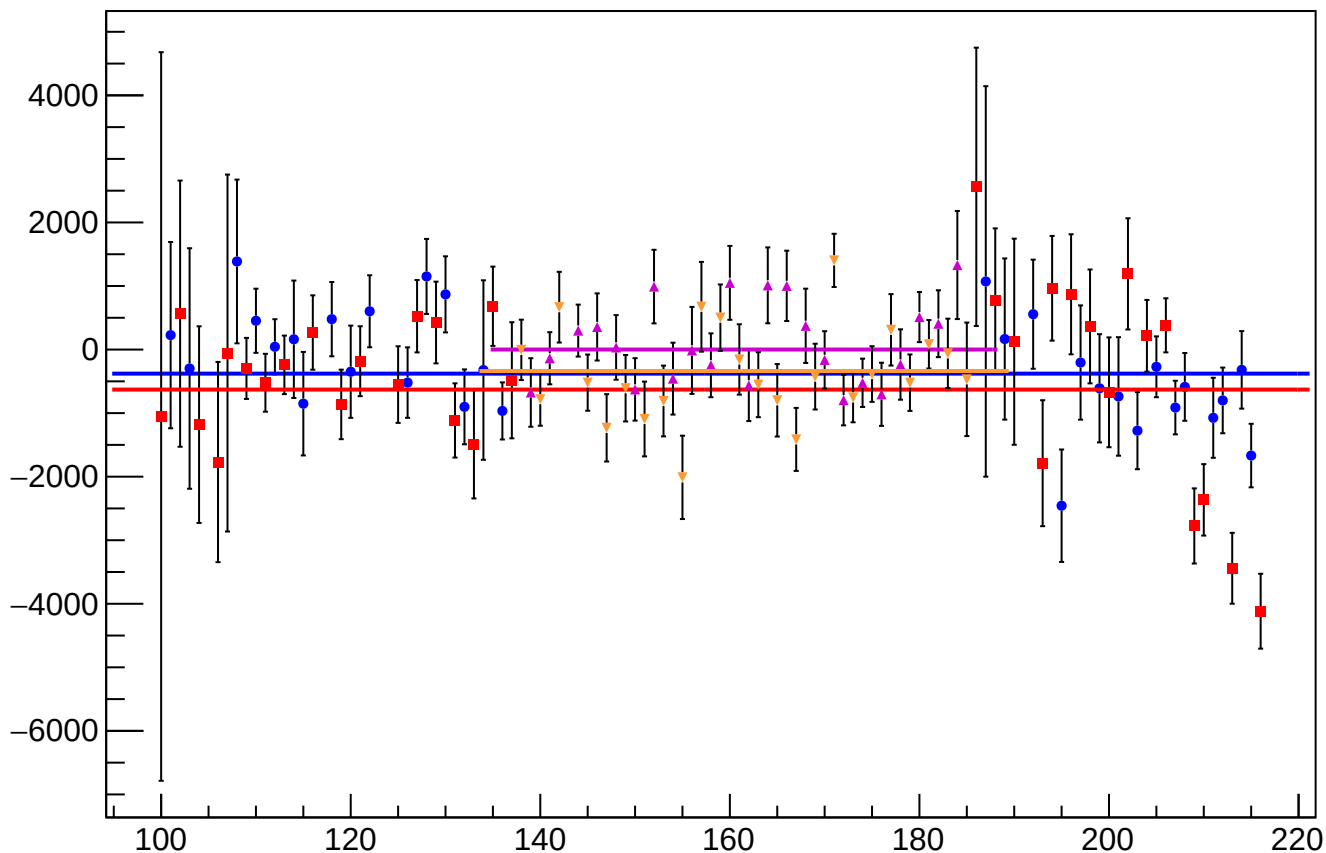
+ sign 1095.817 $\pm$ 0.127  $\chi^2$ /NDF: 717230.3/54

All: 1098.721 $\pm$ 0.090  $\chi^2$ /NDF: 1044784.0/11

- sign 1101.670 $\pm$ 0.128  $\chi^2$ /NDF: 326492.4/55



asym\_us\_dd\_atlr\_dd\_dd\_cor\_correction\_mean vs Slug



Right In: -378.705 $\pm$ 115.640  $\chi^2/\text{NDF}$ : 45.1/30

Left Out: -337.816 $\pm$ 102.601  $\chi^2/\text{NDF}$ : 48.8/23

Right Out: -629.669 $\pm$ 118.980  $\chi^2/\text{NDF}$ : 126.6/32

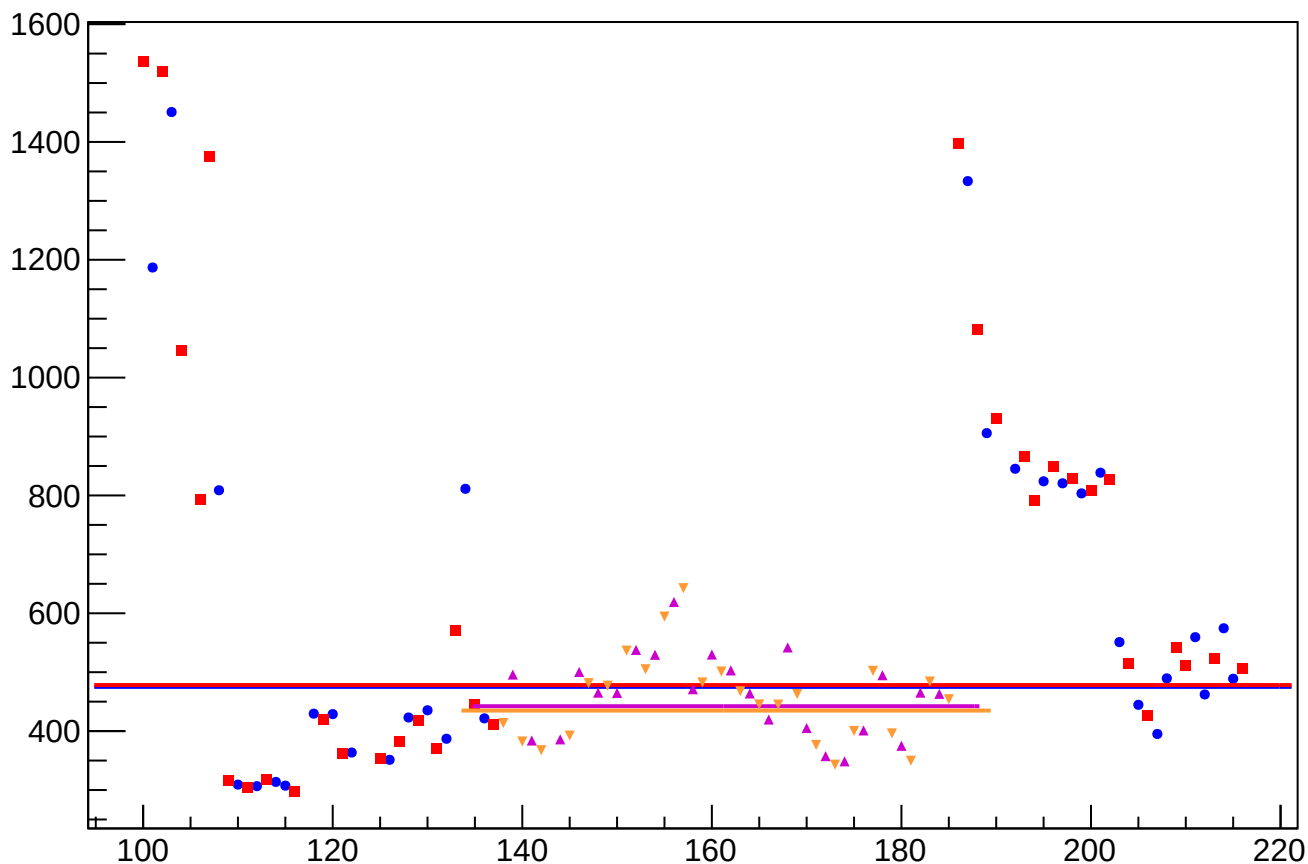
Left In: 0.567 $\pm$ 104.733  $\chi^2/\text{NDF}$ : 31.9/22

+ sign -355.826 $\pm$ 76.748  $\chi^2/\text{NDF}$ : 93.9/54

All: -316.178 $\pm$ 54.917  $\chi^2/\text{NDF}$ : 268.7/110

- sign -274.578 $\pm$ 78.614  $\chi^2/\text{NDF}$ : 174.2/55

asym\_us\_dd\_atlr\_dd\_dd\_cor\_correction\_rms vs Slug



Right In: 475.115 $\pm$ 0.082  $\chi^2$ /NDF: 4381740.3/30

Left Out: 434.856 $\pm$ 0.073  $\chi^2$ /NDF: 878507.3/23

Right Out: 478.117 $\pm$ 0.084  $\chi^2$ /NDF: 5427432.2/32

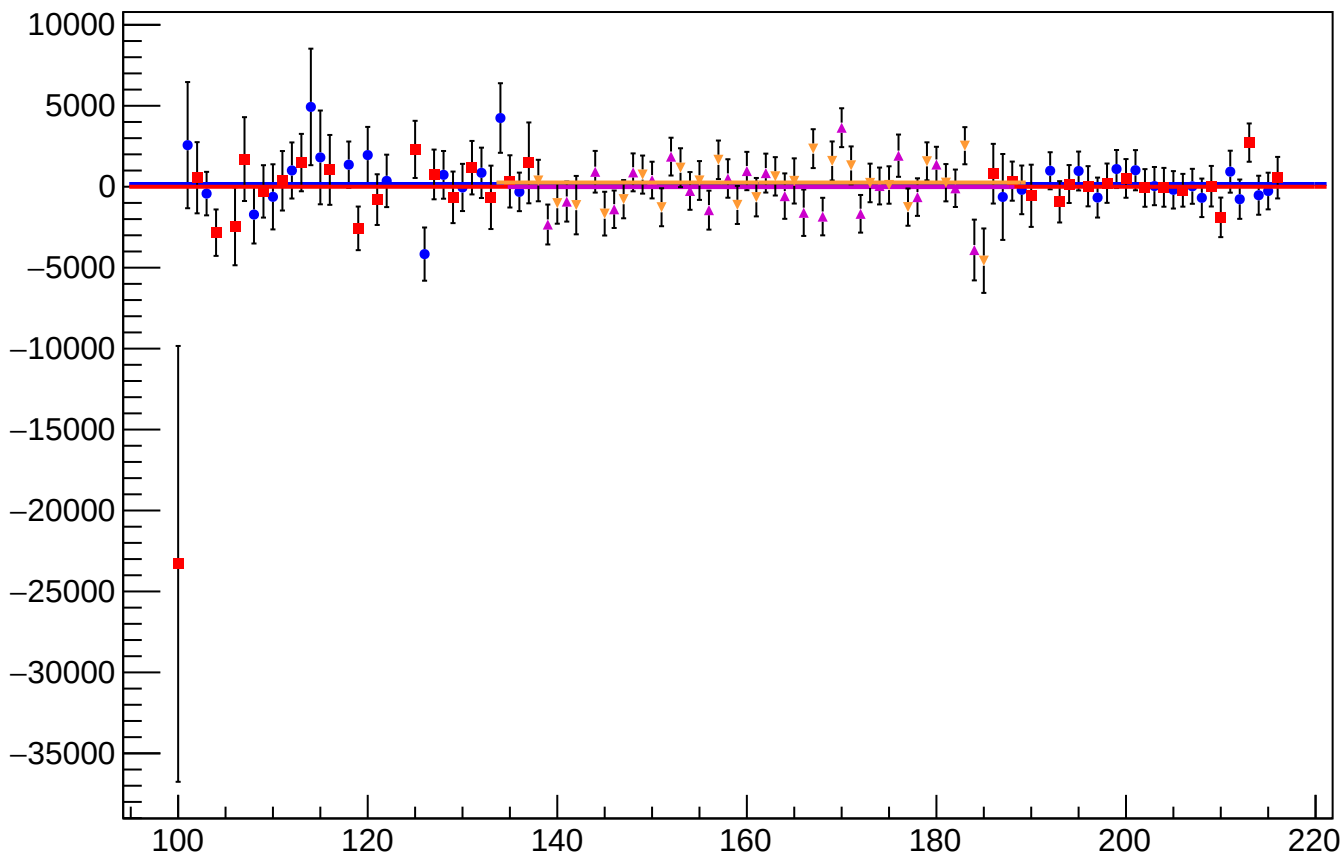
Left In: 442.210 $\pm$ 0.074  $\chi^2$ /NDF: 825844.5/22

+ sign 452.589 $\pm$ 0.054  $\chi^2$ /NDF: 5395882.4/54

All: 455.174 $\pm$ 0.039  $\chi^2$ /NDF: 11756439.7/11

- sign 457.886 $\pm$ 0.056  $\chi^2$ /NDF: 6355908.0/55

eigen\_cor\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 168.576 $\pm$ 254.903  $\chi^2$ /NDF: 21.7/30

Left Out: 260.639 $\pm$ 251.401  $\chi^2$ /NDF:28.2/23

Right Out: -2.296 $\pm$ 256.842  $\chi^2$ /NDF: 25.6/32

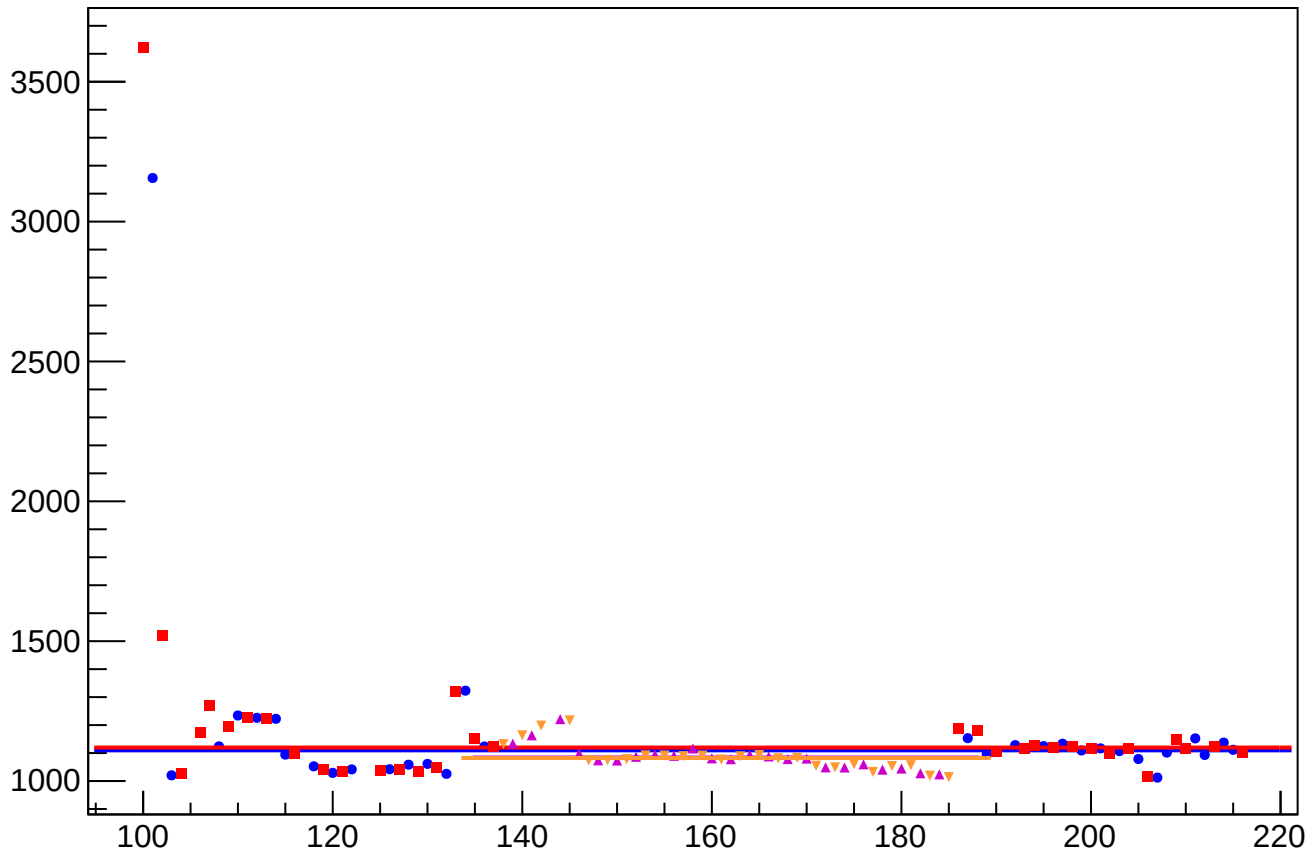
Left In: -22.362 $\pm$ 253.332  $\chi^2$ /NDF:35.8/22

+ sign 215.245 $\pm$ 178.993  $\chi^2$ /NDF: 50.0/54

All: 102.256 $\pm$ 127.048  $\chi^2$ /NDF: 112.2/110

- sign -12.467 $\pm$ 180.361  $\chi^2$ /NDF: 61.4/55

# eigen\_cor\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1109.705+/-0.180  $\chi^2/\text{NDF}$ : 647645.5/30

Left Out: 1082.308+/-0.178  $\chi^2/\text{NDF}$ : 57873.0/23

Right Out: 1119.662+/-0.182  $\chi^2/\text{NDF}$ : 253690.8/32

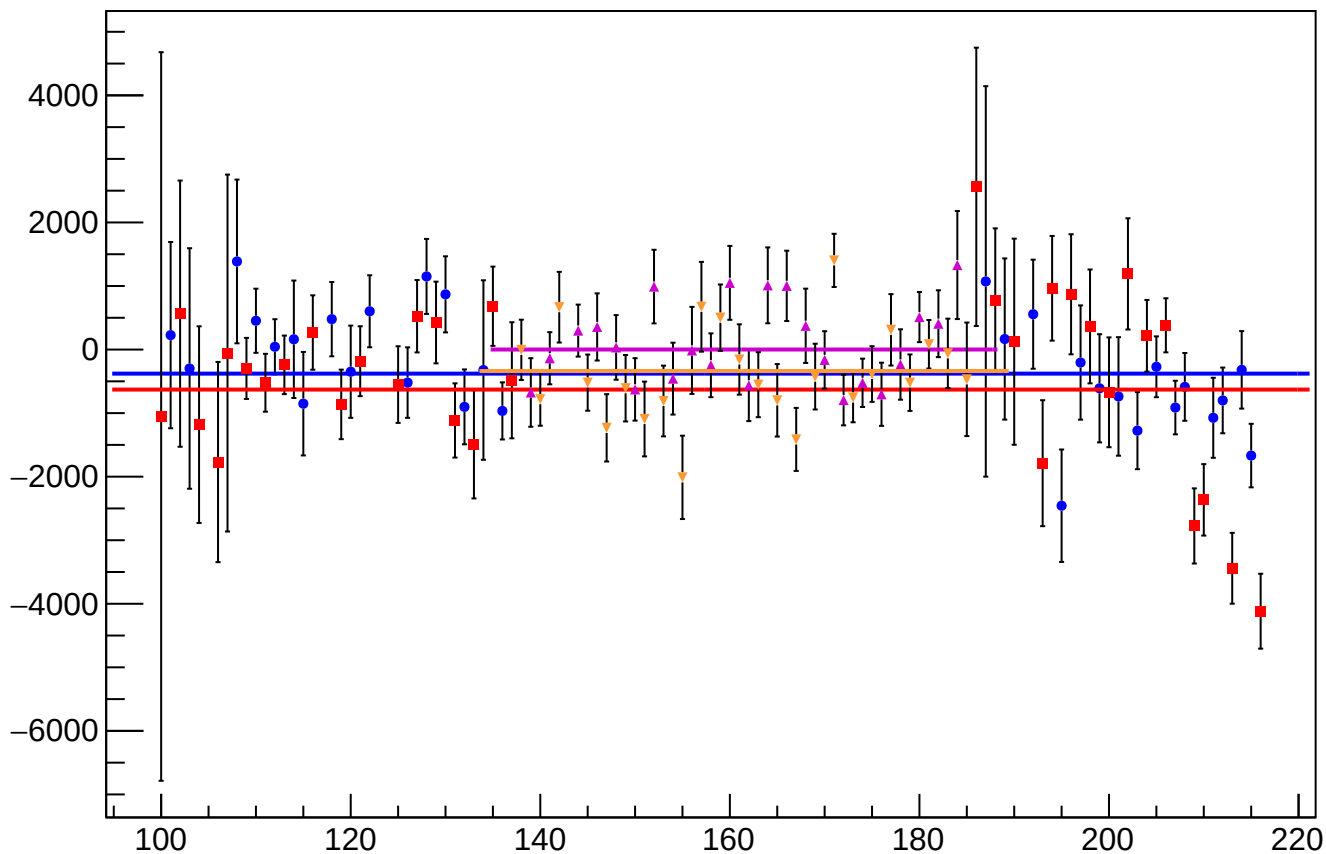
Left In: 1084.166+/-0.179  $\chi^2/\text{NDF}$ : 53438.8/22

+ sign 1095.817+/-0.127  $\chi^2/\text{NDF}$ : 717230.3/54

All: 1098.721+/-0.090  $\chi^2/\text{NDF}$ : 1044784.0/11

- sign 1101.670+/-0.128  $\chi^2/\text{NDF}$ : 326492.4/55

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-378.705 \pm 115.640$   $\chi^2/\text{NDF}: 45.1/30$

Left Out:  $-337.816 \pm 102.601$   $\chi^2/\text{NDF}: 48.8/23$

Right Out:  $-629.669 \pm 118.980$   $\chi^2/\text{NDF}: 126.6/32$

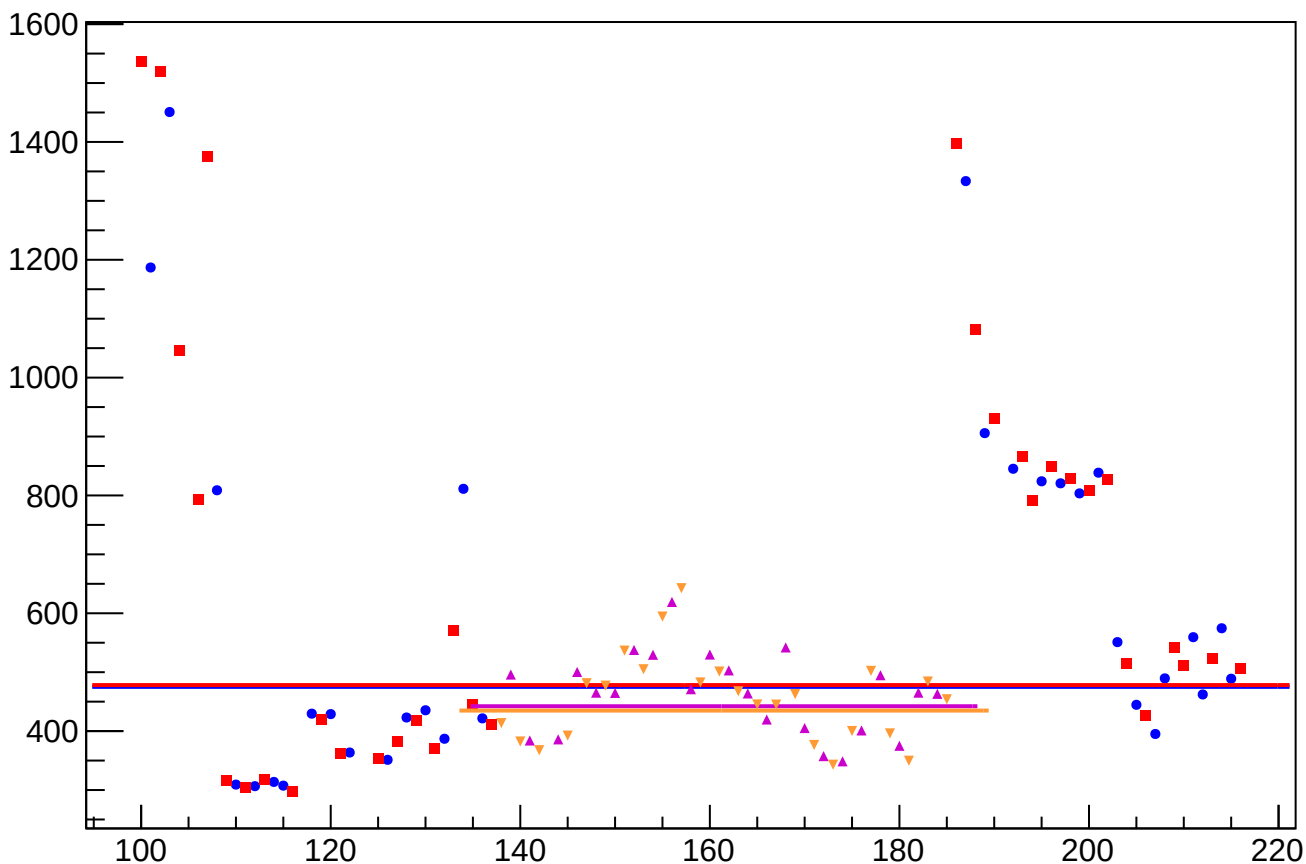
Left In:  $0.567 \pm 104.733$   $\chi^2/\text{NDF}: 31.9/22$

+ sign  $-355.826 \pm 76.748$   $\chi^2/\text{NDF}: 93.9/54$

All:  $-316.178 \pm 54.917$   $\chi^2/\text{NDF}: 268.7/110$

- sign  $-274.578 \pm 78.614$   $\chi^2/\text{NDF}: 174.2/55$

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 475.115 $\pm$ 0.082  $\chi^2$ /NDF: 4381740.3/30

Left Out: 434.856 $\pm$ 0.073  $\chi^2$ /NDF: 878507.3/23

Right Out: 478.117 $\pm$ 0.084  $\chi^2$ /NDF: 5427432.2/32

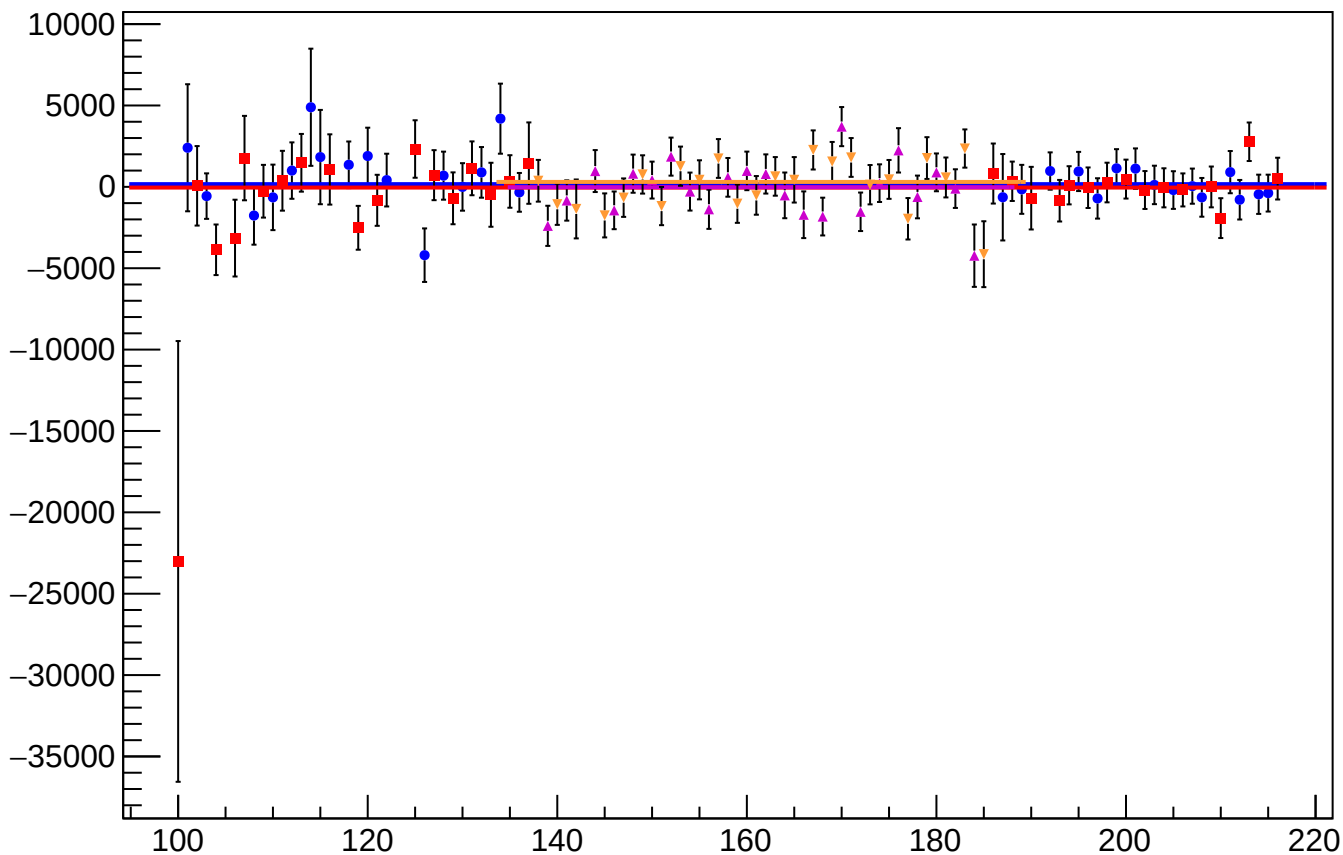
Left In: 442.210 $\pm$ 0.074  $\chi^2$ /NDF: 825844.5/22

+ sign 452.589 $\pm$ 0.054  $\chi^2$ /NDF: 5395882.4/54

All: 455.174 $\pm$ 0.039  $\chi^2$ /NDF: 11756439.7/117

- sign 457.886 $\pm$ 0.056  $\chi^2$ /NDF: 6355908.0/55

# dit\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 166.662 $\pm$ 255.533  $\chi^2$ /NDF: 21.8/30

Left Out: 303.404 $\pm$ 255.556  $\chi^2$ /NDF:28.5/23

Right Out: -44.362 $\pm$ 258.024  $\chi^2$ /NDF: 28.4/32

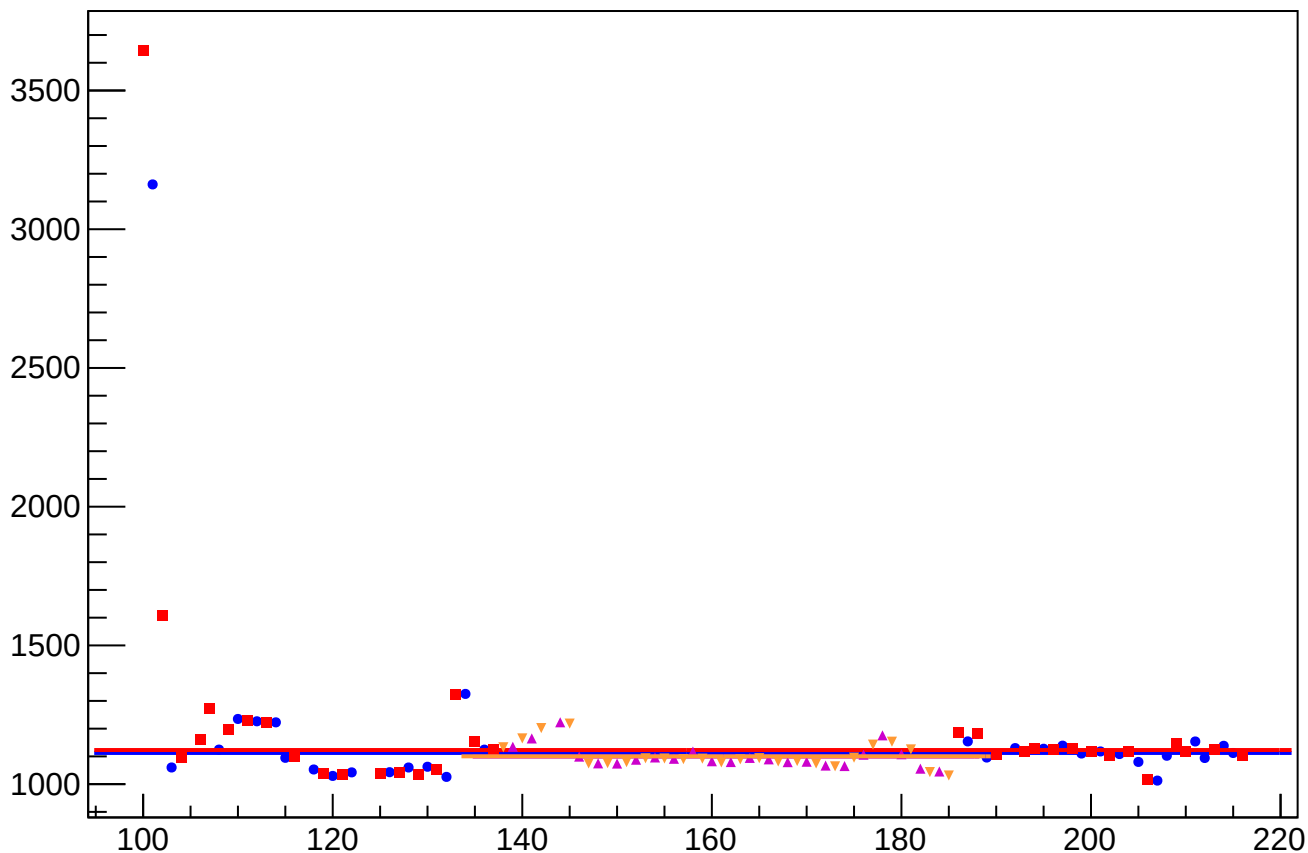
Left In: -25.319 $\pm$ 256.866  $\chi^2$ /NDF:35.9/22

+ sign 235.027 $\pm$ 180.697  $\chi^2$ /NDF: 50.5/54

All: 101.113 $\pm$ 128.244  $\chi^2$ /NDF: 115.8/110

- sign -34.798 $\pm$ 182.040  $\chi^2$ /NDF: 64.2/55

# dit\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1112.468 $\pm$ 0.181  $\chi^2$ /NDF: 642473.2/30

Left Out: 1100.258 $\pm$ 0.181  $\chi^2$ /NDF: 48774.1/23

Right Out: 1122.951 $\pm$ 0.182  $\chi^2$ /NDF: 259545.8/32

Left In: 1099.342 $\pm$ 0.182  $\chi^2$ /NDF: 44785.6/22

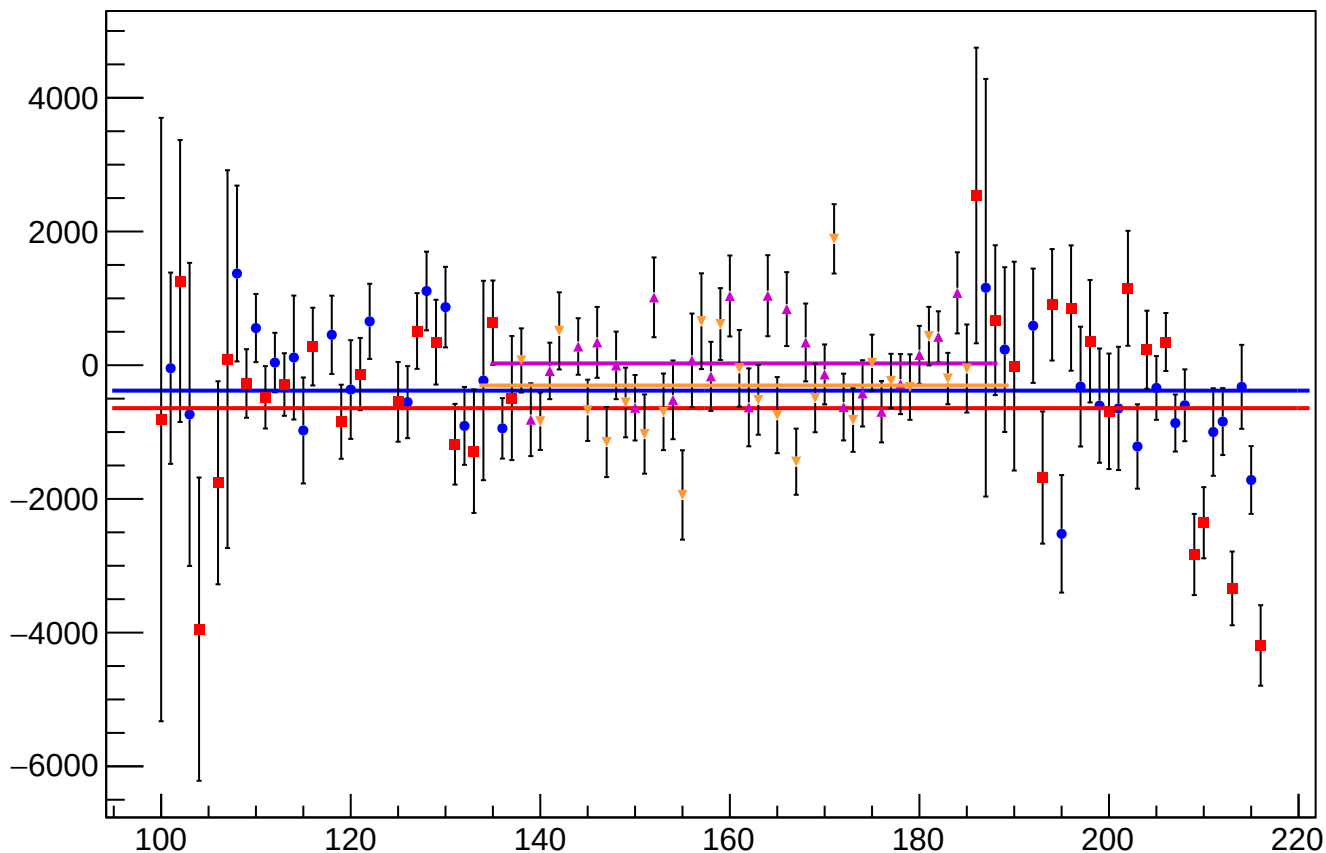
+ sign 1106.364 $\pm$ 0.128  $\chi^2$ /NDF: 693530.3/54

All: 1108.711 $\pm$ 0.091  $\chi^2$ /NDF: 1006951.6/11

- sign 1111.093 $\pm$ 0.129  $\chi^2$ /NDF: 312741.3/55



asym\_us\_dd\_atlr\_dd\_dd\_dit\_correction\_mean vs Slug



Right In:  $-380.405 \pm 116.250$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-303.217 \pm 102.979$   $\chi^2/\text{NDF}: 49.5/23$

Right Out:  $-642.266 \pm 120.324$   $\chi^2/\text{NDF}: 126.0/32$

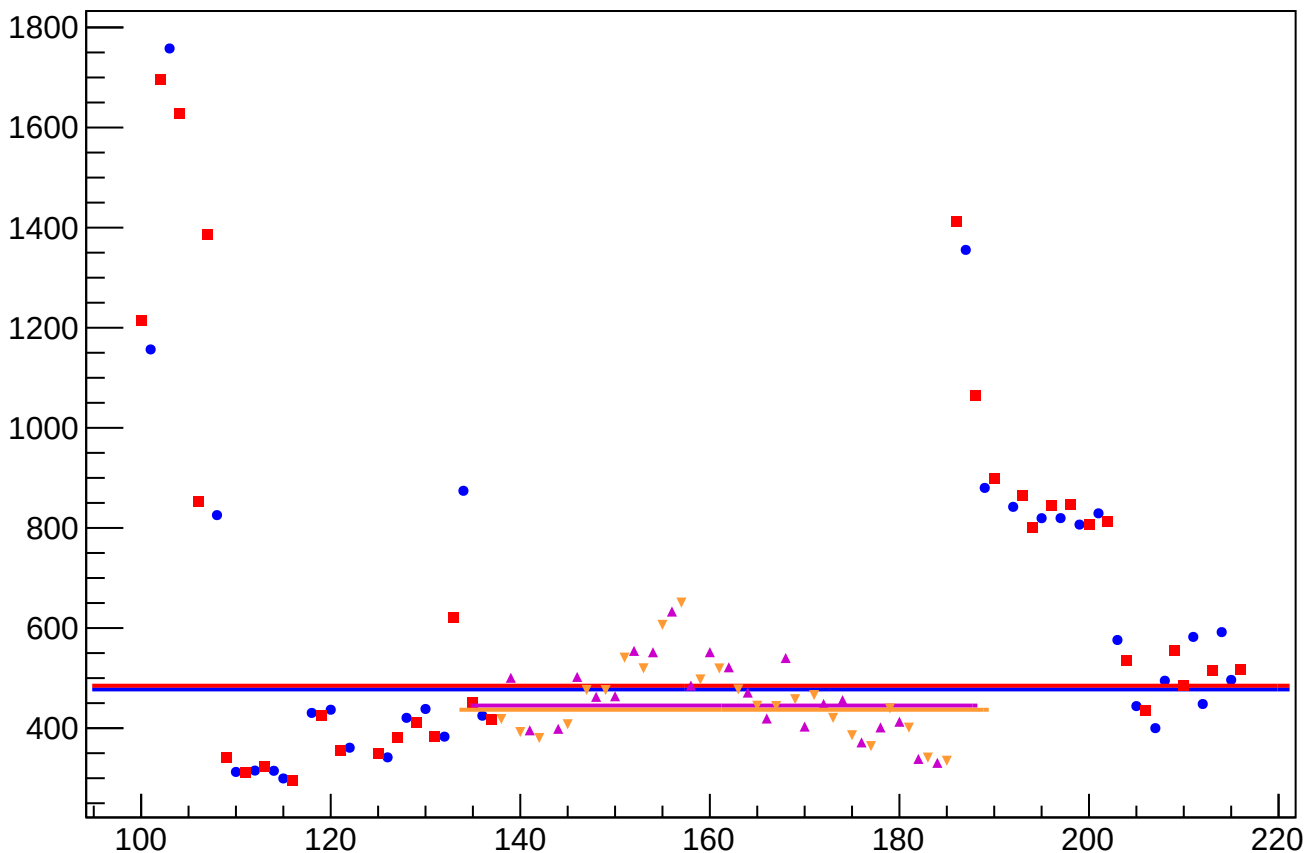
Left In:  $26.740 \pm 105.420$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $-337.156 \pm 77.084$   $\chi^2/\text{NDF}: 95.2/54$

All:  $-301.508 \pm 55.271$   $\chi^2/\text{NDF}: 267.0/110$

- sign  $-263.788 \pm 79.292$   $\chi^2/\text{NDF}: 171.4/55$

asym\_us\_dd\_atlr\_dd\_dd\_dit\_correction\_rms vs Slug



Right In: 477.424 $\pm$ 0.082  $\chi^2/\text{NDF}$ : 4517233.9/30

Left Out: 436.787 $\pm$ 0.073  $\chi^2/\text{NDF}$ :855206.3/23

Right Out: 484.823 $\pm$ 0.085  $\chi^2/\text{NDF}$ : 5740314.7/32

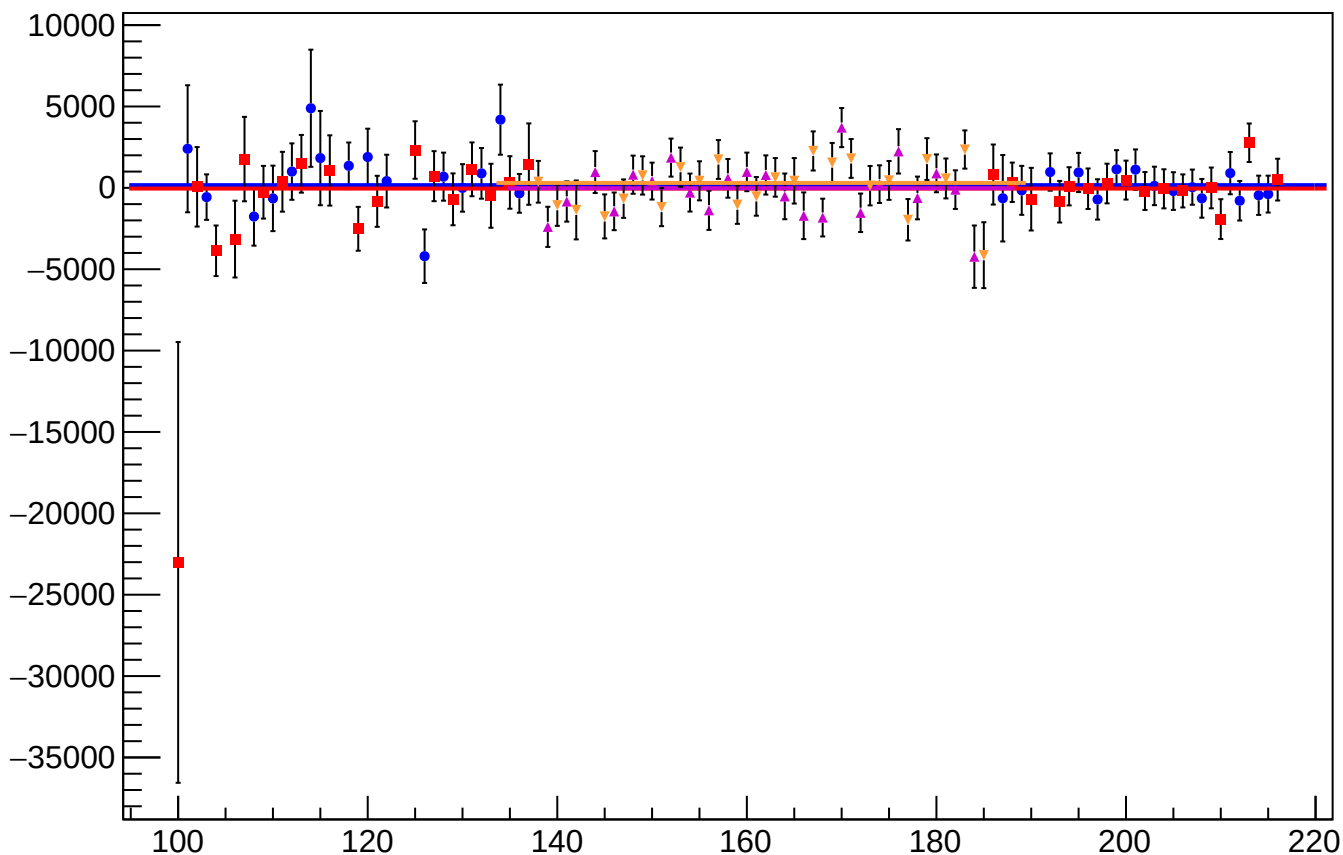
Left In: 445.109 $\pm$ 0.075  $\chi^2/\text{NDF}$ :874534.9/22

+ sign 454.654 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 5509374.0/54

All: 458.396 $\pm$ 0.039  $\chi^2/\text{NDF}$ : 12257186.9/11

- sign 462.356 $\pm$ 0.056  $\chi^2/\text{NDF}$ : 6738113.7/55

eigen\_dit\_asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In: 166.660 $\pm$ 255.533  $\chi^2$ /NDF: 21.8/30

Left Out: 303.402 $\pm$ 255.556  $\chi^2$ /NDF:28.5/23

Right Out: -44.362 $\pm$ 258.024  $\chi^2$ /NDF: 28.4/32

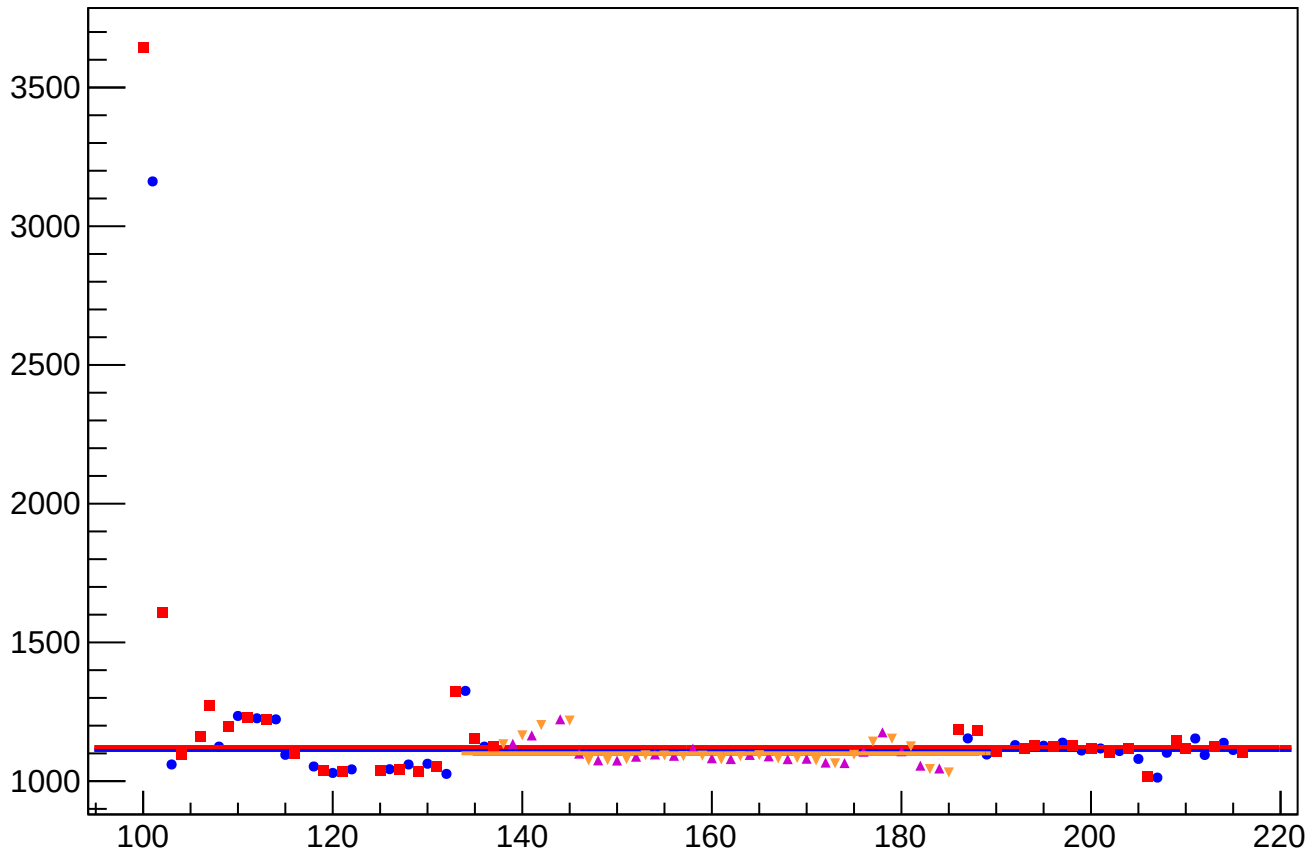
Left In: -25.320 $\pm$ 256.866  $\chi^2$ /NDF:35.9/22

+ sign 235.025 $\pm$ 180.697  $\chi^2$ /NDF: 50.5/54

All: 101.112 $\pm$ 128.244  $\chi^2$ /NDF: 115.8/110

- sign -34.798 $\pm$ 182.040  $\chi^2$ /NDF: 64.2/55

# eigen\_dit\_asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1112.468 $\pm$ 0.181  $\chi^2$ /NDF: 642473.2/30

Left Out: 1100.258 $\pm$ 0.181  $\chi^2$ /NDF: 48774.3/23

+ sign 1106.364 $\pm$ 0.128  $\chi^2$ /NDF: 693530.6/54

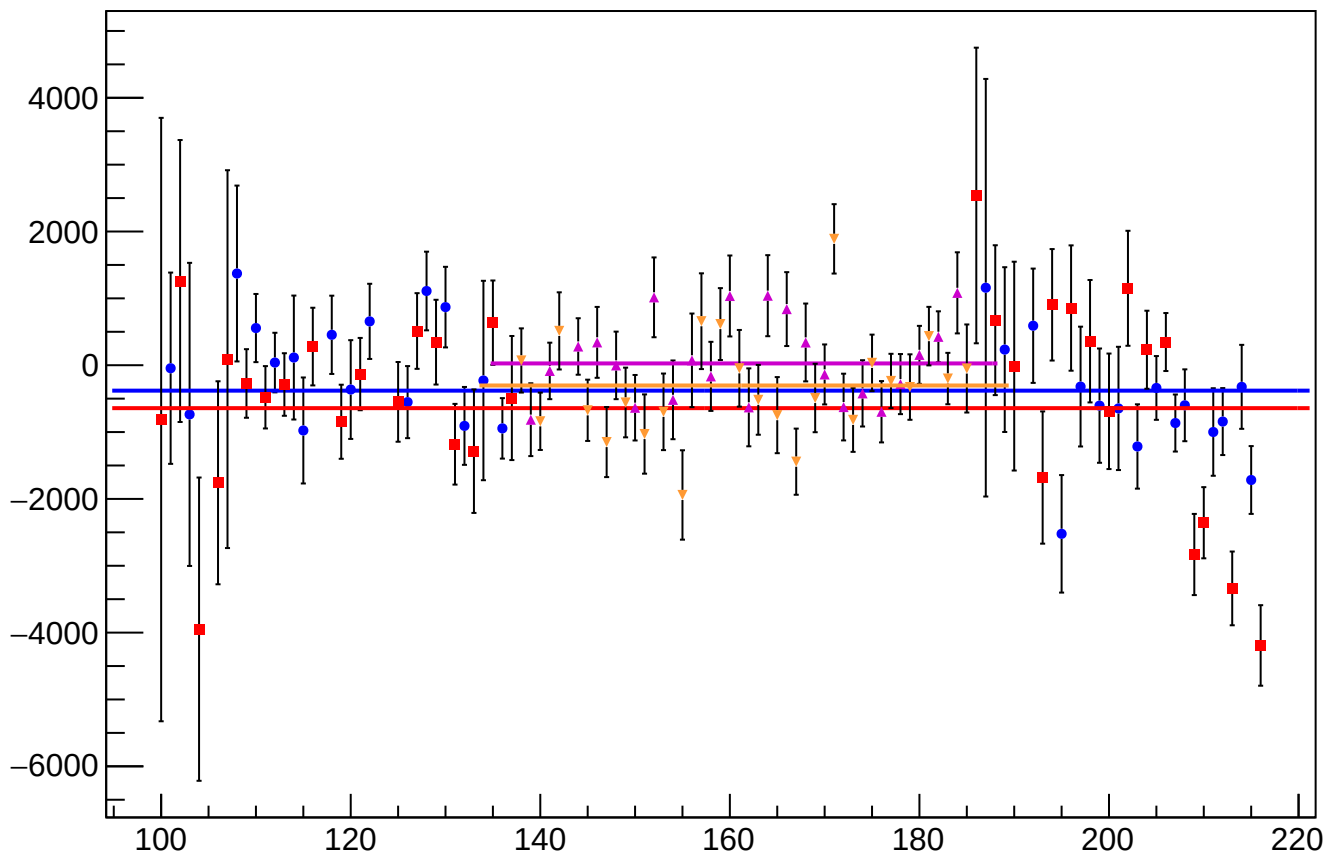
Right Out: 1122.951 $\pm$ 0.182  $\chi^2$ /NDF: 259545.9/32

All: 1108.711 $\pm$ 0.091  $\chi^2$ /NDF: 1006952.1/11

- sign 1111.093 $\pm$ 0.129  $\chi^2$ /NDF: 312741.5/55

Left In: 1099.342 $\pm$ 0.182  $\chi^2$ /NDF: 44785.7/22

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-380.408 \pm 116.249$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-303.218 \pm 102.979$   $\chi^2/\text{NDF}: 49.5/23$

Right Out:  $-642.256 \pm 120.323$   $\chi^2/\text{NDF}: 126.0/32$

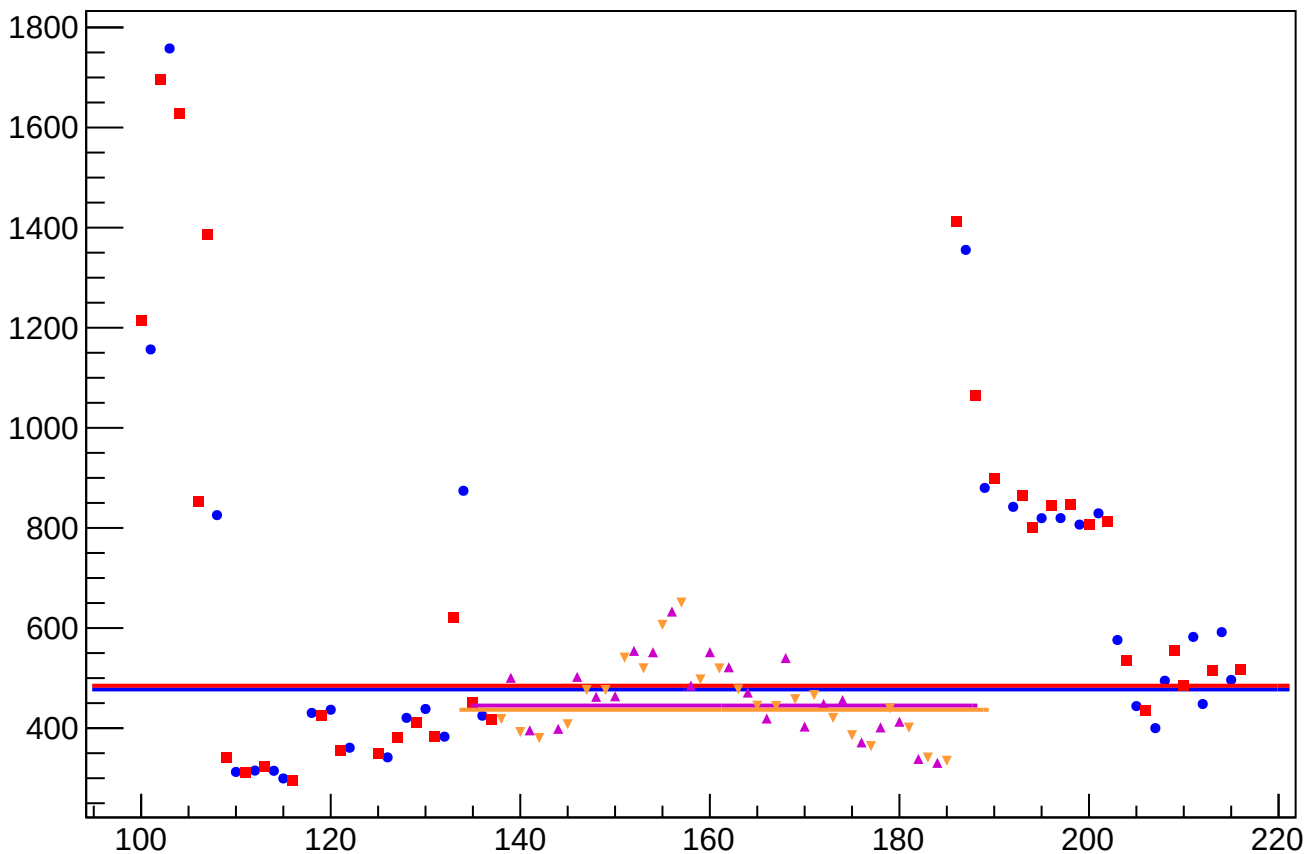
Left In:  $26.739 \pm 105.420$   $\chi^2/\text{NDF}: 27.9/22$

+ sign  $-337.158 \pm 77.084$   $\chi^2/\text{NDF}: 95.2/54$

All:  $-301.507 \pm 55.271$   $\chi^2/\text{NDF}: 267.0/110$

- sign  $-263.785 \pm 79.292$   $\chi^2/\text{NDF}: 171.4/55$

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 477.421+/-0.082  $\chi^2/\text{NDF}$ : 4517267.9/30

Left Out: 436.787+/-0.073  $\chi^2/\text{NDF}$ : 855236.5/23

Right Out: 484.821+/-0.085  $\chi^2/\text{NDF}$ : 5740384.9/32

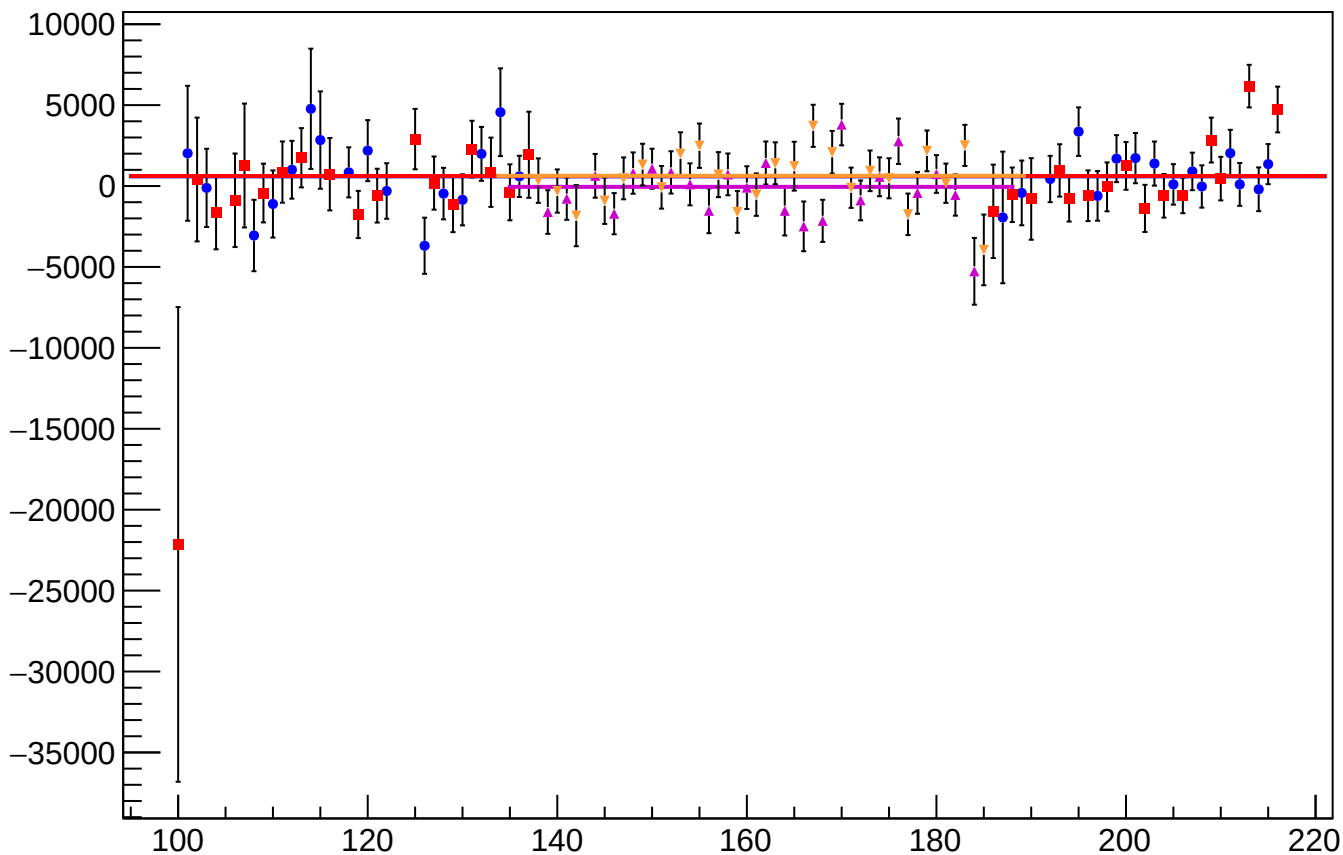
Left In: 445.108+/-0.075  $\chi^2/\text{NDF}$ : 874568.8/22

+ sign 454.653+/-0.055  $\chi^2/\text{NDF}$ : 5509425.4/54

All: 458.395+/-0.039  $\chi^2/\text{NDF}$ : 12257330.0/11

- sign 462.354+/-0.056  $\chi^2/\text{NDF}$ : 6738205.6/55

# asym\_us\_dd\_atlr\_dd\_dd\_mean vs Slug



Right In:  $597.241 \pm 291.691$   $\chi^2/\text{NDF}$ : 25.2/30

Left Out:  $632.875 \pm 274.060$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $617.854 \pm 299.036$   $\chi^2/\text{NDF}$ : 47.7/32

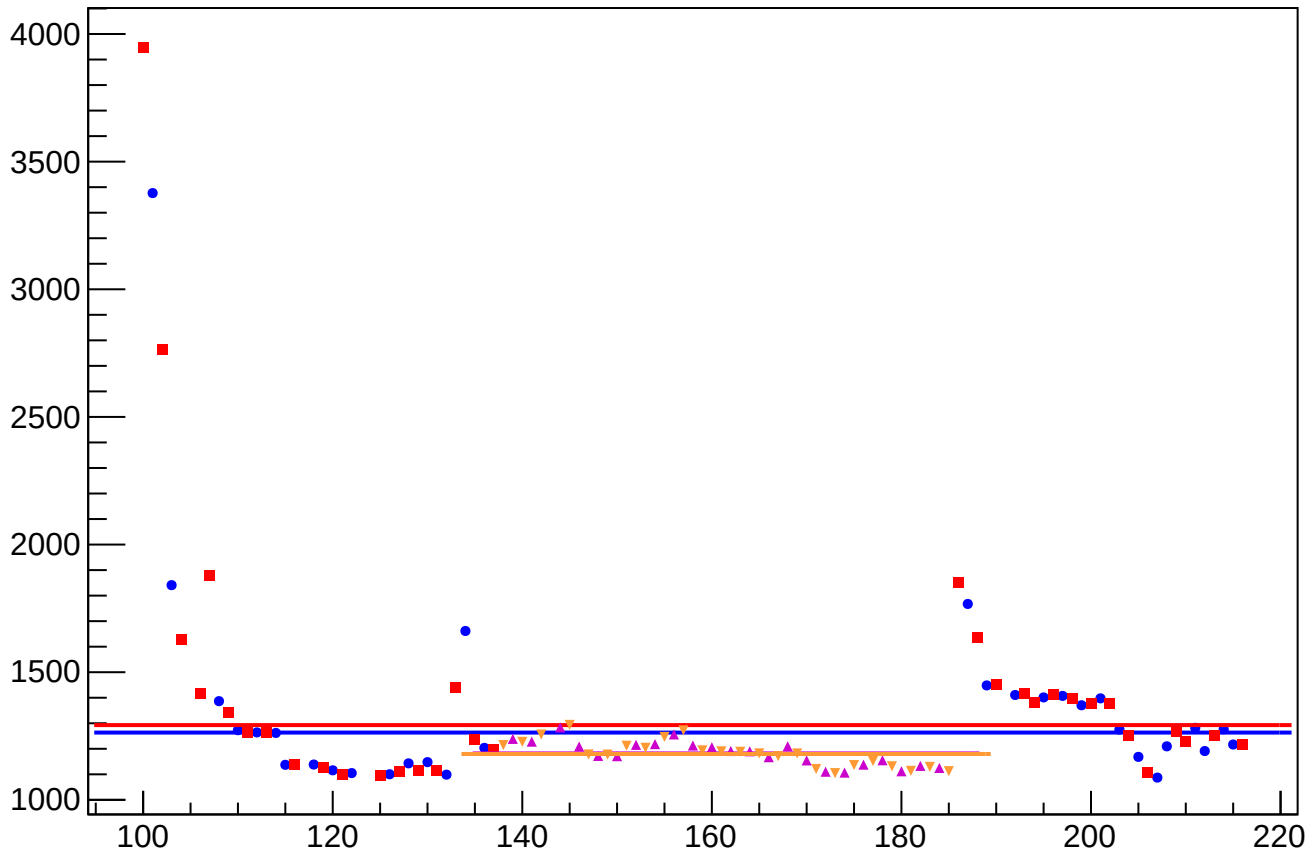
Left In:  $-50.835 \pm 276.213$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $616.167 \pm 199.732$   $\chi^2/\text{NDF}$ : 55.3/54

All:  $439.420 \pm 142.339$   $\chi^2/\text{NDF}$ : 142.3/110

- sign  $257.020 \pm 202.901$   $\chi^2/\text{NDF}$ : 85.4/55

# asym\_us\_dd\_atlr\_dd\_dd\_rms vs Slug



Right In: 1263.574+/-0.206  $\chi^2/\text{NDF}$ : 987284.5/30

Left Out: 1179.713+/-0.194  $\chi^2/\text{NDF}$ : 64667.7/23

Right Out: 1292.857+/-0.211  $\chi^2/\text{NDF}$ : 915336.9/32

Left In: 1181.929+/-0.195  $\chi^2/\text{NDF}$ : 60355.9/22

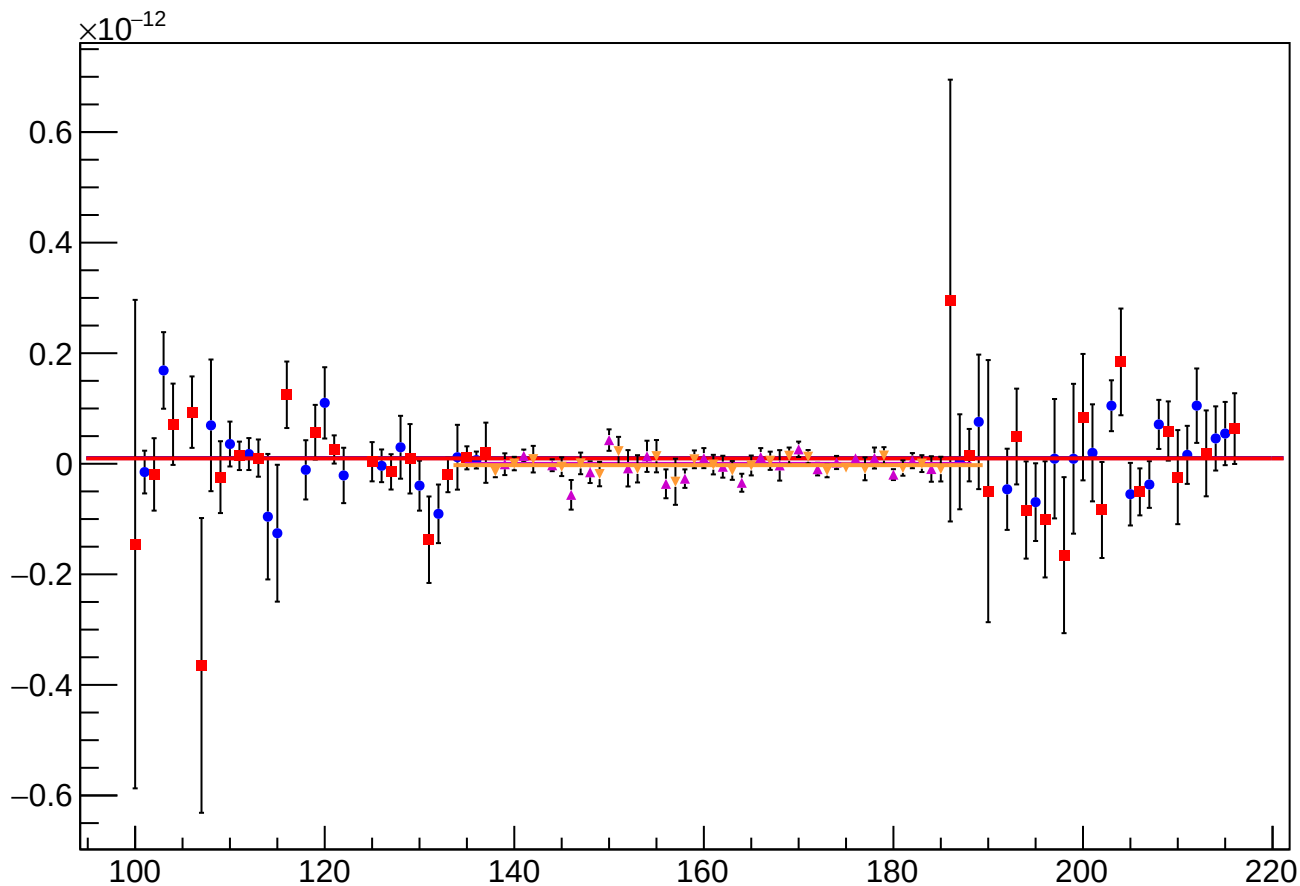
+ sign 1219.032+/-0.141  $\chi^2/\text{NDF}$ : 1139753.3/54

All: 1225.906+/-0.101  $\chi^2/\text{NDF}$ : 2268766.6/111

- sign 1232.999+/-0.143  $\chi^2/\text{NDF}$ : 1124200.8/55



asym\_us\_dd\_atlr\_dd\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.5/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10.5/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.2/32

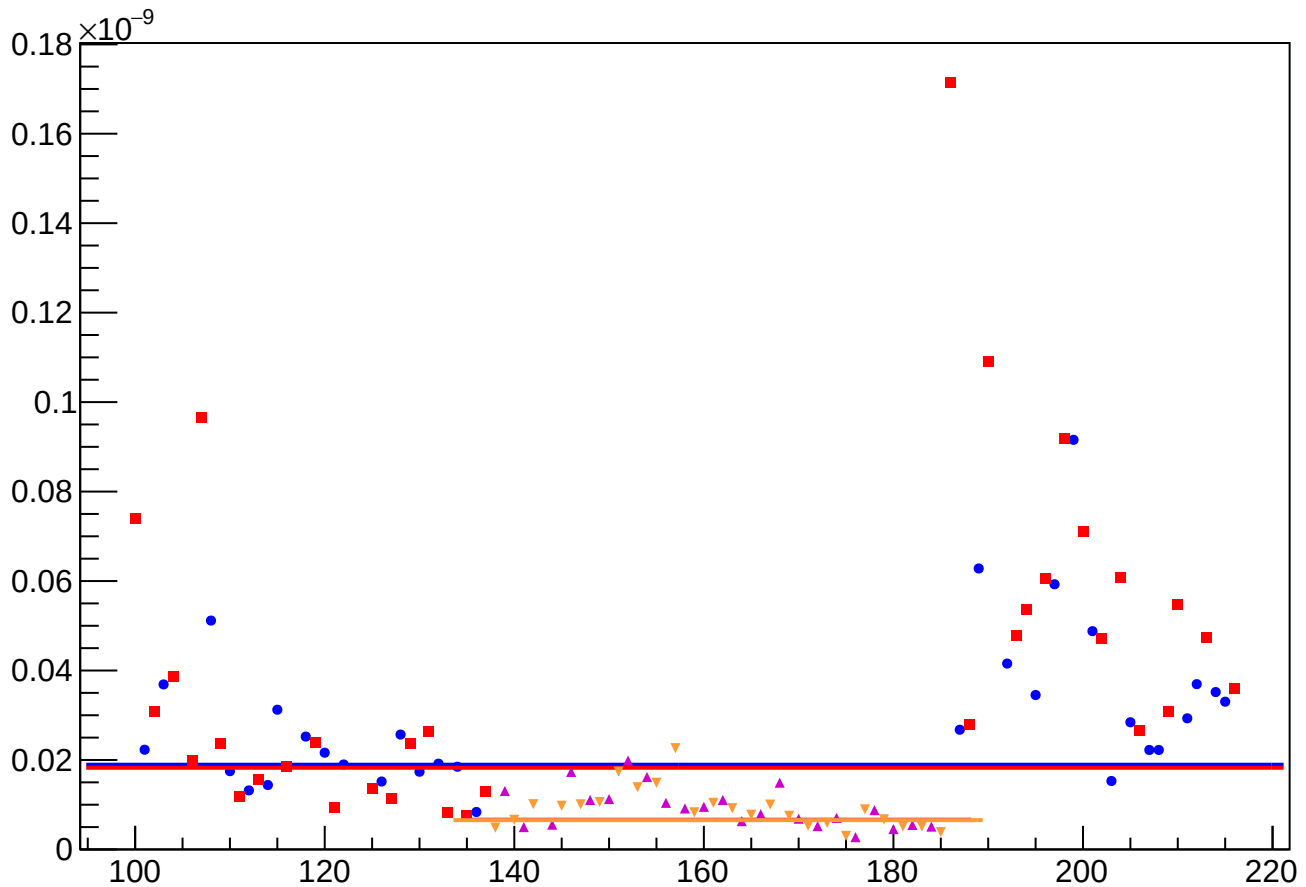
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.1/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 105.3/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.0/55

asym\_us\_dd\_atlr\_dd\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3686773.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2332749.6/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5906676.6/32

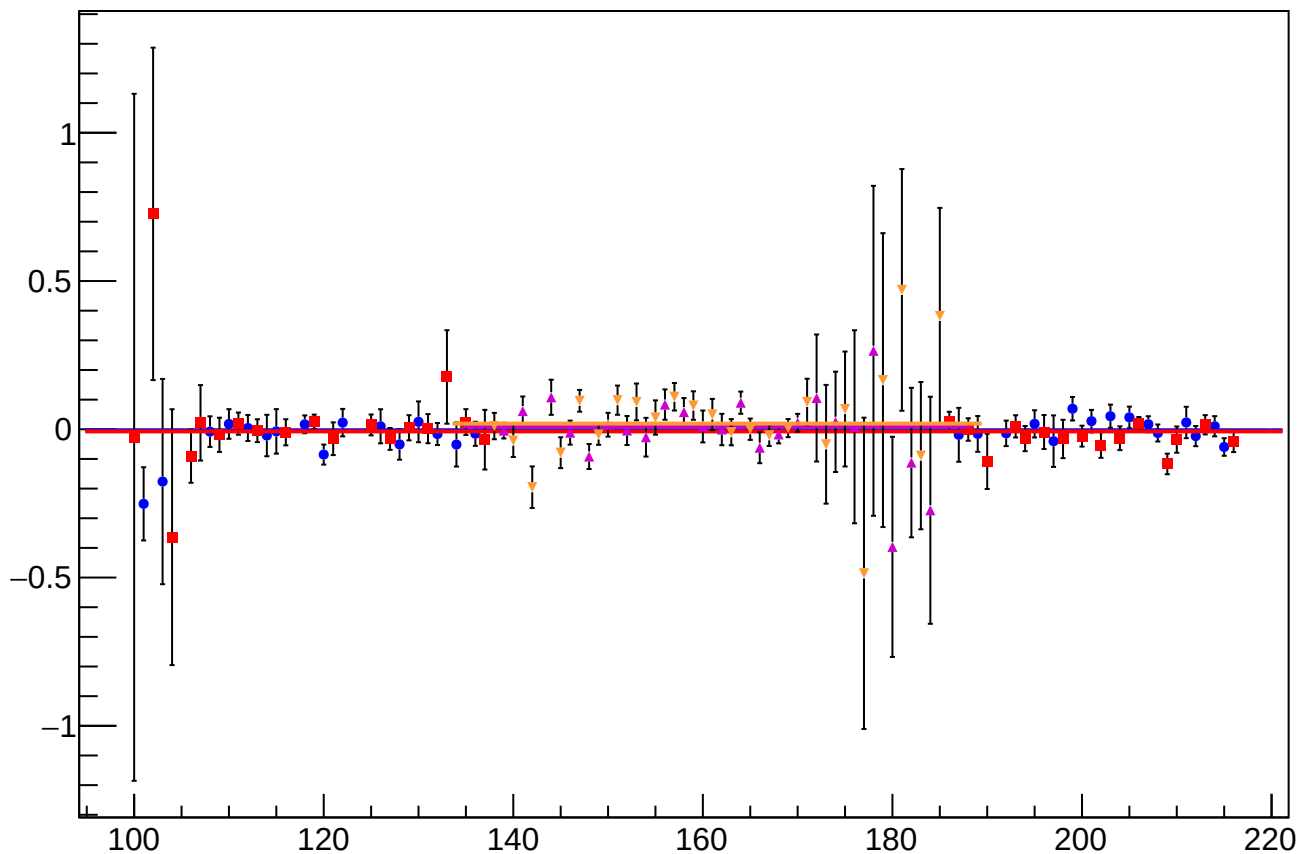
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2542530.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9988189.1/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21780017.1/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11791827.5/55

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/30

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.9/23

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 26.7/32

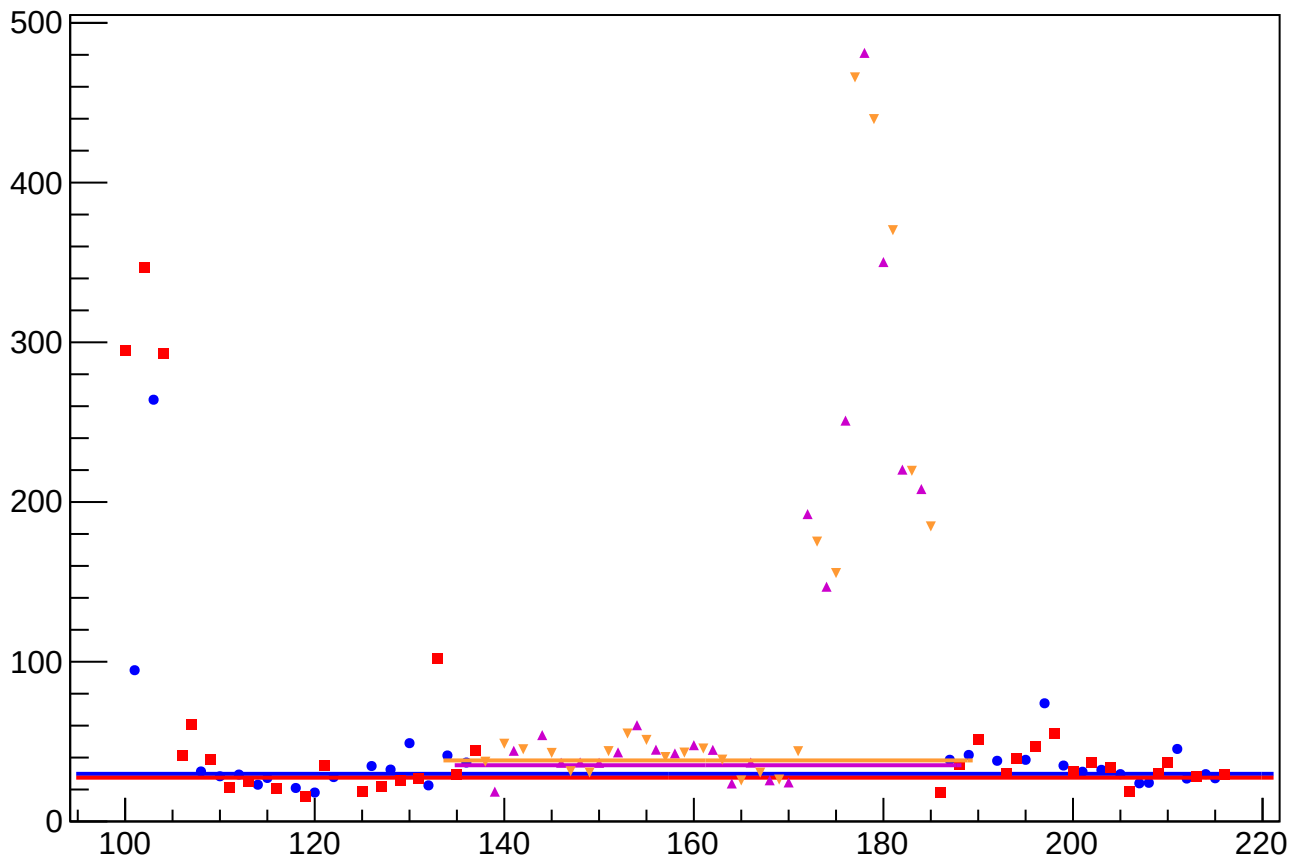
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 116.8/110

- sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 52.2/55

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.808 $\pm$ 0.005  $\chi^2$ /NDF: 3453372.7/30

Left Out: 38.211 $\pm$ 0.008  $\chi^2$ /NDF: 8285024.8/23

Right Out: 27.416 $\pm$ 0.005  $\chi^2$ /NDF: 4826827.0/32

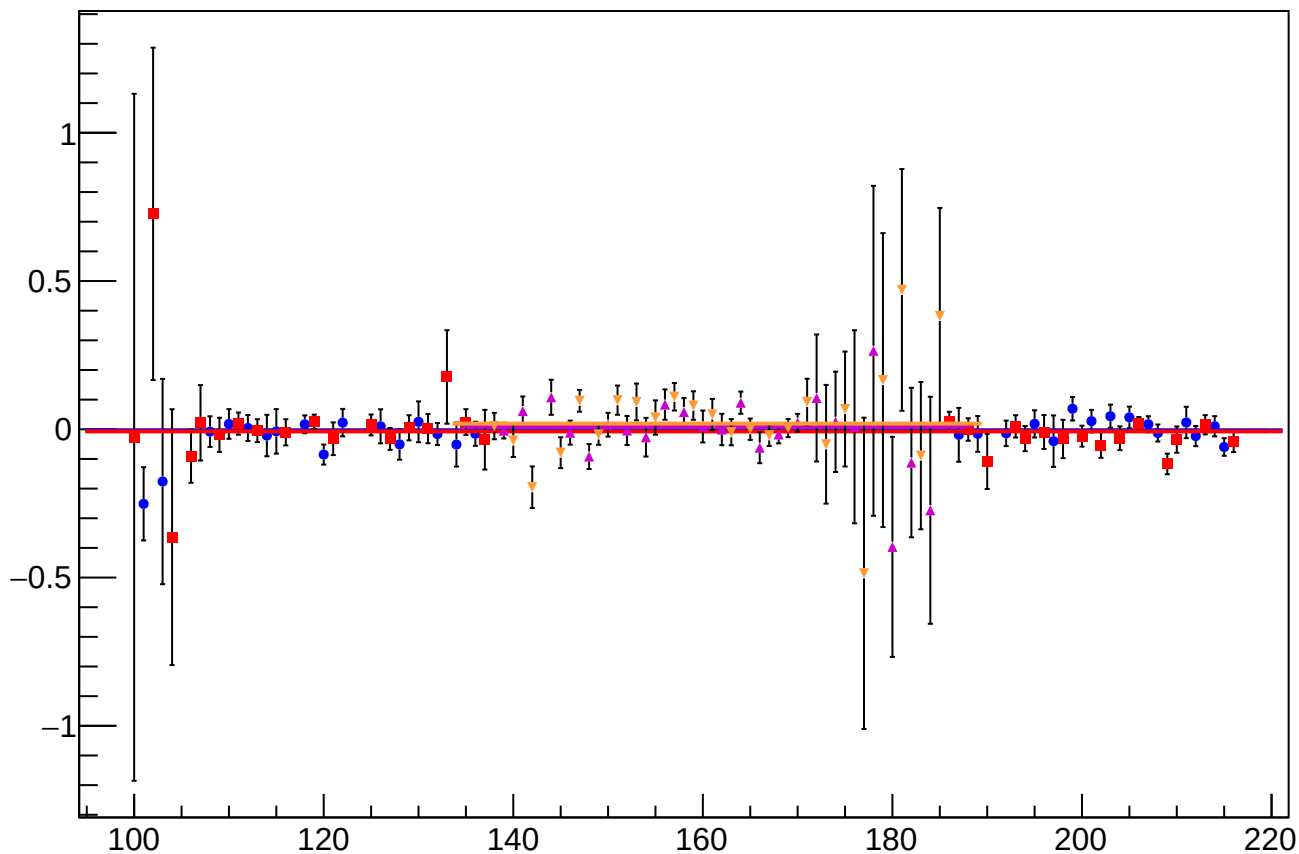
Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9390926.6/22

+ sign 32.657 $\pm$ 0.004  $\chi^2$ /NDF: 12537441.7/54

All: 31.298 $\pm$ 0.003  $\chi^2$ /NDF: 27690684.2/110

- sign 30.066 $\pm$ 0.004  $\chi^2$ /NDF: 14975370.3/55

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.4/30

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}$ : 35.9/23

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 26.7/32

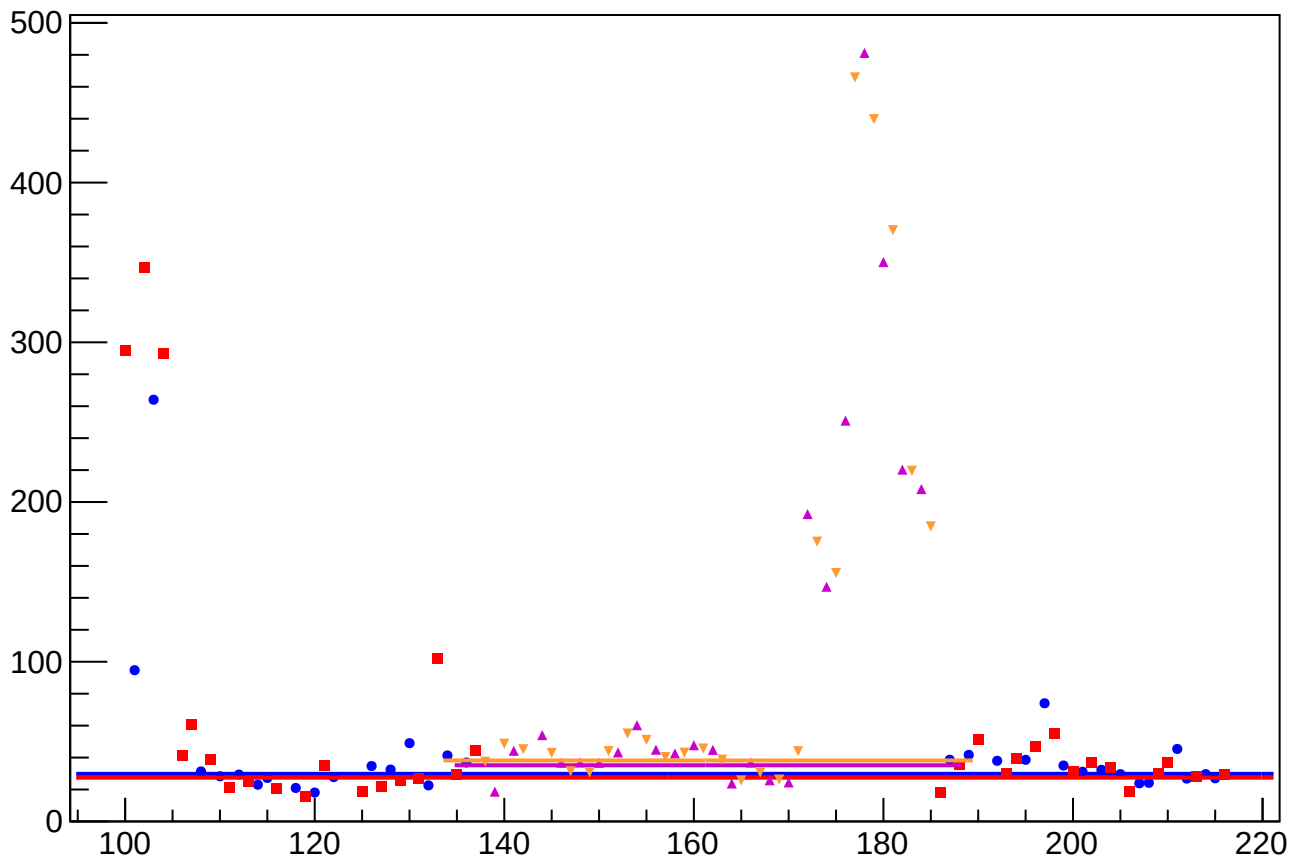
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 64.2/54

All:  $0.001 \pm 0.004$   $\chi^2/\text{NDF}$ : 116.8/110

- sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 52.2/55

asym\_us\_dd\_atlr\_dd\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 29.808 $\pm$ 0.005  $\chi^2$ /NDF: 3453372.7/30

Left Out: 38.211 $\pm$ 0.008  $\chi^2$ /NDF: 8285024.8/23

Right Out: 27.416 $\pm$ 0.005  $\chi^2$ /NDF: 4826827.0/32

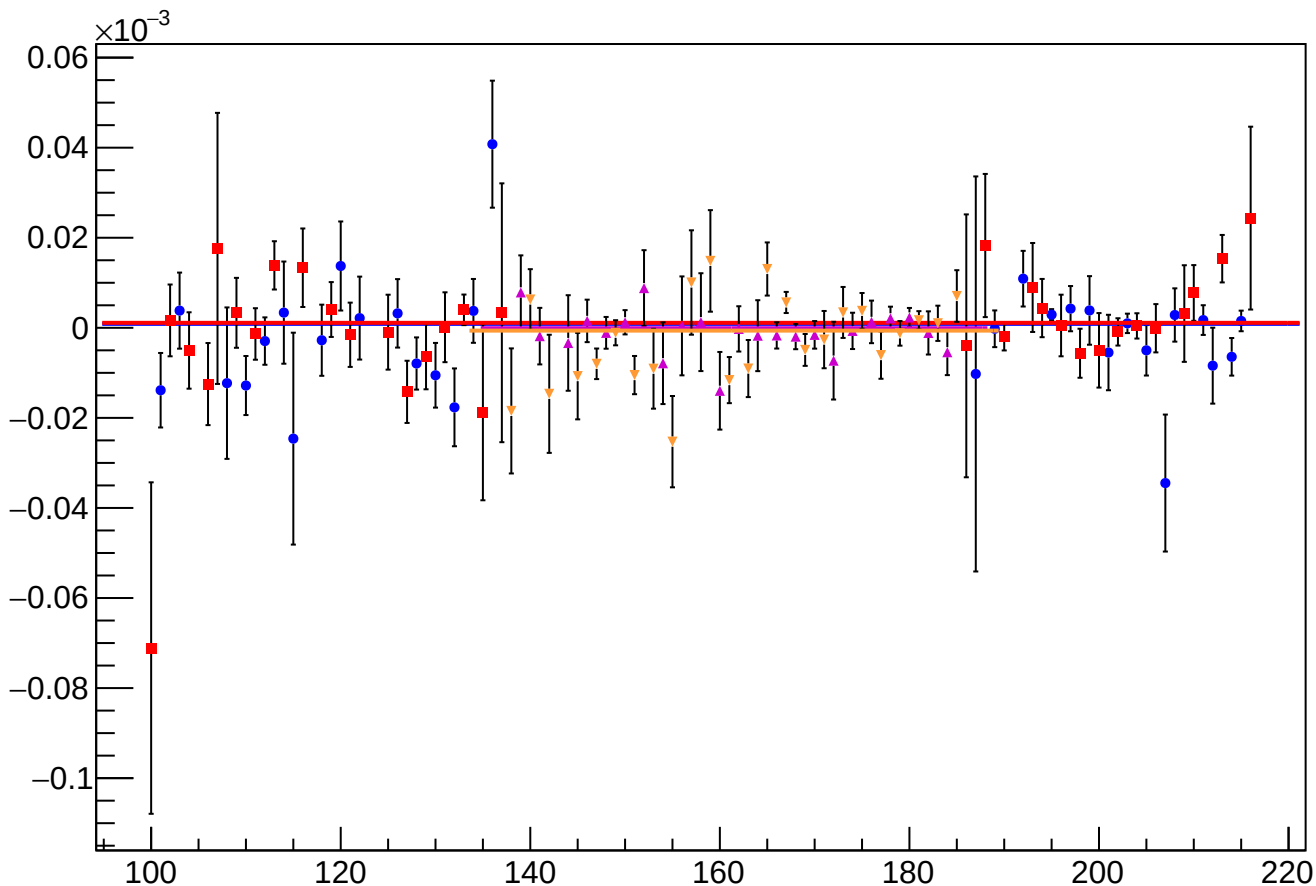
Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9390926.6/22

+ sign 32.657 $\pm$ 0.004  $\chi^2$ /NDF: 12537441.7/54

All: 31.298 $\pm$ 0.003  $\chi^2$ /NDF: 27690684.2/110

- sign 30.066 $\pm$ 0.004  $\chi^2$ /NDF: 14975370.3/55

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.5/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 51.2/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.5/32

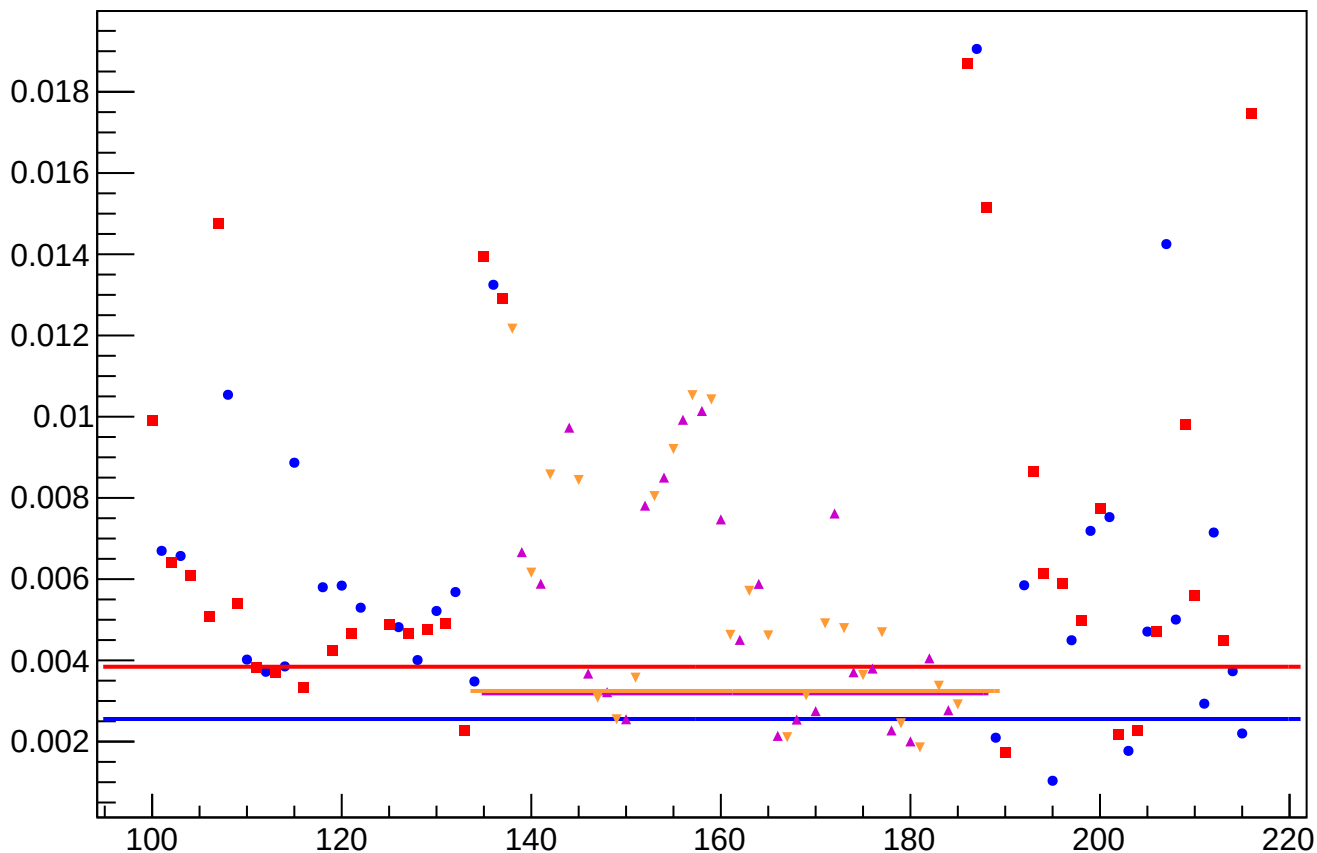
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 11.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 100.3/54

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 150.6/110

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.2/55

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 13168185.1/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7736973.1/23

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 8999811.6/32

Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7301771.9/22

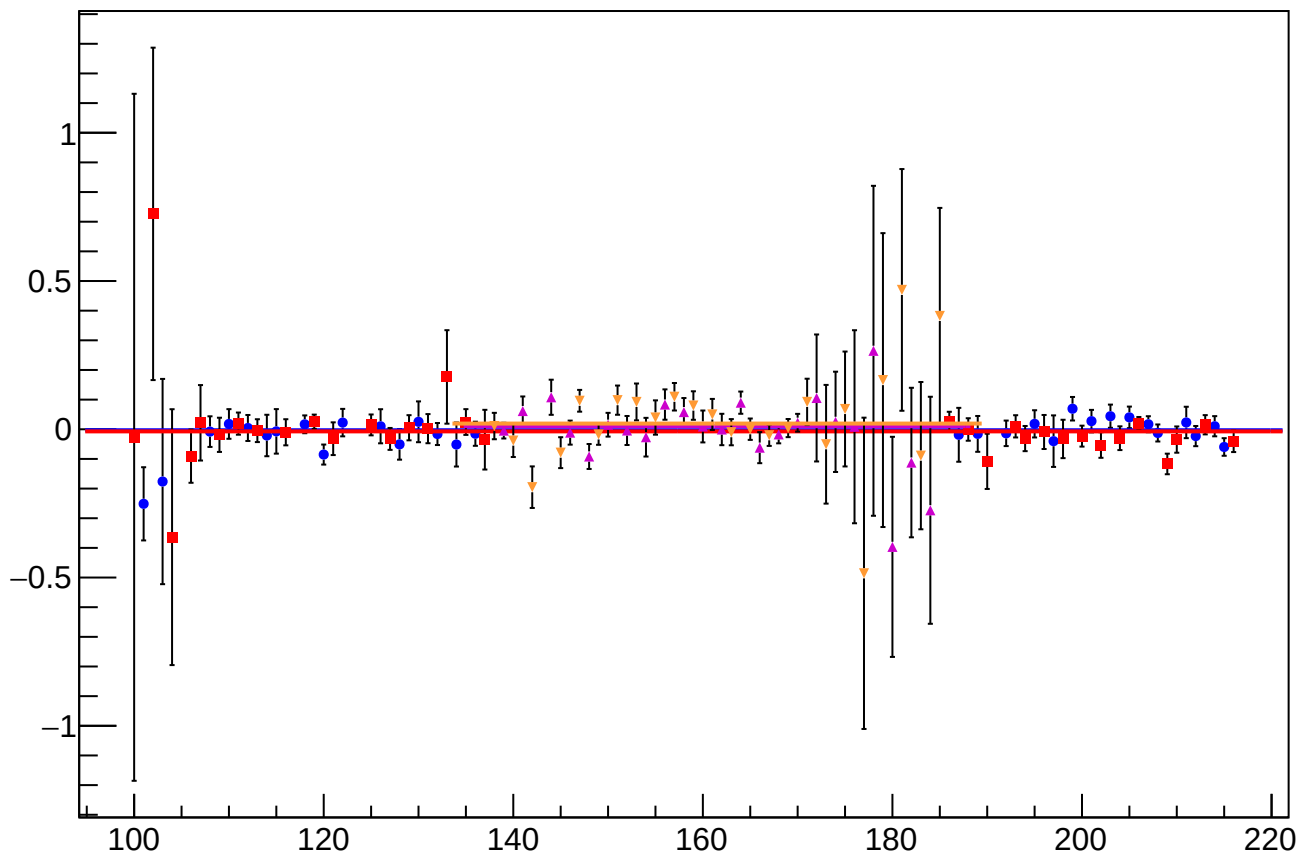
+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 21619251.8/54

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 39292310.1/110

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 16767640.1/55



asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.008$   $\chi^2/\text{NDF}: 25.4/30$

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}: 35.9/23$

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}: 26.7/32$

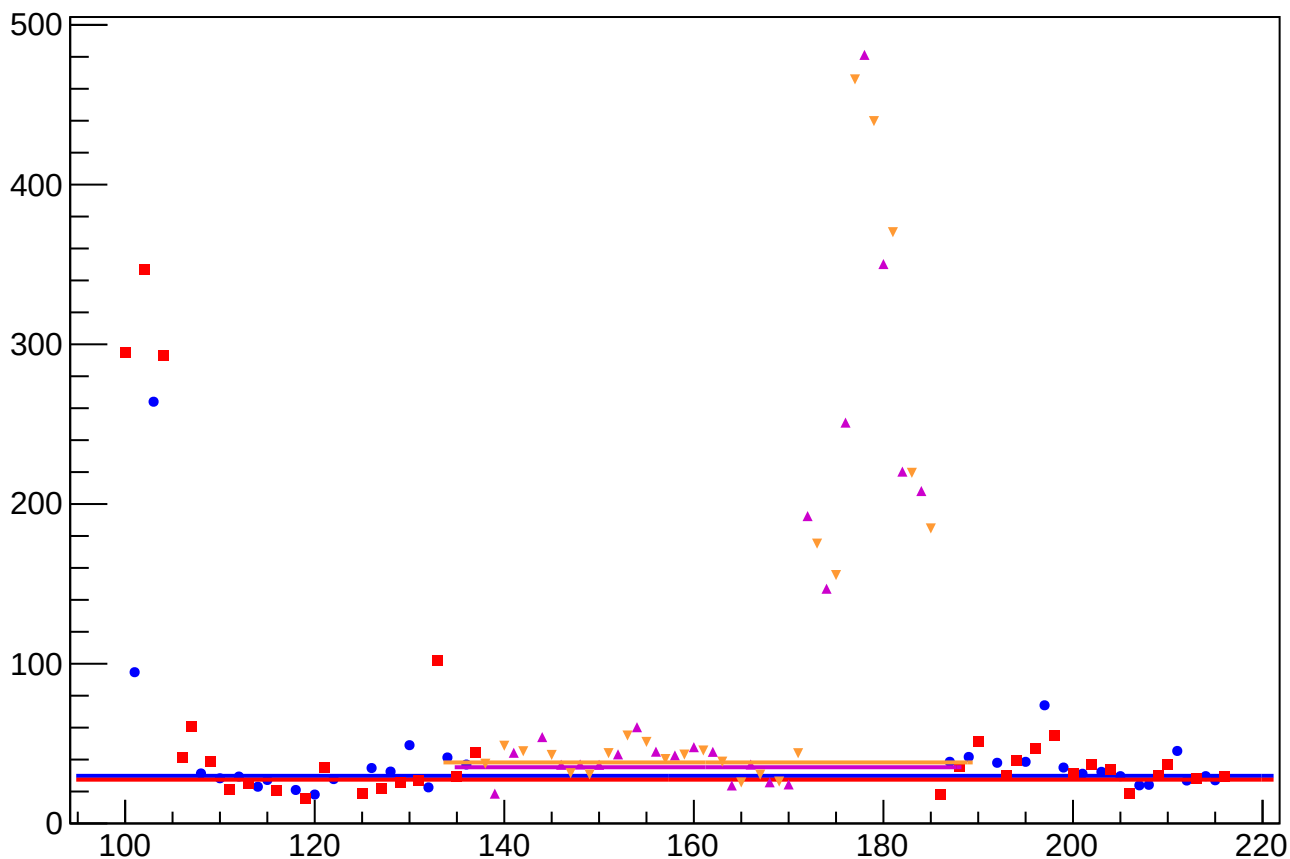
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 23.6/22$

+ sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}: 64.2/54$

All:  $0.001 \pm 0.004$   $\chi^2/\text{NDF}: 116.8/110$

- sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}: 52.2/55$

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 29.807 $\pm$ 0.005  $\chi^2$ /NDF: 3453542.0/30

Left Out: 38.210 $\pm$ 0.008  $\chi^2$ /NDF: 8285200.7/23

Right Out: 27.415 $\pm$ 0.005  $\chi^2$ /NDF: 4827082.9/32

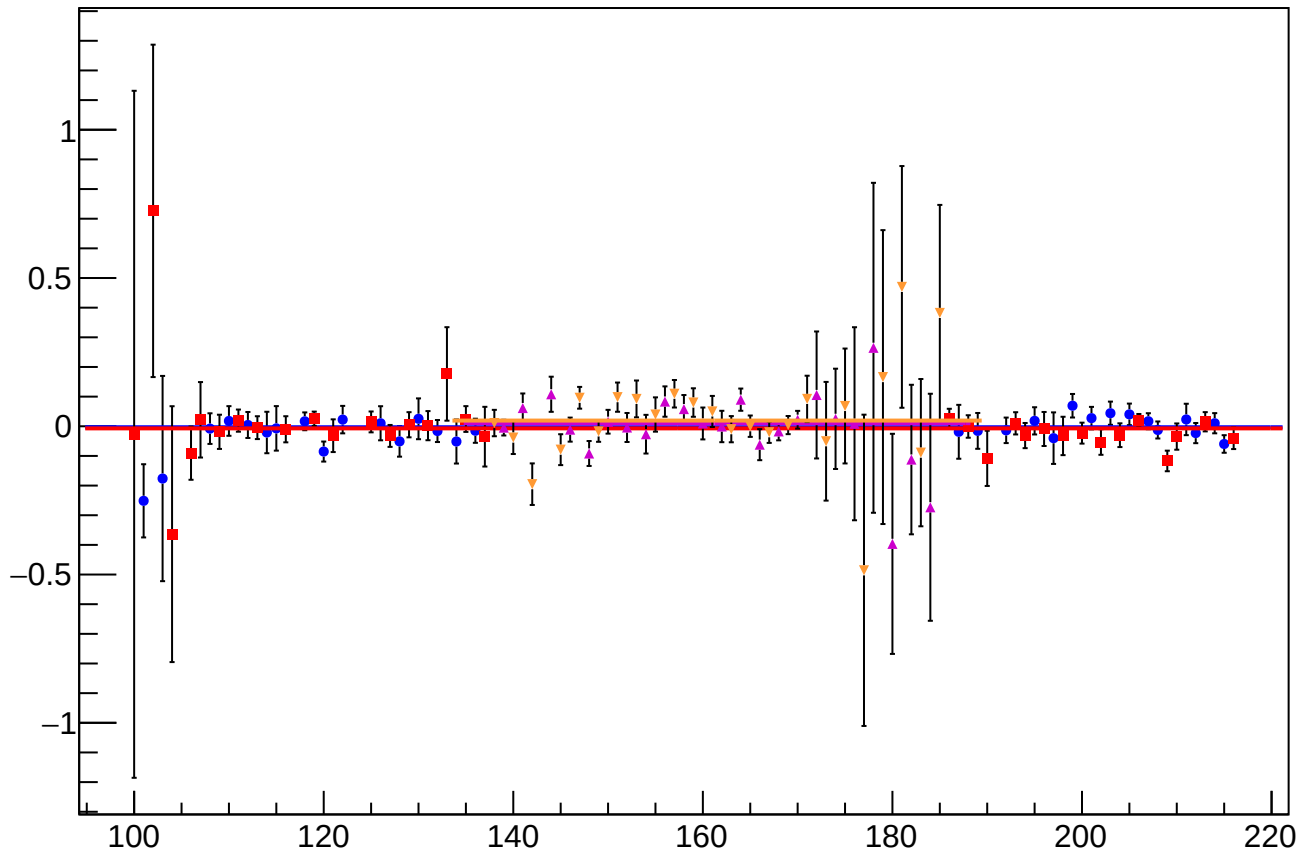
Left In: 35.195 $\pm$ 0.007  $\chi^2$ /NDF: 9391361.4/22

+ sign 32.657 $\pm$ 0.004  $\chi^2$ /NDF: 12537849.9/54

All: 31.297 $\pm$ 0.003  $\chi^2$ /NDF: 27692131.7/110

- sign 30.065 $\pm$ 0.004  $\chi^2$ /NDF: 14976312.9/55

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.008$   $\chi^2/\text{NDF}: 25.4/30$

Left Out:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}: 35.9/23$

Right Out:  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}: 26.7/32$

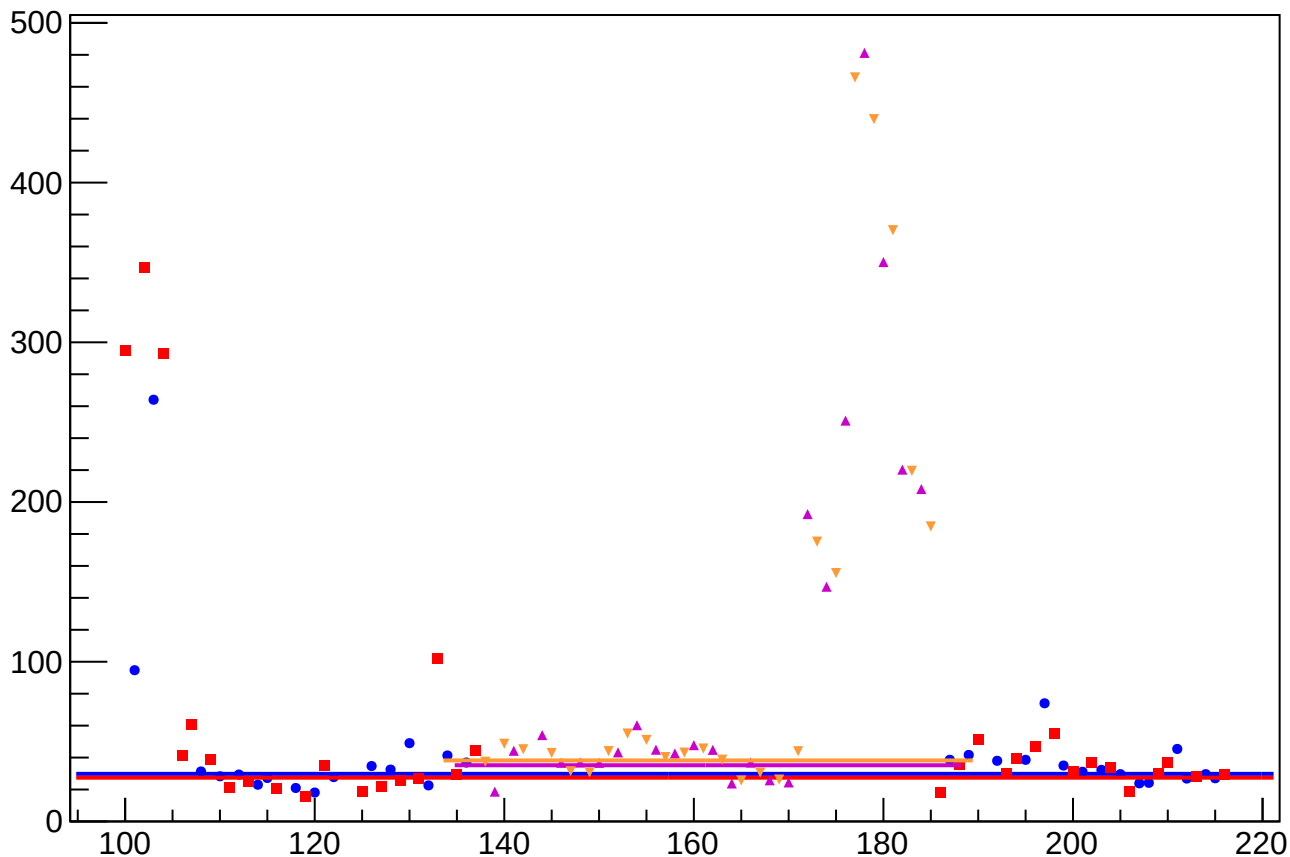
Left In:  $0.010 \pm 0.010$   $\chi^2/\text{NDF}: 23.6/22$

+ sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}: 64.2/54$

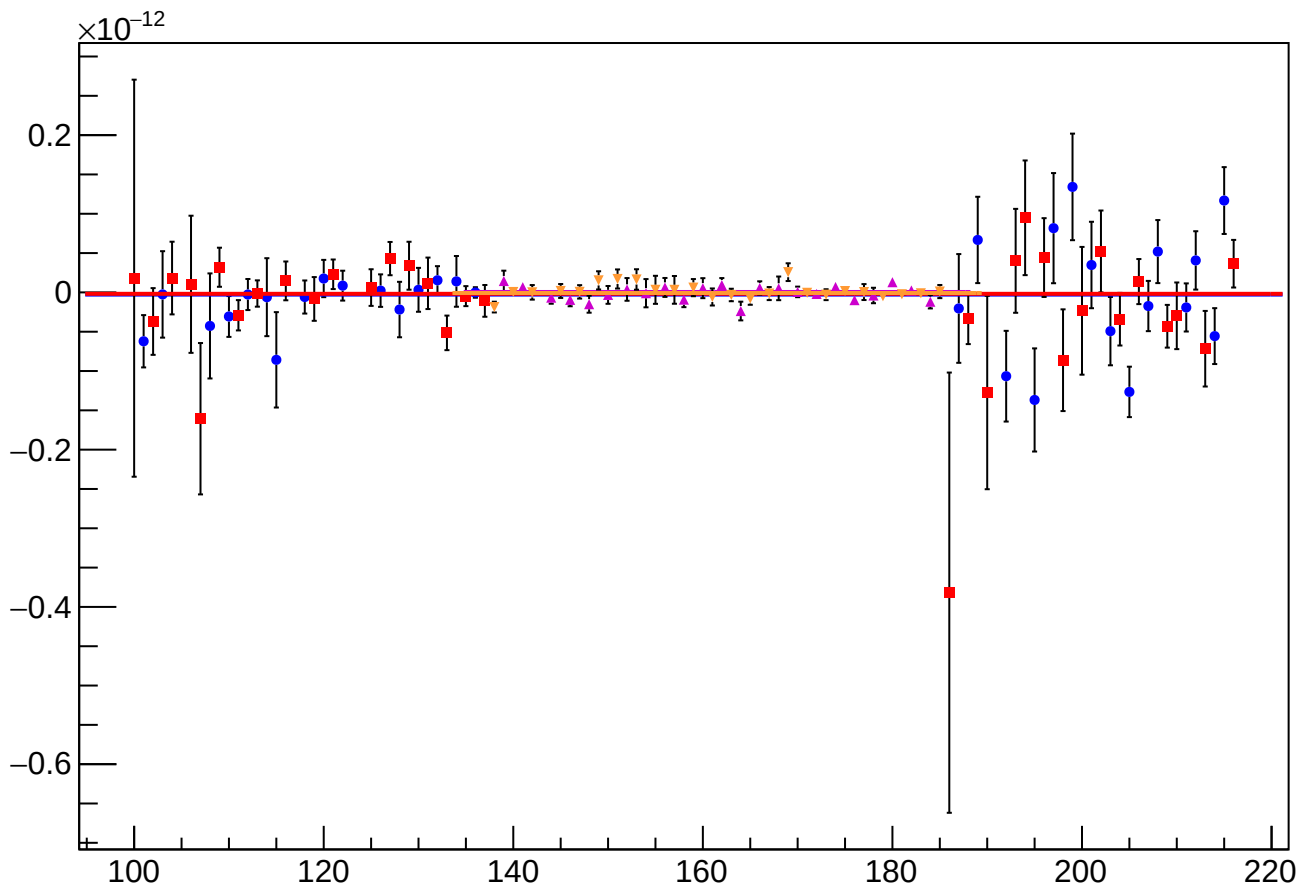
All:  $0.001 \pm 0.004$   $\chi^2/\text{NDF}: 116.8/110$

- sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}: 52.2/55$

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 54.5/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:21.1/23

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 38.5/32

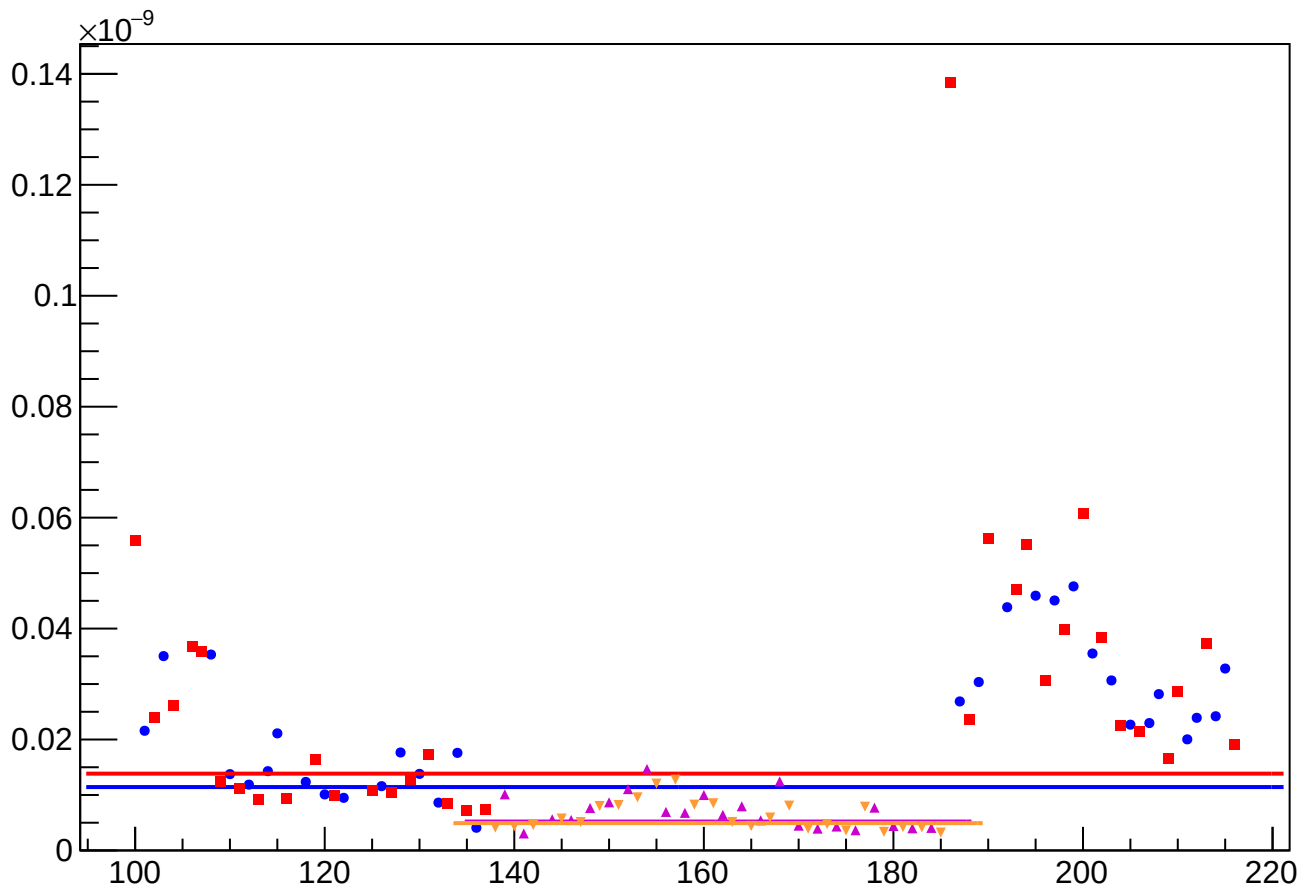
Left In: 0.000+/-0.000  $\chi^2$ /NDF:26.2/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 75.8/54

All: -0.000+/-0.000  $\chi^2$ /NDF: 141.1/110

- sign 0.000+/-0.000  $\chi^2$ /NDF: 65.0/55

asym\_us\_dd\_atlr\_dd\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8851284.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2632036.7/23

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6590777.7/32

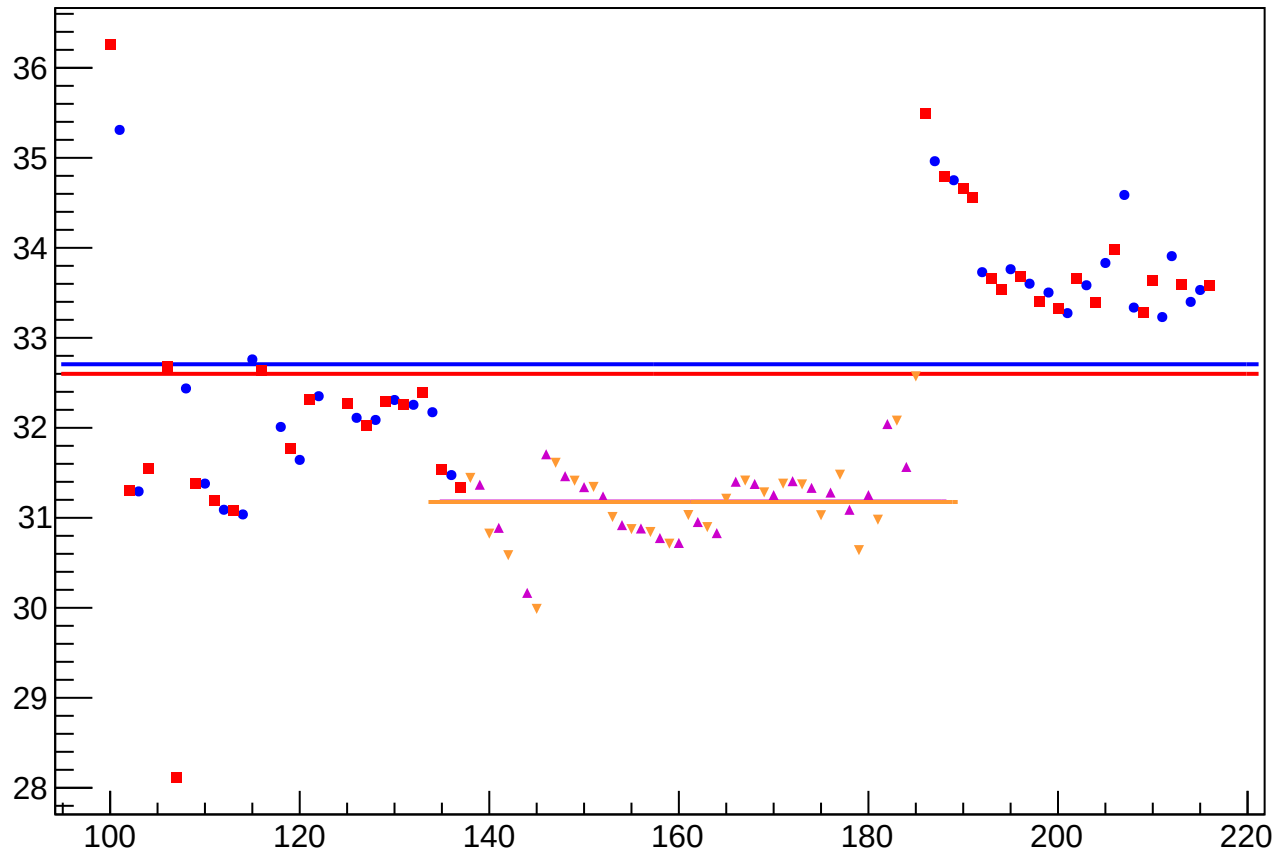
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3449719.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15367168.5/54

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30829522.8/110

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15397317.5/55

# yield\_usl\_mean vs Slug



Right In: 32.706+/-0.000  $\chi^2$ /NDF: 2517749025.8/30

Left Out: 31.176+/-0.000  $\chi^2$ /NDF: 529824418.6/23

Right Out: 32.600+/-0.000  $\chi^2$ /NDF: 2341619362.2/33

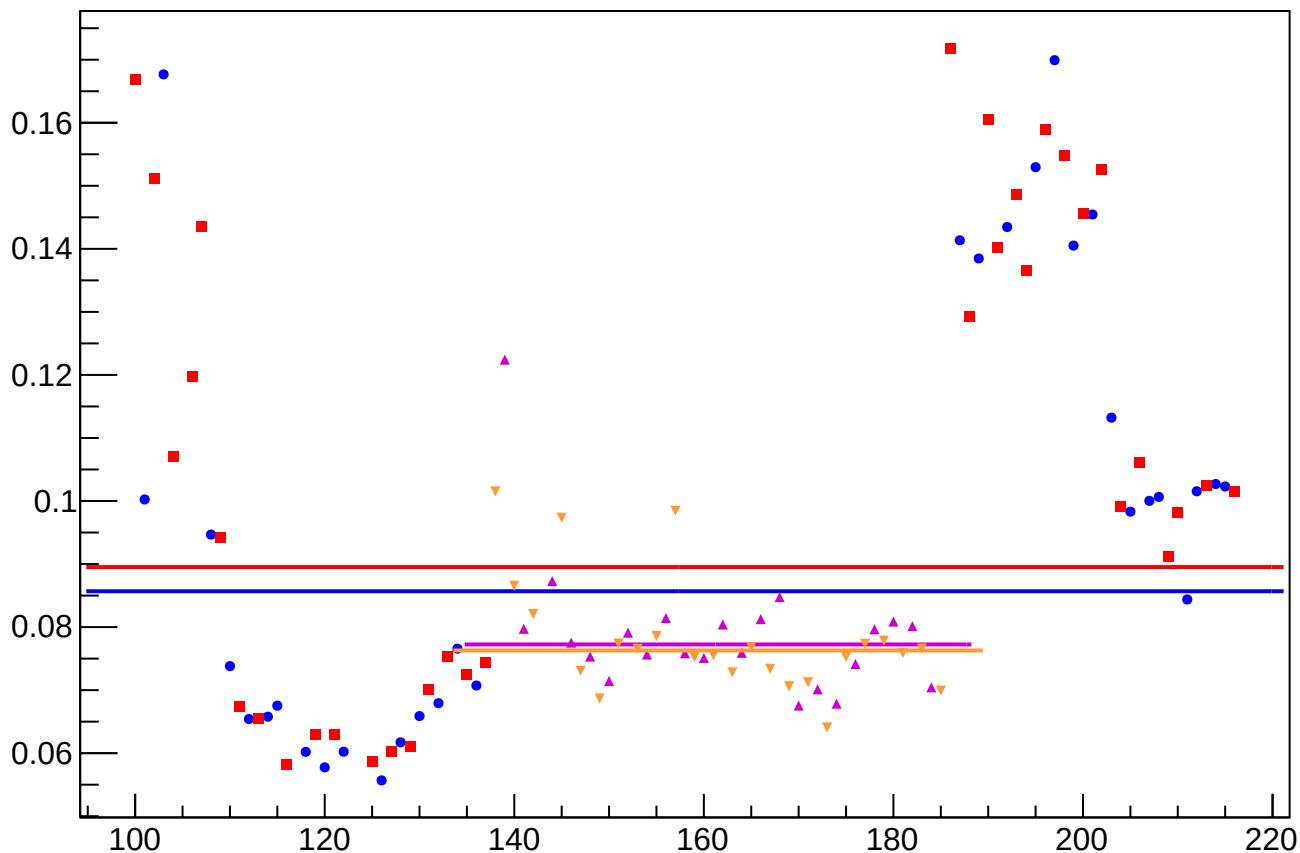
Left In: 31.181+/-0.000  $\chi^2$ /NDF: 376263410.1/22

+ sign 31.844+/-0.000  $\chi^2$ /NDF: 5993329559.9/54

All: 31.816+/-0.000  $\chi^2$ /NDF: 11100051372.0

- sign 31.786+/-0.000  $\chi^2$ /NDF: 5098313247.5/56

# yield\_usl\_rms vs Slug



Right In: 0.086 $\pm$ 0.000  $\chi^2$ /NDF: 3594638.7/30

Left Out: 0.076 $\pm$ 0.000  $\chi^2$ /NDF:356697.3/23

Right Out: 0.090 $\pm$ 0.000  $\chi^2$ /NDF: 4008936.4/33

Left In: 0.077 $\pm$ 0.000  $\chi^2$ /NDF:365206.5/22

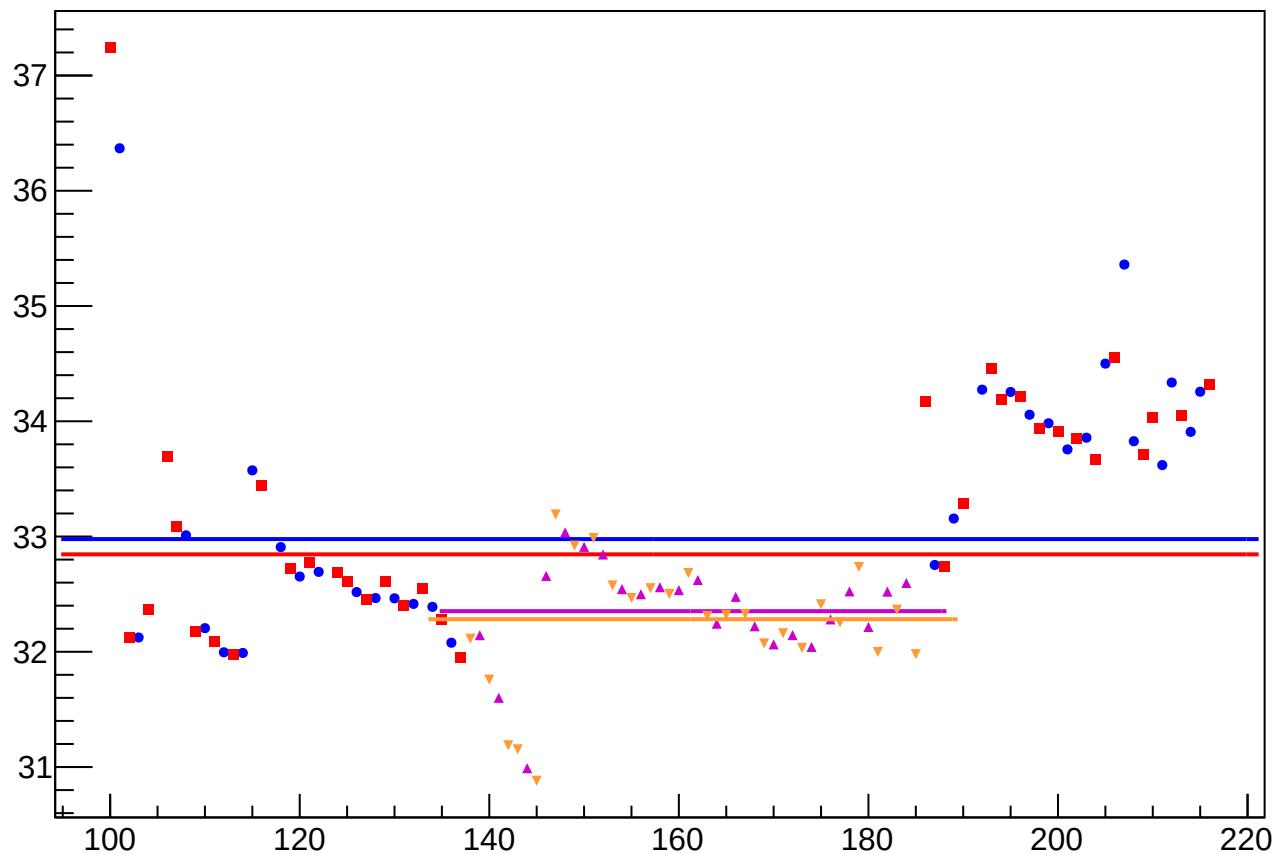
+ sign 0.080 $\pm$ 0.000  $\chi^2$ /NDF: 4173206.1/54

All: 0.081 $\pm$ 0.000  $\chi^2$ /NDF: 8925425.4/111

- sign 0.082 $\pm$ 0.000  $\chi^2$ /NDF: 4730587.3/56



# yield\_usr\_mean vs Slug



Right In: 32.978 $\pm$ 0.000  $\chi^2$ /NDF: 1249547260.8/30

Left Out: 32.282 $\pm$ 0.000  $\chi^2$ /NDF: 838959313.2/24

Right Out: 32.845 $\pm$ 0.000  $\chi^2$ /NDF: 659295746.5/33

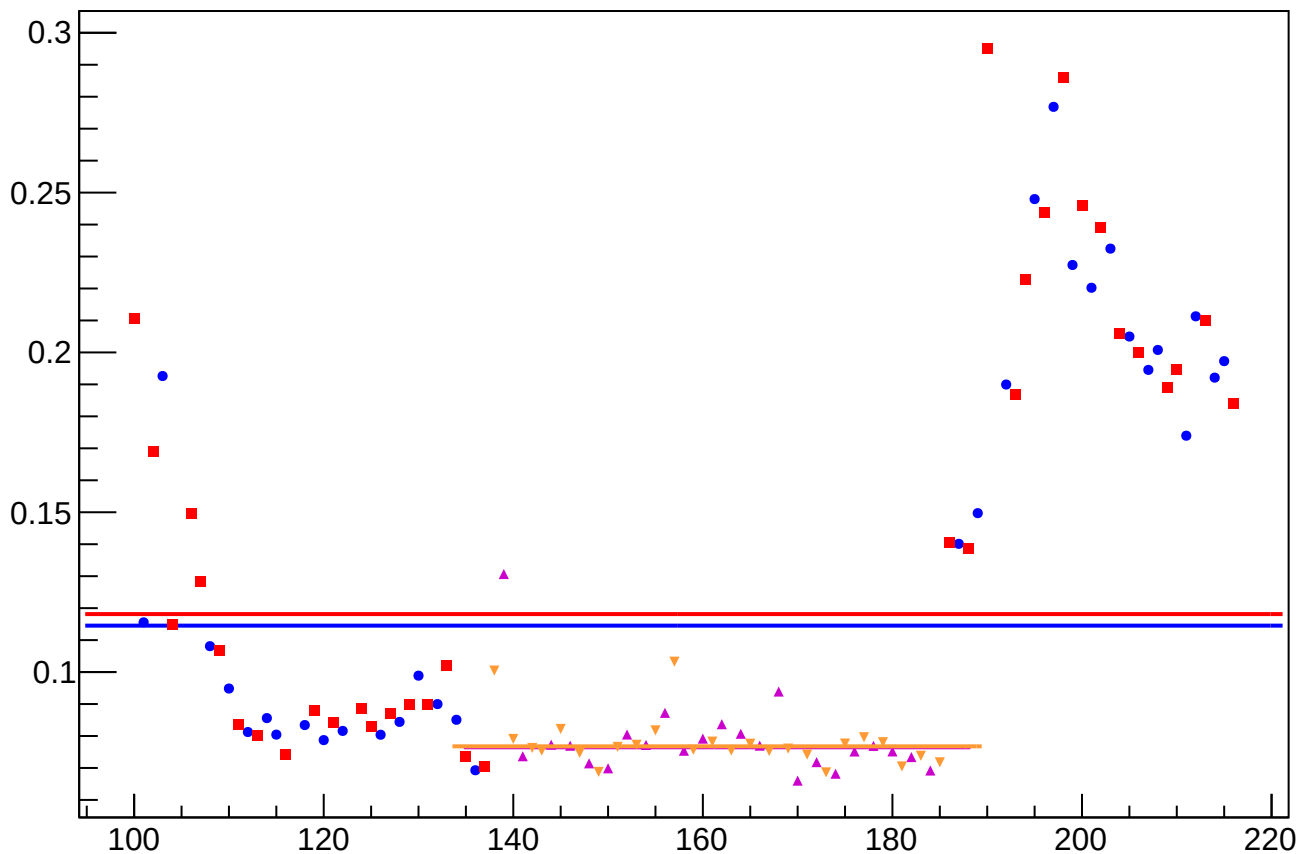
Left In: 32.353 $\pm$ 0.000  $\chi^2$ /NDF: 589893462.0/22

+ sign 32.472 $\pm$ 0.000  $\chi^2$ /NDF: 2483452907.7/55

All: 32.479 $\pm$ 0.000  $\chi^2$ /NDF: 3923953579.0/100

- sign 32.487 $\pm$ 0.000  $\chi^2$ /NDF: 1440024703.3/56

# yield\_usr\_rms vs Slug



Right In:  $0.115 \pm 0.000$   $\chi^2/\text{NDF}$ : 6541561.3/30

Left Out:  $0.077 \pm 0.000$   $\chi^2/\text{NDF}$ : 250795.7/24

Right Out:  $0.118 \pm 0.000$   $\chi^2/\text{NDF}$ : 6222392.3/33

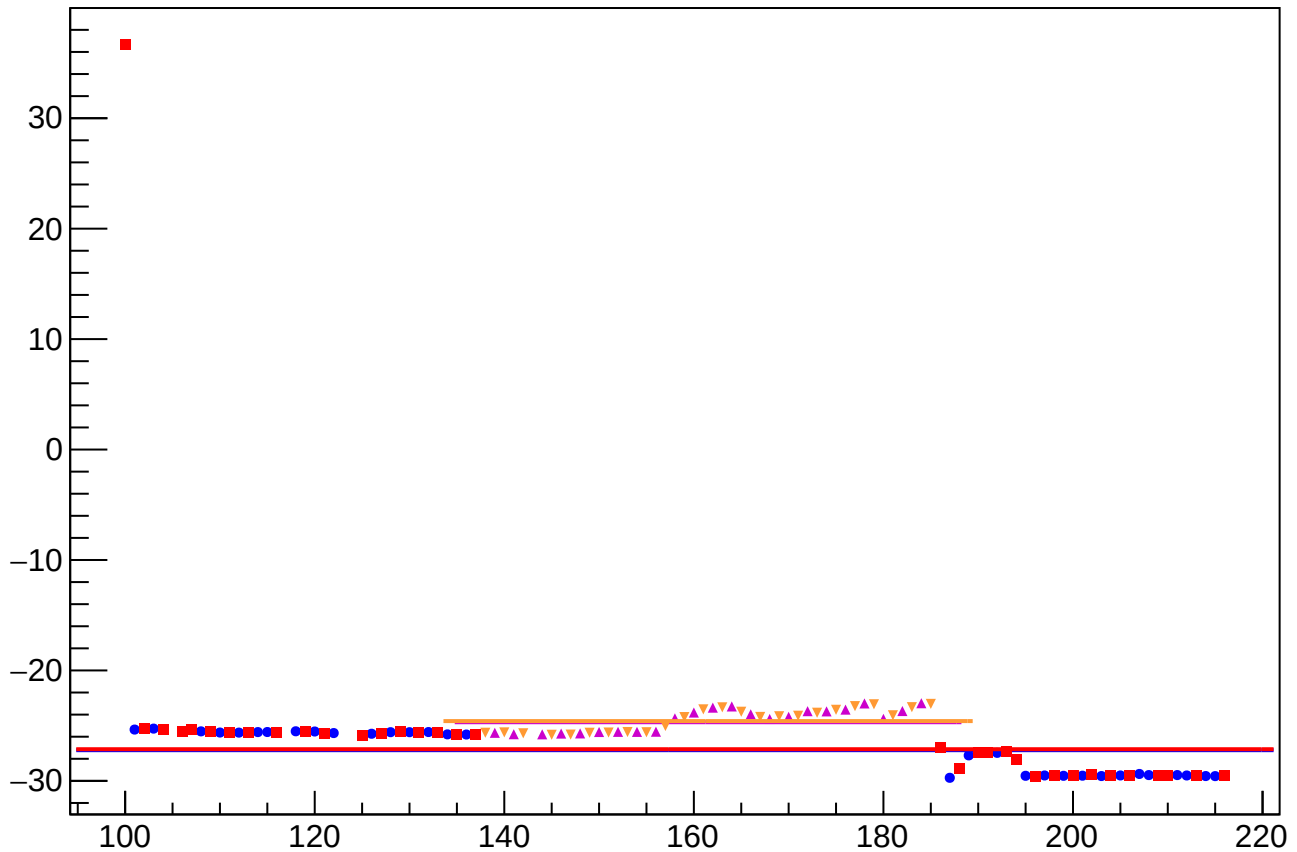
Left In:  $0.076 \pm 0.000$   $\chi^2/\text{NDF}$ : 482593.3/22

+ sign  $0.087 \pm 0.000$   $\chi^2/\text{NDF}$ : 9121166.8/55

All:  $0.087 \pm 0.000$   $\chi^2/\text{NDF}$ : 18557619.9/112

- sign  $0.088 \pm 0.000$   $\chi^2/\text{NDF}$ : 9433888.6/56

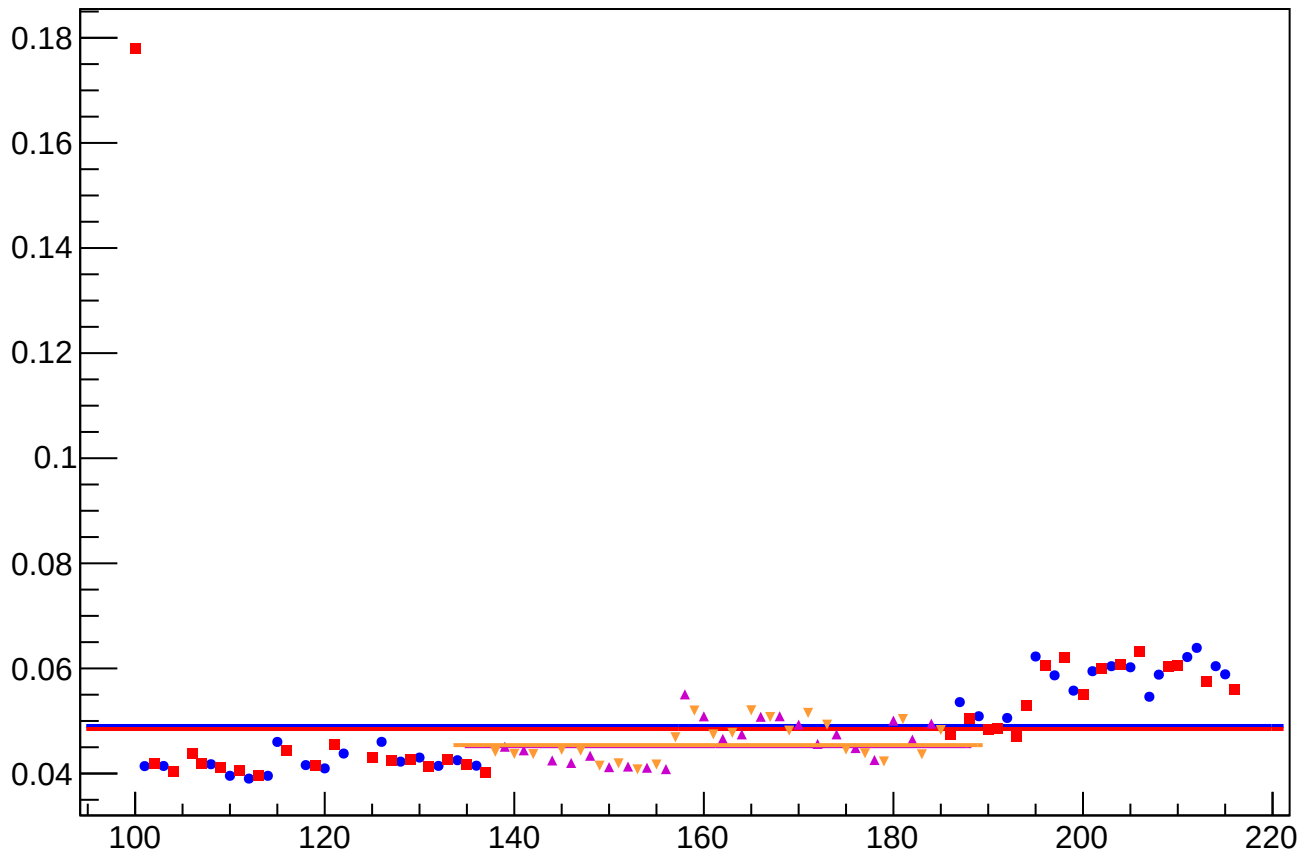
# yield\_dsl\_mean vs Slug



Right In:  $-27.220 \pm 0.000$   $\chi^2/\text{NDF}: 26316402060.5/30$   
 Left Out:  $-24.587 \pm 0.000$   $\chi^2/\text{NDF}: 9182387434.6/23$   
 Right Out:  $-27.133 \pm 0.000$   $\chi^2/\text{NDF}: 33839900446.8/33$   
 Left In:  $-24.689 \pm 0.000$   $\chi^2/\text{NDF}: 8820957974.3/22$

+ sign  $-25.808 \pm 0.000$   $\chi^2/\text{NDF}: 63551219846.3/54$   
 All:  $-25.829 \pm 0.000$   $\chi^2/\text{NDF}: 130971596486$   
 - sign  $-25.850 \pm 0.000$   $\chi^2/\text{NDF}: 67405298610.1/56$

# yield\_dsl\_rms vs Slug



Right In: 0.049 $\pm$ 0.000  $\chi^2$ /NDF: 1093955.1/30

Left Out: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 205535.7/23

Right Out: 0.048 $\pm$ 0.000  $\chi^2$ /NDF: 1061277.1/33

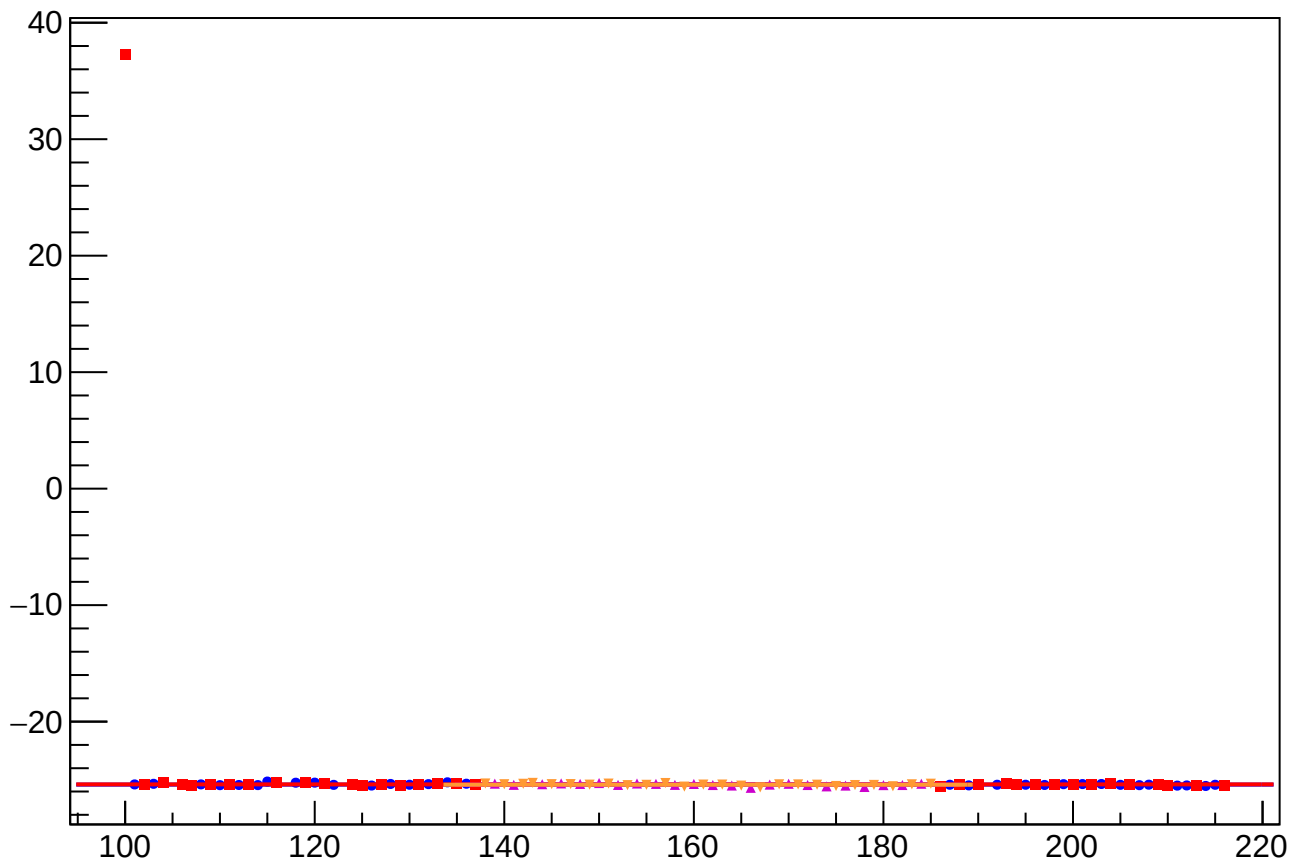
Left In: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 244675.5/22

+ sign 0.047 $\pm$ 0.000  $\chi^2$ /NDF: 1406982.0/54

All: 0.047 $\pm$ 0.000  $\chi^2$ /NDF: 2803398.3/111

- sign 0.047 $\pm$ 0.000  $\chi^2$ /NDF: 1394566.7/56

# yield\_dsr\_mean vs Slug



Right In:  $-25.409 \pm 0.000$   $\chi^2/\text{NDF}: 31843899.1/30$

Left Out:  $-25.417 \pm 0.000$   $\chi^2/\text{NDF}: 52213098.9/24$

Right Out:  $-25.387 \pm 0.000$   $\chi^2/\text{NDF}: 6347012961.4/33$

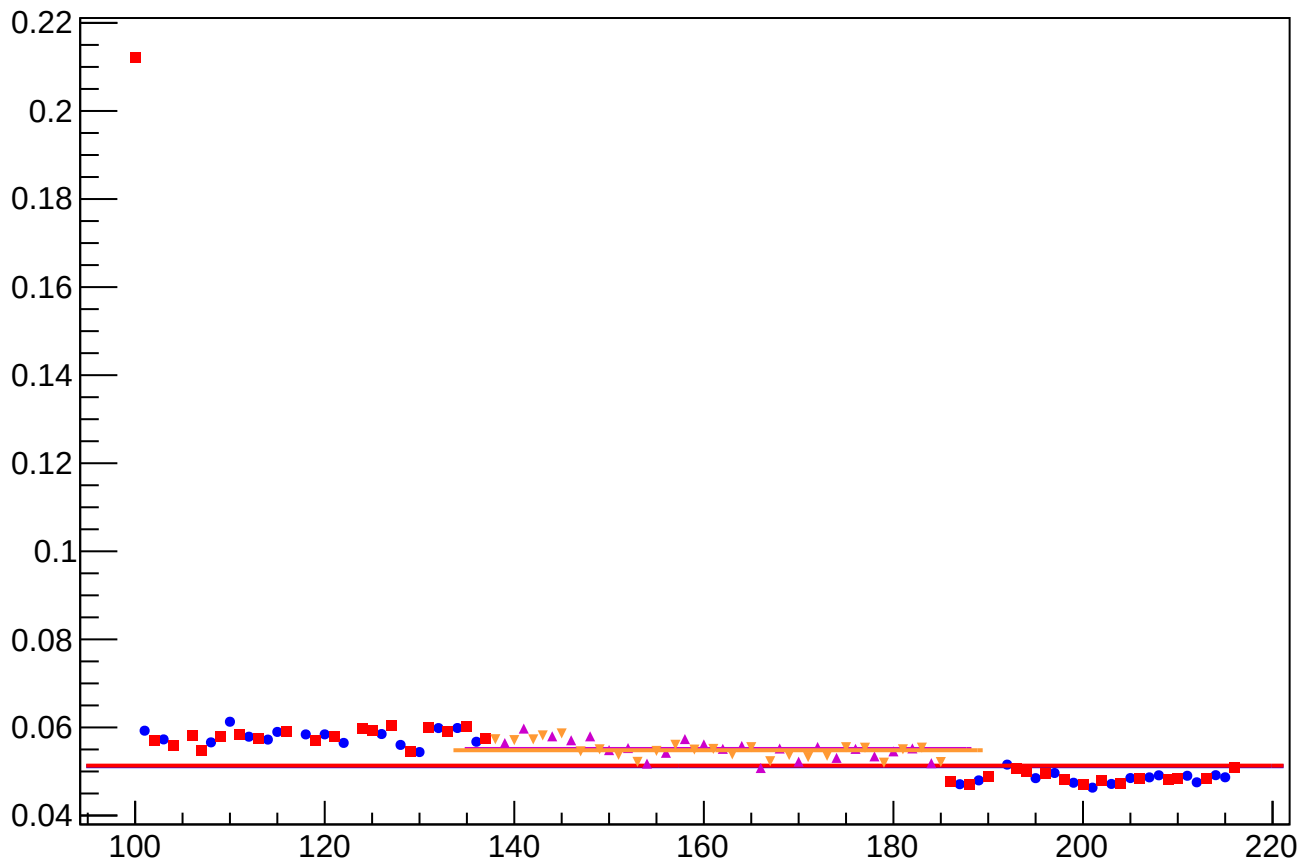
Left In:  $-25.414 \pm 0.000$   $\chi^2/\text{NDF}: 55851916.1/22$

+ sign  $-25.413 \pm 0.000$   $\chi^2/\text{NDF}: 84267249.2/55$

All:  $-25.406 \pm 0.000$   $\chi^2/\text{NDF}: 6490565535.6/111$

- sign  $-25.399 \pm 0.000$   $\chi^2/\text{NDF}: 6405166684.1/56$

# yield\_dsr\_rms vs Slug



Right In: 0.051 $\pm$ 0.000  $\chi^2$ /NDF: 278568.7/30

Left Out: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:38095.1/24

Right Out: 0.051 $\pm$ 0.000  $\chi^2$ /NDF: 375758.6/33

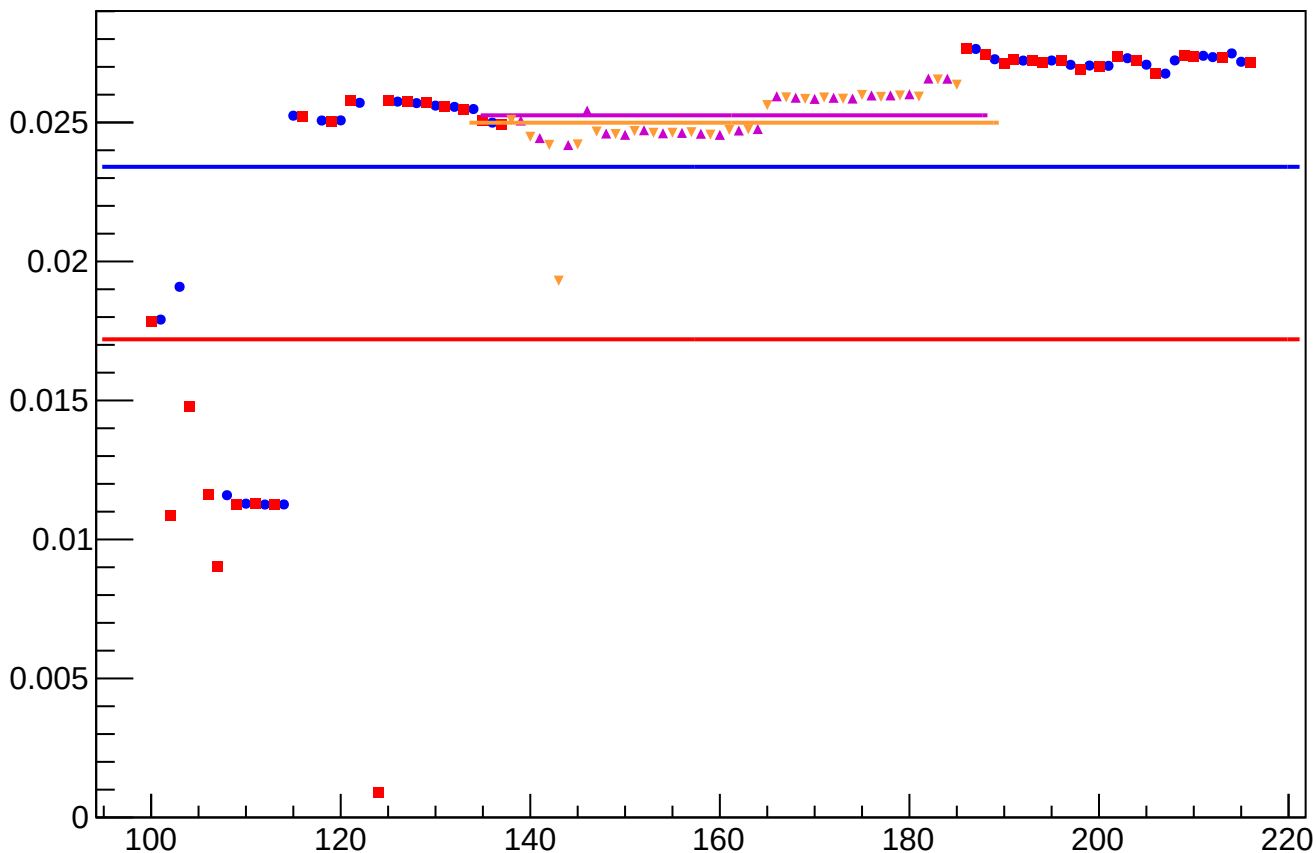
Left In: 0.055 $\pm$ 0.000  $\chi^2$ /NDF:51531.3/22

+ sign 0.053 $\pm$ 0.000  $\chi^2$ /NDF: 404001.8/55

All: 0.053 $\pm$ 0.000  $\chi^2$ /NDF: 923691.6/112

- sign 0.053 $\pm$ 0.000  $\chi^2$ /NDF: 519438.3/56

# yield\_atl1\_mean vs Slug



Right In: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 101865886365.1/30

Left Out: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 7880064969.5/24

Right Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 483269185940.7/34

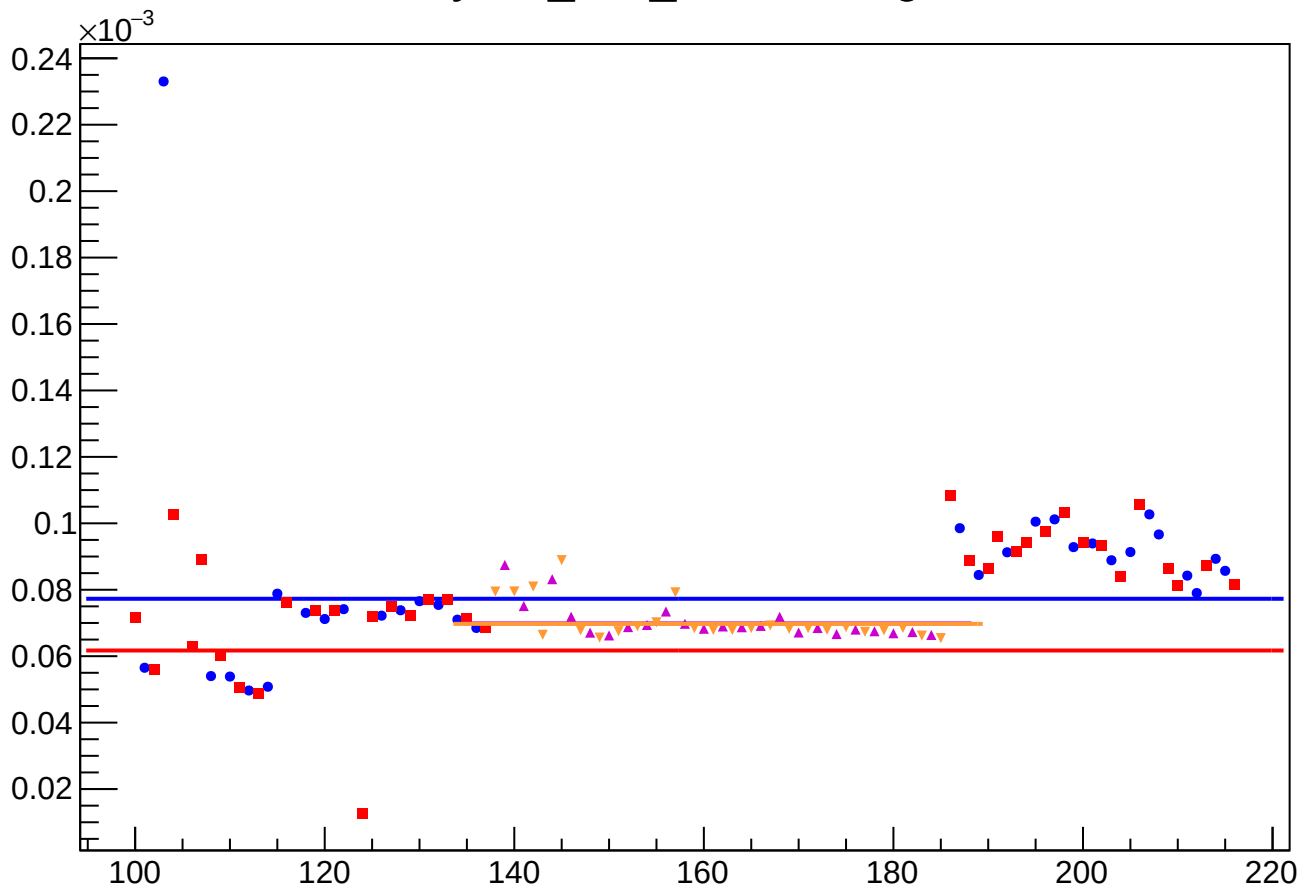
Left In: 0.025 $\pm$ 0.000  $\chi^2$ /NDF: 1884783780.3/22

+ sign 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 113995660318.4/55

All: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 760836571167.9

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 609145538253.8/57

# yield\_atl1\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1948342.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:188211.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 7834196.5/34

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:152421.9/22

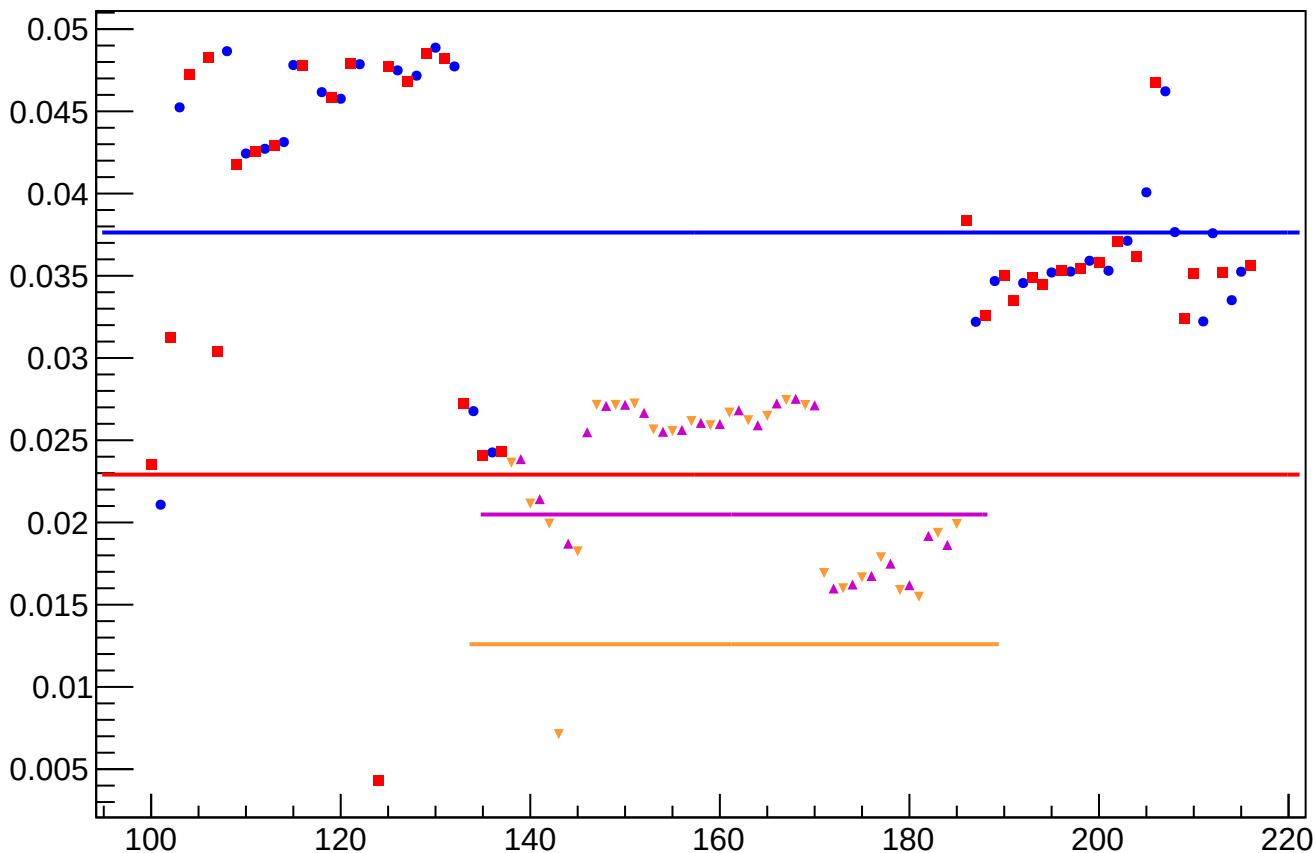
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2329197.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10963059.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8241048.2/57



# yield\_atl2\_mean vs Slug



Right In: 0.038 $\pm$ 0.000  $\chi^2$ /NDF: 7451143542.5/30

Left Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 37338500367.6/24

Right Out: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 47816799049.2/34

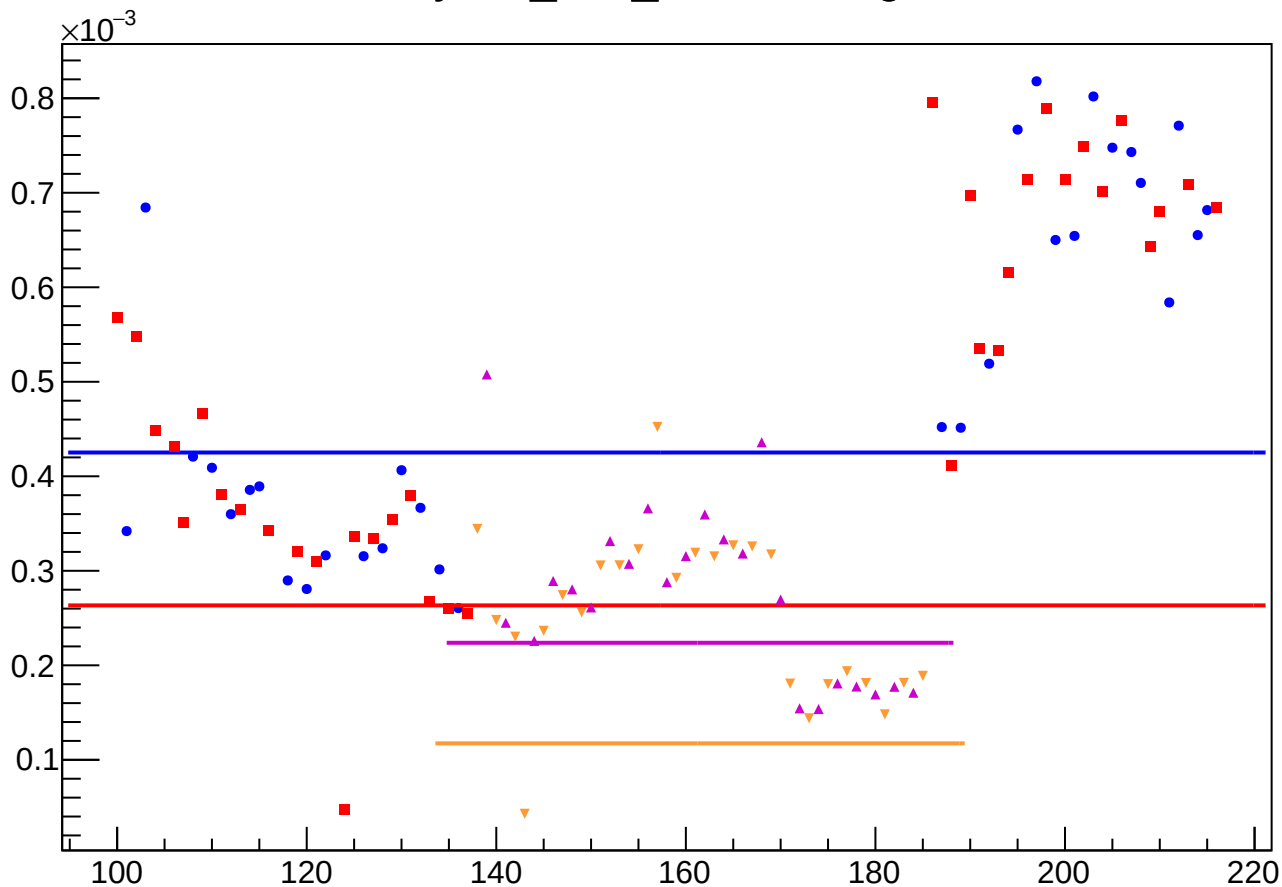
Left In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 6099907424.9/22

+ sign 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 92911078293.3/55

All: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 158500885234.9

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 54507958181.4/57

# yield\_atl2\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4978389.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14390785.9/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15782874.2/34

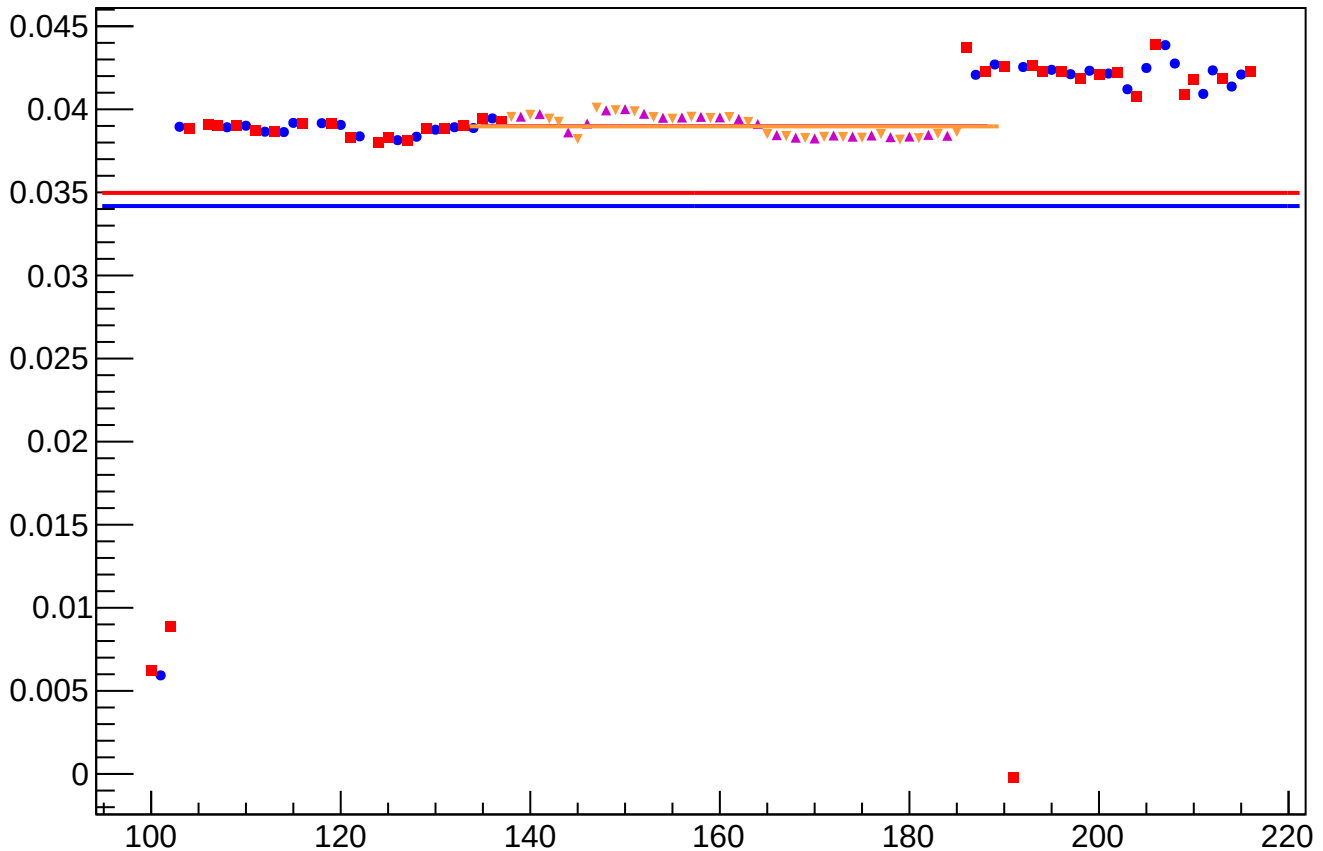
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:3388230.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33911540.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57965909.2/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19485344.7/57

# yield\_atr1\_mean vs Slug



Right In: 0.034 $\pm$ 0.000  $\chi^2$ /NDF: 134820536506.1/30

Left Out: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 477670162.8/24

Right Out: 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 122505073572.5/34

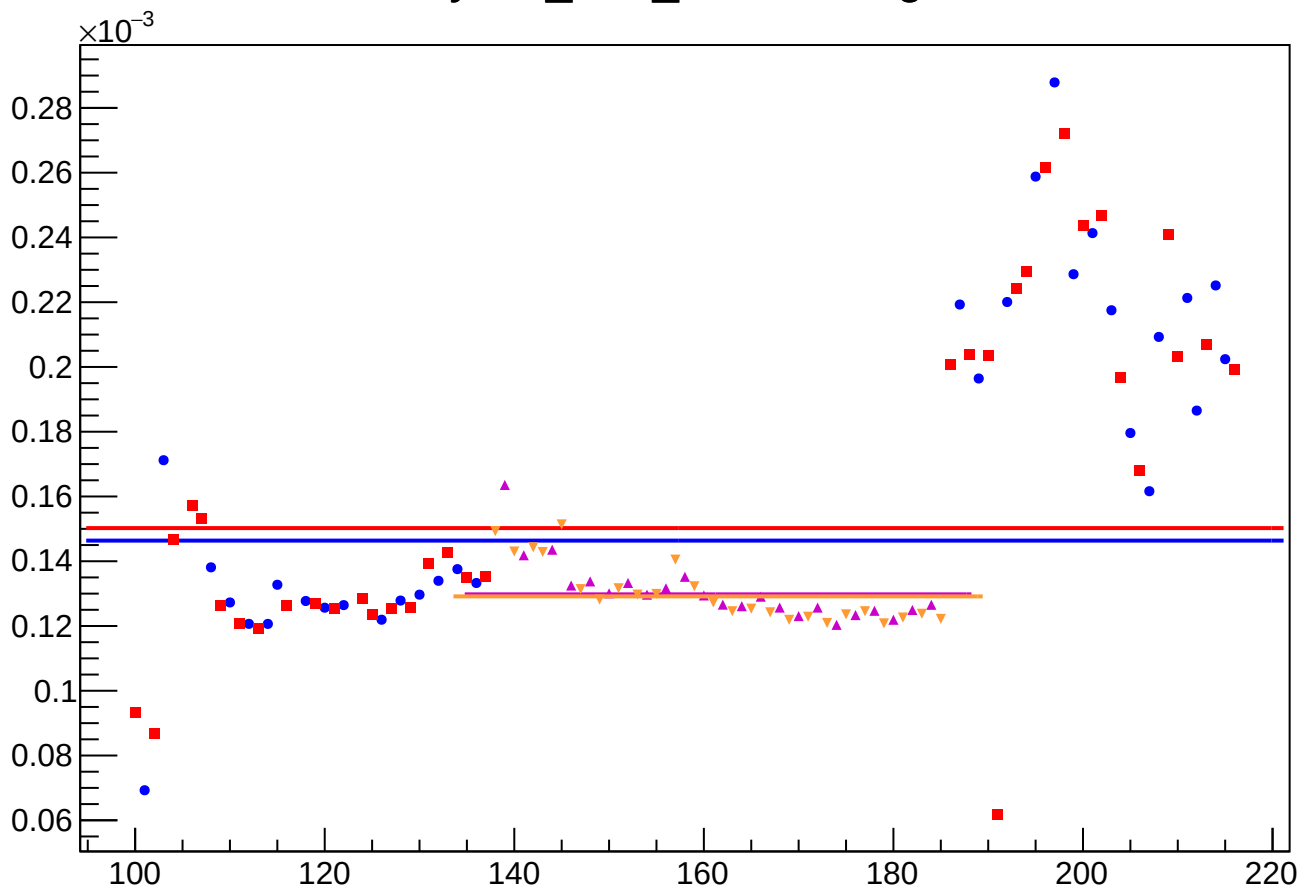
Left In: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 408808029.6/22

+ sign 0.037 $\pm$ 0.000  $\chi^2$ /NDF: 145819562141.7/55

All: 0.037 $\pm$ 0.000  $\chi^2$ /NDF: 275918751046.0

- sign 0.037 $\pm$ 0.000  $\chi^2$ /NDF: 130015805932.4/57

# yield\_atr1\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4359750.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:157557.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4012147.5/34

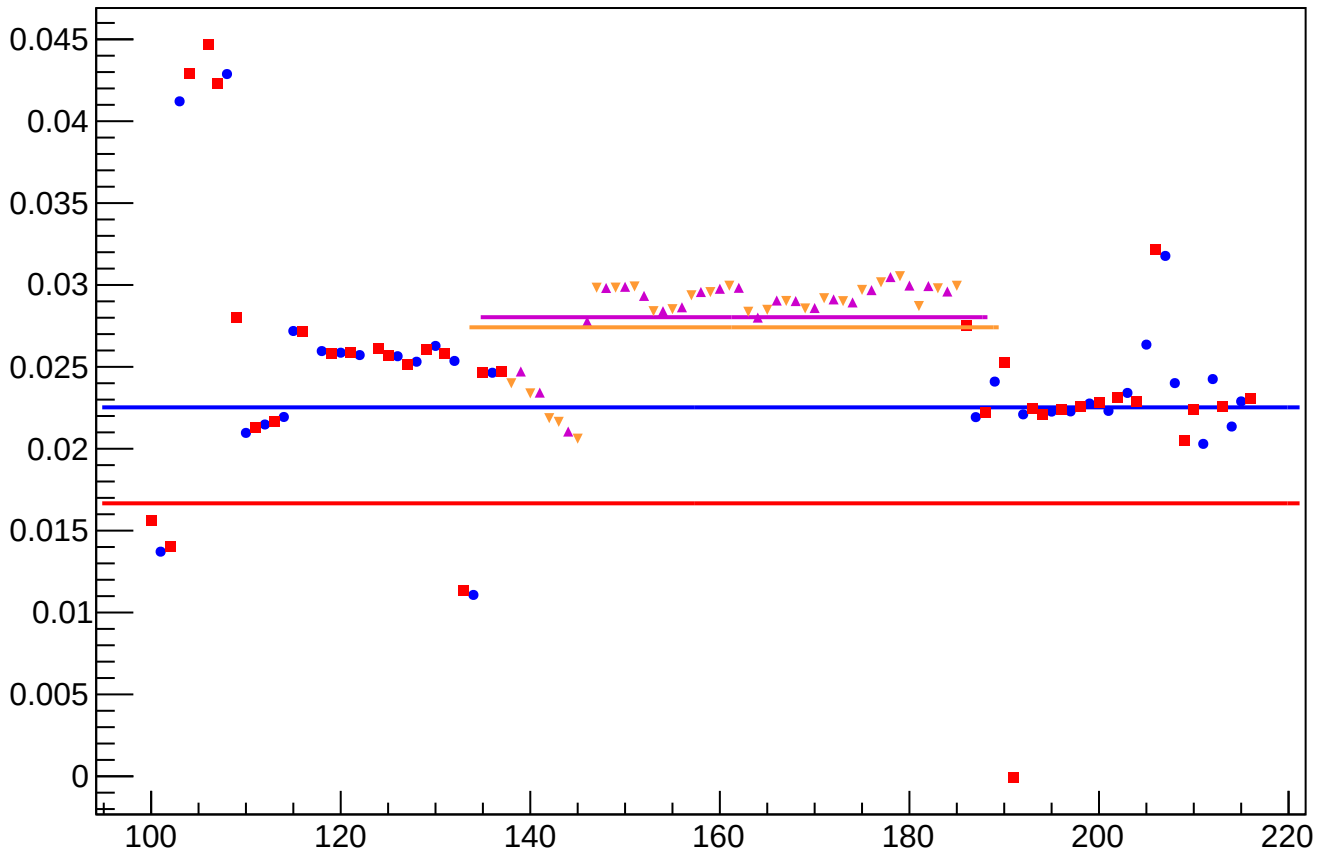
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:141831.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4788855.8/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9318057.7/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 4520954.7/57

# yield\_atr2\_mean vs Slug



Right In: 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 5211011199.4/30

Left Out: 0.027 $\pm$ 0.000  $\chi^2$ /NDF: 2240091851.9/24

Right Out: 0.017 $\pm$ 0.000  $\chi^2$ /NDF: 25893879389.8/34

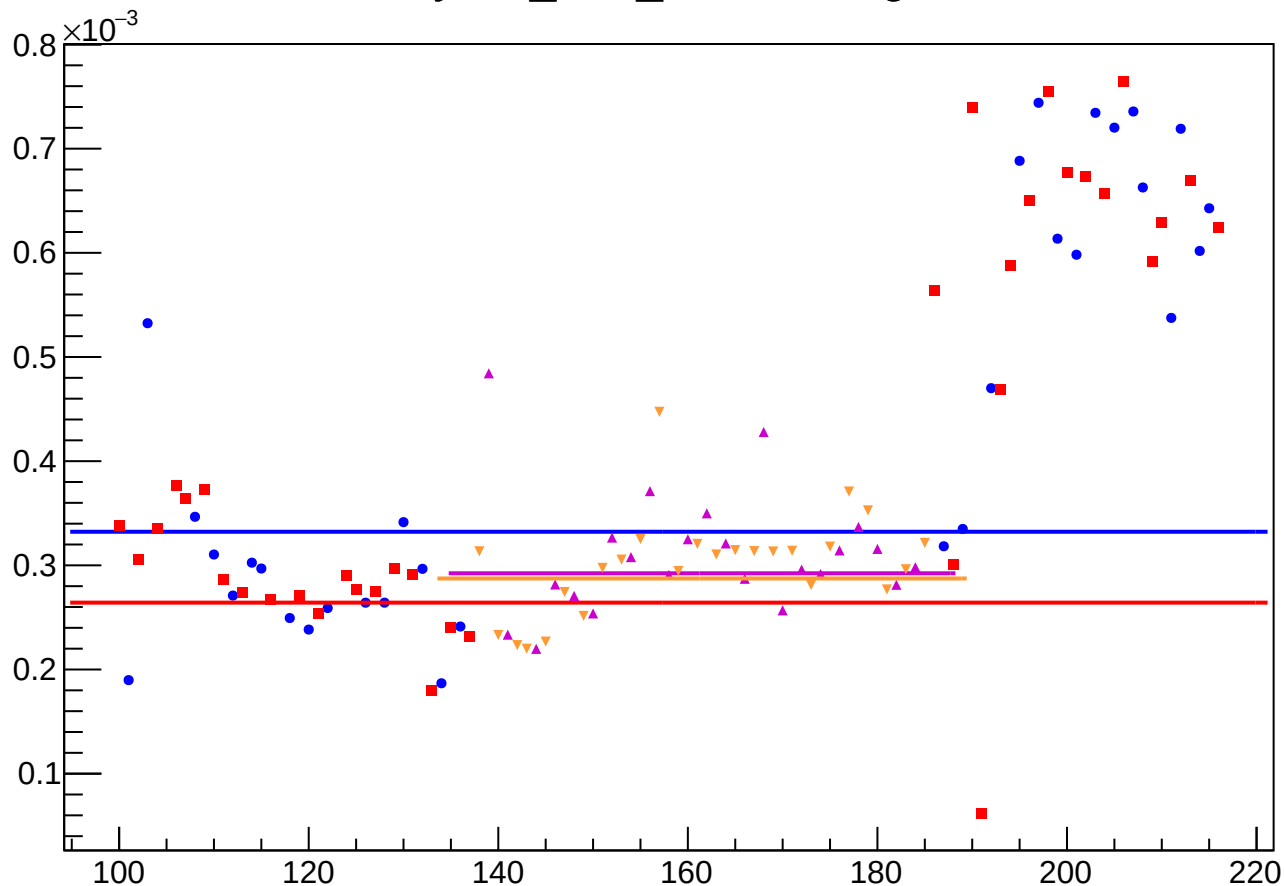
Left In: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 1490587051.3/22

+ sign 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 9363750399.7/55

All: 0.024 $\pm$ 0.000  $\chi^2$ /NDF: 50102463387.5/100

- sign 0.023 $\pm$ 0.000  $\chi^2$ /NDF: 39247185543.8/57

# yield\_atr2\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6982416.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 821515.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11913986.7/34

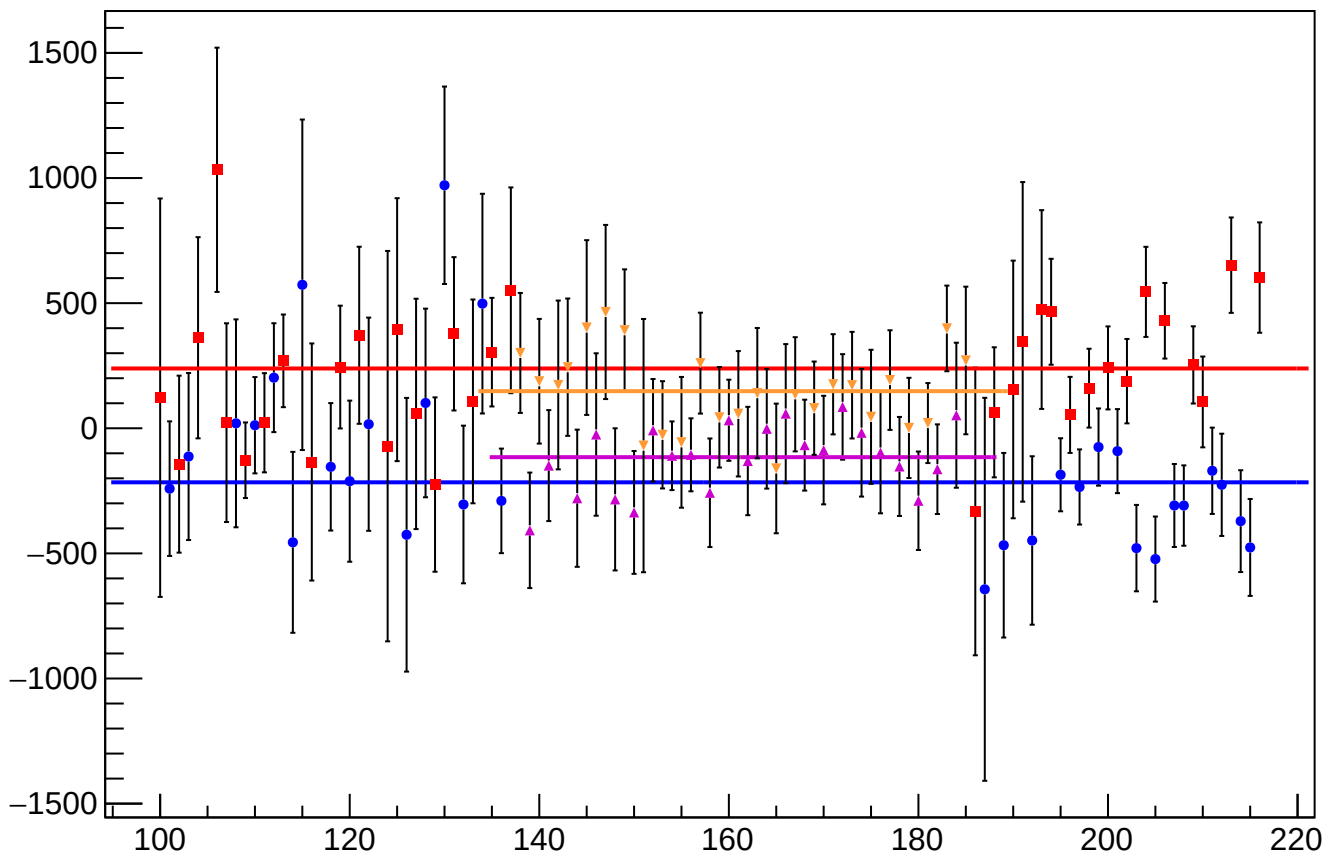
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 970483.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8126161.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21389819.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13030174.6/57

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-215.999 \pm 40.469$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $148.273 \pm 46.219$   $\chi^2/\text{NDF}$ : 10.4/24

Right Out:  $238.965 \pm 40.199$   $\chi^2/\text{NDF}$ : 32.5/34

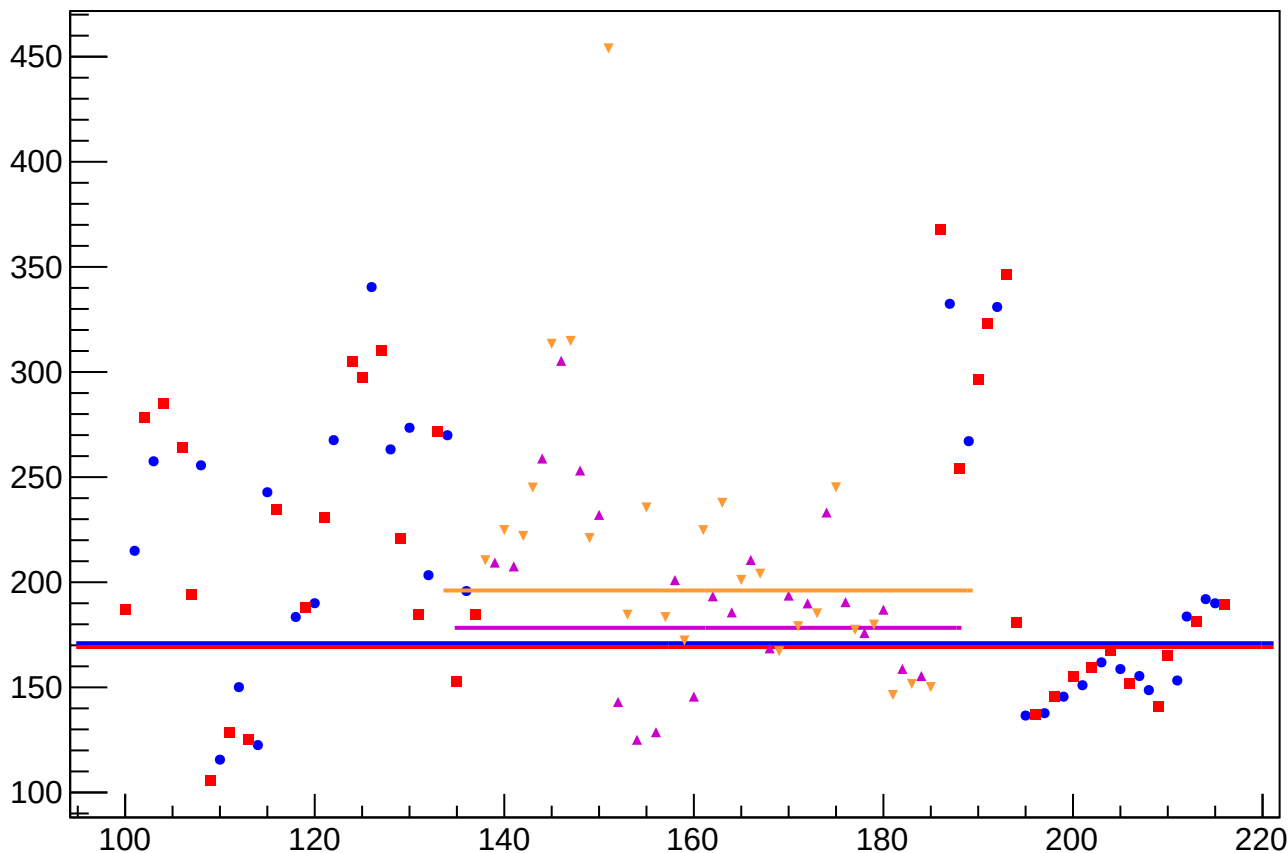
Left In:  $-115.487 \pm 43.568$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-57.921 \pm 30.447$   $\chi^2/\text{NDF}$ : 77.4/55

All:  $11.040 \pm 21.203$   $\chi^2/\text{NDF}$ : 163.4/113

- sign  $75.972 \pm 29.544$   $\chi^2/\text{NDF}$ : 76.0/57

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.002 $\pm$ 0.029  $\chi^2$ /NDF: 2337014.5/30

Left Out: 196.087 $\pm$ 0.033  $\chi^2$ /NDF:1818492.9/24

Right Out: 169.181 $\pm$ 0.028  $\chi^2$ /NDF: 3028861.1/34

Left In: 178.318 $\pm$ 0.031  $\chi^2$ /NDF:1678336.4/22

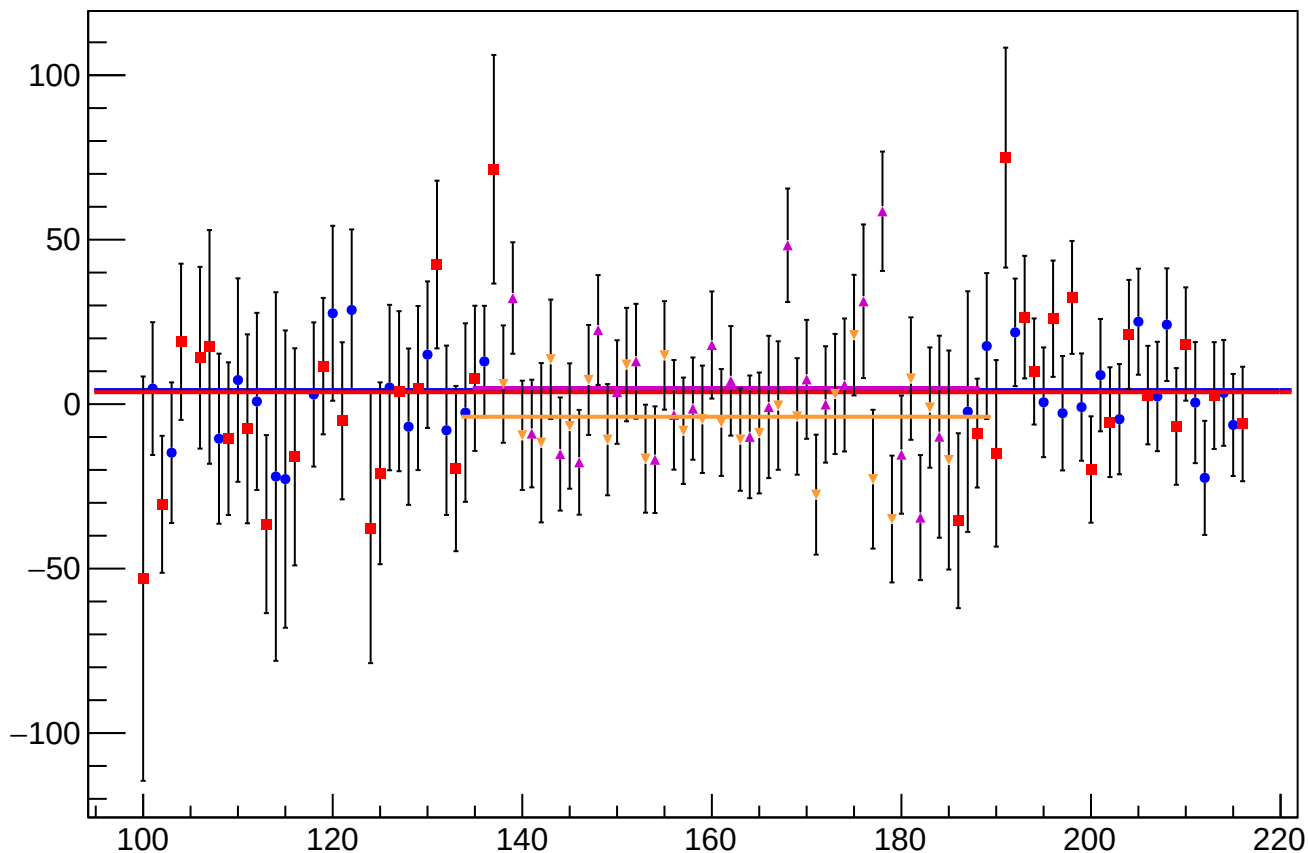
+ sign 181.887 $\pm$ 0.022  $\chi^2$ /NDF: 4488985.4/55

All: 177.507 $\pm$ 0.015  $\chi^2$ /NDF: 9324066.4/113

- sign 173.383 $\pm$ 0.021  $\chi^2$ /NDF: 4754709.0/57



asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $4.277 \pm 3.637$   $\chi^2/\text{NDF}$ : 12.6/30

Left Out:  $-3.834 \pm 3.603$   $\chi^2/\text{NDF}$ : 12.9/24

Right Out:  $3.625 \pm 3.609$   $\chi^2/\text{NDF}$ : 35.1/34

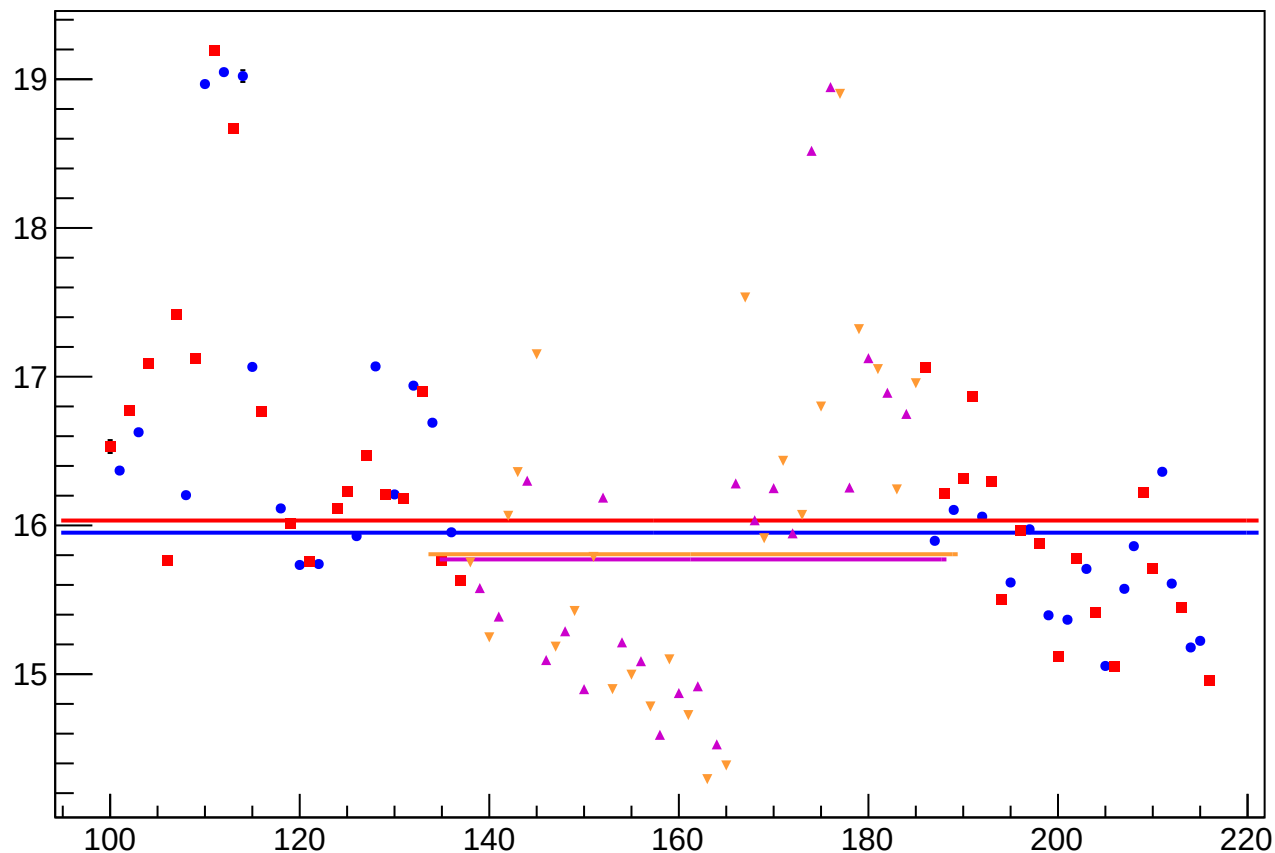
Left In:  $4.903 \pm 3.695$   $\chi^2/\text{NDF}$ : 33.9/22

+ sign  $0.182 \pm 2.560$   $\chi^2/\text{NDF}$ : 28.0/55

All:  $2.198 \pm 1.818$   $\chi^2/\text{NDF}$ : 98.3/113

- sign  $4.249 \pm 2.582$   $\chi^2/\text{NDF}$ : 69.1/57

asym\_bcm\_an\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 15.951 $\pm$ 0.003  $\chi^2$ /NDF: 89360.5/30

Left Out: 15.806 $\pm$ 0.003  $\chi^2$ /NDF:172651.3/24

Right Out: 16.033 $\pm$ 0.003  $\chi^2$ /NDF: 99335.7/34

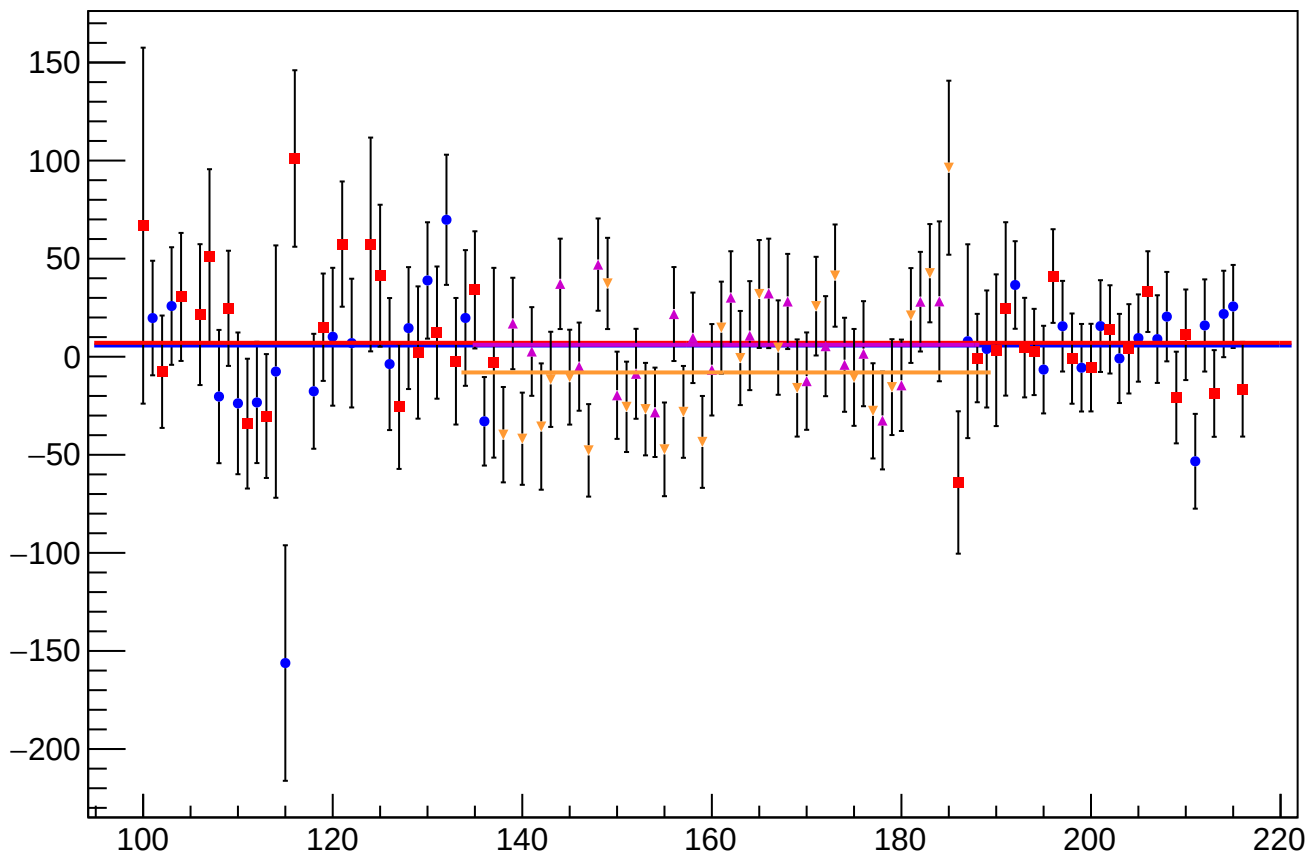
Left In: 15.771 $\pm$ 0.003  $\chi^2$ /NDF:152136.7/22

+ sign 15.878 $\pm$ 0.002  $\chi^2$ /NDF: 263614.9/55

All: 15.892 $\pm$ 0.001  $\chi^2$ /NDF: 520326.1/113

- sign 15.905 $\pm$ 0.002  $\chi^2$ /NDF: 256599.4/57

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In:  $5.720 \pm 4.874$   $\chi^2/\text{NDF}$ : 30.0/30

Left Out:  $-8.016 \pm 4.956$   $\chi^2/\text{NDF}$ : 38.9/24

Right Out:  $7.085 \pm 4.838$   $\chi^2/\text{NDF}$ : 28.5/34

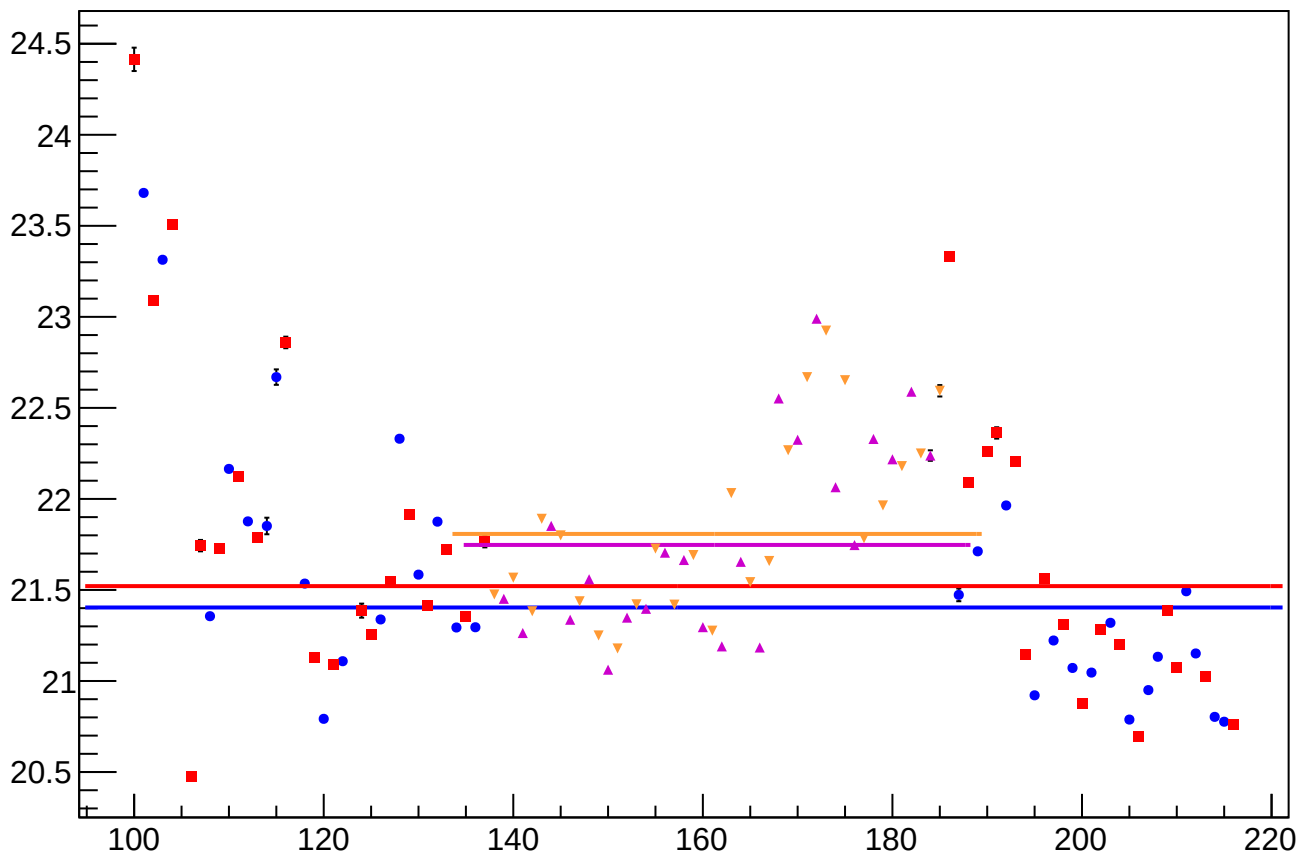
Left In:  $6.086 \pm 5.080$   $\chi^2/\text{NDF}$ : 17.9/22

+ sign  $-1.033 \pm 3.475$   $\chi^2/\text{NDF}$ : 72.7/55

All:  $2.757 \pm 2.467$   $\chi^2/\text{NDF}$ : 121.6/113

- sign  $6.610 \pm 3.503$   $\chi^2/\text{NDF}$ : 46.5/57

asym\_bcm\_an\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.404 $\pm$ 0.003  $\chi^2$ /NDF: 35373.1/30

Left Out: 21.808 $\pm$ 0.004  $\chi^2$ /NDF:17561.0/24

Right Out: 21.521 $\pm$ 0.003  $\chi^2$ /NDF: 40481.8/34

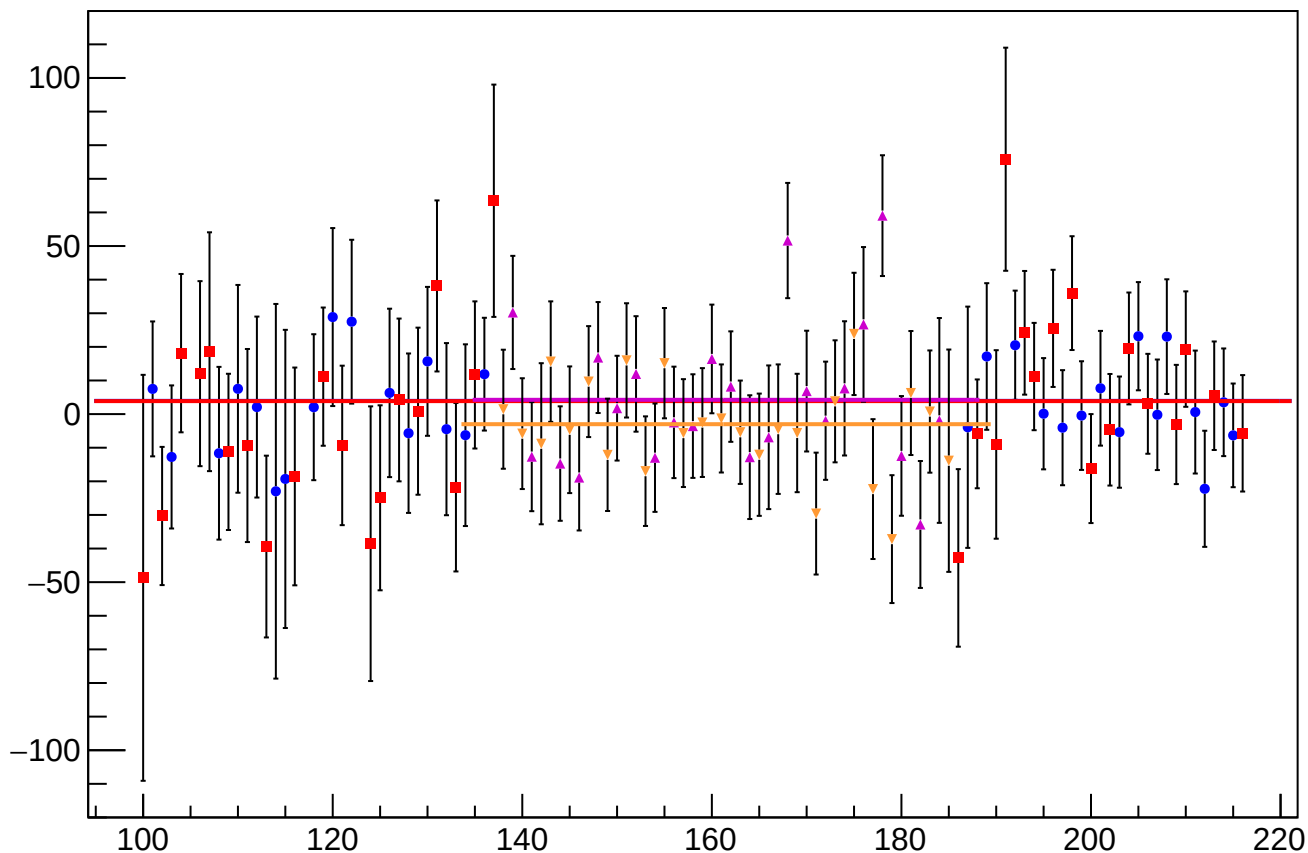
Left In: 21.747 $\pm$ 0.004  $\chi^2$ /NDF:20560.9/22

+ sign 21.602 $\pm$ 0.002  $\chi^2$ /NDF: 59690.1/55

All: 21.615 $\pm$ 0.002  $\chi^2$ /NDF: 122869.0/113

- sign 21.629 $\pm$ 0.002  $\chi^2$ /NDF: 63121.9/57

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $3.935 \pm 3.612$   $\chi^2/\text{NDF}: 12.0/30$

Left Out:  $-3.002 \pm 3.569$   $\chi^2/\text{NDF}: 14.6/24$

Right Out:  $3.862 \pm 3.585$   $\chi^2/\text{NDF}: 35.3/34$

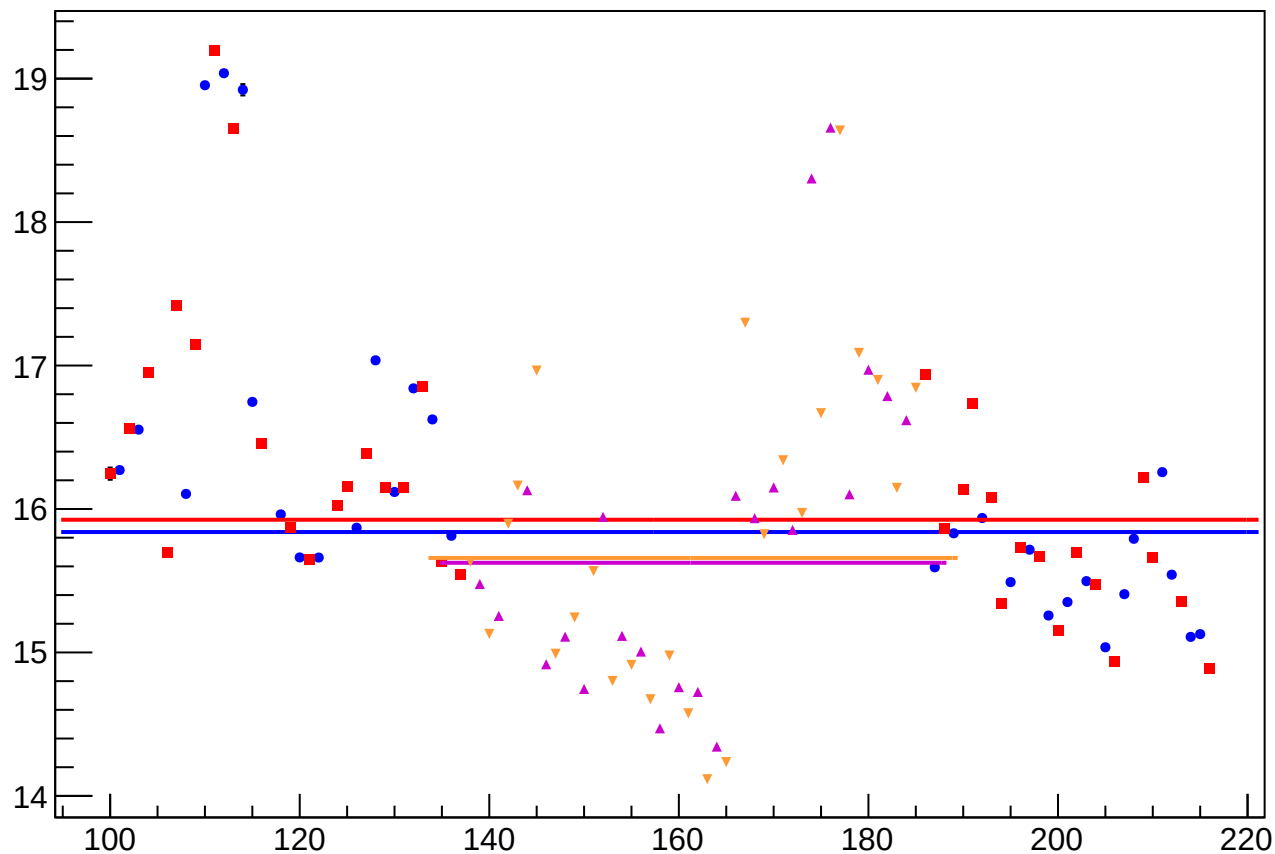
Left In:  $4.249 \pm 3.661$   $\chi^2/\text{NDF}: 33.8/22$

+ sign  $0.424 \pm 2.539$   $\chi^2/\text{NDF}: 28.5/55$

All:  $2.222 \pm 1.803$   $\chi^2/\text{NDF}: 98.7/113$

- sign  $4.051 \pm 2.561$   $\chi^2/\text{NDF}: 69.2/57$

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 15.839 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 92013.0/30

Left Out: 15.659 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 169838.6/24

Right Out: 15.925 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 100317.1/34

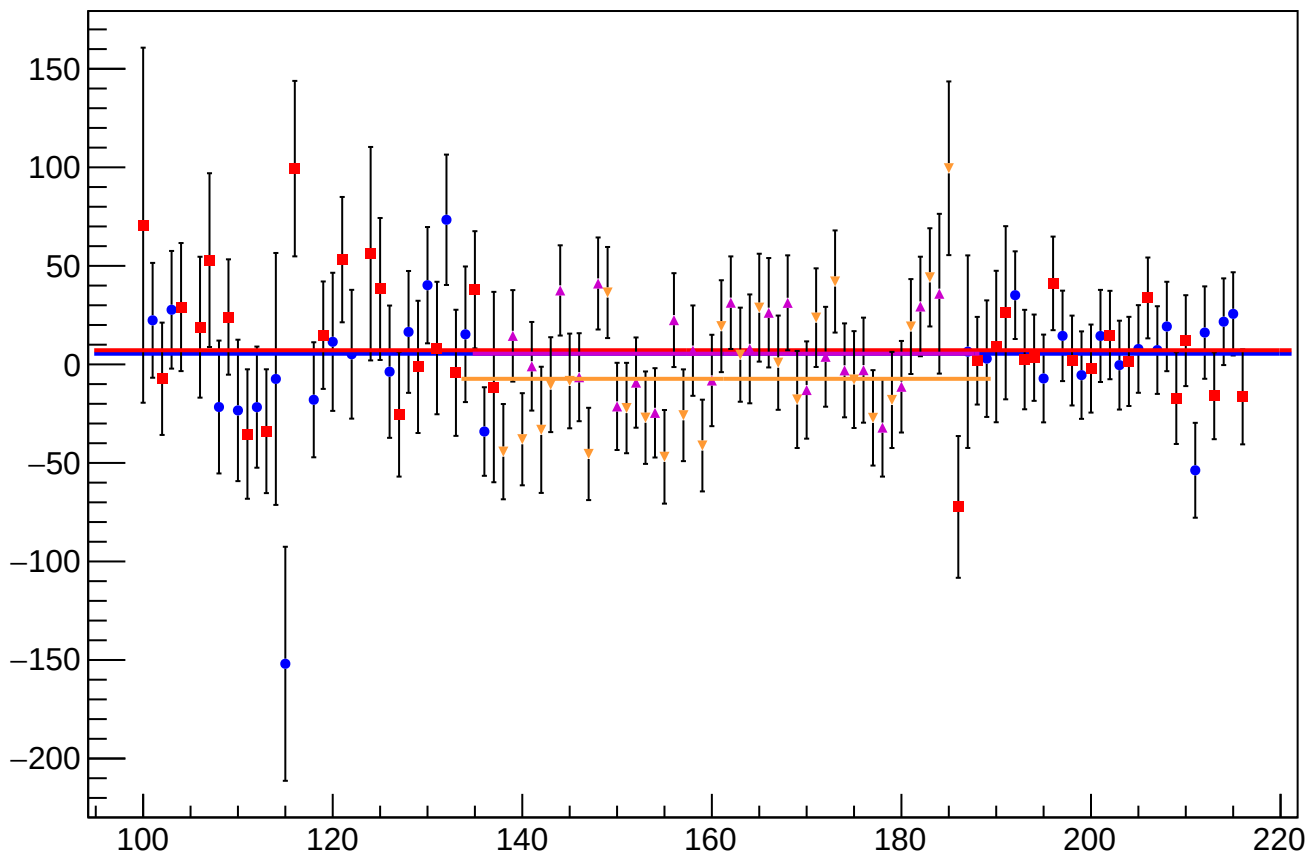
Left In: 15.625 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 150431.7/22

+ sign 15.748 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 264379.1/55

All: 15.763 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 522124.0/113

- sign 15.778 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 257605.9/57

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In:  $5.411 \pm 4.853$   $\chi^2/\text{NDF}$ : 30.5/30

Left Out:  $-7.318 \pm 4.929$   $\chi^2/\text{NDF}$ : 38.6/24

Right Out:  $7.185 \pm 4.815$   $\chi^2/\text{NDF}$ : 29.1/34

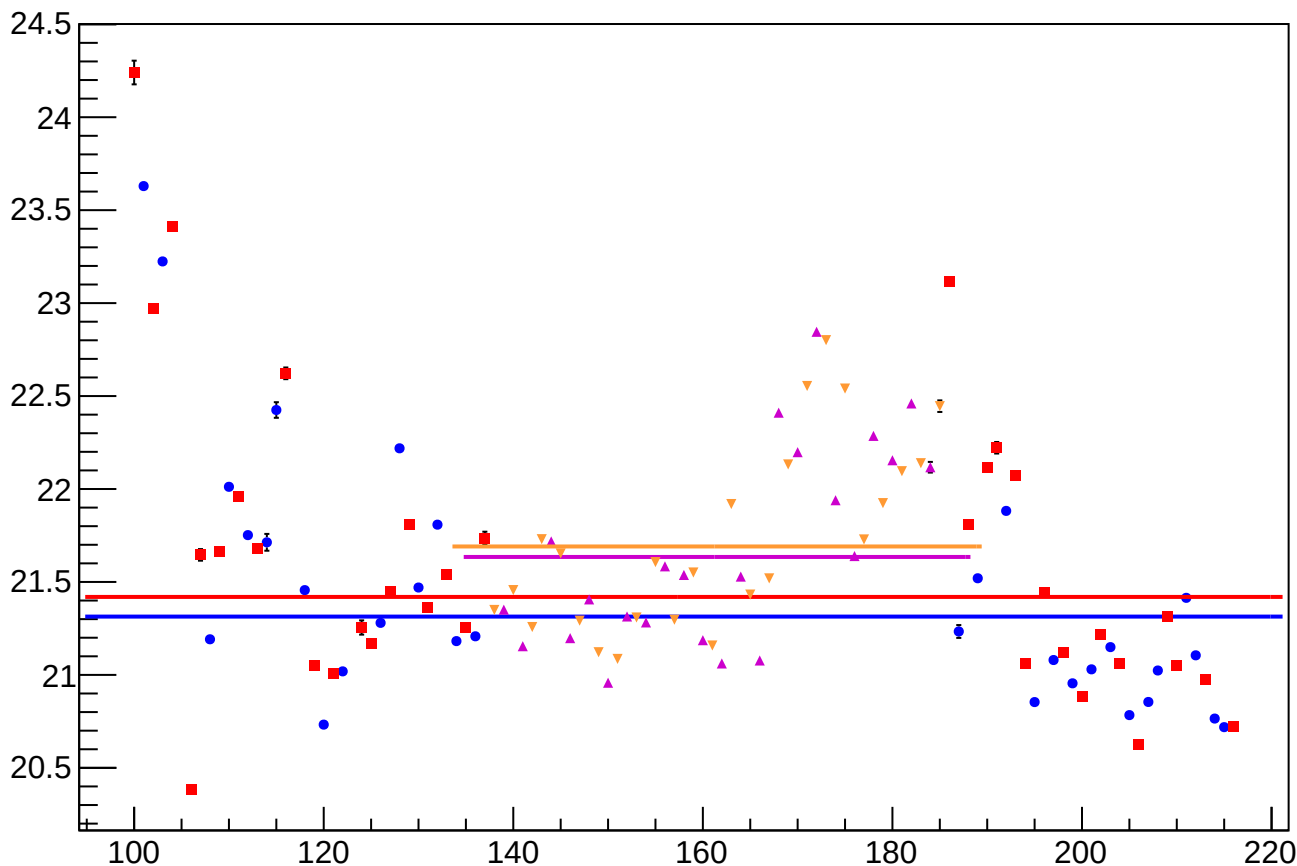
Left In:  $5.435 \pm 5.054$   $\chi^2/\text{NDF}$ : 17.3/22

+ sign  $-0.855 \pm 3.458$   $\chi^2/\text{NDF}$ : 72.5/55

All:  $2.720 \pm 2.455$   $\chi^2/\text{NDF}$ : 121.1/113

- sign  $6.352 \pm 3.486$   $\chi^2/\text{NDF}$ : 46.4/57

asym\_bcm\_an\_us\_ds3\_avg\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 21.314 $\pm$ 0.003  $\chi^2$ /NDF: 34574.9/30

Left Out: 21.691 $\pm$ 0.003  $\chi^2$ /NDF: 17934.9/24

Right Out: 21.419 $\pm$ 0.003  $\chi^2$ /NDF: 37129.9/34

Left In: 21.635 $\pm$ 0.004  $\chi^2$ /NDF: 20561.5/22

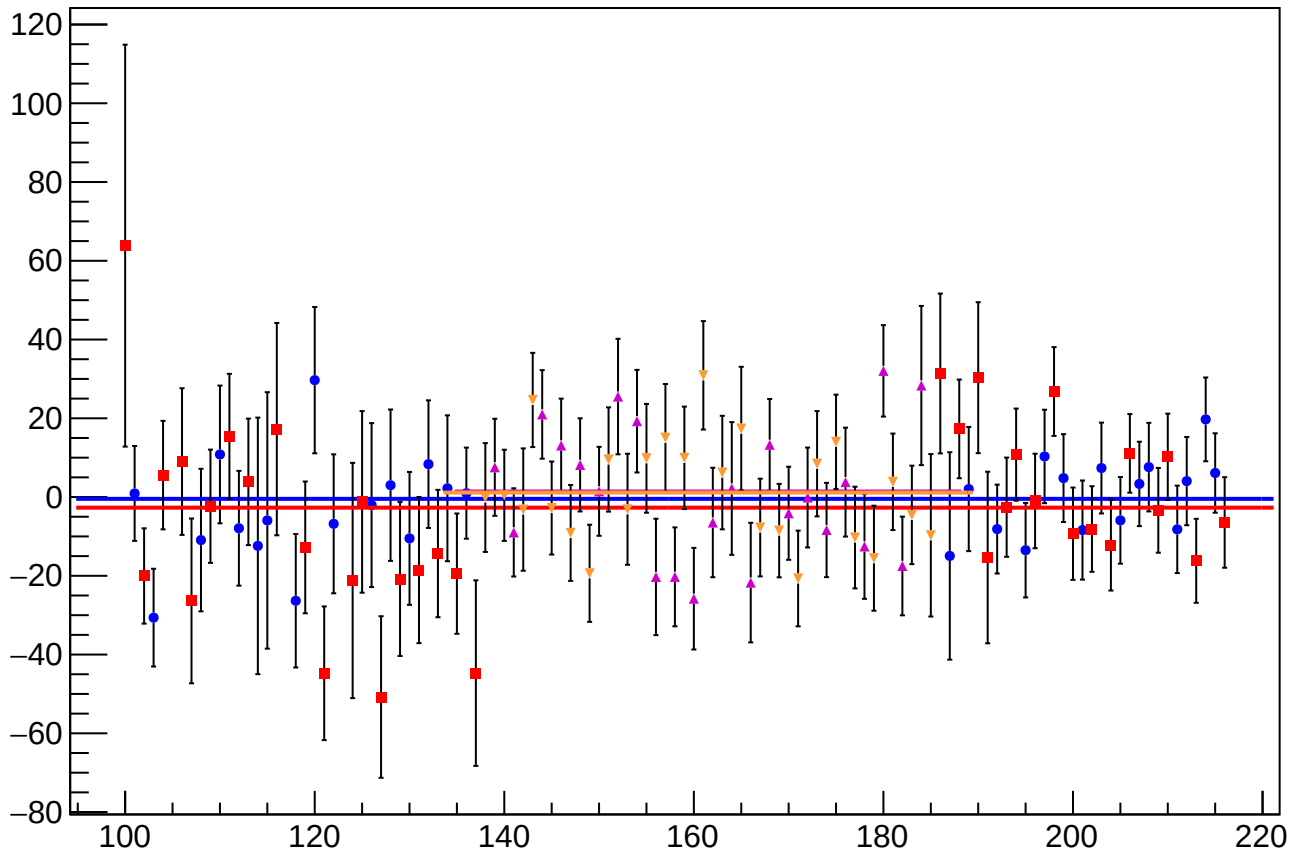
+ sign 21.499 $\pm$ 0.002  $\chi^2$ /NDF: 58455.7/55

All: 21.510 $\pm$ 0.002  $\chi^2$ /NDF: 118087.1/113

- sign 21.522 $\pm$ 0.002  $\chi^2$ /NDF: 59589.6/57



asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-0.457 \pm 2.443$   $\chi^2/\text{NDF}$ : 22.3/30

Left Out:  $1.138 \pm 2.620$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-2.691 \pm 2.438$   $\chi^2/\text{NDF}$ : 49.8/34

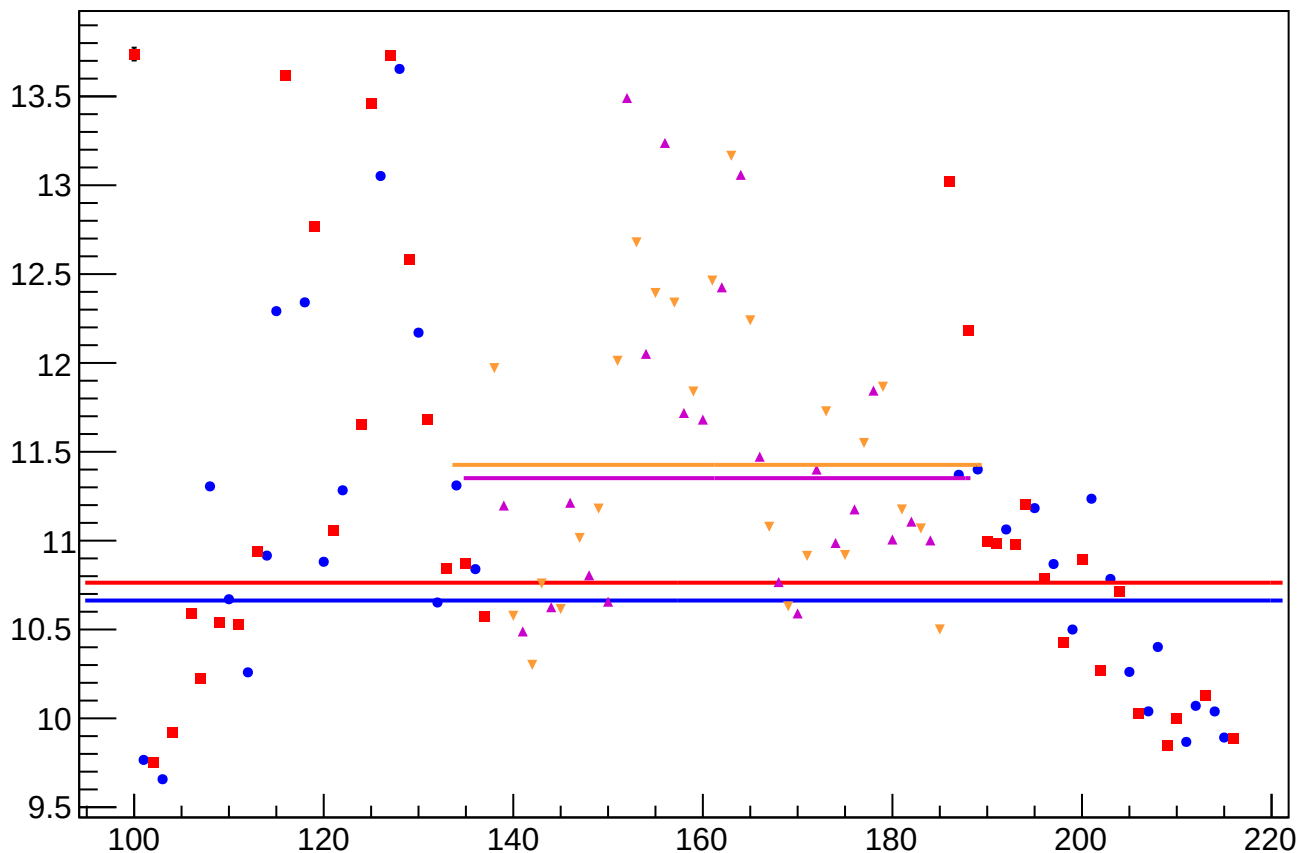
Left In:  $1.407 \pm 2.674$   $\chi^2/\text{NDF}$ : 36.3/22

+ sign  $0.285 \pm 1.787$   $\chi^2/\text{NDF}$ : 47.1/55

All:  $-0.268 \pm 1.269$   $\chi^2/\text{NDF}$ : 134.7/113

- sign  $-0.831 \pm 1.802$   $\chi^2/\text{NDF}$ : 87.4/57

asym\_bcm\_an\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 10.663 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 211853.4/30

Left Out: 11.426 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 156973.4/24

Right Out: 10.763 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 290747.2/34

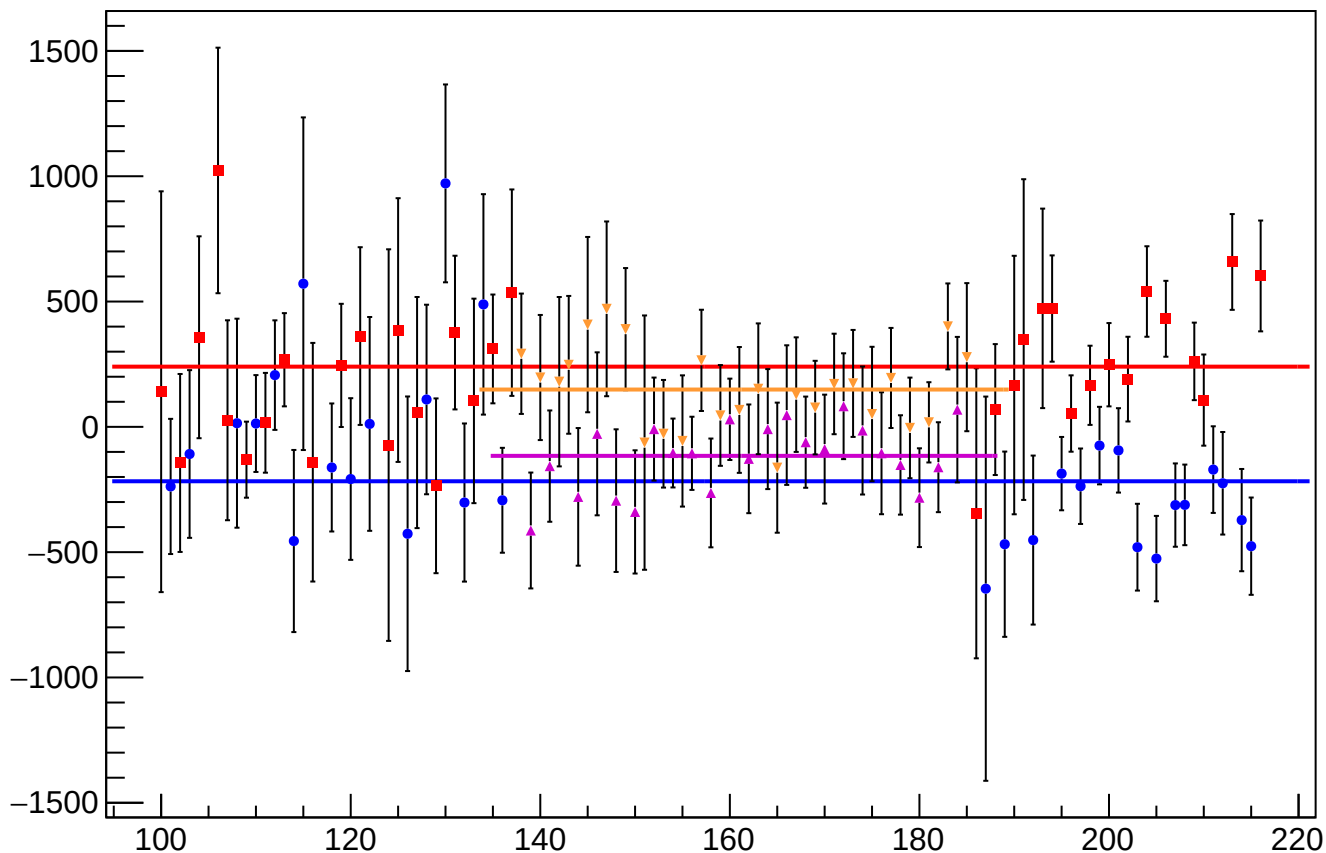
Left In: 11.352 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 170563.6/22

+ sign 11.018 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 459638.6/55

All: 11.024 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 973868.8/113

- sign 11.030 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 514183.6/57

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_mean vs Slug



Right In:  $-217.111 \pm 40.570$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $148.905 \pm 46.306$   $\chi^2/\text{NDF}$ : 10.5/24

Right Out:  $240.237 \pm 40.307$   $\chi^2/\text{NDF}$ : 32.6/34

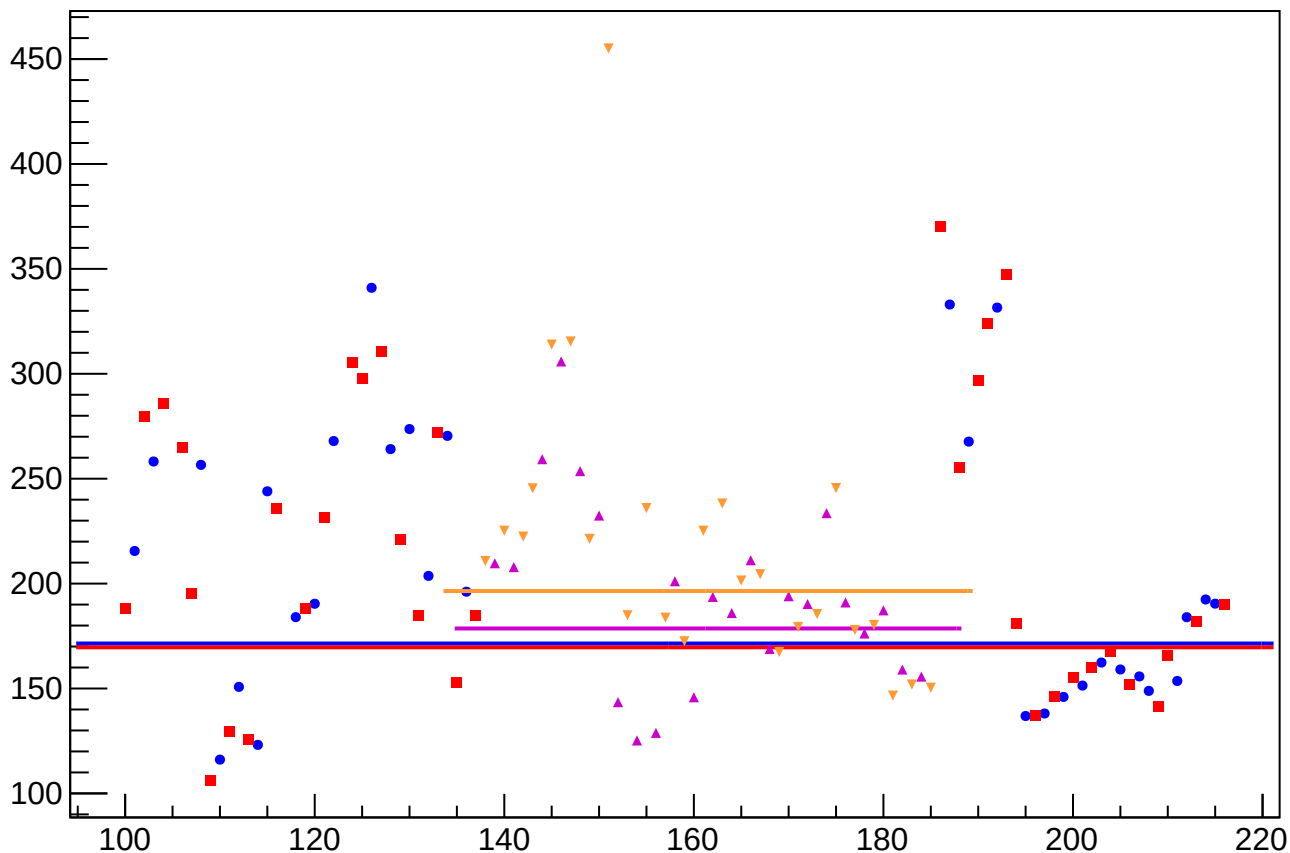
Left In:  $-115.709 \pm 43.641$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-58.166 \pm 30.515$   $\chi^2/\text{NDF}$ : 77.7/55

All:  $11.131 \pm 21.250$   $\chi^2/\text{NDF}$ : 164.0/113

- sign  $76.377 \pm 29.610$   $\chi^2/\text{NDF}$ : 76.3/57

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_avg\_rms vs Slug



Right In: 171.441 $\pm$ 0.029  $\chi^2$ /NDF: 2332243.7/30

Left Out: 196.454 $\pm$ 0.033  $\chi^2$ /NDF:1818746.1/24

Right Out: 169.642 $\pm$ 0.029  $\chi^2$ /NDF: 3026056.9/34

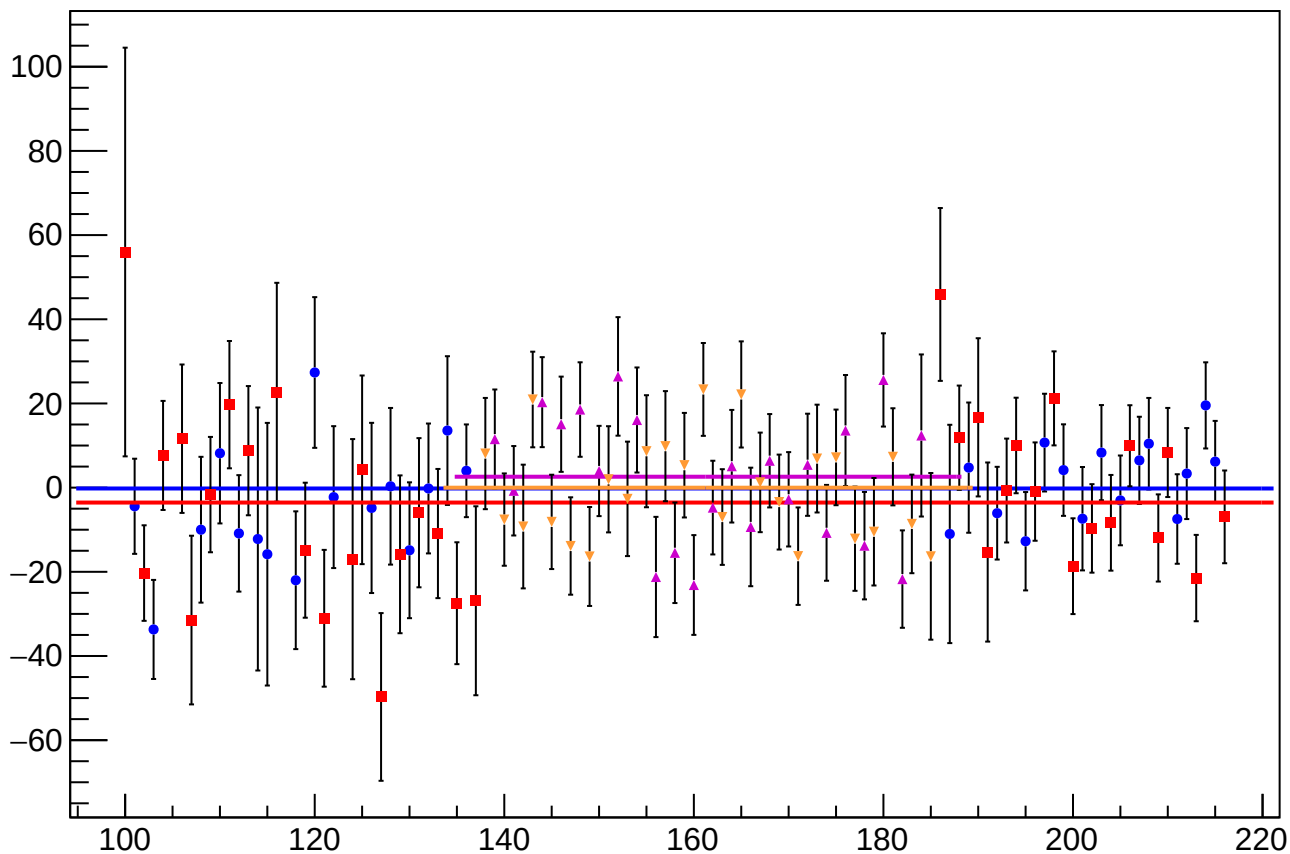
Left In: 178.614 $\pm$ 0.031  $\chi^2$ /NDF:1678859.8/22

+ sign 182.303 $\pm$ 0.022  $\chi^2$ /NDF: 4481149.3/55

All: 177.909 $\pm$ 0.015  $\chi^2$ /NDF: 9312181.8/113

- sign 173.772 $\pm$ 0.021  $\chi^2$ /NDF: 4750530.1/57

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_mean vs Slug



Right In: -0.204 $\pm$ 2.356  $\chi^2/\text{NDF}$ : 25.4/30

Left Out: -0.018 $\pm$ 2.445  $\chi^2/\text{NDF}$ : 23.7/24

Right Out: -3.546 $\pm$ 2.353  $\chi^2/\text{NDF}$ : 49.3/34

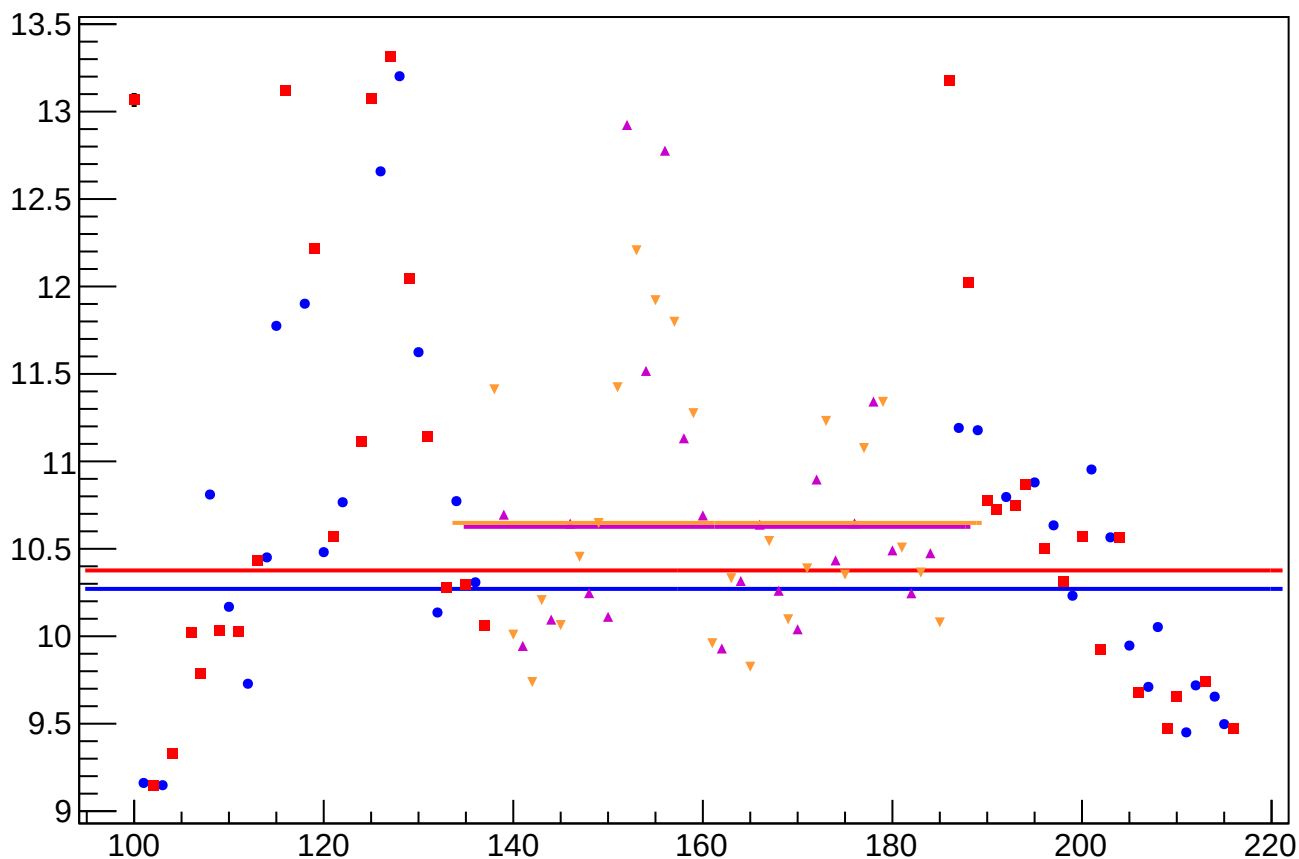
Left In: 2.591 $\pm$ 2.506  $\chi^2/\text{NDF}$ : 34.8/22

+ sign -0.114 $\pm$ 1.696  $\chi^2/\text{NDF}$ : 49.2/55

All: -0.389 $\pm$ 1.206  $\chi^2/\text{NDF}$ : 136.5/113

- sign -0.670 $\pm$ 1.715  $\chi^2/\text{NDF}$ : 87.3/57

asym\_bcm\_an\_us\_bcm\_an\_ds3\_agg\_dd\_rms vs Slug



Right In: 10.271 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 237031.1/30

Left Out: 10.648 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 143535.9/24

Right Out: 10.376 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 331476.5/34

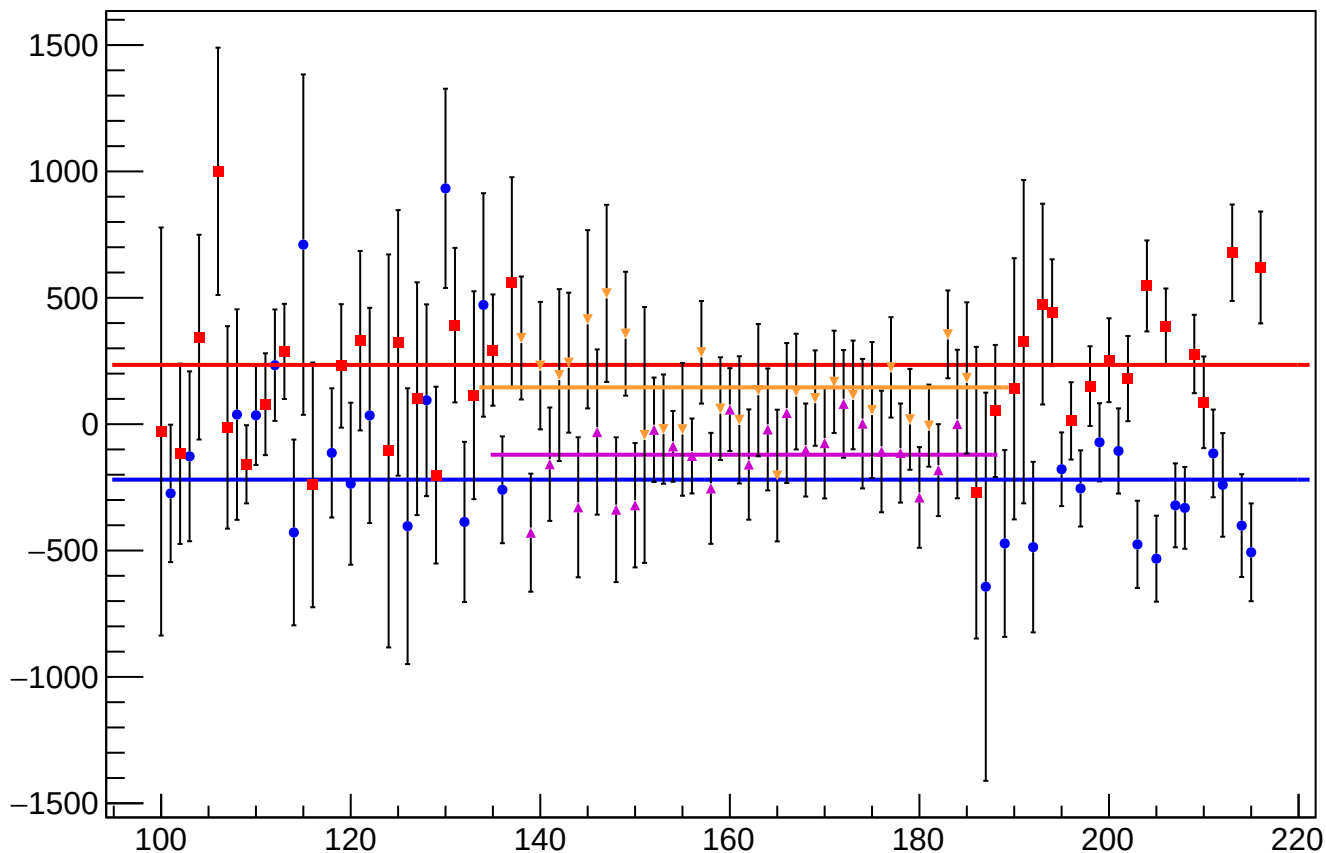
Left In: 10.626 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 159543.1/22

+ sign 10.453 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 405284.4/55

All: 10.473 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 907393.2/113

- sign 10.493 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 501541.9/57

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-219.503 \pm 40.643$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $145.545 \pm 46.613$   $\chi^2/\text{NDF}$ : 10.3/24

Right Out:  $234.531 \pm 40.418$   $\chi^2/\text{NDF}$ : 33.4/34

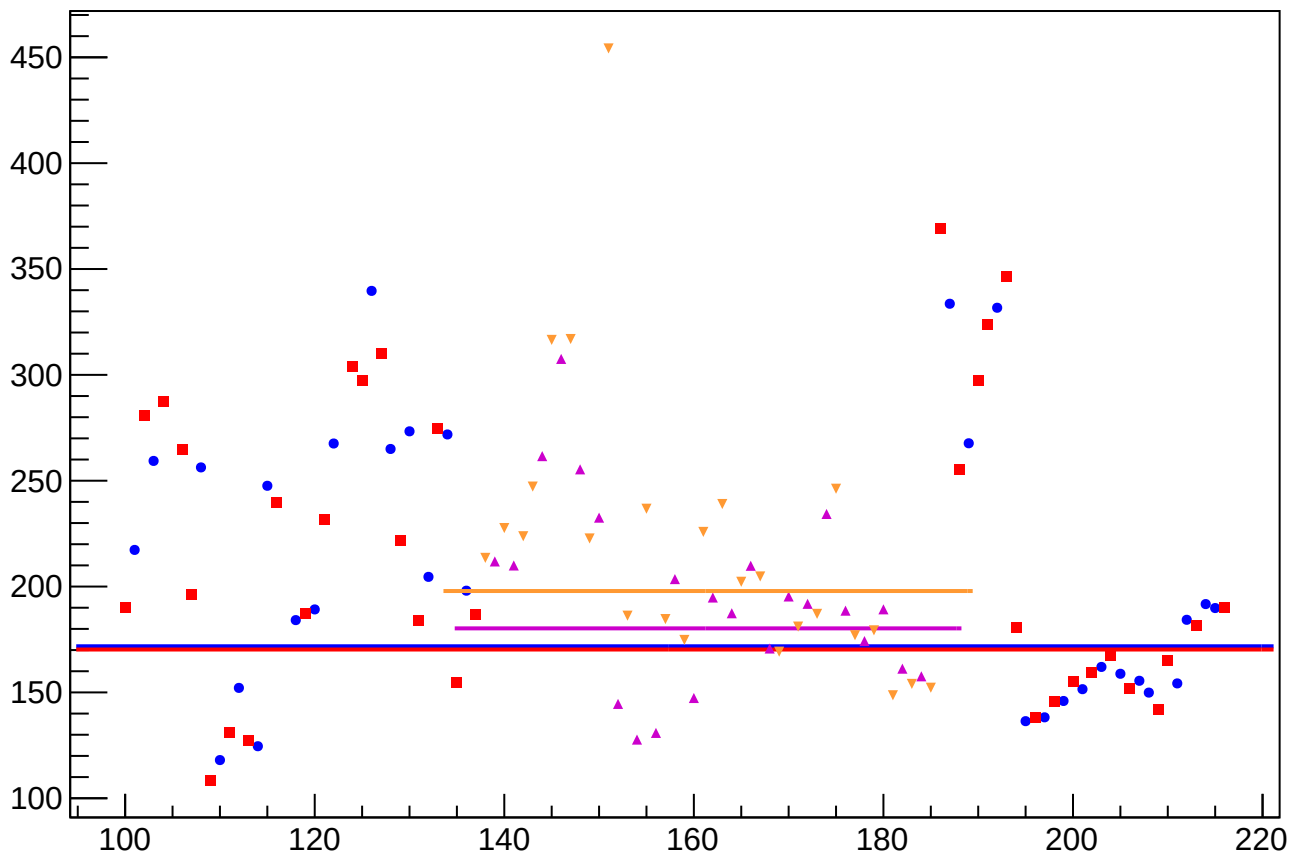
Left In:  $-120.888 \pm 43.994$   $\chi^2/\text{NDF}$ : 8.2/22

+ sign  $-61.840 \pm 30.634$   $\chi^2/\text{NDF}$ : 79.1/55

All:  $6.930 \pm 21.347$   $\chi^2/\text{NDF}$ : 165.9/113

- sign  $71.852 \pm 29.764$   $\chi^2/\text{NDF}$ : 77.0/57

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.787 $\pm$ 0.029  $\chi^2$ /NDF: 2320464.3/30

Left Out: 197.890 $\pm$ 0.033  $\chi^2$ /NDF:1788849.3/24

Right Out: 170.259 $\pm$ 0.029  $\chi^2$ /NDF: 2973054.4/34

Left In: 180.248 $\pm$ 0.031  $\chi^2$ /NDF:1627777.0/22

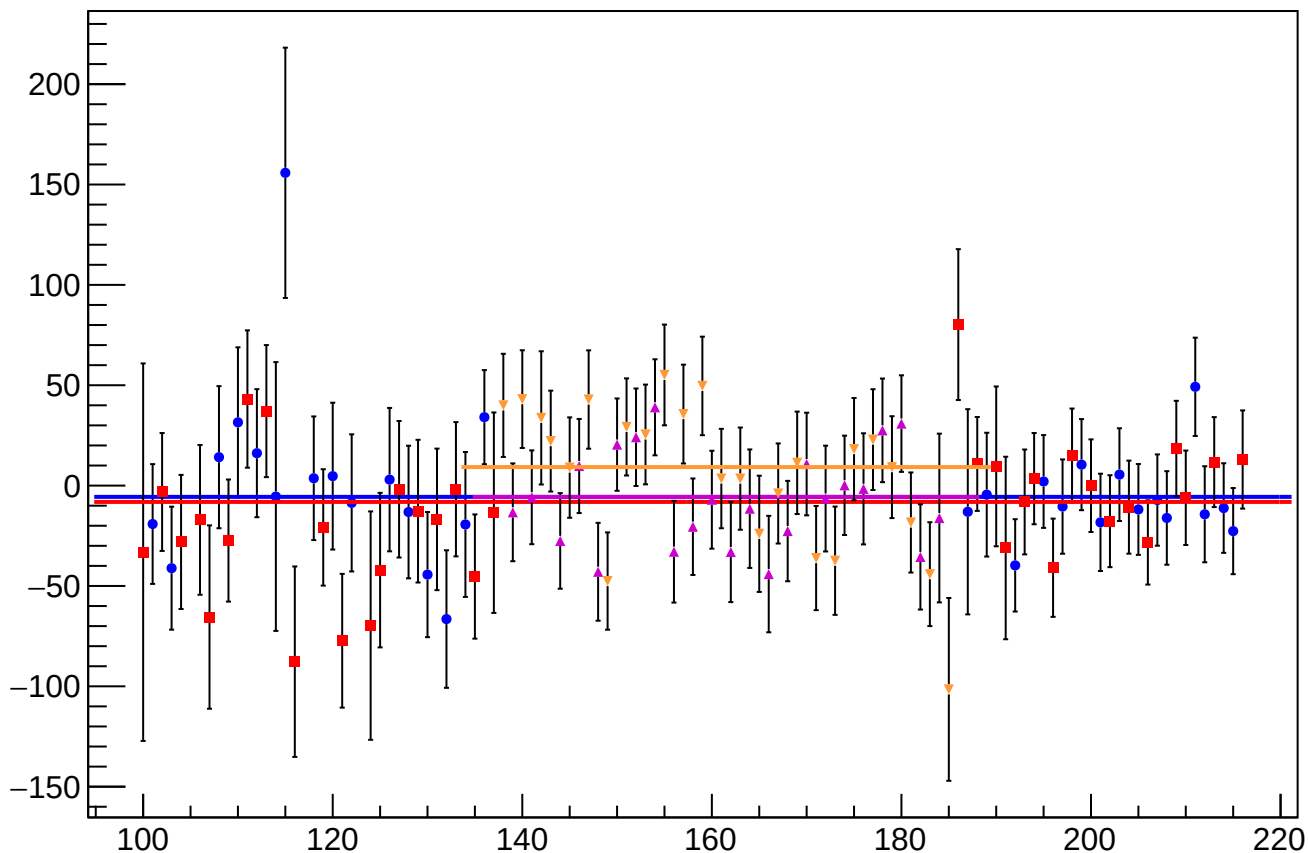
+ sign 183.061 $\pm$ 0.022  $\chi^2$ /NDF: 4465612.8/55

All: 178.828 $\pm$ 0.015  $\chi^2$ /NDF: 9196616.5/113

- sign 174.831 $\pm$ 0.021  $\chi^2$ /NDF: 4656744.2/57



asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-5.609 \pm 5.010$   $\chi^2/\text{NDF}: 27.5/30$

Left Out:  $9.234 \pm 5.162$   $\chi^2/\text{NDF}: 39.4/24$

Right Out:  $-8.130 \pm 4.984$   $\chi^2/\text{NDF}: 31.2/34$

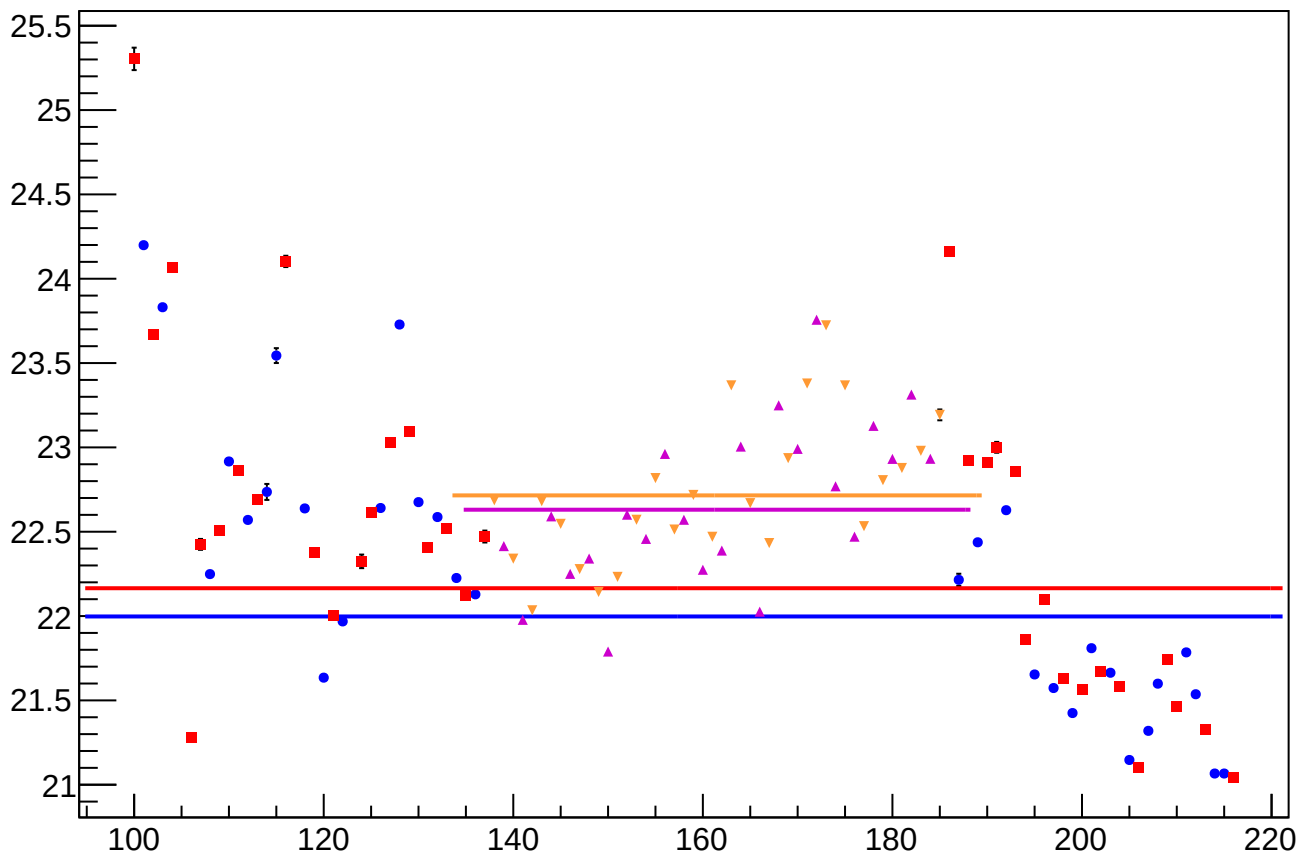
Left In:  $-5.668 \pm 5.286$   $\chi^2/\text{NDF}: 20.8/22$

+ sign  $1.590 \pm 3.595$   $\chi^2/\text{NDF}: 71.2/55$

All:  $-2.654 \pm 2.553$   $\chi^2/\text{NDF}: 126.1/113$

- sign  $-6.971 \pm 3.626$   $\chi^2/\text{NDF}: 52.1/57$

asym\_bcm\_dg\_us\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In:  $21.998 \pm 0.004$   $\chi^2/\text{NDF}$ : 48542.1/30

Left Out:  $22.715 \pm 0.004$   $\chi^2/\text{NDF}$ : 12181.4/24

Right Out:  $22.165 \pm 0.004$   $\chi^2/\text{NDF}$ : 53661.0/34

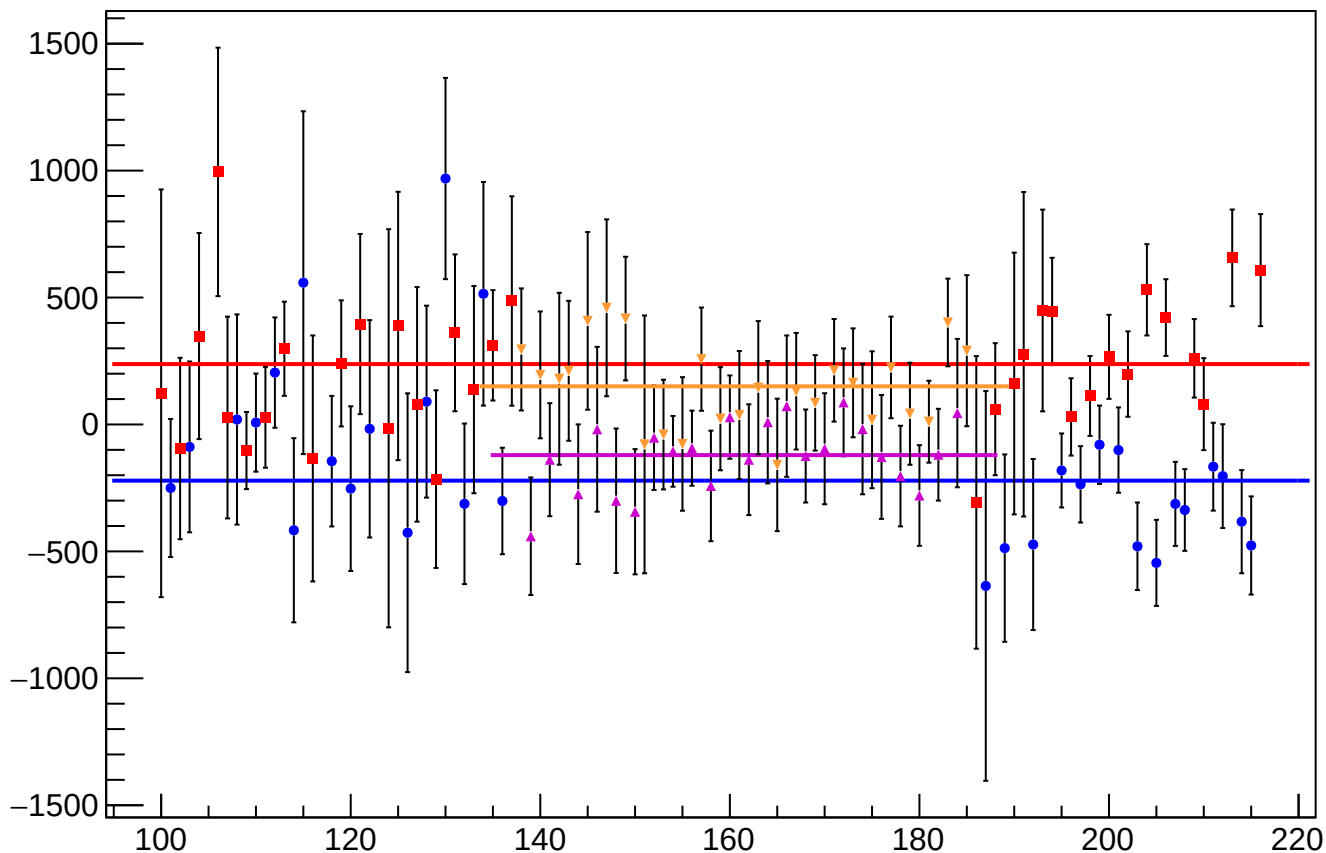
Left In:  $22.631 \pm 0.004$   $\chi^2/\text{NDF}$ : 15391.4/22

+ sign  $22.346 \pm 0.003$   $\chi^2/\text{NDF}$ : 80638.9/55

All:  $22.365 \pm 0.002$   $\chi^2/\text{NDF}$ : 158015.2/113

- sign  $22.384 \pm 0.003$   $\chi^2/\text{NDF}$ : 77263.7/57

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-221.343 \pm 40.527$   $\chi^2/\text{NDF}$ : 32.6/30

Left Out:  $150.218 \pm 46.535$   $\chi^2/\text{NDF}$ : 11.0/24

Right Out:  $237.803 \pm 40.256$   $\chi^2/\text{NDF}$ : 31.1/34

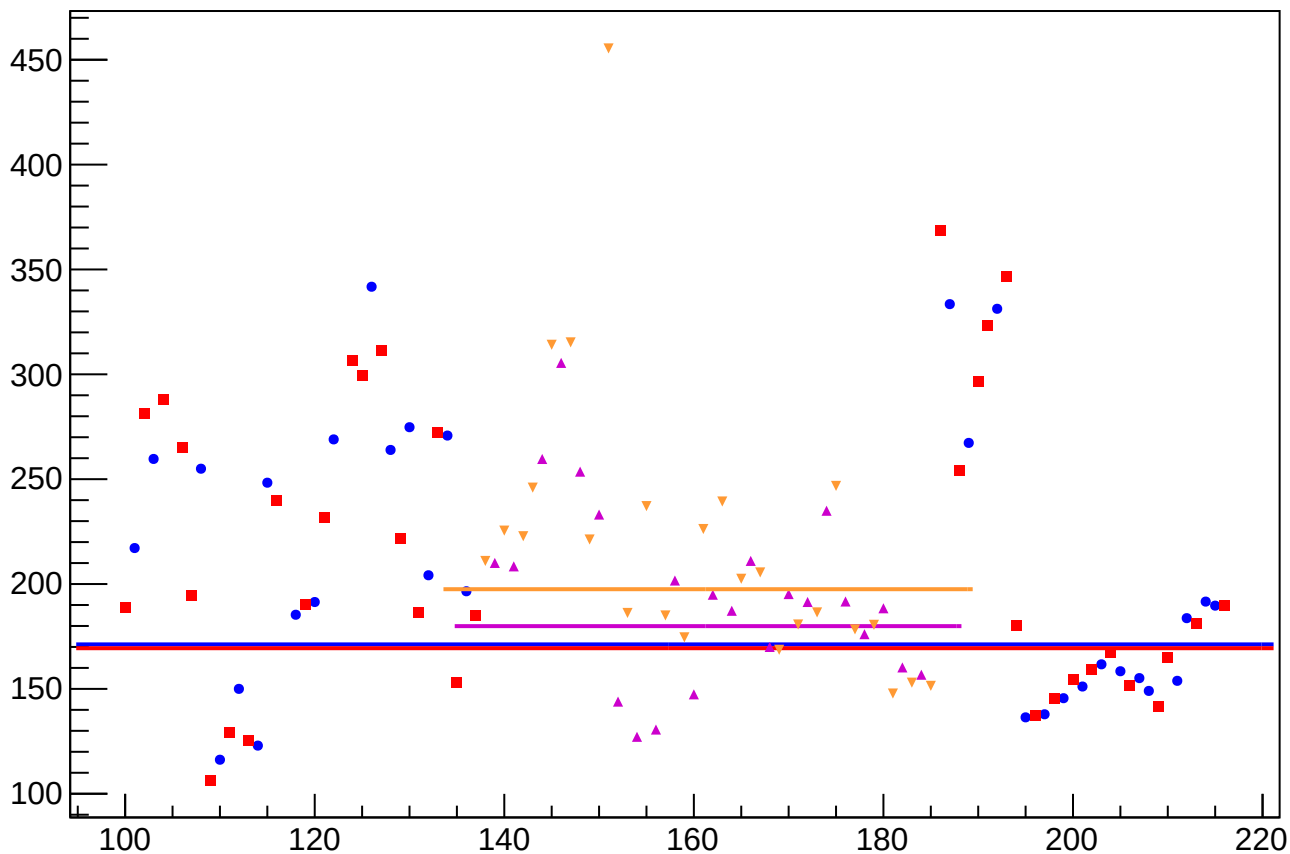
Left In:  $-120.760 \pm 43.920$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-61.082 \pm 30.562$   $\chi^2/\text{NDF}$ : 79.8/55

All:  $8.497 \pm 21.290$   $\chi^2/\text{NDF}$ : 165.1/113

- sign  $74.102 \pm 29.676$   $\chi^2/\text{NDF}$ : 75.2/57

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 171.215 $\pm$ 0.029  $\chi^2$ /NDF: 2353108.2/30

Left Out: 197.534 $\pm$ 0.033  $\chi^2$ /NDF:1789891.0/24

Right Out: 169.397 $\pm$ 0.028  $\chi^2$ /NDF: 3045427.9/34

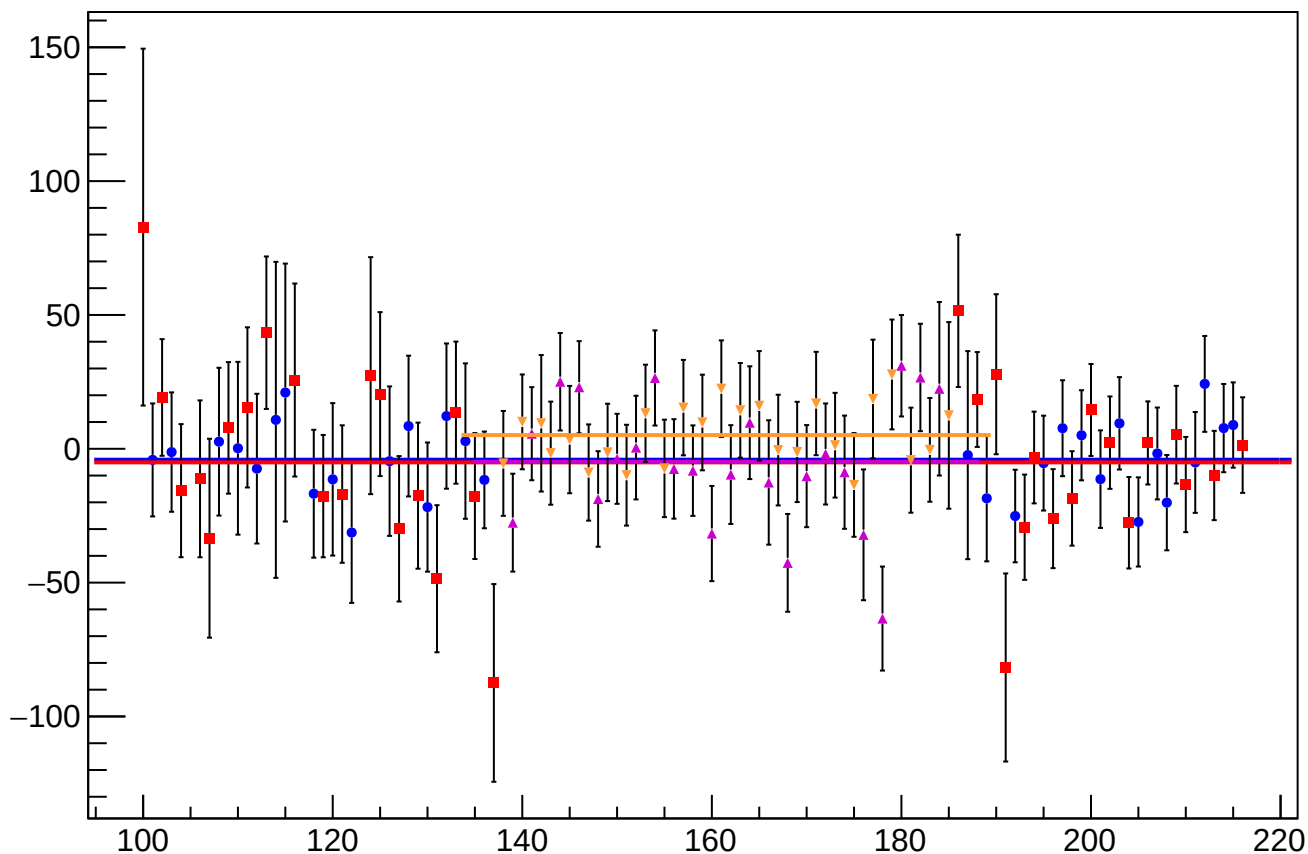
Left In: 179.923 $\pm$ 0.031  $\chi^2$ /NDF:1624144.3/22

+ sign 182.567 $\pm$ 0.022  $\chi^2$ /NDF: 4506815.0/55

All: 178.262 $\pm$ 0.015  $\chi^2$ /NDF: 9315929.6/113

- sign 174.203 $\pm$ 0.021  $\chi^2$ /NDF: 4732010.3/57

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-4.081 \pm 3.815$   $\chi^2/\text{NDF}$ : 13.0/30

Left Out:  $5.119 \pm 3.890$   $\chi^2/\text{NDF}$ : 7.9/24

Right Out:  $-5.069 \pm 3.799$   $\chi^2/\text{NDF}$ : 38.5/34

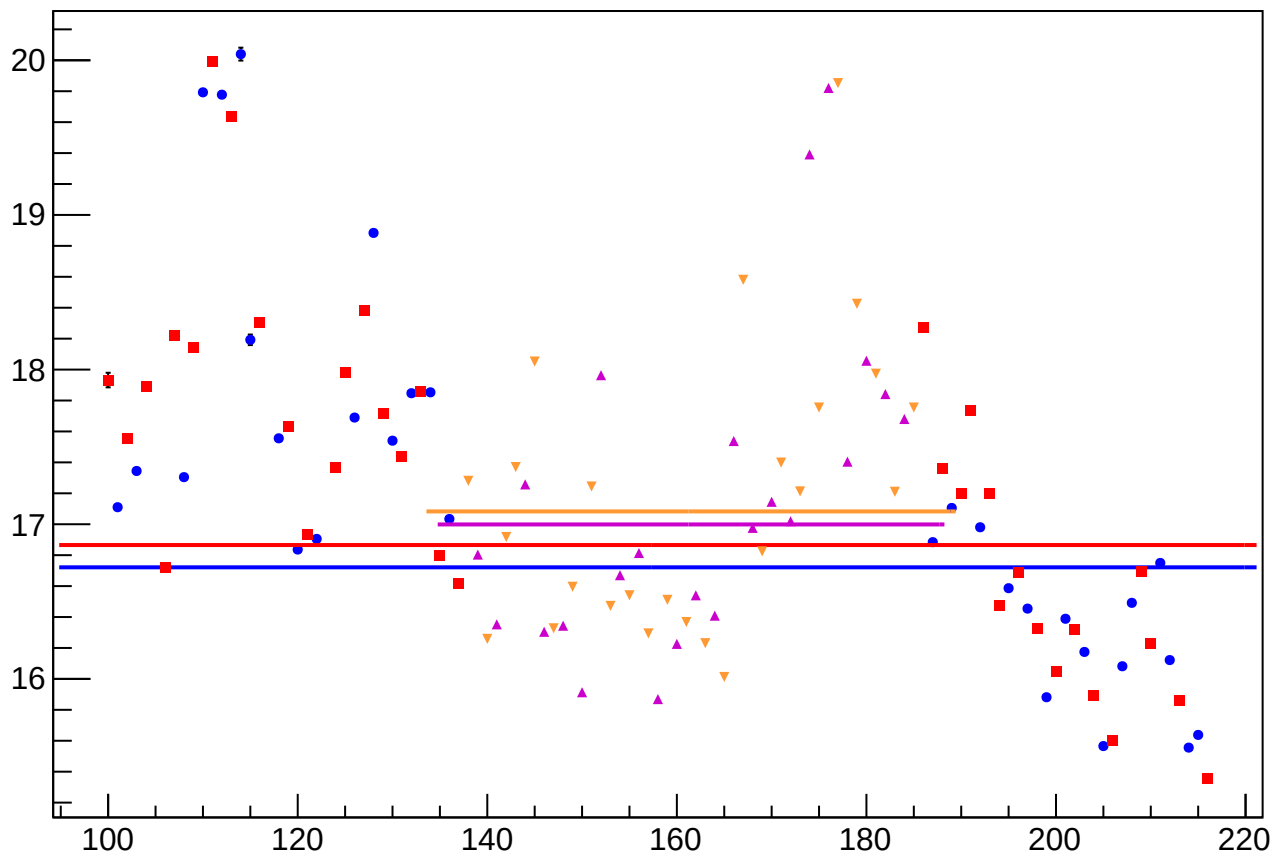
Left In:  $-4.858 \pm 3.980$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $0.429 \pm 2.724$   $\chi^2/\text{NDF}$ : 23.8/55

All:  $-2.246 \pm 1.934$   $\chi^2/\text{NDF}$ : 99.8/113

- sign  $-4.968 \pm 2.748$   $\chi^2/\text{NDF}$ : 74.0/57

asym\_bcm\_dg\_ds\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In:  $16.721 \pm 0.003$   $\chi^2/\text{NDF}: 124673.9/30$

Left Out:  $17.083 \pm 0.003$   $\chi^2/\text{NDF}: 96774.9/24$

Right Out:  $16.866 \pm 0.003$   $\chi^2/\text{NDF}: 137170.3/34$

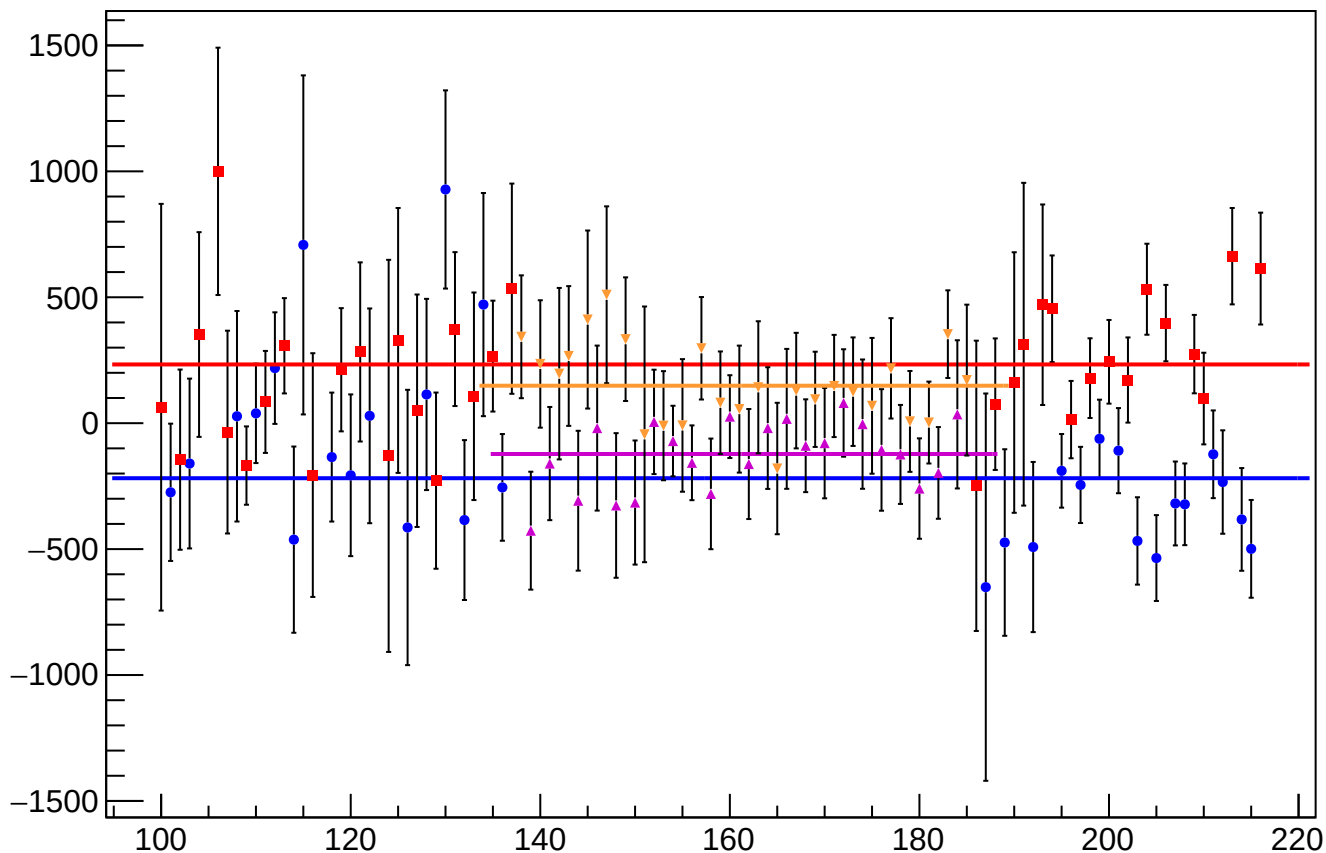
Left In:  $16.999 \pm 0.003$   $\chi^2/\text{NDF}: 104021.0/22$

+ sign  $16.899 \pm 0.002$   $\chi^2/\text{NDF}: 230253.7/55$

All:  $16.914 \pm 0.001$   $\chi^2/\text{NDF}: 472740.7/113$

- sign  $16.929 \pm 0.002$   $\chi^2/\text{NDF}: 242363.6/57$

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-218.497 \pm 40.765$   $\chi^2/\text{NDF}$ : 33.2/30

Left Out:  $148.758 \pm 46.714$   $\chi^2/\text{NDF}$ : 9.5/24

Right Out:  $233.227 \pm 40.539$   $\chi^2/\text{NDF}$ : 32.7/34

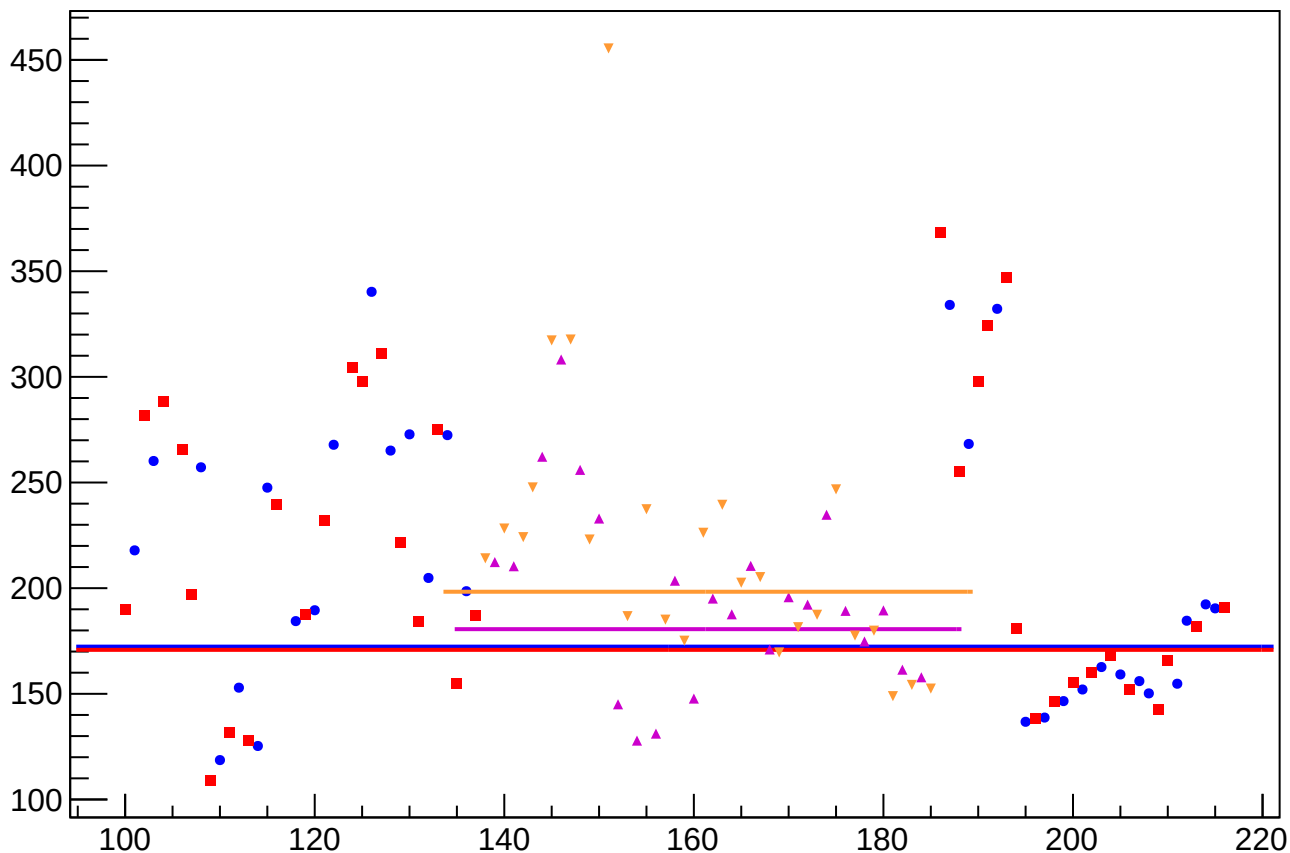
Left In:  $-122.376 \pm 44.081$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-59.728 \pm 30.715$   $\chi^2/\text{NDF}$ : 77.8/55

All:  $7.157 \pm 21.402$   $\chi^2/\text{NDF}$ : 162.8/113

- sign  $70.283 \pm 29.839$   $\chi^2/\text{NDF}$ : 75.8/57

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 172.335 $\pm$ 0.029  $\chi^2$ /NDF: 2307683.7/30

Left Out: 198.313 $\pm$ 0.033  $\chi^2$ /NDF:1790279.4/24

Right Out: 170.811 $\pm$ 0.029  $\chi^2$ /NDF: 2955126.5/34

Left In: 180.601 $\pm$ 0.031  $\chi^2$ /NDF:1628072.3/22

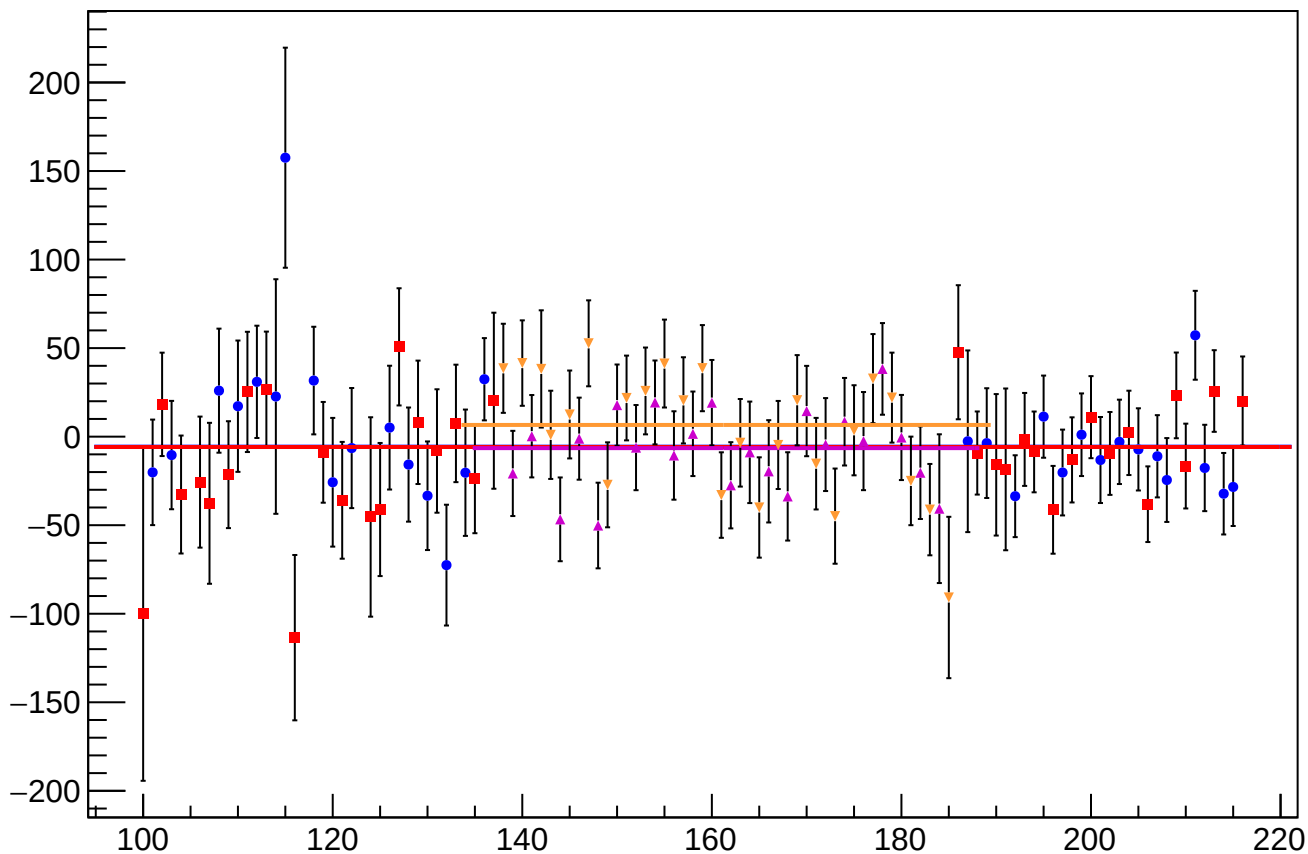
+ sign 183.566 $\pm$ 0.022  $\chi^2$ /NDF: 4449080.6/55

All: 179.312 $\pm$ 0.015  $\chi^2$ /NDF: 9160294.8/113

- sign 175.297 $\pm$ 0.021  $\chi^2$ /NDF: 4636646.2/57



asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-5.659 \pm 5.055$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $6.611 \pm 5.117$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $-5.838 \pm 5.013$   $\chi^2/\text{NDF}$ : 28.5/34

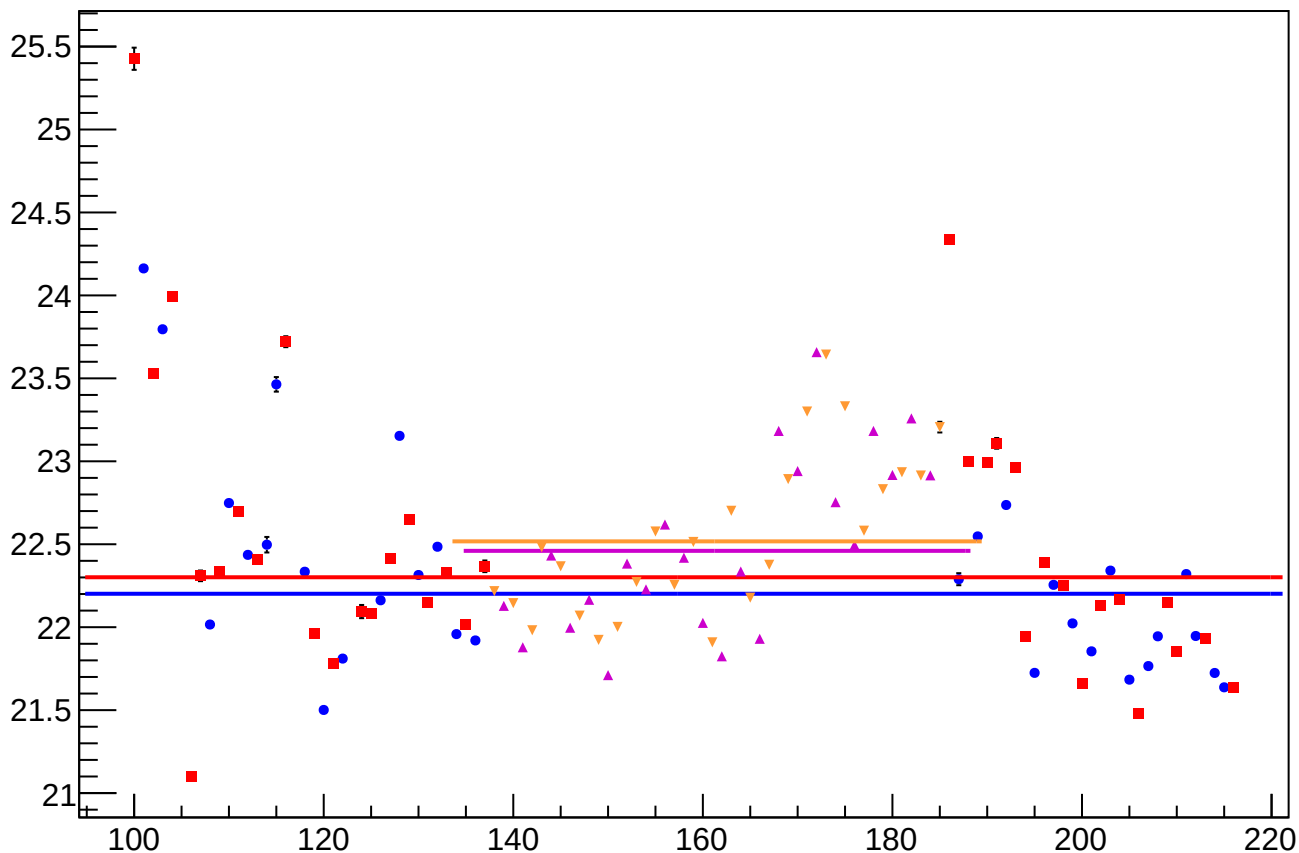
Left In:  $-6.482 \pm 5.247$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $0.402 \pm 3.596$   $\chi^2/\text{NDF}$ : 71.4/55

All:  $-2.846 \pm 2.553$   $\chi^2/\text{NDF}$ : 119.0/113

- sign  $-6.145 \pm 3.625$   $\chi^2/\text{NDF}$ : 46.0/57

asym\_bcm\_dg\_us\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 22.202 $\pm$ 0.004  $\chi^2$ /NDF: 26050.2/30

Left Out: 22.517 $\pm$ 0.004  $\chi^2$ /NDF:16002.5/24

Right Out: 22.301 $\pm$ 0.004  $\chi^2$ /NDF: 34394.0/34

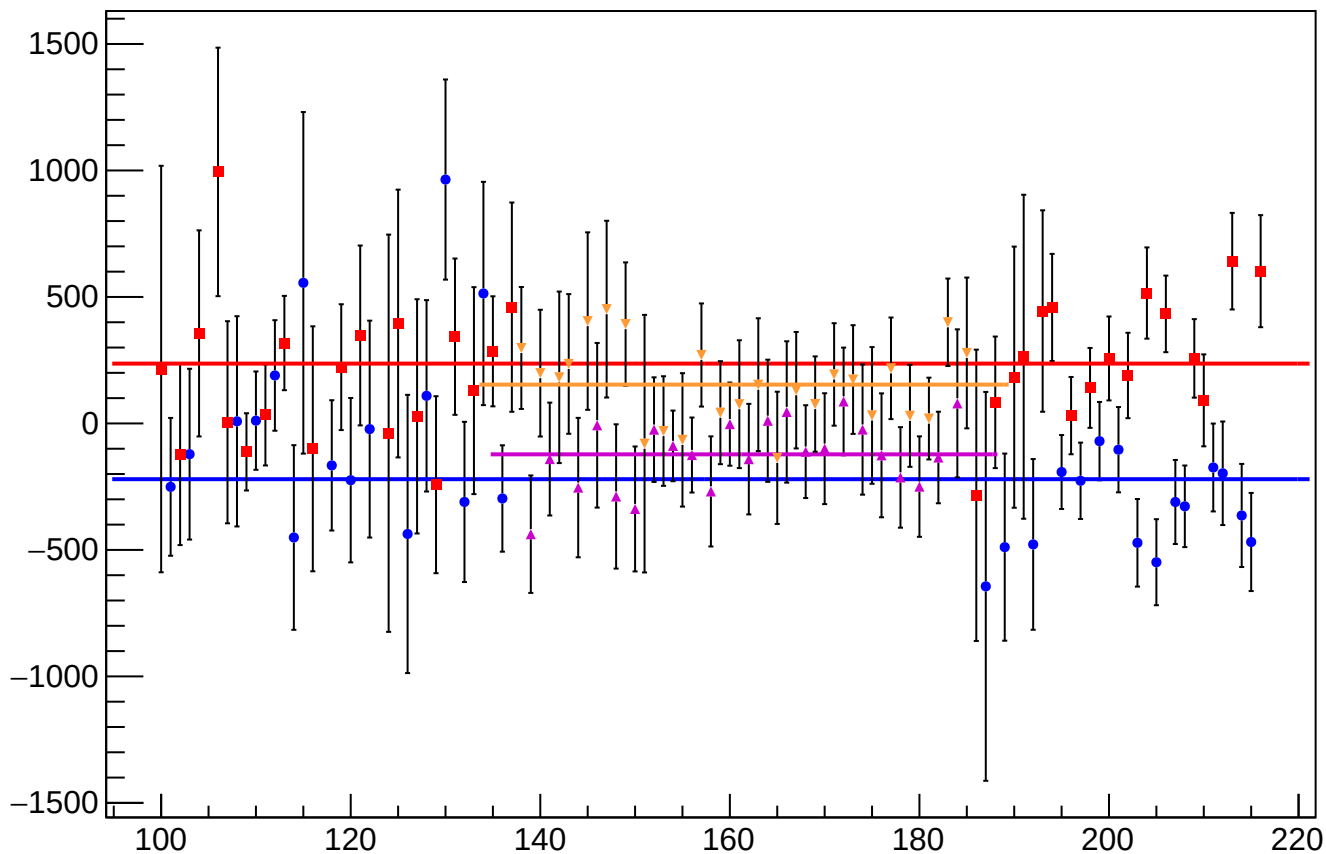
Left In: 22.460 $\pm$ 0.004  $\chi^2$ /NDF:19117.2/22

+ sign 22.358 $\pm$ 0.003  $\chi^2$ /NDF: 45909.7/55

All: 22.367 $\pm$ 0.002  $\chi^2$ /NDF: 100412.9/113

- sign 22.377 $\pm$ 0.003  $\chi^2$ /NDF: 54474.2/57

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-220.358 \pm 40.650$   $\chi^2/\text{NDF}$ : 31.8/30

Left Out:  $153.507 \pm 46.636$   $\chi^2/\text{NDF}$ : 10.1/24

Right Out:  $236.532 \pm 40.378$   $\chi^2/\text{NDF}$ : 30.4/34

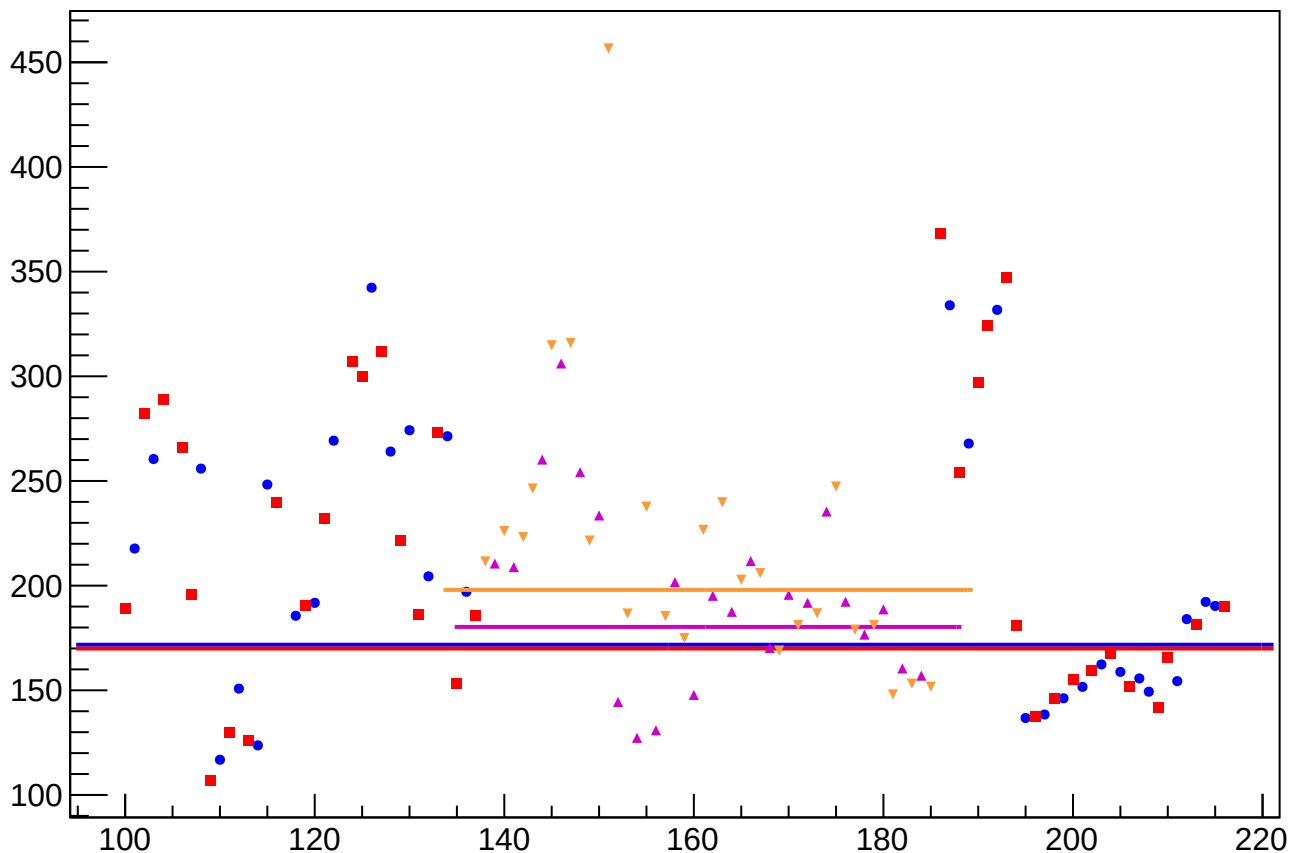
Left In:  $-122.165 \pm 44.006$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-58.943 \pm 30.643$   $\chi^2/\text{NDF}$ : 78.4/55

All:  $8.759 \pm 21.346$   $\chi^2/\text{NDF}$ : 161.9/113

- sign  $72.578 \pm 29.752$   $\chi^2/\text{NDF}$ : 74.0/57

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 171.767 $\pm$ 0.029  $\chi^2$ /NDF: 2339826.8/30

Left Out: 197.957 $\pm$ 0.033  $\chi^2$ /NDF:1791354.6/24

Right Out: 169.955 $\pm$ 0.029  $\chi^2$ /NDF: 3026619.2/34

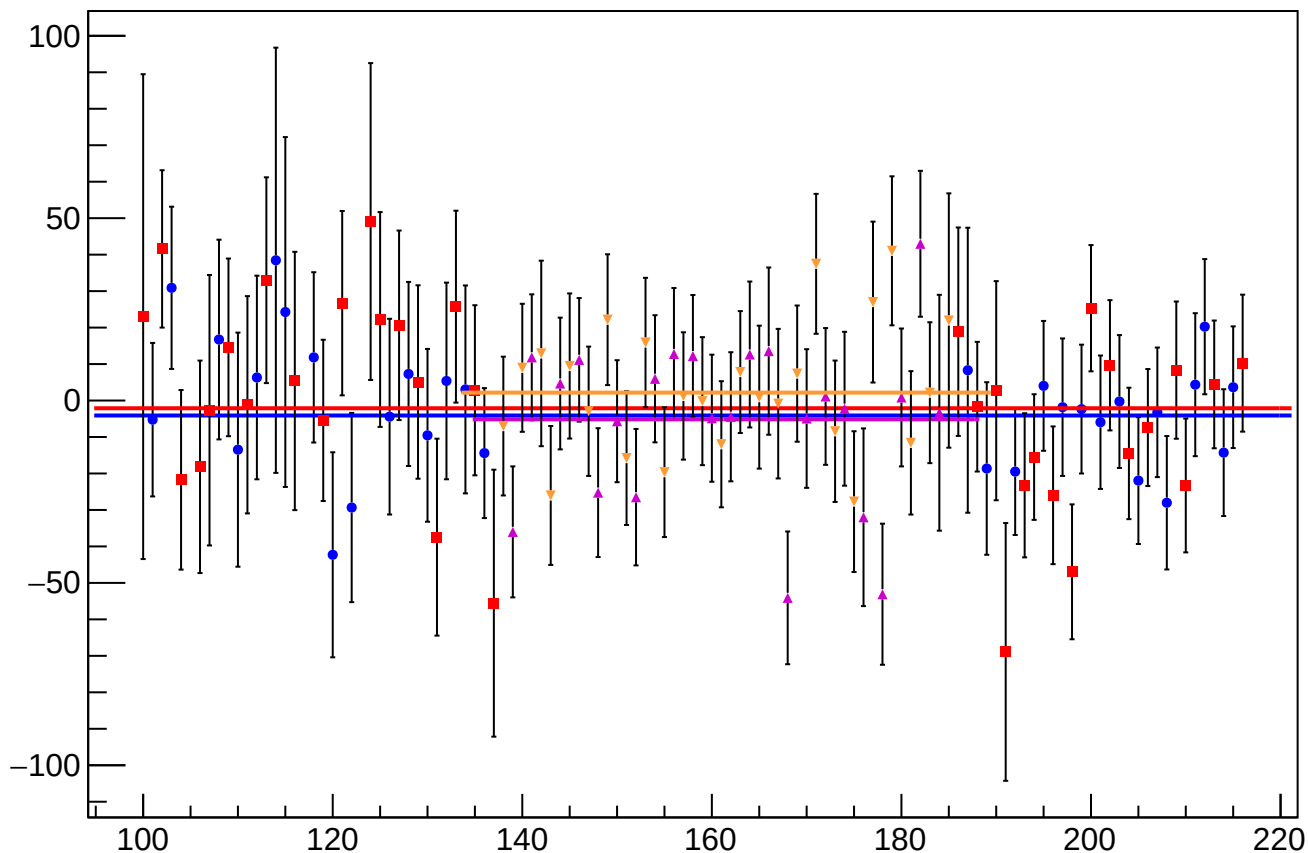
Left In: 180.274 $\pm$ 0.031  $\chi^2$ /NDF:1624682.7/22

+ sign 183.075 $\pm$ 0.022  $\chi^2$ /NDF: 4489612.6/55

All: 178.749 $\pm$ 0.015  $\chi^2$ /NDF: 9278039.0/113

- sign 174.672 $\pm$ 0.021  $\chi^2$ /NDF: 4711012.3/57

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-4.103 \pm 3.878$   $\chi^2/\text{NDF}$ : 15.0/30

Left Out:  $2.174 \pm 3.825$   $\chi^2/\text{NDF}$ : 20.0/24

Right Out:  $-2.116 \pm 3.843$   $\chi^2/\text{NDF}$ : 35.6/34

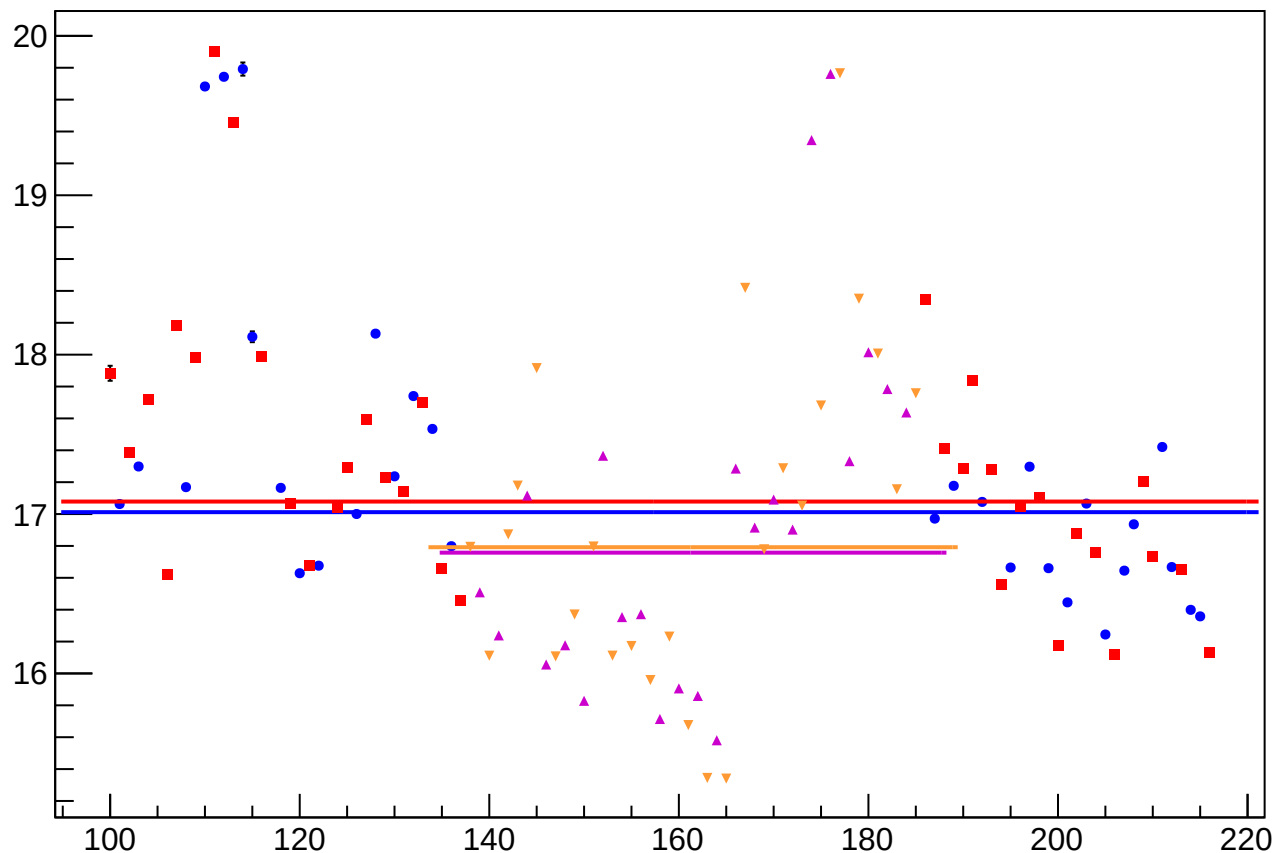
Left In:  $-5.150 \pm 3.924$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.921 \pm 2.723$   $\chi^2/\text{NDF}$ : 36.3/55

All:  $-2.250 \pm 1.934$   $\chi^2/\text{NDF}$ : 105.0/113

- sign  $-3.601 \pm 2.746$   $\chi^2/\text{NDF}$ : 68.2/57

asym\_bcm\_dg\_ds\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 17.012 $\pm$ 0.003  $\chi^2$ /NDF: 62308.4/30

Left Out: 16.792 $\pm$ 0.003  $\chi^2$ /NDF:137000.5/24

Right Out: 17.078 $\pm$ 0.003  $\chi^2$ /NDF: 72639.3/34

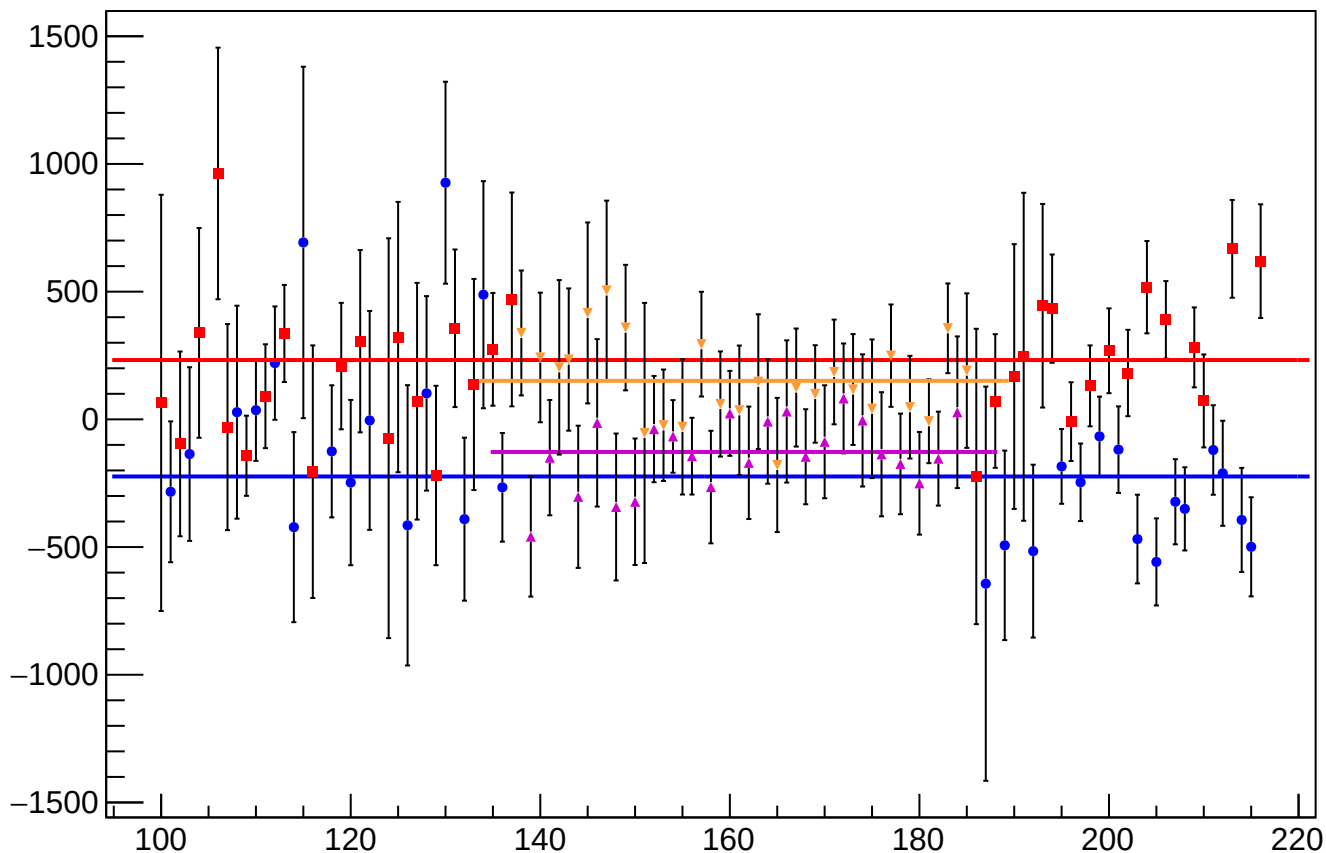
Left In: 16.758 $\pm$ 0.003  $\chi^2$ /NDF:123306.8/22

+ sign 16.900 $\pm$ 0.002  $\chi^2$ /NDF: 202568.8/55

All: 16.911 $\pm$ 0.001  $\chi^2$ /NDF: 405387.5/113

- sign 16.921 $\pm$ 0.002  $\chi^2$ /NDF: 202759.7/57

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In: -223.661 $\pm$ 40.887  $\chi^2$ /NDF: 33.8/30

Left Out: 150.884 $\pm$ 47.035  $\chi^2$ /NDF:10.0/24

Right Out: 232.228 $\pm$ 40.668  $\chi^2$ /NDF: 31.2/34

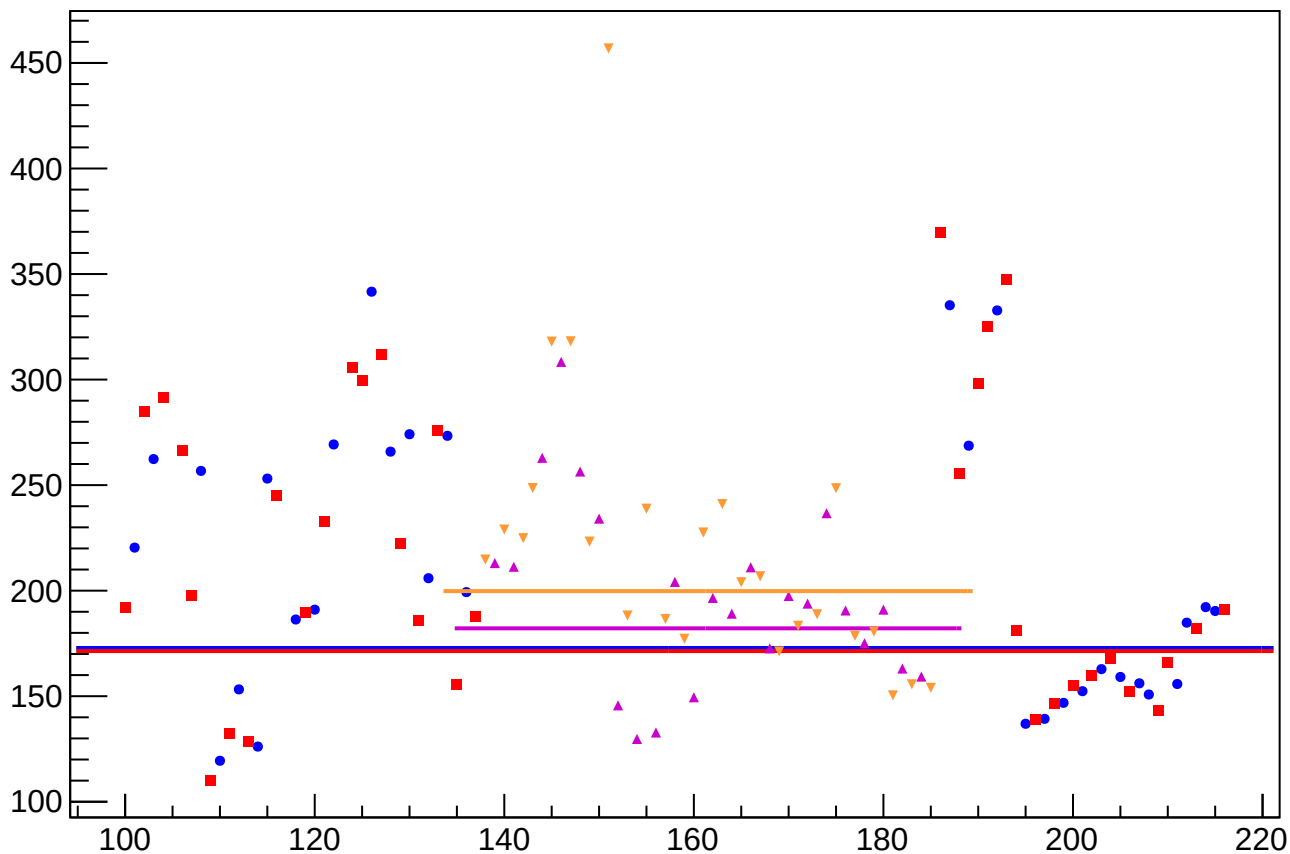
Left In: -127.710 $\pm$ 44.426  $\chi^2$ /NDF:7.8/22

+ sign -62.453 $\pm$ 30.858  $\chi^2$ /NDF: 79.9/55

All: 4.680 $\pm$ 21.509  $\chi^2$ /NDF: 163.9/113

- sign 68.123 $\pm$ 29.998  $\chi^2$ /NDF: 74.8/57

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 172.841 $\pm$ 0.029  $\chi^2$ /NDF: 2314139.2/30

Left Out: 199.785 $\pm$ 0.033  $\chi^2$ /NDF:1760326.2/24

Right Out: 171.375 $\pm$ 0.029  $\chi^2$ /NDF: 2957398.1/34

Left In: 182.150 $\pm$ 0.031  $\chi^2$ /NDF:1584358.1/22

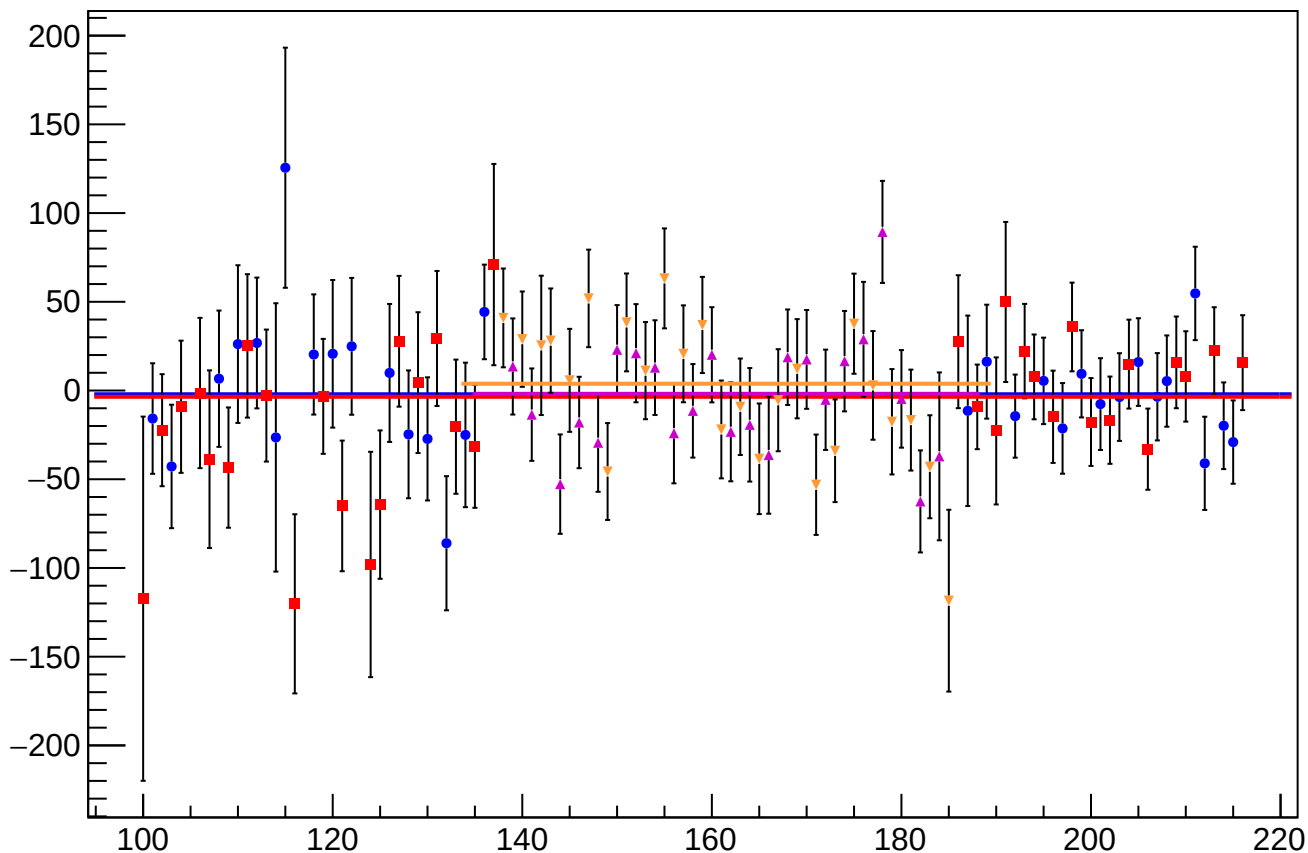
+ sign 184.438 $\pm$ 0.022  $\chi^2$ /NDF: 4448294.3/55

All: 180.247 $\pm$ 0.015  $\chi^2$ /NDF: 9125796.0/113

- sign 176.288 $\pm$ 0.021  $\chi^2$ /NDF: 4605769.5/57



asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In:  $-2.109 \pm 5.456$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $3.831 \pm 5.789$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-3.522 \pm 5.386$   $\chi^2/\text{NDF}$ : 31.9/34

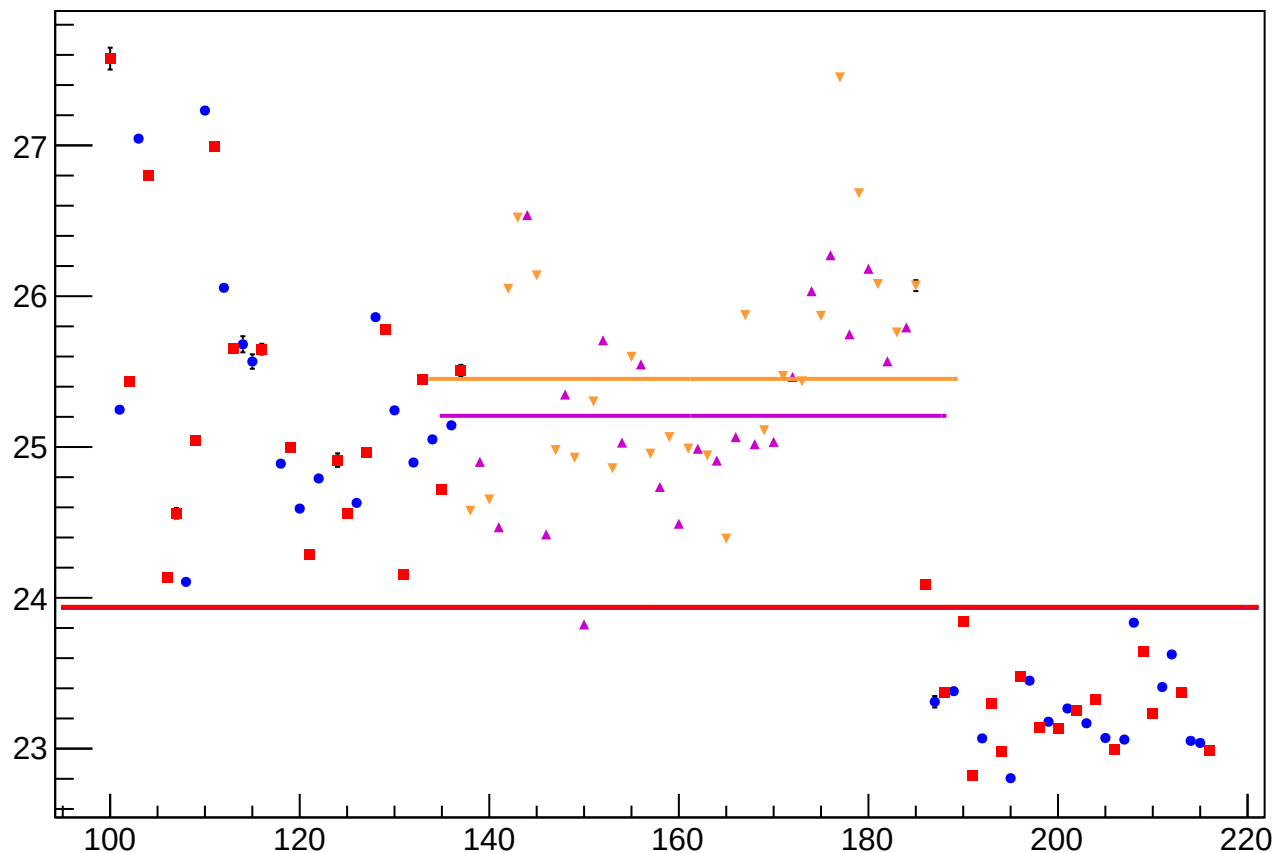
Left In:  $-1.850 \pm 5.893$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $0.685 \pm 3.970$   $\chi^2/\text{NDF}$ : 65.9/55

All:  $-1.036 \pm 2.809$   $\chi^2/\text{NDF}$ : 126.3/113

- sign  $-2.761 \pm 3.976$   $\chi^2/\text{NDF}$ : 60.1/57

asym\_bcm\_dg\_us\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 23.934 $\pm$ 0.004  $\chi^2$ /NDF: 84020.1/30

Left Out: 25.452 $\pm$ 0.004  $\chi^2$ /NDF:29612.4/24

Right Out: 23.940 $\pm$ 0.004  $\chi^2$ /NDF: 77209.0/34

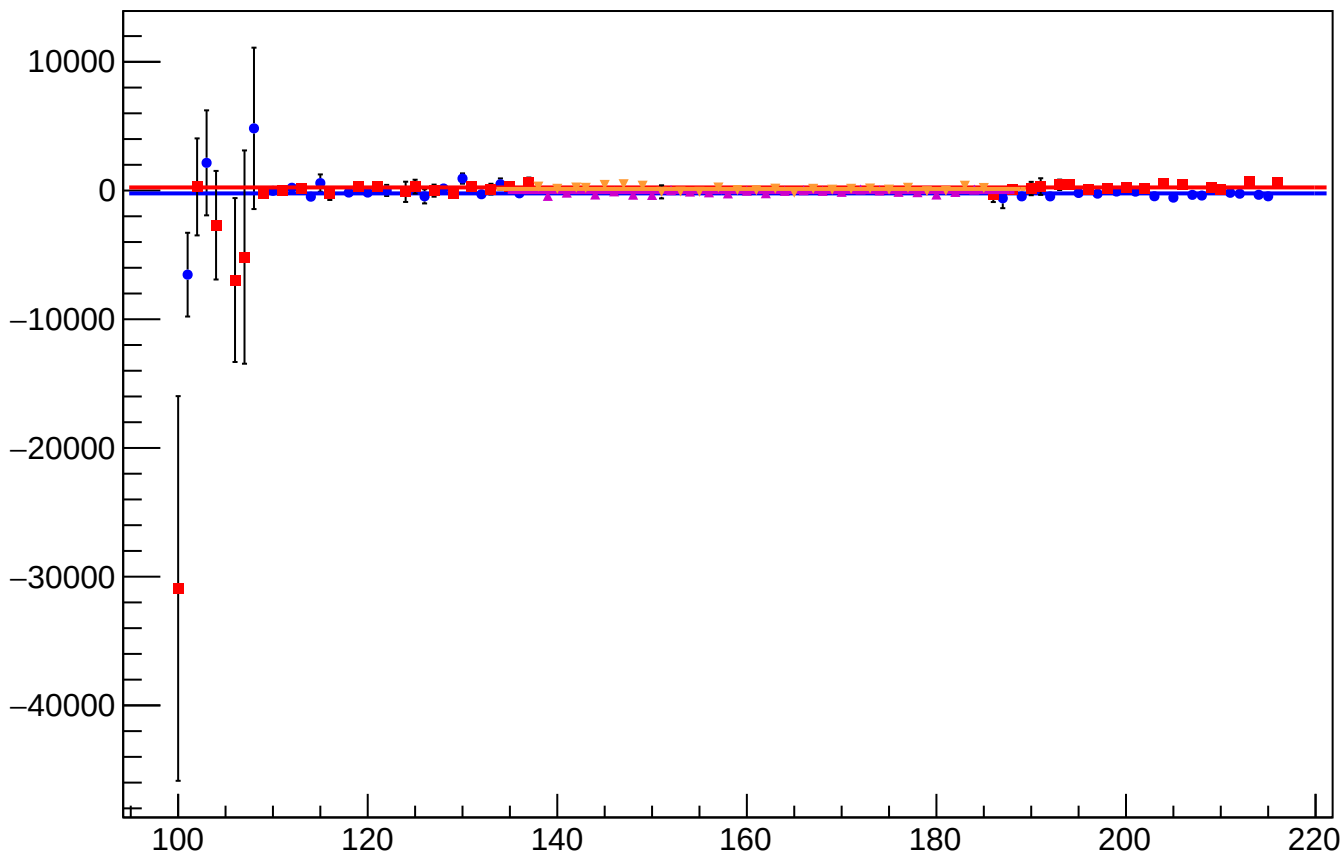
Left In: 25.207 $\pm$ 0.004  $\chi^2$ /NDF:25827.4/22

+ sign 24.648 $\pm$ 0.003  $\chi^2$ /NDF: 186431.9/55

All: 24.583 $\pm$ 0.002  $\chi^2$ /NDF: 340883.0/113

- sign 24.517 $\pm$ 0.003  $\chi^2$ /NDF: 153359.6/57

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_mean vs Slug



Right In:  $-221.795 \pm 42.587$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $125.161 \pm 46.925$   $\chi^2/\text{NDF}$ : 11.1/24

Right Out:  $242.385 \pm 42.830$   $\chi^2/\text{NDF}$ : 34.7/34

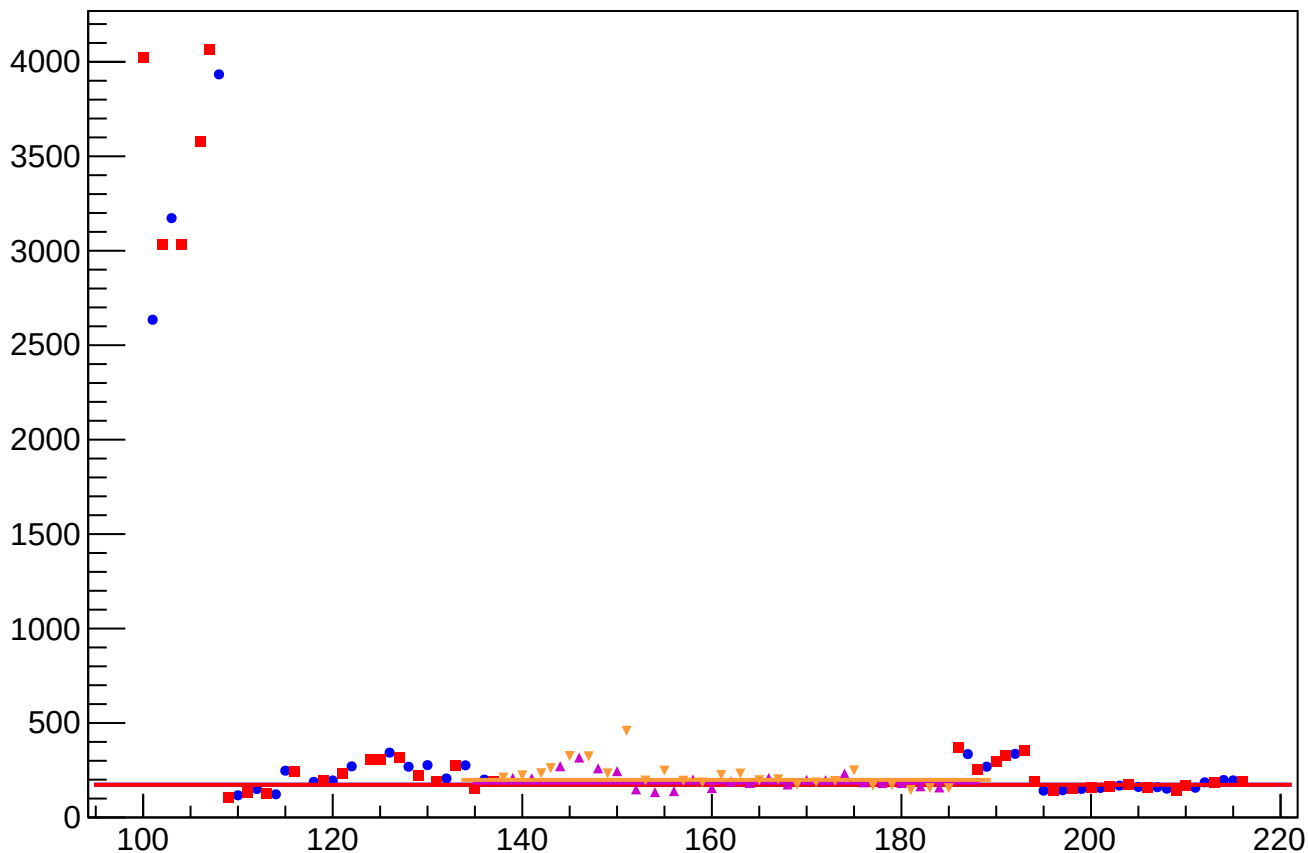
Left In:  $-117.291 \pm 44.871$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-65.094 \pm 31.536$   $\chi^2/\text{NDF}$ : 76.2/55

All:  $4.115 \pm 22.101$   $\chi^2/\text{NDF}$ : 161.9/113

- sign  $70.914 \pm 30.982$   $\chi^2/\text{NDF}$ : 76.3/57

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_avg\_rms vs Slug



Right In: 173.511 $\pm$ 0.030  $\chi^2$ /NDF: 4936754.3/30

Left Out: 198.994 $\pm$ 0.033  $\chi^2$ /NDF: 1902155.1/24

Right Out: 172.873 $\pm$ 0.030  $\chi^2$ /NDF: 5603383.1/34

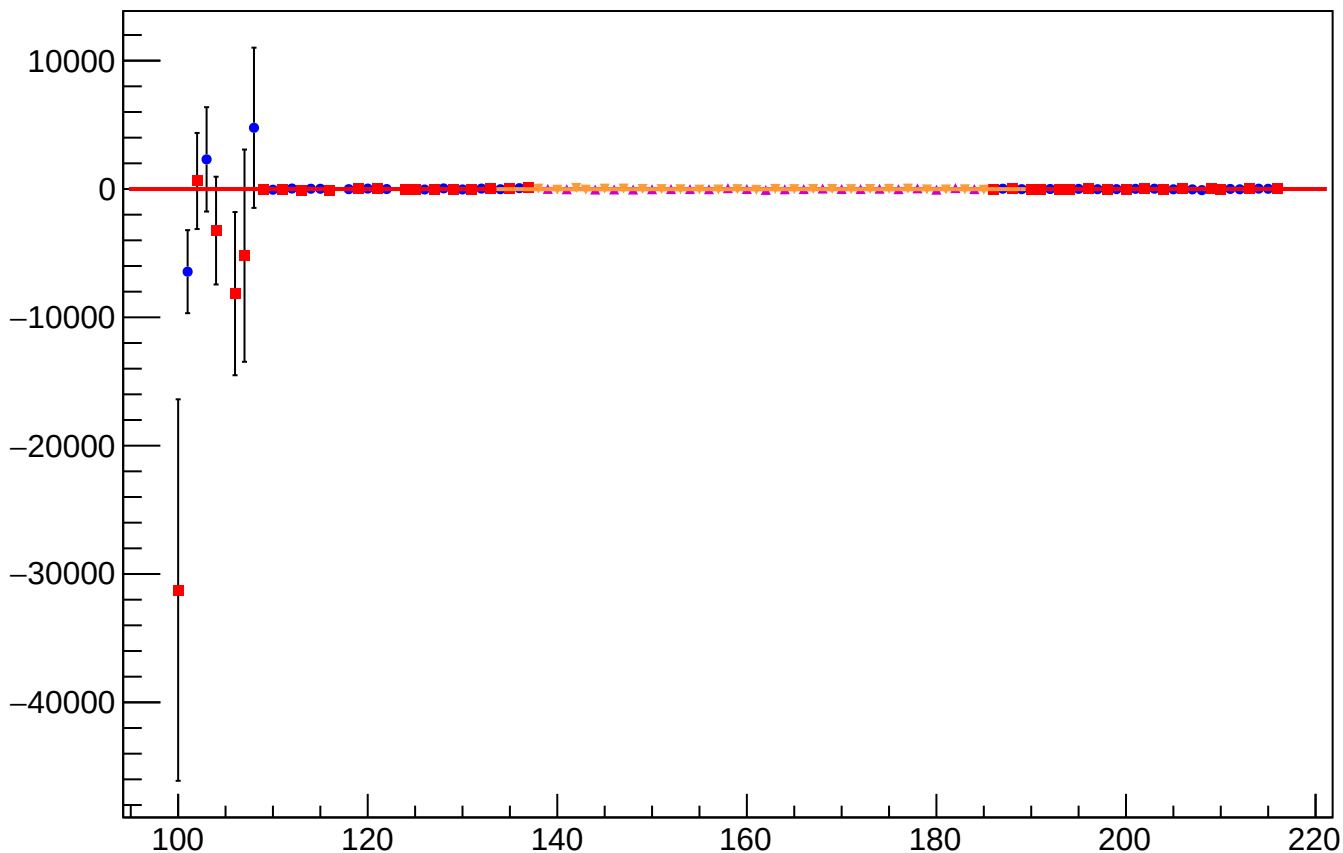
Left In: 184.399 $\pm$ 0.032  $\chi^2$ /NDF: 1446306.0/22

+ sign 185.020 $\pm$ 0.022  $\chi^2$ /NDF: 7162330.1/55

All: 181.635 $\pm$ 0.016  $\chi^2$ /NDF: 14326347.1/11

- sign 178.368 $\pm$ 0.022  $\chi^2$ /NDF: 7118731.4/57

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_mean vs Slug



Right In:  $-1.972 \pm 6.533$   $\chi^2/\text{NDF}$ : 30.1/30

Left Out:  $-14.827 \pm 6.512$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $-2.994 \pm 6.510$   $\chi^2/\text{NDF}$ : 43.1/34

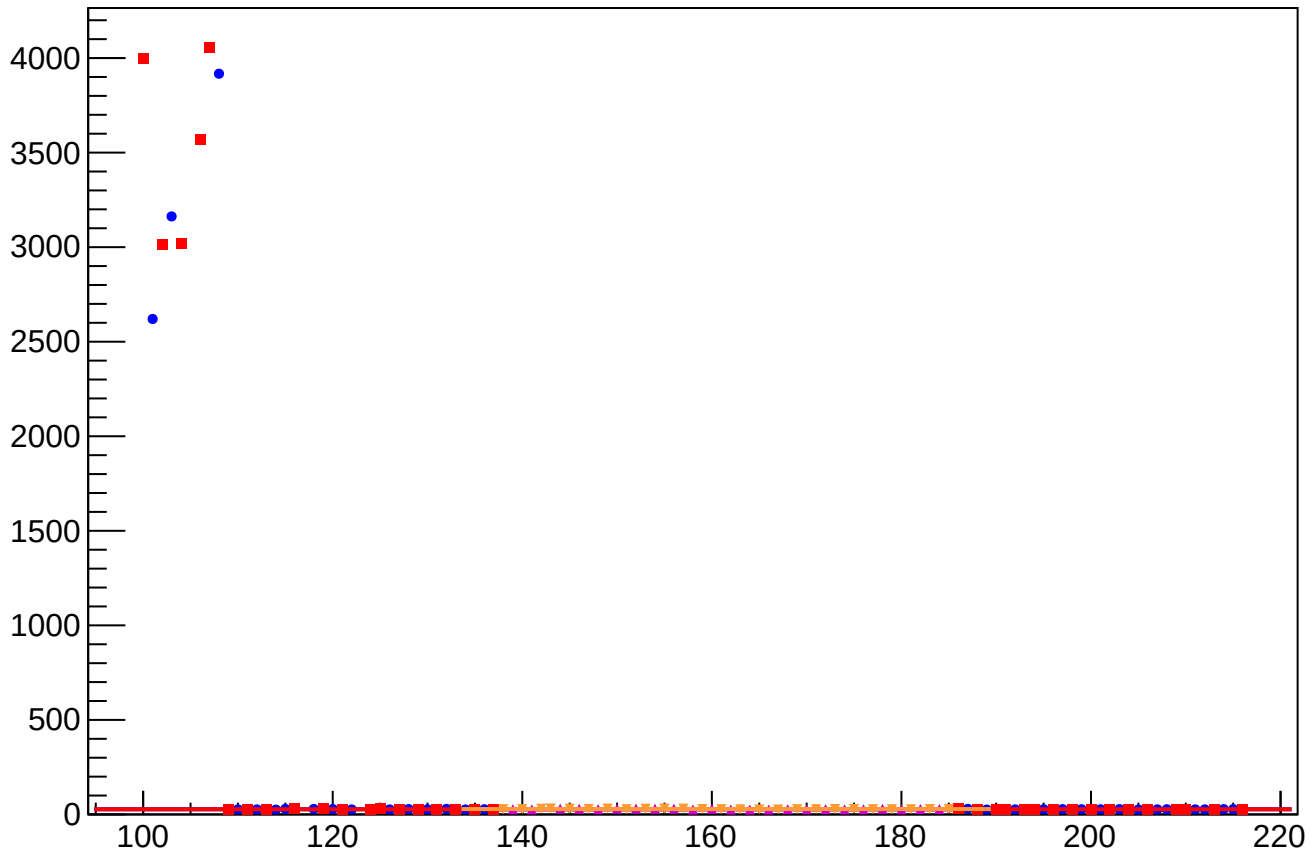
Left In:  $-2.172 \pm 6.703$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-8.421 \pm 4.612$   $\chi^2/\text{NDF}$ : 54.3/55

All:  $-5.545 \pm 3.282$   $\chi^2/\text{NDF}$ : 126.5/113

- sign  $-2.595 \pm 4.670$   $\chi^2/\text{NDF}$ : 71.4/57

asym\_bcm\_cav4cQ\_bcm\_an\_us\_agg\_dd\_rms vs Slug



Right In: 27.431+/-0.005  $\chi^2/\text{NDF}$ : 3283949.7/30

Left Out: 28.586+/-0.005  $\chi^2/\text{NDF}$ : 88130.9/24

Right Out: 27.360+/-0.005  $\chi^2/\text{NDF}$ : 3595986.7/34

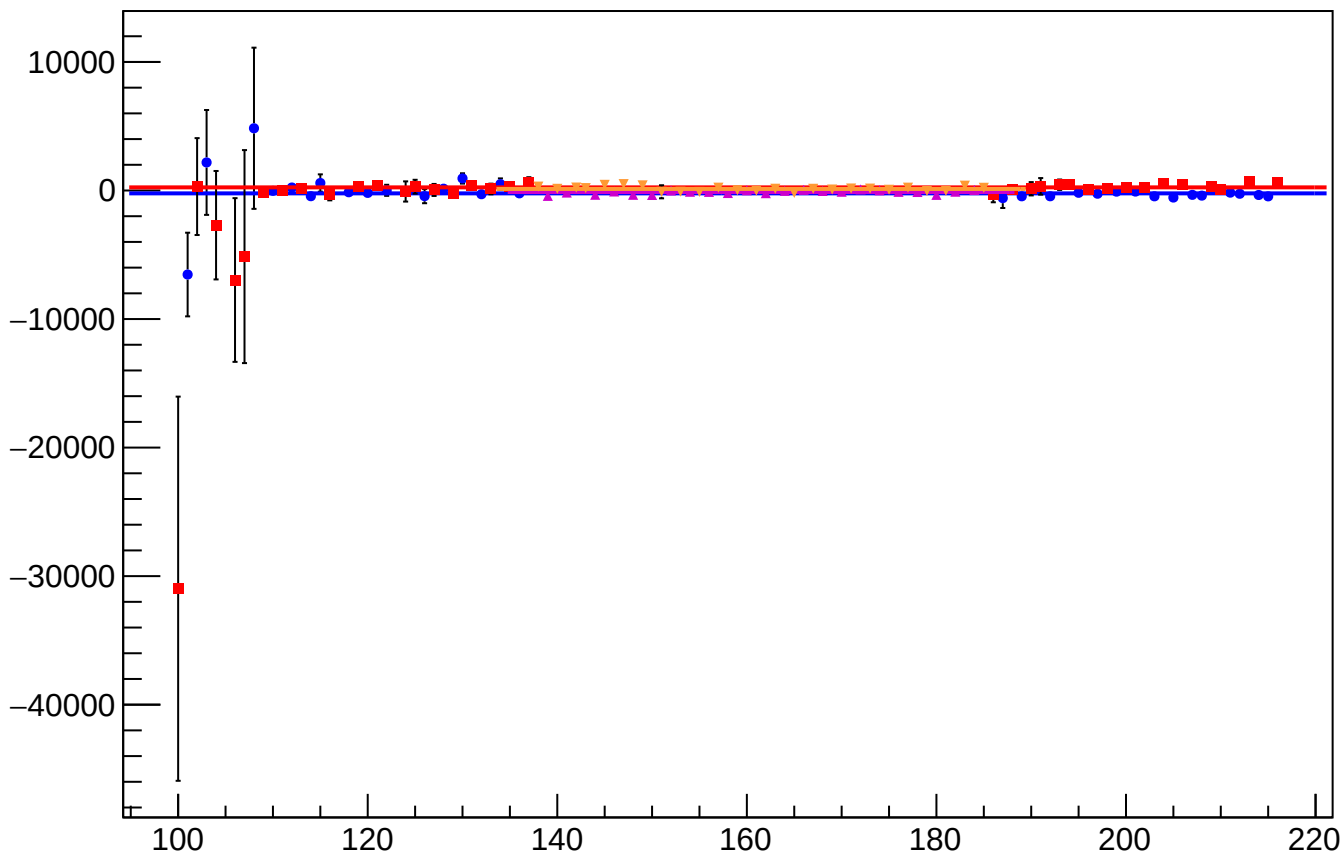
Left In: 28.606+/-0.005  $\chi^2/\text{NDF}$ : 122928.2/22

+ sign 28.010+/-0.003  $\chi^2/\text{NDF}$ : 3403421.2/55

All: 27.988+/-0.002  $\chi^2/\text{NDF}$ : 7157988.7/113

- sign 27.965+/-0.003  $\chi^2/\text{NDF}$ : 3754470.8/57

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_mean vs Slug



Right In:  $-223.251 \pm 42.463$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $121.915 \pm 46.825$   $\chi^2/\text{NDF}$ : 12.0/24

Right Out:  $243.397 \pm 42.709$   $\chi^2/\text{NDF}$ : 35.7/34

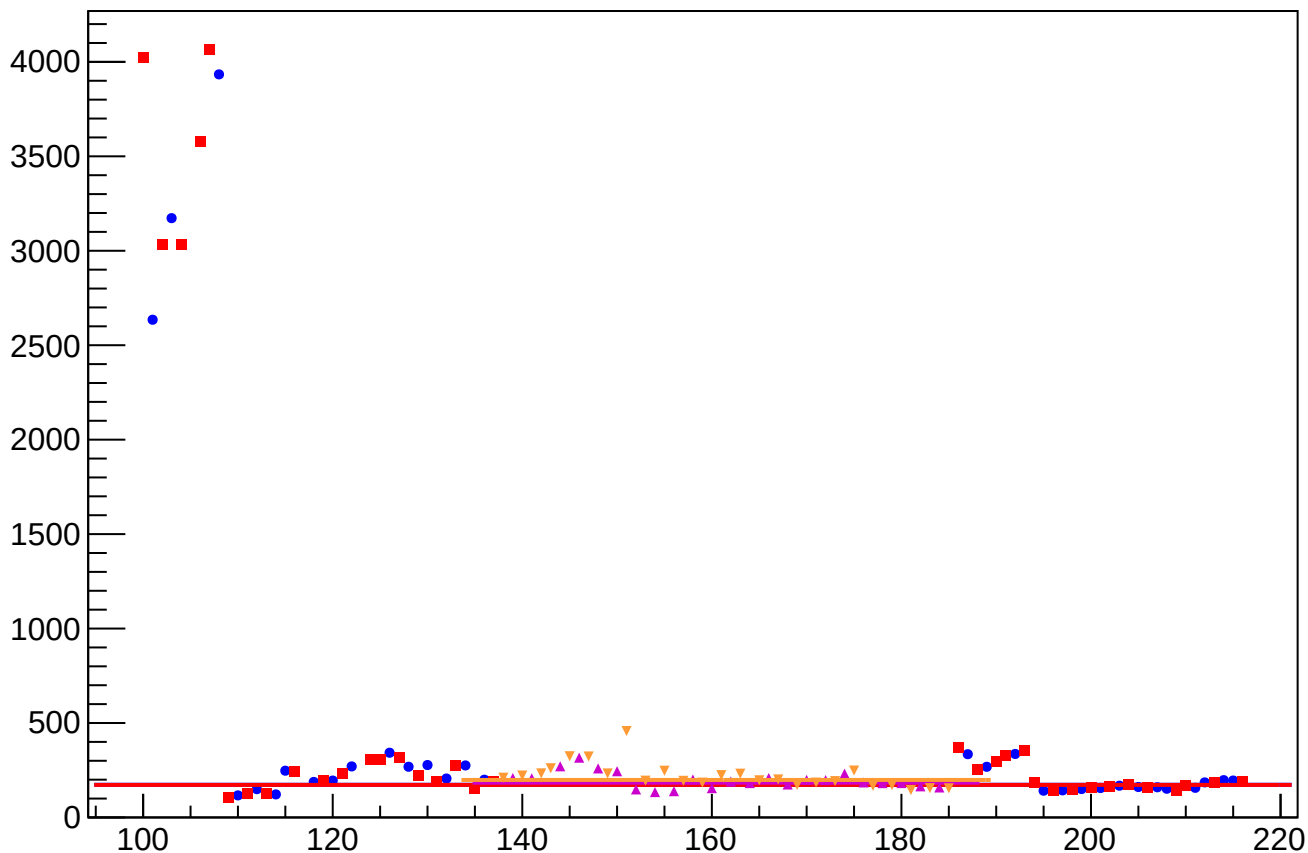
Left In:  $-116.243 \pm 44.786$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-67.488 \pm 31.455$   $\chi^2/\text{NDF}$ : 77.4/55

All:  $3.536 \pm 22.046$   $\chi^2/\text{NDF}$ : 165.4/113

- sign  $72.110 \pm 30.908$   $\chi^2/\text{NDF}$ : 77.9/57

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_avg\_rms vs Slug



Right In: 172.973+/-0.030  $\chi^2/\text{NDF}$ : 4950508.2/30

Left Out: 198.571+/-0.033  $\chi^2/\text{NDF}$ :1901504.1/24

Right Out: 172.337+/-0.030  $\chi^2/\text{NDF}$ : 5622148.4/34

Left In: 184.051+/-0.032  $\chi^2/\text{NDF}$ :1445426.0/22

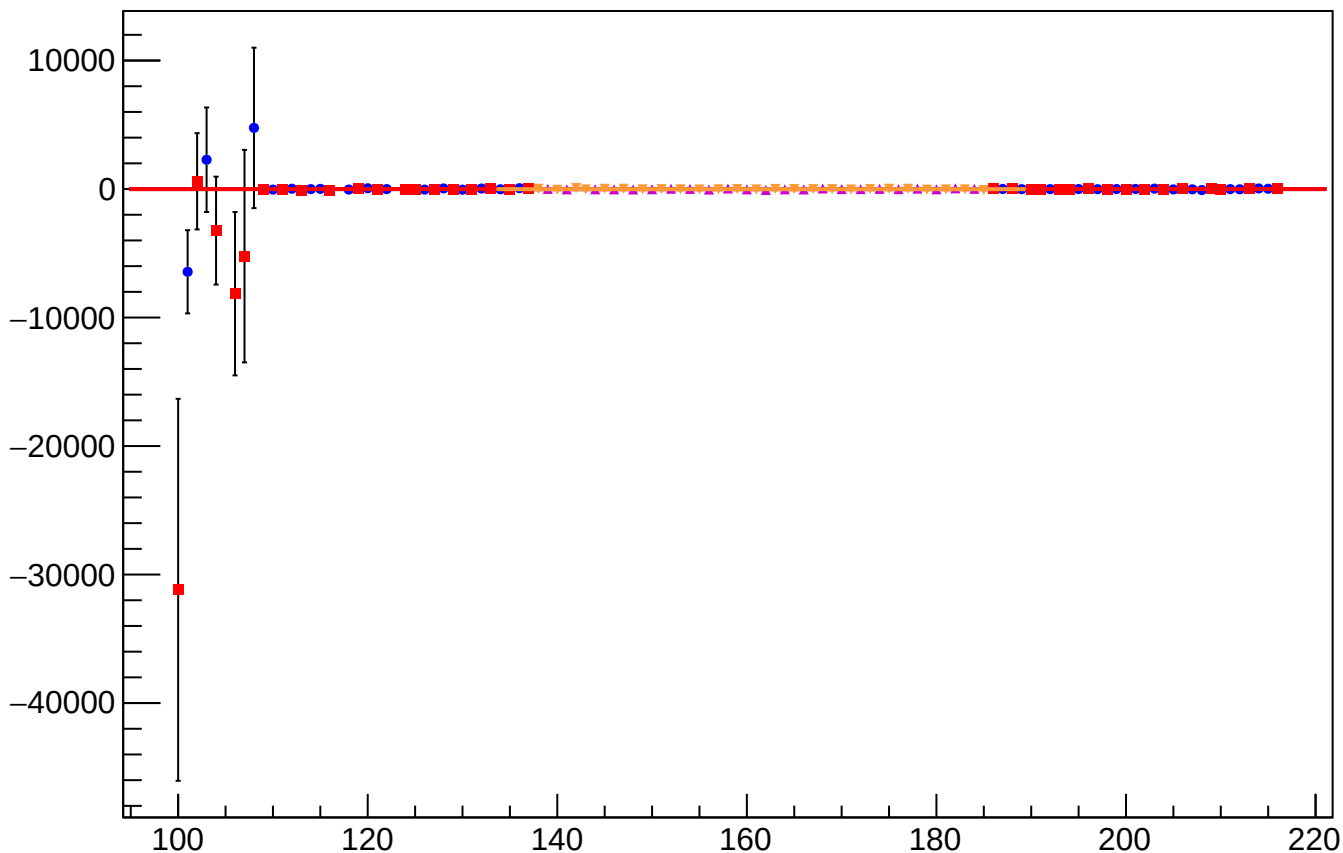
+ sign 184.524+/-0.022  $\chi^2/\text{NDF}$ : 7179993.7/55

All: 181.162+/-0.016  $\chi^2/\text{NDF}$ : 14364122.9/11

- sign 177.916+/-0.022  $\chi^2/\text{NDF}$ : 7139224.7/57



asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_mean vs Slug



Right In:  $-1.695 \pm 6.497$   $\chi^2/\text{NDF}$ : 32.9/30

Left Out:  $-11.862 \pm 6.541$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $-4.624 \pm 6.480$   $\chi^2/\text{NDF}$ : 40.8/34

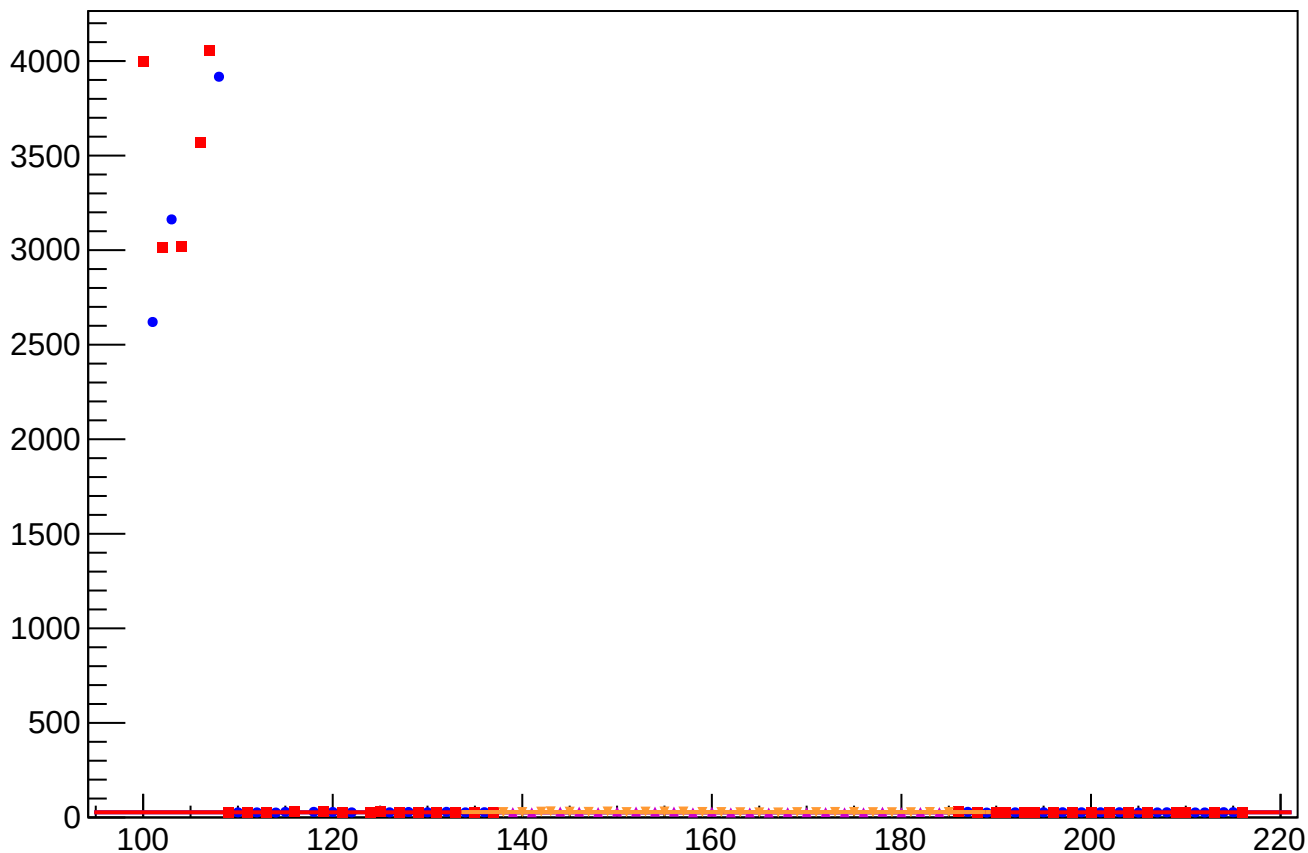
Left In:  $-2.576 \pm 6.732$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-6.745 \pm 4.609$   $\chi^2/\text{NDF}$ : 52.0/55

All:  $-5.212 \pm 3.280$   $\chi^2/\text{NDF}$ : 115.2/113

- sign  $-3.639 \pm 4.669$   $\chi^2/\text{NDF}$ : 63.0/57

asym\_bcm\_cav4cQ\_bcm\_an\_ds\_agg\_dd\_rms vs Slug



Right In: 27.276 $\pm$ 0.005  $\chi^2$ /NDF: 3289896.2/30

Left Out: 28.707 $\pm$ 0.005  $\chi^2$ /NDF: 98865.9/24

Right Out: 27.233 $\pm$ 0.005  $\chi^2$ /NDF: 3600568.5/34

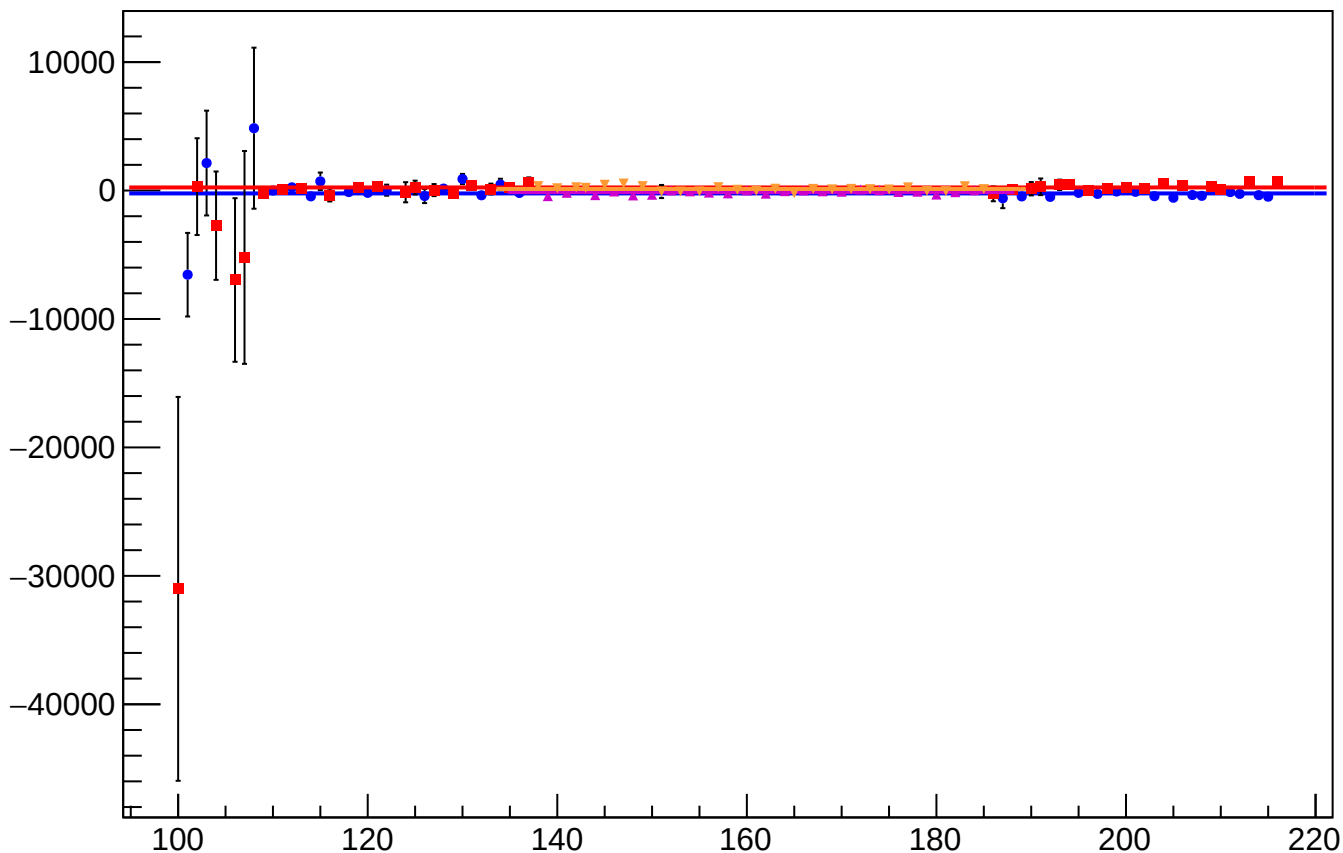
Left In: 28.728 $\pm$ 0.005  $\chi^2$ /NDF: 127383.0/22

+ sign 27.987 $\pm$ 0.003  $\chi^2$ /NDF: 3437000.3/55

All: 27.969 $\pm$ 0.002  $\chi^2$ /NDF: 7216184.0/113

- sign 27.952 $\pm$ 0.003  $\chi^2$ /NDF: 3779127.0/57

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_mean vs Slug



Right In:  $-224.122 \pm 42.764$   $\chi^2/\text{NDF}$ : 37.1/30

Left Out:  $122.864 \pm 47.300$   $\chi^2/\text{NDF}$ : 11.3/24

Right Out:  $240.510 \pm 43.029$   $\chi^2/\text{NDF}$ : 34.9/34

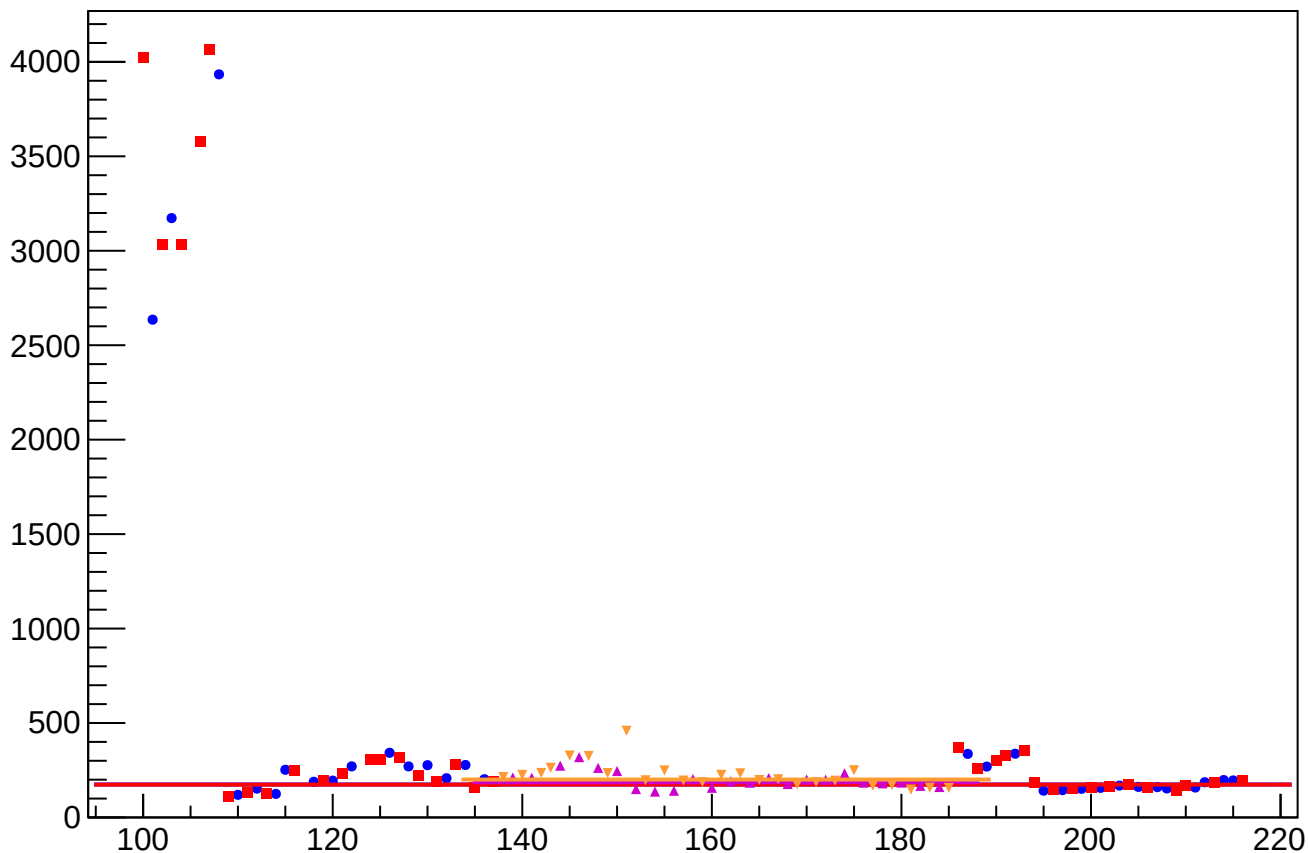
Left In:  $-123.046 \pm 45.269$   $\chi^2/\text{NDF}$ : 8.5/22

+ sign  $-68.058 \pm 31.721$   $\chi^2/\text{NDF}$ : 78.0/55

All:  $1.098 \pm 22.239$   $\chi^2/\text{NDF}$ : 164.6/113

- sign  $67.948 \pm 31.188$   $\chi^2/\text{NDF}$ : 77.3/57

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_avg\_rms vs Slug



Right In: 174.306+/-0.030  $\chi^2/\text{NDF}$ : 4913121.3/30

Left Out: 200.686+/-0.033  $\chi^2/\text{NDF}$ :1880083.2/24

Right Out: 173.814+/-0.030  $\chi^2/\text{NDF}$ : 5558509.8/34

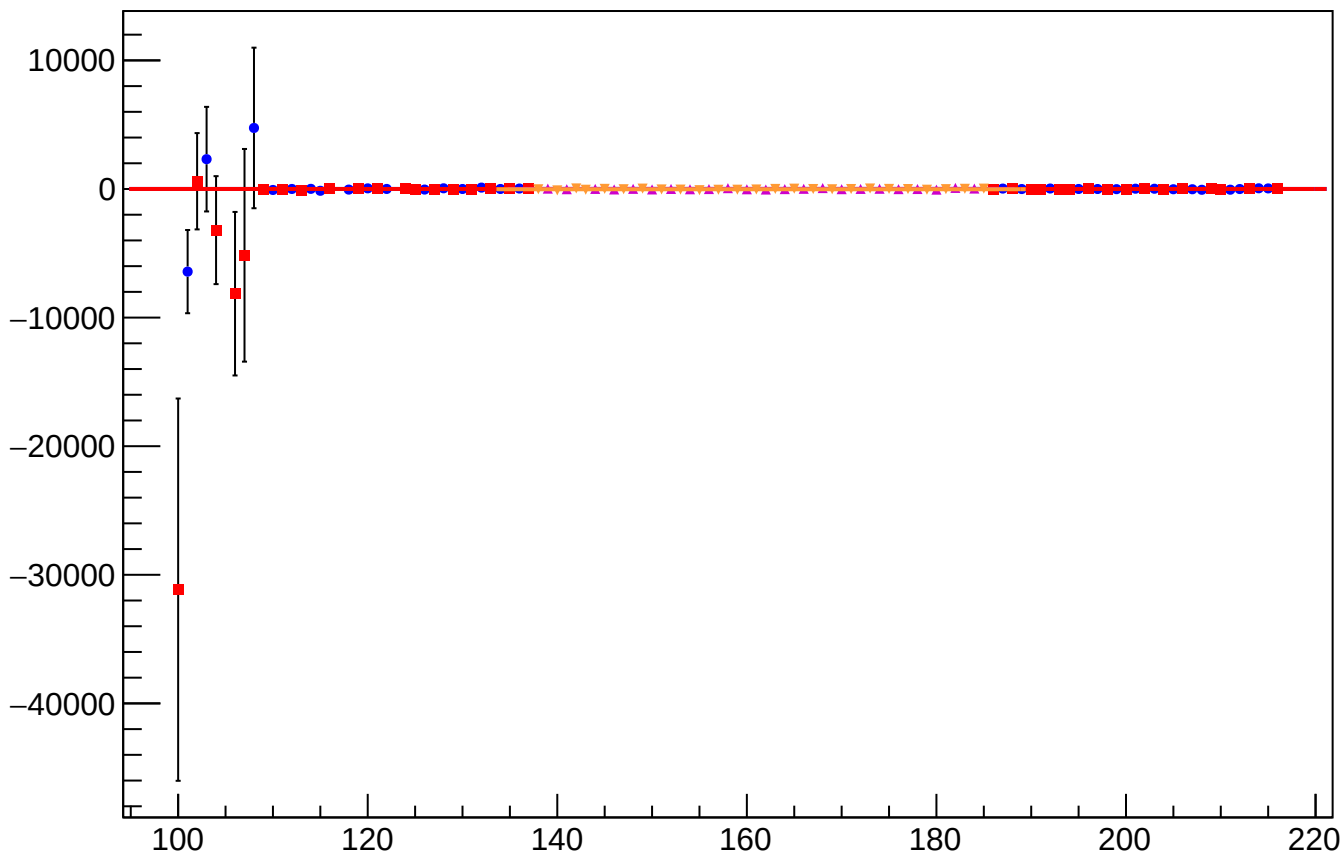
Left In: 186.169+/-0.032  $\chi^2/\text{NDF}$ :1413387.1/22

+ sign 186.171+/-0.022  $\chi^2/\text{NDF}$ : 7135508.6/55

All: 182.869+/-0.016  $\chi^2/\text{NDF}$ : 14228275.2/11

- sign 179.678+/-0.022  $\chi^2/\text{NDF}$ : 7050166.5/57

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_mean vs Slug



Right In: 2.847 $\pm$ 7.924  $\chi^2/\text{NDF}$ : 29.6/30

Left Out: -21.228 $\pm$ 7.835  $\chi^2/\text{NDF}$ : 22.9/24

Right Out: 2.389 $\pm$ 7.911  $\chi^2/\text{NDF}$ : 36.1/34

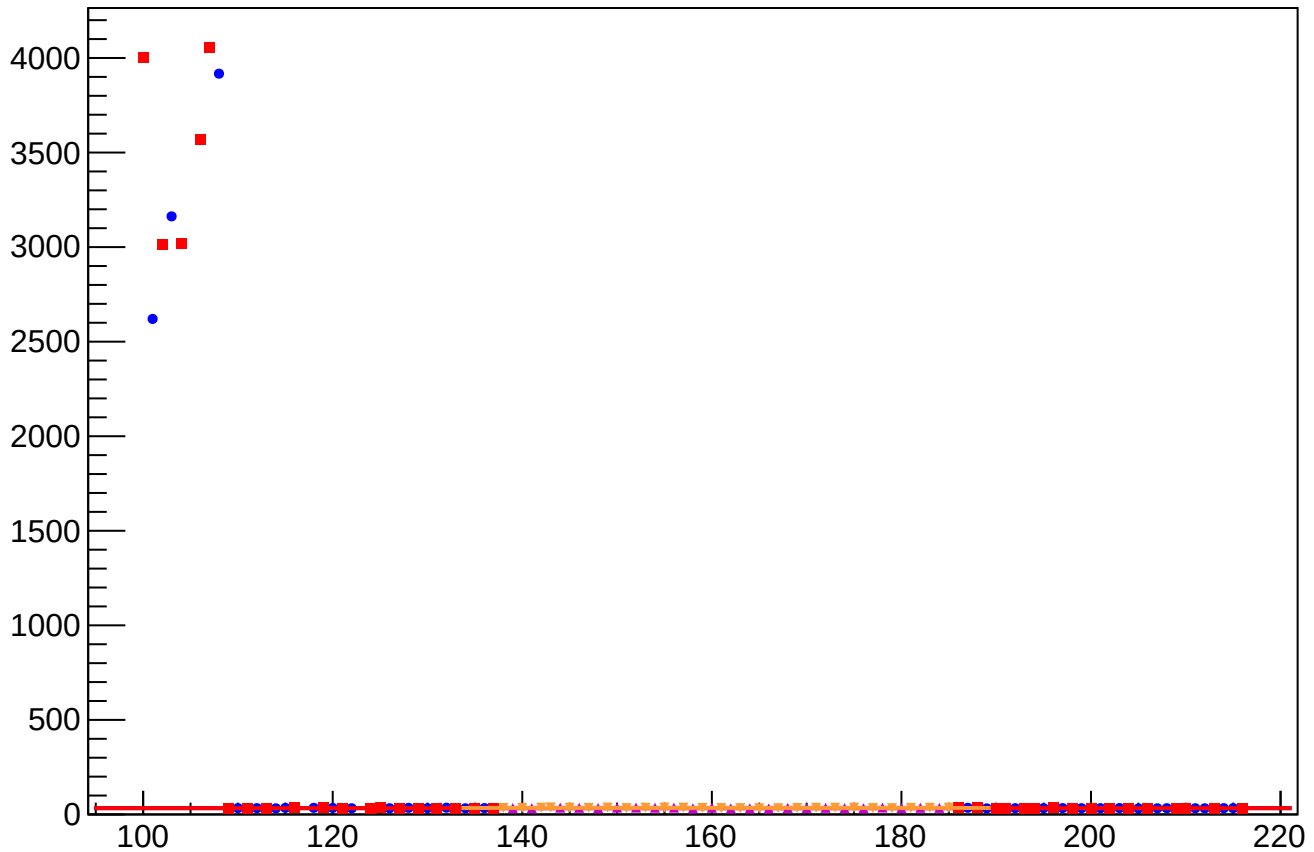
Left In: 4.029 $\pm$ 8.083  $\chi^2/\text{NDF}$ : 18.9/22

+ sign -9.326 $\pm$ 5.571  $\chi^2/\text{NDF}$ : 57.2/55

All: -3.159 $\pm$ 3.968  $\chi^2/\text{NDF}$ : 114.8/113

- sign 3.191 $\pm$ 5.654  $\chi^2/\text{NDF}$ : 55.1/57

asym\_bcm\_cav4cQ\_bcm\_dg\_us\_agg\_dd\_rms vs Slug



Right In: 33.295 $\pm$ 0.006  $\chi^2$ /NDF: 3257082.2/30

Left Out: 34.439 $\pm$ 0.006  $\chi^2$ /NDF: 44686.3/24

Right Out: 33.291 $\pm$ 0.006  $\chi^2$ /NDF: 3552382.3/34

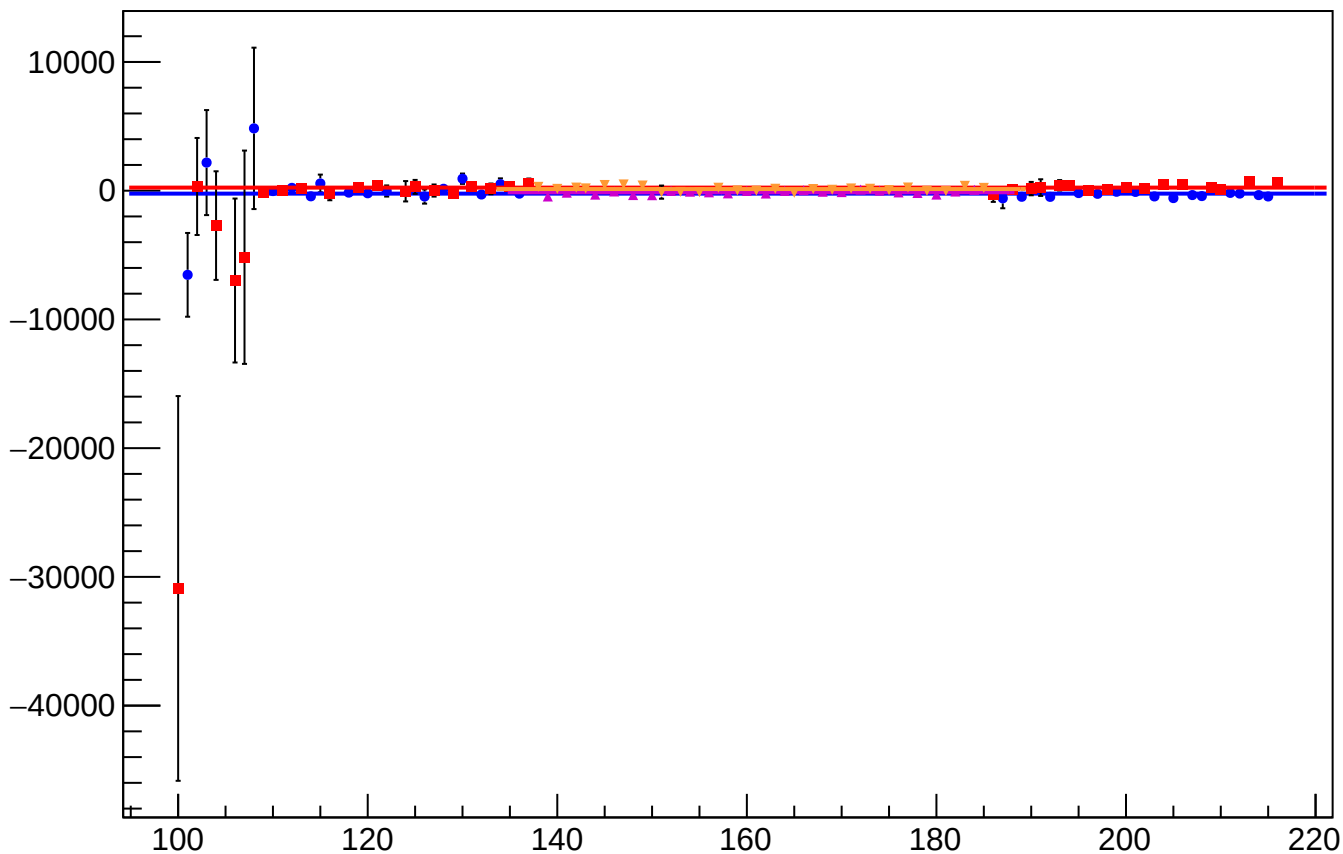
Left In: 34.552 $\pm$ 0.006  $\chi^2$ /NDF: 59280.9/22

+ sign 33.873 $\pm$ 0.004  $\chi^2$ /NDF: 3322825.3/55

All: 33.890 $\pm$ 0.003  $\chi^2$ /NDF: 6959397.1/113

- sign 33.908 $\pm$ 0.004  $\chi^2$ /NDF: 3636534.1/57

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_mean vs Slug



Right In:  $-227.370 \pm 42.641$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $127.689 \pm 47.228$   $\chi^2/\text{NDF}$ : 11.6/24

Right Out:  $240.258 \pm 42.879$   $\chi^2/\text{NDF}$ : 33.9/34

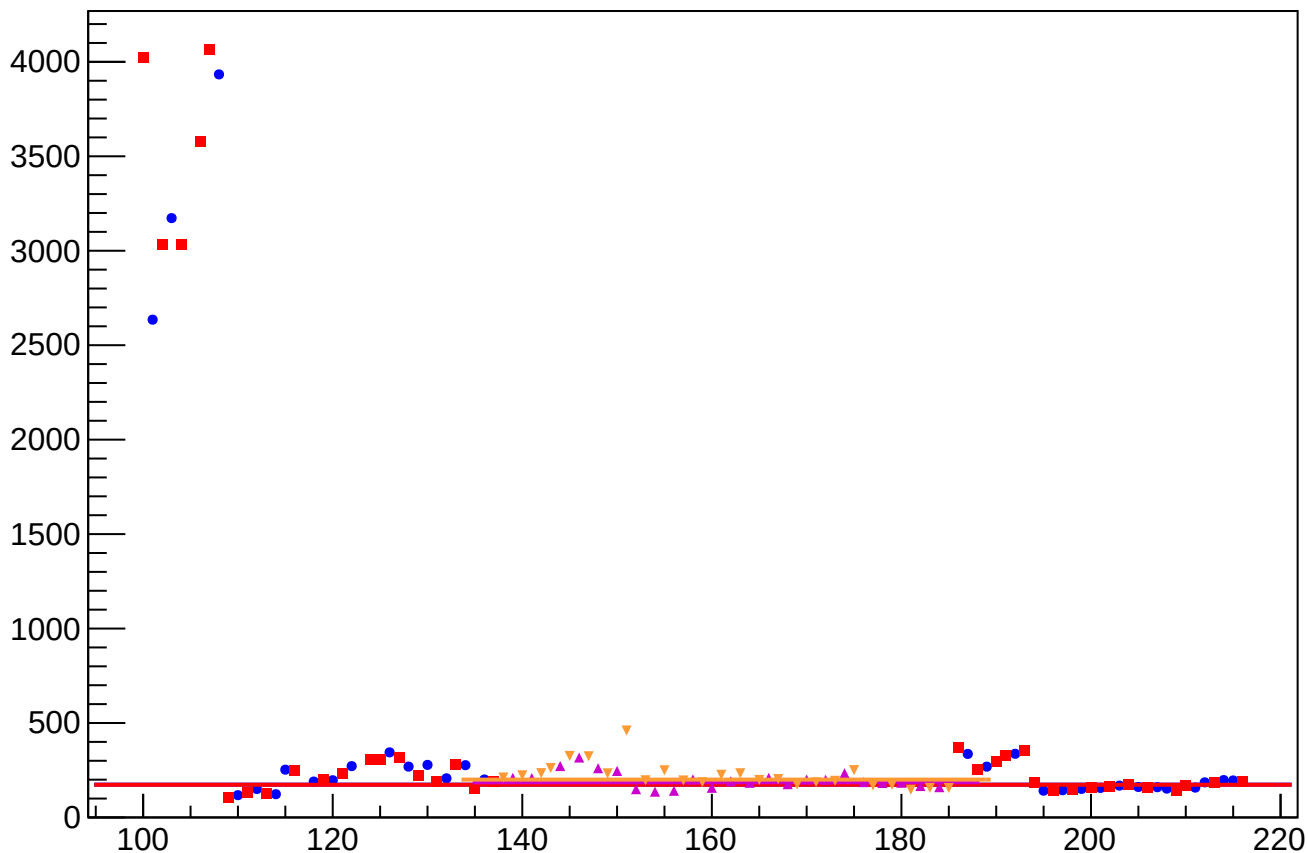
Left In:  $-122.809 \pm 45.199$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-67.916 \pm 31.649$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $1.357 \pm 22.186$   $\chi^2/\text{NDF}$ : 163.8/113

- sign  $68.279 \pm 31.108$   $\chi^2/\text{NDF}$ : 75.9/57

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_avg\_rms vs Slug



Right In: 173.713+/-0.030  $\chi^2/\text{NDF}$ : 4944571.3/30

Left Out: 200.372+/-0.033  $\chi^2/\text{NDF}$ : 1876533.6/24

Right Out: 173.066+/-0.030  $\chi^2/\text{NDF}$ : 5609639.5/34

Left In: 185.871+/-0.032  $\chi^2/\text{NDF}$ : 1405525.2/22

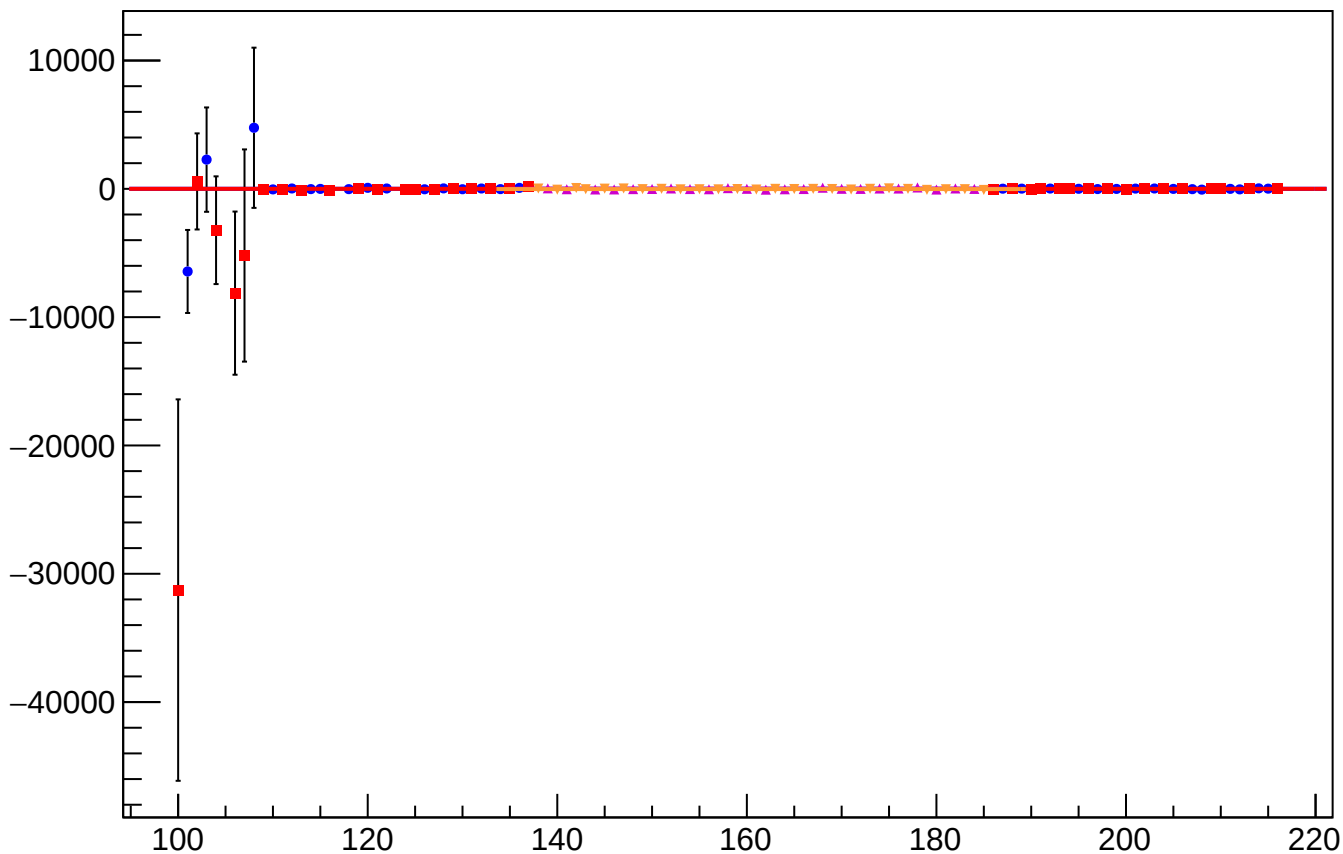
+ sign 185.685+/-0.022  $\chi^2/\text{NDF}$ : 7172183.4/55

All: 182.352+/-0.016  $\chi^2/\text{NDF}$ : 14315452.8/11

- sign 179.132+/-0.022  $\chi^2/\text{NDF}$ : 7099654.1/57



asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_mean vs Slug



Right In: 3.439+/-7.170  $\chi^2/\text{NDF}$ : 25.8/30

Left Out: -18.581+/-7.135  $\chi^2/\text{NDF}$ : 20.4/24

Right Out: 1.830+/-7.155  $\chi^2/\text{NDF}$ : 46.4/34

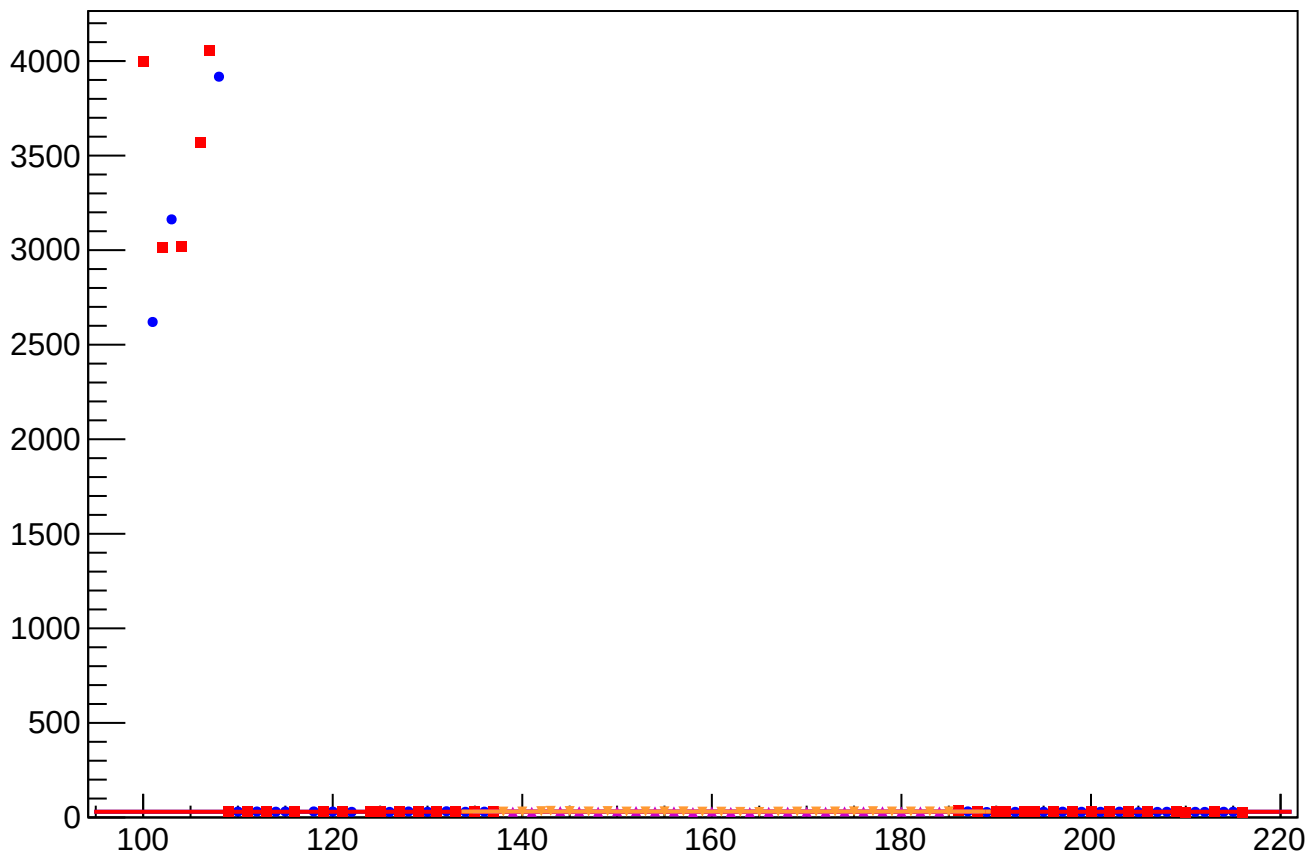
Left In: 2.709+/-7.348  $\chi^2/\text{NDF}$ : 35.5/22

+ sign -7.625+/-5.057  $\chi^2/\text{NDF}$ : 51.0/55

All: -2.750+/-3.600  $\chi^2/\text{NDF}$ : 134.8/113

- sign 2.258+/-5.126  $\chi^2/\text{NDF}$ : 81.9/57

asym\_bcm\_cav4cQ\_bcm\_dg\_ds\_agg\_dd\_rms vs Slug



Right In: 30.109 $\pm$ 0.005  $\chi^2$ /NDF: 3275530.5/30

Left Out: 31.340 $\pm$ 0.005  $\chi^2$ /NDF: 63017.9/24

Right Out: 30.088 $\pm$ 0.005  $\chi^2$ /NDF: 3574148.8/34

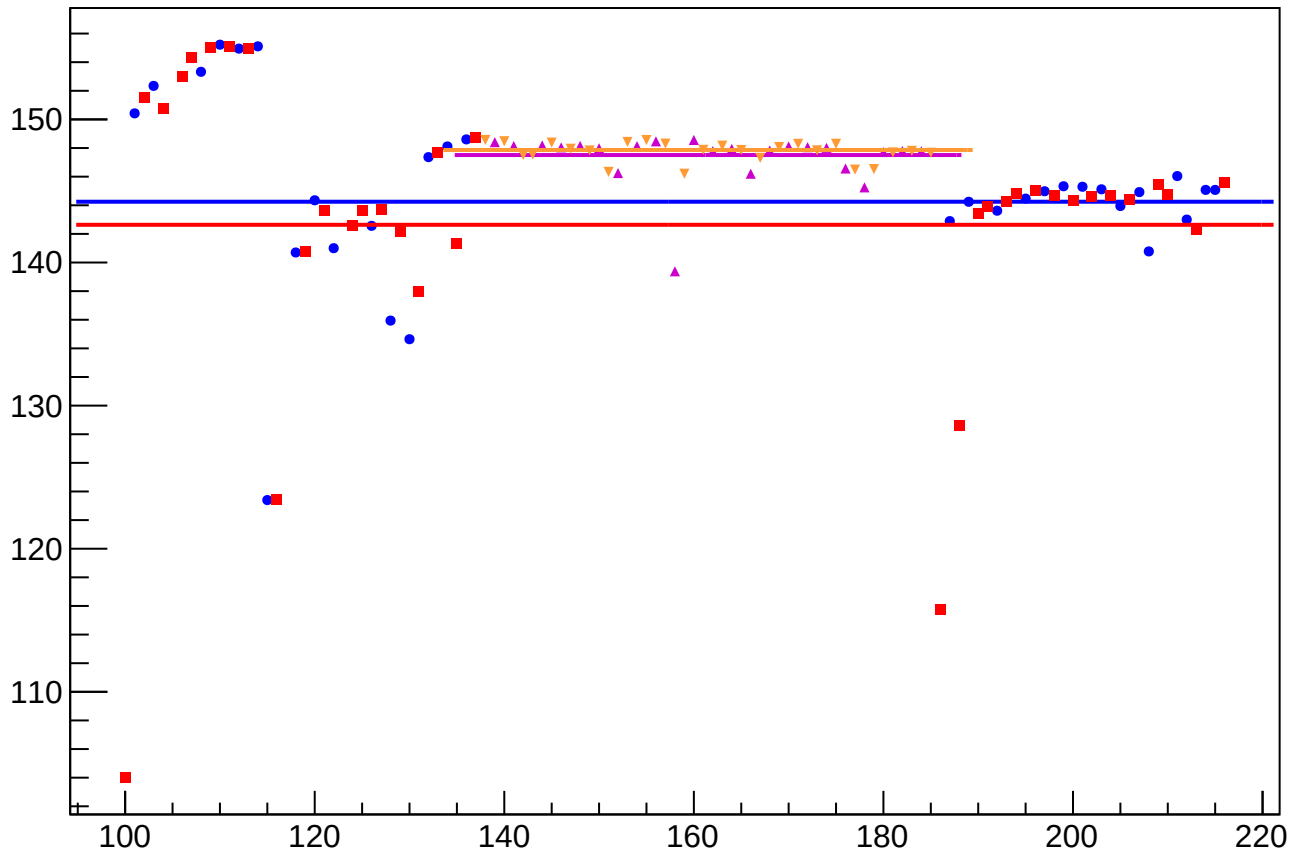
Left In: 31.379 $\pm$ 0.005  $\chi^2$ /NDF: 85229.7/22

+ sign 30.727 $\pm$ 0.004  $\chi^2$ /NDF: 3368163.8/55

All: 30.722 $\pm$ 0.003  $\chi^2$ /NDF: 7059276.8/113

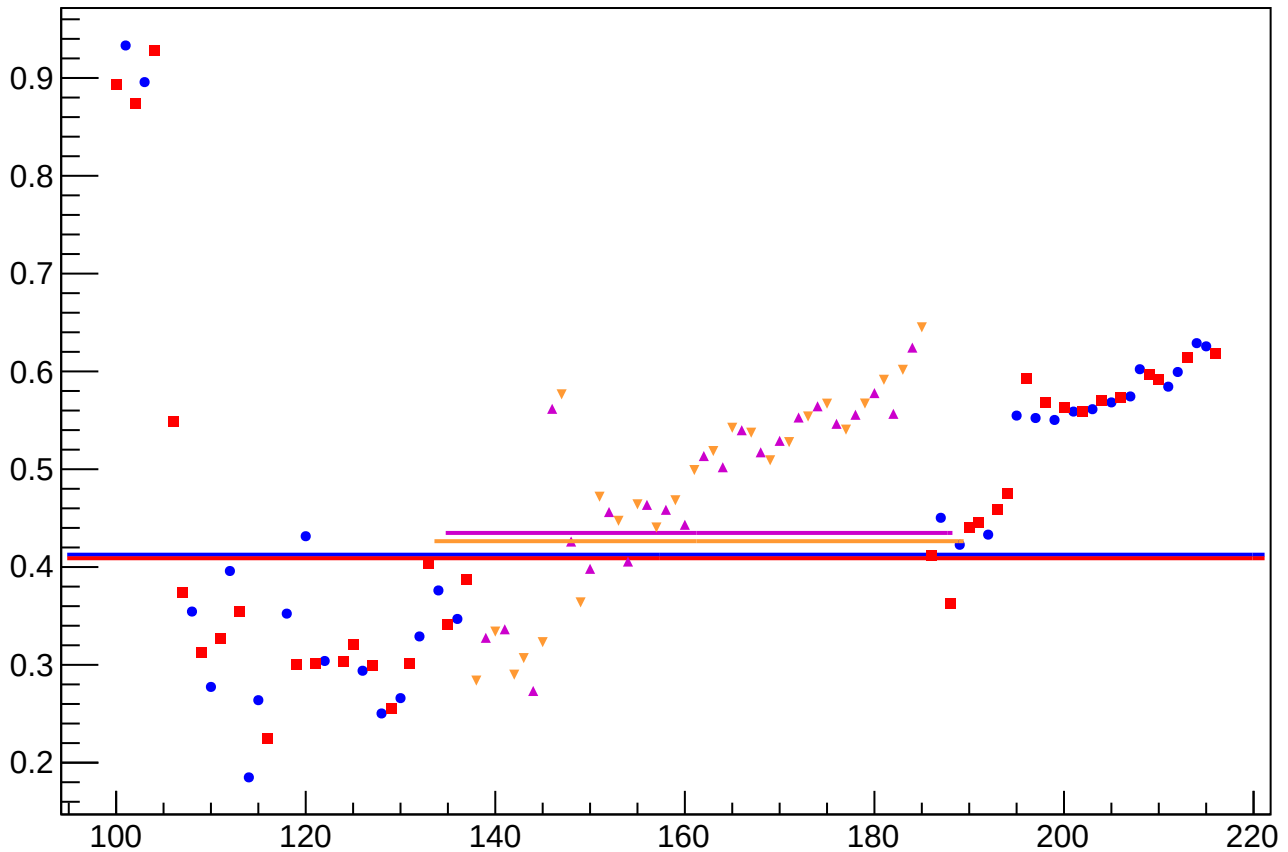
- sign 30.716 $\pm$ 0.004  $\chi^2$ /NDF: 3691108.2/57

# yield\_bcm\_target\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 144.248+/-0.000  | $\chi^2/\text{NDF}$ : 3781244949.5/30 | + sign 146.071+/-0.000 | $\chi^2/\text{NDF}$ : 4455224259.6/55 |
| Left Out: 147.864+/-0.000  | $\chi^2/\text{NDF}$ : 44922014.2/24   | All: 145.500+/-0.000   | $\chi^2/\text{NDF}$ : 13610791493.    |
| Right Out: 142.635+/-0.000 | $\chi^2/\text{NDF}$ : 7597199521.9/34 | - sign 144.922+/-0.000 | $\chi^2/\text{NDF}$ : 9029362566.9/57 |
| Left In: 147.511+/-0.000   | $\chi^2/\text{NDF}$ : 306421789.5/22  |                        |                                       |

# yield\_bcm\_target\_rms vs Slug



Right In: 0.413 $\pm$ 0.000  $\chi^2$ /NDF: 4008522.6/30

Left Out: 0.426 $\pm$ 0.000  $\chi^2$ /NDF:2259192.5/24

Right Out: 0.409 $\pm$ 0.000  $\chi^2$ /NDF: 3641339.7/34

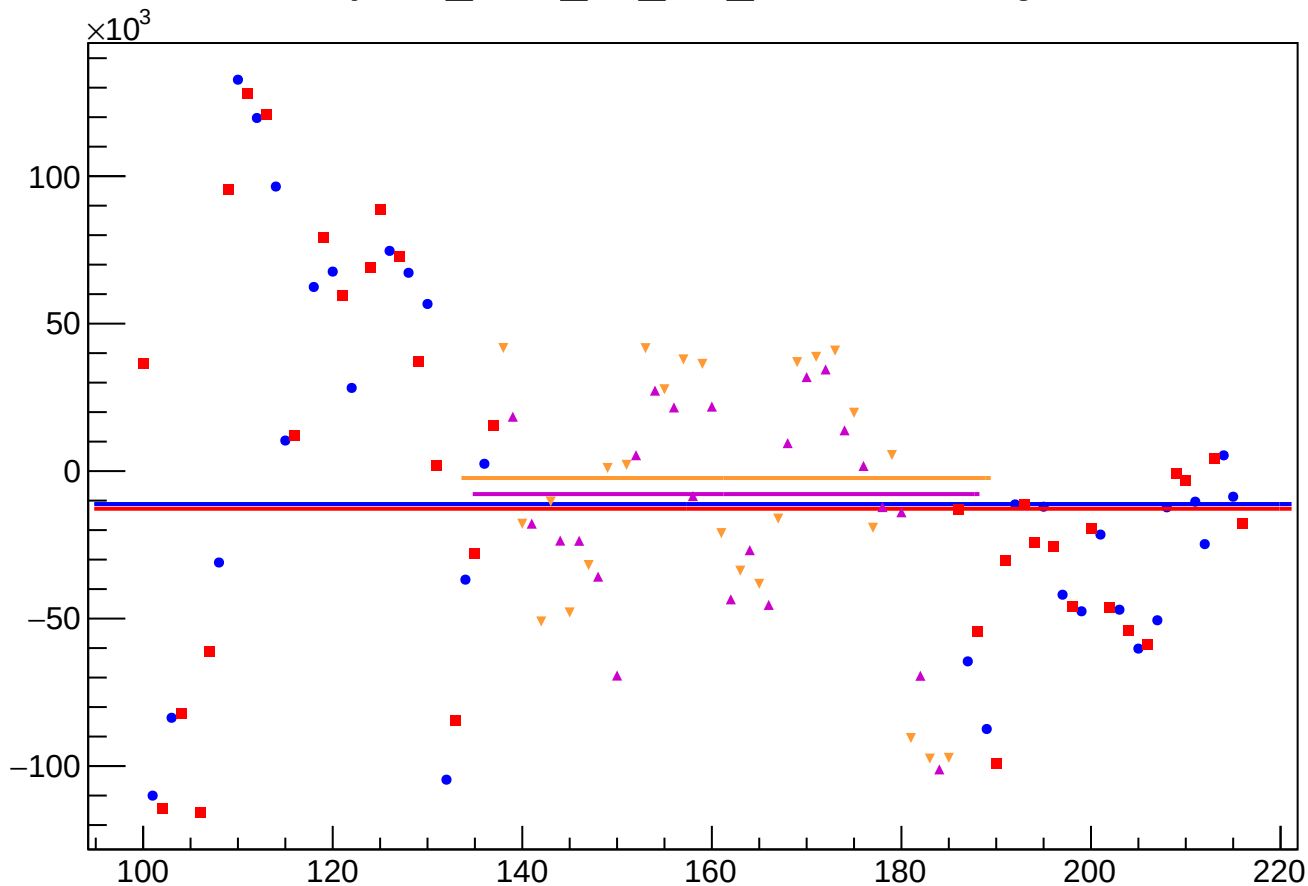
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1774903.7/22

+ sign 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 6286050.2/55

All: 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 11766316.0/113

- sign 0.421 $\pm$ 0.000  $\chi^2$ /NDF: 5479809.8/57

yield\_bcm\_an\_diff\_mean vs Slug



Right In:  $-11164.646 \pm 1.258$   $\chi^2/\text{NDF}: 1947958275.7/30$

Left Out:  $-2344.855 \pm 1.123$   $\chi^2/\text{NDF}: 1230029339.6/24$

+ sign  $-6256.252 \pm 0.838$   $\chi^2/\text{NDF}: 3205329547.7/5$

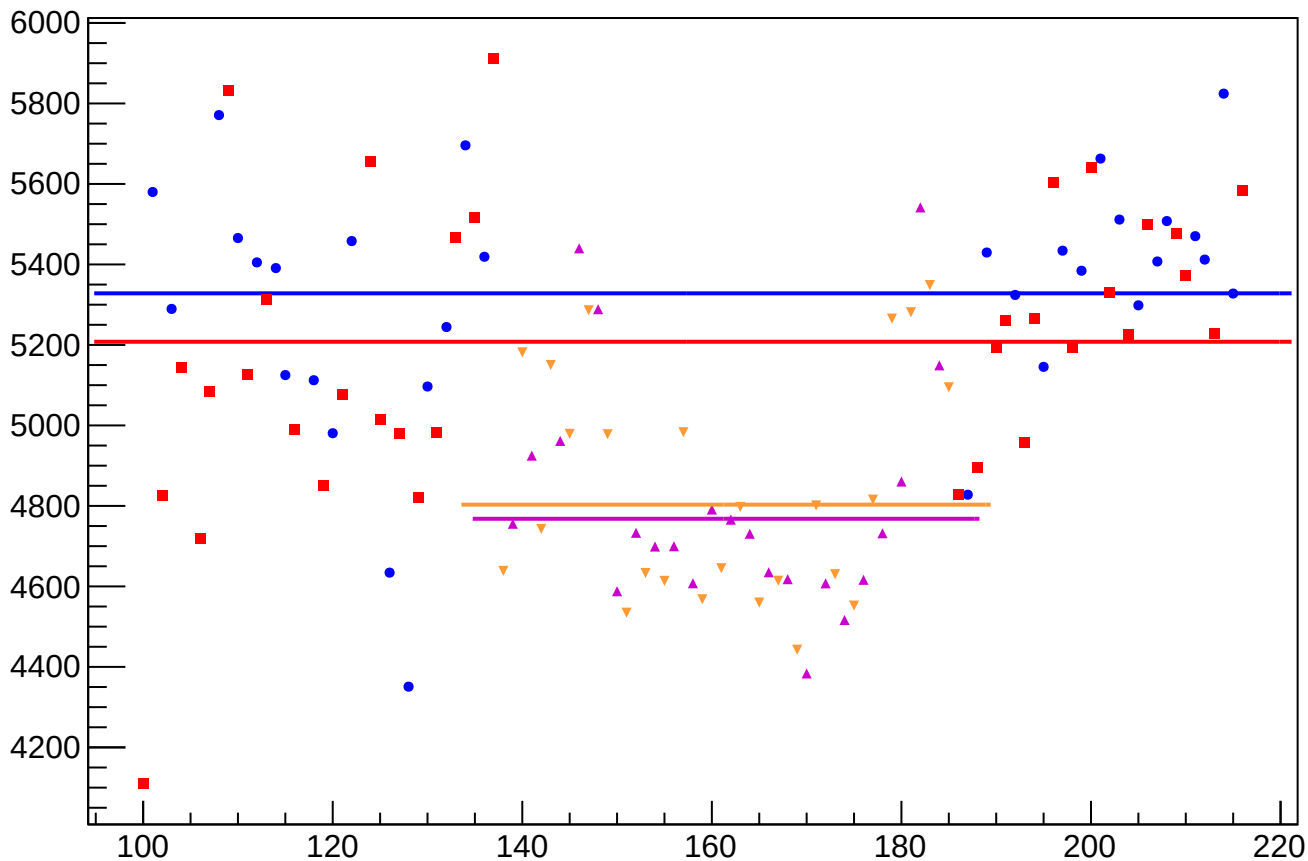
Right Out:  $-12757.160 \pm 1.212$   $\chi^2/\text{NDF}: 2405021459.6/34$

All:  $-8206.791 \pm 0.590$   $\chi^2/\text{NDF}: 6392495721$

- sign  $-10130.353 \pm 0.832$   $\chi^2/\text{NDF}: 3176404410.1/5$

Left In:  $-7787.808 \pm 1.145$   $\chi^2/\text{NDF}: 762496621.5/22$

# yield\_bcm\_an\_diff\_rms vs Slug



Right In: 5328.228+/-0.890  $\chi^2/\text{NDF}$ : 115221.3/30

Left Out: 4803.136+/-0.794  $\chi^2/\text{NDF}$ : 114681.5/24

Right Out: 5207.871+/-0.857  $\chi^2/\text{NDF}$ : 117292.2/34

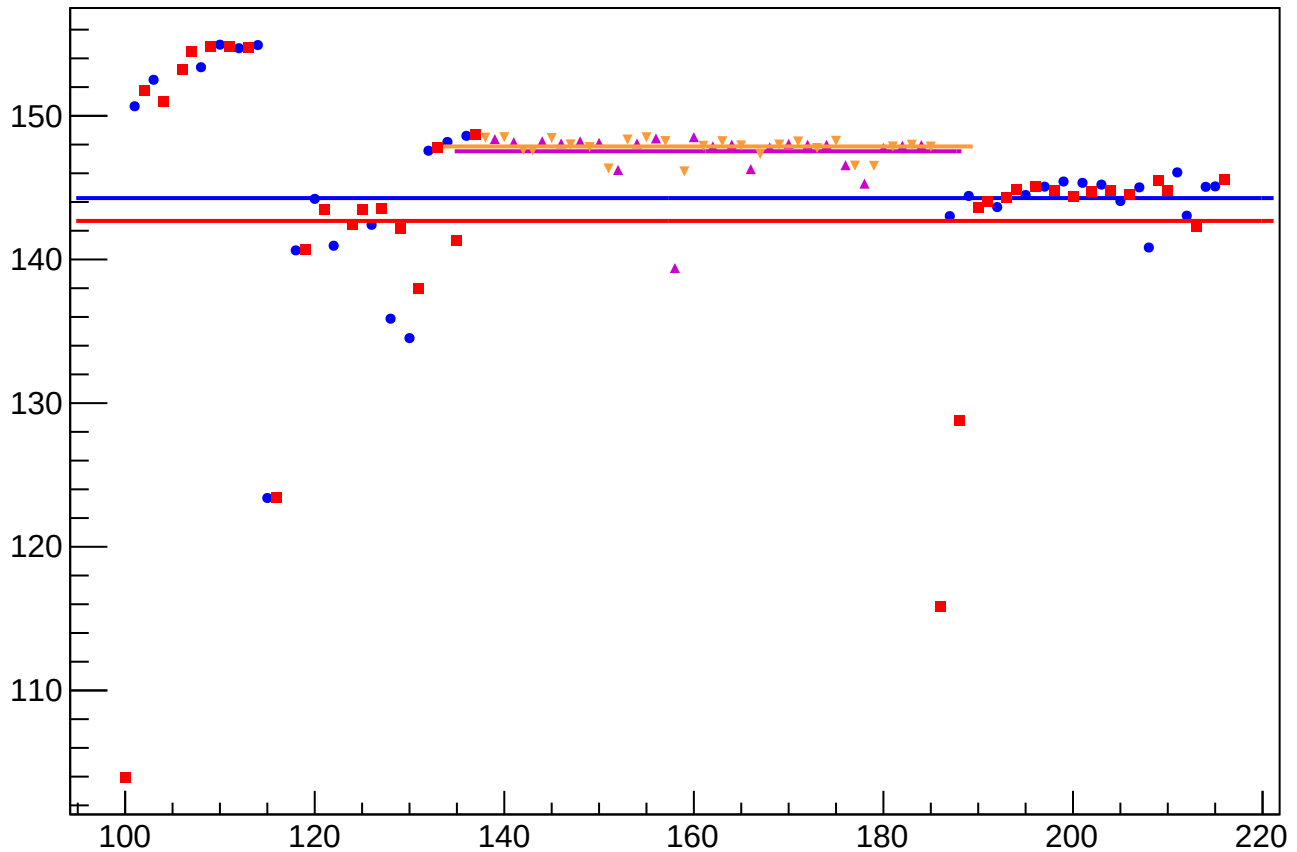
Left In: 4768.055+/-0.809  $\chi^2/\text{NDF}$ : 102355.5/22

+ sign 5036.004+/-0.593  $\chi^2/\text{NDF}$ : 423729.4/55

All: 5005.483+/-0.418  $\chi^2/\text{NDF}$ : 787864.7/113

- sign 4975.384+/-0.588  $\chi^2/\text{NDF}$ : 358865.3/57

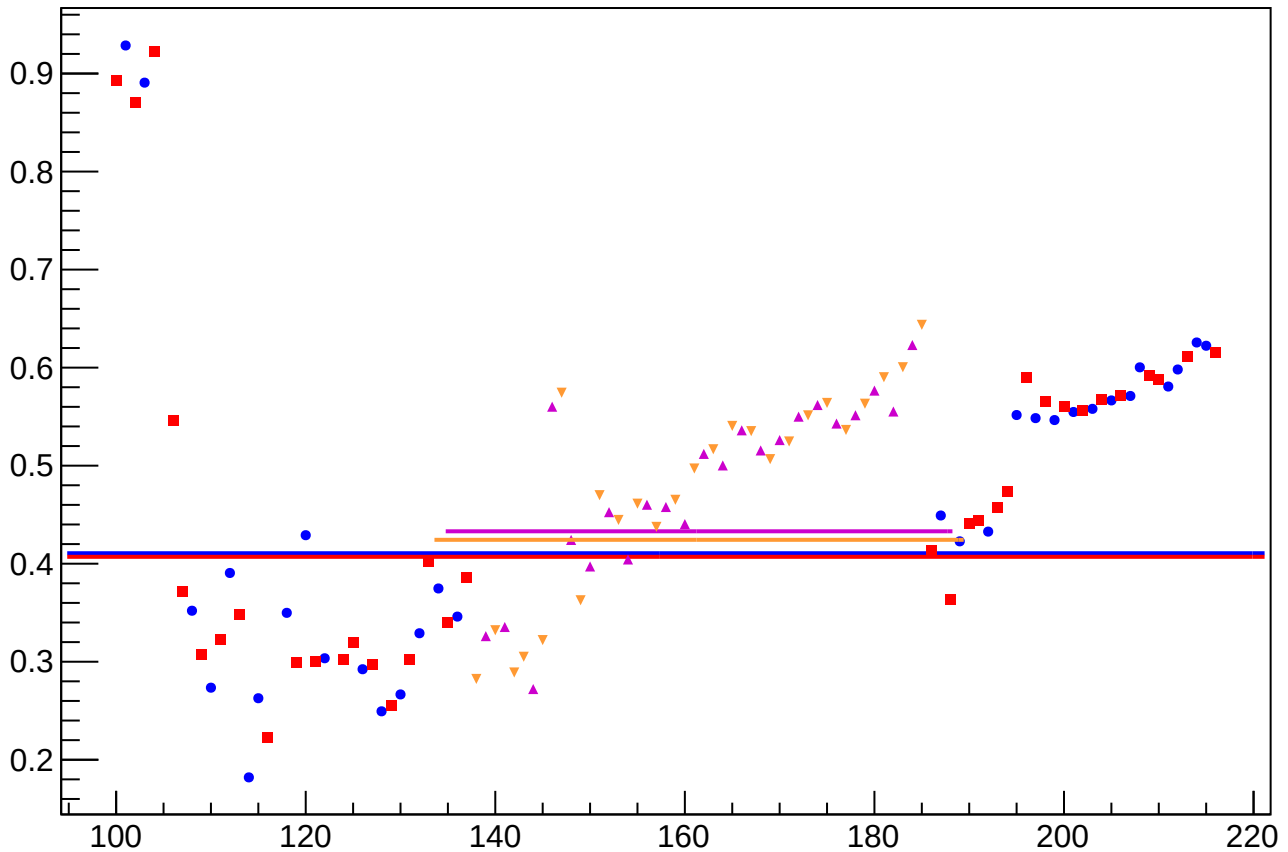
# yield\_bcm\_an\_ds\_mean vs Slug



Right In: 144.273 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3822337653.2/30  
 Left Out: 147.870 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 44483332.4/24  
 Right Out: 142.685 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7572560250.1/34  
 Left In: 147.532 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 307143604.6/22

+ sign 146.086 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 4495152080.2/55  
 All: 145.525 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13620354652.  
 - sign 144.957 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9002104425.6/57

# yield\_bcm\_an\_ds\_rms vs Slug



Right In: 0.411 $\pm$ 0.000  $\chi^2$ /NDF: 4007016.2/30

Left Out: 0.424 $\pm$ 0.000  $\chi^2$ /NDF:2260723.7/24

Right Out: 0.407 $\pm$ 0.000  $\chi^2$ /NDF: 3646483.8/34

Left In: 0.433 $\pm$ 0.000  $\chi^2$ /NDF:1771141.8/22

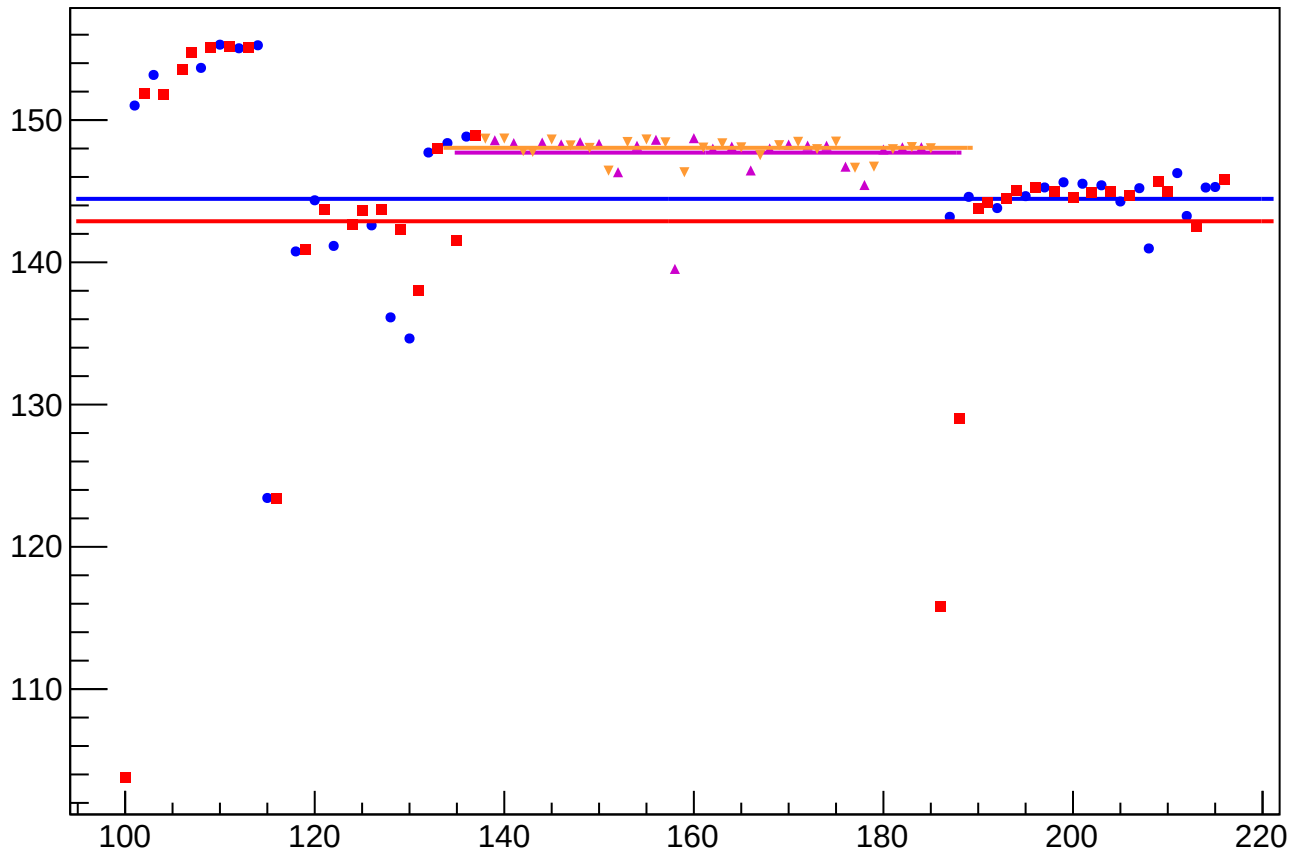
+ sign 0.418 $\pm$ 0.000  $\chi^2$ /NDF: 6285932.0/55

All: 0.418 $\pm$ 0.000  $\chi^2$ /NDF: 11768829.9/113

- sign 0.419 $\pm$ 0.000  $\chi^2$ /NDF: 5482373.1/57

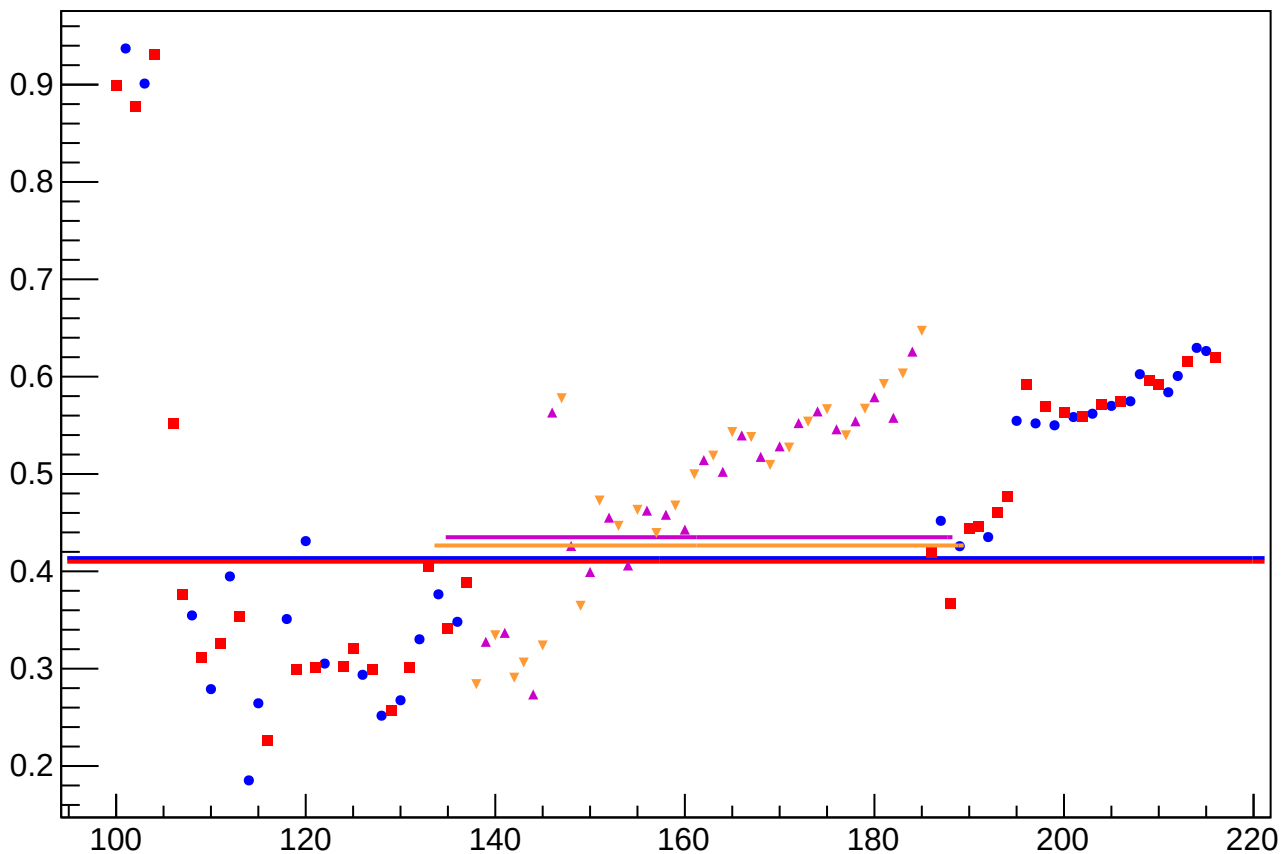


# yield\_bcm\_an\_ds3\_mean vs Slug



|                            |                                       |                        |                                        |
|----------------------------|---------------------------------------|------------------------|----------------------------------------|
| Right In: 144.461+/-0.000  | $\chi^2/\text{NDF}$ : 3816773607.0/30 | + sign 146.273+/-0.000 | $\chi^2/\text{NDF}$ : 4479715249.7/55  |
| Left Out: 148.049+/-0.000  | $\chi^2/\text{NDF}$ : 44901895.1/24   | All: 145.717+/-0.000   | $\chi^2/\text{NDF}$ : 13516800682.0/57 |
| Right Out: 142.887+/-0.000 | $\chi^2/\text{NDF}$ : 7506714305.4/34 | - sign 145.154+/-0.000 | $\chi^2/\text{NDF}$ : 8917572868.8/57  |
| Left In: 147.710+/-0.000   | $\chi^2/\text{NDF}$ : 311841433.9/22  |                        |                                        |

# yield\_bcm\_an\_ds3\_rms vs Slug



Right In: 0.414 $\pm$ 0.000  $\chi^2$ /NDF: 3989666.5/30

Left Out: 0.427 $\pm$ 0.000  $\chi^2$ /NDF:2257492.3/24

Right Out: 0.410 $\pm$ 0.000  $\chi^2$ /NDF: 3638788.4/34

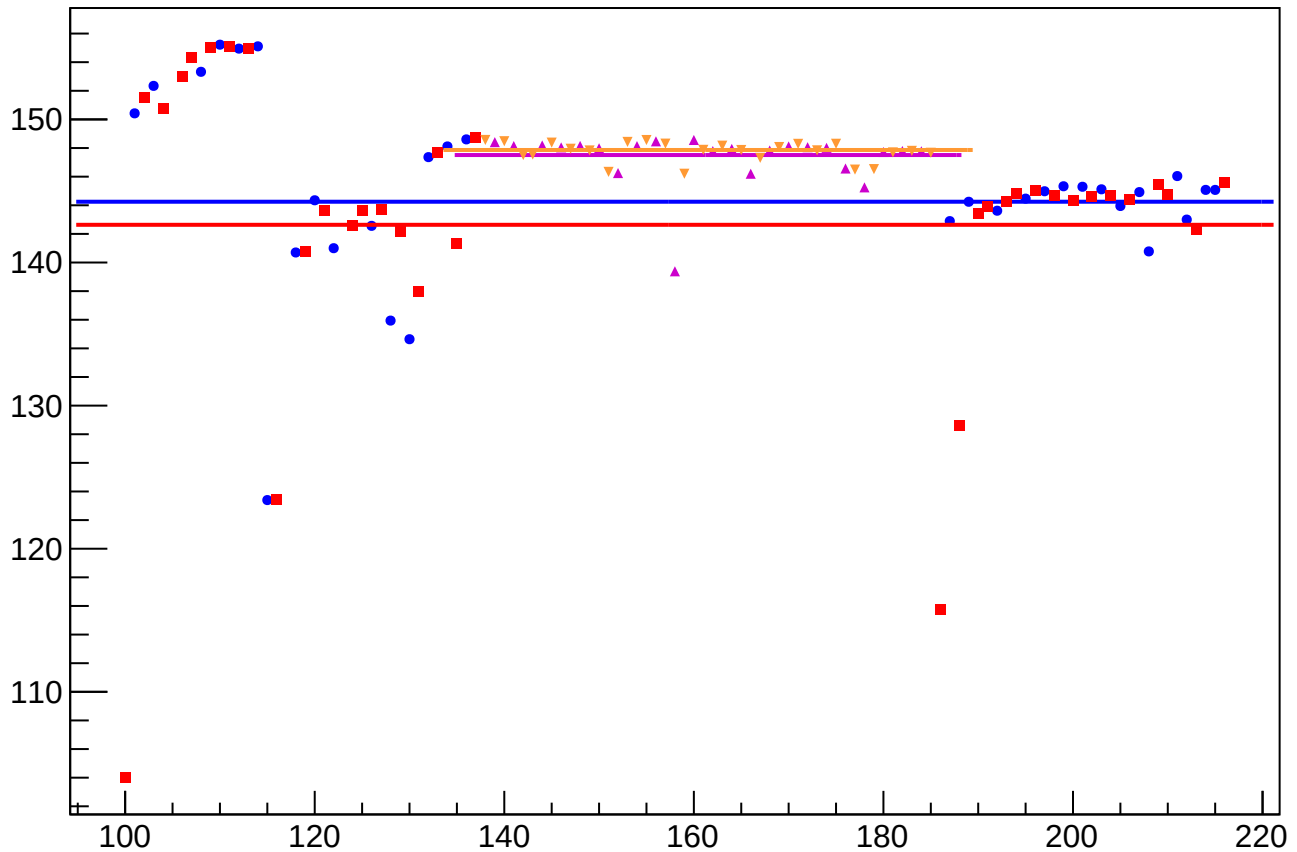
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1769716.0/22

+ sign 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 6263318.2/55

All: 0.421 $\pm$ 0.000  $\chi^2$ /NDF: 11732000.4/113

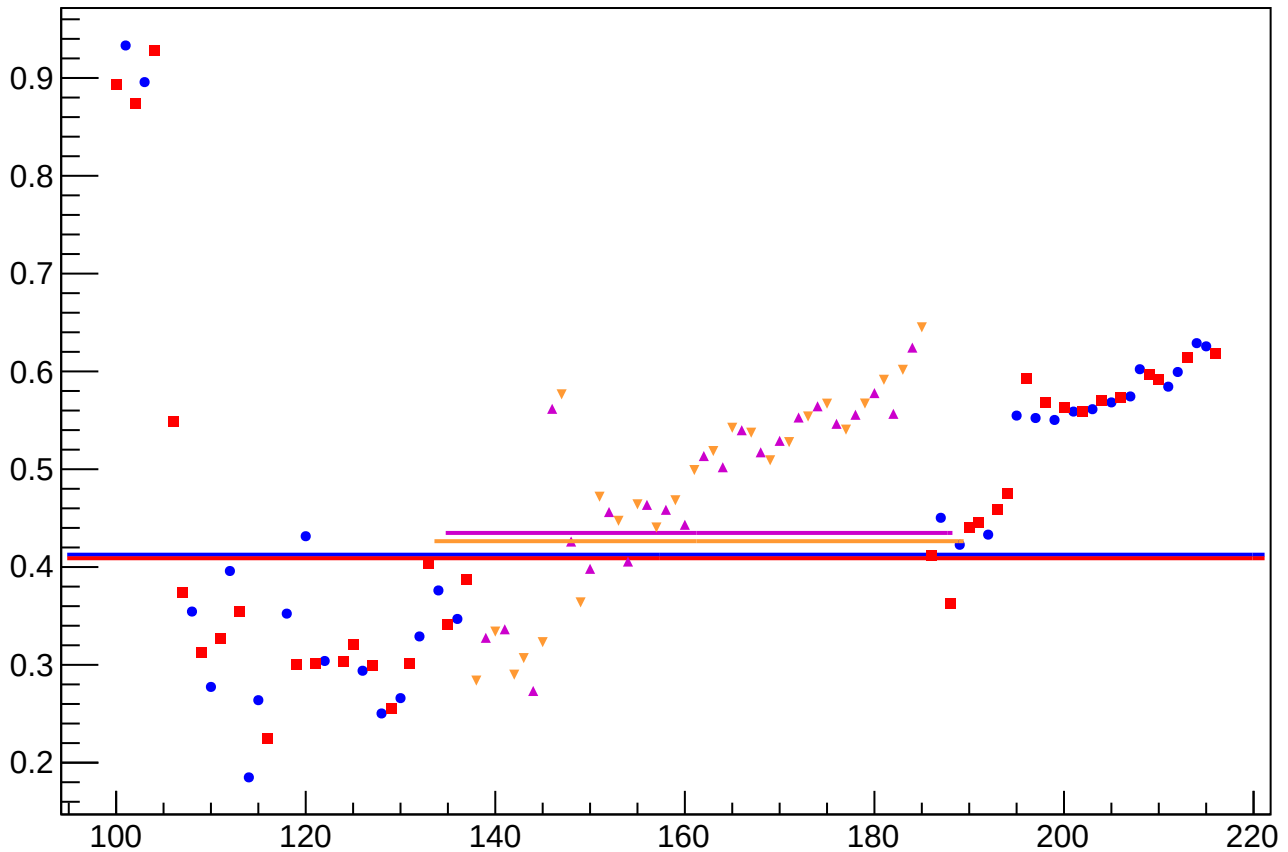
- sign 0.422 $\pm$ 0.000  $\chi^2$ /NDF: 5468193.2/57

# yield\_bcm\_an\_us\_mean vs Slug



|                            |                                       |                        |                                       |
|----------------------------|---------------------------------------|------------------------|---------------------------------------|
| Right In: 144.248+/-0.000  | $\chi^2/\text{NDF}$ : 3781244949.5/30 | + sign 146.071+/-0.000 | $\chi^2/\text{NDF}$ : 4455224259.6/55 |
| Left Out: 147.864+/-0.000  | $\chi^2/\text{NDF}$ : 44922014.2/24   | All: 145.500+/-0.000   | $\chi^2/\text{NDF}$ : 13610791493.    |
| Right Out: 142.635+/-0.000 | $\chi^2/\text{NDF}$ : 7597199521.9/34 | - sign 144.922+/-0.000 | $\chi^2/\text{NDF}$ : 9029362566.9/57 |
| Left In: 147.511+/-0.000   | $\chi^2/\text{NDF}$ : 306421789.5/22  |                        |                                       |

# yield\_bcm\_an\_us\_rms vs Slug



Right In: 0.413 $\pm$ 0.000  $\chi^2$ /NDF: 4008522.6/30

Left Out: 0.426 $\pm$ 0.000  $\chi^2$ /NDF:2259192.5/24

Right Out: 0.409 $\pm$ 0.000  $\chi^2$ /NDF: 3641339.7/34

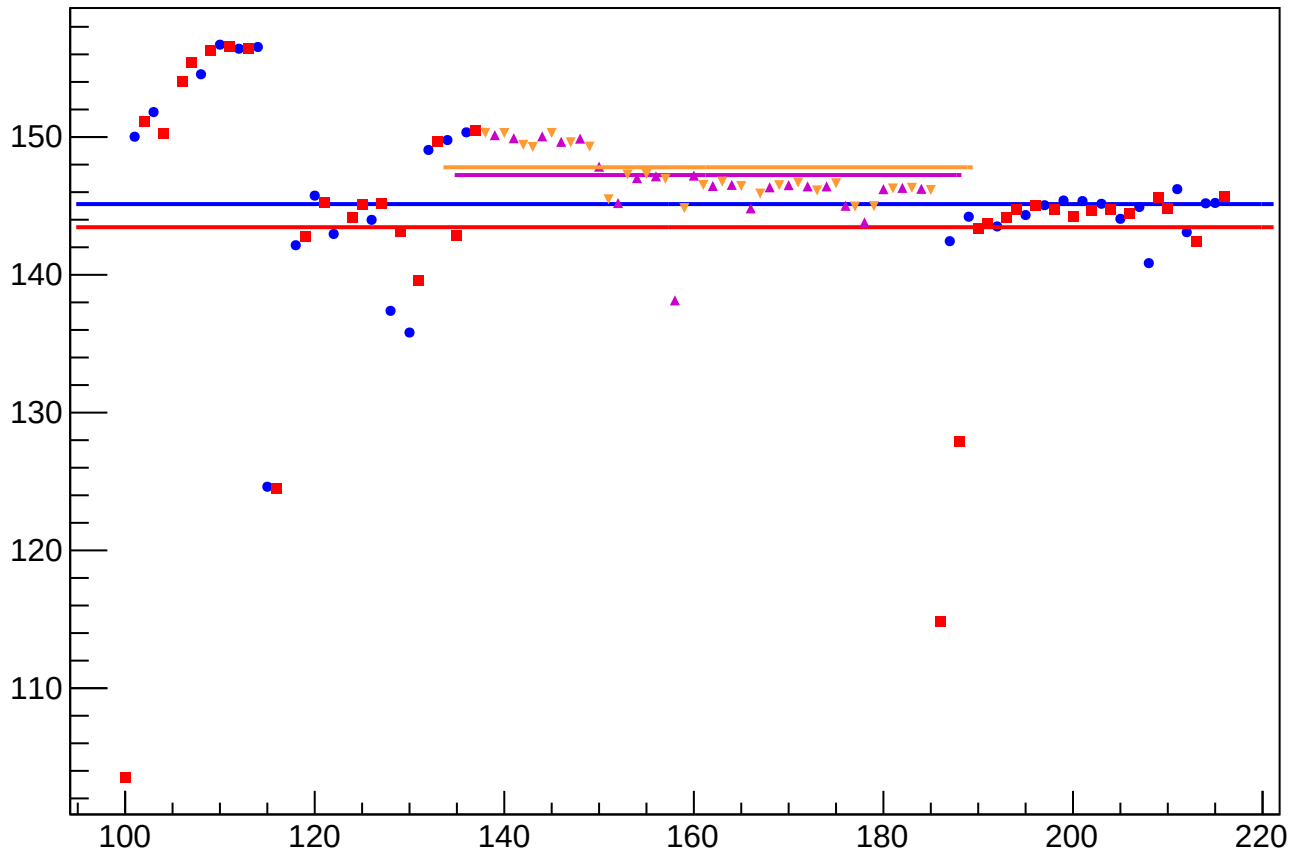
Left In: 0.435 $\pm$ 0.000  $\chi^2$ /NDF:1774903.7/22

+ sign 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 6286050.2/55

All: 0.420 $\pm$ 0.000  $\chi^2$ /NDF: 11766316.0/113

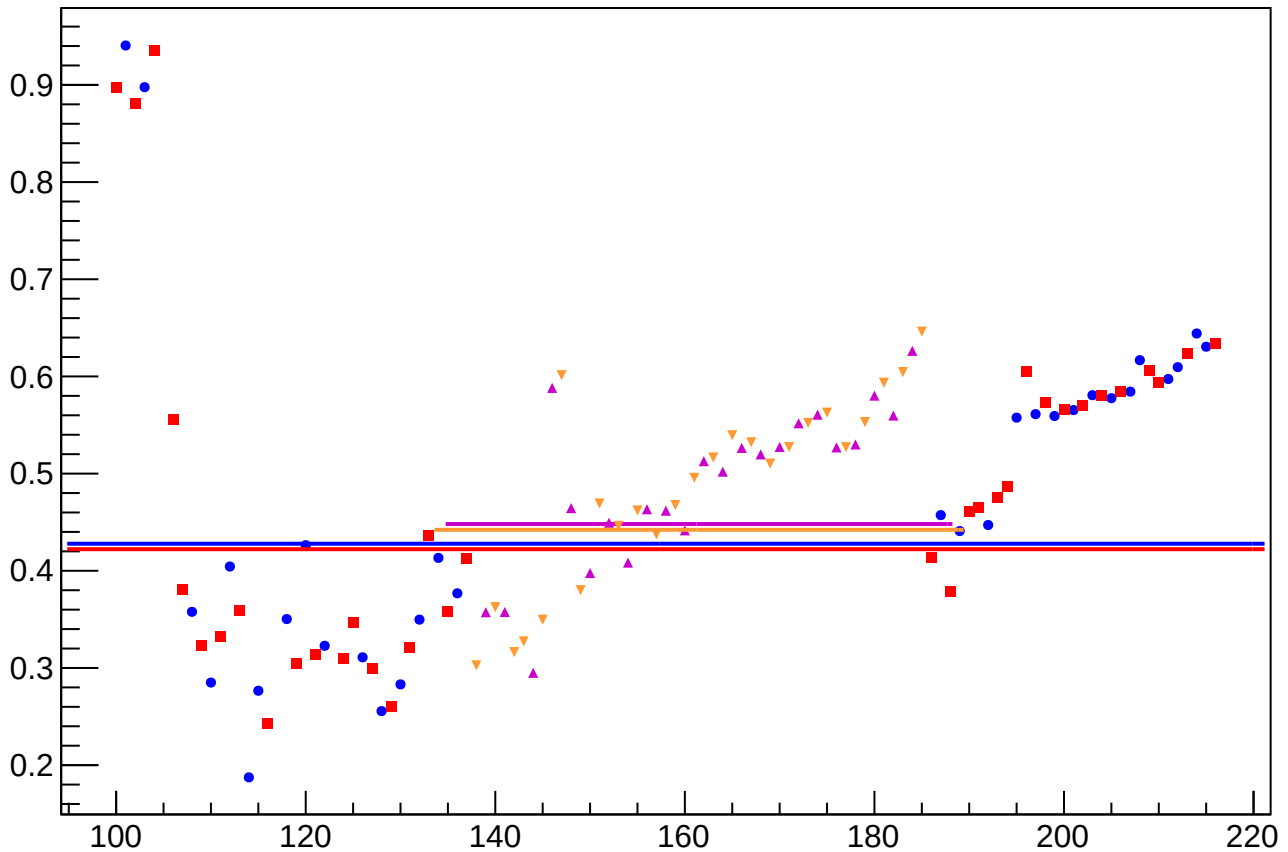
- sign 0.421 $\pm$ 0.000  $\chi^2$ /NDF: 5479809.8/57

# yield\_bcm\_dg\_us\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 145.134 $\pm$ 0.000  | $\chi^2$ /NDF: 3572938636.3/30 | + sign 146.486 $\pm$ 0.000 | $\chi^2$ /NDF: 4221933945.4/55 |
| Left Out: 147.804 $\pm$ 0.000  | $\chi^2$ /NDF: 327059704.2/24  | All: 145.866 $\pm$ 0.000   | $\chi^2$ /NDF: 13264710545.0   |
| Right Out: 143.457 $\pm$ 0.000 | $\chi^2$ /NDF: 7642618716.7/34 | - sign 145.244 $\pm$ 0.000 | $\chi^2$ /NDF: 8903748759.0/57 |
| Left In: 147.241 $\pm$ 0.000   | $\chi^2$ /NDF: 618679483.9/22  |                            |                                |

# yield\_bcm\_dg\_us\_rms vs Slug



Right In:  $0.428 \pm 0.000$   $\chi^2/\text{NDF}$ : 3779246.1/30

Left Out:  $0.442 \pm 0.000$   $\chi^2/\text{NDF}$ : 1704199.1/24

Right Out:  $0.422 \pm 0.000$   $\chi^2/\text{NDF}$ : 3459107.7/34

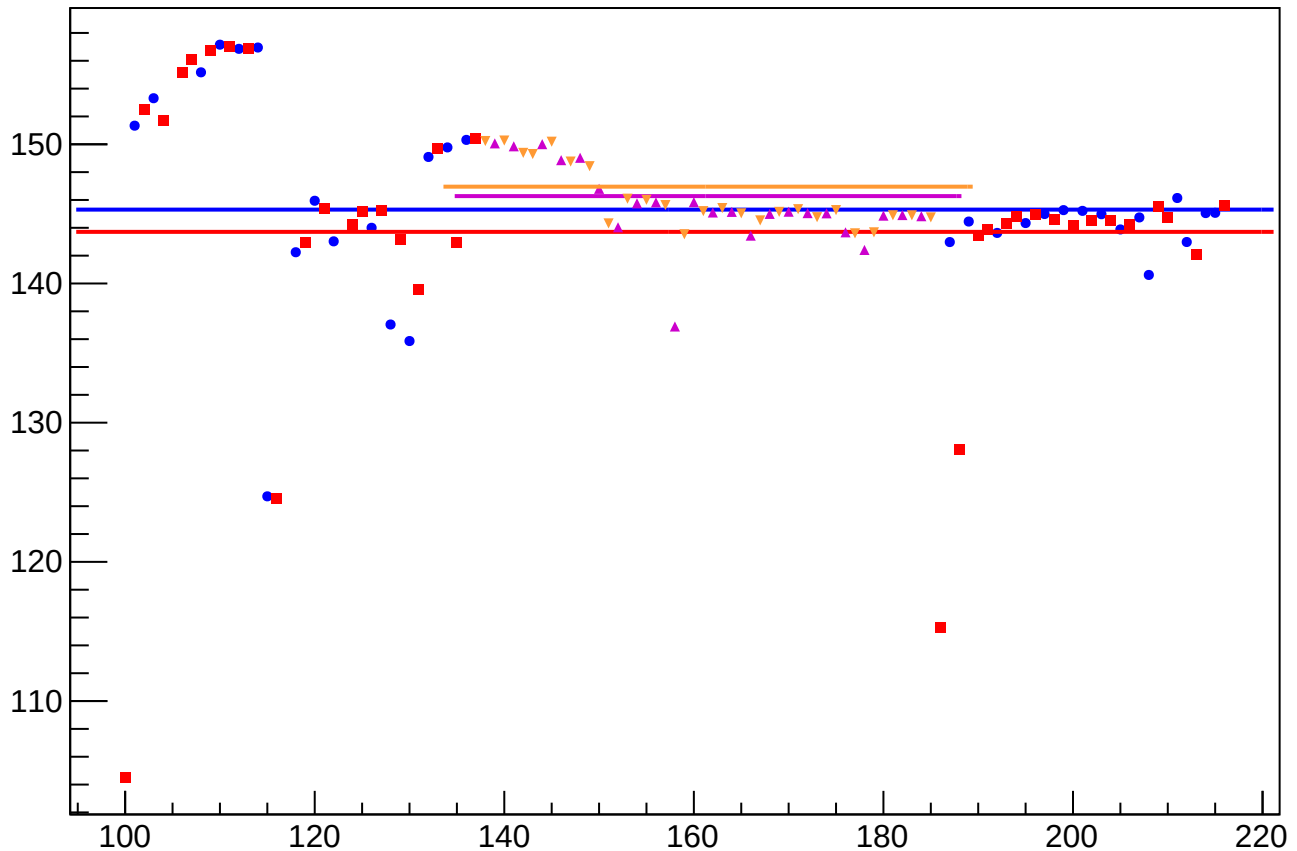
Left In:  $0.448 \pm 0.000$   $\chi^2/\text{NDF}$ : 1347802.9/22

+ sign  $0.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 5501943.1/55

All:  $0.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 10369145.6/113

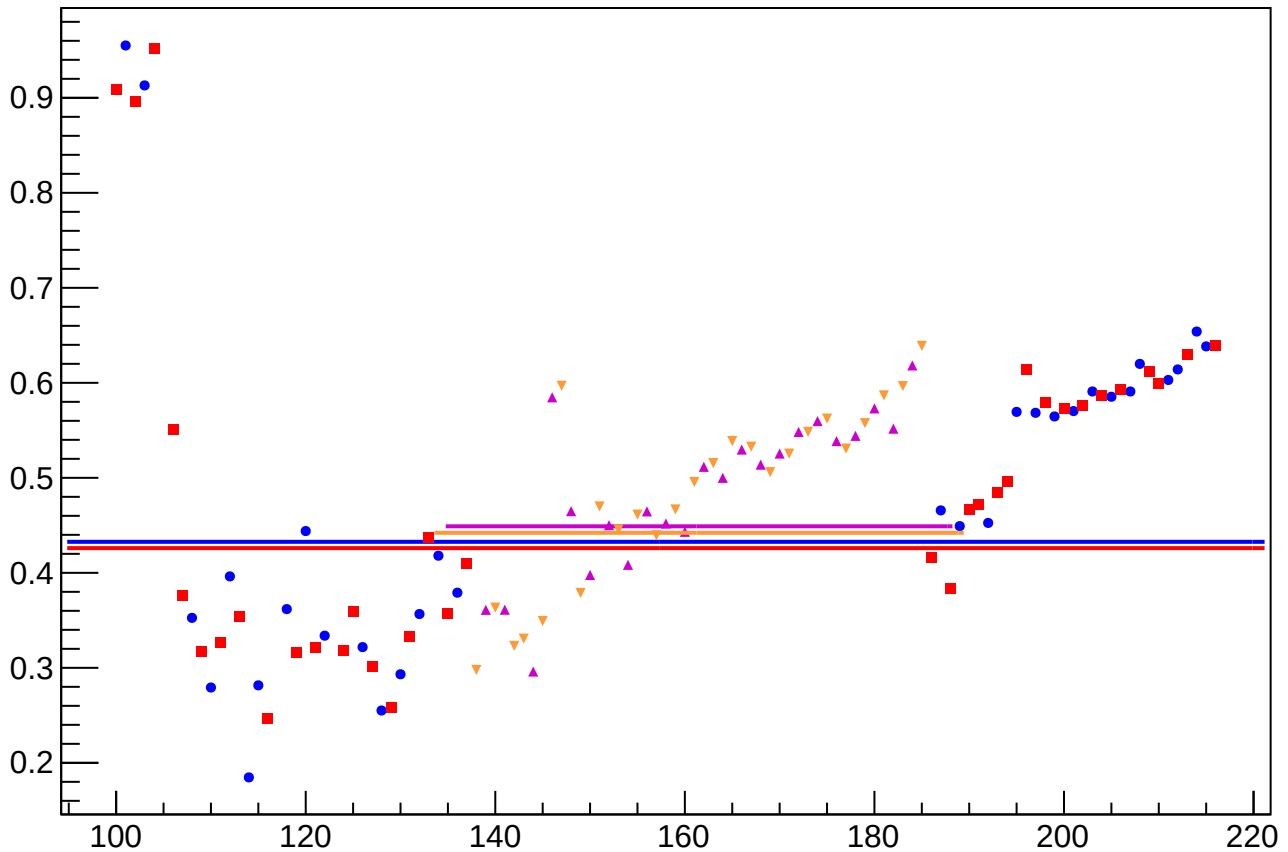
- sign  $0.434 \pm 0.000$   $\chi^2/\text{NDF}$ : 4867129.2/57

# yield\_bcm\_dg\_ds\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 145.307 $\pm$ 0.000  | $\chi^2$ /NDF: 3734241762.9/30 | + sign 146.152 $\pm$ 0.000 | $\chi^2$ /NDF: 4398189984.4/55 |
| Left Out: 146.956 $\pm$ 0.000  | $\chi^2$ /NDF: 542800379.5/24  | All: 145.544 $\pm$ 0.000   | $\chi^2$ /NDF: 13344790997.    |
| Right Out: 143.709 $\pm$ 0.000 | $\chi^2$ /NDF: 7696273004.3/34 | - sign 144.933 $\pm$ 0.000 | $\chi^2$ /NDF: 8814274750.7/57 |
| Left In: 146.278 $\pm$ 0.000   | $\chi^2$ /NDF: 825161532.5/22  |                            |                                |

# yield\_bcm\_dg\_ds\_rms vs Slug



Right In: 0.433 $\pm$ 0.000  $\chi^2$ /NDF: 3813136.5/30

Left Out: 0.442 $\pm$ 0.000  $\chi^2$ /NDF:1676682.9/24

Right Out: 0.426 $\pm$ 0.000  $\chi^2$ /NDF: 3487136.6/34

Left In: 0.449 $\pm$ 0.000  $\chi^2$ /NDF:1300658.3/22

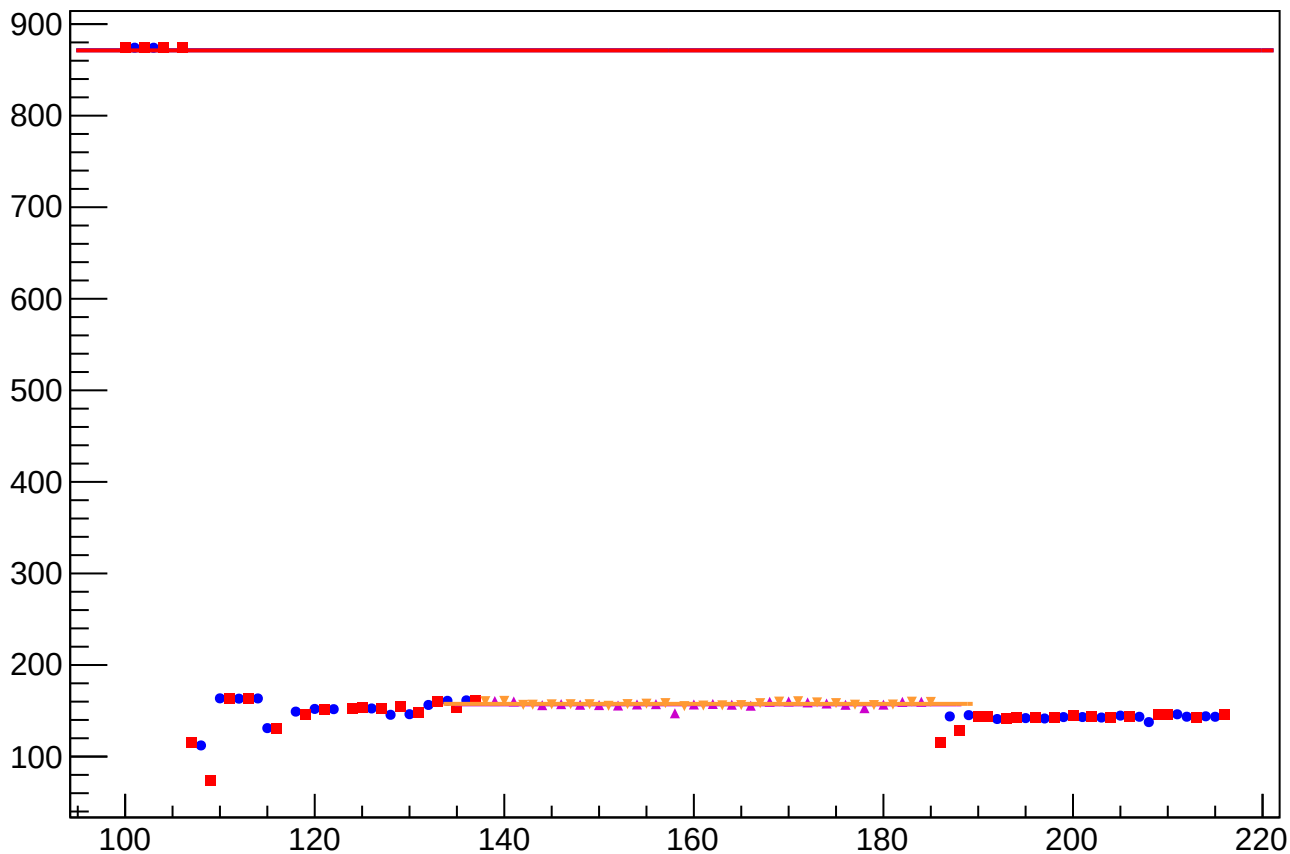
+ sign 0.438 $\pm$ 0.000  $\chi^2$ /NDF: 5497821.5/55

All: 0.437 $\pm$ 0.000  $\chi^2$ /NDF: 10332402.5/113

- sign 0.437 $\pm$ 0.000  $\chi^2$ /NDF: 4834526.0/57

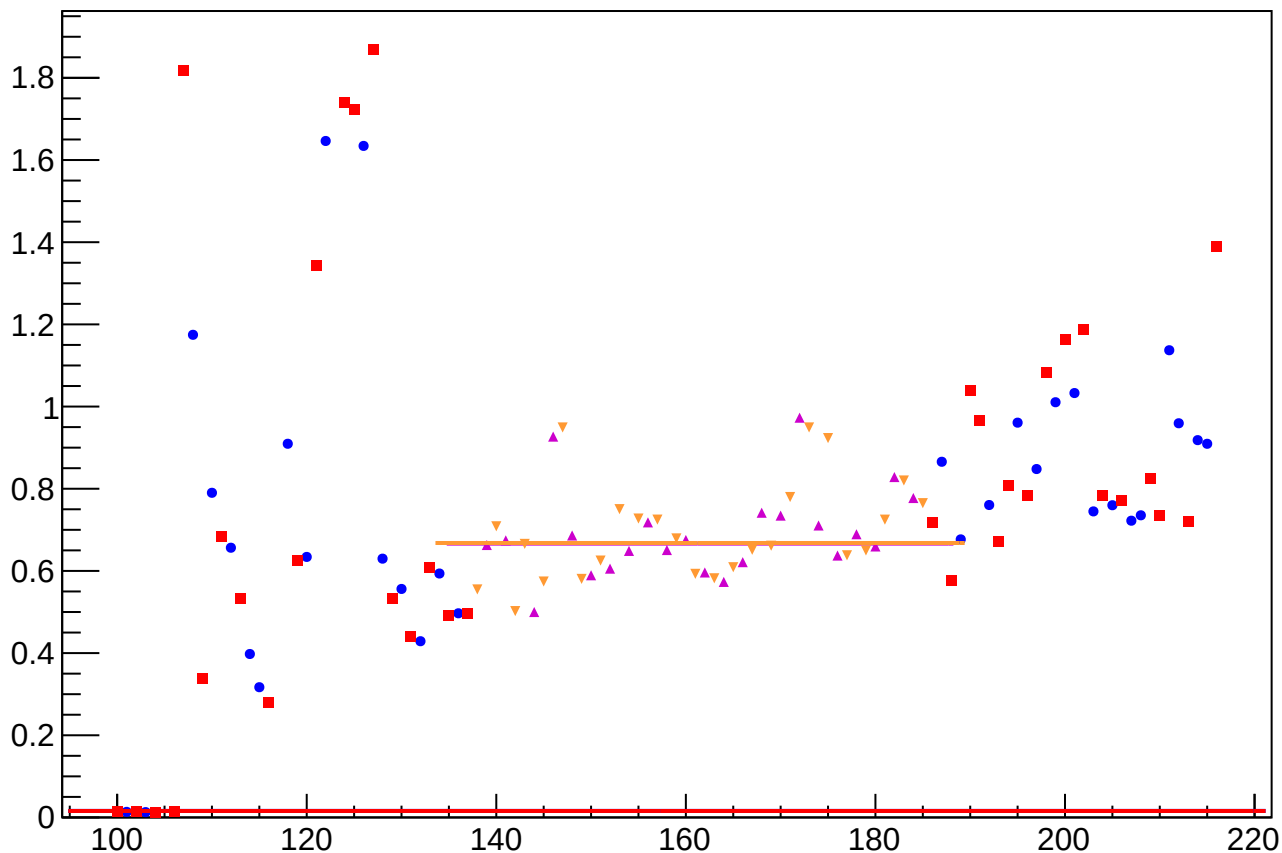


# yield\_cav4bQ\_mean vs Slug



Right In:  $871.426 \pm 0.000$   $\chi^2/\text{NDF}$ : 14453199562927.7/30  
 Left Out:  $157.566 \pm 0.000$   $\chi^2/\text{NDF}$ : 104641292.0/24  
 Right Out:  $871.249 \pm 0.000$   $\chi^2/\text{NDF}$ : 17747468979934.7/34  
 Left In:  $157.013 \pm 0.000$   $\chi^2/\text{NDF}$ : 239819941.9/22  
 + sign  $868.054 \pm 0.000$   $\chi^2/\text{NDF}$ : 31637200899718.  
 All:  $868.263 \pm 0.000$   $\chi^2/\text{NDF}$ : 65853384337.  
 - sign  $868.446 \pm 0.000$   $\chi^2/\text{NDF}$ : 34215593481265.7

# yield\_cav4bQ\_rms vs Slug



Right In: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 28305941.0/30

Left Out: 0.668 $\pm$ 0.000  $\chi^2$ /NDF:681720.2/24

Right Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 29530004.4/34

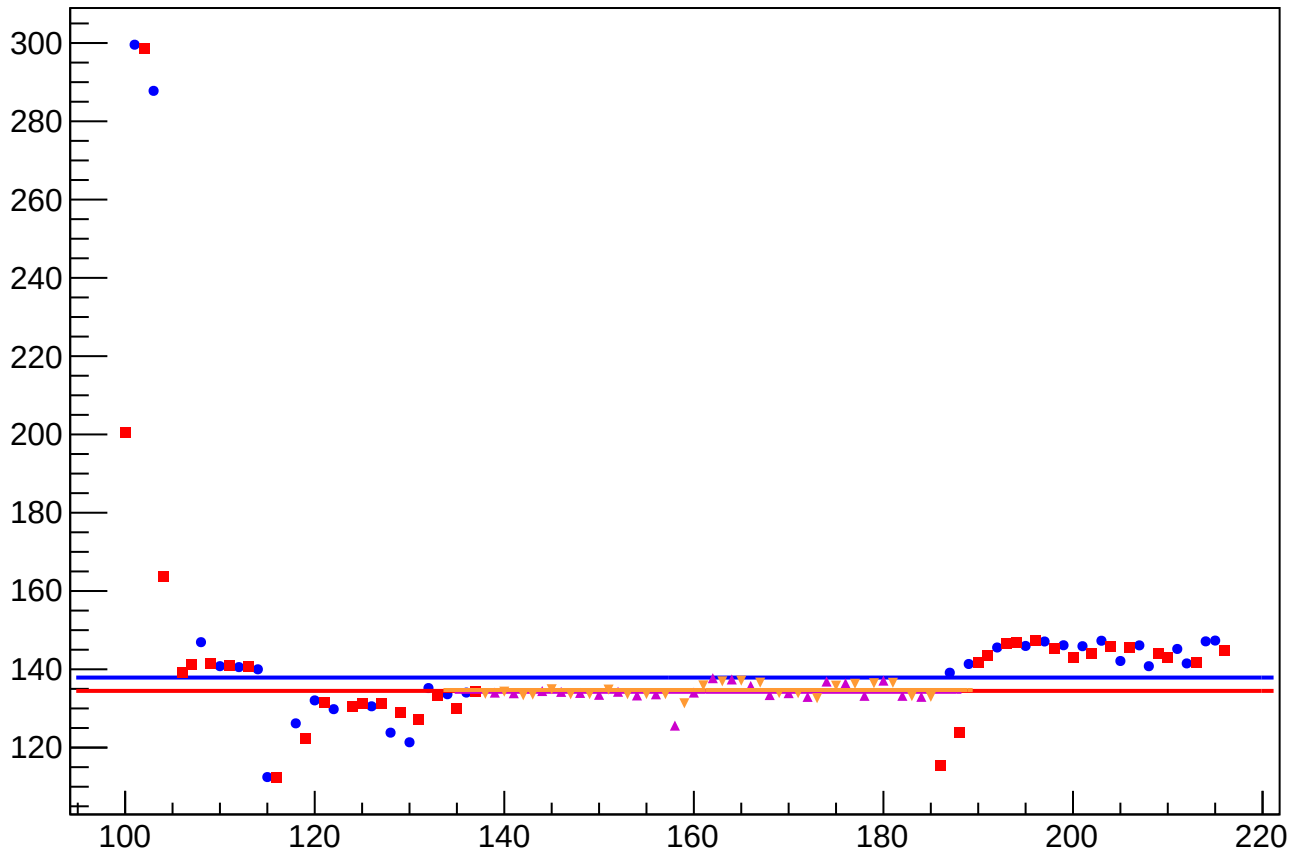
Left In: 0.666 $\pm$ 0.000  $\chi^2$ /NDF:536078.9/22

+ sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 57659588.4/55

All: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 115067818.6/113

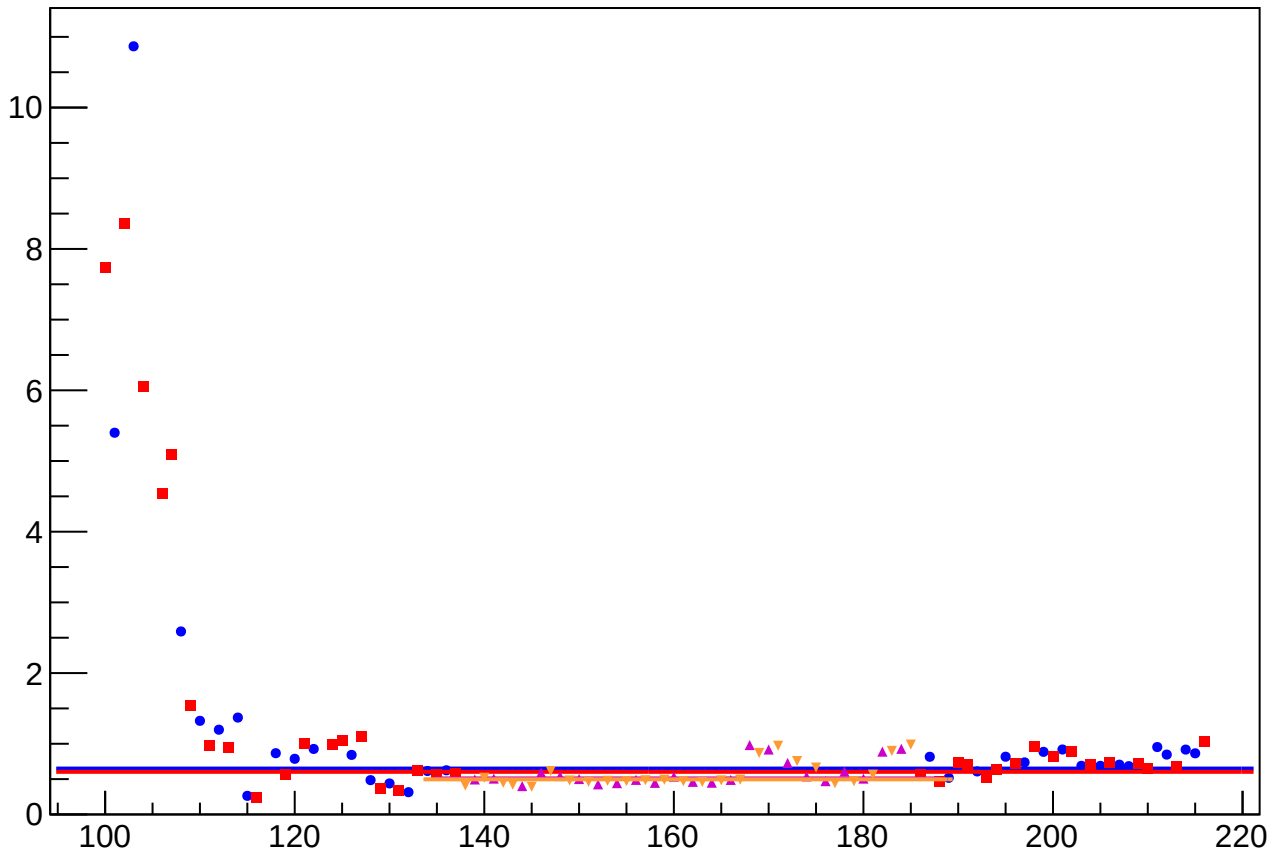
- sign 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 57404169.7/57

# yield\_cav4cQ\_mean vs Slug



|                                |                                |                            |                                |
|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| Right In: 137.889 $\pm$ 0.000  | $\chi^2$ /NDF: 3730607694.2/30 | + sign 135.729 $\pm$ 0.000 | $\chi^2$ /NDF: 4106191830.2/55 |
| Left Out: 134.714 $\pm$ 0.000  | $\chi^2$ /NDF: 159886495.0/24  | All: 135.036 $\pm$ 0.000   | $\chi^2$ /NDF: 10143533596.    |
| Right Out: 134.482 $\pm$ 0.000 | $\chi^2$ /NDF: 5499884411.0/34 | - sign 134.339 $\pm$ 0.000 | $\chi^2$ /NDF: 5942654211.8/57 |
| Left In: 134.250 $\pm$ 0.000   | $\chi^2$ /NDF: 441522664.4/22  |                            |                                |

# yield\_cav4cQ\_rms vs Slug



Right In: 0.649 $\pm$ 0.000  $\chi^2$ /NDF: 5403311.1/30

Left Out: 0.497 $\pm$ 0.000  $\chi^2$ /NDF:1572512.9/24

Right Out: 0.603 $\pm$ 0.000  $\chi^2$ /NDF: 6277582.5/34

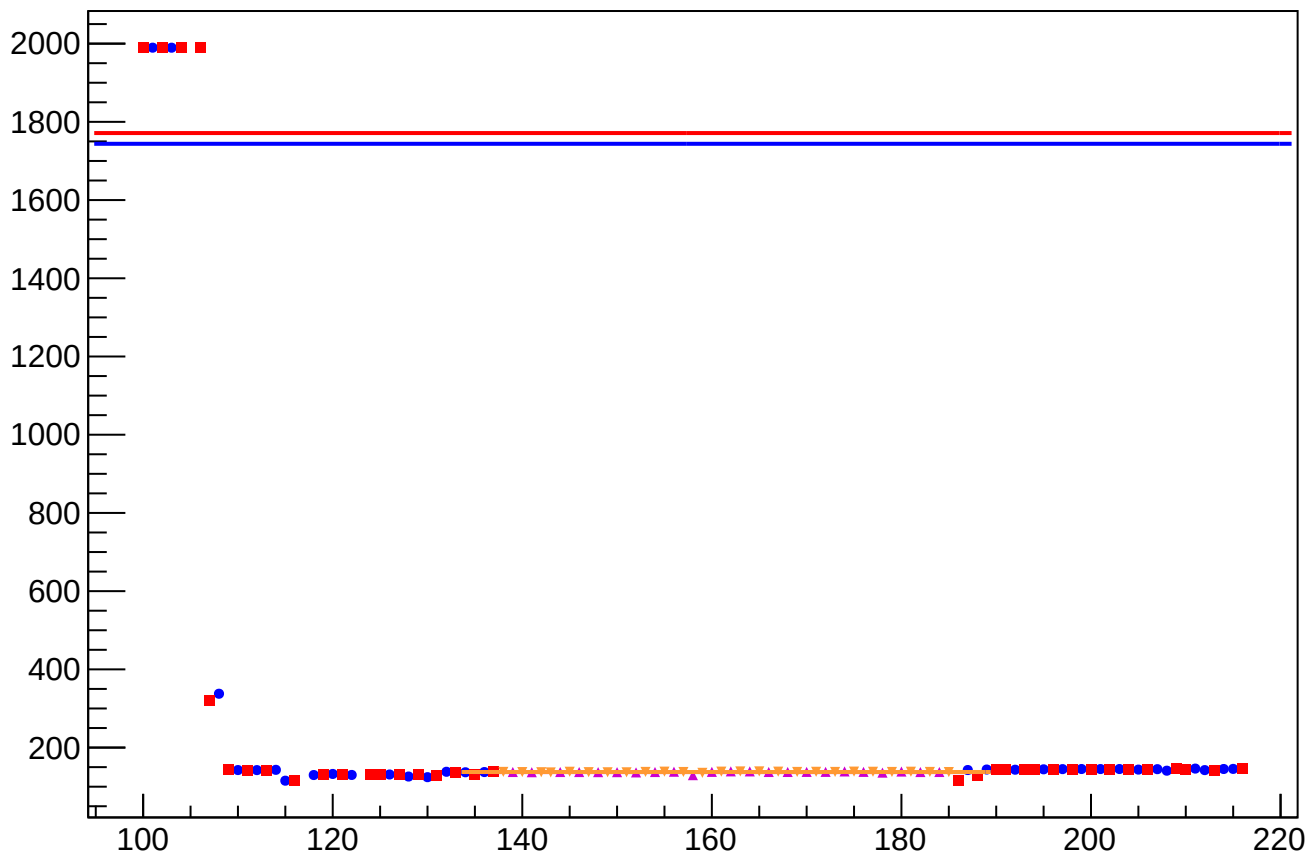
Left In: 0.510 $\pm$ 0.000  $\chi^2$ /NDF:1485489.4/22

+ sign 0.546 $\pm$ 0.000  $\chi^2$ /NDF: 7966243.5/55

All: 0.545 $\pm$ 0.000  $\chi^2$ /NDF: 16133019.4/113

- sign 0.545 $\pm$ 0.000  $\chi^2$ /NDF: 8166768.8/57

# yield\_cav4dQ\_mean vs Slug



Right In: 1743.880+/-0.000  $\chi^2/\text{NDF}$ : 238653074763240.6/30

Left Out: 137.578+/-0.000  $\chi^2/\text{NDF}$ : 64111345.2/24

Right Out: 1771.344+/-0.000  $\chi^2/\text{NDF}$ : 251478627801315.6/34

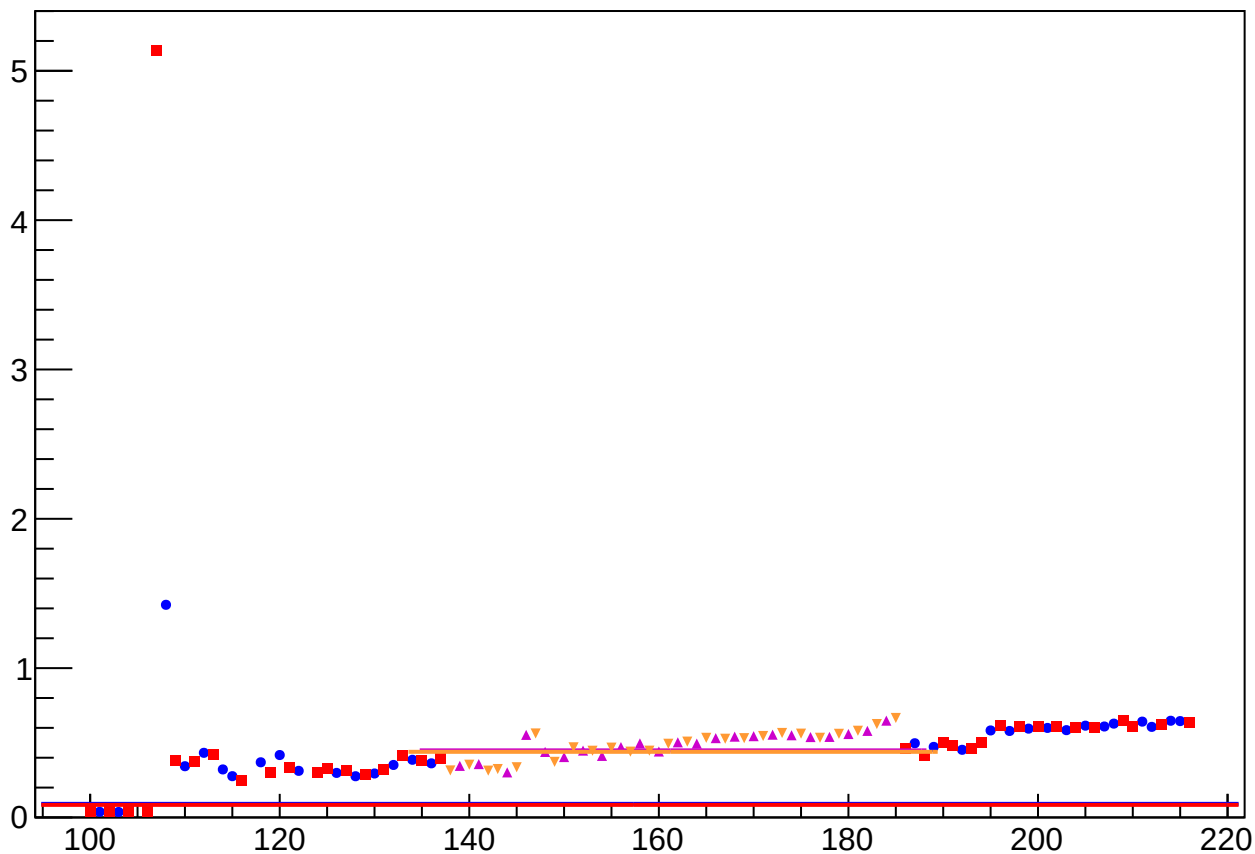
Left In: 137.349+/-0.000  $\chi^2/\text{NDF}$ : 248752254.7/22

+ sign 1530.021+/-0.000  $\chi^2/\text{NDF}$ : 44631897894501

All: 1564.872+/-0.000  $\chi^2/\text{NDF}$ : 90165469629

- sign 1595.659+/-0.000  $\chi^2/\text{NDF}$ : 45374044296348

# yield\_cav4dQ\_rms vs Slug



Right In: 0.091+/-0.000  $\chi^2/\text{NDF}$ : 25681165.8/30

Left Out: 0.440+/-0.000  $\chi^2/\text{NDF}$ :1765604.0/24

Right Out: 0.084+/-0.000  $\chi^2/\text{NDF}$ : 25966031.2/34

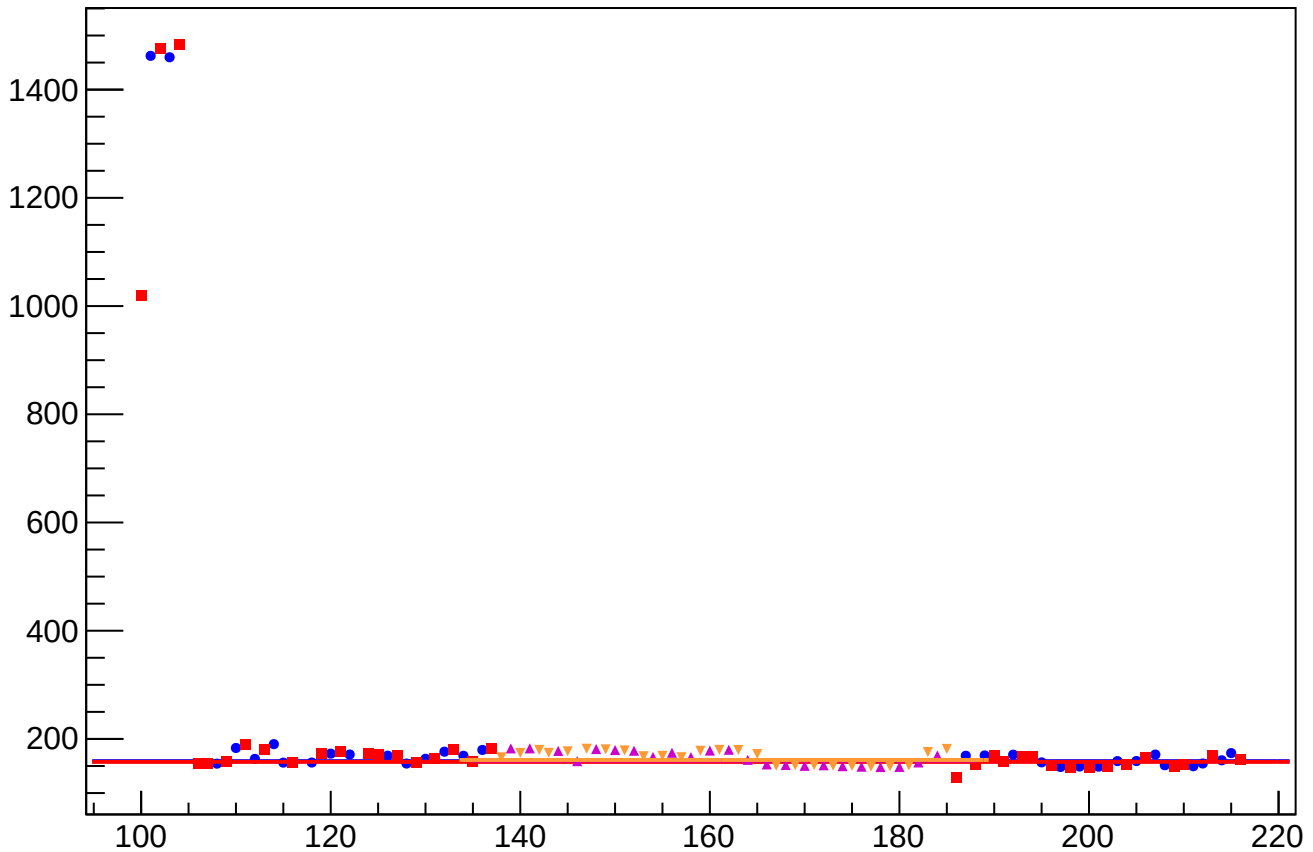
Left In: 0.449+/-0.000  $\chi^2/\text{NDF}$ :1340860.2/22

+ sign 0.137+/-0.000  $\chi^2/\text{NDF}$ : 47003219.6/55

All: 0.130+/-0.000  $\chi^2/\text{NDF}$ : 94633470.5/113

- sign 0.124+/-0.000  $\chi^2/\text{NDF}$ : 47487903.7/57

# yield\_bcm0l02\_mean vs Slug



Right In: 158.912+/-0.000  $\chi^2/\text{NDF}$ : 16066242794.6/30

Left Out: 161.147+/-0.000  $\chi^2/\text{NDF}$ : 3739064587.8/24

Right Out: 157.663+/-0.000  $\chi^2/\text{NDF}$ : 18377954586.6/34

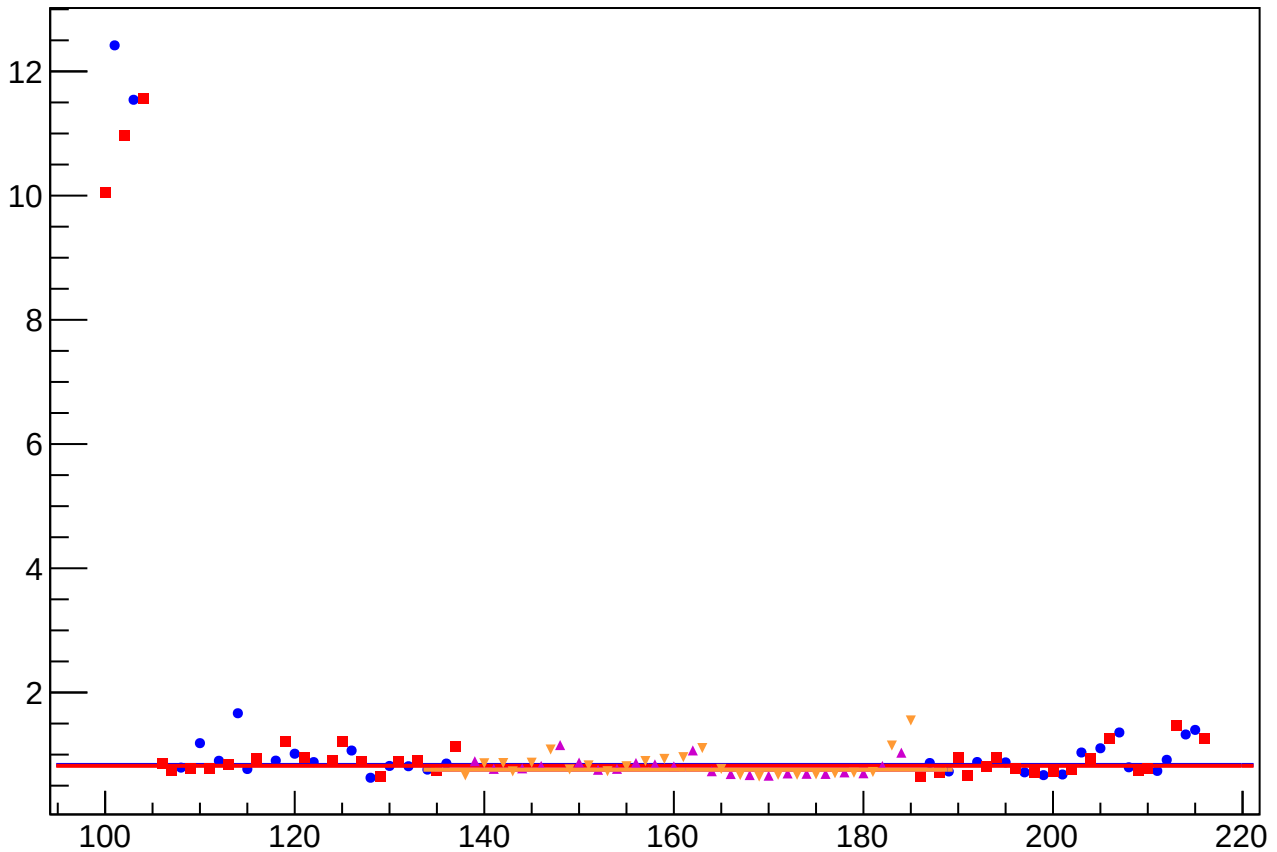
Left In: 160.140+/-0.000  $\chi^2/\text{NDF}$ : 3738383186.1/22

+ sign 160.194+/-0.000  $\chi^2/\text{NDF}$ : 19857547275.5/55

All: 159.592+/-0.000  $\chi^2/\text{NDF}$ : 42071002908.6/100

- sign 159.002+/-0.000  $\chi^2/\text{NDF}$ : 22182791907.4/57

# yield\_bcm0l02\_rms vs Slug



Right In:  $0.834 \pm 0.000$   $\chi^2/\text{NDF}$ : 3250625.1/30

Left Out:  $0.756 \pm 0.000$   $\chi^2/\text{NDF}$ : 750259.3/24

Right Out:  $0.820 \pm 0.000$   $\chi^2/\text{NDF}$ : 2972391.0/34

Left In:  $0.755 \pm 0.000$   $\chi^2/\text{NDF}$ : 472792.1/22

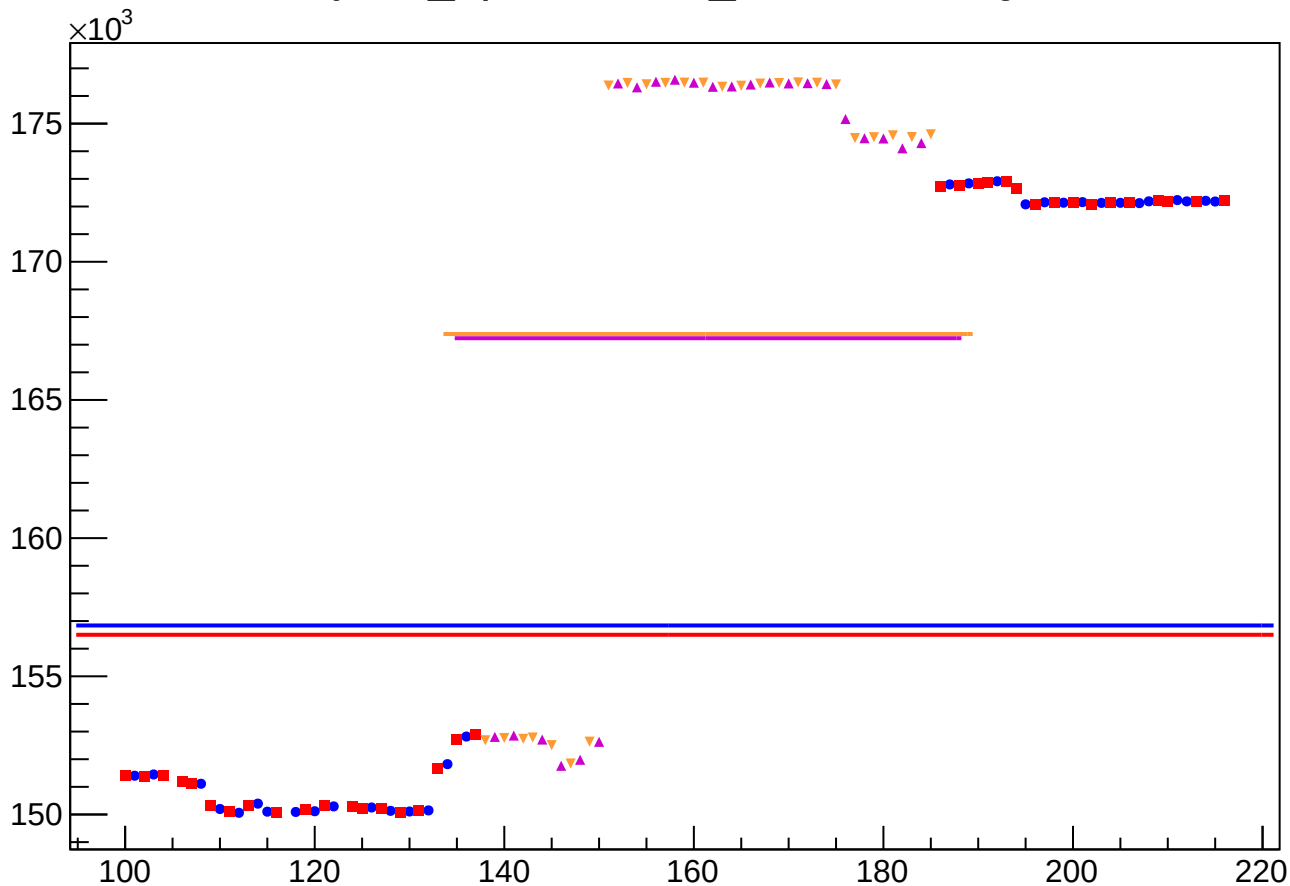
+ sign  $0.789 \pm 0.000$   $\chi^2/\text{NDF}$ : 4126253.5/55

All:  $0.787 \pm 0.000$   $\chi^2/\text{NDF}$ : 7661366.4/113

- sign  $0.785 \pm 0.000$   $\chi^2/\text{NDF}$ : 3534257.8/57

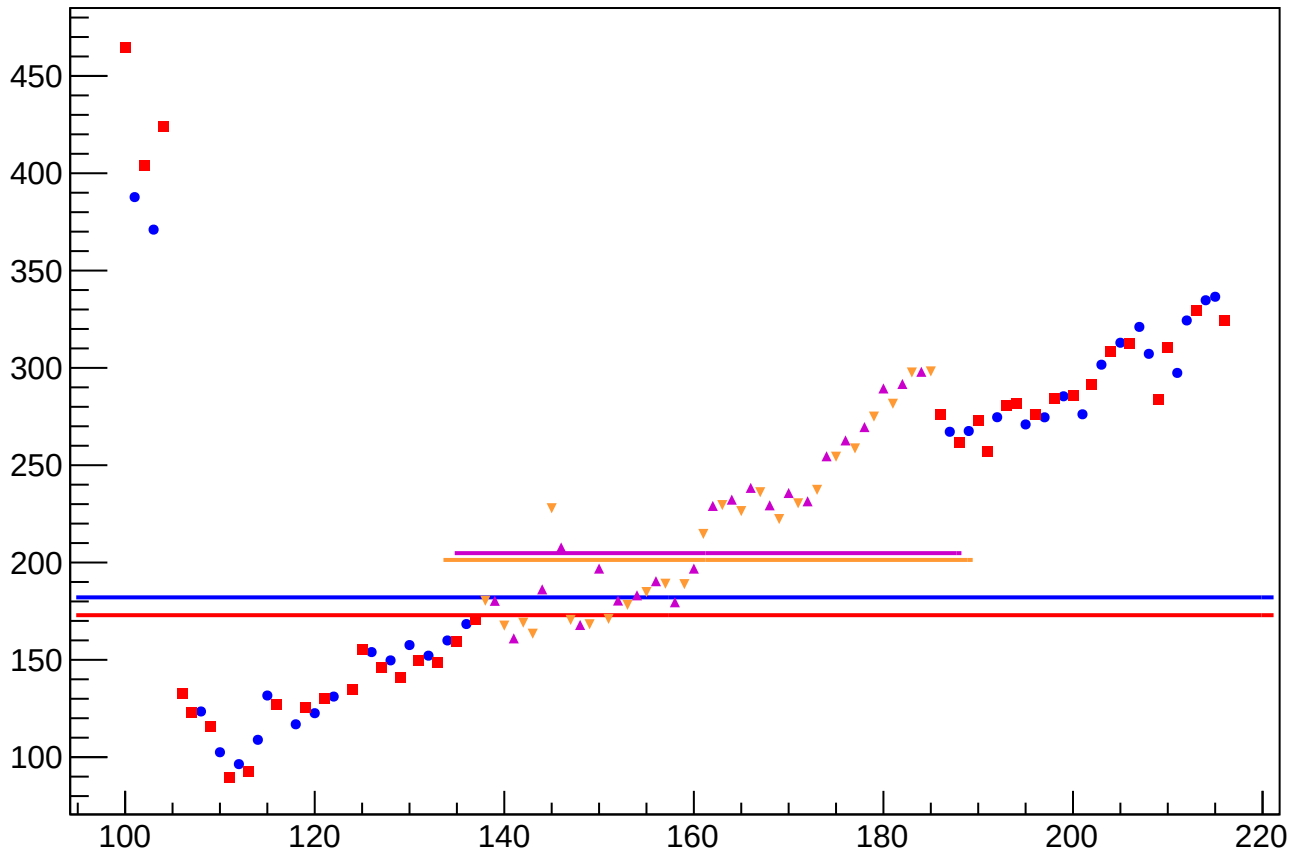


# yield\_bpm2i01WS\_mean vs Slug



Right In: 156839.818 $\pm$ 0.046  $\chi^2$ /NDF: 45893971197.2/30  
 Left Out: 167385.483 $\pm$ 0.047  $\chi^2$ /NDF: 59602607546.2/24  
 Right Out: 156502.924 $\pm$ 0.043  $\chi^2$ /NDF: 50037963120.6/34  
 Left In: 167234.214 $\pm$ 0.049  $\chi^2$ /NDF: 55099214555.0/22

# yield\_bpm2i01WS\_rms vs Slug



Right In: 182.100 $\pm$ 0.033  $\chi^2$ /NDF: 6517976.1/30

Left Out: 201.329 $\pm$ 0.033  $\chi^2$ /NDF:1230655.6/24

Right Out: 172.939 $\pm$ 0.031  $\chi^2$ /NDF: 7142526.9/34

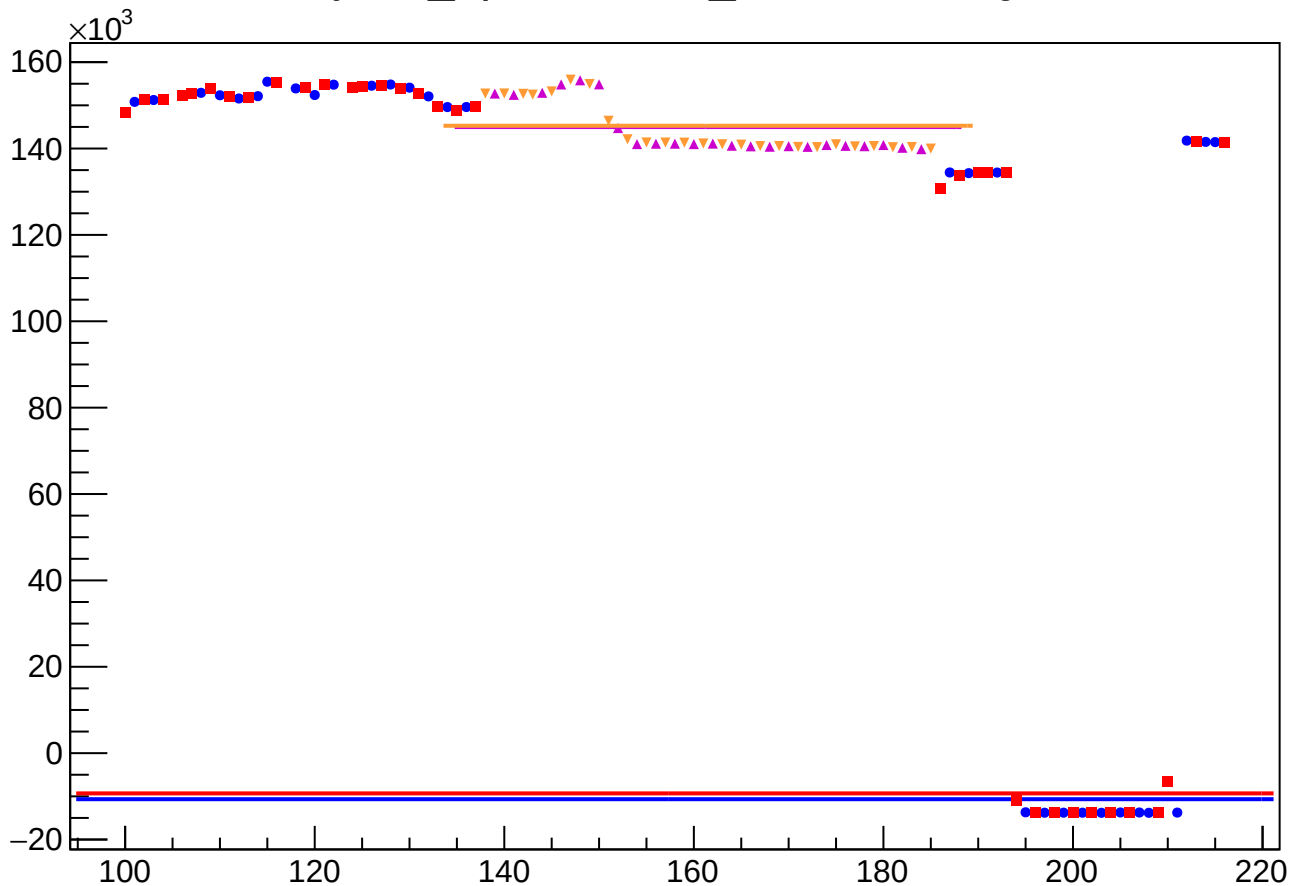
Left In: 204.826 $\pm$ 0.035  $\chi^2$ /NDF:1053130.7/22

+ sign 191.573 $\pm$ 0.023  $\chi^2$ /NDF: 7920415.8/55

All: 189.279 $\pm$ 0.016  $\chi^2$ /NDF: 16610698.7/1

- sign 187.028 $\pm$ 0.023  $\chi^2$ /NDF: 8670899.5/57

# yield\_bpm0i07WS\_mean vs Slug



Right In:  $-10661.166 \pm 0.009$

$\chi^2/\text{NDF}$ : 6498989865505.2/30

Left Out:  $145269.857 \pm 0.049$

$\chi^2/\text{NDF}$ : 13706269279.5/24

Right Out:  $-9315.639 \pm 0.009$

$\chi^2/\text{NDF}$ : 7518360012763.7/34

Left In:  $144966.398 \pm 0.051$

$\chi^2/\text{NDF}$ : 13154547043.3/22

+ sign  $-5926.211 \pm 0.009$

$\chi^2/\text{NDF}$ : 1617850229439

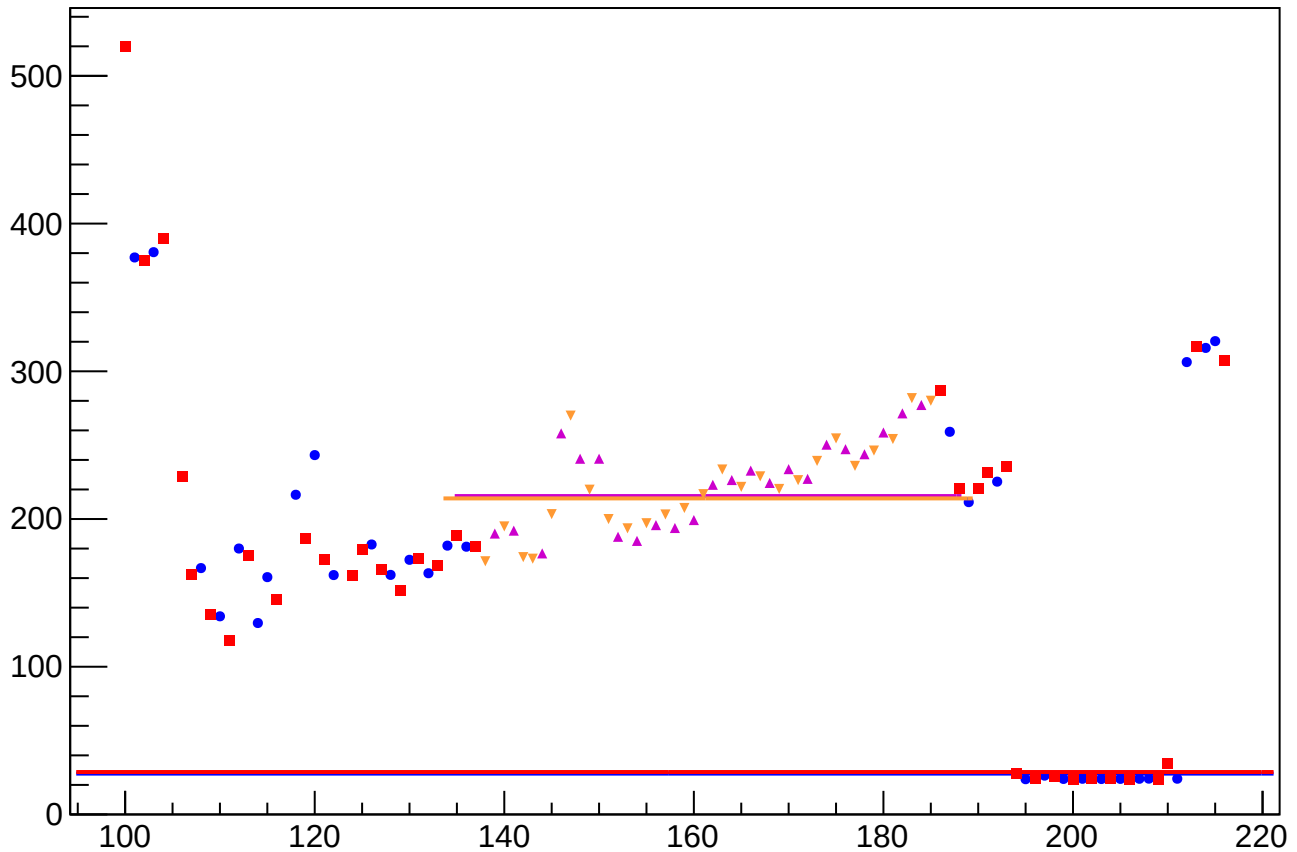
All:  $-5173.021 \pm 0.006$

$\chi^2/\text{NDF}$ : 3251037764

- sign  $-4307.544 \pm 0.009$

$\chi^2/\text{NDF}$ : 16315414825306

# yield\_bpm0i07WS\_rms vs Slug



Right In: 27.663 $\pm$ 0.006  $\chi^2$ /NDF: 17069043.1/30

Left Out: 213.951 $\pm$ 0.035  $\chi^2$ /NDF: 650607.8/24

Right Out: 28.726 $\pm$ 0.007  $\chi^2$ /NDF: 17160093.4/34

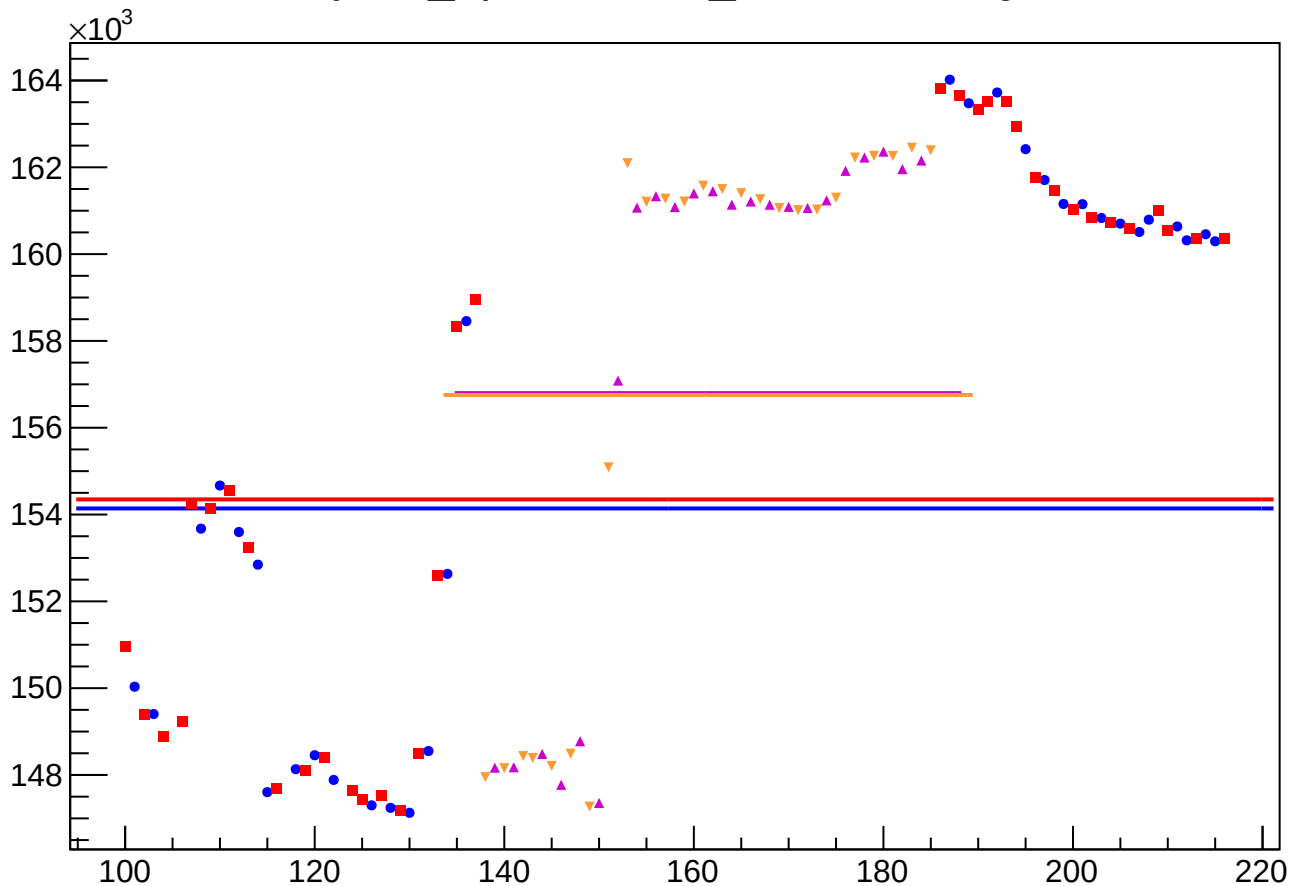
Left In: 215.539 $\pm$ 0.036  $\chi^2$ /NDF: 600575.7/22

+ sign 33.320 $\pm$ 0.006  $\chi^2$ /NDF: 45311066.3/55

All: 34.004 $\pm$ 0.004  $\chi^2$ /NDF: 88856063.5/113

- sign 34.790 $\pm$ 0.007  $\chi^2$ /NDF: 43517822.5/57

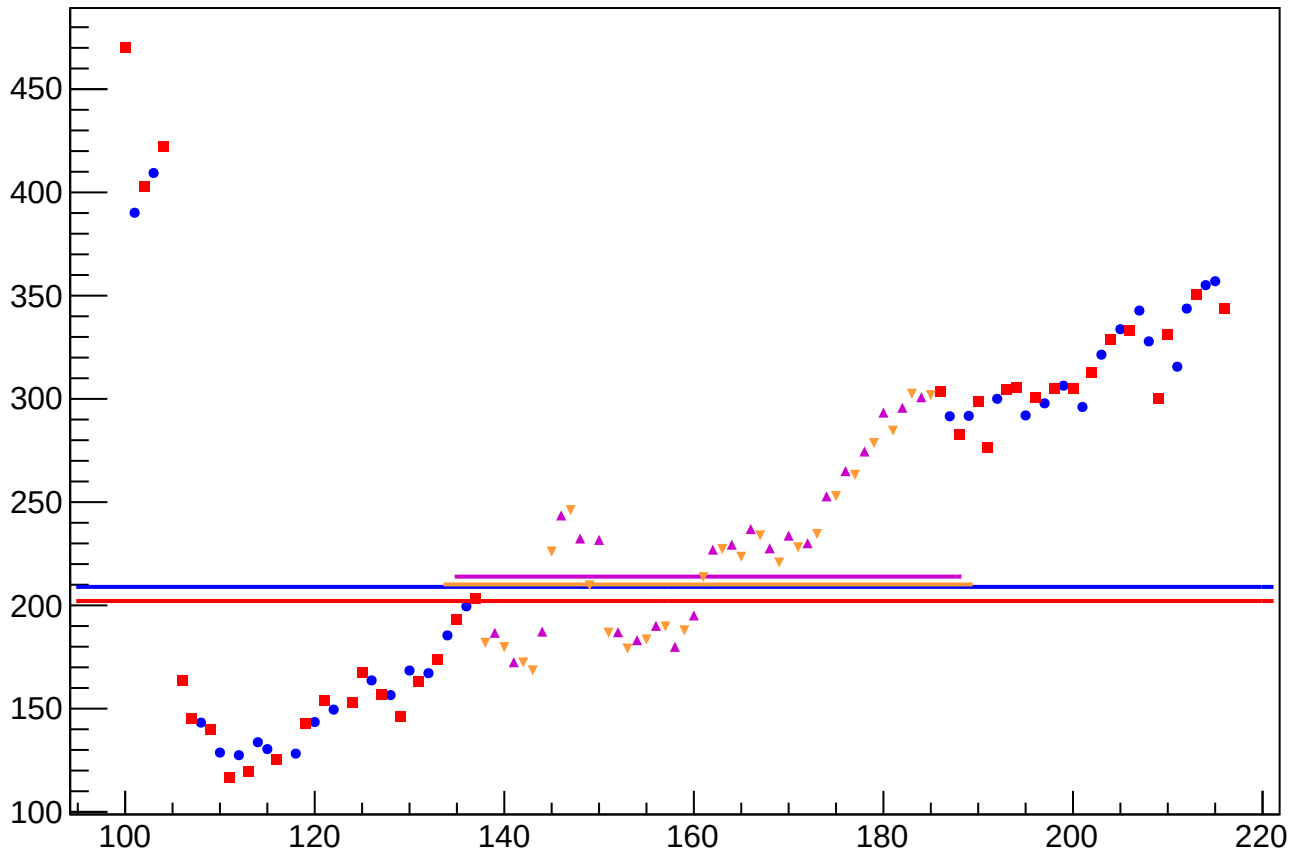
# yield\_bpm0i01WS\_mean vs Slug



Right In:  $154140.302 \pm 0.052$   $\chi^2/\text{NDF}: 12640690542.9/30$   
 Left Out:  $156754.233 \pm 0.049$   $\chi^2/\text{NDF}: 16380807583.4/24$   
 Right Out:  $154348.847 \pm 0.050$   $\chi^2/\text{NDF}: 13386757227.8/34$   
 Left In:  $156798.005 \pm 0.051$   $\chi^2/\text{NDF}: 14344098884.4/22$

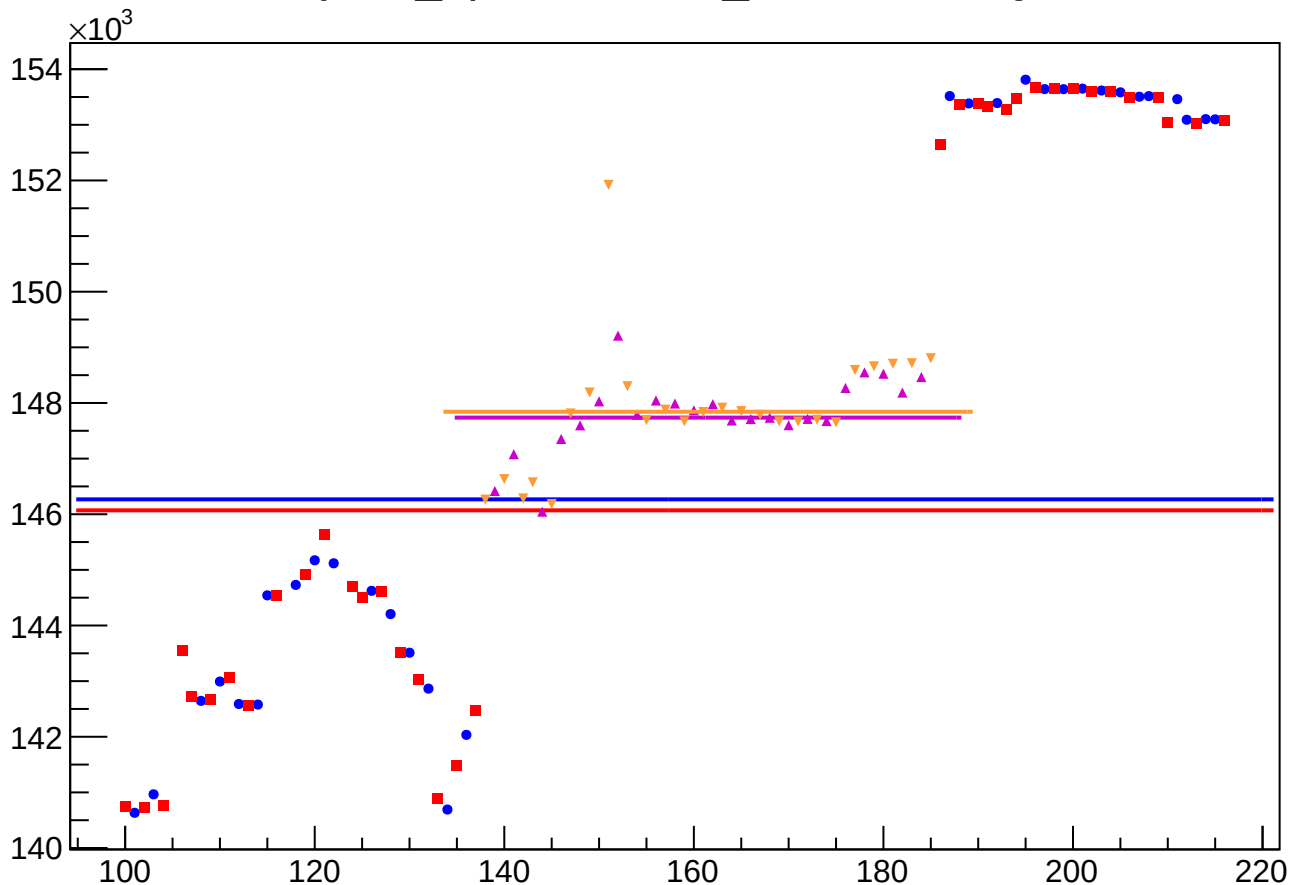
+ sign  $155532.228 \pm 0.035$   $\chi^2/\text{NDF}: 30371687962.8/24$   
 All:  $155539.625 \pm 0.025$   $\chi^2/\text{NDF}: 592827792.8/100$   
 - sign  $155547.083 \pm 0.036$   $\chi^2/\text{NDF}: 28911004029.8/100$

# yield\_bpm0i01WS\_rms vs Slug



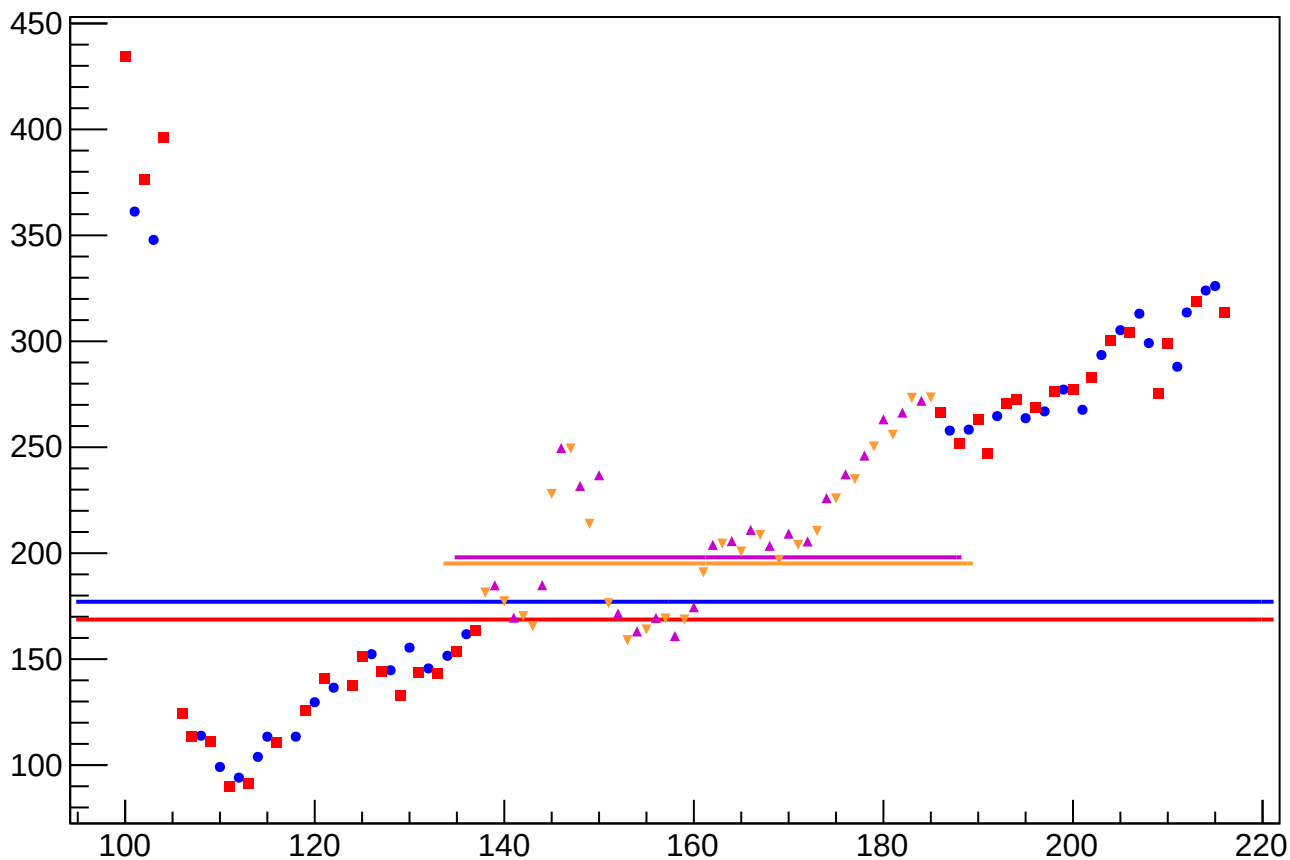
|                                |                             |                            |                             |
|--------------------------------|-----------------------------|----------------------------|-----------------------------|
| Right In: 208.958 $\pm$ 0.037  | $\chi^2$ /NDF: 5407335.9/30 | + sign 209.589 $\pm$ 0.025 | $\chi^2$ /NDF: 6405692.7/55 |
| Left Out: 210.142 $\pm$ 0.034  | $\chi^2$ /NDF: 997802.7/24  | All: 208.747 $\pm$ 0.018   | $\chi^2$ /NDF: 13067332.3/1 |
| Right Out: 202.105 $\pm$ 0.035 | $\chi^2$ /NDF: 5689755.2/34 | - sign 207.898 $\pm$ 0.025 | $\chi^2$ /NDF: 6659380.2/57 |
| Left In: 213.945 $\pm$ 0.036   | $\chi^2$ /NDF: 914465.3/22  |                            |                             |

# yield\_bpm0i01aWS\_mean vs Slug



|                                   |                                 |                               |                              |
|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| Right In: 146267.370 $\pm$ 0.045  | $\chi^2$ /NDF: 11184850331.6/30 | + sign 147048.364 $\pm$ 0.032 | $\chi^2$ /NDF: 12511657581.  |
| Left Out: 147842.157 $\pm$ 0.045  | $\chi^2$ /NDF: 713066054.2/24   | All: 146929.671 $\pm$ 0.022   | $\chi^2$ /NDF: 254799765     |
| Right Out: 146070.040 $\pm$ 0.042 | $\chi^2$ /NDF: 12022089500.7/34 | - sign 146813.051 $\pm$ 0.032 | $\chi^2$ /NDF: 12940668486.7 |
| Left In: 147736.722 $\pm$ 0.047   | $\chi^2$ /NDF: 227077133.0/22   |                               |                              |

# yield\_bpm0i01aWS\_rms vs Slug



Right In: 177.083+/-0.032  $\chi^2/\text{NDF}$ : 6451233.3/30

Left Out: 195.145+/-0.032  $\chi^2/\text{NDF}$ : 903994.2/24

Right Out: 168.692+/-0.030  $\chi^2/\text{NDF}$ : 6973874.9/34

Left In: 198.057+/-0.033  $\chi^2/\text{NDF}$ : 900359.1/22

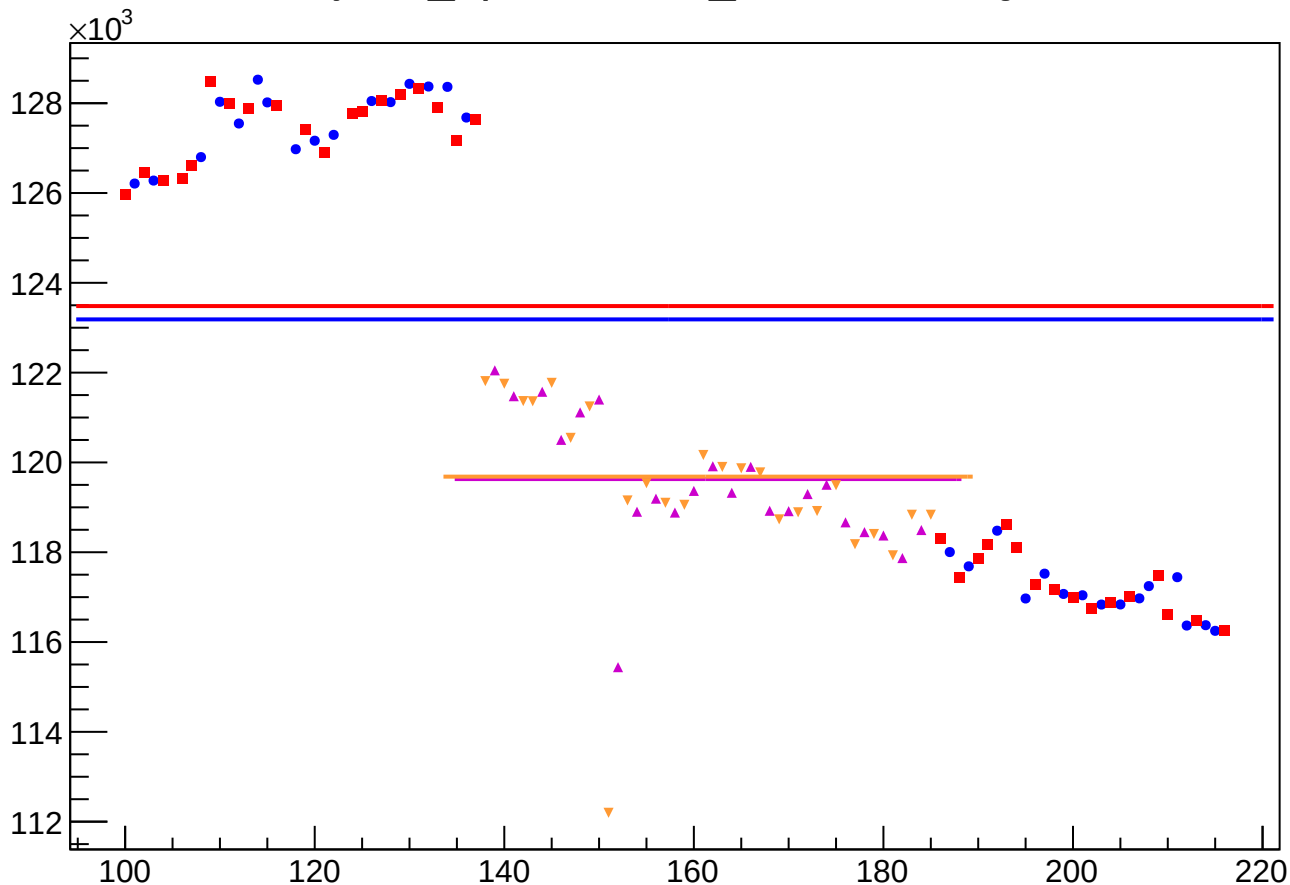
+ sign 186.041+/-0.022  $\chi^2/\text{NDF}$ : 7516708.0/55

All: 183.893+/-0.016  $\chi^2/\text{NDF}$ : 15838369.9/11

- sign 181.783+/-0.022  $\chi^2/\text{NDF}$ : 8303553.1/57



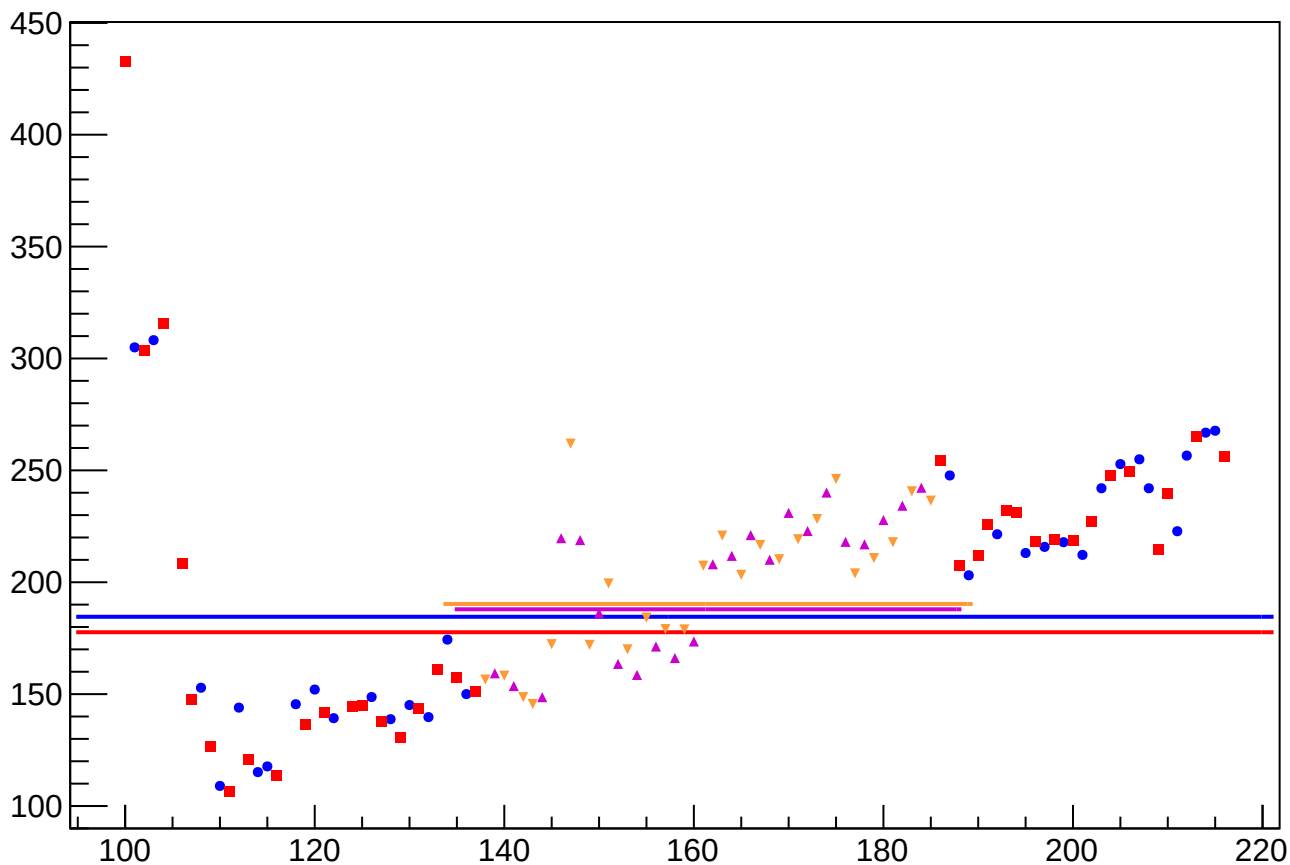
# yield\_bpm0l01WS\_mean vs Slug



Right In:  $123185.417 \pm 0.044$   $\chi^2/\text{NDF}: 14164243709.9/30$   
 Left Out:  $119683.519 \pm 0.044$   $\chi^2/\text{NDF}: 1985993997.6/24$   
 Right Out:  $123482.186 \pm 0.042$   $\chi^2/\text{NDF}: 14947372728.9/34$   
 Left In:  $119629.600 \pm 0.045$   $\chi^2/\text{NDF}: 1317214801.7/22$

+ sign  $121437.869 \pm 0.031$   $\chi^2/\text{NDF}: 19285774359.5$   
 All:  $121557.734 \pm 0.022$   $\chi^2/\text{NDF}: 394715103$   
 - sign  $121674.166 \pm 0.031$   $\chi^2/\text{NDF}: 20156767865.5$

# yield\_bpm0l01WS\_rms vs Slug



Right In: 184.571+/-0.031  $\chi^2/\text{NDF}$ : 2784665.5/30

Left Out: 190.298+/-0.031  $\chi^2/\text{NDF}$ : 924542.3/24

Right Out: 177.660+/-0.030  $\chi^2/\text{NDF}$ : 3254342.4/34

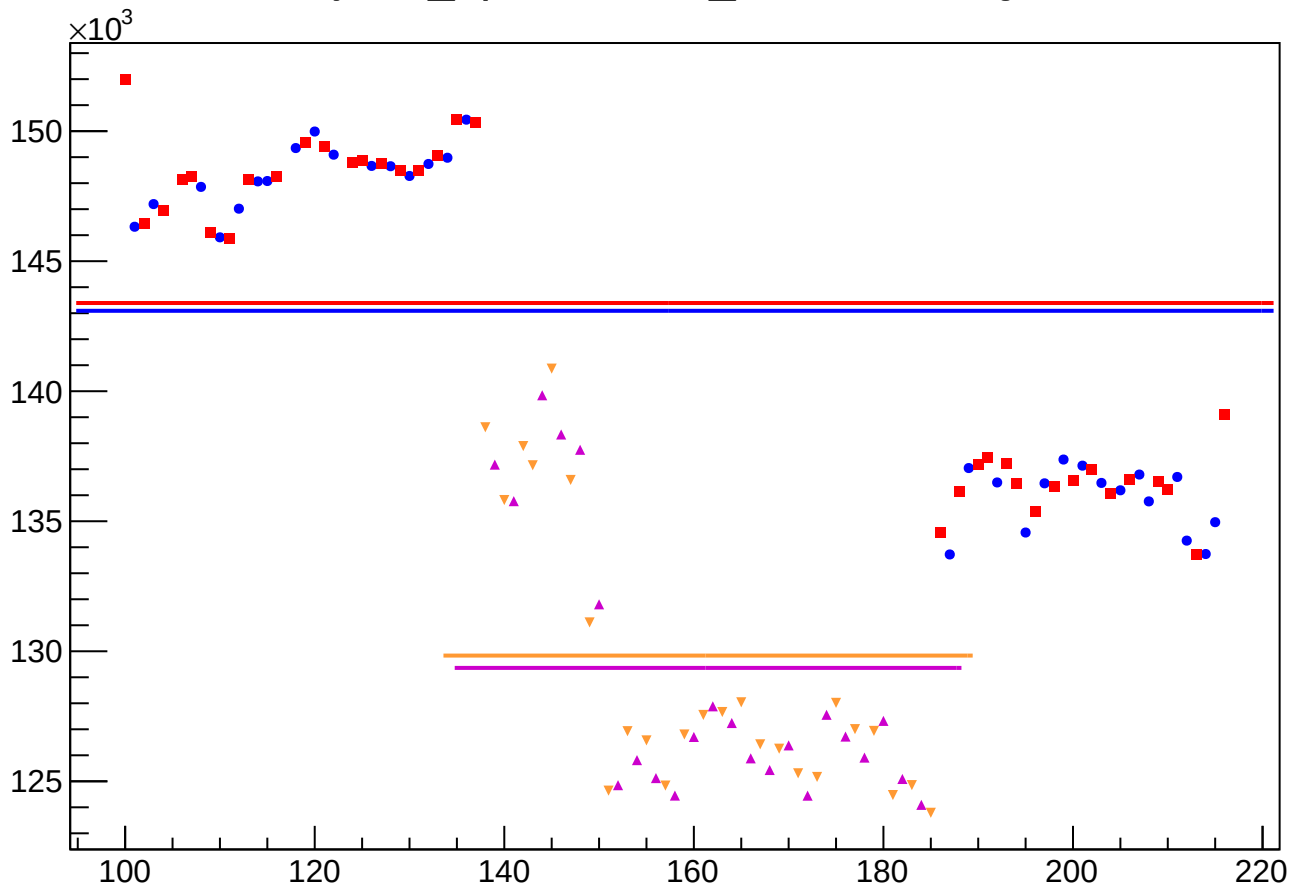
Left In: 187.909+/-0.032  $\chi^2/\text{NDF}$ : 926037.0/22

+ sign 187.429+/-0.022  $\chi^2/\text{NDF}$ : 3725979.1/55

All: 184.913+/-0.016  $\chi^2/\text{NDF}$ : 7986966.3/113

- sign 182.470+/-0.022  $\chi^2/\text{NDF}$ : 4235471.3/57

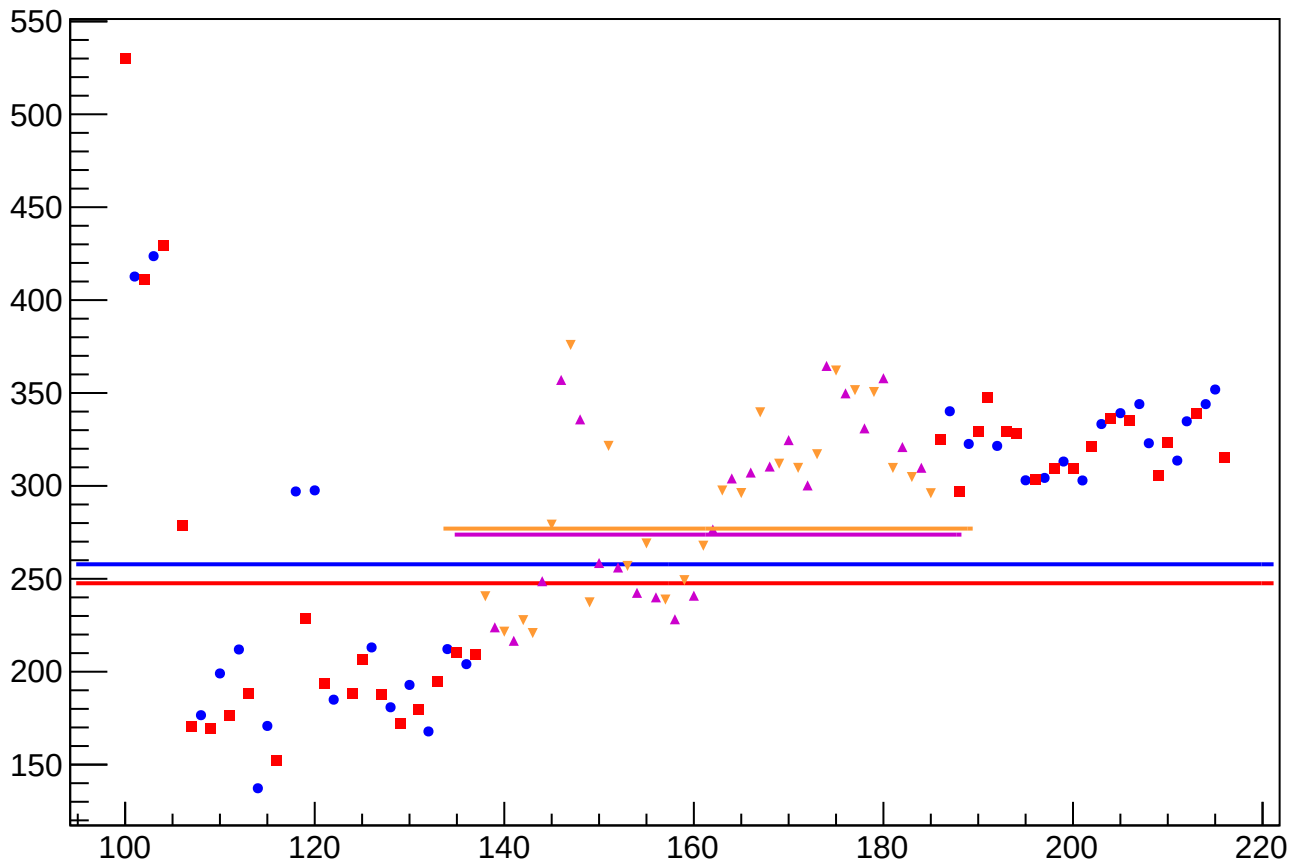
# yield\_bpm0l02WS\_mean vs Slug



Right In:  $143092.062 \pm 0.062$   $\chi^2/\text{NDF}: 10516338158.9/30$   
 Left Out:  $129834.437 \pm 0.064$   $\chi^2/\text{NDF}: 6793515279.7/24$   
 Right Out:  $143391.917 \pm 0.059$   $\chi^2/\text{NDF}: 10368140867.2/34$   
 Left In:  $129360.487 \pm 0.065$   $\chi^2/\text{NDF}: 6626094577.9/22$

+ sign  $136726.287 \pm 0.044$   $\chi^2/\text{NDF}: 39479023142.0$   
 All:  $136922.797 \pm 0.031$   $\chi^2/\text{NDF}: 819792793.0$   
 - sign  $137112.594 \pm 0.044$   $\chi^2/\text{NDF}: 42461896055.0$

# yield\_bpm0l02WS\_rms vs Slug



Right In: 257.814+/-0.044  $\chi^2/\text{NDF}$ : 2797461.4/30

Left Out: 277.021+/-0.045  $\chi^2/\text{NDF}$ : 946602.2/24

Right Out: 247.609+/-0.042  $\chi^2/\text{NDF}$ : 3026926.4/34

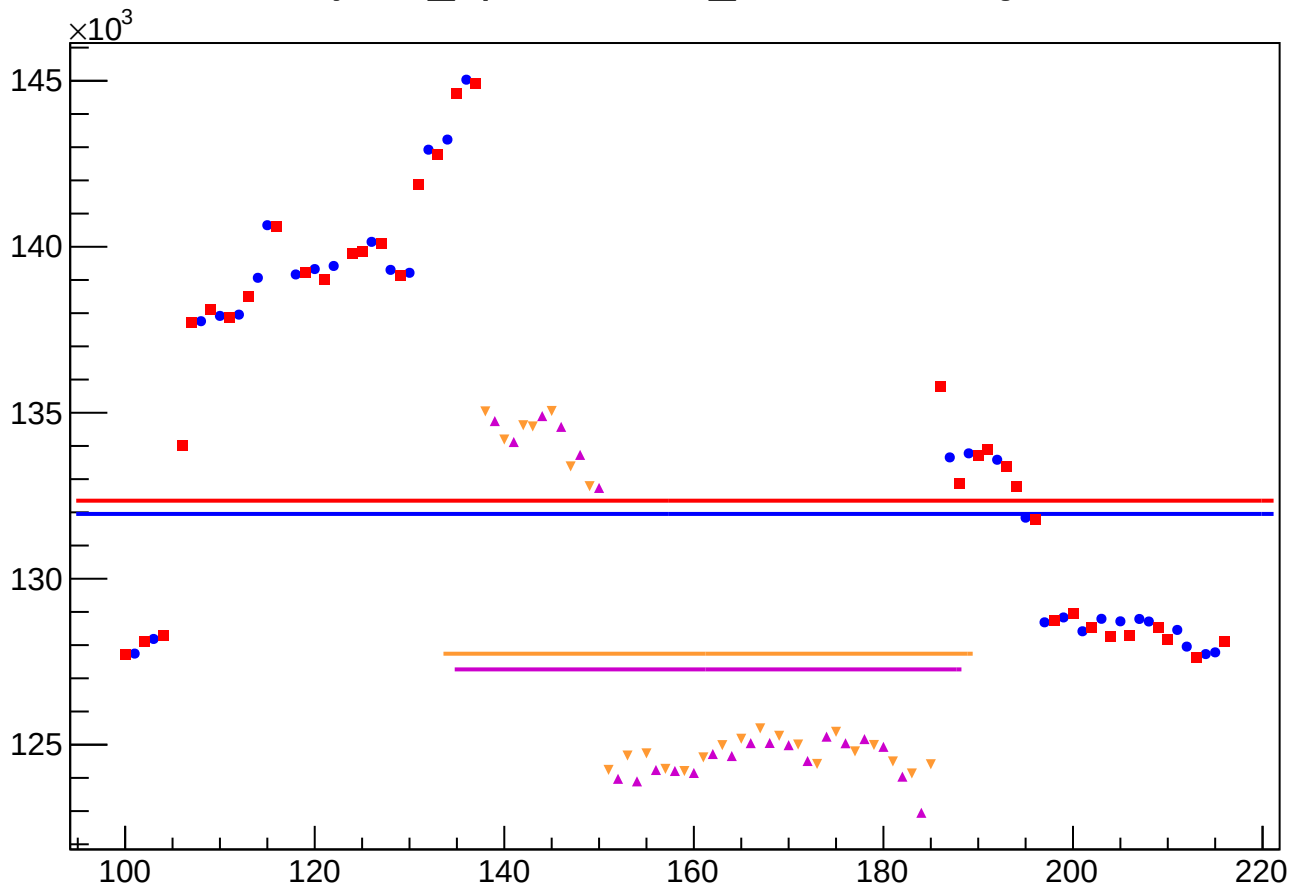
Left In: 273.784+/-0.046  $\chi^2/\text{NDF}$ : 1003910.6/22

+ sign 267.036+/-0.031  $\chi^2/\text{NDF}$ : 3837121.6/55

All: 263.113+/-0.022  $\chi^2/\text{NDF}$ : 8075810.6/113

- sign 259.323+/-0.031  $\chi^2/\text{NDF}$ : 4208099.9/57

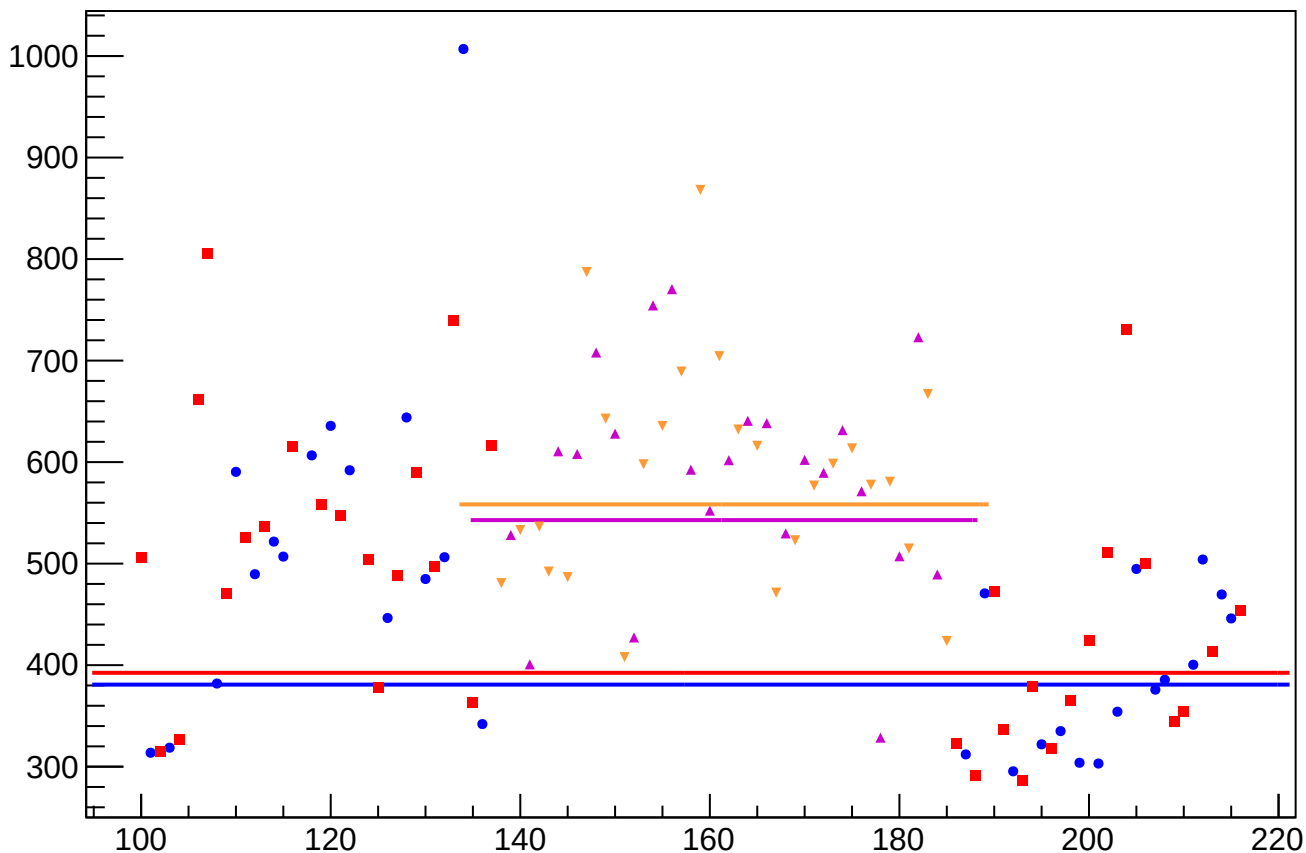
# yield\_bpm0l03WS\_mean vs Slug



Right In: 131952.034 $\pm$ 0.098  $\chi^2$ /NDF: 2913274208.0/30  
 Left Out: 127741.156 $\pm$ 0.136  $\chi^2$ /NDF: 1092529845.6/24  
 Right Out: 132351.253 $\pm$ 0.101  $\chi^2$ /NDF: 2139990670.8/34  
 Left In: 127268.542 $\pm$ 0.139  $\chi^2$ /NDF: 971404491.0/22

+ sign 130500.336 $\pm$ 0.080  $\chi^2$ /NDF: 4637911085.2  
 All: 130543.238 $\pm$ 0.057  $\chi^2$ /NDF: 86282806  
 - sign 130588.348 $\pm$ 0.082  $\chi^2$ /NDF: 3989773720.2

# yield\_bpm0l03WS\_rms vs Slug



Right In:  $380.832 \pm 0.070$   $\chi^2/\text{NDF}: 1758965.6/30$

Left Out:  $558.373 \pm 0.096$   $\chi^2/\text{NDF}: 968289.3/24$

Right Out:  $392.465 \pm 0.071$   $\chi^2/\text{NDF}: 2026943.9/34$

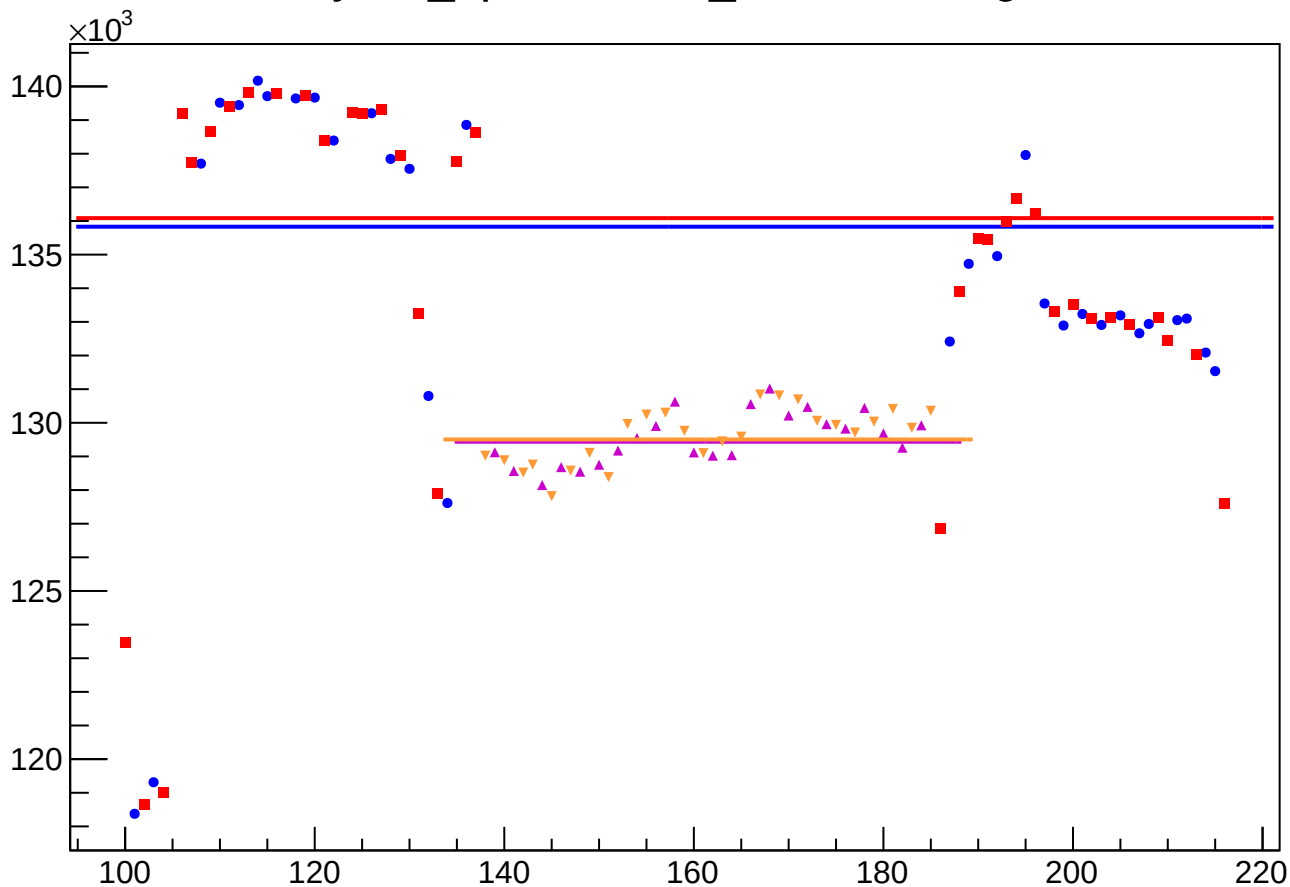
Left In:  $542.872 \pm 0.098$   $\chi^2/\text{NDF}: 1416690.9/22$

+ sign  $442.039 \pm 0.056$   $\chi^2/\text{NDF}: 4974621.6/55$

All:  $443.303 \pm 0.040$   $\chi^2/\text{NDF}: 9957646.9/113$

- sign  $444.633 \pm 0.058$   $\chi^2/\text{NDF}: 4981990.3/57$

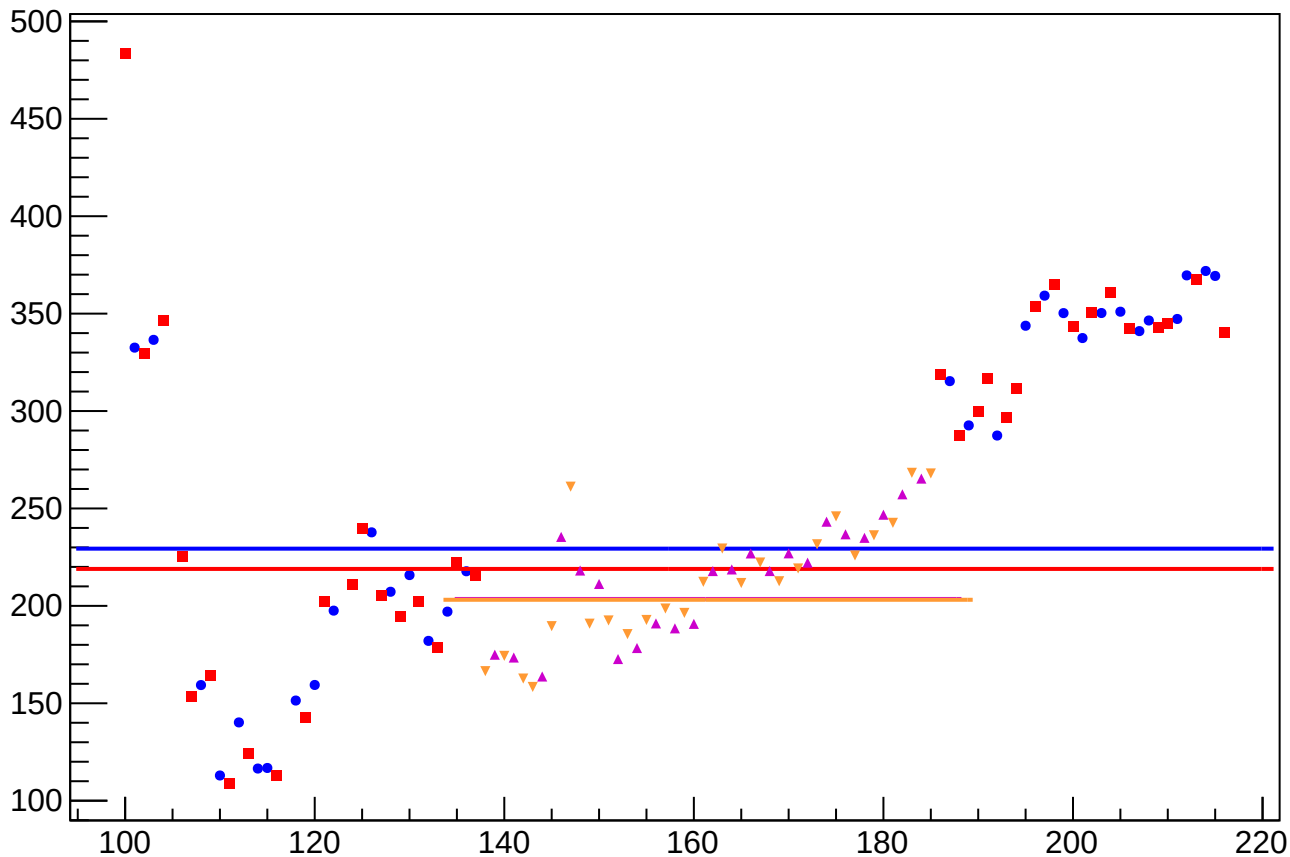
# yield\_bpm0l04WS\_mean vs Slug



Right In:  $135829.876 \pm 0.057$   $\chi^2/\text{NDF}: 6843169922.6/30$   
 Left Out:  $129504.922 \pm 0.047$   $\chi^2/\text{NDF}: 299464438.2/24$   
 Right Out:  $136084.701 \pm 0.054$   $\chi^2/\text{NDF}: 7503011656.1/34$   
 Left In:  $129437.551 \pm 0.048$   $\chi^2/\text{NDF}: 269025464.3/22$

+ sign  $132064.827 \pm 0.036$   $\chi^2/\text{NDF}: 14473098430.0$   
 All:  $132228.073 \pm 0.026$   $\chi^2/\text{NDF}: 306523930.0$   
 - sign  $132389.947 \pm 0.036$   $\chi^2/\text{NDF}: 16138928335.8$

# yield\_bpm0l04WS\_rms vs Slug



Right In: 229.368 $\pm$ 0.040  $\chi^2$ /NDF: 5131680.5/30

Left Out: 203.129 $\pm$ 0.033  $\chi^2$ /NDF: 758448.5/24

Right Out: 218.963 $\pm$ 0.038  $\chi^2$ /NDF: 5702643.6/34

Left In: 203.546 $\pm$ 0.034  $\chi^2$ /NDF: 666043.6/22

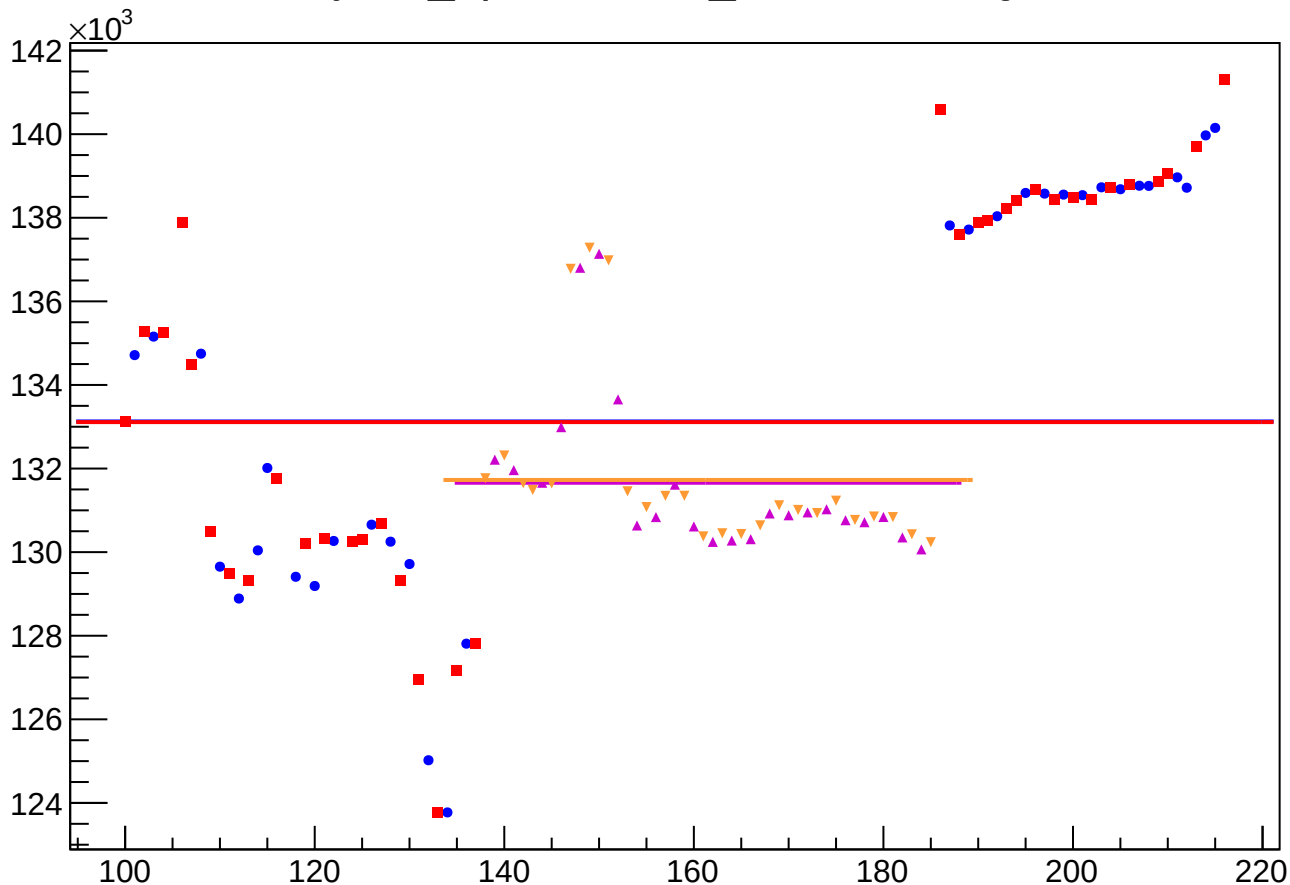
+ sign 213.749 $\pm$ 0.026  $\chi^2$ /NDF: 6142440.8/55

All: 212.064 $\pm$ 0.018  $\chi^2$ /NDF: 12609731.0/11

- sign 210.394 $\pm$ 0.026  $\chi^2$ /NDF: 6458693.0/57



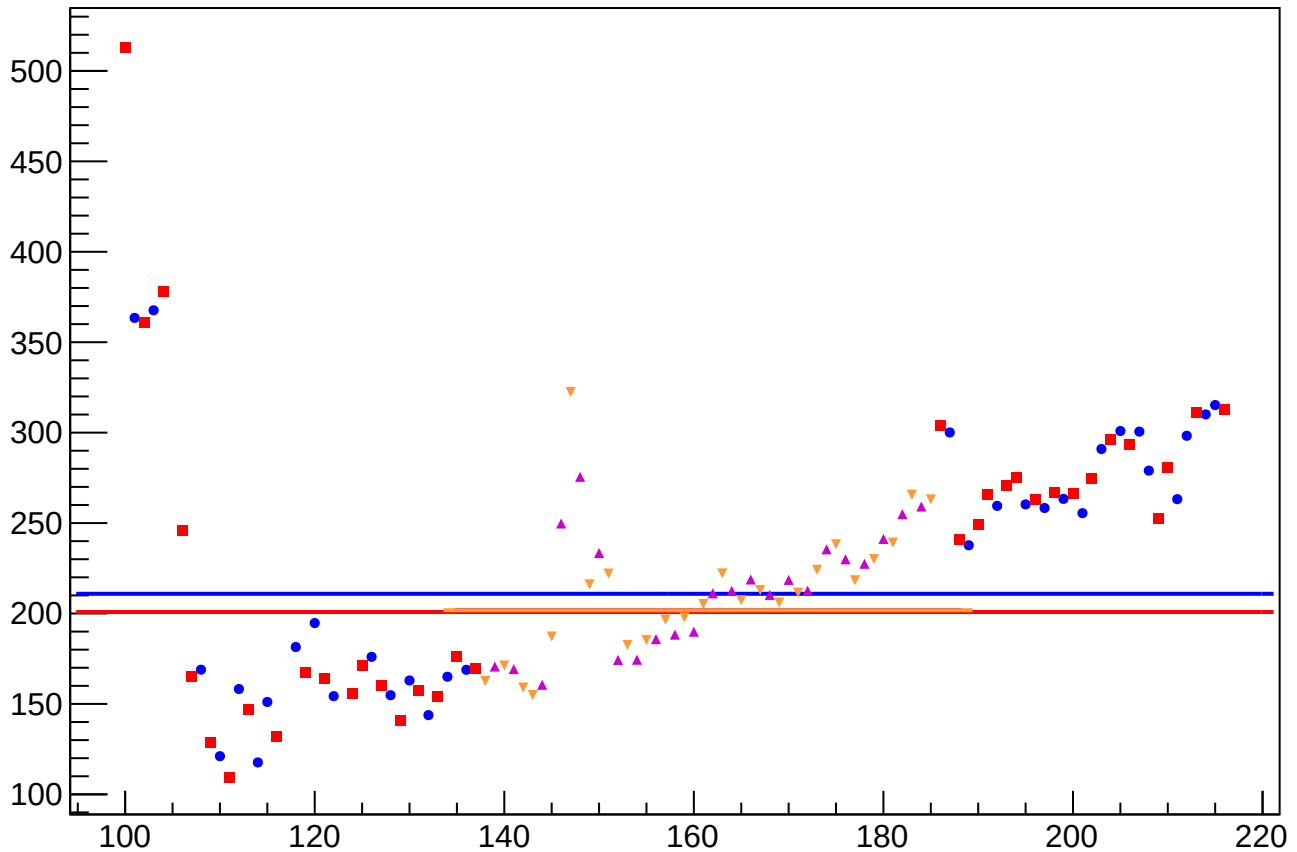
# yield\_bpm0l05WS\_mean vs Slug



Right In:  $133126.268 \pm 0.051$   $\chi^2/\text{NDF}: 9915452700.5/30$   
 Left Out:  $131727.086 \pm 0.047$   $\chi^2/\text{NDF}: 1425045697.6/24$   
 Right Out:  $133111.341 \pm 0.049$   $\chi^2/\text{NDF}: 9992840544.1/34$   
 Left In:  $131660.490 \pm 0.048$   $\chi^2/\text{NDF}: 1164380319.7/22$

+ sign  $132367.066 \pm 0.035$   $\chi^2/\text{NDF}: 11748543086.6/24$   
 - sign  $132380.782 \pm 0.034$   $\chi^2/\text{NDF}: 11607479888.9/24$   
 All:  $132373.988 \pm 0.024$   $\chi^2/\text{NDF}: 233561027.1/24$

# yield\_bpm0l05WS\_rms vs Slug



Right In: 210.894+/-0.036  $\chi^2/\text{NDF}$ : 3331162.7/30

Left Out: 201.798+/-0.033  $\chi^2/\text{NDF}$ : 905352.1/24

+ sign 205.959+/-0.024  $\chi^2/\text{NDF}$ : 4271007.4/55

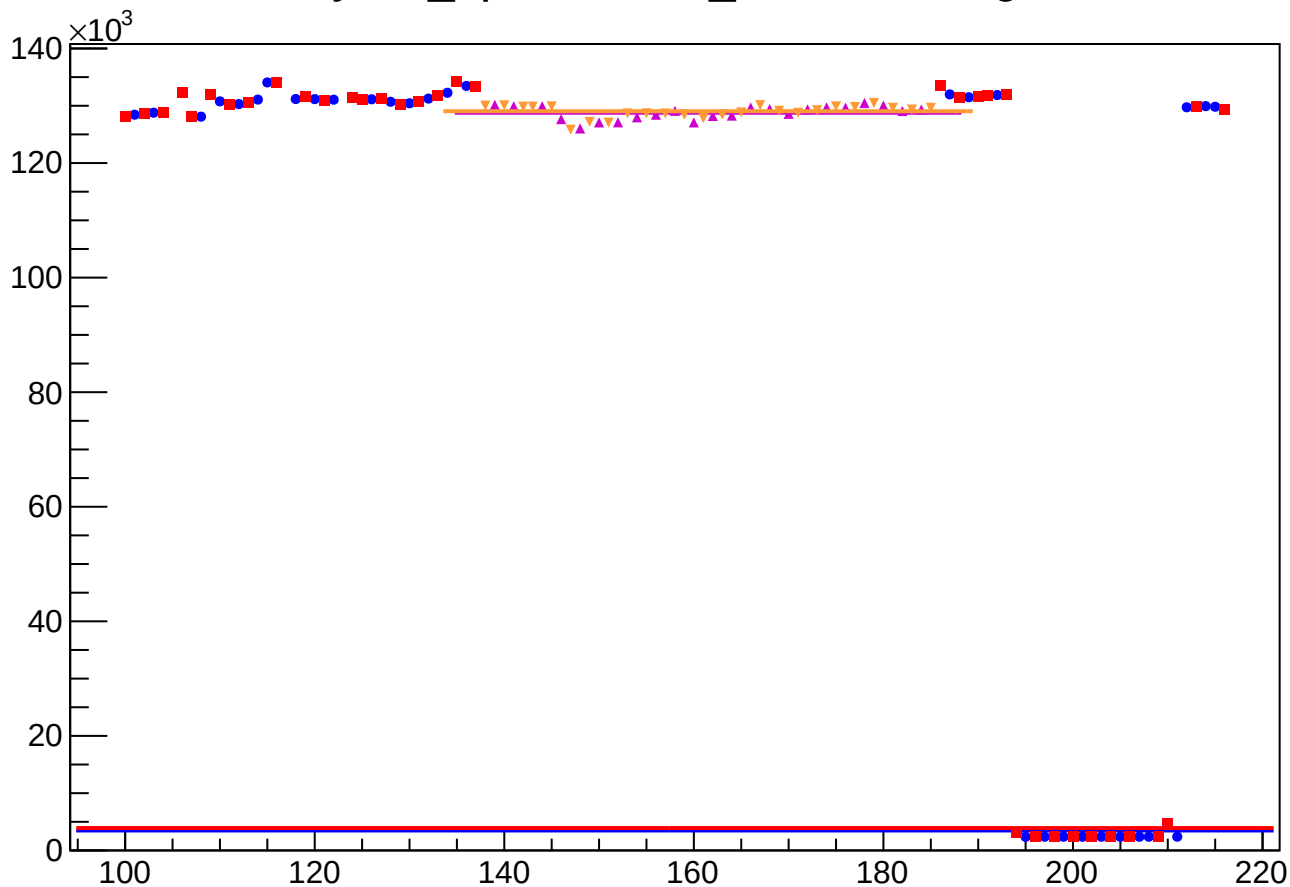
Right Out: 200.834+/-0.034  $\chi^2/\text{NDF}$ : 4072372.1/34

All: 203.655+/-0.017  $\chi^2/\text{NDF}$ : 9164267.5/113

Left In: 201.947+/-0.034  $\chi^2/\text{NDF}$ : 802700.2/22

- sign 201.394+/-0.024  $\chi^2/\text{NDF}$ : 4875602.0/57

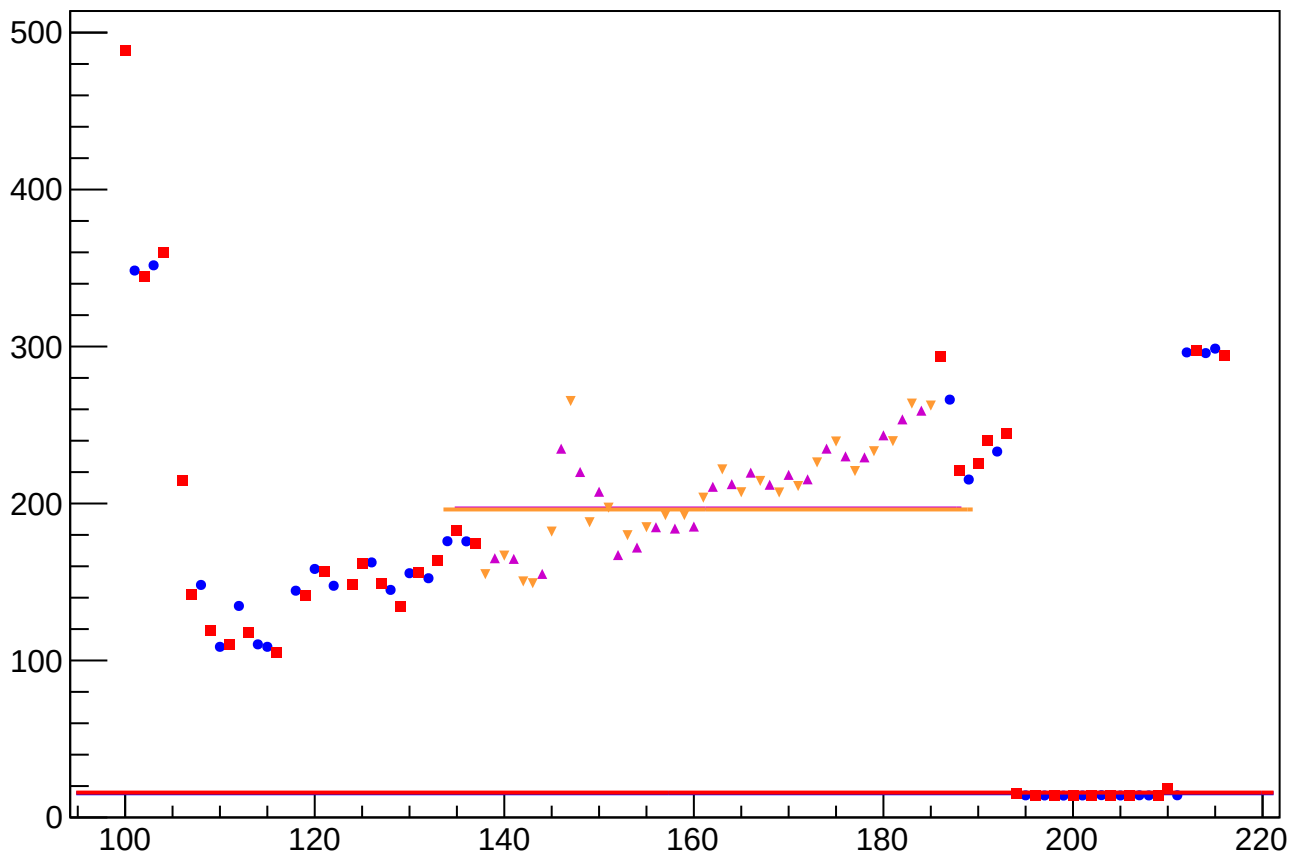
# yield\_bpm0l06WS\_mean vs Slug



Right In:  $3487.946 \pm 0.005$   $\chi^2/\text{NDF}: 5472101775797.4/30$   
 Left Out:  $129050.458 \pm 0.045$   $\chi^2/\text{NDF}: 530879250.1/24$   
 Right Out:  $3908.861 \pm 0.005$   $\chi^2/\text{NDF}: 6198542631519.9/34$   
 Left In:  $128783.852 \pm 0.047$   $\chi^2/\text{NDF}: 655675405.6/22$

+ sign  $5019.123 \pm 0.005$   $\chi^2/\text{NDF}: 12998115873785$   
 All:  $5275.978 \pm 0.004$   $\chi^2/\text{NDF}: 2619867318$   
 - sign  $5574.568 \pm 0.005$   $\chi^2/\text{NDF}: 13194903957602$

# yield\_bpm0l06WS\_rms vs Slug



Right In: 15.415 $\pm$ 0.004  $\chi^2$ /NDF: 19159705.5/30

Left Out: 196.203 $\pm$ 0.032  $\chi^2$ /NDF: 922826.1/24

Right Out: 15.843 $\pm$ 0.004  $\chi^2$ /NDF: 19455618.5/34

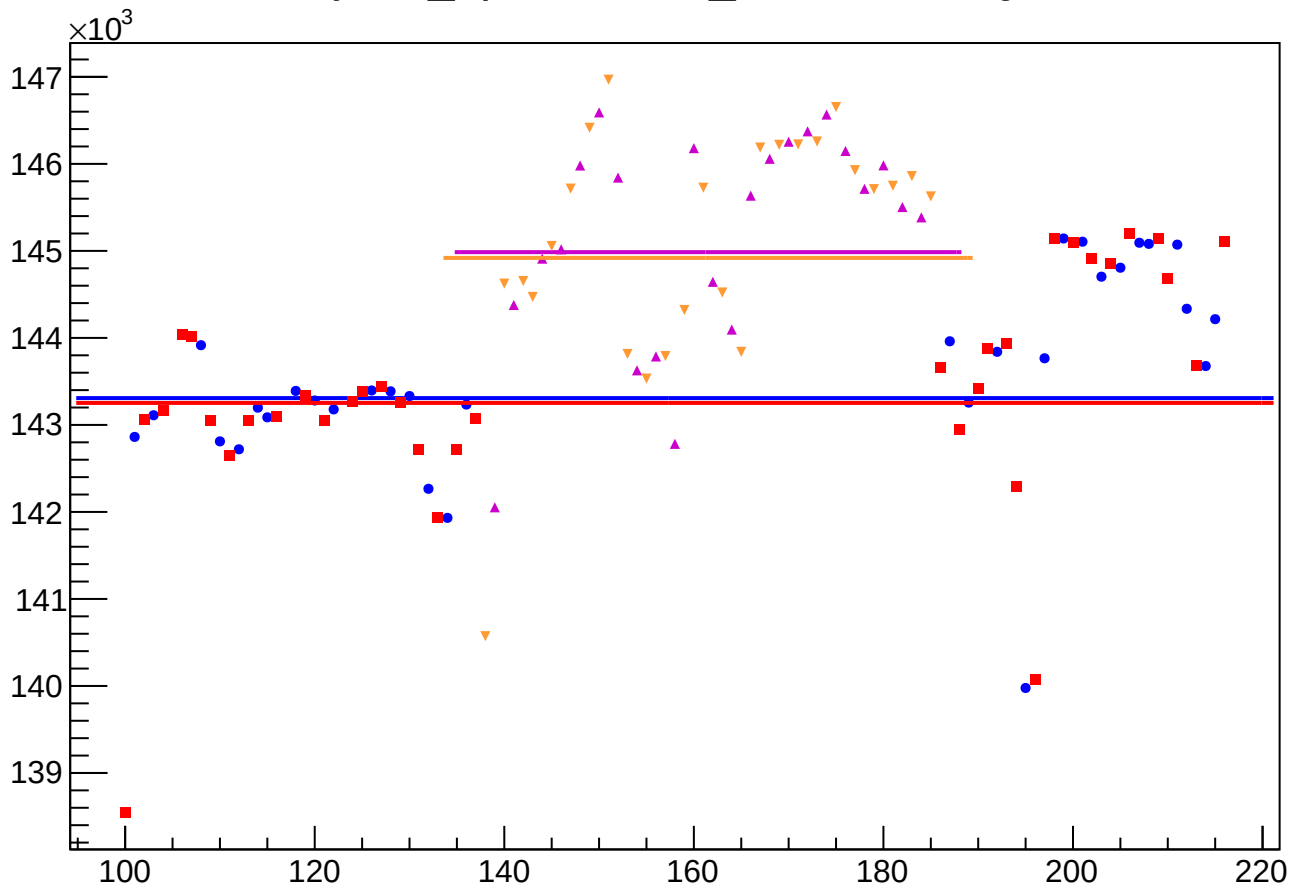
Left In: 196.840 $\pm$ 0.033  $\chi^2$ /NDF: 773052.6/22

+ sign 17.619 $\pm$ 0.004  $\chi^2$ /NDF: 51284747.3/55

All: 17.914 $\pm$ 0.003  $\chi^2$ /NDF: 100922025.7/11

- sign 18.257 $\pm$ 0.004  $\chi^2$ /NDF: 49622362.6/57

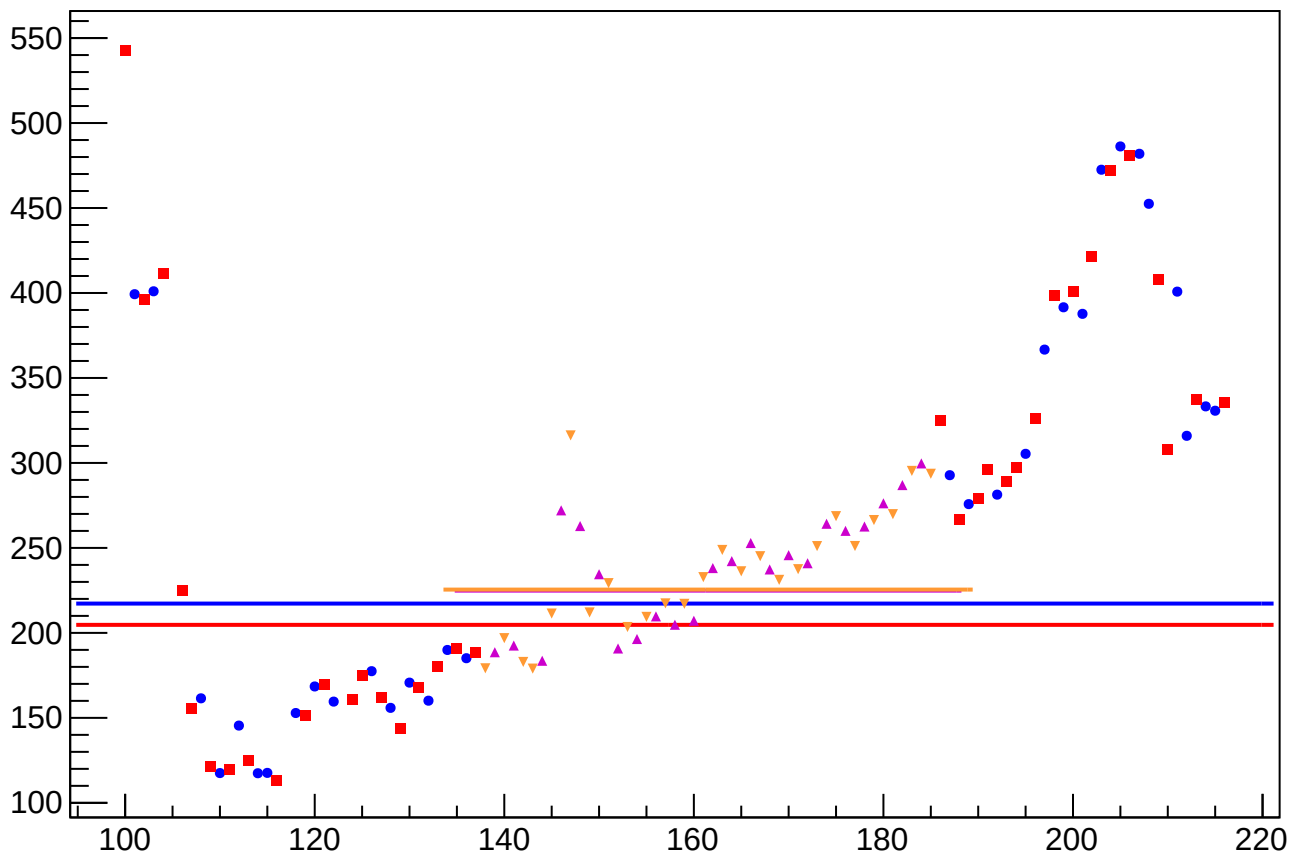
# yield\_bpm0l07WS\_mean vs Slug



Right In: 143308.375 $\pm$ 0.055  $\chi^2$ /NDF: 276061908.2/30  
 Left Out: 144919.479 $\pm$ 0.052  $\chi^2$ /NDF: 835478710.7/24  
 Right Out: 143252.910 $\pm$ 0.052  $\chi^2$ /NDF: 289122500.1/34  
 Left In: 144985.586 $\pm$ 0.054  $\chi^2$ /NDF: 618782558.7/22

+ sign 144157.694 $\pm$ 0.038  $\chi^2$ /NDF: 1561431542.1  
 All: 144122.324 $\pm$ 0.027  $\chi^2$ /NDF: 301271285  
 - sign 144088.289 $\pm$ 0.037  $\chi^2$ /NDF: 1449574339.0

# yield\_bpm0l07WS\_rms vs Slug



Right In: 217.248+/-0.039  $\chi^2/\text{NDF}$ : 6652337.0/30

Left Out: 225.478+/-0.037  $\chi^2/\text{NDF}$ : 775365.4/24

Right Out: 204.726+/-0.037  $\chi^2/\text{NDF}$ : 7148627.0/34

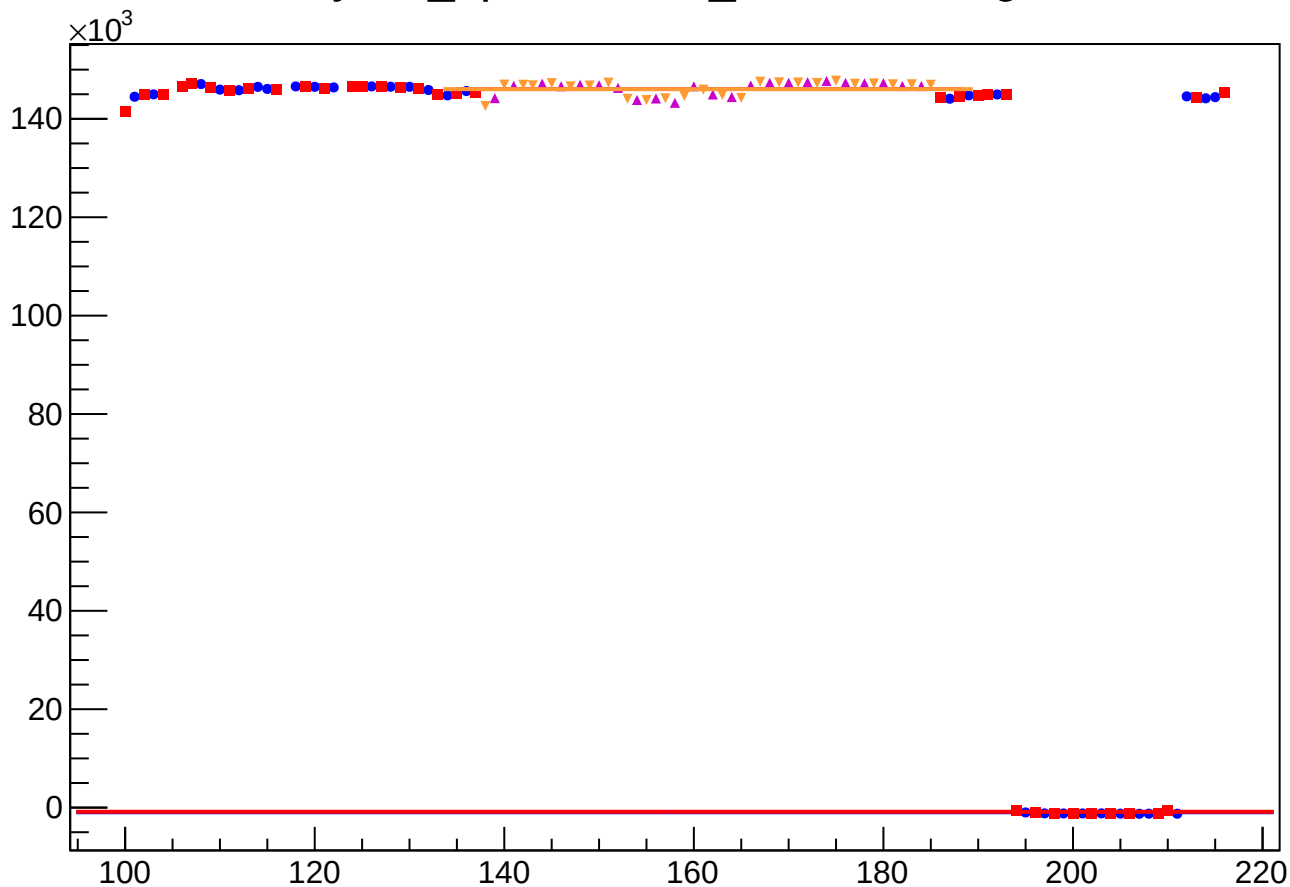
Left In: 224.869+/-0.038  $\chi^2/\text{NDF}$ : 723816.1/22

+ sign 221.587+/-0.027  $\chi^2/\text{NDF}$ : 7451182.4/55

All: 217.943+/-0.019  $\chi^2/\text{NDF}$ : 15506255.7/1

- sign 214.437+/-0.026  $\chi^2/\text{NDF}$ : 8018846.6/57

# yield\_bpm0l08WS\_mean vs Slug



Right In: -943.904 $\pm$ 0.003  $\chi^2$ /NDF: 5890025089744.2/30

Left Out: 146042.636 $\pm$ 0.052  $\chi^2$ /NDF: 882705044.1/24

Right Out: -847.209 $\pm$ 0.003  $\chi^2$ /NDF: 6778014902959.7/34

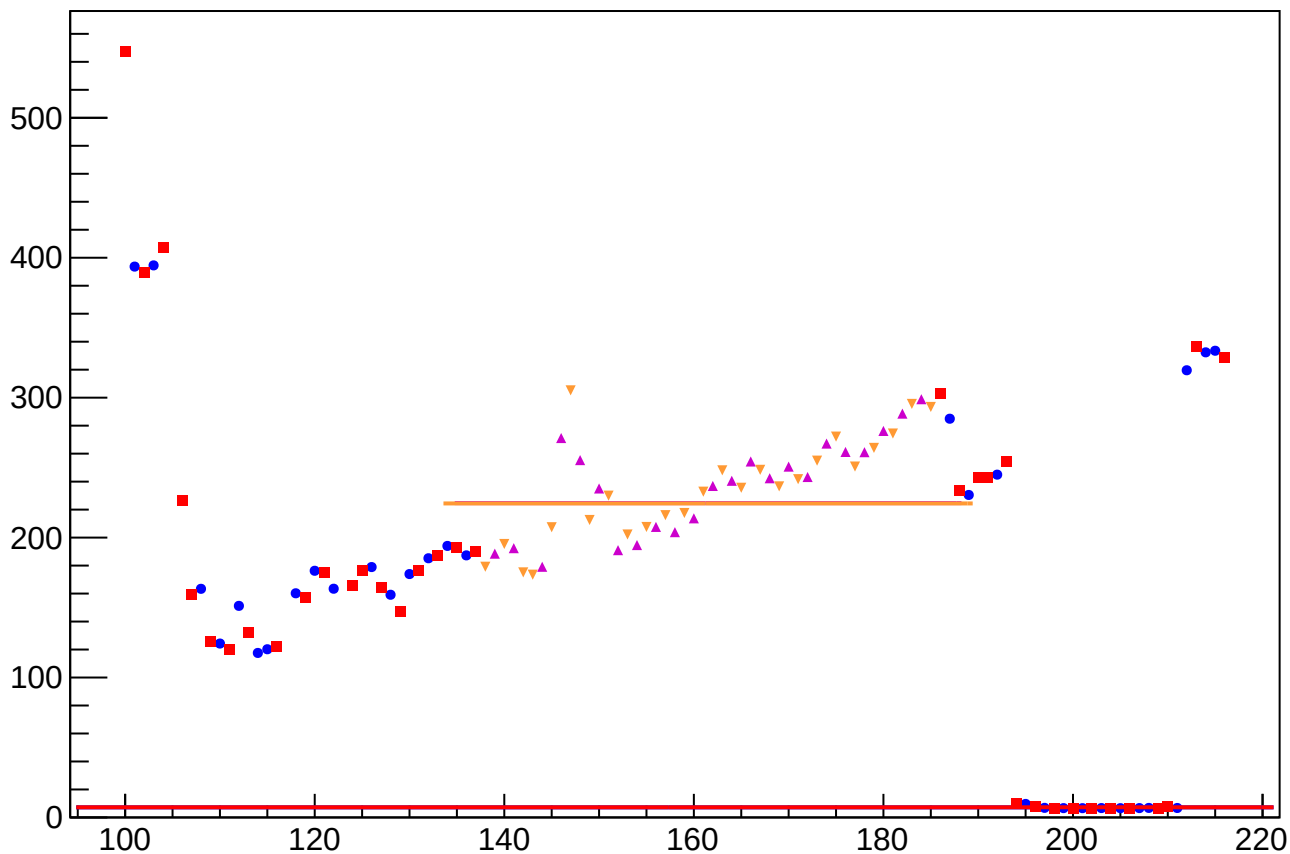
Left In: 146056.687 $\pm$ 0.054  $\chi^2$ /NDF: 698743124.4/22

+ sign -604.155 $\pm$ 0.003  $\chi^2$ /NDF: 13859418998457

All: -545.901 $\pm$ 0.002  $\chi^2$ /NDF: 28142854012

- sign -478.886 $\pm$ 0.003  $\chi^2$ /NDF: 14282267907580

# yield\_bpm0l08WS\_rms vs Slug



Right In:  $7.213 \pm 0.002$   $\chi^2/\text{NDF}$ : 21146848.8/30

Left Out:  $224.409 \pm 0.037$   $\chi^2/\text{NDF}$ : 849100.4/24

Right Out:  $7.262 \pm 0.002$   $\chi^2/\text{NDF}$ : 21561190.2/34

Left In:  $224.655 \pm 0.038$   $\chi^2/\text{NDF}$ : 756996.8/22

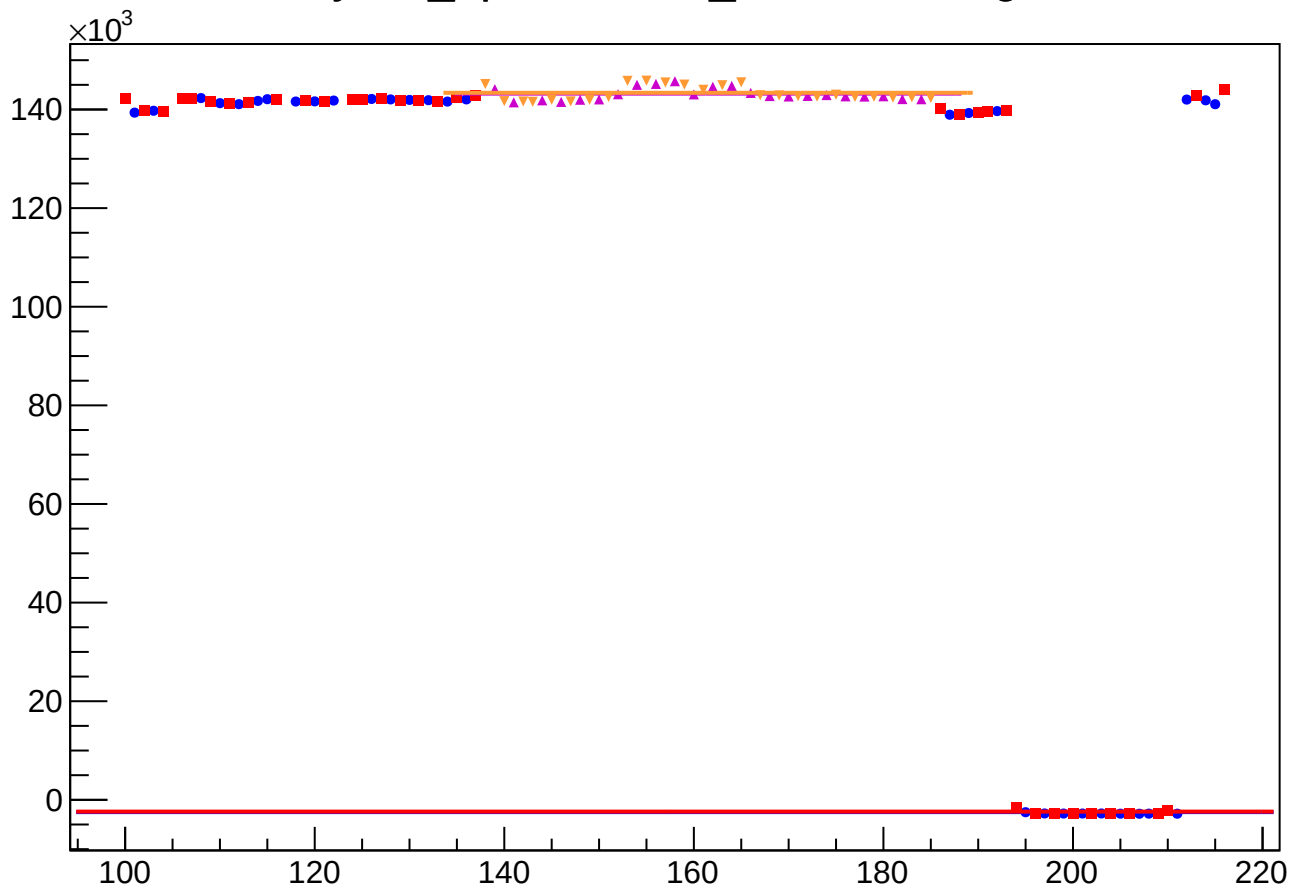
+ sign  $7.715 \pm 0.002$   $\chi^2/\text{NDF}$ : 56794245.4/55

All:  $7.758 \pm 0.001$   $\chi^2/\text{NDF}$ : 111977554.0/113

- sign  $7.807 \pm 0.002$   $\chi^2/\text{NDF}$ : 55182033.9/57



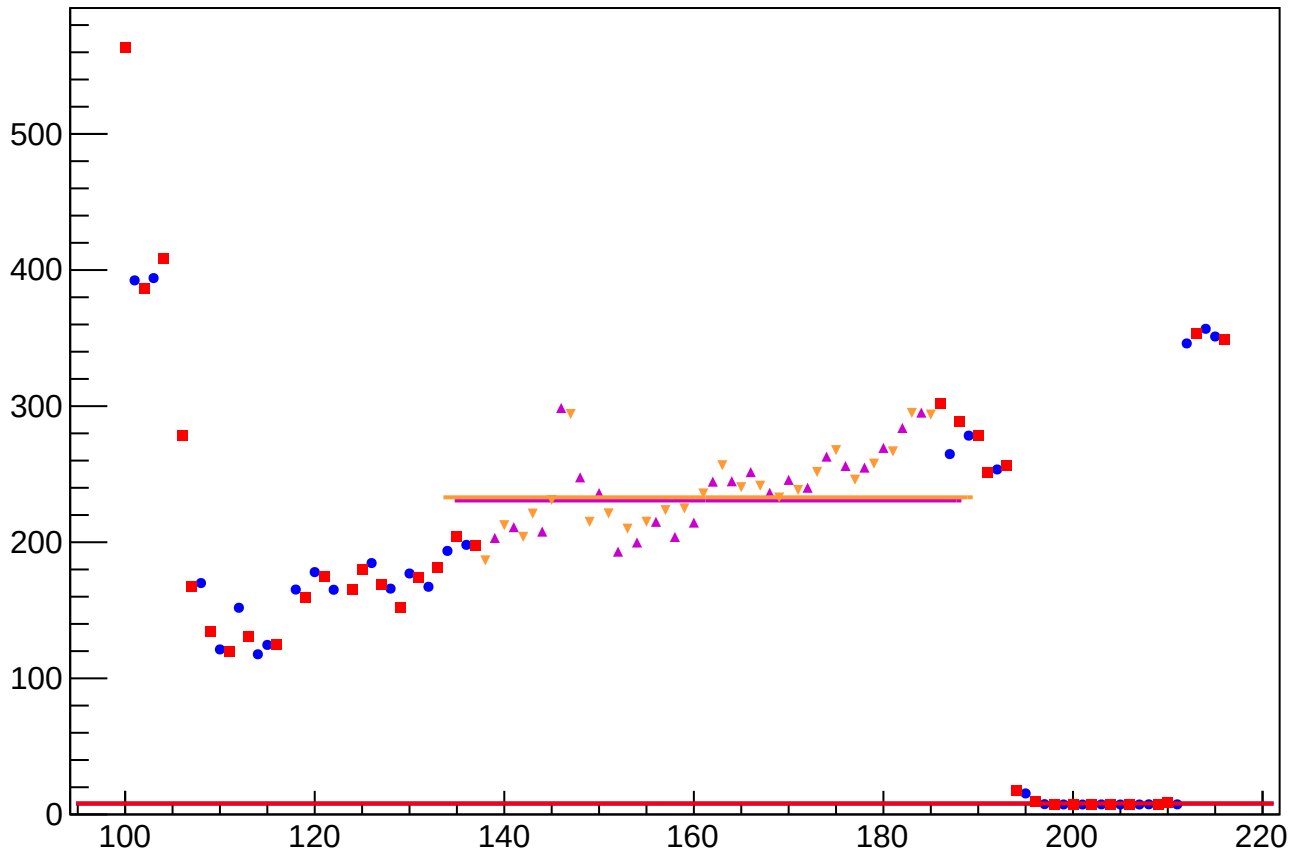
# yield\_bpm0l09WS\_mean vs Slug



Right In:  $-2486.615 \pm 0.003$   $\chi^2/\text{NDF}: 5404961744010.6/30$   
 Left Out:  $143386.915 \pm 0.054$   $\chi^2/\text{NDF}: 784001363.1/24$   
 Right Out:  $-2384.558 \pm 0.003$   $\chi^2/\text{NDF}: 6114104017815.9/34$   
 Left In:  $143221.802 \pm 0.055$   $\chi^2/\text{NDF}: 540234973.1/22$

+ sign  $-2091.824 \pm 0.003$   $\chi^2/\text{NDF}: 1276928212171$   
 All:  $-2025.733 \pm 0.002$   $\chi^2/\text{NDF}: 2591633933$   
 - sign  $-1949.645 \pm 0.003$   $\chi^2/\text{NDF}: 13145852464521$

# yield\_bpm0l09WS\_rms vs Slug



Right In:  $7.996 \pm 0.002$   $\chi^2/\text{NDF}$ : 21289900.5/30

Left Out:  $233.007 \pm 0.038$   $\chi^2/\text{NDF}$ : 446120.9/24

Right Out:  $8.069 \pm 0.002$   $\chi^2/\text{NDF}$ : 21596952.3/34

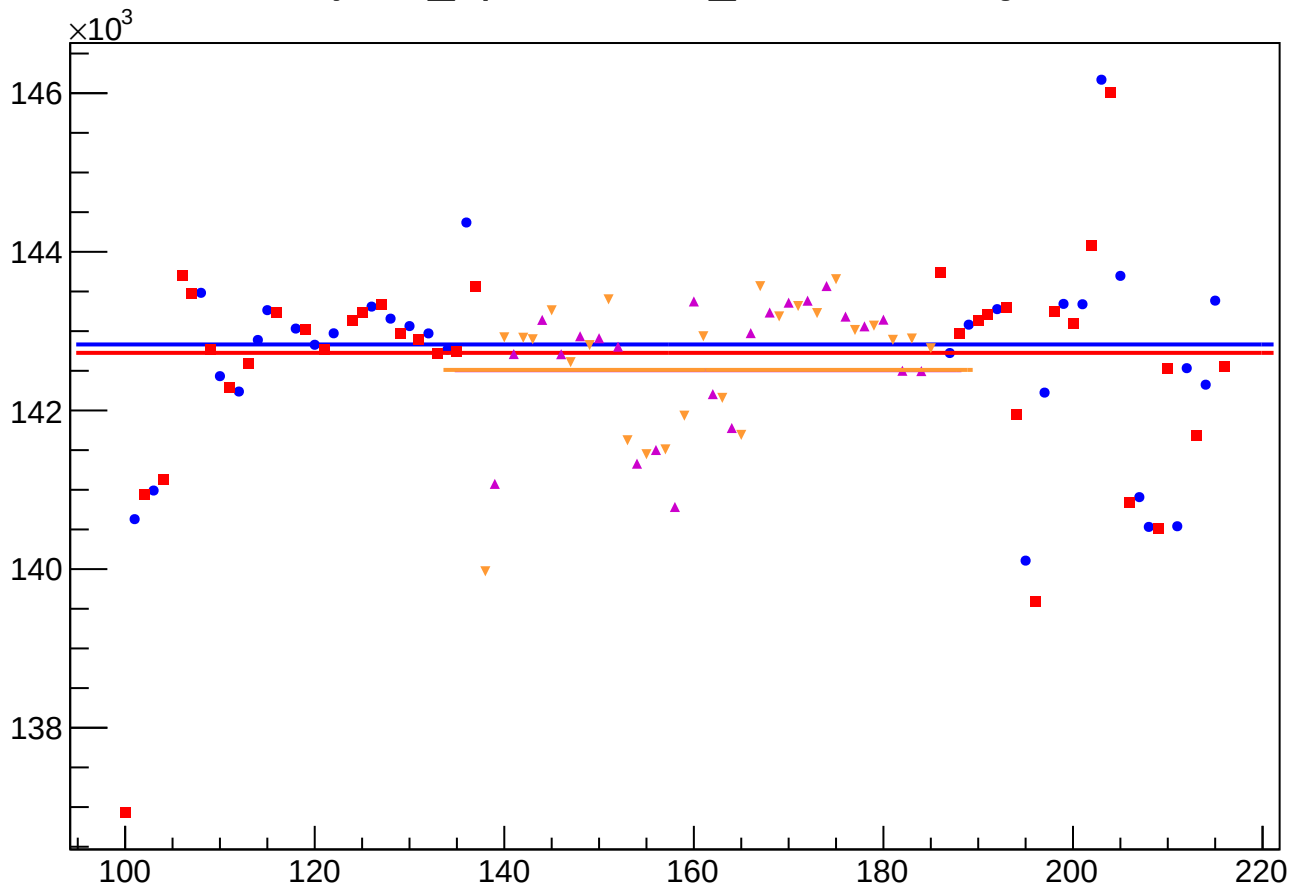
Left In:  $230.693 \pm 0.039$   $\chi^2/\text{NDF}$ : 512017.9/22

+ sign  $8.605 \pm 0.002$   $\chi^2/\text{NDF}$ : 56776543.8/55

All:  $8.665 \pm 0.001$   $\chi^2/\text{NDF}$ : 111760692.4/113

- sign  $8.734 \pm 0.002$   $\chi^2/\text{NDF}$ : 54982157.3/57

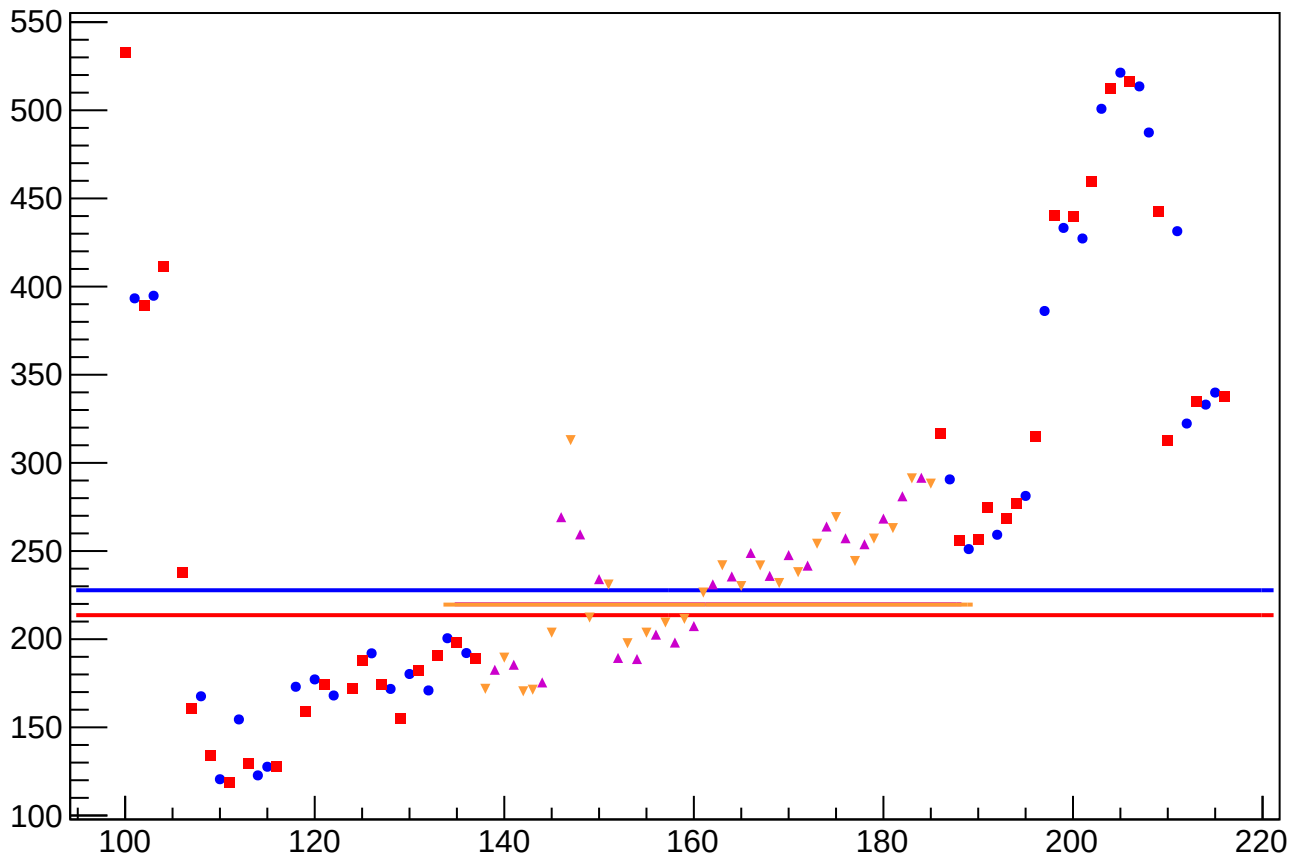
# yield\_bpm0l10WS\_mean vs Slug



Right In:  $142832.290 \pm 0.058$   $\chi^2/\text{NDF}: 300381451.1/30$   
 Left Out:  $142511.381 \pm 0.051$   $\chi^2/\text{NDF}: 338087157.2/24$   
 Right Out:  $142726.200 \pm 0.054$   $\chi^2/\text{NDF}: 247375716.3/34$   
 Left In:  $142507.563 \pm 0.052$   $\chi^2/\text{NDF}: 269272097.4/22$

+ sign  $142652.035 \pm 0.038$   $\chi^2/\text{NDF}: 655890705.8/5$   
 All:  $142632.850 \pm 0.027$   $\chi^2/\text{NDF}: 118153673$   
 - sign  $142614.328 \pm 0.037$   $\chi^2/\text{NDF}: 525148933.9/5$

# yield\_bpm0l10WS\_rms vs Slug



Right In: 227.761 $\pm$ 0.041  $\chi^2$ /NDF: 6331584.4/30

Left Out: 219.618 $\pm$ 0.036  $\chi^2$ /NDF: 902026.4/24

Right Out: 213.629 $\pm$ 0.038  $\chi^2$ /NDF: 6729421.3/34

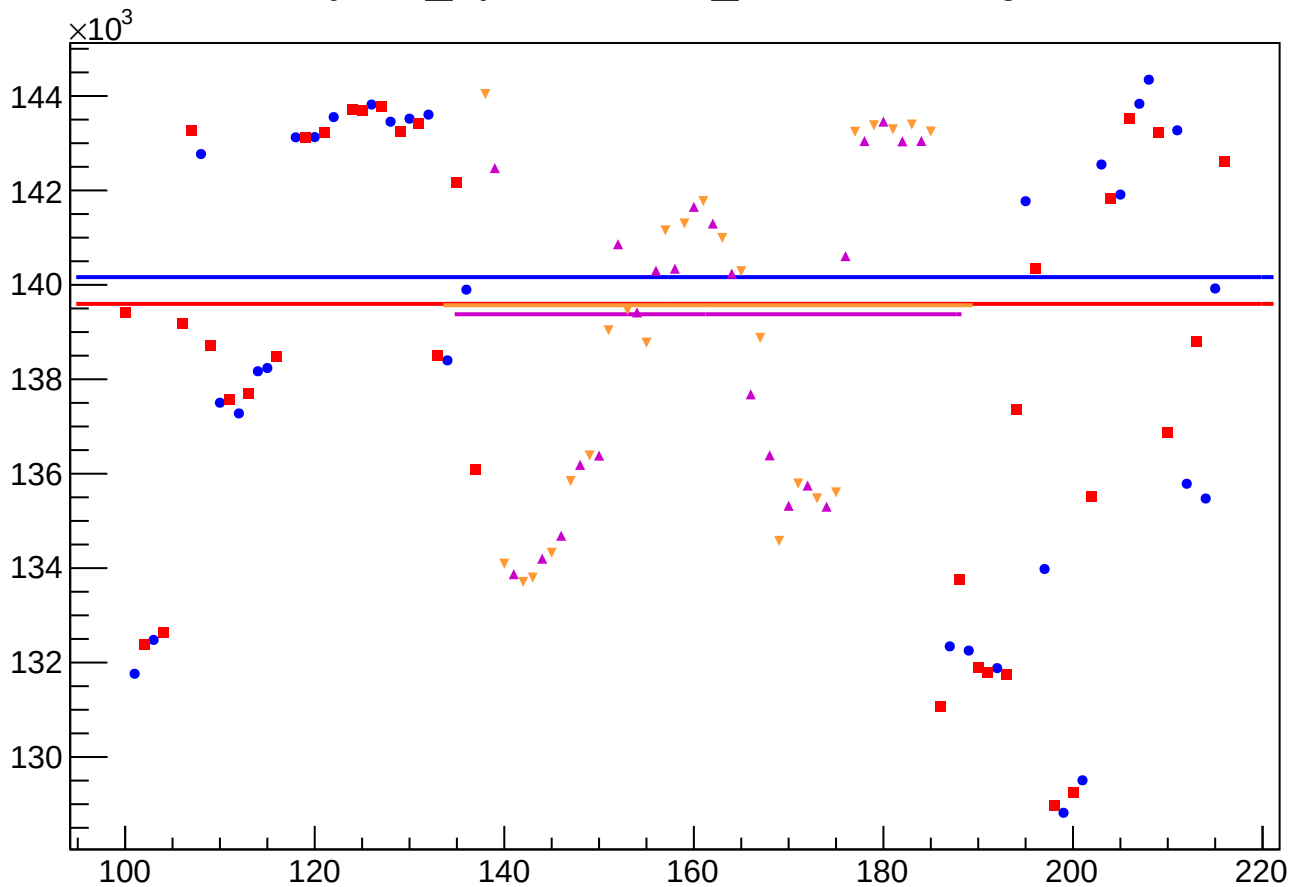
Left In: 219.813 $\pm$ 0.037  $\chi^2$ /NDF: 805501.8/22

+ sign 223.187 $\pm$ 0.027  $\chi^2$ /NDF: 7256044.8/55

All: 219.934 $\pm$ 0.019  $\chi^2$ /NDF: 14833157.2/11

- sign 216.793 $\pm$ 0.027  $\chi^2$ /NDF: 7548528.0/57

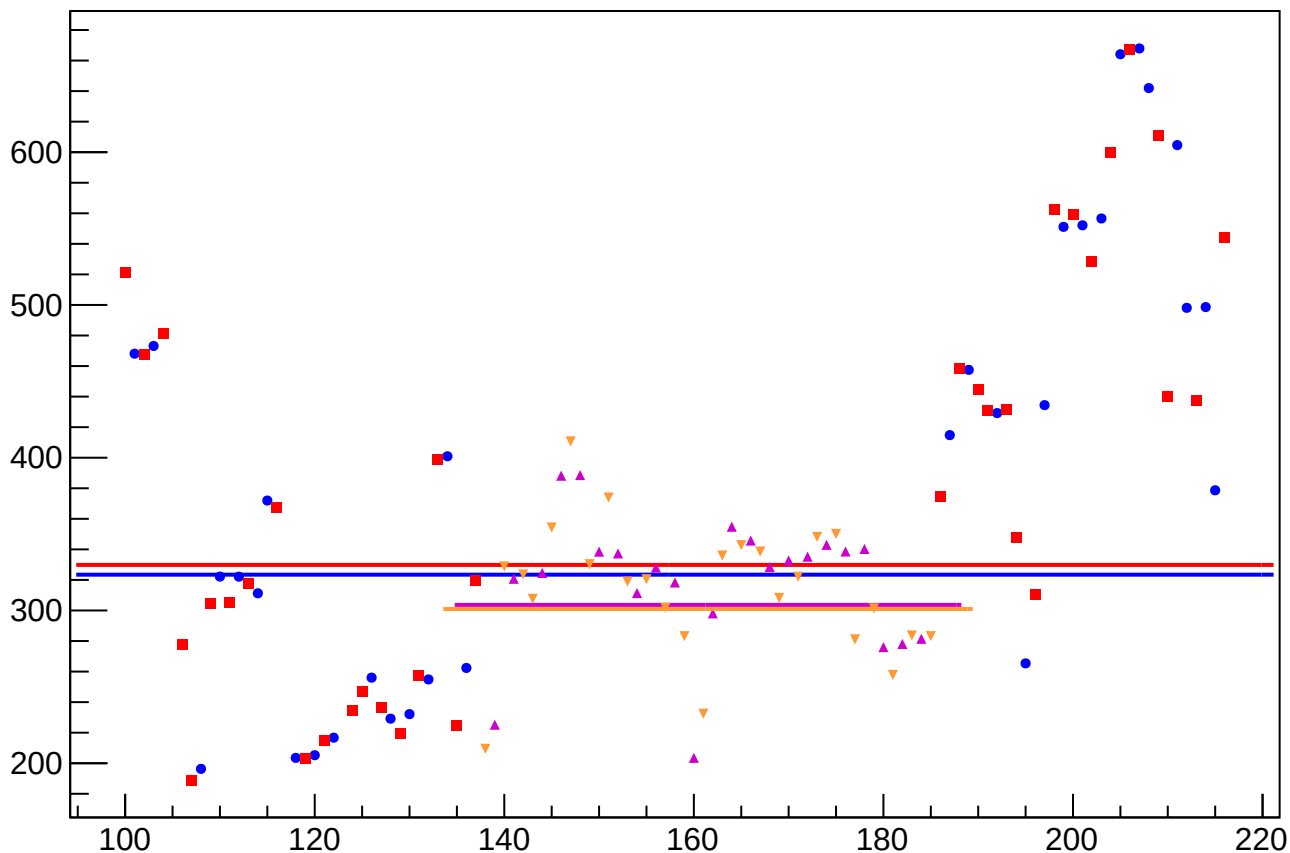
# yield\_bpm0r03WS\_mean vs Slug



Right In:  $140163.613 \pm 0.081$   $\chi^2/\text{NDF}: 2802396582.2/30$   
 Left Out:  $139568.750 \pm 0.070$   $\chi^2/\text{NDF}: 2586638805.4/24$   
 Right Out:  $139597.450 \pm 0.081$   $\chi^2/\text{NDF}: 2846883753.1/34$   
 Left In:  $139377.582 \pm 0.073$   $\chi^2/\text{NDF}: 1921434868.2/22$

+ sign  $139823.592 \pm 0.053$   $\chi^2/\text{NDF}: 5419950586.3$   
 All:  $139653.837 \pm 0.038$   $\chi^2/\text{NDF}: 102133783$   
 - sign  $139476.445 \pm 0.054$   $\chi^2/\text{NDF}: 4772402987.2/$

# yield\_bpm0r03WS\_rms vs Slug



Right In:  $323.443 \pm 0.057$   $\chi^2/\text{NDF}: 5276778.0/30$

Left Out:  $300.964 \pm 0.050$   $\chi^2/\text{NDF}: 876889.9/24$

Right Out:  $329.820 \pm 0.057$   $\chi^2/\text{NDF}: 4737894.2/34$

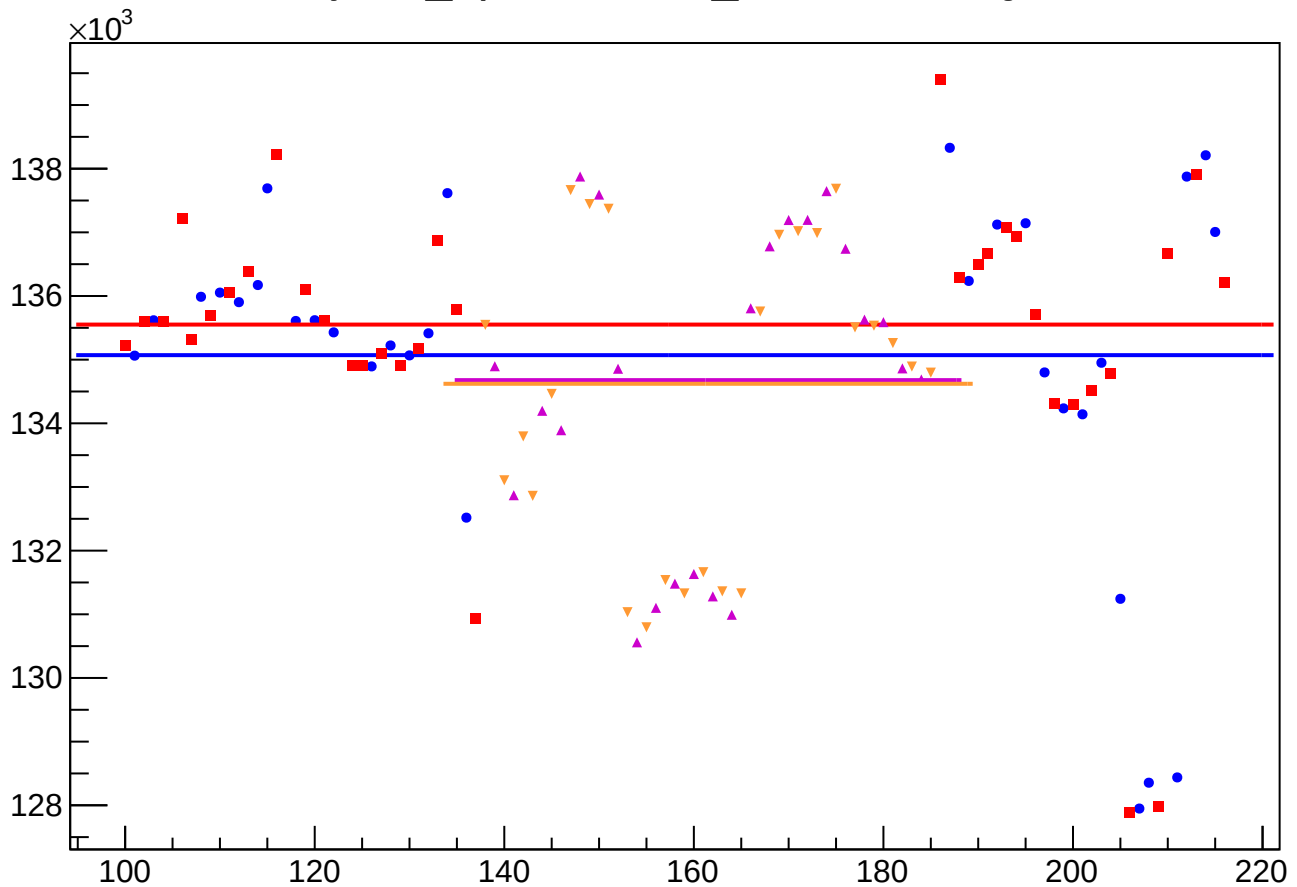
Left In:  $303.658 \pm 0.052$   $\chi^2/\text{NDF}: 976252.9/22$

+ sign  $310.594 \pm 0.037$   $\chi^2/\text{NDF}: 6241959.6/55$

All:  $312.955 \pm 0.027$   $\chi^2/\text{NDF}: 12079892.6/11$

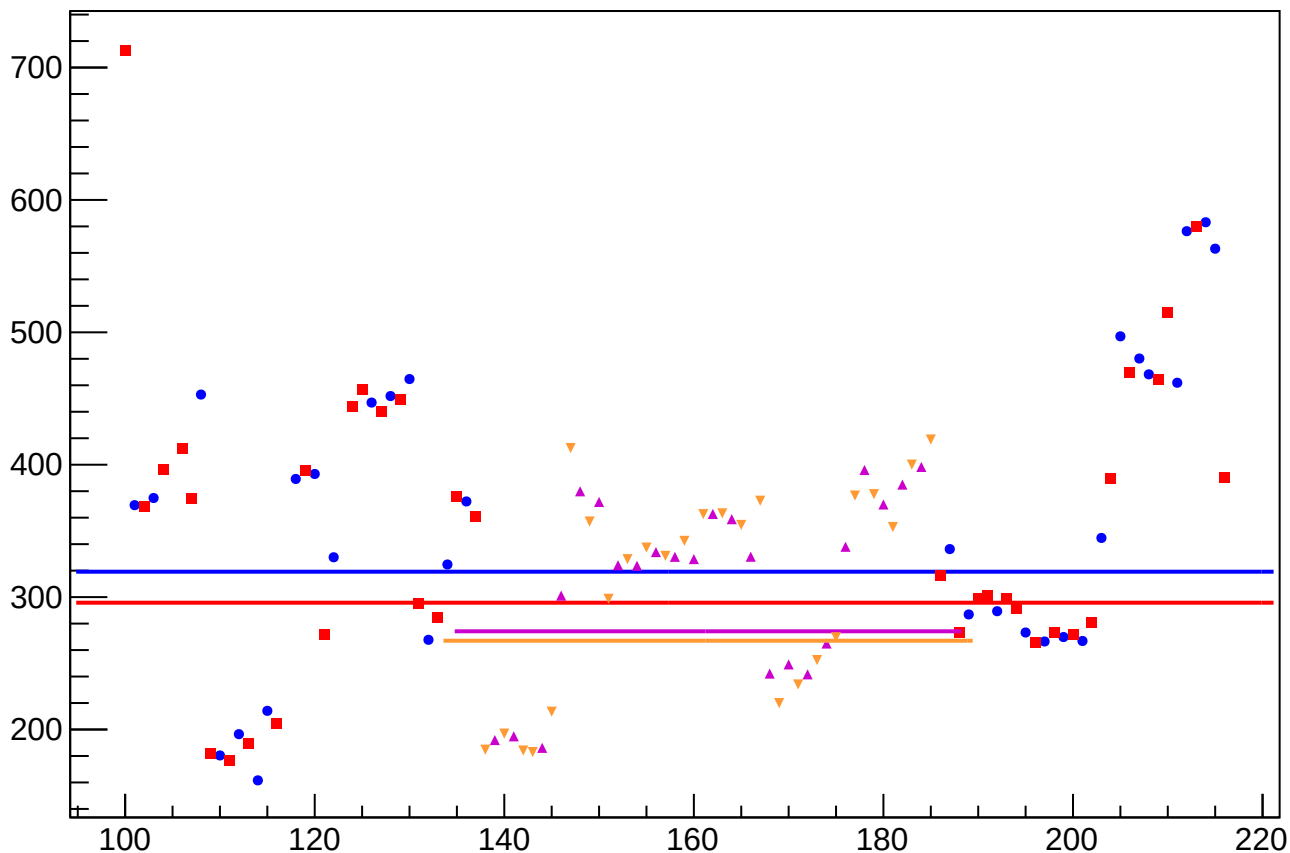
- sign  $315.422 \pm 0.038$   $\chi^2/\text{NDF}: 5829800.5/57$

# yield\_bpm0r05WS\_mean vs Slug



|                                   |                                |                               |                                |
|-----------------------------------|--------------------------------|-------------------------------|--------------------------------|
| Right In: 135070.957 $\pm$ 0.077  | $\chi^2$ /NDF: 894008512.4/30  | + sign 134803.363 $\pm$ 0.049 | $\chi^2$ /NDF: 2115702339.0/24 |
| Left Out: 134620.993 $\pm$ 0.064  | $\chi^2$ /NDF: 1201492843.7/24 | All: 134948.880 $\pm$ 0.035   | $\chi^2$ /NDF: 409341214.0/24  |
| Right Out: 135551.110 $\pm$ 0.071 | $\chi^2$ /NDF: 783650562.1/34  | - sign 135091.012 $\pm$ 0.049 | $\chi^2$ /NDF: 1960382930.0/22 |
| Left In: 134678.497 $\pm$ 0.067   | $\chi^2$ /NDF: 1096295429.9/22 |                               |                                |

# yield\_bpm0r05WS\_rms vs Slug



Right In:  $319.190 \pm 0.055$   $\chi^2/\text{NDF}: 3582947.6/30$

Left Out:  $267.053 \pm 0.045$   $\chi^2/\text{NDF}: 2843307.1/24$

Right Out:  $295.771 \pm 0.050$   $\chi^2/\text{NDF}: 3284586.4/34$

Left In:  $274.177 \pm 0.047$   $\chi^2/\text{NDF}: 2236755.2/22$

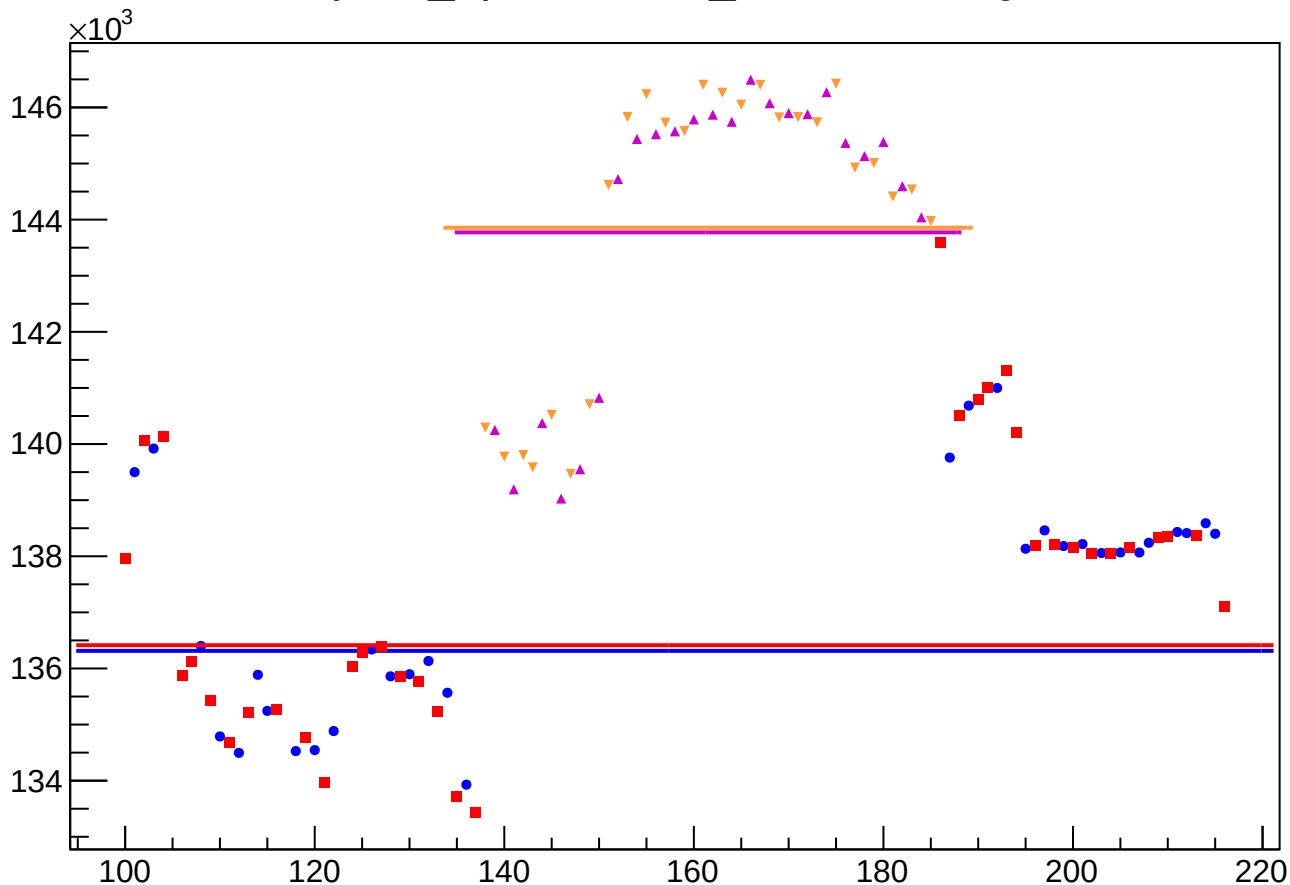
+ sign  $288.184 \pm 0.035$   $\chi^2/\text{NDF}: 6968675.9/55$

All:  $286.263 \pm 0.024$   $\chi^2/\text{NDF}: 12594579.9/11$

- sign  $284.386 \pm 0.034$   $\chi^2/\text{NDF}: 5619860.0/57$



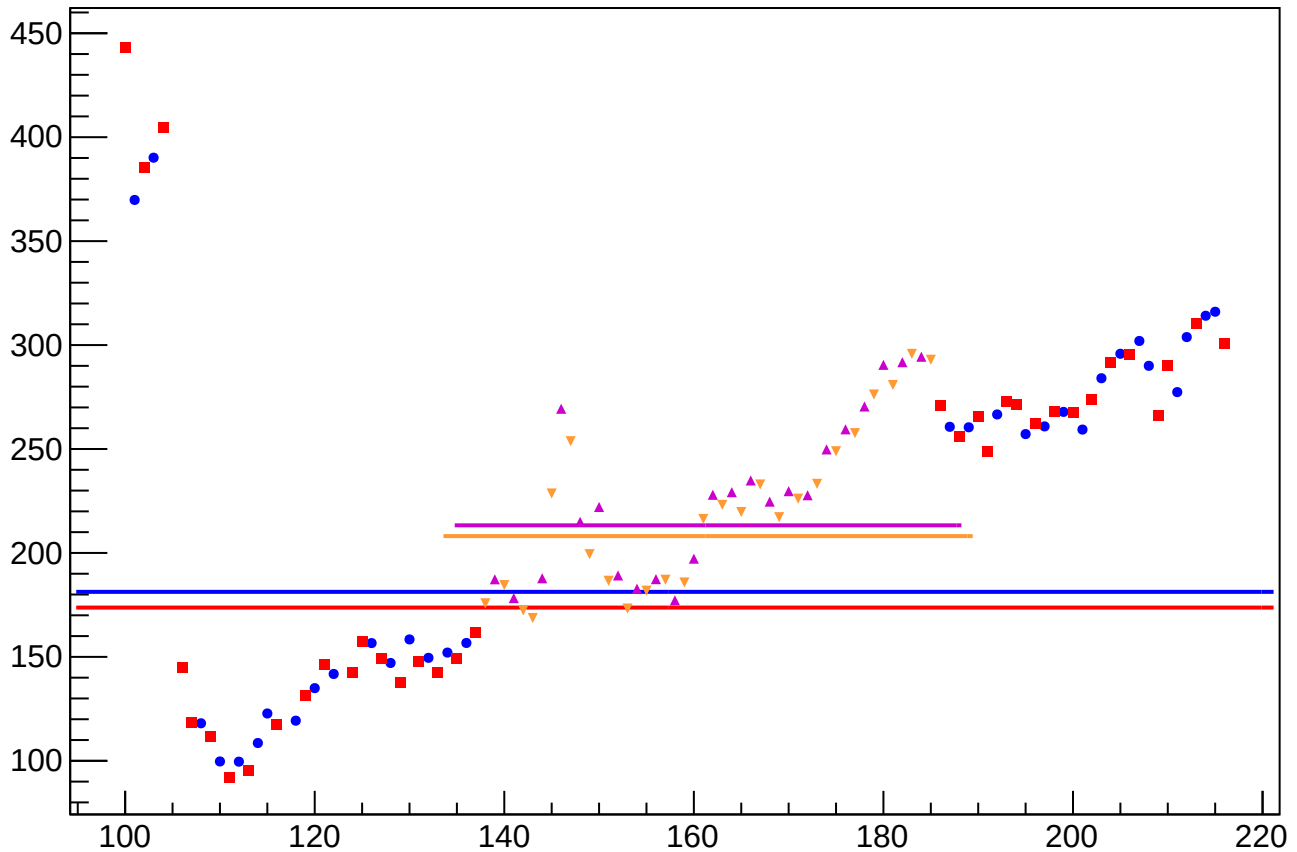
# yield\_bpm0i02WS\_mean vs Slug



Right In:  $136314.066 \pm 0.045$   $\chi^2/\text{NDF}: 1739012530.2/30$   
 Left Out:  $143855.894 \pm 0.048$   $\chi^2/\text{NDF}: 3130204188.4/24$   
 Right Out:  $136414.739 \pm 0.043$   $\chi^2/\text{NDF}: 2304611229.3/34$   
 Left In:  $143773.112 \pm 0.051$   $\chi^2/\text{NDF}: 2803362782.2/22$

+ sign  $139846.084 \pm 0.033$   $\chi^2/\text{NDF}: 17813859584.4/24$   
 All:  $139675.402 \pm 0.023$   $\chi^2/\text{NDF}: 350859695.4/24$   
 - sign  $139505.499 \pm 0.033$   $\chi^2/\text{NDF}: 17218977803.4/24$

# yield\_bpm0i02WS\_rms vs Slug



Right In: 181.285 $\pm$ 0.032  $\chi^2$ /NDF: 5829644.2/30

Left Out: 208.100 $\pm$ 0.034  $\chi^2$ /NDF: 993011.6/24

Right Out: 173.721 $\pm$ 0.031  $\chi^2$ /NDF: 6332853.0/34

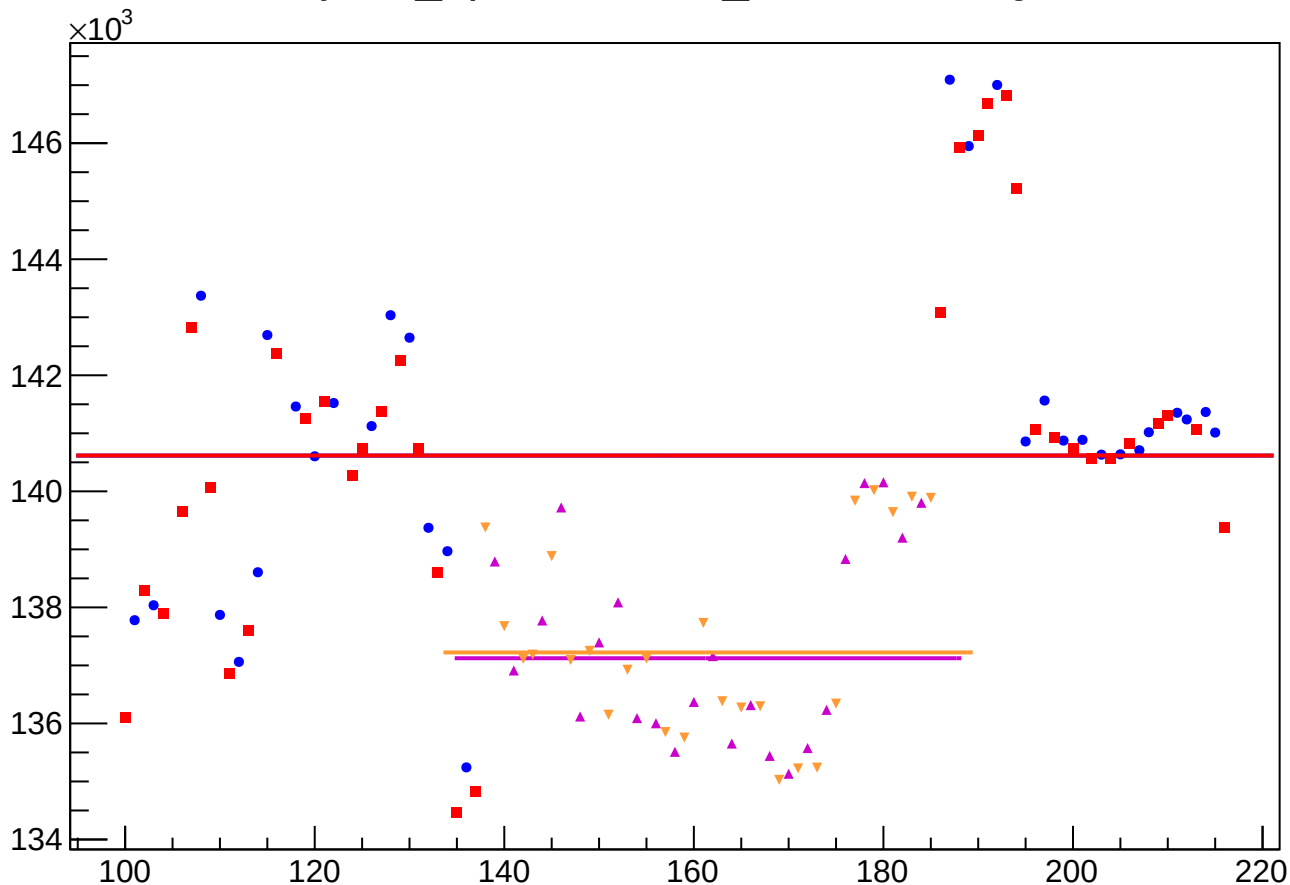
Left In: 213.288 $\pm$ 0.036  $\chi^2$ /NDF: 865525.4/22

+ sign 193.843 $\pm$ 0.023  $\chi^2$ /NDF: 7149946.3/55

All: 192.088 $\pm$ 0.017  $\chi^2$ /NDF: 15059917.0/11

- sign 190.340 $\pm$ 0.023  $\chi^2$ /NDF: 7898728.6/57

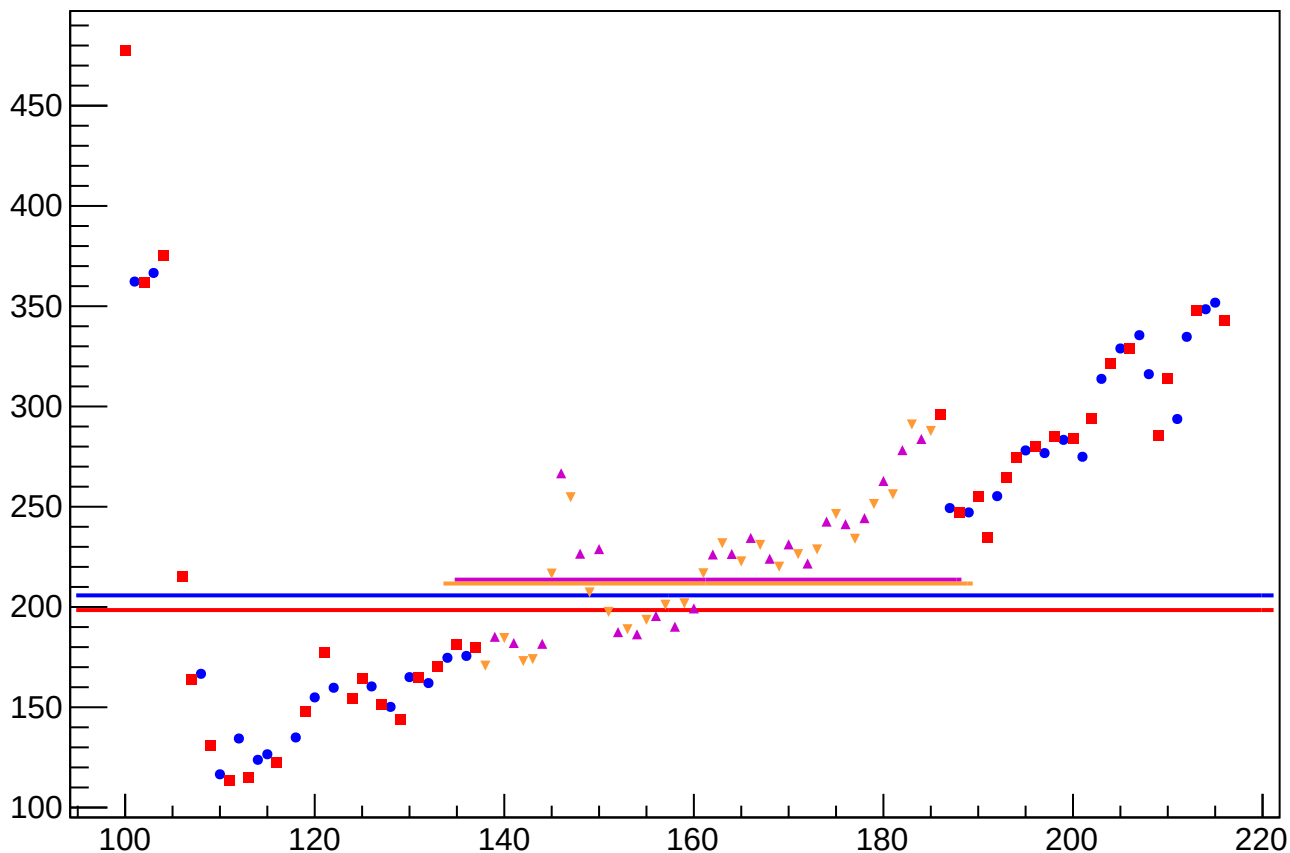
# yield\_bpm0i02aWS\_mean vs Slug



Right In:  $140615.972 \pm 0.051$   $\chi^2/\text{NDF}: 2823656870.1/30$   
 Left Out:  $137223.651 \pm 0.049$   $\chi^2/\text{NDF}: 894565924.0/24$   
 Right Out:  $140616.857 \pm 0.049$   $\chi^2/\text{NDF}: 3257963207.2/34$   
 Left In:  $137123.557 \pm 0.051$   $\chi^2/\text{NDF}: 860635149.0/22$

+ sign  $138865.596 \pm 0.035$   $\chi^2/\text{NDF}: 6033644164.4/24$   
 All:  $138909.097 \pm 0.025$   $\chi^2/\text{NDF}: 126204759.0/24$   
 - sign  $138952.372 \pm 0.035$   $\chi^2/\text{NDF}: 6583790633.8/24$

# yield\_bpm0i02aWS\_rms vs Slug



Right In: 205.797 $\pm$ 0.036  $\chi^2$ /NDF: 4677903.8/30

Left Out: 211.714 $\pm$ 0.035  $\chi^2$ /NDF: 675587.4/24

Right Out: 198.473 $\pm$ 0.034  $\chi^2$ /NDF: 5040798.5/34

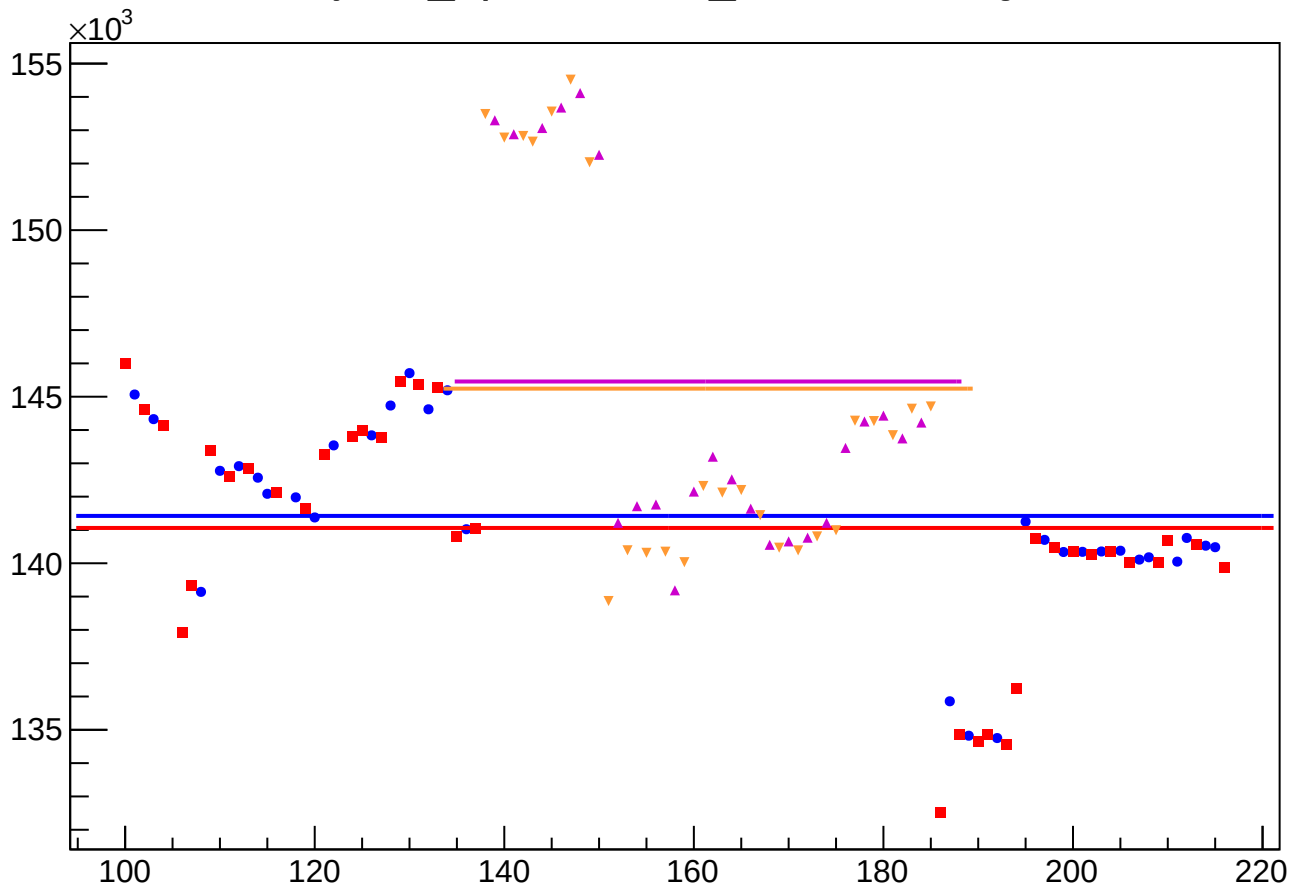
Left In: 213.641 $\pm$ 0.036  $\chi^2$ /NDF: 621332.1/22

+ sign 208.850 $\pm$ 0.025  $\chi^2$ /NDF: 5367579.4/55

All: 207.271 $\pm$ 0.018  $\chi^2$ /NDF: 11130667.6/11

- sign 205.700 $\pm$ 0.025  $\chi^2$ /NDF: 5755075.5/57

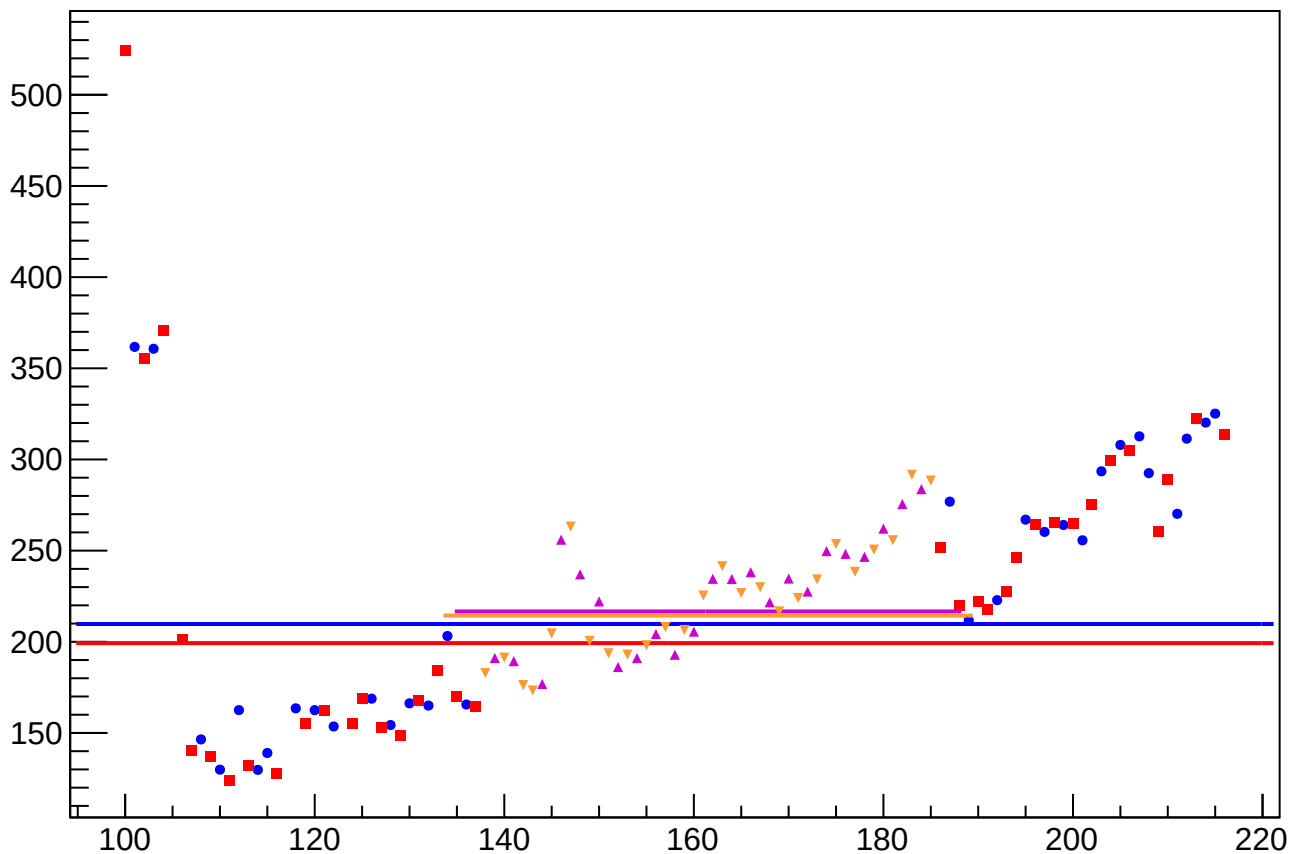
# yield\_bpm0i05WS\_mean vs Slug



Right In:  $141421.532 \pm 0.051$   $\chi^2/\text{NDF}: 2843927995.8/30$   
 Left Out:  $145242.337 \pm 0.050$   $\chi^2/\text{NDF}: 13032998081.1/24$   
 Right Out:  $141060.014 \pm 0.048$   $\chi^2/\text{NDF}: 4438629169.5/34$   
 Left In:  $145456.704 \pm 0.052$   $\chi^2/\text{NDF}: 11073020116.4/22$

+ sign  $143370.872 \pm 0.035$   $\chi^2/\text{NDF}: 18780982097.0$   
 - sign  $143092.562 \pm 0.035$   $\chi^2/\text{NDF}: 19418694428.0$   
 All:  $143230.243 \pm 0.025$   $\chi^2/\text{NDF}: 382308322.0$

# yield\_bpm0i05WS\_rms vs Slug



Right In: 209.759+/-0.036  $\chi^2/\text{NDF}$ : 3366478.0/30

Left Out: 214.391+/-0.035  $\chi^2/\text{NDF}$ : 643384.3/24

Right Out: 199.280+/-0.034  $\chi^2/\text{NDF}$ : 3659192.1/34

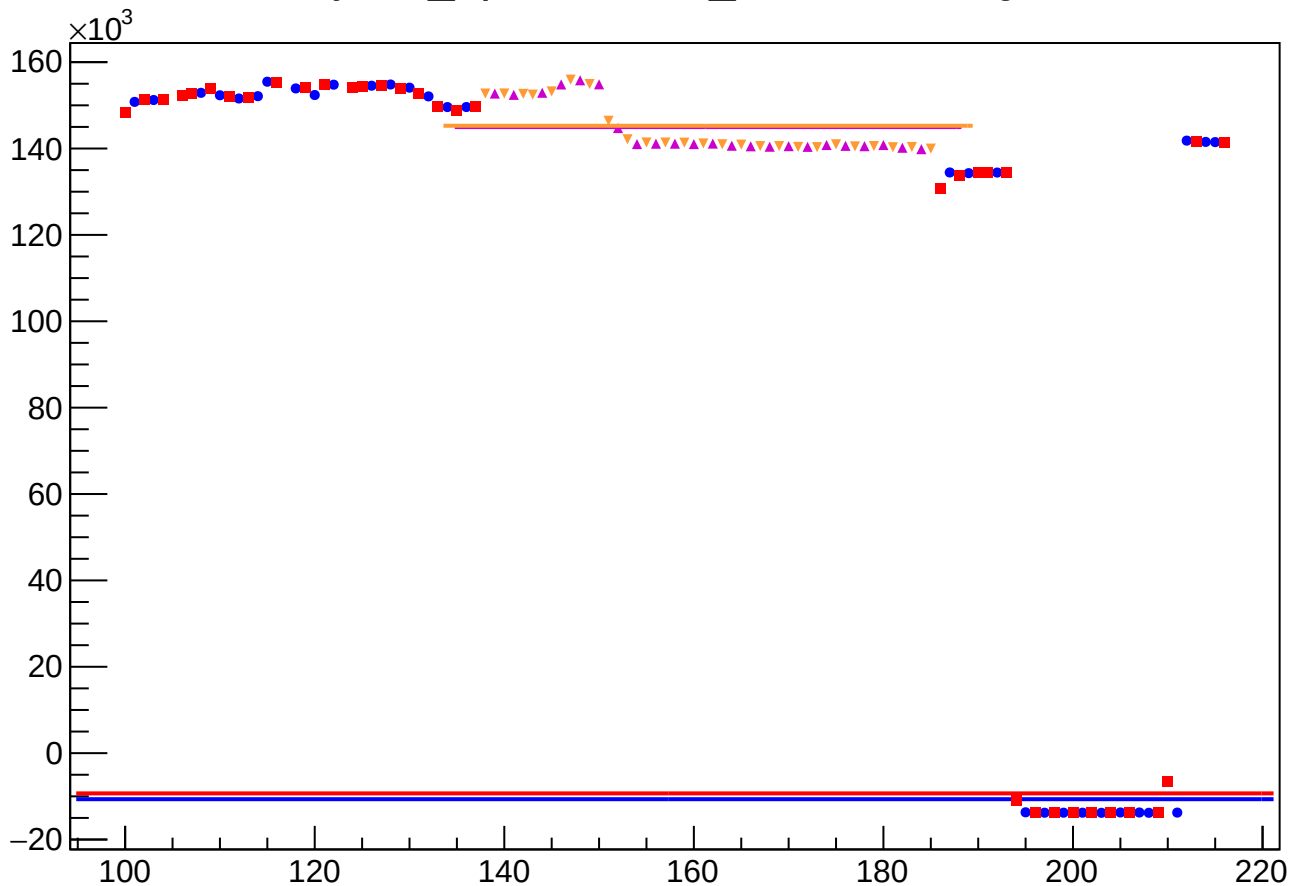
Left In: 216.654+/-0.036  $\chi^2/\text{NDF}$ : 587166.8/22

+ sign 212.122+/-0.025  $\chi^2/\text{NDF}$ : 4018399.4/55

All: 209.692+/-0.018  $\chi^2/\text{NDF}$ : 8405402.3/113

- sign 207.312+/-0.025  $\chi^2/\text{NDF}$ : 4368386.2/57

# yield\_bpm0i07WS\_mean vs Slug



Right In: -10661.166 $\pm$ 0.009

$\chi^2$ /NDF: 6498989865505.2/30

Left Out: 145269.857 $\pm$ 0.049

$\chi^2$ /NDF: 13706269279.5/24

Right Out: -9315.639 $\pm$ 0.009

$\chi^2$ /NDF: 7518360012763.7/34

Left In: 144966.398 $\pm$ 0.051

$\chi^2$ /NDF: 13154547043.3/22

+ sign -5926.211 $\pm$ 0.009

$\chi^2$ /NDF: 1617850229439

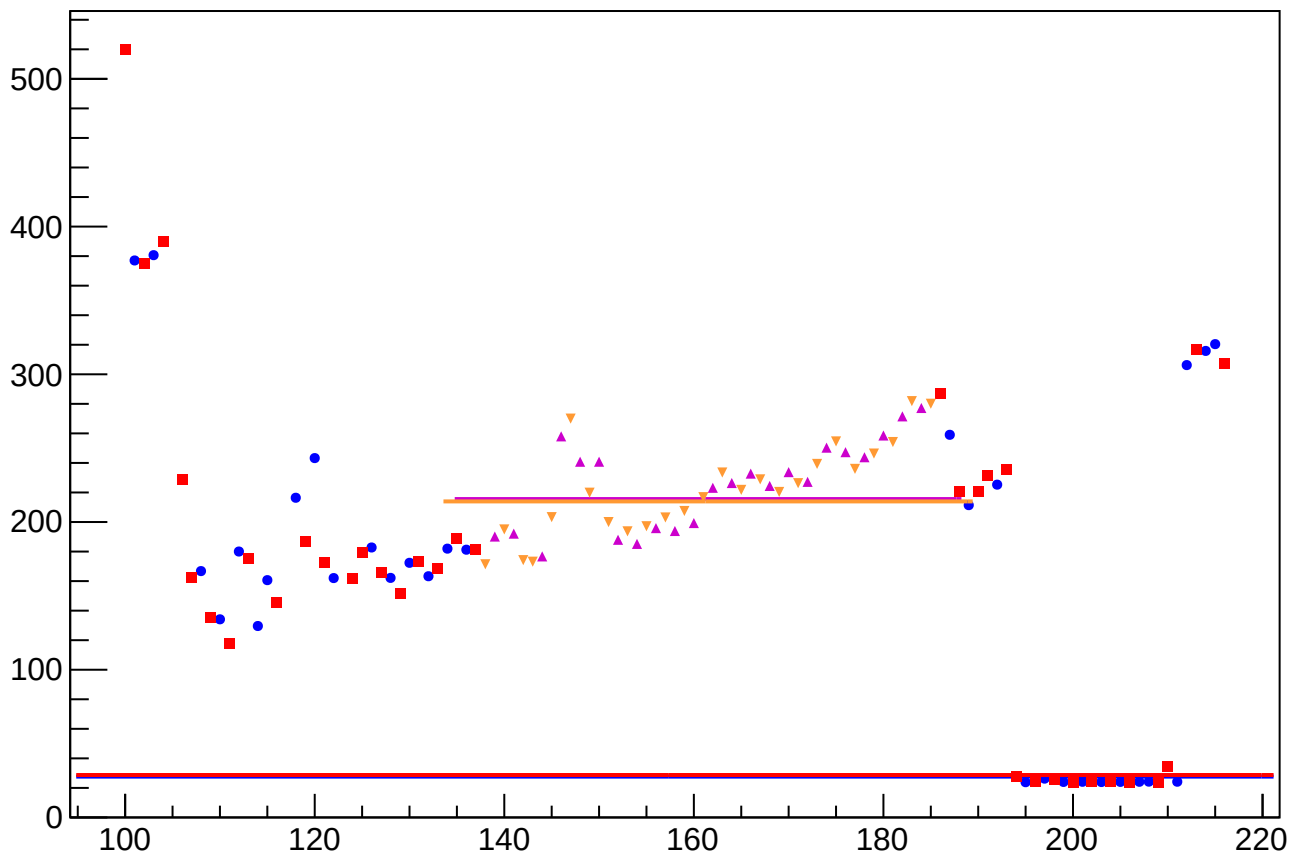
All: -5173.021 $\pm$ 0.006

$\chi^2$ /NDF: 3251037764

- sign -4307.544 $\pm$ 0.009

$\chi^2$ /NDF: 16315414825306

# yield\_bpm0i07WS\_rms vs Slug



Right In: 27.663+/-0.006  $\chi^2/\text{NDF}$ : 17069043.1/30

Left Out: 213.951+/-0.035  $\chi^2/\text{NDF}$ : 650607.8/24

Right Out: 28.726+/-0.007  $\chi^2/\text{NDF}$ : 17160093.4/34

Left In: 215.539+/-0.036  $\chi^2/\text{NDF}$ : 600575.7/22

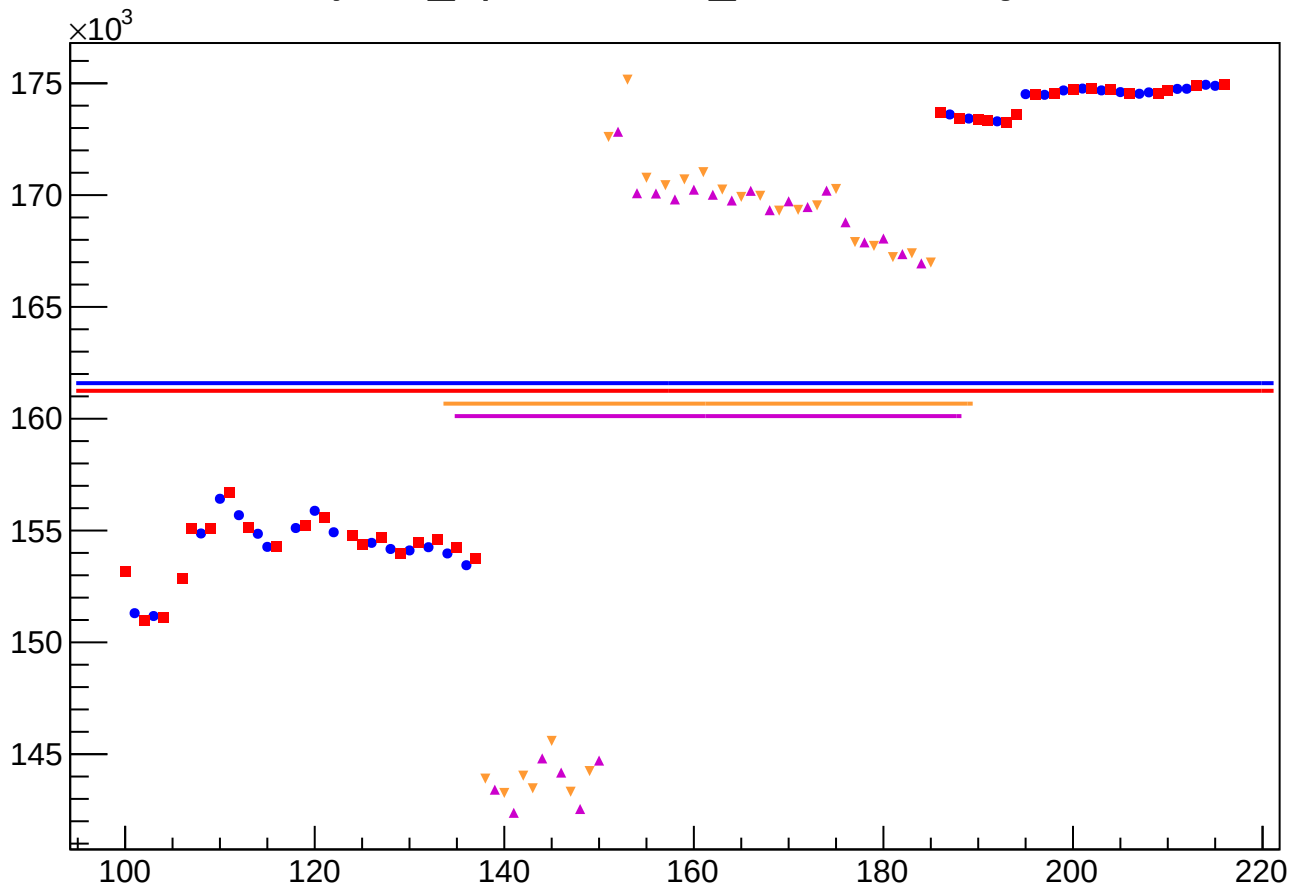
+ sign 33.320+/-0.006  $\chi^2/\text{NDF}$ : 45311066.3/55

All: 34.004+/-0.004  $\chi^2/\text{NDF}$ : 88856063.5/113

- sign 34.790+/-0.007  $\chi^2/\text{NDF}$ : 43517822.5/57

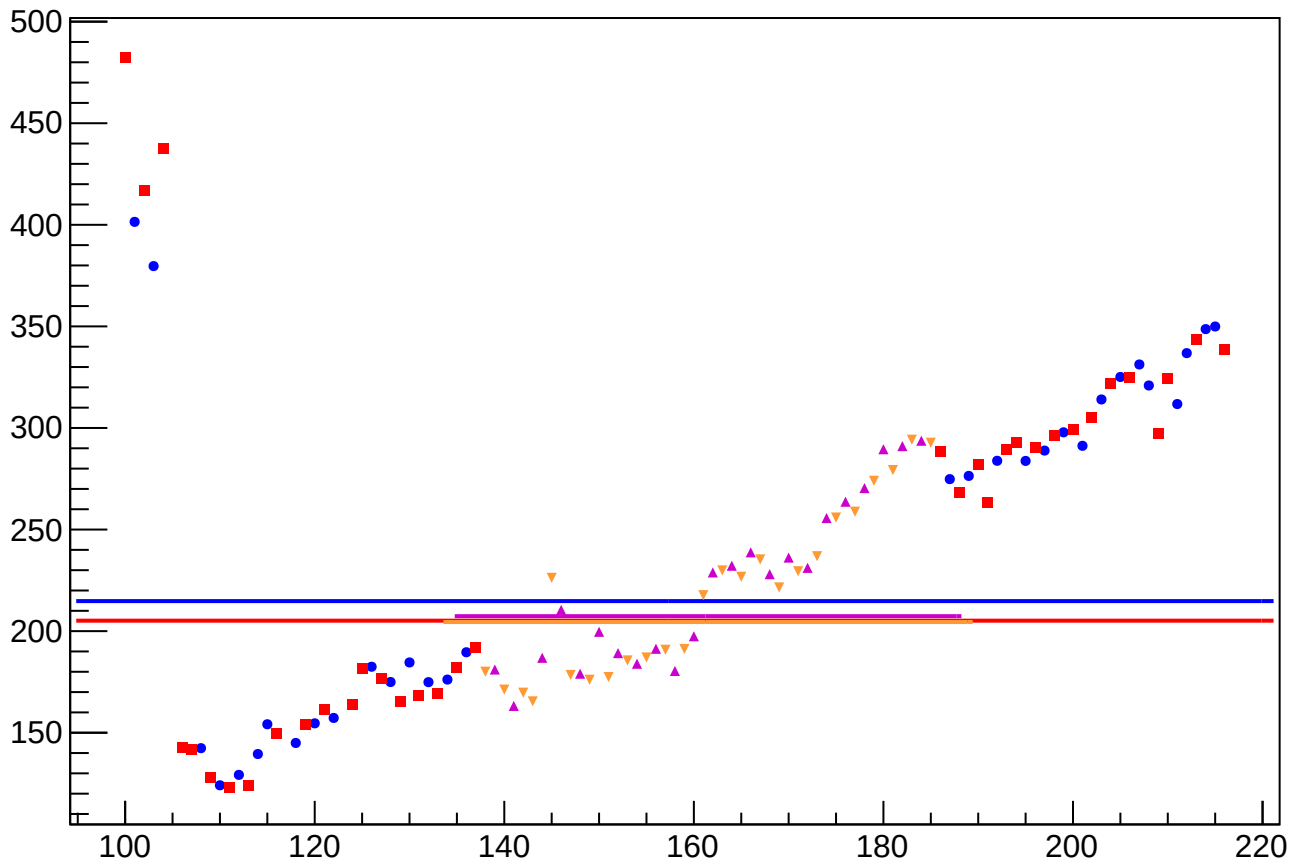


# yield\_bpm1i02WS\_mean vs Slug



|                                   |                                 |                               |                             |
|-----------------------------------|---------------------------------|-------------------------------|-----------------------------|
| Right In: 161591.081 $\pm$ 0.053  | $\chi^2$ /NDF: 32120039589.3/30 | + sign 161084.915 $\pm$ 0.035 | $\chi^2$ /NDF: 106442475694 |
| Left Out: 160674.818 $\pm$ 0.047  | $\chi^2$ /NDF: 74155131898.4/24 | All: 160880.380 $\pm$ 0.025   | $\chi^2$ /NDF: 207341697    |
| Right Out: 161248.718 $\pm$ 0.050 | $\chi^2$ /NDF: 34019343690.6/34 | - sign 160677.126 $\pm$ 0.035 | $\chi^2$ /NDF: 100831996676 |
| Left In: 160117.460 $\pm$ 0.049   | $\chi^2$ /NDF: 66553191753.2/22 |                               |                             |

# yield\_bpm1i02WS\_rms vs Slug



Right In: 214.785 $\pm$ 0.037  $\chi^2$ /NDF: 4579392.9/30

Left Out: 204.476 $\pm$ 0.034  $\chi^2$ /NDF:1073199.0/24

Right Out: 205.154 $\pm$ 0.035  $\chi^2$ /NDF: 5084029.5/34

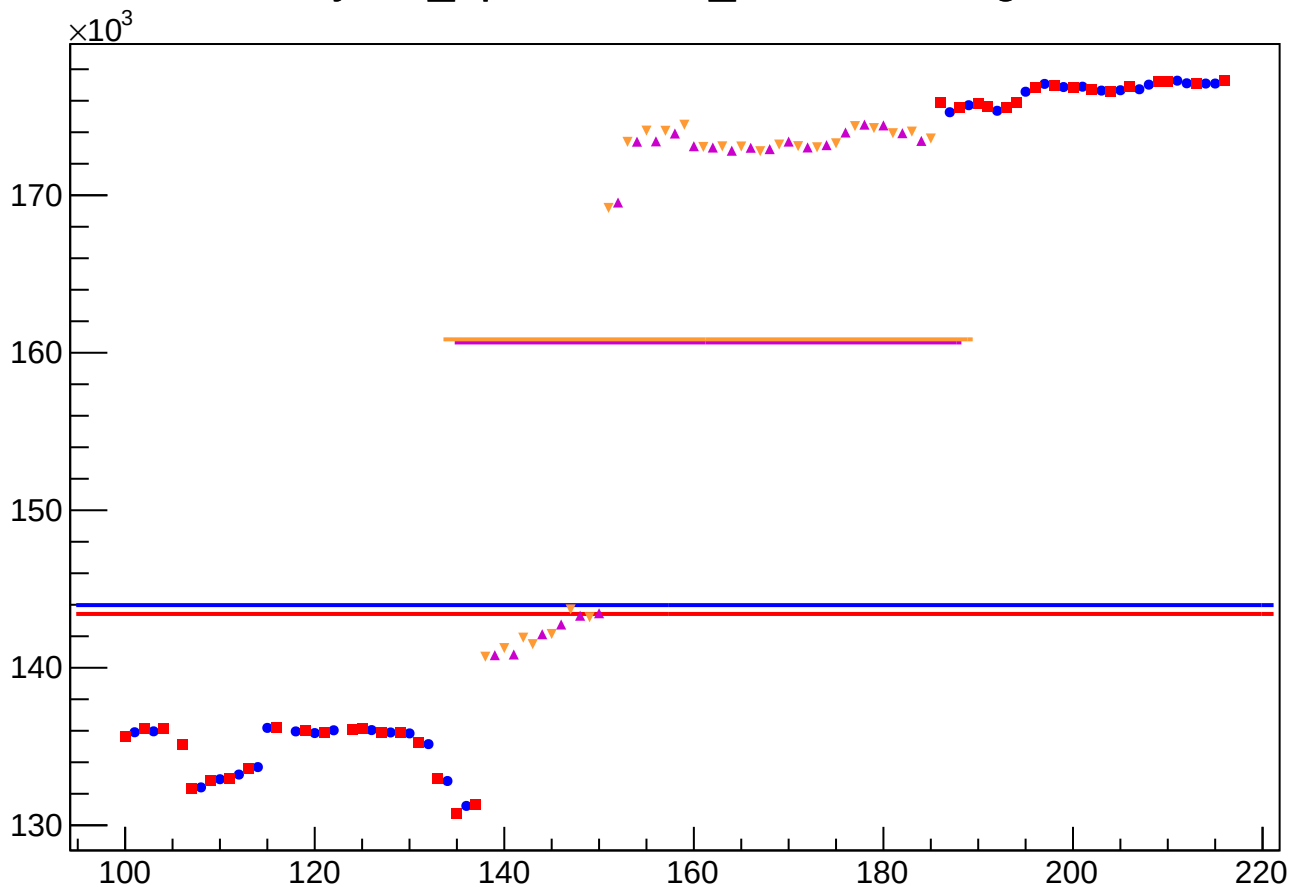
Left In: 207.368 $\pm$ 0.035  $\chi^2$ /NDF:956644.0/22

+ sign 209.090 $\pm$ 0.025  $\chi^2$ /NDF: 5694947.6/55

All: 207.677 $\pm$ 0.018  $\chi^2$ /NDF: 11744027.8/11

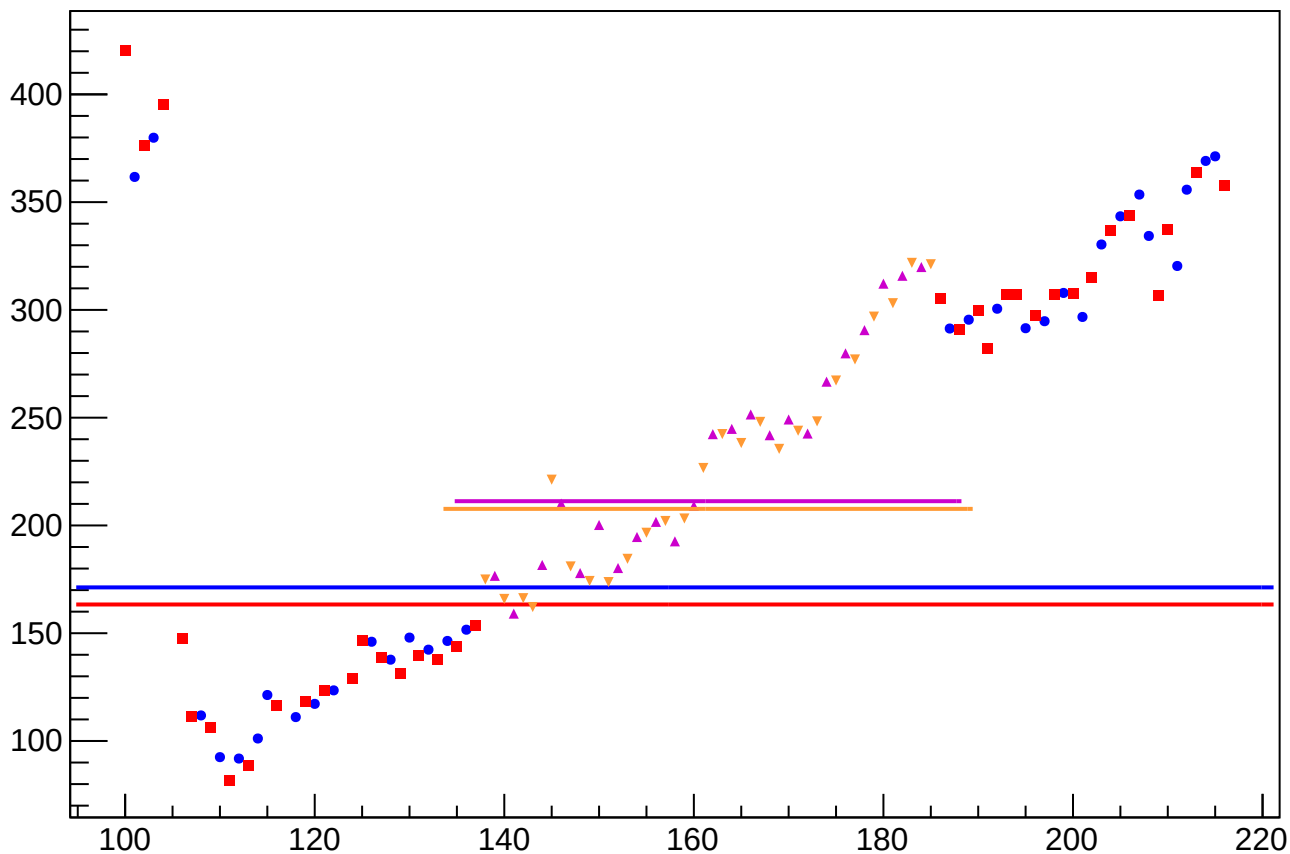
- sign 206.273 $\pm$ 0.025  $\chi^2$ /NDF: 6042662.2/57

# yield\_bpm1i04WS\_mean vs Slug



Right In: 143977.525 $\pm$ 0.045  $\chi^2$ /NDF: 160391418721.4/30  
 Left Out: 160851.077 $\pm$ 0.048  $\chi^2$ /NDF: 99202825178.3/24  
 Right Out: 143416.699 $\pm$ 0.042  $\chi^2$ /NDF: 170903822910.6/34  
 Left In: 160654.189 $\pm$ 0.051  $\chi^2$ /NDF: 90149721861.0/22  
 All: 151123.944 $\pm$ 0.023  $\chi^2$ /NDF: 655086342  
 + sign 151727.005 $\pm$ 0.033  $\chi^2$ /NDF: 325235413461  
 - sign 150532.086 $\pm$ 0.033  $\chi^2$ /NDF: 329181946918

# yield\_bpm1i04WS\_rms vs Slug



Right In: 171.263+/-0.032  $\chi^2/\text{NDF}$ : 8413296.9/30

Left Out: 207.689+/-0.034  $\chi^2/\text{NDF}$ :1500711.5/24

Right Out: 163.330+/-0.030  $\chi^2/\text{NDF}$ : 8991504.4/34

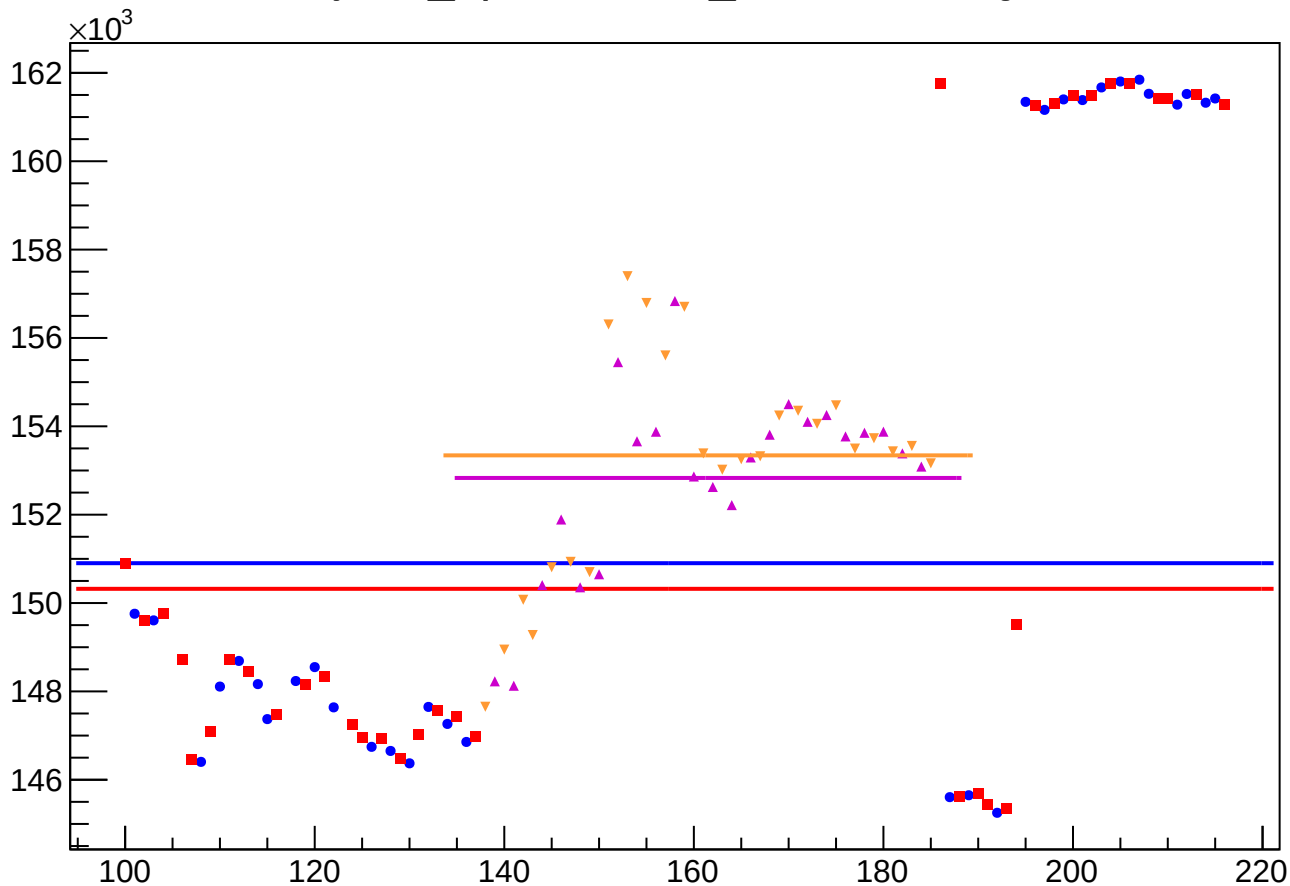
Left In: 211.254+/-0.036  $\chi^2/\text{NDF}$ :1305730.5/22

+ sign 187.992+/-0.023  $\chi^2/\text{NDF}$ : 10525818.8/55

All: 185.530+/-0.016  $\chi^2/\text{NDF}$ : 21898591.0/11

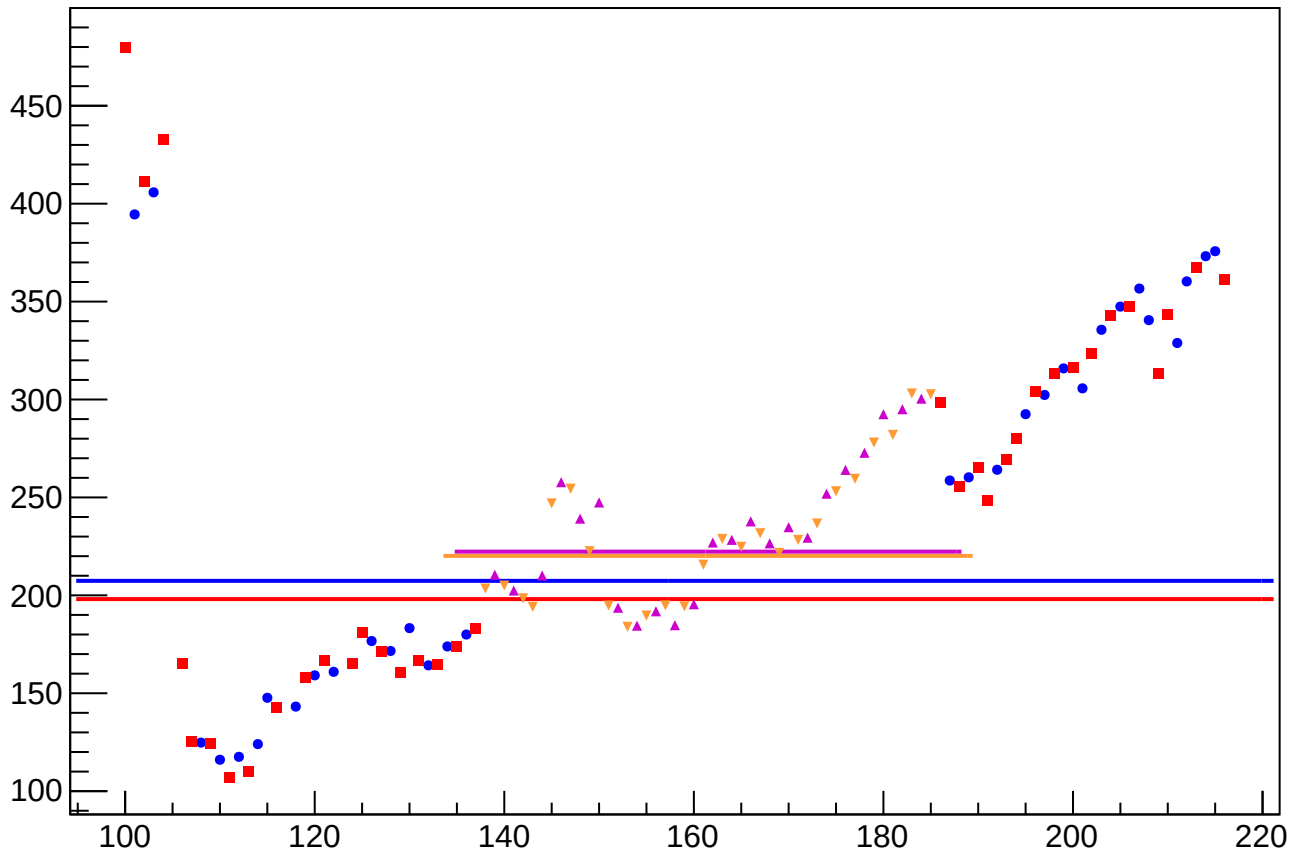
- sign 183.113+/-0.023  $\chi^2/\text{NDF}$ : 11350458.9/57

# yield\_bpm1i06WS\_mean vs Slug



|                                   |                                 |                               |                              |
|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| Right In: 150902.065 $\pm$ 0.052  | $\chi^2$ /NDF: 14059131808.1/30 | + sign 152144.940 $\pm$ 0.036 | $\chi^2$ /NDF: 18170254507.  |
| Left Out: 153342.472 $\pm$ 0.051  | $\chi^2$ /NDF: 2978670616.9/24  | All: 151811.621 $\pm$ 0.026   | $\chi^2$ /NDF: 346432238     |
| Right Out: 150321.785 $\pm$ 0.049 | $\chi^2$ /NDF: 13178193747.7/34 | - sign 151484.154 $\pm$ 0.036 | $\chi^2$ /NDF: 16305387529.9 |
| Left In: 152831.399 $\pm$ 0.053   | $\chi^2$ /NDF: 1914395326.4/22  |                               |                              |

# yield\_bpm1i06WS\_rms vs Slug



Right In: 207.396 $\pm$ 0.037  $\chi^2$ /NDF: 5750932.5/30

Left Out: 220.156 $\pm$ 0.036  $\chi^2$ /NDF:685590.6/24

Right Out: 198.076 $\pm$ 0.035  $\chi^2$ /NDF: 6105931.0/34

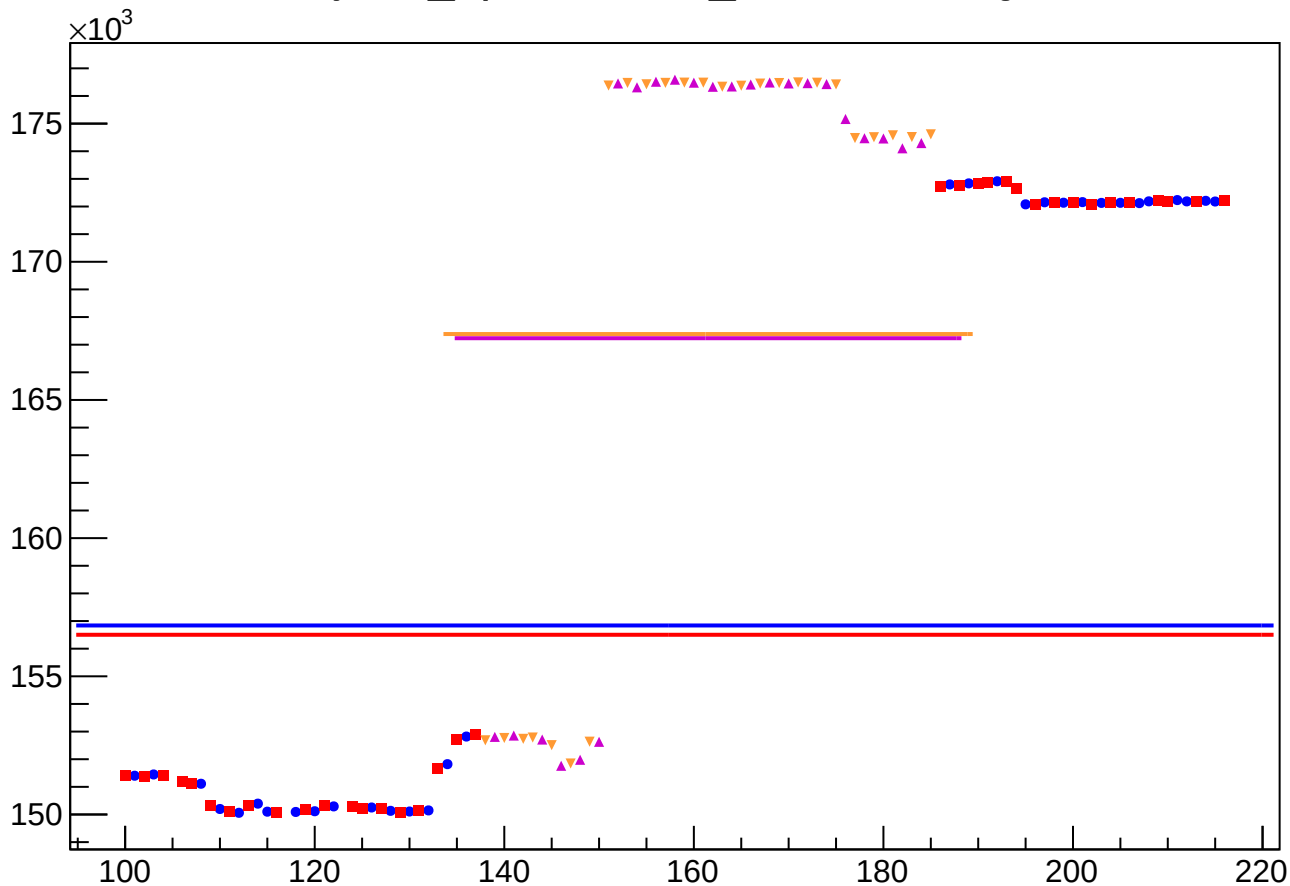
Left In: 222.304 $\pm$ 0.037  $\chi^2$ /NDF:697605.9/22

+ sign 213.895 $\pm$ 0.026  $\chi^2$ /NDF: 6498436.7/55

All: 211.576 $\pm$ 0.018  $\chi^2$ /NDF: 13544264.1/11

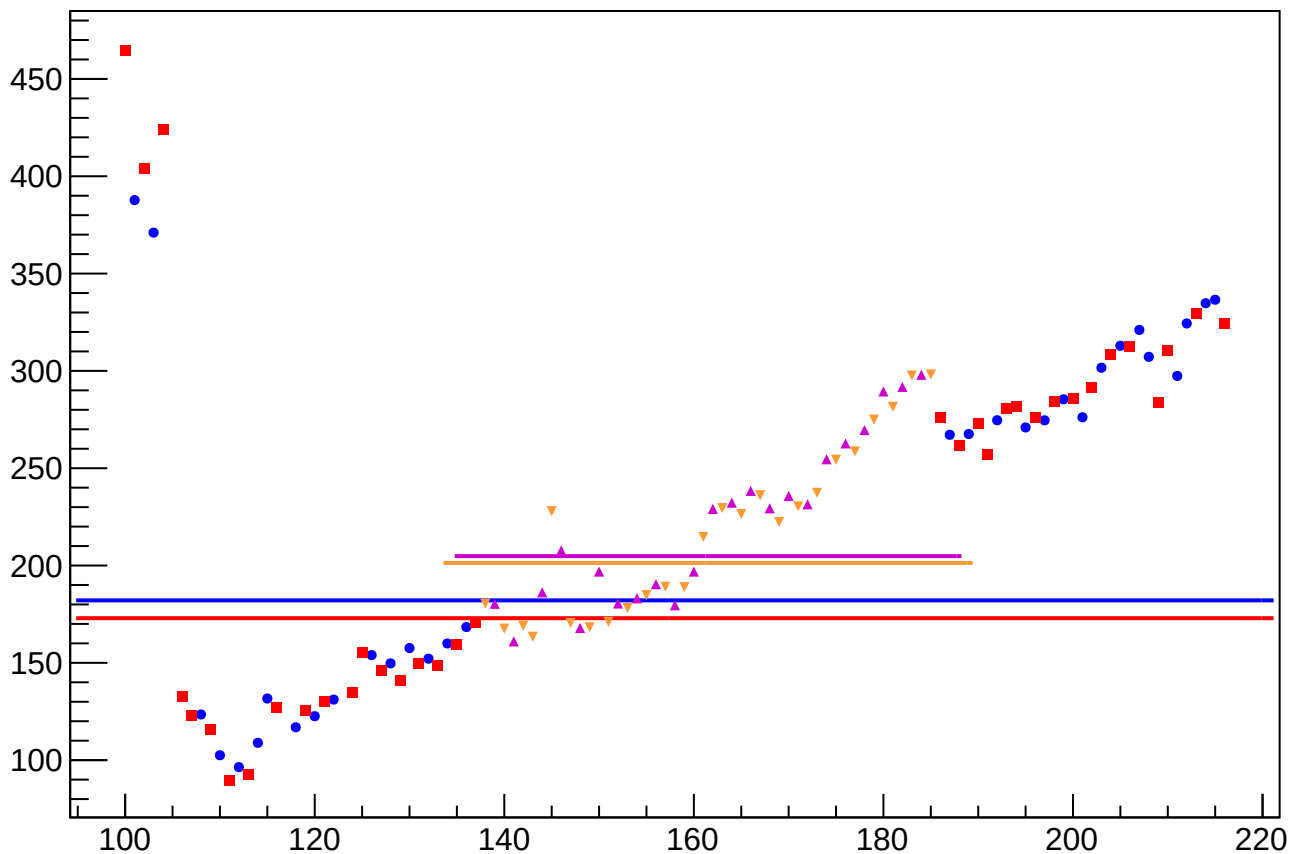
- sign 209.298 $\pm$ 0.025  $\chi^2$ /NDF: 7029607.7/57

# yield\_bpm2i01WS\_mean vs Slug



Right In: 156839.818 $\pm$ 0.046  $\chi^2$ /NDF: 45893971197.2/30  
 Left Out: 167385.483 $\pm$ 0.047  $\chi^2$ /NDF: 59602607546.2/24  
 Right Out: 156502.924 $\pm$ 0.043  $\chi^2$ /NDF: 50037963120.6/34  
 Left In: 167234.214 $\pm$ 0.049  $\chi^2$ /NDF: 55099214555.0/22

# yield\_bpm2i01WS\_rms vs Slug



Right In: 182.100 $\pm$ 0.033  $\chi^2$ /NDF: 6517976.1/30

Left Out: 201.329 $\pm$ 0.033  $\chi^2$ /NDF:1230655.6/24

Right Out: 172.939 $\pm$ 0.031  $\chi^2$ /NDF: 7142526.9/34

Left In: 204.826 $\pm$ 0.035  $\chi^2$ /NDF:1053130.7/22

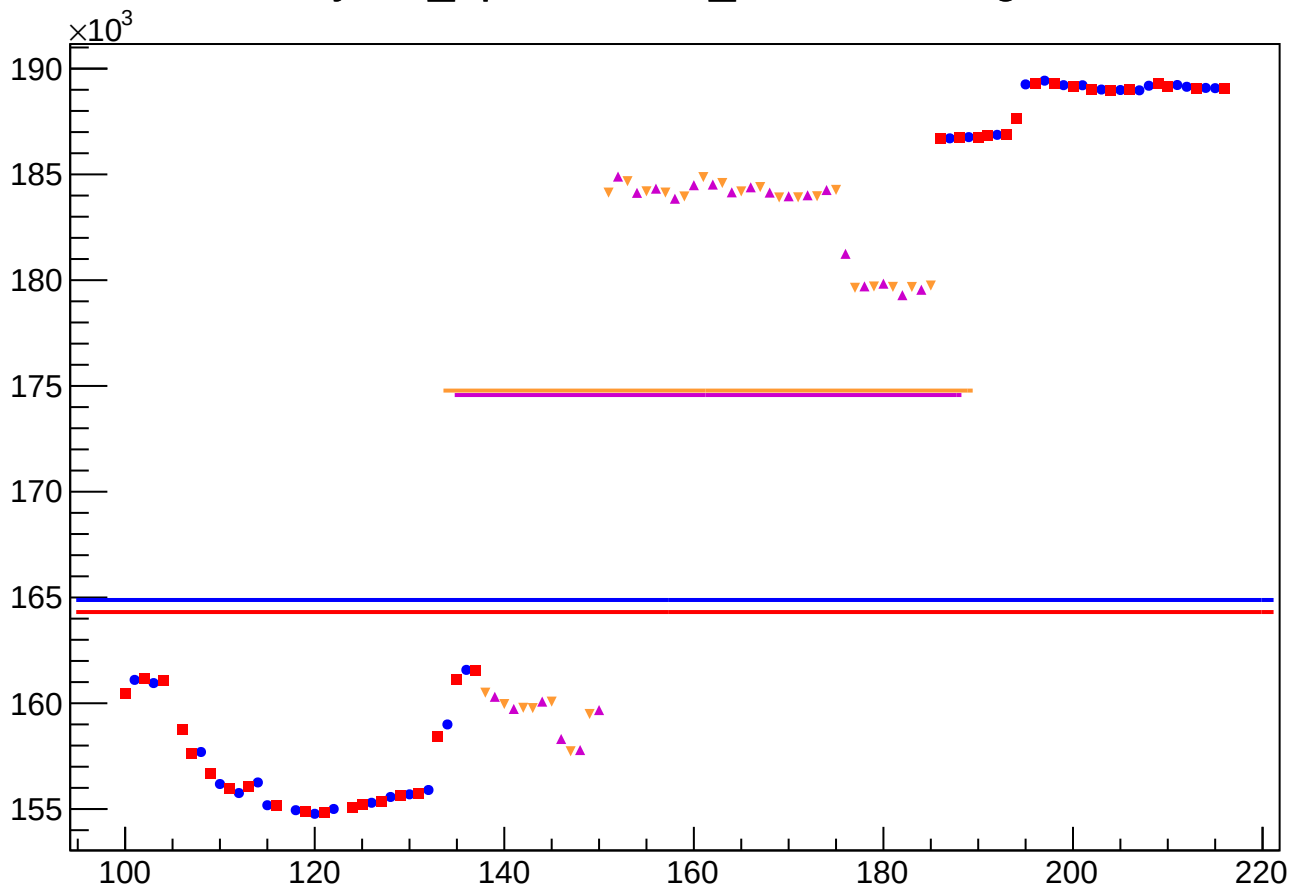
+ sign 191.573 $\pm$ 0.023  $\chi^2$ /NDF: 7920415.8/55

All: 189.279 $\pm$ 0.016  $\chi^2$ /NDF: 16610698.7/1

- sign 187.028 $\pm$ 0.023  $\chi^2$ /NDF: 8670899.5/57

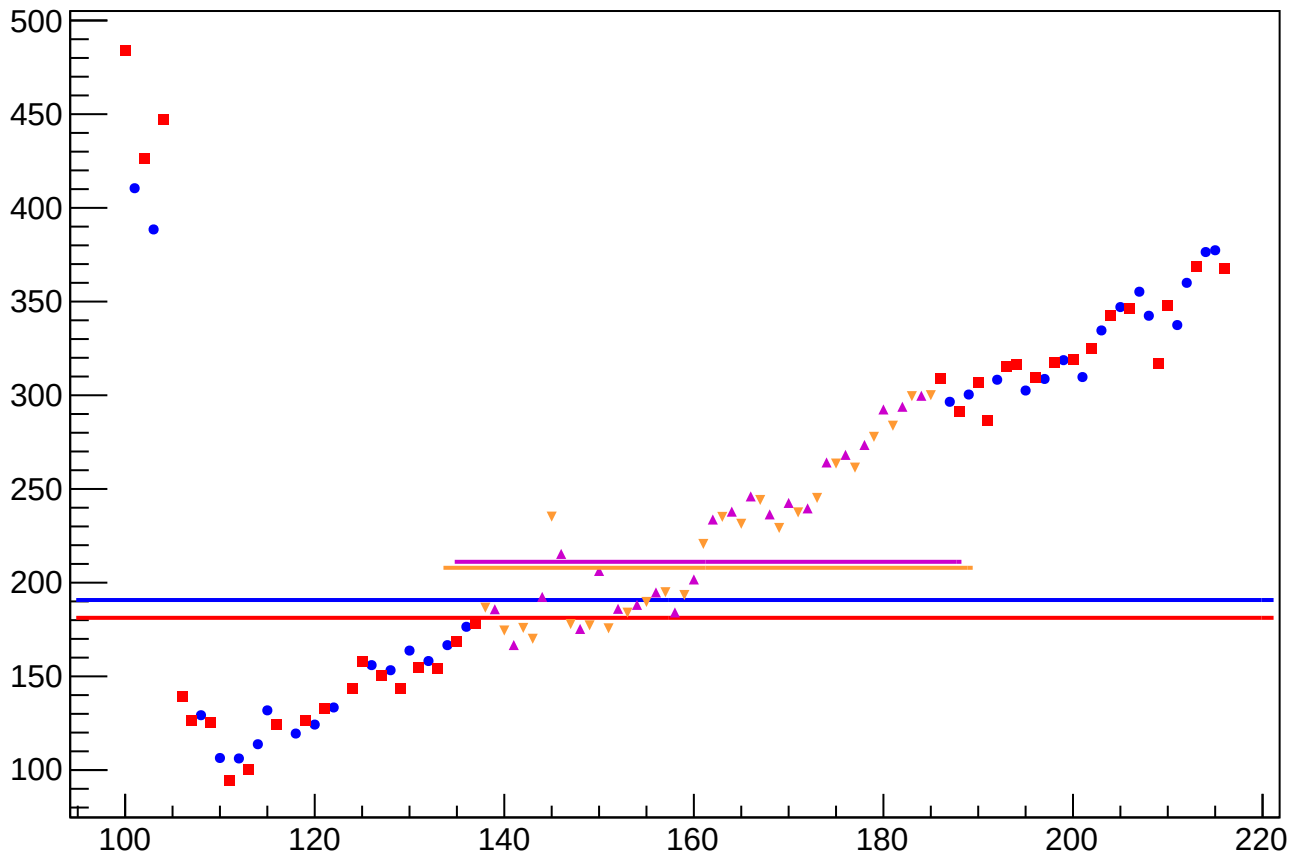


# yield\_bpm2i02WS\_mean vs Slug



Right In: 164882.045 $\pm$ 0.049  $\chi^2$ /NDF: 85448308002.2/30  
 Left Out: 174780.651 $\pm$ 0.048  $\chi^2$ /NDF: 58132787948.0/24  
 Right Out: 164311.713 $\pm$ 0.046  $\chi^2$ /NDF: 90114091113.8/34  
 Left In: 174570.001 $\pm$ 0.050  $\chi^2$ /NDF: 54757801795.4/22  
 + sign 169898.600 $\pm$ 0.034  $\chi^2$ /NDF: 164376918698  
 - sign 168995.650 $\pm$ 0.034  $\chi^2$ /NDF: 167441547745  
 All: 169443.096 $\pm$ 0.024  $\chi^2$ /NDF: 332167700

# yield\_bpm2i02WS\_rms vs Slug



Right In: 190.742 $\pm$ 0.035  $\chi^2$ /NDF: 7312620.7/30

Left Out: 207.940 $\pm$ 0.034  $\chi^2$ /NDF:1132127.7/24

Right Out: 181.239 $\pm$ 0.033  $\chi^2$ /NDF: 7925240.0/34

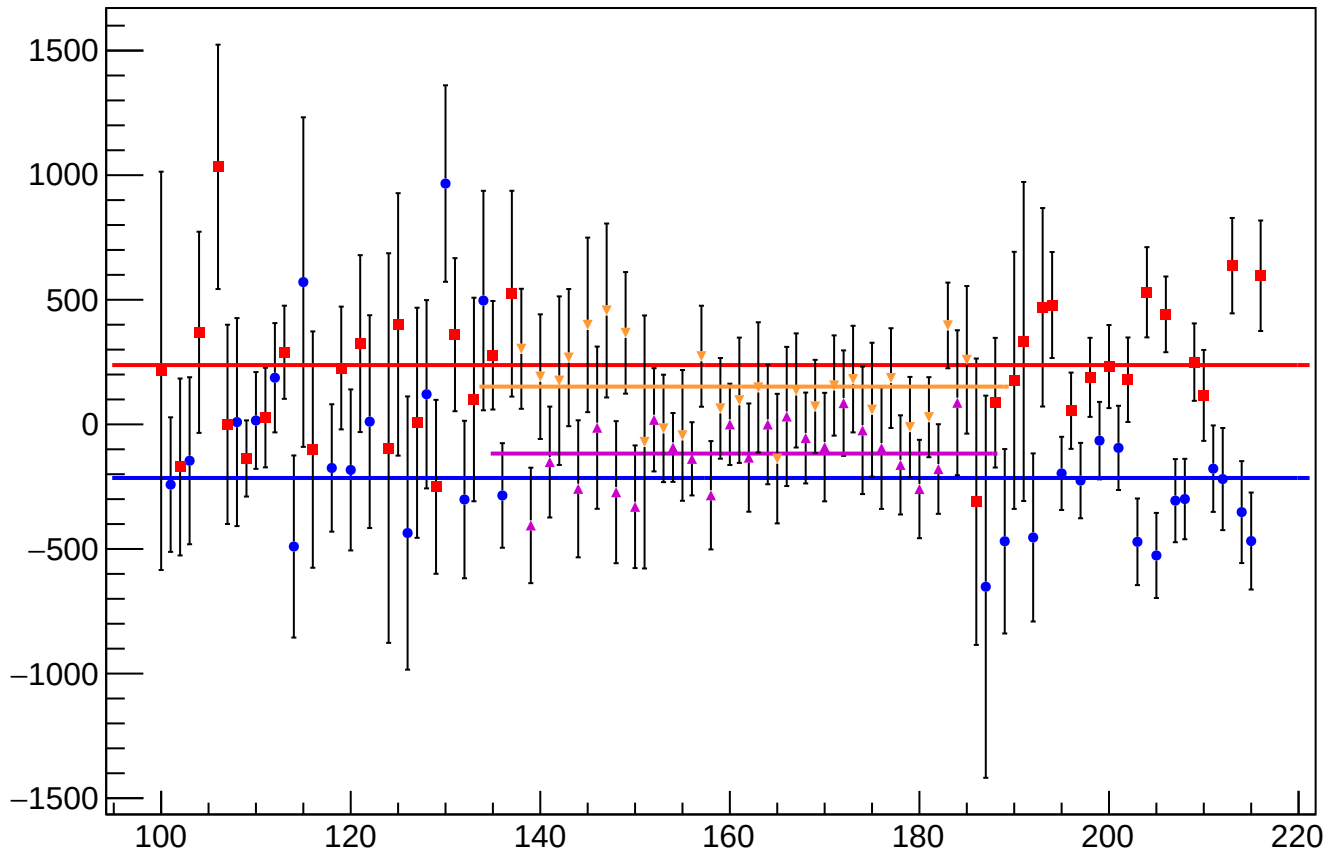
Left In: 211.133 $\pm$ 0.036  $\chi^2$ /NDF:993720.4/22

+ sign 199.458 $\pm$ 0.024  $\chi^2$ /NDF: 8570290.1/55

All: 197.153 $\pm$ 0.017  $\chi^2$ /NDF: 17890480.8/1

- sign 194.889 $\pm$ 0.024  $\chi^2$ /NDF: 9302305.7/57

# asym\_bcm\_target\_mean vs Slug



Right In:  $-215.063 \pm 40.698$   $\chi^2/\text{NDF}: 31.1/30$

Left Out:  $151.598 \pm 46.419$   $\chi^2/\text{NDF}: 9.6/24$

Right Out:  $237.984 \pm 40.434$   $\chi^2/\text{NDF}: 31.8/34$

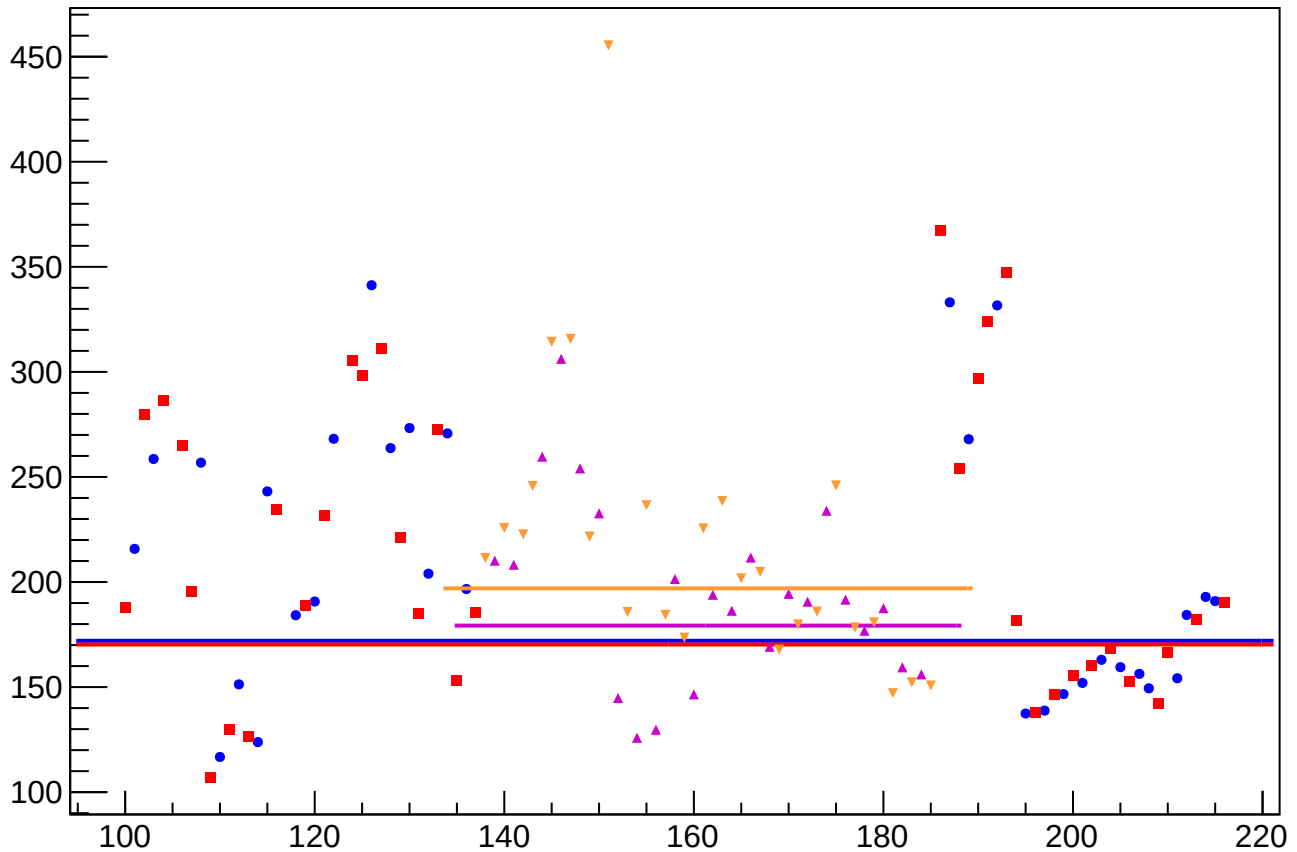
Left In:  $-117.163 \pm 43.778$   $\chi^2/\text{NDF}: 7.5/22$

+ sign  $-55.710 \pm 30.602$   $\chi^2/\text{NDF}: 76.0/55$

All:  $11.330 \pm 21.314$   $\chi^2/\text{NDF}: 160.2/113$

- sign  $74.490 \pm 29.703$   $\chi^2/\text{NDF}: 74.8/57$

# asym\_bcm\_target\_rms vs Slug



Right In: 172.042 $\pm$ 0.029  $\chi^2$ /NDF: 2308374.2/30

Left Out: 196.975 $\pm$ 0.033  $\chi^2$ /NDF:1809307.4/24

Right Out: 170.279 $\pm$ 0.029  $\chi^2$ /NDF: 2989206.7/34

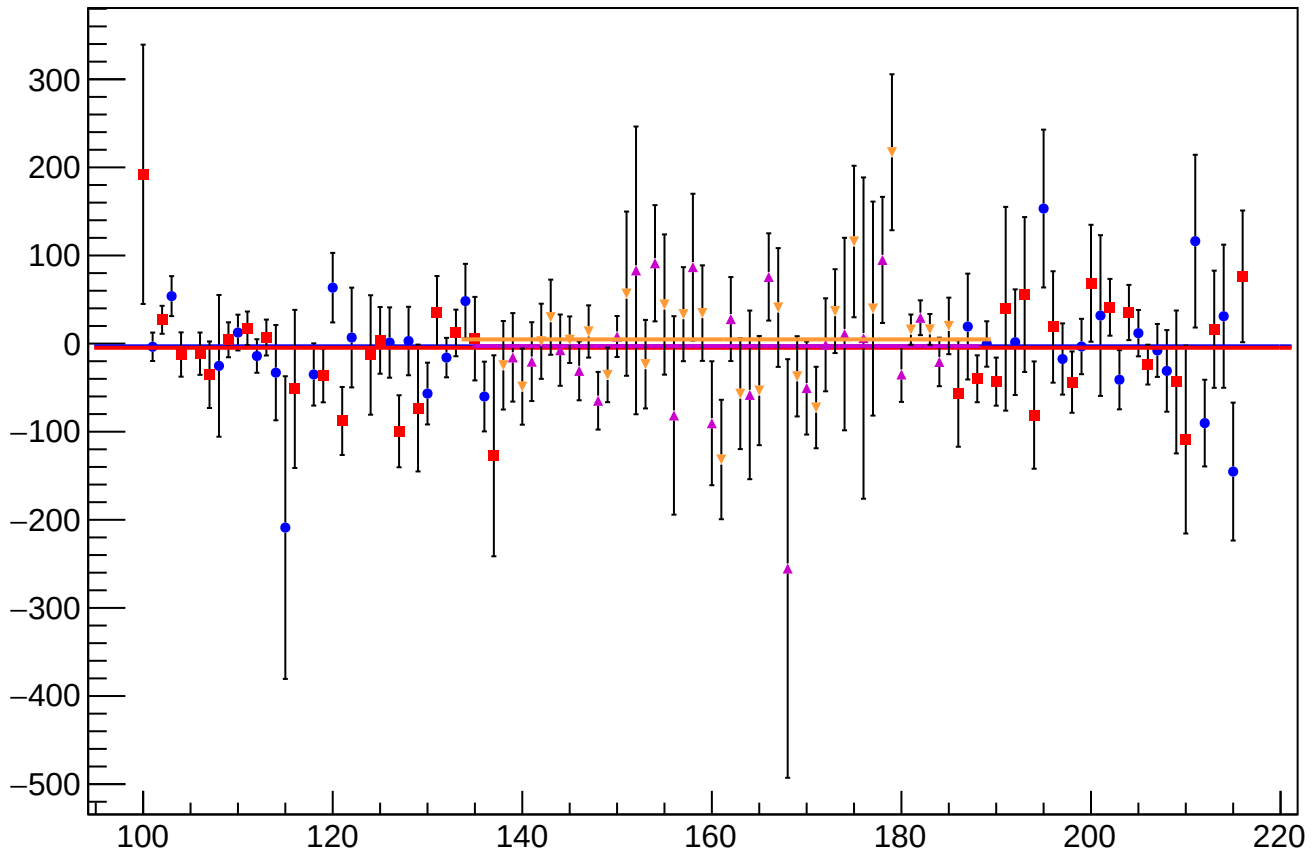
Left In: 179.256 $\pm$ 0.031  $\chi^2$ /NDF:1656023.5/22

+ sign 182.878 $\pm$ 0.022  $\chi^2$ /NDF: 4443935.0/55

All: 178.519 $\pm$ 0.015  $\chi^2$ /NDF: 9213381.0/113

- sign 174.411 $\pm$ 0.021  $\chi^2$ /NDF: 4690616.2/57

# asym\_bcm\_an\_diff\_mean vs Slug



Right In:  $-3.086 \pm 6.061$   $\chi^2/\text{NDF}$ : 32.6/30

Left Out:  $4.803 \pm 7.601$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-4.734 \pm 5.659$   $\chi^2/\text{NDF}$ : 39.5/34

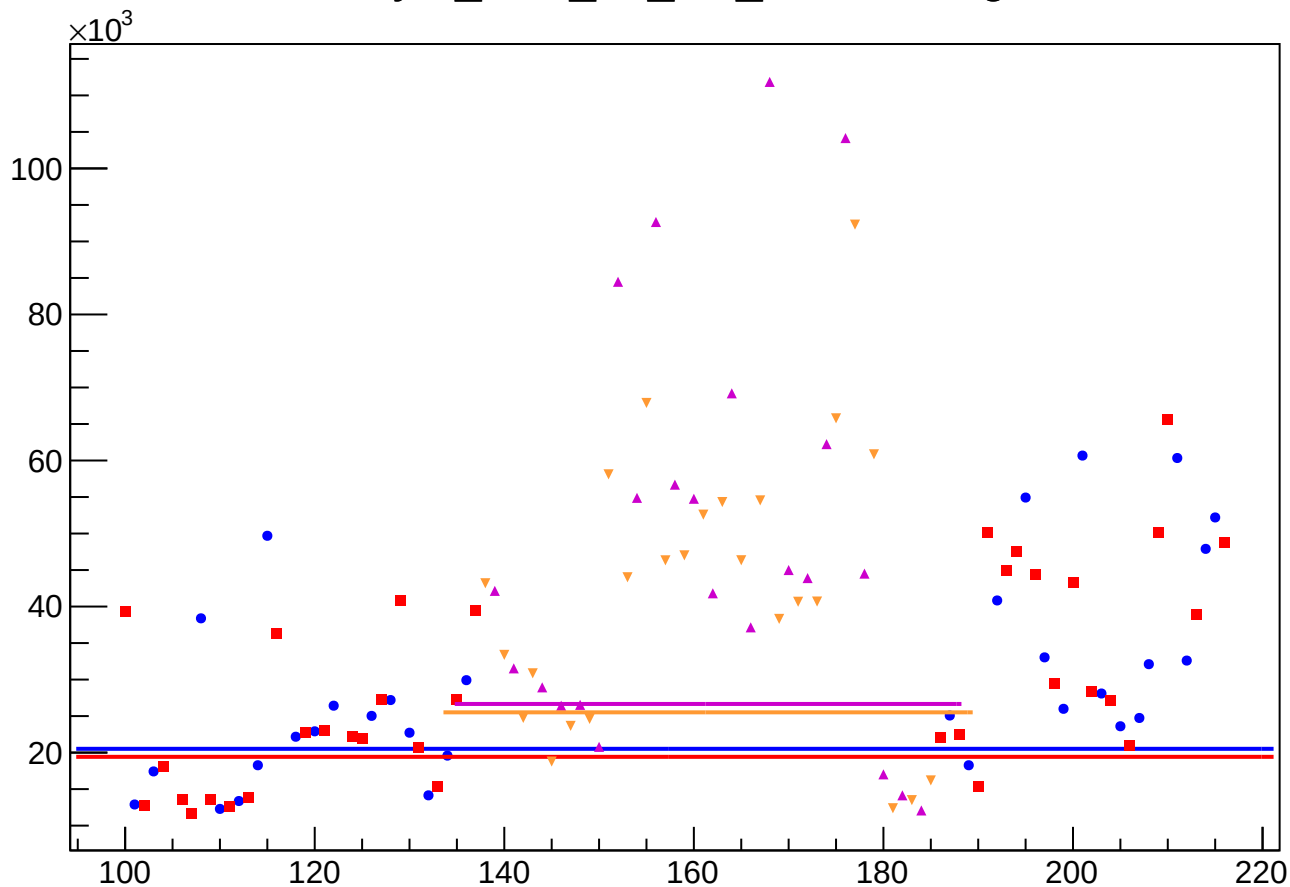
Left In:  $-2.918 \pm 8.840$   $\chi^2/\text{NDF}$ : 21.5/22

+ sign  $-0.019 \pm 4.739$   $\chi^2/\text{NDF}$ : 57.5/55

All:  $-2.101 \pm 3.360$   $\chi^2/\text{NDF}$ : 118.9/113

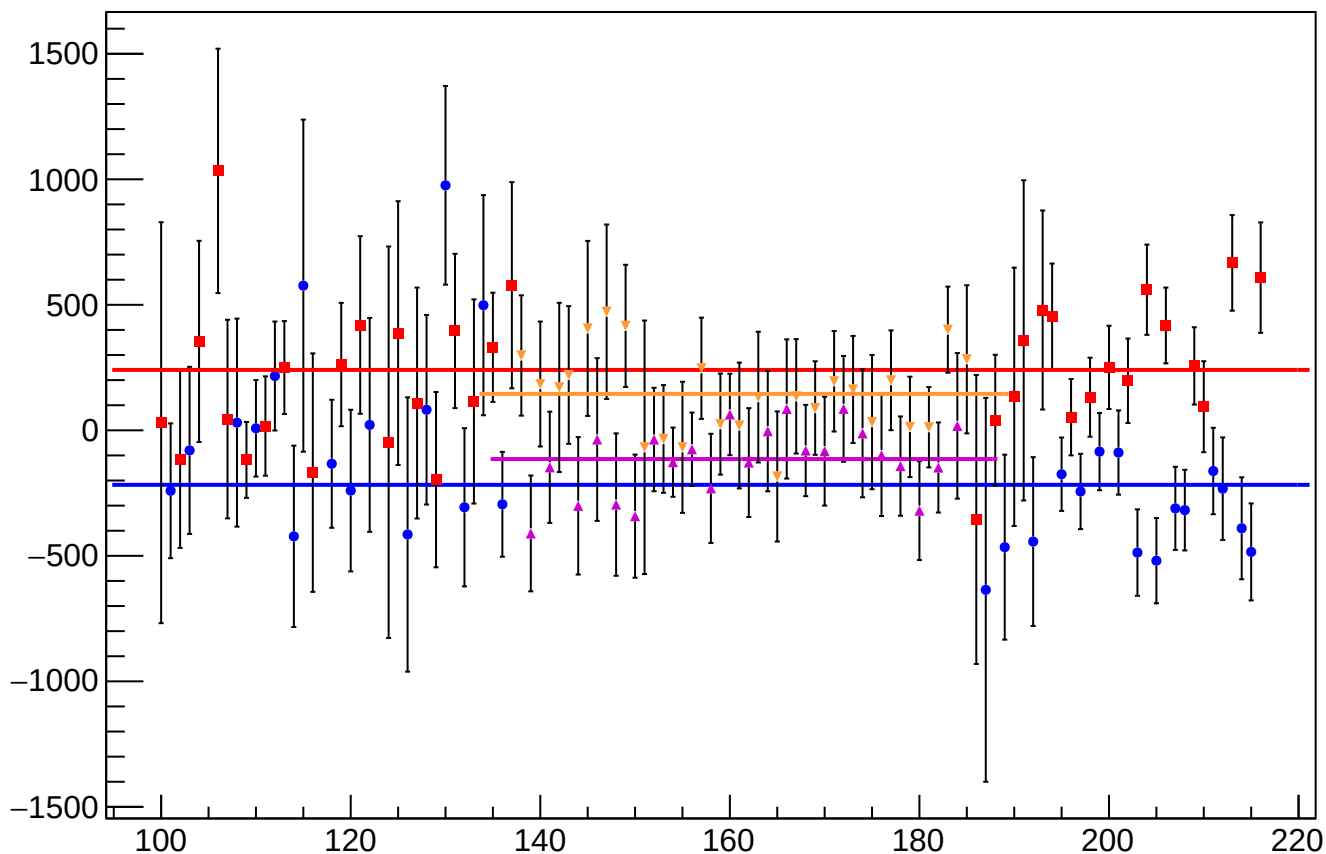
- sign  $-4.206 \pm 4.766$   $\chi^2/\text{NDF}$ : 61.0/57

# asym\_bcm\_an\_diff\_rms vs Slug



Right In:  $20518.087 \pm 4.286$   $\chi^2/\text{NDF}$ : 4148361.9/30  
 Left Out:  $25512.643 \pm 5.375$   $\chi^2/\text{NDF}$ : 7742585.8/24  
 Right Out:  $19419.235 \pm 4.002$   $\chi^2/\text{NDF}$ : 4686864.8/34  
 Left In:  $26660.853 \pm 6.251$   $\chi^2/\text{NDF}$ : 5883195.1/22  
 All:  $21994.515 \pm 2.376$   $\chi^2/\text{NDF}$ : 23979565.8  
 + sign  $22459.447 \pm 3.351$   $\chi^2/\text{NDF}$ : 12418827.6/55  
 - sign  $21524.216 \pm 3.370$   $\chi^2/\text{NDF}$ : 11522014.0/57

# asym\_bcm\_an\_ds\_mean vs Slug



Right In:  $-217.120 \pm 40.431$   $\chi^2/\text{NDF}$ : 32.5/30

Left Out:  $145.172 \pm 46.225$   $\chi^2/\text{NDF}$ : 11.2/24

Right Out:  $240.625 \pm 40.177$   $\chi^2/\text{NDF}$ : 33.2/34

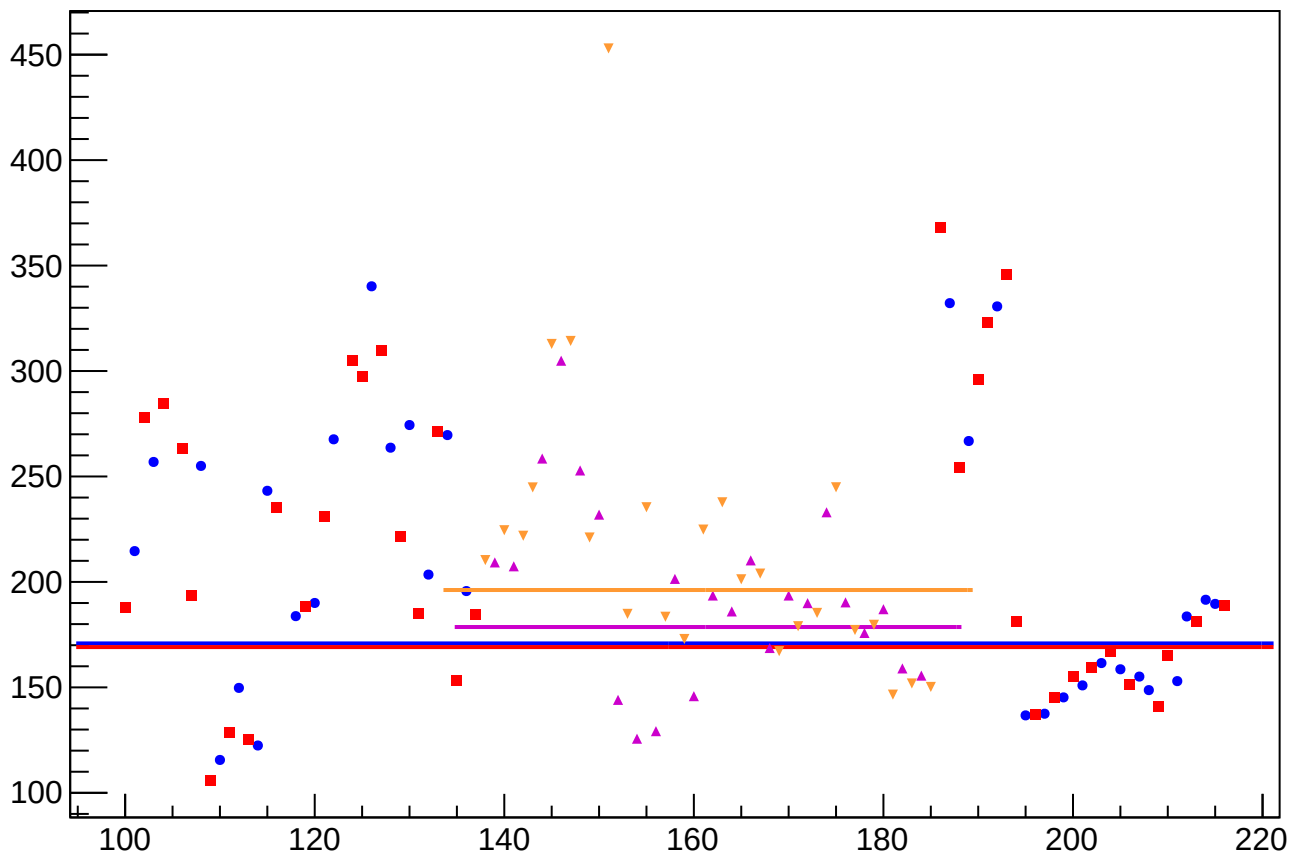
Left In:  $-114.400 \pm 43.619$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-60.093 \pm 30.433$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $10.812 \pm 21.201$   $\chi^2/\text{NDF}$ : 166.5/113

- sign  $77.671 \pm 29.552$   $\chi^2/\text{NDF}$ : 77.4/57

# asym\_bcm\_an\_ds\_rms vs Slug



Right In: 170.844 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 2338472.8/30

Left Out: 196.166 $\pm$ 0.033  $\chi^2/\text{NDF}$ :1806871.5/24

Right Out: 169.109 $\pm$ 0.028  $\chi^2/\text{NDF}$ : 3027677.5/34

Left In: 178.621 $\pm$ 0.031  $\chi^2/\text{NDF}$ :1651873.8/22

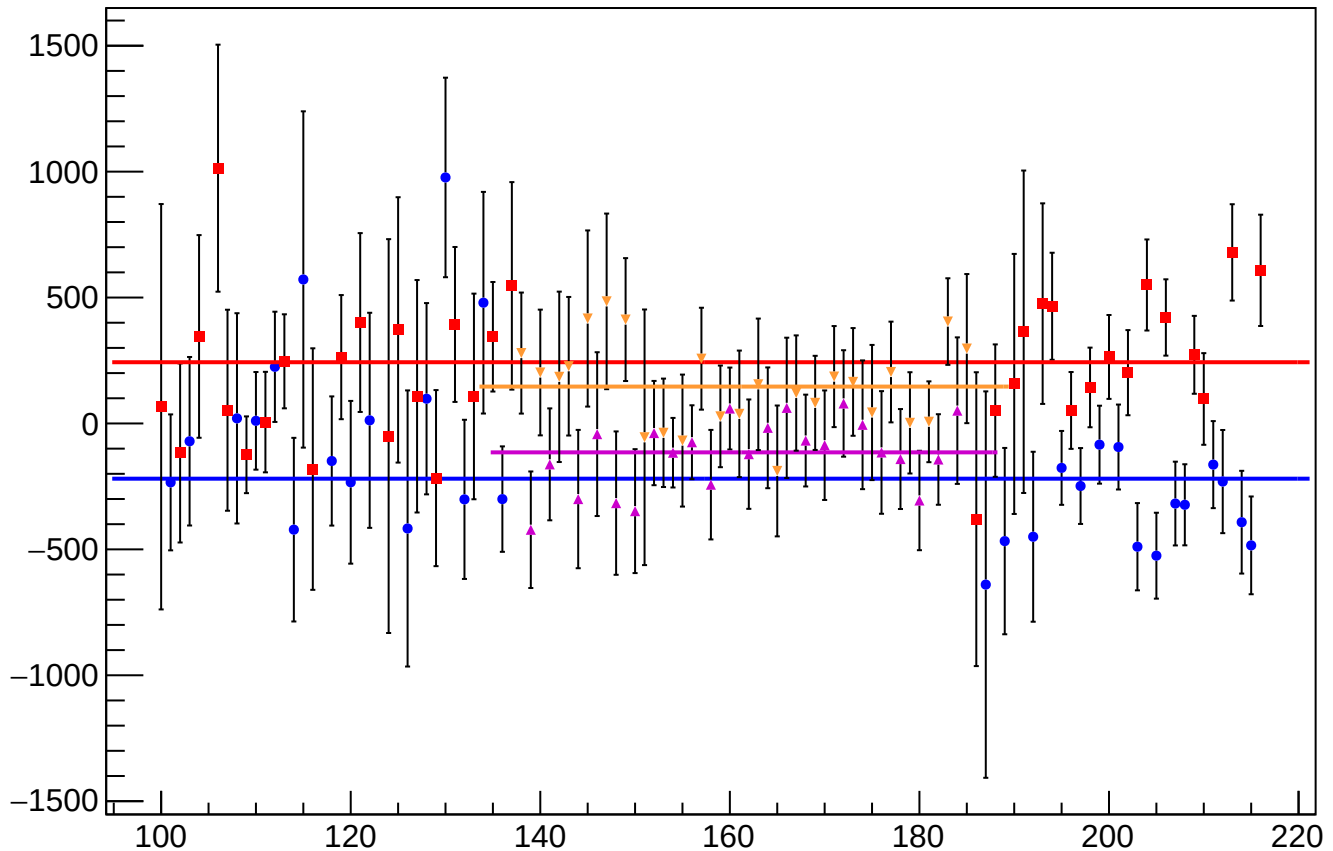
+ sign 181.819 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4485367.8/55

All: 177.524 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 9293752.7/113

- sign 173.475 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 4731001.3/57



# asym\_bcm\_an\_ds3\_mean vs Slug



Right In:  $-219.323 \pm 40.622$   $\chi^2/\text{NDF}: 32.6/30$

Left Out:  $146.417 \pm 46.379$   $\chi^2/\text{NDF}: 11.4/24$

Right Out:  $243.153 \pm 40.379$   $\chi^2/\text{NDF}: 33.3/34$

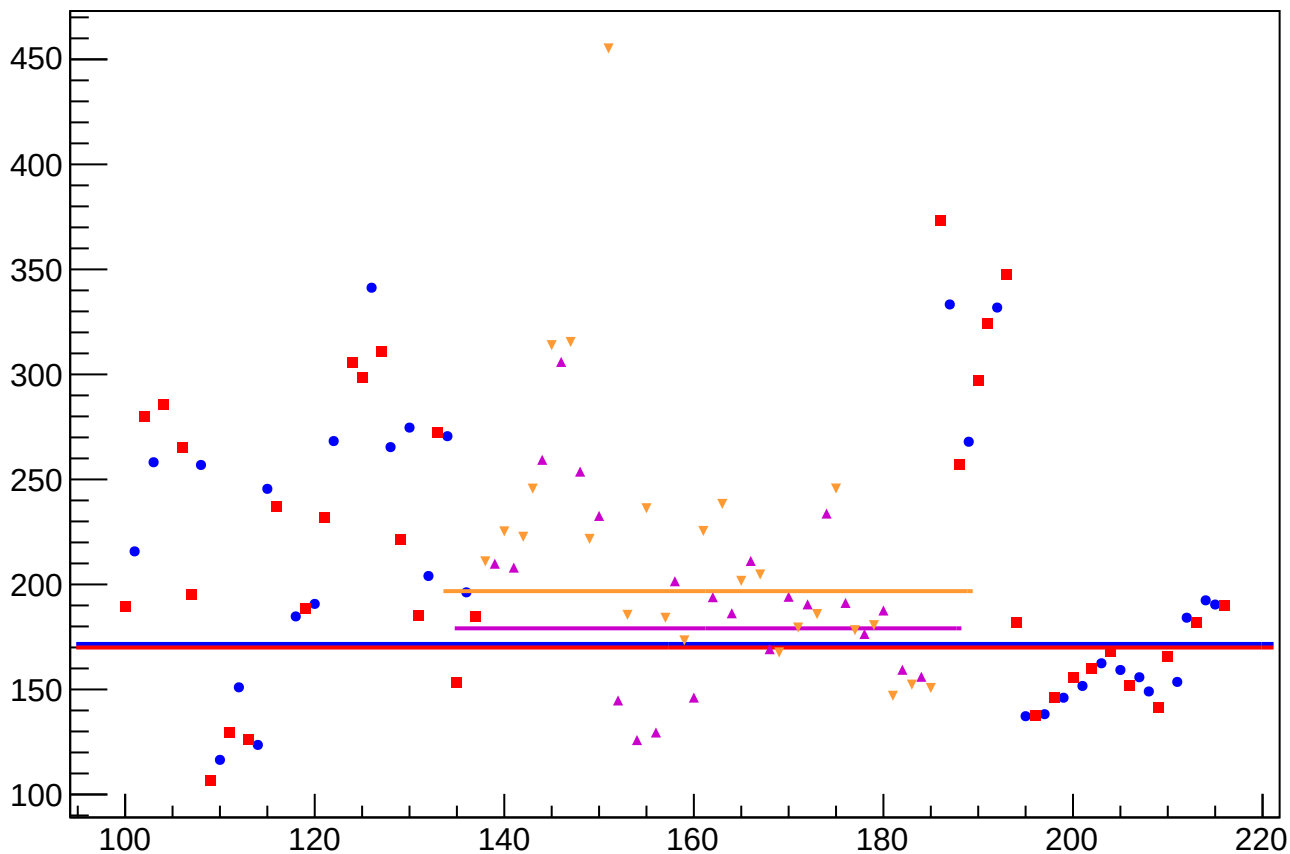
Left In:  $-114.807 \pm 43.740$   $\chi^2/\text{NDF}: 8.4/22$

+ sign  $-60.549 \pm 30.558$   $\chi^2/\text{NDF}: 79.2/55$

All:  $11.001 \pm 21.287$   $\chi^2/\text{NDF}: 167.7/113$

- sign  $78.452 \pm 29.670$   $\chi^2/\text{NDF}: 77.8/57$

# asym\_bcm\_an\_ds3\_rms vs Slug



Right In: 171.669 $\pm$ 0.029  $\chi^2$ /NDF: 2330388.9/30

Left Out: 196.805 $\pm$ 0.033  $\chi^2$ /NDF:1808608.7/24

Right Out: 169.964 $\pm$ 0.029  $\chi^2$ /NDF: 3024963.4/34

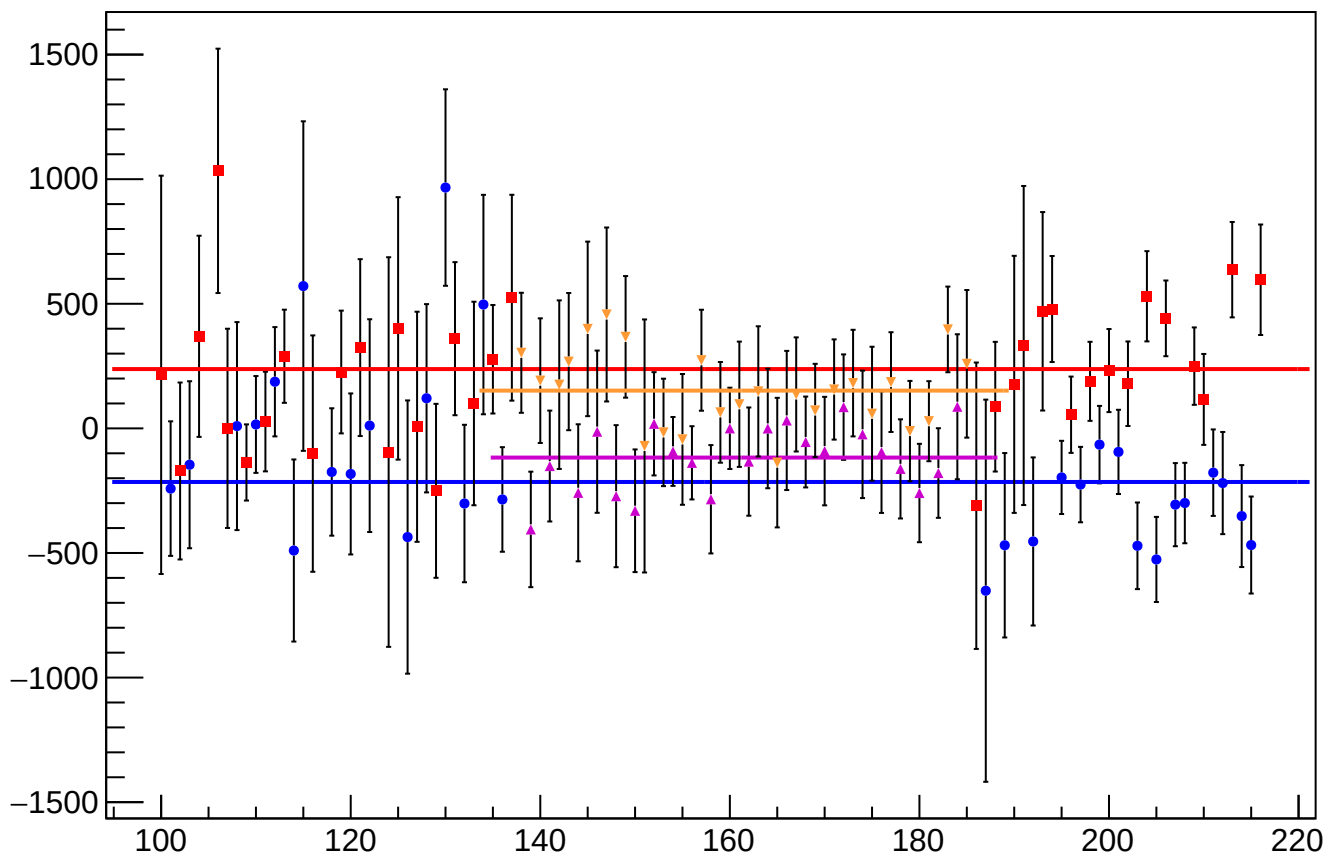
Left In: 179.101 $\pm$ 0.031  $\chi^2$ /NDF:1655866.1/22

+ sign 182.581 $\pm$ 0.022  $\chi^2$ /NDF: 4471452.0/55

All: 178.250 $\pm$ 0.015  $\chi^2$ /NDF: 9277428.6/113

- sign 174.168 $\pm$ 0.021  $\chi^2$ /NDF: 4727943.9/57

# asym\_bcm\_an\_us\_mean vs Slug



Right In:  $-215.063 \pm 40.698$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $151.598 \pm 46.419$   $\chi^2/\text{NDF}$ : 9.6/24

Right Out:  $237.984 \pm 40.434$   $\chi^2/\text{NDF}$ : 31.8/34

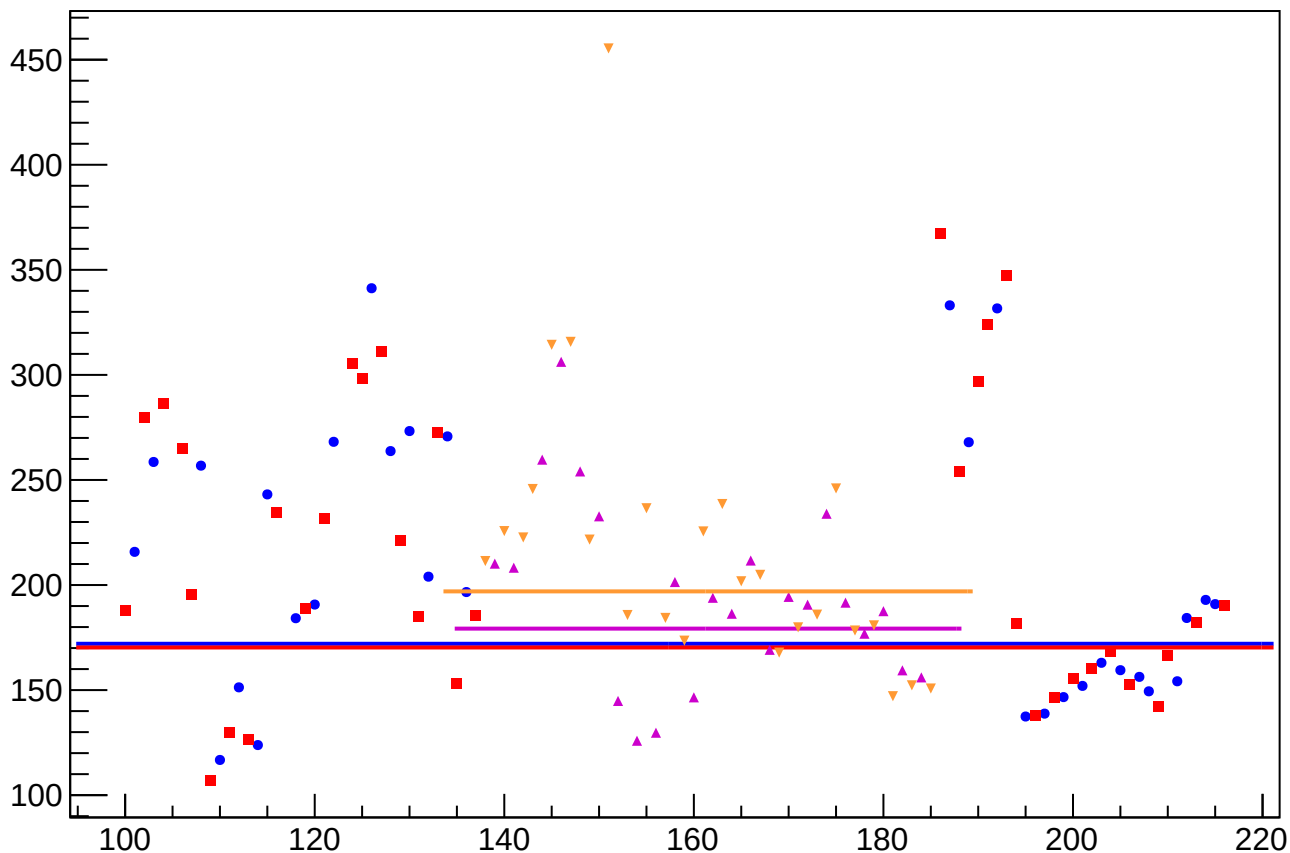
Left In:  $-117.163 \pm 43.778$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-55.710 \pm 30.602$   $\chi^2/\text{NDF}$ : 76.0/55

All:  $11.330 \pm 21.314$   $\chi^2/\text{NDF}$ : 160.2/113

- sign  $74.490 \pm 29.703$   $\chi^2/\text{NDF}$ : 74.8/57

# asym\_bcm\_an\_us\_rms vs Slug



Right In:  $172.042 \pm 0.029$   $\chi^2/\text{NDF}: 2308374.2/30$

Left Out:  $196.975 \pm 0.033$   $\chi^2/\text{NDF}: 1809307.4/24$

Right Out:  $170.279 \pm 0.029$   $\chi^2/\text{NDF}: 2989206.7/34$

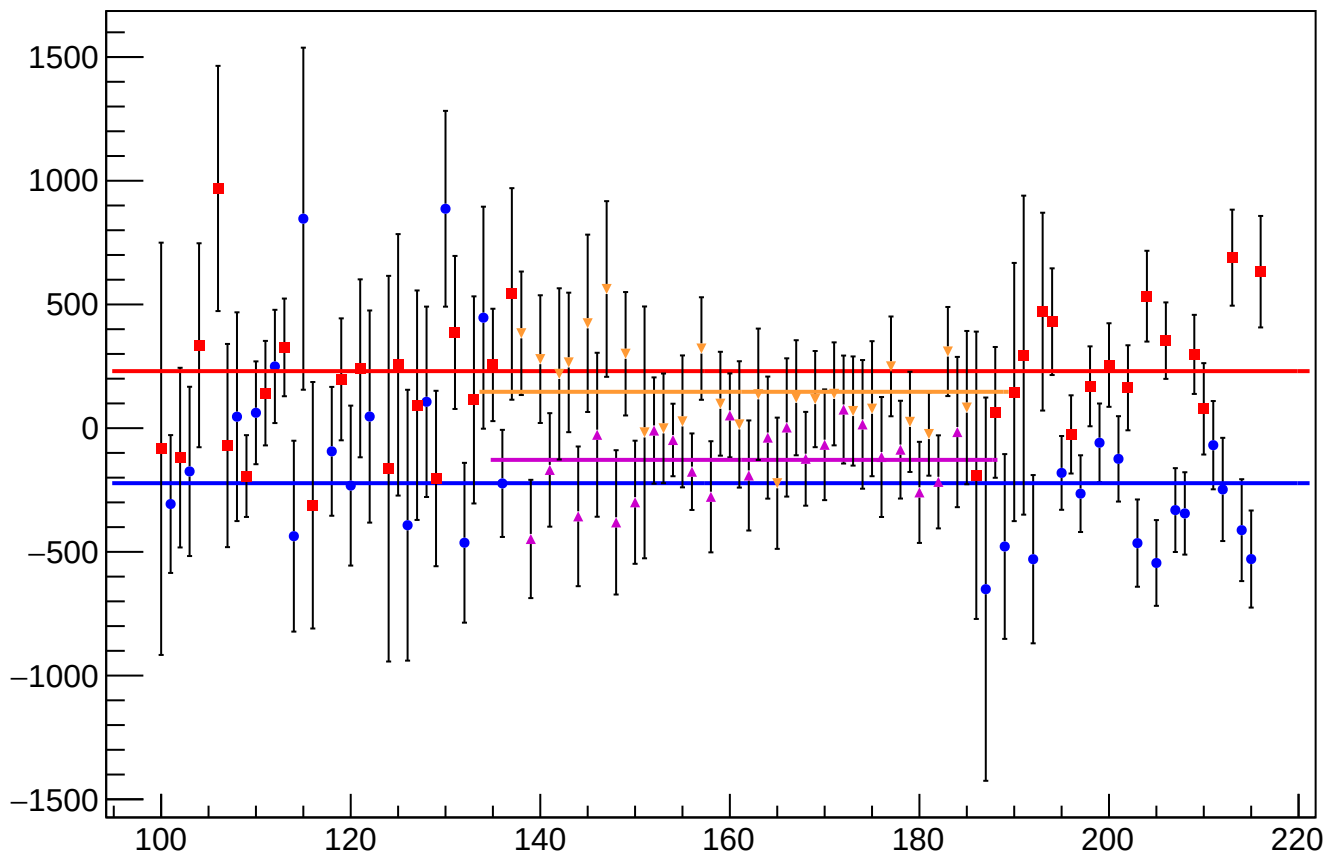
Left In:  $179.256 \pm 0.031$   $\chi^2/\text{NDF}: 1656023.5/22$

+ sign  $182.878 \pm 0.022$   $\chi^2/\text{NDF}: 4443935.0/55$

All:  $178.519 \pm 0.015$   $\chi^2/\text{NDF}: 9213381.0/113$

- sign  $174.411 \pm 0.021$   $\chi^2/\text{NDF}: 4690616.2/57$

# asym\_bcm\_dg\_us\_mean vs Slug



Right In:  $-222.362 \pm 41.599$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $146.973 \pm 47.709$   $\chi^2/\text{NDF}$ : 10.2/24

Right Out:  $230.508 \pm 41.475$   $\chi^2/\text{NDF}$ : 32.9/34

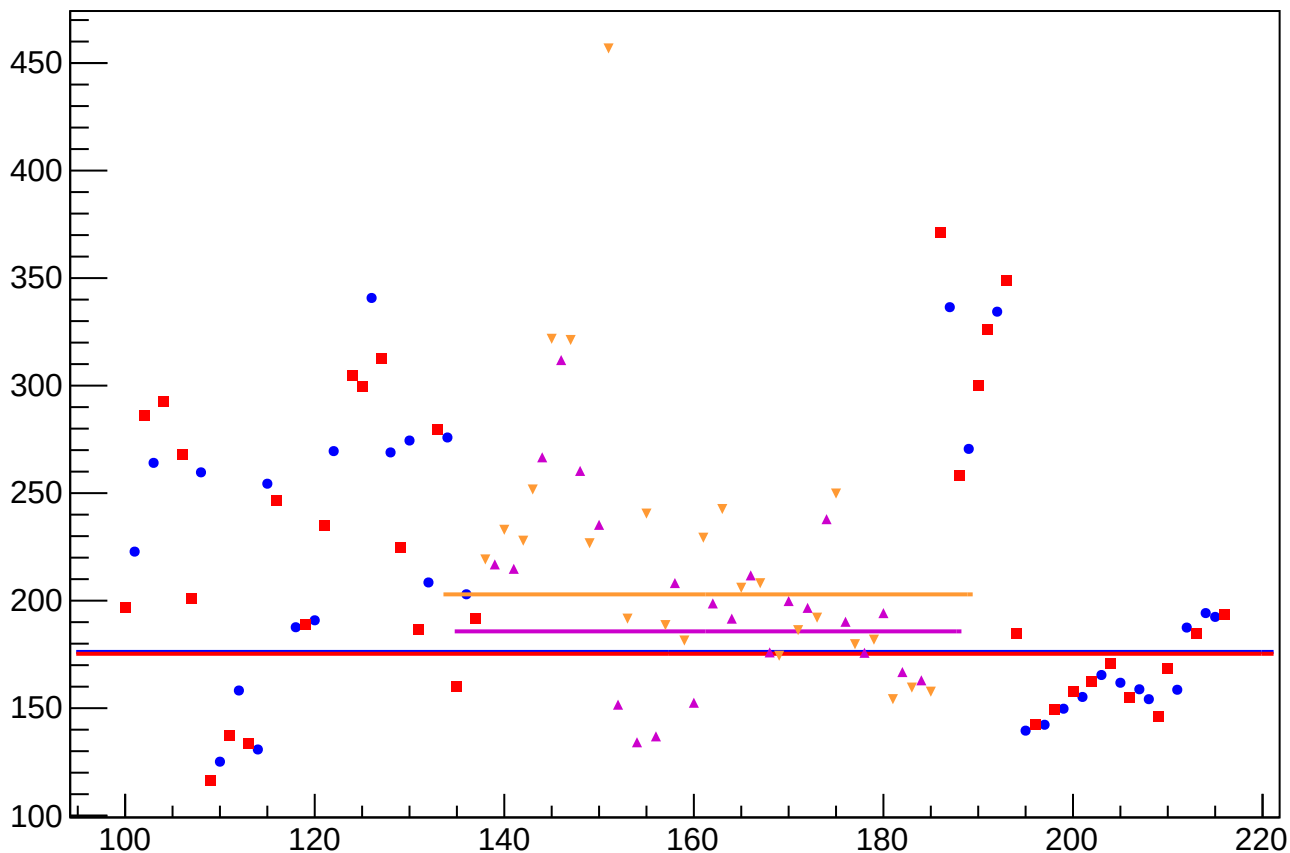
Left In:  $-128.159 \pm 45.200$   $\chi^2/\text{NDF}$ : 8.6/22

+ sign  $-62.845 \pm 31.354$   $\chi^2/\text{NDF}$ : 79.1/55

All:  $3.518 \pm 21.884$   $\chi^2/\text{NDF}$ : 163.5/113

- sign  $66.560 \pm 30.559$   $\chi^2/\text{NDF}$ : 75.7/57

# asym\_bcm\_dg\_us\_rms vs Slug



Right In: 176.157 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 2204499.9/30

Left Out: 202.920 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 1700115.2/24

Right Out: 175.298 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 2777696.7/34

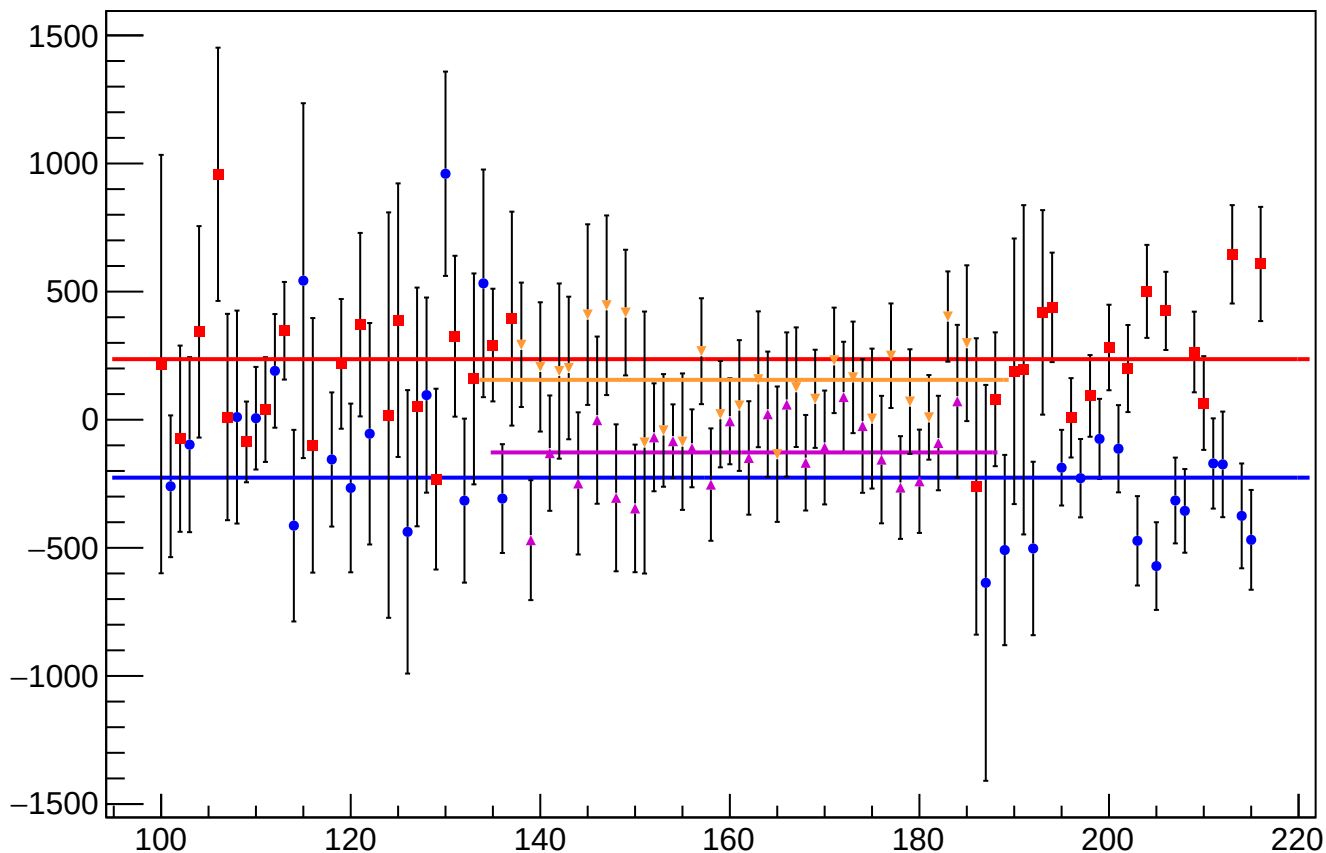
Left In: 185.716 $\pm$ 0.032  $\chi^2/\text{NDF}$ : 1489487.2/22

+ sign 187.716 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4262149.1/55

All: 183.790 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 8648182.1/113

- sign 180.060 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4324869.2/57

# asym\_bcm\_dg\_ds\_mean vs Slug



Right In:  $-226.069 \pm 41.081$   $\chi^2/\text{NDF}$ : 32.1/30

Left Out:  $155.646 \pm 47.263$   $\chi^2/\text{NDF}$ : 10.7/24

Right Out:  $236.387 \pm 40.855$   $\chi^2/\text{NDF}$ : 28.9/34

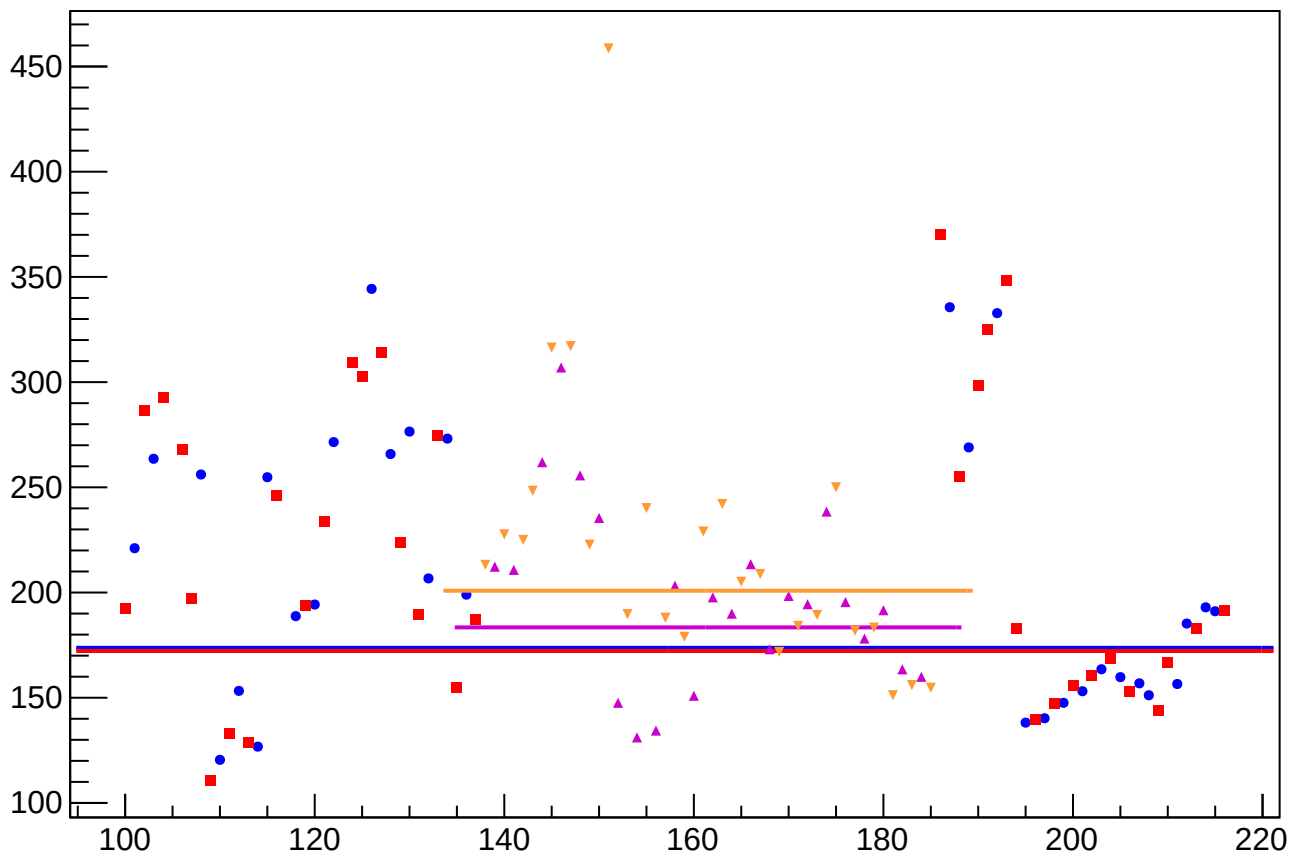
Left In:  $-127.660 \pm 44.698$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-61.793 \pm 31.006$   $\chi^2/\text{NDF}$ : 79.9/55

All:  $6.284 \pm 21.618$   $\chi^2/\text{NDF}$ : 162.4/113

- sign  $70.682 \pm 30.156$   $\chi^2/\text{NDF}$ : 73.0/57

# asym\_bcm\_dg\_ds\_rms vs Slug



Right In: 173.722 $\pm$ 0.029  $\chi^2$ /NDF: 2295407.1/30

Left Out: 200.865 $\pm$ 0.033  $\chi^2$ /NDF:1727404.3/24

Right Out: 172.219 $\pm$ 0.029  $\chi^2$ /NDF: 2949048.8/34

Left In: 183.433 $\pm$ 0.032  $\chi^2$ /NDF:1530678.8/22

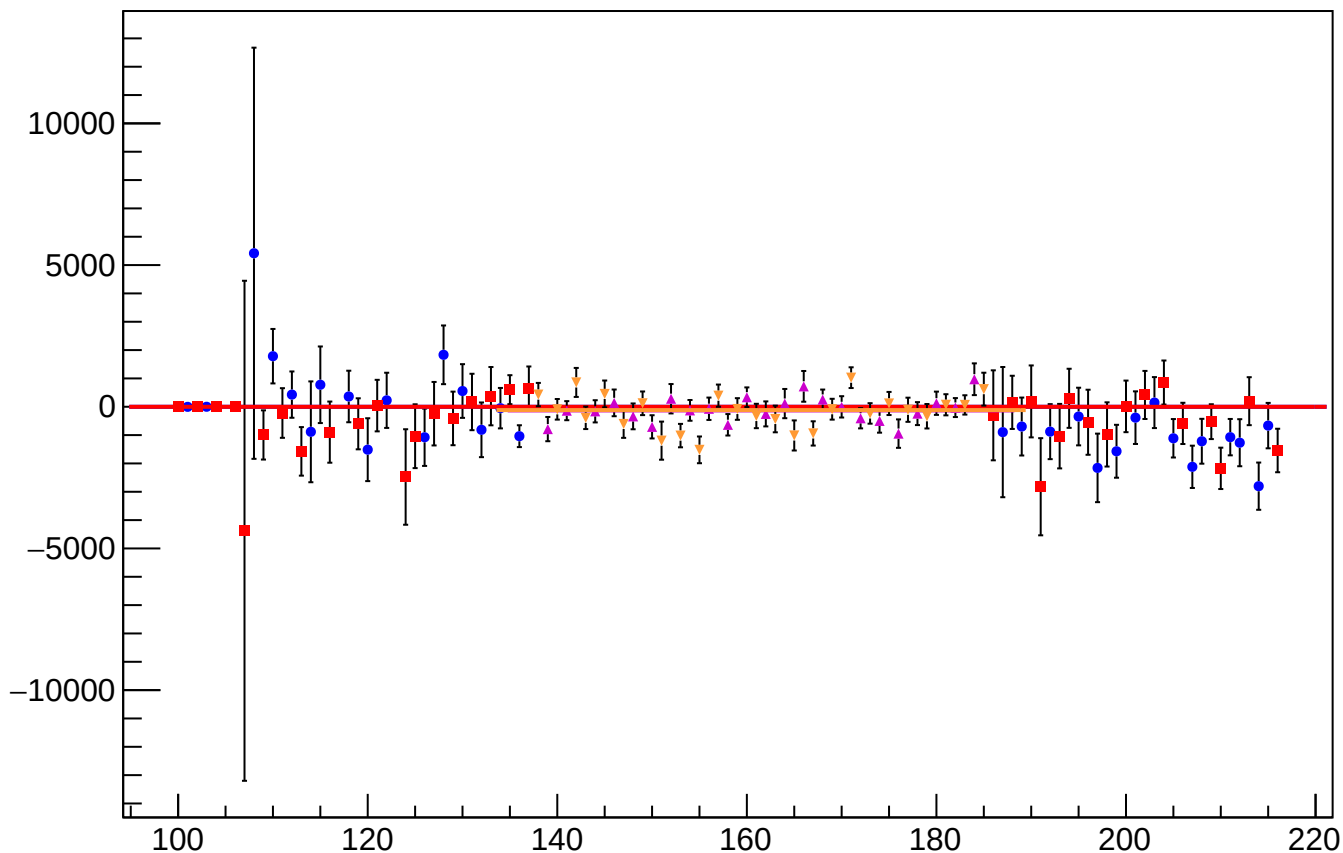
+ sign 185.403 $\pm$ 0.022  $\chi^2$ /NDF: 4398555.2/55

All: 181.251 $\pm$ 0.015  $\chi^2$ /NDF: 9016664.5/113

- sign 177.323 $\pm$ 0.021  $\chi^2$ /NDF: 4548318.2/57



# asym\_cav4bQ\_mean vs Slug



Right In:  $-1.349 \pm 2.171$   $\chi^2/\text{NDF}$ : 57.8/30

Left Out:  $-117.658 \pm 84.207$   $\chi^2/\text{NDF}$ : 46.4/24

Right Out:  $-1.416 \pm 2.022$   $\chi^2/\text{NDF}$ : 37.3/34

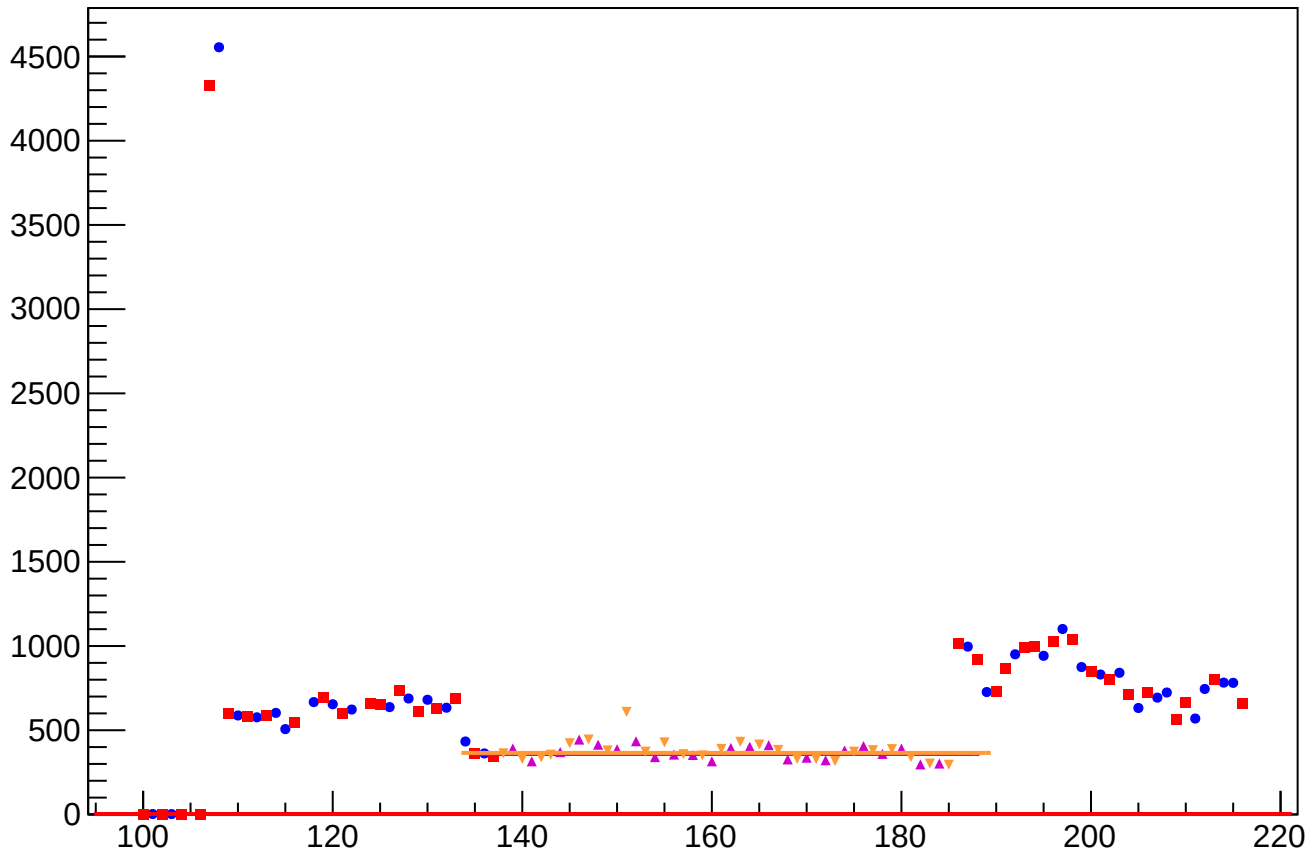
Left In:  $-129.738 \pm 85.075$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-1.426 \pm 2.170$   $\chi^2/\text{NDF}$ : 106.1/55

All:  $-1.459 \pm 1.479$   $\chi^2/\text{NDF}$ : 167.4/113

- sign  $-1.488 \pm 2.022$   $\chi^2/\text{NDF}$ : 61.2/57

# asym\_cav4bQ\_rms vs Slug



Right In: 2.548 $\pm$ 0.002  $\chi^2$ /NDF: 35246869.6/30

Left Out: 365.603 $\pm$ 0.060  $\chi^2$ /NDF: 668124.0/24

Right Out: 2.524 $\pm$ 0.001  $\chi^2$ /NDF: 35699175.1/34

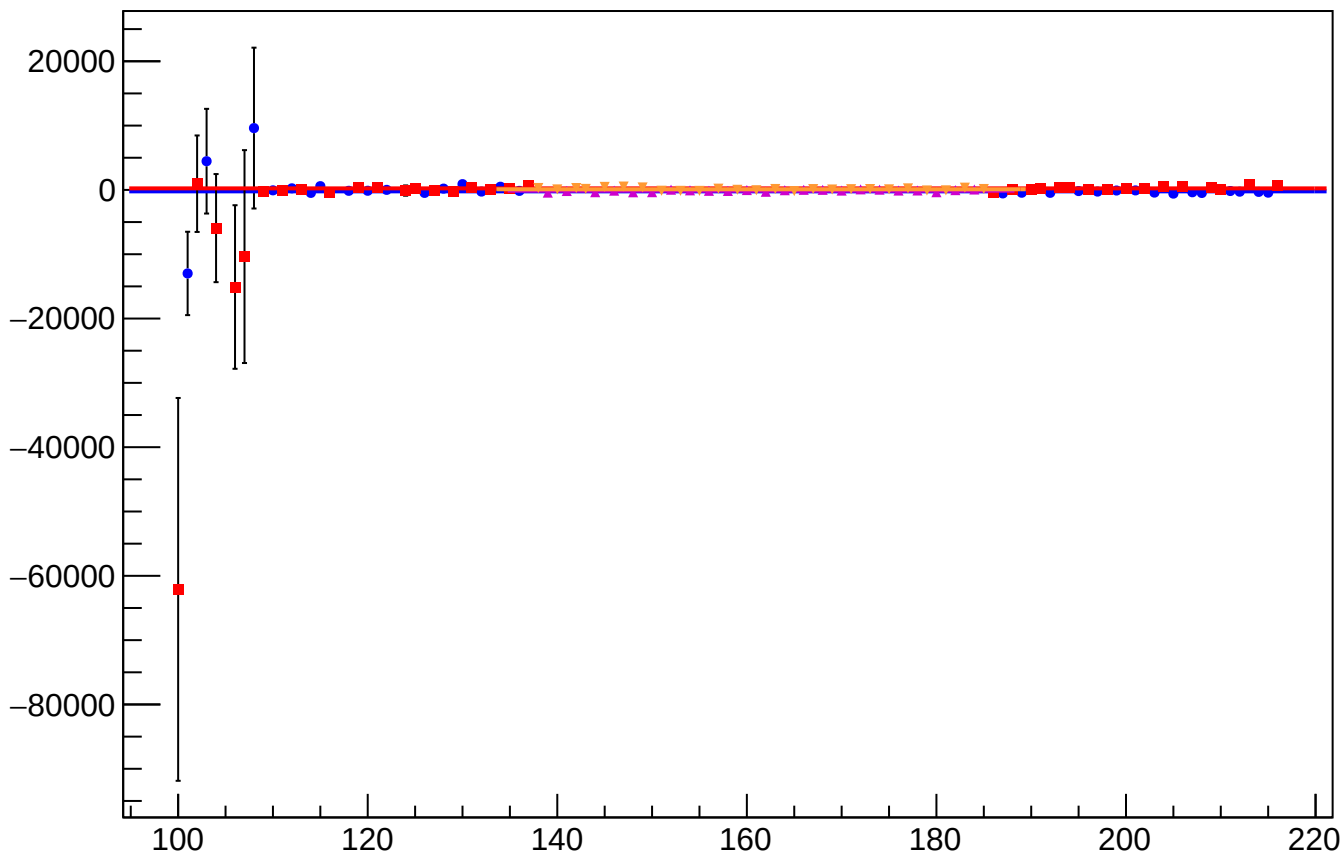
Left In: 359.024 $\pm$ 0.060  $\chi^2$ /NDF: 446263.1/22

+ sign 2.789 $\pm$ 0.002  $\chi^2$ /NDF: 73067248.2/55

All: 2.755 $\pm$ 0.001  $\chi^2$ /NDF: 144313320.7/113

- sign 2.725 $\pm$ 0.001  $\chi^2$ /NDF: 71245147.4/57

# asym\_cav4cQ\_mean vs Slug



Right In: -224.567 $\pm$ 44.619  $\chi^2$ /NDF: 34.5/30

Left Out: 99.601 $\pm$ 48.250  $\chi^2$ /NDF: 12.7/24

Right Out: 238.126 $\pm$ 44.838  $\chi^2$ /NDF: 37.5/34

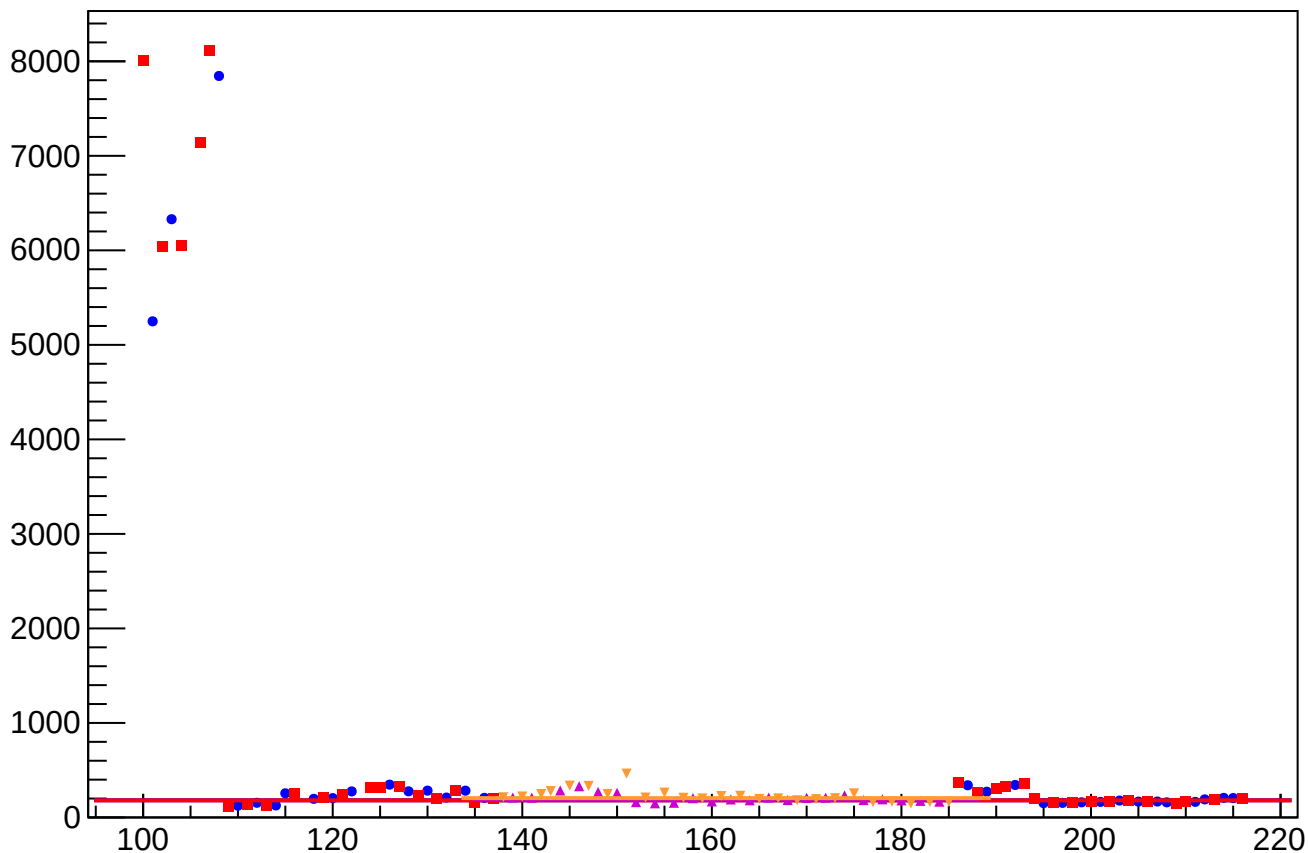
Left In: -119.345 $\pm$ 46.957  $\chi^2$ /NDF: 9.3/22

+ sign -75.137 $\pm$ 32.759  $\chi^2$ /NDF: 71.6/55

All: -3.027 $\pm$ 23.046  $\chi^2$ /NDF: 158.2/113

- sign 67.637 $\pm$ 32.429  $\chi^2$ /NDF: 77.1/57

# asym\_cav4cQ\_rms vs Slug



Right In: 181.787 $\pm$ 0.032  $\chi^2$ /NDF: 4950620.2/30

Left Out: 204.581 $\pm$ 0.034  $\chi^2$ /NDF:1975114.7/24

Right Out: 181.055 $\pm$ 0.032  $\chi^2$ /NDF: 5618788.0/34

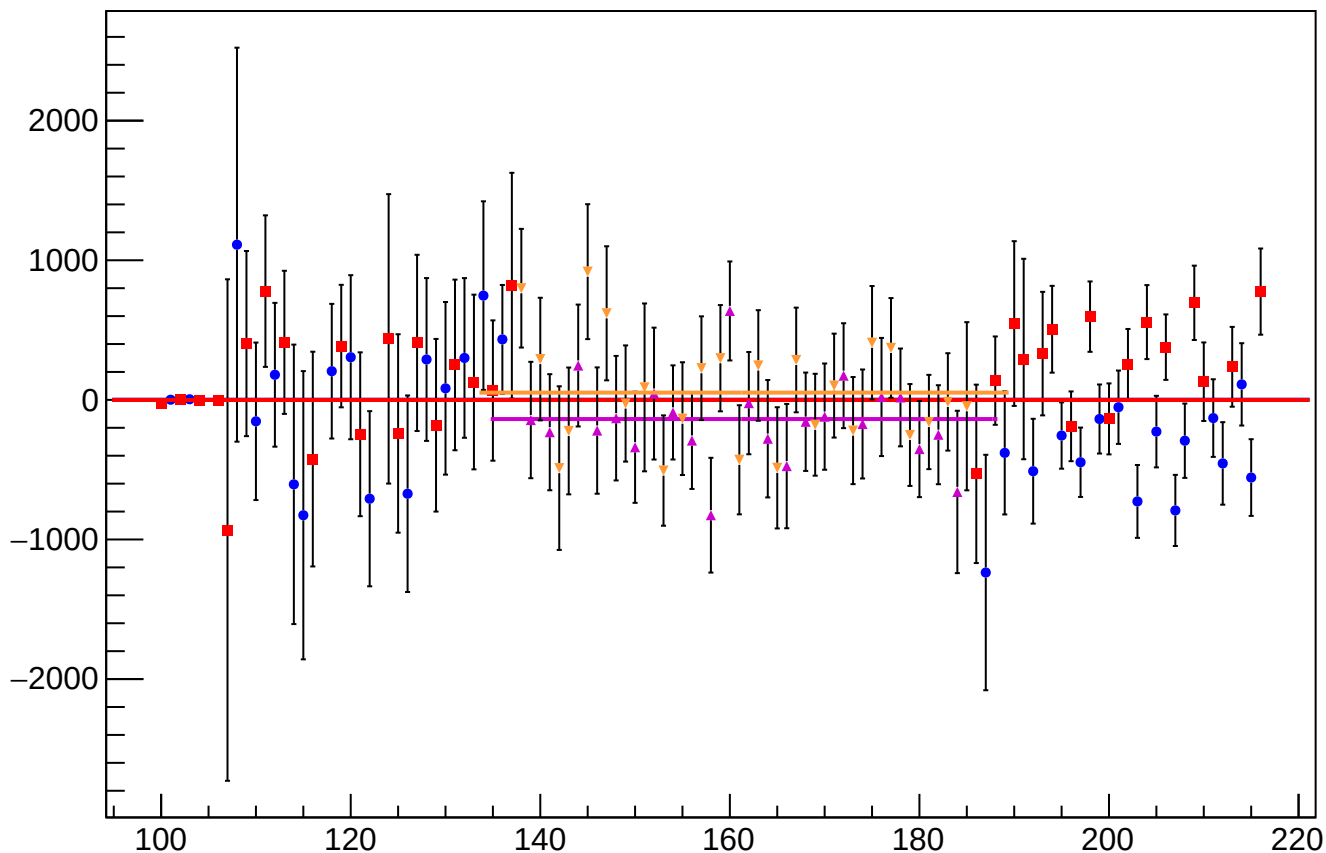
Left In: 193.895 $\pm$ 0.033  $\chi^2$ /NDF:1191589.3/22

+ sign 192.294 $\pm$ 0.023  $\chi^2$ /NDF: 7166329.7/55

All: 189.711 $\pm$ 0.016  $\chi^2$ /NDF: 14079565.8/1

- sign 187.179 $\pm$ 0.023  $\chi^2$ /NDF: 6888603.0/57

# asym\_cav4dQ\_mean vs Slug



Right In:  $1.274 \pm 1.660$   $\chi^2/\text{NDF}$ : 43.8/30

Left Out:  $51.829 \pm 81.555$   $\chi^2/\text{NDF}$ : 19.4/24

Right Out:  $-0.966 \pm 1.527$   $\chi^2/\text{NDF}$ : 42.9/34

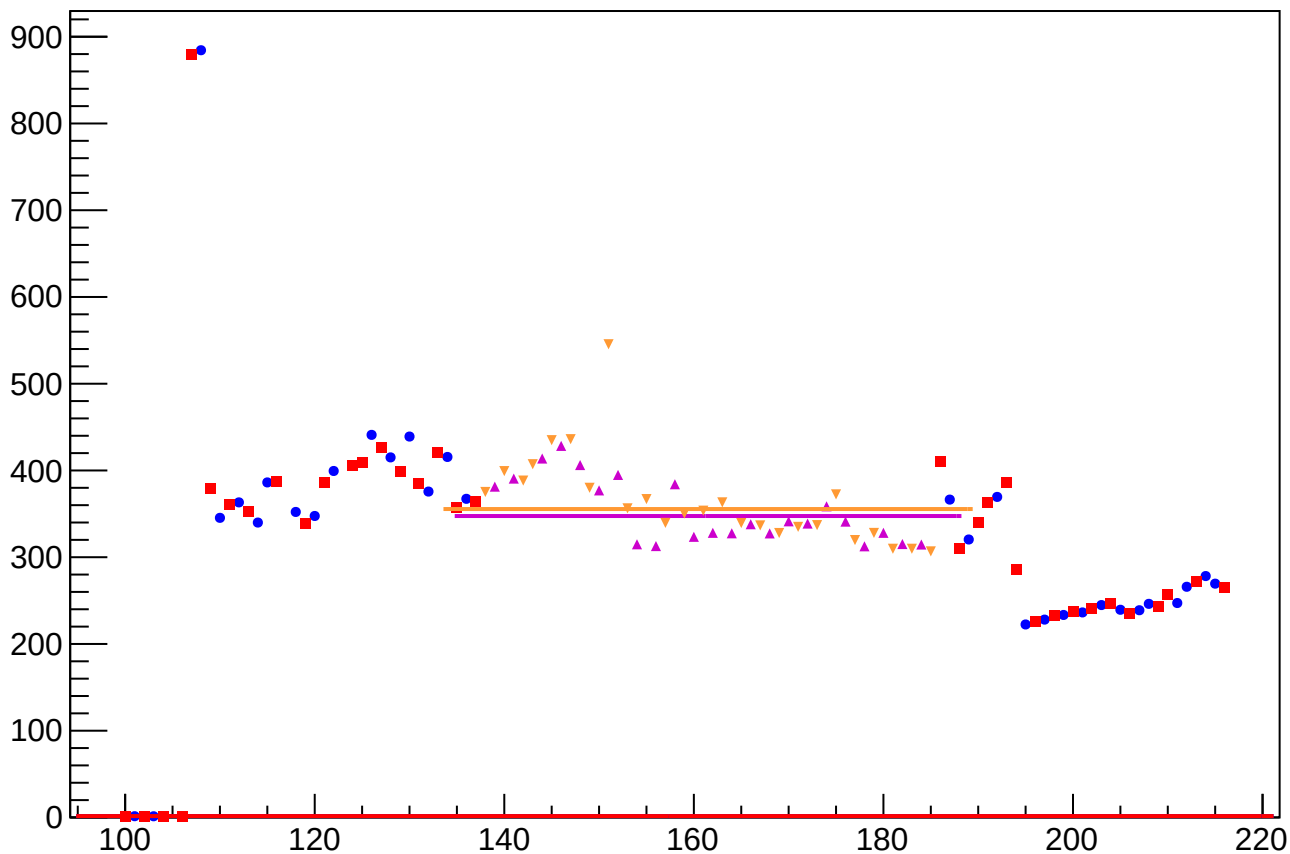
Left In:  $-137.399 \pm 82.111$   $\chi^2/\text{NDF}$ : 12.2/22

+ sign  $1.295 \pm 1.660$   $\chi^2/\text{NDF}$ : 63.6/55

All:  $0.045 \pm 1.124$   $\chi^2/\text{NDF}$ : 122.5/113

- sign  $-1.013 \pm 1.527$   $\chi^2/\text{NDF}$ : 57.8/57

# asym\_cav4dQ\_rms vs Slug



Right In:  $1.599 \pm 0.001$   $\chi^2/\text{NDF}$ : 35544640.1/30

Left Out:  $355.535 \pm 0.058$   $\chi^2/\text{NDF}$ : 528878.5/24

Right Out:  $1.574 \pm 0.001$   $\chi^2/\text{NDF}$ : 35392146.9/34

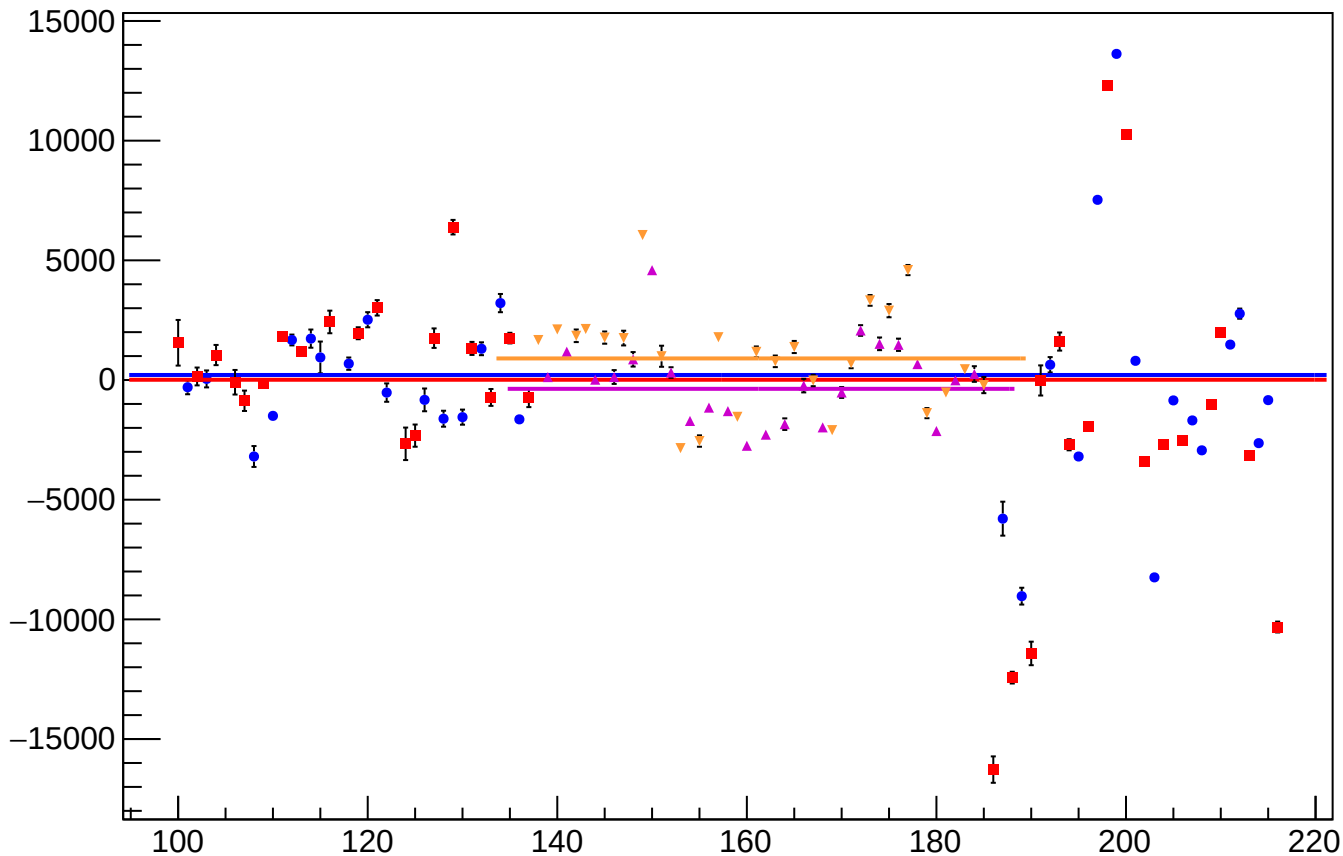
Left In:  $347.484 \pm 0.058$   $\chi^2/\text{NDF}$ : 344530.3/22

+ sign  $1.746 \pm 0.001$   $\chi^2/\text{NDF}$ : 73726466.6/55

All:  $1.717 \pm 0.001$   $\chi^2/\text{NDF}$ : 144945917.8/113

- sign  $1.693 \pm 0.001$   $\chi^2/\text{NDF}$ : 71218380.5/57

# asym\_bcm0l02\_mean vs Slug



Right In: 210.793 $\pm$ 42.720  $\chi^2$ /NDF: 12241.9/30

Left Out: 901.476 $\pm$ 44.481  $\chi^2$ /NDF:2411.0/24

Right Out: 11.334 $\pm$ 42.381  $\chi^2$ /NDF: 16345.8/34

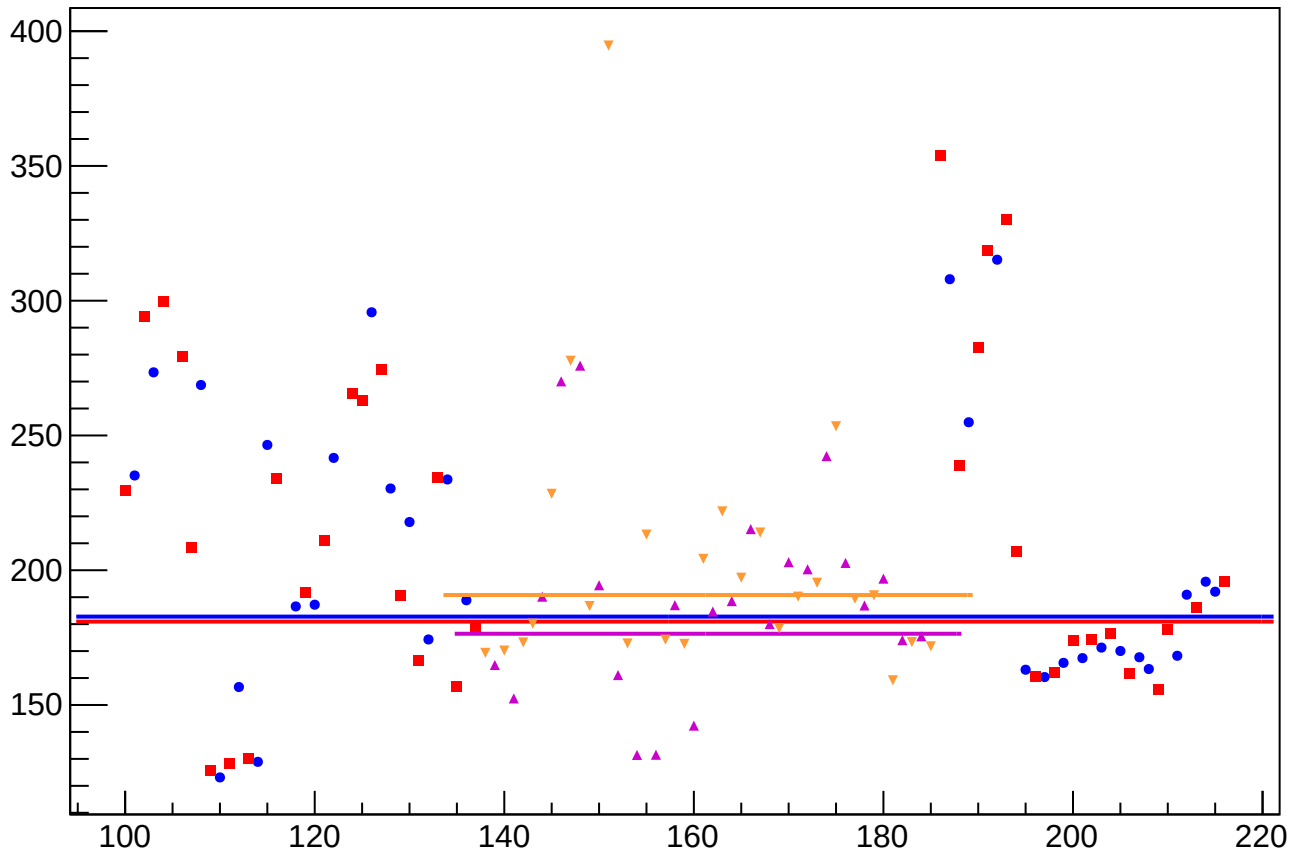
Left In: -368.252 $\pm$ 42.700  $\chi^2$ /NDF:1593.0/22

+ sign 542.191 $\pm$ 30.811  $\chi^2$ /NDF: 14778.3/55

All: 173.937 $\pm$ 21.524  $\chi^2$ /NDF: 33035.9/113

- sign -177.036 $\pm$ 30.080  $\chi^2$ /NDF: 17978.6/57

# asym\_bcm0l02\_rms vs Slug



Right In: 182.791+/-0.030  $\chi^2/\text{NDF}$ : 1456481.3/30

Left Out: 190.801+/-0.031  $\chi^2/\text{NDF}$ :1019598.1/24

Right Out: 180.945+/-0.030  $\chi^2/\text{NDF}$ : 2196214.5/34

Left In: 176.431+/-0.030  $\chi^2/\text{NDF}$ :1257661.0/22

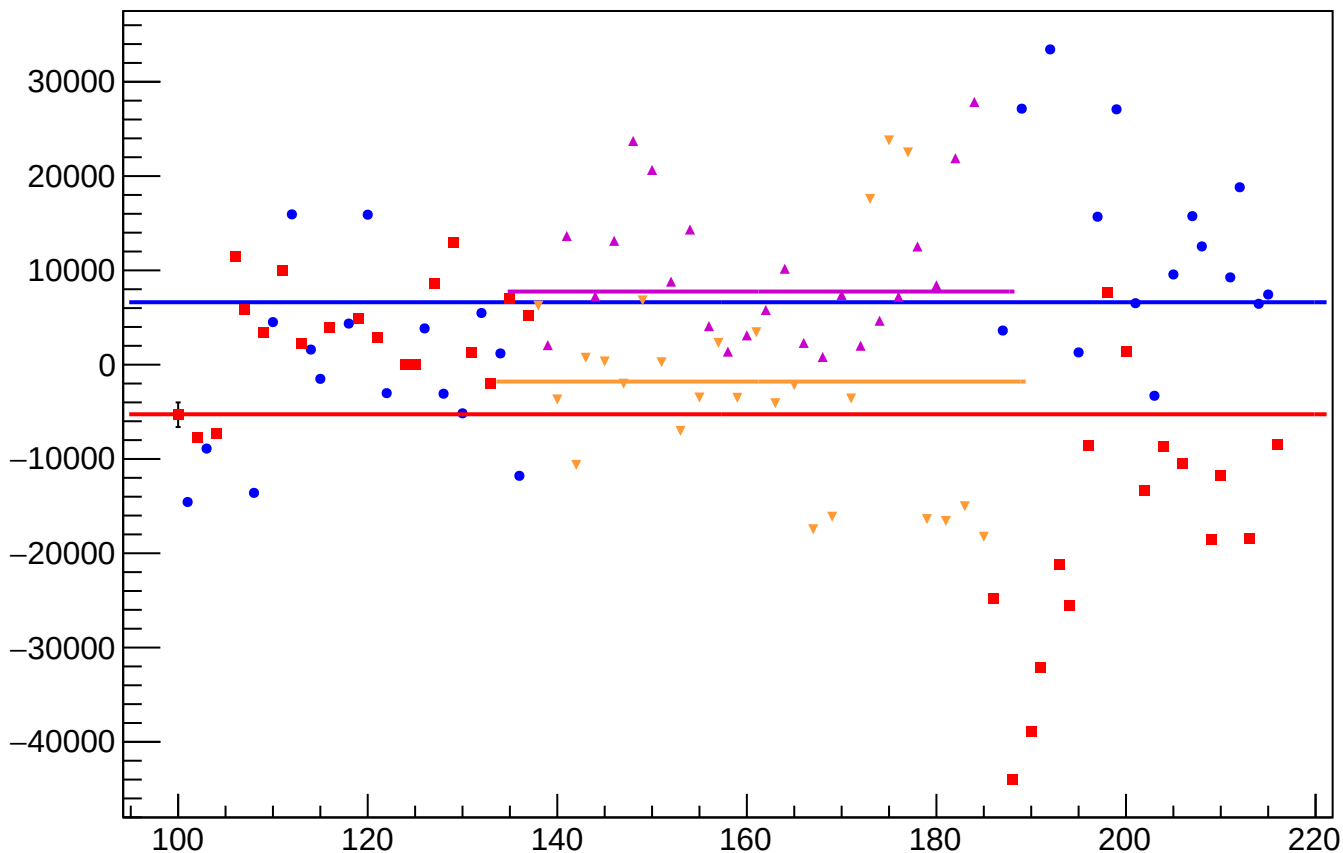
+ sign 186.634+/-0.022  $\chi^2/\text{NDF}$ : 2509817.1/55

All: 182.574+/-0.015  $\chi^2/\text{NDF}$ : 6042769.2/113

- sign 178.705+/-0.021  $\chi^2/\text{NDF}$ : 3465132.3/57



# asym\_bpm0i02WS\_mean vs Slug



Right In:  $6622.063 \pm 38.494$   $\chi^2/\text{NDF}: 96708.1/30$

Left Out:  $-1790.289 \pm 40.910$   $\chi^2/\text{NDF}: 65745.9/24$

Right Out:  $-5259.429 \pm 37.280$   $\chi^2/\text{NDF}: 147172.3/34$

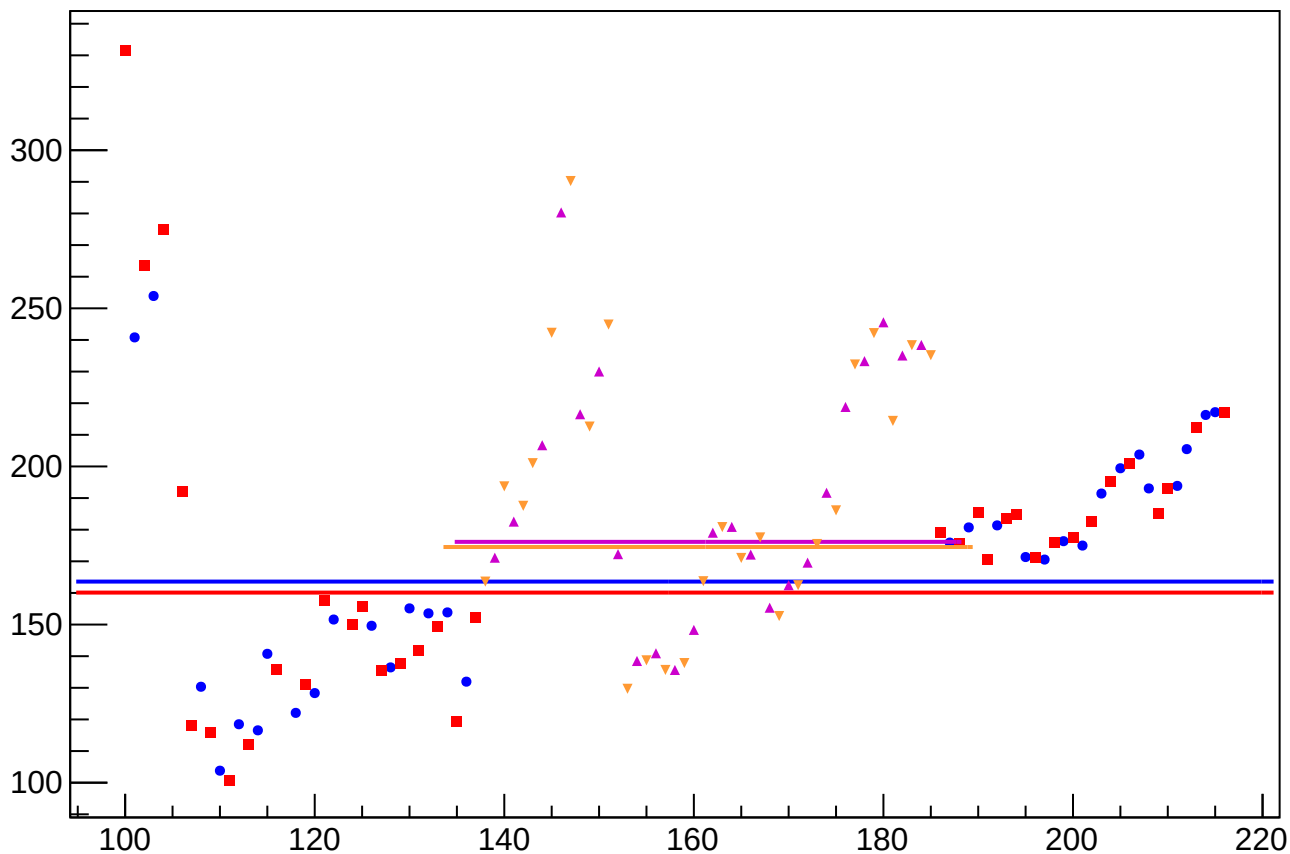
Left In:  $7754.468 \pm 42.571$   $\chi^2/\text{NDF}: 23278.0/22$

+ sign  $2671.646 \pm 28.034$   $\chi^2/\text{NDF}: 184881.6/55$

All:  $1530.772 \pm 19.827$   $\chi^2/\text{NDF}: 411536.3/11$

- sign  $388.946 \pm 28.046$   $\chi^2/\text{NDF}: 223341.2/57$

# asym\_bpm0i02WS\_rms vs Slug



Right In: 163.592 $\pm$ 0.027  $\chi^2$ /NDF: 1660588.8/30

Left Out: 174.520 $\pm$ 0.029  $\chi^2$ /NDF: 1659469.6/24

Right Out: 160.112 $\pm$ 0.026  $\chi^2$ /NDF: 1934130.3/34

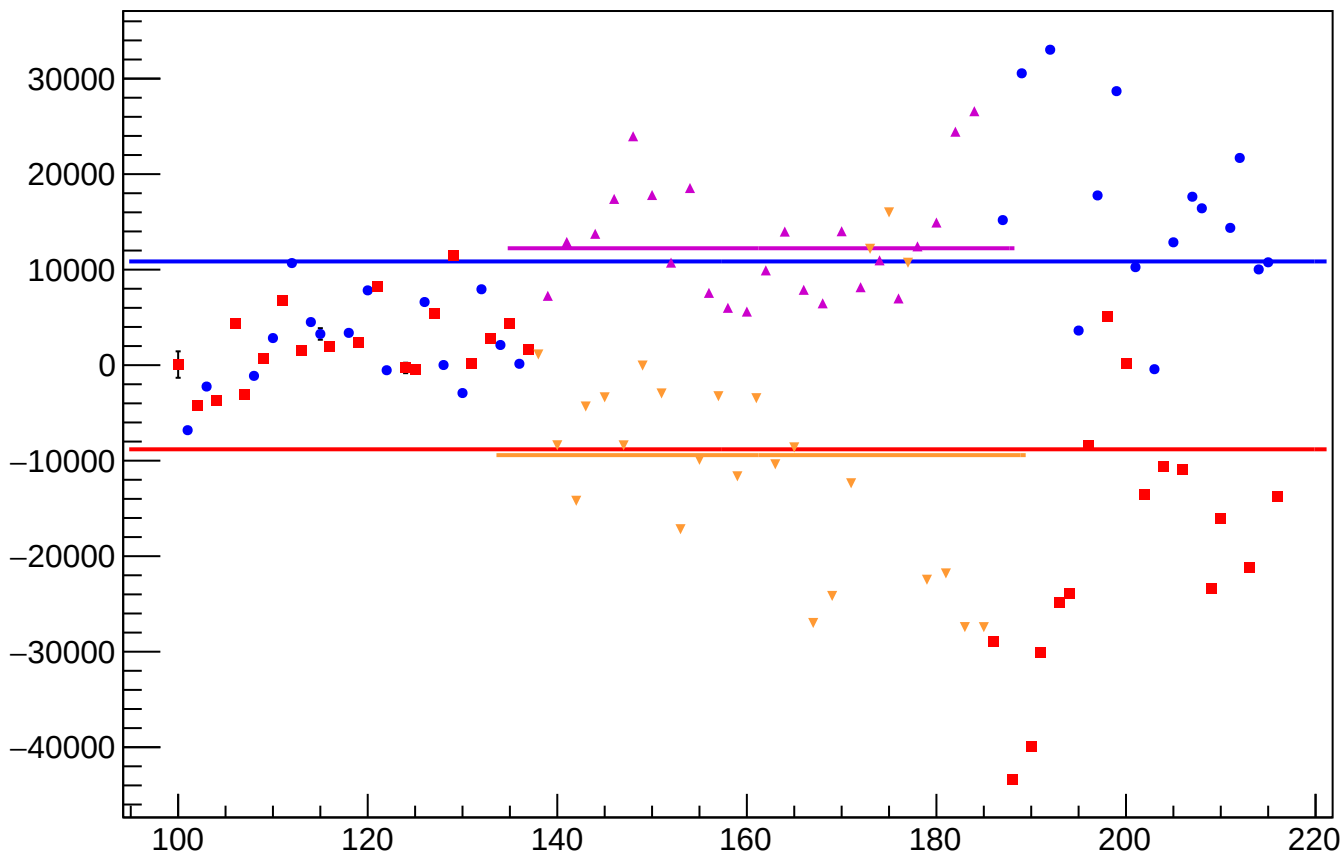
Left In: 176.155 $\pm$ 0.030  $\chi^2$ /NDF: 1367059.2/22

+ sign 168.724 $\pm$ 0.020  $\chi^2$ /NDF: 3395760.4/55

All: 167.900 $\pm$ 0.014  $\chi^2$ /NDF: 6861158.8/113

- sign 167.075 $\pm$ 0.020  $\chi^2$ /NDF: 3461939.5/57

# asym\_bpm0i02aWS\_mean vs Slug



Right In: 10858.808+/-41.986  $\chi^2/\text{NDF}$ : 56817.9/30

Left Out: -9420.181+/-45.698  $\chi^2/\text{NDF}$ : 64719.0/24

Right Out: -8810.155+/-40.821  $\chi^2/\text{NDF}$ : 118713.7/34

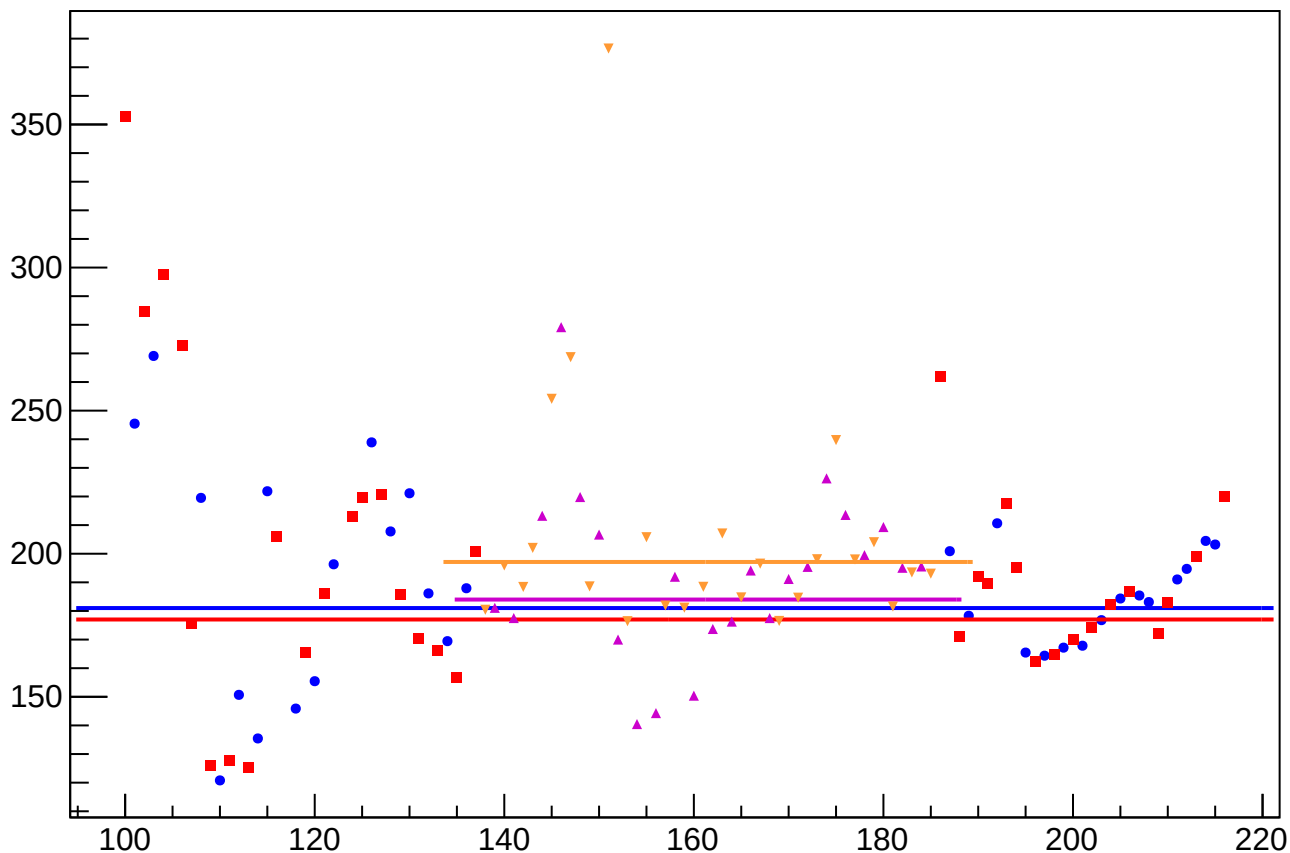
Left In: 12238.678+/-44.195  $\chi^2/\text{NDF}$ : 16015.8/22

+ sign 1576.266+/-30.918  $\chi^2/\text{NDF}$ : 228320.9/55

All: 1217.616+/-21.525  $\chi^2/\text{NDF}$ : 485716.7/11

- sign 880.236+/-29.987  $\chi^2/\text{NDF}$ : 257134.7/57

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 181.014+/-0.030  $\chi^2/\text{NDF}$ : 835574.4/30

Left Out: 197.122+/-0.032  $\chi^2/\text{NDF}$ : 732529.8/24

Right Out: 177.017+/-0.029  $\chi^2/\text{NDF}$ : 1292980.5/34

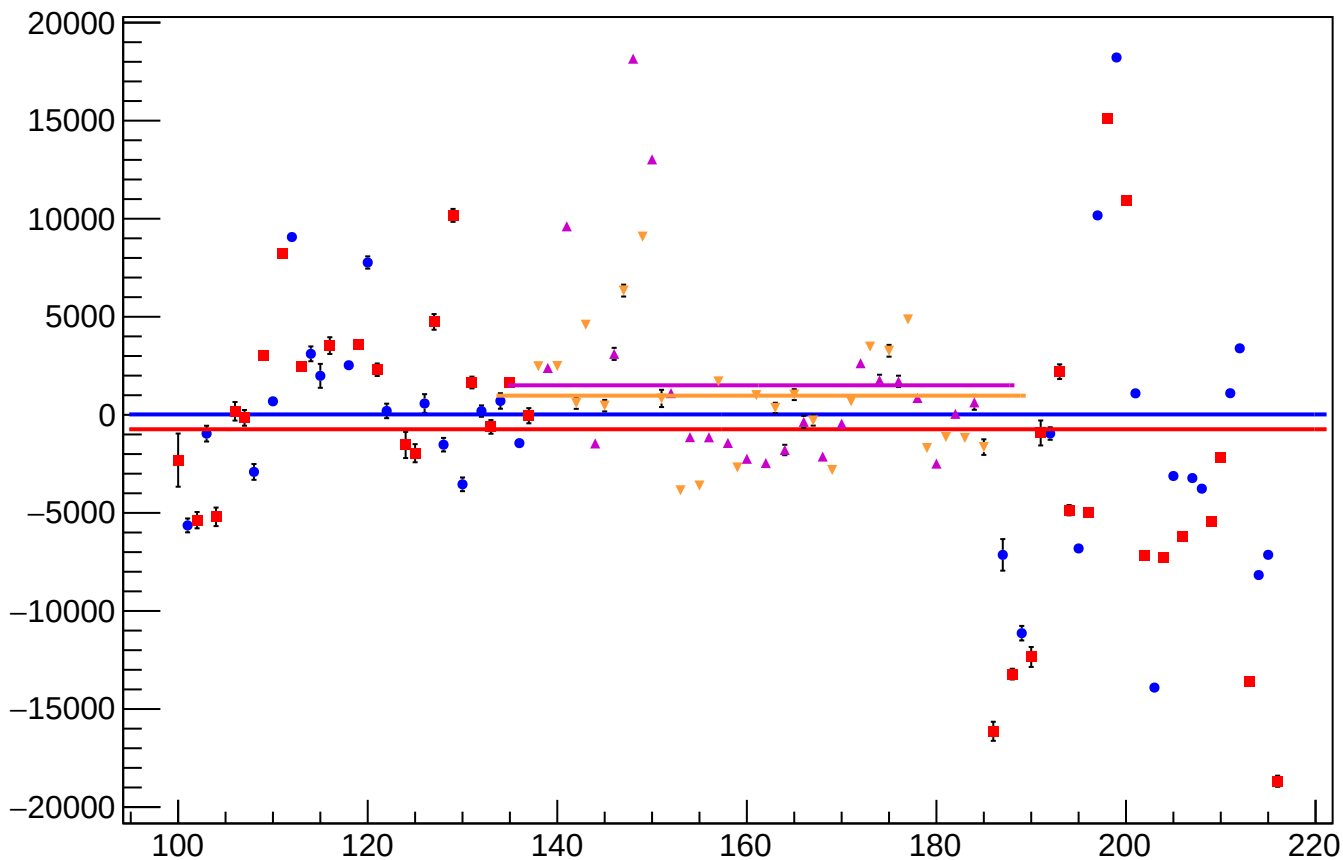
Left In: 183.985+/-0.031  $\chi^2/\text{NDF}$ : 829778.1/22

+ sign 188.387+/-0.022  $\chi^2/\text{NDF}$ : 1702860.3/55

All: 184.182+/-0.015  $\chi^2/\text{NDF}$ : 3924276.6/113

- sign 180.225+/-0.021  $\chi^2/\text{NDF}$ : 2149589.6/57

# asym\_bpm0i05WS\_mean vs Slug



Right In: 21.514+/-47.127  $\chi^2/\text{NDF}$ : 23873.1/30

Left Out: 978.429+/-49.607  $\chi^2/\text{NDF}$ : 4322.9/24

Right Out: -735.079+/-45.902  $\chi^2/\text{NDF}$ : 29466.0/34

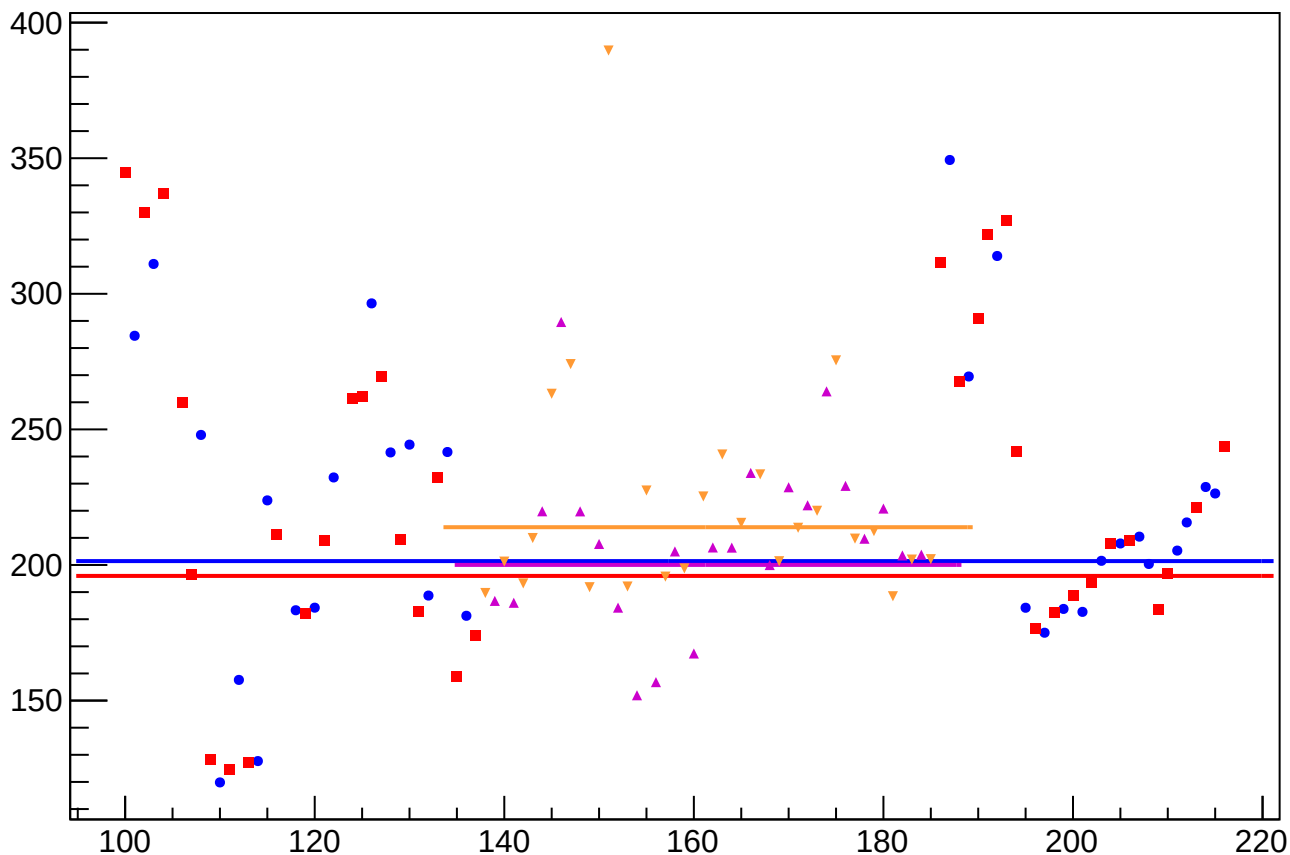
Left In: 1505.093+/-48.051  $\chi^2/\text{NDF}$ : 11480.6/22

+ sign 475.454+/-34.167  $\chi^2/\text{NDF}$ : 28391.6/55

All: 402.570+/-23.807  $\chi^2/\text{NDF}$ : 70483.5/113

- sign 333.789+/-33.191  $\chi^2/\text{NDF}$ : 42083.0/57

# asym\_bpm0i05WS\_rms vs Slug



Right In: 201.436+/-0.033  $\chi^2/\text{NDF}$ : 1516221.0/30

Left Out: 213.931+/-0.035  $\chi^2/\text{NDF}$ : 733638.6/24

Right Out: 195.969+/-0.032  $\chi^2/\text{NDF}$ : 2344789.0/34

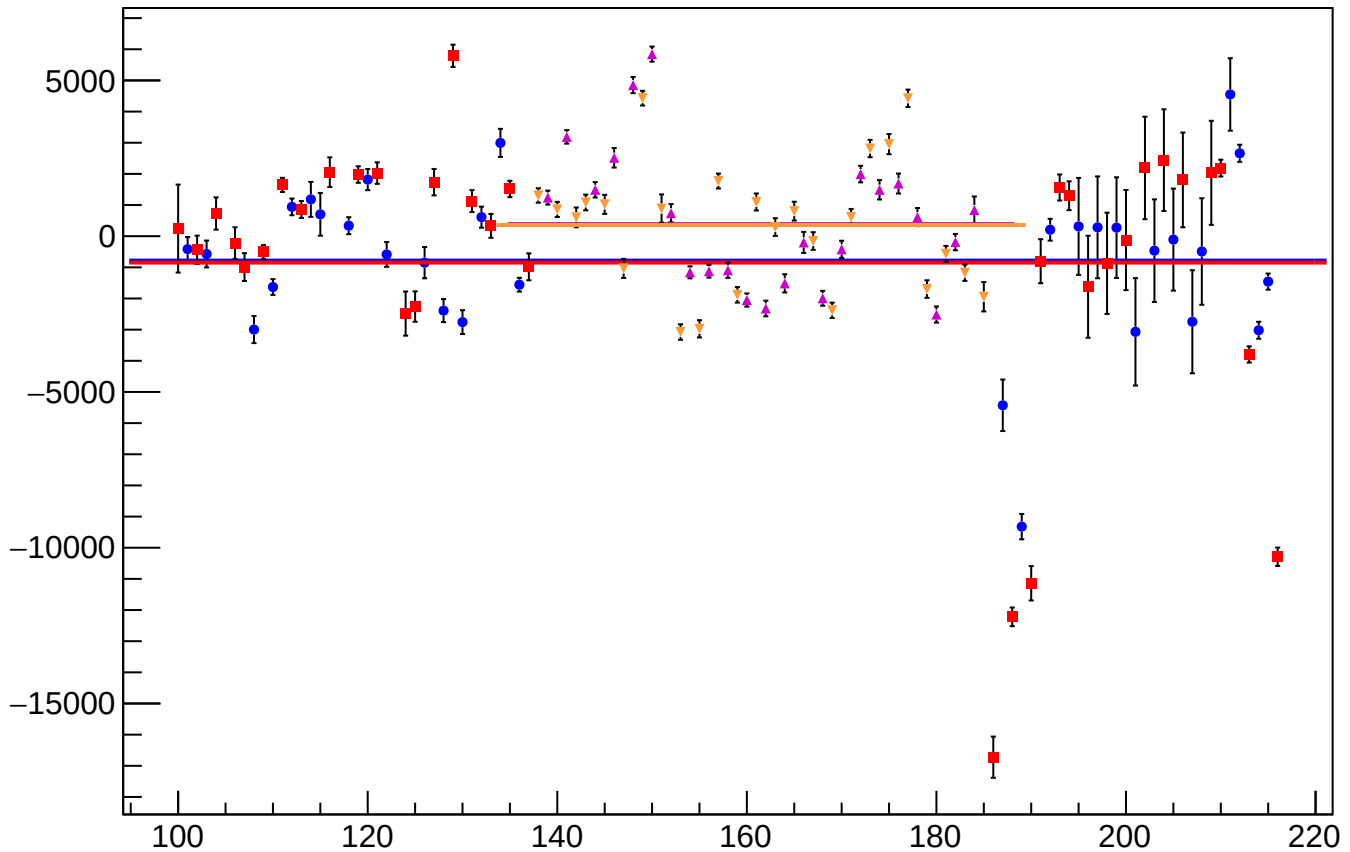
Left In: 200.031+/-0.034  $\chi^2/\text{NDF}$ : 785525.4/22

+ sign 207.363+/-0.024  $\chi^2/\text{NDF}$ : 2316561.2/55

All: 202.498+/-0.017  $\chi^2/\text{NDF}$ : 5533162.1/113

- sign 197.907+/-0.023  $\chi^2/\text{NDF}$ : 3137784.9/57

# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-783.966 \pm 71.793$   $\chi^2/\text{NDF}$ : 1054.0/30

Left Out:  $358.680 \pm 54.992$   $\chi^2/\text{NDF}$ : 1418.9/24

Right Out:  $-846.717 \pm 66.750$   $\chi^2/\text{NDF}$ : 4630.6/34

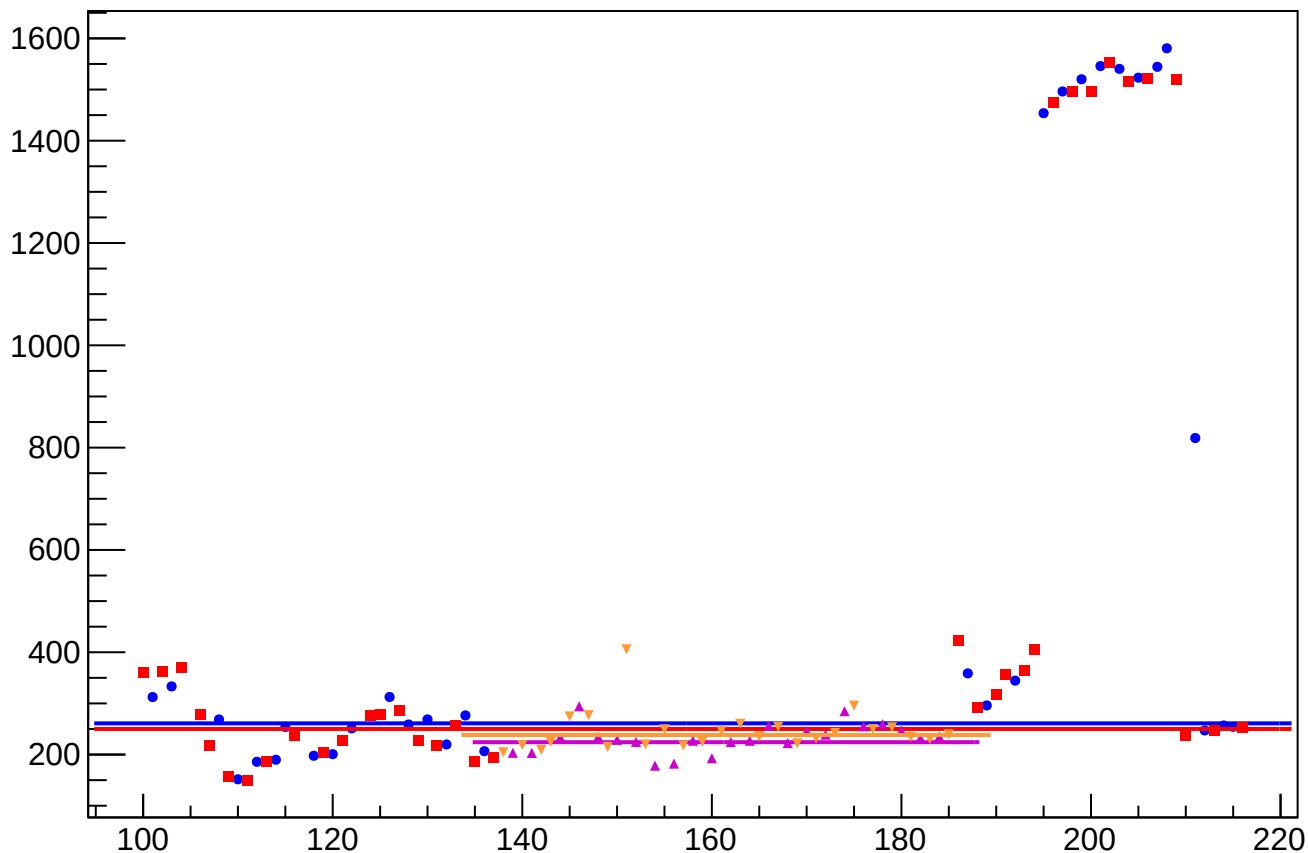
Left In:  $386.941 \pm 53.528$   $\chi^2/\text{NDF}$ : 1804.2/22

+ sign  $-63.836 \pm 43.656$   $\chi^2/\text{NDF}$ : 2632.5/55

All:  $-80.579 \pm 30.177$   $\chi^2/\text{NDF}$ : 9275.4/113

- sign  $-95.898 \pm 41.759$   $\chi^2/\text{NDF}$ : 6642.6/57

# asym\_bpm0i07WS\_rms vs Slug



Right In: 261.040 $\pm$ 0.051  $\chi^2$ /NDF: 11061109.2/30

Left Out: 238.199 $\pm$ 0.039  $\chi^2$ /NDF: 567935.3/24

Right Out: 250.058 $\pm$ 0.047  $\chi^2$ /NDF: 10530121.1/34

Left In: 224.212 $\pm$ 0.038  $\chi^2$ /NDF: 563231.1/22

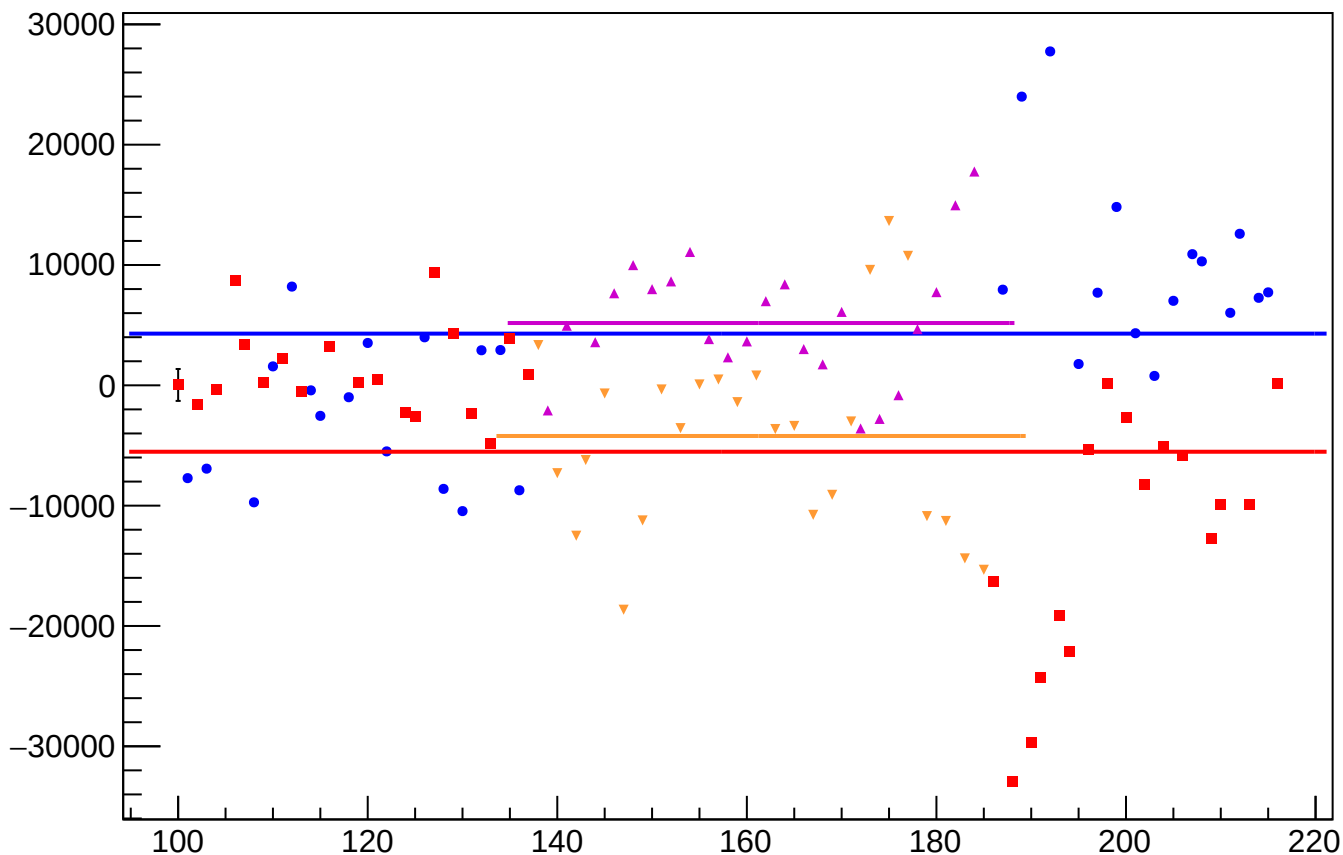
+ sign 246.645 $\pm$ 0.031  $\chi^2$ /NDF: 11756626.6/55

All: 240.213 $\pm$ 0.021  $\chi^2$ /NDF: 23115615.8/11

- sign 234.328 $\pm$ 0.030  $\chi^2$ /NDF: 11275850.9/57



# asym\_bpm1i02WS\_mean vs Slug



Right In: 4296.754+/-32.692  $\chi^2/\text{NDF}$ : 82067.2/30

Left Out: -4210.601+/-30.828  $\chi^2/\text{NDF}$ : 56802.7/24

Right Out: -5519.669+/-31.489  $\chi^2/\text{NDF}$ : 106535.7/34

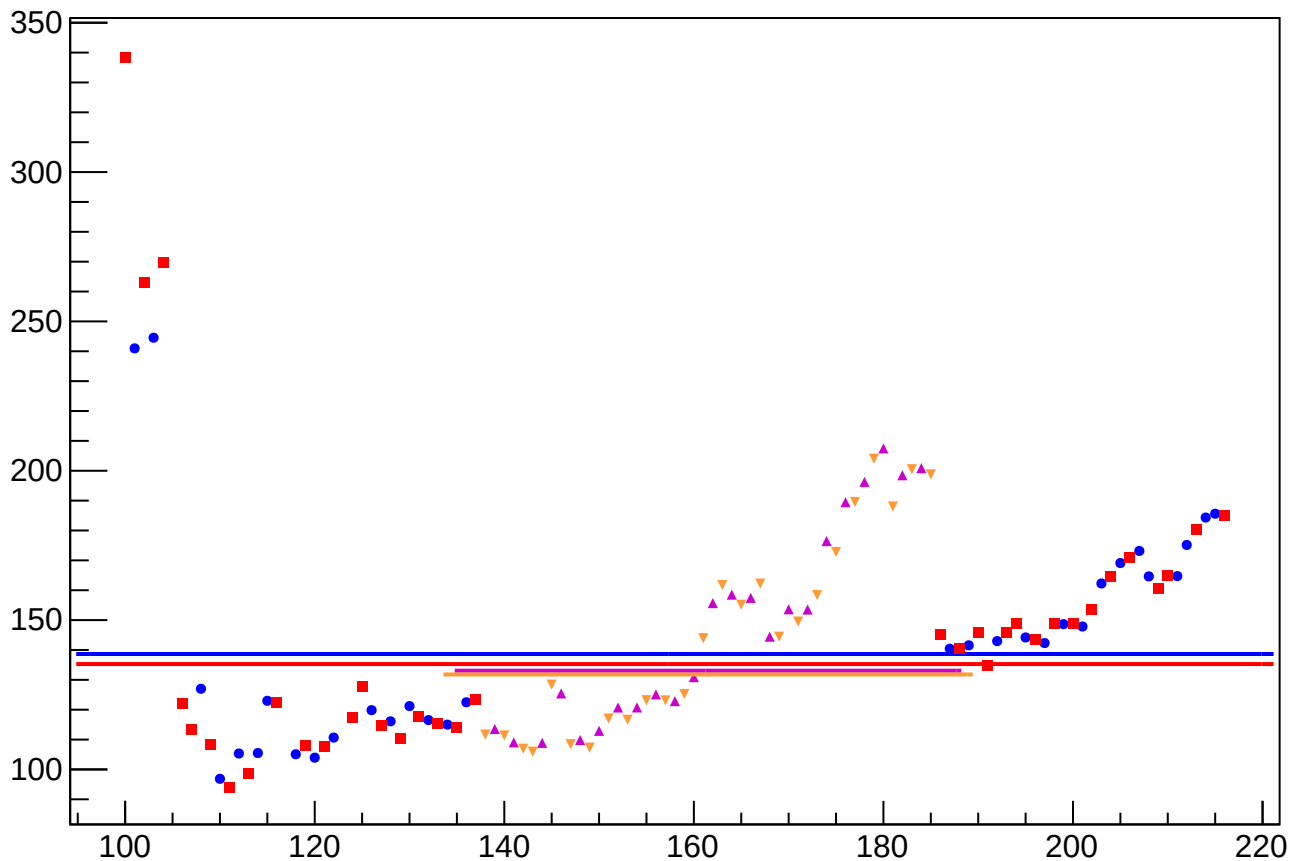
Left In: 5178.213+/-31.969  $\chi^2/\text{NDF}$ : 18541.3/22

+ sign -206.338+/-22.429  $\chi^2/\text{NDF}$ : 174714.1/55

All: -229.006+/-15.861  $\chi^2/\text{NDF}$ : 356628.9/11

- sign -251.684+/-22.434  $\chi^2/\text{NDF}$ : 181912.8/57

# asym\_bpm1i02WS\_rms vs Slug



Right In: 138.649+/-0.023  $\chi^2/\text{NDF}$ : 1670189.0/30

Left Out: 131.798+/-0.022  $\chi^2/\text{NDF}$ :1544340.3/24

Right Out: 135.280+/-0.022  $\chi^2/\text{NDF}$ : 1796884.3/34

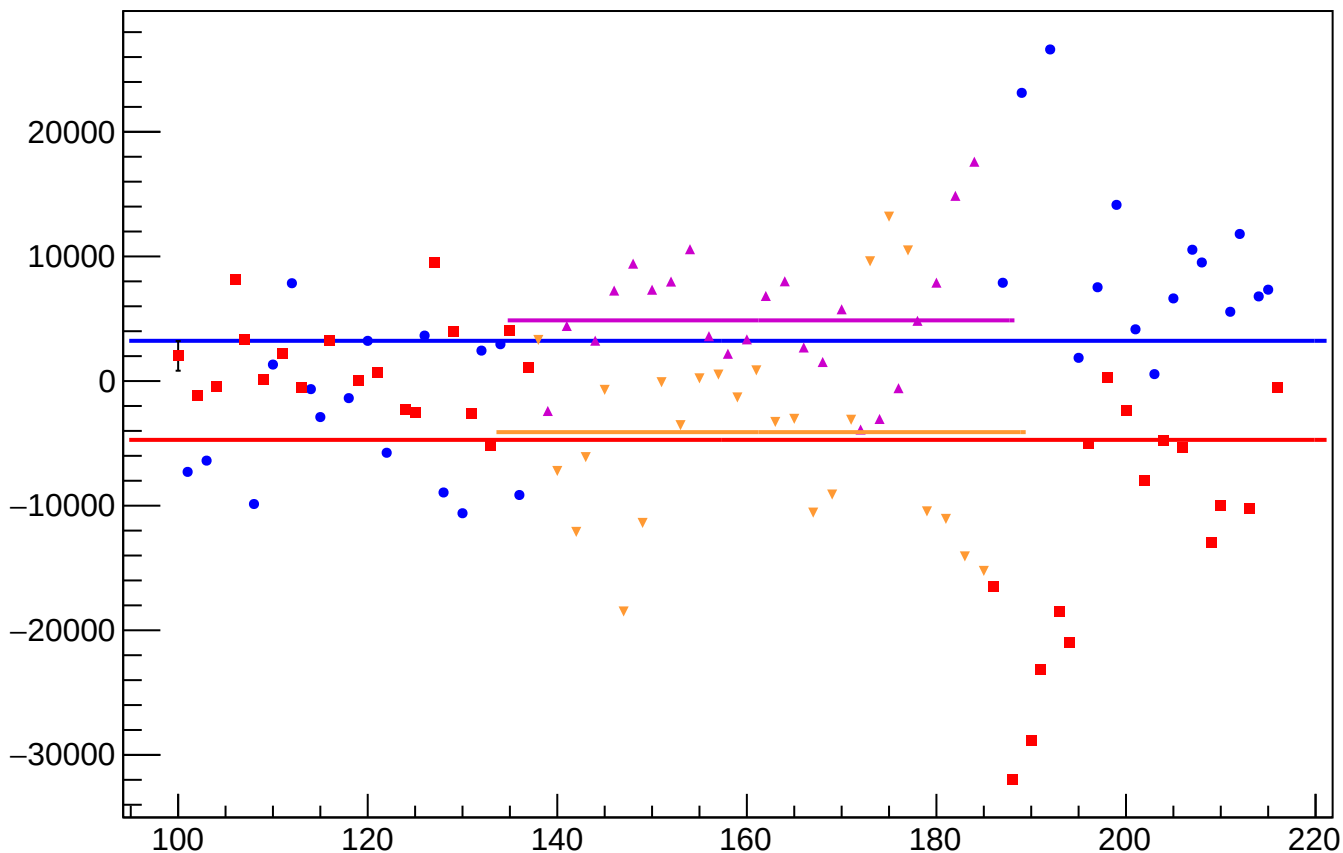
Left In: 133.061+/-0.023  $\chi^2/\text{NDF}$ :1418252.2/22

+ sign 135.022+/-0.016  $\chi^2/\text{NDF}$ : 3261023.7/55

All: 134.605+/-0.011  $\chi^2/\text{NDF}$ : 6482434.4/113

- sign 134.187+/-0.016  $\chi^2/\text{NDF}$ : 3220025.1/57

# asym\_bpm2i01WS\_mean vs Slug



Right In: 3229.487+/-30.079  $\chi^2/\text{NDF}$ : 90501.3/30

Left Out: -4098.897+/-27.771  $\chi^2/\text{NDF}$ : 66271.3/24

Right Out: -4719.696+/-29.088  $\chi^2/\text{NDF}$ : 113476.9/34

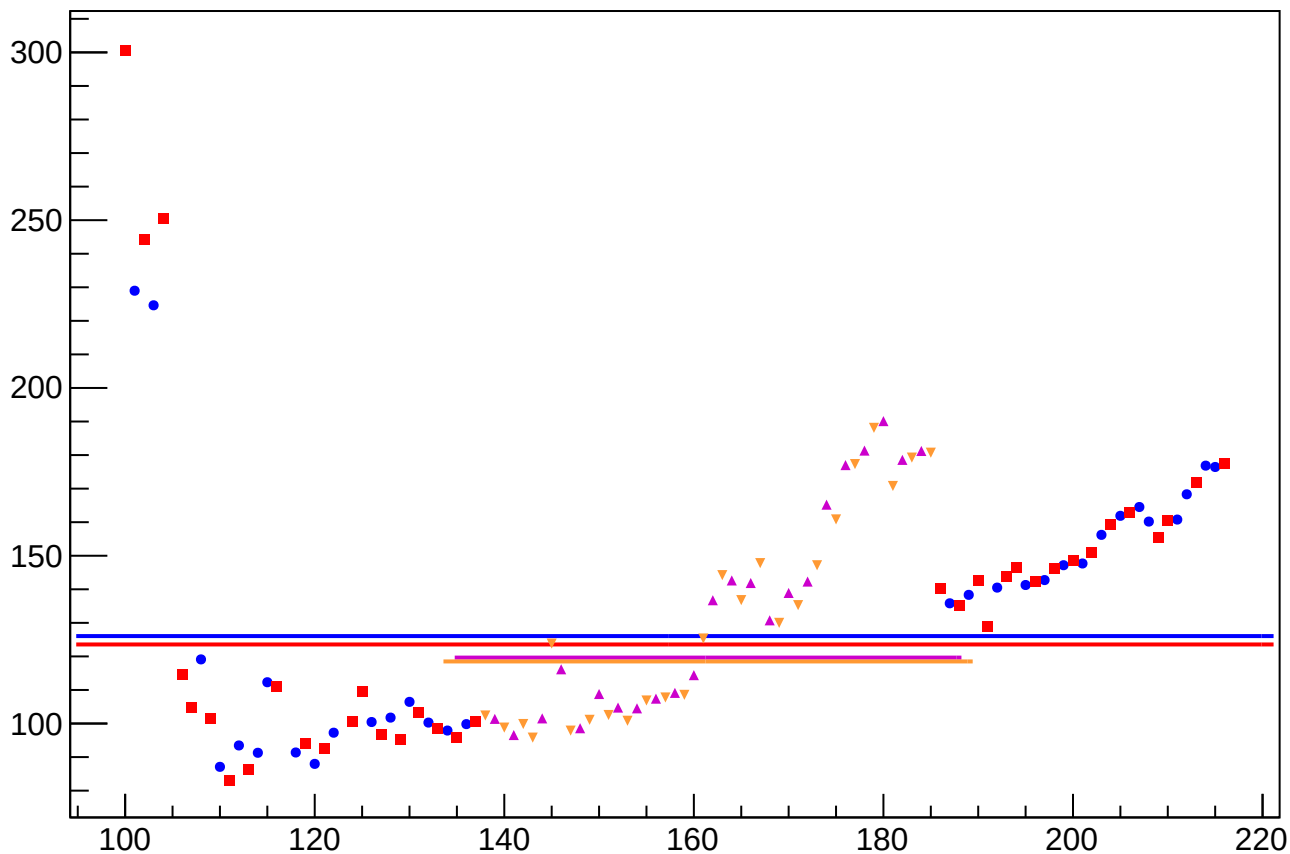
Left In: 4869.740+/-28.809  $\chi^2/\text{NDF}$ : 21913.6/22

+ sign -726.552+/-20.404  $\chi^2/\text{NDF}$ : 188816.4/55

All: -303.954+/-14.451  $\chi^2/\text{NDF}$ : 379932.0/11

- sign 121.323+/-20.469  $\chi^2/\text{NDF}$ : 190255.0/57

# asym\_bpm2i01WS\_rms vs Slug



Right In: 126.059+/-0.021  $\chi^2/\text{NDF}$ : 2431631.2/30

Left Out: 118.502+/-0.020  $\chi^2/\text{NDF}$ : 1627138.9/24

Right Out: 123.561+/-0.021  $\chi^2/\text{NDF}$ : 2516781.8/34

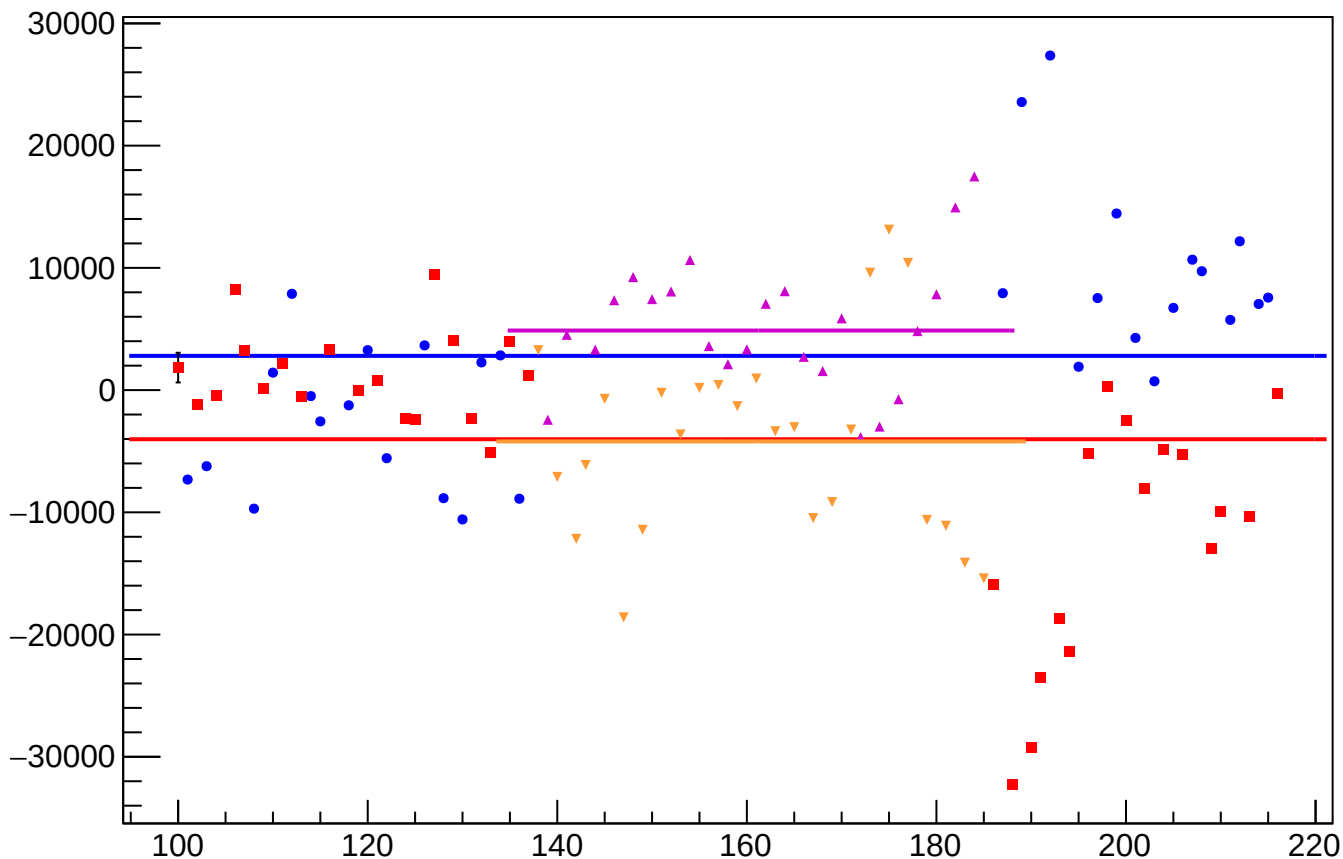
Left In: 119.645+/-0.020  $\chi^2/\text{NDF}$ : 1512380.5/22

+ sign 121.980+/-0.014  $\chi^2/\text{NDF}$ : 4126930.9/55

All: 121.782+/-0.010  $\chi^2/\text{NDF}$ : 8174770.2/113

- sign 121.584+/-0.014  $\chi^2/\text{NDF}$ : 4047464.9/57

# asym\_bpm2i02WS\_mean vs Slug



Right In: 2800.817+/-29.970  $\chi^2/\text{NDF}$ : 89832.8/30

Left Out: -4197.414+/-27.211  $\chi^2/\text{NDF}$ : 70415.4/24

Right Out: -4020.375+/-28.927  $\chi^2/\text{NDF}$ : 107177.0/34

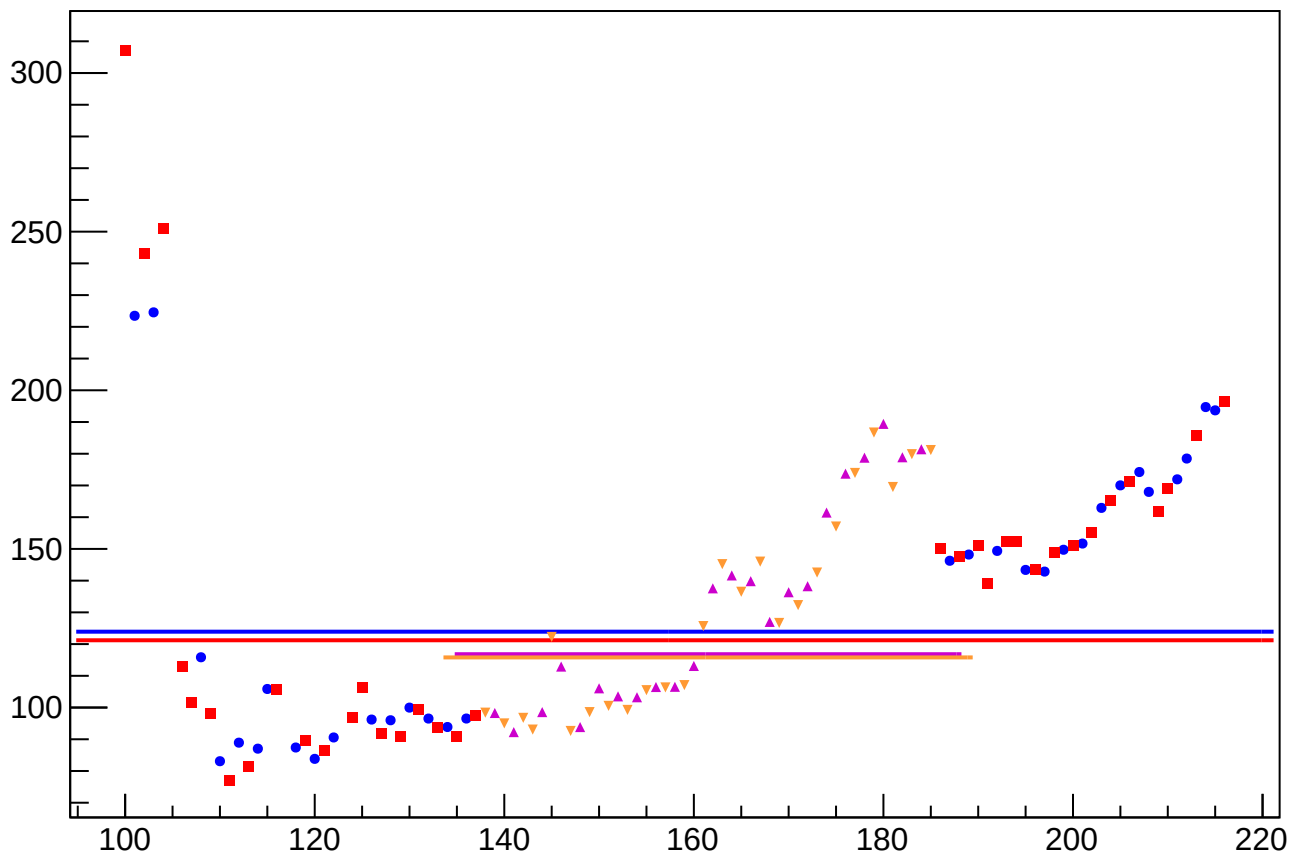
Left In: 4873.124+/-28.200  $\chi^2/\text{NDF}$ : 22923.8/22

+ sign -1035.198+/-20.146  $\chi^2/\text{NDF}$ : 190136.4/55

All: -249.694+/-14.262  $\chi^2/\text{NDF}$ : 371748.9/11

- sign 539.459+/-20.193  $\chi^2/\text{NDF}$ : 178564.9/57

# asym\_bpm2i02WS\_rms vs Slug



Right In: 123.912+/-0.021  $\chi^2/\text{NDF}$ : 3263802.9/30

Left Out: 115.798+/-0.019  $\chi^2/\text{NDF}$ : 1749021.2/24

Right Out: 121.205+/-0.020  $\chi^2/\text{NDF}$ : 3393973.6/34

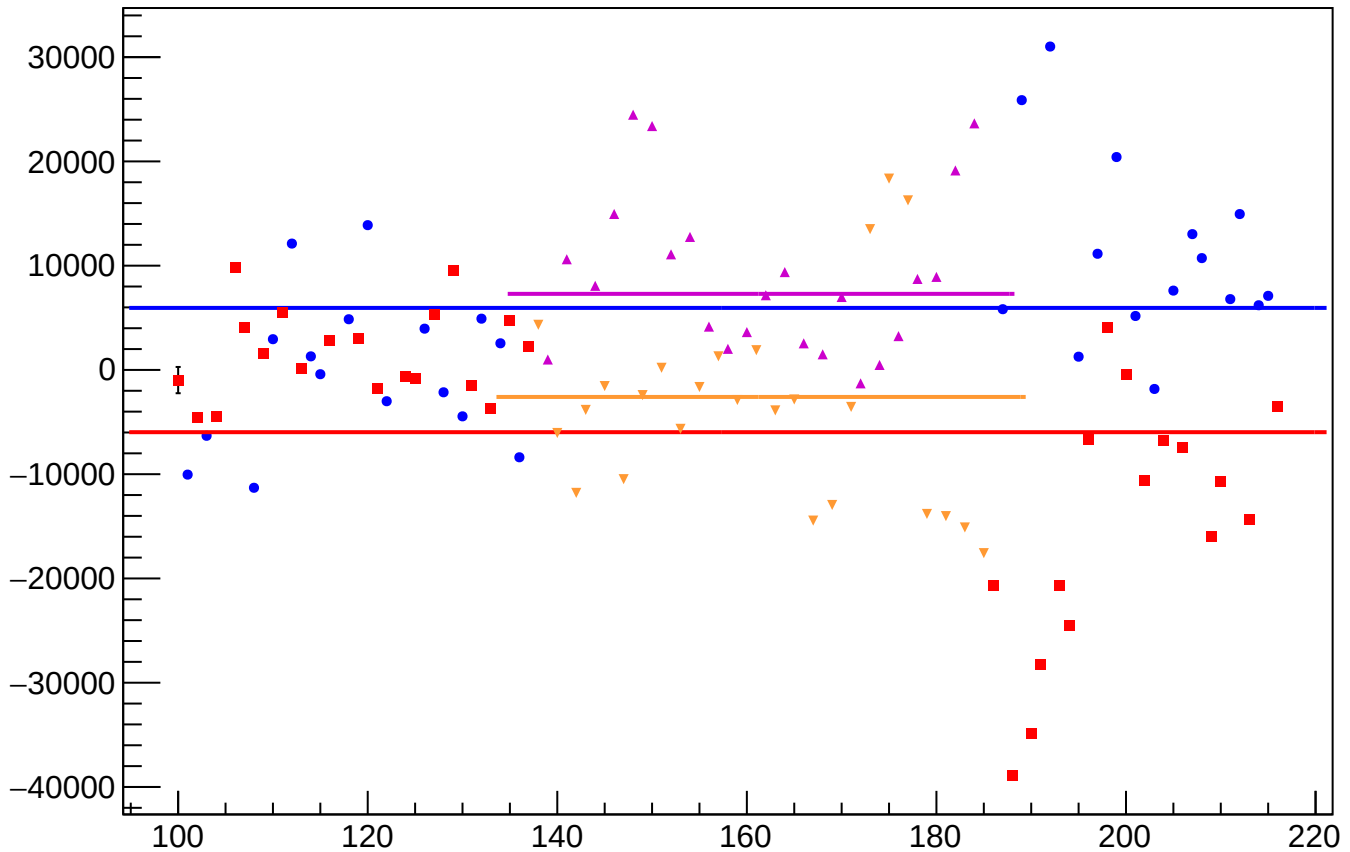
Left In: 116.808+/-0.020  $\chi^2/\text{NDF}$ : 1617645.9/22

+ sign 119.464+/-0.014  $\chi^2/\text{NDF}$ : 5093176.7/55

All: 119.208+/-0.010  $\chi^2/\text{NDF}$ : 10129128.6/119

- sign 118.951+/-0.014  $\chi^2/\text{NDF}$ : 5035303.6/57

# asym\_bpm0i01WS\_mean vs Slug



Right In:  $5948.674 \pm 39.182$   $\chi^2/\text{NDF}$ : 65940.0/30

Left Out:  $-2591.379 \pm 37.643$   $\chi^2/\text{NDF}$ : 47994.7/24

+ sign  $1507.650 \pm 27.146$   $\chi^2/\text{NDF}$ : 138638.7/55

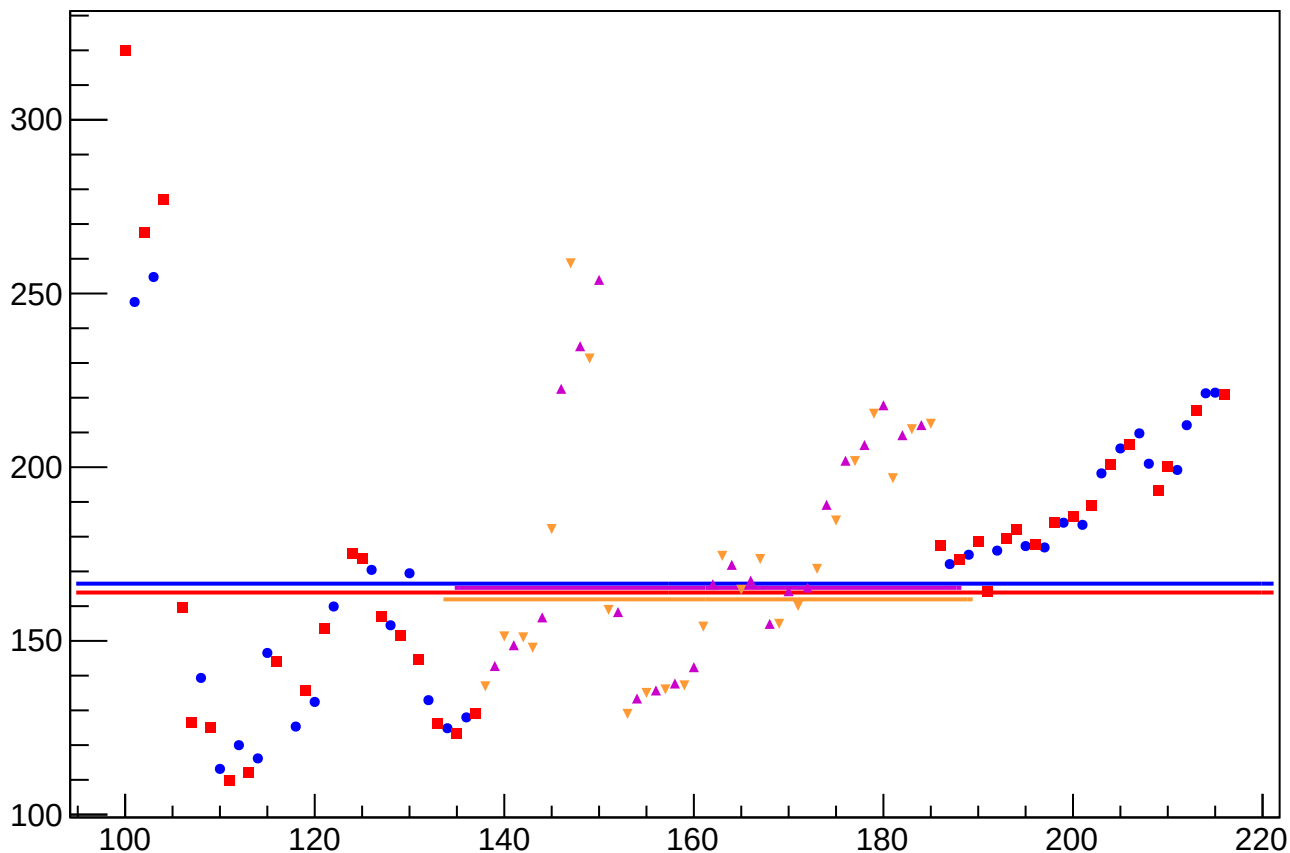
Right Out:  $-5971.355 \pm 38.083$   $\chi^2/\text{NDF}$ : 101566.0/34

All:  $963.490 \pm 19.298$   $\chi^2/\text{NDF}$ : 324115.4/113

- sign  $407.416 \pm 27.441$   $\chi^2/\text{NDF}$ : 184664.2/57

Left In:  $7296.193 \pm 39.576$   $\chi^2/\text{NDF}$ : 24743.4/22

# asym\_bpm0i01WS\_rms vs Slug



Right In: 166.479+/-0.028  $\chi^2/\text{NDF}$ : 1744180.4/30

Left Out: 161.957+/-0.027  $\chi^2/\text{NDF}$ :1144808.3/24

Right Out: 163.920+/-0.027  $\chi^2/\text{NDF}$ : 1796494.2/34

Left In: 165.273+/-0.028  $\chi^2/\text{NDF}$ :1179090.6/22

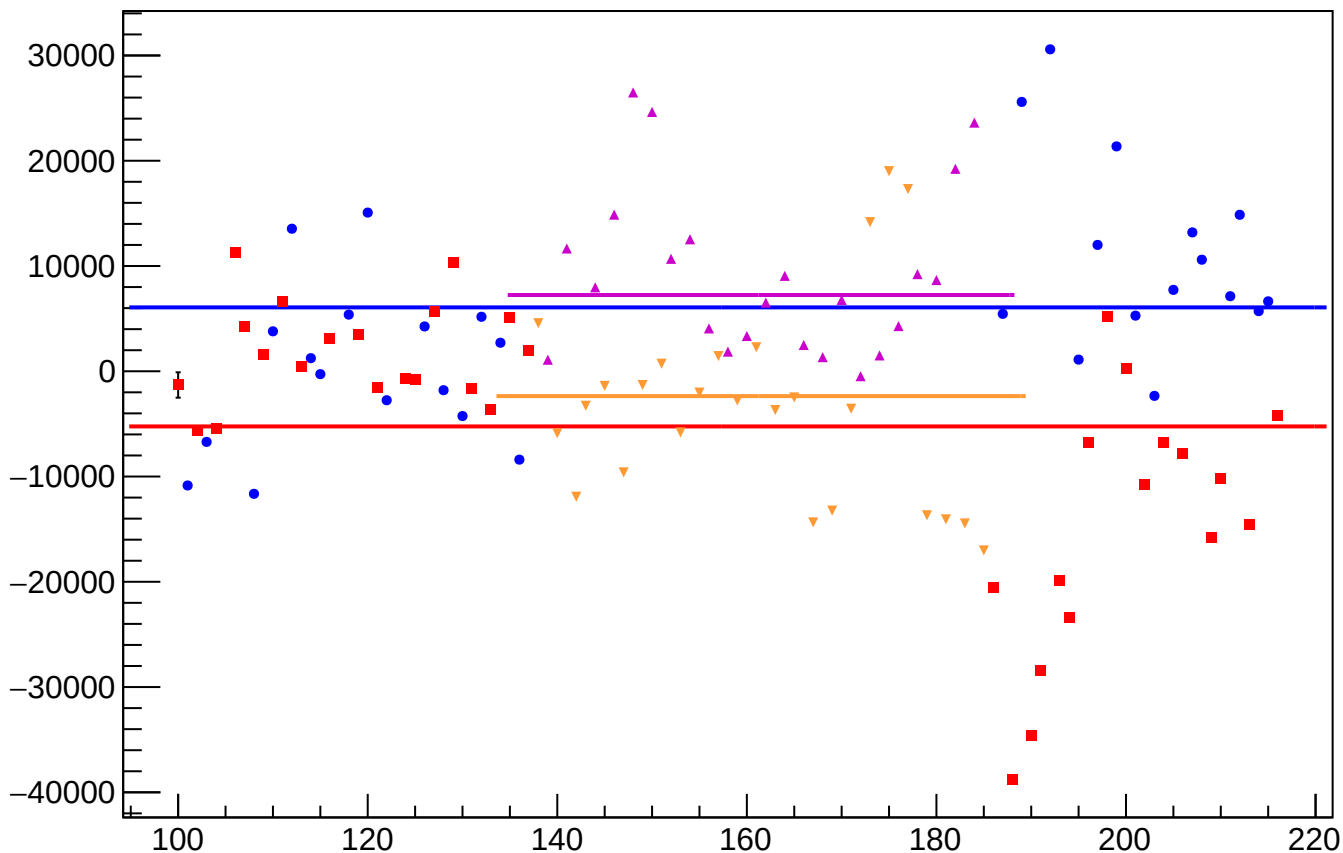
+ sign 164.127+/-0.019  $\chi^2/\text{NDF}$ : 2902839.4/55

All: 164.346+/-0.014  $\chi^2/\text{NDF}$ : 5879900.4/113

- sign 164.570+/-0.019  $\chi^2/\text{NDF}$ : 2976797.4/57



# asym\_bpm0i01aWS\_mean vs Slug



Right In: 6068.375+/-33.413  $\chi^2/\text{NDF}$ : 91712.5/30

Left Out: -2360.753+/-33.680  $\chi^2/\text{NDF}$ : 58566.4/24

Right Out: -5239.626+/-32.275  $\chi^2/\text{NDF}$ : 141549.7/34

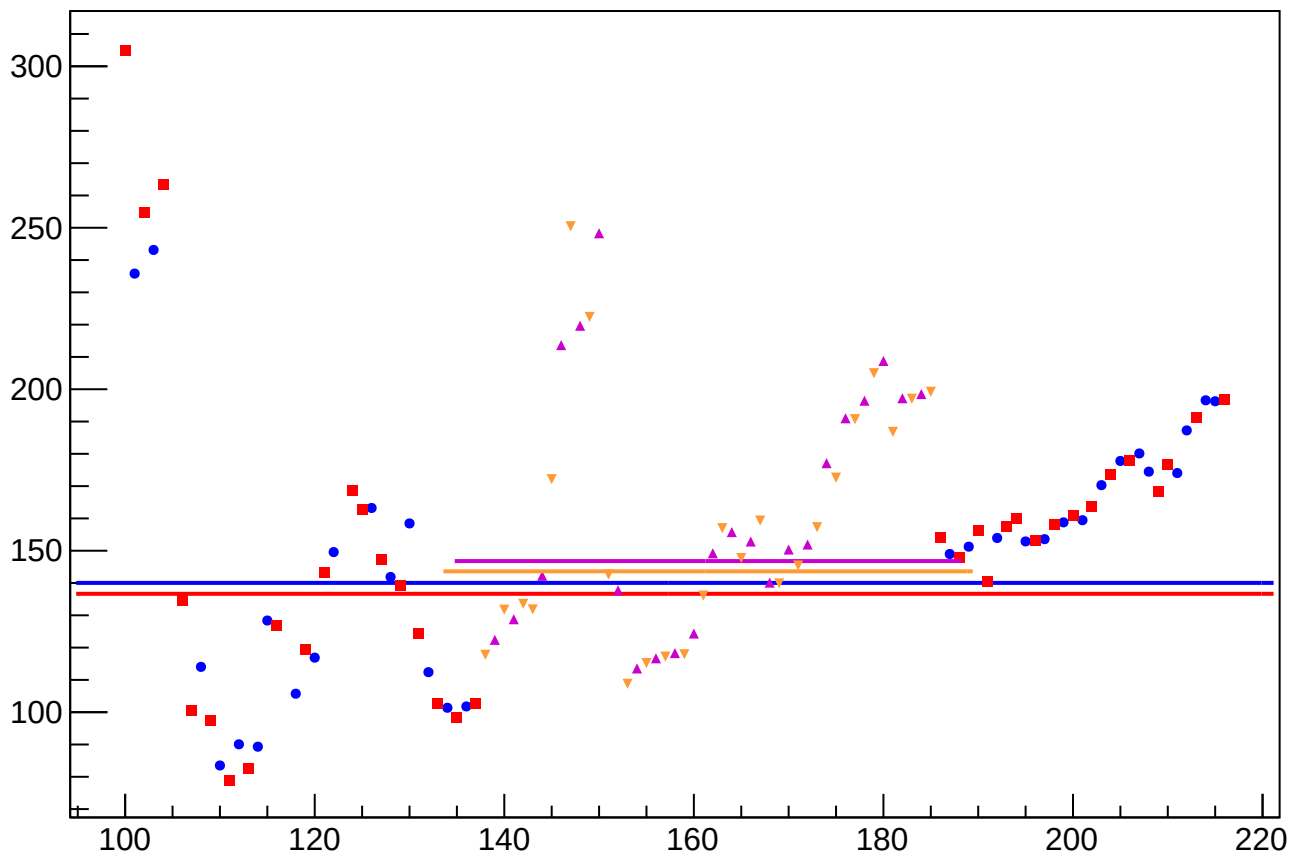
Left In: 7244.763+/-35.507  $\chi^2/\text{NDF}$ : 30447.9/22

+ sign 1887.401+/-23.720  $\chi^2/\text{NDF}$ : 181846.0/55

All: 1153.091+/-16.830  $\chi^2/\text{NDF}$ : 423466.2/11

- sign 408.669+/-23.883  $\chi^2/\text{NDF}$ : 239690.4/57

# asym\_bpm0i01aWS\_rms vs Slug



Right In: 140.039+/-0.024  $\chi^2/\text{NDF}$ : 2552621.3/30

Left Out: 143.622+/-0.024  $\chi^2/\text{NDF}$ :1662825.4/24

Right Out: 136.657+/-0.023  $\chi^2/\text{NDF}$ : 2790041.7/34

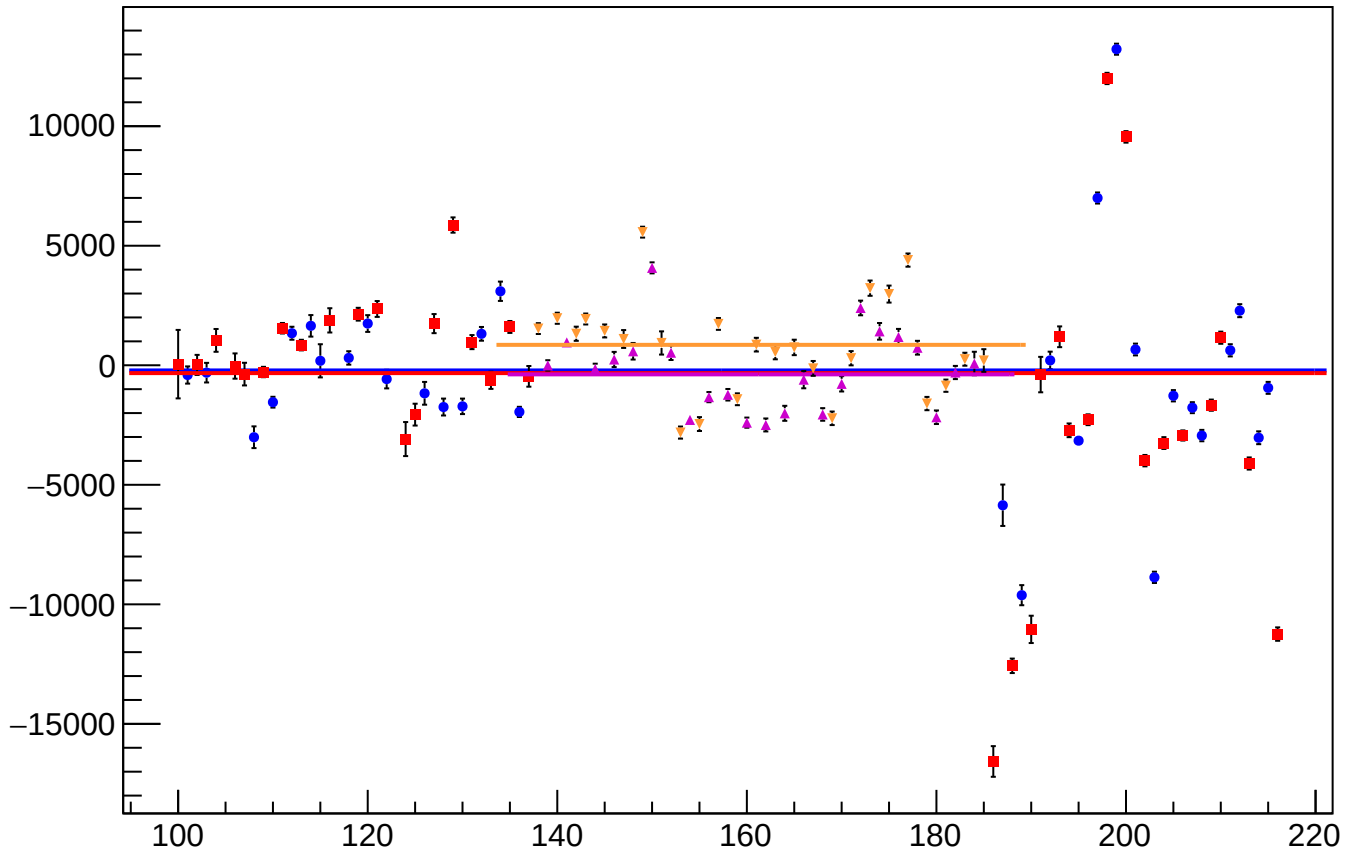
Left In: 146.793+/-0.025  $\chi^2/\text{NDF}$ :1694524.1/22

+ sign 141.816+/-0.017  $\chi^2/\text{NDF}$ : 4226855.9/55

All: 141.532+/-0.012  $\chi^2/\text{NDF}$ : 8801248.9/113

- sign 141.243+/-0.017  $\chi^2/\text{NDF}$ : 4573812.8/57

# asym\_bpm0l01WS\_mean vs Slug



Right In:  $-216.612 \pm 51.968$   $\chi^2/\text{NDF}$ : 7213.1/30

Left Out:  $853.916 \pm 56.237$   $\chi^2/\text{NDF}$ : 1443.8/24

Right Out:  $-328.205 \pm 51.303$   $\chi^2/\text{NDF}$ : 10326.7/34

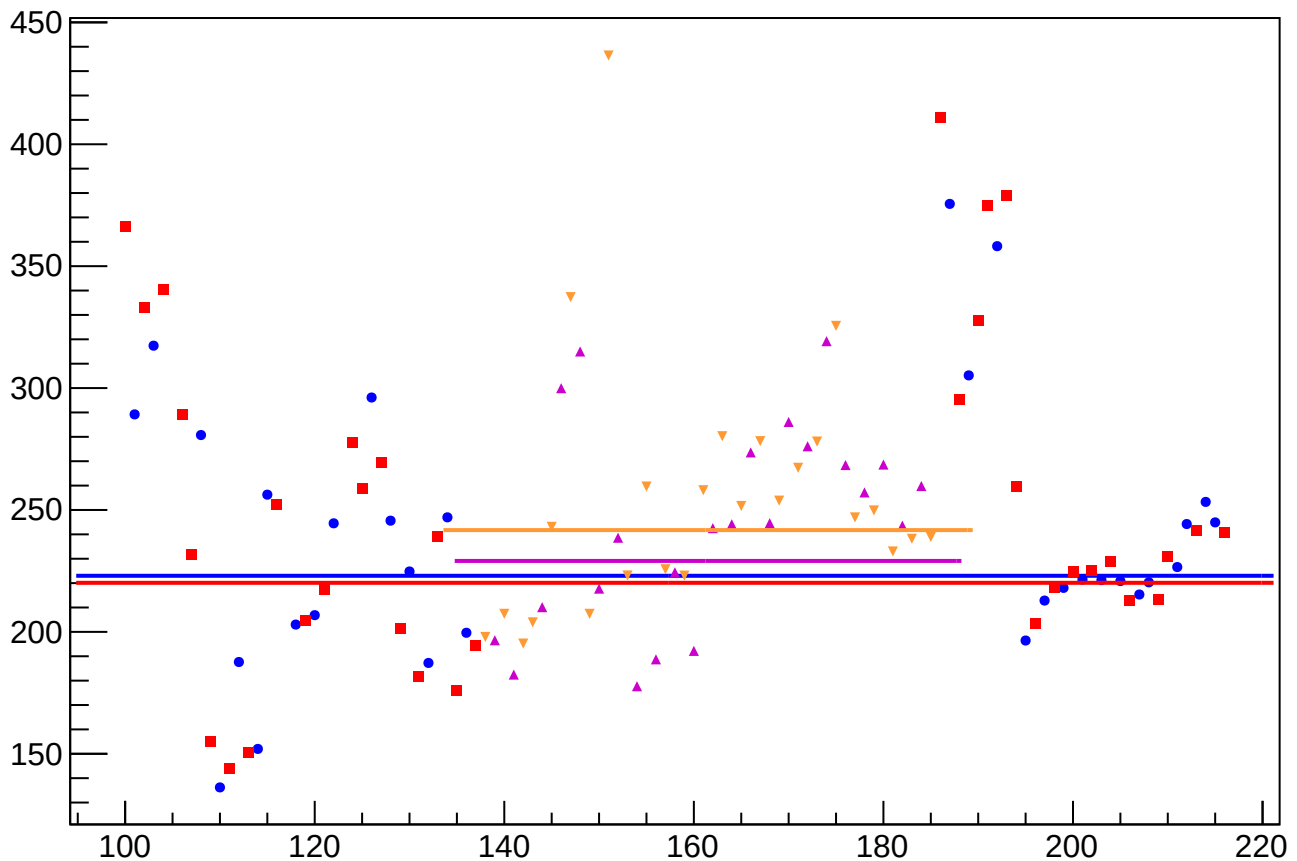
Left In:  $-380.865 \pm 55.135$   $\chi^2/\text{NDF}$ : 982.4/22

+ sign  $276.485 \pm 38.167$   $\chi^2/\text{NDF}$ : 8852.4/55

All:  $-43.132 \pm 26.770$   $\chi^2/\text{NDF}$ : 20300.0/113

- sign  $-352.641 \pm 37.558$   $\chi^2/\text{NDF}$ : 11309.6/57

# asym\_bpm0l01WS\_rms vs Slug



Right In: 223.012 $\pm$ 0.037  $\chi^2$ /NDF: 1233417.2/30

Left Out: 241.746 $\pm$ 0.040  $\chi^2$ /NDF: 986390.8/24

Right Out: 220.131 $\pm$ 0.036  $\chi^2$ /NDF: 1942866.9/34

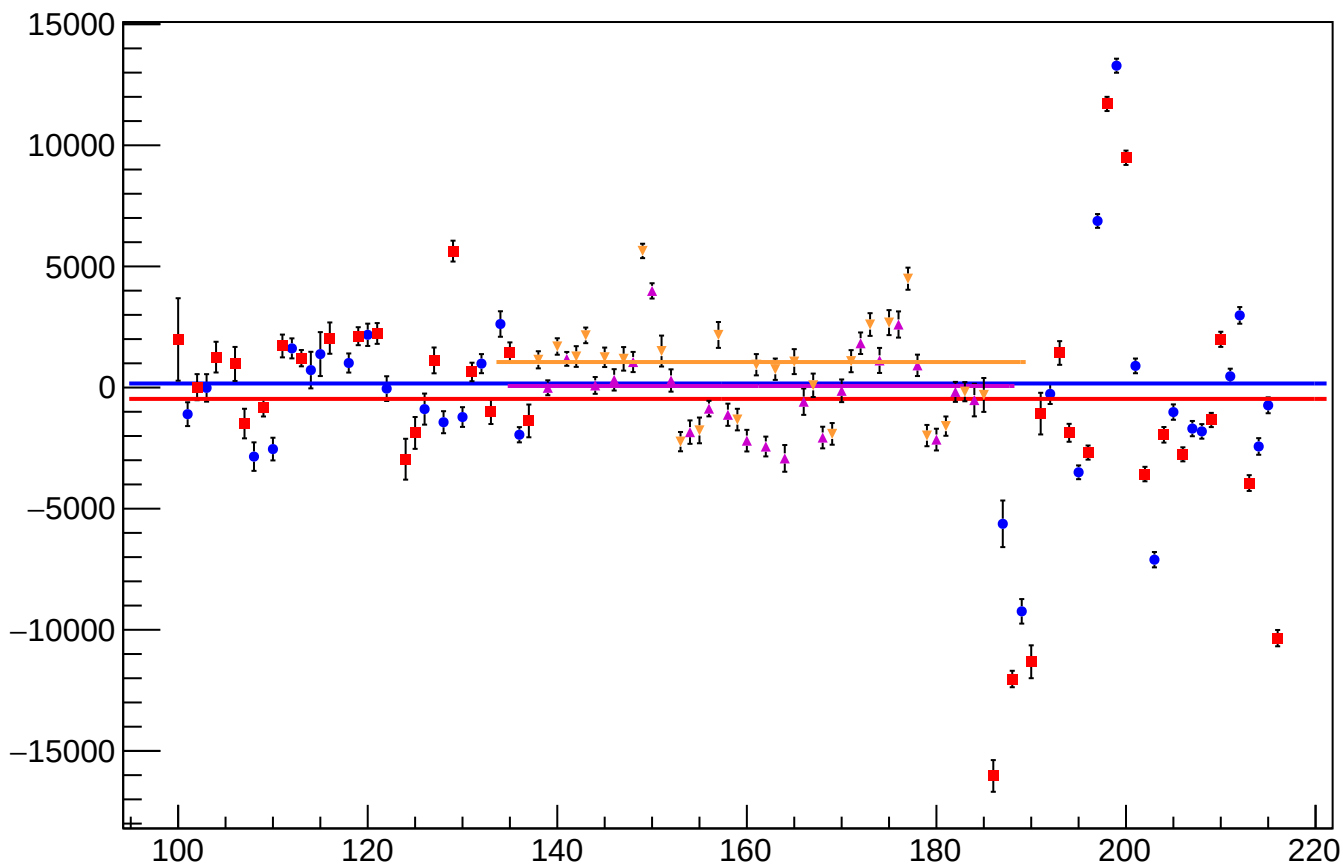
Left In: 229.103 $\pm$ 0.039  $\chi^2$ /NDF: 1068960.6/22

+ sign 231.641 $\pm$ 0.027  $\chi^2$ /NDF: 2339518.8/55

All: 227.909 $\pm$ 0.019  $\chi^2$ /NDF: 5417379.4/113

- sign 224.295 $\pm$ 0.027  $\chi^2$ /NDF: 3040213.5/57

# asym\_bpm0l02WS\_mean vs Slug



Right In: 167.563 $\pm$ 69.439  $\chi^2$ /NDF: 4103.6/30

Left Out: 1053.354 $\pm$ 85.895  $\chi^2$ /NDF: 614.6/24

Right Out: -468.883 $\pm$ 68.710  $\chi^2$ /NDF: 6585.8/34

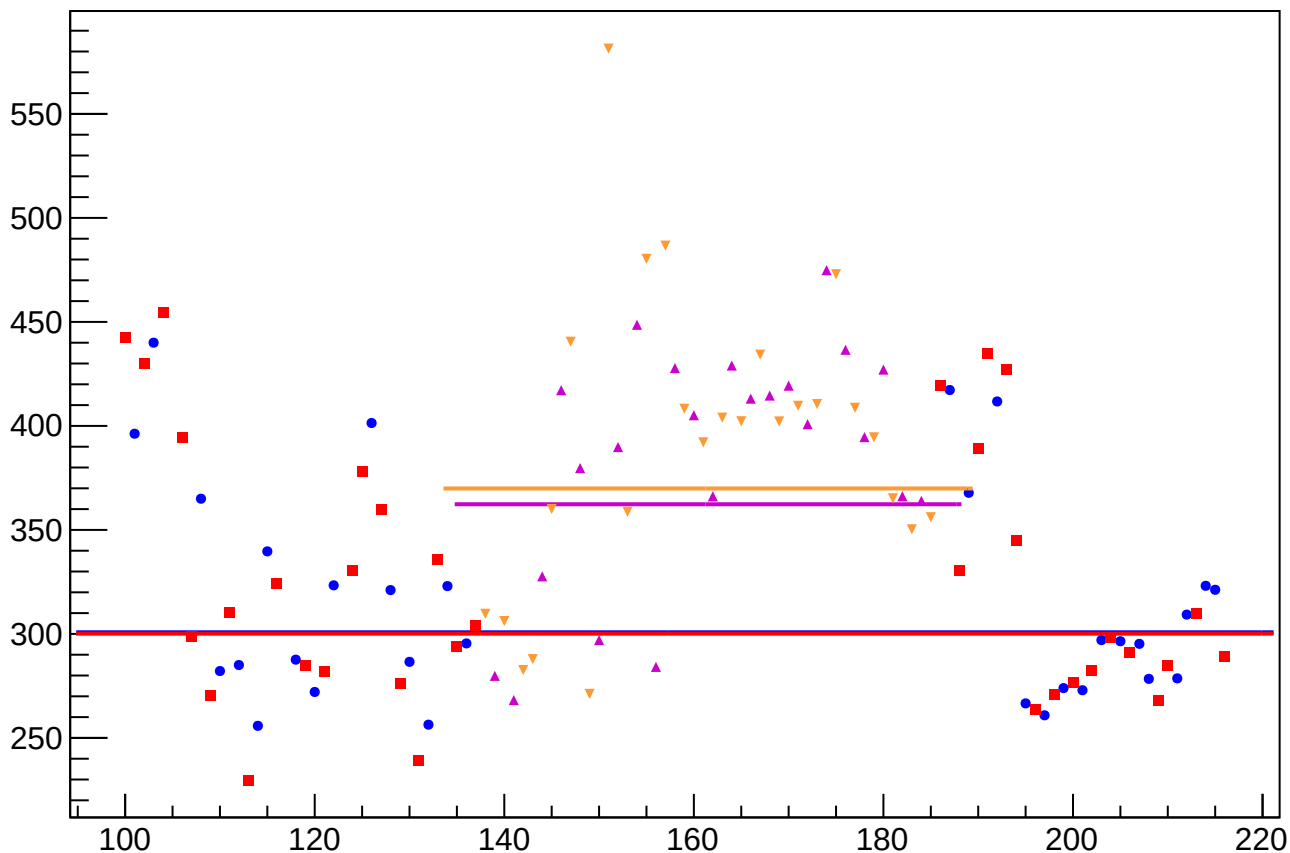
Left In: 64.646 $\pm$ 86.660  $\chi^2$ /NDF: 394.4/22

+ sign 517.660 $\pm$ 54.001  $\chi^2$ /NDF: 4782.5/55

All: 126.196 $\pm$ 38.127  $\chi^2$ /NDF: 11890.8/113

- sign -262.945 $\pm$ 53.840  $\chi^2$ /NDF: 7003.6/57

# asym\_bpm0l02WS\_rms vs Slug



Right In: 300.769+/-0.049  $\chi^2/\text{NDF}$ : 682614.8/30

Left Out: 369.923+/-0.061  $\chi^2/\text{NDF}$ :1230300.9/24

Right Out: 300.117+/-0.049  $\chi^2/\text{NDF}$ : 956861.5/34

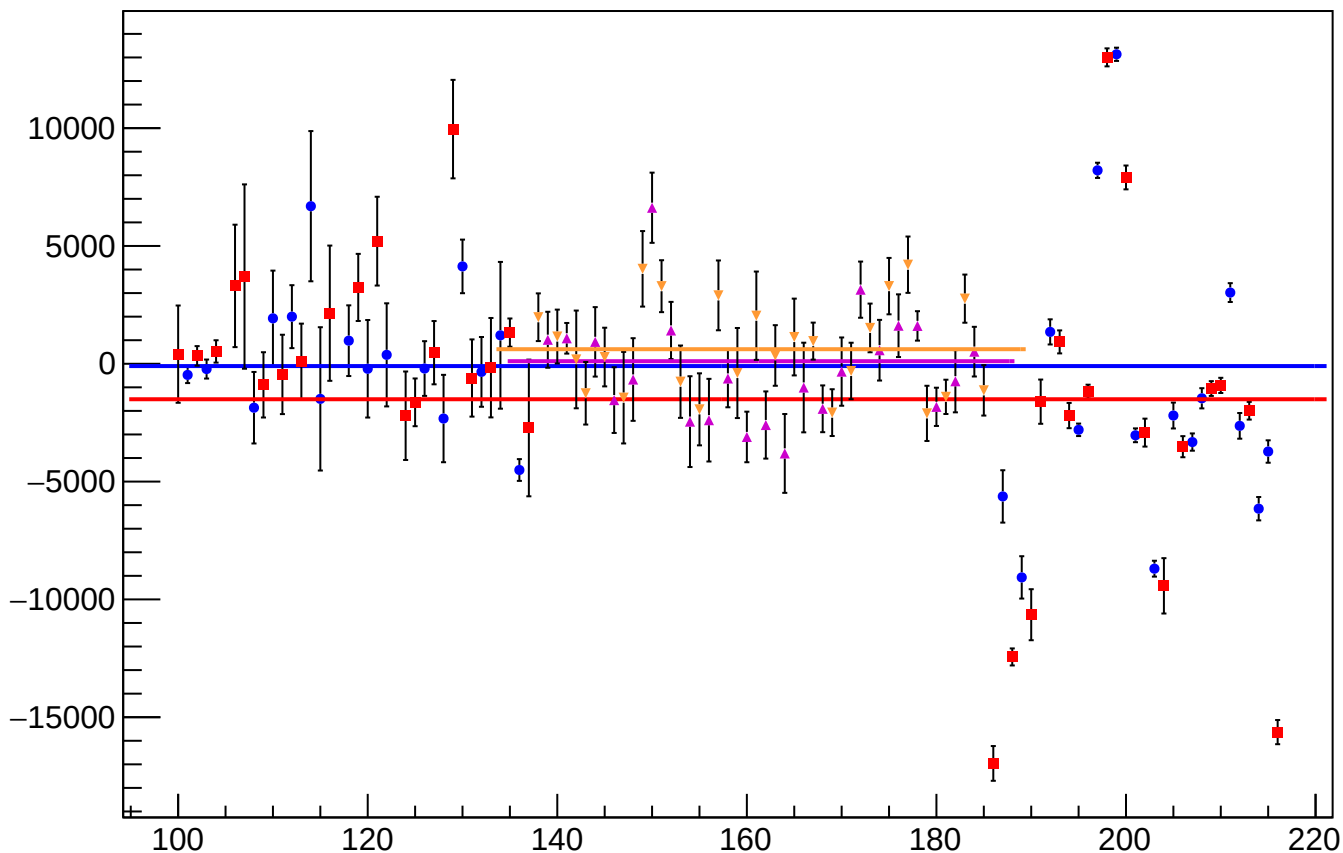
Left In: 362.341+/-0.061  $\chi^2/\text{NDF}$ :1053395.6/22

+ sign 328.101+/-0.038  $\chi^2/\text{NDF}$ : 2696924.2/55

All: 326.112+/-0.027  $\chi^2/\text{NDF}$ : 5345701.6/113

- sign 324.135+/-0.038  $\chi^2/\text{NDF}$ : 2643367.5/57

# asym\_bpm0l03WS\_mean vs Slug



Right In:  $-97.564 \pm 91.047$   $\chi^2/\text{NDF}$ : 4374.0/30

Left Out:  $618.538 \pm 238.150$   $\chi^2/\text{NDF}$ : 65.7/24

Right Out:  $-1505.399 \pm 100.420$   $\chi^2/\text{NDF}$ : 4205.6/34

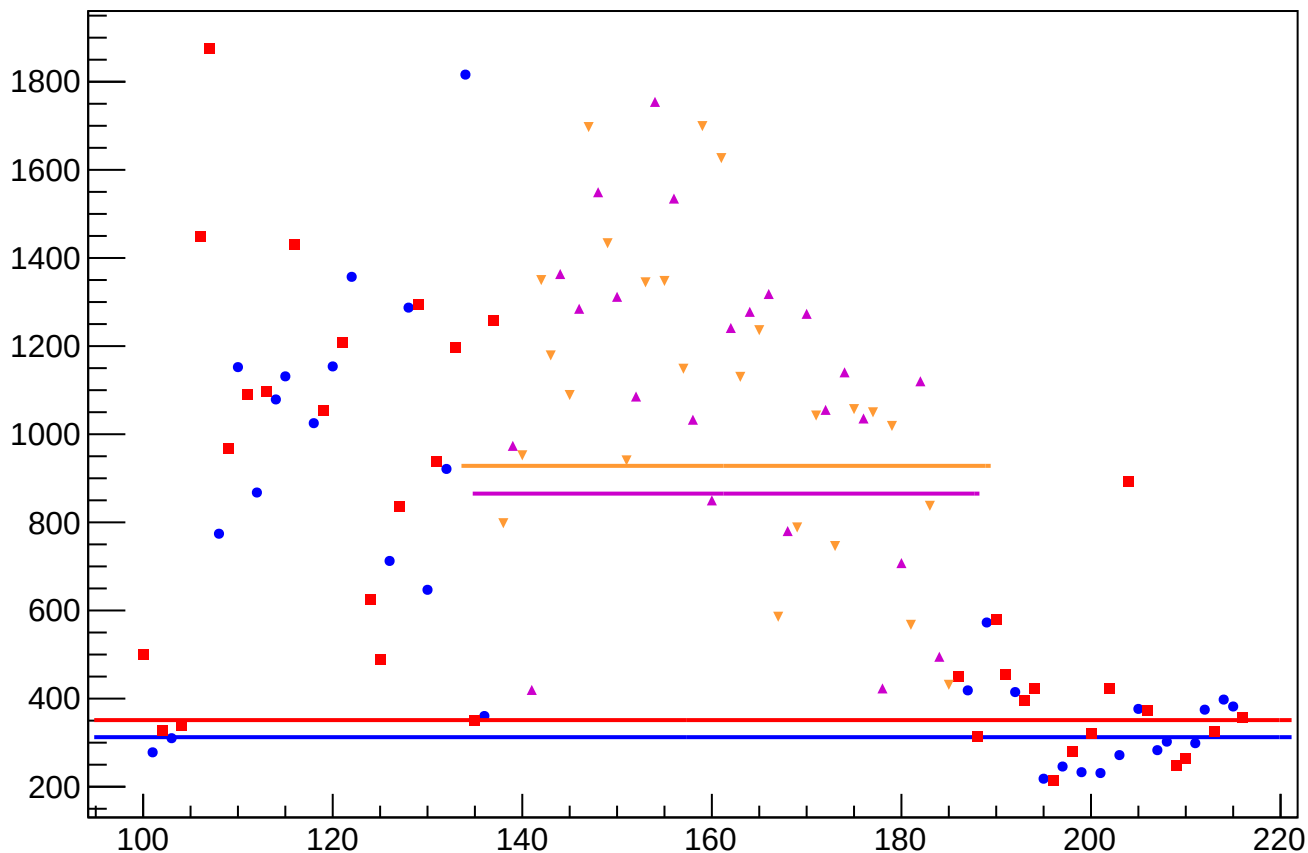
Left In:  $109.519 \pm 237.827$   $\chi^2/\text{NDF}$ : 71.7/22

+ sign  $-6.246 \pm 85.043$   $\chi^2/\text{NDF}$ : 4447.7/55

All:  $-580.966 \pm 62.609$   $\chi^2/\text{NDF}$ : 8863.8/113

- sign  $-1261.048 \pm 92.511$   $\chi^2/\text{NDF}$ : 4316.4/57

# asym\_bpm0l03WS\_rms vs Slug



Right In: 312.488 $\pm$ 0.064  $\chi^2$ /NDF: 5294823.1/30

Left Out: 928.240 $\pm$ 0.168  $\chi^2$ /NDF: 3294716.2/24

Right Out: 351.205 $\pm$ 0.071  $\chi^2$ /NDF: 6160616.6/34

Left In: 865.223 $\pm$ 0.168  $\chi^2$ /NDF: 4792678.4/22

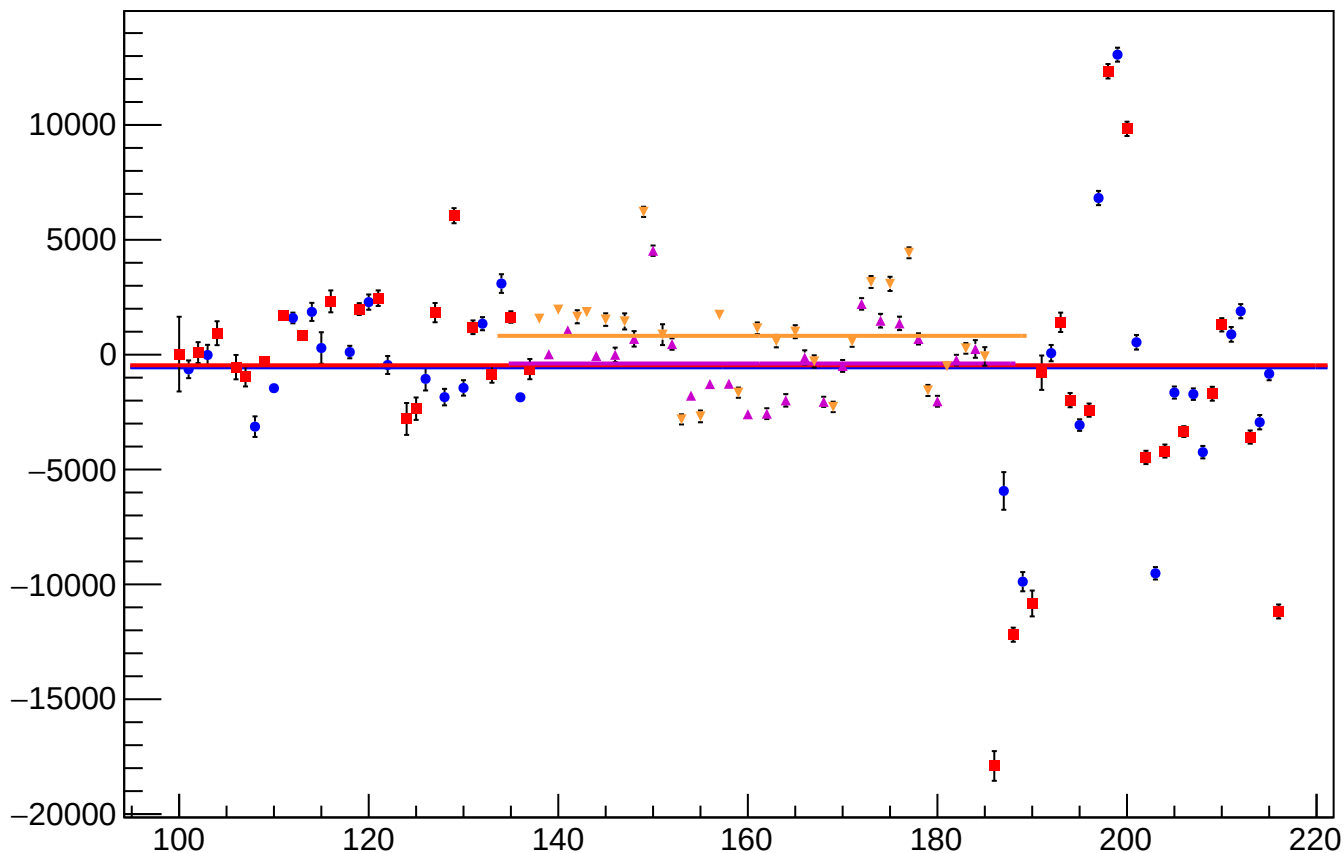
+ sign 391.009 $\pm$ 0.060  $\chi^2$ /NDF: 20254834.2/55

All: 408.400 $\pm$ 0.044  $\chi^2$ /NDF: 39319659.3/1

- sign 428.980 $\pm$ 0.065  $\chi^2$ /NDF: 18882209.6/57



# asym\_bpm0l04WS\_mean vs Slug



Right In:  $-550.992 \pm 55.964$   $\chi^2/\text{NDF}$ : 5115.8/30

Left Out:  $820.821 \pm 49.996$   $\chi^2/\text{NDF}$ : 1990.8/24

Right Out:  $-462.580 \pm 54.063$   $\chi^2/\text{NDF}$ : 8213.7/34

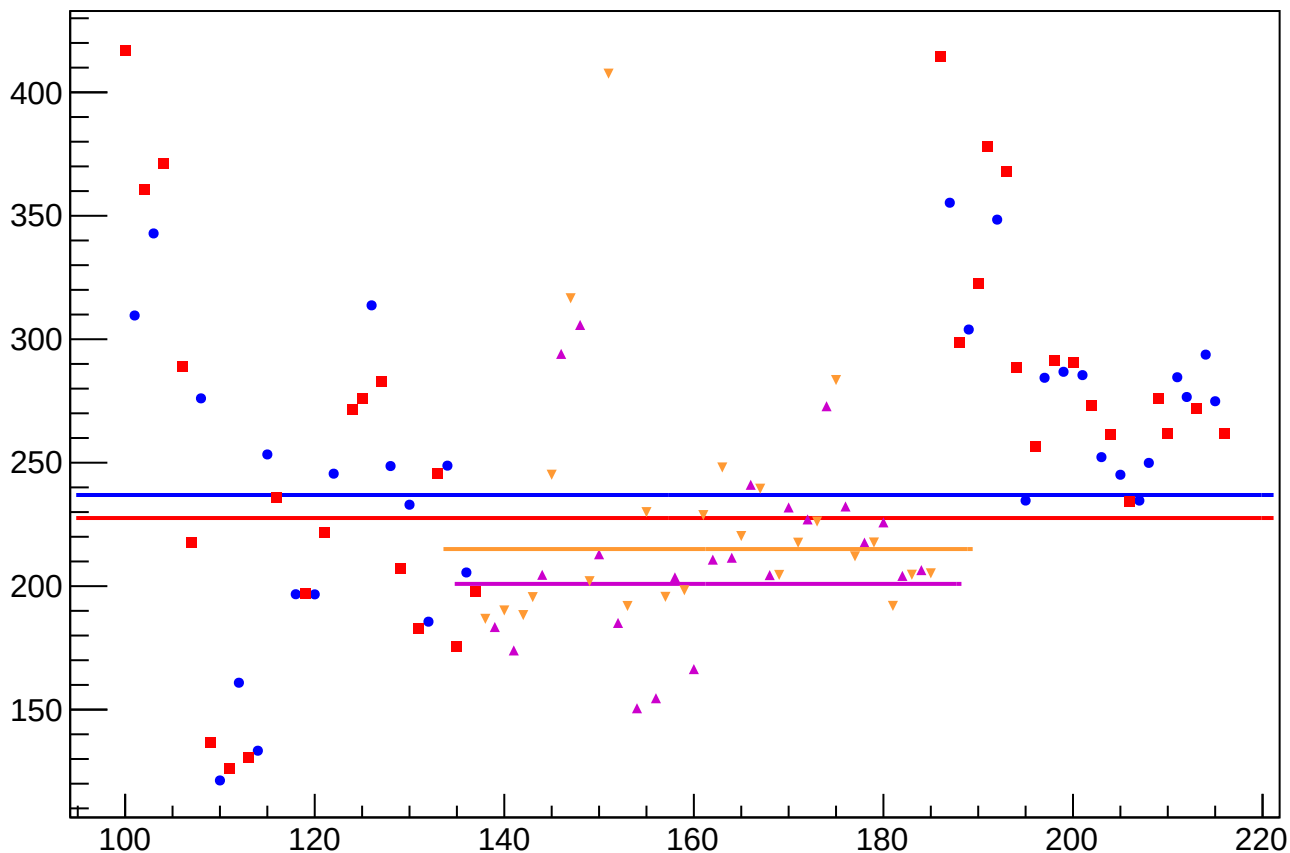
Left In:  $-385.002 \pm 48.455$   $\chi^2/\text{NDF}$ : 1253.3/22

+ sign  $211.936 \pm 37.285$   $\chi^2/\text{NDF}$ : 7440.7/55

All:  $-114.152 \pm 25.929$   $\chi^2/\text{NDF}$ : 17057.0/113

- sign  $-419.560 \pm 36.083$   $\chi^2/\text{NDF}$ : 9468.1/57

# asym\_bpm0l04WS\_rms vs Slug



Right In: 236.921 $\pm$ 0.040  $\chi^2$ /NDF: 2064799.4/30

Left Out: 215.027 $\pm$ 0.035  $\chi^2$ /NDF: 897791.6/24

Right Out: 227.592 $\pm$ 0.038  $\chi^2$ /NDF: 3253267.3/34

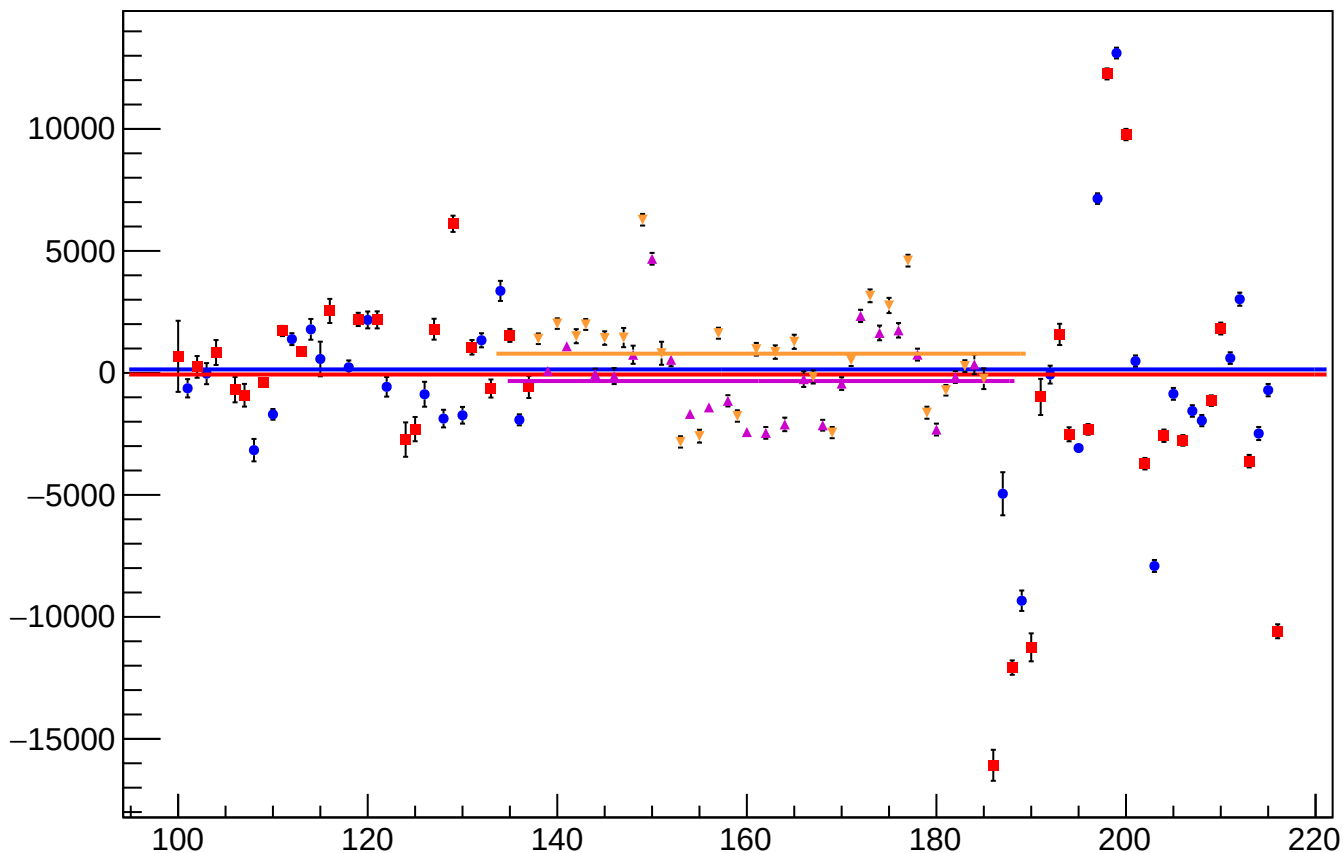
Left In: 200.917 $\pm$ 0.034  $\chi^2$ /NDF: 1105842.5/22

+ sign 224.745 $\pm$ 0.026  $\chi^2$ /NDF: 3132827.8/55

All: 218.576 $\pm$ 0.018  $\chi^2$ /NDF: 7867946.1/113

- sign 212.800 $\pm$ 0.026  $\chi^2$ /NDF: 4629117.6/57

# asym\_bpm0l05WS\_mean vs Slug



Right In: 143.347 $\pm$ 51.557  $\chi^2$ /NDF: 7157.5/30

Left Out: 788.110 $\pm$ 51.424  $\chi^2$ /NDF:1890.2/24

Right Out: -65.659 $\pm$ 50.677  $\chi^2$ /NDF: 10447.3/34

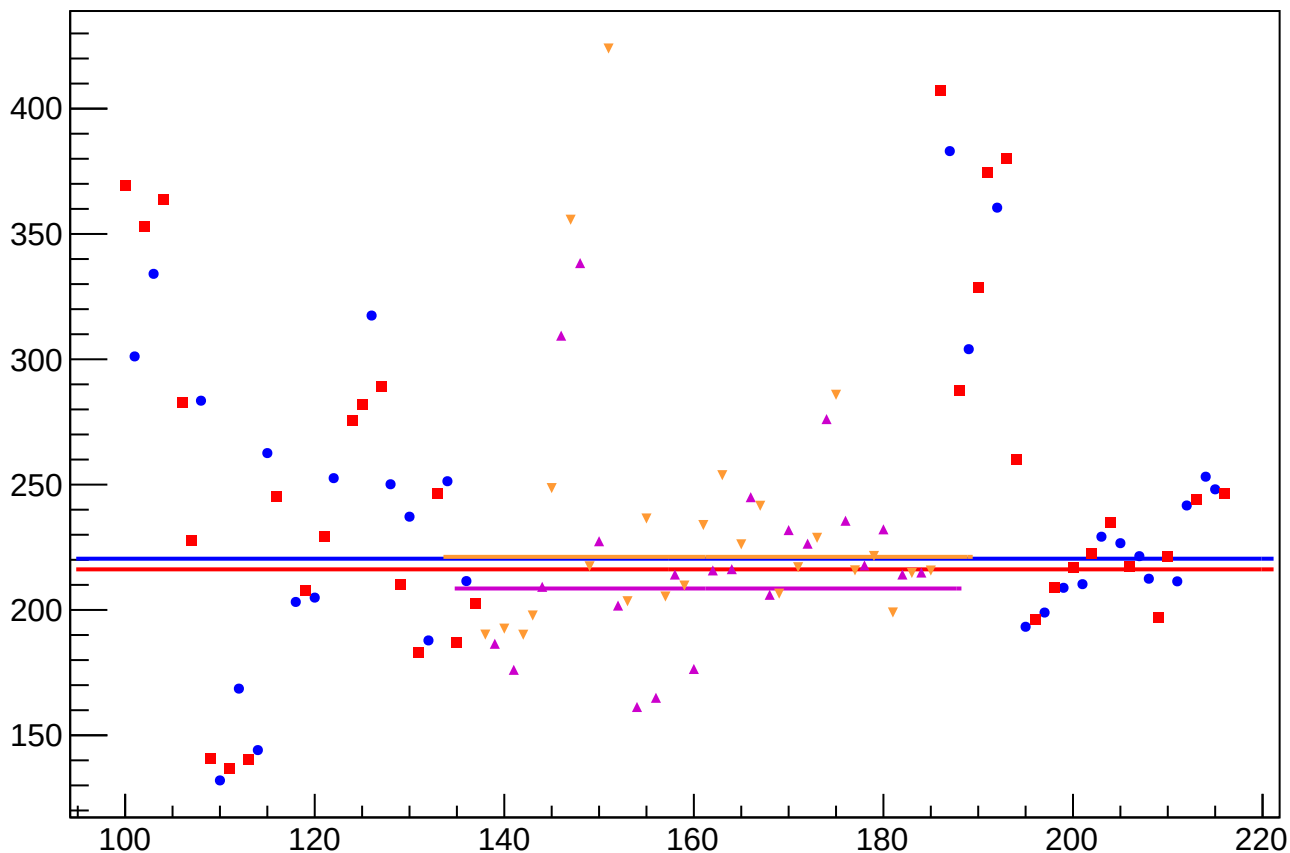
Left In: -333.303 $\pm$ 50.194  $\chi^2$ /NDF:1215.2/22

+ sign 466.561 $\pm$ 36.409  $\chi^2$ /NDF: 9126.1/55

All: 125.982 $\pm$ 25.477  $\chi^2$ /NDF: 20974.1/113

- sign -200.762 $\pm$ 35.662  $\chi^2$ /NDF: 11676.6/57

# asym\_bpm0l05WS\_rms vs Slug



Right In: 220.445 $\pm$ 0.036  $\chi^2$ /NDF: 1487569.4/30

Left Out: 221.185 $\pm$ 0.036  $\chi^2$ /NDF: 939520.0/24

Right Out: 216.191 $\pm$ 0.036  $\chi^2$ /NDF: 2329482.7/34

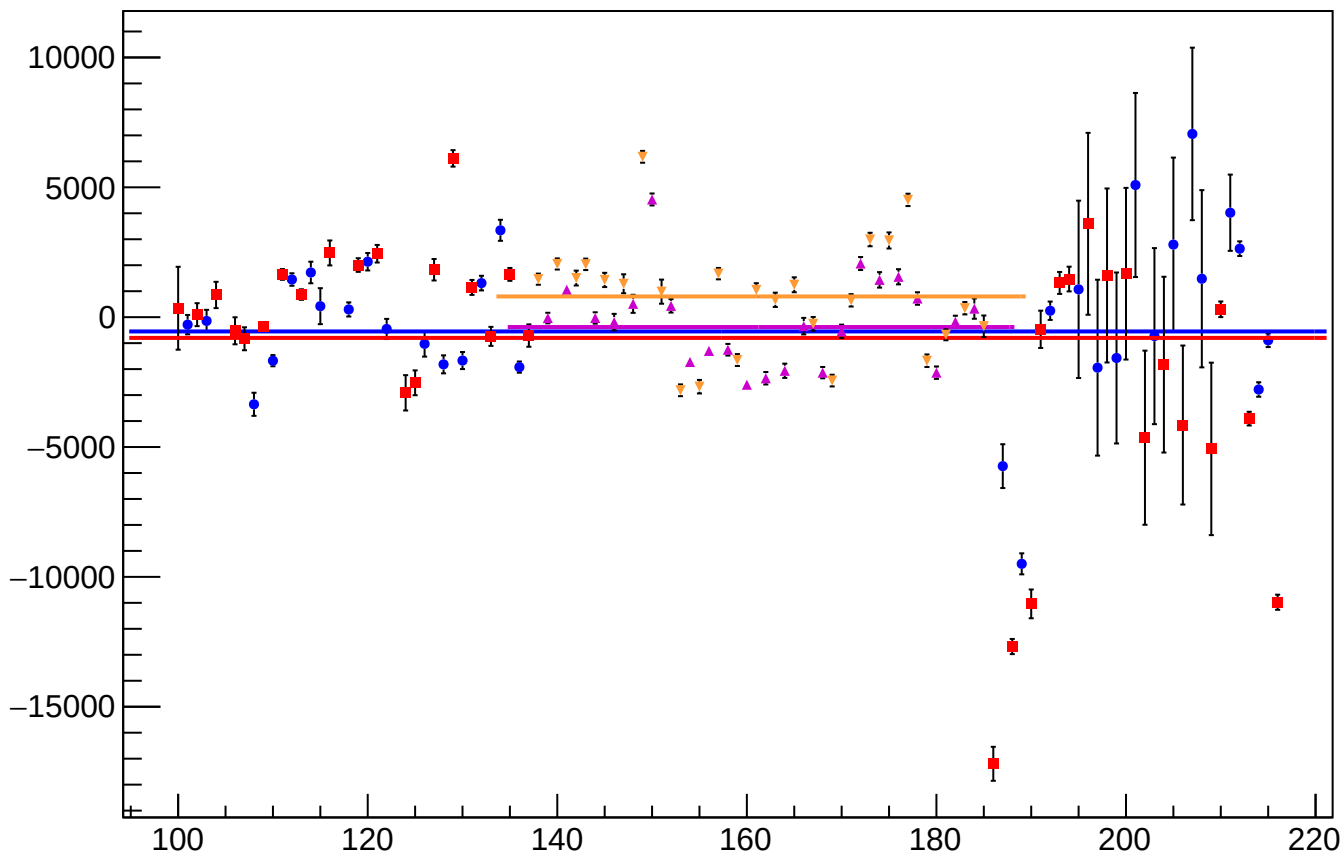
Left In: 208.556 $\pm$ 0.035  $\chi^2$ /NDF: 1035638.0/22

+ sign 220.816 $\pm$ 0.026  $\chi^2$ /NDF: 2427296.1/55

All: 216.489 $\pm$ 0.018  $\chi^2$ /NDF: 5870689.2/113

- sign 212.337 $\pm$ 0.025  $\chi^2$ /NDF: 3388034.8/57

# asym\_bpm0l06WS\_mean vs Slug



Right In:  $-549.276 \pm 68.657$   $\chi^2/\text{NDF}$ : 1189.5/30

Left Out:  $797.475 \pm 50.495$   $\chi^2/\text{NDF}$ : 1960.8/24

Right Out:  $-797.959 \pm 62.879$   $\chi^2/\text{NDF}$ : 5218.3/34

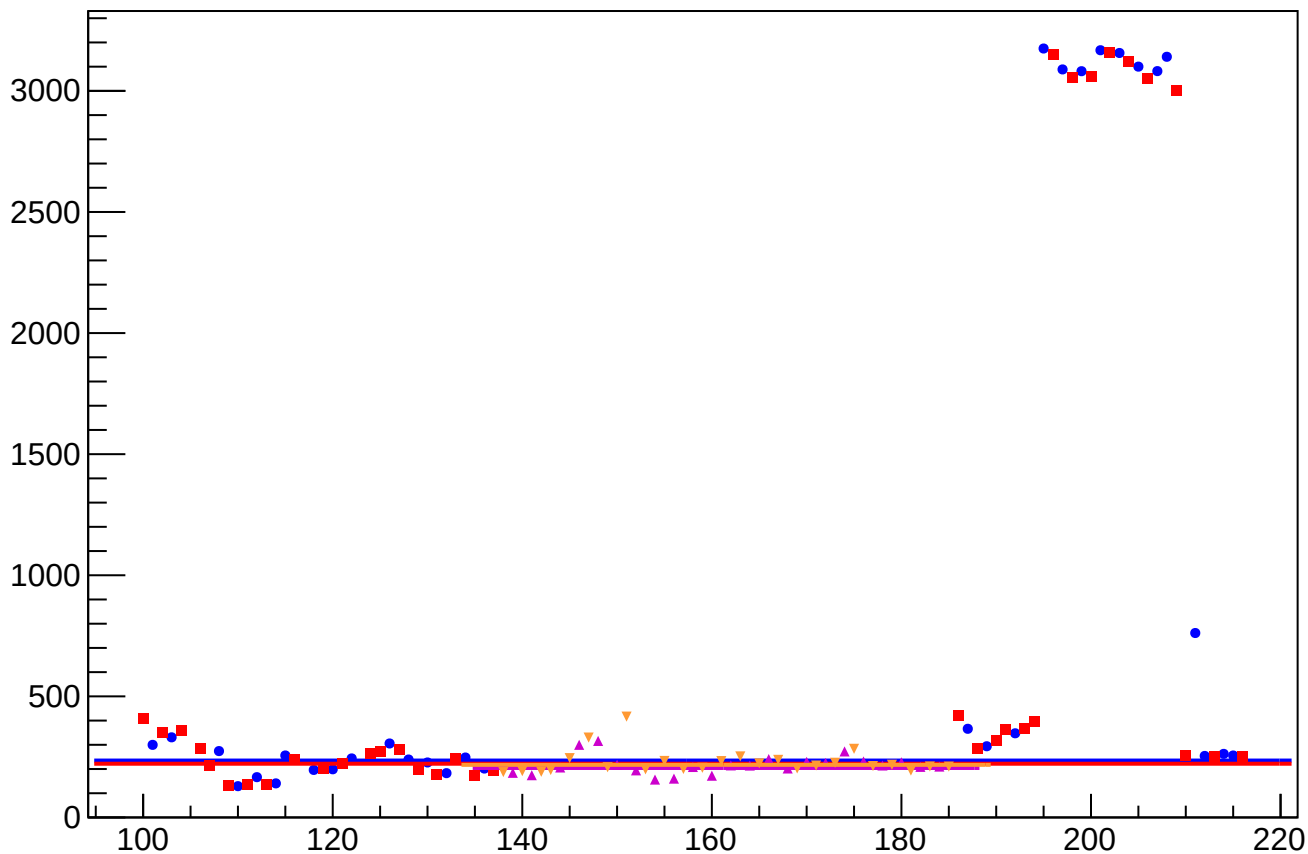
Left In:  $-379.578 \pm 49.183$   $\chi^2/\text{NDF}$ : 1201.2/22

+ sign  $324.720 \pm 40.678$   $\chi^2/\text{NDF}$ : 3400.0/55

All:  $-127.883 \pm 28.053$   $\chi^2/\text{NDF}$ : 10083.1/113

- sign  $-538.388 \pm 38.740$   $\chi^2/\text{NDF}$ : 6447.0/57

# asym\_bpm0l06WS\_rms vs Slug



Right In: 234.971 $\pm$ 0.049  $\chi^2$ /NDF: 13379324.8/30

Left Out: 217.224 $\pm$ 0.036  $\chi^2$ /NDF: 910445.0/24

Right Out: 221.844 $\pm$ 0.044  $\chi^2$ /NDF: 13174582.8/34

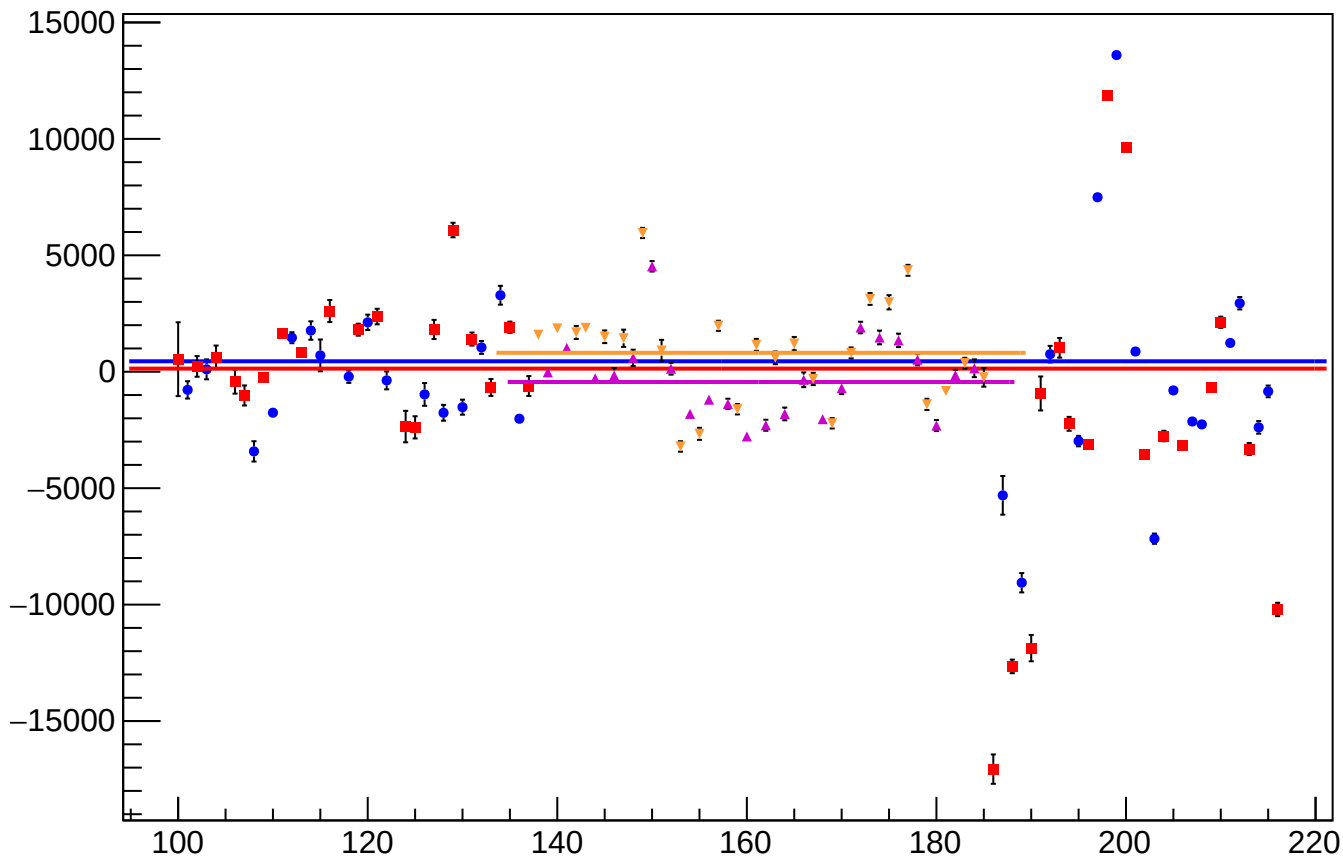
Left In: 204.308 $\pm$ 0.035  $\chi^2$ /NDF: 1015049.0/22

+ sign 223.454 $\pm$ 0.029  $\chi^2$ /NDF: 14376491.3/55

All: 216.905 $\pm$ 0.020  $\chi^2$ /NDF: 28761500.1/11

- sign 210.964 $\pm$ 0.027  $\chi^2$ /NDF: 14286133.6/57

# asym\_bpm0l07WS\_mean vs Slug



Right In:  $449.503 \pm 48.190$   $\chi^2/\text{NDF}$ : 9356.2/30

Left Out:  $814.275 \pm 49.760$   $\chi^2/\text{NDF}$ : 2000.4/24

Right Out:  $135.428 \pm 47.379$   $\chi^2/\text{NDF}$ : 12269.6/34

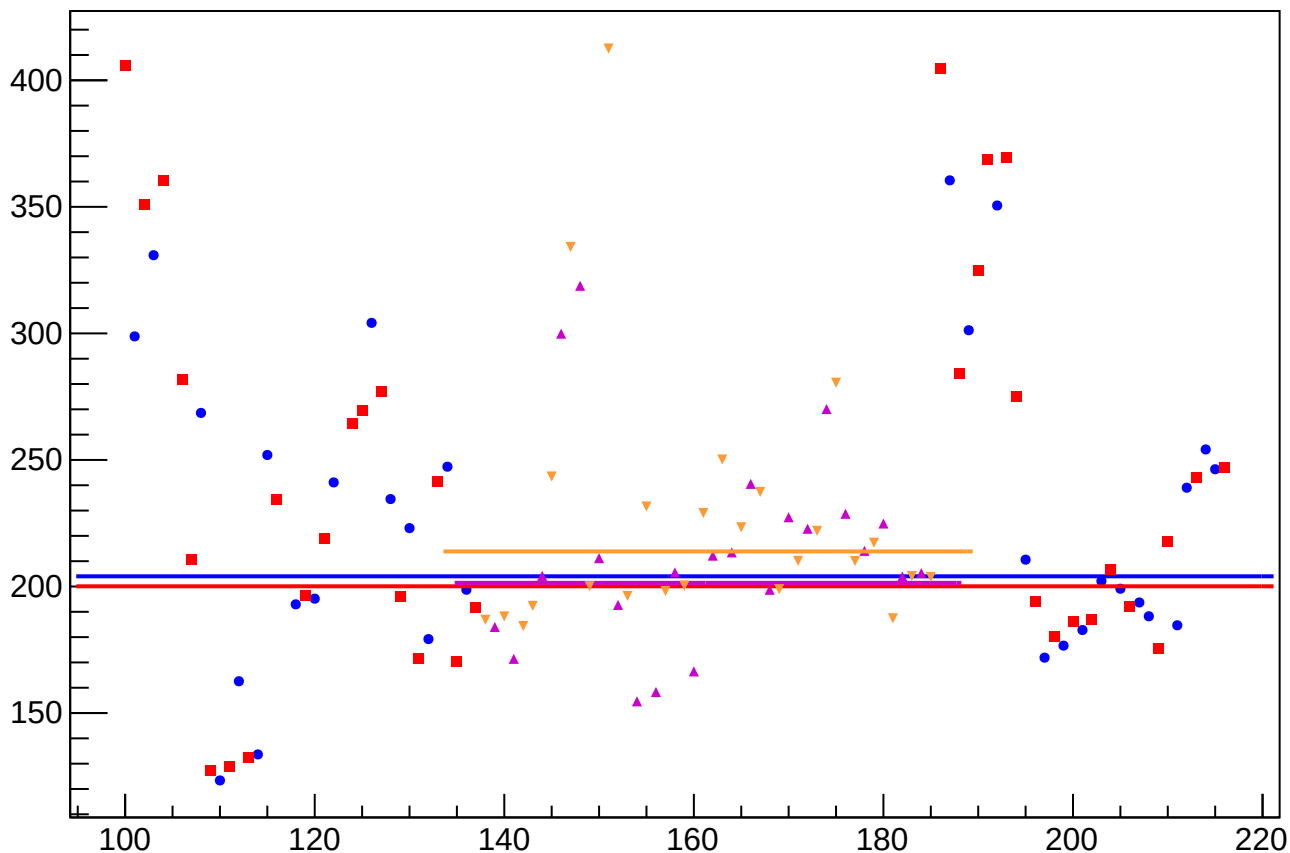
Left In:  $-439.674 \pm 48.535$   $\chi^2/\text{NDF}$ : 1235.0/22

+ sign  $626.045 \pm 34.617$   $\chi^2/\text{NDF}$ : 11384.3/55

All:  $232.395 \pm 24.222$   $\chi^2/\text{NDF}$ : 25214.2/113

- sign  $-145.192 \pm 33.904$   $\chi^2/\text{NDF}$ : 13576.5/57

# asym\_bpm0l07WS\_rms vs Slug



Right In: 204.026 $\pm$ 0.034  $\chi^2$ /NDF: 1799063.6/30

Left Out: 213.848 $\pm$ 0.035  $\chi^2$ /NDF:963582.3/24

Right Out: 200.080 $\pm$ 0.034  $\chi^2$ /NDF: 2794798.5/34

Left In: 201.446 $\pm$ 0.034  $\chi^2$ /NDF:1061972.3/22

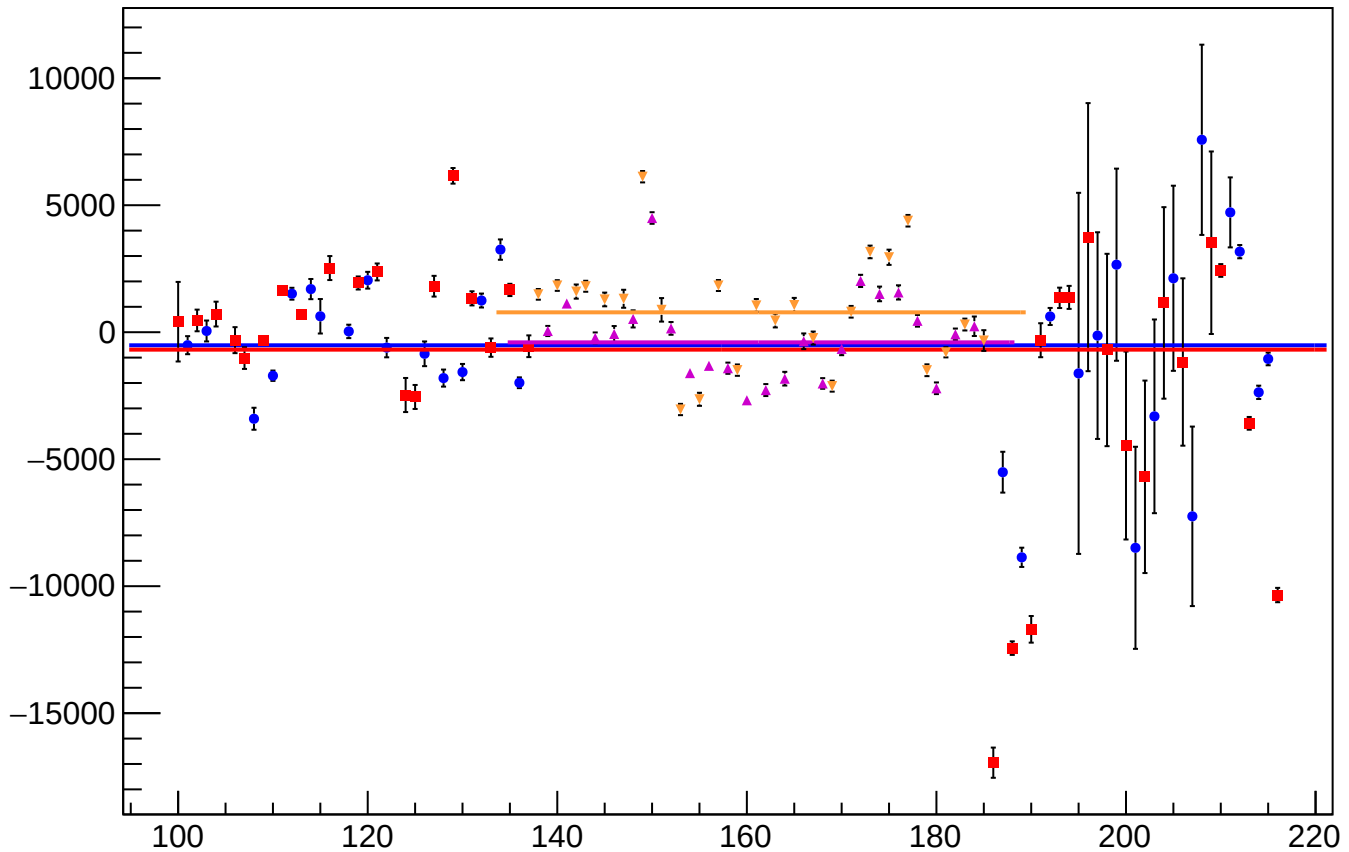
+ sign 208.780 $\pm$ 0.024  $\chi^2$ /NDF: 2802854.0/55

All: 204.679 $\pm$ 0.017  $\chi^2$ /NDF: 6715411.0/113

- sign 200.746 $\pm$ 0.024  $\chi^2$ /NDF: 3857581.1/57



# asym\_bpm0l08WS\_mean vs Slug



Right In:  $-515.497 \pm 66.168$   $\chi^2/\text{NDF}$ : 1277.1/30

Left Out:  $782.388 \pm 49.199$   $\chi^2/\text{NDF}$ : 2001.3/24

Right Out:  $-686.505 \pm 59.975$   $\chi^2/\text{NDF}$ : 5791.5/34

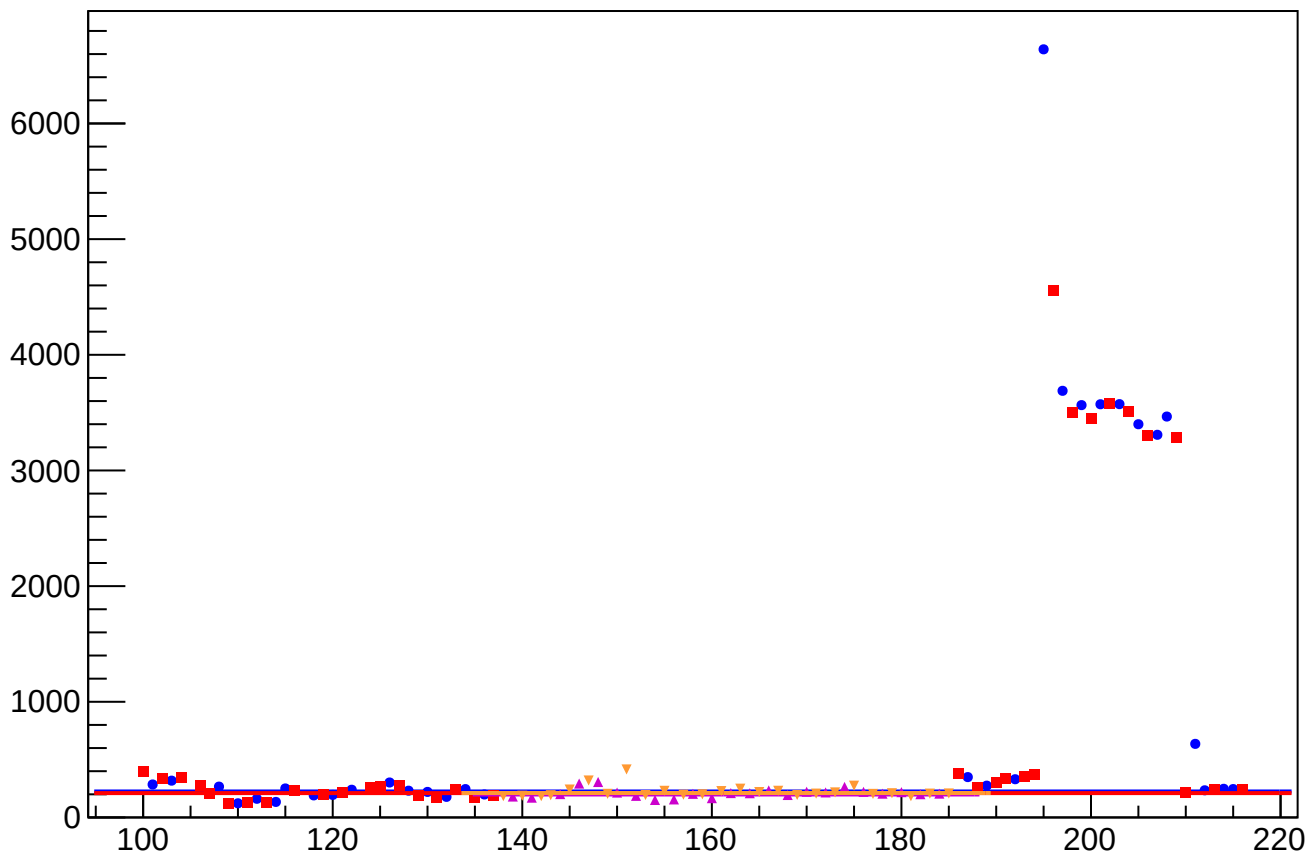
Left In:  $-399.798 \pm 47.819$   $\chi^2/\text{NDF}$ : 1232.0/22

+ sign  $320.307 \pm 39.481$   $\chi^2/\text{NDF}$ : 3526.1/55

All:  $-118.071 \pm 27.148$   $\chi^2/\text{NDF}$ : 10797.4/113

- sign  $-511.223 \pm 37.389$   $\chi^2/\text{NDF}$ : 7037.5/57

# asym\_bpm0l08WS\_rms vs Slug



Right In: 224.620+/-0.047  $\chi^2/\text{NDF}$ : 13759746.5/30

Left Out: 211.496+/-0.035  $\chi^2/\text{NDF}$ : 934978.4/24

Right Out: 210.526+/-0.042  $\chi^2/\text{NDF}$ : 13432829.8/34

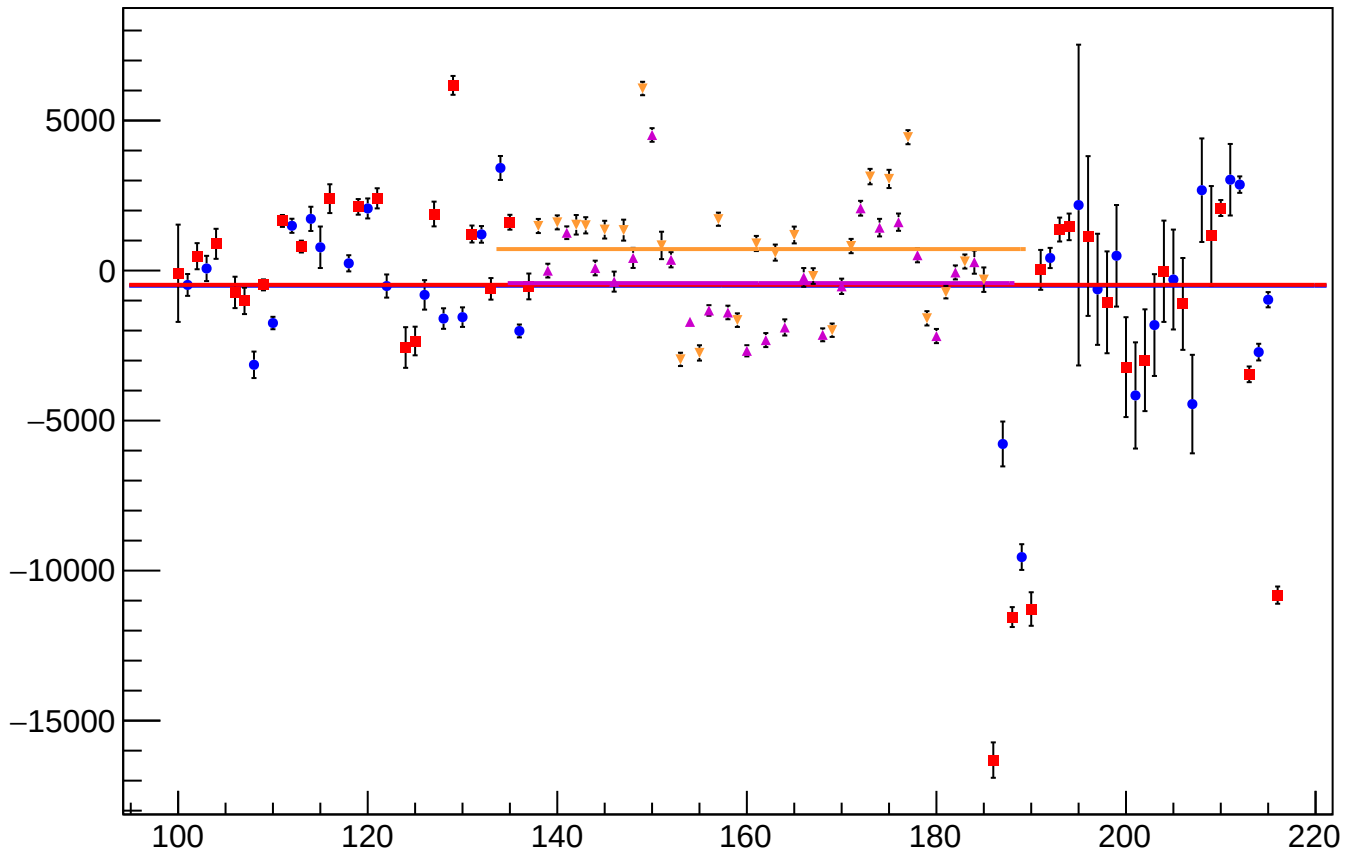
Left In: 198.524+/-0.034  $\chi^2/\text{NDF}$ : 1006458.6/22

+ sign 216.168+/-0.028  $\chi^2/\text{NDF}$ : 14745398.4/55

All: 209.326+/-0.019  $\chi^2/\text{NDF}$ : 29347606.4/11

- sign 203.189+/-0.026  $\chi^2/\text{NDF}$ : 14488245.9/57

# asym\_bpm0l09WS\_mean vs Slug



Right In:  $-505.464 \pm 67.232$   $\chi^2/\text{NDF}: 1194.6/30$

Left Out:  $715.643 \pm 51.110$   $\chi^2/\text{NDF}: 1918.0/24$

Right Out:  $-475.600 \pm 61.561$   $\chi^2/\text{NDF}: 4766.8/34$

Left In:  $-418.574 \pm 49.523$   $\chi^2/\text{NDF}: 1241.0/22$

+ sign  $268.415 \pm 40.688$   $\chi^2/\text{NDF}: 3321.6/55$

All:  $-105.066 \pm 27.998$   $\chi^2/\text{NDF}: 9490.0/113$

- sign  $-440.979 \pm 38.587$   $\chi^2/\text{NDF}: 6008.3/57$

# asym\_bpm0l09WS\_rms vs Slug



Right In: 237.711+/-0.048  $\chi^2/\text{NDF}$ : 12321278.3/30

Left Out: 220.145+/-0.036  $\chi^2/\text{NDF}$ : 799699.4/24

Right Out: 222.915+/-0.044  $\chi^2/\text{NDF}$ : 11624027.5/34

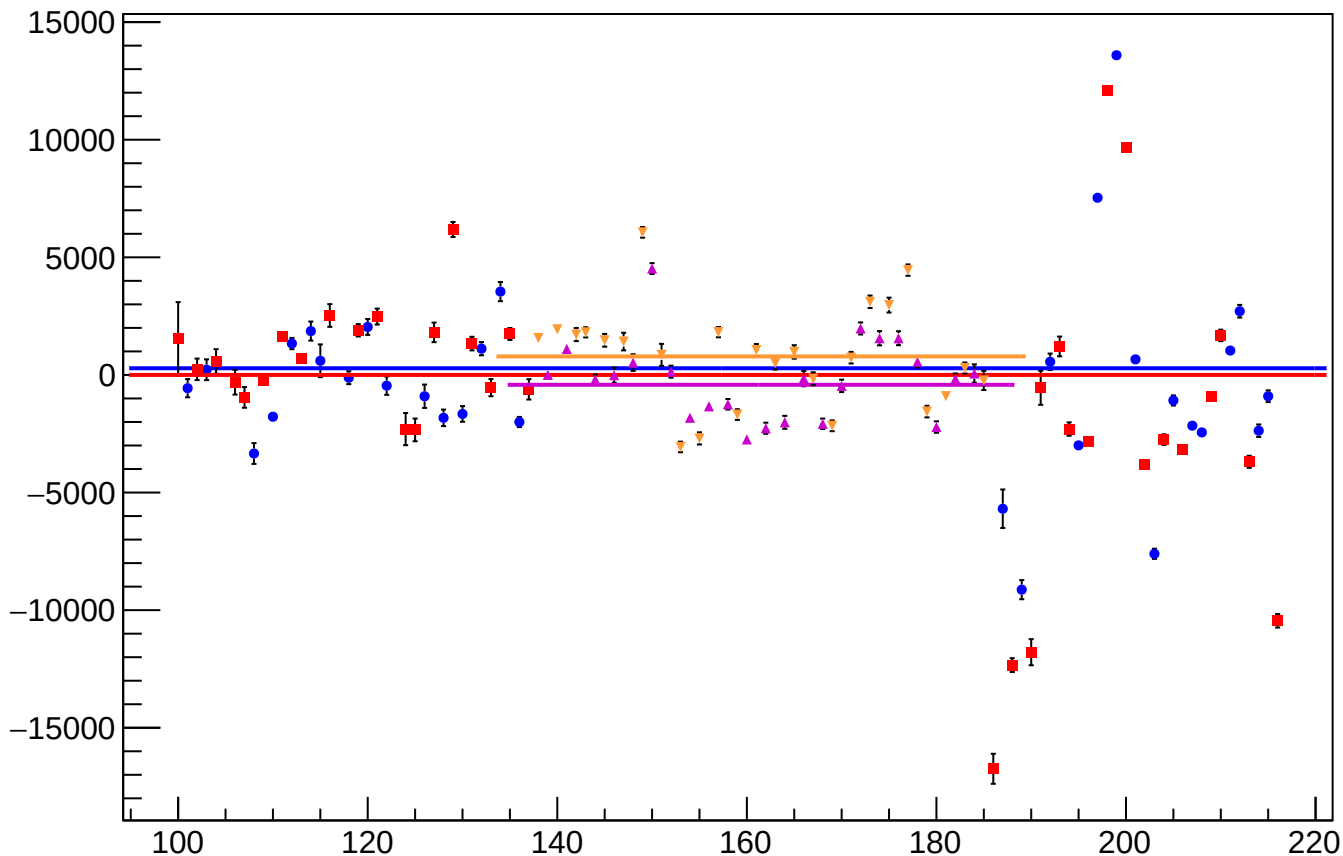
Left In: 205.481+/-0.035  $\chi^2/\text{NDF}$ : 1013965.4/22

+ sign 226.579+/-0.029  $\chi^2/\text{NDF}$ : 13207506.7/55

All: 219.078+/-0.020  $\chi^2/\text{NDF}$ : 26071990.0/11

- sign 212.331+/-0.027  $\chi^2/\text{NDF}$ : 12735373.1/57

# asym\_bpm0l10WS\_mean vs Slug



Right In:  $284.316 \pm 48.647$   $\chi^2/\text{NDF}: 9328.0/30$

Left Out:  $786.922 \pm 50.524$   $\chi^2/\text{NDF}: 1937.6/24$

Right Out:  $0.482 \pm 48.098$   $\chi^2/\text{NDF}: 11955.7/34$

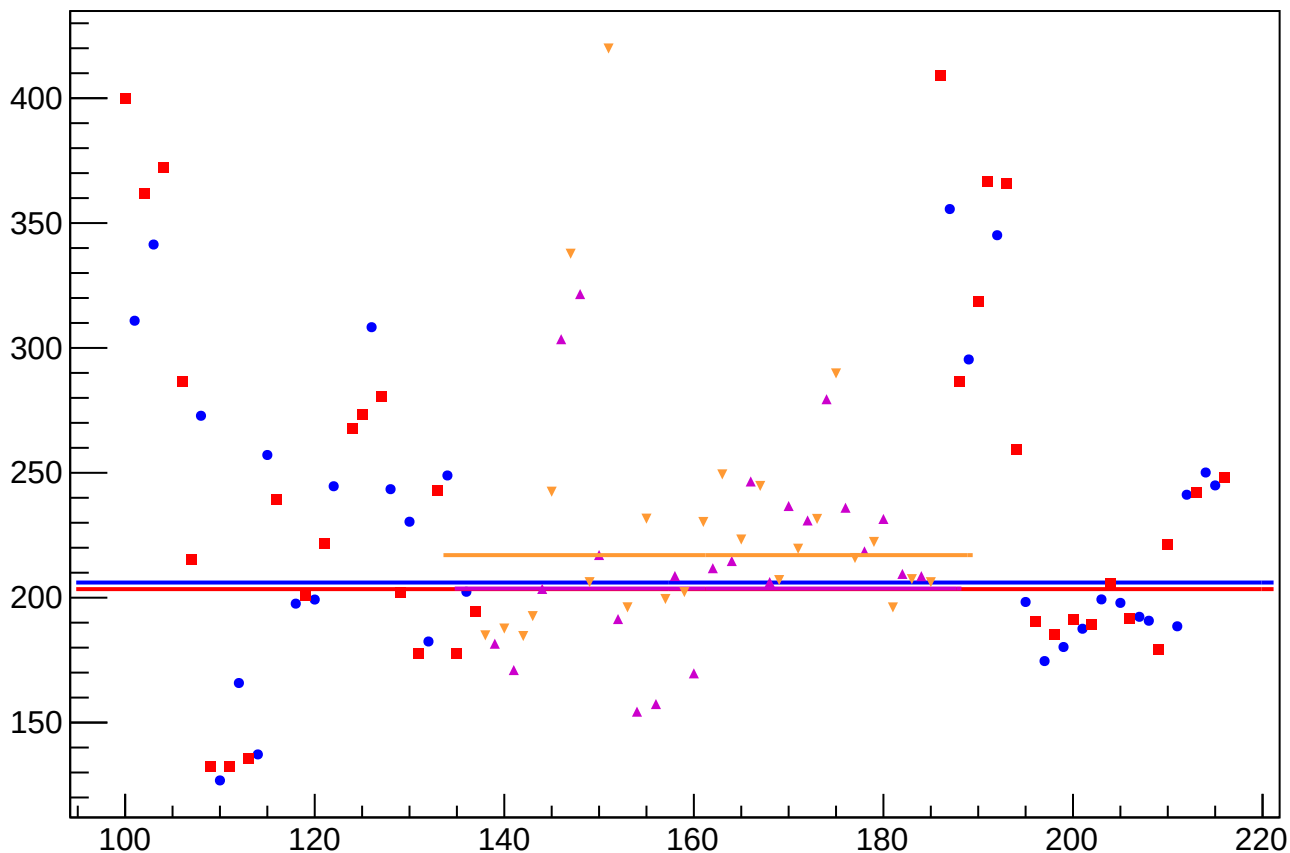
Left In:  $-418.824 \pm 49.152$   $\chi^2/\text{NDF}: 1211.0/22$

+ sign  $526.108 \pm 35.043$   $\chi^2/\text{NDF}: 11316.9/55$

All:  $153.726 \pm 24.540$   $\chi^2/\text{NDF}: 24742.4/113$

- sign  $-204.628 \pm 34.377$   $\chi^2/\text{NDF}: 13203.9/57$

# asym\_bpm0l10WS\_rms vs Slug



Right In: 206.070 $\pm$ 0.034  $\chi^2$ /NDF: 1721617.3/30

Left Out: 217.040 $\pm$ 0.036  $\chi^2$ /NDF:983170.6/24

Right Out: 203.429 $\pm$ 0.034  $\chi^2$ /NDF: 2618518.4/34

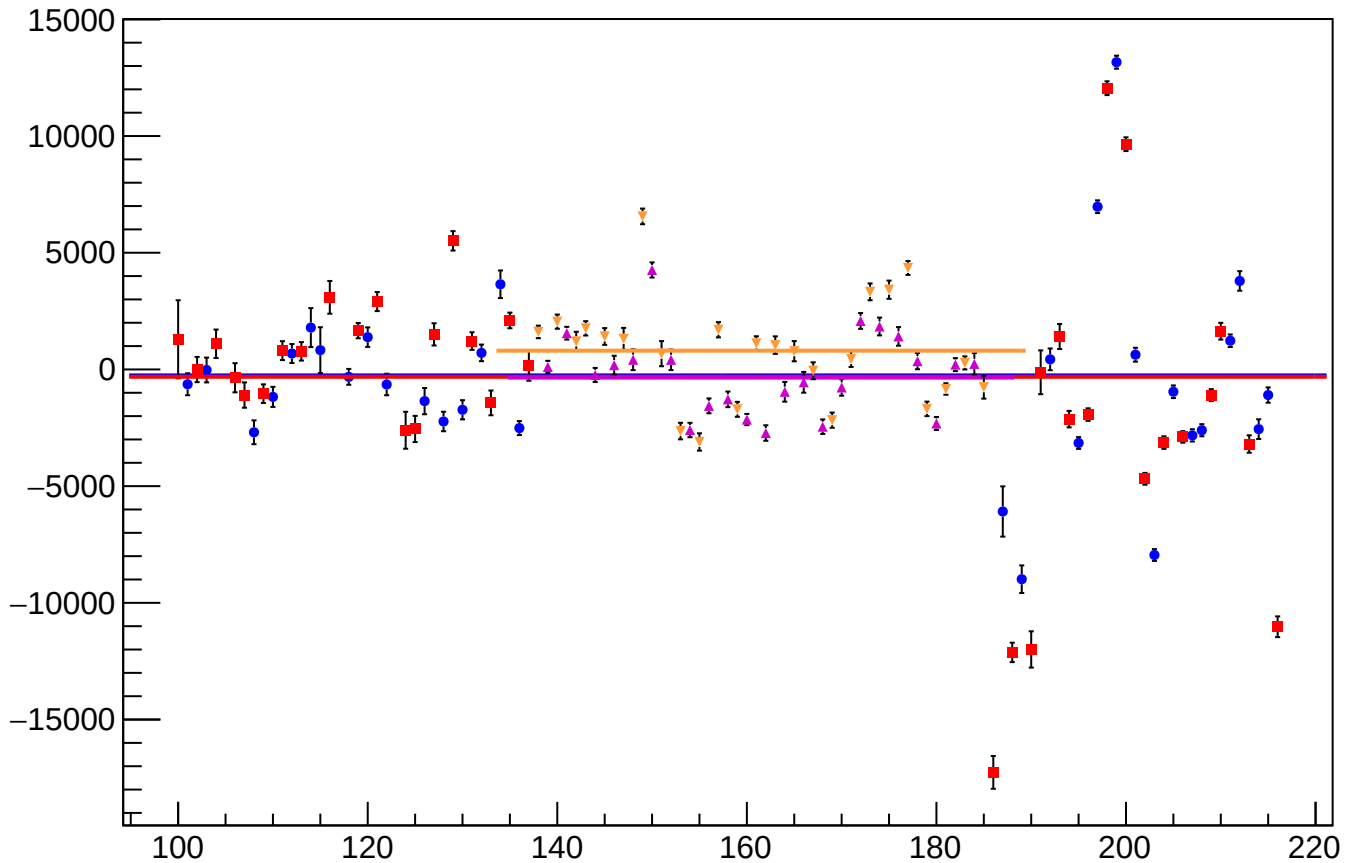
Left In: 203.660 $\pm$ 0.035  $\chi^2$ /NDF:1165334.8/22

+ sign 211.347 $\pm$ 0.025  $\chi^2$ /NDF: 2753718.4/55

All: 207.370 $\pm$ 0.017  $\chi^2$ /NDF: 6588153.2/113

- sign 203.542 $\pm$ 0.024  $\chi^2$ /NDF: 3783875.8/57

# asym\_bpm0r03WS\_mean vs Slug



Right In:  $-255.463 \pm 65.055$   $\chi^2/\text{NDF}: 4880.4/30$

Left Out:  $803.752 \pm 67.693$   $\chi^2/\text{NDF}: 1057.7/24$

Right Out:  $-314.509 \pm 66.645$   $\chi^2/\text{NDF}: 6232.0/34$

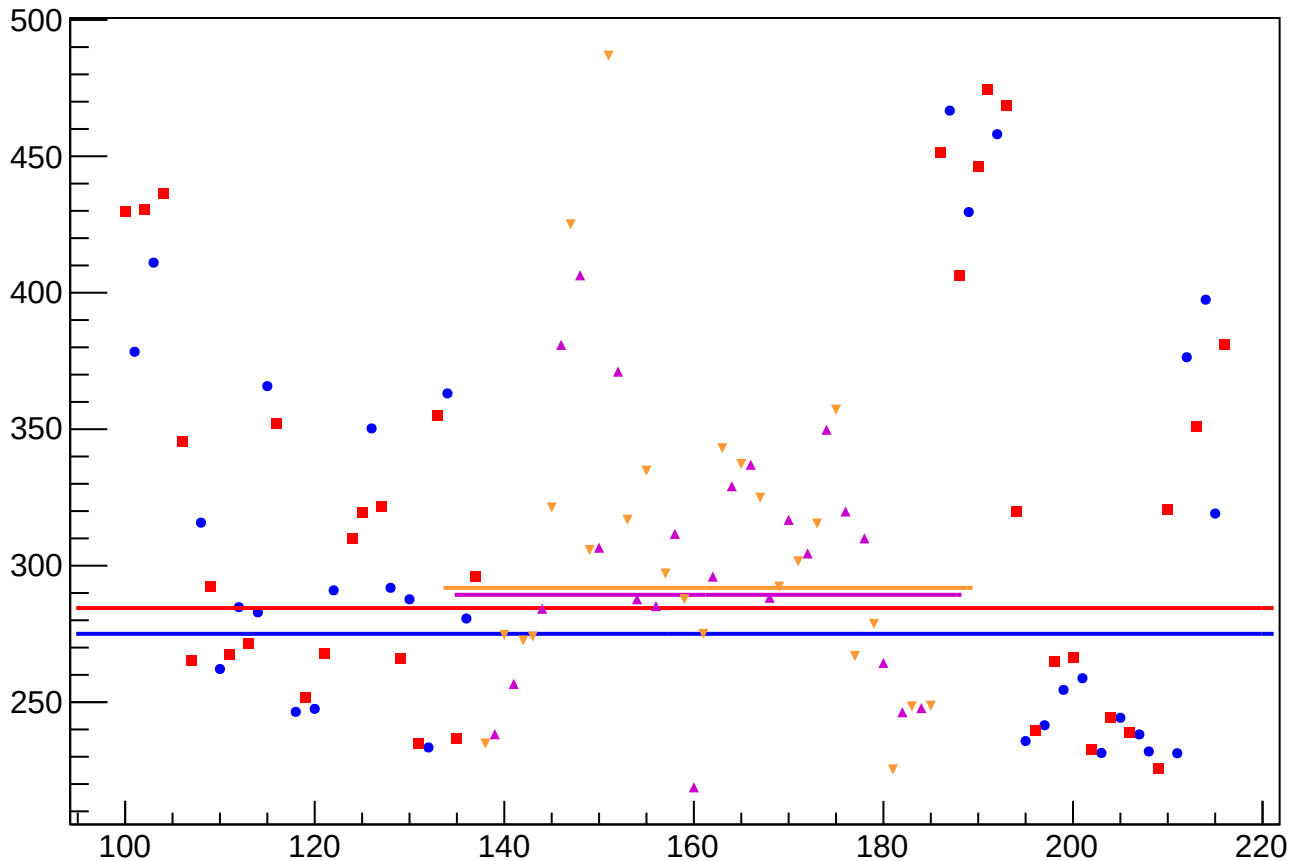
Left In:  $-350.095 \pm 68.985$   $\chi^2/\text{NDF}: 656.1/22$

+ sign  $253.106 \pm 46.906$   $\chi^2/\text{NDF}: 6065.4/55$

All:  $-32.970 \pm 33.524$   $\chi^2/\text{NDF}: 13029.6/113$

- sign  $-331.688 \pm 47.931$   $\chi^2/\text{NDF}: 6888.2/57$

# asym\_bpm0r03WS\_rms vs Slug



Right In: 275.033+/-0.046  $\chi^2/\text{NDF}$ : 1558066.0/30

Left Out: 291.882+/-0.048  $\chi^2/\text{NDF}$ : 959919.3/24

Right Out: 284.476+/-0.047  $\chi^2/\text{NDF}$ : 1750906.5/34

Left In: 289.321+/-0.049  $\chi^2/\text{NDF}$ : 808605.3/22

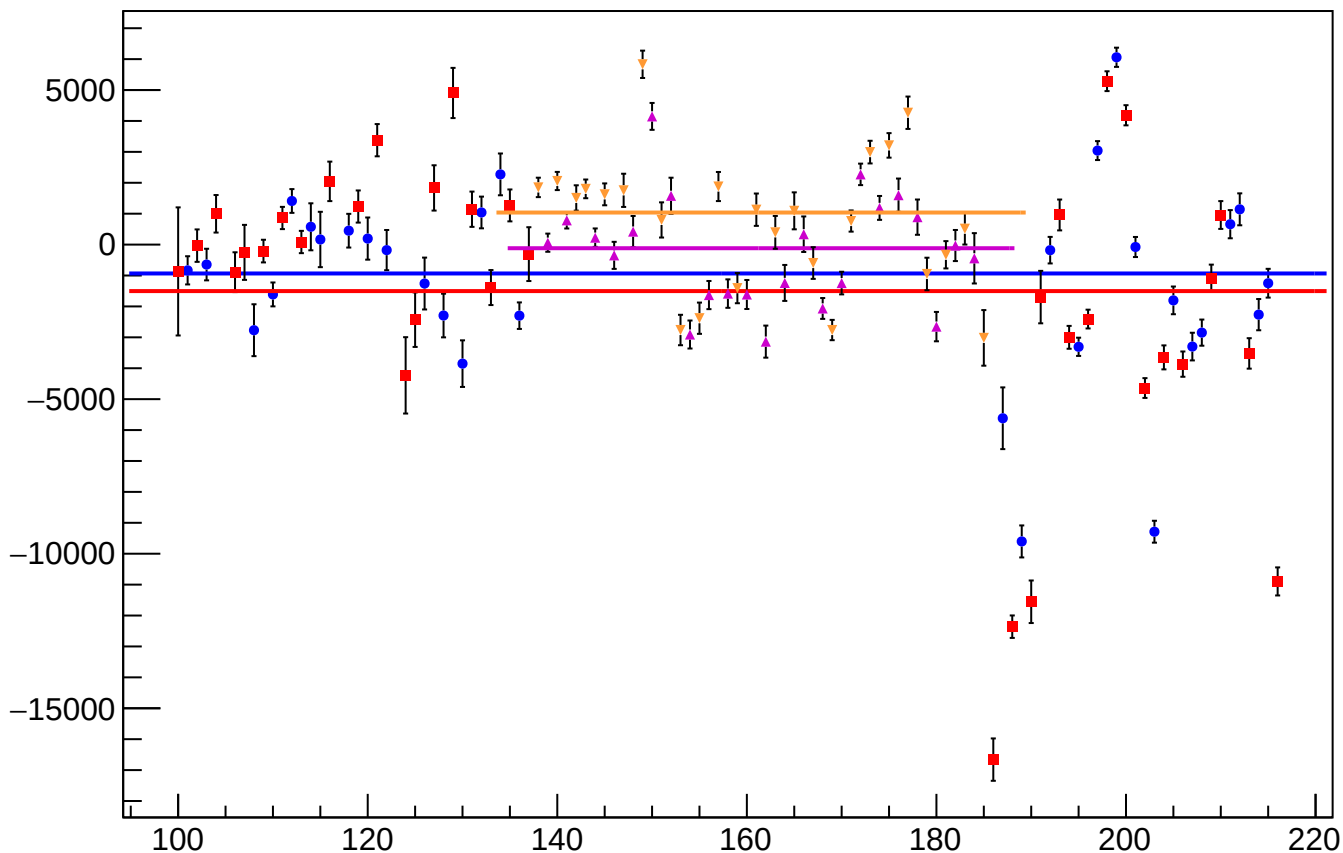
+ sign 283.123+/-0.033  $\chi^2/\text{NDF}$ : 2582400.2/55

All: 284.929+/-0.024  $\chi^2/\text{NDF}$ : 5153075.1/113

- sign 286.815+/-0.034  $\chi^2/\text{NDF}$ : 2564613.9/57



# asym\_bpm0r05WS\_mean vs Slug



Right In:  $-933.953 \pm 83.404$   $\chi^2/\text{NDF}: 1824.4/30$

Left Out:  $1037.330 \pm 85.200$   $\chi^2/\text{NDF}: 570.2/24$

Right Out:  $-1503.980 \pm 80.157$   $\chi^2/\text{NDF}: 3423.7/34$

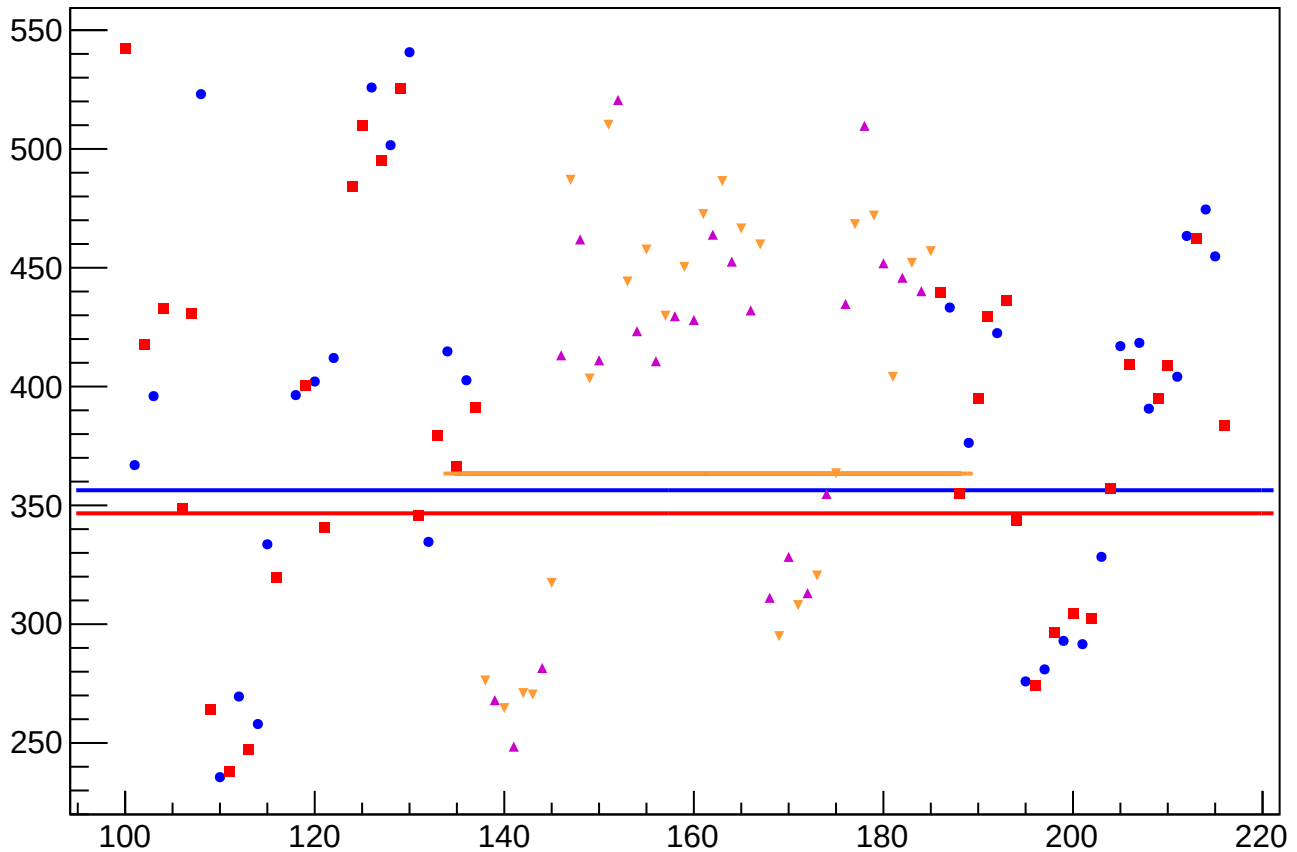
Left In:  $-117.211 \pm 87.461$   $\chi^2/\text{NDF}: 370.4/22$

+ sign  $30.691 \pm 59.600$   $\chi^2/\text{NDF}: 2667.9/55$

All:  $-423.963 \pm 41.963$   $\chi^2/\text{NDF}: 6714.1/113$

- sign  $-870.913 \pm 59.093$   $\chi^2/\text{NDF}: 3930.8/57$

# asym\_bpm0r05WS\_rms vs Slug



Right In: 356.366+/-0.059  $\chi^2/\text{NDF}$ : 1688444.3/30

Left Out: 363.387+/-0.060  $\chi^2/\text{NDF}$ :1940497.4/24

Right Out: 346.653+/-0.057  $\chi^2/\text{NDF}$ : 1461117.1/34

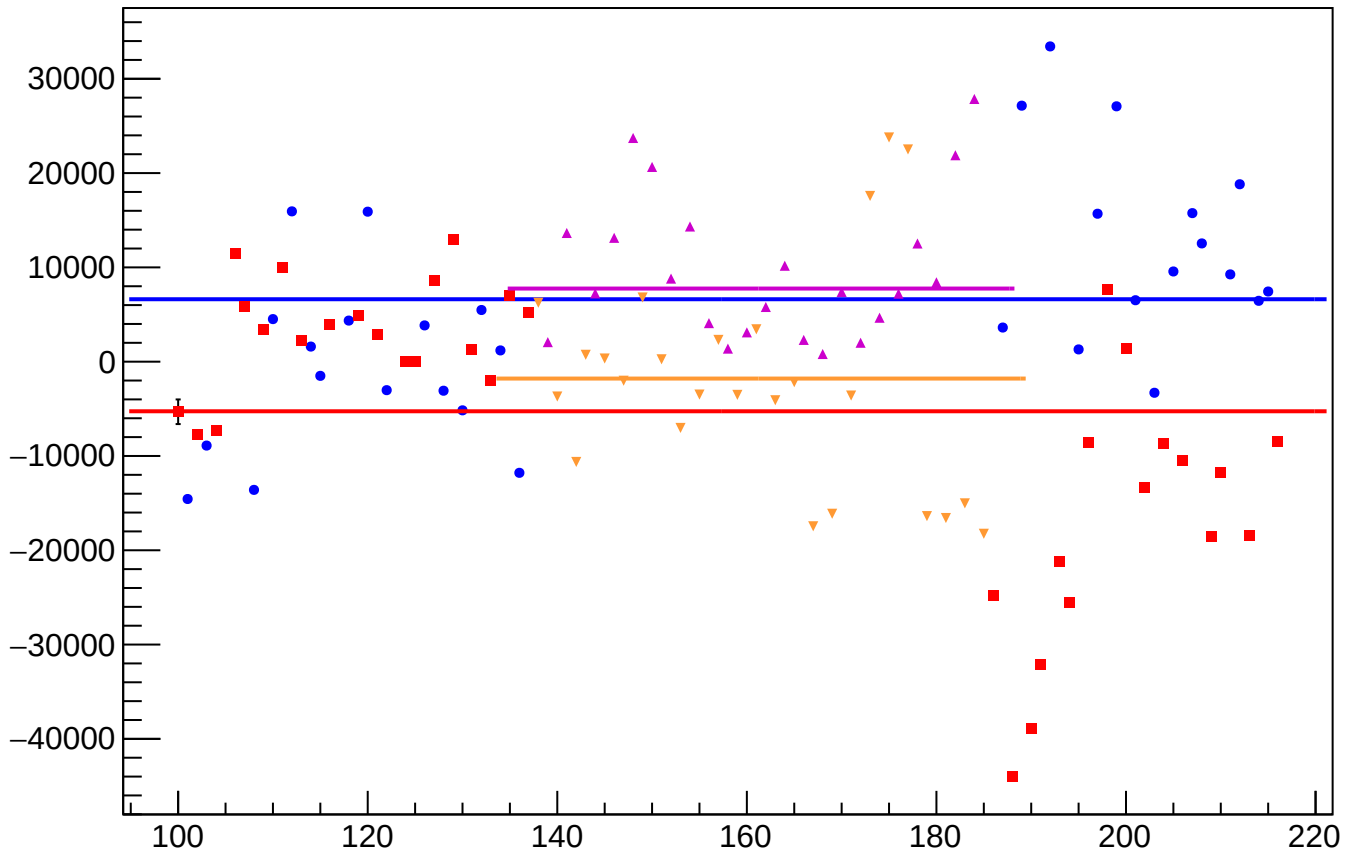
Left In: 363.386+/-0.062  $\chi^2/\text{NDF}$ :1711599.2/22

+ sign 359.801+/-0.042  $\chi^2/\text{NDF}$ : 3635877.9/55

All: 357.023+/-0.030  $\chi^2/\text{NDF}$ : 6857003.0/113

- sign 354.292+/-0.042  $\chi^2/\text{NDF}$ : 3212506.0/57

# asym\_bpm0i02WS\_mean vs Slug



Right In:  $6622.063 \pm 38.494$   $\chi^2/\text{NDF}: 96708.1/30$

Left Out:  $-1790.289 \pm 40.910$   $\chi^2/\text{NDF}: 65745.9/24$

+ sign  $2671.646 \pm 28.034$   $\chi^2/\text{NDF}: 184881.6/55$

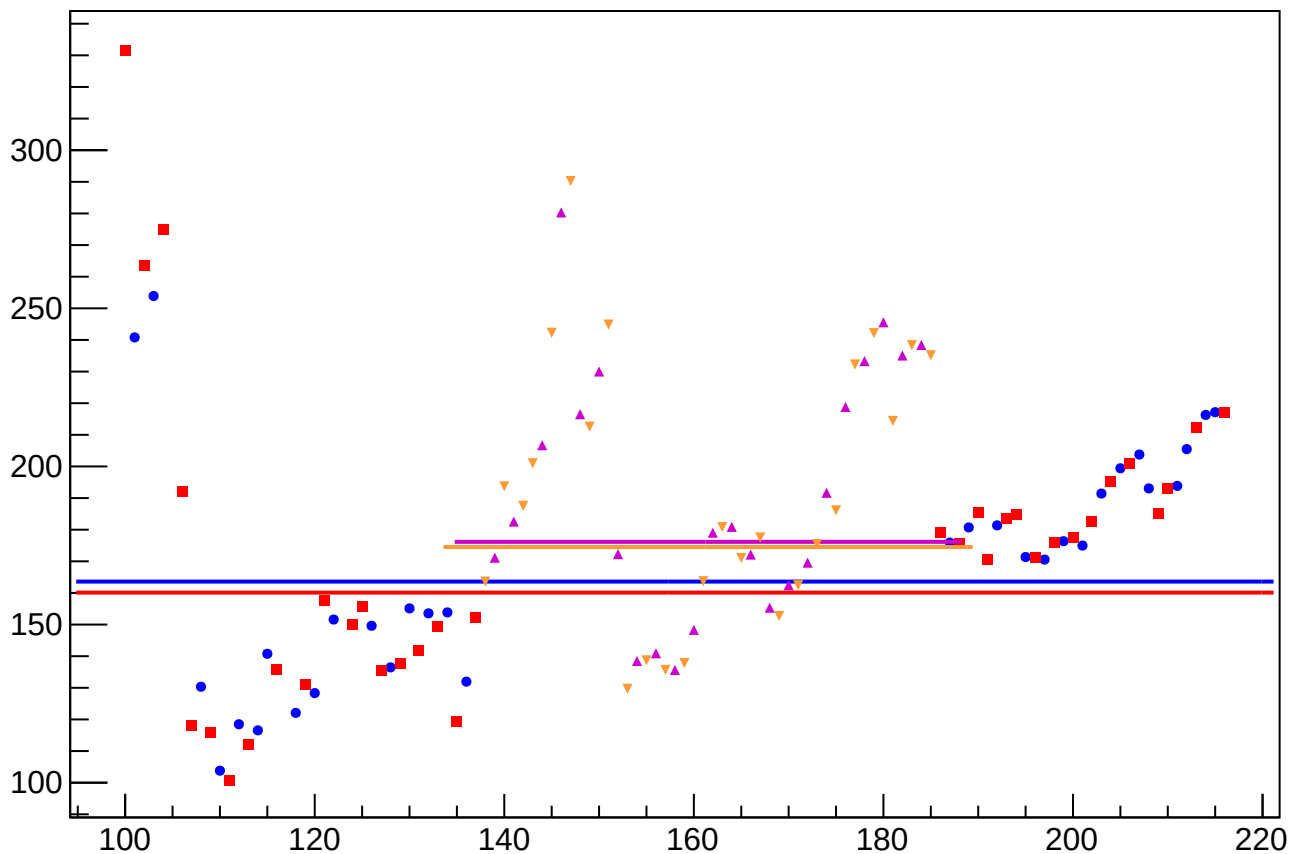
Right Out:  $-5259.429 \pm 37.280$   $\chi^2/\text{NDF}: 147172.3/34$

All:  $1530.772 \pm 19.827$   $\chi^2/\text{NDF}: 411536.3/11$

- sign  $388.946 \pm 28.046$   $\chi^2/\text{NDF}: 223341.2/57$

Left In:  $7754.468 \pm 42.571$   $\chi^2/\text{NDF}: 23278.0/22$

# asym\_bpm0i02WS\_rms vs Slug



Right In: 163.592 $\pm$ 0.027  $\chi^2$ /NDF: 1660588.8/30

Left Out: 174.520 $\pm$ 0.029  $\chi^2$ /NDF: 1659469.6/24

Right Out: 160.112 $\pm$ 0.026  $\chi^2$ /NDF: 1934130.3/34

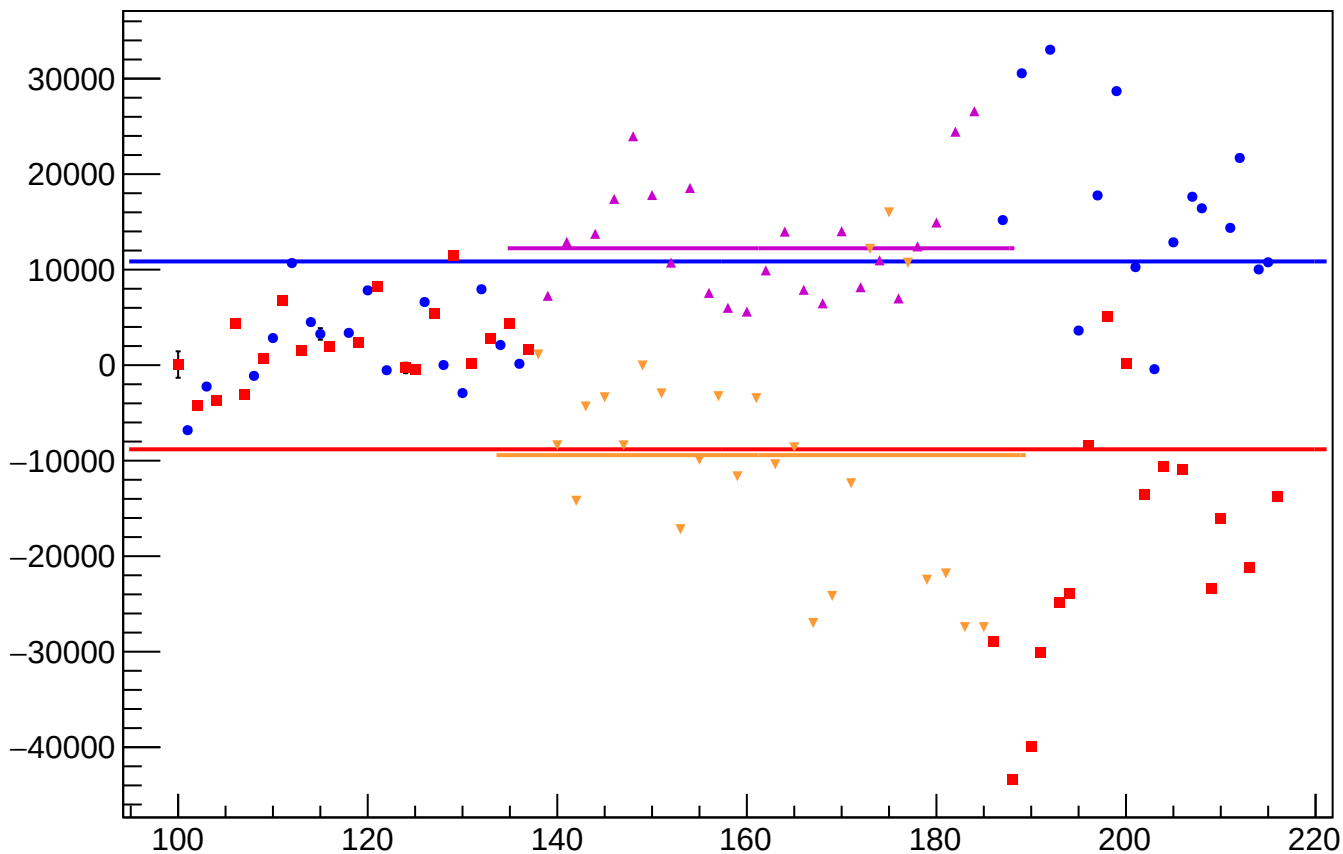
Left In: 176.155 $\pm$ 0.030  $\chi^2$ /NDF: 1367059.2/22

+ sign 168.724 $\pm$ 0.020  $\chi^2$ /NDF: 3395760.4/55

All: 167.900 $\pm$ 0.014  $\chi^2$ /NDF: 6861158.8/113

- sign 167.075 $\pm$ 0.020  $\chi^2$ /NDF: 3461939.5/57

# asym\_bpm0i02aWS\_mean vs Slug



Right In: 10858.808+/-41.986  $\chi^2/\text{NDF}$ : 56817.9/30

Left Out: -9420.181+/-45.698  $\chi^2/\text{NDF}$ : 64719.0/24

Right Out: -8810.155+/-40.821  $\chi^2/\text{NDF}$ : 118713.7/34

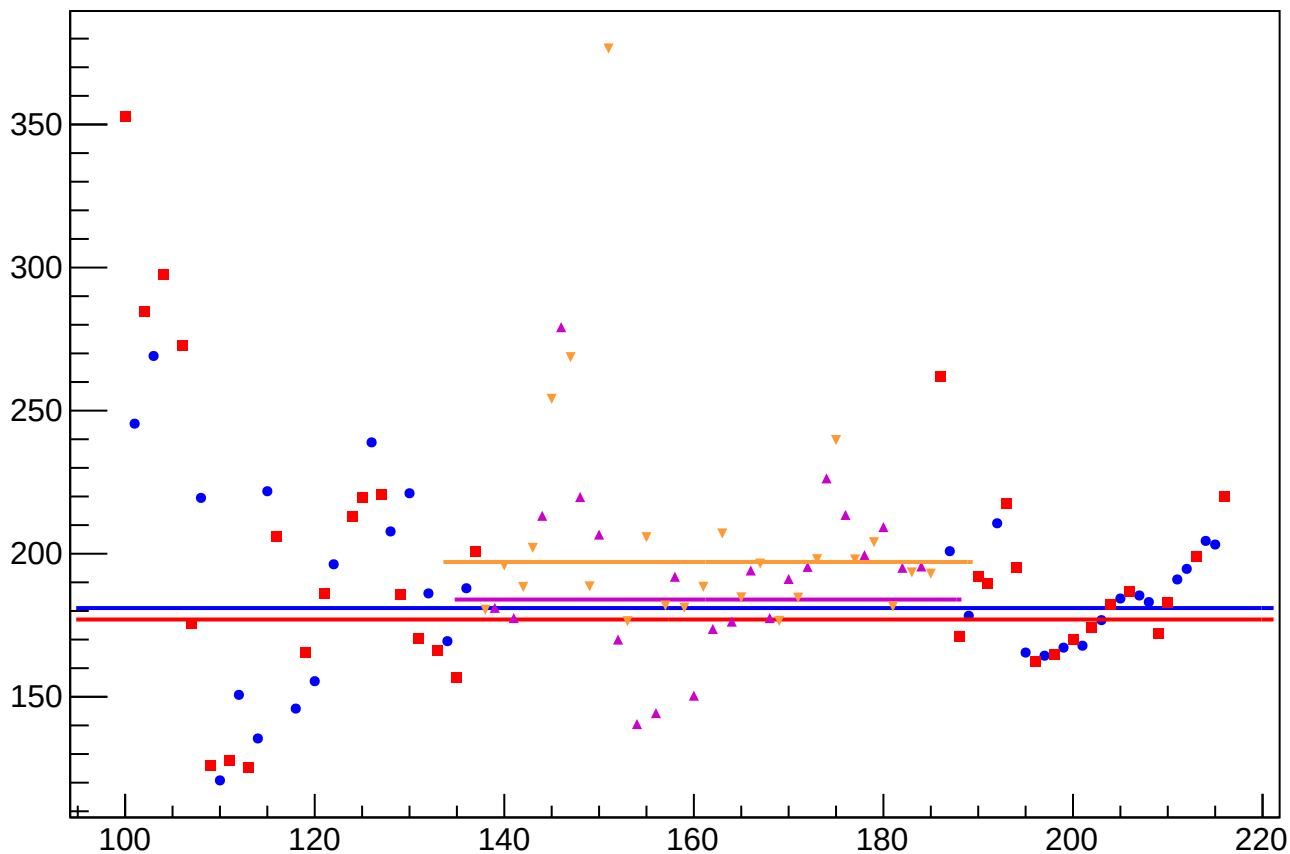
Left In: 12238.678+/-44.195  $\chi^2/\text{NDF}$ : 16015.8/22

+ sign 1576.266+/-30.918  $\chi^2/\text{NDF}$ : 228320.9/55

All: 1217.616+/-21.525  $\chi^2/\text{NDF}$ : 485716.7/11

- sign 880.236+/-29.987  $\chi^2/\text{NDF}$ : 257134.7/57

# asym\_bpm0i02aWS\_rms vs Slug



Right In: 181.014+/-0.030  $\chi^2/\text{NDF}$ : 835574.4/30

Left Out: 197.122+/-0.032  $\chi^2/\text{NDF}$ : 732529.8/24

Right Out: 177.017+/-0.029  $\chi^2/\text{NDF}$ : 1292980.5/34

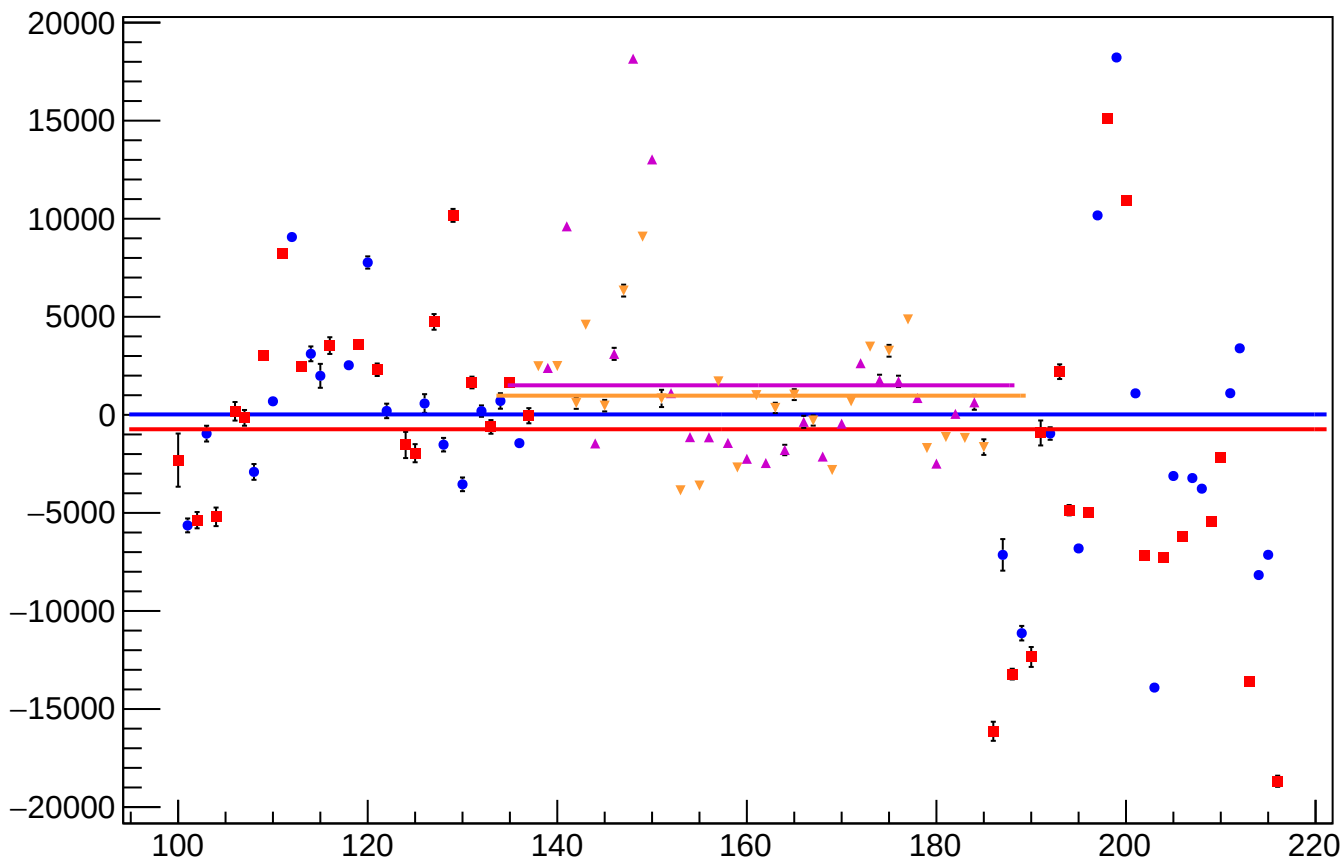
Left In: 183.985+/-0.031  $\chi^2/\text{NDF}$ : 829778.1/22

+ sign 188.387+/-0.022  $\chi^2/\text{NDF}$ : 1702860.3/55

All: 184.182+/-0.015  $\chi^2/\text{NDF}$ : 3924276.6/113

- sign 180.225+/-0.021  $\chi^2/\text{NDF}$ : 2149589.6/57

# asym\_bpm0i05WS\_mean vs Slug



Right In: 21.514+/-47.127  $\chi^2/\text{NDF}$ : 23873.1/30

Left Out: 978.429+/-49.607  $\chi^2/\text{NDF}$ : 4322.9/24

Right Out: -735.079+/-45.902  $\chi^2/\text{NDF}$ : 29466.0/34

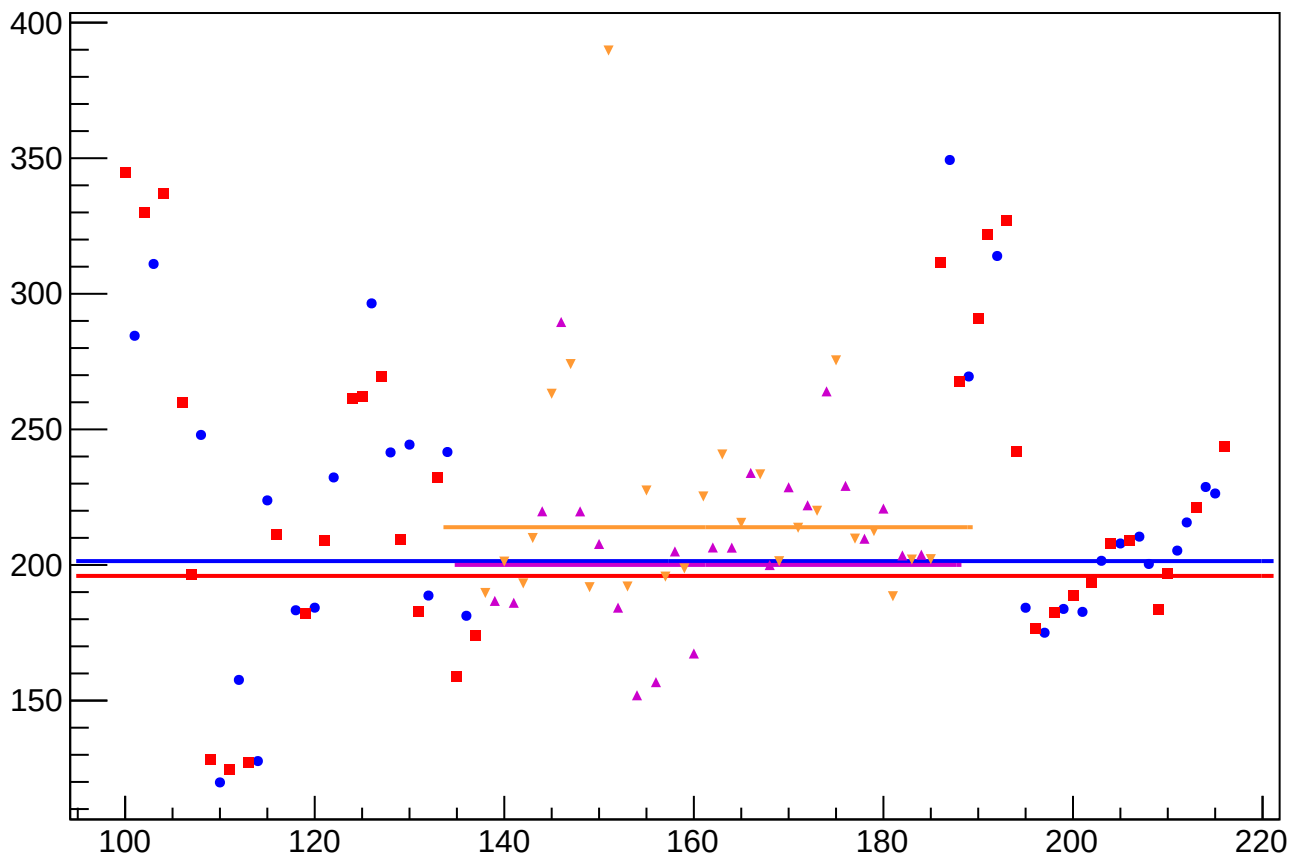
Left In: 1505.093+/-48.051  $\chi^2/\text{NDF}$ : 11480.6/22

+ sign 475.454+/-34.167  $\chi^2/\text{NDF}$ : 28391.6/55

All: 402.570+/-23.807  $\chi^2/\text{NDF}$ : 70483.5/113

- sign 333.789+/-33.191  $\chi^2/\text{NDF}$ : 42083.0/57

# asym\_bpm0i05WS\_rms vs Slug



Right In: 201.436 $\pm$ 0.033  $\chi^2$ /NDF: 1516221.0/30

Left Out: 213.931 $\pm$ 0.035  $\chi^2$ /NDF: 733638.6/24

Right Out: 195.969 $\pm$ 0.032  $\chi^2$ /NDF: 2344789.0/34

Left In: 200.031 $\pm$ 0.034  $\chi^2$ /NDF: 785525.4/22

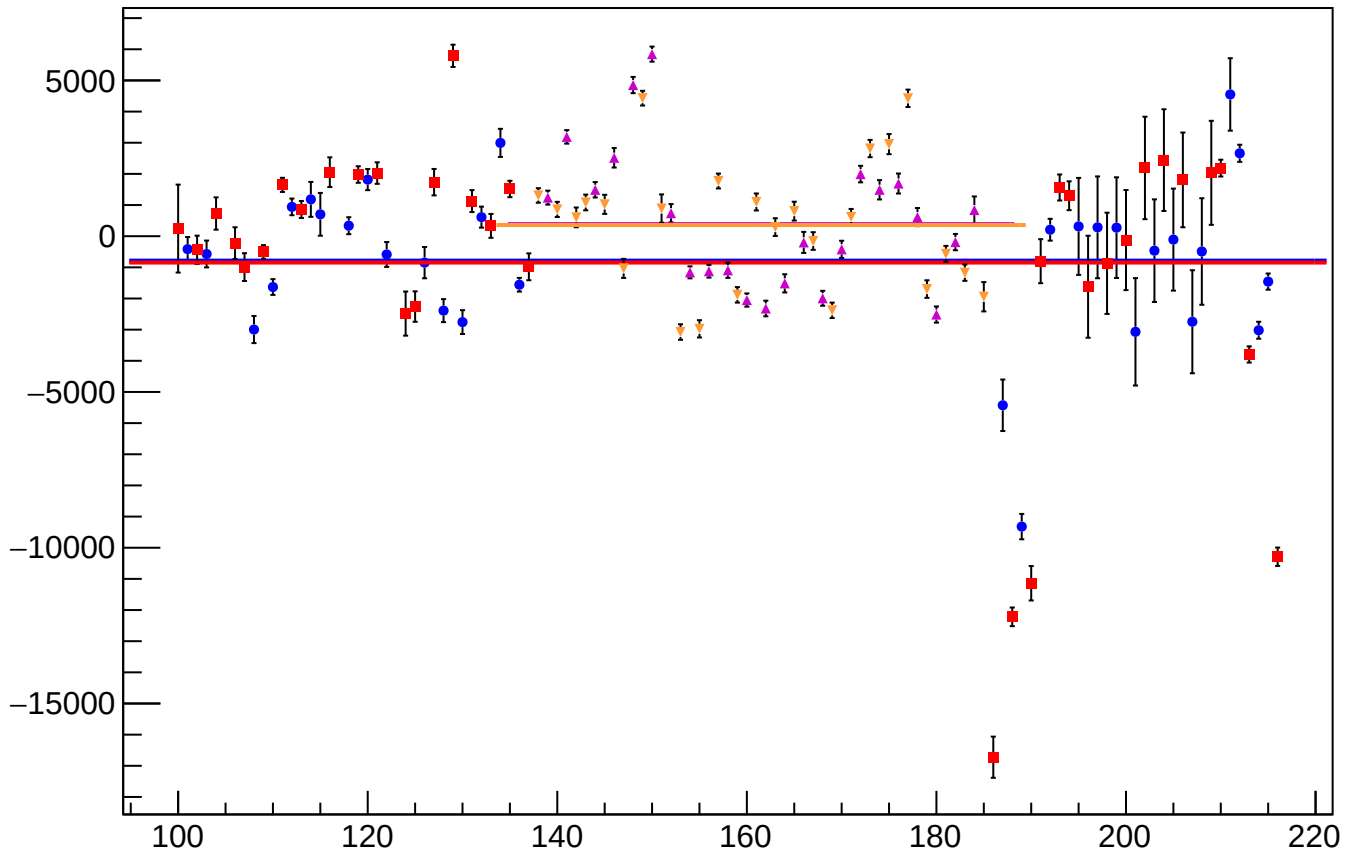
+ sign 207.363 $\pm$ 0.024  $\chi^2$ /NDF: 2316561.2/55

All: 202.498 $\pm$ 0.017  $\chi^2$ /NDF: 5533162.1/113

- sign 197.907 $\pm$ 0.023  $\chi^2$ /NDF: 3137784.9/57



# asym\_bpm0i07WS\_mean vs Slug



Right In:  $-783.966 \pm 71.793$   $\chi^2/\text{NDF}: 1054.0/30$

Left Out:  $358.680 \pm 54.992$   $\chi^2/\text{NDF}: 1418.9/24$

Right Out:  $-846.717 \pm 66.750$   $\chi^2/\text{NDF}: 4630.6/34$

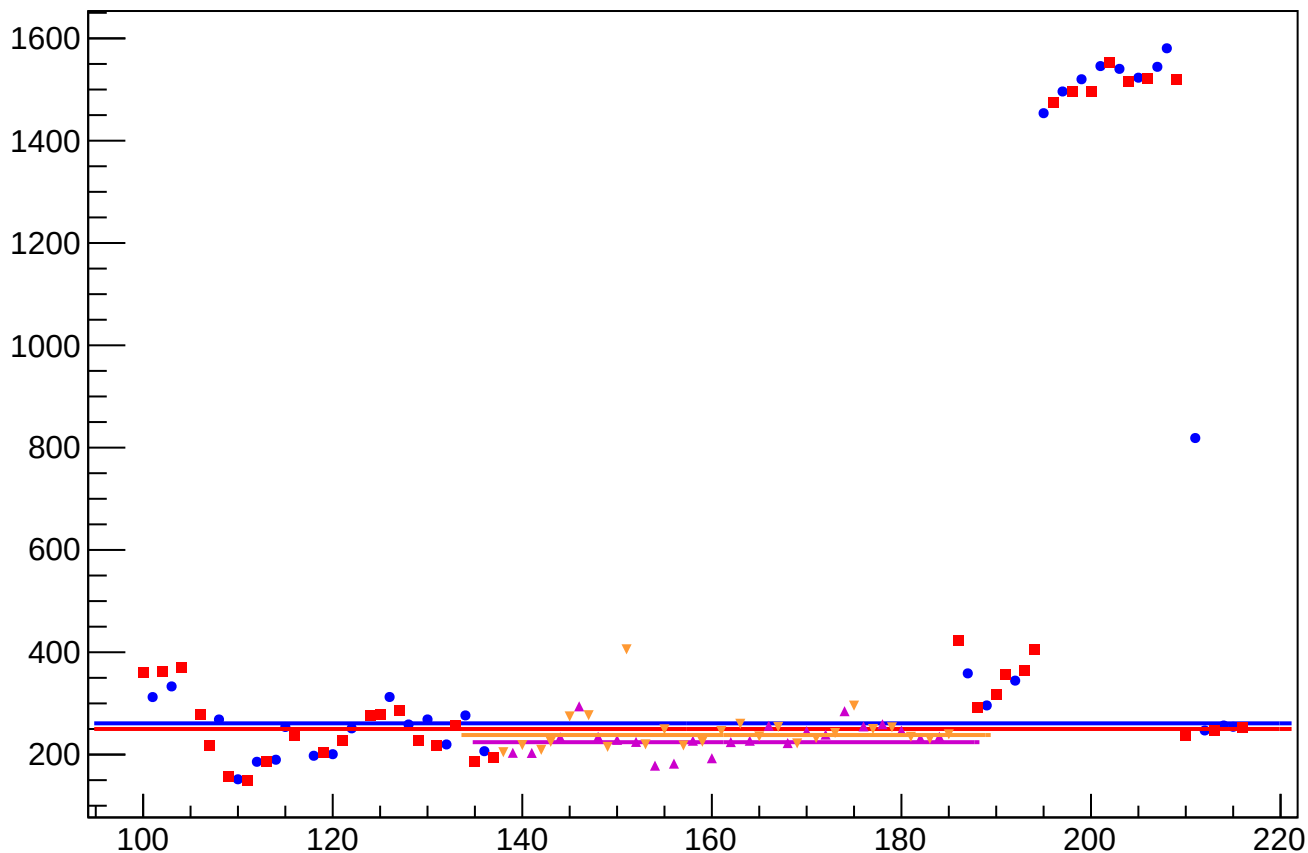
Left In:  $386.941 \pm 53.528$   $\chi^2/\text{NDF}: 1804.2/22$

+ sign  $-63.836 \pm 43.656$   $\chi^2/\text{NDF}: 2632.5/55$

All:  $-80.579 \pm 30.177$   $\chi^2/\text{NDF}: 9275.4/113$

- sign  $-95.898 \pm 41.759$   $\chi^2/\text{NDF}: 6642.6/57$

# asym\_bpm0i07WS\_rms vs Slug



Right In: 261.040 $\pm$ 0.051  $\chi^2$ /NDF: 11061109.2/30

Left Out: 238.199 $\pm$ 0.039  $\chi^2$ /NDF: 567935.3/24

Right Out: 250.058 $\pm$ 0.047  $\chi^2$ /NDF: 10530121.1/34

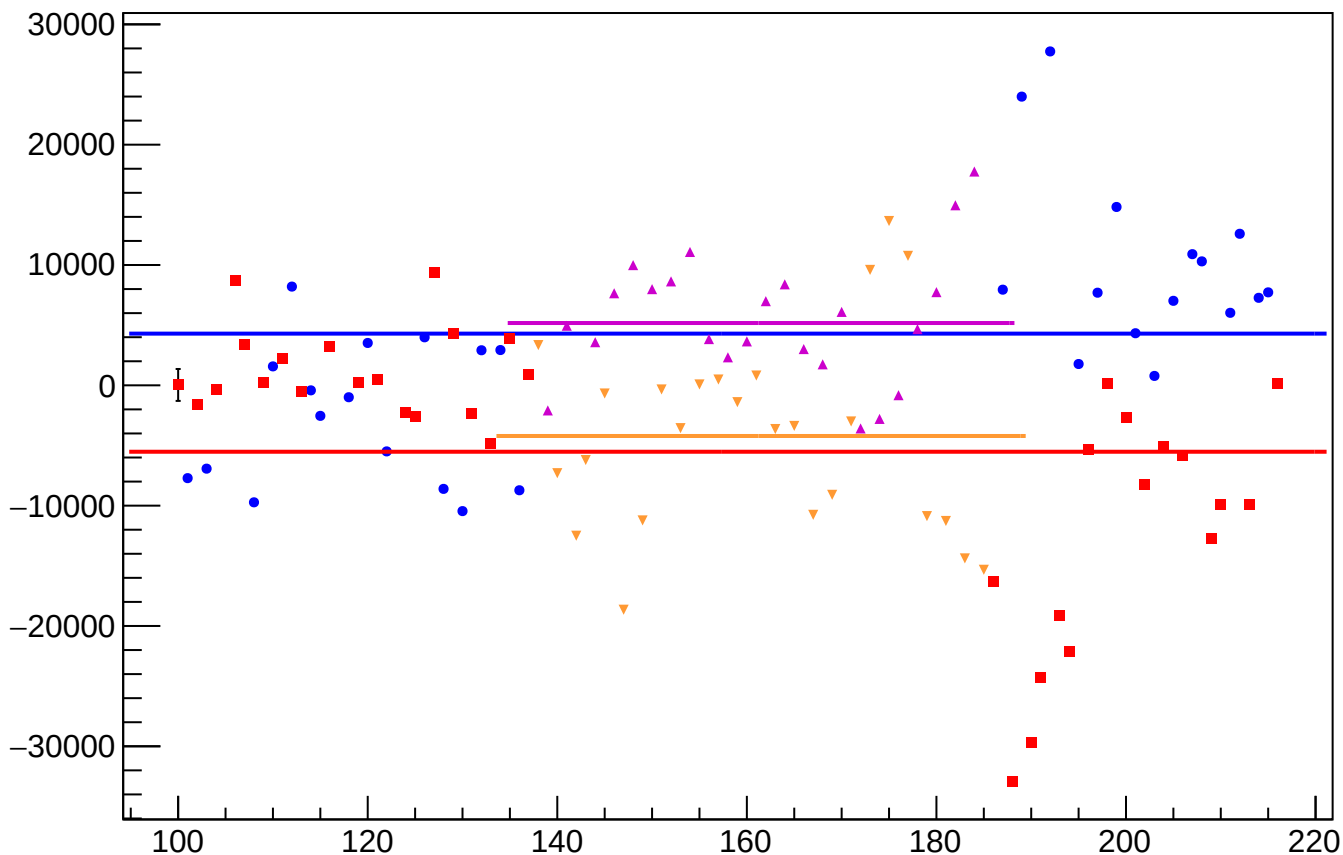
Left In: 224.212 $\pm$ 0.038  $\chi^2$ /NDF: 563231.1/22

+ sign 246.645 $\pm$ 0.031  $\chi^2$ /NDF: 11756626.6/55

All: 240.213 $\pm$ 0.021  $\chi^2$ /NDF: 23115615.8/11

- sign 234.328 $\pm$ 0.030  $\chi^2$ /NDF: 11275850.9/57

# asym\_bpm1i02WS\_mean vs Slug



Right In: 4296.754+/-32.692  $\chi^2/\text{NDF}$ : 82067.2/30

Left Out: -4210.601+/-30.828  $\chi^2/\text{NDF}$ : 56802.7/24

Right Out: -5519.669+/-31.489  $\chi^2/\text{NDF}$ : 106535.7/34

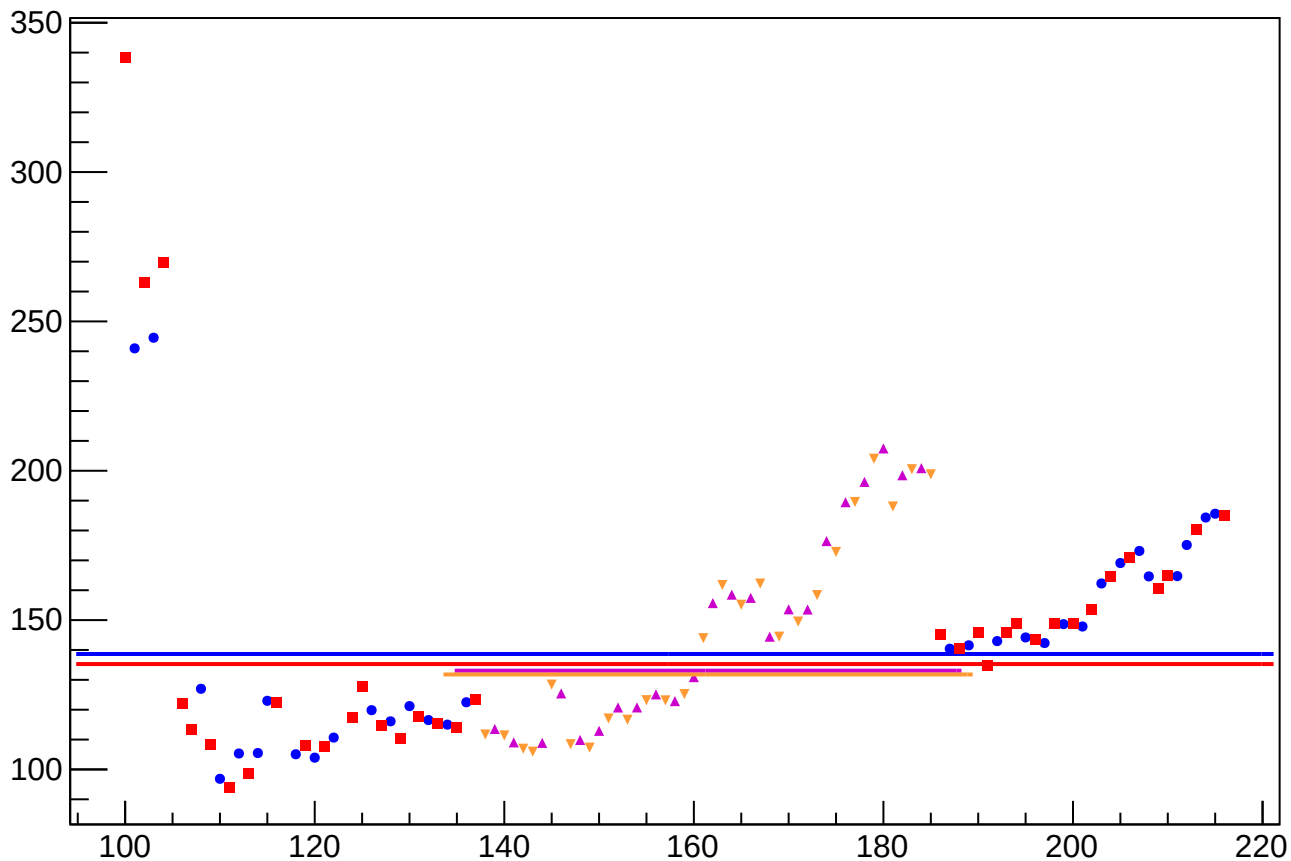
Left In: 5178.213+/-31.969  $\chi^2/\text{NDF}$ : 18541.3/22

+ sign -206.338+/-22.429  $\chi^2/\text{NDF}$ : 174714.1/55

All: -229.006+/-15.861  $\chi^2/\text{NDF}$ : 356628.9/11

- sign -251.684+/-22.434  $\chi^2/\text{NDF}$ : 181912.8/57

# asym\_bpm1i02WS\_rms vs Slug



Right In: 138.649+/-0.023  $\chi^2/\text{NDF}$ : 1670189.0/30

Left Out: 131.798+/-0.022  $\chi^2/\text{NDF}$ :1544340.3/24

Right Out: 135.280+/-0.022  $\chi^2/\text{NDF}$ : 1796884.3/34

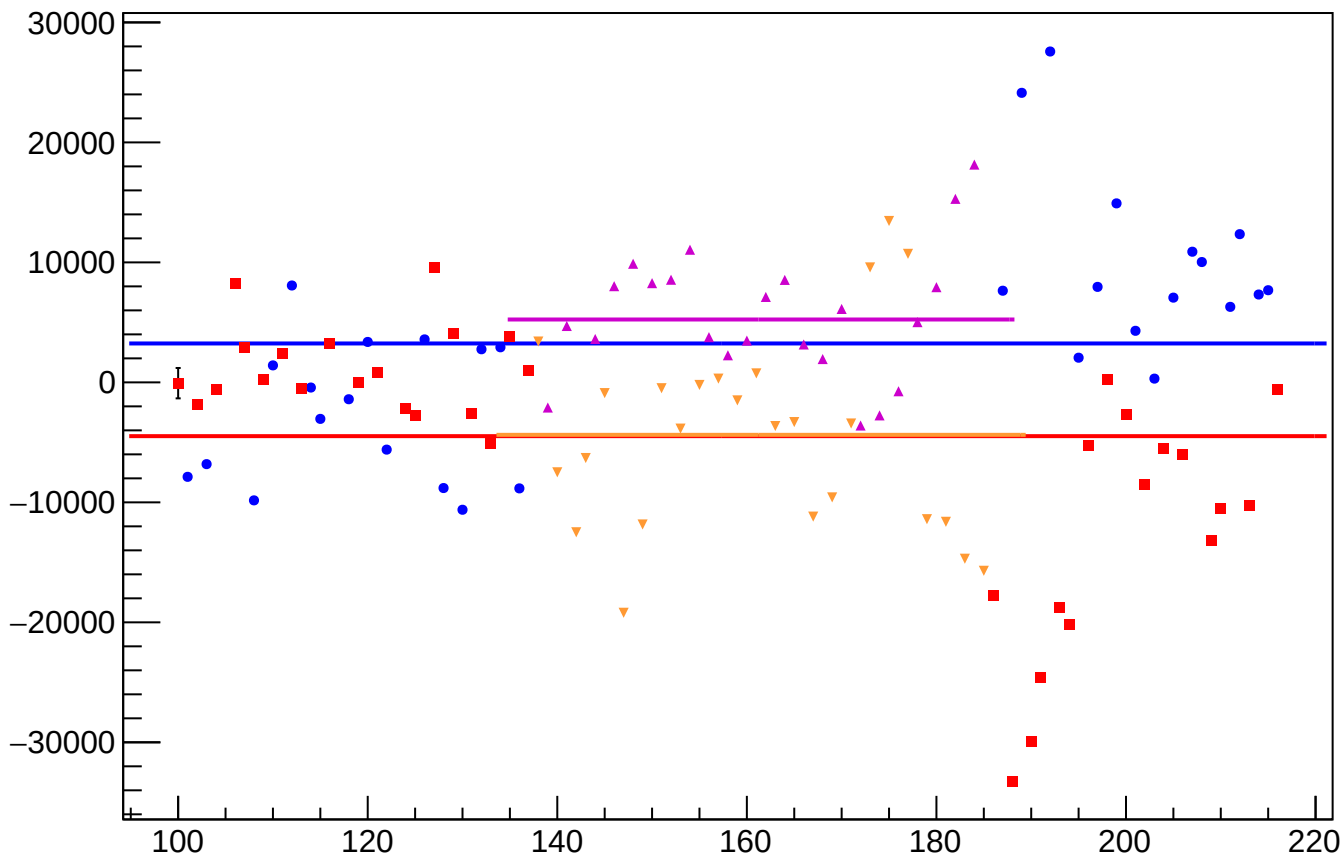
Left In: 133.061+/-0.023  $\chi^2/\text{NDF}$ :1418252.2/22

+ sign 135.022+/-0.016  $\chi^2/\text{NDF}$ : 3261023.7/55

All: 134.605+/-0.011  $\chi^2/\text{NDF}$ : 6482434.4/113

- sign 134.187+/-0.016  $\chi^2/\text{NDF}$ : 3220025.1/57

# asym\_bpm1i04WS\_mean vs Slug



Right In: 3242.449+/-29.471  $\chi^2/\text{NDF}$ : 92978.5/30

Left Out: -4372.743+/-27.955  $\chi^2/\text{NDF}$ : 67218.5/24

Right Out: -4482.228+/-28.527  $\chi^2/\text{NDF}$ : 116624.9/34

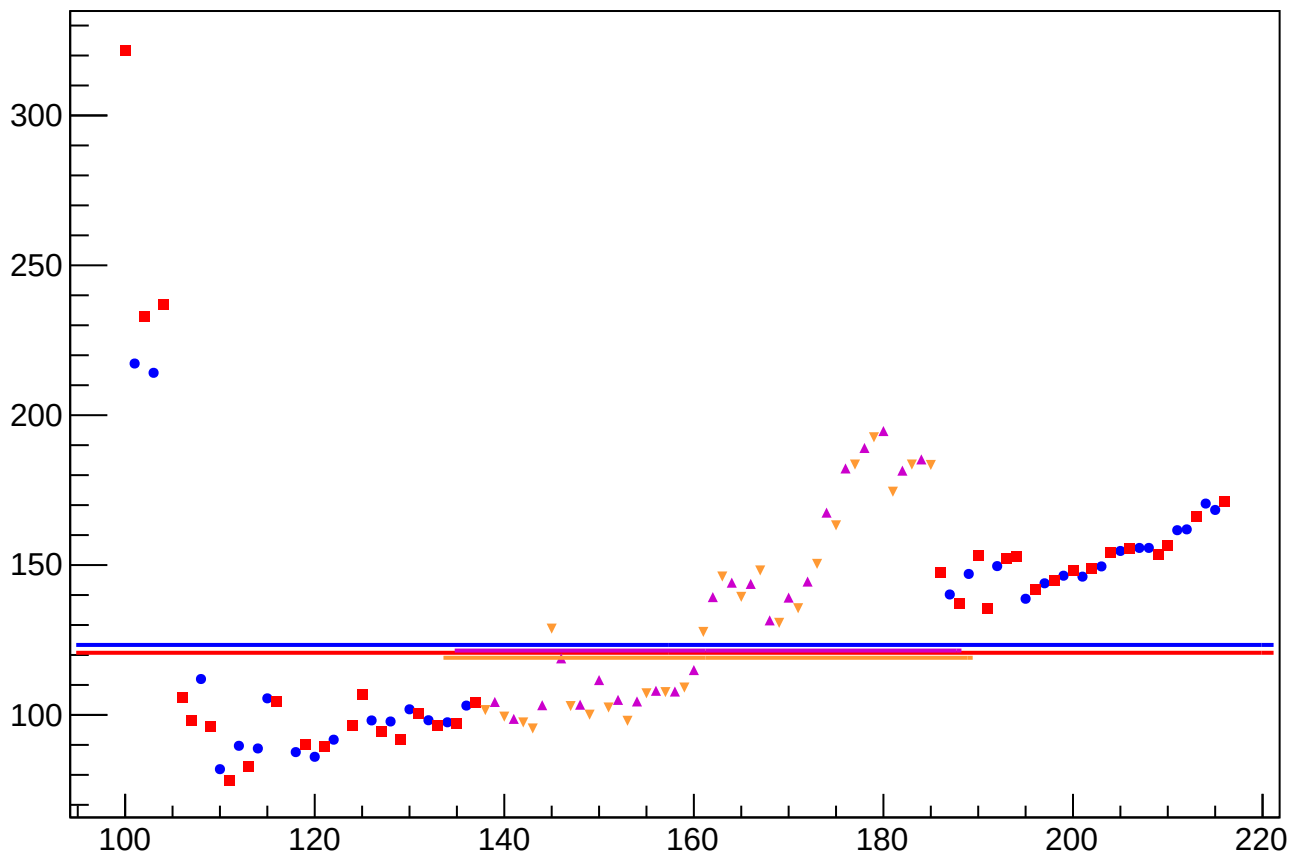
Left In: 5239.784+/-29.252  $\chi^2/\text{NDF}$ : 22273.2/22

+ sign -766.036+/-20.282  $\chi^2/\text{NDF}$ : 195342.1/55

All: -258.148+/-14.391  $\chi^2/\text{NDF}$ : 392119.8/11

- sign 256.814+/-20.423  $\chi^2/\text{NDF}$ : 195514.8/57

# asym\_bpm1i04WS\_rms vs Slug



Right In: 123.354+/-0.021  $\chi^2/\text{NDF}$ : 2477120.4/30

Left Out: 119.064+/-0.020  $\chi^2/\text{NDF}$ : 1755428.3/24

Right Out: 120.732+/-0.020  $\chi^2/\text{NDF}$ : 2732610.1/34

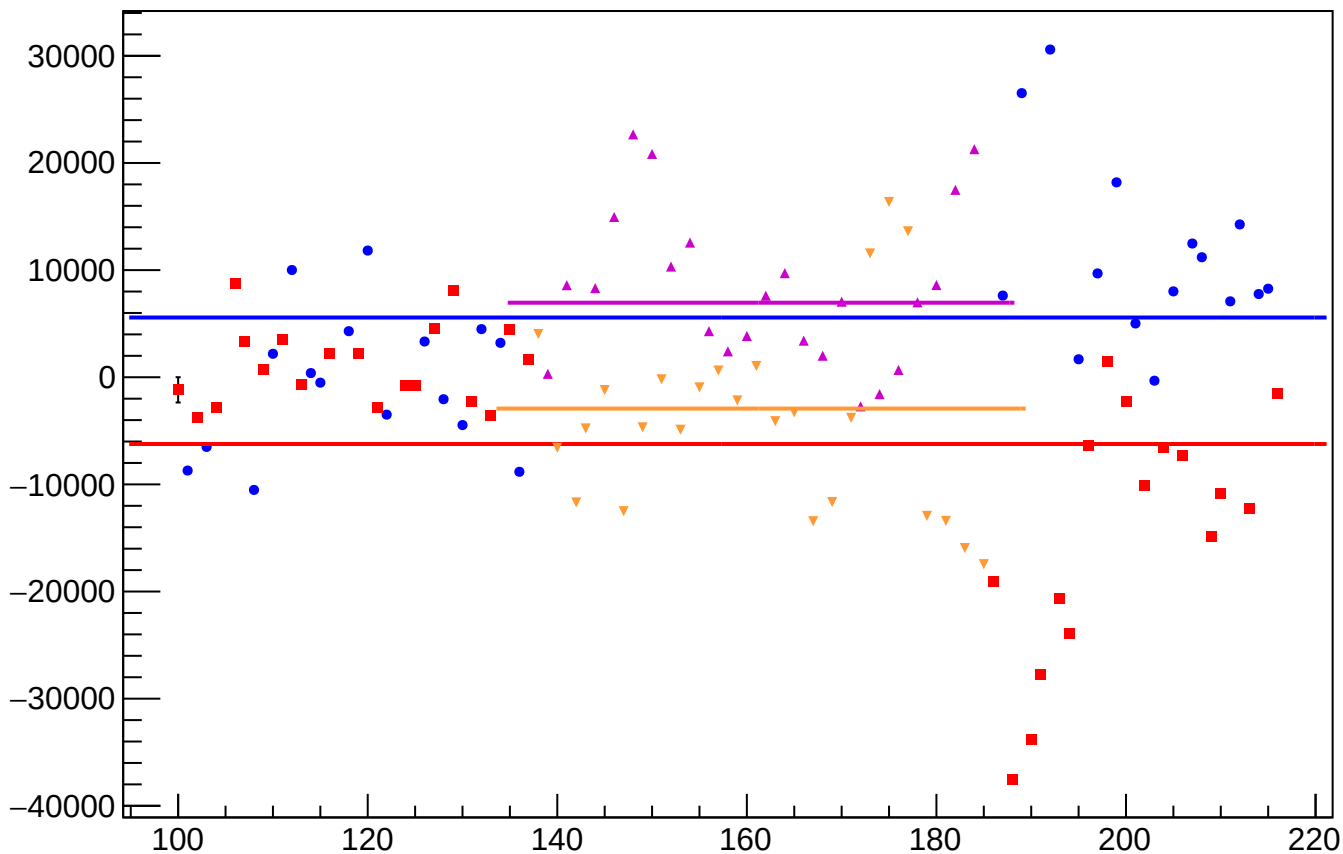
Left In: 121.468+/-0.021  $\chi^2/\text{NDF}$ : 1529379.8/22

+ sign 121.096+/-0.014  $\chi^2/\text{NDF}$ : 4254851.5/55

All: 121.093+/-0.010  $\chi^2/\text{NDF}$ : 8517490.4/113

- sign 121.091+/-0.014  $\chi^2/\text{NDF}$ : 4262638.9/57

# asym\_bpm1i06WS\_mean vs Slug



Right In: 5575.090 $\pm$ 38.590  $\chi^2/\text{NDF}$ : 65070.1/30

Left Out: -2923.060 $\pm$ 38.185  $\chi^2/\text{NDF}$ : 38052.4/24

Right Out: -6230.541 $\pm$ 37.425  $\chi^2/\text{NDF}$ : 95795.2/34

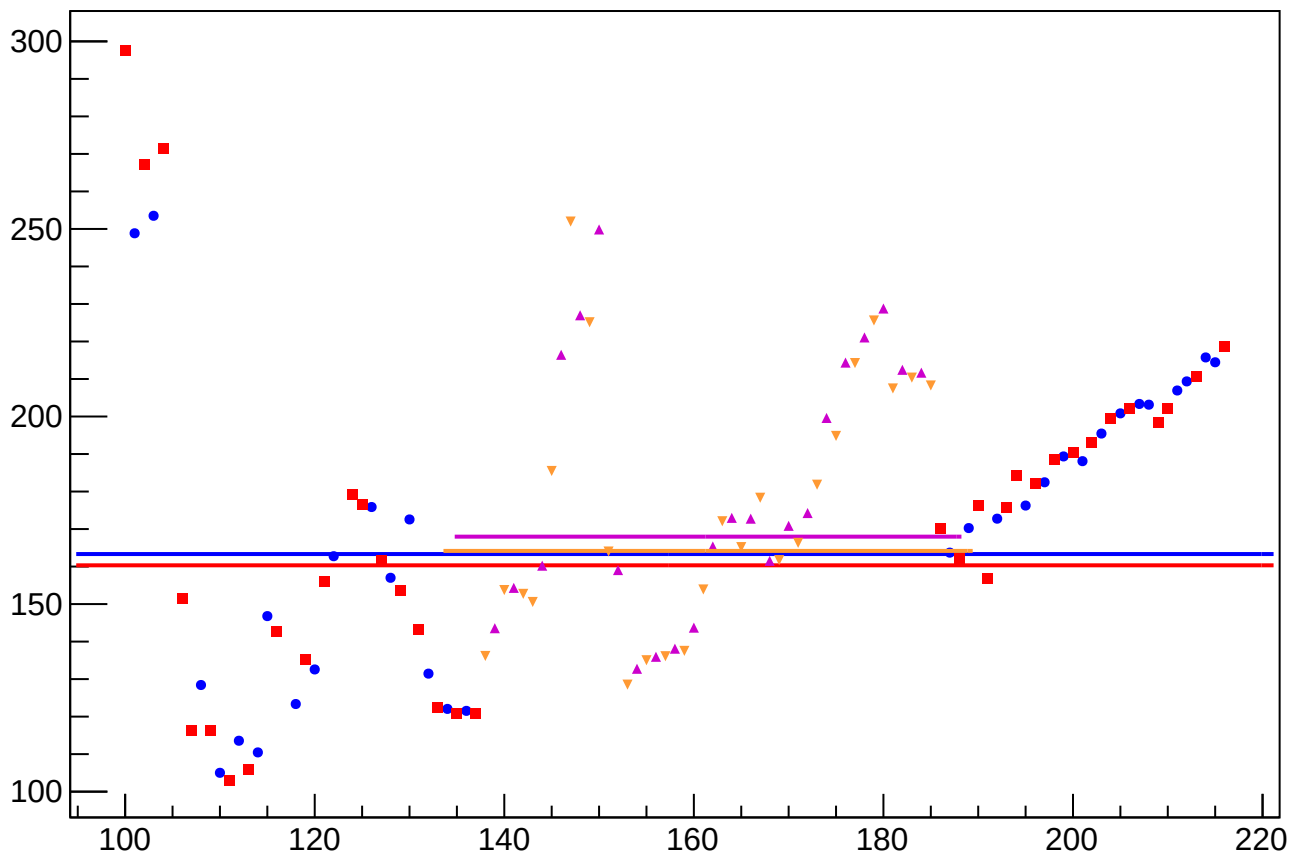
Left In: 6956.884 $\pm$ 40.245  $\chi^2/\text{NDF}$ : 22339.0/22

+ sign 1281.214 $\pm$ 27.143  $\chi^2/\text{NDF}$ : 127626.2/55

All: 589.823 $\pm$ 19.285  $\chi^2/\text{NDF}$ : 304651.1/113

- sign -115.051 $\pm$ 27.406  $\chi^2/\text{NDF}$ : 175714.5/57

# asym\_bpm1i06WS\_rms vs Slug



Right In: 163.337 $\pm$ 0.027  $\chi^2$ /NDF: 2005883.2/30

Left Out: 164.172 $\pm$ 0.027  $\chi^2$ /NDF:1224405.6/24

Right Out: 160.332 $\pm$ 0.026  $\chi^2$ /NDF: 2111037.1/34

Left In: 167.975 $\pm$ 0.028  $\chi^2$ /NDF:1222745.4/22

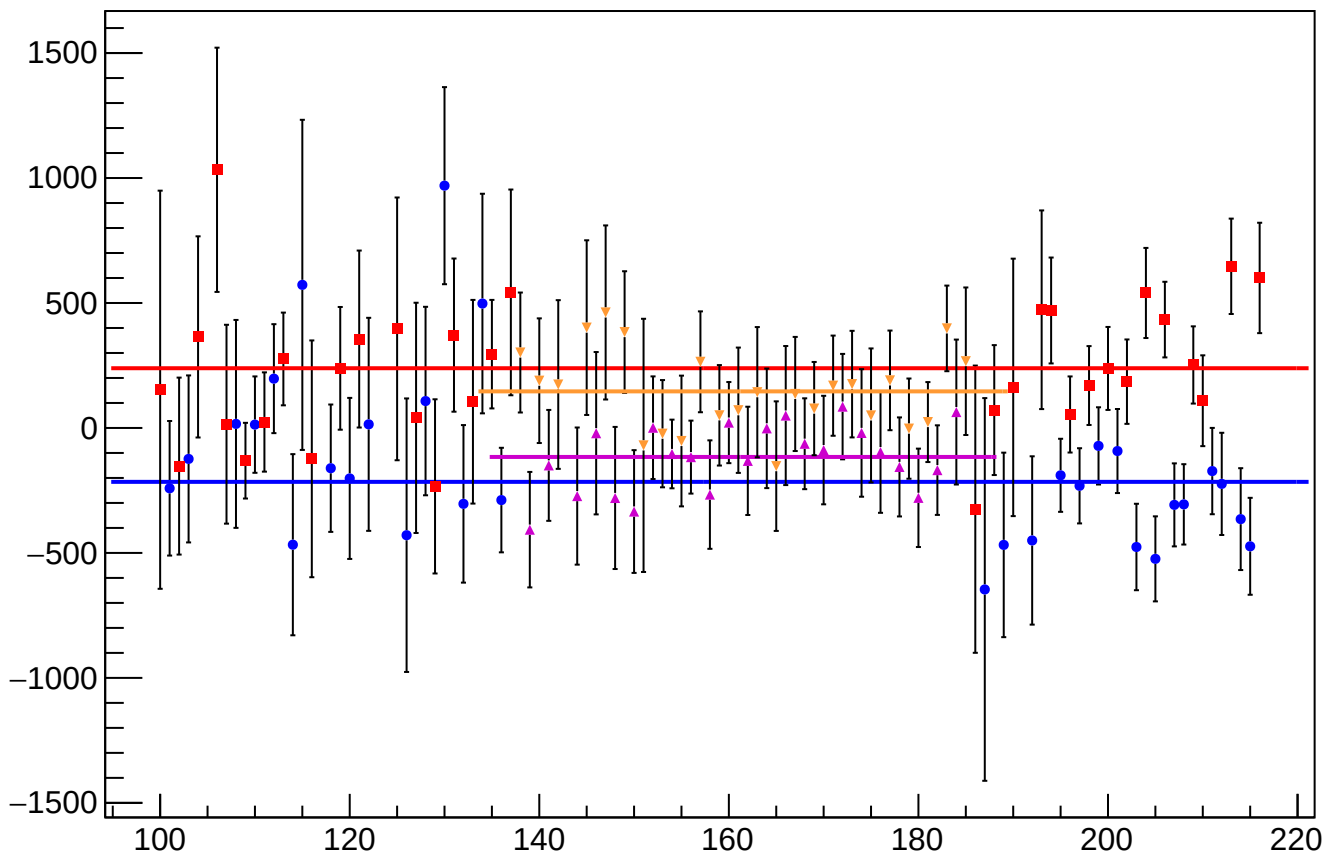
+ sign 163.759 $\pm$ 0.019  $\chi^2$ /NDF: 3230762.5/55

All: 163.817 $\pm$ 0.014  $\chi^2$ /NDF: 6603244.4/113

- sign 163.877 $\pm$ 0.019  $\chi^2$ /NDF: 3372463.3/57



# asym\_bcm\_2an\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-215.645 \pm 40.520$   $\chi^2/\text{NDF}$ : 31.7/30

Left Out:  $146.352 \pm 46.929$   $\chi^2/\text{NDF}$ : 10.0/23

Right Out:  $238.983 \pm 40.384$   $\chi^2/\text{NDF}$ : 32.1/32

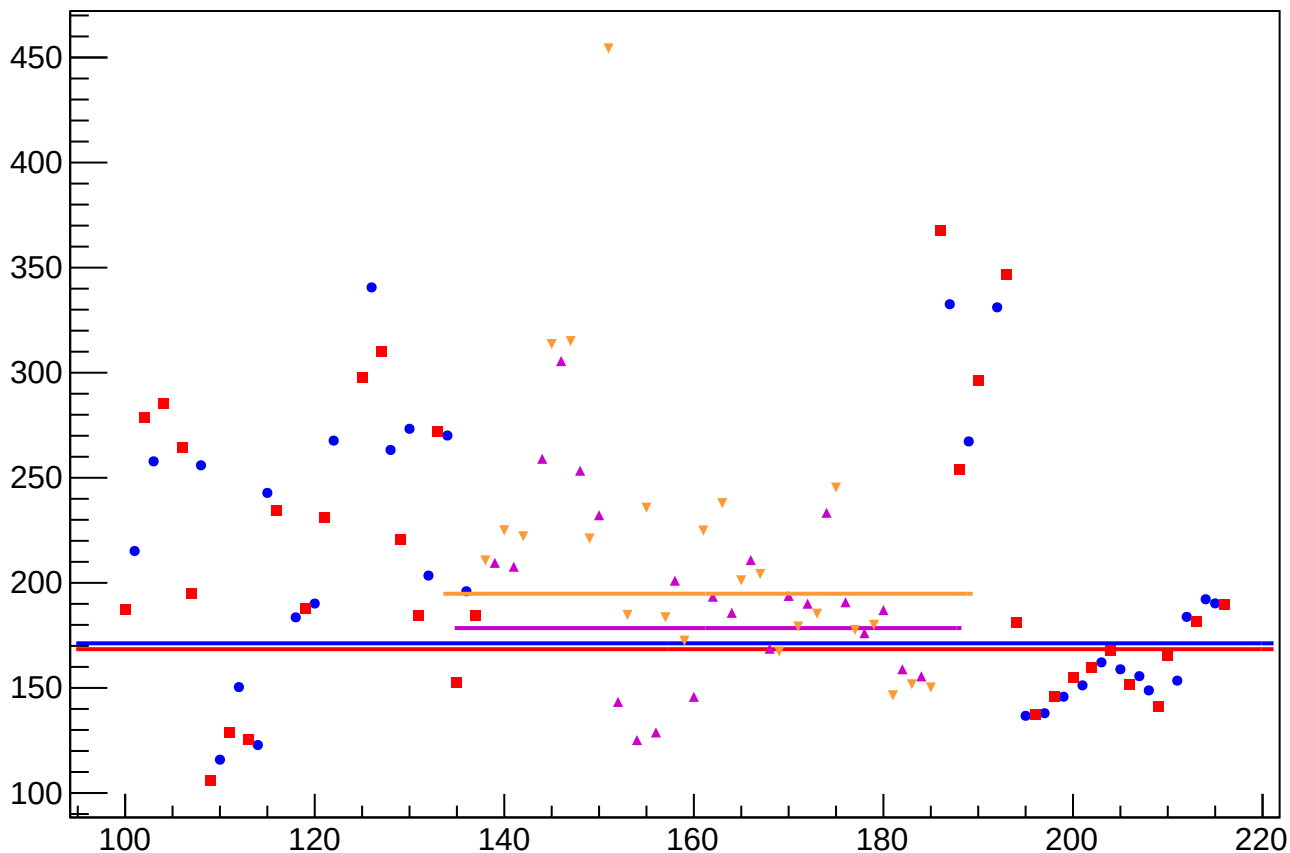
Left In:  $-115.974 \pm 43.605$   $\chi^2/\text{NDF}$ : 7.6/22

+ sign  $-61.035 \pm 30.670$   $\chi^2/\text{NDF}$ : 75.7/54

All:  $9.379 \pm 21.309$   $\chi^2/\text{NDF}$ : 161.3/110

- sign  $75.096 \pm 29.629$   $\chi^2/\text{NDF}$ : 75.4/55

# asym\_bcm\_2an\_us\_an\_ds\_avg\_rms vs Slug



Right In:  $171.234 \pm 0.029$   $\chi^2/\text{NDF}: 2330422.1/30$

Left Out:  $194.828 \pm 0.033$   $\chi^2/\text{NDF}: 1752475.1/23$

Right Out:  $168.439 \pm 0.029$   $\chi^2/\text{NDF}: 2842377.2/32$

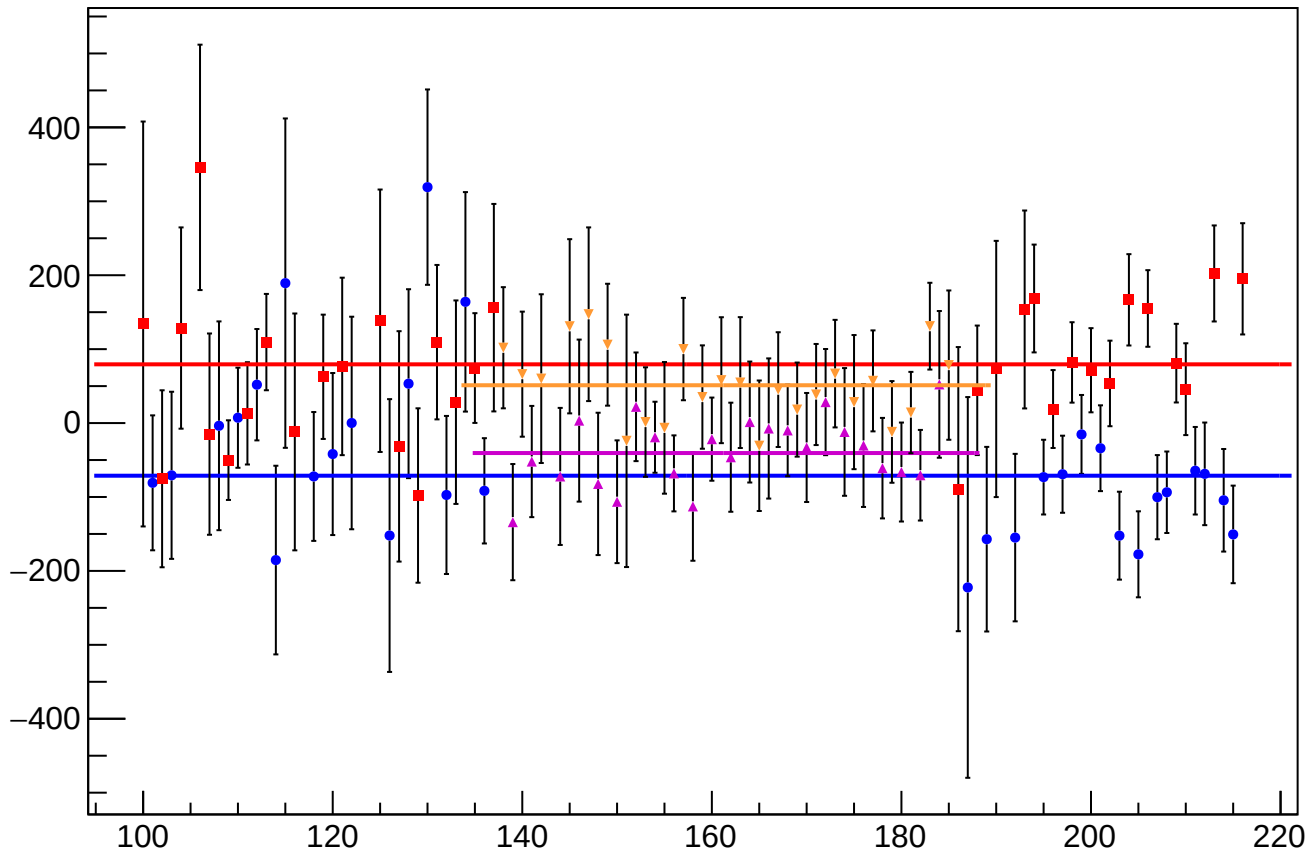
Left In:  $178.475 \pm 0.031$   $\chi^2/\text{NDF}: 1676266.4/22$

+ sign  $181.311 \pm 0.022$   $\chi^2/\text{NDF}: 4372532.7/54$

All:  $177.050 \pm 0.015$   $\chi^2/\text{NDF}: 9022857.9/110$

- sign  $173.073 \pm 0.021$   $\chi^2/\text{NDF}: 4575680.1/55$

# asym\_bcm\_2an\_us\_an\_ds\_dd\_mean vs Slug



Right In:  $-71.213 \pm 13.900$   $\chi^2/\text{NDF}$ : 29.4/30

Left Out:  $51.161 \pm 16.037$   $\chi^2/\text{NDF}$ : 8.1/23

Right Out:  $79.459 \pm 13.884$   $\chi^2/\text{NDF}$ : 30.2/32

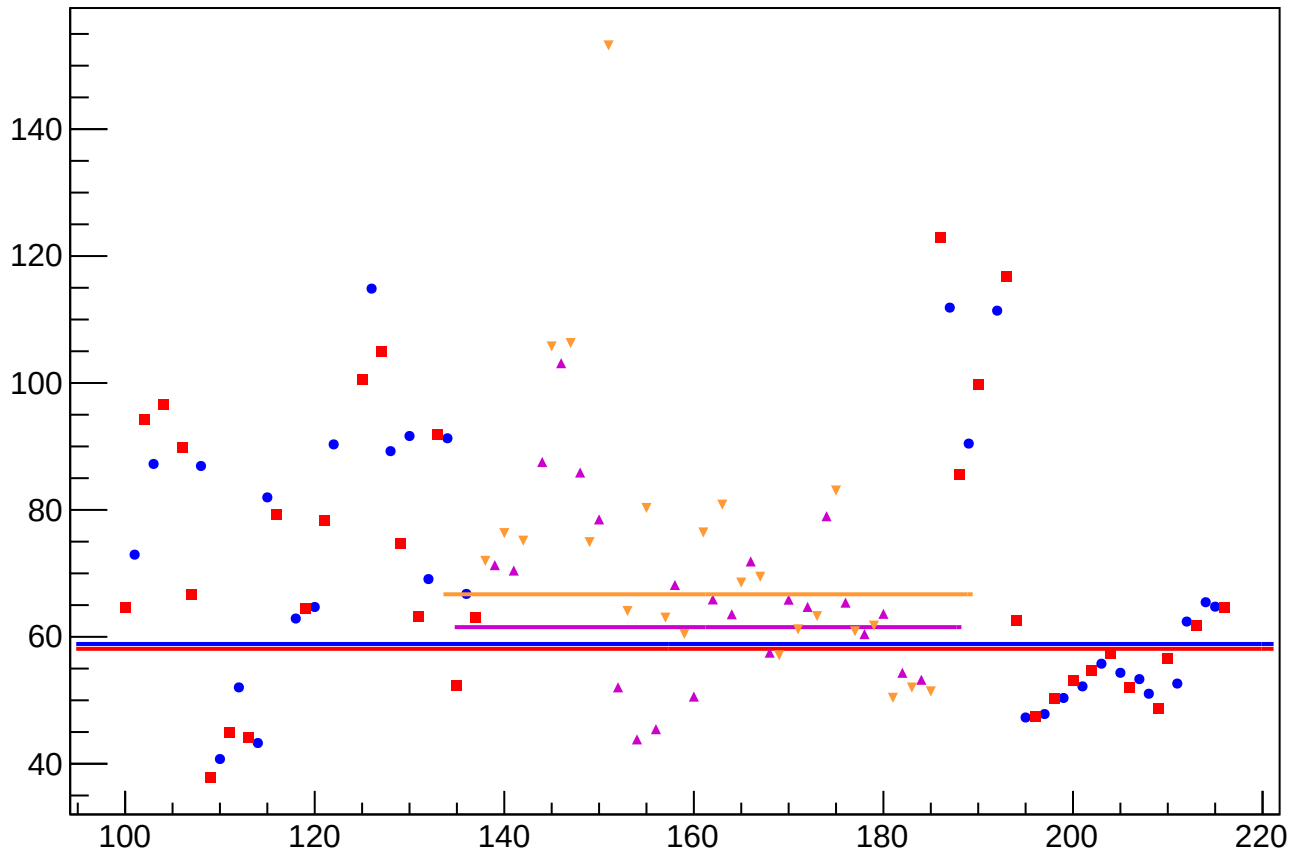
Left In:  $-40.540 \pm 14.978$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-18.718 \pm 10.504$   $\chi^2/\text{NDF}$ : 70.8/54

All:  $3.306 \pm 7.311$   $\chi^2/\text{NDF}$ : 151.9/110

- sign  $24.002 \pm 10.182$   $\chi^2/\text{NDF}$ : 72.6/55

# asym\_bcm\_2an\_us\_an\_ds\_dd\_rms vs Slug



Right In: 58.877 $\pm$ 0.010  $\chi^2$ /NDF: 2180457.6/30

Left Out: 66.703 $\pm$ 0.011  $\chi^2$ /NDF: 1676329.9/23

Right Out: 58.114 $\pm$ 0.010  $\chi^2$ /NDF: 2640363.6/32

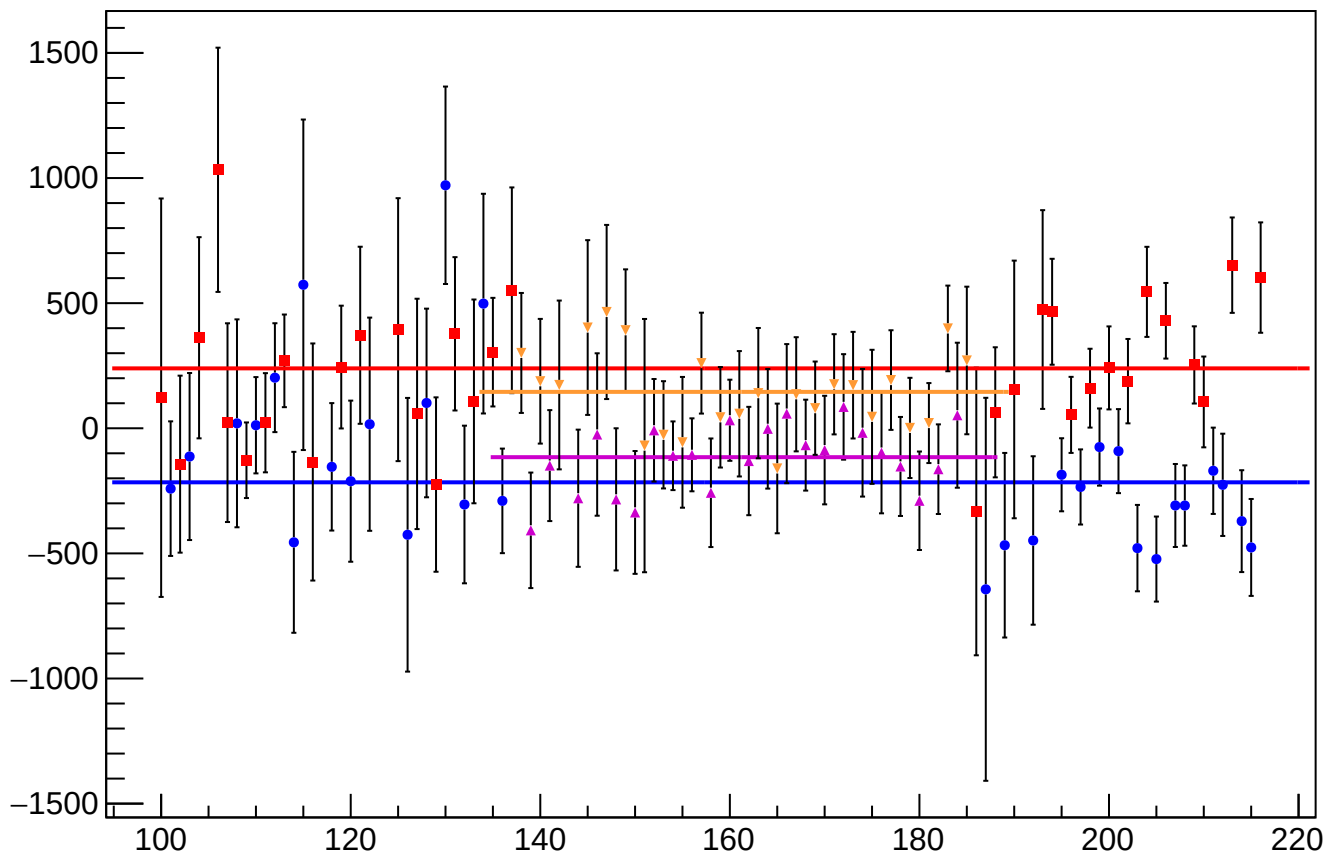
Left In: 61.529 $\pm$ 0.011  $\chi^2$ /NDF: 1489848.4/22

+ sign 62.234 $\pm$ 0.007  $\chi^2$ /NDF: 4128764.3/54

All: 60.924 $\pm$ 0.005  $\chi^2$ /NDF: 8375269.6/110

- sign 59.692 $\pm$ 0.007  $\chi^2$ /NDF: 4186122.4/55

# asym\_bcm\_an\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-215.999 \pm 40.469$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $145.476 \pm 46.889$   $\chi^2/\text{NDF}$ : 10.2/23

Right Out:  $239.370 \pm 40.333$   $\chi^2/\text{NDF}$ : 32.3/32

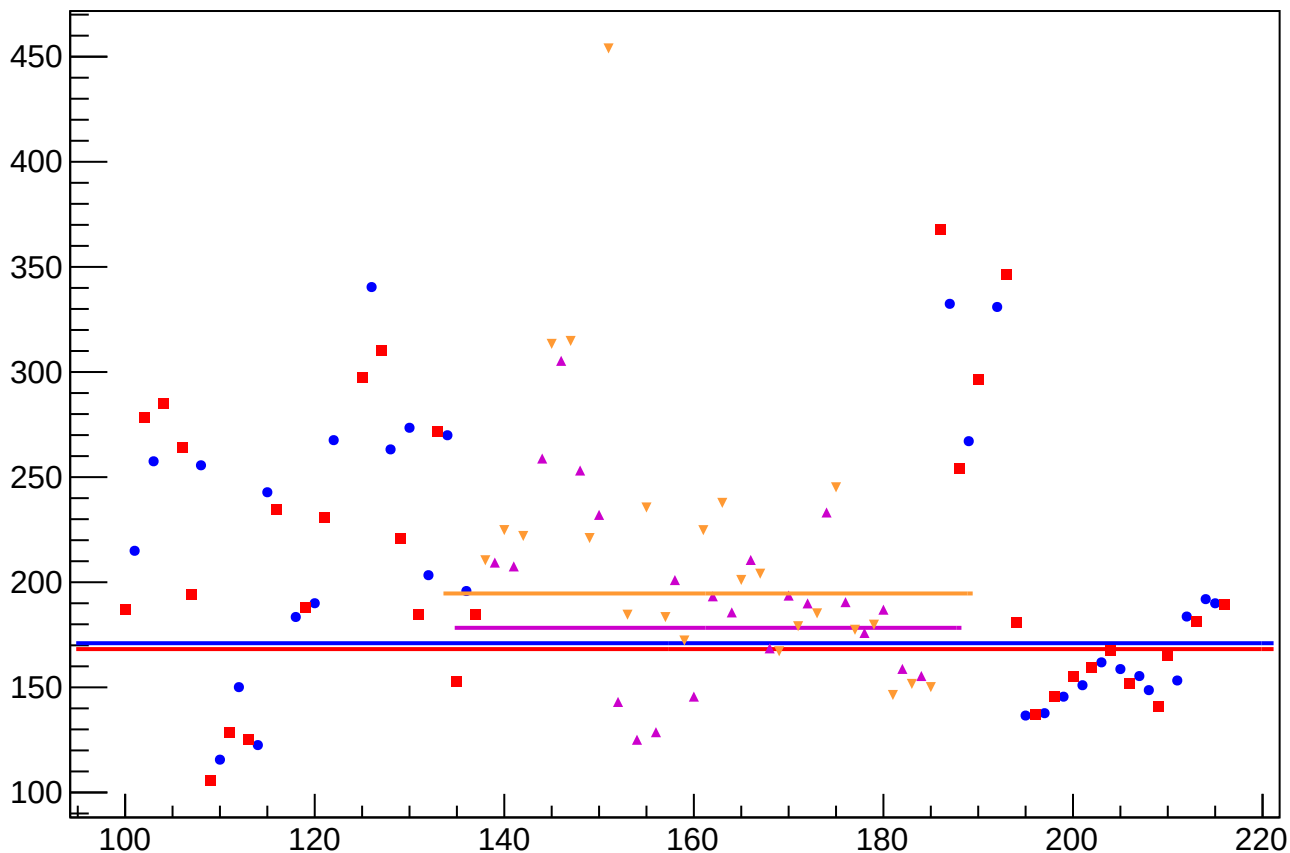
Left In:  $-115.487 \pm 43.568$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-61.685 \pm 30.636$   $\chi^2/\text{NDF}$ : 76.2/54

All:  $9.328 \pm 21.286$   $\chi^2/\text{NDF}$ : 162.4/110

- sign  $75.605 \pm 29.597$   $\chi^2/\text{NDF}$ : 75.8/55

# asym\_bcm\_an\_us\_an\_ds\_avg\_rms vs Slug



Right In: 171.002 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 2337014.5/30

Left Out: 194.659 $\pm$ 0.033  $\chi^2/\text{NDF}$ : 1753119.9/23

Right Out: 168.204 $\pm$ 0.029  $\chi^2/\text{NDF}$ : 2850814.8/32

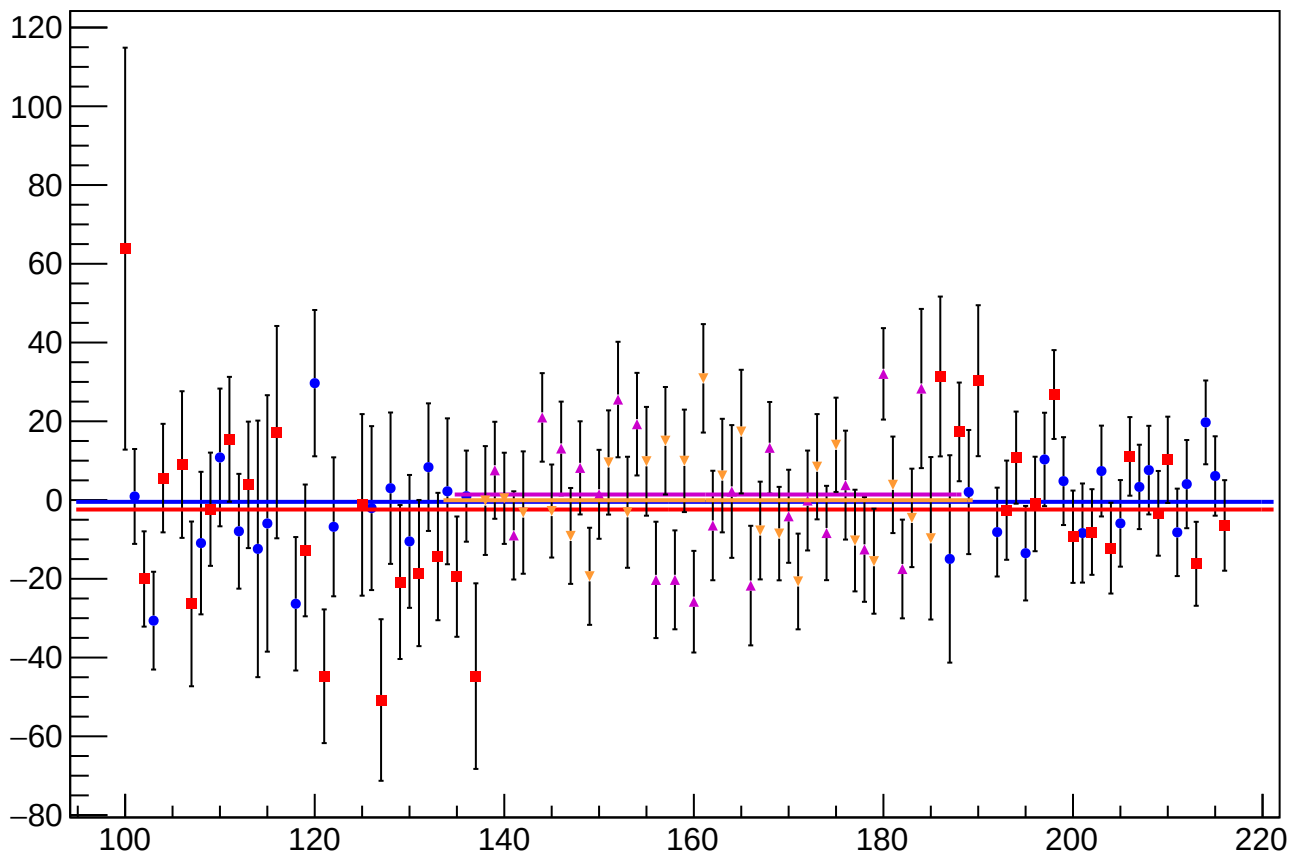
Left In: 178.318 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 1678336.4/22

+ sign 181.101 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 4381917.6/54

All: 176.844 $\pm$ 0.015  $\chi^2/\text{NDF}$ : 9043754.5/110

- sign 172.871 $\pm$ 0.021  $\chi^2/\text{NDF}$ : 4587190.8/55

# asym\_bcm\_an\_us\_an\_ds\_dd\_mean vs Slug



Right In: -0.457 $\pm$ 2.443  $\chi^2/\text{NDF}$ : 22.3/30

Left Out: -0.047 $\pm$ 2.685  $\chi^2/\text{NDF}$ : 20.5/23

Right Out: -2.404 $\pm$ 2.462  $\chi^2/\text{NDF}$ : 49.1/32

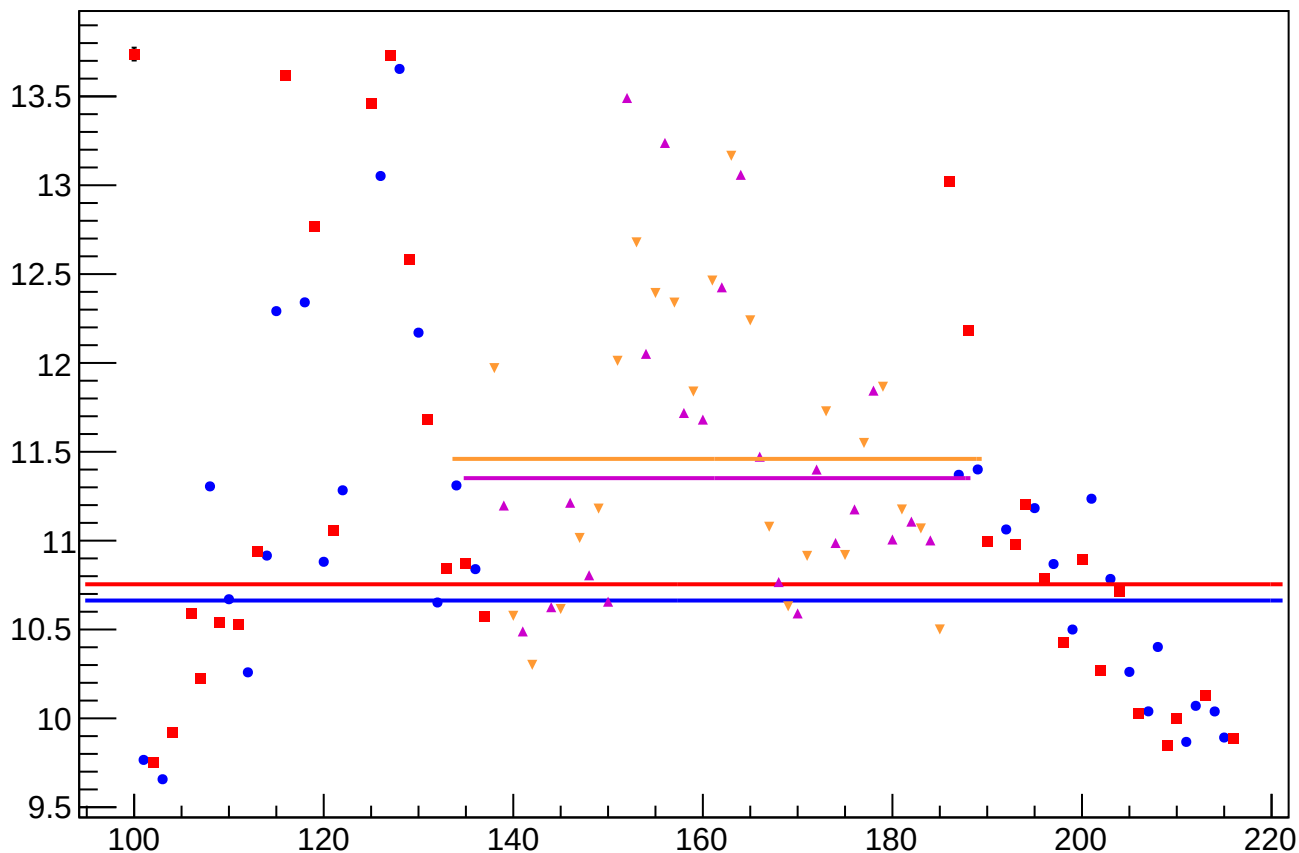
Left In: 1.407 $\pm$ 2.674  $\chi^2/\text{NDF}$ : 36.3/22

+ sign -0.271 $\pm$ 1.807  $\chi^2/\text{NDF}$ : 42.8/54

All: -0.463 $\pm$ 1.279  $\chi^2/\text{NDF}$ : 129.3/110

- sign -0.656 $\pm$ 1.811  $\chi^2/\text{NDF}$ : 86.5/55

# asym\_bcm\_an\_us\_an\_ds\_dd\_rms vs Slug



Right In:  $10.663 \pm 0.002$   $\chi^2/\text{NDF}: 211853.4/30$

Left Out:  $11.460 \pm 0.002$   $\chi^2/\text{NDF}: 150430.0/23$

Right Out:  $10.754 \pm 0.002$   $\chi^2/\text{NDF}: 288746.2/32$

Left In:  $11.352 \pm 0.002$   $\chi^2/\text{NDF}: 170563.6/22$

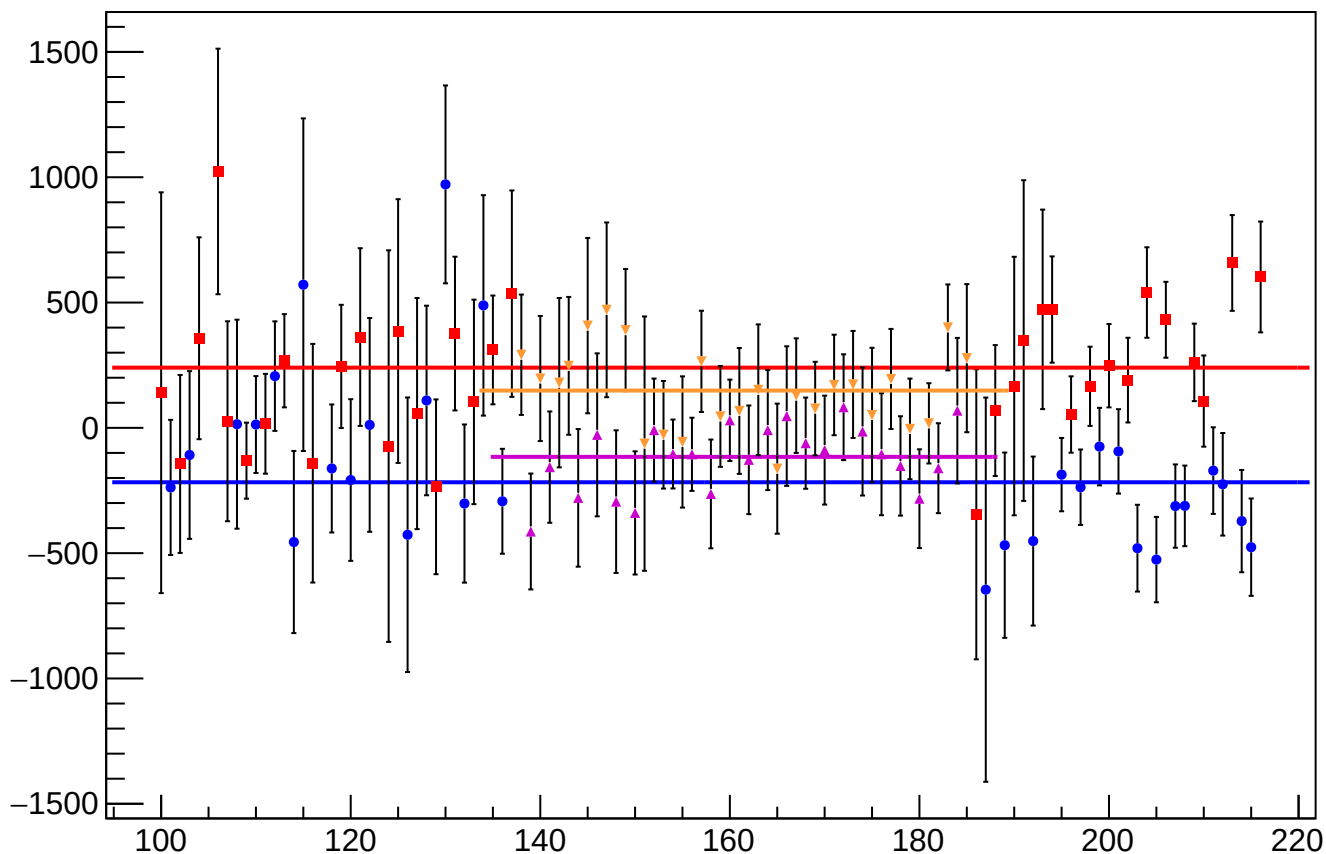
+ sign  $11.024 \pm 0.001$   $\chi^2/\text{NDF}: 458676.3/54$

All:  $11.026 \pm 0.001$   $\chi^2/\text{NDF}: 971990.9/110$

- sign  $11.028 \pm 0.001$   $\chi^2/\text{NDF}: 513308.9/55$



asym\_bcm\_an\_us\_an\_ds3\_avg\_mean vs Slug



Right In:  $-217.111 \pm 40.570$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $148.905 \pm 46.306$   $\chi^2/\text{NDF}$ : 10.5/24

Right Out:  $240.237 \pm 40.307$   $\chi^2/\text{NDF}$ : 32.6/34

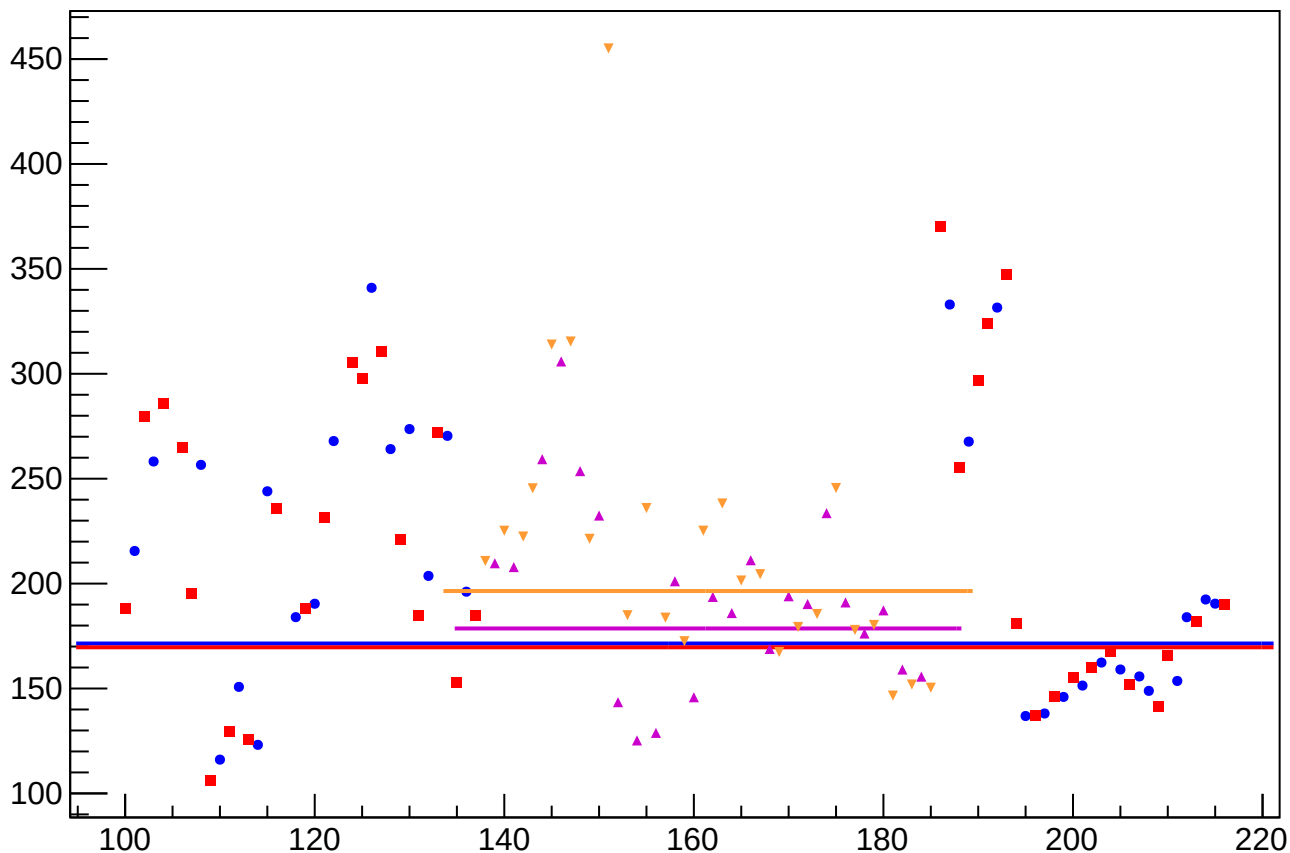
Left In:  $-115.709 \pm 43.641$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-58.166 \pm 30.515$   $\chi^2/\text{NDF}$ : 77.7/55

All:  $11.131 \pm 21.250$   $\chi^2/\text{NDF}$ : 164.0/113

- sign  $76.377 \pm 29.610$   $\chi^2/\text{NDF}$ : 76.3/57

# asym\_bcm\_an\_us\_an\_ds3\_avg\_rms vs Slug



Right In:  $171.441 \pm 0.029$   $\chi^2/\text{NDF}$ : 2332243.7/30

Left Out:  $196.454 \pm 0.033$   $\chi^2/\text{NDF}$ : 1818746.1/24

Right Out:  $169.642 \pm 0.029$   $\chi^2/\text{NDF}$ : 3026056.9/34

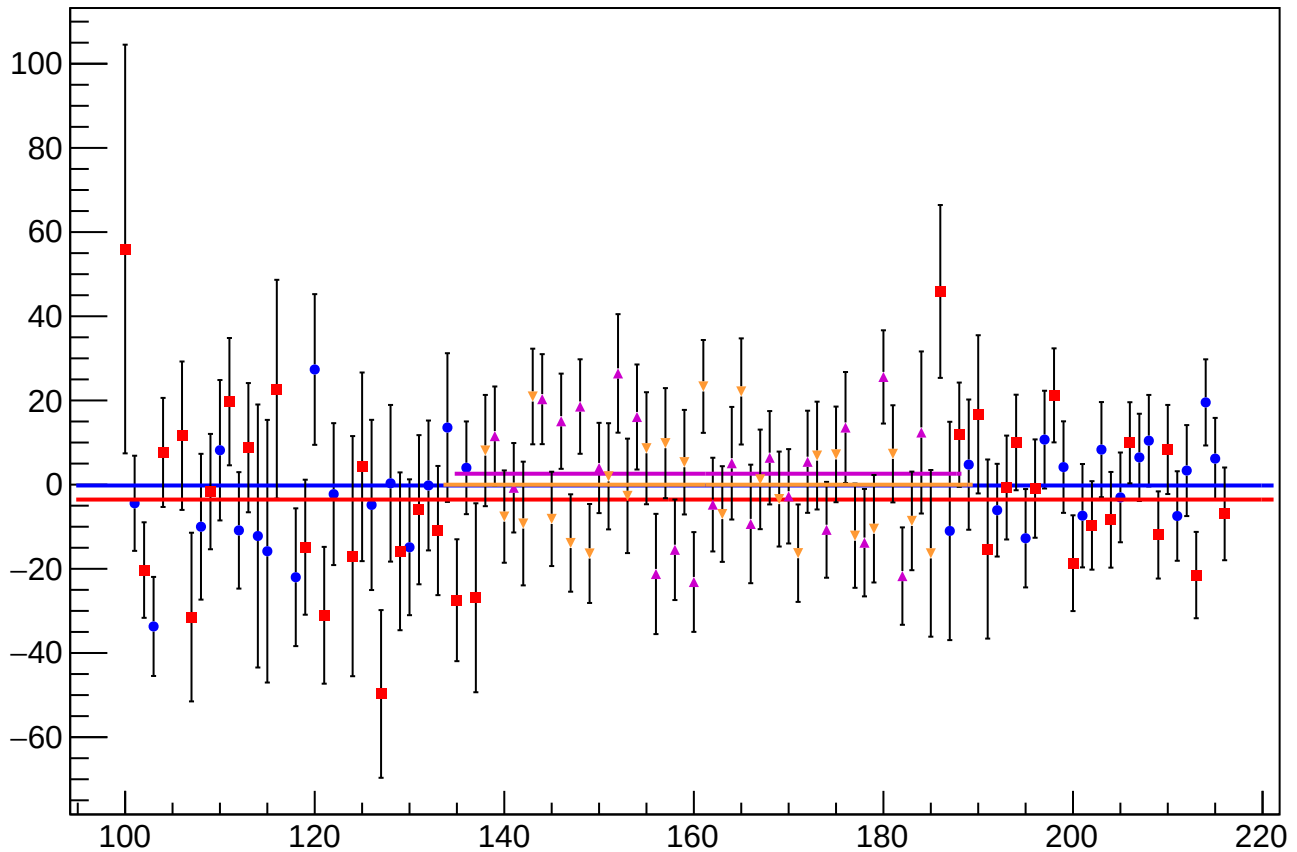
Left In:  $178.614 \pm 0.031$   $\chi^2/\text{NDF}$ : 1678859.8/22

+ sign  $182.303 \pm 0.022$   $\chi^2/\text{NDF}$ : 4481149.3/55

All:  $177.909 \pm 0.015$   $\chi^2/\text{NDF}$ : 9312181.8/113

- sign  $173.772 \pm 0.021$   $\chi^2/\text{NDF}$ : 4750530.1/57

# asym\_bcm\_an\_us\_an\_ds3\_dd\_mean vs Slug



Right In:  $-0.204 \pm 2.356$   $\chi^2/\text{NDF}$ : 25.4/30

Left Out:  $-0.018 \pm 2.445$   $\chi^2/\text{NDF}$ : 23.7/24

Right Out:  $-3.546 \pm 2.353$   $\chi^2/\text{NDF}$ : 49.3/34

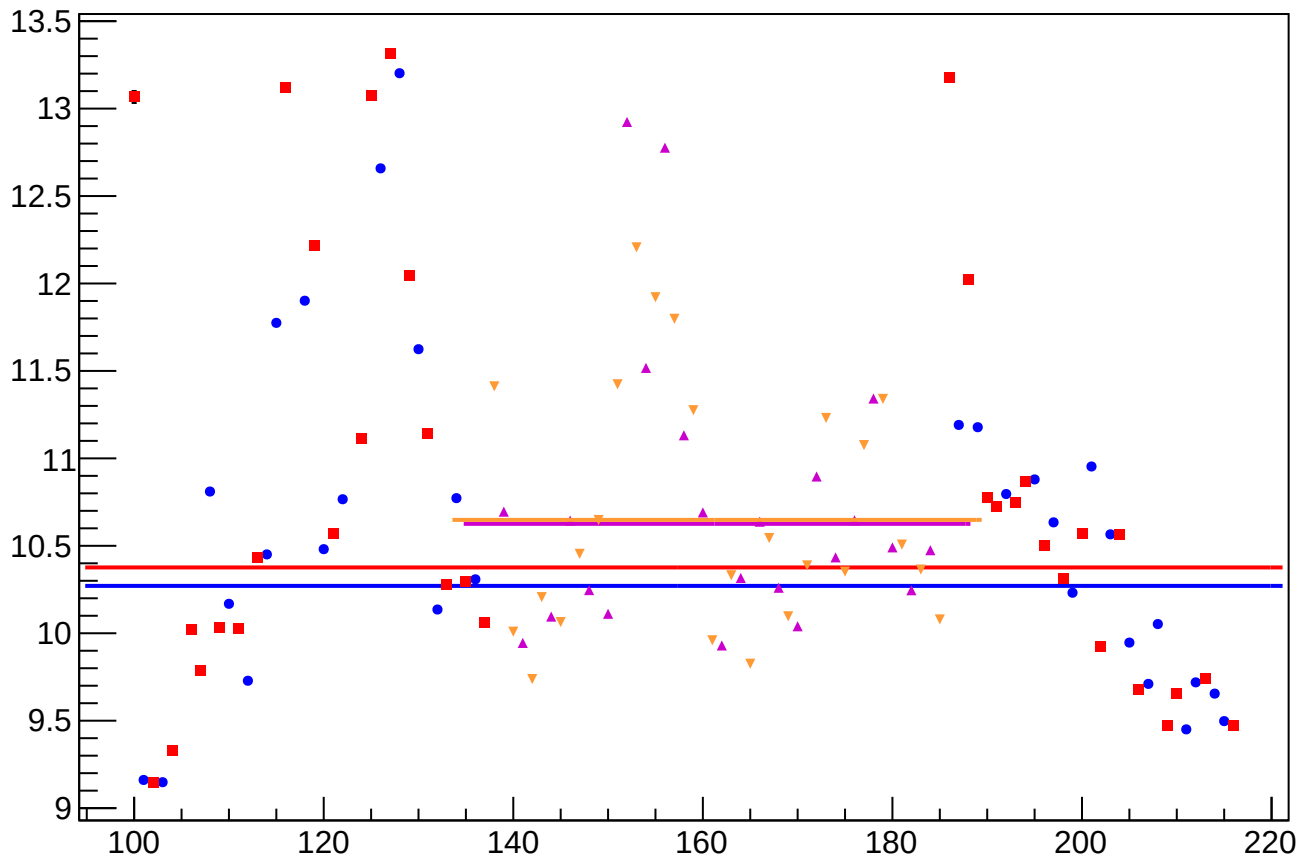
Left In:  $2.591 \pm 2.506$   $\chi^2/\text{NDF}$ : 34.8/22

+ sign  $-0.114 \pm 1.696$   $\chi^2/\text{NDF}$ : 49.2/55

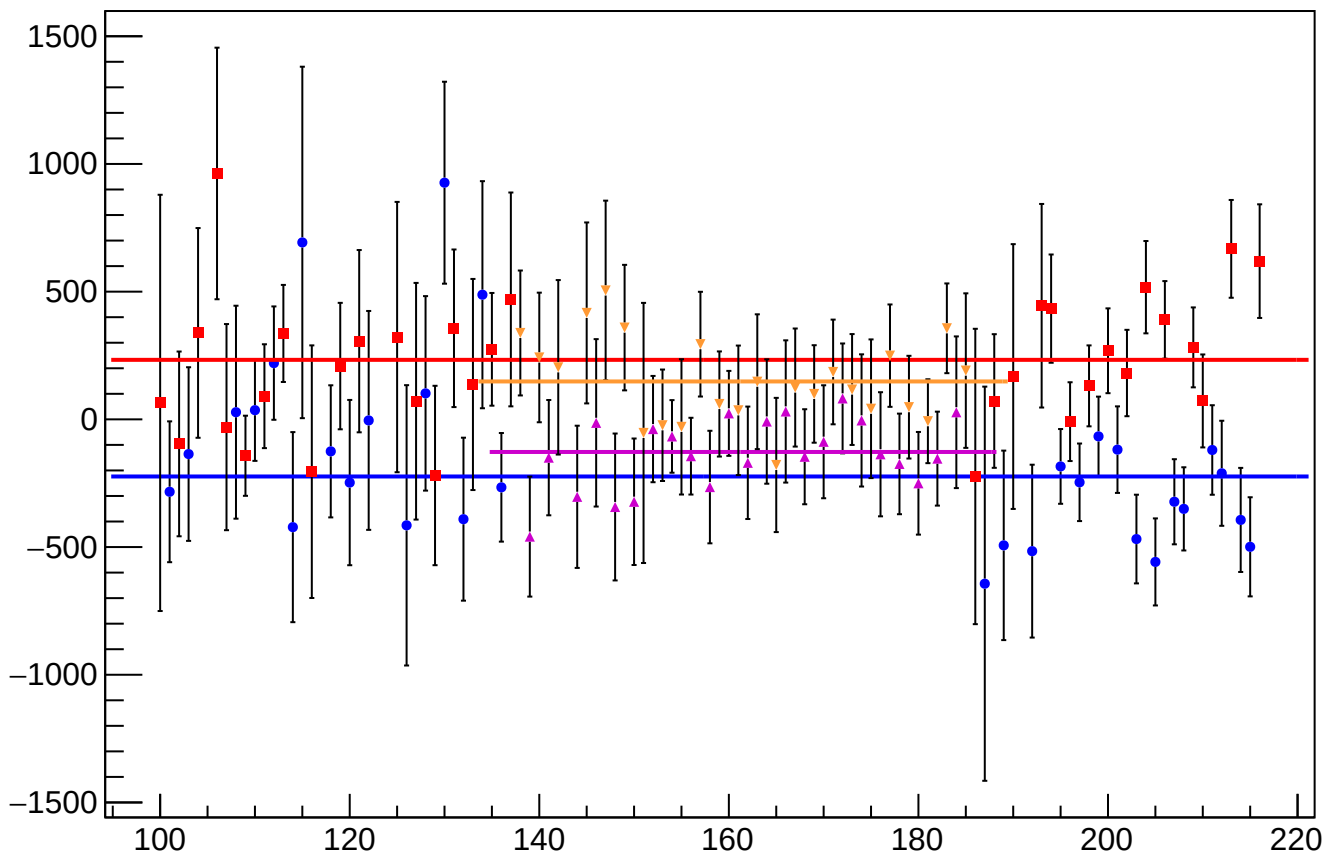
All:  $-0.389 \pm 1.206$   $\chi^2/\text{NDF}$ : 136.5/113

- sign  $-0.670 \pm 1.715$   $\chi^2/\text{NDF}$ : 87.3/57

# asym\_bcm\_an\_us\_an\_ds3\_dd\_rms vs Slug



asym\_bcm\_dg\_us\_dg\_ds\_avg\_mean vs Slug



Right In:  $-223.661 \pm 40.887$   $\chi^2/\text{NDF}$ : 33.8/30

Left Out:  $148.441 \pm 47.720$   $\chi^2/\text{NDF}$ : 9.9/23

Right Out:  $233.008 \pm 40.806$   $\chi^2/\text{NDF}$ : 31.1/32

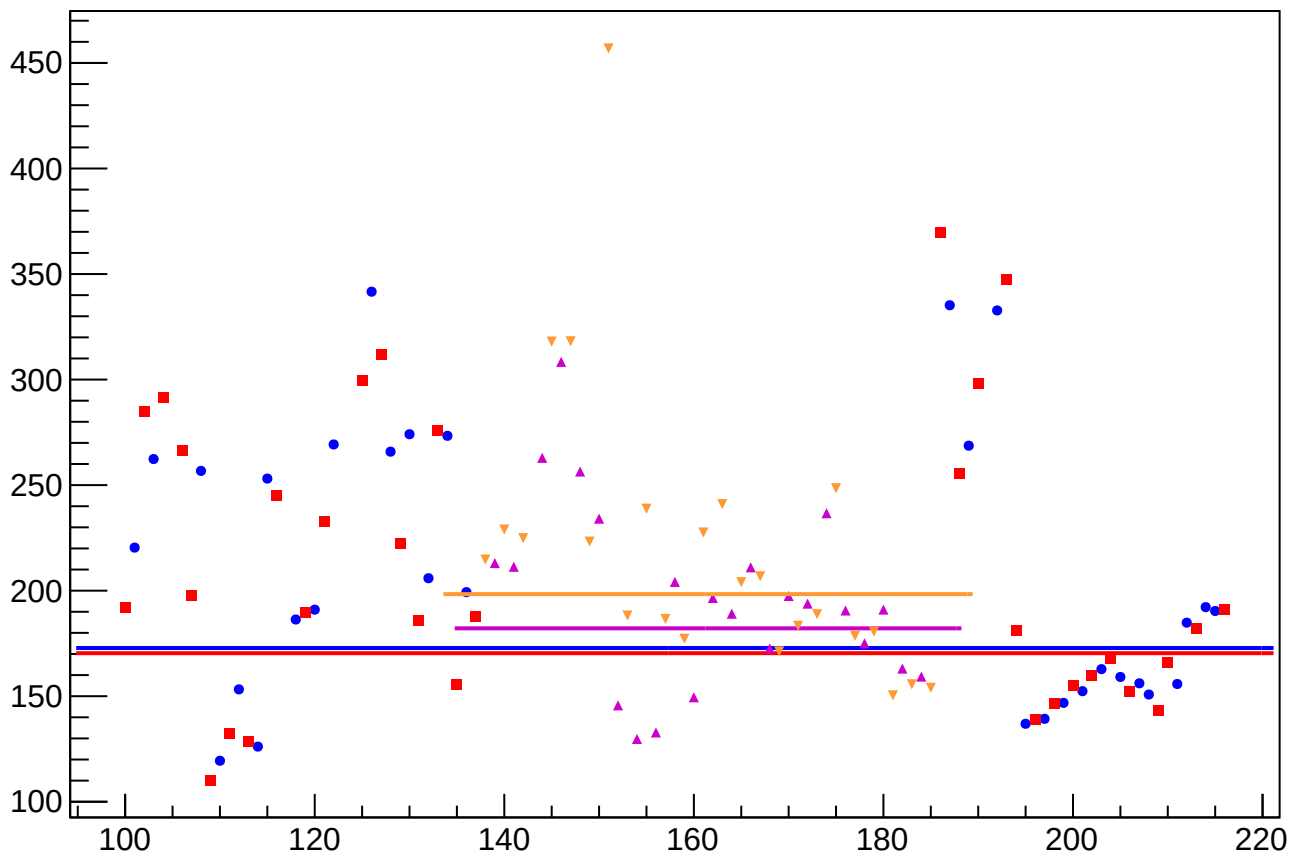
Left In:  $-127.710 \pm 44.426$   $\chi^2/\text{NDF}$ : 7.8/22

+ sign  $-66.139 \pm 31.049$   $\chi^2/\text{NDF}$ : 78.7/54

All:  $3.089 \pm 21.594$   $\chi^2/\text{NDF}$ : 163.1/110

- sign  $67.945 \pm 30.053$   $\chi^2/\text{NDF}$ : 74.7/55

# asym\_bcm\_dg\_us\_dg\_ds\_avg\_rms vs Slug



Right In: 172.841 $\pm$ 0.029  $\chi^2$ /NDF: 2314139.2/30

Left Out: 198.351 $\pm$ 0.034  $\chi^2$ /NDF:1697058.2/23

Right Out: 170.389 $\pm$ 0.029  $\chi^2$ /NDF: 2782705.4/32

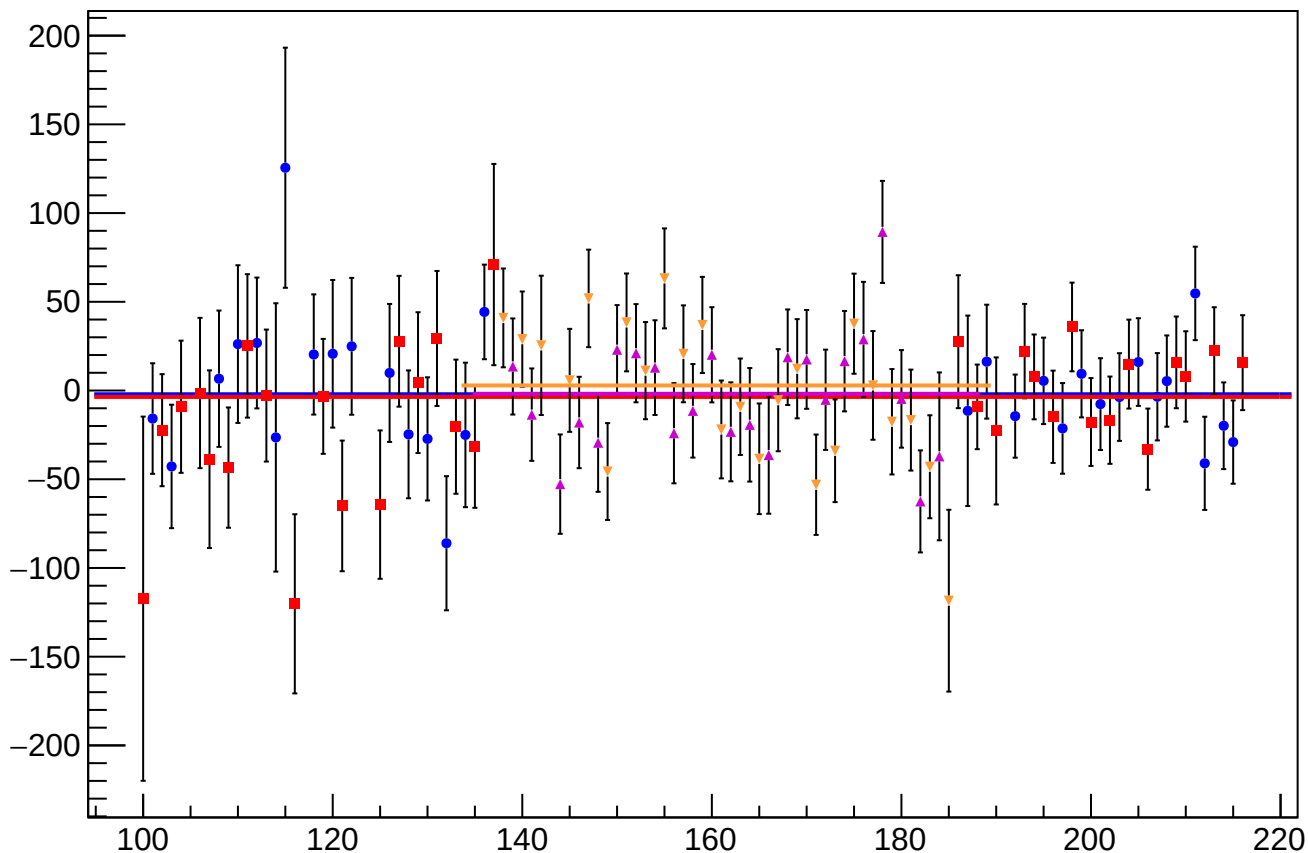
Left In: 182.150 $\pm$ 0.031  $\chi^2$ /NDF:1584358.1/22

+ sign 183.640 $\pm$ 0.022  $\chi^2$ /NDF: 4340797.1/54

All: 179.577 $\pm$ 0.015  $\chi^2$ /NDF: 8850224.7/110

- sign 175.771 $\pm$ 0.021  $\chi^2$ /NDF: 4443094.0/55

# asym\_bcm\_dg\_us\_dg\_ds\_dd\_mean vs Slug



Right In:  $-2.109 \pm 5.456$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $2.851 \pm 5.904$   $\chi^2/\text{NDF}$ : 36.9/23

Right Out:  $-3.605 \pm 5.445$   $\chi^2/\text{NDF}$ : 28.3/32

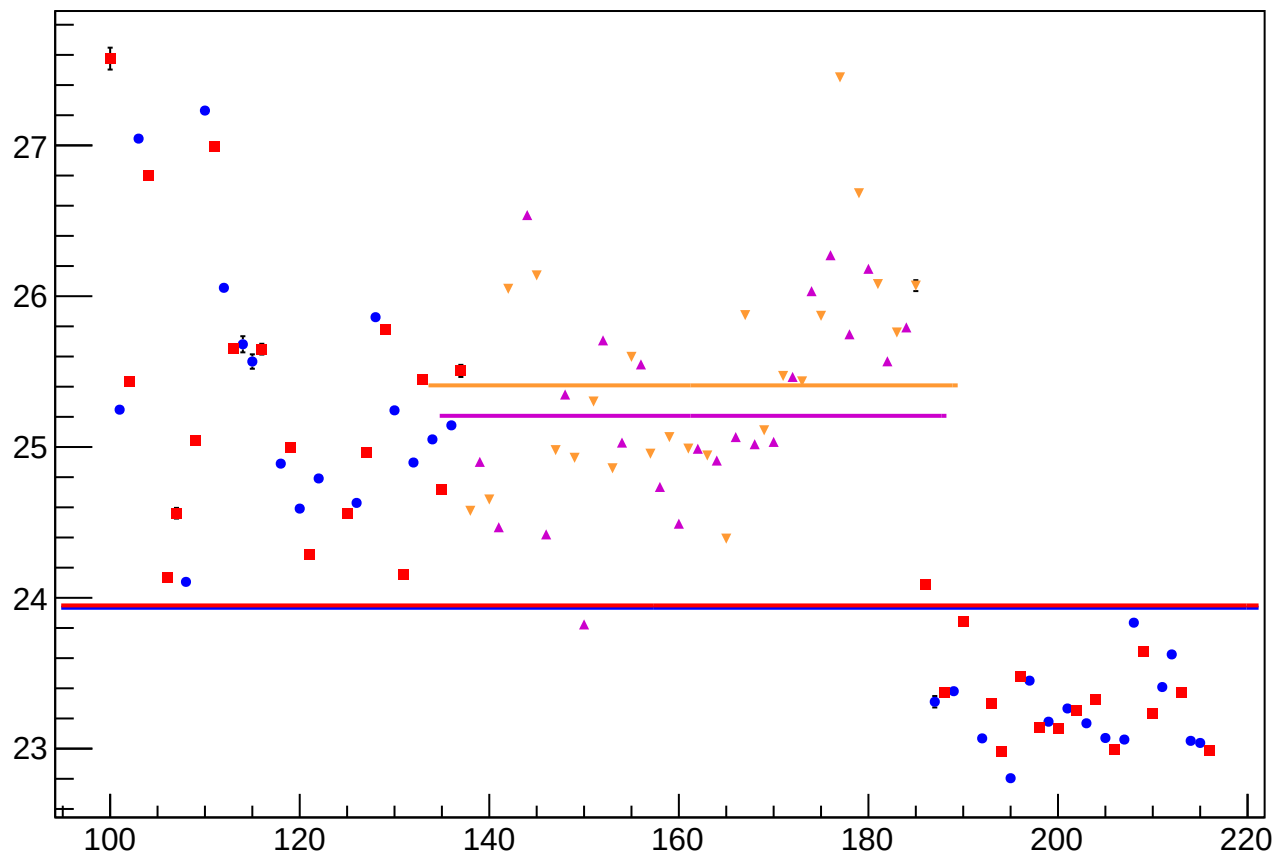
Left In:  $-1.850 \pm 5.893$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $0.175 \pm 4.007$   $\chi^2/\text{NDF}$ : 65.0/54

All:  $-1.314 \pm 2.831$   $\chi^2/\text{NDF}$ : 121.7/110

- sign  $-2.797 \pm 3.999$   $\chi^2/\text{NDF}$ : 56.4/55

# asym\_bcm\_dg\_us\_dg\_ds\_dd\_rms vs Slug



Right In:  $23.934 \pm 0.004$   $\chi^2/\text{NDF}$ : 84020.1/30

Left Out:  $25.409 \pm 0.004$   $\chi^2/\text{NDF}$ : 26863.6/23

Right Out:  $23.950 \pm 0.004$   $\chi^2/\text{NDF}$ : 75504.1/32

Left In:  $25.207 \pm 0.004$   $\chi^2/\text{NDF}$ : 25827.4/22

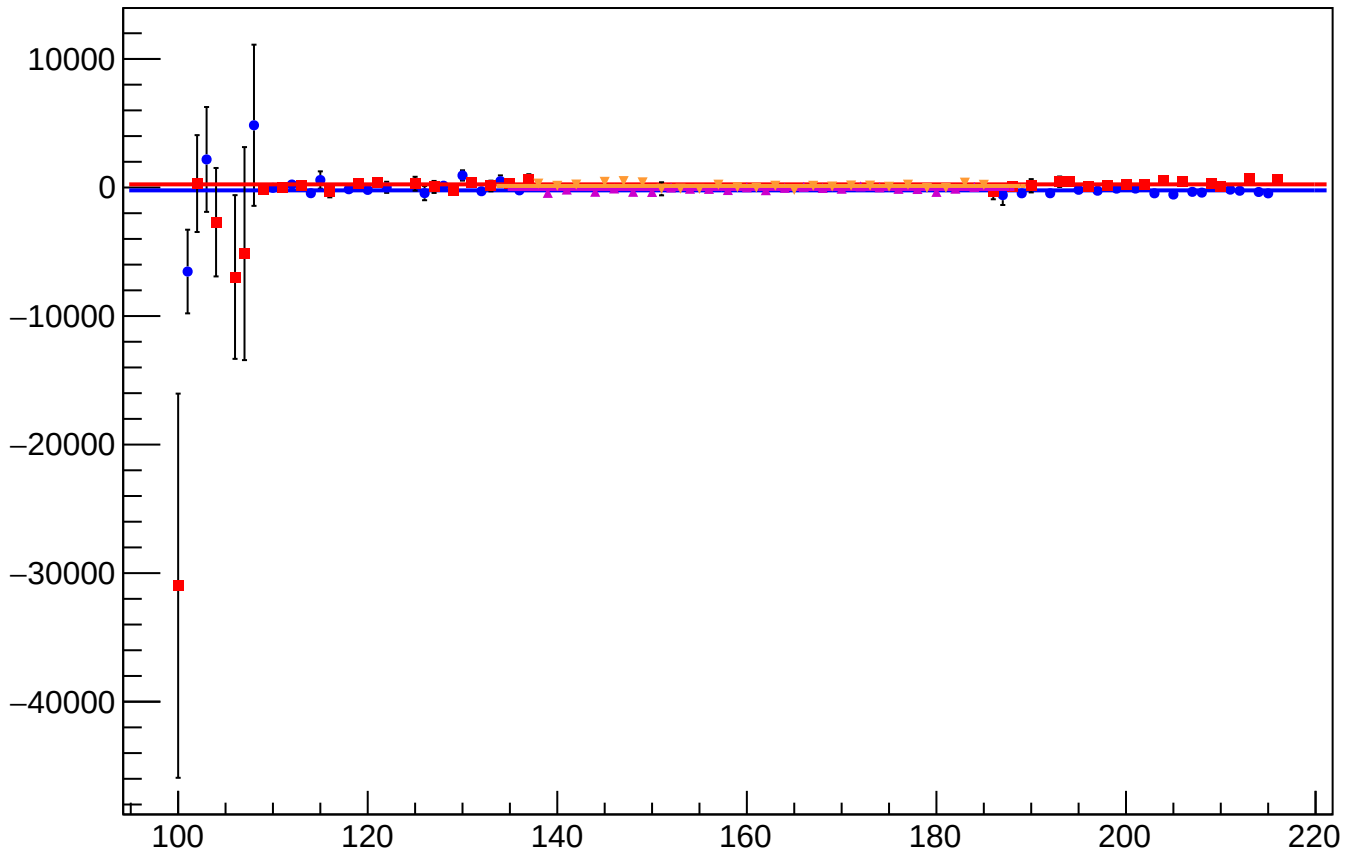
+ sign  $24.613 \pm 0.003$   $\chi^2/\text{NDF}$ : 178168.9/54

All:  $24.571 \pm 0.002$   $\chi^2/\text{NDF}$ : 329057.3/110

- sign  $24.529 \pm 0.003$   $\chi^2/\text{NDF}$ : 150440.5/55



# asym\_bcm\_cav4cQ\_an\_ds\_avg\_mean vs Slug



Right In:  $-223.251 \pm 42.463$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $120.221 \pm 47.440$   $\chi^2/\text{NDF}$ : 11.9/23

Right Out:  $243.995 \pm 42.867$   $\chi^2/\text{NDF}$ : 35.6/32

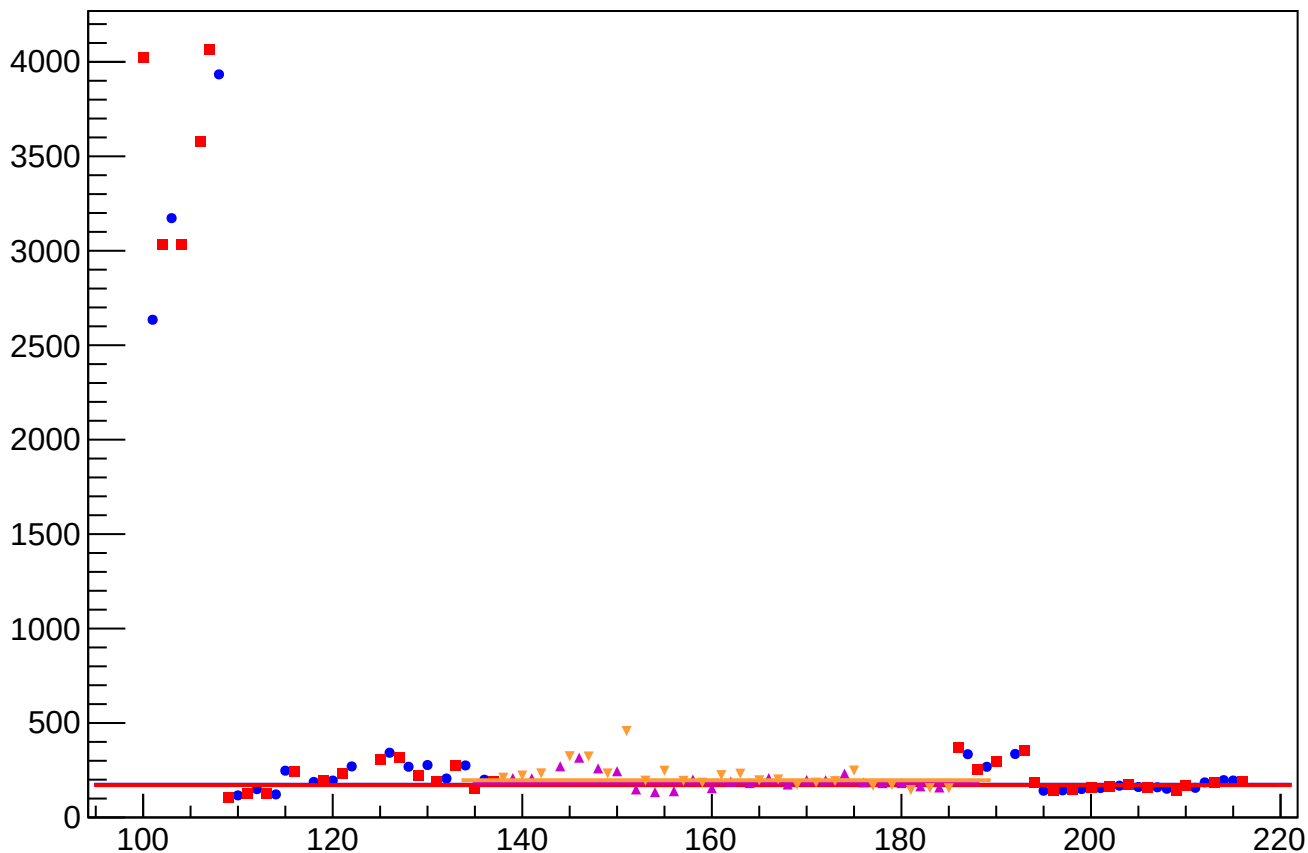
Left In:  $-116.243 \pm 44.786$   $\chi^2/\text{NDF}$ : 8.4/22

+ sign  $-70.470 \pm 31.640$   $\chi^2/\text{NDF}$ : 76.7/54

All:  $2.172 \pm 22.131$   $\chi^2/\text{NDF}$ : 164.7/110

- sign  $71.761 \pm 30.968$   $\chi^2/\text{NDF}$ : 77.7/55

# asym\_bcm\_cav4cQ\_an\_ds\_avg\_rms vs Slug



Right In: 172.973+/-0.030  $\chi^2/\text{NDF}$ : 4950508.2/30

Left Out: 196.935+/-0.034  $\chi^2/\text{NDF}$ : 1809266.5/23

Right Out: 171.256+/-0.030  $\chi^2/\text{NDF}$ : 5448017.9/32

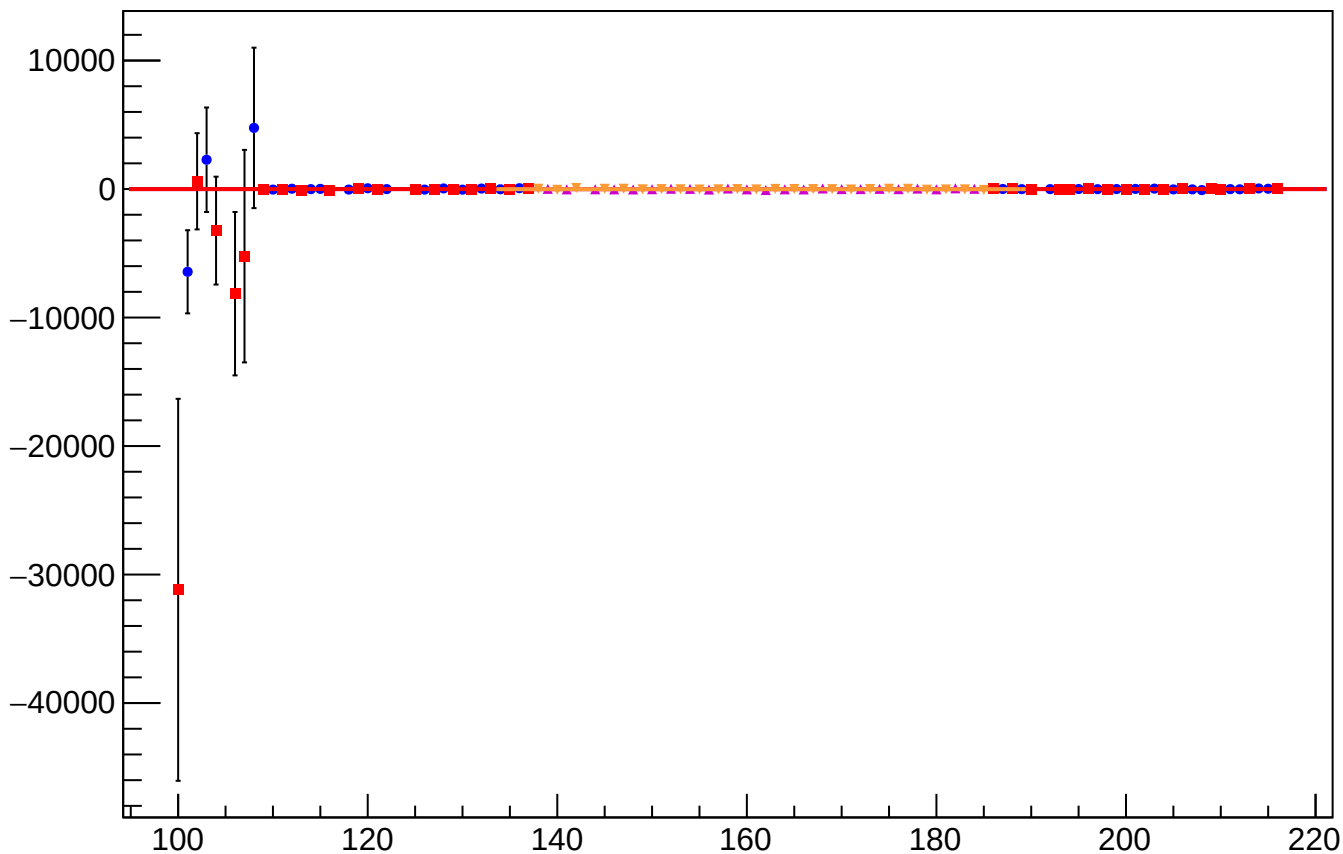
Left In: 184.051+/-0.032  $\chi^2/\text{NDF}$ : 1445426.0/22

+ sign 183.631+/-0.022  $\chi^2/\text{NDF}$ : 7043074.6/54

All: 180.435+/-0.016  $\chi^2/\text{NDF}$ : 14061673.7/11

- sign 177.373+/-0.022  $\chi^2/\text{NDF}$ : 6978637.5/55

asym\_bcm\_cav4cQ\_an\_ds\_dd\_mean vs Slug



Right In:  $-1.695 \pm 6.497$   $\chi^2/\text{NDF}$ : 32.9/30

Left Out:  $-11.111 \pm 6.653$   $\chi^2/\text{NDF}$ : 17.5/23

Right Out:  $-3.929 \pm 6.562$   $\chi^2/\text{NDF}$ : 40.3/32

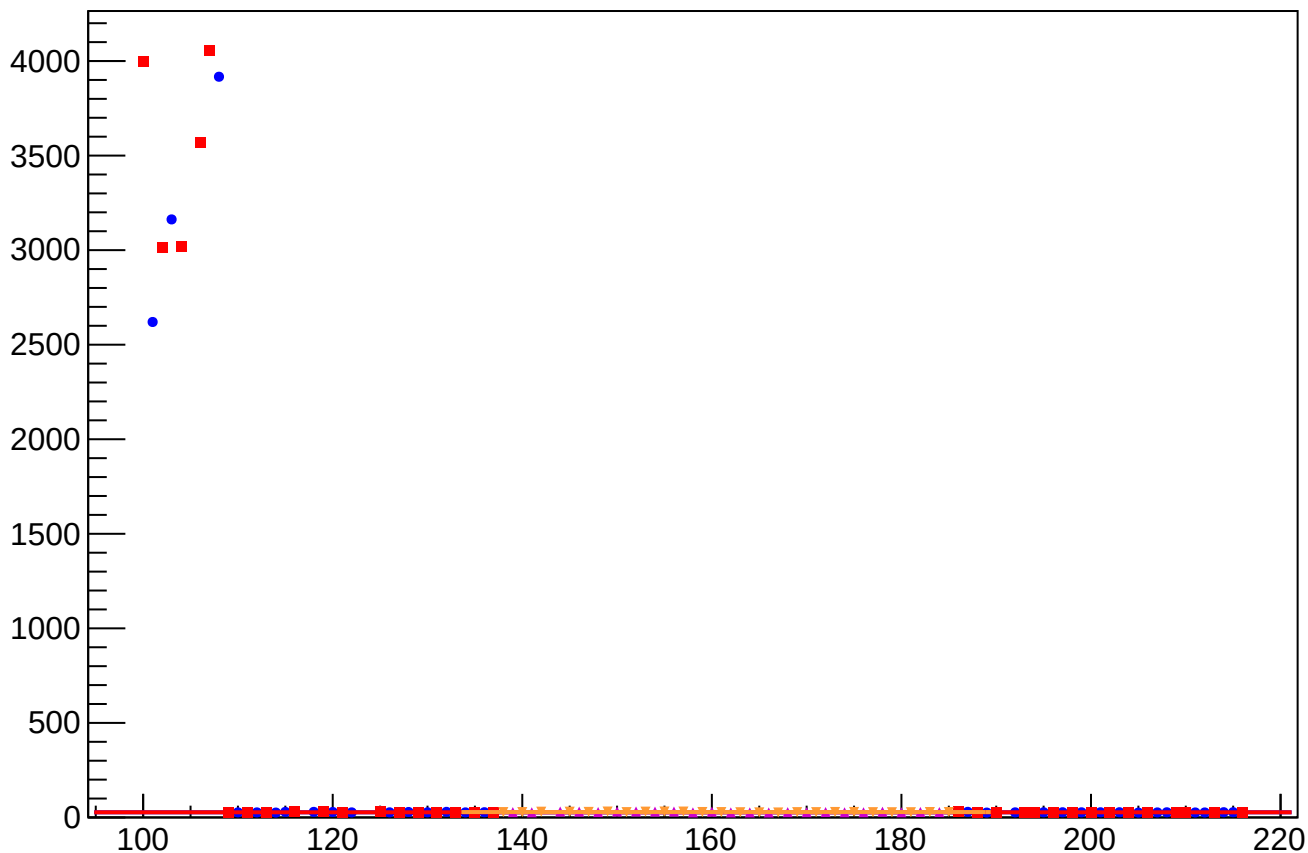
Left In:  $-2.576 \pm 6.732$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-6.291 \pm 4.648$   $\chi^2/\text{NDF}$ : 51.5/54

All:  $-4.797 \pm 3.305$   $\chi^2/\text{NDF}$ : 114.2/110

- sign  $-3.270 \pm 4.699$   $\chi^2/\text{NDF}$ : 62.5/55

# asym\_bcm\_cav4cQ\_an\_ds\_dd\_rms vs Slug



Right In: 27.276+/-0.005  $\chi^2/\text{NDF}$ : 3289896.2/30

Left Out: 28.592+/-0.005  $\chi^2/\text{NDF}$ : 80997.4/23

Right Out: 27.253+/-0.005  $\chi^2/\text{NDF}$ : 3599618.3/32

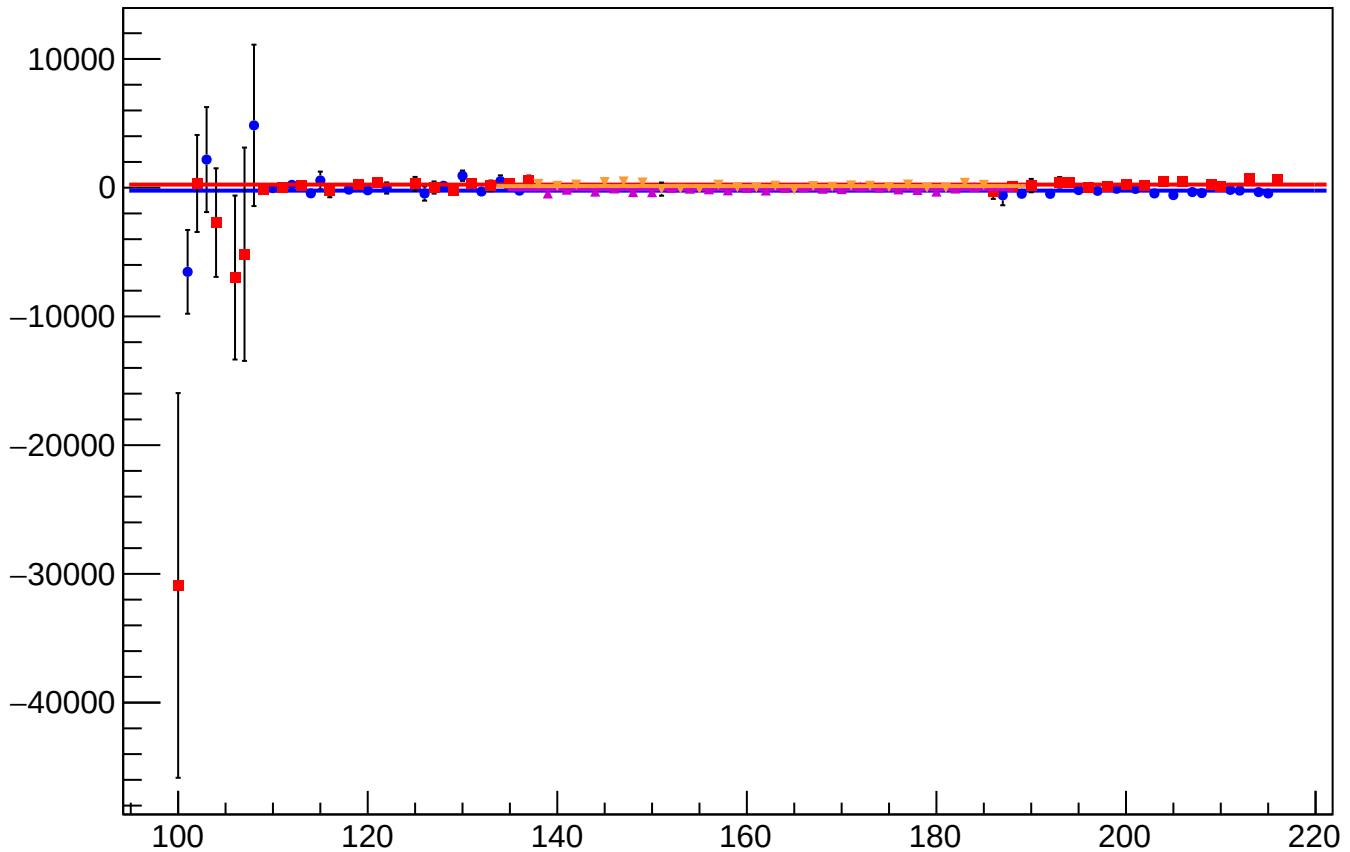
Left In: 28.728+/-0.005  $\chi^2/\text{NDF}$ : 127383.0/22

+ sign 27.918+/-0.003  $\chi^2/\text{NDF}$ : 3410987.6/54

All: 27.945+/-0.002  $\chi^2/\text{NDF}$ : 7187322.1/110

- sign 27.971+/-0.003  $\chi^2/\text{NDF}$ : 3776205.3/55

# asym\_bcm\_cav4cQ\_dg\_ds\_avg\_mean vs Slug



Right In:  $-227.370 \pm 42.641$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $126.373 \pm 47.852$   $\chi^2/\text{NDF}$ : 11.6/23

Right Out:  $241.094 \pm 43.037$   $\chi^2/\text{NDF}$ : 33.8/32

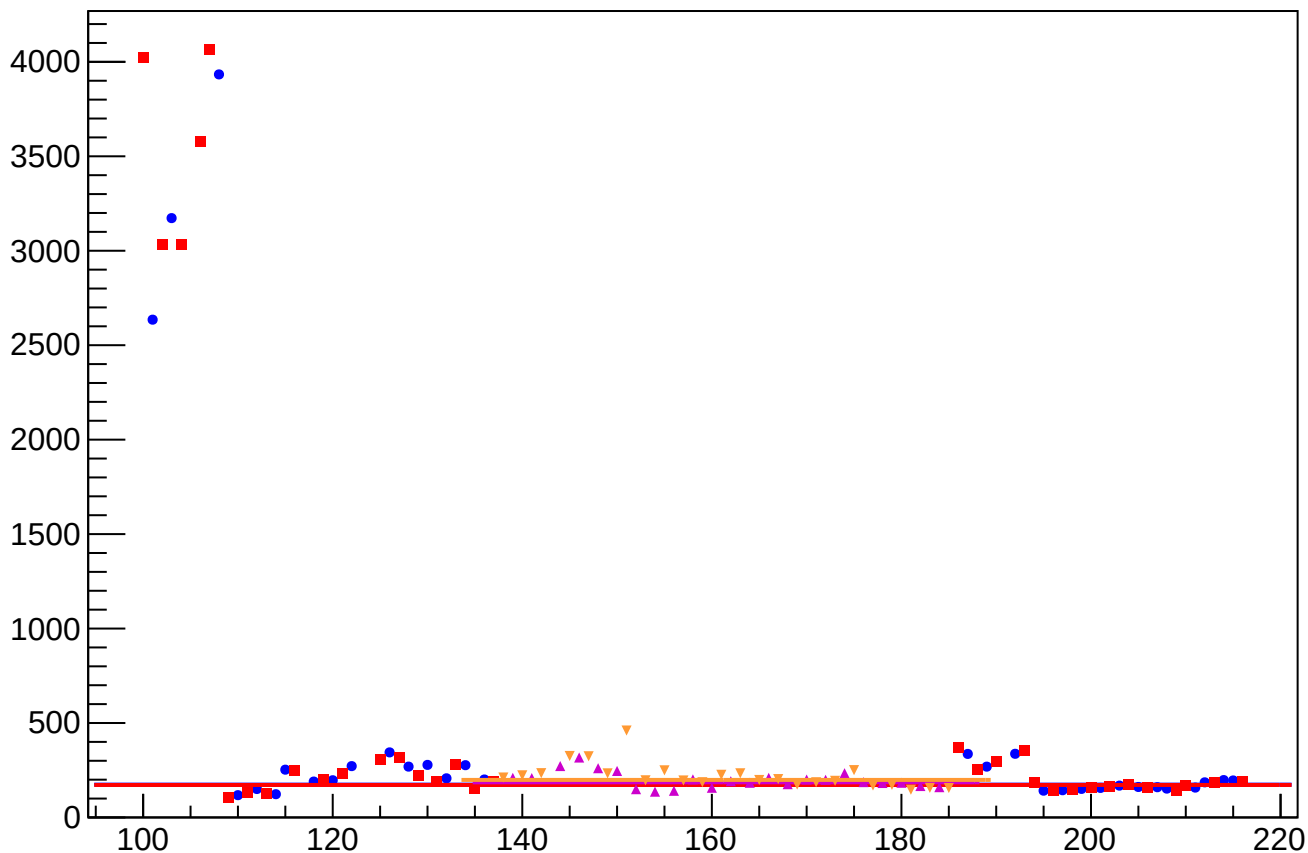
Left In:  $-122.809 \pm 45.199$   $\chi^2/\text{NDF}$ : 8.0/22

+ sign  $-70.804 \pm 31.835$   $\chi^2/\text{NDF}$ : 77.8/54

All:  $0.094 \pm 22.271$   $\chi^2/\text{NDF}$ : 163.3/110

- sign  $68.051 \pm 31.168$   $\chi^2/\text{NDF}$ : 75.8/55

# asym\_bcm\_cav4cQ\_dg\_ds\_avg\_rms vs Slug



Right In: 173.713 $\pm$ 0.030  $\chi^2$ /NDF: 4944571.3/30

Left Out: 198.736 $\pm$ 0.034  $\chi^2$ /NDF: 1786406.6/23

Right Out: 171.980 $\pm$ 0.030  $\chi^2$ /NDF: 5435545.1/32

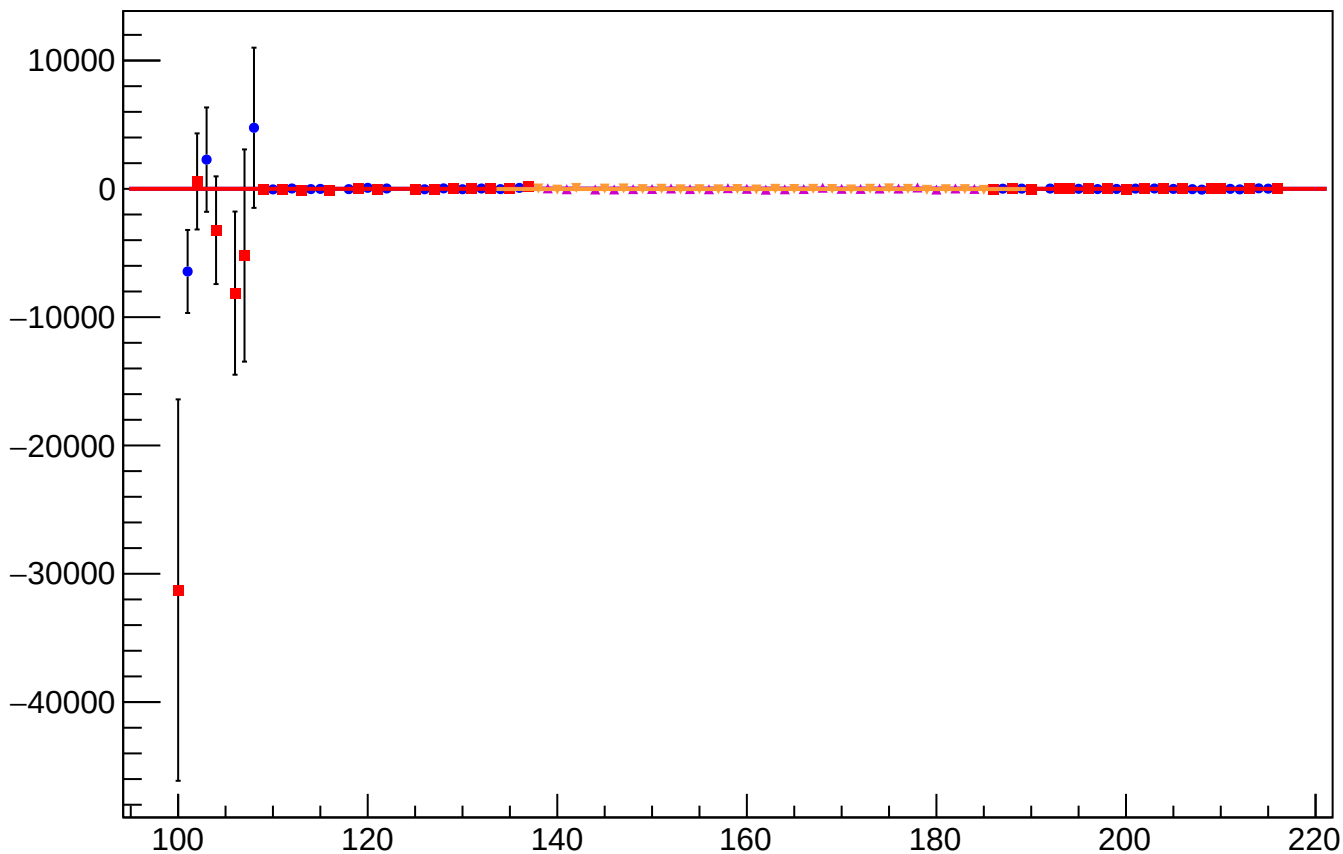
Left In: 185.871 $\pm$ 0.032  $\chi^2$ /NDF: 1405525.2/22

+ sign 184.788 $\pm$ 0.023  $\chi^2$ /NDF: 7035821.0/54

All: 181.621 $\pm$ 0.016  $\chi^2$ /NDF: 14014729.5/11

- sign 178.586 $\pm$ 0.022  $\chi^2$ /NDF: 6940148.2/55

# asym\_bcm\_cav4cQ\_dg\_ds\_dd\_mean vs Slug



Right In:  $3.439 \pm 7.170$   $\chi^2/\text{NDF}$ : 25.8/30

Left Out:  $-18.187 \pm 7.260$   $\chi^2/\text{NDF}$ : 20.3/23

Right Out:  $1.666 \pm 7.243$   $\chi^2/\text{NDF}$ : 44.9/32

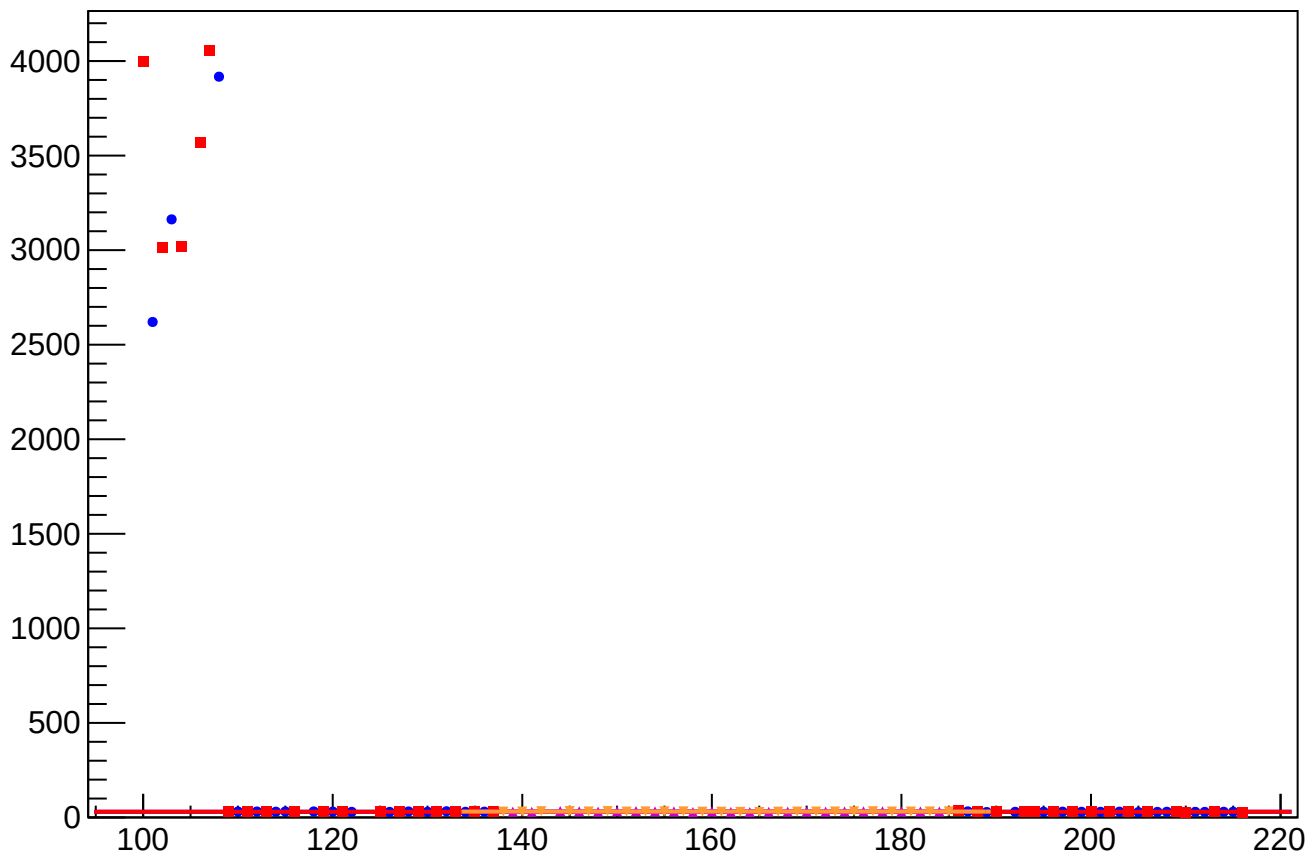
Left In:  $2.709 \pm 7.348$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $-7.240 \pm 5.101$   $\chi^2/\text{NDF}$ : 50.6/54

All:  $-2.582 \pm 3.627$   $\chi^2/\text{NDF}$ : 132.7/110

- sign  $2.180 \pm 5.158$   $\chi^2/\text{NDF}$ : 80.4/55

# asym\_bcm\_cav4cQ\_dg\_ds\_dd\_rms vs Slug



Right In: 30.109 $\pm$ 0.005  $\chi^2$ /NDF: 3275530.5/30

Left Out: 31.221 $\pm$ 0.005  $\chi^2$ /NDF: 47423.0/23

Right Out: 30.102 $\pm$ 0.005  $\chi^2$ /NDF: 3573733.3/32

Left In: 31.379 $\pm$ 0.005  $\chi^2$ /NDF: 85229.7/22

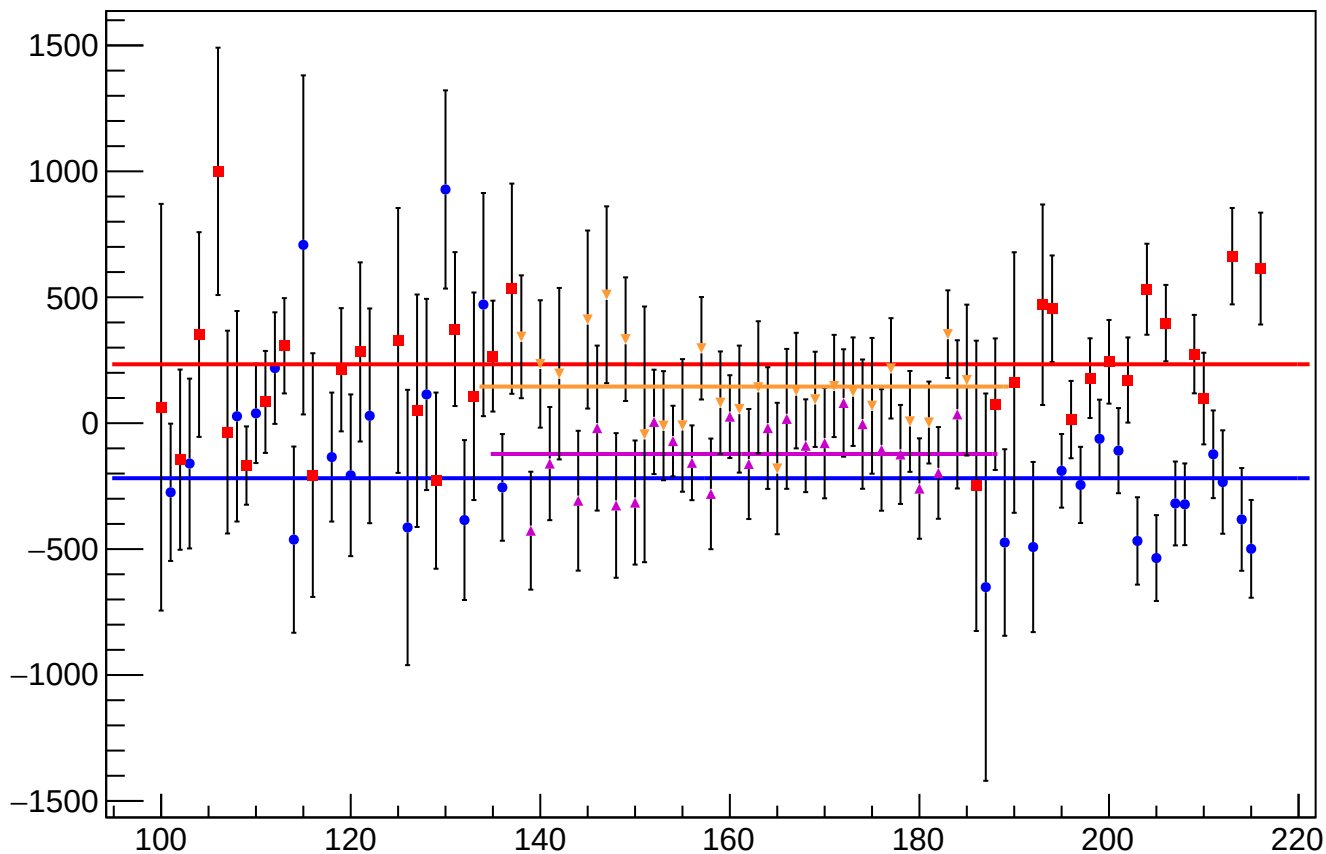
+ sign 30.658 $\pm$ 0.004  $\chi^2$ /NDF: 3346729.8/54

All: 30.695 $\pm$ 0.003  $\chi^2$ /NDF: 7036552.0/110

- sign 30.732 $\pm$ 0.004  $\chi^2$ /NDF: 3689618.2/55



# asym\_bcm\_dg\_us\_an\_us\_avg\_mean vs Slug



Right In:  $-218.497 \pm 40.765$   $\chi^2/\text{NDF}: 33.2/30$

Left Out:  $145.314 \pm 47.390$   $\chi^2/\text{NDF}: 9.4/23$

Right Out:  $233.895 \pm 40.676$   $\chi^2/\text{NDF}: 32.4/32$

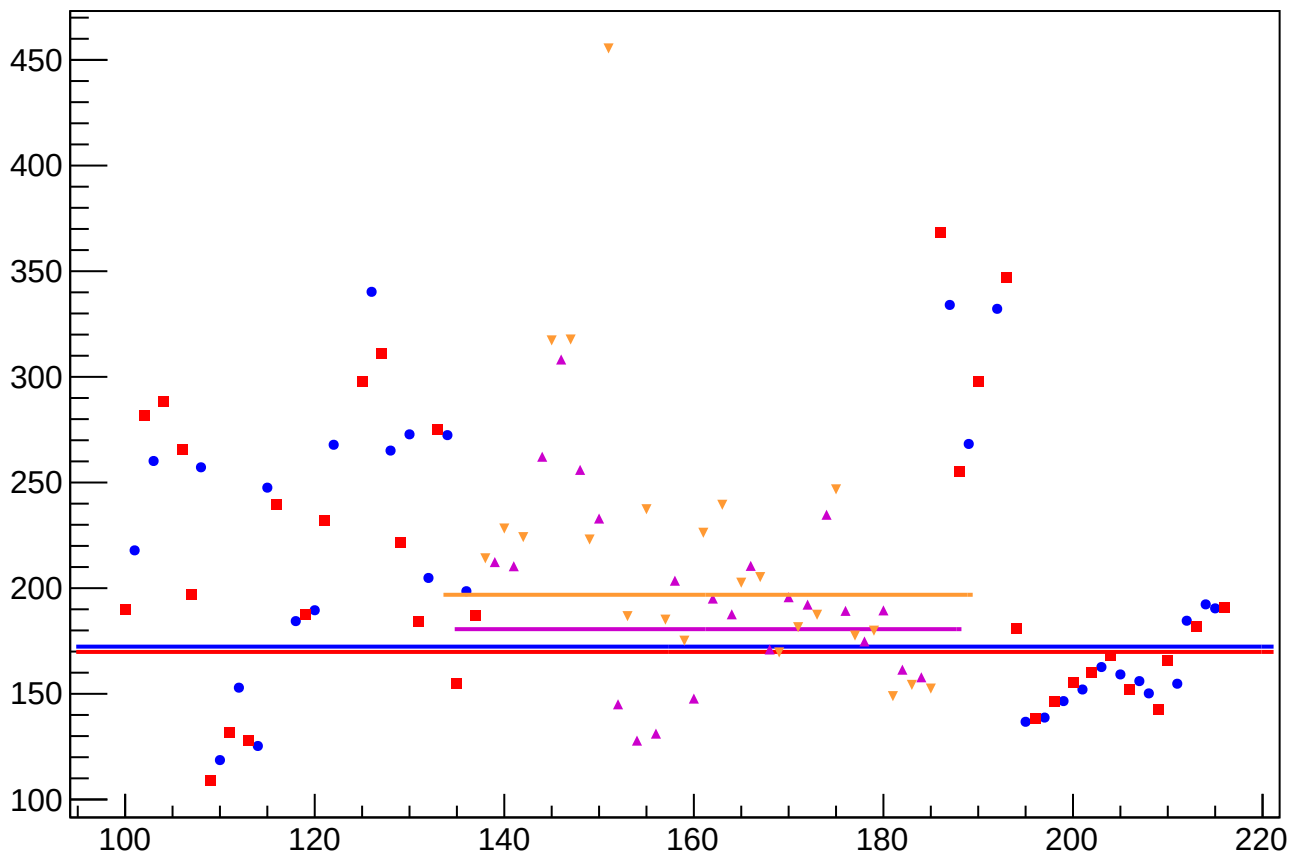
Left In:  $-122.376 \pm 44.081$   $\chi^2/\text{NDF}: 7.9/22$

+ sign  $-63.778 \pm 30.905$   $\chi^2/\text{NDF}: 76.4/54$

All:  $5.359 \pm 21.487$   $\chi^2/\text{NDF}: 161.7/110$

- sign  $70.048 \pm 29.894$   $\chi^2/\text{NDF}: 75.6/55$

# asym\_bcm\_dg\_us\_an\_us\_avg\_rms vs Slug



Right In:  $172.335 \pm 0.029$   $\chi^2/\text{NDF}$ : 2307683.7/30

Left Out:  $196.873 \pm 0.034$   $\chi^2/\text{NDF}$ : 1725106.9/23

Right Out:  $169.828 \pm 0.029$   $\chi^2/\text{NDF}$ : 2780402.4/32

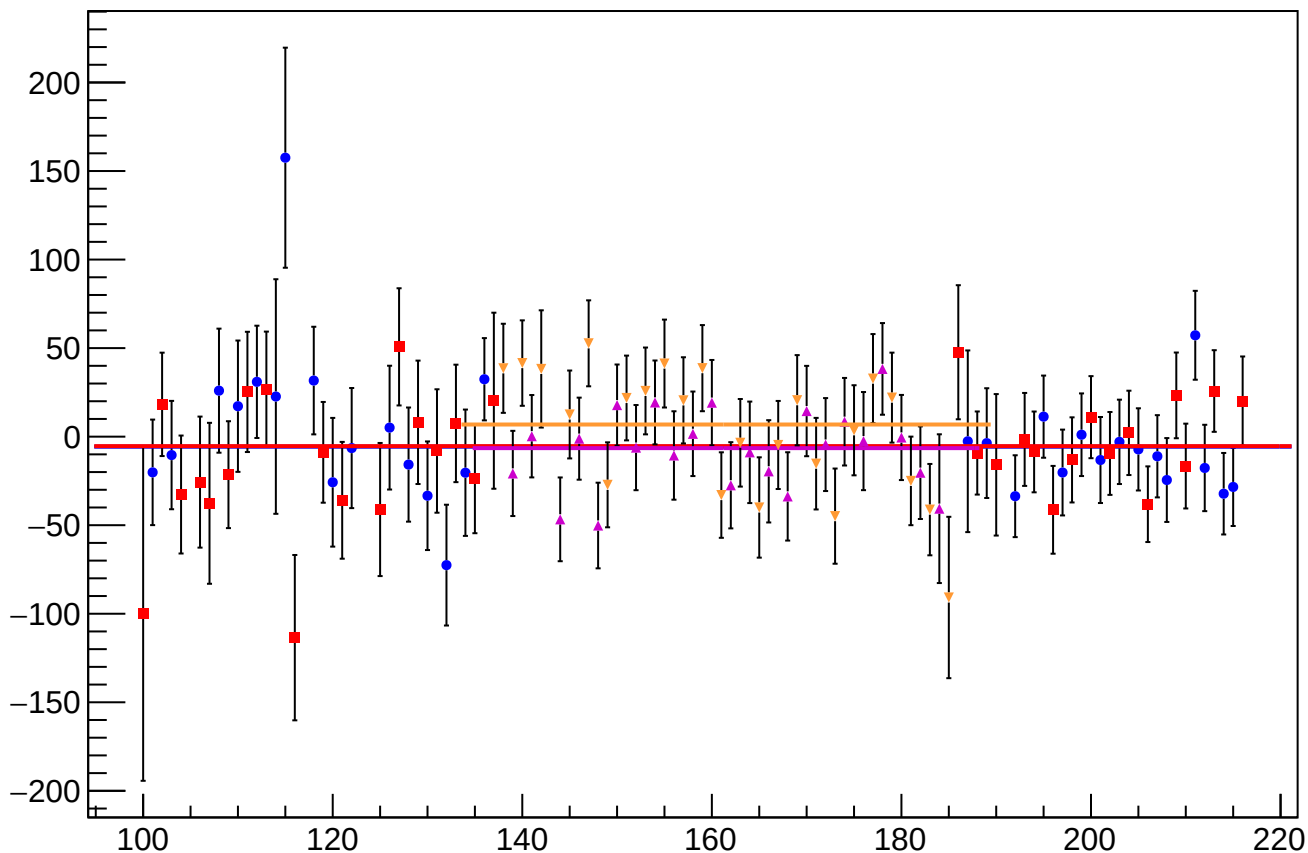
Left In:  $180.601 \pm 0.031$   $\chi^2/\text{NDF}$ : 1628072.3/22

+ sign  $182.771 \pm 0.022$   $\chi^2/\text{NDF}$ : 4340951.2/54

All:  $178.644 \pm 0.015$   $\chi^2/\text{NDF}$ : 8882968.0/110

- sign  $174.783 \pm 0.021$   $\chi^2/\text{NDF}$ : 4472992.9/55

# asym\_bcm\_dg\_us\_an\_us\_dd\_mean vs Slug



Right In:  $-5.659 \pm 5.055$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $6.857 \pm 5.229$   $\chi^2/\text{NDF}$ : 36.8/23

Right Out:  $-5.363 \pm 5.064$   $\chi^2/\text{NDF}$ : 27.9/32

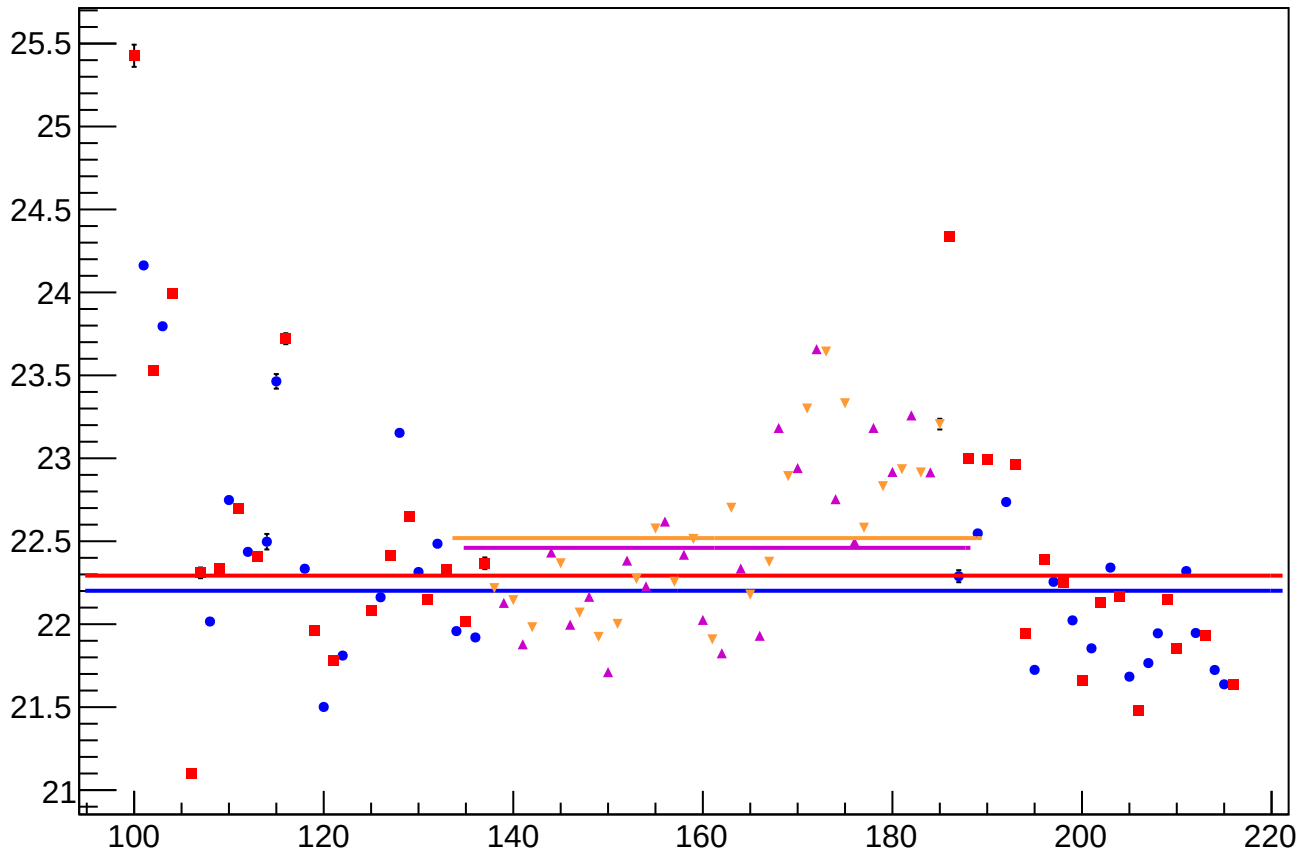
Left In:  $-6.482 \pm 5.247$   $\chi^2/\text{NDF}$ : 17.4/22

+ sign  $0.388 \pm 3.634$   $\chi^2/\text{NDF}$ : 71.4/54

All:  $-2.749 \pm 2.573$   $\chi^2/\text{NDF}$ : 118.3/110

- sign  $-5.902 \pm 3.644$   $\chi^2/\text{NDF}$ : 45.4/55

# asym\_bcm\_dg\_us\_an\_us\_dd\_rms vs Slug



Right In:  $22.202 \pm 0.004$   $\chi^2/\text{NDF}: 26050.2/30$

Left Out:  $22.519 \pm 0.004$   $\chi^2/\text{NDF}: 15998.2/23$

Right Out:  $22.293 \pm 0.004$   $\chi^2/\text{NDF}: 33737.0/32$

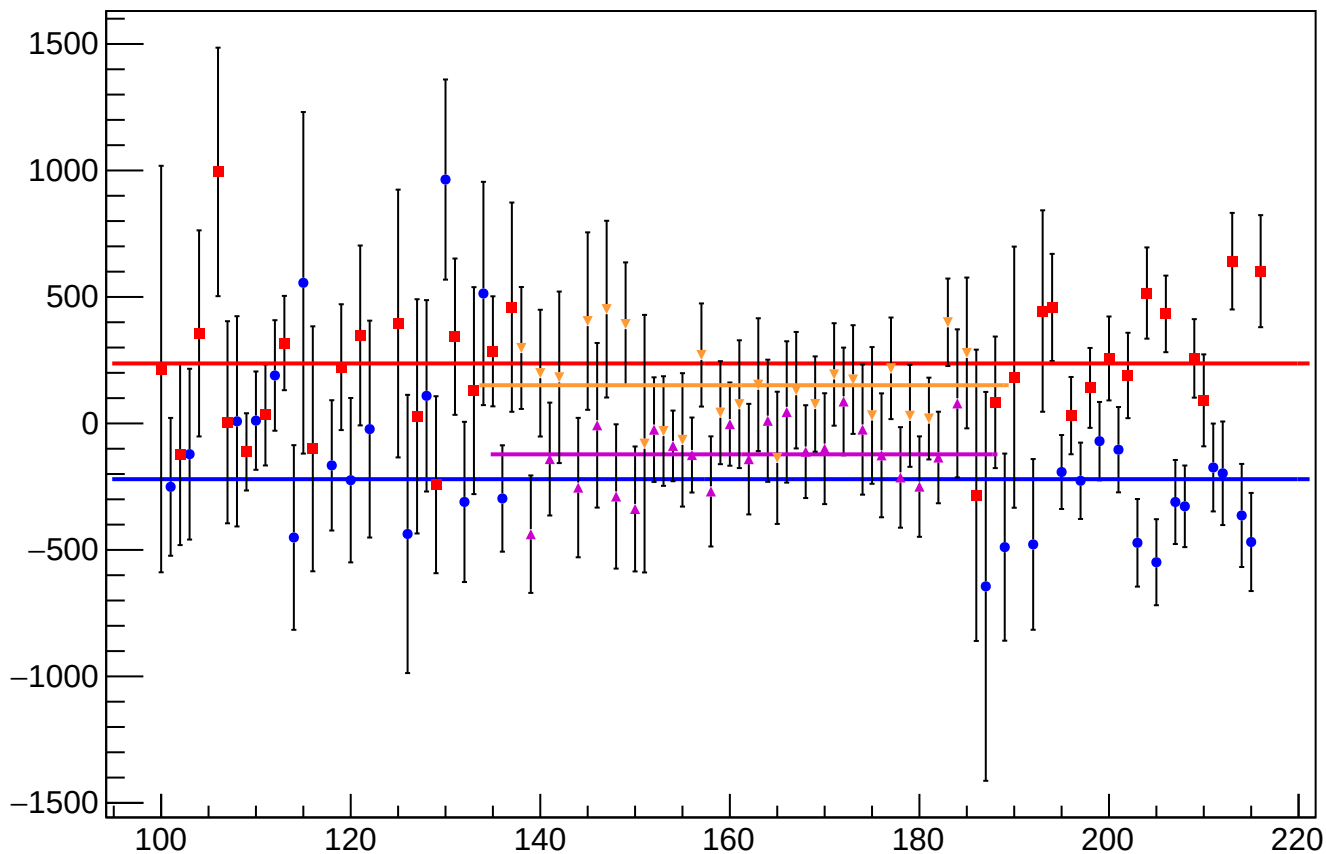
Left In:  $22.460 \pm 0.004$   $\chi^2/\text{NDF}: 19117.2/22$

+ sign  $22.355 \pm 0.003$   $\chi^2/\text{NDF}: 45859.0/54$

All:  $22.364 \pm 0.002$   $\chi^2/\text{NDF}: 99794.4/110$

- sign  $22.374 \pm 0.003$   $\chi^2/\text{NDF}: 53909.2/55$

asym\_bcm\_dg\_ds\_an\_us\_avg\_mean vs Slug



Right In:  $-220.358 \pm 40.650$   $\chi^2/\text{NDF}$ : 31.8/30

Left Out:  $151.108 \pm 47.316$   $\chi^2/\text{NDF}$ : 10.0/23

Right Out:  $237.156 \pm 40.512$   $\chi^2/\text{NDF}$ : 30.3/32

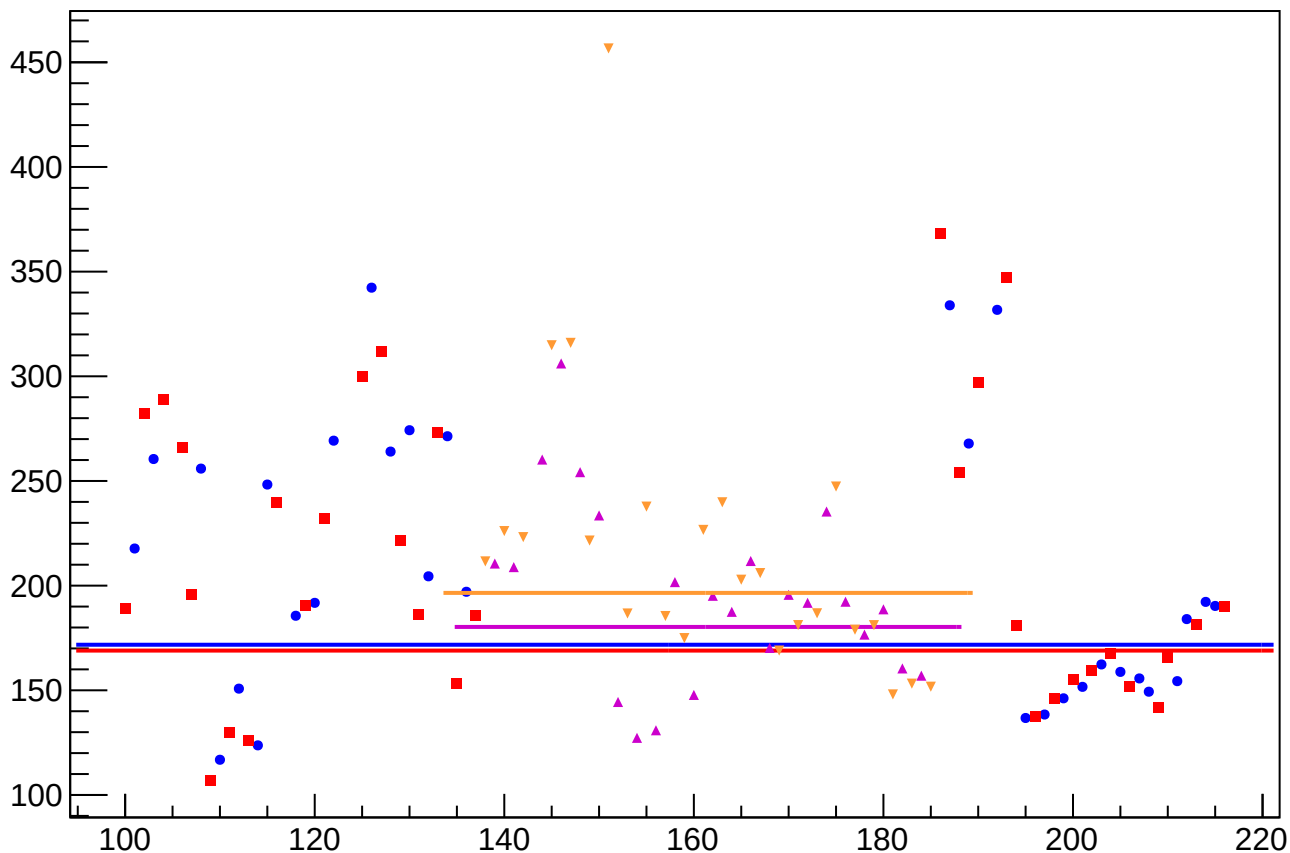
Left In:  $-122.165 \pm 44.006$   $\chi^2/\text{NDF}$ : 7.5/22

+ sign  $-62.612 \pm 30.834$   $\chi^2/\text{NDF}$ : 77.3/54

All:  $7.144 \pm 21.430$   $\chi^2/\text{NDF}$ : 161.0/110

- sign  $72.324 \pm 29.805$   $\chi^2/\text{NDF}$ : 73.9/55

# asym\_bcm\_dg\_ds\_an\_us\_avg\_rms vs Slug



Right In: 171.767 $\pm$ 0.029  $\chi^2$ /NDF: 2339826.8/30

Left Out: 196.533 $\pm$ 0.033  $\chi^2$ /NDF:1727888.6/23

Right Out: 168.973 $\pm$ 0.029  $\chi^2$ /NDF: 2848724.1/32

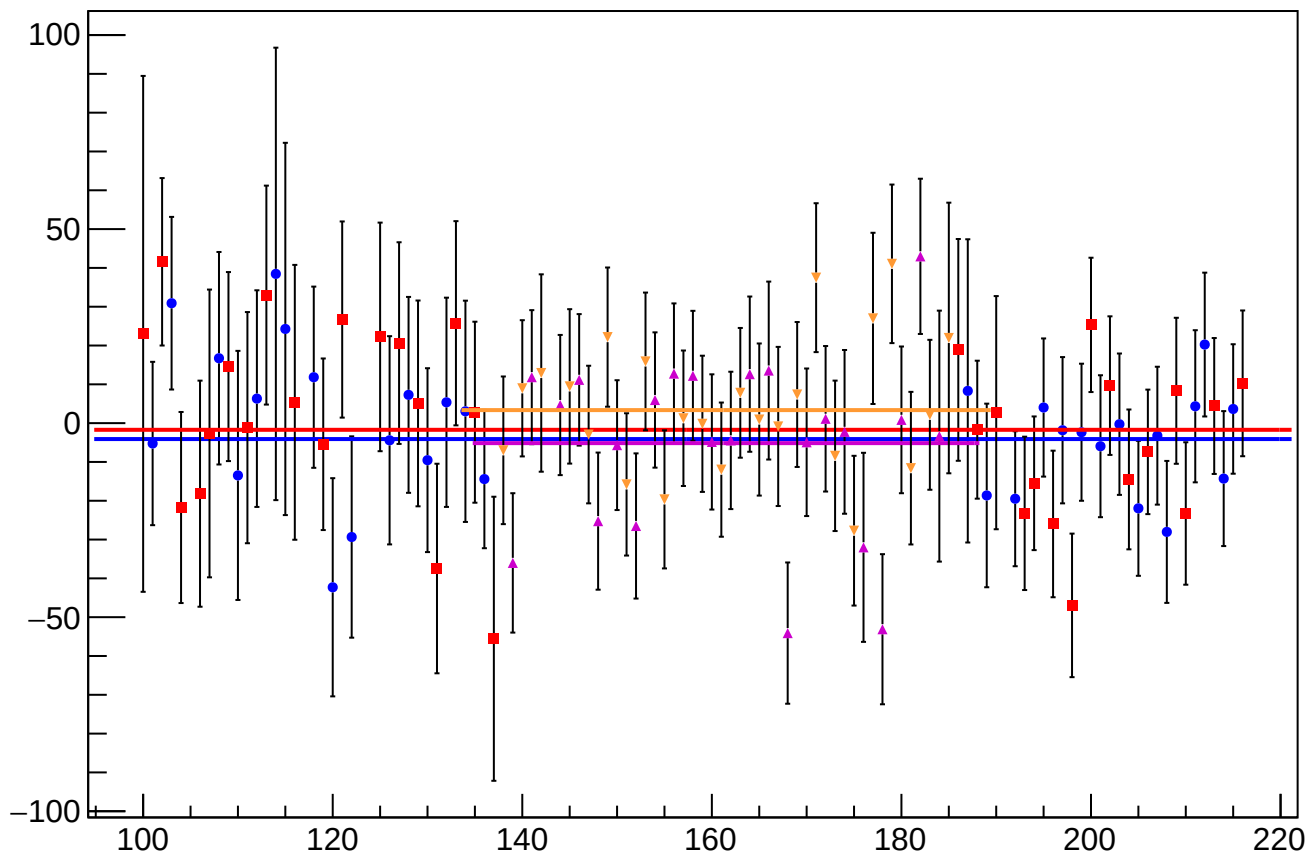
Left In: 180.274 $\pm$ 0.031  $\chi^2$ /NDF:1624682.7/22

+ sign 182.284 $\pm$ 0.022  $\chi^2$ /NDF: 4382970.7/54

All: 178.083 $\pm$ 0.015  $\chi^2$ /NDF: 8999592.2/110

- sign 174.157 $\pm$ 0.021  $\chi^2$ /NDF: 4544797.6/55

# asym\_bcm\_dg\_ds\_an\_us\_dd\_mean vs Slug



Right In:  $-4.103 \pm 3.878$   $\chi^2/\text{NDF}$ : 15.0/30

Left Out:  $3.359 \pm 3.905$   $\chi^2/\text{NDF}$ : 17.7/23

Right Out:  $-1.718 \pm 3.882$   $\chi^2/\text{NDF}$ : 30.6/32

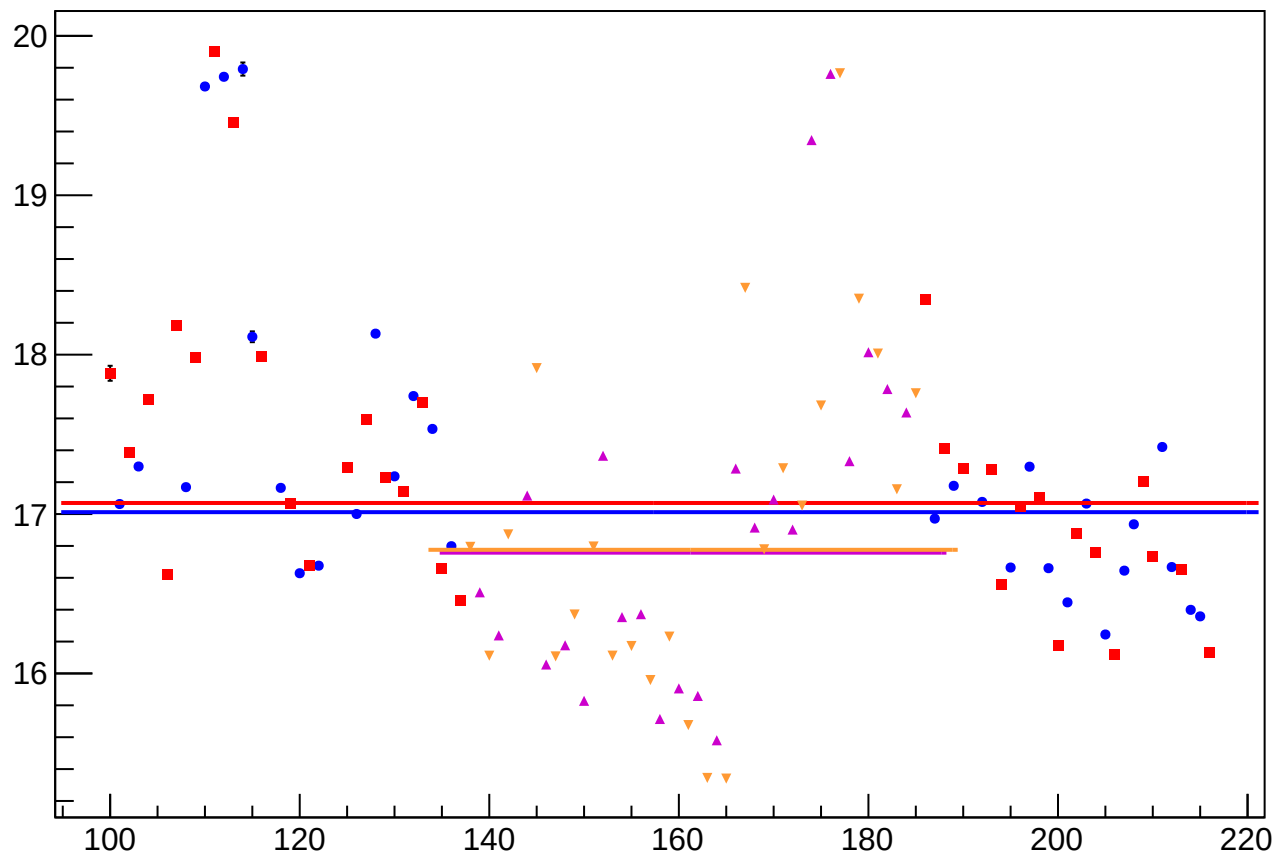
Left In:  $-5.150 \pm 3.924$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $-0.397 \pm 2.752$   $\chi^2/\text{NDF}$ : 34.5/54

All:  $-1.902 \pm 1.949$   $\chi^2/\text{NDF}$ : 98.4/110

- sign  $-3.416 \pm 2.760$   $\chi^2/\text{NDF}$ : 63.3/55

# asym\_bcm\_dg\_ds\_an\_us\_dd\_rms vs Slug



Right In:  $17.012 \pm 0.003$   $\chi^2/\text{NDF}$ : 62308.4/30

Left Out:  $16.776 \pm 0.003$   $\chi^2/\text{NDF}$ : 136142.5/23

Right Out:  $17.069 \pm 0.003$   $\chi^2/\text{NDF}$ : 71696.4/32

Left In:  $16.758 \pm 0.003$   $\chi^2/\text{NDF}$ : 123306.8/22

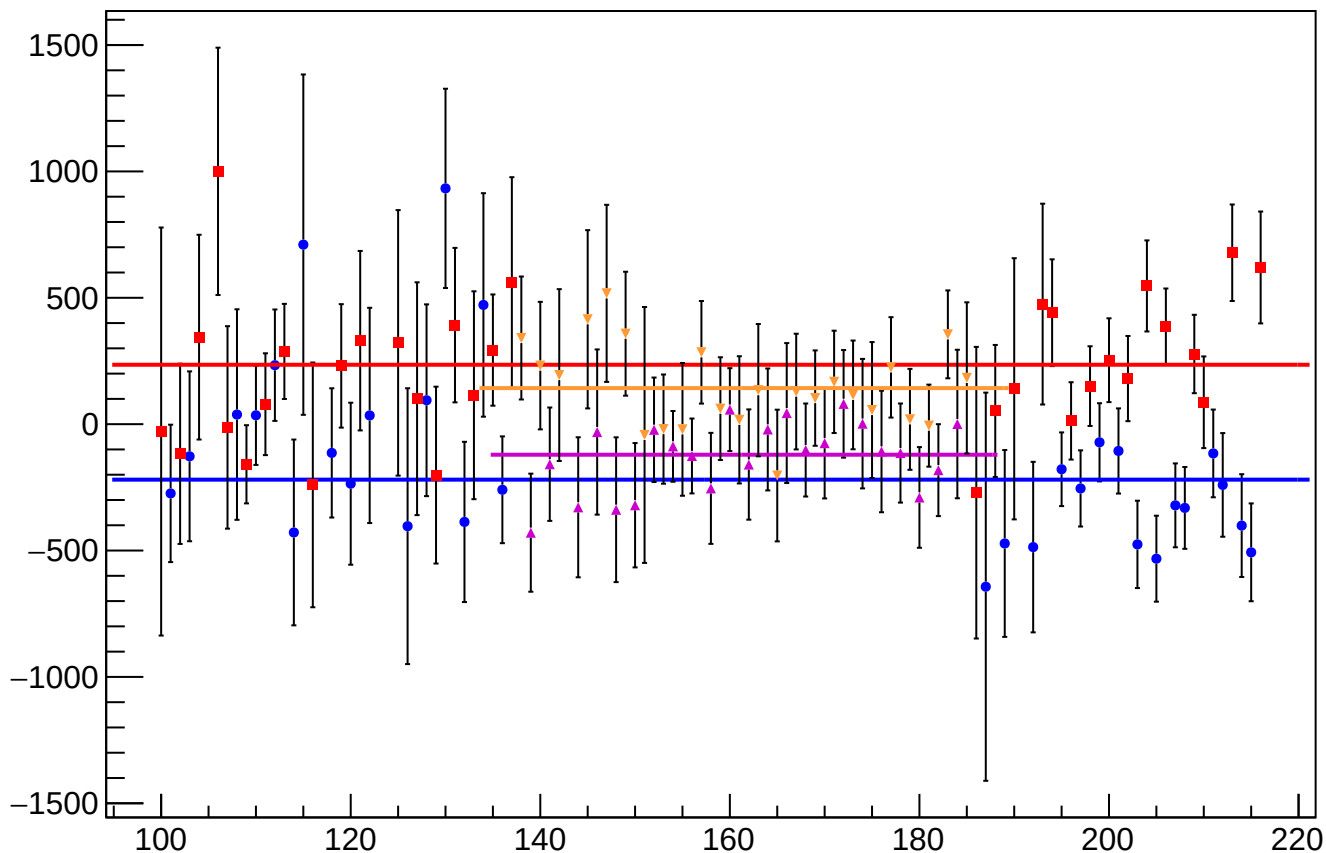
+ sign  $16.895 \pm 0.002$   $\chi^2/\text{NDF}$ : 202133.8/54

All:  $16.905 \pm 0.001$   $\chi^2/\text{NDF}$ : 403570.8/110

- sign  $16.915 \pm 0.002$   $\chi^2/\text{NDF}$ : 201380.5/55



asym\_bcm\_dg\_us\_an\_ds\_avg\_mean vs Slug



Right In:  $-219.503 \pm 40.643$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $142.696 \pm 47.288$   $\chi^2/\text{NDF}$ : 10.2/23

Right Out:  $235.088 \pm 40.554$   $\chi^2/\text{NDF}$ : 33.1/32

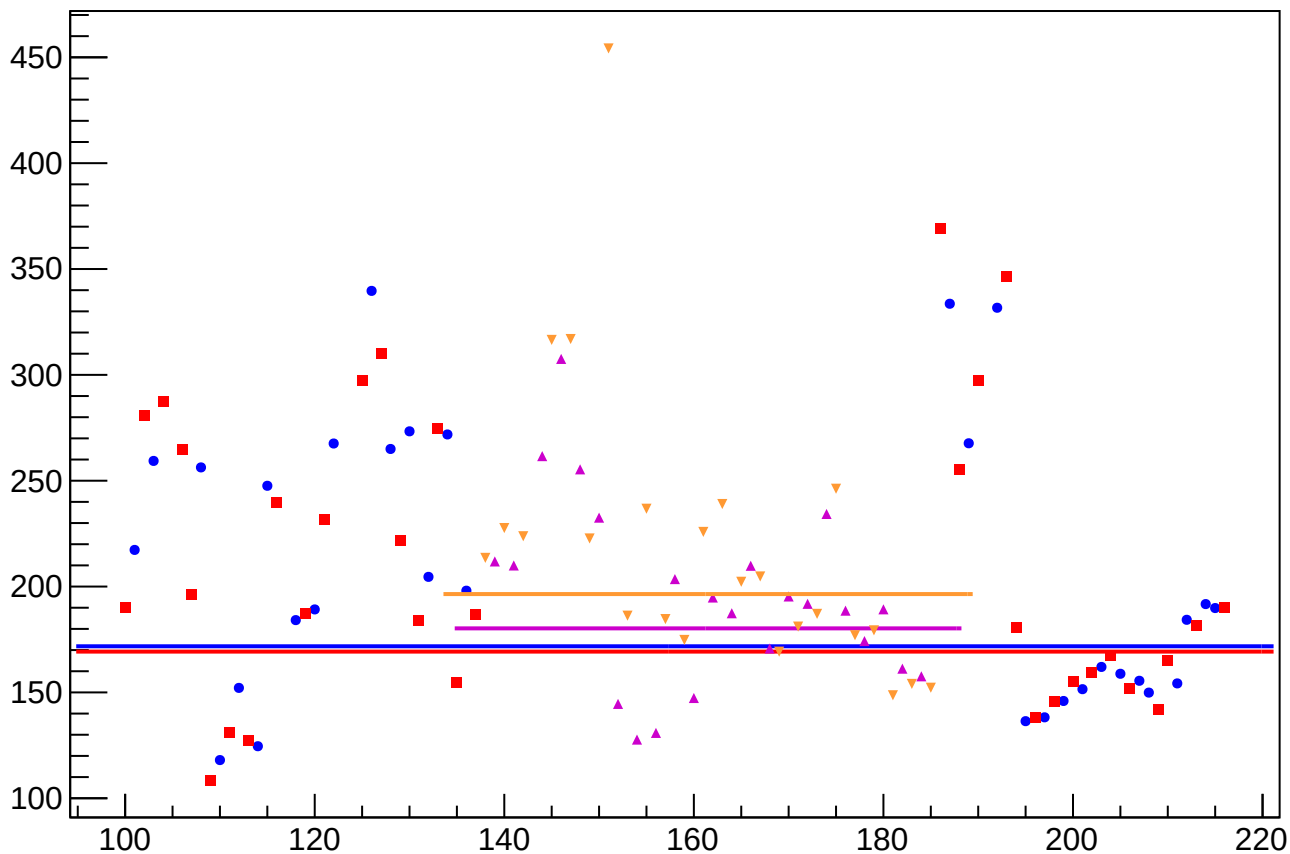
Left In:  $-120.888 \pm 43.994$   $\chi^2/\text{NDF}$ : 8.2/22

+ sign  $-65.619 \pm 30.823$   $\chi^2/\text{NDF}$ : 77.9/54

All:  $5.242 \pm 21.431$   $\chi^2/\text{NDF}$ : 164.9/110

- sign  $71.560 \pm 29.818$   $\chi^2/\text{NDF}$ : 76.8/55

# asym\_bcm\_dg\_us\_an\_ds\_avg\_rms vs Slug



Right In: 171.787 $\pm$ 0.029  $\chi^2$ /NDF: 2320464.3/30

Left Out: 196.452 $\pm$ 0.033  $\chi^2$ /NDF:1723529.1/23

Right Out: 169.278 $\pm$ 0.029  $\chi^2$ /NDF: 2797691.9/32

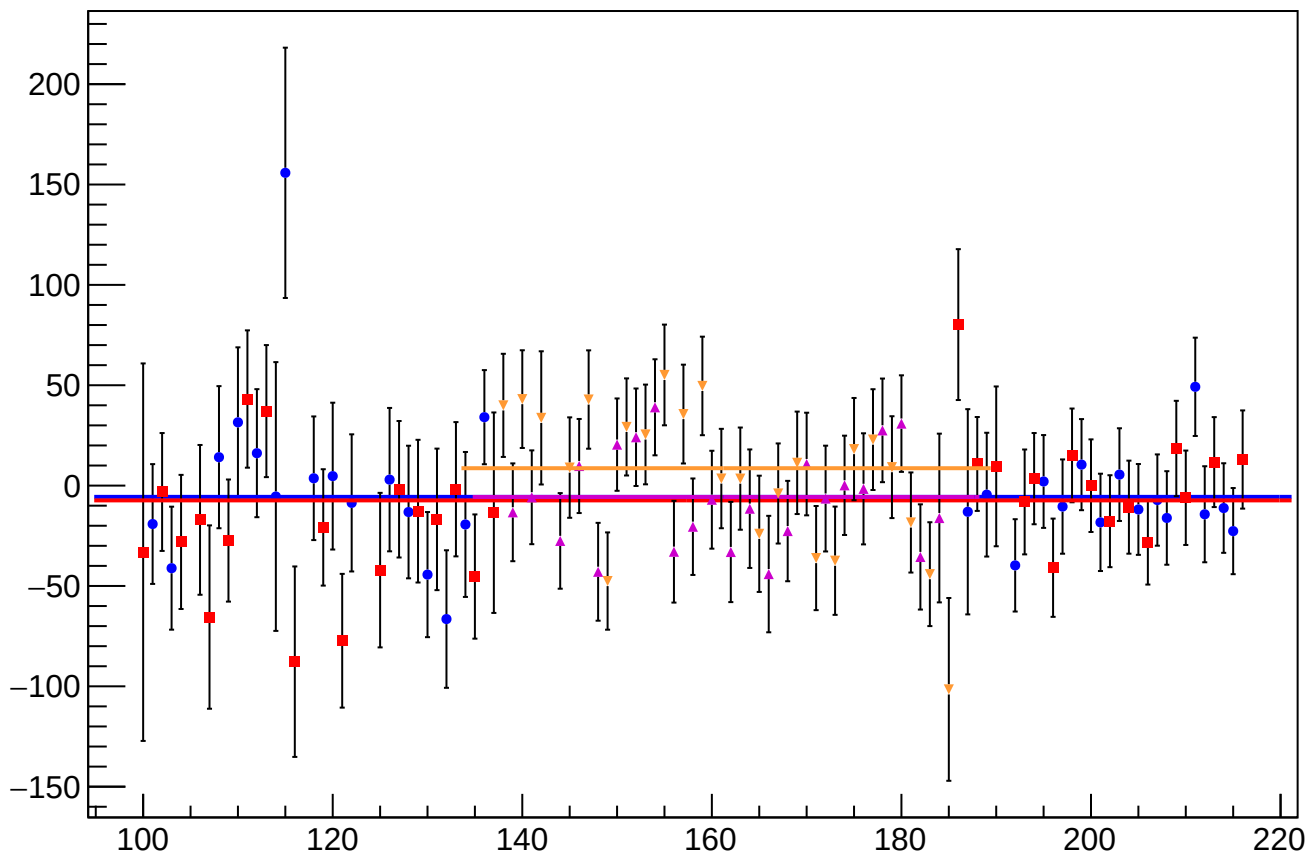
Left In: 180.248 $\pm$ 0.031  $\chi^2$ /NDF:1627777.0/22

+ sign 182.266 $\pm$ 0.022  $\chi^2$ /NDF: 4356926.2/54

All: 178.160 $\pm$ 0.015  $\chi^2$ /NDF: 8918325.0/110

- sign 174.318 $\pm$ 0.021  $\chi^2$ /NDF: 4492689.1/55

asym\_bcm\_dg\_us\_an\_ds\_dd\_mean vs Slug



Right In:  $-5.609 \pm 5.010$   $\chi^2/\text{NDF}$ : 27.5/30

Left Out:  $8.664 \pm 5.275$   $\chi^2/\text{NDF}$ : 39.2/23

Right Out:  $-7.366 \pm 5.034$   $\chi^2/\text{NDF}$ : 29.7/32

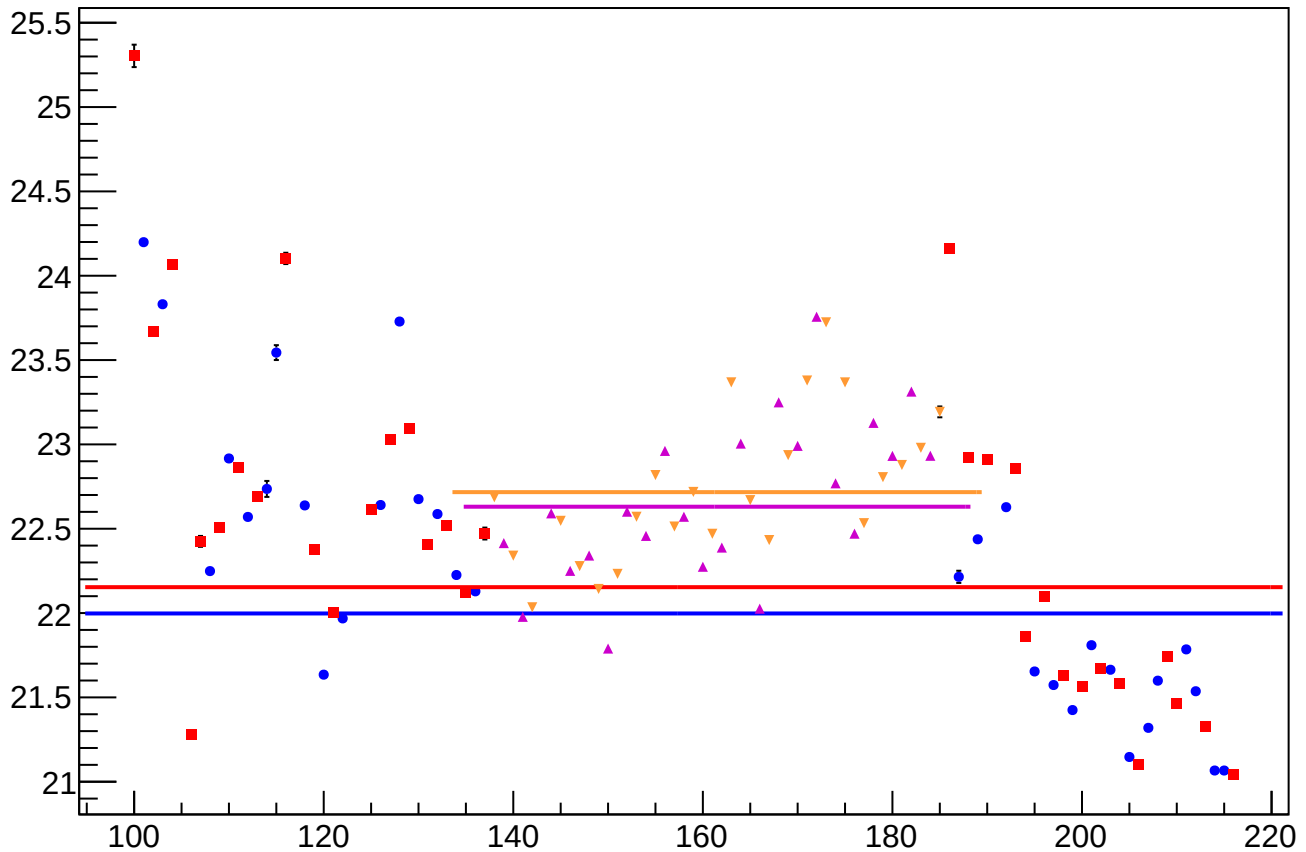
Left In:  $-5.668 \pm 5.286$   $\chi^2/\text{NDF}$ : 20.8/22

+ sign  $1.160 \pm 3.633$   $\chi^2/\text{NDF}$ : 70.5/54

All:  $-2.685 \pm 2.573$   $\chi^2/\text{NDF}$ : 123.4/110

- sign  $-6.558 \pm 3.645$   $\chi^2/\text{NDF}$ : 50.6/55

# asym\_bcm\_dg\_us\_an\_ds\_dd\_rms vs Slug



Right In:  $21.998 \pm 0.004$   $\chi^2/\text{NDF}: 48542.1/30$

Left Out:  $22.717 \pm 0.004$   $\chi^2/\text{NDF}: 12177.5/23$

Right Out:  $22.154 \pm 0.004$   $\chi^2/\text{NDF}: 52959.6/32$

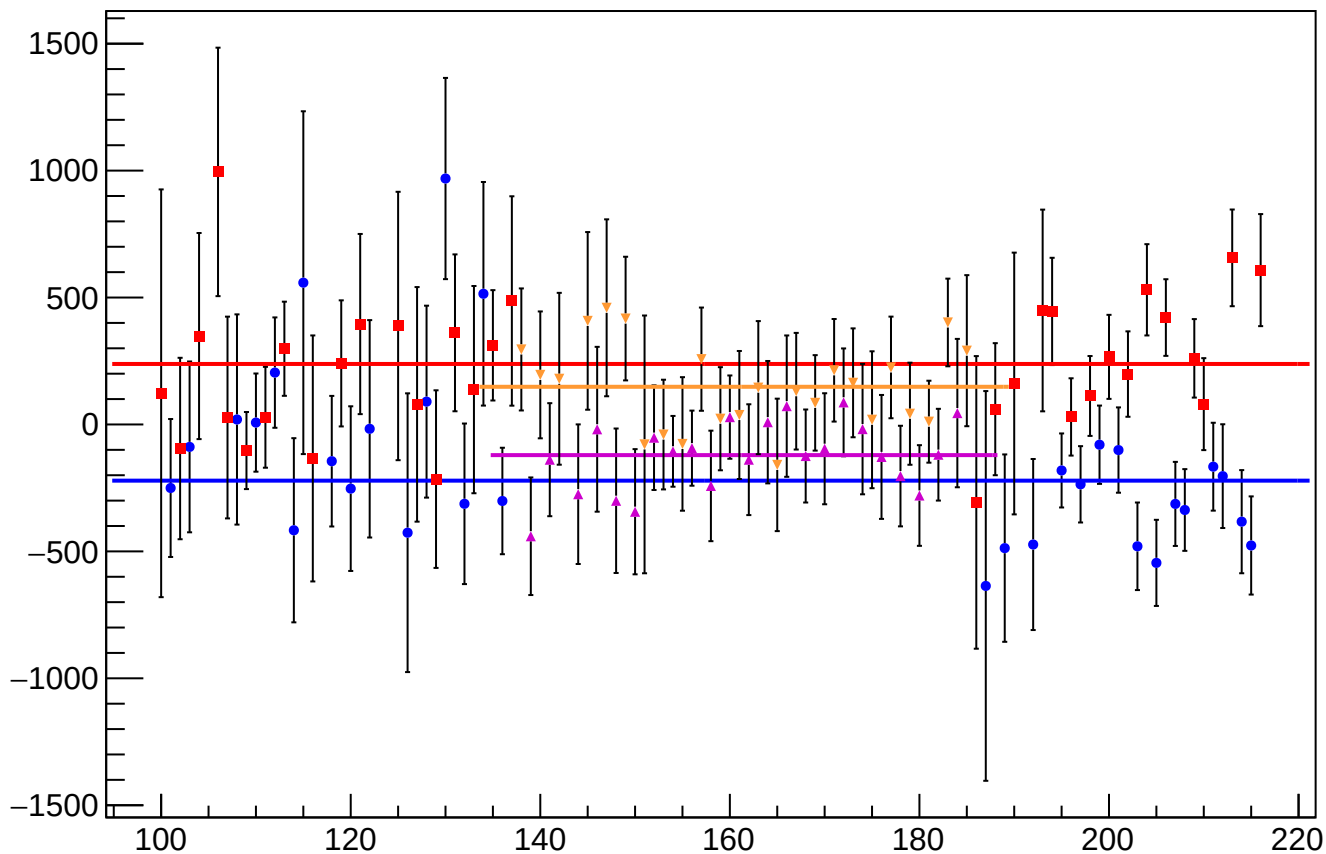
Left In:  $22.631 \pm 0.004$   $\chi^2/\text{NDF}: 15391.4/22$

+ sign  $22.339 \pm 0.003$   $\chi^2/\text{NDF}: 80275.9/54$

All:  $22.359 \pm 0.002$   $\chi^2/\text{NDF}: 157298.3/110$

- sign  $22.380 \pm 0.003$   $\chi^2/\text{NDF}: 76891.9/55$

asym\_bcm\_dg\_ds\_an\_ds\_avg\_mean vs Slug



Right In:  $-221.343 \pm 40.527$   $\chi^2/\text{NDF}$ : 32.6/30

Left Out:  $148.424 \pm 47.213$   $\chi^2/\text{NDF}$ : 10.9/23

Right Out:  $238.319 \pm 40.389$   $\chi^2/\text{NDF}$ : 31.0/32

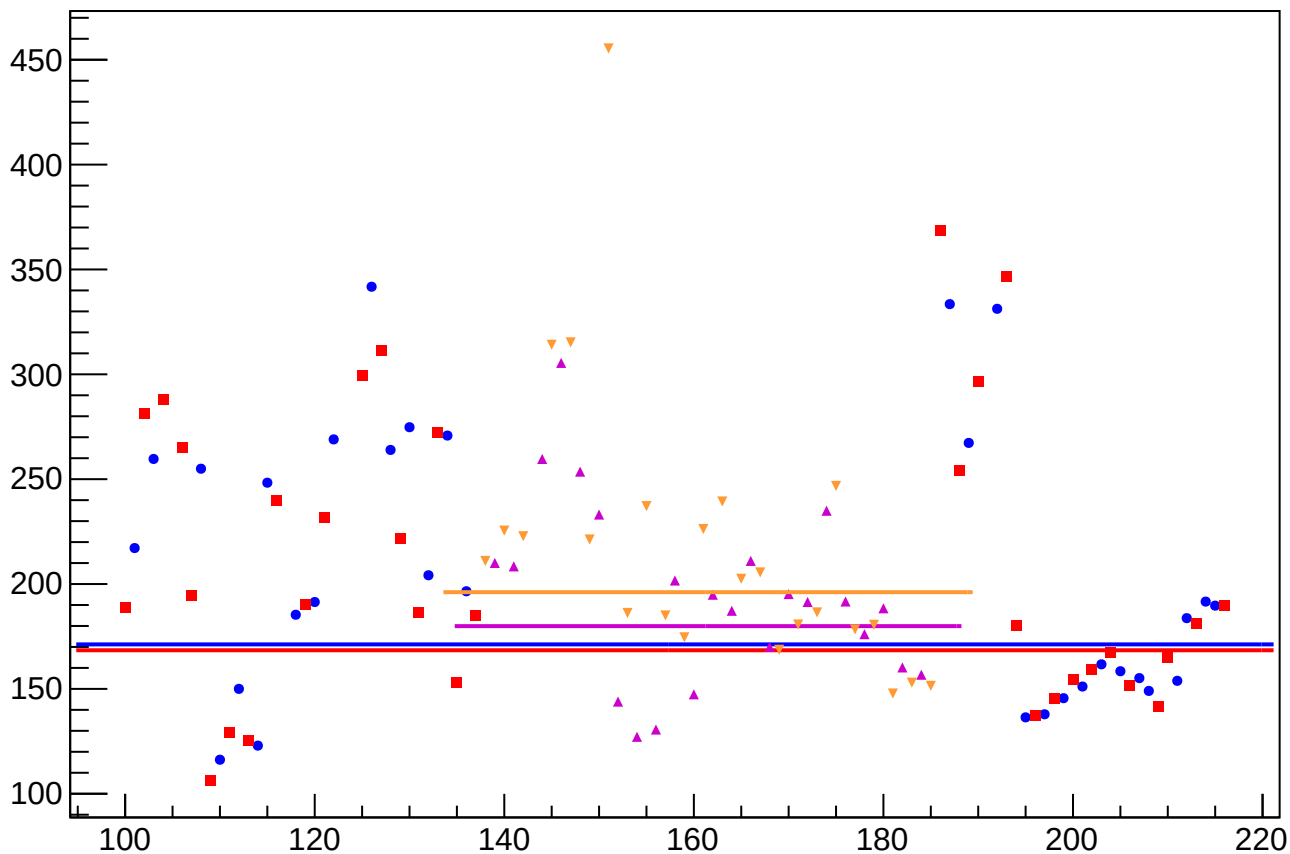
Left In:  $-120.760 \pm 43.920$   $\chi^2/\text{NDF}$ : 7.9/22

+ sign  $-64.475 \pm 30.751$   $\chi^2/\text{NDF}$ : 78.8/54

All:  $6.994 \pm 21.374$   $\chi^2/\text{NDF}$ : 164.4/110

- sign  $73.792 \pm 29.729$   $\chi^2/\text{NDF}$ : 75.1/55

# asym\_bcm\_dg\_ds\_an\_ds\_avg\_rms vs Slug



Right In: 171.215 $\pm$ 0.029  $\chi^2$ /NDF: 2353108.2/30

Left Out: 196.112 $\pm$ 0.033  $\chi^2$ /NDF:1726285.1/23

Right Out: 168.418 $\pm$ 0.029  $\chi^2$ /NDF: 2866871.4/32

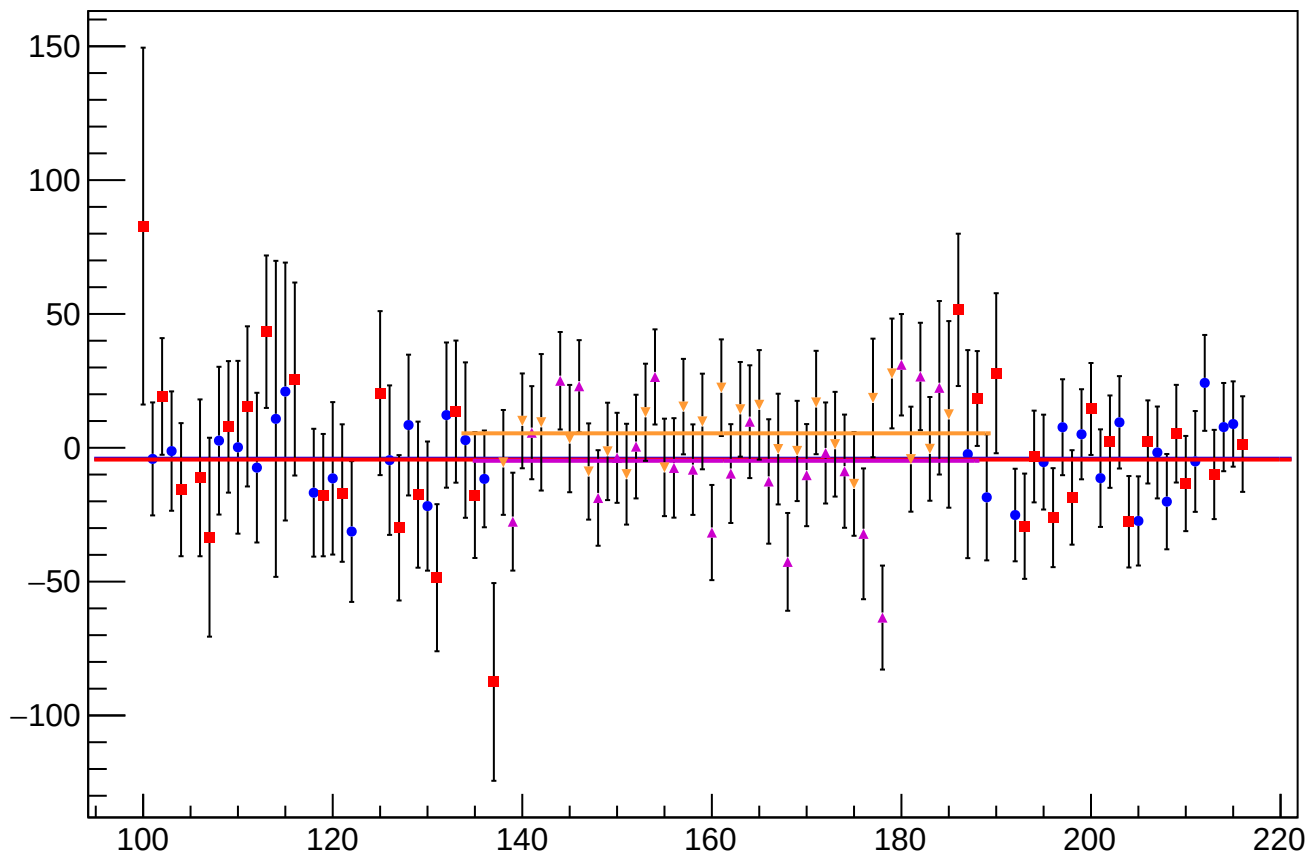
Left In: 179.923 $\pm$ 0.031  $\chi^2$ /NDF:1624144.3/22

+ sign 181.777 $\pm$ 0.022  $\chi^2$ /NDF: 4399614.7/54

All: 177.597 $\pm$ 0.015  $\chi^2$ /NDF: 9036503.5/110

- sign 173.690 $\pm$ 0.021  $\chi^2$ /NDF: 4565381.5/55

# asym\_bcm\_dg\_ds\_an\_ds\_dd\_mean vs Slug



Right In:  $-4.081 \pm 3.815$   $\chi^2/\text{NDF}$ : 13.0/30

Left Out:  $5.406 \pm 3.972$   $\chi^2/\text{NDF}$ : 7.8/23

Right Out:  $-4.399 \pm 3.835$   $\chi^2/\text{NDF}$ : 33.2/32

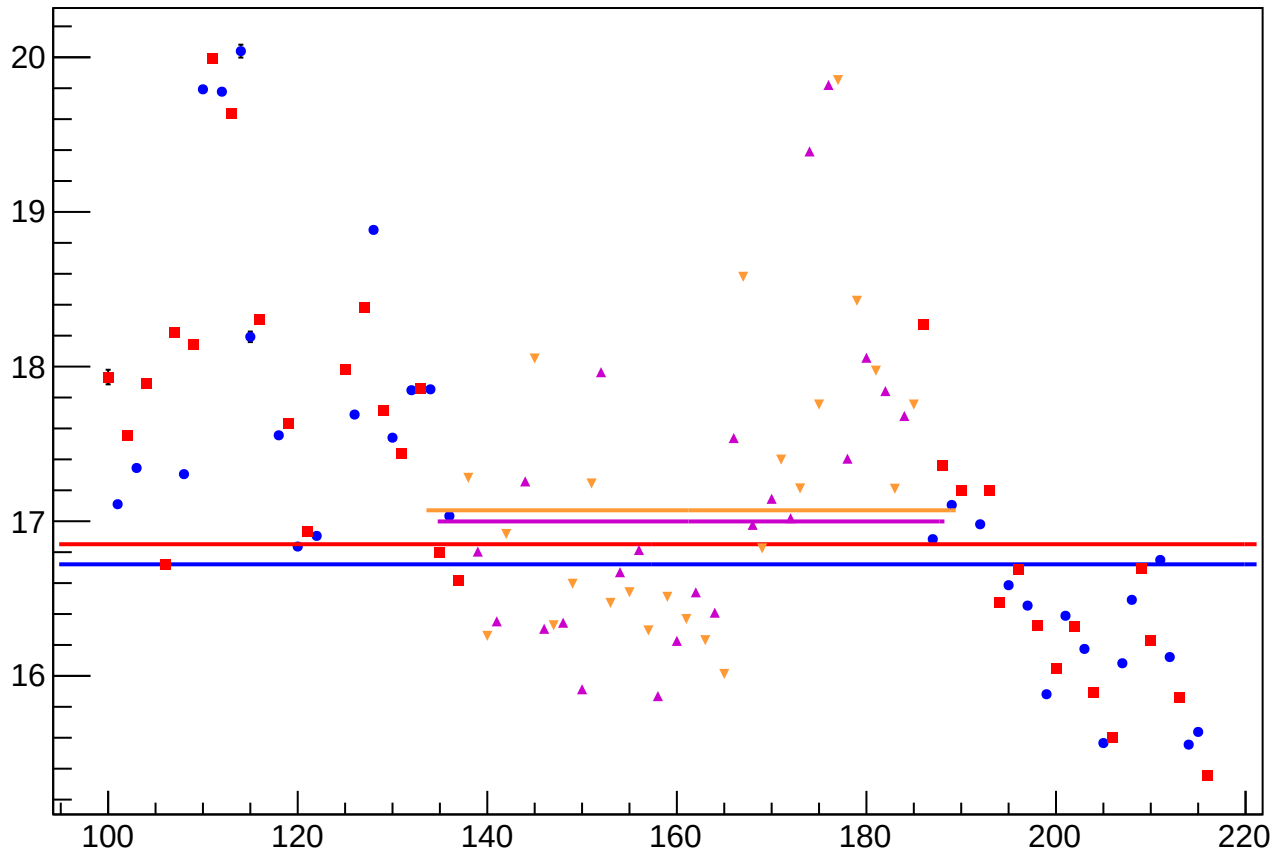
Left In:  $-4.858 \pm 3.980$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $0.471 \pm 2.751$   $\chi^2/\text{NDF}$ : 23.8/54

All:  $-2.065 \pm 1.949$   $\chi^2/\text{NDF}$ : 94.2/110

- sign  $-4.620 \pm 2.762$   $\chi^2/\text{NDF}$ : 68.7/55

# asym\_bcm\_dg\_ds\_an\_ds\_dd\_rms vs Slug



Right In: 16.721 $\pm$ 0.003     $\chi^2$ /NDF: 124673.9/30

Left Out: 17.071 $\pm$ 0.003     $\chi^2$ /NDF: 96312.6/23

Right Out: 16.851 $\pm$ 0.003     $\chi^2$ /NDF: 135656.7/32

Left In: 16.999 $\pm$ 0.003     $\chi^2$ /NDF: 104021.0/22

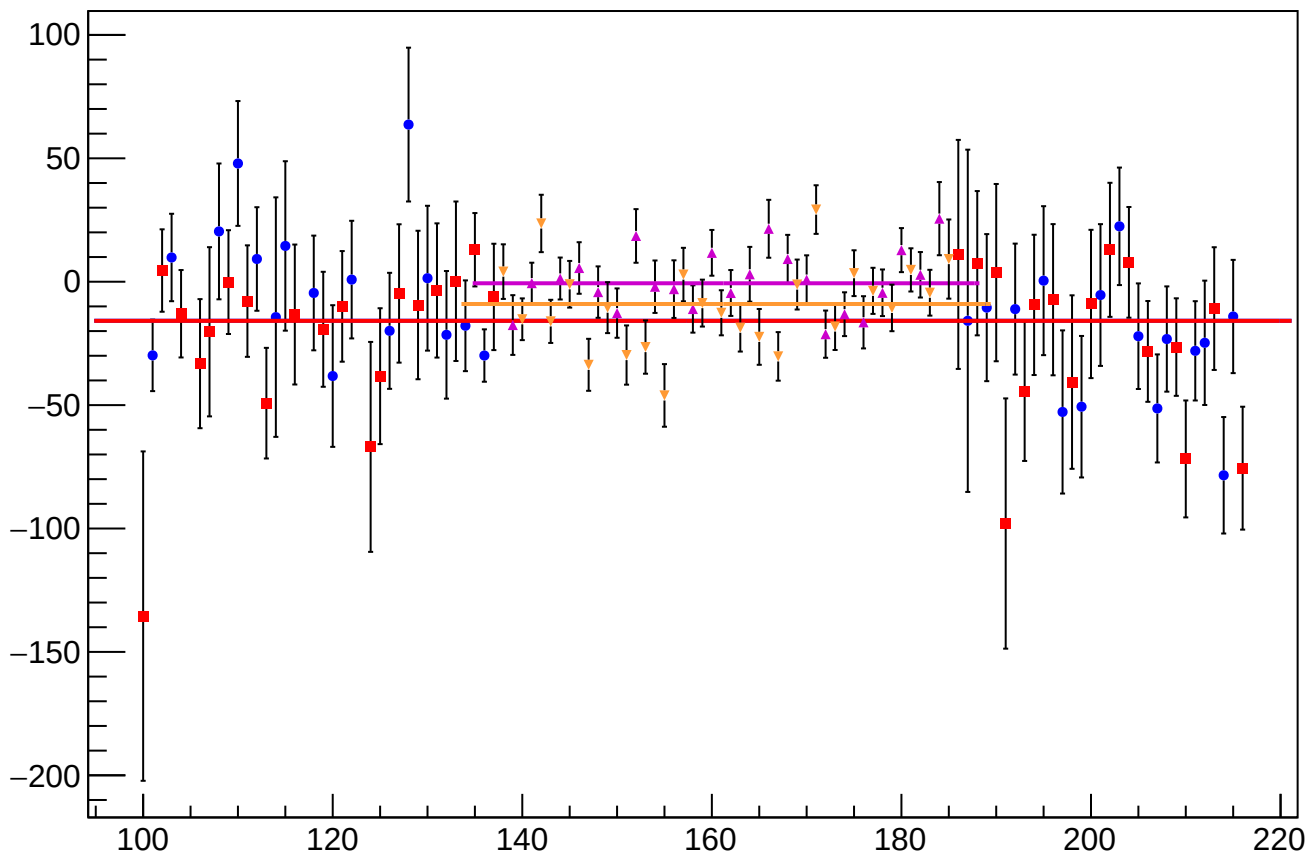
+ sign 16.889 $\pm$ 0.002     $\chi^2$ /NDF: 229032.7/54

All: 16.906 $\pm$ 0.001     $\chi^2$ /NDF: 470277.8/110

- sign 16.922 $\pm$ 0.002     $\chi^2$ /NDF: 241098.9/55



# diff\_bpm\_4aX\_4acX\_avg\_mean vs Slug



Right In:  $-15.809 \pm 4.092$   $\chi^2/\text{NDF}: 39.5/30$

Left Out:  $-9.027 \pm 2.006$   $\chi^2/\text{NDF}: 62.0/24$

Right Out:  $-15.858 \pm 4.248$   $\chi^2/\text{NDF}: 34.7/34$

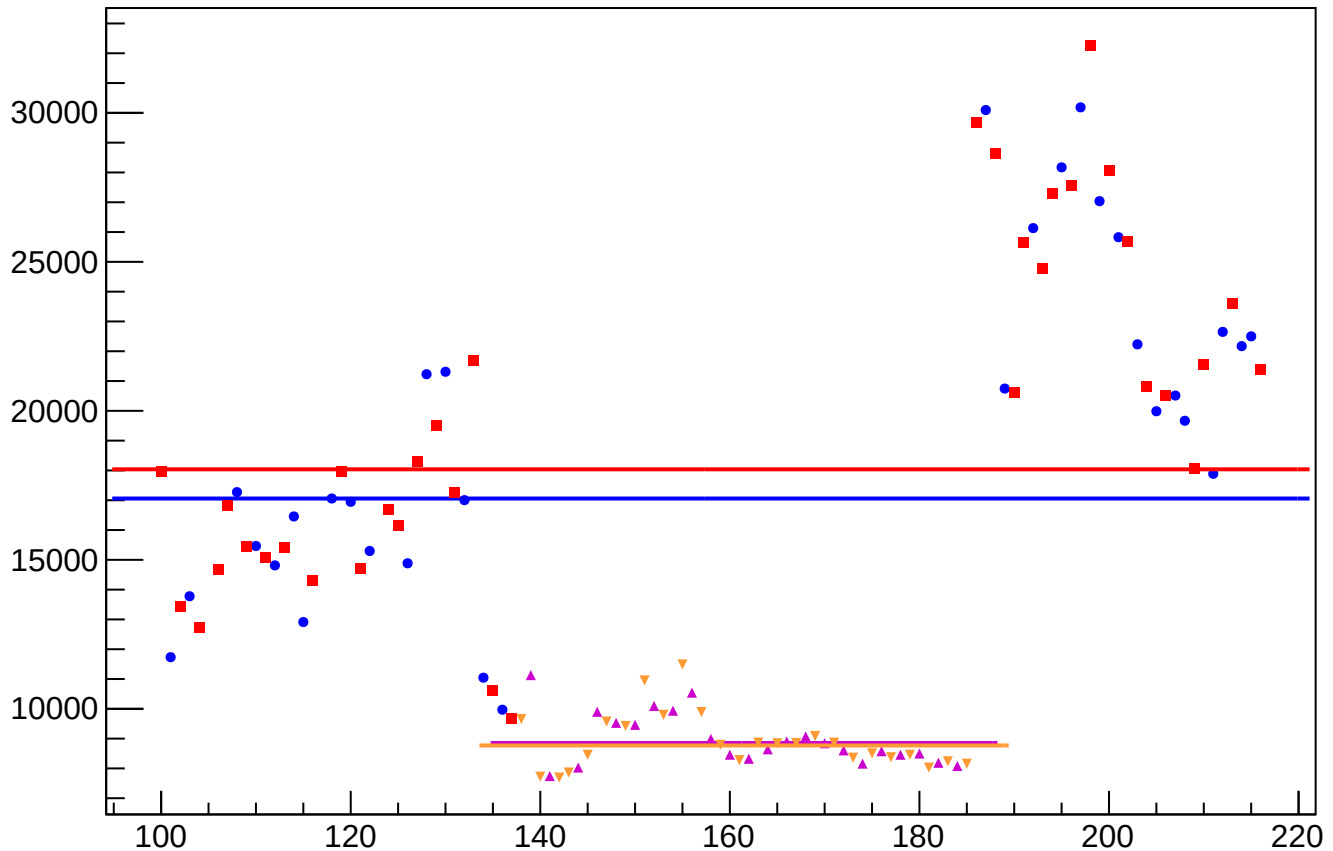
Left In:  $-0.628 \pm 2.079$   $\chi^2/\text{NDF}: 29.5/22$

+ sign  $-10.342 \pm 1.802$   $\chi^2/\text{NDF}: 103.7/55$

All:  $-7.078 \pm 1.297$   $\chi^2/\text{NDF}: 185.2/113$

- sign  $-3.572 \pm 1.868$   $\chi^2/\text{NDF}: 74.6/57$

diff\_bpm\_4aX\_4acX\_avg\_rms vs Slug



Right In: 17057.225 $\pm$ 2.894  $\chi^2$ /NDF: 3481274.5/30

Left Out: 8770.330 $\pm$ 1.419  $\chi^2$ /NDF:345180.6/24

Right Out: 18037.645 $\pm$ 3.004  $\chi^2$ /NDF: 3292003.9/34

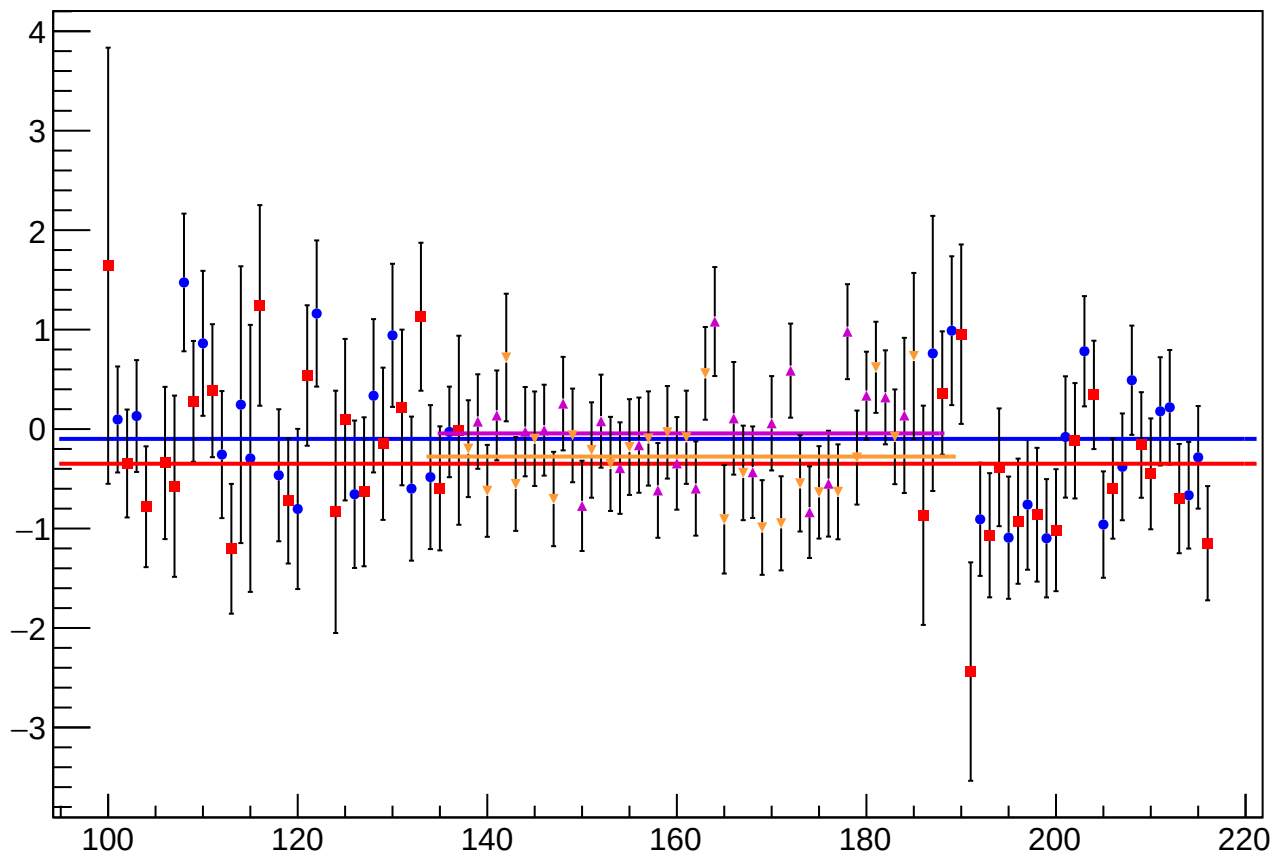
Left In: 8852.820 $\pm$ 1.470  $\chi^2$ /NDF:299860.4/22

+ sign 10376.332 $\pm$ 1.274  $\chi^2$ /NDF: 10438206.2/55

All: 10497.729 $\pm$ 0.917  $\chi^2$ /NDF: 21592294.8

- sign 10628.181 $\pm$ 1.321  $\chi^2$ /NDF: 11135248.4/57

# diff\_bpm\_4aX\_4acX\_dd\_mean vs Slug



Right In:  $-0.099 \pm 0.114$   $\chi^2/\text{NDF}: 34.4/30$

Left Out:  $-0.277 \pm 0.097$   $\chi^2/\text{NDF}: 21.0/24$

Right Out:  $-0.349 \pm 0.114$   $\chi^2/\text{NDF}: 30.9/34$

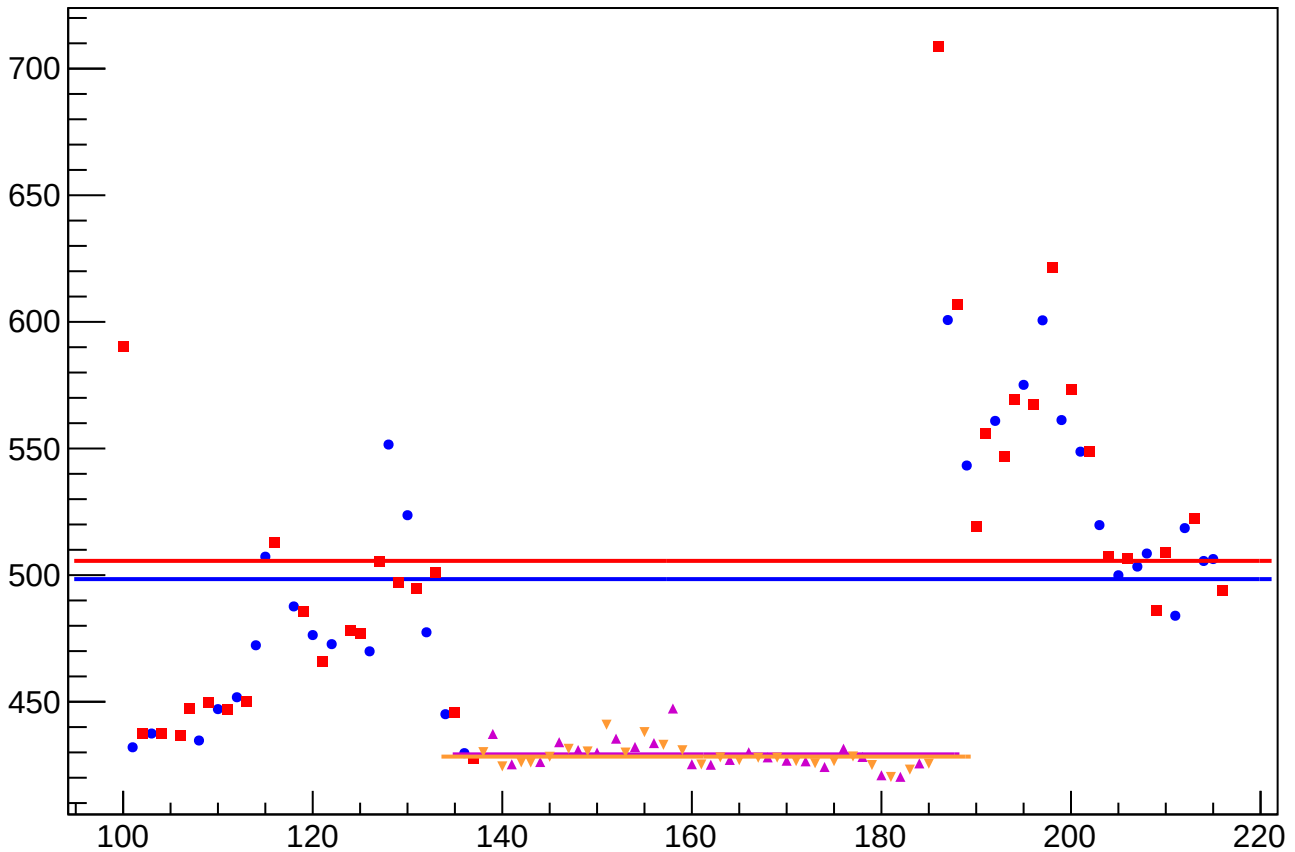
Left In:  $-0.044 \pm 0.100$   $\chi^2/\text{NDF}: 23.8/22$

+ sign  $-0.202 \pm 0.074$   $\chi^2/\text{NDF}: 56.9/55$

All:  $-0.189 \pm 0.053$   $\chi^2/\text{NDF}: 115.7/113$

- sign  $-0.176 \pm 0.075$   $\chi^2/\text{NDF}: 58.8/57$

# diff\_bpm\_4aX\_4acX\_dd\_rms vs Slug



Right In: 498.428 $\pm$ 0.081  $\chi^2$ /NDF: 336956.2/30

Left Out: 428.343 $\pm$ 0.069  $\chi^2$ /NDF: 4016.5/24

Right Out: 505.630 $\pm$ 0.081  $\chi^2$ /NDF: 452595.4/34

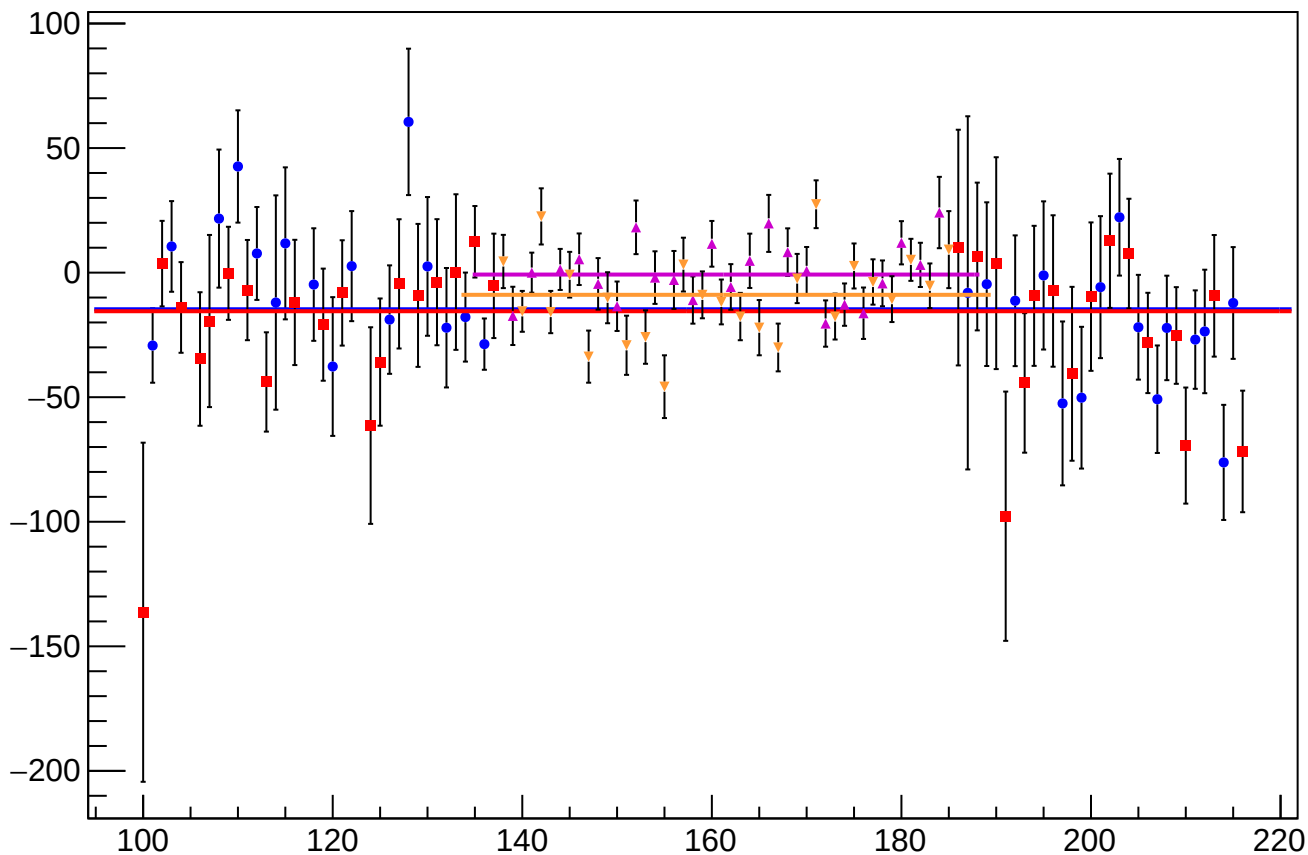
Left In: 429.228 $\pm$ 0.071  $\chi^2$ /NDF: 6749.9/22

+ sign 457.888 $\pm$ 0.052  $\chi^2$ /NDF: 778358.4/55

All: 460.120 $\pm$ 0.037  $\chi^2$ /NDF: 1746489.0/113

- sign 462.436 $\pm$ 0.053  $\chi^2$ /NDF: 964422.4/57

diff\_bpm\_4aX\_4eX\_avg\_mean vs Slug



Right In:  $-14.701 \pm 3.981$   $\chi^2/\text{NDF}$ : 40.1/30

Left Out:  $-8.904 \pm 1.961$   $\chi^2/\text{NDF}$ : 61.6/24

Right Out:  $-15.497 \pm 4.118$   $\chi^2/\text{NDF}$ : 33.8/34

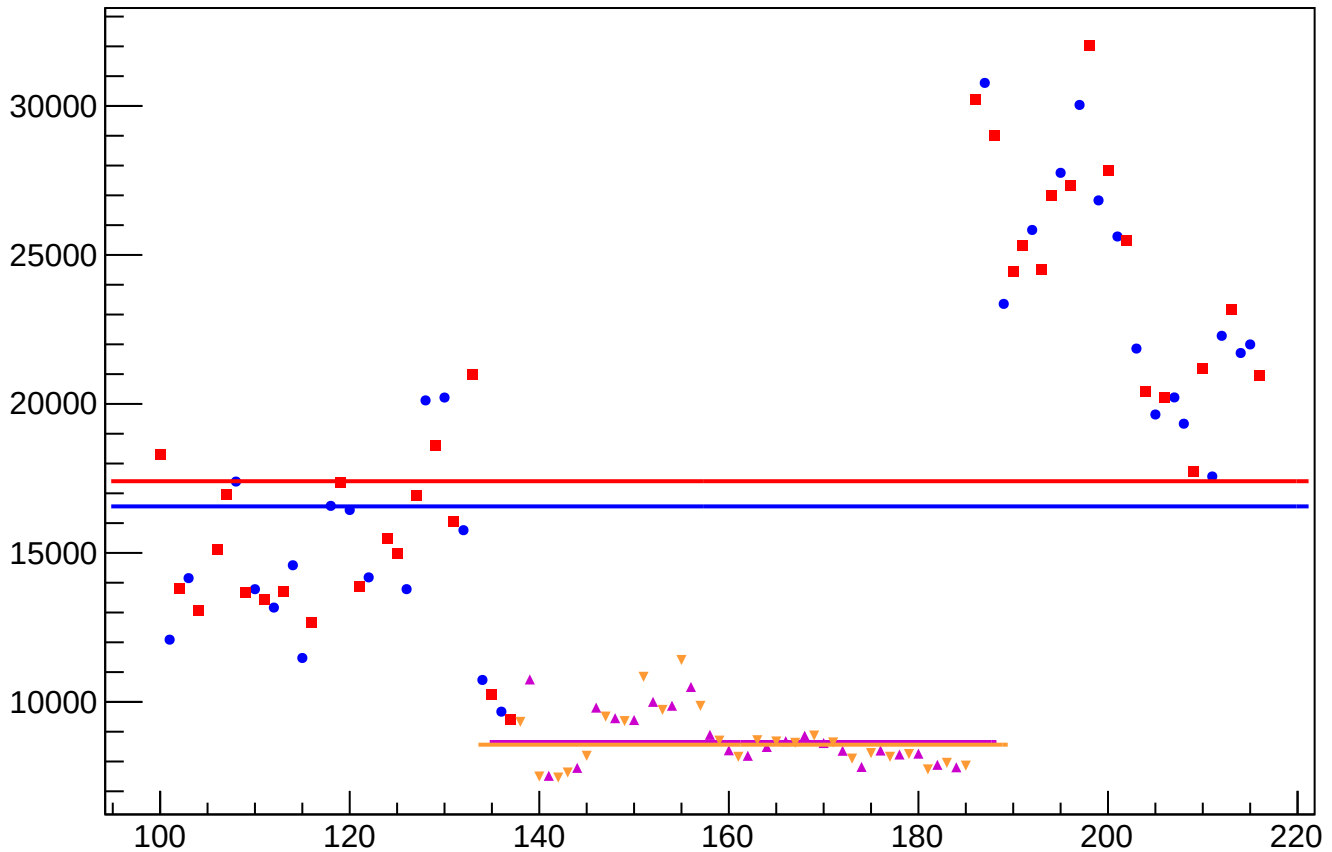
Left In:  $-0.773 \pm 2.034$   $\chi^2/\text{NDF}$ : 29.3/22

+ sign  $-10.036 \pm 1.759$   $\chi^2/\text{NDF}$ : 103.4/55

All:  $-6.963 \pm 1.266$   $\chi^2/\text{NDF}$ : 183.1/113

- sign  $-3.660 \pm 1.824$   $\chi^2/\text{NDF}$ : 73.3/57

diff\_bpm\_4aX\_4eX\_avg\_rms vs Slug



Right In: 16561.366 $\pm$ 2.815  $\chi^2$ /NDF: 3666647.9/30

Left Out: 8564.413 $\pm$ 1.387  $\chi^2$ /NDF:400646.9/24

+ sign 10125.618 $\pm$ 1.244  $\chi^2$ /NDF: 10561481.9/55

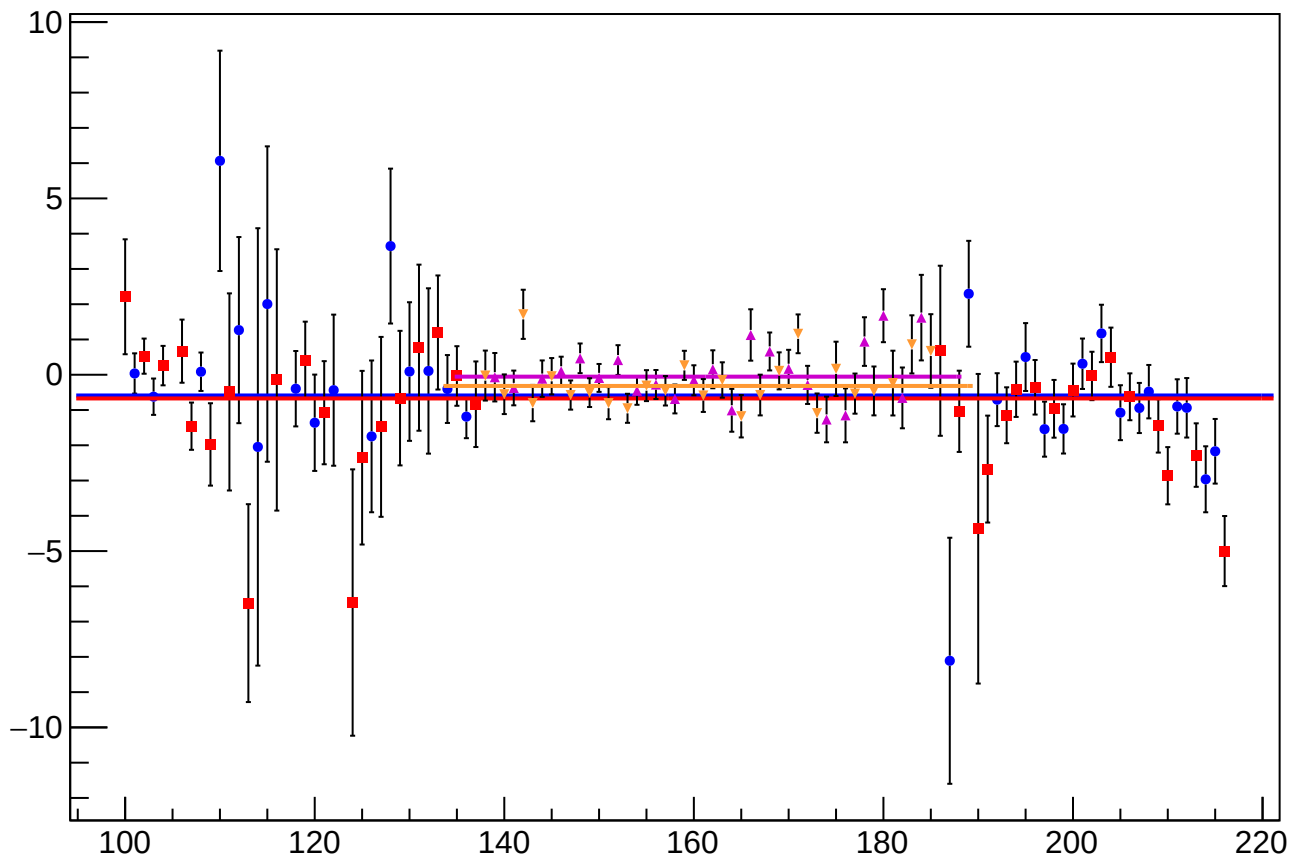
Right Out: 17406.497 $\pm$ 2.912  $\chi^2$ /NDF: 3609573.6/34

All: 10243.815 $\pm$ 0.895  $\chi^2$ /NDF: 21798691.9

Left In: 8654.310 $\pm$ 1.438  $\chi^2$ /NDF:345603.4/22

- sign 10370.841 $\pm$ 1.289  $\chi^2$ /NDF: 11218476.0/57

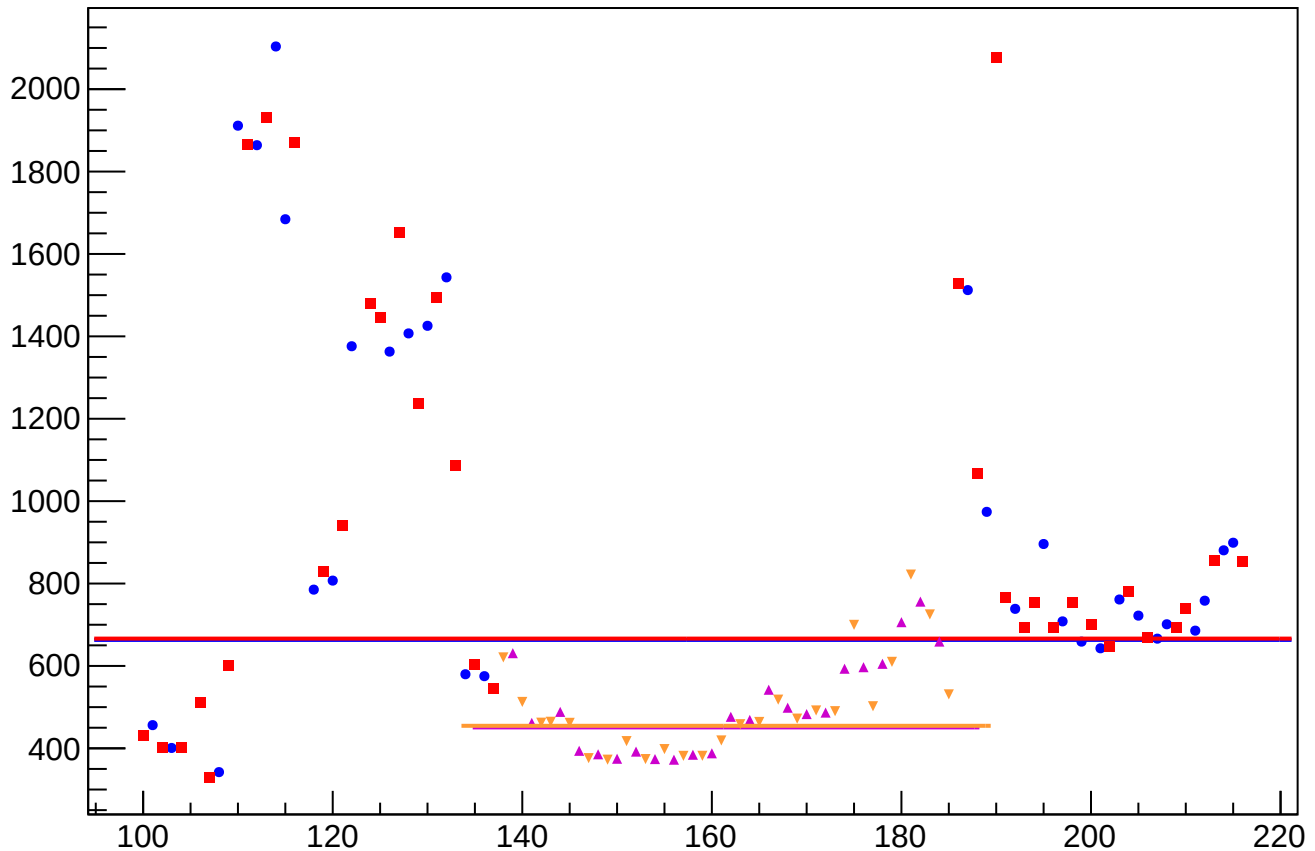
# diff\_bpm\_4aX\_4eX\_dd\_mean vs Slug



Right In:  $-0.588 \pm 0.162$   $\chi^2/\text{NDF}: 43.4/30$   
 Left Out:  $-0.318 \pm 0.106$   $\chi^2/\text{NDF}: 32.3/24$   
 Right Out:  $-0.672 \pm 0.163$   $\chi^2/\text{NDF}: 64.2/34$   
 Left In:  $-0.054 \pm 0.108$   $\chi^2/\text{NDF}: 29.8/22$

+ sign  $-0.399 \pm 0.089$   $\chi^2/\text{NDF}: 77.6/55$   
 All:  $-0.322 \pm 0.063$   $\chi^2/\text{NDF}: 183.1/113$   
 - sign  $-0.243 \pm 0.090$   $\chi^2/\text{NDF}: 104.0/57$

# diff\_bpm\_4aX\_4eX\_dd\_rms vs Slug



Right In: 663.148 $\pm$ 0.115  $\chi^2$ /NDF: 4433664.7/30

Left Out: 454.697 $\pm$ 0.075  $\chi^2$ /NDF:1451363.0/24

Right Out: 666.362 $\pm$ 0.115  $\chi^2$ /NDF: 4899101.8/34

Left In: 450.767 $\pm$ 0.076  $\chi^2$ /NDF:1471497.9/22

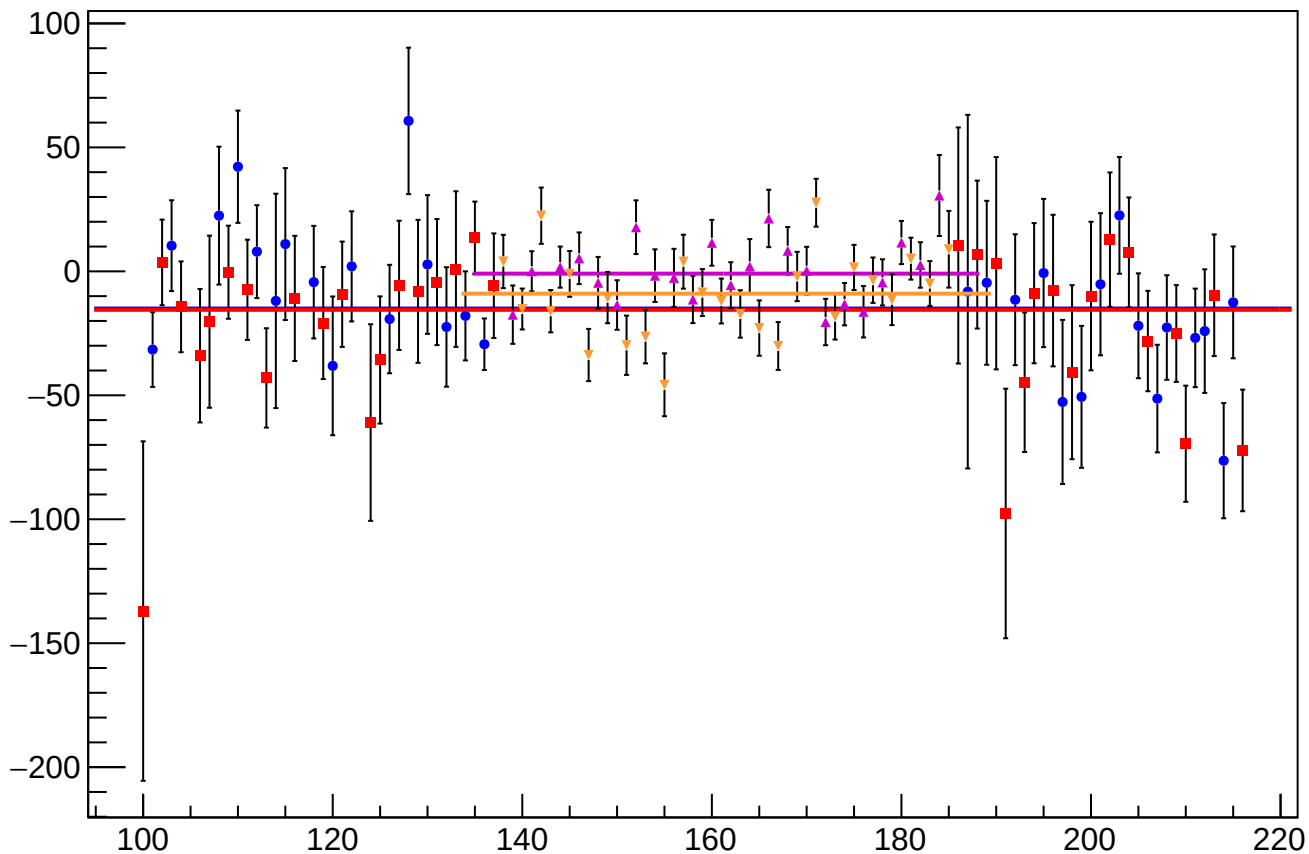
+ sign 517.180 $\pm$ 0.063  $\chi^2$ /NDF: 8204452.6/55

All: 516.924 $\pm$ 0.045  $\chi^2$ /NDF: 17004777.4/1

- sign 516.659 $\pm$ 0.064  $\chi^2$ /NDF: 8800290.8/57



# diff\_bpm\_4aX\_4ecX\_avg\_mean vs Slug



Right In:  $-15.020 \pm 4.006$   $\chi^2/\text{NDF}: 40.5/30$

Left Out:  $-9.001 \pm 1.982$   $\chi^2/\text{NDF}: 61.3/24$

Right Out:  $-15.515 \pm 4.144$   $\chi^2/\text{NDF}: 33.5/34$

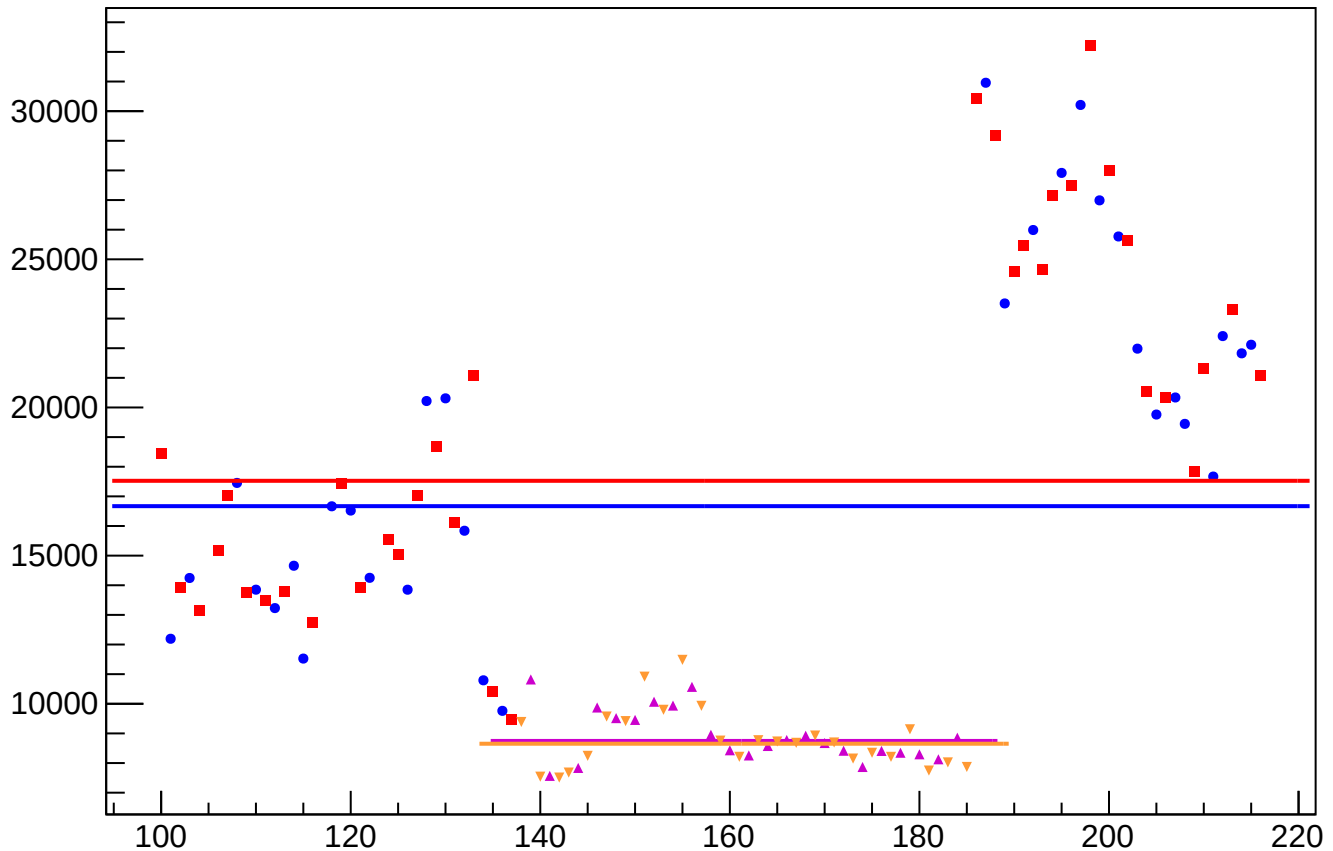
Left In:  $-0.925 \pm 2.056$   $\chi^2/\text{NDF}: 29.9/22$

+ sign  $-10.184 \pm 1.776$   $\chi^2/\text{NDF}: 103.6/55$

All:  $-7.110 \pm 1.278$   $\chi^2/\text{NDF}: 183.1/113$

- sign  $-3.806 \pm 1.842$   $\chi^2/\text{NDF}: 73.3/57$

diff\_bpm\_4aX\_4ecX\_avg\_rms vs Slug



Right In: 16669.582+/-2.833  $\chi^2/\text{NDF}$ : 3649043.3/30

Left Out: 8651.872+/-1.401  $\chi^2/\text{NDF}$ : 405419.4/24

Right Out: 17525.167+/-2.931  $\chi^2/\text{NDF}$ : 3585080.2/34

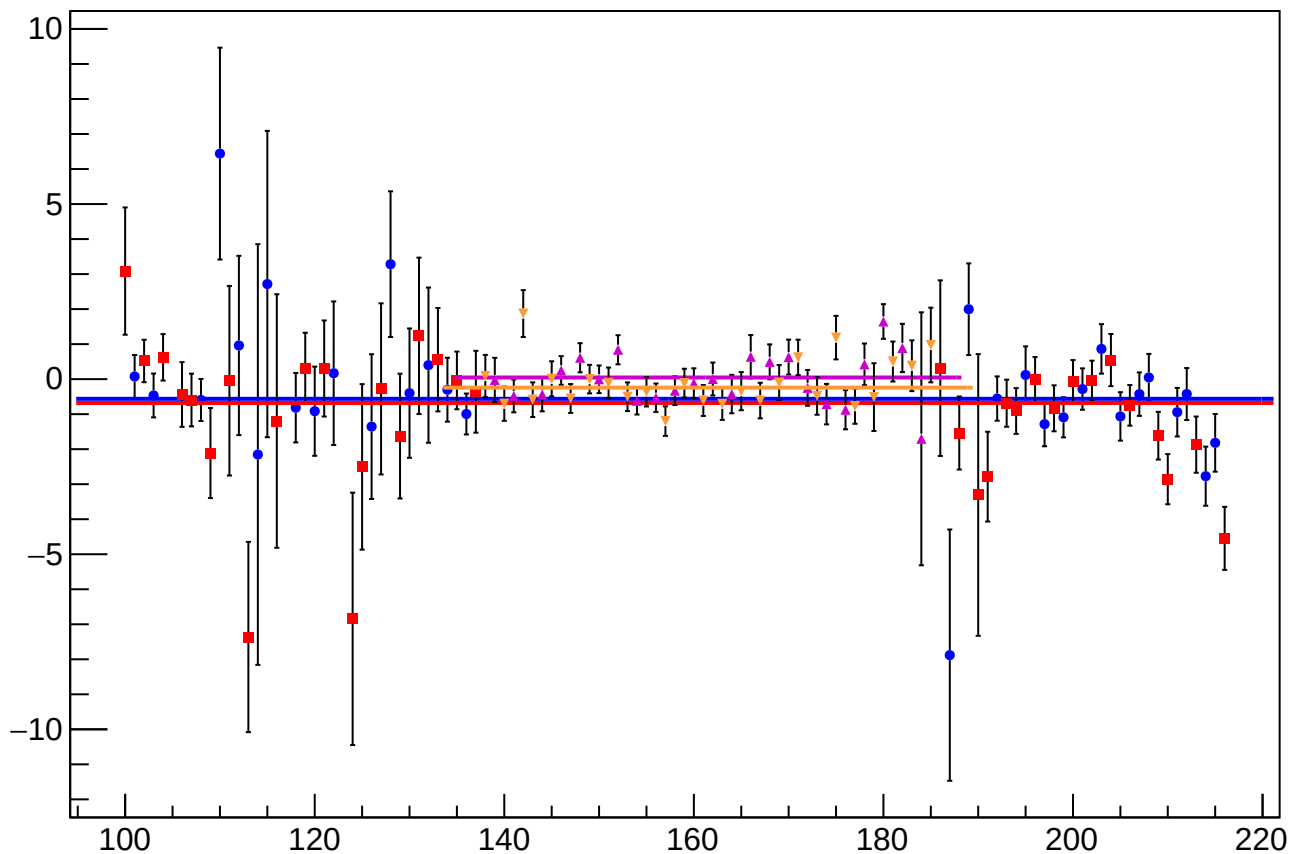
Left In: 8746.106+/-1.454  $\chi^2/\text{NDF}$ : 331167.0/22

+ sign 10228.009+/-1.256  $\chi^2/\text{NDF}$ : 10489717.9/55

All: 10349.171+/-0.904  $\chi^2/\text{NDF}$ : 21627436.5

- sign 10479.393+/-1.302  $\chi^2/\text{NDF}$ : 11118412.8/57

# diff\_bpm\_4aX\_4ecX\_dd\_mean vs Slug



Right In:  $-0.562 \pm 0.151$   $\chi^2/\text{NDF}$ : 38.2/30

Left Out:  $-0.242 \pm 0.100$   $\chi^2/\text{NDF}$ : 34.3/24

Right Out:  $-0.680 \pm 0.153$   $\chi^2/\text{NDF}$ : 68.9/34

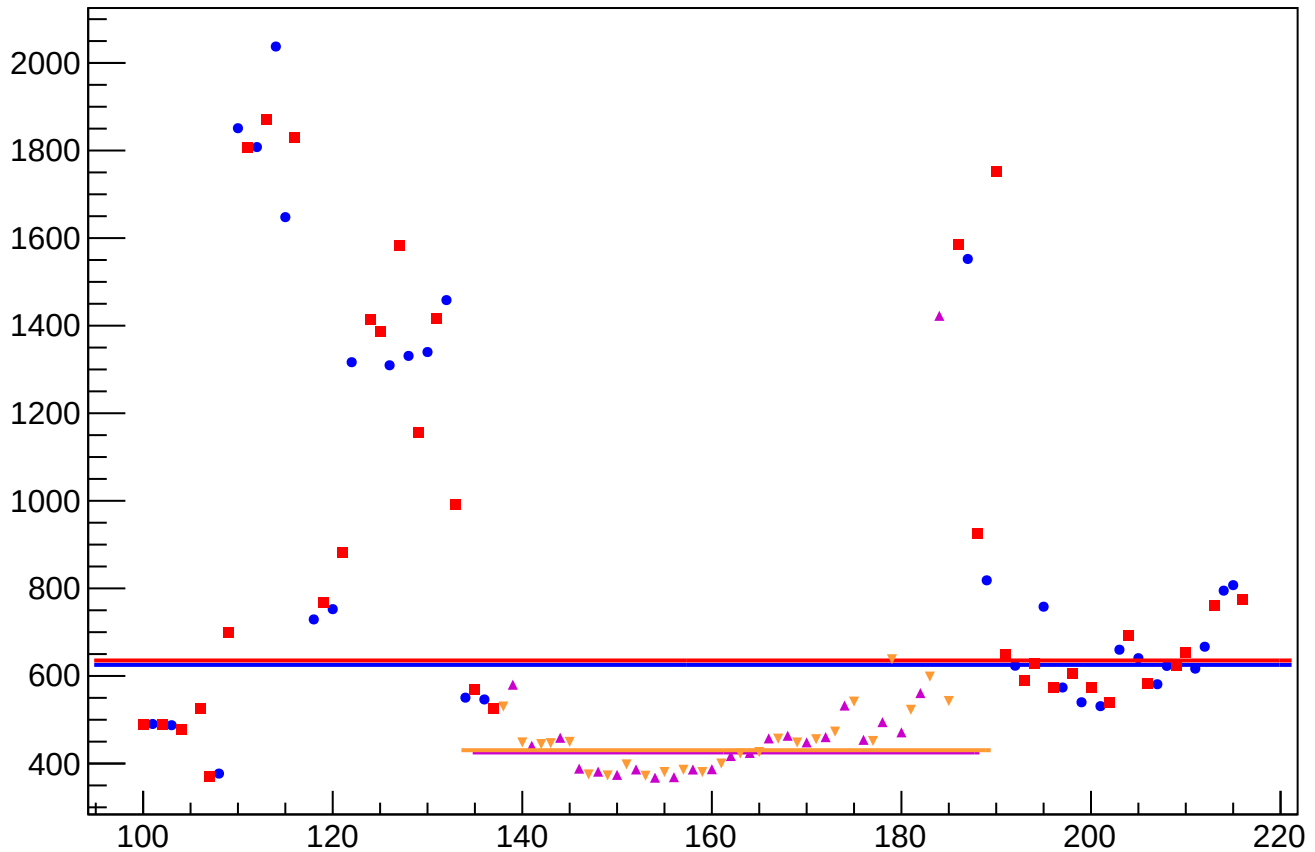
Left In:  $0.047 \pm 0.102$   $\chi^2/\text{NDF}$ : 35.1/22

+ sign  $-0.340 \pm 0.083$   $\chi^2/\text{NDF}$ : 75.6/55

All:  $-0.259 \pm 0.059$   $\chi^2/\text{NDF}$ : 197.1/113

- sign  $-0.176 \pm 0.085$   $\chi^2/\text{NDF}$ : 119.6/57

# diff\_bpm\_4aX\_4ecX\_dd\_rms vs Slug



Right In: 625.335 $\pm$ 0.107  $\chi^2$ /NDF: 3401921.1/30

Left Out: 430.437 $\pm$ 0.071  $\chi^2$ /NDF: 648114.1/24

Right Out: 635.372 $\pm$ 0.108  $\chi^2$ /NDF: 3621955.8/34

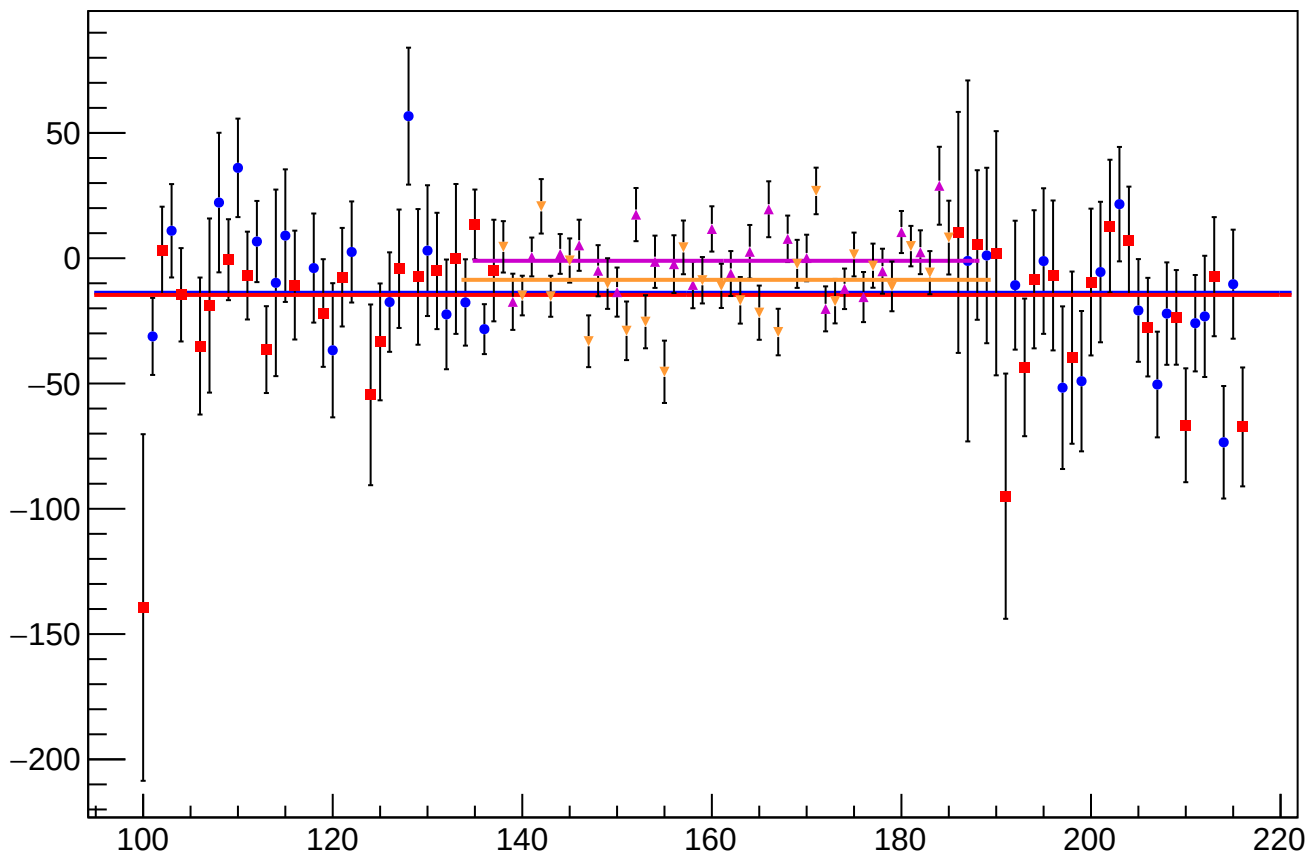
Left In: 425.312 $\pm$ 0.072  $\chi^2$ /NDF: 716953.2/22

+ sign 490.212 $\pm$ 0.059  $\chi^2$ /NDF: 6370298.1/55

All: 489.908 $\pm$ 0.042  $\chi^2$ /NDF: 13326335.5/13

- sign 489.595 $\pm$ 0.060  $\chi^2$ /NDF: 6955983.6/57

diff\_bpm\_4eX\_4ecX\_avg\_mean vs Slug



Right In:  $-13.785 \pm 3.823$   $\chi^2/\text{NDF}$ : 41.3/30

Left Out:  $-8.623 \pm 1.913$   $\chi^2/\text{NDF}$ : 61.6/24

Right Out:  $-14.642 \pm 3.930$   $\chi^2/\text{NDF}$ : 32.8/34

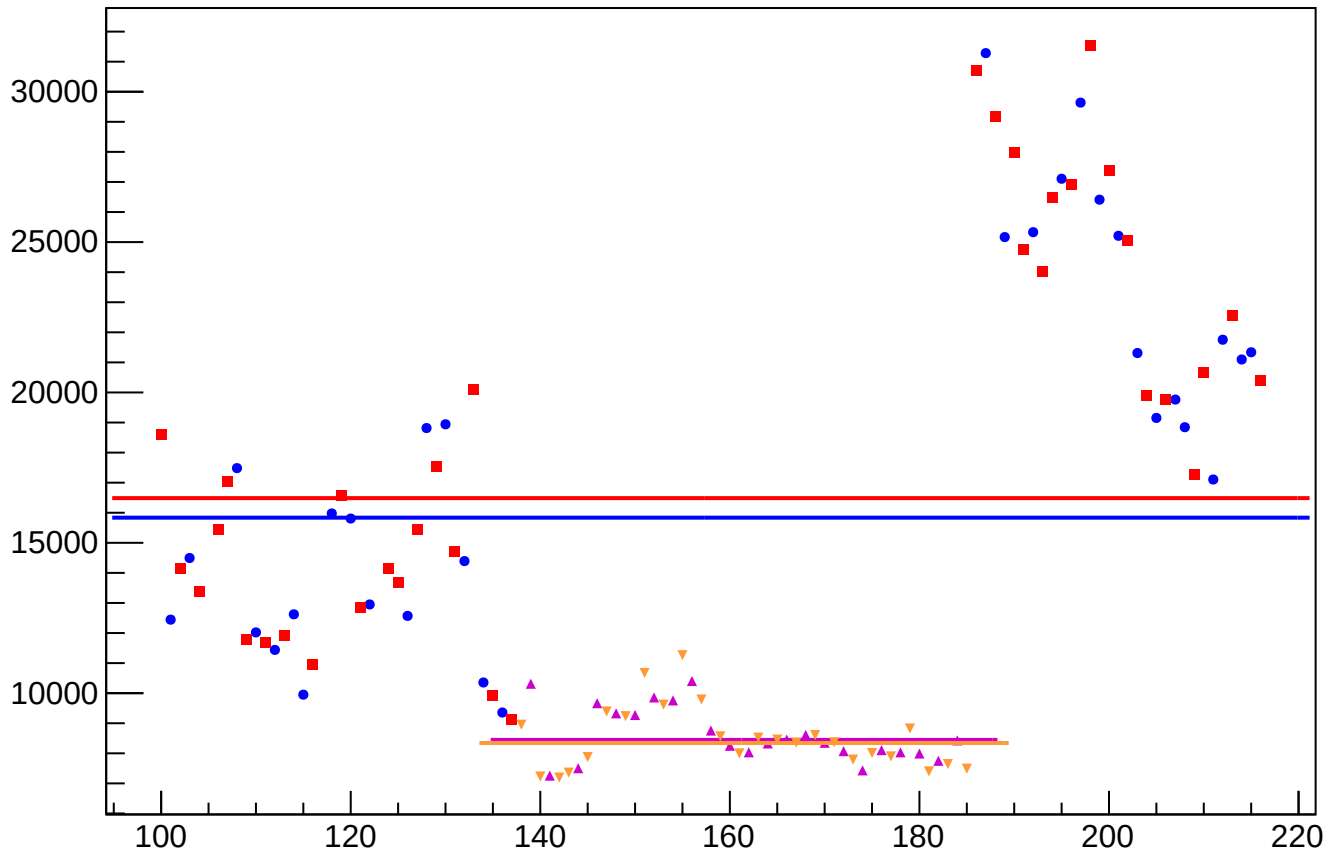
Left In:  $-1.027 \pm 1.987$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-9.657 \pm 1.711$   $\chi^2/\text{NDF}$ : 104.4/55

All:  $-6.832 \pm 1.231$   $\chi^2/\text{NDF}$ : 182.2/113

- sign  $-3.798 \pm 1.773$   $\chi^2/\text{NDF}$ : 72.2/57

diff\_bpm\_4eX\_4ecX\_avg\_rms vs Slug



Right In:  $15836.672 \pm 2.703$   $\chi^2/\text{NDF}$ : 3979258.5/30

Left Out:  $8344.309 \pm 1.353$   $\chi^2/\text{NDF}$ : 469243.6/24

Right Out:  $16486.324 \pm 2.779$   $\chi^2/\text{NDF}$ : 4137292.4/34

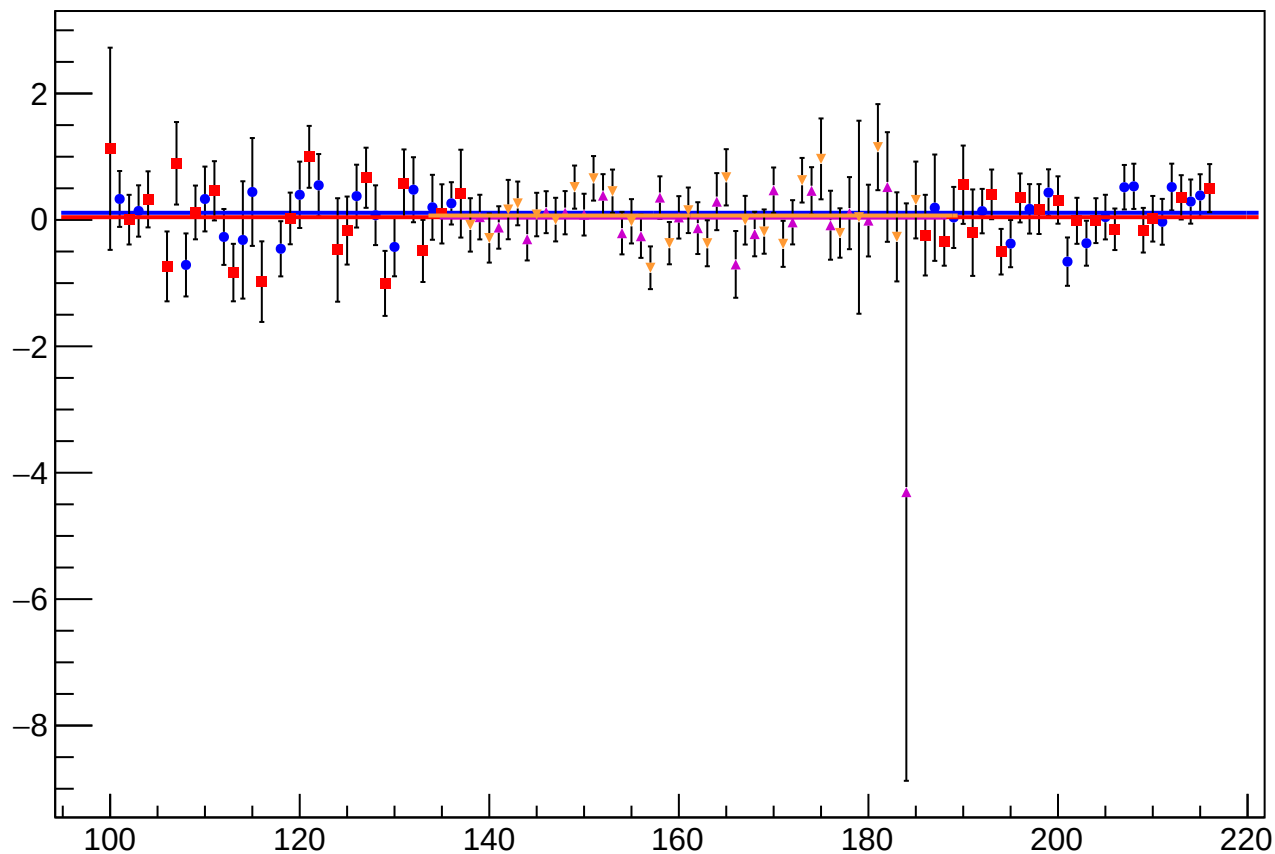
Left In:  $8446.686 \pm 1.405$   $\chi^2/\text{NDF}$ : 381901.7/22

+ sign  $9844.828 \pm 1.210$   $\chi^2/\text{NDF}$ : 10592391.8/55

All:  $9959.555 \pm 0.871$   $\chi^2/\text{NDF}$ : 21795818.6/1

- sign  $10082.780 \pm 1.254$   $\chi^2/\text{NDF}$ : 11184771.7/57

# diff\_bpm\_4eX\_4ecX\_dd\_mean vs Slug



Right In:  $0.113 \pm 0.076$   $\chi^2/\text{NDF}$ : 22.9/30

Left Out:  $0.069 \pm 0.079$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $0.043 \pm 0.075$   $\chi^2/\text{NDF}$ : 33.8/34

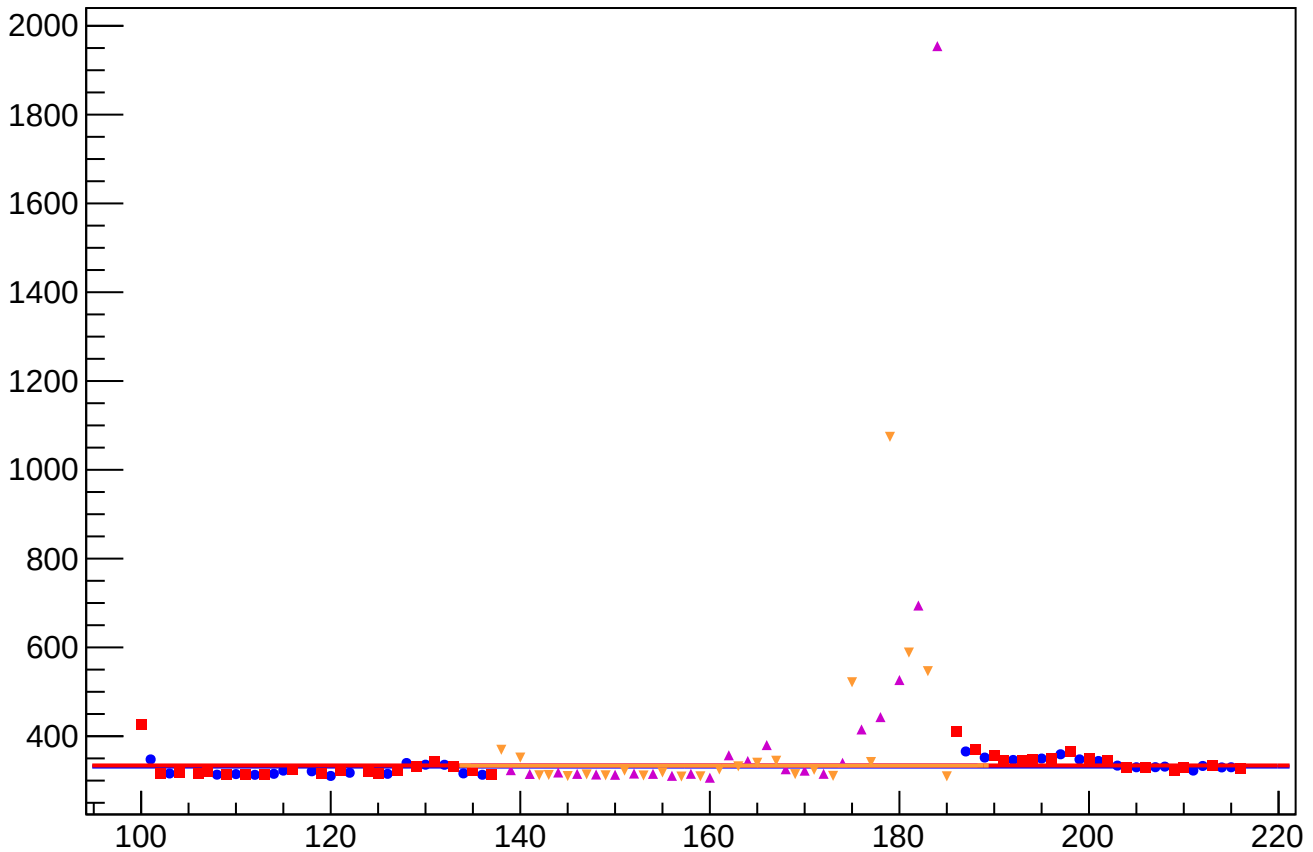
Left In:  $0.037 \pm 0.081$   $\chi^2/\text{NDF}$ : 11.7/22

+ sign  $0.092 \pm 0.055$   $\chi^2/\text{NDF}$ : 51.2/55

All:  $0.066 \pm 0.039$   $\chi^2/\text{NDF}$ : 97.1/113

- sign  $0.040 \pm 0.055$   $\chi^2/\text{NDF}$ : 45.5/57

# diff\_bpm\_4eX\_4ecX\_dd\_rms vs Slug



Right In: 331.551+/-0.053  $\chi^2/\text{NDF}$ : 64328.7/30

Left Out: 333.783+/-0.056  $\chi^2/\text{NDF}$ : 1217257.0/24

Right Out: 334.133+/-0.053  $\chi^2/\text{NDF}$ : 119555.8/34

Left In: 333.979+/-0.057  $\chi^2/\text{NDF}$ : 1050984.2/22

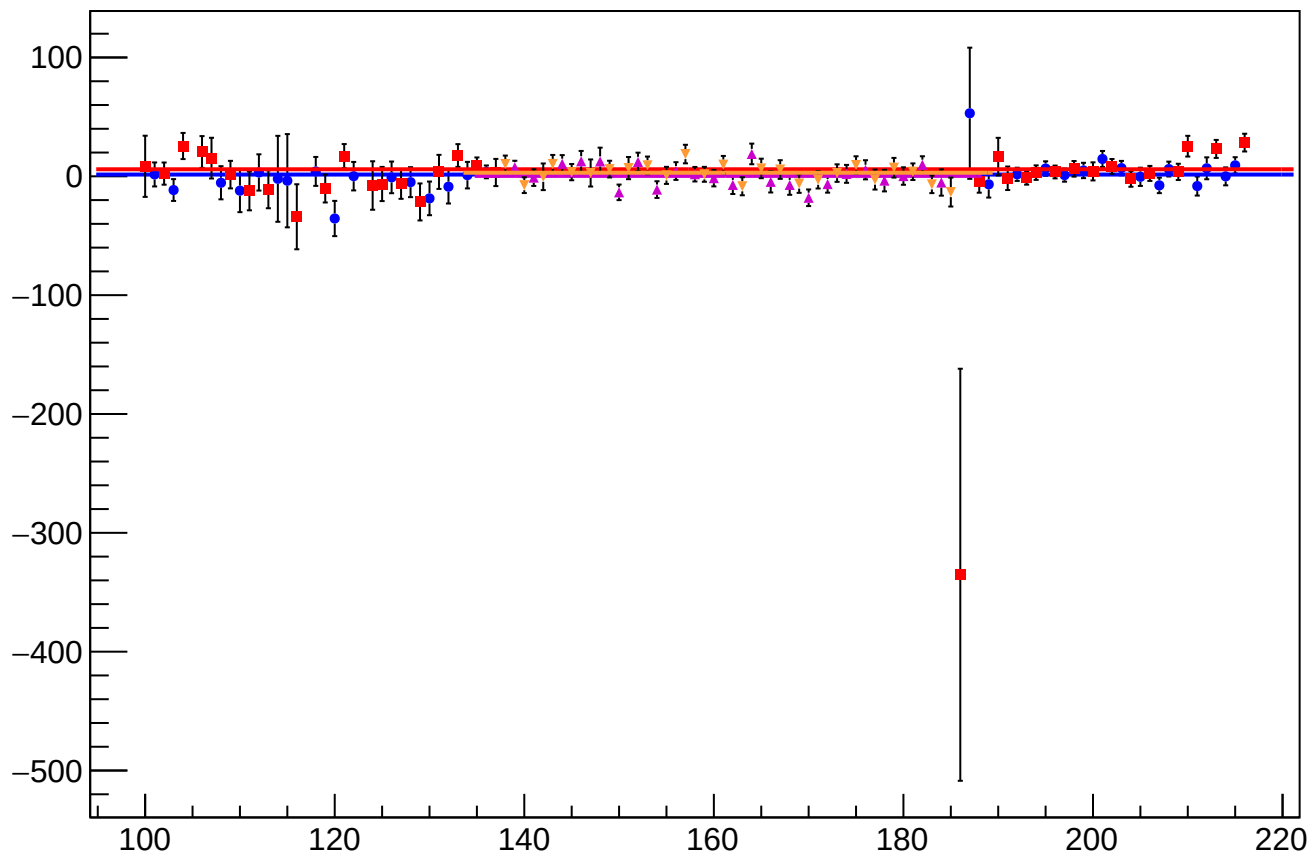
+ sign 332.618+/-0.039  $\chi^2/\text{NDF}$ : 1282417.8/55

All: 333.334+/-0.027  $\chi^2/\text{NDF}$ : 2453653.1/113

- sign 334.062+/-0.039  $\chi^2/\text{NDF}$ : 1170543.9/57



# diff\_bpm\_4aY\_4acY\_avg\_mean vs Slug



Right In: 1.481 $\pm$ 1.536  $\chi^2$ /NDF: 24.7/30

Left Out: 3.023 $\pm$ 1.542  $\chi^2$ /NDF:20.3/24

Right Out: 5.928 $\pm$ 1.528  $\chi^2$ /NDF: 49.1/34

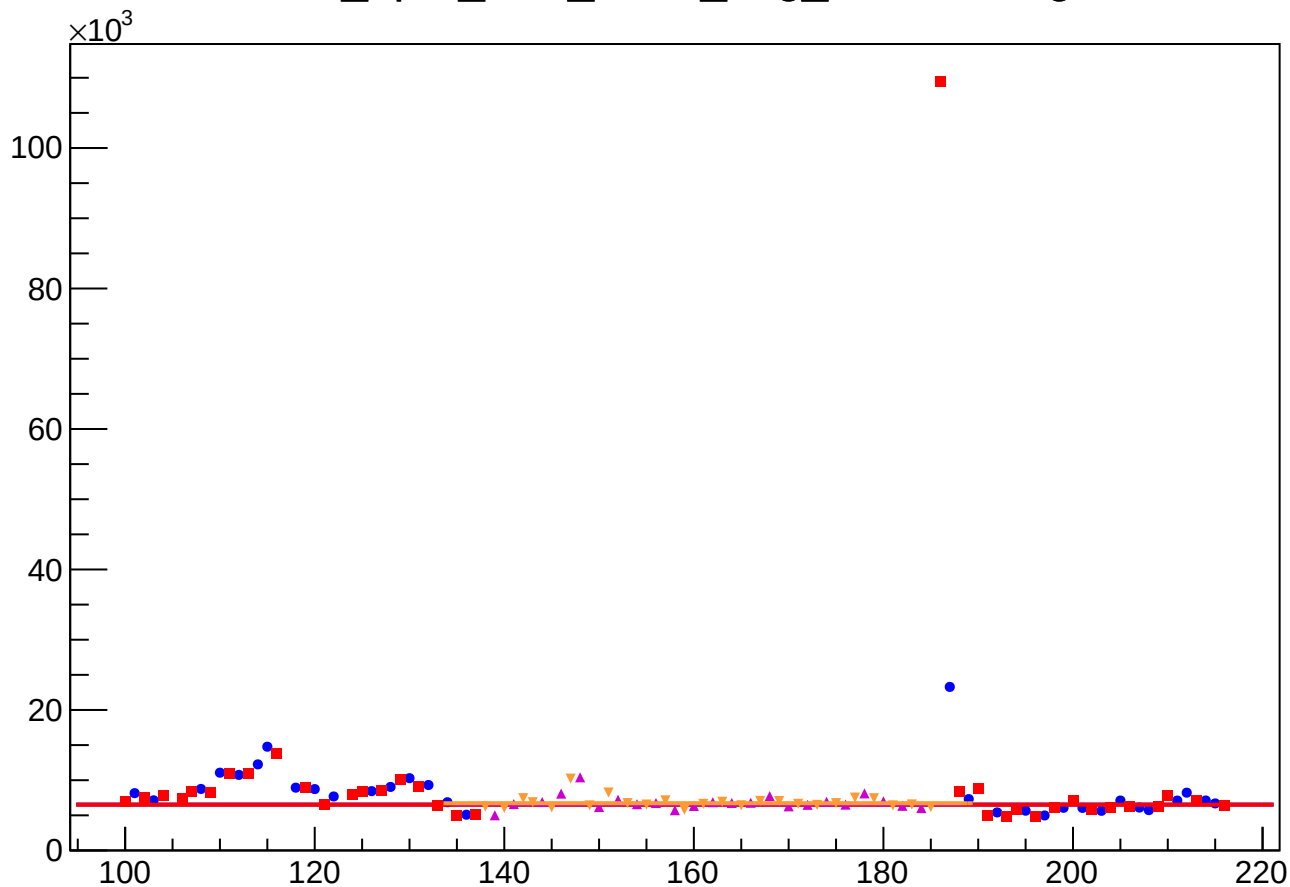
Left In: 0.351 $\pm$ 1.568  $\chi^2$ /NDF:33.8/22

+ sign 2.249 $\pm$ 1.088  $\chi^2$ /NDF: 45.6/55

All: 2.728 $\pm$ 0.772  $\chi^2$ /NDF: 135.3/113

- sign 3.213 $\pm$ 1.094  $\chi^2$ /NDF: 89.3/57

# diff\_bpm\_4aY\_4acY\_avg\_rms vs Slug



Right In:  $6533.272 \pm 1.086$   $\chi^2/\text{NDF}: 1832207.3/30$

Left Out:  $6722.984 \pm 1.090$   $\chi^2/\text{NDF}: 403317.7/24$

Right Out:  $6514.376 \pm 1.080$   $\chi^2/\text{NDF}: 2441477.1/34$

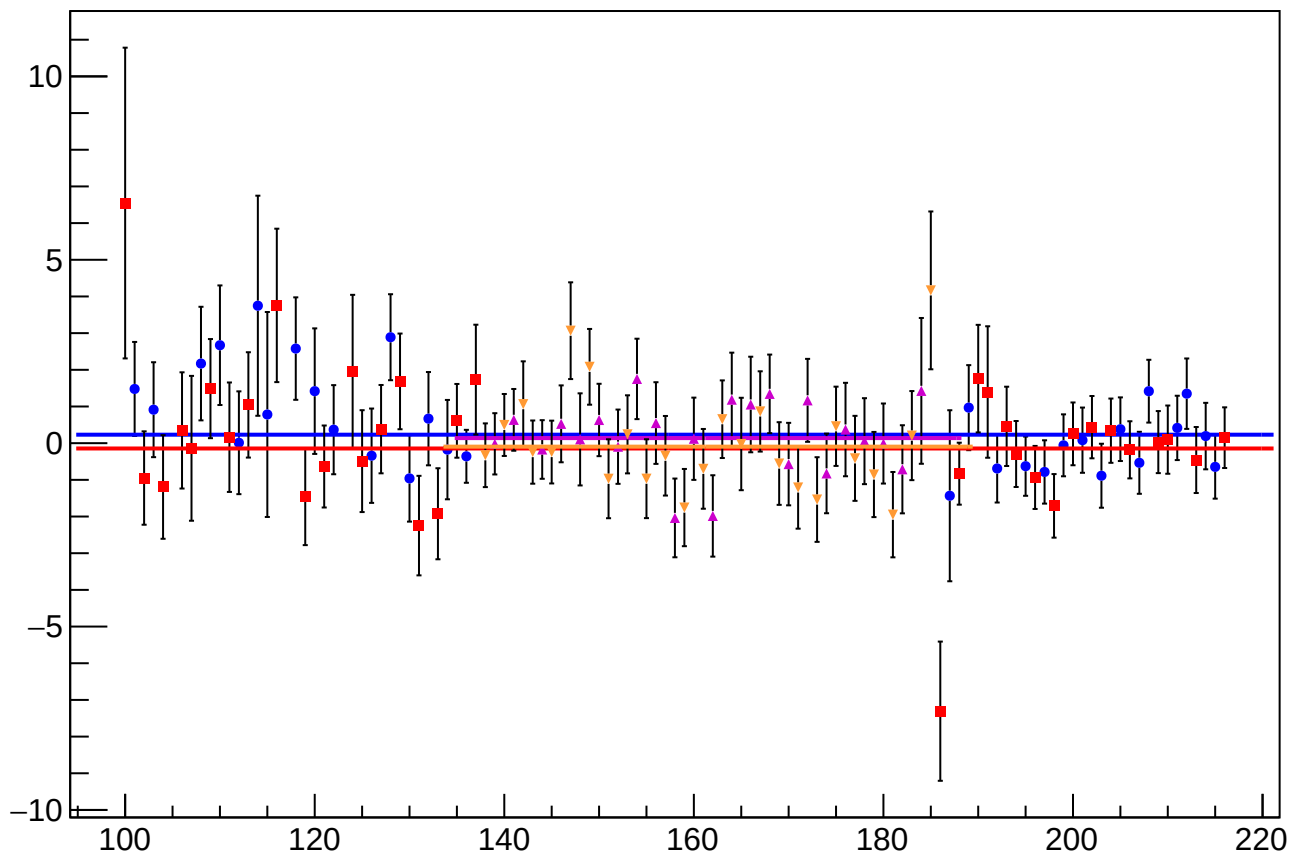
Left In:  $6632.723 \pm 1.109$   $\chi^2/\text{NDF}: 629490.9/22$

+ sign  $6627.760 \pm 0.769$   $\chi^2/\text{NDF}: 2250727.3/55$

All:  $6600.039 \pm 0.546$   $\chi^2/\text{NDF}: 5330151.0/11$

- sign  $6571.995 \pm 0.774$   $\chi^2/\text{NDF}: 3076811.9/57$

# diff\_bpm\_4aY\_4acY\_dd\_mean vs Slug



Right In:  $0.231 \pm 0.191$   $\chi^2/\text{NDF}: 28.4/30$

Left Out:  $-0.095 \pm 0.215$   $\chi^2/\text{NDF}: 27.3/24$

Right Out:  $-0.145 \pm 0.190$   $\chi^2/\text{NDF}: 43.3/34$

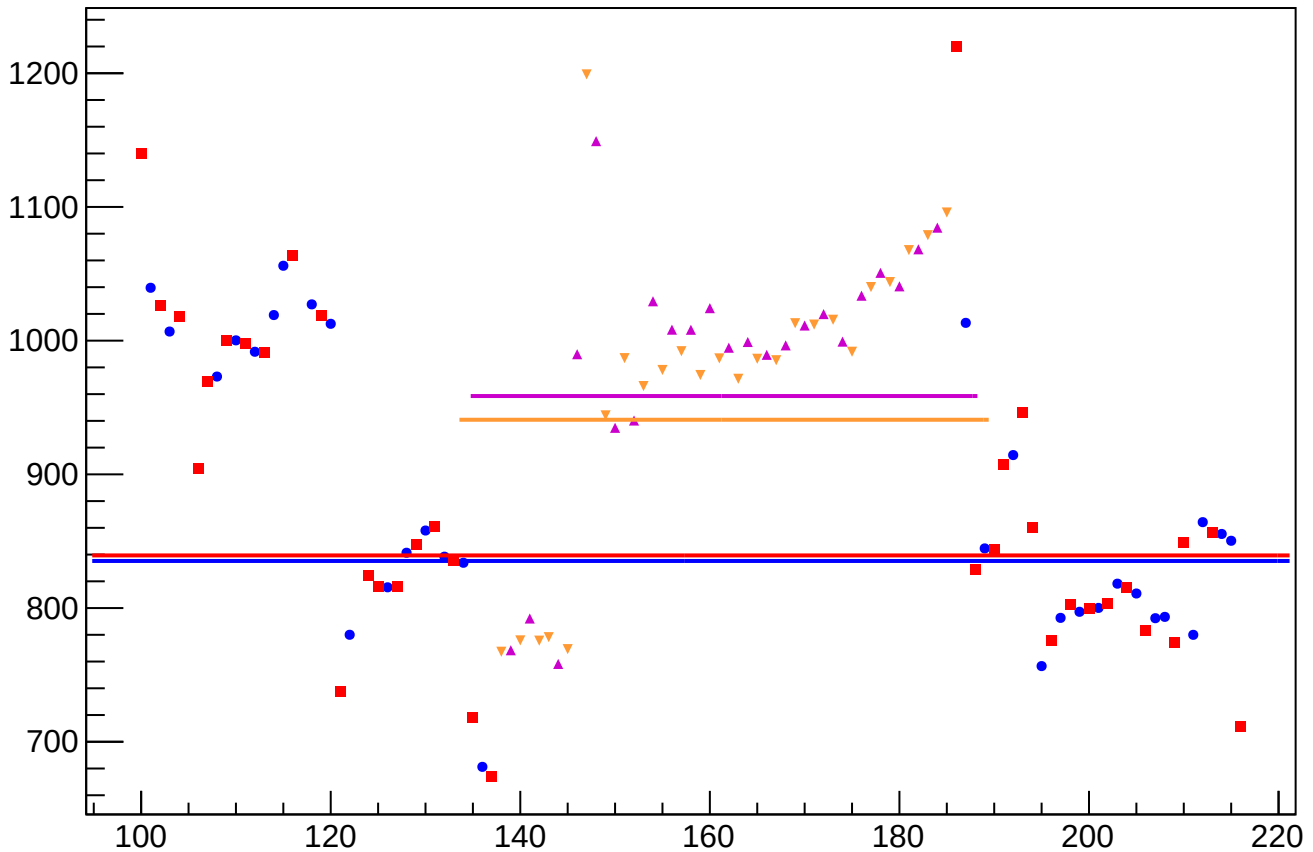
Left In:  $0.138 \pm 0.225$   $\chi^2/\text{NDF}: 16.5/22$

+ sign  $0.088 \pm 0.143$   $\chi^2/\text{NDF}: 57.0/55$

All:  $0.031 \pm 0.102$   $\chi^2/\text{NDF}: 118.1/113$

- sign  $-0.027 \pm 0.145$   $\chi^2/\text{NDF}: 60.7/57$

# diff\_bpm\_4aY\_4acY\_dd\_rms vs Slug



Right In: 835.227 $\pm$ 0.135  $\chi^2$ /NDF: 403900.1/30

Left Out: 940.844 $\pm$ 0.152  $\chi^2$ /NDF: 568776.0/24

Right Out: 839.372 $\pm$ 0.134  $\chi^2$ /NDF: 501124.6/34

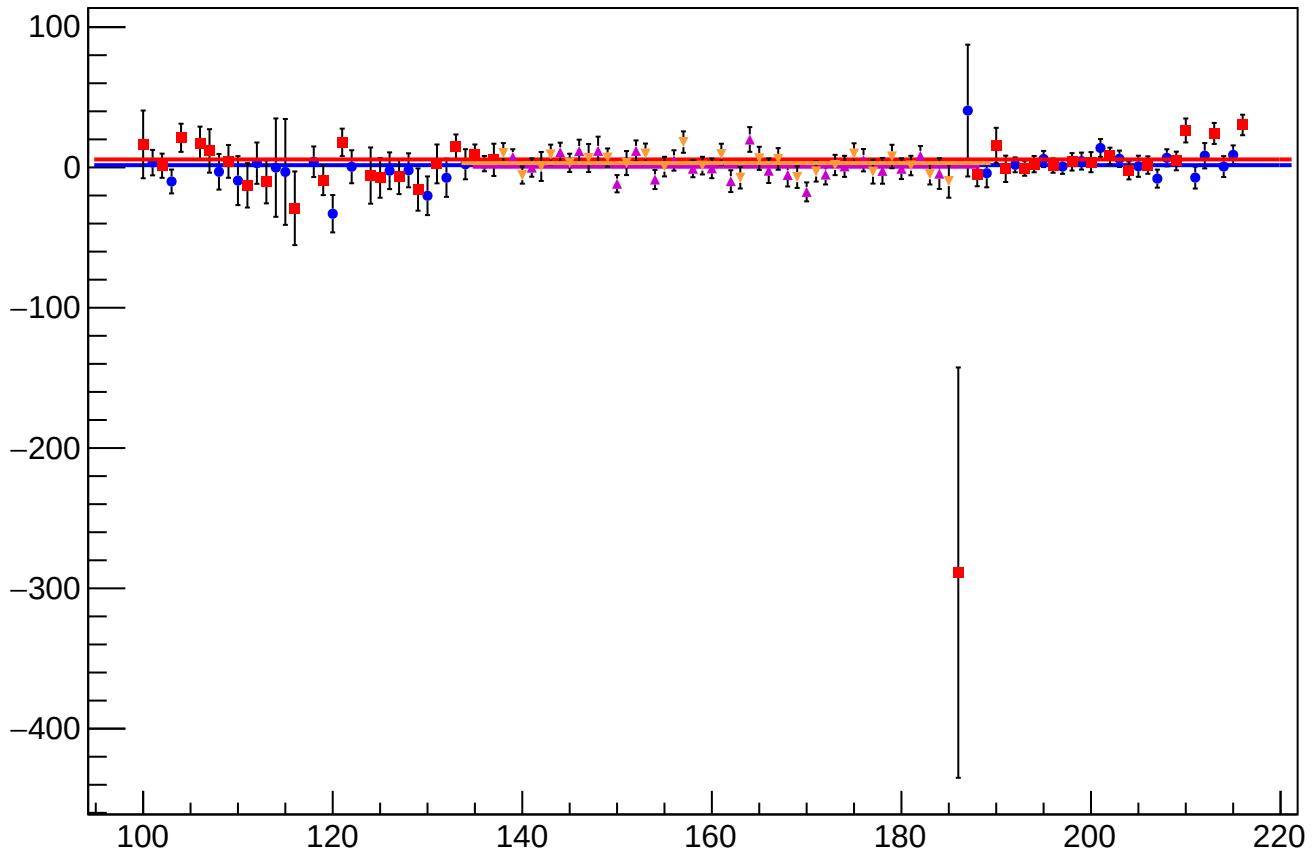
Left In: 958.578 $\pm$ 0.159  $\chi^2$ /NDF: 456824.8/22

+ sign 881.745 $\pm$ 0.101  $\chi^2$ /NDF: 1241802.4/55

All: 885.244 $\pm$ 0.072  $\chi^2$ /NDF: 2529548.6/113

- sign 888.854 $\pm$ 0.103  $\chi^2$ /NDF: 1285310.9/57

diff\_bpm\_4aY\_4eY\_avg\_mean vs Slug



Right In:  $1.618 \pm 1.474$   $\chi^2/\text{NDF}$ : 24.6/30

Left Out:  $3.099 \pm 1.500$   $\chi^2/\text{NDF}$ : 18.6/24

Right Out:  $5.696 \pm 1.458$   $\chi^2/\text{NDF}$ : 52.1/34

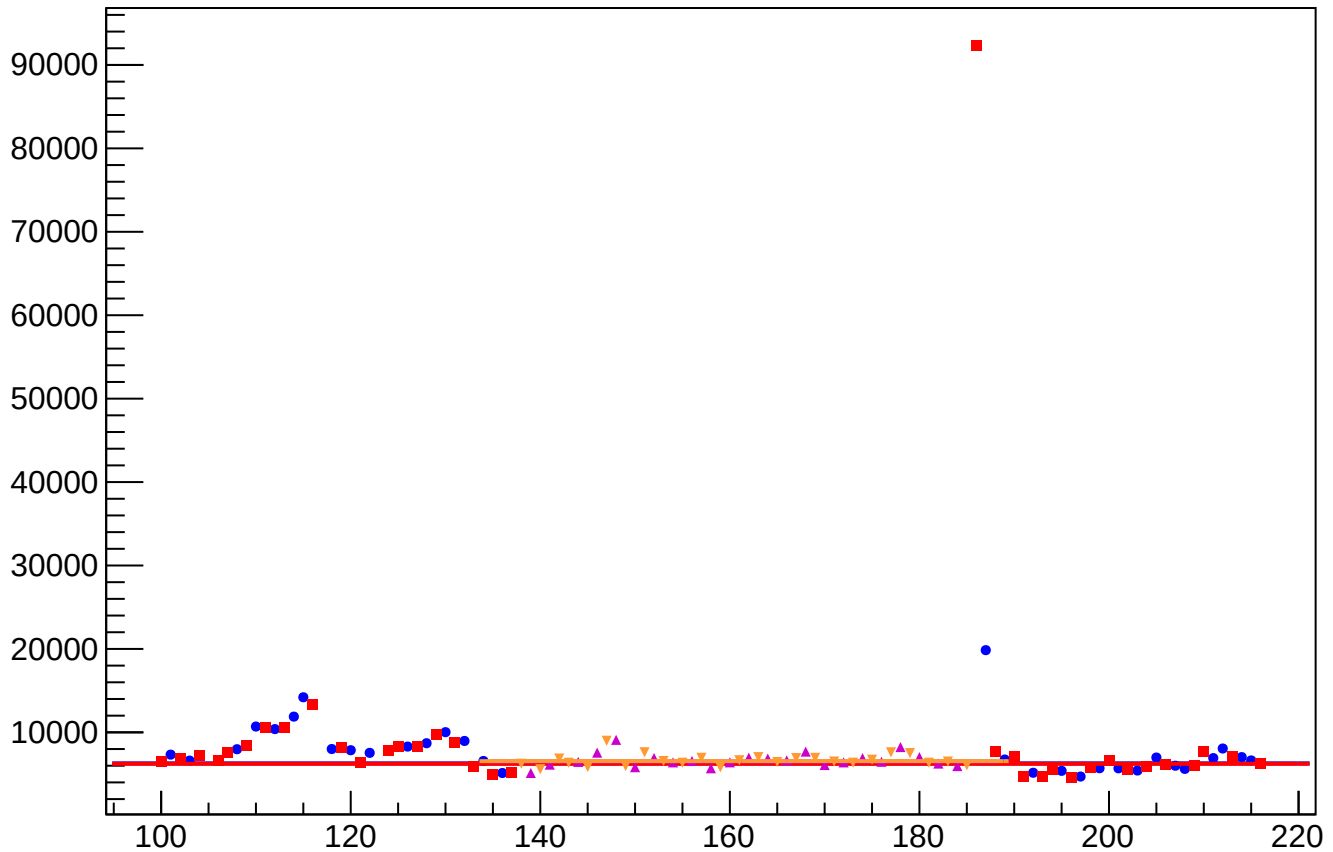
Left In:  $0.519 \pm 1.535$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $2.346 \pm 1.052$   $\chi^2/\text{NDF}$ : 43.7/55

All:  $2.791 \pm 0.745$   $\chi^2/\text{NDF}$ : 134.2/113

- sign  $3.241 \pm 1.057$   $\chi^2/\text{NDF}$ : 90.1/57

# diff\_bpm\_4aY\_4eY\_avg\_rms vs Slug



Right In: 6282.720+/-1.043  $\chi^2/\text{NDF}$ : 1765885.0/30

Left Out: 6548.897+/-1.061  $\chi^2/\text{NDF}$ : 366072.4/24

Right Out: 6229.008+/-1.031  $\chi^2/\text{NDF}$ : 2390242.6/34

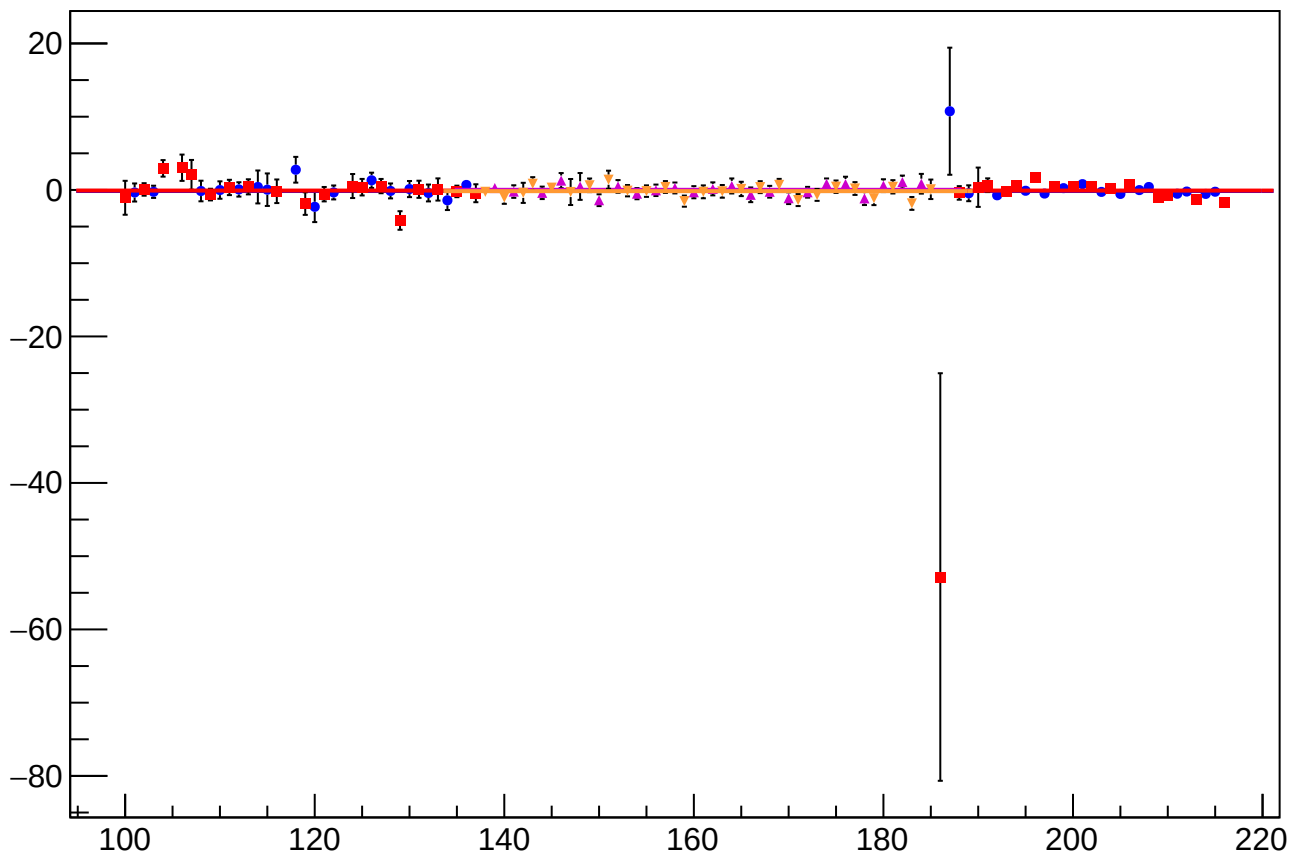
Left In: 6505.057+/-1.085  $\chi^2/\text{NDF}$ : 515496.8/22

+ sign 6413.498+/-0.744  $\chi^2/\text{NDF}$ : 2163983.3/55

All: 6386.836+/-0.527  $\chi^2/\text{NDF}$ : 5106325.7/11

- sign 6359.903+/-0.747  $\chi^2/\text{NDF}$ : 2939757.9/57

diff\_bpm\_4aY\_4eY\_dd\_mean vs Slug



Right In:  $-0.146 \pm 0.121$   $\chi^2/\text{NDF}$ : 18.8/30

Left Out:  $-0.162 \pm 0.172$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $-0.085 \pm 0.126$   $\chi^2/\text{NDF}$ : 72.3/34

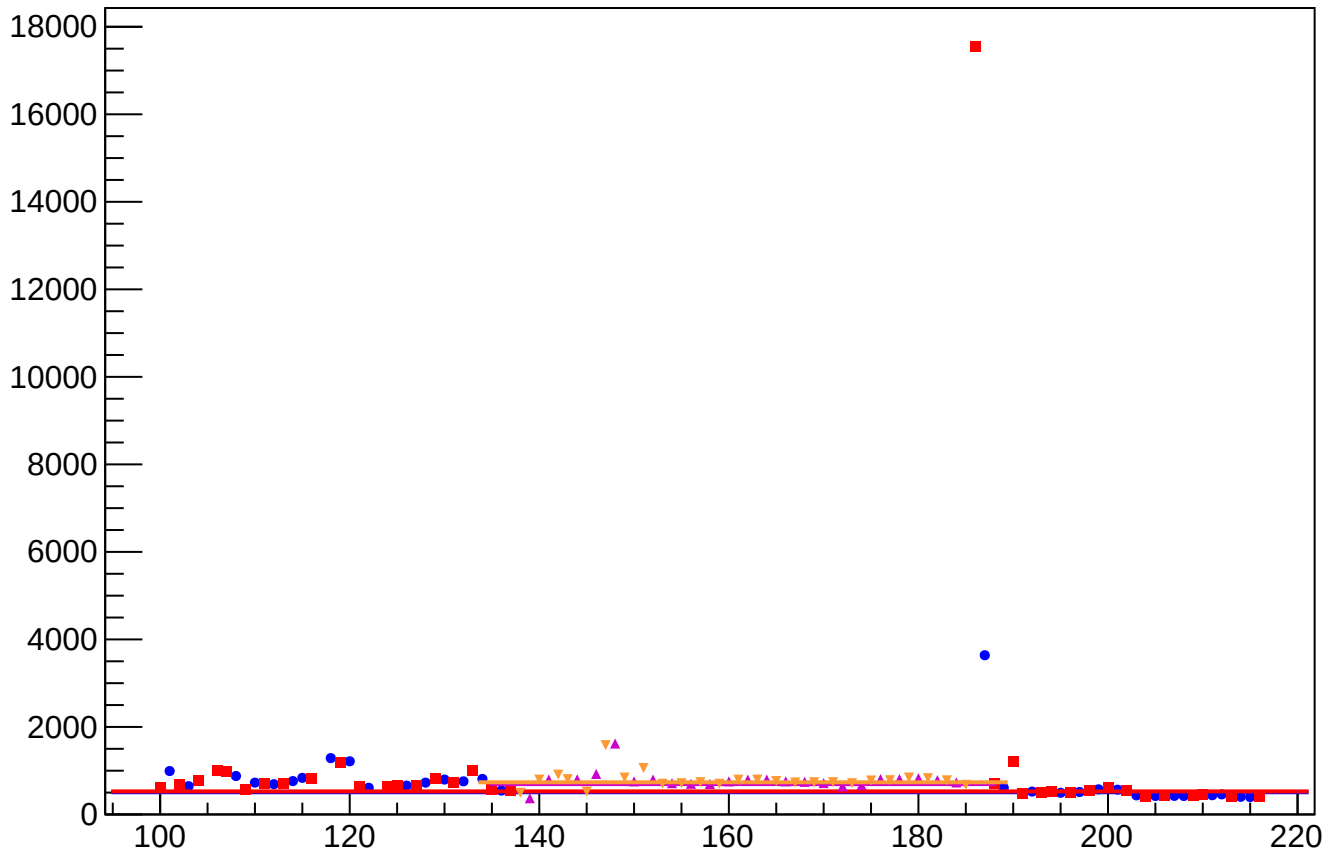
Left In:  $0.017 \pm 0.169$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-0.151 \pm 0.099$   $\chi^2/\text{NDF}$ : 37.8/55

All:  $-0.101 \pm 0.071$   $\chi^2/\text{NDF}$ : 126.1/113

- sign  $-0.048 \pm 0.101$   $\chi^2/\text{NDF}$ : 87.8/57

# diff\_bpm\_4aY\_4eY\_dd\_rms vs Slug



Right In:  $507.227 \pm 0.086$   $\chi^2/\text{NDF}$ : 2737782.3/30

Left Out:  $734.984 \pm 0.122$   $\chi^2/\text{NDF}$ : 1339748.9/24

Right Out:  $526.781 \pm 0.089$   $\chi^2/\text{NDF}$ : 3038562.4/34

Left In:  $694.150 \pm 0.120$   $\chi^2/\text{NDF}$ : 2225094.5/22

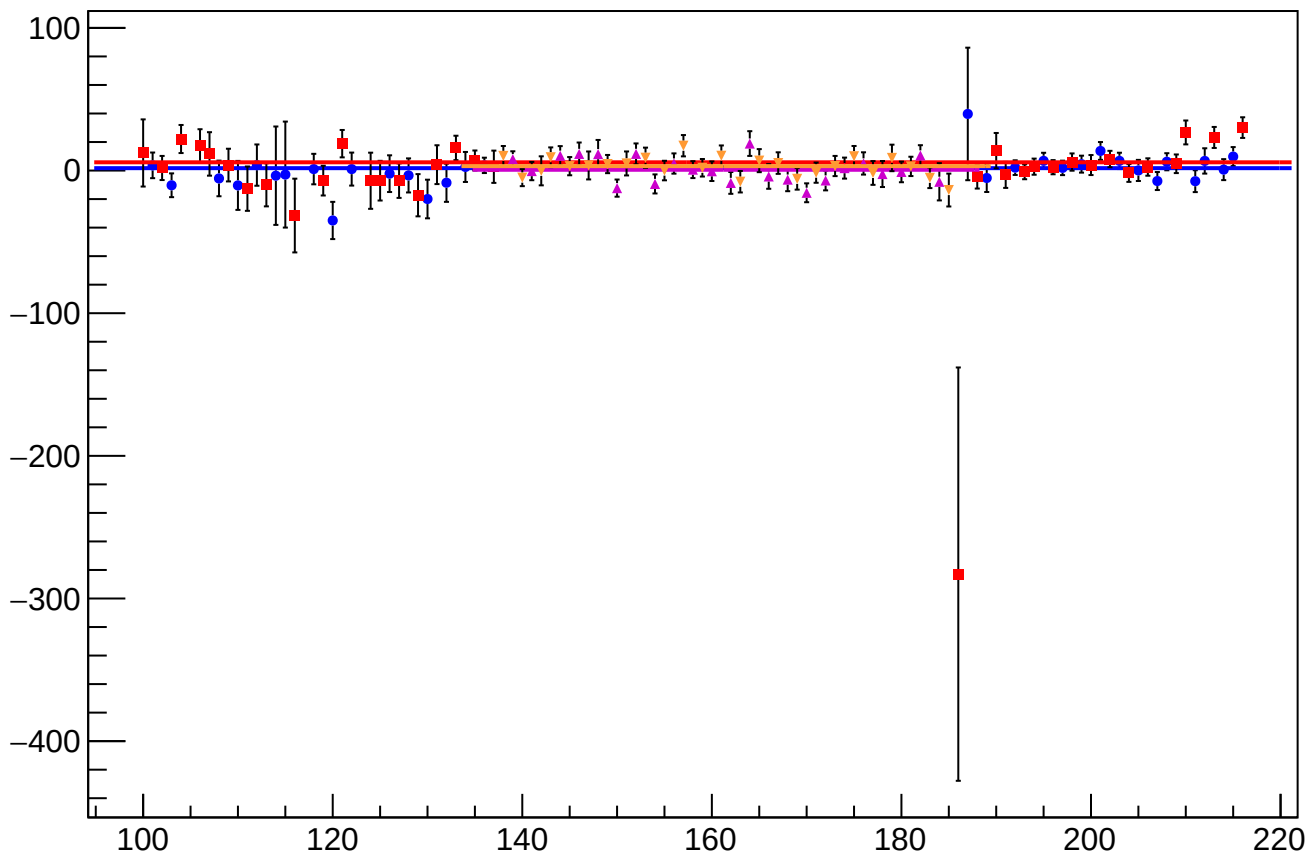
+ sign  $582.549 \pm 0.070$   $\chi^2/\text{NDF}$ : 6421392.7/55

All:  $584.399 \pm 0.050$   $\chi^2/\text{NDF}$ : 12949216.4/11

- sign  $586.320 \pm 0.071$   $\chi^2/\text{NDF}$ : 6526399.8/57



# diff\_bpm\_4aY\_4ecY\_avg\_mean vs Slug



Right In:  $1.677 \pm 1.446$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $3.111 \pm 1.476$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $5.782 \pm 1.429$   $\chi^2/\text{NDF}$ : 52.9/34

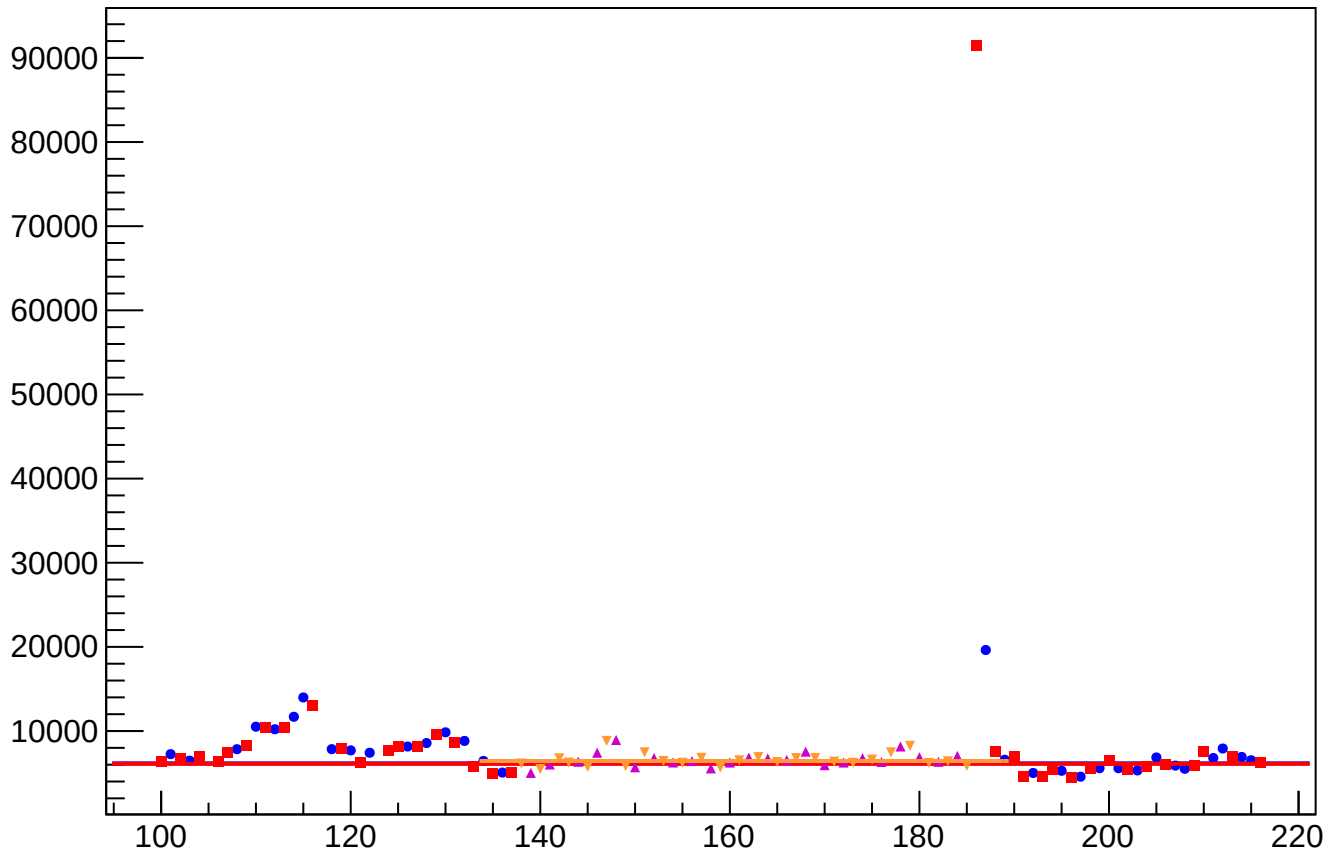
Left In:  $0.550 \pm 1.512$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $2.379 \pm 1.033$   $\chi^2/\text{NDF}$ : 46.3/55

All:  $2.844 \pm 0.732$   $\chi^2/\text{NDF}$ : 139.6/113

- sign  $3.315 \pm 1.039$   $\chi^2/\text{NDF}$ : 92.9/57

# diff\_bpm\_4aY\_4ecY\_avg\_rms vs Slug



Right In: 6158.347 $\pm$ 1.023  $\chi^2$ /NDF: 1798006.6/30

Left Out: 6435.363 $\pm$ 1.044  $\chi^2$ /NDF: 417318.3/24

Right Out: 6102.126 $\pm$ 1.010  $\chi^2$ /NDF: 2415054.9/34

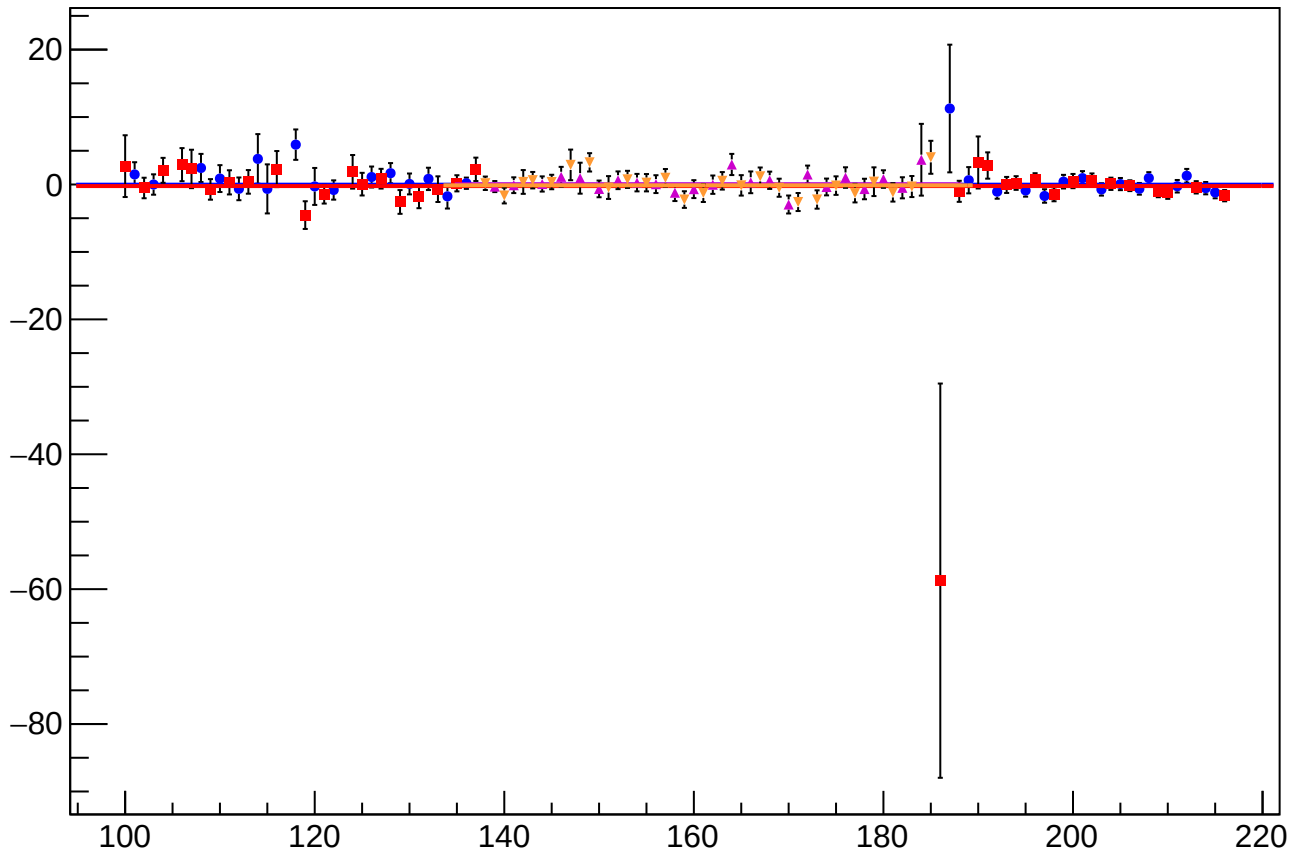
Left In: 6405.229 $\pm$ 1.069  $\chi^2$ /NDF: 525079.4/22

+ sign 6294.015 $\pm$ 0.731  $\chi^2$ /NDF: 2251260.2/55

All: 6269.676 $\pm$ 0.518  $\chi^2$ /NDF: 5236069.4/11

- sign 6245.075 $\pm$ 0.734  $\chi^2$ /NDF: 2982577.1/57

# diff\_bpm\_4aY\_4ecY\_dd\_mean vs Slug



Right In:  $-0.028 \pm 0.219$   $\chi^2/\text{NDF}$ : 27.3/30

Left Out:  $-0.122 \pm 0.273$   $\chi^2/\text{NDF}$ : 27.0/24

Right Out:  $-0.235 \pm 0.223$   $\chi^2/\text{NDF}$ : 33.2/34

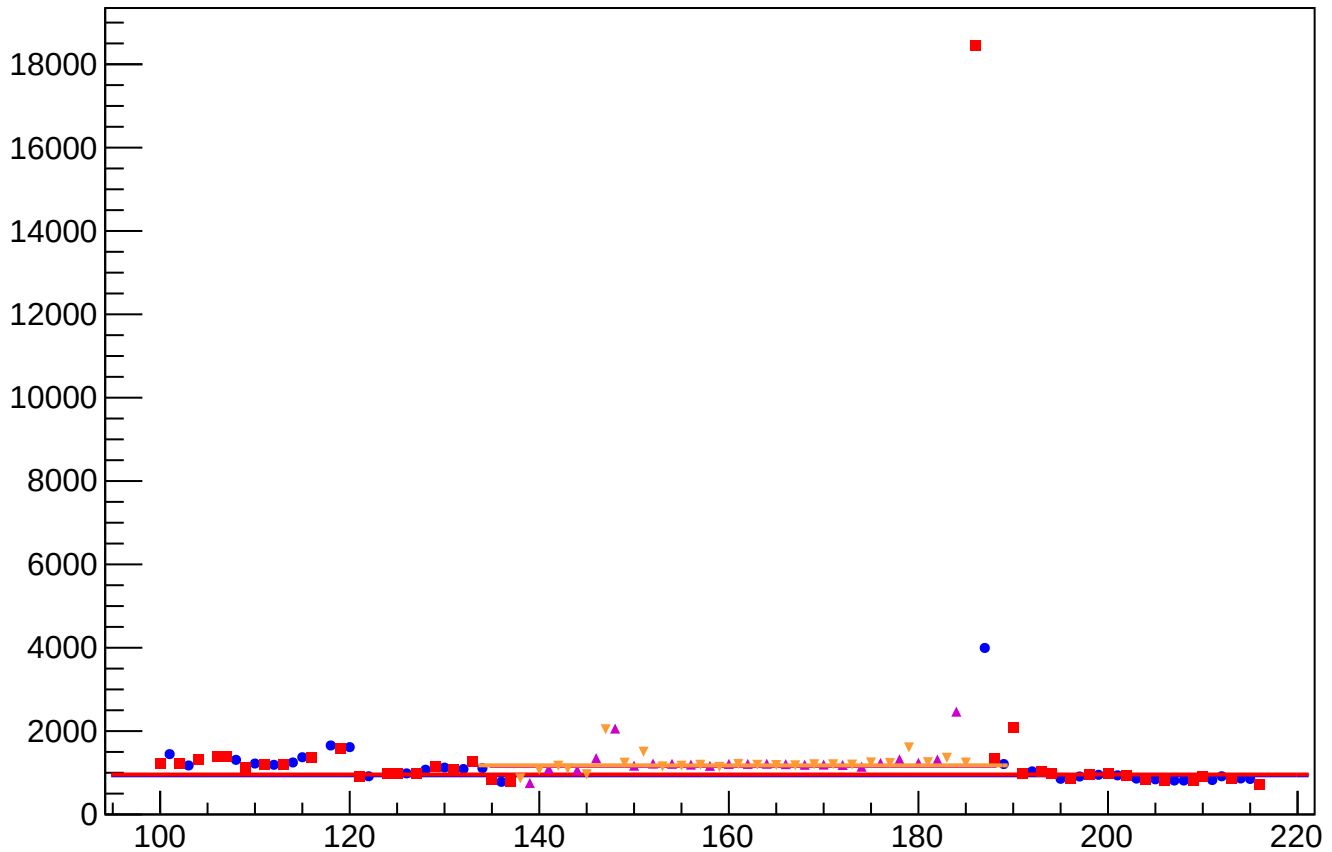
Left In:  $0.029 \pm 0.279$   $\chi^2/\text{NDF}$ : 14.4/22

+ sign  $-0.065 \pm 0.171$   $\chi^2/\text{NDF}$ : 54.4/55

All:  $-0.098 \pm 0.122$   $\chi^2/\text{NDF}$ : 102.6/113

- sign  $-0.131 \pm 0.174$   $\chi^2/\text{NDF}$ : 48.2/57

# diff\_bpm\_4aY\_4ecY\_dd\_rms vs Slug



Right In:  $938.987 \pm 0.155$   $\chi^2/\text{NDF}$ : 1337642.7/30

Left Out:  $1177.742 \pm 0.193$   $\chi^2/\text{NDF}$ : 800899.0/24

Right Out:  $958.332 \pm 0.158$   $\chi^2/\text{NDF}$ : 2099138.8/34

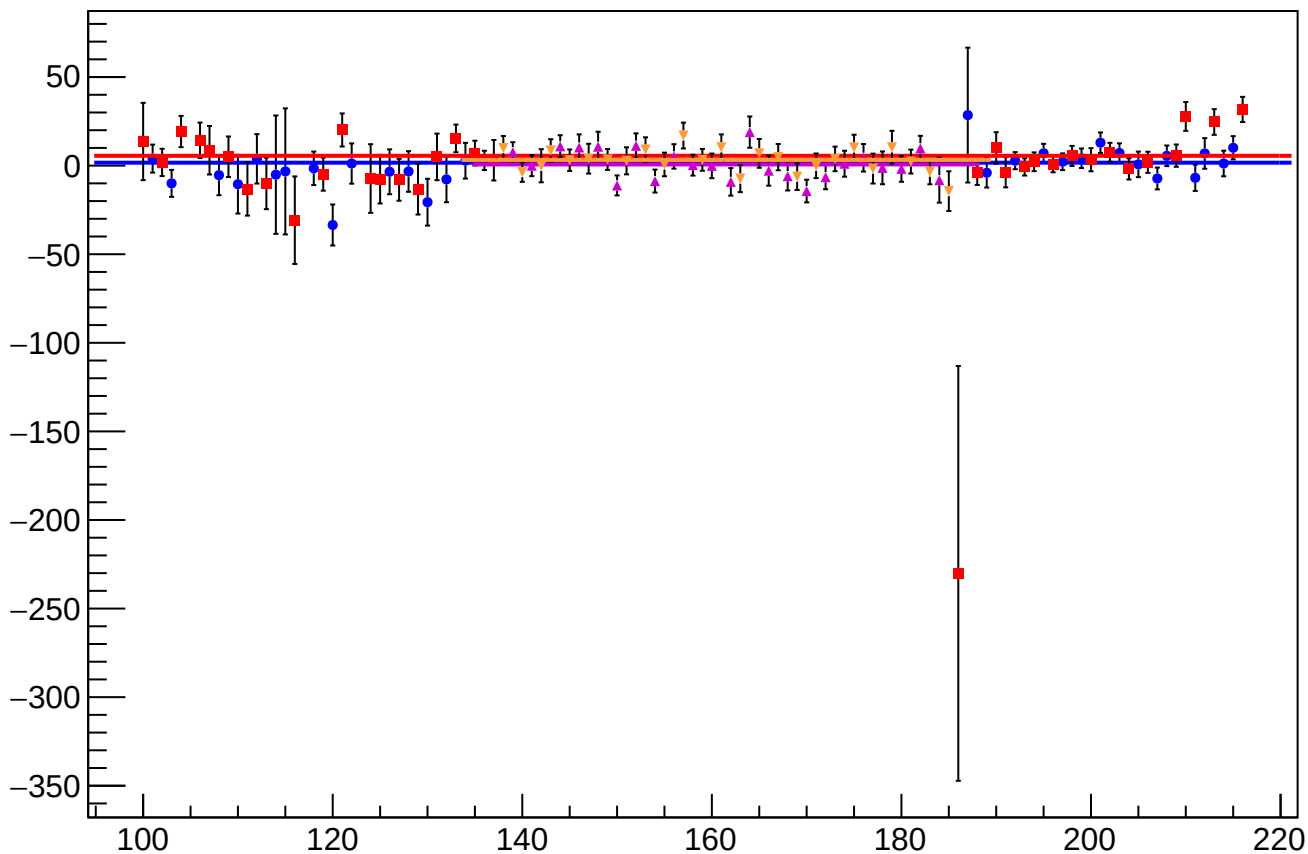
Left In:  $1163.827 \pm 0.197$   $\chi^2/\text{NDF}$ : 1052206.0/22

+ sign  $1032.246 \pm 0.121$   $\chi^2/\text{NDF}$ : 3068181.1/55

All:  $1035.441 \pm 0.086$   $\chi^2/\text{NDF}$ : 6883265.5/11

- sign  $1038.766 \pm 0.123$   $\chi^2/\text{NDF}$ : 3813657.4/57

# diff\_bpm\_4eY\_4ecY\_avg\_mean vs Slug



Right In:  $1.669 \pm 1.372$   $\chi^2/\text{NDF}$ : 29.5/30

Left Out:  $3.234 \pm 1.430$   $\chi^2/\text{NDF}$ : 17.9/24

Right Out:  $5.553 \pm 1.343$   $\chi^2/\text{NDF}$ : 58.6/34

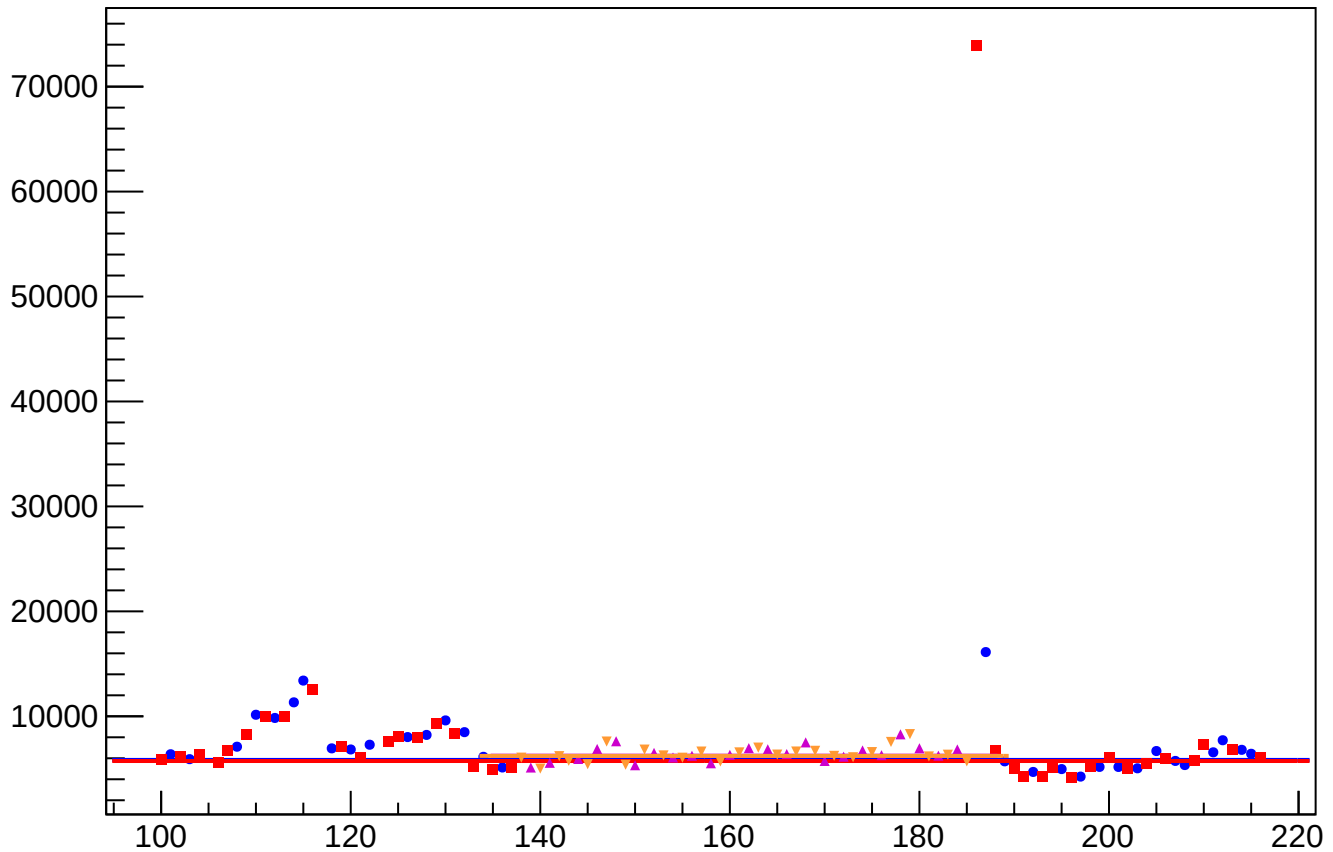
Left In:  $0.667 \pm 1.474$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $2.420 \pm 0.990$   $\chi^2/\text{NDF}$ : 48.1/55

All:  $2.876 \pm 0.701$   $\chi^2/\text{NDF}$ : 145.4/113

- sign  $3.335 \pm 0.993$   $\chi^2/\text{NDF}$ : 97.0/57

# diff\_bpm\_4eY\_4ecY\_avg\_rms vs Slug



Right In: 5842.388+/-0.970  $\chi^2/\text{NDF}$ : 1828313.3/30

Left Out: 6228.654+/-1.011  $\chi^2/\text{NDF}$ : 470851.7/24

Right Out: 5739.517+/-0.950  $\chi^2/\text{NDF}$ : 2481979.9/34

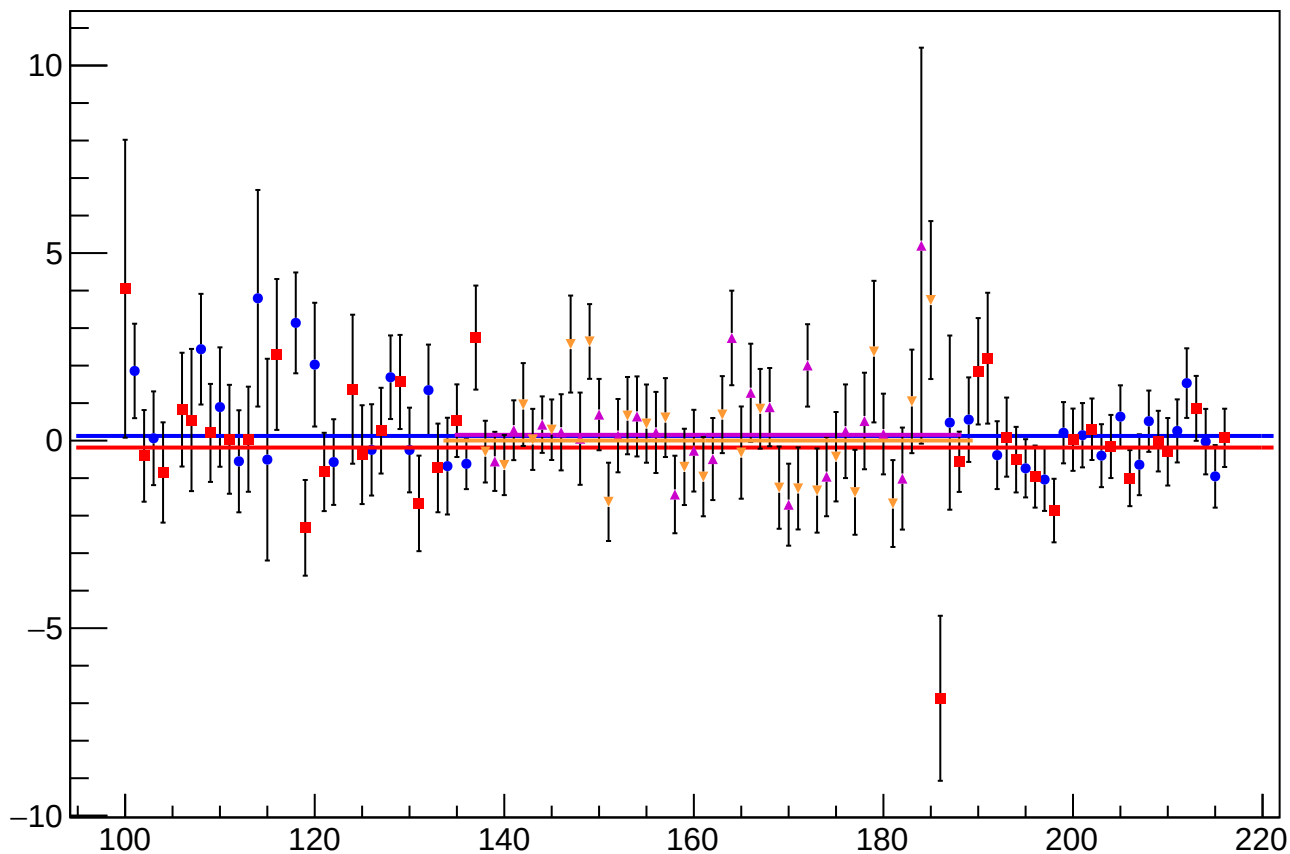
Left In: 6246.800+/-1.042  $\chi^2/\text{NDF}$ : 484982.9/22

+ sign 6027.585+/-0.700  $\chi^2/\text{NDF}$ : 2375169.4/55

All: 5998.759+/-0.496  $\chi^2/\text{NDF}$ : 5474956.5/11

- sign 5969.762+/-0.702  $\chi^2/\text{NDF}$ : 3096385.1/57

diff\_bpm\_4eY\_4ecY\_dd\_mean vs Slug



Right In:  $0.125 \pm 0.184$   $\chi^2/\text{NDF}$ : 27.6/30

Left Out:  $0.003 \pm 0.212$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-0.185 \pm 0.182$   $\chi^2/\text{NDF}$ : 37.8/34

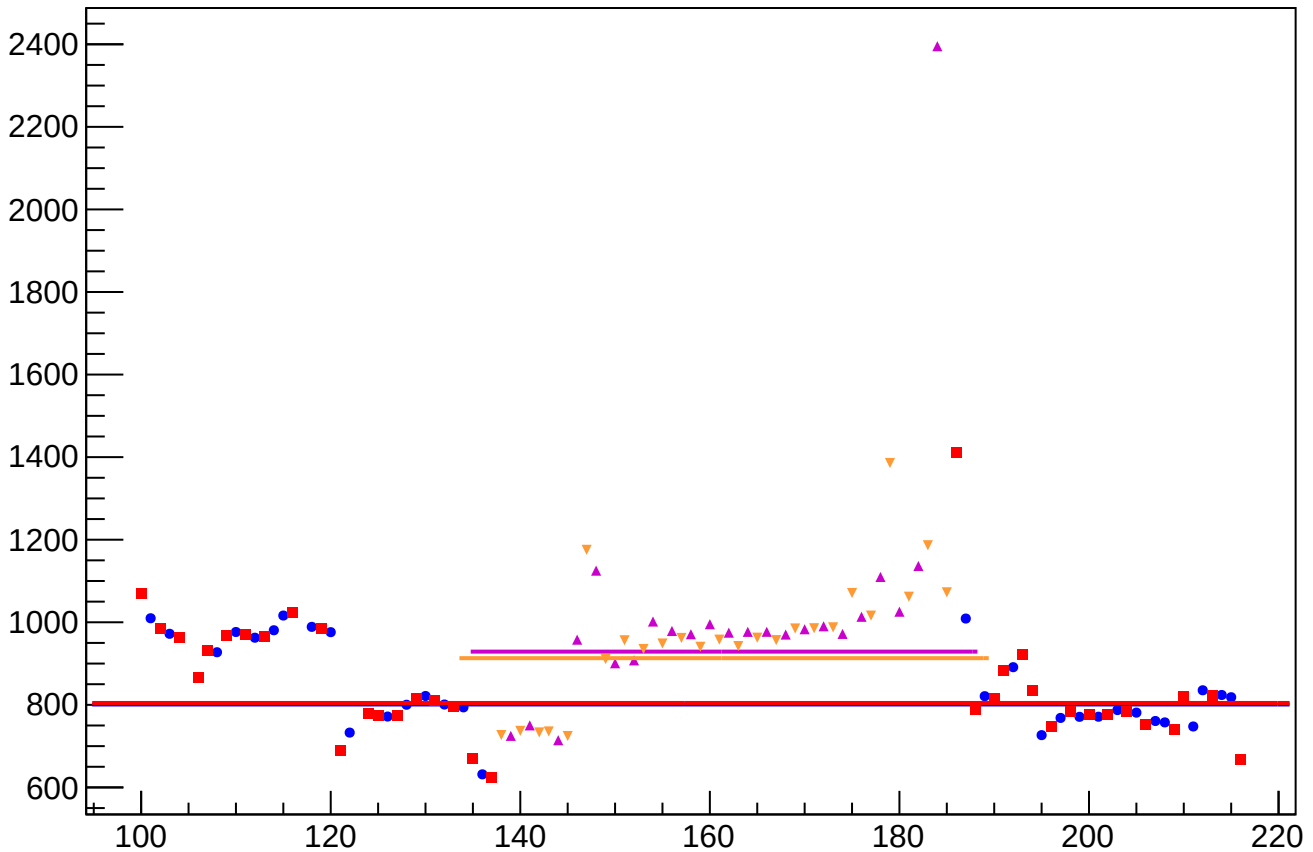
Left In:  $0.154 \pm 0.221$   $\chi^2/\text{NDF}$ : 18.4/22

+ sign  $0.073 \pm 0.139$   $\chi^2/\text{NDF}$ : 59.4/55

All:  $0.013 \pm 0.099$   $\chi^2/\text{NDF}$ : 117.4/113

- sign  $-0.047 \pm 0.141$   $\chi^2/\text{NDF}$ : 57.6/57

# diff\_bpm\_4eY\_4ecY\_dd\_rms vs Slug



Right In: 800.904 $\pm$ 0.130  $\chi^2$ /NDF: 465204.5/30

Left Out: 913.070 $\pm$ 0.150  $\chi^2$ /NDF: 889200.0/24

Right Out: 804.586 $\pm$ 0.129  $\chi^2$ /NDF: 627272.2/34

Left In: 928.913 $\pm$ 0.156  $\chi^2$ /NDF: 769065.0/22

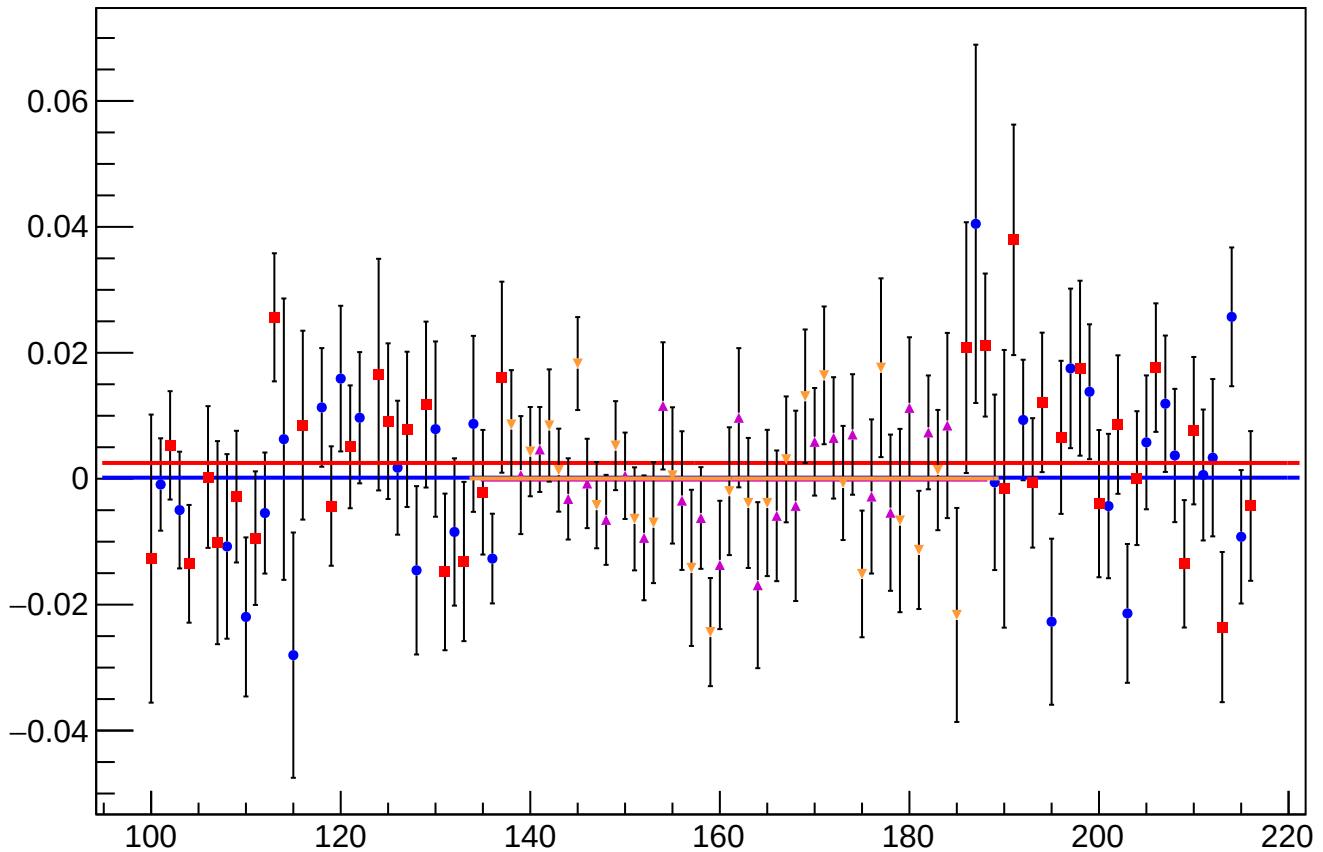
+ sign 848.971 $\pm$ 0.098  $\chi^2$ /NDF: 1674580.6/55

All: 851.918 $\pm$ 0.070  $\chi^2$ /NDF: 3449071.6/113

- sign 854.949 $\pm$ 0.099  $\chi^2$ /NDF: 1772660.7/57



# diff\_dispE\_bpm12X\_mean vs Slug



Right In: 0.000 $\pm$ 0.002  $\chi^2$ /NDF: 37.5/30

Left Out: 0.000 $\pm$ 0.002  $\chi^2$ /NDF:31.1/24

Right Out: 0.003 $\pm$ 0.002  $\chi^2$ /NDF: 37.8/34

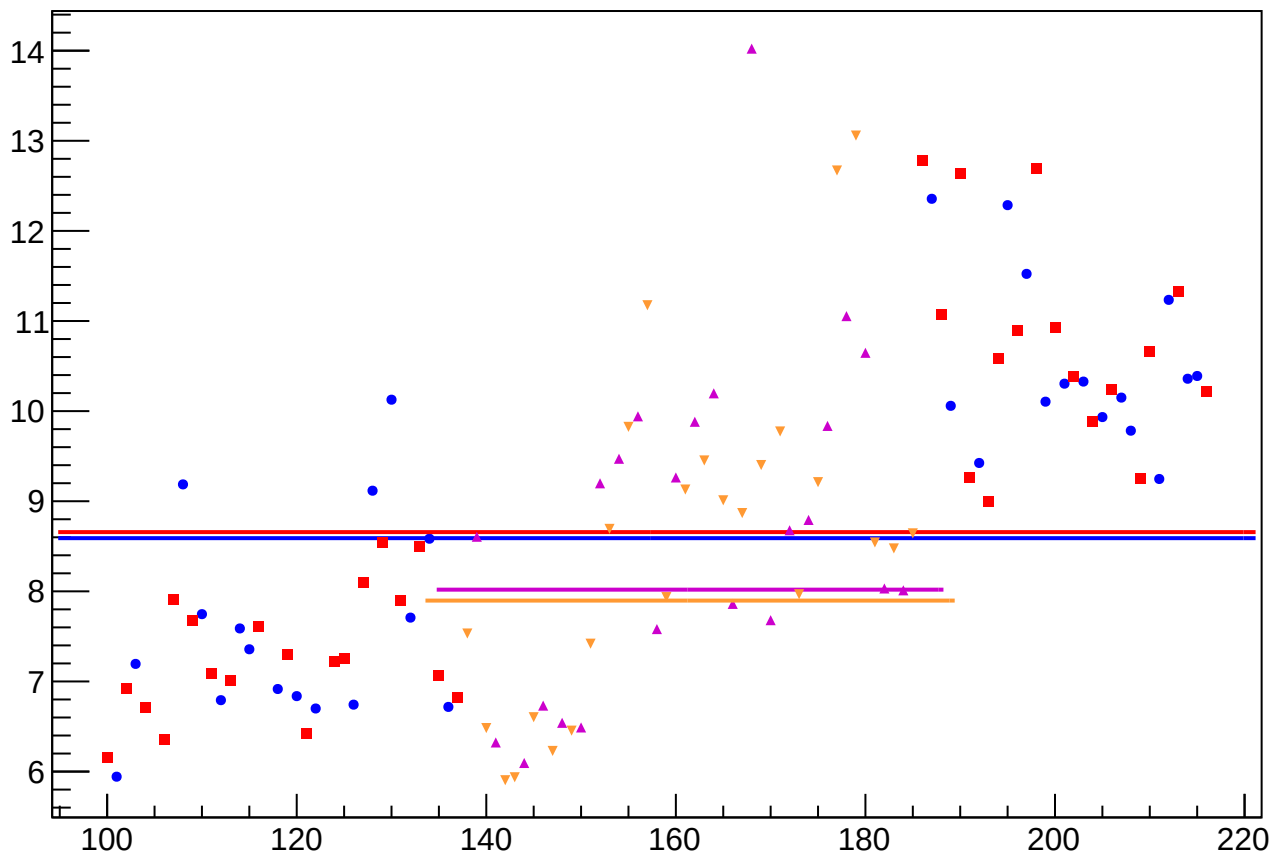
Left In: -0.000 $\pm$ 0.002  $\chi^2$ /NDF:12.8/22

+ sign 0.000 $\pm$ 0.001  $\chi^2$ /NDF: 68.6/55

All: 0.001 $\pm$ 0.001  $\chi^2$ /NDF: 120.4/113

- sign 0.001 $\pm$ 0.001  $\chi^2$ /NDF: 51.5/57

# diff\_dispE\_bpm12X\_rms vs Slug



Right In: 8.590 $\pm$ 0.001  $\chi^2$ /NDF: 1588783.8/30

Left Out: 7.897 $\pm$ 0.001  $\chi^2$ /NDF:1590867.7/24

Right Out: 8.657 $\pm$ 0.001  $\chi^2$ /NDF: 1620800.2/34

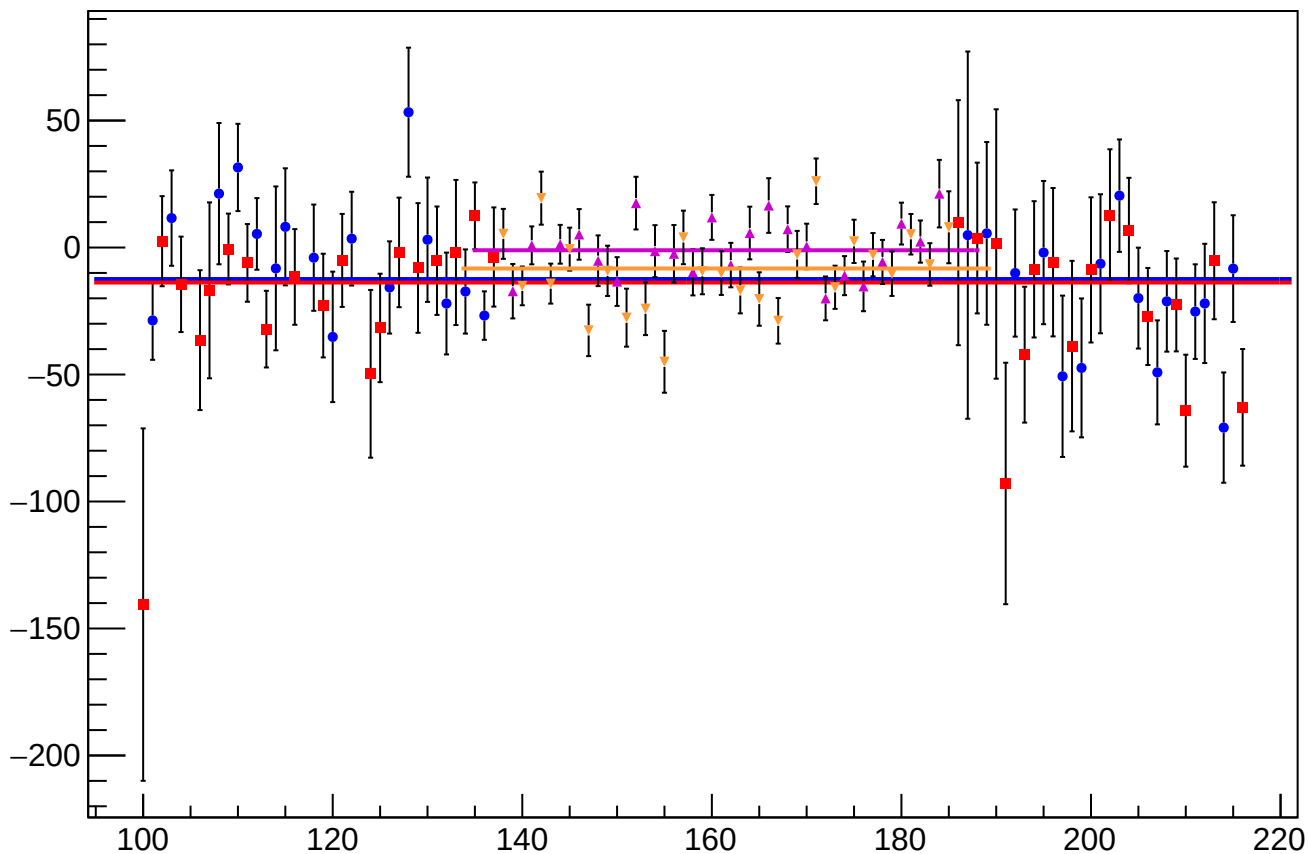
Left In: 8.019 $\pm$ 0.001  $\chi^2$ /NDF:1455714.6/22

+ sign 8.215 $\pm$ 0.001  $\chi^2$ /NDF: 3309131.1/55

All: 8.269 $\pm$ 0.001  $\chi^2$ /NDF: 6498741.1/113

- sign 8.325 $\pm$ 0.001  $\chi^2$ /NDF: 3183121.0/57

# diff\_targ\_positionX\_mean vs Slug



Right In:  $-12.406 \pm 3.634$   $\chi^2/\text{NDF}$ : 41.8/30

Left Out:  $-8.256 \pm 1.849$   $\chi^2/\text{NDF}$ : 62.2/24

Right Out:  $-13.778 \pm 3.706$   $\chi^2/\text{NDF}$ : 32.7/34

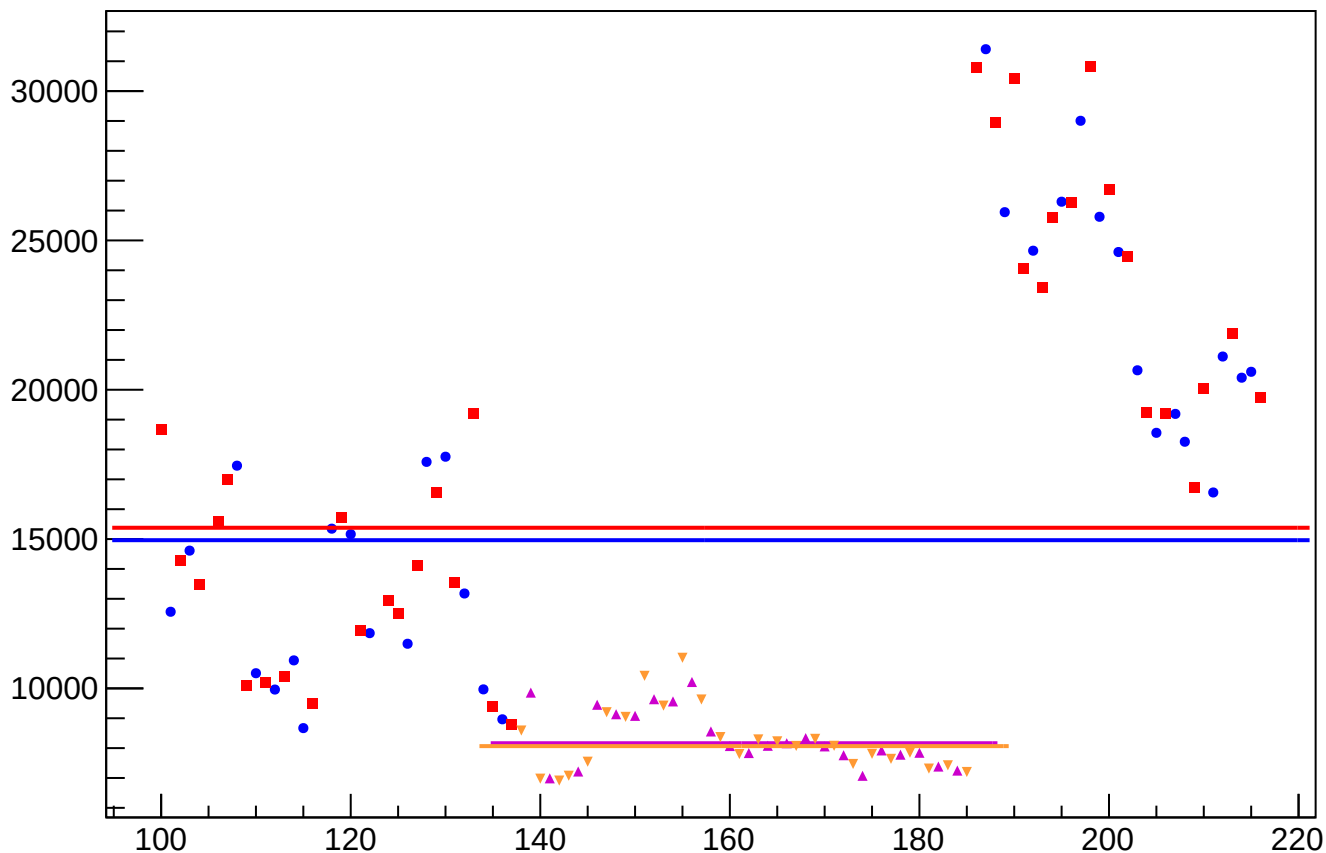
Left In:  $-1.072 \pm 1.921$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $-9.110 \pm 1.648$   $\chi^2/\text{NDF}$ : 105.0/55

All:  $-6.527 \pm 1.185$   $\chi^2/\text{NDF}$ : 180.9/113

- sign  $-3.763 \pm 1.705$   $\chi^2/\text{NDF}$ : 70.8/57

# diff\_targ\_positionX\_rms vs Slug



Right In: 14962.379+/-2.570  $\chi^2/\text{NDF}$ : 4422217.2/30

Left Out: 8066.710+/-1.308  $\chi^2/\text{NDF}$ : 498146.1/24

Right Out: 15378.916+/-2.620  $\chi^2/\text{NDF}$ : 4861643.1/34

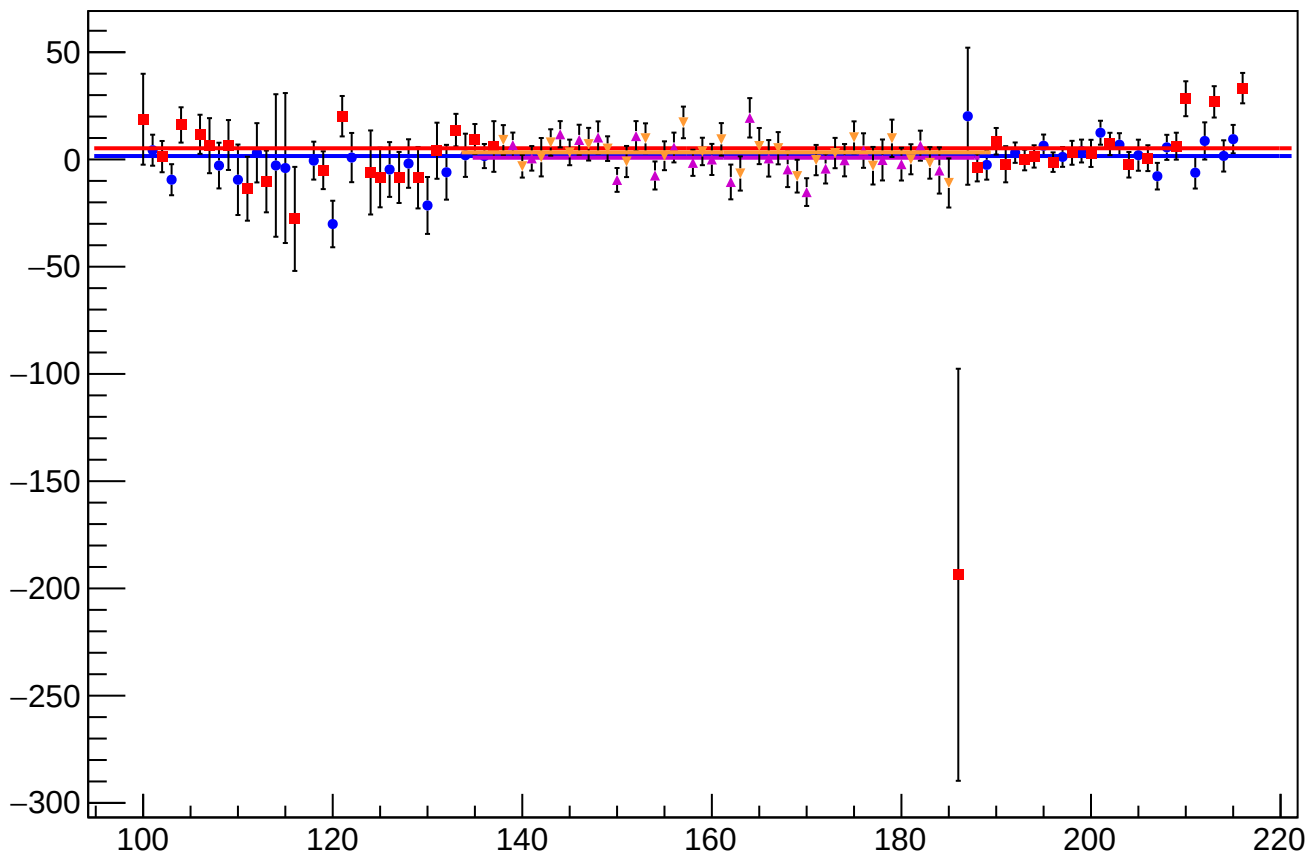
Left In: 8163.472+/-1.358  $\chi^2/\text{NDF}$ : 432350.3/22

+ sign 9485.092+/-1.166  $\chi^2/\text{NDF}$ : 10639442.3/55

All: 9584.797+/-0.838  $\chi^2/\text{NDF}$ : 21925191.8/100

- sign 9691.526+/-1.206  $\chi^2/\text{NDF}$ : 11270597.7/57

# diff\_targ\_positionY\_mean vs Slug



Right In:  $1.597 \pm 1.345$   $\chi^2/\text{NDF}$ : 28.0/30

Left Out:  $3.330 \pm 1.431$   $\chi^2/\text{NDF}$ : 16.9/24

Right Out:  $5.217 \pm 1.303$   $\chi^2/\text{NDF}$ : 62.9/34

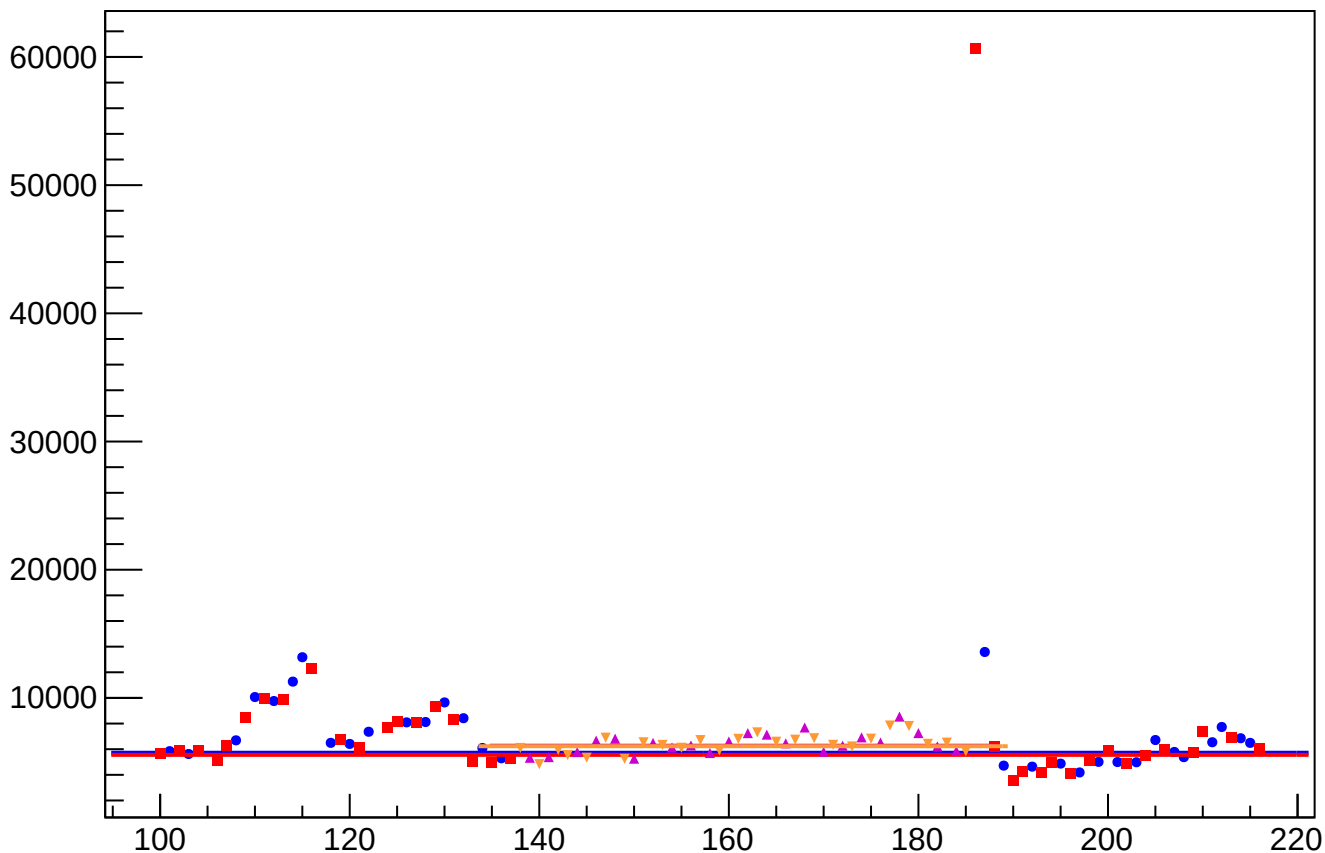
Left In:  $0.797 \pm 1.479$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $2.410 \pm 0.980$   $\chi^2/\text{NDF}$ : 45.7/55

All:  $2.848 \pm 0.692$   $\chi^2/\text{NDF}$ : 143.5/113

- sign  $3.284 \pm 0.978$   $\chi^2/\text{NDF}$ : 97.3/57

# diff\_targ\_positionY\_rms vs Slug



Right In: 5724.048+/-0.951  $\chi^2/\text{NDF}$ : 1875803.6/30

Left Out: 6230.934+/-1.012  $\chi^2/\text{NDF}$ : 532579.4/24

Right Out: 5558.316+/-0.921  $\chi^2/\text{NDF}$ : 2693288.4/34

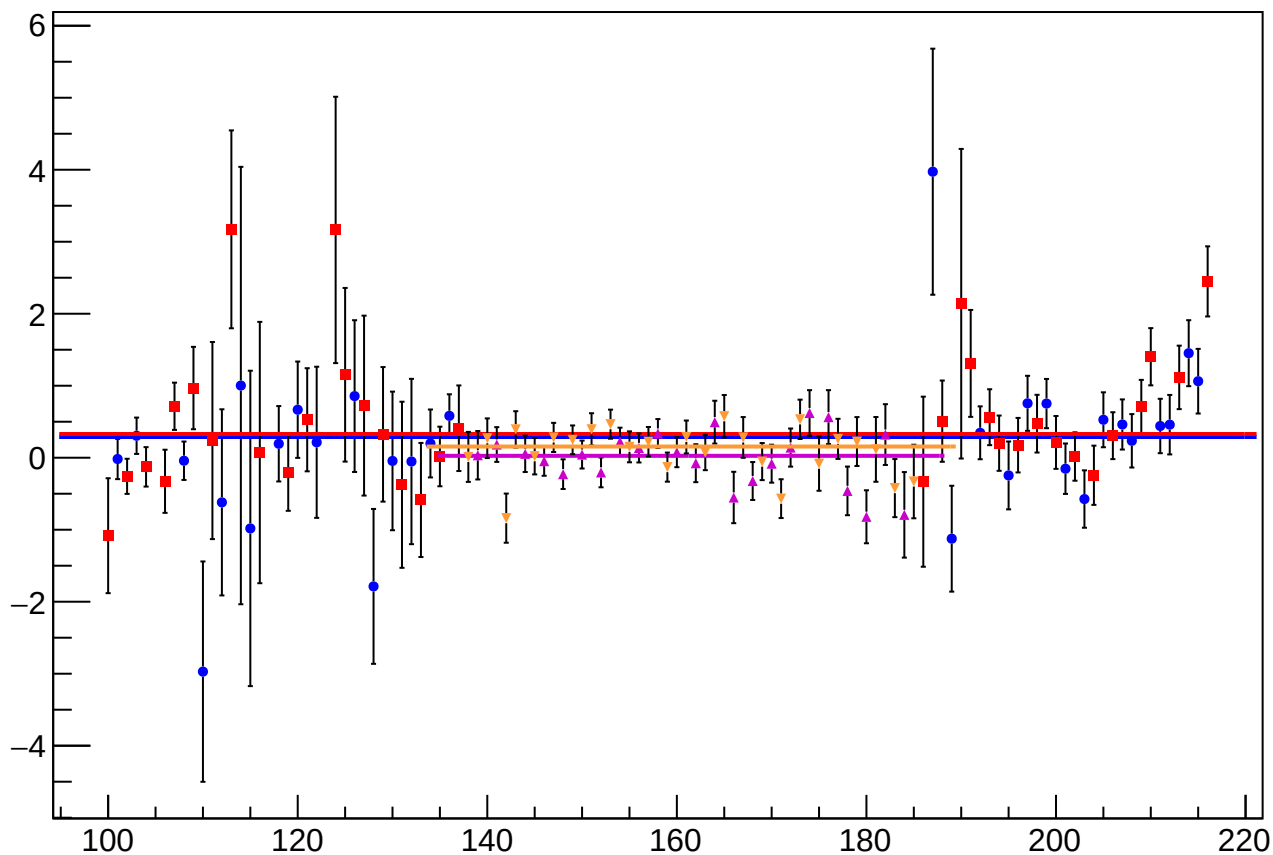
Left In: 6270.834+/-1.046  $\chi^2/\text{NDF}$ : 504723.6/22

+ sign 5961.839+/-0.693  $\chi^2/\text{NDF}$ : 2541687.1/55

All: 5915.725+/-0.489  $\chi^2/\text{NDF}$ : 6009918.0/11

- sign 5869.813+/-0.691  $\chi^2/\text{NDF}$ : 3459390.1/57

# diff\_targ\_thetaX\_mean vs Slug



Right In:  $0.288 \pm 0.079$   $\chi^2/\text{NDF}$ : 43.4/30

Left Out:  $0.156 \pm 0.052$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $0.329 \pm 0.080$   $\chi^2/\text{NDF}$ : 64.2/34

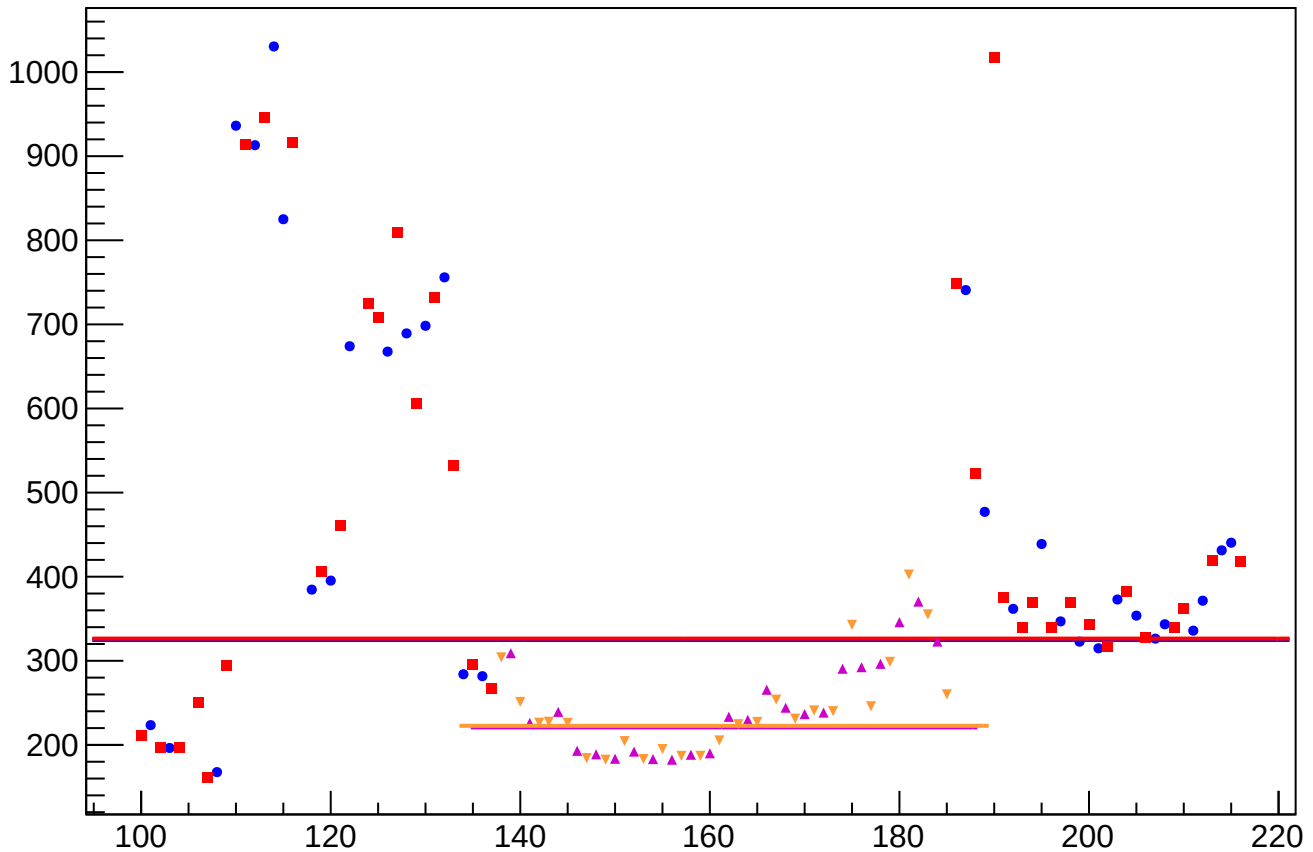
Left In:  $0.026 \pm 0.053$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $0.195 \pm 0.043$   $\chi^2/\text{NDF}$ : 77.6/55

All:  $0.158 \pm 0.031$   $\chi^2/\text{NDF}$ : 183.1/113

- sign  $0.119 \pm 0.044$   $\chi^2/\text{NDF}$ : 104.0/57

# diff\_targ\_thetaX\_rms vs Slug



Right In: 324.833 $\pm$ 0.056  $\chi^2$ /NDF: 4433664.7/30

Left Out: 222.727 $\pm$ 0.037  $\chi^2$ /NDF:1451363.0/24

Right Out: 326.408 $\pm$ 0.056  $\chi^2$ /NDF: 4899101.8/34

Left In: 220.802 $\pm$ 0.037  $\chi^2$ /NDF:1471497.9/22

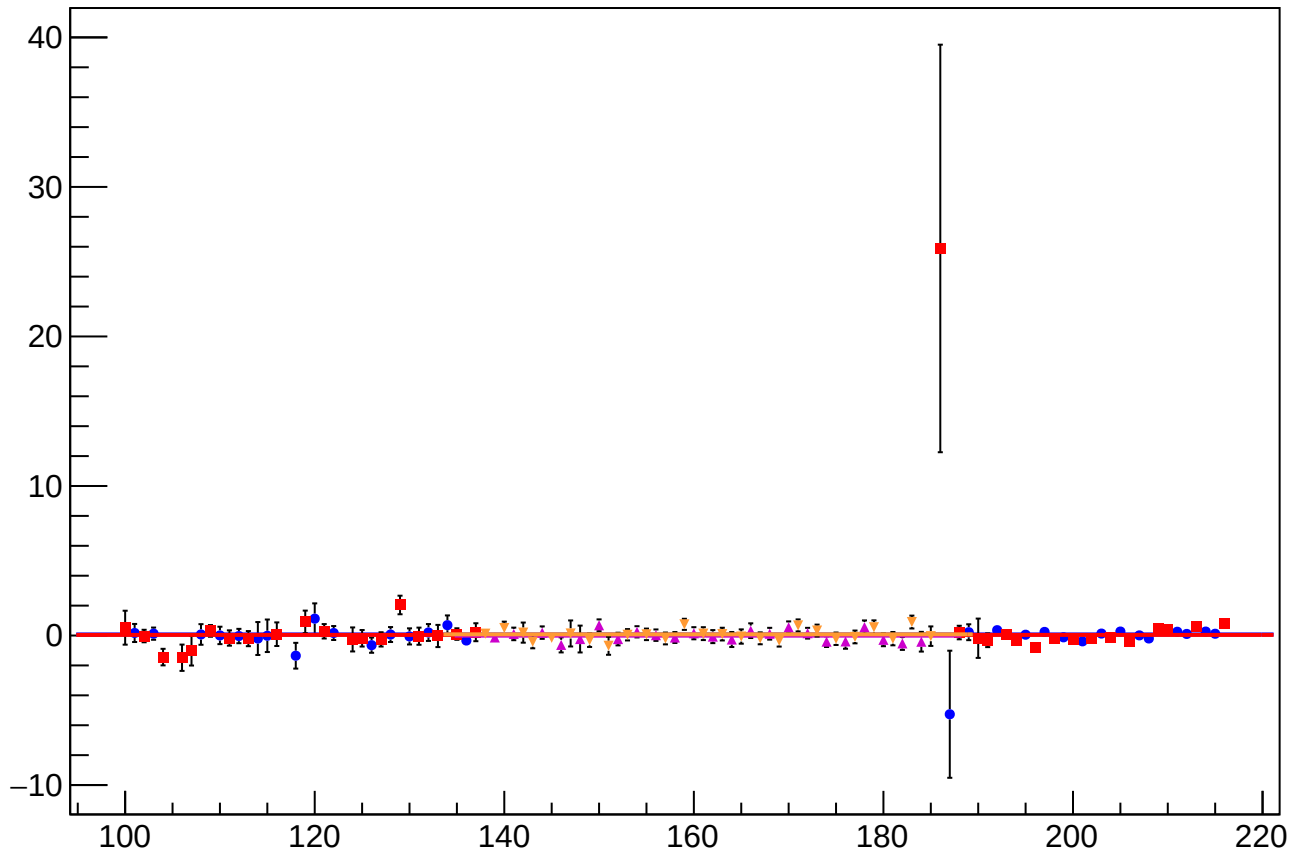
+ sign 253.333 $\pm$ 0.031  $\chi^2$ /NDF: 8204452.6/55

All: 253.208 $\pm$ 0.022  $\chi^2$ /NDF: 17004777.4/11

- sign 253.078 $\pm$ 0.031  $\chi^2$ /NDF: 8800290.8/57



diff\_targ\_thetaY\_mean vs Slug



Right In: 0.072 $\pm$ 0.059  $\chi^2$ /NDF: 18.8/30

Left Out: 0.079 $\pm$ 0.084  $\chi^2$ /NDF: 19.0/24

Right Out: 0.042 $\pm$ 0.062  $\chi^2$ /NDF: 72.3/34

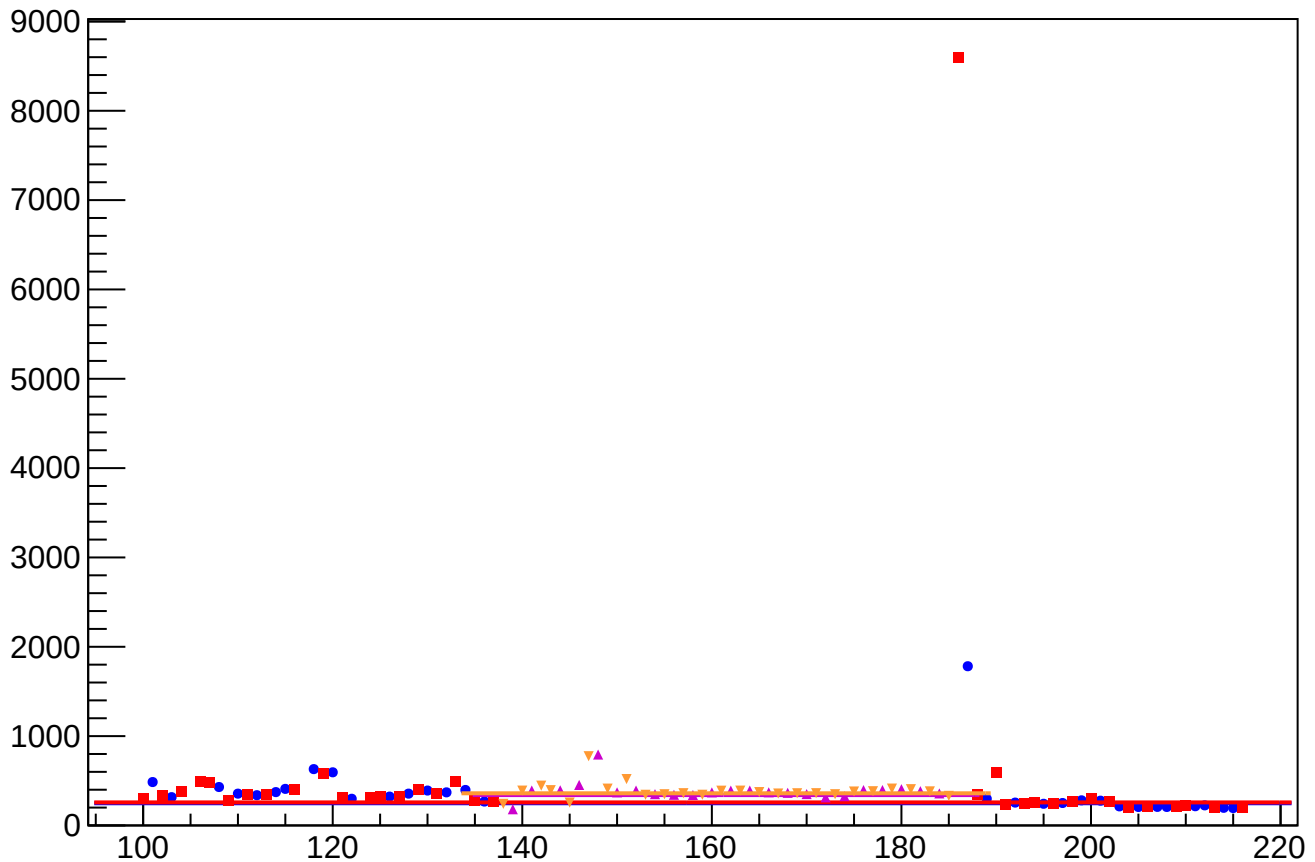
Left In: -0.009 $\pm$ 0.083  $\chi^2$ /NDF: 15.2/22

+ sign 0.074 $\pm$ 0.048  $\chi^2$ /NDF: 37.8/55

All: 0.049 $\pm$ 0.035  $\chi^2$ /NDF: 126.1/113

- sign 0.024 $\pm$ 0.049  $\chi^2$ /NDF: 87.8/57

# diff\_targ\_thetaY\_rms vs Slug



Right In:  $248.458 \pm 0.042$   $\chi^2/\text{NDF}$ : 2737782.3/30

Left Out:  $360.021 \pm 0.060$   $\chi^2/\text{NDF}$ : 1339748.9/24

Right Out:  $258.036 \pm 0.044$   $\chi^2/\text{NDF}$ : 3038562.4/34

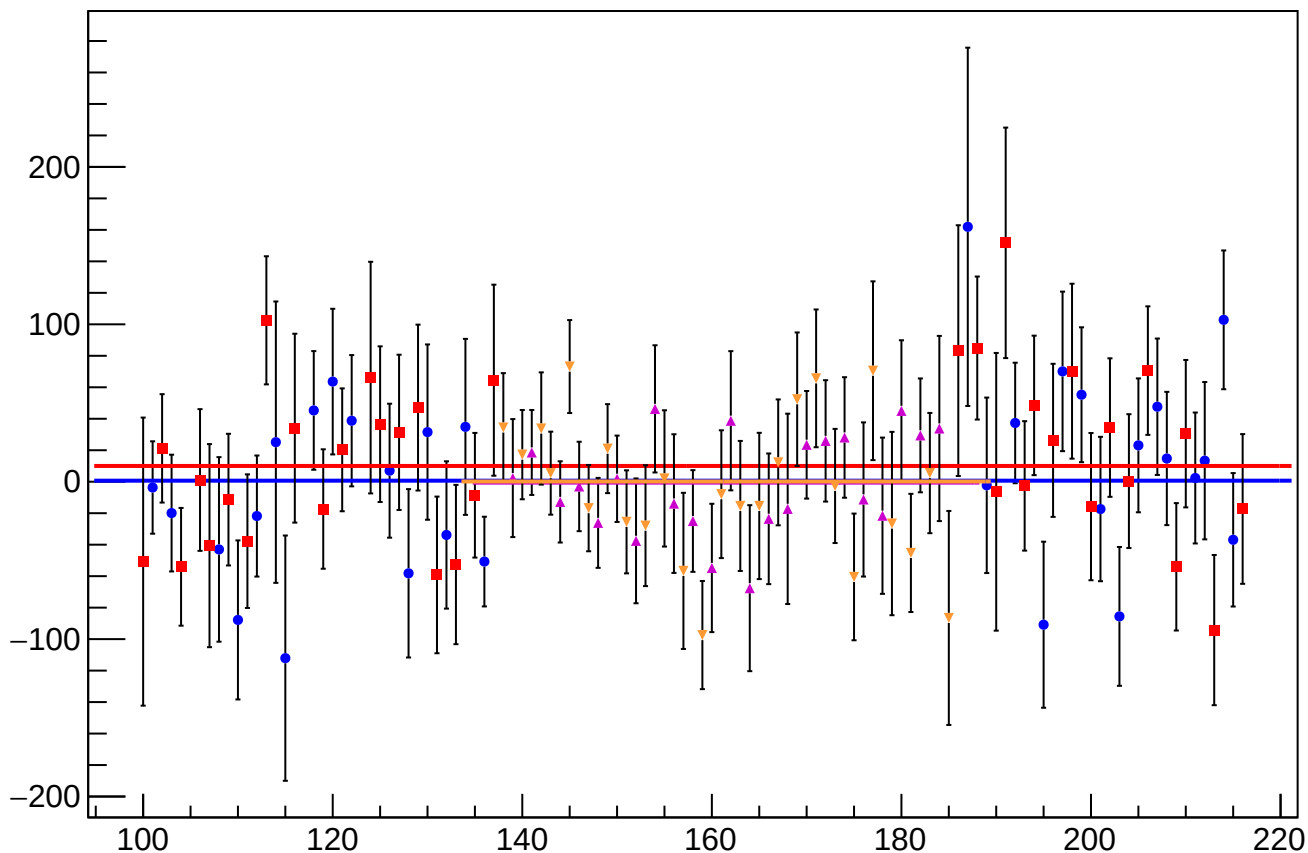
Left In:  $340.020 \pm 0.059$   $\chi^2/\text{NDF}$ : 2225094.5/22

+ sign  $285.354 \pm 0.034$   $\chi^2/\text{NDF}$ : 6421392.7/55

All:  $286.260 \pm 0.024$   $\chi^2/\text{NDF}$ : 12949216.4/11

- sign  $287.200 \pm 0.035$   $\chi^2/\text{NDF}$ : 6526399.8/57

# diff\_bpmE\_mean vs Slug



Right In:  $0.663 \pm 8.013$   $\chi^2/\text{NDF}$ : 37.5/30

Left Out:  $0.168 \pm 7.375$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $10.013 \pm 7.976$   $\chi^2/\text{NDF}$ : 37.8/34

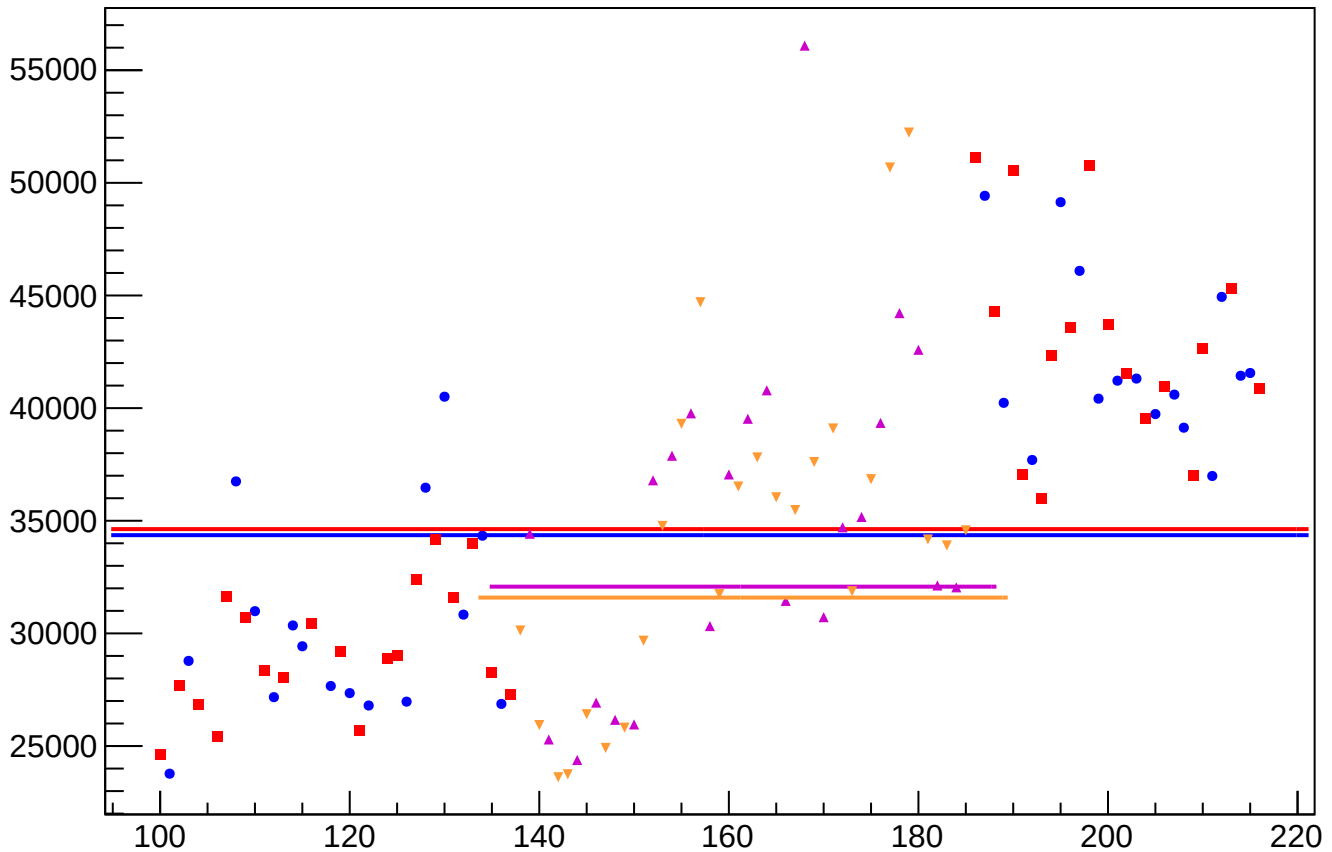
Left In:  $-0.586 \pm 7.667$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $0.395 \pm 5.426$   $\chi^2/\text{NDF}$ : 68.6/55

All:  $2.412 \pm 3.872$   $\chi^2/\text{NDF}$ : 120.4/113

- sign  $4.504 \pm 5.527$   $\chi^2/\text{NDF}$ : 51.5/57

# diff\_bpmE\_rms vs Slug



Right In: 34360.771 $\pm$ 5.666  $\chi^2$ /NDF: 1588783.8/30

Left Out: 31589.841 $\pm$ 5.215  $\chi^2$ /NDF:1590867.7/24

Right Out: 34629.345 $\pm$ 5.640  $\chi^2$ /NDF: 1620800.2/34

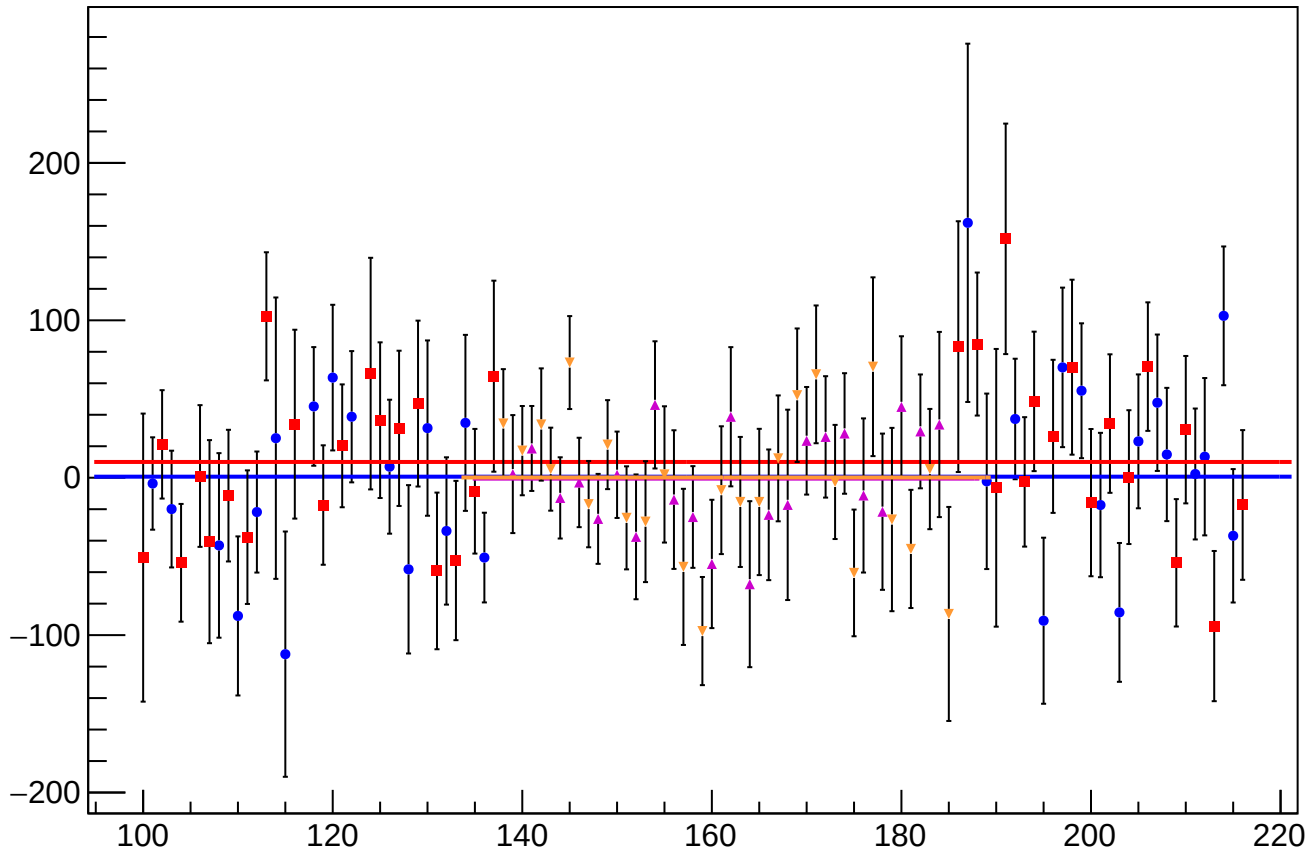
Left In: 32075.078 $\pm$ 5.421  $\chi^2$ /NDF:1455714.6/22

+ sign 32860.546 $\pm$ 3.837  $\chi^2$ /NDF: 3309131.1/55

All: 33077.084 $\pm$ 2.738  $\chi^2$ /NDF: 6498741.1/100

- sign 33301.755 $\pm$ 3.908  $\chi^2$ /NDF: 3183121.0/57

# diff\_bpmEX\_mean vs Slug



Right In:  $0.663 \pm 8.013$   $\chi^2/\text{NDF}$ : 37.5/30

Left Out:  $0.168 \pm 7.375$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $10.013 \pm 7.976$   $\chi^2/\text{NDF}$ : 37.8/34

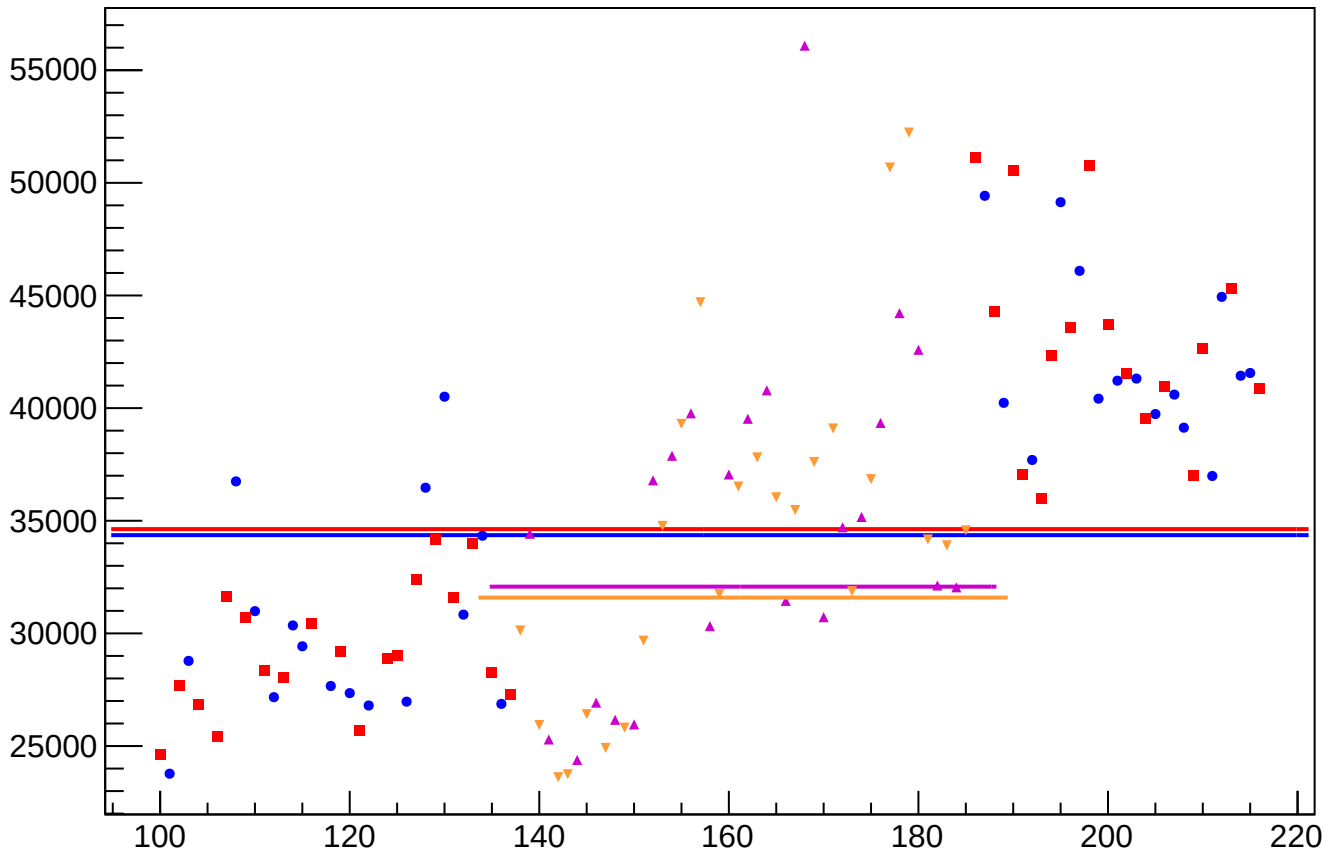
Left In:  $-0.586 \pm 7.667$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $0.395 \pm 5.426$   $\chi^2/\text{NDF}$ : 68.6/55

All:  $2.412 \pm 3.872$   $\chi^2/\text{NDF}$ : 120.4/113

- sign  $4.504 \pm 5.527$   $\chi^2/\text{NDF}$ : 51.5/57

# diff\_bpmEX\_rms vs Slug



Right In: 34360.771 $\pm$ 5.666  $\chi^2$ /NDF: 1588783.8/30

Left Out: 31589.841 $\pm$ 5.215  $\chi^2$ /NDF:1590867.7/24

Right Out: 34629.345 $\pm$ 5.640  $\chi^2$ /NDF: 1620800.2/34

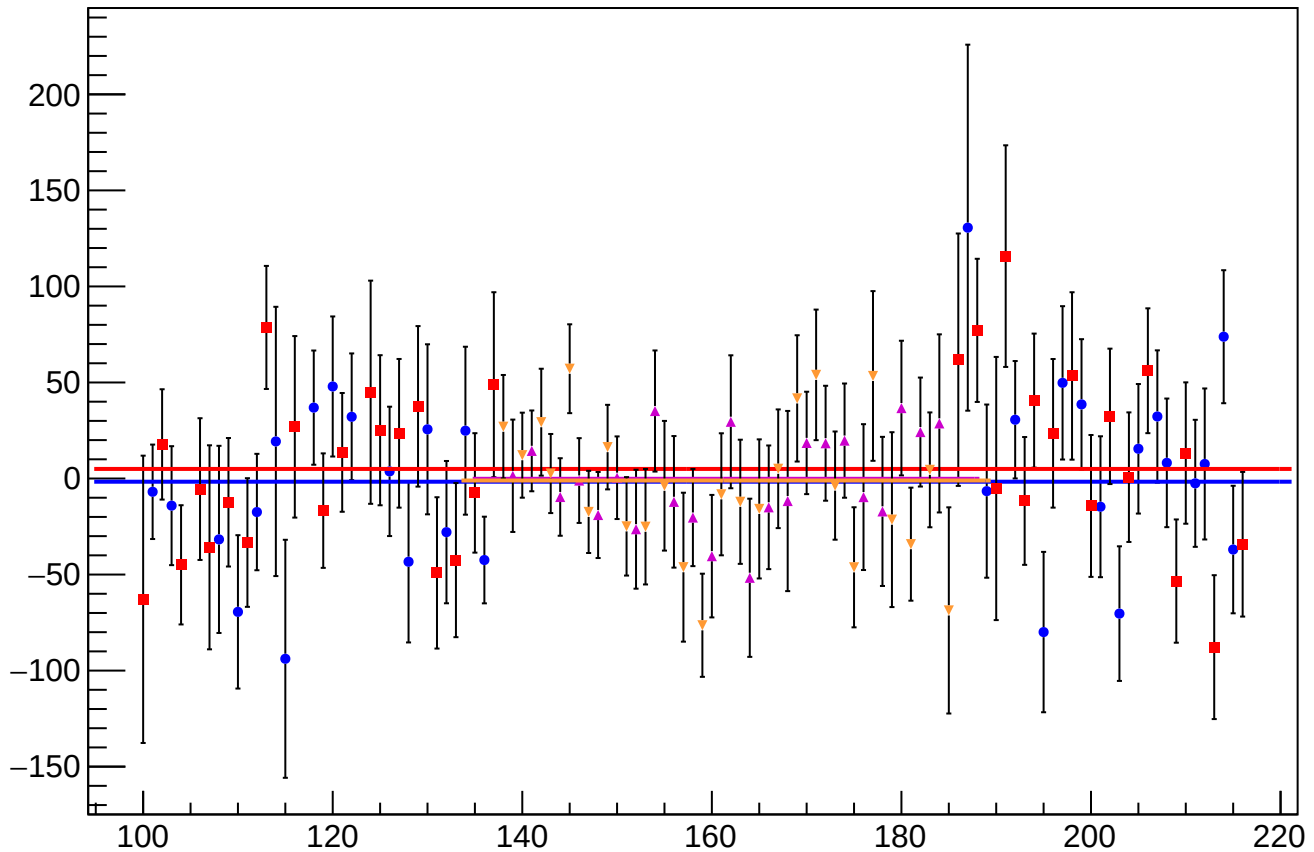
Left In: 32075.078 $\pm$ 5.421  $\chi^2$ /NDF:1455714.6/22

+ sign 32860.546 $\pm$ 3.837  $\chi^2$ /NDF: 3309131.1/55

All: 33077.084 $\pm$ 2.738  $\chi^2$ /NDF: 6498741.1/100

- sign 33301.755 $\pm$ 3.908  $\chi^2$ /NDF: 3183121.0/57

# diff\_bpmE\_11X12X\_mean vs Slug



Right In:  $-1.666 \pm 6.389$   $\chi^2/\text{NDF}$ : 37.0/30

Left Out:  $-1.042 \pm 5.755$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $4.988 \pm 6.363$   $\chi^2/\text{NDF}$ : 42.7/34

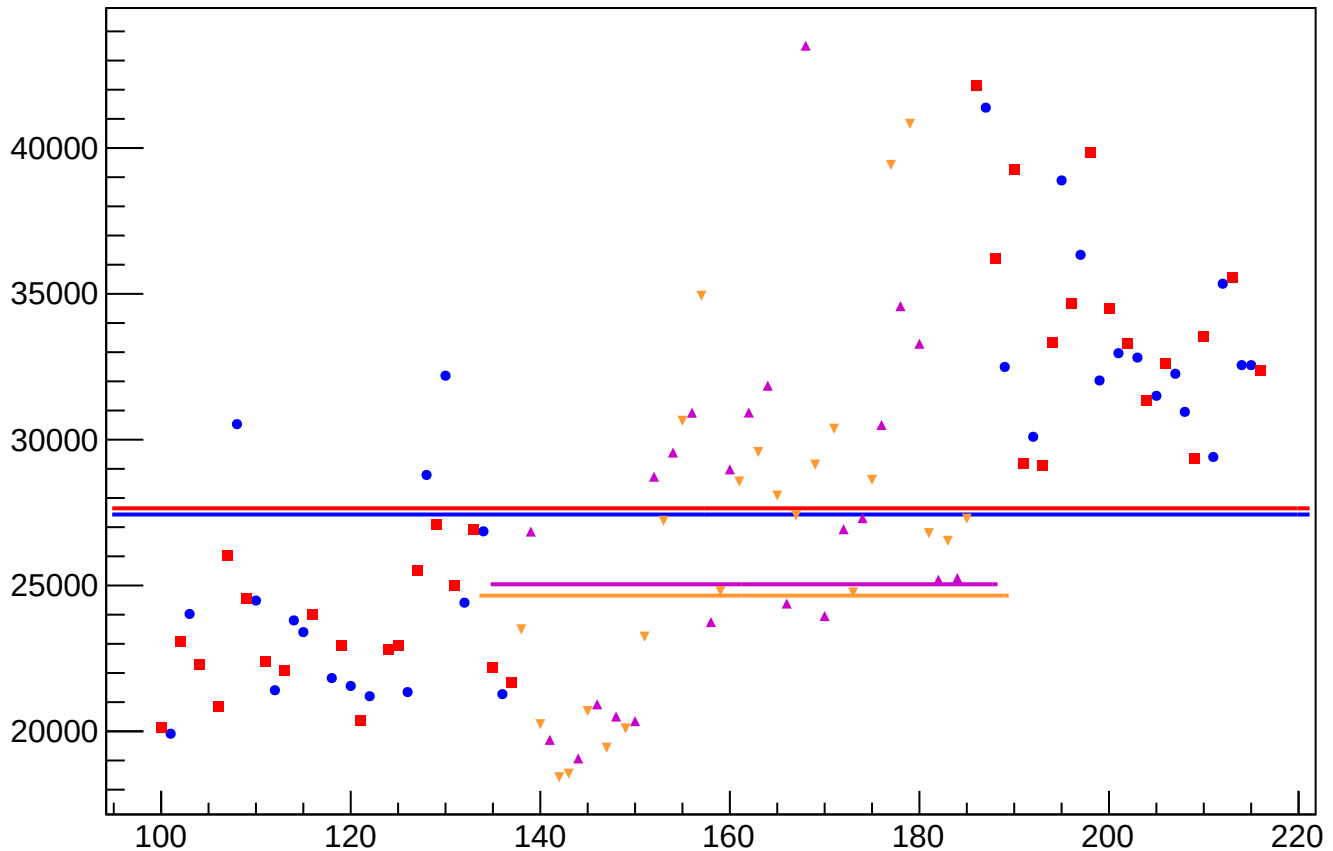
Left In:  $-0.147 \pm 5.985$   $\chi^2/\text{NDF}$ : 12.1/22

+ sign  $-1.321 \pm 4.276$   $\chi^2/\text{NDF}$ : 69.4/55

All:  $0.436 \pm 3.053$   $\chi^2/\text{NDF}$ : 124.9/113

- sign  $2.263 \pm 4.359$   $\chi^2/\text{NDF}$ : 55.2/57

# diff\_bpmE\_11X12X\_rms vs Slug



Right In: 27434.098+/-4.518  $\chi^2/\text{NDF}$ : 1503689.4/30

Left Out: 24654.001+/-4.069  $\chi^2/\text{NDF}$ : 1582710.2/24

Right Out: 27646.331+/-4.499  $\chi^2/\text{NDF}$ : 1561258.4/34

Left In: 25041.993+/-4.232  $\chi^2/\text{NDF}$ : 1441641.5/22

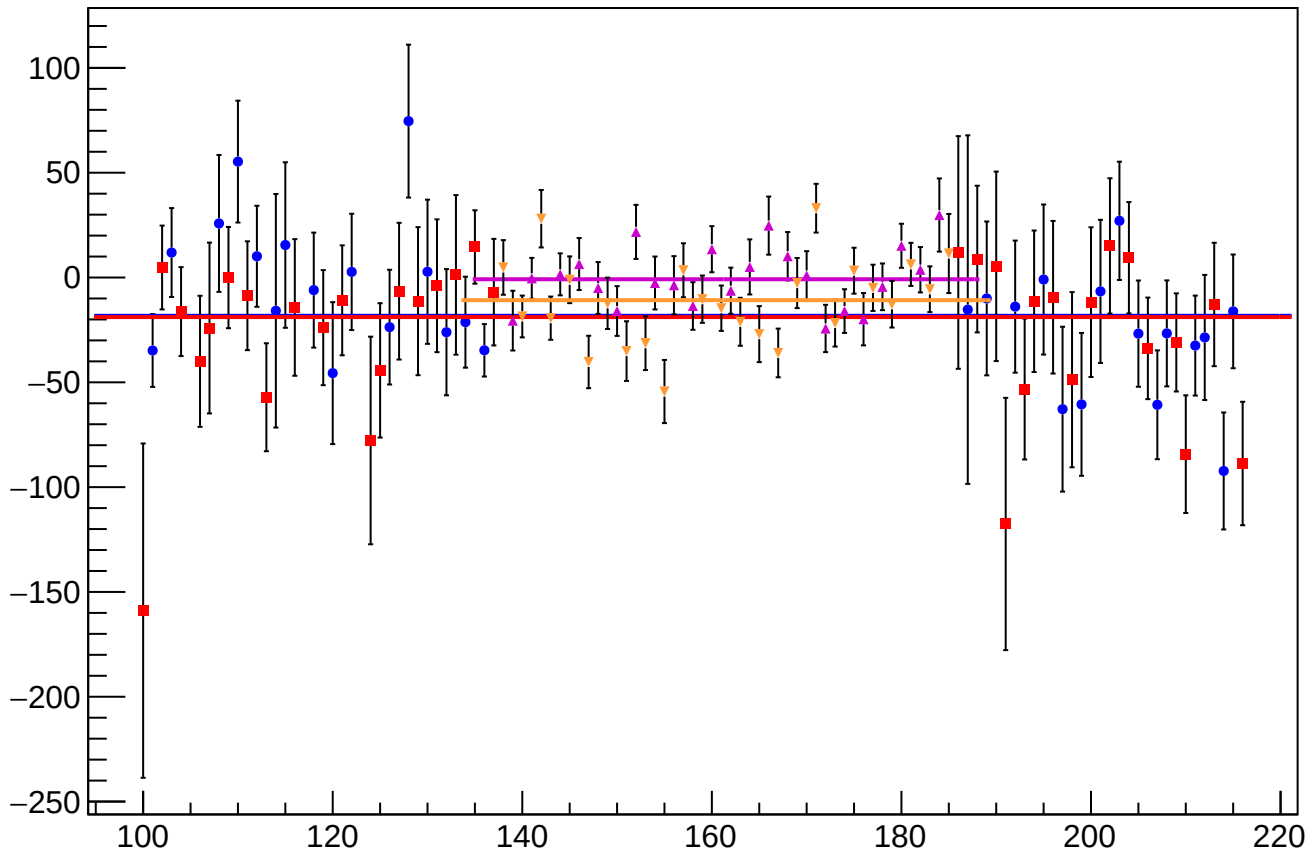
+ sign 25899.113+/-3.024  $\chi^2/\text{NDF}$ : 3295462.6/55

All: 26078.253+/-2.159  $\chi^2/\text{NDF}$ : 6483299.7/1

- sign 26264.454+/-3.083  $\chi^2/\text{NDF}$ : 3180678.0/57



# diff\_bpm4aesumX\_mean vs Slug



Right In:  $-18.268 \pm 4.832$   $\chi^2/\text{NDF}$ : 39.7/30

Left Out:  $-10.822 \pm 2.370$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-18.868 \pm 5.012$   $\chi^2/\text{NDF}$ : 34.3/34

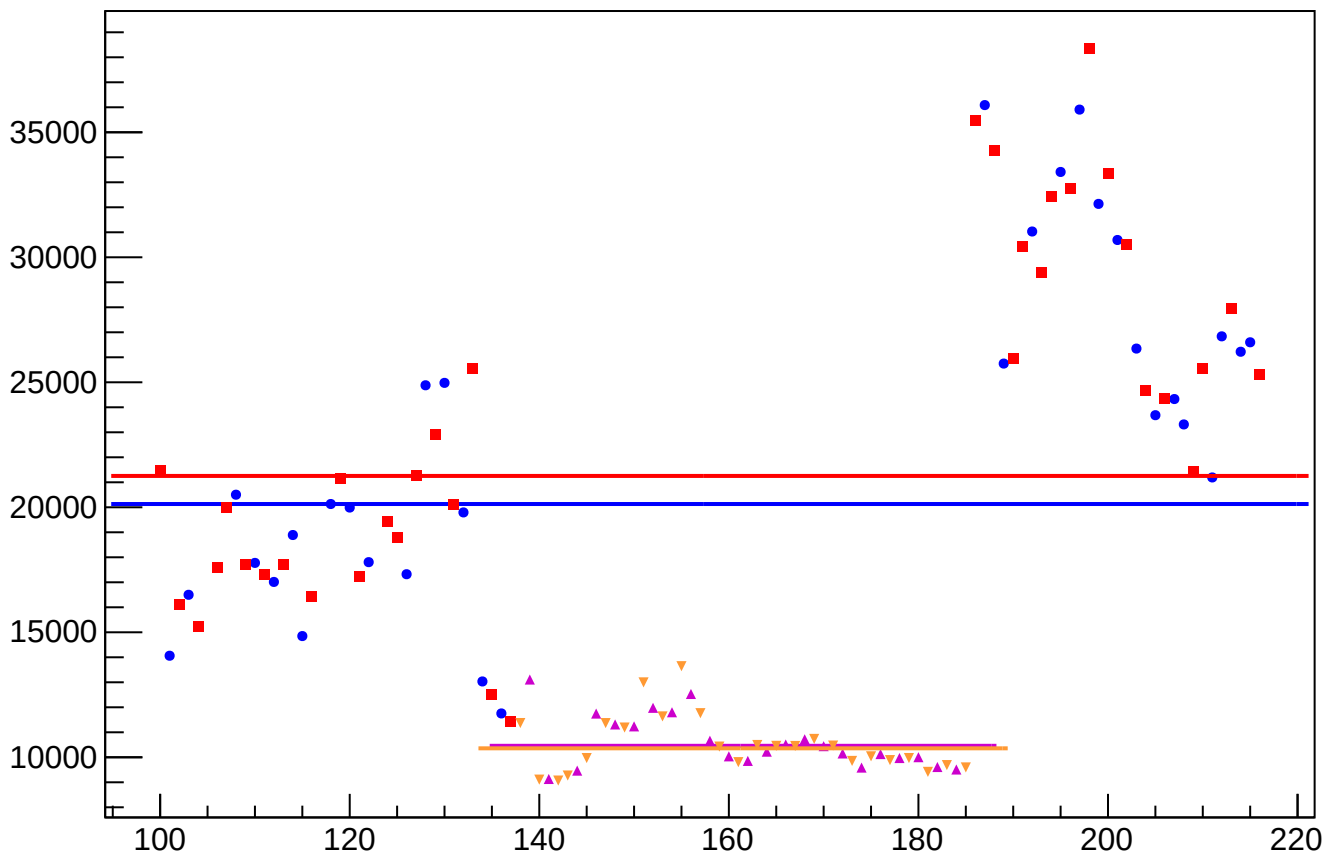
Left In:  $-0.826 \pm 2.457$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-12.266 \pm 2.128$   $\chi^2/\text{NDF}$ : 102.8/55

All:  $-8.437 \pm 1.532$   $\chi^2/\text{NDF}$ : 183.7/113

- sign  $-4.323 \pm 2.206$   $\chi^2/\text{NDF}$ : 74.1/57

# diff\_bpm4aesumX\_rms vs Slug



Right In: 20130.728 $\pm$ 3.417  $\chi^2$ /NDF: 3537295.5/30

Left Out: 10358.363 $\pm$ 1.676  $\chi^2$ /NDF:363077.1/24

Right Out: 21254.149 $\pm$ 3.544  $\chi^2$ /NDF: 3381108.4/34

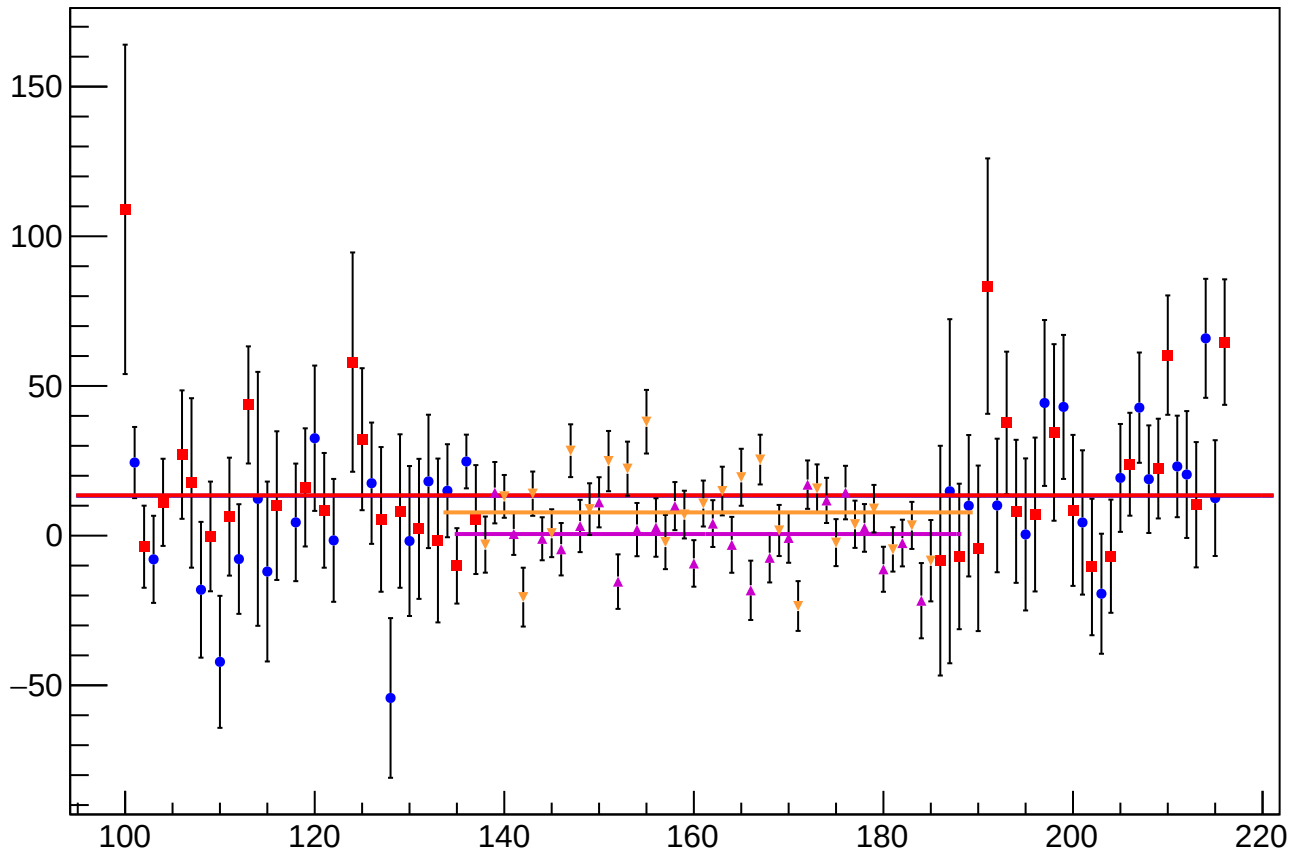
Left In: 10459.060 $\pm$ 1.737  $\chi^2$ /NDF:314636.9/22

+ sign 12253.593 $\pm$ 1.505  $\chi^2$ /NDF: 10493138.4/55

All: 12396.963 $\pm$ 1.083  $\chi^2$ /NDF: 21689278.9

- sign 12551.039 $\pm$ 1.560  $\chi^2$ /NDF: 11177308.2/57

# diff\_bpm4aeddifX\_mean vs Slug



Right In:  $13.340 \pm 3.449$   $\chi^2/\text{NDF}: 39.2/30$

Left Out:  $7.763 \pm 1.691$   $\chi^2/\text{NDF}: 60.9/24$

Right Out:  $13.461 \pm 3.583$   $\chi^2/\text{NDF}: 34.9/34$

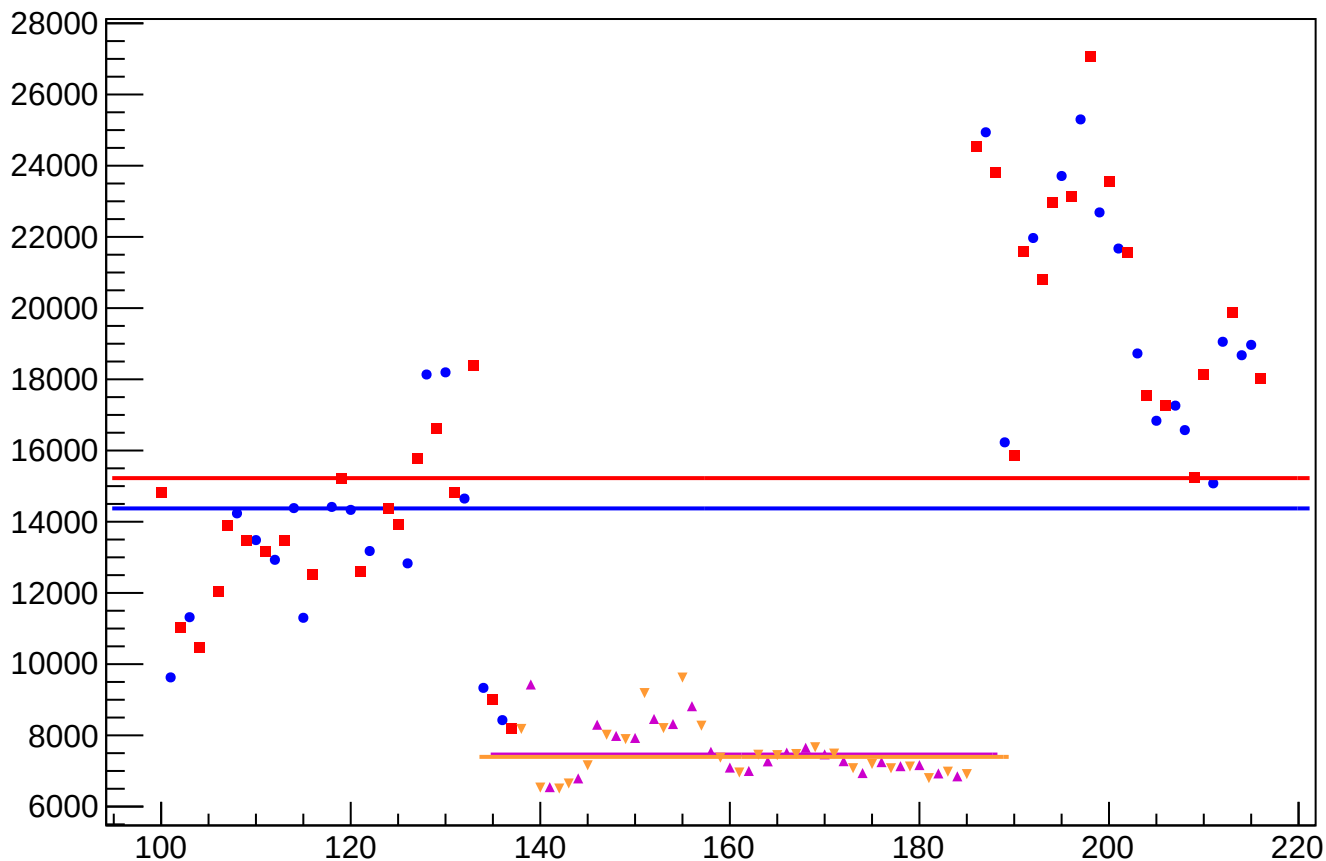
Left In:  $0.532 \pm 1.752$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $8.844 \pm 1.519$   $\chi^2/\text{NDF}: 102.3/55$

All:  $6.039 \pm 1.093$   $\chi^2/\text{NDF}: 184.3/113$

- sign  $3.026 \pm 1.574$   $\chi^2/\text{NDF}: 74.9/57$

# diff\_bpm4aediffX\_rms vs Slug



Right In: 14373.934+/-2.439  $\chi^2/\text{NDF}$ : 3470788.3/30

Left Out: 7395.667+/-1.196  $\chi^2/\text{NDF}$ :324459.4/24

Right Out: 15224.977+/-2.534  $\chi^2/\text{NDF}$ : 3250311.2/34

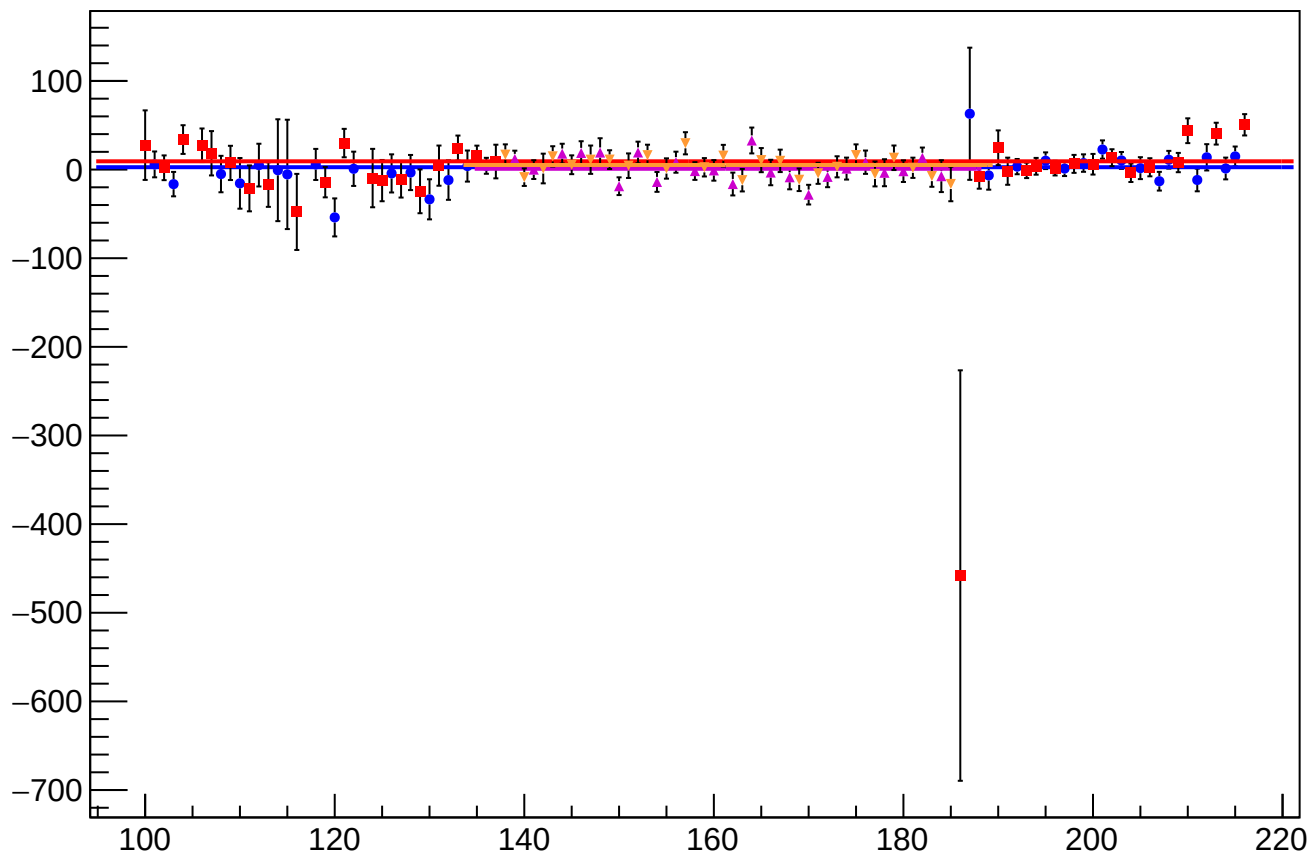
Left In: 7460.824+/-1.239  $\chi^2/\text{NDF}$ :284034.9/22

+ sign 8748.340+/-1.074  $\chi^2/\text{NDF}$ : 10393725.5/55

All: 8849.790+/-0.773  $\chi^2/\text{NDF}$ : 21524784.2/100

- sign 8958.749+/-1.113  $\chi^2/\text{NDF}$ : 11112549.0/57

# diff\_bpm4aesumY\_mean vs Slug



Right In:  $2.677 \pm 2.408$   $\chi^2/\text{NDF}$ : 25.0/30

Left Out:  $5.178 \pm 2.459$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $9.328 \pm 2.376$   $\chi^2/\text{NDF}$ : 53.2/34

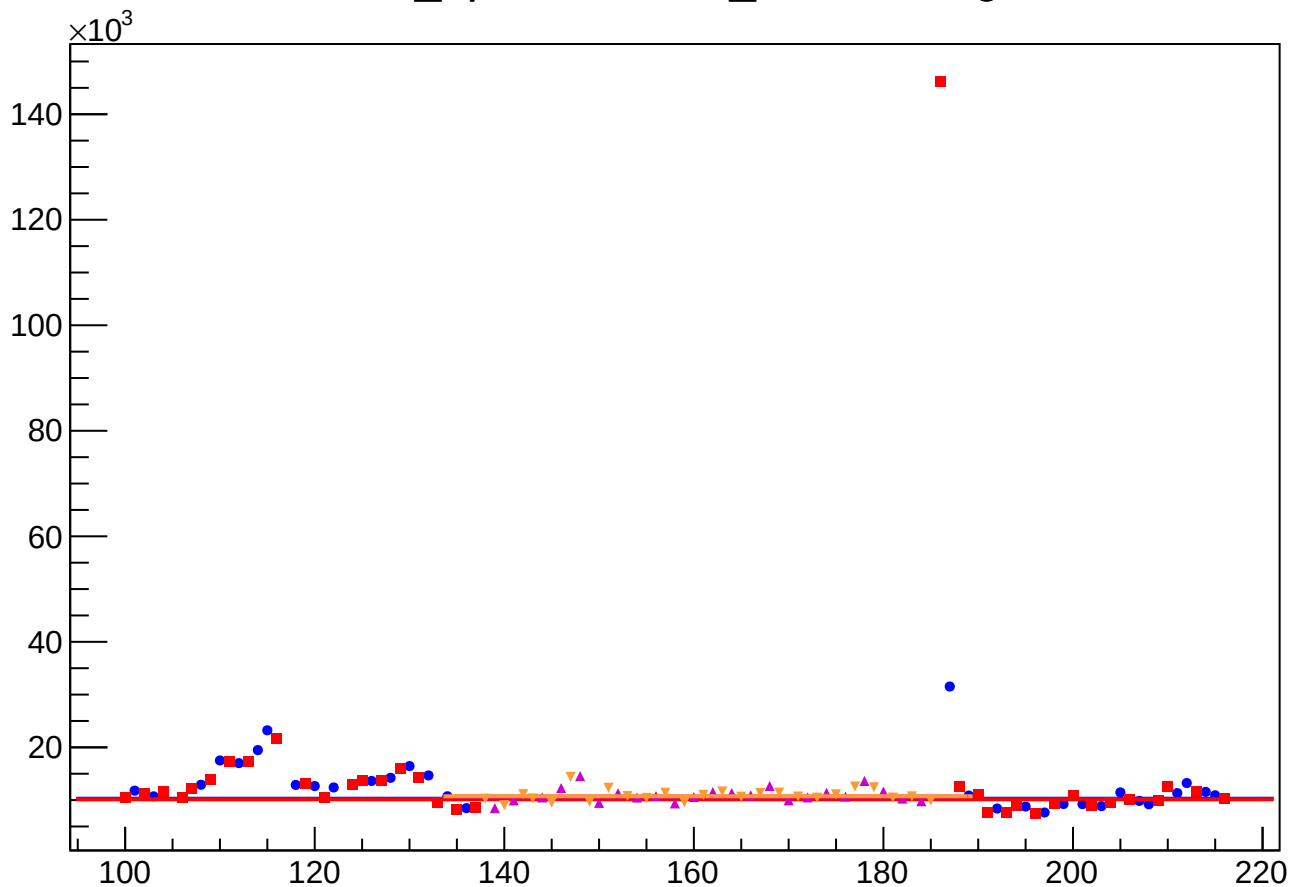
Left In:  $0.891 \pm 2.519$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $3.901 \pm 1.720$   $\chi^2/\text{NDF}$ : 43.9/55

All:  $4.624 \pm 1.219$   $\chi^2/\text{NDF}$ : 135.2/113

- sign  $5.354 \pm 1.728$   $\chi^2/\text{NDF}$ : 91.0/57

# diff\_bpm4aesumY\_rms vs Slug



Right In:  $10261.223 \pm 1.703$   $\chi^2/\text{NDF}$ : 1763631.4/30

Left Out:  $10733.733 \pm 1.739$   $\chi^2/\text{NDF}$ : 368279.7/24

Right Out:  $10158.610 \pm 1.680$   $\chi^2/\text{NDF}$ : 2391414.8/34

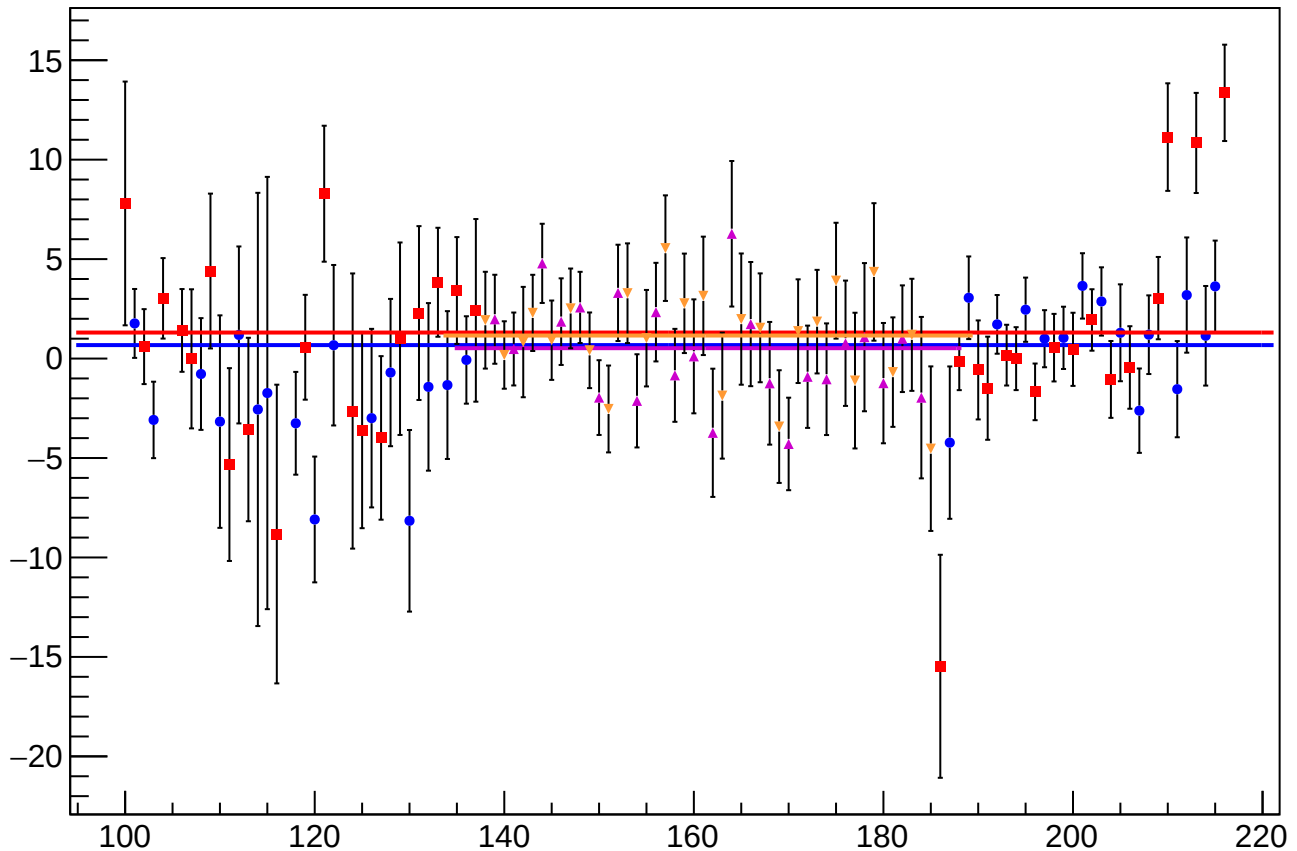
Left In:  $10677.154 \pm 1.781$   $\chi^2/\text{NDF}$ : 500574.4/22

+ sign  $10492.514 \pm 1.216$   $\chi^2/\text{NDF}$ : 2169615.6/55

All:  $10447.885 \pm 0.862$   $\chi^2/\text{NDF}$ : 5109161.6/100

- sign  $10402.835 \pm 1.222$   $\chi^2/\text{NDF}$ : 2936841.3/57

# diff\_bpm4aediY\_mean vs Slug



Right In:  $0.677 \pm 0.419$   $\chi^2/\text{NDF}$ : 35.9/30

Left Out:  $1.158 \pm 0.500$   $\chi^2/\text{NDF}$ : 16.8/24

Right Out:  $1.308 \pm 0.401$   $\chi^2/\text{NDF}$ : 89.5/34

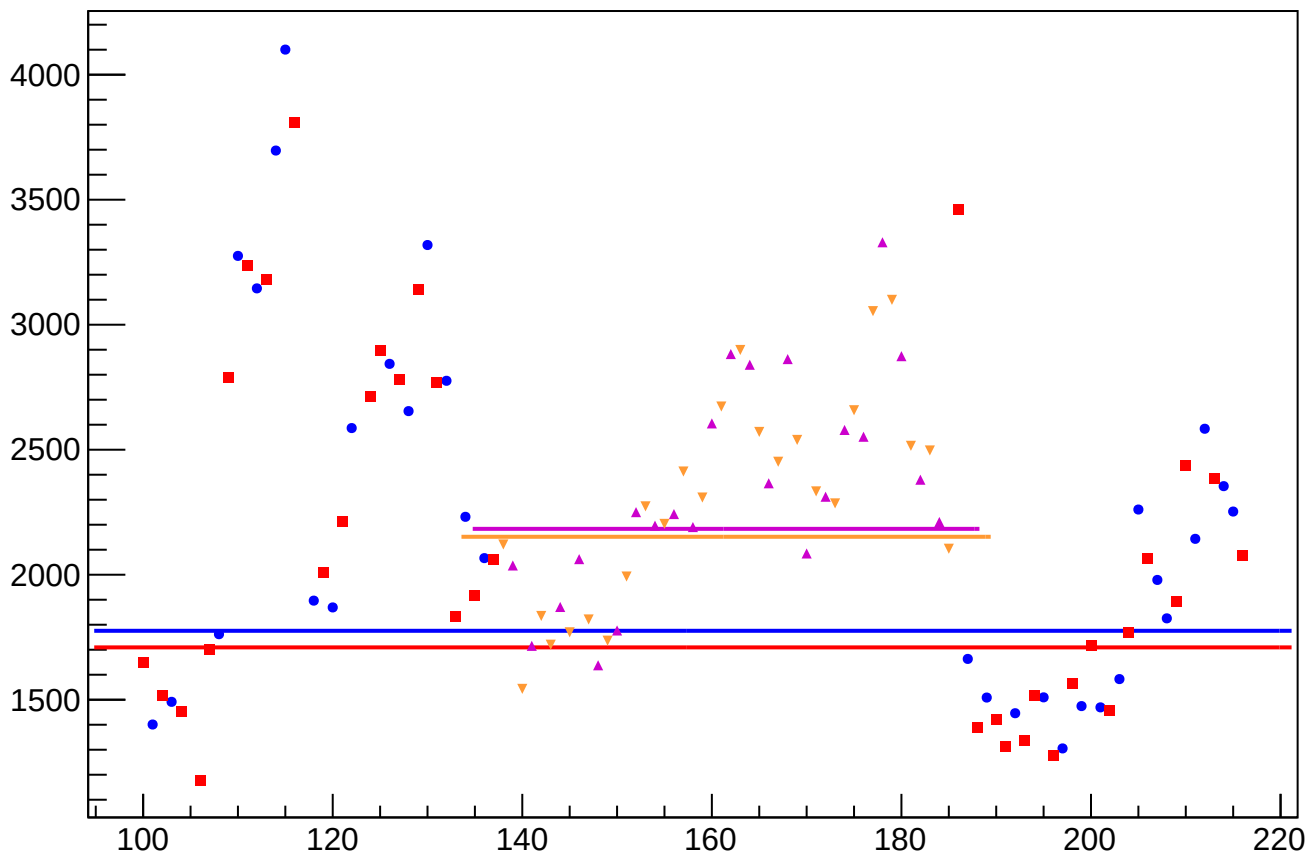
Left In:  $0.522 \pm 0.520$   $\chi^2/\text{NDF}$ : 22.3/22

+ sign  $0.876 \pm 0.321$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $0.946 \pm 0.226$   $\chi^2/\text{NDF}$ : 166.6/113

- sign  $1.015 \pm 0.318$   $\chi^2/\text{NDF}$ : 113.3/57

# diff\_bpm4aediY\_rms vs Slug



Right In: 1775.706 $\pm$ 0.297  $\chi^2$ /NDF: 2423851.6/30

Left Out: 2151.757 $\pm$ 0.354  $\chi^2$ /NDF:1349537.9/24

Right Out: 1709.344 $\pm$ 0.284  $\chi^2$ /NDF: 2761300.8/34

Left In: 2183.482 $\pm$ 0.368  $\chi^2$ /NDF:1162266.2/22

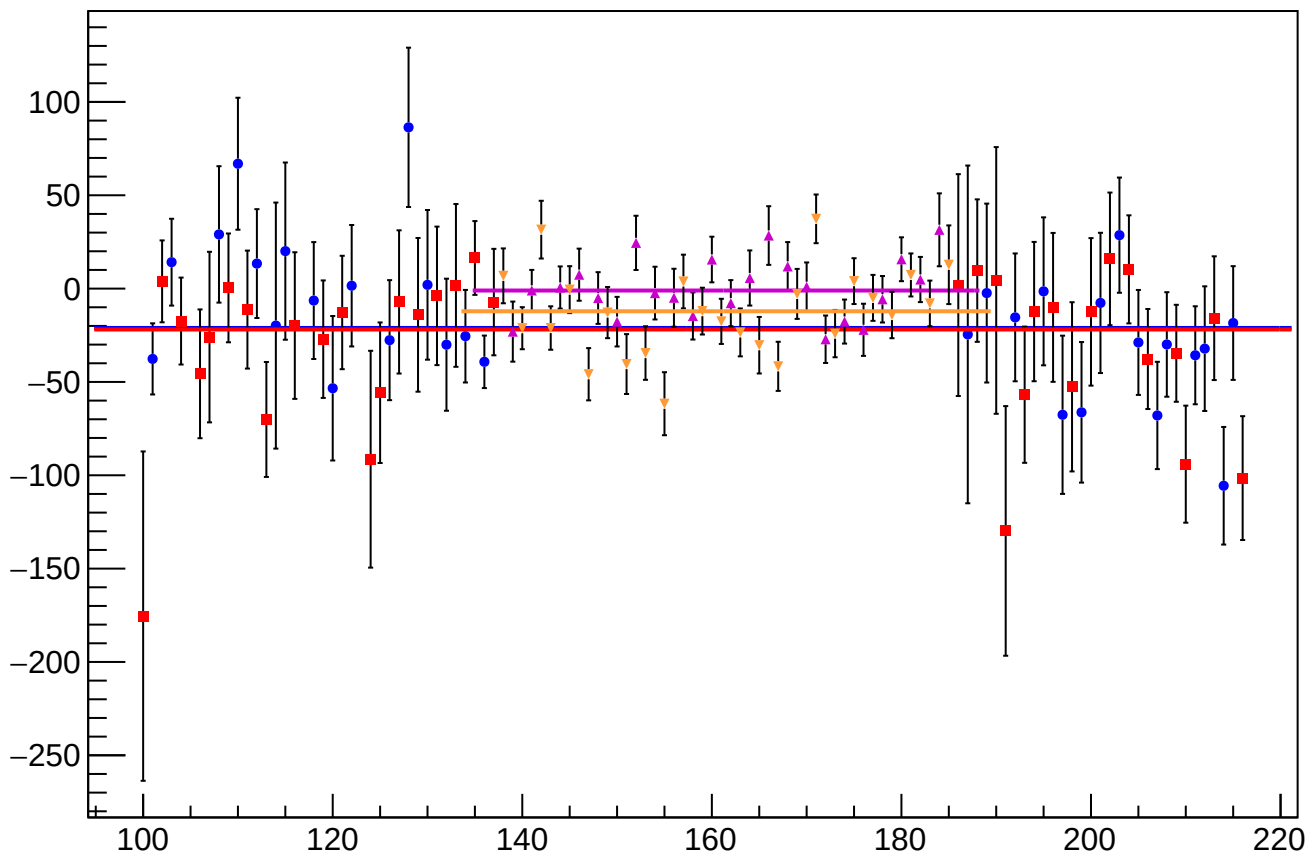
+ sign 1931.008 $\pm$ 0.227  $\chi^2$ /NDF: 4437131.7/55

All: 1908.333 $\pm$ 0.160  $\chi^2$ /NDF: 9423440.5/11

- sign 1886.205 $\pm$ 0.225  $\chi^2$ /NDF: 4966639.9/57



# diff\_bpmtargetsumX\_mean vs Slug



Right In:  $-21.083 \pm 5.463$   $\chi^2/\text{NDF}: 39.4/30$

Left Out:  $-12.135 \pm 2.661$   $\chi^2/\text{NDF}: 62.6/24$

Right Out:  $-21.903 \pm 5.682$   $\chi^2/\text{NDF}: 34.4/34$

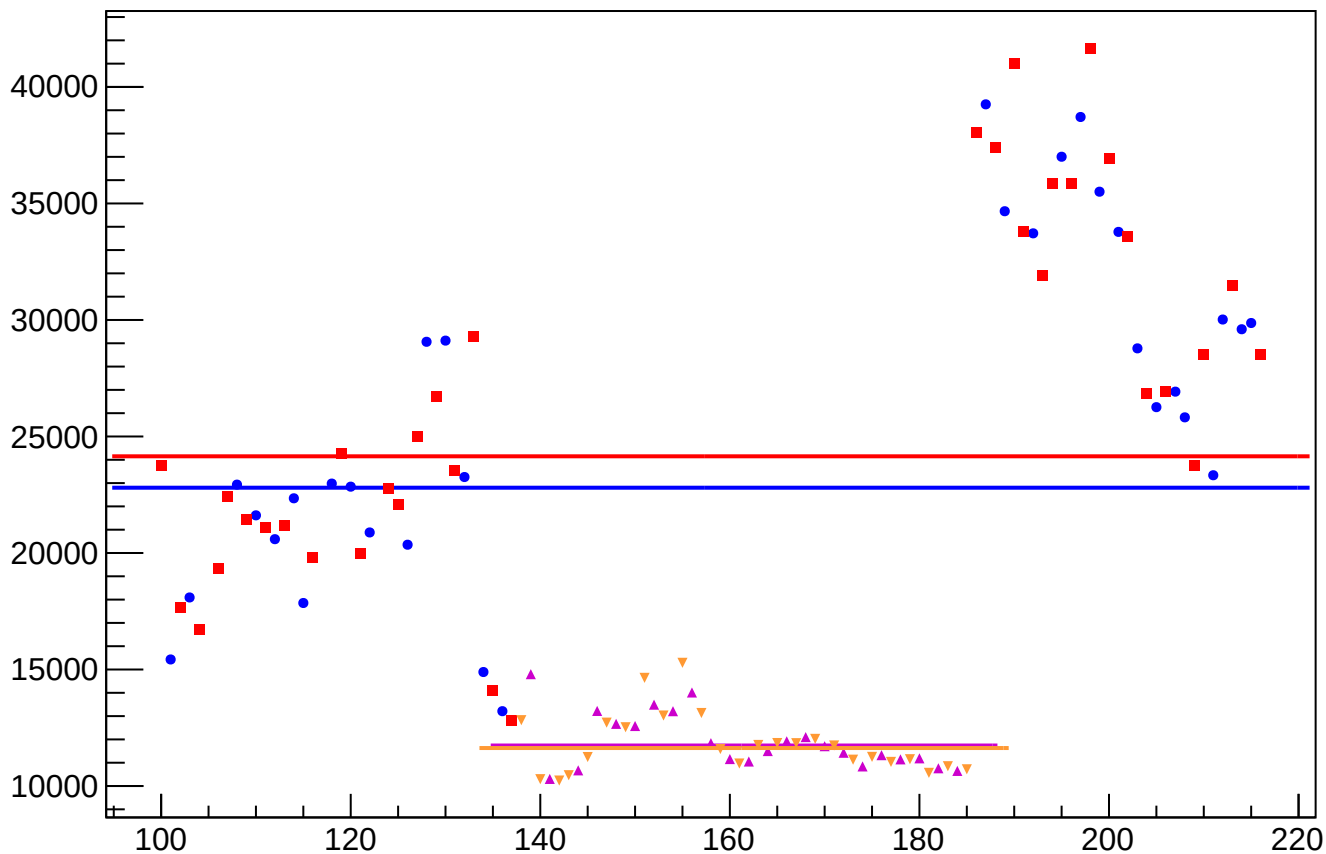
Left In:  $-1.024 \pm 2.758$   $\chi^2/\text{NDF}: 28.8/22$

+ sign  $-13.851 \pm 2.392$   $\chi^2/\text{NDF}: 104.2/55$

All:  $-9.588 \pm 1.722$   $\chi^2/\text{NDF}: 184.9/113$

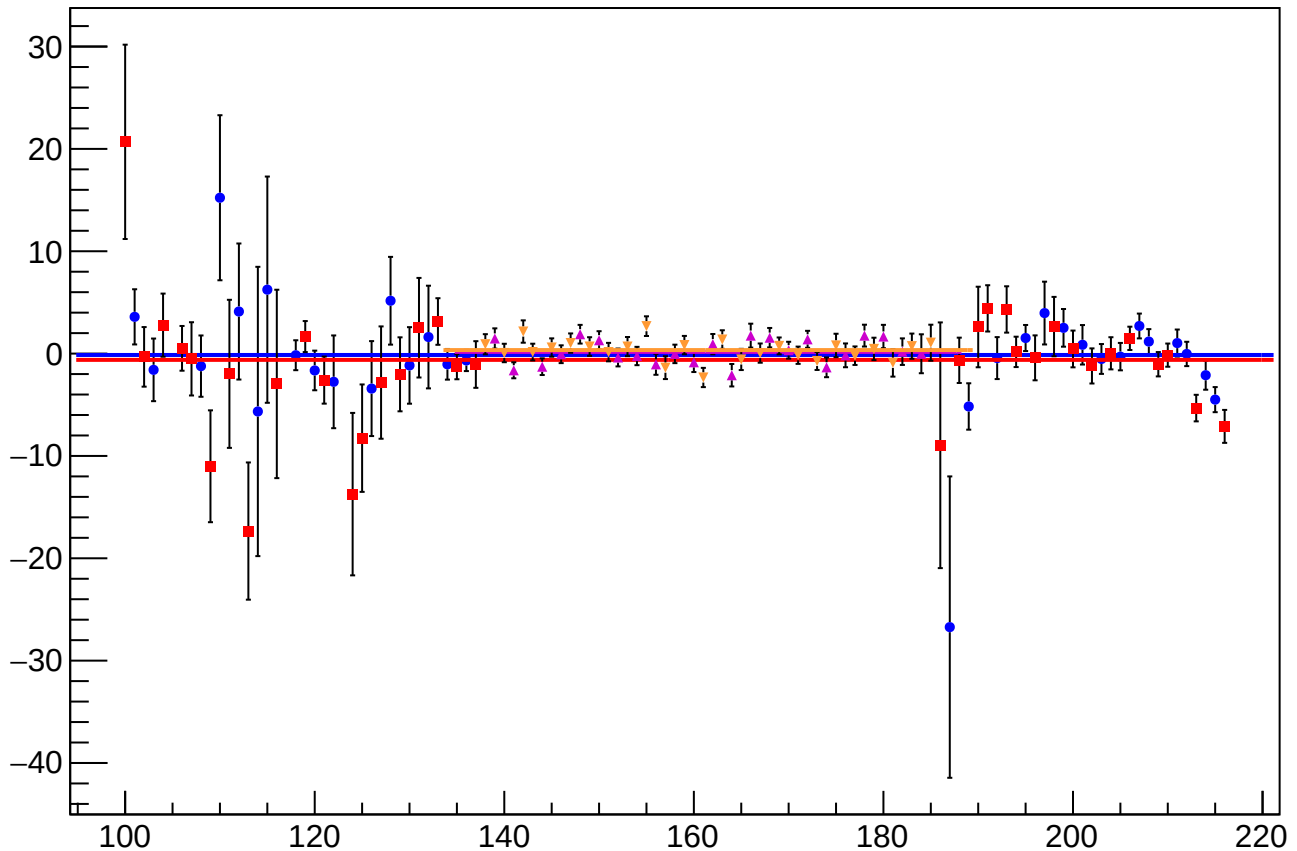
- sign  $-5.004 \pm 2.481$   $\chi^2/\text{NDF}: 74.1/57$

# diff\_bpmtargetsumX\_rms vs Slug



Right In:  $22801.978 \pm 3.863$   $\chi^2/\text{NDF}$ : 3455531.9/30  
 Left Out:  $11630.201 \pm 1.882$   $\chi^2/\text{NDF}$ : 356022.1/24  
 Right Out:  $24149.362 \pm 4.018$   $\chi^2/\text{NDF}$ : 3233720.5/34  
 Left In:  $11738.371 \pm 1.950$   $\chi^2/\text{NDF}$ : 313542.0/22  
 All:  $13932.415 \pm 1.218$   $\chi^2/\text{NDF}$ : 21860015.2  
 + sign 13772.733  $\pm 1.692$   $\chi^2/\text{NDF}$ : 10571774.1/55  
 - sign 14104.131  $\pm 1.754$   $\chi^2/\text{NDF}$ : 11269749.0/57

# diff\_bpmtargetdiffX\_mean vs Slug



Right In:  $-0.134 \pm 0.327$   $\chi^2/\text{NDF}: 46.7/30$

Left Out:  $0.343 \pm 0.194$   $\chi^2/\text{NDF}: 26.8/24$

Right Out:  $-0.613 \pm 0.349$   $\chi^2/\text{NDF}: 74.3/34$

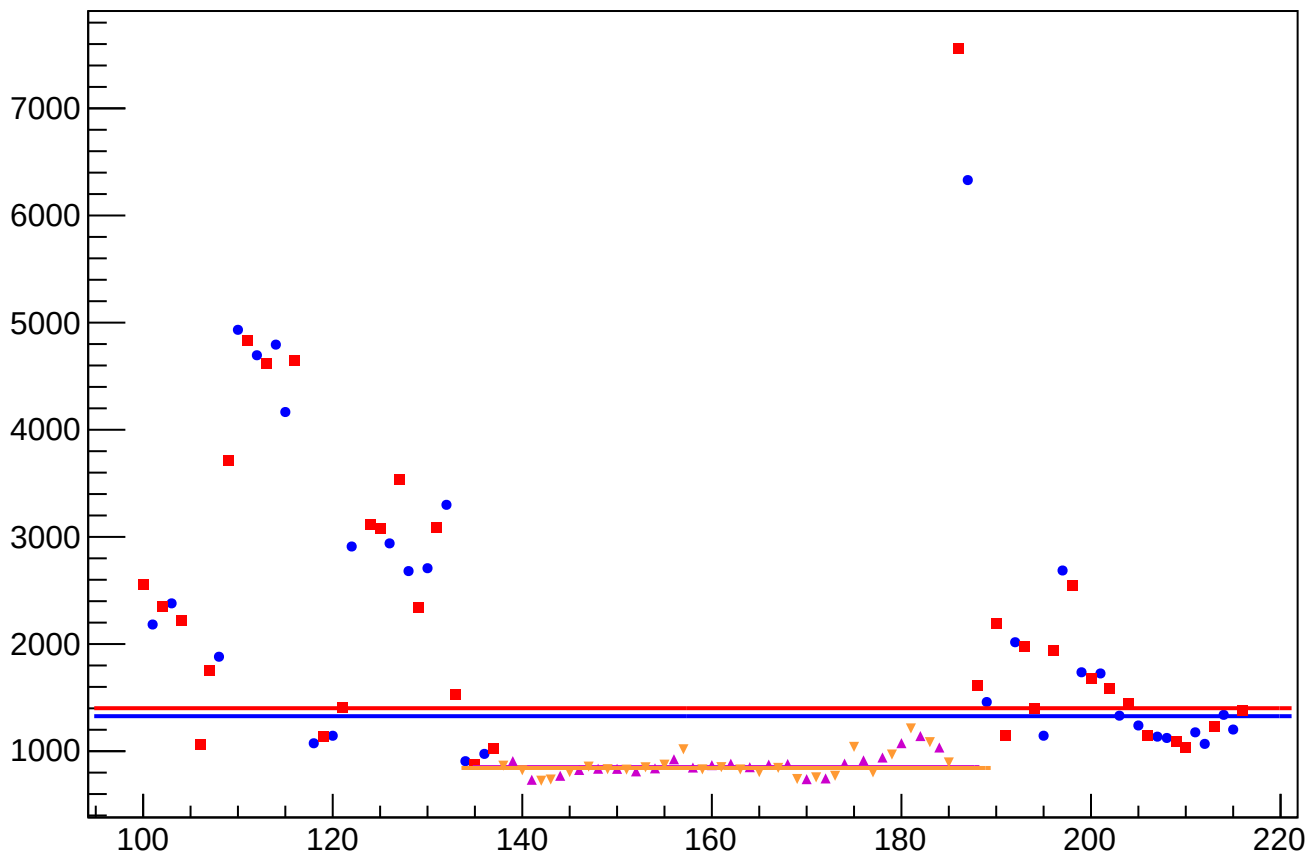
Left In:  $0.165 \pm 0.201$   $\chi^2/\text{NDF}: 36.3/22$

+ sign  $0.219 \pm 0.167$   $\chi^2/\text{NDF}: 75.0/55$

All:  $0.100 \pm 0.120$   $\chi^2/\text{NDF}: 190.5/113$

- sign  $-0.029 \pm 0.174$   $\chi^2/\text{NDF}: 114.4/57$

# diff\_bpmtargetdiffX\_rms vs Slug



Right In:  $1326.741 \pm 0.232$   $\chi^2/\text{NDF}: 4744731.9/30$

Left Out:  $843.266 \pm 0.137$   $\chi^2/\text{NDF}: 505106.4/24$

Right Out:  $1401.201 \pm 0.246$   $\chi^2/\text{NDF}: 5208860.4/34$

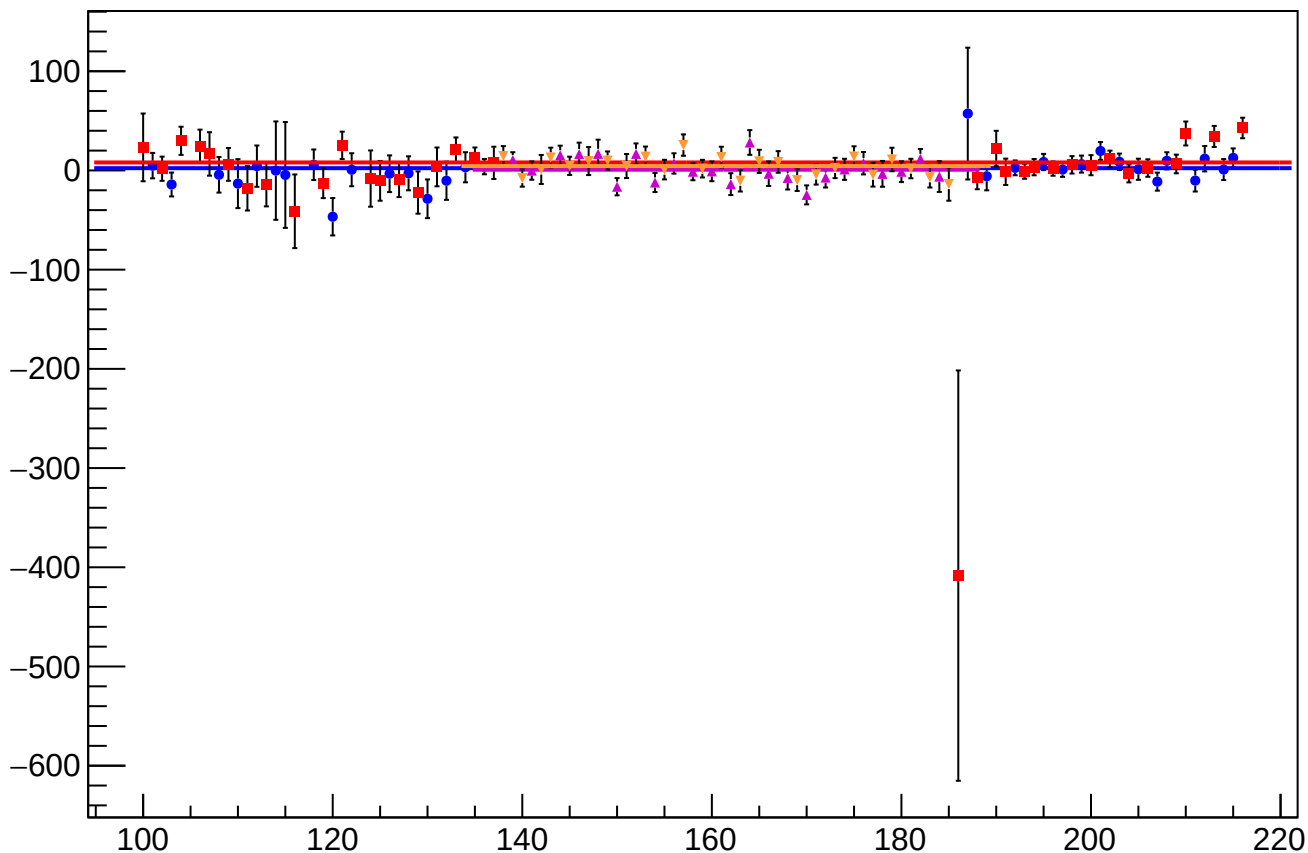
Left In:  $851.618 \pm 0.142$   $\chi^2/\text{NDF}: 382555.6/22$

+ sign  $968.650 \pm 0.118$   $\chi^2/\text{NDF}: 8479252.1/55$

All:  $978.203 \pm 0.085$   $\chi^2/\text{NDF}: 17816336.8/11$

- sign  $988.611 \pm 0.123$   $\chi^2/\text{NDF}: 9323368.4/57$

# diff\_bpmtargetsumY\_mean vs Slug



Right In:  $2.289 \pm 2.085$   $\chi^2/\text{NDF}$ : 24.6/30

Left Out:  $4.383 \pm 2.122$   $\chi^2/\text{NDF}$ : 18.6/24

Right Out:  $8.055 \pm 2.061$   $\chi^2/\text{NDF}$ : 52.1/34

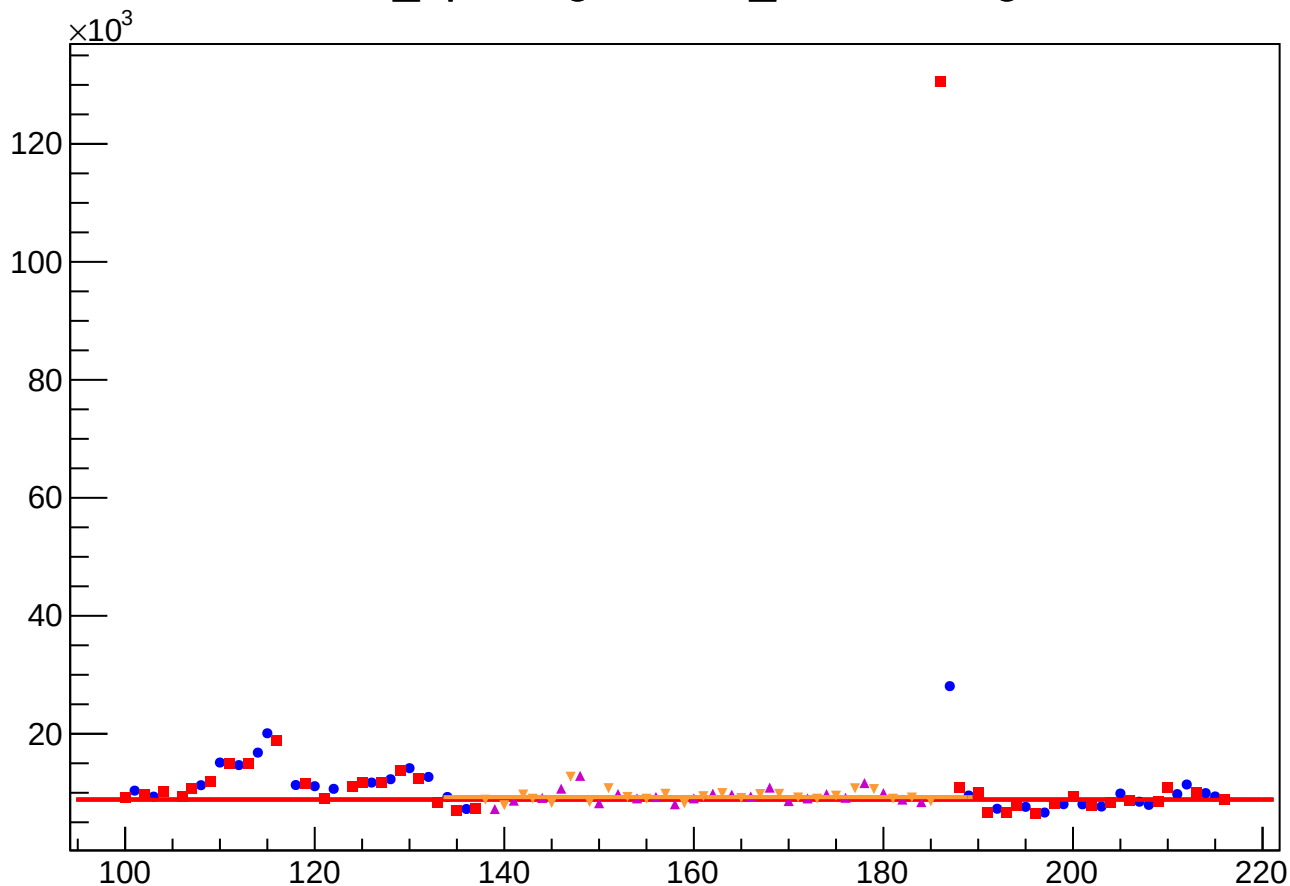
Left In:  $0.734 \pm 2.171$   $\chi^2/\text{NDF}$ : 32.0/22

+ sign  $3.318 \pm 1.487$   $\chi^2/\text{NDF}$ : 43.7/55

All:  $3.947 \pm 1.054$   $\chi^2/\text{NDF}$ : 134.2/113

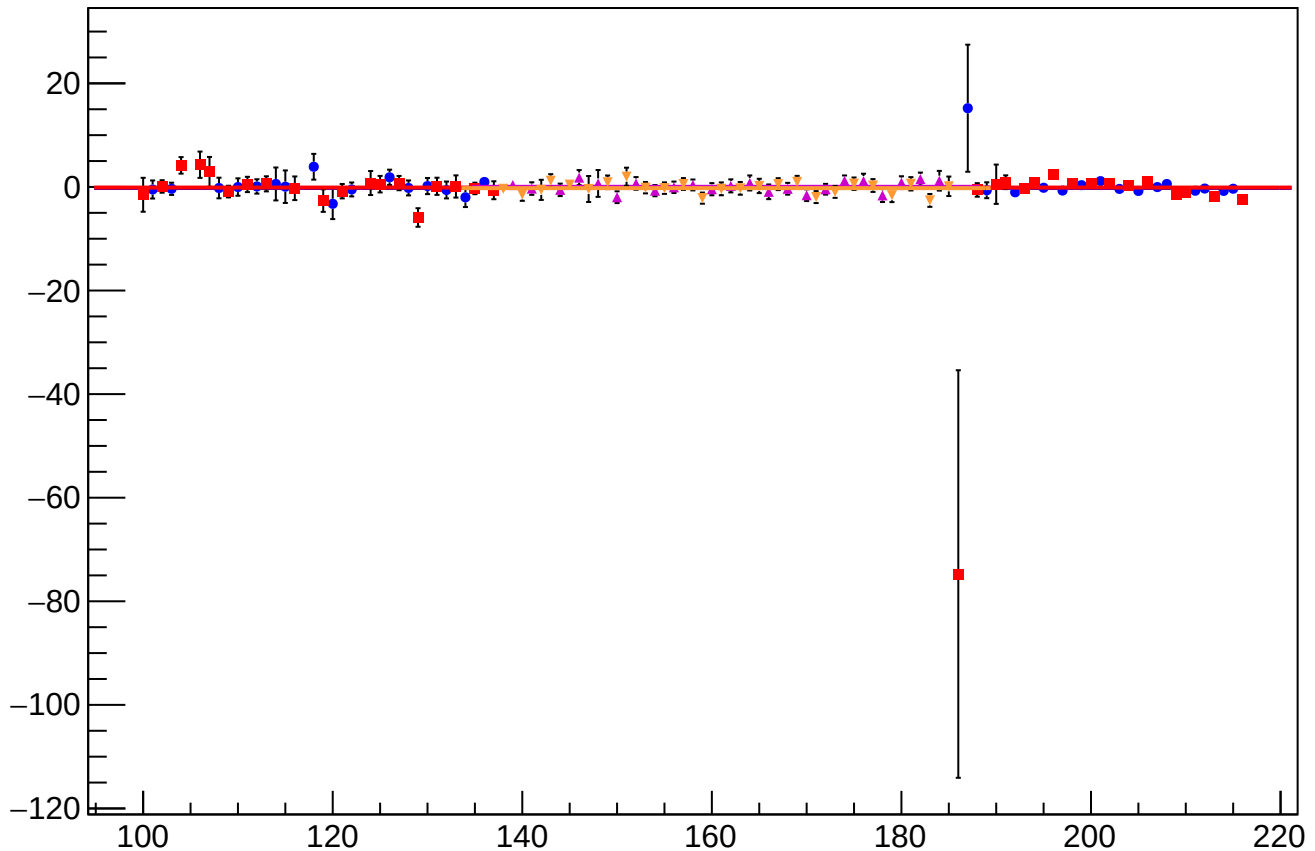
- sign  $4.584 \pm 1.495$   $\chi^2/\text{NDF}$ : 90.1/57

# diff\_bpmtargetsumY\_rms vs Slug



Right In:  $8885.111 \pm 1.474$      $\chi^2/\text{NDF}$ : 1765885.0/30    + sign  $9070.059 \pm 1.052$      $\chi^2/\text{NDF}$ : 2163983.3/55  
 Left Out:  $9261.542 \pm 1.500$      $\chi^2/\text{NDF}$ : 366072.4/24    All:  $9032.353 \pm 0.745$      $\chi^2/\text{NDF}$ : 5106325.7/11  
 Right Out:  $8809.150 \pm 1.458$      $\chi^2/\text{NDF}$ : 2390242.6/34    - sign  $8994.263 \pm 1.057$      $\chi^2/\text{NDF}$ : 2939757.9/57  
 Left In:  $9199.542 \pm 1.535$      $\chi^2/\text{NDF}$ : 515496.8/22

# diff\_bpmtargetdiffY\_mean vs Slug



Right In:  $-0.206 \pm 0.171$   $\chi^2/\text{NDF}$ : 18.8/30

Left Out:  $-0.229 \pm 0.243$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $-0.120 \pm 0.178$   $\chi^2/\text{NDF}$ : 72.3/34

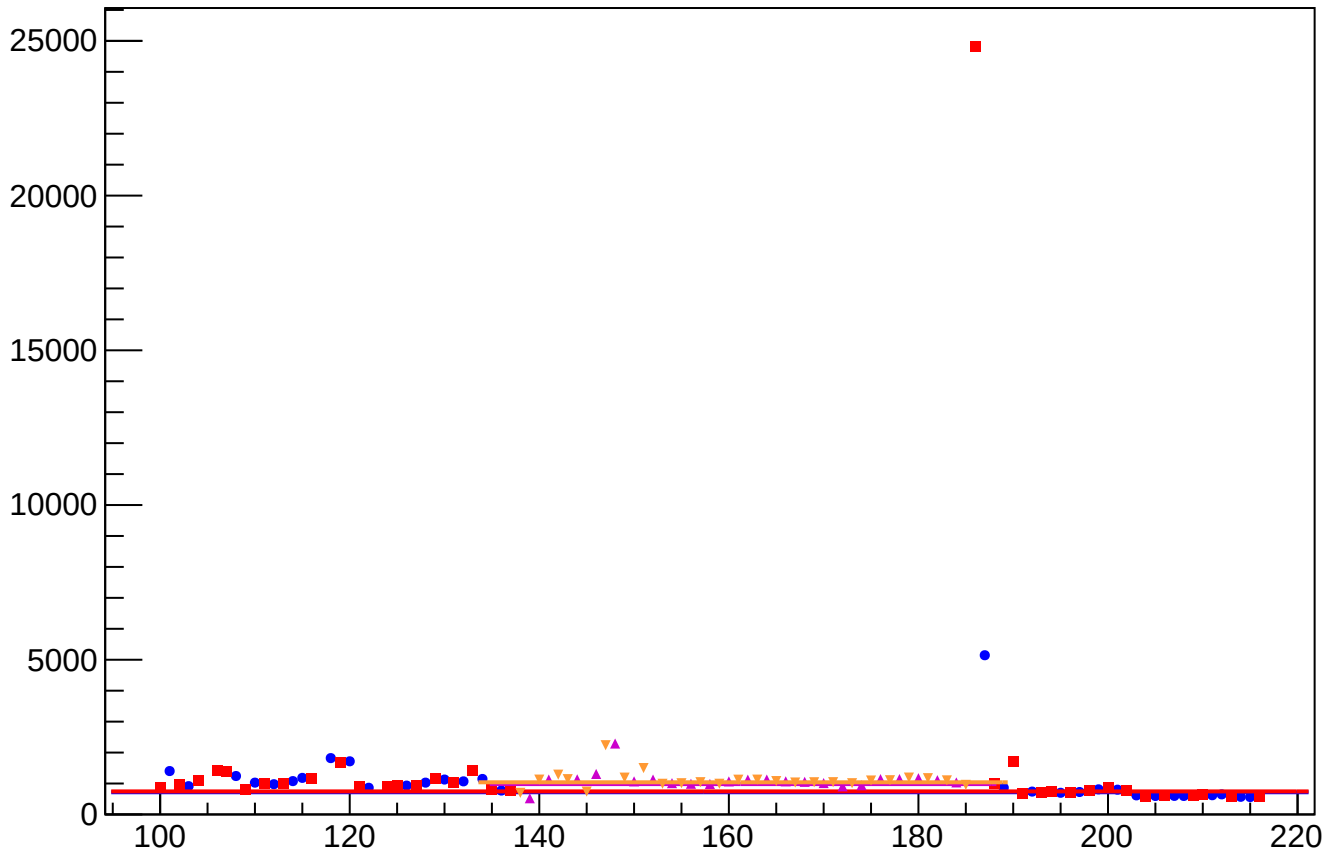
Left In:  $0.025 \pm 0.239$   $\chi^2/\text{NDF}$ : 15.2/22

+ sign  $-0.214 \pm 0.140$   $\chi^2/\text{NDF}$ : 37.8/55

All:  $-0.143 \pm 0.100$   $\chi^2/\text{NDF}$ : 126.1/113

- sign  $-0.068 \pm 0.143$   $\chi^2/\text{NDF}$ : 87.8/57

# diff\_bpmtargetdiffY\_rms vs Slug



Right In:  $717.328 \pm 0.121$   $\chi^2/\text{NDF}$ : 2737782.3/30

Left Out:  $1039.424 \pm 0.172$   $\chi^2/\text{NDF}$ : 1339748.9/24

Right Out:  $744.981 \pm 0.126$   $\chi^2/\text{NDF}$ : 3038562.4/34

Left In:  $981.677 \pm 0.169$   $\chi^2/\text{NDF}$ : 2225094.5/22

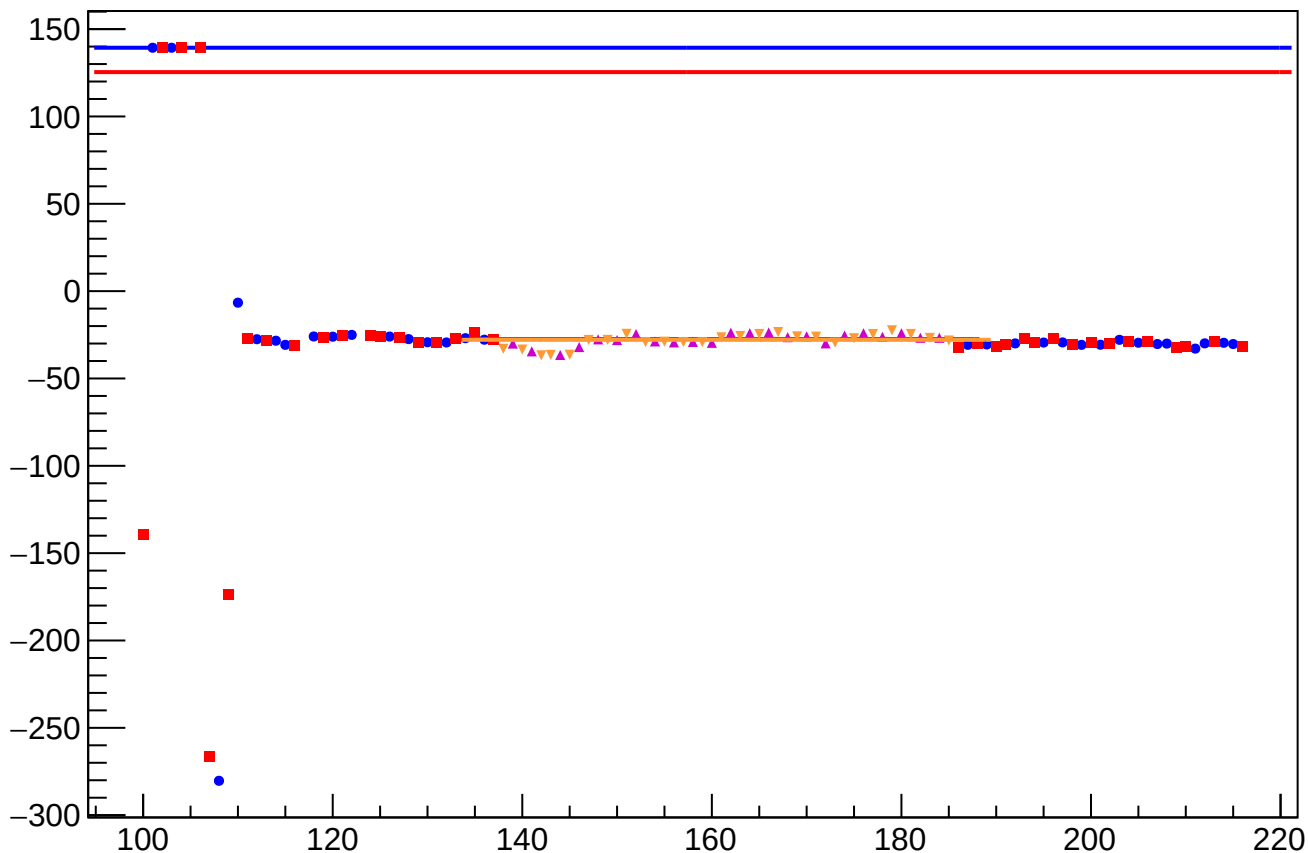
+ sign  $823.849 \pm 0.099$   $\chi^2/\text{NDF}$ : 6421392.7/55

All:  $826.466 \pm 0.071$   $\chi^2/\text{NDF}$ : 12949216.4/11

- sign  $829.181 \pm 0.101$   $\chi^2/\text{NDF}$ : 6526399.8/57



# yield\_cav4bX\_mean vs Slug



Right In: 139.336+/-0.000  $\chi^2/\text{NDF}$ : 67957227638.9/30

Left Out: -27.865+/-0.000  $\chi^2/\text{NDF}$ : 181586557.6/24

Right Out: 125.391+/-0.000  $\chi^2/\text{NDF}$ : 774190669088001.2/34

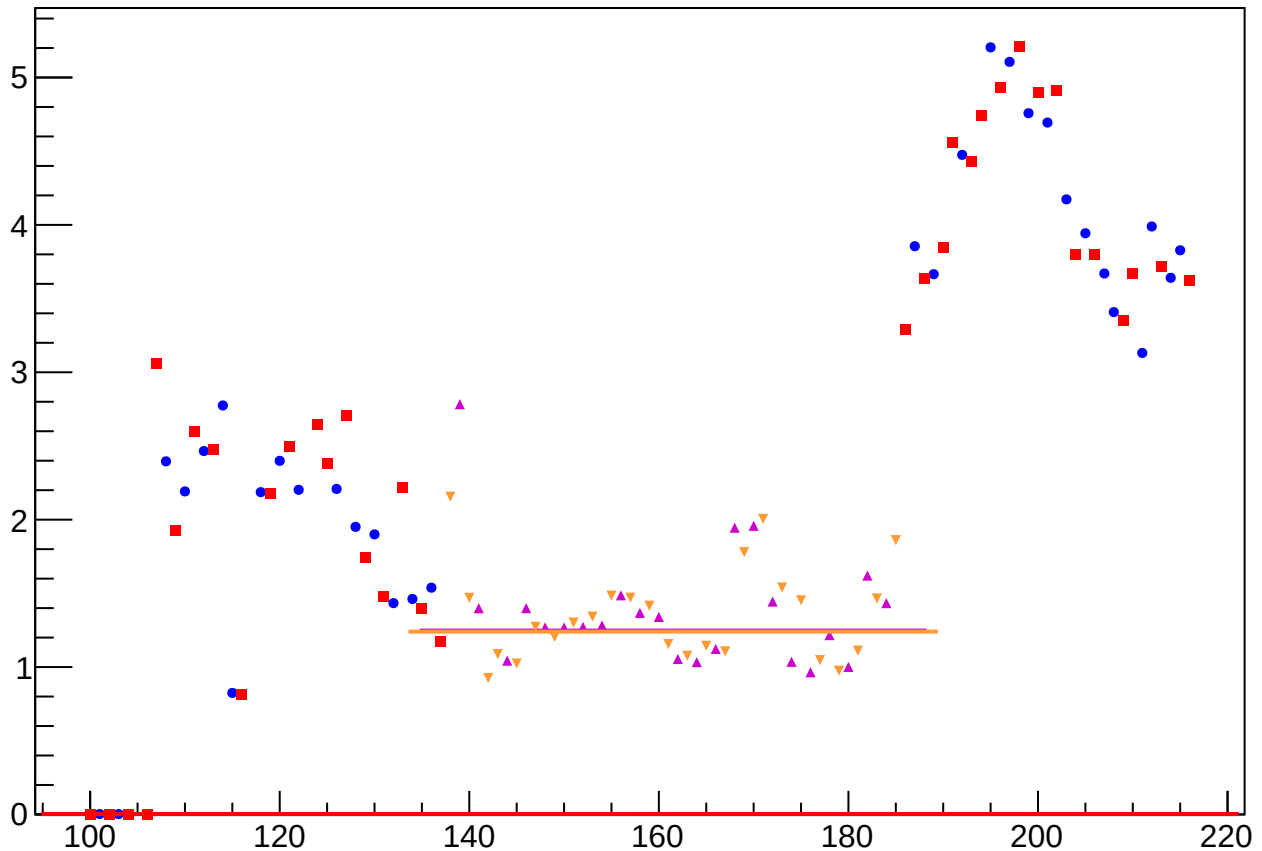
Left In: -27.427+/-0.000  $\chi^2/\text{NDF}$ : 123181562.3/22

+ sign 139.327+/-0.000  $\chi^2/\text{NDF}$ : 342498813561.9/5

All: 131.810+/-0.000  $\chi^2/\text{NDF}$ : 79352549984

- sign 125.385+/-0.000  $\chi^2/\text{NDF}$ : 774404321244581

# yield\_cav4bX\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 32860302.6/30

Left Out: 1.241+/-0.000  $\chi^2/\text{NDF}$ :1221248.2/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 33482422.7/34

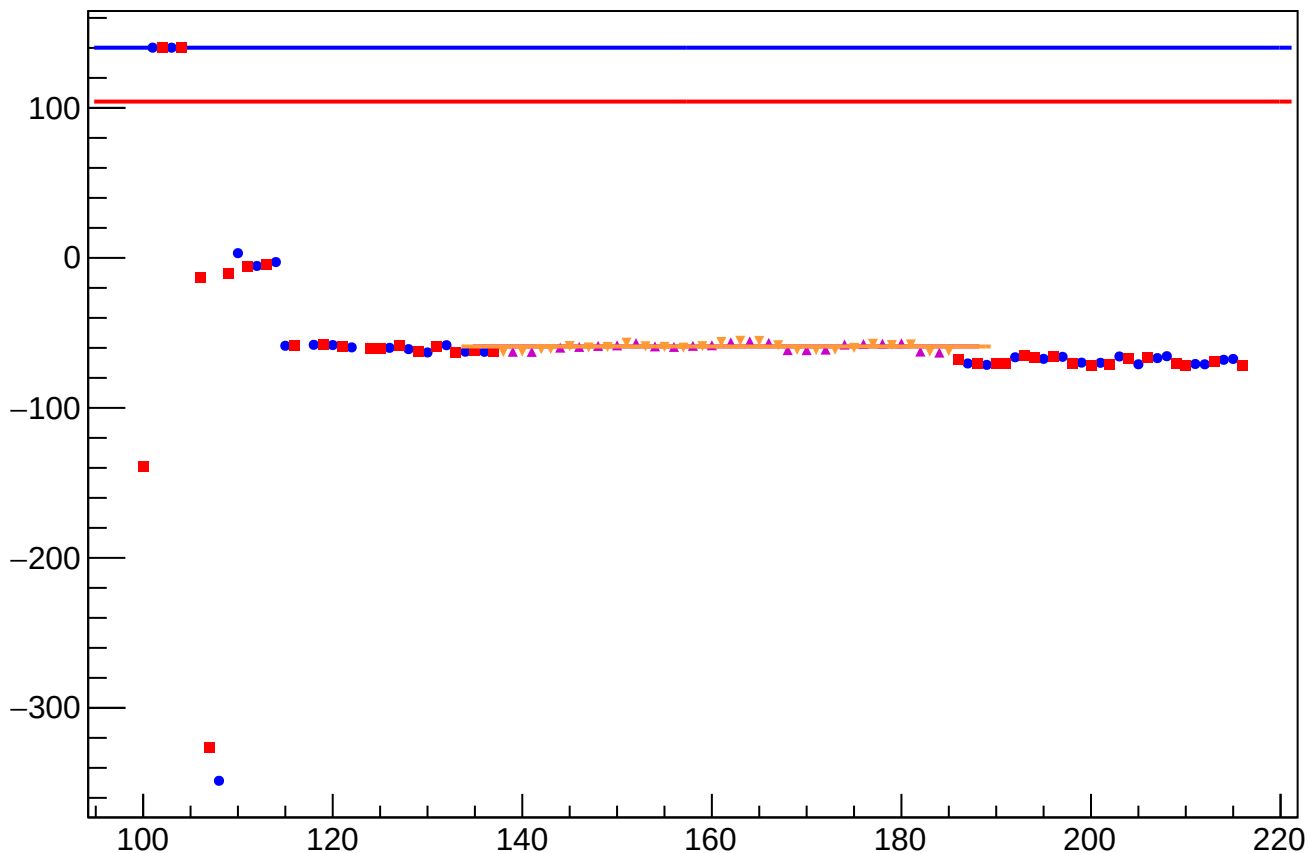
Left In: 1.247+/-0.000  $\chi^2/\text{NDF}$ :1436411.6/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 64158177.6/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 127407765.2/113

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 63249169.2/57

# yield\_cav4bY\_mean vs Slug



Right In: 140.134 $\pm$ 0.000  $\chi^2$ /NDF: 536288836234.3/30

Left Out: -59.066 $\pm$ 0.000  $\chi^2$ /NDF: 177511074.0/24

Right Out: 104.217 $\pm$ 0.000  $\chi^2$ /NDF: 1257664743538395.5/34

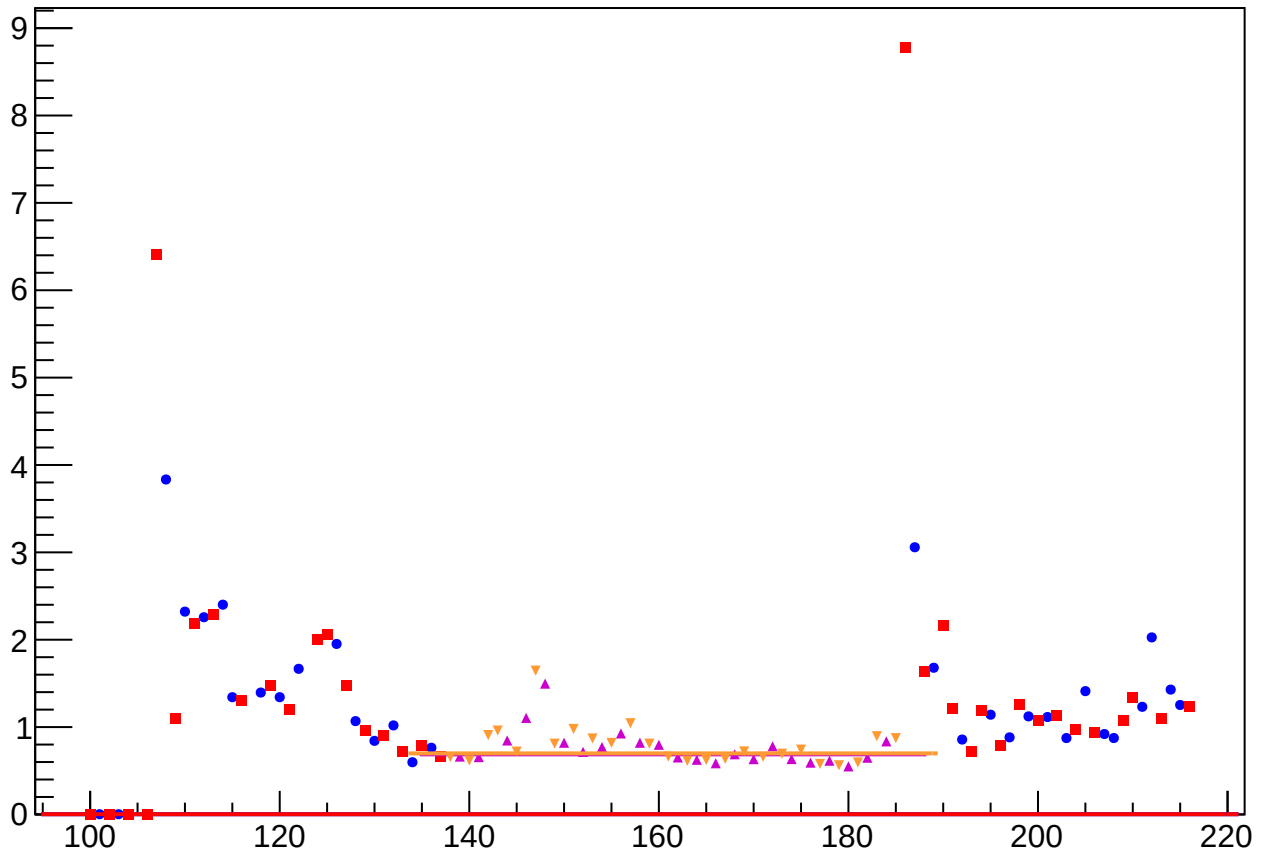
Left In: -59.020 $\pm$ 0.000  $\chi^2$ /NDF: 179236820.4/22

+ sign 140.097 $\pm$ 0.000  $\chi^2$ /NDF: 1833357048116.3

All: 120.793 $\pm$ 0.000  $\chi^2$ /NDF: 138359657438

- sign 104.192 $\pm$ 0.000  $\chi^2$ /NDF: 125852173114172

# yield\_cav4bY\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 30008924.1/30

Left Out: 0.699 $\pm$ 0.000  $\chi^2$ /NDF:1357196.3/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 30983958.7/34

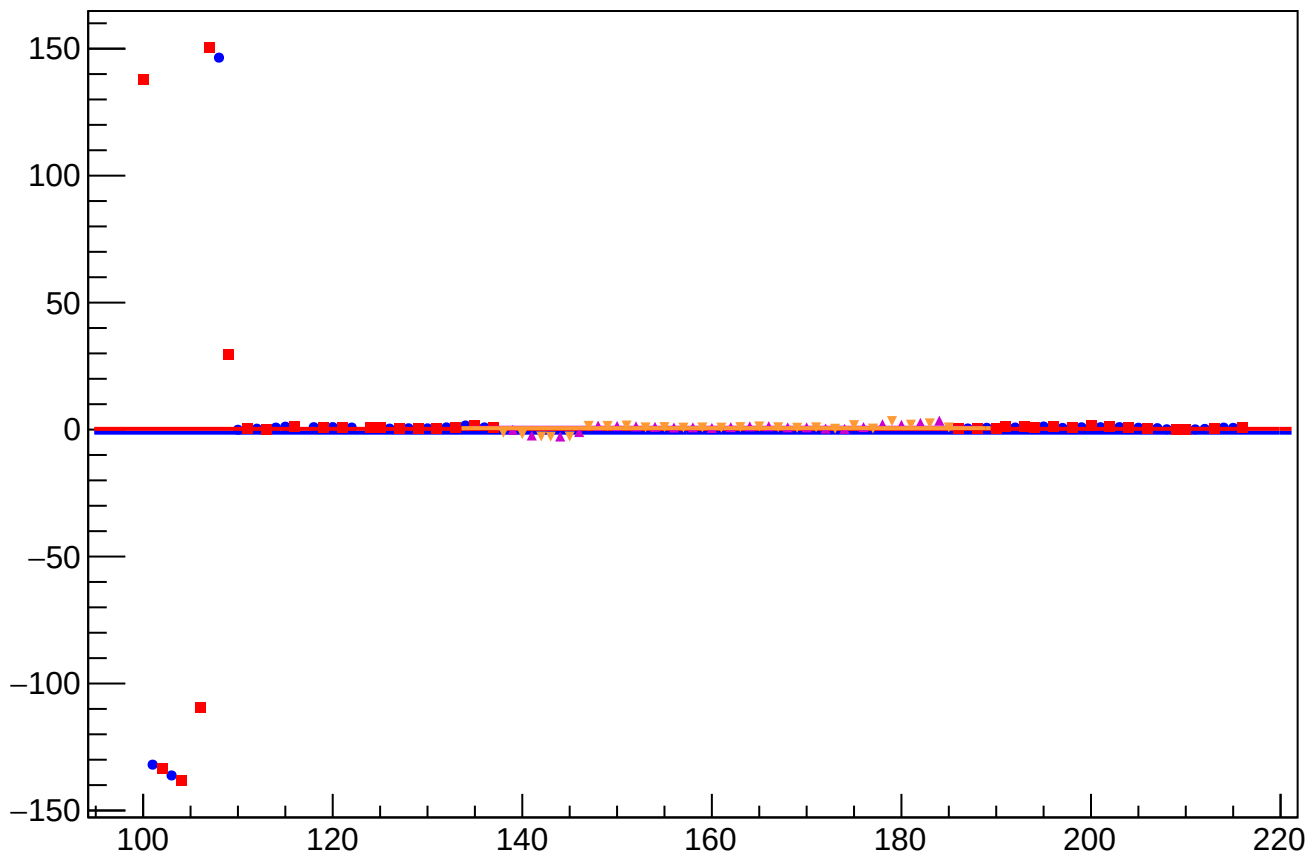
Left In: 0.688 $\pm$ 0.000  $\chi^2$ /NDF:1107767.8/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 63058897.7/55

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 125350152.3/113

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 62290606.6/57

# yield\_cav4cX\_mean vs Slug



Right In:  $-1.219 \pm 0.000$   $\chi^2/\text{NDF}$ : 9910997955.9/30

Left Out:  $0.575 \pm 0.000$   $\chi^2/\text{NDF}$ : 154364809.1/24

Right Out:  $0.293 \pm 0.000$   $\chi^2/\text{NDF}$ : 3613034275.3/34

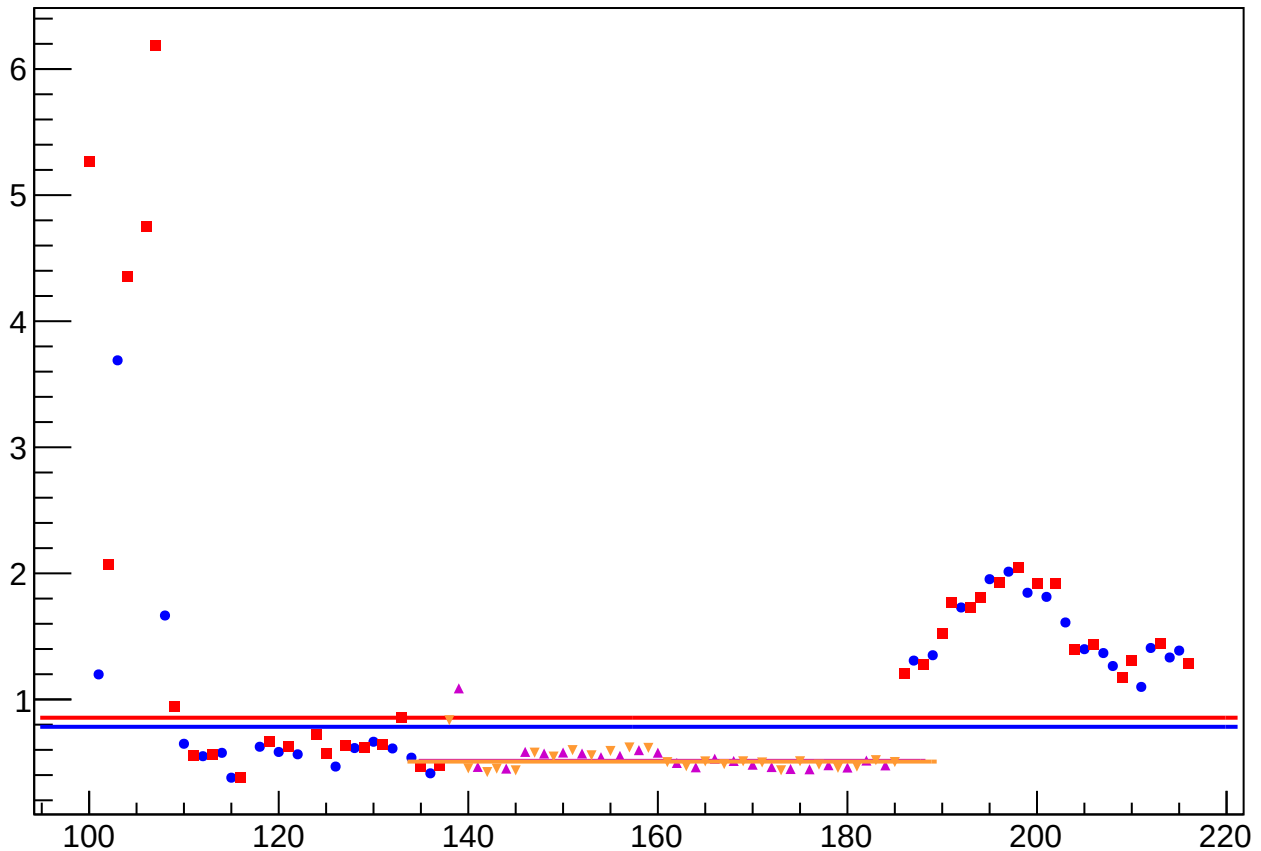
Left In:  $0.732 \pm 0.000$   $\chi^2/\text{NDF}$ : 105135095.8/22

+ sign  $0.107 \pm 0.000$   $\chi^2/\text{NDF}$ : 10116425213.0/55

All:  $0.352 \pm 0.000$   $\chi^2/\text{NDF}$ : 13847702424.4/100

- sign  $0.623 \pm 0.000$   $\chi^2/\text{NDF}$ : 3720865775.8/57

# yield\_cav4cX\_rms vs Slug



Right In: 0.783+/-0.000  $\chi^2/\text{NDF}$ : 8727724.8/30

Left Out: 0.507+/-0.000  $\chi^2/\text{NDF}$ :554639.8/24

Right Out: 0.855+/-0.000  $\chi^2/\text{NDF}$ : 8964290.9/34

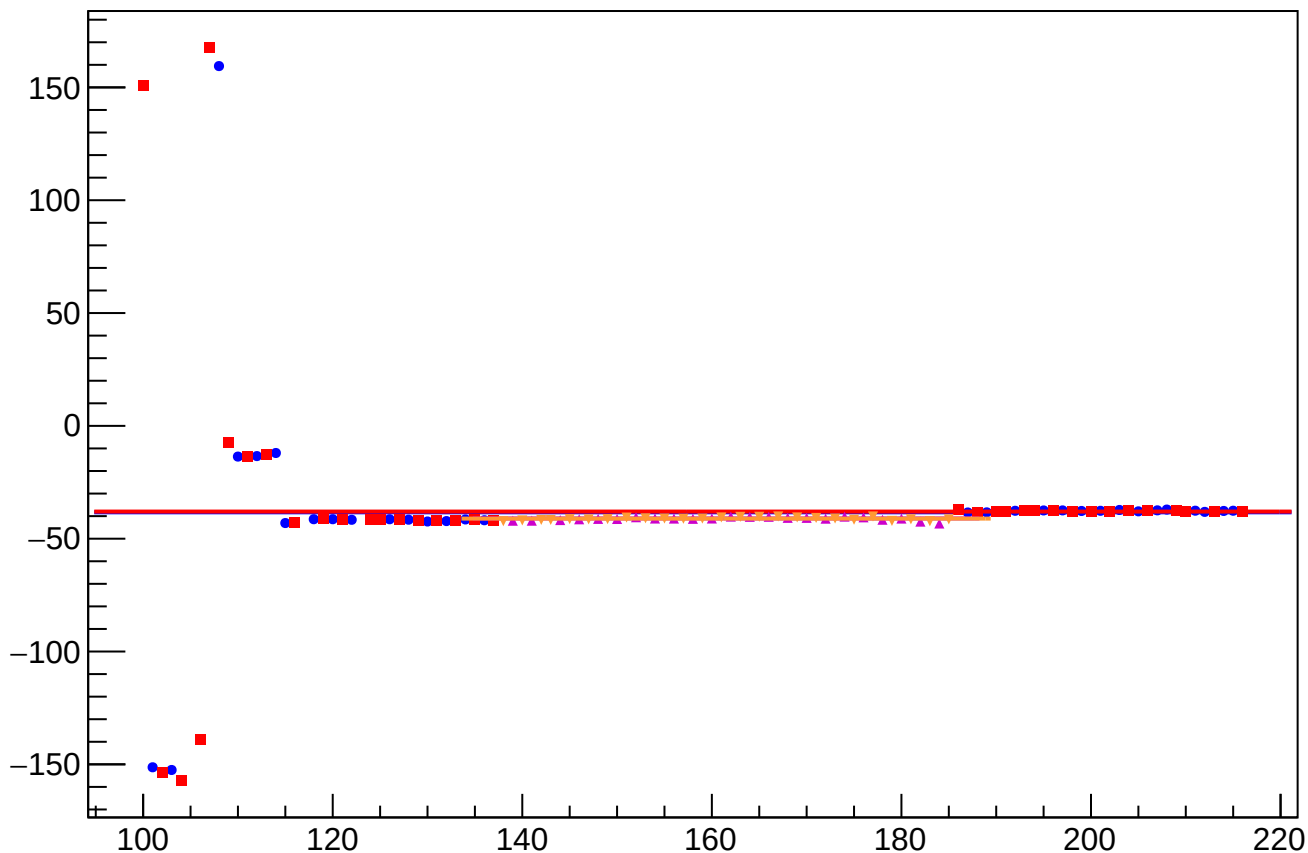
Left In: 0.513+/-0.000  $\chi^2/\text{NDF}$ :753419.6/22

+ sign 0.579+/-0.000  $\chi^2/\text{NDF}$ : 11698365.7/55

All: 0.588+/-0.000  $\chi^2/\text{NDF}$ : 24723046.5/113

- sign 0.598+/-0.000  $\chi^2/\text{NDF}$ : 12995493.3/57

# yield\_cav4cY\_mean vs Slug



Right In:  $-38.313 \pm 0.000$   $\chi^2/\text{NDF}: 3623138096.8/30$

Left Out:  $-41.092 \pm 0.000$   $\chi^2/\text{NDF}: 60251030.2/24$

Right Out:  $-37.976 \pm 0.000$   $\chi^2/\text{NDF}: 2514486594.6/34$

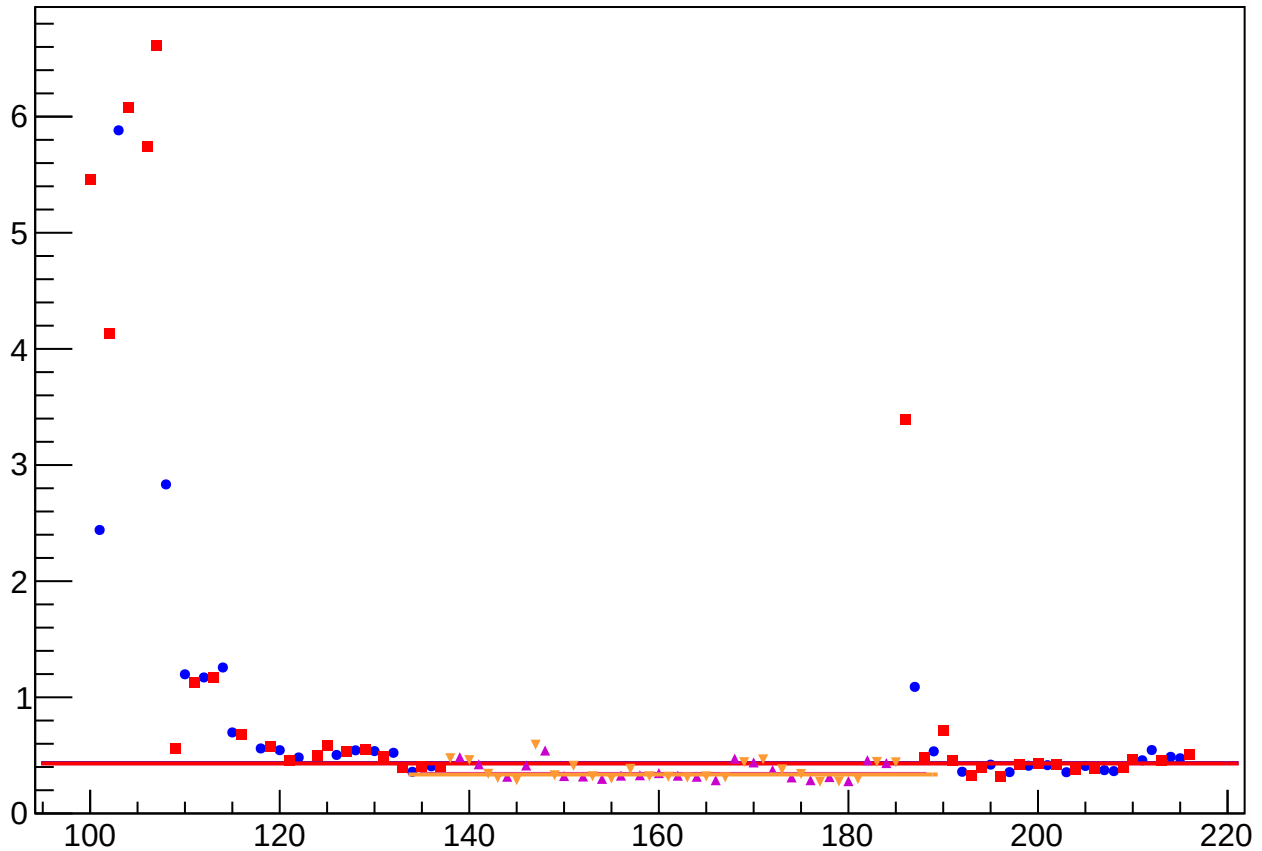
Left In:  $-41.029 \pm 0.000$   $\chi^2/\text{NDF}: 51382147.2/22$

+ sign  $-40.122 \pm 0.000$   $\chi^2/\text{NDF}: 4107936548.3/55$

All:  $-40.013 \pm 0.000$   $\chi^2/\text{NDF}: 7180265513.5/100$

- sign  $-39.899 \pm 0.000$   $\chi^2/\text{NDF}: 3066465439.3/57$

# yield\_cav4cY\_rms vs Slug



Right In:  $0.433 \pm 0.000$   $\chi^2/\text{NDF}: 3853968.6/30$

Left Out:  $0.336 \pm 0.000$   $\chi^2/\text{NDF}: 1238006.0/24$

Right Out:  $0.431 \pm 0.000$   $\chi^2/\text{NDF}: 4737737.7/34$

Left In:  $0.340 \pm 0.000$   $\chi^2/\text{NDF}: 1065343.8/22$

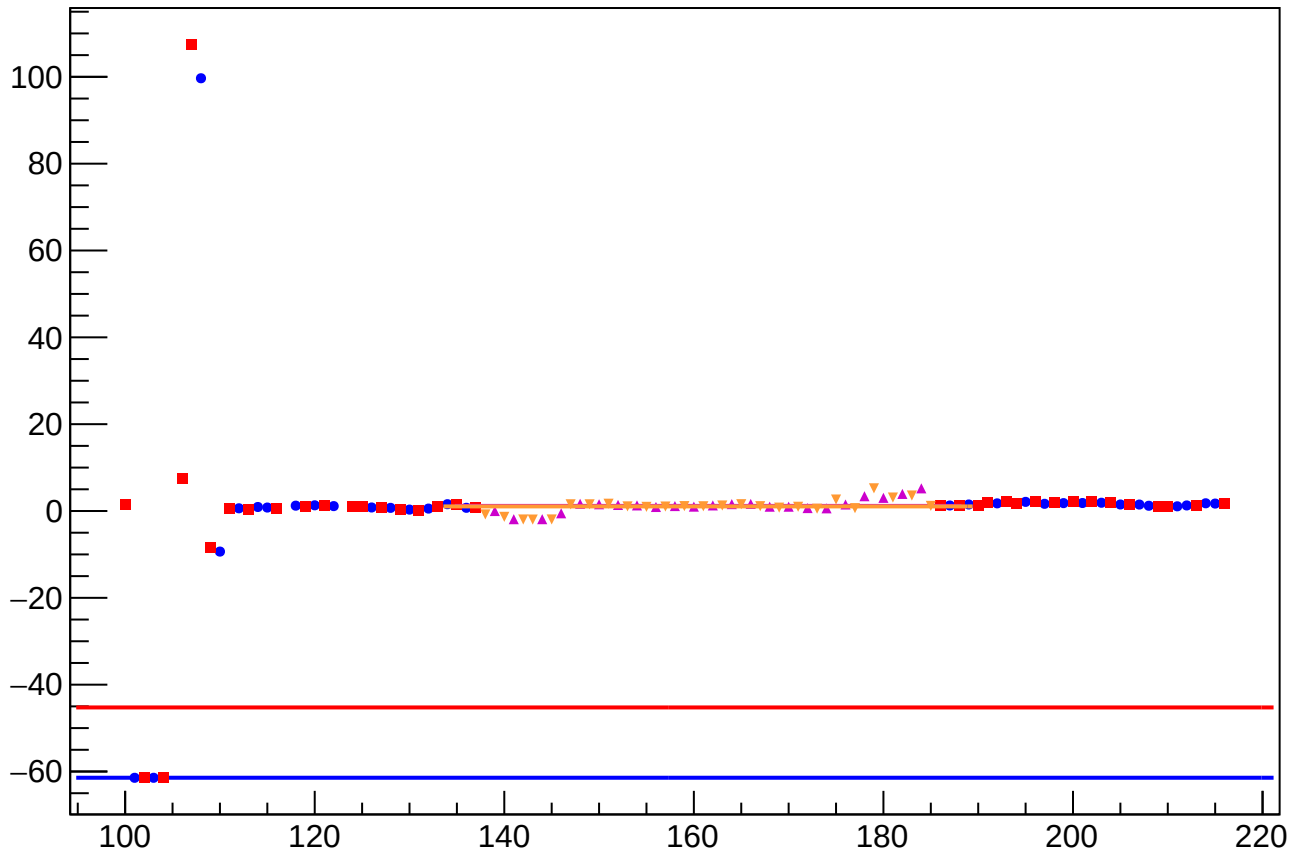
+ sign  $0.370 \pm 0.000$   $\chi^2/\text{NDF}: 6142813.3/55$

All:  $0.372 \pm 0.000$   $\chi^2/\text{NDF}: 12826558.1/113$

- sign  $0.374 \pm 0.000$   $\chi^2/\text{NDF}: 6680131.9/57$



# yield\_cav4dX\_mean vs Slug



Right In:  $-61.435 \pm 0.000$   $\chi^2/\text{NDF}$ : 302077398570.1/30

Left Out:  $1.059 \pm 0.000$   $\chi^2/\text{NDF}$ : 253133917.4/24

Right Out:  $-45.244 \pm 0.000$   $\chi^2/\text{NDF}$ : 357885879405654.4/34

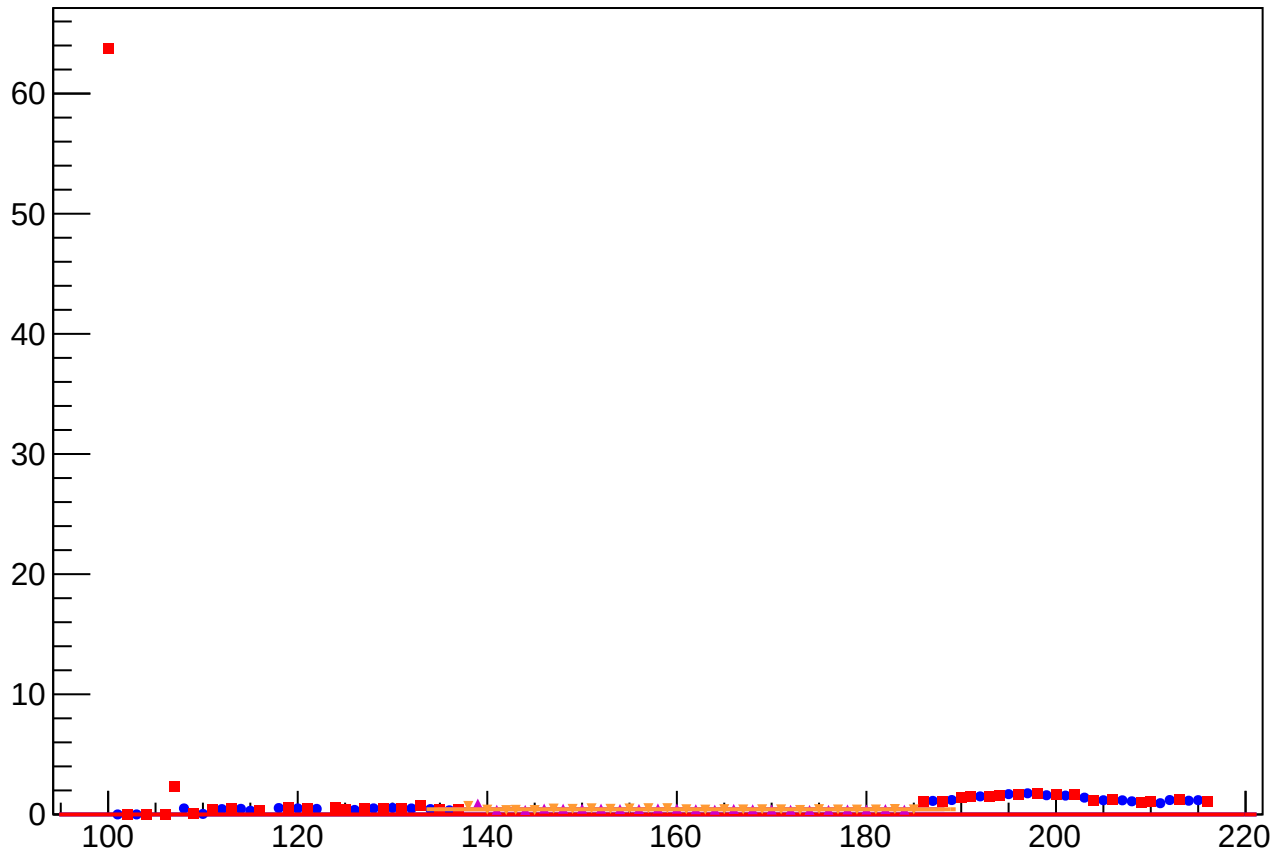
Left In:  $1.175 \pm 0.000$   $\chi^2/\text{NDF}$ : 182397676.2/22

+ sign  $-61.420 \pm 0.000$   $\chi^2/\text{NDF}$ : 632072837356.4/5

All:  $-52.737 \pm 0.000$   $\chi^2/\text{NDF}$ : 409633495777

- sign  $-45.236 \pm 0.000$   $\chi^2/\text{NDF}$ : 358052440650602.

# yield\_cav4dX\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 32442036.4/30

Left Out: 0.432+/-0.000  $\chi^2/\text{NDF}$ : 527546.3/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 33119377.0/34

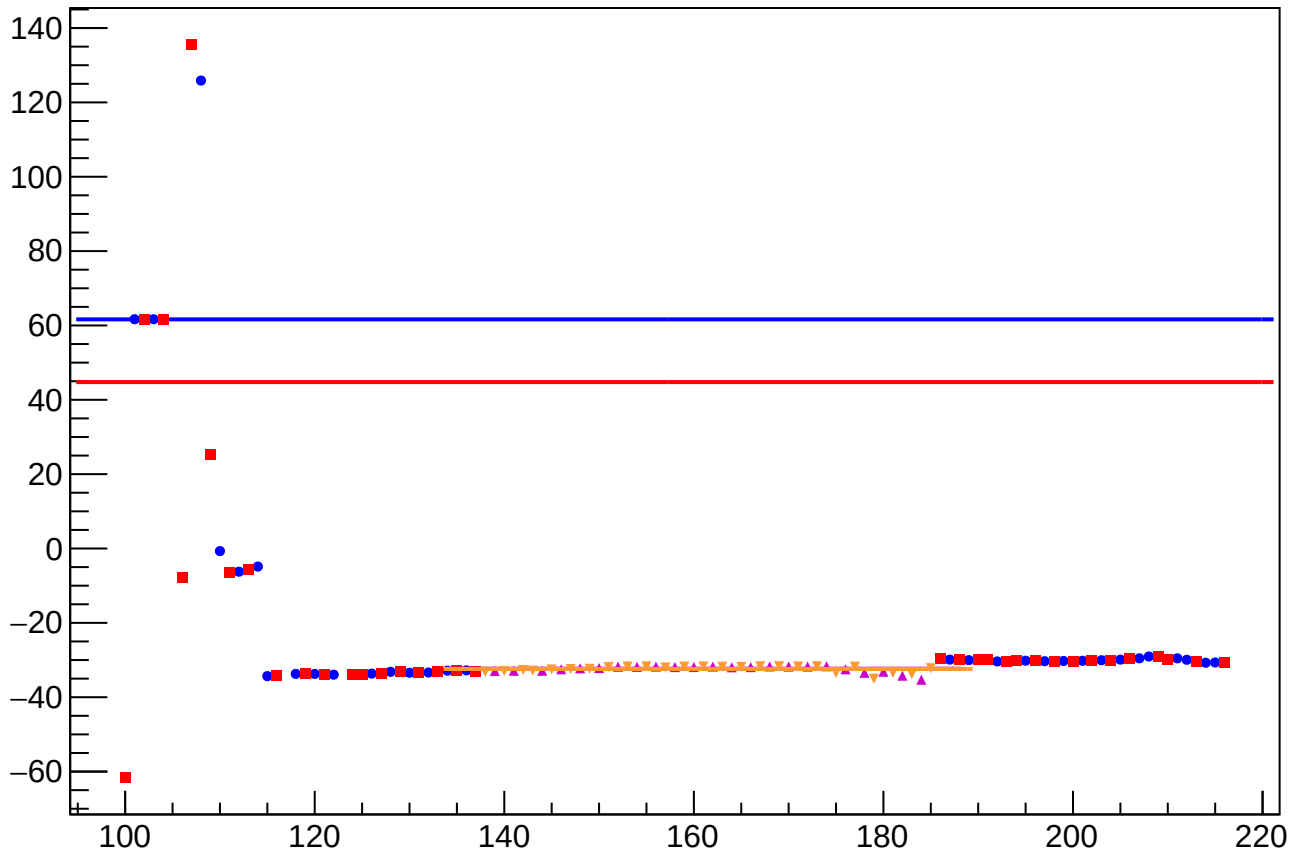
Left In: 0.438+/-0.000  $\chi^2/\text{NDF}$ : 698702.2/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 64204182.7/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 127464251.0/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 63259813.7/57

# yield\_cav4dY\_mean vs Slug



Right In: 61.636 $\pm$ 0.000  $\chi^2$ /NDF: 1175156863998.9/30

Left Out: -32.386 $\pm$ 0.000  $\chi^2$ /NDF: 172024234.9/24

Right Out: 44.767 $\pm$ 0.000  $\chi^2$ /NDF: 366620773148809.8/34

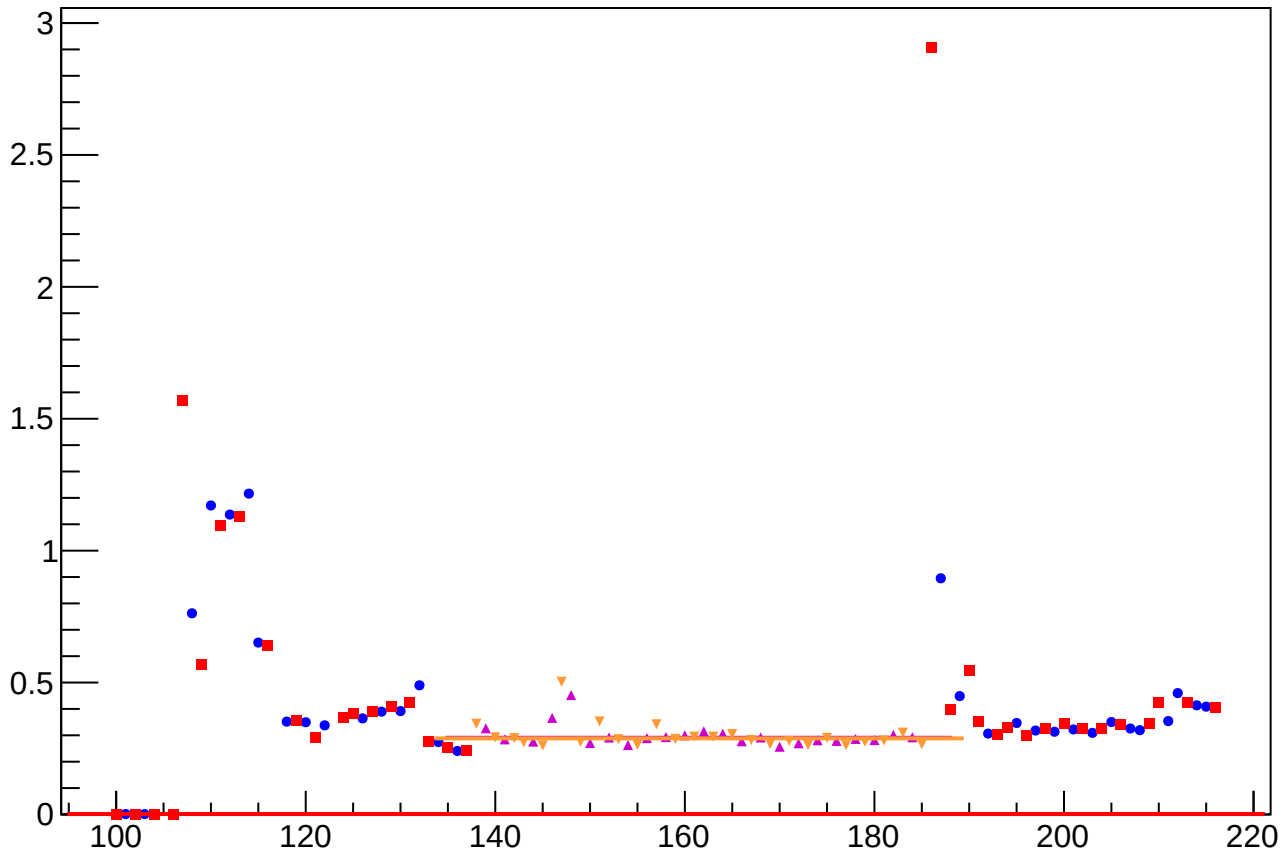
Left In: -32.325 $\pm$ 0.000  $\chi^2$ /NDF: 118654391.5/22

+ sign 61.574 $\pm$ 0.000  $\chi^2$ /NDF: 3132206527799.7/5

All: 52.616 $\pm$ 0.000  $\chi^2$ /NDF: 4219598921711

- sign 44.726 $\pm$ 0.000  $\chi^2$ /NDF: 367848005609966.3

# yield\_cav4dY\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 33962994.8/30

Left Out: 0.288 $\pm$ 0.000  $\chi^2$ /NDF:522979.2/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 34006193.5/34

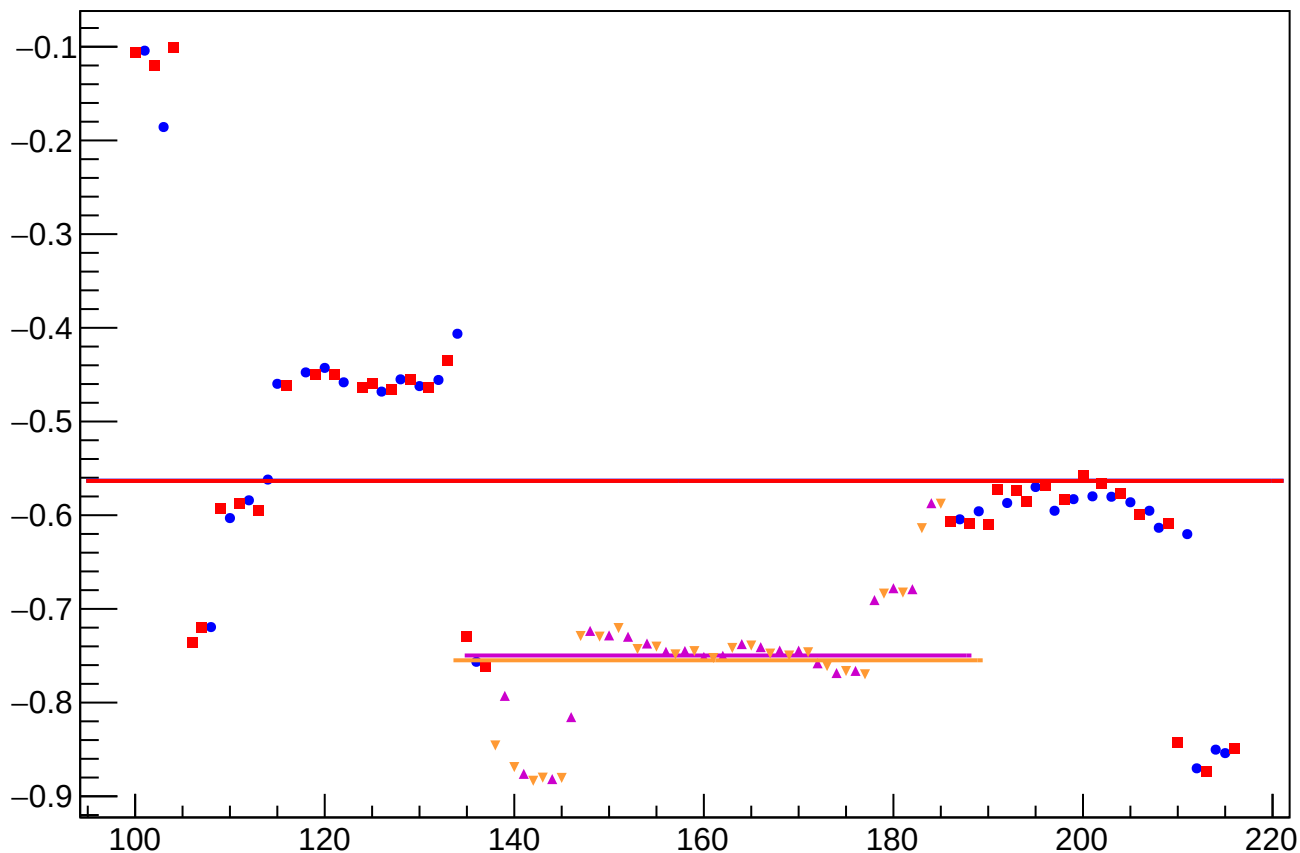
Left In: 0.291 $\pm$ 0.000  $\chi^2$ /NDF:387524.5/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 70901672.5/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 139796237.3/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 68894325.2/57

# yield\_bpm4aX\_mean vs Slug



Right In:  $-0.563 \pm 0.000$   $\chi^2/\text{NDF}$ : 385547270.8/30

Left Out:  $-0.755 \pm 0.000$   $\chi^2/\text{NDF}$ : 212643091.8/24

Right Out:  $-0.563 \pm 0.000$   $\chi^2/\text{NDF}$ : 296637021.3/34

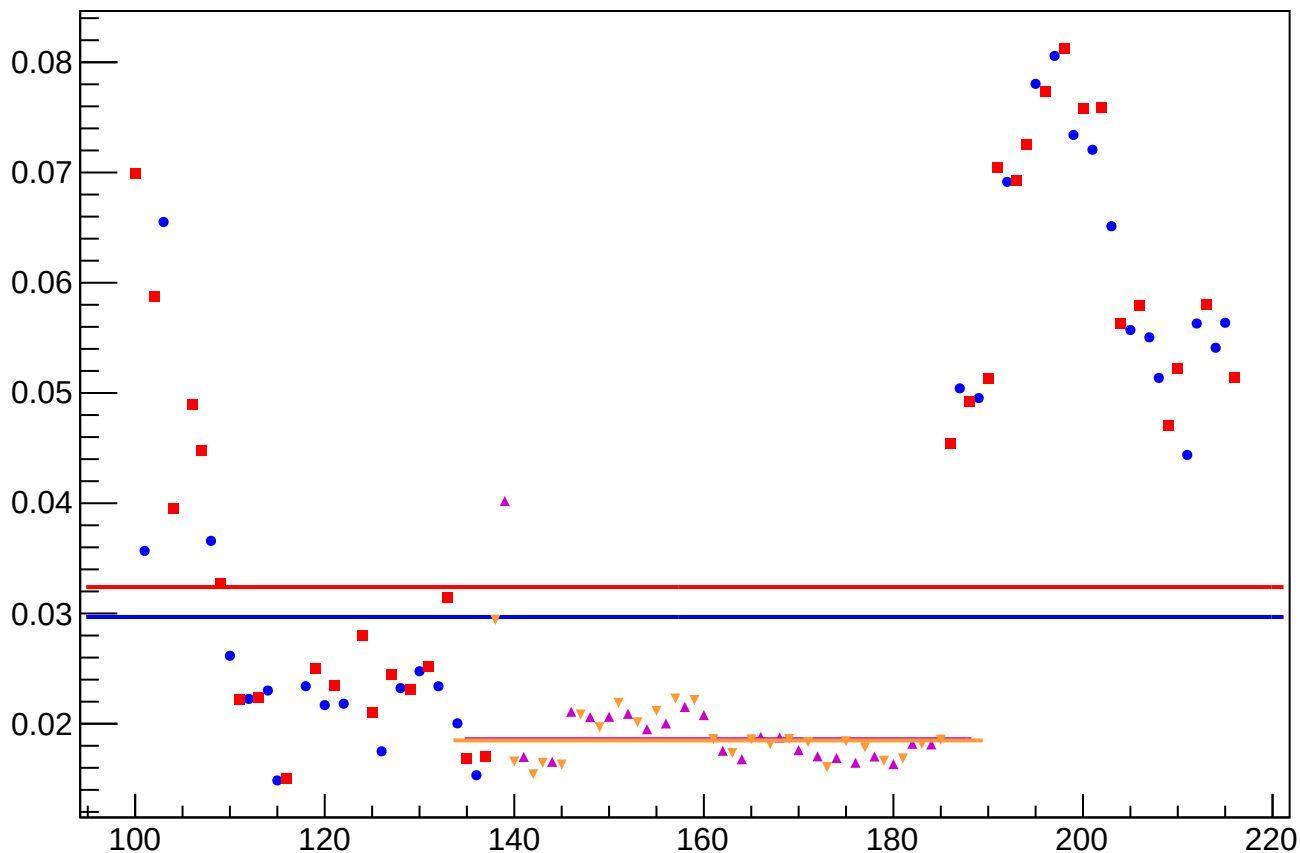
Left In:  $-0.750 \pm 0.000$   $\chi^2/\text{NDF}$ : 140839352.1/22

+ sign  $-0.708 \pm 0.000$   $\chi^2/\text{NDF}$ : 1012783490.7/55

All:  $-0.706 \pm 0.000$   $\chi^2/\text{NDF}$ : 1803204574.6/1

- sign  $-0.705 \pm 0.000$   $\chi^2/\text{NDF}$ : 790247158.4/57

# yield\_bpm4aX\_rms vs Slug



Right In: 0.030 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8848161.2/30

Left Out: 0.018 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 491665.0/24

Right Out: 0.032 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8198997.4/34

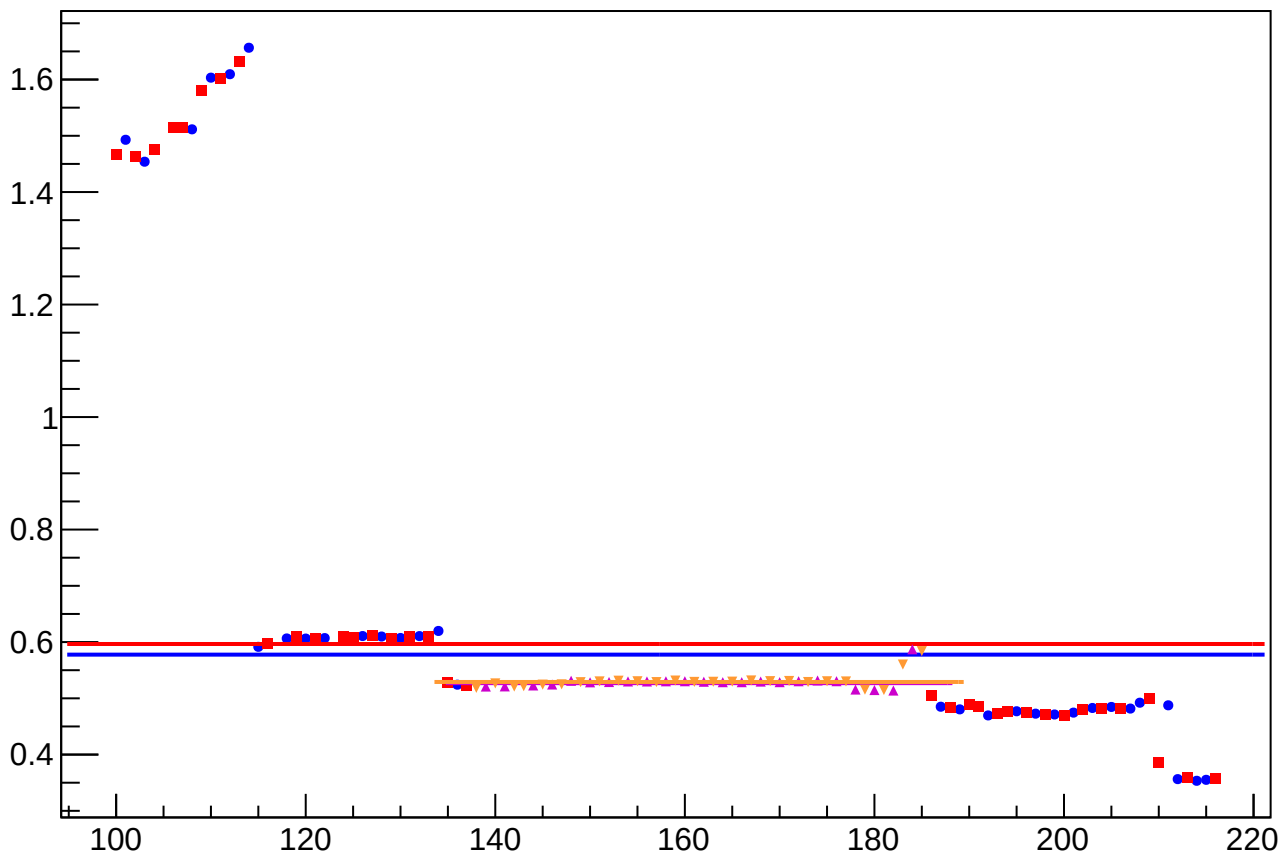
Left In: 0.019 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 739183.3/22

+ sign 0.021 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12167055.6/55

All: 0.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 25003693.7/113

- sign 0.022 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12811940.4/57

# yield\_bpm4aY\_mean vs Slug



Right In: 0.578 $\pm$ 0.000  $\chi^2$ /NDF: 6117230734.6/30

Left Out: 0.529 $\pm$ 0.000  $\chi^2$ /NDF:16236836.5/24

Right Out: 0.597 $\pm$ 0.000  $\chi^2$ /NDF: 7045418446.9/34

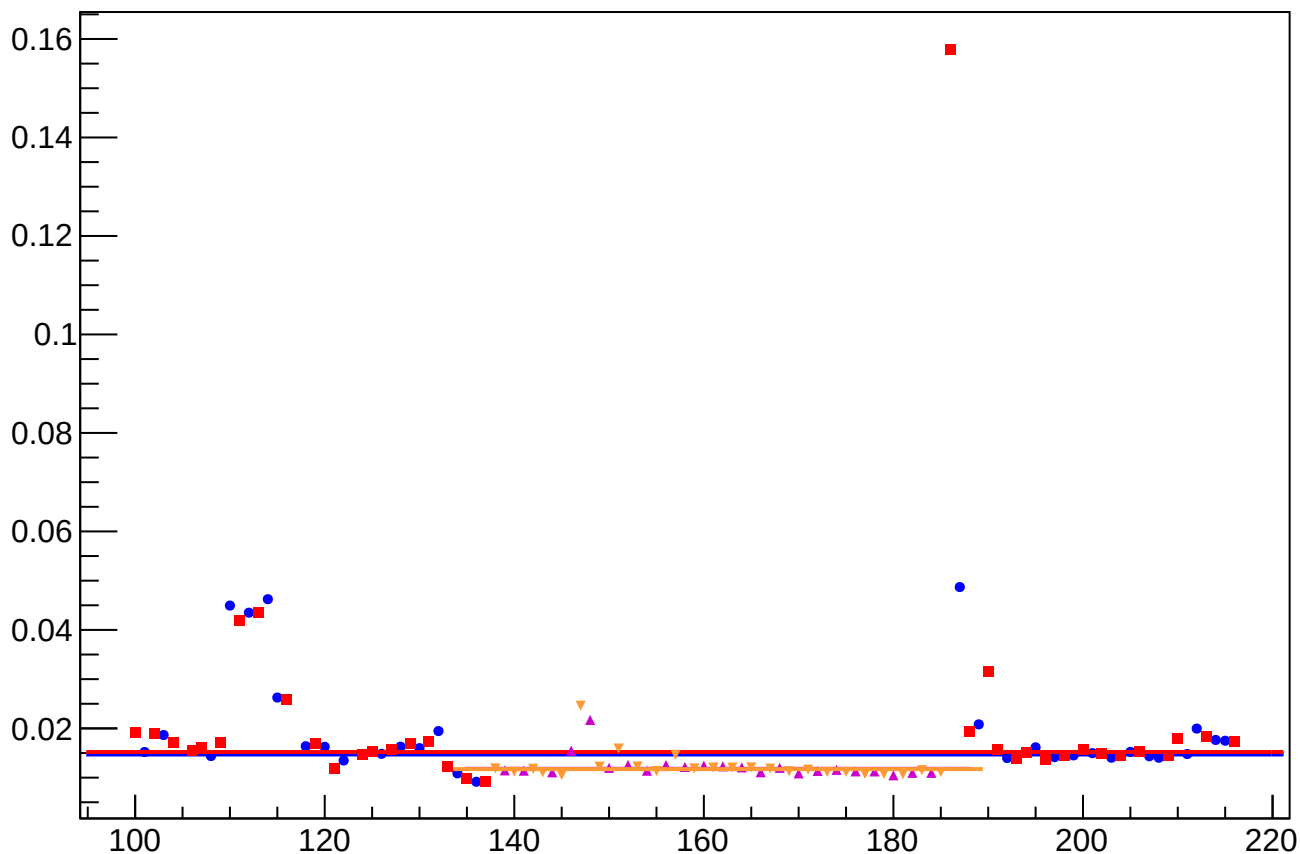
Left In: 0.527 $\pm$ 0.000  $\chi^2$ /NDF:13035326.4/22

+ sign 0.547 $\pm$ 0.000  $\chi^2$ /NDF: 6251679547.4/55

All: 0.550 $\pm$ 0.000  $\chi^2$ /NDF: 13543301664.6/100

- sign 0.553 $\pm$ 0.000  $\chi^2$ /NDF: 7287959654.9/57

# yield\_bpm4aY\_rms vs Slug



Right In: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 2196965.2/30

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:699878.1/24

Right Out: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 2509925.1/34

Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:519826.8/22

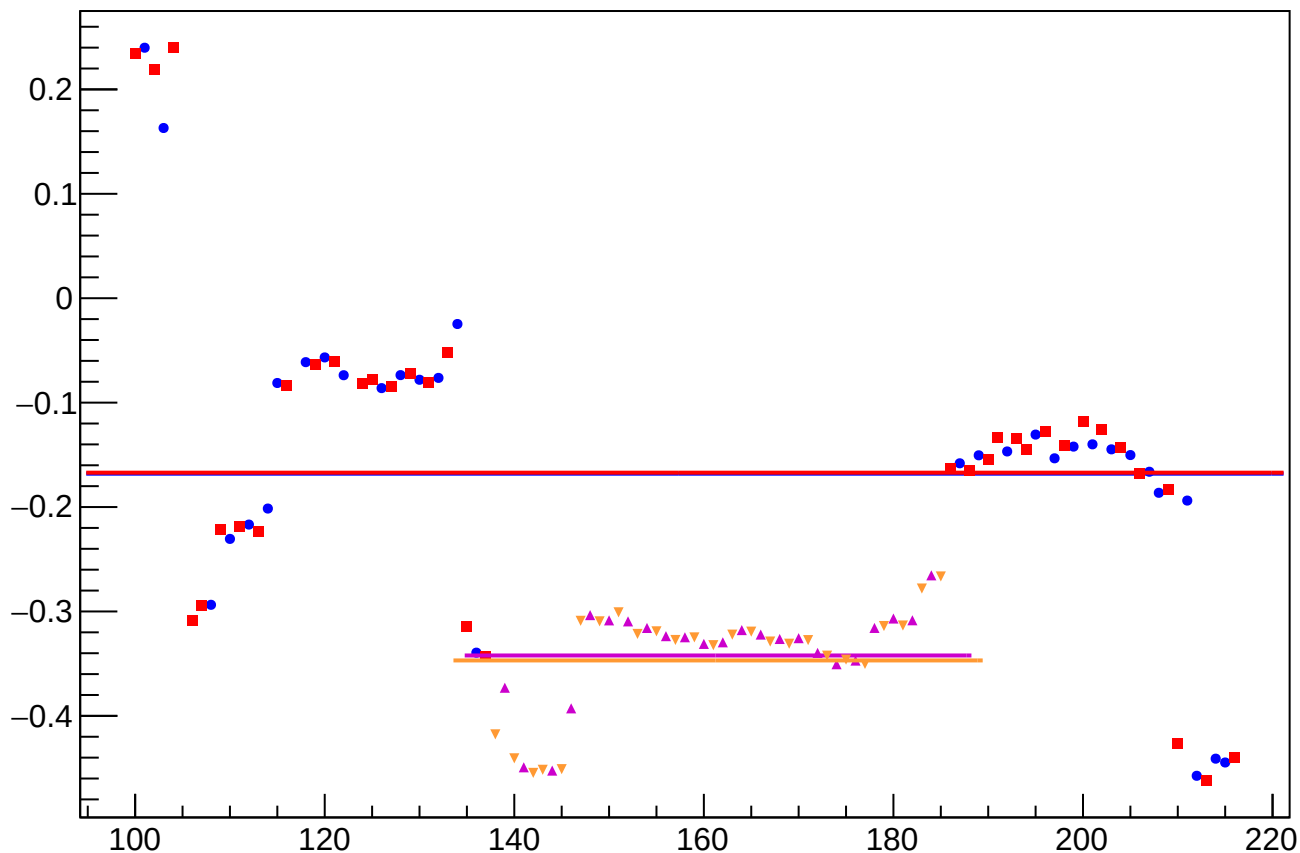
+ sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3780187.3/55

All: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 7926058.8/113

- sign 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 4134707.2/57



# yield\_bpm4eX\_mean vs Slug



Right In:  $-0.168 \pm 0.000$   $\chi^2/\text{NDF}$ : 357125557.0/30

Left Out:  $-0.347 \pm 0.000$   $\chi^2/\text{NDF}$ : 125890246.2/24

Right Out:  $-0.167 \pm 0.000$   $\chi^2/\text{NDF}$ : 276953960.8/34

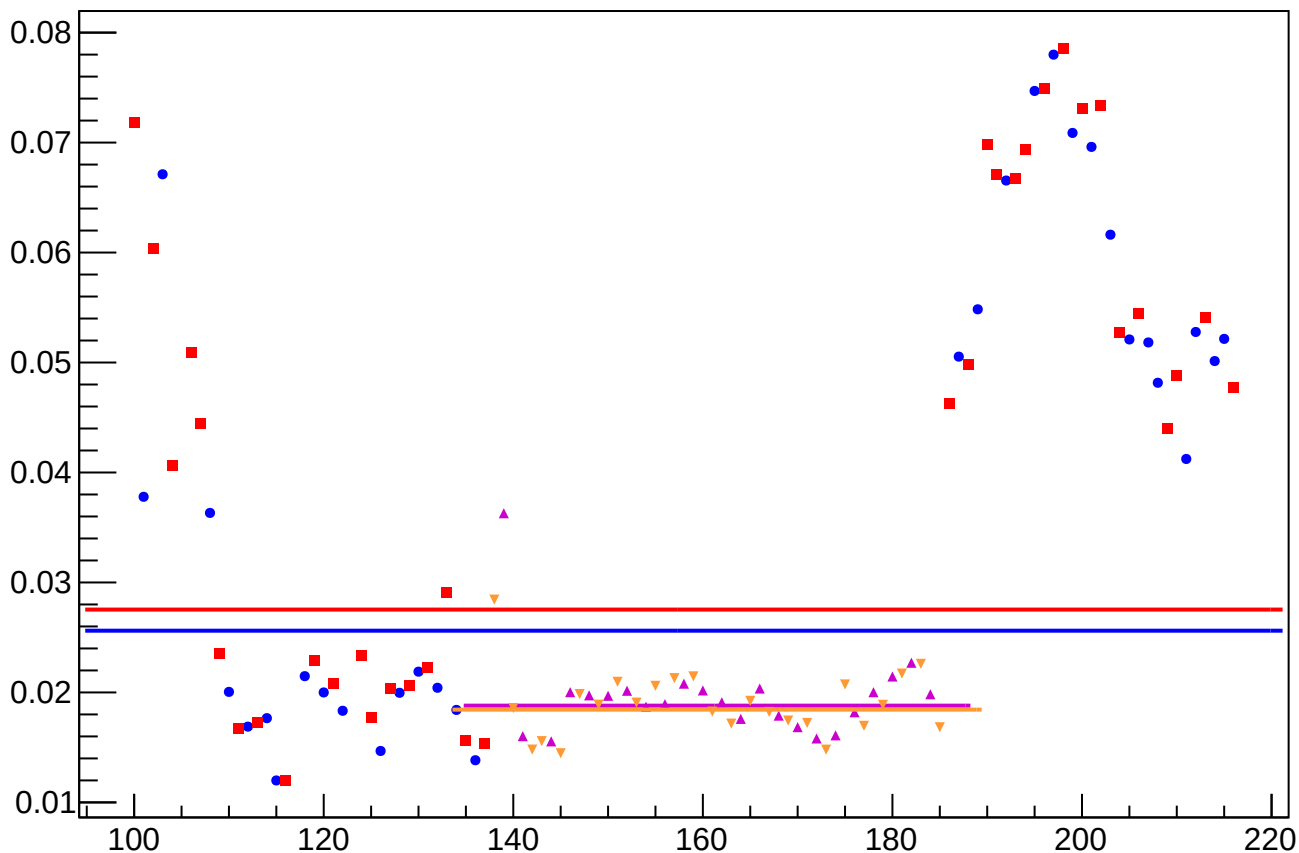
Left In:  $-0.342 \pm 0.000$   $\chi^2/\text{NDF}$ : 88220744.3/22

+ sign  $-0.295 \pm 0.000$   $\chi^2/\text{NDF}$ : 916752626.8/55

All:  $-0.293 \pm 0.000$   $\chi^2/\text{NDF}$ : 1659703956.8/1

- sign  $-0.291 \pm 0.000$   $\chi^2/\text{NDF}$ : 742562056.7/57

# yield\_bpm4eX\_rms vs Slug



Right In: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 10175079.6/30

Left Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF:640029.5/24

Right Out: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 9977404.3/34

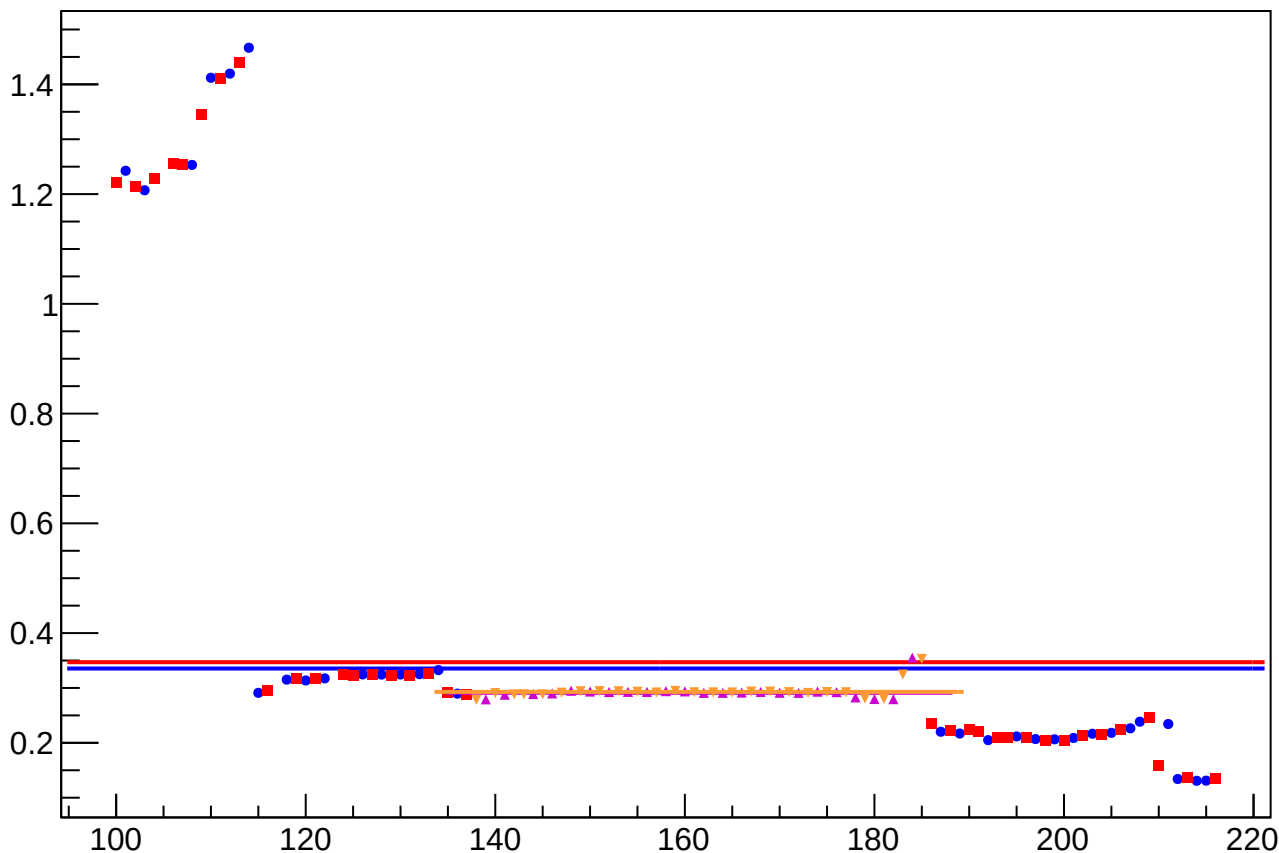
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:718726.0/22

+ sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12212519.6/55

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 24829177.3/113

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12575657.4/57

# yield\_bpm4eY\_mean vs Slug



Right In: 0.335 $\pm$ 0.000  $\chi^2$ /NDF: 8779910561.5/30

Left Out: 0.293 $\pm$ 0.000  $\chi^2$ /NDF:17281571.0/24

Right Out: 0.347 $\pm$ 0.000  $\chi^2$ /NDF: 9680199934.9/34

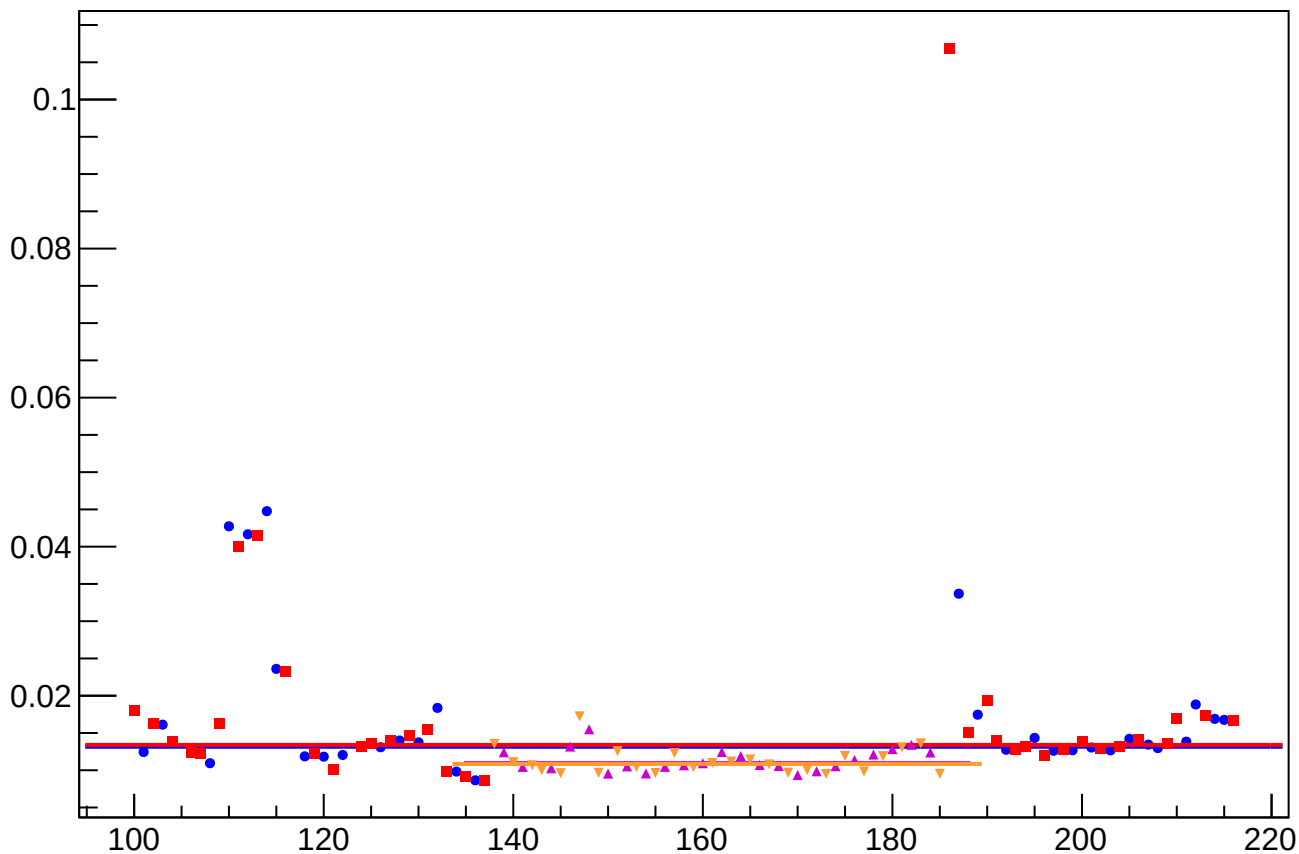
Left In: 0.291 $\pm$ 0.000  $\chi^2$ /NDF:10282762.1/22

+ sign 0.309 $\pm$ 0.000  $\chi^2$ /NDF: 8907251826.5/55

All: 0.311 $\pm$ 0.000  $\chi^2$ /NDF: 18780400244.7/100

- sign 0.314 $\pm$ 0.000  $\chi^2$ /NDF: 9871033629.0/57

# yield\_bpm4eY\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2144803.2/30

Left Out: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 654475.7/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2418536.4/34

Left In: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 512130.1/22

+ sign 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3447805.6/55

All: 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7082816.1/113

- sign 0.012 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3625747.2/57

# yield\_bpm4acX\_mean vs Slug



Right In:  $-0.963 \pm 0.000$   $\chi^2/\text{NDF}$ : 747777300.4/30

Left Out:  $-1.129 \pm 0.000$   $\chi^2/\text{NDF}$ : 238152679.4/24

Right Out:  $-0.977 \pm 0.000$   $\chi^2/\text{NDF}$ : 758892375.1/34

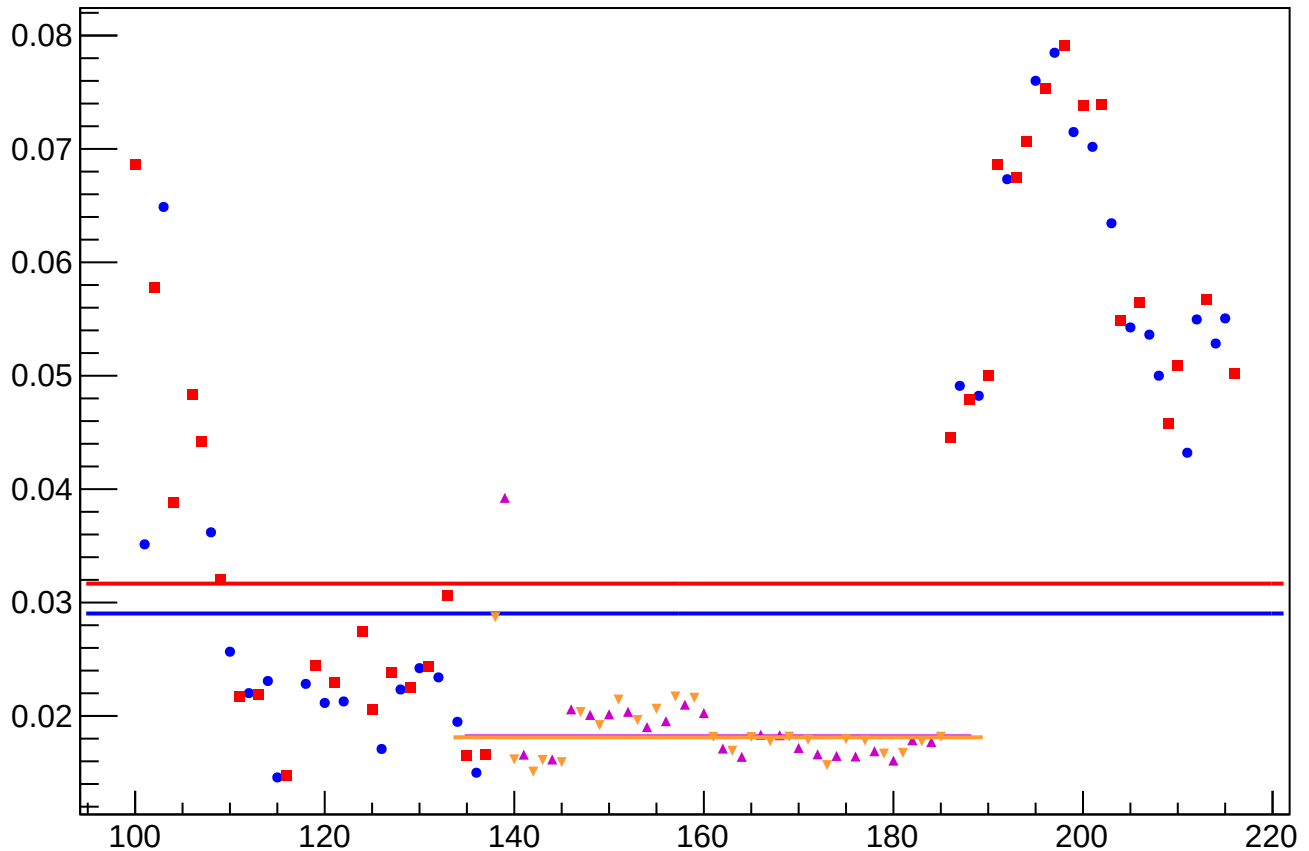
Left In:  $-1.132 \pm 0.000$   $\chi^2/\text{NDF}$ : 260075820.5/22

+ sign  $-1.088 \pm 0.000$   $\chi^2/\text{NDF}$ : 1310301050.9/55

All:  $-1.091 \pm 0.000$   $\chi^2/\text{NDF}$ : 2584476212.2/1

- sign  $-1.095 \pm 0.000$   $\chi^2/\text{NDF}$ : 1272847751.1/57

# yield\_bpm4acX\_rms vs Slug



Right In: 0.029 $\pm$ 0.000  $\chi^2$ /NDF: 8818438.4/30

Left Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 474004.4/24

Right Out: 0.032 $\pm$ 0.000  $\chi^2$ /NDF: 8170286.1/34

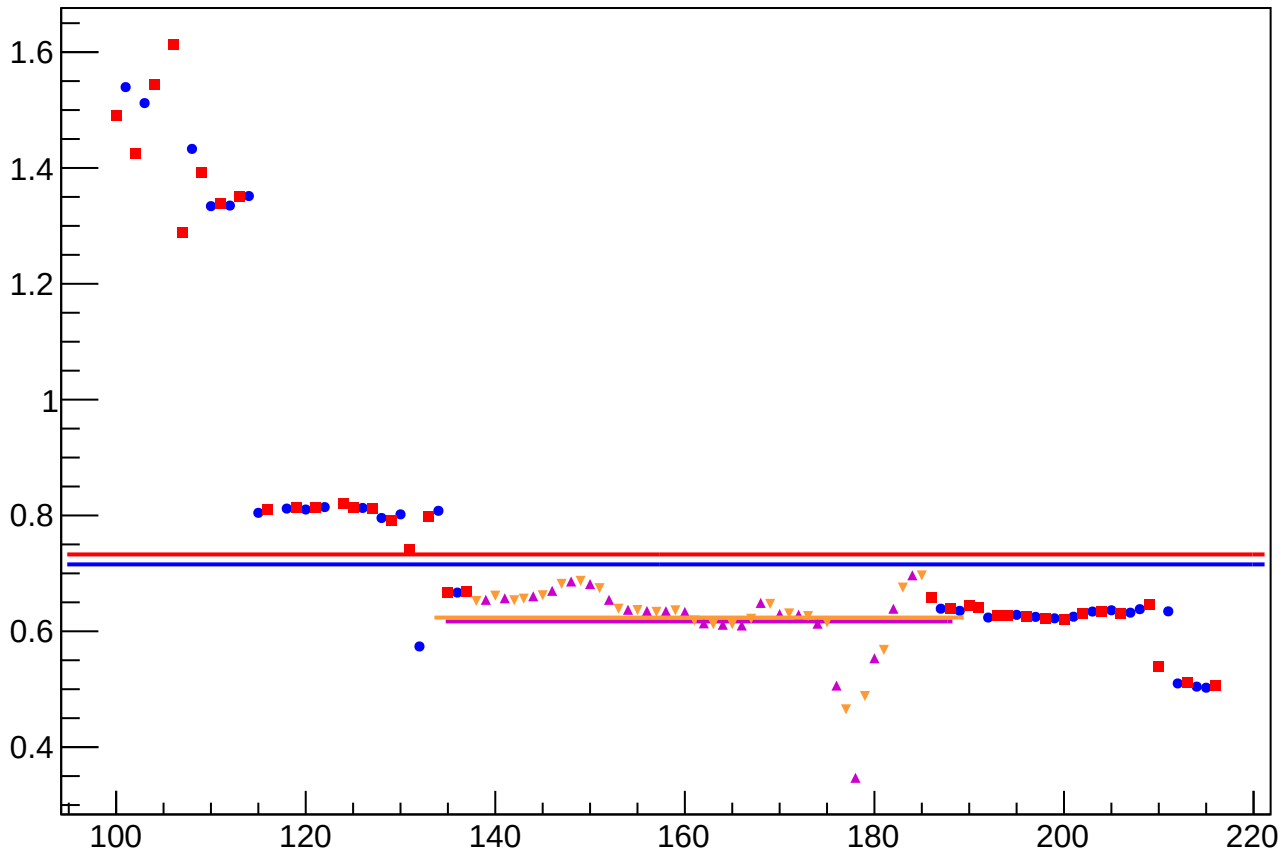
Left In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 723957.3/22

+ sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12099610.3/55

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 24873270.0/113

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12751386.7/57

# yield\_bpm4acY\_mean vs Slug



Right In: 0.716 $\pm$ 0.000  $\chi^2$ /NDF: 4284786289.6/30

Left Out: 0.624 $\pm$ 0.000  $\chi^2$ /NDF: 400613435.2/24

Right Out: 0.733 $\pm$ 0.000  $\chi^2$ /NDF: 4609638029.5/34

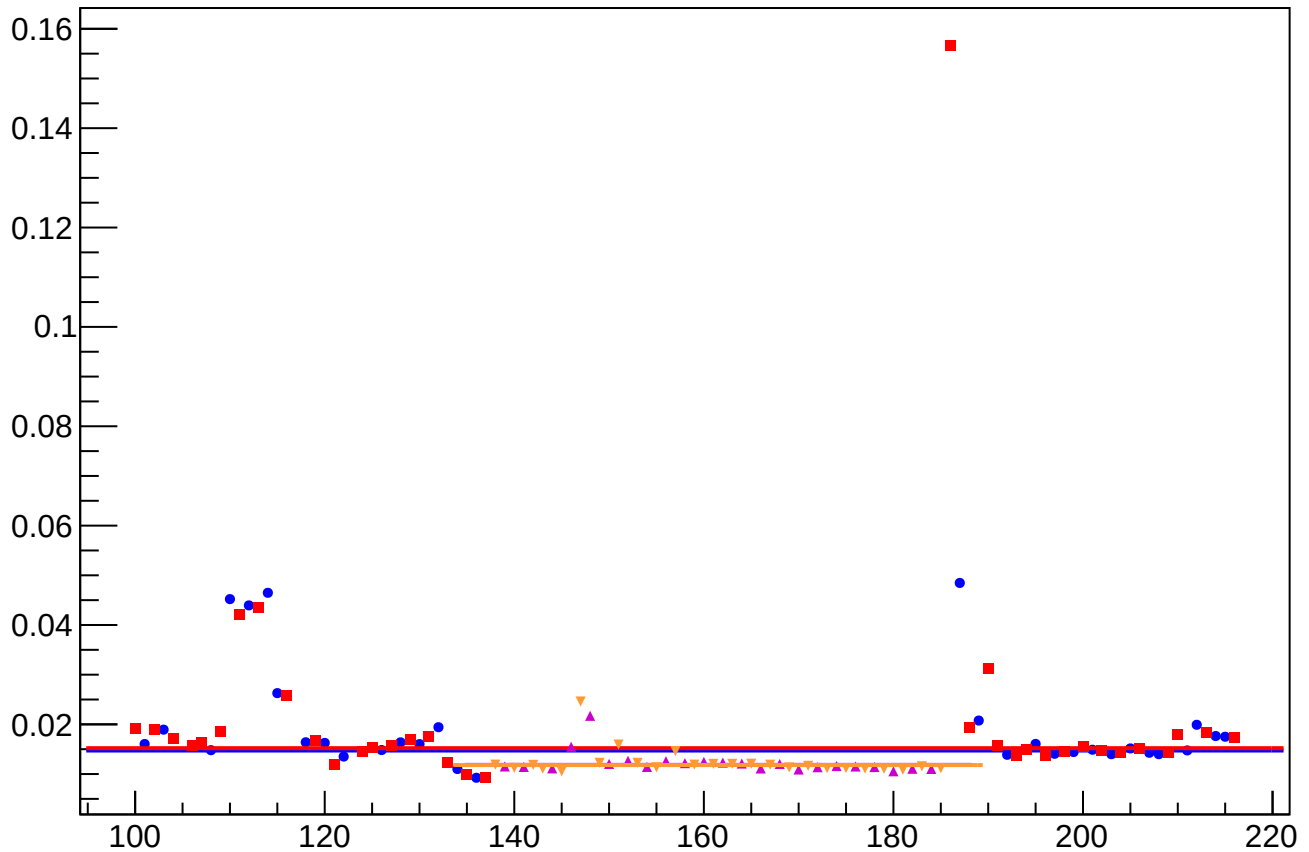
Left In: 0.617 $\pm$ 0.000  $\chi^2$ /NDF: 646297442.3/22

+ sign 0.658 $\pm$ 0.000  $\chi^2$ /NDF: 5103474096.1/55

All: 0.659 $\pm$ 0.000  $\chi^2$ /NDF: 10991043451.2/100

- sign 0.661 $\pm$ 0.000  $\chi^2$ /NDF: 5886884836.4/57

# yield\_bpm4acY\_rms vs Slug



Right In: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2175517.1/30

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 673680.7/24

Right Out: 0.015+/-0.000  $\chi^2/\text{NDF}$ : 2515106.8/34

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 508762.0/22

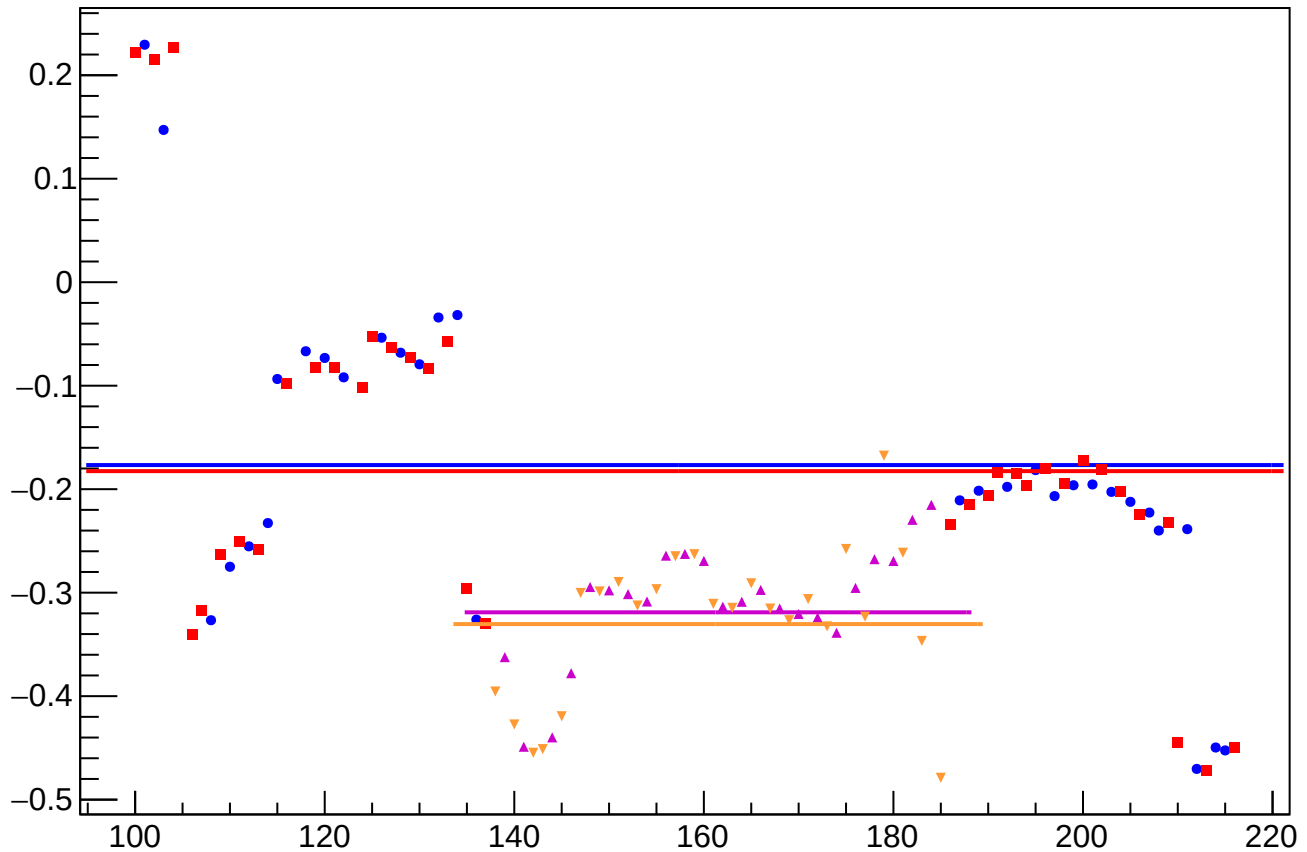
+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3699729.3/55

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 7797936.0/113

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4089148.1/57



# yield\_bpm4ecX\_mean vs Slug



Right In:  $-0.177 \pm 0.000$   $\chi^2/\text{NDF}$ : 361355708.7/30

Left Out:  $-0.330 \pm 0.000$   $\chi^2/\text{NDF}$ : 182729419.2/24

Right Out:  $-0.183 \pm 0.000$   $\chi^2/\text{NDF}$ : 274654260.2/34

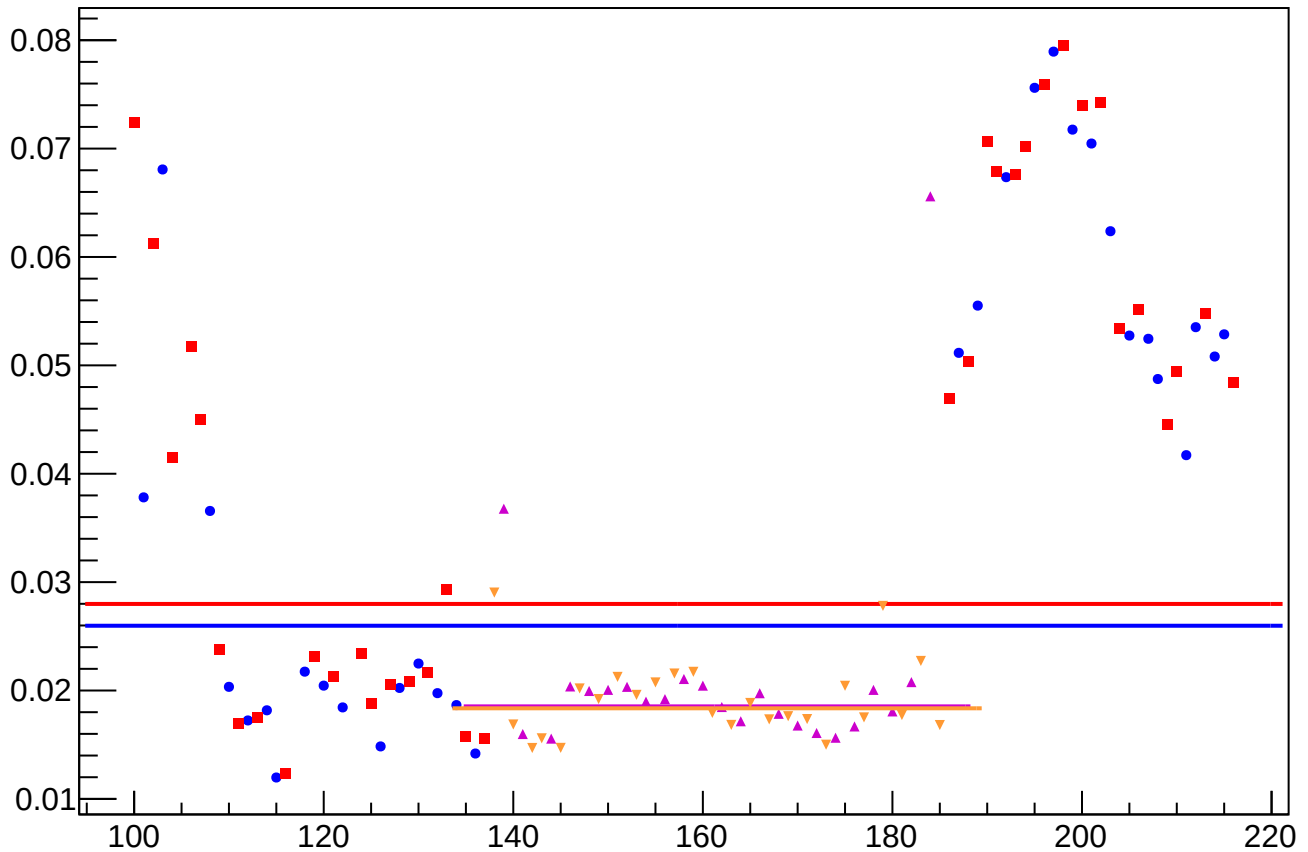
Left In:  $-0.319 \pm 0.000$   $\chi^2/\text{NDF}$ : 130589173.8/22

+ sign  $-0.286 \pm 0.000$   $\chi^2/\text{NDF}$ : 856135908.2/55

All:  $-0.283 \pm 0.000$   $\chi^2/\text{NDF}$ : 1486261177.4/1

- sign  $-0.280 \pm 0.000$   $\chi^2/\text{NDF}$ : 629150205.3/57

# yield\_bpm4ecX\_rms vs Slug



Right In: 0.026 $\pm$ 0.000  $\chi^2$ /NDF: 10133786.1/30

Left Out: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 737503.8/24

Right Out: 0.028 $\pm$ 0.000  $\chi^2$ /NDF: 9916036.1/34

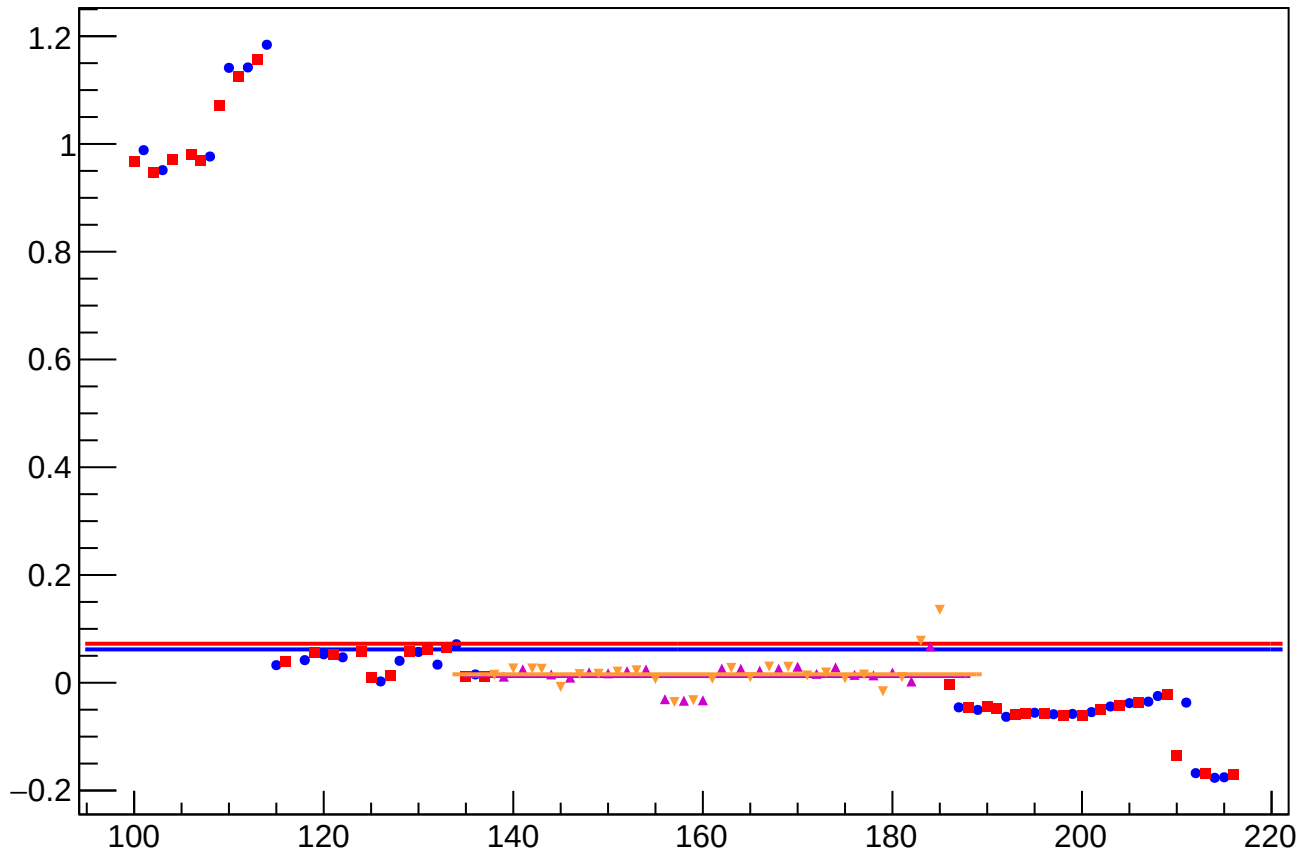
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 933807.9/22

+ sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12405038.4/55

All: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 25430710.5/113

- sign 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 12999164.2/57

# yield\_bpm4ecY\_mean vs Slug



Right In: 0.062 $\pm$ 0.000  $\chi^2$ /NDF: 8976726969.8/30

Left Out: 0.016 $\pm$ 0.000  $\chi^2$ /NDF:104485335.8/24

Right Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF: 9673035973.1/34

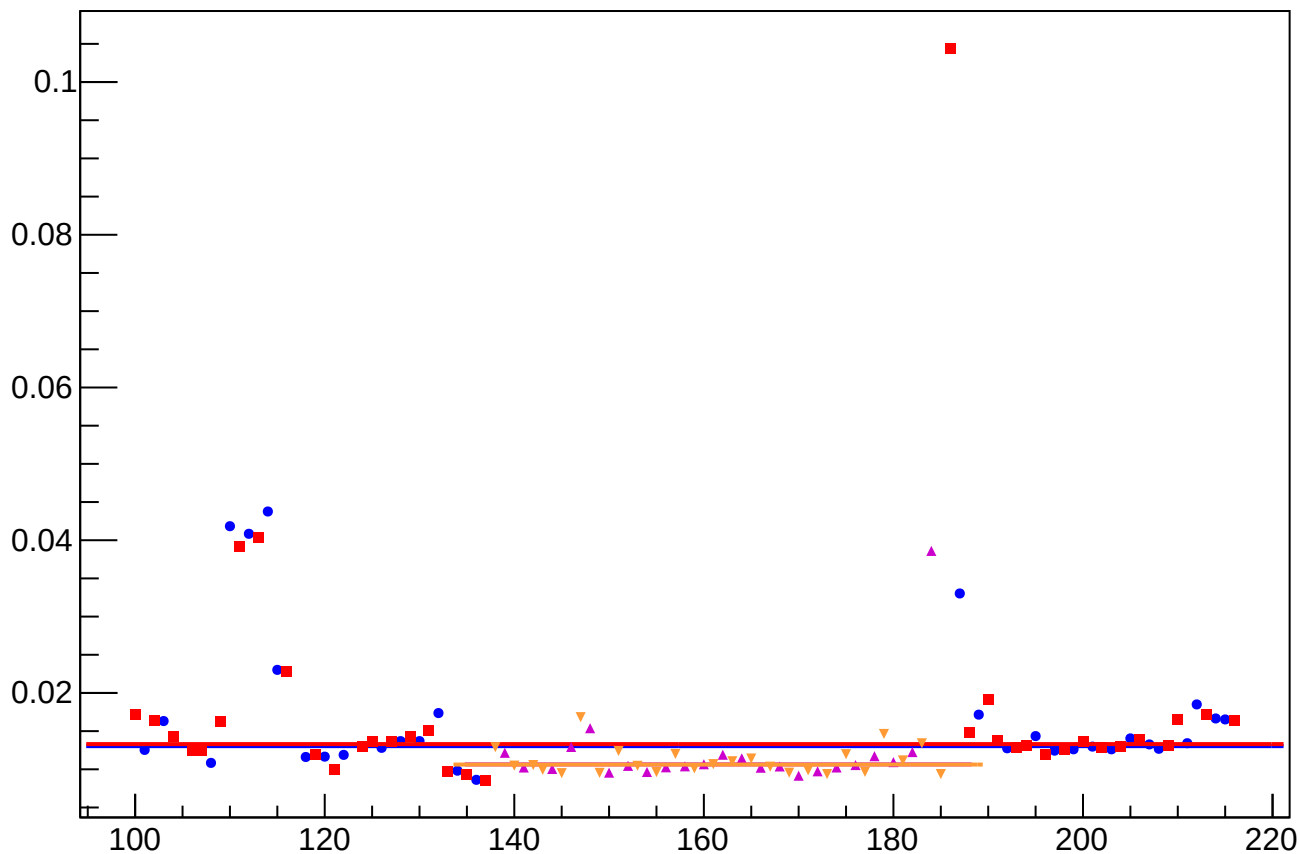
Left In: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:58674739.1/22

+ sign 0.034 $\pm$ 0.000  $\chi^2$ /NDF: 9212916371.4/55

All: 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 19159387123.8/1

- sign 0.036 $\pm$ 0.000  $\chi^2$ /NDF: 9945682092.9/57

# yield\_bpm4ecY\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2090794.9/30

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 622208.3/24

Right Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2342920.7/34

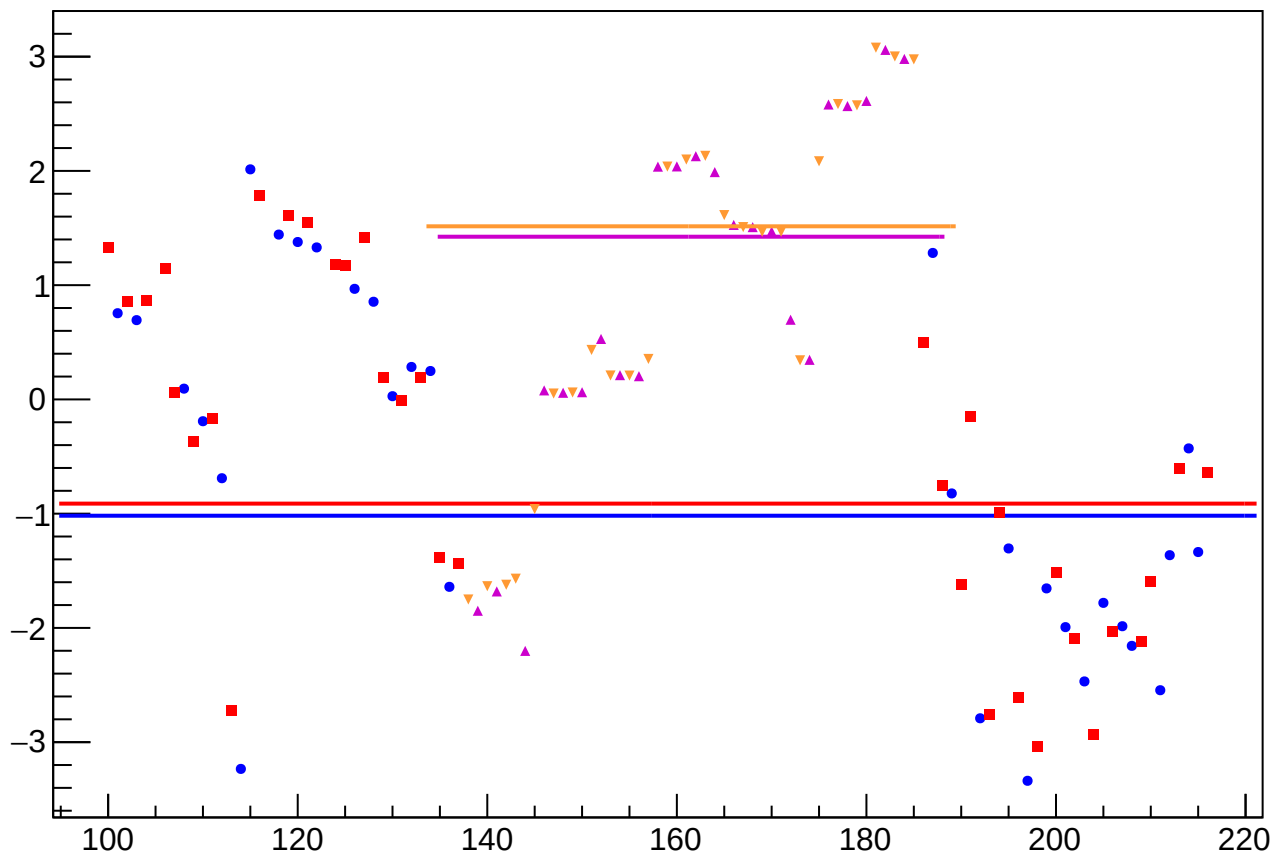
Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 571950.9/22

+ sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3432131.8/55

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 7194582.0/113

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 3757999.9/57

# yield\_bpm1X\_mean vs Slug



Right In:  $-1.018 \pm 0.000$   $\chi^2/\text{NDF}: 9701929493.1/30$

Left Out:  $1.515 \pm 0.000$   $\chi^2/\text{NDF}: 67789388512.2/24$

Right Out:  $-0.912 \pm 0.000$   $\chi^2/\text{NDF}: 9683495260.7/34$

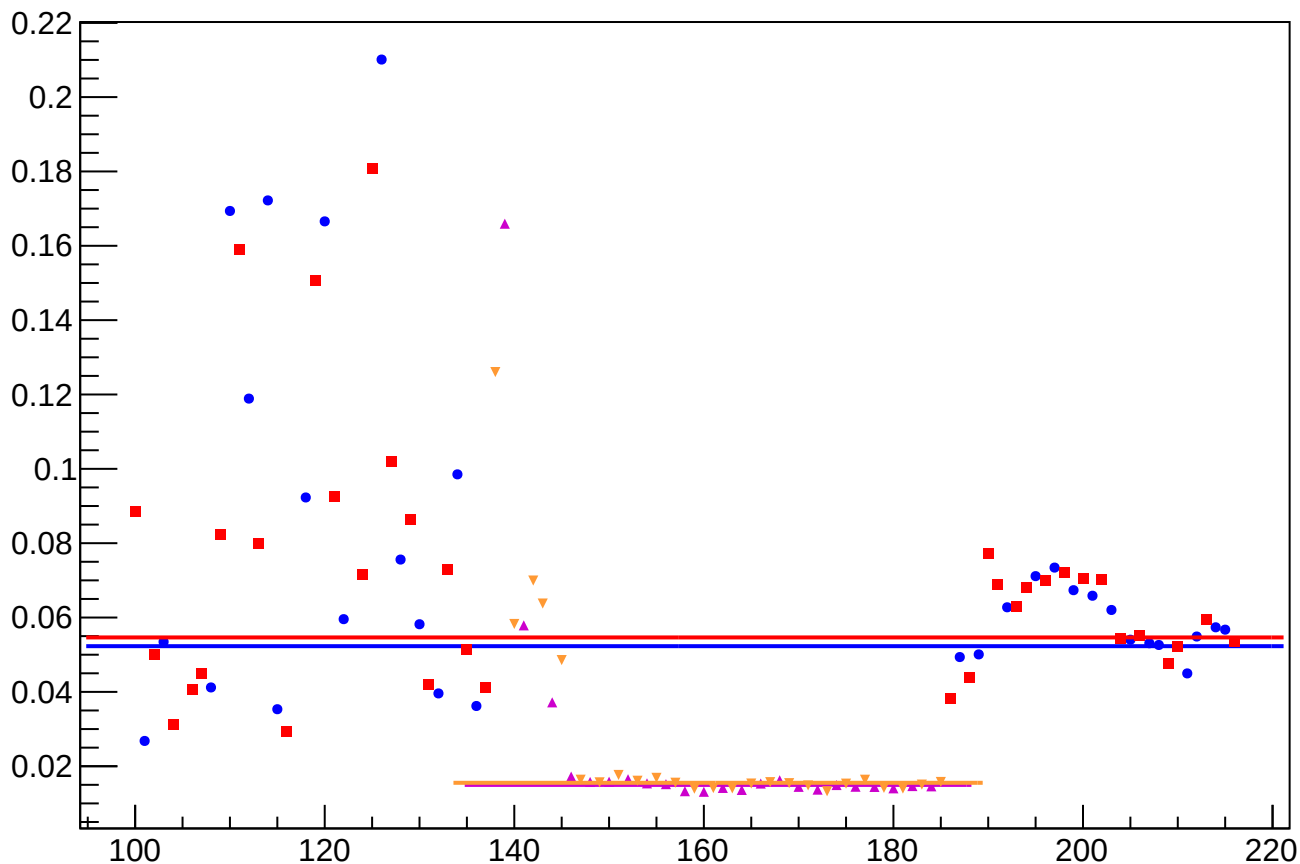
Left In:  $1.424 \pm 0.000$   $\chi^2/\text{NDF}: 68046262594.0/22$

+ sign  $1.308 \pm 0.000$   $\chi^2/\text{NDF}: 109328734194.1/55$

All:  $1.275 \pm 0.000$   $\chi^2/\text{NDF}: 213492412670.8$

- sign  $1.243 \pm 0.000$   $\chi^2/\text{NDF}: 104023058492.9/57$

# yield\_bpm1X\_rms vs Slug



Right In: 0.052+/-0.000  $\chi^2/\text{NDF}$ : 3622277.3/30

Left Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ :2984313.0/24

Right Out: 0.055+/-0.000  $\chi^2/\text{NDF}$ : 3196670.5/34

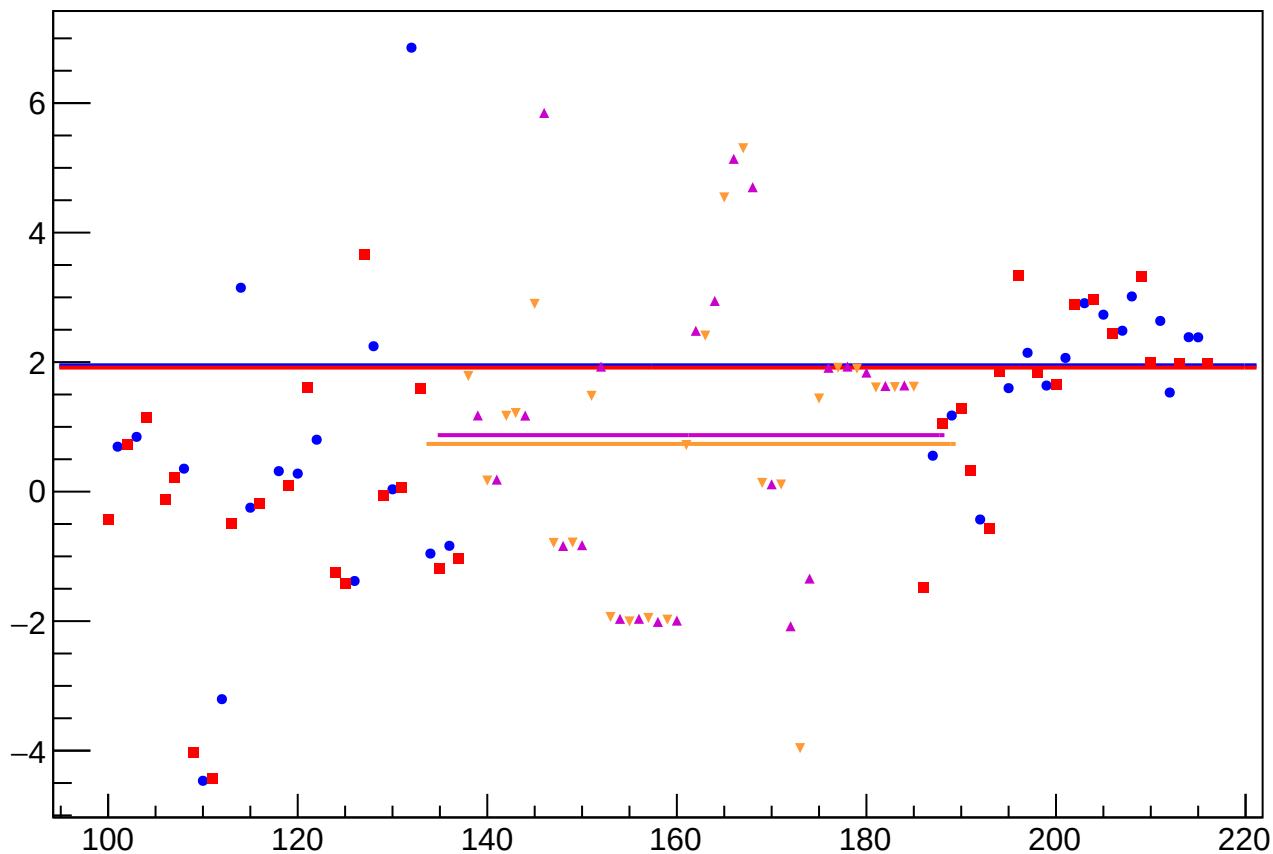
Left In: 0.015+/-0.000  $\chi^2/\text{NDF}$ :2182916.7/22

+ sign 0.019+/-0.000  $\chi^2/\text{NDF}$ : 20010278.0/55

All: 0.018+/-0.000  $\chi^2/\text{NDF}$ : 40573065.9/113

- sign 0.018+/-0.000  $\chi^2/\text{NDF}$ : 20546062.1/57

# yield\_bpm1Y\_mean vs Slug



Right In: 1.951+/-0.000  $\chi^2/\text{NDF}$ : 41567070098.4/30

Left Out: 0.737+/-0.000  $\chi^2/\text{NDF}$ : 535962480112.3/24

Right Out: 1.916+/-0.000  $\chi^2/\text{NDF}$ : 44577442264.9/34

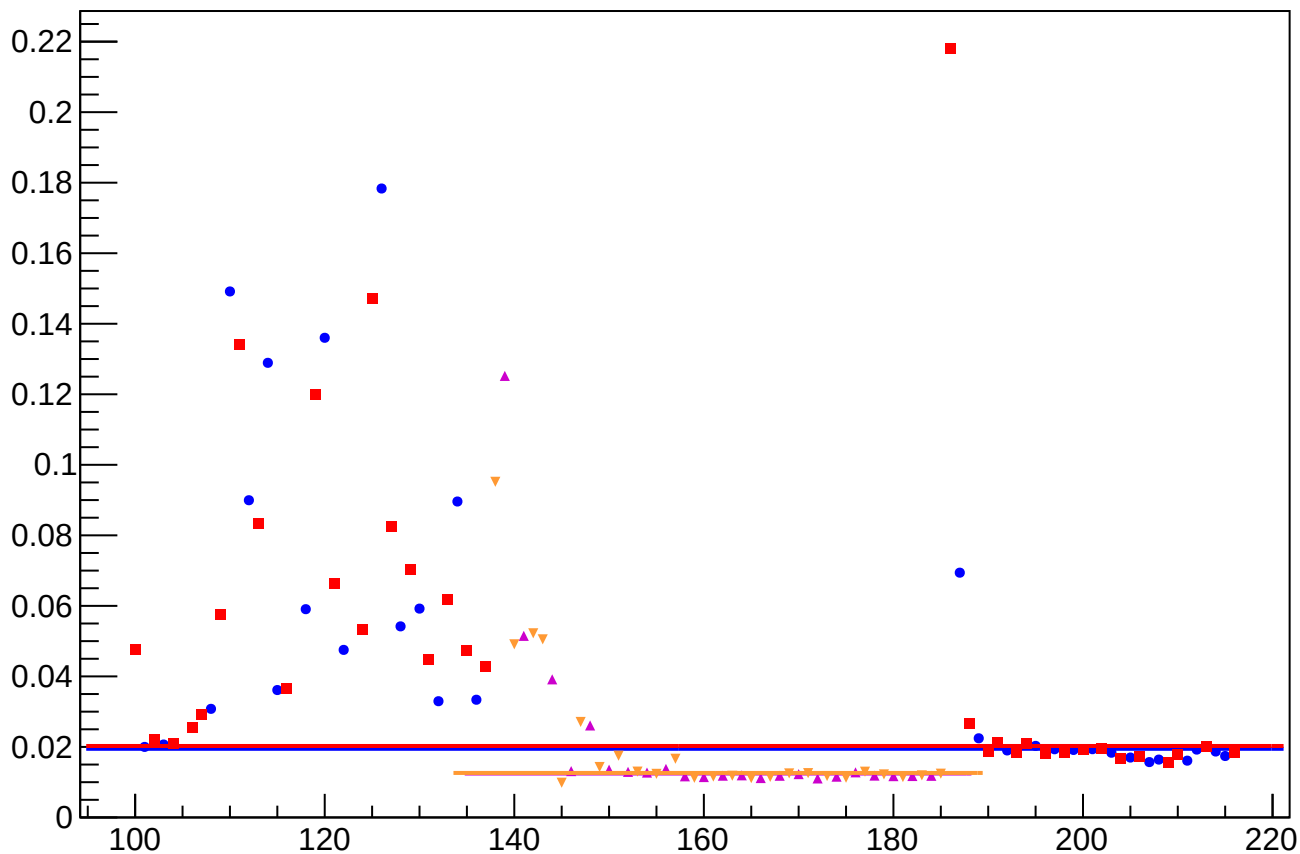
Left In: 0.872+/-0.000  $\chi^2/\text{NDF}$ : 620161319368.2/22

+ sign 1.057+/-0.000  $\chi^2/\text{NDF}$ : 616081729199.6/55

All: 1.096+/-0.000  $\chi^2/\text{NDF}$ : 1308570728150.

- sign 1.137+/-0.000  $\chi^2/\text{NDF}$ : 692058909433.6/57

# yield\_bpm1Y\_rms vs Slug



Right In: 0.019+/-0.000  $\chi^2/\text{NDF}$ : 4500879.4/30

Left Out: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 3191407.4/24

Right Out: 0.020+/-0.000  $\chi^2/\text{NDF}$ : 5540768.9/34

Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 2756702.2/22

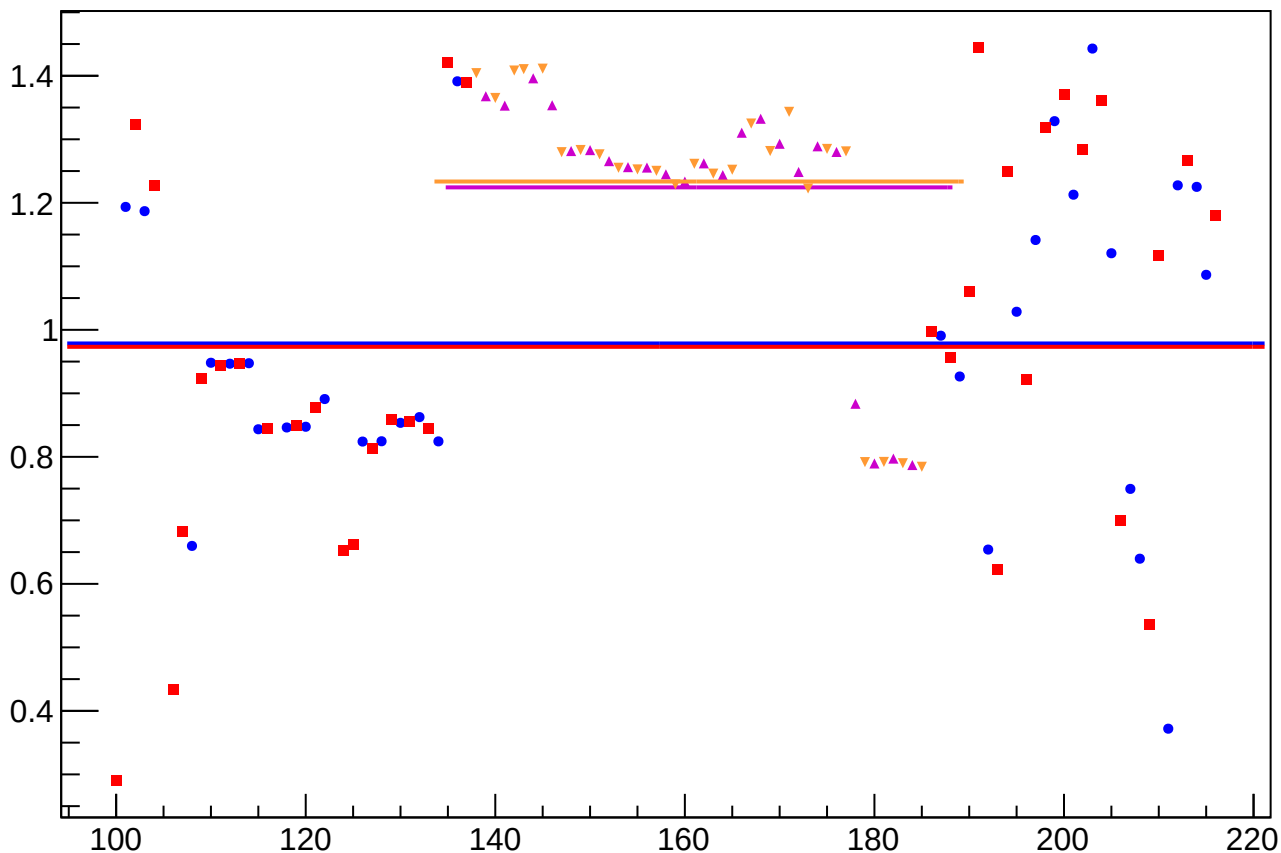
+ sign 0.014+/-0.000  $\chi^2/\text{NDF}$ : 10143477.9/55

All: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 21503000.1/113

- sign 0.014+/-0.000  $\chi^2/\text{NDF}$ : 11359512.9/57



# yield\_bpm11X\_mean vs Slug



Right In: 0.979 $\pm$ 0.000  $\chi^2$ /NDF: 2288401534.5/30

Left Out: 1.234 $\pm$ 0.000  $\chi^2$ /NDF:3043934887.1/24

Right Out: 0.973 $\pm$ 0.000  $\chi^2$ /NDF: 2544480062.1/34

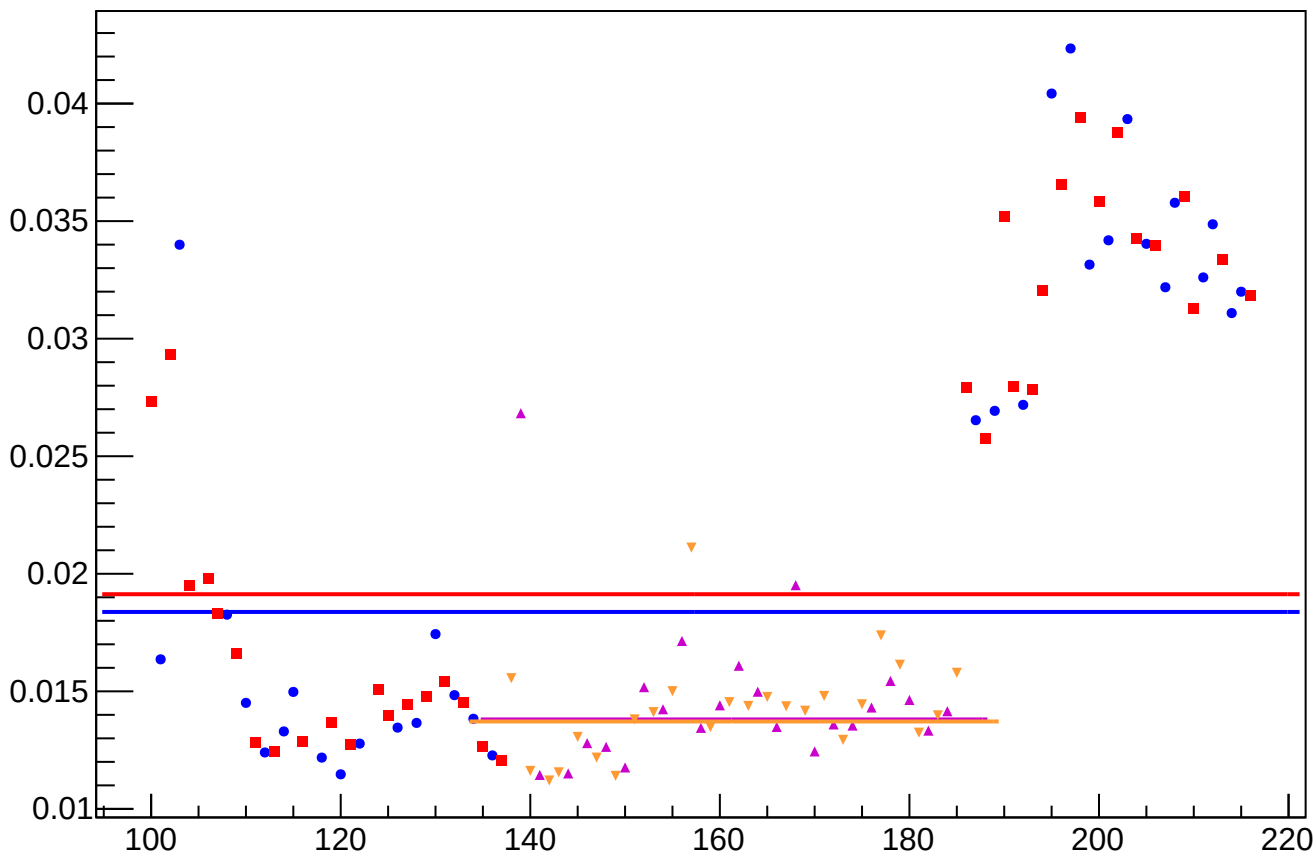
Left In: 1.224 $\pm$ 0.000  $\chi^2$ /NDF:2653773297.1/22

+ sign 1.152 $\pm$ 0.000  $\chi^2$ /NDF: 7209412753.4/55

All: 1.147 $\pm$ 0.000  $\chi^2$ /NDF: 14167004601.5/1

- sign 1.142 $\pm$ 0.000  $\chi^2$ /NDF: 6951712195.9/57

# yield\_bpm11X\_rms vs Slug



Right In: 0.018 $\pm$ 0.000  $\chi^2$ /NDF: 6504970.3/30

Left Out: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:550789.3/24

Right Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 5931569.0/34

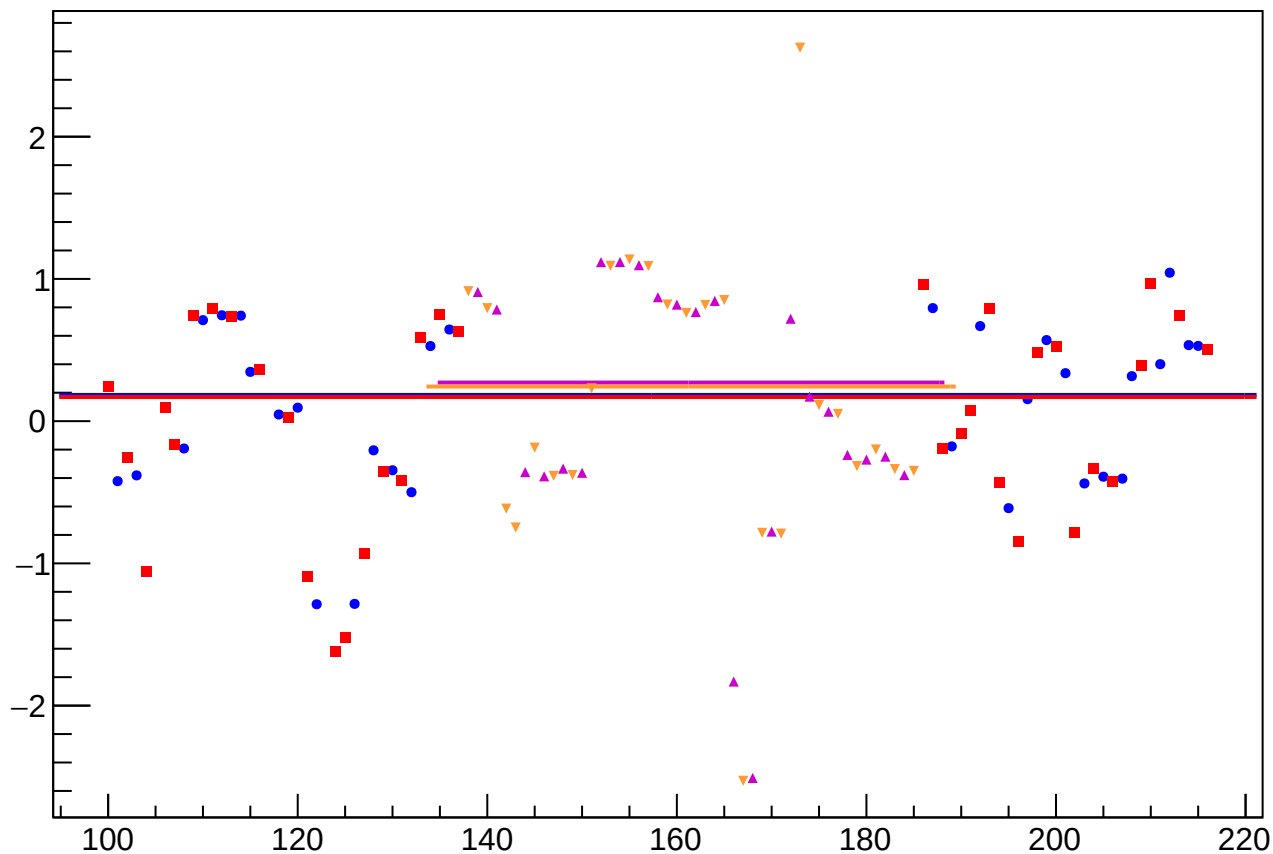
Left In: 0.014 $\pm$ 0.000  $\chi^2$ /NDF:870104.2/22

+ sign 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 8308765.4/55

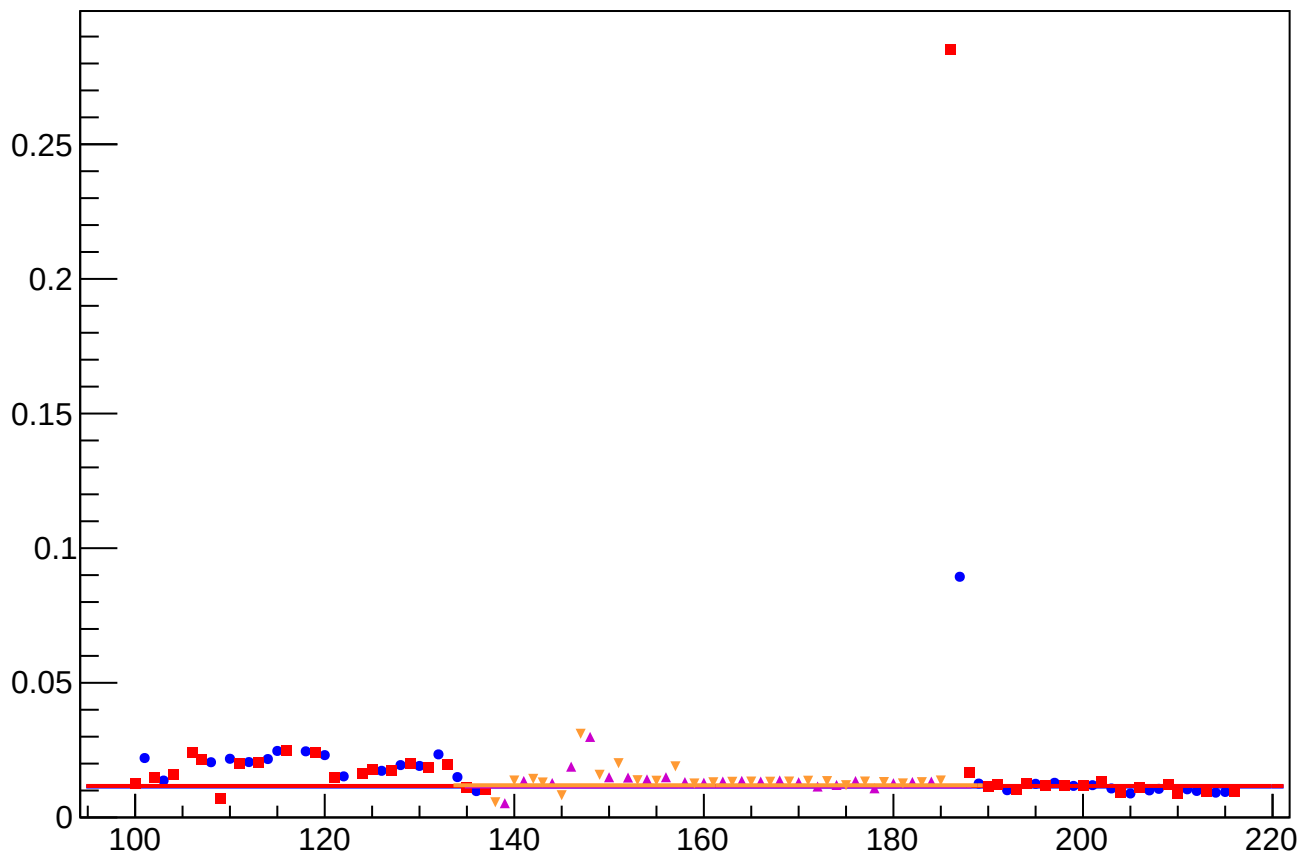
All: 0.015 $\pm$ 0.000  $\chi^2$ /NDF: 16703365.8/113

- sign 0.016 $\pm$ 0.000  $\chi^2$ /NDF: 8380169.1/57

# yield\_bpm11Y\_mean vs Slug



# yield\_bpm11Y\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2843458.0/30

Left Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF:3266034.8/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3295710.6/34

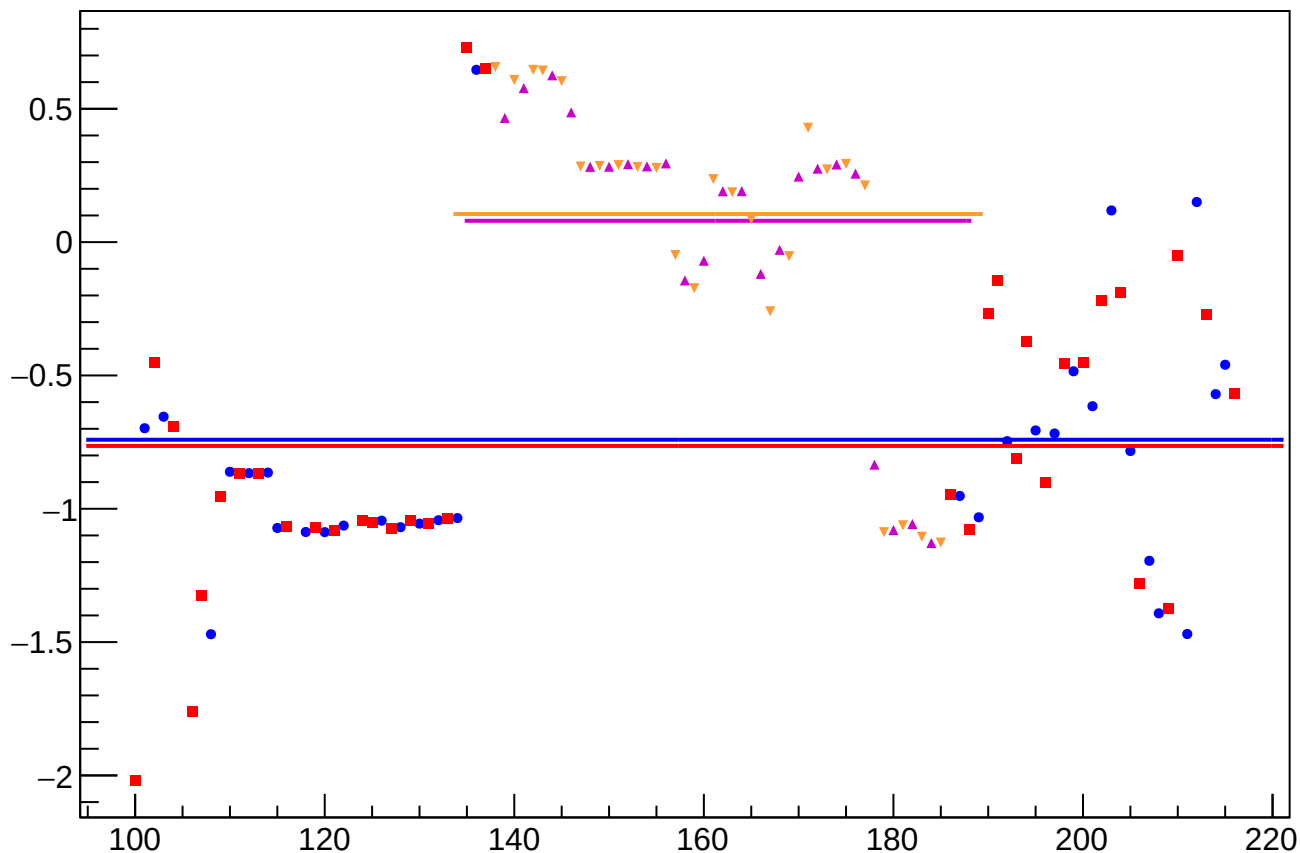
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:3671096.5/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6136919.3/55

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 13111962.5/113

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 6971991.3/57

# yield\_bpm12X\_mean vs Slug



Right In:  $-0.741 \pm 0.000$   $\chi^2/\text{NDF}: 2406468847.6/30$

Left Out:  $0.105 \pm 0.000$   $\chi^2/\text{NDF}: 3787188881.7/24$

Right Out:  $-0.764 \pm 0.000$   $\chi^2/\text{NDF}: 2245888933.1/34$

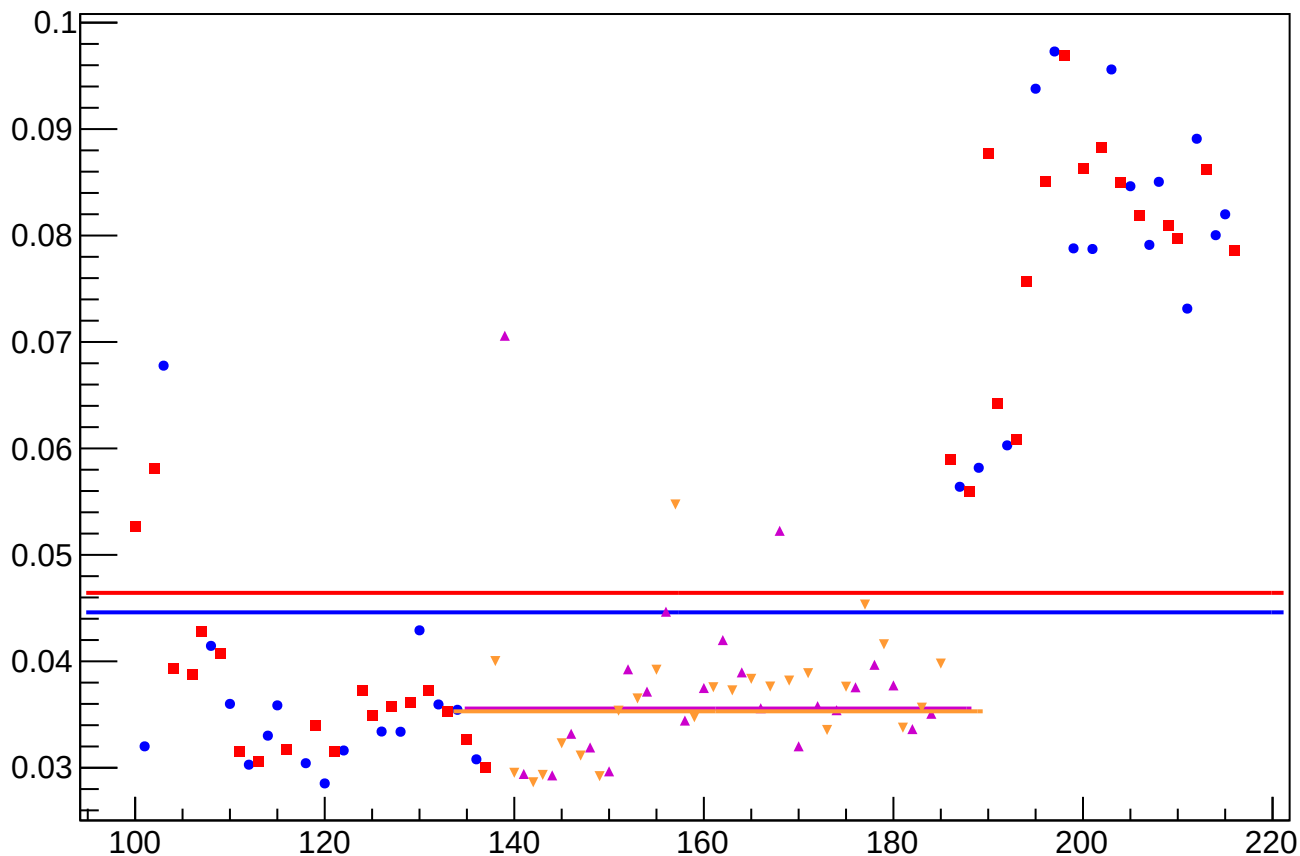
Left In:  $0.080 \pm 0.000$   $\chi^2/\text{NDF}: 3269598614.0/22$

+ sign  $-0.194 \pm 0.000$   $\chi^2/\text{NDF}: 9618405522.3/55$

All:  $-0.209 \pm 0.000$   $\chi^2/\text{NDF}: 18409568825.6/101$

- sign  $-0.224 \pm 0.000$   $\chi^2/\text{NDF}: 8782217223.9/57$

# yield\_bpm12X\_rms vs Slug



Right In: 0.045 $\pm$ 0.000  $\chi^2$ /NDF: 6271046.8/30

Left Out: 0.035 $\pm$ 0.000  $\chi^2$ /NDF:612627.1/24

Right Out: 0.046 $\pm$ 0.000  $\chi^2$ /NDF: 5484493.4/34

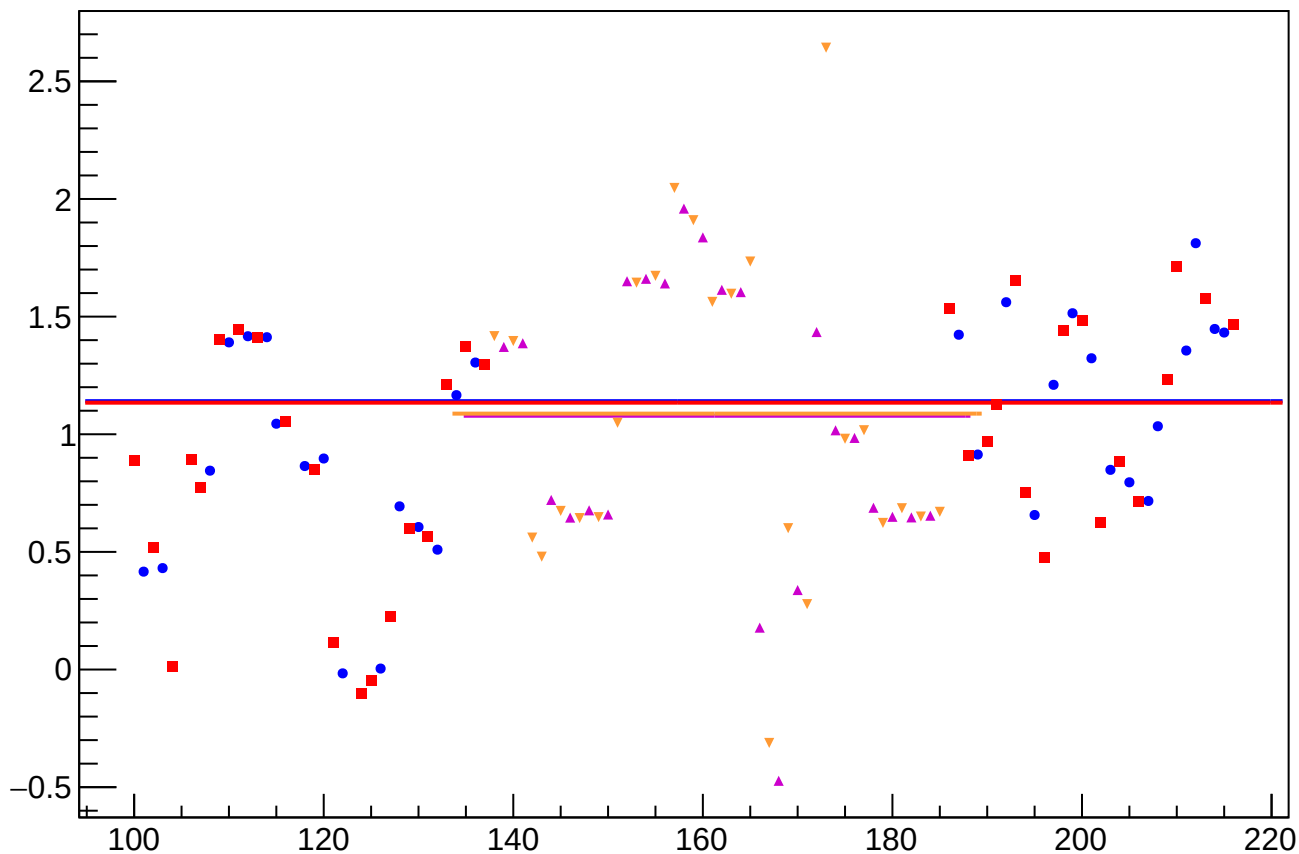
Left In: 0.036 $\pm$ 0.000  $\chi^2$ /NDF:960383.5/22

+ sign 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 7710033.0/55

All: 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 15253290.6/113

- sign 0.039 $\pm$ 0.000  $\chi^2$ /NDF: 7527453.6/57

# yield\_bpm12Y\_mean vs Slug



Right In: 1.141 $\pm$ 0.000  $\chi^2$ /NDF: 51173354601.6/30

Left Out: 1.088 $\pm$ 0.000  $\chi^2$ /NDF: 93851056436.3/24

Right Out: 1.134 $\pm$ 0.000  $\chi^2$ /NDF: 59878671468.5/34

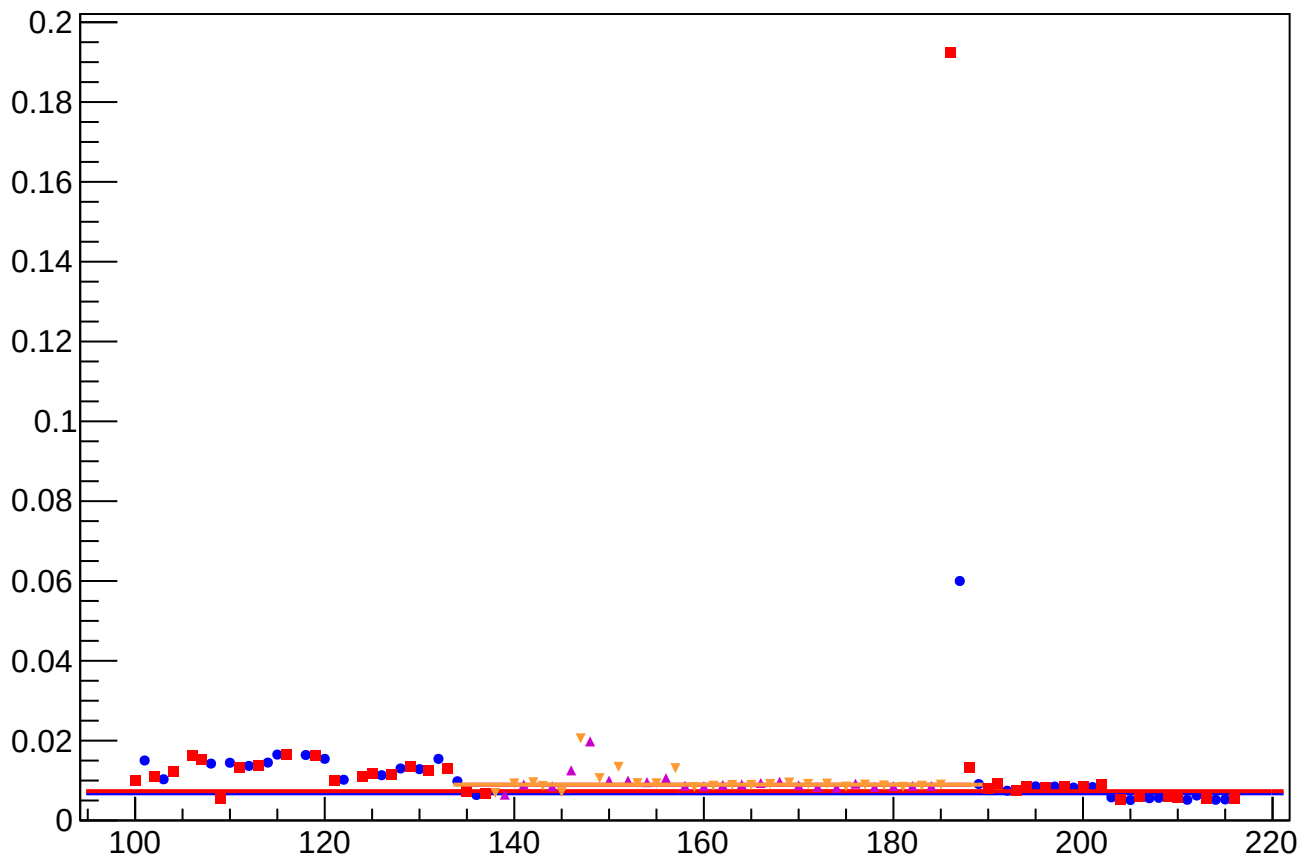
Left In: 1.079 $\pm$ 0.000  $\chi^2$ /NDF: 74081002727.0/22

+ sign 1.120 $\pm$ 0.000  $\chi^2$ /NDF: 145405962066.1/55

All: 1.116 $\pm$ 0.000  $\chi^2$ /NDF: 279767503605.8

- sign 1.111 $\pm$ 0.000  $\chi^2$ /NDF: 134341696310.3/57

# yield\_bpm12Y\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4180482.1/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:1146497.6/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4338278.3/34

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:966765.2/22

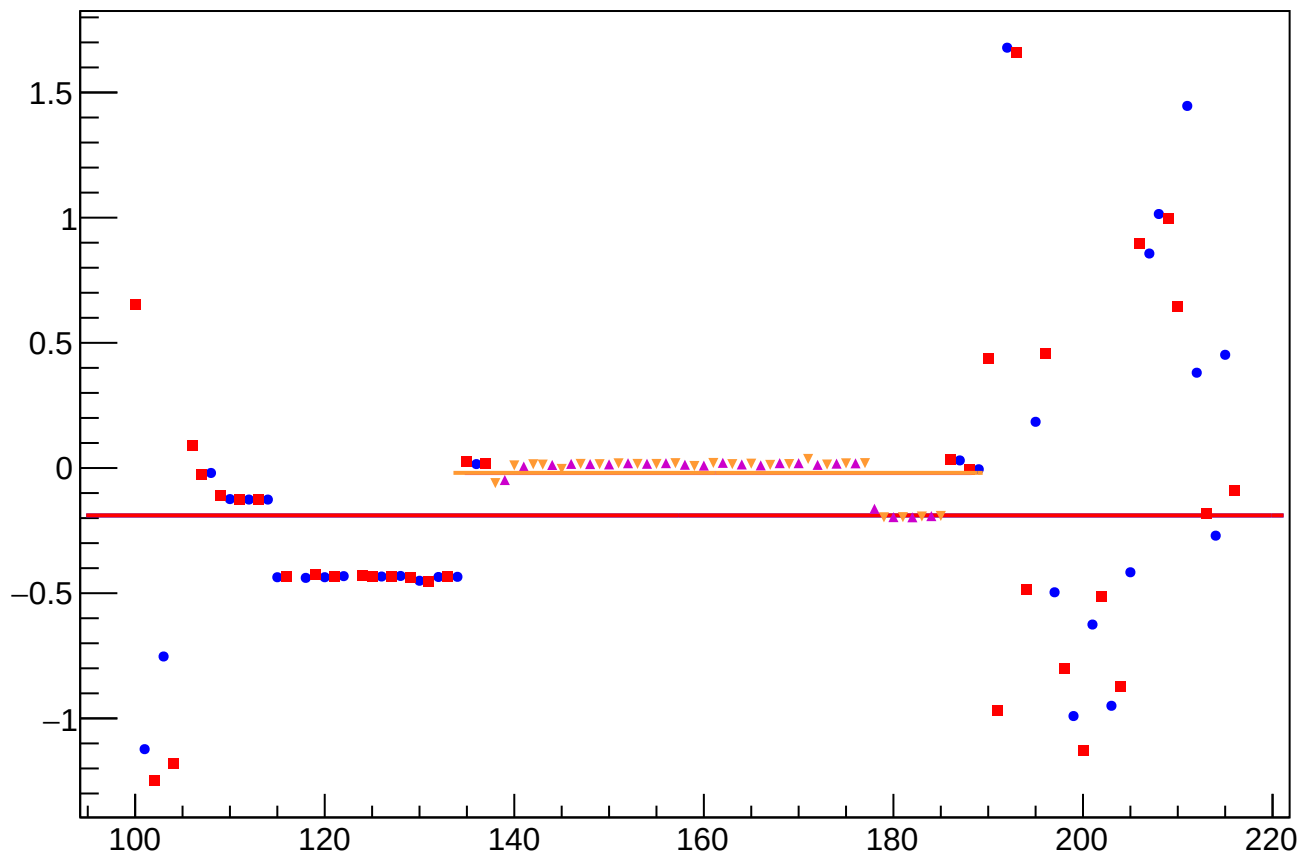
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6610520.3/55

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 12619466.4/113

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 5942232.9/57



# yield\_bpm16X\_mean vs Slug



Right In:  $-0.190 \pm 0.000$   $\chi^2/\text{NDF}: 6213657019.8/30$

Left Out:  $-0.019 \pm 0.000$   $\chi^2/\text{NDF}: 1058597672.8/24$

Right Out:  $-0.189 \pm 0.000$   $\chi^2/\text{NDF}: 4550152996.1/34$

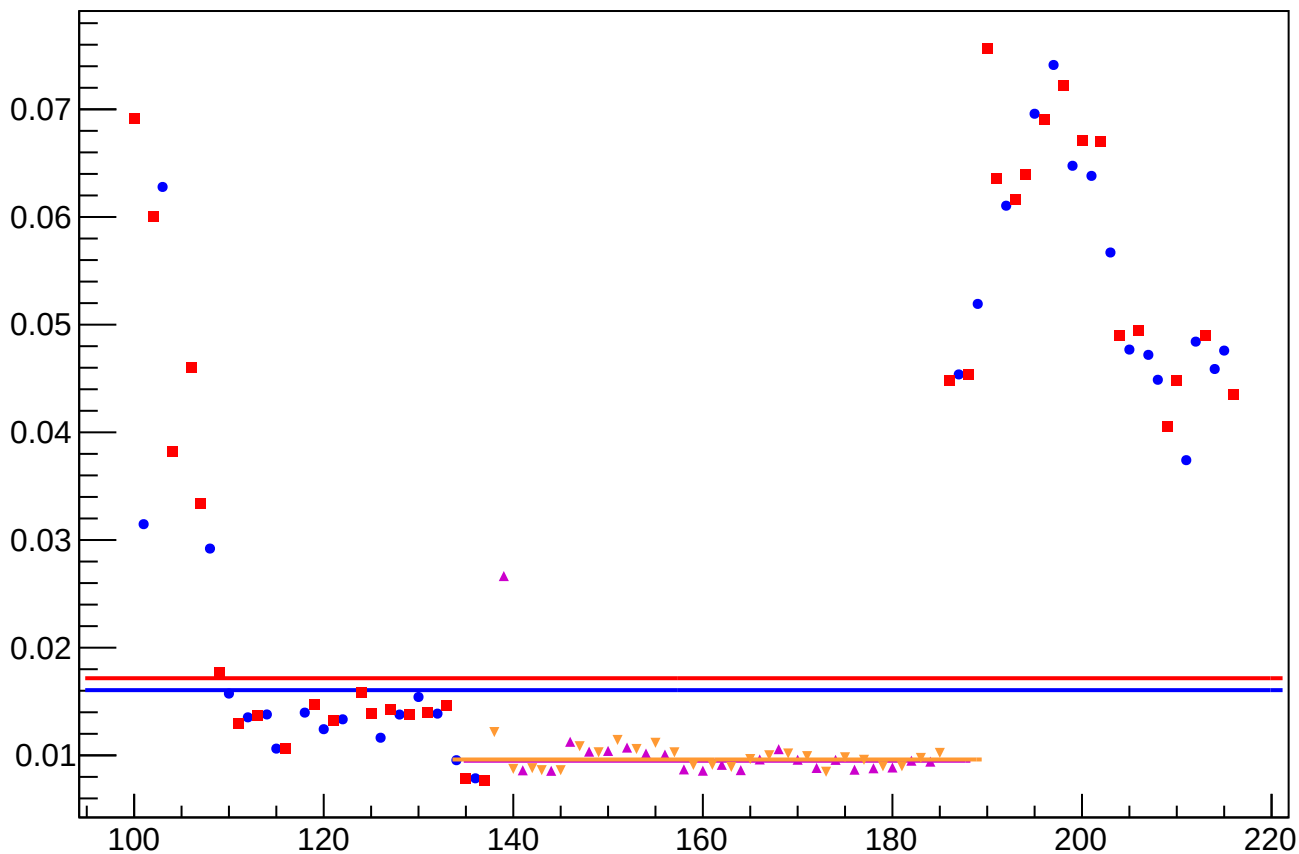
Left In:  $-0.020 \pm 0.000$   $\chi^2/\text{NDF}: 984483299.5/22$

+ sign  $-0.051 \pm 0.000$   $\chi^2/\text{NDF}: 8216001086.4/55$

All:  $-0.050 \pm 0.000$   $\chi^2/\text{NDF}: 14598272540.4/100$

- sign  $-0.050 \pm 0.000$   $\chi^2/\text{NDF}: 6382207715.1/57$

# yield\_bpm16X\_rms vs Slug



Right In: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 14354894.9/30

Left Out: 0.010+/-0.000  $\chi^2/\text{NDF}$ : 271912.7/24

Right Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 14550947.8/34

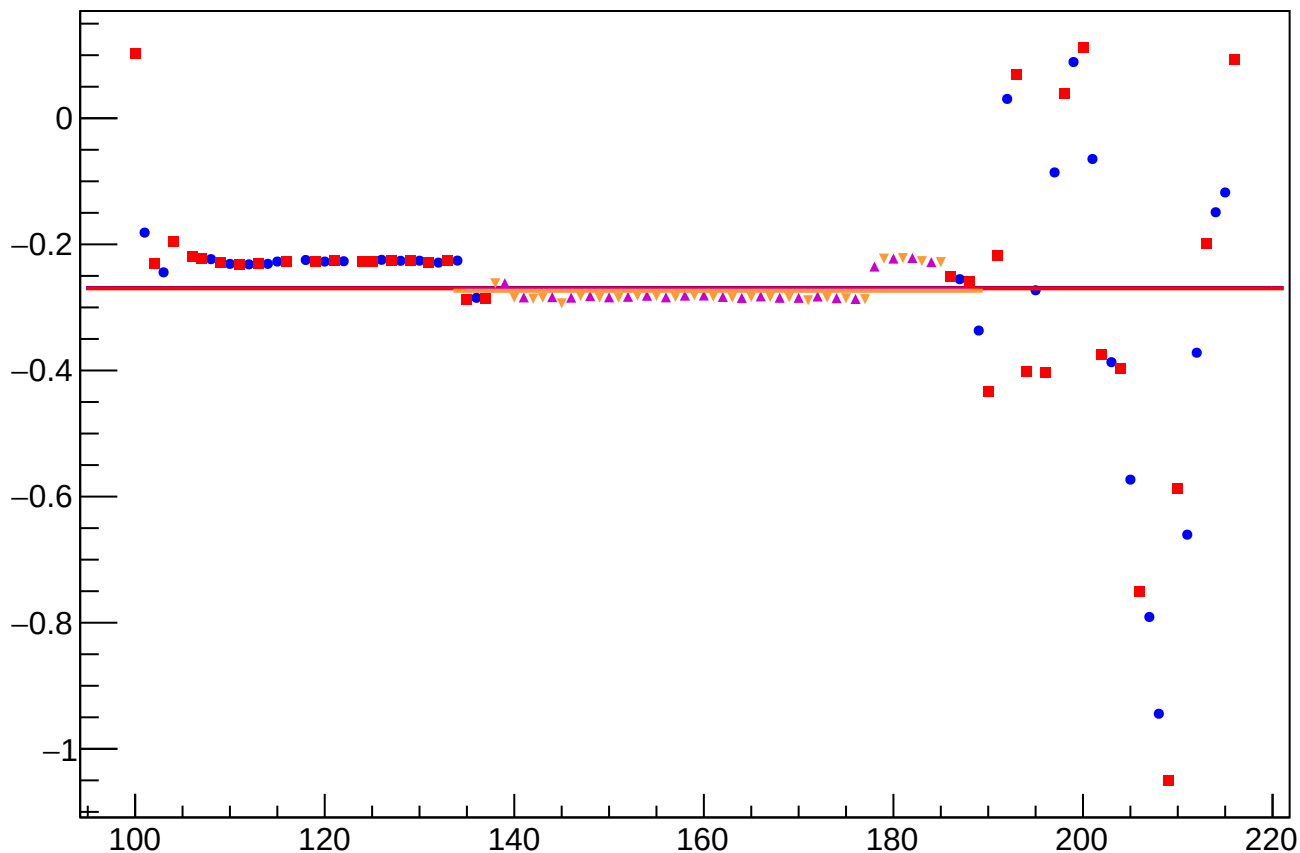
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 900469.0/22

+ sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 17326081.9/55

All: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 36263138.7/113

- sign 0.011+/-0.000  $\chi^2/\text{NDF}$ : 18936581.9/57

# yield\_bpm16Y\_mean vs Slug



Right In: -0.269+/-0.000  $\chi^2/\text{NDF}$ : 27517331080.9/30

Left Out: -0.274+/-0.000  $\chi^2/\text{NDF}$ : 395563277.1/24

Right Out: -0.270+/-0.000  $\chi^2/\text{NDF}$ : 28844754735.2/34

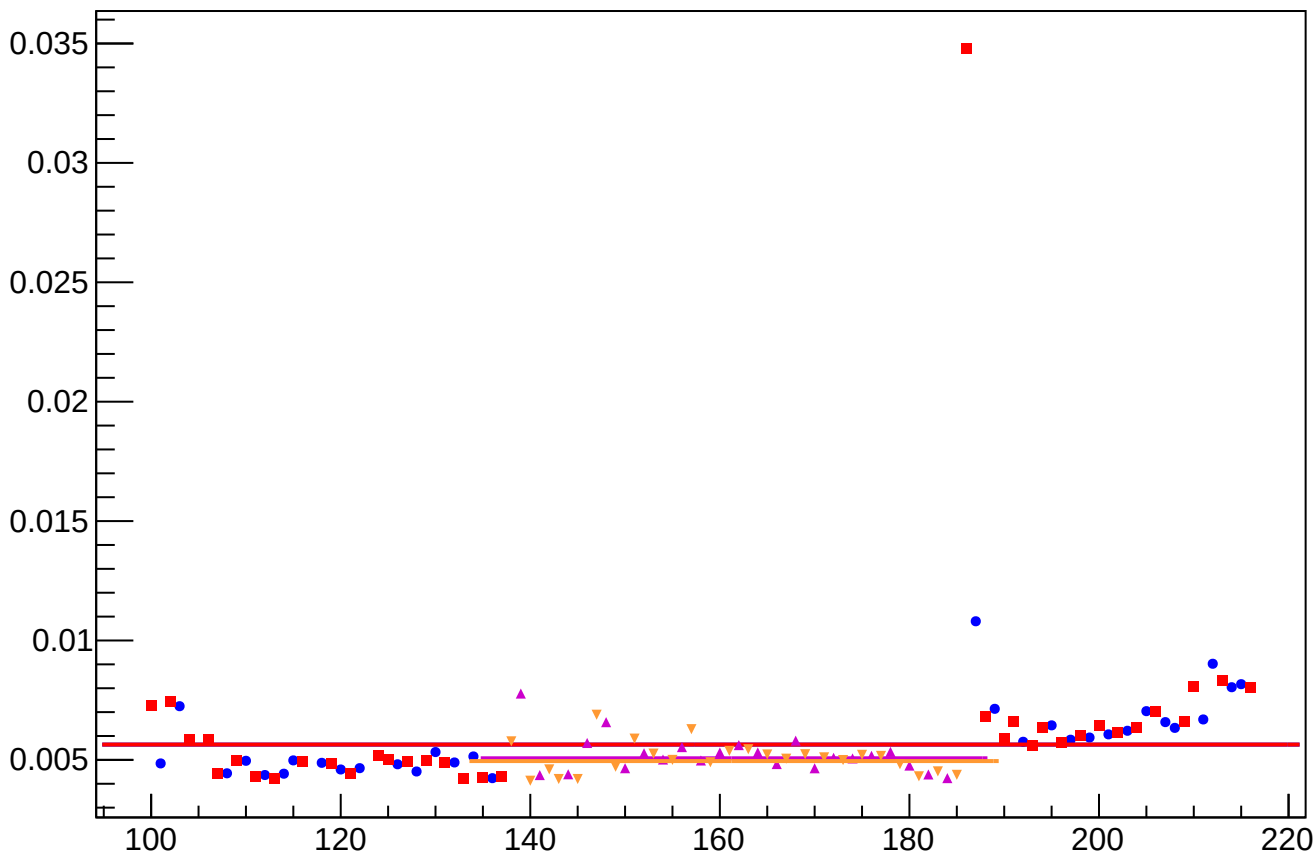
Left In: -0.273+/-0.000  $\chi^2/\text{NDF}$ : 335149425.2/22

+ sign -0.272+/-0.000  $\chi^2/\text{NDF}$ : 27918885001.2/55

All: -0.271+/-0.000  $\chi^2/\text{NDF}$ : 57101390168.9

- sign -0.271+/-0.000  $\chi^2/\text{NDF}$ : 29182426213.4/57

# yield\_bpm16Y\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1507053.3/30

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 528766.8/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1947932.5/34

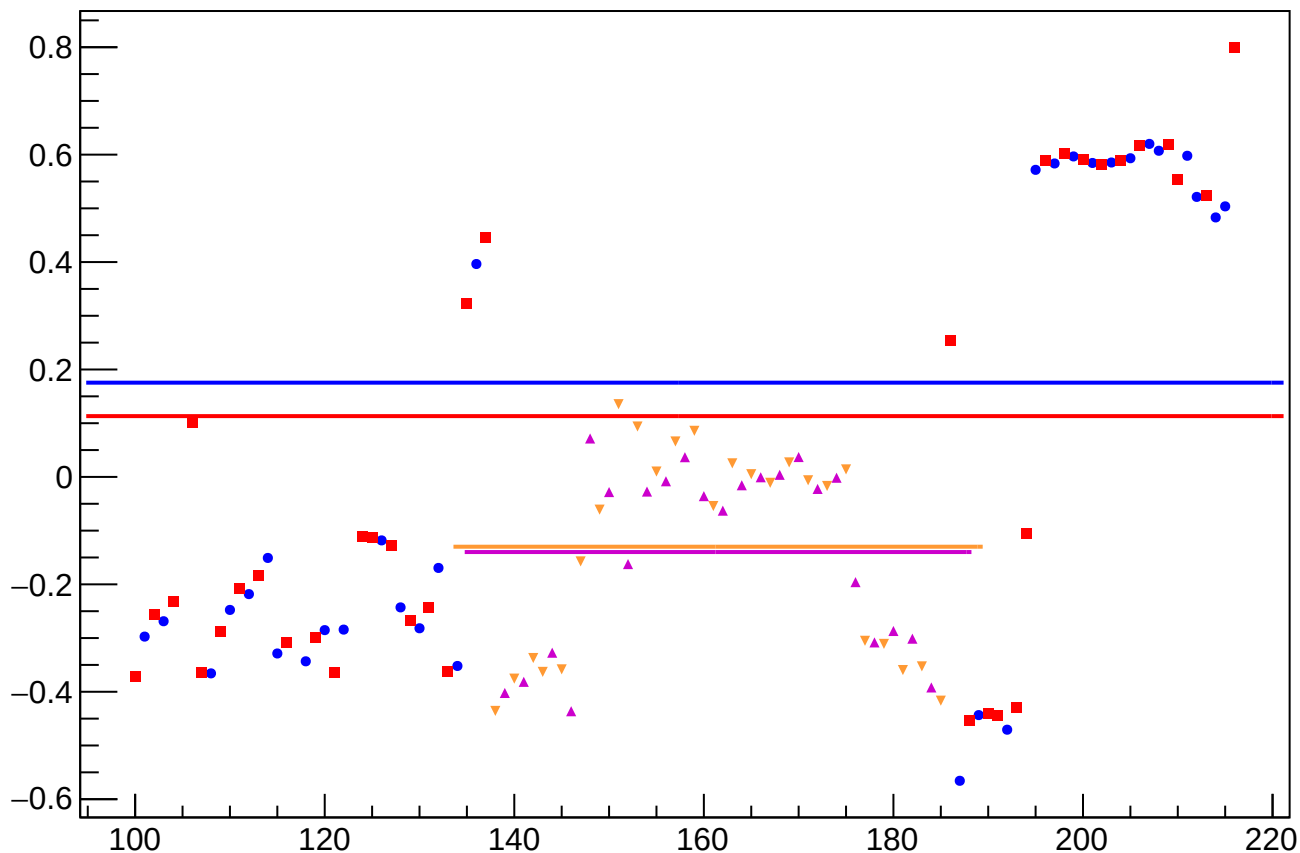
Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 539392.8/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2332581.4/55

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5028978.9/113

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2687374.6/57

# yield\_bpm0i02X\_mean vs Slug



Right In: 0.175+/-0.000  $\chi^2/\text{NDF}$ : 74435642920.9/30

Left Out: -0.130+/-0.000  $\chi^2/\text{NDF}$ : 21496239338.5/24

Right Out: 0.113+/-0.000  $\chi^2/\text{NDF}$ : 78009870191.4/34

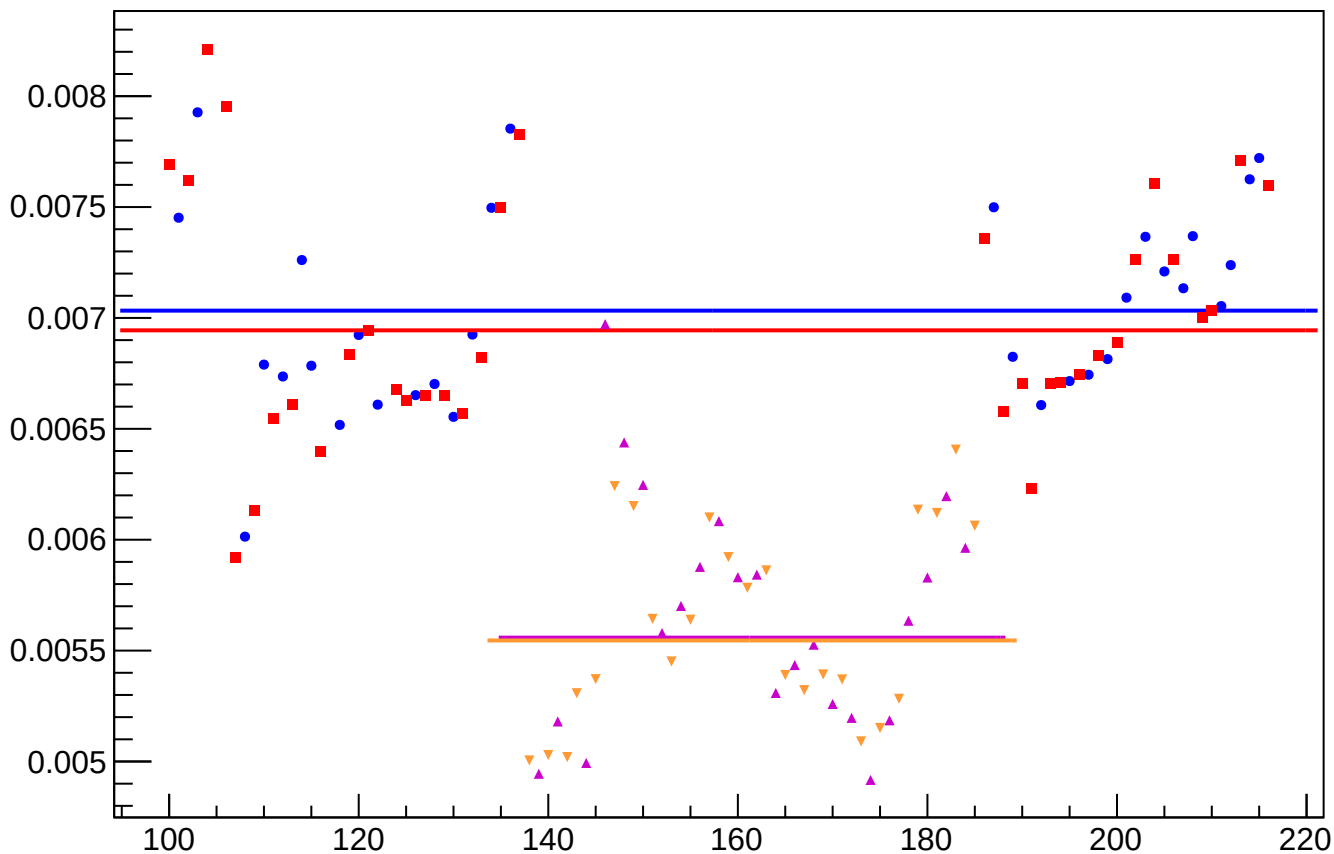
Left In: -0.140+/-0.000  $\chi^2/\text{NDF}$ : 15148699439.4/22

+ sign -0.011+/-0.000  $\chi^2/\text{NDF}$ : 117669551927.9/55

All: -0.022+/-0.000  $\chi^2/\text{NDF}$ : 226028723887.6

- sign -0.034+/-0.000  $\chi^2/\text{NDF}$ : 108086127276.2/57

# yield\_bpm0i02X\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 142165.4/30

Left Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 201874.8/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 173236.6/34

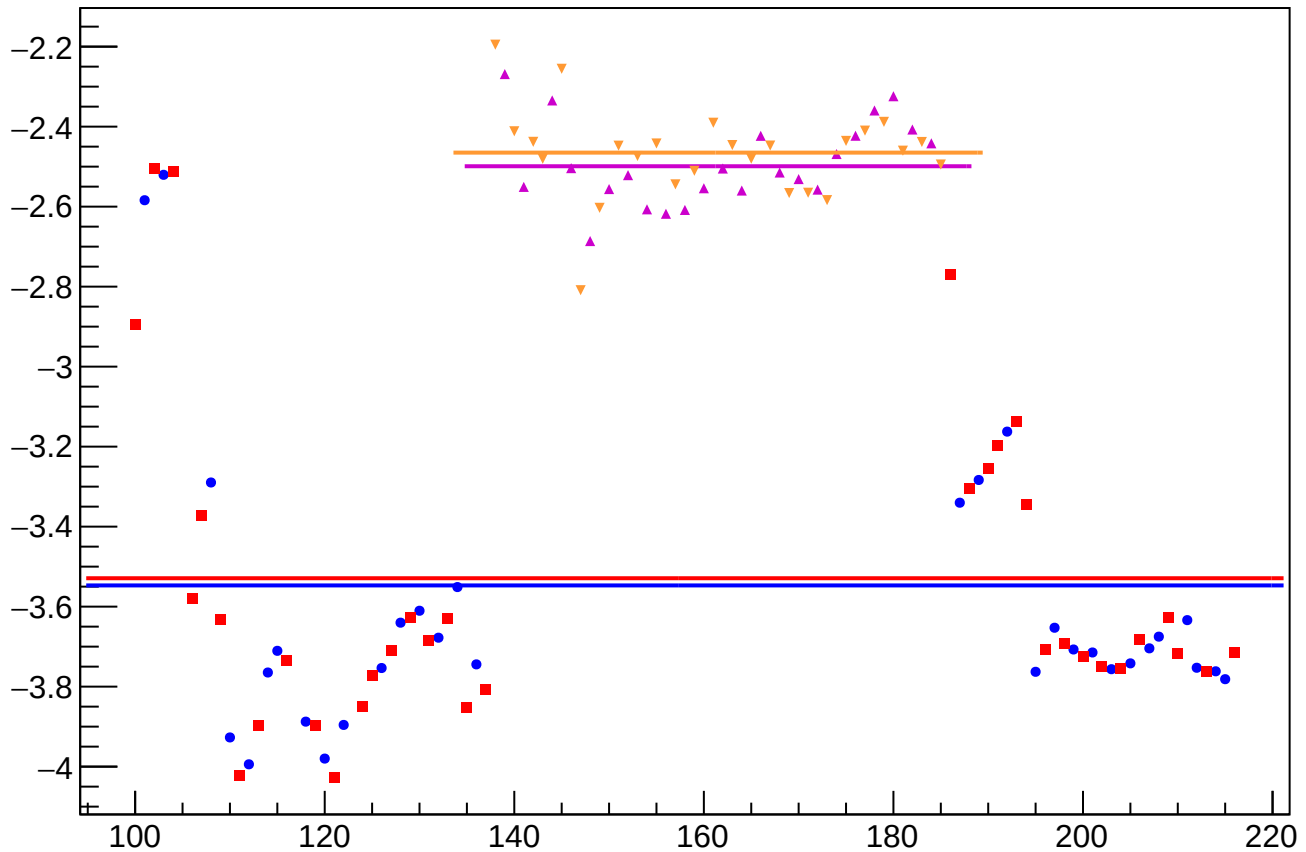
Left In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 260994.3/22

+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1374929.5/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2704230.9/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 1329214.6/57

# yield\_bpm0i02Y\_mean vs Slug



Right In: -3.547+/-0.000  $\chi^2/\text{NDF}$ : 33673600332.5/30

Left Out: -2.465+/-0.000  $\chi^2/\text{NDF}$ : 2167098053.0/24

Right Out: -3.529+/-0.000  $\chi^2/\text{NDF}$ : 35362812763.7/34

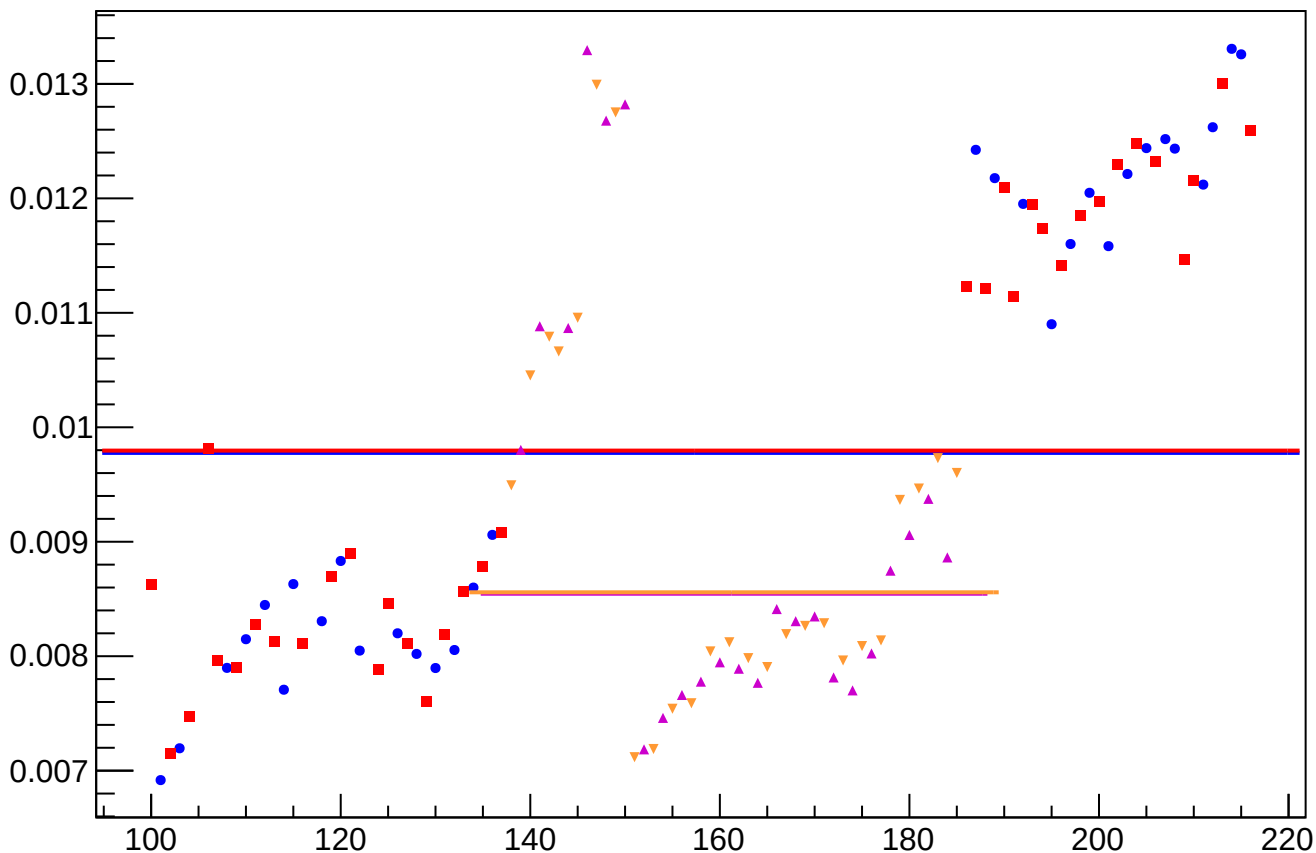
Left In: -2.499+/-0.000  $\chi^2/\text{NDF}$ : 2273256162.3/22

+ sign -2.933+/-0.000  $\chi^2/\text{NDF}$ : 160952717491.9/55

All: -2.949+/-0.000  $\chi^2/\text{NDF}$ : 310853622162.3

- sign -2.964+/-0.000  $\chi^2/\text{NDF}$ : 149698943651.1/57

# yield\_bpm0i02Y\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1741894.0/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:824029.0/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 1506895.4/34

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:910760.2/22

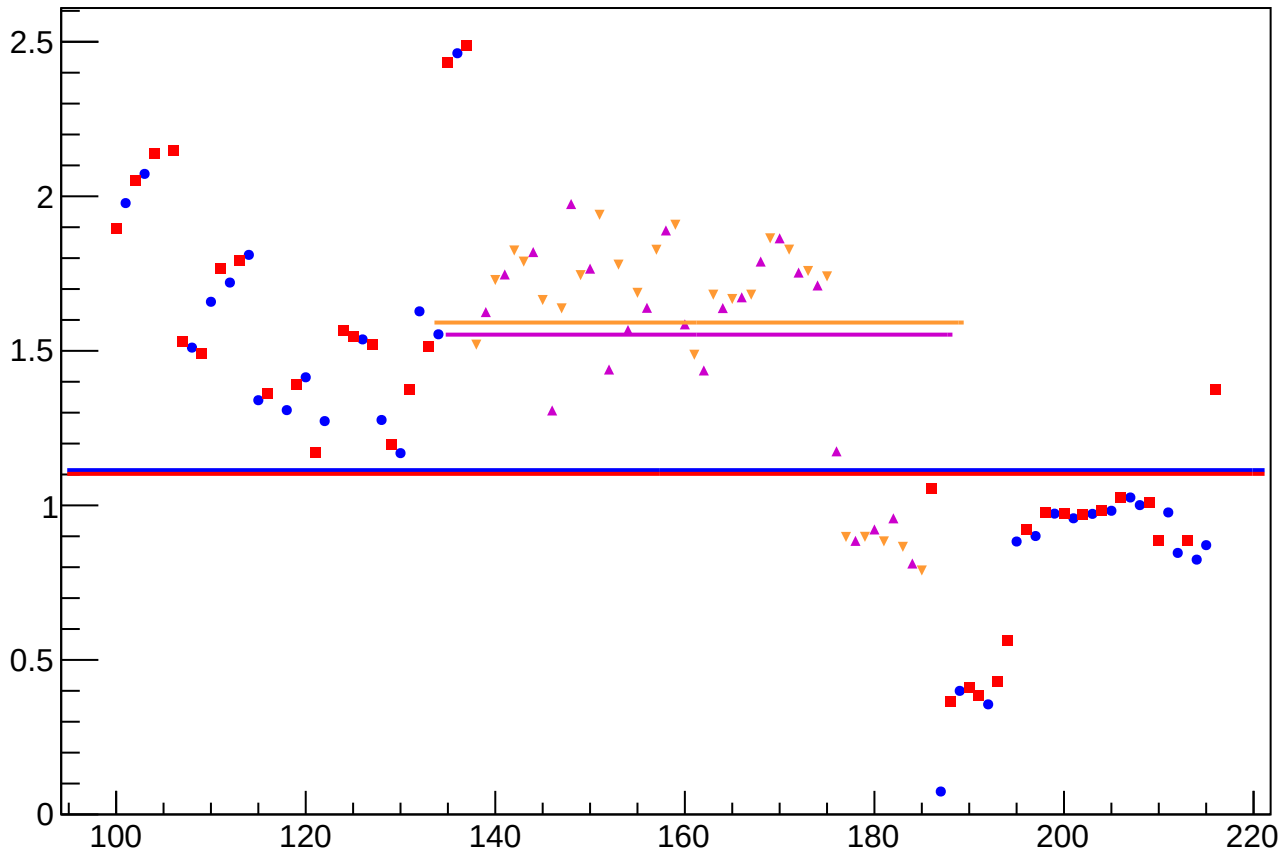
+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2882947.7/55

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 5631194.0/113

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 2747981.2/57



# yield\_bpm0i02aX\_mean vs Slug



Right In: 1.114 $\pm$ 0.000  $\chi^2$ /NDF: 30722117227.6/30

Left Out: 1.592 $\pm$ 0.000  $\chi^2$ /NDF: 17078853061.6/24

Right Out: 1.102 $\pm$ 0.000  $\chi^2$ /NDF: 35184677887.7/34

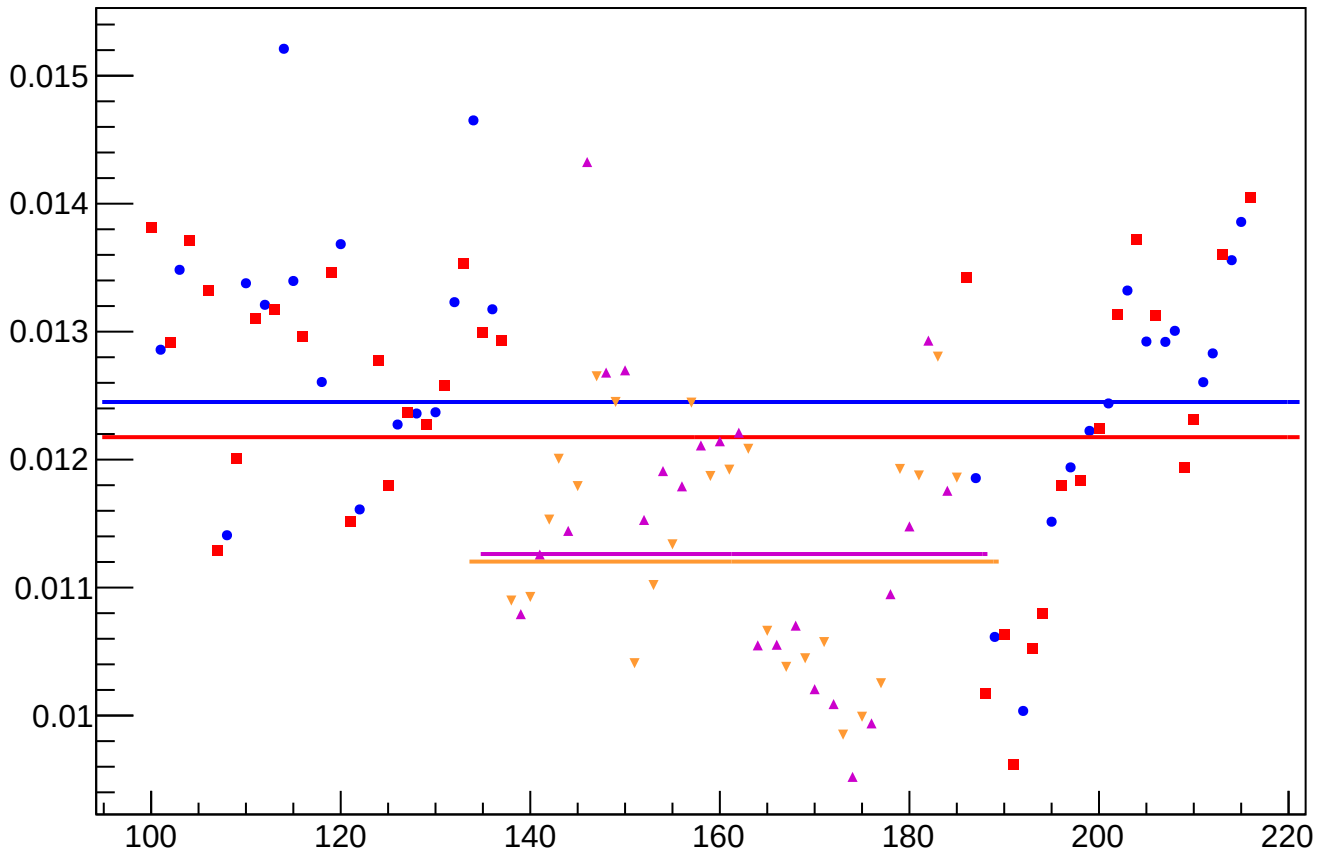
Left In: 1.552 $\pm$ 0.000  $\chi^2$ /NDF: 14055987405.9/22

+ sign 1.376 $\pm$ 0.000  $\chi^2$ /NDF: 62939198443.8/55

All: 1.355 $\pm$ 0.000  $\chi^2$ /NDF: 125857816122.6

- sign 1.334 $\pm$ 0.000  $\chi^2$ /NDF: 62682769466.5/57

# yield\_bpm0i02aX\_rms vs Slug



Right In: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 270842.9/30

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :223594.3/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 352272.2/34

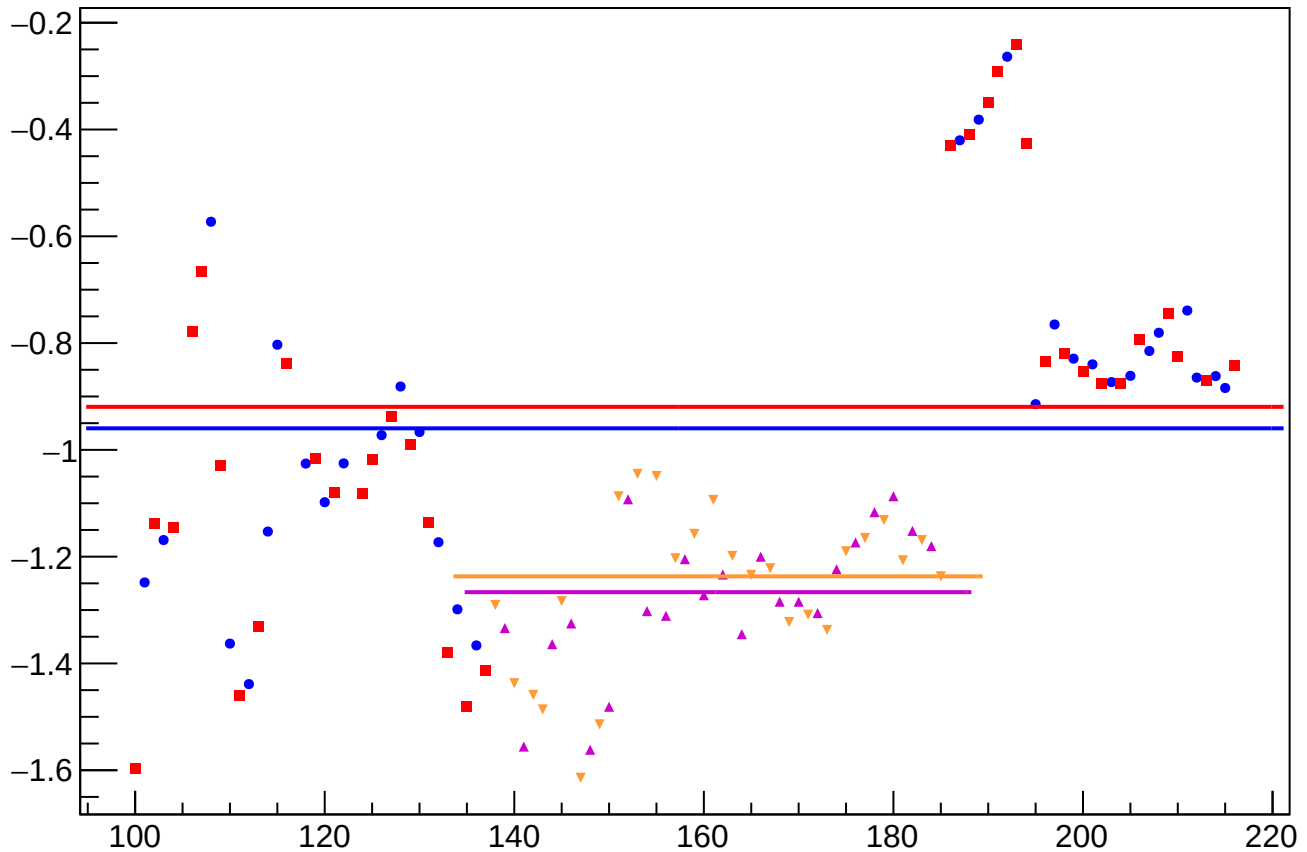
Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :311660.7/22

+ sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 700879.9/55

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 1476308.8/113

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 774444.0/57

# yield\_bpm0i02aY\_mean vs Slug



Right In:  $-0.960 \pm 0.000$   $\chi^2/\text{NDF}$ : 12504655663.6/30

Left Out:  $-1.237 \pm 0.000$   $\chi^2/\text{NDF}$ : 4972272024.7/24

Right Out:  $-0.919 \pm 0.000$   $\chi^2/\text{NDF}$ : 16999708456.7/34

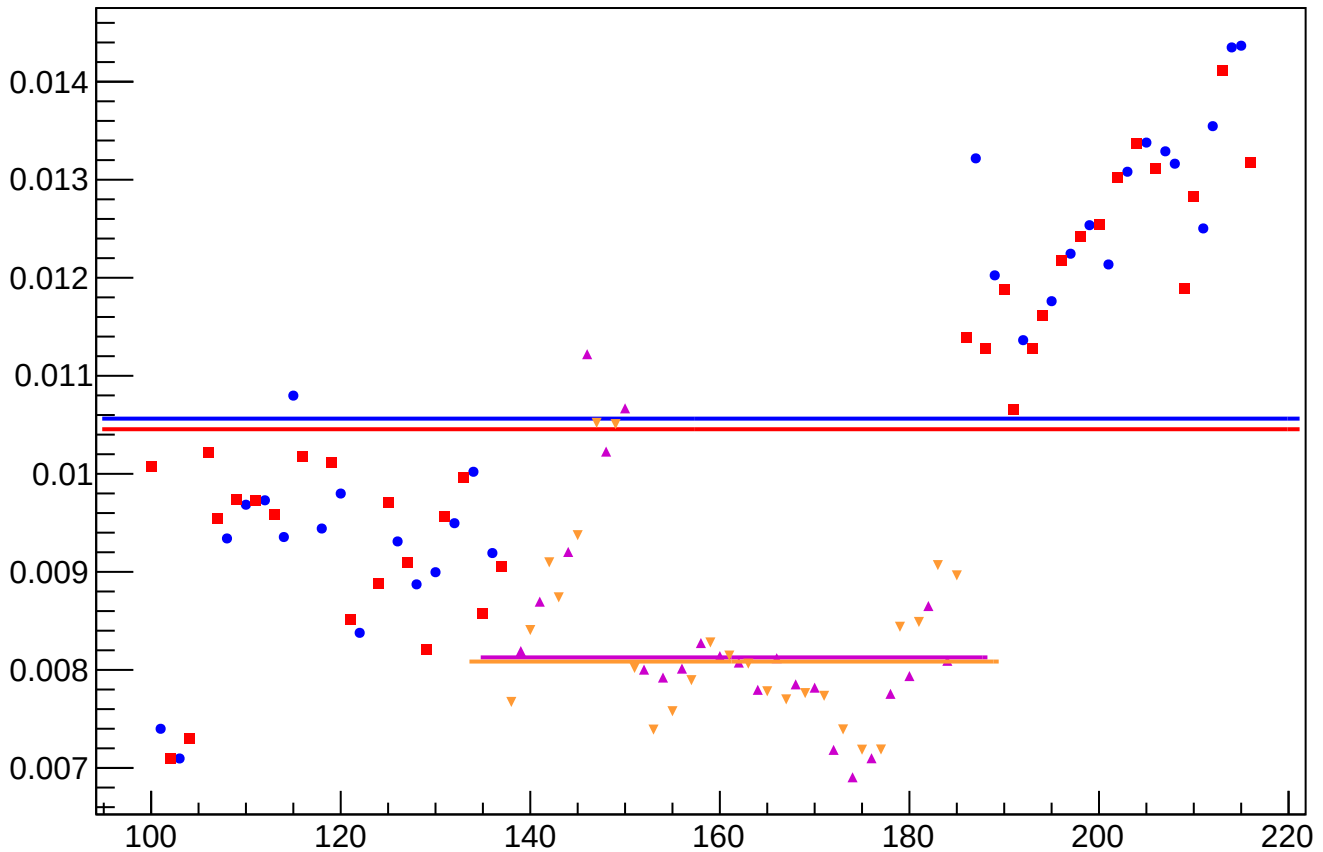
Left In:  $-1.267 \pm 0.000$   $\chi^2/\text{NDF}$ : 3674801511.3/22

+ sign  $-1.135 \pm 0.000$   $\chi^2/\text{NDF}$ : 25288668870.6/55

All:  $-1.132 \pm 0.000$   $\chi^2/\text{NDF}$ : 58258036228.9

- sign  $-1.130 \pm 0.000$   $\chi^2/\text{NDF}$ : 32963944040.8/57

# yield\_bpm0i02aY\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1536175.3/30

Left Out: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 326825.0/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1348777.9/34

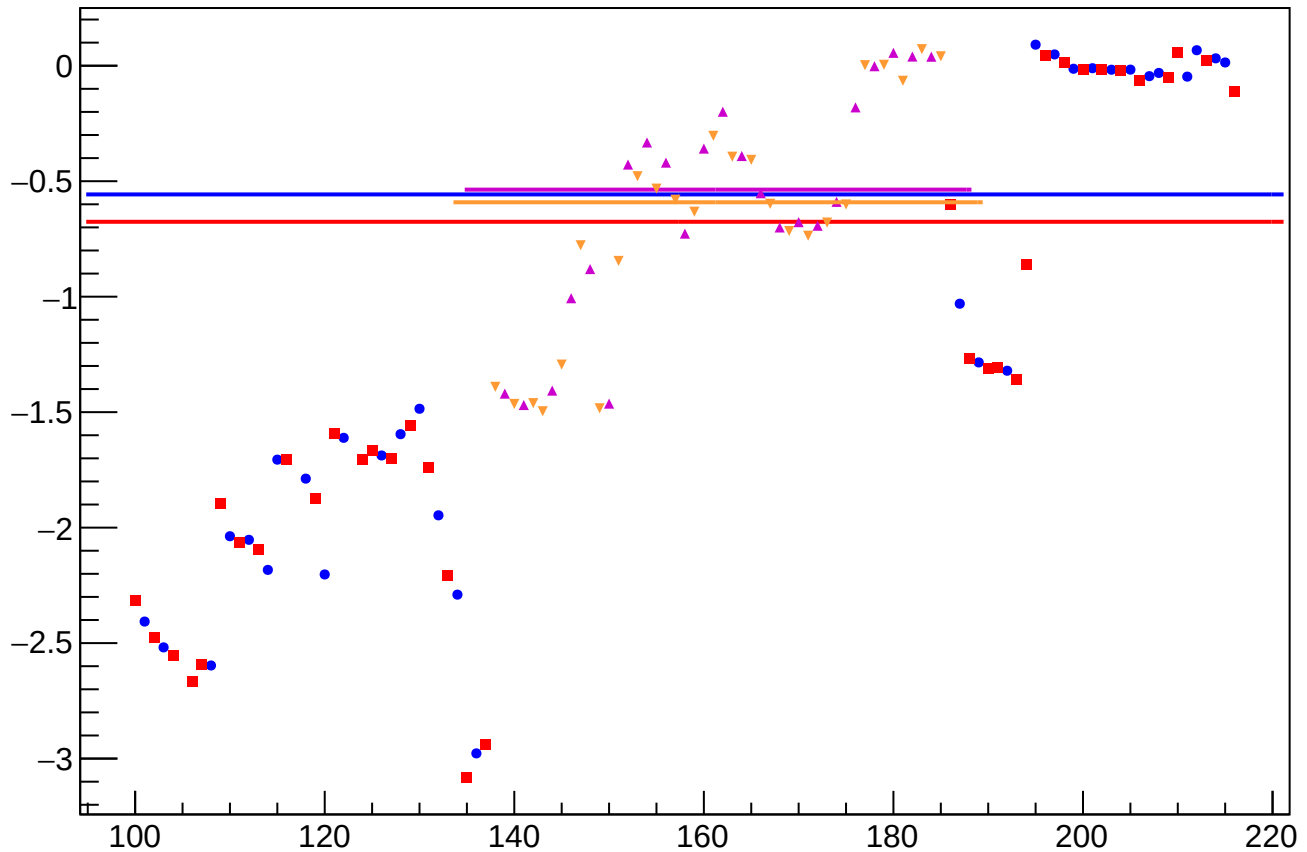
Left In: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 409030.0/22

+ sign 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3111383.4/55

All: 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5975136.1/113

- sign 0.009 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2862799.9/57

# yield\_bpm0i05X\_mean vs Slug



Right In:  $-0.557 \pm 0.000$   $\chi^2/\text{NDF}$ : 413645860633.6/30

Left Out:  $-0.591 \pm 0.000$   $\chi^2/\text{NDF}$ : 72678844667.5/24

Right Out:  $-0.676 \pm 0.000$   $\chi^2/\text{NDF}$ : 435555673337.5/34

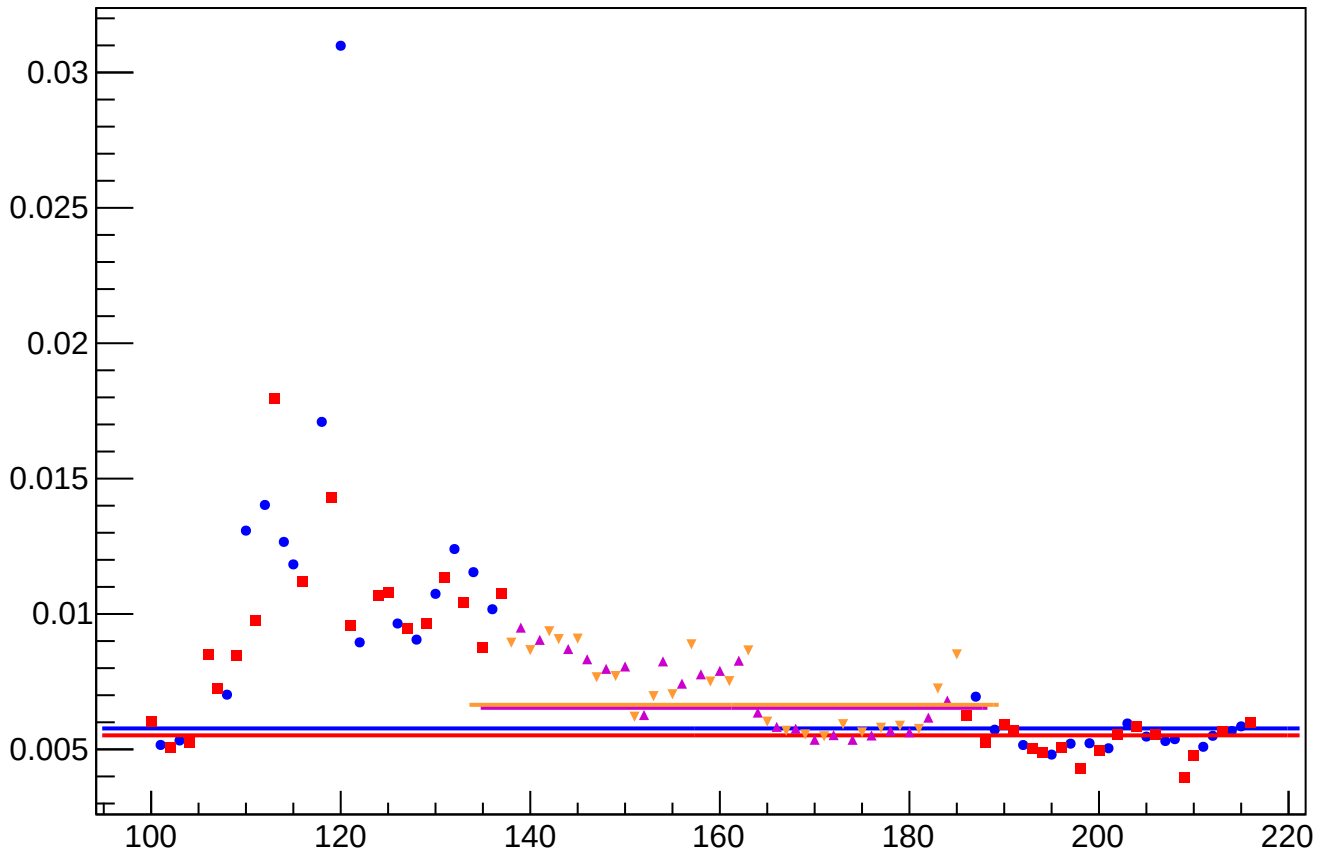
Left In:  $-0.536 \pm 0.000$   $\chi^2/\text{NDF}$ : 70168781562.6/22

+ sign  $-0.572 \pm 0.000$   $\chi^2/\text{NDF}$ : 486568762399.2/55

All:  $-0.596 \pm 0.000$   $\chi^2/\text{NDF}$ : 997476519525.5

- sign  $-0.619 \pm 0.000$   $\chi^2/\text{NDF}$ : 509966983004.8/57

# yield\_bpm0i05X\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2542391.4/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1091920.0/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 2685601.6/34

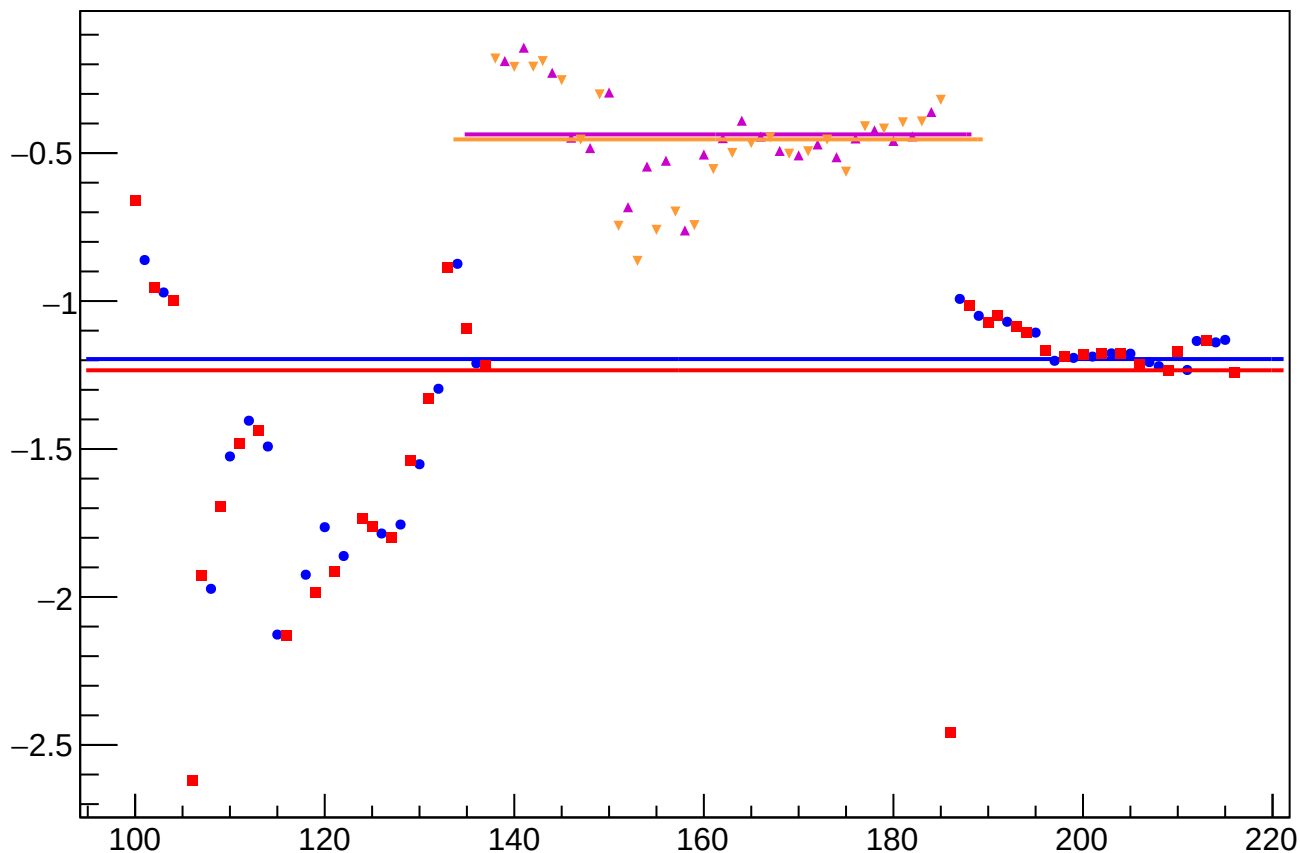
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1151126.7/22

+ sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 3955418.1/55

All: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 8289436.7/113

- sign 0.006+/-0.000  $\chi^2/\text{NDF}$ : 4289696.2/57

# yield\_bpm0i05Y\_mean vs Slug



Right In:  $-1.196 \pm 0.000$   $\chi^2/\text{NDF}$ : 27643496352.8/30

Left Out:  $-0.454 \pm 0.000$   $\chi^2/\text{NDF}$ : 29096412438.0/24

Right Out:  $-1.234 \pm 0.000$   $\chi^2/\text{NDF}$ : 72816427143.0/34

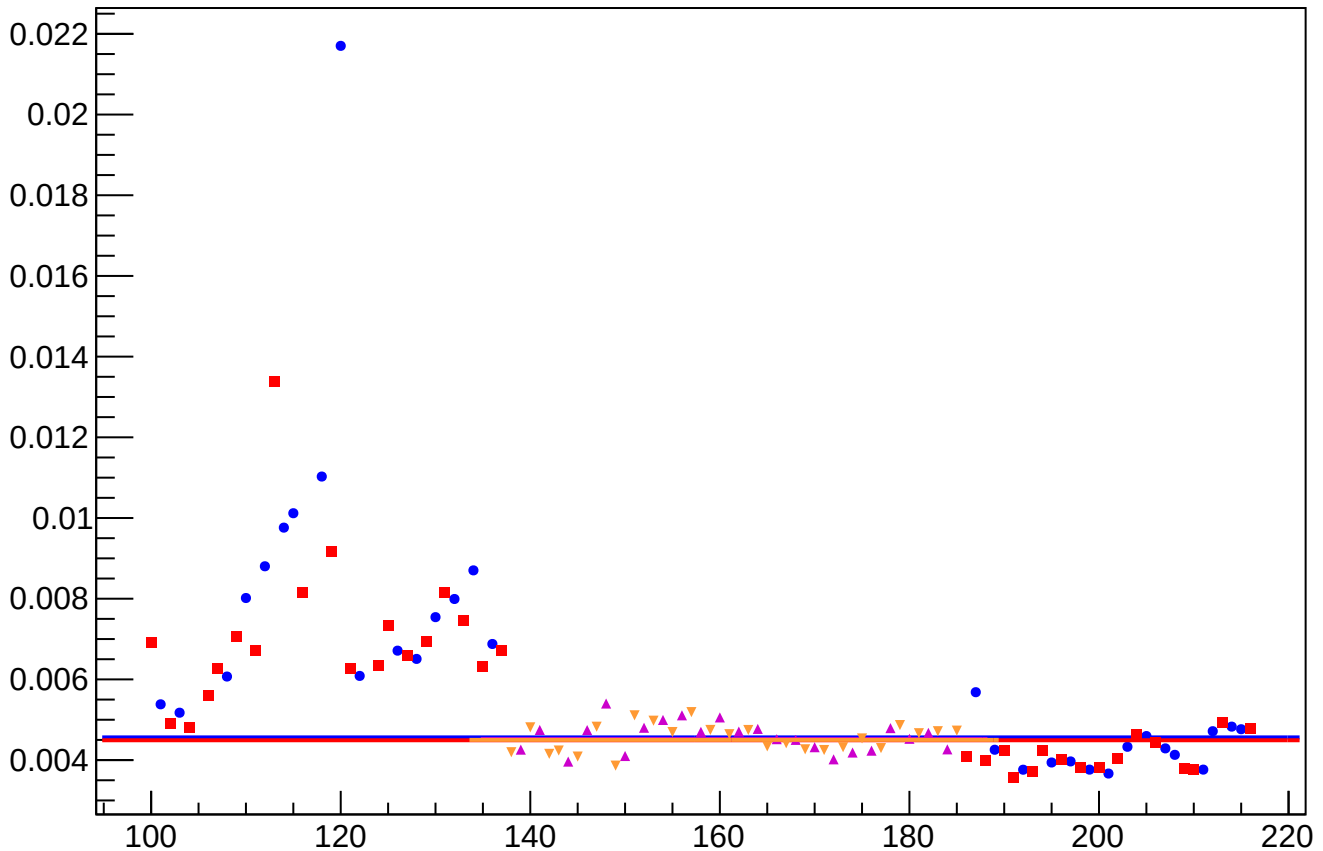
Left In:  $-0.437 \pm 0.000$   $\chi^2/\text{NDF}$ : 16544160360.6/22

+ sign  $-0.802 \pm 0.000$   $\chi^2/\text{NDF}$ : 281638960983.7/55

All:  $-0.819 \pm 0.000$   $\chi^2/\text{NDF}$ : 631943834458.1

- sign  $-0.837 \pm 0.000$   $\chi^2/\text{NDF}$ : 349299049089.2/57

# yield\_bpm0i05Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2255891.7/30

Left Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ :189230.5/24

Right Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 1985421.3/34

Left In: 0.005+/-0.000  $\chi^2/\text{NDF}$ :212056.7/22

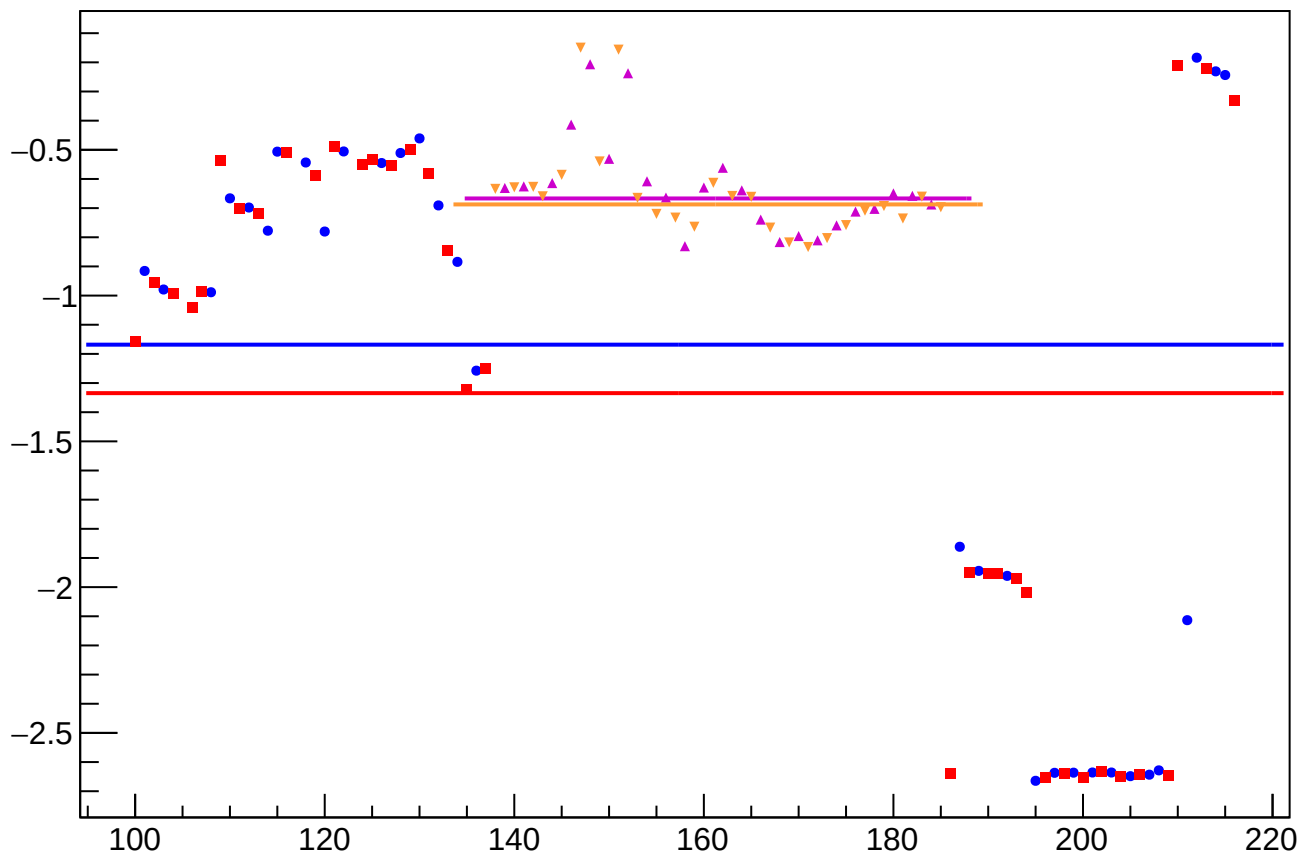
+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2448184.9/55

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 4647271.3/113

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 2198163.9/57



# yield\_bpm0i07X\_mean vs Slug



Right In:  $-1.168 \pm 0.000$   $\chi^2/\text{NDF}$ : 599624527967.8/30

Left Out:  $-0.687 \pm 0.000$   $\chi^2/\text{NDF}$ : 22462821855.7/24

Right Out:  $-1.335 \pm 0.000$   $\chi^2/\text{NDF}$ : 701241256114.5/34

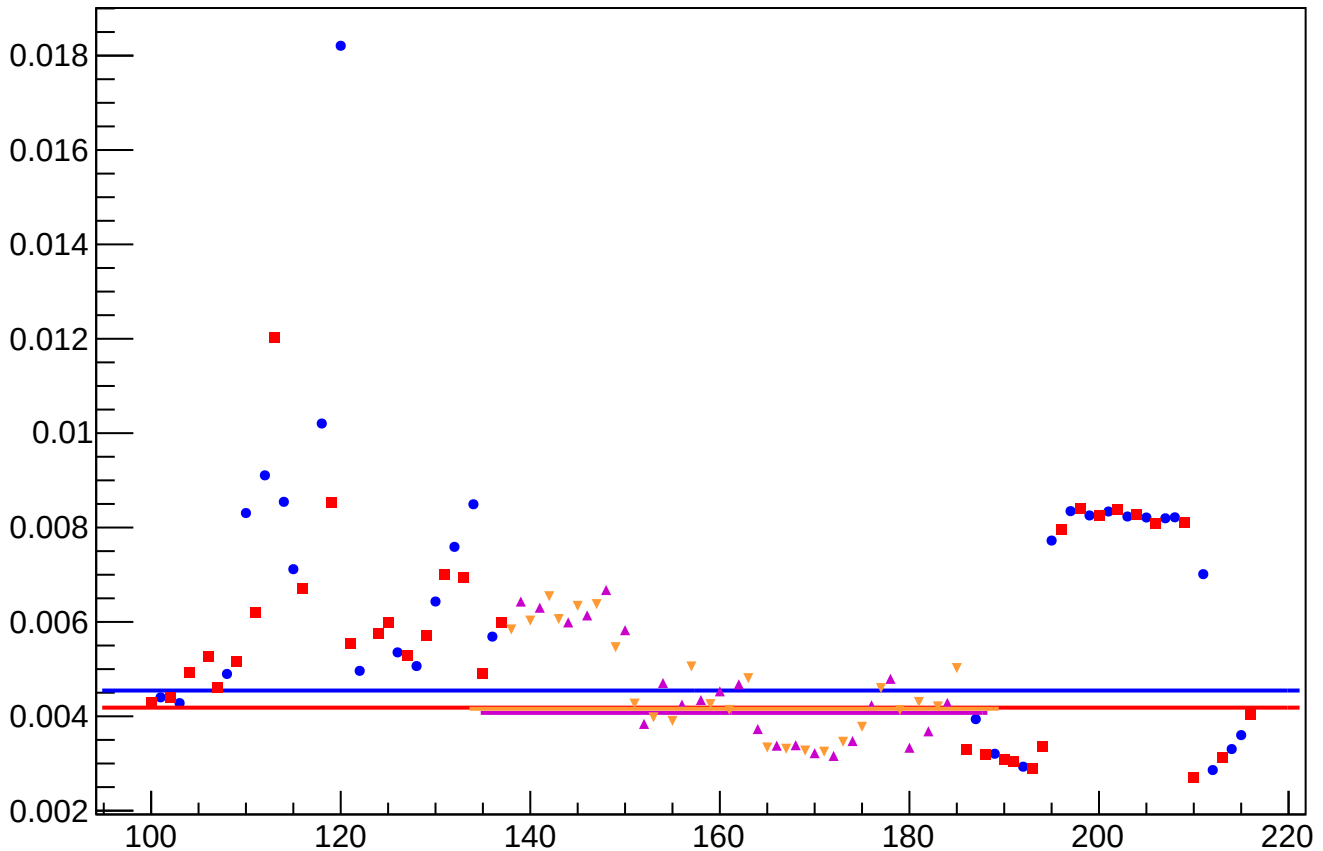
Left In:  $-0.667 \pm 0.000$   $\chi^2/\text{NDF}$ : 22531477329.1/22

+ sign  $-0.893 \pm 0.000$   $\chi^2/\text{NDF}$ : 717548639029.8/55

All:  $-0.942 \pm 0.000$   $\chi^2/\text{NDF}$ : 1653221083738

- sign  $-0.988 \pm 0.000$   $\chi^2/\text{NDF}$ : 927770050670.2/57

# yield\_bpm0i07X\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 5850550.3/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1520055.0/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 5567070.3/34

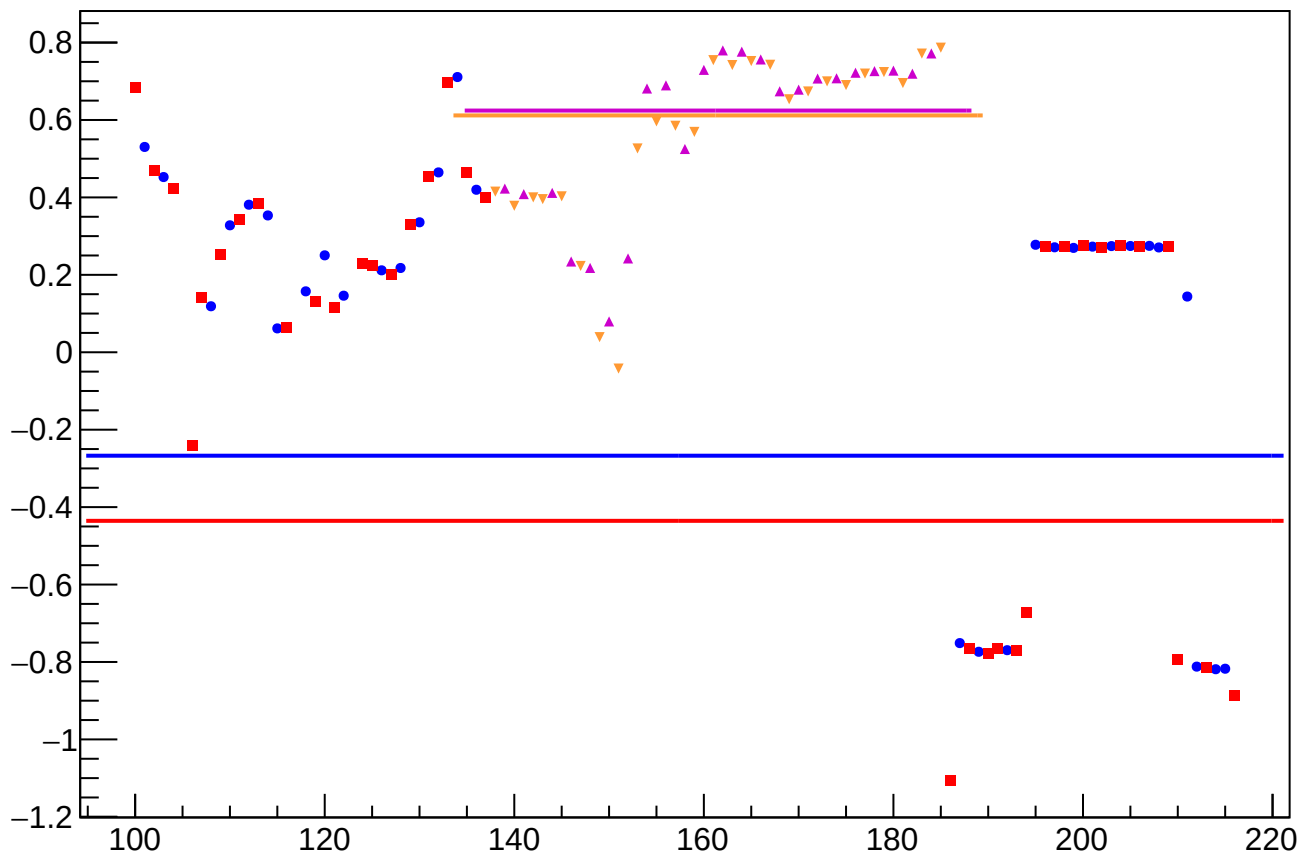
Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:1750303.9/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7493338.9/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 14891711.2/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7328667.7/57

# yield\_bpm0i07Y\_mean vs Slug



Right In:  $-0.267 \pm 0.000$   $\chi^2/\text{NDF}: 468629905502.8/30$

Left Out:  $0.612 \pm 0.000$   $\chi^2/\text{NDF}: 45742599949.2/24$

Right Out:  $-0.435 \pm 0.000$   $\chi^2/\text{NDF}: 596021558385.7/34$

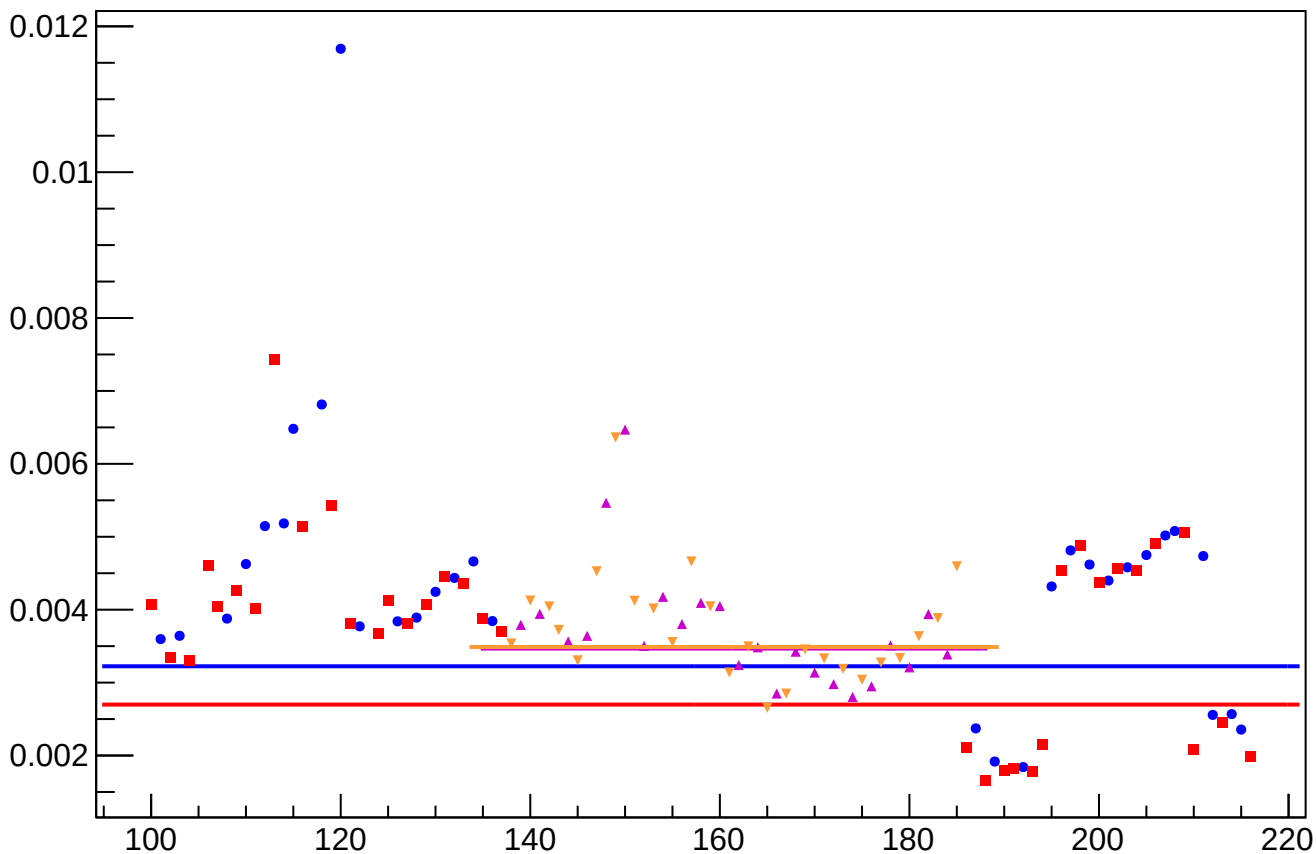
Left In:  $0.624 \pm 0.000$   $\chi^2/\text{NDF}: 40353141115.4/22$

+ sign  $0.144 \pm 0.000$   $\chi^2/\text{NDF}: 1056926055879.5/55$

All:  $0.045 \pm 0.000$   $\chi^2/\text{NDF}: 2631097063364.0/101$

- sign  $-0.037 \pm 0.000$   $\chi^2/\text{NDF}: 1524111330293.7/57$

# yield\_bpm0i07Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 4430742.8/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:850746.8/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5621530.5/34

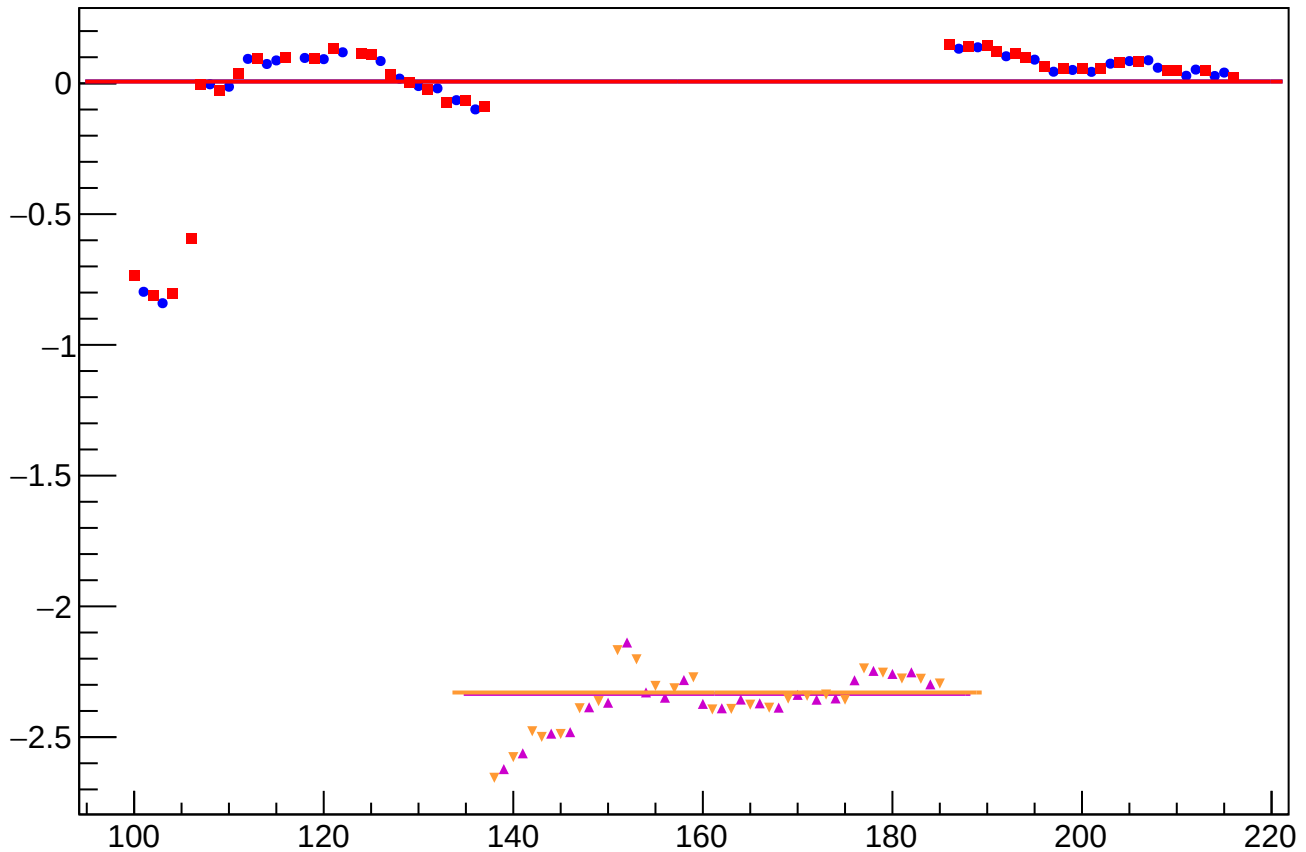
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:894124.0/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5379458.9/55

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 13226056.5/113

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7448897.8/57

# yield\_bpm1i02X\_mean vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 6576532792.6/30

Left Out: -2.329+/-0.000  $\chi^2/\text{NDF}$ :1982733526.8/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 7838205218.8/34

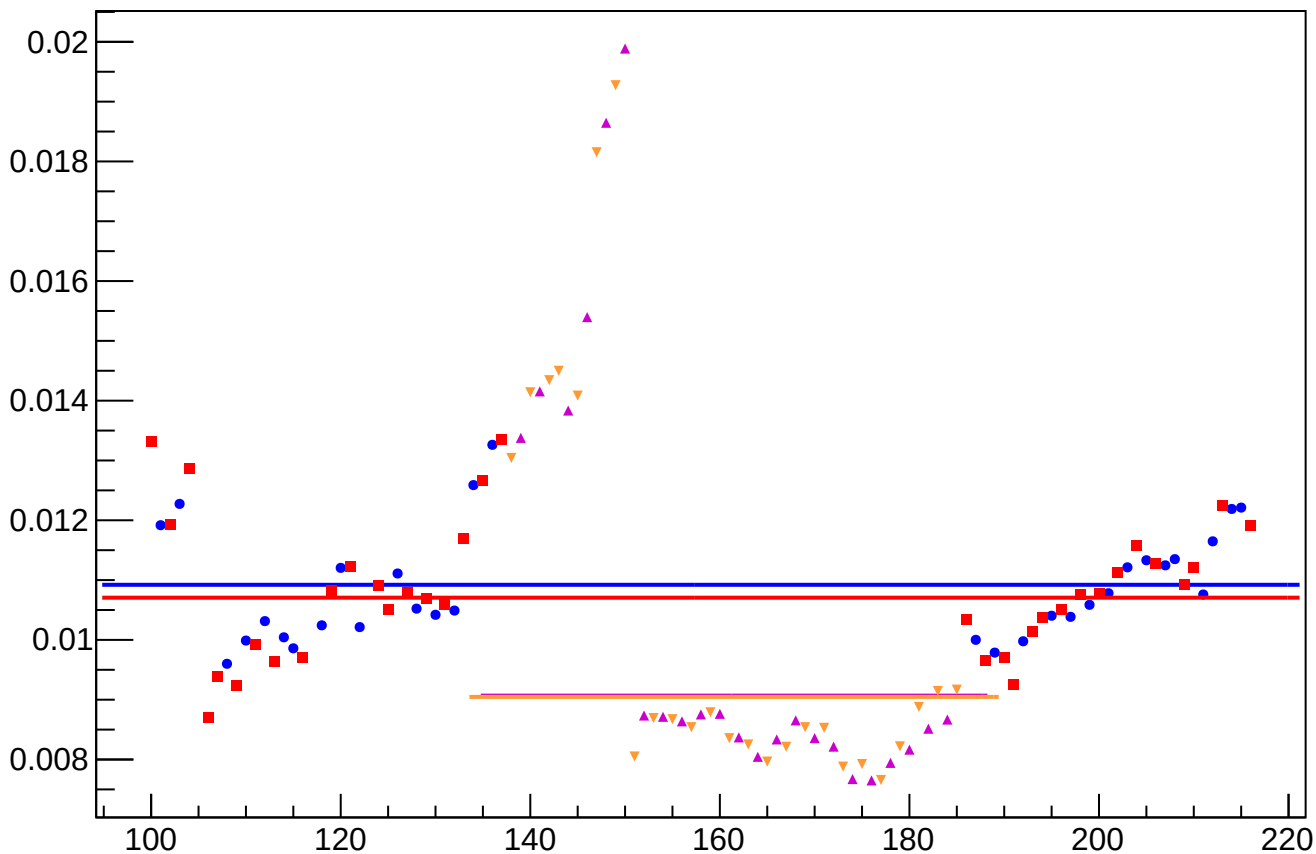
Left In: -2.335+/-0.000  $\chi^2/\text{NDF}$ :1676703216.8/22

+ sign -1.353+/-0.000  $\chi^2/\text{NDF}$ : 515640982965.1/55

All: -1.318+/-0.000  $\chi^2/\text{NDF}$ : 1039523424162

- sign -1.284+/-0.000  $\chi^2/\text{NDF}$ : 522977312520.3/57

# yield\_bpm1i02X\_rms vs Slug



Right In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 236059.2/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:2048729.6/24

Right Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 306442.5/34

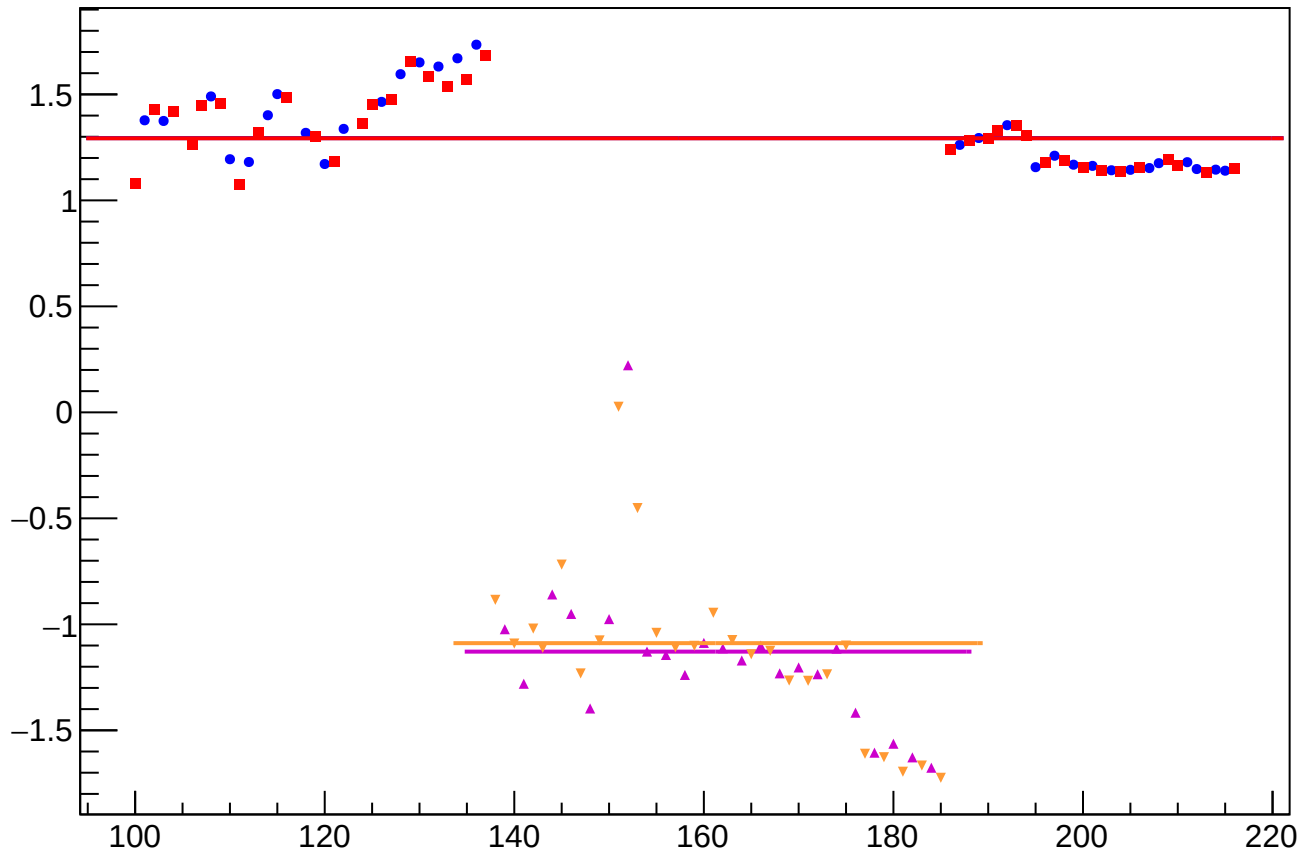
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF:2134207.9/22

+ sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 2937271.1/55

All: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 5880558.9/113

- sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 2943006.9/57

# yield\_bpm1i02Y\_mean vs Slug



Right In: 1.294 $\pm$ 0.000  $\chi^2$ /NDF: 9493475141.4/30

Left Out: -1.089 $\pm$ 0.000  $\chi^2$ /NDF: 61255304912.3/24

Right Out: 1.293 $\pm$ 0.000  $\chi^2$ /NDF: 7325774857.0/34

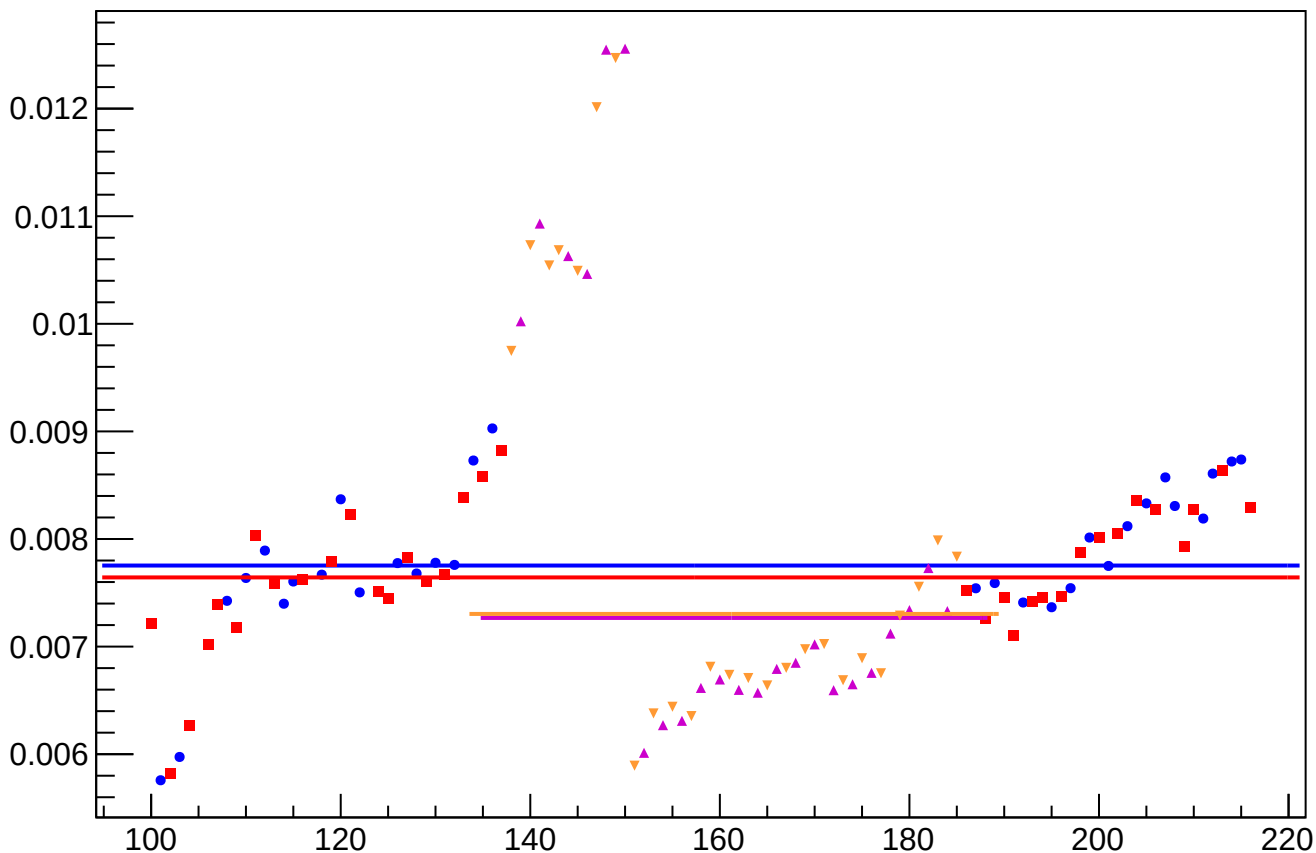
Left In: -1.129 $\pm$ 0.000  $\chi^2$ /NDF: 58876825364.1/22

+ sign 0.046 $\pm$ 0.000  $\chi^2$ /NDF: 1007516076323.6/55

All: 0.067 $\pm$ 0.000  $\chi^2$ /NDF: 2049201132303.6/111

- sign 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 1041112001775.9/57

# yield\_bpm1i02Y\_rms vs Slug



Right In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 428294.9/30

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1504103.4/24

Right Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 312054.2/34

Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1560089.8/22

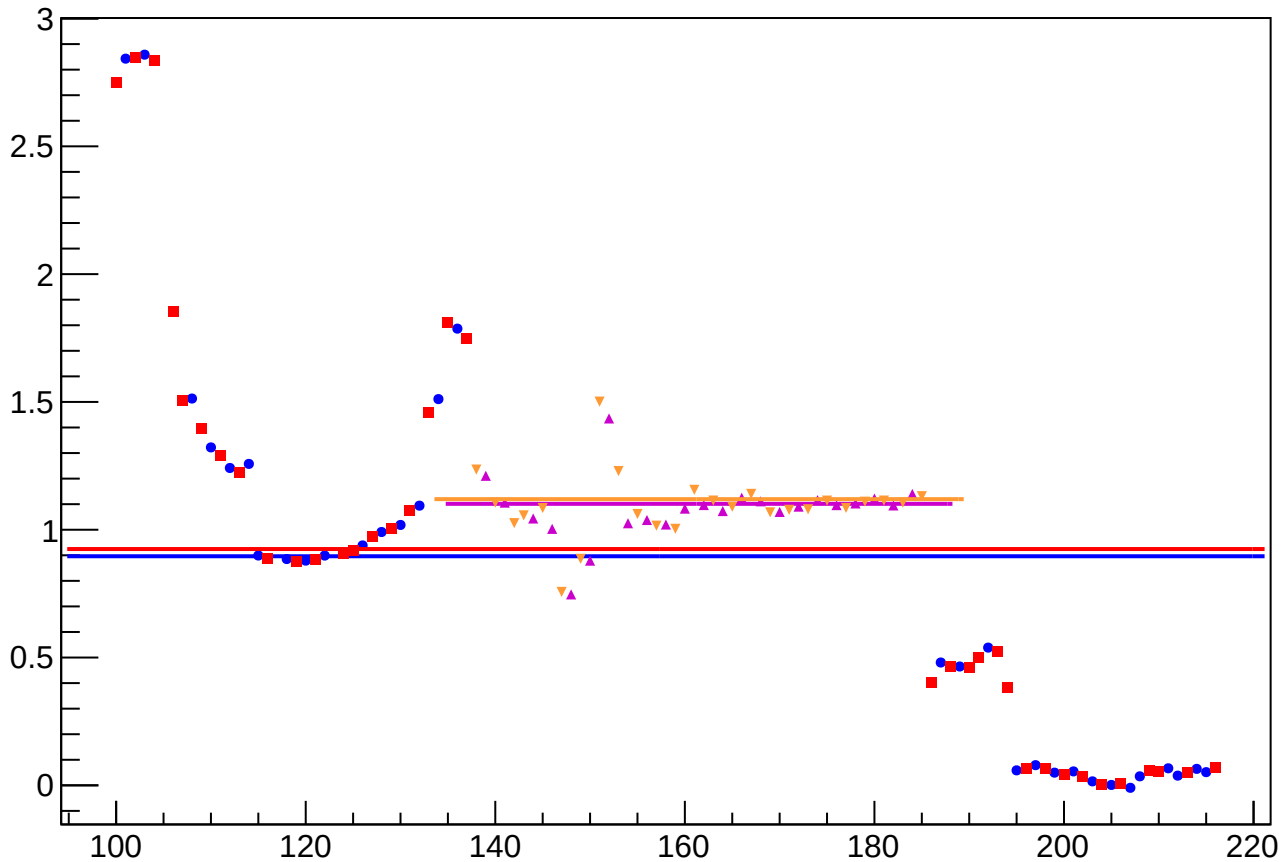
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 1999168.0/55

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3921052.8/113

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 1919308.0/57



# yield\_bpm1i04X\_mean vs Slug



Right In:  $0.896 \pm 0.000$   $\chi^2/\text{NDF}$ : 157341744235.3/30

Left Out:  $1.120 \pm 0.000$   $\chi^2/\text{NDF}$ : 5515079117.9/24

Right Out:  $0.925 \pm 0.000$   $\chi^2/\text{NDF}$ : 150931819937.5/34

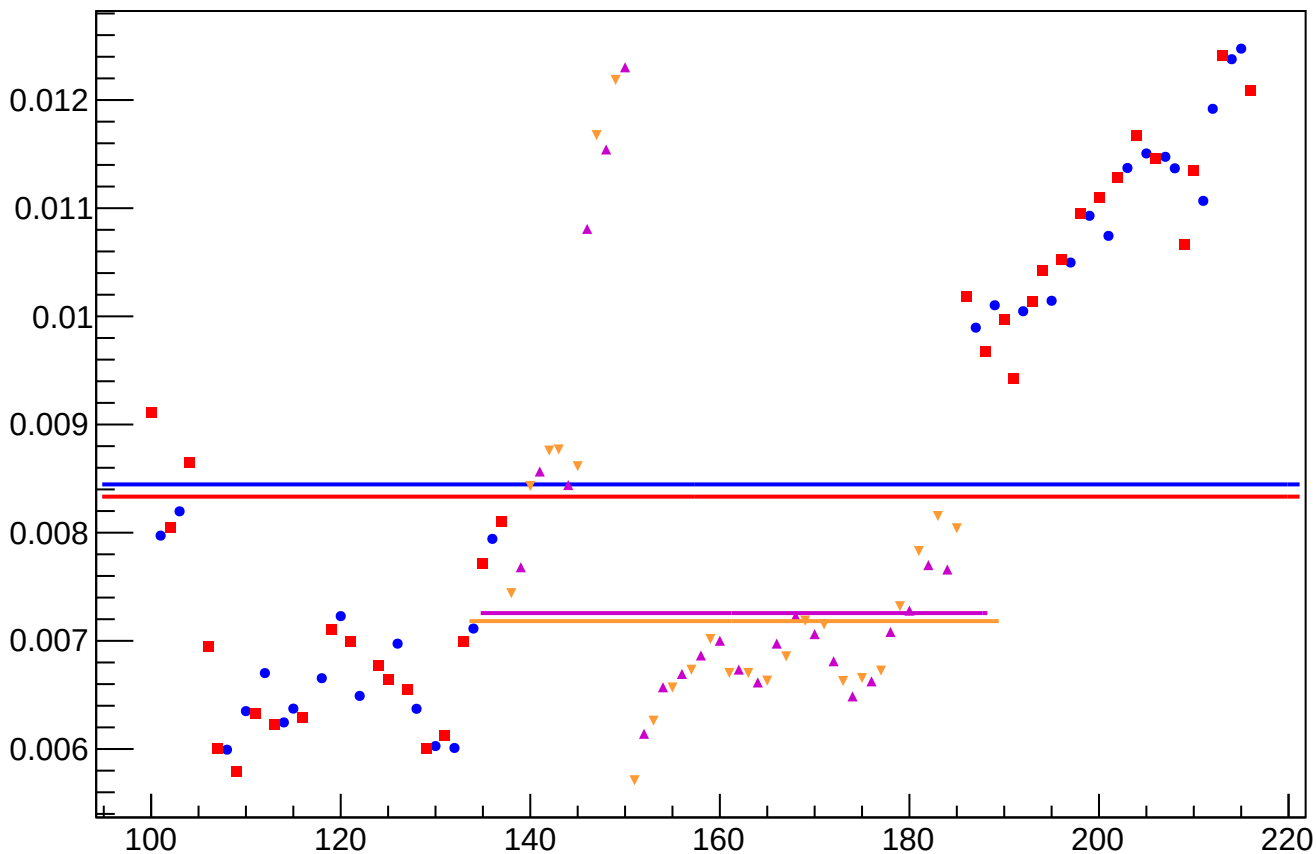
Left In:  $1.101 \pm 0.000$   $\chi^2/\text{NDF}$ : 4201972548.8/22

+ sign  $1.027 \pm 0.000$   $\chi^2/\text{NDF}$ : 170227918909.8/55

All:  $1.025 \pm 0.000$   $\chi^2/\text{NDF}$ : 329982708884.4

- sign  $1.023 \pm 0.000$   $\chi^2/\text{NDF}$ : 159748540858.5/57

# yield\_bpm1i04X\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2441770.4/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :893807.0/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2452102.5/34

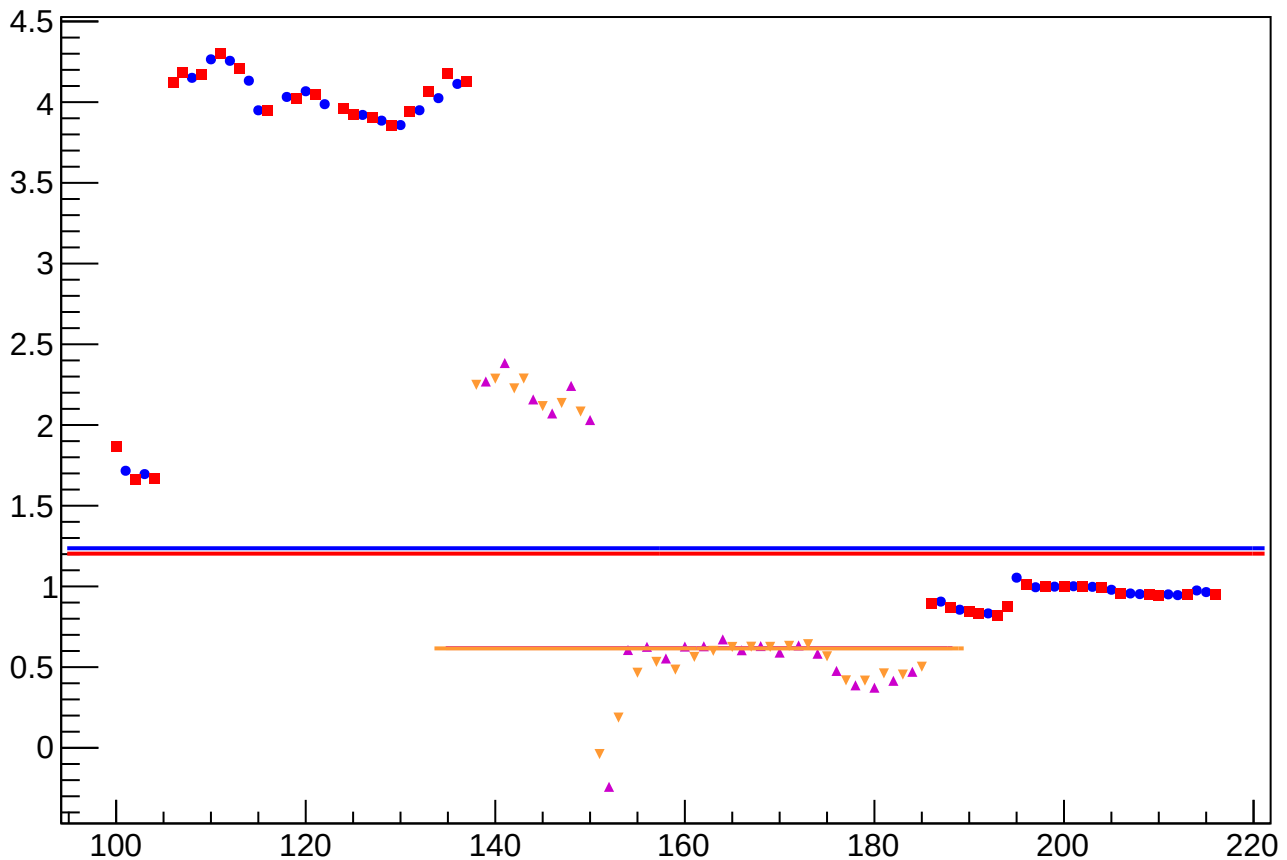
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :916696.6/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3807301.1/55

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 7518759.4/113

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3710907.3/57

# yield\_bpm1i04Y\_mean vs Slug



Right In: 1.236+/-0.000  $\chi^2/\text{NDF}$ : 1637819585637.4/30

Left Out: 0.616+/-0.000  $\chi^2/\text{NDF}$ : 251940630795.3/24

Right Out: 1.203+/-0.000  $\chi^2/\text{NDF}$ : 1797401344278.2/34

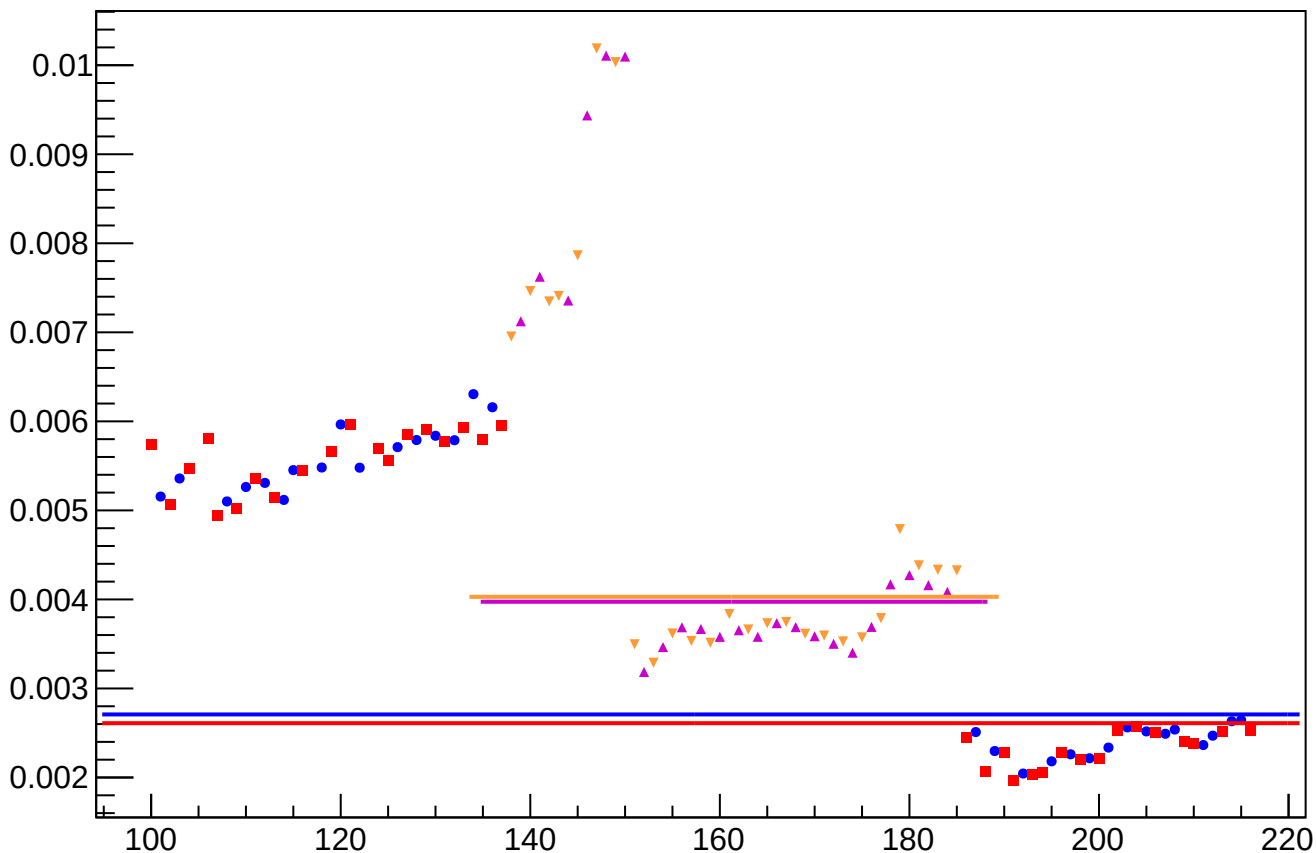
Left In: 0.618+/-0.000  $\chi^2/\text{NDF}$ : 254248143278.9/22

+ sign 1.035+/-0.000  $\chi^2/\text{NDF}$ : 2164418002632.8/55

All: 1.032+/-0.000  $\chi^2/\text{NDF}$ : 4462401484811.1

- sign 1.028+/-0.000  $\chi^2/\text{NDF}$ : 2297904971082.6/57

# yield\_bpm1i04Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4426052.9/30

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 2965028.8/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 4714198.2/34

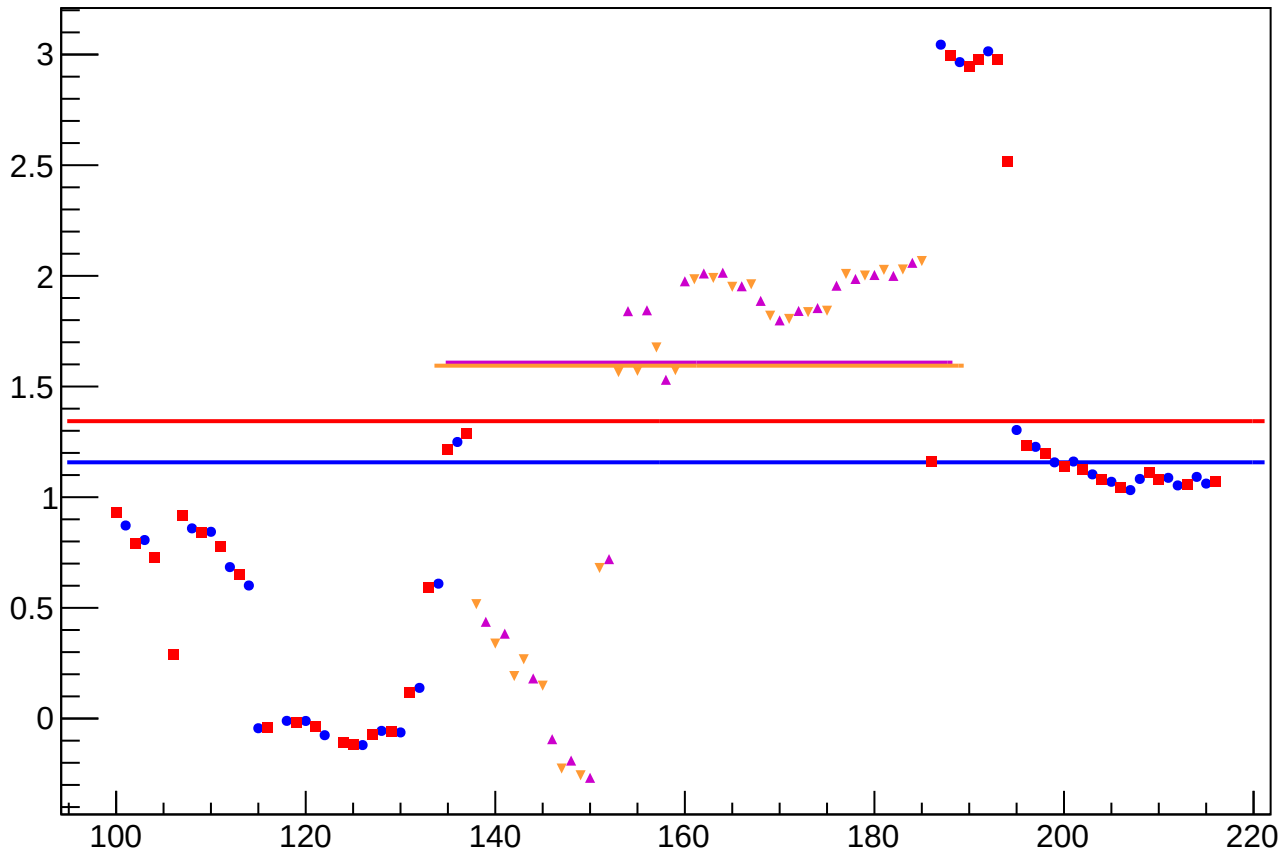
Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ : 3121901.5/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 9880740.9/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 20442228.9/113

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10514000.4/57

# yield\_bpm1i06X\_mean vs Slug



Right In: 1.158 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 77912111355.5/30

Left Out: 1.594 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 62632055963.2/24

Right Out: 1.344 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 107155858519.2/34

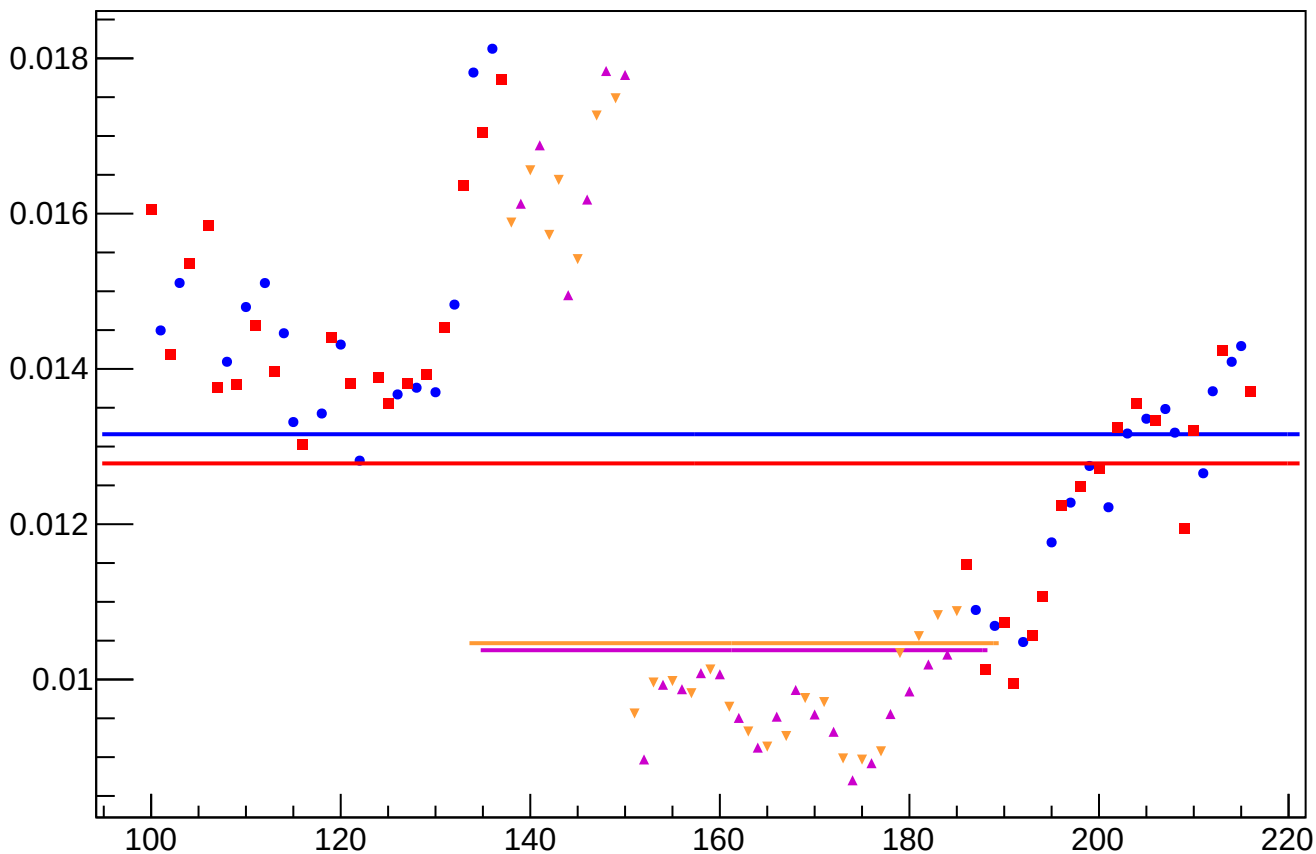
Left In: 1.608 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 66403809503.4/22

+ sign 1.422 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 153075817052.6/55

All: 1.460 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 332134682222.1

- sign 1.497 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 178293076639.5/57

# yield\_bpm1i06X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 531720.9/30

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:1661211.8/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 641627.6/34

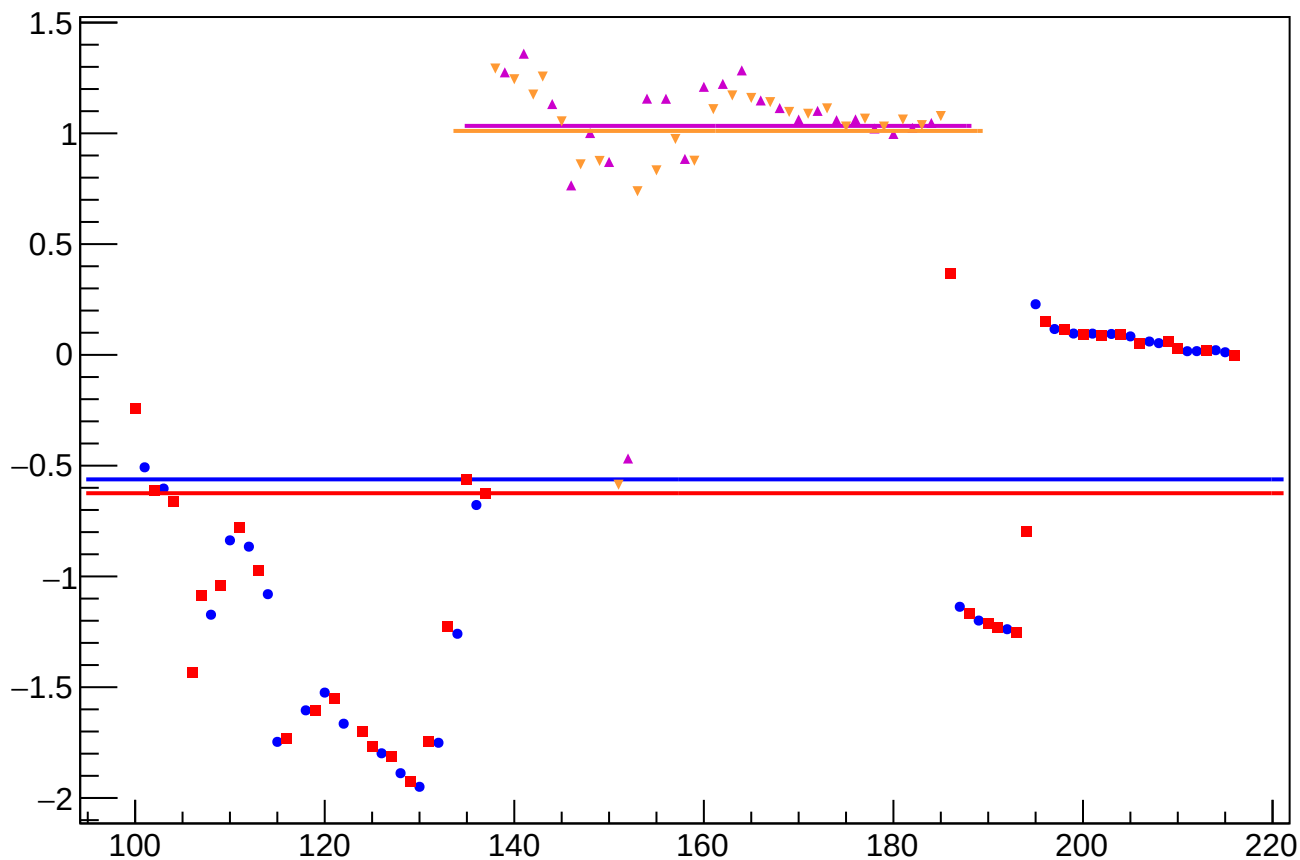
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF:1710541.0/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3145290.1/55

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 6286006.2/113

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 3135483.9/57

# yield\_bpm1i06Y\_mean vs Slug



Right In: -0.562 $\pm$ 0.000  $\chi^2$ /NDF: 213722545714.9/30

Left Out: 1.011 $\pm$ 0.000  $\chi^2$ /NDF: 111188616245.0/24

Right Out: -0.624 $\pm$ 0.000  $\chi^2$ /NDF: 200443887908.4/34

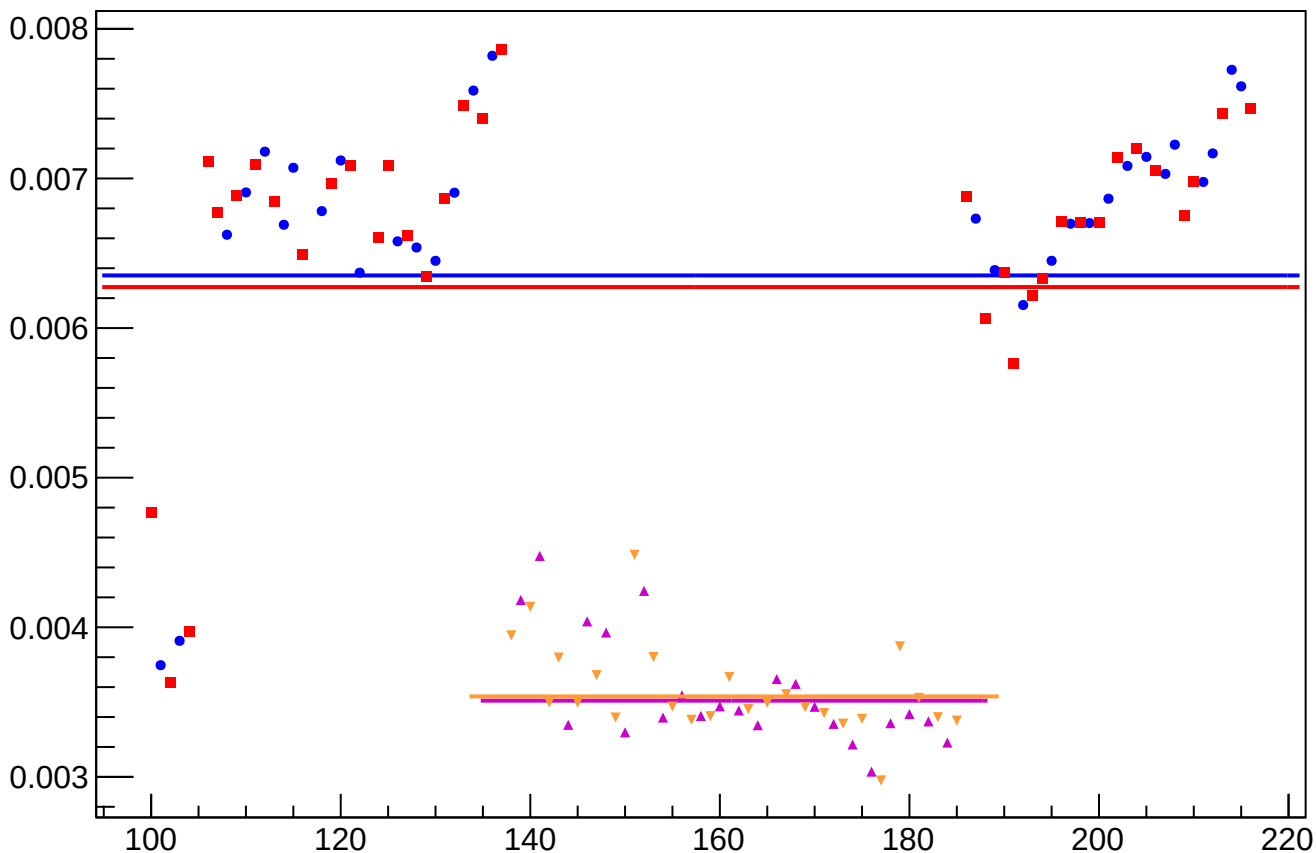
Left In: 1.034 $\pm$ 0.000  $\chi^2$ /NDF: 125385050389.9/22

+ sign 0.636 $\pm$ 0.000  $\chi^2$ /NDF: 1153502223675.8/55

All: 0.624 $\pm$ 0.000  $\chi^2$ /NDF: 2423192689723.0

- sign 0.611 $\pm$ 0.000  $\chi^2$ /NDF: 1269112927229.2/57

# yield\_bpm1i06Y\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1363154.2/30

Left Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:215725.1/24

Right Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 1334250.1/34

Left In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF:284960.7/22

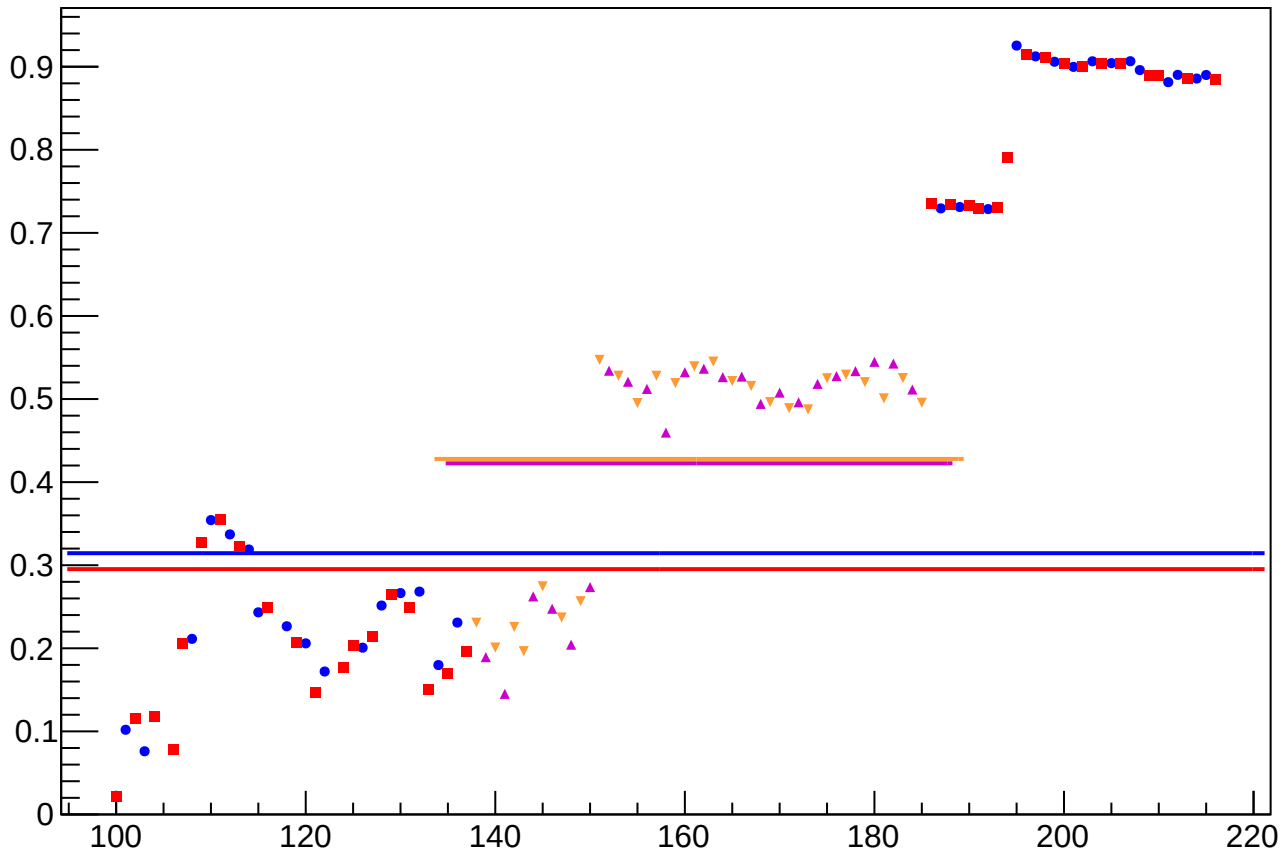
+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6883467.9/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 13747895.6/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 6864363.1/57



# yield\_bpm2i01X\_mean vs Slug



Right In: 0.314 $\pm$ 0.000  $\chi^2$ /NDF: 236675362545.2/30

Left Out: 0.428 $\pm$ 0.000  $\chi^2$ /NDF: 153820853539.2/24

Right Out: 0.295 $\pm$ 0.000  $\chi^2$ /NDF: 246558933281.9/34

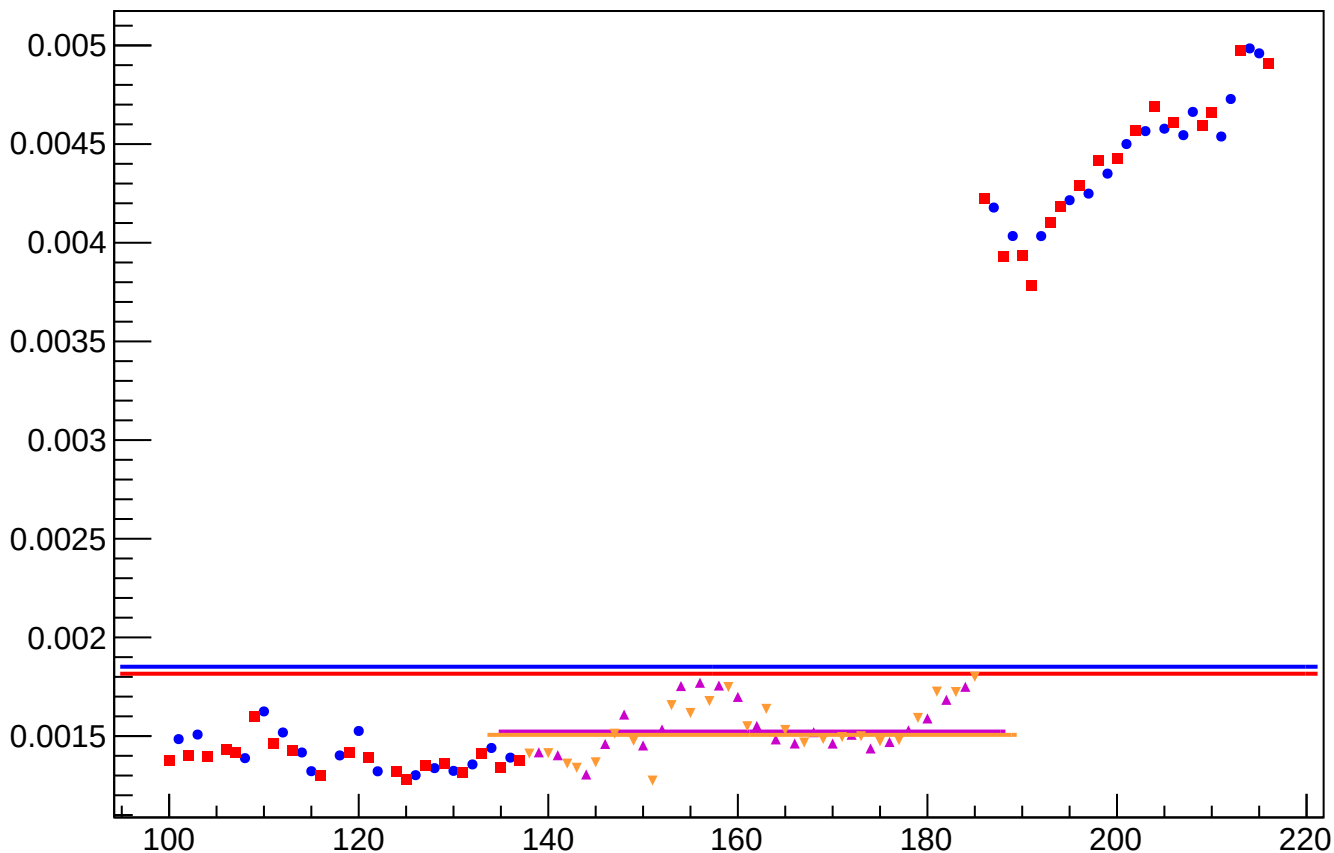
Left In: 0.423 $\pm$ 0.000  $\chi^2$ /NDF: 158122093061.2/22

+ sign 0.391 $\pm$ 0.000  $\chi^2$ /NDF: 426013353982.6/55

All: 0.384 $\pm$ 0.000  $\chi^2$ /NDF: 877612216439.3

- sign 0.376 $\pm$ 0.000  $\chi^2$ /NDF: 450339653798.7/57

# yield\_bpm2i01X\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9706309.7/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 278895.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9888146.0/34

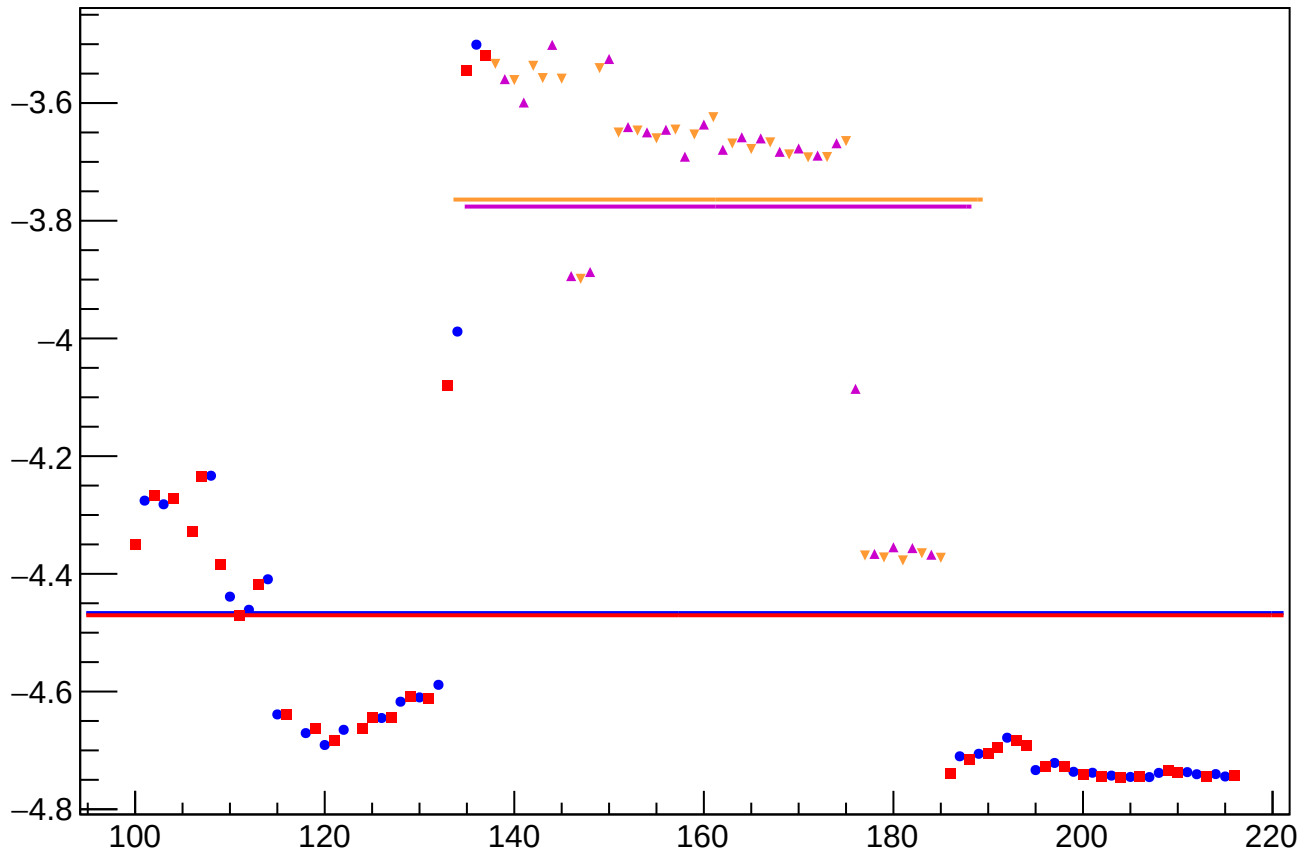
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 234679.9/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 10642302.5/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 21249728.0/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 10606257.2/57

# yield\_bpm2i01Y\_mean vs Slug



Right In: -4.467+/-0.000  $\chi^2$ /NDF: 449005093516.6/30

Left Out: -3.764+/-0.000  $\chi^2$ /NDF: 483461311370.8/24

Right Out: -4.470+/-0.000  $\chi^2$ /NDF: 395072594377.3/34

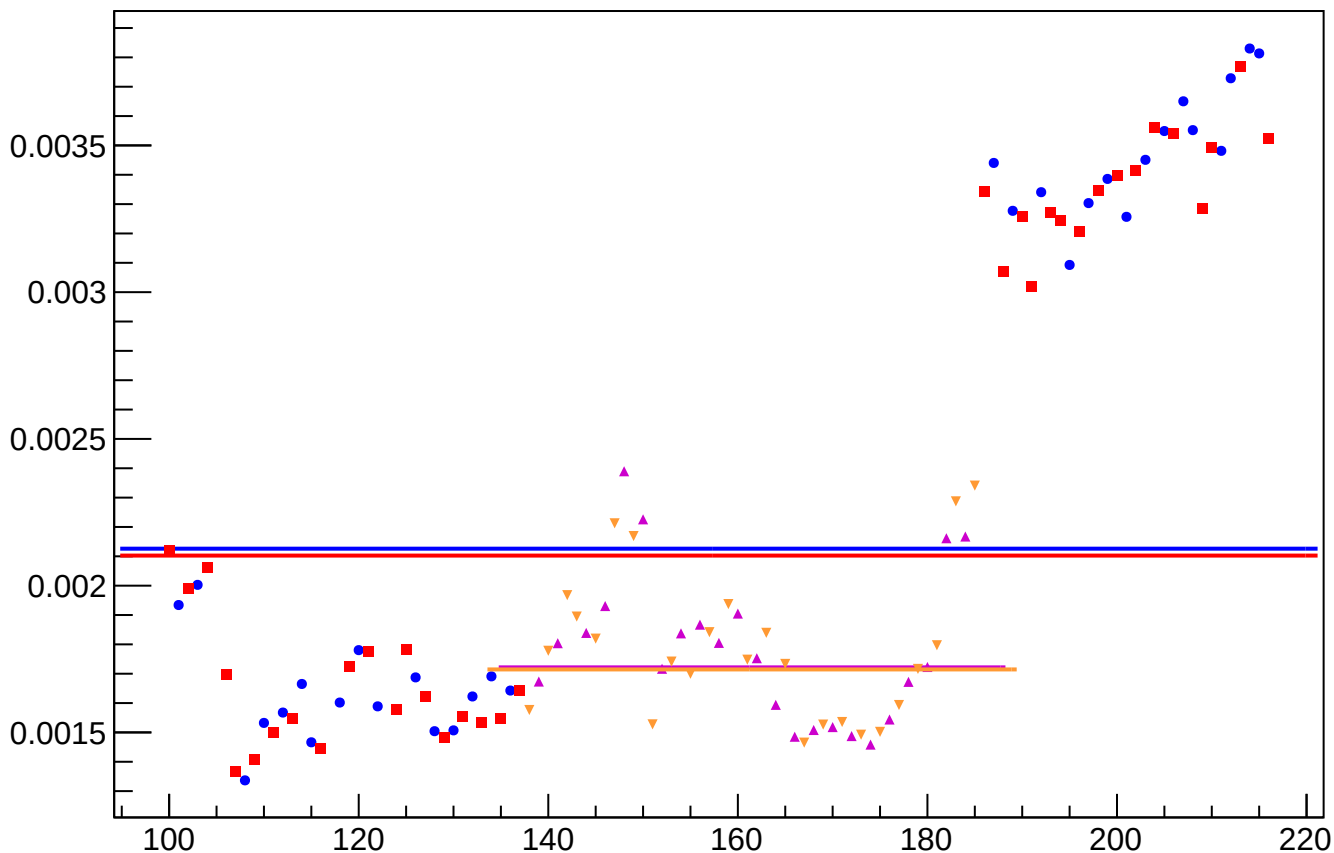
Left In: -3.776+/-0.000  $\chi^2$ /NDF: 402659987166.3/22

+ sign -4.020+/-0.000  $\chi^2$ /NDF: 2066213261455.8/5

All: -4.034+/-0.000  $\chi^2$ /NDF: 3988715241885

- sign -4.048+/-0.000  $\chi^2$ /NDF: 1918528930895.7/5

# yield\_bpm2i01Y\_rms vs Slug



Right In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 5104979.0/30

Left Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 562338.1/24

Right Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 5000427.5/34

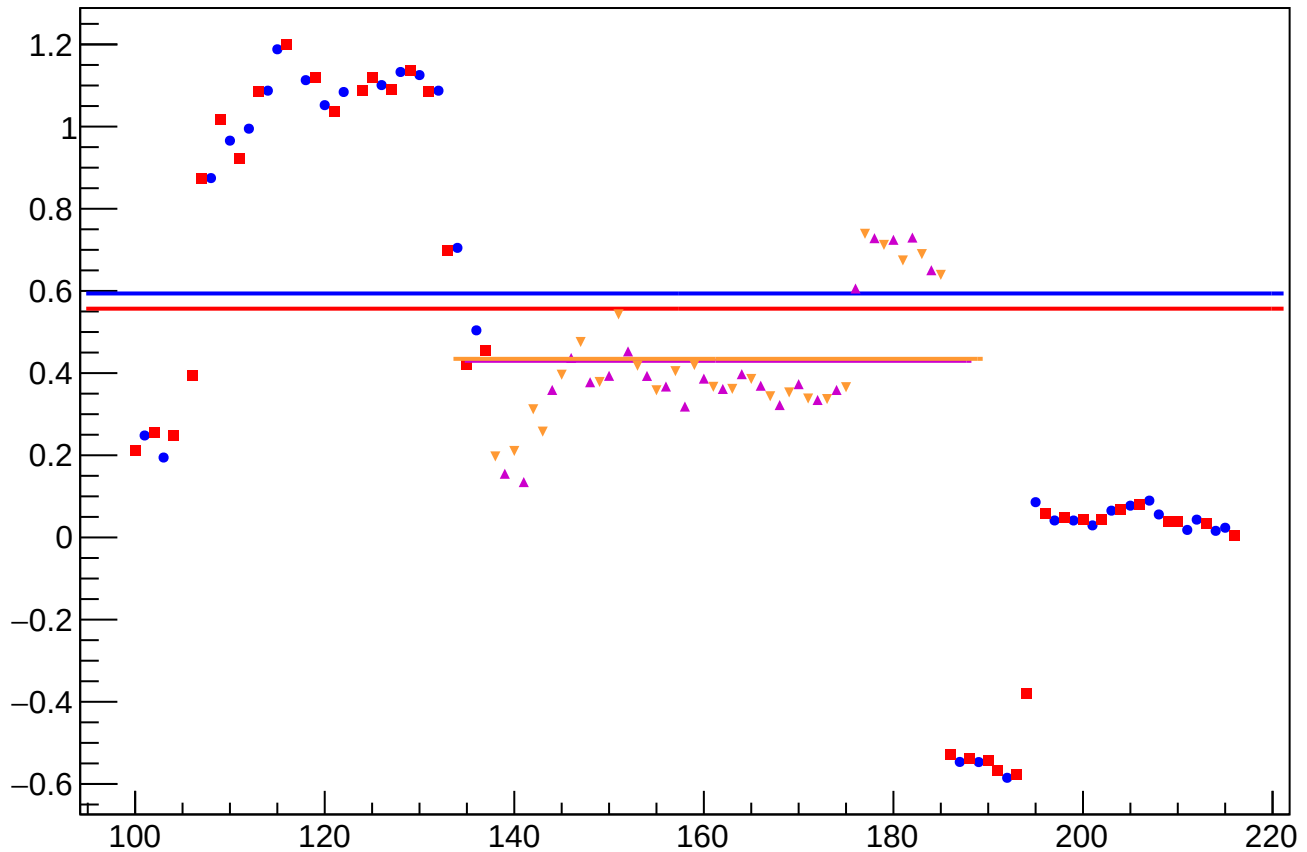
Left In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 581878.6/22

+ sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 6444772.7/55

All:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 12701851.8/113

- sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}$ : 6256649.4/57

# yield\_bpm2i02X\_mean vs Slug



Right In: 0.594 $\pm$ 0.000  $\chi^2$ /NDF: 75688423845.2/30

Left Out: 0.435 $\pm$ 0.000  $\chi^2$ /NDF: 8515333254.7/24

Right Out: 0.557 $\pm$ 0.000  $\chi^2$ /NDF: 93242509104.6/34

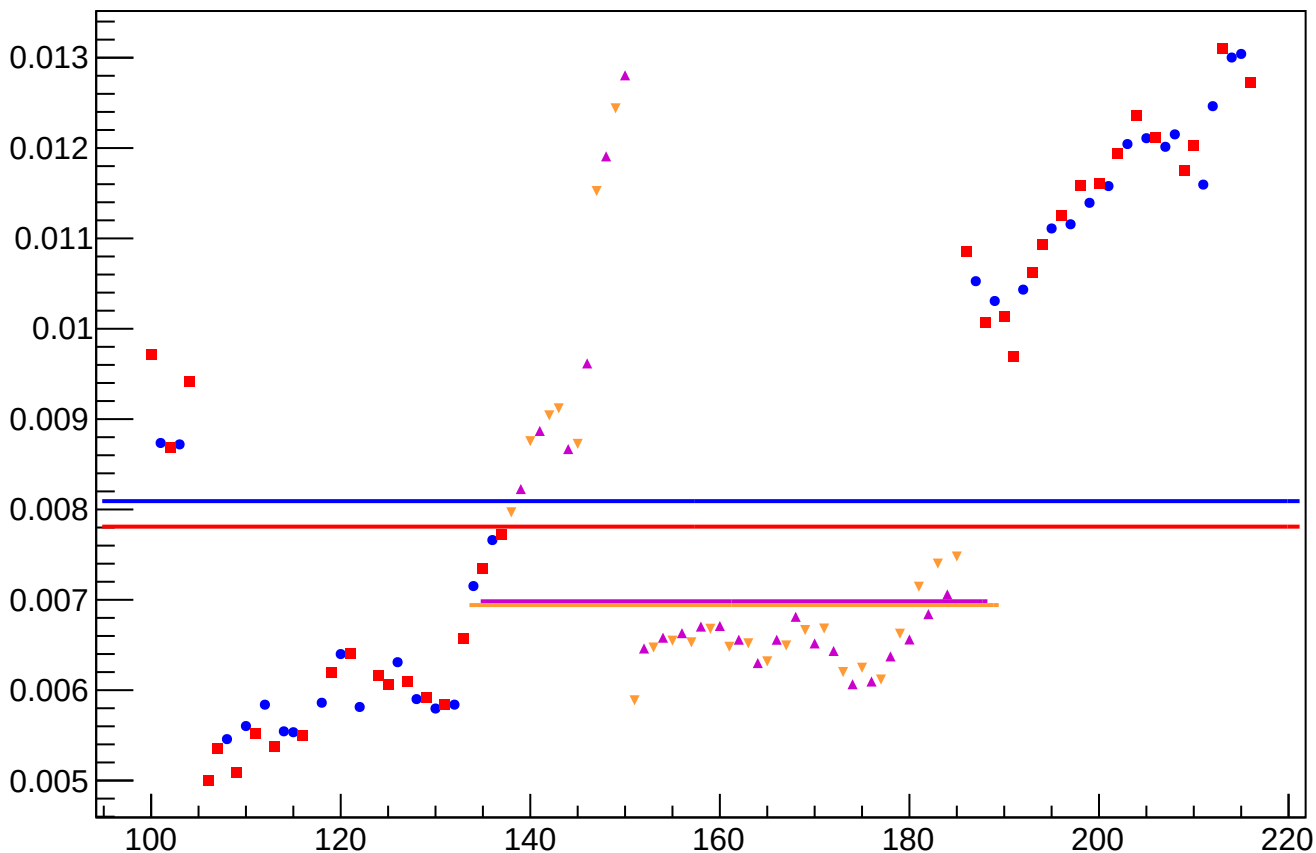
Left In: 0.430 $\pm$ 0.000  $\chi^2$ /NDF: 9041195997.1/22

+ sign 0.499 $\pm$ 0.000  $\chi^2$ /NDF: 88174486659.9/55

All: 0.493 $\pm$ 0.000  $\chi^2$ /NDF: 193096637483.5

- sign 0.486 $\pm$ 0.000  $\chi^2$ /NDF: 104867204246.2/57

# yield\_bpm2i02X\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3779761.4/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1090916.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4168128.3/34

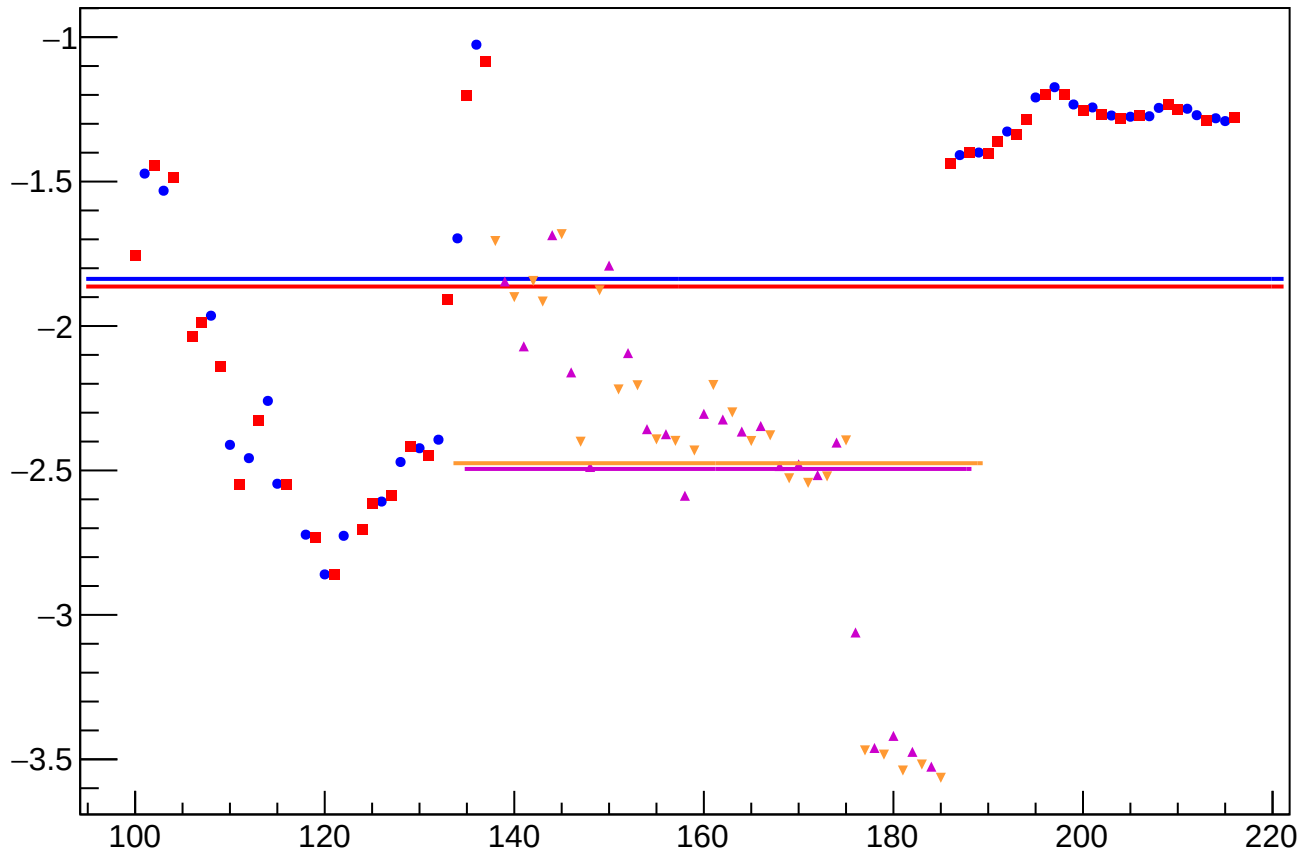
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1136529.0/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5285983.4/55

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 10811723.6/113

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5523584.3/57

# yield\_bpm2i02Y\_mean vs Slug



Right In: -1.837+/-0.000  $\chi^2/\text{NDF}$ : 120977097989.6/30

Left Out: -2.475+/-0.000  $\chi^2/\text{NDF}$ : 122955897541.5/24

Right Out: -1.863+/-0.000  $\chi^2/\text{NDF}$ : 117768277508.1/34

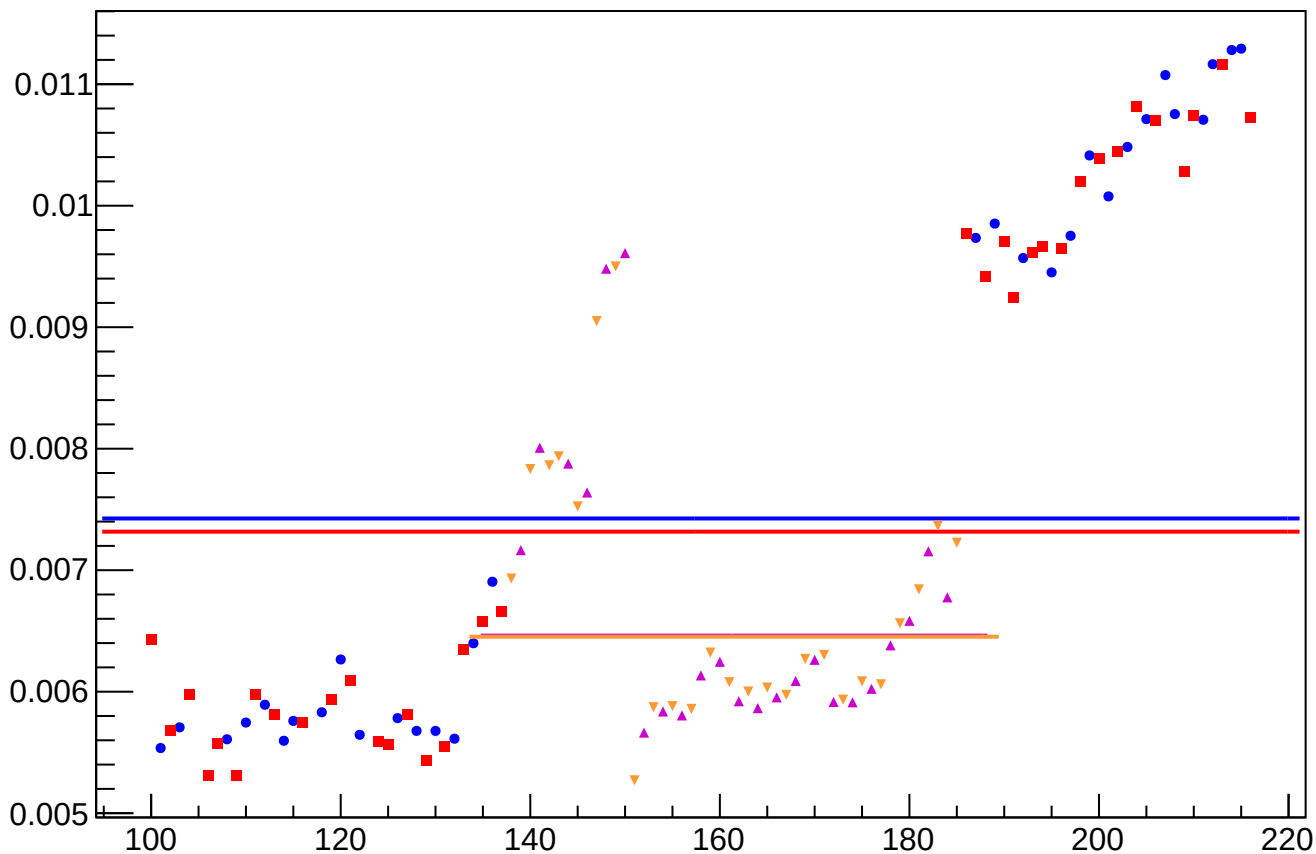
Left In: -2.495+/-0.000  $\chi^2/\text{NDF}$ : 96774638297.6/22

+ sign -2.211+/-0.000  $\chi^2/\text{NDF}$ : 320418311798.9/55

All: -2.214+/-0.000  $\chi^2/\text{NDF}$ : 610579764557.2

- sign -2.216+/-0.000  $\chi^2/\text{NDF}$ : 290153377503.4/57

# yield\_bpm2i02Y\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3136532.8/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 713238.0/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 3082470.7/34

Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 720640.7/22

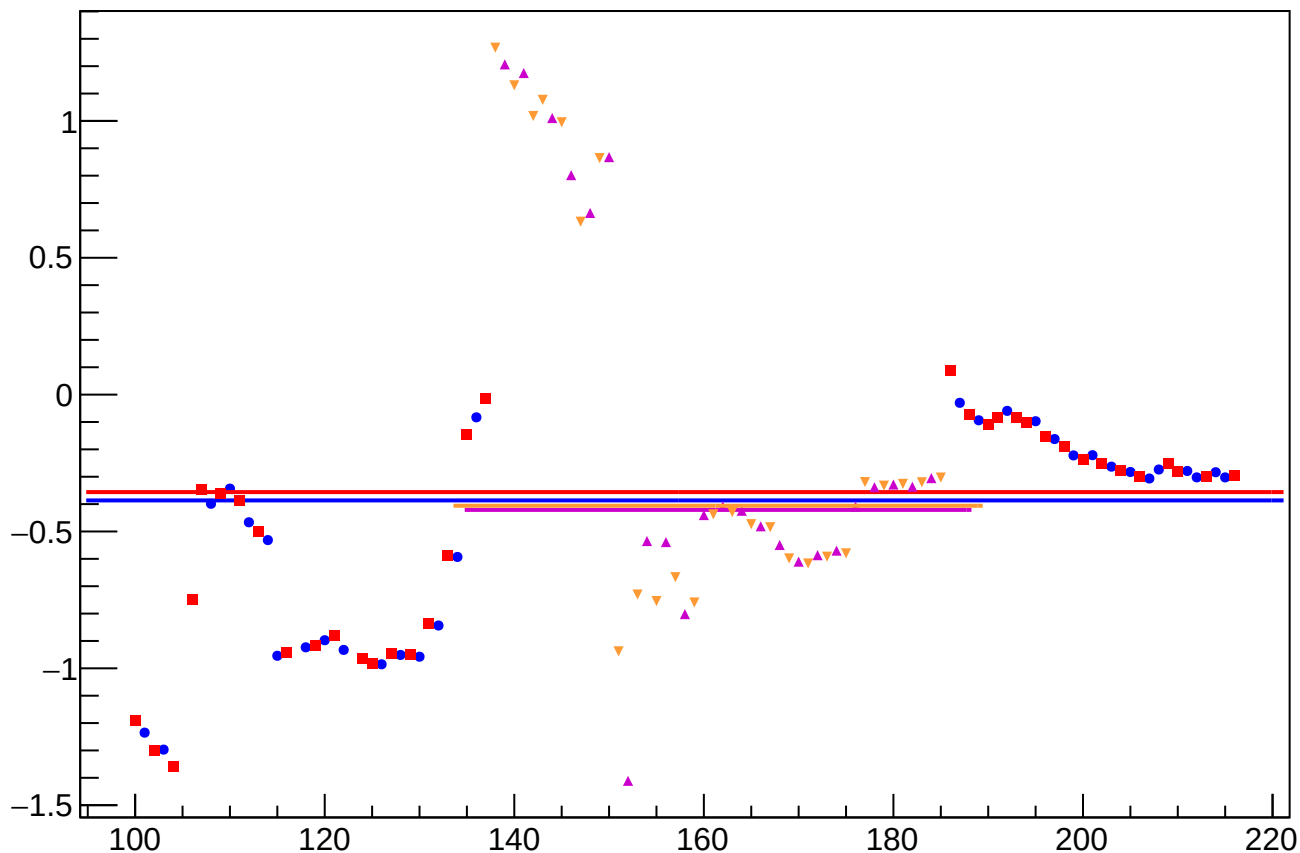
+ sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4205684.2/55

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 8286654.4/113

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 4080792.9/57



# yield\_bpm0i01X\_mean vs Slug



Right In:  $-0.387 \pm 0.000$   $\chi^2/\text{NDF}$ : 24662029251.1/30

Left Out:  $-0.406 \pm 0.000$   $\chi^2/\text{NDF}$ : 81633647828.2/24

Right Out:  $-0.356 \pm 0.000$   $\chi^2/\text{NDF}$ : 27342403785.6/34

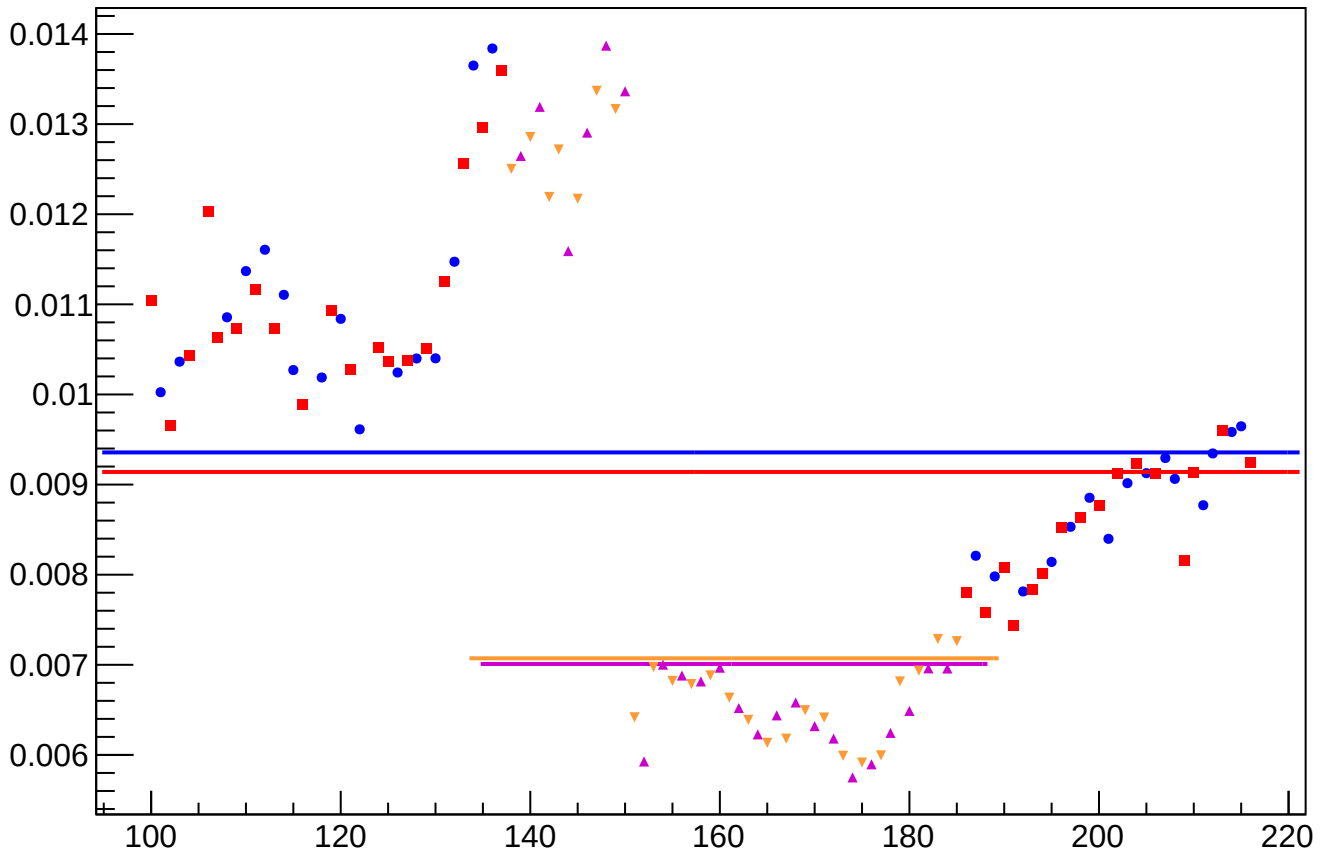
Left In:  $-0.421 \pm 0.000$   $\chi^2/\text{NDF}$ : 90241717621.7/22

+ sign  $-0.399 \pm 0.000$   $\chi^2/\text{NDF}$ : 106345983542.9/55

All:  $-0.397 \pm 0.000$   $\chi^2/\text{NDF}$ : 224511596638.0

- sign  $-0.395 \pm 0.000$   $\chi^2/\text{NDF}$ : 118162079276.6/57

# yield\_bpm0i01X\_rms vs Slug



Right In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 638548.1/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :2384159.5/24

Right Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 704097.4/34

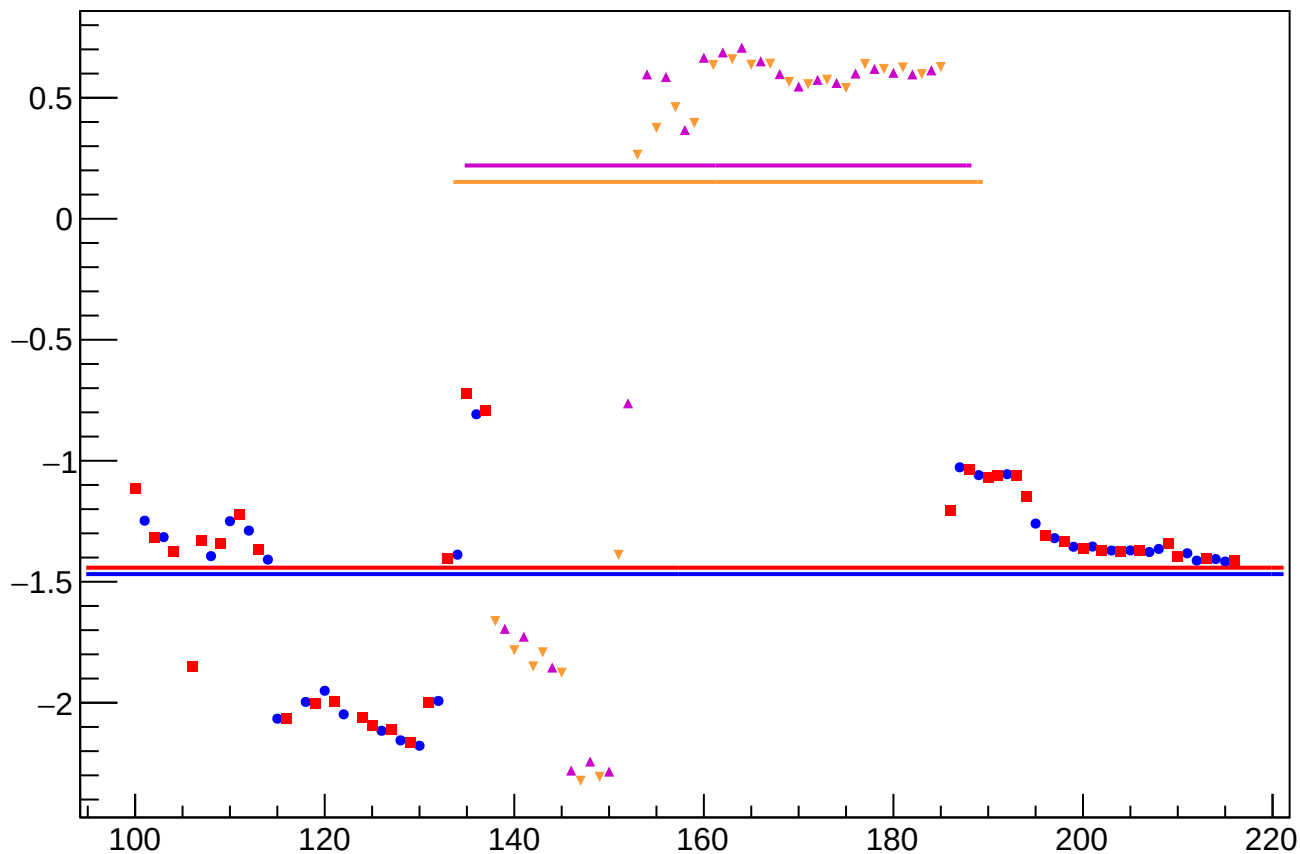
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :2456348.6/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4412240.0/55

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 8814798.7/113

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 4400017.3/57

# yield\_bpm0i01Y\_mean vs Slug



Right In:  $-1.468 \pm 0.000$   $\chi^2/\text{NDF}$ : 183897970193.0/30

Left Out:  $0.152 \pm 0.000$   $\chi^2/\text{NDF}$ : 2398778835341.2/24

Right Out:  $-1.442 \pm 0.000$   $\chi^2/\text{NDF}$ : 172706007004.1/34

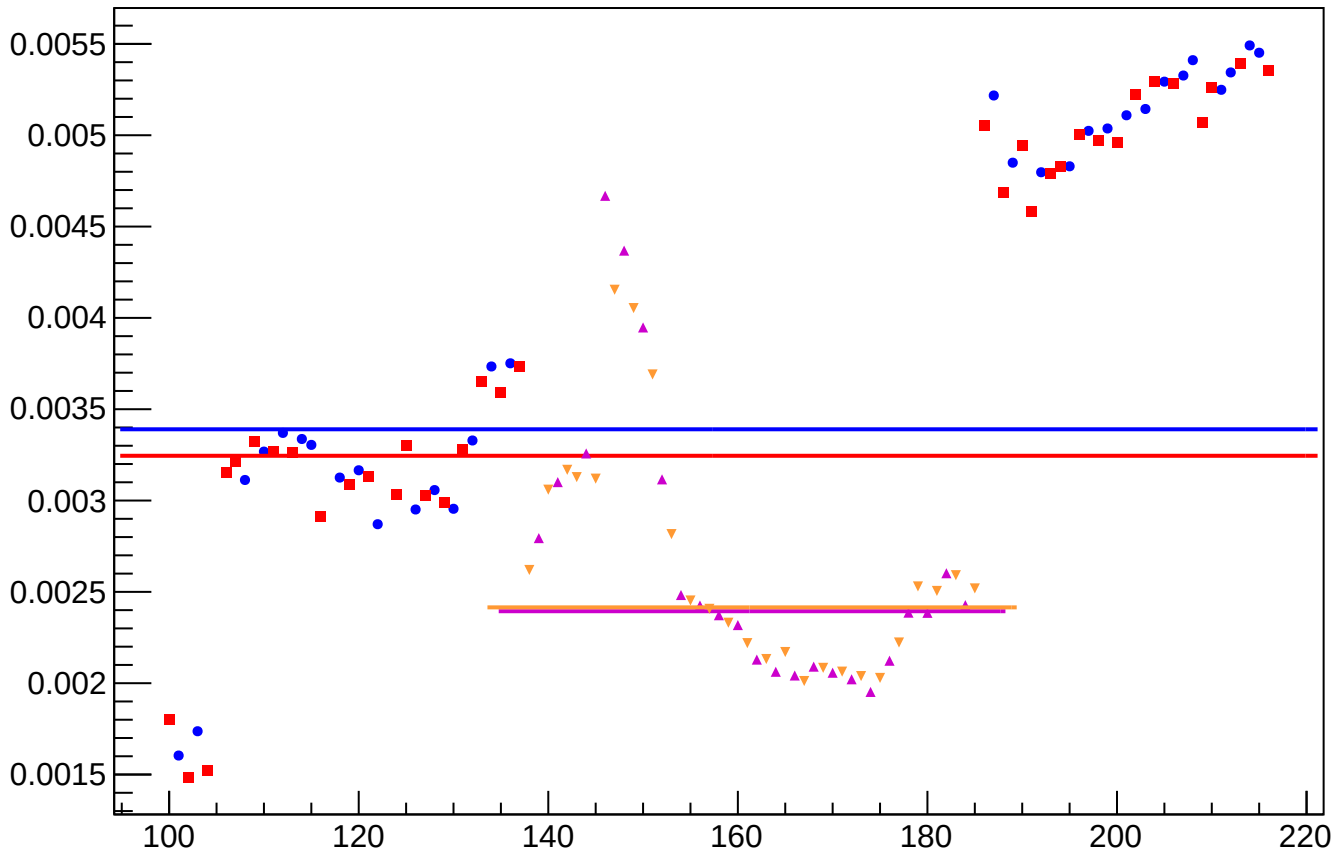
Left In:  $0.220 \pm 0.000$   $\chi^2/\text{NDF}$ : 2121977245985.6/22

+ sign  $-0.364 \pm 0.000$   $\chi^2/\text{NDF}$ : 5031030729526.9/5

All:  $-0.361 \pm 0.000$   $\chi^2/\text{NDF}$ : 1000370580050

- sign  $-0.358 \pm 0.000$   $\chi^2/\text{NDF}$ : 4972590047992.2/5

# yield\_bpm0i01Y\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 5260297.7/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1220406.4/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 6050826.1/34

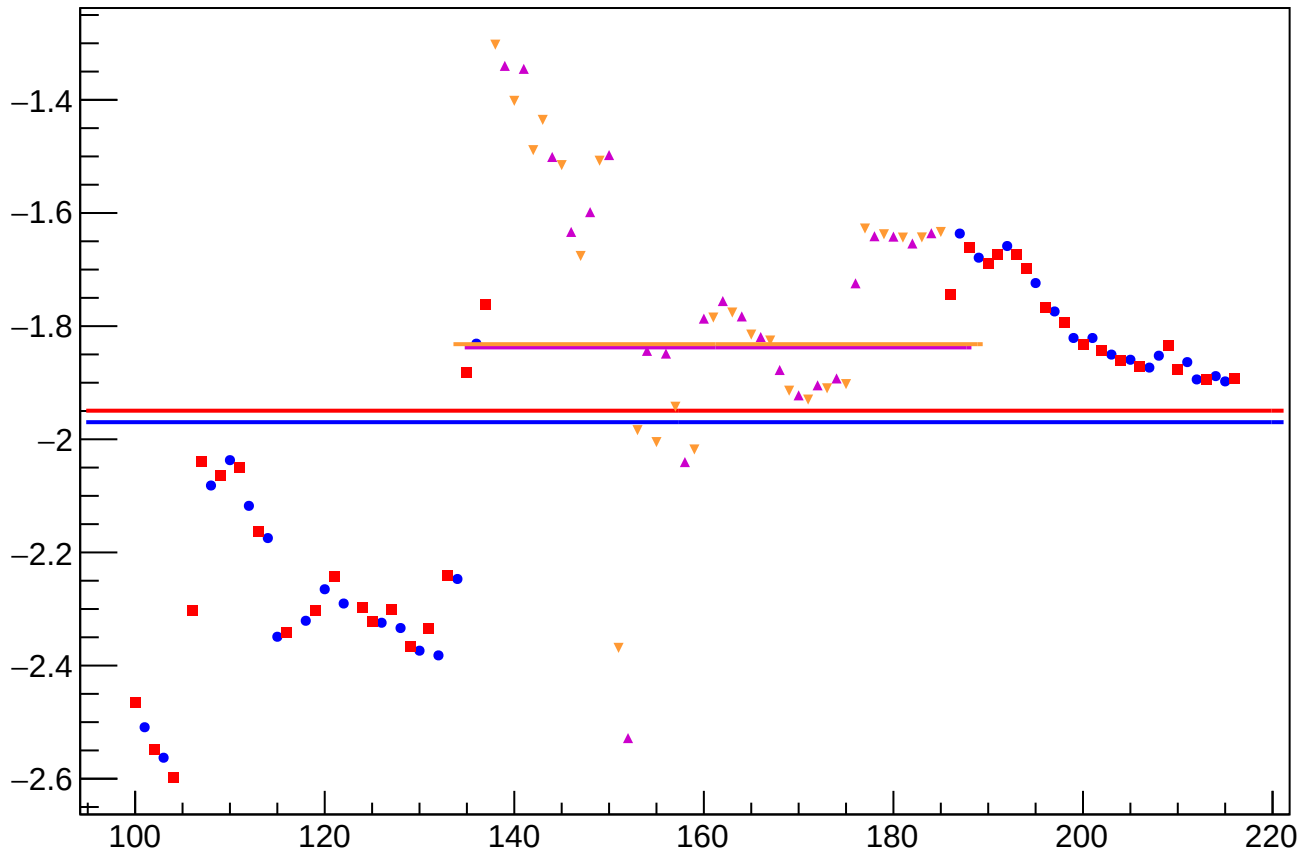
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1409595.4/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8252753.7/55

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 17122869.4/113

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 8864646.6/57

# yield\_bpm0i01aX\_mean vs Slug



Right In: -1.970+/-0.000  $\chi^2/\text{NDF}$ : 34136240985.8/30

Left Out: -1.832+/-0.000  $\chi^2/\text{NDF}$ : 38365576589.1/24

Right Out: -1.949+/-0.000  $\chi^2/\text{NDF}$ : 38056618063.8/34

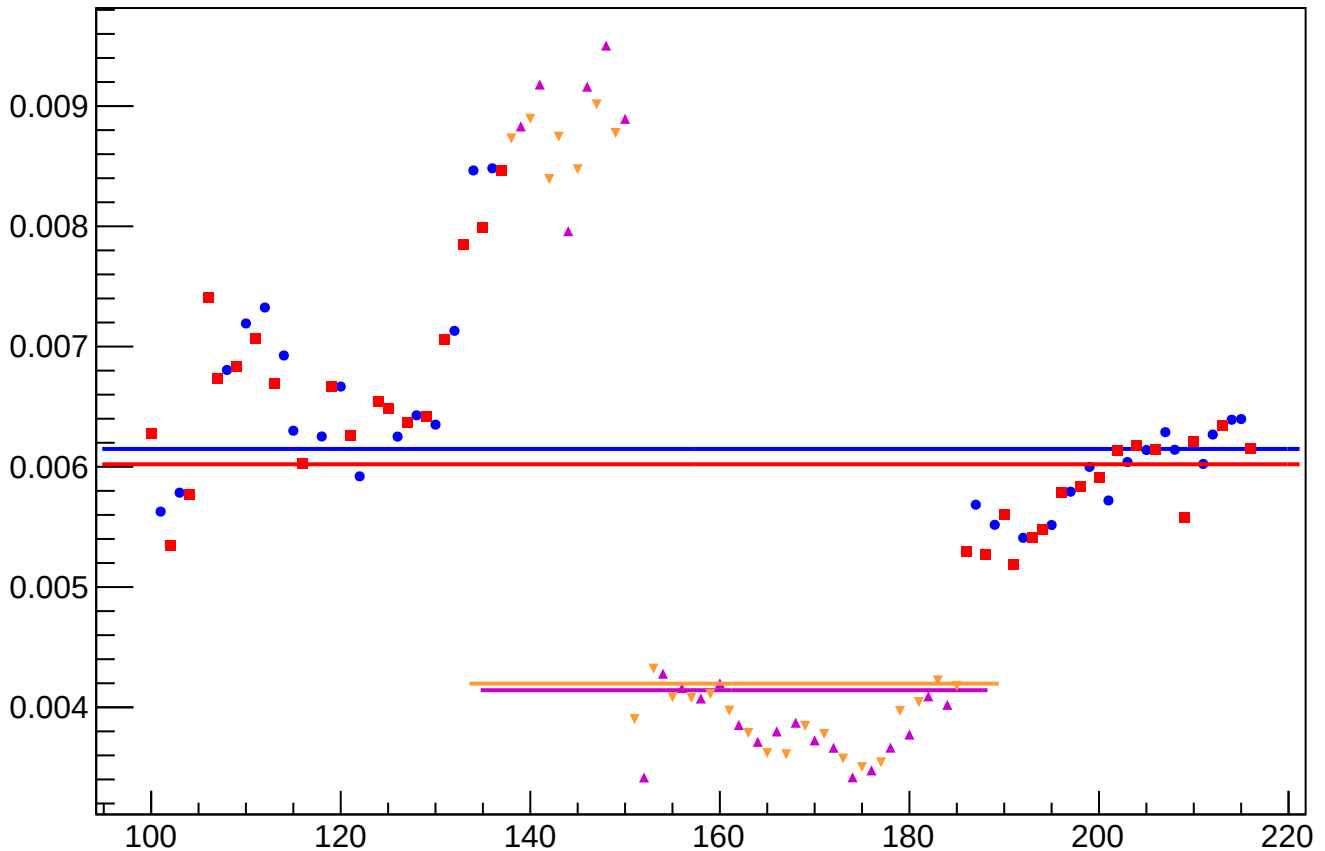
Left In: -1.838+/-0.000  $\chi^2/\text{NDF}$ : 53437434367.2/22

+ sign -1.878+/-0.000  $\chi^2/\text{NDF}$ : 78725287726.6/55

All: -1.878+/-0.000  $\chi^2/\text{NDF}$ : 174435044991.5

- sign -1.878+/-0.000  $\chi^2/\text{NDF}$ : 95709591823.6/57

# yield\_bpm0i01aX\_rms vs Slug



Right In: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 374144.0/30

Left Out: 0.004+/-0.000  $\chi^2/\text{NDF}$ :3091489.2/24

Right Out: 0.006+/-0.000  $\chi^2/\text{NDF}$ : 397287.4/34

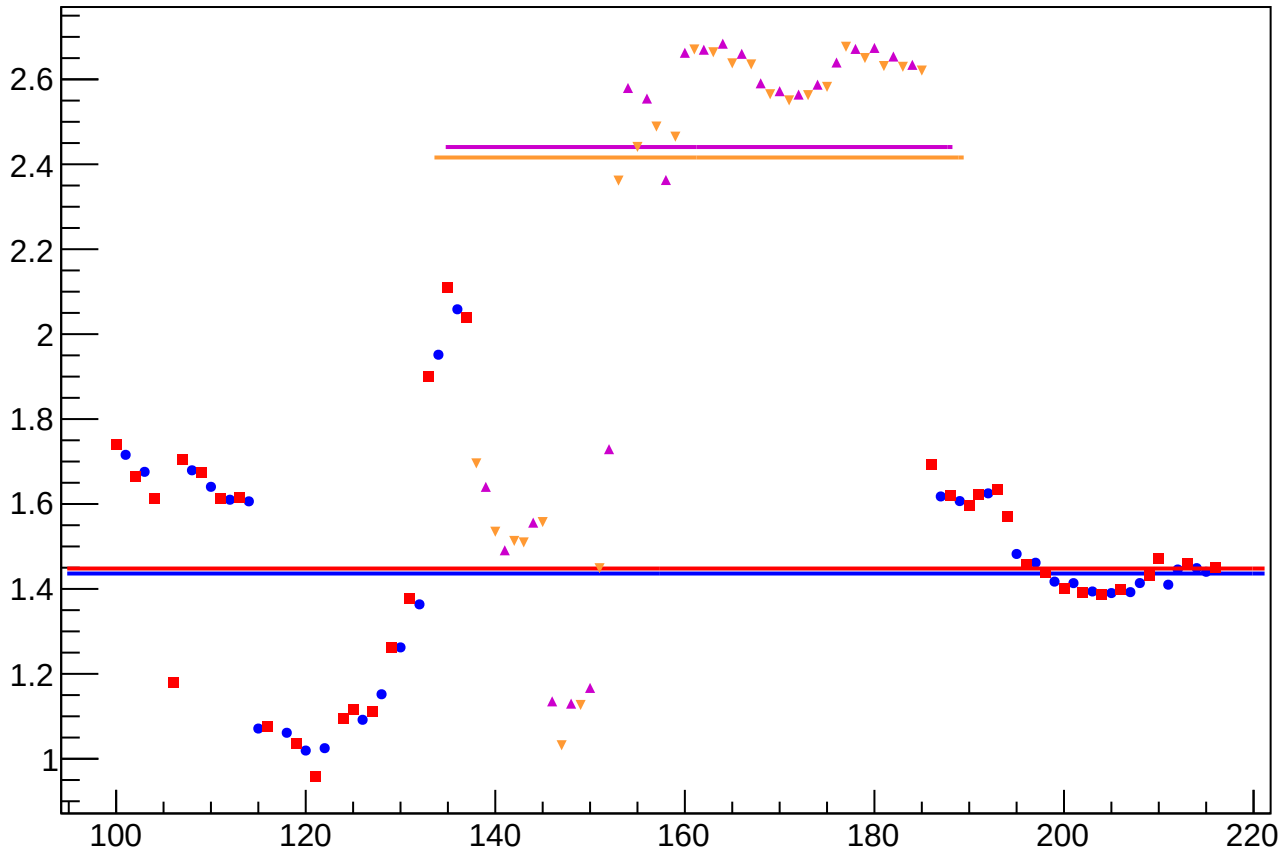
Left In: 0.004+/-0.000  $\chi^2/\text{NDF}$ :3193924.3/22

+ sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5960218.3/55

All: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 11932927.2/113

- sign 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5970749.8/57

# yield\_bpm0i01aY\_mean vs Slug



Right In: 1.436+/-0.000  $\chi^2/\text{NDF}$ : 191505833017.0/30

Left Out: 2.416+/-0.000  $\chi^2/\text{NDF}$ : 242949391498.0/24

Right Out: 1.448+/-0.000  $\chi^2/\text{NDF}$ : 186652006517.9/34

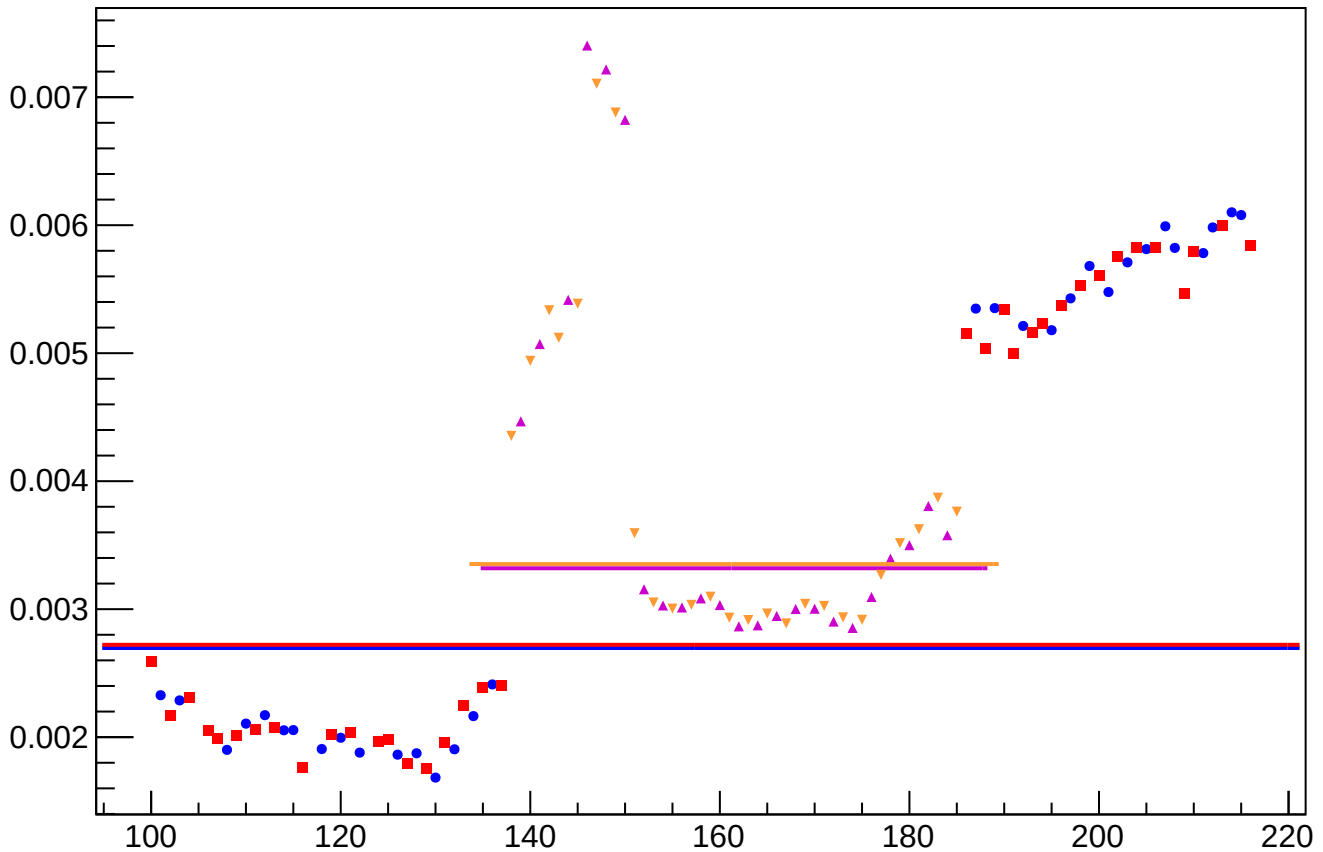
Left In: 2.441+/-0.000  $\chi^2/\text{NDF}$ : 231724954471.8/22

+ sign 1.865+/-0.000  $\chi^2/\text{NDF}$ : 1272828380604.5/55

All: 1.866+/-0.000  $\chi^2/\text{NDF}$ : 2535547419086.

- sign 1.867+/-0.000  $\chi^2/\text{NDF}$ : 1262712797190.2/57

# yield\_bpm0i01aY\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 8223368.7/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ :1819921.4/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 7933493.4/34

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ :2055631.9/22

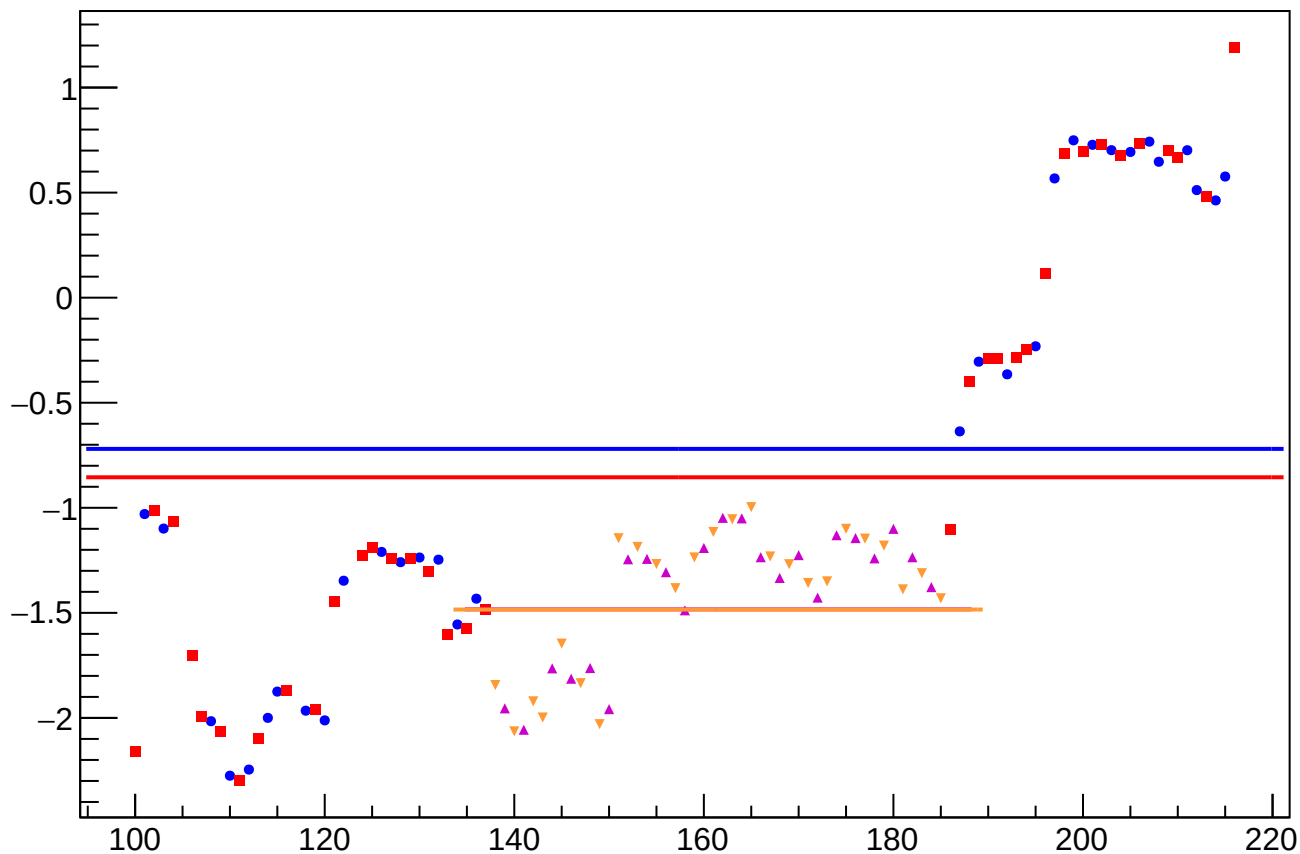
+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10793881.1/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 21396345.5/113

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 10602126.9/57



# yield\_bpm0l01X\_mean vs Slug



Right In:  $-0.720 \pm 0.000$   $\chi^2/\text{NDF}$ : 251570540118.5/30

Left Out:  $-1.484 \pm 0.000$   $\chi^2/\text{NDF}$ : 48438764764.6/24

Right Out:  $-0.855 \pm 0.000$   $\chi^2/\text{NDF}$ : 288141430697.3/34

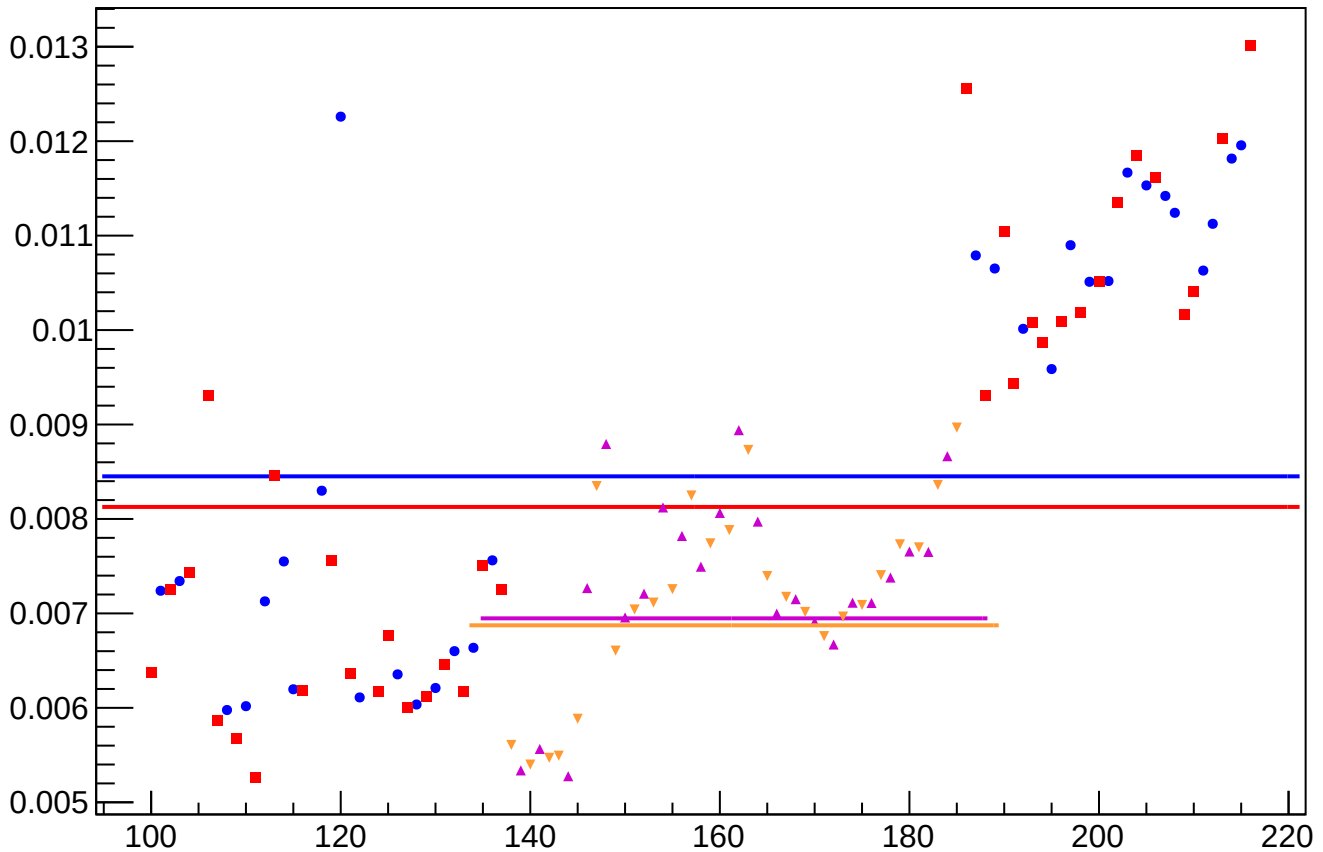
Left In:  $-1.483 \pm 0.000$   $\chi^2/\text{NDF}$ : 40353431150.9/22

+ sign  $-1.190 \pm 0.000$   $\chi^2/\text{NDF}$ : 386244543391.8/55

All:  $-1.201 \pm 0.000$   $\chi^2/\text{NDF}$ : 774886135866.8

- sign  $-1.213 \pm 0.000$   $\chi^2/\text{NDF}$ : 388479221705.5/57

# yield\_bpm0l01X\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2306415.1/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 745531.3/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 2588694.3/34

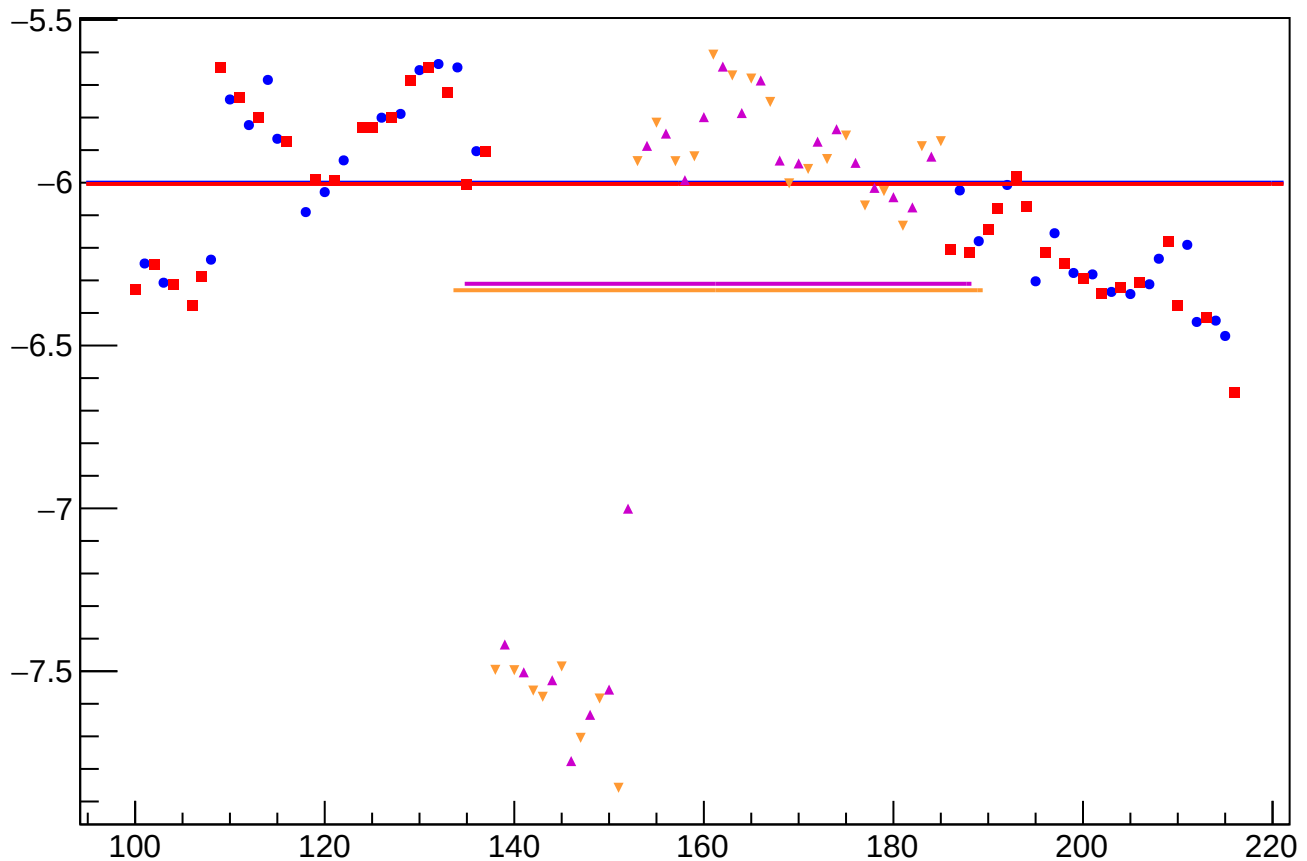
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 746731.6/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3785945.0/55

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 7544372.6/113

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 3758018.7/57

# yield\_bpm0l01Y\_mean vs Slug



Right In:  $-6.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18252784079.0/30

Left Out:  $-6.330 \pm 0.000$   $\chi^2/\text{NDF}$ : 110328634370.4/24

Right Out:  $-6.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 19143699856.8/34

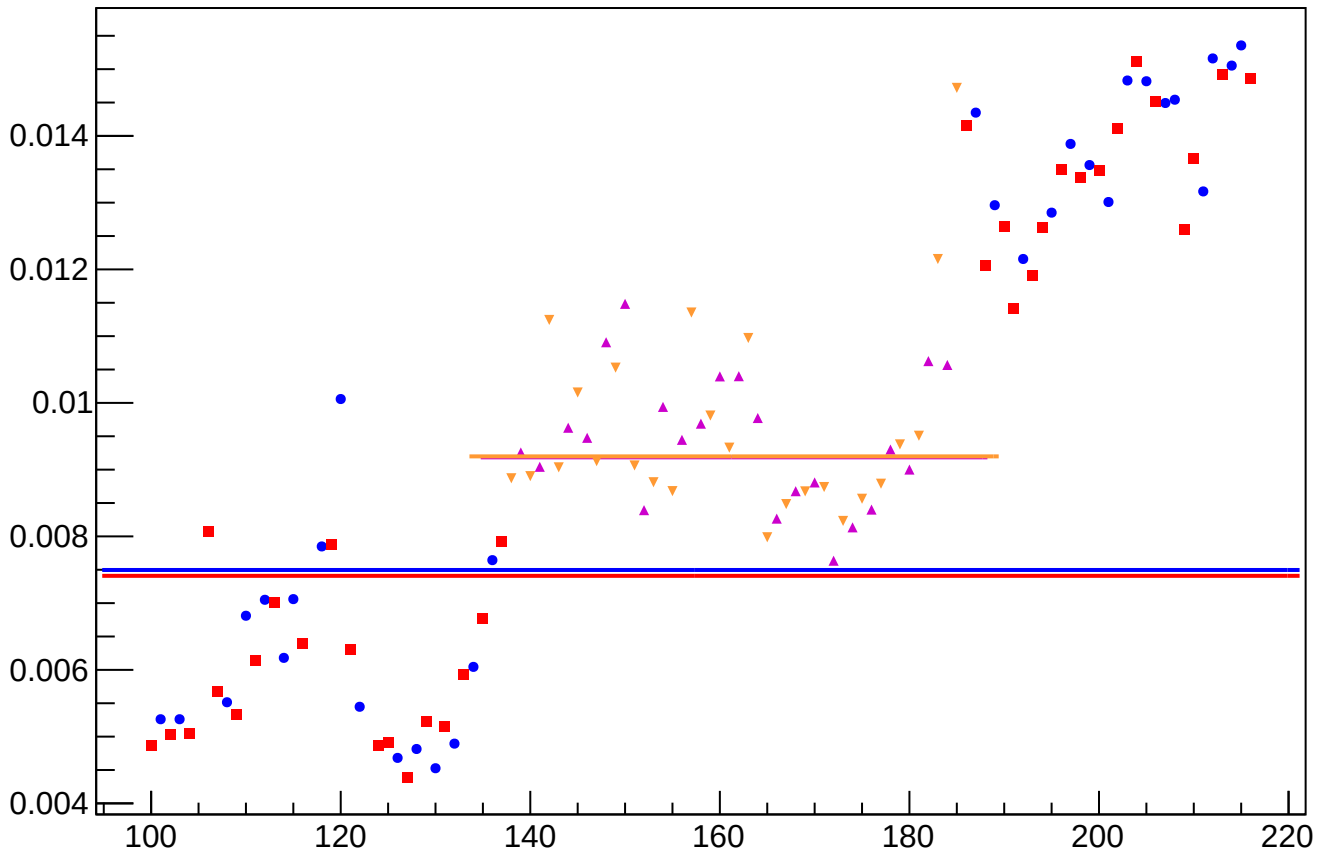
Left In:  $-6.310 \pm 0.000$   $\chi^2/\text{NDF}$ : 91689184100.9/22

+ sign  $-6.140 \pm 0.000$   $\chi^2/\text{NDF}$ : 140546737106.7/55

All:  $-6.133 \pm 0.000$   $\chi^2/\text{NDF}$ : 261757843854.8

- sign  $-6.126 \pm 0.000$   $\chi^2/\text{NDF}$ : 121164061429.2/57

# yield\_bpm0l01Y\_rms vs Slug



Right In: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6984313.3/30

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 367040.4/24

Right Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 6625736.6/34

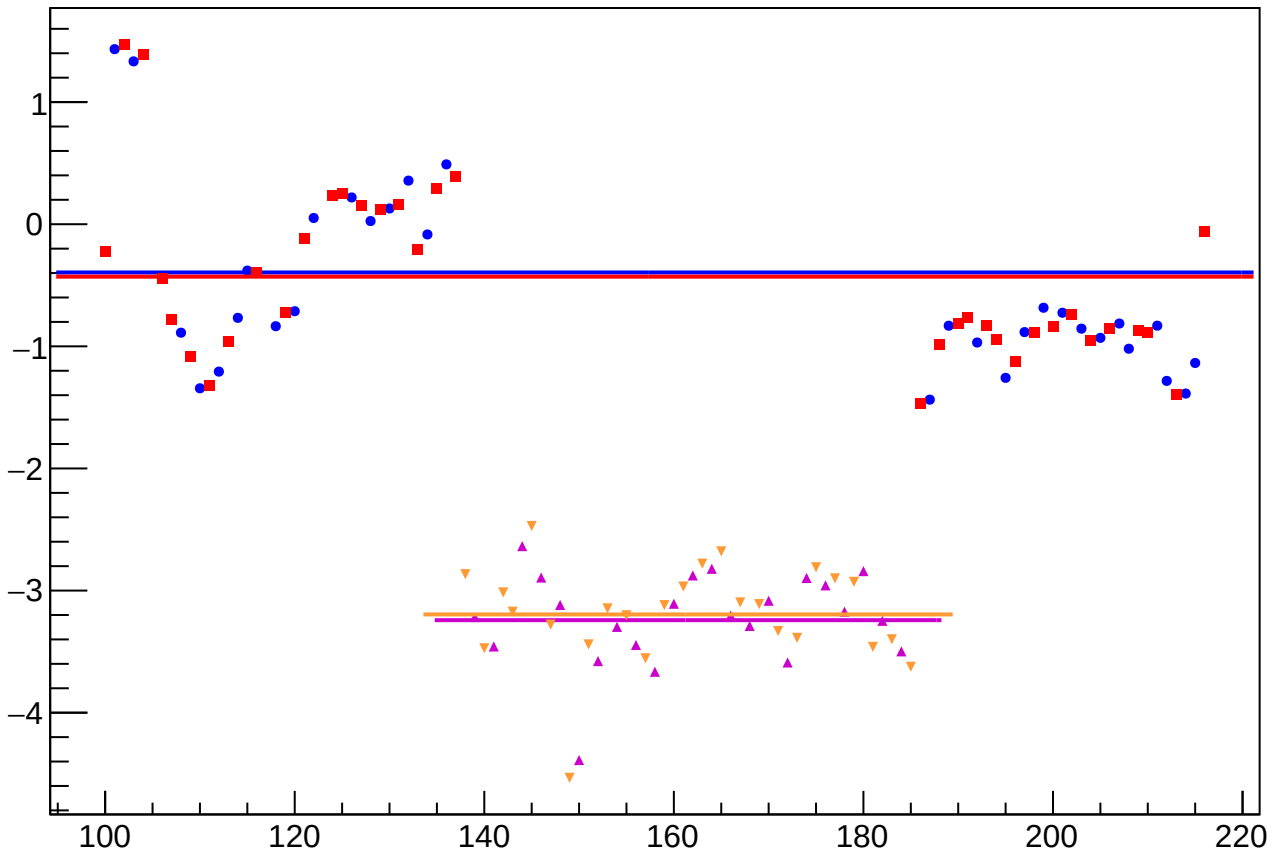
Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 319063.5/22

+ sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 7986882.3/55

All: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 15629571.6/113

- sign 0.008+/-0.000  $\chi^2/\text{NDF}$ : 7637765.9/57

# yield\_bpm0l02X\_mean vs Slug



Right In:  $-0.395 \pm 0.000$   $\chi^2/\text{NDF}: 39792327247.0/30$

Left Out:  $-3.195 \pm 0.000$   $\chi^2/\text{NDF}: 9538006171.4/24$

Right Out:  $-0.429 \pm 0.000$   $\chi^2/\text{NDF}: 38384605714.7/34$

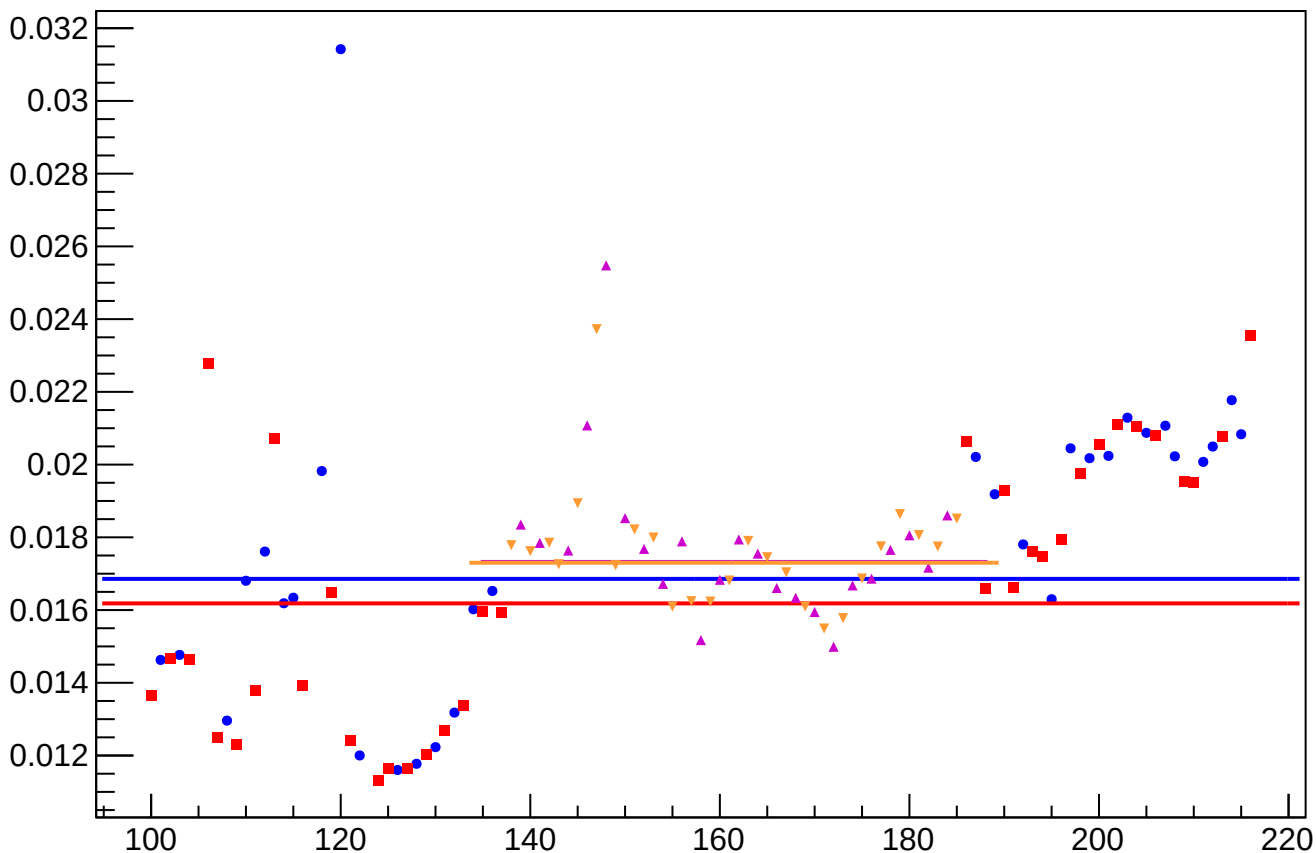
Left In:  $-3.242 \pm 0.000$   $\chi^2/\text{NDF}: 7955956403.6/22$

+ sign  $-1.800 \pm 0.000$   $\chi^2/\text{NDF}: 291814197749.2/55$

All:  $-1.758 \pm 0.000$   $\chi^2/\text{NDF}: 589144304312.6$

- sign  $-1.717 \pm 0.000$   $\chi^2/\text{NDF}: 296898169475.5/57$

# yield\_bpm0l02X\_rms vs Slug



Right In: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 1634479.9/30

Left Out: 0.017+/-0.000  $\chi^2/\text{NDF}$ :218030.0/24

Right Out: 0.016+/-0.000  $\chi^2/\text{NDF}$ : 1681621.3/34

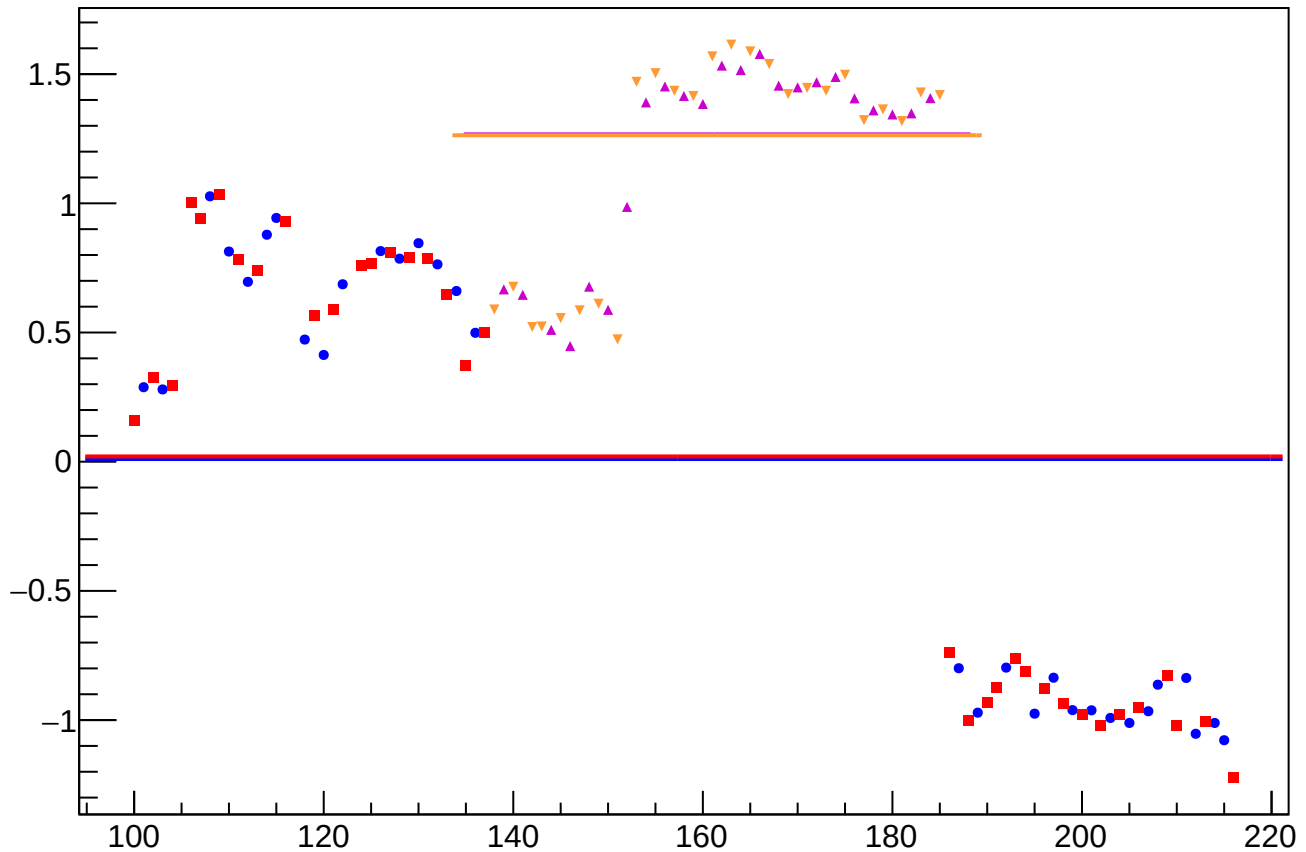
Left In: 0.017+/-0.000  $\chi^2/\text{NDF}$ :329879.6/22

+ sign 0.017+/-0.000  $\chi^2/\text{NDF}$ : 1864698.3/55

All: 0.017+/-0.000  $\chi^2/\text{NDF}$ : 3976011.1/113

- sign 0.017+/-0.000  $\chi^2/\text{NDF}$ : 2093670.6/57

# yield\_bpm0l02Y\_mean vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 94134778073.1/30

Left Out: 1.263 $\pm$ 0.000  $\chi^2$ /NDF: 45594559273.0/24

Right Out: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 103906786845.2/34

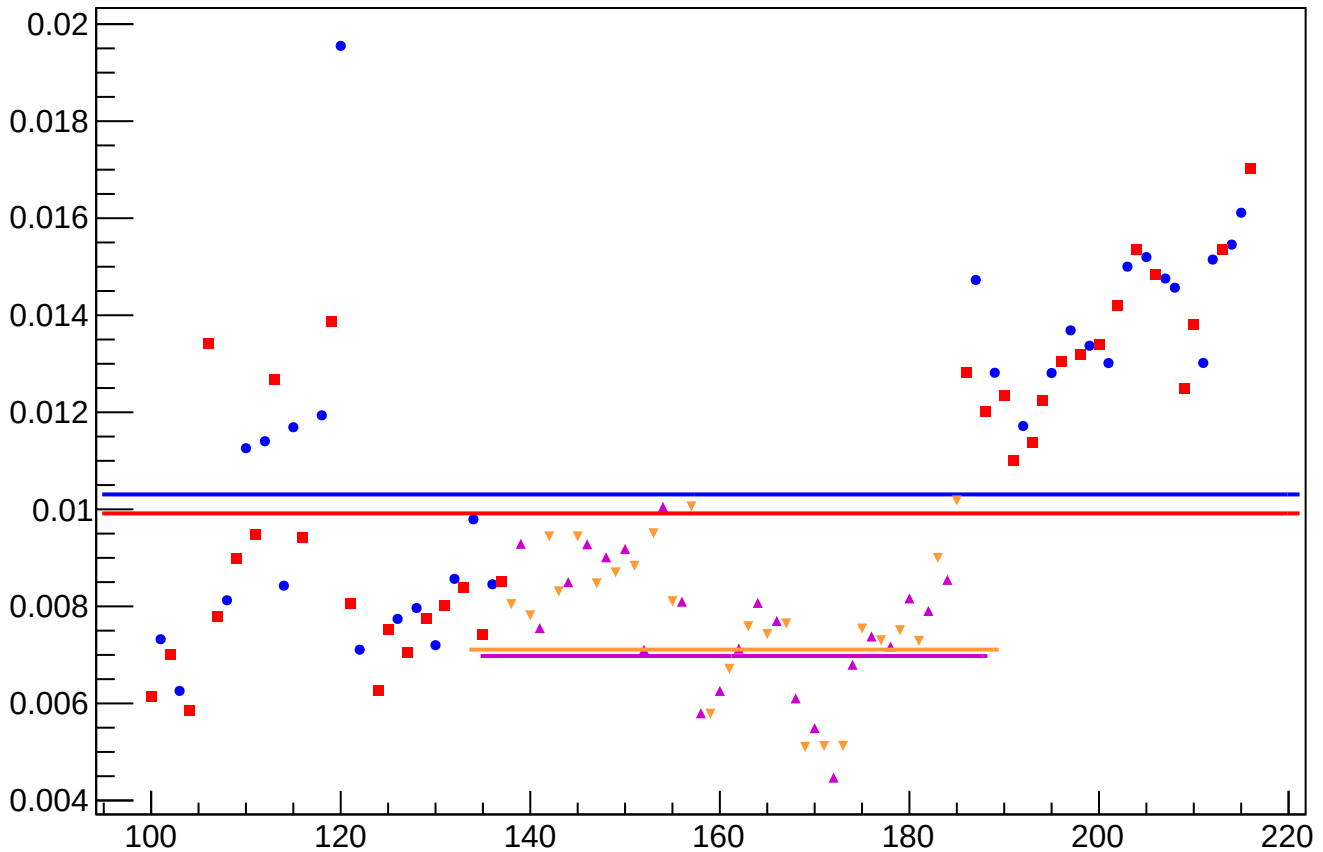
Left In: 1.267 $\pm$ 0.000  $\chi^2$ /NDF: 37614918579.9/22

+ sign 0.869 $\pm$ 0.000  $\chi^2$ /NDF: 305905450270.9/55

All: 0.856 $\pm$ 0.000  $\chi^2$ /NDF: 623576400946.5

- sign 0.844 $\pm$ 0.000  $\chi^2$ /NDF: 317509671965.1/57

# yield\_bpm0l02Y\_rms vs Slug



Right In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 3268786.4/30

Left Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1519295.8/24

Right Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 3277583.6/34

Left In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF:1457031.8/22

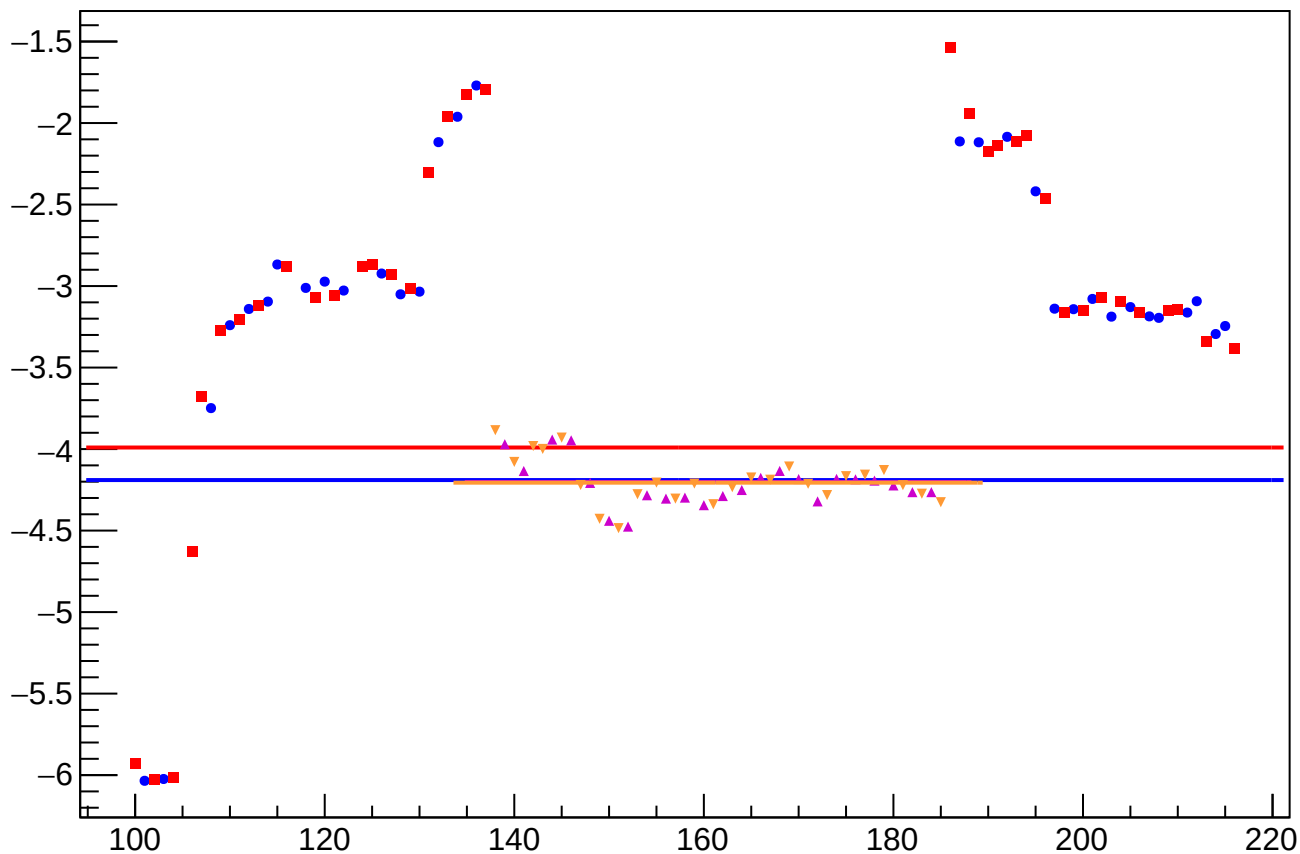
+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6952826.3/55

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 13655518.8/113

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 6692762.0/57



# yield\_bpm0l03X\_mean vs Slug



Right In:  $-4.190 \pm 0.000$   $\chi^2/\text{NDF}$ : 301970049267.0/30

Left Out:  $-4.206 \pm 0.000$   $\chi^2/\text{NDF}$ : 61558336.8/24

Right Out:  $-3.990 \pm 0.000$   $\chi^2/\text{NDF}$ : 307297668723.5/34

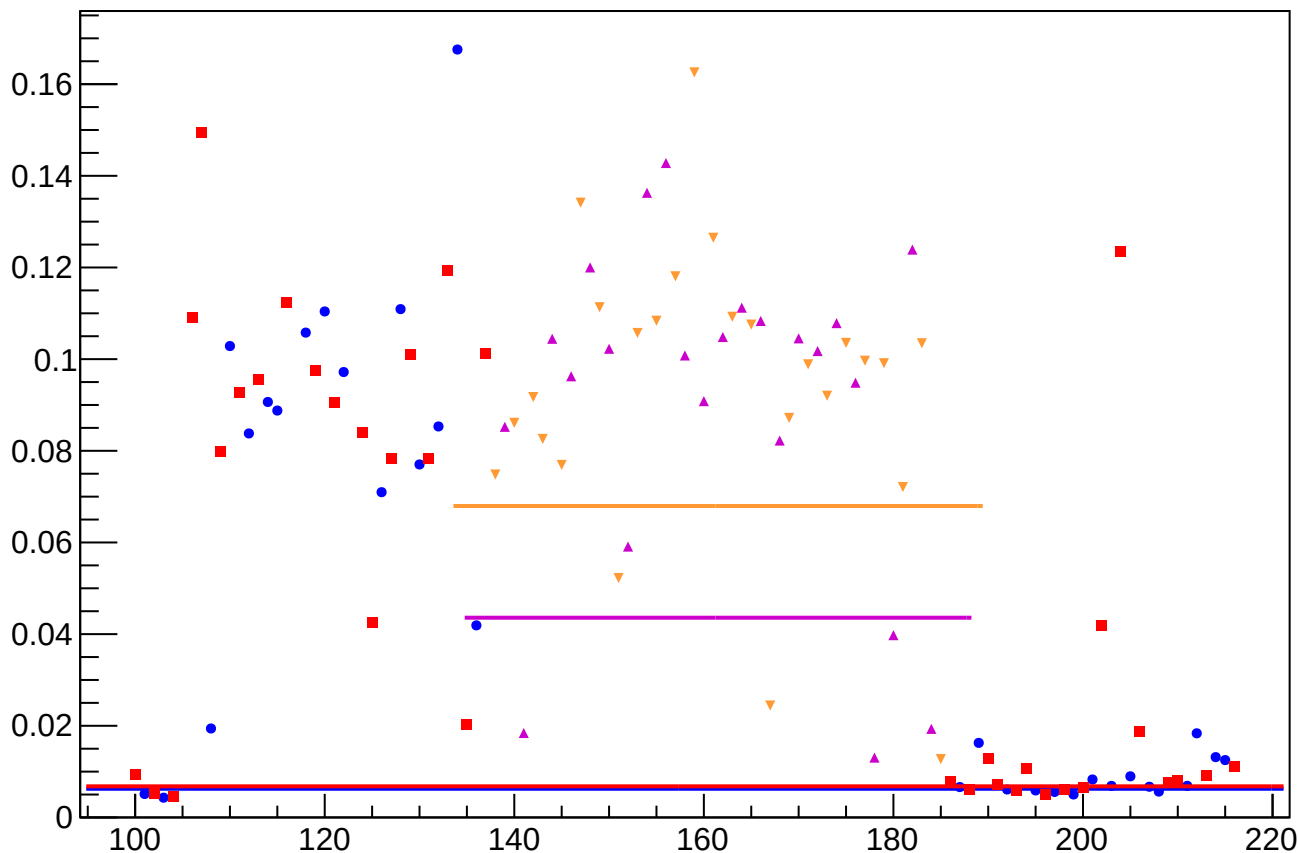
Left In:  $-4.202 \pm 0.000$   $\chi^2/\text{NDF}$ : 42747893.4/22

+ sign  $-4.190 \pm 0.000$   $\chi^2/\text{NDF}$ : 302032274491.8/55

All:  $-4.104 \pm 0.000$   $\chi^2/\text{NDF}$ : 611636426613.9

- sign  $-3.999 \pm 0.000$   $\chi^2/\text{NDF}$ : 307515846037.0/57

# yield\_bpm0l03X\_rms vs Slug



Right In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 9350382.7/30

Left Out: 0.068 $\pm$ 0.000  $\chi^2$ /NDF: 7631751.0/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 10797052.4/34

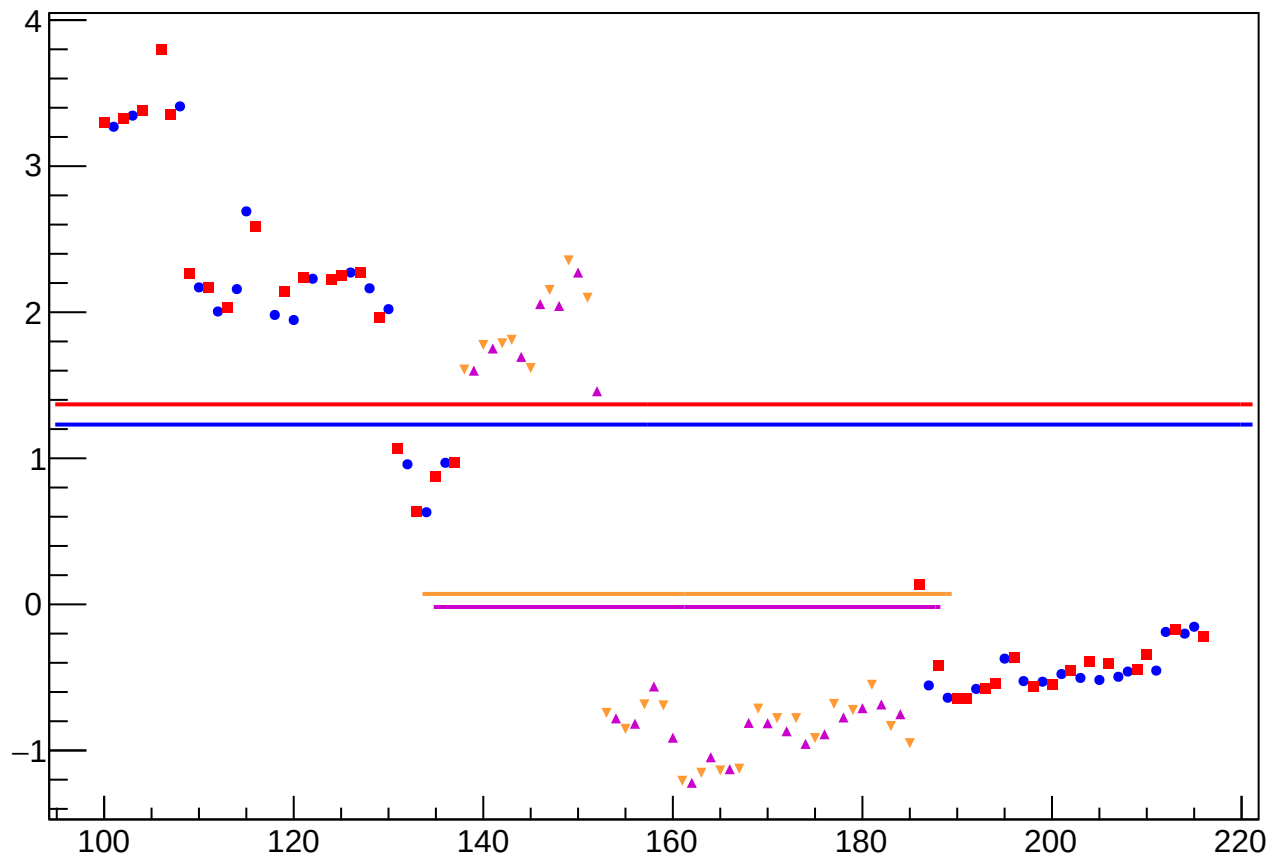
Left In: 0.044 $\pm$ 0.000  $\chi^2$ /NDF: 12761920.2/22

+ sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 36806031.4/55

All: 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 71056602.2/113

- sign 0.008 $\pm$ 0.000  $\chi^2$ /NDF: 34199142.7/57

# yield\_bpm0l03Y\_mean vs Slug



Right In: 1.231+/-0.000  $\chi^2/\text{NDF}$ : 238524093434.1/30

Left Out: 0.072+/-0.000  $\chi^2/\text{NDF}$ : 3635027099.6/24

Right Out: 1.369+/-0.000  $\chi^2/\text{NDF}$ : 212882551565.1/34

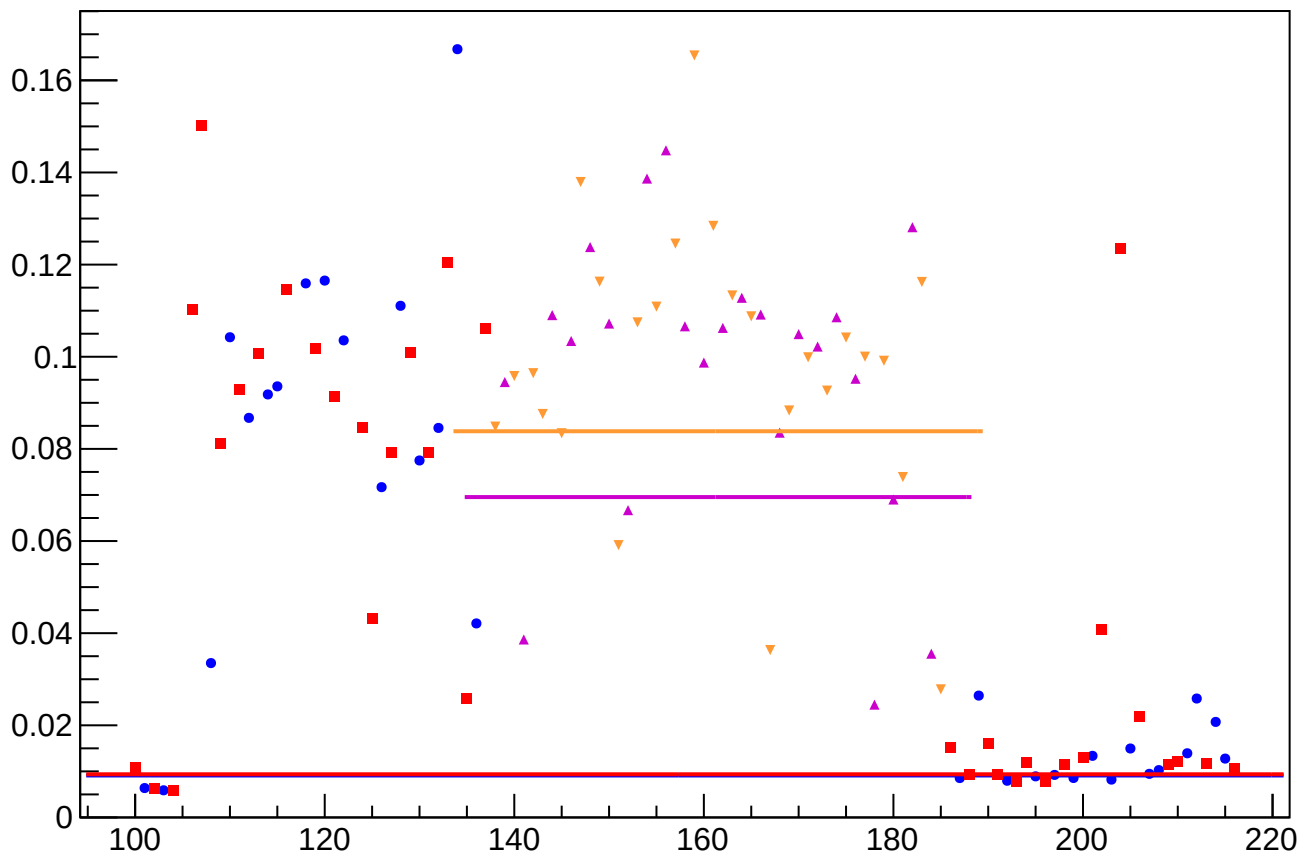
Left In: -0.018+/-0.000  $\chi^2/\text{NDF}$ : 3455714643.1/22

+ sign 1.197+/-0.000  $\chi^2/\text{NDF}$ : 244843610626.7/55

All: 1.254+/-0.000  $\chi^2/\text{NDF}$ : 466062536831.7

- sign 1.317+/-0.000  $\chi^2/\text{NDF}$ : 220741273805.9/57

# yield\_bpm0l03Y\_rms vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 9308339.5/30

Left Out: 0.084 $\pm$ 0.000  $\chi^2$ /NDF:3830160.2/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 10523583.9/34

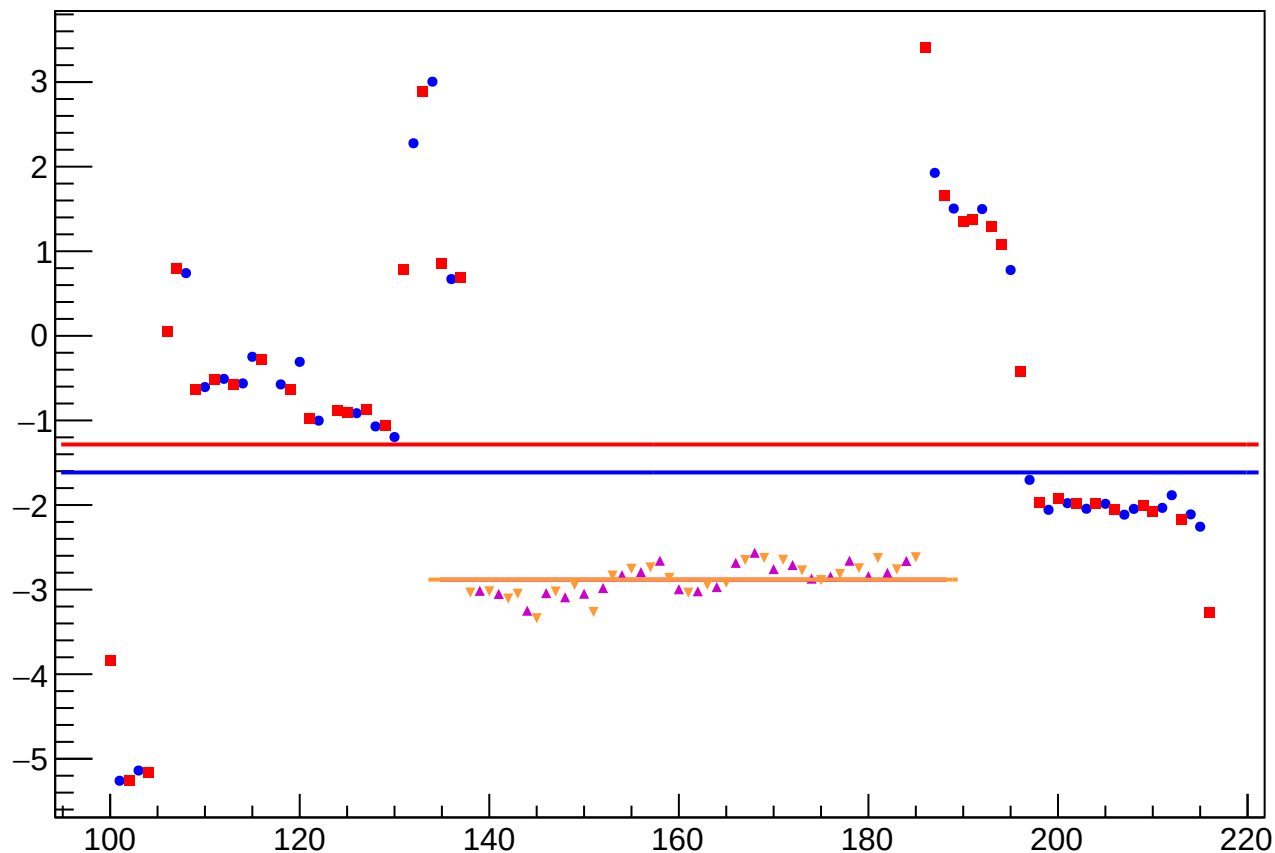
Left In: 0.070 $\pm$ 0.000  $\chi^2$ /NDF:6697383.9/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 35433781.1/55

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 69232996.7/113

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 33792266.0/57

# yield\_bpm0l04X\_mean vs Slug



Right In: -1.615+/-0.000  $\chi^2/\text{NDF}$ : 210237131062.3/30

Left Out: -2.881+/-0.000  $\chi^2/\text{NDF}$ : 10553050715.1/24

Right Out: -1.285+/-0.000  $\chi^2/\text{NDF}$ : 243315771405.4/34

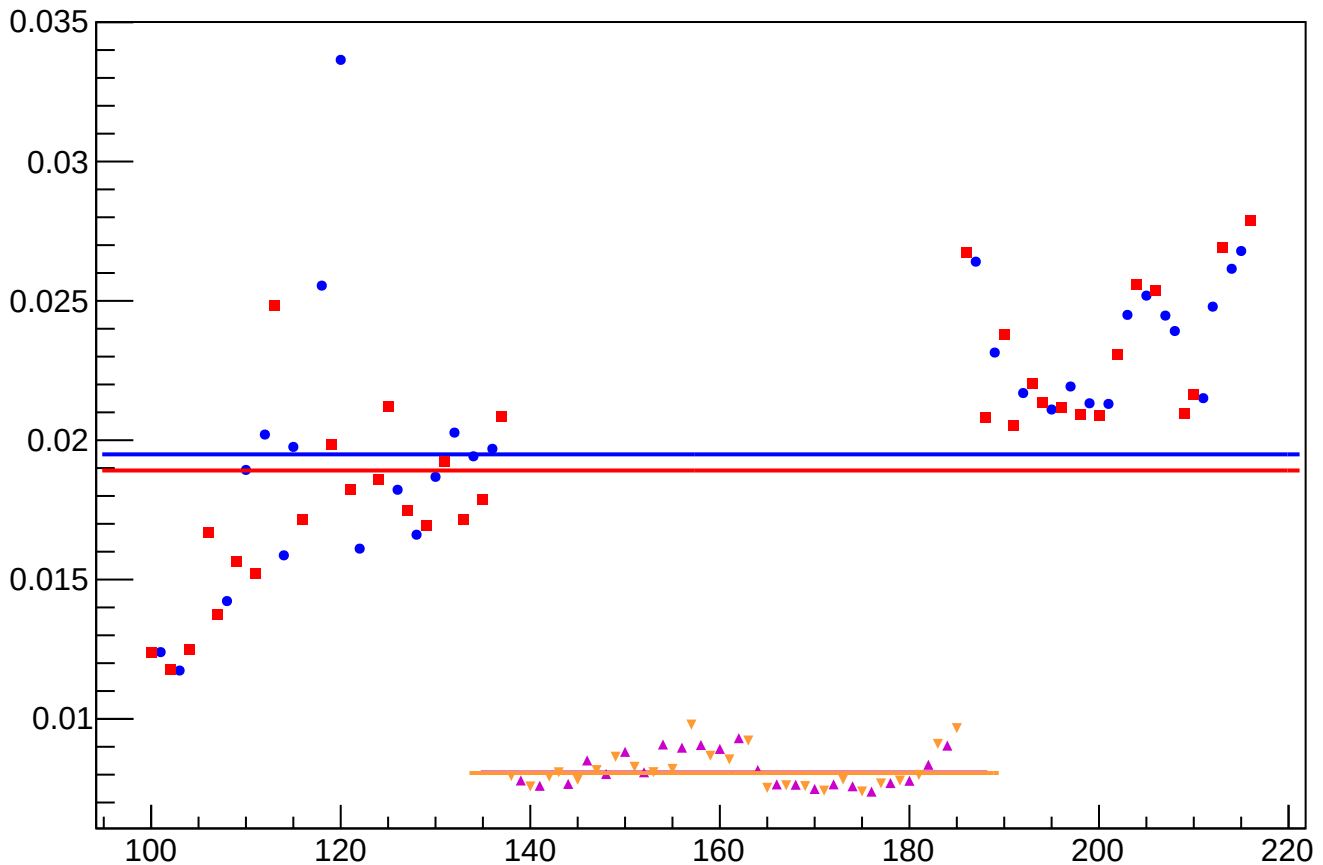
Left In: -2.882+/-0.000  $\chi^2/\text{NDF}$ : 8300047325.0/22

+ sign -2.711+/-0.000  $\chi^2/\text{NDF}$ : 281950370839.5/55

All: -2.674+/-0.000  $\chi^2/\text{NDF}$ : 639792434181.8

- sign -2.636+/-0.000  $\chi^2/\text{NDF}$ : 356935880511.2/57

# yield\_bpm0l04X\_rms vs Slug



Right In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 2006359.9/30

Left Out: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:185446.1/24

Right Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 1862268.6/34

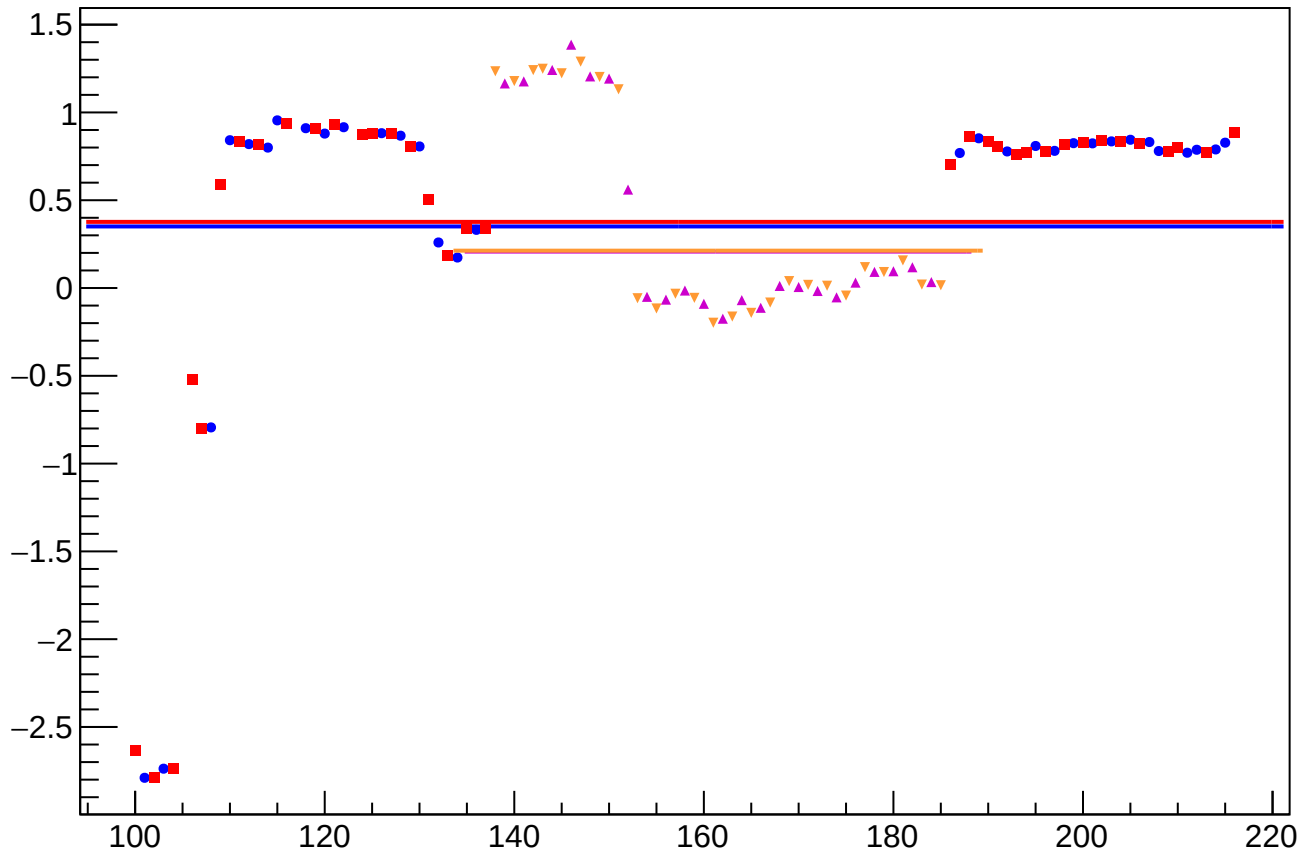
Left In: 0.008 $\pm$ 0.000  $\chi^2$ /NDF:181843.4/22

+ sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 12167139.0/55

All: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 23904292.8/113

- sign 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 11729547.8/57

# yield\_bpm0l04Y\_mean vs Slug



Right In: 0.351+/-0.000  $\chi^2/\text{NDF}$ : 981472567134.6/30

Left Out: 0.213+/-0.000  $\chi^2/\text{NDF}$ : 102819241186.2/24

Right Out: 0.377+/-0.000  $\chi^2/\text{NDF}$ : 1064930765875.2/34

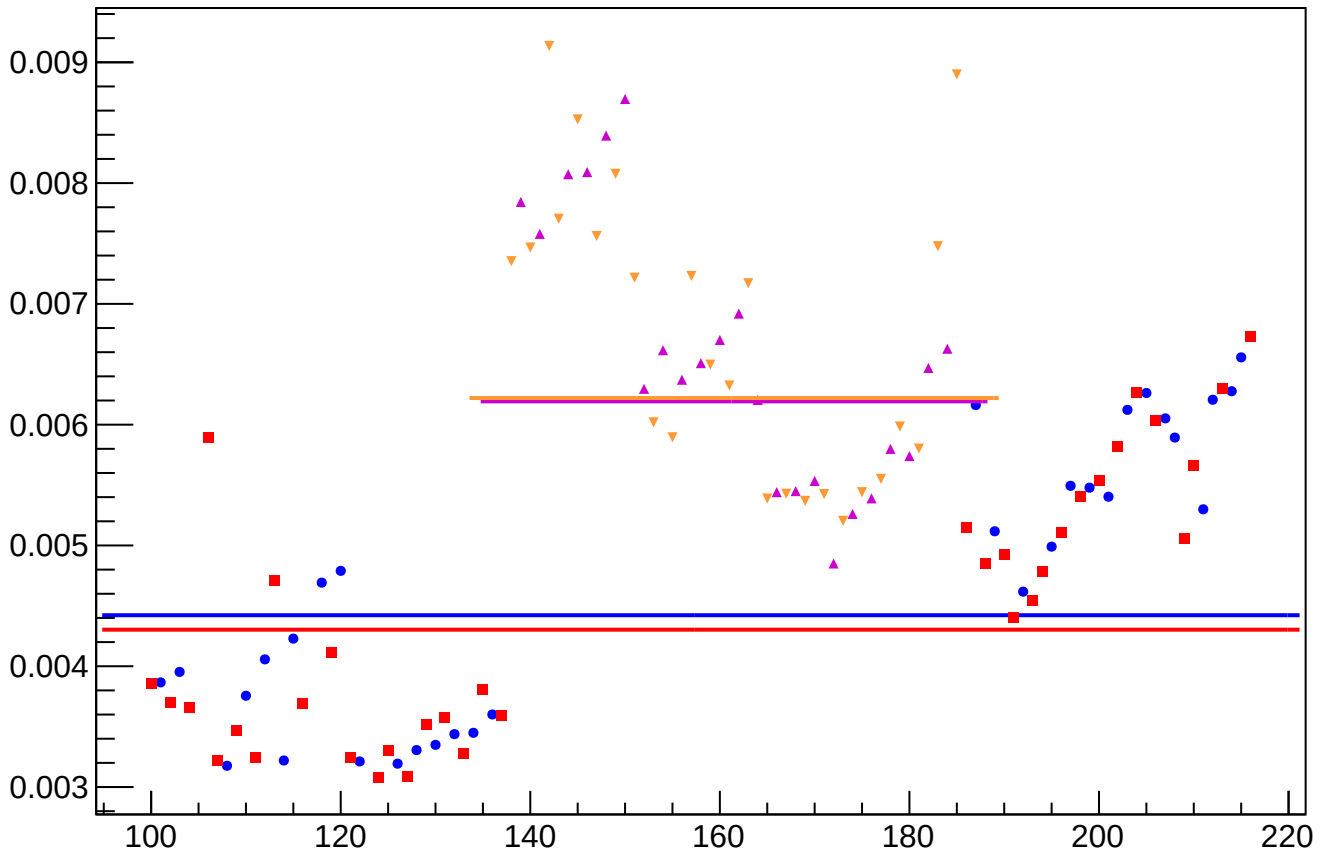
Left In: 0.207+/-0.000  $\chi^2/\text{NDF}$ : 87109076861.7/22

+ sign 0.306+/-0.000  $\chi^2/\text{NDF}$ : 1089803807149.0/55

All: 0.316+/-0.000  $\chi^2/\text{NDF}$ : 2250417991645.

- sign 0.326+/-0.000  $\chi^2/\text{NDF}$ : 1160333305101.8/57

# yield\_bpm0l04Y\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 2160841.4/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:813678.9/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 2060354.5/34

Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:816234.4/22

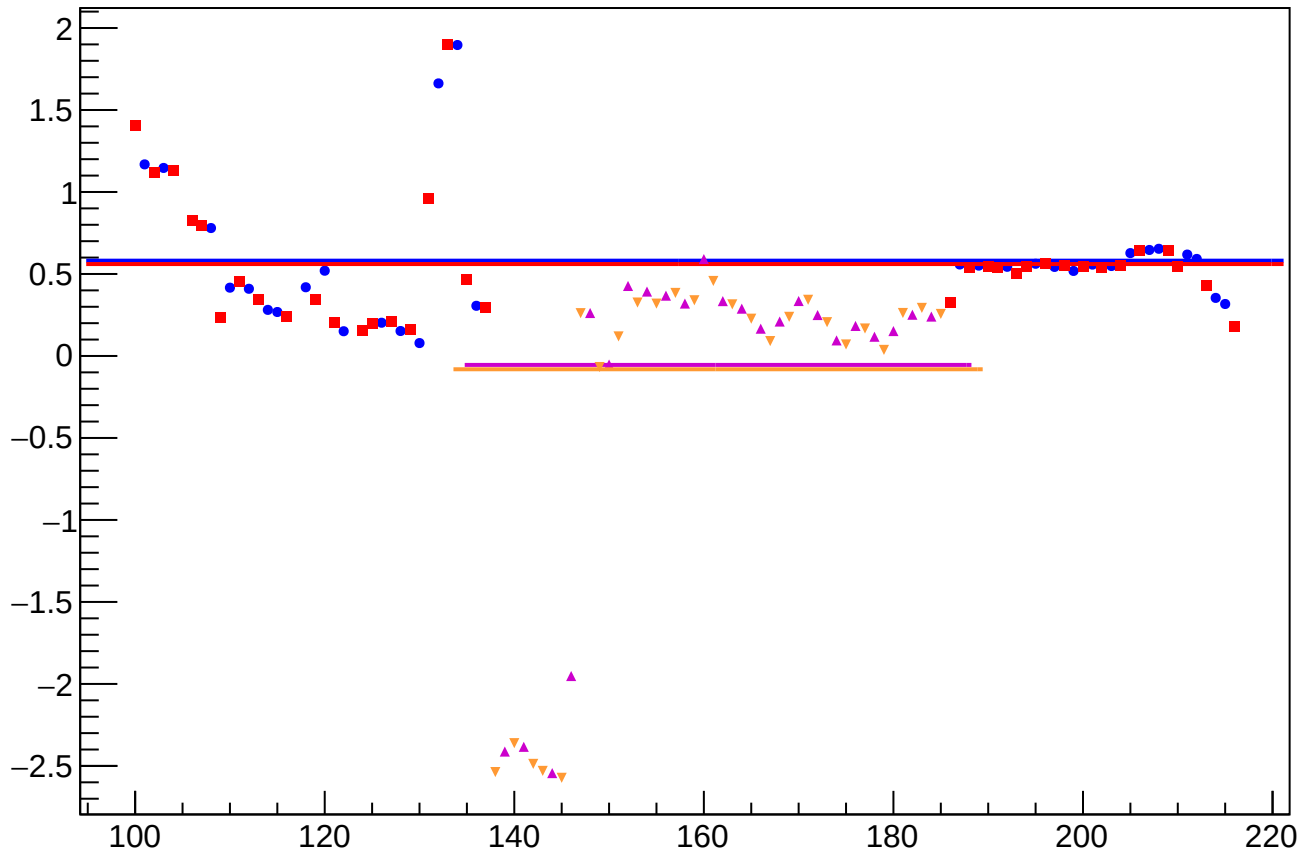
+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 4848036.4/55

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 9819256.7/113

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 4944403.9/57



# yield\_bpm0l05X\_mean vs Slug



Right In: 0.581 $\pm$ 0.000  $\chi^2$ /NDF: 52715467152.0/30

Left Out: -0.081 $\pm$ 0.000  $\chi^2$ /NDF: 388332231902.9/24

Right Out: 0.560 $\pm$ 0.000  $\chi^2$ /NDF: 53380800250.5/34

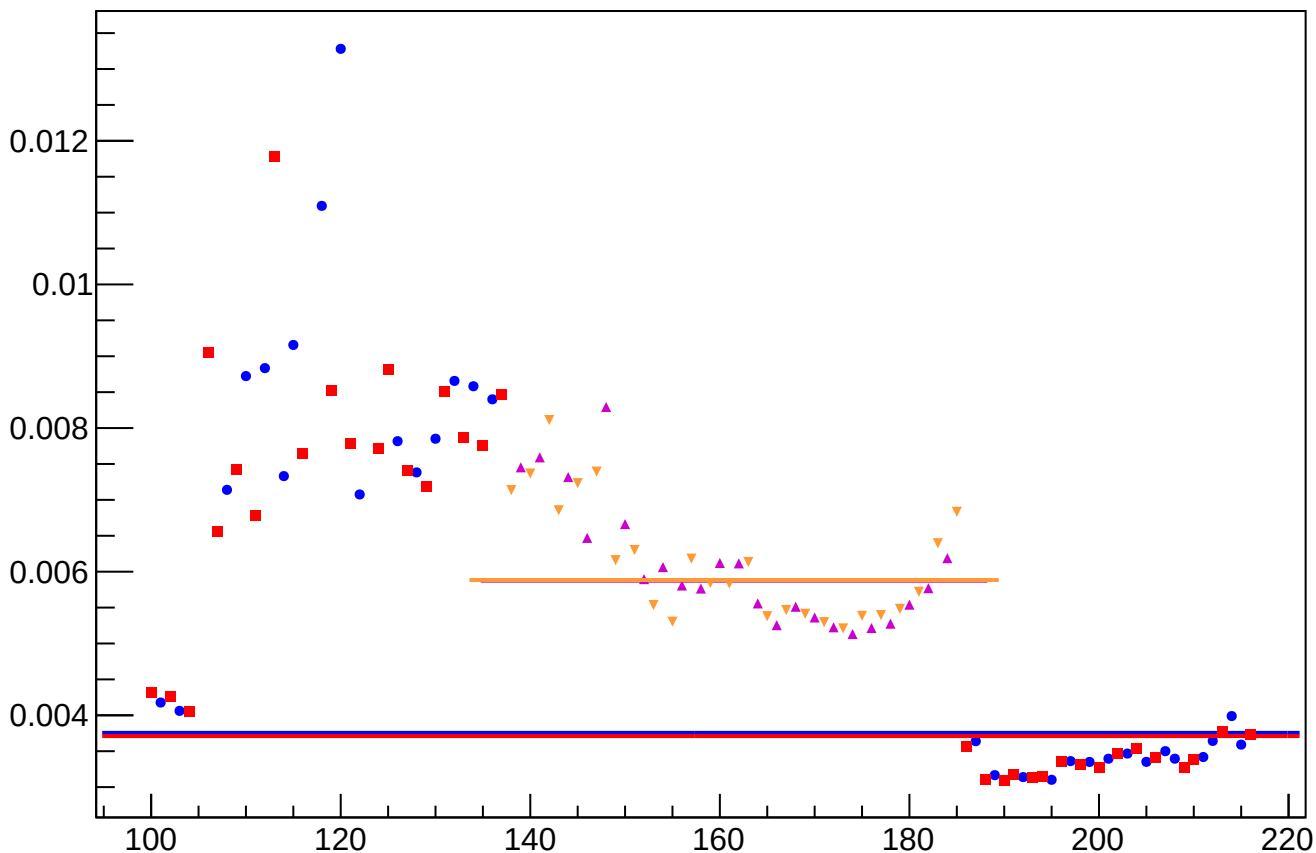
Left In: -0.055 $\pm$ 0.000  $\chi^2$ /NDF: 347072248163.0/22

+ sign 0.378 $\pm$ 0.000  $\chi^2$ /NDF: 595024347697.0/55

All: 0.382 $\pm$ 0.000  $\chi^2$ /NDF: 1126653306122.0/112

- sign 0.385 $\pm$ 0.000  $\chi^2$ /NDF: 531581014119.8/57

# yield\_bpm0l05X\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 3495437.5/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:457789.1/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 3479614.4/34

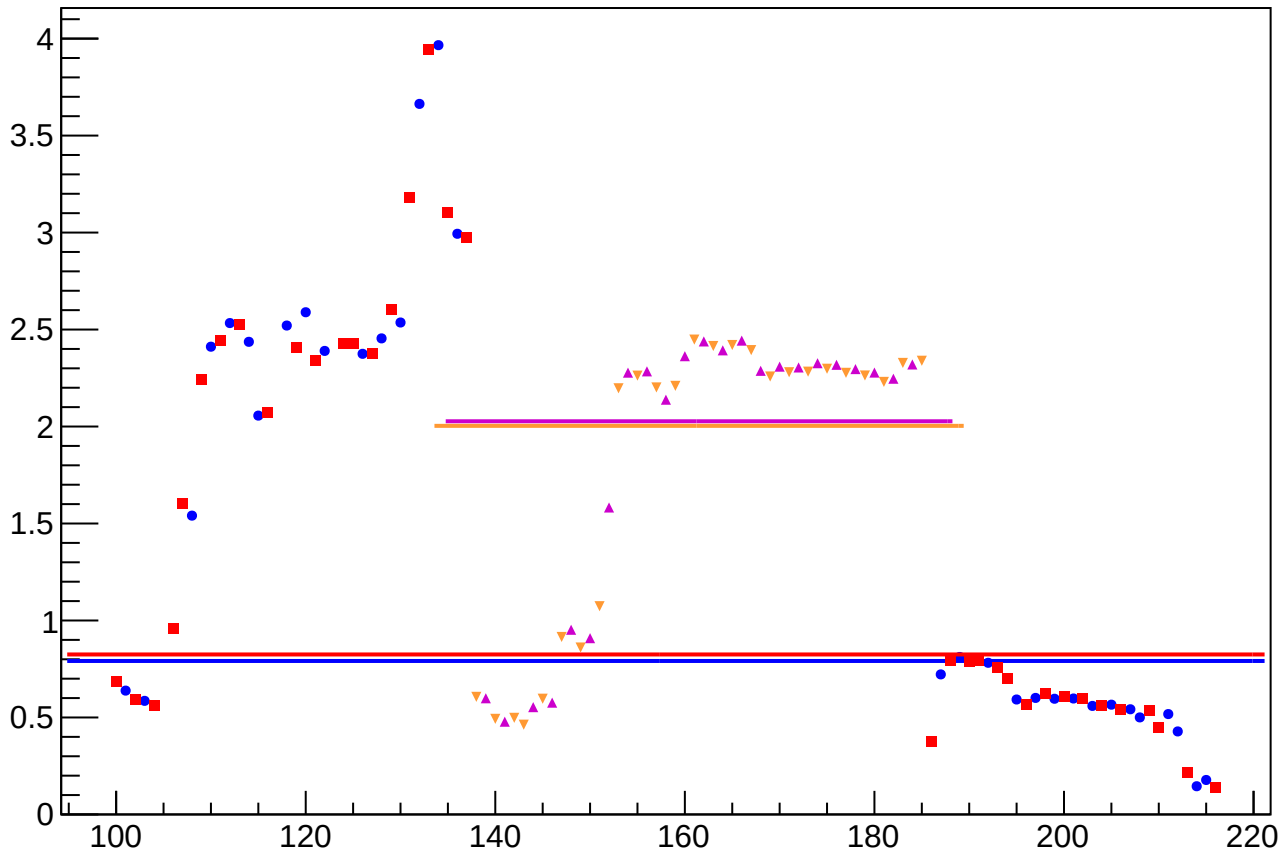
Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:521878.3/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7133194.5/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 14392976.7/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 7248545.1/57

# yield\_bpm0l05Y\_mean vs Slug



Right In: 0.791 $\pm$ 0.000  $\chi^2$ /NDF: 270956016586.1/30

Left Out: 2.004 $\pm$ 0.000  $\chi^2$ /NDF: 219172813454.7/24

Right Out: 0.825 $\pm$ 0.000  $\chi^2$ /NDF: 298567334501.2/34

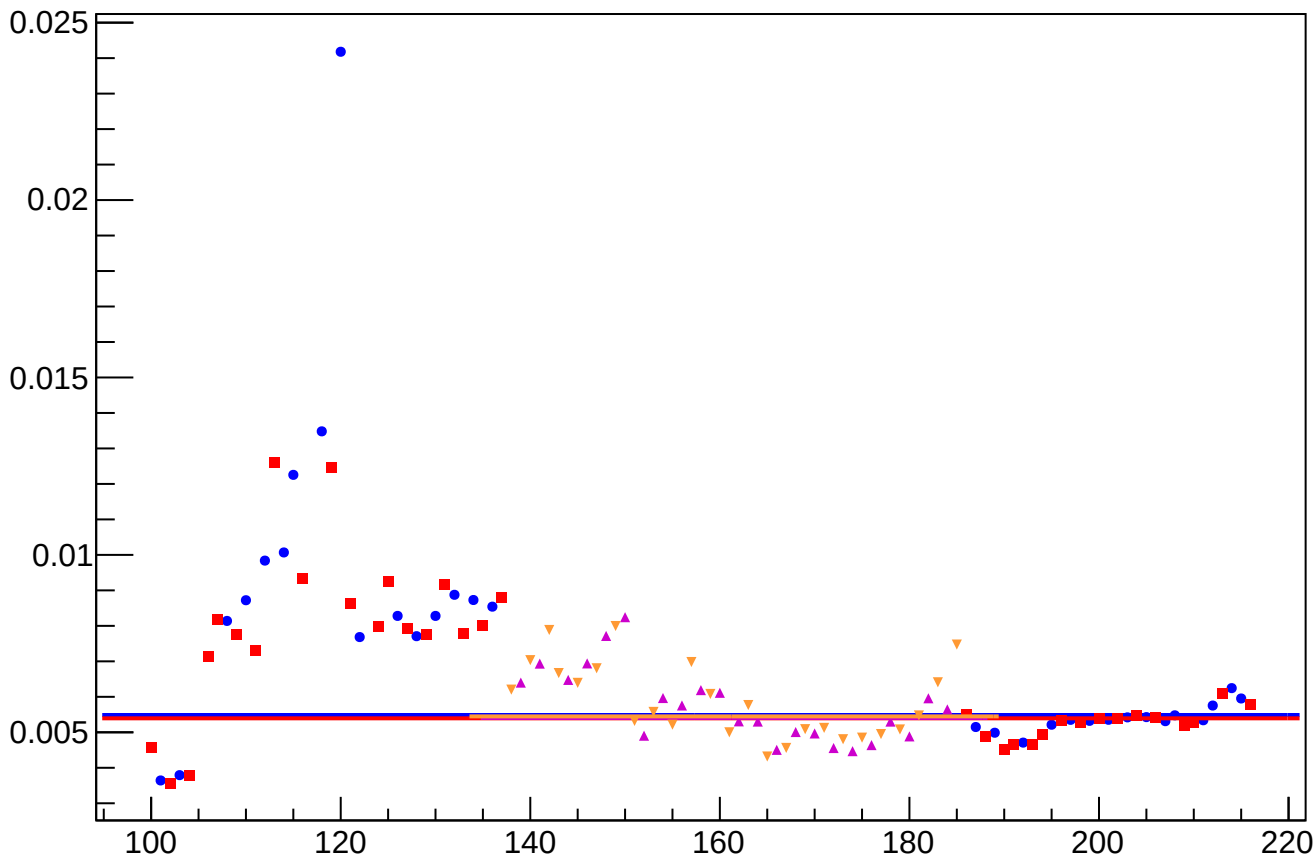
Left In: 2.027 $\pm$ 0.000  $\chi^2$ /NDF: 194461333084.6/22

+ sign 1.397 $\pm$ 0.000  $\chi^2$ /NDF: 895362769896.5/55

All: 1.395 $\pm$ 0.000  $\chi^2$ /NDF: 1794105716030.

- sign 1.392 $\pm$ 0.000  $\chi^2$ /NDF: 898727476231.0/57

# yield\_bpm0l05Y\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2353844.5/30

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:771417.6/24

Right Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2159905.6/34

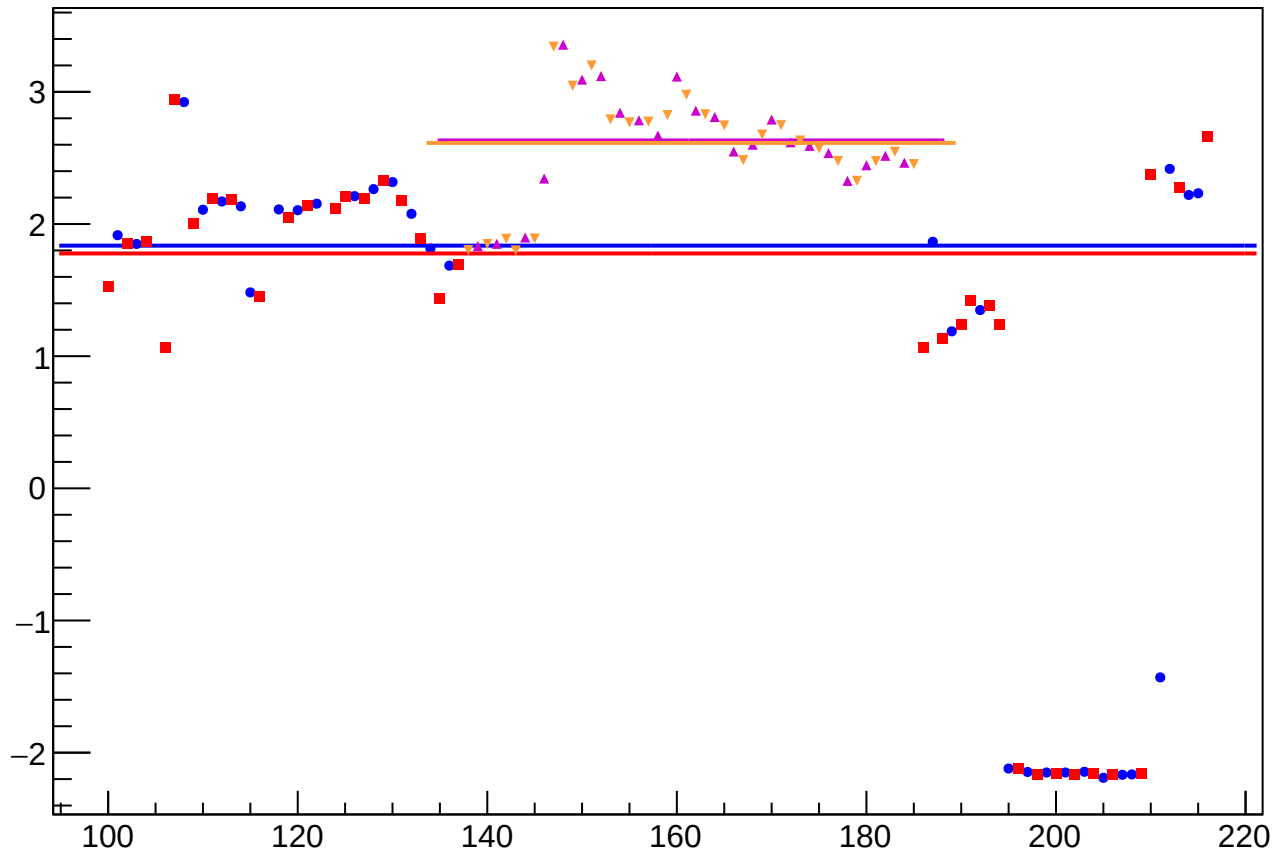
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:815136.5/22

+ sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 3126092.7/55

All: 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 6106552.2/113

- sign 0.005 $\pm$ 0.000  $\chi^2$ /NDF: 2975109.8/57

# yield\_bpm0l06X\_mean vs Slug



Right In: 1.836 $\pm$ 0.000  $\chi^2$ /NDF: 186334976339.2/30

Left Out: 2.614 $\pm$ 0.000  $\chi^2$ /NDF: 46402554271.4/24

Right Out: 1.777 $\pm$ 0.000  $\chi^2$ /NDF: 169352335373.0/34

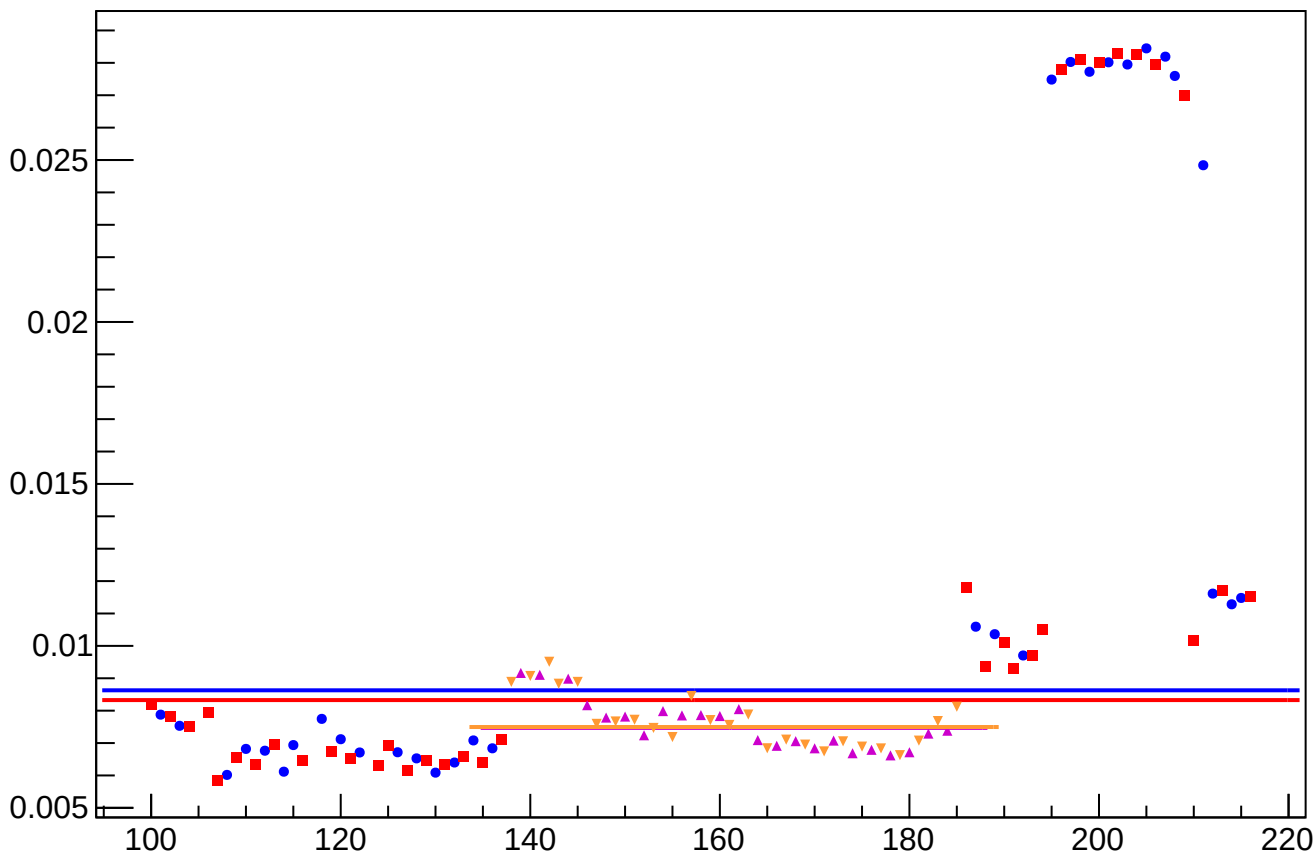
Left In: 2.632 $\pm$ 0.000  $\chi^2$ /NDF: 40551967819.7/22

+ sign 2.323 $\pm$ 0.000  $\chi^2$ /NDF: 305590034002.2/55

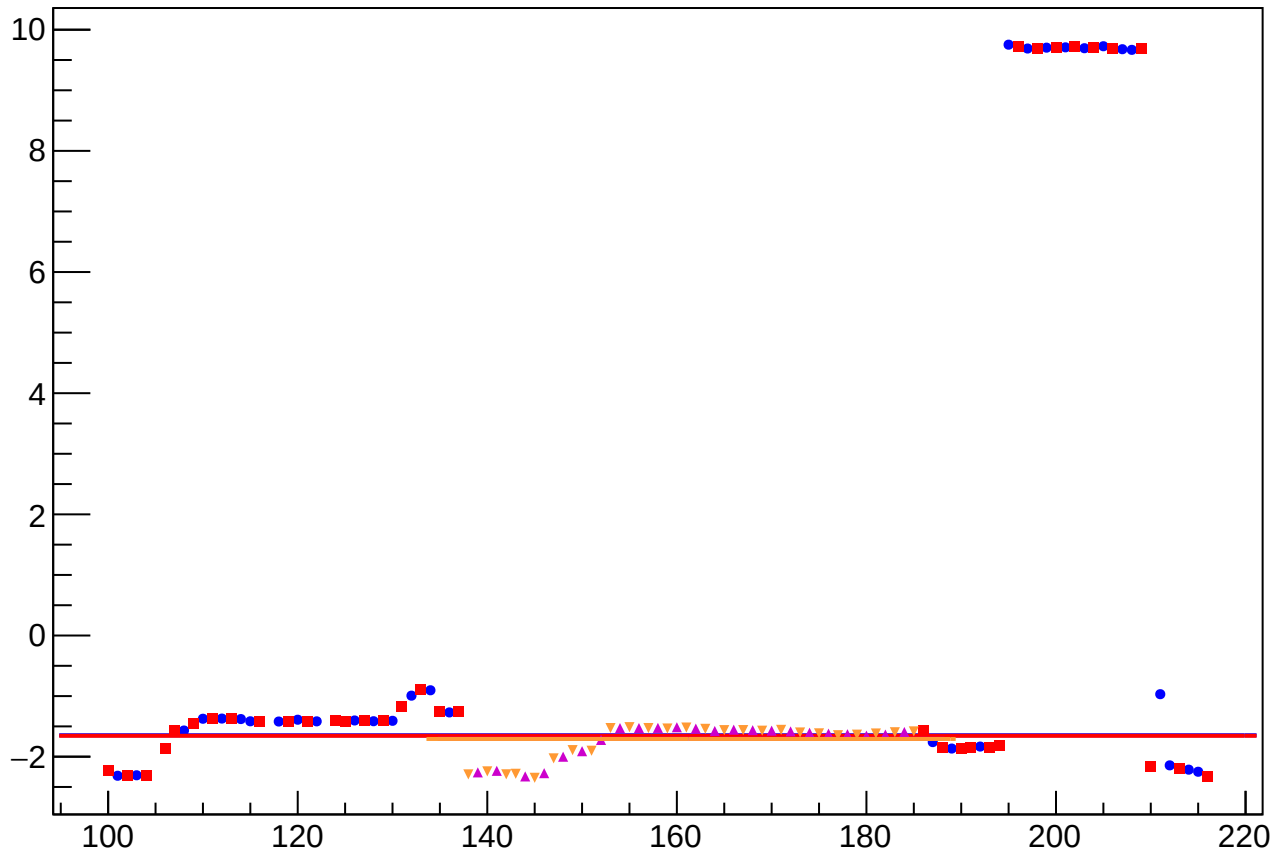
All: 2.300 $\pm$ 0.000  $\chi^2$ /NDF: 610278951693.5

- sign 2.277 $\pm$ 0.000  $\chi^2$ /NDF: 304130281598.1/57

# yield\_bpm0l06X\_rms vs Slug



# yield\_bpm0l06Y\_mean vs Slug



Right In: -1.646+/-0.000  $\chi^2/\text{NDF}$ : 470834278714.0/30

Left Out: -1.708+/-0.000  $\chi^2/\text{NDF}$ : 151845502556.2/24

Right Out: -1.655+/-0.000  $\chi^2/\text{NDF}$ : 450447214831.9/34

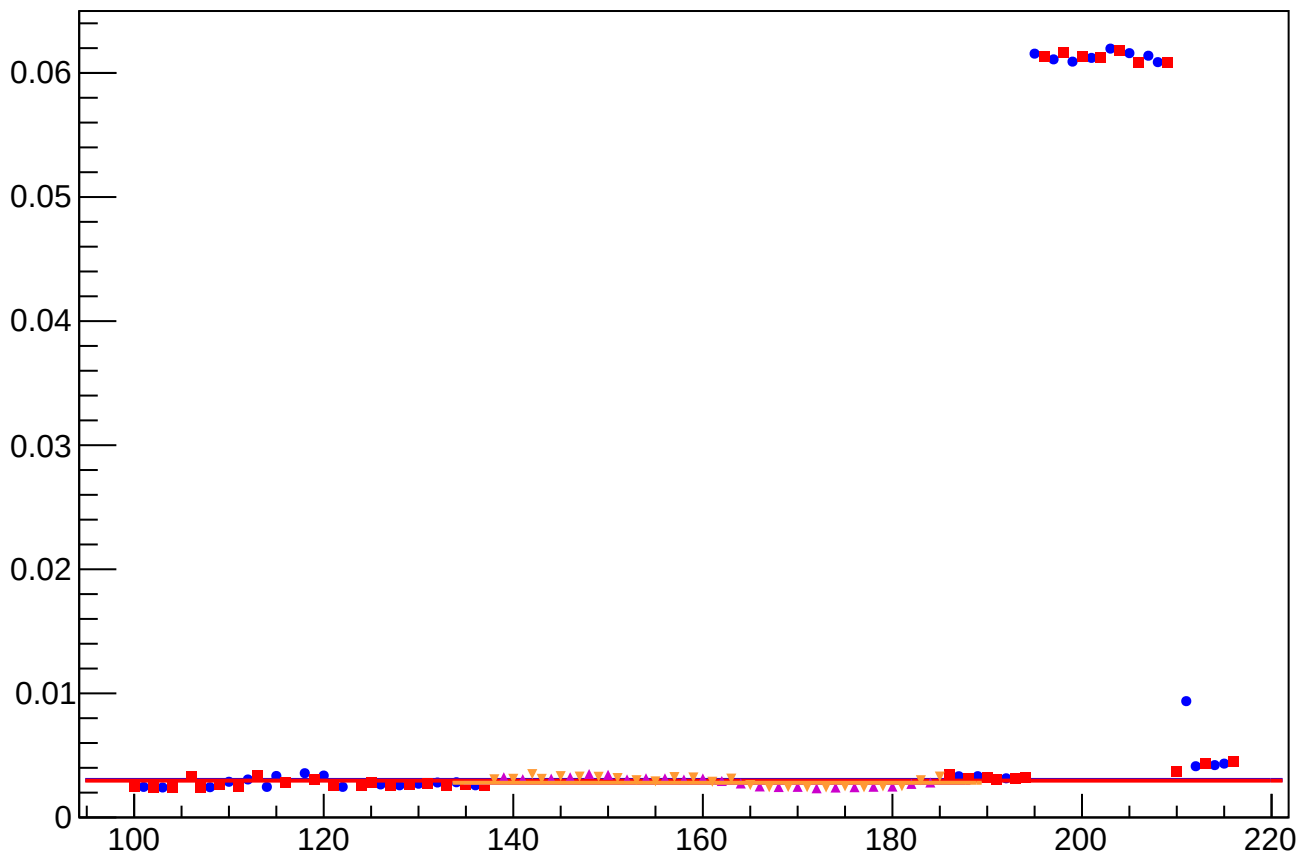
Left In: -1.705+/-0.000  $\chi^2/\text{NDF}$ : 136540618081.0/22

+ sign -1.686+/-0.000  $\chi^2/\text{NDF}$ : 625707027643.7/55

All: -1.686+/-0.000  $\chi^2/\text{NDF}$ : 1214903167500

- sign -1.685+/-0.000  $\chi^2/\text{NDF}$ : 589195373283.6/57

# yield\_bpm0l06Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 13461736.5/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 547758.3/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11903850.5/34

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 557113.5/22

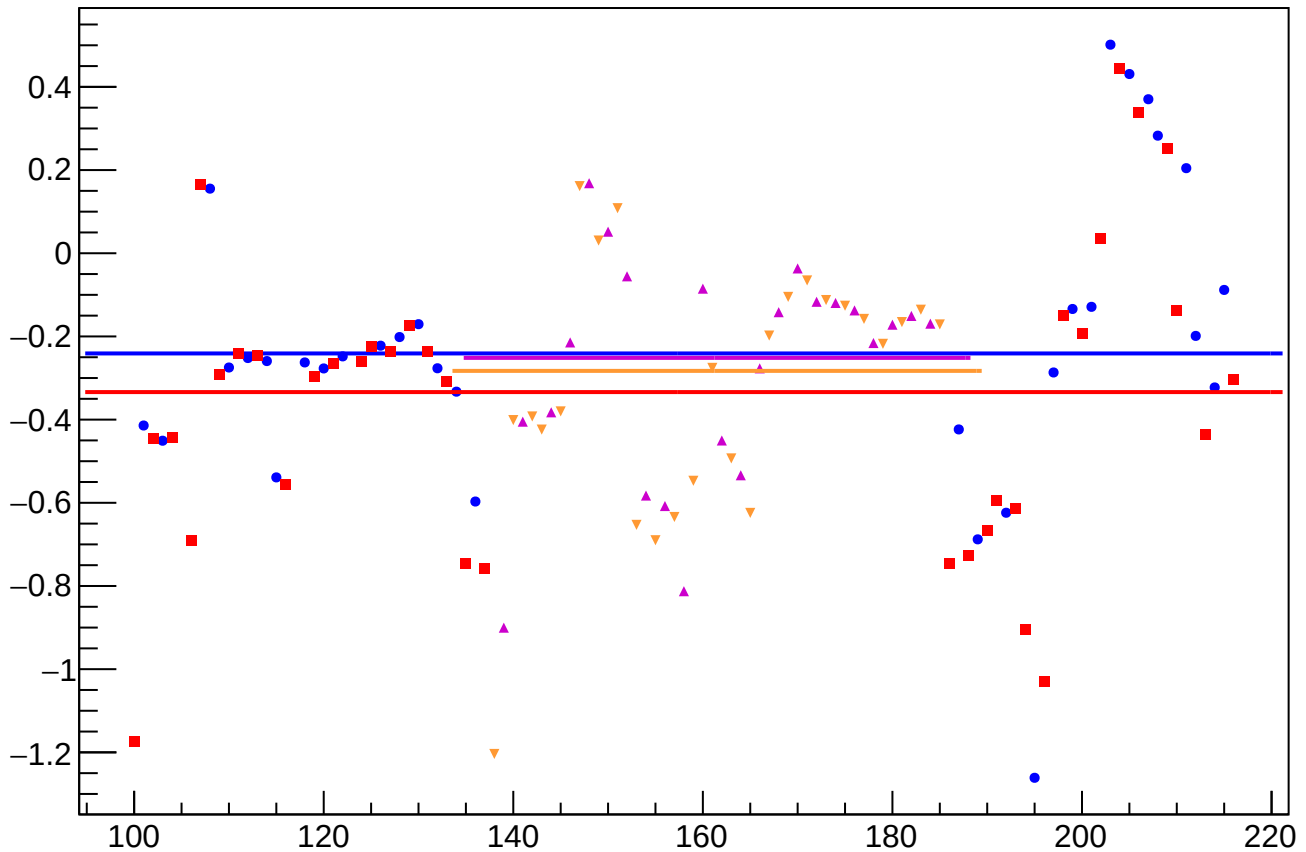
+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 14092112.6/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 26613932.0/113

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 12520597.7/57



# yield\_bpm0l07X\_mean vs Slug



Right In:  $-0.241 \pm 0.000$   $\chi^2/\text{NDF}: 9771508093.8/30$

Left Out:  $-0.283 \pm 0.000$   $\chi^2/\text{NDF}: 9343511244.8/24$

Right Out:  $-0.334 \pm 0.000$   $\chi^2/\text{NDF}: 9917967955.0/34$

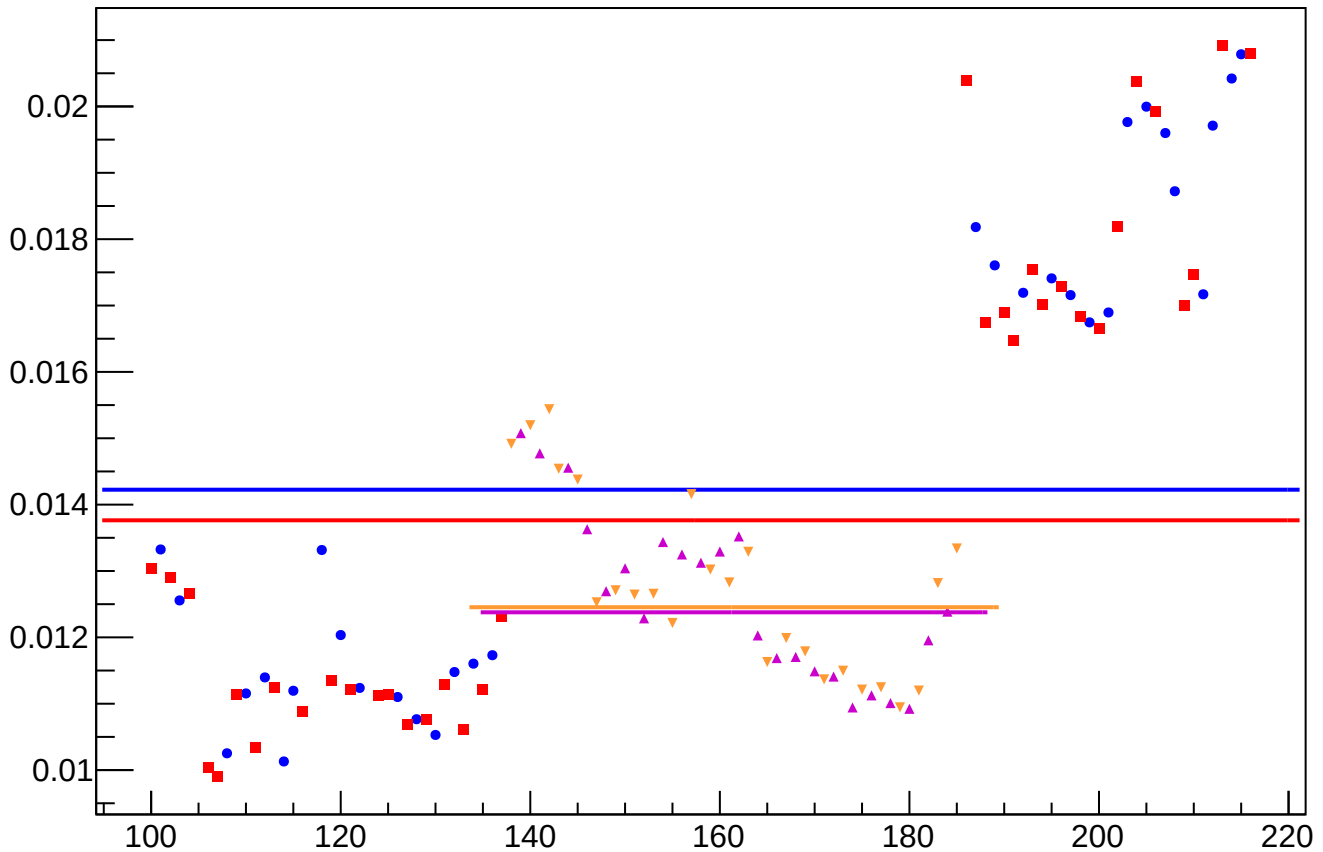
Left In:  $-0.252 \pm 0.000$   $\chi^2/\text{NDF}: 7167367678.6/22$

+ sign  $-0.265 \pm 0.000$   $\chi^2/\text{NDF}: 19202723537.1/55$

All:  $-0.277 \pm 0.000$   $\chi^2/\text{NDF}: 36697312708.6/100$

- sign  $-0.289 \pm 0.000$   $\chi^2/\text{NDF}: 17434639450.7/57$

# yield\_bpm0l07X\_rms vs Slug



Right In: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2138425.6/30

Left Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ :341430.5/24

Right Out: 0.014+/-0.000  $\chi^2/\text{NDF}$ : 2293725.4/34

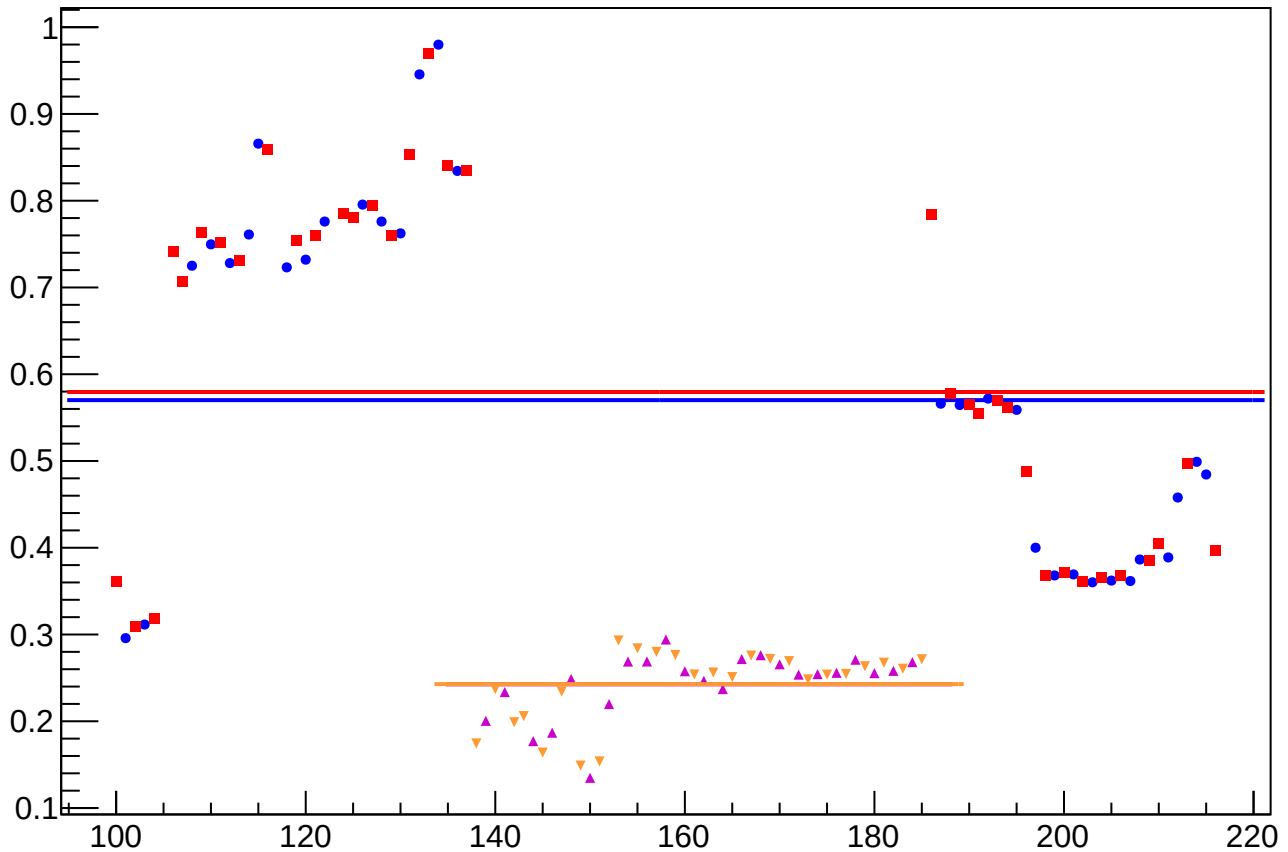
Left In: 0.012+/-0.000  $\chi^2/\text{NDF}$ :326925.9/22

+ sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2792789.4/55

All: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 5619631.1/113

- sign 0.013+/-0.000  $\chi^2/\text{NDF}$ : 2819063.9/57

# yield\_bpm0l07Y\_mean vs Slug



Right In: 0.570 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 98920634084.8/30

Left Out: 0.243 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7290530687.7/24

Right Out: 0.580 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 95261668336.4/34

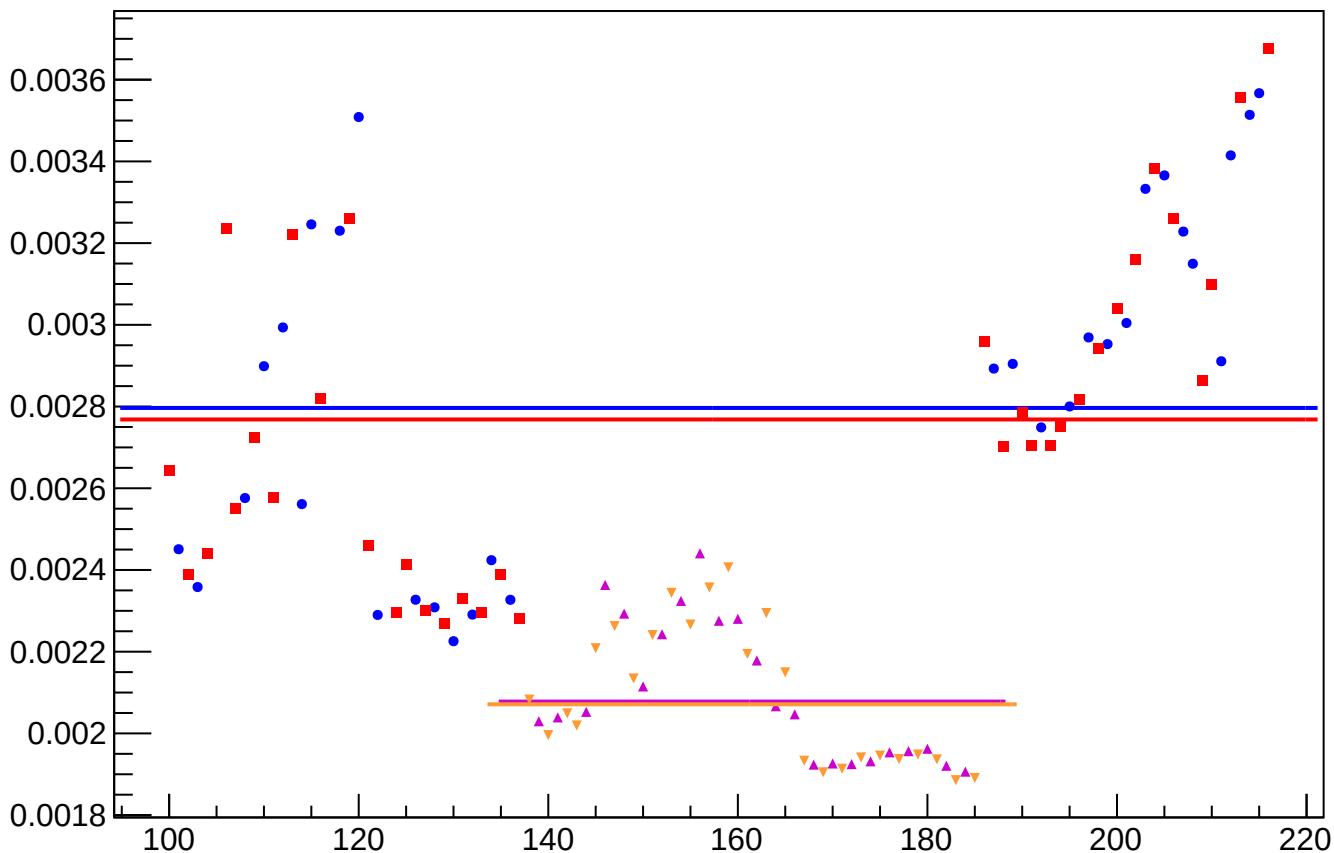
Left In: 0.243 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5781231269.1/22

+ sign 0.355 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 270274518980.7/55

All: 0.361 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 547035065219.9

- sign 0.367 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 276330824364.1/57

# yield\_bpm0l07Y\_rms vs Slug



Right In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 817983.5/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ :233799.0/24

Right Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 680841.7/34

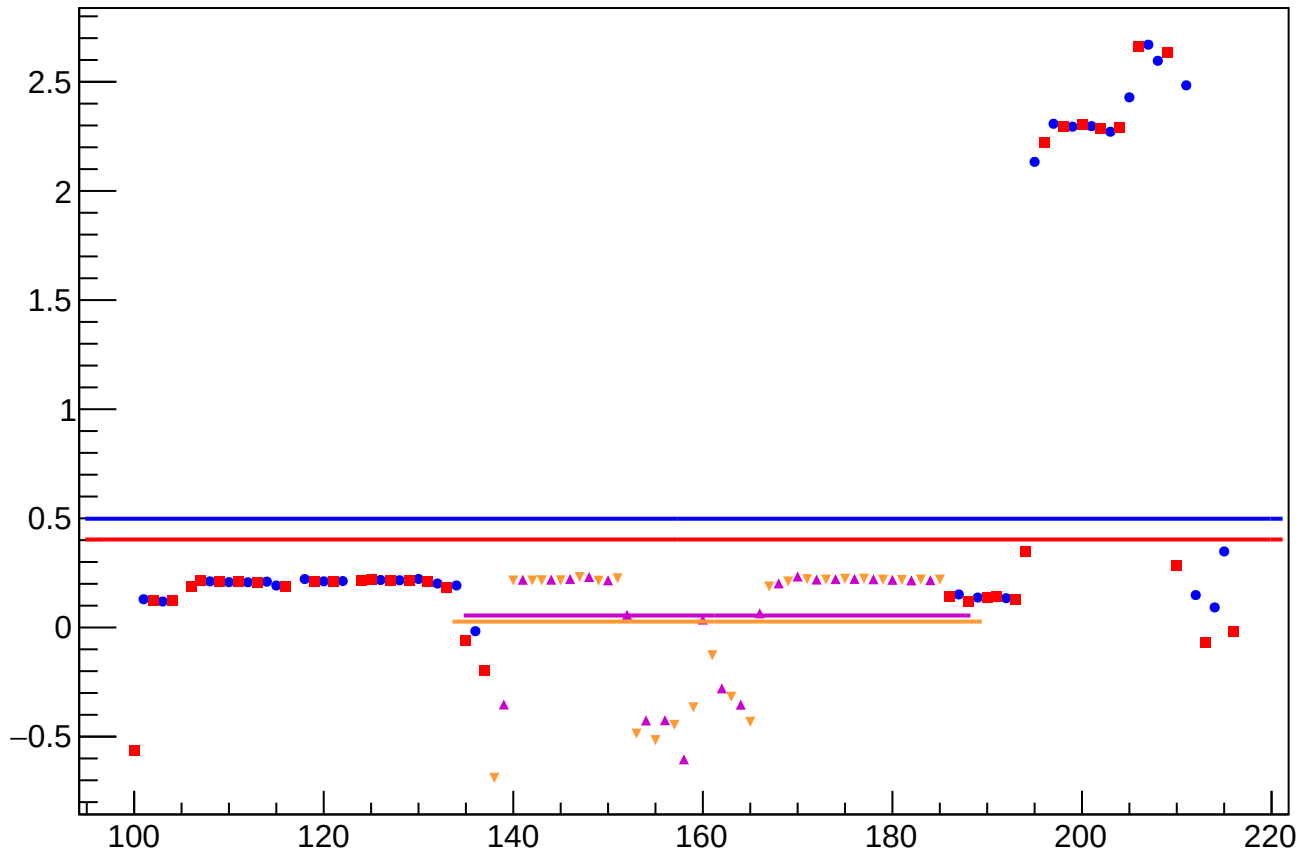
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ :211544.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2662898.8/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5028714.6/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2364919.7/57

# yield\_bpm0l08X\_mean vs Slug



Right In: 0.498 $\pm$ 0.000  $\chi^2$ /NDF: 61771939667.6/30

Left Out: 0.027 $\pm$ 0.000  $\chi^2$ /NDF: 12975171876.0/24

Right Out: 0.403 $\pm$ 0.000  $\chi^2$ /NDF: 55136943417.6/34

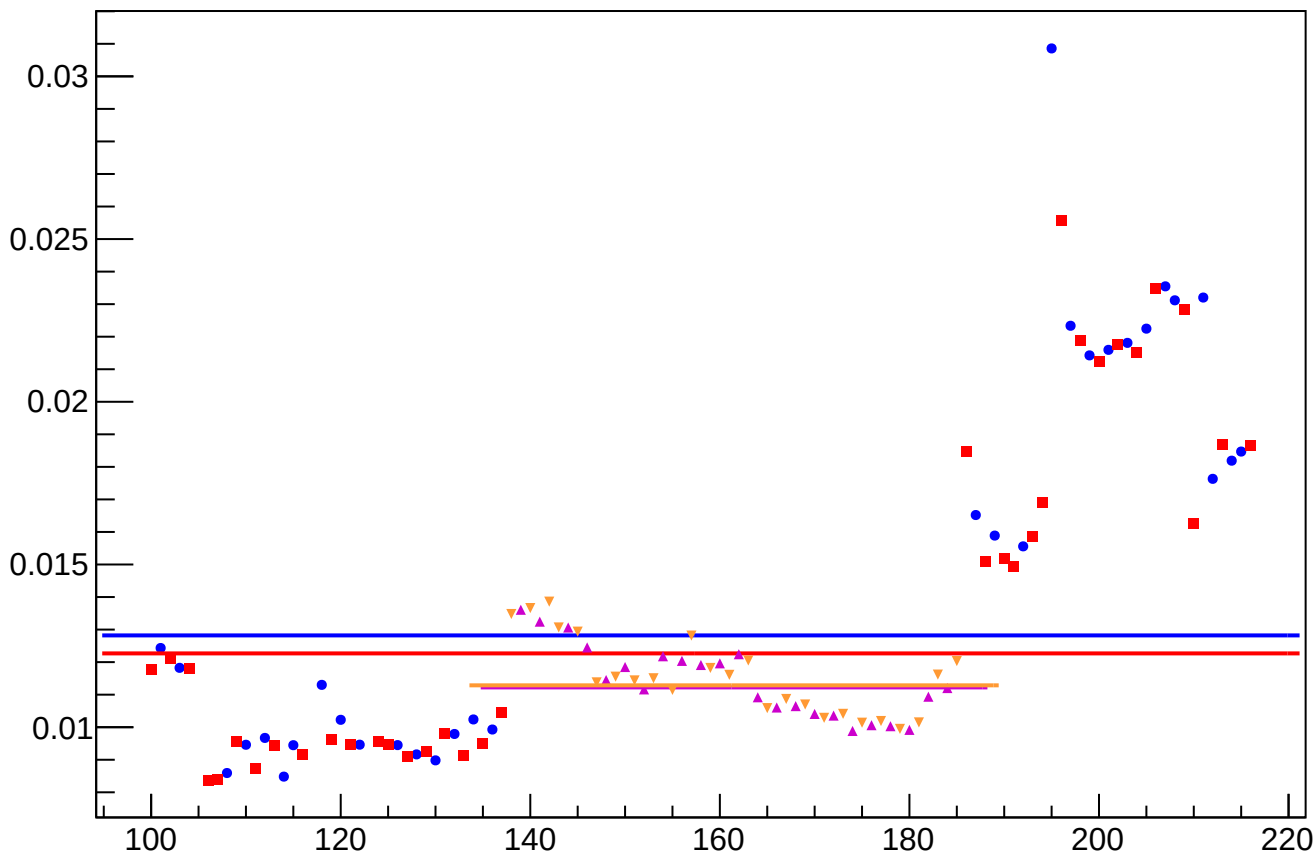
Left In: 0.055 $\pm$ 0.000  $\chi^2$ /NDF: 9704180322.0/22

+ sign 0.219 $\pm$ 0.000  $\chi^2$ /NDF: 87761152005.8/55

All: 0.215 $\pm$ 0.000  $\chi^2$ /NDF: 160104690729.7

- sign 0.211 $\pm$ 0.000  $\chi^2$ /NDF: 72335359696.3/57

# yield\_bpm0l08X\_rms vs Slug



Right In: 0.013+/-0.000  $\chi^2/\text{NDF}$ : 4984921.1/30

Left Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ :328248.0/24

Right Out: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 4687621.1/34

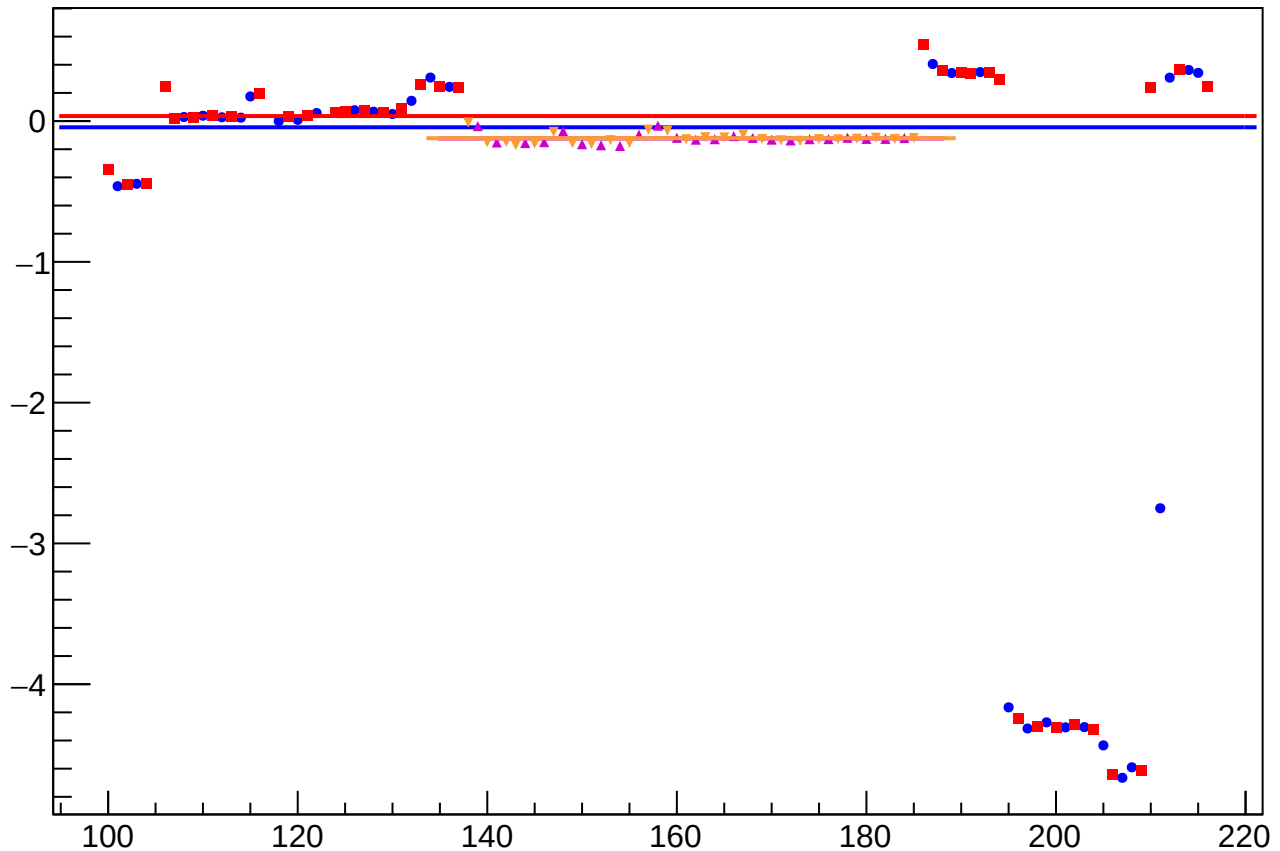
Left In: 0.011+/-0.000  $\chi^2/\text{NDF}$ :315246.6/22

+ sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5589093.9/55

All: 0.012+/-0.000  $\chi^2/\text{NDF}$ : 10738963.8/113

- sign 0.012+/-0.000  $\chi^2/\text{NDF}$ : 5137864.0/57

# yield\_bpm0l08Y\_mean vs Slug



Right In:  $-0.044 \pm 0.000$   $\chi^2/\text{NDF}: 437289947329.2/30$

Left Out:  $-0.122 \pm 0.000$   $\chi^2/\text{NDF}: 2922583819.6/24$

Right Out:  $0.036 \pm 0.000$   $\chi^2/\text{NDF}: 399716609224.7/34$

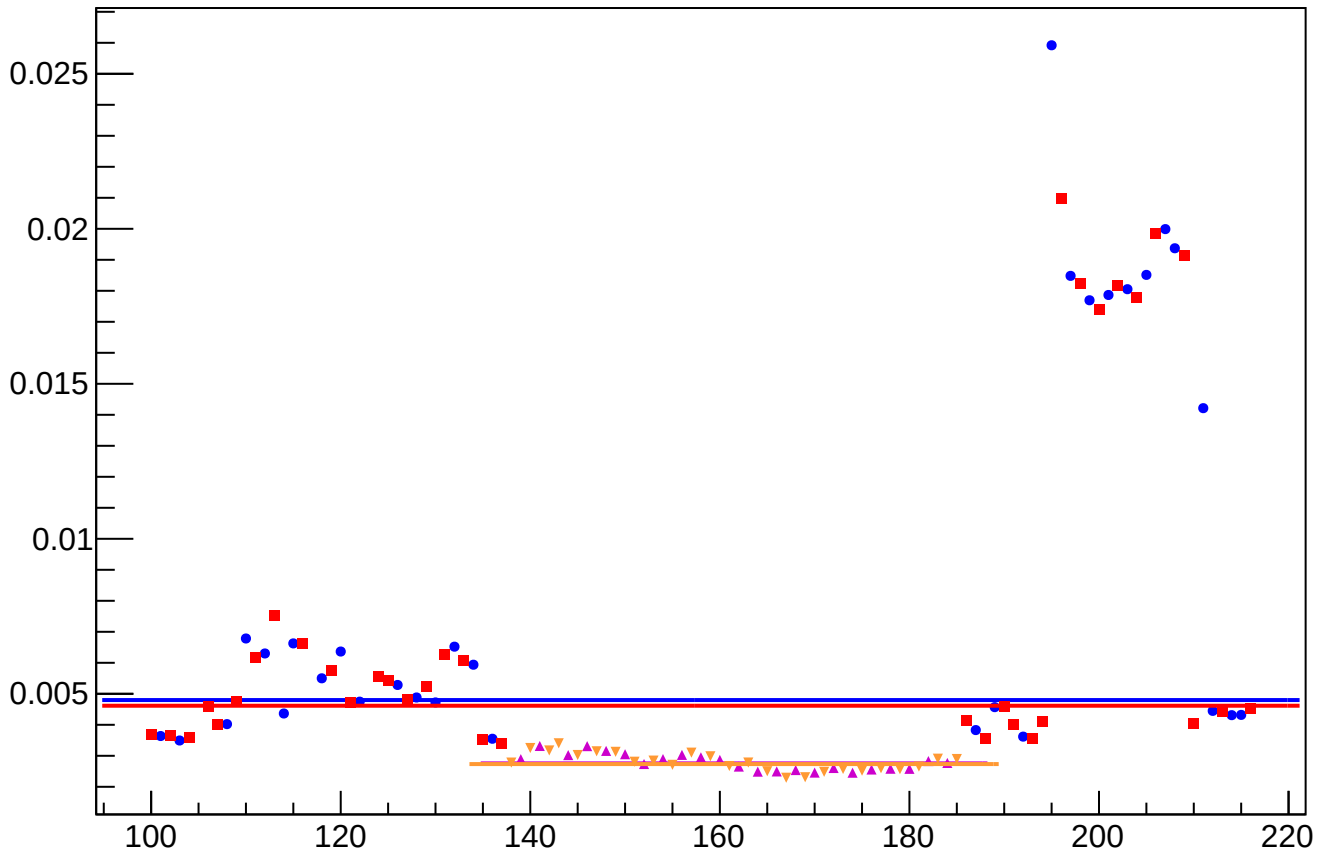
Left In:  $-0.124 \pm 0.000$   $\chi^2/\text{NDF}: 2809457047.2/22$

+ sign  $-0.107 \pm 0.000$   $\chi^2/\text{NDF}: 443037943897.7/55$

All:  $-0.097 \pm 0.000$   $\chi^2/\text{NDF}: 859392743419.9$

- sign  $-0.087 \pm 0.000$   $\chi^2/\text{NDF}: 415775714395.1/57$

# yield\_bpm0l08Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 9346851.0/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 391885.5/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 8009741.7/34

Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 293113.7/22

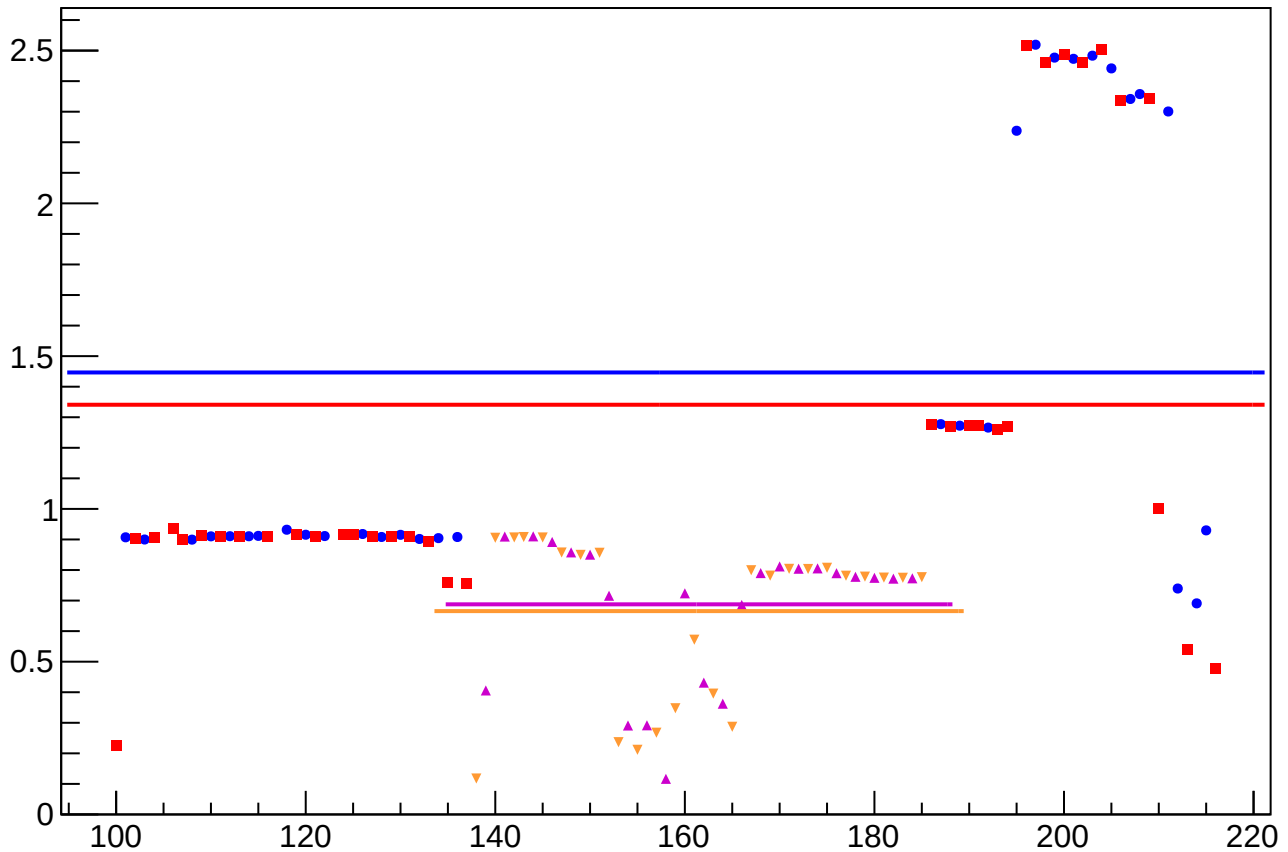
+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 13746773.5/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 25667380.1/113

- sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 11912139.8/57



# yield\_bpm0l09X\_mean vs Slug



Right In: 1.447 $\pm$ 0.000  $\chi^2$ /NDF: 56784660401.4/30

Left Out: 0.666 $\pm$ 0.000  $\chi^2$ /NDF: 9213839939.9/24

Right Out: 1.341 $\pm$ 0.000  $\chi^2$ /NDF: 55361787712.5/34

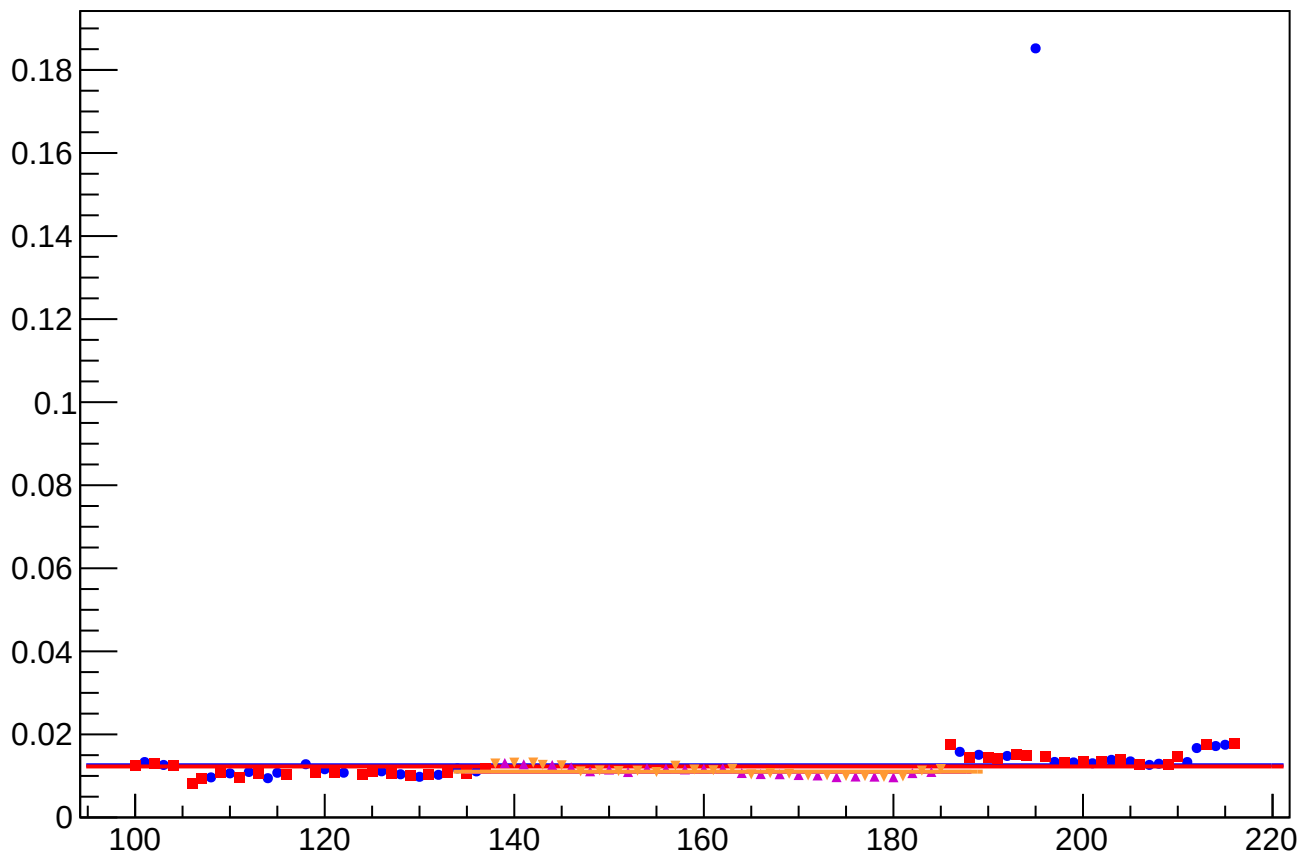
Left In: 0.688 $\pm$ 0.000  $\chi^2$ /NDF: 6999062215.3/22

+ sign 0.995 $\pm$ 0.000  $\chi^2$ /NDF: 104954869581.1/55

All: 0.989 $\pm$ 0.000  $\chi^2$ /NDF: 195319313694.7

- sign 0.983 $\pm$ 0.000  $\chi^2$ /NDF: 90345131006.6/57

# yield\_bpm0l09X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2410876.3/30

Left Out: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:299445.0/24

Right Out: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1145799.1/34

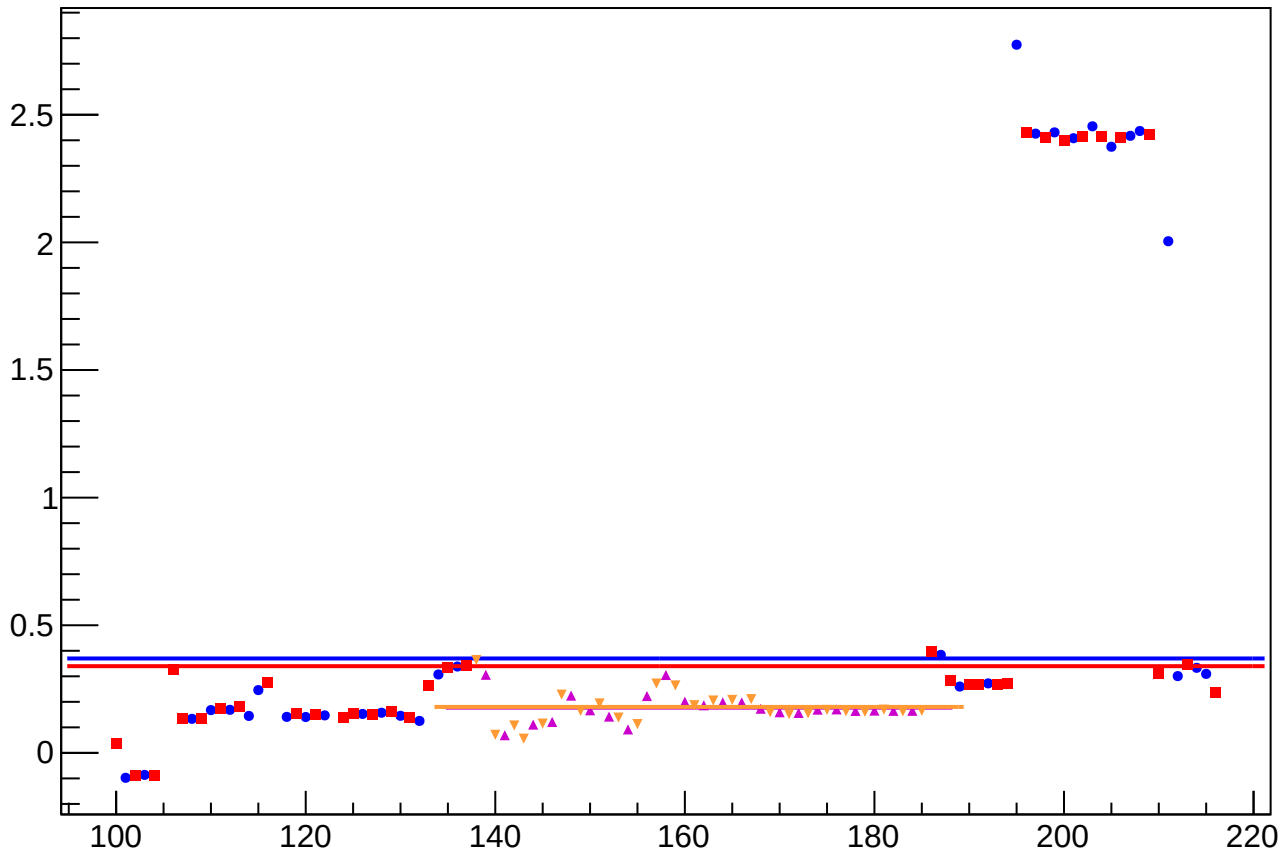
Left In: 0.011 $\pm$ 0.000  $\chi^2$ /NDF:287650.0/22

+ sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 3012748.5/55

All: 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 4676306.8/113

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 1659809.9/57

# yield\_bpm0l09Y\_mean vs Slug



Right In: 0.370 $\pm$ 0.000  $\chi^2$ /NDF: 191460161606.6/30

Left Out: 0.180 $\pm$ 0.000  $\chi^2$ /NDF: 6448853953.3/24

Right Out: 0.340 $\pm$ 0.000  $\chi^2$ /NDF: 163796289873.1/34

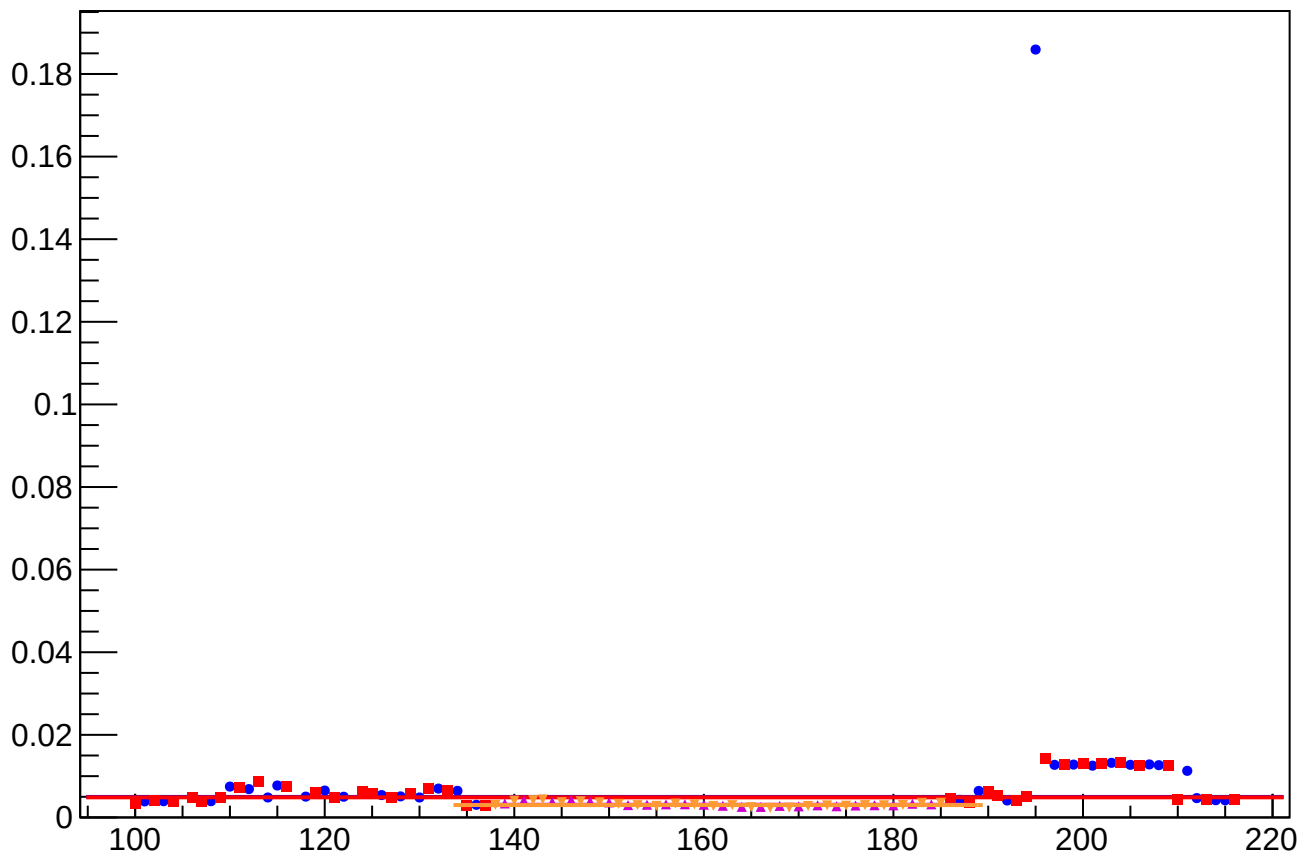
Left In: 0.177 $\pm$ 0.000  $\chi^2$ /NDF: 4620854117.7/22

+ sign 0.222 $\pm$ 0.000  $\chi^2$ /NDF: 213561899652.3/55

All: 0.221 $\pm$ 0.000  $\chi^2$ /NDF: 394027486165.9

- sign 0.219 $\pm$ 0.000  $\chi^2$ /NDF: 180453021487.6/57

# yield\_bpm0l09Y\_rms vs Slug



Right In: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 7932672.8/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 888350.2/24

Right Out: 0.005+/-0.000  $\chi^2/\text{NDF}$ : 5965338.0/34

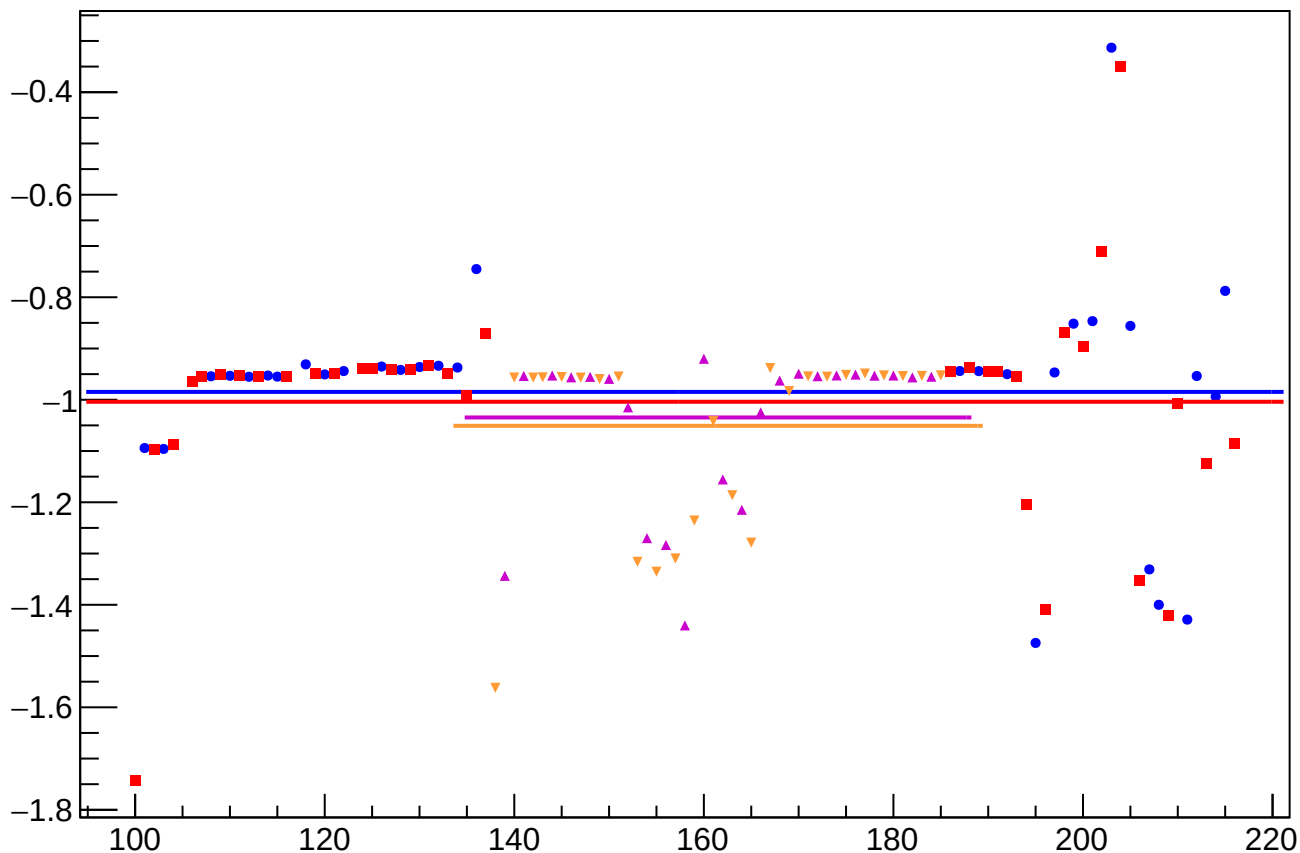
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 587459.6/22

+ sign 0.003+/-0.000  $\chi^2/\text{NDF}$ : 12176035.4/55

All: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 21697761.3/113

- sign 0.004+/-0.000  $\chi^2/\text{NDF}$ : 9498273.2/57

# yield\_bpm0l10X\_mean vs Slug



Right In:  $-0.985 \pm 0.000$   $\chi^2/\text{NDF}: 5971118179.9/30$

Left Out:  $-1.051 \pm 0.000$   $\chi^2/\text{NDF}: 5082084184.4/24$

Right Out:  $-1.004 \pm 0.000$   $\chi^2/\text{NDF}: 5094991332.7/34$

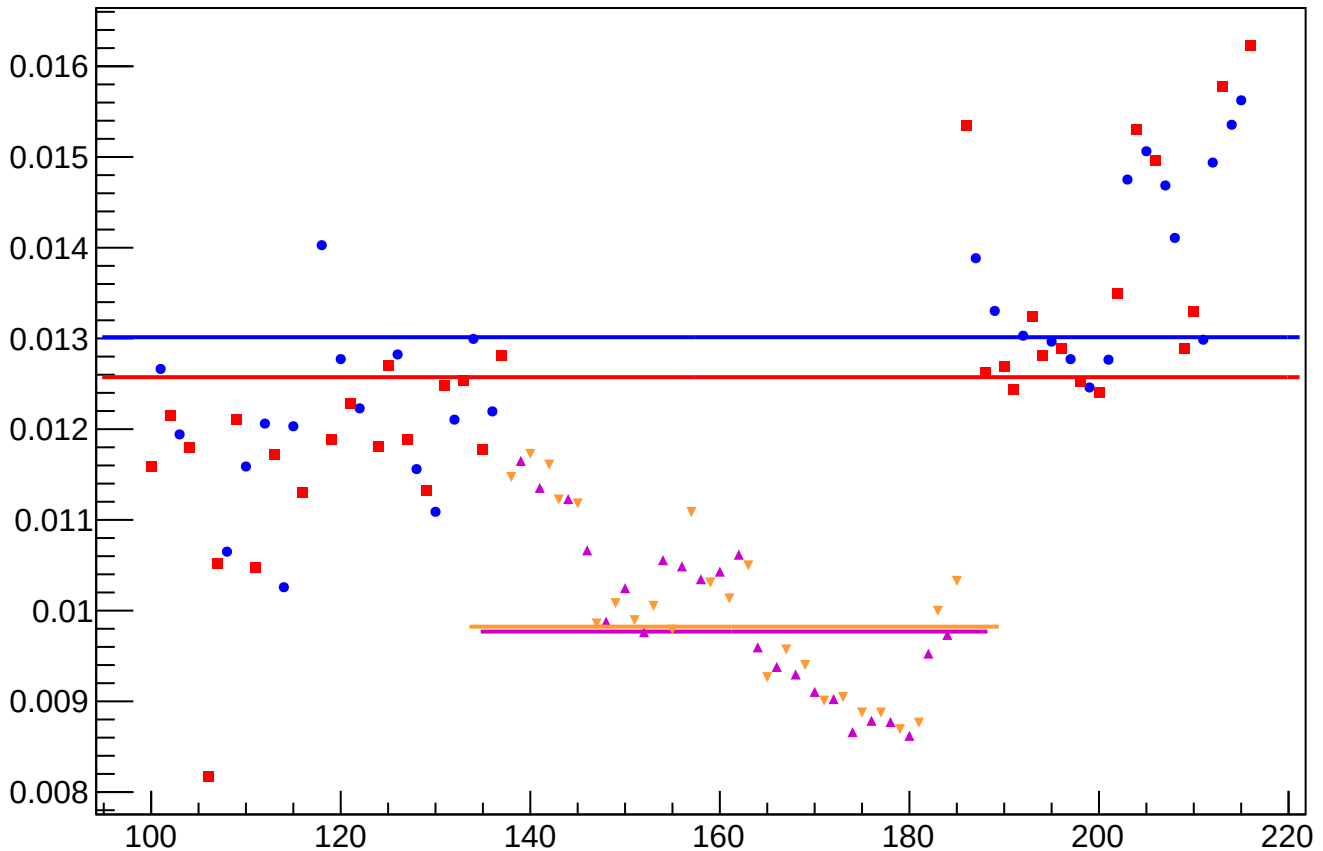
Left In:  $-1.035 \pm 0.000$   $\chi^2/\text{NDF}: 3925761523.9/22$

+ sign  $-1.027 \pm 0.000$   $\chi^2/\text{NDF}: 11357076080.7/55$

All:  $-1.025 \pm 0.000$   $\chi^2/\text{NDF}: 20448675744.1/100$

- sign  $-1.022 \pm 0.000$   $\chi^2/\text{NDF}: 9088628888.5/57$

# yield\_bpm0l10X\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 358897.9/30

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 293862.1/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 561478.0/34

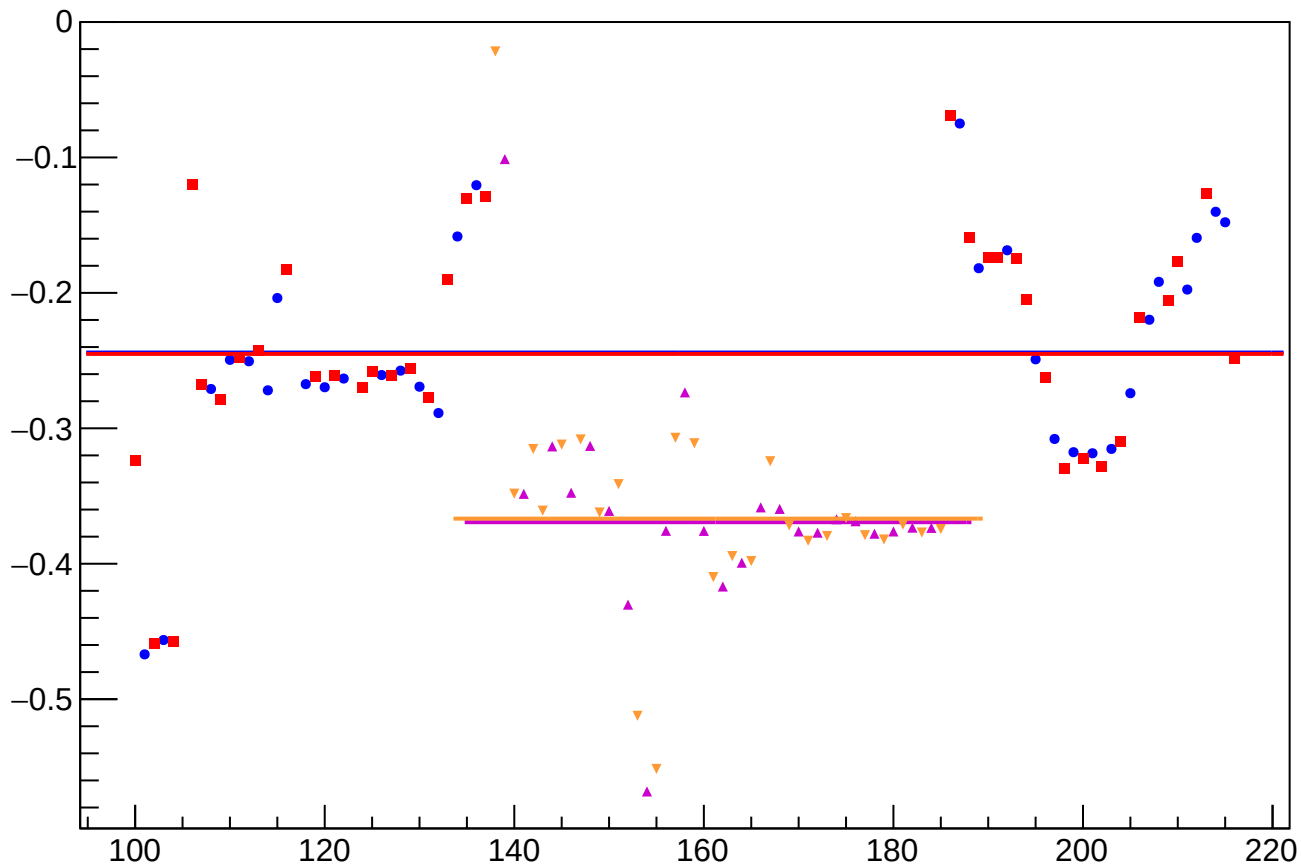
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 281817.4/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 2063957.5/55

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 4047905.1/113

- sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 1980663.4/57

# yield\_bpm0l10Y\_mean vs Slug



Right In: -0.244+/-0.000  $\chi^2$ /NDF: 10070520664.2/30

Left Out: -0.367+/-0.000  $\chi^2$ /NDF: 11945266102.2/24

Right Out: -0.245+/-0.000  $\chi^2$ /NDF: 9551712484.9/34

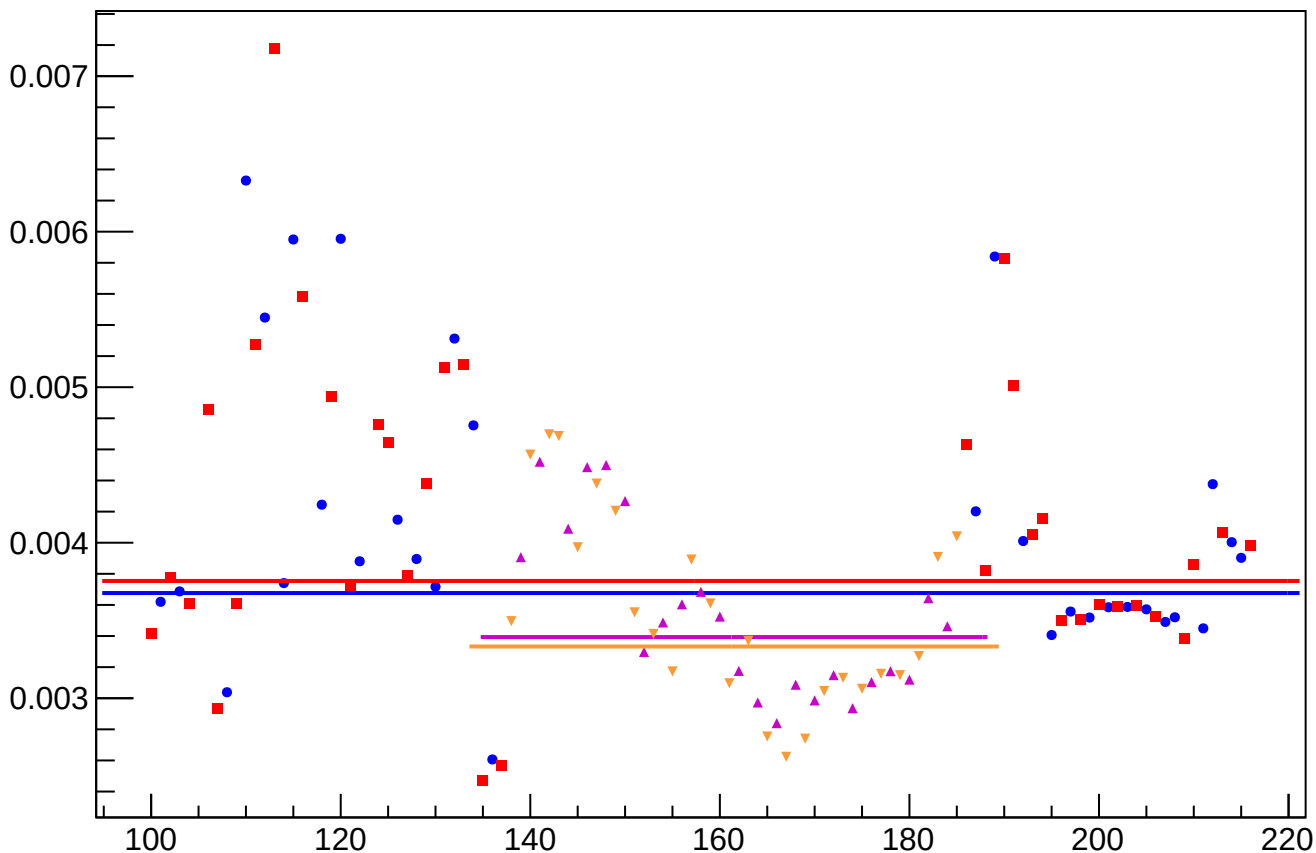
Left In: -0.369+/-0.000  $\chi^2$ /NDF: 7581323027.3/22

+ sign -0.312+/-0.000  $\chi^2$ /NDF: 32648322491.8/55

All: -0.312+/-0.000  $\chi^2$ /NDF: 60143936693.8/100

- sign -0.311+/-0.000  $\chi^2$ /NDF: 27495427982.0/57

# yield\_bpm0l10Y\_rms vs Slug



Right In: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 976176.3/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:857705.2/24

Right Out: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1127108.5/34

Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF:633604.8/22

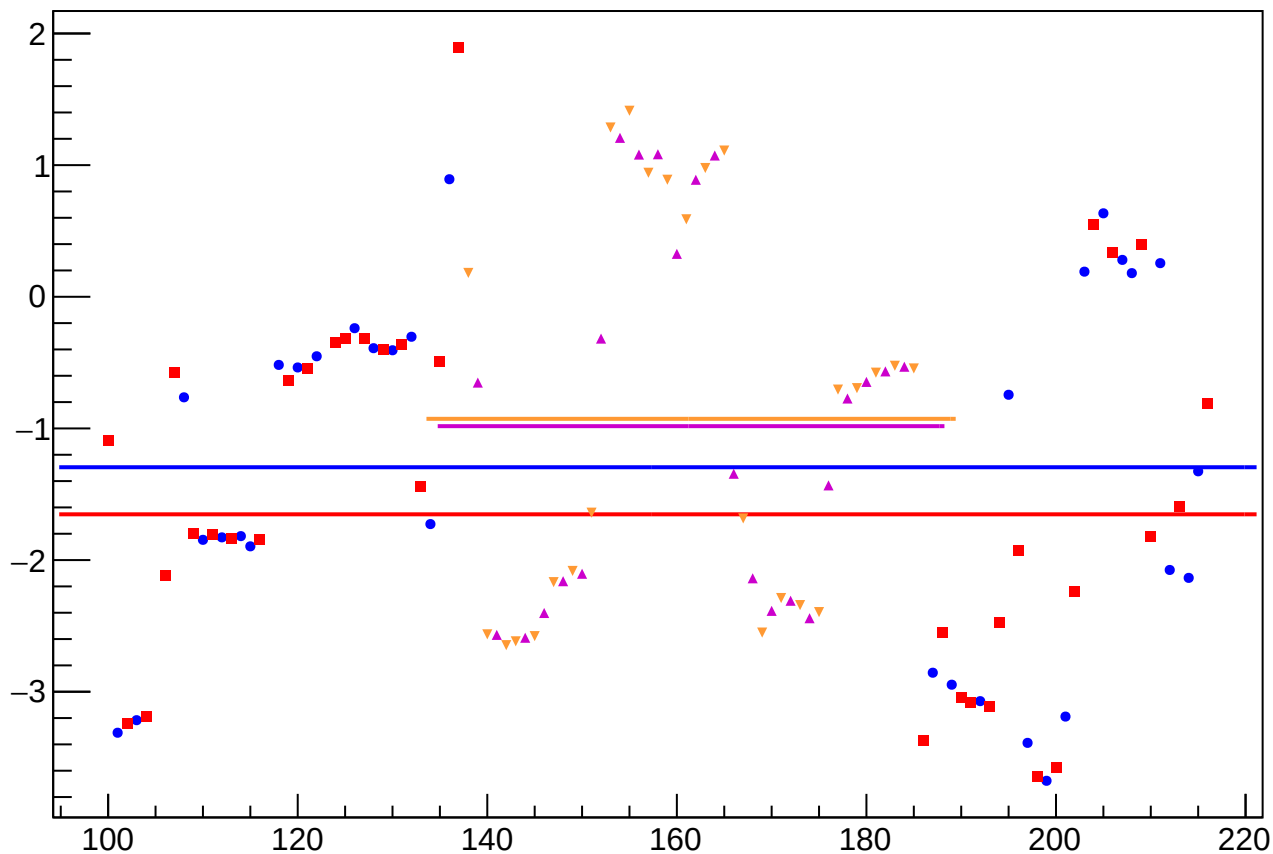
+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 2000812.3/55

All: 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 3951673.7/113

- sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 1935337.6/57



# yield\_bpm0r03X\_mean vs Slug



Right In:  $-1.295 \pm 0.000$   $\chi^2/\text{NDF}$ : 7084168306.8/30

Left Out:  $-0.927 \pm 0.000$   $\chi^2/\text{NDF}$ : 7248712470.7/24

Right Out:  $-1.652 \pm 0.000$   $\chi^2/\text{NDF}$ : 6055342045.3/34

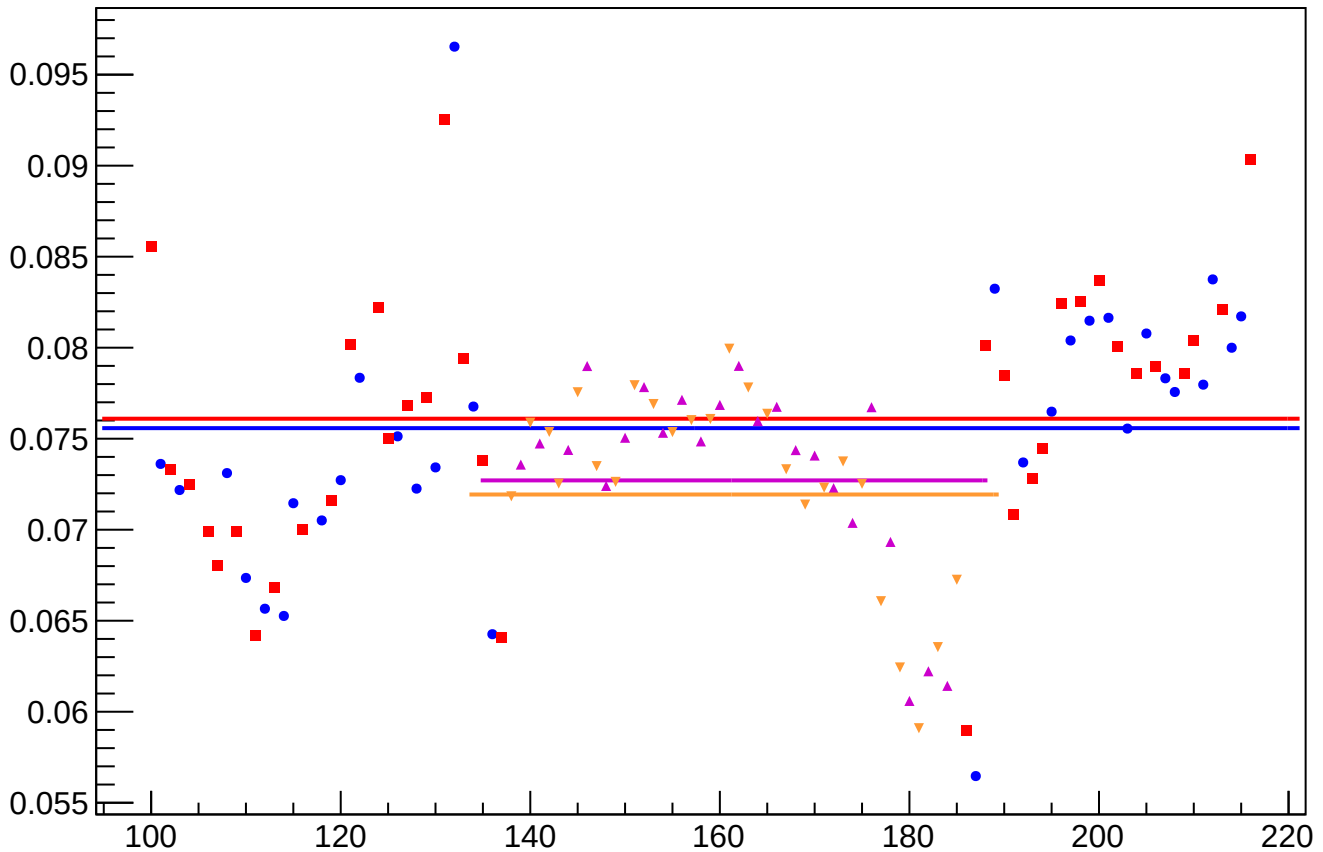
Left In:  $-0.983 \pm 0.000$   $\chi^2/\text{NDF}$ : 5918975536.0/22

+ sign  $-1.101 \pm 0.000$   $\chi^2/\text{NDF}$ : 14567682561.5/55

All:  $-1.206 \pm 0.000$   $\chi^2/\text{NDF}$ : 27453174900.6/100

- sign  $-1.315 \pm 0.000$   $\chi^2/\text{NDF}$ : 12728637868.9/57

# yield\_bpm0r03X\_rms vs Slug



Right In: 0.076 $\pm$ 0.000  $\chi^2$ /NDF: 263033.8/30

Left Out: 0.072 $\pm$ 0.000  $\chi^2$ /NDF:235534.6/24

Right Out: 0.076 $\pm$ 0.000  $\chi^2$ /NDF: 301494.3/34

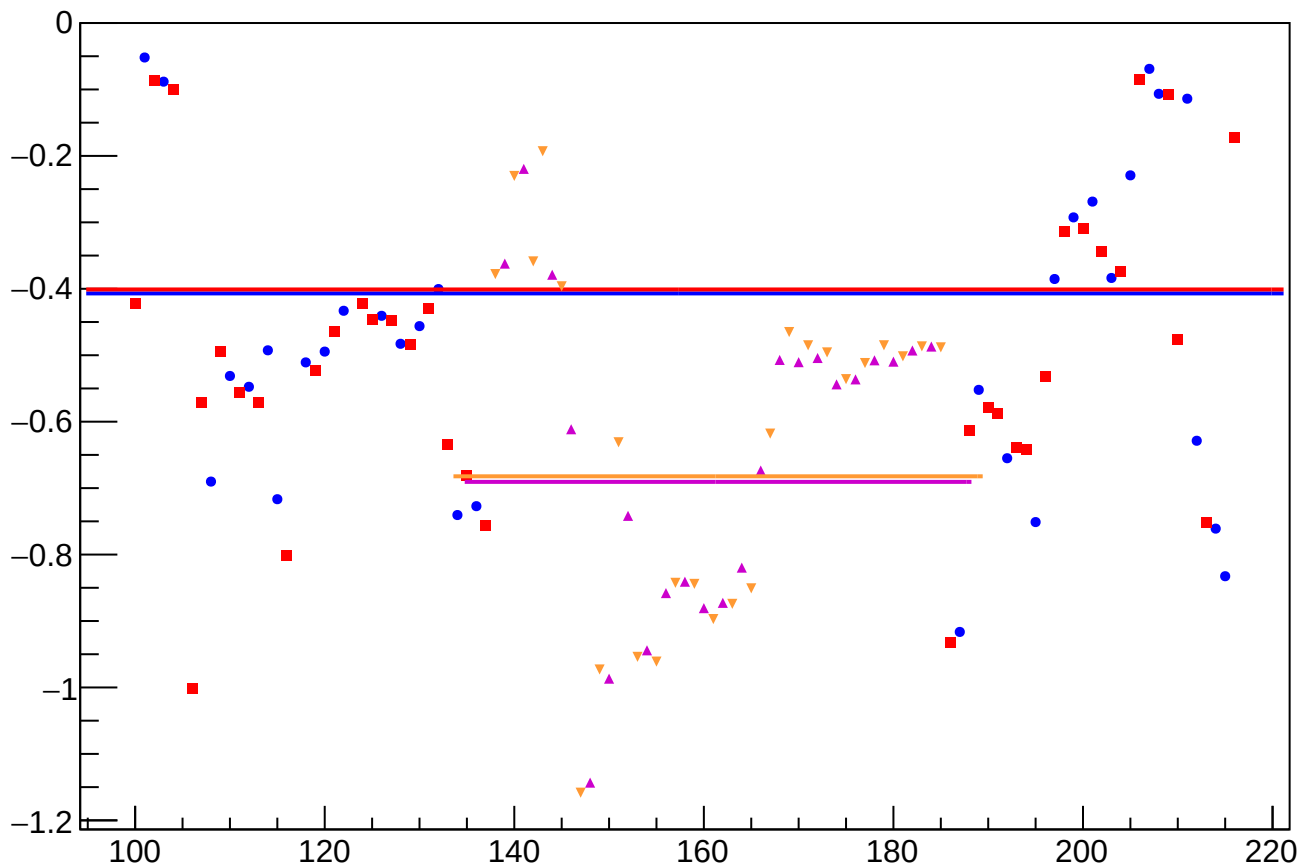
Left In: 0.073 $\pm$ 0.000  $\chi^2$ /NDF:197009.2/22

+ sign 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 544710.6/55

All: 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 1085517.5/113

- sign 0.074 $\pm$ 0.000  $\chi^2$ /NDF: 537147.5/57

# yield\_bpm0r03Y\_mean vs Slug



Right In:  $-0.407 \pm 0.000$   $\chi^2/\text{NDF}: 19244743897.5/30$

Left Out:  $-0.682 \pm 0.000$   $\chi^2/\text{NDF}: 21823342960.4/24$

Right Out:  $-0.401 \pm 0.000$   $\chi^2/\text{NDF}: 13059759449.9/34$

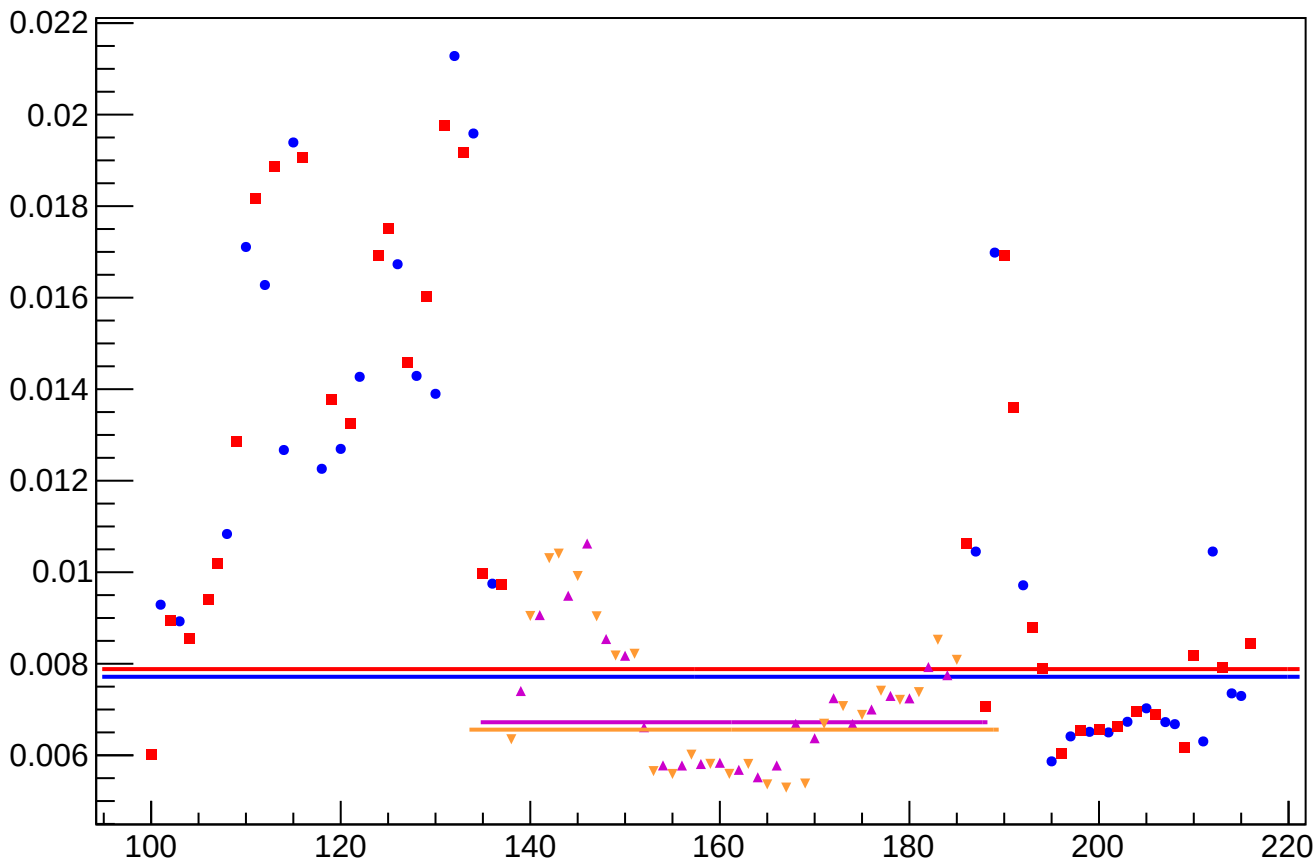
Left In:  $-0.691 \pm 0.000$   $\chi^2/\text{NDF}: 16867819938.3/22$

+ sign  $-0.571 \pm 0.000$   $\chi^2/\text{NDF}: 53522927459.7/55$

All:  $-0.571 \pm 0.000$   $\chi^2/\text{NDF}: 96363834246.5/100$

- sign  $-0.570 \pm 0.000$   $\chi^2/\text{NDF}: 42840186149.9/57$

# yield\_bpm0r03Y\_rms vs Slug



Right In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3192770.2/30

Left Out: 0.007+/-0.000  $\chi^2/\text{NDF}$ :1404221.4/24

Right Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 3262904.4/34

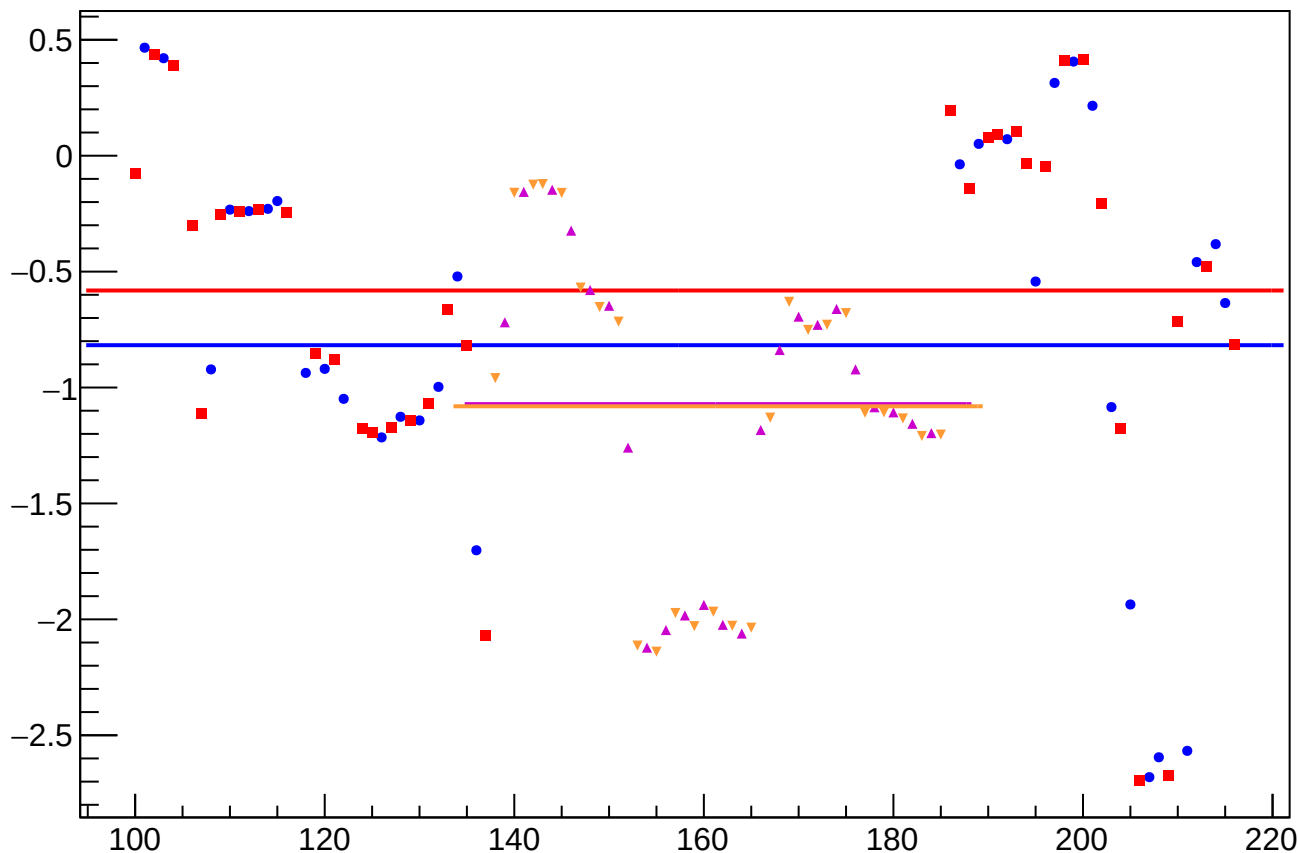
Left In: 0.007+/-0.000  $\chi^2/\text{NDF}$ :960755.3/22

+ sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 5035657.0/55

All: 0.007+/-0.000  $\chi^2/\text{NDF}$ : 9696019.1/113

- sign 0.007+/-0.000  $\chi^2/\text{NDF}$ : 4638950.7/57

# yield\_bpm0r05X\_mean vs Slug



Right In:  $-0.817 \pm 0.000$   $\chi^2/\text{NDF}$ : 1986058174.3/30

Left Out:  $-1.081 \pm 0.000$   $\chi^2/\text{NDF}$ : 1152285460.9/24

Right Out:  $-0.581 \pm 0.000$   $\chi^2/\text{NDF}$ : 1664482855.7/34

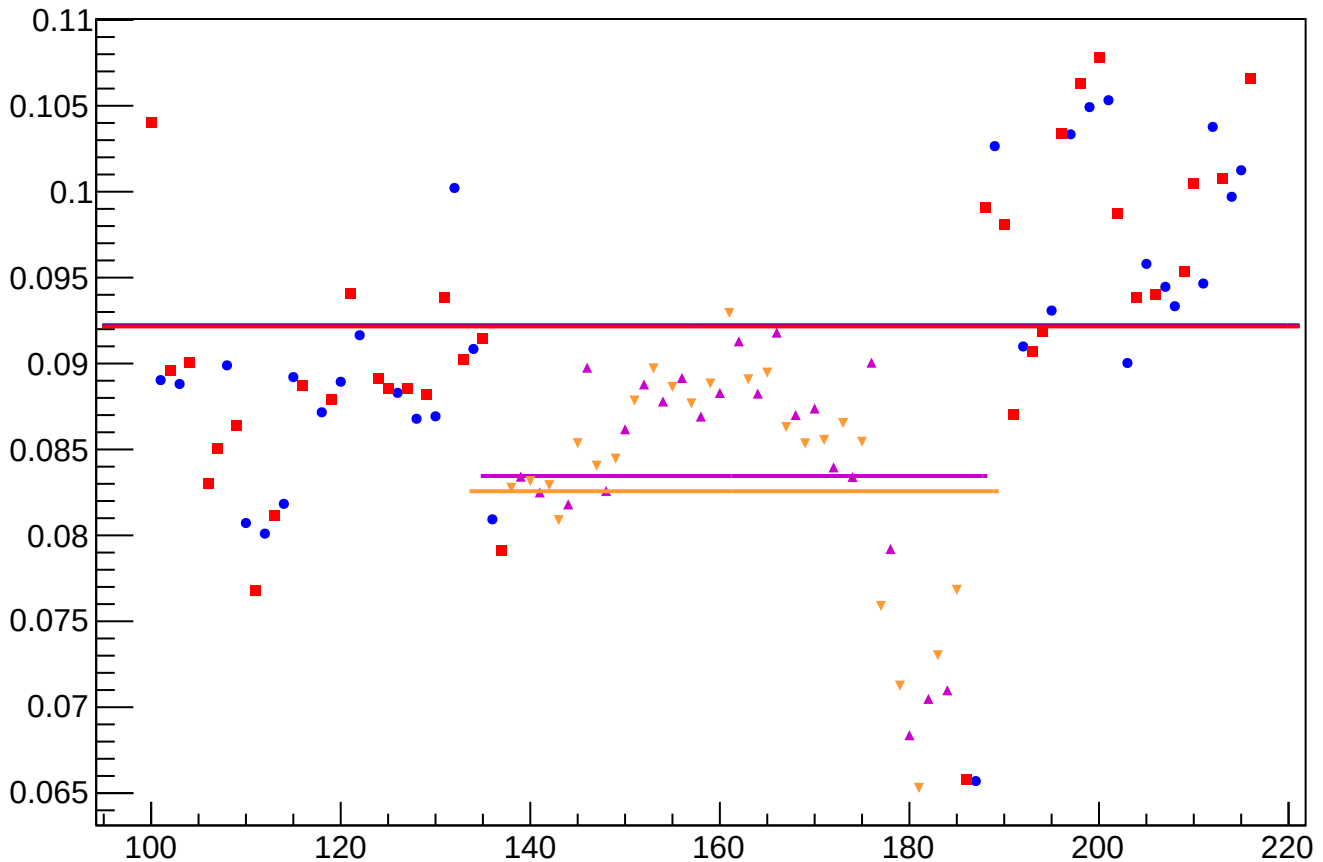
Left In:  $-1.072 \pm 0.000$   $\chi^2/\text{NDF}$ : 975623531.2/22

+ sign  $-0.964 \pm 0.000$   $\chi^2/\text{NDF}$ : 3224804757.3/55

All:  $-0.904 \pm 0.000$   $\chi^2/\text{NDF}$ : 6194909448.1/1

- sign  $-0.842 \pm 0.000$   $\chi^2/\text{NDF}$ : 2932942676.1/57

# yield\_bpm0r05X\_rms vs Slug



Right In: 0.092 $\pm$ 0.000  $\chi^2$ /NDF: 292431.1/30

Left Out: 0.083 $\pm$ 0.000  $\chi^2$ /NDF:291134.3/24

Right Out: 0.092 $\pm$ 0.000  $\chi^2$ /NDF: 387770.5/34

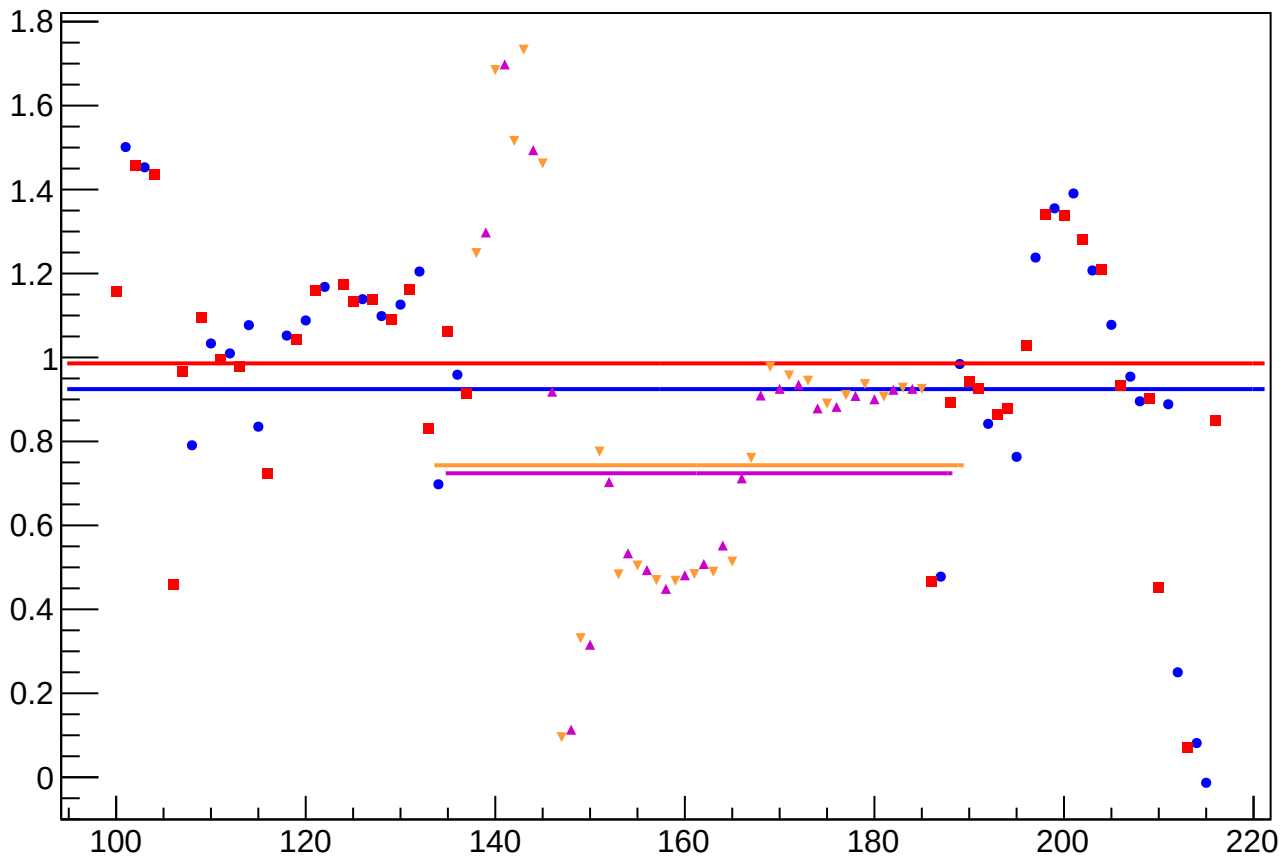
Left In: 0.083 $\pm$ 0.000  $\chi^2$ /NDF:238412.3/22

+ sign 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 815576.2/55

All: 0.087 $\pm$ 0.000  $\chi^2$ /NDF: 1628790.4/113

- sign 0.088 $\pm$ 0.000  $\chi^2$ /NDF: 810876.2/57

# yield\_bpm0r05Y\_mean vs Slug



Right In:  $0.925 \pm 0.000$   $\chi^2/\text{NDF}$ : 22470072179.9/30

Left Out:  $0.743 \pm 0.000$   $\chi^2/\text{NDF}$ : 32581746516.6/24

Right Out:  $0.986 \pm 0.000$   $\chi^2/\text{NDF}$ : 13492106937.5/34

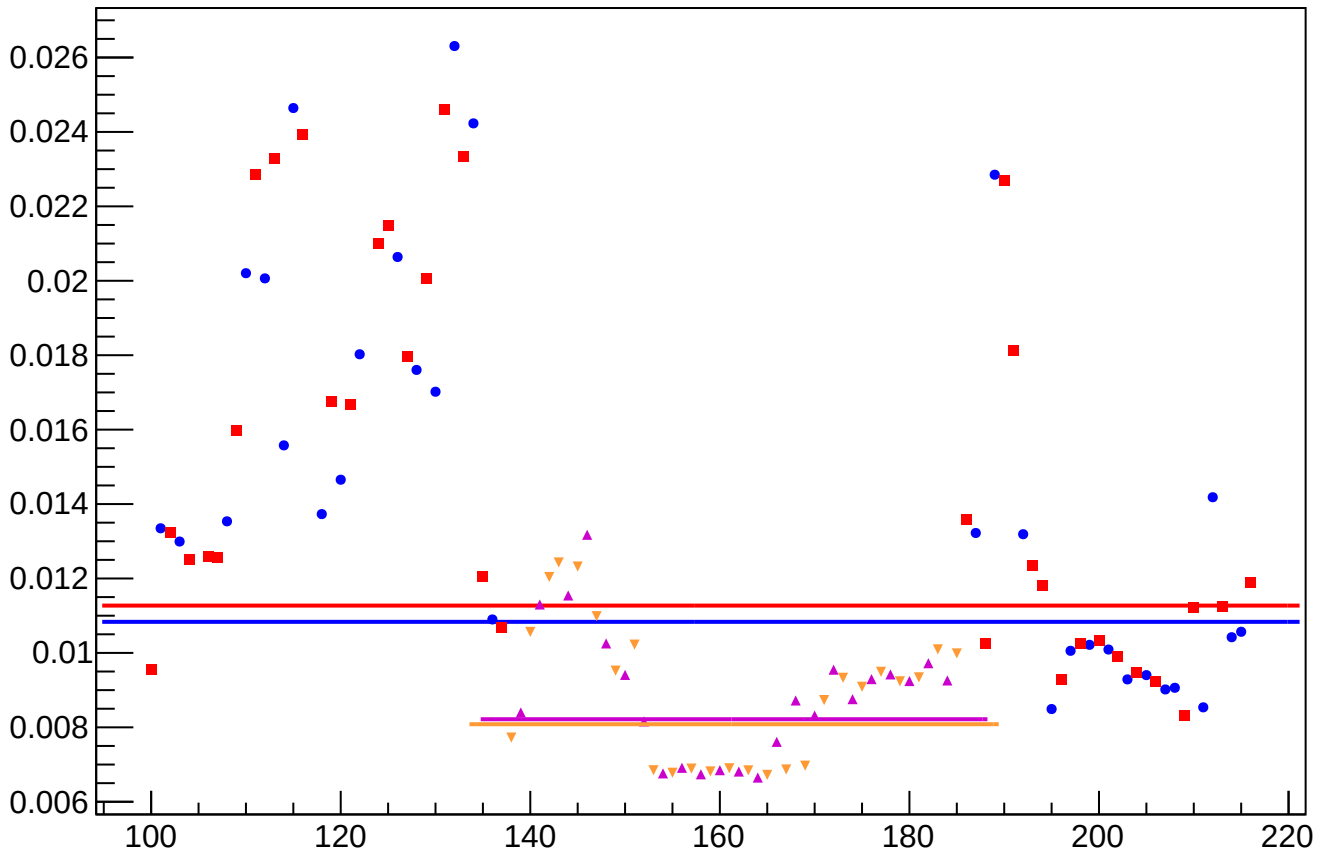
Left In:  $0.724 \pm 0.000$   $\chi^2/\text{NDF}$ : 25654534031.9/22

+ sign  $0.806 \pm 0.000$   $\chi^2/\text{NDF}$ : 58129533918.4/55

All:  $0.810 \pm 0.000$   $\chi^2/\text{NDF}$ : 103215361731.9

- sign  $0.816 \pm 0.000$   $\chi^2/\text{NDF}$ : 45067149667.2/57

# yield\_bpm0r05Y\_rms vs Slug



Right In: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2399072.8/30

Left Out: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1406307.1/24

Right Out: 0.011+/-0.000  $\chi^2/\text{NDF}$ : 2460692.1/34

Left In: 0.008+/-0.000  $\chi^2/\text{NDF}$ : 1127833.6/22

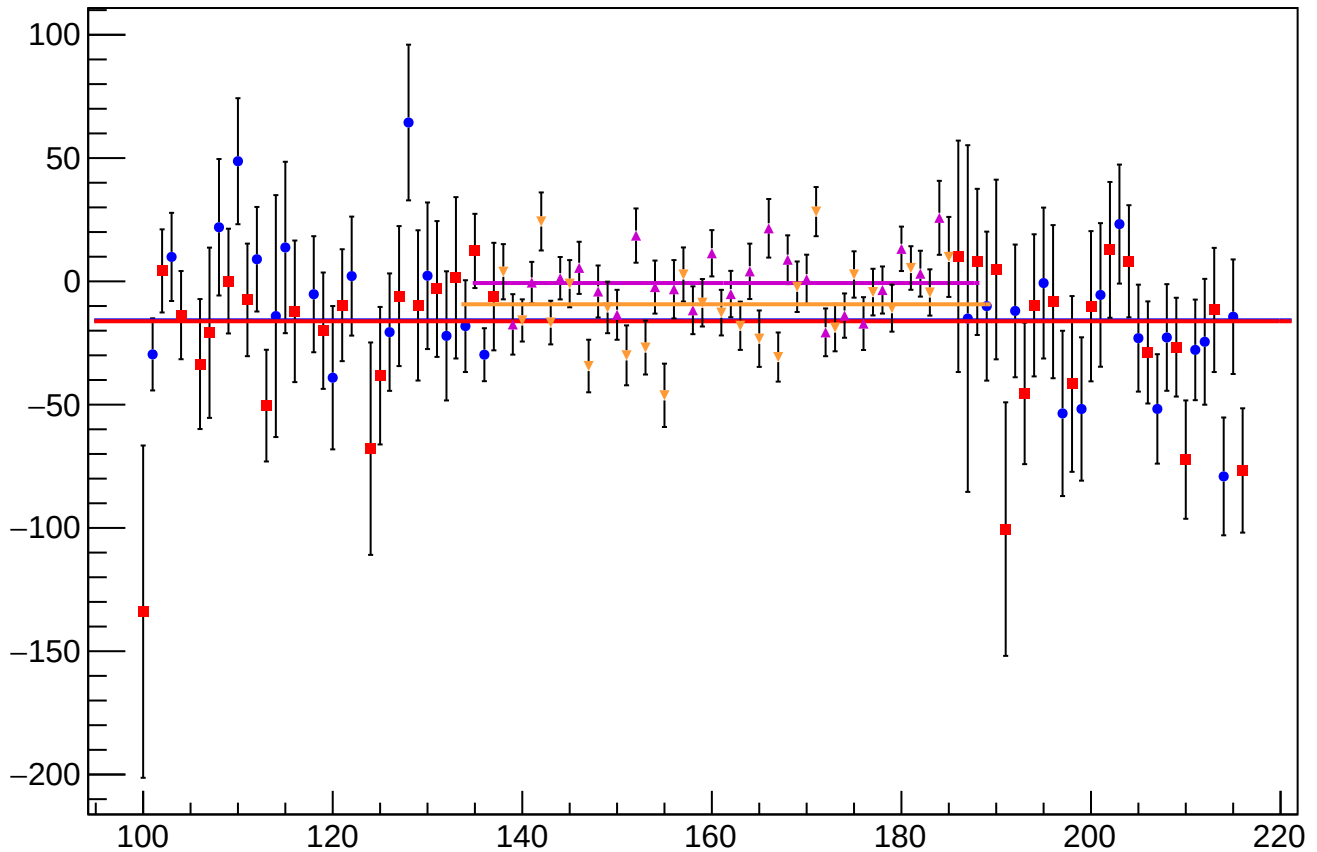
+ sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 5221548.7/55

All: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 10446319.5/113

- sign 0.009+/-0.000  $\chi^2/\text{NDF}$ : 5199801.8/57



# diff\_bpm4aX\_mean vs Slug



Right In:  $-15.810 \pm 4.142$   $\chi^2/\text{NDF}$ : 39.5/30

Left Out:  $-9.292 \pm 2.031$   $\chi^2/\text{NDF}$ : 61.1/24

Right Out:  $-16.178 \pm 4.299$   $\chi^2/\text{NDF}$ : 34.5/34

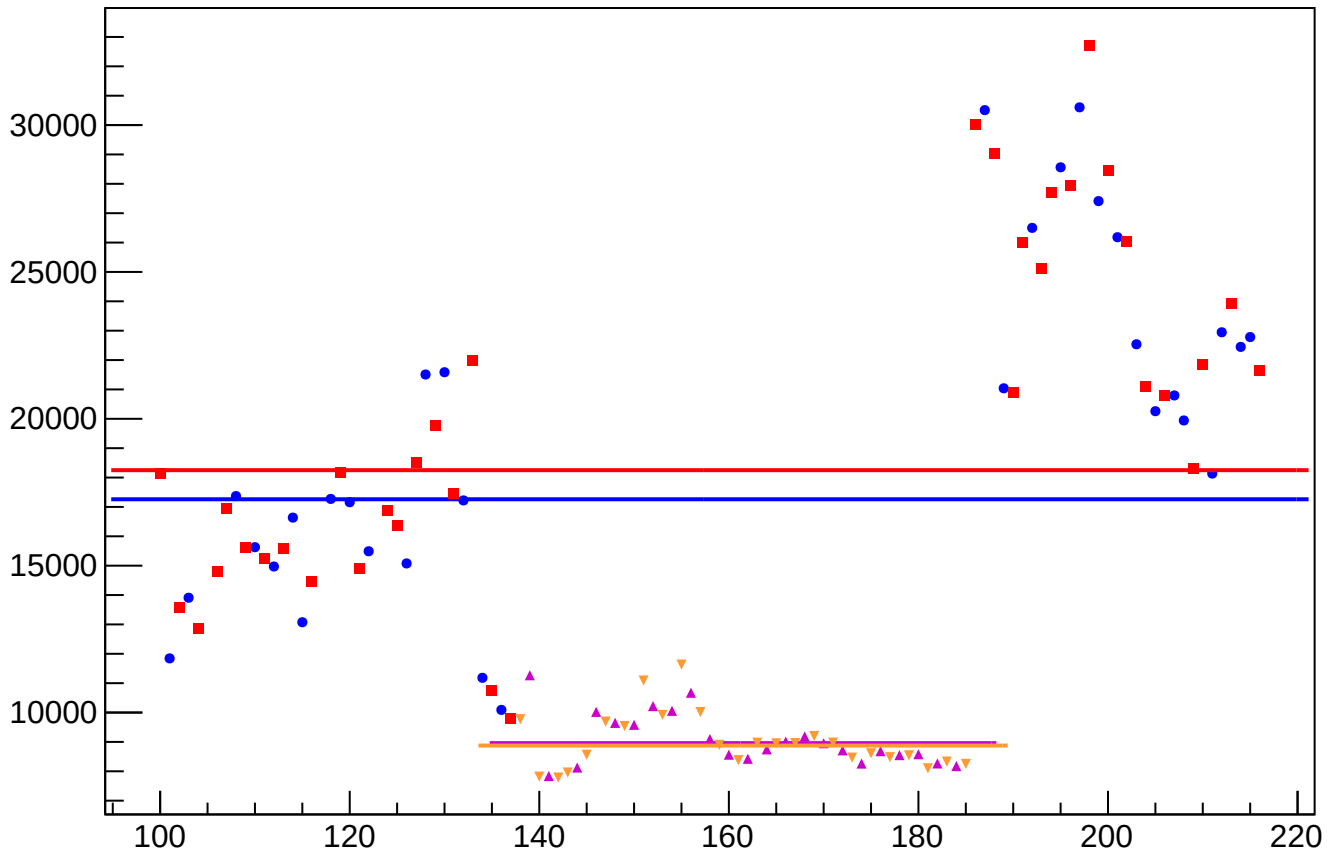
Left In:  $-0.676 \pm 2.104$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-10.554 \pm 1.823$   $\chi^2/\text{NDF}$ : 102.6/55

All:  $-7.237 \pm 1.312$   $\chi^2/\text{NDF}$ : 183.9/113

- sign  $-3.672 \pm 1.890$   $\chi^2/\text{NDF}$ : 74.5/57

# diff\_bpm4aX\_rms vs Slug



Right In: 17260.518 $\pm$ 2.929  $\chi^2$ /NDF: 3501329.7/30

Left Out: 8875.623 $\pm$ 1.436  $\chi^2$ /NDF:346964.6/24

Right Out: 18251.156 $\pm$ 3.040  $\chi^2$ /NDF: 3313930.7/34

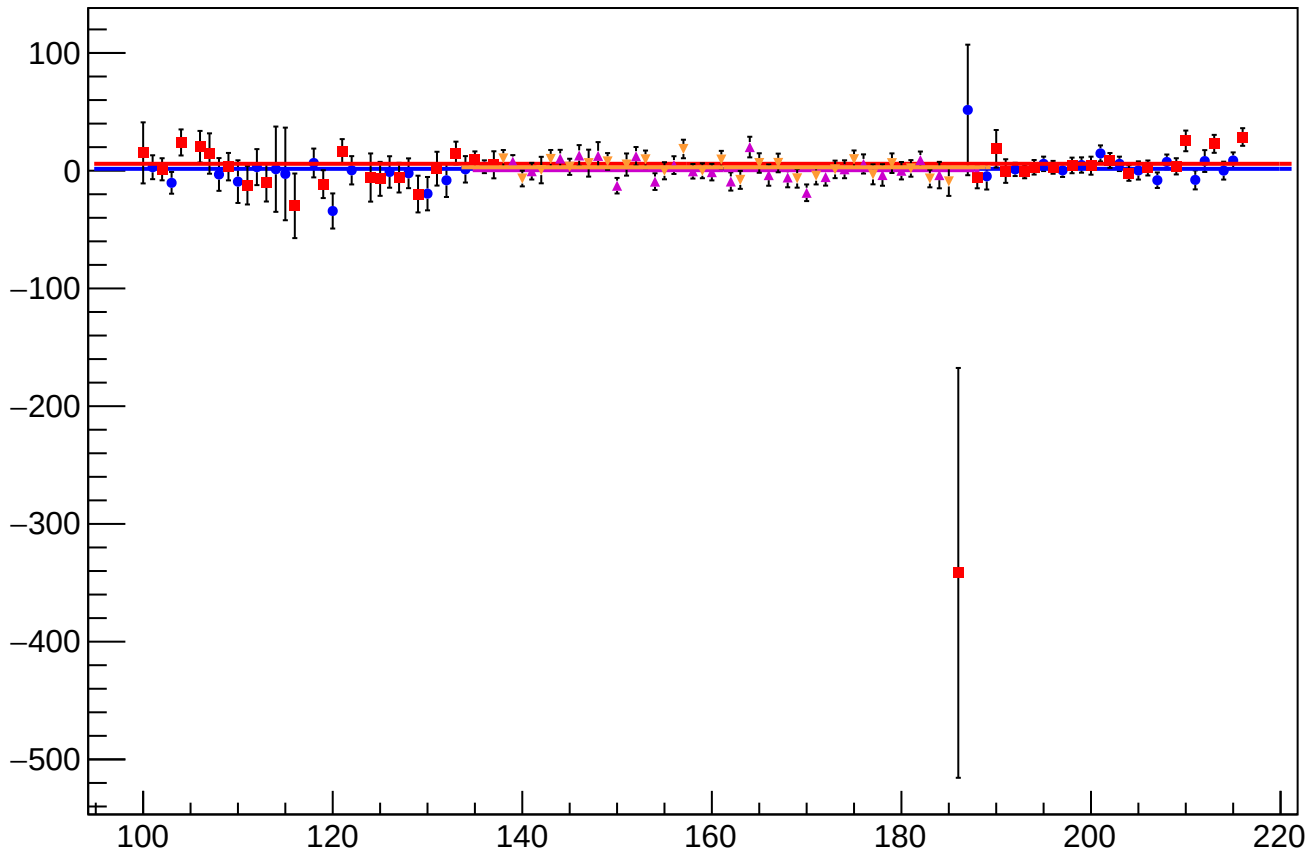
Left In: 8958.661 $\pm$ 1.488  $\chi^2$ /NDF:301724.6/22

+ sign 10500.162 $\pm$ 1.289  $\chi^2$ /NDF: 10455440.3/55

All: 10622.710 $\pm$ 0.928  $\chi^2$ /NDF: 21627417.3

- sign 10754.384 $\pm$ 1.336  $\chi^2$ /NDF: 11153234.4/57

# diff\_bpm4aY\_mean vs Slug



Right In:  $1.584 \pm 1.547$   $\chi^2/\text{NDF}$ : 23.1/30

Left Out:  $2.879 \pm 1.554$   $\chi^2/\text{NDF}$ : 19.5/24

Right Out:  $5.864 \pm 1.540$   $\chi^2/\text{NDF}$ : 47.2/34

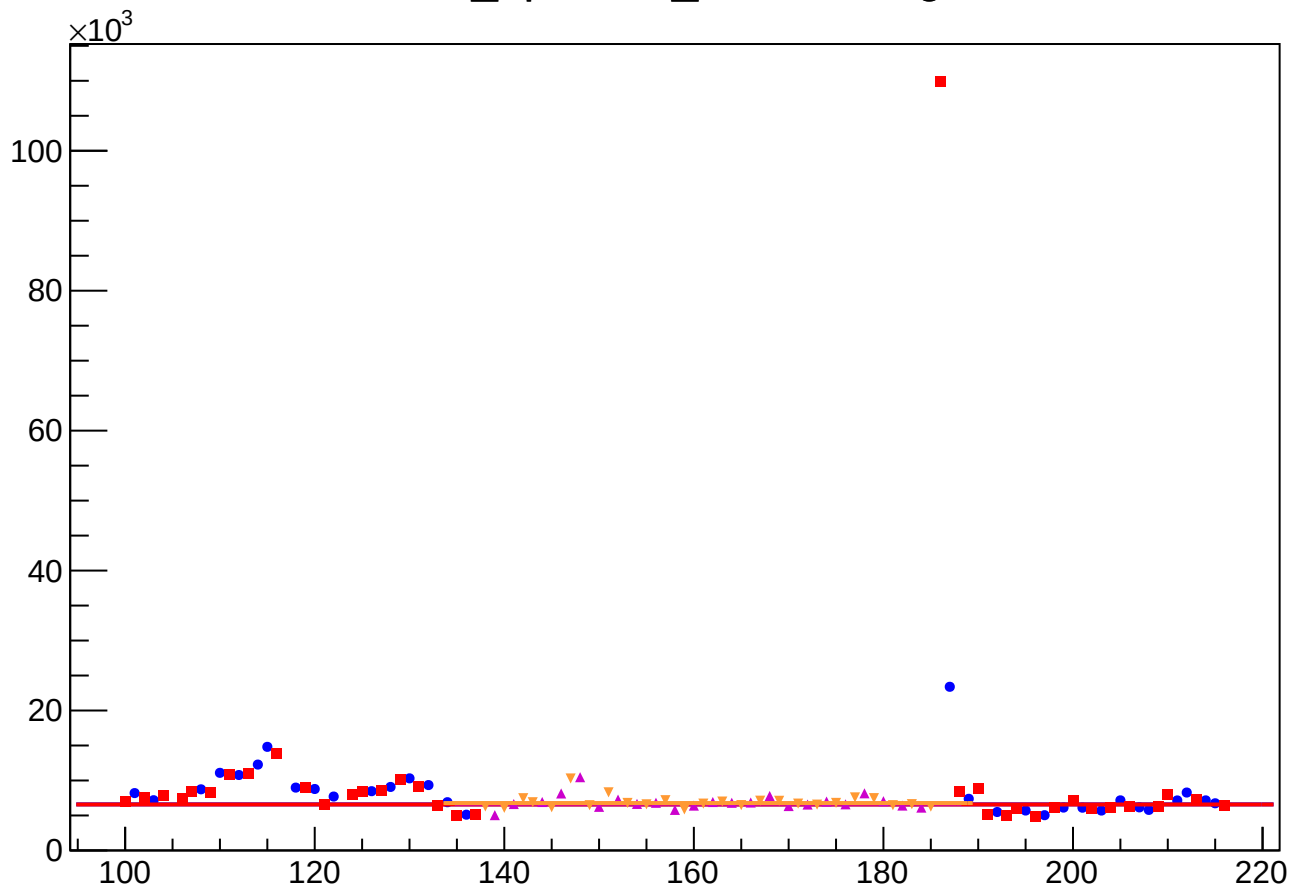
Left In:  $0.456 \pm 1.581$   $\chi^2/\text{NDF}$ : 32.8/22

+ sign  $2.229 \pm 1.096$   $\chi^2/\text{NDF}$ : 42.9/55

All:  $2.727 \pm 0.778$   $\chi^2/\text{NDF}$ : 129.4/113

- sign  $3.232 \pm 1.103$   $\chi^2/\text{NDF}$ : 86.0/57

# diff\_bpm4aY\_rms vs Slug



Right In:  $6587.392 \pm 1.094$   $\chi^2/\text{NDF}$ : 1799314.7/30

Left Out:  $6776.739 \pm 1.099$   $\chi^2/\text{NDF}$ : 400166.7/24

Right Out:  $6570.384 \pm 1.089$   $\chi^2/\text{NDF}$ : 2402729.0/34

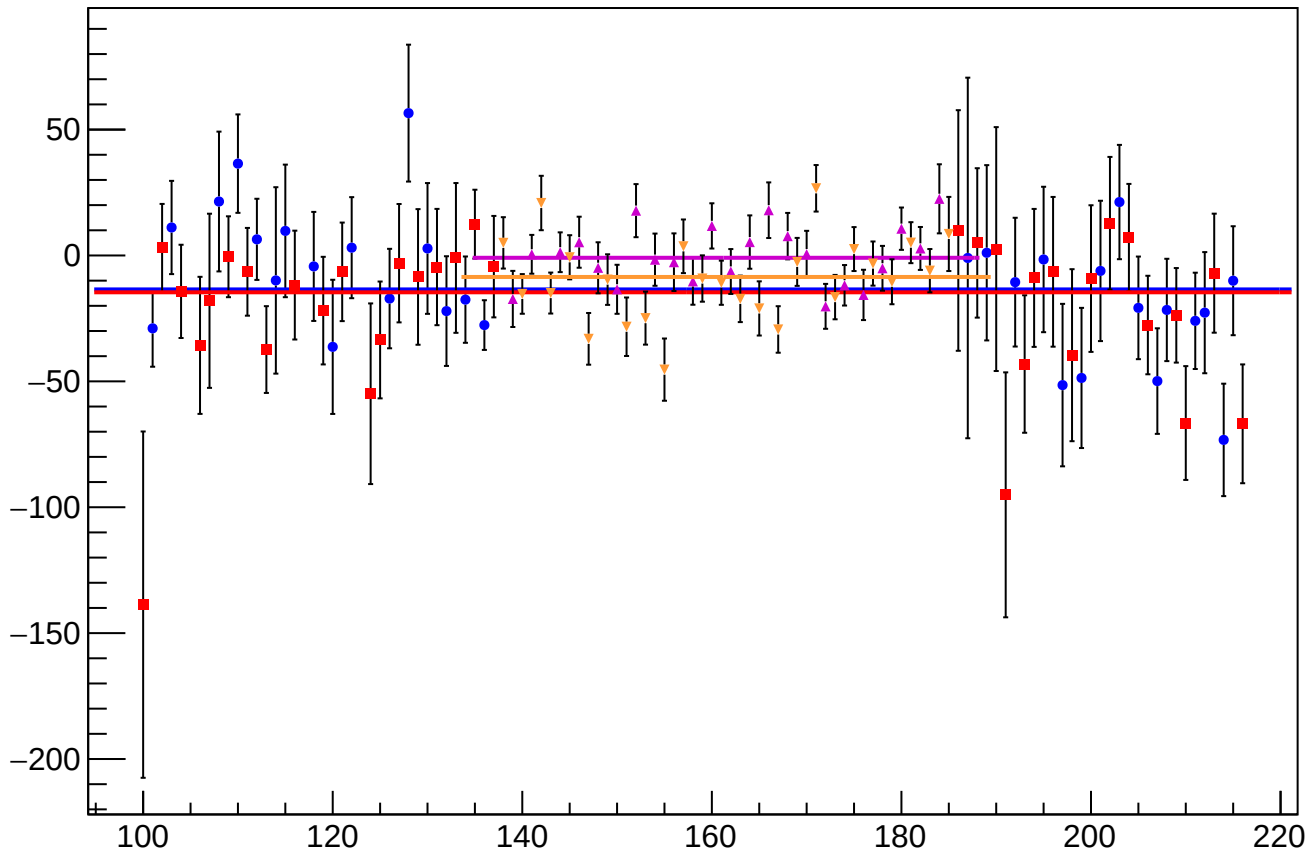
Left In:  $6689.550 \pm 1.118$   $\chi^2/\text{NDF}$ : 620276.8/22

+ sign  $6681.682 \pm 0.775$   $\chi^2/\text{NDF}$ : 2214392.4/55

All:  $6655.192 \pm 0.550$   $\chi^2/\text{NDF}$ : 5245577.4/11

- sign  $6628.374 \pm 0.780$   $\chi^2/\text{NDF}$ : 3028835.7/57

# diff\_bpm4eX\_mean vs Slug



Right In:  $-13.484 \pm 3.799$   $\chi^2/\text{NDF}: 41.0/30$

Left Out:  $-8.536 \pm 1.897$   $\chi^2/\text{NDF}: 61.9/24$

Right Out:  $-14.627 \pm 3.905$   $\chi^2/\text{NDF}: 33.1/34$

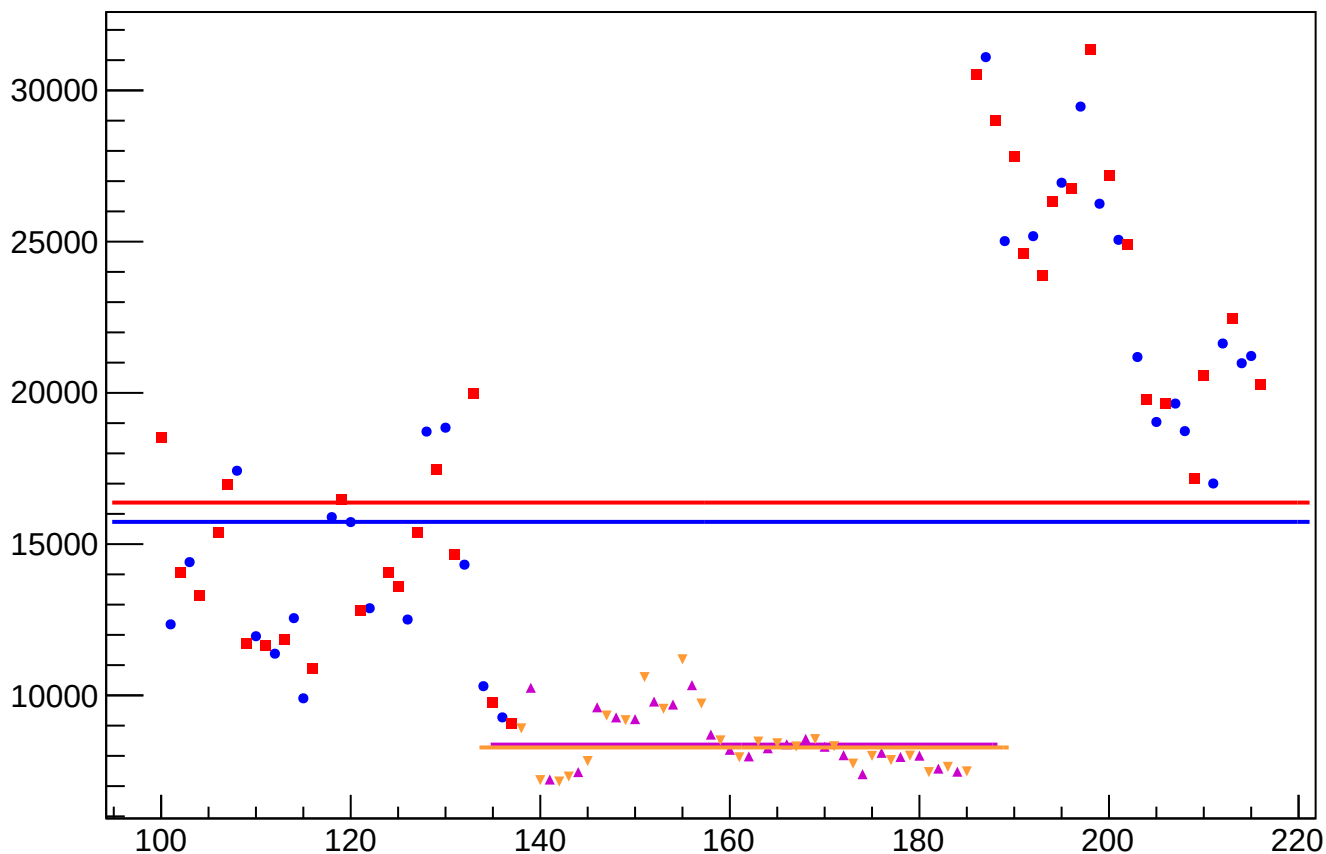
Left In:  $-0.919 \pm 1.969$   $\chi^2/\text{NDF}: 29.1/22$

+ sign  $-9.524 \pm 1.697$   $\chi^2/\text{NDF}: 104.3/55$

All:  $-6.714 \pm 1.221$   $\chi^2/\text{NDF}: 182.0/113$

- sign  $-3.698 \pm 1.758$   $\chi^2/\text{NDF}: 72.0/57$

# diff\_bpm4eX\_rms vs Slug



Right In: 15735.695+/-2.686  $\chi^2/\text{NDF}$ : 3992976.6/30

Left Out: 8277.768+/-1.341  $\chi^2/\text{NDF}$ :455108.5/24

Right Out: 16373.814+/-2.761  $\chi^2/\text{NDF}$ : 4160499.9/34

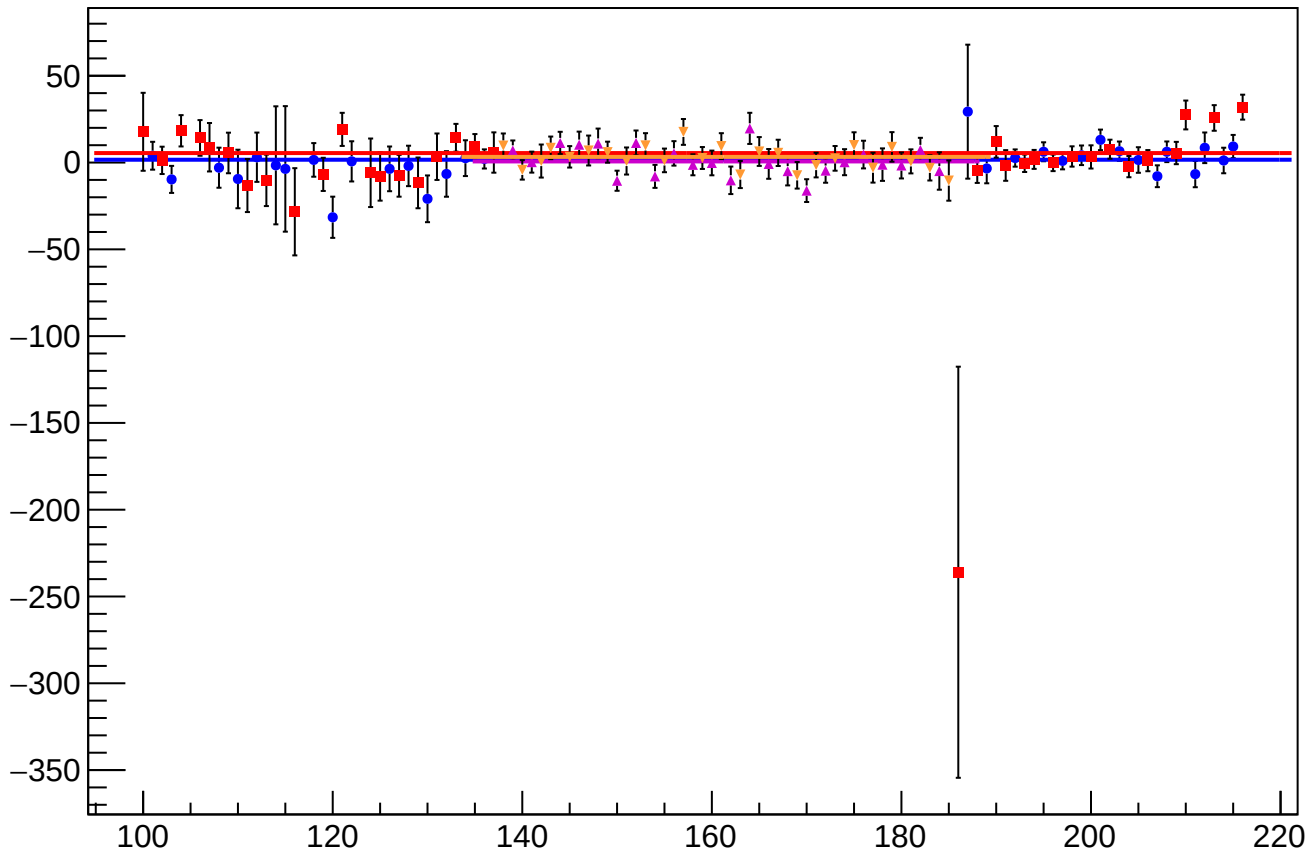
Left In: 8372.363+/-1.392  $\chi^2/\text{NDF}$ :392872.1/22

+ sign 9765.784+/-1.200  $\chi^2/\text{NDF}$ : 10617989.4/55

All: 9876.062+/-0.863  $\chi^2/\text{NDF}$ : 21884891.8/100

- sign 9994.427+/-1.243  $\chi^2/\text{NDF}$ : 11249389.7/57

# diff\_bpm4eY\_mean vs Slug



Right In:  $1.625 \pm 1.403$   $\chi^2/\text{NDF}$ : 26.4/30

Left Out:  $3.255 \pm 1.457$   $\chi^2/\text{NDF}$ : 17.6/24

Right Out:  $5.467 \pm 1.375$   $\chi^2/\text{NDF}$ : 57.8/34

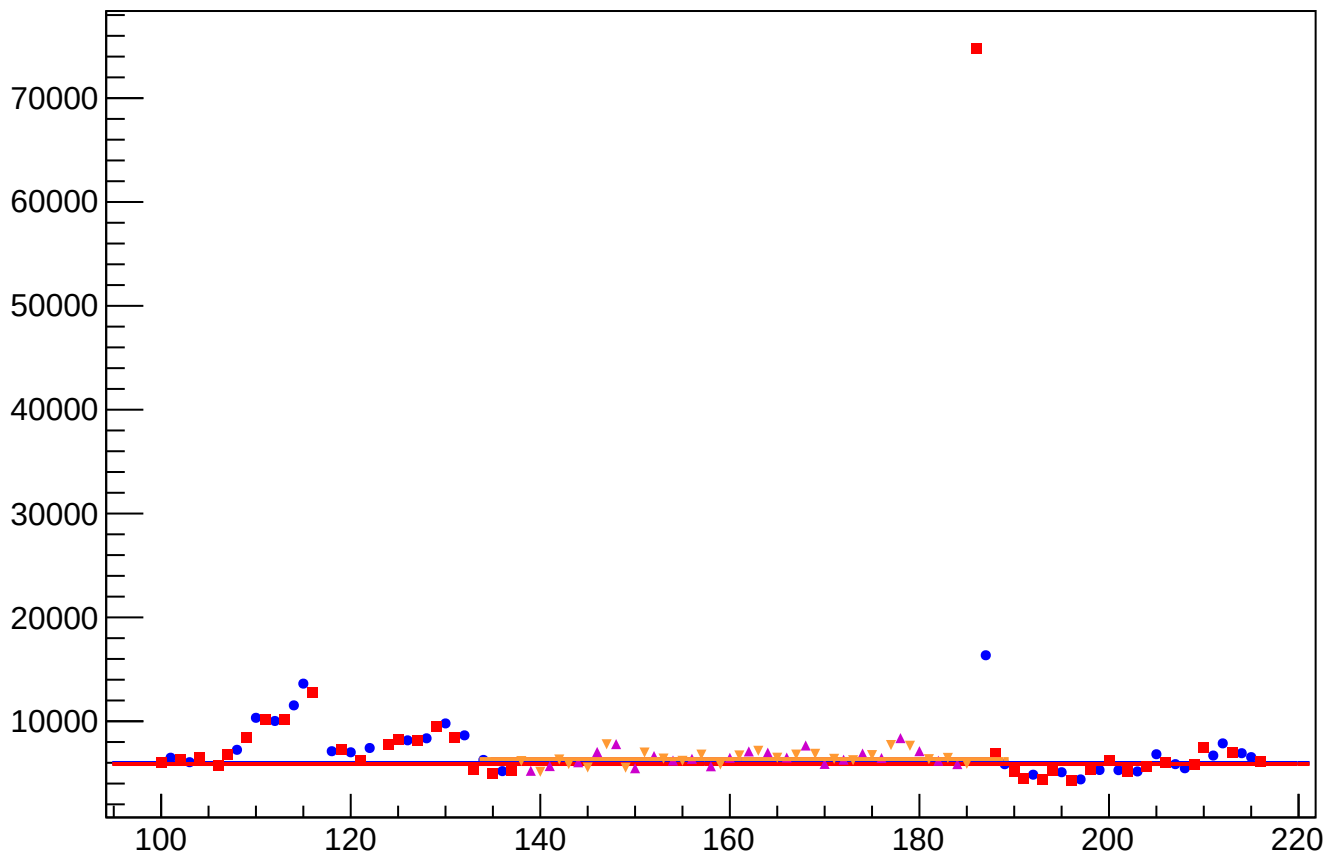
Left In:  $0.645 \pm 1.499$   $\chi^2/\text{NDF}$ : 30.8/22

+ sign  $2.409 \pm 1.011$   $\chi^2/\text{NDF}$ : 44.7/55

All:  $2.835 \pm 0.716$   $\chi^2/\text{NDF}$ : 139.2/113

- sign  $3.264 \pm 1.014$   $\chi^2/\text{NDF}$ : 94.2/57

# diff\_bpm4eY\_rms vs Slug



Right In: 5981.688 $\pm$ 0.992  $\chi^2$ /NDF: 1777653.6/30

Left Out: 6357.608 $\pm$ 1.030  $\chi^2$ /NDF: 414119.5/24

Right Out: 5882.190 $\pm$ 0.973  $\chi^2$ /NDF: 2431984.9/34

Left In: 6359.907 $\pm$ 1.060  $\chi^2$ /NDF: 473875.4/22

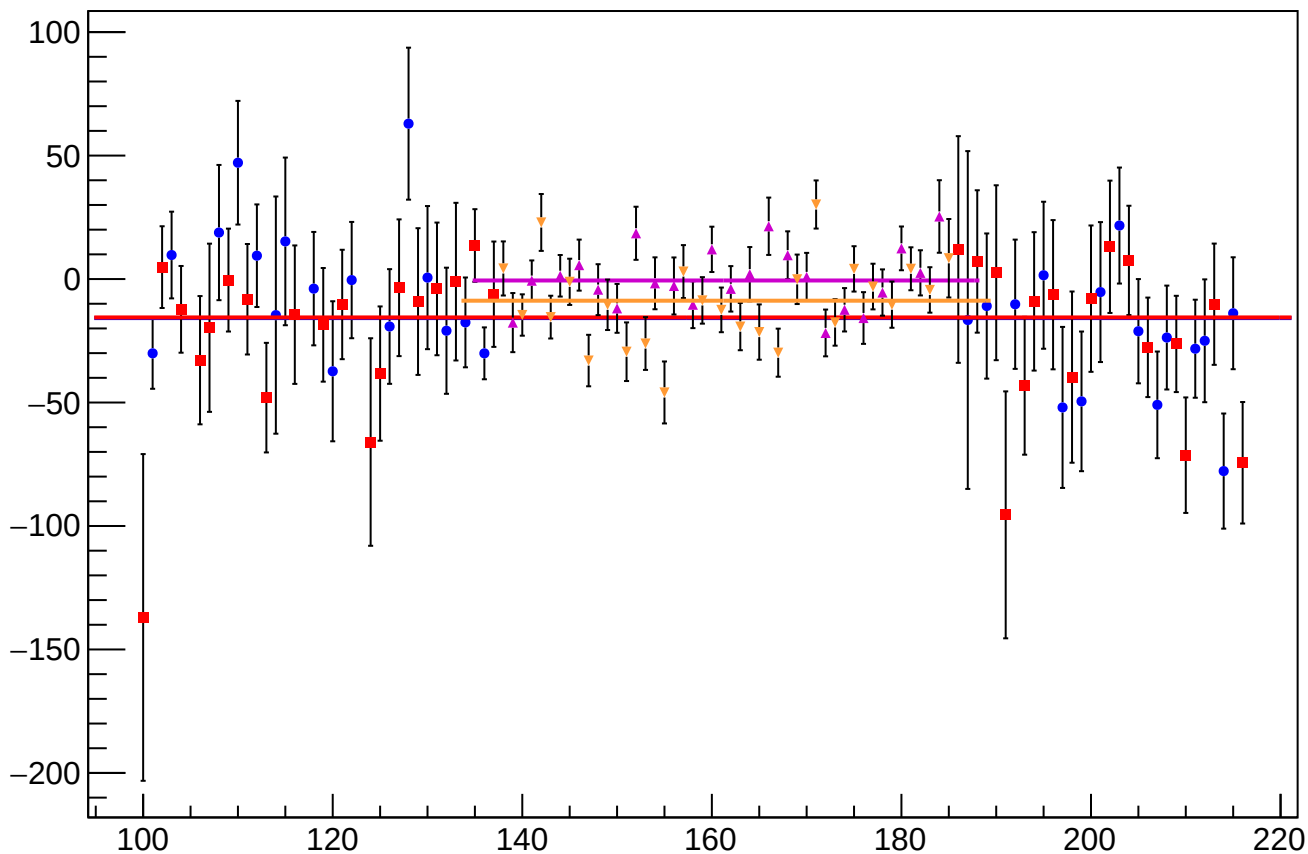
+ sign 6162.570 $\pm$ 0.715  $\chi^2$ /NDF: 2260833.2/55

All: 6131.620 $\pm$ 0.506  $\chi^2$ /NDF: 5280718.1/11

- sign 6100.503 $\pm$ 0.717  $\chi^2$ /NDF: 3016124.6/57



# diff\_bpm4acX\_mean vs Slug



Right In:  $-15.805 \pm 4.046$   $\chi^2/\text{NDF}: 39.6/30$

Left Out:  $-8.767 \pm 1.987$   $\chi^2/\text{NDF}: 62.7/24$

Right Out:  $-15.544 \pm 4.199$   $\chi^2/\text{NDF}: 34.9/34$

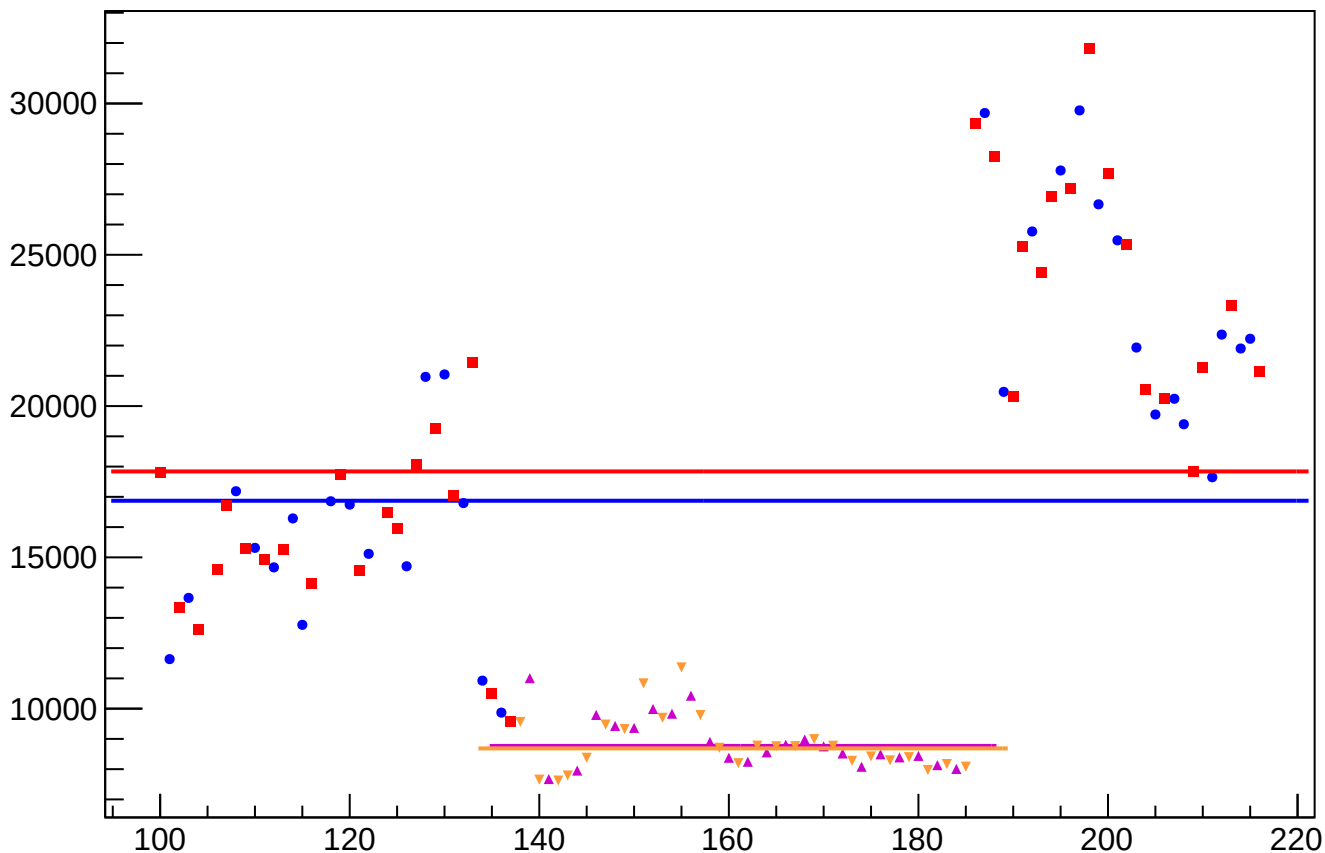
Left In:  $-0.579 \pm 2.059$   $\chi^2/\text{NDF}: 29.6/22$

+ sign  $-10.134 \pm 1.783$   $\chi^2/\text{NDF}: 104.7/55$

All:  $-6.927 \pm 1.284$   $\chi^2/\text{NDF}: 186.2/113$

- sign  $-3.480 \pm 1.849$   $\chi^2/\text{NDF}: 74.8/57$

# diff\_bpm4acX\_rms vs Slug



Right In: 16870.984 $\pm$ 2.861  $\chi^2$ /NDF: 3450382.9/30

Left Out: 8686.048 $\pm$ 1.405  $\chi^2$ /NDF:340655.6/24

Right Out: 17839.607 $\pm$ 2.969  $\chi^2$ /NDF: 3261119.3/34

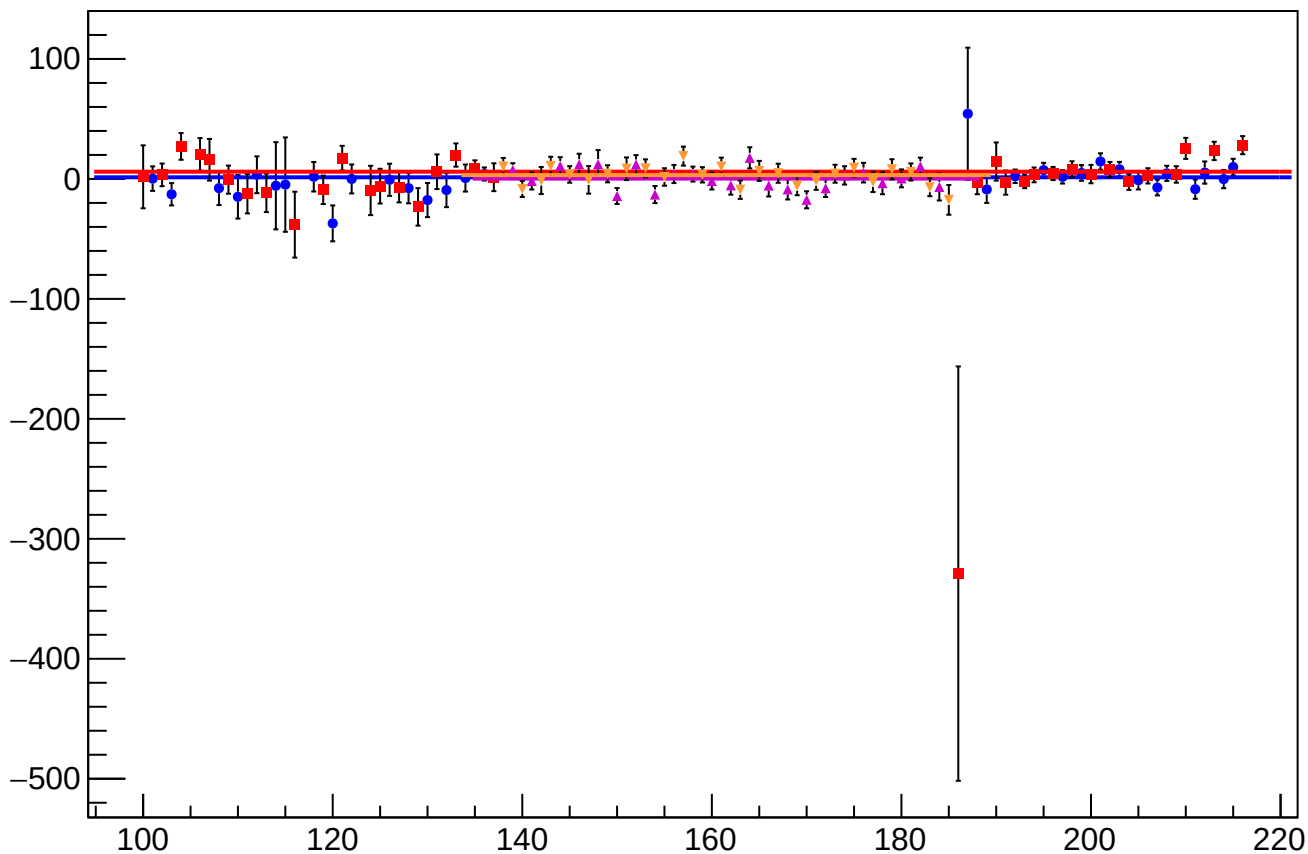
Left In: 8767.705 $\pm$ 1.456  $\chi^2$ /NDF:295552.8/22

+ sign 10276.619 $\pm$ 1.261  $\chi^2$ /NDF: 10386005.5/55

All: 10396.896 $\pm$ 0.908  $\chi^2$ /NDF: 21486347.1

- sign 10526.145 $\pm$ 1.307  $\chi^2$ /NDF: 11081471.0/57

# diff\_bpm4acY\_mean vs Slug



Right In:  $1.357 \pm 1.552$   $\chi^2/\text{NDF}$ : 26.6/30

Left Out:  $3.171 \pm 1.562$   $\chi^2/\text{NDF}$ : 21.7/24

Right Out:  $6.036 \pm 1.545$   $\chi^2/\text{NDF}$ : 50.6/34

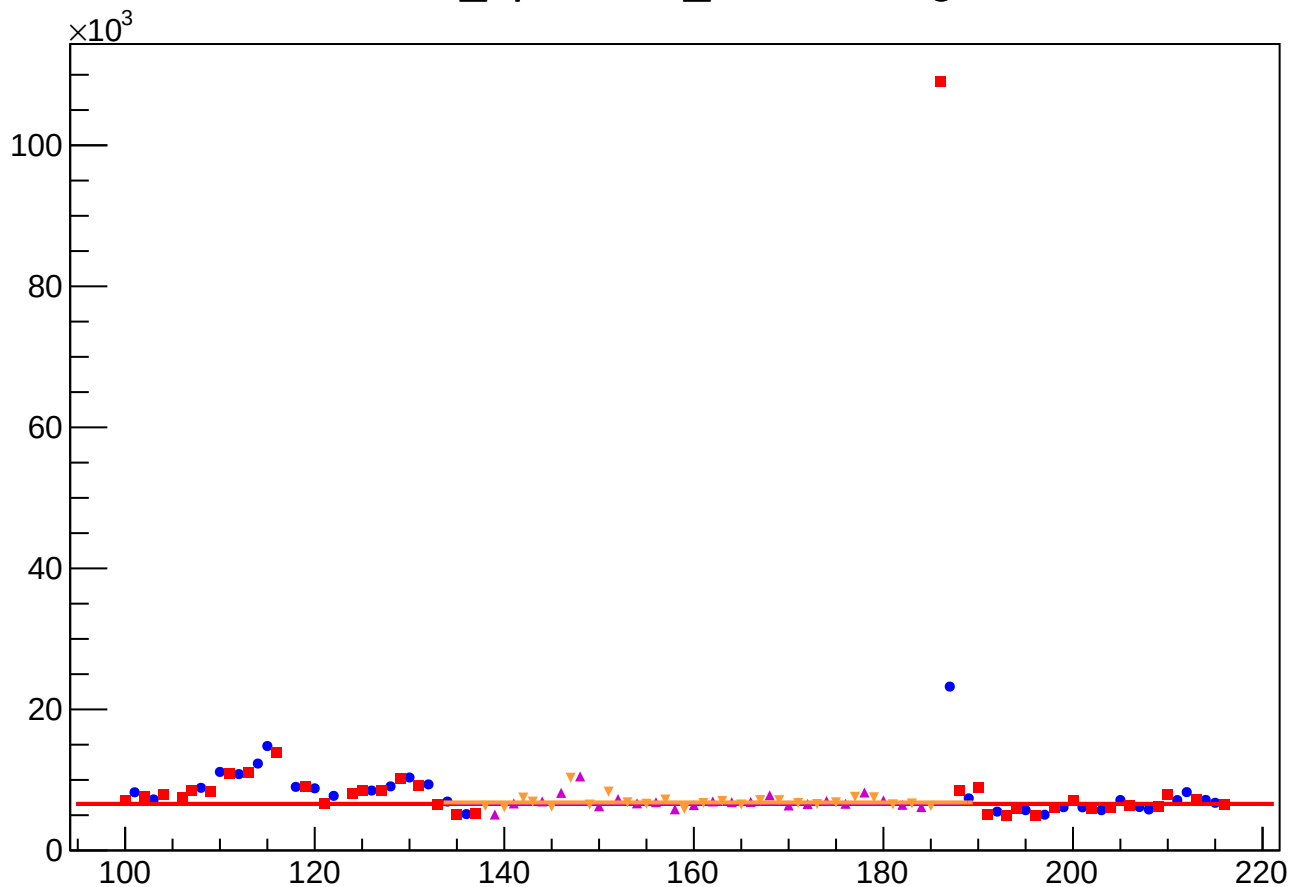
Left In:  $0.269 \pm 1.590$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $2.258 \pm 1.101$   $\chi^2/\text{NDF}$ : 48.9/55

All:  $2.744 \pm 0.781$   $\chi^2/\text{NDF}$ : 140.9/113

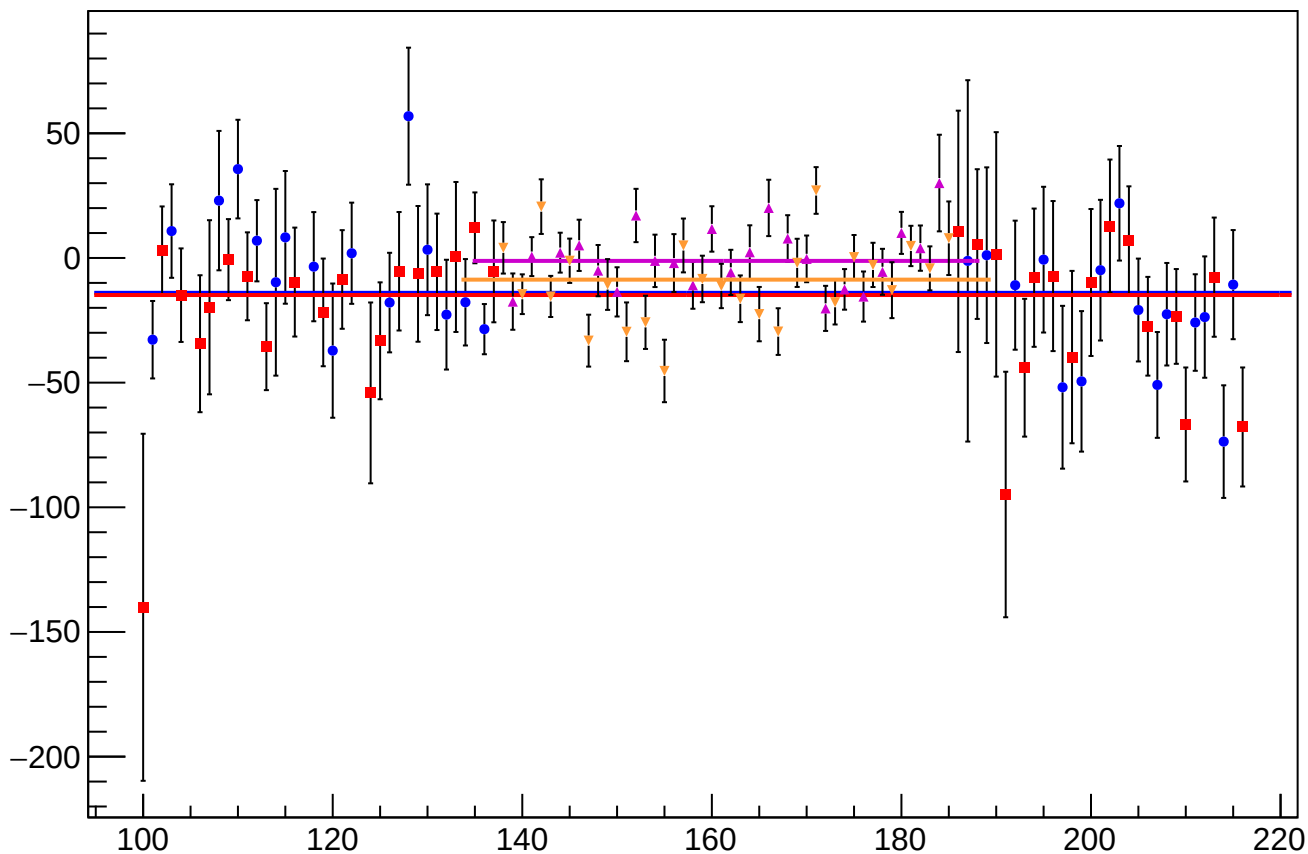
- sign  $3.236 \pm 1.108$   $\chi^2/\text{NDF}$ : 91.6/57

# diff\_bpm4acY\_rms vs Slug



|                                 |                                    |                             |                                    |
|---------------------------------|------------------------------------|-----------------------------|------------------------------------|
| Right In: 6606.419 $\pm$ 1.097  | $\chi^2/\text{NDF}$ : 1794662.7/30 | + sign 6709.015 $\pm$ 0.778 | $\chi^2/\text{NDF}$ : 2206886.9/55 |
| Left Out: 6812.964 $\pm$ 1.104  | $\chi^2/\text{NDF}$ : 394620.8/24  | All: 6684.120 $\pm$ 0.552   | $\chi^2/\text{NDF}$ : 5221449.7/11 |
| Right Out: 6593.812 $\pm$ 1.092 | $\chi^2/\text{NDF}$ : 2395153.7/34 | - sign 6658.896 $\pm$ 0.783 | $\chi^2/\text{NDF}$ : 3012503.3/57 |
| Left In: 6727.864 $\pm$ 1.124   | $\chi^2/\text{NDF}$ : 610037.3/22  |                             |                                    |

# diff\_bpm4ecX\_mean vs Slug



Right In:  $-13.981 \pm 3.849$   $\chi^2/\text{NDF}$ : 41.4/30

Left Out:  $-8.692 \pm 1.936$   $\chi^2/\text{NDF}$ : 61.4/24

Right Out:  $-14.859 \pm 3.958$   $\chi^2/\text{NDF}$ : 31.8/34

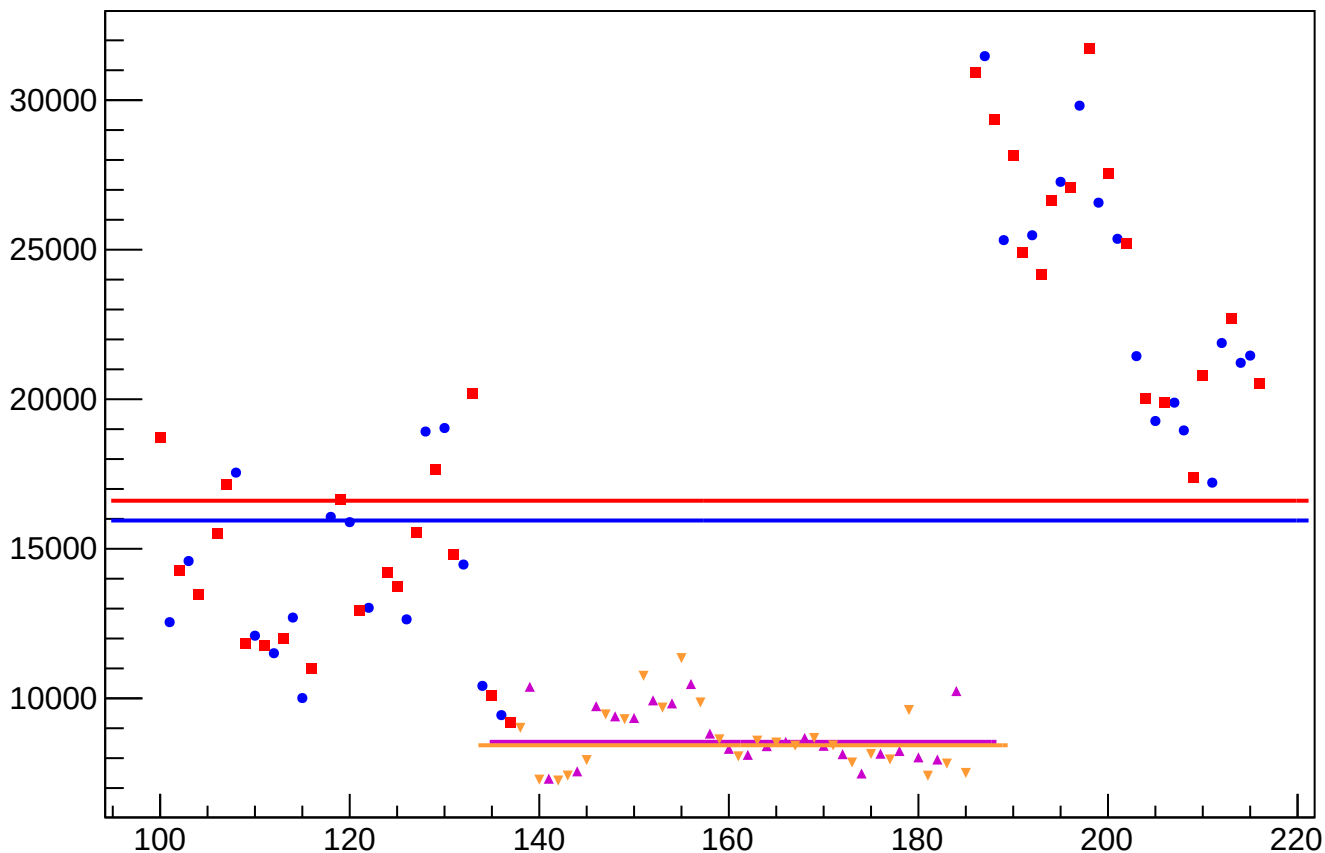
Left In:  $-1.174 \pm 2.012$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-9.760 \pm 1.730$   $\chi^2/\text{NDF}$ : 104.3/55

All:  $-6.978 \pm 1.245$   $\chi^2/\text{NDF}$ : 179.6/113

- sign  $-3.985 \pm 1.794$   $\chi^2/\text{NDF}$ : 69.9/57

# diff\_bpm4ecX\_rms vs Slug



Right In: 15945.970 $\pm$ 2.722  $\chi^2$ /NDF: 3962298.4/30

Left Out: 8430.683 $\pm$ 1.369  $\chi^2$ /NDF:484653.2/24

+ sign 9948.416 $\pm$ 1.223  $\chi^2$ /NDF: 10532378.2/55

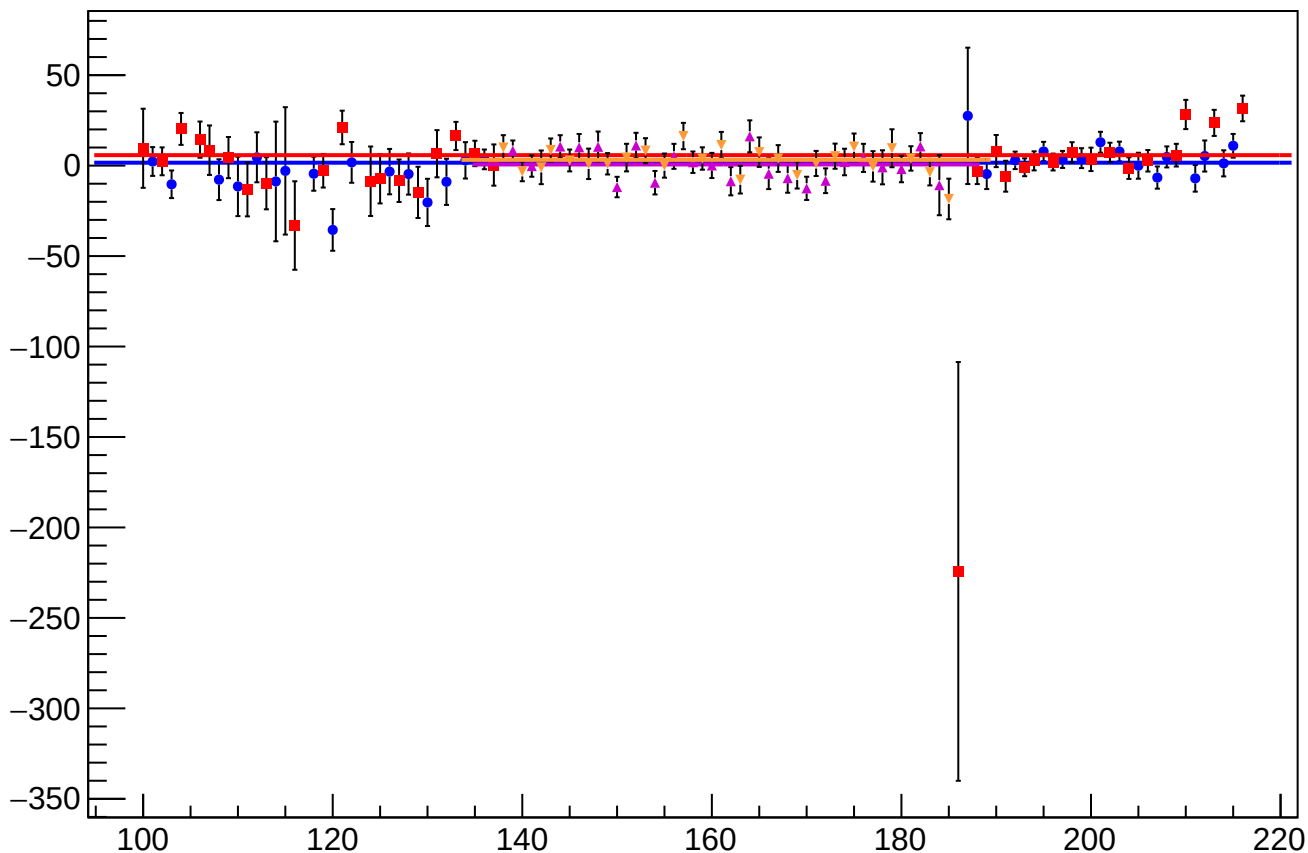
Right Out: 16607.013 $\pm$ 2.799  $\chi^2$ /NDF: 4111796.6/34

All: 10070.231 $\pm$ 0.880  $\chi^2$ /NDF: 21646500.4

Left In: 8545.534 $\pm$ 1.423  $\chi^2$ /NDF:389747.0/22

- sign 10201.260 $\pm$ 1.268  $\chi^2$ /NDF: 11093531.2/57

# diff\_bpm4ecY\_mean vs Slug



Right In:  $1.612 \pm 1.370$   $\chi^2/\text{NDF}$ : 32.6/30

Left Out:  $3.185 \pm 1.435$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $5.781 \pm 1.342$   $\chi^2/\text{NDF}$ : 59.1/34

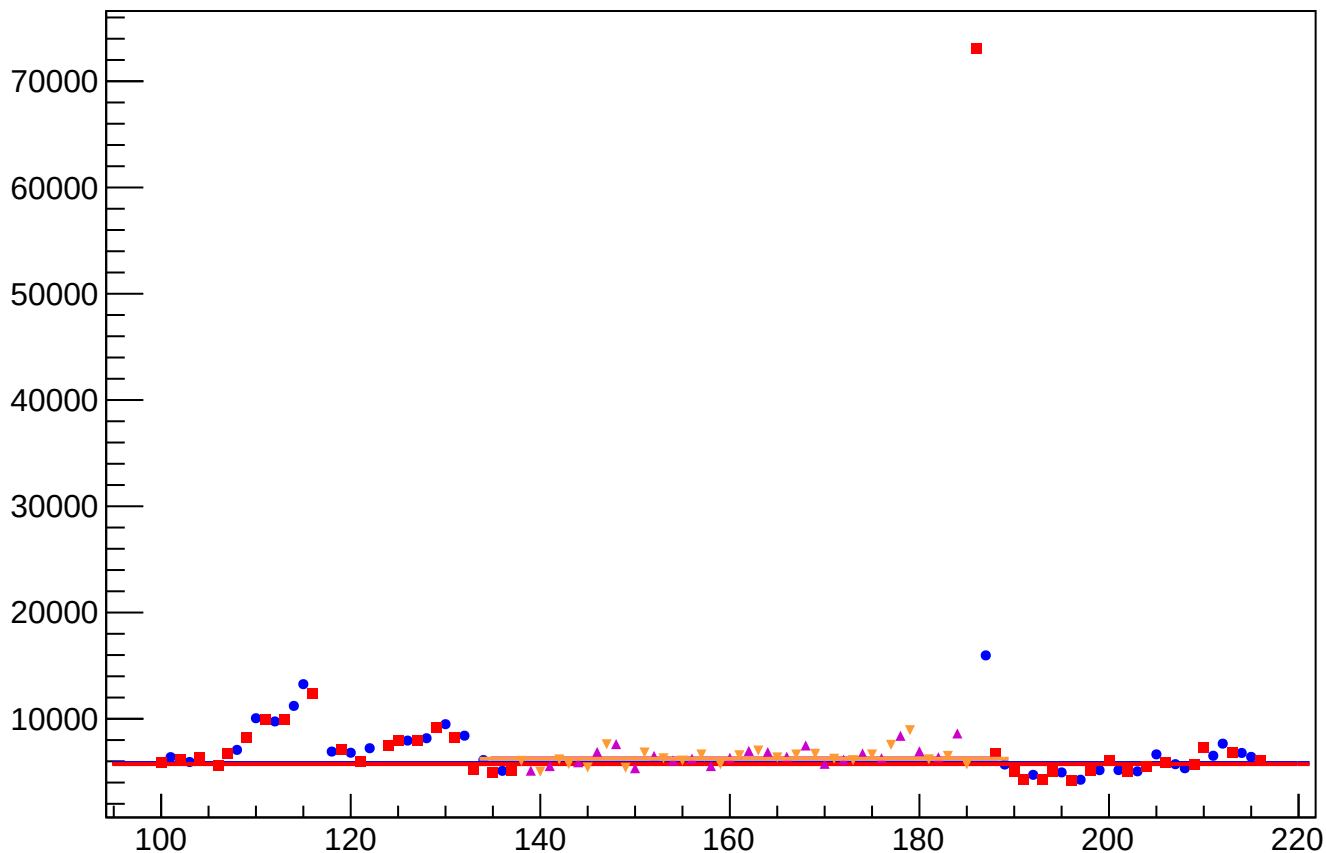
Left In:  $0.633 \pm 1.482$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $2.362 \pm 0.991$   $\chi^2/\text{NDF}$ : 51.9/55

All:  $2.910 \pm 0.702$   $\chi^2/\text{NDF}$ : 150.0/113

- sign  $3.462 \pm 0.995$   $\chi^2/\text{NDF}$ : 97.6/57

# diff\_bpm4ecY\_rms vs Slug



Right In: 5836.517+/-0.968  $\chi^2/\text{NDF}$ : 1779970.0/30

Left Out: 6237.931+/-1.015  $\chi^2/\text{NDF}$ : 507726.8/24

Right Out: 5737.115+/-0.949  $\chi^2/\text{NDF}$ : 2416129.6/34

Left In: 6268.263+/-1.048  $\chi^2/\text{NDF}$ : 524326.6/22

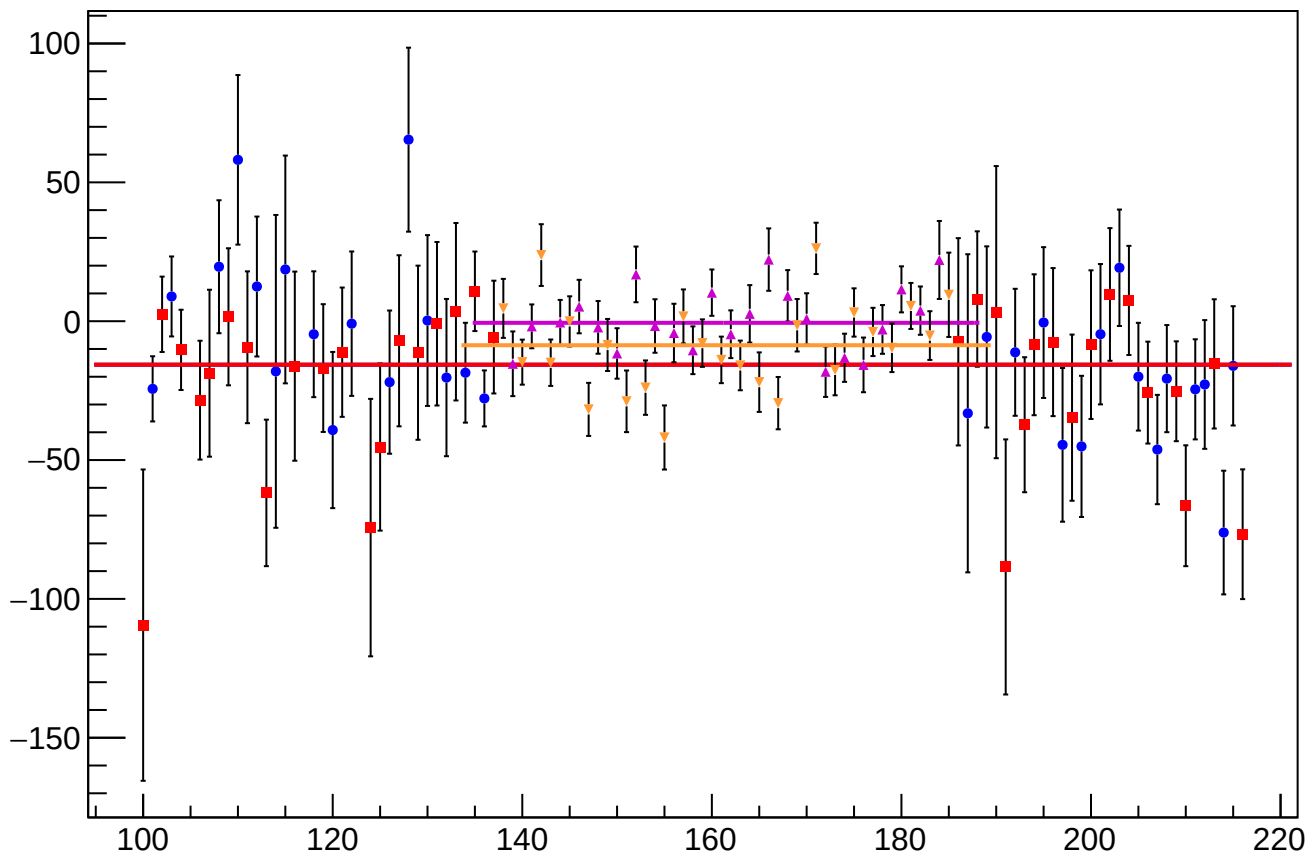
+ sign 6027.905+/-0.701  $\chi^2/\text{NDF}$ : 2369603.0/55

All: 6002.256+/-0.496  $\chi^2/\text{NDF}$ : 5453962.4/11

- sign 5976.407+/-0.703  $\chi^2/\text{NDF}$ : 3081667.9/57



# diff\_bpm1X\_mean vs Slug



Right In:  $-15.664 \pm 3.835$   $\chi^2/\text{NDF}$ : 38.6/30

Left Out:  $-8.650 \pm 1.875$   $\chi^2/\text{NDF}$ : 63.0/24

Right Out:  $-15.661 \pm 4.000$   $\chi^2/\text{NDF}$ : 36.1/34

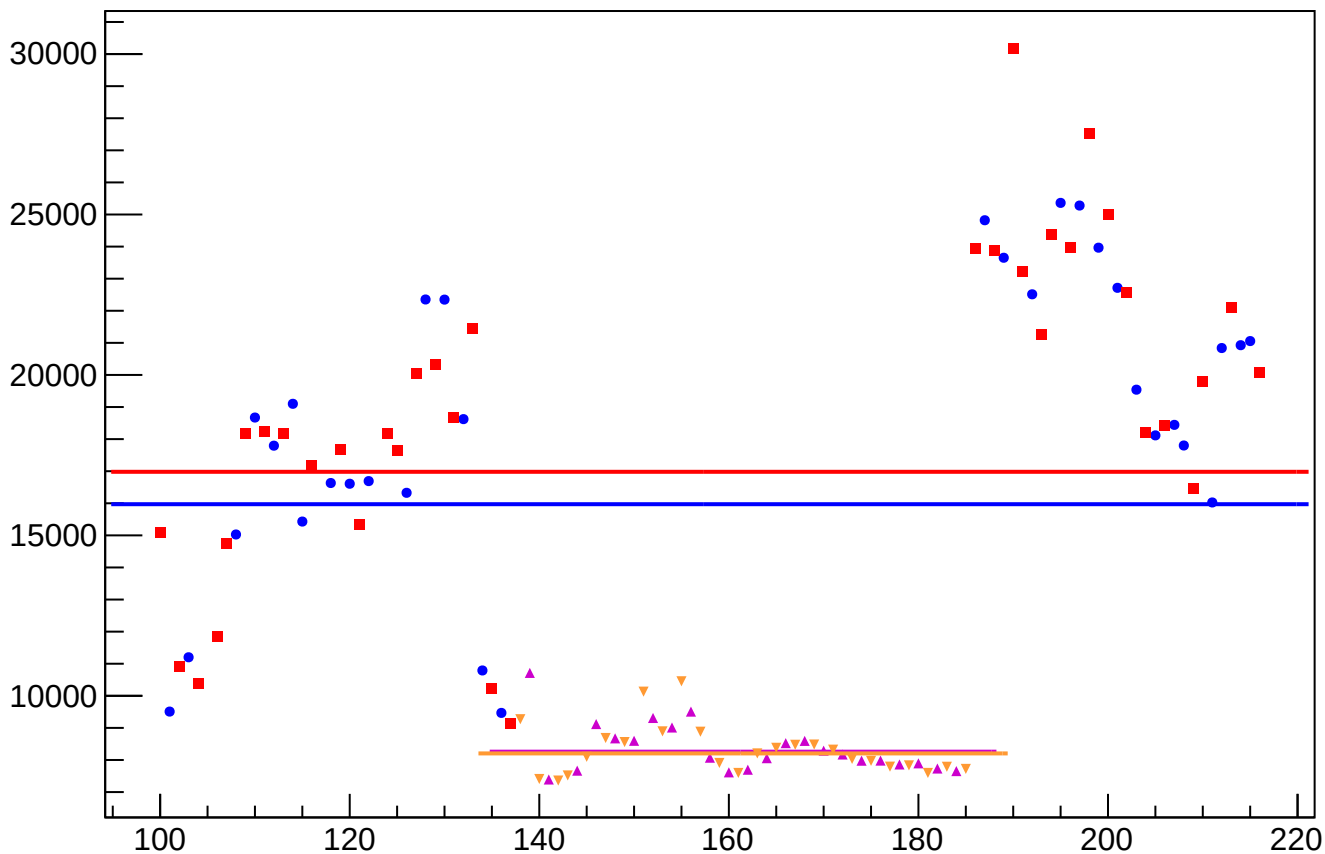
Left In:  $-0.583 \pm 1.939$   $\chi^2/\text{NDF}$ : 28.5/22

+ sign  $-10.003 \pm 1.685$   $\chi^2/\text{NDF}$ : 104.4/55

All:  $-6.842 \pm 1.212$   $\chi^2/\text{NDF}$ : 187.8/113

- sign  $-3.452 \pm 1.745$   $\chi^2/\text{NDF}$ : 76.1/57

# diff\_bpm1X\_rms vs Slug



Right In: 15971.566 $\pm$ 2.712  $\chi^2$ /NDF: 3601576.4/30

Left Out: 8204.502 $\pm$ 1.326  $\chi^2$ /NDF: 272958.7/24

+ sign 9702.805 $\pm$ 1.191  $\chi^2$ /NDF: 10494381.4/55

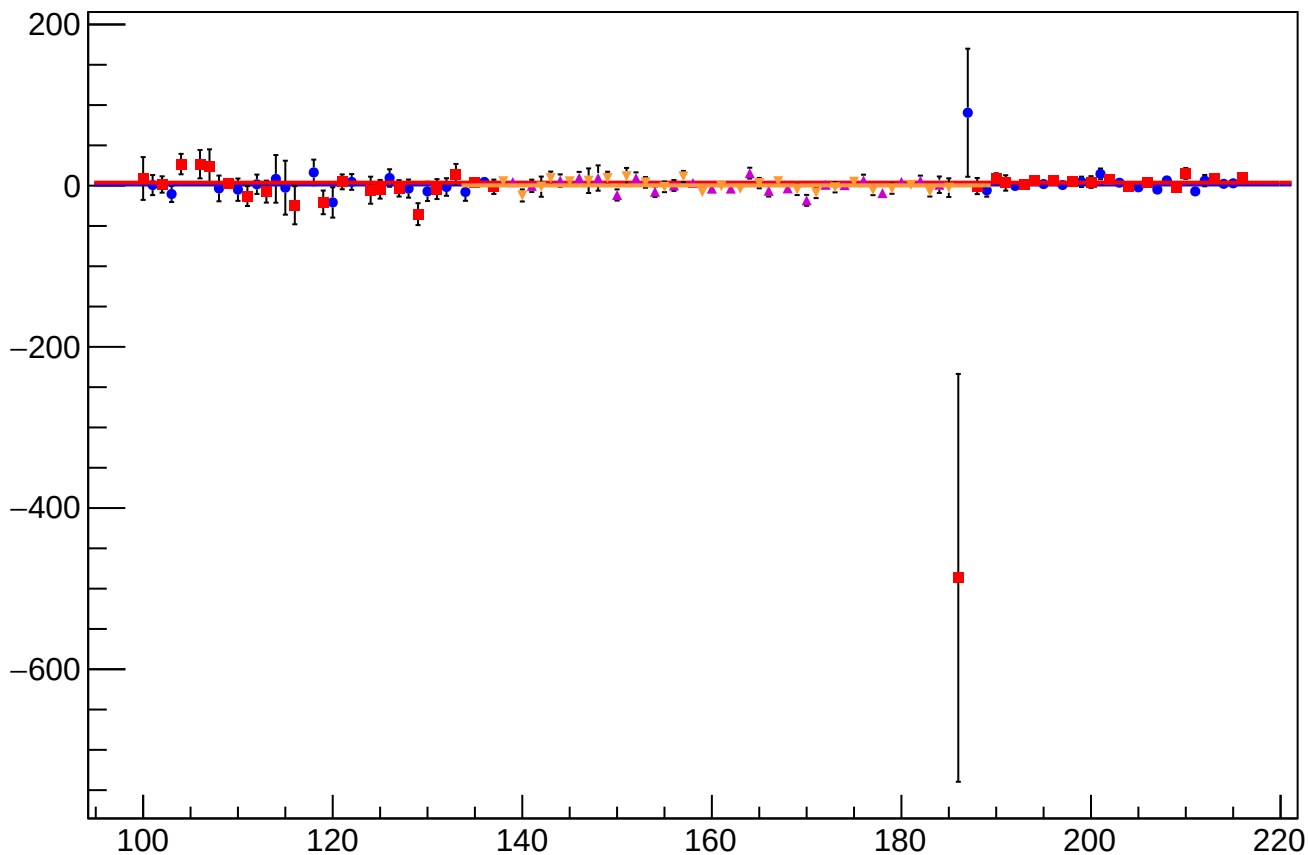
Right Out: 16981.413 $\pm$ 2.828  $\chi^2$ /NDF: 3290496.8/34

All: 9806.969 $\pm$ 0.857  $\chi^2$ /NDF: 21759479.7/1

- sign 9918.699 $\pm$ 1.234  $\chi^2$ /NDF: 11249248.4/57

Left In: 8259.162 $\pm$ 1.371  $\chi^2$ /NDF: 257333.8/22

# diff\_bpm1Y\_mean vs Slug



Right In: 1.473 $\pm$ 1.324  $\chi^2$ /NDF: 18.7/30

Left Out: 0.353 $\pm$ 1.322  $\chi^2$ /NDF:21.5/24

Right Out: 3.760 $\pm$ 1.295  $\chi^2$ /NDF: 35.9/34

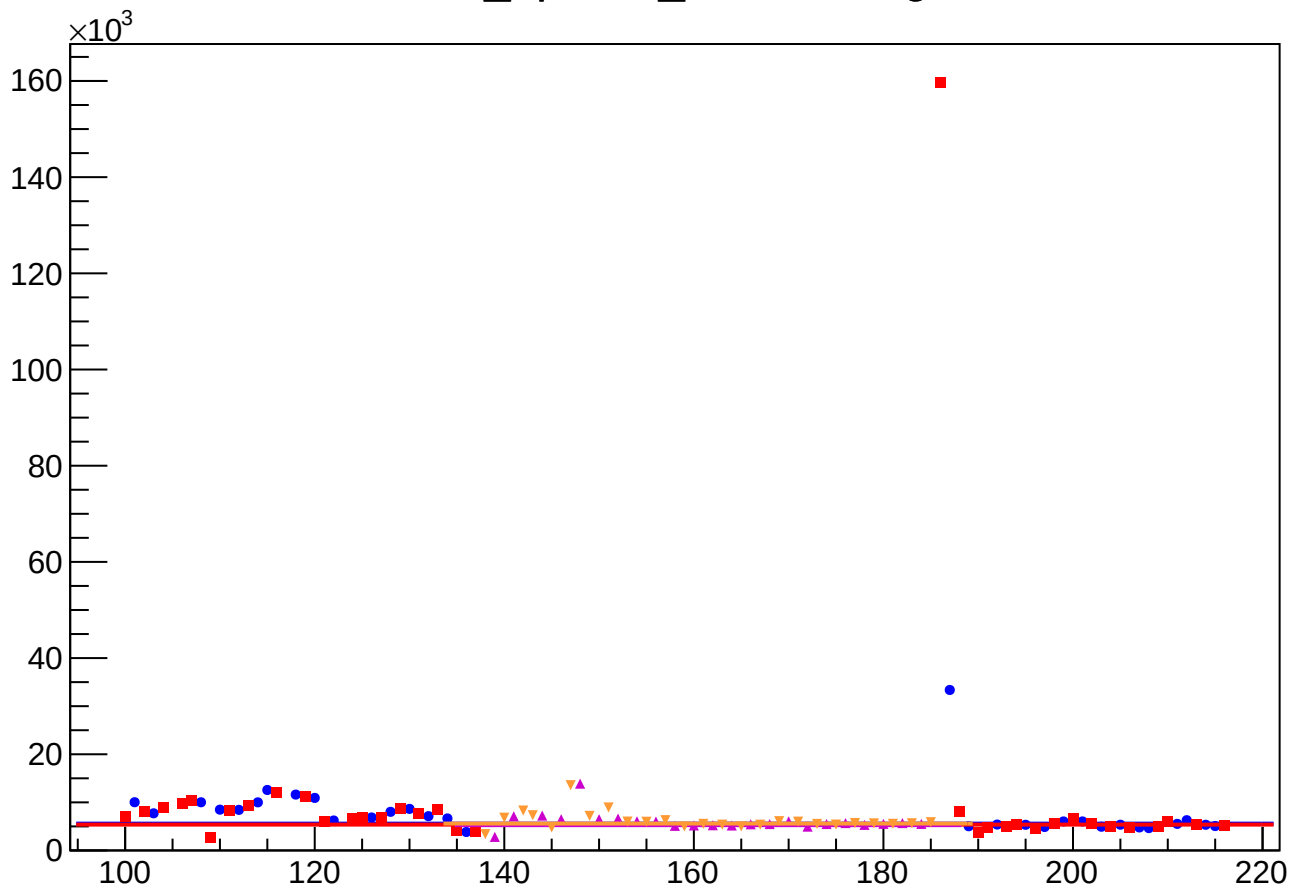
Left In: 0.709 $\pm$ 1.291  $\chi^2$ /NDF:29.9/22

+ sign 0.912 $\pm$ 0.935  $\chi^2$ /NDF: 40.5/55

All: 1.586 $\pm$ 0.654  $\chi^2$ /NDF: 110.1/113

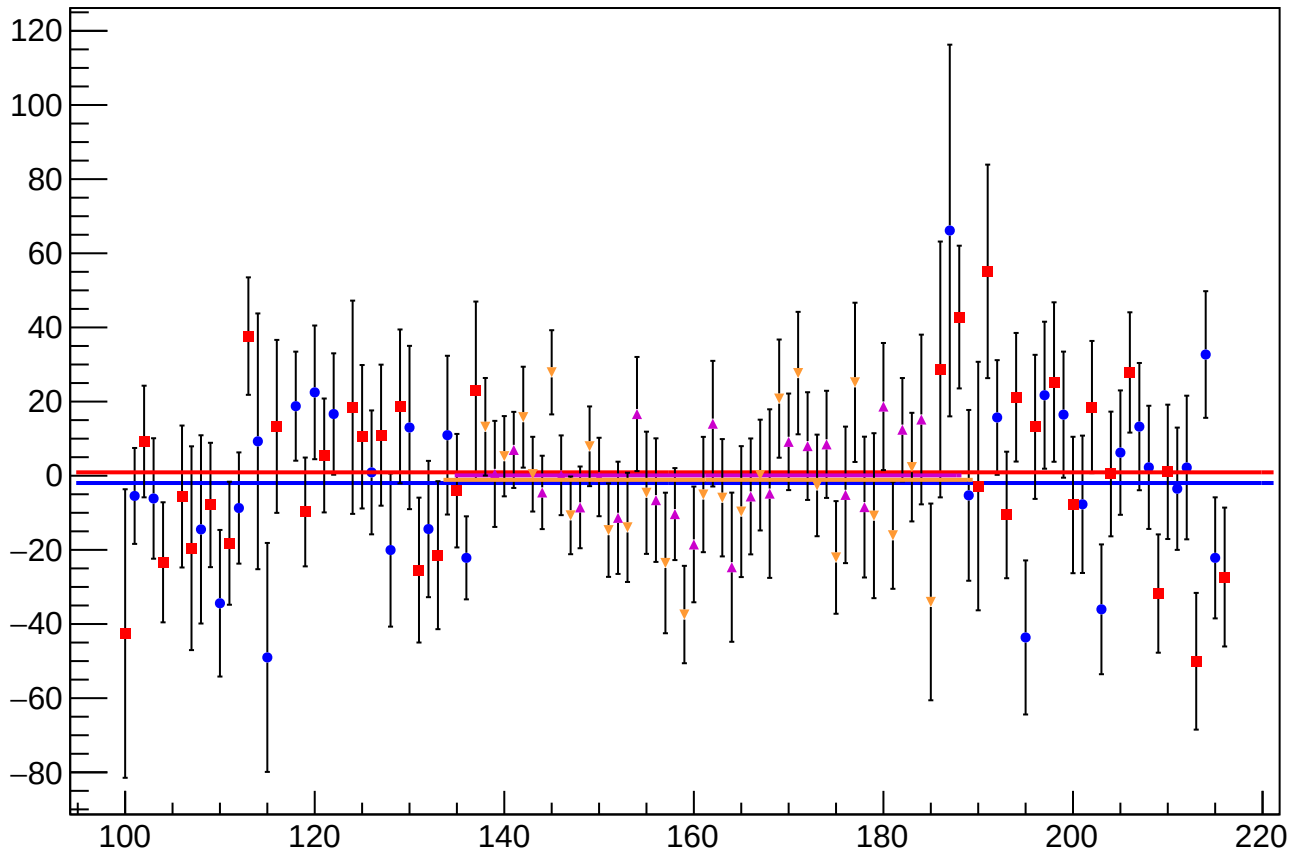
- sign 2.230 $\pm$ 0.914  $\chi^2$ /NDF: 68.6/57

# diff\_bpm1Y\_rms vs Slug



Right In:  $5576.470 \pm 0.936$   $\chi^2/\text{NDF}: 2478912.4/30$  + sign  $5585.504 \pm 0.661$   $\chi^2/\text{NDF}: 4263357.4/55$   
 Left Out:  $5594.503 \pm 0.935$   $\chi^2/\text{NDF}: 1784259.1/24$  All:  $5449.000 \pm 0.462$   $\chi^2/\text{NDF}: 10598390.7/1$   
 Right Out:  $5374.691 \pm 0.916$   $\chi^2/\text{NDF}: 3818645.9/34$  - sign  $5318.541 \pm 0.647$   $\chi^2/\text{NDF}: 6251741.4/57$   
 Left In:  $5262.754 \pm 0.913$   $\chi^2/\text{NDF}: 2425604.2/22$

# diff\_bpm11X\_mean vs Slug



Right In:  $-1.965 \pm 3.198$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $-1.111 \pm 2.813$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $0.915 \pm 3.189$   $\chi^2/\text{NDF}$ : 48.5/34

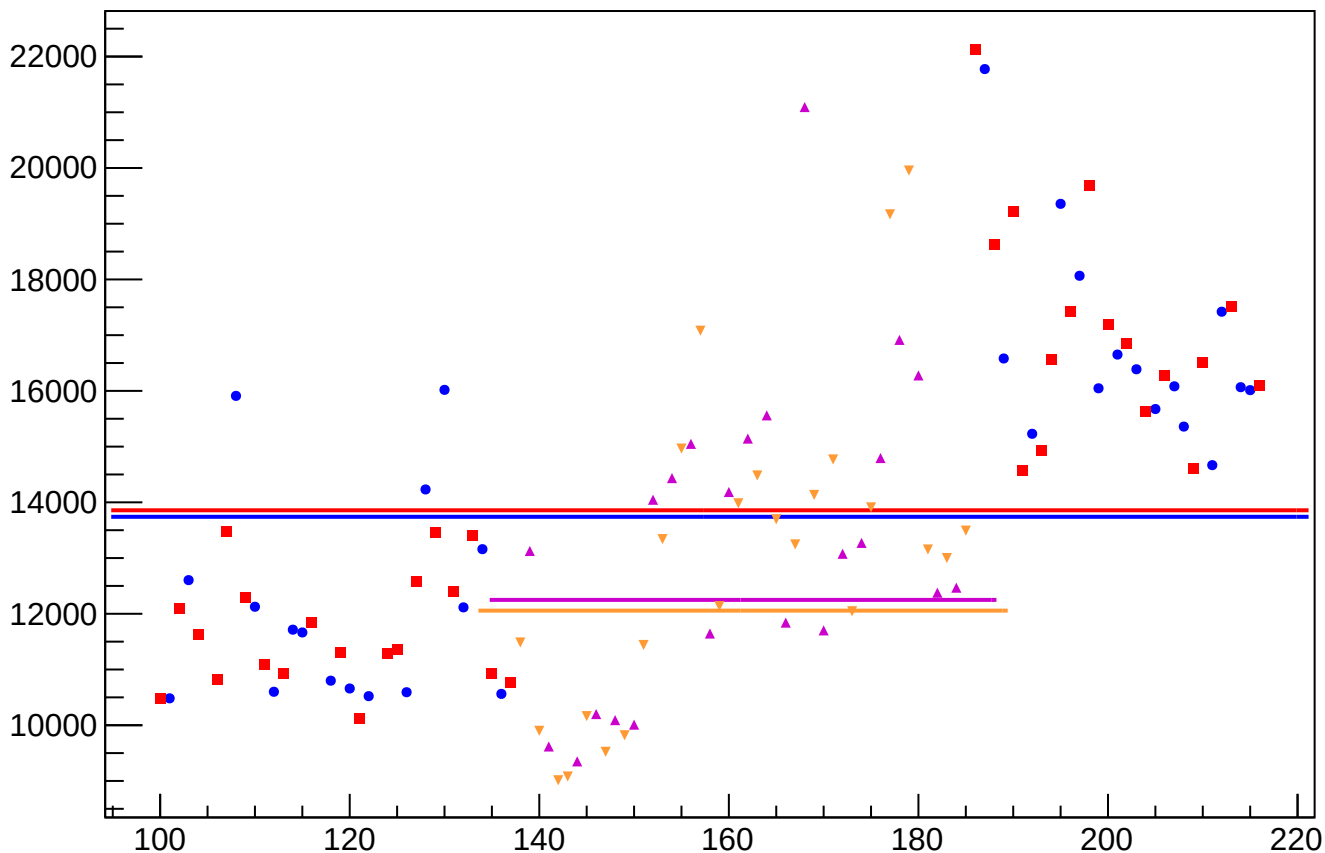
Left In:  $0.084 \pm 2.926$   $\chi^2/\text{NDF}$ : 11.5/22

+ sign  $-1.483 \pm 2.112$   $\chi^2/\text{NDF}$ : 70.4/55

All:  $-0.530 \pm 1.509$   $\chi^2/\text{NDF}$ : 130.9/113

- sign  $0.464 \pm 2.156$   $\chi^2/\text{NDF}$ : 60.0/57

# diff\_bpm11X\_rms vs Slug



Right In: 13740.435 $\pm$ 2.261  $\chi^2$ /NDF: 1466249.7/30

Left Out: 12056.714 $\pm$ 1.989  $\chi^2$ /NDF: 1561738.9/24

Right Out: 13857.312 $\pm$ 2.255  $\chi^2$ /NDF: 1549568.2/34

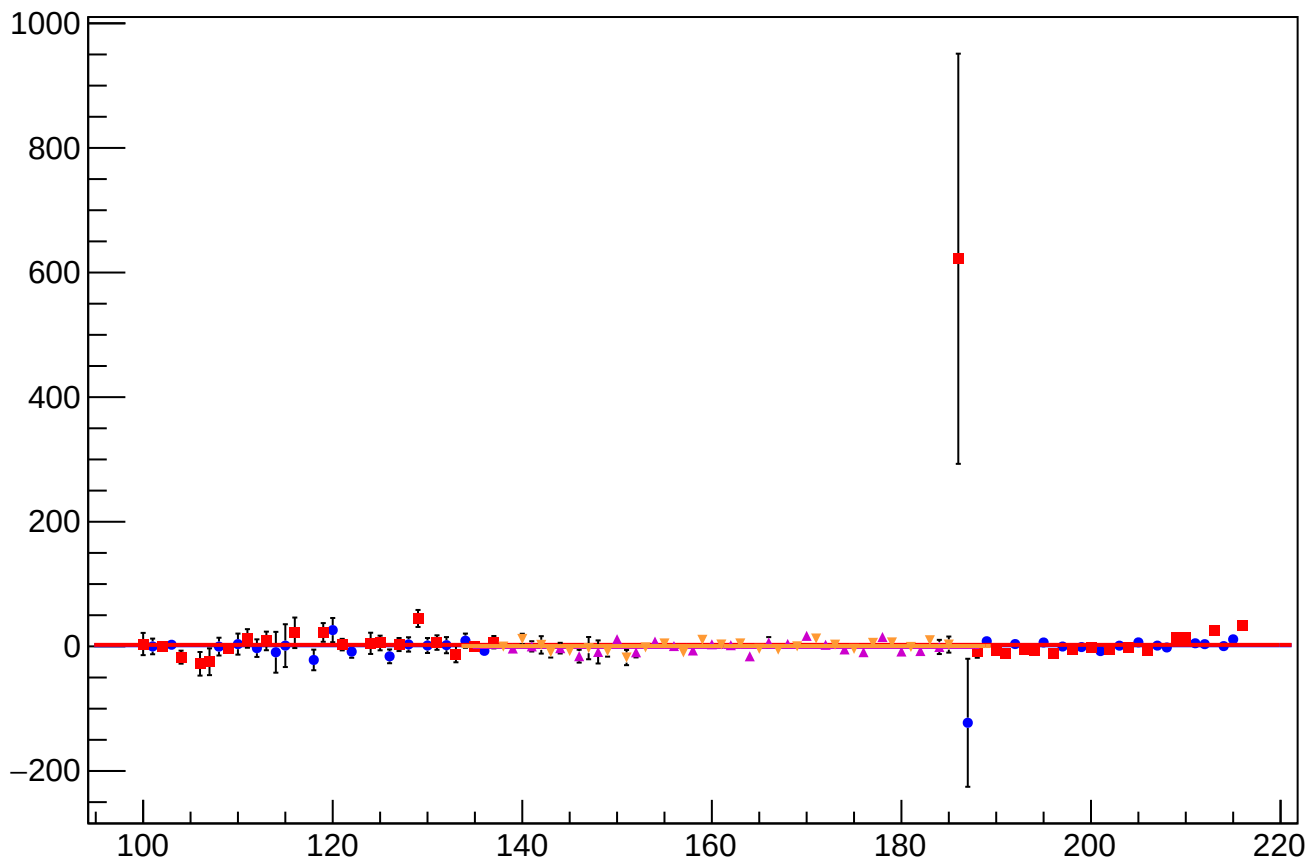
Left In: 12249.109 $\pm$ 2.069  $\chi^2$ /NDF: 1416030.4/22

+ sign 12791.216 $\pm$ 1.494  $\chi^2$ /NDF: 3340547.0/55

All: 12885.764 $\pm$ 1.067  $\chi^2$ /NDF: 6590462.6/100

- sign 12984.284 $\pm$ 1.525  $\chi^2$ /NDF: 3241732.1/57

# diff\_bpm11Y\_mean vs Slug



Right In:  $1.745 \pm 1.098$   $\chi^2/\text{NDF}$ : 26.6/30

Left Out:  $0.526 \pm 1.369$   $\chi^2/\text{NDF}$ : 21.4/24

Right Out:  $2.429 \pm 1.104$   $\chi^2/\text{NDF}$ : 143.9/34

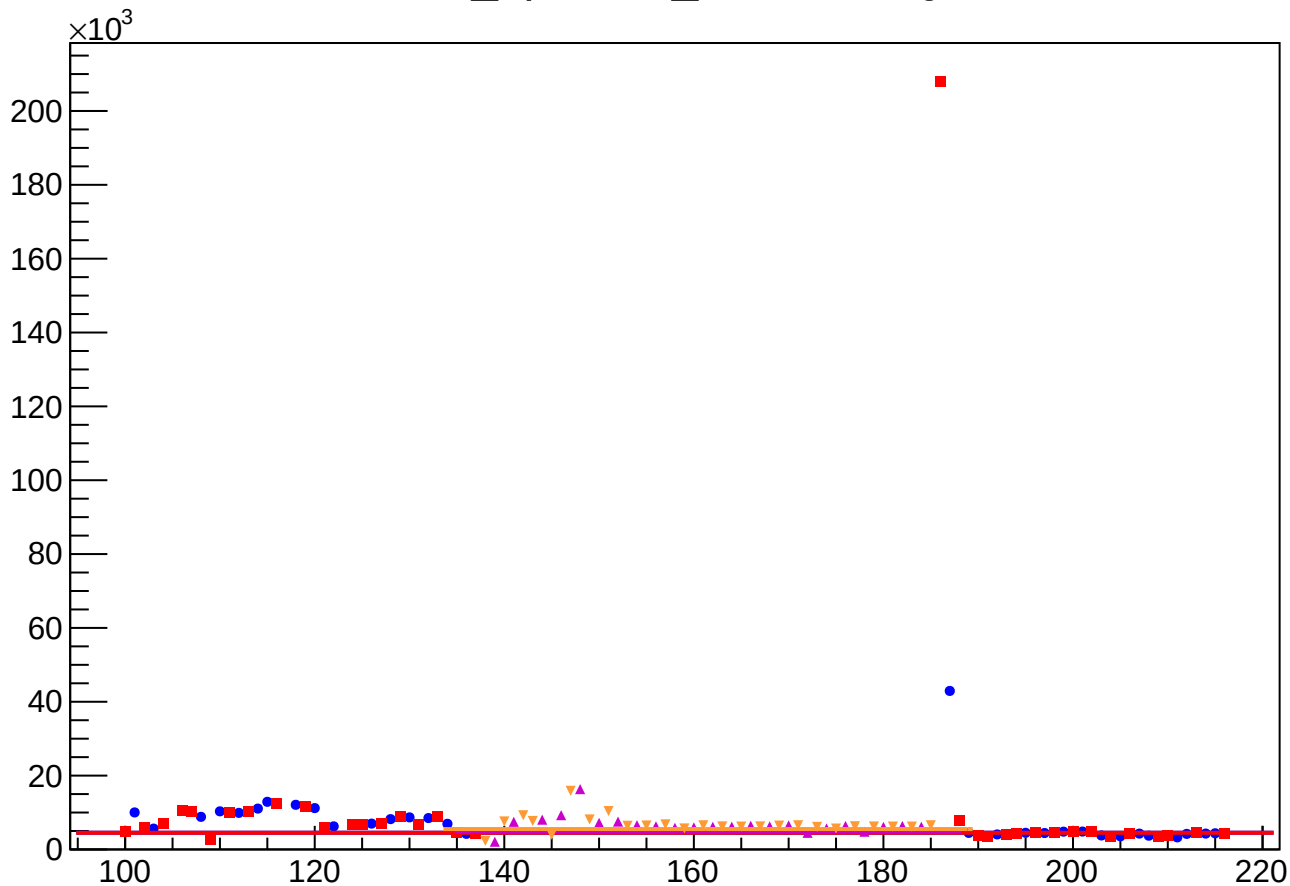
Left In:  $-0.946 \pm 1.294$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $1.268 \pm 0.856$   $\chi^2/\text{NDF}$ : 48.5/55

All:  $1.135 \pm 0.600$   $\chi^2/\text{NDF}$ : 228.5/113

- sign  $1.008 \pm 0.840$   $\chi^2/\text{NDF}$ : 180.0/57

# diff\_bpm11Y\_rms vs Slug

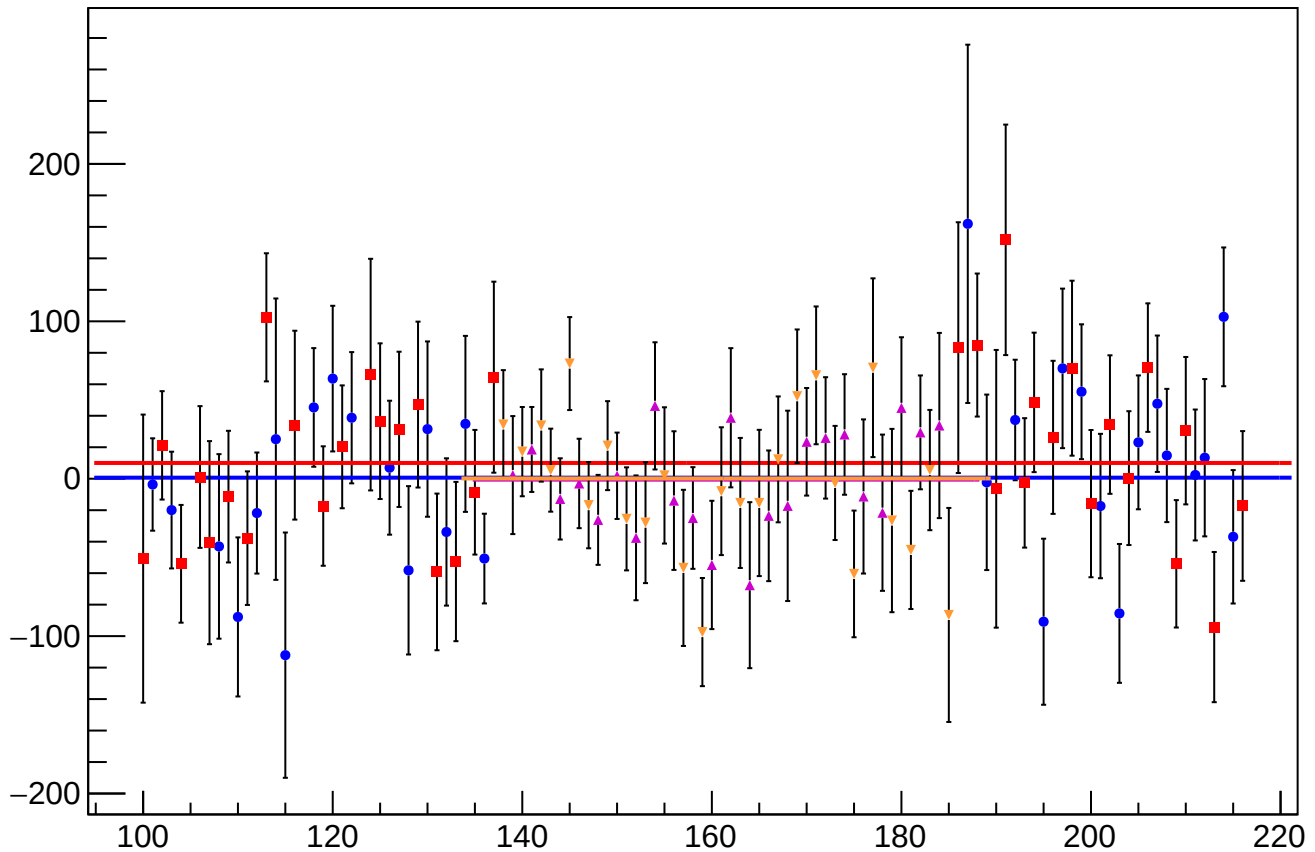


Right In:  $4533.178 \pm 0.776$   $\chi^2/\text{NDF}$ : 3725797.1/30  
 Left Out:  $5527.971 \pm 0.968$   $\chi^2/\text{NDF}$ : 4375722.1/24  
 Right Out:  $4517.044 \pm 0.780$   $\chi^2/\text{NDF}$ : 4234478.1/34  
 Left In:  $4941.993 \pm 0.915$   $\chi^2/\text{NDF}$ : 5936108.3/22

+ sign  $4922.603 \pm 0.606$   $\chi^2/\text{NDF}$ : 8744429.2/55  
 All:  $4807.074 \pm 0.424$   $\chi^2/\text{NDF}$ : 19111241.4/100  
 - sign  $4695.962 \pm 0.594$   $\chi^2/\text{NDF}$ : 10295406.0/57



# diff\_bpm12X\_mean vs Slug



Right In:  $0.663 \pm 8.013$   $\chi^2/\text{NDF}$ : 37.5/30

Left Out:  $0.168 \pm 7.375$   $\chi^2/\text{NDF}$ : 31.1/24

Right Out:  $10.013 \pm 7.976$   $\chi^2/\text{NDF}$ : 37.8/34

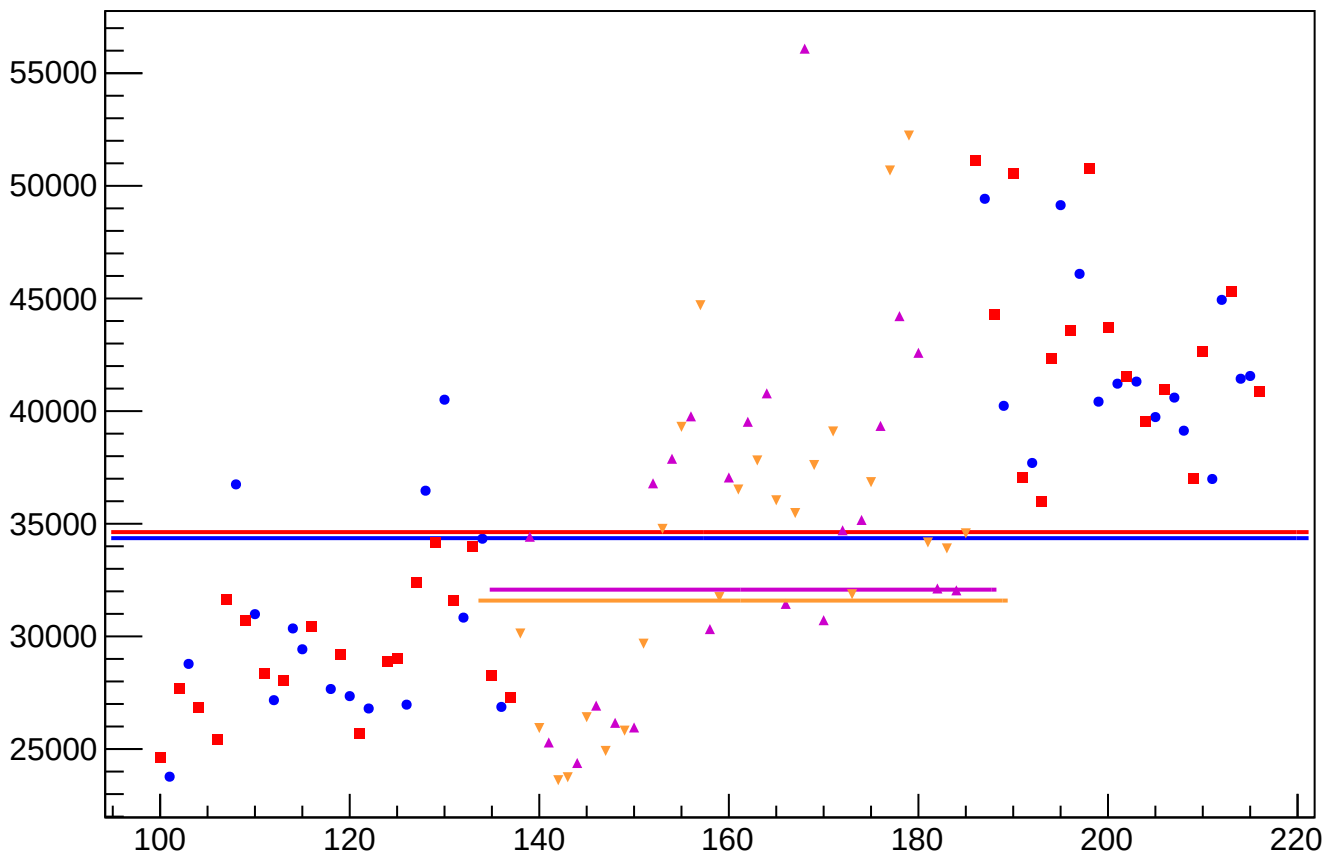
Left In:  $-0.586 \pm 7.667$   $\chi^2/\text{NDF}$ : 12.8/22

+ sign  $0.395 \pm 5.426$   $\chi^2/\text{NDF}$ : 68.6/55

All:  $2.412 \pm 3.872$   $\chi^2/\text{NDF}$ : 120.4/113

- sign  $4.504 \pm 5.527$   $\chi^2/\text{NDF}$ : 51.5/57

# diff\_bpm12X\_rms vs Slug



Right In: 34360.771 $\pm$ 5.666  $\chi^2$ /NDF: 1588783.8/30

Left Out: 31589.841 $\pm$ 5.215  $\chi^2$ /NDF:1590867.7/24

Right Out: 34629.345 $\pm$ 5.640  $\chi^2$ /NDF: 1620800.2/34

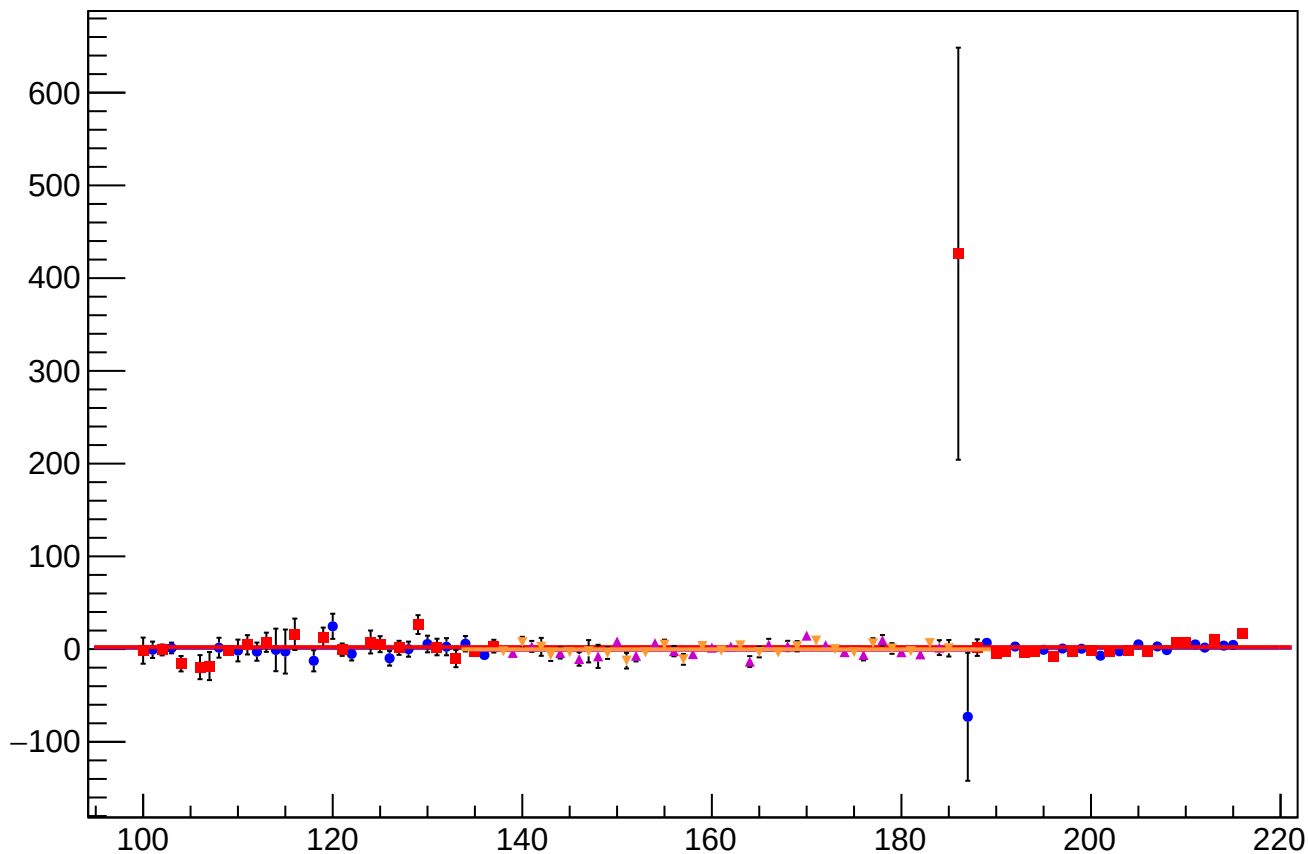
Left In: 32075.078 $\pm$ 5.421  $\chi^2$ /NDF:1455714.6/22

+ sign 32860.546 $\pm$ 3.837  $\chi^2$ /NDF: 3309131.1/55

All: 33077.084 $\pm$ 2.738  $\chi^2$ /NDF: 6498741.1/100

- sign 33301.755 $\pm$ 3.908  $\chi^2$ /NDF: 3183121.0/57

# diff\_bpm12Y\_mean vs Slug



Right In: 1.481 $\pm$ 0.634  $\chi^2$ /NDF: 37.0/30

Left Out: -0.226 $\pm$ 1.094  $\chi^2$ /NDF: 19.9/24

Right Out: 2.091 $\pm$ 0.674  $\chi^2$ /NDF: 117.1/34

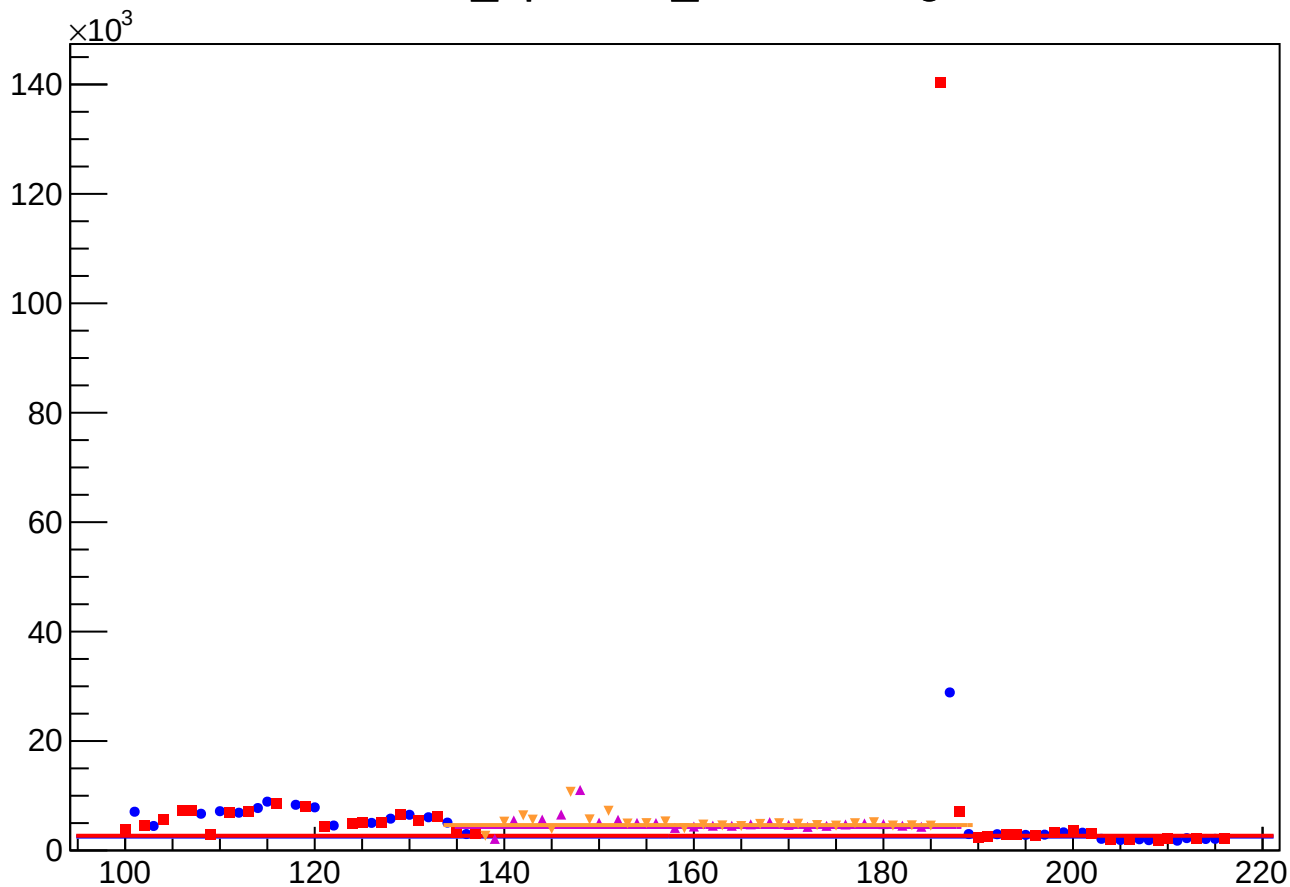
Left In: -0.788 $\pm$ 1.061  $\chi^2$ /NDF: 33.8/22

+ sign 1.051 $\pm$ 0.549  $\chi^2$ /NDF: 58.6/55

All: 1.153 $\pm$ 0.395  $\chi^2$ /NDF: 214.8/113

- sign 1.262 $\pm$ 0.569  $\chi^2$ /NDF: 156.1/57

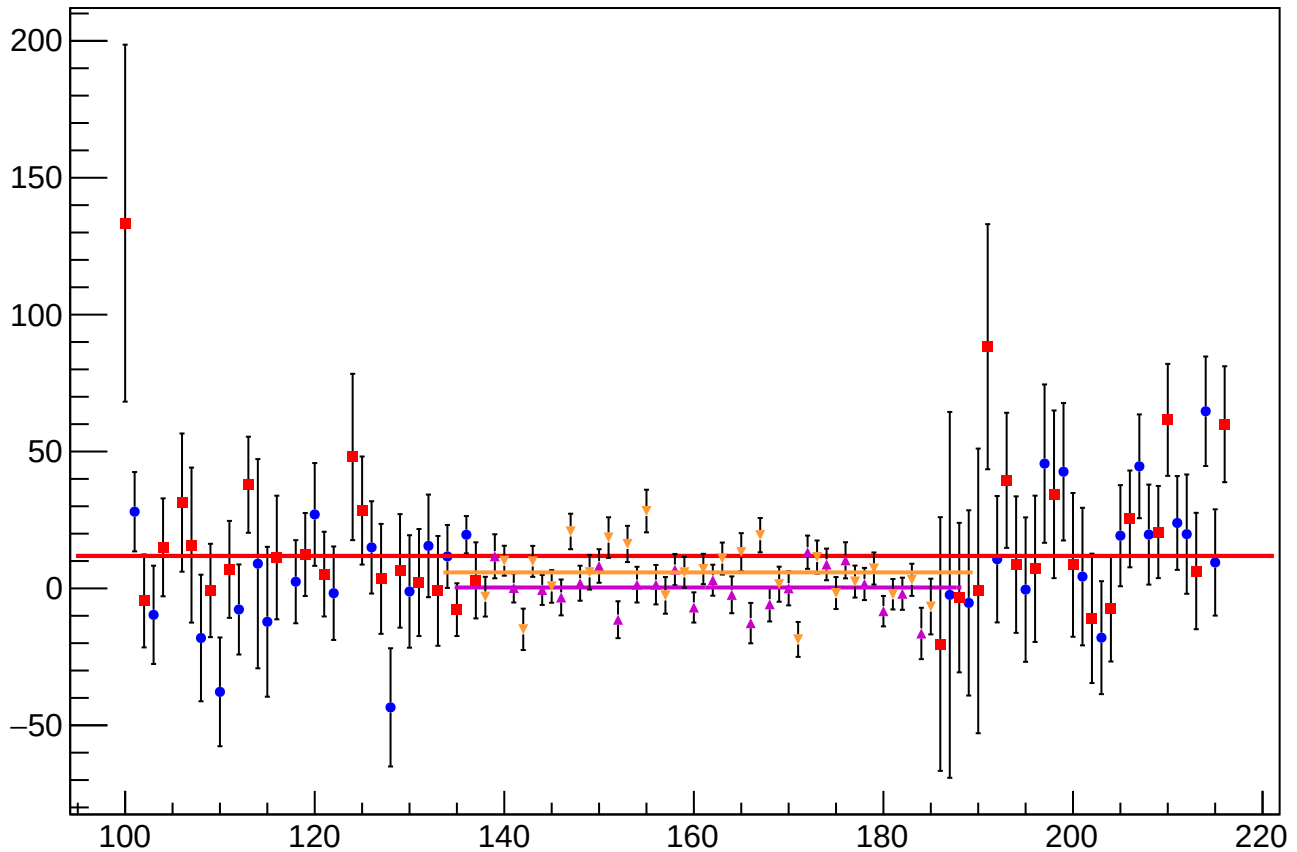
# diff\_bpm12Y\_rms vs Slug



Right In:  $2531.613 \pm 0.449$   $\chi^2/\text{NDF}$ : 6010723.7/30  
 Left Out:  $4637.399 \pm 0.774$   $\chi^2/\text{NDF}$ : 1763103.2/24  
 Right Out:  $2687.805 \pm 0.477$   $\chi^2/\text{NDF}$ : 6365611.3/34  
 Left In:  $4295.074 \pm 0.750$   $\chi^2/\text{NDF}$ : 3095610.0/22

+ sign  $3061.535 \pm 0.388$   $\chi^2/\text{NDF}$ : 13319909.1/55  
 All:  $3104.384 \pm 0.279$   $\chi^2/\text{NDF}$ : 26077230.4/100  
 - sign  $3150.459 \pm 0.402$   $\chi^2/\text{NDF}$ : 12732015.5/57

# diff\_bpm16X\_mean vs Slug



Right In:  $11.896 \pm 3.178$   $\chi^2/\text{NDF}: 39.3/30$

Left Out:  $5.849 \pm 1.257$   $\chi^2/\text{NDF}: 60.0/24$

Right Out:  $11.821 \pm 3.383$   $\chi^2/\text{NDF}: 35.2/34$

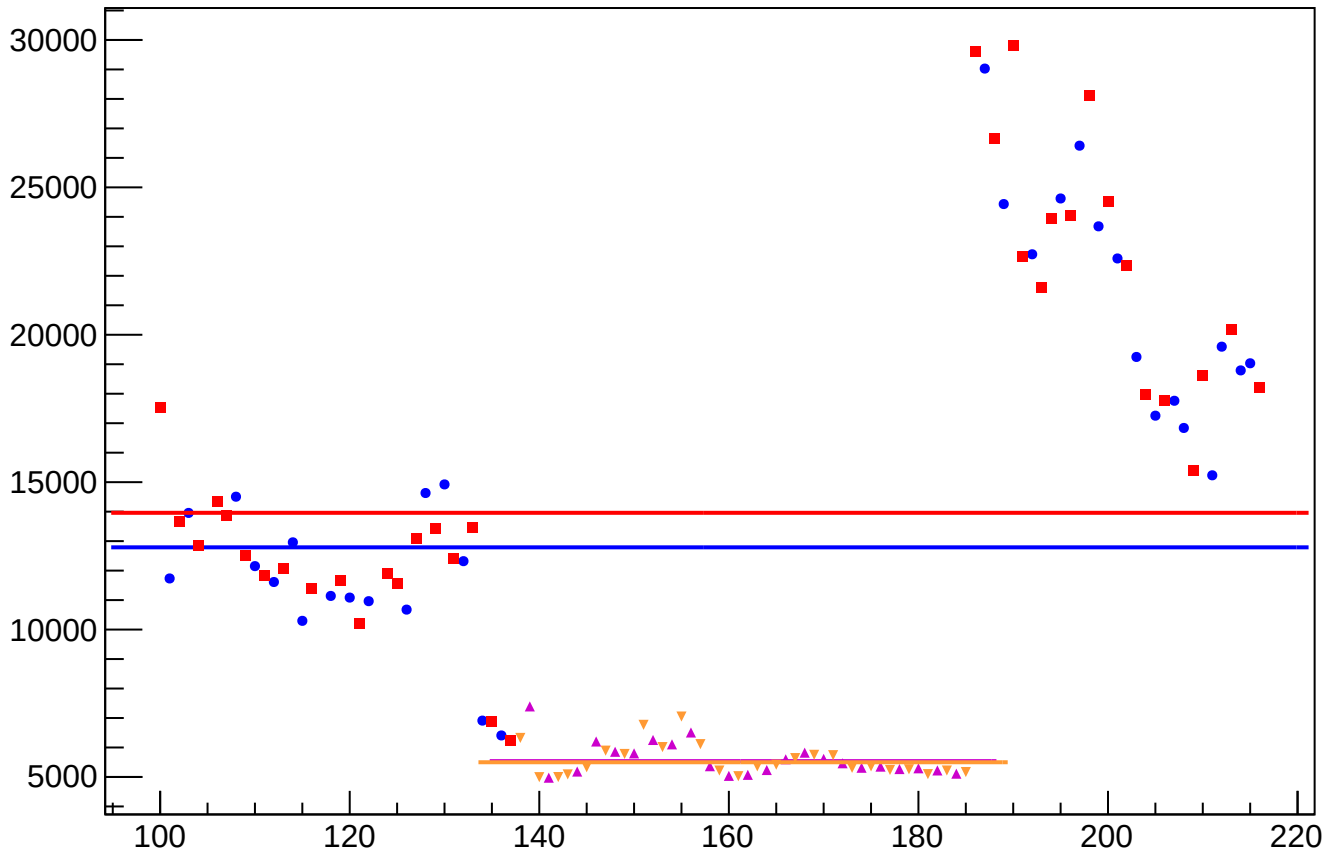
Left In:  $0.337 \pm 1.301$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $6.668 \pm 1.169$   $\chi^2/\text{NDF}: 102.5/55$

All:  $4.333 \pm 0.842$   $\chi^2/\text{NDF}: 185.3/113$

- sign  $1.816 \pm 1.214$   $\chi^2/\text{NDF}: 74.6/57$

# diff\_bpm16X\_rms vs Slug



Right In: 12789.483+/-2.247  $\chi^2/\text{NDF}$ : 5888742.9/30

Left Out: 5499.215+/-0.889  $\chi^2/\text{NDF}$ : 297719.4/24

Right Out: 13960.512+/-2.392  $\chi^2/\text{NDF}$ : 5293135.9/34

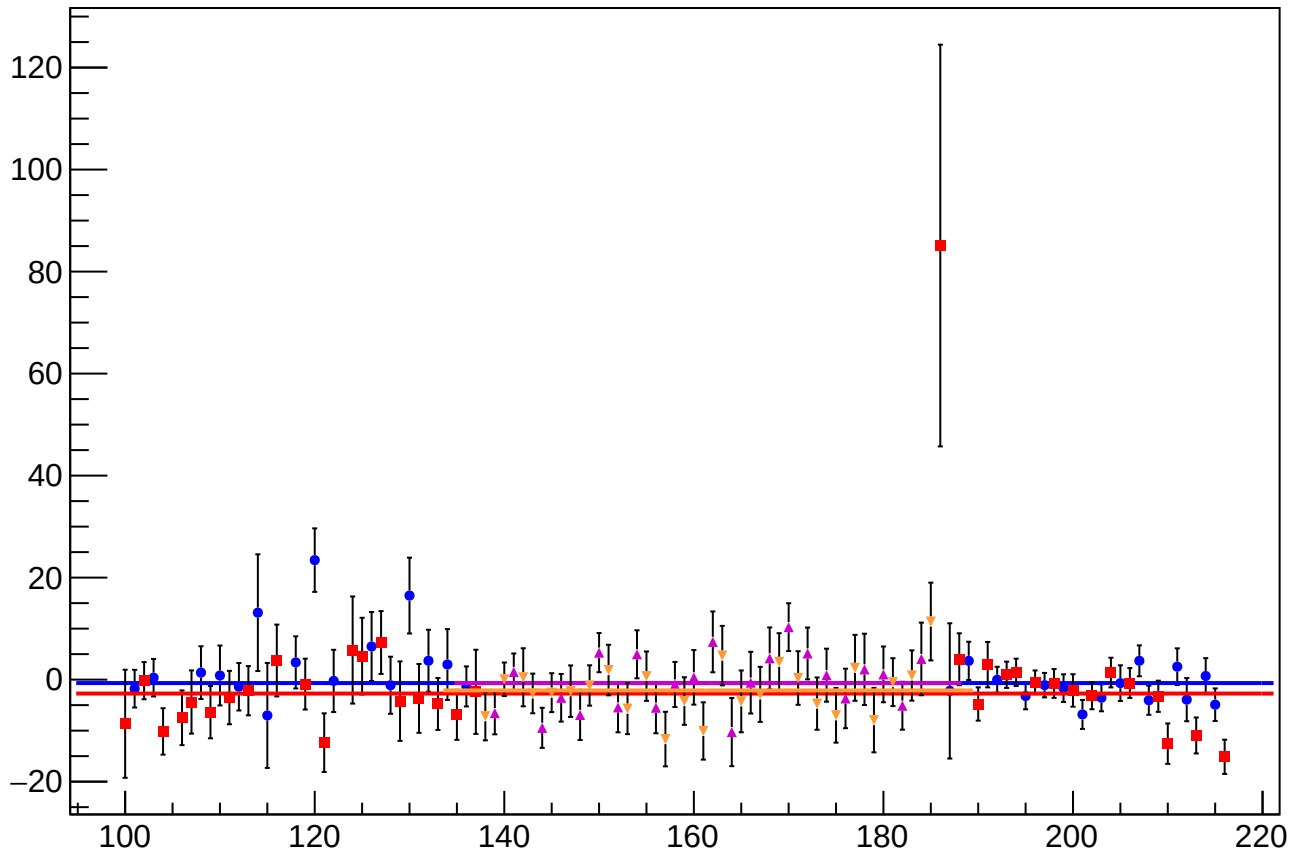
Left In: 5537.777+/-0.920  $\chi^2/\text{NDF}$ : 304062.1/22

+ sign 6486.258+/-0.827  $\chi^2/\text{NDF}$ : 15288942.6/55

All: 6551.820+/-0.596  $\chi^2/\text{NDF}$ : 31698628.6/100

- sign 6622.520+/-0.859  $\chi^2/\text{NDF}$ : 16396615.6/57

# diff\_bpm16Y\_mean vs Slug



Right In:  $-0.674 \pm 0.685$   $\chi^2/\text{NDF}$ : 40.3/30

Left Out:  $-2.116 \pm 0.987$   $\chi^2/\text{NDF}$ : 17.5/24

Right Out:  $-2.729 \pm 0.676$   $\chi^2/\text{NDF}$ : 56.2/34

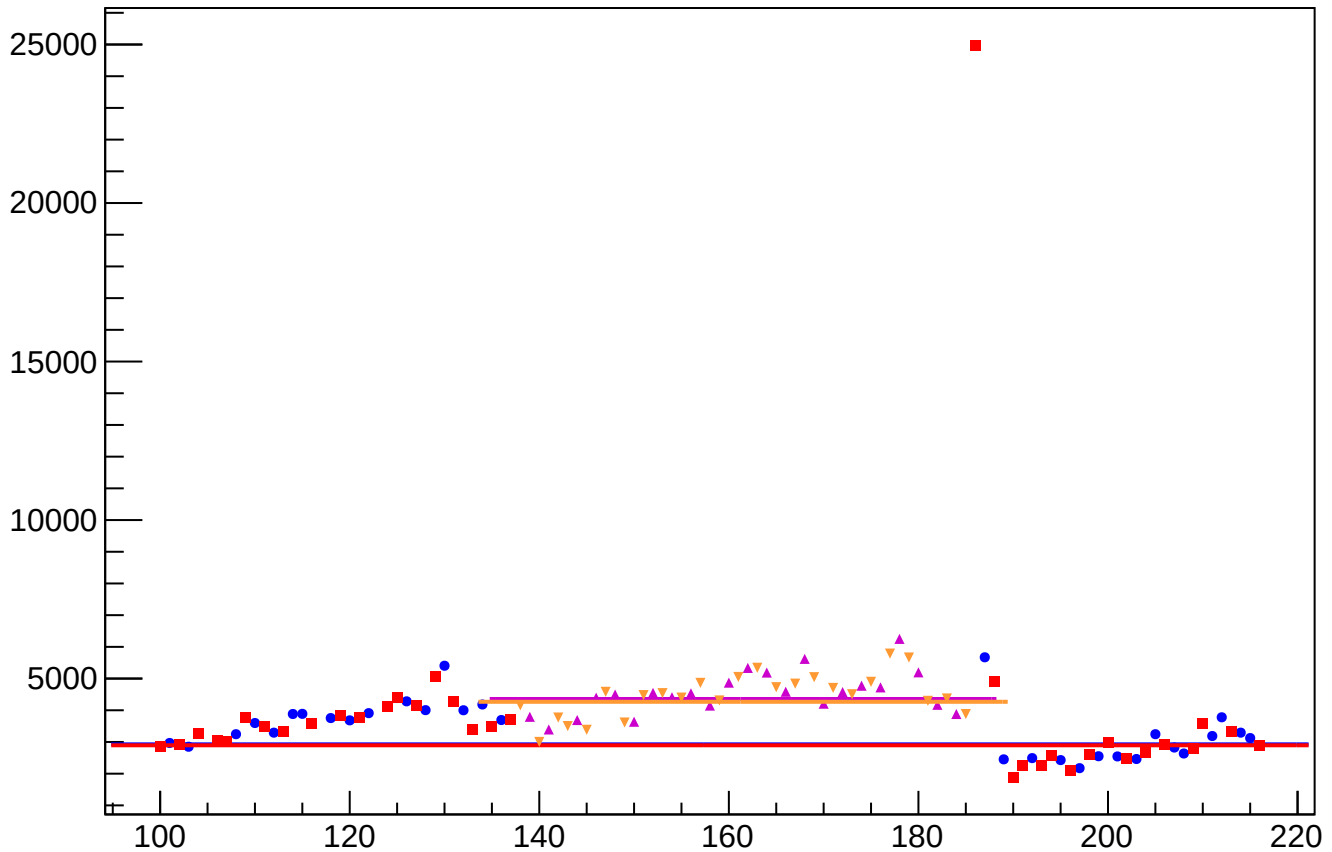
Left In:  $-0.670 \pm 1.031$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-1.142 \pm 0.563$   $\chi^2/\text{NDF}$ : 59.2/55

All:  $-1.624 \pm 0.399$   $\chi^2/\text{NDF}$ : 148.1/113

- sign  $-2.110 \pm 0.565$   $\chi^2/\text{NDF}$ : 87.4/57

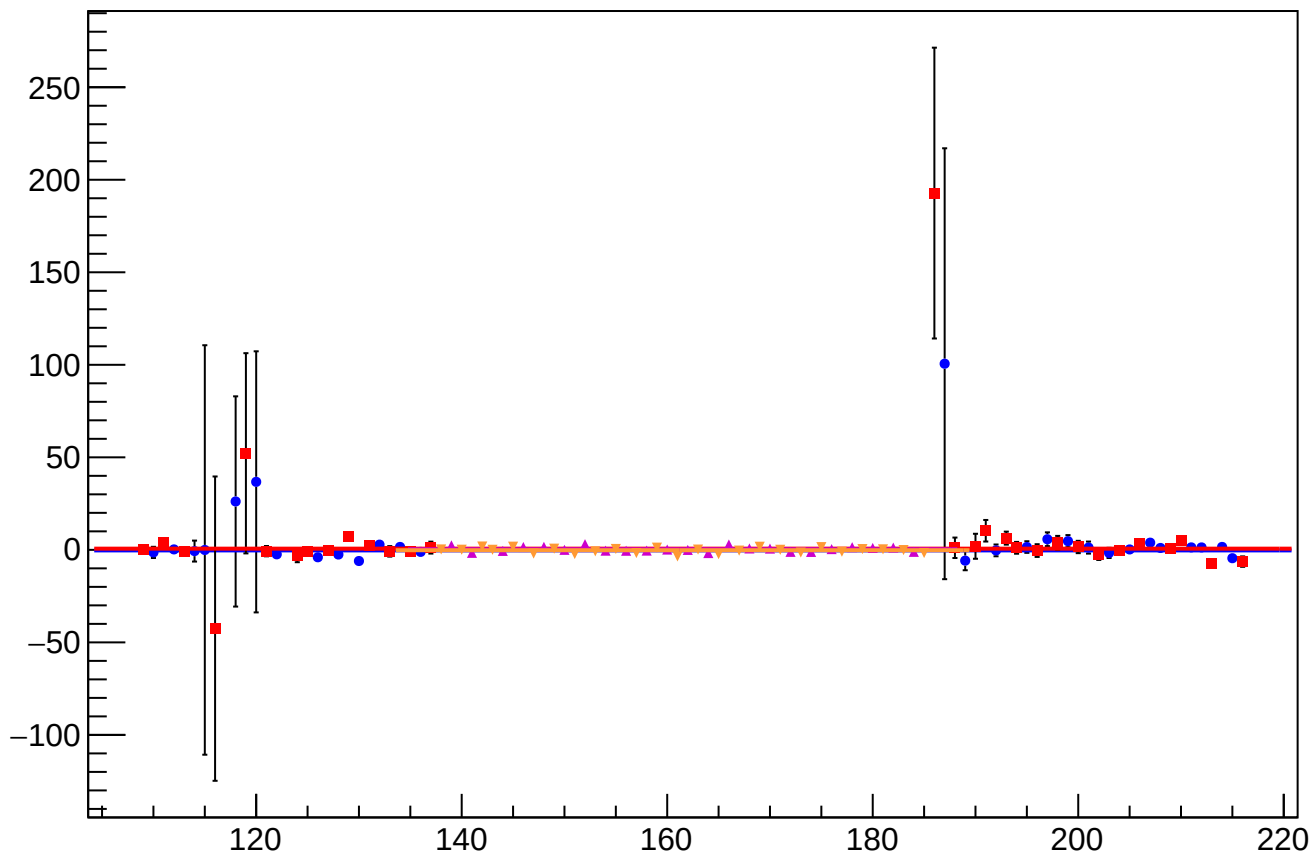
# diff\_bpm16Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 2924.618+/-0.484  | $\chi^2/\text{NDF}$ : 1535699.0/30 | + sign 3360.811+/-0.398 | $\chi^2/\text{NDF}$ : 5069308.8/55 |
| Left Out: 4267.631+/-0.698  | $\chi^2/\text{NDF}$ : 1034722.2/24 | All: 3347.570+/-0.282   | $\chi^2/\text{NDF}$ : 11137160.4/1 |
| Right Out: 2895.296+/-0.478 | $\chi^2/\text{NDF}$ : 2514297.8/34 | - sign 3334.213+/-0.400 | $\chi^2/\text{NDF}$ : 6065626.7/57 |
| Left In: 4355.855+/-0.729   | $\chi^2/\text{NDF}$ : 743046.1/22  |                         |                                    |



# diff\_bpm1p02bX\_mean vs Slug



Right In:  $-0.295 \pm 0.504$   $\chi^2/\text{NDF}$ : 31.6/27

Left Out:  $-0.201 \pm 0.236$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $0.647 \pm 0.519$   $\chi^2/\text{NDF}$ : 48.9/29

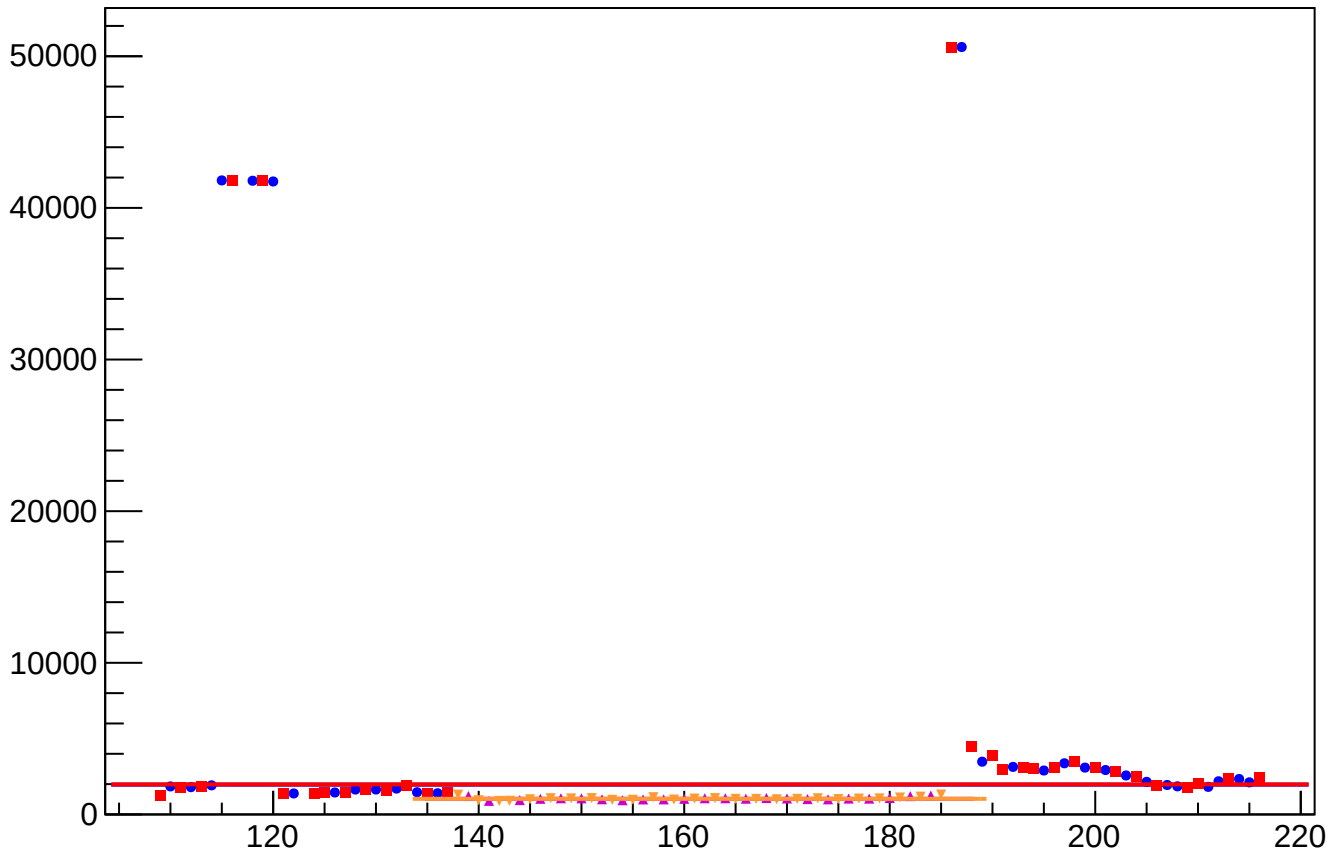
Left In:  $0.333 \pm 0.242$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $-0.218 \pm 0.213$   $\chi^2/\text{NDF}$ : 65.5/52

All:  $0.077 \pm 0.153$   $\chi^2/\text{NDF}$ : 148.1/105

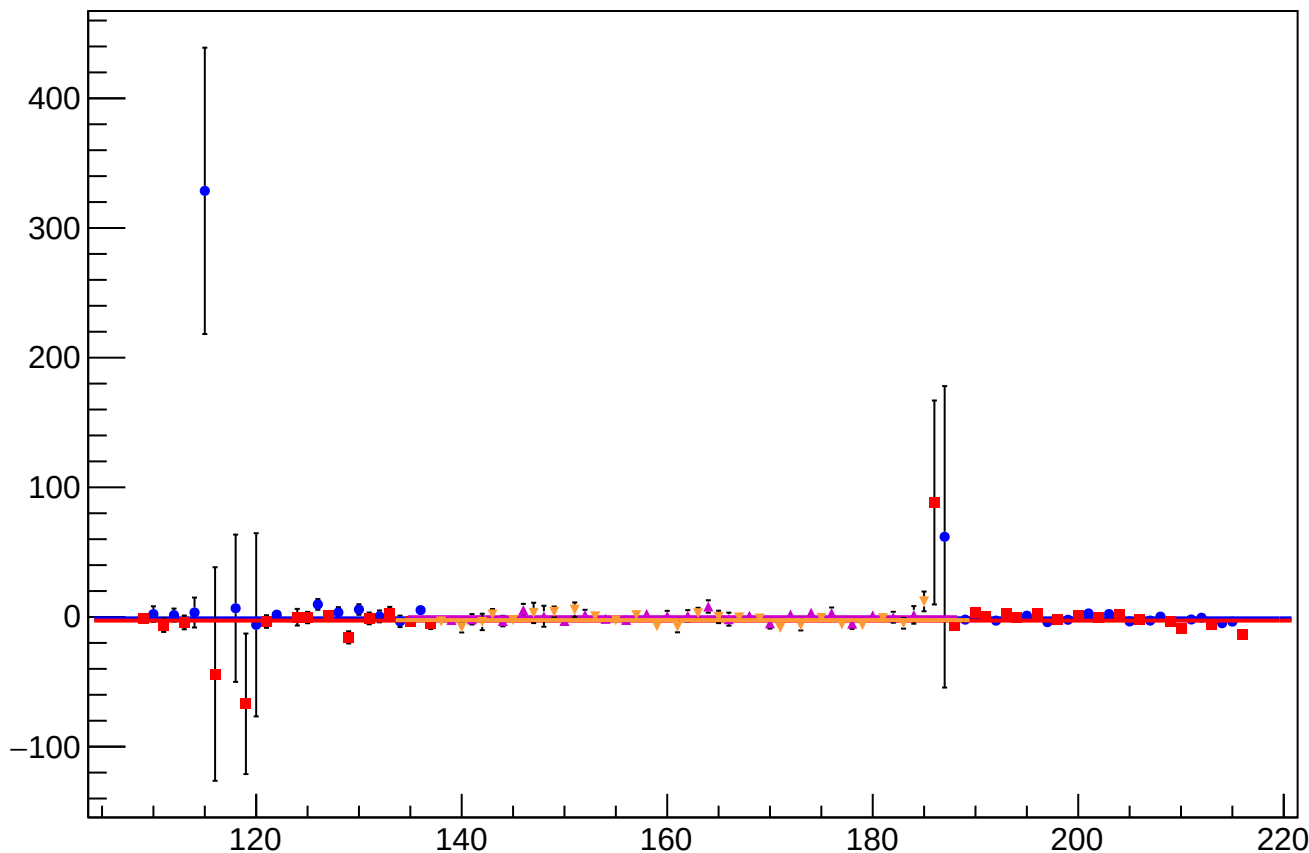
- sign  $0.389 \pm 0.219$   $\chi^2/\text{NDF}$ : 78.6/52

# diff\_bpm1p02bX\_rms vs Slug



Right In:  $1964.800 \pm 0.356$   $\chi^2/\text{NDF}: 4478137.3/27$  + sign  $1198.973 \pm 0.151$   $\chi^2/\text{NDF}: 10359801.6/52$   
Left Out:  $1031.473 \pm 0.167$   $\chi^2/\text{NDF}: 244095.3/24$  All:  $1200.658 \pm 0.108$   $\chi^2/\text{NDF}: 21514219.8/1$   
Right Out:  $1982.359 \pm 0.367$   $\chi^2/\text{NDF}: 5469903.5/29$  - sign  $1202.441 \pm 0.155$   $\chi^2/\text{NDF}: 11154161.4/52$   
Left In:  $1032.715 \pm 0.171$   $\chi^2/\text{NDF}: 187148.3/22$

# diff\_bpm1p02bY\_mean vs Slug



Right In:  $-1.046 \pm 0.426$   $\chi^2/\text{NDF}$ : 55.5/27

Left Out:  $-2.380 \pm 0.782$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-2.774 \pm 0.453$   $\chi^2/\text{NDF}$ : 106.7/29

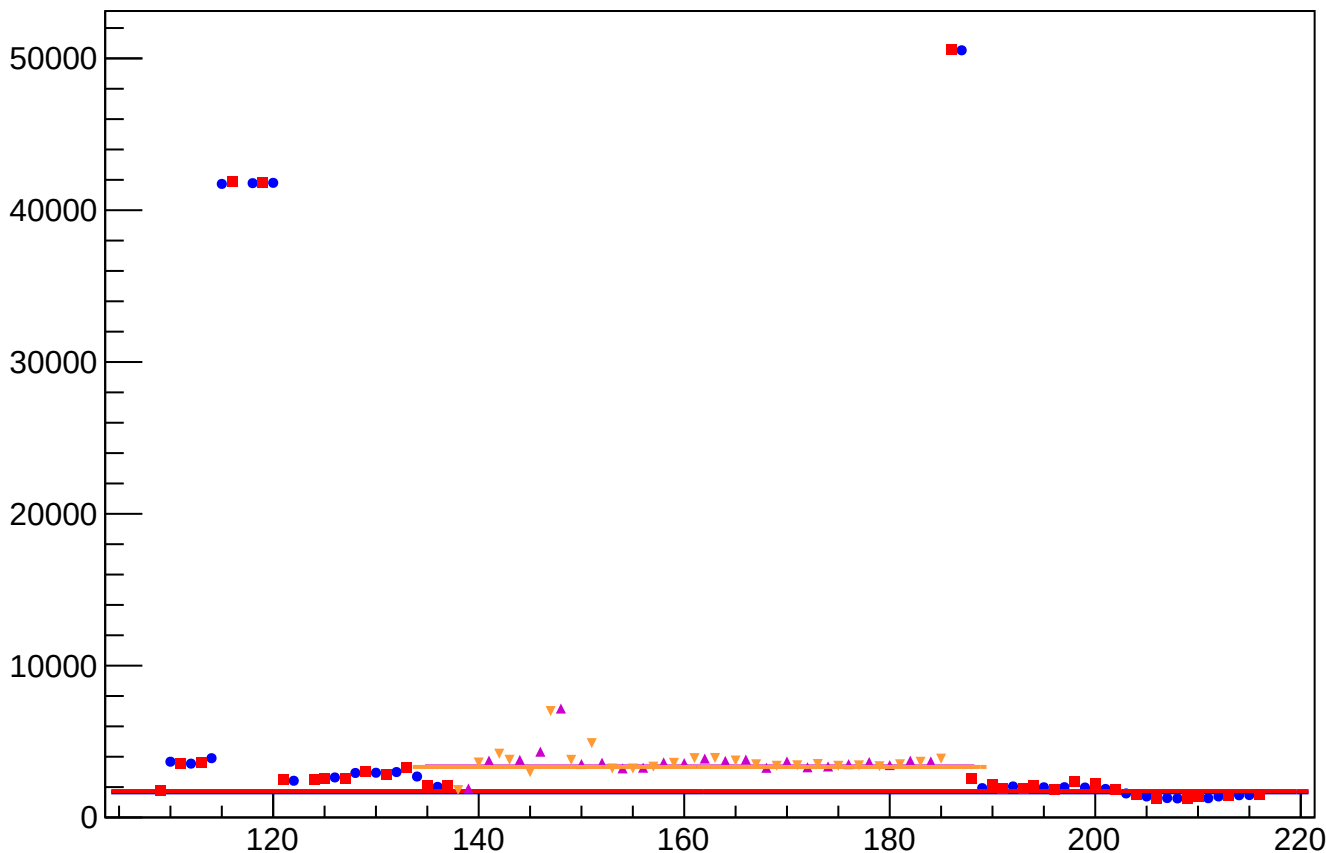
Left In:  $-0.171 \pm 0.810$   $\chi^2/\text{NDF}$ : 12.6/22

+ sign  $-1.351 \pm 0.374$   $\chi^2/\text{NDF}$ : 82.1/52

All:  $-1.730 \pm 0.272$   $\chi^2/\text{NDF}$ : 211.4/105

- sign  $-2.153 \pm 0.395$   $\chi^2/\text{NDF}$ : 127.2/52

# diff\_bpm1p02bY\_rms vs Slug



Right In: 1651.610+/-0.301     $\chi^2$ /NDF: 4689078.7/27

Left Out: 3328.251+/-0.553     $\chi^2/\text{NDF}$ :1915576.2/24

Right Out: 1740.364+/-0.320     $\chi^2/\text{NDF}$ : 4787318.6/29

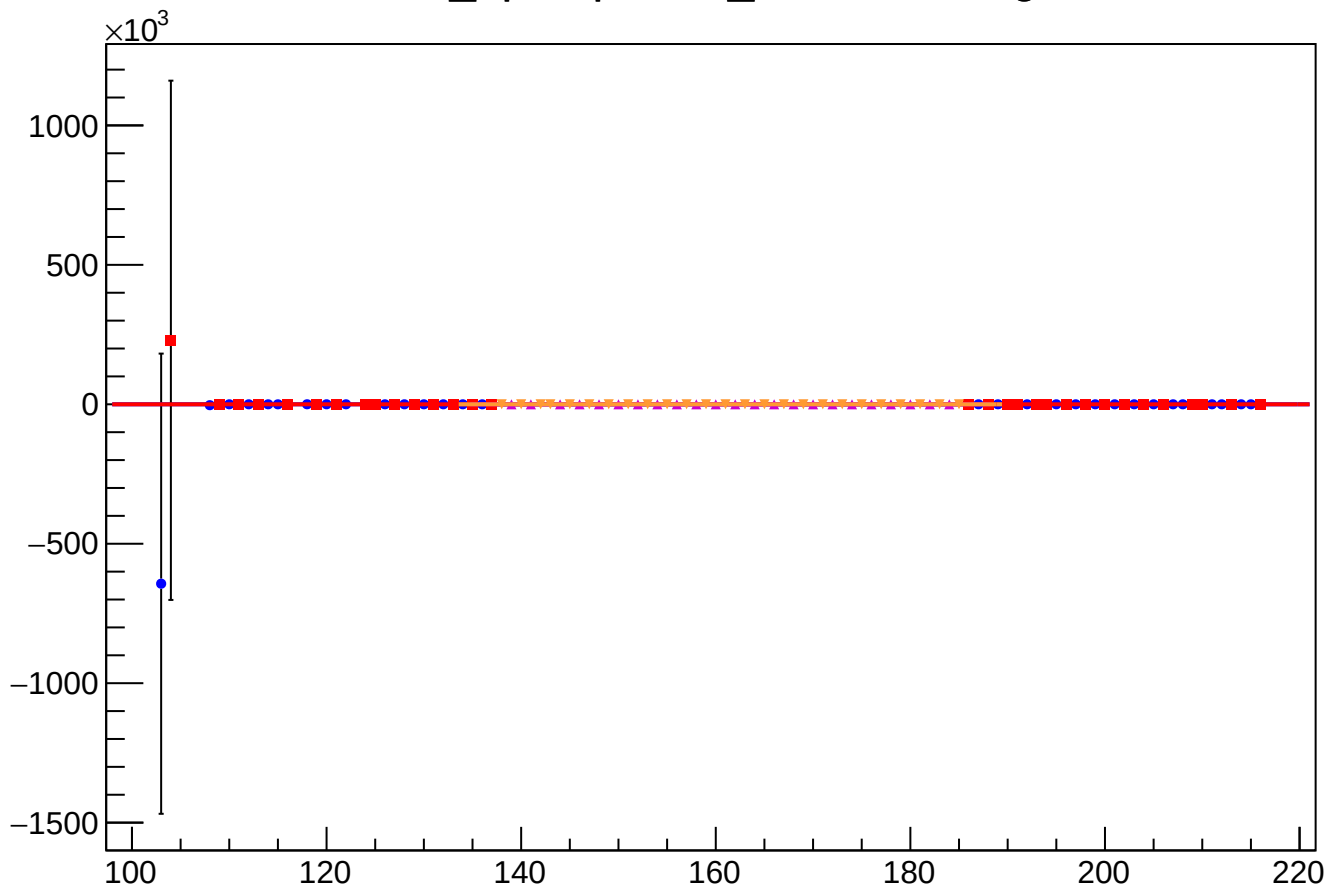
Left In: 3360.799+/-0.572     $\chi^2/\text{NDF}$ :1649390.5/22

+ sign 2034.974+/-0.264     $\chi^2/\text{NDF}$ : 13694639.4/52

All: 2078.433+/-0.192     $\chi^2/\text{NDF}$ : 26288714.3/1

- sign 2127.036+/-0.280     $\chi^2/\text{NDF}$ : 12536859.5/52

# diff\_bpm1p03aX\_mean vs Slug



Right In:  $-2.060 \pm 0.542$   $\chi^2/\text{NDF}$ : 40.4/29

Left Out:  $-1.573 \pm 0.363$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-2.819 \pm 0.555$   $\chi^2/\text{NDF}$ : 55.2/30

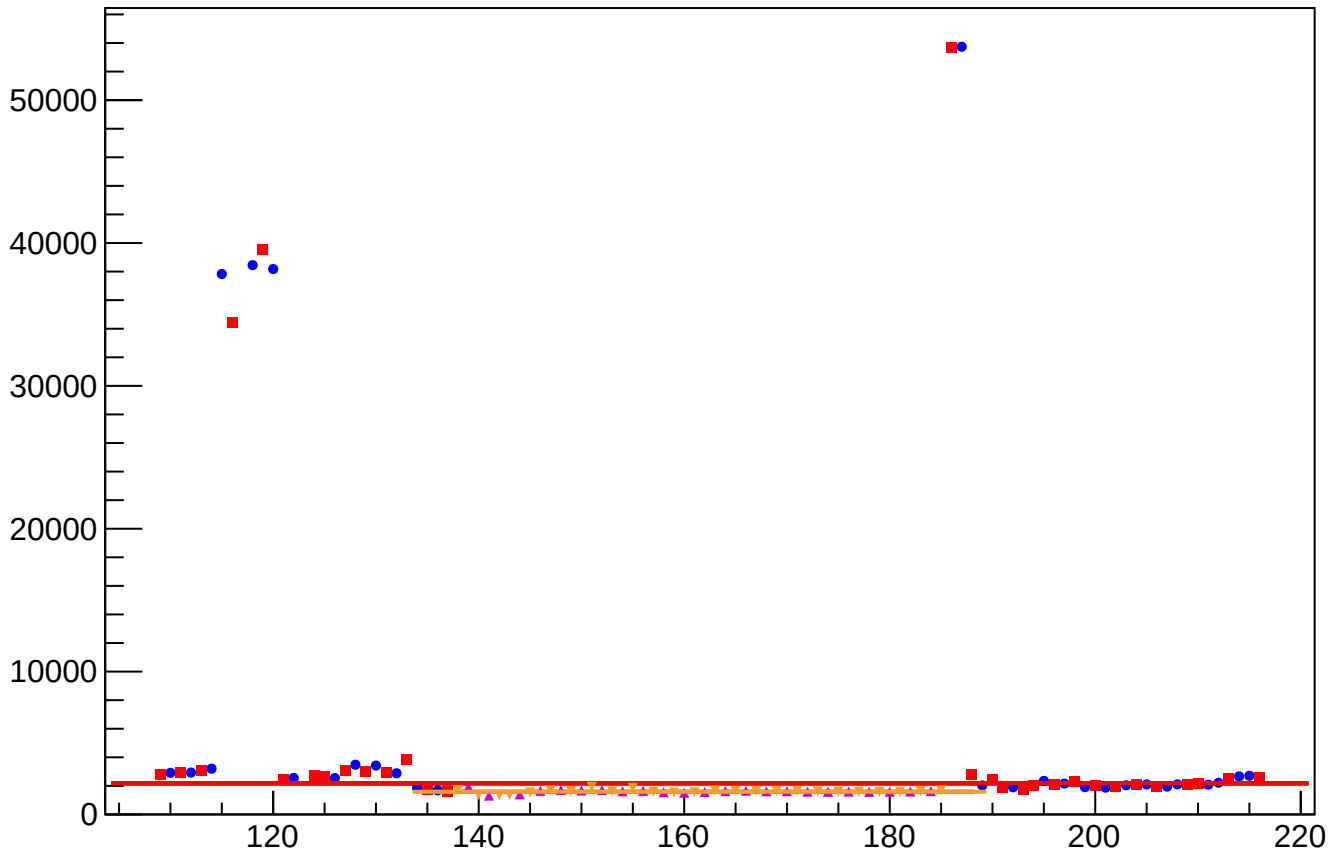
Left In:  $0.018 \pm 0.374$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $-1.723 \pm 0.302$   $\chi^2/\text{NDF}$ : 91.2/54

All:  $-1.309 \pm 0.216$   $\chi^2/\text{NDF}$ : 195.6/108

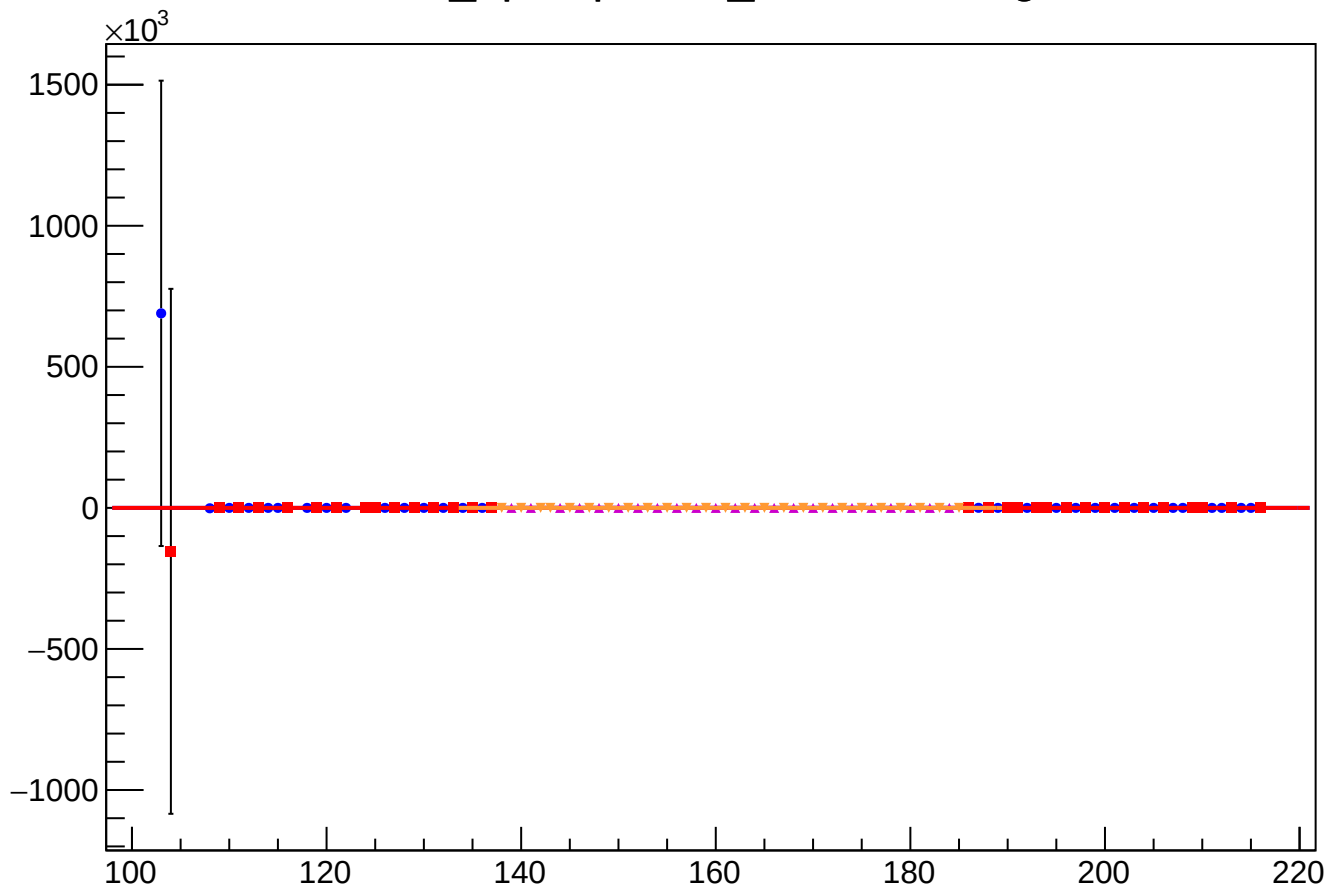
- sign  $-0.869 \pm 0.310$   $\chi^2/\text{NDF}$ : 100.5/53

# diff\_bpm1p03aX\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 2156.048+/-0.384  | $\chi^2/\text{NDF}$ : 3140015.8/27 | + sign 1764.685+/-0.213 | $\chi^2/\text{NDF}$ : 4879898.0/52 |
| Left Out: 1589.488+/-0.257  | $\chi^2/\text{NDF}$ : 232518.0/24  | All: 1774.869+/-0.153   | $\chi^2/\text{NDF}$ : 10037168.6/1 |
| Right Out: 2202.298+/-0.393 | $\chi^2/\text{NDF}$ : 3317538.1/29 | - sign 1785.658+/-0.220 | $\chi^2/\text{NDF}$ : 5152574.8/52 |
| Left In: 1596.179+/-0.265   | $\chi^2/\text{NDF}$ : 196833.1/22  |                         |                                    |

# diff\_bpm1p03aY\_mean vs Slug



Right In:  $-0.262 \pm 0.363$   $\chi^2/\text{NDF}$ : 28.7/29

Left Out:  $-1.179 \pm 0.502$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $-1.138 \pm 0.379$   $\chi^2/\text{NDF}$ : 50.9/30

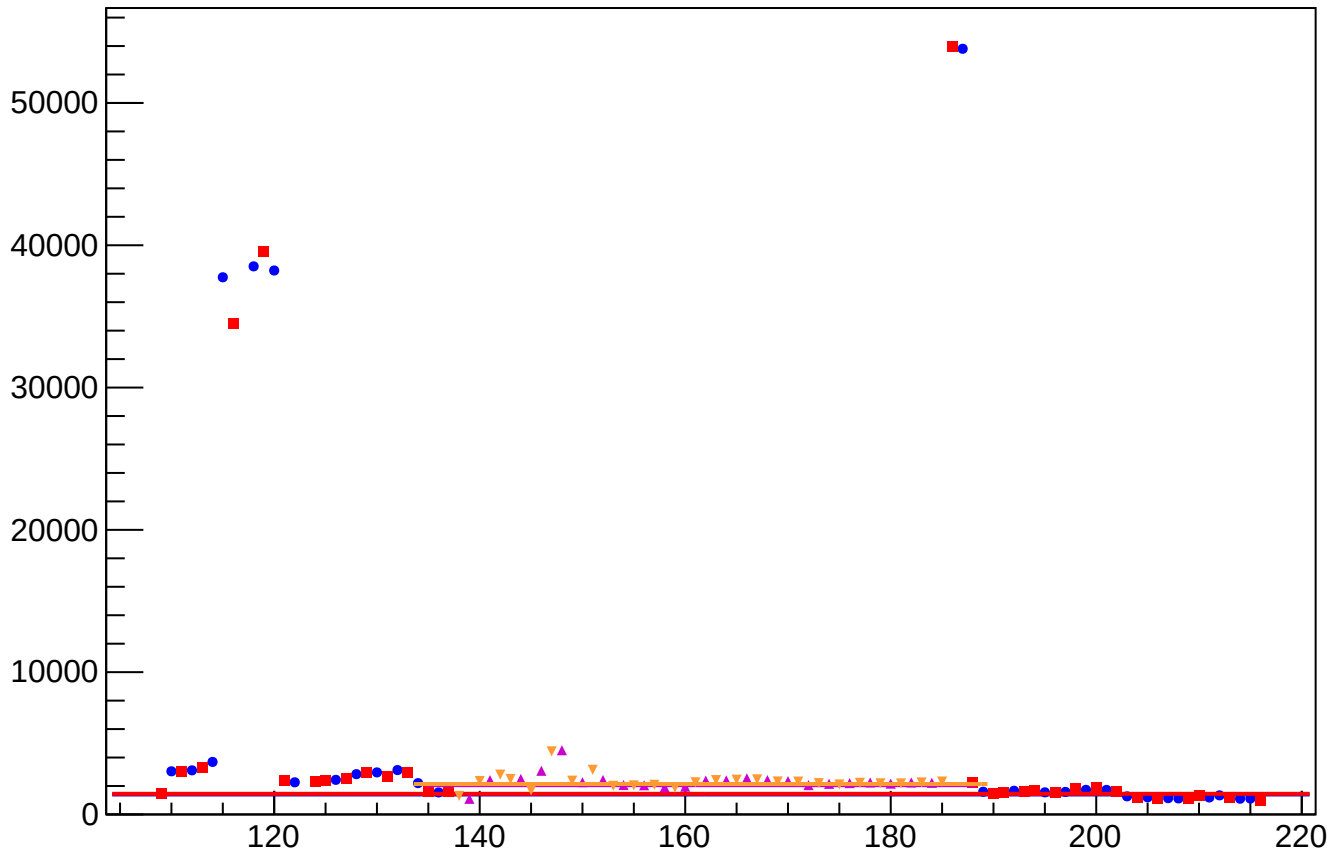
Left In:  $0.125 \pm 0.501$   $\chi^2/\text{NDF}$ : 16.9/22

+ sign  $-0.577 \pm 0.294$   $\chi^2/\text{NDF}$ : 55.3/54

All:  $-0.626 \pm 0.211$   $\chi^2/\text{NDF}$ : 127.2/108

- sign  $-0.678 \pm 0.302$   $\chi^2/\text{NDF}$ : 71.9/53

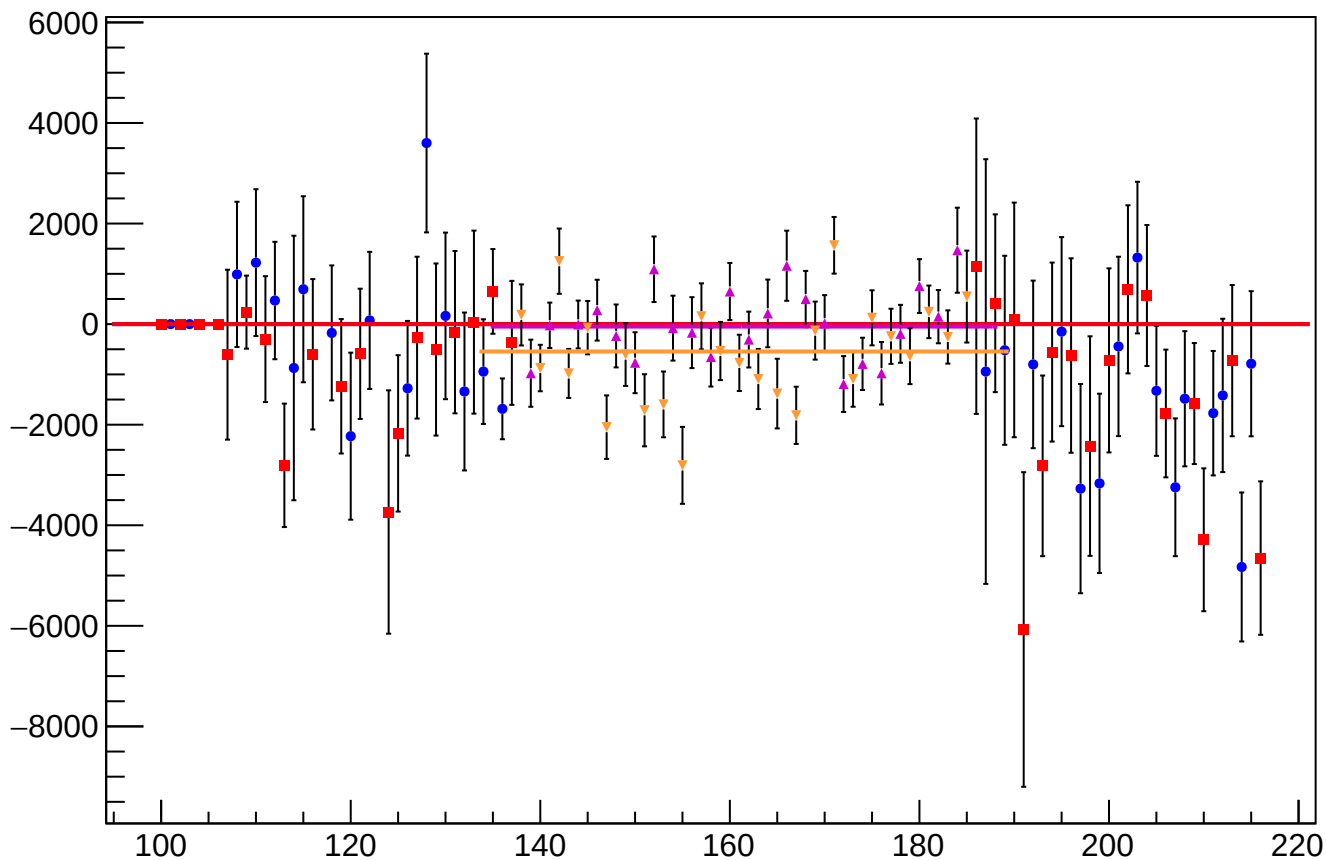
# diff\_bpm1p03aY\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 1404.367+/-0.257  | $\chi^2/\text{NDF}$ : 4828155.7/27 | + sign 1656.294+/-0.208 | $\chi^2/\text{NDF}$ : 9119638.7/52   |
| Left Out: 2139.248+/-0.355  | $\chi^2/\text{NDF}$ : 1480000.5/24 | All: 1663.491+/-0.149   | $\chi^2/\text{NDF}$ : 18340562.1/100 |
| Right Out: 1449.592+/-0.268 | $\chi^2/\text{NDF}$ : 5049344.8/29 | - sign 1671.095+/-0.214 | $\chi^2/\text{NDF}$ : 9218461.9/52   |
| Left In: 2058.216+/-0.354   | $\chi^2/\text{NDF}$ : 2293601.6/22 |                         |                                      |



# diff\_cav4bX\_mean vs Slug



Right In:  $0.254 \pm 0.356$   $\chi^2/\text{NDF}: 46.3/30$

Left Out:  $-544.414 \pm 117.154$   $\chi^2/\text{NDF}: 60.9/24$

Right Out:  $0.095 \pm 0.328$   $\chi^2/\text{NDF}: 46.1/34$

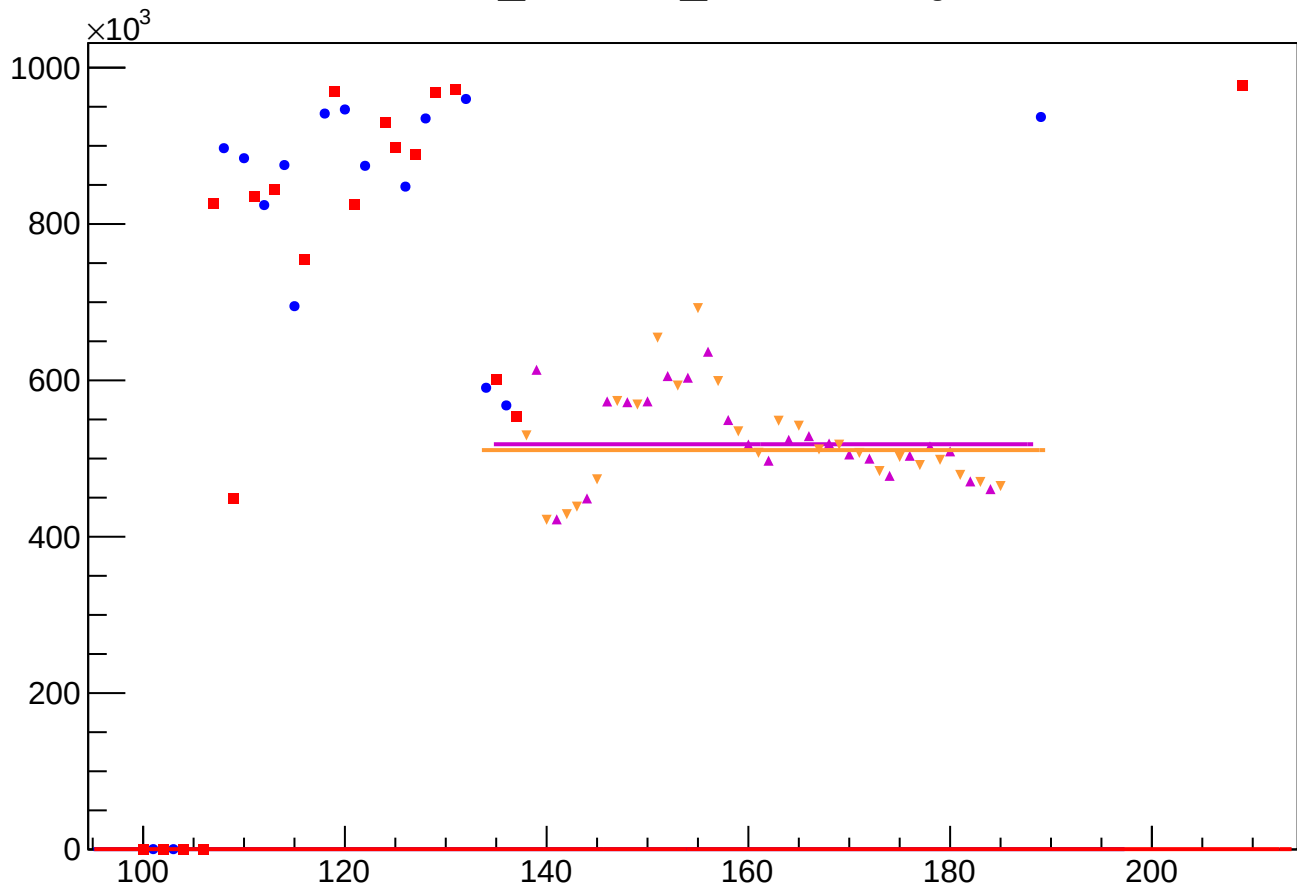
Left In:  $-49.119 \pm 121.932$   $\chi^2/\text{NDF}: 28.0/22$

+ sign  $0.249 \pm 0.356$   $\chi^2/\text{NDF}: 128.8/55$

All:  $0.166 \pm 0.241$   $\chi^2/\text{NDF}: 203.1/113$

- sign  $0.095 \pm 0.328$   $\chi^2/\text{NDF}: 74.2/57$

# diff\_cav4bX\_rms vs Slug



Right In:  $398.894 \pm 0.251$   $\chi^2/\text{NDF}$ : 8685185.3/15

Left Out:  $510811.545 \pm 82.841$   $\chi^2/\text{NDF}$ : 509606.7/24

Right Out:  $393.242 \pm 0.232$   $\chi^2/\text{NDF}$ : 7684547.6/18

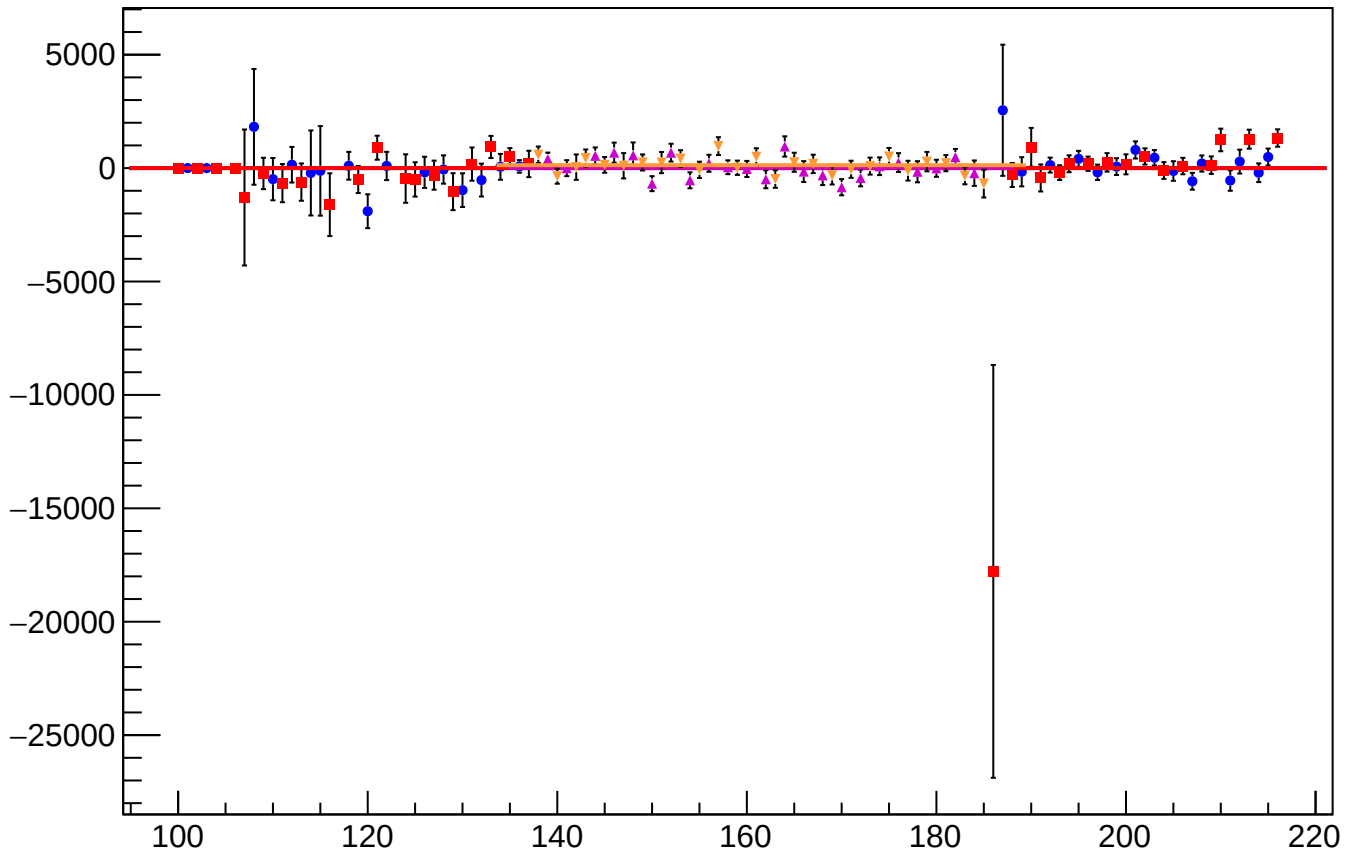
Left In:  $518313.411 \pm 86.219$   $\chi^2/\text{NDF}$ : 399884.6/22

+ sign  $403.598 \pm 0.251$   $\chi^2/\text{NDF}$ : 47157011.5/40

All:  $400.022 \pm 0.170$   $\chi^2/\text{NDF}$ : 91325731.6/82

- sign  $396.985 \pm 0.232$   $\chi^2/\text{NDF}$ : 44168346.1/41

# diff\_cav4bY\_mean vs Slug



Right In:  $-0.019 \pm 0.347$   $\chi^2/\text{NDF}$ : 26.0/30

Left Out:  $128.971 \pm 78.249$   $\chi^2/\text{NDF}$ : 20.1/24

Right Out:  $0.602 \pm 0.324$   $\chi^2/\text{NDF}$ : 52.0/34

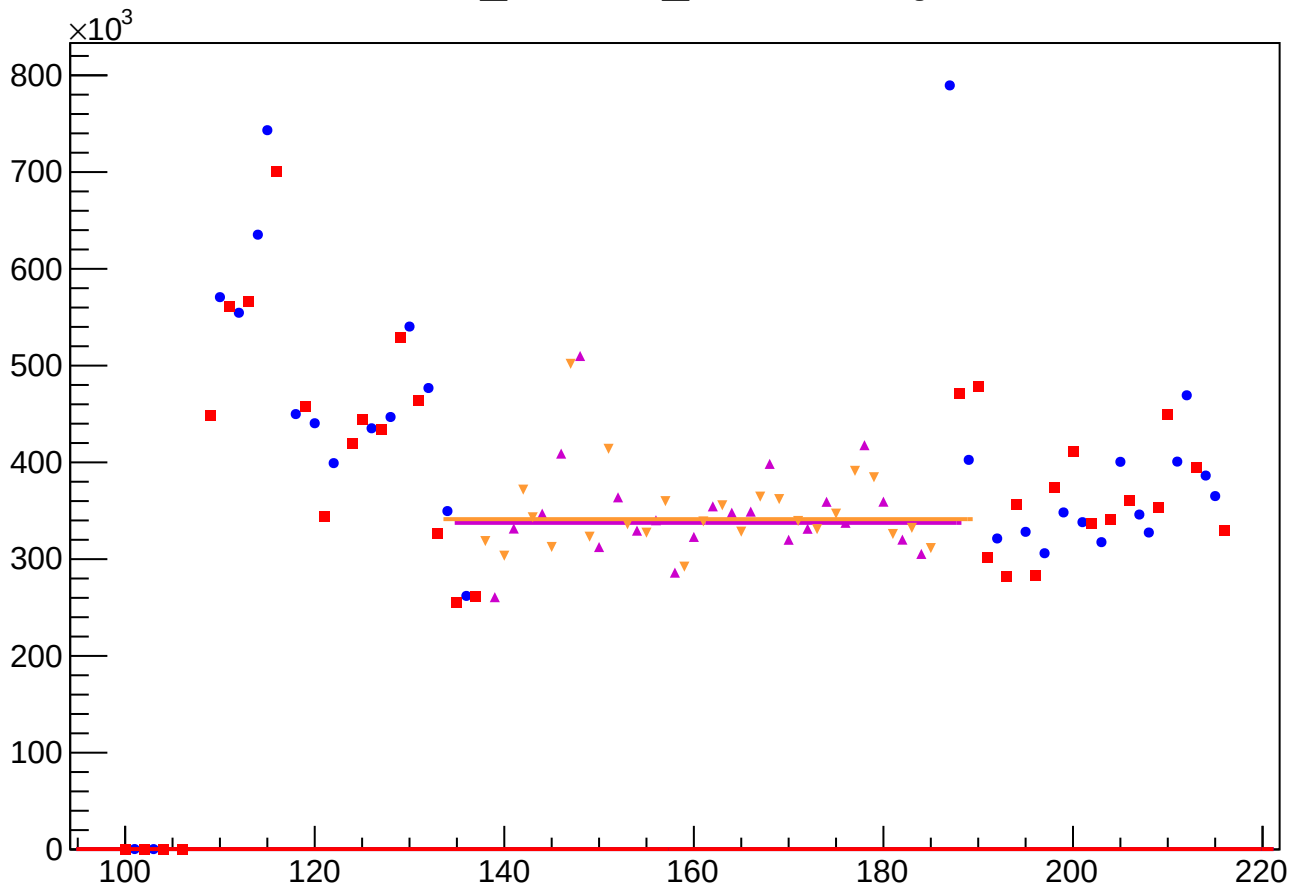
Left In:  $19.324 \pm 79.767$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $-0.017 \pm 0.347$   $\chi^2/\text{NDF}$ : 48.8/55

All:  $0.314 \pm 0.237$   $\chi^2/\text{NDF}$ : 136.3/113

- sign  $0.602 \pm 0.324$   $\chi^2/\text{NDF}$ : 85.8/57

# diff\_cav4bY\_rms vs Slug



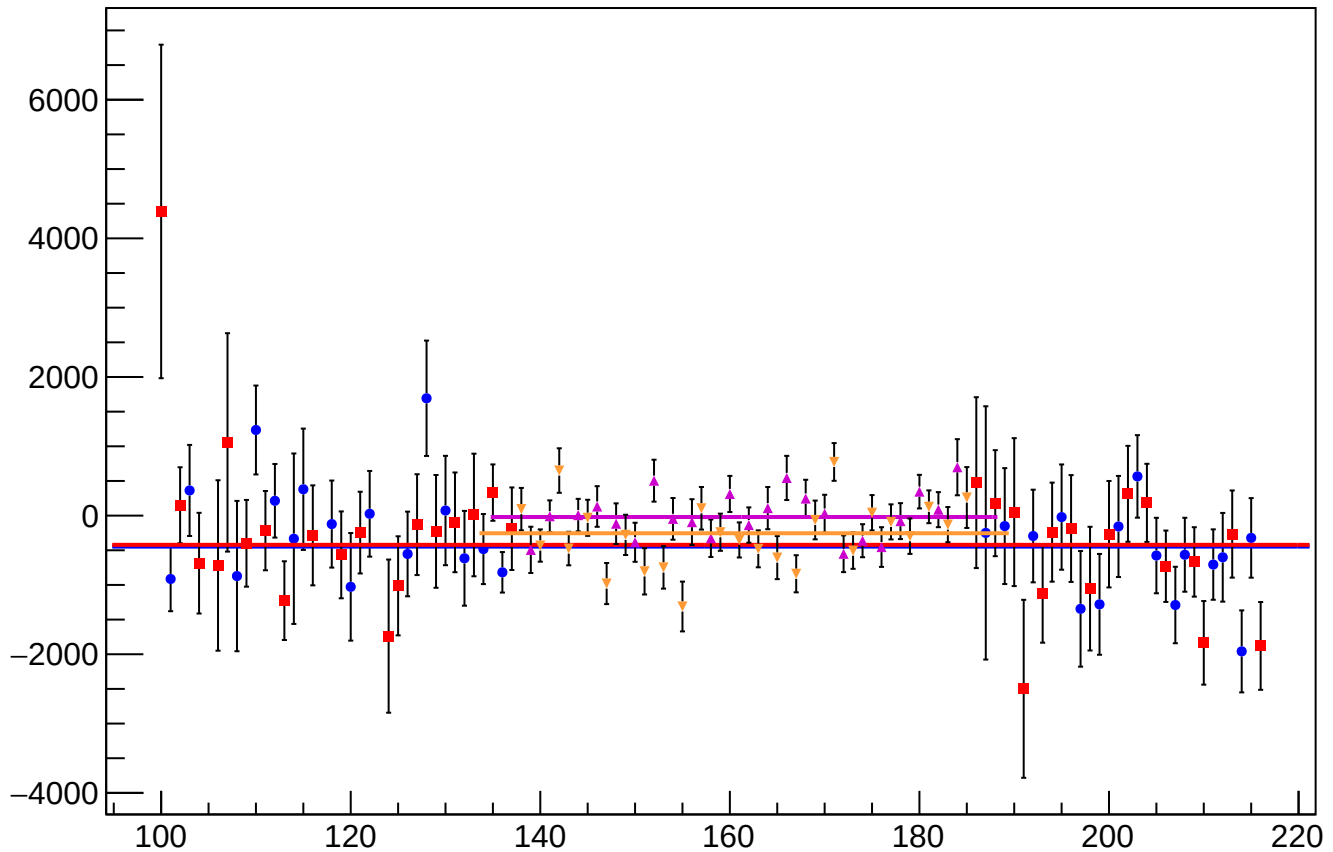
Right In:  $394.202 \pm 0.245$   $\chi^2/\text{NDF}$ : 34208231.2/29

Left Out:  $341327.149 \pm 55.330$   $\chi^2/\text{NDF}$ : 403173.8/24 + sign  $400.911 \pm 0.245$   $\chi^2/\text{NDF}$ : 72578267.2/54

Right Out:  $391.352 \pm 0.229$   $\chi^2/\text{NDF}$ : 34093960.4/32 All:  $398.769 \pm 0.167$   $\chi^2/\text{NDF}$ : 142990850.3/100

Left In:  $337505.654 \pm 56.407$   $\chi^2/\text{NDF}$ : 600776.4/22 - sign  $396.906 \pm 0.229$   $\chi^2/\text{NDF}$ : 70412440.8/55

# diff\_cav4cX\_mean vs Slug



Right In:  $-446.801 \pm 110.319$   $\chi^2/\text{NDF}$ : 37.5/30

Left Out:  $-254.371 \pm 55.417$   $\chi^2/\text{NDF}$ : 61.3/24

Right Out:  $-421.667 \pm 116.258$   $\chi^2/\text{NDF}$ : 34.2/34

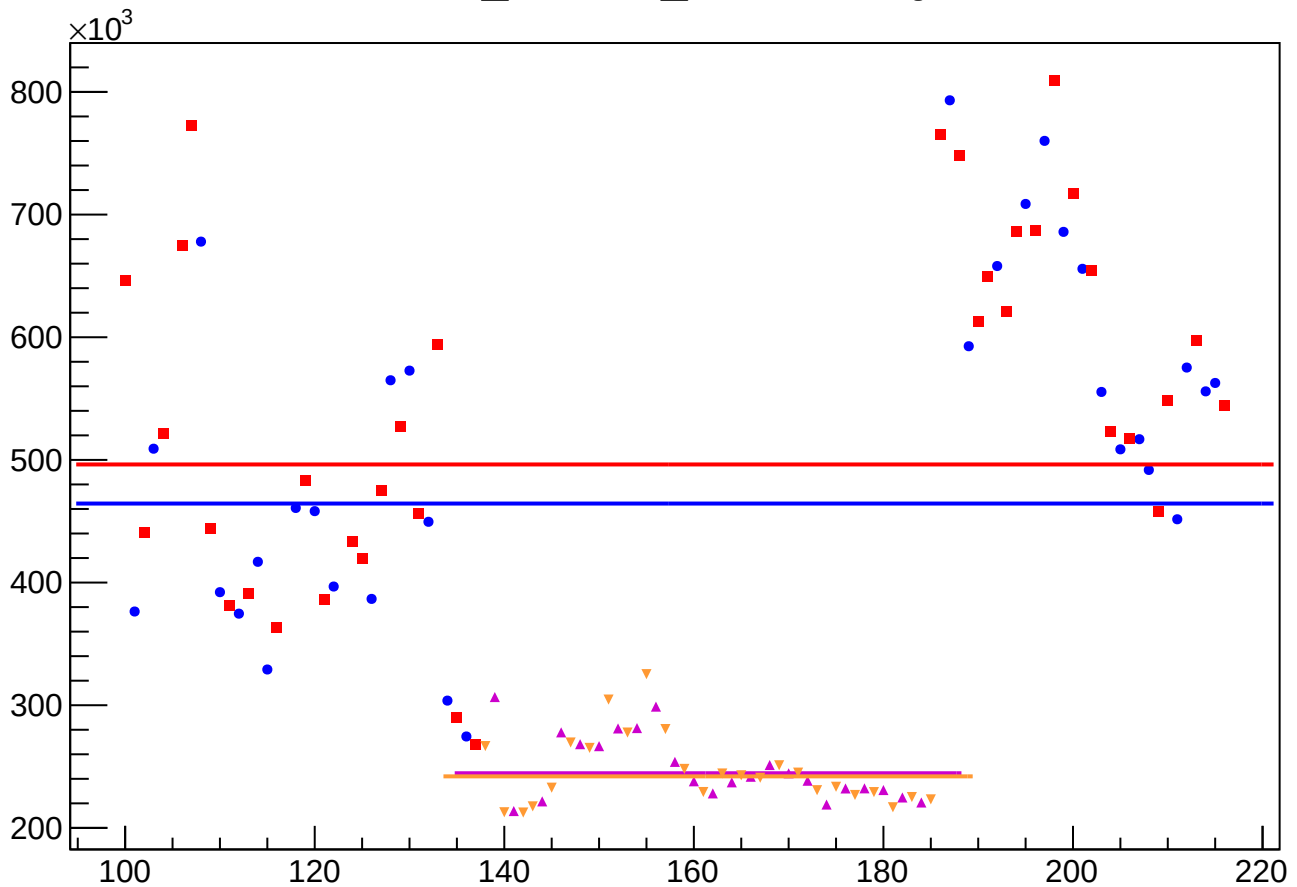
Left In:  $-20.176 \pm 57.484$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-293.145 \pm 49.521$   $\chi^2/\text{NDF}$ : 101.3/55

All:  $-199.954 \pm 35.705$   $\chi^2/\text{NDF}$ : 181.0/113

- sign  $-99.050 \pm 51.529$   $\chi^2/\text{NDF}$ : 72.4/57

# diff\_cav4cX\_rms vs Slug



Right In: 464420.321+/-78.020

$\chi^2/\text{NDF}$ : 2773132.6/30

Left Out: 242008.749+/-39.186

$\chi^2/\text{NDF}$ : 413236.1/24

Right Out: 496295.448+/-82.288

$\chi^2/\text{NDF}$ : 2594436.2/34

Left In: 244542.686+/-40.647

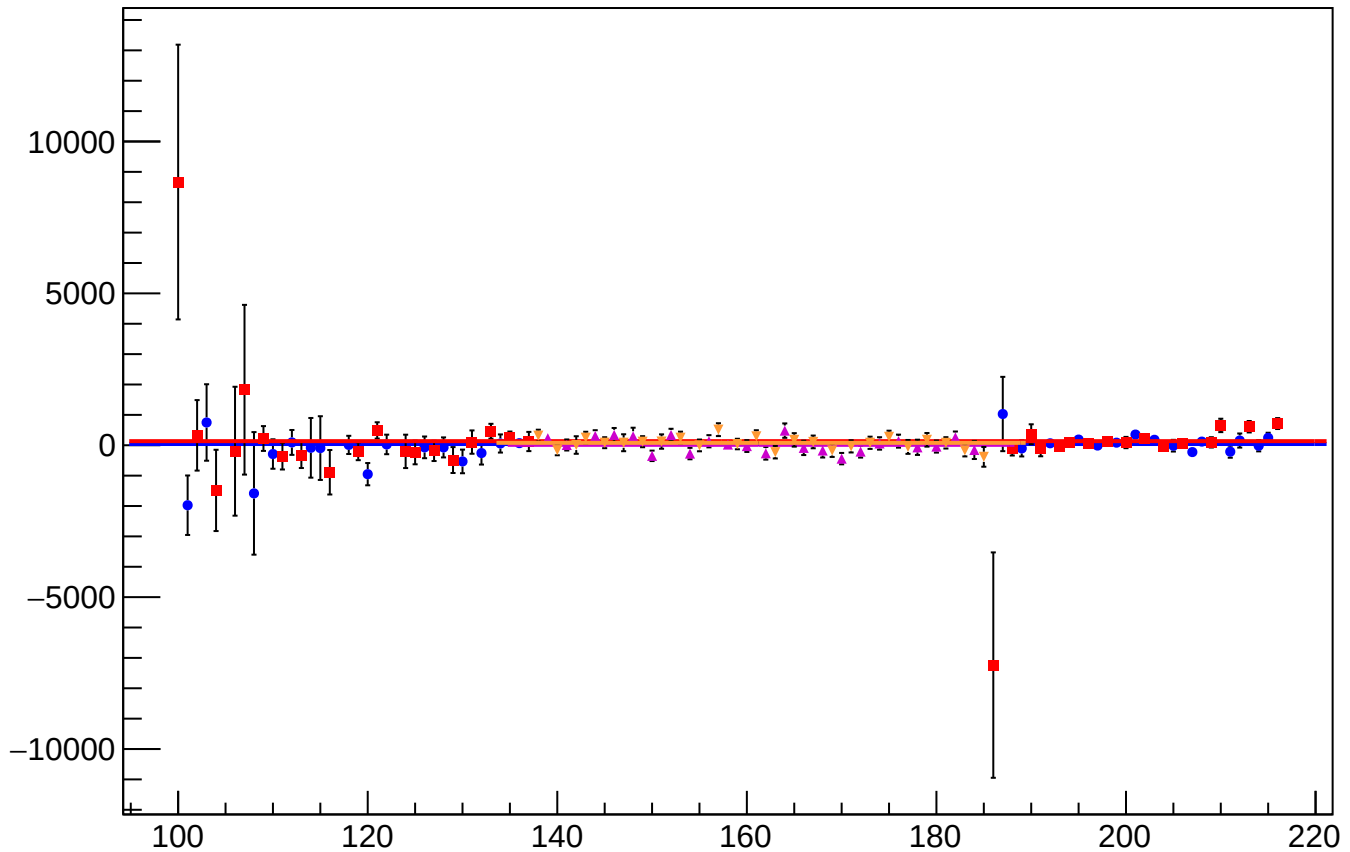
$\chi^2/\text{NDF}$ : 361527.4/22

+ sign 286812.609+/-35.017  $\chi^2/\text{NDF}$ : 9675839.7/55

All: 290225.552+/-25.250  $\chi^2/\text{NDF}$ : 20175768

- sign 293922.145+/-36.444  $\chi^2/\text{NDF}$ : 10480140.9/55

# diff\_cav4cY\_mean vs Slug



Right In: 40.901 $\pm$ 39.318  $\chi^2$ /NDF: 29.5/30

Left Out: 79.495 $\pm$ 41.301  $\chi^2$ /NDF: 19.7/24

Right Out: 135.199 $\pm$ 39.371  $\chi^2$ /NDF: 52.7/34

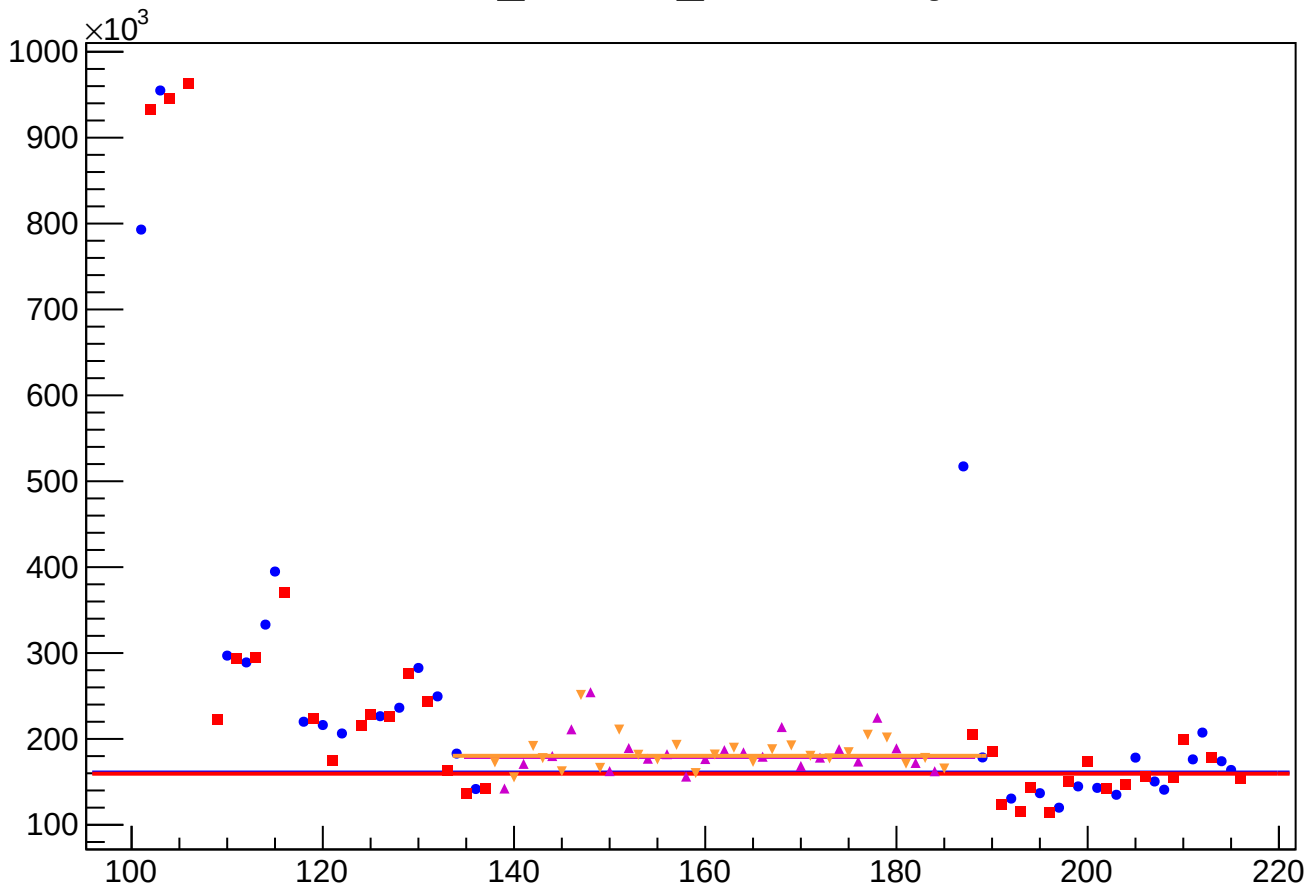
Left In: 14.032 $\pm$ 42.233  $\chi^2$ /NDF: 33.2/22

+ sign 59.249 $\pm$ 28.477  $\chi^2$ /NDF: 49.7/55

All: 68.945 $\pm$ 20.249  $\chi^2$ /NDF: 140.2/113

- sign 78.860 $\pm$ 28.798  $\chi^2$ /NDF: 90.3/57

# diff\_cav4cY\_rms vs Slug



Right In: 160881.530 $\pm$ 27.811  $\chi^2/\text{NDF}$ : 3370405.0/29

Left Out: 180342.867 $\pm$ 29.204  $\chi^2/\text{NDF}$ : 346596.9/24

Right Out: 159539.568 $\pm$ 27.855  $\chi^2/\text{NDF}$ : 3361641.9/31

Left In: 179024.195 $\pm$ 29.863  $\chi^2/\text{NDF}$ : 501400.7/22

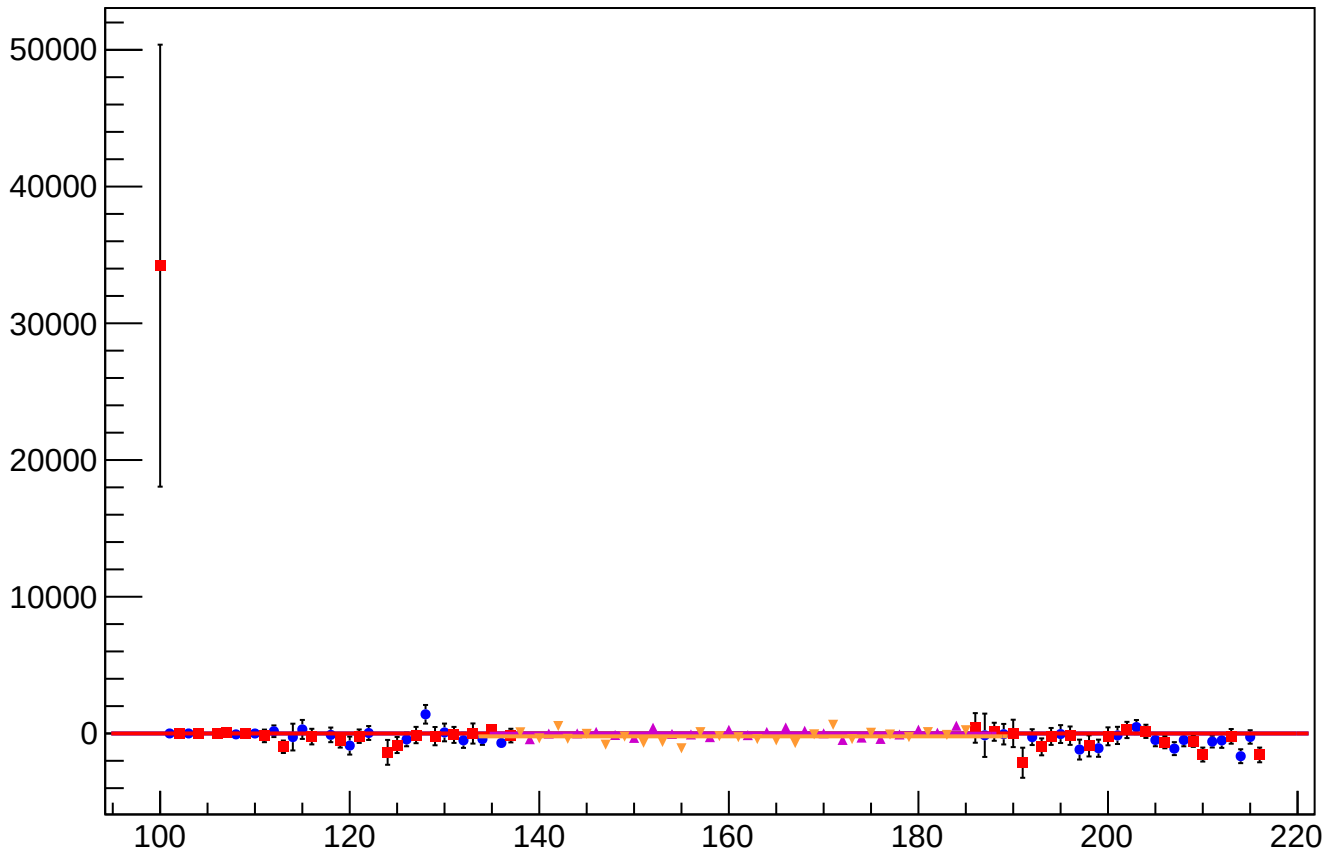
+ sign 170137.136 $\pm$ 20.140  $\chi^2/\text{NDF}$ : 3949882.2/54

All: 169379.611 $\pm$ 14.322  $\chi^2/\text{NDF}$ : 8043432.2/100

- sign 168604.716 $\pm$ 20.370  $\chi^2/\text{NDF}$ : 4090688.2/54



# diff\_cav4dX\_mean vs Slug



Right In:  $-0.036 \pm 0.172$   $\chi^2/\text{NDF}$ : 46.2/30

Left Out:  $-210.198 \pm 46.290$   $\chi^2/\text{NDF}$ : 61.2/24

Right Out:  $-0.356 \pm 0.160$   $\chi^2/\text{NDF}$ : 46.5/34

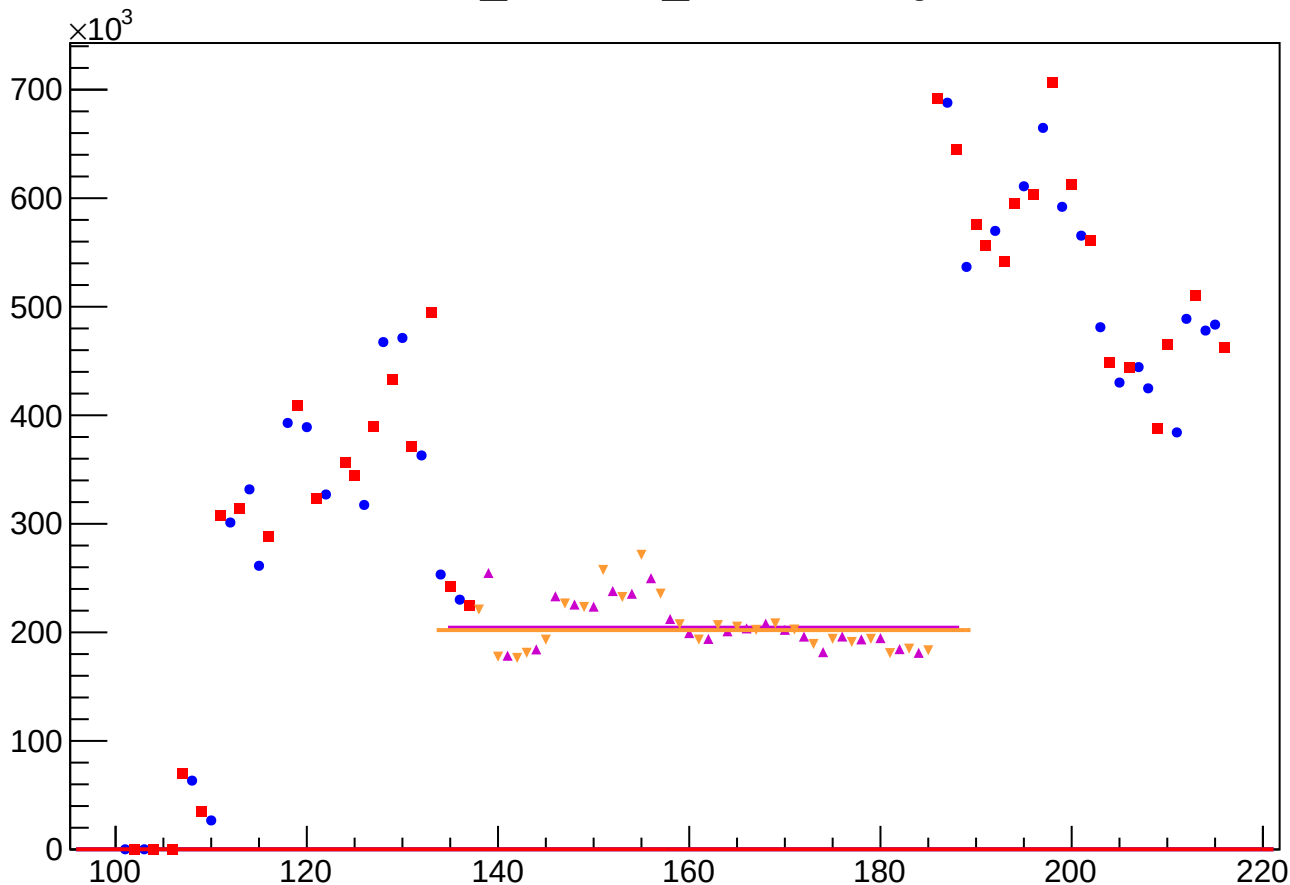
Left In:  $-21.095 \pm 48.037$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-0.039 \pm 0.172$   $\chi^2/\text{NDF}$ : 128.0/55

All:  $-0.209 \pm 0.117$   $\chi^2/\text{NDF}$ : 205.0/113

- sign  $-0.356 \pm 0.160$   $\chi^2/\text{NDF}$ : 75.3/57

# diff\_cav4dX\_rms vs Slug



Right In:  $149.801 \pm 0.122$   $\chi^2/\text{NDF}: 35262500.6/30$

Left Out:  $202085.802 \pm 32.732$   $\chi^2/\text{NDF}: 434069.3/24$

Right Out:  $149.971 \pm 0.113$   $\chi^2/\text{NDF}: 35726473.3/33$

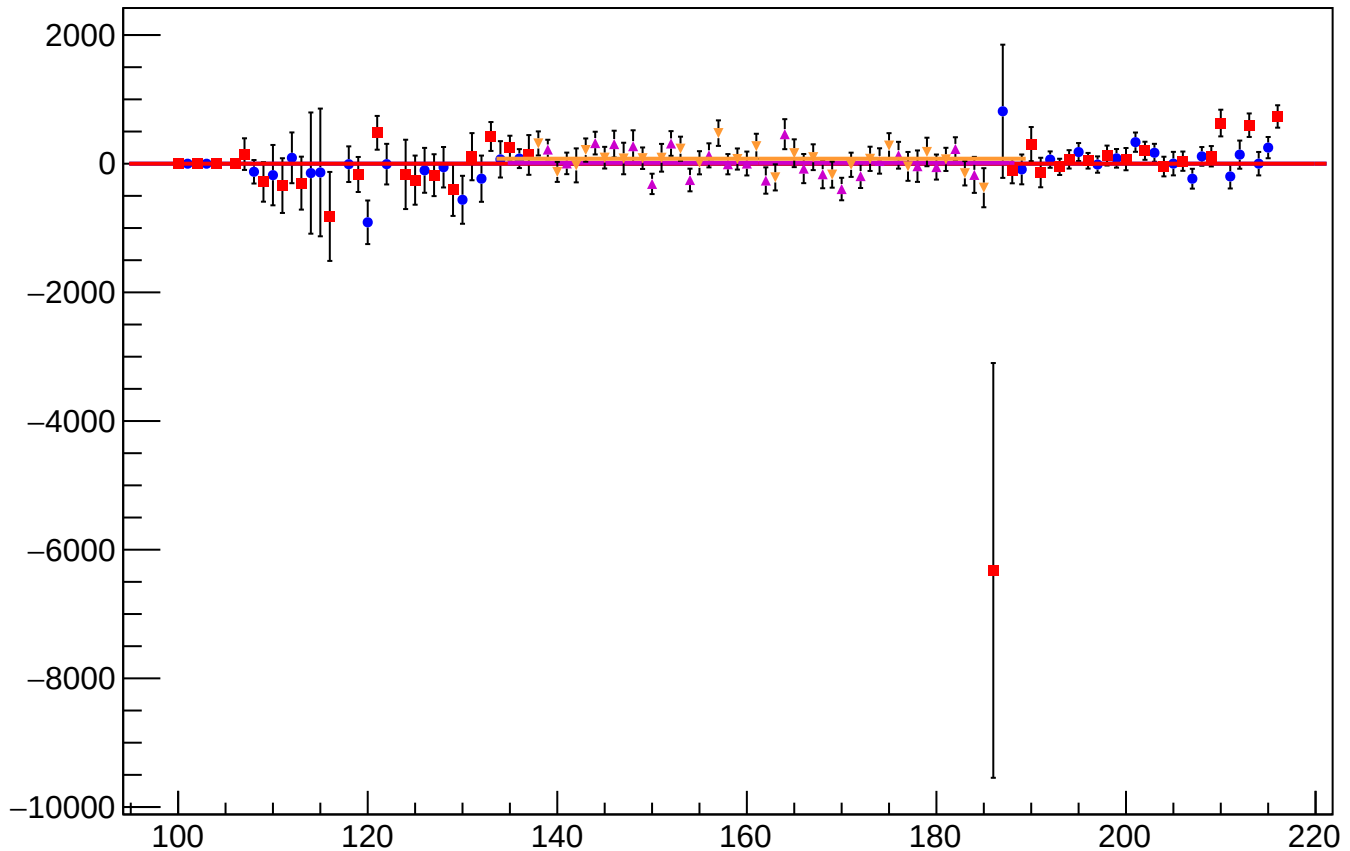
Left In:  $204310.238 \pm 33.967$   $\chi^2/\text{NDF}: 377332.3/22$

+ sign  $152.598 \pm 0.122$   $\chi^2/\text{NDF}: 73758106.9/55$

All:  $152.406 \pm 0.083$   $\chi^2/\text{NDF}: 145987156.8/100$

- sign  $152.240 \pm 0.113$   $\chi^2/\text{NDF}: 72229045.3/56$

# diff\_cav4dY\_mean vs Slug



Right In:  $-0.067 \pm 0.177$   $\chi^2/\text{NDF}$ : 27.5/30

Left Out:  $77.572 \pm 38.921$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $0.128 \pm 0.166$   $\chi^2/\text{NDF}$ : 62.9/34

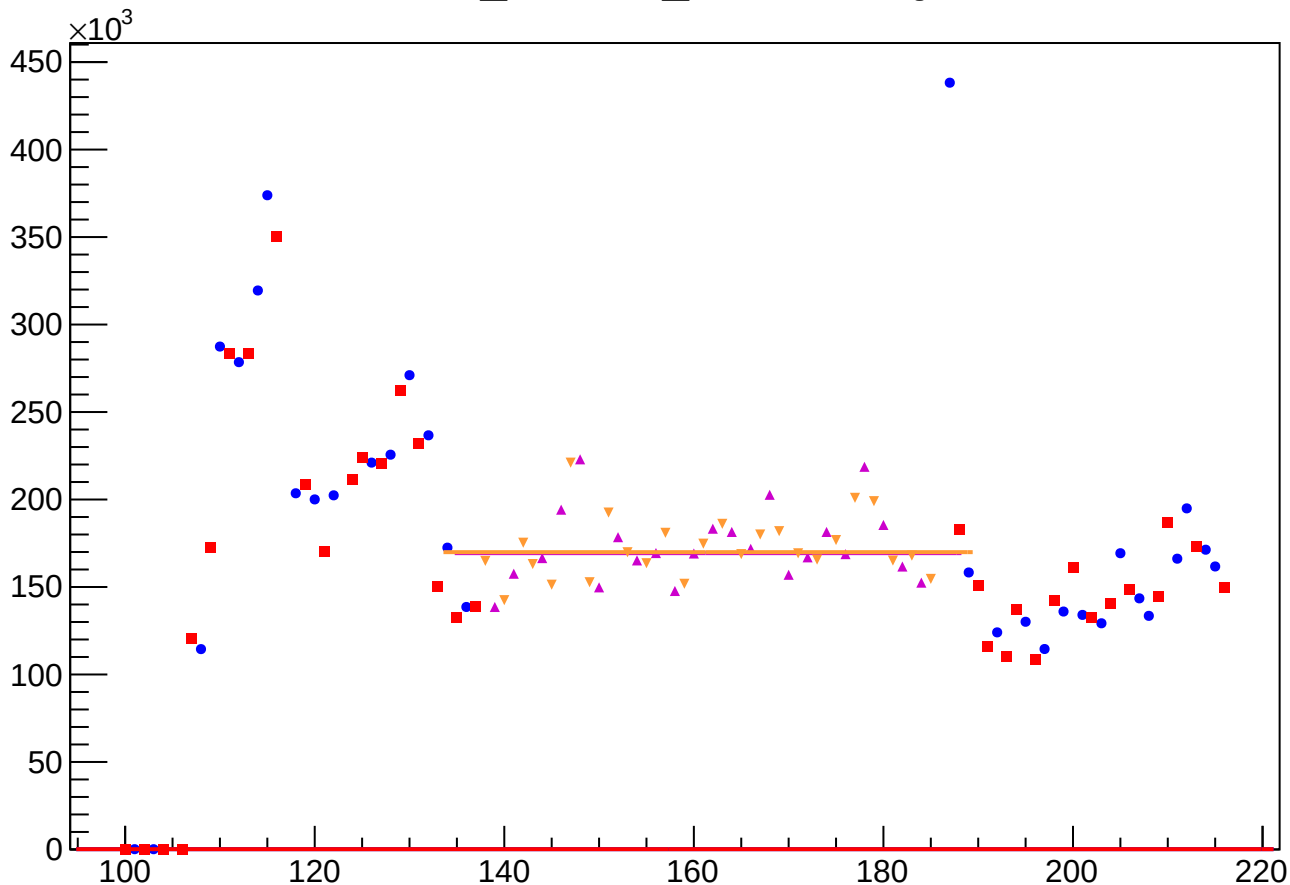
Left In:  $13.457 \pm 39.929$   $\chi^2/\text{NDF}$ : 32.7/22

+ sign  $-0.065 \pm 0.177$   $\chi^2/\text{NDF}$ : 50.5/55

All:  $0.038 \pm 0.121$   $\chi^2/\text{NDF}$ : 146.8/113

- sign  $0.128 \pm 0.166$   $\chi^2/\text{NDF}$ : 95.7/57

# diff\_cav4dY\_rms vs Slug



Right In: 156.009 $\pm$ 0.125  $\chi^2$ /NDF: 35482557.0/30

Left Out: 169916.225 $\pm$ 27.521  $\chi^2$ /NDF:363966.0/24

Right Out: 158.401 $\pm$ 0.118  $\chi^2$ /NDF: 34586446.1/33

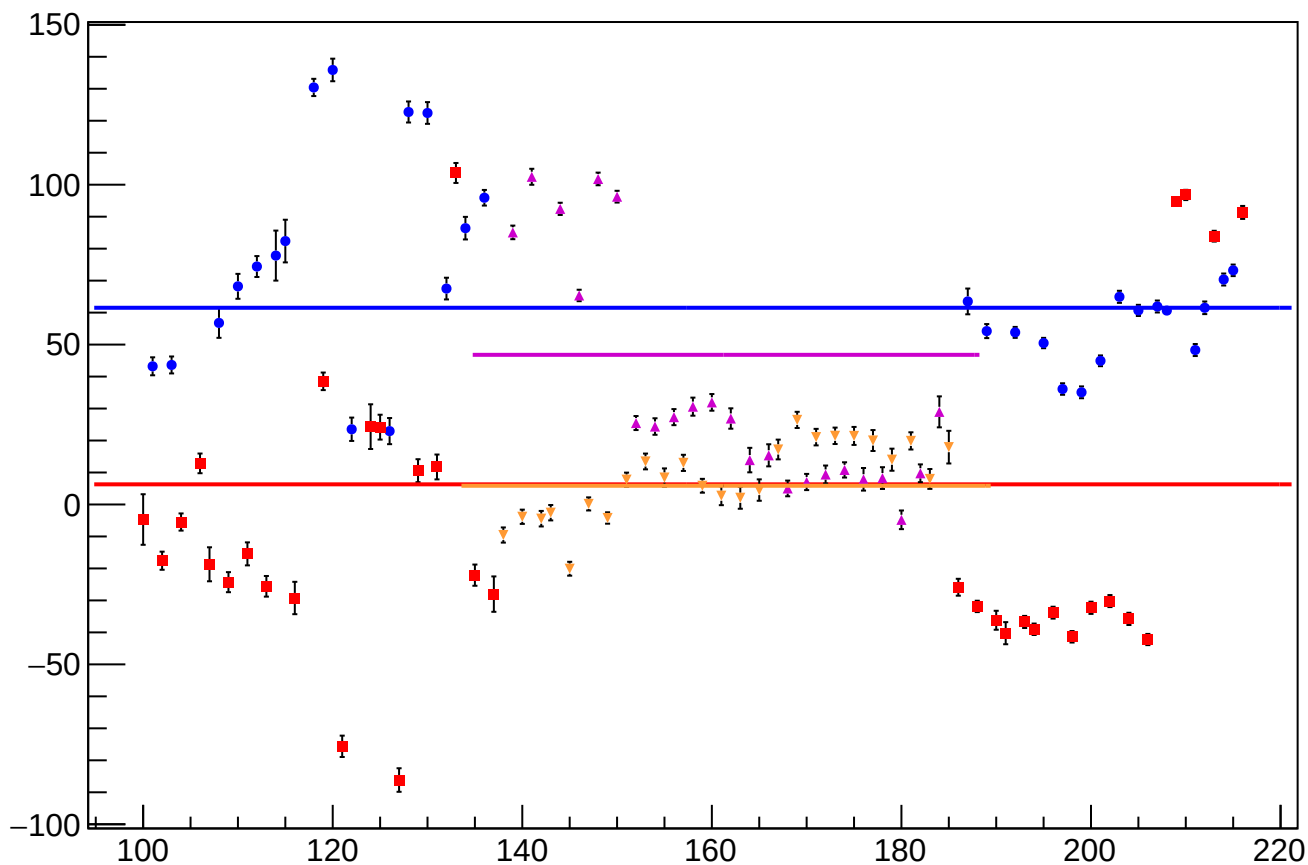
Left In: 169352.083 $\pm$ 28.234  $\chi^2$ /NDF:474852.1/22

+ sign 159.529 $\pm$ 0.125  $\chi^2$ /NDF: 73893543.2/55

All: 160.492 $\pm$ 0.086  $\chi^2$ /NDF: 144864162.3/100

- sign 161.342 $\pm$ 0.118  $\chi^2$ /NDF: 70970507.8/56

# diff\_bpm0i01X\_mean vs Slug



Right In: 61.516 $\pm$ 0.417  $\chi^2$ /NDF: 3030.5/30

Left Out: 5.852 $\pm$ 0.514  $\chi^2$ /NDF: 535.3/24

Right Out: 6.299 $\pm$ 0.404  $\chi^2$ /NDF: 20491.1/34

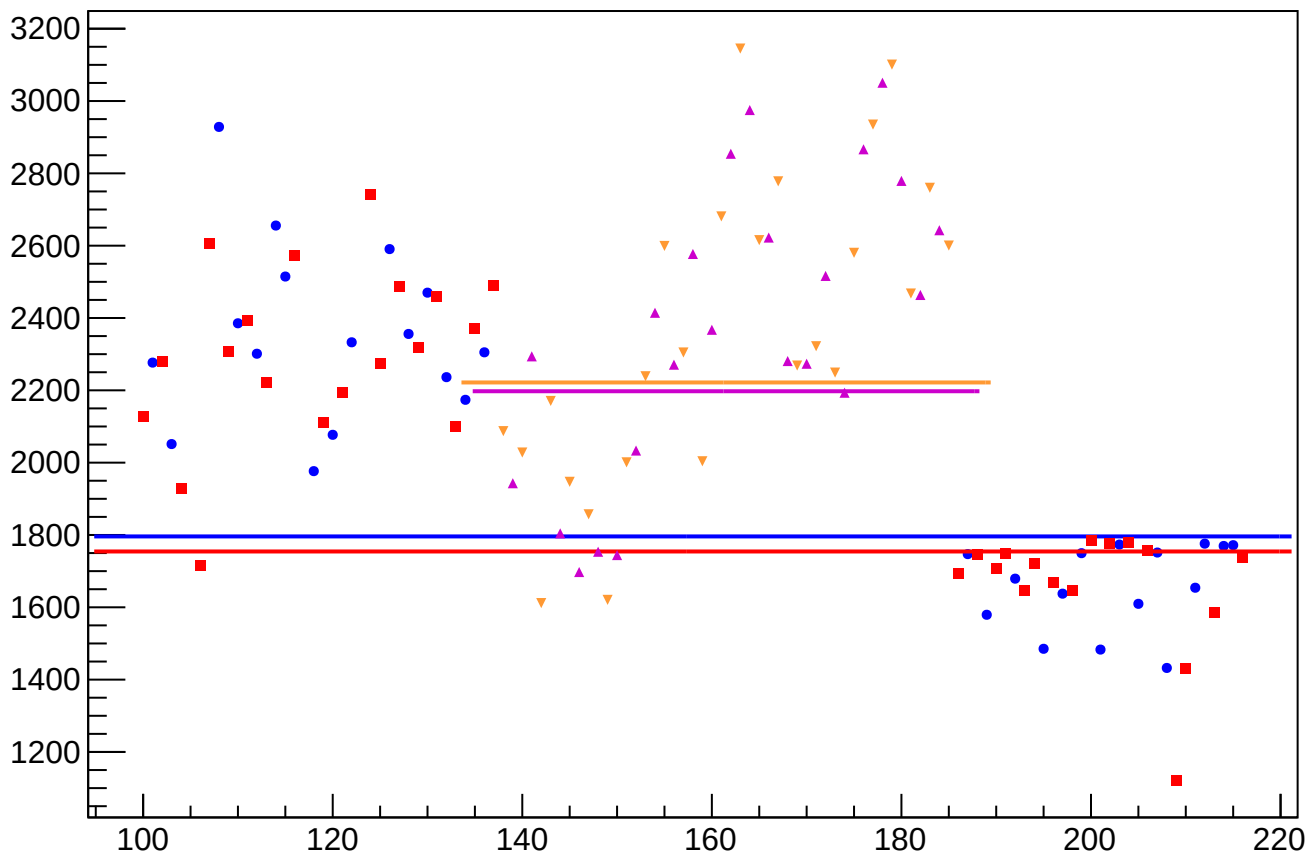
Left In: 46.796 $\pm$ 0.524  $\chi^2$ /NDF: 5175.4/22

+ sign 39.414 $\pm$ 0.324  $\chi^2$ /NDF: 10637.5/55

All: 30.274 $\pm$ 0.228  $\chi^2$ /NDF: 41621.5/113

- sign 21.361 $\pm$ 0.320  $\chi^2$ /NDF: 29411.0/57

# diff\_bpm0i01X\_rms vs Slug



Right In: 1796.002 $\pm$ 0.295  $\chi^2$ /NDF: 1087053.2/30

Left Out: 2221.771 $\pm$ 0.363  $\chi^2$ /NDF: 1184043.2/24

Right Out: 1754.377 $\pm$ 0.285  $\chi^2$ /NDF: 1477476.2/34

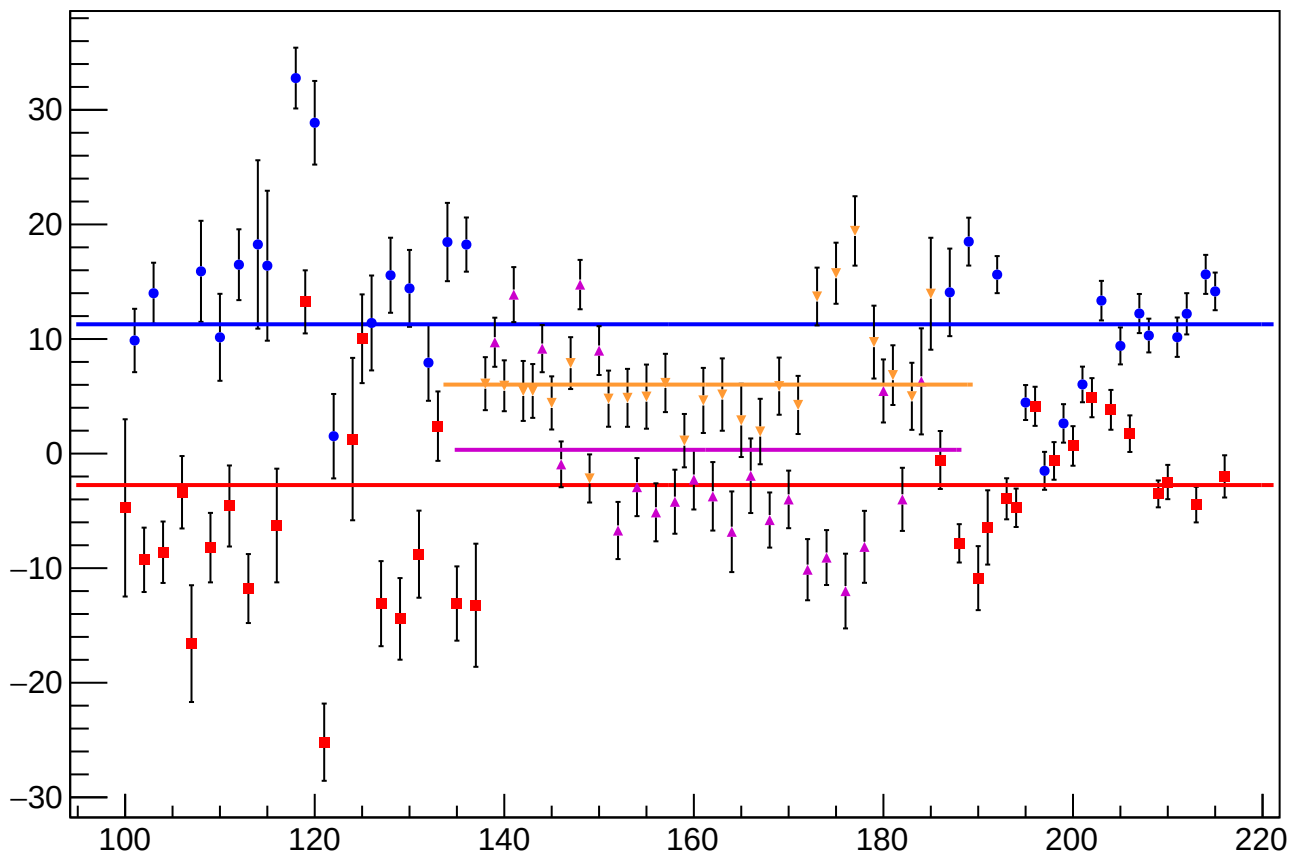
Left In: 2197.471 $\pm$ 0.371  $\chi^2$ /NDF: 1104663.4/22

+ sign 1965.059 $\pm$ 0.229  $\chi^2$ /NDF: 3098568.8/55

All: 1941.828 $\pm$ 0.161  $\chi^2$ /NDF: 6597594.7/11

- sign 1919.170 $\pm$ 0.226  $\chi^2$ /NDF: 3478699.6/57

# diff\_bpm0i01Y\_mean vs Slug



Right In:  $11.286 \pm 0.391$   $\chi^2/\text{NDF}$ : 270.4/30

Left Out:  $6.022 \pm 0.521$   $\chi^2/\text{NDF}$ : 71.8/24

Right Out:  $-2.747 \pm 0.380$   $\chi^2/\text{NDF}$ : 245.2/34

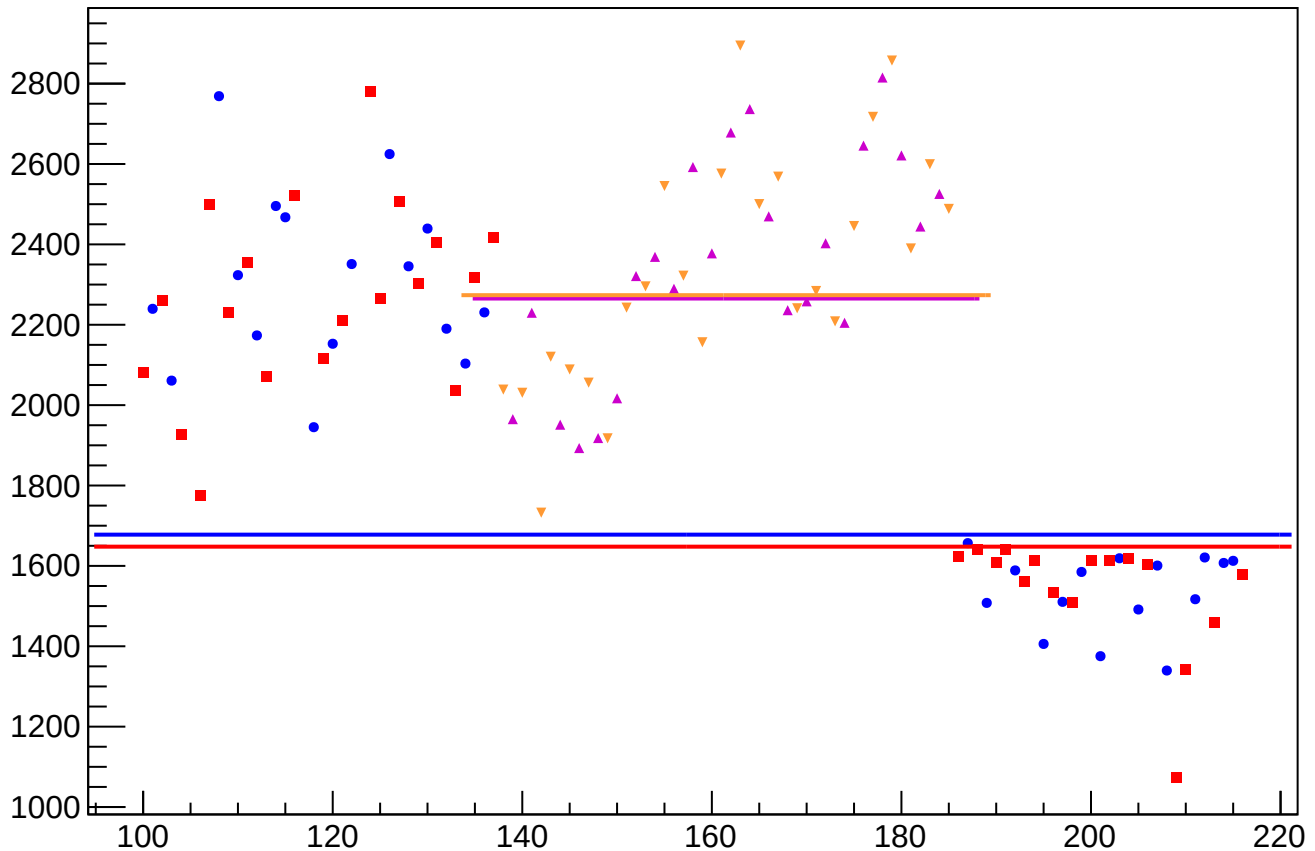
Left In:  $0.329 \pm 0.535$   $\chi^2/\text{NDF}$ : 224.9/22

+ sign  $9.391 \pm 0.313$   $\chi^2/\text{NDF}$ : 407.6/55

All:  $3.787 \pm 0.220$   $\chi^2/\text{NDF}$ : 1536.9/113

- sign  $-1.715 \pm 0.310$   $\chi^2/\text{NDF}$ : 492.1/57

# diff\_bpm0i01Y\_rms vs Slug



Right In: 1677.756 $\pm$ 0.276  $\chi^2$ /NDF: 1358884.0/30

Left Out: 2273.612 $\pm$ 0.368  $\chi^2$ /NDF: 536838.6/24

Right Out: 1647.854 $\pm$ 0.269  $\chi^2$ /NDF: 1695373.0/34

Left In: 2265.257 $\pm$ 0.378  $\chi^2$ /NDF: 495816.5/22

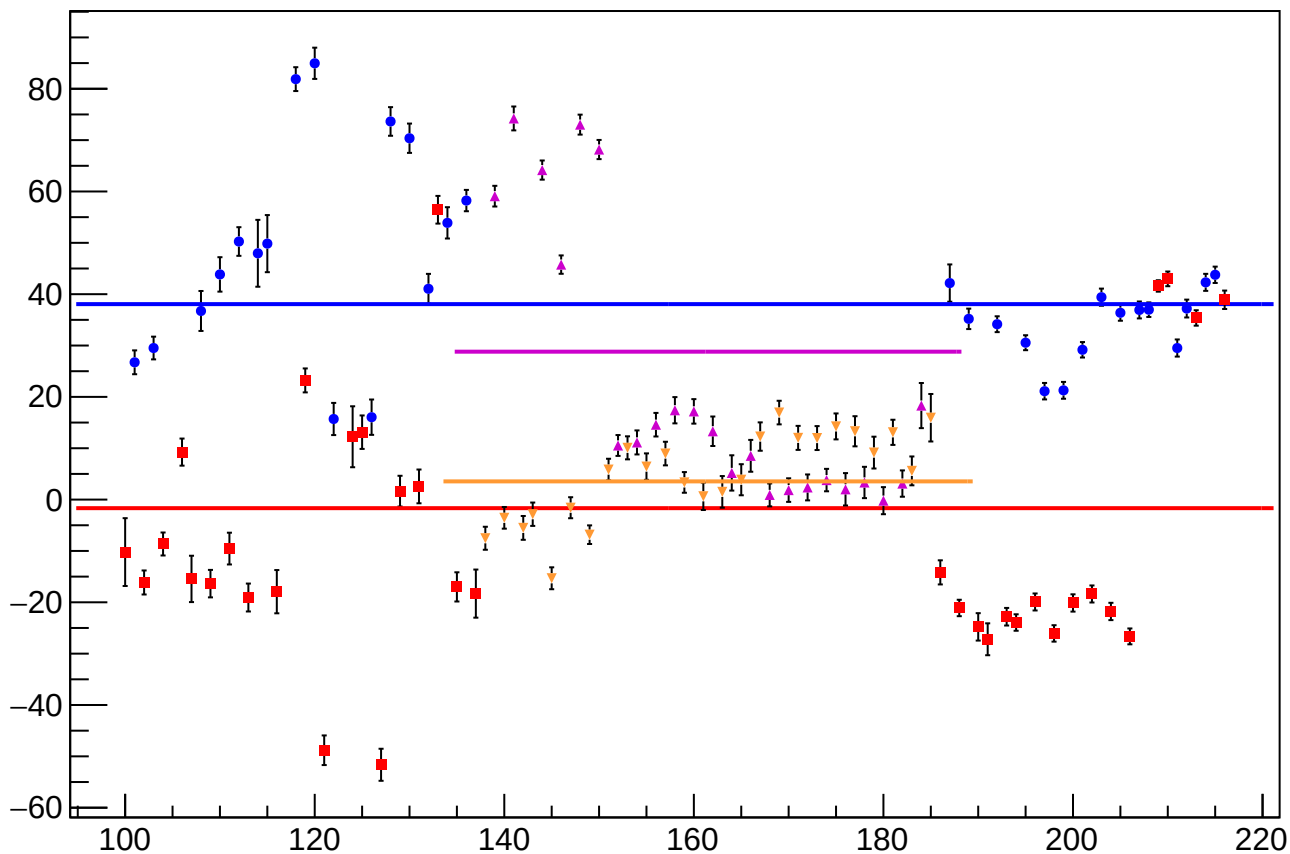
+ sign 1892.273 $\pm$ 0.221  $\chi^2$ /NDF: 3571054.2/55

All: 1873.468 $\pm$ 0.156  $\chi^2$ /NDF: 7549275.3/11

- sign 1855.005 $\pm$ 0.219  $\chi^2$ /NDF: 3963868.4/57



# diff\_bpm0i01aX\_mean vs Slug



Right In:  $38.064 \pm 0.367$   $\chi^2/\text{NDF}$ : 1503.1/30

Left Out:  $3.544 \pm 0.480$   $\chi^2/\text{NDF}$ : 319.8/24

Right Out:  $-1.670 \pm 0.355$   $\chi^2/\text{NDF}$ : 6589.6/34

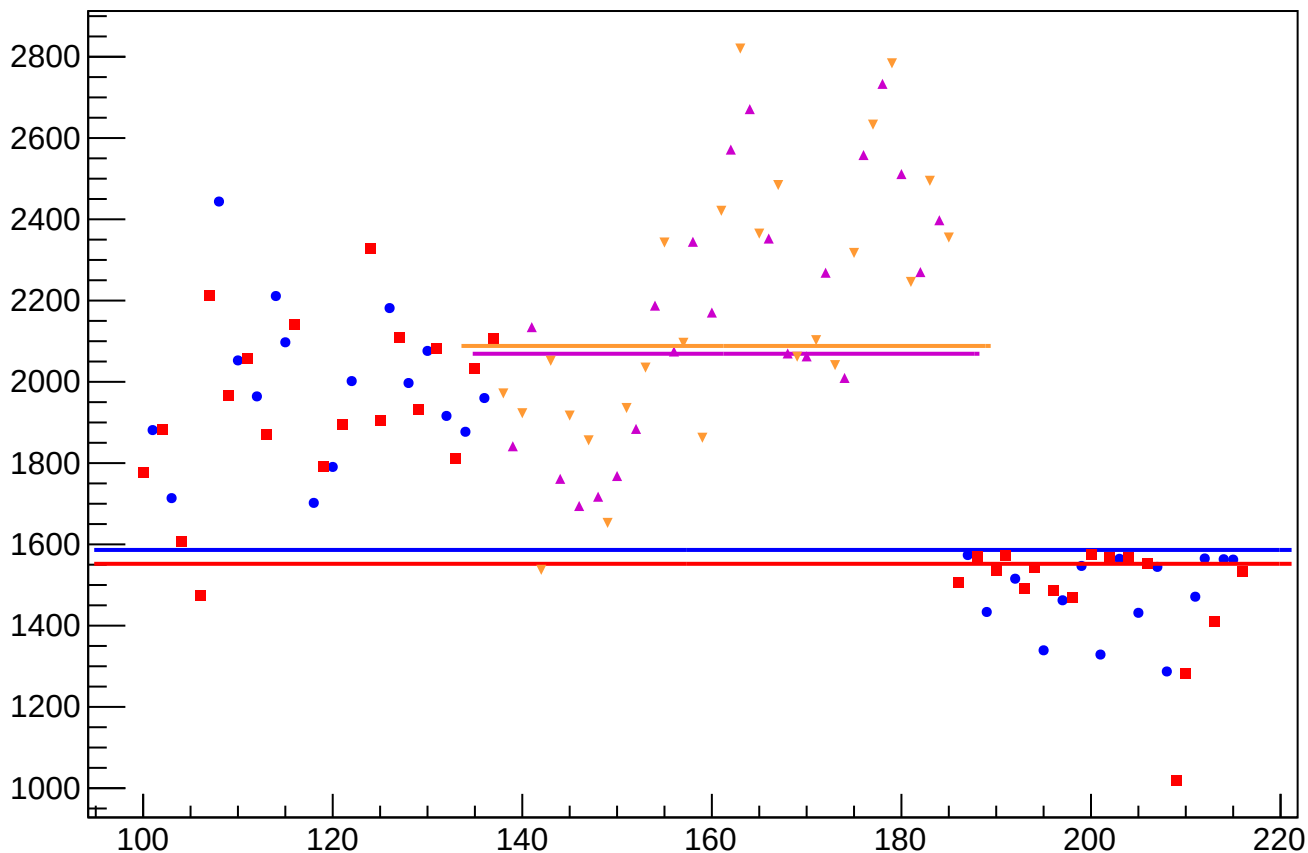
Left In:  $28.804 \pm 0.491$   $\chi^2/\text{NDF}$ : 3262.5/22

+ sign  $25.344 \pm 0.292$   $\chi^2/\text{NDF}$ : 5085.3/55

All:  $16.976 \pm 0.205$   $\chi^2/\text{NDF}$ : 19092.9/113

- sign  $8.815 \pm 0.288$   $\chi^2/\text{NDF}$ : 12380.4/57

# diff\_bpm0i01aX\_rms vs Slug



Right In: 1586.311 $\pm$ 0.259  $\chi^2$ /NDF: 833115.7/30

Left Out: 2088.353 $\pm$ 0.340  $\chi^2$ /NDF: 787429.8/24

Right Out: 1552.162 $\pm$ 0.251  $\chi^2$ /NDF: 1176224.8/34

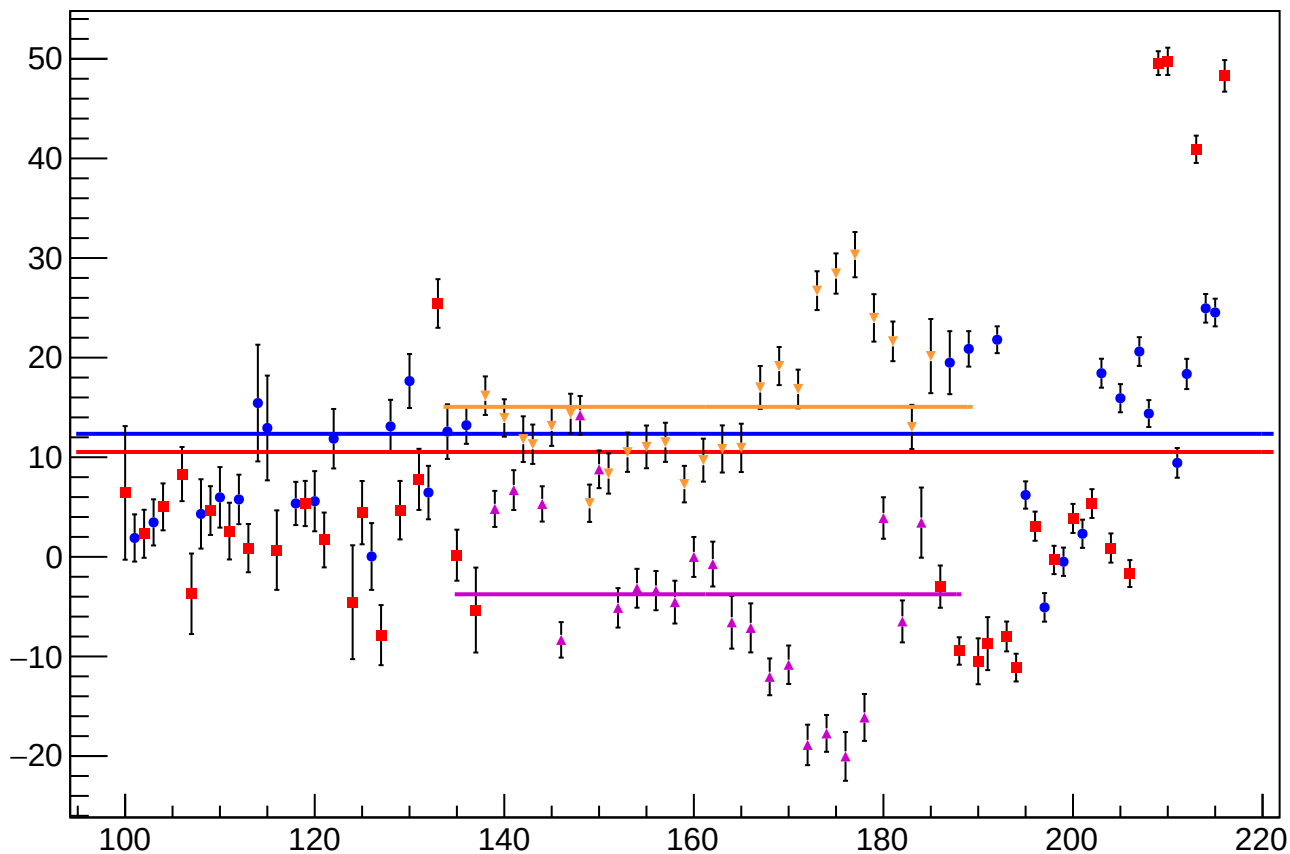
Left In: 2069.116 $\pm$ 0.347  $\chi^2$ /NDF: 711501.5/22

+ sign 1771.308 $\pm$ 0.206  $\chi^2$ /NDF: 3000649.9/55

All: 1750.405 $\pm$ 0.145  $\chi^2$ /NDF: 6363789.7/11

- sign 1730.019 $\pm$ 0.204  $\chi^2$ /NDF: 3342831.3/57

# diff\_bpm0i01aY\_mean vs Slug



Right In:  $12.351 \pm 0.333$   $\chi^2/\text{NDF}$ : 698.6/30

Left Out:  $15.056 \pm 0.416$   $\chi^2/\text{NDF}$ : 246.2/24

Right Out:  $10.528 \pm 0.326$   $\chi^2/\text{NDF}$ : 4169.7/34

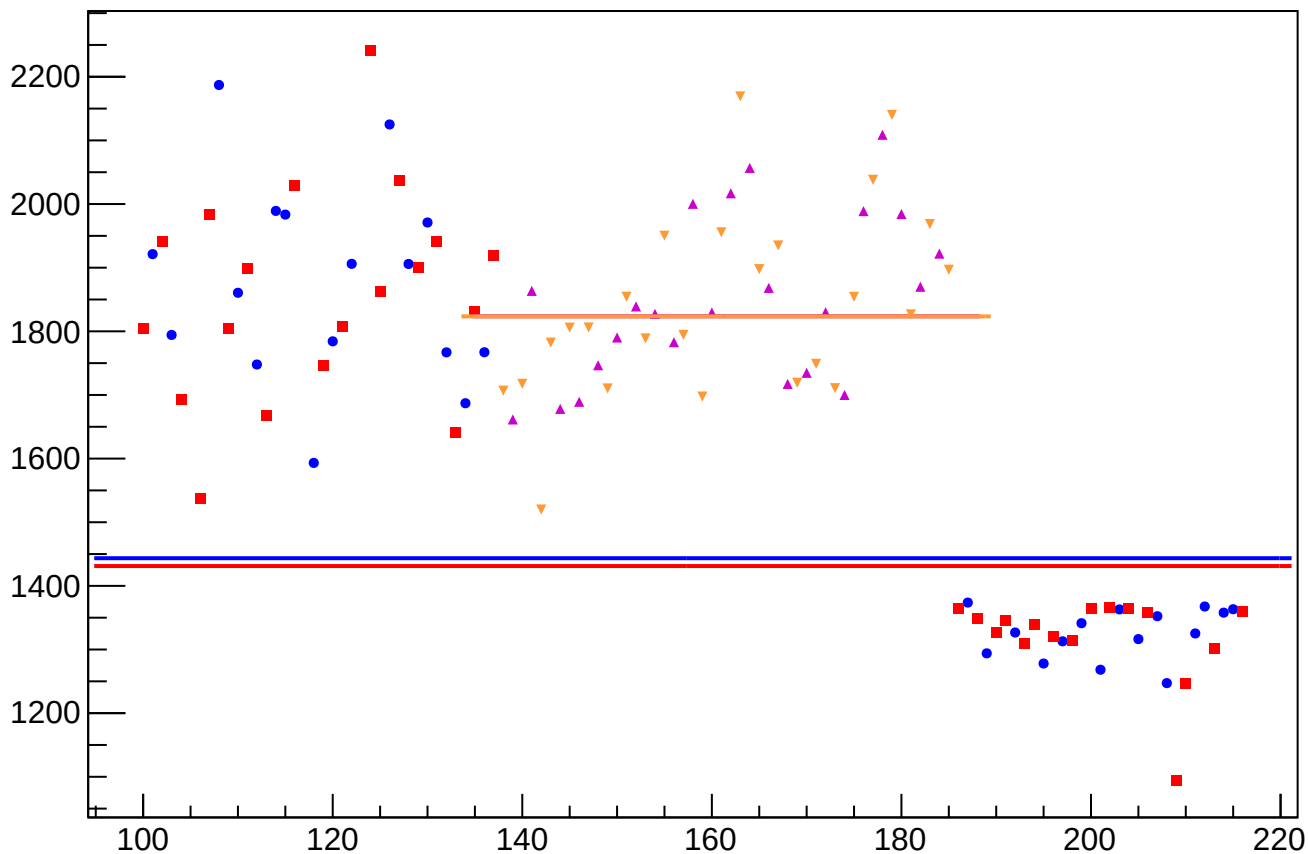
Left In:  $-3.758 \pm 0.428$   $\chi^2/\text{NDF}$ : 459.1/22

+ sign  $13.409 \pm 0.260$   $\chi^2/\text{NDF}$ : 970.6/55

All:  $9.333 \pm 0.184$   $\chi^2/\text{NDF}$ : 6794.9/113

- sign  $5.272 \pm 0.259$   $\chi^2/\text{NDF}$ : 5333.6/57

# diff\_bpm0i01aY\_rms vs Slug



Right In:  $1443.472 \pm 0.236$   $\chi^2/\text{NDF}: 951513.2/30$

Left Out:  $1823.452 \pm 0.294$   $\chi^2/\text{NDF}: 211274.0/24$

Right Out:  $1431.191 \pm 0.231$   $\chi^2/\text{NDF}: 1052544.1/34$

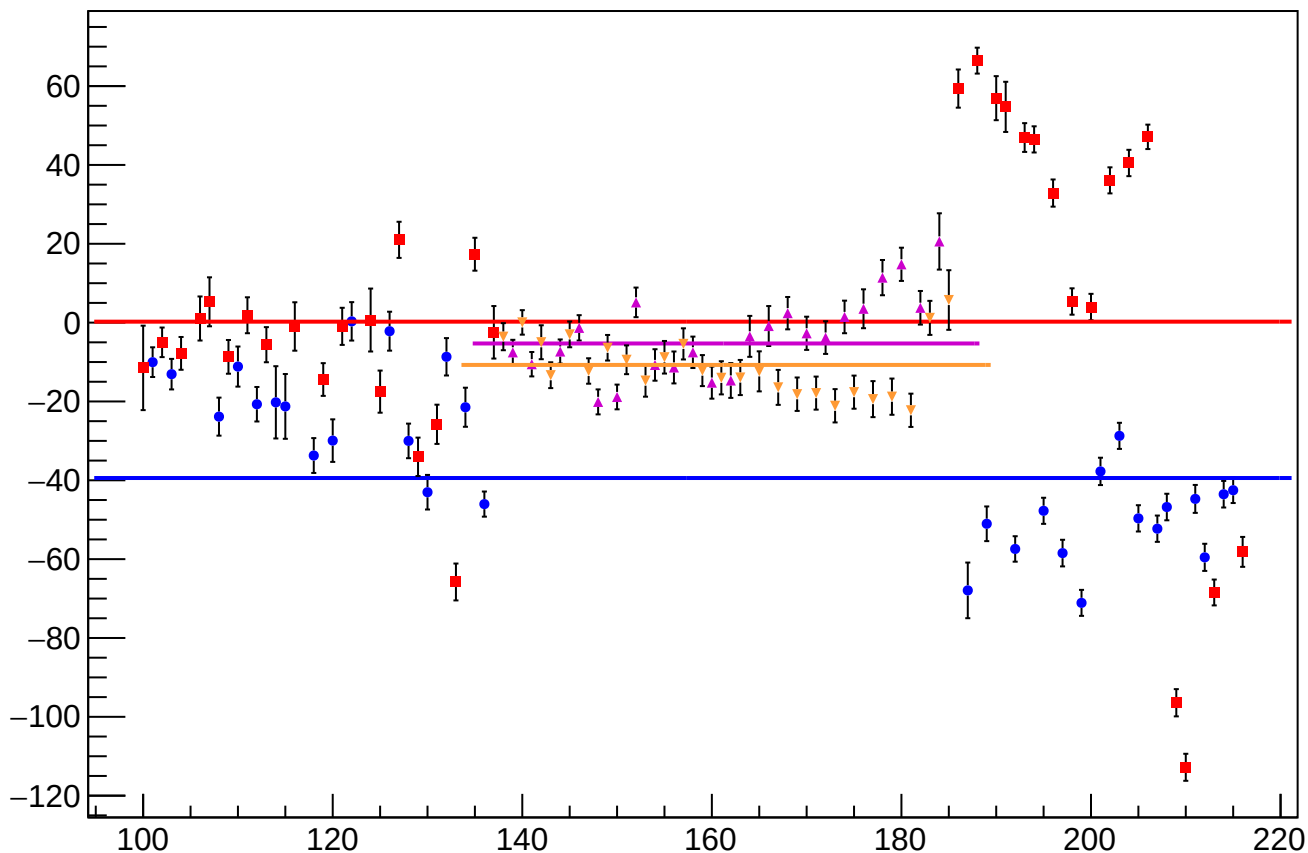
Left In:  $1823.627 \pm 0.303$   $\chi^2/\text{NDF}: 163768.2/22$

+ sign  $1592.106 \pm 0.184$   $\chi^2/\text{NDF}: 2180247.0/55$

All:  $1583.821 \pm 0.130$   $\chi^2/\text{NDF}: 4464346.1/11$

- sign  $1575.568 \pm 0.183$   $\chi^2/\text{NDF}: 2280044.5/57$

# diff\_bpm0l01X\_mean vs Slug



Right In:  $-39.419 \pm 0.710$   $\chi^2/\text{NDF}$ : 632.1/30

Left Out:  $-10.732 \pm 0.794$   $\chi^2/\text{NDF}$ : 73.8/24

Right Out:  $0.243 \pm 0.703$   $\chi^2/\text{NDF}$ : 4571.4/34

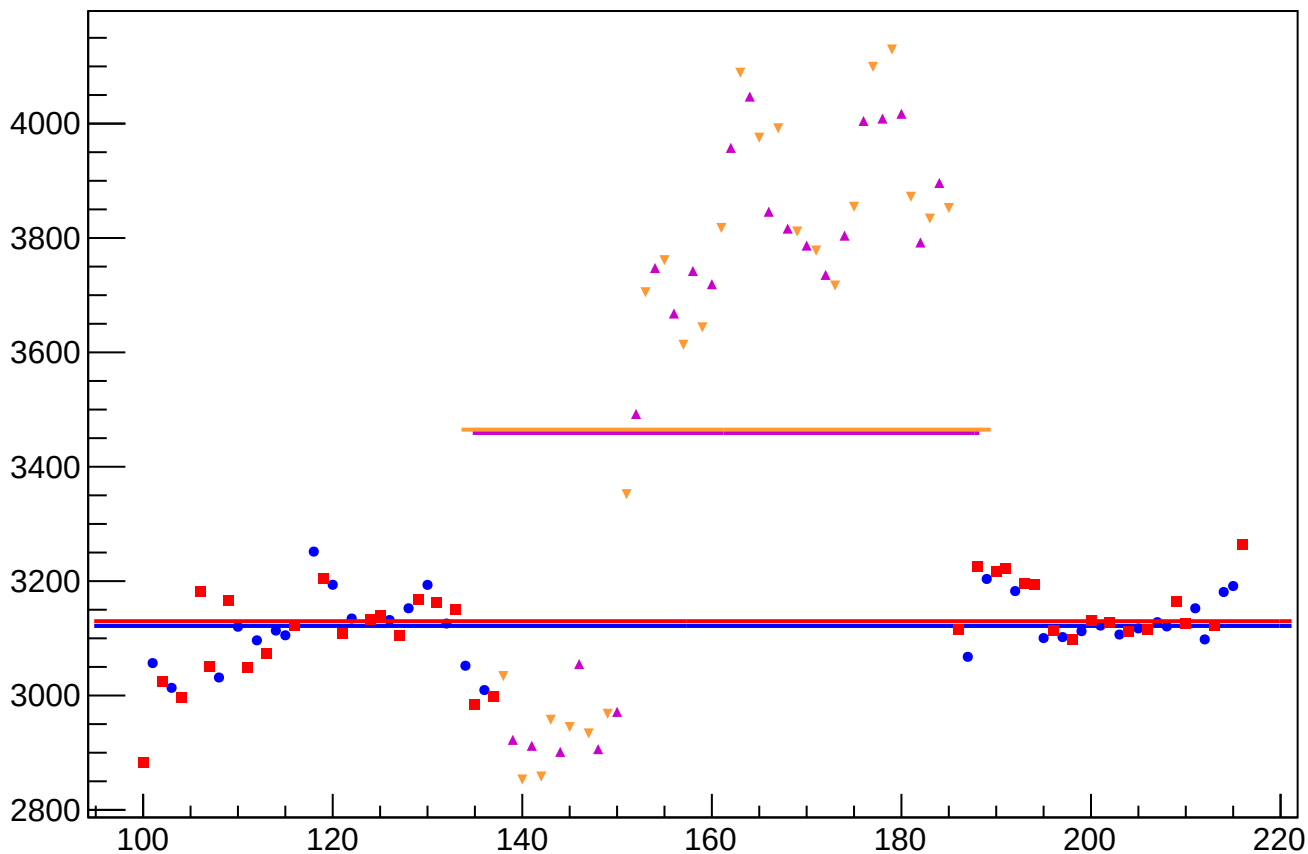
Left In:  $-5.291 \pm 0.814$   $\chi^2/\text{NDF}$ : 133.6/22

+ sign  $-26.661 \pm 0.529$   $\chi^2/\text{NDF}$ : 1431.0/55

All:  $-14.457 \pm 0.375$   $\chi^2/\text{NDF}$ : 7231.0/113

- sign  $-2.121 \pm 0.532$   $\chi^2/\text{NDF}$ : 4731.4/57

# diff\_bpm0l01X\_rms vs Slug



Right In: 3121.658 $\pm$ 0.502  $\chi^2$ /NDF: 12070.7/30

Left Out: 3464.906 $\pm$ 0.561  $\chi^2$ /NDF:644023.5/24

Right Out: 3129.952 $\pm$ 0.497  $\chi^2$ /NDF: 17567.9/34

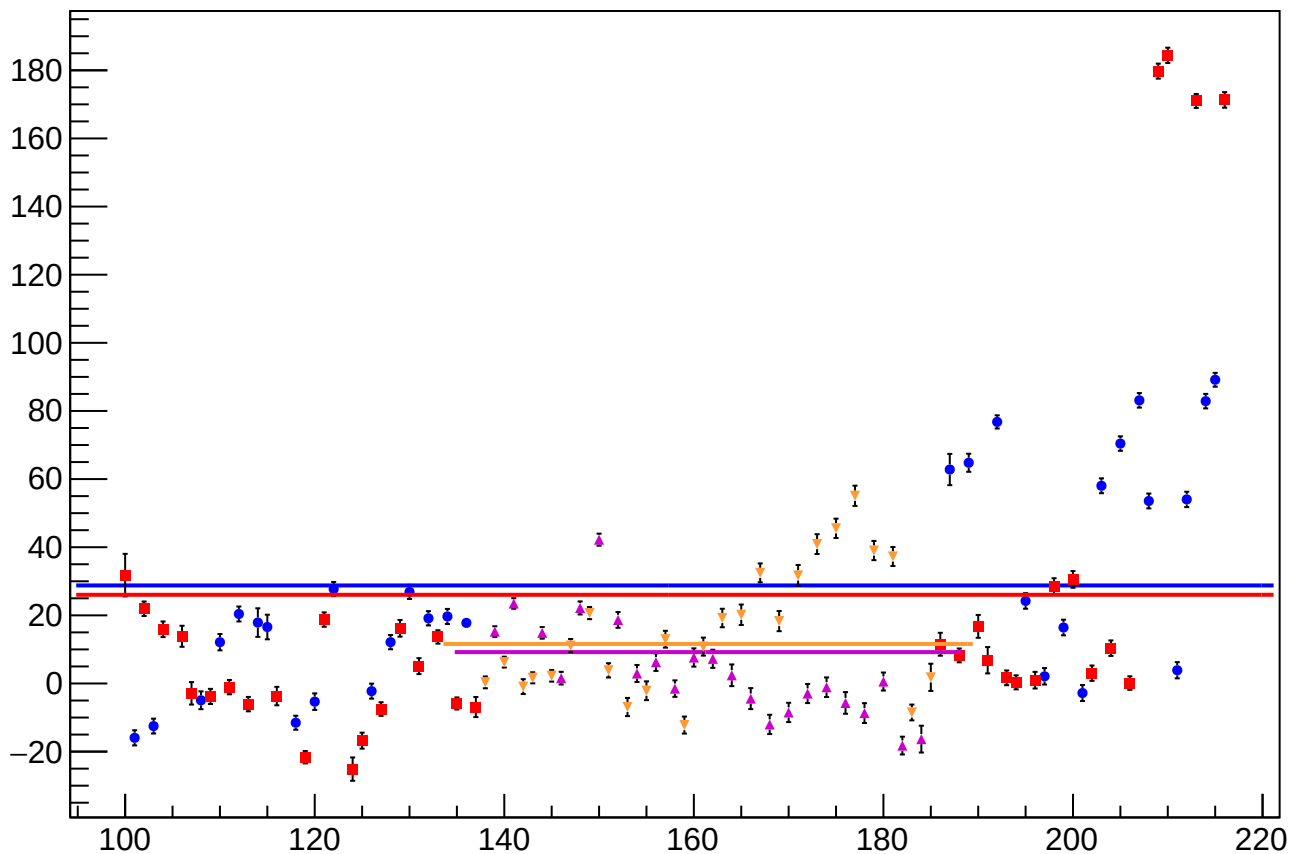
Left In: 3459.050 $\pm$ 0.576  $\chi^2$ /NDF:583309.1/22

+ sign 3274.318 $\pm$ 0.374  $\chi^2$ /NDF: 863727.0/55

All: 3272.446 $\pm$ 0.265  $\chi^2$ /NDF: 1651757.1/11

- sign 3270.554 $\pm$ 0.376  $\chi^2$ /NDF: 787979.8/57

# diff\_bpm0l01Y\_mean vs Slug



Right In: 28.780 $\pm$ 0.399  $\chi^2$ /NDF: 6256.6/30

Left Out: 11.599 $\pm$ 0.463  $\chi^2$ /NDF:1196.9/24

Right Out: 26.035 $\pm$ 0.394  $\chi^2$ /NDF: 22625.6/34

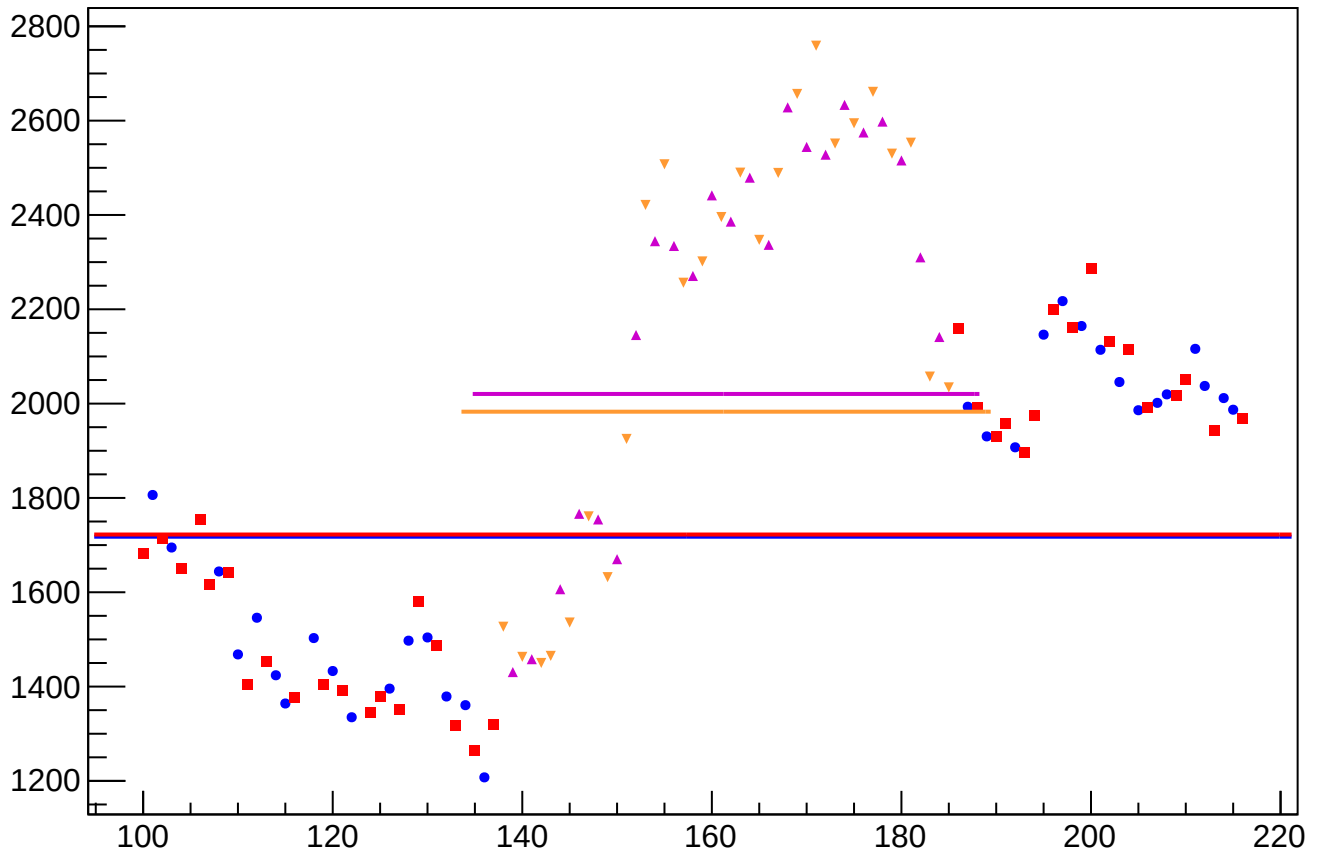
Left In: 9.213 $\pm$ 0.484  $\chi^2$ /NDF:940.6/22

+ sign 21.476 $\pm$ 0.302  $\chi^2$ /NDF: 8243.8/55

All: 20.412 $\pm$ 0.215  $\chi^2$ /NDF: 32561.6/113

- sign 19.323 $\pm$ 0.306  $\chi^2$ /NDF: 24292.8/57

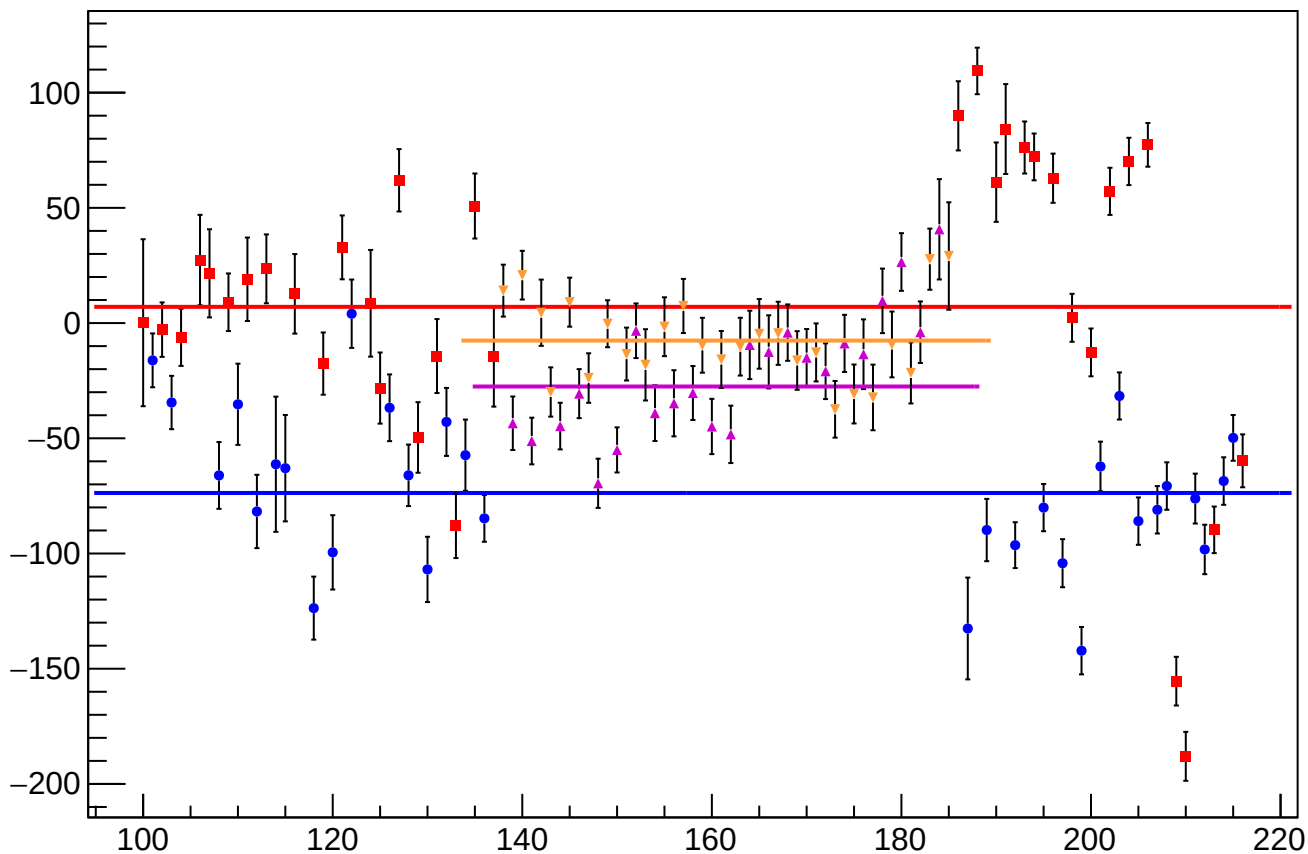
# diff\_bpm0l01Y\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 1717.810+/-0.282  | $\chi^2/\text{NDF}$ : 1337871.7/30 | + sign 1830.498+/-0.214 | $\chi^2/\text{NDF}$ : 3691673.5/55 |
| Left Out: 1982.871+/-0.328  | $\chi^2/\text{NDF}$ : 1977669.4/24 | All: 1835.857+/-0.152   | $\chi^2/\text{NDF}$ : 7077283.8/11 |
| Right Out: 1722.424+/-0.279 | $\chi^2/\text{NDF}$ : 1313474.4/34 | - sign 1841.338+/-0.216 | $\chi^2/\text{NDF}$ : 3384337.9/57 |
| Left In: 2020.468+/-0.342   | $\chi^2/\text{NDF}$ : 1614691.2/22 |                         |                                    |



# diff\_bpm0l02X\_mean vs Slug



Right In:  $-73.727 \pm 2.201$   $\chi^2/\text{NDF}: 202.2/30$

Left Out:  $-7.594 \pm 2.495$   $\chi^2/\text{NDF}: 47.9/24$

Right Out:  $7.044 \pm 2.182$   $\chi^2/\text{NDF}: 1190.4/34$

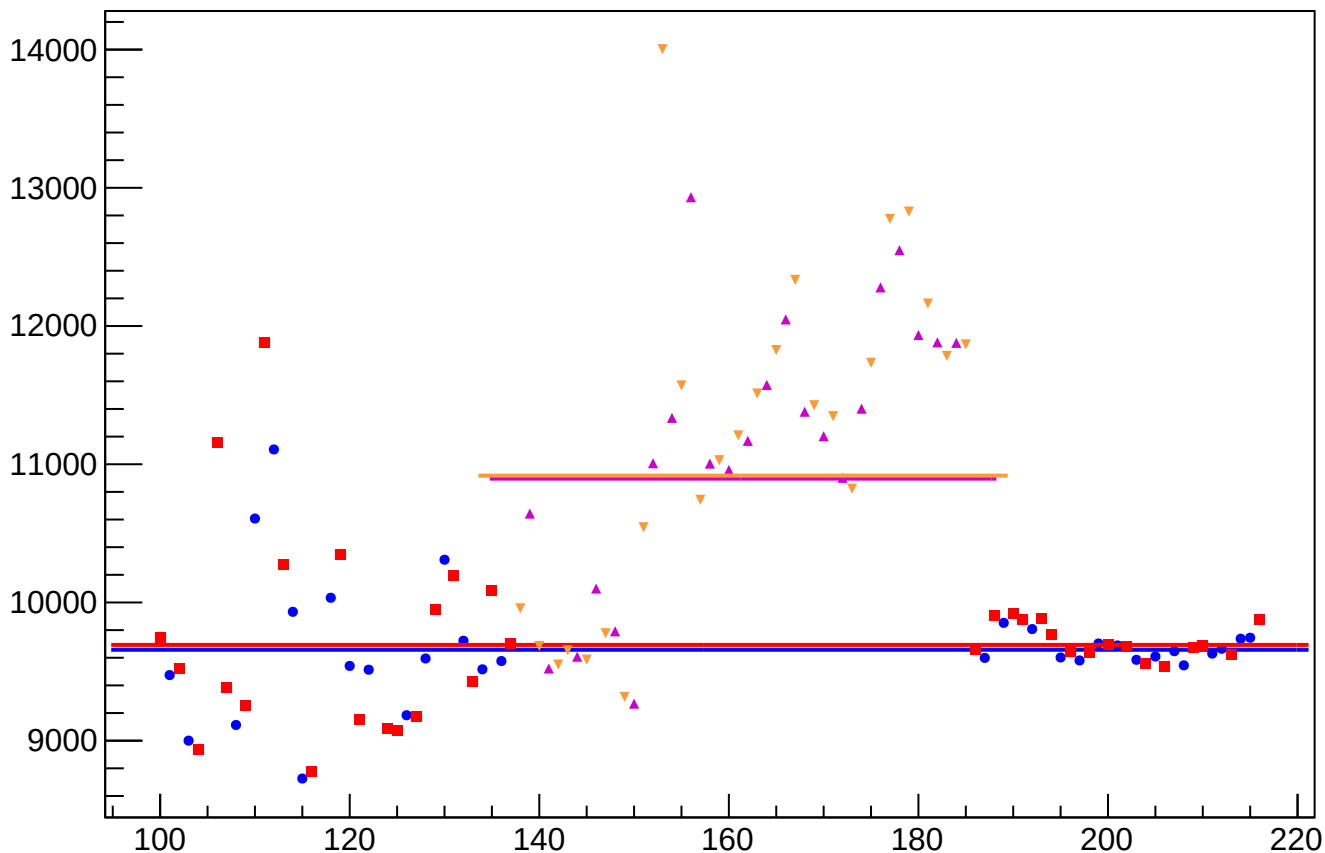
Left In:  $-27.528 \pm 2.556$   $\chi^2/\text{NDF}: 93.0/22$

+ sign  $-44.782 \pm 1.651$   $\chi^2/\text{NDF}: 645.1/55$

All:  $-26.254 \pm 1.170$   $\chi^2/\text{NDF}: 2287.8/113$

- sign  $-7.525 \pm 1.660$   $\chi^2/\text{NDF}: 1389.3/57$

# diff\_bpm0l02X\_rms vs Slug



Right In:  $9657.885 \pm 1.557$   $\chi^2/\text{NDF}$ : 45911.8/30

Left Out:  $10917.711 \pm 1.764$   $\chi^2/\text{NDF}$ : 425841.1/24

Right Out:  $9693.042 \pm 1.543$   $\chi^2/\text{NDF}$ : 83653.2/34

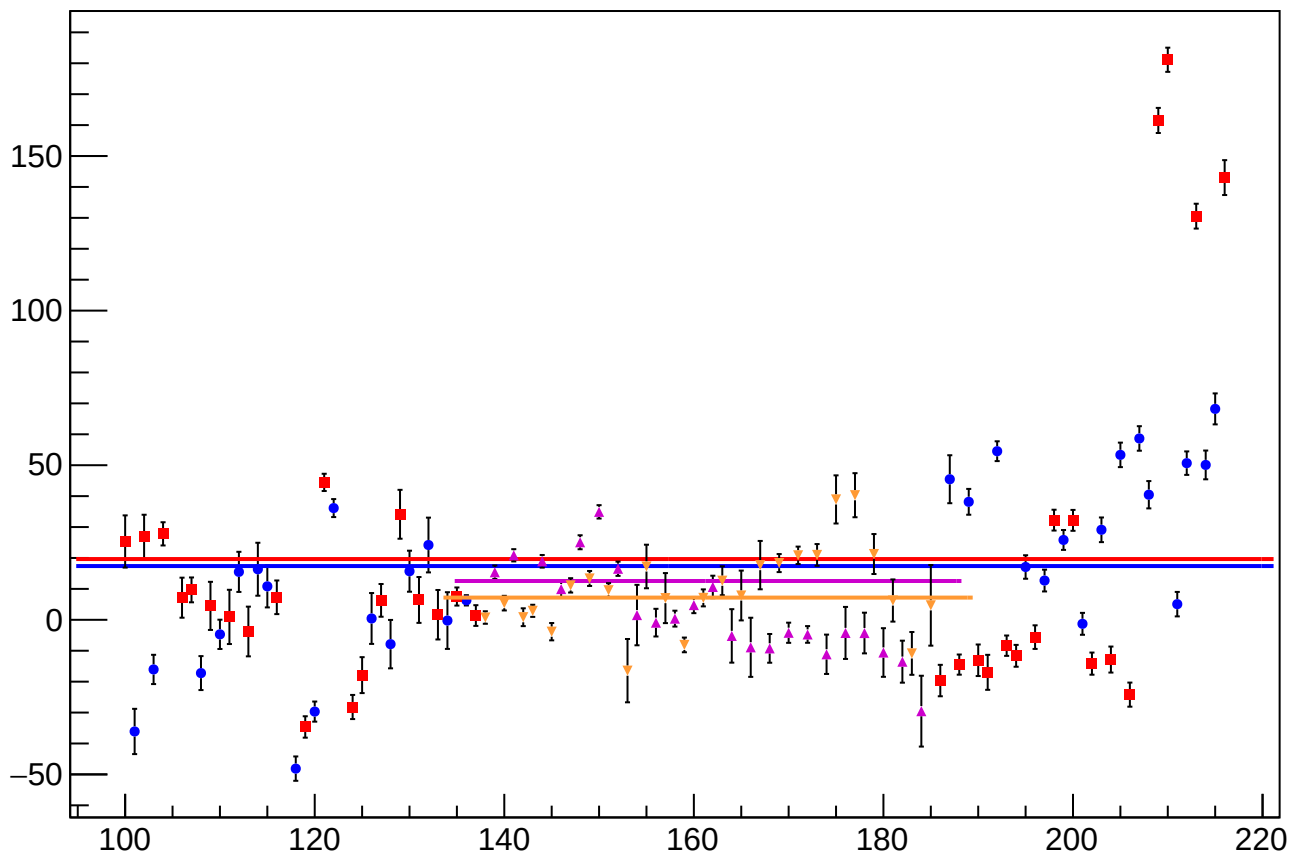
Left In:  $10895.992 \pm 1.808$   $\chi^2/\text{NDF}$ : 298059.2/22

+ sign  $10209.287 \pm 1.167$   $\chi^2/\text{NDF}$ : 758486.3/55

All:  $10204.653 \pm 0.828$   $\chi^2/\text{NDF}$ : 1396453.5/1

- sign  $10199.968 \pm 1.173$   $\chi^2/\text{NDF}$ : 637935.5/57

# diff\_bpm0l02Y\_mean vs Slug



Right In:  $17.387 \pm 0.731$   $\chi^2/\text{NDF}: 1431.1/30$

Left Out:  $7.185 \pm 0.654$   $\chi^2/\text{NDF}: 201.7/24$

Right Out:  $19.653 \pm 0.724$   $\chi^2/\text{NDF}: 5537.1/34$

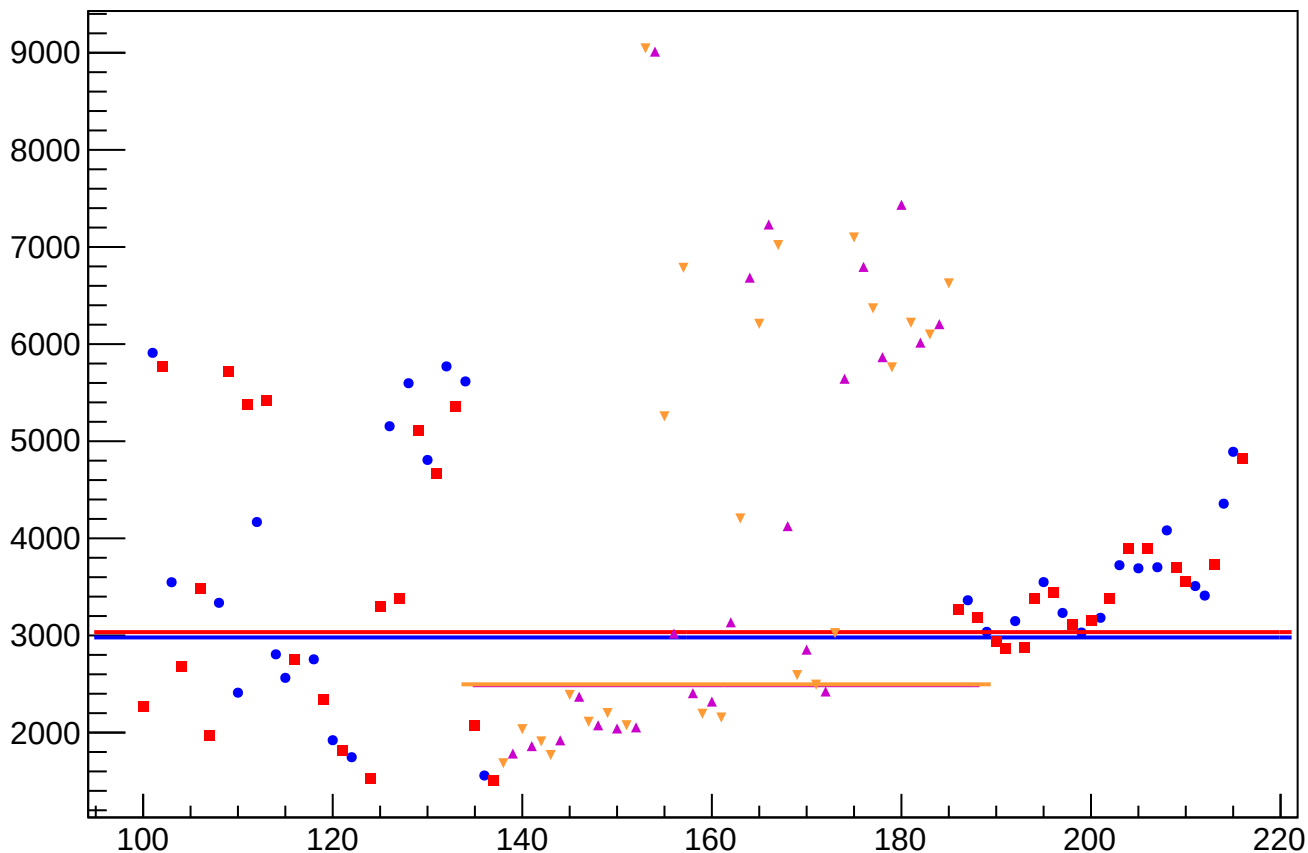
Left In:  $12.553 \pm 0.661$   $\chi^2/\text{NDF}: 372.1/22$

+ sign  $11.720 \pm 0.487$   $\chi^2/\text{NDF}: 1741.1/55$

All:  $13.745 \pm 0.345$   $\chi^2/\text{NDF}: 7737.4/113$

- sign  $15.777 \pm 0.488$   $\chi^2/\text{NDF}: 5961.7/57$

# diff\_bpm0l02Y\_rms vs Slug



Right In: 2979.689+/-0.517  $\chi^2/\text{NDF}$ : 4298046.8/30

Left Out: 2496.801+/-0.462  $\chi^2/\text{NDF}$ : 7205827.8/24

Right Out: 3034.492+/-0.512  $\chi^2/\text{NDF}$ : 3456583.0/34

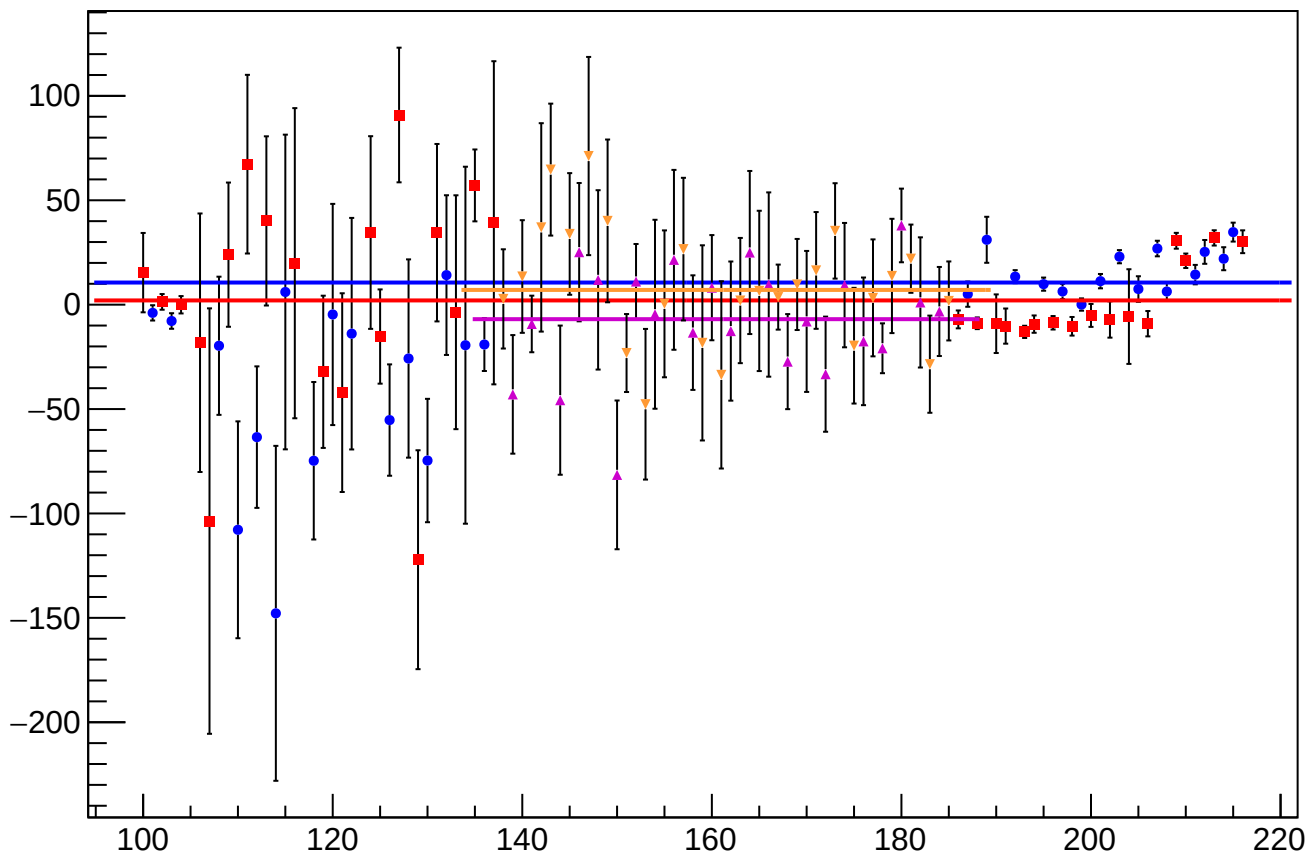
Left In: 2487.721+/-0.467  $\chi^2/\text{NDF}$ : 6103466.5/22

+ sign 2711.464+/-0.344  $\chi^2/\text{NDF}$ : 11989139.0/55

All: 2723.712+/-0.244  $\chi^2/\text{NDF}$ : 22174021.3/100

- sign 2736.005+/-0.345  $\chi^2/\text{NDF}$ : 10182349.2/57

# diff\_bpm0l03X\_mean vs Slug



Right In:  $10.601 \pm 0.961$   $\chi^2/\text{NDF}$ : 175.8/30

Left Out:  $7.059 \pm 5.227$   $\chi^2/\text{NDF}$ : 19.6/24

Right Out:  $2.031 \pm 0.999$   $\chi^2/\text{NDF}$ : 294.6/34

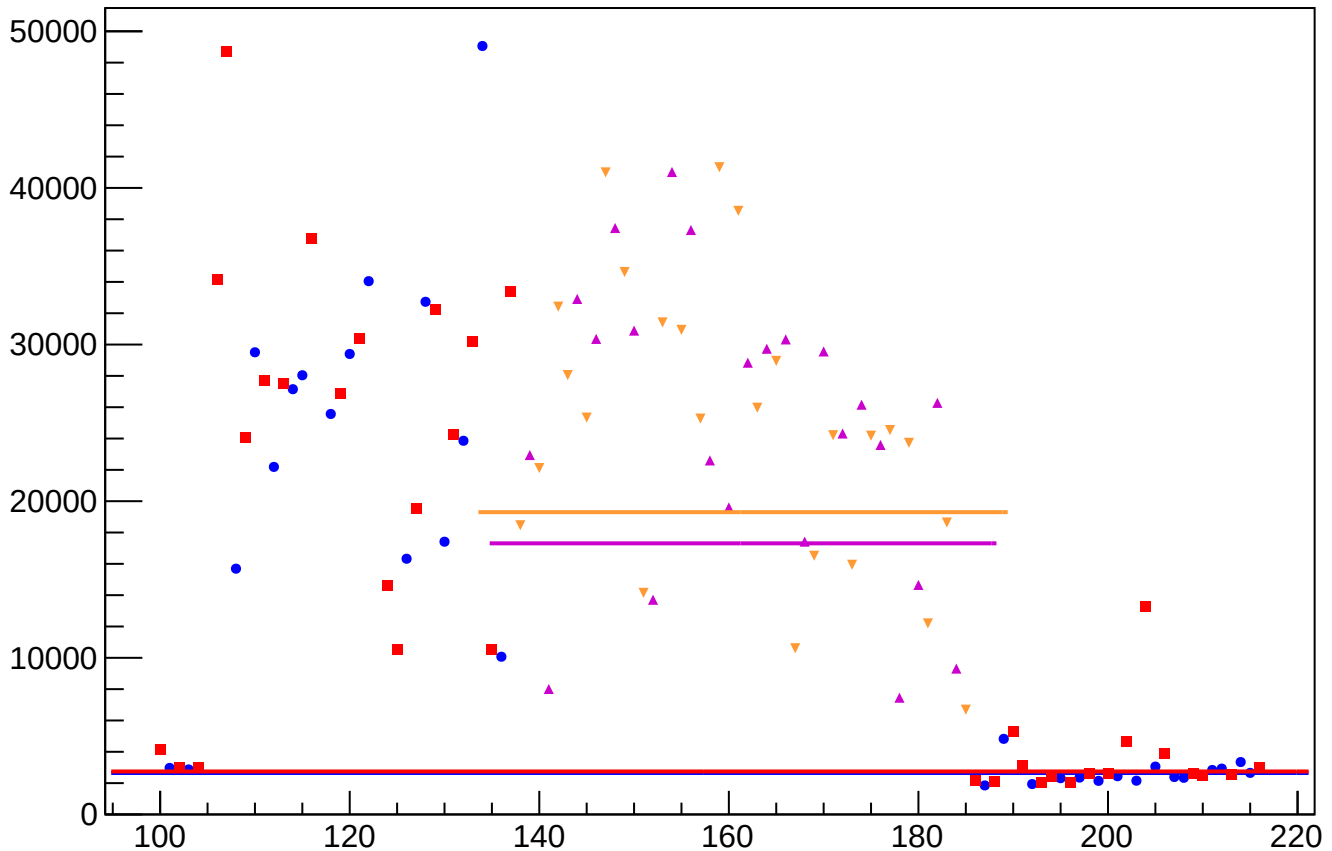
Left In:  $-6.944 \pm 5.090$   $\chi^2/\text{NDF}$ : 21.1/22

+ sign  $10.485 \pm 0.945$   $\chi^2/\text{NDF}$ : 195.8/55

All:  $6.251 \pm 0.680$   $\chi^2/\text{NDF}$ : 556.2/113

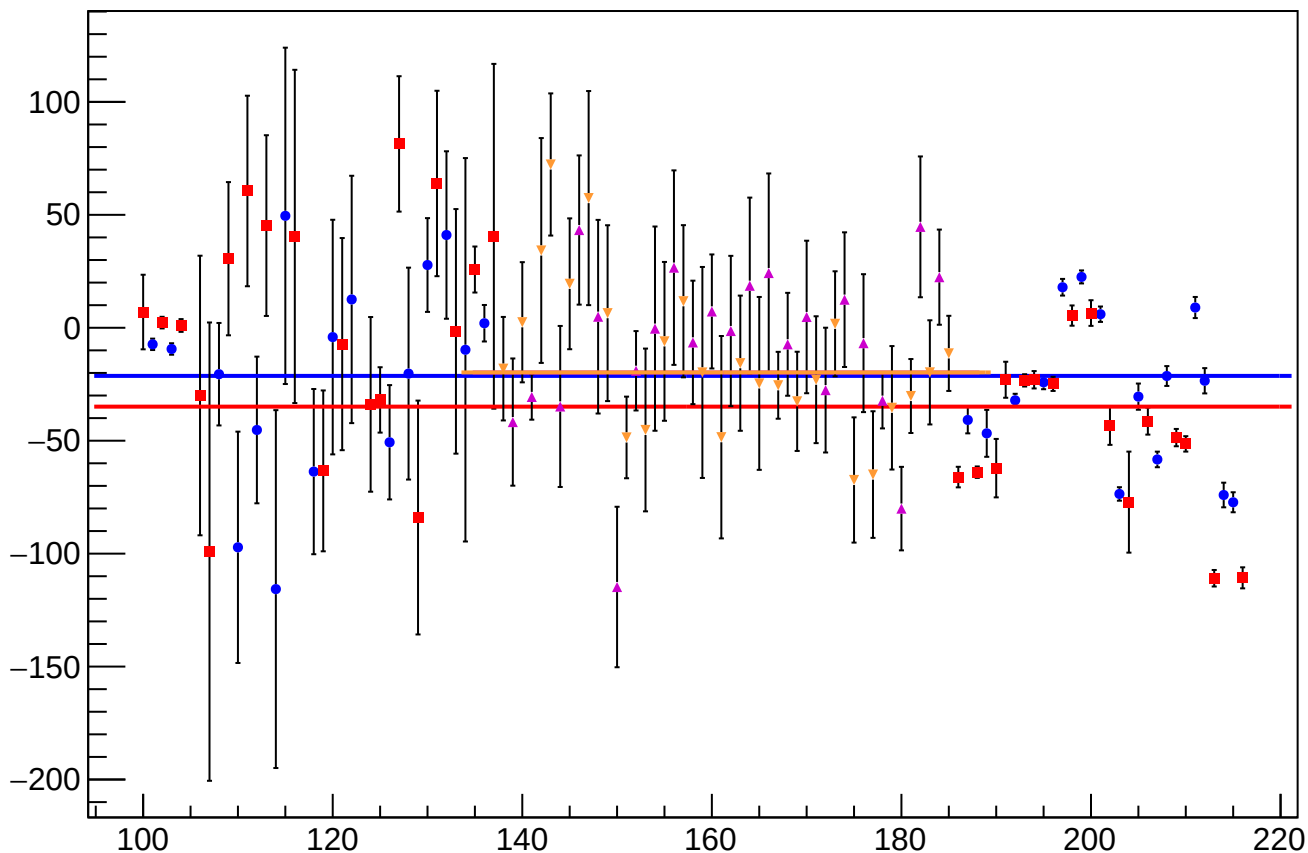
- sign  $1.699 \pm 0.980$   $\chi^2/\text{NDF}$ : 318.7/57

# diff\_bpm0l03X\_rms vs Slug



|                             |                                    |                         |                                     |
|-----------------------------|------------------------------------|-------------------------|-------------------------------------|
| Right In: 2648.032+/-0.679  | $\chi^2/\text{NDF}$ : 7988563.8/30 | + sign 3192.176+/-0.668 | $\chi^2/\text{NDF}$ : 32655157.0/55 |
| Left Out: 19299.351+/-3.696 | $\chi^2/\text{NDF}$ : 5037014.9/24 | All: 3236.764+/-0.481   | $\chi^2/\text{NDF}$ : 64577685.4/1  |
| Right Out: 2745.041+/-0.706 | $\chi^2/\text{NDF}$ : 9428929.7/34 | - sign 3284.708+/-0.693 | $\chi^2/\text{NDF}$ : 31913288.0/57 |
| Left In: 17309.081+/-3.600  | $\chi^2/\text{NDF}$ : 6719993.9/22 |                         |                                     |

# diff\_bpm0l03Y\_mean vs Slug



Right In:  $-21.305 \pm 0.870$   $\chi^2/\text{NDF}$ : 1236.7/30

Left Out:  $-19.769 \pm 5.117$   $\chi^2/\text{NDF}$ : 27.8/24

Right Out:  $-34.918 \pm 0.901$   $\chi^2/\text{NDF}$ : 1546.8/34

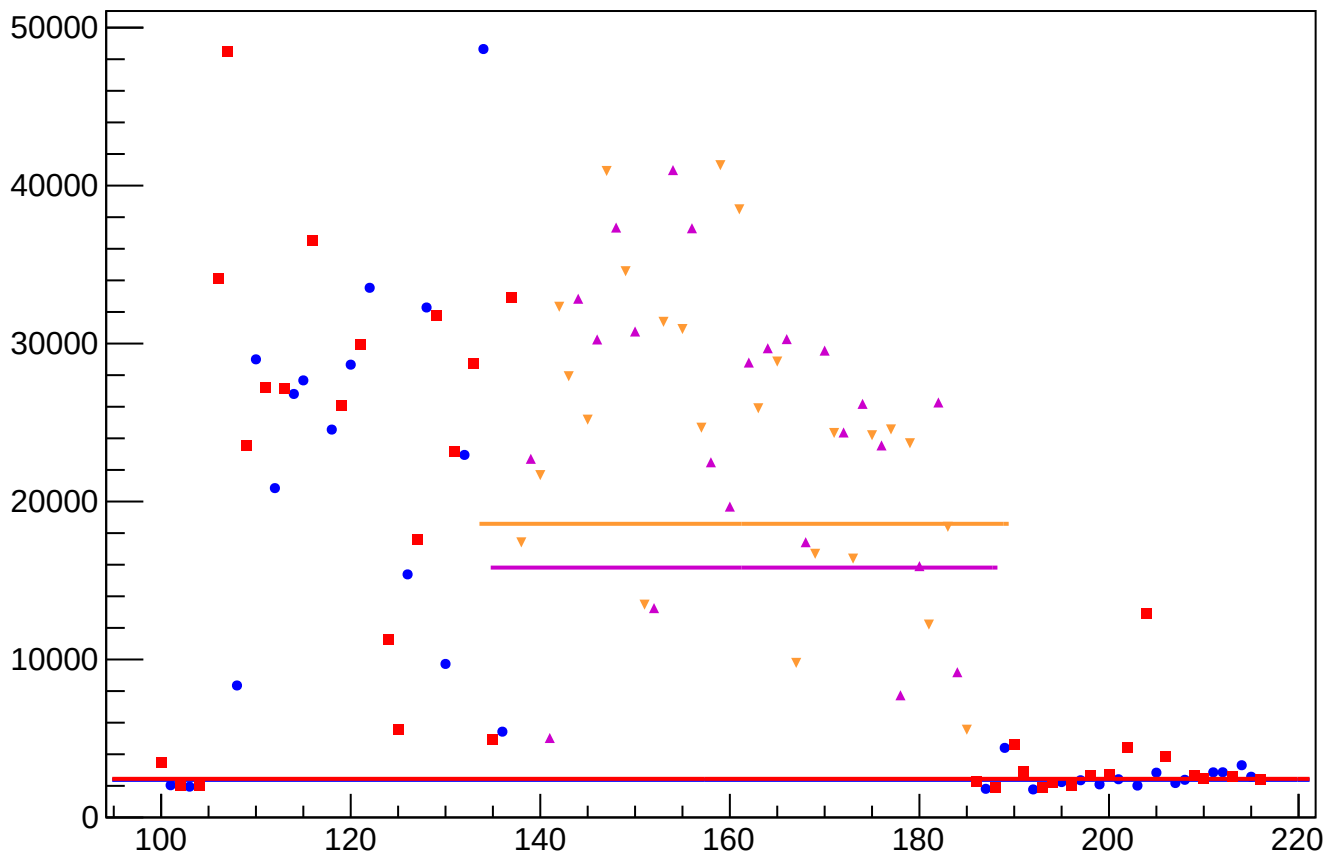
Left In:  $-19.822 \pm 4.846$   $\chi^2/\text{NDF}$ : 40.3/22

+ sign  $-21.261 \pm 0.857$   $\chi^2/\text{NDF}$ : 1264.6/55

All:  $-27.624 \pm 0.616$   $\chi^2/\text{NDF}$ : 2974.9/113

- sign  $-34.413 \pm 0.886$   $\chi^2/\text{NDF}$ : 1596.5/57

# diff\_bpm0l03Y\_rms vs Slug



Right In:  $2379.268 \pm 0.615$   $\chi^2/\text{NDF}: 7174799.3/30$

Left Out:  $18589.195 \pm 3.618$   $\chi^2/\text{NDF}: 5698567.3/24$

Right Out:  $2444.928 \pm 0.637$   $\chi^2/\text{NDF}: 9018720.8/34$

Left In:  $15817.655 \pm 3.426$   $\chi^2/\text{NDF}: 8406830.8/22$

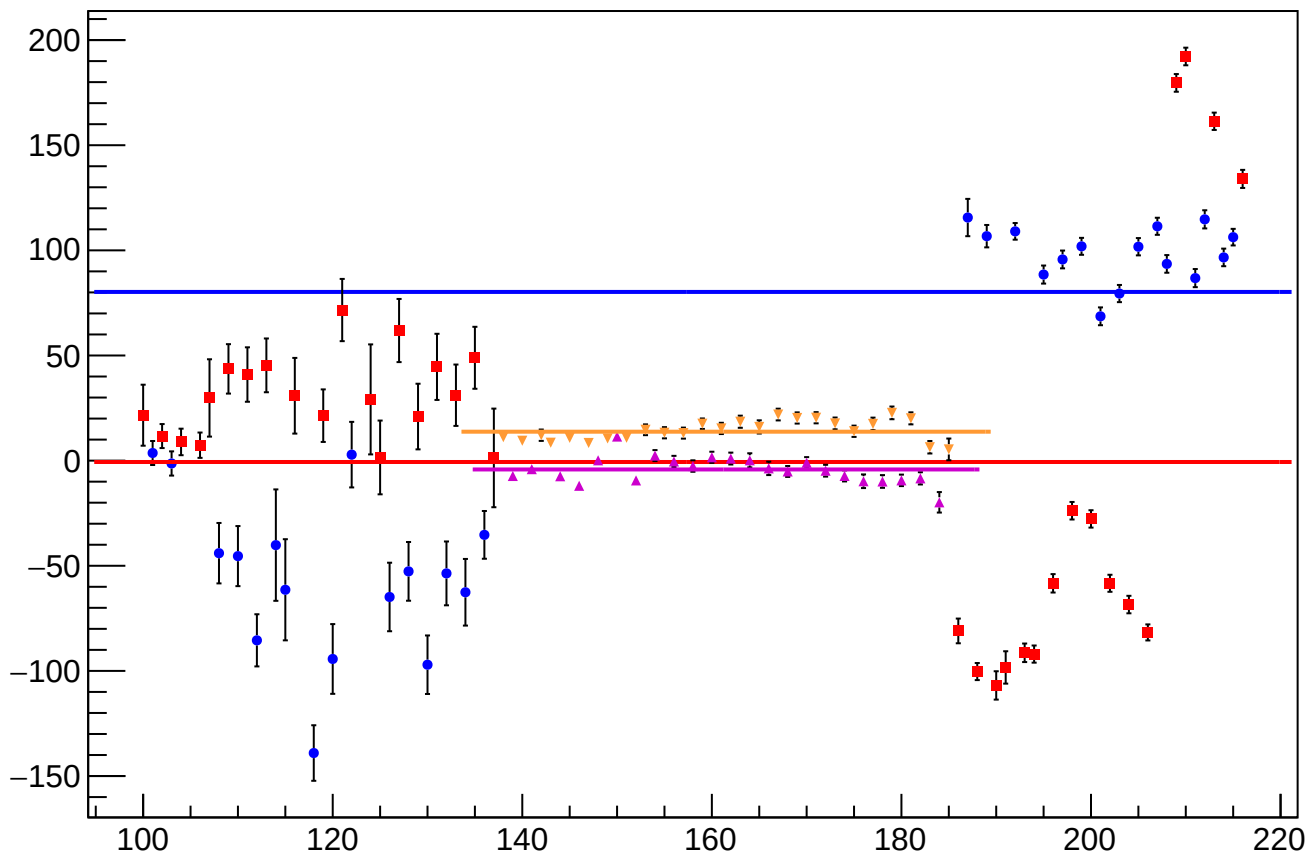
+ sign  $2834.277 \pm 0.606$   $\chi^2/\text{NDF}: 32382769.7/55$

All:  $2862.005 \pm 0.436$   $\chi^2/\text{NDF}: 64536614.4/100$

- sign  $2891.596 \pm 0.626$   $\chi^2/\text{NDF}: 32149519.2/57$



# diff\_bpm0l04X\_mean vs Slug



Right In:  $80.227 \pm 1.038$   $\chi^2/\text{NDF}$ : 2141.1/30

Left Out:  $13.761 \pm 0.514$   $\chi^2/\text{NDF}$ : 77.2/24

Right Out:  $-0.647 \pm 1.013$   $\chi^2/\text{NDF}$ : 9900.3/34

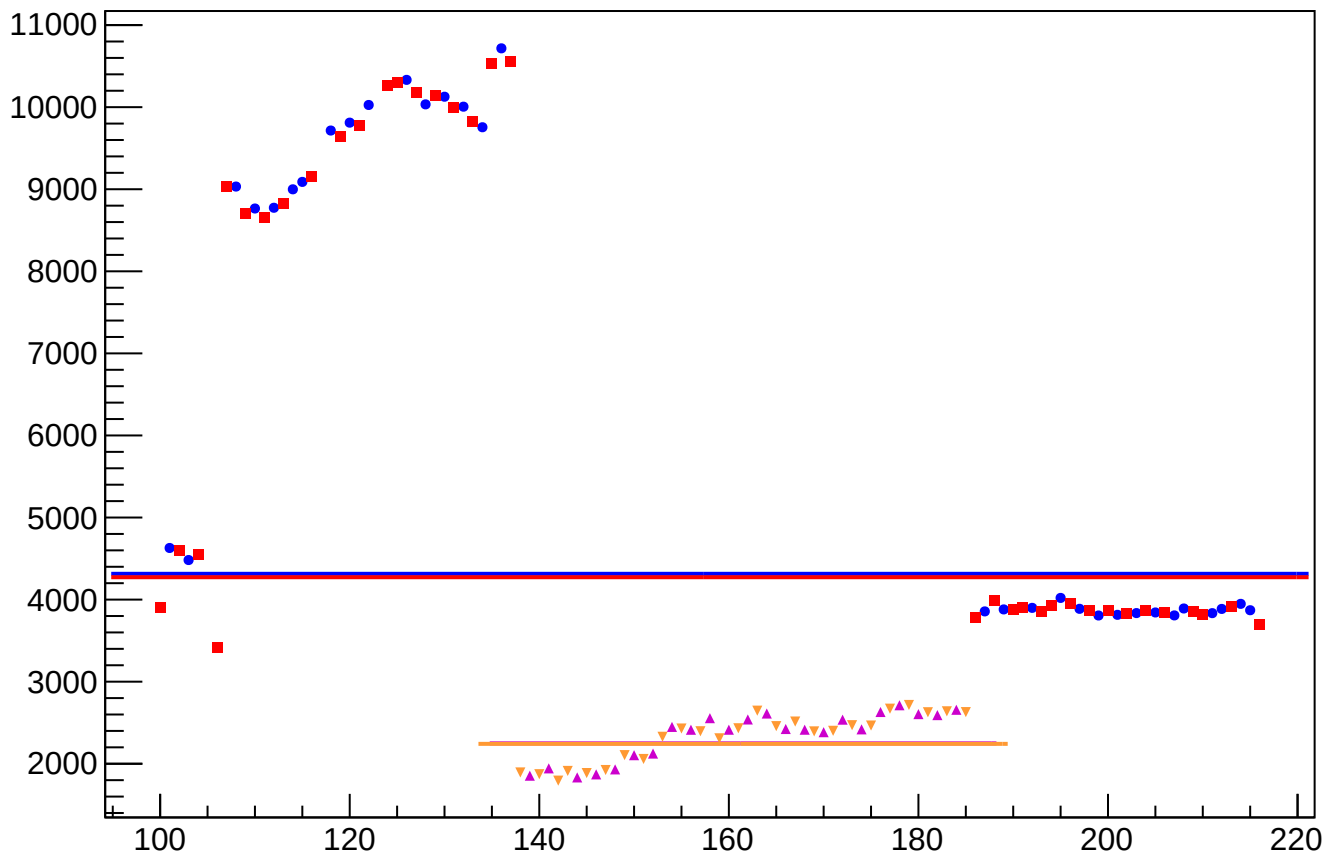
Left In:  $-4.202 \pm 0.530$   $\chi^2/\text{NDF}$ : 123.9/22

+ sign  $26.850 \pm 0.461$   $\chi^2/\text{NDF}$ : 5511.0/55

All:  $11.999 \pm 0.329$   $\chi^2/\text{NDF}$ : 17664.9/113

- sign  $-3.438 \pm 0.470$   $\chi^2/\text{NDF}$ : 10033.9/57

# diff\_bpm0l04X\_rms vs Slug



Right In: 4314.281 $\pm$ 0.734  $\chi^2$ /NDF: 4070185.0/30

Left Out: 2242.334 $\pm$ 0.363  $\chi^2$ /NDF: 657865.5/24

Right Out: 4272.620 $\pm$ 0.716  $\chi^2$ /NDF: 4017969.4/34

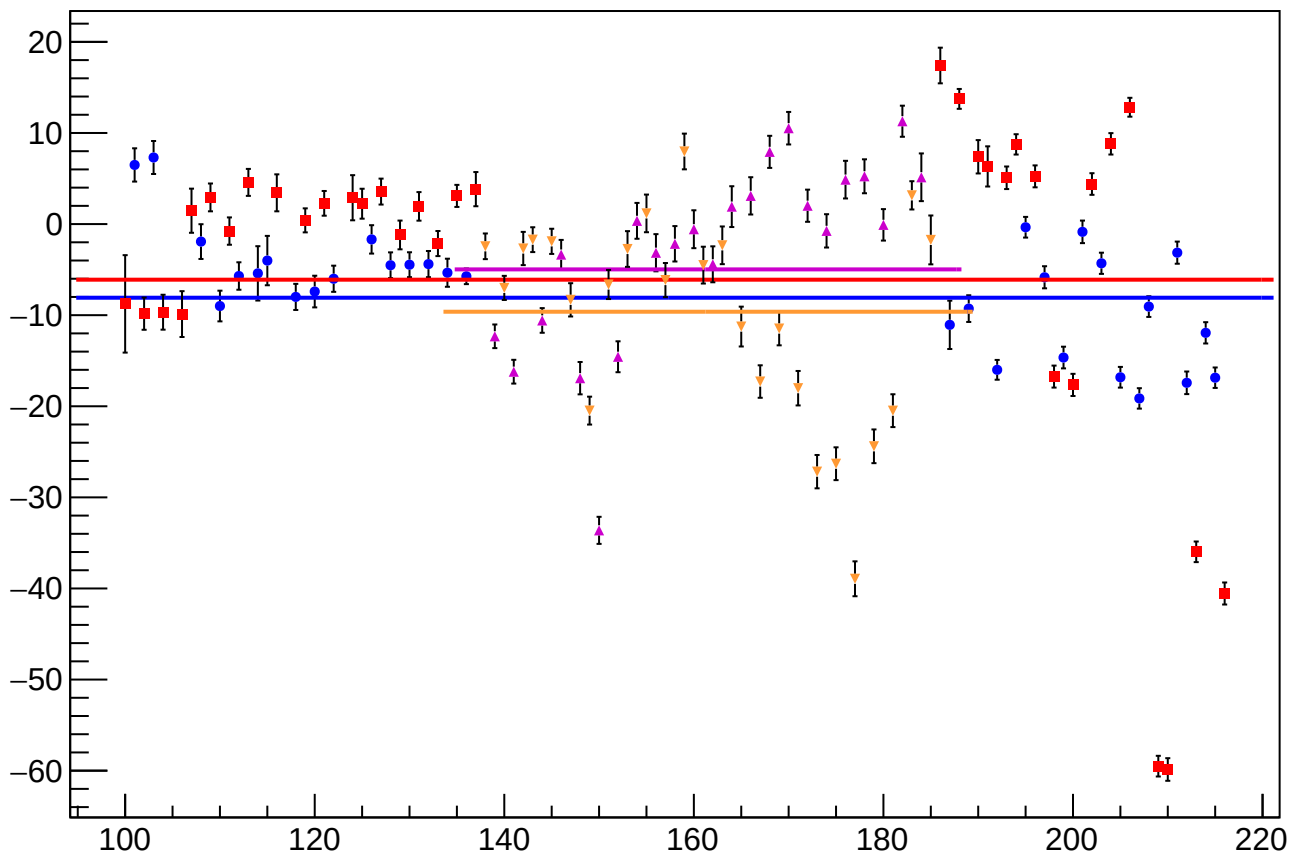
Left In: 2248.582 $\pm$ 0.375  $\chi^2$ /NDF: 642255.3/22

+ sign 2650.346 $\pm$ 0.326  $\chi^2$ /NDF: 11127567.1/55

All: 2666.787 $\pm$ 0.233  $\chi^2$ /NDF: 22064506.3/1

- sign 2683.877 $\pm$ 0.332  $\chi^2$ /NDF: 10931742.5/57

# diff\_bpm0l04Y\_mean vs Slug



Right In:  $-8.084 \pm 0.242$   $\chi^2/\text{NDF}: 684.2/30$

Left Out:  $-9.622 \pm 0.349$   $\chi^2/\text{NDF}: 934.3/24$

Right Out:  $-6.104 \pm 0.240$   $\chi^2/\text{NDF}: 7664.5/34$

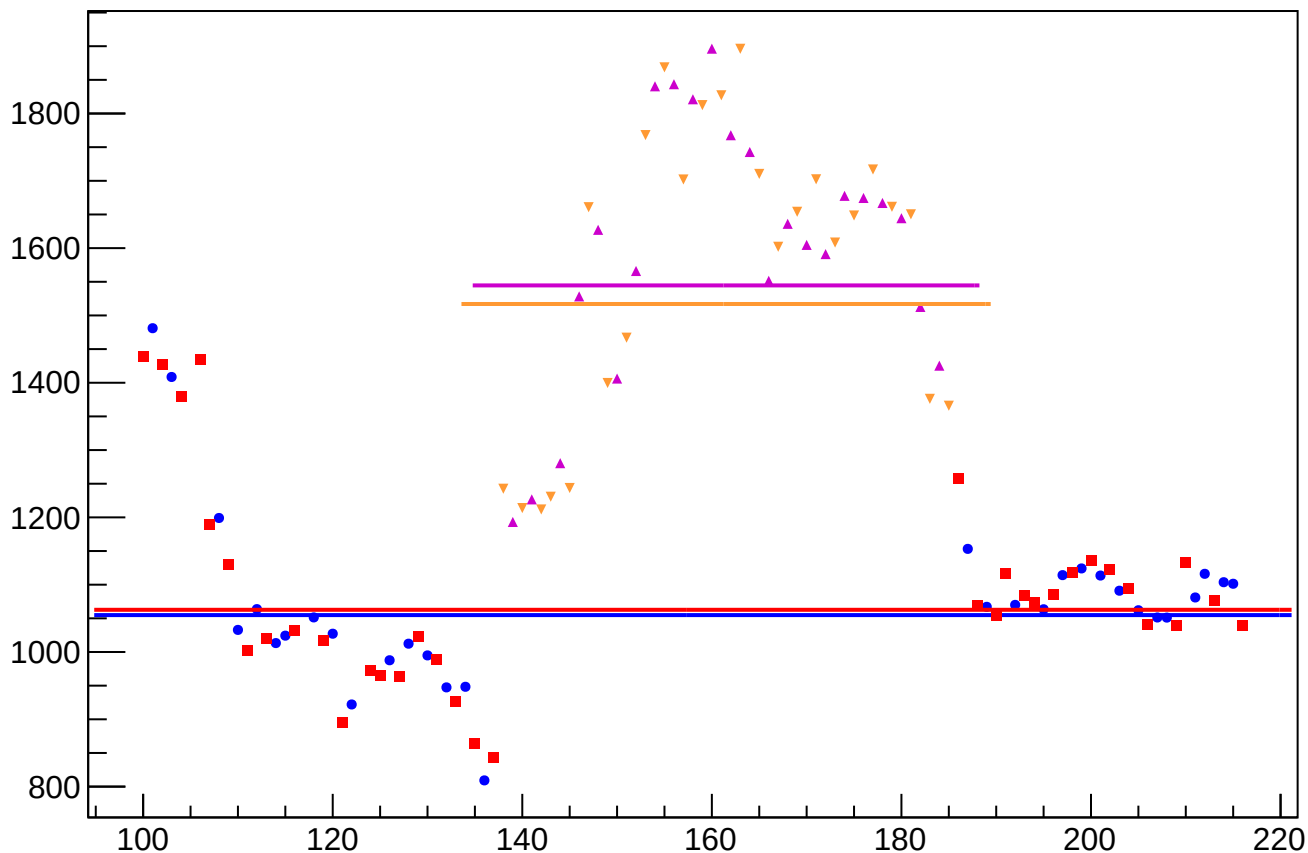
Left In:  $-4.974 \pm 0.365$   $\chi^2/\text{NDF}: 929.8/22$

+ sign  $-8.582 \pm 0.199$   $\chi^2/\text{NDF}: 1631.7/55$

All:  $-7.186 \pm 0.141$   $\chi^2/\text{NDF}: 10332.3/113$

- sign  $-5.762 \pm 0.201$   $\chi^2/\text{NDF}: 8600.9/57$

# diff\_bpm0l04Y\_rms vs Slug



Right In: 1054.817 $\pm$ 0.171  $\chi^2$ /NDF: 443380.2/30

Left Out: 1517.008 $\pm$ 0.247  $\chi^2$ /NDF: 832983.9/24

Right Out: 1062.696 $\pm$ 0.170  $\chi^2$ /NDF: 415115.3/34

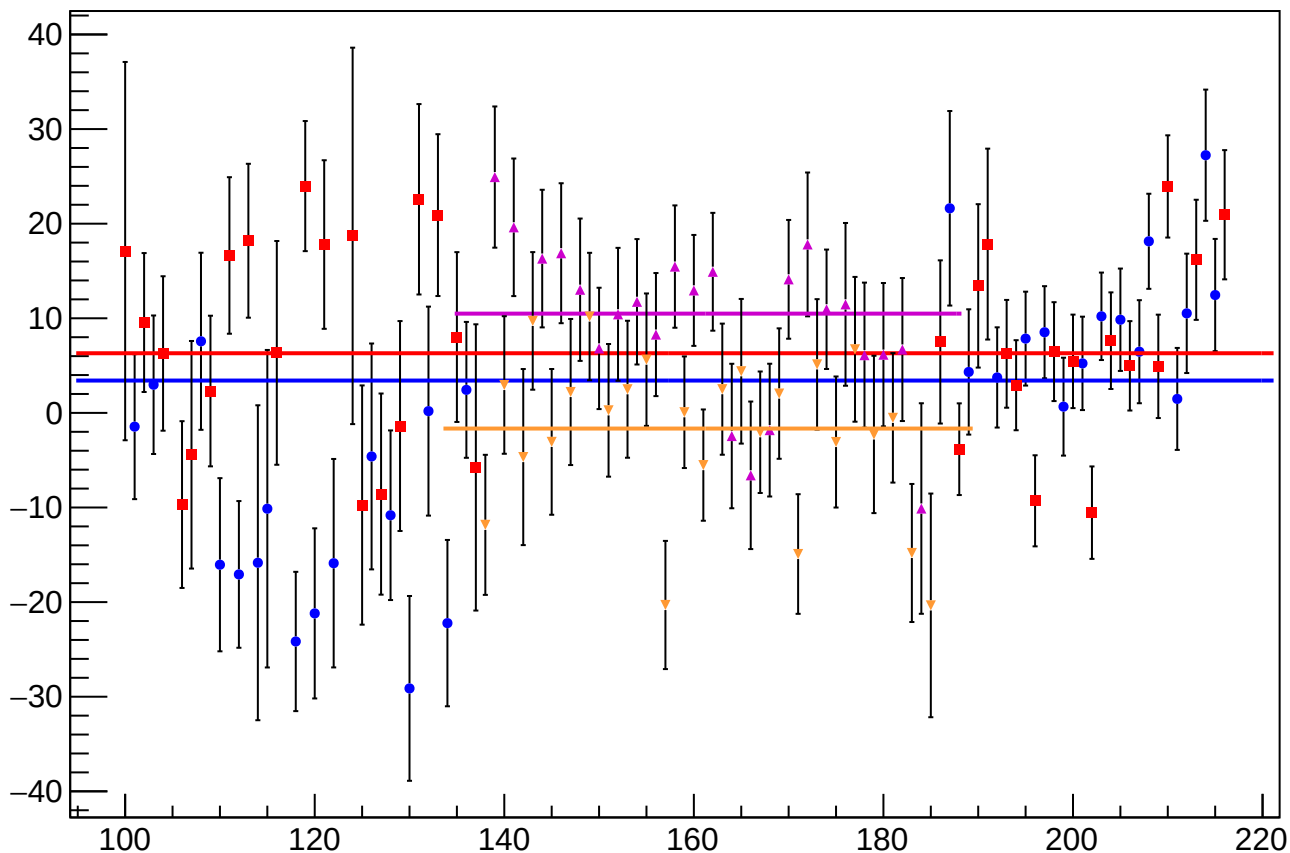
Left In: 1544.620 $\pm$ 0.258  $\chi^2$ /NDF: 638659.4/22

+ sign 1204.440 $\pm$ 0.140  $\chi^2$ /NDF: 3647125.3/55

All: 1206.440 $\pm$ 0.100  $\chi^2$ /NDF: 7138353.4/11

- sign 1208.479 $\pm$ 0.142  $\chi^2$ /NDF: 3490818.7/57

# diff\_bpm0l05X\_mean vs Slug



Right In:  $3.418 \pm 1.209$   $\chi^2/\text{NDF}: 94.8/30$

Left Out:  $-1.655 \pm 1.426$   $\chi^2/\text{NDF}: 31.5/24$

Right Out:  $6.305 \pm 1.177$   $\chi^2/\text{NDF}: 74.6/34$

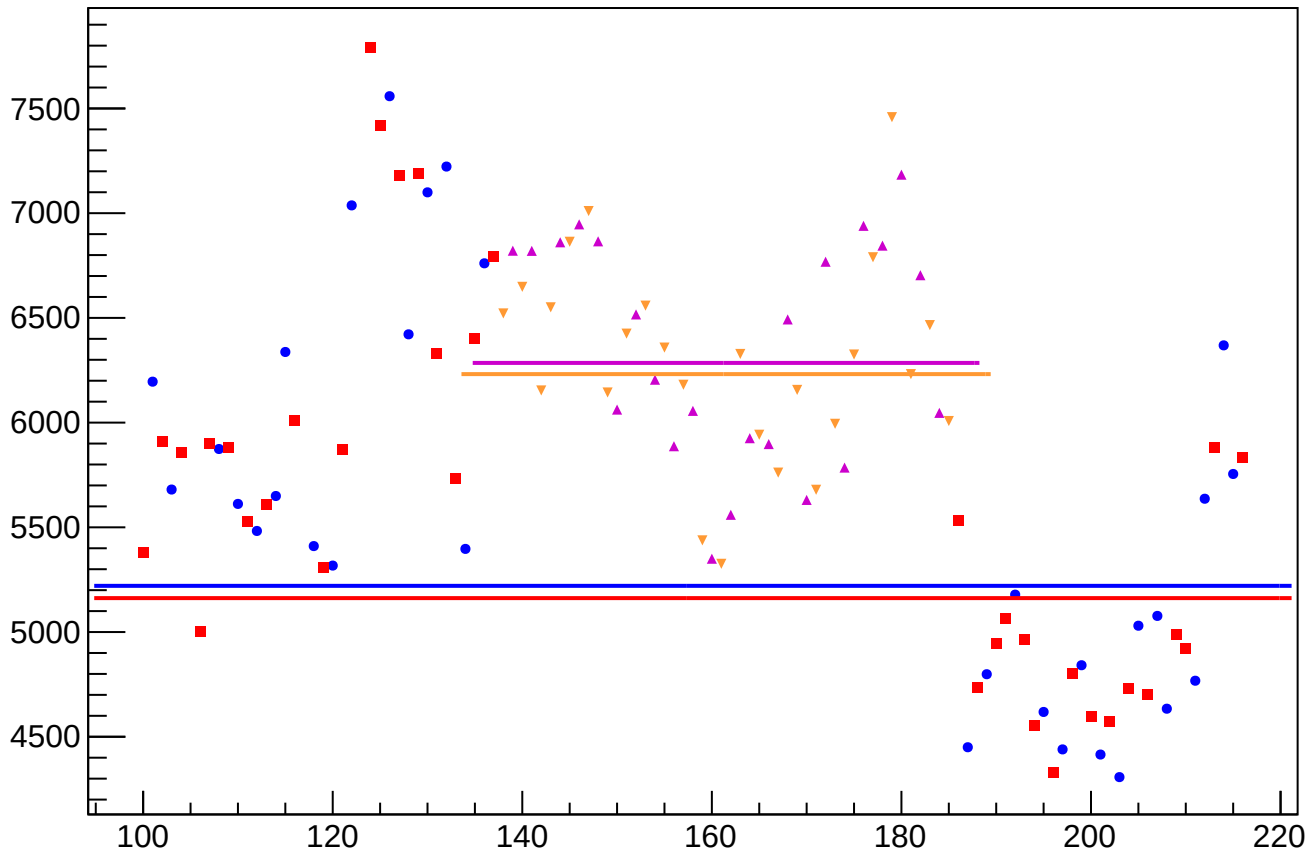
Left In:  $10.492 \pm 1.480$   $\chi^2/\text{NDF}: 24.9/22$

+ sign  $1.298 \pm 0.922$   $\chi^2/\text{NDF}: 133.7/55$

All:  $4.617 \pm 0.652$   $\chi^2/\text{NDF}: 264.0/113$

- sign  $7.927 \pm 0.921$   $\chi^2/\text{NDF}: 104.5/57$

# diff\_bpm0l05X\_rms vs Slug



Right In: 5220.616 $\pm$ 0.855  $\chi^2$ /NDF: 834661.2/30

Left Out: 6231.572 $\pm$ 1.009  $\chi^2$ /NDF: 226959.2/24

Right Out: 5161.998 $\pm$ 0.832  $\chi^2$ /NDF: 693766.0/34

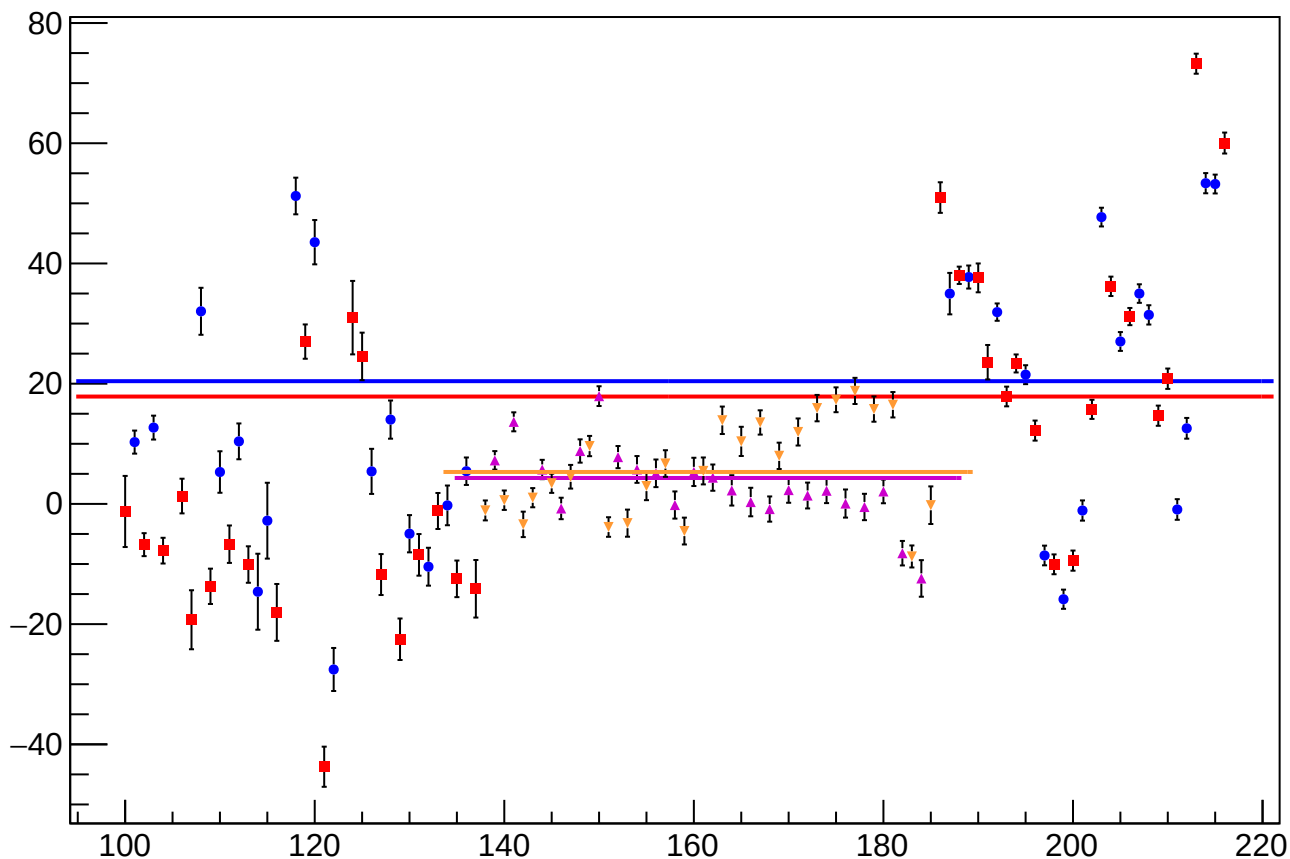
Left In: 6285.058 $\pm$ 1.046  $\chi^2$ /NDF: 265370.2/22

+ sign 5643.169 $\pm$ 0.652  $\chi^2$ /NDF: 1646437.0/55

All: 5620.068 $\pm$ 0.461  $\chi^2$ /NDF: 3313879.4/11

- sign 5597.024 $\pm$ 0.651  $\chi^2$ /NDF: 1664935.0/57

# diff\_bpm0l05Y\_mean vs Slug



Right In: 20.419 $\pm$ 0.373  $\chi^2$ /NDF: 3329.0/30

Left Out: 5.313 $\pm$ 0.400  $\chi^2$ /NDF: 378.1/24

Right Out: 17.860 $\pm$ 0.368  $\chi^2$ /NDF: 4469.5/34

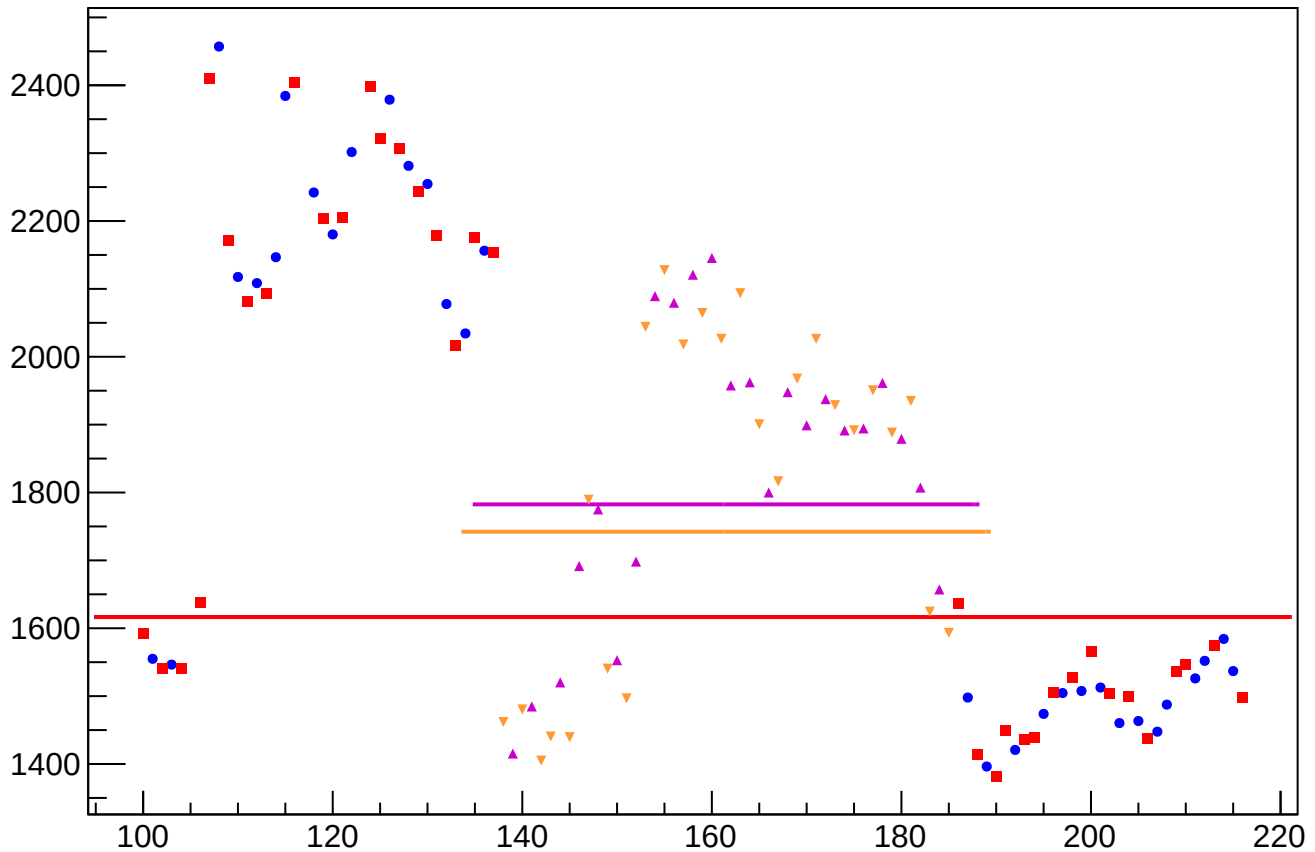
Left In: 4.310 $\pm$ 0.420  $\chi^2$ /NDF: 220.4/22

+ sign 13.395 $\pm$ 0.273  $\chi^2$ /NDF: 4468.9/55

All: 12.692 $\pm$ 0.194  $\chi^2$ /NDF: 9760.2/113

- sign 11.969 $\pm$ 0.277  $\chi^2$ /NDF: 5277.9/57

# diff\_bpm0l05Y\_rms vs Slug



Right In: 1616.596 $\pm$ 0.264  $\chi^2$ /NDF: 1081734.8/30

Left Out: 1742.217 $\pm$ 0.283  $\chi^2$ /NDF: 767663.9/24

Right Out: 1616.499 $\pm$ 0.261  $\chi^2$ /NDF: 1055900.6/34

Left In: 1782.502 $\pm$ 0.297  $\chi^2$ /NDF: 534374.9/22

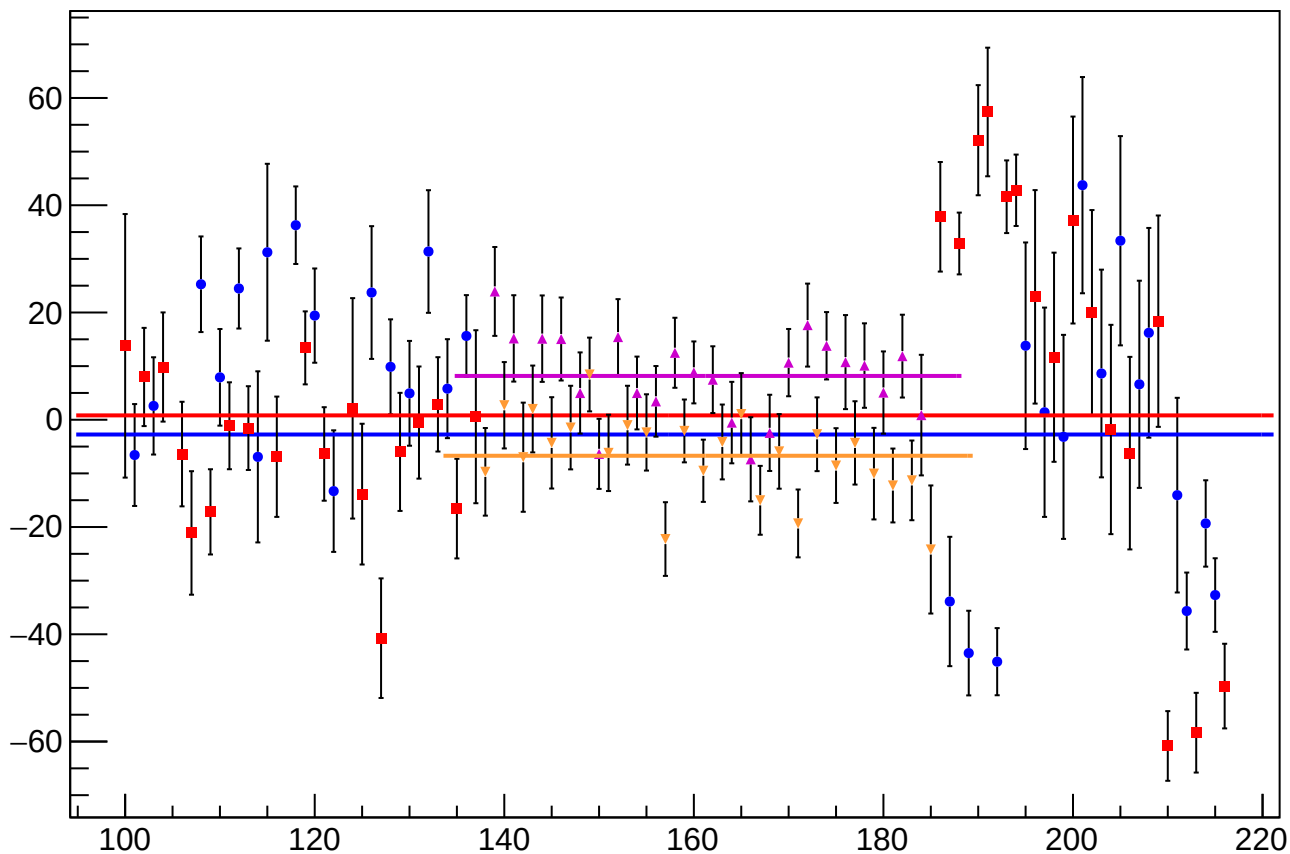
+ sign 1675.006 $\pm$ 0.193  $\chi^2$ /NDF: 1954752.6/55

All: 1681.740 $\pm$ 0.137  $\chi^2$ /NDF: 3724026.6/11

- sign 1688.672 $\pm$ 0.196  $\chi^2$ /NDF: 1766804.4/57



# diff\_bpm0l06X\_mean vs Slug



Right In:  $-2.750 \pm 1.800$   $\chi^2/\text{NDF}$ : 223.5/30

Left Out:  $-6.713 \pm 1.458$   $\chi^2/\text{NDF}$ : 25.7/24

Right Out:  $0.815 \pm 1.643$   $\chi^2/\text{NDF}$ : 403.4/34

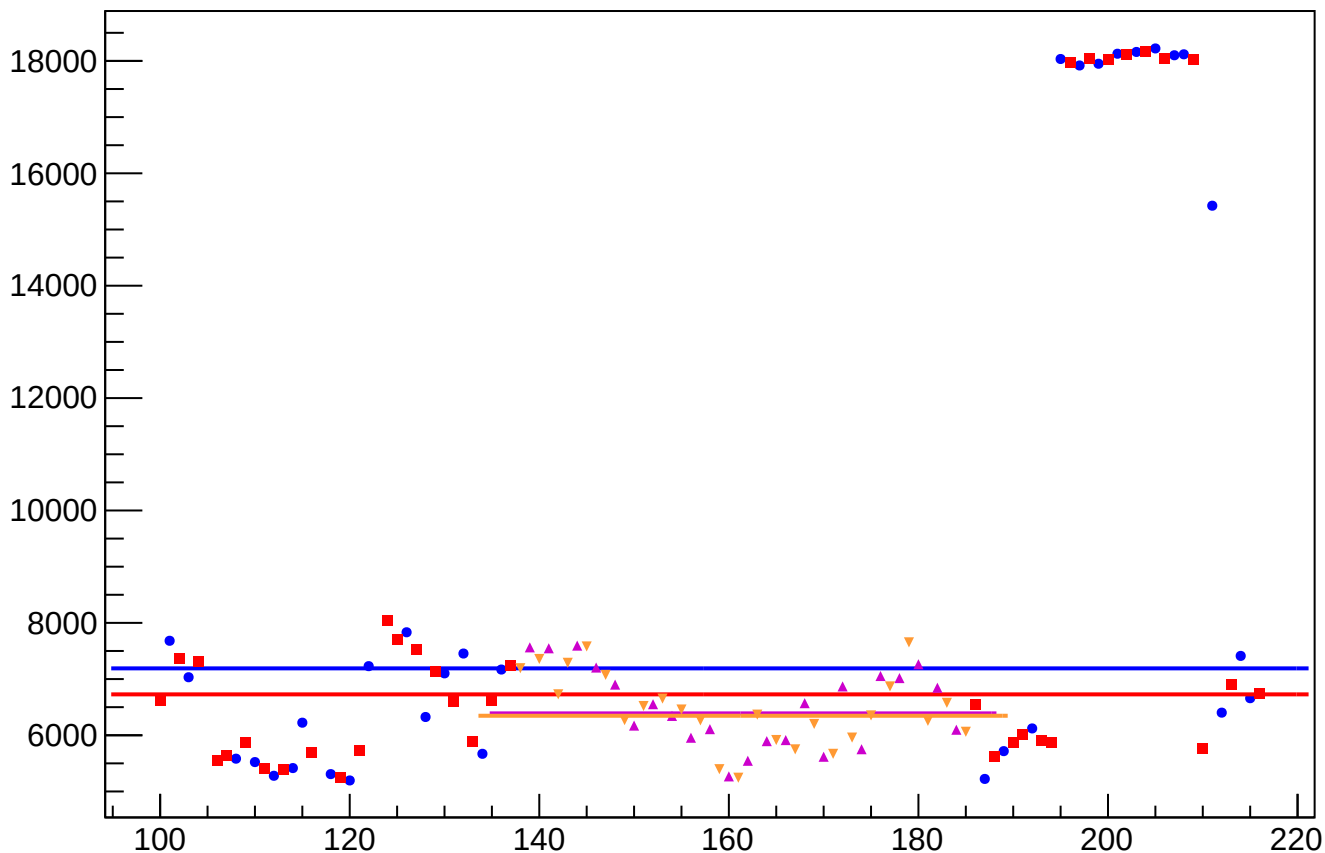
Left In:  $8.171 \pm 1.510$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-5.143 \pm 1.133$   $\chi^2/\text{NDF}$ : 252.0/55

All:  $-0.077 \pm 0.793$   $\chi^2/\text{NDF}$ : 729.8/113

- sign  $4.802 \pm 1.112$   $\chi^2/\text{NDF}$ : 438.5/57

# diff\_bpm0l06X\_rms vs Slug



Right In: 7190.413+/-1.273  $\chi^2/\text{NDF}$ : 6261677.4/30

Left Out: 6347.287+/-1.031  $\chi^2/\text{NDF}$ : 386025.6/24

Right Out: 6727.767+/-1.161  $\chi^2/\text{NDF}$ : 5434257.0/34

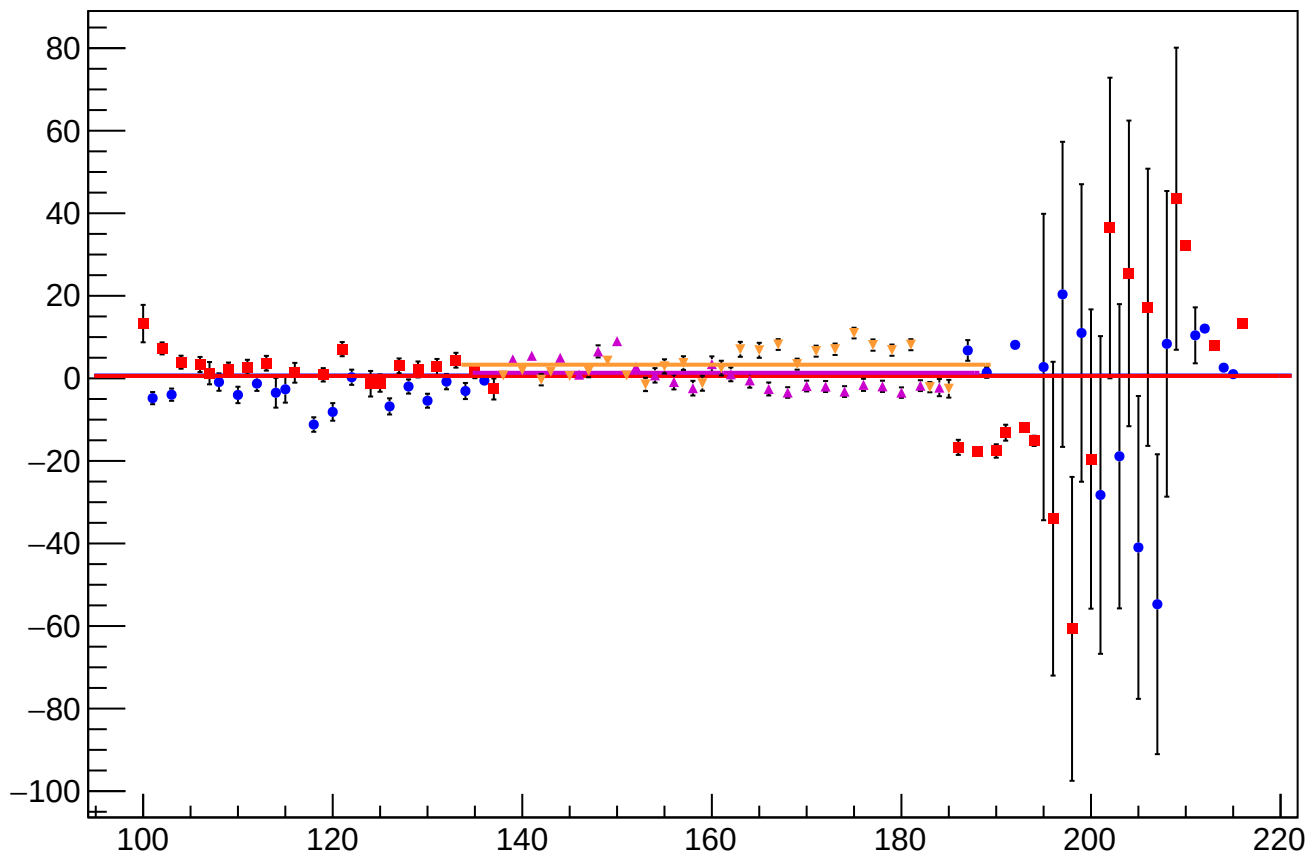
Left In: 6389.425+/-1.068  $\chi^2/\text{NDF}$ : 419756.4/22

+ sign 6681.236+/-0.801  $\chi^2/\text{NDF}$ : 6912694.3/55

All: 6611.520+/-0.561  $\chi^2/\text{NDF}$ : 12827568.3/1

- sign 6544.393+/-0.786  $\chi^2/\text{NDF}$ : 5900006.6/57

# diff\_bpm0l06Y\_mean vs Slug



Right In:  $0.688 \pm 0.324$   $\chi^2/\text{NDF}$ : 308.6/30

Left Out:  $3.311 \pm 0.264$   $\chi^2/\text{NDF}$ : 177.9/24

Right Out:  $0.586 \pm 0.300$   $\chi^2/\text{NDF}$ : 1827.8/34

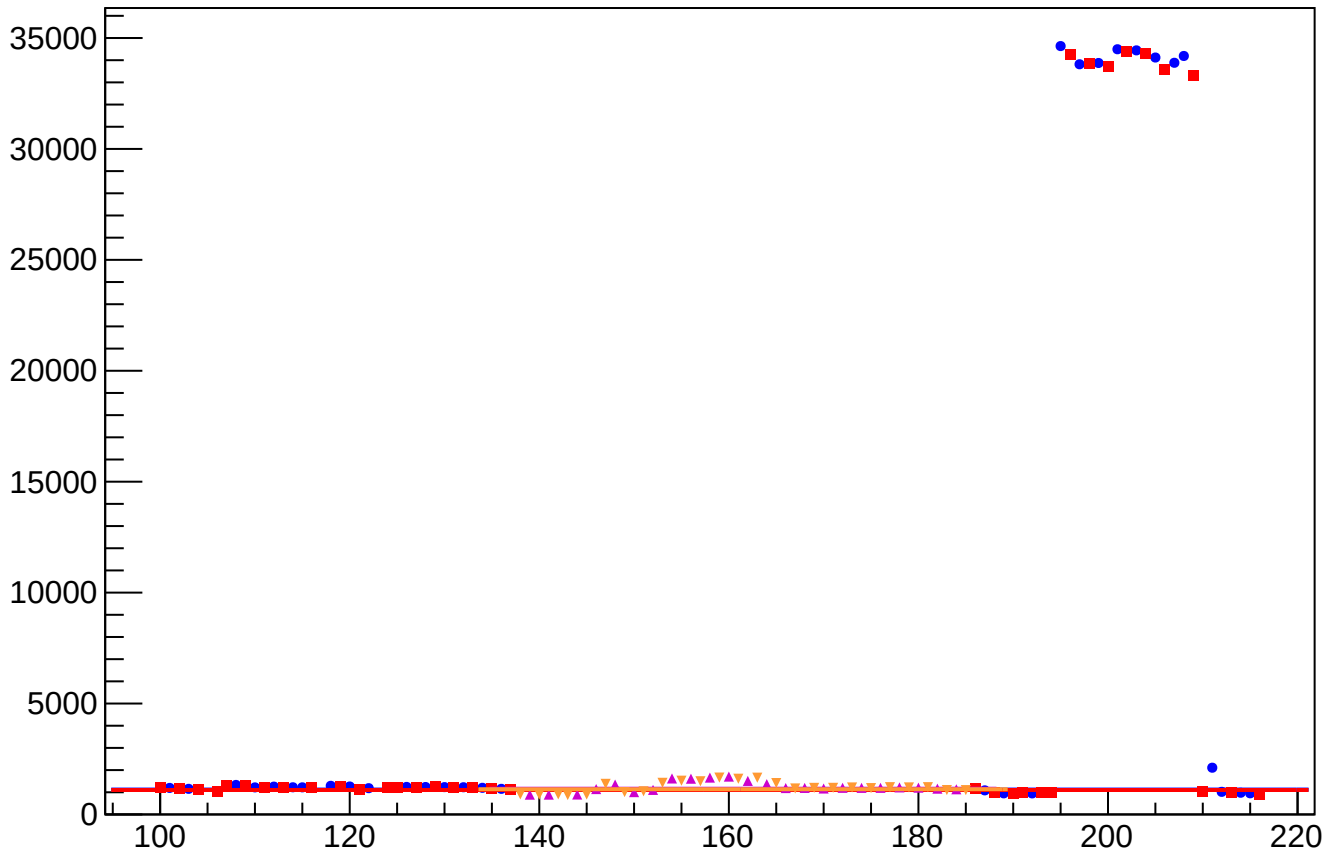
Left In:  $1.355 \pm 0.277$   $\chi^2/\text{NDF}$ : 196.3/22

+ sign  $2.264 \pm 0.205$   $\chi^2/\text{NDF}$ : 525.8/55

All:  $1.628 \pm 0.144$   $\chi^2/\text{NDF}$ : 2572.5/113

- sign  $1.002 \pm 0.203$   $\chi^2/\text{NDF}$ : 2027.7/57

# diff\_bpm0l06Y\_rms vs Slug



Right In: 1121.560 $\pm$ 0.229  $\chi^2$ /NDF: 13191879.7/30

Left Out: 1137.150 $\pm$ 0.187  $\chi^2$ /NDF: 1469686.1/24

Right Out: 1102.394 $\pm$ 0.212  $\chi^2$ /NDF: 11766109.3/34

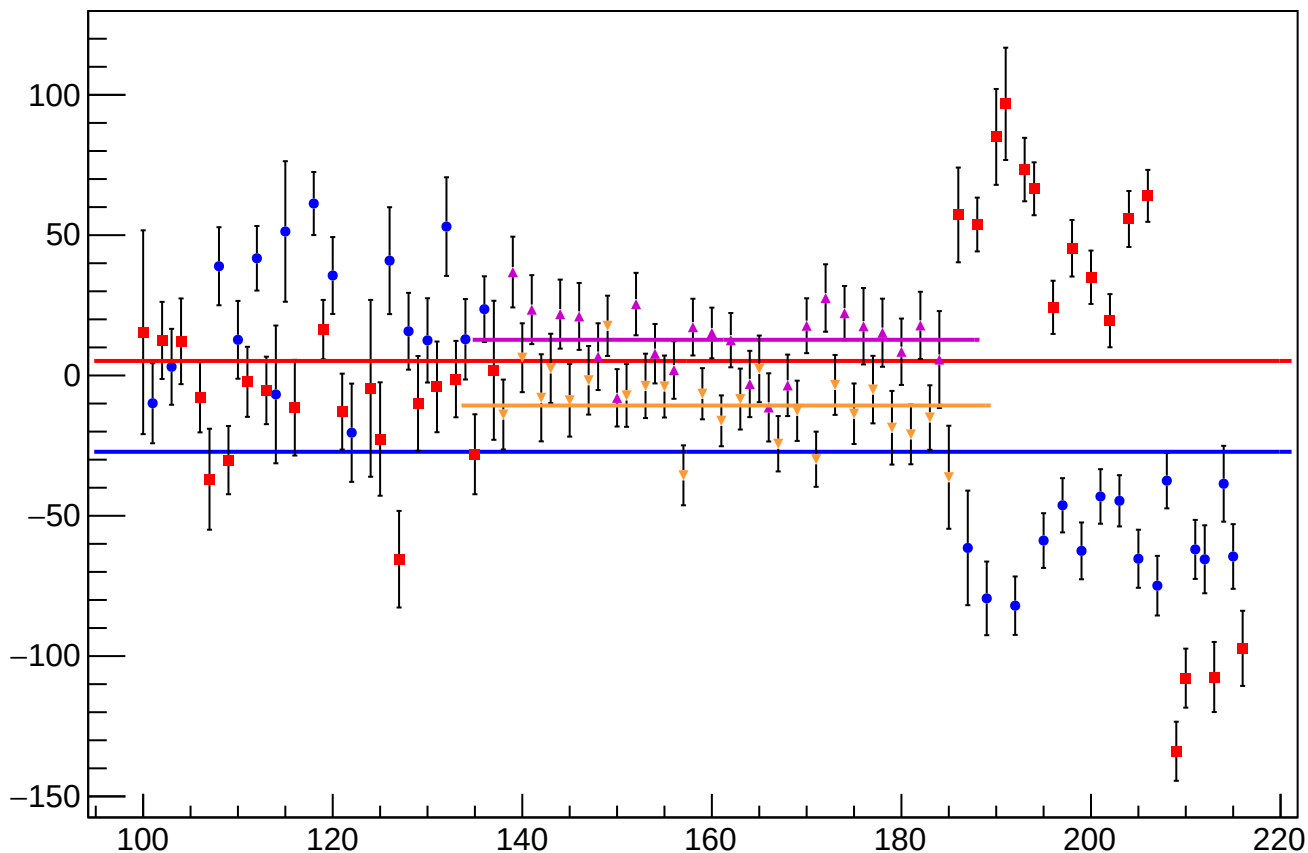
Left In: 1159.432 $\pm$ 0.196  $\chi^2$ /NDF: 1259793.6/22

+ sign 1130.925 $\pm$ 0.145  $\chi^2$ /NDF: 14664341.7/55

All: 1132.083 $\pm$ 0.102  $\chi^2$ /NDF: 27729429.1/100

- sign 1133.224 $\pm$ 0.144  $\chi^2$ /NDF: 13064960.6/57

# diff\_bpm0l07X\_mean vs Slug



Right In:  $-27.195 \pm 2.212$   $\chi^2/\text{NDF}$ : 390.3/30

Left Out:  $-10.696 \pm 2.257$   $\chi^2/\text{NDF}$ : 28.7/24

Right Out:  $5.182 \pm 2.141$   $\chi^2/\text{NDF}$ : 731.0/34

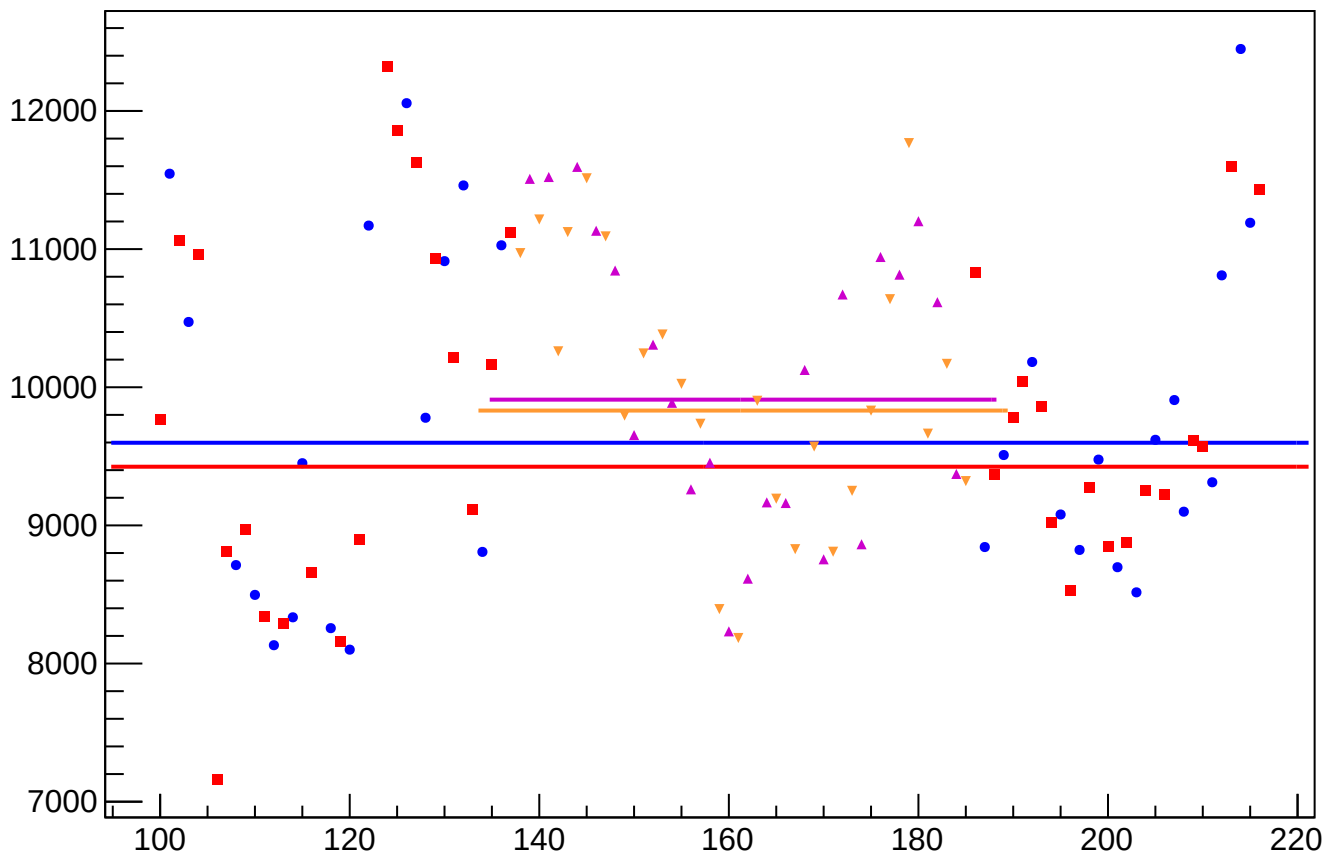
Left In:  $12.719 \pm 2.341$   $\chi^2/\text{NDF}$ : 24.0/22

+ sign  $-19.112 \pm 1.580$   $\chi^2/\text{NDF}$ : 446.3/55

All:  $-5.247 \pm 1.117$   $\chi^2/\text{NDF}$ : 1361.0/113

- sign  $8.615 \pm 1.580$   $\chi^2/\text{NDF}$ : 760.7/57

# diff\_bpm0l07X\_rms vs Slug



Right In: 9598.225+/-1.564  $\chi^2/\text{NDF}$ : 508698.8/30

Left Out: 9831.301+/-1.596  $\chi^2/\text{NDF}$ : 356125.1/24

Right Out: 9424.790+/-1.514  $\chi^2/\text{NDF}$ : 466136.6/34

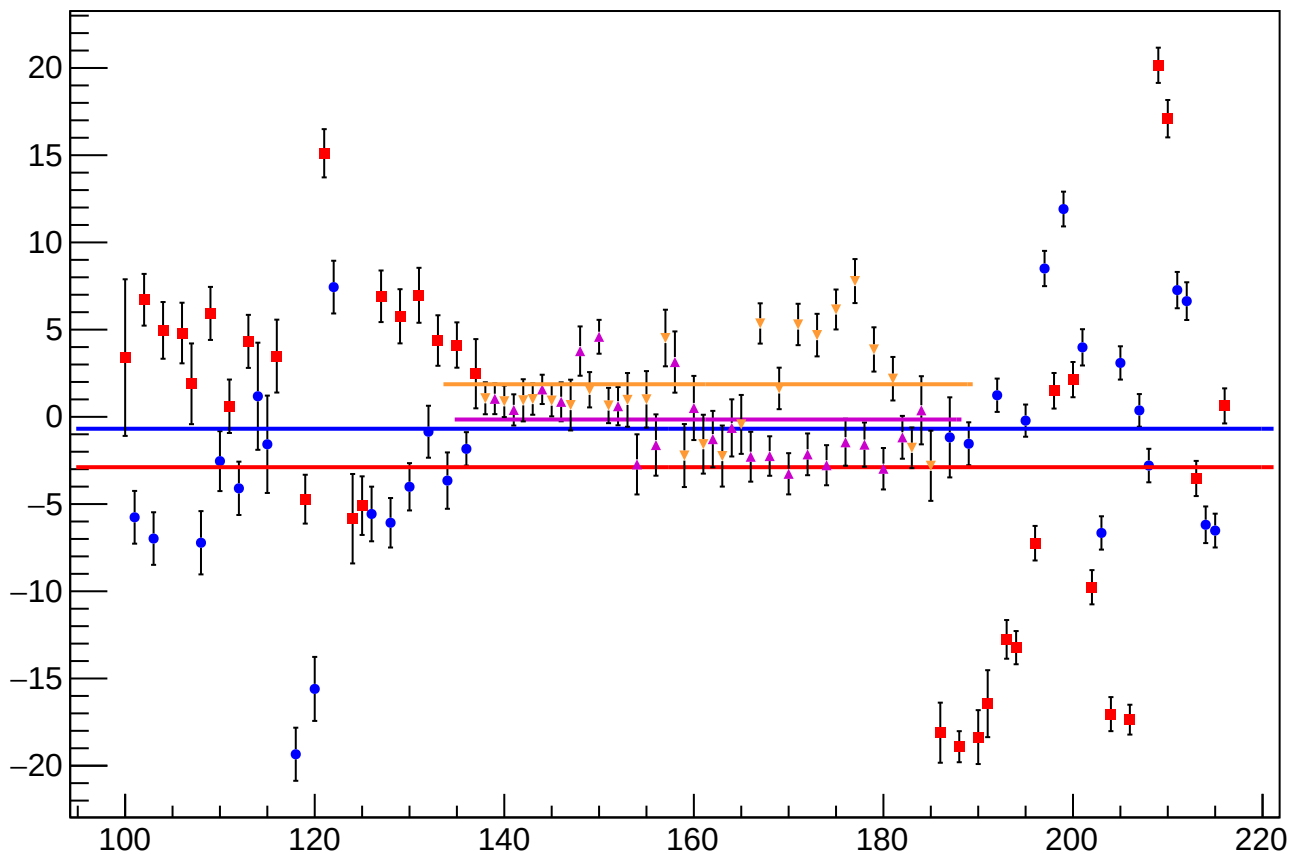
Left In: 9910.300+/-1.655  $\chi^2/\text{NDF}$ : 389368.1/22

+ sign 9712.419+/-1.117  $\chi^2/\text{NDF}$ : 875700.3/55

All: 9679.163+/-0.790  $\chi^2/\text{NDF}$ : 1779827.2/11

- sign 9645.914+/-1.117  $\chi^2/\text{NDF}$ : 902354.9/57

# diff\_bpm0l07Y\_mean vs Slug



Right In:  $-0.682 \pm 0.219$   $\chi^2/\text{NDF}: 824.5/30$

Left Out:  $1.869 \pm 0.243$   $\chi^2/\text{NDF}: 103.2/24$

Right Out:  $-2.886 \pm 0.216$   $\chi^2/\text{NDF}: 2749.2/34$

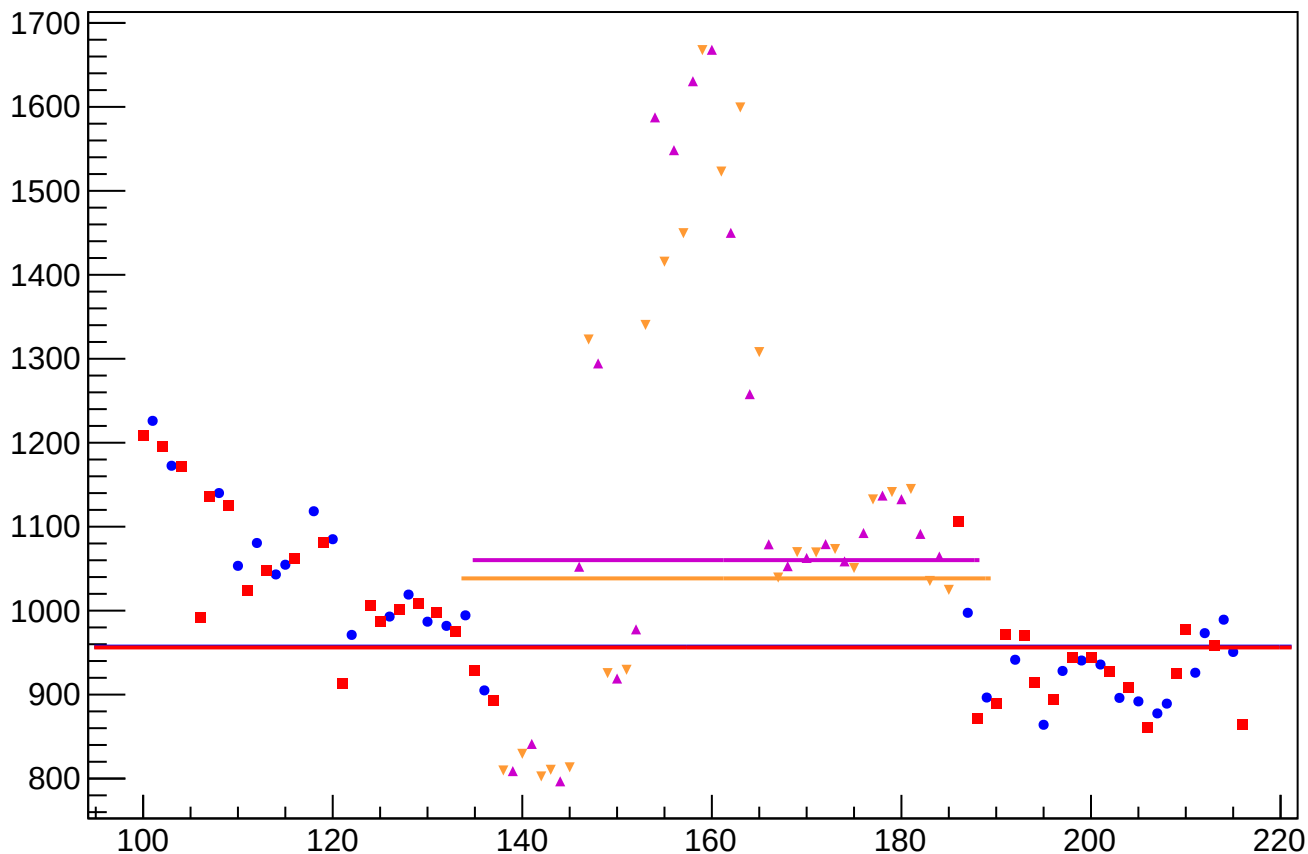
Left In:  $-0.152 \pm 0.254$   $\chi^2/\text{NDF}: 75.7/22$

+ sign  $0.461 \pm 0.162$   $\chi^2/\text{NDF}: 988.6/55$

All:  $-0.627 \pm 0.116$   $\chi^2/\text{NDF}: 3971.5/113$

- sign  $-1.743 \pm 0.165$   $\chi^2/\text{NDF}: 2892.0/57$

# diff\_bpm0l07Y\_rms vs Slug



Right In: 957.151+/-0.155  $\chi^2/\text{NDF}$ : 268998.5/30

Left Out: 1038.406+/-0.172  $\chi^2/\text{NDF}$ :1706682.8/24

Right Out: 956.164+/-0.152  $\chi^2/\text{NDF}$ : 276067.9/34

Left In: 1060.162+/-0.180  $\chi^2/\text{NDF}$ :1523219.9/22

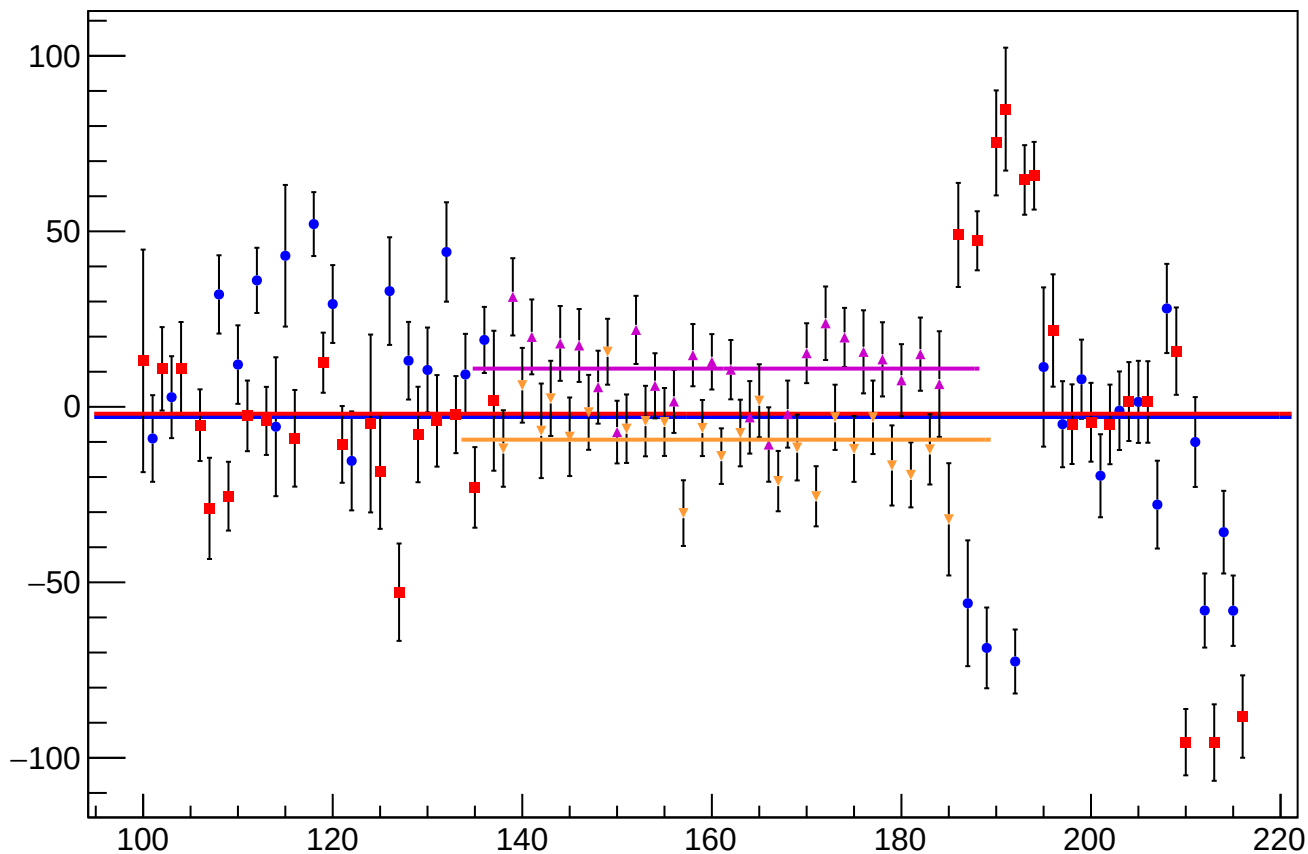
+ sign 993.567+/-0.115  $\chi^2/\text{NDF}$ : 2099440.5/55

All: 996.561+/-0.082  $\chi^2/\text{NDF}$ : 4094506.8/113

- sign 999.633+/-0.116  $\chi^2/\text{NDF}$ : 1993689.1/57



# diff\_bpm0l08X\_mean vs Slug



Right In:  $-2.890 \pm 2.126$   $\chi^2/\text{NDF}$ : 285.7/30

Left Out:  $-9.355 \pm 1.969$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-1.961 \pm 2.000$   $\chi^2/\text{NDF}$ : 456.1/34

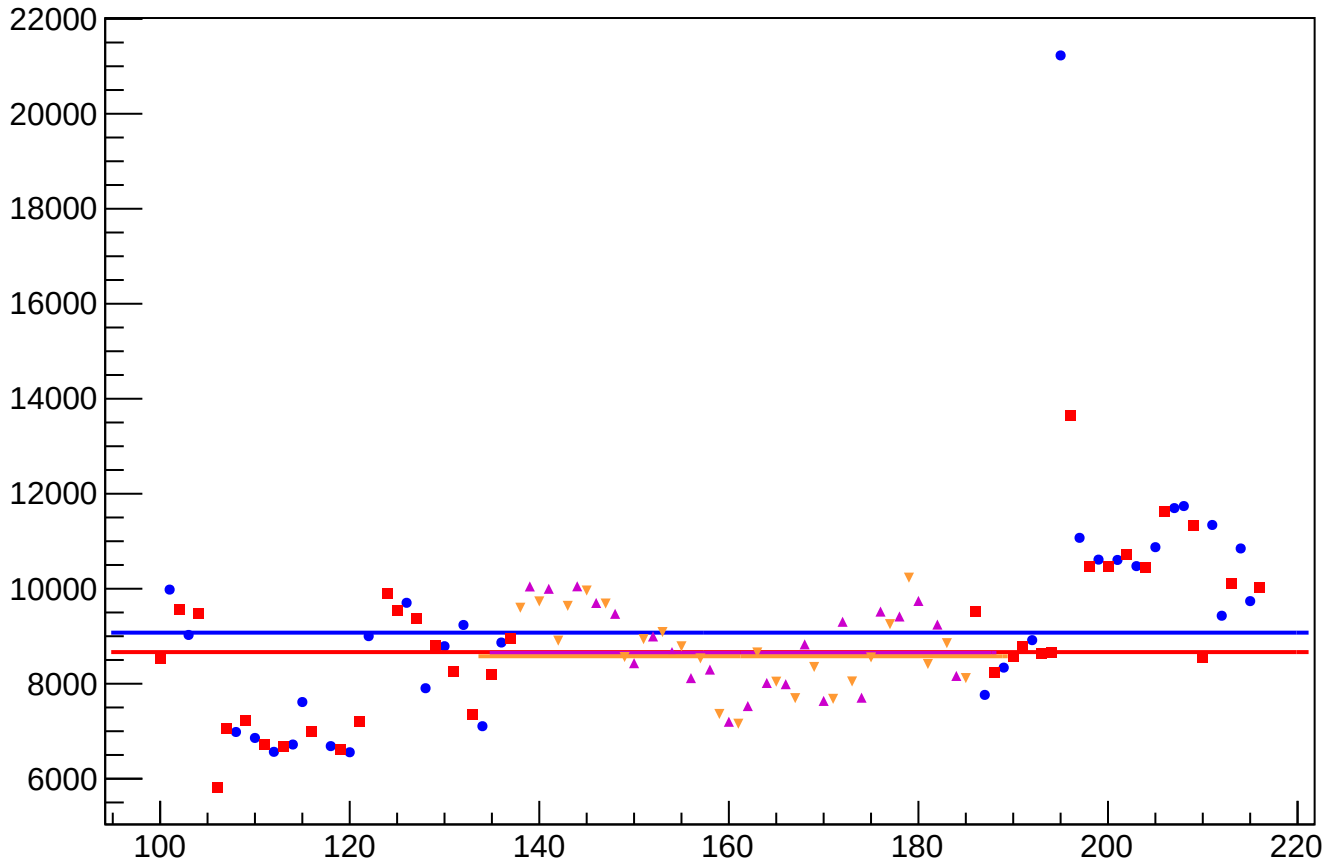
Left In:  $10.892 \pm 2.043$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-6.370 \pm 1.445$   $\chi^2/\text{NDF}$ : 319.2/55

All:  $-0.961 \pm 1.016$   $\chi^2/\text{NDF}$ : 846.8/113

- sign  $4.330 \pm 1.429$   $\chi^2/\text{NDF}$ : 499.9/57

# diff\_bpm0l08X\_rms vs Slug



Right In: 9075.358+/-1.504  $\chi^2/\text{NDF}$ : 1762196.6/30

Left Out: 8578.396+/-1.392  $\chi^2/\text{NDF}$ : 343721.1/24

Right Out: 8665.970+/-1.414  $\chi^2/\text{NDF}$ : 1339336.5/34

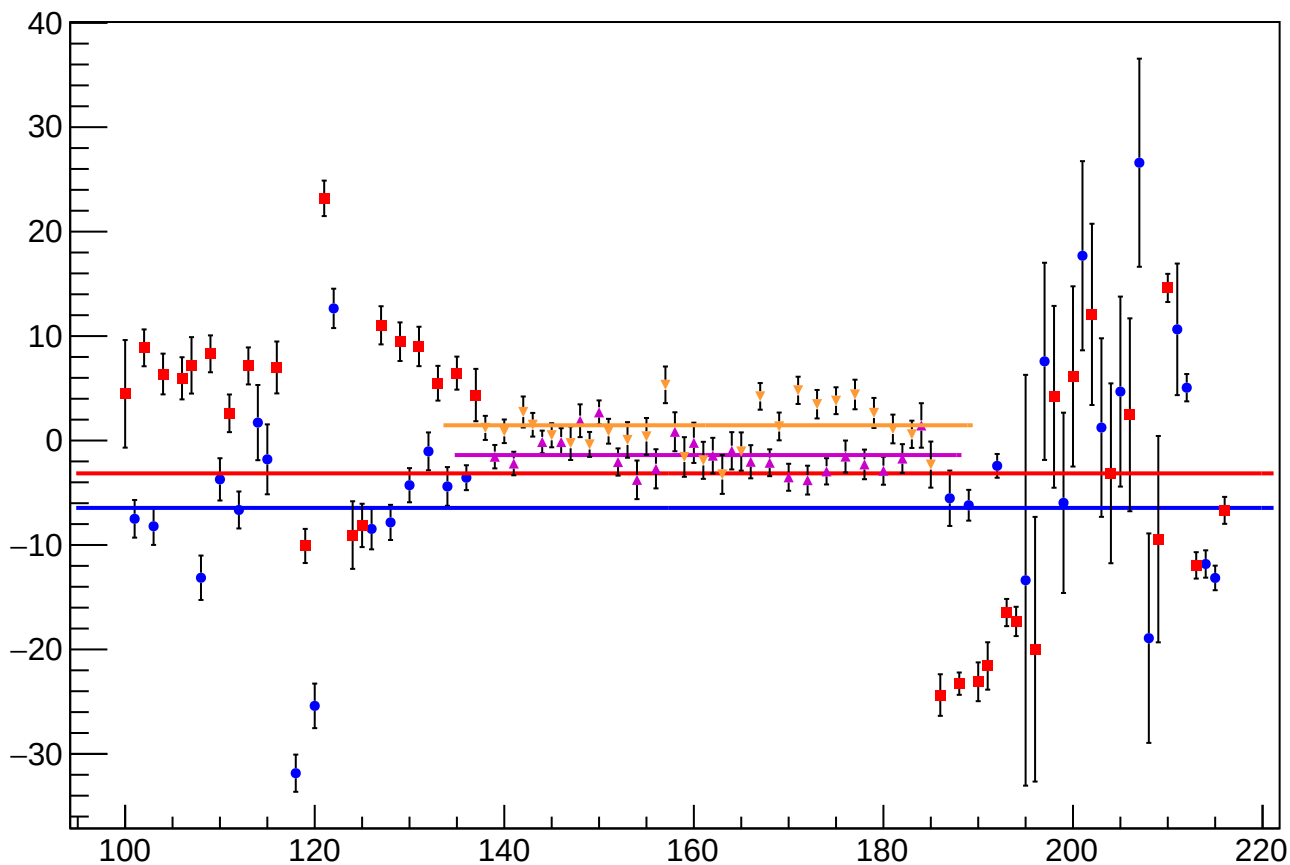
Left In: 8649.232+/-1.444  $\chi^2/\text{NDF}$ : 377932.0/22

+ sign 8807.841+/-1.022  $\chi^2/\text{NDF}$ : 2164728.6/55

All: 8731.985+/-0.718  $\chi^2/\text{NDF}$ : 3892972.3/11

- sign 8657.778+/-1.010  $\chi^2/\text{NDF}$ : 1717337.1/57

# diff\_bpm0l08Y\_mean vs Slug



Right In:  $-6.450 \pm 0.352$   $\chi^2/\text{NDF}: 595.9/30$

Left Out:  $1.461 \pm 0.281$   $\chi^2/\text{NDF}: 51.0/24$

Right Out:  $-3.144 \pm 0.324$   $\chi^2/\text{NDF}: 1791.9/34$

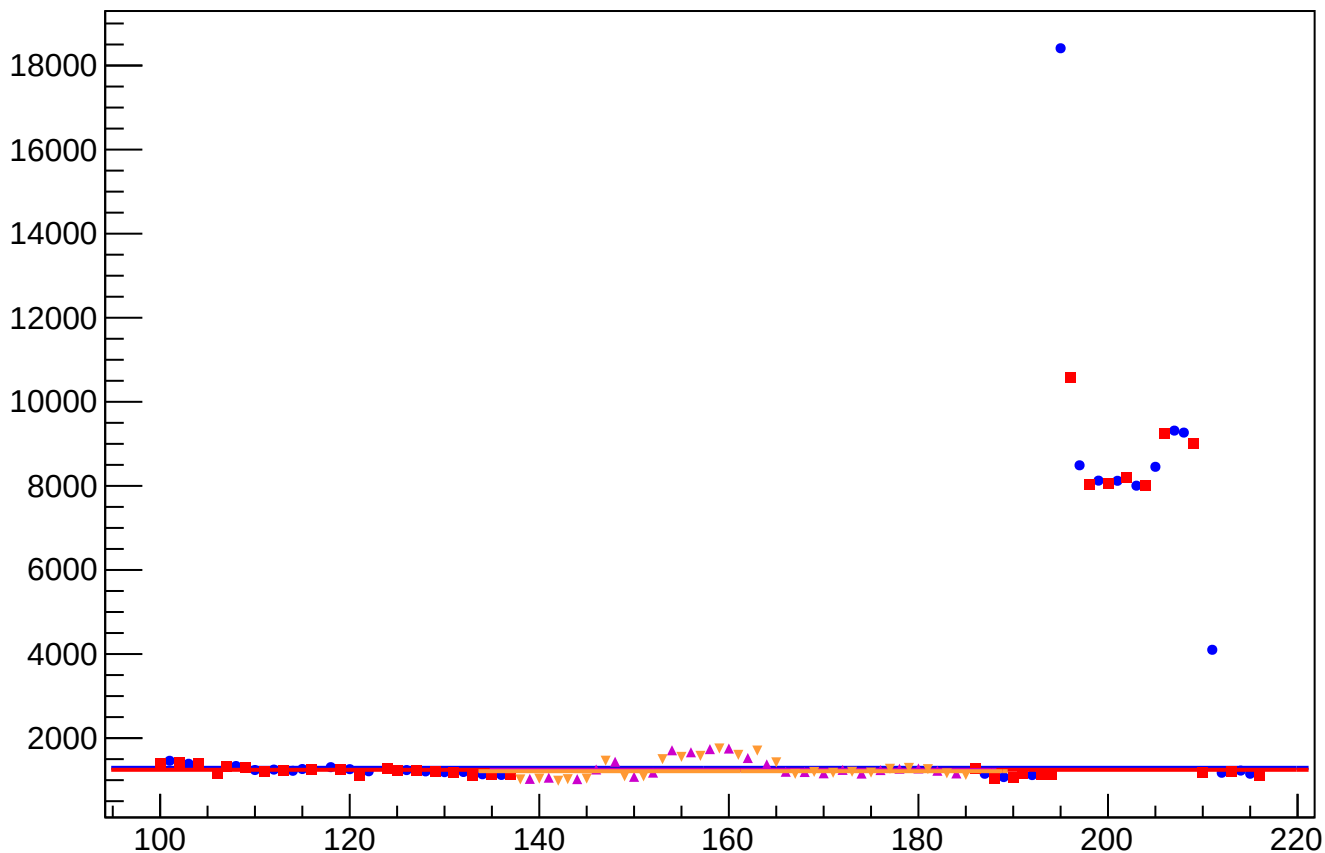
Left In:  $-1.390 \pm 0.294$   $\chi^2/\text{NDF}: 35.5/22$

+ sign  $-1.608 \pm 0.219$   $\chi^2/\text{NDF}: 955.5/55$

All:  $-1.898 \pm 0.155$   $\chi^2/\text{NDF}: 2802.4/113$

- sign  $-2.183 \pm 0.218$   $\chi^2/\text{NDF}: 1843.4/57$

# diff\_bpm0l08Y\_rms vs Slug



Right In: 1293.399+/-0.249  $\chi^2/\text{NDF}$ : 10754052.2/30

Left Out: 1213.262+/-0.198  $\chi^2/\text{NDF}$ : 1012762.9/24

Right Out: 1246.302+/-0.229  $\chi^2/\text{NDF}$ : 9031607.4/34

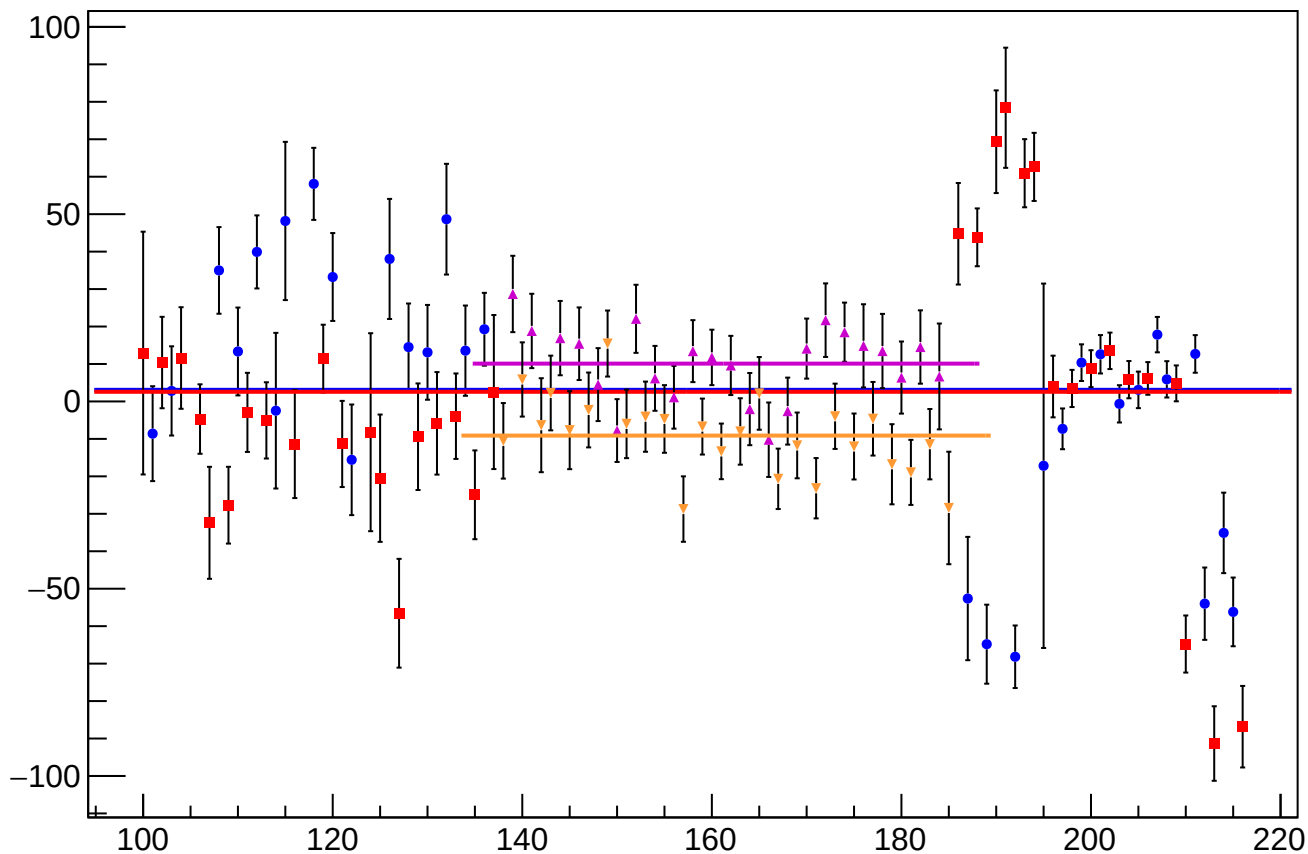
Left In: 1239.174+/-0.208  $\chi^2/\text{NDF}$ : 885596.7/22

+ sign 1244.355+/-0.155  $\chi^2/\text{NDF}$ : 11830139.8/55

All: 1243.368+/-0.109  $\chi^2/\text{NDF}$ : 21747954.5/100

- sign 1242.396+/-0.154  $\chi^2/\text{NDF}$ : 9917734.4/57

# diff\_bpm0l09X\_mean vs Slug



Right In:  $3.100 \pm 1.433$   $\chi^2/\text{NDF}: 327.2/30$

Left Out:  $-9.114 \pm 1.842$   $\chi^2/\text{NDF}: 28.8/24$

Right Out:  $2.576 \pm 1.435$   $\chi^2/\text{NDF}: 457.0/34$

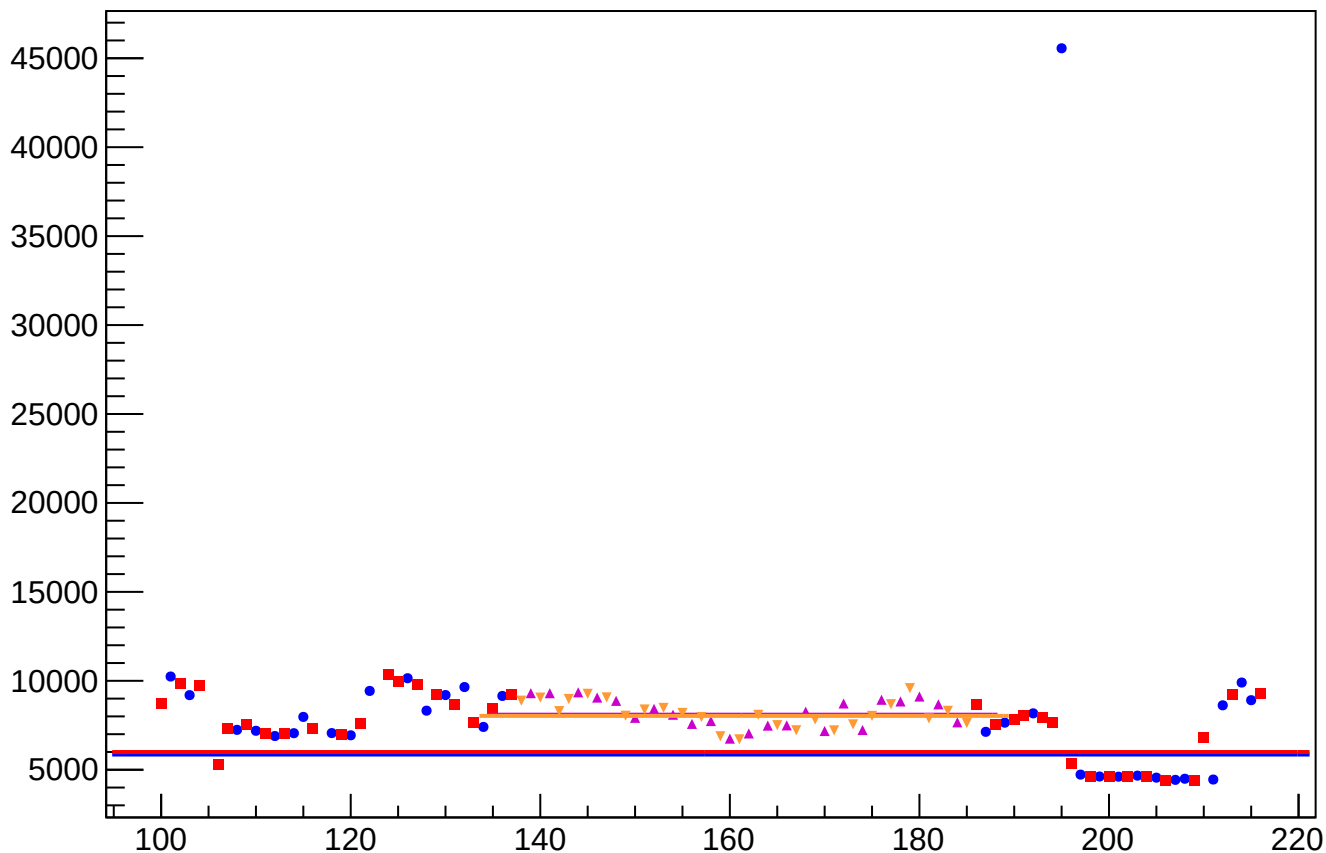
Left In:  $10.095 \pm 1.911$   $\chi^2/\text{NDF}: 24.3/22$

+ sign  $-1.504 \pm 1.131$   $\chi^2/\text{NDF}: 383.3/55$

All:  $1.842 \pm 0.806$   $\chi^2/\text{NDF}: 892.3/113$

- sign  $5.286 \pm 1.147$   $\chi^2/\text{NDF}: 491.3/57$

# diff\_bpm0l09X\_rms vs Slug



Right In: 5856.948 $\pm$ 1.013  $\chi^2$ /NDF: 4742314.4/30

Left Out: 8028.056 $\pm$ 1.303  $\chi^2$ /NDF: 332457.9/24

Right Out: 5997.487 $\pm$ 1.015  $\chi^2$ /NDF: 3163258.6/34

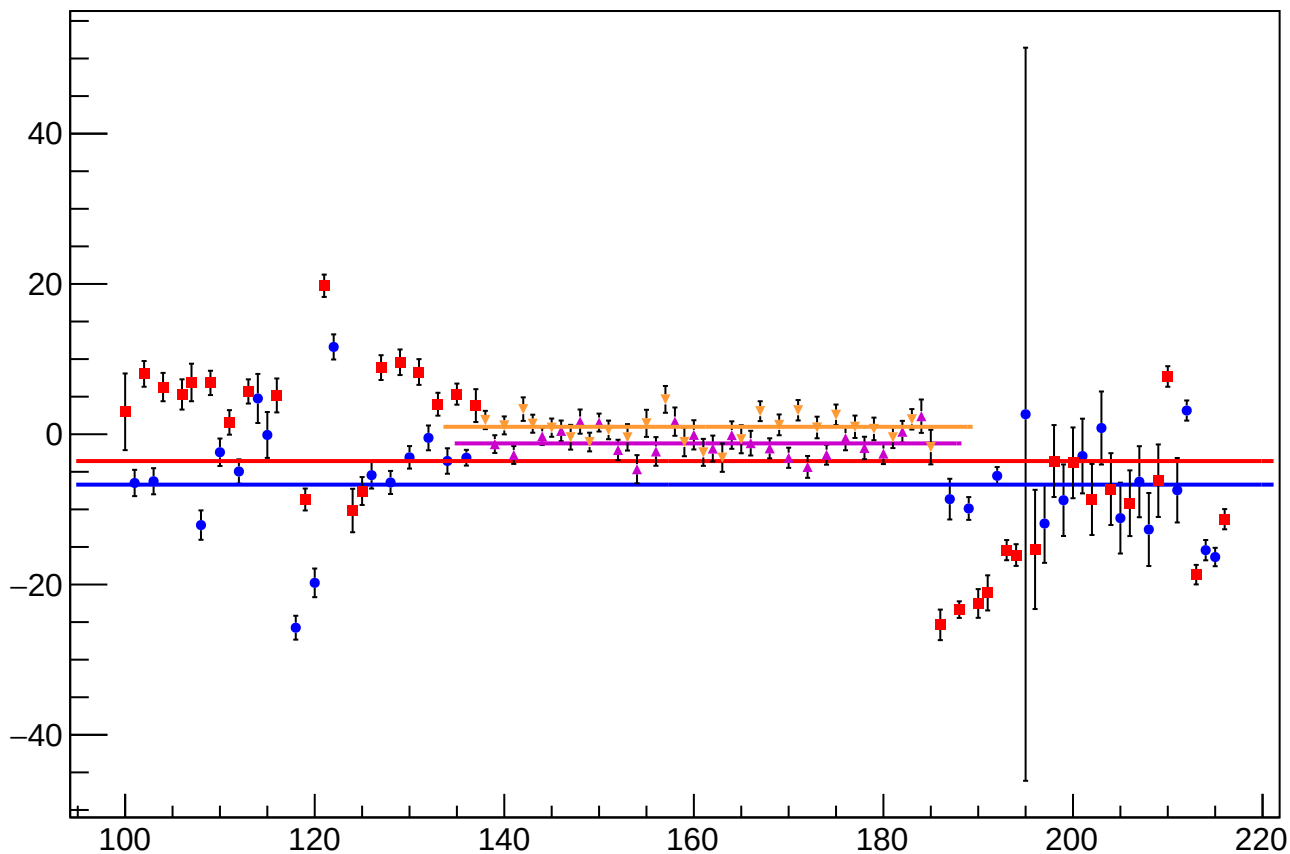
Left In: 8095.368 $\pm$ 1.351  $\chi^2$ /NDF: 367451.5/22

+ sign 6675.348 $\pm$ 0.800  $\chi^2$ /NDF: 6805067.1/55

All: 6713.939 $\pm$ 0.570  $\chi^2$ /NDF: 11881592.5/100

- sign 6753.647 $\pm$ 0.811  $\chi^2$ /NDF: 5071802.7/57

# diff\_bpm0l09Y\_mean vs Slug



Right In:  $-6.707 \pm 0.332$   $\chi^2/\text{NDF}$ : 548.1/30

Left Out:  $0.988 \pm 0.292$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $-3.570 \pm 0.309$   $\chi^2/\text{NDF}$ : 1706.0/34

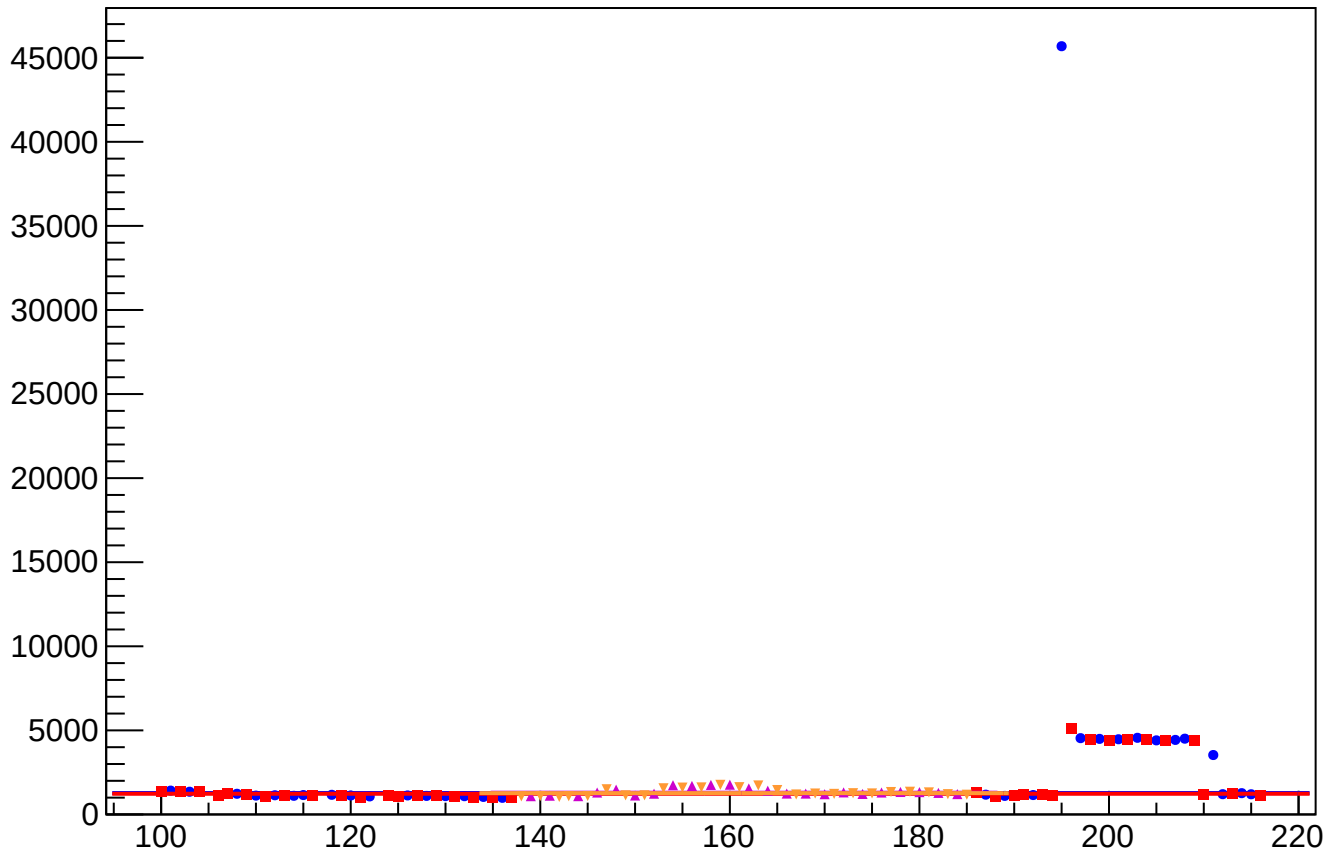
Left In:  $-1.219 \pm 0.307$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-2.372 \pm 0.219$   $\chi^2/\text{NDF}$ : 881.6/55

All:  $-2.378 \pm 0.155$   $\chi^2/\text{NDF}$ : 2649.8/113

- sign  $-2.385 \pm 0.218$   $\chi^2/\text{NDF}$ : 1768.3/57

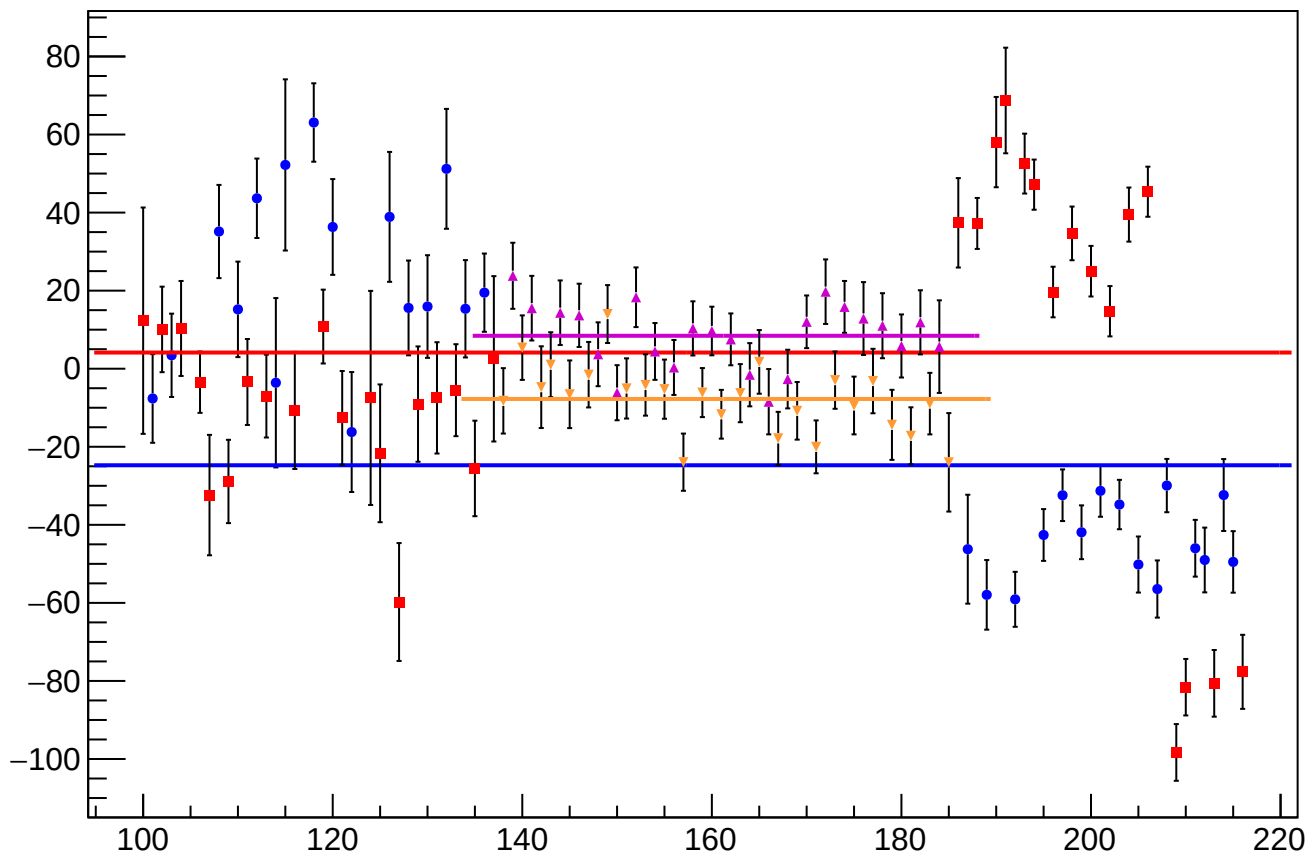
# diff\_bpm0l09Y\_rms vs Slug



Right In: 1273.583 $\pm$ 0.235  $\chi^2$ /NDF: 8754384.4/30 + sign 1270.102 $\pm$ 0.155  $\chi^2$ /NDF: 9633206.1/55  
Left Out: 1267.405 $\pm$ 0.207  $\chi^2$ /NDF: 878431.8/24 All: 1266.423 $\pm$ 0.109  $\chi^2$ /NDF: 16844119.2/1  
Right Out: 1230.992 $\pm$ 0.219  $\chi^2$ /NDF: 6409619.8/34 - sign 1262.801 $\pm$ 0.154  $\chi^2$ /NDF: 7209797.3/57  
Left In: 1294.076 $\pm$ 0.217  $\chi^2$ /NDF: 758193.5/22



# diff\_bpm0l10X\_mean vs Slug



Right In:  $-24.738 \pm 1.634$   $\chi^2/\text{NDF}$ : 412.3/30

Left Out:  $-7.752 \pm 1.547$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $4.143 \pm 1.570$   $\chi^2/\text{NDF}$ : 831.1/34

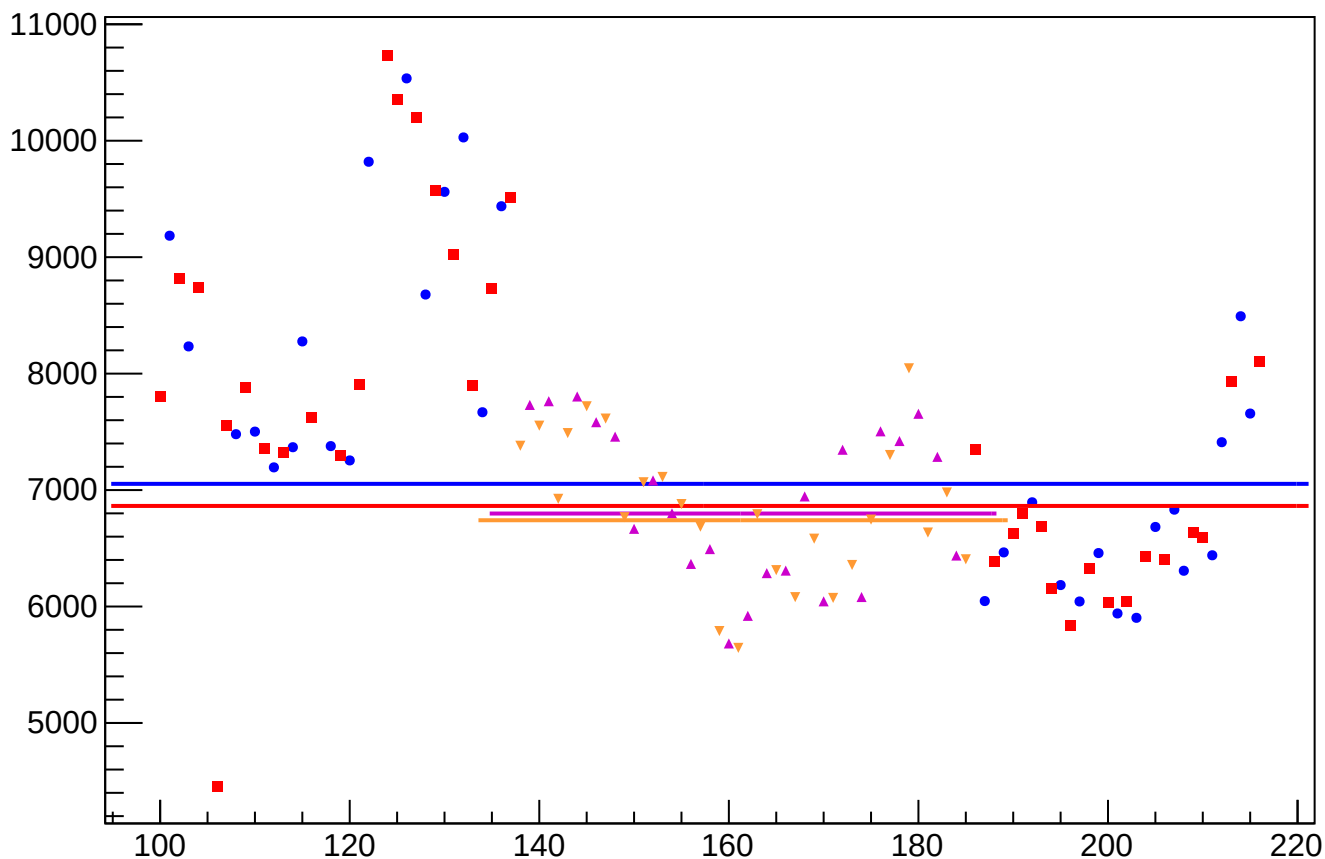
Left In:  $8.438 \pm 1.605$   $\chi^2/\text{NDF}$ : 24.8/22

+ sign  $-15.780 \pm 1.123$   $\chi^2/\text{NDF}$ : 499.7/55

All:  $-4.759 \pm 0.794$   $\chi^2/\text{NDF}$ : 1551.7/113

- sign  $6.243 \pm 1.122$   $\chi^2/\text{NDF}$ : 859.5/57

# diff\_bpm0l10X\_rms vs Slug



Right In: 7053.388 $\pm$ 1.155  $\chi^2$ /NDF: 911540.5/30

Left Out: 6740.835 $\pm$ 1.094  $\chi^2$ /NDF: 316707.6/24

Right Out: 6863.750 $\pm$ 1.110  $\chi^2$ /NDF: 1033724.1/34

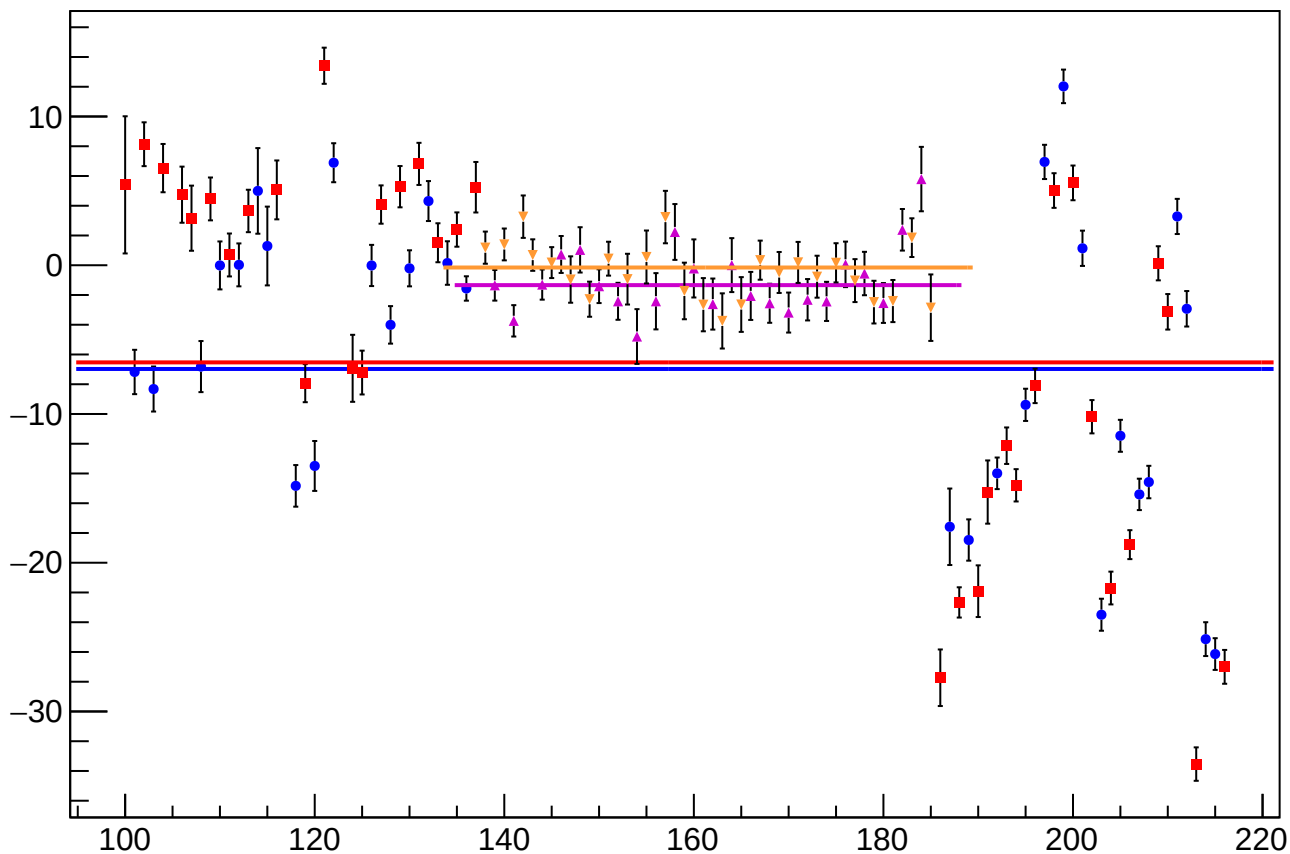
Left In: 6798.524 $\pm$ 1.135  $\chi^2$ /NDF: 353277.6/22

+ sign 6888.546 $\pm$ 0.794  $\chi^2$ /NDF: 1266849.7/55

All: 6860.172 $\pm$ 0.561  $\chi^2$ /NDF: 2658090.3/11

- sign 6831.848 $\pm$ 0.794  $\chi^2$ /NDF: 1388690.1/57

# diff\_bpm0l10Y\_mean vs Slug



Right In:  $-6.973 \pm 0.227$   $\chi^2/\text{NDF}$ : 2070.1/30

Left Out:  $-0.152 \pm 0.277$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-6.531 \pm 0.226$   $\chi^2/\text{NDF}$ : 3099.6/34

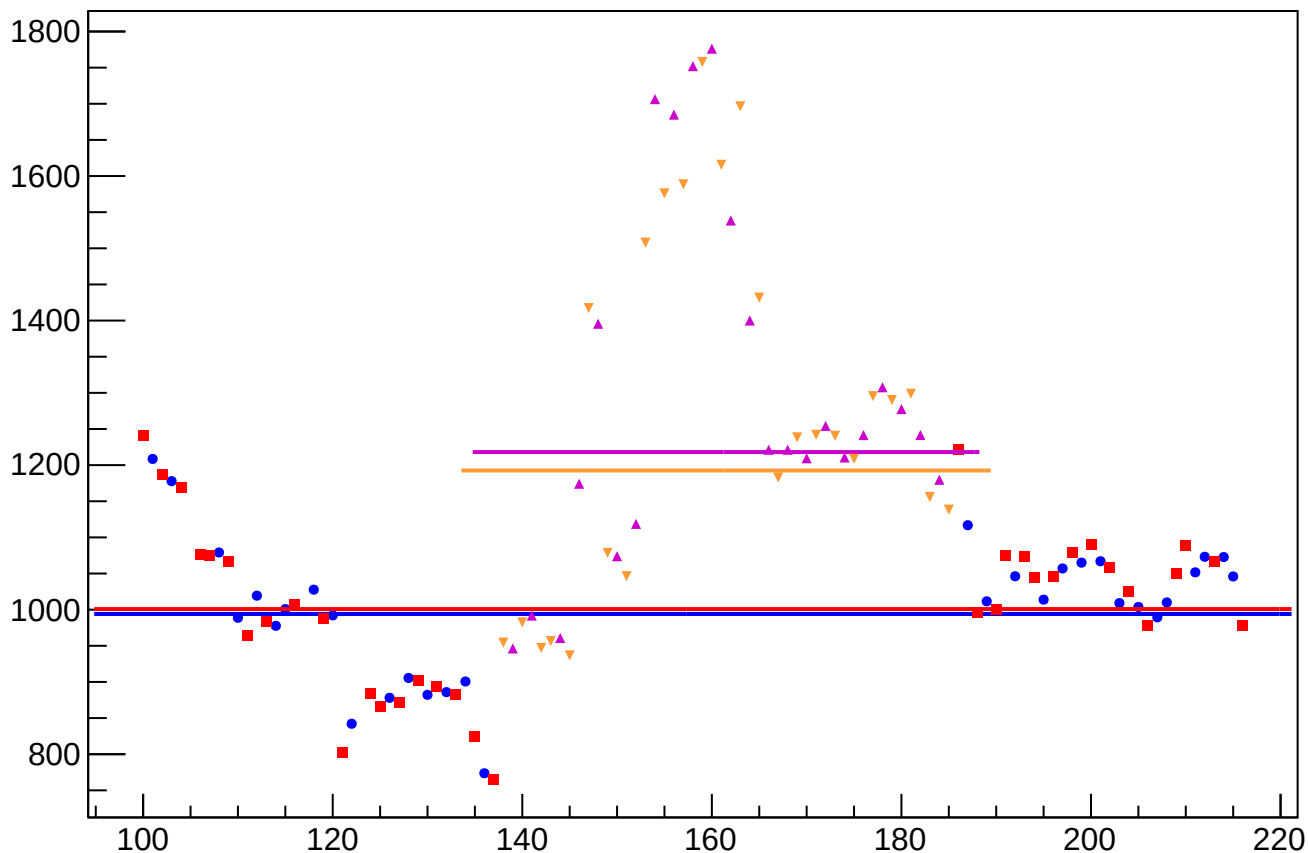
Left In:  $-1.337 \pm 0.290$   $\chi^2/\text{NDF}$ : 44.0/22

+ sign  $-4.224 \pm 0.176$   $\chi^2/\text{NDF}$ : 2468.9/55

All:  $-4.394 \pm 0.125$   $\chi^2/\text{NDF}$ : 5813.8/113

- sign  $-4.569 \pm 0.178$   $\chi^2/\text{NDF}$ : 3343.0/57

# diff\_bpm0l10Y\_rms vs Slug



Right In: 993.994 $\pm$ 0.161  $\chi^2$ /NDF: 371941.5/30

Left Out: 1192.579 $\pm$ 0.196  $\chi^2$ /NDF:1320181.3/24

Right Out: 1000.851 $\pm$ 0.160  $\chi^2$ /NDF: 383085.8/34

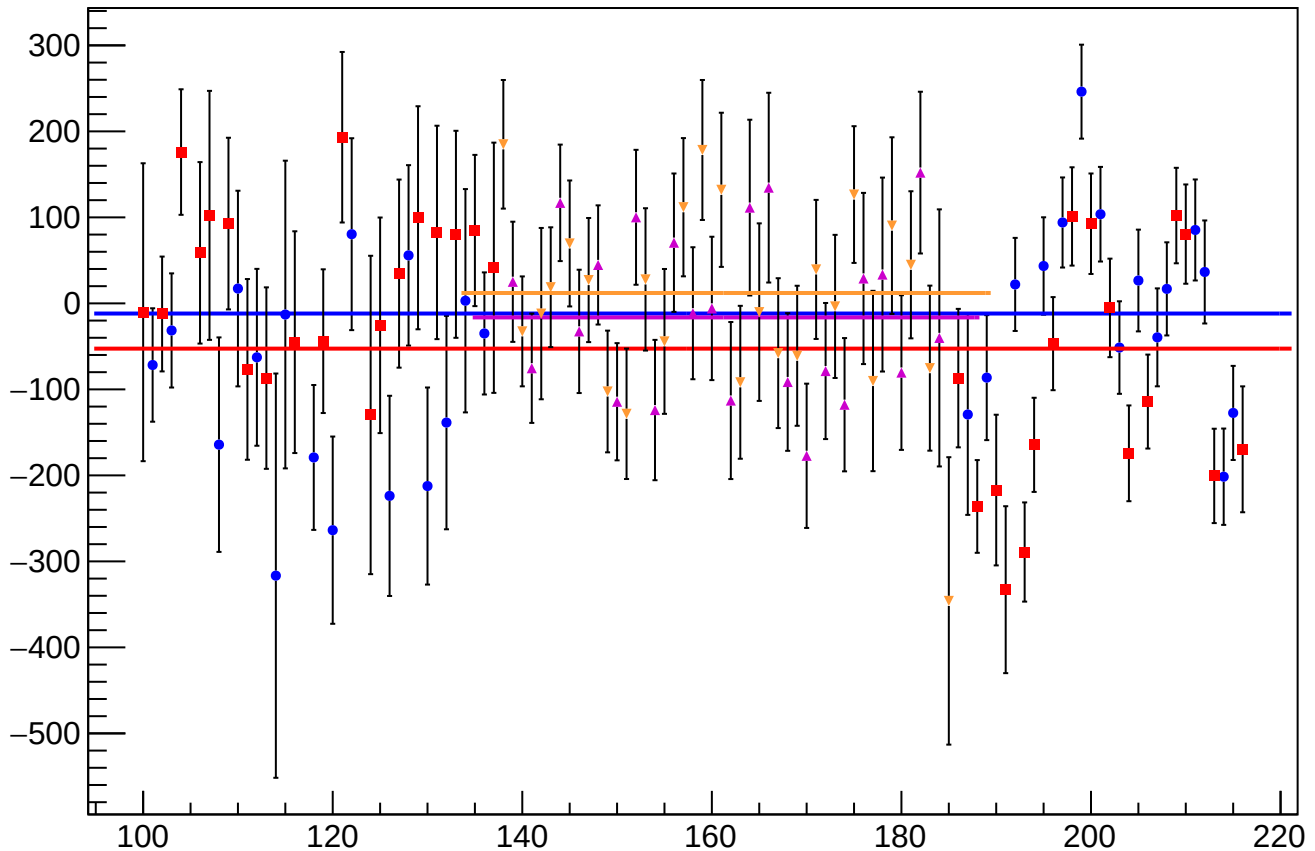
Left In: 1218.058 $\pm$ 0.205  $\chi^2$ /NDF:1127896.8/22

+ sign 1074.034 $\pm$ 0.124  $\chi^2$ /NDF: 2307052.0/55

All: 1078.399 $\pm$ 0.088  $\chi^2$ /NDF: 4517958.8/11

- sign 1082.897 $\pm$ 0.126  $\chi^2$ /NDF: 2208399.6/57

# diff\_bpm0r03X\_mean vs Slug



Right In:  $-11.807 \pm 12.846$   $\chi^2/\text{NDF}$ : 77.3/30

Left Out:  $12.081 \pm 16.608$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $-52.619 \pm 12.771$   $\chi^2/\text{NDF}$ : 116.1/34

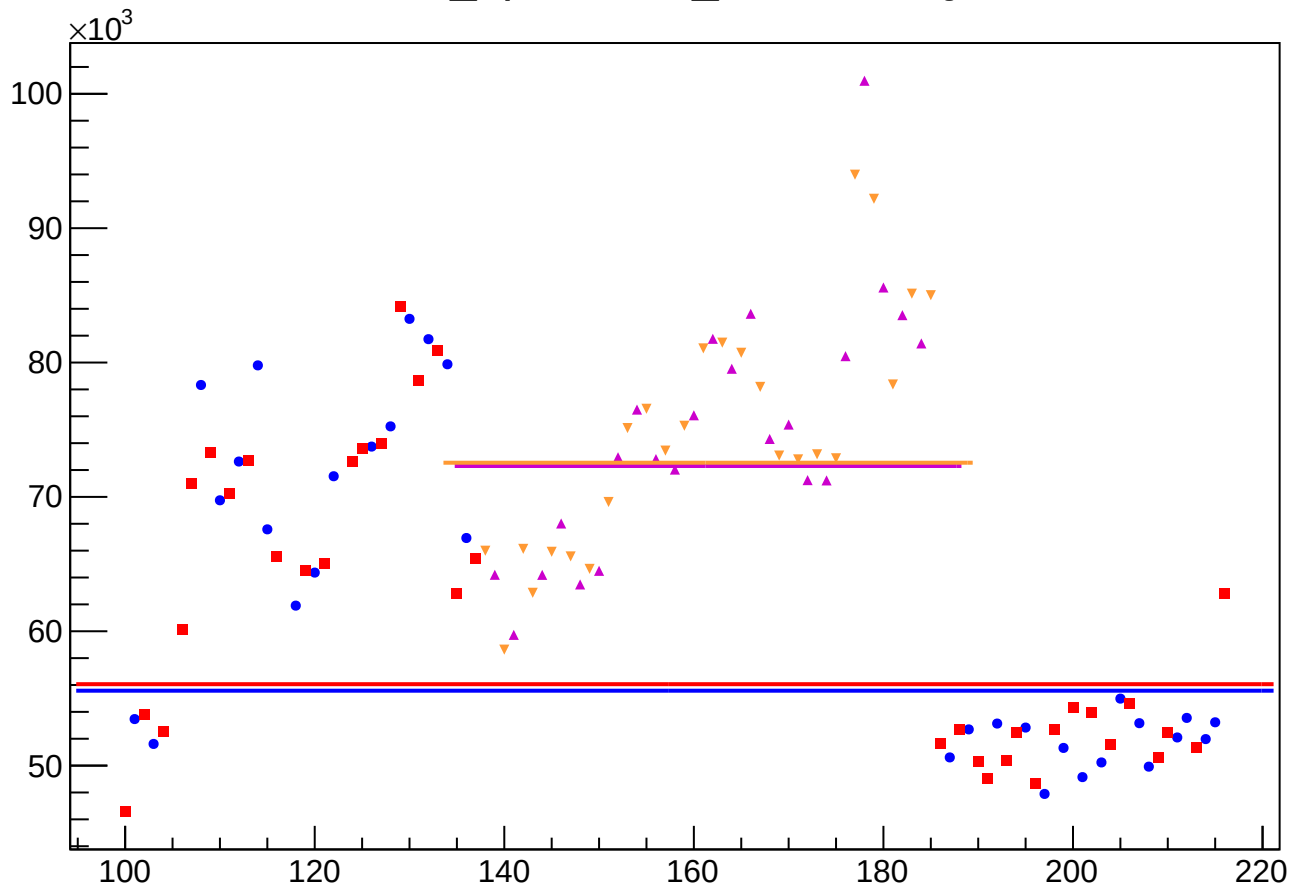
Left In:  $-16.339 \pm 17.018$   $\chi^2/\text{NDF}$ : 28.7/22

+ sign  $-2.865 \pm 10.161$   $\chi^2/\text{NDF}$ : 111.4/55

All:  $-21.110 \pm 7.204$   $\chi^2/\text{NDF}$ : 265.7/113

- sign  $-39.548 \pm 10.215$   $\chi^2/\text{NDF}$ : 147.7/57

# diff\_bpm0r03X\_rms vs Slug



Right In: 55576.046 $\pm$ 9.083  $\chi^2$ /NDF: 867973.5/30

Left Out: 72544.327 $\pm$ 11.744  $\chi^2$ /NDF: 500066.2/24

Right Out: 56060.697 $\pm$ 9.031  $\chi^2$ /NDF: 787911.7/34

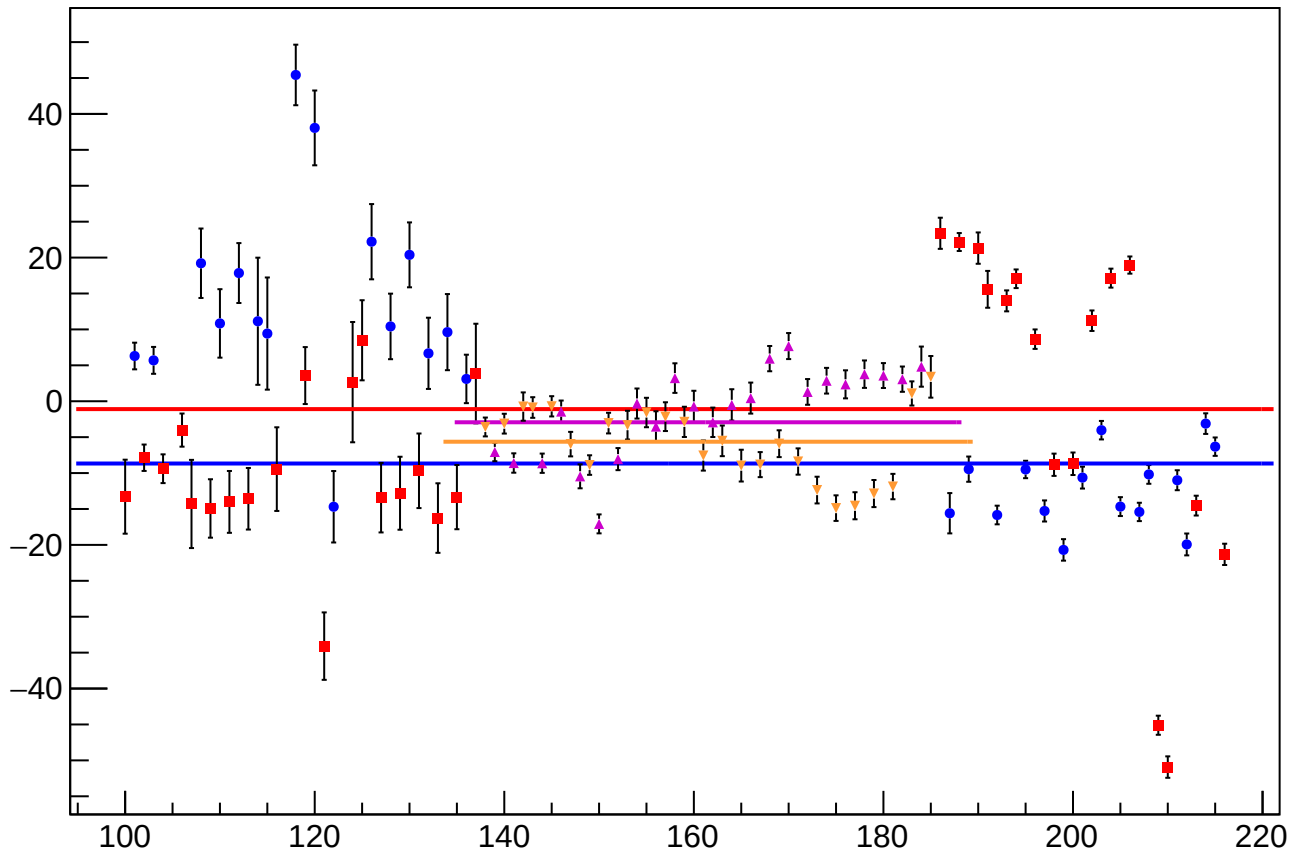
Left In: 72300.590 $\pm$ 12.033  $\chi^2$ /NDF: 488780.3/22

+ sign 61927.611 $\pm$ 7.185  $\chi^2$ /NDF: 2674292.8/55

All: 61919.706 $\pm$ 5.094  $\chi^2$ /NDF: 5116123.4/100

- sign 61911.717 $\pm$ 7.223  $\chi^2$ /NDF: 2441828.1/57

# diff\_bpm0r03Y\_mean vs Slug



Right In:  $-8.670 \pm 0.340$   $\chi^2/\text{NDF}$ : 861.2/30

Left Out:  $-5.636 \pm 0.349$   $\chi^2/\text{NDF}$ : 178.2/24

Right Out:  $-1.095 \pm 0.337$   $\chi^2/\text{NDF}$ : 4225.5/34

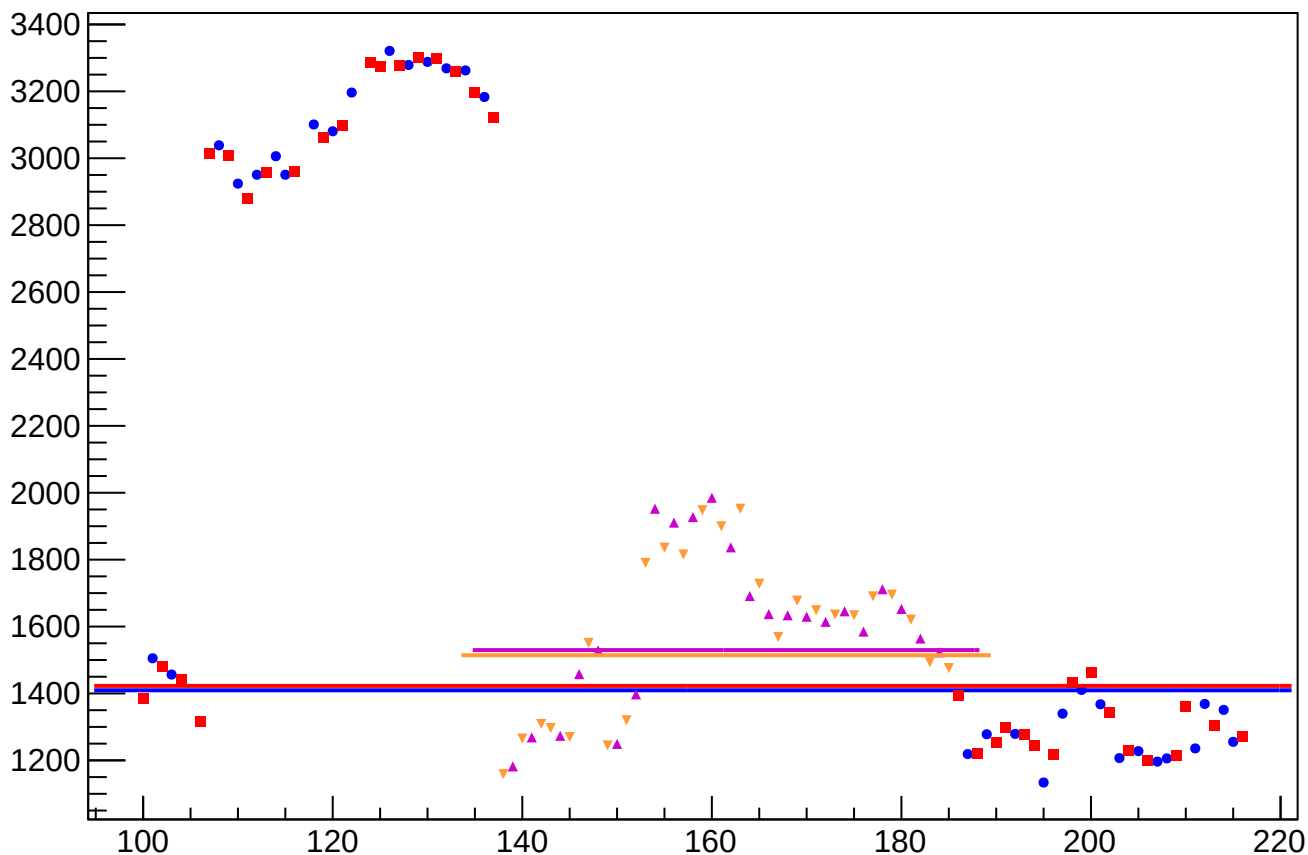
Left In:  $-2.929 \pm 0.362$   $\chi^2/\text{NDF}$ : 337.4/22

+ sign  $-7.195 \pm 0.243$   $\chi^2/\text{NDF}$ : 1078.2/55

All:  $-4.608 \pm 0.173$   $\chi^2/\text{NDF}$ : 5884.0/113

- sign  $-1.946 \pm 0.247$   $\chi^2/\text{NDF}$ : 4576.6/57

# diff\_bpm0r03Y\_rms vs Slug



Right In: 1409.487 $\pm$ 0.240  $\chi^2$ /NDF: 4071903.3/30

Left Out: 1514.334 $\pm$ 0.247  $\chi^2$ /NDF: 933332.1/24

Right Out: 1422.690 $\pm$ 0.238  $\chi^2$ /NDF: 3917479.4/34

Left In: 1529.635 $\pm$ 0.256  $\chi^2$ /NDF: 828481.7/22

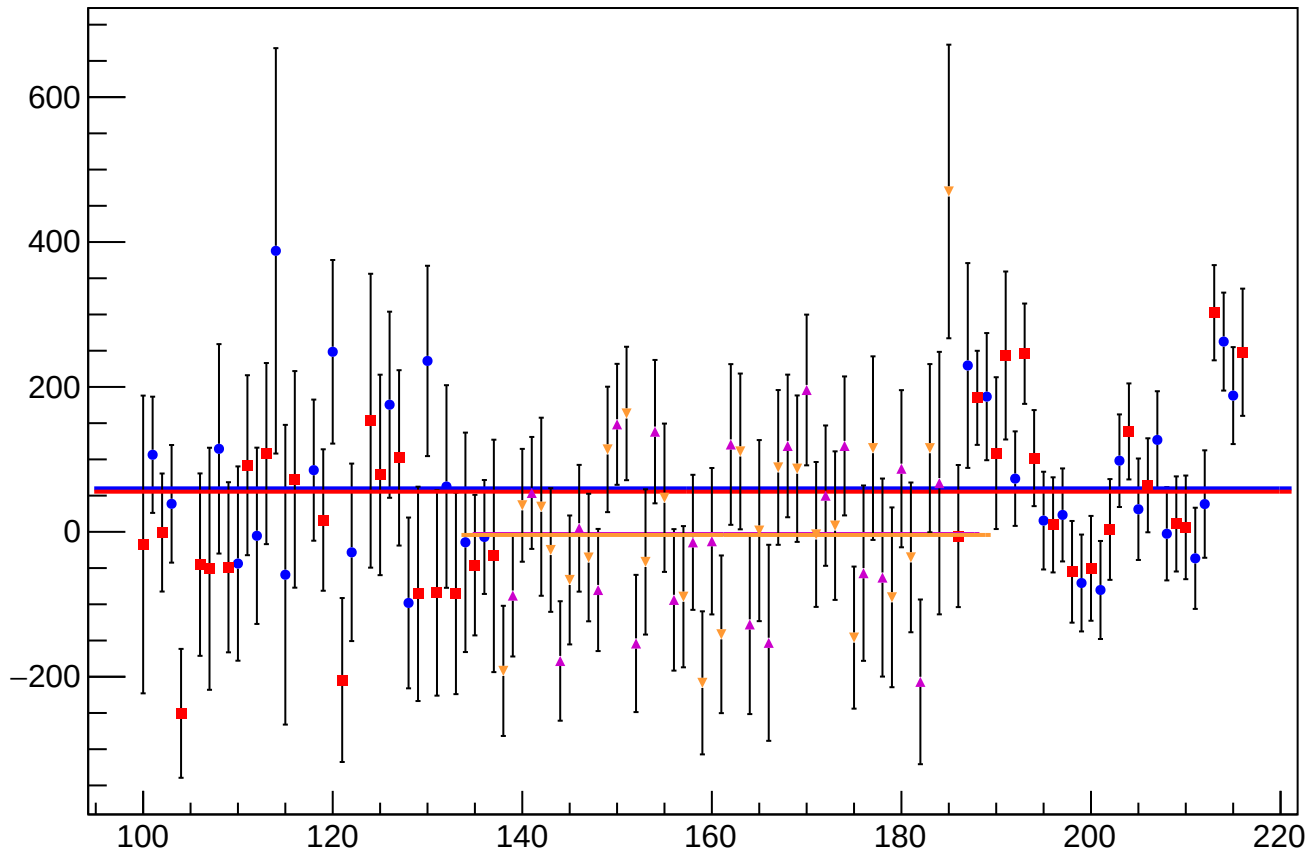
+ sign 1460.464 $\pm$ 0.172  $\chi^2$ /NDF: 5097961.9/55

All: 1466.316 $\pm$ 0.123  $\chi^2$ /NDF: 9939652.3/11

- sign 1472.334 $\pm$ 0.175  $\chi^2$ /NDF: 4839344.9/57



# diff\_bpm0r05X\_mean vs Slug



Right In: 60.013 $\pm$ 15.328  $\chi^2$ /NDF: 40.9/30

Left Out: -4.274 $\pm$ 20.240  $\chi^2$ /NDF:30.4/24

Right Out: 55.438 $\pm$ 15.257  $\chi^2$ /NDF: 67.1/34

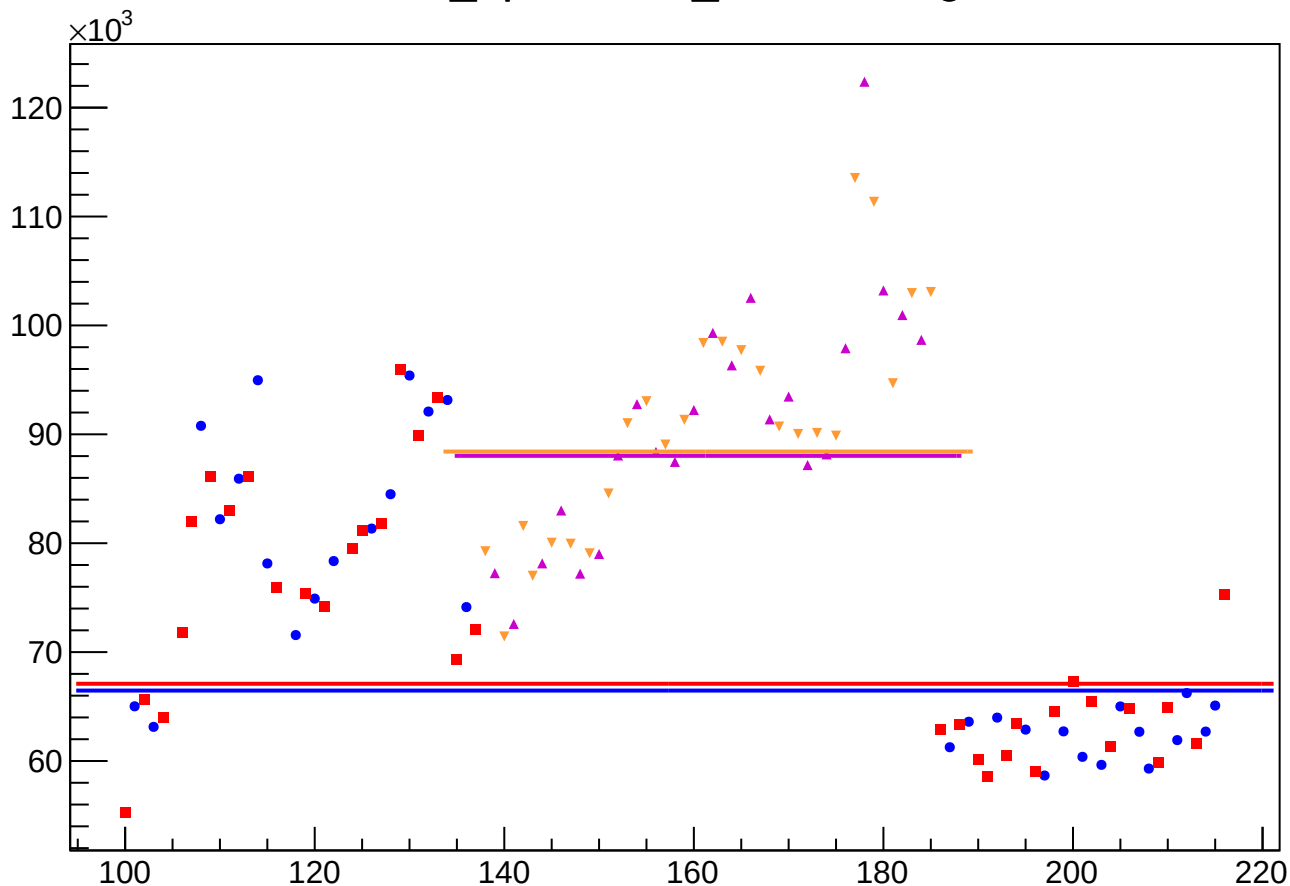
Left In: -3.017 $\pm$ 20.720  $\chi^2$ /NDF:30.7/22

+ sign 36.582 $\pm$ 12.219  $\chi^2$ /NDF: 77.7/55

All: 35.739 $\pm$ 8.664  $\chi^2$ /NDF: 180.7/113

- sign 34.886 $\pm$ 12.286  $\chi^2$ /NDF: 103.0/57

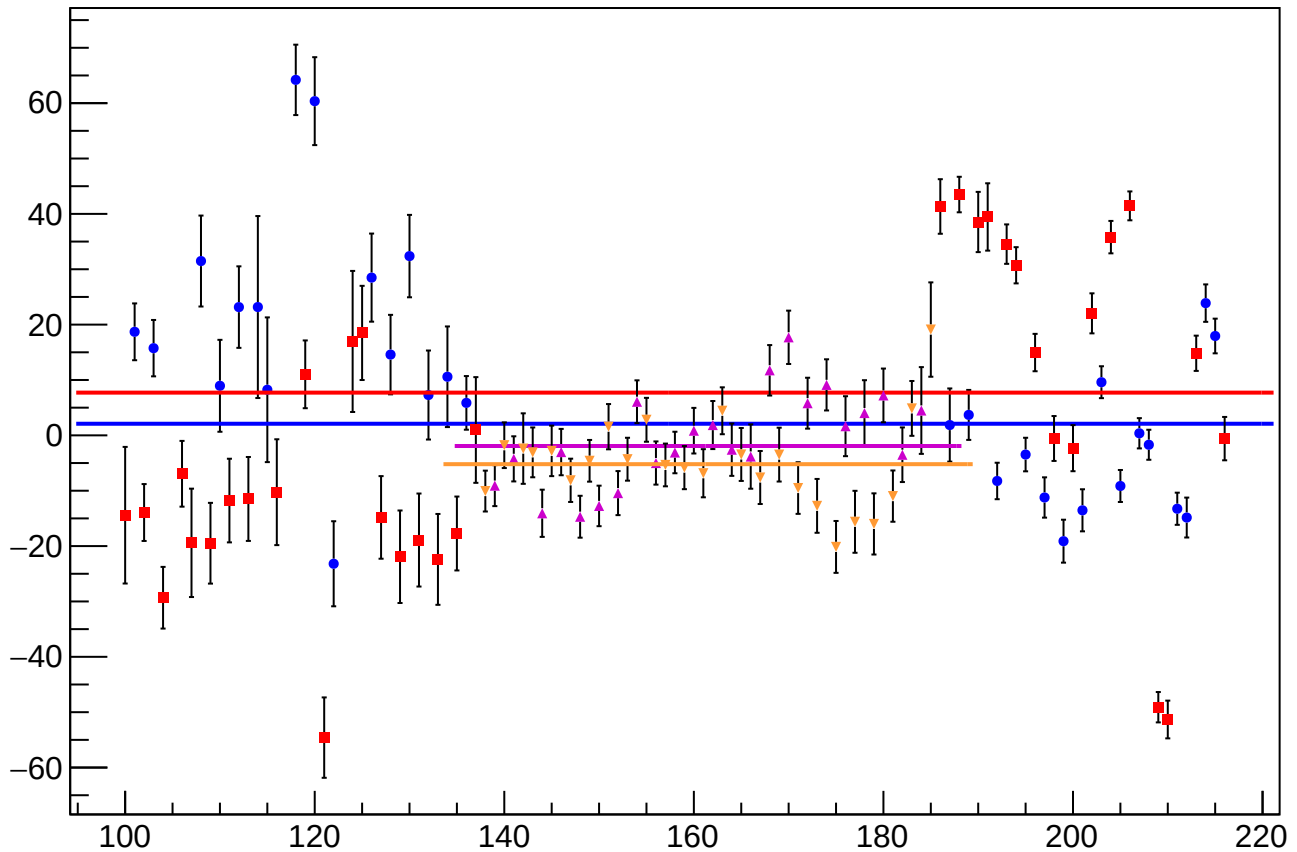
# diff\_bpm0r05X\_rms vs Slug



Right In:  $66467.663 \pm 10.838$   $\chi^2/\text{NDF}: 654299.3/30$   
 Left Out:  $88417.953 \pm 14.312$   $\chi^2/\text{NDF}: 481954.0/24$   
 Right Out:  $67092.972 \pm 10.788$   $\chi^2/\text{NDF}: 612999.9/34$   
 Left In:  $88023.592 \pm 14.651$   $\chi^2/\text{NDF}: 484812.2/22$

+ sign  $74468.132 \pm 8.640$   $\chi^2/\text{NDF}: 2631174.3/55$   
 All:  $74460.037 \pm 6.126$   $\chi^2/\text{NDF}: 5052345.1/100$   
 - sign  $74451.854 \pm 8.687$   $\chi^2/\text{NDF}: 2421169.0/57$

# diff\_bpm0r05Y\_mean vs Slug



Right In:  $2.096 \pm 0.768$   $\chi^2/\text{NDF}: 448.9/30$

Left Out:  $-5.206 \pm 0.894$   $\chi^2/\text{NDF}: 51.0/24$

Right Out:  $7.718 \pm 0.781$   $\chi^2/\text{NDF}: 1610.6/34$

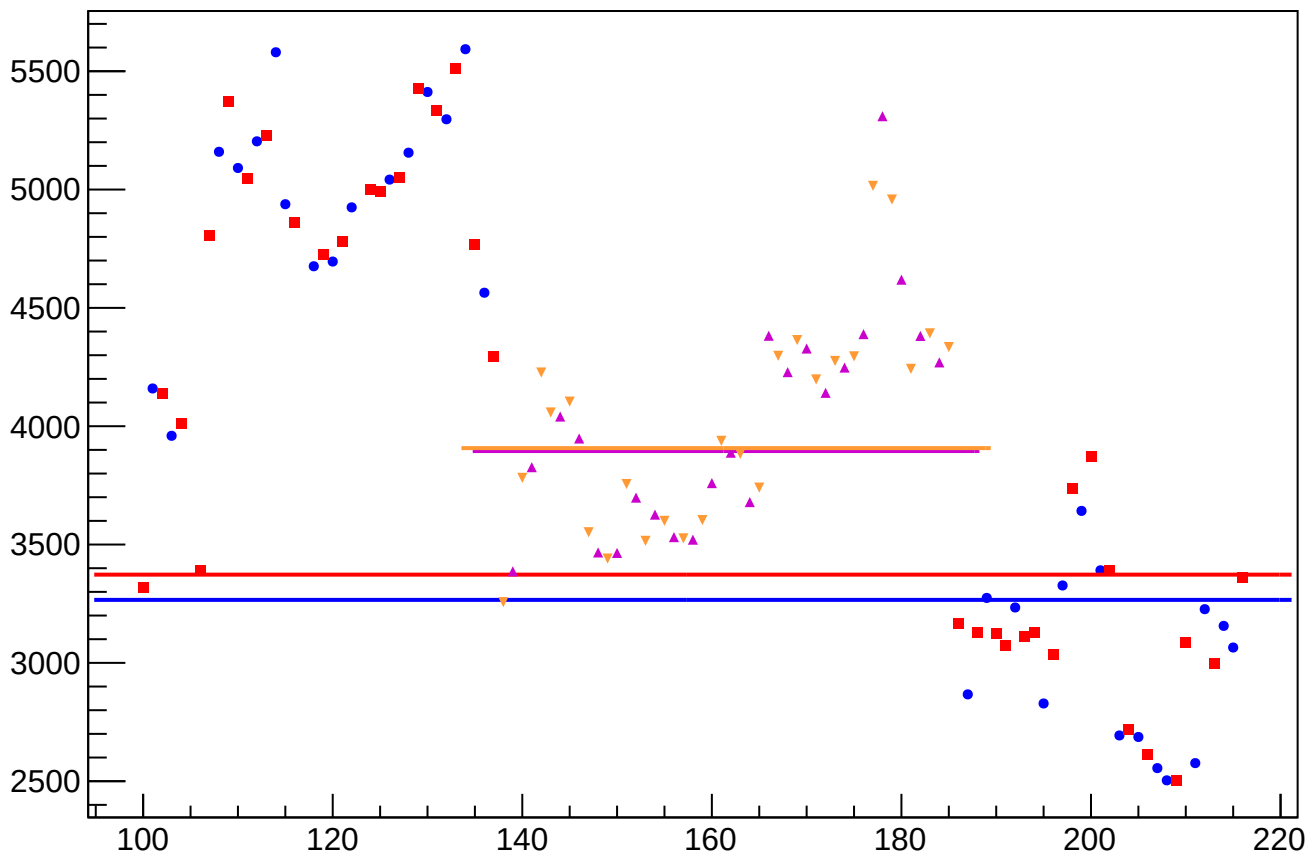
Left In:  $-1.924 \pm 0.916$   $\chi^2/\text{NDF}: 83.2/22$

+ sign  $-1.006 \pm 0.583$   $\chi^2/\text{NDF}: 538.2/55$

All:  $1.283 \pm 0.416$   $\chi^2/\text{NDF}: 2327.7/113$

- sign  $3.663 \pm 0.594$   $\chi^2/\text{NDF}: 1758.0/57$

# diff\_bpm0r05Y\_rms vs Slug



Right In: 3266.183 $\pm$ 0.543  $\chi^2$ /NDF: 2222105.1/30

Left Out: 3907.465 $\pm$ 0.632  $\chi^2$ /NDF: 441202.5/24

Right Out: 3372.828 $\pm$ 0.552  $\chi^2$ /NDF: 2004362.5/34

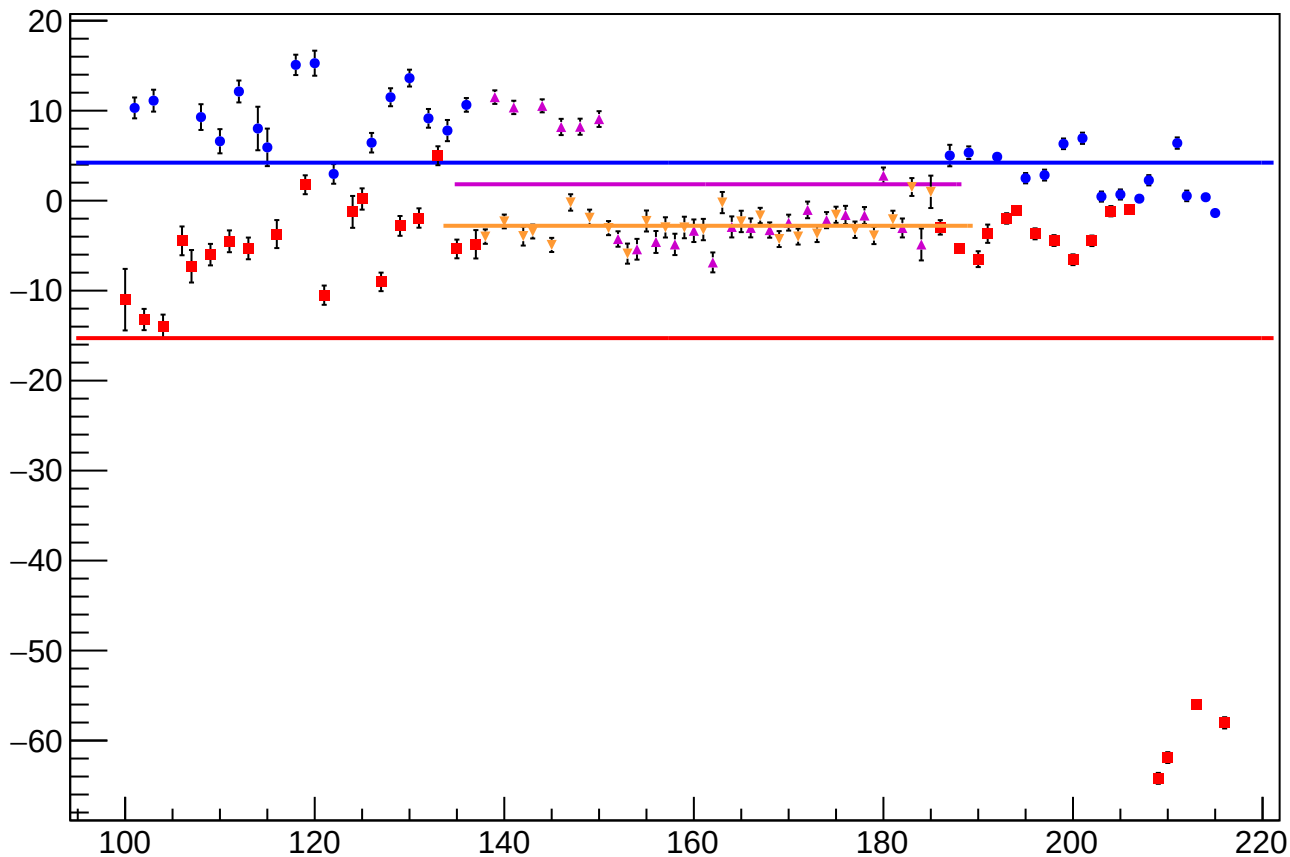
Left In: 3895.108 $\pm$ 0.648  $\chi^2$ /NDF: 409913.9/22

+ sign 3538.624 $\pm$ 0.412  $\chi^2$ /NDF: 3255407.4/55

All: 3565.005 $\pm$ 0.294  $\chi^2$ /NDF: 6054618.0/11

- sign 3592.444 $\pm$ 0.420  $\chi^2$ /NDF: 2790844.4/57

# diff\_bpm2i01X\_mean vs Slug



Right In:  $4.222 \pm 0.135$   $\chi^2/\text{NDF}$ : 946.8/30

Left Out:  $-2.792 \pm 0.190$   $\chi^2/\text{NDF}$ : 68.4/24

Right Out:  $-15.278 \pm 0.134$   $\chi^2/\text{NDF}$ : 29266.0/34

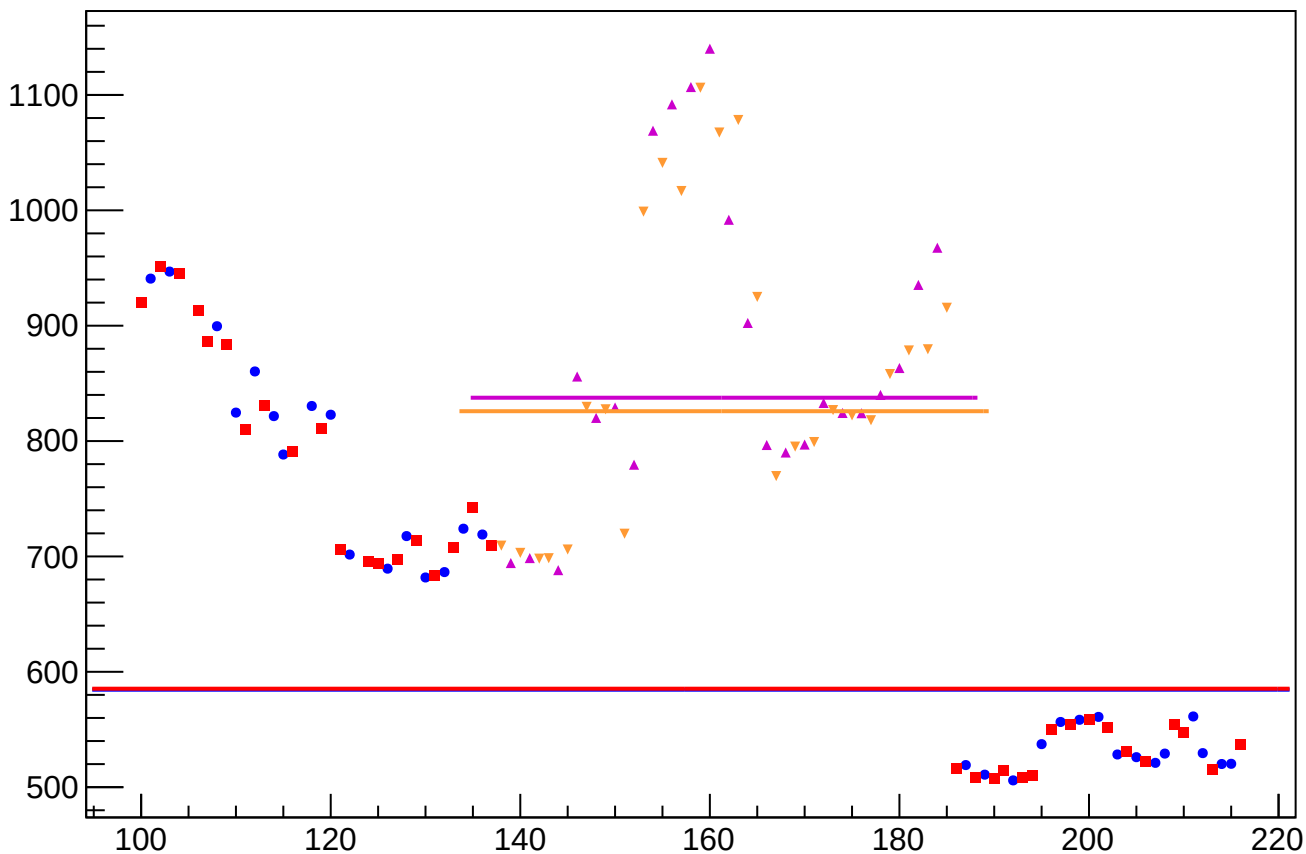
Left In:  $1.820 \pm 0.198$   $\chi^2/\text{NDF}$ : 1026.0/22

+ sign  $1.863 \pm 0.110$   $\chi^2/\text{NDF}$ : 1919.2/55

All:  $-3.990 \pm 0.078$   $\chi^2/\text{NDF}$ : 42995.8/113

- sign  $-9.918 \pm 0.111$   $\chi^2/\text{NDF}$ : 35402.8/57

# diff\_bpm2i01X\_rms vs Slug



Right In: 584.488 $\pm$ 0.096  $\chi^2$ /NDF: 1291842.7/30

Left Out: 825.883 $\pm$ 0.134  $\chi^2$ /NDF: 765050.9/24

Right Out: 585.360 $\pm$ 0.095  $\chi^2$ /NDF: 1396896.3/34

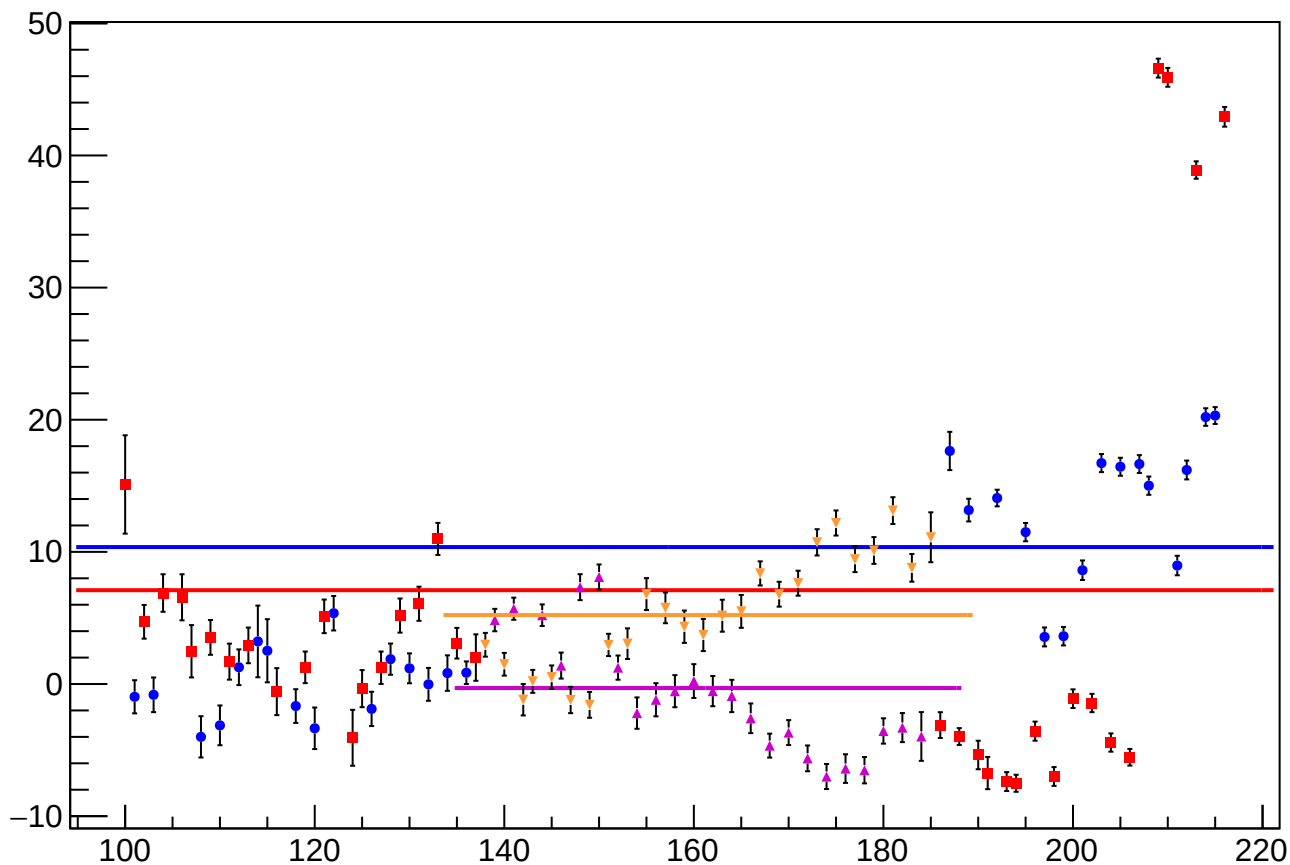
Left In: 837.569 $\pm$ 0.140  $\chi^2$ /NDF: 714157.0/22

+ sign 665.689 $\pm$ 0.078  $\chi^2$ /NDF: 4197671.9/55

All: 665.058 $\pm$ 0.055  $\chi^2$ /NDF: 8532936.2/113

- sign 664.418 $\pm$ 0.078  $\chi^2$ /NDF: 4335132.1/57

# diff\_bpm2i01Y\_mean vs Slug



Right In:  $10.364 \pm 0.161$   $\chi^2/\text{NDF}$ : 2101.6/30

Left Out:  $5.219 \pm 0.204$   $\chi^2/\text{NDF}$ : 449.9/24

Right Out:  $7.101 \pm 0.159$   $\chi^2/\text{NDF}$ : 14032.0/34

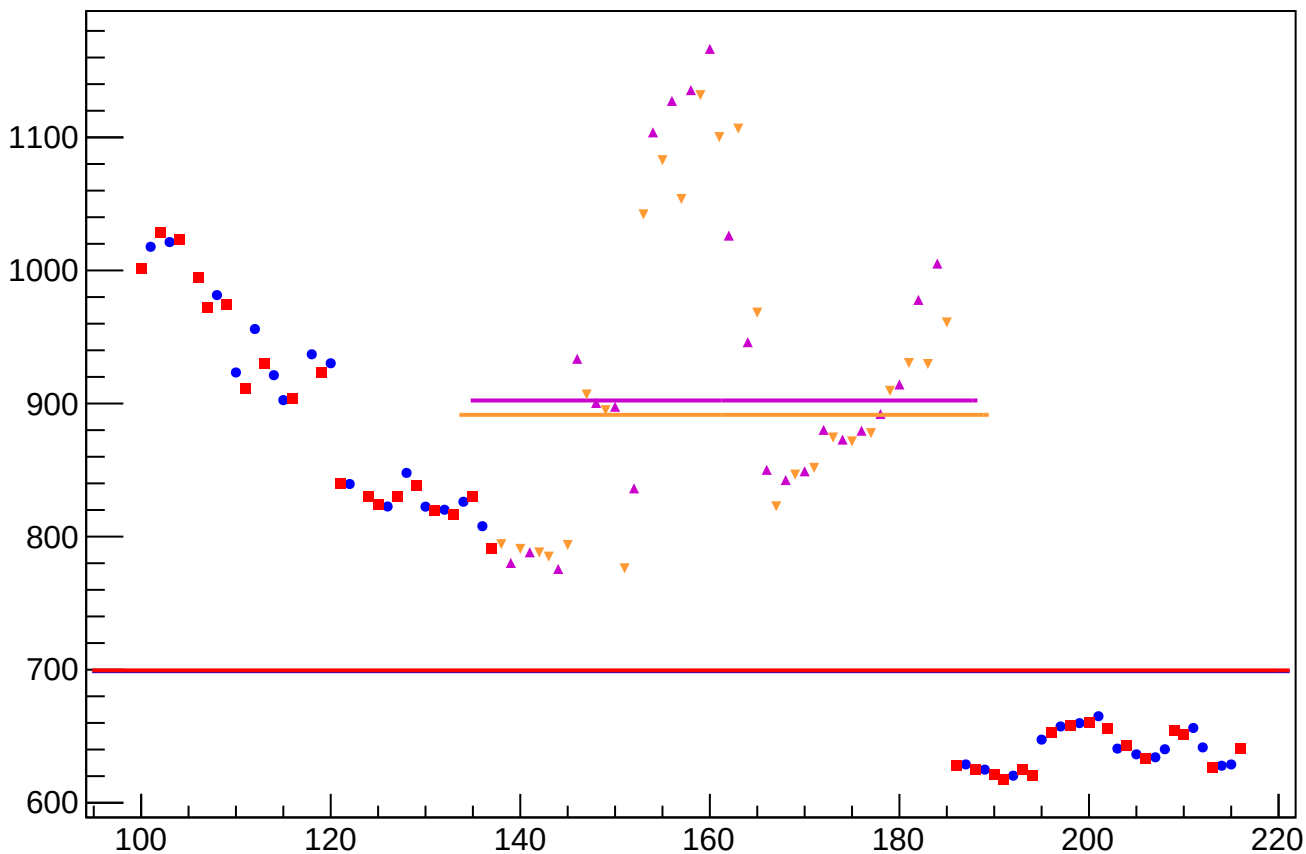
Left In:  $-0.304 \pm 0.213$   $\chi^2/\text{NDF}$ : 495.2/22

+ sign  $8.392 \pm 0.127$   $\chi^2/\text{NDF}$ : 2942.5/55

All:  $6.431 \pm 0.090$   $\chi^2/\text{NDF}$ : 18730.8/113

- sign  $4.440 \pm 0.127$   $\chi^2/\text{NDF}$ : 15304.0/57

# diff\_bpm2i01Y\_rms vs Slug



Right In: 698.885 $\pm$ 0.114  $\chi^2$ /NDF: 948723.6/30

Left Out: 891.492 $\pm$ 0.145  $\chi^2$ /NDF: 517791.6/24

Right Out: 699.472 $\pm$ 0.113  $\chi^2$ /NDF: 1024845.8/34

Left In: 902.292 $\pm$ 0.150  $\chi^2$ /NDF: 484924.8/22

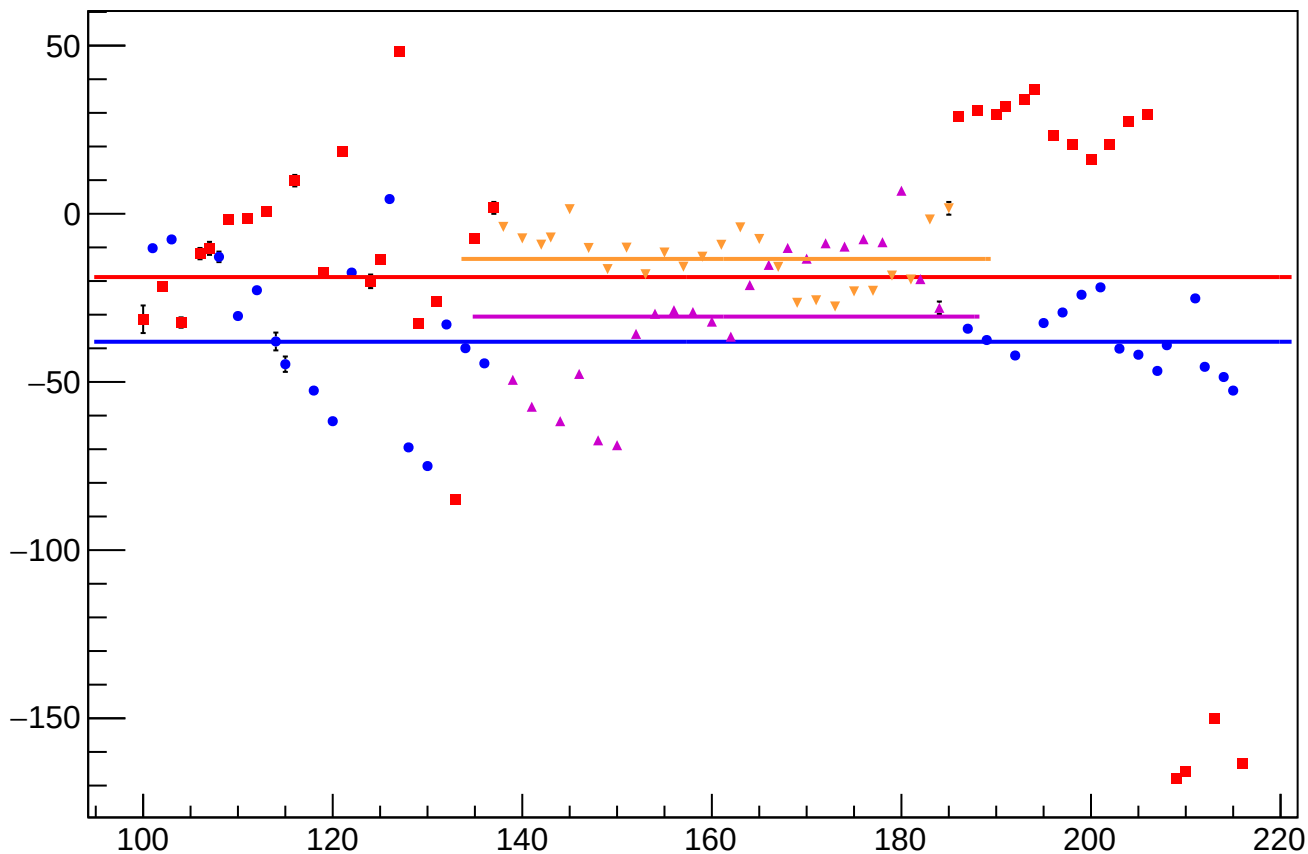
+ sign 772.698 $\pm$ 0.089  $\chi^2$ /NDF: 2562143.1/55

All: 772.526 $\pm$ 0.063  $\chi^2$ /NDF: 5237440.8/113

- sign 772.352 $\pm$ 0.090  $\chi^2$ /NDF: 2675290.4/57



# diff\_bpm2i02X\_mean vs Slug



Right In:  $-38.049 \pm 0.159$   $\chi^2/\text{NDF}: 7703.5/30$

Left Out:  $-13.420 \pm 0.206$   $\chi^2/\text{NDF}: 1663.3/24$

Right Out:  $-18.817 \pm 0.157$   $\chi^2/\text{NDF}: 218379.9/34$

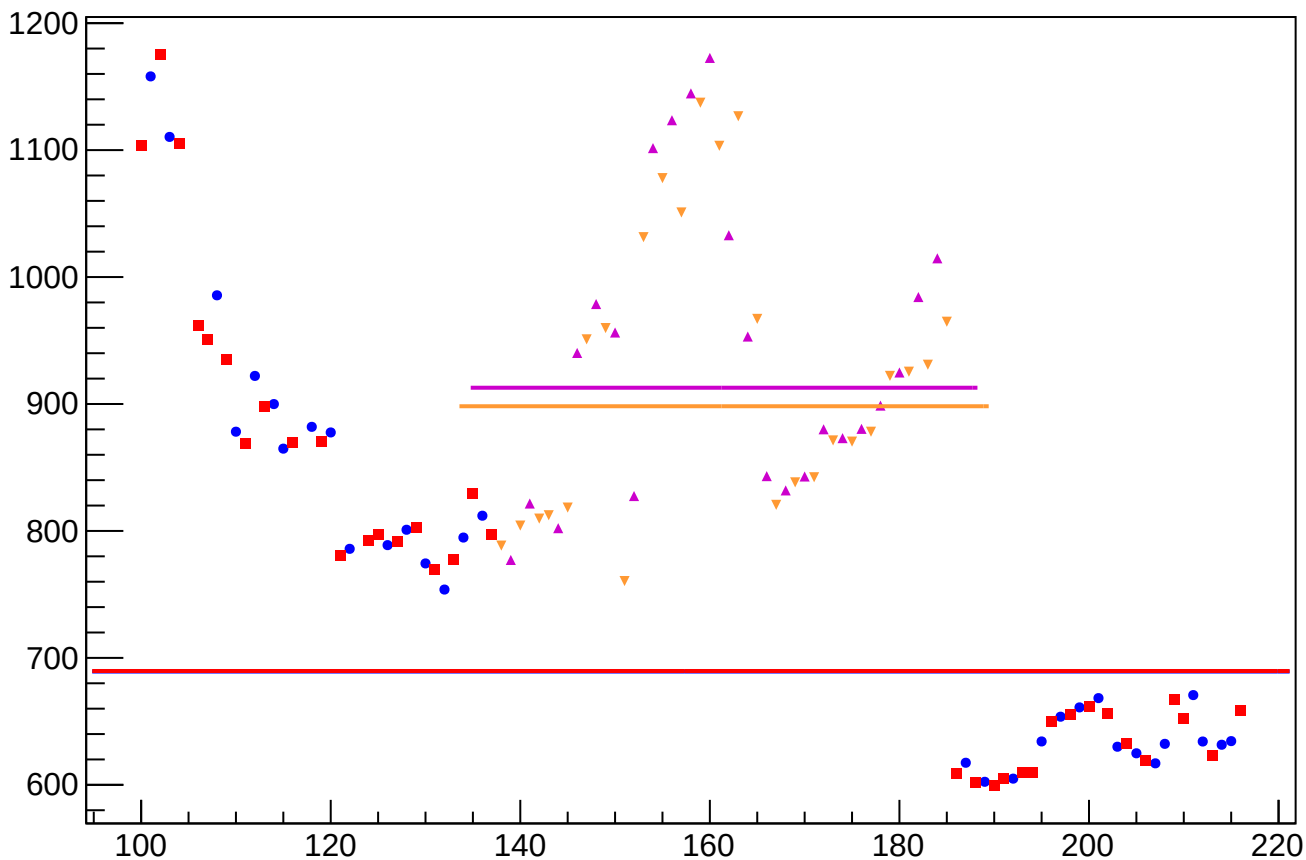
Left In:  $-30.571 \pm 0.215$   $\chi^2/\text{NDF}: 10386.5/22$

+ sign  $-28.857 \pm 0.126$   $\chi^2/\text{NDF}: 18330.2/55$

All:  $-25.905 \pm 0.089$   $\chi^2/\text{NDF}: 250153.5/113$

- sign  $-22.903 \pm 0.127$   $\chi^2/\text{NDF}: 230713.1/57$

# diff\_bpm2i02X\_rms vs Slug



Right In: 689.260 $\pm$ 0.112  $\chi^2$ /NDF: 989184.0/30

Left Out: 898.227 $\pm$ 0.146  $\chi^2$ /NDF: 518370.6/24

Right Out: 689.675 $\pm$ 0.111  $\chi^2$ /NDF: 1063045.4/34

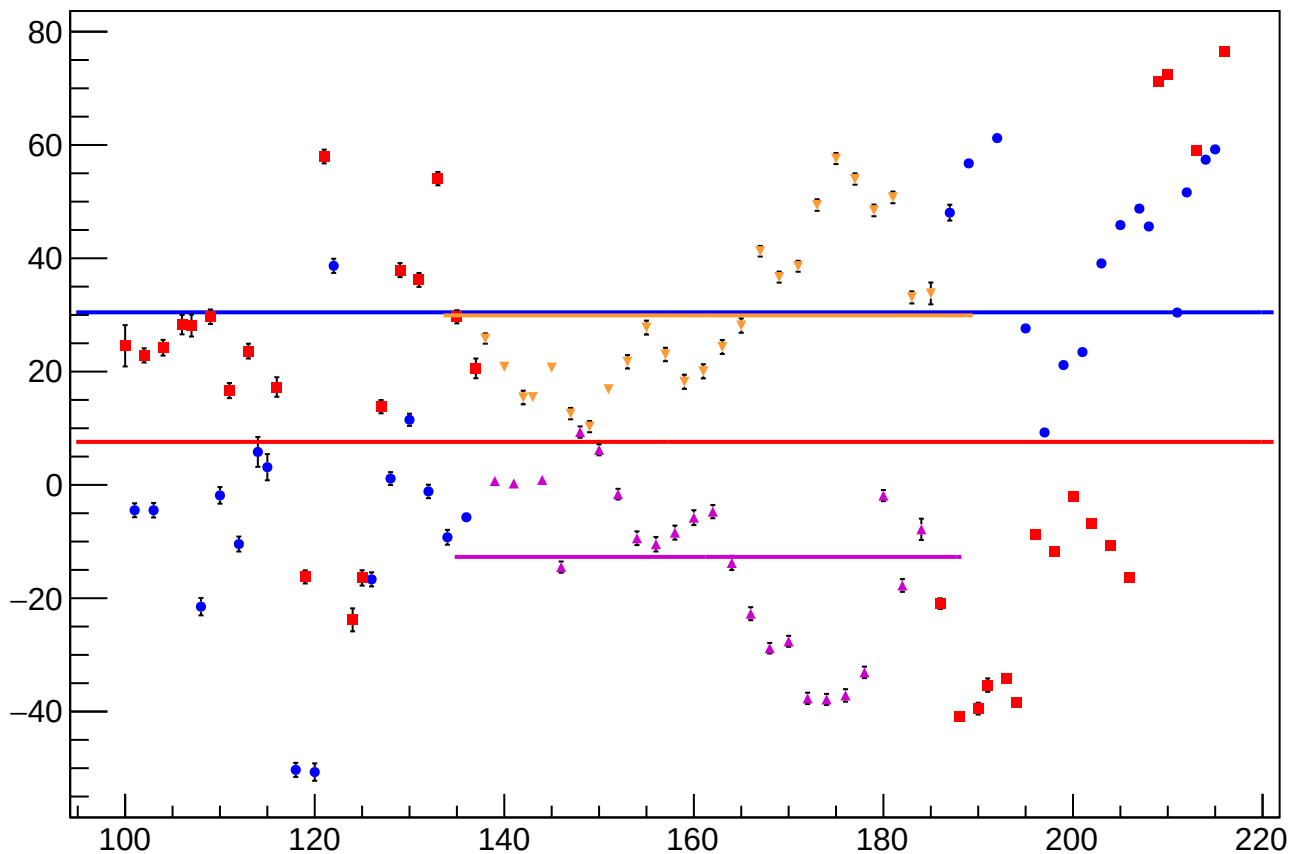
Left In: 912.817 $\pm$ 0.152  $\chi^2$ /NDF: 480021.0/22

+ sign 767.253 $\pm$ 0.089  $\chi^2$ /NDF: 2798050.9/55

All: 767.250 $\pm$ 0.063  $\chi^2$ /NDF: 5744268.6/113

- sign 767.246 $\pm$ 0.090  $\chi^2$ /NDF: 2946217.7/57

# diff\_bpm2i02Y\_mean vs Slug



Right In:  $30.461 \pm 0.157$   $\chi^2/\text{NDF}: 28915.5/30$

Left Out:  $29.922 \pm 0.209$   $\chi^2/\text{NDF}: 4580.4/24$

Right Out:  $7.596 \pm 0.155$   $\chi^2/\text{NDF}: 63076.2/34$

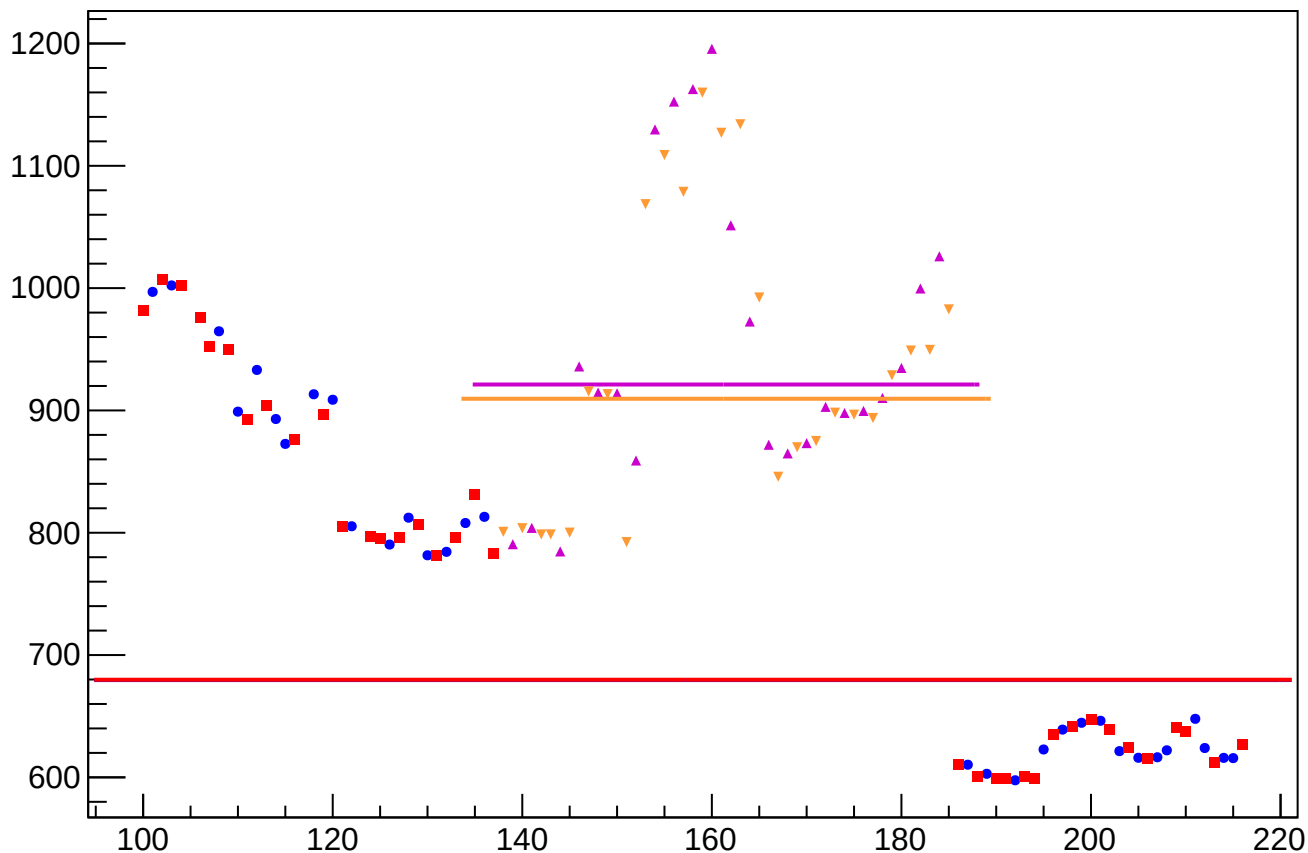
Left In:  $-12.708 \pm 0.217$   $\chi^2/\text{NDF}: 4791.2/22$

+ sign  $30.267 \pm 0.125$   $\chi^2/\text{NDF}: 33500.2/55$

All:  $15.603 \pm 0.089$   $\chi^2/\text{NDF}: 134752.8/113$

- sign  $0.755 \pm 0.126$   $\chi^2/\text{NDF}: 73665.4/57$

# diff\_bpm2i02Y\_rms vs Slug



Right In: 679.557 $\pm$ 0.111  $\chi^2$ /NDF: 965784.5/30

Left Out: 909.552 $\pm$ 0.147  $\chi^2$ /NDF: 541710.0/24

Right Out: 679.809 $\pm$ 0.109  $\chi^2$ /NDF: 1041874.7/34

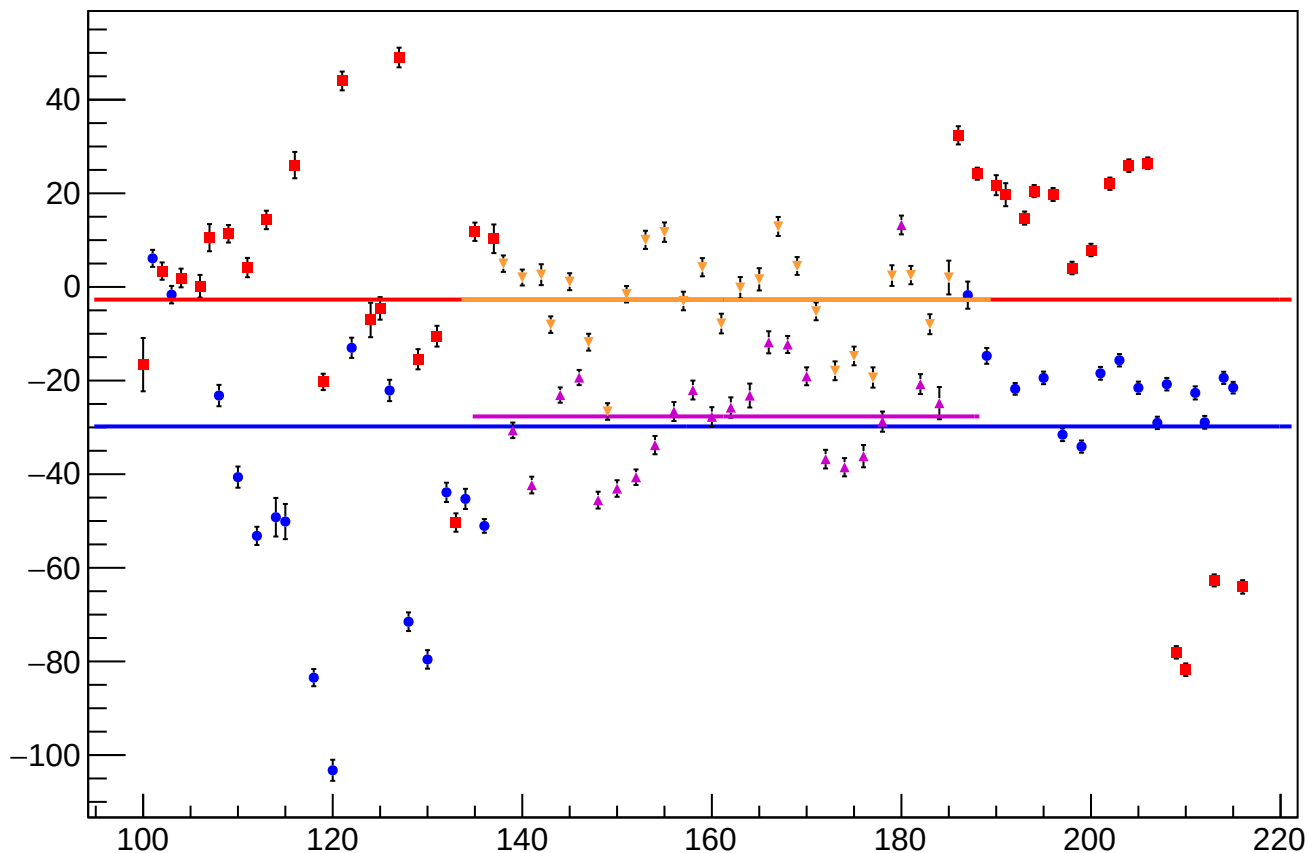
Left In: 921.198 $\pm$ 0.154  $\chi^2$ /NDF: 497337.0/22

+ sign 762.503 $\pm$ 0.089  $\chi^2$ /NDF: 3062603.5/55

All: 761.826 $\pm$ 0.063  $\chi^2$ /NDF: 6240987.6/113

- sign 761.141 $\pm$ 0.089  $\chi^2$ /NDF: 3178266.7/57

# diff\_bpm0i02X\_mean vs Slug



Right In:  $-29.798 \pm 0.294$   $\chi^2/\text{NDF}: 4910.1/30$

Left Out:  $-2.767 \pm 0.397$   $\chi^2/\text{NDF}: 616.1/24$

Right Out:  $-2.698 \pm 0.290$   $\chi^2/\text{NDF}: 16035.8/34$

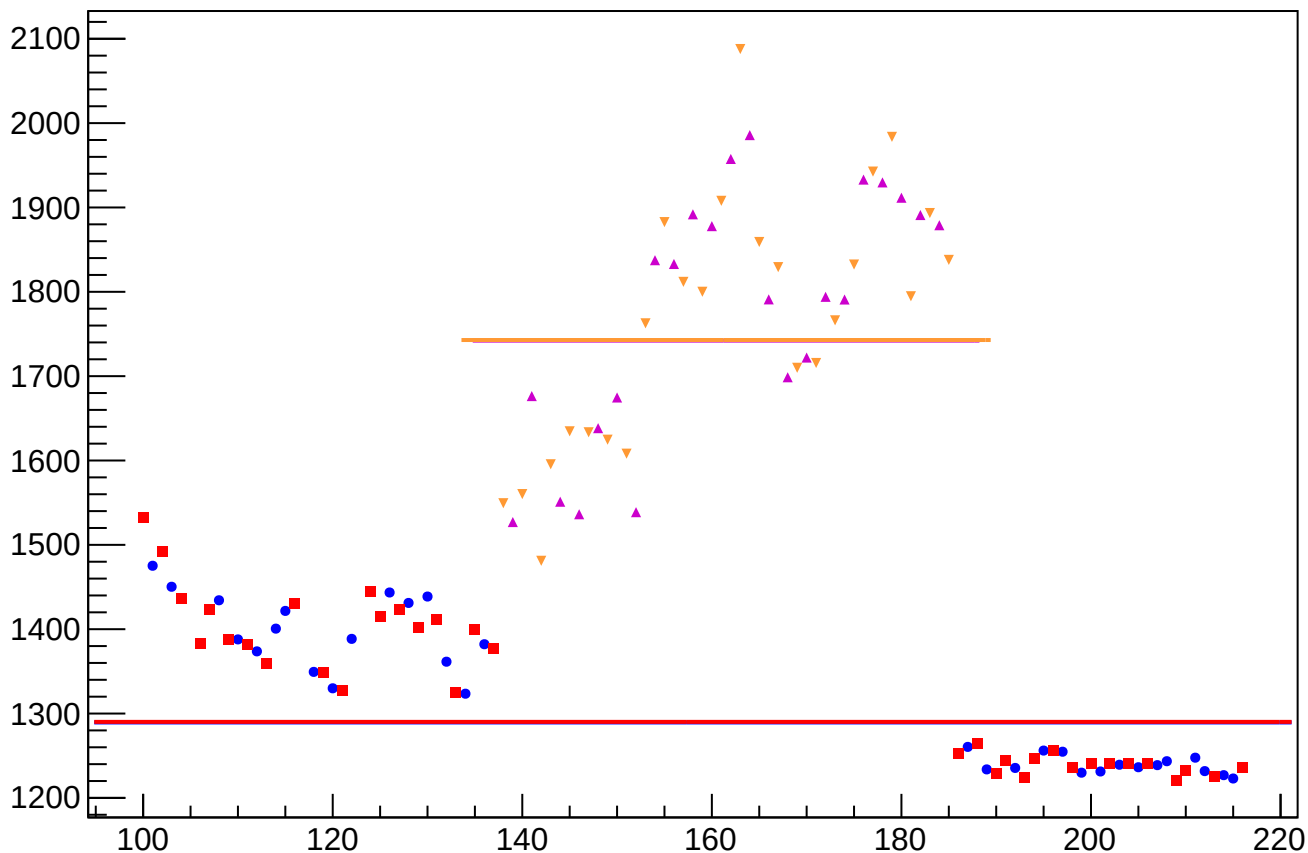
Left In:  $-27.663 \pm 0.409$   $\chi^2/\text{NDF}: 989.9/22$

+ sign  $-20.238 \pm 0.236$   $\chi^2/\text{NDF}: 8516.4/55$

All:  $-15.664 \pm 0.167$   $\chi^2/\text{NDF}: 28771.9/113$

- sign  $-11.073 \pm 0.237$   $\chi^2/\text{NDF}: 19504.9/57$

# diff\_bpm0i02X\_rms vs Slug



Right In: 1289.448 $\pm$ 0.208  $\chi^2$ /NDF: 147339.5/30

Left Out: 1742.842 $\pm$ 0.281  $\chi^2$ /NDF:263118.4/24

Right Out: 1290.131 $\pm$ 0.205  $\chi^2$ /NDF: 145469.1/34

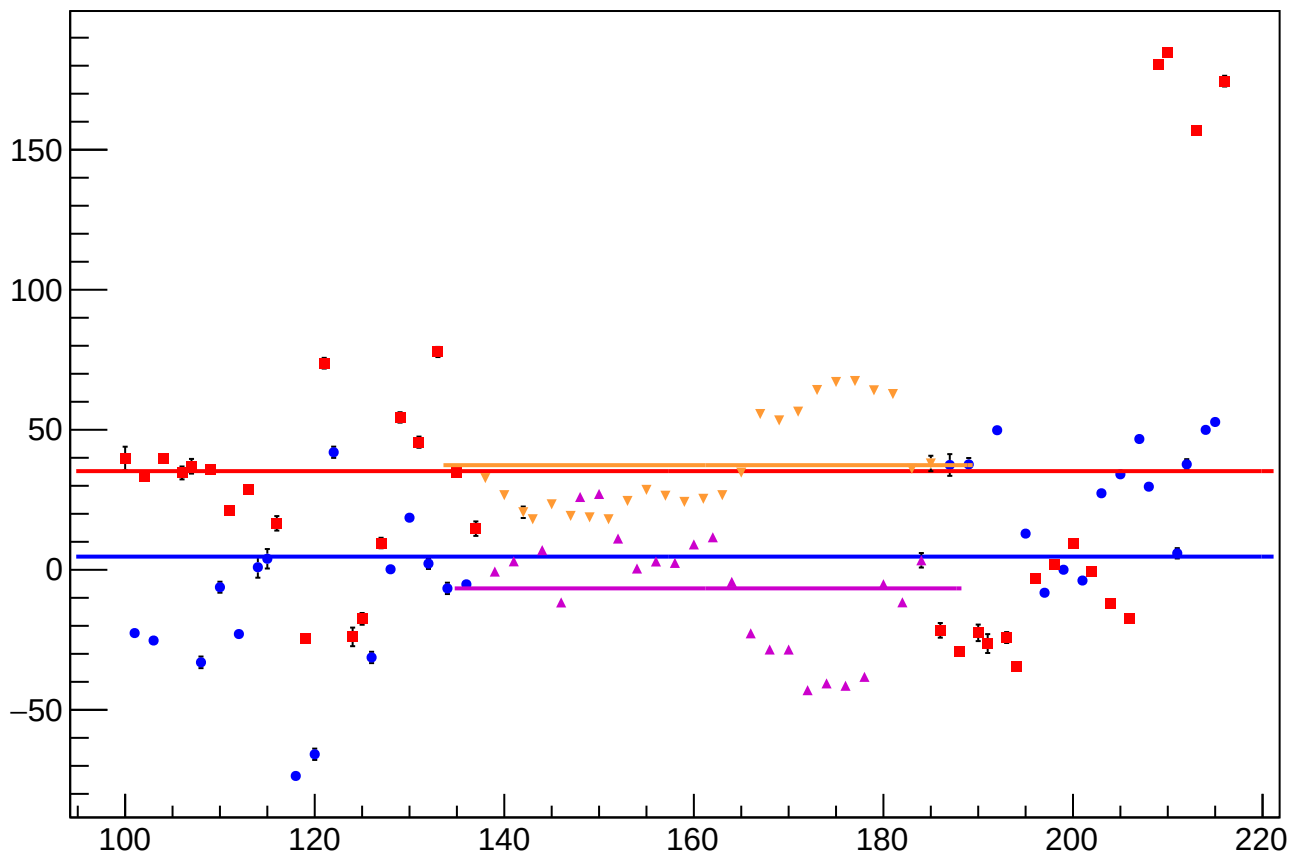
Left In: 1742.153 $\pm$ 0.289  $\chi^2$ /NDF:261606.6/22

+ sign 1449.800 $\pm$ 0.167  $\chi^2$ /NDF: 2092971.0/55

All: 1445.796 $\pm$ 0.118  $\chi^2$ /NDF: 4126697.0/11

- sign 1441.779 $\pm$ 0.167  $\chi^2$ /NDF: 2032576.4/57

diff\_bpm0i02Y\_mean vs Slug



Right In:  $4.715 \pm 0.327$   $\chi^2/\text{NDF}: 9645.4/30$

Left Out:  $37.369 \pm 0.308$   $\chi^2/\text{NDF}: 3395.8/24$

Right Out:  $35.237 \pm 0.322$   $\chi^2/\text{NDF}: 38202.2/34$

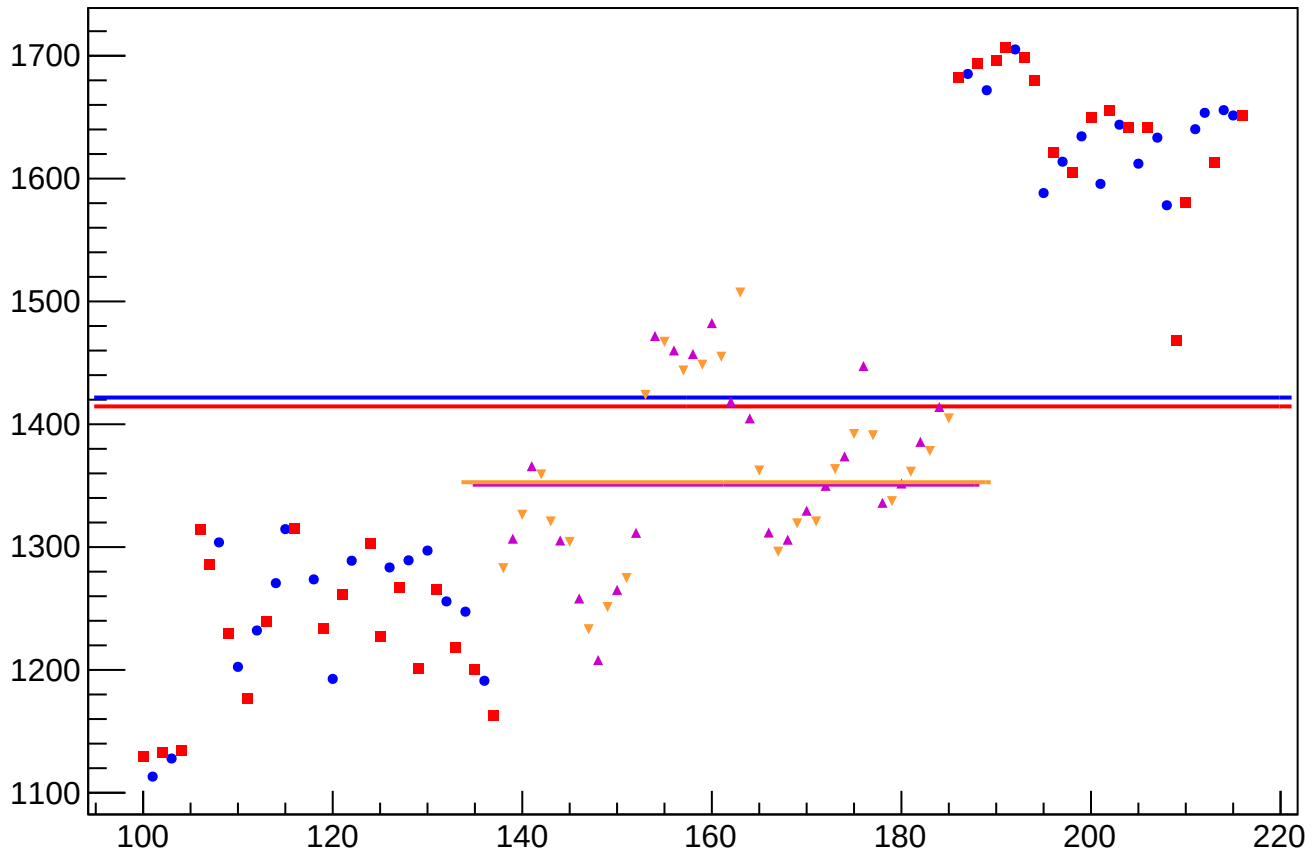
Left In:  $-6.631 \pm 0.316$   $\chi^2/\text{NDF}: 4410.3/22$

+ sign  $22.035 \pm 0.224$   $\chi^2/\text{NDF}: 18324.0/55$

All:  $18.010 \pm 0.159$   $\chi^2/\text{NDF}: 70206.8/113$

- sign  $13.943 \pm 0.225$   $\chi^2/\text{NDF}: 51235.0/57$

# diff\_bpm0i02Y\_rms vs Slug



Right In: 1421.753 $\pm$ 0.231  $\chi^2$ /NDF: 834135.2/30

Left Out: 1352.820 $\pm$ 0.218  $\chi^2$ /NDF:104845.3/24

Right Out: 1414.533 $\pm$ 0.227  $\chi^2$ /NDF: 896310.2/34

Left In: 1350.830 $\pm$ 0.223  $\chi^2$ /NDF:108618.5/22

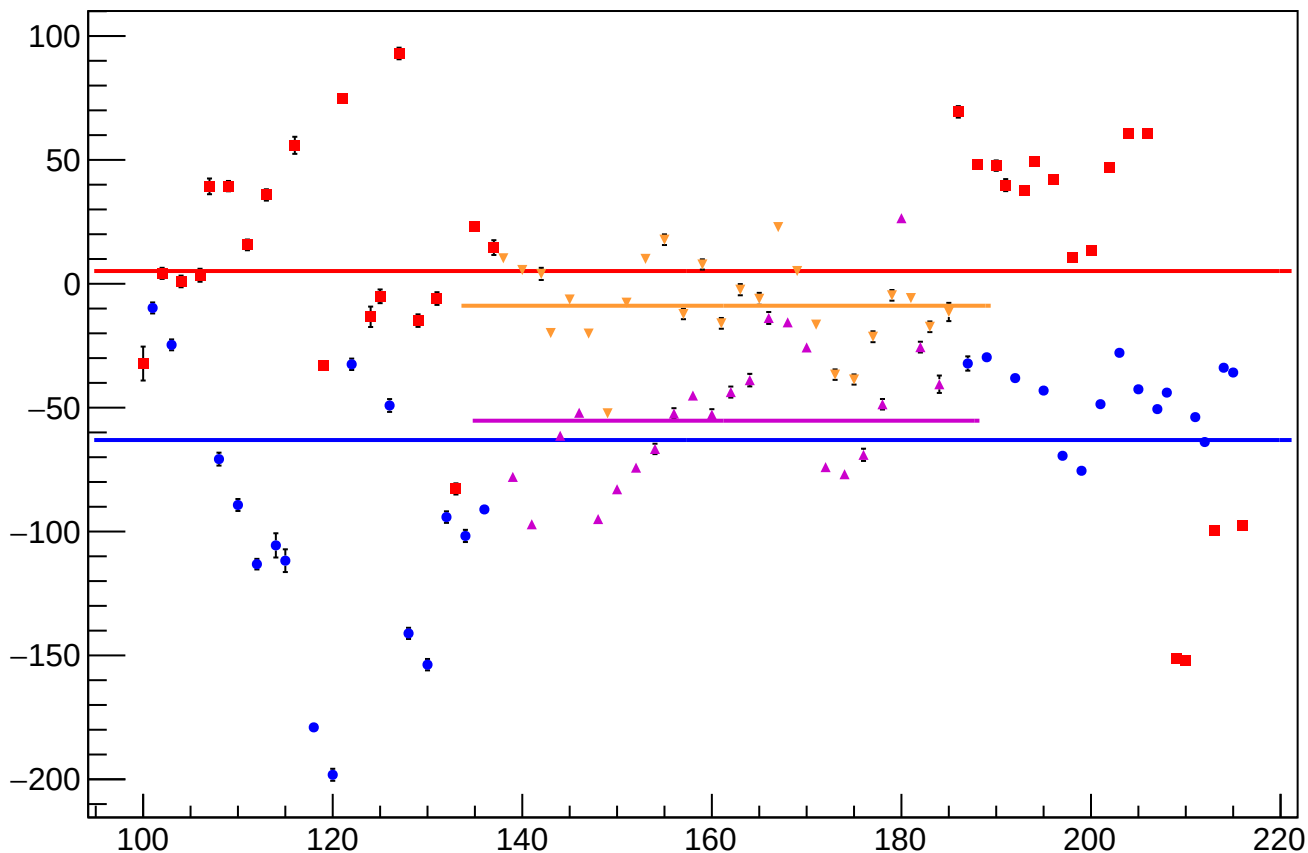
+ sign 1385.189 $\pm$ 0.159  $\chi^2$ /NDF: 986064.1/55

All: 1383.669 $\pm$ 0.112  $\chi^2$ /NDF: 2031098.4/11

- sign 1382.133 $\pm$ 0.159  $\chi^2$ /NDF: 1044849.5/57



# diff\_bpm0i02aX\_mean vs Slug



Right In:  $-63.069 \pm 0.332$   $\chi^2/\text{NDF}: 14728.5/30$

Left Out:  $-8.859 \pm 0.407$   $\chi^2/\text{NDF}: 1953.2/24$

Right Out:  $5.144 \pm 0.324$   $\chi^2/\text{NDF}: 42128.8/34$

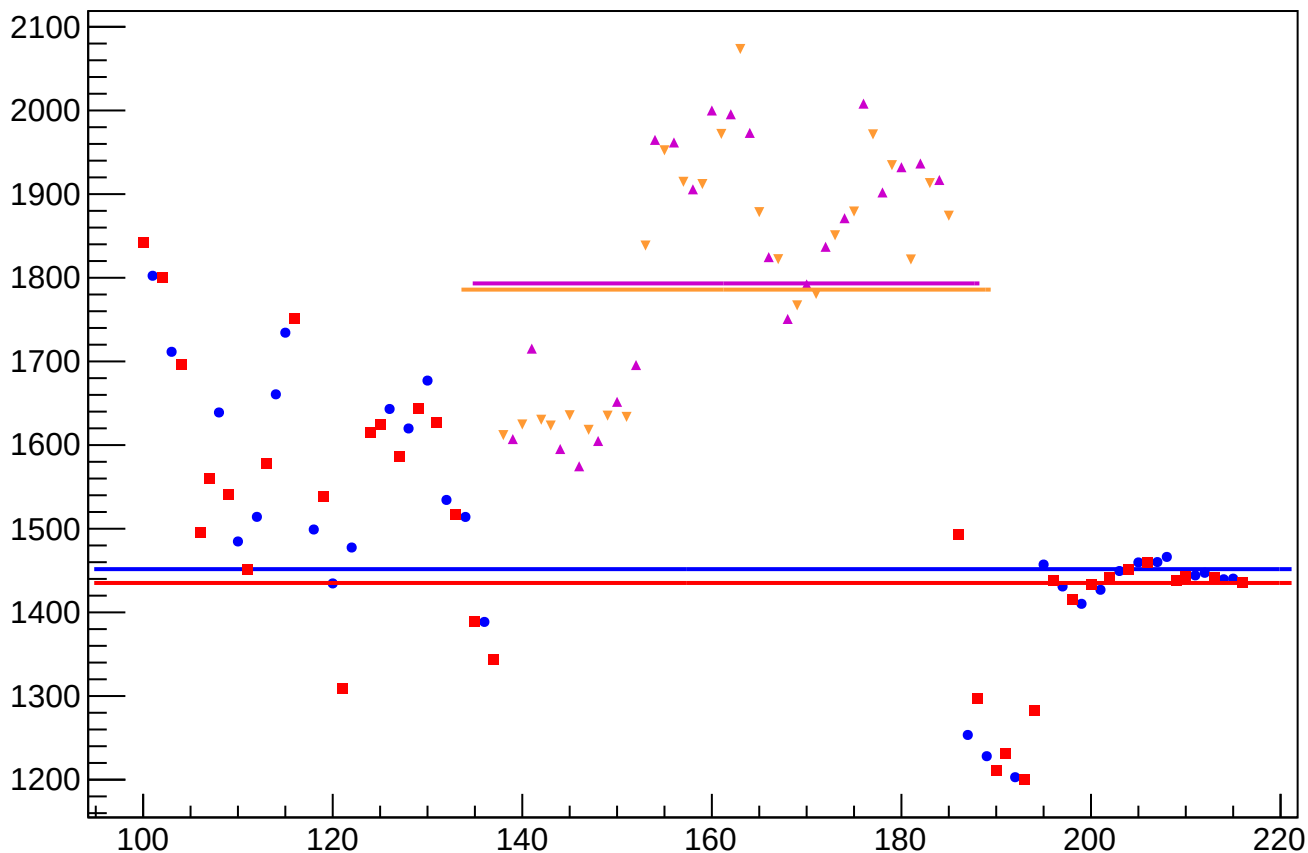
Left In:  $-55.266 \pm 0.420$   $\chi^2/\text{NDF}: 4736.1/22$

+ sign  $-41.453 \pm 0.257$   $\chi^2/\text{NDF}: 27338.9/55$

All:  $-29.375 \pm 0.182$   $\chi^2/\text{NDF}: 91563.3/113$

- sign  $-17.349 \pm 0.257$   $\chi^2/\text{NDF}: 59820.7/57$

# diff\_bpm0i02aX\_rms vs Slug



Right In: 1451.695 $\pm$ 0.234  $\chi^2$ /NDF: 282047.1/30

Left Out: 1785.836 $\pm$ 0.288  $\chi^2$ /NDF: 237239.4/24

Right Out: 1435.163 $\pm$ 0.229  $\chi^2$ /NDF: 330978.8/34

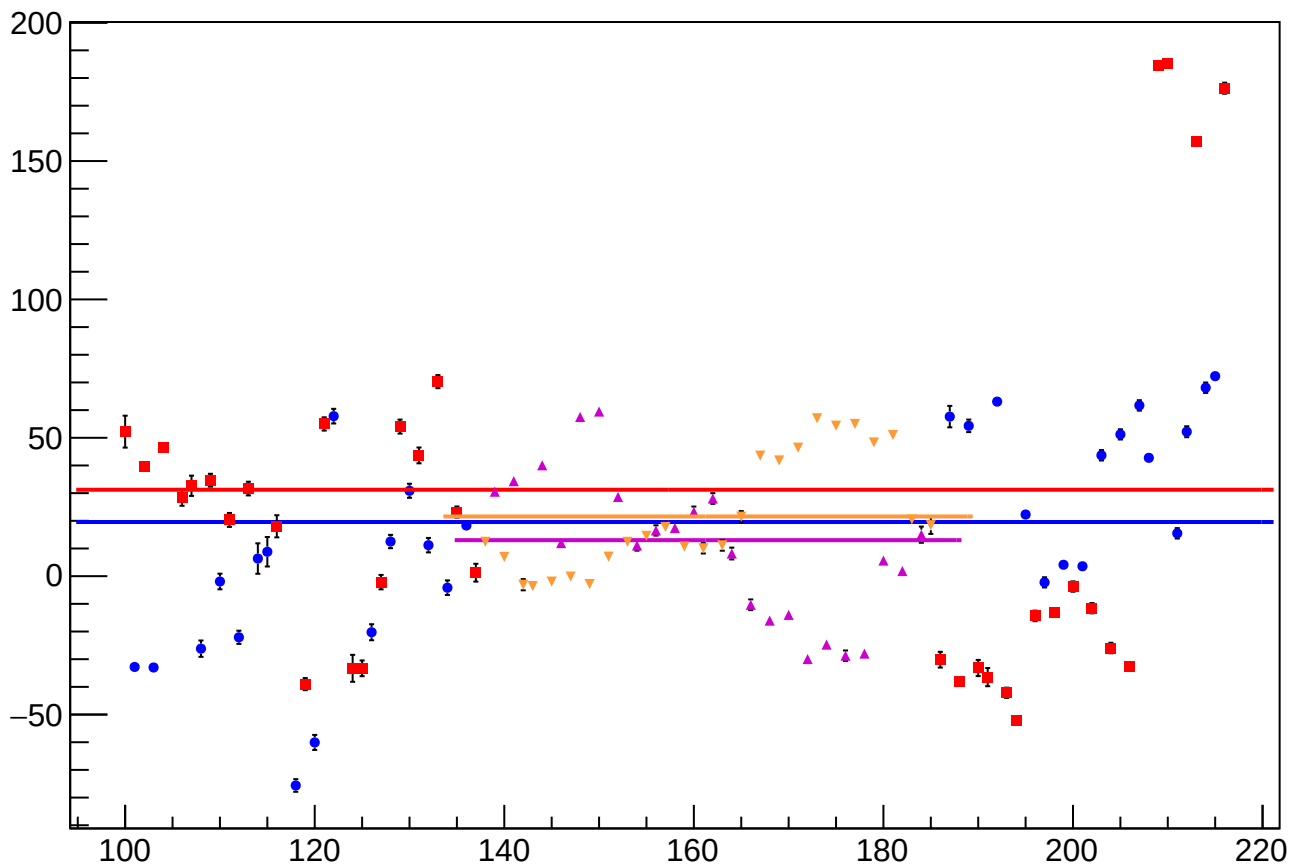
Left In: 1793.249 $\pm$ 0.297  $\chi^2$ /NDF: 252788.2/22

+ sign 1584.934 $\pm$ 0.182  $\chi^2$ /NDF: 1329084.6/55

All: 1576.695 $\pm$ 0.128  $\chi^2$ /NDF: 2827383.9/11

- sign 1568.490 $\pm$ 0.181  $\chi^2$ /NDF: 1494200.1/57

# diff\_bpm0i02aY\_mean vs Slug



Right In:  $19.572 \pm 0.381$   $\chi^2/\text{NDF}$ : 9690.5/30

Left Out:  $21.567 \pm 0.330$   $\chi^2/\text{NDF}$ : 4160.8/24

Right Out:  $31.229 \pm 0.372$   $\chi^2/\text{NDF}$ : 41388.5/34

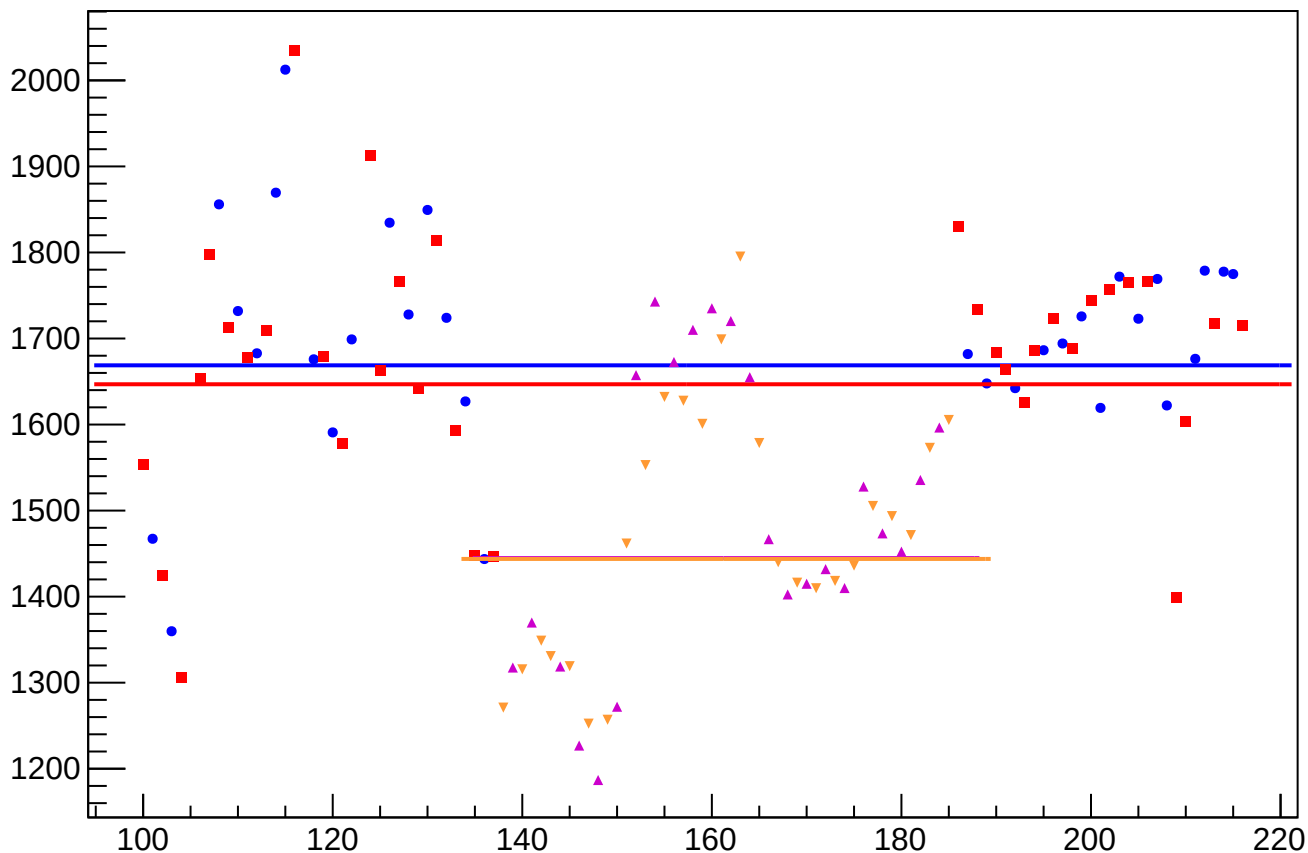
Left In:  $13.014 \pm 0.340$   $\chi^2/\text{NDF}$ : 6627.2/22

+ sign  $20.713 \pm 0.250$   $\chi^2/\text{NDF}$ : 13866.9/55

All:  $21.010 \pm 0.177$   $\chi^2/\text{NDF}$ : 63192.5/113

- sign  $21.310 \pm 0.251$   $\chi^2/\text{NDF}$ : 49322.8/57

# diff\_bpm0i02aY\_rms vs Slug



Right In:  $1668.831 \pm 0.270$   $\chi^2/\text{NDF}: 211024.1/30$

Left Out:  $1443.826 \pm 0.233$   $\chi^2/\text{NDF}: 352397.9/24$

Right Out:  $1646.825 \pm 0.263$   $\chi^2/\text{NDF}: 283666.1/34$

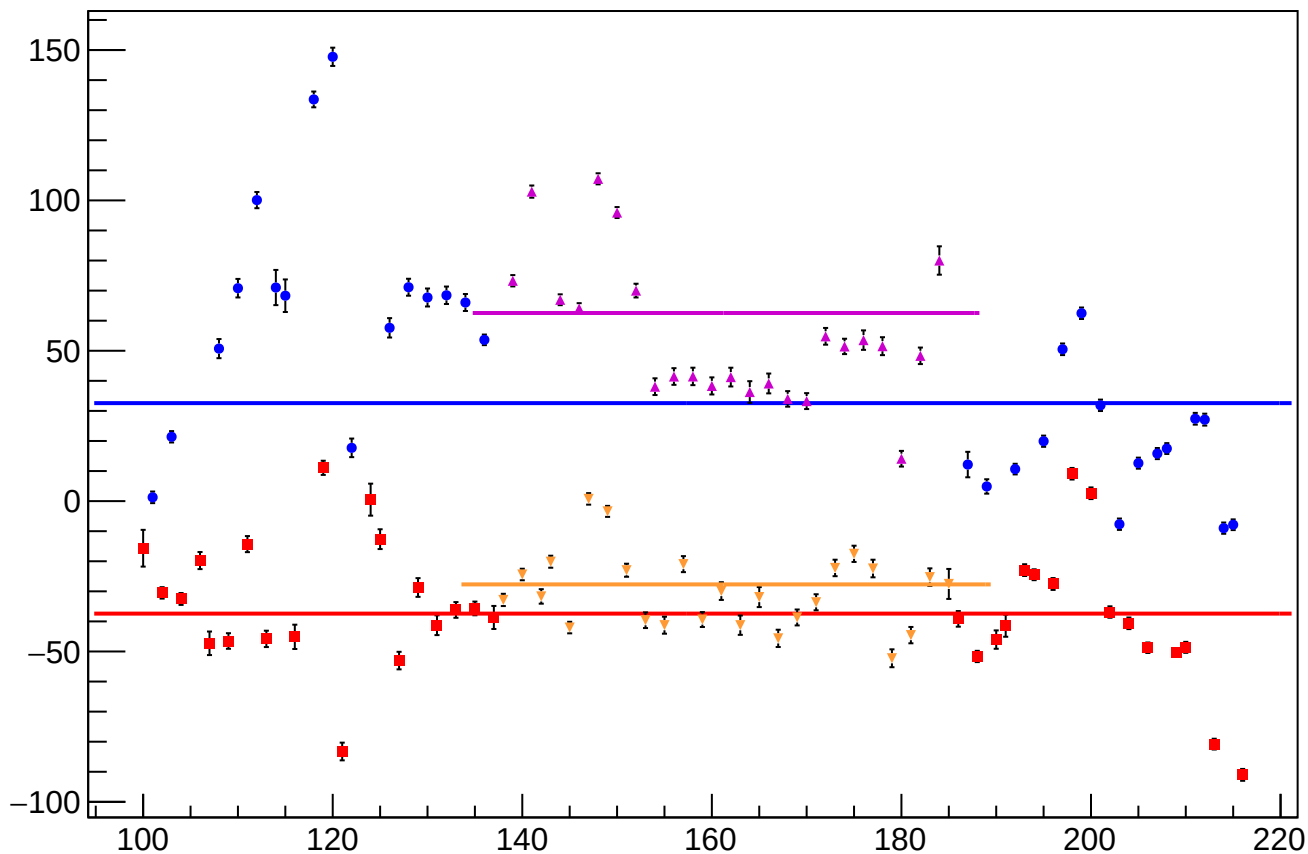
Left In:  $1444.817 \pm 0.240$   $\chi^2/\text{NDF}: 485230.7/22$

+ sign  $1540.140 \pm 0.176$   $\chi^2/\text{NDF}: 961621.0/55$

All:  $1538.495 \pm 0.125$   $\chi^2/\text{NDF}: 2052213.1/11$

- sign  $1536.830 \pm 0.177$   $\chi^2/\text{NDF}: 1090417.1/57$

# diff\_bpm0i05X\_mean vs Slug



Right In:  $32.587 \pm 0.403$   $\chi^2/\text{NDF}$ : 7393.2/30

Left Out:  $-27.692 \pm 0.496$   $\chi^2/\text{NDF}$ : 766.1/24

Right Out:  $-37.406 \pm 0.394$   $\chi^2/\text{NDF}$ : 3661.6/34

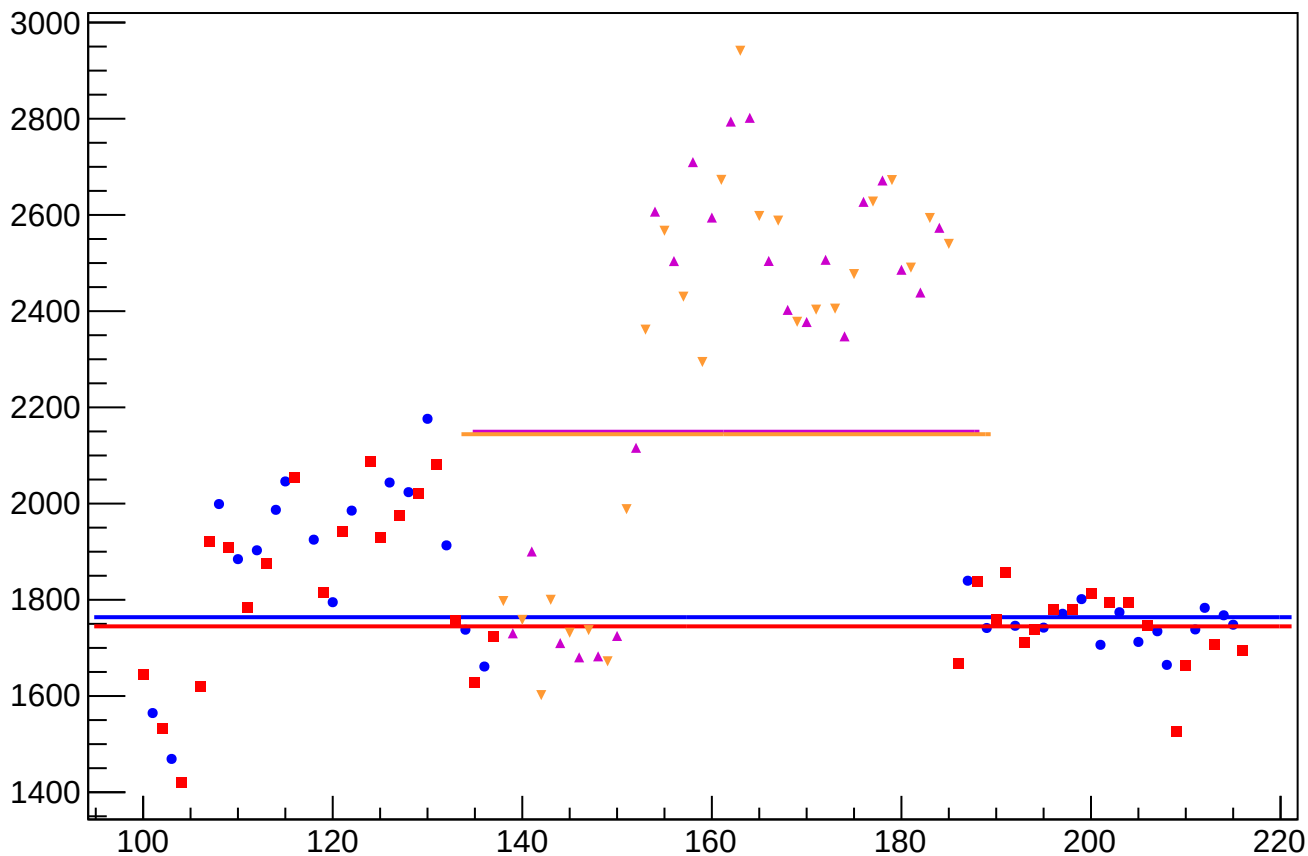
Left In:  $62.558 \pm 0.512$   $\chi^2/\text{NDF}$ : 2458.2/22

+ sign  $8.627 \pm 0.313$   $\chi^2/\text{NDF}$ : 17057.4/55

All:  $4.174 \pm 0.221$   $\chi^2/\text{NDF}$ : 47558.8/113

- sign  $-0.258 \pm 0.312$   $\chi^2/\text{NDF}$ : 30096.8/57

# diff\_bpm0i05X\_rms vs Slug



Right In: 1763.864 $\pm$ 0.285  $\chi^2$ /NDF: 210701.2/30

Left Out: 2144.219 $\pm$ 0.351  $\chi^2$ /NDF:1279852.9/24

Right Out: 1744.800 $\pm$ 0.278  $\chi^2$ /NDF: 247982.7/34

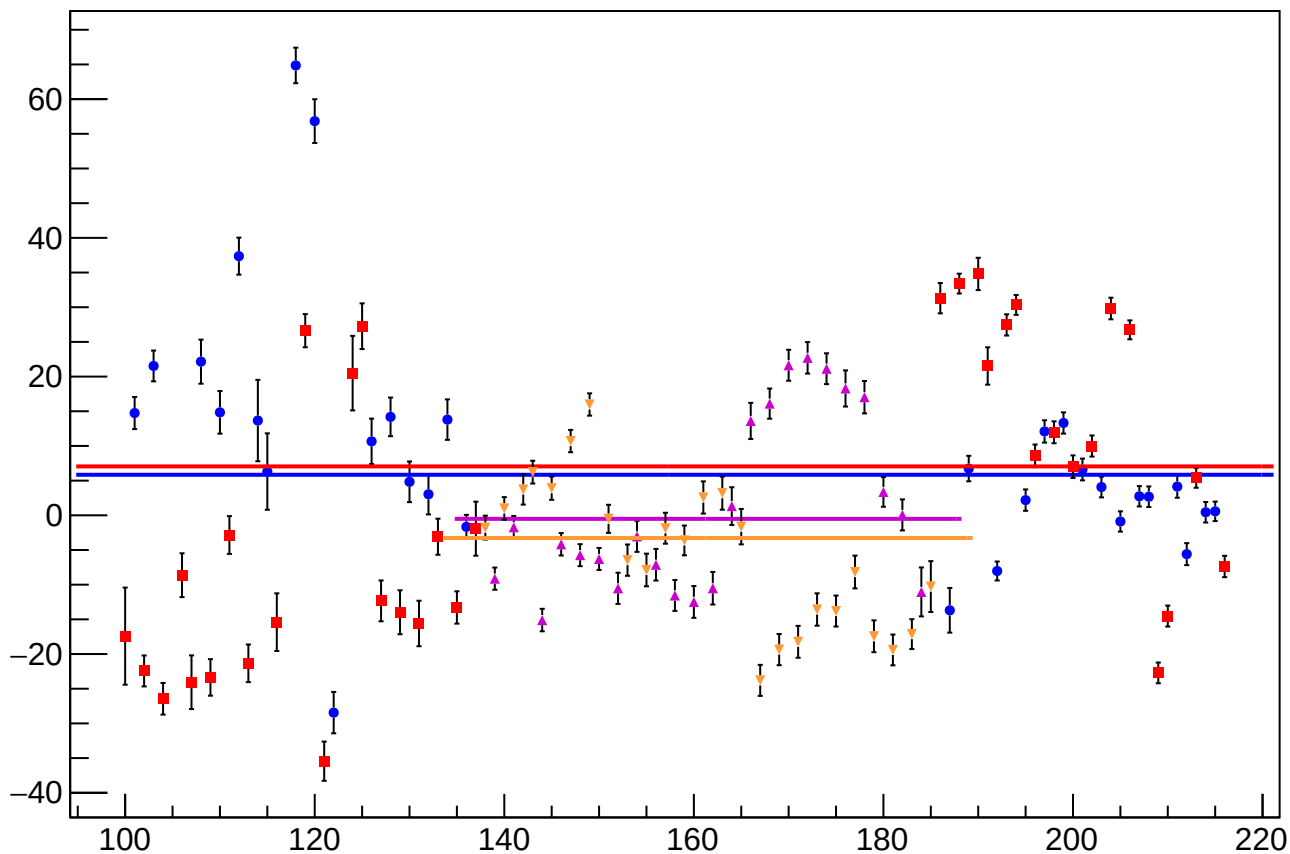
Left In: 2149.354 $\pm$ 0.362  $\chi^2$ /NDF:1265722.5/22

+ sign 1915.049 $\pm$ 0.221  $\chi^2$ /NDF: 2199096.4/55

All: 1905.069 $\pm$ 0.156  $\chi^2$ /NDF: 4502279.5/11

- sign 1895.137 $\pm$ 0.221  $\chi^2$ /NDF: 2299118.9/57

# diff\_bpm0i05Y\_mean vs Slug



Right In:  $5.846 \pm 0.349$   $\chi^2/\text{NDF}$ : 1500.8/30

Left Out:  $-3.275 \pm 0.415$   $\chi^2/\text{NDF}$ : 671.1/24

Right Out:  $7.050 \pm 0.344$   $\chi^2/\text{NDF}$ : 3547.1/34

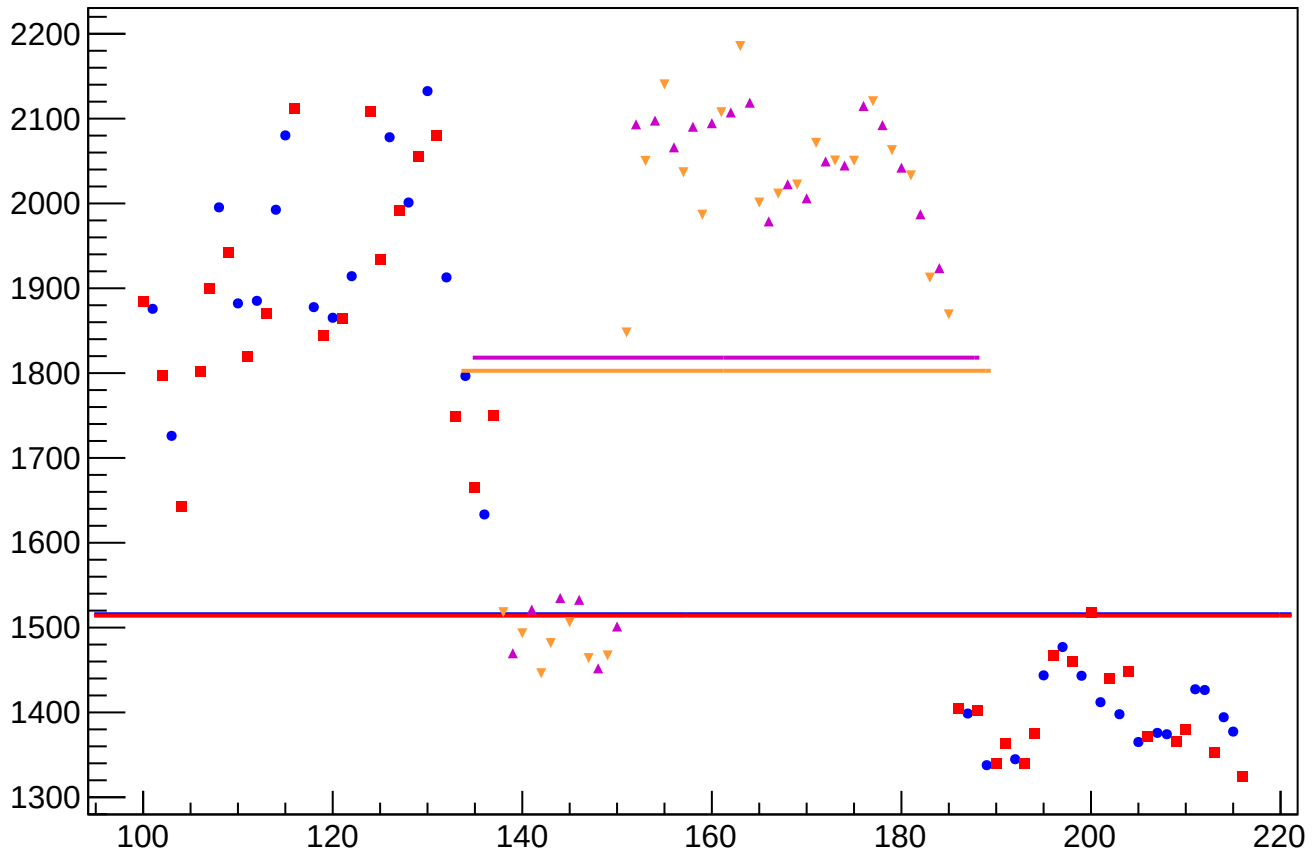
Left In:  $-0.511 \pm 0.430$   $\chi^2/\text{NDF}$ : 745.8/22

+ sign  $2.068 \pm 0.267$   $\chi^2/\text{NDF}$ : 2455.3/55

All:  $3.078 \pm 0.189$   $\chi^2/\text{NDF}$ : 6965.7/113

- sign  $4.100 \pm 0.268$   $\chi^2/\text{NDF}$ : 4481.6/57

# diff\_bpm0i05Y\_rms vs Slug



Right In: 1515.703 $\pm$ 0.247  $\chi^2$ /NDF: 773319.8/30

Left Out: 1802.748 $\pm$ 0.293  $\chi^2$ /NDF: 897375.1/24

Right Out: 1514.079 $\pm$ 0.243  $\chi^2$ /NDF: 768541.9/34

Left In: 1818.225 $\pm$ 0.304  $\chi^2$ /NDF: 840353.0/22

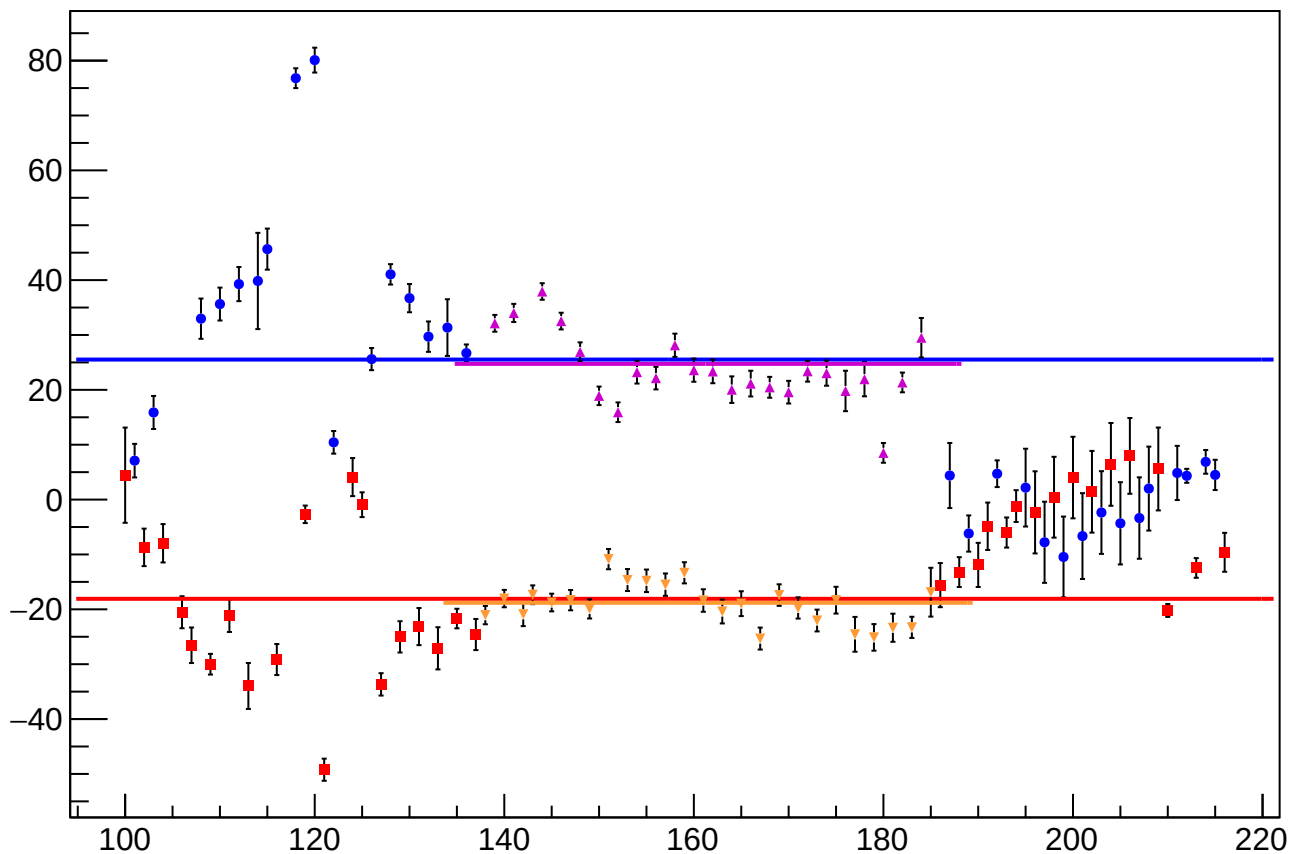
+ sign 1634.605 $\pm$ 0.189  $\chi^2$ /NDF: 2232152.8/55

All: 1633.687 $\pm$ 0.134  $\chi^2$ /NDF: 4451872.8/11

- sign 1632.759 $\pm$ 0.190  $\chi^2$ /NDF: 2219672.4/57



# diff\_bpm0i07X\_mean vs Slug



Right In:  $25.519 \pm 0.499$   $\chi^2/\text{NDF}: 2375.5/30$

Left Out:  $-18.816 \pm 0.402$   $\chi^2/\text{NDF}: 74.9/24$

Right Out:  $-18.084 \pm 0.463$   $\chi^2/\text{NDF}: 760.7/34$

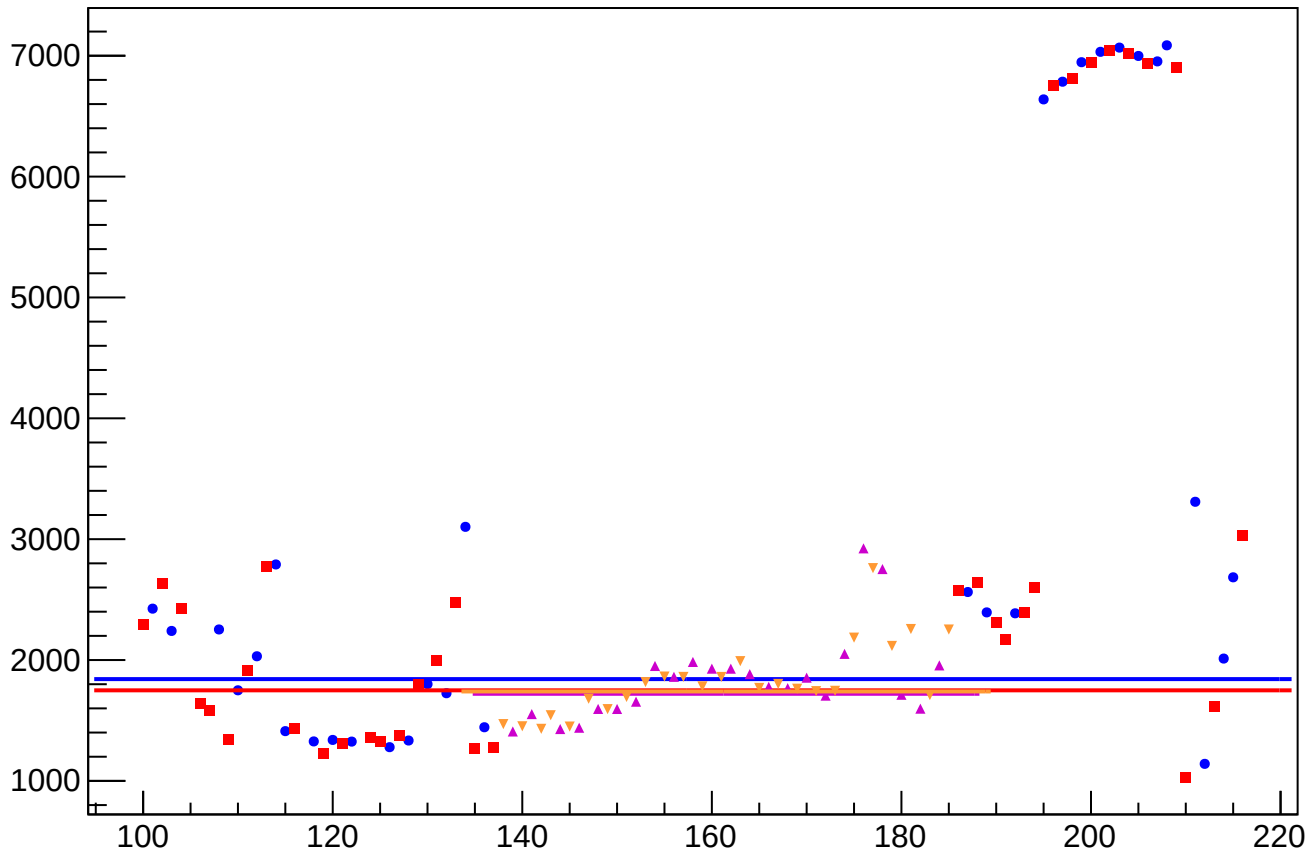
Left In:  $24.731 \pm 0.409$   $\chi^2/\text{NDF}: 308.0/22$

+ sign  $-1.365 \pm 0.313$   $\chi^2/\text{NDF}: 7239.5/55$

All:  $2.391 \pm 0.219$   $\chi^2/\text{NDF}: 13391.6/113$

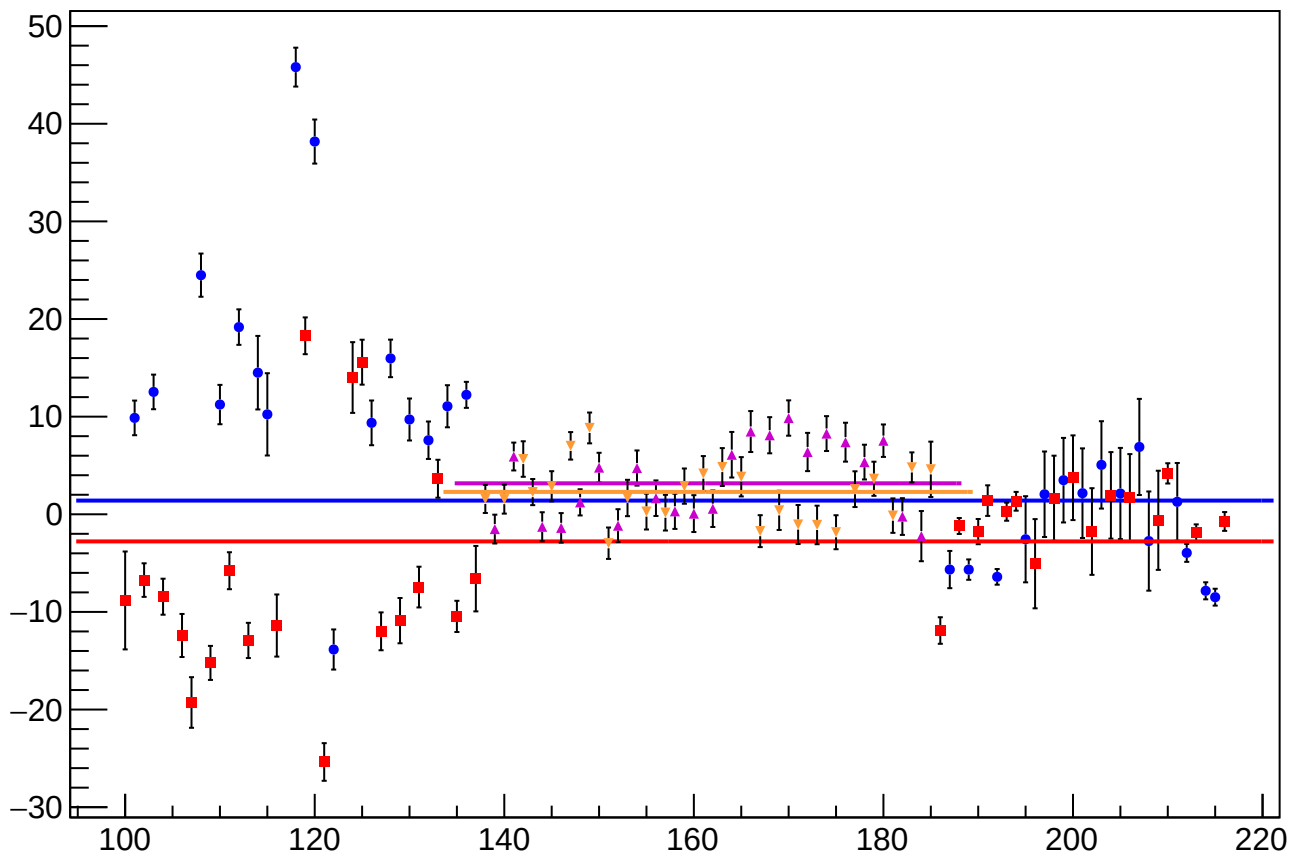
- sign  $5.994 \pm 0.307$   $\chi^2/\text{NDF}: 5869.9/57$

# diff\_bpm0i07X\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 1842.257+/-0.353  | $\chi^2/\text{NDF}$ : 9747327.2/30 | + sign 1780.303+/-0.221 | $\chi^2/\text{NDF}$ : 10551571.3/55  |
| Left Out: 1740.089+/-0.284  | $\chi^2/\text{NDF}$ : 753377.5/24  | All: 1756.323+/-0.155   | $\chi^2/\text{NDF}$ : 21216425.7/100 |
| Right Out: 1749.325+/-0.328 | $\chi^2/\text{NDF}$ : 9753618.5/34 | - sign 1733.320+/-0.217 | $\chi^2/\text{NDF}$ : 10641851.9/57  |
| Left In: 1720.864+/-0.289   | $\chi^2/\text{NDF}$ : 883990.4/22  |                         |                                      |

# diff\_bpm0i07Y\_mean vs Slug



Right In:  $1.404 \pm 0.302$   $\chi^2/\text{NDF}: 1740.5/30$

Left Out:  $2.293 \pm 0.343$   $\chi^2/\text{NDF}: 73.5/24$

Right Out:  $-2.778 \pm 0.274$   $\chi^2/\text{NDF}: 732.9/34$

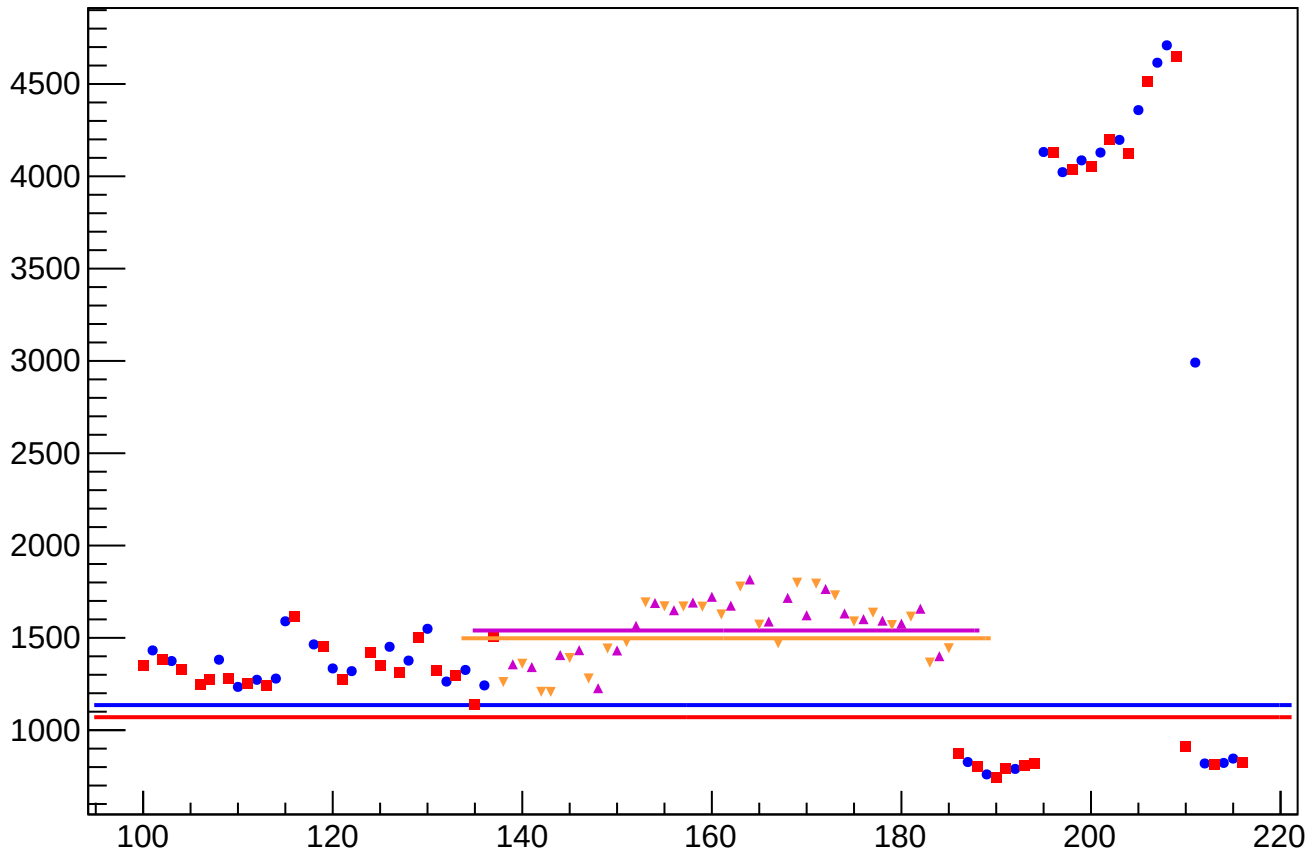
Left In:  $3.173 \pm 0.362$   $\chi^2/\text{NDF}: 110.4/22$

+ sign  $1.792 \pm 0.227$   $\chi^2/\text{NDF}: 1817.8/55$

All:  $0.548 \pm 0.157$   $\chi^2/\text{NDF}: 2890.4/113$

- sign  $-0.609 \pm 0.219$   $\chi^2/\text{NDF}: 1014.6/57$

# diff\_bpm0i07Y\_rms vs Slug



Right In: 1135.807 $\pm$ 0.214  $\chi^2$ /NDF: 9710626.0/30

Left Out: 1497.713 $\pm$ 0.243  $\chi^2$ /NDF: 568629.4/24

Right Out: 1070.233 $\pm$ 0.194  $\chi^2$ /NDF: 8575948.1/34

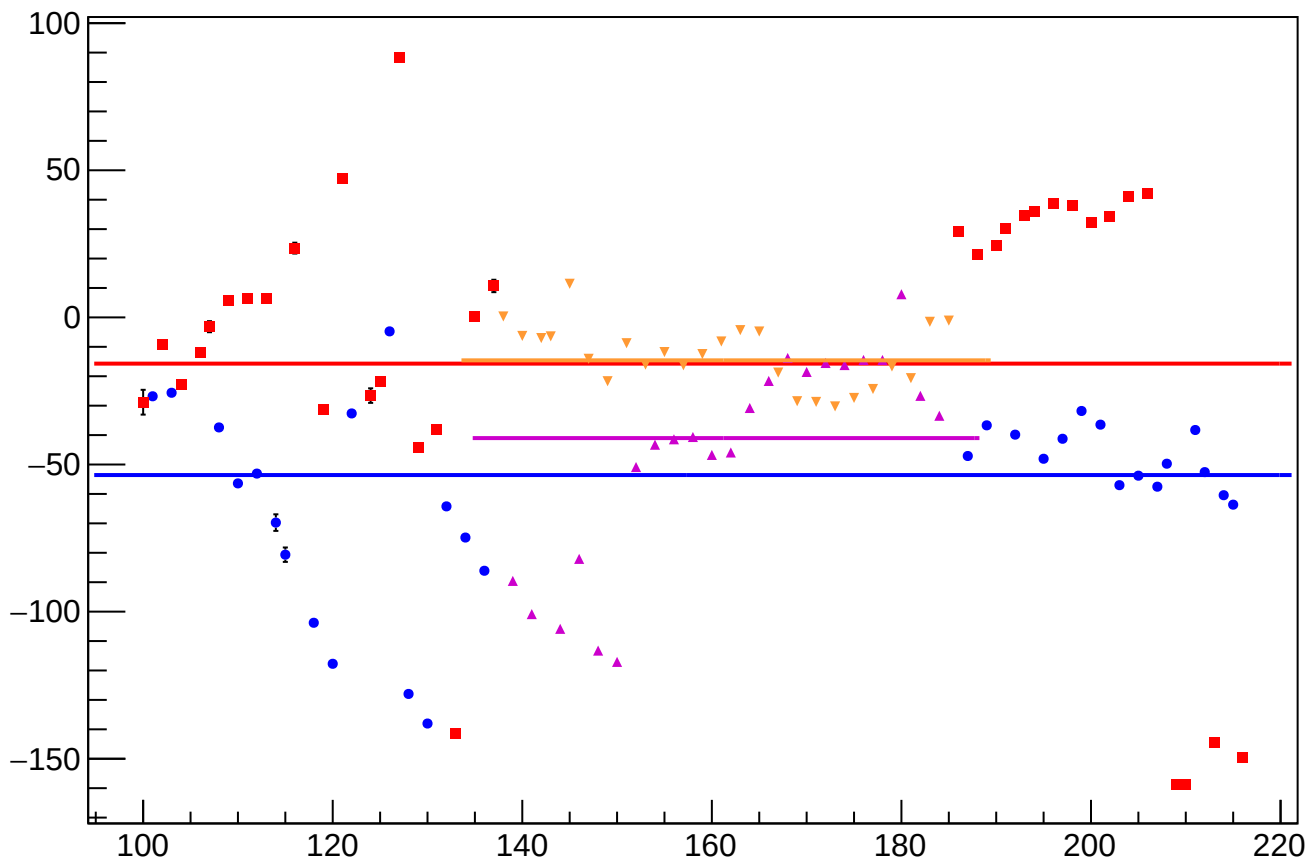
Left In: 1539.884 $\pm$ 0.256  $\chi^2$ /NDF: 380330.7/22

+ sign 1293.637 $\pm$ 0.160  $\chi^2$ /NDF: 11531342.6/55

All: 1266.586 $\pm$ 0.111  $\chi^2$ /NDF: 22676771.5/1

- sign 1241.413 $\pm$ 0.155  $\chi^2$ /NDF: 11090514.3/57

# diff\_bpm1i02X\_mean vs Slug



Right In:  $-53.579 \pm 0.162$   $\chi^2/\text{NDF}$ : 18638.5/30

Left Out:  $-14.597 \pm 0.183$   $\chi^2/\text{NDF}$ : 3159.3/24

Right Out:  $-15.711 \pm 0.161$   $\chi^2/\text{NDF}$ : 232996.1/34

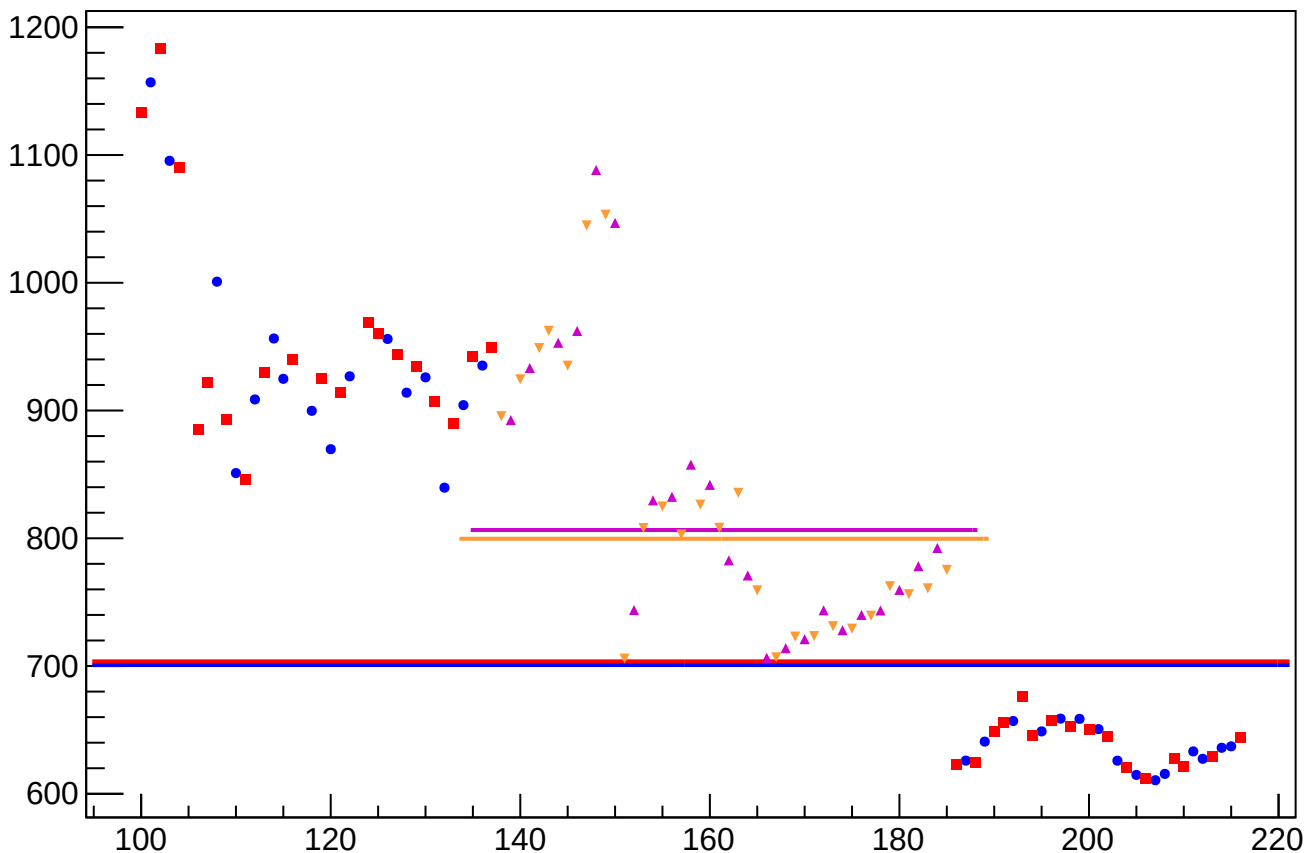
Left In:  $-41.021 \pm 0.190$   $\chi^2/\text{NDF}$ : 31066.6/22

+ sign  $-36.421 \pm 0.121$   $\chi^2/\text{NDF}$ : 47215.7/55

All:  $-31.410 \pm 0.086$   $\chi^2/\text{NDF}$ : 325075.8/113

- sign  $-26.290 \pm 0.123$   $\chi^2/\text{NDF}$ : 274414.7/57

# diff\_bpm1i02X\_rms vs Slug



Right In: 700.775 $\pm$ 0.115  $\chi^2$ /NDF: 1286123.7/30

Left Out: 799.639 $\pm$ 0.129  $\chi^2$ /NDF: 497430.7/24

Right Out: 703.653 $\pm$ 0.114  $\chi^2$ /NDF: 1335283.4/34

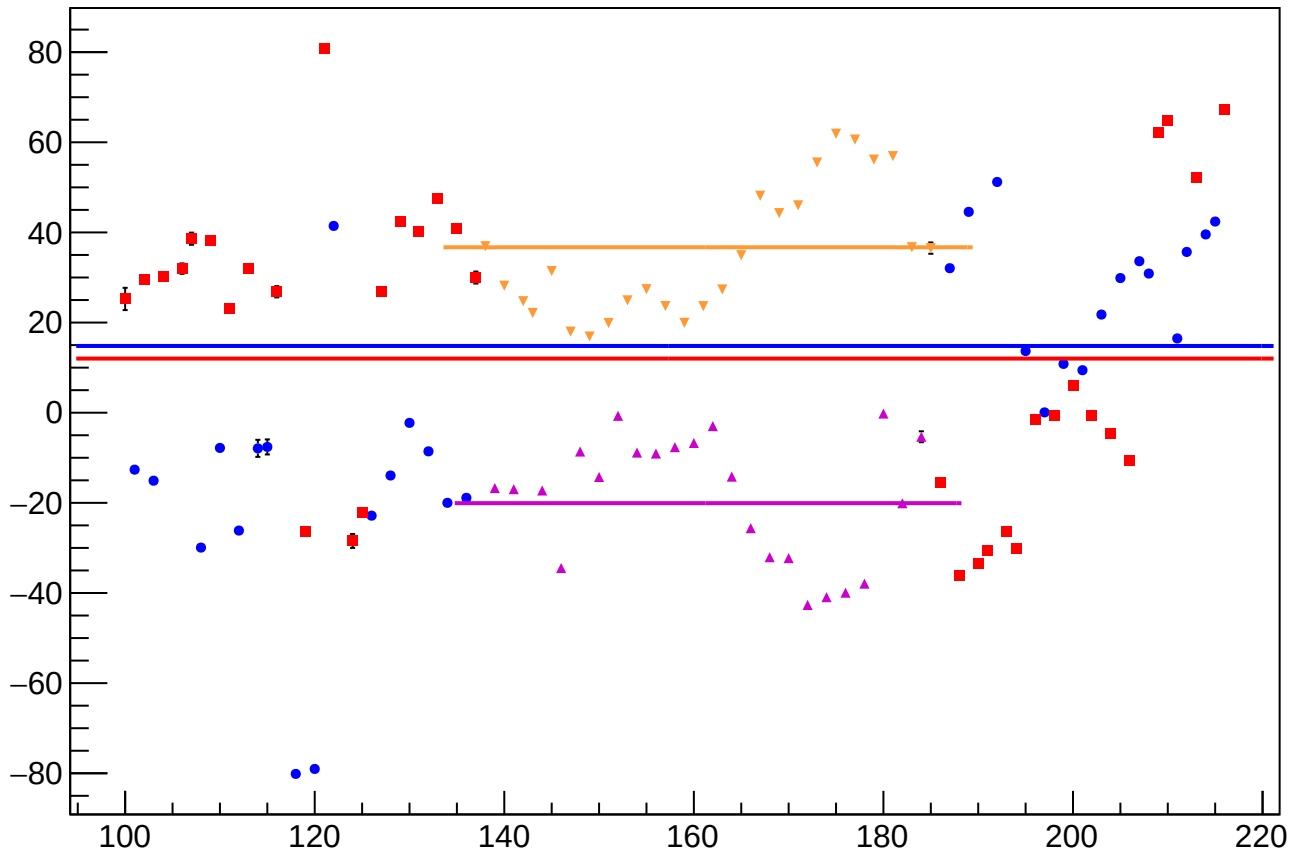
Left In: 806.478 $\pm$ 0.134  $\chi^2$ /NDF: 511294.8/22

+ sign 744.292 $\pm$ 0.086  $\chi^2$ /NDF: 2110534.9/55

All: 745.449 $\pm$ 0.061  $\chi^2$ /NDF: 4299199.2/113

- sign 746.632 $\pm$ 0.087  $\chi^2$ /NDF: 2188297.0/57

# diff\_bpm1i02Y\_mean vs Slug



Right In: 14.810 $\pm$ 0.121  $\chi^2$ /NDF: 53514.8/30

Left Out: 36.705 $\pm$ 0.145  $\chi^2$ /NDF:10231.1/24

Right Out: 12.012 $\pm$ 0.119  $\chi^2$ /NDF: 84517.6/34

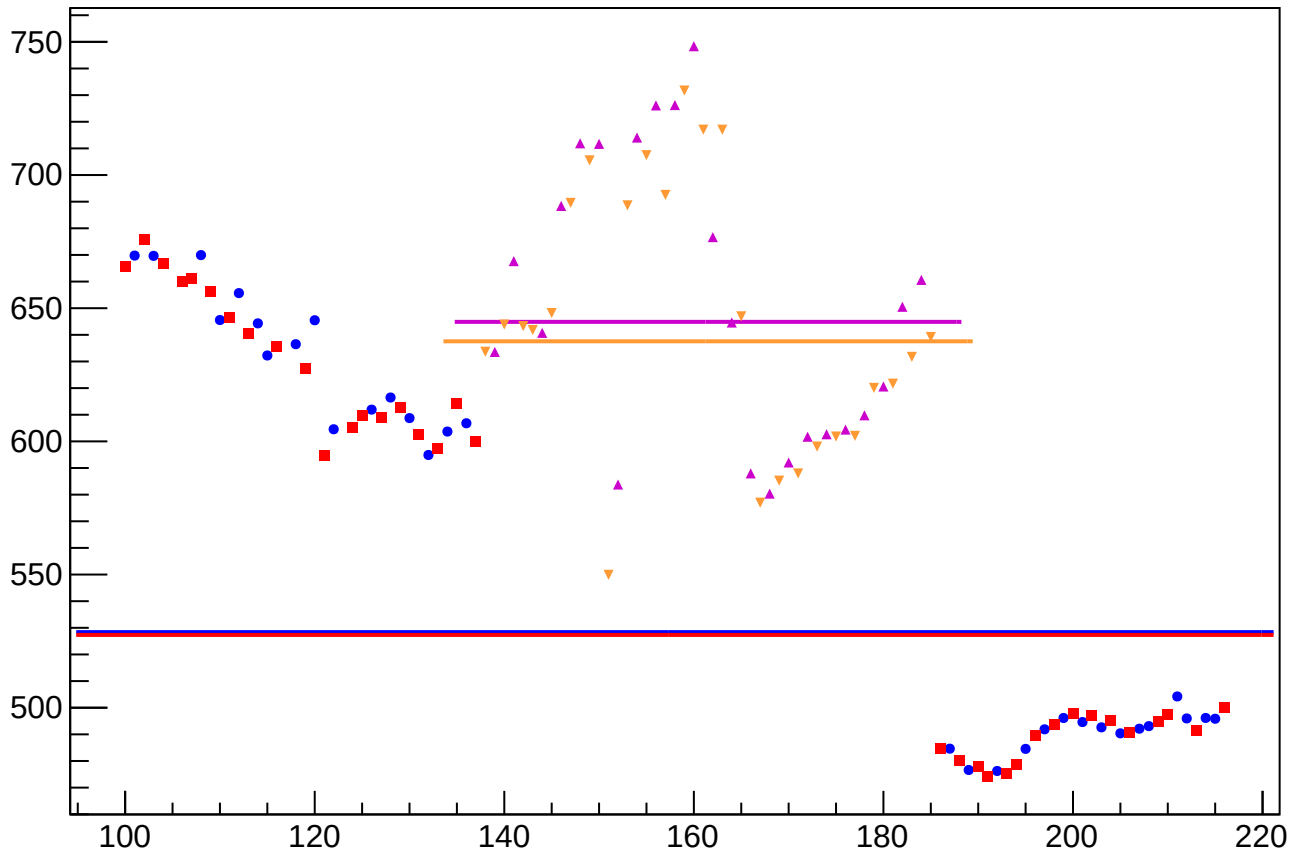
Left In: -20.069 $\pm$ 0.151  $\chi^2$ /NDF:8560.6/22

+ sign 23.774 $\pm$ 0.093  $\chi^2$ /NDF: 77132.1/55

All: 11.819 $\pm$ 0.066  $\chi^2$ /NDF: 231177.9/113

- sign -0.297 $\pm$ 0.094  $\chi^2$ /NDF: 120812.2/57

# diff\_bpm1i02Y\_rms vs Slug



Right In: 528.379+/-0.086  $\chi^2/\text{NDF}$ : 541864.6/30

Left Out: 637.569+/-0.103  $\chi^2/\text{NDF}$ : 236539.6/24

Right Out: 527.336+/-0.084  $\chi^2/\text{NDF}$ : 573952.6/34

Left In: 644.873+/-0.107  $\chi^2/\text{NDF}$ : 229560.3/22

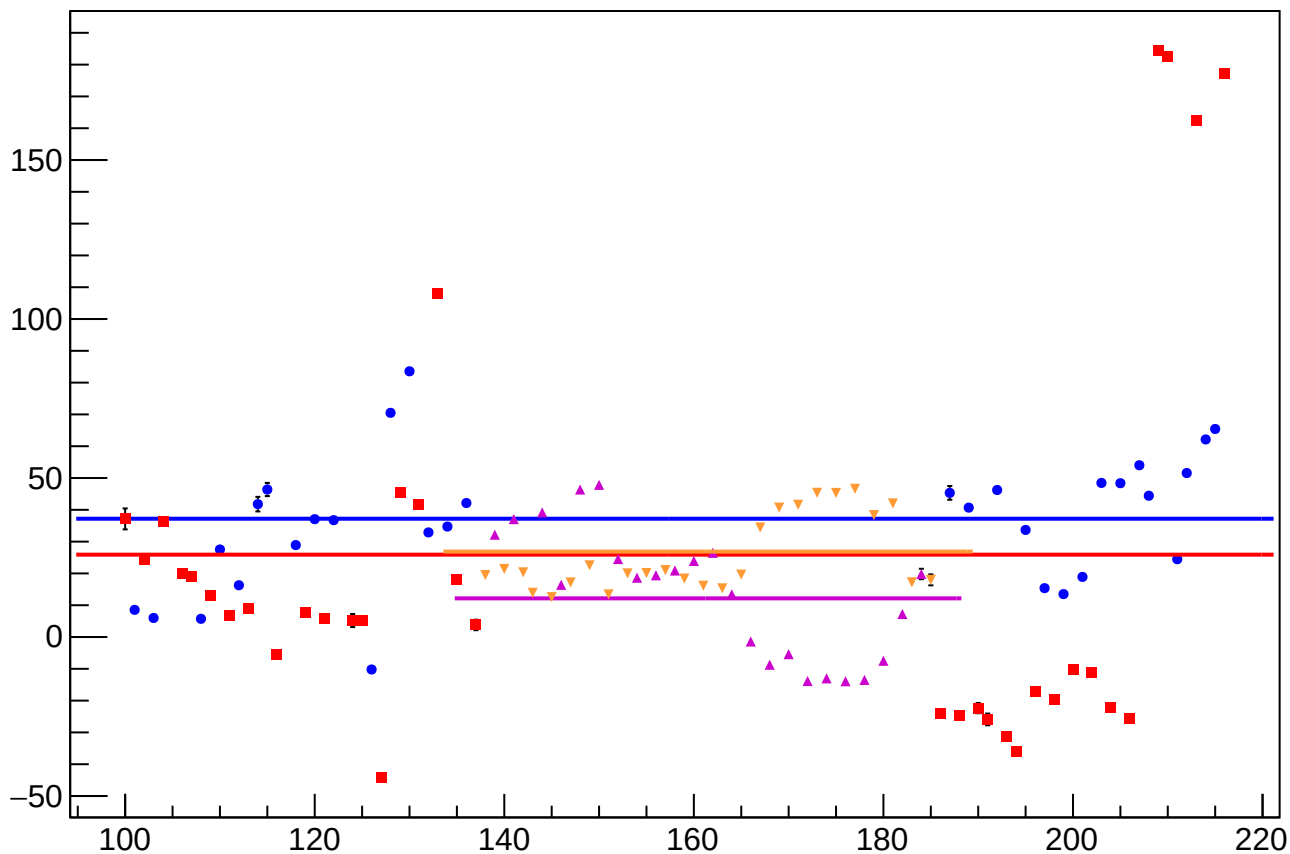
+ sign 573.085+/-0.066  $\chi^2/\text{NDF}$ : 1444262.3/55

All: 572.760+/-0.047  $\chi^2/\text{NDF}$ : 2992361.4/113

- sign 572.431+/-0.066  $\chi^2/\text{NDF}$ : 1548050.1/57



# diff\_bpm1i04X\_mean vs Slug



Right In: 37.201 $\pm$ 0.198  $\chi^2$ /NDF: 10696.8/30

Left Out: 26.866 $\pm$ 0.207  $\chi^2$ /NDF:3390.4/24

Right Out: 25.901 $\pm$ 0.196  $\chi^2$ /NDF: 121143.2/34

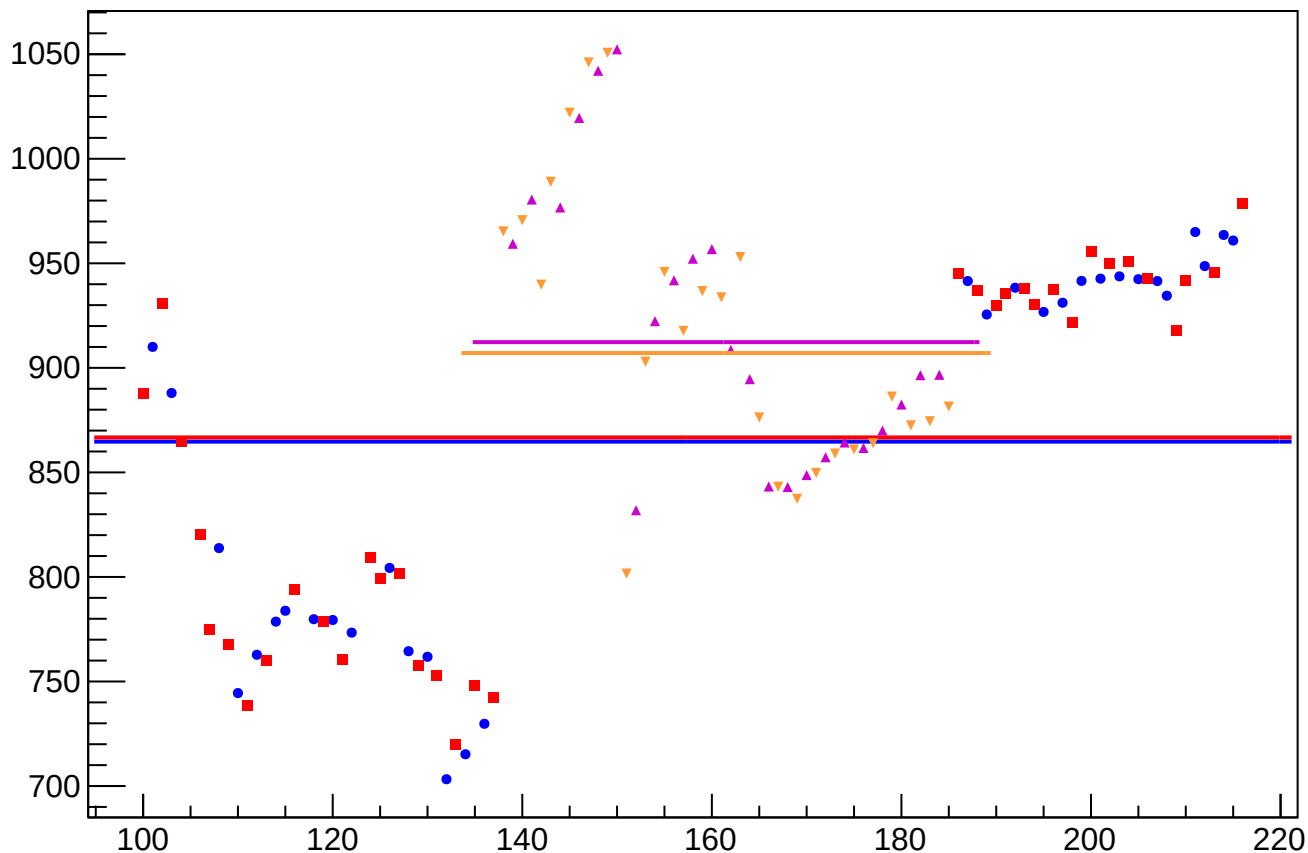
Left In: 12.159 $\pm$ 0.214  $\chi^2$ /NDF:8547.0/22

+ sign 32.257 $\pm$ 0.143  $\chi^2$ /NDF: 15391.4/55

All: 26.005 $\pm$ 0.102  $\chi^2$ /NDF: 151193.4/113

- sign 19.633 $\pm$ 0.144  $\chi^2$ /NDF: 131939.5/57

# diff\_bpm1i04X\_rms vs Slug



Right In: 864.715 $\pm$ 0.140  $\chi^2$ /NDF: 436472.0/30

Left Out: 907.089 $\pm$ 0.146  $\chi^2$ /NDF:194606.8/24

Right Out: 866.724 $\pm$ 0.138  $\chi^2$ /NDF: 397240.2/34

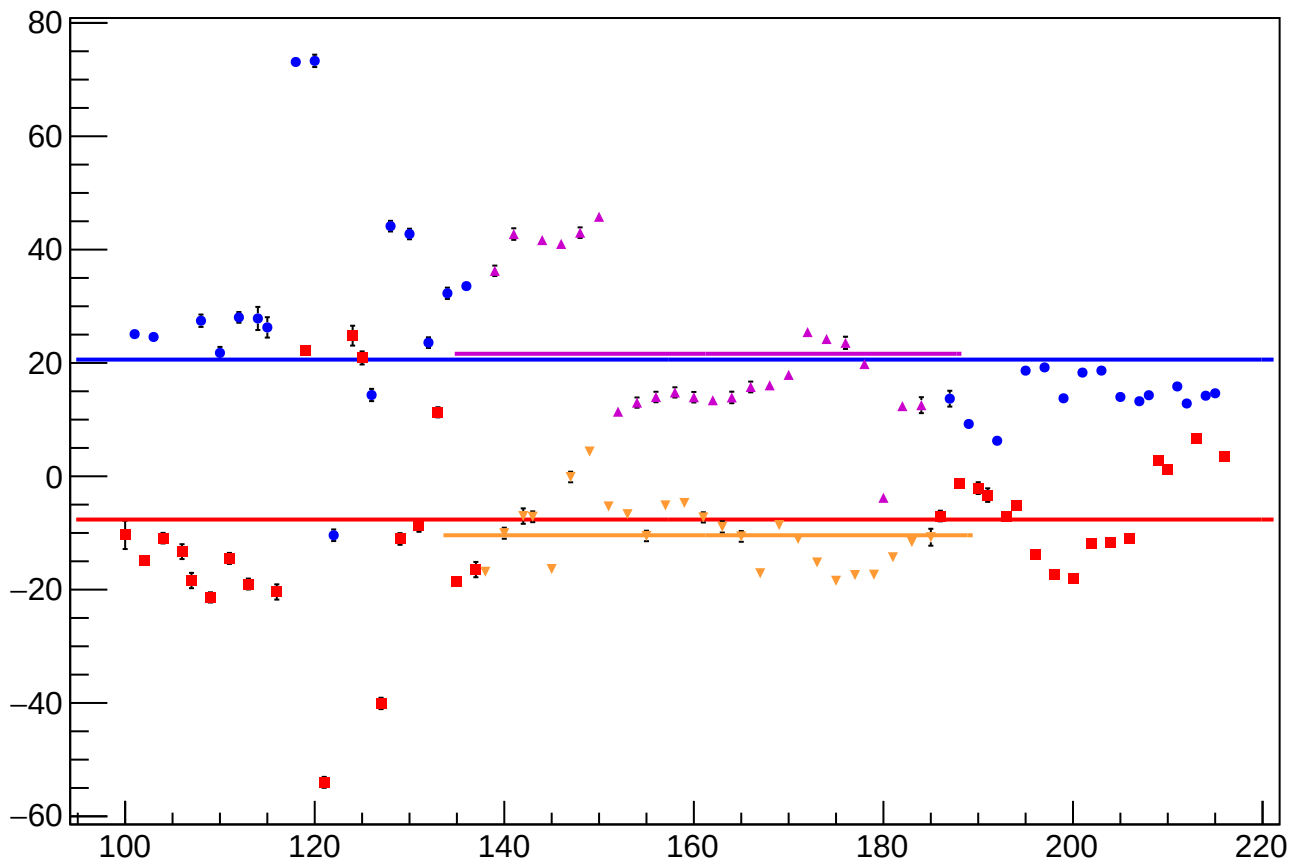
Left In: 912.301 $\pm$ 0.151  $\chi^2$ /NDF:174715.2/22

+ sign 884.986 $\pm$ 0.101  $\chi^2$ /NDF: 674933.4/55

All: 886.238 $\pm$ 0.072  $\chi^2$ /NDF: 129678.8/113

- sign 887.514 $\pm$ 0.102  $\chi^2$ /NDF: 621435.5/57

# diff\_bpm1i04Y\_mean vs Slug



Right In:  $20.592 \pm 0.140$   $\chi^2/\text{NDF}$ : 10436.5/30

Left Out:  $-10.406 \pm 0.176$   $\chi^2/\text{NDF}$ : 1041.8/24

Right Out:  $-7.632 \pm 0.137$   $\chi^2/\text{NDF}$ : 9203.5/34

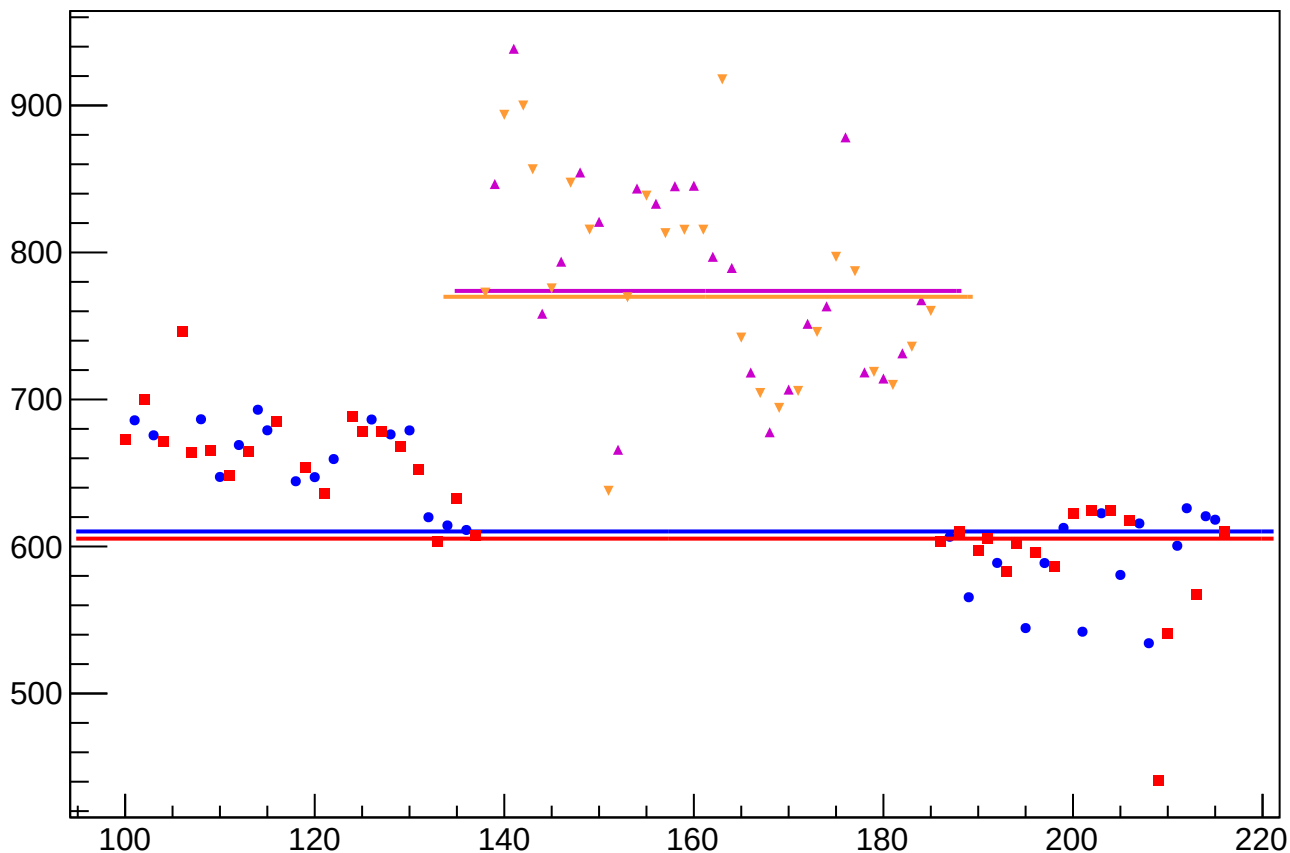
Left In:  $21.621 \pm 0.182$   $\chi^2/\text{NDF}$ : 5241.8/22

+ sign  $8.615 \pm 0.109$   $\chi^2/\text{NDF}$ : 30513.7/55

All:  $5.783 \pm 0.077$   $\chi^2/\text{NDF}$ : 62800.6/113

- sign  $2.950 \pm 0.109$   $\chi^2/\text{NDF}$ : 30946.3/57

# diff\_bpm1i04Y\_rms vs Slug



Right In:  $610.233 \pm 0.099$   $\chi^2/\text{NDF}$ : 196831.8/30

Left Out:  $769.850 \pm 0.124$   $\chi^2/\text{NDF}$ : 304526.6/24

Right Out:  $605.336 \pm 0.097$   $\chi^2/\text{NDF}$ : 408771.9/34

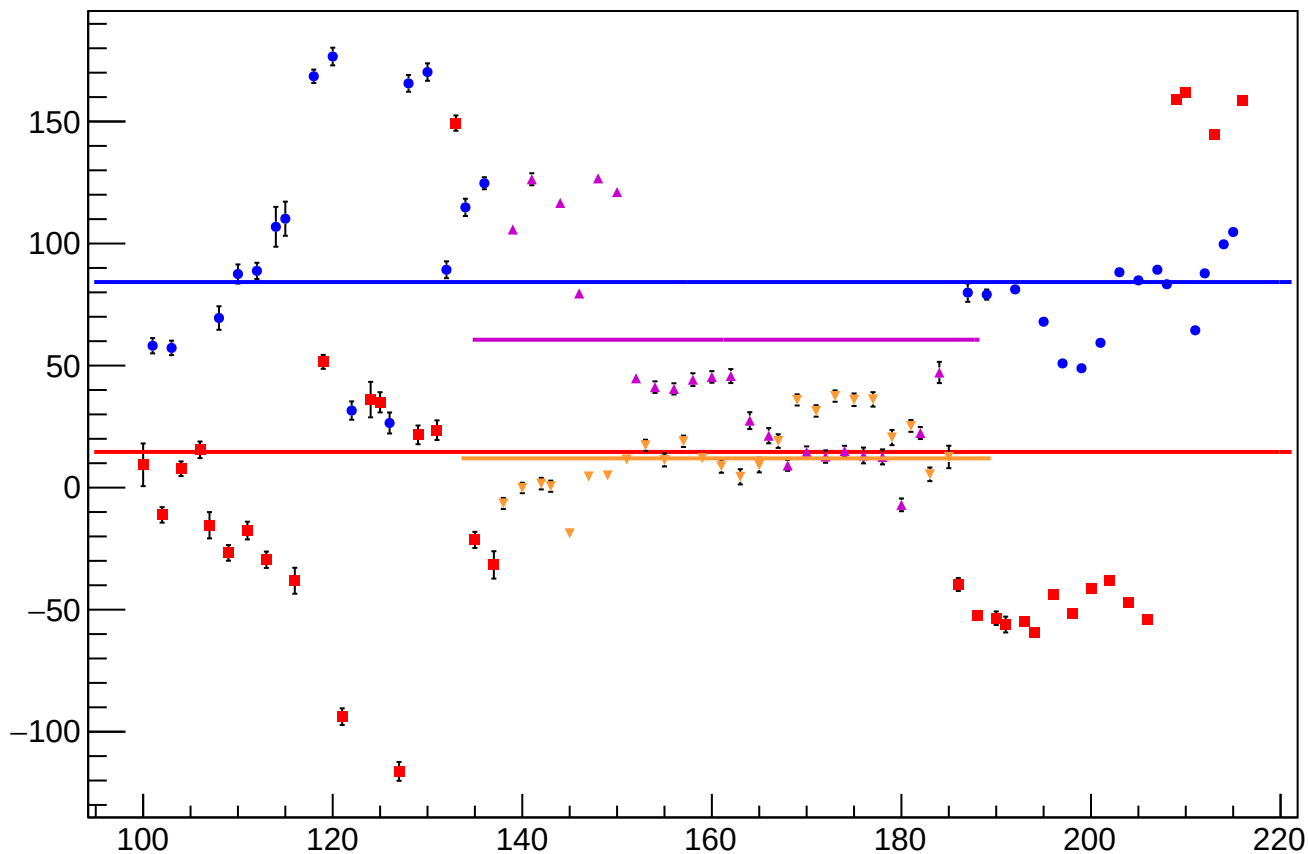
Left In:  $773.845 \pm 0.129$   $\chi^2/\text{NDF}$ : 282843.1/22

+ sign  $671.905 \pm 0.077$   $\chi^2/\text{NDF}$ : 1510751.0/55

All:  $669.100 \pm 0.055$   $\chi^2/\text{NDF}$ : 3300050.2/113

- sign  $666.293 \pm 0.077$   $\chi^2/\text{NDF}$ : 1786667.8/57

# diff\_bpm1i06X\_mean vs Slug



Right In: 84.221 $\pm$ 0.419  $\chi^2$ /NDF: 5014.1/30

Left Out: 11.989 $\pm$ 0.472  $\chi^2$ /NDF: 947.1/24

Right Out: 14.622 $\pm$ 0.406  $\chi^2$ /NDF: 49669.4/34

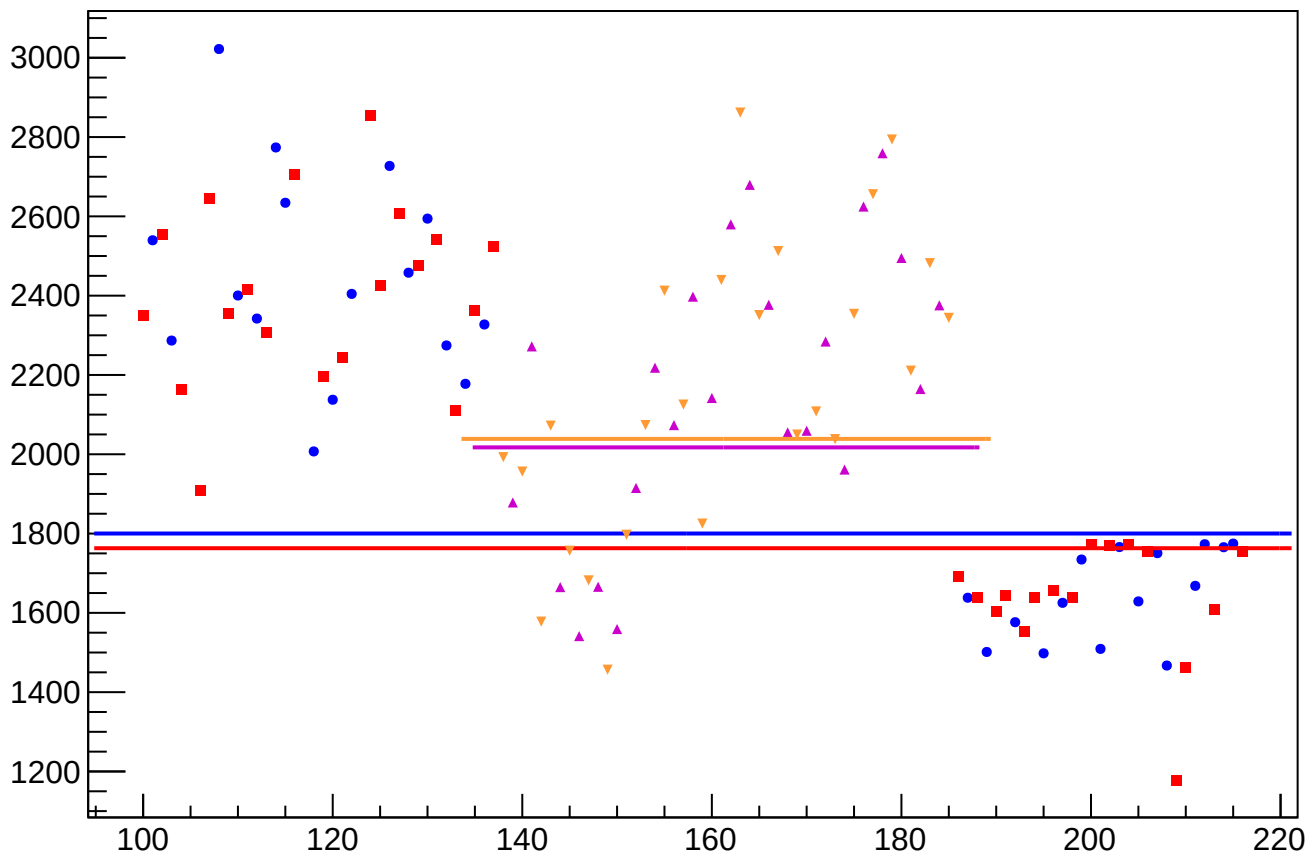
Left In: 60.598 $\pm$ 0.481  $\chi^2$ /NDF: 8638.1/22

+ sign 52.367 $\pm$ 0.313  $\chi^2$ /NDF: 19078.4/55

All: 42.969 $\pm$ 0.220  $\chi^2$ /NDF: 84508.3/113

- sign 33.747 $\pm$ 0.310  $\chi^2$ /NDF: 63645.3/57

# diff\_bpm1i06X\_rms vs Slug



Right In: 1800.123+/-0.296  $\chi^2/\text{NDF}$ : 1298516.3/30

Left Out: 2038.784+/-0.333  $\chi^2/\text{NDF}$ : 1123518.3/24

Right Out: 1763.064+/-0.287  $\chi^2/\text{NDF}$ : 1597999.4/34

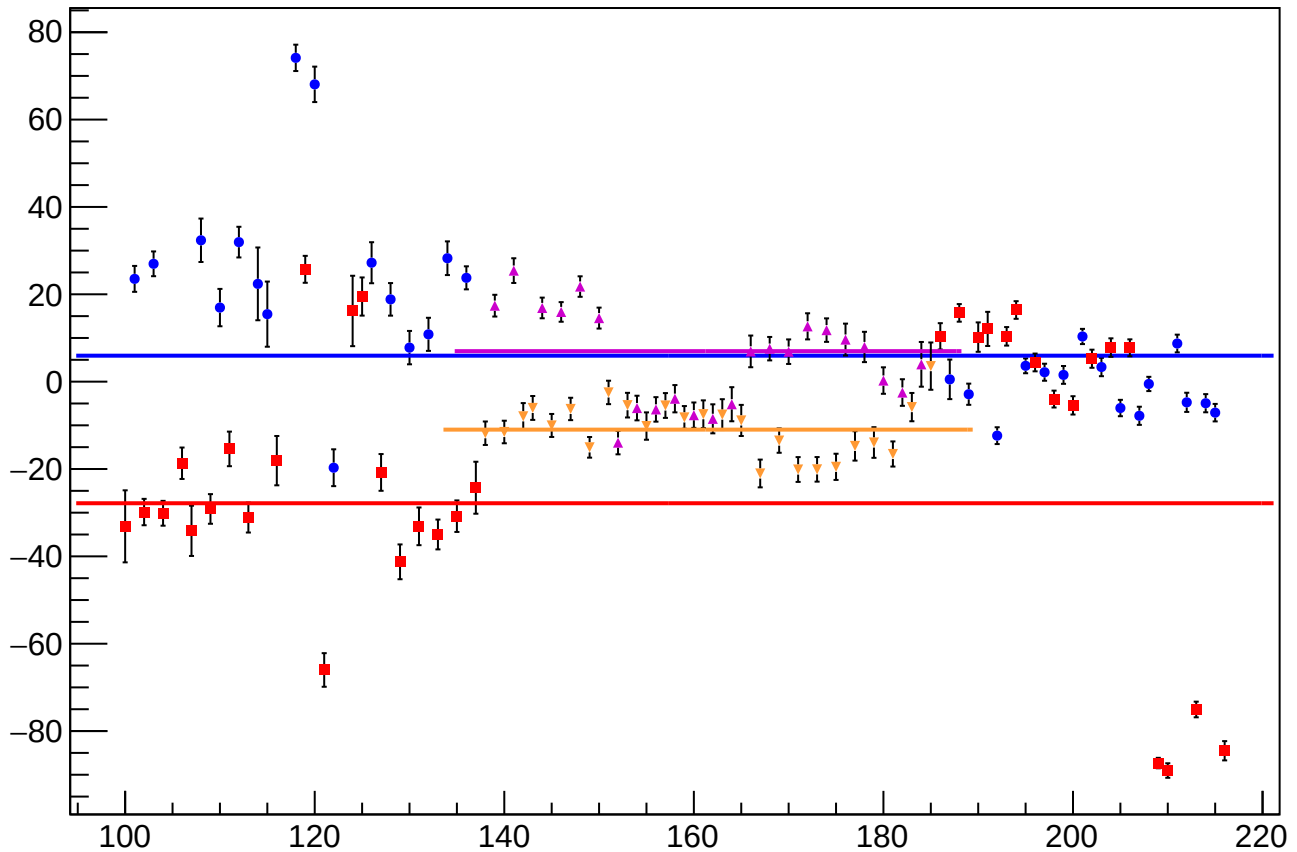
Left In: 2017.328+/-0.340  $\chi^2/\text{NDF}$ : 1050043.3/22

+ sign 1905.371+/-0.221  $\chi^2/\text{NDF}$ : 2708428.3/55

All: 1886.929+/-0.156  $\chi^2/\text{NDF}$ : 5696725.5/11

- sign 1868.835+/-0.219  $\chi^2/\text{NDF}$ : 2974554.1/57

# diff\_bpm1i06Y\_mean vs Slug



Right In:  $5.946 \pm 0.454$   $\chi^2/\text{NDF}$ : 1400.0/30

Left Out:  $-10.985 \pm 0.586$   $\chi^2/\text{NDF}$ : 87.6/24

Right Out:  $-27.838 \pm 0.437$   $\chi^2/\text{NDF}$ : 8829.6/34

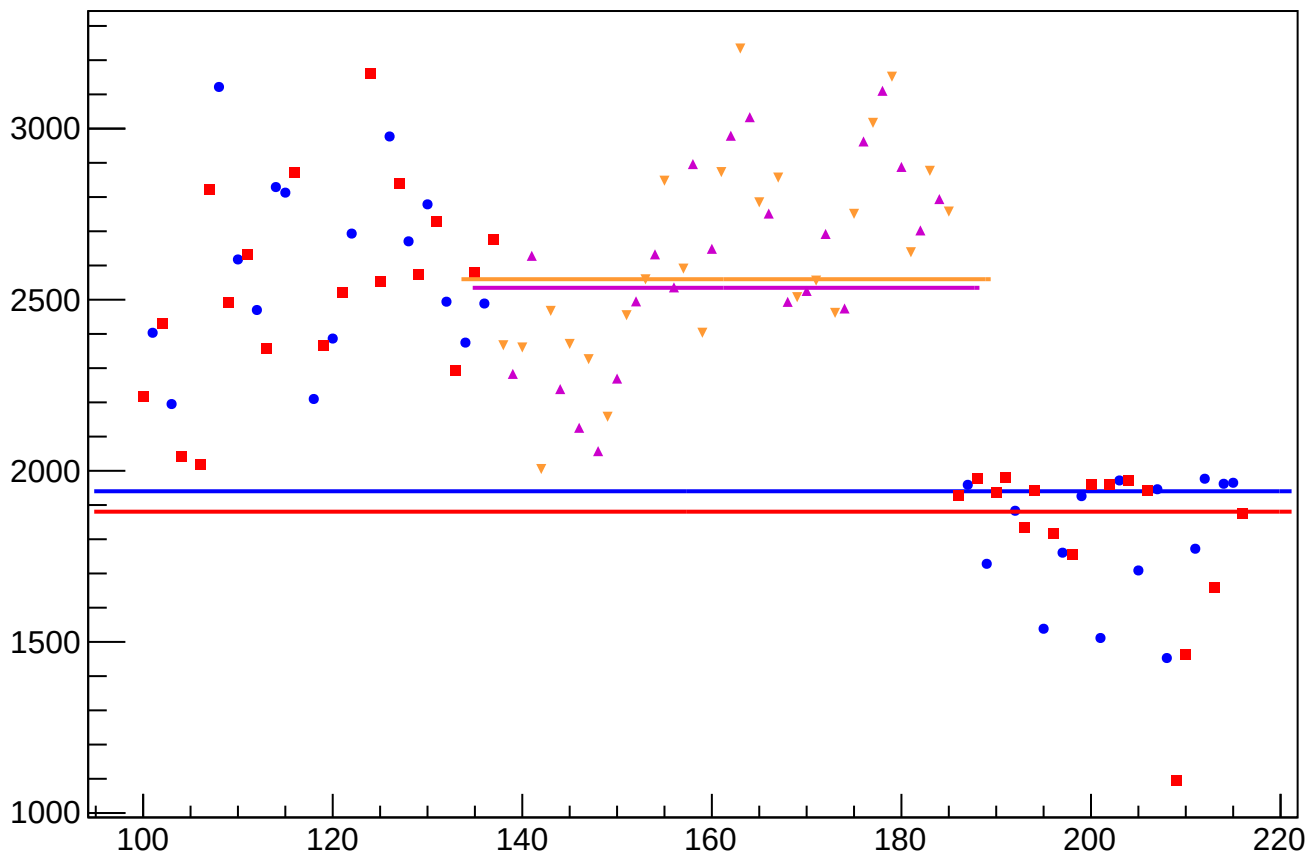
Left In:  $6.985 \pm 0.598$   $\chi^2/\text{NDF}$ : 339.5/22

+ sign  $-0.404 \pm 0.359$   $\chi^2/\text{NDF}$ : 2009.5/55

All:  $-8.198 \pm 0.252$   $\chi^2/\text{NDF}$ : 14315.7/113

- sign  $-15.735 \pm 0.353$   $\chi^2/\text{NDF}$ : 11378.1/57

diff\_bpm1i06Y\_rms vs Slug



Right In: 1940.242 $\pm$ 0.321  $\chi^2$ /NDF: 1343341.8/30

Left Out: 2559.931 $\pm$ 0.414  $\chi^2$ /NDF: 450188.5/24

Right Out: 1880.567 $\pm$ 0.309  $\chi^2$ /NDF: 2005788.1/34

Left In: 2534.780 $\pm$ 0.423  $\chi^2$ /NDF: 463621.9/22

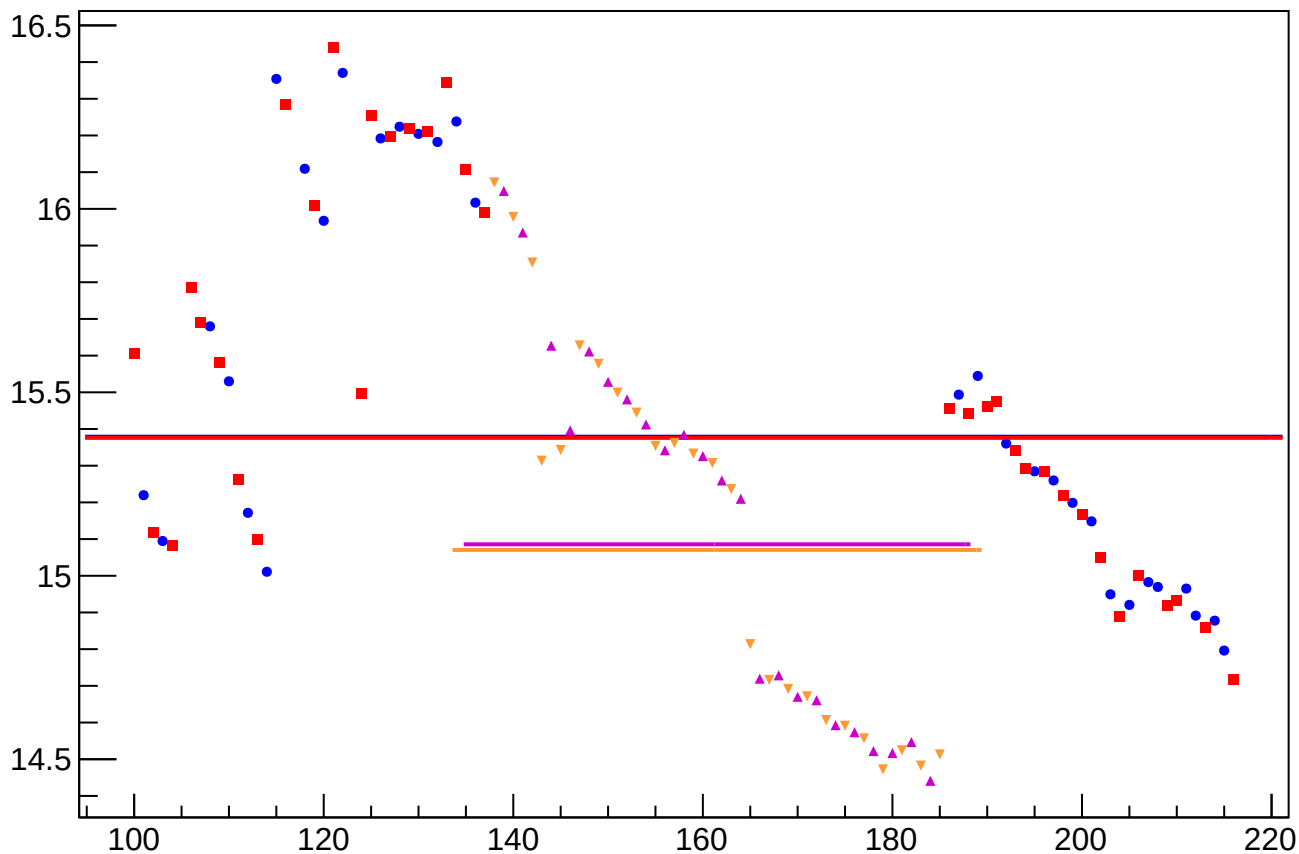
+ sign 2172.654 $\pm$ 0.254  $\chi^2$ /NDF: 3191801.9/55

All: 2139.762 $\pm$ 0.178  $\chi^2$ /NDF: 7253553.7/11

- sign 2107.956 $\pm$ 0.249  $\chi^2$ /NDF: 4028691.8/57



# yield\_sam1\_mean vs Slug



Right In: 15.379+/-0.000  $\chi^2/\text{NDF}$ : 28810891196.1/30

Left Out: 15.070+/-0.000  $\chi^2/\text{NDF}$ : 43718295237.2/24

Right Out: 15.376+/-0.000  $\chi^2/\text{NDF}$ : 26282723807.1/34

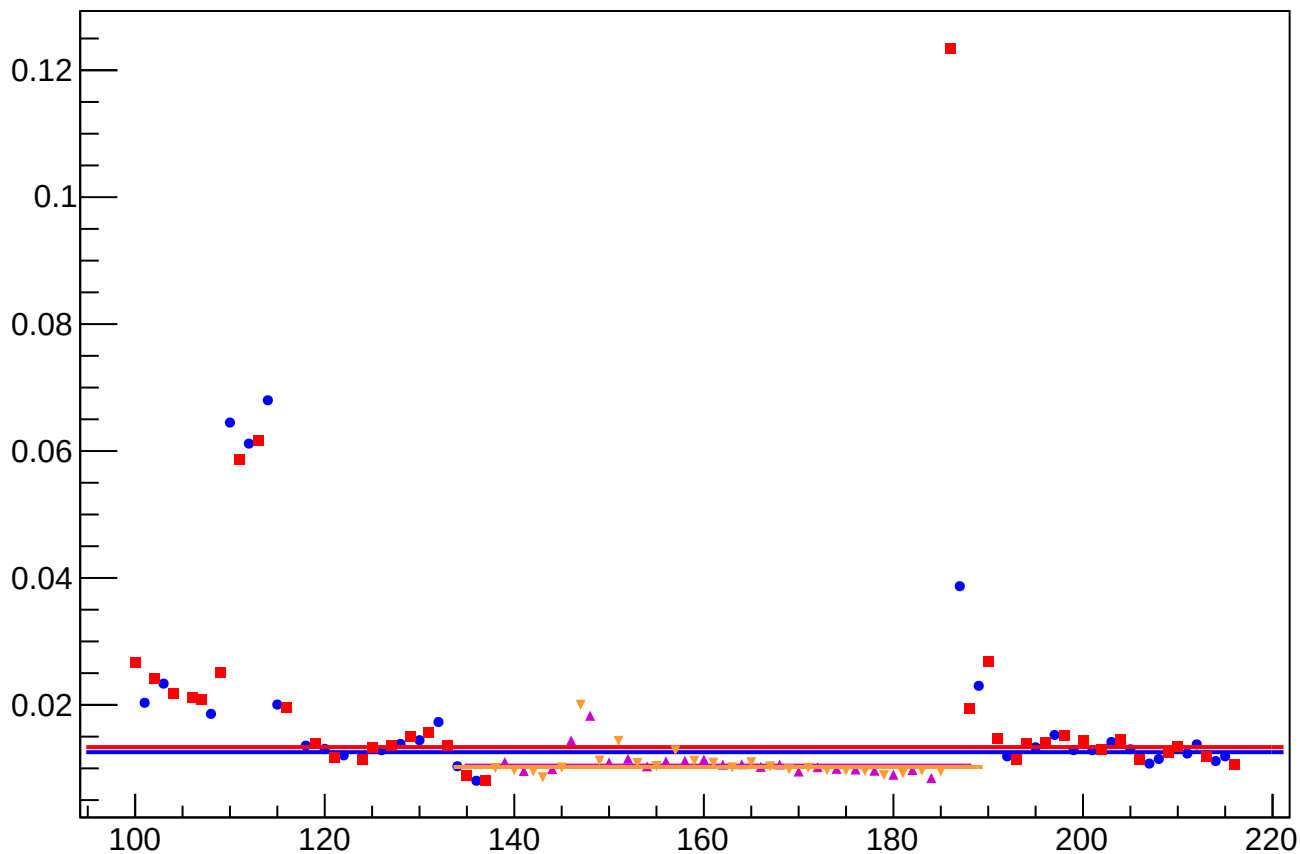
Left In: 15.086+/-0.000  $\chi^2/\text{NDF}$ : 39504896066.7/22

+ sign 15.188+/-0.000  $\chi^2/\text{NDF}$ : 78826703204.4/55

All: 15.191+/-0.000  $\chi^2/\text{NDF}$ : 149620433353.

- sign 15.195+/-0.000  $\chi^2/\text{NDF}$ : 70787212049.2/57

# yield\_sam1\_rms vs Slug



Right In: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 2882081.1/30

Left Out: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 760322.0/24

Right Out: 0.013 $\pm$ 0.000  $\chi^2$ /NDF: 3492129.1/34

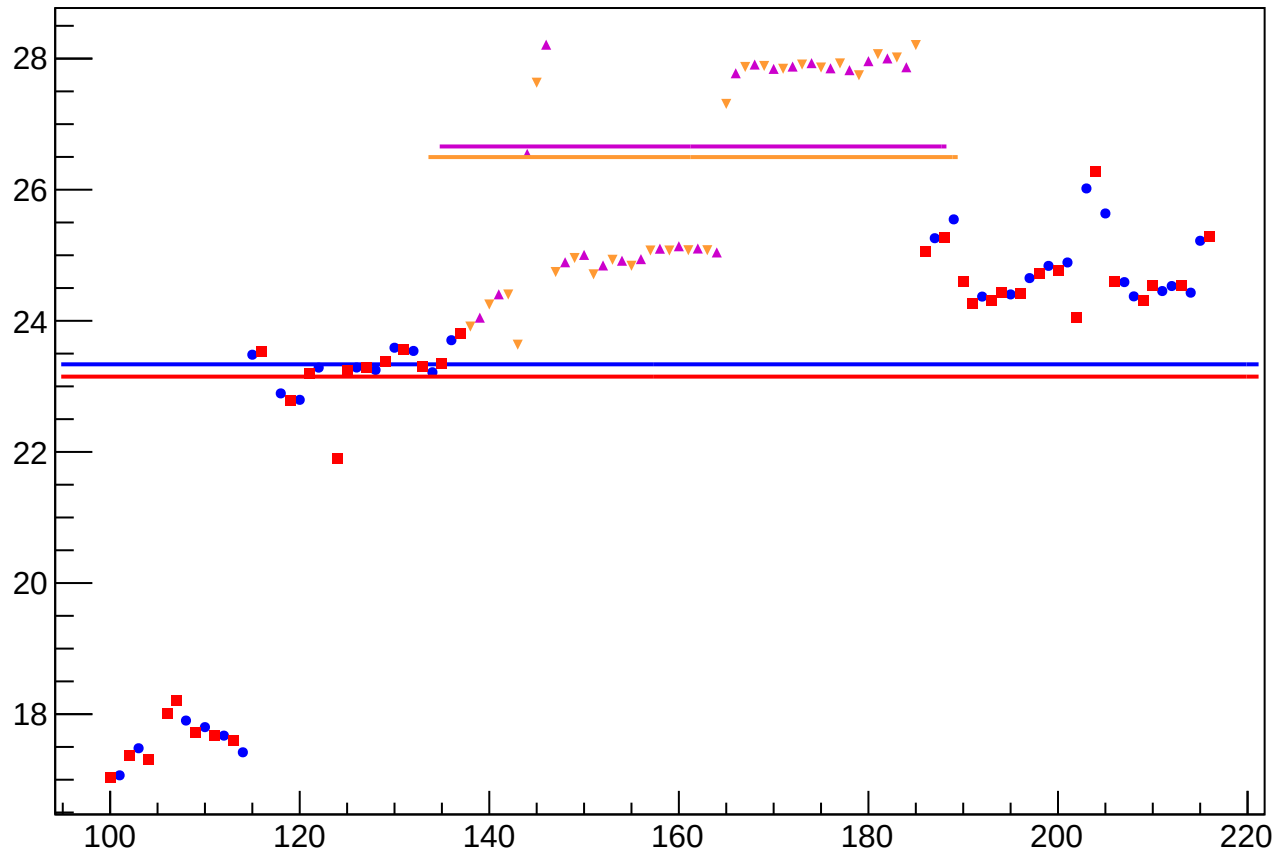
Left In: 0.010 $\pm$ 0.000  $\chi^2$ /NDF: 597752.6/22

+ sign 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 4362719.9/55

All: 0.011 $\pm$ 0.000  $\chi^2$ /NDF: 9514380.9/113

- sign 0.012 $\pm$ 0.000  $\chi^2$ /NDF: 5104289.0/57

# yield\_sam2\_mean vs Slug



Right In: 23.336+/-0.000  $\chi^2/\text{NDF}$ : 1696395179.9/30

Left Out: 26.498+/-0.000  $\chi^2/\text{NDF}$ : 3909357236.5/24

Right Out: 23.149+/-0.000  $\chi^2/\text{NDF}$ : 1790697485.3/34

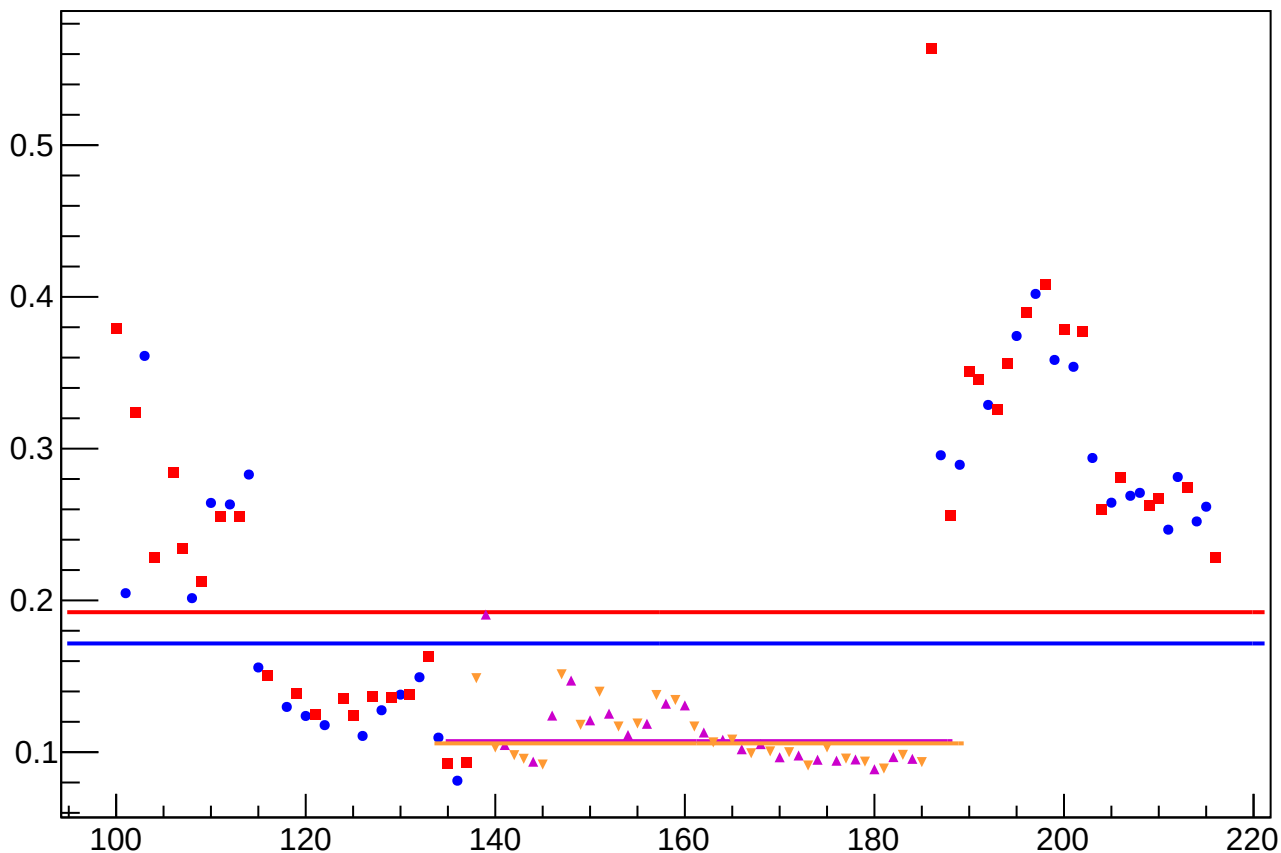
Left In: 26.660+/-0.000  $\chi^2/\text{NDF}$ : 2886823196.4/22

+ sign 25.726+/-0.000  $\chi^2/\text{NDF}$ : 9225134602.7/55

All: 25.784+/-0.000  $\chi^2/\text{NDF}$ : 17792810028.8

- sign 25.848+/-0.000  $\chi^2/\text{NDF}$ : 8553779424.9/57

# yield\_sam2\_rms vs Slug



Right In: 0.172 $\pm$ 0.000  $\chi^2$ /NDF: 7581773.8/30

Left Out: 0.106 $\pm$ 0.000  $\chi^2$ /NDF: 756185.0/24

Right Out: 0.192 $\pm$ 0.000  $\chi^2$ /NDF: 6699171.7/34

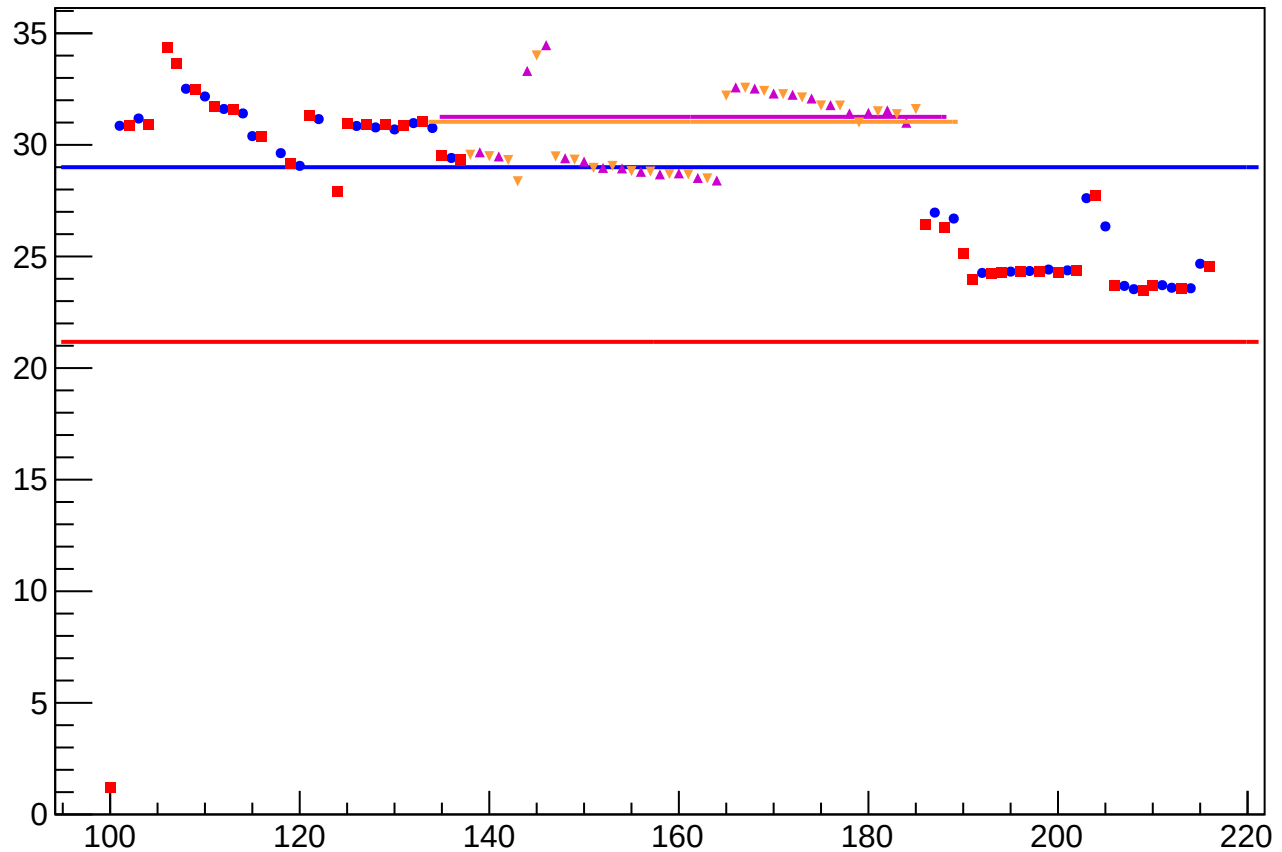
Left In: 0.107 $\pm$ 0.000  $\chi^2$ /NDF: 859458.3/22

+ sign 0.122 $\pm$ 0.000  $\chi^2$ /NDF: 11478408.7/55

All: 0.124 $\pm$ 0.000  $\chi^2$ /NDF: 23626010.1/113

- sign 0.127 $\pm$ 0.000  $\chi^2$ /NDF: 12100265.0/57

# yield\_sam3\_mean vs Slug



Right In: 29.000 $\pm$ 0.000  $\chi^2$ /NDF: 8362494468.7/30

Left Out: 31.035 $\pm$ 0.000  $\chi^2$ /NDF: 11897463221.2/24

Right Out: 21.174 $\pm$ 0.000  $\chi^2$ /NDF: 226562359669.0/34

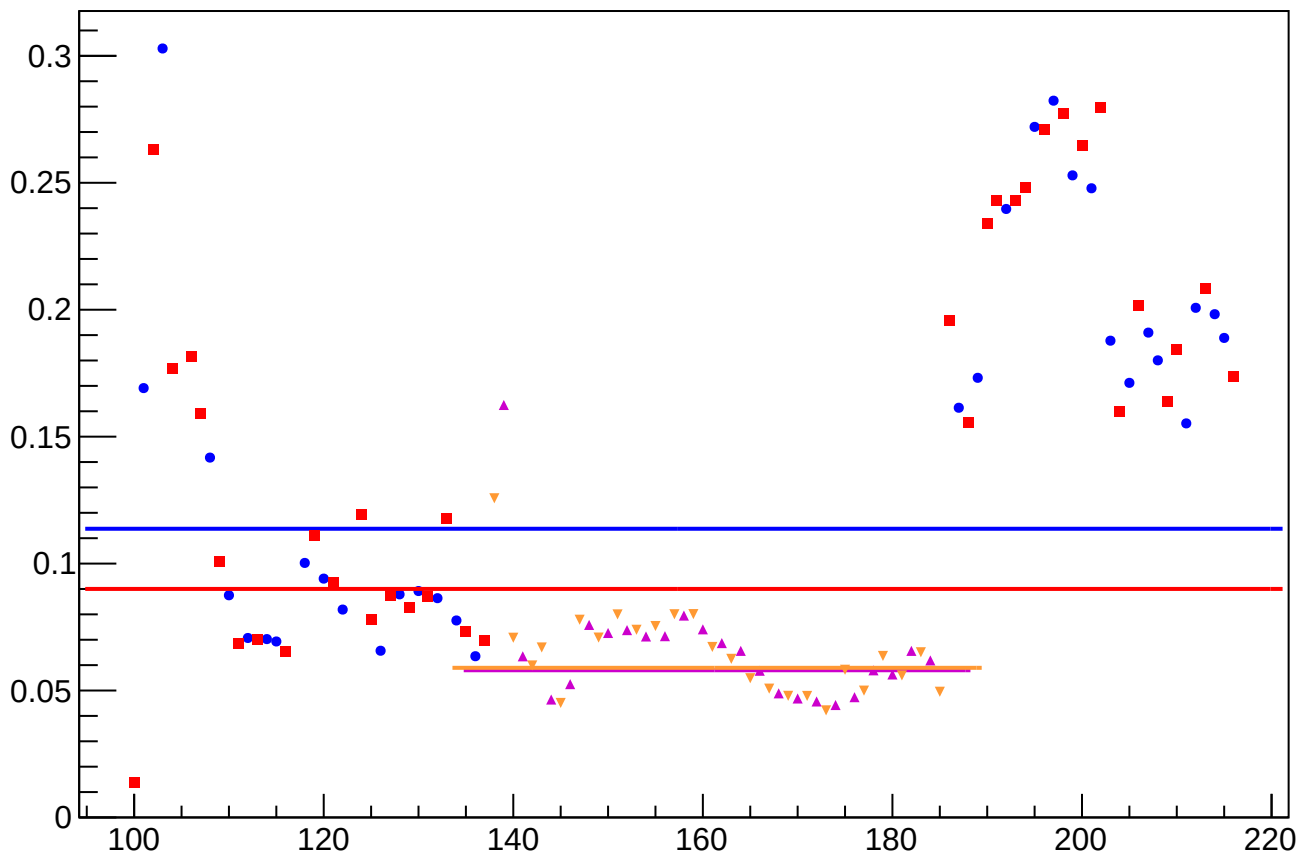
Left In: 31.256 $\pm$ 0.000  $\chi^2$ /NDF: 12589744083.0/22

+ sign 30.631 $\pm$ 0.000  $\chi^2$ /NDF: 23780653216.2/55

All: 29.672 $\pm$ 0.000  $\chi^2$ /NDF: 377265335910.

- sign 28.740 $\pm$ 0.000  $\chi^2$ /NDF: 343796242483.0/57

# yield\_sam3\_rms vs Slug



Right In: 0.114 $\pm$ 0.000  $\chi^2$ /NDF: 7540782.7/30

Left Out: 0.059 $\pm$ 0.000  $\chi^2$ /NDF:1536601.0/24

Right Out: 0.090 $\pm$ 0.000  $\chi^2$ /NDF: 13715741.2/34

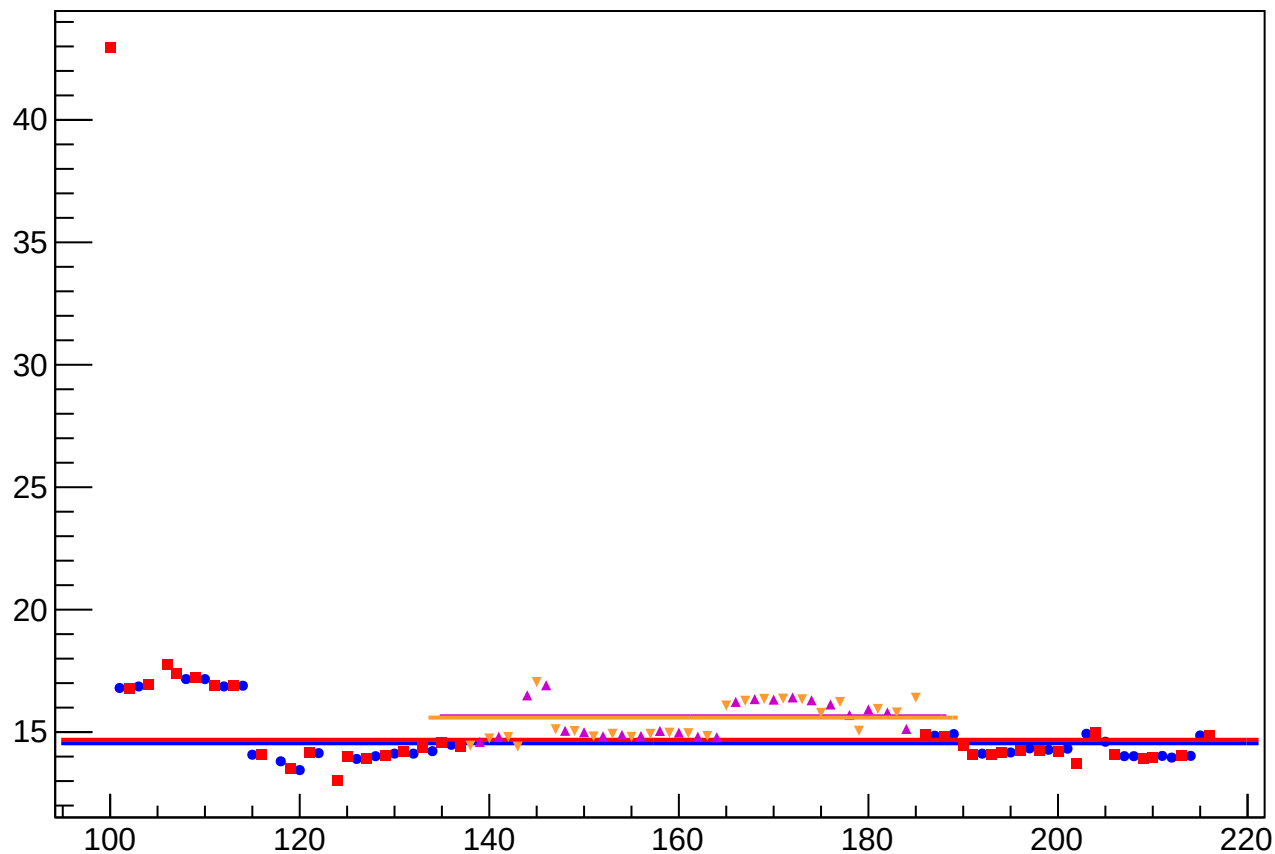
Left In: 0.058 $\pm$ 0.000  $\chi^2$ /NDF:1716553.7/22

+ sign 0.070 $\pm$ 0.000  $\chi^2$ /NDF: 14178463.6/55

All: 0.068 $\pm$ 0.000  $\chi^2$ /NDF: 31803704.6/113

- sign 0.066 $\pm$ 0.000  $\chi^2$ /NDF: 17545452.0/57

# yield\_sam4\_mean vs Slug



Right In: 14.542 $\pm$ 0.000  $\chi^2$ /NDF: 1273601274.1/30

Left Out: 15.591 $\pm$ 0.000  $\chi^2$ /NDF: 2257437225.0/24

Right Out: 14.687 $\pm$ 0.000  $\chi^2$ /NDF: 1874951537.2/34

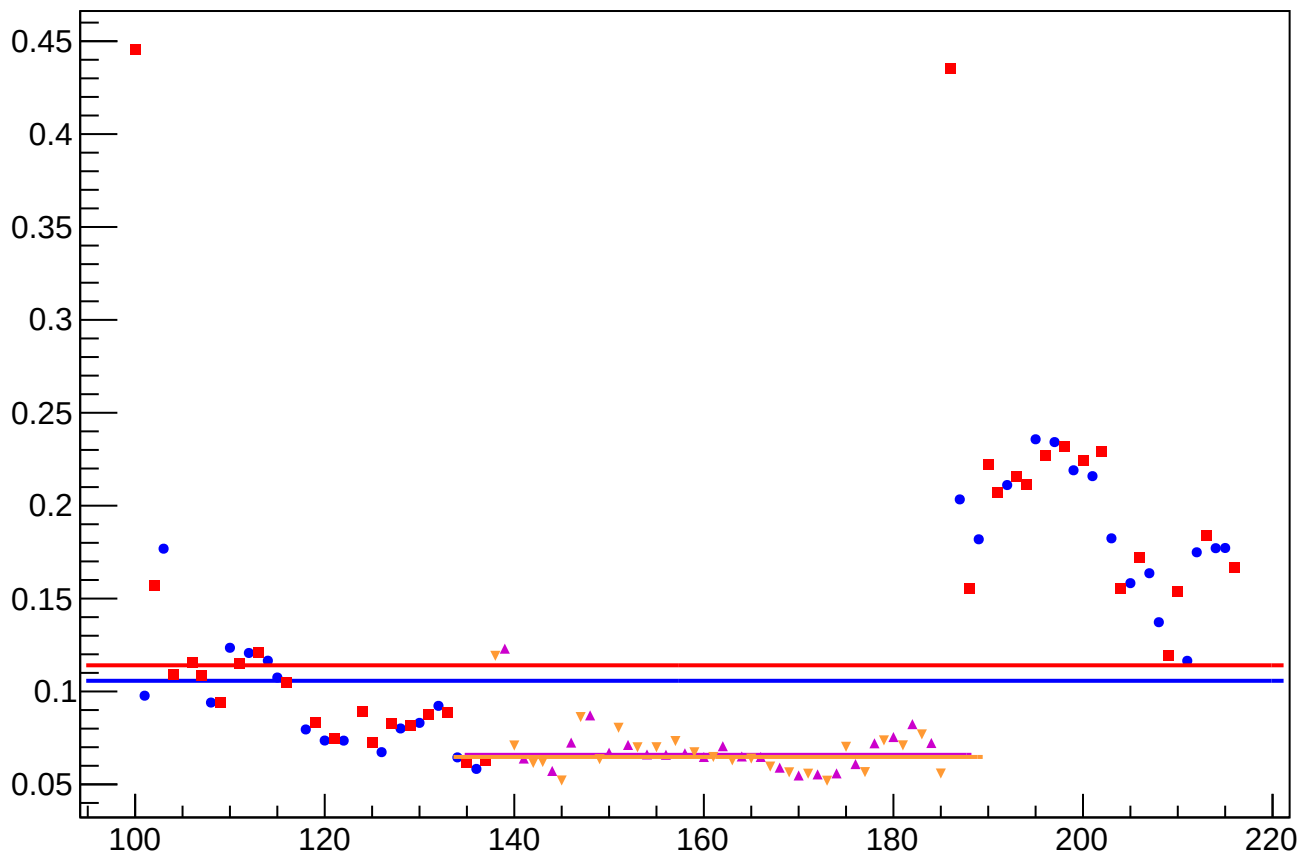
Left In: 15.645 $\pm$ 0.000  $\chi^2$ /NDF: 1858454747.6/22

+ sign 15.327 $\pm$ 0.000  $\chi^2$ /NDF: 4614809130.5/55

All: 15.365 $\pm$ 0.000  $\chi^2$ /NDF: 9179854498.0/100

- sign 15.407 $\pm$ 0.000  $\chi^2$ /NDF: 4549140439.6/57

# yield\_sam4\_rms vs Slug



Right In: 0.106 $\pm$ 0.000  $\chi^2$ /NDF: 6481246.1/30

Left Out: 0.065 $\pm$ 0.000  $\chi^2$ /NDF:855753.3/24

Right Out: 0.114 $\pm$ 0.000  $\chi^2$ /NDF: 6085798.8/34

Left In: 0.066 $\pm$ 0.000  $\chi^2$ /NDF:788235.2/22

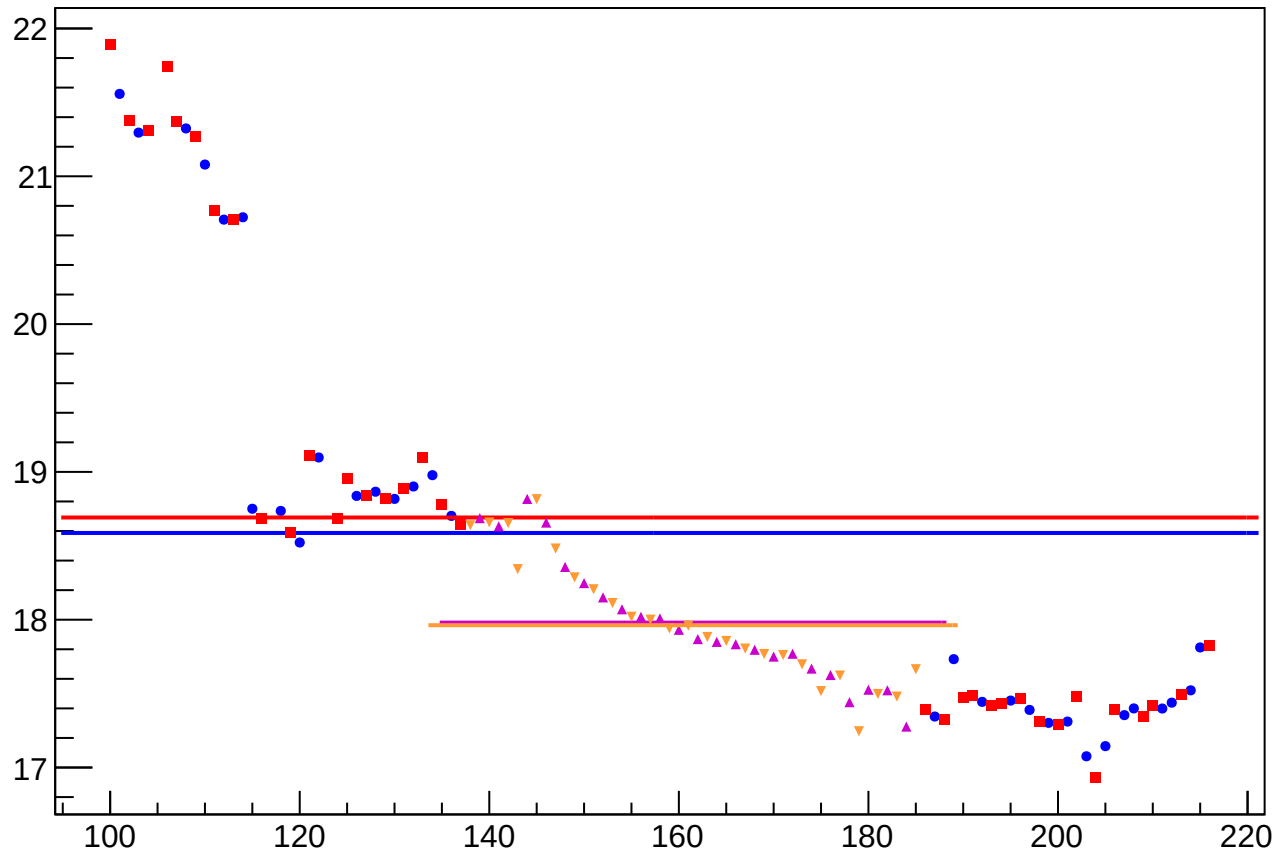
+ sign 0.075 $\pm$ 0.000  $\chi^2$ /NDF: 10647947.4/55

All: 0.076 $\pm$ 0.000  $\chi^2$ /NDF: 21693819.1/113

- sign 0.078 $\pm$ 0.000  $\chi^2$ /NDF: 11007153.1/57



# yield\_sam5\_mean vs Slug



Right In:  $18.587 \pm 0.000$   $\chi^2/\text{NDF}$ : 35217732003.0/30

Left Out:  $17.963 \pm 0.000$   $\chi^2/\text{NDF}$ : 3041551307.2/24

Right Out:  $18.692 \pm 0.000$   $\chi^2/\text{NDF}$ : 37707281090.5/34

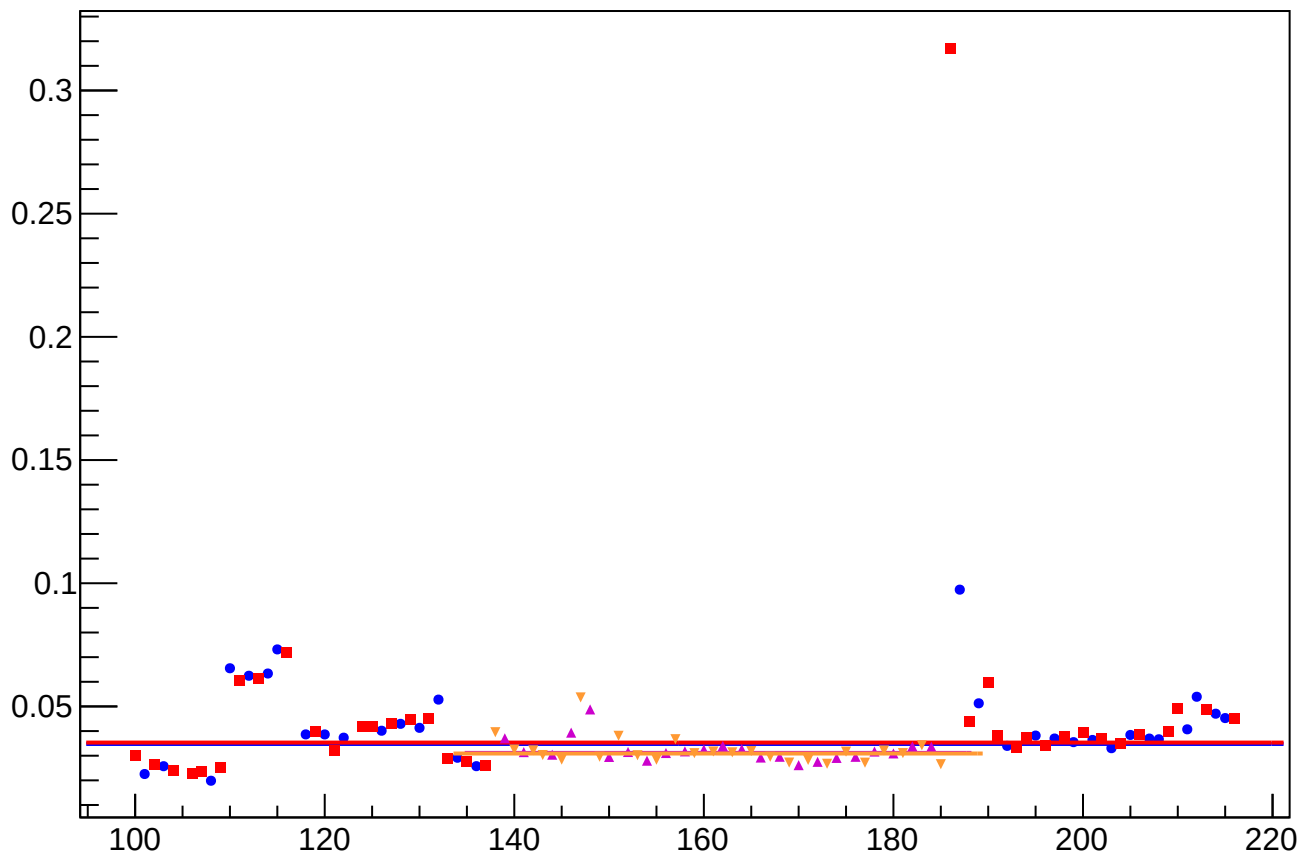
Left In:  $17.980 \pm 0.000$   $\chi^2/\text{NDF}$ : 2720441956.8/22

+ sign  $18.227 \pm 0.000$   $\chi^2/\text{NDF}$ : 41424595103.2/55

All:  $18.258 \pm 0.000$   $\chi^2/\text{NDF}$ : 85868079901.4

- sign  $18.291 \pm 0.000$   $\chi^2/\text{NDF}$ : 44376609189.0/57

# yield\_sam5\_rms vs Slug



Right In: 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 2459792.4/30

Left Out: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:633519.6/24

Right Out: 0.035 $\pm$ 0.000  $\chi^2$ /NDF: 2645562.3/34

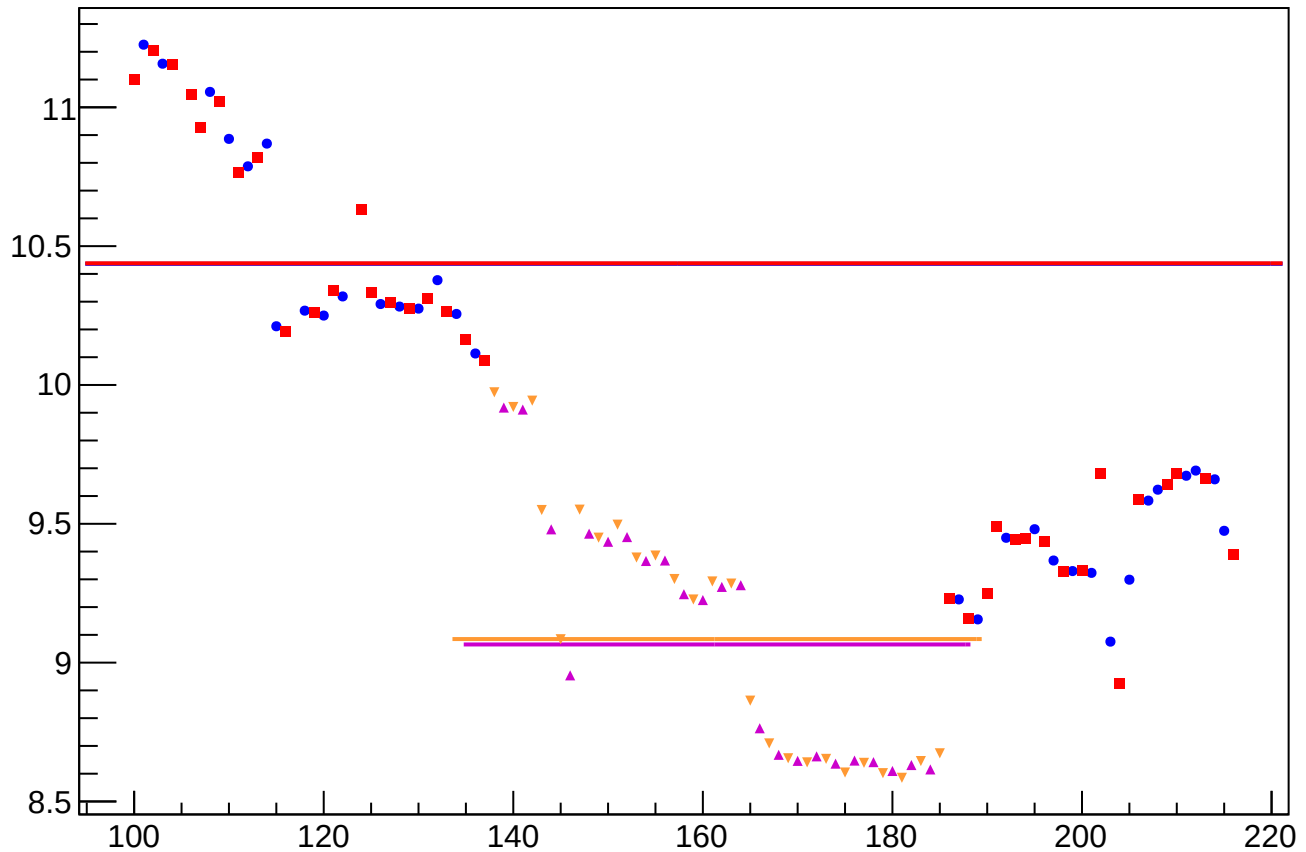
Left In: 0.031 $\pm$ 0.000  $\chi^2$ /NDF:482919.2/22

+ sign 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 3337443.9/55

All: 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 6747215.1/113

- sign 0.033 $\pm$ 0.000  $\chi^2$ /NDF: 3403503.1/57

# yield\_sam6\_mean vs Slug



Right In: 10.436 $\pm$ 0.000  $\chi^2$ /NDF: 16476663151.2/30

Left Out: 9.085 $\pm$ 0.000  $\chi^2$ /NDF: 10203625727.4/24

Right Out: 10.438 $\pm$ 0.000  $\chi^2$ /NDF: 15163202050.3/34

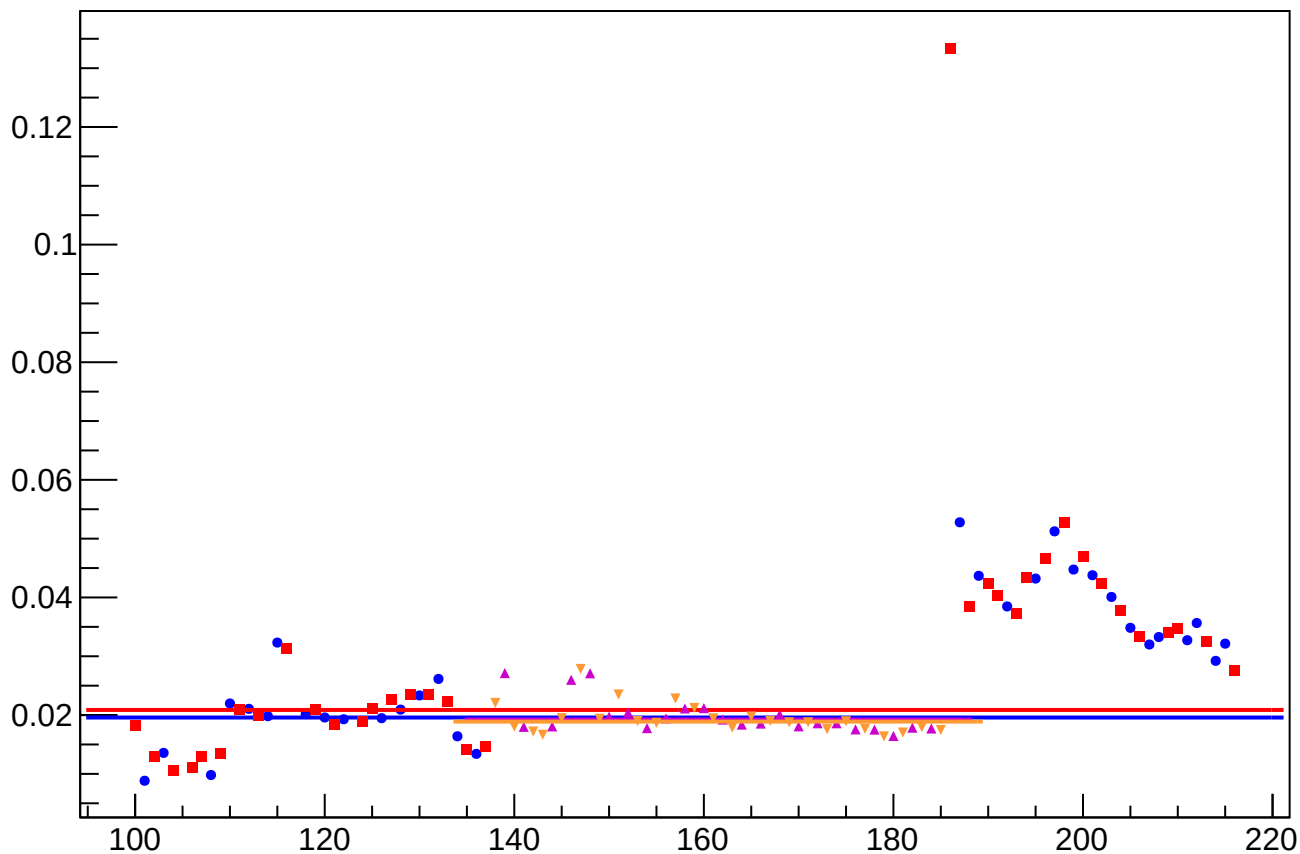
Left In: 9.065 $\pm$ 0.000  $\chi^2$ /NDF: 8070708662.0/22

+ sign 9.657 $\pm$ 0.000  $\chi^2$ /NDF: 64812276713.0/55

All: 9.656 $\pm$ 0.000  $\chi^2$ /NDF: 124250016352.9

- sign 9.654 $\pm$ 0.000  $\chi^2$ /NDF: 59437355937.7/57

# yield\_sam6\_rms vs Slug



Right In: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 8417671.1/30

Left Out: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:441360.7/24

Right Out: 0.021 $\pm$ 0.000  $\chi^2$ /NDF: 8013167.3/34

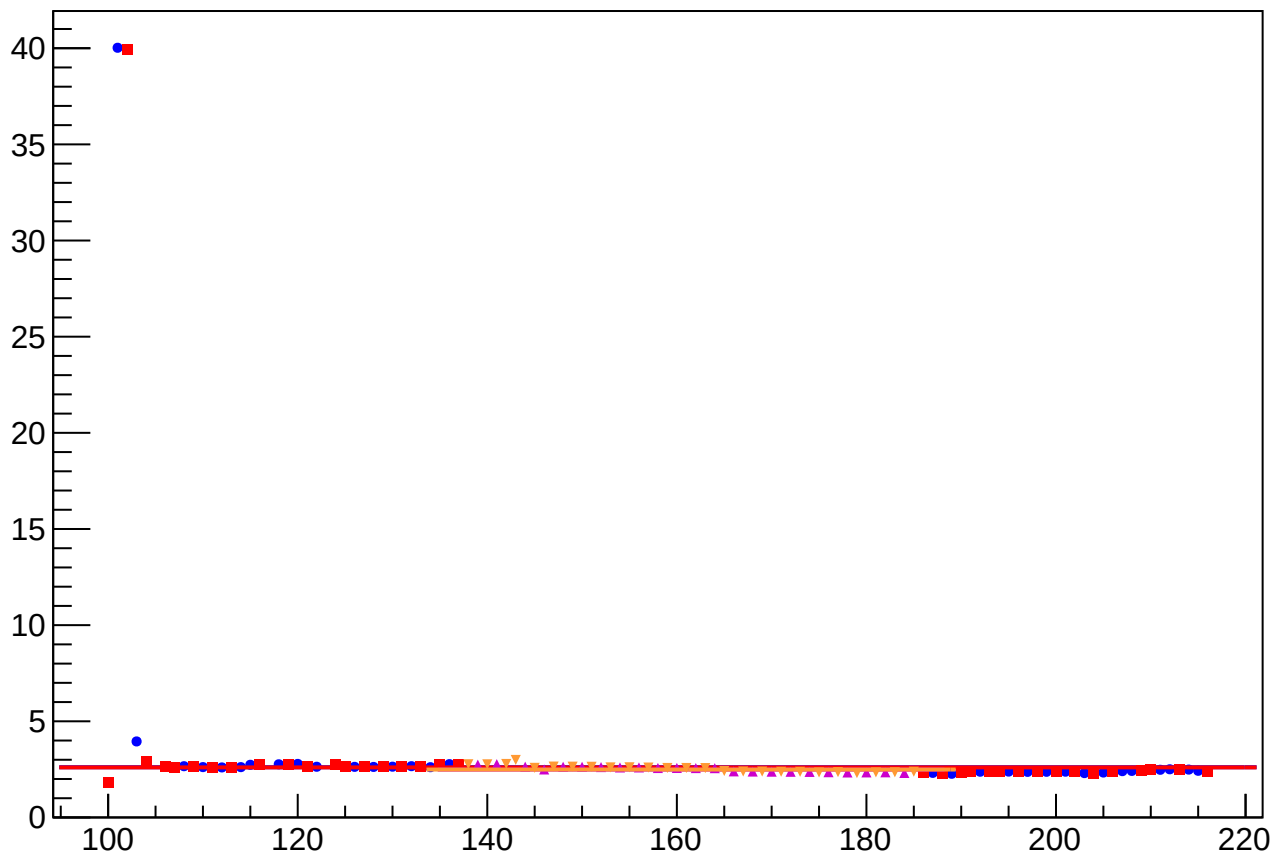
Left In: 0.019 $\pm$ 0.000  $\chi^2$ /NDF:540886.4/22

+ sign 0.019 $\pm$ 0.000  $\chi^2$ /NDF: 8878821.1/55

All: 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 17582084.1/113

- sign 0.020 $\pm$ 0.000  $\chi^2$ /NDF: 8657379.9/57

# yield\_sam7\_mean vs Slug



Right In: 2.612 $\pm$ 0.000  $\chi^2$ /NDF: 88641418732.8/30

Left Out: 2.491 $\pm$ 0.000  $\chi^2$ /NDF: 92364283353.6/24

Right Out: 2.603 $\pm$ 0.000  $\chi^2$ /NDF: 86712827559.9/34

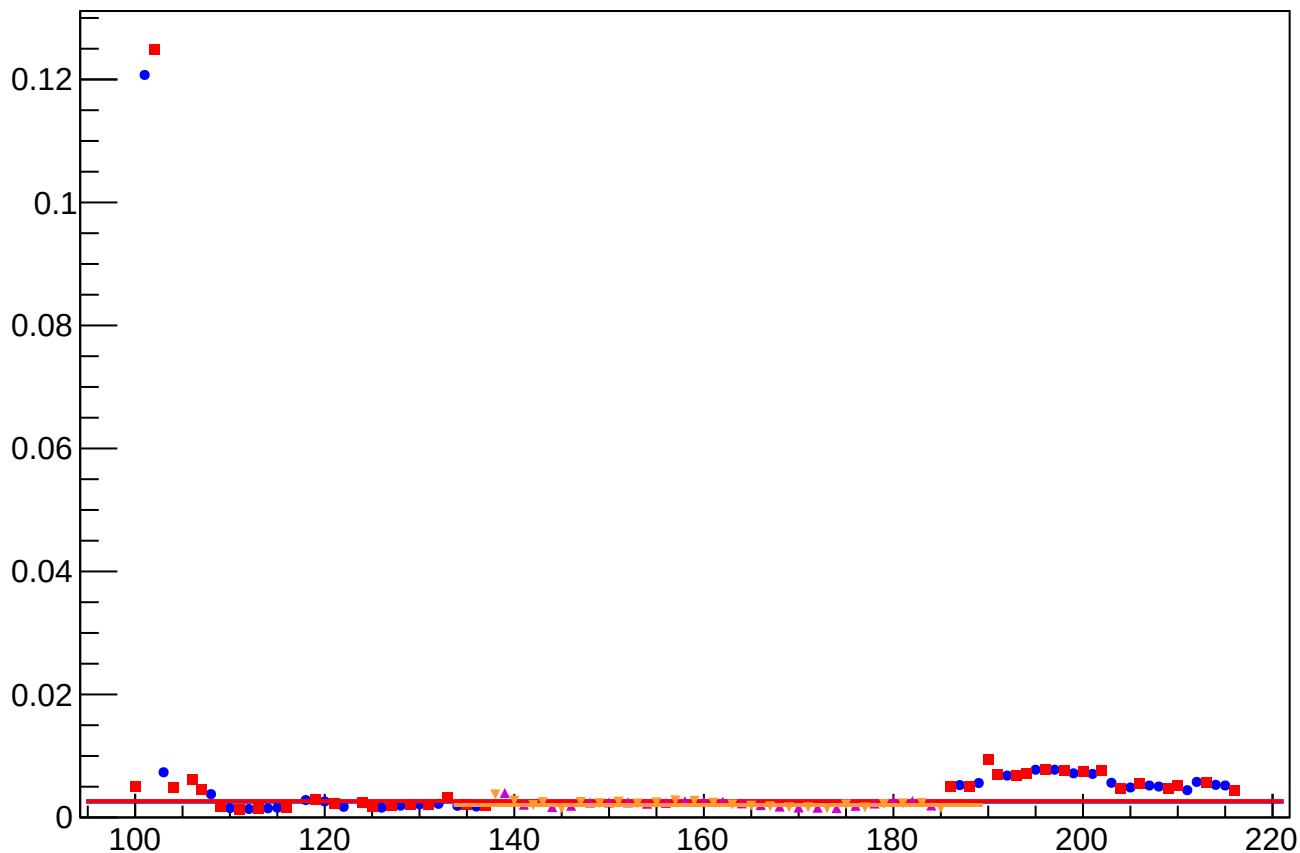
Left In: 2.489 $\pm$ 0.000  $\chi^2$ /NDF: 61212546319.1/22

+ sign 2.530 $\pm$ 0.000  $\chi^2$ /NDF: 198855723626.0/55

All: 2.529 $\pm$ 0.000  $\chi^2$ /NDF: 361946303658.8

- sign 2.527 $\pm$ 0.000  $\chi^2$ /NDF: 163062710457.3/57

# yield\_sam7\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 10803281.0/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1556481.5/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 11592551.1/34

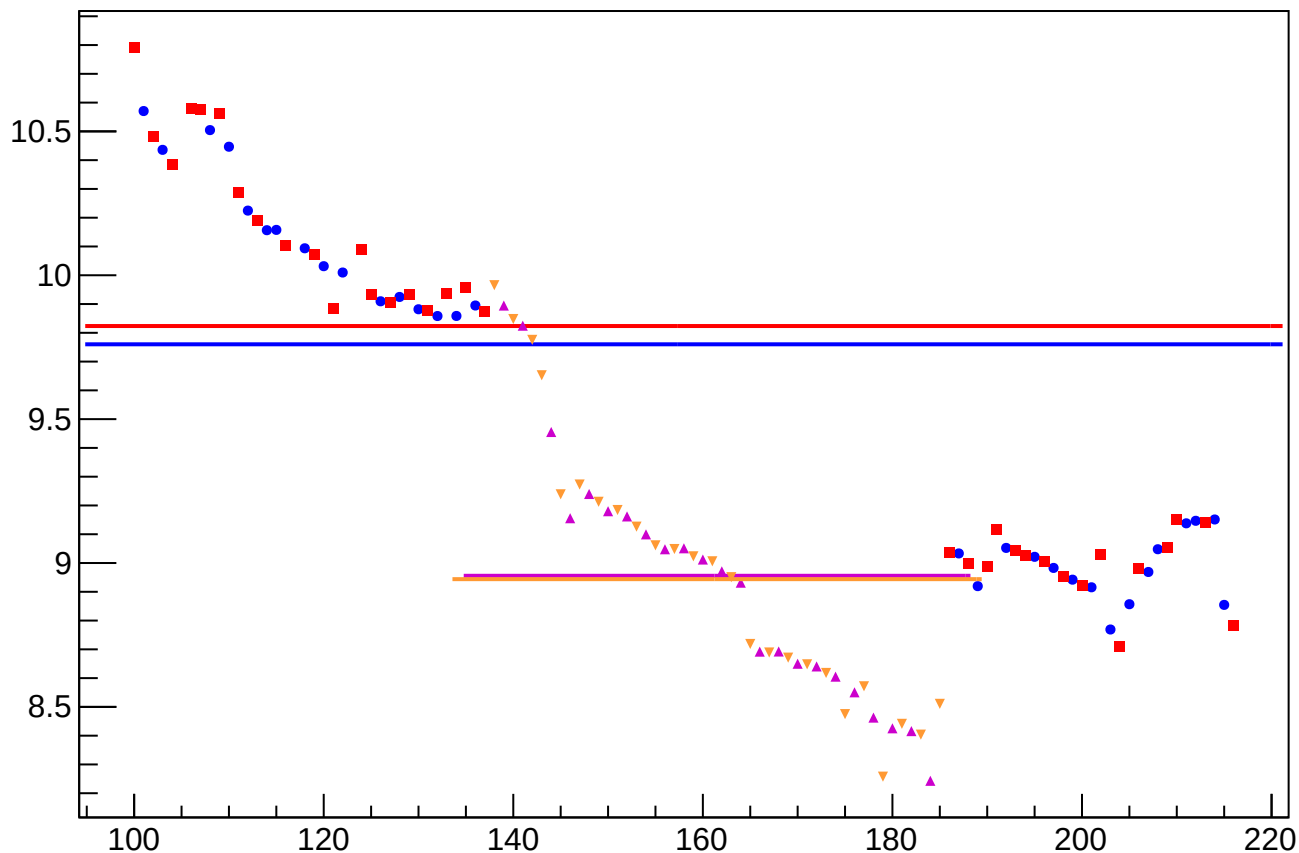
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1402331.9/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13079826.1/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 26912526.2/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13809007.6/57

# yield\_sam8\_mean vs Slug



Right In: 9.760 $\pm$ 0.000  $\chi^2$ /NDF: 84118036077.8/30

Left Out: 8.944 $\pm$ 0.000  $\chi^2$ /NDF: 65887712966.5/24

Right Out: 9.824 $\pm$ 0.000  $\chi^2$ /NDF: 91535166201.6/34

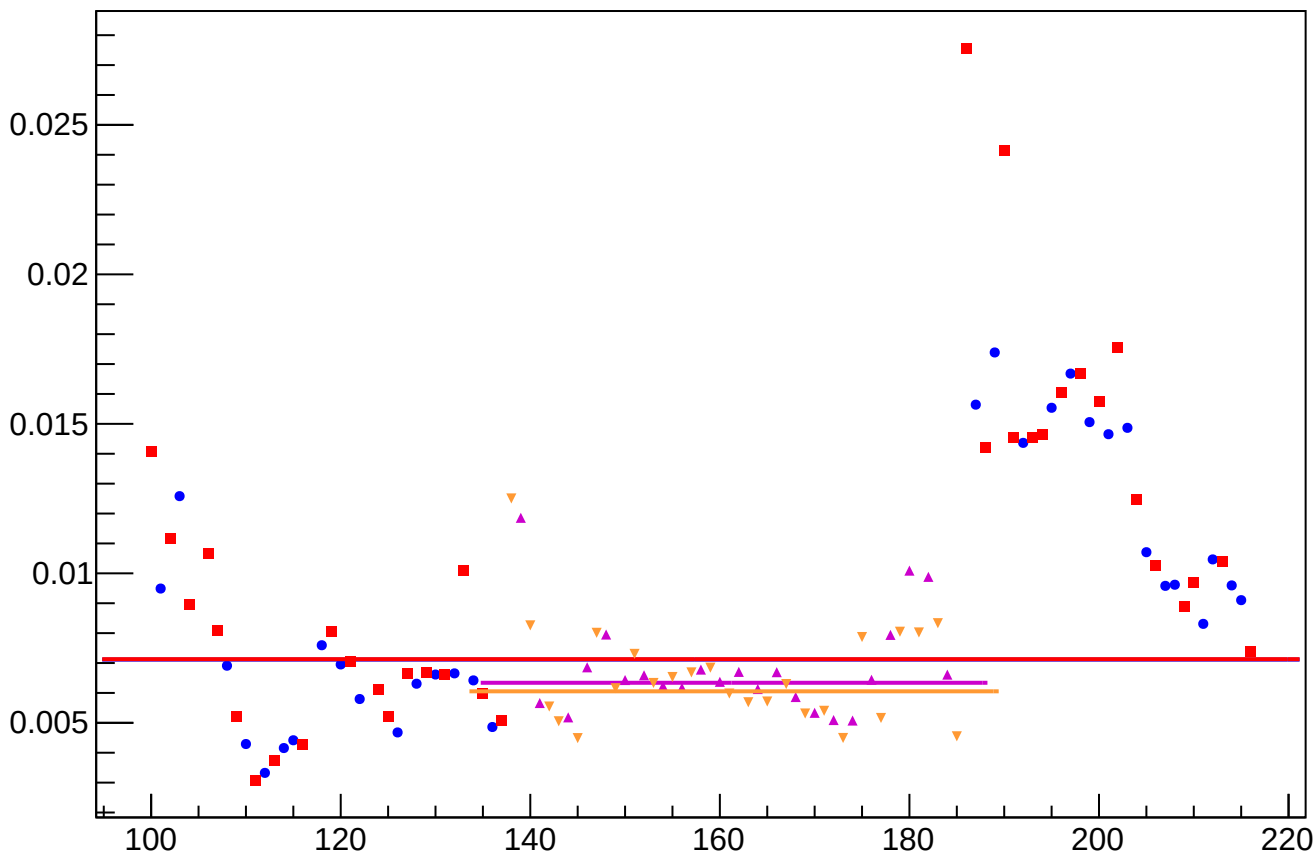
Left In: 8.956 $\pm$ 0.000  $\chi^2$ /NDF: 51572164470.4/22

+ sign 9.273 $\pm$ 0.000  $\chi^2$ /NDF: 261939611459.2/55

All: 9.302 $\pm$ 0.000  $\chi^2$ /NDF: 524671424360.2

- sign 9.332 $\pm$ 0.000  $\chi^2$ /NDF: 261561537357.2/57

# yield\_sam8\_rms vs Slug



Right In: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 6698890.8/30

Left Out: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:1461022.8/24

Right Out: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 8343030.9/34

Left In: 0.006 $\pm$ 0.000  $\chi^2$ /NDF:1175260.9/22

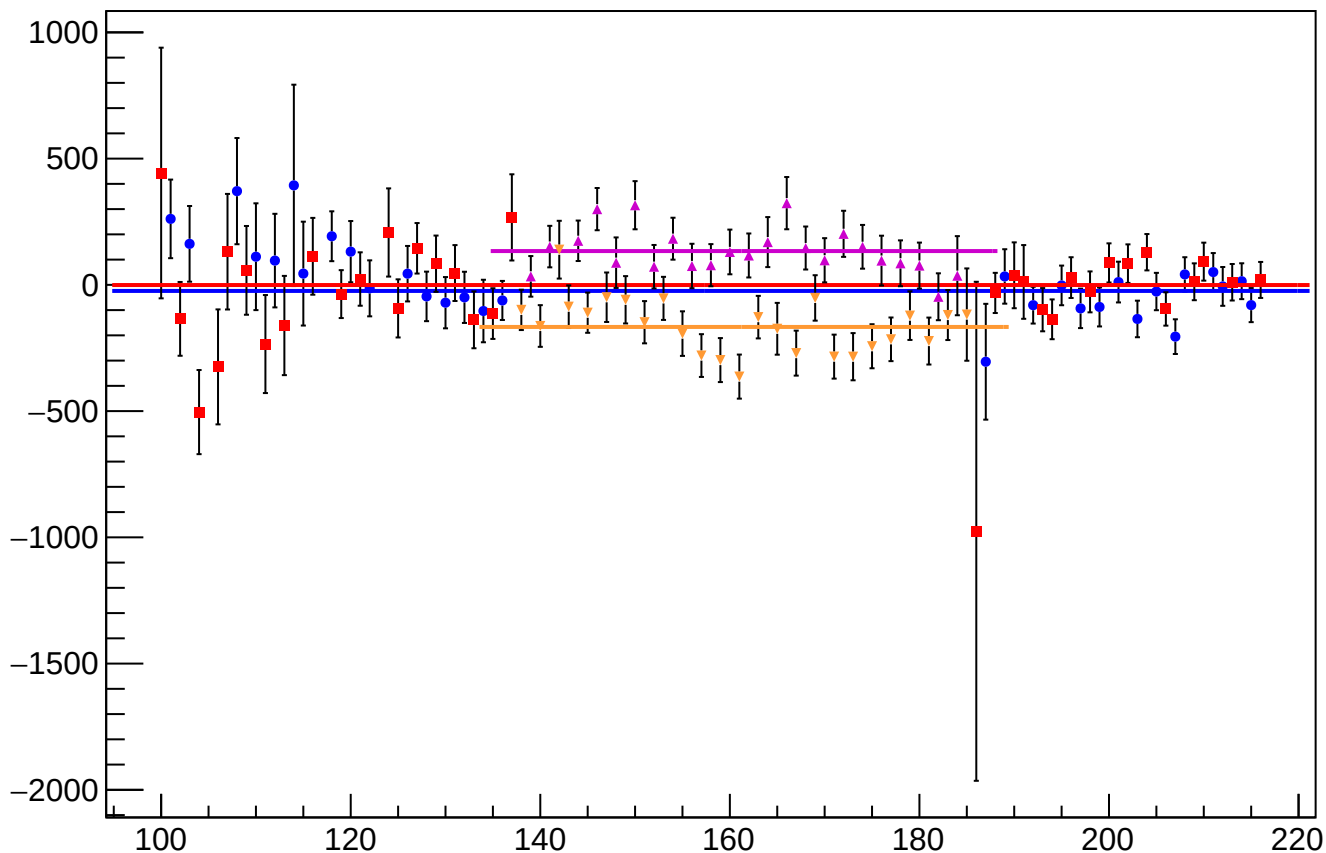
+ sign 0.006 $\pm$ 0.000  $\chi^2$ /NDF: 8538277.5/55

All: 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 18279340.1/113

- sign 0.007 $\pm$ 0.000  $\chi^2$ /NDF: 9714228.3/57



# reg\_asym\_sam1\_mean vs Slug



Right In:  $-24.033 \pm 16.757$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-166.676 \pm 18.079$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-0.733 \pm 17.105$   $\chi^2/\text{NDF}$ : 41.5/34

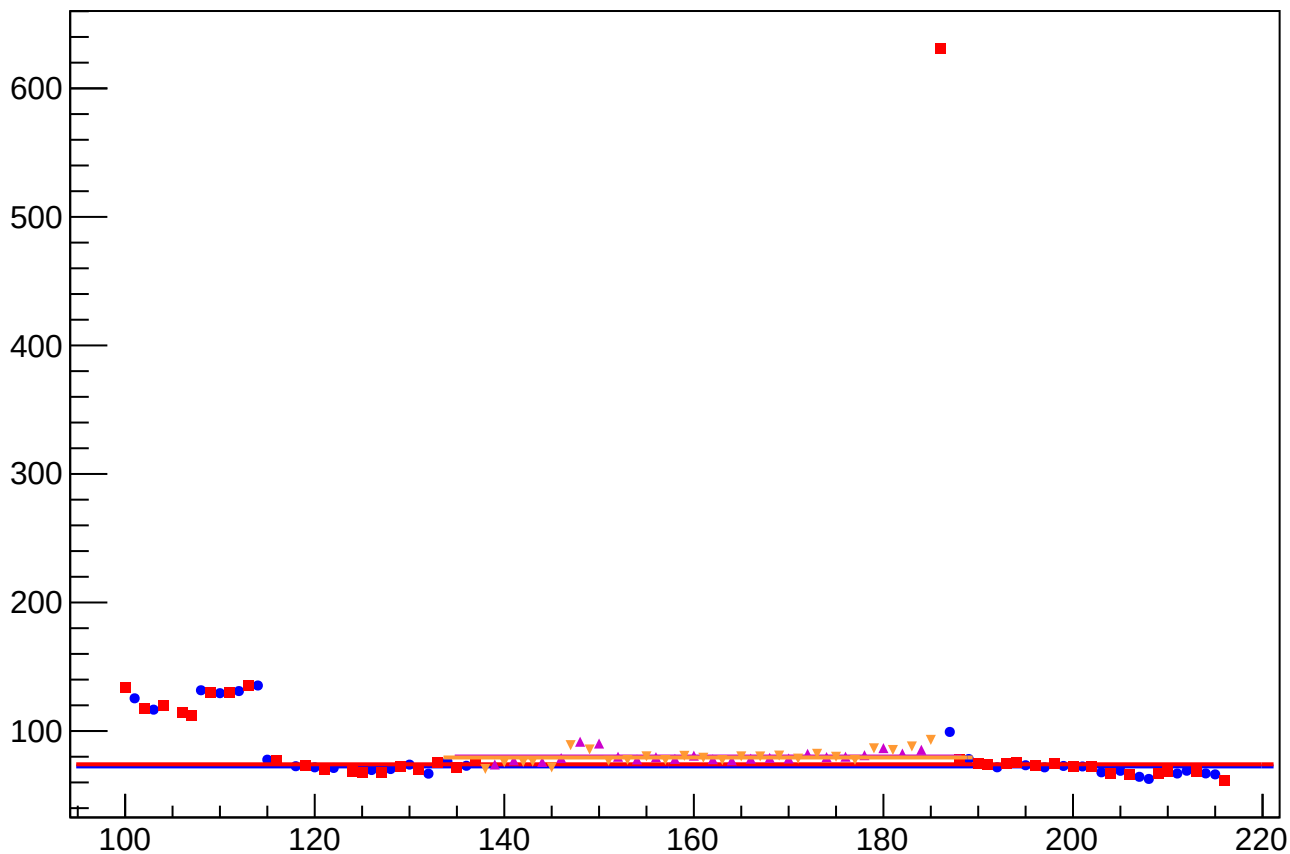
Left In:  $133.843 \pm 18.756$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $-89.952 \pm 12.290$   $\chi^2/\text{NDF}$ : 99.8/55

All:  $-16.890 \pm 8.811$   $\chi^2/\text{NDF}$ : 262.8/113

- sign  $60.372 \pm 12.638$   $\chi^2/\text{NDF}$ : 90.4/57

# reg\_asym\_sam1\_rms vs Slug



Right In: 72.460 $\pm$ 0.012     $\chi^2$ /NDF: 1129307.1/30

Left Out: 79.410 $\pm$ 0.013     $\chi^2$ /NDF:134796.0/24

Right Out: 74.111 $\pm$ 0.012     $\chi^2$ /NDF: 1858317.5/34

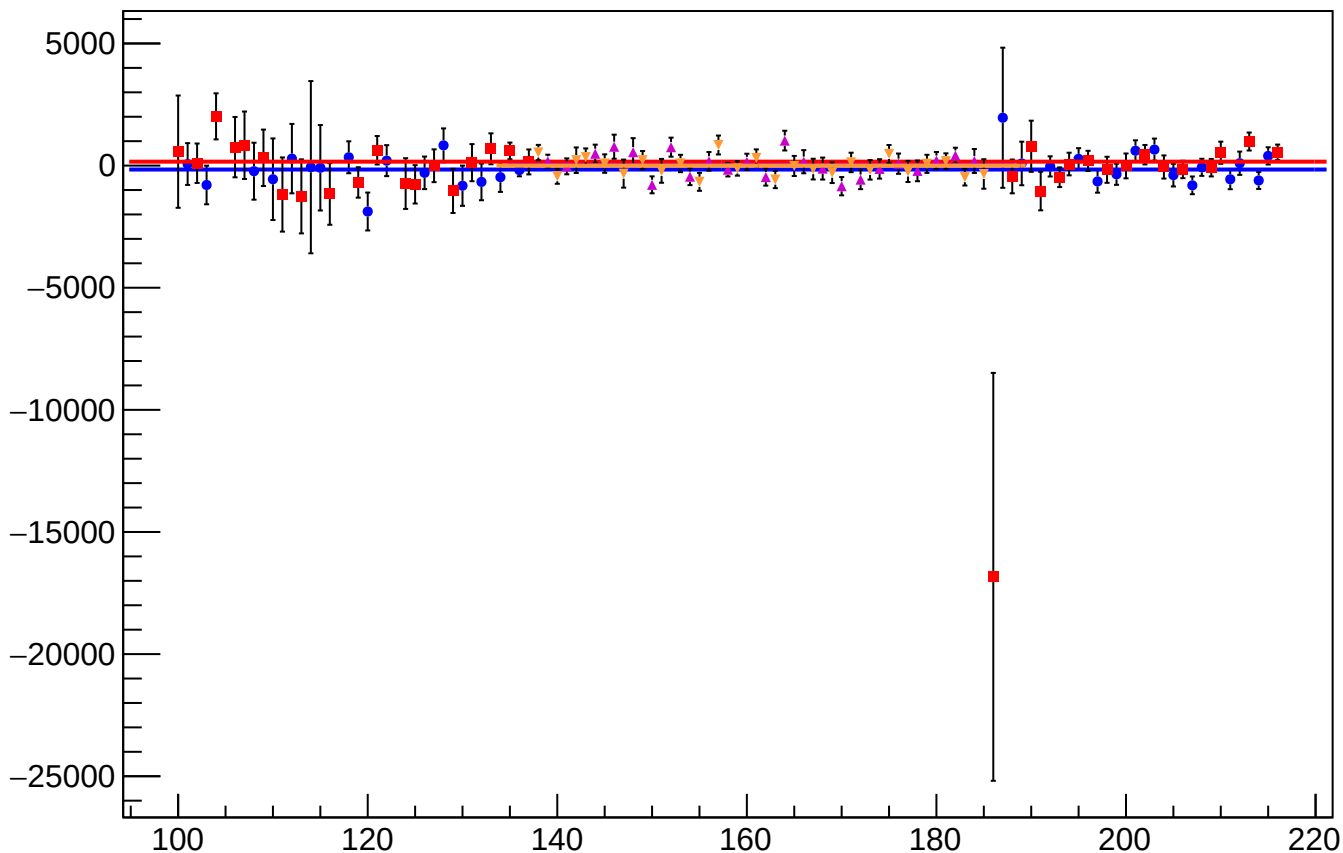
Left In: 80.160 $\pm$ 0.013     $\chi^2$ /NDF:91469.5/22

+ sign 75.672 $\pm$ 0.009     $\chi^2$ /NDF: 1423097.6/55

All: 76.248 $\pm$ 0.006     $\chi^2$ /NDF: 3495508.5/113

- sign 76.858 $\pm$ 0.009     $\chi^2$ /NDF: 2063362.8/57

# asym\_sam1\_reg\_correction\_mean vs Slug



Right In:  $-160.575 \pm 92.347$   $\chi^2/\text{NDF}$ : 28.6/30

Left Out:  $-3.474 \pm 75.863$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $161.198 \pm 94.635$   $\chi^2/\text{NDF}$ : 35.7/34

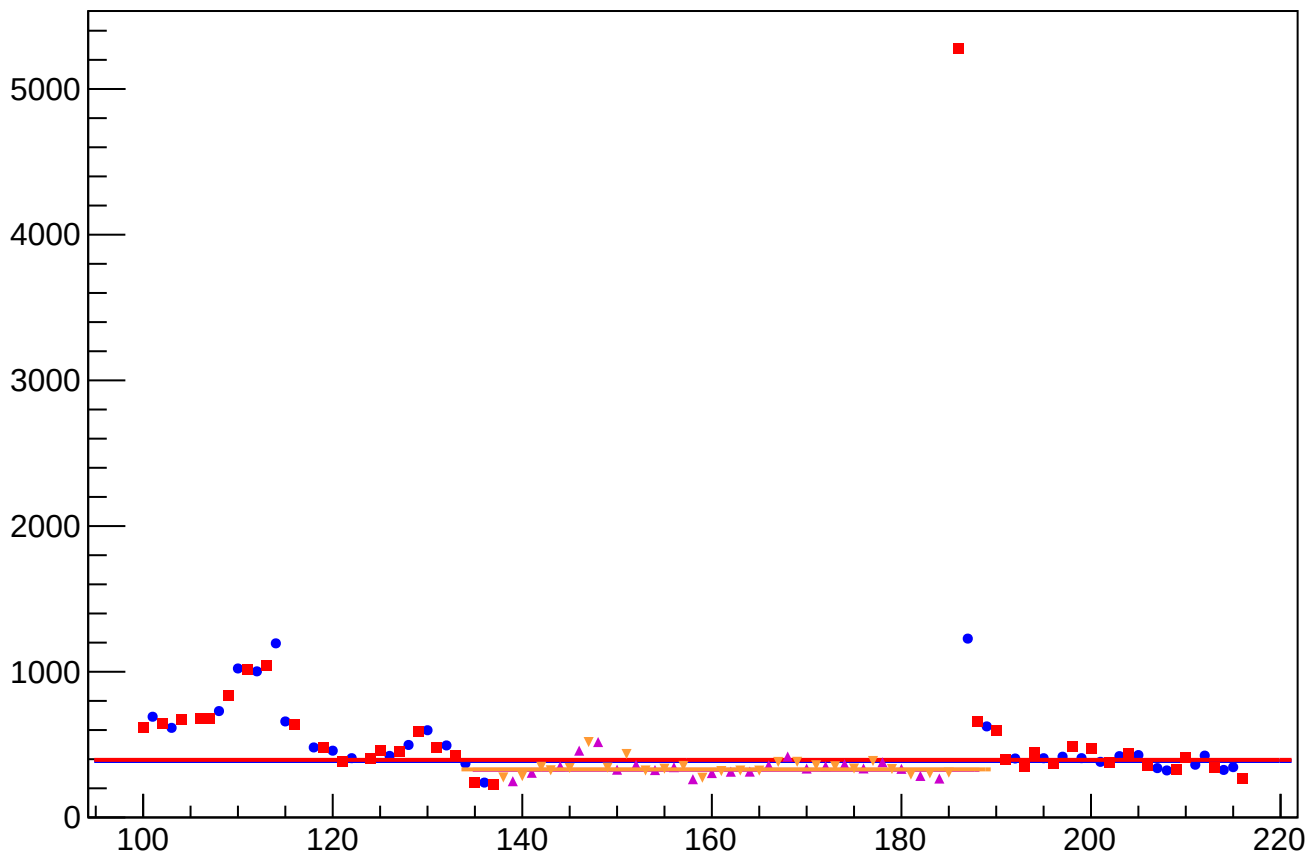
Left In:  $19.298 \pm 77.541$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $-66.775 \pm 58.619$   $\chi^2/\text{NDF}$ : 54.4/55

All:  $3.122 \pm 41.922$   $\chi^2/\text{NDF}$ : 129.4/113

- sign  $76.297 \pm 59.978$   $\chi^2/\text{NDF}$ : 72.1/57

# asym\_sam1\_reg\_correction\_rms vs Slug



Right In: 387.505 $\pm$ 0.065  $\chi^2$ /NDF: 2951563.9/30

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659241.4/24

Right Out: 395.238 $\pm$ 0.067  $\chi^2$ /NDF: 4127472.7/34

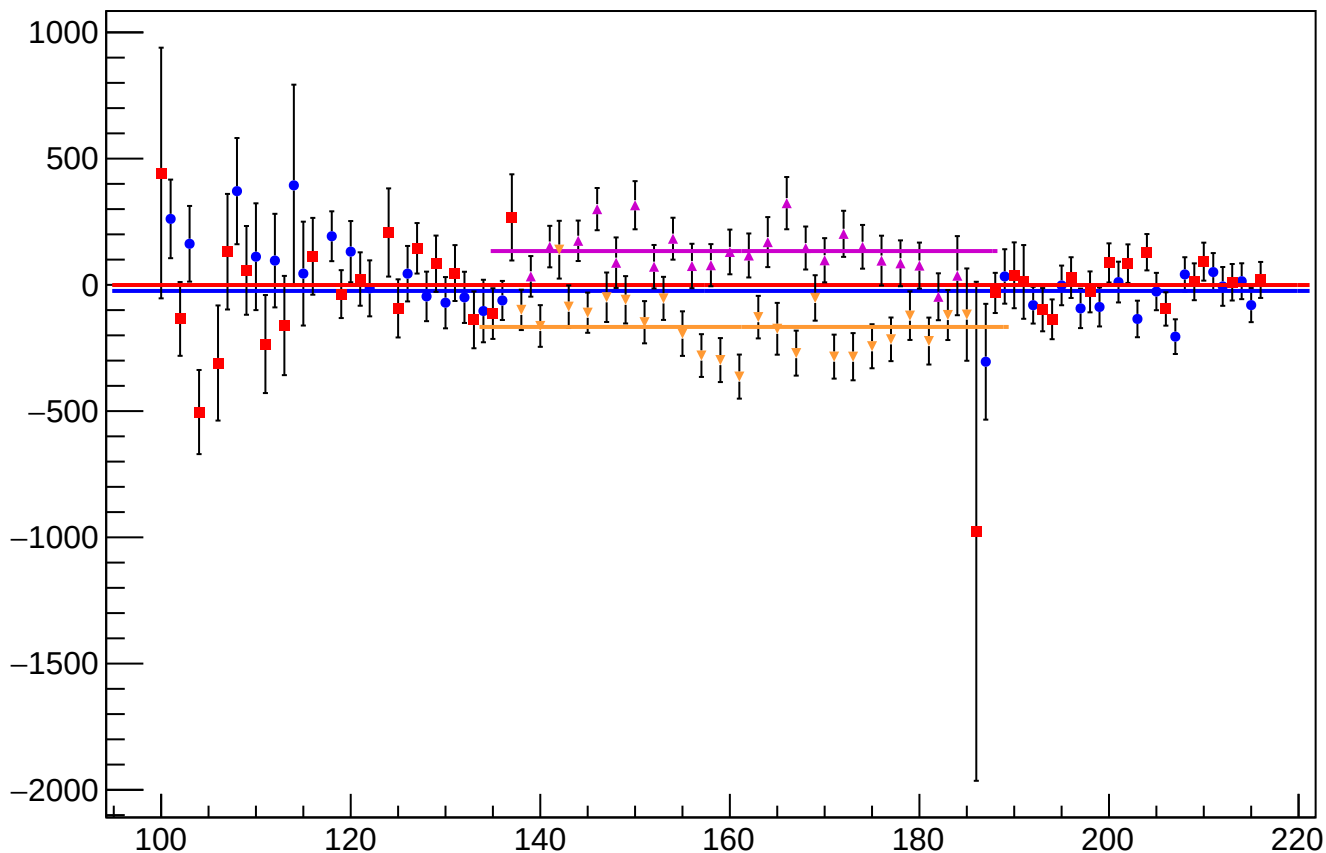
Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899326.3/22

+ sign 353.151 $\pm$ 0.041  $\chi^2$ /NDF: 4074365.8/55

All: 353.756 $\pm$ 0.030  $\chi^2$ /NDF: 9724440.8/113

- sign 354.388 $\pm$ 0.042  $\chi^2$ /NDF: 5649640.1/57

# cor\_asym\_sam1\_mean vs Slug



Right In:  $-24.034 \pm 16.757$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-166.675 \pm 18.079$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-0.640 \pm 17.105$   $\chi^2/\text{NDF}$ : 41.3/34

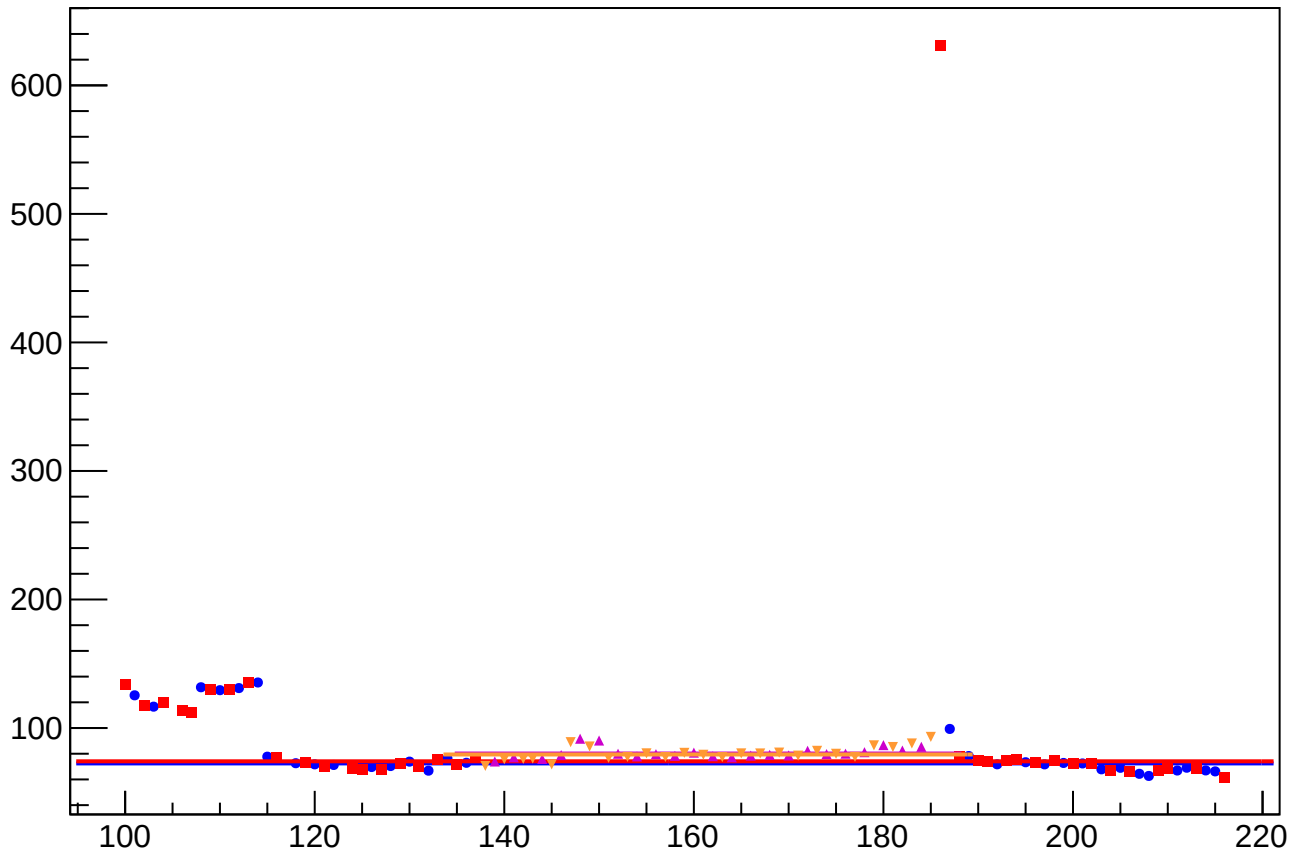
Left In:  $133.850 \pm 18.756$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $-89.952 \pm 12.290$   $\chi^2/\text{NDF}$ : 99.8/55

All:  $-16.864 \pm 8.811$   $\chi^2/\text{NDF}$ : 262.7/113

- sign  $60.426 \pm 12.638$   $\chi^2/\text{NDF}$ : 90.1/57

# cor\_asym\_sam1\_rms vs Slug



Right In: 72.460 $\pm$ 0.012  $\chi^2$ /NDF: 1129307.3/30

Left Out: 79.410 $\pm$ 0.013  $\chi^2$ /NDF:134796.1/24

Right Out: 74.106 $\pm$ 0.012  $\chi^2$ /NDF: 1855947.6/34

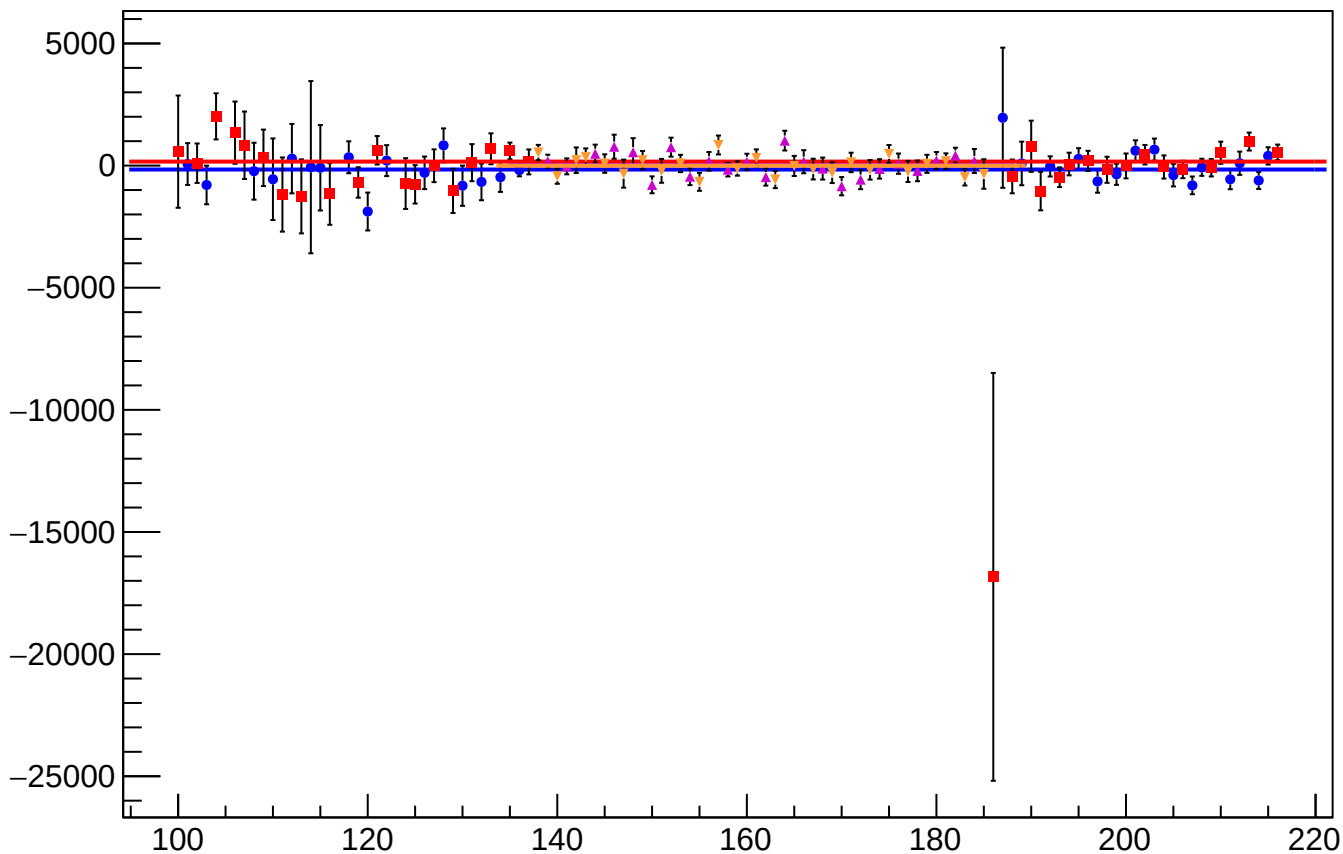
Left In: 80.160 $\pm$ 0.013  $\chi^2$ /NDF:91469.5/22

+ sign 75.672 $\pm$ 0.009  $\chi^2$ /NDF: 1423097.8/55

All: 76.247 $\pm$ 0.006  $\chi^2$ /NDF: 3493275.8/113

- sign 76.855 $\pm$ 0.009  $\chi^2$ /NDF: 2061168.6/57

# asym\_sam1\_cor\_correction\_mean vs Slug



Right In:  $-160.579 \pm 92.347$   $\chi^2/\text{NDF}$ : 28.6/30

Left Out:  $-3.474 \pm 75.863$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $164.258 \pm 94.652$   $\chi^2/\text{NDF}$ : 36.4/34

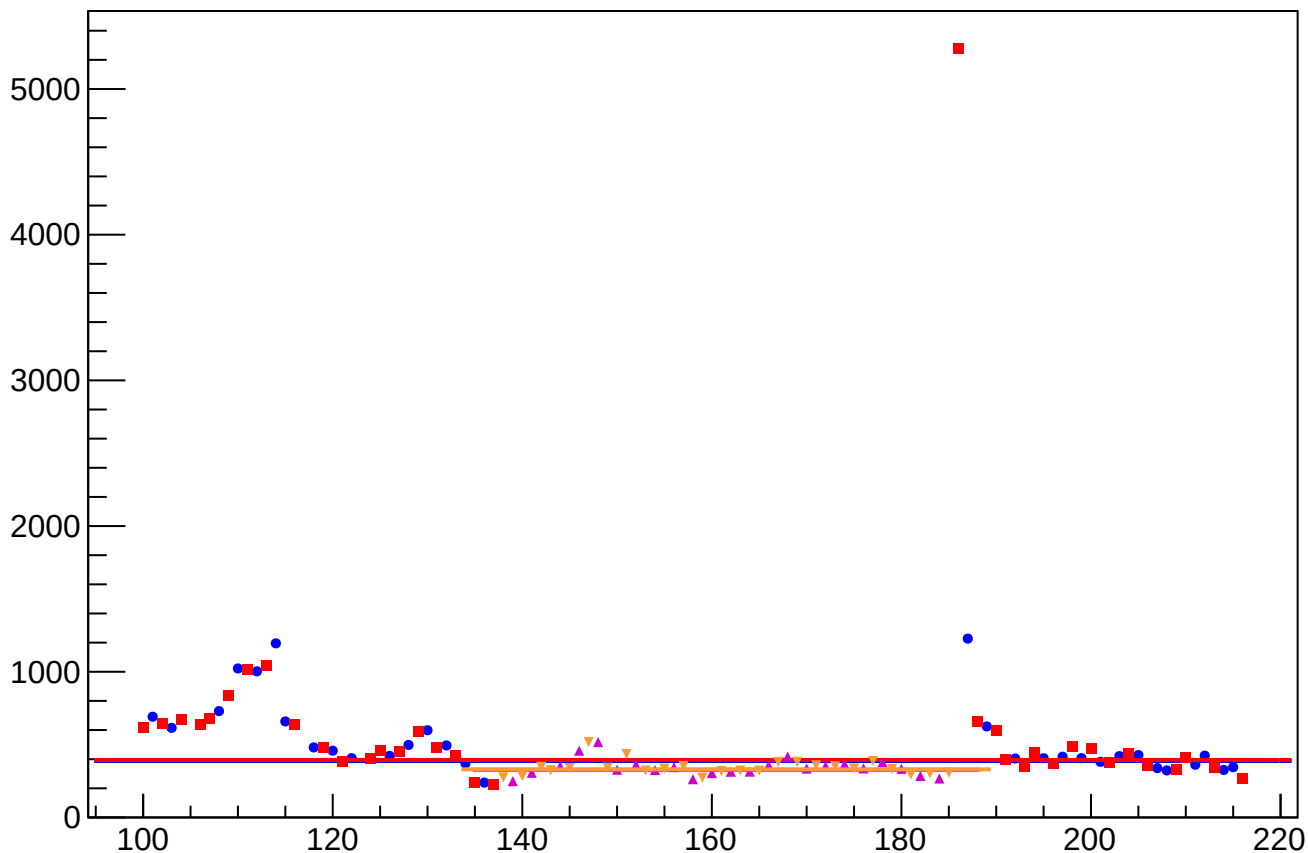
Left In:  $19.305 \pm 77.541$   $\chi^2/\text{NDF}$ : 35.0/22

+ sign  $-66.777 \pm 58.619$   $\chi^2/\text{NDF}$ : 54.4/55

All:  $3.712 \pm 41.924$   $\chi^2/\text{NDF}$ : 130.1/113

- sign  $77.518 \pm 59.983$   $\chi^2/\text{NDF}$ : 72.8/57

# asym\_sam1\_cor\_correction\_rms vs Slug



Right In: 387.505 $\pm$ 0.065  $\chi^2$ /NDF: 2951560.5/30

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659249.8/24

Right Out: 394.921 $\pm$ 0.067  $\chi^2$ /NDF: 4095480.3/34

Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899329.3/22

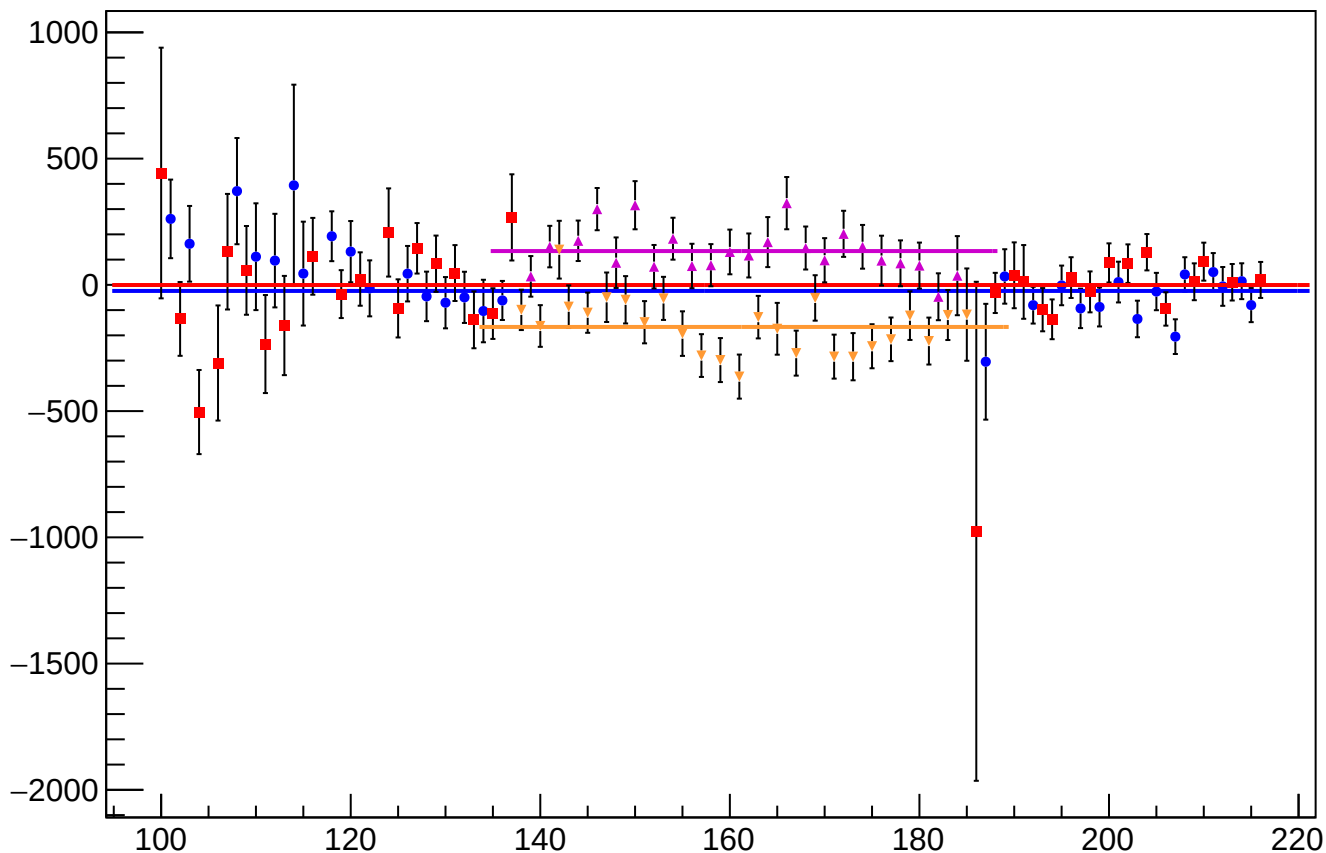
+ sign 353.151 $\pm$ 0.041  $\chi^2$ /NDF: 4074373.3/55

All: 353.691 $\pm$ 0.030  $\chi^2$ /NDF: 9686476.1/113

- sign 354.255 $\pm$ 0.042  $\chi^2$ /NDF: 5611756.4/57



# eigen\_cor\_asym\_sam1\_mean vs Slug



Right In:  $-24.034 \pm 16.757$   $\chi^2/\text{NDF}$ : 34.7/30

Left Out:  $-166.675 \pm 18.079$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-0.640 \pm 17.105$   $\chi^2/\text{NDF}$ : 41.3/34

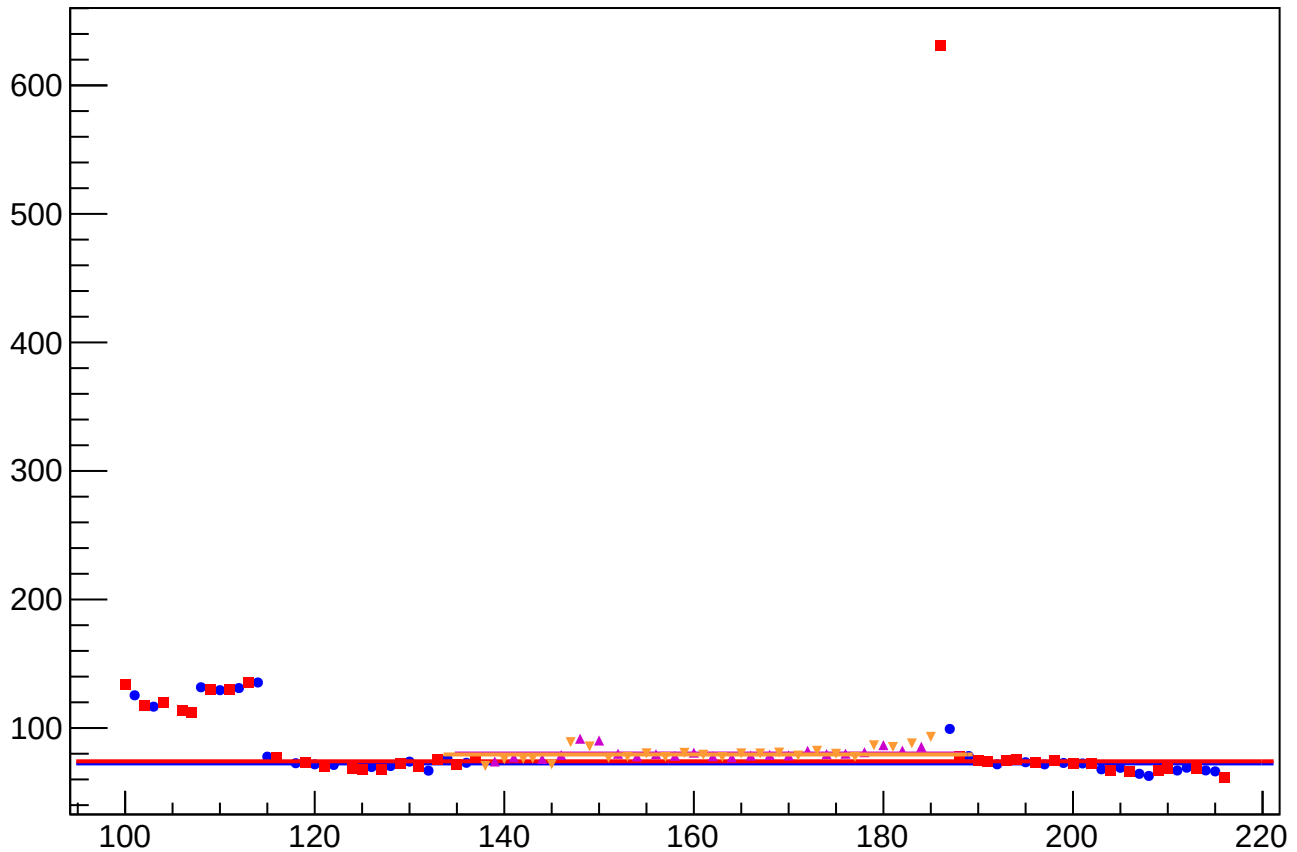
Left In:  $133.850 \pm 18.756$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $-89.952 \pm 12.290$   $\chi^2/\text{NDF}$ : 99.8/55

All:  $-16.864 \pm 8.811$   $\chi^2/\text{NDF}$ : 262.7/113

- sign  $60.426 \pm 12.638$   $\chi^2/\text{NDF}$ : 90.1/57

# eigen\_cor\_asym\_sam1\_rms vs Slug



Right In: 72.460 $\pm$ 0.012  $\chi^2$ /NDF: 1129307.3/30

Left Out: 79.410 $\pm$ 0.013  $\chi^2$ /NDF: 134796.1/24

Right Out: 74.106 $\pm$ 0.012  $\chi^2$ /NDF: 1855947.6/34

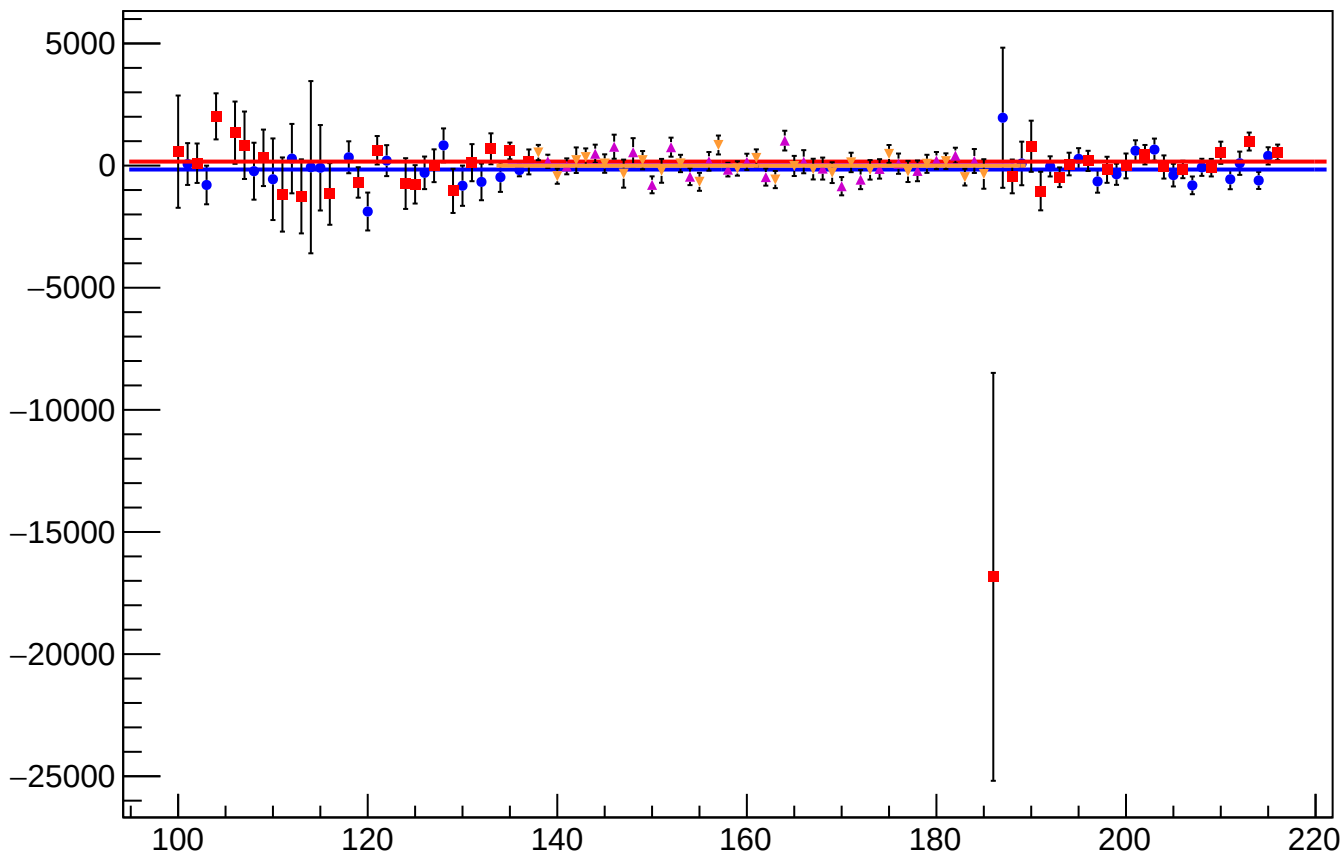
Left In: 80.160 $\pm$ 0.013  $\chi^2$ /NDF: 91469.5/22

+ sign 75.672 $\pm$ 0.009  $\chi^2$ /NDF: 1423097.8/55

All: 76.247 $\pm$ 0.006  $\chi^2$ /NDF: 3493275.8/113

- sign 76.855 $\pm$ 0.009  $\chi^2$ /NDF: 2061168.6/57

# asym\_sam1\_eigen\_cor\_correction\_mean vs Slug



Right In: -160.579 $\pm$ 92.347  $\chi^2/\text{NDF}$ : 28.6/30

Left Out: -3.474 $\pm$ 75.863  $\chi^2/\text{NDF}$ : 24.0/24

Right Out: 164.258 $\pm$ 94.652  $\chi^2/\text{NDF}$ : 36.4/34

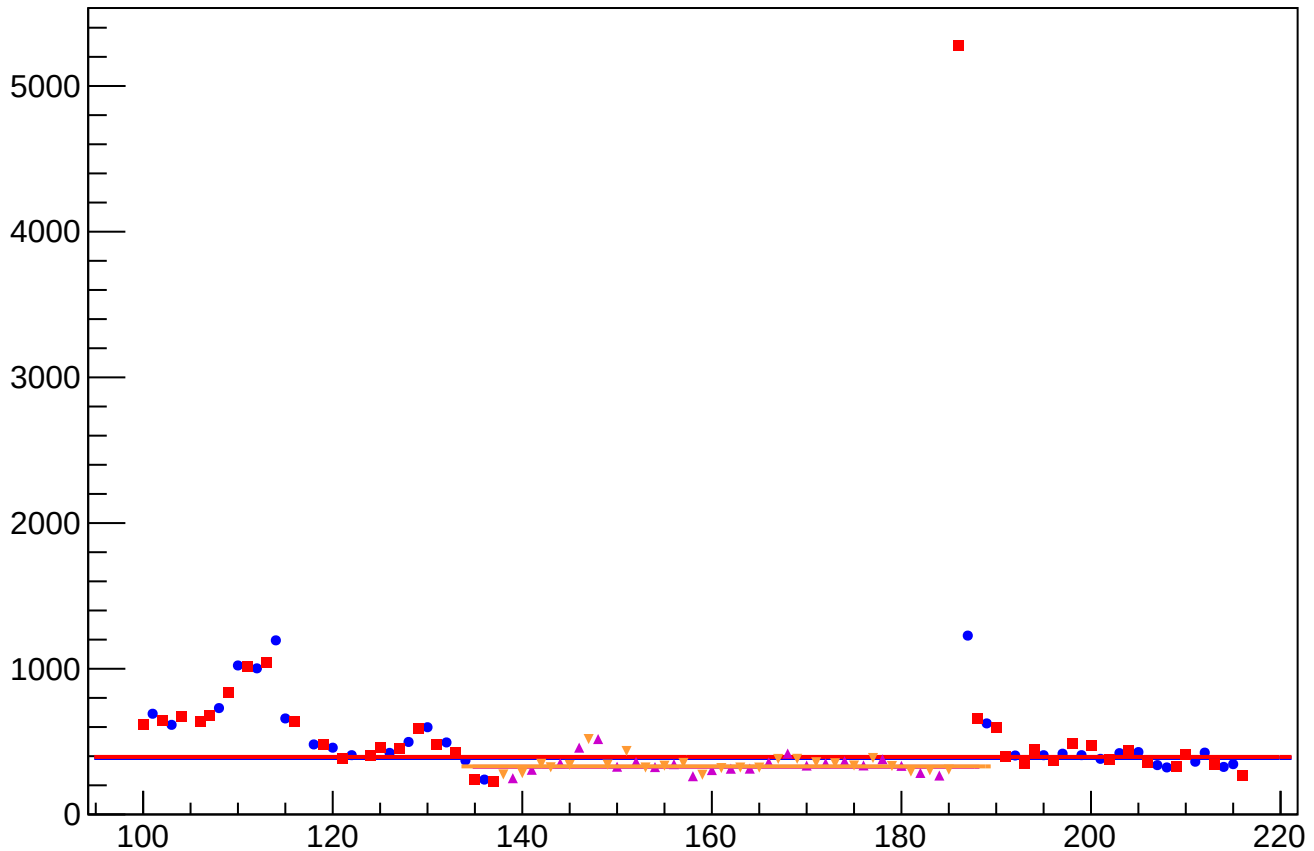
Left In: 19.305 $\pm$ 77.541  $\chi^2/\text{NDF}$ : 35.0/22

+ sign -66.777 $\pm$ 58.619  $\chi^2/\text{NDF}$ : 54.4/55

All: 3.712 $\pm$ 41.924  $\chi^2/\text{NDF}$ : 130.1/113

- sign 77.518 $\pm$ 59.983  $\chi^2/\text{NDF}$ : 72.8/57

# asym\_sam1\_eigen\_cor\_correction\_rms vs Slug



Right In: 387.505 $\pm$ 0.065  $\chi^2$ /NDF: 2951560.5/30

Left Out: 329.968 $\pm$ 0.054  $\chi^2$ /NDF: 659249.8/24

Right Out: 394.921 $\pm$ 0.067  $\chi^2$ /NDF: 4095480.3/34

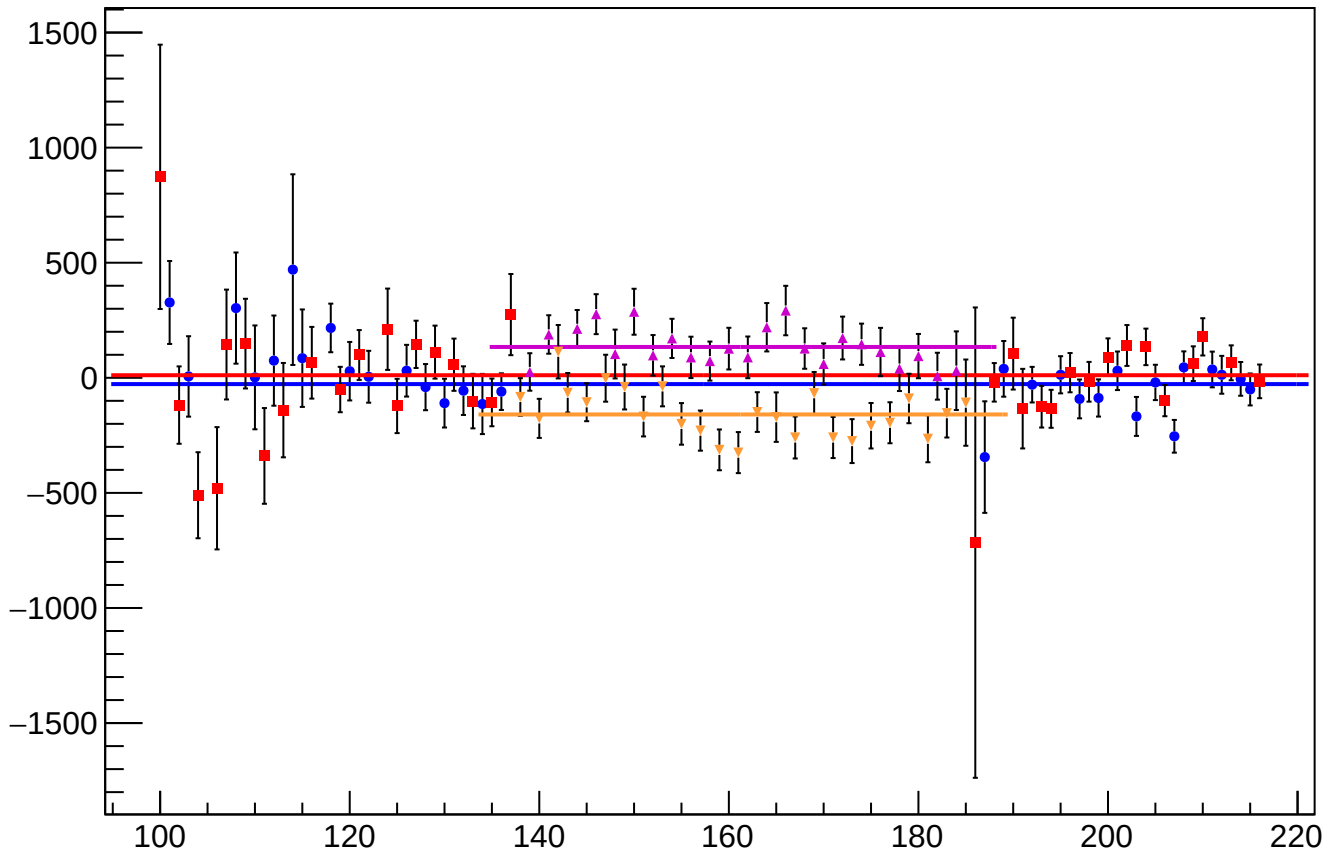
Left In: 326.963 $\pm$ 0.055  $\chi^2$ /NDF: 899329.3/22

+ sign 353.151 $\pm$ 0.041  $\chi^2$ /NDF: 4074373.3/55

All: 353.691 $\pm$ 0.030  $\chi^2$ /NDF: 9686476.1/113

- sign 354.255 $\pm$ 0.042  $\chi^2$ /NDF: 5611756.4/57

# dit\_asym\_sam1\_mean vs Slug



Right In:  $-27.325 \pm 17.617$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $-159.223 \pm 18.749$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $11.240 \pm 18.095$   $\chi^2/\text{NDF}$ : 49.7/34

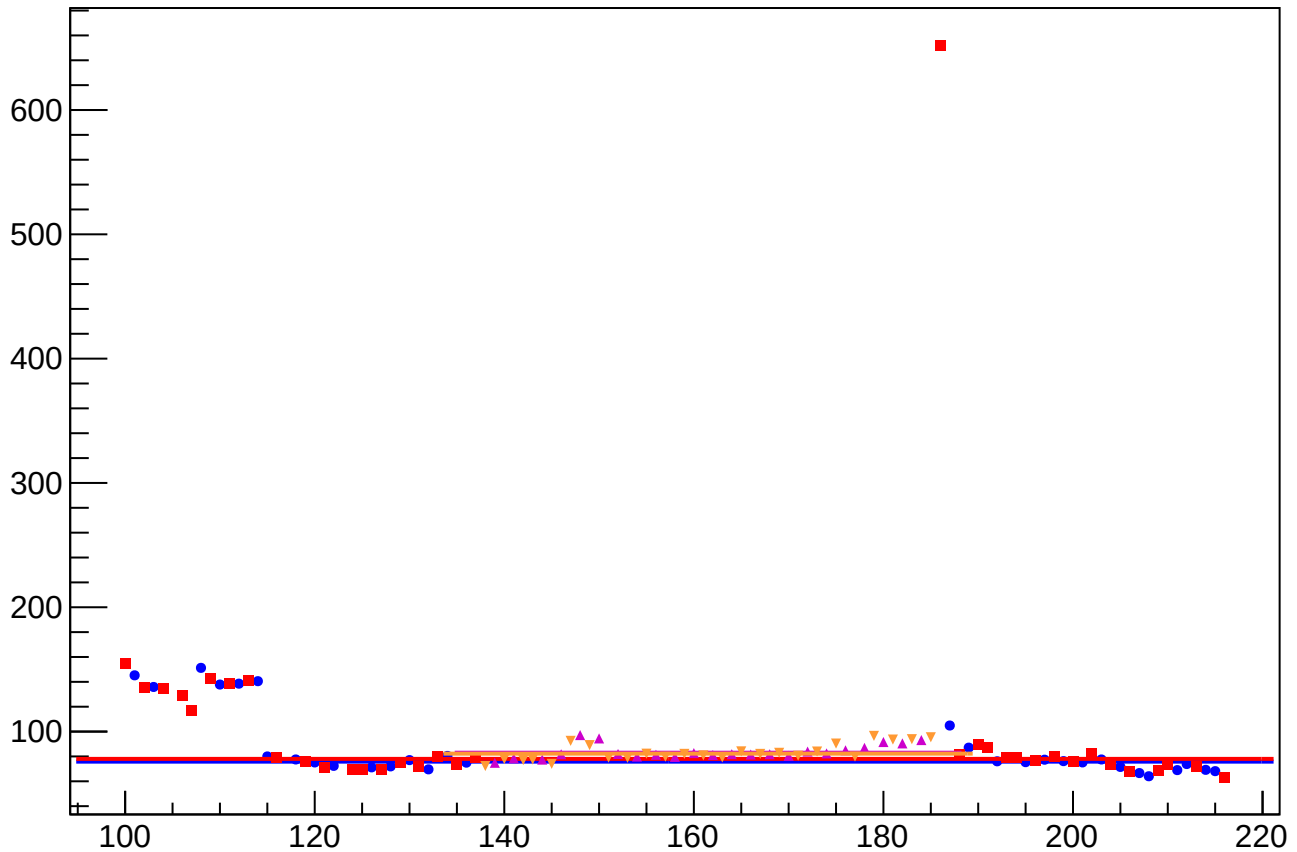
Left In:  $134.010 \pm 19.441$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $-89.172 \pm 12.839$   $\chi^2/\text{NDF}$ : 88.4/55

All:  $-12.924 \pm 9.219$   $\chi^2/\text{NDF}$ : 248.8/113

- sign  $68.229 \pm 13.245$   $\chi^2/\text{NDF}$ : 87.5/57

# dit\_asym\_sam1\_rms vs Slug



Right In: 75.815+/-0.012  $\chi^2/\text{NDF}$ : 1354127.0/30

Left Out: 82.247+/-0.013  $\chi^2/\text{NDF}$ : 216548.3/24

Right Out: 78.026+/-0.013  $\chi^2/\text{NDF}$ : 2056120.5/34

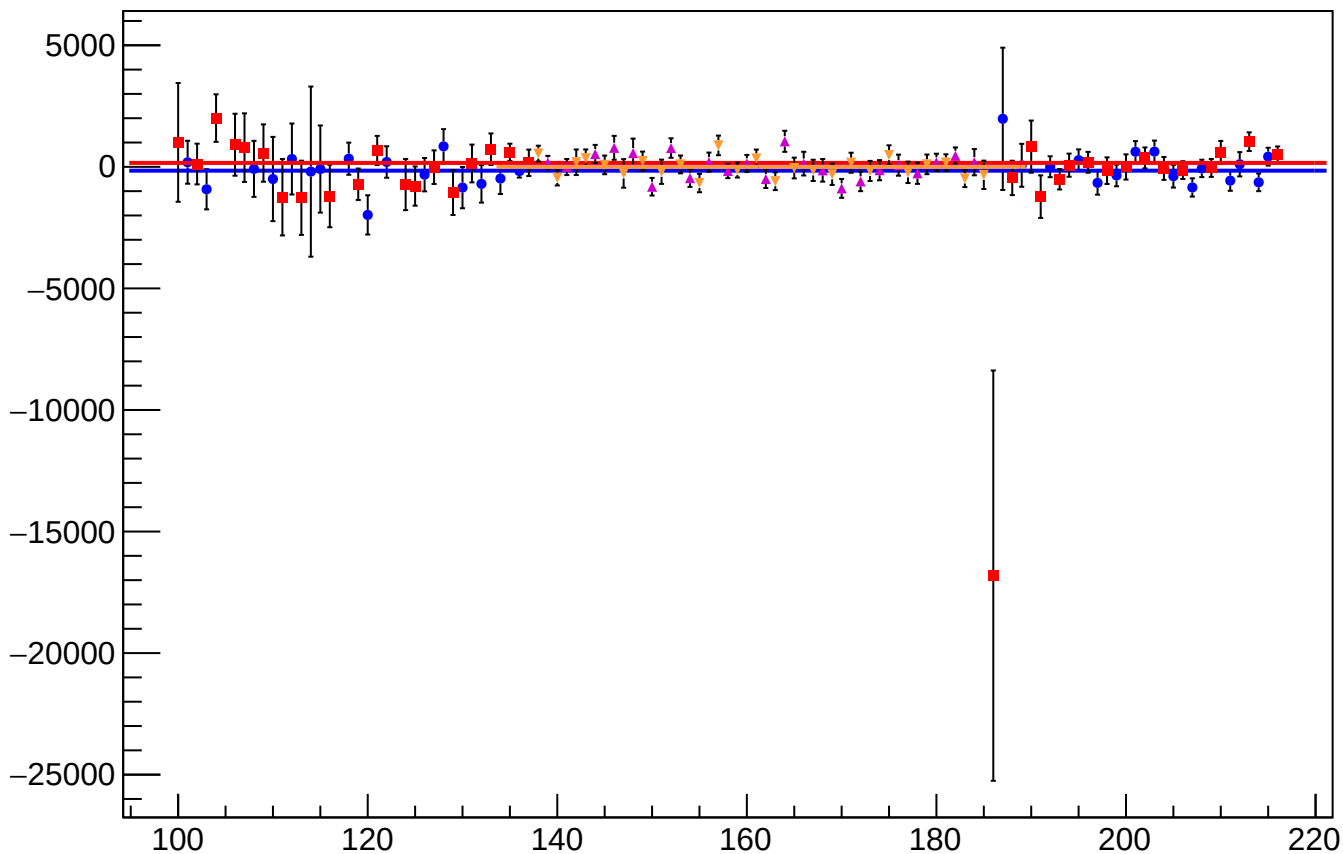
Left In: 82.993+/-0.014  $\chi^2/\text{NDF}$ : 145608.6/22

+ sign 78.831+/-0.009  $\chi^2/\text{NDF}$ : 1695697.0/55

All: 79.558+/-0.007  $\chi^2/\text{NDF}$ : 3980621.3/113

- sign 80.331+/-0.009  $\chi^2/\text{NDF}$ : 2271690.4/57

# asym\_sam1\_dit\_correction\_mean vs Slug



Right In:  $-157.418 \pm 95.366$   $\chi^2/\text{NDF}$ : 28.8/30

Left Out:  $-3.095 \pm 78.582$   $\chi^2/\text{NDF}$ : 23.5/24

Right Out:  $161.852 \pm 98.002$   $\chi^2/\text{NDF}$ : 35.2/34

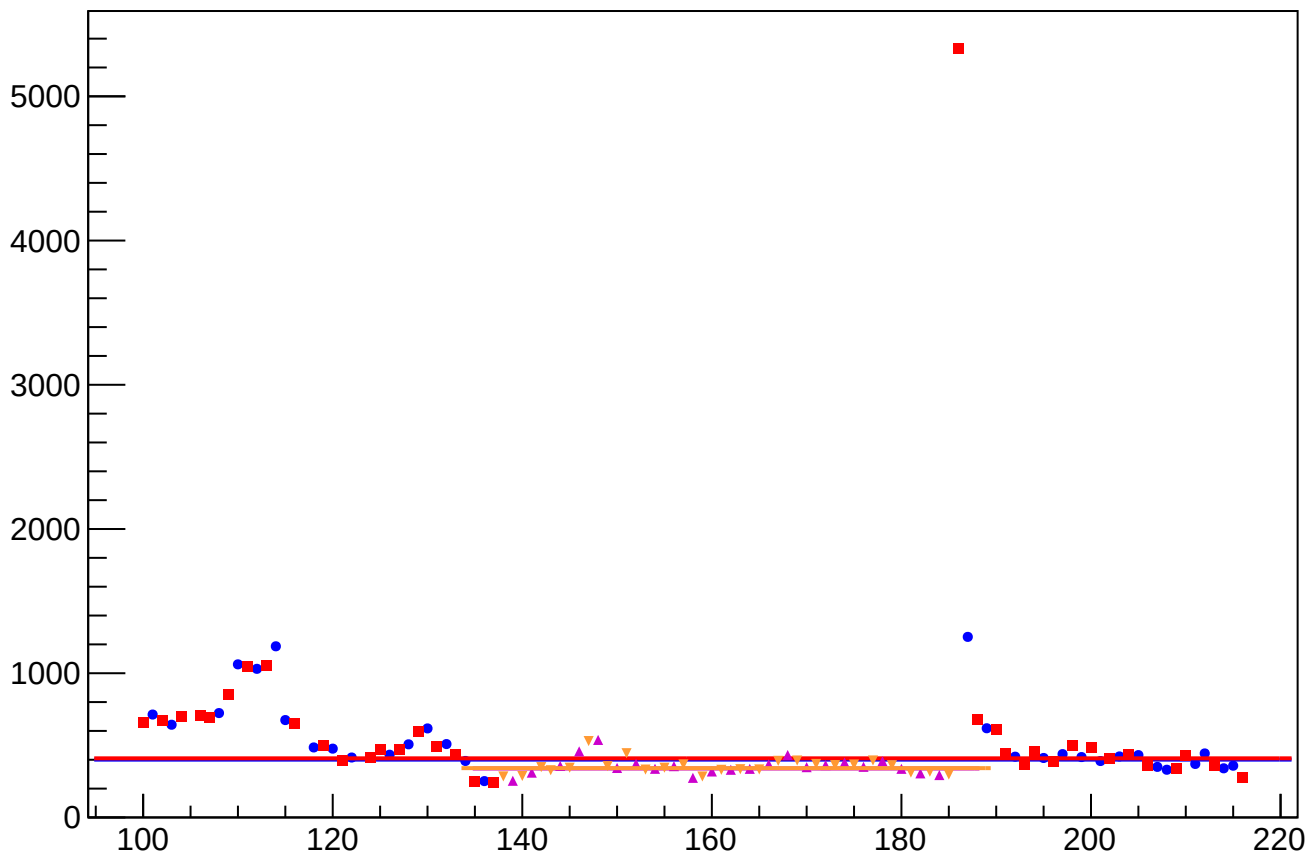
Left In:  $16.519 \pm 80.410$   $\chi^2/\text{NDF}$ : 34.9/22

+ sign  $-65.503 \pm 60.646$   $\chi^2/\text{NDF}$ : 53.9/55

All:  $3.009 \pm 43.409$   $\chi^2/\text{NDF}$ : 127.9/113

- sign  $74.993 \pm 62.163$   $\chi^2/\text{NDF}$ : 71.4/57

# asym\_sam1\_dit\_correction\_rms vs Slug



Right In: 400.986 $\pm$ 0.067  $\chi^2$ /NDF: 2825681.8/30

Left Out: 341.918 $\pm$ 0.056  $\chi^2$ /NDF: 653930.4/24

Right Out: 409.913 $\pm$ 0.069  $\chi^2$ /NDF: 4021333.6/34

Left In: 339.430 $\pm$ 0.057  $\chi^2$ /NDF: 846706.0/22

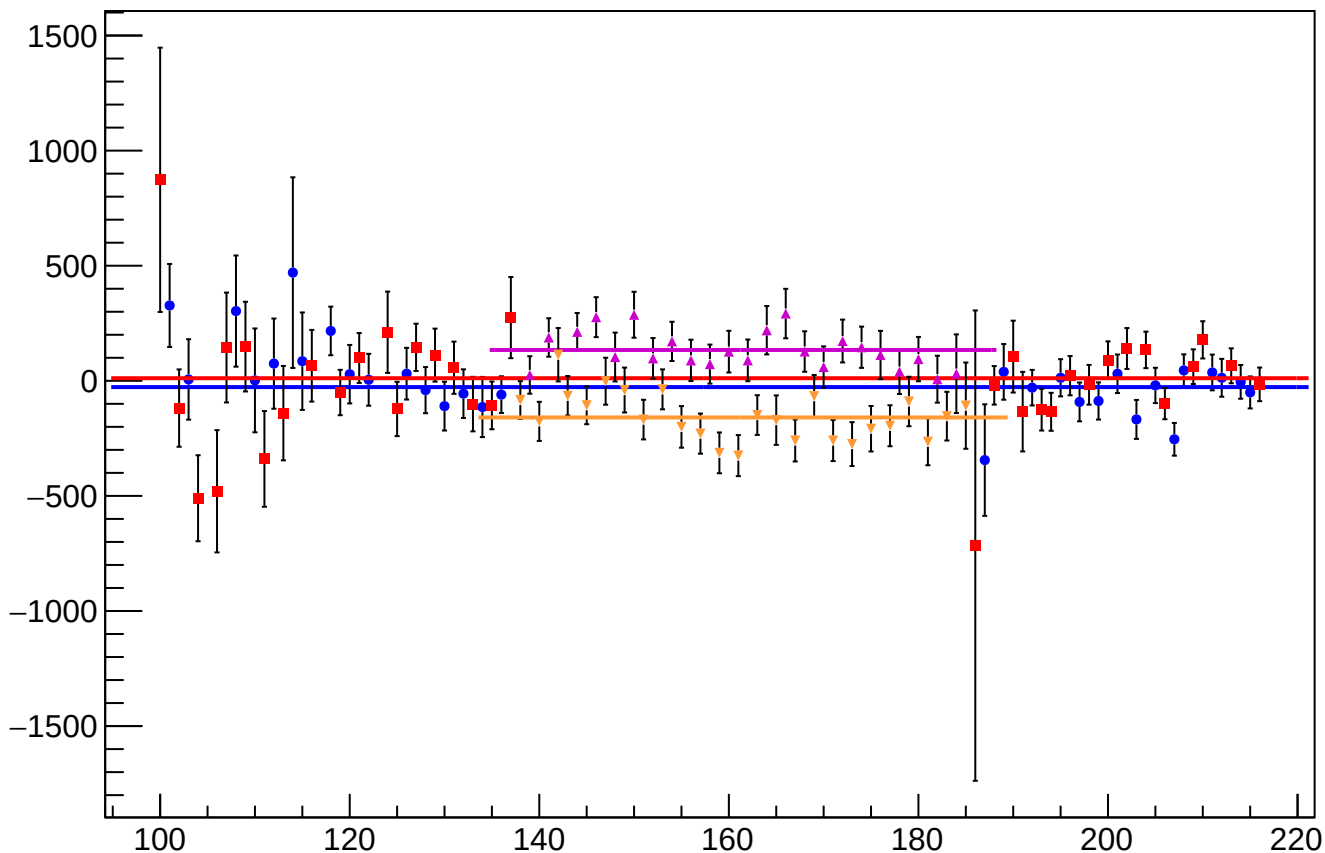
+ sign 365.805 $\pm$ 0.043  $\chi^2$ /NDF: 3936600.9/55

All: 366.772 $\pm$ 0.031  $\chi^2$ /NDF: 9423964.3/113

- sign 367.788 $\pm$ 0.044  $\chi^2$ /NDF: 5486320.1/57



# eigen\_dit\_asym\_sam1\_mean vs Slug



Right In:  $-27.324 \pm 17.617$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $-159.223 \pm 18.749$   $\chi^2/\text{NDF}$ : 28.2/24

Right Out:  $11.241 \pm 18.095$   $\chi^2/\text{NDF}$ : 49.7/34

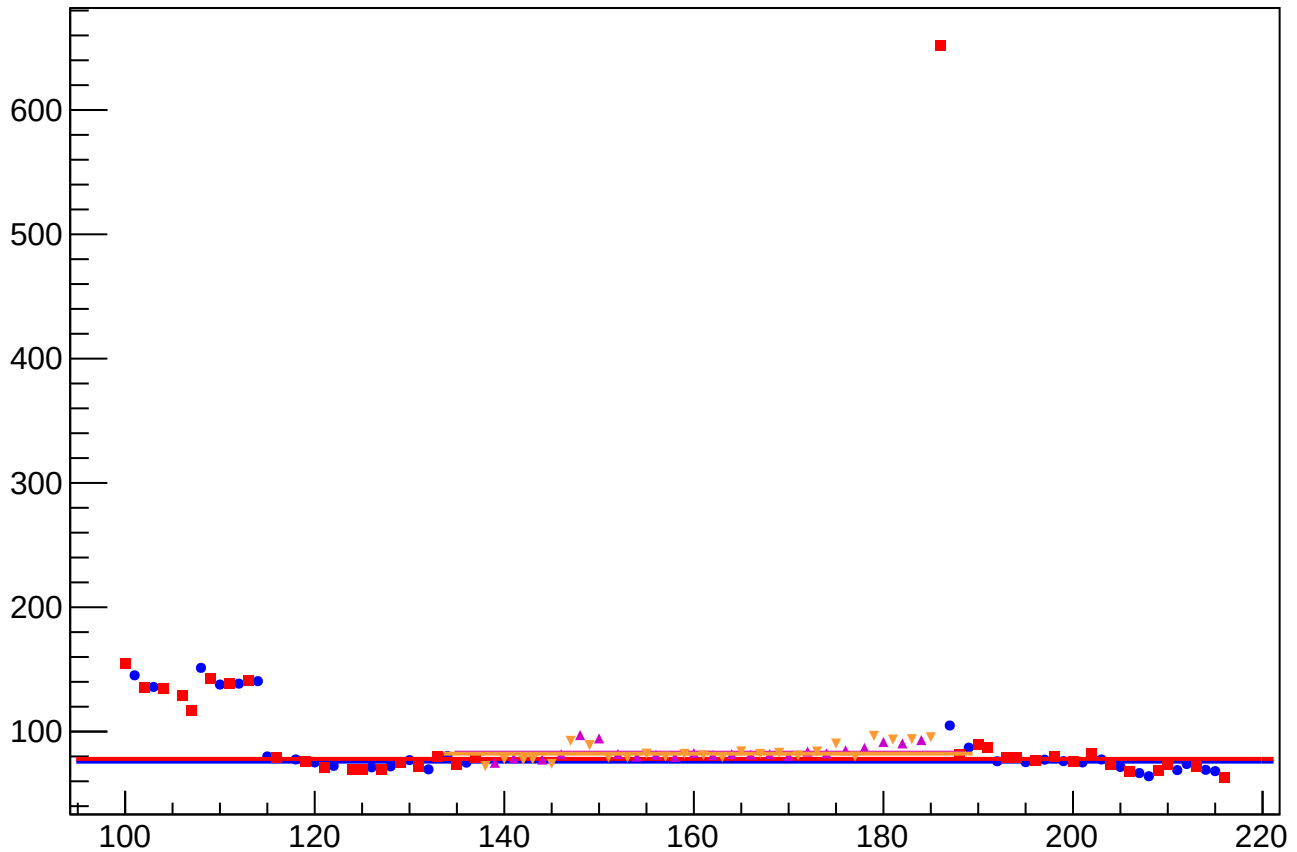
Left In:  $134.010 \pm 19.441$   $\chi^2/\text{NDF}$ : 16.4/22

+ sign  $-89.171 \pm 12.839$   $\chi^2/\text{NDF}$ : 88.4/55

All:  $-12.924 \pm 9.219$   $\chi^2/\text{NDF}$ : 248.8/113

- sign  $68.229 \pm 13.245$   $\chi^2/\text{NDF}$ : 87.5/57

# eigen\_dit\_asym\_sam1\_rms vs Slug



Right In: 75.815+/-0.012  $\chi^2/\text{NDF}$ : 1354128.6/30

Left Out: 82.247+/-0.013  $\chi^2/\text{NDF}$ : 216548.5/24

Right Out: 78.026+/-0.013  $\chi^2/\text{NDF}$ : 2056121.4/34

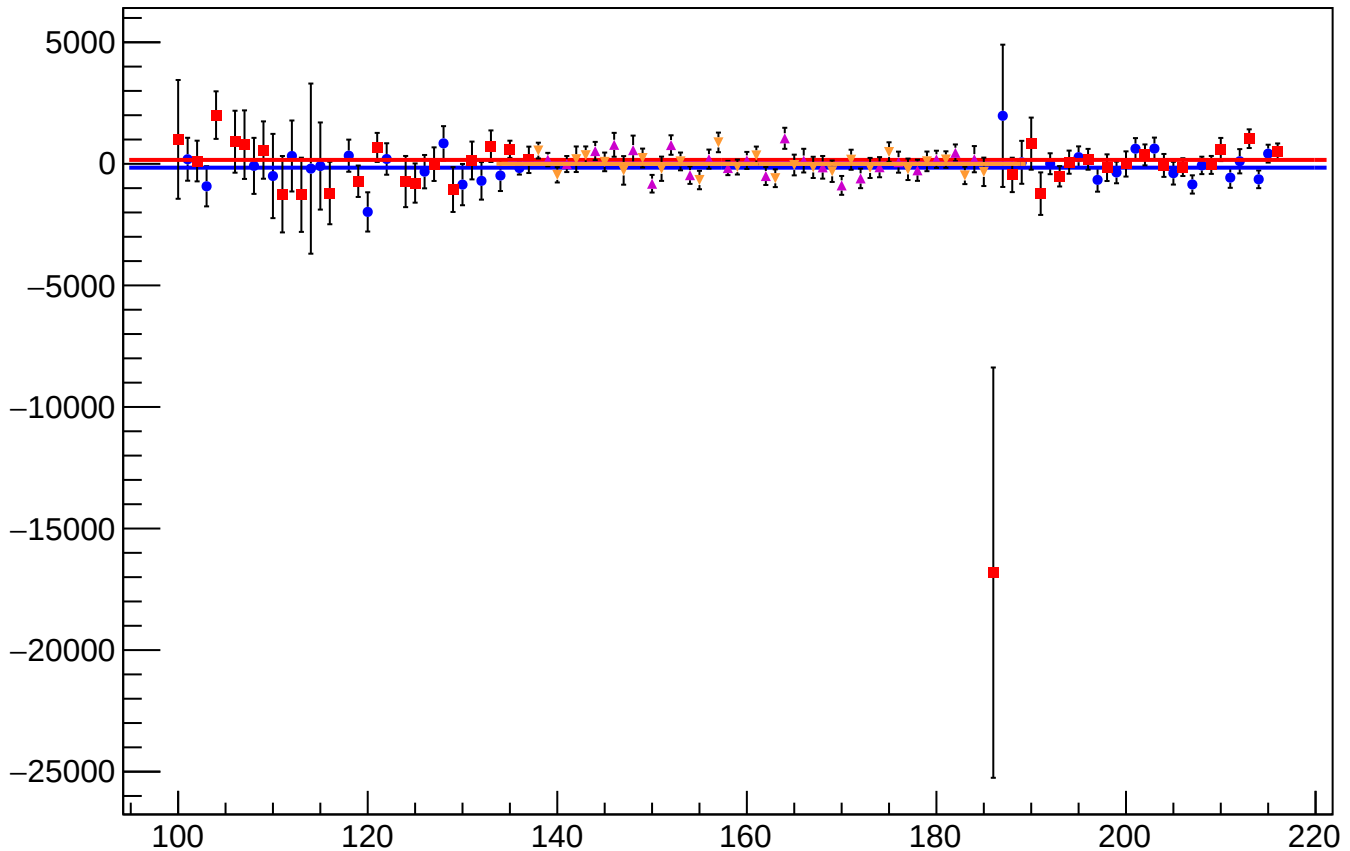
Left In: 82.993+/-0.014  $\chi^2/\text{NDF}$ : 145607.1/22

+ sign 78.831+/-0.009  $\chi^2/\text{NDF}$ : 1695703.6/55

All: 79.558+/-0.007  $\chi^2/\text{NDF}$ : 3980630.7/113

- sign 80.331+/-0.009  $\chi^2/\text{NDF}$ : 2271693.6/57

# asym\_sam1\_eigen\_dit\_correction\_mean vs Slug



Right In: -157.416 $\pm$ 95.366  $\chi^2/\text{NDF}$ : 28.8/30

Left Out: -3.094 $\pm$ 78.582  $\chi^2/\text{NDF}$ : 23.5/24

Right Out: 161.852 $\pm$ 98.001  $\chi^2/\text{NDF}$ : 35.2/34

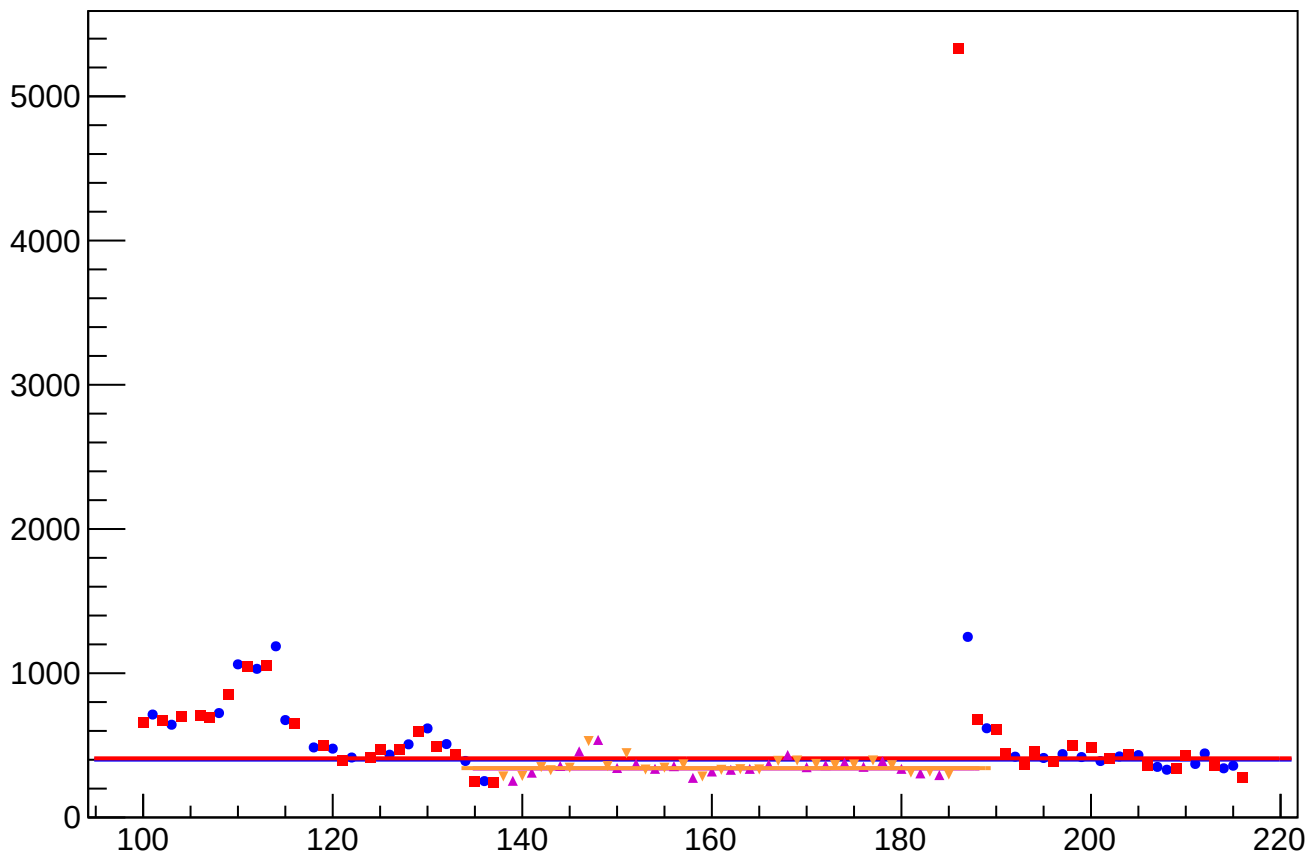
Left In: 16.519 $\pm$ 80.410  $\chi^2/\text{NDF}$ : 34.9/22

+ sign -65.502 $\pm$ 60.646  $\chi^2/\text{NDF}$ : 53.9/55

All: 3.010 $\pm$ 43.409  $\chi^2/\text{NDF}$ : 127.9/113

- sign 74.993 $\pm$ 62.163  $\chi^2/\text{NDF}$ : 71.4/57

# asym\_sam1\_eigen\_dit\_correction\_rms vs Slug



Right In: 400.985 $\pm$ 0.067  $\chi^2$ /NDF: 2825686.5/30

Left Out: 341.918 $\pm$ 0.056  $\chi^2$ /NDF:653932.3/24

Right Out: 409.912 $\pm$ 0.069  $\chi^2$ /NDF: 4021341.5/34

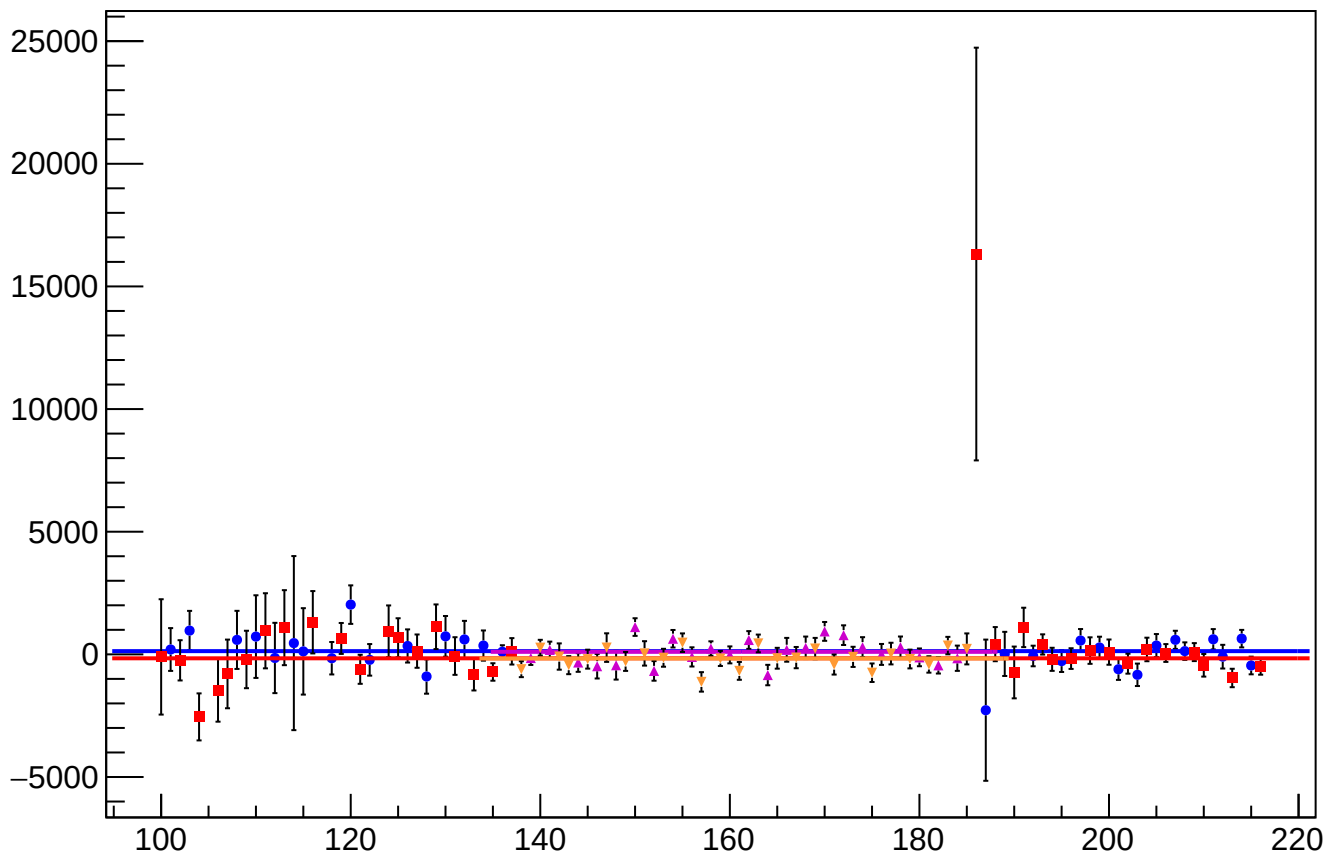
Left In: 339.430 $\pm$ 0.057  $\chi^2$ /NDF:846709.1/22

+ sign 365.804 $\pm$ 0.043  $\chi^2$ /NDF: 3936596.8/55

All: 366.772 $\pm$ 0.031  $\chi^2$ /NDF: 9423957.6/113

- sign 367.788 $\pm$ 0.044  $\chi^2$ /NDF: 5486317.7/57

# asym\_sam1\_mean vs Slug



Right In:  $131.522 \pm 94.237$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $-167.380 \pm 78.179$   $\chi^2/\text{NDF}$ : 25.6/24

Right Out:  $-161.367 \pm 96.602$   $\chi^2/\text{NDF}$ : 37.9/34

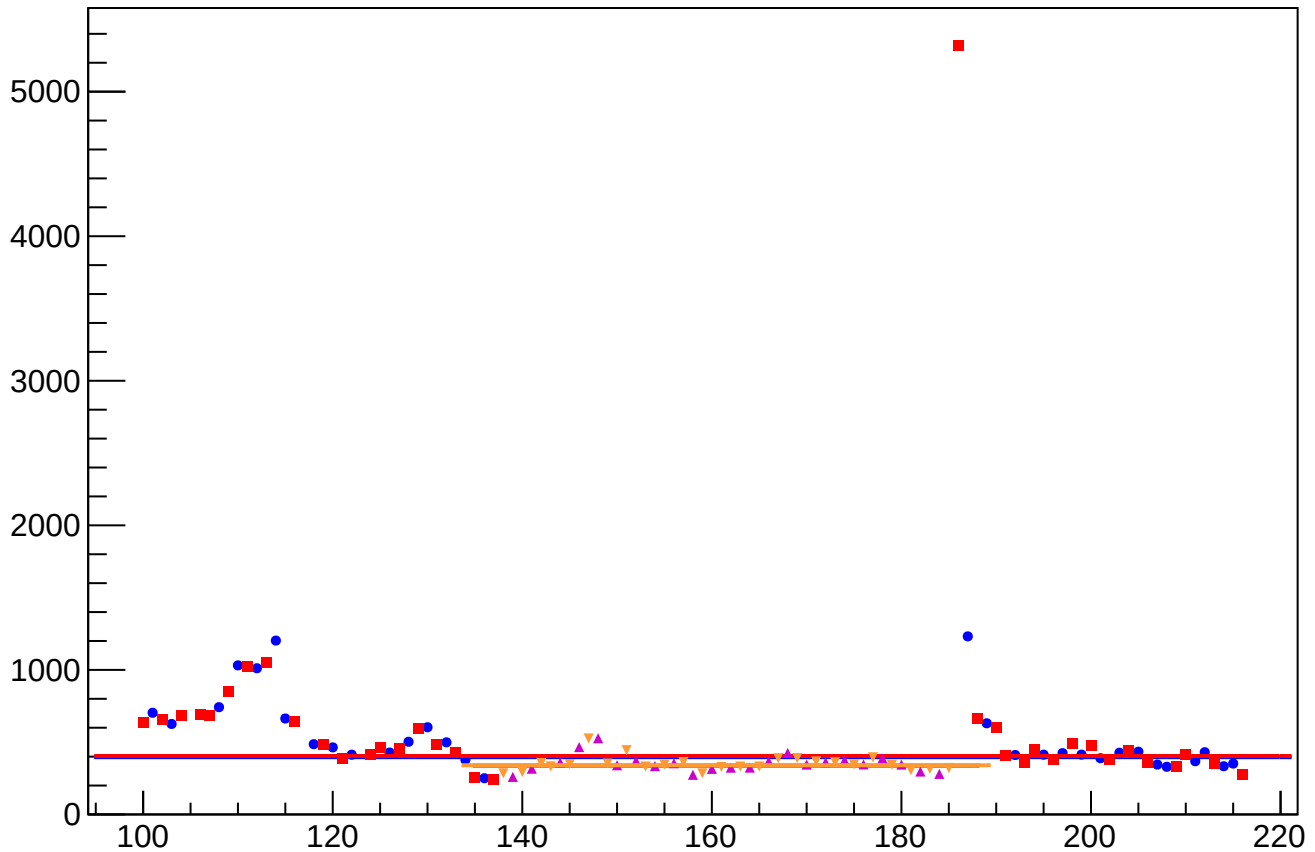
Left In:  $104.016 \pm 79.995$   $\chi^2/\text{NDF}$ : 37.5/22

+ sign  $-45.528 \pm 60.169$   $\chi^2/\text{NDF}$ : 60.7/55

All:  $-25.226 \pm 43.047$   $\chi^2/\text{NDF}$ : 140.8/113

- sign  $-3.939 \pm 61.613$   $\chi^2/\text{NDF}$ : 79.9/57

# asym\_sam1\_rms vs Slug



Right In: 396.309 $\pm$ 0.067  $\chi^2$ /NDF: 2812651.2/30

Left Out: 340.391 $\pm$ 0.055  $\chi^2$ /NDF:604155.3/24

Right Out: 404.402 $\pm$ 0.068  $\chi^2$ /NDF: 3965372.2/34

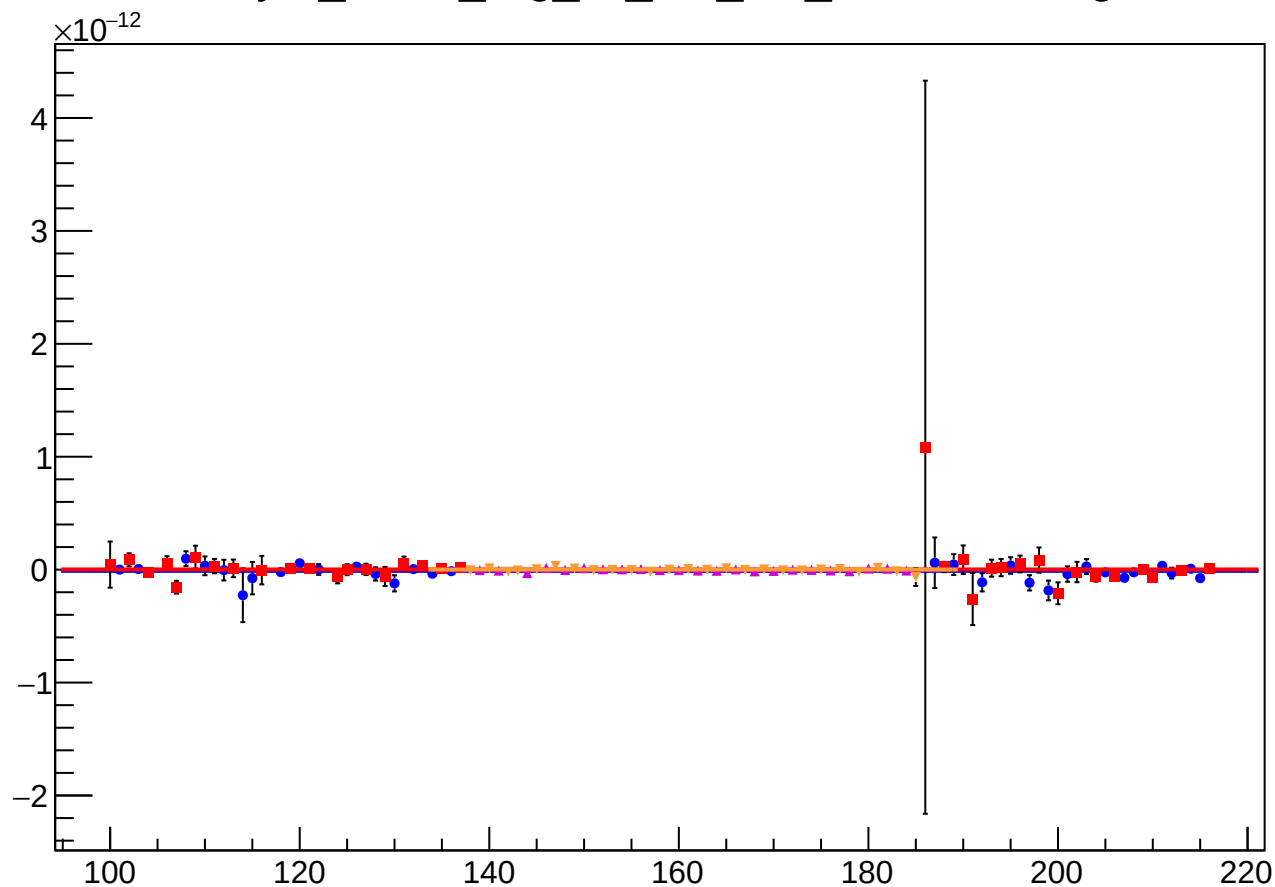
Left In: 337.759 $\pm$ 0.057  $\chi^2$ /NDF:820674.4/22

+ sign 363.187 $\pm$ 0.043  $\chi^2$ /NDF: 3833915.6/55

All: 364.008 $\pm$ 0.030  $\chi^2$ /NDF: 9185382.6/113

- sign 364.869 $\pm$ 0.044  $\chi^2$ /NDF: 5350704.2/57

# asym\_sam1\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.2/34

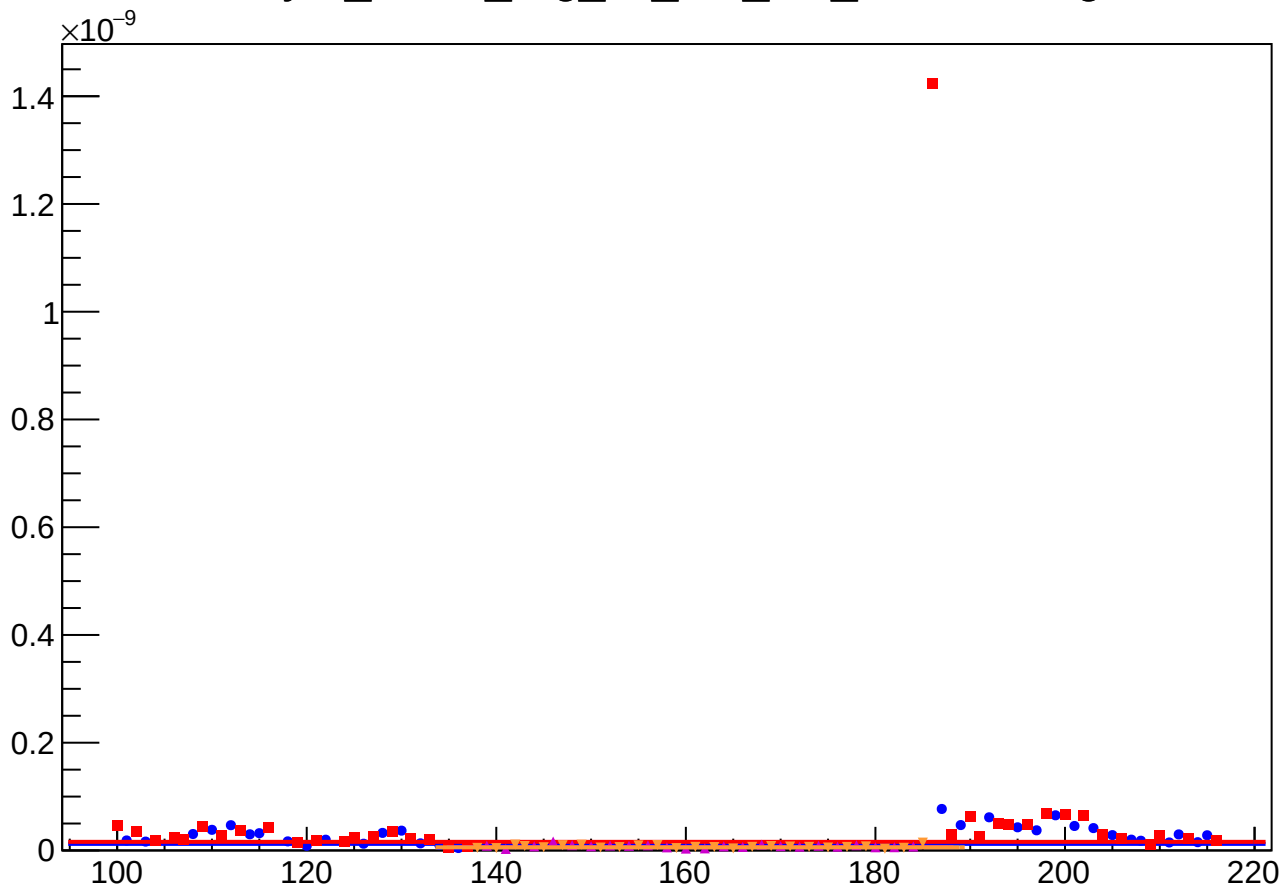
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.4/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 103.6/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.7/57

# asym\_sam1\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8120051.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1155947.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7392096.4/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1970663.5/22

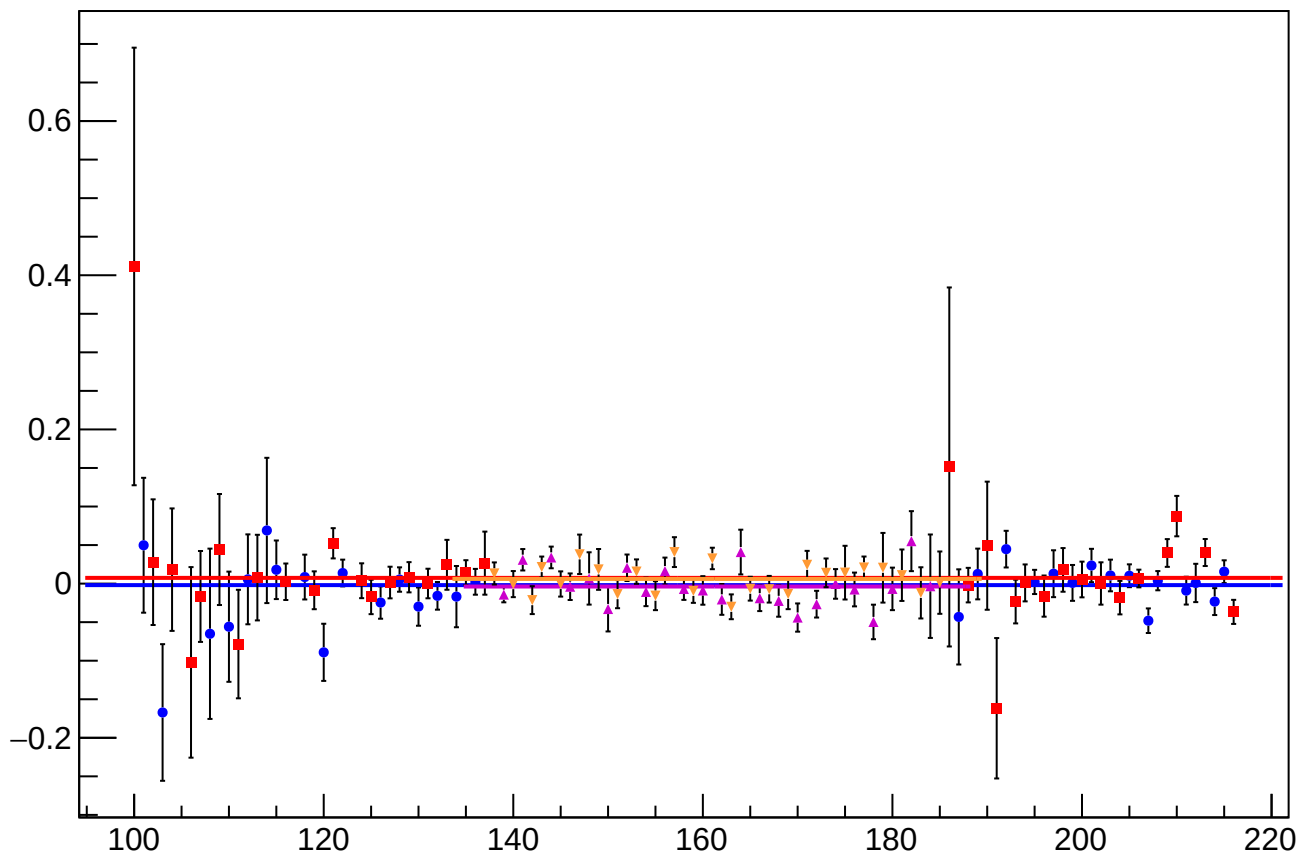
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11690306.5/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24935931.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13147411.5/57



# asym\_sam1\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.007 \pm 0.004$   $\chi^2/\text{NDF}$ : 44.7/34

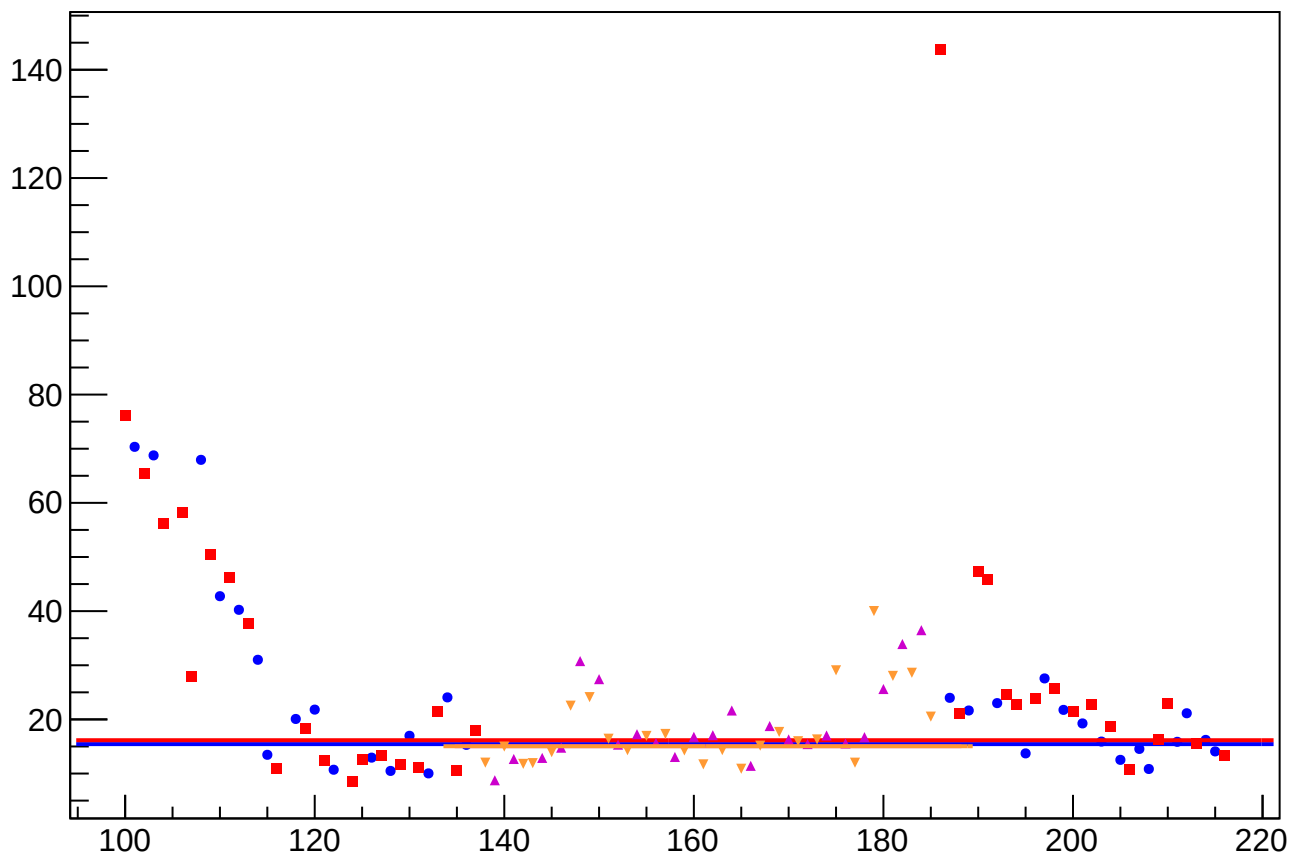
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 149.0/113

- sign  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 85.7/57

# asym\_sam1\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 15.436+/-0.003     $\chi^2/\text{NDF}$ : 4793415.4/30

Left Out: 15.046+/-0.003     $\chi^2/\text{NDF}$ : 2758075.6/24

Right Out: 16.154+/-0.003     $\chi^2/\text{NDF}$ : 6621863.9/34

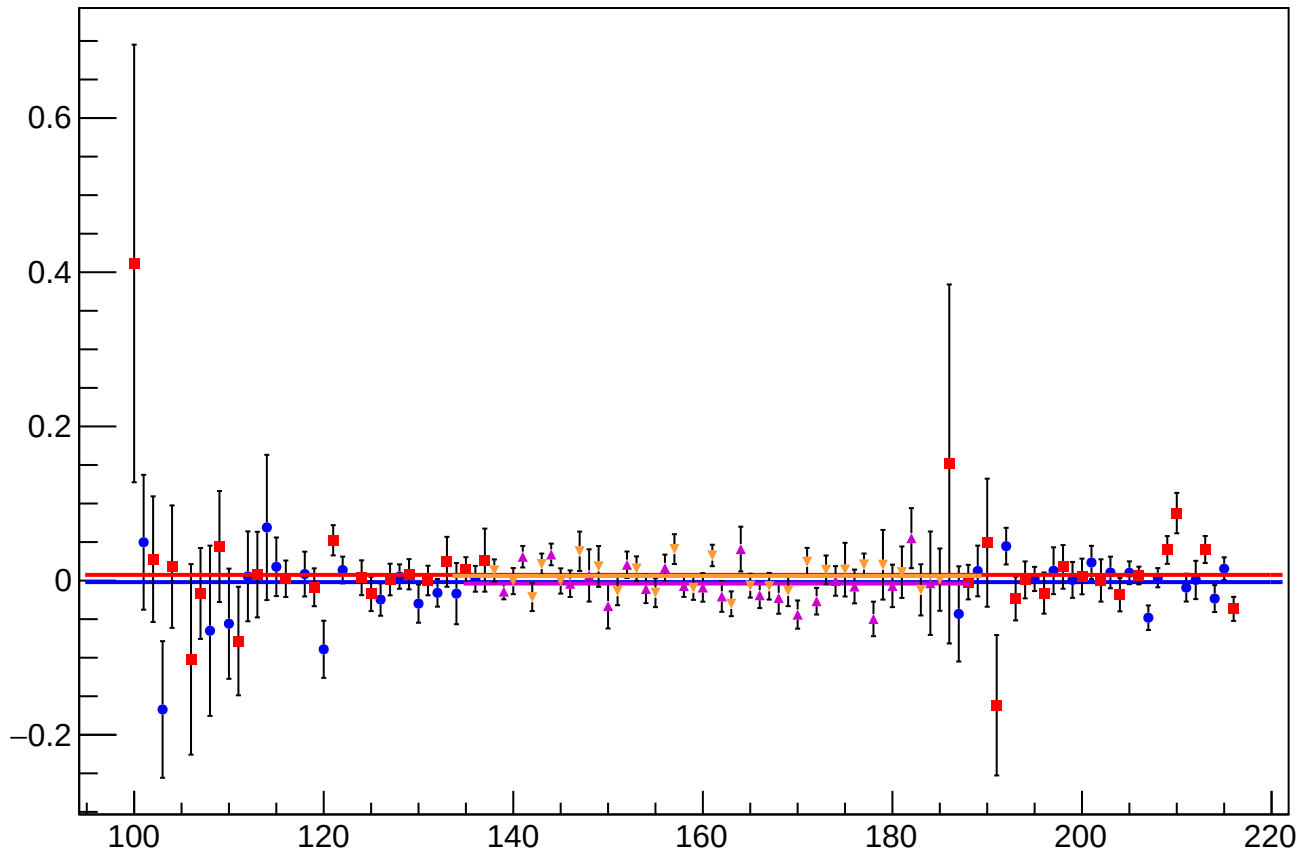
Left In: 15.068+/-0.003     $\chi^2/\text{NDF}$ : 3066591.4/22

+ sign 15.227+/-0.002     $\chi^2/\text{NDF}$ : 7561917.2/55

All: 15.388+/-0.001     $\chi^2/\text{NDF}$ : 17338723.6/113

- sign 15.564+/-0.002     $\chi^2/\text{NDF}$ : 9761907.6/57

# asym\_sam1\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.007 \pm 0.004$   $\chi^2/\text{NDF}$ : 44.7/34

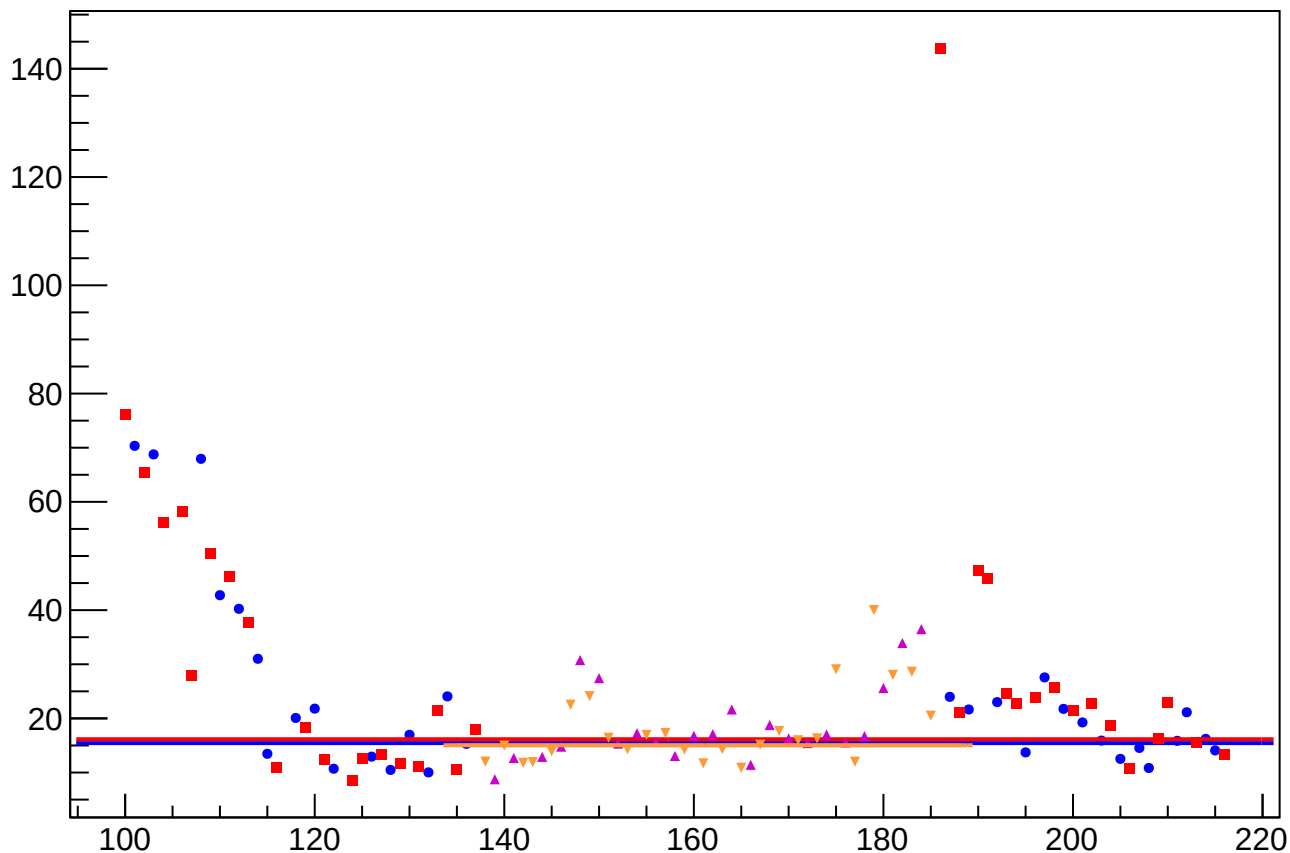
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 149.0/113

- sign  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 85.7/57

# asym\_sam1\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 15.436 $\pm$ 0.003  $\chi^2$ /NDF: 4793415.4/30

Left Out: 15.046 $\pm$ 0.003  $\chi^2$ /NDF: 2758075.6/24

Right Out: 16.154 $\pm$ 0.003  $\chi^2$ /NDF: 6621863.9/34

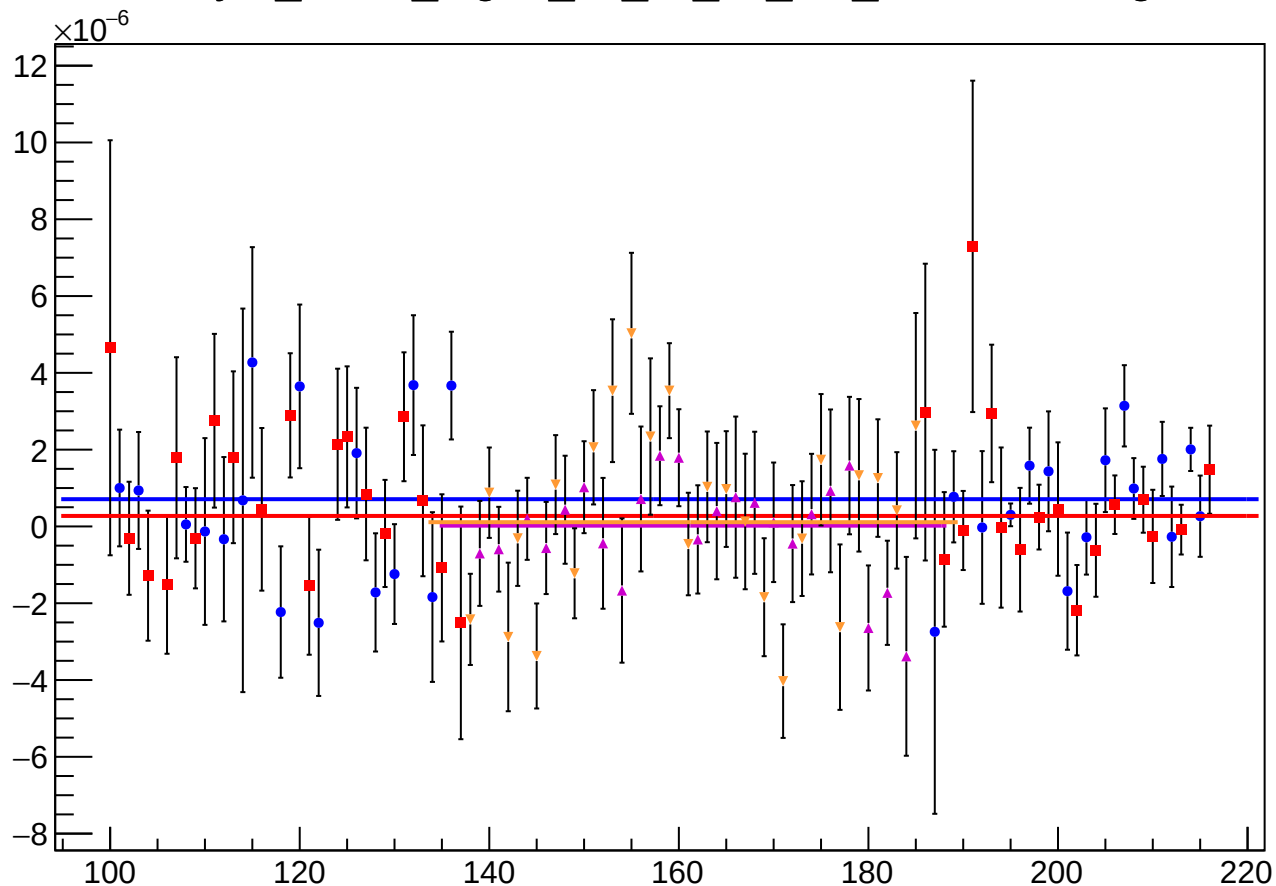
Left In: 15.068 $\pm$ 0.003  $\chi^2$ /NDF: 3066591.4/22

+ sign 15.227 $\pm$ 0.002  $\chi^2$ /NDF: 7561917.2/55

All: 15.388 $\pm$ 0.001  $\chi^2$ /NDF: 17338723.6/113

- sign 15.564 $\pm$ 0.002  $\chi^2$ /NDF: 9761907.6/57

# asym\_sam1\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:50.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.7/34

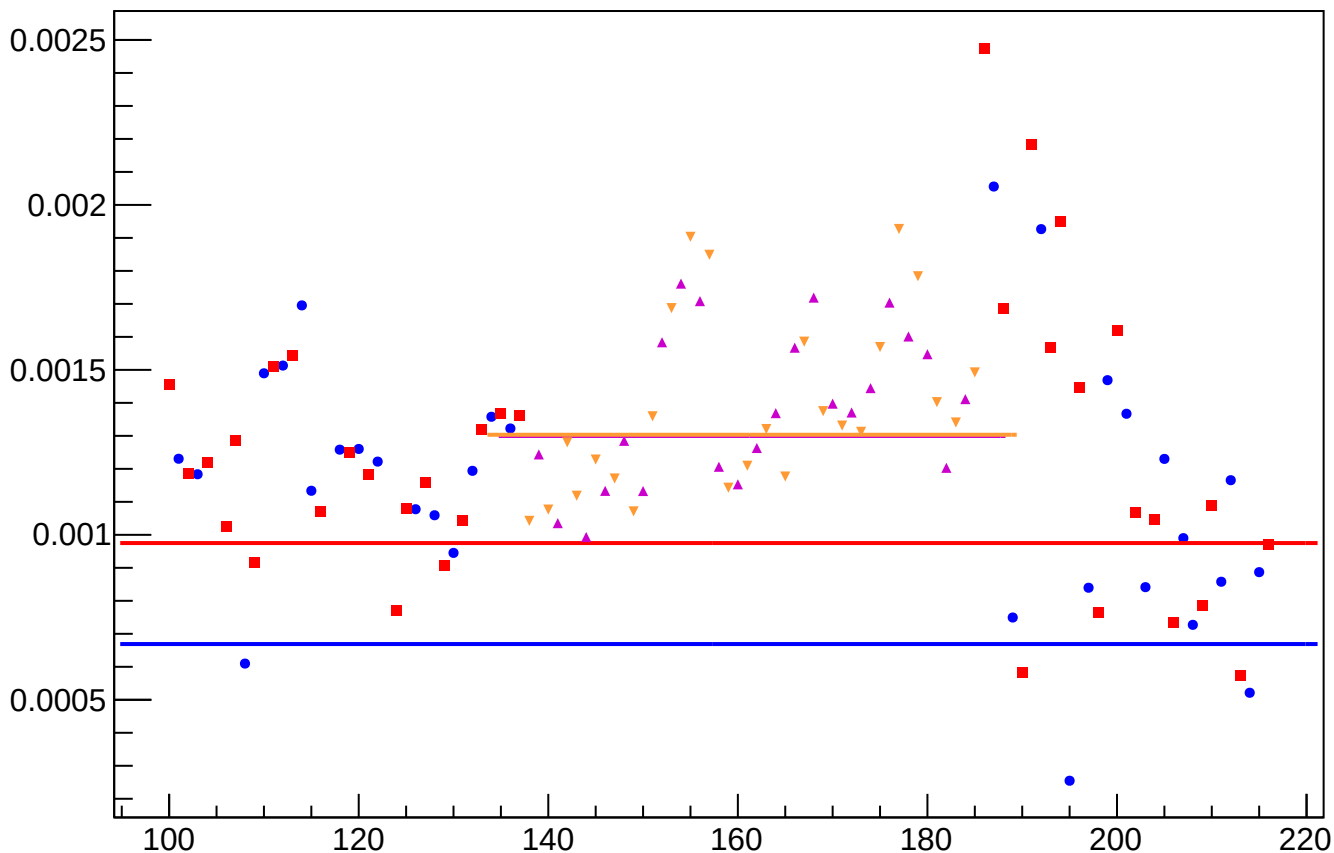
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 96.8/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 141.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.3/57

# asym\_sam1\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 9964676.3/30$

Left Out:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 1181536.6/24$

Right Out:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 4092867.8/34$

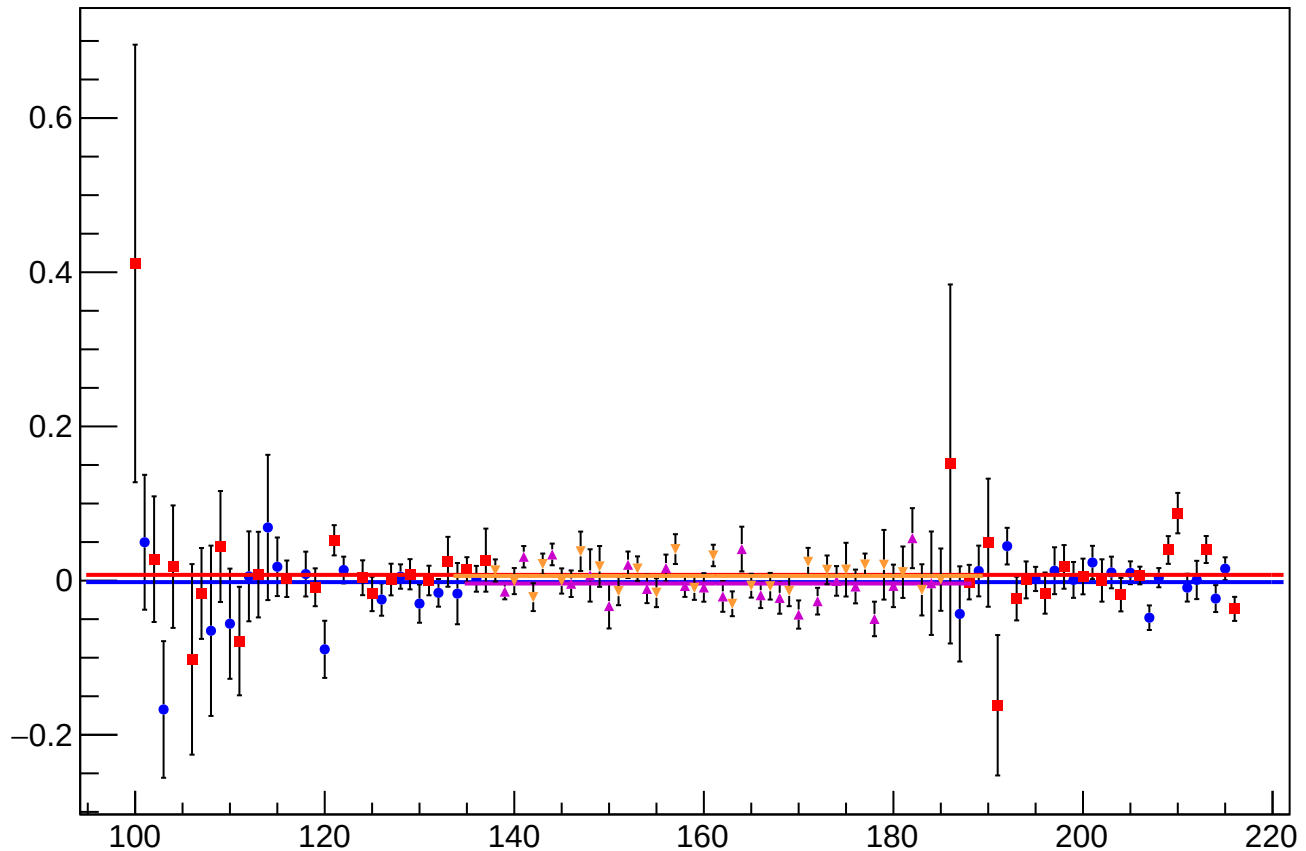
Left In:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 1026052.2/22$

+ sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 17609276.7/55$

All:  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 26287927.3/113$

- sign  $0.001 \pm 0.000$   $\chi^2/\text{NDF}: 6510747.6/57$

# asym\_sam1\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.007 \pm 0.004$   $\chi^2/\text{NDF}$ : 44.7/34

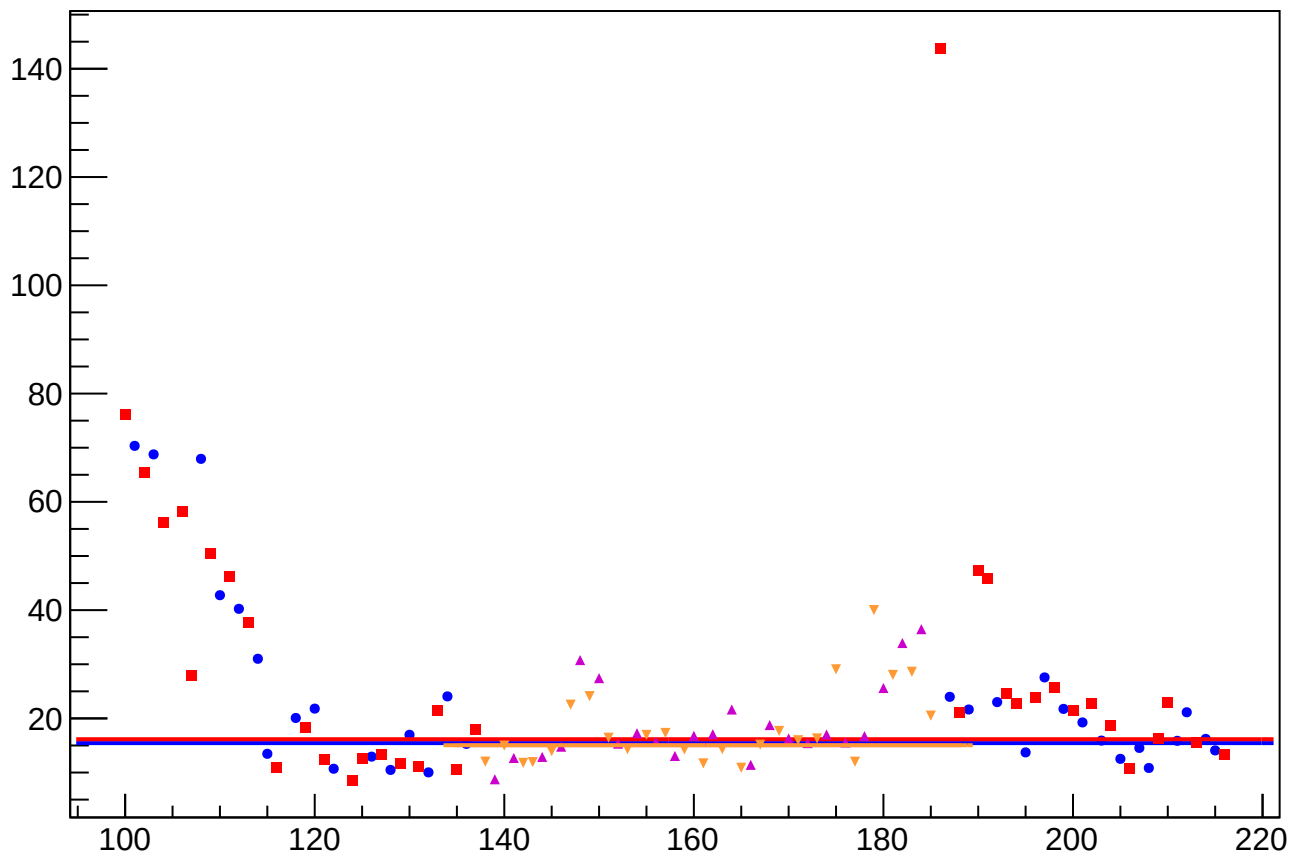
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 149.0/113

- sign  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 85.7/57

# asym\_sam1\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $15.436 \pm 0.003$   $\chi^2/\text{NDF}: 4793431.2/30$

Left Out:  $15.046 \pm 0.003$   $\chi^2/\text{NDF}: 2758285.3/24$

Right Out:  $16.154 \pm 0.003$   $\chi^2/\text{NDF}: 6621854.4/34$

Left In:  $15.067 \pm 0.003$   $\chi^2/\text{NDF}: 3066635.3/22$

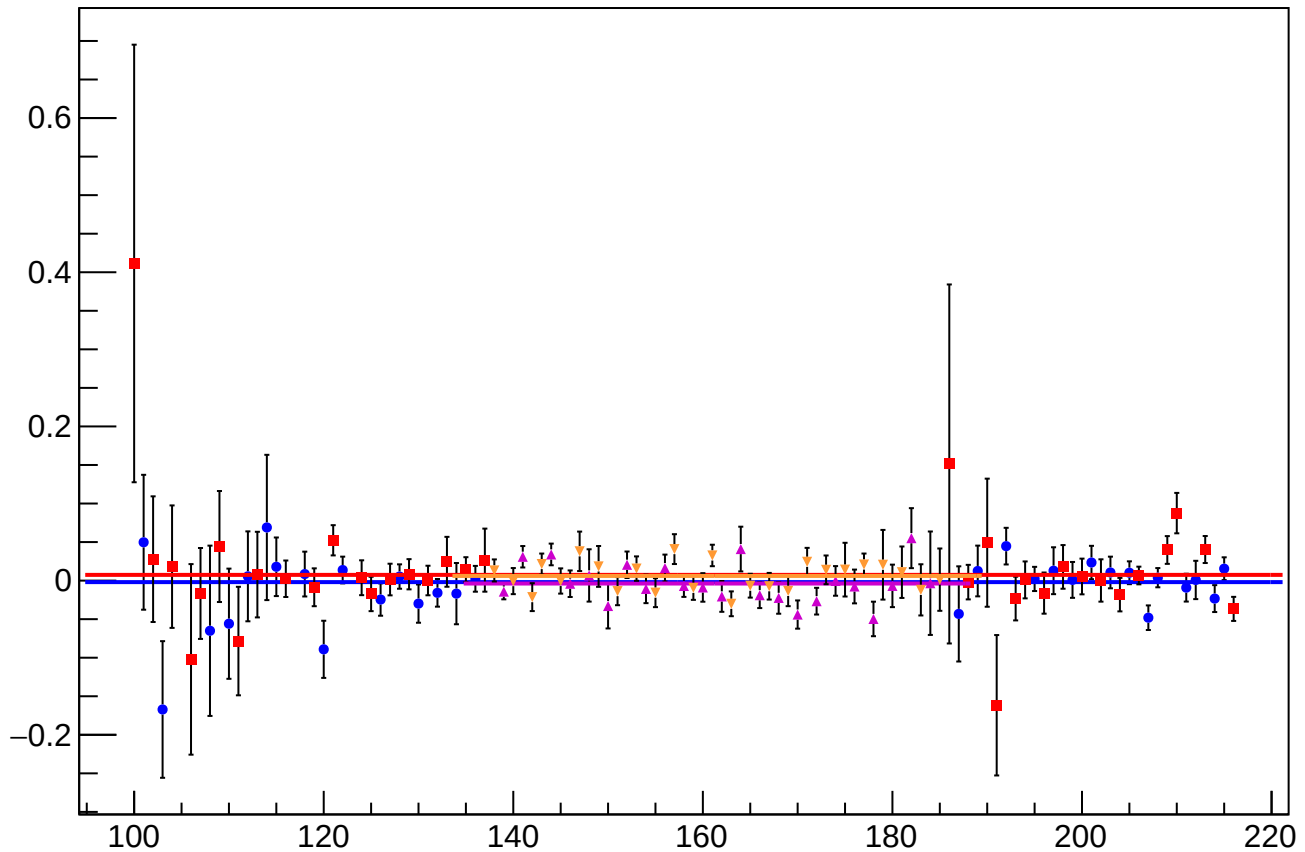
+ sign  $15.227 \pm 0.002$   $\chi^2/\text{NDF}: 7562137.2/55$

All:  $15.387 \pm 0.001$   $\chi^2/\text{NDF}: 17338971.2/113$

- sign  $15.564 \pm 0.002$   $\chi^2/\text{NDF}: 9761928.6/57$



asym\_sam1\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 34.4/30

Left Out:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.7/24

Right Out:  $0.007 \pm 0.004$   $\chi^2/\text{NDF}$ : 44.7/34

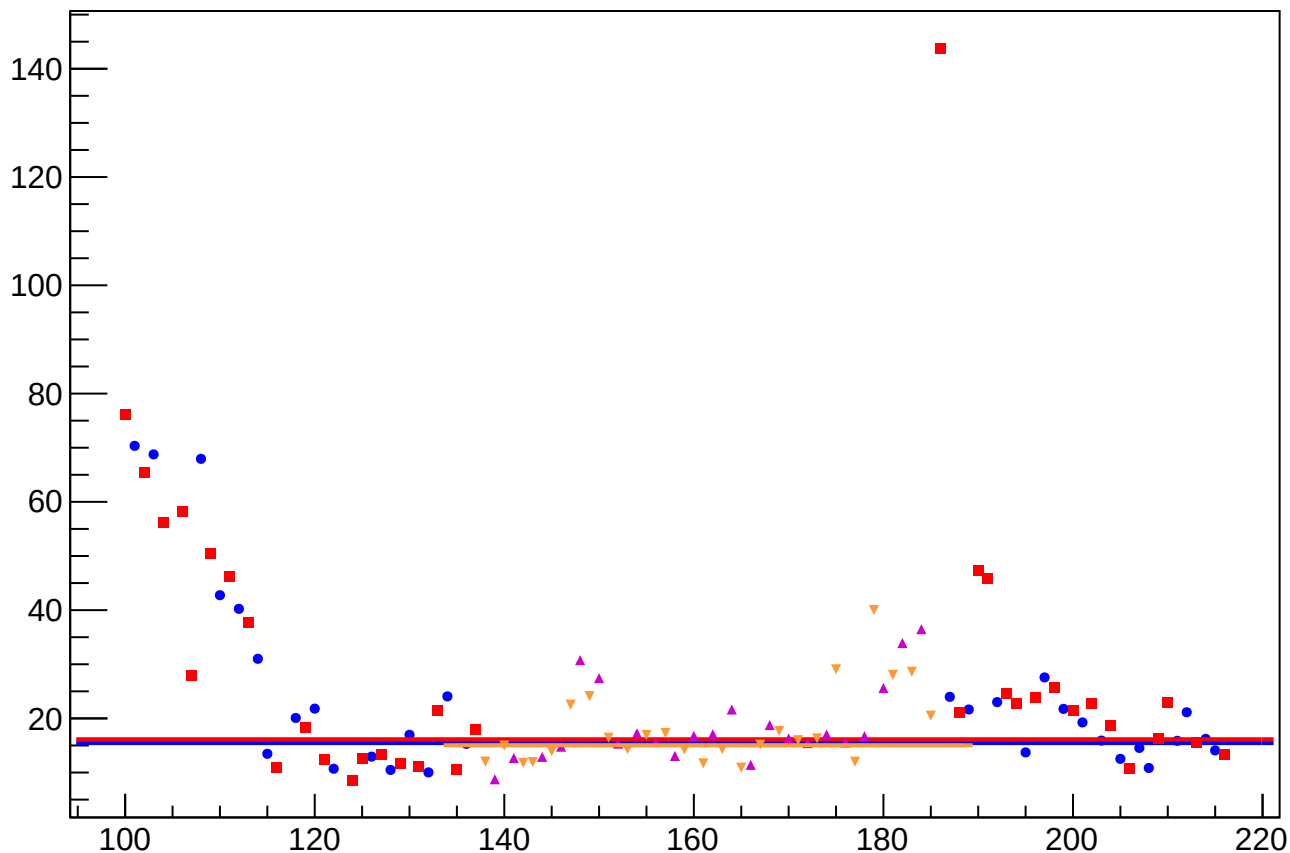
Left In:  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.1/22

+ sign  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 63.3/55

All:  $0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 149.0/113

- sign  $0.001 \pm 0.003$   $\chi^2/\text{NDF}$ : 85.7/57

asym\_sam1\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 15.436 $\pm$ 0.003  $\chi^2$ /NDF: 4793431.2/30

Left Out: 15.046 $\pm$ 0.003  $\chi^2$ /NDF: 2758285.3/24

Right Out: 16.154 $\pm$ 0.003  $\chi^2$ /NDF: 6621854.4/34

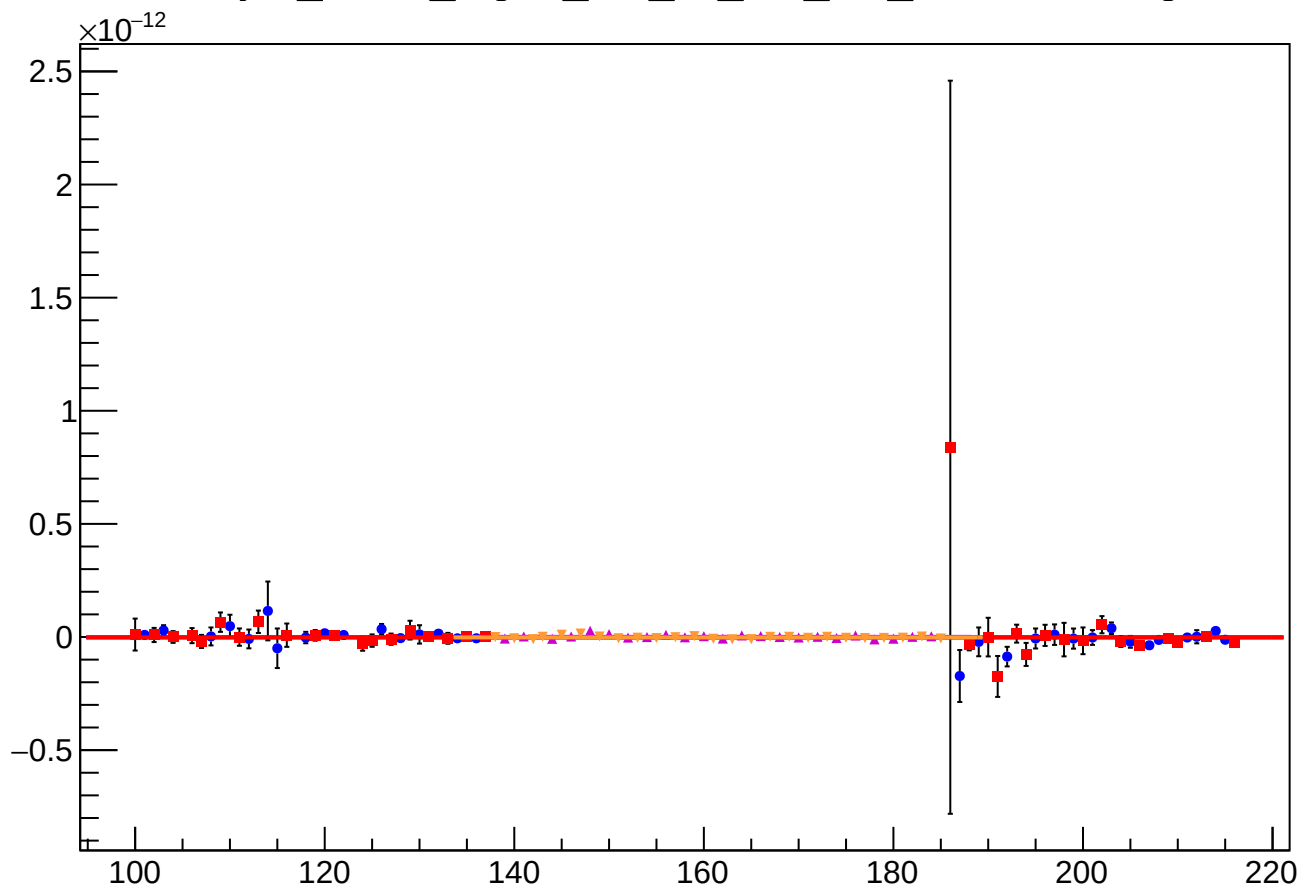
Left In: 15.067 $\pm$ 0.003  $\chi^2$ /NDF: 3066635.3/22

+ sign 15.227 $\pm$ 0.002  $\chi^2$ /NDF: 7562137.2/55

All: 15.387 $\pm$ 0.001  $\chi^2$ /NDF: 17338971.2/113

- sign 15.564 $\pm$ 0.002  $\chi^2$ /NDF: 9761928.6/57

# asym\_sam1\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.6/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.7/34

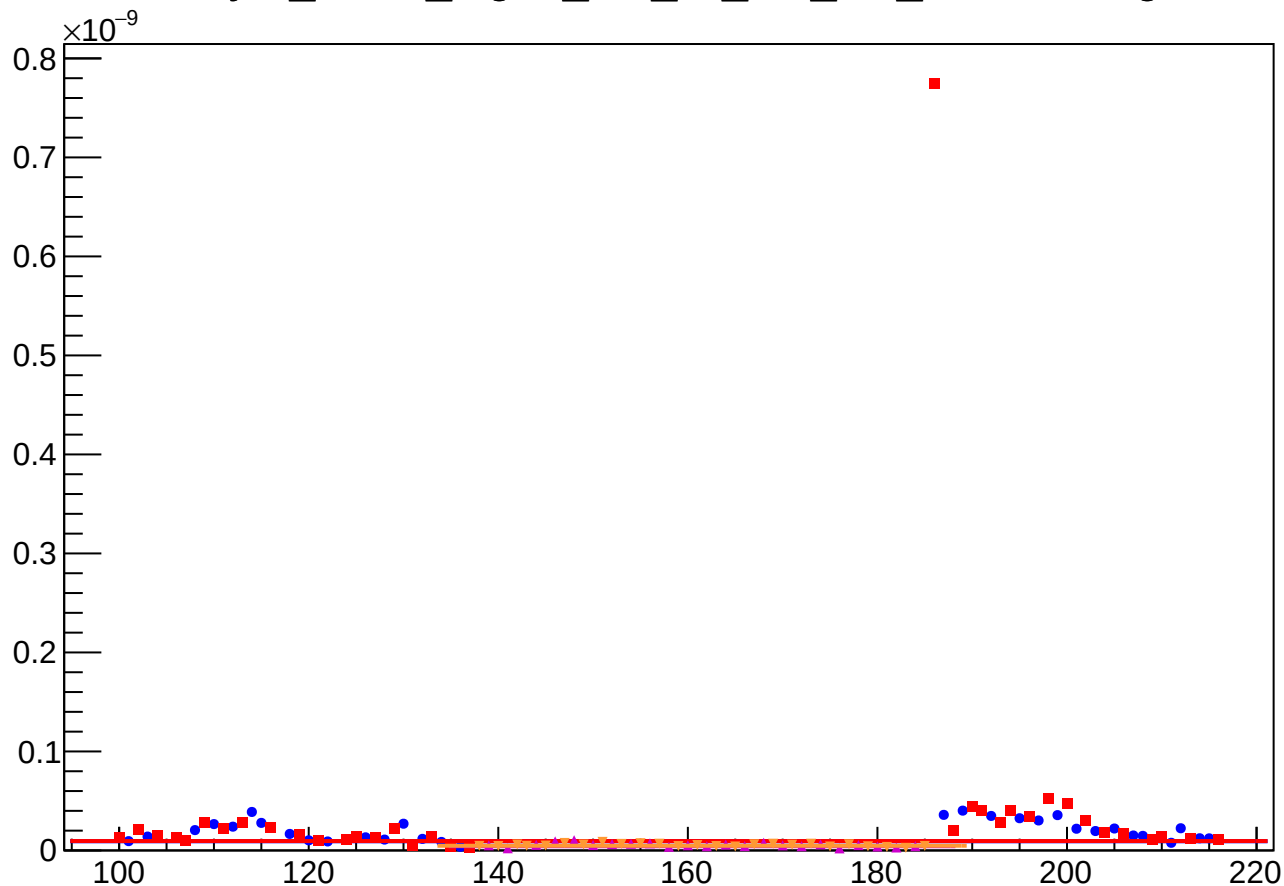
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.3/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.8/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 90.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.5/57

# asym\_sam1\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9407511.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2098495.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11162237.6/34

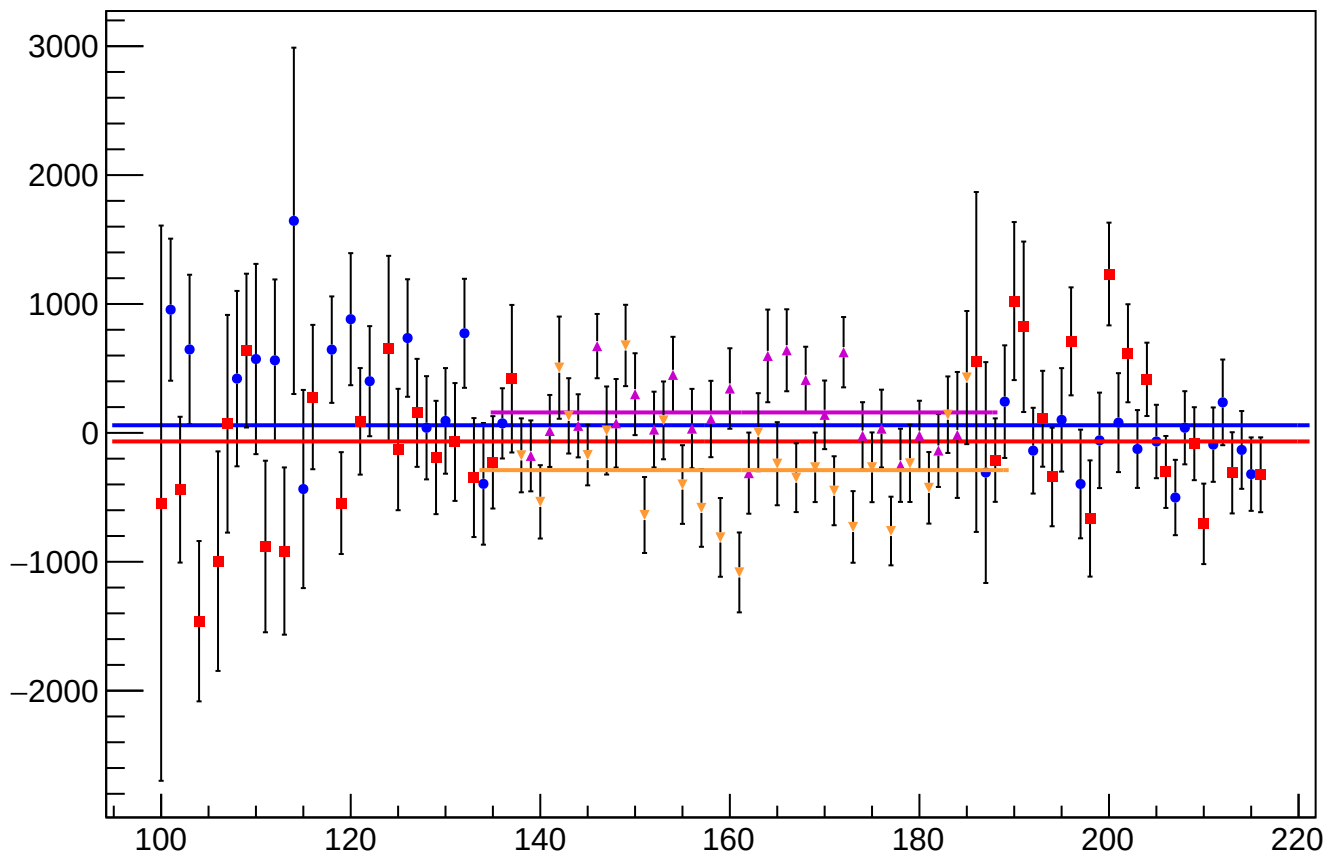
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3526134.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14869137.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33879860.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18859579.4/57

# reg\_asym\_sam2\_mean vs Slug



Right In:  $59.151 \pm 69.996$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $-288.924 \pm 59.035$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $-66.324 \pm 72.159$   $\chi^2/\text{NDF}$ : 50.4/34

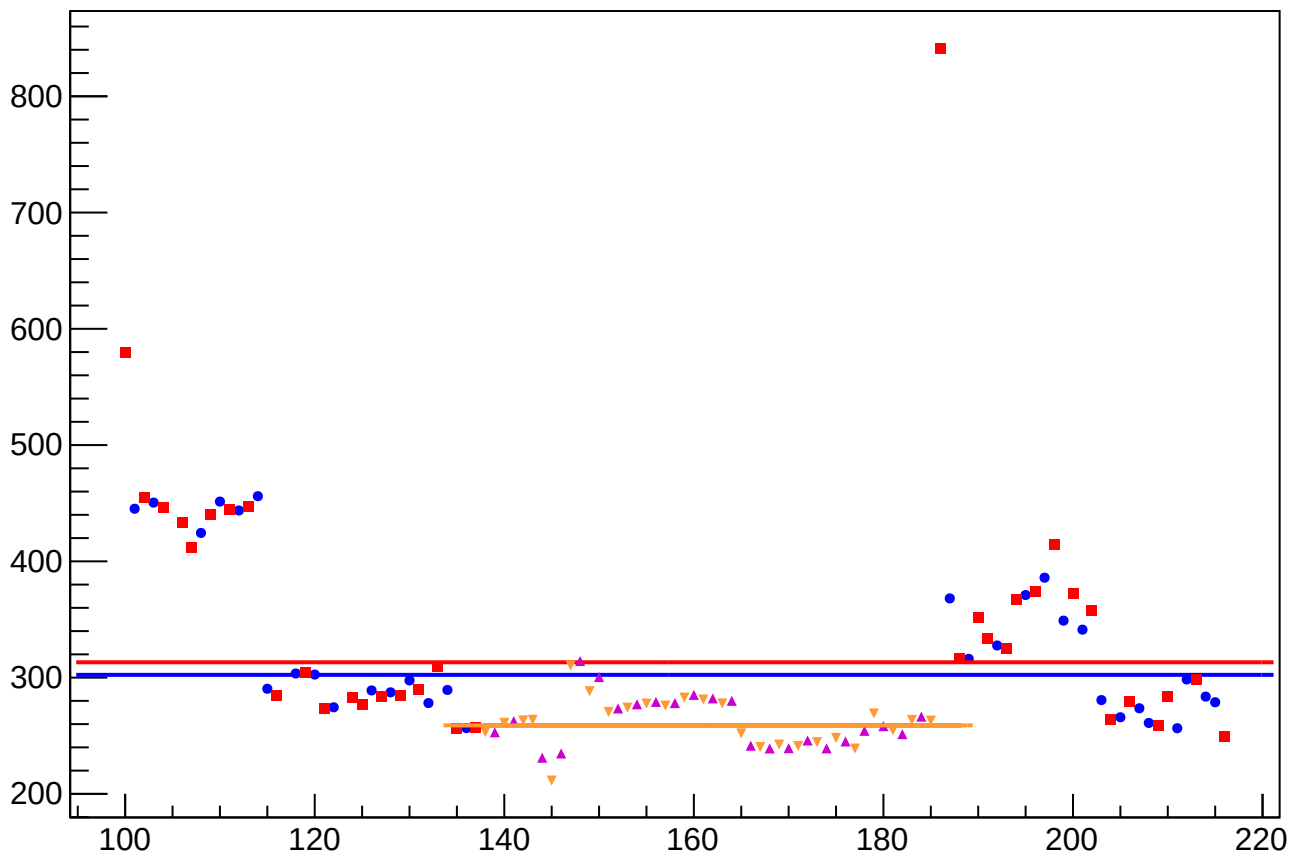
Left In:  $158.601 \pm 60.708$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-144.244 \pm 45.128$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-42.467 \pm 32.369$   $\chi^2/\text{NDF}$ : 173.0/113

- sign  $65.381 \pm 46.454$   $\chi^2/\text{NDF}$ : 78.6/57

# reg\_asym\_sam2\_rms vs Slug



Right In: 302.374+/-0.049  $\chi^2/\text{NDF}$ : 1009167.7/30

Left Out: 258.912+/-0.042  $\chi^2/\text{NDF}$ : 248740.9/24

Right Out: 313.183+/-0.051  $\chi^2/\text{NDF}$ : 1572180.2/34

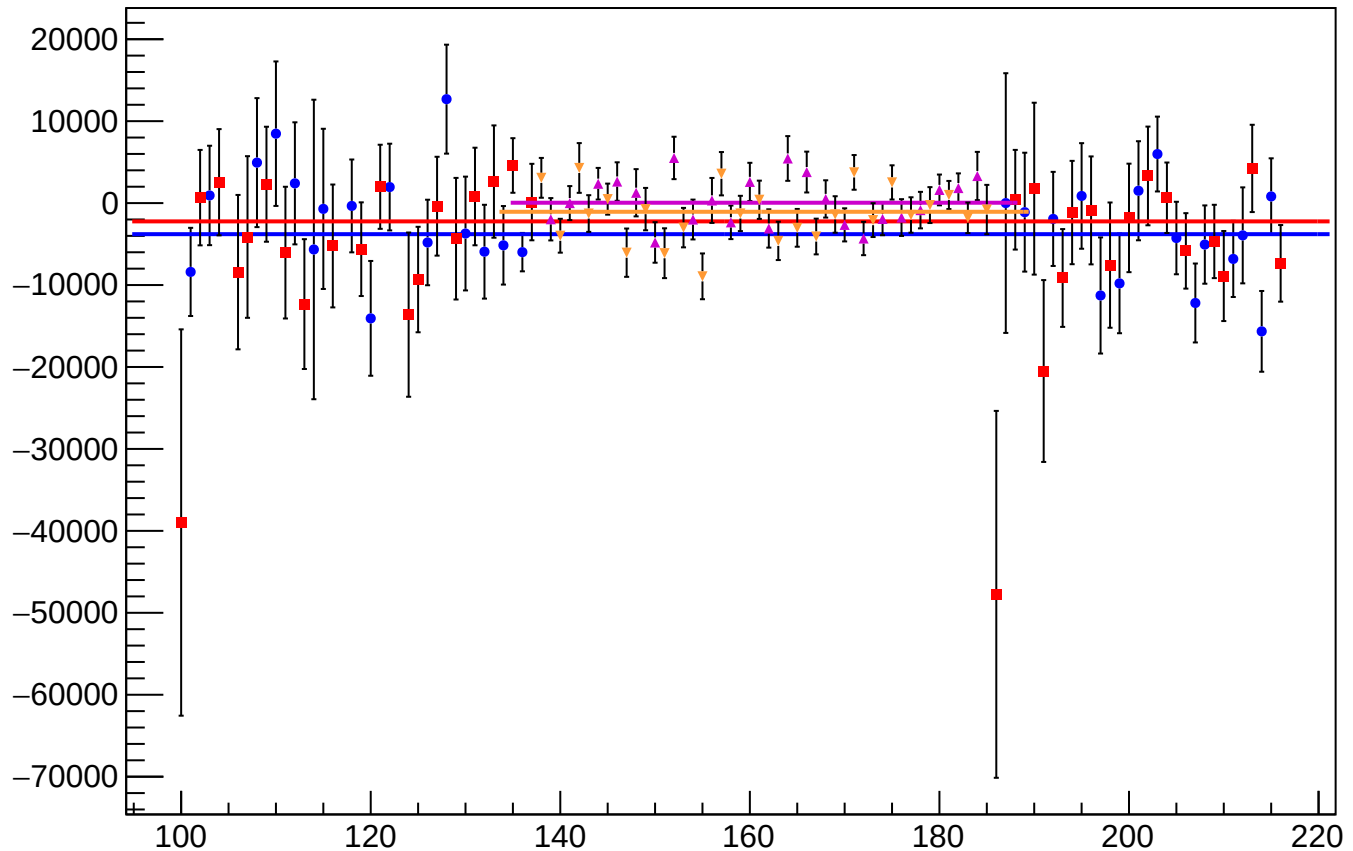
Left In: 258.843+/-0.043  $\chi^2/\text{NDF}$ : 244953.3/22

+ sign 276.977+/-0.032  $\chi^2/\text{NDF}$ : 1708490.4/55

All: 279.107+/-0.023  $\chi^2/\text{NDF}$ : 4198940.3/113

- sign 281.364+/-0.033  $\chi^2/\text{NDF}$ : 2481273.5/57

# asym\_sam2\_reg\_correction\_mean vs Slug



Right In:  $-3791.890 \pm 977.699$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $-1059.229 \pm 454.653$   $\chi^2/\text{NDF}$ : 41.5/24

Right Out:  $-2231.672 \pm 1033.963$   $\chi^2/\text{NDF}$ : 30.5/34

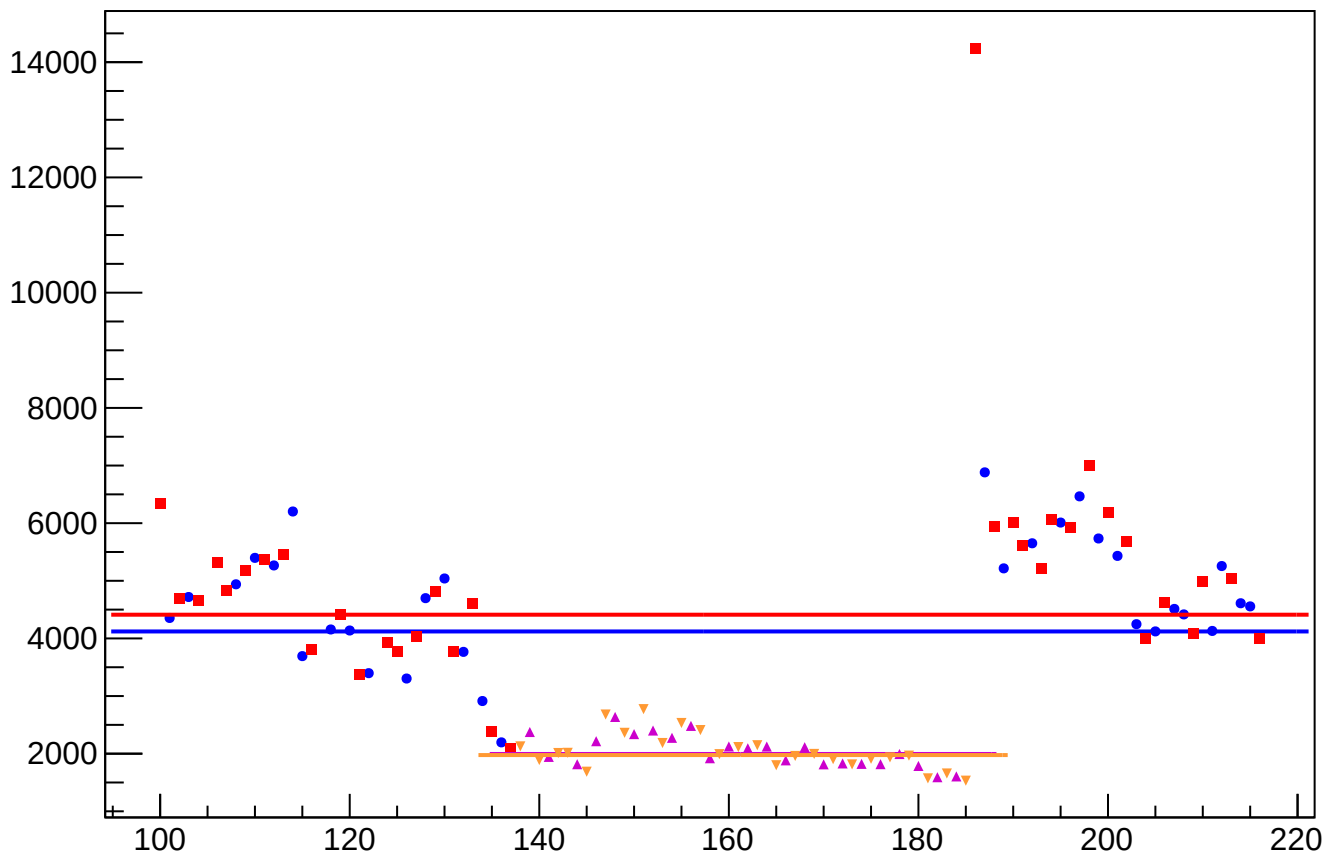
Left In:  $44.352 \pm 470.700$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $-1545.091 \pm 412.258$   $\chi^2/\text{NDF}$ : 82.8/55

All:  $-968.734 \pm 297.052$   $\chi^2/\text{NDF}$ : 155.5/113

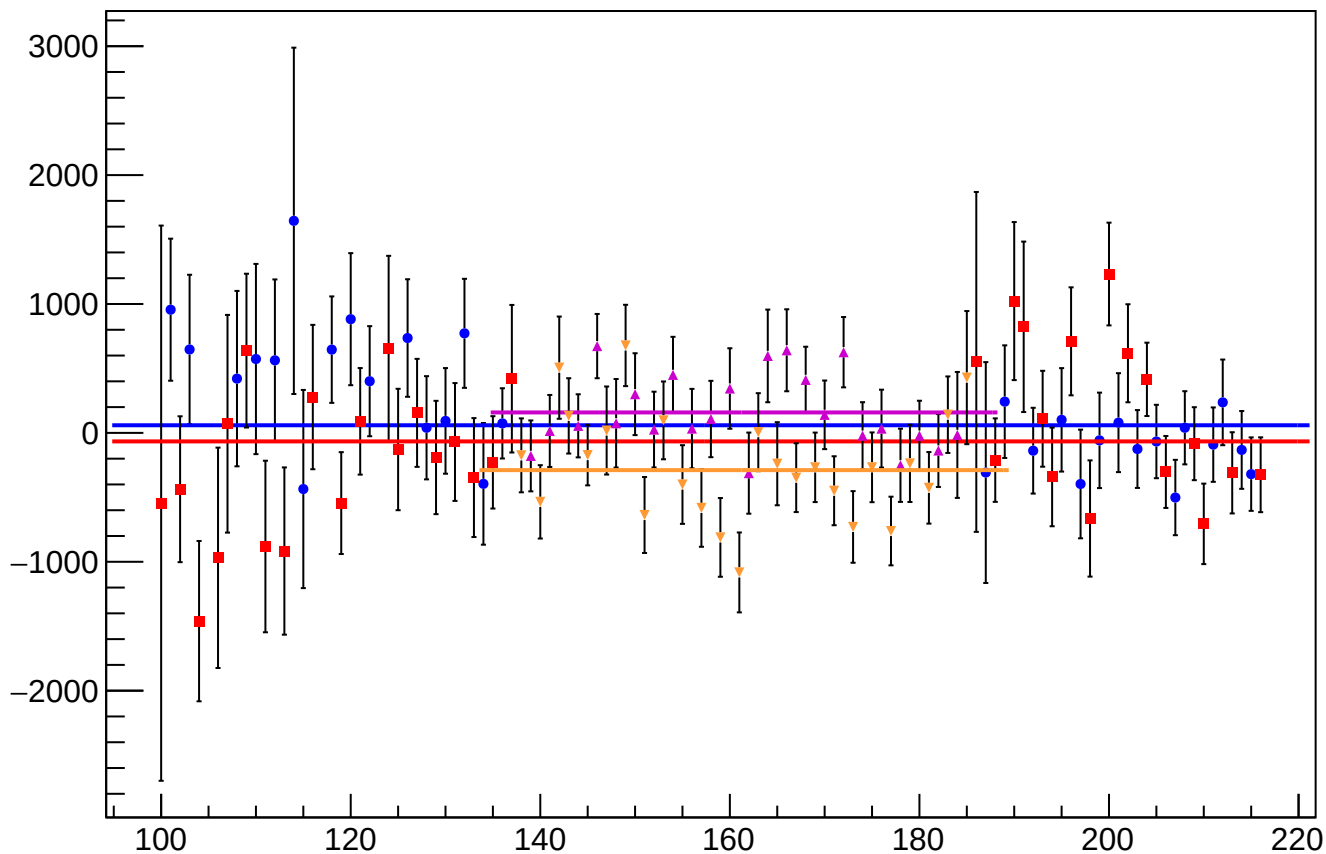
- sign  $-346.364 \pm 428.398$   $\chi^2/\text{NDF}$ : 68.7/57

# asym\_sam2\_reg\_correction\_rms vs Slug





# cor\_asym\_sam2\_mean vs Slug



Right In:  $59.129 \pm 69.996$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $-288.928 \pm 59.035$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $-66.017 \pm 72.161$   $\chi^2/\text{NDF}$ : 50.3/34

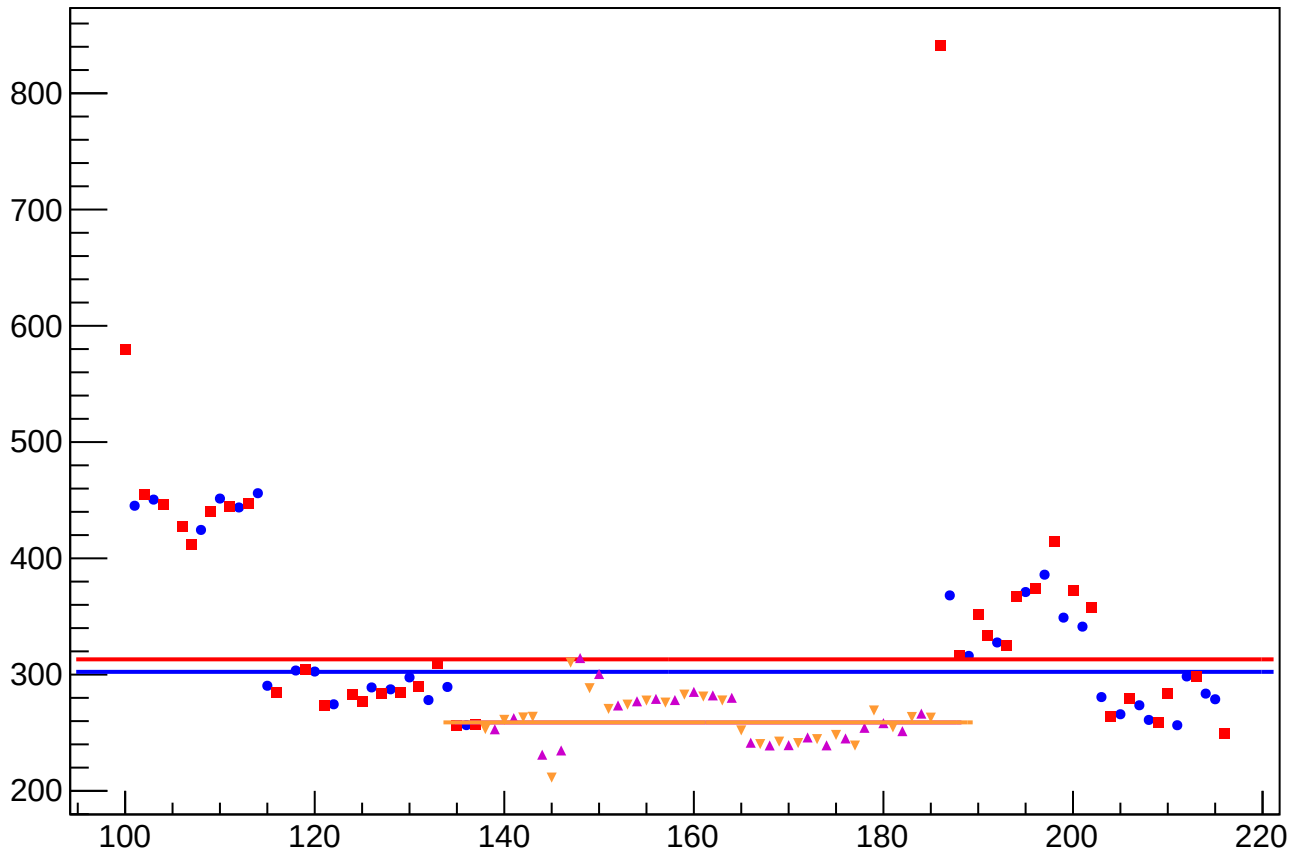
Left In:  $158.612 \pm 60.708$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-144.256 \pm 45.128$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-42.408 \pm 32.369$   $\chi^2/\text{NDF}$ : 172.9/113

- sign  $65.518 \pm 46.455$   $\chi^2/\text{NDF}$ : 78.5/57

# cor\_asym\_sam2\_rms vs Slug



Right In: 302.374+/-0.049  $\chi^2/\text{NDF}$ : 1009169.2/30

Left Out: 258.912+/-0.042  $\chi^2/\text{NDF}$ : 248740.9/24

Right Out: 313.129+/-0.051  $\chi^2/\text{NDF}$ : 1567744.0/34

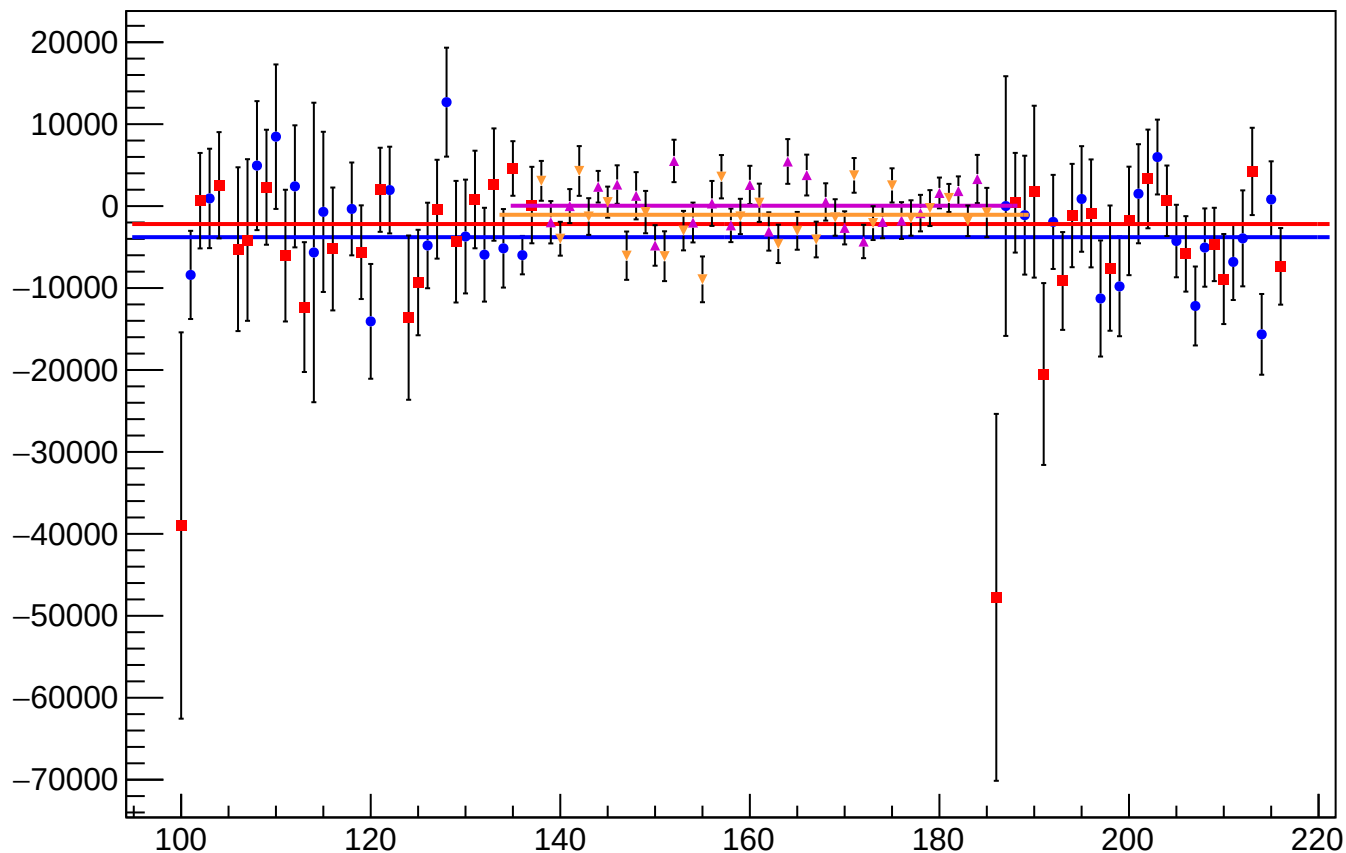
Left In: 258.843+/-0.043  $\chi^2/\text{NDF}$ : 244953.3/22

+ sign 276.977+/-0.032  $\chi^2/\text{NDF}$ : 1708491.9/55

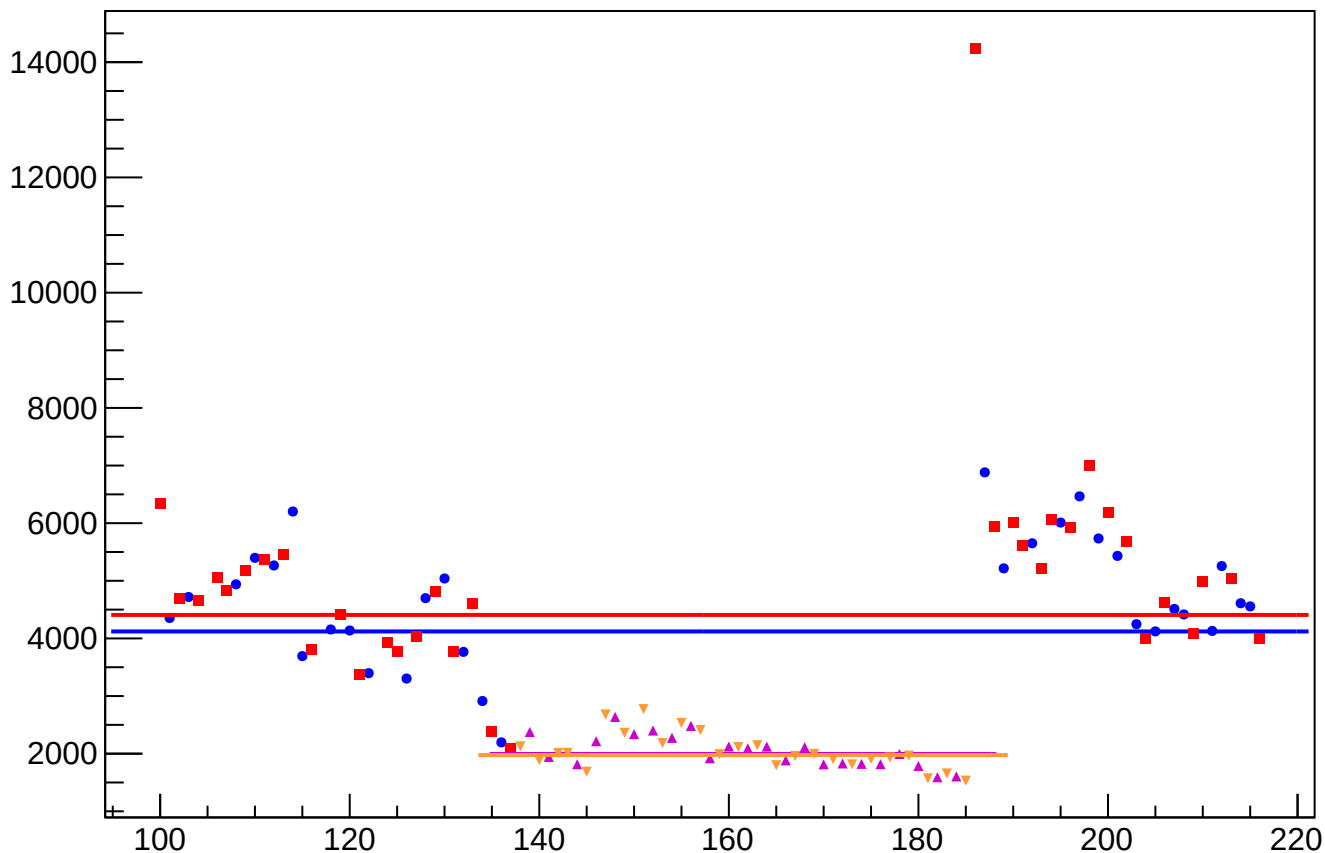
All: 279.096+/-0.023  $\chi^2/\text{NDF}$ : 4193067.5/113

- sign 281.341+/-0.033  $\chi^2/\text{NDF}$ : 2475496.1/57

# asym\_sam2\_cor\_correction\_mean vs Slug



# asym\_sam2\_cor\_correction\_rms vs Slug



Right In: 4121.003+/-0.691  $\chi^2/\text{NDF}$ : 2792364.5/30

Left Out: 1975.967+/-0.321  $\chi^2/\text{NDF}$ : 763328.1/24

Right Out: 4407.864+/-0.732  $\chi^2/\text{NDF}$ : 2937795.7/34

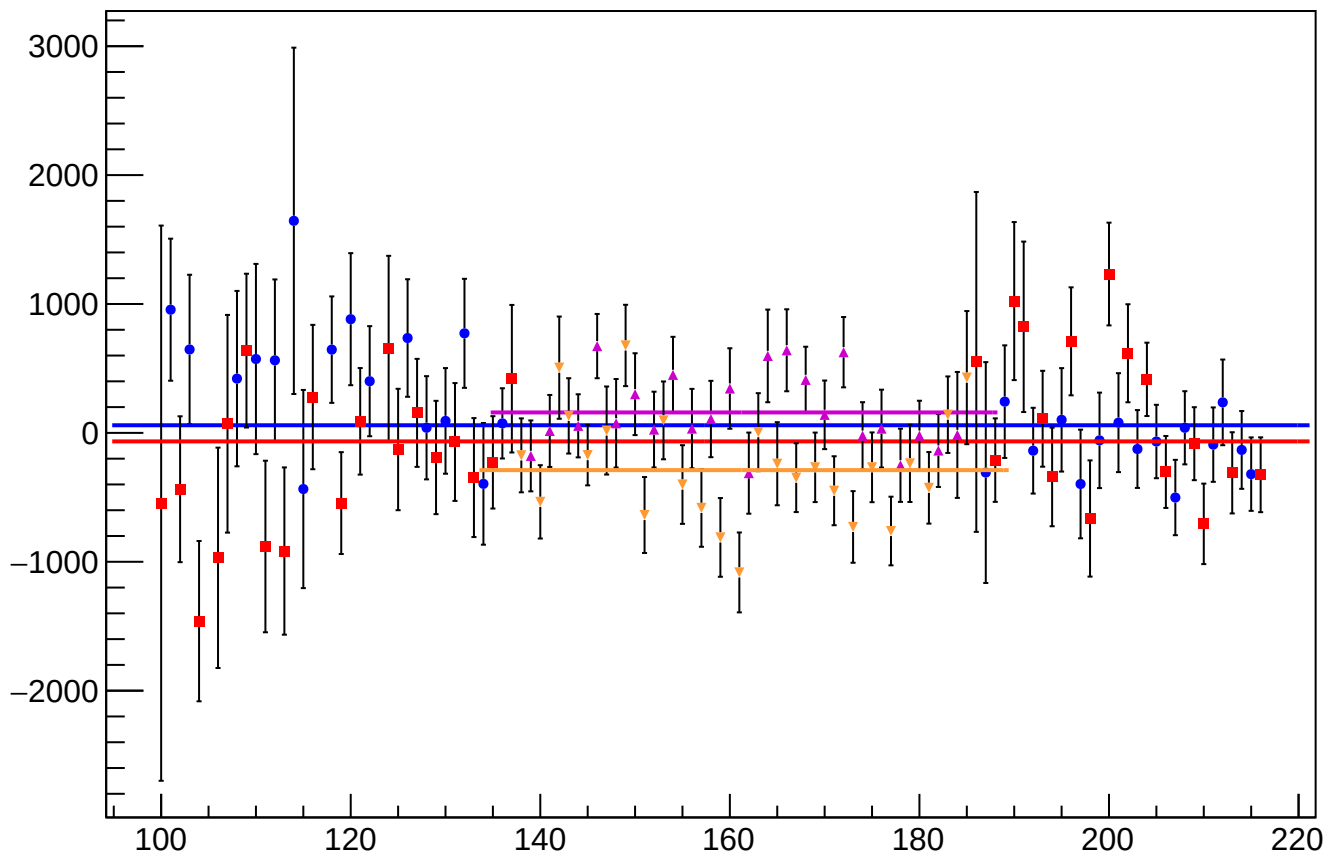
Left In: 1994.760+/-0.333  $\chi^2/\text{NDF}$ : 599996.2/22

+ sign 2357.350+/-0.292  $\chi^2/\text{NDF}$ : 11470968.1/55

All: 2381.958+/-0.210  $\chi^2/\text{NDF}$ : 24036846.5/100

- sign 2408.536+/-0.303  $\chi^2/\text{NDF}$ : 12551056.2/57

# eigen\_cor\_asym\_sam2\_mean vs Slug



Right In:  $59.129 \pm 69.996$   $\chi^2/\text{NDF}$ : 27.1/30

Left Out:  $-288.928 \pm 59.035$   $\chi^2/\text{NDF}$ : 42.4/24

Right Out:  $-66.017 \pm 72.161$   $\chi^2/\text{NDF}$ : 50.3/34

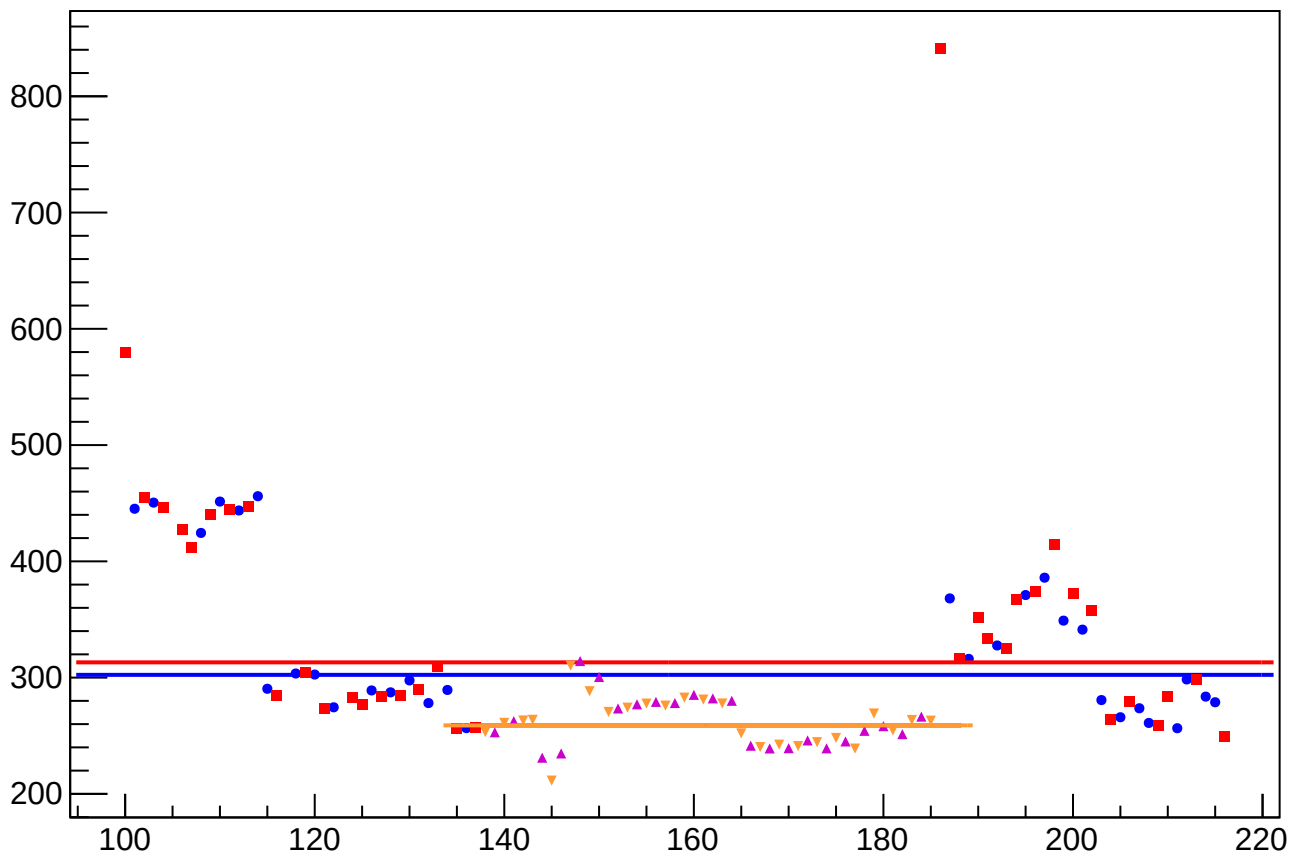
Left In:  $158.612 \pm 60.708$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-144.256 \pm 45.128$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-42.408 \pm 32.369$   $\chi^2/\text{NDF}$ : 172.9/113

- sign  $65.518 \pm 46.455$   $\chi^2/\text{NDF}$ : 78.5/57

# eigen\_cor\_asym\_sam2\_rms vs Slug



Right In: 302.374 $\pm$ 0.049  $\chi^2$ /NDF: 1009169.2/30

Left Out: 258.912 $\pm$ 0.042  $\chi^2$ /NDF: 248740.9/24

Right Out: 313.129 $\pm$ 0.051  $\chi^2$ /NDF: 1567744.0/34

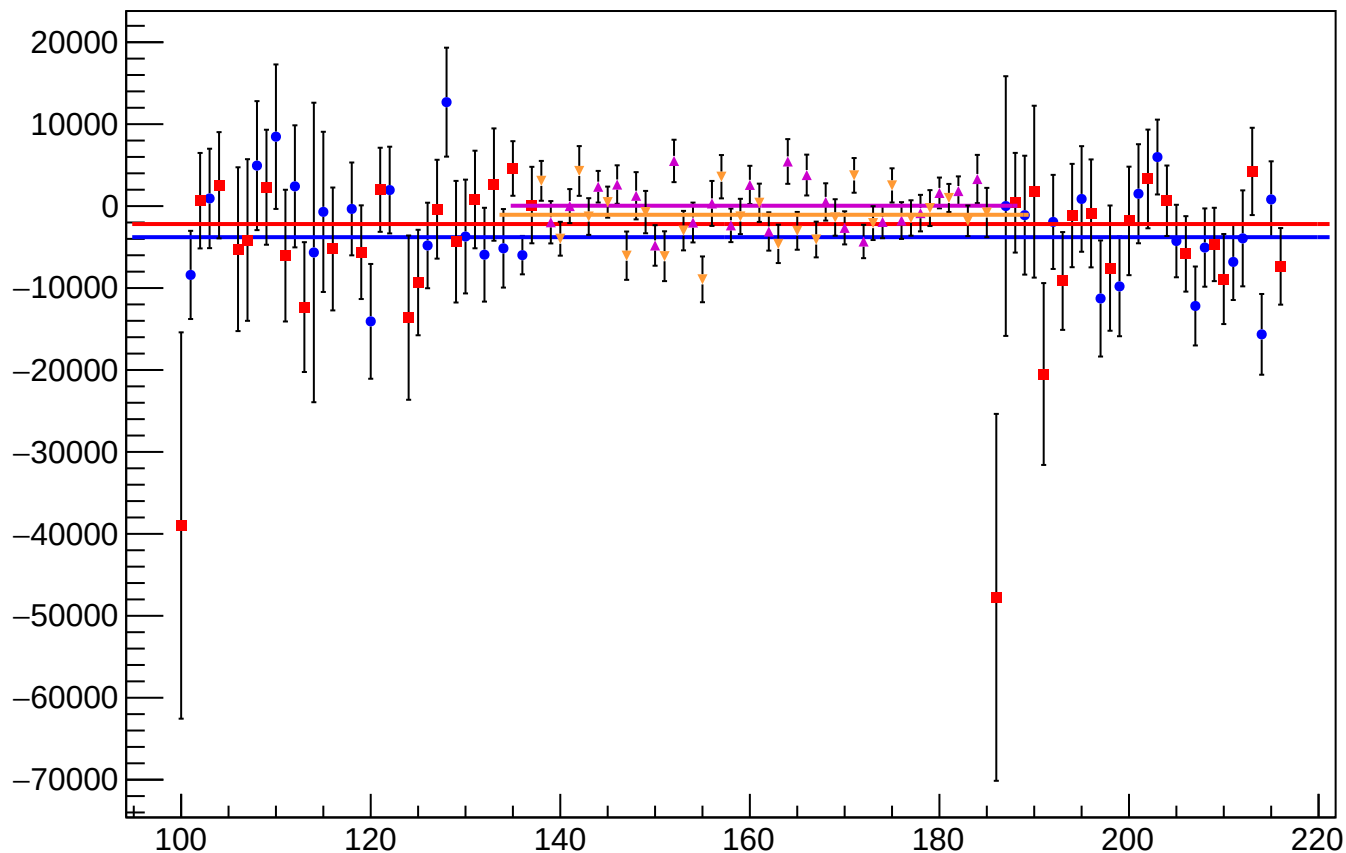
Left In: 258.843 $\pm$ 0.043  $\chi^2$ /NDF: 244953.3/22

+ sign 276.977 $\pm$ 0.032  $\chi^2$ /NDF: 1708491.9/55

All: 279.096 $\pm$ 0.023  $\chi^2$ /NDF: 4193067.5/113

- sign 281.341 $\pm$ 0.033  $\chi^2$ /NDF: 2475496.1/57

# asym\_sam2\_eigen\_cor\_correction\_mean vs Slug



Right In: -3791.867 $\pm$ 977.700  $\chi^2/\text{NDF}$ : 34.9/30

Left Out: -1059.232 $\pm$ 454.653  $\chi^2/\text{NDF}$ : 41.5/24

Right Out: -2189.719 $\pm$ 1034.675  $\chi^2/\text{NDF}$ : 30.1/34

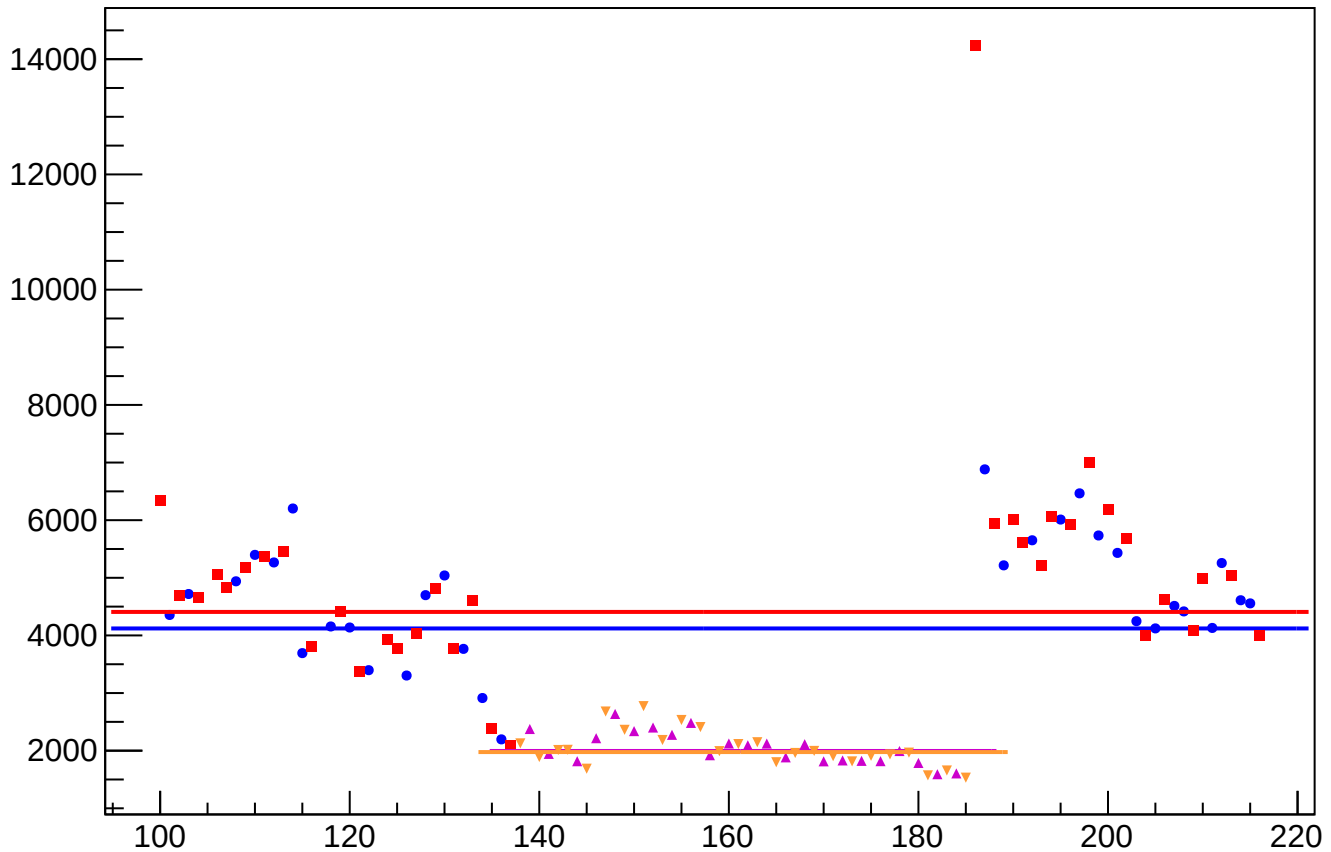
Left In: 44.348 $\pm$ 470.700  $\chi^2/\text{NDF}$ : 34.2/22

+ sign -1545.089 $\pm$ 412.258  $\chi^2/\text{NDF}$ : 82.8/55

All: -965.133 $\pm$ 297.069  $\chi^2/\text{NDF}$ : 155.1/113

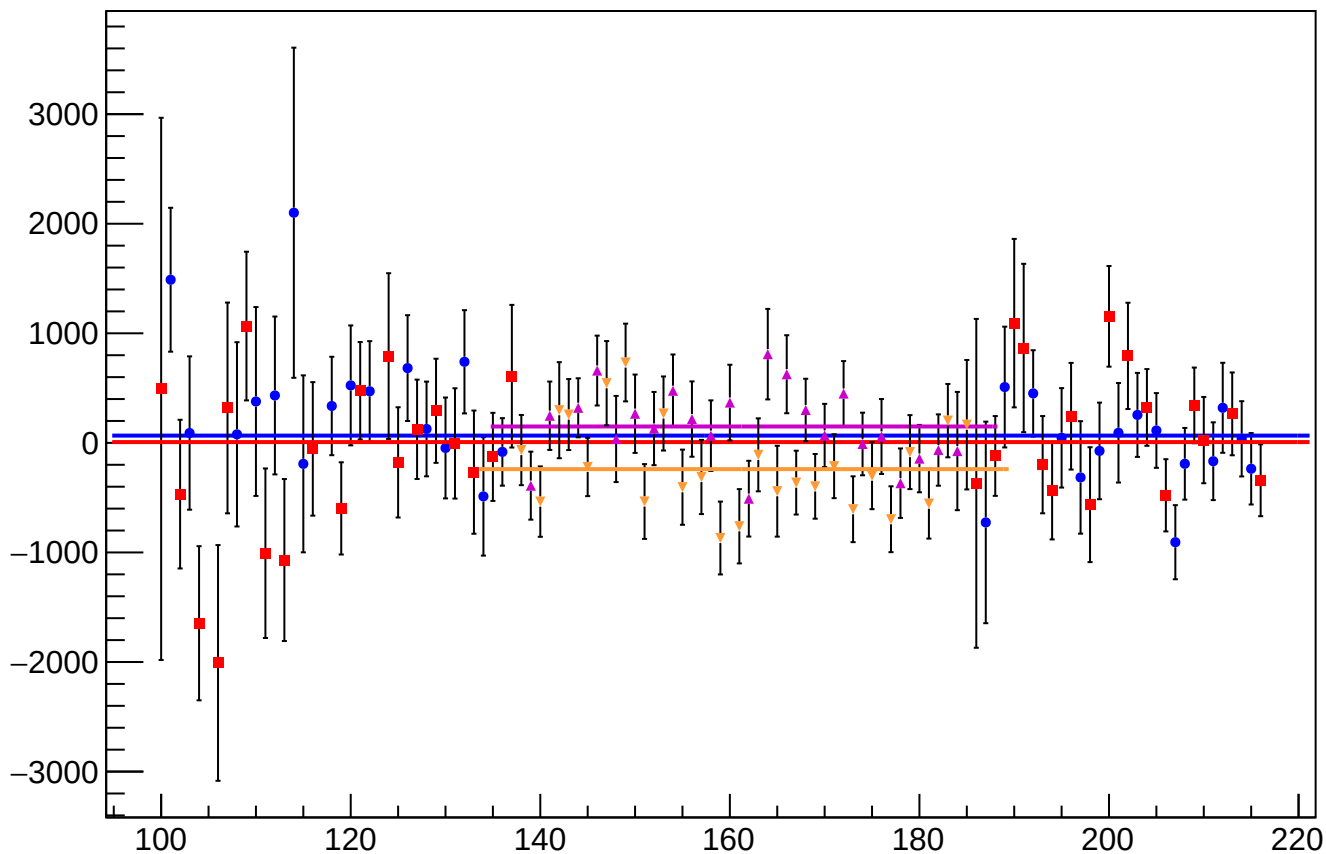
- sign -338.729 $\pm$ 428.448  $\chi^2/\text{NDF}$ : 68.2/57

# asym\_sam2\_eigen\_cor\_correction\_rms vs Slug





# dit\_asym\_sam2\_mean vs Slug



Right In:  $66.307 \pm 81.184$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $-239.549 \pm 66.167$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $7.227 \pm 83.646$   $\chi^2/\text{NDF}$ : 42.5/34

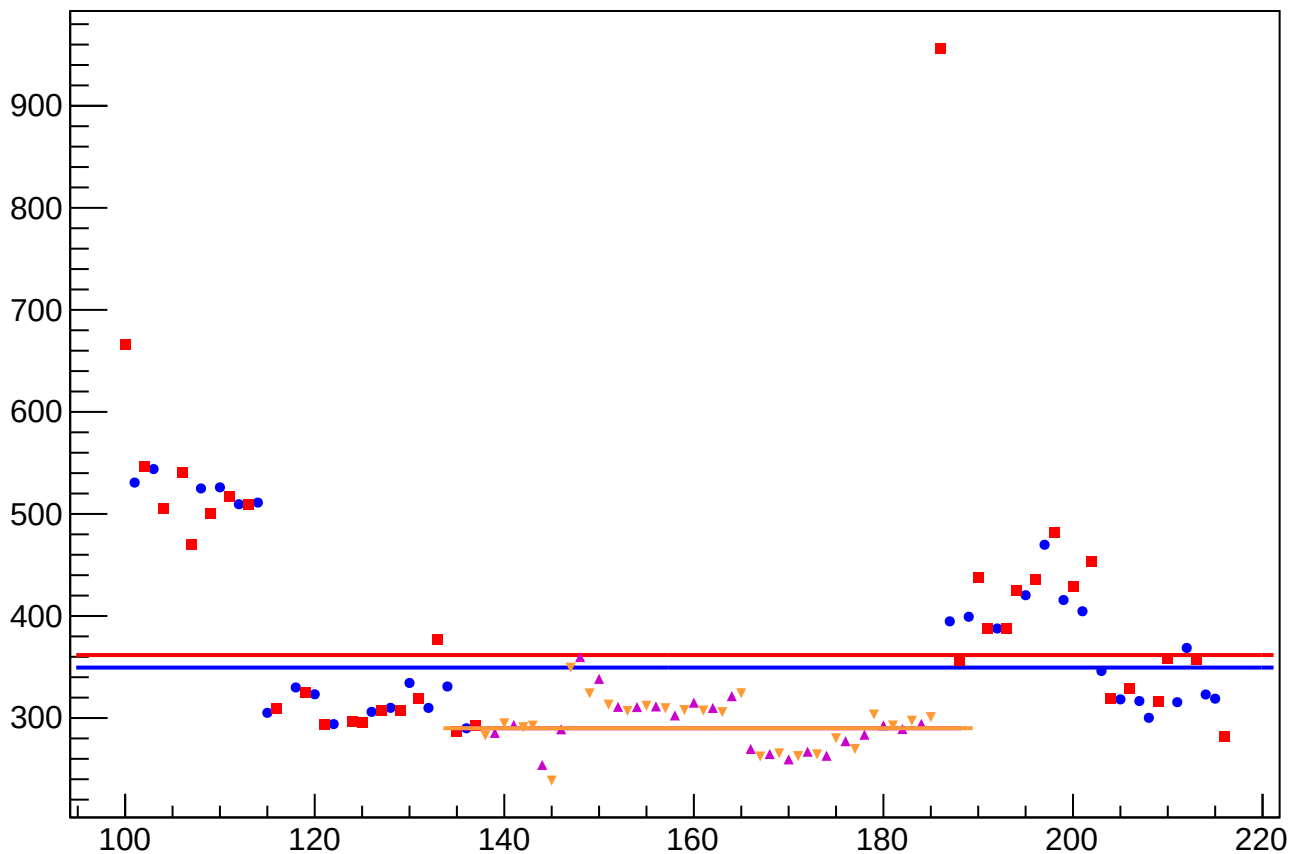
Left In:  $149.516 \pm 68.160$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-117.471 \pm 51.290$   $\chi^2/\text{NDF}$ : 70.3/55

All:  $-15.492 \pm 36.803$   $\chi^2/\text{NDF}$ : 144.3/113

- sign  $92.738 \pm 52.839$   $\chi^2/\text{NDF}$ : 65.9/57

# dit\_asym\_sam2\_rms vs Slug



Right In: 349.449 $\pm$ 0.057  $\chi^2$ /NDF: 1176214.0/30

Left Out: 290.023 $\pm$ 0.047  $\chi^2$ /NDF:280647.1/24

Right Out: 361.717 $\pm$ 0.059  $\chi^2$ /NDF: 1727311.3/34

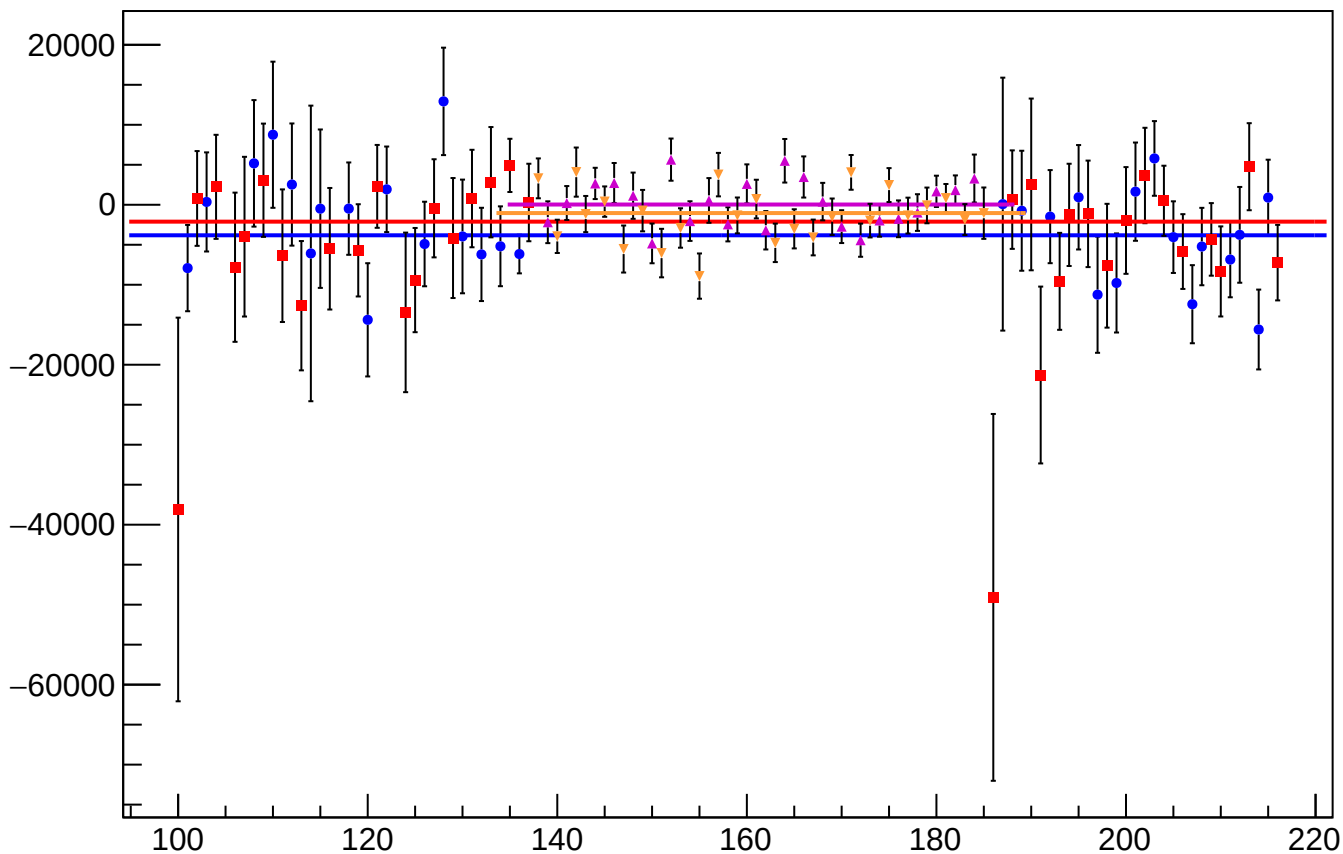
Left In: 289.941 $\pm$ 0.048  $\chi^2$ /NDF:269669.5/22

+ sign 313.742 $\pm$ 0.036  $\chi^2$ /NDF: 2100769.2/55

All: 316.090 $\pm$ 0.026  $\chi^2$ /NDF: 4991400.5/113

- sign 318.582 $\pm$ 0.037  $\chi^2$ /NDF: 2881989.9/57

# asym\_sam2\_dit\_correction\_mean vs Slug



Right In:  $-3816.203 \pm 996.951$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $-1036.592 \pm 465.324$   $\chi^2/\text{NDF}$ : 40.3/24

Right Out:  $-2110.652 \pm 1047.263$   $\chi^2/\text{NDF}$ : 31.1/34

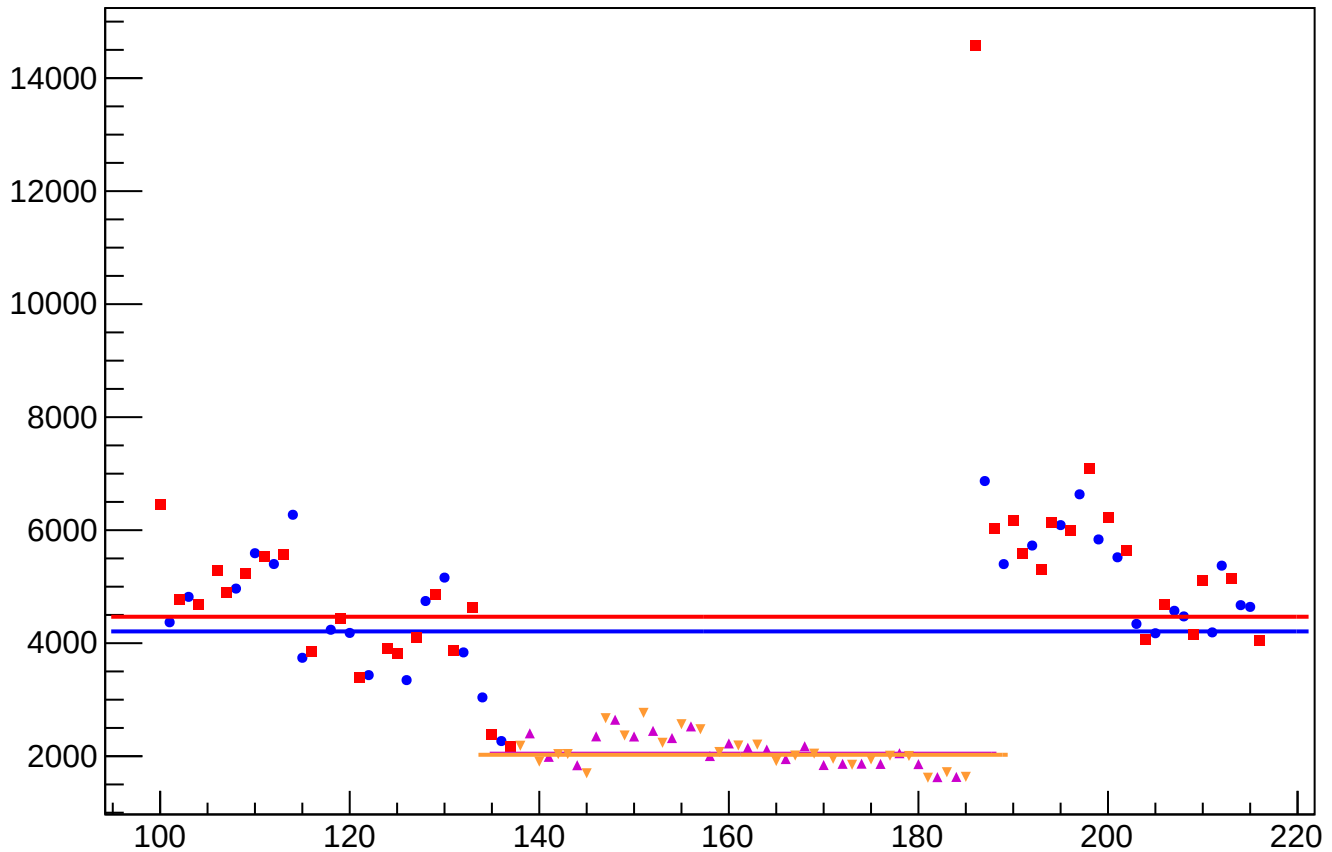
Left In:  $30.393 \pm 482.280$   $\chi^2/\text{NDF}$ : 34.1/22

+ sign  $-1533.816 \pm 421.656$   $\chi^2/\text{NDF}$ : 81.0/55

All:  $-961.711 \pm 303.790$   $\chi^2/\text{NDF}$ : 153.5/113

- sign  $-344.221 \pm 438.061$   $\chi^2/\text{NDF}$ : 68.7/57

# asym\_sam2\_dit\_correction\_rms vs Slug



Right In: 4208.341 $\pm$ 0.705  $\chi^2$ /NDF: 2703957.1/30

Left Out: 2025.085 $\pm$ 0.329  $\chi^2$ /NDF: 700821.6/24

Right Out: 4467.944 $\pm$ 0.741  $\chi^2$ /NDF: 2943324.0/34

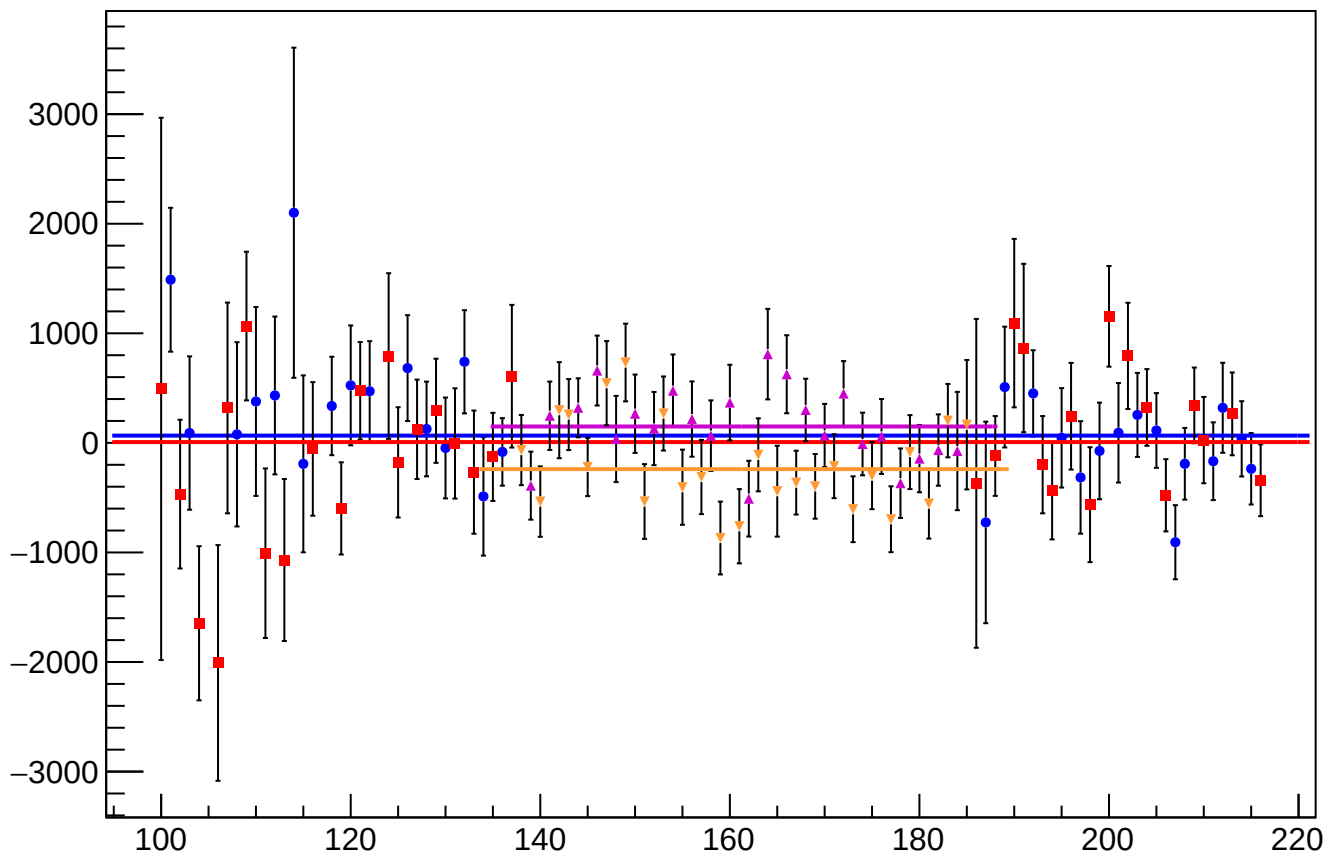
Left In: 2044.523 $\pm$ 0.341  $\chi^2$ /NDF: 584918.7/22

+ sign 2415.631 $\pm$ 0.298  $\chi^2$ /NDF: 11280615.1/55

All: 2441.078 $\pm$ 0.215  $\chi^2$ /NDF: 23659832.9/100

- sign 2468.544 $\pm$ 0.310  $\chi^2$ /NDF: 12364071.4/57

# eigen\_dit\_asym\_sam2\_mean vs Slug



Right In:  $66.314 \pm 81.184$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $-239.552 \pm 66.167$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $7.227 \pm 83.646$   $\chi^2/\text{NDF}$ : 42.5/34

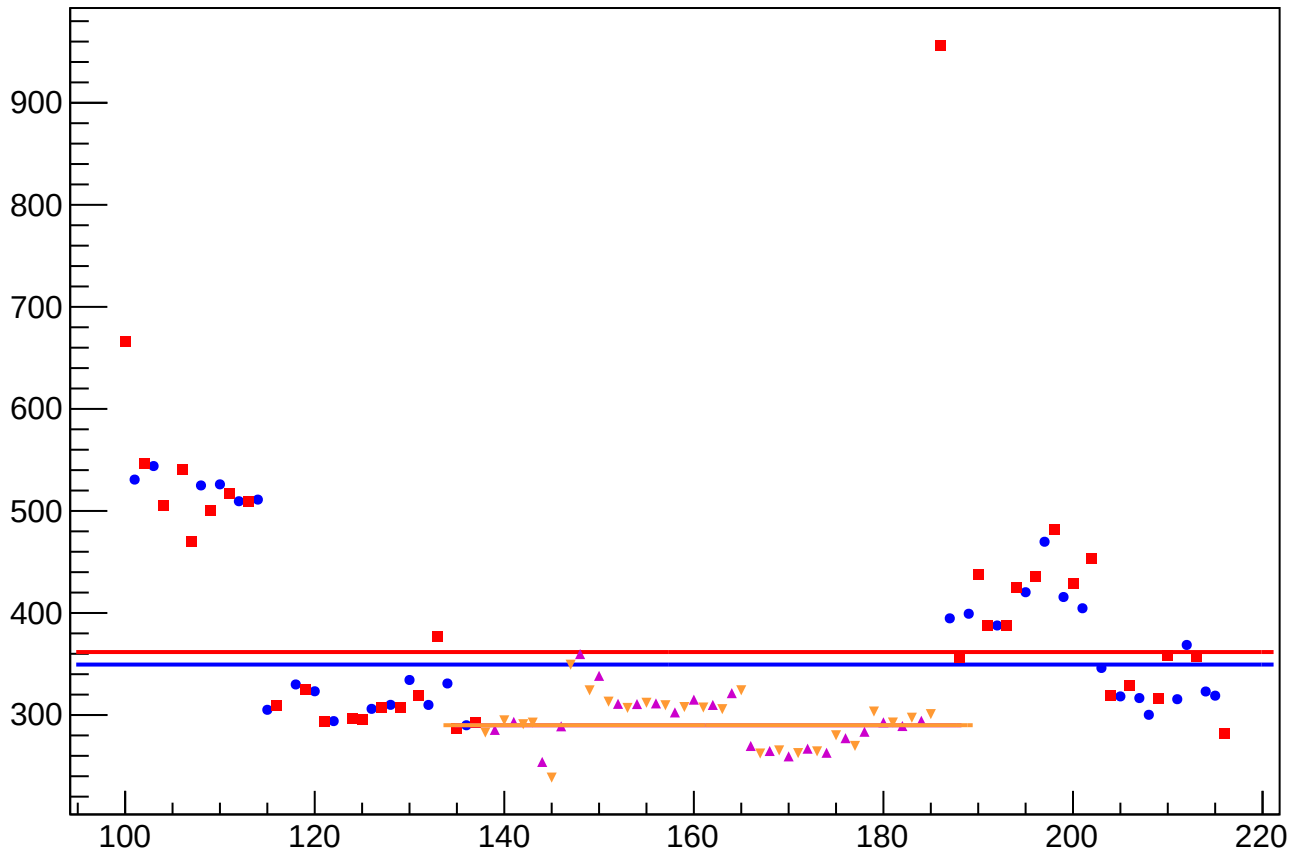
Left In:  $149.517 \pm 68.160$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-117.470 \pm 51.290$   $\chi^2/\text{NDF}$ : 70.3/55

All:  $-15.492 \pm 36.803$   $\chi^2/\text{NDF}$ : 144.3/113

- sign  $92.739 \pm 52.839$   $\chi^2/\text{NDF}$ : 65.9/57

# eigen\_dit\_asym\_sam2\_rms vs Slug



Right In:  $349.449 \pm 0.057$   $\chi^2/\text{NDF}: 1176209.0/30$

Left Out:  $290.023 \pm 0.047$   $\chi^2/\text{NDF}: 280652.8/24$

Right Out:  $361.717 \pm 0.059$   $\chi^2/\text{NDF}: 1727296.2/34$

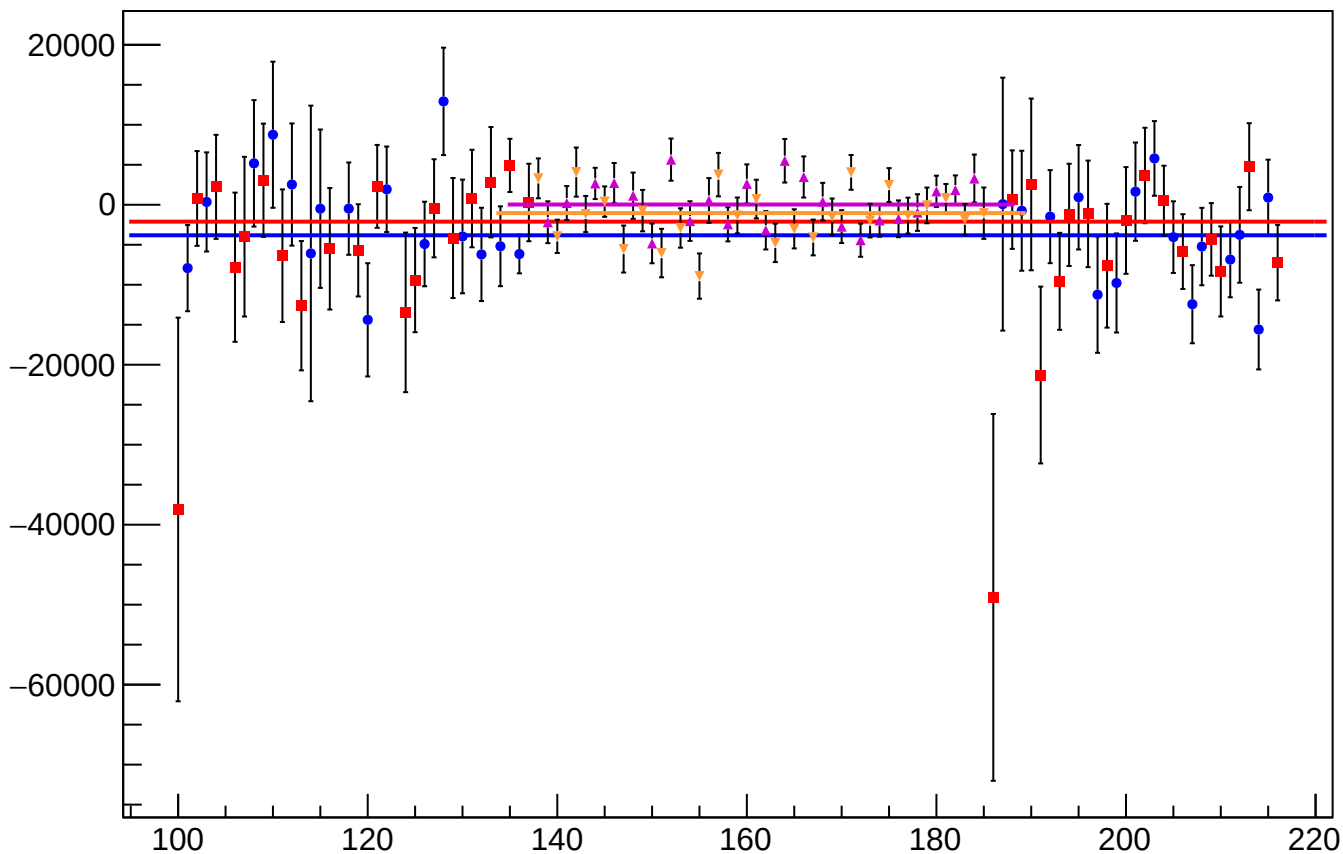
Left In:  $289.941 \pm 0.048$   $\chi^2/\text{NDF}: 269671.9/22$

+ sign  $313.742 \pm 0.036$   $\chi^2/\text{NDF}: 2100754.7/55$

All:  $316.090 \pm 0.026$   $\chi^2/\text{NDF}: 4991369.7/113$

- sign  $318.582 \pm 0.037$   $\chi^2/\text{NDF}: 2881973.2/57$

# asym\_sam2\_eigen\_dit\_correction\_mean vs Slug



Right In: -3816.199 $\pm$ 996.951  $\chi^2/\text{NDF}$ : 34.3/30

Left Out: -1036.591 $\pm$ 465.324  $\chi^2/\text{NDF}$ : 40.3/24

Right Out: -2110.650 $\pm$ 1047.262  $\chi^2/\text{NDF}$ : 31.1/34

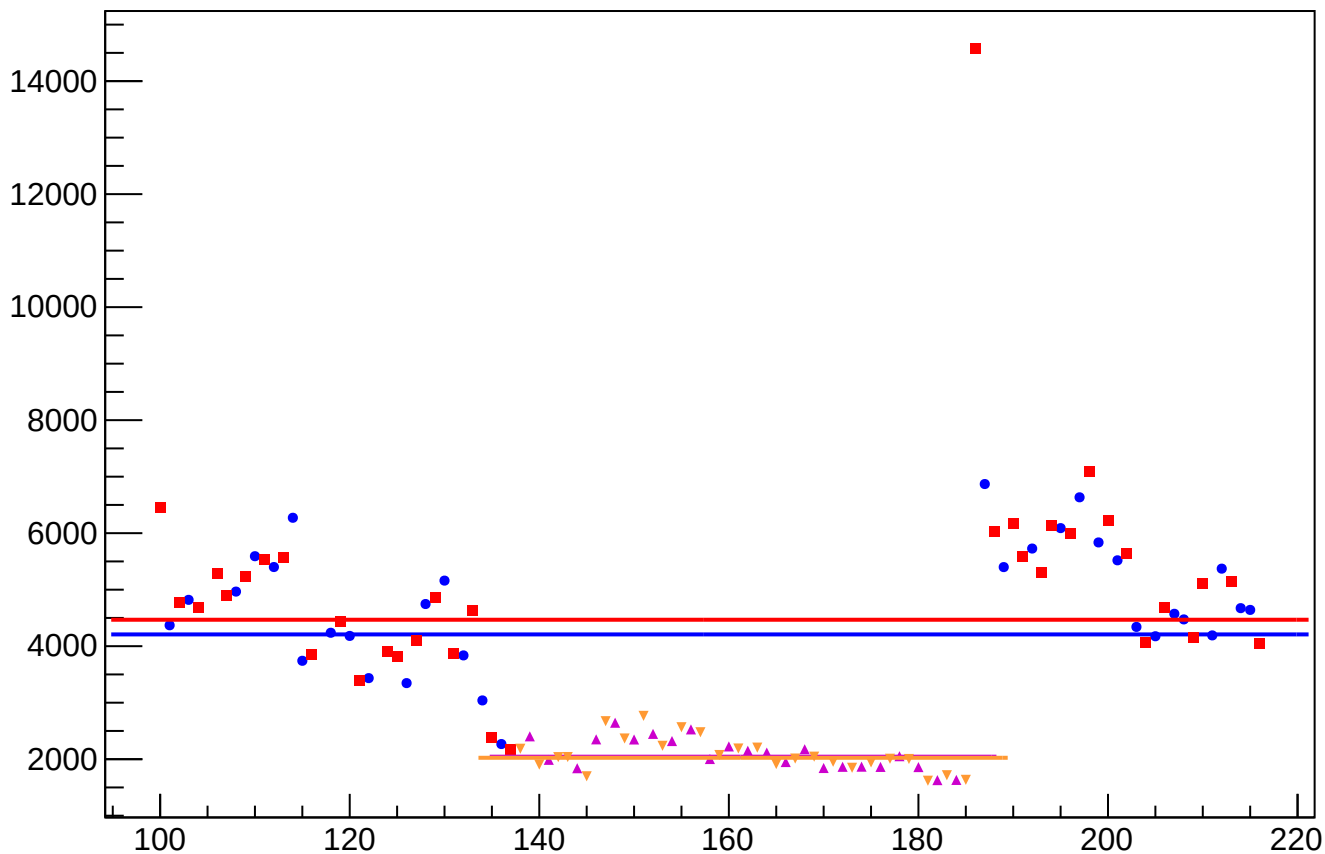
Left In: 30.392 $\pm$ 482.280  $\chi^2/\text{NDF}$ : 34.1/22

+ sign -1533.815 $\pm$ 421.656  $\chi^2/\text{NDF}$ : 81.0/55

All: -961.711 $\pm$ 303.790  $\chi^2/\text{NDF}$ : 153.5/113

- sign -344.222 $\pm$ 438.061  $\chi^2/\text{NDF}$ : 68.7/57

# asym\_sam2\_eigen\_dit\_correction\_rms vs Slug



Right In: 4208.339 $\pm$ 0.705  $\chi^2$ /NDF: 2703949.8/30

Left Out: 2025.085 $\pm$ 0.329  $\chi^2$ /NDF: 700825.4/24

Right Out: 4467.942 $\pm$ 0.741  $\chi^2$ /NDF: 2943318.7/34

Left In: 2044.522 $\pm$ 0.341  $\chi^2$ /NDF: 584922.7/22

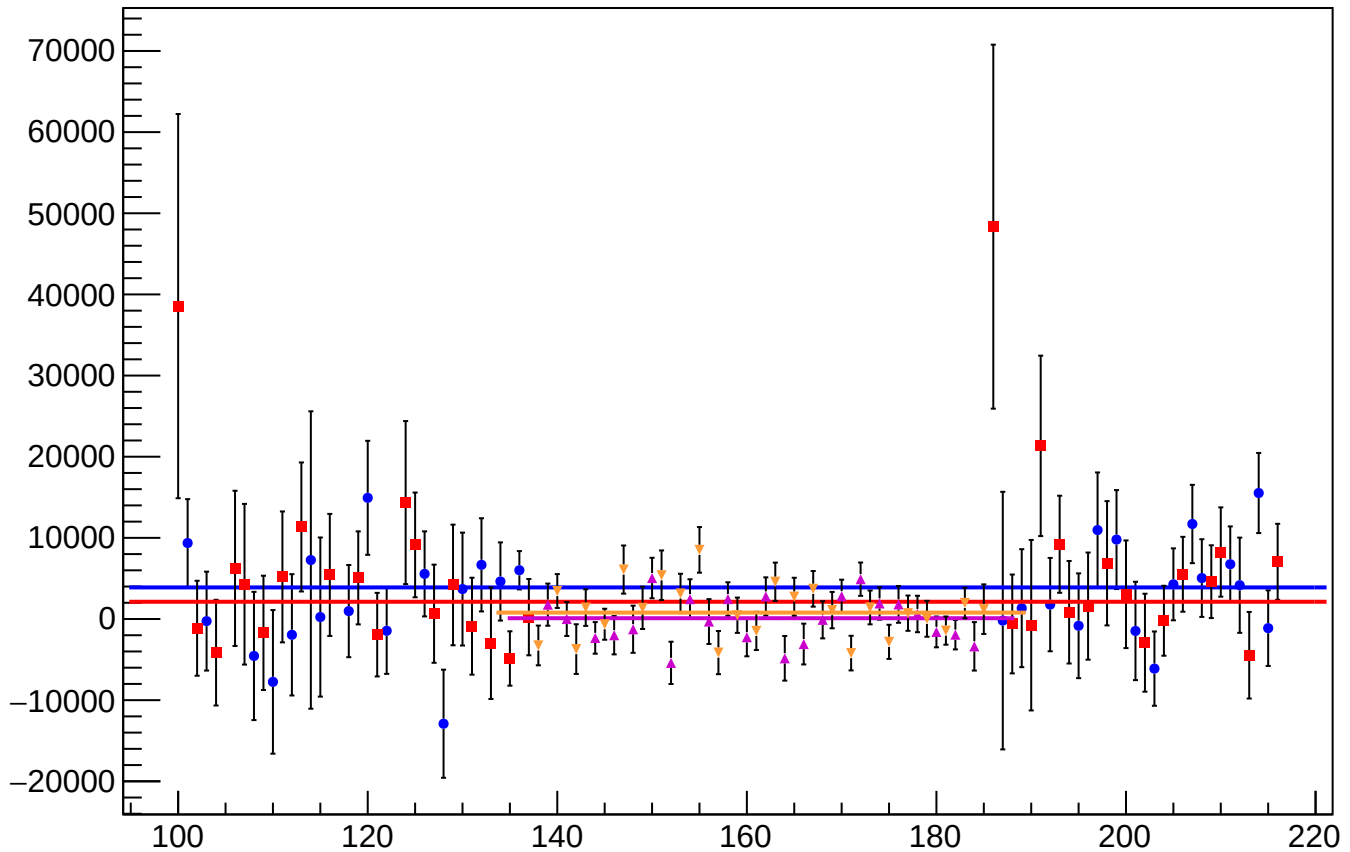
+ sign 2415.632 $\pm$ 0.298  $\chi^2$ /NDF: 11280601.6/55

All: 2441.078 $\pm$ 0.215  $\chi^2$ /NDF: 23659813.4/100

- sign 2468.544 $\pm$ 0.310  $\chi^2$ /NDF: 12364065.8/57



# asym\_sam2\_mean vs Slug



Right In: 3893.231 $\pm$ 981.079  $\chi^2$ /NDF: 34.5/30

Left Out: 788.321 $\pm$ 458.726  $\chi^2$ /NDF:41.3/24

Right Out: 2126.126 $\pm$ 1037.258  $\chi^2$ /NDF: 29.9/34

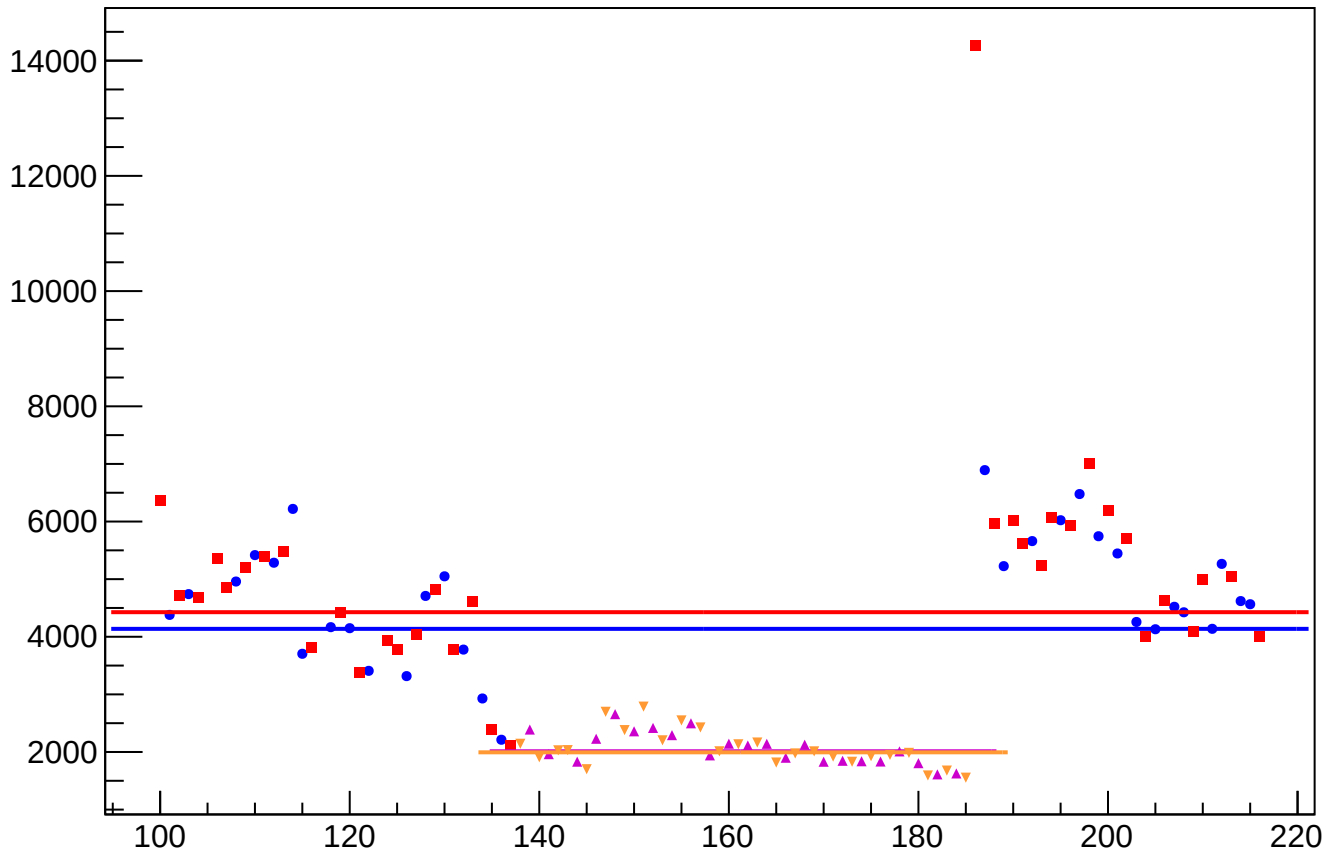
Left In: 96.730 $\pm$ 474.825  $\chi^2$ /NDF:32.8/22

+ sign 1345.350 $\pm$ 415.545  $\chi^2$ /NDF: 84.1/55

All: 913.973 $\pm$ 299.396  $\chi^2$ /NDF: 152.2/113

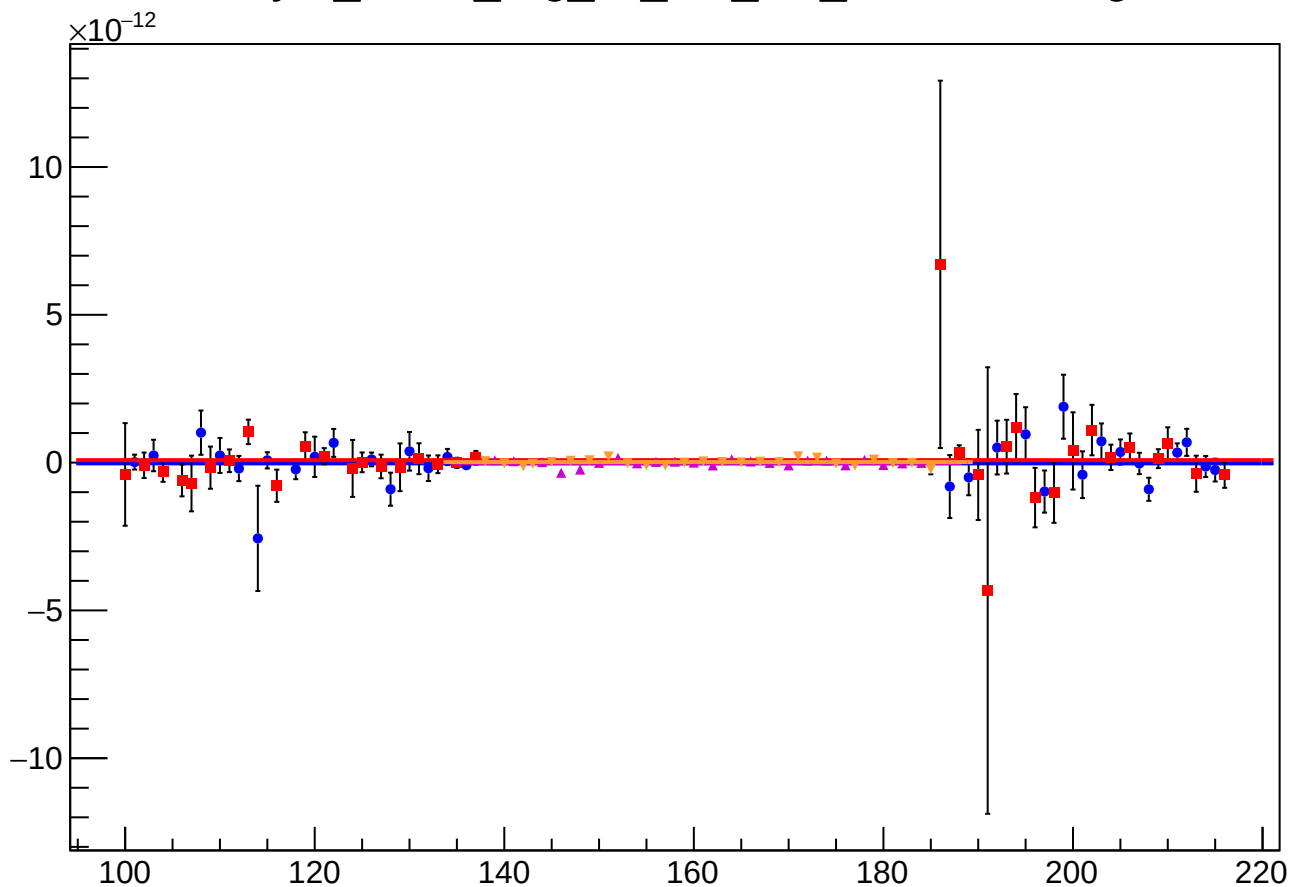
- sign 448.319 $\pm$ 431.739  $\chi^2$ /NDF: 65.9/57

# asym\_sam2\_rms vs Slug



Right In:  $4137.254 \pm 0.694$   $\chi^2/\text{NDF}: 2759582.5/30$  + sign  $2378.707 \pm 0.294$   $\chi^2/\text{NDF}: 11336773.6/55$   
 Left Out:  $1994.246 \pm 0.324$   $\chi^2/\text{NDF}: 746498.4/24$  All:  $2403.814 \pm 0.212$   $\chi^2/\text{NDF}: 23820610.9/100$   
 Right Out:  $4426.712 \pm 0.733$   $\chi^2/\text{NDF}: 2925413.1/34$  - sign  $2430.916 \pm 0.305$   $\chi^2/\text{NDF}: 12468654.8/57$   
 Left In:  $2012.692 \pm 0.336$   $\chi^2/\text{NDF}: 587260.9/22$

# asym\_sam2\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 26.2/34

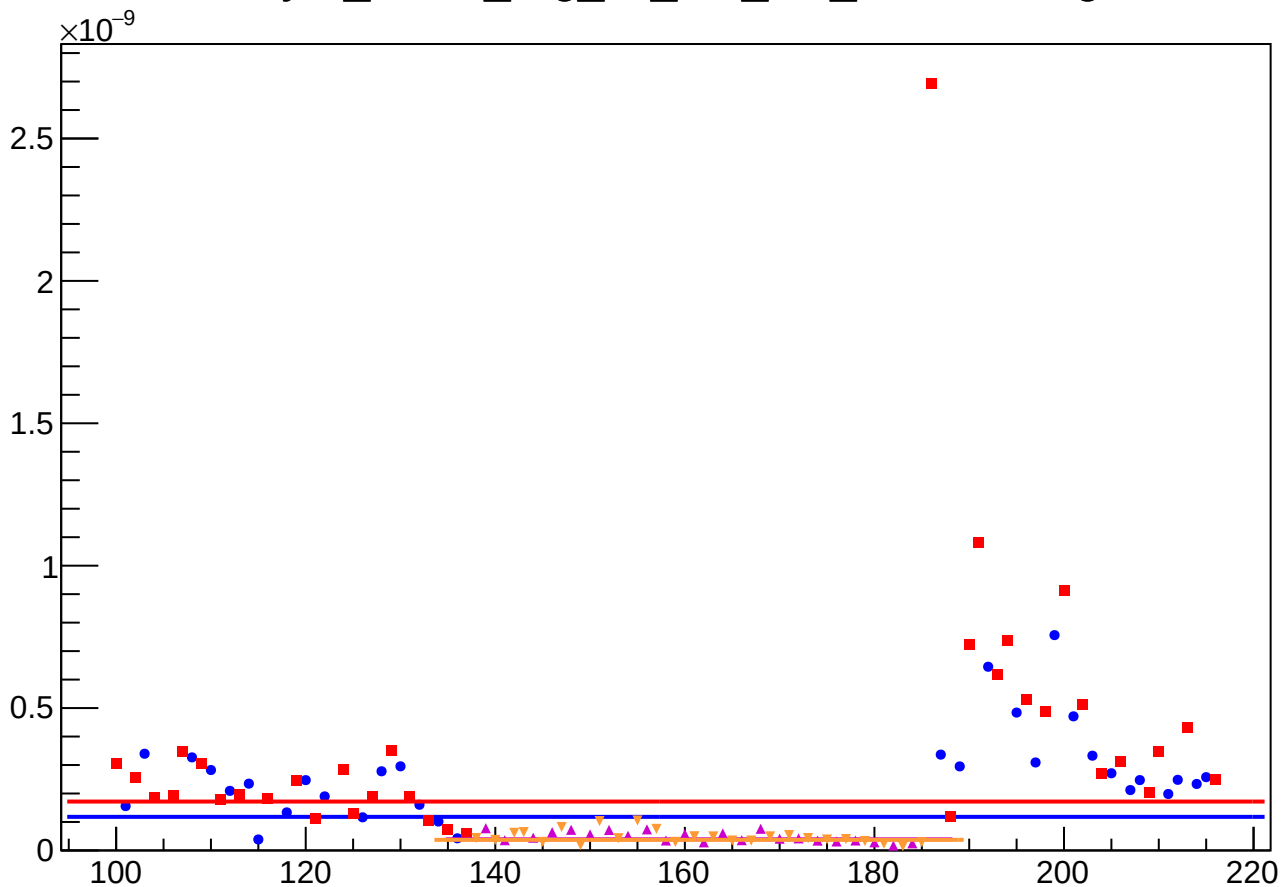
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.6/57

# asym\_sam2\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7476706.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2323330.9/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5820243.3/34

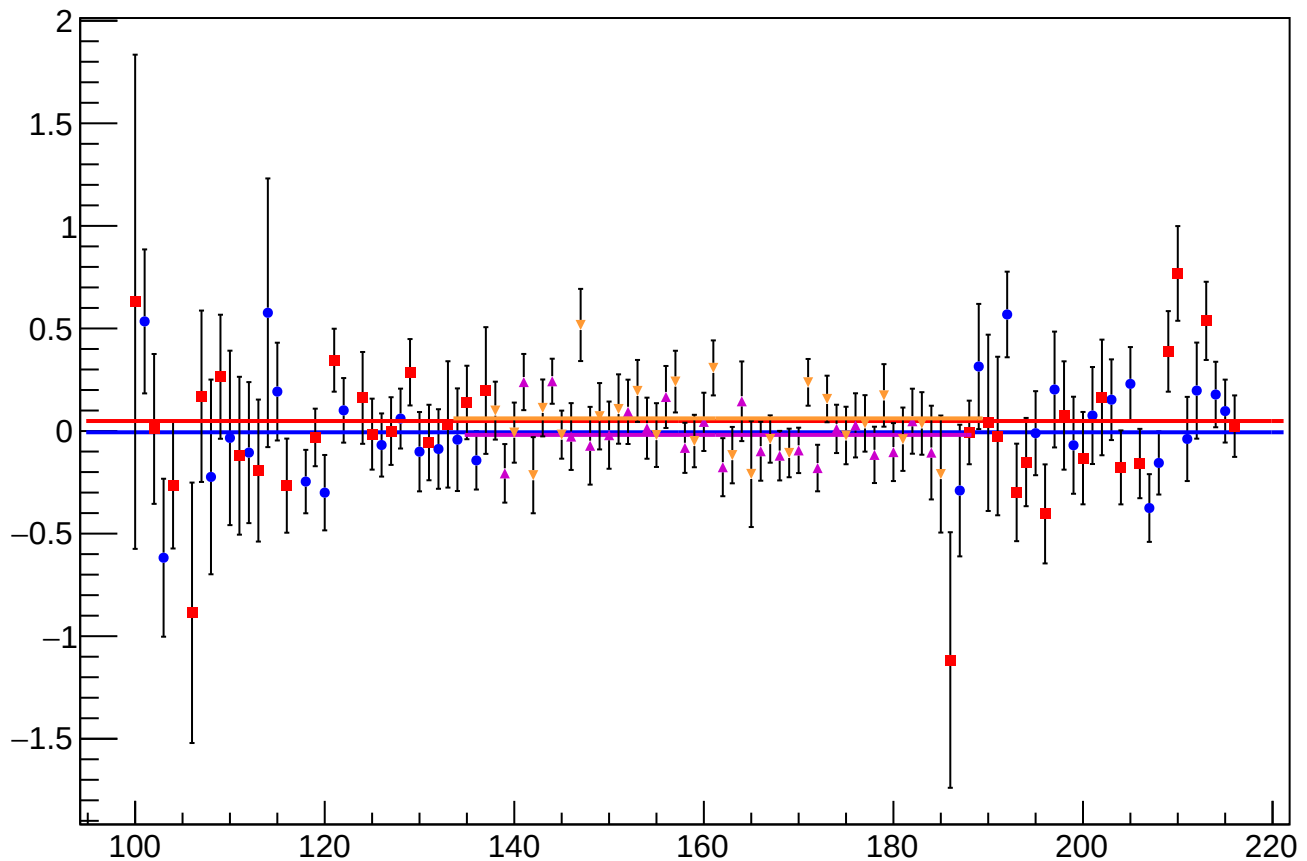
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1921481.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13840692.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 28127034.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14258978.6/57

# asym\_sam2\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.049 \pm 0.037$   $\chi^2/\text{NDF}$ : 47.5/34

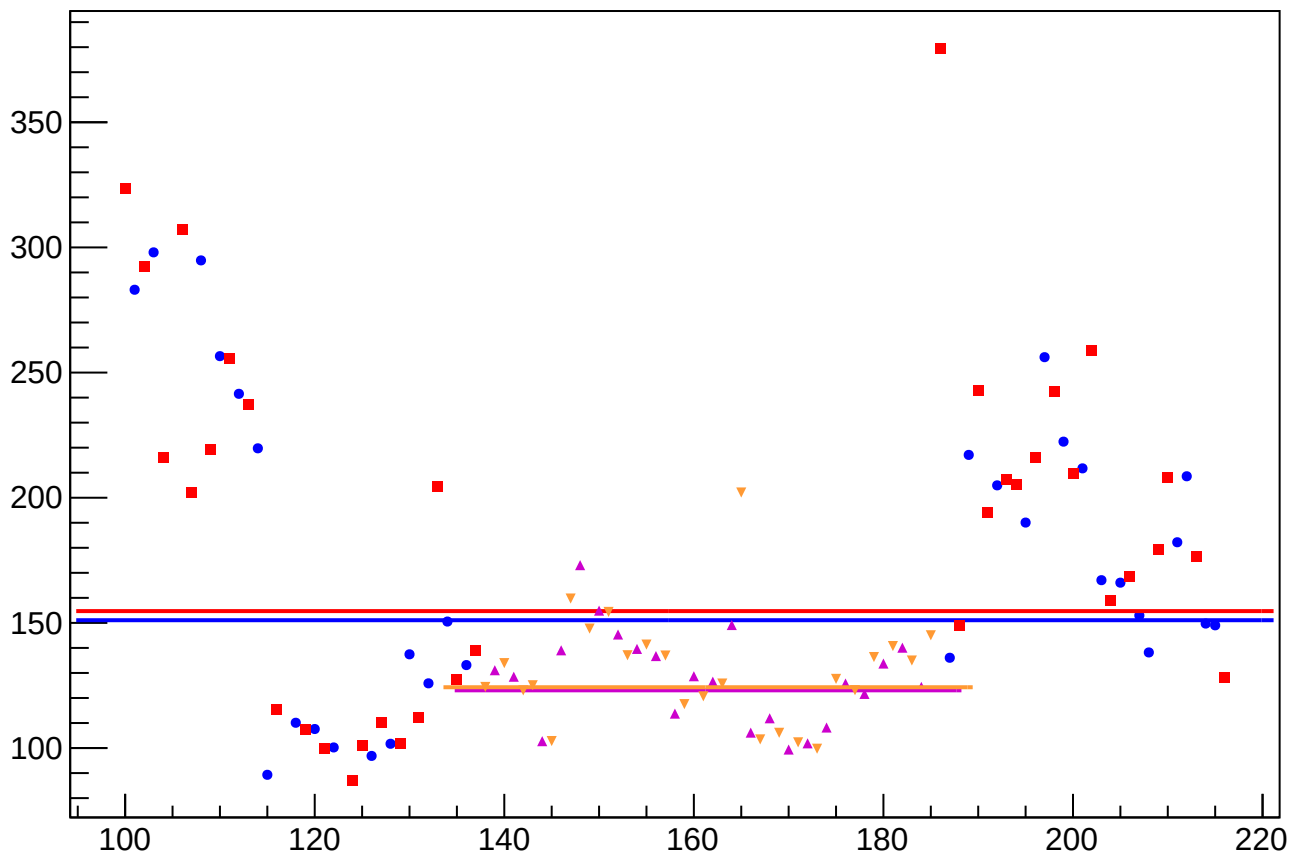
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.036 \pm 0.023$   $\chi^2/\text{NDF}$ : 64.5/55

All:  $0.022 \pm 0.016$   $\chi^2/\text{NDF}$ : 135.1/113

- sign  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 69.8/57

# asym\_sam2\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 151.070 $\pm$ 0.026  $\chi^2$ /NDF: 3292552.9/30

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF: 840983.3/24

Right Out: 154.712 $\pm$ 0.026  $\chi^2$ /NDF: 3931166.6/34

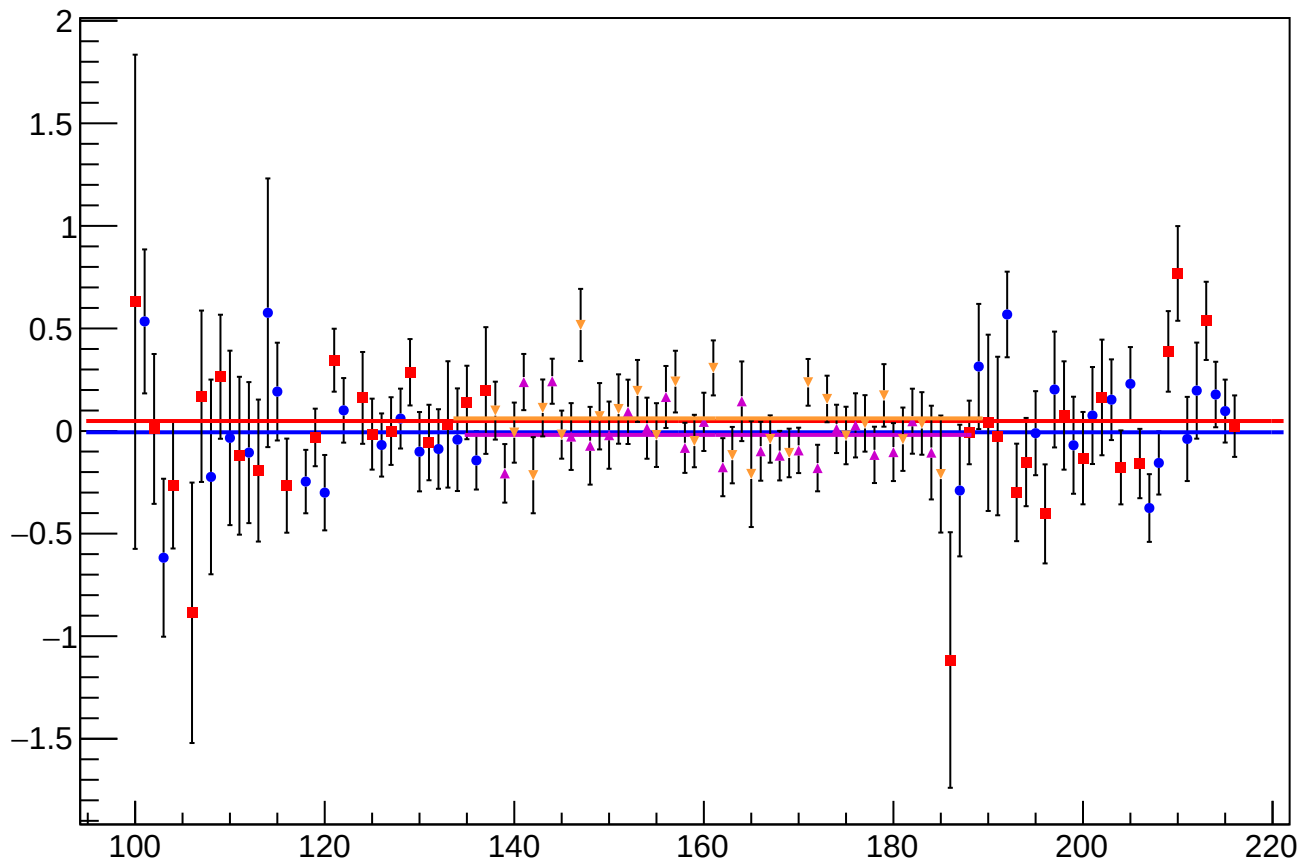
Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF: 718821.1/22

+ sign 134.494 $\pm$ 0.016  $\chi^2$ /NDF: 4797728.1/55

All: 134.809 $\pm$ 0.011  $\chi^2$ /NDF: 10337194.1/11

- sign 135.139 $\pm$ 0.016  $\chi^2$ /NDF: 5538666.0/57

asym\_sam2\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.049 \pm 0.037$   $\chi^2/\text{NDF}$ : 47.5/34

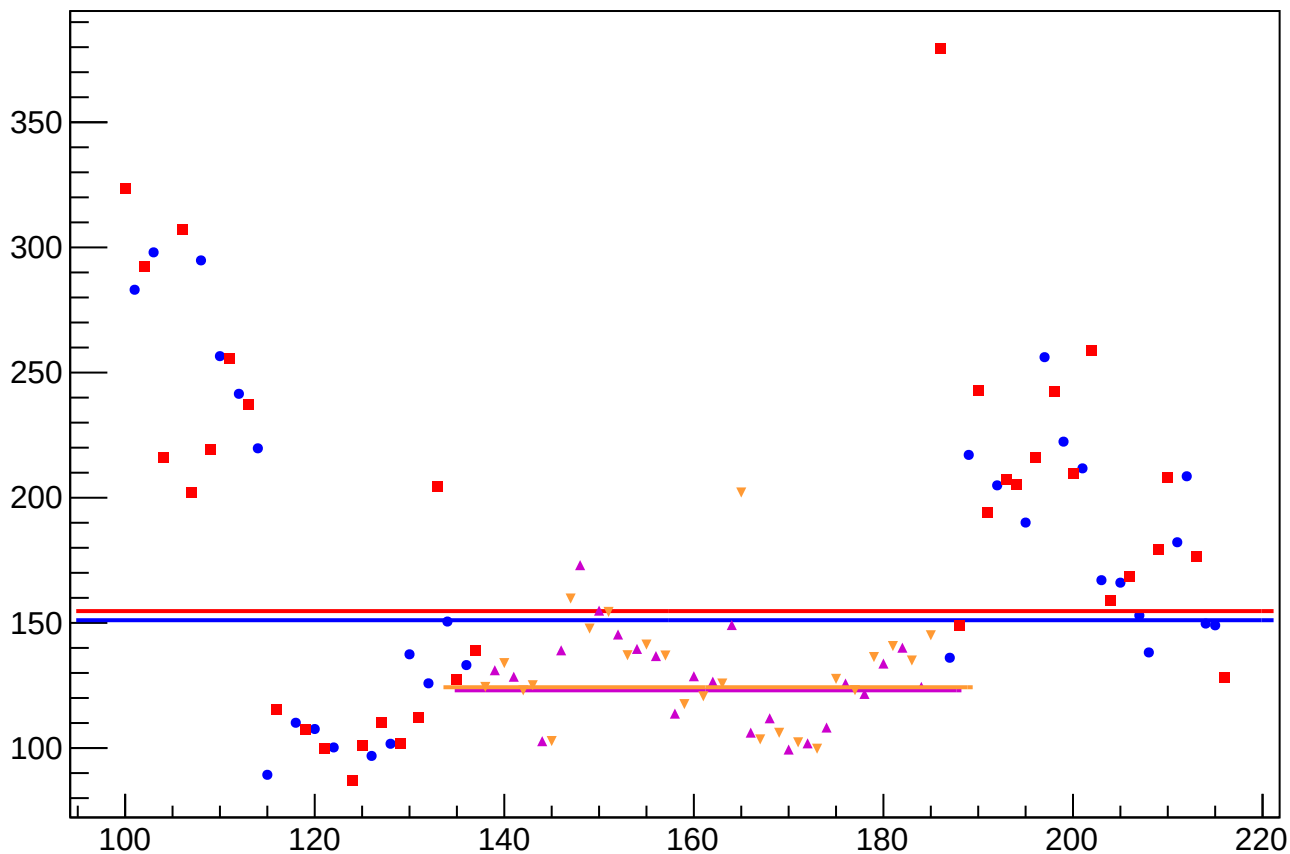
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.036 \pm 0.023$   $\chi^2/\text{NDF}$ : 64.5/55

All:  $0.022 \pm 0.016$   $\chi^2/\text{NDF}$ : 135.1/113

- sign  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_sam2\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 151.070 $\pm$ 0.026  $\chi^2$ /NDF: 3292552.9/30

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF: 840983.3/24

Right Out: 154.712 $\pm$ 0.026  $\chi^2$ /NDF: 3931166.6/34

Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF: 718821.1/22

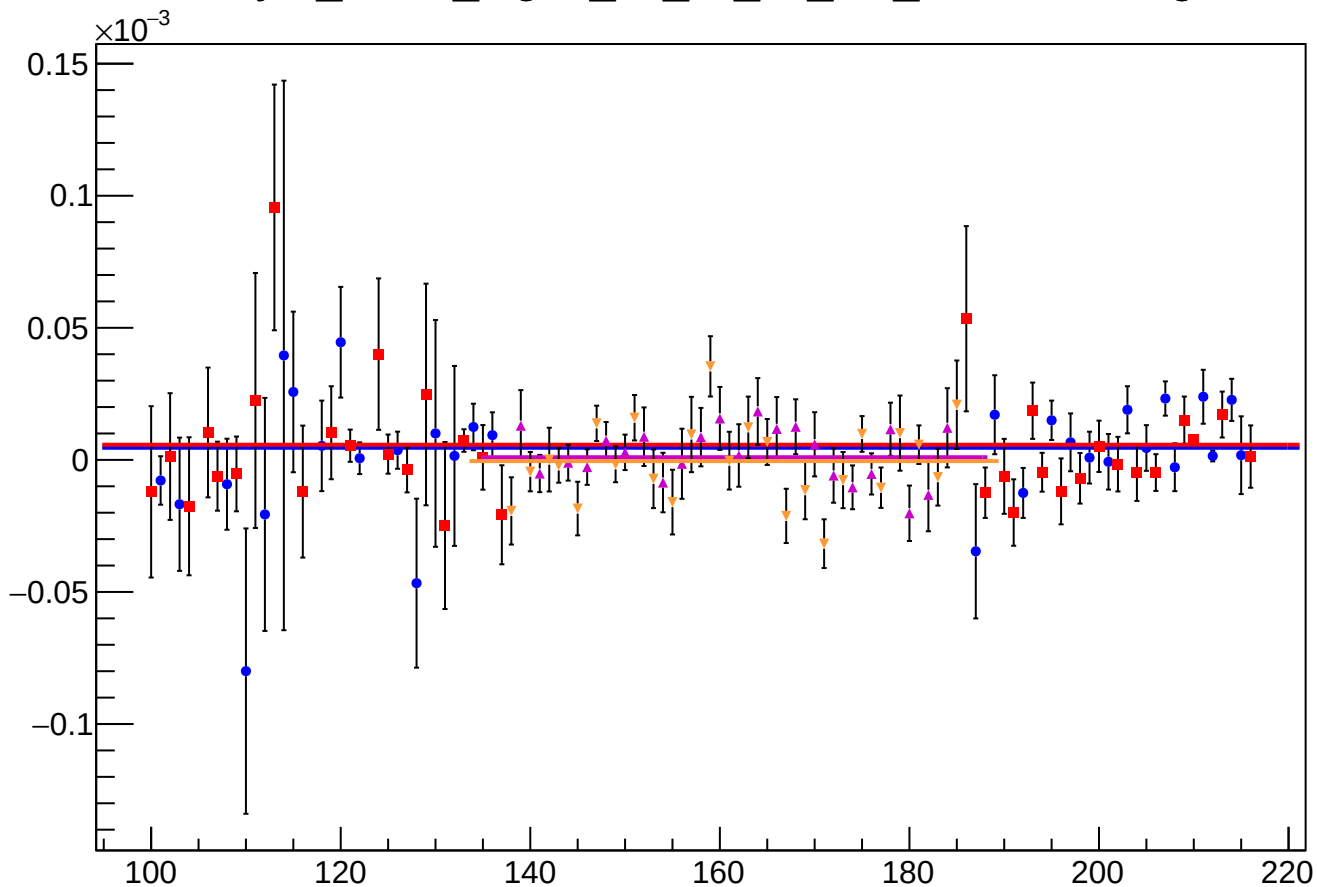
+ sign 134.494 $\pm$ 0.016  $\chi^2$ /NDF: 4797728.1/55

All: 134.809 $\pm$ 0.011  $\chi^2$ /NDF: 10337194.1/11

- sign 135.139 $\pm$ 0.016  $\chi^2$ /NDF: 5538666.0/57



# asym\_sam2\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 45.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.5/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.4/34

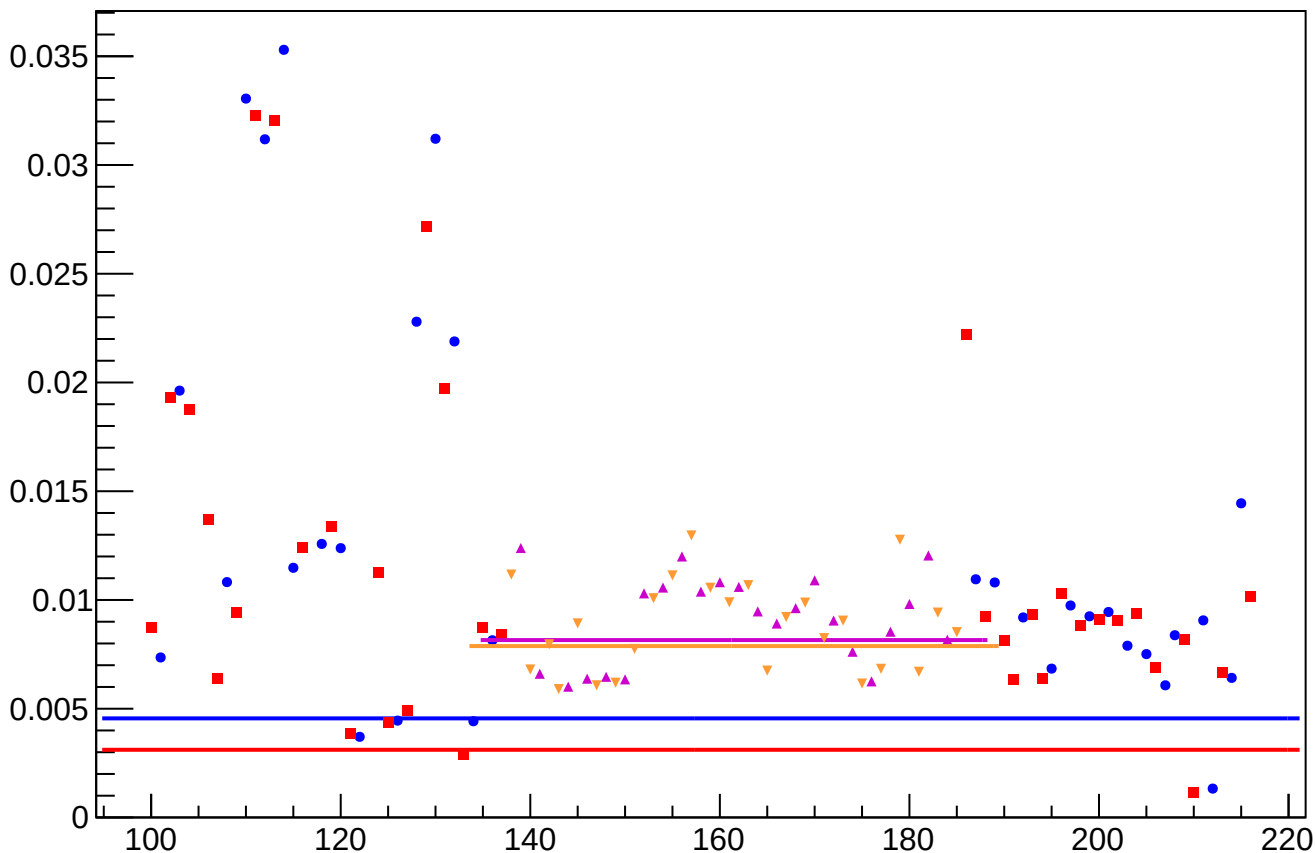
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.0/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 102.8/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 169.3/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.7/57

# asym\_sam2\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15637429.5/30

Left Out: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2076596.0/24

Right Out: 0.003 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20186908.7/34

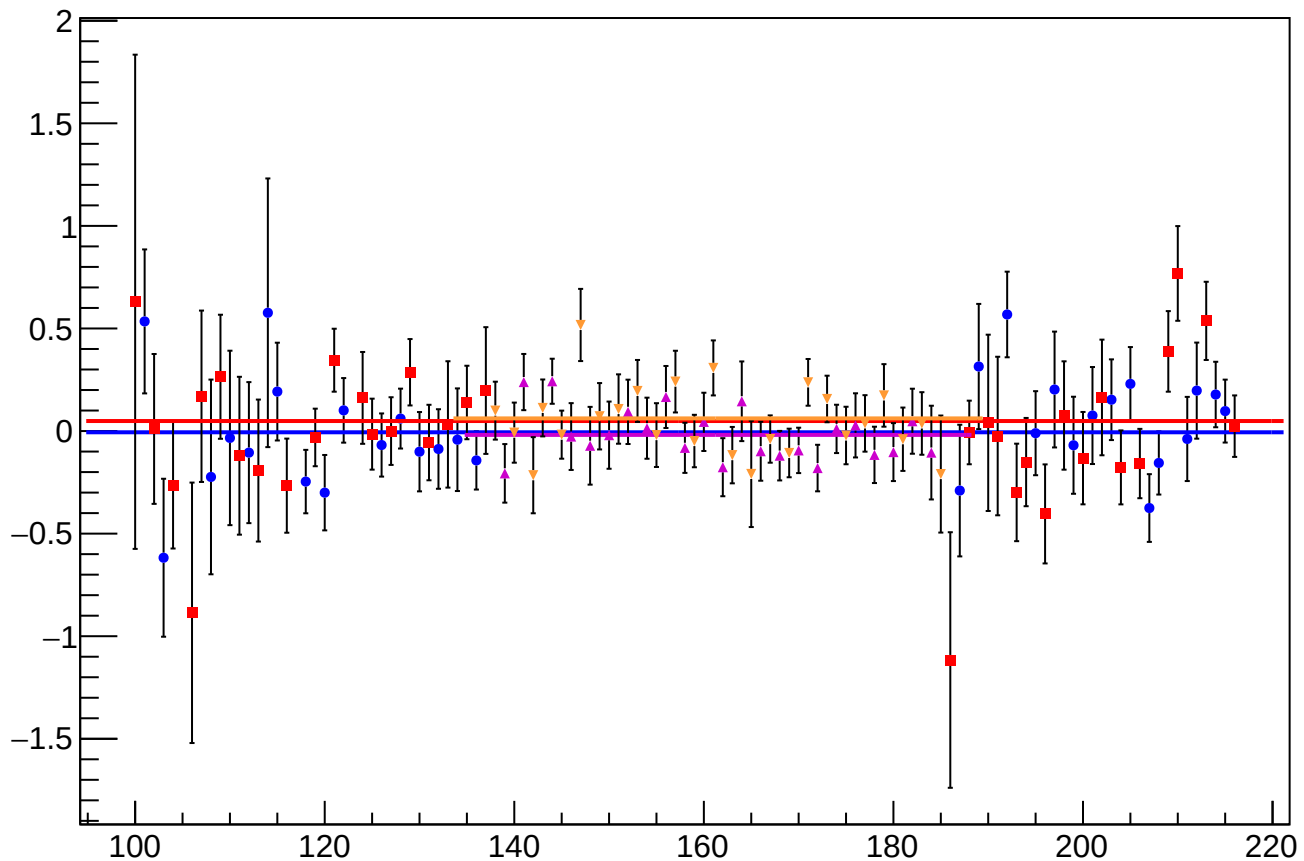
Left In: 0.008 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2017677.5/22

+ sign 0.006 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 21770733.4/55

All: 0.005 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 56156457.1/113

- sign 0.004 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32208014.2/57

# asym\_sam2\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.049 \pm 0.037$   $\chi^2/\text{NDF}$ : 47.5/34

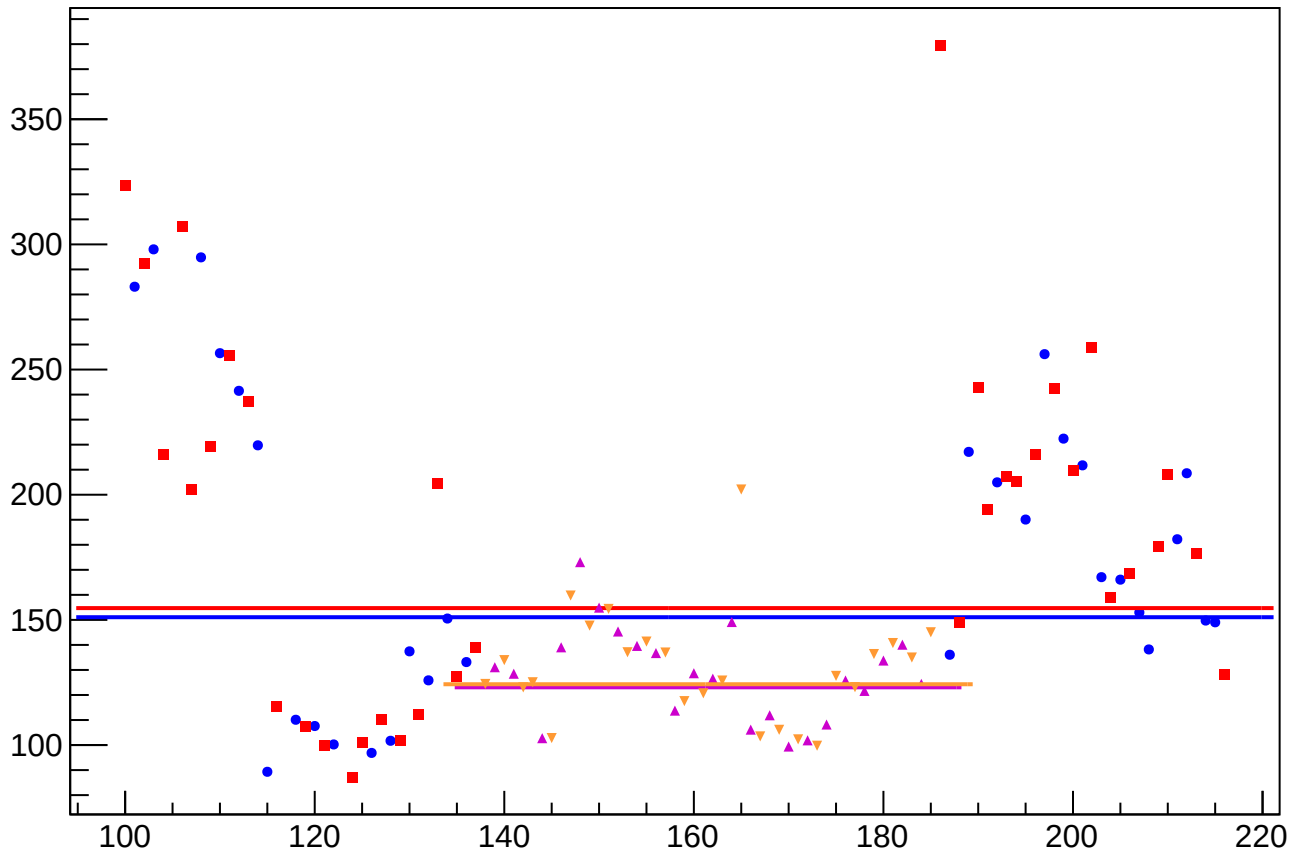
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.036 \pm 0.023$   $\chi^2/\text{NDF}$ : 64.5/55

All:  $0.022 \pm 0.016$   $\chi^2/\text{NDF}$ : 135.1/113

- sign  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_sam2\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 151.068 $\pm$ 0.026  $\chi^2$ /NDF: 3292629.8/30

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF: 841035.9/24

Right Out: 154.710 $\pm$ 0.026  $\chi^2$ /NDF: 3931289.3/34

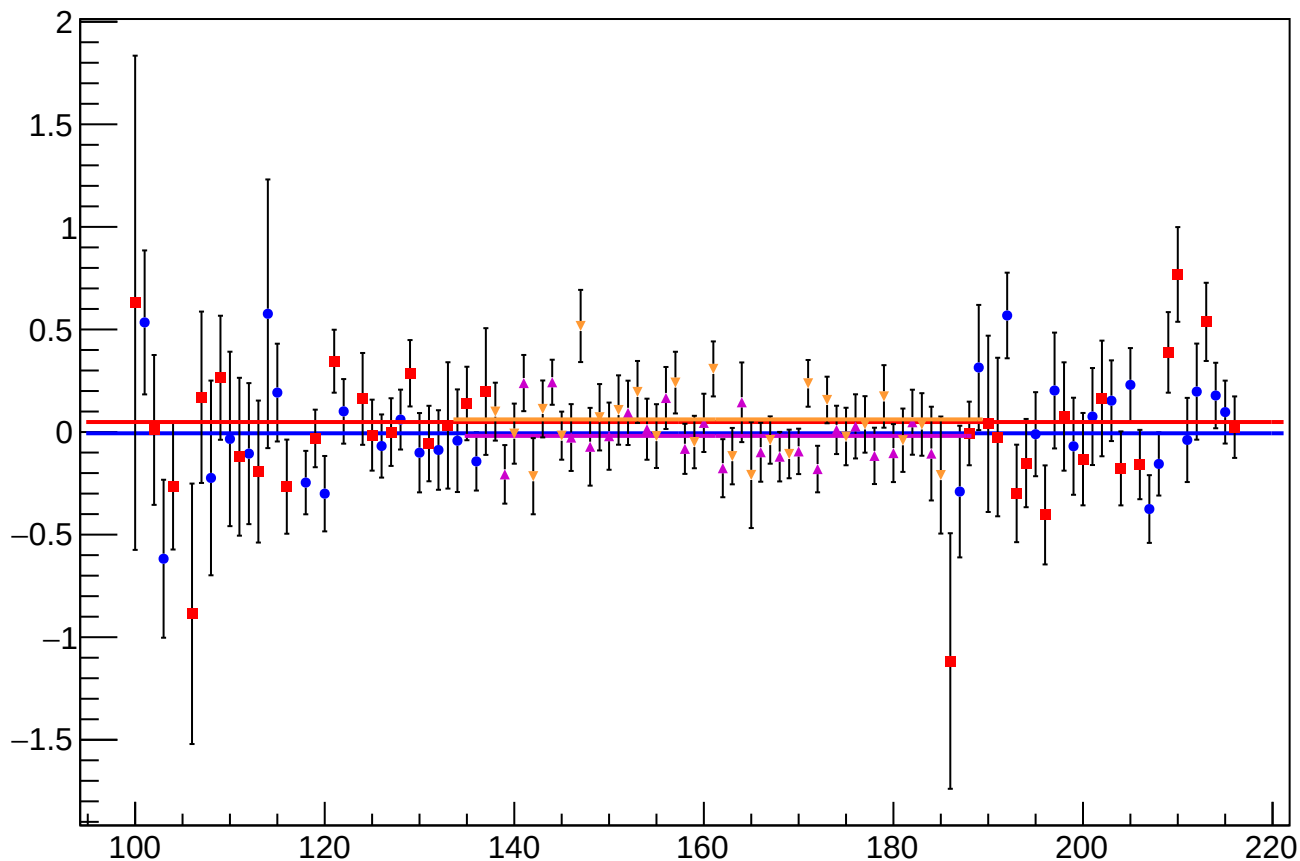
Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF: 718844.3/22

+ sign 134.493 $\pm$ 0.016  $\chi^2$ /NDF: 4797772.5/55

All: 134.809 $\pm$ 0.011  $\chi^2$ /NDF: 10337295.7/11

- sign 135.139 $\pm$ 0.016  $\chi^2$ /NDF: 5538723.4/57

asym\_sam2\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.037$   $\chi^2/\text{NDF}$ : 34.9/30

Left Out:  $0.062 \pm 0.029$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.049 \pm 0.037$   $\chi^2/\text{NDF}$ : 47.5/34

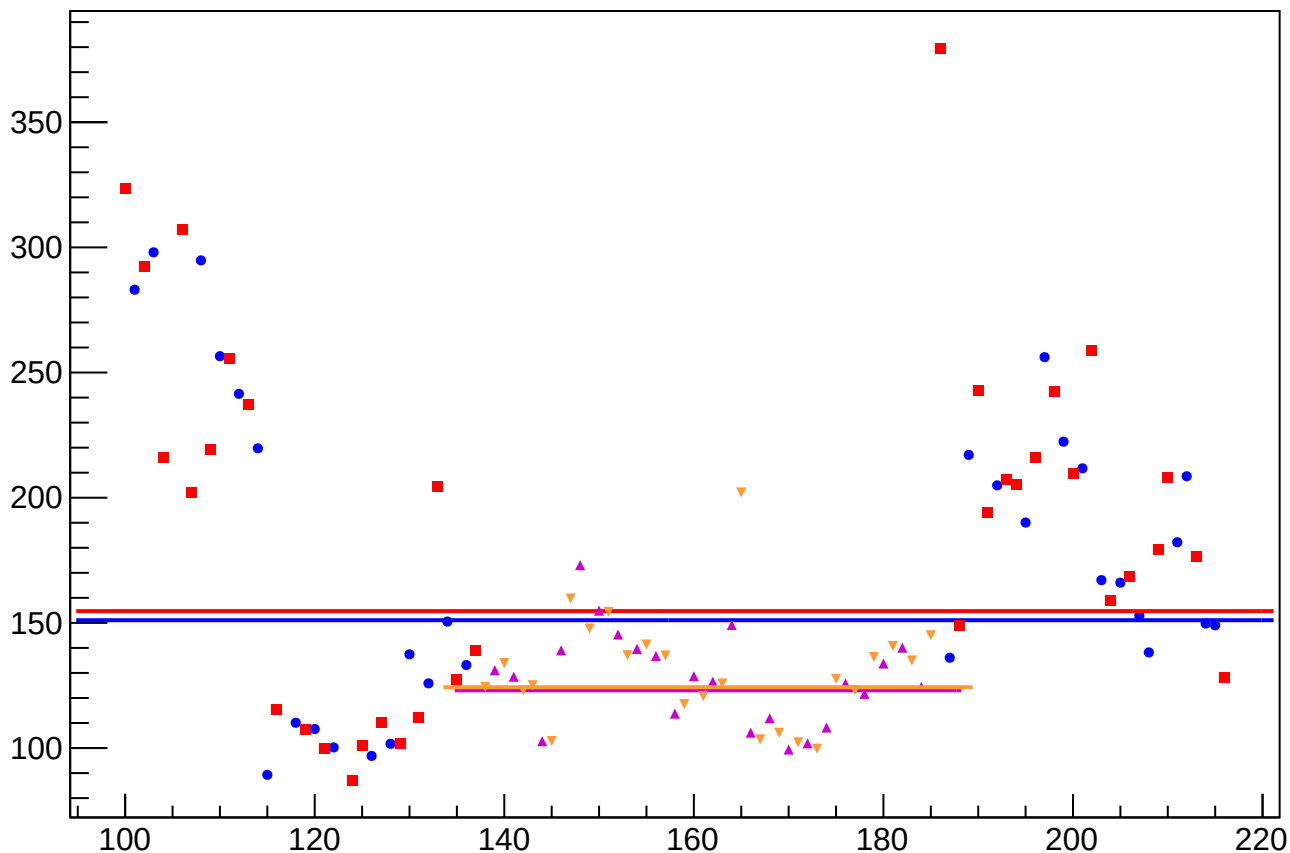
Left In:  $-0.019 \pm 0.029$   $\chi^2/\text{NDF}$ : 20.3/22

+ sign  $0.036 \pm 0.023$   $\chi^2/\text{NDF}$ : 64.5/55

All:  $0.022 \pm 0.016$   $\chi^2/\text{NDF}$ : 135.1/113

- sign  $0.007 \pm 0.023$   $\chi^2/\text{NDF}$ : 69.8/57

asym\_sam2\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 151.068 $\pm$ 0.026  $\chi^2$ /NDF: 3292629.8/30

Left Out: 124.292 $\pm$ 0.020  $\chi^2$ /NDF: 841035.9/24

Right Out: 154.710 $\pm$ 0.026  $\chi^2$ /NDF: 3931289.3/34

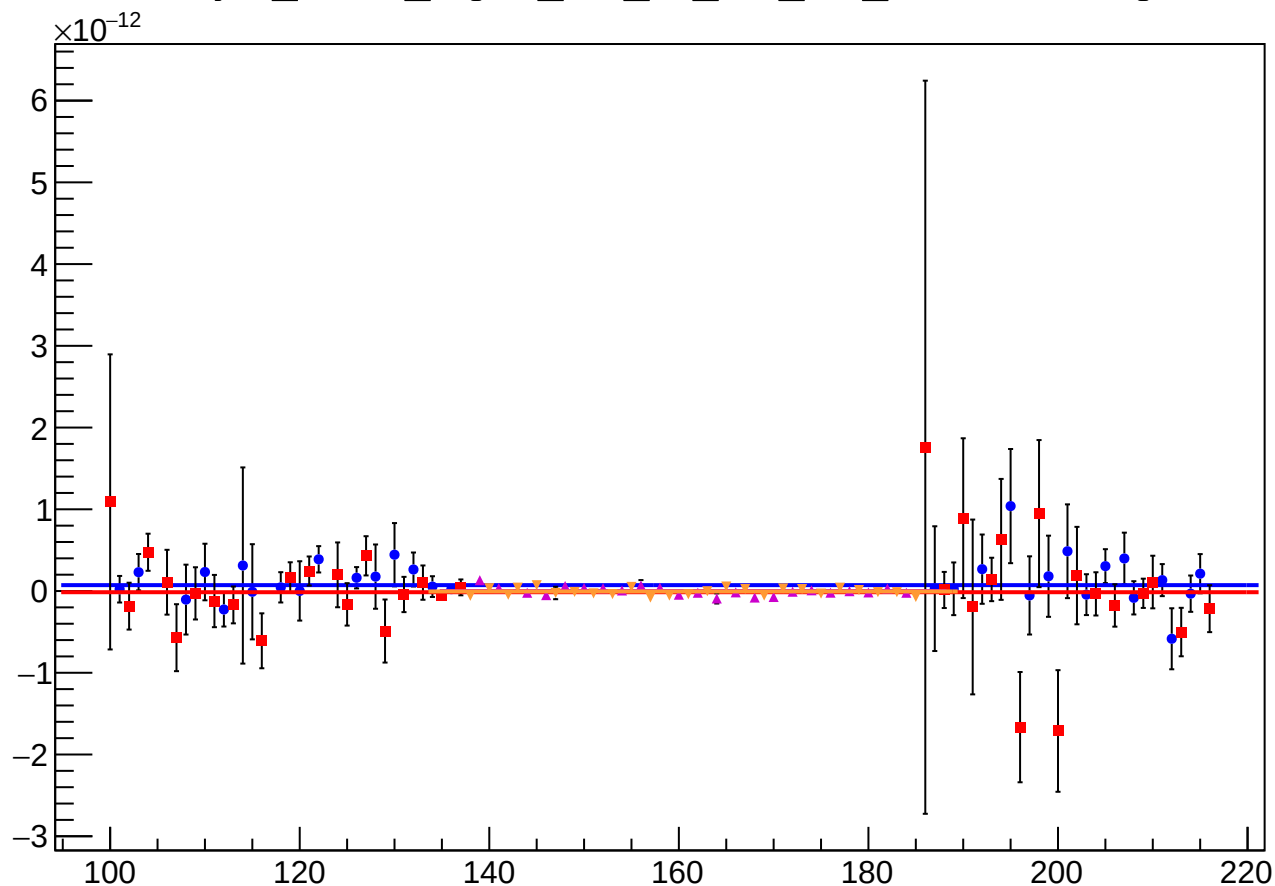
Left In: 123.062 $\pm$ 0.021  $\chi^2$ /NDF: 718844.3/22

+ sign 134.493 $\pm$ 0.016  $\chi^2$ /NDF: 4797772.5/55

All: 134.809 $\pm$ 0.011  $\chi^2$ /NDF: 10337295.7/11

- sign 135.139 $\pm$ 0.016  $\chi^2$ /NDF: 5538723.4/57

# asym\_sam2\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.0/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.2/34

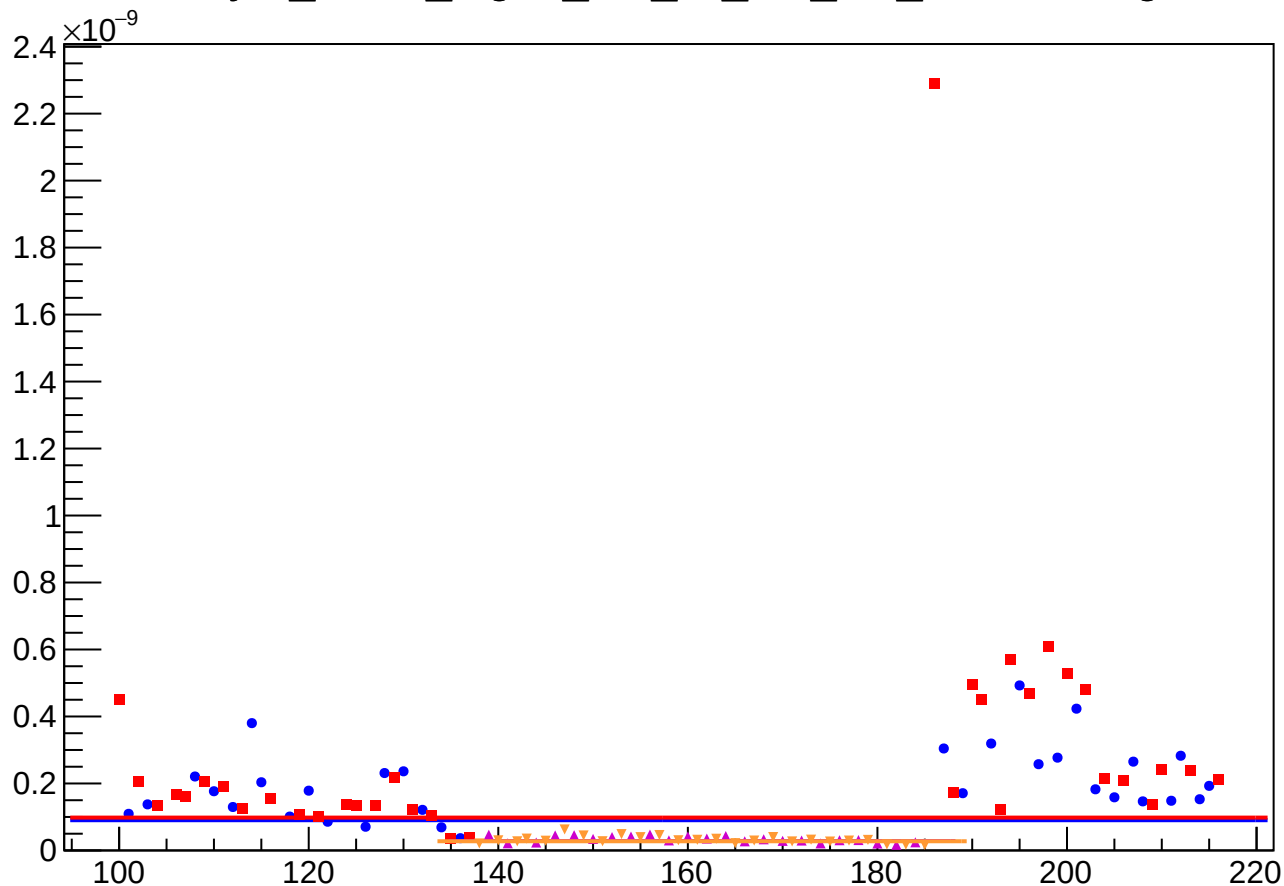
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.8/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.8/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.0/57

asym\_sam2\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 9235253.6/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2403081.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 11256630.3/34

Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2191521.5/22

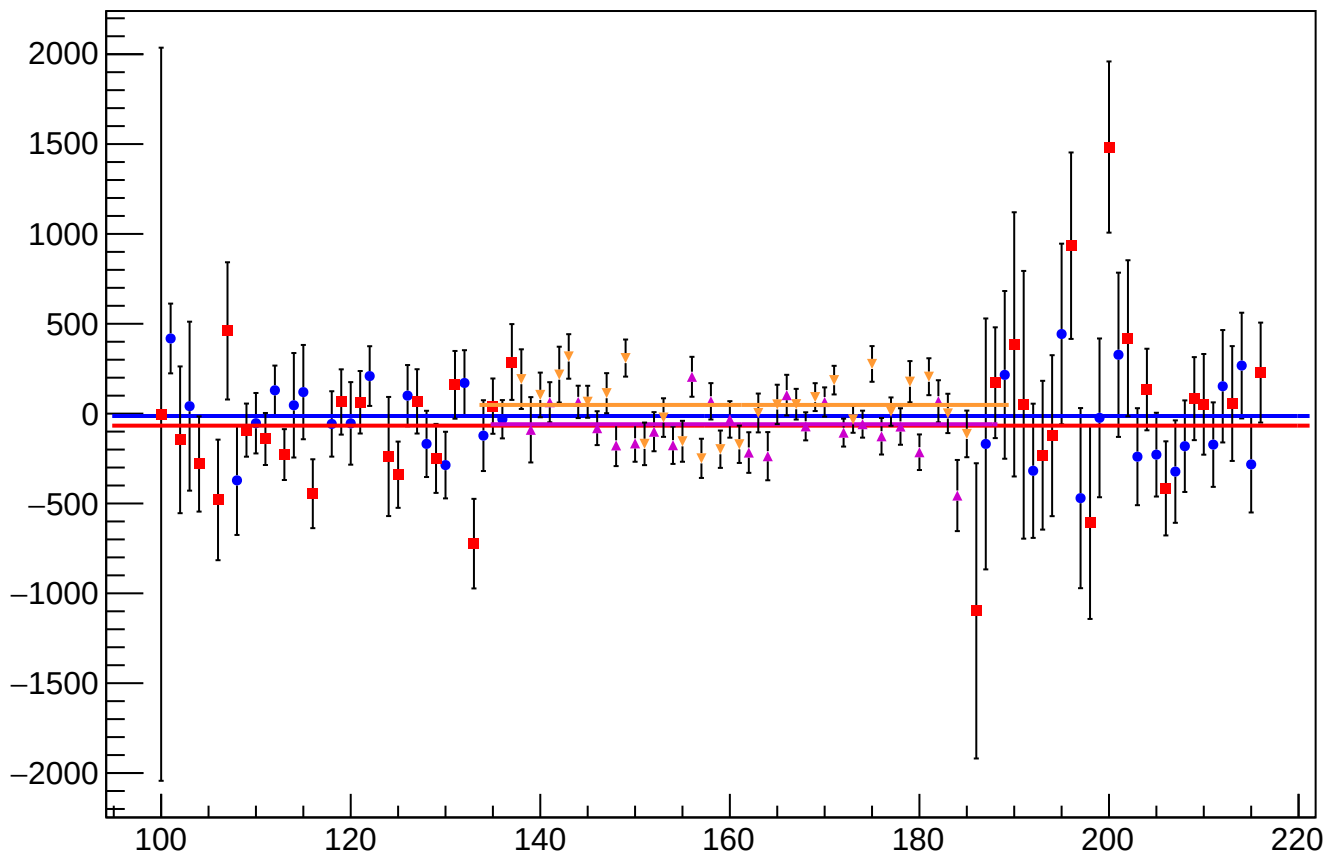
+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18644617.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39365977.4/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20710536.1/57



# reg\_asym\_sam3\_mean vs Slug



Right In:  $-13.238 \pm 40.029$   $\chi^2/\text{NDF}: 23.3/30$

Left Out:  $48.392 \pm 20.423$   $\chi^2/\text{NDF}: 53.6/24$

Right Out:  $-66.927 \pm 40.563$   $\chi^2/\text{NDF}: 50.1/34$

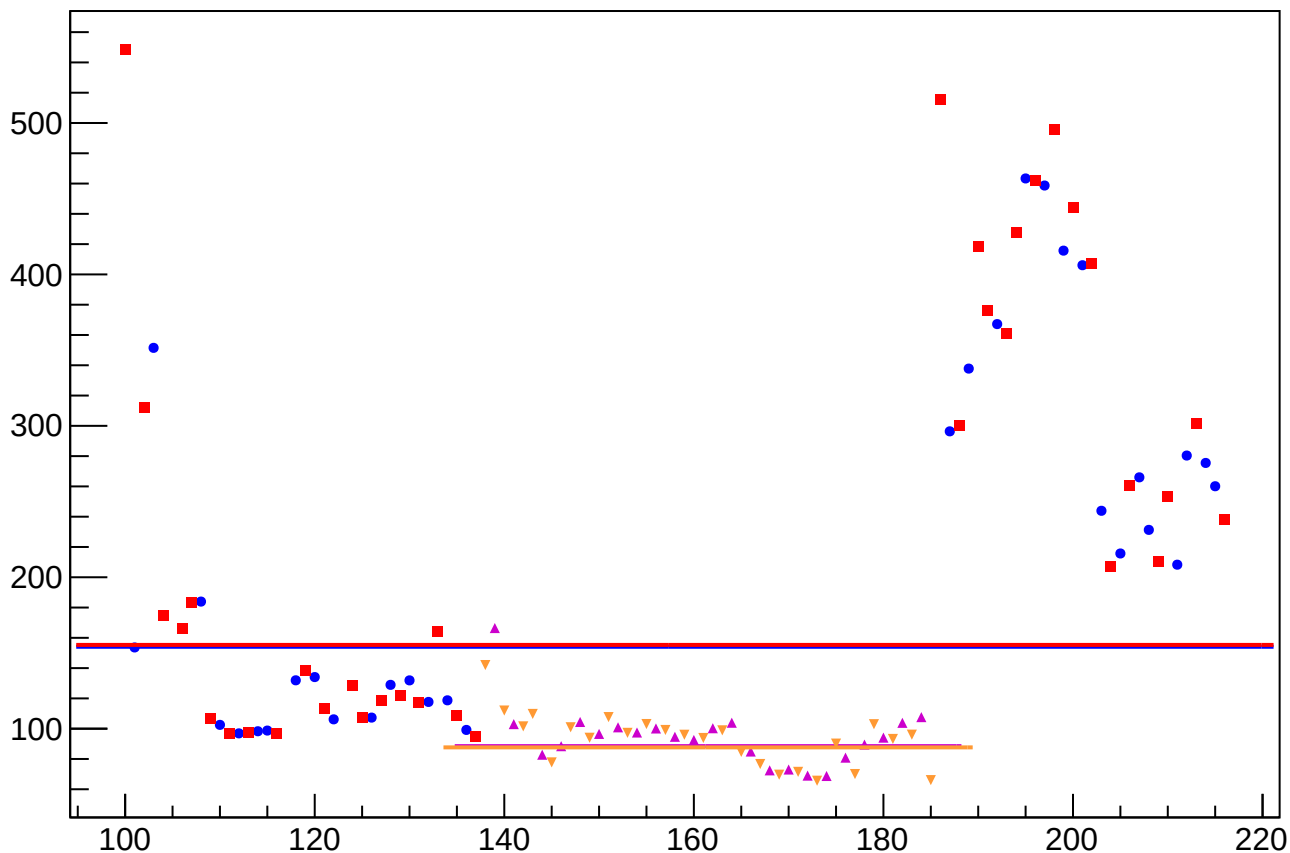
Left In:  $-59.014 \pm 21.156$   $\chi^2/\text{NDF}: 30.6/22$

+ sign  $35.663 \pm 18.192$   $\chi^2/\text{NDF}: 78.8/55$

All:  $-11.045 \pm 13.059$   $\chi^2/\text{NDF}: 173.1/113$

- sign  $-60.706 \pm 18.758$   $\chi^2/\text{NDF}: 80.7/57$

# reg\_asym\_sam3\_rms vs Slug



Right In: 154.108 $\pm$ 0.028  $\chi^2$ /NDF: 7961113.3/30

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 155.325 $\pm$ 0.029  $\chi^2$ /NDF: 9090852.7/34

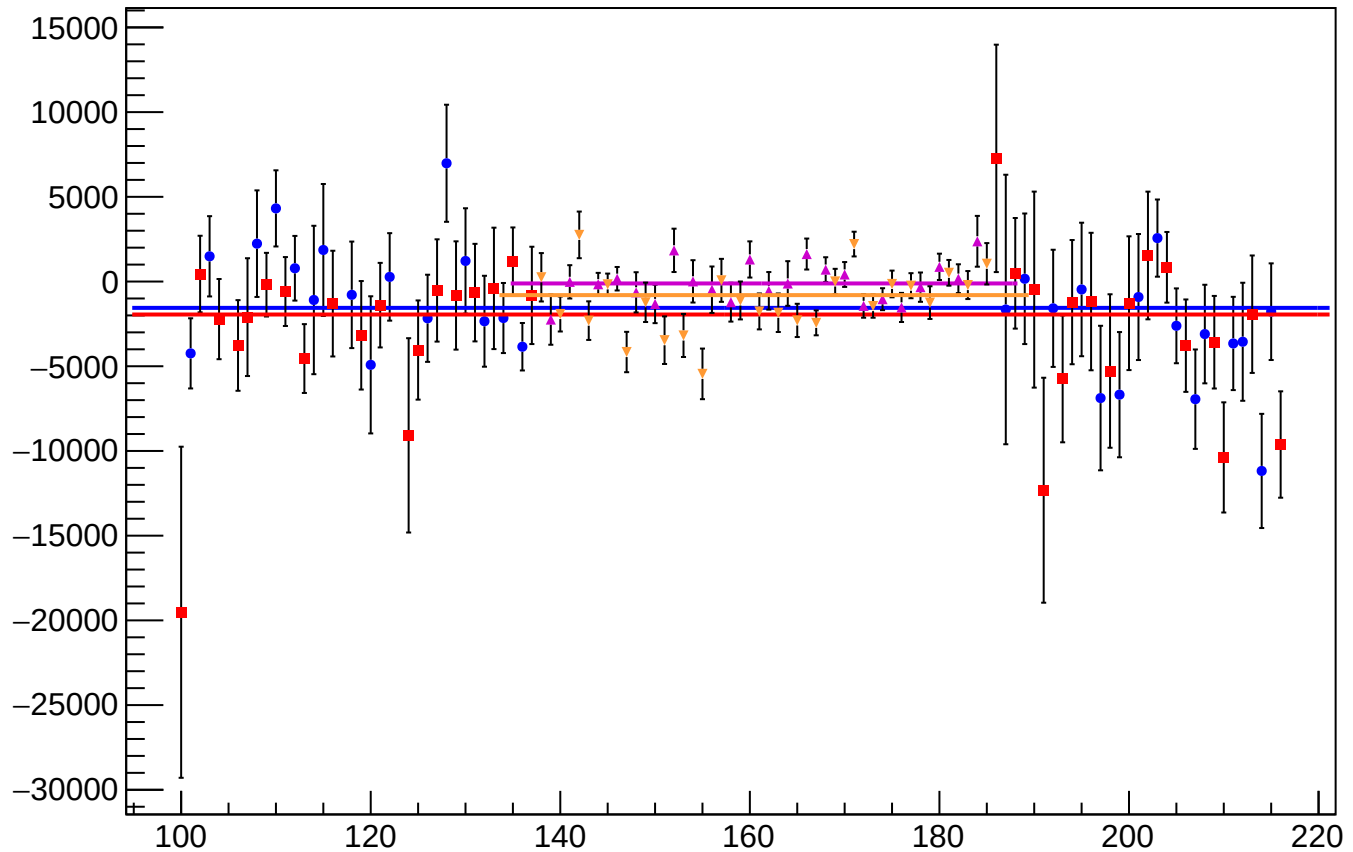
Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

+ sign 101.381 $\pm$ 0.013  $\chi^2$ /NDF: 13547737.4/55

All: 102.057 $\pm$ 0.009  $\chi^2$ /NDF: 27989463.3/1

- sign 102.777 $\pm$ 0.013  $\chi^2$ /NDF: 14436019.1/57

# asym\_sam3\_reg\_correction\_mean vs Slug



Right In:  $-1554.047 \pm 492.414$   $\chi^2/\text{NDF}$ : 45.0/30

Left Out:  $-801.506 \pm 187.755$   $\chi^2/\text{NDF}$ : 71.9/24

Right Out:  $-1946.135 \pm 500.228$   $\chi^2/\text{NDF}$ : 36.2/34

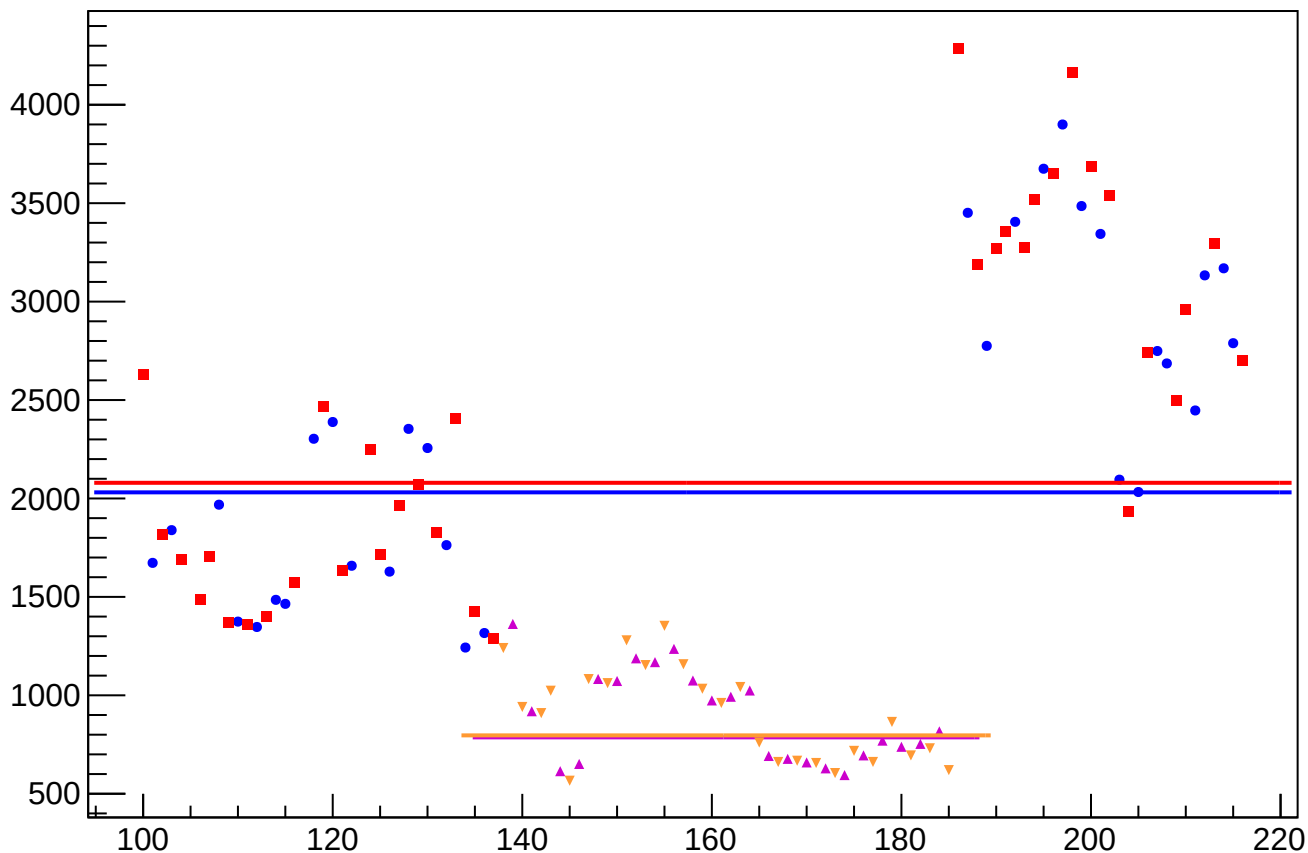
Left In:  $-112.483 \pm 190.269$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $-897.028 \pm 175.435$   $\chi^2/\text{NDF}$ : 118.9/55

All:  $-624.396 \pm 124.893$   $\chi^2/\text{NDF}$ : 198.8/113

- sign  $-344.241 \pm 177.839$   $\chi^2/\text{NDF}$ : 75.0/57

# asym\_sam3\_reg\_correction\_rms vs Slug



Right In: 2031.031+/-0.348  $\chi^2/\text{NDF}$ : 4137464.4/30

Left Out: 796.524+/-0.133  $\chi^2/\text{NDF}$ : 2417872.0/24

Right Out: 2079.580+/-0.354  $\chi^2/\text{NDF}$ : 4668459.1/34

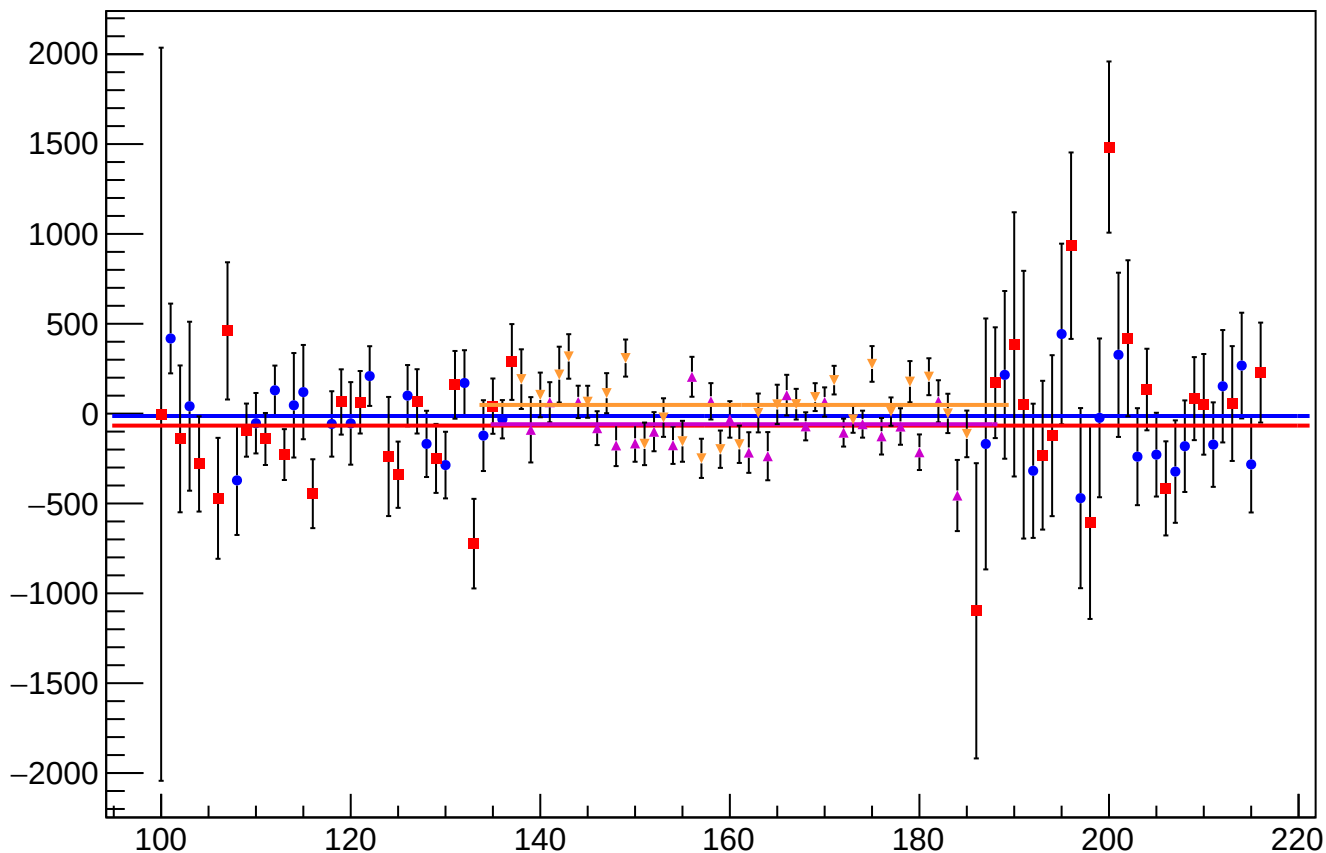
Left In: 786.336+/-0.135  $\chi^2/\text{NDF}$ : 2156583.9/22

+ sign 953.222+/-0.124  $\chi^2/\text{NDF}$ : 17530340.9/55

All: 951.530+/-0.088  $\chi^2/\text{NDF}$ : 36033833.0/11

- sign 949.791+/-0.126  $\chi^2/\text{NDF}$ : 18503114.7/57

# cor\_asym\_sam3\_mean vs Slug



Right In:  $-13.251 \pm 40.029$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $48.399 \pm 20.423$   $\chi^2/\text{NDF}$ : 53.6/24

Right Out:  $-66.704 \pm 40.565$   $\chi^2/\text{NDF}$ : 50.0/34

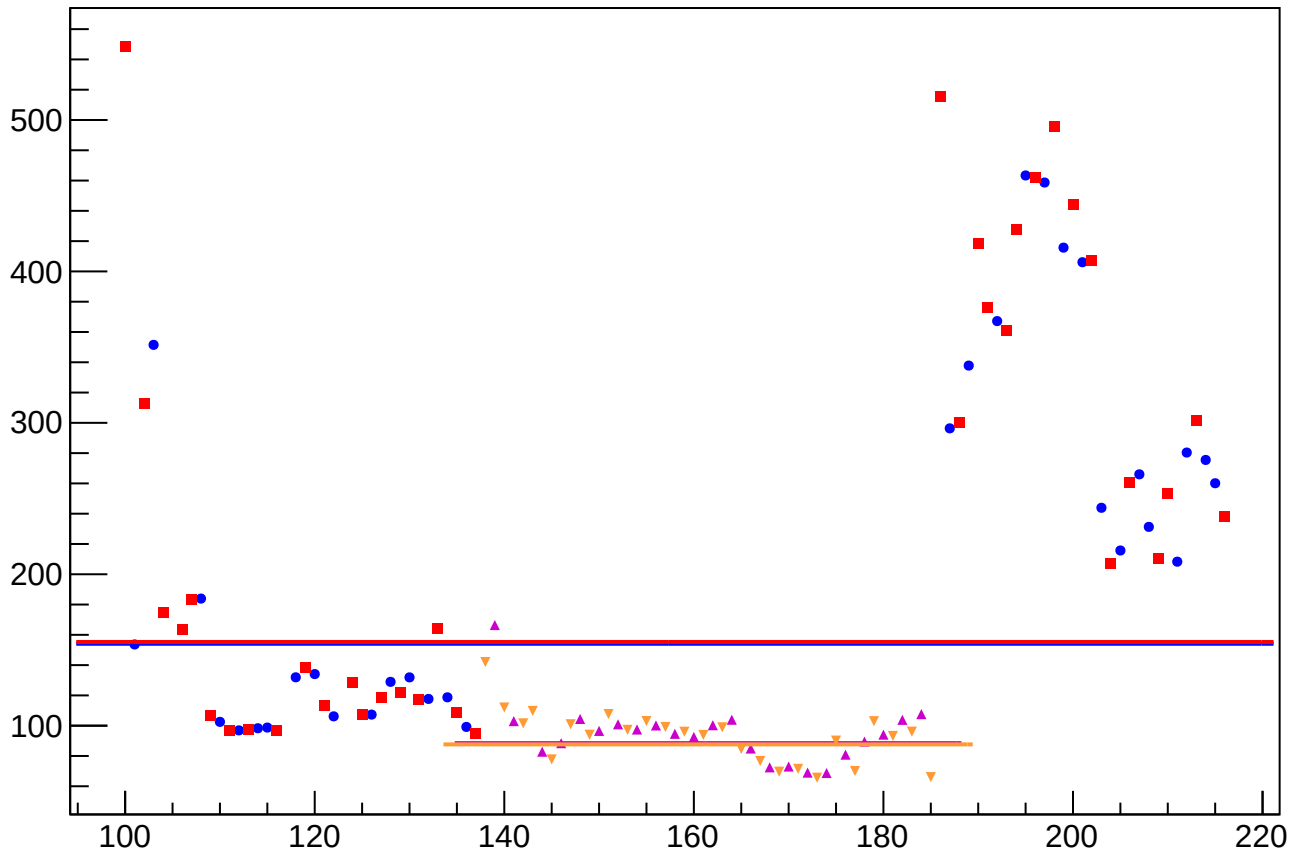
Left In:  $-59.016 \pm 21.156$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $35.666 \pm 18.192$   $\chi^2/\text{NDF}$ : 78.8/55

All:  $-11.021 \pm 13.059$   $\chi^2/\text{NDF}$ : 173.0/113

- sign  $-60.660 \pm 18.758$   $\chi^2/\text{NDF}$ : 80.6/57

# cor\_asym\_sam3\_rms vs Slug



Right In: 154.108 $\pm$ 0.028  $\chi^2$ /NDF: 7961115.9/30

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 155.288 $\pm$ 0.029  $\chi^2$ /NDF: 9090162.2/34

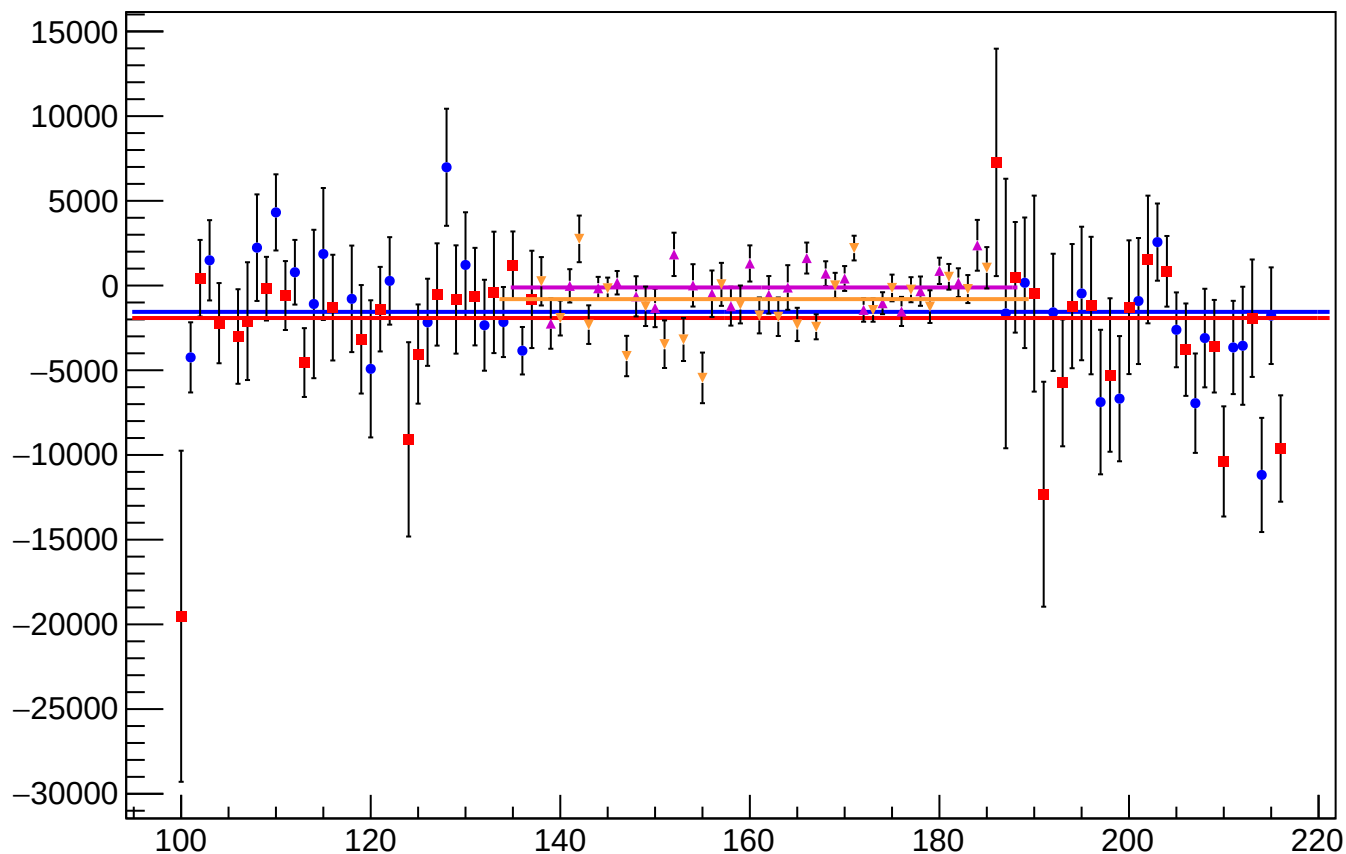
Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

+ sign 101.381 $\pm$ 0.013  $\chi^2$ /NDF: 13547738.9/55

All: 102.053 $\pm$ 0.009  $\chi^2$ /NDF: 27983662.9/1

- sign 102.768 $\pm$ 0.013  $\chi^2$ /NDF: 14430290.6/57

# asym\_sam3\_cor\_correction\_mean vs Slug



Right In:  $-1554.044 \pm 492.416$   $\chi^2/\text{NDF}$ : 45.0/30

Left Out:  $-801.499 \pm 187.755$   $\chi^2/\text{NDF}$ : 71.9/24

Right Out:  $-1917.243 \pm 500.959$   $\chi^2/\text{NDF}$ : 35.9/34

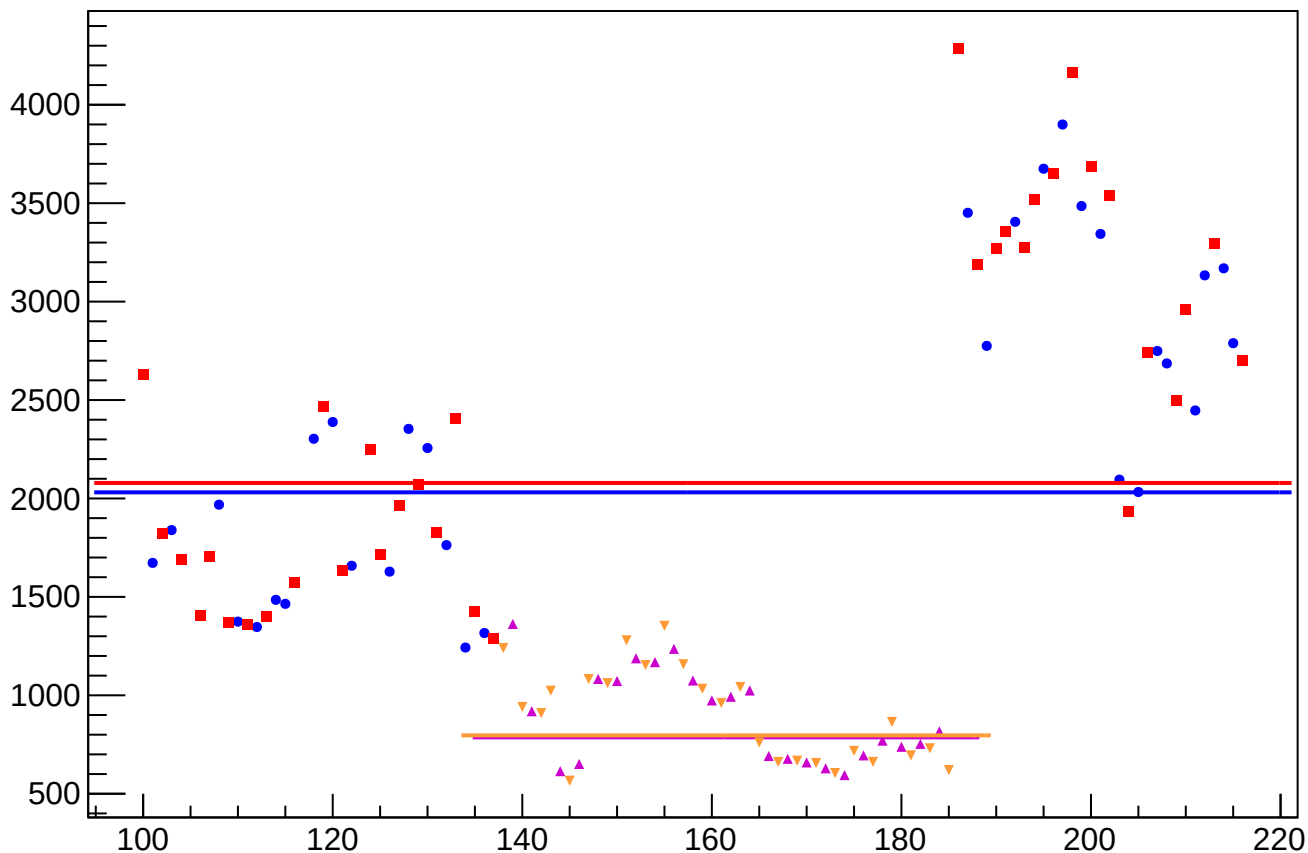
Left In:  $-112.485 \pm 190.269$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $-897.020 \pm 175.435$   $\chi^2/\text{NDF}$ : 118.9/55

All:  $-622.357 \pm 124.904$   $\chi^2/\text{NDF}$ : 198.2/113

- sign  $-340.010 \pm 177.872$   $\chi^2/\text{NDF}$ : 74.3/57

# asym\_sam3\_cor\_correction\_rms vs Slug



Right In: 2031.041 $\pm$ 0.348  $\chi^2$ /NDF: 4137440.1/30

Left Out: 796.523 $\pm$ 0.133  $\chi^2$ /NDF: 2417869.7/24

Right Out: 2078.743 $\pm$ 0.354  $\chi^2$ /NDF: 4686524.5/34

Left In: 786.336 $\pm$ 0.135  $\chi^2$ /NDF: 2156582.1/22

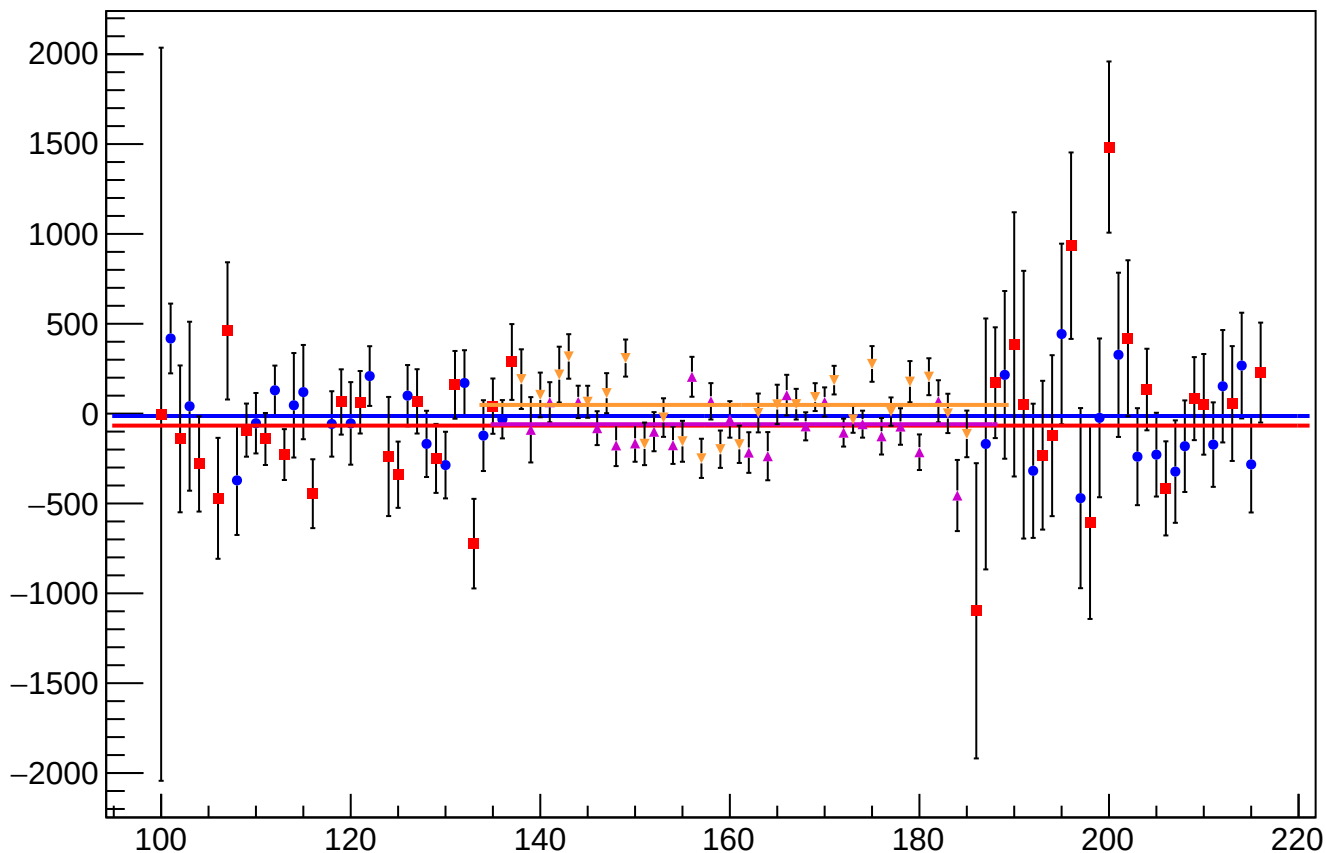
+ sign 953.222 $\pm$ 0.124  $\chi^2$ /NDF: 17530402.1/55

All: 951.273 $\pm$ 0.088  $\chi^2$ /NDF: 36007269.0/1

- sign 949.269 $\pm$ 0.126  $\chi^2$ /NDF: 18476366.2/57



# eigen\_cor\_asym\_sam3\_mean vs Slug



Right In:  $-13.251 \pm 40.029$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $48.399 \pm 20.423$   $\chi^2/\text{NDF}$ : 53.6/24

Right Out:  $-66.704 \pm 40.565$   $\chi^2/\text{NDF}$ : 50.0/34

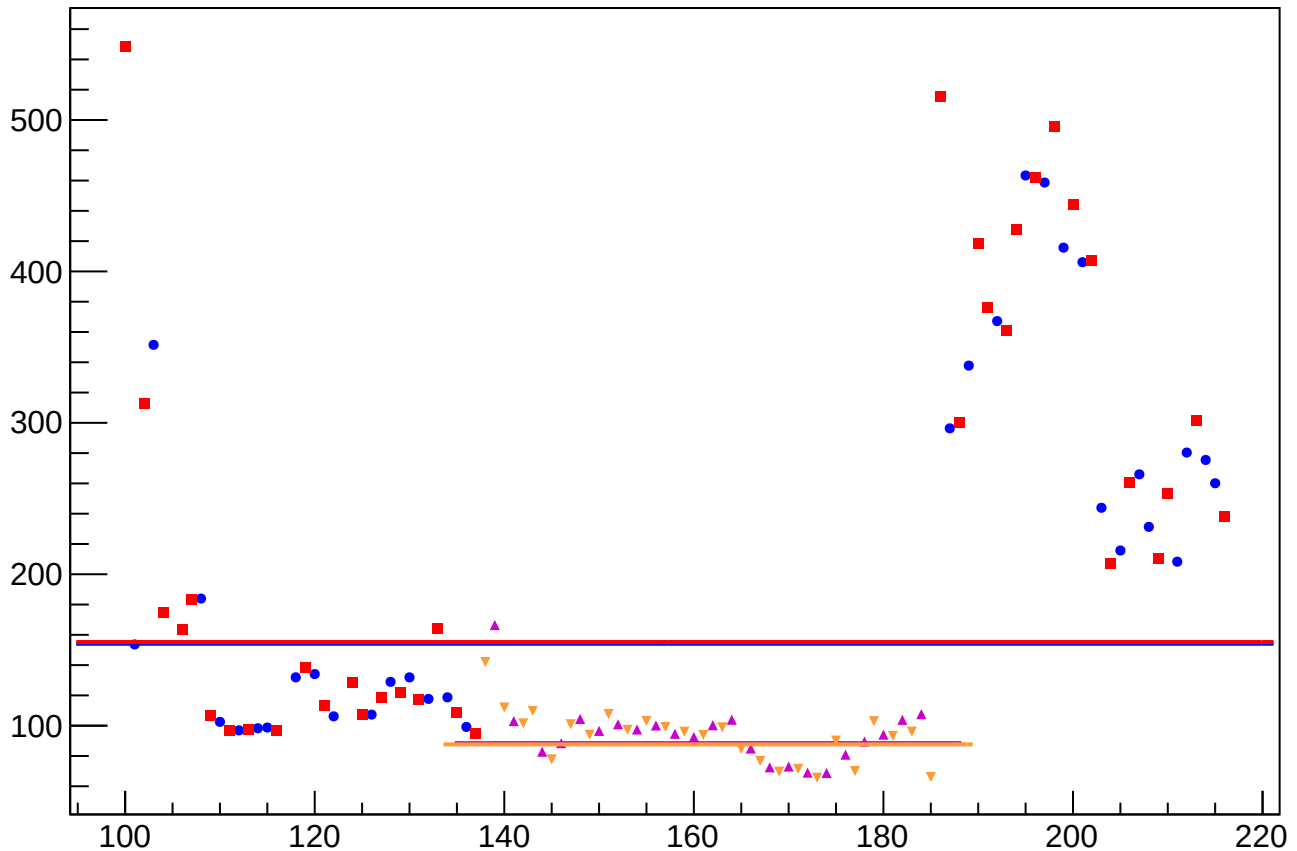
Left In:  $-59.016 \pm 21.156$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $35.666 \pm 18.192$   $\chi^2/\text{NDF}$ : 78.8/55

All:  $-11.021 \pm 13.059$   $\chi^2/\text{NDF}$ : 173.0/113

- sign  $-60.660 \pm 18.758$   $\chi^2/\text{NDF}$ : 80.6/57

# eigen\_cor\_asym\_sam3\_rms vs Slug



Right In: 154.108 $\pm$ 0.028  $\chi^2$ /NDF: 7961115.9/30

Left Out: 87.656 $\pm$ 0.014  $\chi^2$ /NDF:1213284.3/24

Right Out: 155.288 $\pm$ 0.029  $\chi^2$ /NDF: 9090162.2/34

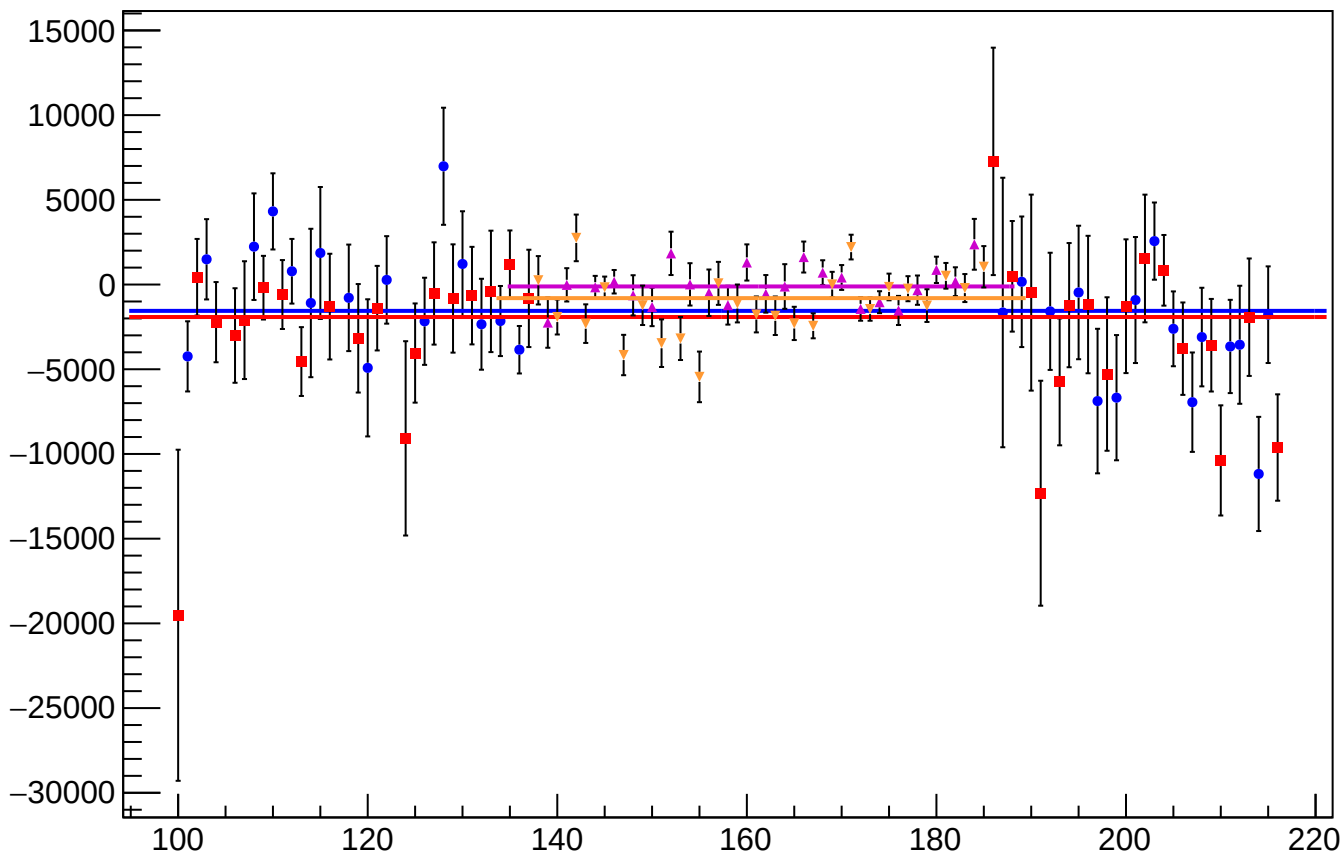
Left In: 88.482 $\pm$ 0.015  $\chi^2$ /NDF:1075689.1/22

+ sign 101.381 $\pm$ 0.013  $\chi^2$ /NDF: 13547738.9/55

All: 102.053 $\pm$ 0.009  $\chi^2$ /NDF: 27983662.9/1

- sign 102.768 $\pm$ 0.013  $\chi^2$ /NDF: 14430290.6/57

# asym\_sam3\_eigen\_cor\_correction\_mean vs Slug



Right In: -1554.044 $\pm$ 492.416  $\chi^2$ /NDF: 45.0/30

Left Out: -801.499 $\pm$ 187.755  $\chi^2$ /NDF: 71.9/24

Right Out: -1917.243 $\pm$ 500.959  $\chi^2$ /NDF: 35.9/34

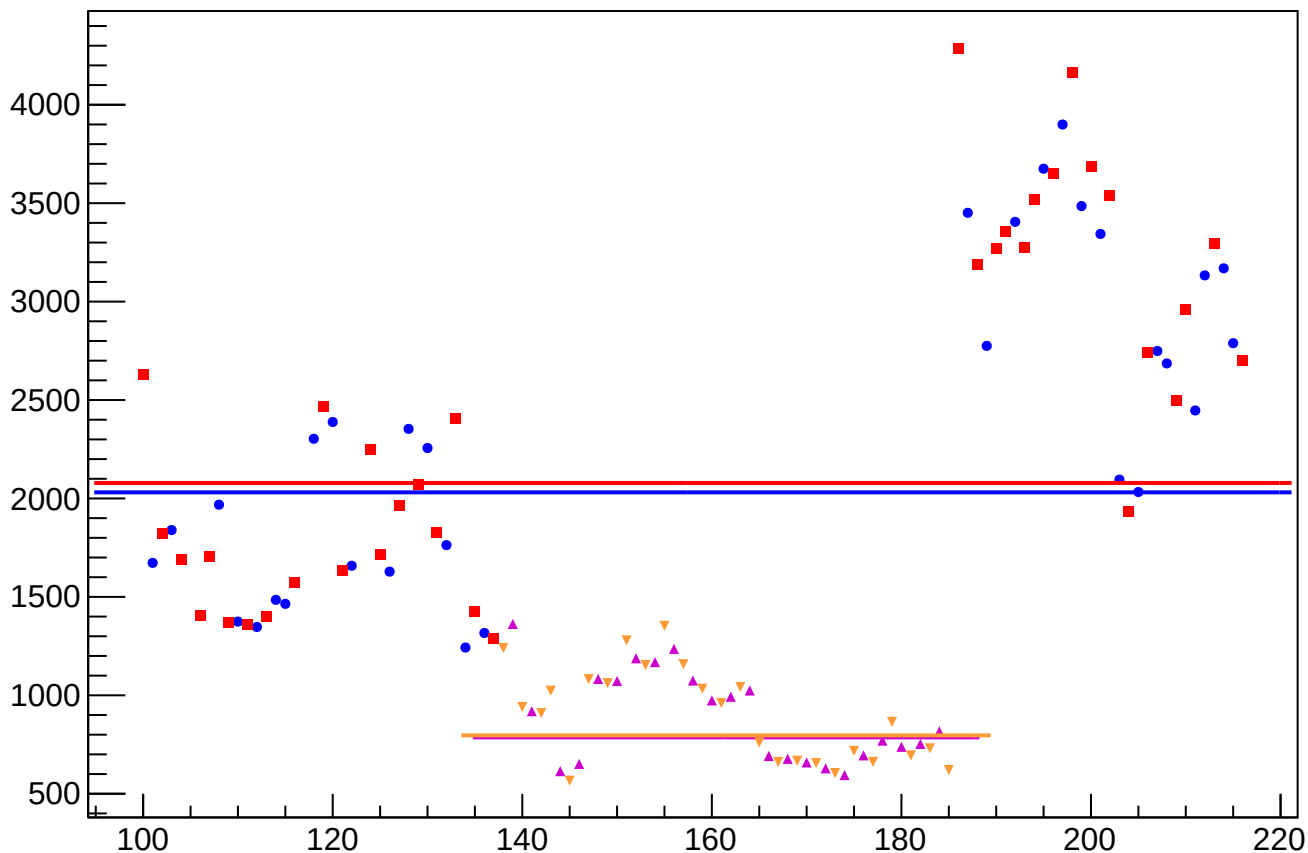
Left In: -112.485 $\pm$ 190.269  $\chi^2$ /NDF: 27.1/22

+ sign -897.020 $\pm$ 175.435  $\chi^2$ /NDF: 118.9/55

All: -622.357 $\pm$ 124.904  $\chi^2$ /NDF: 198.2/113

- sign -340.010 $\pm$ 177.872  $\chi^2$ /NDF: 74.3/57

# asym\_sam3\_eigen\_cor\_correction\_rms vs Slug



Right In: 2031.041 $\pm$ 0.348  $\chi^2$ /NDF: 4137440.1/30

Left Out: 796.523 $\pm$ 0.133  $\chi^2$ /NDF: 2417869.7/24

Right Out: 2078.743 $\pm$ 0.354  $\chi^2$ /NDF: 4686524.5/34

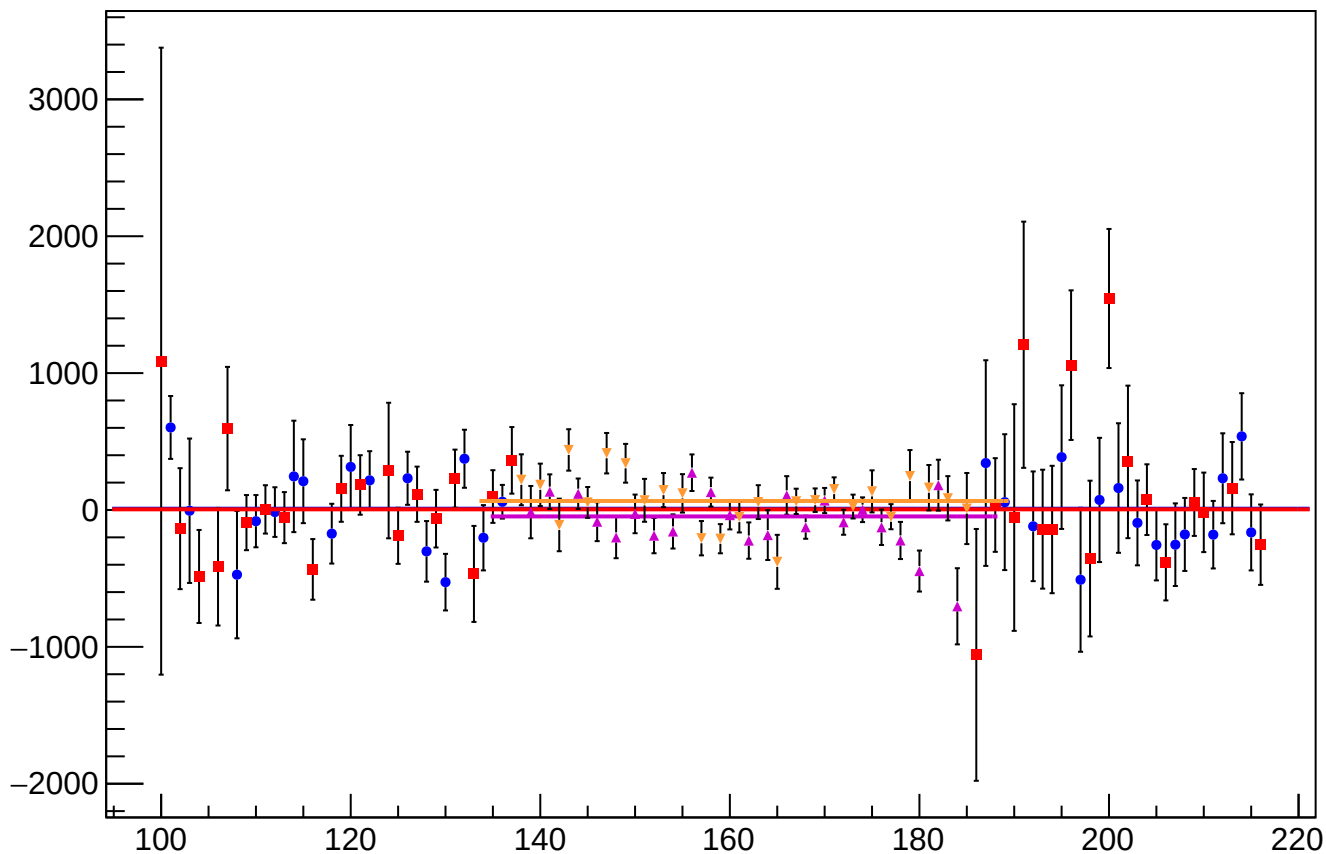
Left In: 786.336 $\pm$ 0.135  $\chi^2$ /NDF: 2156582.1/22

+ sign 953.222 $\pm$ 0.124  $\chi^2$ /NDF: 17530402.1/55

All: 951.273 $\pm$ 0.088  $\chi^2$ /NDF: 36007269.0/1

- sign 949.269 $\pm$ 0.126  $\chi^2$ /NDF: 18476366.2/57

# dit\_asym\_sam3\_mean vs Slug



Right In:  $9.173 \pm 46.658$   $\chi^2/\text{NDF}$ : 33.9/30

Left Out:  $65.702 \pm 25.059$   $\chi^2/\text{NDF}$ : 40.0/24

Right Out:  $4.766 \pm 48.189$   $\chi^2/\text{NDF}$ : 37.4/34

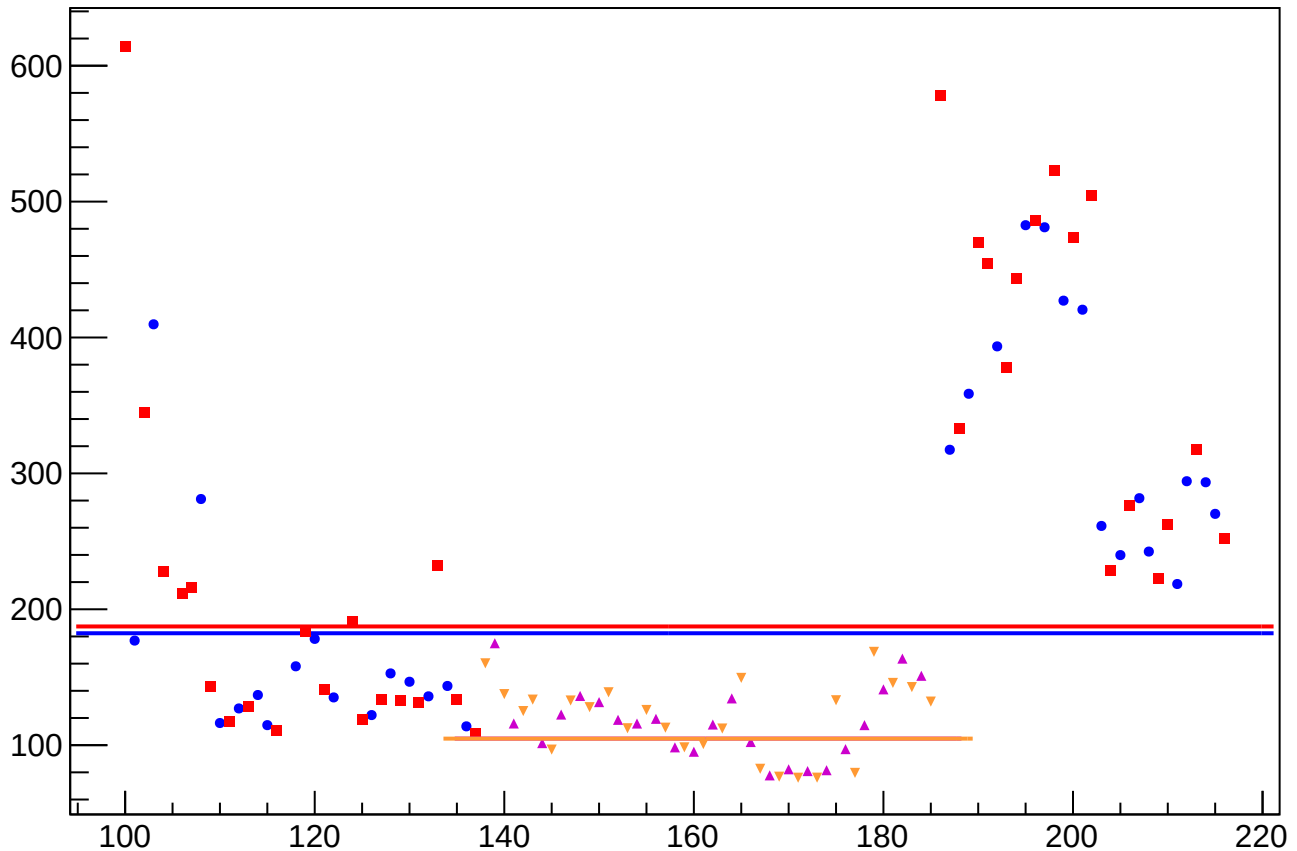
Left In:  $-47.039 \pm 25.696$   $\chi^2/\text{NDF}$ : 38.6/22

+ sign  $53.046 \pm 22.077$   $\chi^2/\text{NDF}$ : 75.1/55

All:  $9.921 \pm 15.817$   $\chi^2/\text{NDF}$ : 159.9/113

- sign  $-35.570 \pm 22.674$   $\chi^2/\text{NDF}$ : 77.0/57

# dit\_asym\_sam3\_rms vs Slug



Right In: 182.357+/-0.033  $\chi^2/\text{NDF}$ : 6721638.3/30

Left Out: 104.810+/-0.018  $\chi^2/\text{NDF}$ : 2242795.3/24

Right Out: 187.357+/-0.034  $\chi^2/\text{NDF}$ : 7864604.6/34

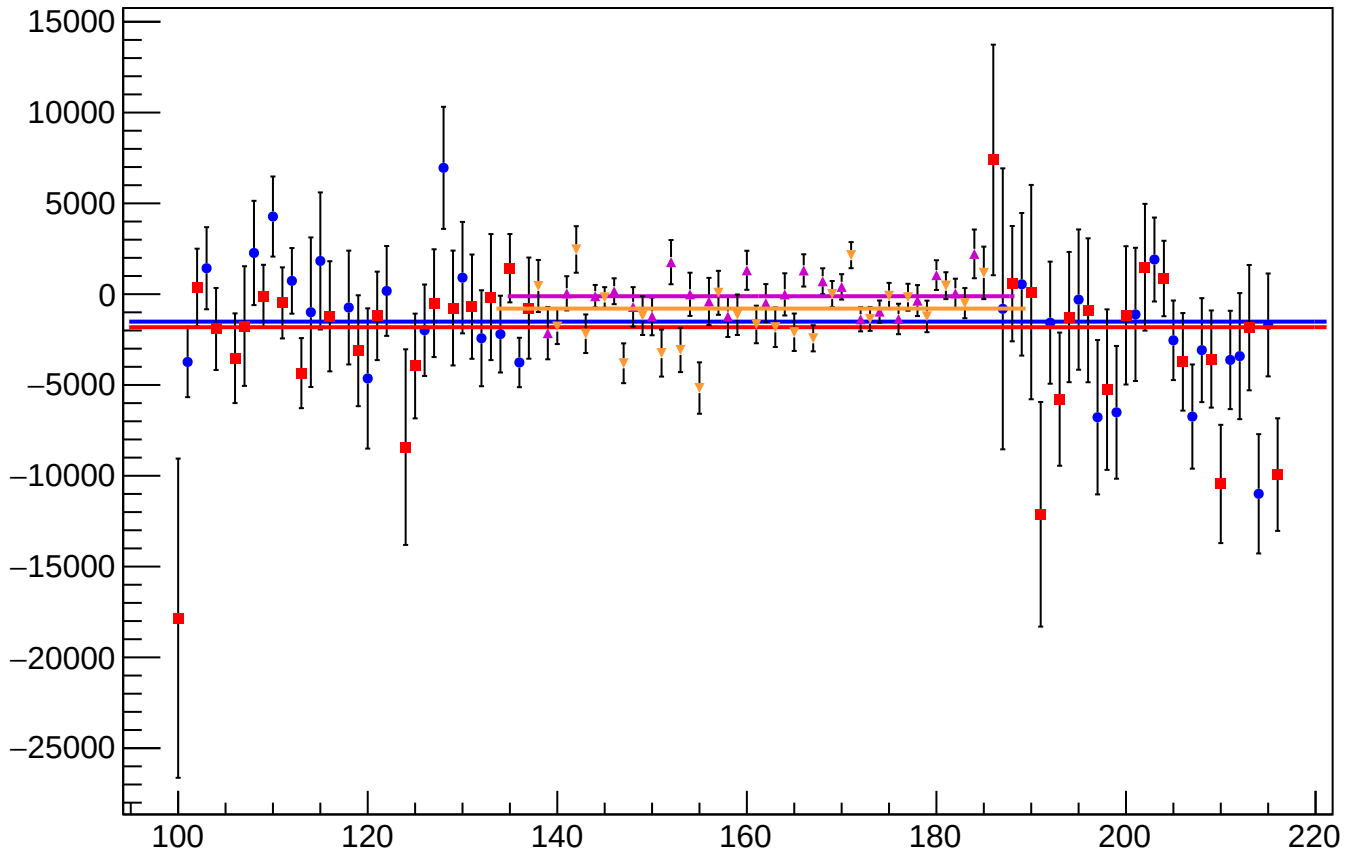
Left In: 104.835+/-0.018  $\chi^2/\text{NDF}$ : 1614476.5/22

+ sign 122.171+/-0.016  $\chi^2/\text{NDF}$ : 13252352.8/55

All: 122.625+/-0.011  $\chi^2/\text{NDF}$ : 27299836.0/11

- sign 123.104+/-0.016  $\chi^2/\text{NDF}$ : 14045745.4/57

# asym\_sam3\_dit\_correction\_mean vs Slug



Right In:  $-1512.108 \pm 480.329$   $\chi^2/\text{NDF}: 44.2/30$

Left Out:  $-793.070 \pm 179.897$   $\chi^2/\text{NDF}: 70.0/24$

Right Out:  $-1819.743 \pm 482.054$   $\chi^2/\text{NDF}: 39.0/34$

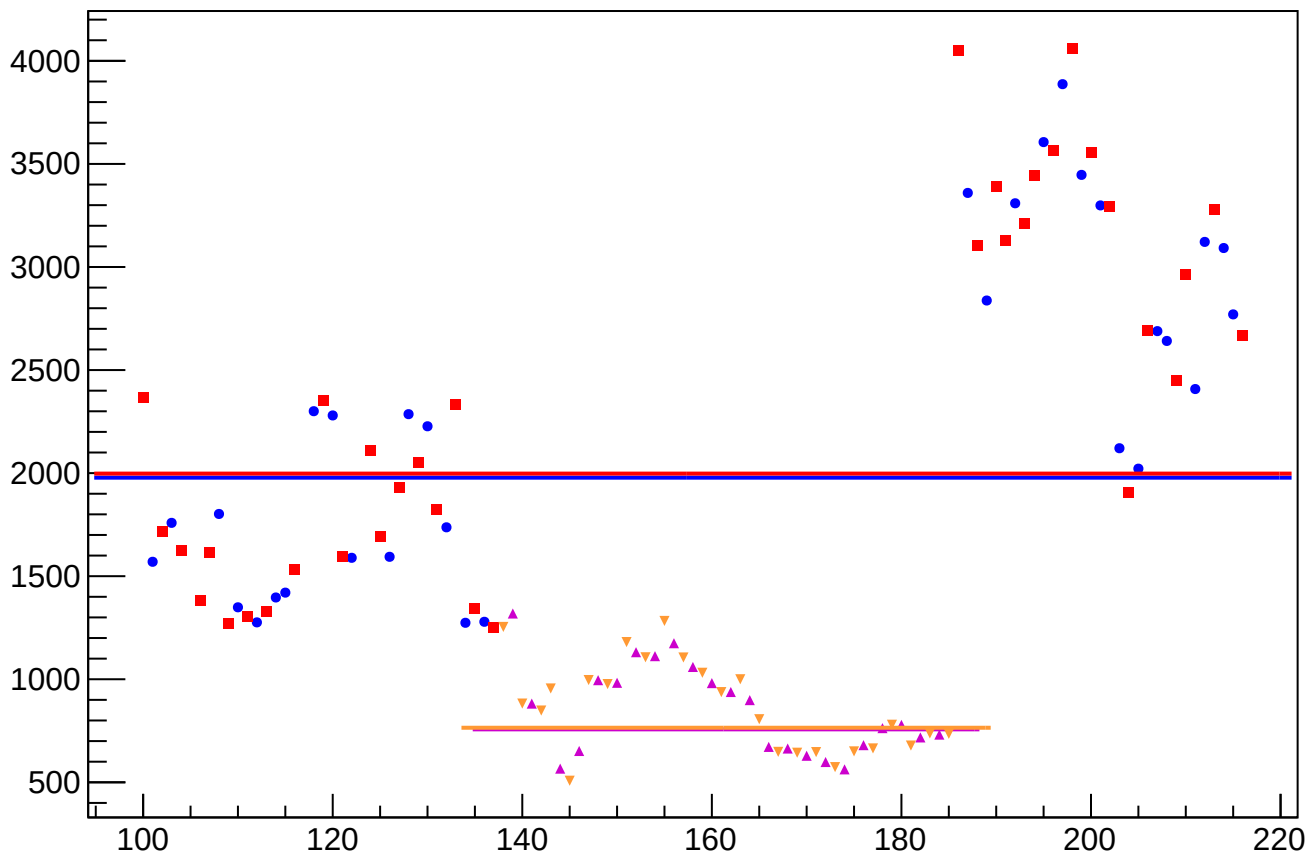
Left In:  $-113.680 \pm 183.126$   $\chi^2/\text{NDF}: 26.3/22$

+ sign  $-881.523 \pm 168.469$   $\chi^2/\text{NDF}: 116.2/55$

All:  $-609.607 \pm 120.076$   $\chi^2/\text{NDF}: 197.7/113$

- sign  $-328.838 \pm 171.189$   $\chi^2/\text{NDF}: 76.2/57$

# asym\_sam3\_dit\_correction\_rms vs Slug



Right In: 1977.971 $\pm$ 0.340  $\chi^2$ /NDF: 4296516.5/30

Left Out: 764.734 $\pm$ 0.127  $\chi^2$ /NDF: 2425556.5/24

Right Out: 1997.682 $\pm$ 0.341  $\chi^2$ /NDF: 4923441.5/34

Left In: 756.927 $\pm$ 0.129  $\chi^2$ /NDF: 2115280.1/22

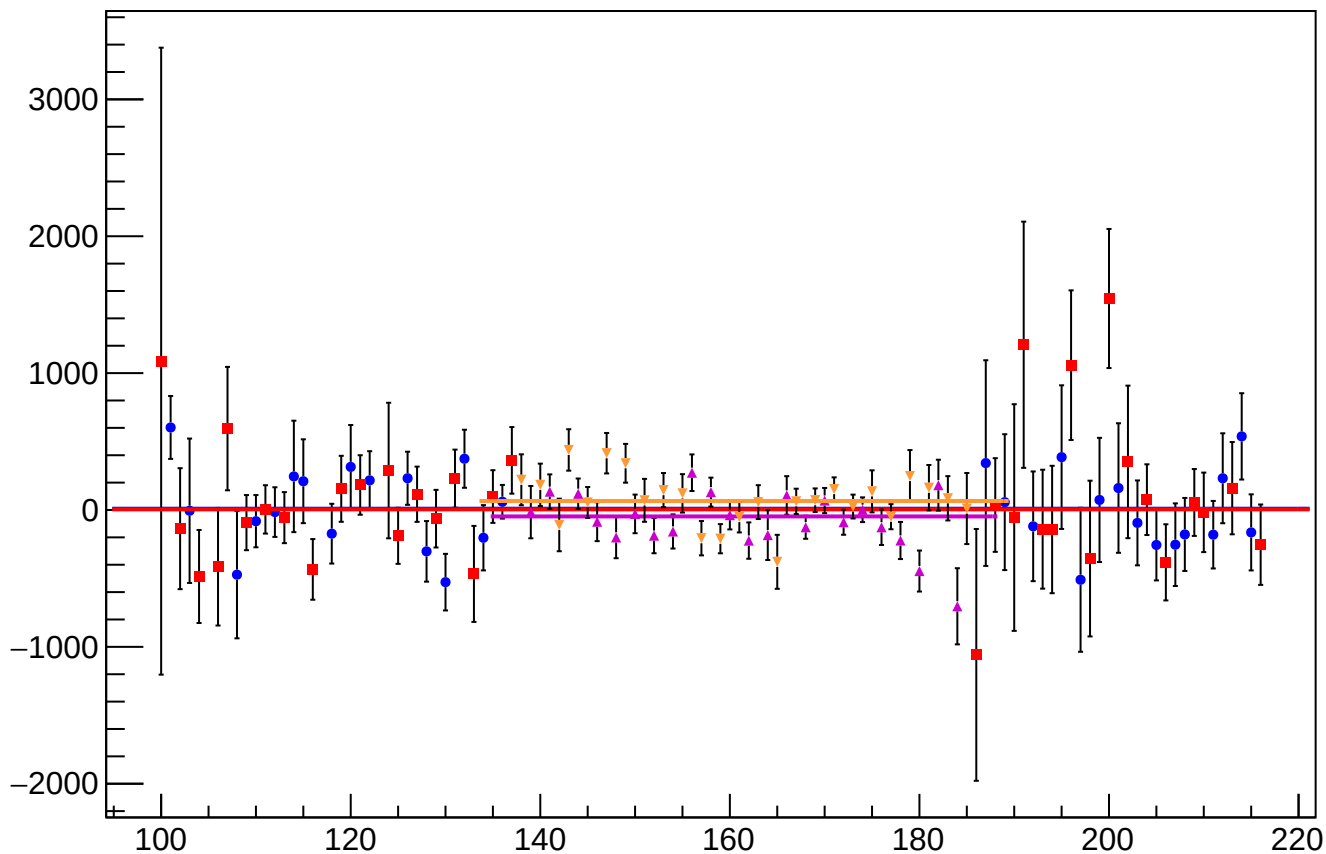
+ sign 913.981 $\pm$ 0.119  $\chi^2$ /NDF: 17912204.7/55

All: 913.696 $\pm$ 0.085  $\chi^2$ /NDF: 36529802.3/11

- sign 913.403 $\pm$ 0.121  $\chi^2$ /NDF: 18617586.0/57



# eigen\_dit\_asym\_sam3\_mean vs Slug



Right In:  $9.173 \pm 46.658$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $65.703 \pm 25.059$   $\chi^2/\text{NDF}$ : 40.0/24

Right Out:  $4.770 \pm 48.189$   $\chi^2/\text{NDF}$ : 37.4/34

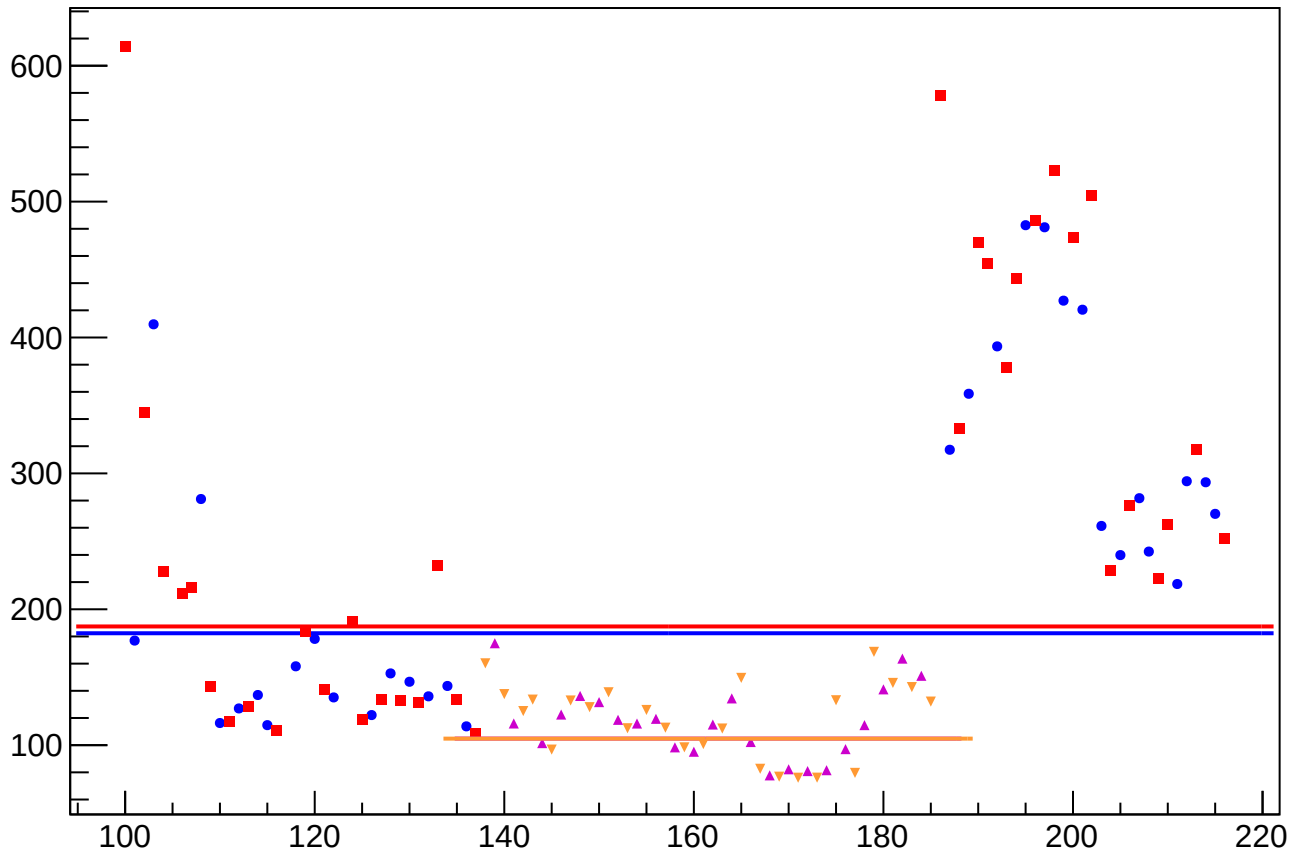
Left In:  $-47.038 \pm 25.696$   $\chi^2/\text{NDF}$ : 38.6/22

+ sign  $53.047 \pm 22.077$   $\chi^2/\text{NDF}$ : 75.1/55

All:  $9.922 \pm 15.818$   $\chi^2/\text{NDF}$ : 159.9/113

- sign  $-35.568 \pm 22.674$   $\chi^2/\text{NDF}$ : 77.0/57

# eigen\_dit\_asym\_sam3\_rms vs Slug



Right In: 182.358 $\pm$ 0.033  $\chi^2$ /NDF: 6721626.3/30

Left Out: 104.810 $\pm$ 0.018  $\chi^2$ /NDF: 2242815.0/24

Right Out: 187.358 $\pm$ 0.034  $\chi^2$ /NDF: 7864582.4/34

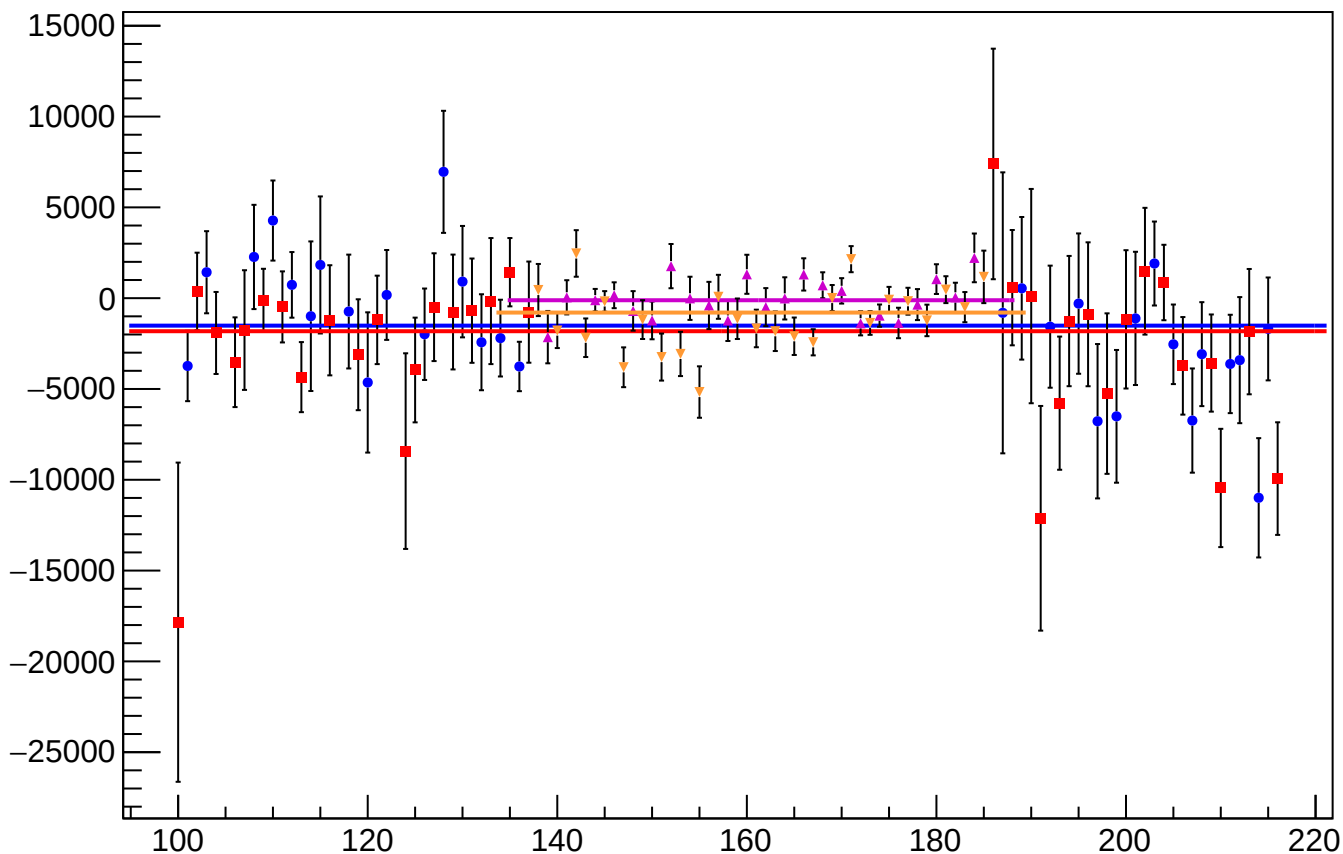
Left In: 104.835 $\pm$ 0.018  $\chi^2$ /NDF: 1614484.2/22

+ sign 122.172 $\pm$ 0.016  $\chi^2$ /NDF: 13252343.3/55

All: 122.626 $\pm$ 0.011  $\chi^2$ /NDF: 27299815.9/11

- sign 123.105 $\pm$ 0.016  $\chi^2$ /NDF: 14045734.9/57

# asym\_sam3\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1512.106 \pm 480.329$   $\chi^2/\text{NDF}: 44.2/30$

Left Out:  $-793.071 \pm 179.896$   $\chi^2/\text{NDF}: 70.0/24$

Right Out:  $-1819.741 \pm 482.053$   $\chi^2/\text{NDF}: 39.0/34$

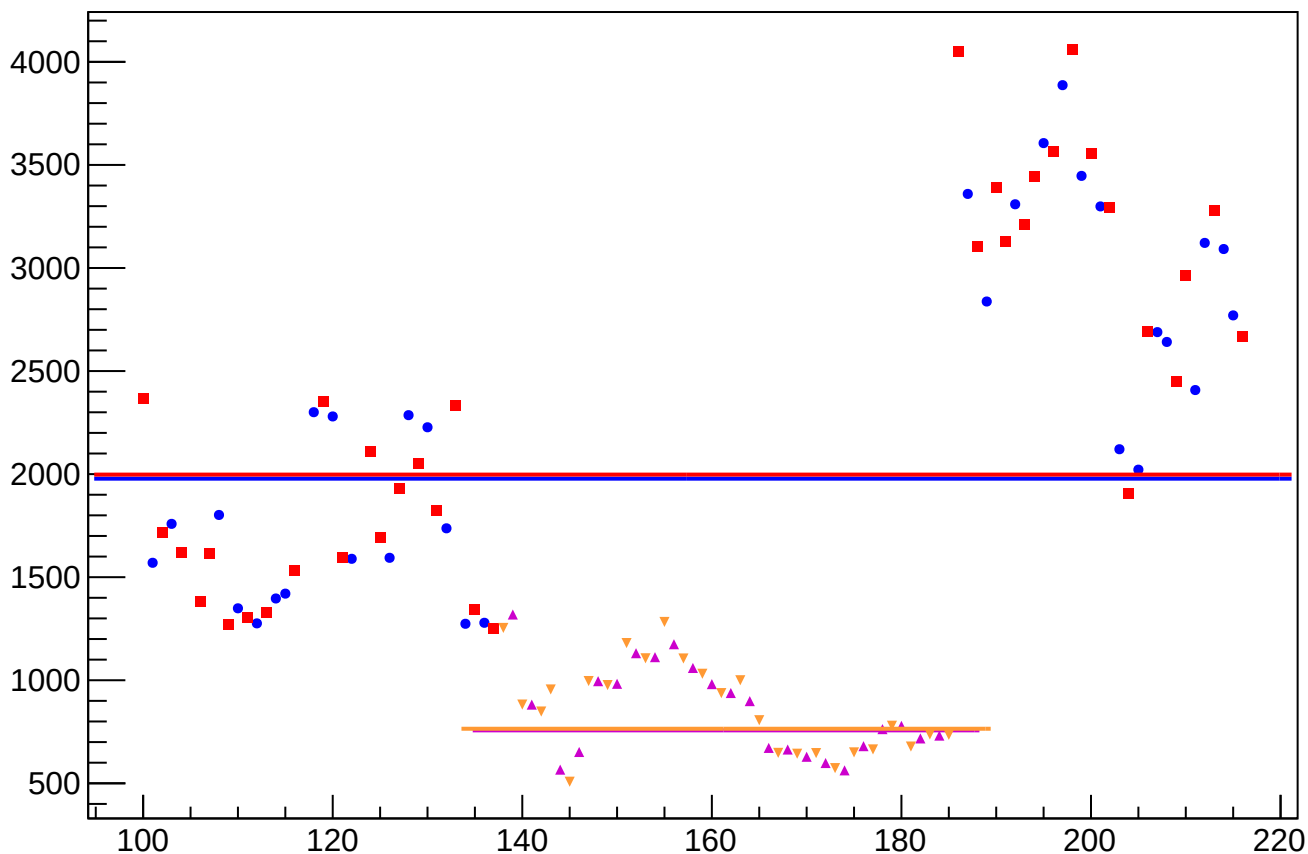
Left In:  $-113.680 \pm 183.125$   $\chi^2/\text{NDF}: 26.3/22$

+ sign  $-881.524 \pm 168.468$   $\chi^2/\text{NDF}: 116.2/55$

All:  $-609.607 \pm 120.076$   $\chi^2/\text{NDF}: 197.7/113$

- sign  $-328.837 \pm 171.189$   $\chi^2/\text{NDF}: 76.2/57$

# asym\_sam3\_eigen\_dit\_correction\_rms vs Slug



Right In: 1977.969 $\pm$ 0.340  $\chi^2$ /NDF: 4296515.2/30

Left Out: 764.734 $\pm$ 0.127  $\chi^2$ /NDF: 2425549.9/24

Right Out: 1997.679 $\pm$ 0.341  $\chi^2$ /NDF: 4923443.8/34

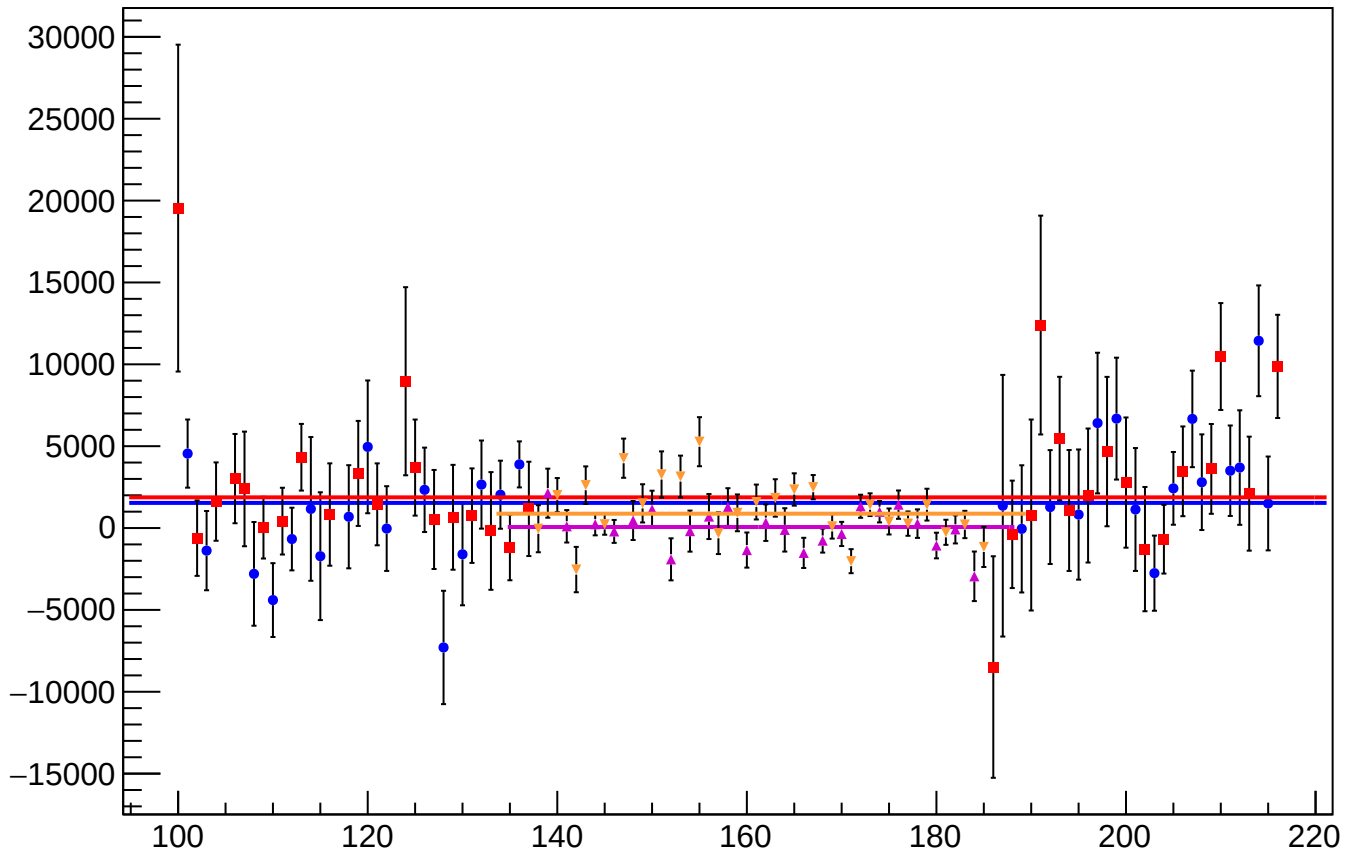
Left In: 756.926 $\pm$ 0.129  $\chi^2$ /NDF: 2115275.0/22

+ sign 913.980 $\pm$ 0.119  $\chi^2$ /NDF: 17912195.4/55

All: 913.696 $\pm$ 0.085  $\chi^2$ /NDF: 36529783.8/11

- sign 913.402 $\pm$ 0.121  $\chi^2$ /NDF: 18617576.8/57

# asym\_sam3\_mean vs Slug



Right In:  $1536.331 \pm 494.869$   $\chi^2/\text{NDF}$ : 45.9/30

Left Out:  $876.482 \pm 188.998$   $\chi^2/\text{NDF}$ : 67.3/24

Right Out:  $1874.331 \pm 503.002$   $\chi^2/\text{NDF}$ : 35.9/34

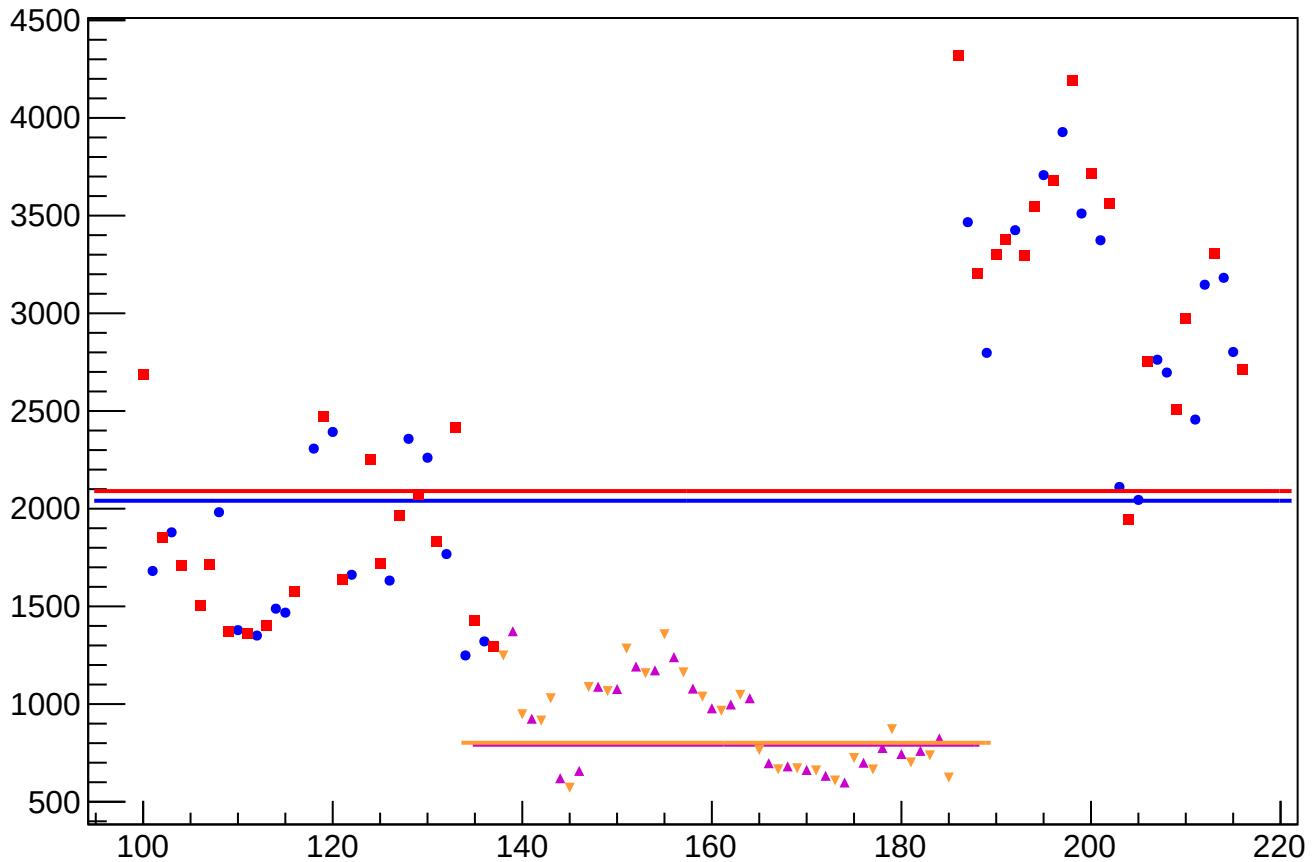
Left In:  $62.754 \pm 191.596$   $\chi^2/\text{NDF}$ : 27.1/22

+ sign  $960.476 \pm 176.560$   $\chi^2/\text{NDF}$ : 114.7/55

All:  $631.057 \pm 125.717$   $\chi^2/\text{NDF}$ : 196.2/113

- sign  $292.291 \pm 179.047$   $\chi^2/\text{NDF}$ : 74.4/57

# asym\_sam3\_rms vs Slug



Right In: 2040.607 $\pm$ 0.350  $\chi^2$ /NDF: 4155364.5/30

Left Out: 802.014 $\pm$ 0.134  $\chi^2$ /NDF:2396024.4/24

+ sign 959.678 $\pm$ 0.125  $\chi^2$ /NDF: 17485261.9/55

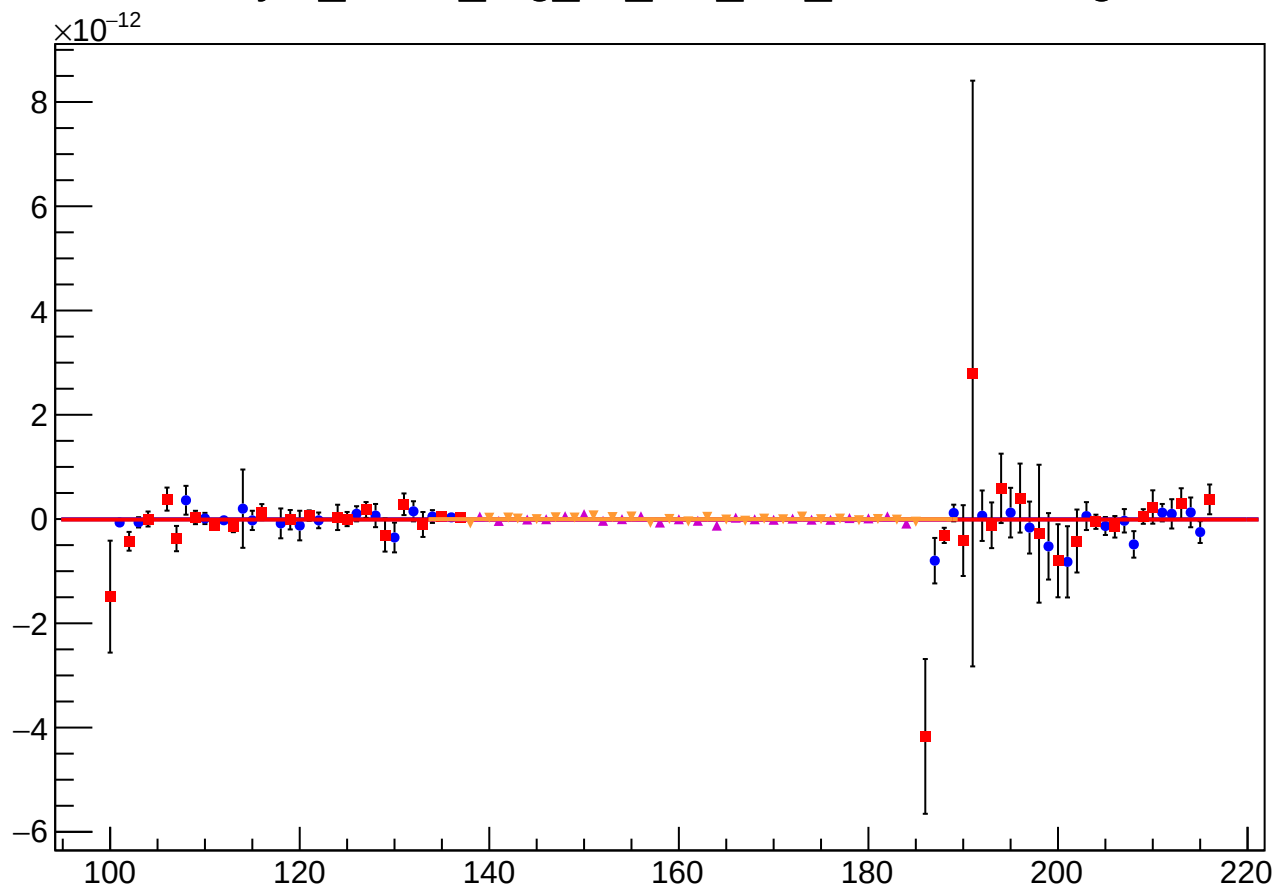
Right Out: 2090.257 $\pm$ 0.356  $\chi^2$ /NDF: 4684247.2/34

All: 958.135 $\pm$ 0.089  $\chi^2$ /NDF: 35939488.7/1

Left In: 792.060 $\pm$ 0.135  $\chi^2$ /NDF:2135575.6/22

- sign 956.549 $\pm$ 0.127  $\chi^2$ /NDF: 18453917.2/57

# asym\_sam3\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.6/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.5/34

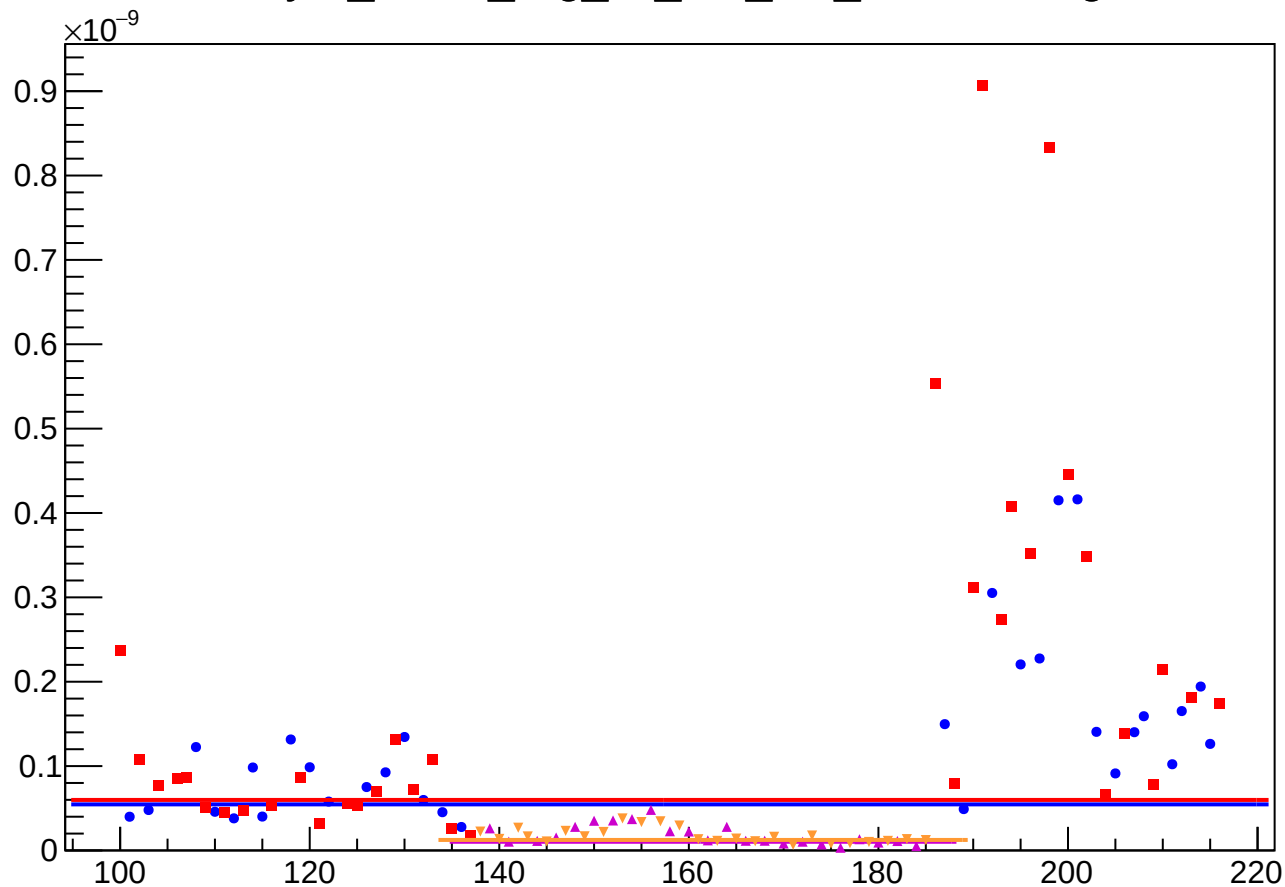
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.6/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 119.2/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 75.1/57

# asym\_sam3\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5987016.1/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2214354.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6951115.4/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3679061.1/22

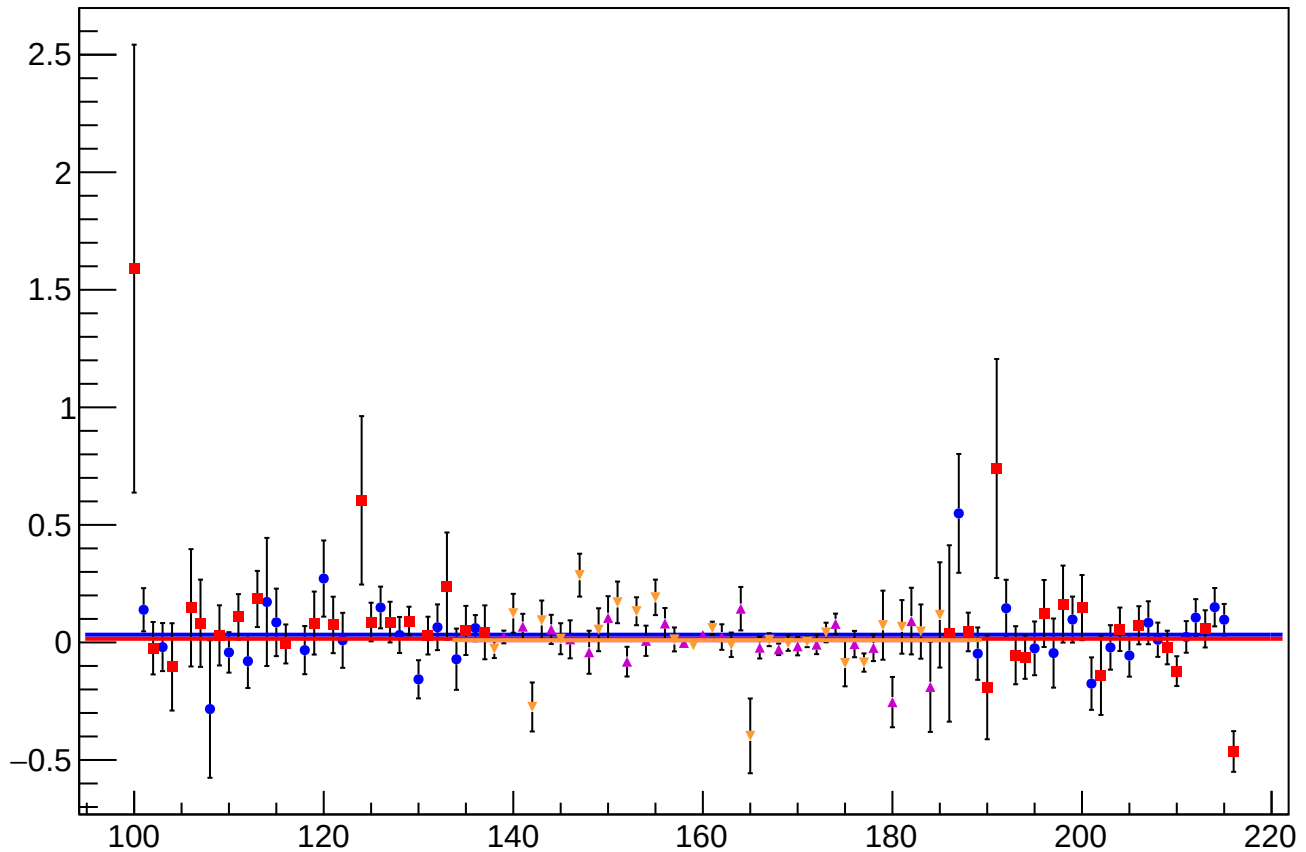
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13542602.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30667800.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16891207.3/57



# asym\_sam3\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.033 \pm 0.017$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 54.6/24

Right Out:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}$ : 58.3/34

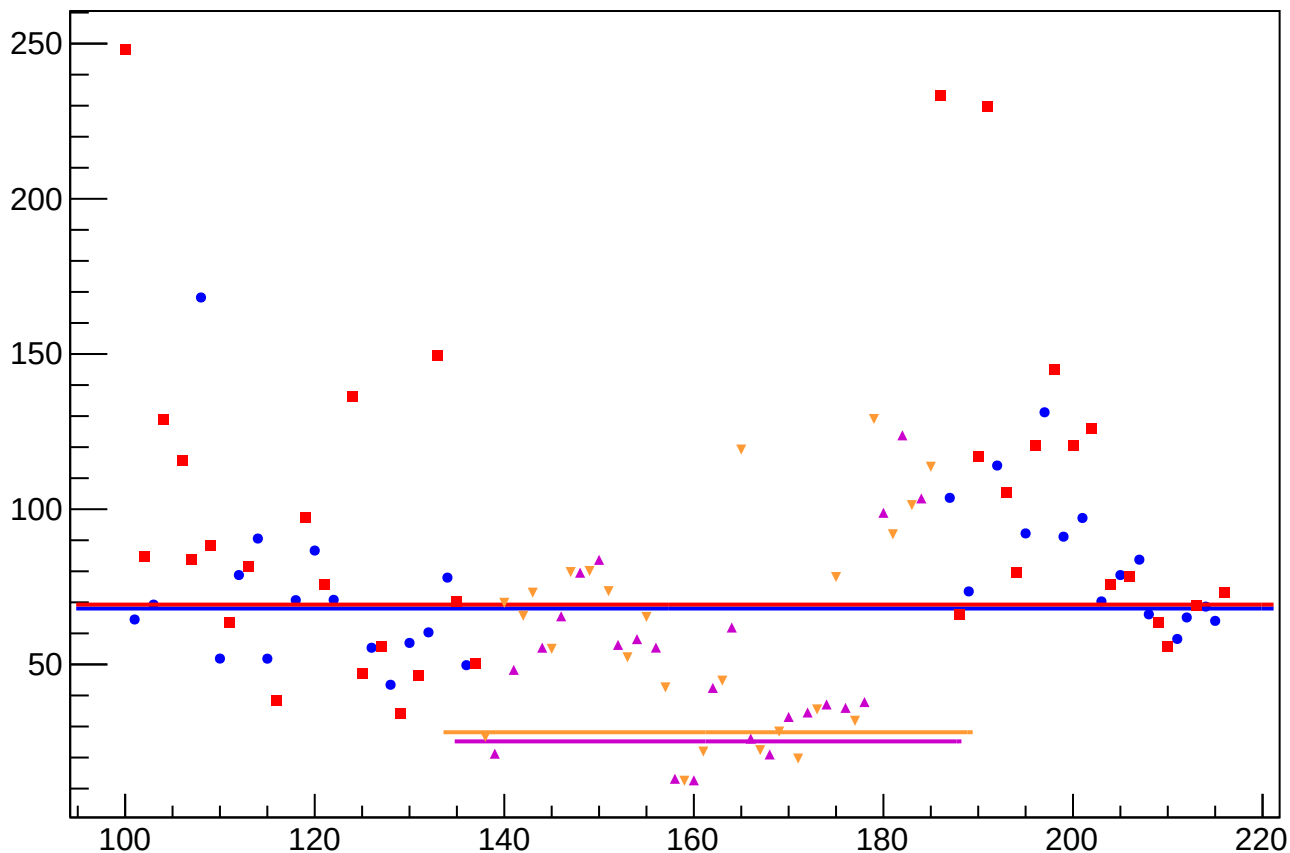
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $0.014 \pm 0.008$   $\chi^2/\text{NDF}$ : 87.4/55

All:  $0.012 \pm 0.005$   $\chi^2/\text{NDF}$ : 171.0/113

- sign  $0.010 \pm 0.007$   $\chi^2/\text{NDF}$ : 83.5/57

# asym\_sam3\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 68.014 $\pm$ 0.012  $\chi^2$ /NDF: 2102449.7/30

Left Out: 28.151 $\pm$ 0.006  $\chi^2$ /NDF: 11070747.0/24

Right Out: 69.275 $\pm$ 0.013  $\chi^2$ /NDF: 4472240.8/34

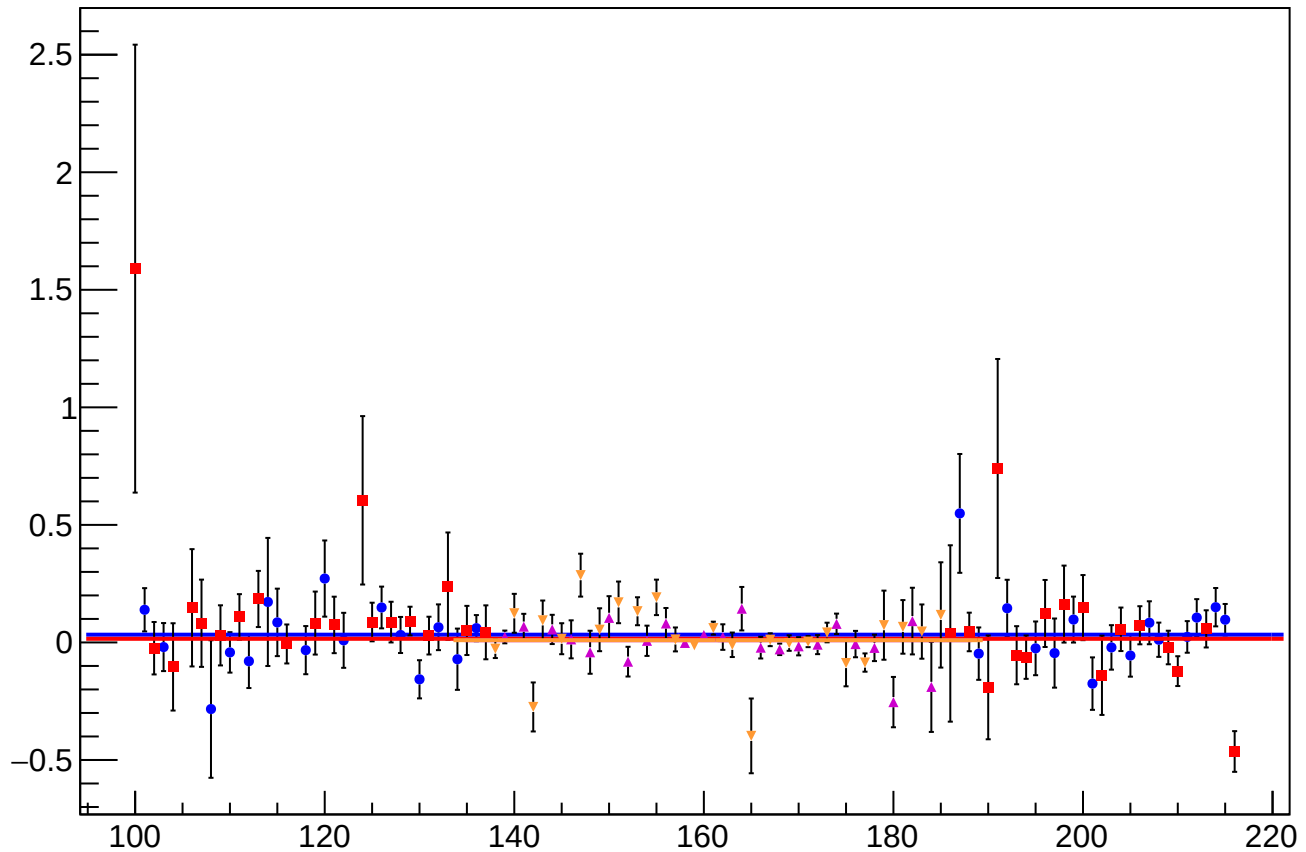
Left In: 25.206 $\pm$ 0.006  $\chi^2$ /NDF: 9964049.2/22

+ sign 35.978 $\pm$ 0.005  $\chi^2$ /NDF: 21896836.0/55

All: 34.112 $\pm$ 0.004  $\chi^2$ /NDF: 46672434.6/113

- sign 32.406 $\pm$ 0.005  $\chi^2$ /NDF: 24543639.1/57

asym\_sam3\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.033 \pm 0.017$   $\chi^2/\text{NDF}$ : 31.2/30

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}$ : 54.6/24

Right Out:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}$ : 58.3/34

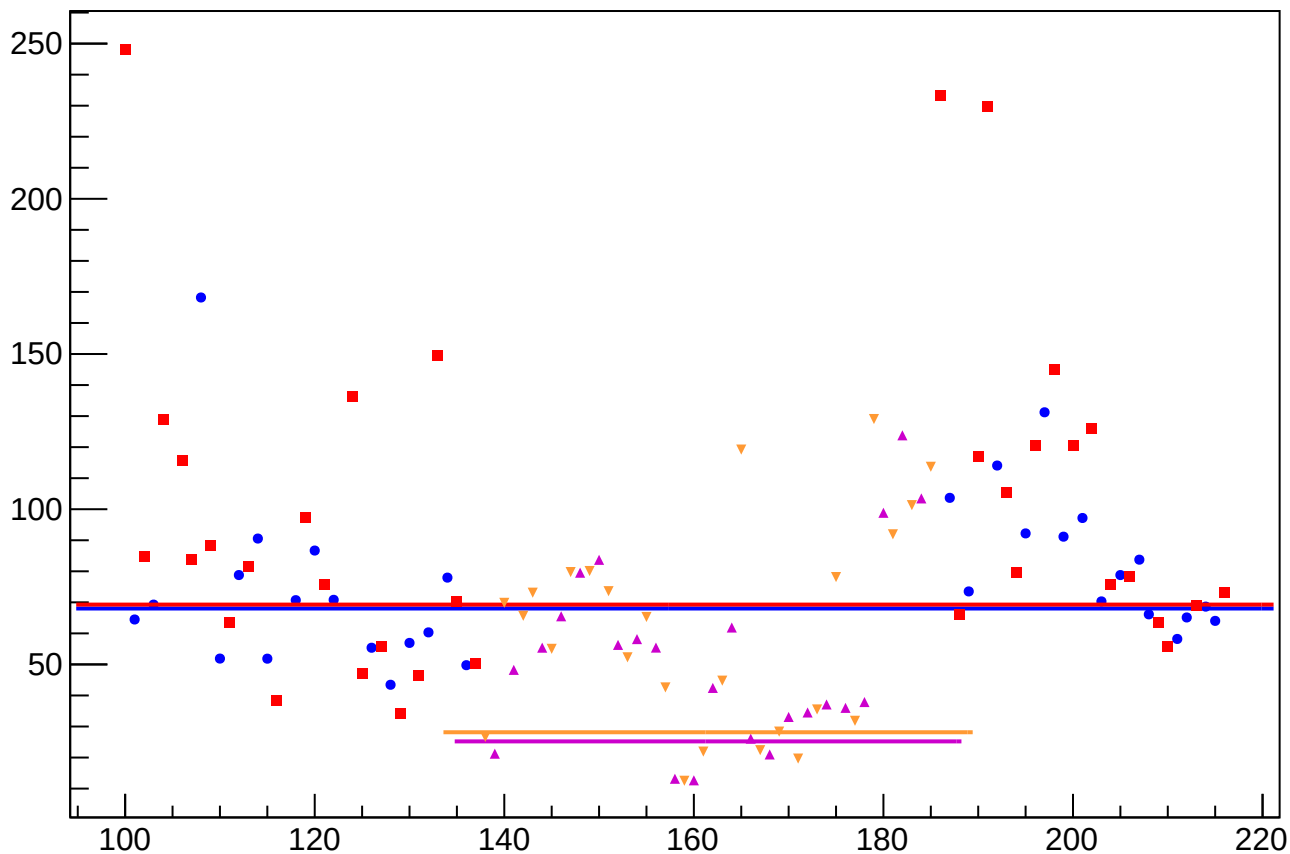
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}$ : 25.2/22

+ sign  $0.014 \pm 0.008$   $\chi^2/\text{NDF}$ : 87.4/55

All:  $0.012 \pm 0.005$   $\chi^2/\text{NDF}$ : 171.0/113

- sign  $0.010 \pm 0.007$   $\chi^2/\text{NDF}$ : 83.5/57

# asym\_sam3\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 68.014 $\pm$ 0.012  $\chi^2$ /NDF: 2102449.7/30

Left Out: 28.151 $\pm$ 0.006  $\chi^2$ /NDF: 11070747.0/24

Right Out: 69.275 $\pm$ 0.013  $\chi^2$ /NDF: 4472240.8/34

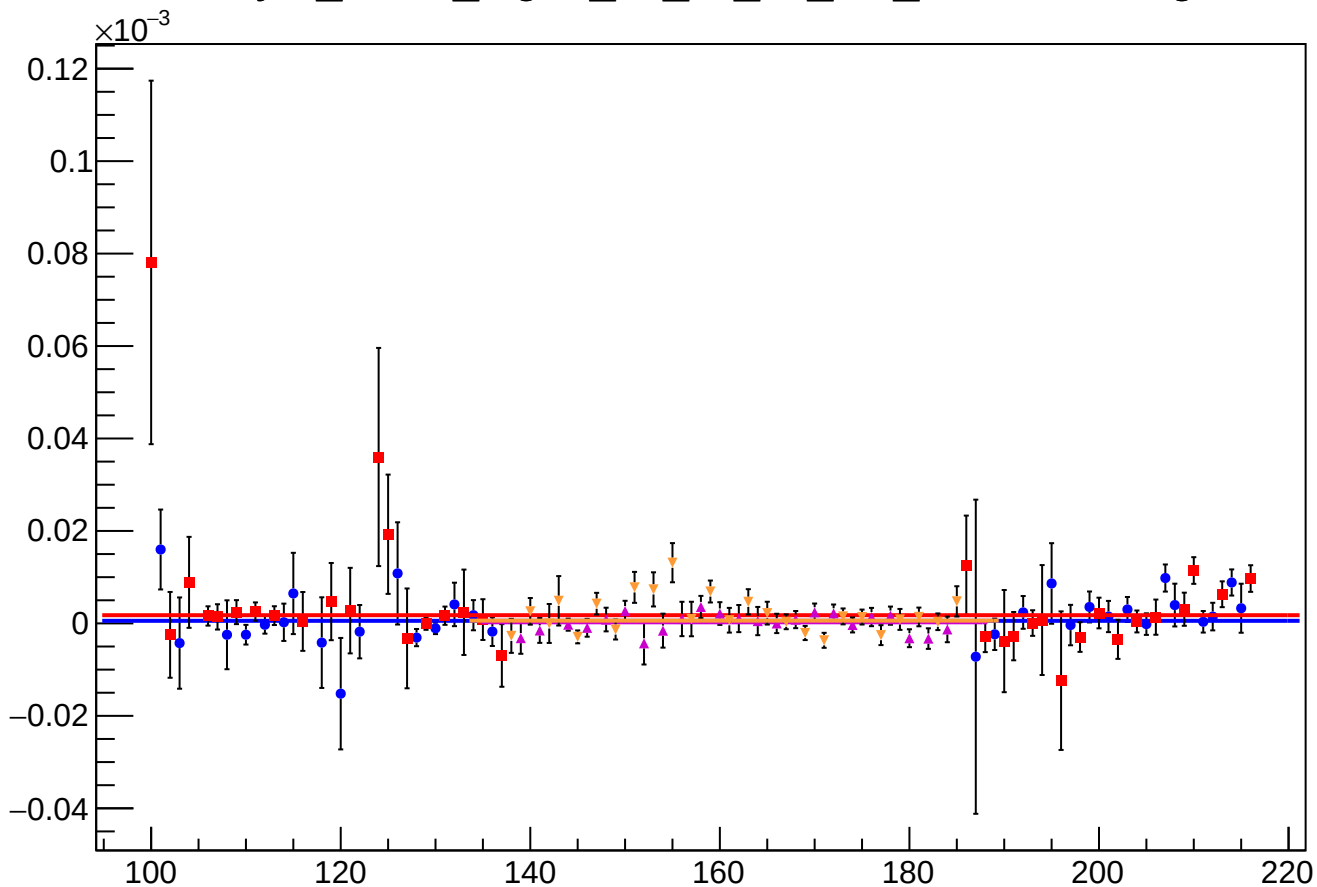
Left In: 25.206 $\pm$ 0.006  $\chi^2$ /NDF: 9964049.2/22

+ sign 35.978 $\pm$ 0.005  $\chi^2$ /NDF: 21896836.0/55

All: 34.112 $\pm$ 0.004  $\chi^2$ /NDF: 46672434.6/113

- sign 32.406 $\pm$ 0.005  $\chi^2$ /NDF: 24543639.1/57

# asym\_sam3\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.2/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.8/34

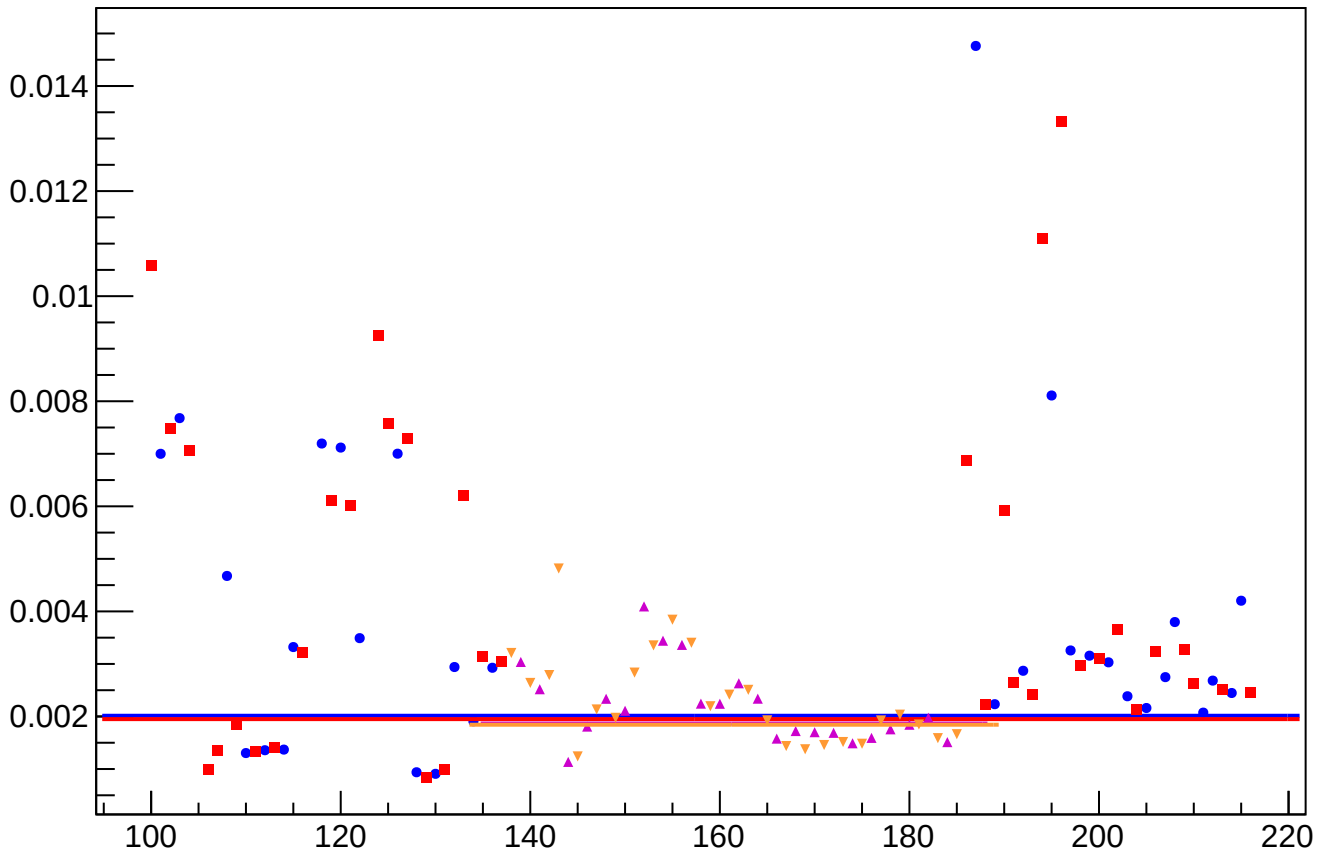
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.5/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 156.7/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.9/57

# asym\_sam3\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8985558.4/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:3783185.4/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11510972.1/34

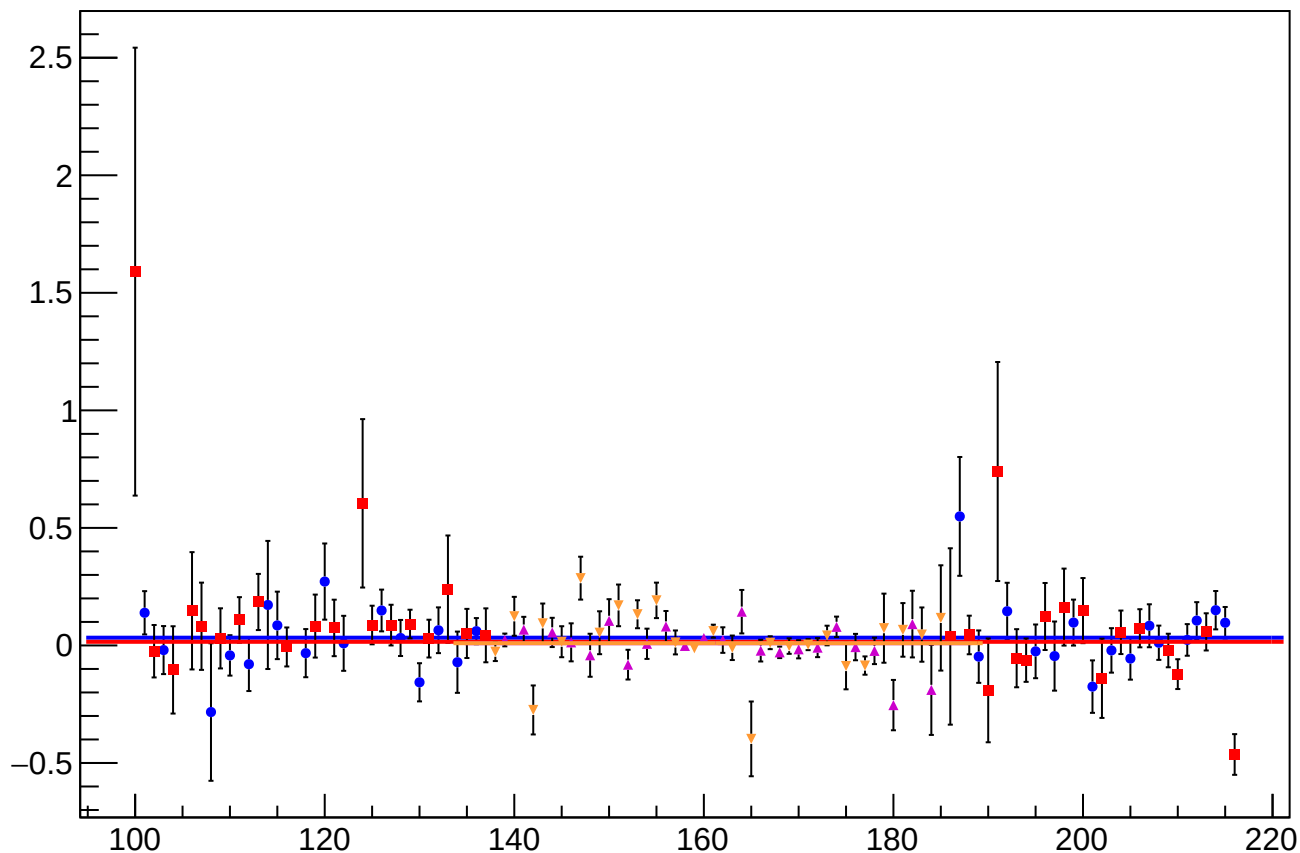
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:2794135.0/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 12882279.2/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 27215959.9/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 14332950.9/57

asym\_sam3\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.033 \pm 0.017$   $\chi^2/\text{NDF}: 31.2/30$

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}: 54.6/24$

Right Out:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}: 58.3/34$

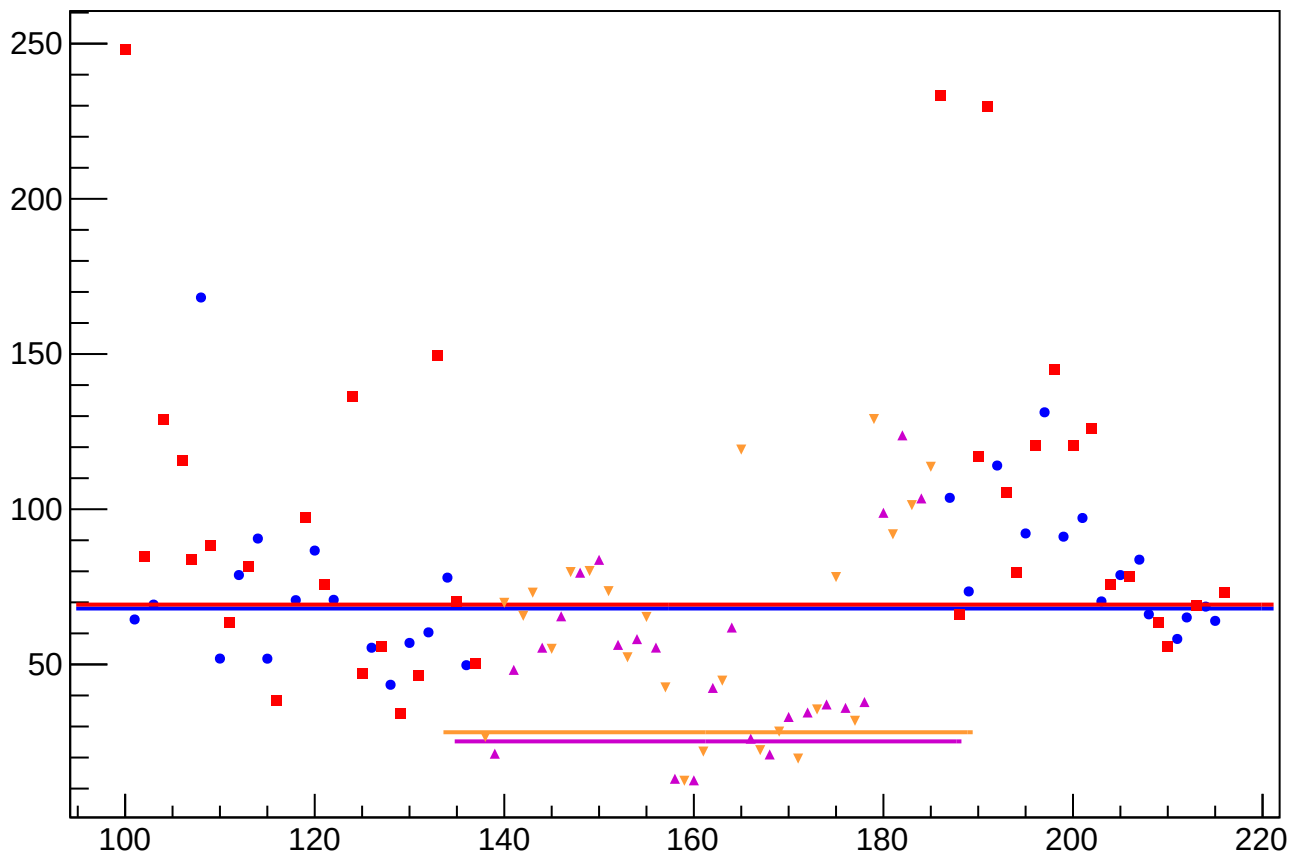
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}: 25.2/22$

+ sign  $0.014 \pm 0.008$   $\chi^2/\text{NDF}: 87.4/55$

All:  $0.012 \pm 0.005$   $\chi^2/\text{NDF}: 171.0/113$

- sign  $0.010 \pm 0.007$   $\chi^2/\text{NDF}: 83.5/57$

# asym\_sam3\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 68.015 $\pm$ 0.012  $\chi^2$ /NDF: 2102433.6/30

Left Out: 28.150 $\pm$ 0.006  $\chi^2$ /NDF: 11071818.3/24

Right Out: 69.275 $\pm$ 0.013  $\chi^2$ /NDF: 4472291.6/34

Left In: 25.205 $\pm$ 0.006  $\chi^2$ /NDF: 9964548.1/22

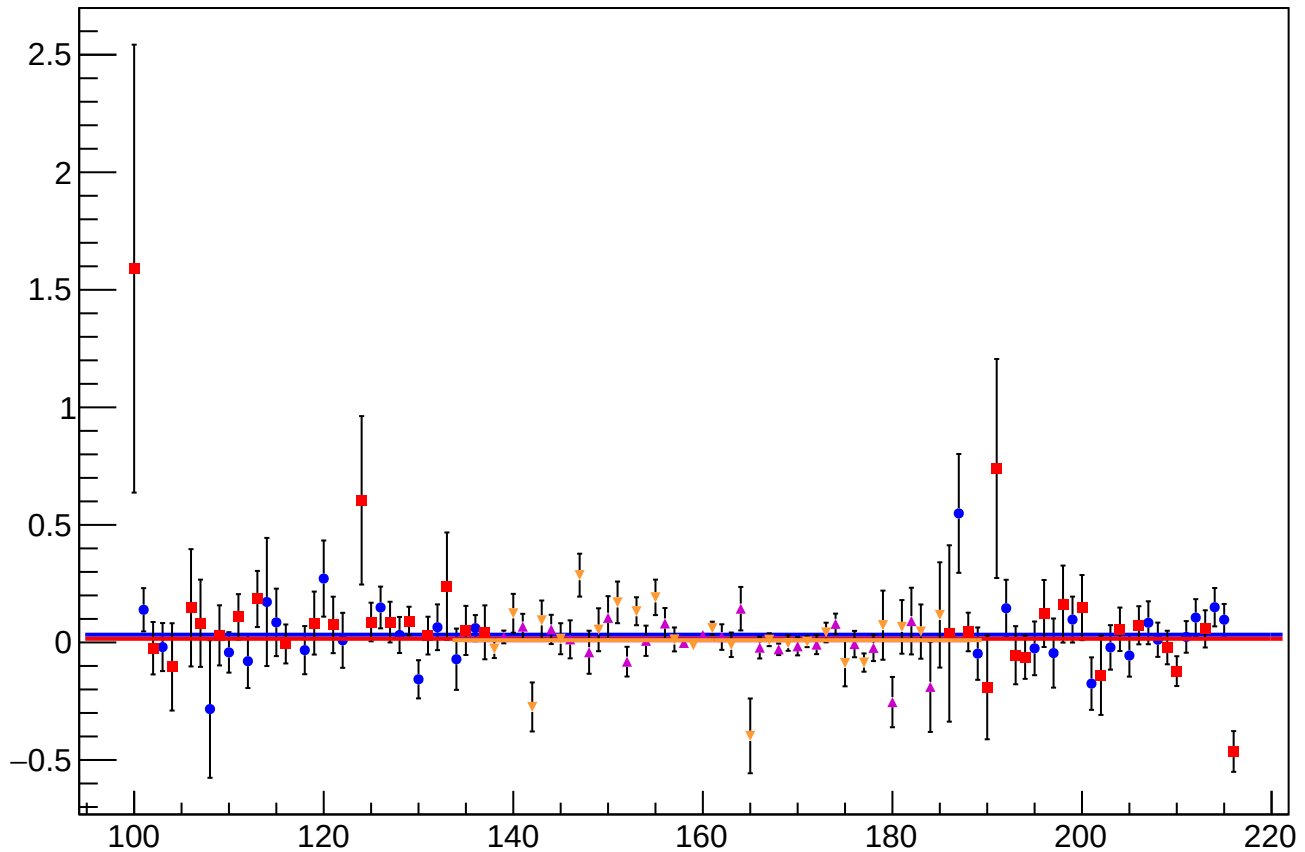
+ sign 35.977 $\pm$ 0.005  $\chi^2$ /NDF: 21898613.1/55

All: 34.111 $\pm$ 0.004  $\chi^2$ /NDF: 46675032.1/113

- sign 32.406 $\pm$ 0.005  $\chi^2$ /NDF: 24544565.8/57



asym\_sam3\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.033 \pm 0.017$   $\chi^2/\text{NDF}: 31.2/30$

Left Out:  $0.010 \pm 0.008$   $\chi^2/\text{NDF}: 54.6/24$

Right Out:  $0.015 \pm 0.018$   $\chi^2/\text{NDF}: 58.3/34$

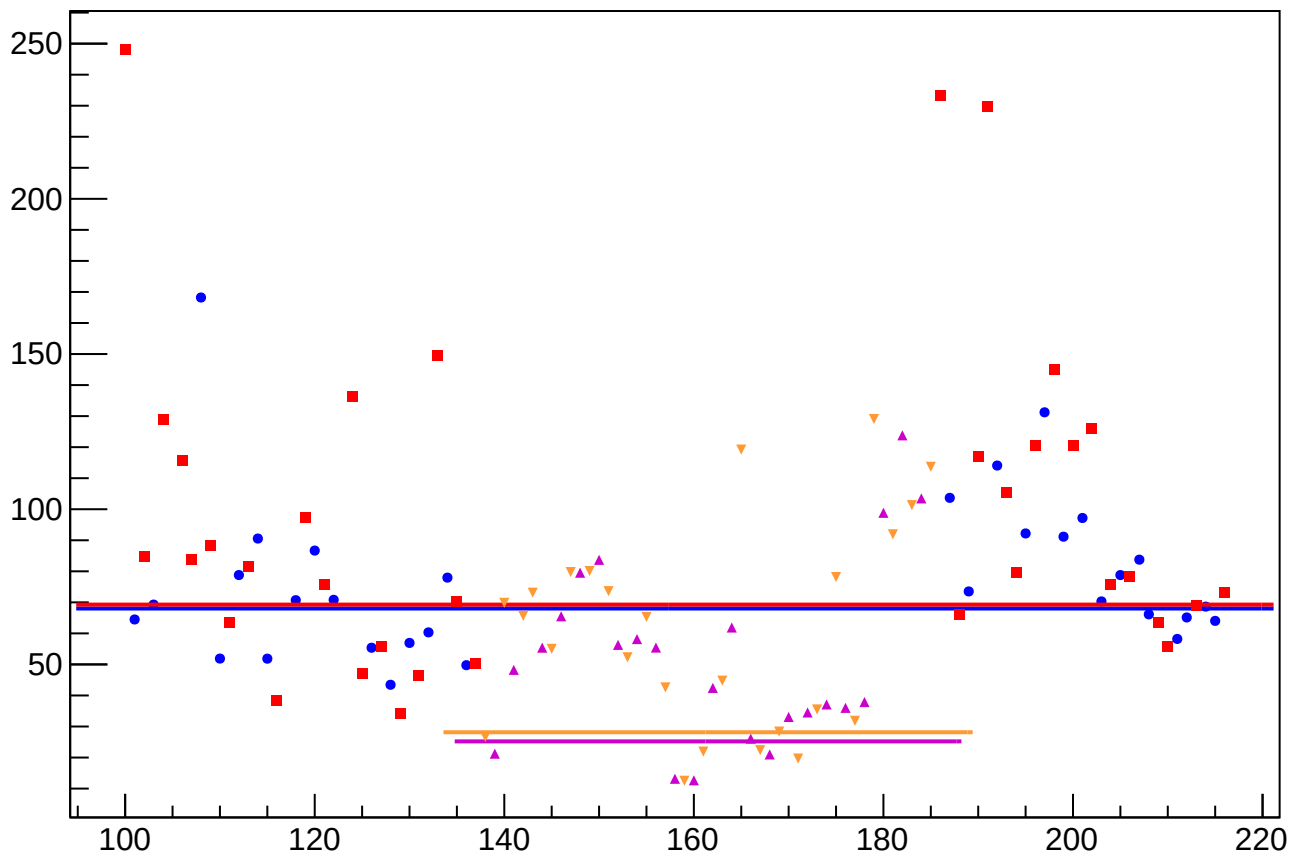
Left In:  $0.009 \pm 0.008$   $\chi^2/\text{NDF}: 25.2/22$

+ sign  $0.014 \pm 0.008$   $\chi^2/\text{NDF}: 87.4/55$

All:  $0.012 \pm 0.005$   $\chi^2/\text{NDF}: 171.0/113$

- sign  $0.010 \pm 0.007$   $\chi^2/\text{NDF}: 83.5/57$

asym\_sam3\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 68.015 $\pm$ 0.012  $\chi^2$ /NDF: 2102433.6/30

Left Out: 28.150 $\pm$ 0.006  $\chi^2$ /NDF: 11071818.3/24

Right Out: 69.275 $\pm$ 0.013  $\chi^2$ /NDF: 4472291.6/34

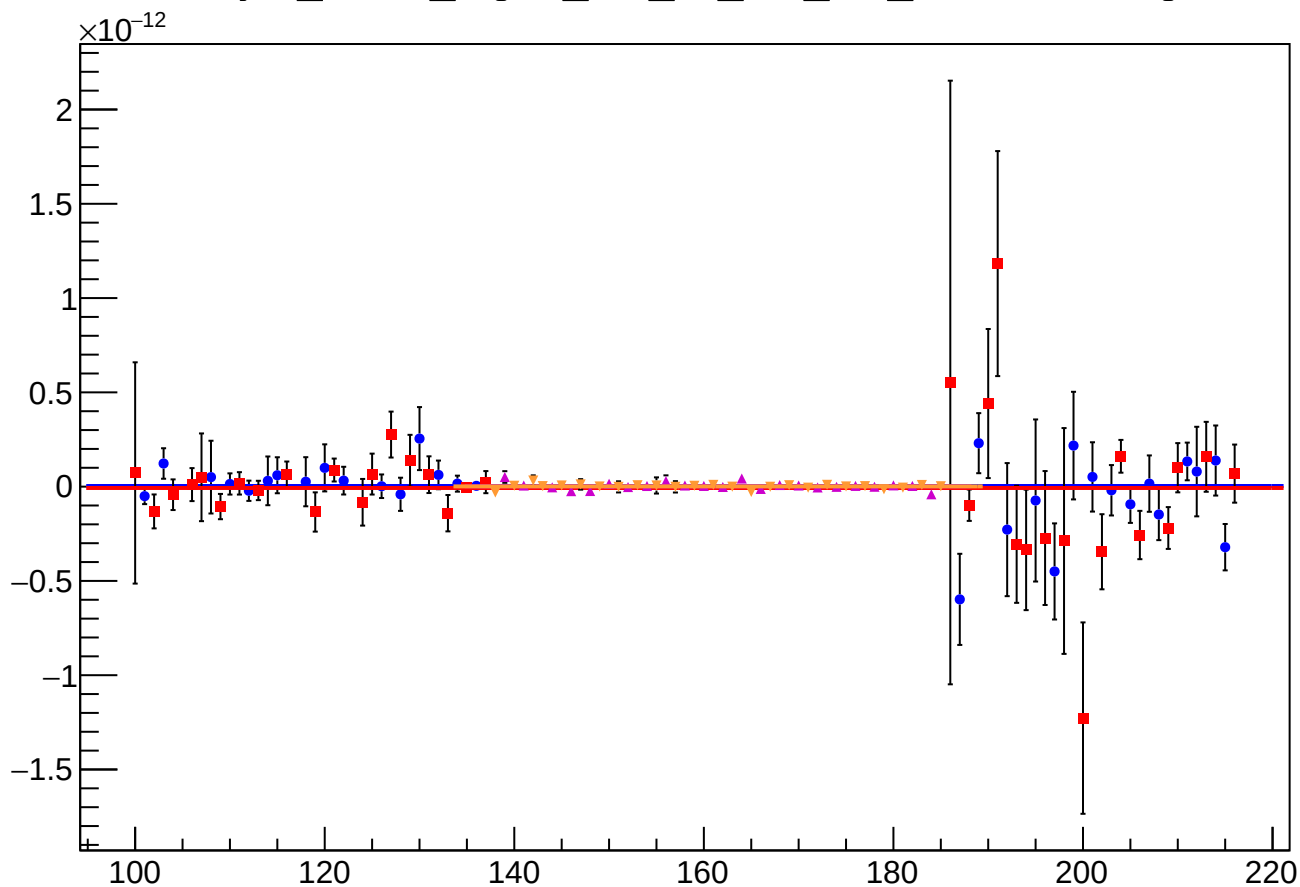
Left In: 25.205 $\pm$ 0.006  $\chi^2$ /NDF: 9964548.1/22

+ sign 35.977 $\pm$ 0.005  $\chi^2$ /NDF: 21898613.1/55

All: 34.111 $\pm$ 0.004  $\chi^2$ /NDF: 46675032.1/113

- sign 32.406 $\pm$ 0.005  $\chi^2$ /NDF: 24544565.8/57

asym\_sam3\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11.3/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 50.7/34

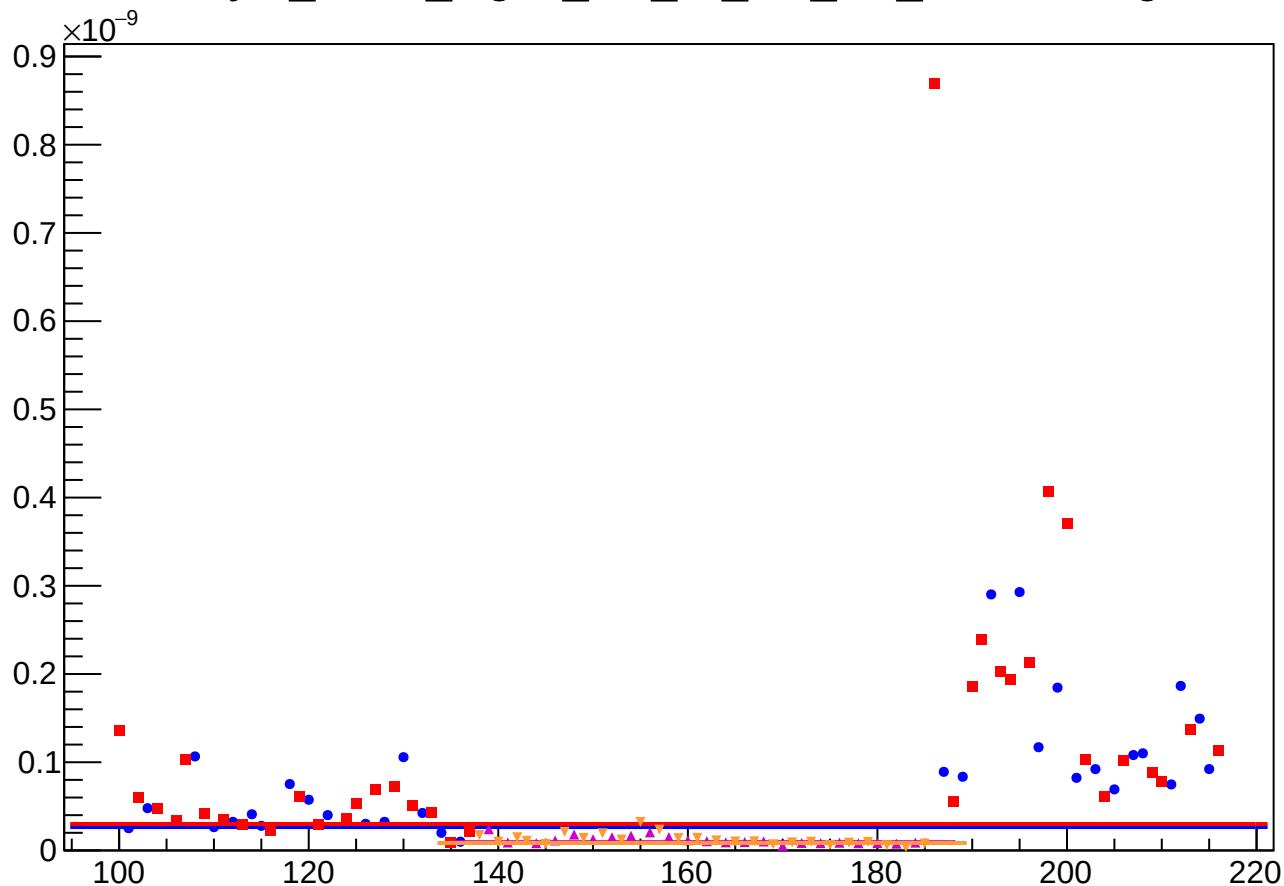
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 43.8/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 115.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 72.0/57

asym\_sam3\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12039195.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4343727.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11962158.1/34

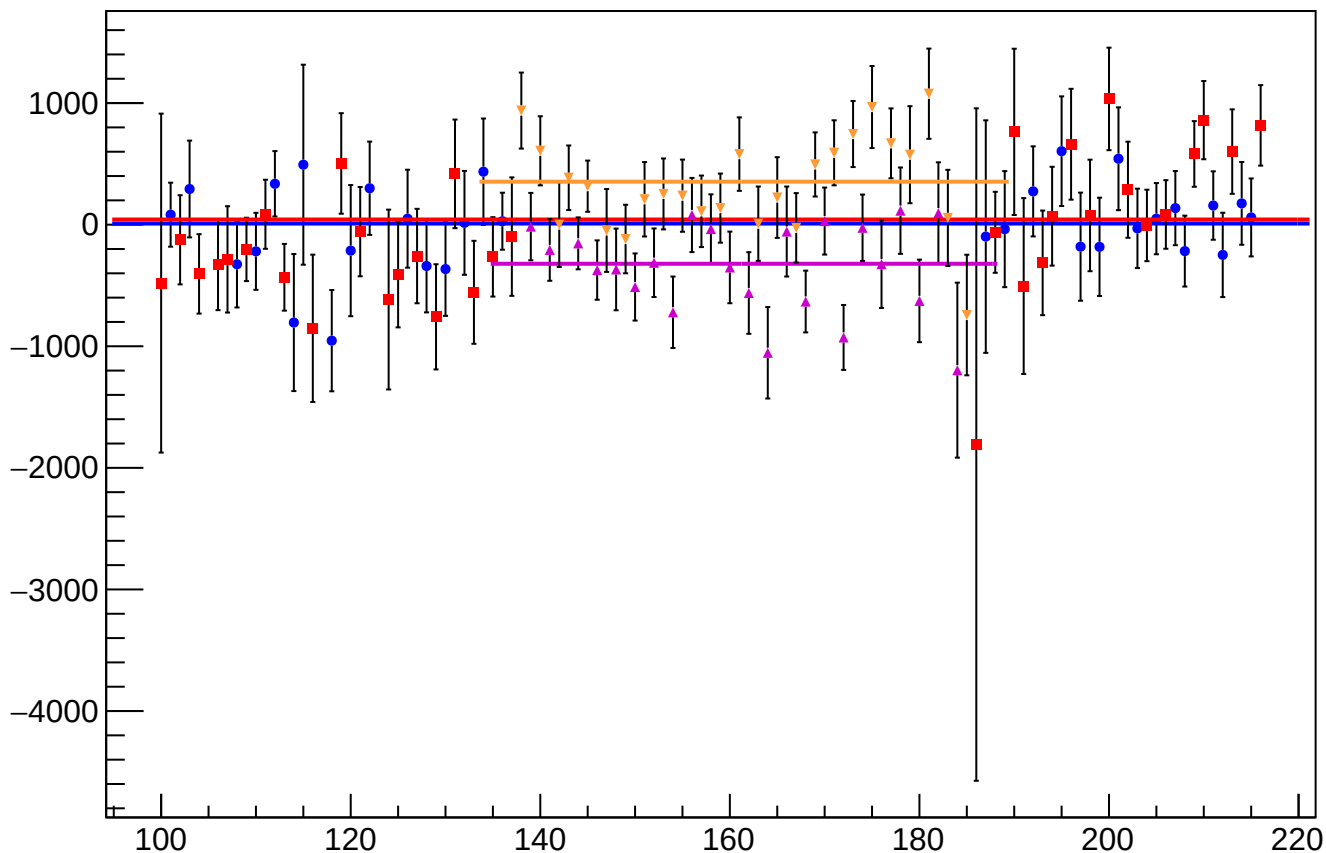
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2146041.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20952783.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40114034.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19027109.2/57

# reg\_asym\_sam4\_mean vs Slug



Right In:  $9.282 \pm 64.667$   $\chi^2/\text{NDF}$ : 20.9/30

Left Out:  $353.617 \pm 60.149$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $42.518 \pm 64.470$   $\chi^2/\text{NDF}$ : 50.0/34

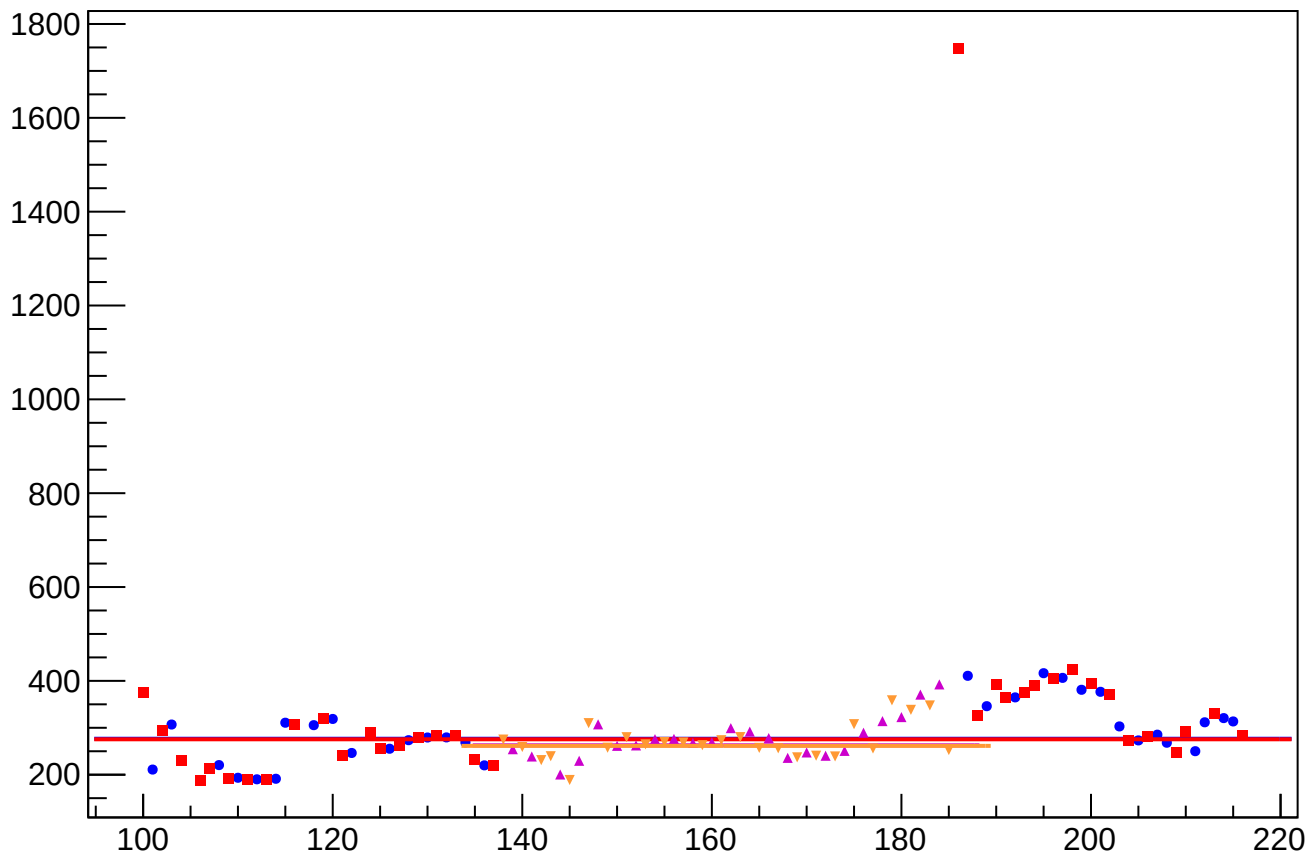
Left In:  $-321.510 \pm 62.113$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $193.898 \pm 44.043$   $\chi^2/\text{NDF}$ : 68.5/55

All:  $26.450 \pm 31.383$   $\chi^2/\text{NDF}$ : 190.6/113

- sign  $-146.272 \pm 44.731$   $\chi^2/\text{NDF}$ : 92.8/57

# reg\_asym\_sam4\_rms vs Slug



Right In: 276.645 $\pm$ 0.046  $\chi^2$ /NDF: 1655091.6/30

Left Out: 261.470 $\pm$ 0.043  $\chi^2$ /NDF: 715467.9/24

Right Out: 275.486 $\pm$ 0.046  $\chi^2$ /NDF: 2600667.6/34

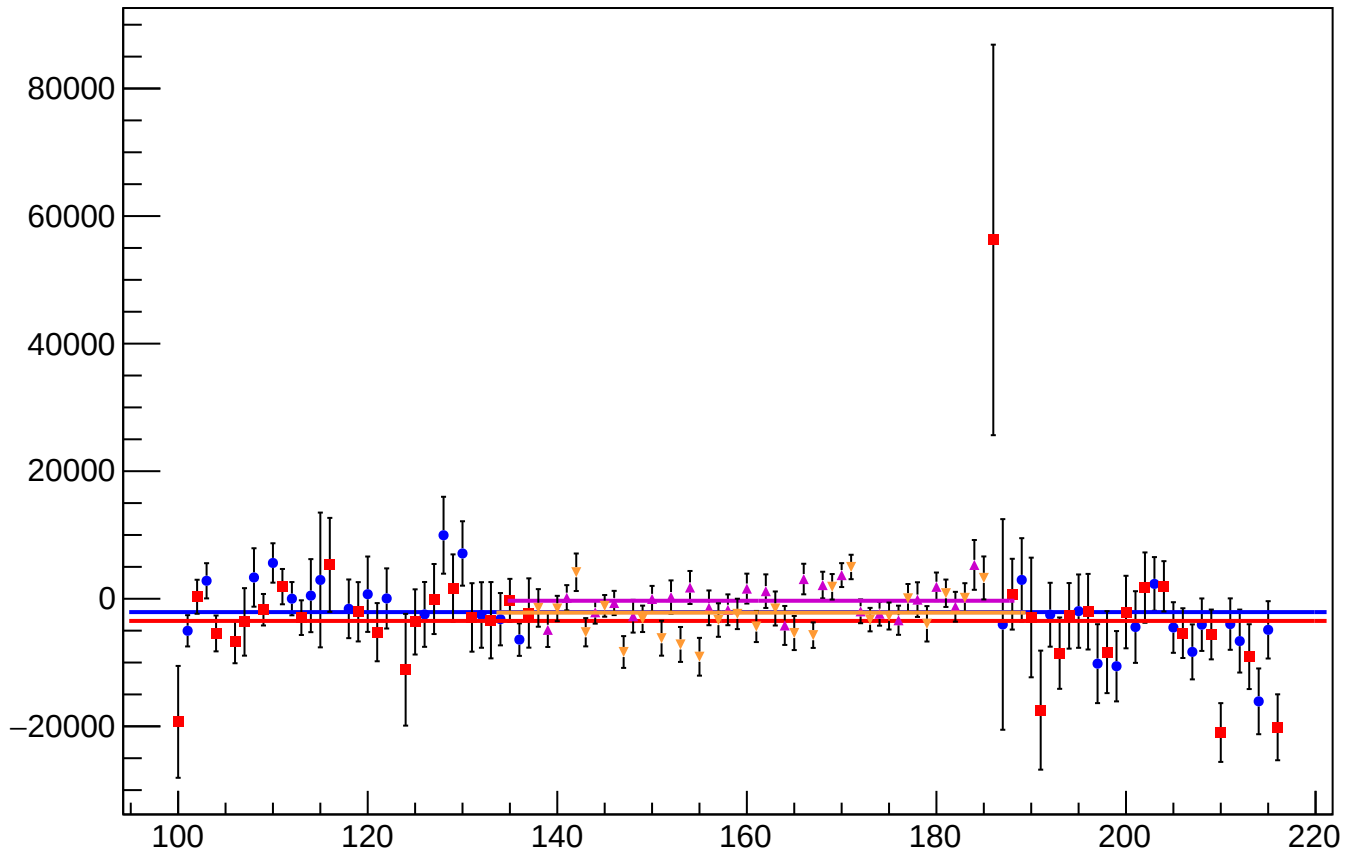
Left In: 262.616 $\pm$ 0.044  $\chi^2$ /NDF: 670646.3/22

+ sign 268.509 $\pm$ 0.031  $\chi^2$ /NDF: 2429610.4/55

All: 268.658 $\pm$ 0.022  $\chi^2$ /NDF: 5742302.9/113

- sign 268.811 $\pm$ 0.032  $\chi^2$ /NDF: 3312646.0/57

# asym\_sam4\_reg\_correction\_mean vs Slug



Right In: -2091.480 $\pm$ 761.515  $\chi^2/\text{NDF}$ : 41.5/30

Left Out: -2171.840 $\pm$ 461.649  $\chi^2/\text{NDF}$ : 55.5/24

Right Out: -3475.616 $\pm$ 742.845  $\chi^2/\text{NDF}$ : 53.3/34

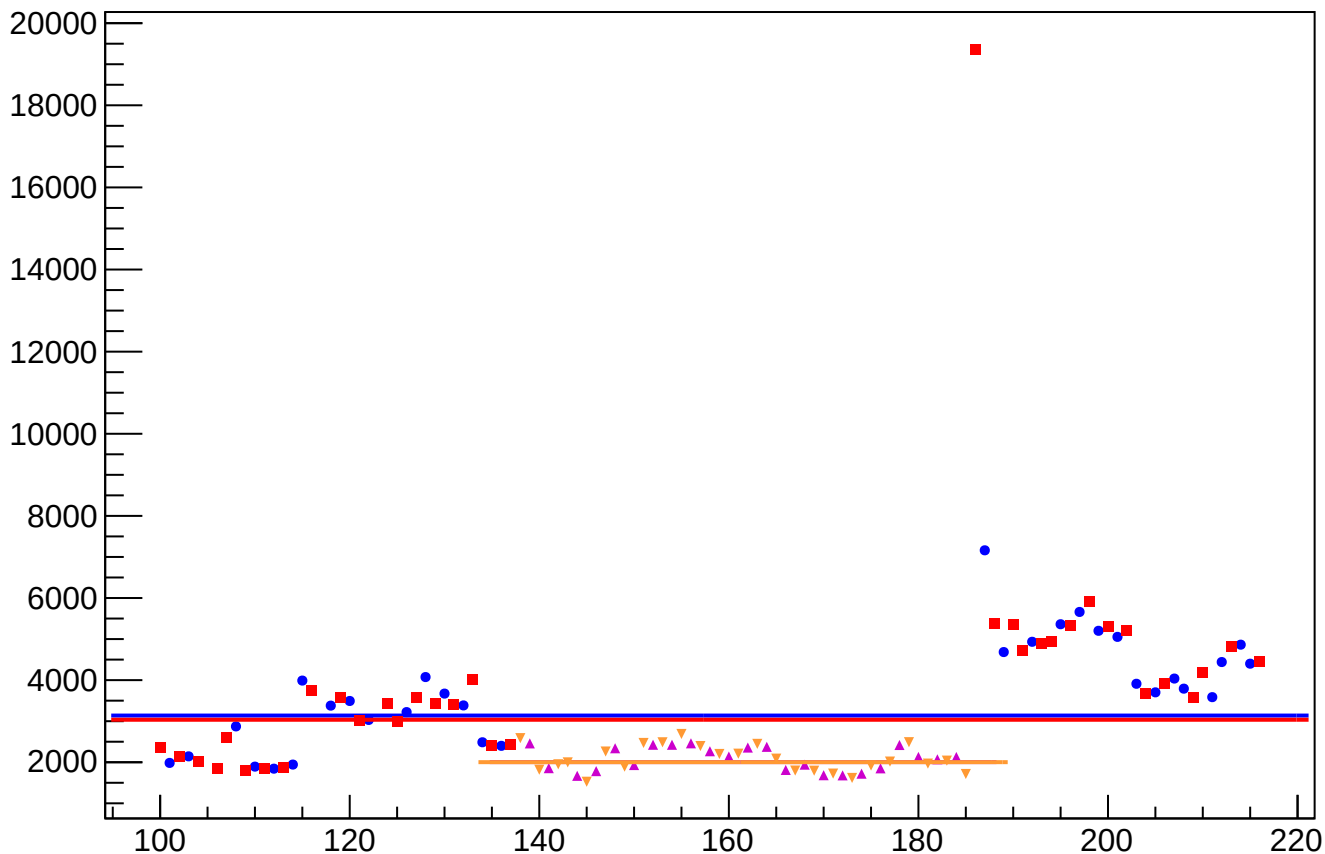
Left In: -313.739 $\pm$ 474.086  $\chi^2/\text{NDF}$ : 23.7/22

+ sign -2150.244 $\pm$ 394.772  $\chi^2/\text{NDF}$ : 97.0/55

All: -1695.187 $\pm$ 280.850  $\chi^2/\text{NDF}$ : 189.5/113

- sign -1228.851 $\pm$ 399.635  $\chi^2/\text{NDF}$ : 89.8/57

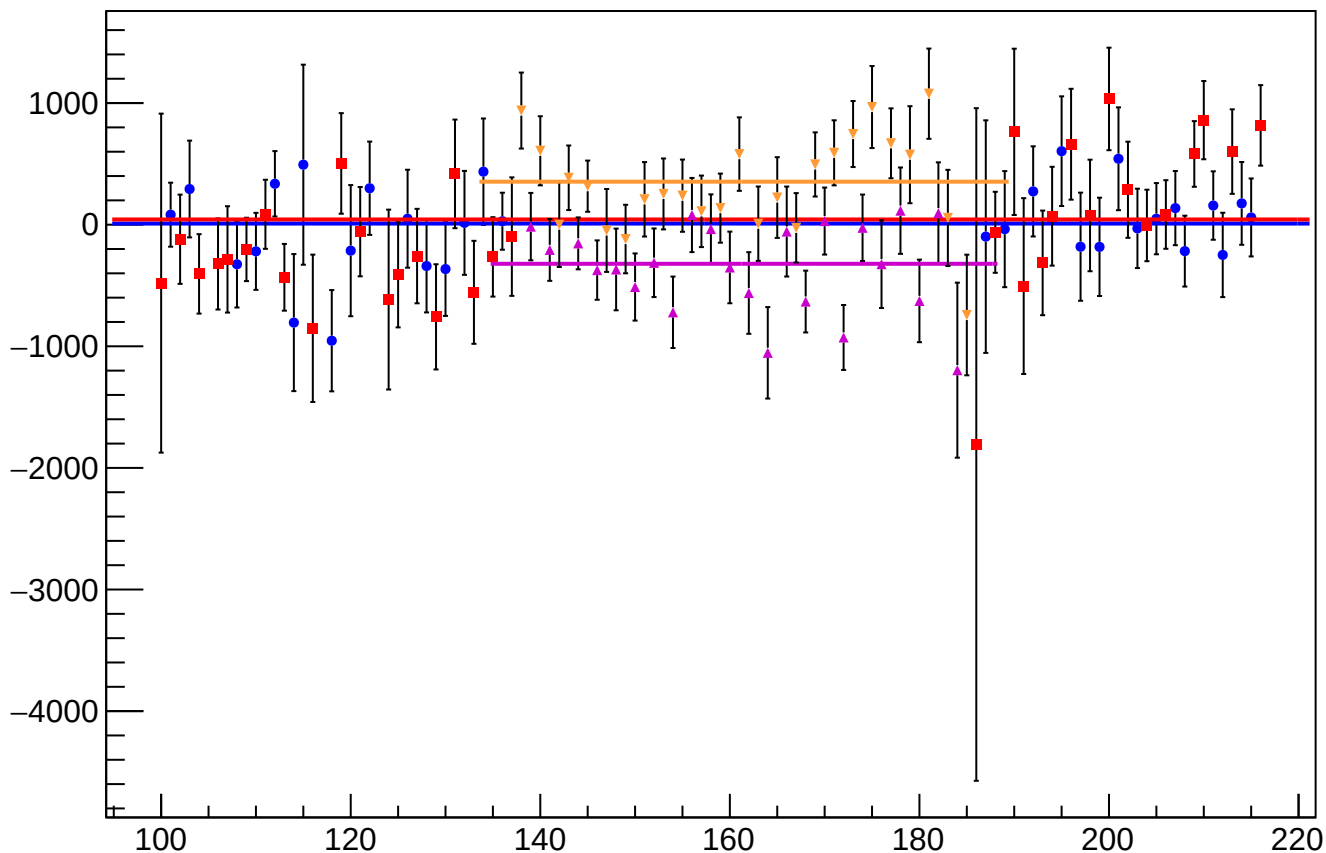
# asym\_sam4\_reg\_correction\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 3137.162+/-0.538  | $\chi^2/\text{NDF}$ : 4357001.1/30 | + sign 2307.234+/-0.279 | $\chi^2/\text{NDF}$ : 8498219.4/55 |
| Left Out: 2002.229+/-0.326  | $\chi^2/\text{NDF}$ : 892707.2/24  | All: 2304.938+/-0.199   | $\chi^2/\text{NDF}$ : 17833166.4/1 |
| Right Out: 3035.064+/-0.525 | $\chi^2/\text{NDF}$ : 5893288.4/34 | - sign 2302.585+/-0.283 | $\chi^2/\text{NDF}$ : 9334810.0/57 |
| Left In: 2004.244+/-0.335   | $\chi^2/\text{NDF}$ : 704919.9/22  |                         |                                    |



# cor\_asym\_sam4\_mean vs Slug



Right In:  $9.269 \pm 64.667$   $\chi^2/\text{NDF}$ : 20.9/30

Left Out:  $353.640 \pm 60.149$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $42.898 \pm 64.475$   $\chi^2/\text{NDF}$ : 49.9/34

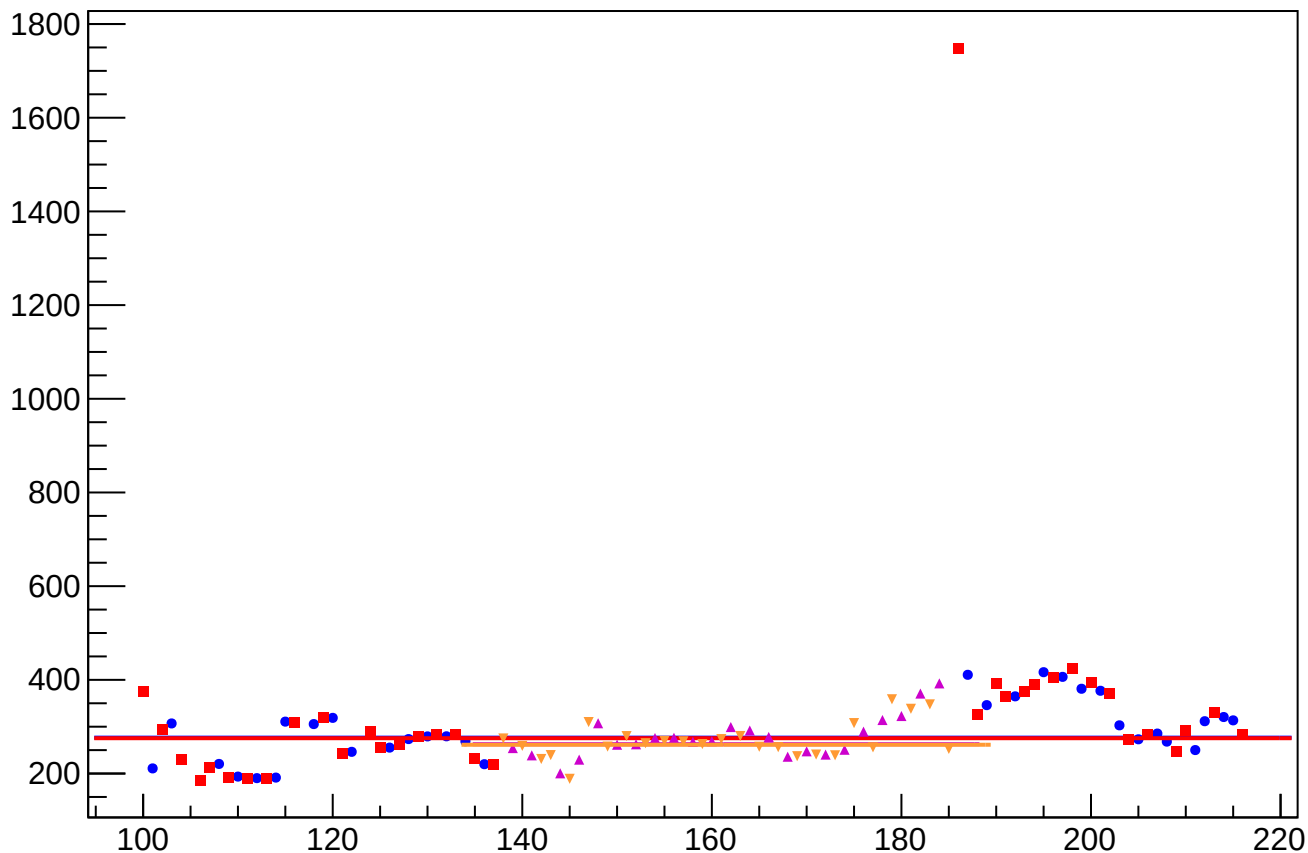
Left In:  $-321.514 \pm 62.113$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $193.905 \pm 44.043$   $\chi^2/\text{NDF}$ : 68.5/55

All:  $26.541 \pm 31.384$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $-146.107 \pm 44.732$   $\chi^2/\text{NDF}$ : 92.7/57

# cor\_asym\_sam4\_rms vs Slug



Right In: 276.645 $\pm$ 0.046  $\chi^2$ /NDF: 1655092.8/30

Left Out: 261.470 $\pm$ 0.043  $\chi^2$ /NDF: 715467.9/24

Right Out: 275.427 $\pm$ 0.046  $\chi^2$ /NDF: 2606618.4/34

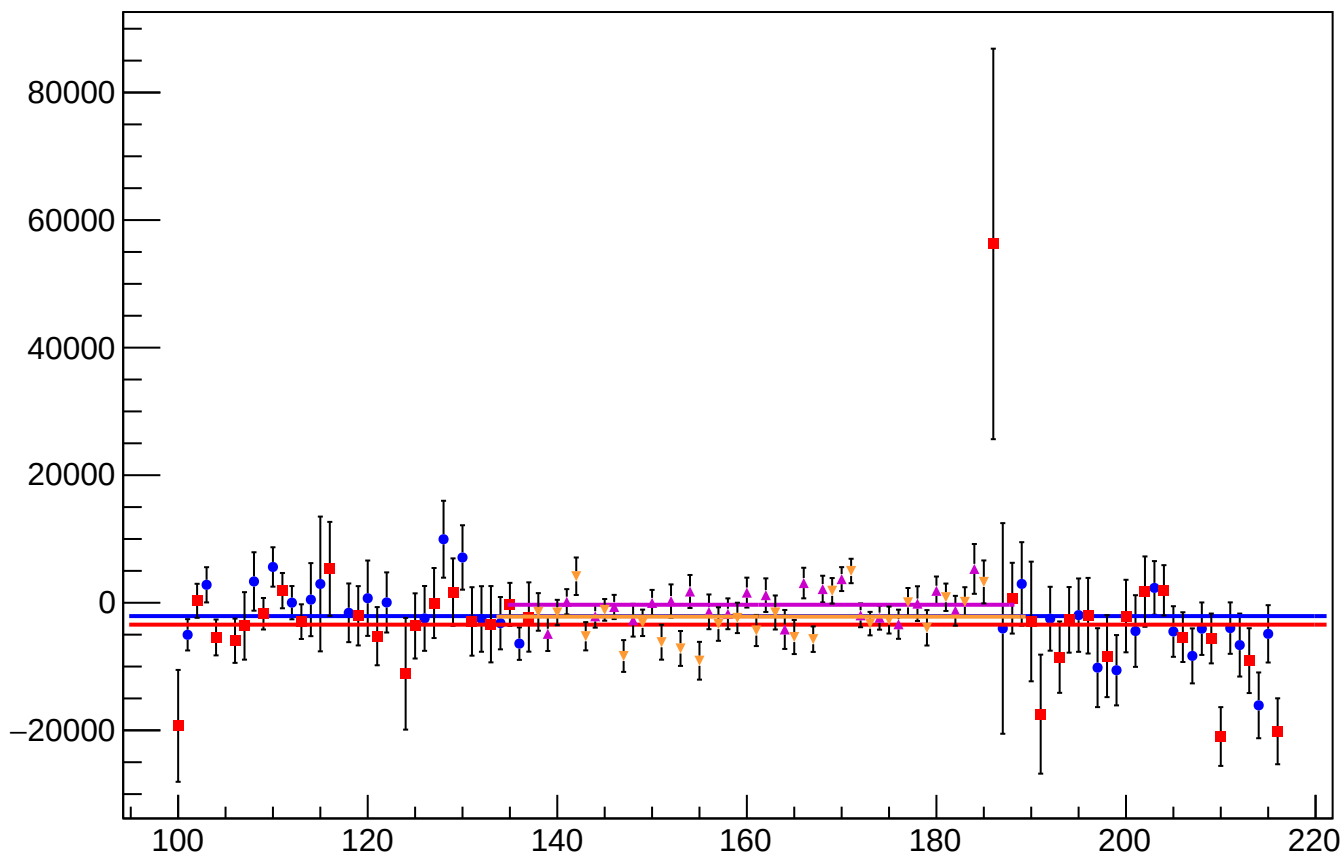
Left In: 262.616 $\pm$ 0.044  $\chi^2$ /NDF: 670646.4/22

+ sign 268.509 $\pm$ 0.031  $\chi^2$ /NDF: 2429612.0/55

All: 268.644 $\pm$ 0.022  $\chi^2$ /NDF: 5747867.7/113

- sign 268.783 $\pm$ 0.032  $\chi^2$ /NDF: 3318217.6/57

# asym\_sam4\_cor\_correction\_mean vs Slug



Right In: -2091.604 $\pm$ 761.519  $\chi^2$ /NDF: 41.5/30

Left Out: -2171.811 $\pm$ 461.649  $\chi^2$ /NDF:55.5/24

Right Out: -3432.586 $\pm$ 743.814  $\chi^2$ /NDF: 52.9/34

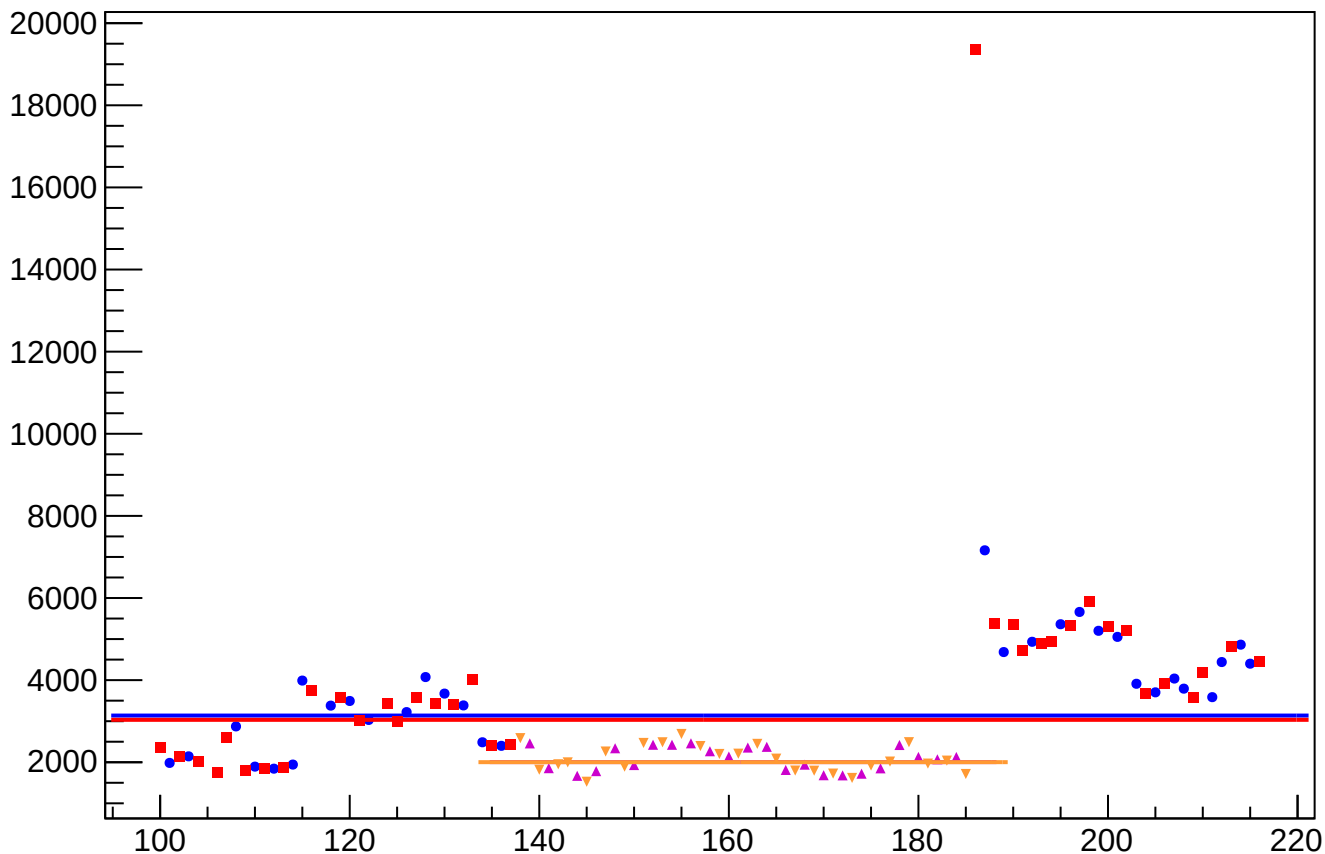
Left In: -313.745 $\pm$ 474.086  $\chi^2$ /NDF:23.7/22

+ sign -2150.256 $\pm$ 394.773  $\chi^2$ /NDF: 97.0/55

All: -1688.395 $\pm$ 280.902  $\chi^2$ /NDF: 188.8/113

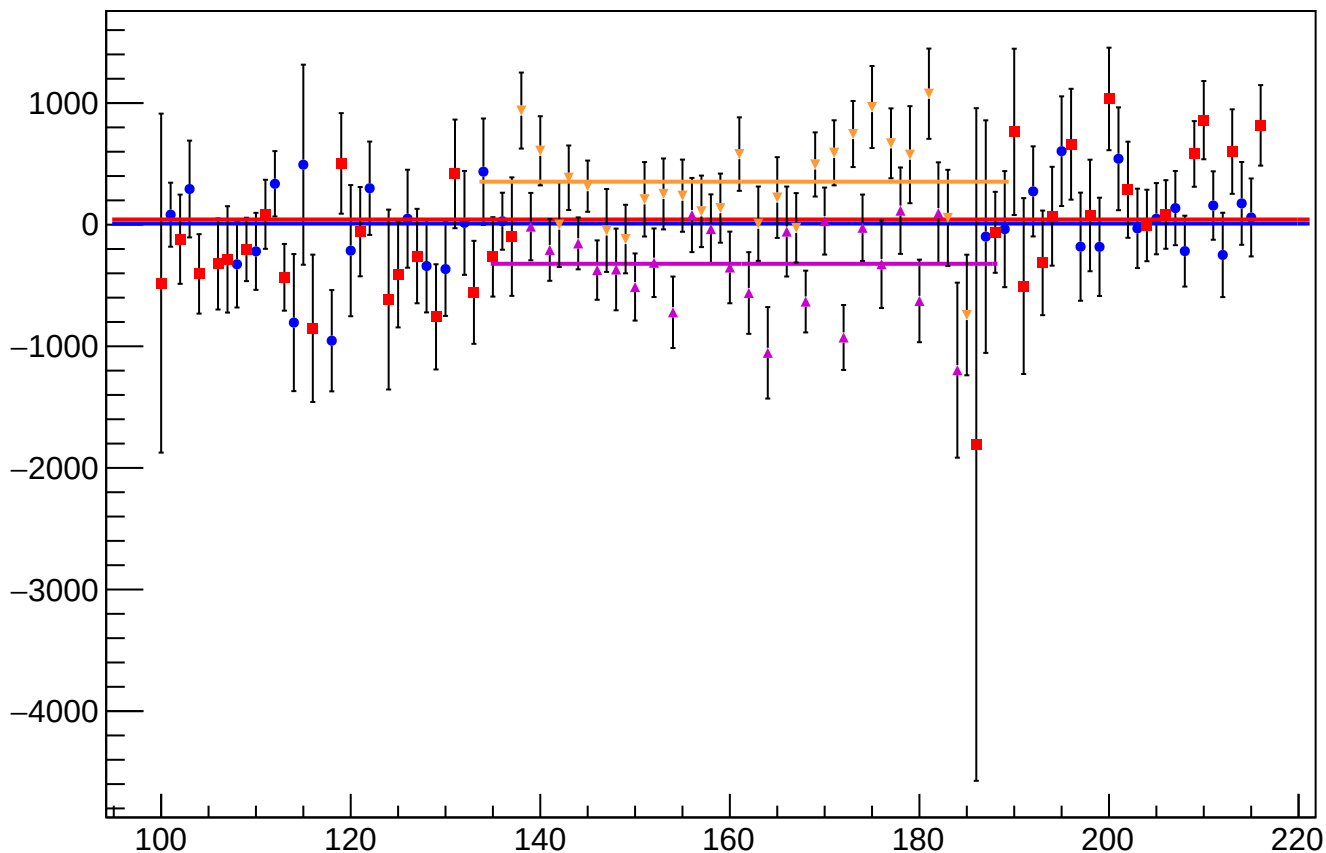
- sign -1214.731 $\pm$ 399.785  $\chi^2$ /NDF: 89.0/57

# asym\_sam4\_cor\_correction\_rms vs Slug



|                             |                                    |                         |                                    |
|-----------------------------|------------------------------------|-------------------------|------------------------------------|
| Right In: 3137.186+/-0.538  | $\chi^2/\text{NDF}$ : 4356878.7/30 | + sign 2307.238+/-0.279 | $\chi^2/\text{NDF}$ : 8498204.7/55 |
| Left Out: 2002.229+/-0.326  | $\chi^2/\text{NDF}$ : 892706.8/24  | All: 2304.384+/-0.199   | $\chi^2/\text{NDF}$ : 17849972.6/1 |
| Right Out: 3033.071+/-0.526 | $\chi^2/\text{NDF}$ : 5925655.2/34 | - sign 2301.457+/-0.283 | $\chi^2/\text{NDF}$ : 9351556.1/57 |
| Left In: 2004.244+/-0.335   | $\chi^2/\text{NDF}$ : 704920.5/22  |                         |                                    |

# eigen\_cor\_asym\_sam4\_mean vs Slug



Right In:  $9.269 \pm 64.667$   $\chi^2/\text{NDF}$ : 20.9/30

Left Out:  $353.640 \pm 60.149$   $\chi^2/\text{NDF}$ : 32.3/24

Right Out:  $42.898 \pm 64.475$   $\chi^2/\text{NDF}$ : 49.9/34

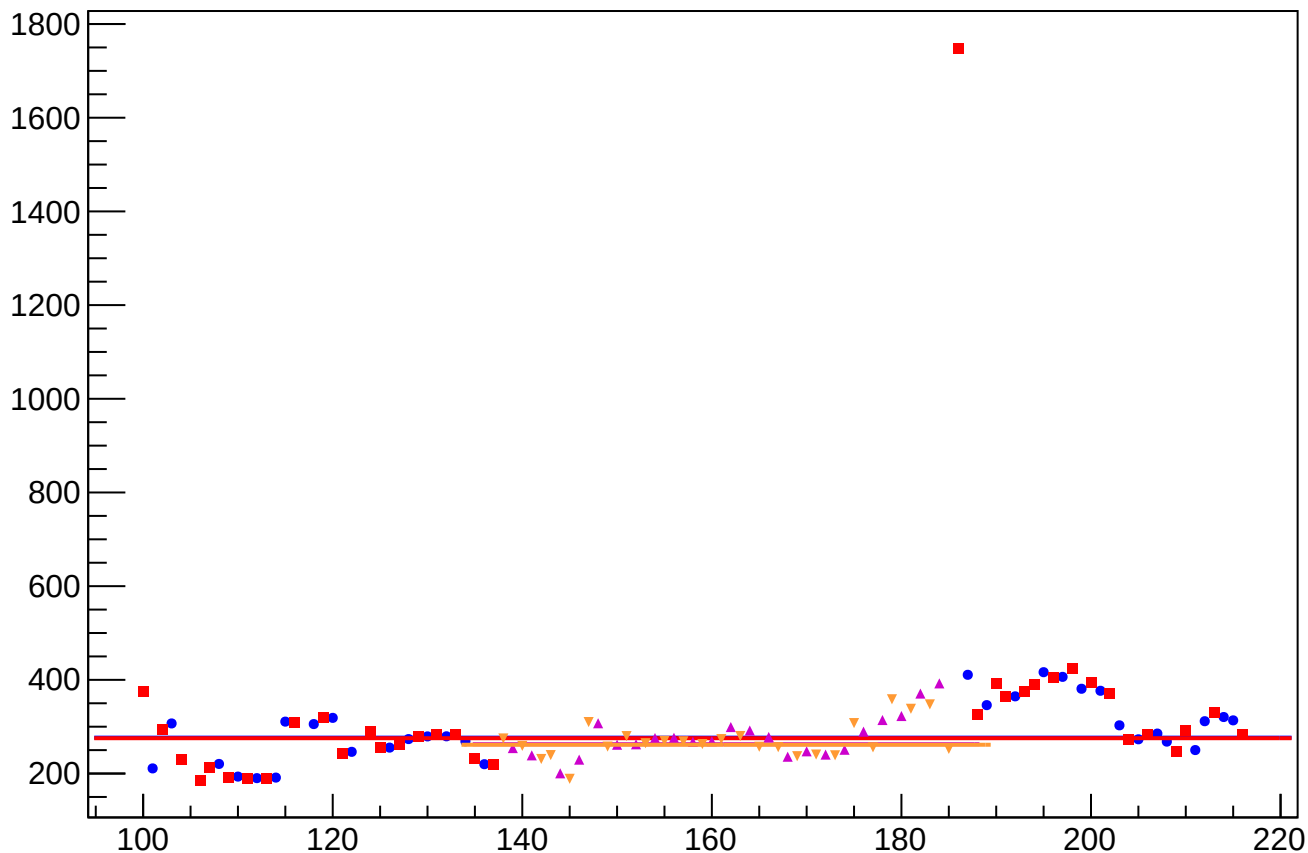
Left In:  $-321.514 \pm 62.113$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $193.905 \pm 44.043$   $\chi^2/\text{NDF}$ : 68.5/55

All:  $26.541 \pm 31.384$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $-146.107 \pm 44.732$   $\chi^2/\text{NDF}$ : 92.7/57

# eigen\_cor\_asym\_sam4\_rms vs Slug



Right In: 276.645+/-0.046  $\chi^2/\text{NDF}$ : 1655092.8/30

Left Out: 261.470+/-0.043  $\chi^2/\text{NDF}$ : 715467.9/24

Right Out: 275.427+/-0.046  $\chi^2/\text{NDF}$ : 2606618.4/34

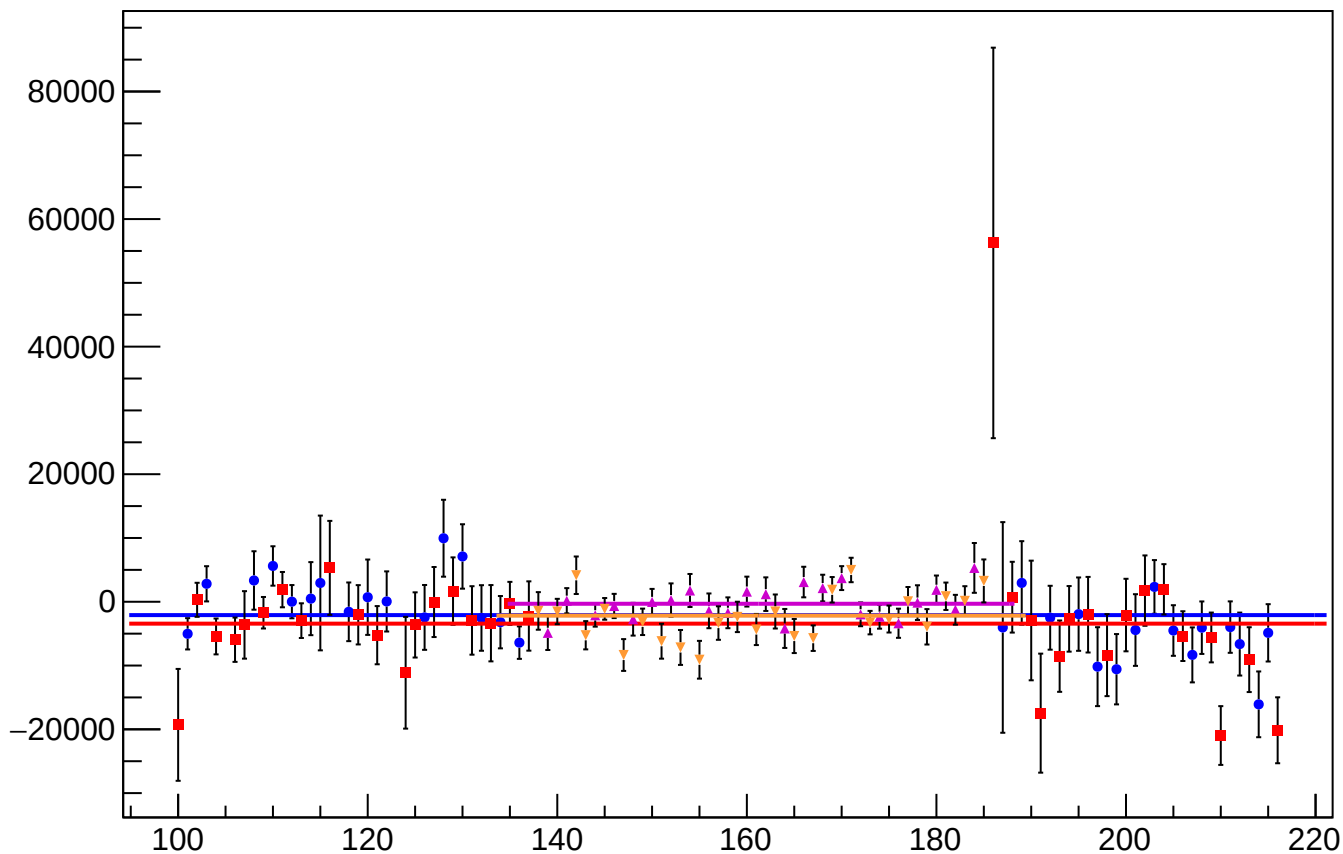
Left In: 262.616+/-0.044  $\chi^2/\text{NDF}$ : 670646.4/22

+ sign 268.509+/-0.031  $\chi^2/\text{NDF}$ : 2429612.0/55

All: 268.644+/-0.022  $\chi^2/\text{NDF}$ : 5747867.7/113

- sign 268.783+/-0.032  $\chi^2/\text{NDF}$ : 3318217.6/57

# asym\_sam4\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-2091.604 \pm 761.519$   $\chi^2/\text{NDF}: 41.5/30$

Left Out:  $-2171.811 \pm 461.649$   $\chi^2/\text{NDF}: 55.5/24$

Right Out:  $-3432.586 \pm 743.814$   $\chi^2/\text{NDF}: 52.9/34$

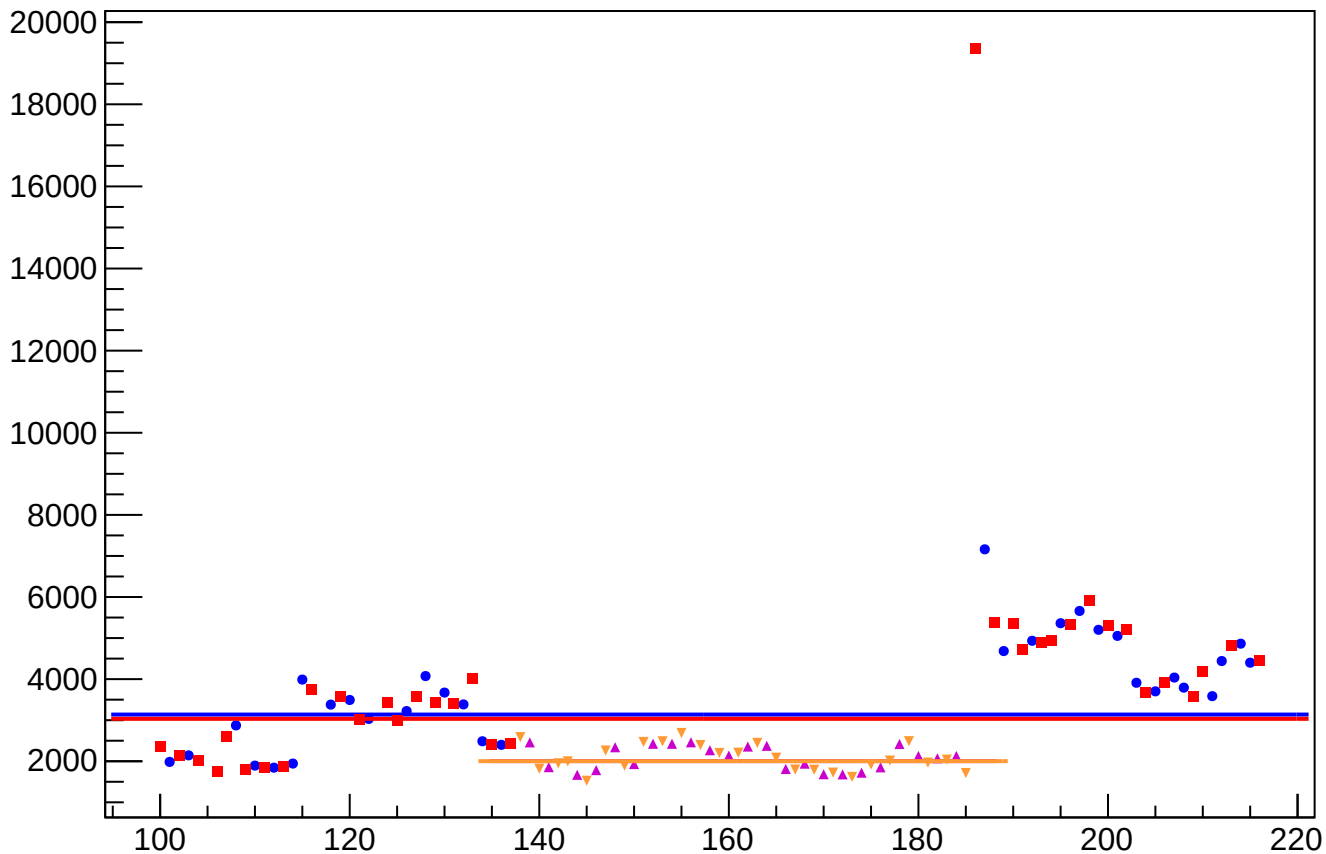
Left In:  $-313.745 \pm 474.086$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $-2150.256 \pm 394.773$   $\chi^2/\text{NDF}: 97.0/55$

All:  $-1688.395 \pm 280.902$   $\chi^2/\text{NDF}: 188.8/113$

- sign  $-1214.731 \pm 399.785$   $\chi^2/\text{NDF}: 89.0/57$

# asym\_sam4\_eigen\_cor\_correction\_rms vs Slug



Right In: 3137.186 $\pm$ 0.538  $\chi^2$ /NDF: 4356878.7/30

Left Out: 2002.229 $\pm$ 0.326  $\chi^2$ /NDF: 892706.8/24

Right Out: 3033.071 $\pm$ 0.526  $\chi^2$ /NDF: 5925655.2/34

Left In: 2004.244 $\pm$ 0.335  $\chi^2$ /NDF: 704920.5/22

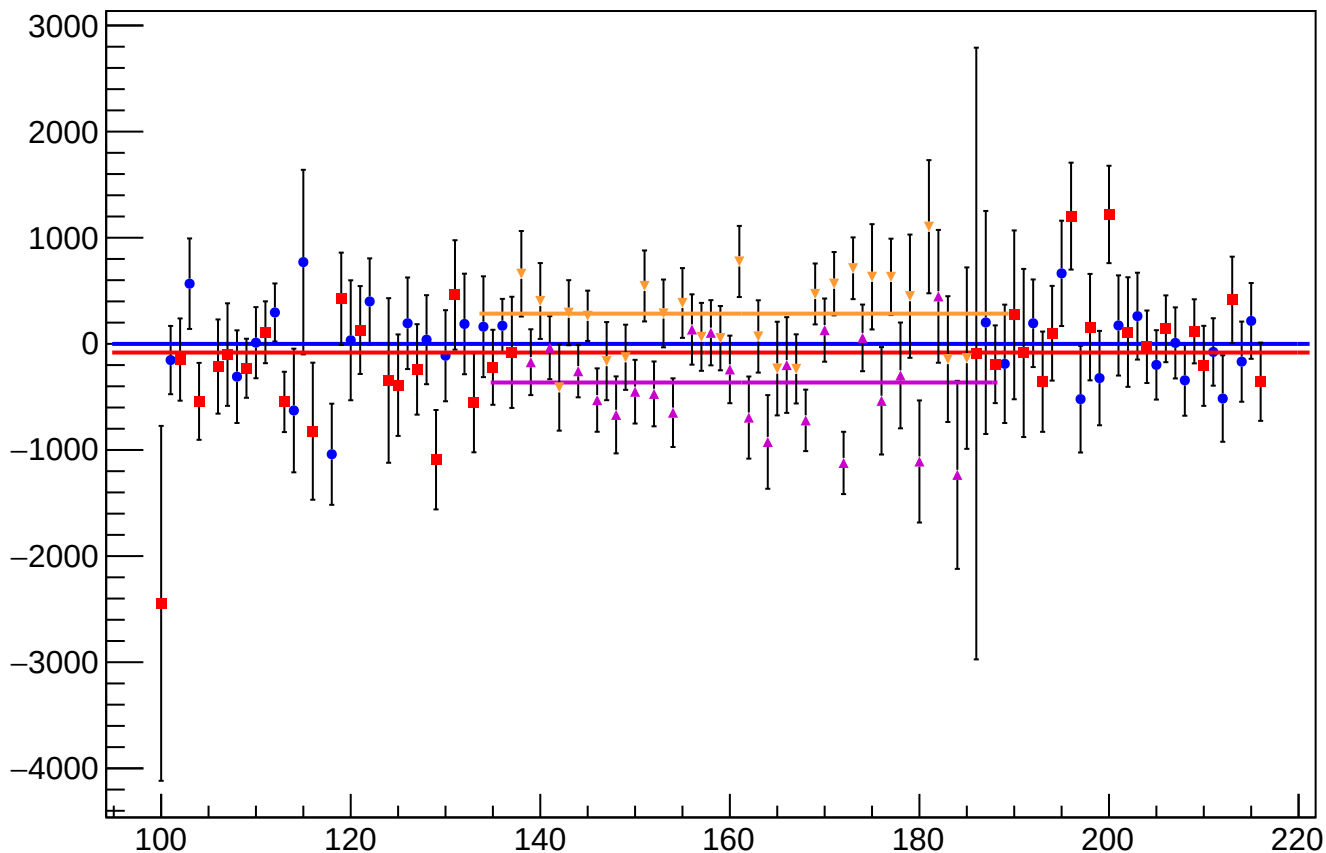
+ sign 2307.238 $\pm$ 0.279  $\chi^2$ /NDF: 8498204.7/55

All: 2304.384 $\pm$ 0.199  $\chi^2$ /NDF: 17849972.6/100

- sign 2301.457 $\pm$ 0.283  $\chi^2$ /NDF: 9351556.1/57



# dit\_asym\_sam4\_mean vs Slug



Right In:  $-0.428 \pm 71.960$   $\chi^2/\text{NDF}$ : 20.3/30

Left Out:  $284.913 \pm 70.036$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-81.844 \pm 71.180$   $\chi^2/\text{NDF}$ : 36.5/34

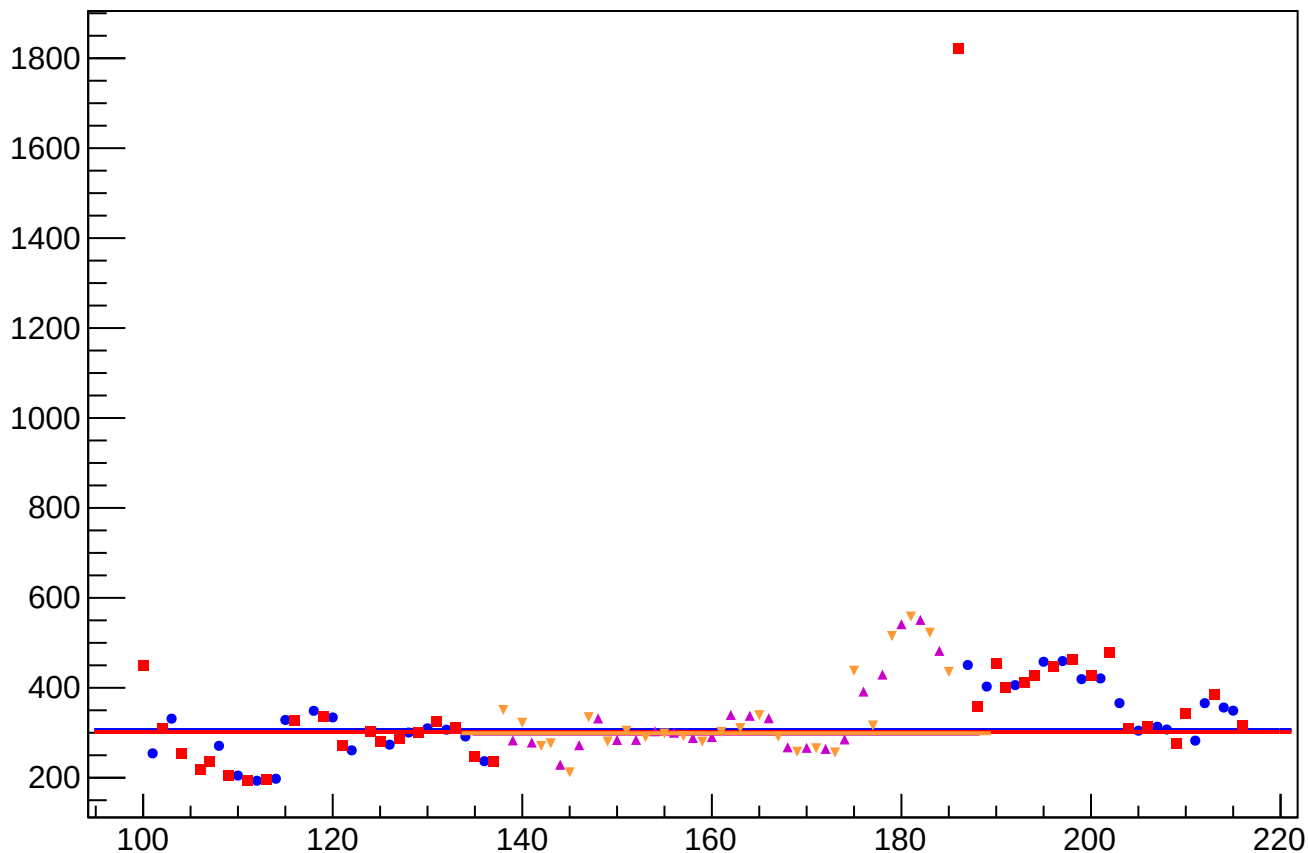
Left In:  $-364.163 \pm 71.714$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $146.108 \pm 50.190$   $\chi^2/\text{NDF}$ : 51.2/55

All:  $-36.715 \pm 35.605$   $\chi^2/\text{NDF}$ : 150.4/113

- sign  $-221.950 \pm 50.520$   $\chi^2/\text{NDF}$ : 72.5/57

# dit\_asym\_sam4\_rms vs Slug



Right In: 306.111 $\pm$ 0.051  $\chi^2$ /NDF: 1872321.4/30

Left Out: 298.938 $\pm$ 0.050  $\chi^2$ /NDF: 1613077.3/24

Right Out: 301.799 $\pm$ 0.050  $\chi^2$ /NDF: 2937965.7/34

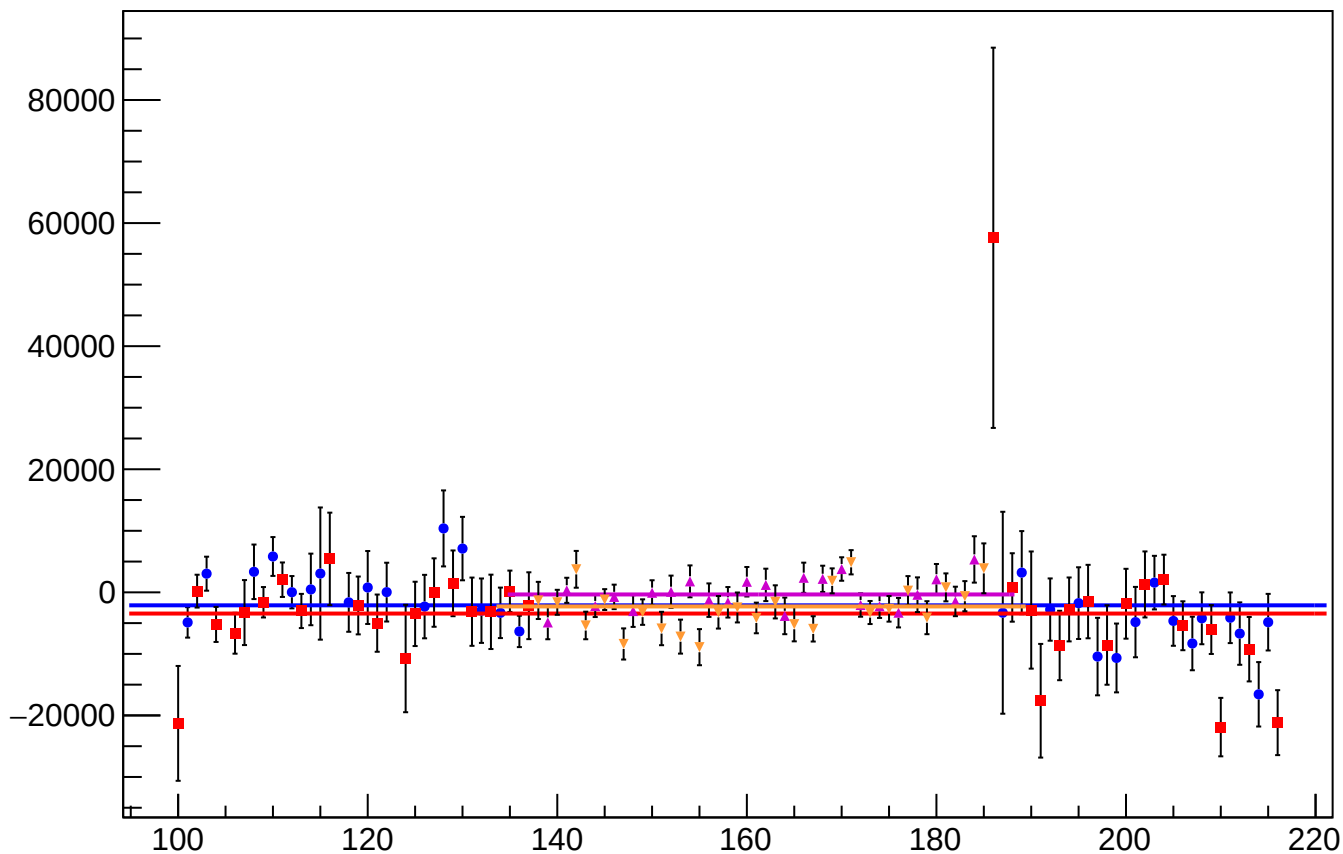
Left In: 297.885 $\pm$ 0.051  $\chi^2$ /NDF: 1319062.0/22

+ sign 302.427 $\pm$ 0.035  $\chi^2$ /NDF: 3495603.5/55

All: 301.150 $\pm$ 0.025  $\chi^2$ /NDF: 7758237.5/113

- sign 299.857 $\pm$ 0.036  $\chi^2$ /NDF: 4260028.2/57

# asym\_sam4\_dit\_correction\_mean vs Slug



Right In: -2109.436 $\pm$ 770.824  $\chi^2/\text{NDF}$ : 41.7/30

Left Out: -2290.992 $\pm$ 470.518  $\chi^2/\text{NDF}$ : 51.7/24

Right Out: -3446.492 $\pm$ 749.815  $\chi^2/\text{NDF}$ : 55.4/34

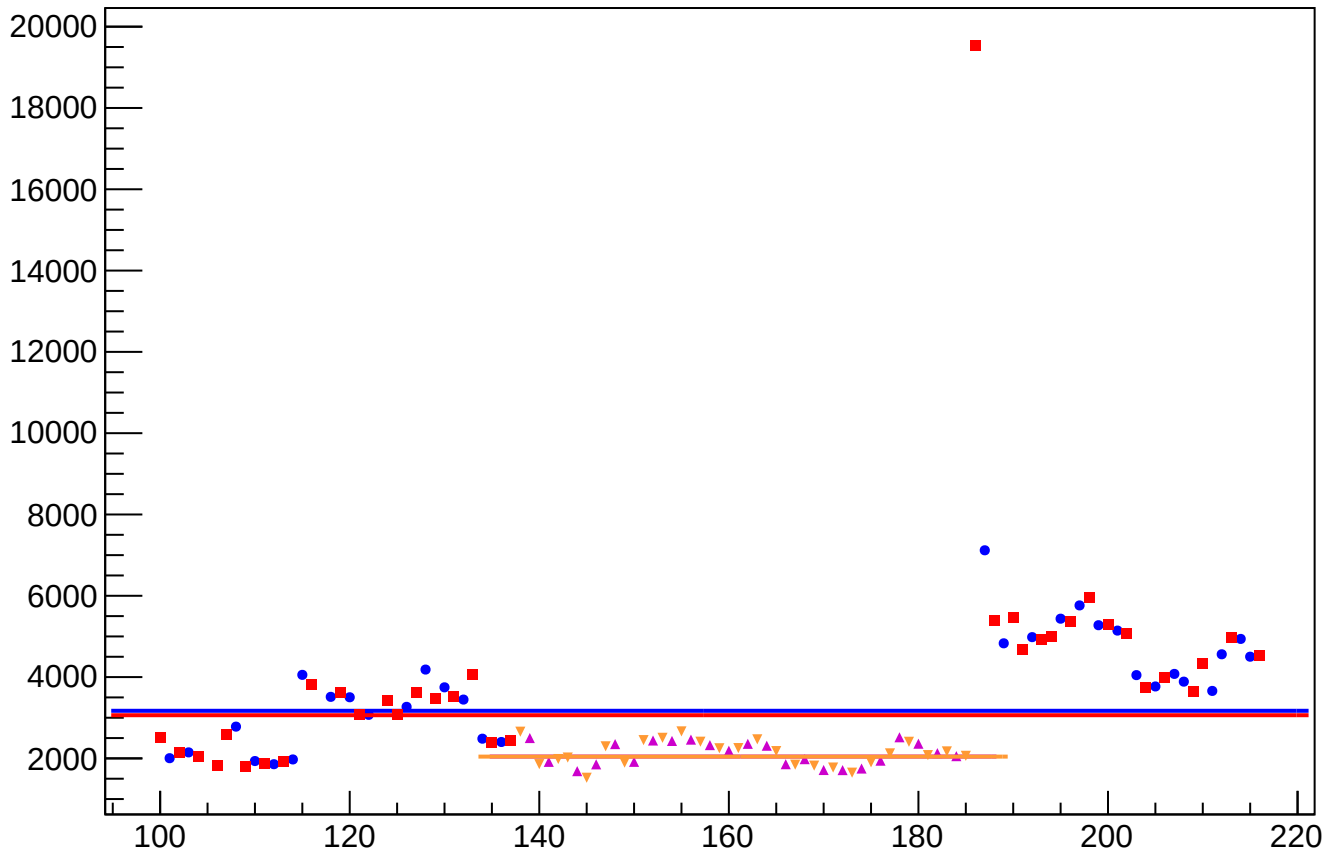
Left In: -342.609 $\pm$ 483.605  $\chi^2/\text{NDF}$ : 22.8/22

+ sign -2241.707 $\pm$ 401.610  $\chi^2/\text{NDF}$ : 93.4/55

All: -1753.943 $\pm$ 285.662  $\chi^2/\text{NDF}$ : 186.7/113

- sign -1254.454 $\pm$ 406.408  $\chi^2/\text{NDF}$ : 90.4/57

# asym\_sam4\_dit\_correction\_rms vs Slug



Right In: 3171.001 $\pm$ 0.545  $\chi^2$ /NDF: 4479864.0/30

Left Out: 2043.746 $\pm$ 0.333  $\chi^2$ /NDF:853391.4/24

+ sign 2349.745 $\pm$ 0.284  $\chi^2$ /NDF: 8449423.5/55

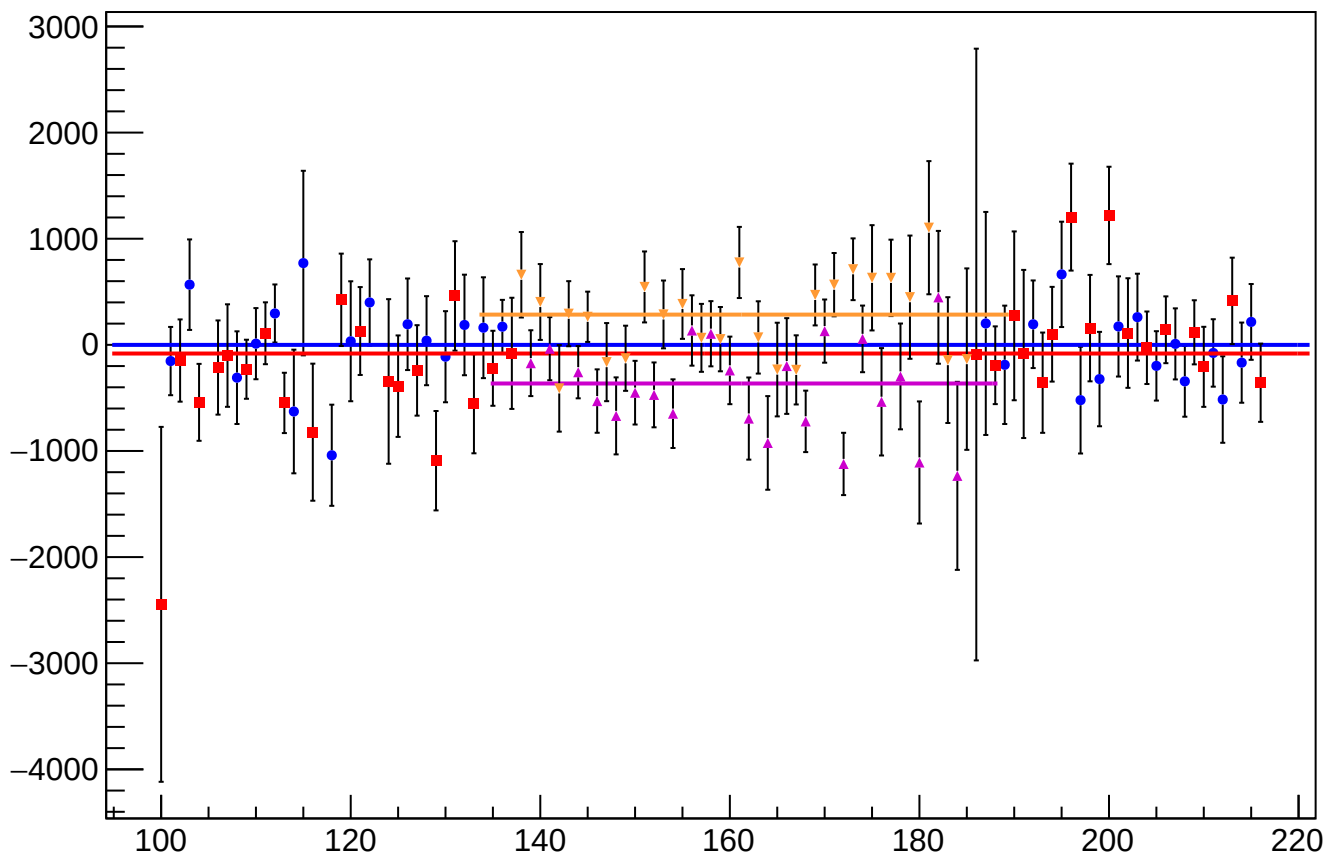
Right Out: 3062.199 $\pm$ 0.530  $\chi^2$ /NDF: 5938129.2/34

All: 2346.884 $\pm$ 0.202  $\chi^2$ /NDF: 17676483.9/100

Left In: 2045.178 $\pm$ 0.342  $\chi^2$ /NDF:690219.7/22

- sign 2343.954 $\pm$ 0.287  $\chi^2$ /NDF: 9226854.9/57

# eigen\_dit\_asym\_sam4\_mean vs Slug



Right In:  $-0.422 \pm 71.960$   $\chi^2/\text{NDF}$ : 20.3/30

Left Out:  $284.918 \pm 70.036$   $\chi^2/\text{NDF}$ : 22.8/24

Right Out:  $-81.840 \pm 71.180$   $\chi^2/\text{NDF}$ : 36.5/34

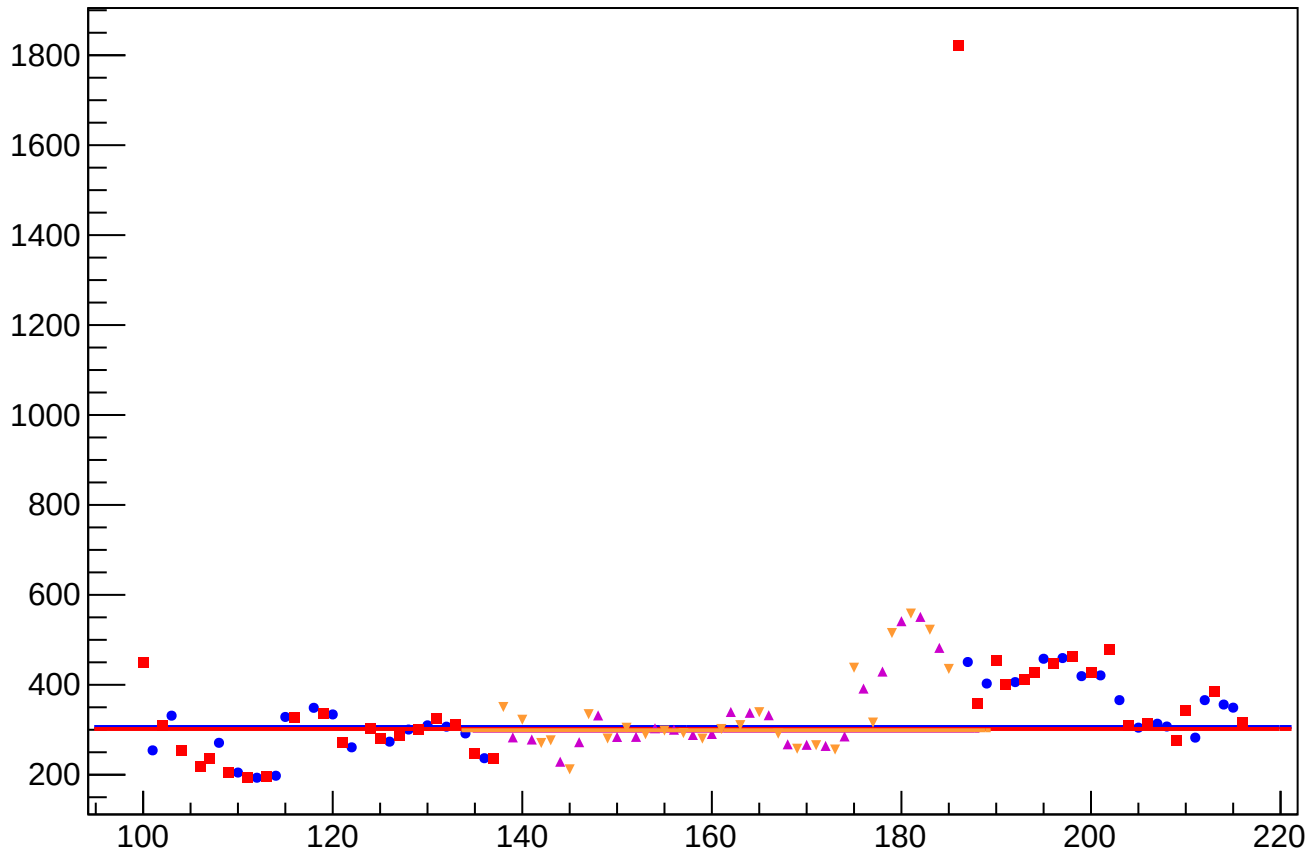
Left In:  $-364.164 \pm 71.714$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $146.113 \pm 50.190$   $\chi^2/\text{NDF}$ : 51.2/55

All:  $-36.711 \pm 35.605$   $\chi^2/\text{NDF}$ : 150.4/113

- sign  $-221.948 \pm 50.520$   $\chi^2/\text{NDF}$ : 72.5/57

# eigen\_dit\_asym\_sam4\_rms vs Slug



Right In: 306.111 $\pm$ 0.051  $\chi^2$ /NDF: 1872301.2/30

Left Out: 298.938 $\pm$ 0.050  $\chi^2$ /NDF:1613074.5/24

Right Out: 301.799 $\pm$ 0.050  $\chi^2$ /NDF: 2937967.4/34

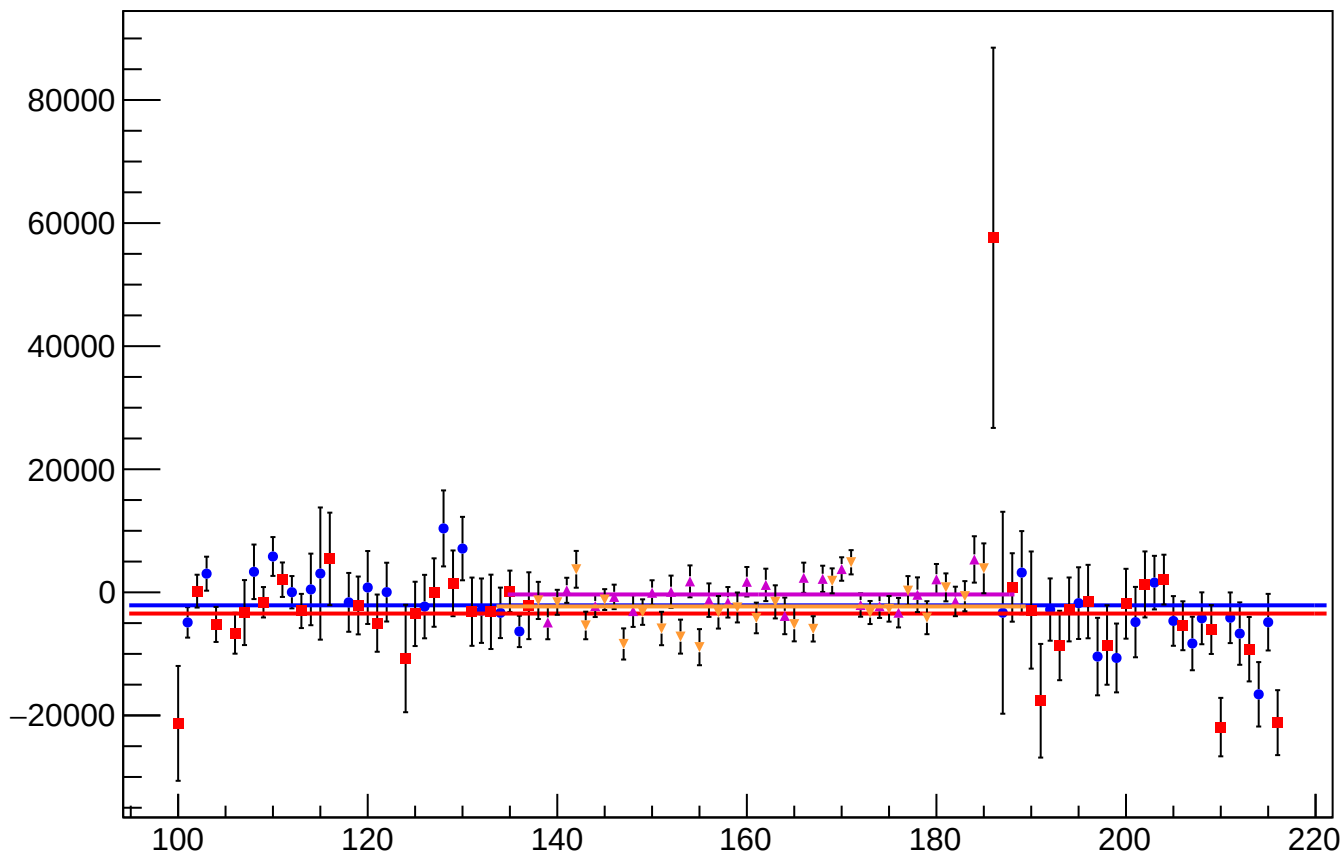
Left In: 297.885 $\pm$ 0.051  $\chi^2$ /NDF:1319043.7/22

+ sign 302.427 $\pm$ 0.035  $\chi^2$ /NDF: 3495579.3/55

All: 301.150 $\pm$ 0.025  $\chi^2$ /NDF: 7758196.3/113

- sign 299.857 $\pm$ 0.036  $\chi^2$ /NDF: 4260011.2/57

# asym\_sam4\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-2109.433 \pm 770.824$   $\chi^2/\text{NDF}: 41.7/30$

Left Out:  $-2290.986 \pm 470.517$   $\chi^2/\text{NDF}: 51.7/24$

Right Out:  $-3446.487 \pm 749.815$   $\chi^2/\text{NDF}: 55.4/34$

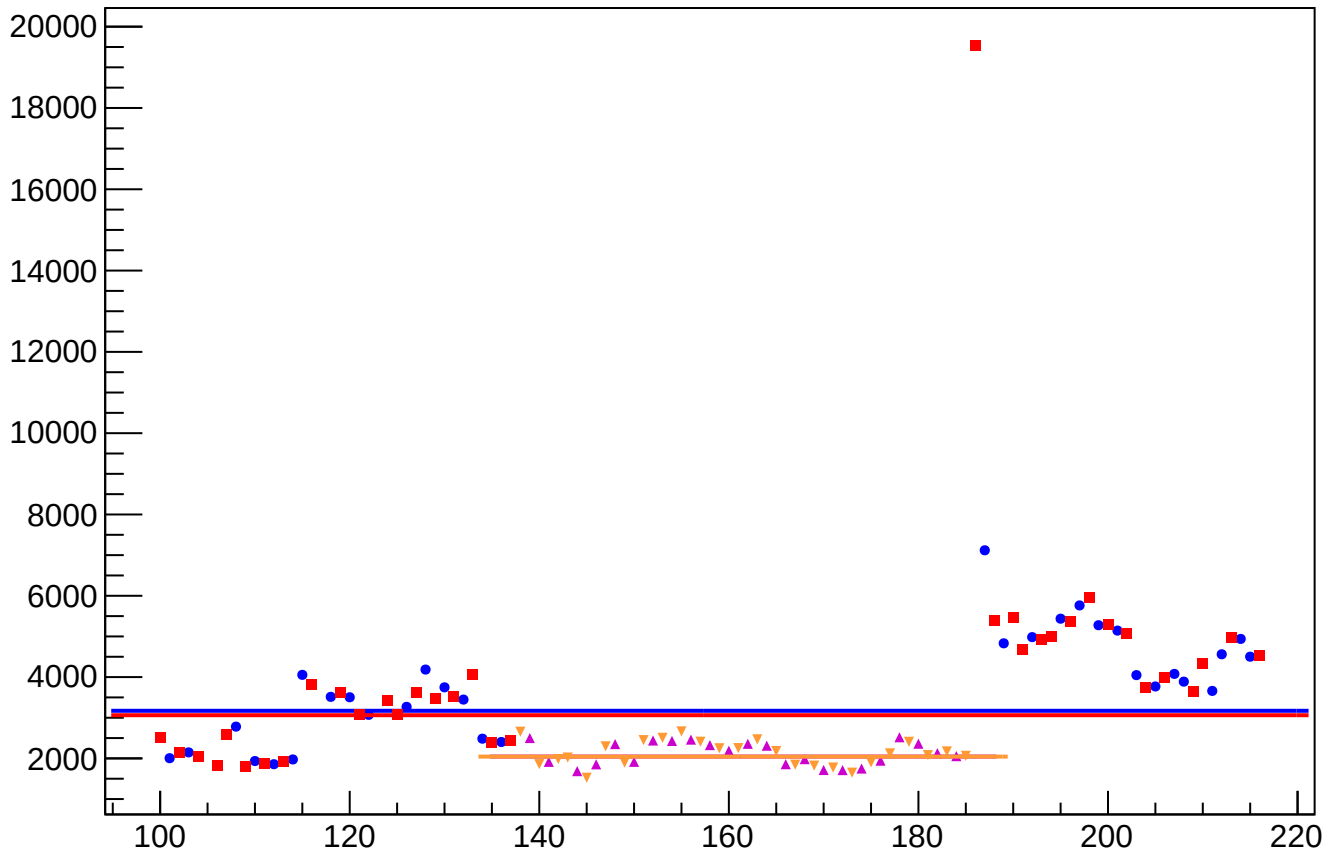
Left In:  $-342.606 \pm 483.604$   $\chi^2/\text{NDF}: 22.8/22$

+ sign  $-2241.703 \pm 401.609$   $\chi^2/\text{NDF}: 93.4/55$

All:  $-1753.939 \pm 285.662$   $\chi^2/\text{NDF}: 186.7/113$

- sign  $-1254.450 \pm 406.407$   $\chi^2/\text{NDF}: 90.4/57$

# asym\_sam4\_eigen\_dit\_correction\_rms vs Slug



Right In: 3170.999 $\pm$ 0.545  $\chi^2$ /NDF: 4479861.0/30

Left Out: 2043.742 $\pm$ 0.333  $\chi^2$ /NDF: 853393.7/24

Right Out: 3062.197 $\pm$ 0.530  $\chi^2$ /NDF: 5938125.3/34

Left In: 2045.175 $\pm$ 0.342  $\chi^2$ /NDF: 690218.2/22

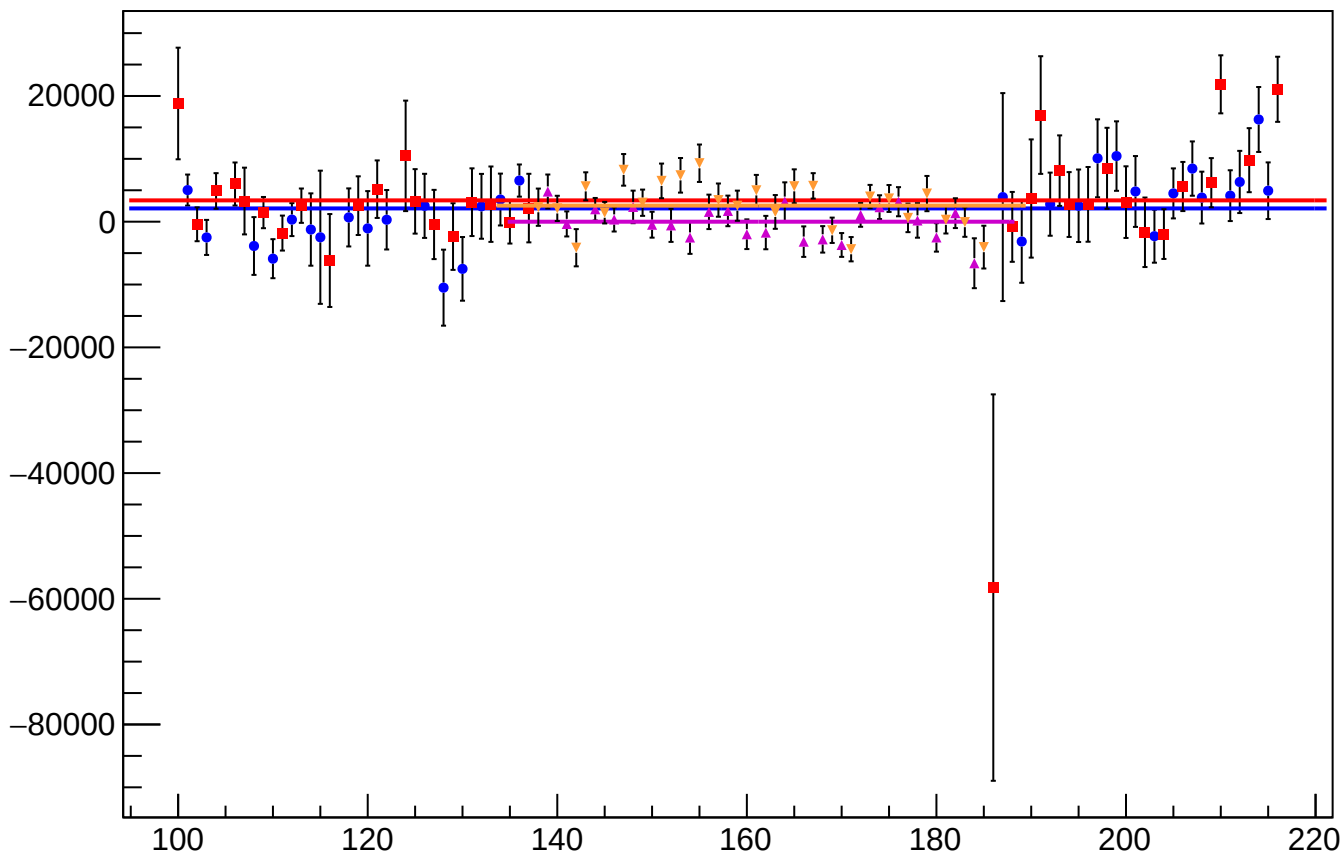
+ sign 2349.741 $\pm$ 0.284  $\chi^2$ /NDF: 8449433.8/55

All: 2346.881 $\pm$ 0.202  $\chi^2$ /NDF: 17676497.1/100

- sign 2343.951 $\pm$ 0.287  $\chi^2$ /NDF: 9226857.9/57



# asym\_sam4\_mean vs Slug



Right In:  $2109.529 \pm 764.991$   $\chi^2/\text{NDF}: 42.5/30$

Left Out:  $2559.048 \pm 465.944$   $\chi^2/\text{NDF}: 52.7/24$

Right Out:  $3391.317 \pm 746.626$   $\chi^2/\text{NDF}: 56.1/34$

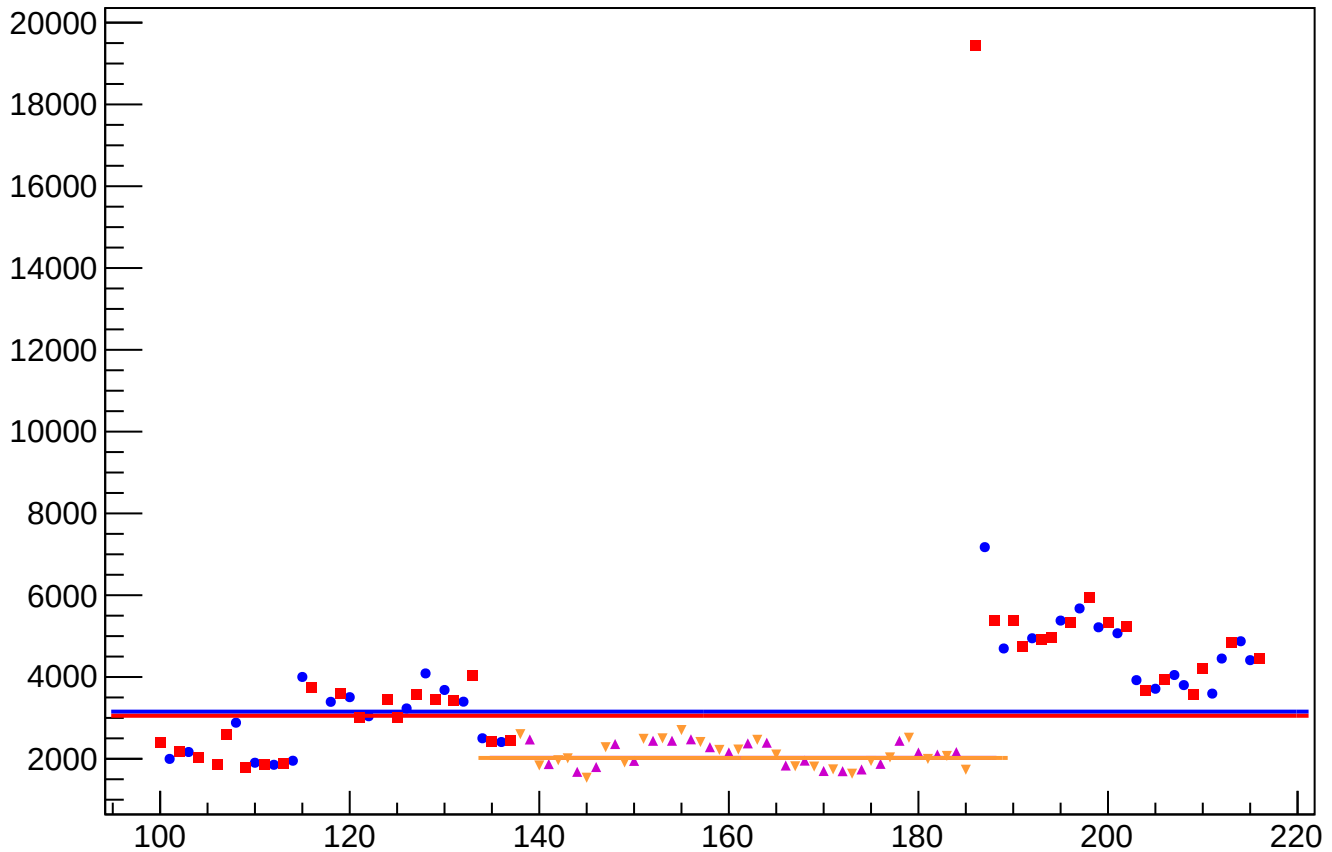
Left In:  $-3.474 \pm 478.514$   $\chi^2/\text{NDF}: 24.7/22$

+ sign  $2437.410 \pm 397.940$   $\chi^2/\text{NDF}: 95.5/55$

All:  $1720.128 \pm 283.114$   $\chi^2/\text{NDF}: 197.5/113$

- sign  $984.952 \pm 402.873$   $\chi^2/\text{NDF}: 95.5/57$

# asym\_sam4\_rms vs Slug



Right In: 3153.277+/-0.541  $\chi^2/\text{NDF}$ : 4319434.3/30

Left Out: 2021.266+/-0.329  $\chi^2/\text{NDF}$ : 881370.9/24

Right Out: 3052.221+/-0.528  $\chi^2/\text{NDF}$ : 5848135.4/34

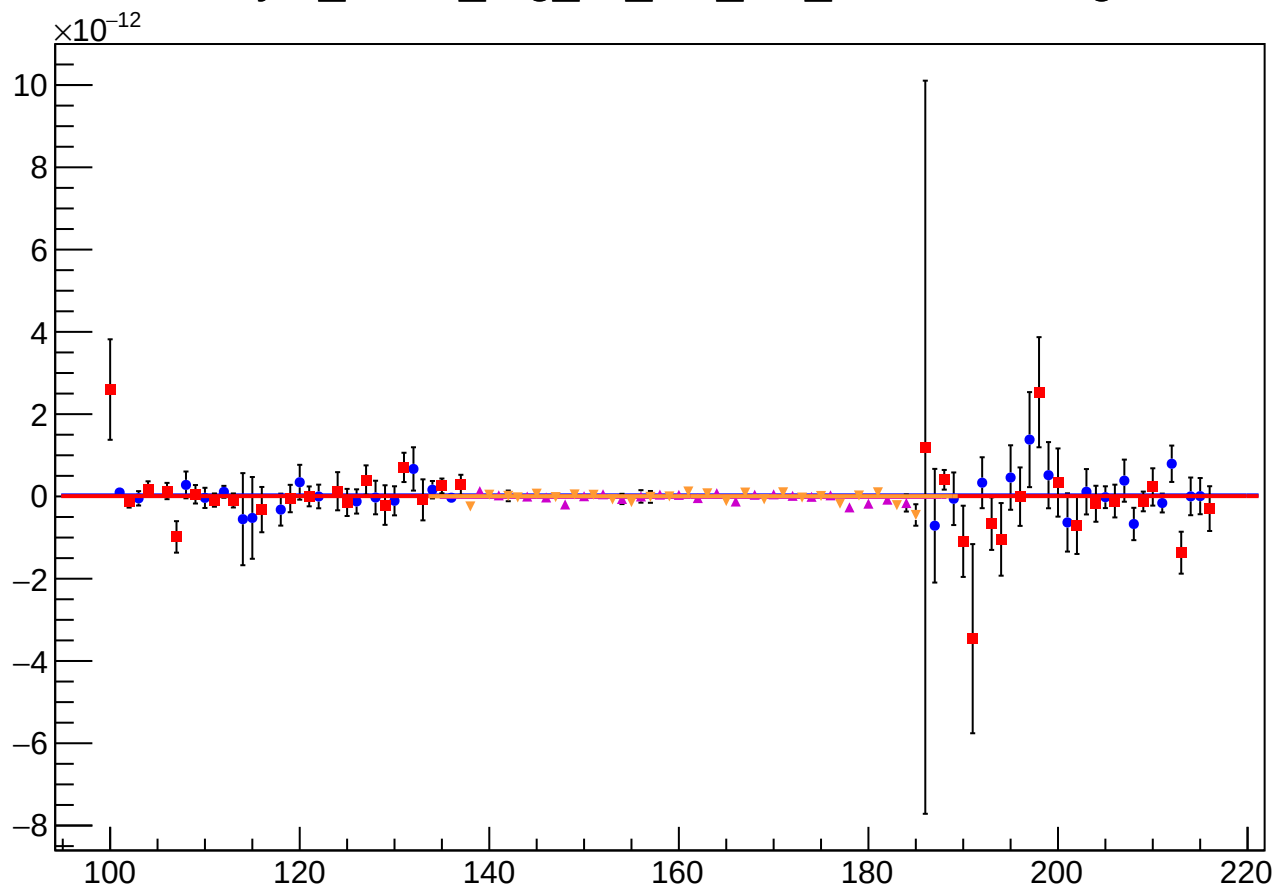
Left In: 2023.284+/-0.338  $\chi^2/\text{NDF}$ : 696055.4/22

+ sign 2327.584+/-0.281  $\chi^2/\text{NDF}$ : 8395179.0/55

All: 2325.256+/-0.200  $\chi^2/\text{NDF}$ : 17631977.4/100

- sign 2322.869+/-0.285  $\chi^2/\text{NDF}$ : 9236659.8/57

# asym\_sam4\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.6/34

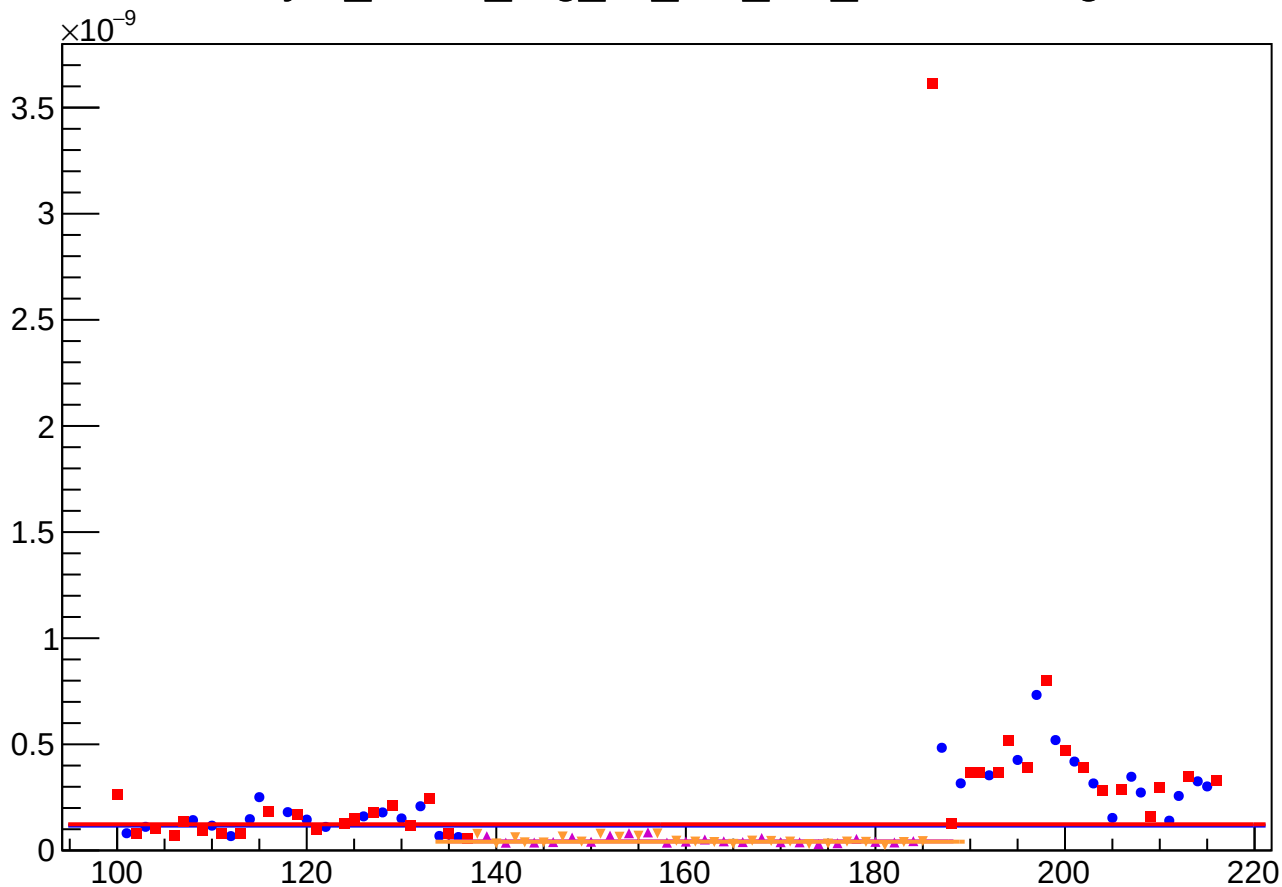
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 20.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.2/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 116.4/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.6/57

# asym\_sam4\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5815607.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1235677.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5554964.9/34

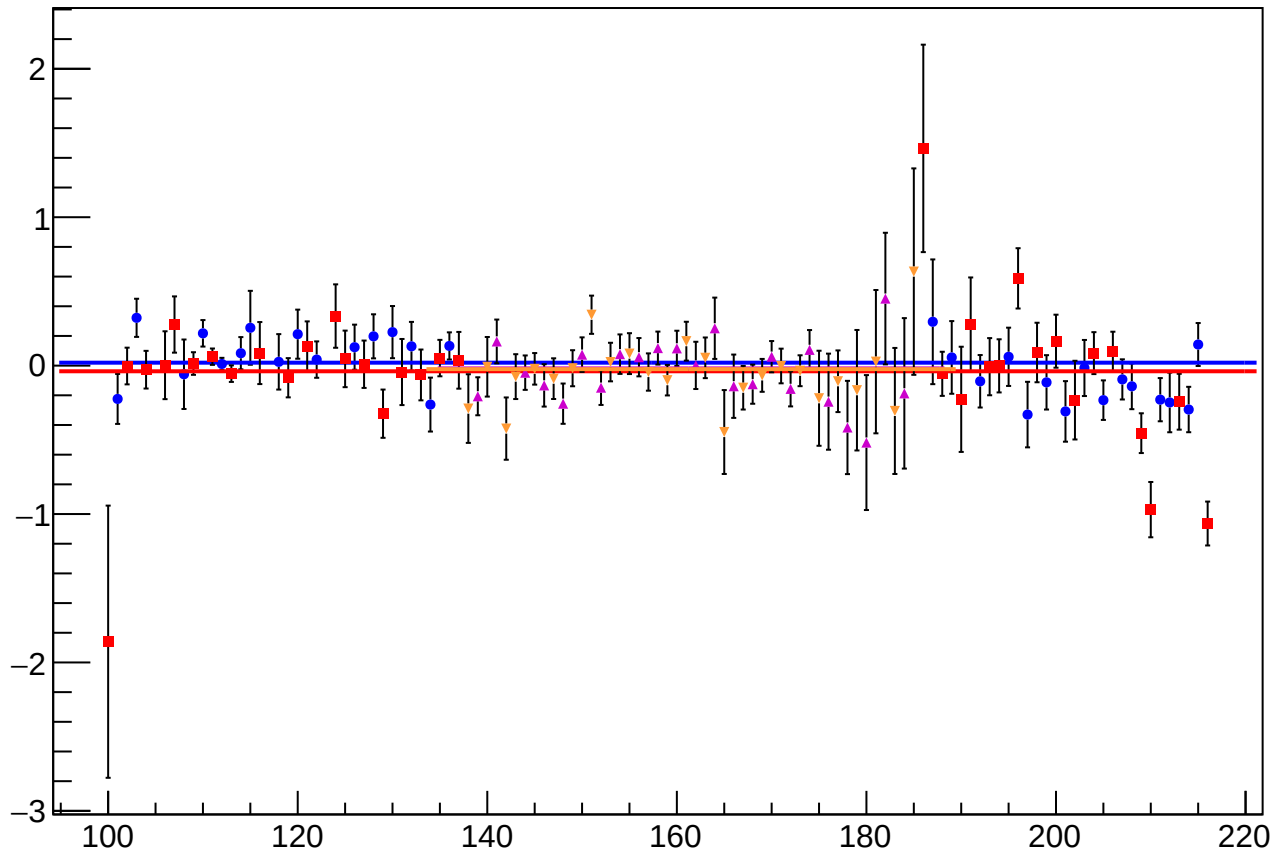
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 931395.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11559478.4/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 22598135.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11017248.3/57

# asym\_sam4\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.023$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-0.024 \pm 0.030$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $-0.038 \pm 0.023$   $\chi^2/\text{NDF}$ : 122.6/34

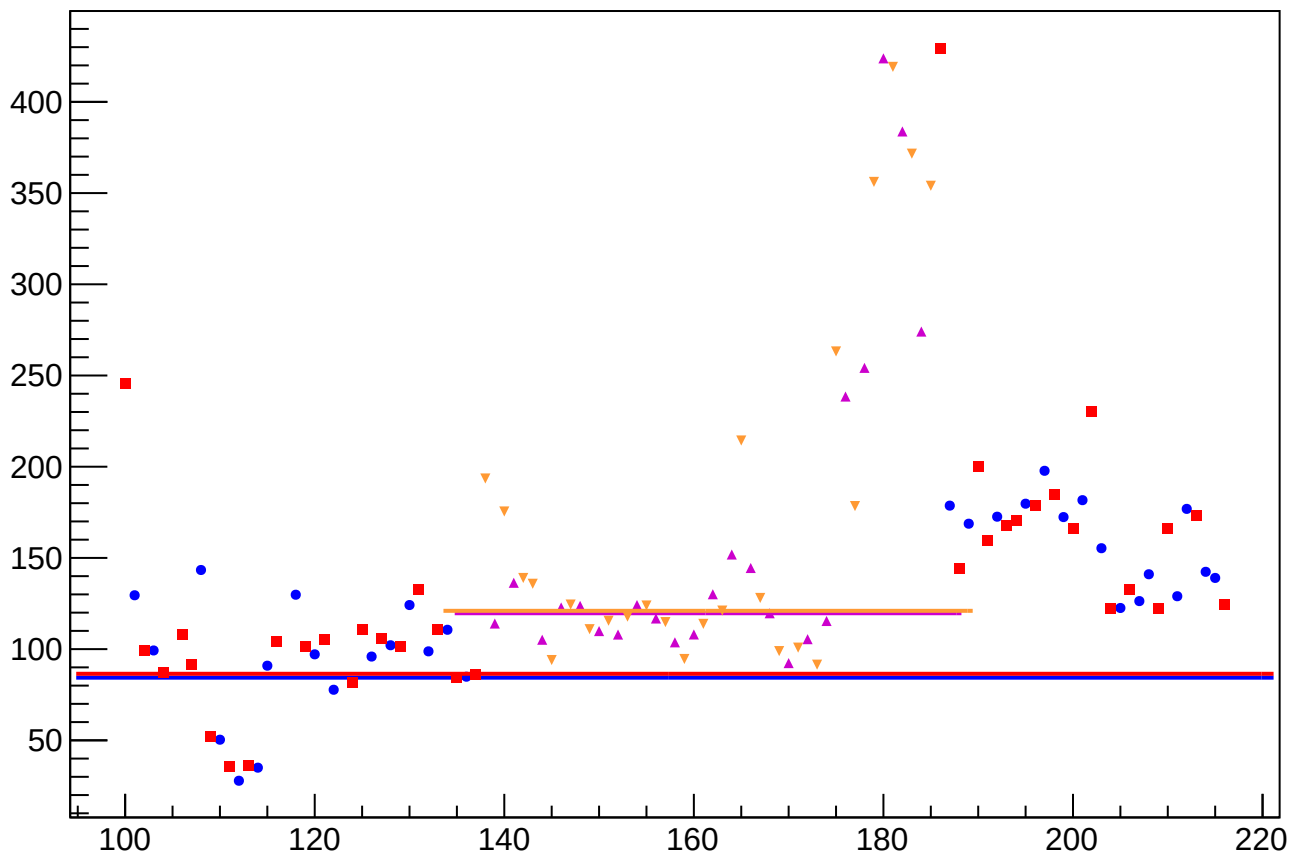
Left In:  $-0.019 \pm 0.030$   $\chi^2/\text{NDF}$ : 23.0/22

+ sign  $0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 68.2/55

All:  $-0.014 \pm 0.013$   $\chi^2/\text{NDF}$ : 215.8/113

- sign  $-0.031 \pm 0.018$   $\chi^2/\text{NDF}$ : 145.8/57

# asym\_sam4\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 84.358 $\pm$ 0.016  $\chi^2$ /NDF: 9959271.0/30

Left Out: 120.999 $\pm$ 0.021  $\chi^2$ /NDF: 4095266.9/24

Right Out: 86.484 $\pm$ 0.016  $\chi^2$ /NDF: 9320372.9/34

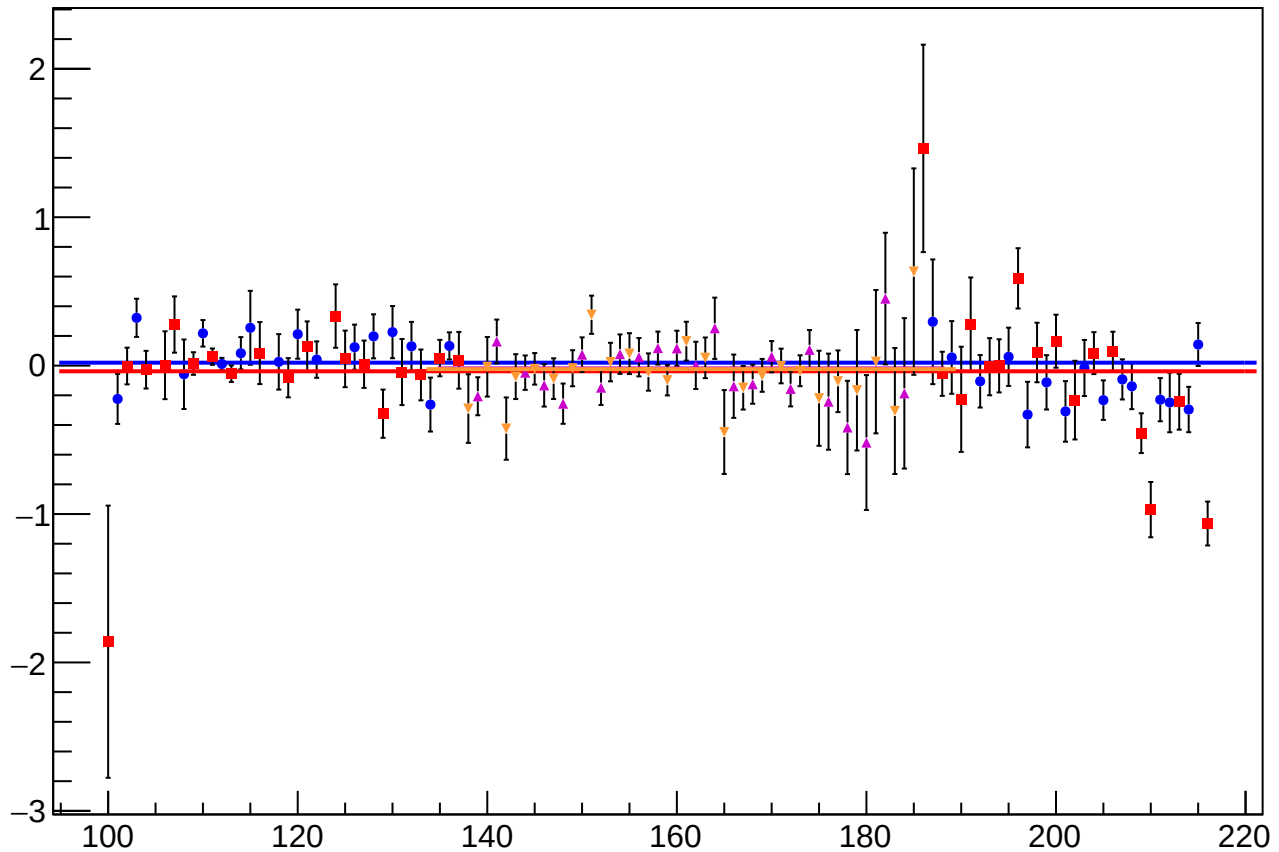
Left In: 119.679 $\pm$ 0.021  $\chi^2$ /NDF: 2838257.9/22

+ sign 98.077 $\pm$ 0.013  $\chi^2$ /NDF: 15933164.0/55

All: 98.404 $\pm$ 0.009  $\chi^2$ /NDF: 29615259.9/113

- sign 98.733 $\pm$ 0.013  $\chi^2$ /NDF: 13680813.5/57

# asym\_sam4\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.023$   $\chi^2/\text{NDF}: 44.7/30$

Left Out:  $-0.024 \pm 0.030$   $\chi^2/\text{NDF}: 22.2/24$

Right Out:  $-0.038 \pm 0.023$   $\chi^2/\text{NDF}: 122.6/34$

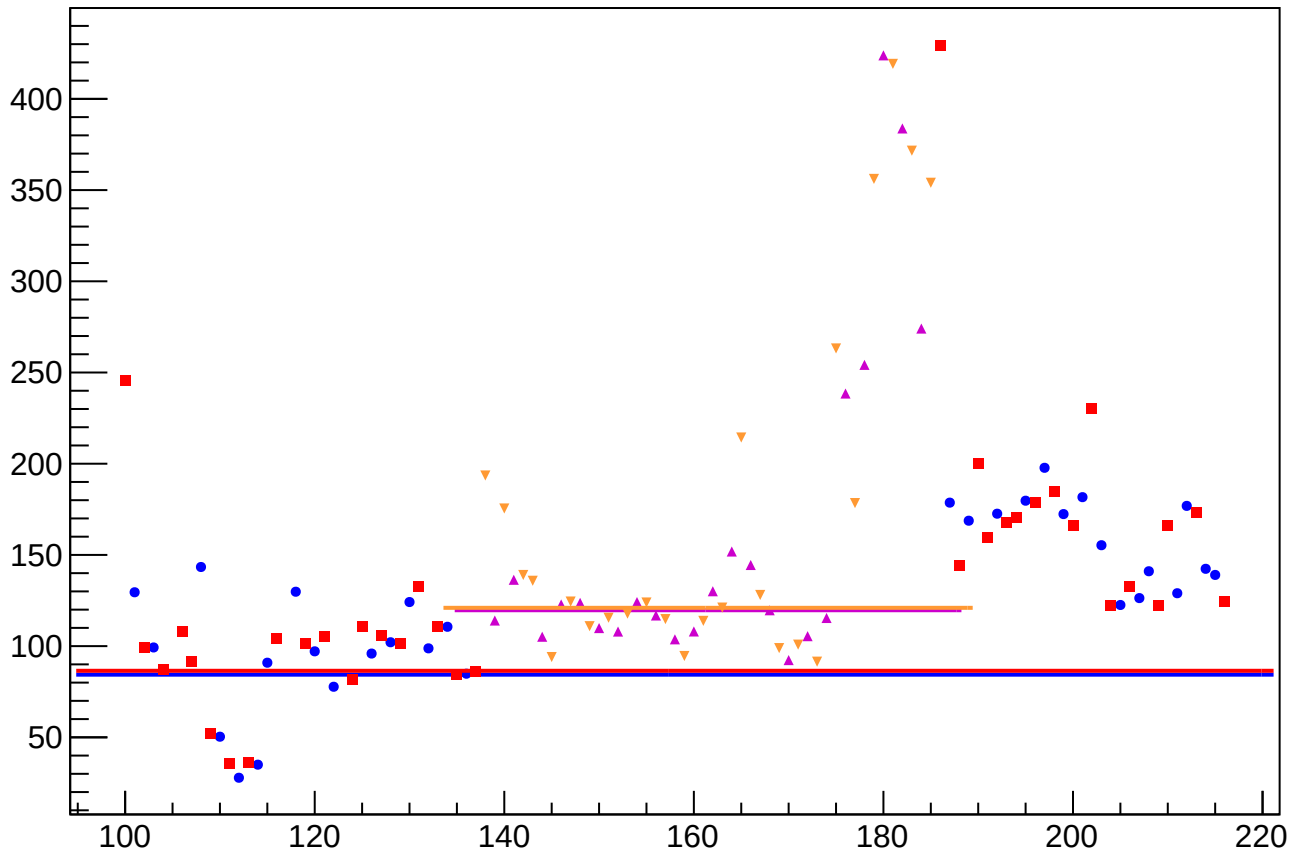
Left In:  $-0.019 \pm 0.030$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $0.004 \pm 0.018$   $\chi^2/\text{NDF}: 68.2/55$

All:  $-0.014 \pm 0.013$   $\chi^2/\text{NDF}: 215.8/113$

- sign  $-0.031 \pm 0.018$   $\chi^2/\text{NDF}: 145.8/57$

# asym\_sam4\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 84.358+/-0.016  $\chi^2/\text{NDF}$ : 9959271.0/30

Left Out: 120.999+/-0.021  $\chi^2/\text{NDF}$ : 4095266.9/24

Right Out: 86.484+/-0.016  $\chi^2/\text{NDF}$ : 9320372.9/34

Left In: 119.679+/-0.021  $\chi^2/\text{NDF}$ : 2838257.9/22

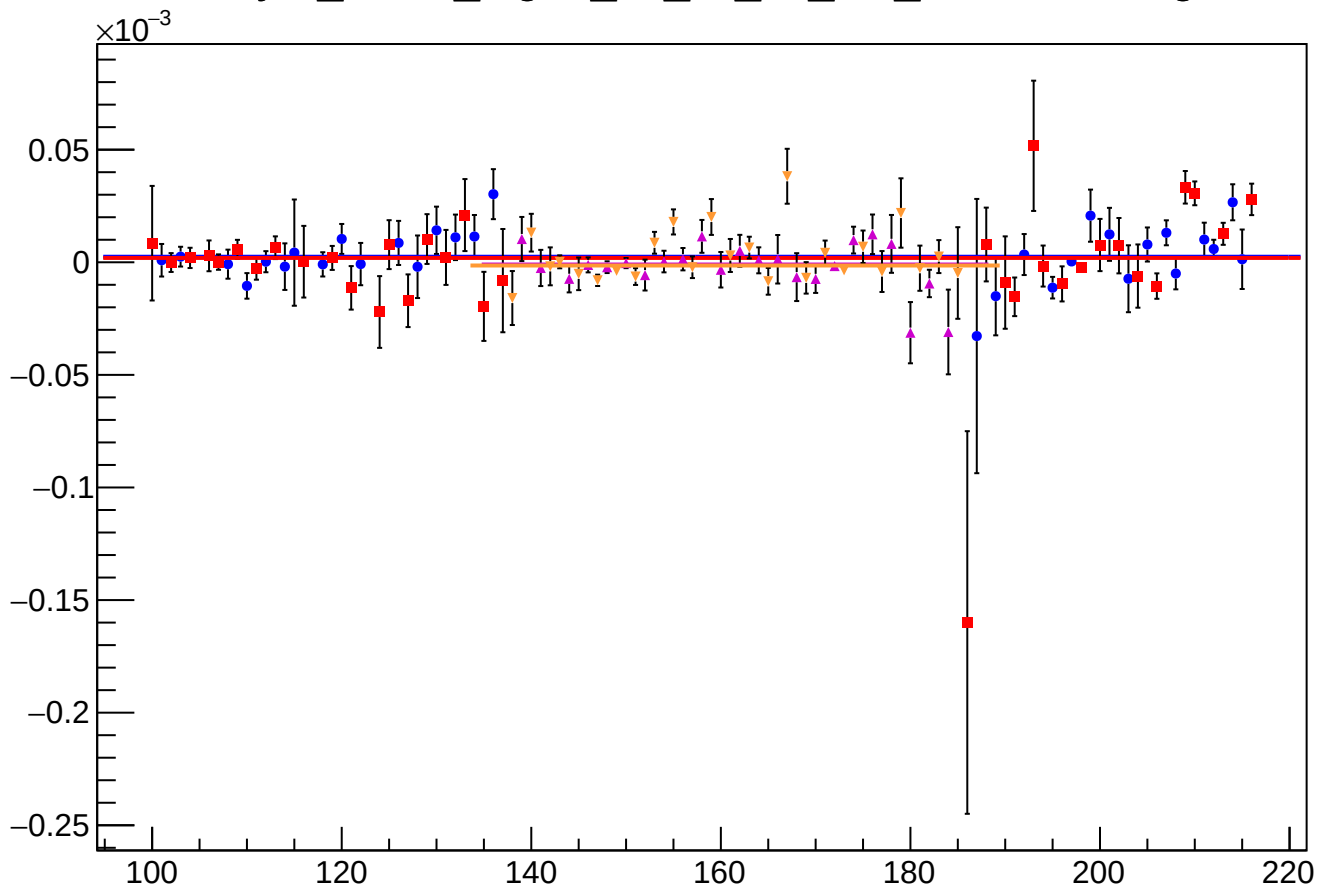
+ sign 98.077+/-0.013  $\chi^2/\text{NDF}$ : 15933164.0/55

All: 98.404+/-0.009  $\chi^2/\text{NDF}$ : 29615259.9/113

- sign 98.733+/-0.013  $\chi^2/\text{NDF}$ : 13680813.5/57



# asym\_sam4\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.5/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 106.6/34

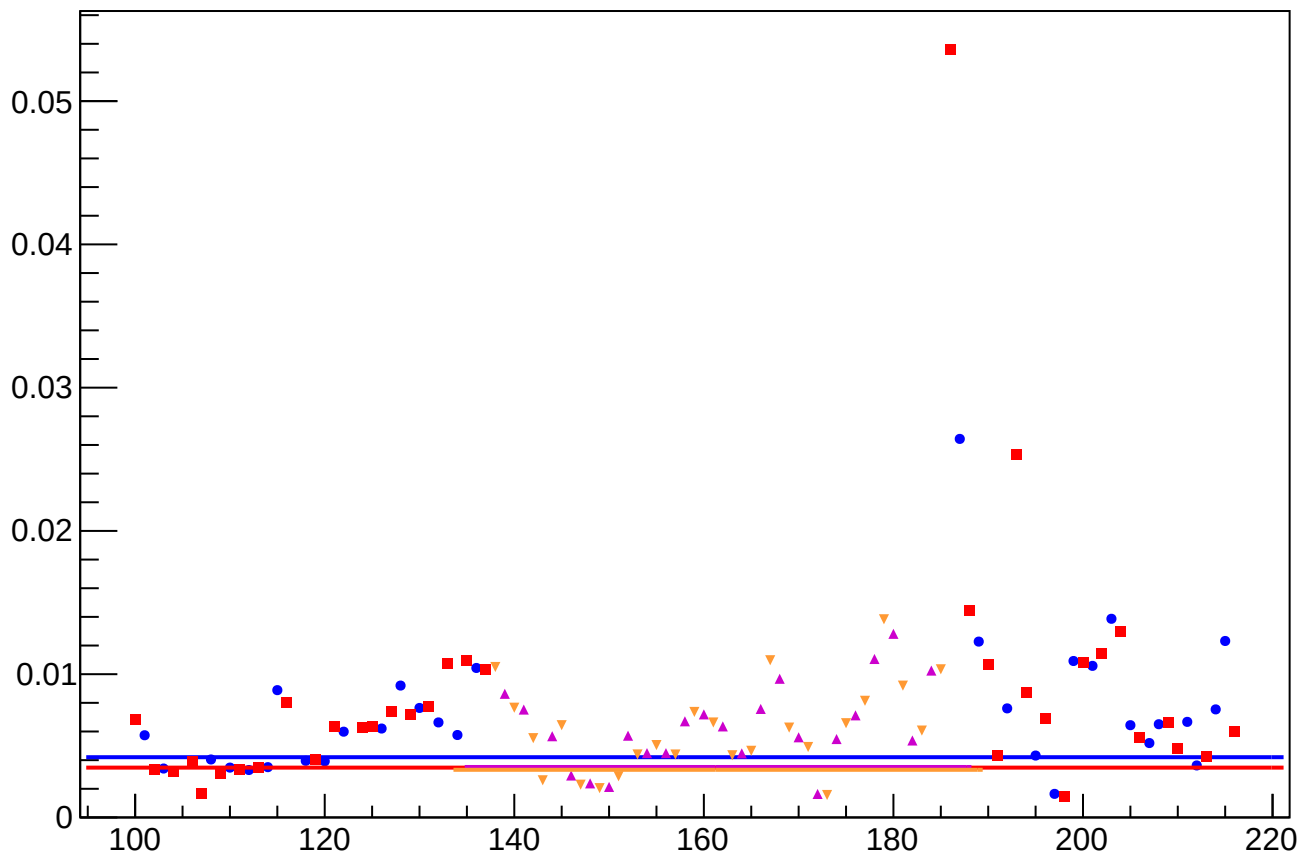
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 115.4/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 251.0/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 135.4/57

# asym\_sam4\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 9454718.3/30

Left Out:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 10486084.0/24

Right Out:  $0.003 \pm 0.000$   $\chi^2/\text{NDF}$ : 13566427.4/34

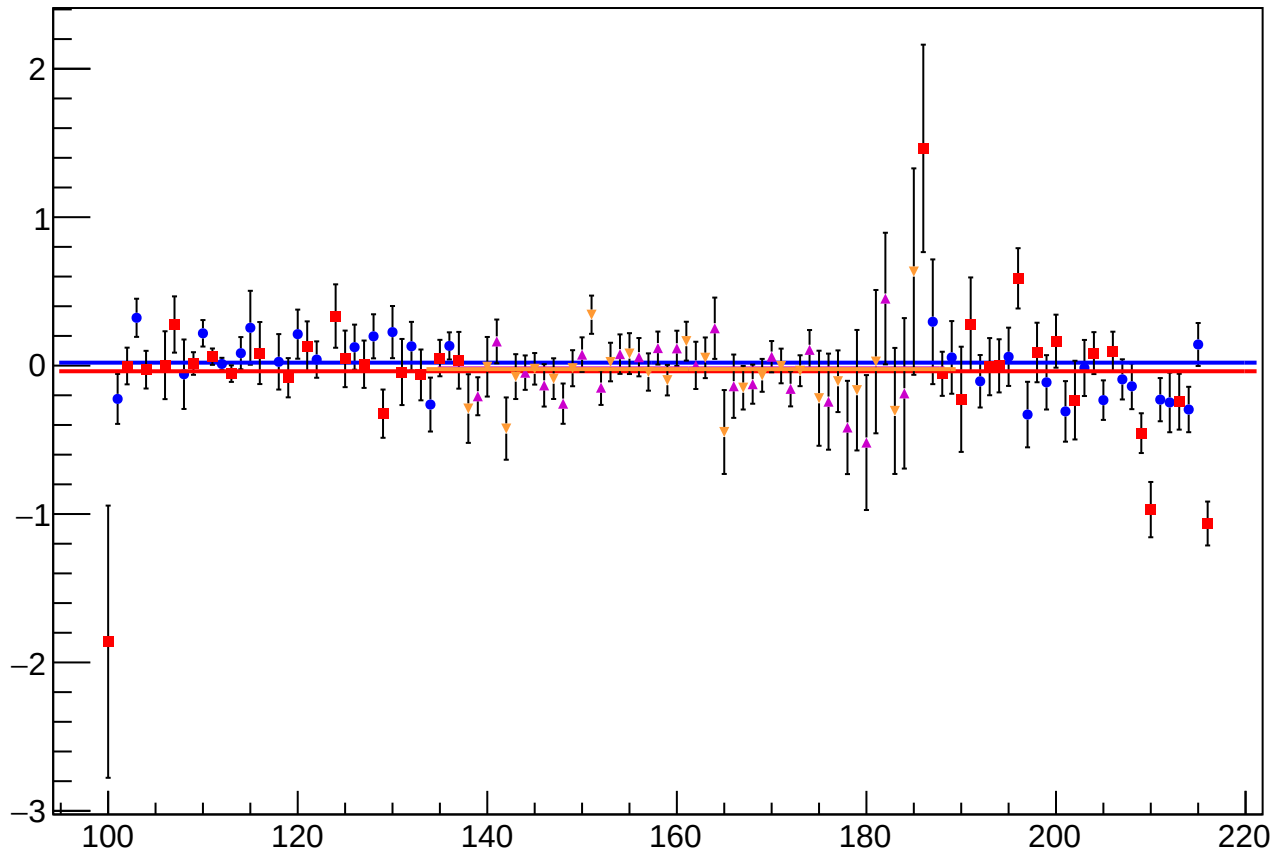
Left In:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 9426441.5/22

+ sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 20667732.3/55

All:  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 43716551.9/113

- sign  $0.004 \pm 0.000$   $\chi^2/\text{NDF}$ : 22994899.6/57

# asym\_sam4\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.023$   $\chi^2/\text{NDF}: 44.7/30$

Left Out:  $-0.024 \pm 0.030$   $\chi^2/\text{NDF}: 22.2/24$

Right Out:  $-0.038 \pm 0.023$   $\chi^2/\text{NDF}: 122.6/34$

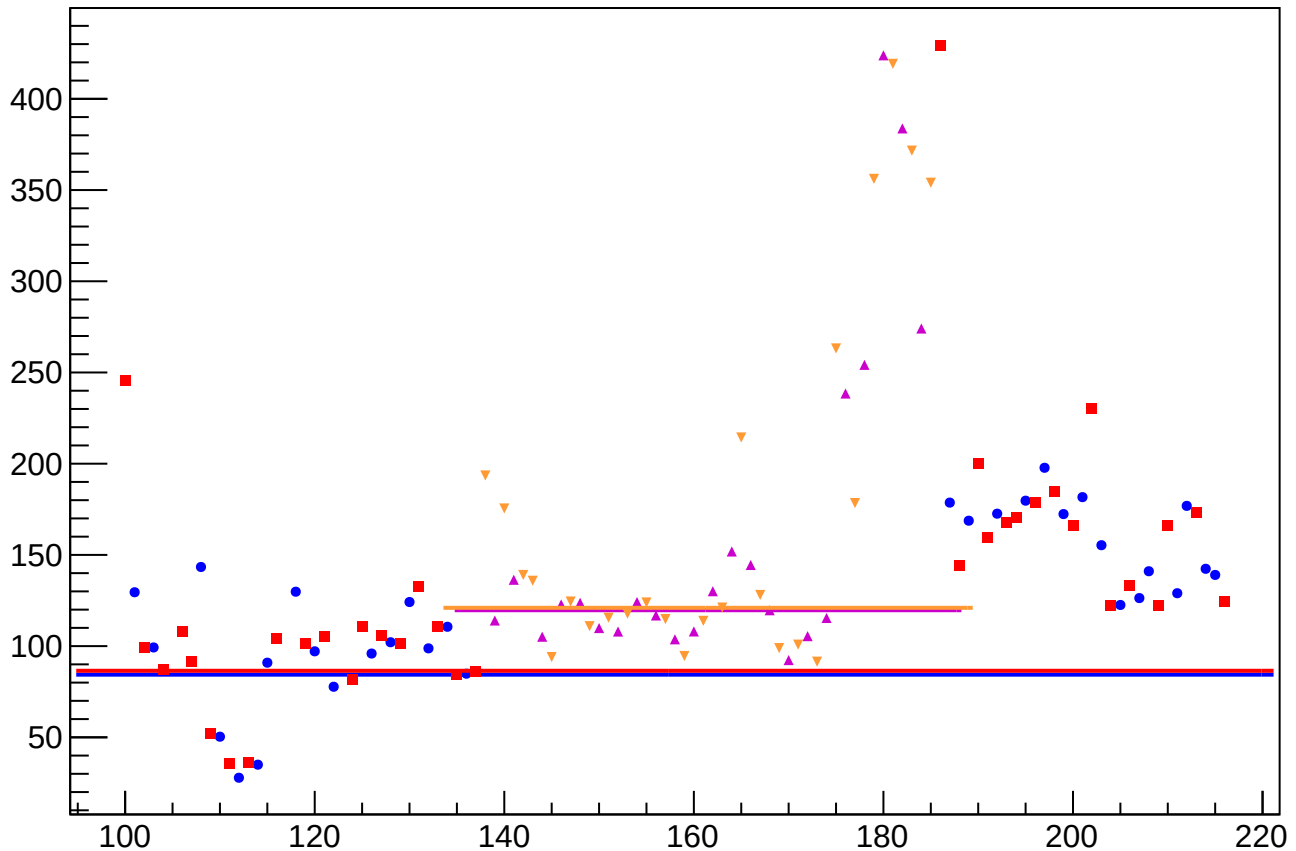
Left In:  $-0.019 \pm 0.030$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $0.004 \pm 0.018$   $\chi^2/\text{NDF}: 68.2/55$

All:  $-0.014 \pm 0.013$   $\chi^2/\text{NDF}: 215.8/113$

- sign  $-0.031 \pm 0.018$   $\chi^2/\text{NDF}: 145.8/57$

# asym\_sam4\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 84.355+/-0.016  $\chi^2/\text{NDF}$ : 9959788.7/30

Left Out: 121.000+/-0.021  $\chi^2/\text{NDF}$ : 4095210.5/24

Right Out: 86.482+/-0.016  $\chi^2/\text{NDF}$ : 9320906.8/34

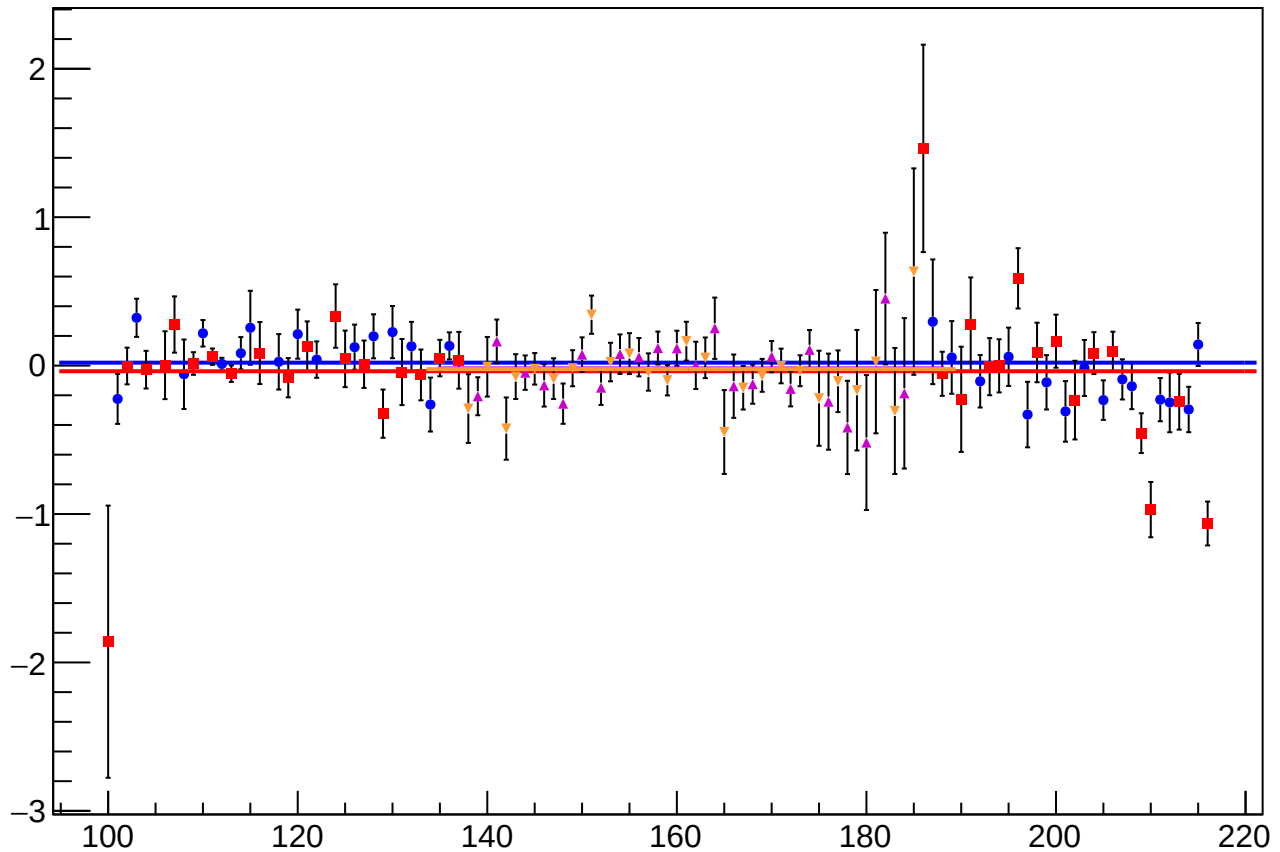
Left In: 119.680+/-0.021  $\chi^2/\text{NDF}$ : 2838196.2/22

+ sign 98.075+/-0.013  $\chi^2/\text{NDF}$ : 15933969.2/55

All: 98.402+/-0.009  $\chi^2/\text{NDF}$ : 29616800.1/113

- sign 98.732+/-0.013  $\chi^2/\text{NDF}$ : 13681547.2/57

# asym\_sam4\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.020 \pm 0.023$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-0.024 \pm 0.030$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $-0.038 \pm 0.023$   $\chi^2/\text{NDF}$ : 122.6/34

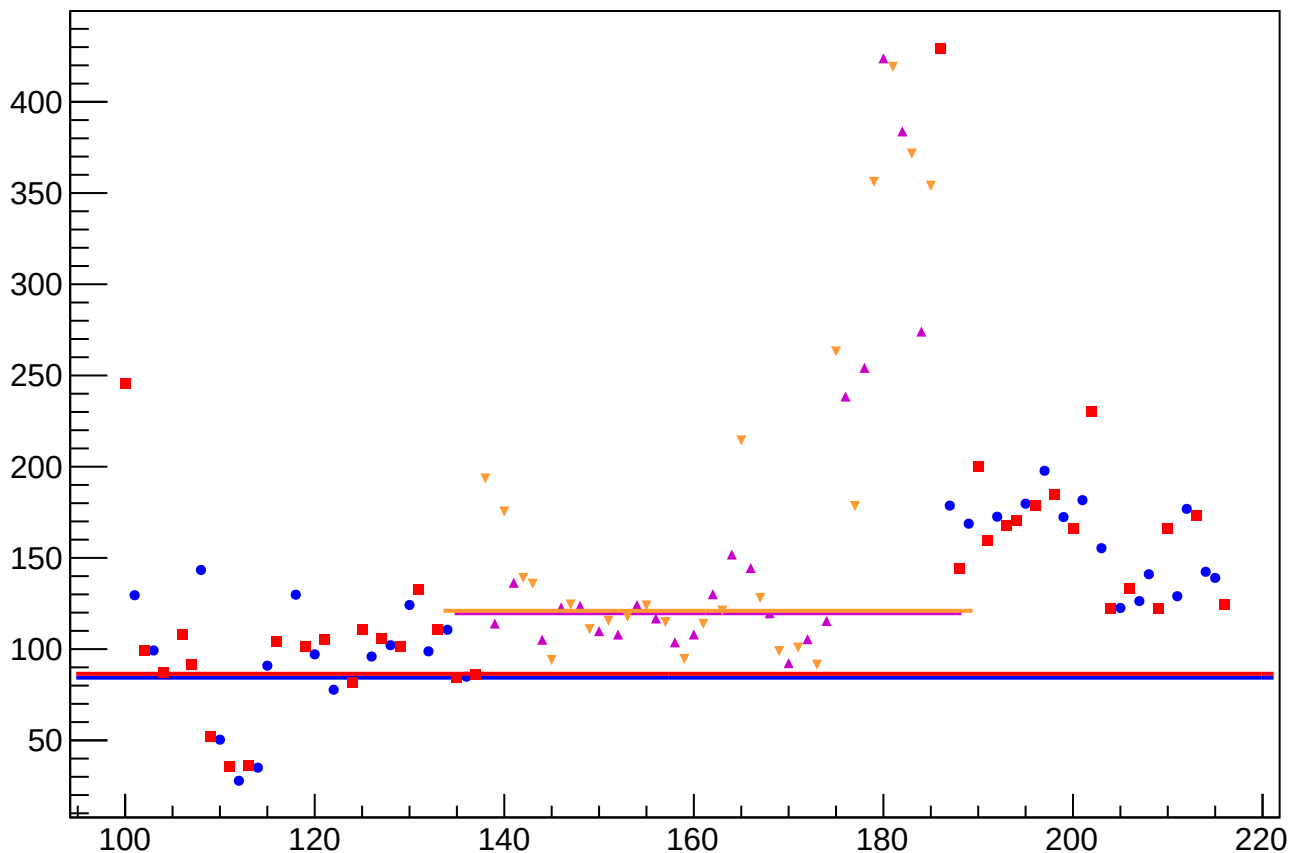
Left In:  $-0.019 \pm 0.030$   $\chi^2/\text{NDF}$ : 23.0/22

+ sign  $0.004 \pm 0.018$   $\chi^2/\text{NDF}$ : 68.2/55

All:  $-0.014 \pm 0.013$   $\chi^2/\text{NDF}$ : 215.8/113

- sign  $-0.031 \pm 0.018$   $\chi^2/\text{NDF}$ : 145.8/57

asym\_sam4\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 84.355+/-0.016  $\chi^2/\text{NDF}$ : 9959788.7/30

Left Out: 121.000+/-0.021  $\chi^2/\text{NDF}$ : 4095210.5/24

Right Out: 86.482+/-0.016  $\chi^2/\text{NDF}$ : 9320906.8/34

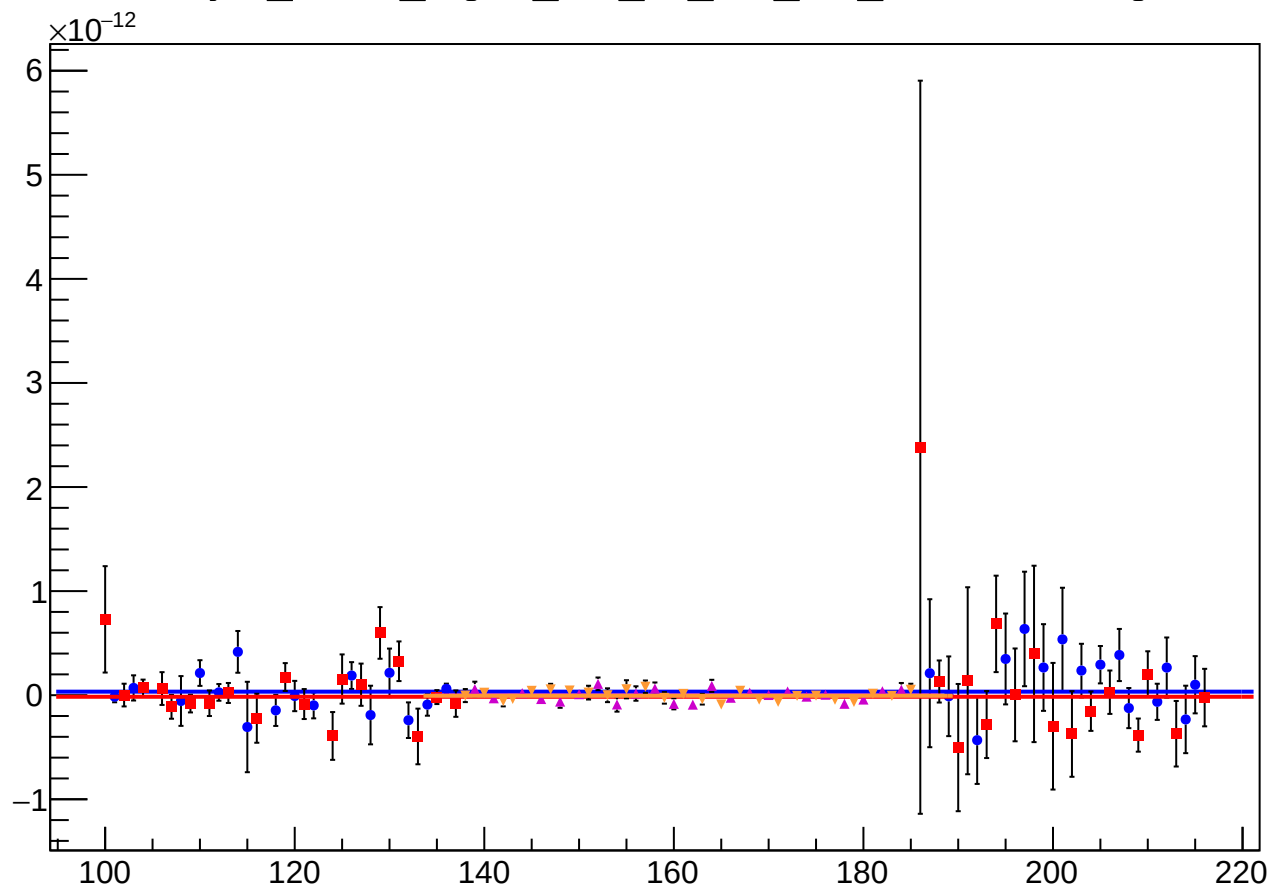
Left In: 119.680+/-0.021  $\chi^2/\text{NDF}$ : 2838196.2/22

+ sign 98.075+/-0.013  $\chi^2/\text{NDF}$ : 15933969.2/55

All: 98.402+/-0.009  $\chi^2/\text{NDF}$ : 29616800.1/113

- sign 98.732+/-0.013  $\chi^2/\text{NDF}$ : 13681547.2/57

# asym\_sam4\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.4/34

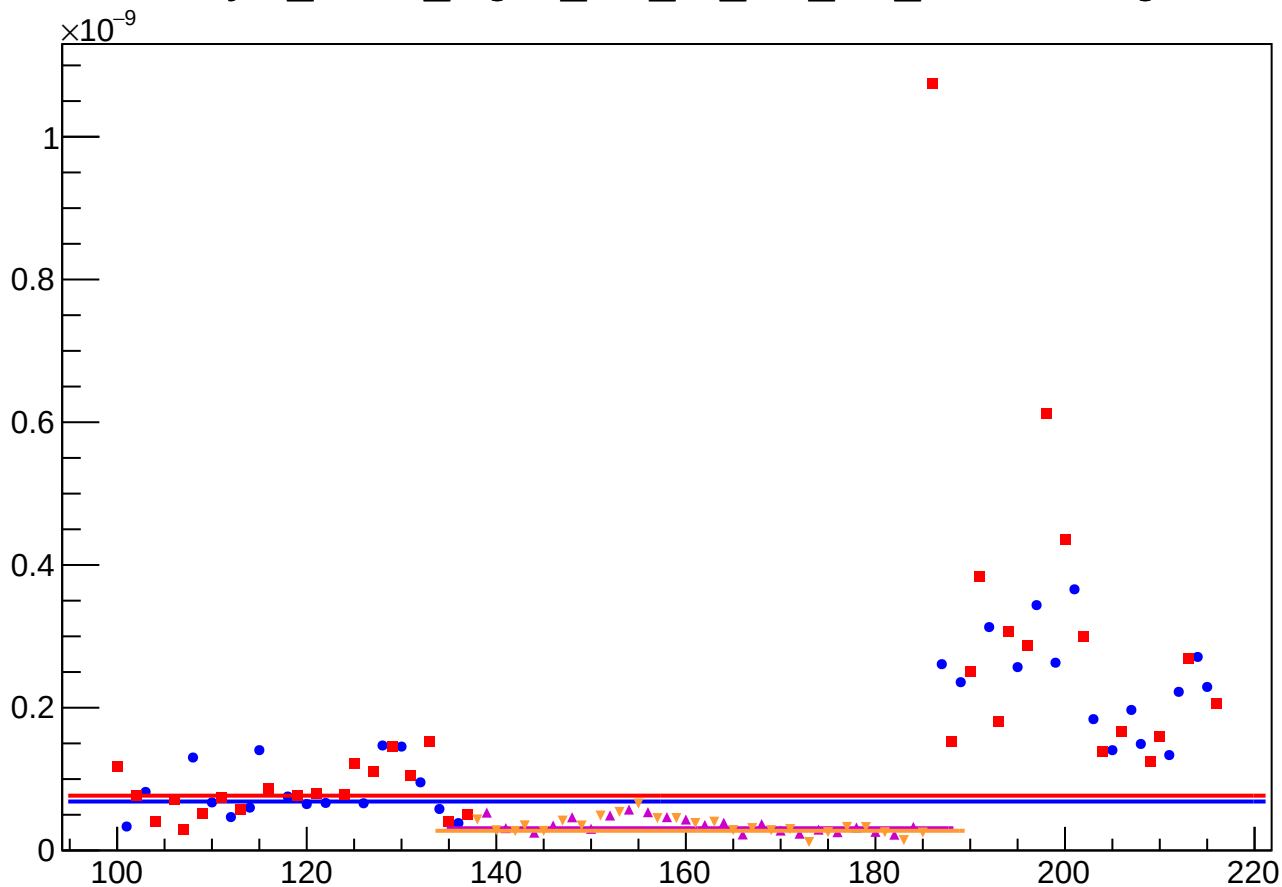
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.6/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.9/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 118.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.2/57

# asym\_sam4\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9535503.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3691738.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8512008.2/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1937733.7/22

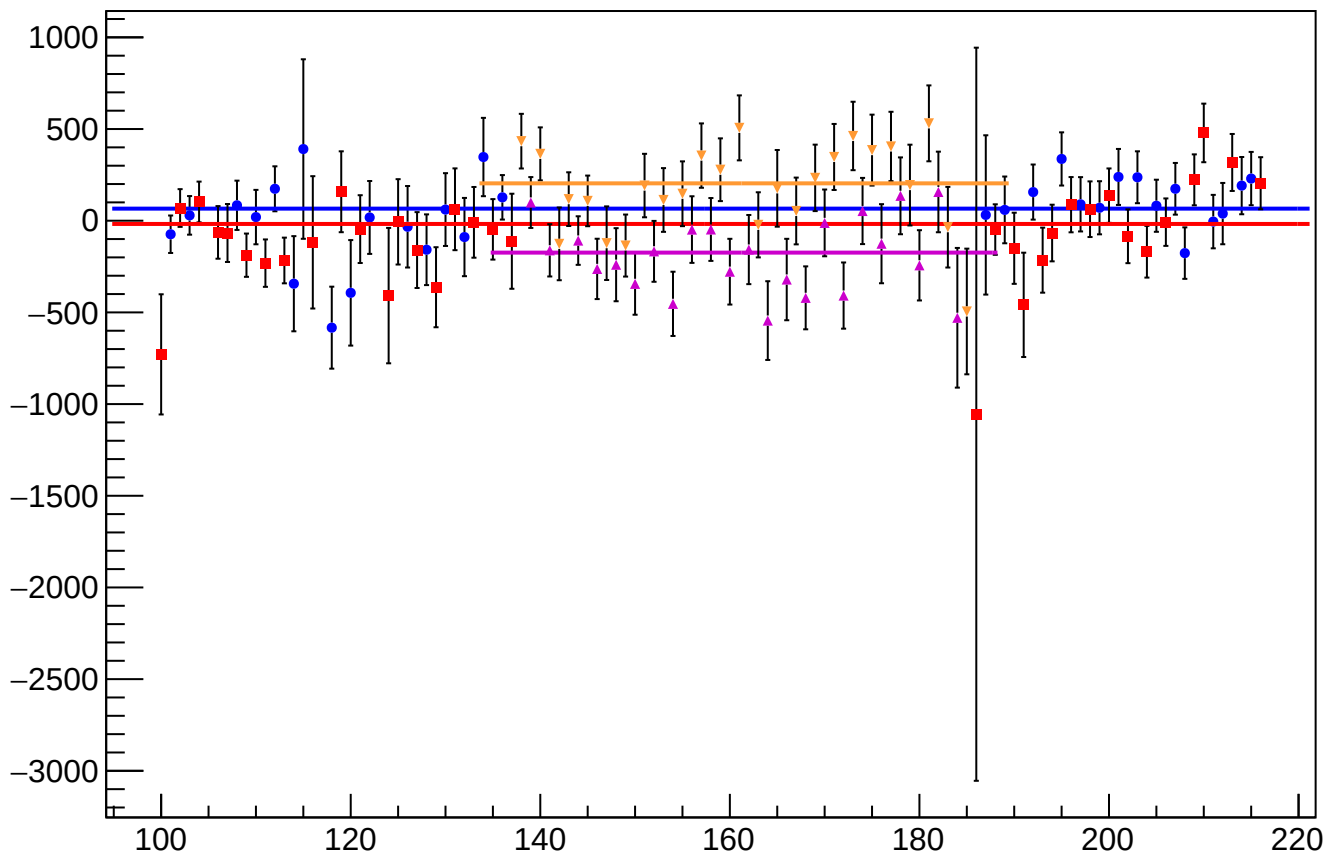
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18229568.0/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34173140.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15682415.7/57



# reg\_asym\_sam5\_mean vs Slug



Right In:  $65.875 \pm 28.292$   $\chi^2/\text{NDF}$ : 33.3/30

Left Out:  $203.760 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-17.673 \pm 27.388$   $\chi^2/\text{NDF}$ : 46.8/34

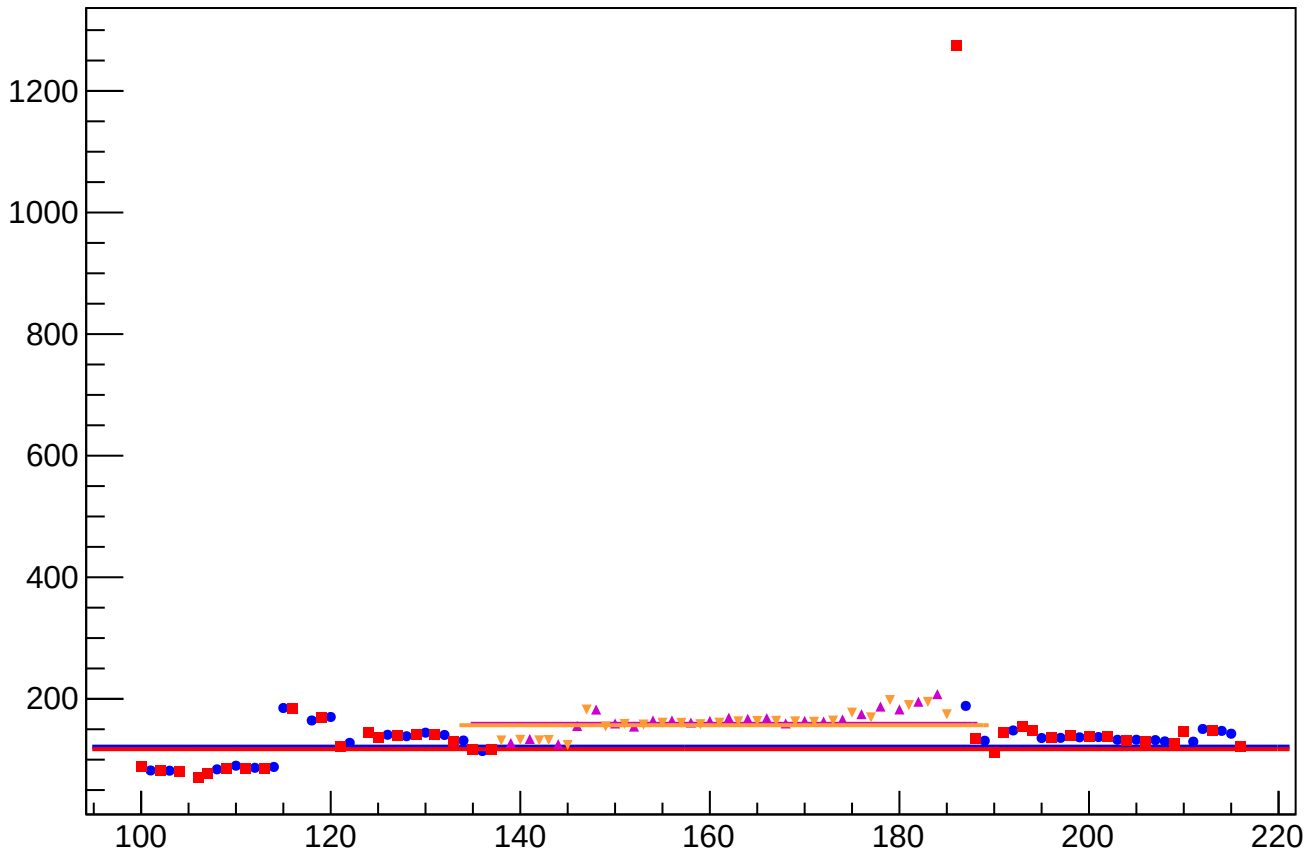
Left In:  $-173.974 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $118.742 \pm 22.216$   $\chi^2/\text{NDF}$ : 75.3/55

All:  $22.752 \pm 15.667$   $\chi^2/\text{NDF}$ : 195.1/113

- sign  $-72.224 \pm 22.098$   $\chi^2/\text{NDF}$ : 82.7/57

# reg\_asym\_sam5\_rms vs Slug



Right In: 121.418 $\pm$ 0.020  $\chi^2$ /NDF: 1675312.8/30

Left Out: 156.638 $\pm$ 0.025  $\chi^2$ /NDF: 582414.4/24

Right Out: 117.209 $\pm$ 0.019  $\chi^2$ /NDF: 2725350.2/34

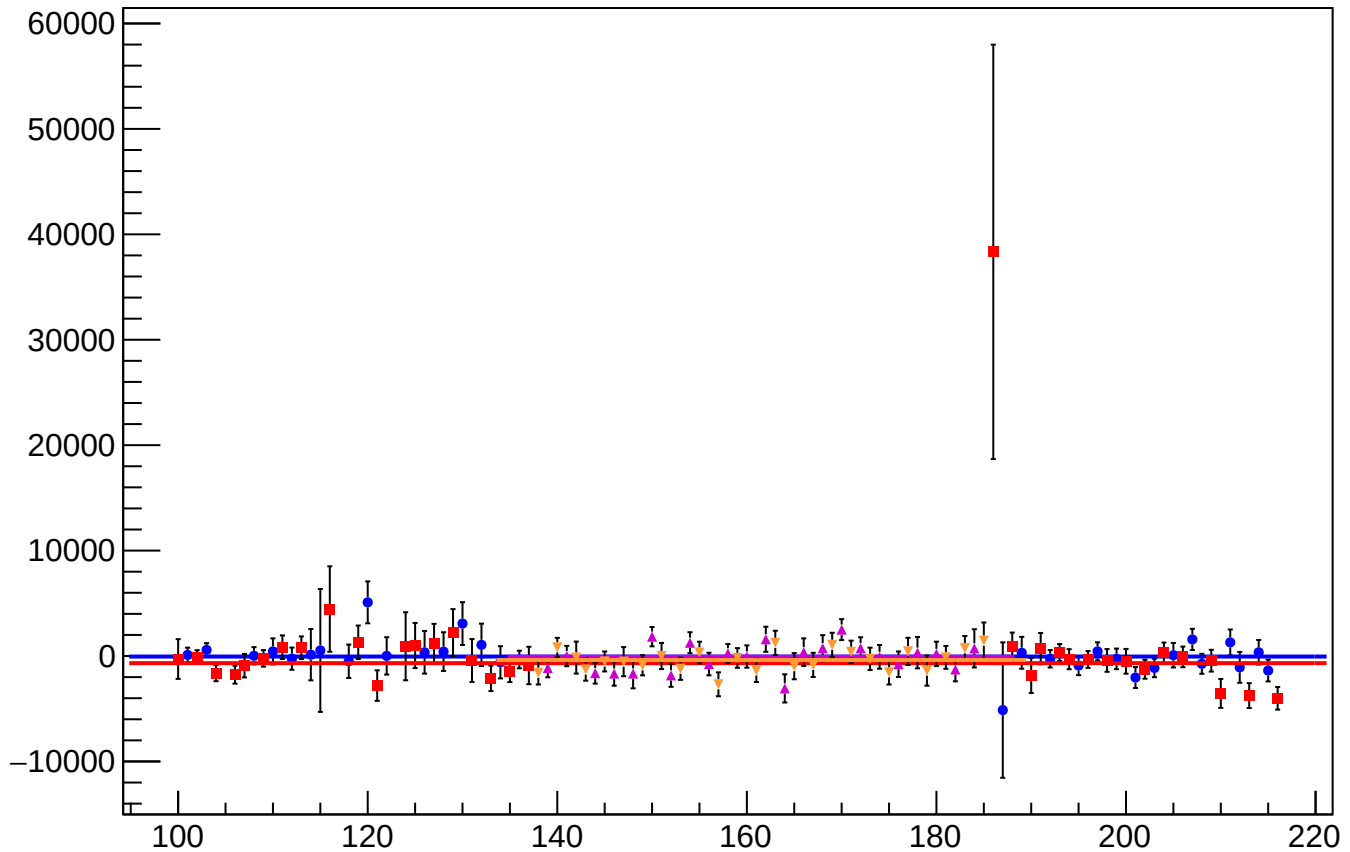
Left In: 158.952 $\pm$ 0.026  $\chi^2$ /NDF: 511321.2/22

+ sign 134.922 $\pm$ 0.016  $\chi^2$ /NDF: 3446093.8/55

All: 133.341 $\pm$ 0.011  $\chi^2$ /NDF: 8324372.1/113

- sign 131.777 $\pm$ 0.016  $\chi^2$ /NDF: 4858138.5/57

# asym\_sam5\_reg\_correction\_mean vs Slug



Right In:  $-48.921 \pm 199.636$   $\chi^2/\text{NDF}$ : 25.1/30

Left Out:  $-380.690 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-676.430 \pm 191.114$   $\chi^2/\text{NDF}$ : 50.4/34

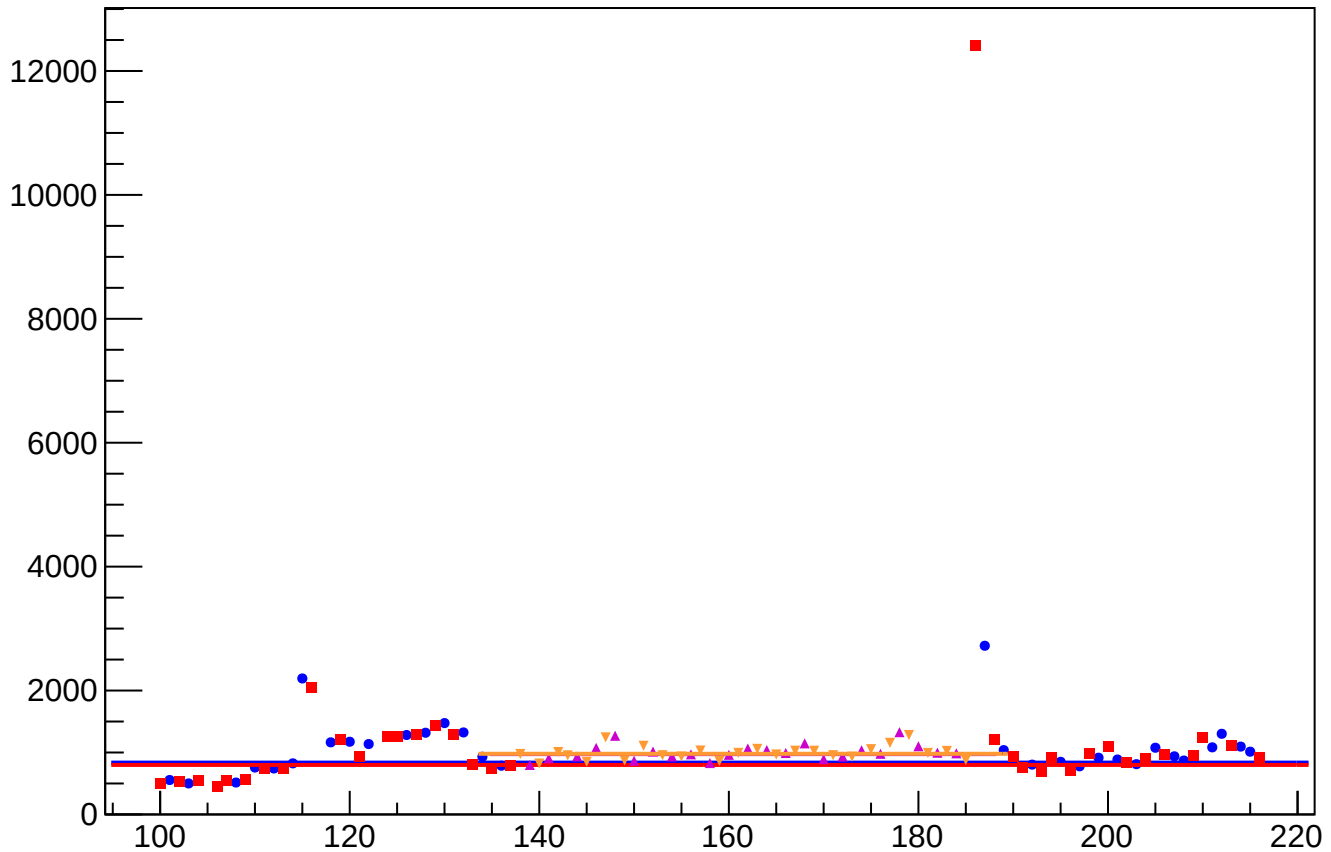
Left In:  $-74.440 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-195.383 \pm 149.199$   $\chi^2/\text{NDF}$ : 45.1/55

All:  $-314.629 \pm 104.690$   $\chi^2/\text{NDF}$ : 133.9/113

- sign  $-430.285 \pm 146.936$   $\chi^2/\text{NDF}$ : 87.6/57

# asym\_sam5\_reg\_correction\_rms vs Slug



Right In: 837.001+/-0.141  $\chi^2/\text{NDF}$ : 2868593.3/30

Left Out: 979.111+/-0.159  $\chi^2/\text{NDF}$ : 429795.3/24

Right Out: 799.322+/-0.135  $\chi^2/\text{NDF}$ : 3861462.8/34

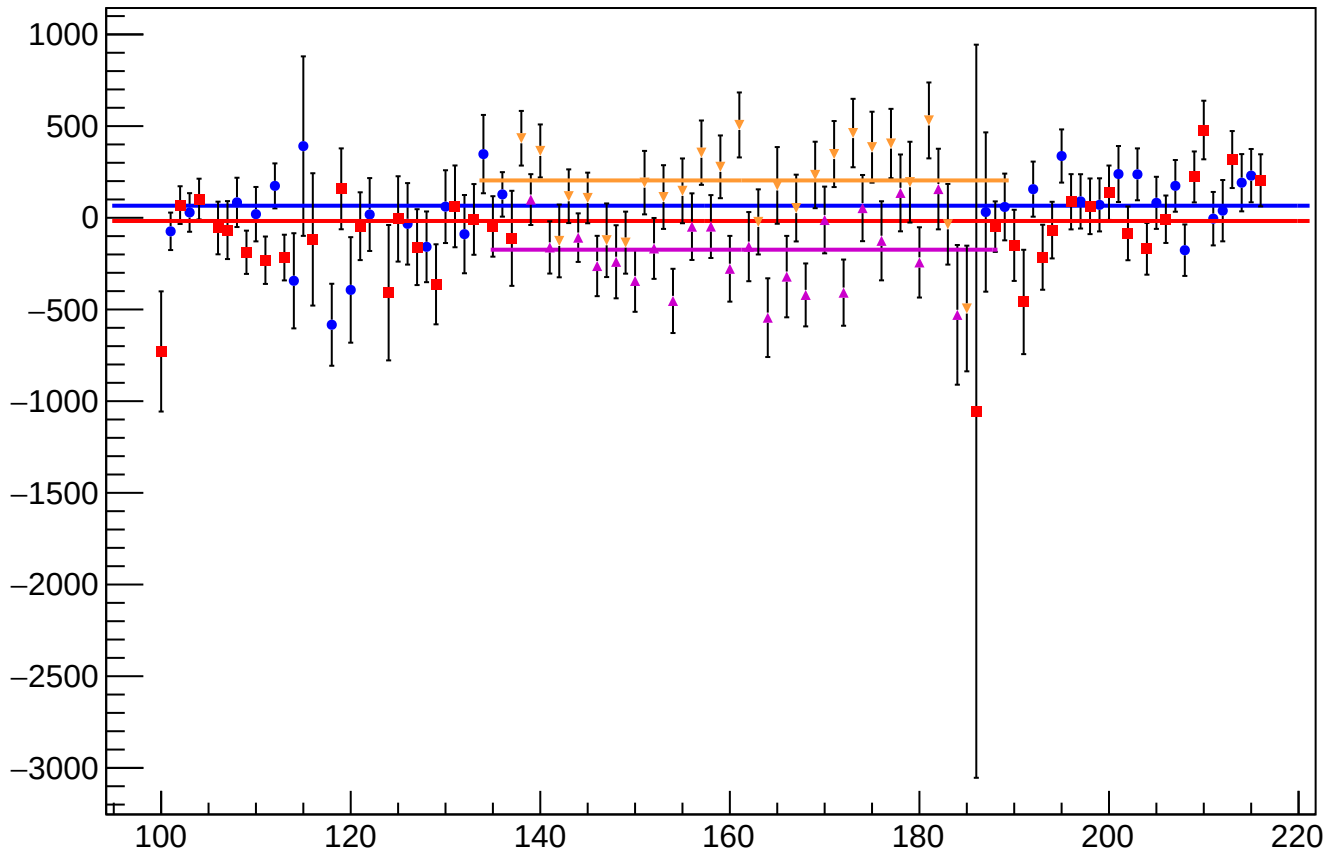
Left In: 973.818+/-0.162  $\chi^2/\text{NDF}$ : 498612.7/22

+ sign 899.737+/-0.105  $\chi^2/\text{NDF}$ : 3745789.9/55

All: 884.982+/-0.074  $\chi^2/\text{NDF}$ : 8826133.7/113

- sign 870.671+/-0.104  $\chi^2/\text{NDF}$ : 5041811.2/57

# cor\_asym\_sam5\_mean vs Slug



Right In:  $65.873 \pm 28.292$   $\chi^2/\text{NDF}$ : 33.3/30

Left Out:  $203.766 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-17.396 \pm 27.389$   $\chi^2/\text{NDF}$ : 46.8/34

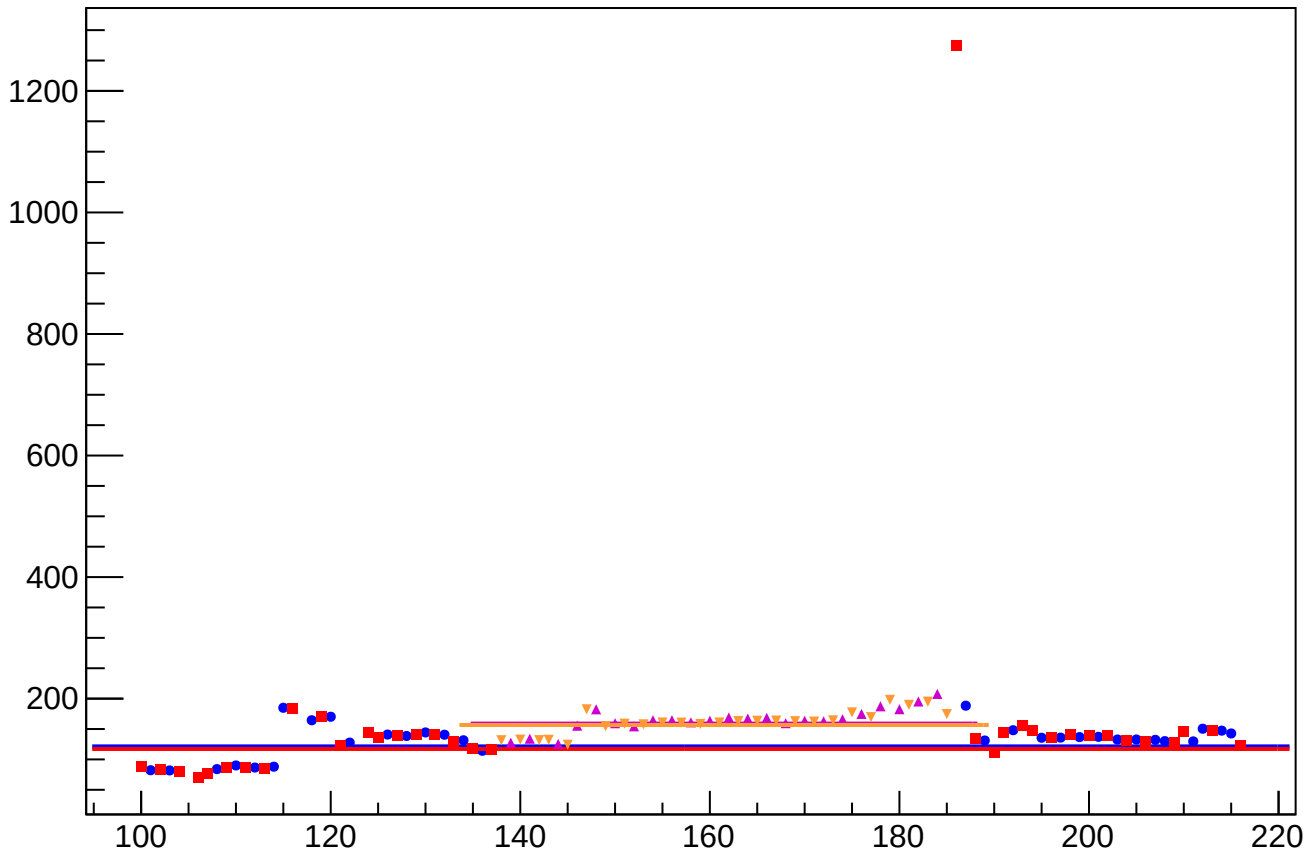
Left In:  $-173.978 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $118.743 \pm 22.216$   $\chi^2/\text{NDF}$ : 75.3/55

All:  $22.844 \pm 15.667$   $\chi^2/\text{NDF}$ : 195.1/113

- sign  $-72.047 \pm 22.098$   $\chi^2/\text{NDF}$ : 82.7/57

# cor\_asym\_sam5\_rms vs Slug



Right In: 121.418 $\pm$ 0.020  $\chi^2$ /NDF: 1675311.4/30

Left Out: 156.638 $\pm$ 0.025  $\chi^2$ /NDF: 582414.5/24

Right Out: 117.197 $\pm$ 0.019  $\chi^2$ /NDF: 2728652.8/34

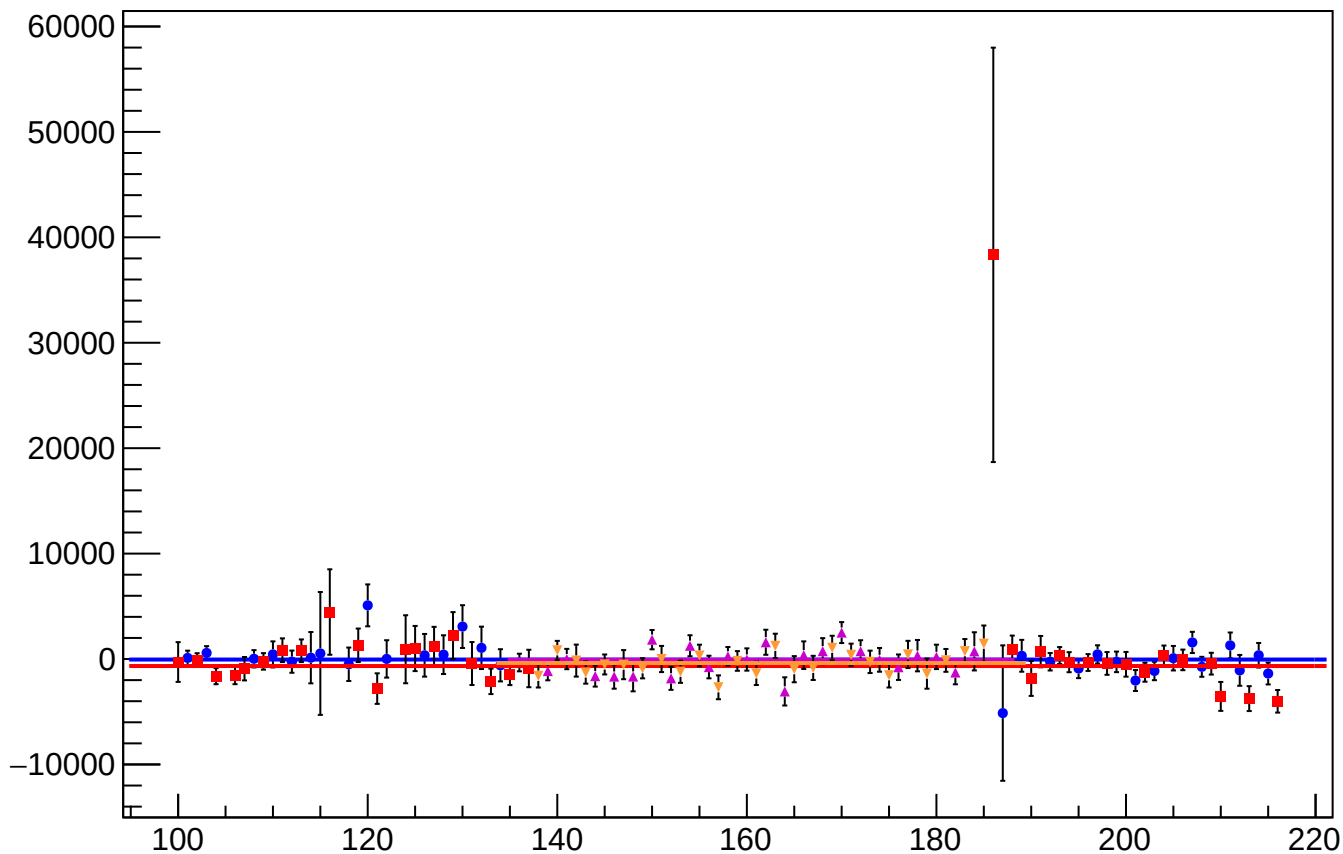
Left In: 158.952 $\pm$ 0.026  $\chi^2$ /NDF: 511321.3/22

+ sign 134.922 $\pm$ 0.016  $\chi^2$ /NDF: 3446091.8/55

All: 133.338 $\pm$ 0.011  $\chi^2$ /NDF: 8328582.1/113

- sign 131.771 $\pm$ 0.016  $\chi^2$ /NDF: 4862266.7/57

# asym\_sam5\_cor\_correction\_mean vs Slug



Right In:  $-48.918 \pm 199.636$   $\chi^2/\text{NDF}$ : 25.1/30

Left Out:  $-380.678 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-663.561 \pm 191.177$   $\chi^2/\text{NDF}$ : 49.8/34

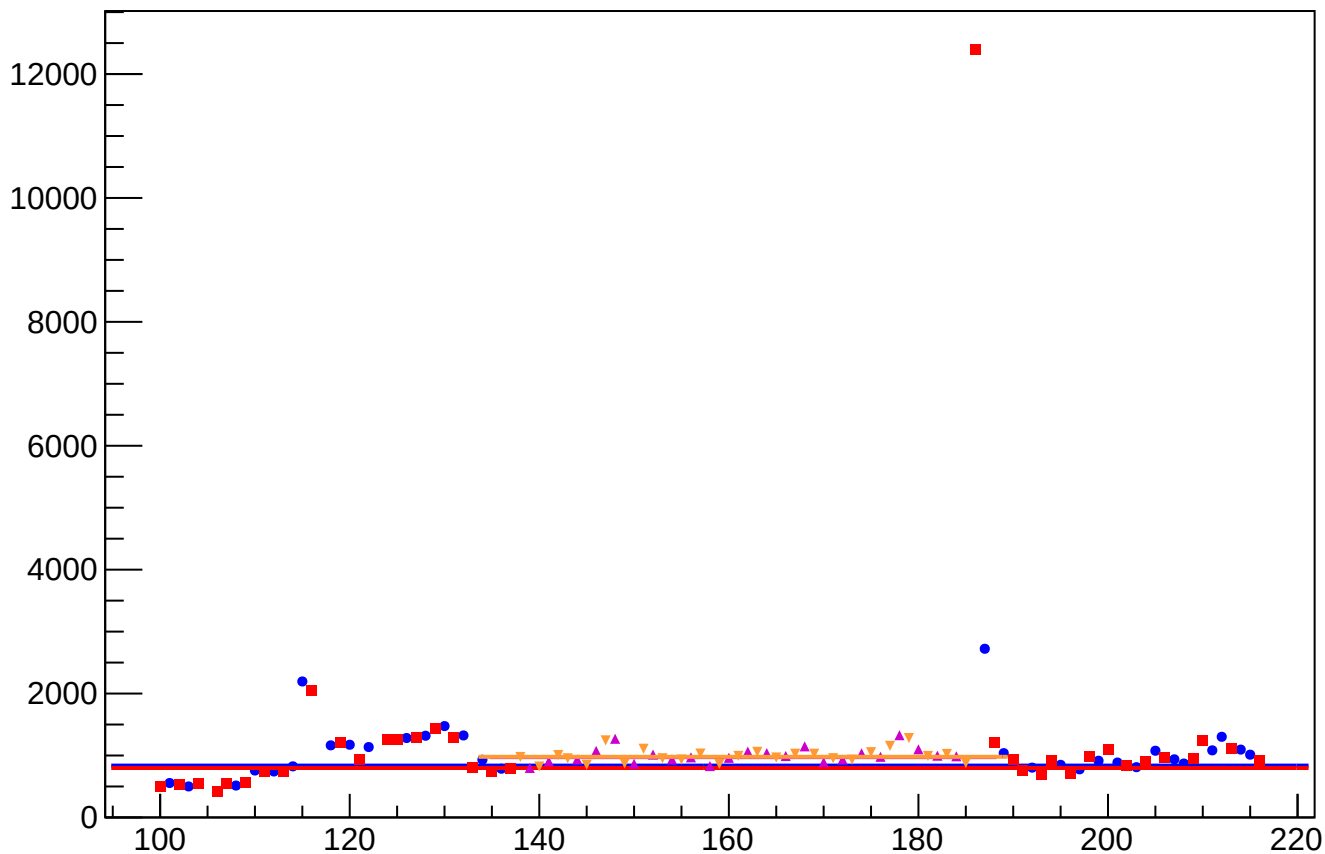
Left In:  $-74.438 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-195.377 \pm 149.199$   $\chi^2/\text{NDF}$ : 45.1/55

All:  $-310.694 \pm 104.701$   $\chi^2/\text{NDF}$ : 133.0/113

- sign  $-422.583 \pm 146.965$   $\chi^2/\text{NDF}$ : 86.7/57

# asym\_sam5\_cor\_correction\_rms vs Slug



Right In: 837.001 $\pm$ 0.141  $\chi^2$ /NDF: 2868596.8/30

Left Out: 979.112 $\pm$ 0.159  $\chi^2$ /NDF: 429793.5/24

Right Out: 798.330 $\pm$ 0.135  $\chi^2$ /NDF: 3905513.3/34

Left In: 973.818 $\pm$ 0.162  $\chi^2$ /NDF: 498615.1/22

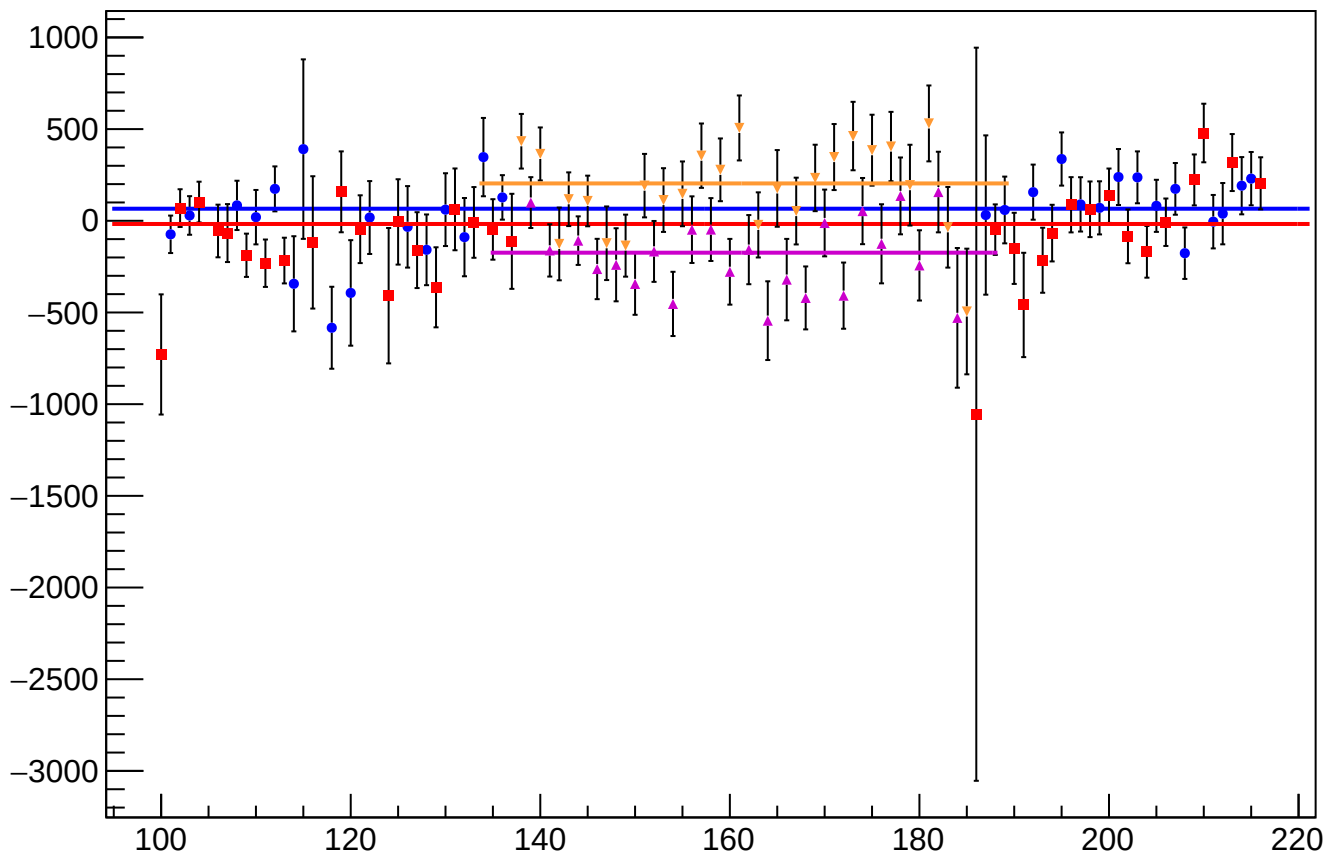
+ sign 899.737 $\pm$ 0.105  $\chi^2$ /NDF: 3745794.5/55

All: 884.701 $\pm$ 0.074  $\chi^2$ /NDF: 8879265.1/113

- sign 870.112 $\pm$ 0.104  $\chi^2$ /NDF: 5093451.0/57



# eigen\_cor\_asym\_sam5\_mean vs Slug



Right In:  $65.873 \pm 28.292$   $\chi^2/\text{NDF}$ : 33.3/30

Left Out:  $203.766 \pm 35.878$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-17.396 \pm 27.389$   $\chi^2/\text{NDF}$ : 46.8/34

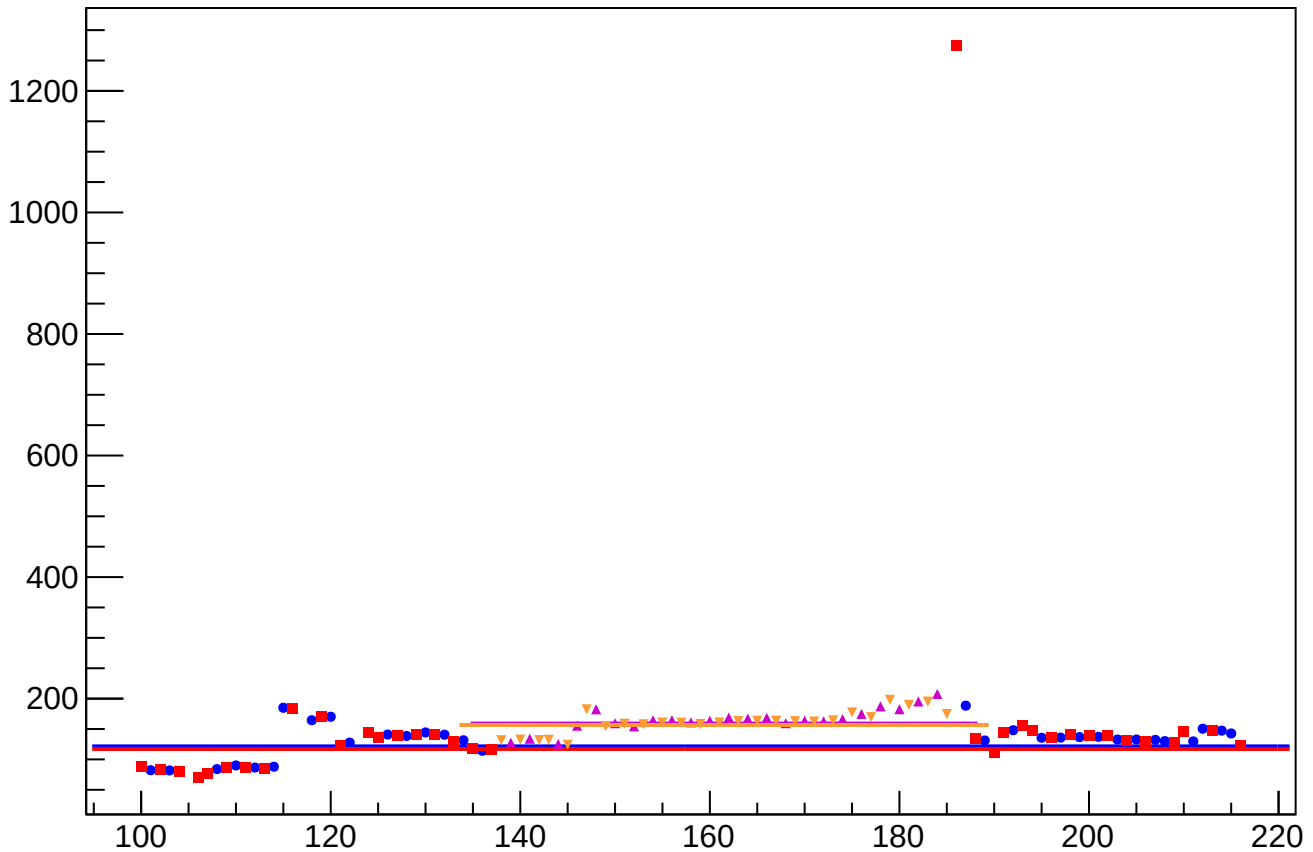
Left In:  $-173.978 \pm 37.405$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $118.743 \pm 22.216$   $\chi^2/\text{NDF}$ : 75.3/55

All:  $22.844 \pm 15.667$   $\chi^2/\text{NDF}$ : 195.1/113

- sign  $-72.047 \pm 22.098$   $\chi^2/\text{NDF}$ : 82.7/57

# eigen\_cor\_asym\_sam5\_rms vs Slug



Right In: 121.418+/-0.020  $\chi^2/\text{NDF}$ : 1675311.4/30

Left Out: 156.638+/-0.025  $\chi^2/\text{NDF}$ : 582414.5/24

Right Out: 117.197+/-0.019  $\chi^2/\text{NDF}$ : 2728652.8/34

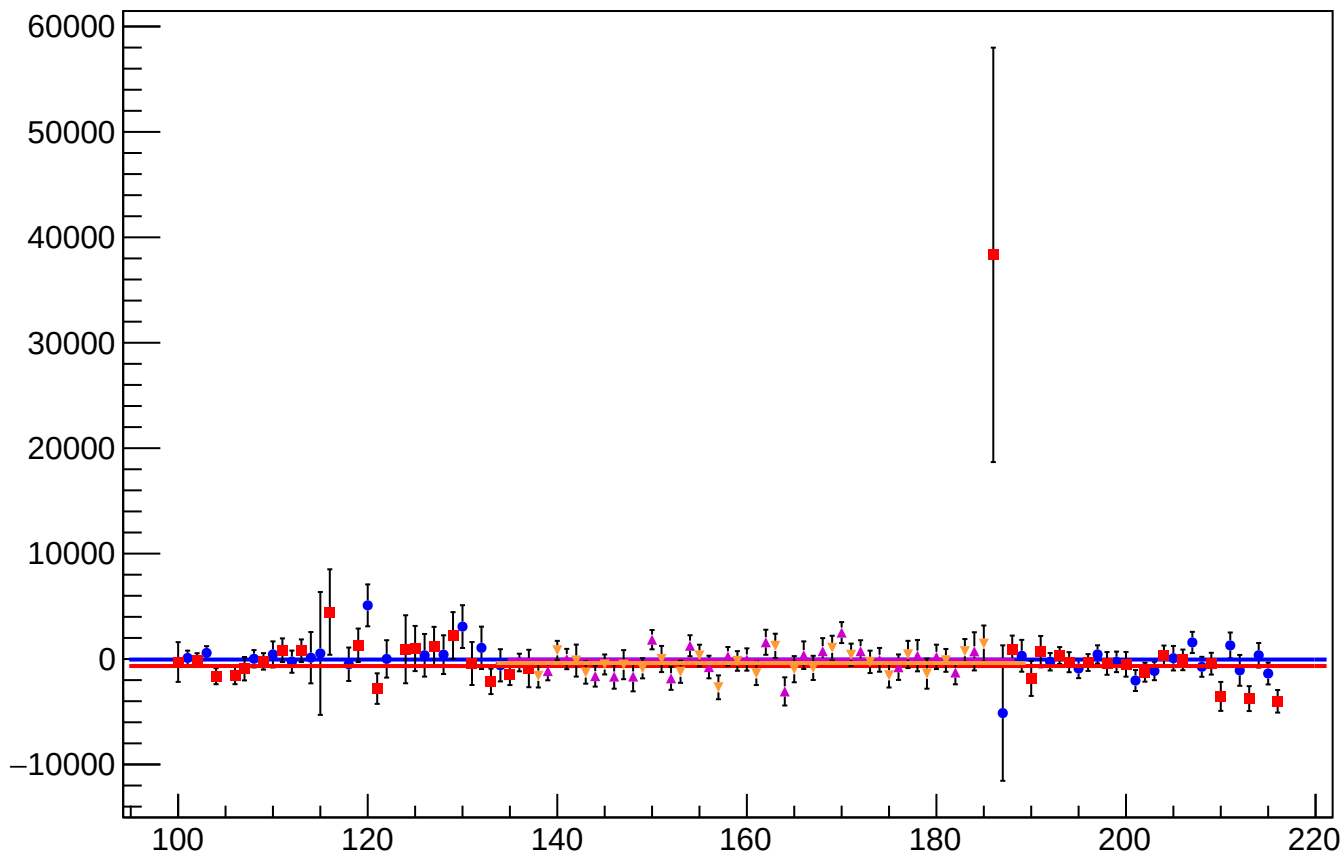
Left In: 158.952+/-0.026  $\chi^2/\text{NDF}$ : 511321.3/22

+ sign 134.922+/-0.016  $\chi^2/\text{NDF}$ : 3446091.8/55

All: 133.338+/-0.011  $\chi^2/\text{NDF}$ : 8328582.1/113

- sign 131.771+/-0.016  $\chi^2/\text{NDF}$ : 4862266.7/57

# asym\_sam5\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-48.918 \pm 199.636$   $\chi^2/\text{NDF}$ : 25.1/30

Left Out:  $-380.678 \pm 224.554$   $\chi^2/\text{NDF}$ : 18.7/24

Right Out:  $-663.561 \pm 191.177$   $\chi^2/\text{NDF}$ : 49.8/34

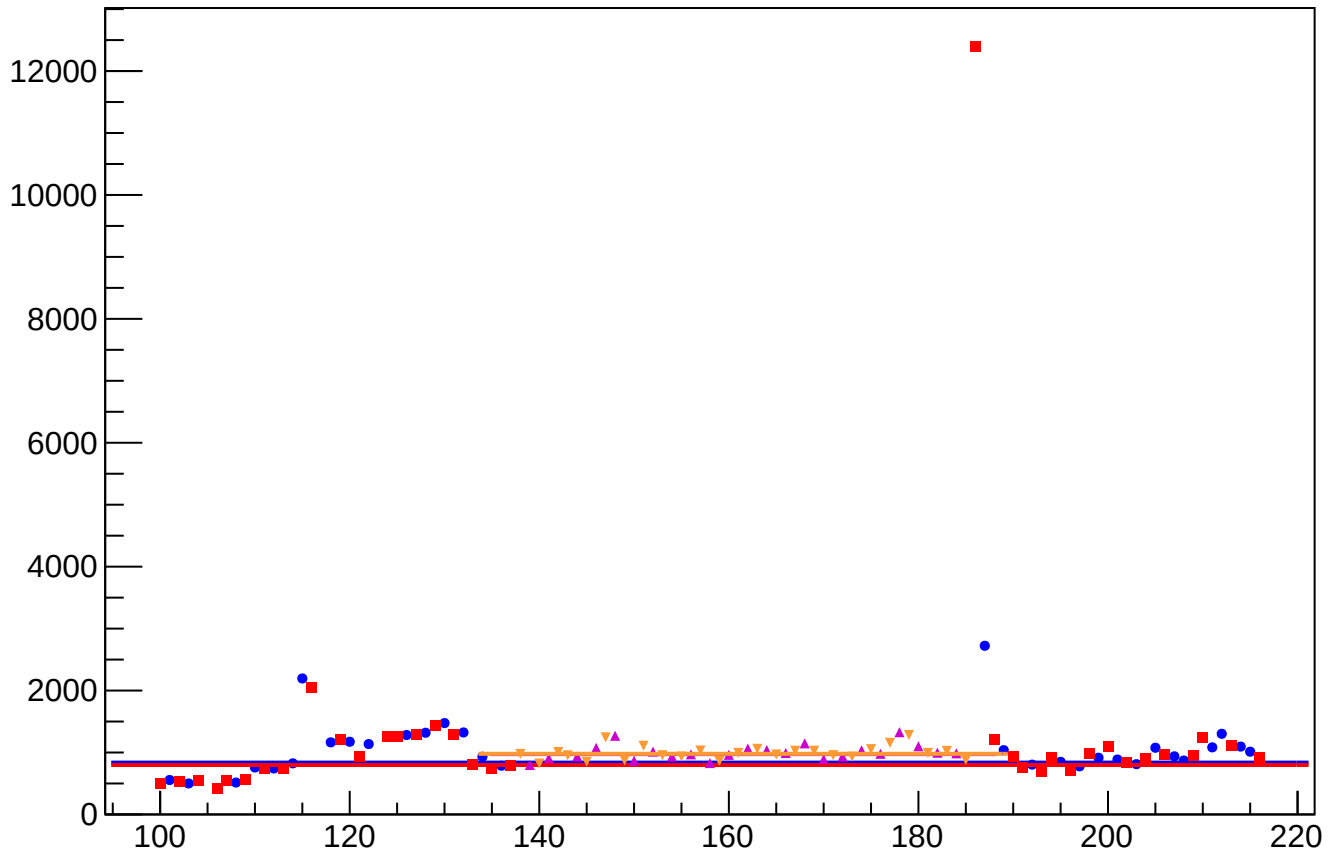
Left In:  $-74.438 \pm 229.788$   $\chi^2/\text{NDF}$ : 33.1/22

+ sign  $-195.377 \pm 149.199$   $\chi^2/\text{NDF}$ : 45.1/55

All:  $-310.694 \pm 104.701$   $\chi^2/\text{NDF}$ : 133.0/113

- sign  $-422.583 \pm 146.965$   $\chi^2/\text{NDF}$ : 86.7/57

# asym\_sam5\_eigen\_cor\_correction\_rms vs Slug



Right In: 837.001 $\pm$ 0.141  $\chi^2$ /NDF: 2868596.8/30

Left Out: 979.112 $\pm$ 0.159  $\chi^2$ /NDF: 429793.5/24

Right Out: 798.330 $\pm$ 0.135  $\chi^2$ /NDF: 3905513.3/34

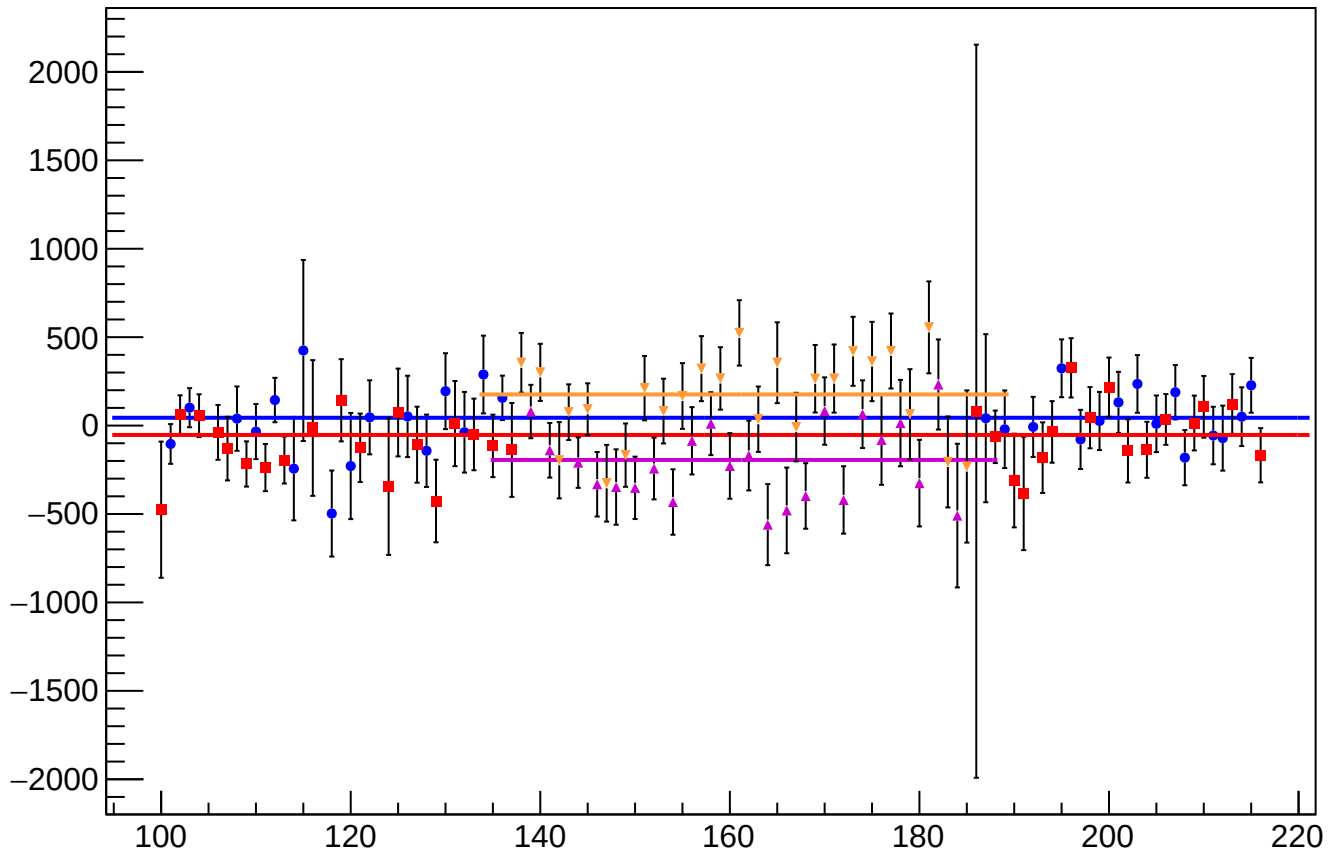
Left In: 973.818 $\pm$ 0.162  $\chi^2$ /NDF: 498615.1/22

+ sign 899.737 $\pm$ 0.105  $\chi^2$ /NDF: 3745794.5/55

All: 884.701 $\pm$ 0.074  $\chi^2$ /NDF: 8879265.1/113

- sign 870.112 $\pm$ 0.104  $\chi^2$ /NDF: 5093451.0/57

# dit\_asym\_sam5\_mean vs Slug



Right In:  $44.192 \pm 31.029$   $\chi^2/\text{NDF}$ : 24.2/30

Left Out:  $176.010 \pm 38.838$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-53.049 \pm 29.978$   $\chi^2/\text{NDF}$ : 26.7/34

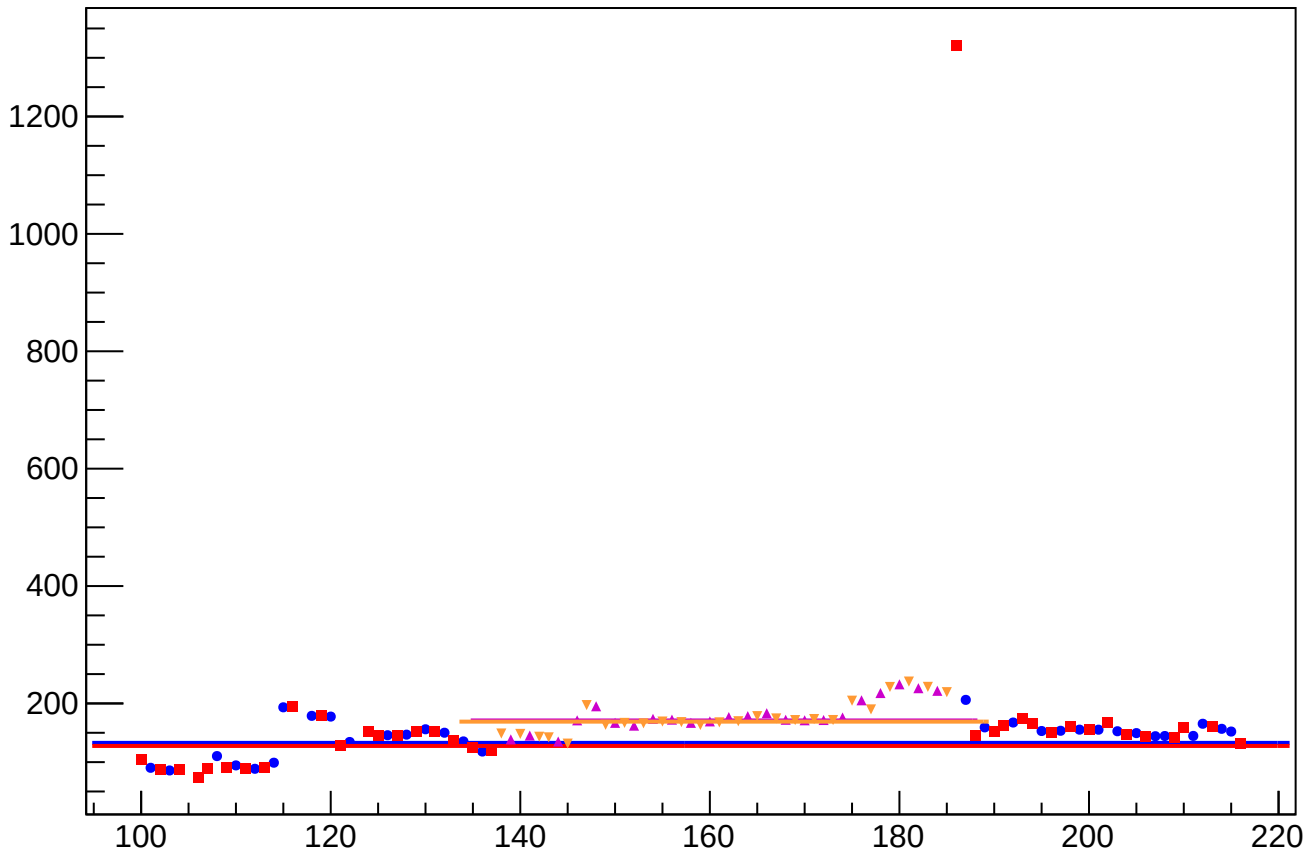
Left In:  $-194.324 \pm 40.384$   $\chi^2/\text{NDF}$ : 23.8/22

+ sign  $95.551 \pm 24.242$   $\chi^2/\text{NDF}$ : 62.0/55

All:  $-4.551 \pm 17.081$   $\chi^2/\text{NDF}$ : 154.3/113

- sign  $-103.241 \pm 24.071$   $\chi^2/\text{NDF}$ : 58.5/57

# dit\_asym\_sam5\_rms vs Slug



Right In: 132.821+/-0.022  $\chi^2/\text{NDF}$ : 1806389.5/30

Left Out: 169.009+/-0.027  $\chi^2/\text{NDF}$ : 773937.9/24

Right Out: 127.576+/-0.021  $\chi^2/\text{NDF}$ : 2995223.5/34

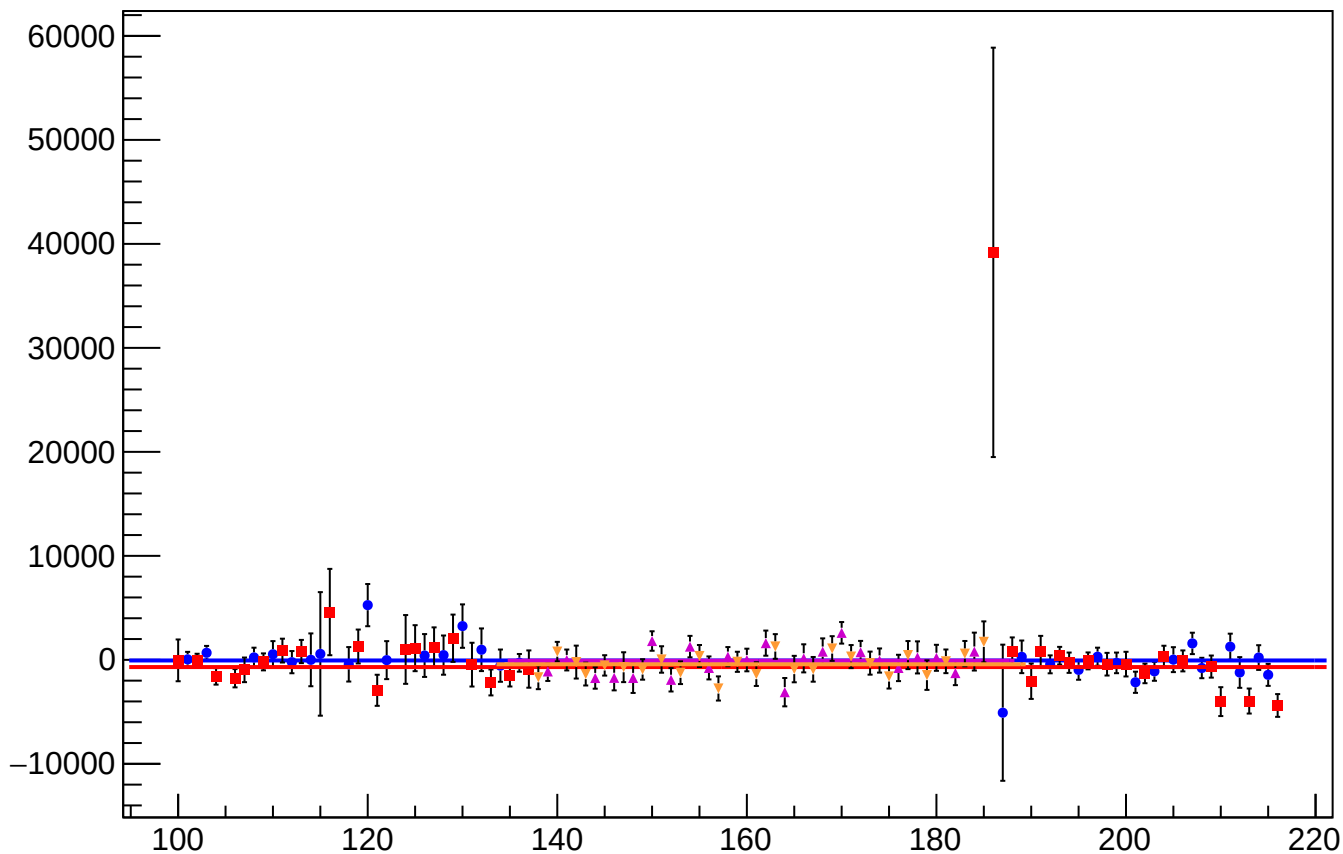
Left In: 171.021+/-0.029  $\chi^2/\text{NDF}$ : 678106.1/22

+ sign 146.920+/-0.017  $\chi^2/\text{NDF}$ : 3640233.5/55

All: 144.952+/-0.012  $\chi^2/\text{NDF}$ : 8832105.7/113

- sign 143.011+/-0.017  $\chi^2/\text{NDF}$ : 5165681.2/57

# asym\_sam5\_dit\_correction\_mean vs Slug



Right In:  $-59.962 \pm 206.318$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $-425.819 \pm 232.561$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $-694.593 \pm 197.143$   $\chi^2/\text{NDF}$ : 54.4/34

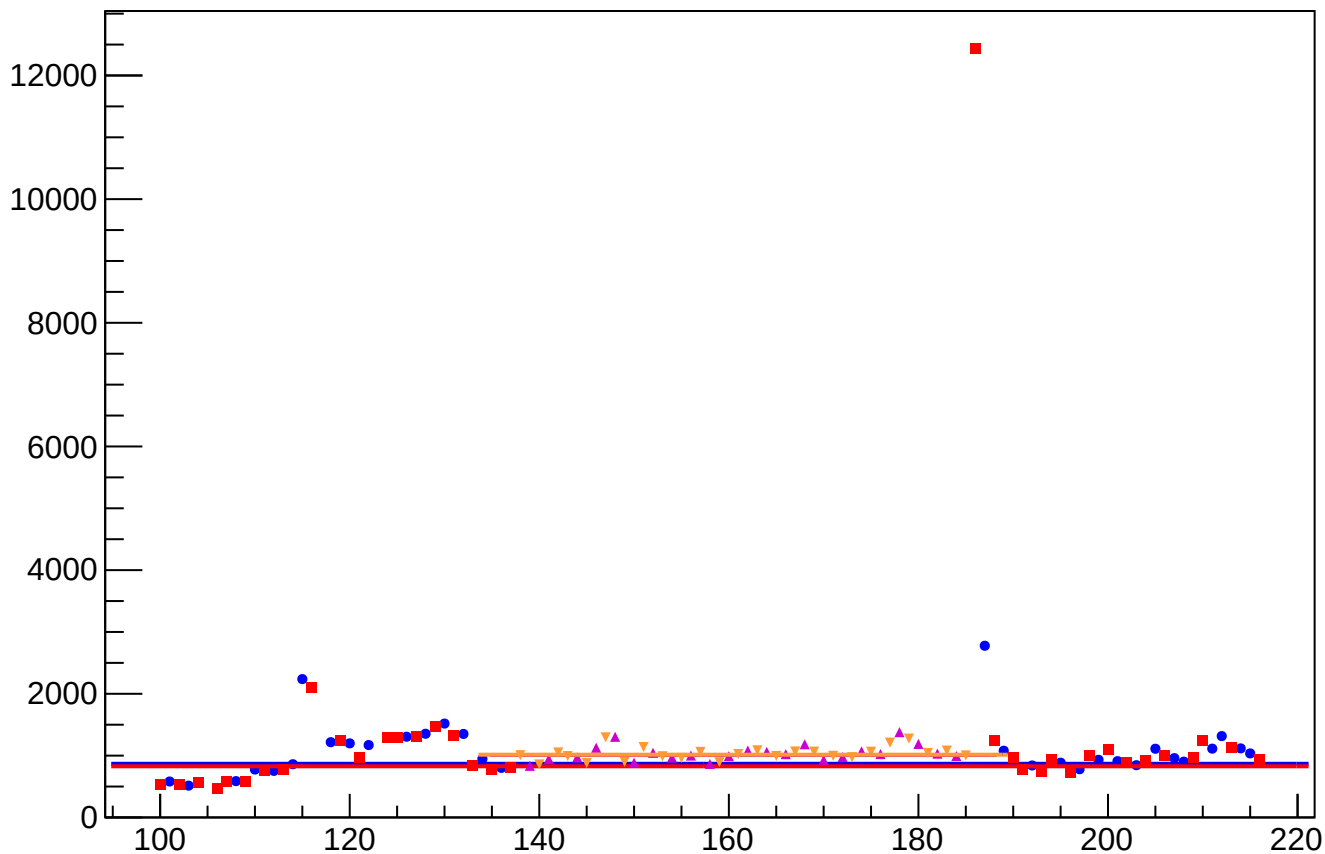
Left In:  $-86.486 \pm 238.155$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-221.092 \pm 154.337$   $\chi^2/\text{NDF}$ : 45.4/55

All:  $-336.038 \pm 108.247$   $\chi^2/\text{NDF}$ : 137.2/113

- sign  $-447.328 \pm 151.862$   $\chi^2/\text{NDF}$ : 90.7/57

# asym\_sam5\_dit\_correction\_rms vs Slug



Right In: 867.934 $\pm$ 0.146  $\chi^2$ /NDF: 2689620.9/30

Left Out: 1015.046 $\pm$ 0.164  $\chi^2$ /NDF: 397966.2/24

Right Out: 827.142 $\pm$ 0.139  $\chi^2$ /NDF: 3708275.9/34

Left In: 1009.672 $\pm$ 0.168  $\chi^2$ /NDF: 498783.5/22

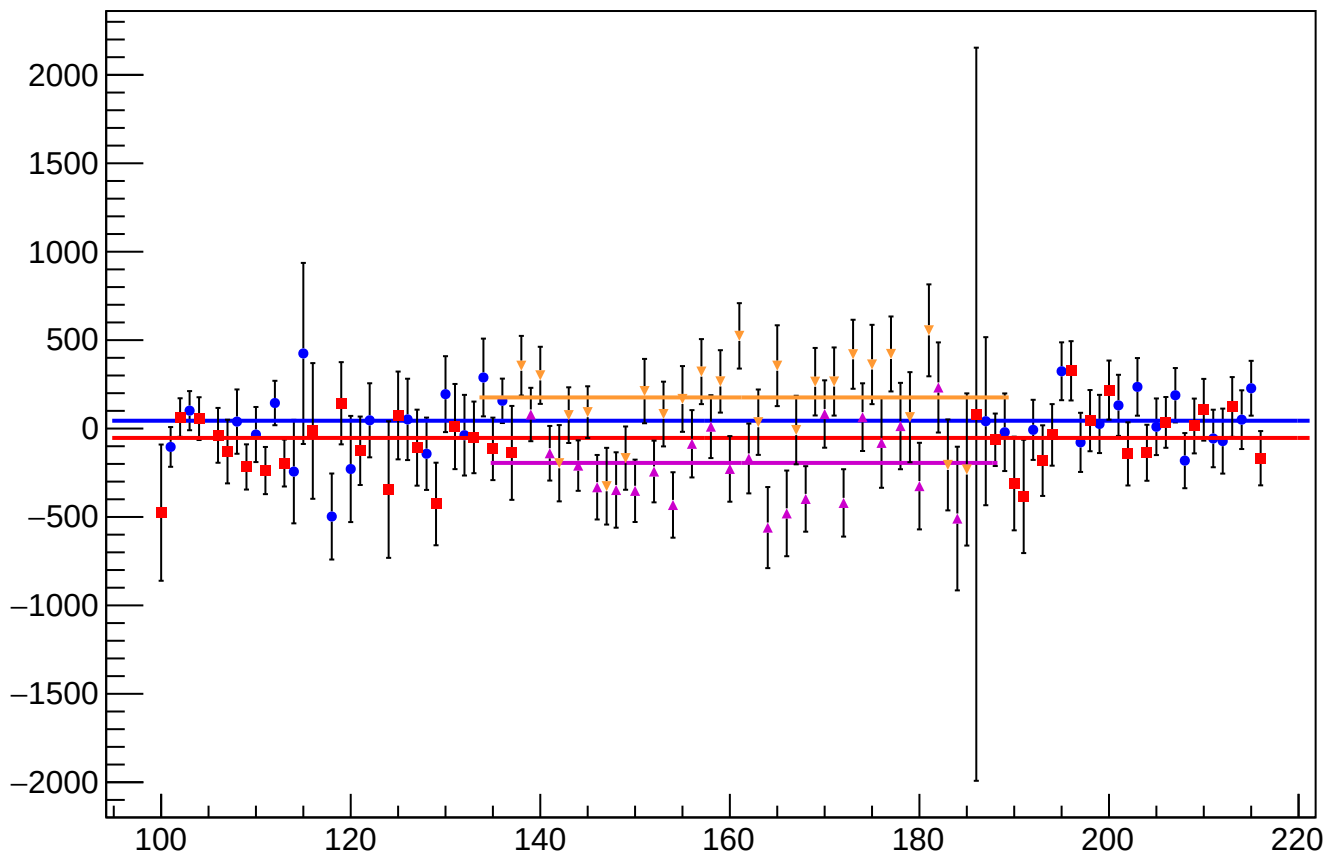
+ sign 932.725 $\pm$ 0.109  $\chi^2$ /NDF: 3535423.2/55

All: 916.790 $\pm$ 0.077  $\chi^2$ /NDF: 8481577.4/113

- sign 901.362 $\pm$ 0.107  $\chi^2$ /NDF: 4904191.5/57



# eigen\_dit\_asym\_sam5\_mean vs Slug



Right In: 44.192 $\pm$ 31.029  $\chi^2$ /NDF: 24.2/30

Left Out: 176.011 $\pm$ 38.838  $\chi^2$ /NDF:30.8/24

Right Out: -53.048 $\pm$ 29.978  $\chi^2$ /NDF: 26.7/34

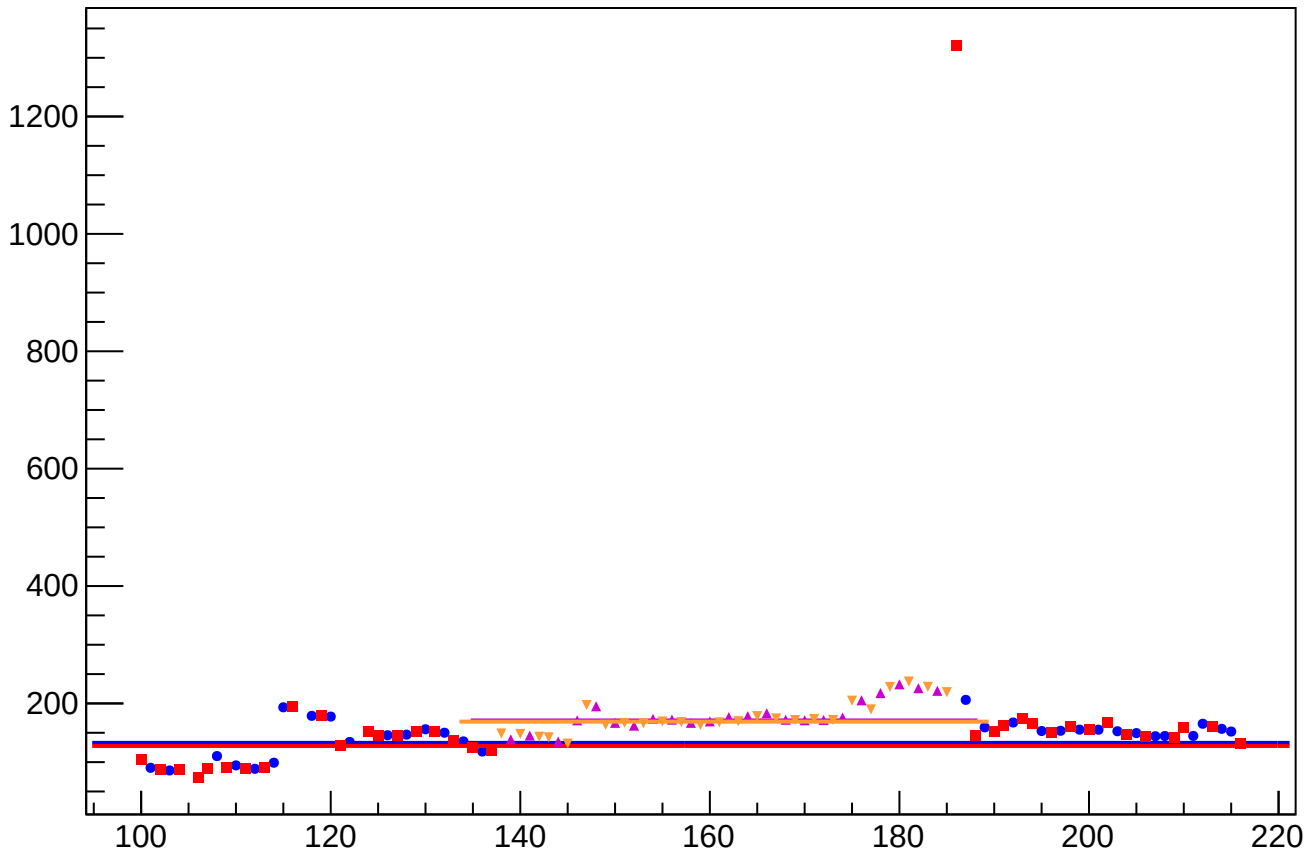
Left In: -194.324 $\pm$ 40.384  $\chi^2$ /NDF:23.8/22

+ sign 95.551 $\pm$ 24.242  $\chi^2$ /NDF: 62.0/55

All: -4.550 $\pm$ 17.081  $\chi^2$ /NDF: 154.3/113

- sign -103.240 $\pm$ 24.071  $\chi^2$ /NDF: 58.5/57

# eigen\_dit\_asym\_sam5\_rms vs Slug



Right In: 132.820 $\pm$ 0.022  $\chi^2$ /NDF: 1806397.2/30

Left Out: 169.009 $\pm$ 0.027  $\chi^2$ /NDF: 773925.9/24

Right Out: 127.576 $\pm$ 0.021  $\chi^2$ /NDF: 2995224.3/34

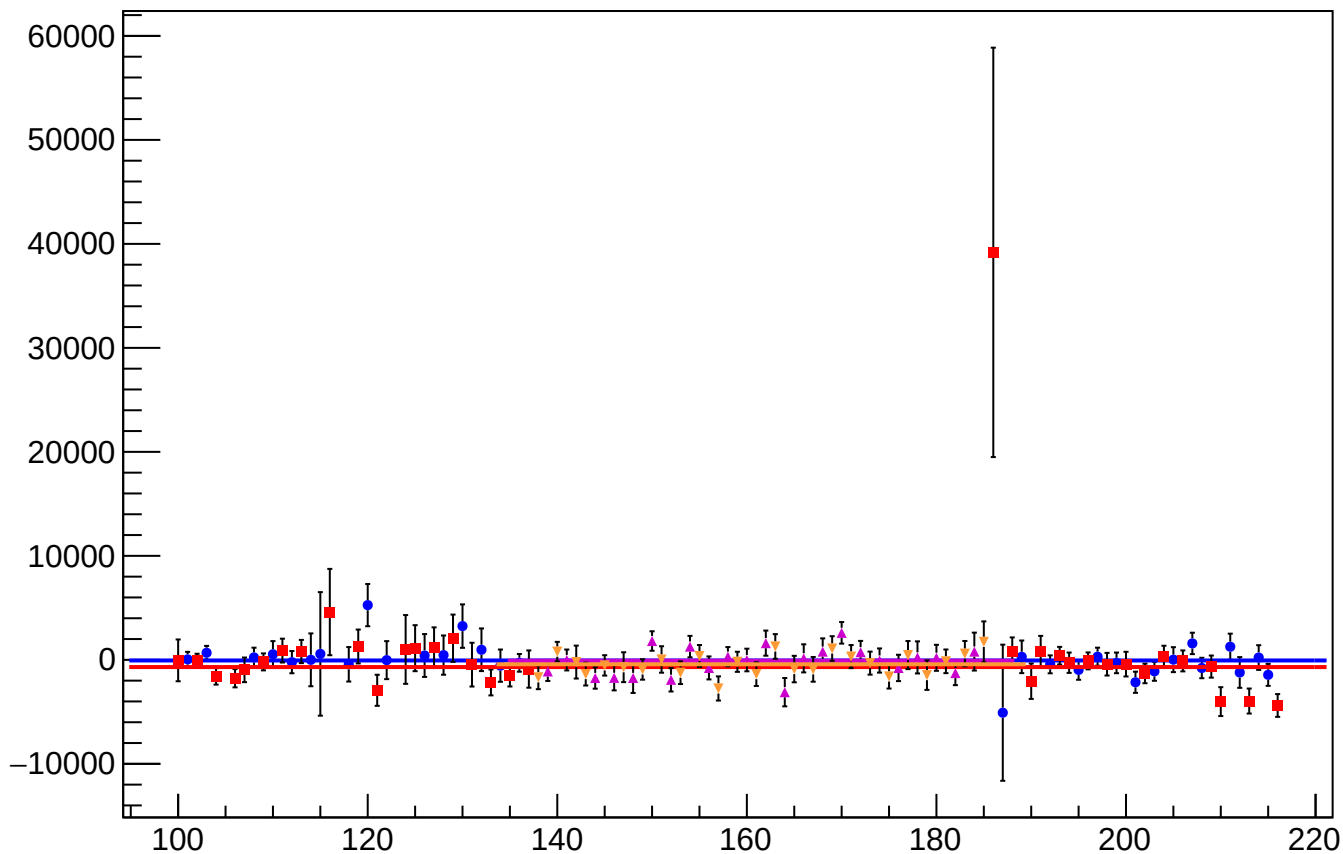
Left In: 171.021 $\pm$ 0.029  $\chi^2$ /NDF: 678096.1/22

+ sign 146.920 $\pm$ 0.017  $\chi^2$ /NDF: 3640251.0/55

All: 144.952 $\pm$ 0.012  $\chi^2$ /NDF: 8832146.7/113

- sign 143.011 $\pm$ 0.017  $\chi^2$ /NDF: 5165705.2/57

# asym\_sam5\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-59.961 \pm 206.318$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $-425.818 \pm 232.561$   $\chi^2/\text{NDF}$ : 18.4/24

Right Out:  $-694.594 \pm 197.143$   $\chi^2/\text{NDF}$ : 54.4/34

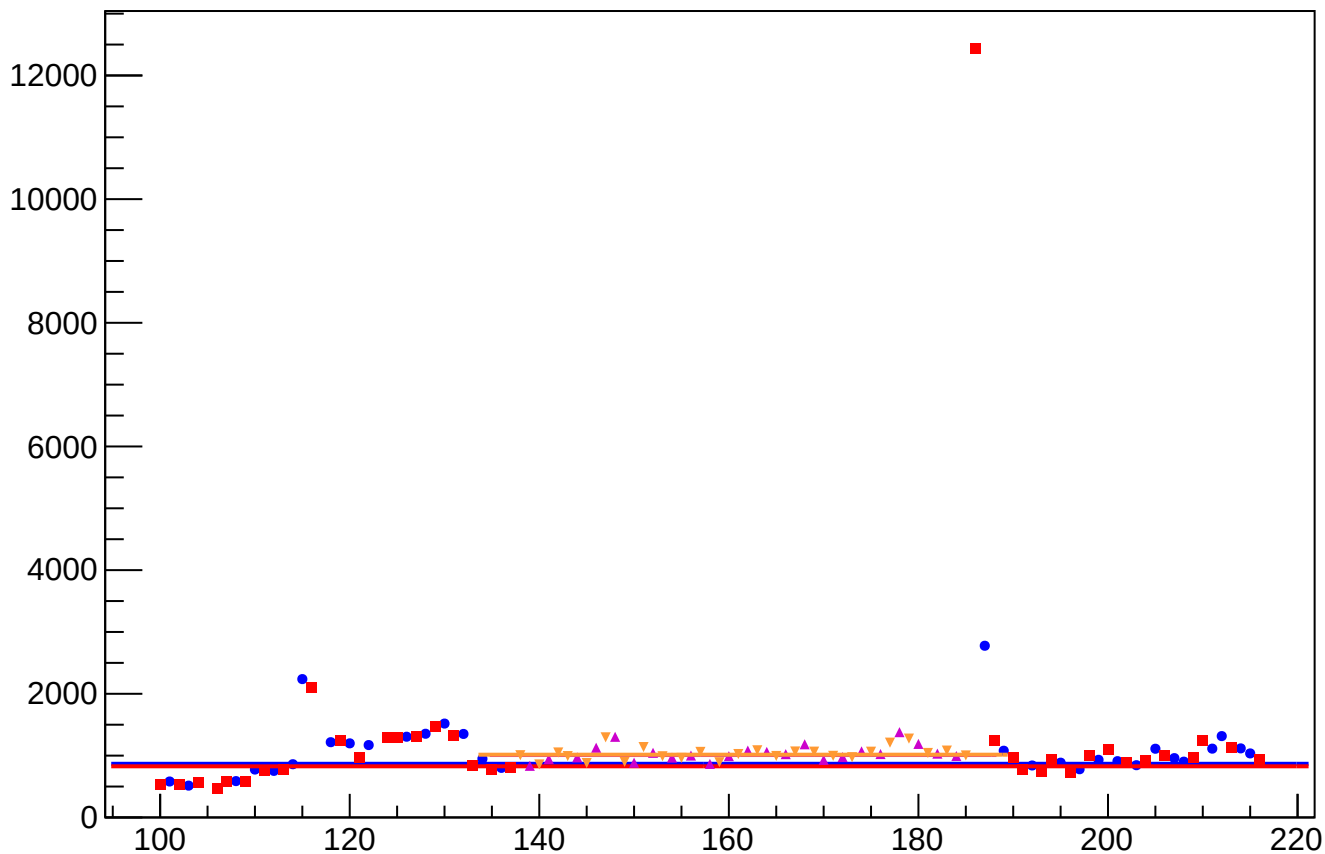
Left In:  $-86.487 \pm 238.155$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $-221.091 \pm 154.337$   $\chi^2/\text{NDF}$ : 45.4/55

All:  $-336.038 \pm 108.247$   $\chi^2/\text{NDF}$ : 137.2/113

- sign  $-447.329 \pm 151.862$   $\chi^2/\text{NDF}$ : 90.7/57

# asym\_sam5\_eigen\_dit\_correction\_rms vs Slug



Right In: 867.933 $\pm$ 0.146  $\chi^2$ /NDF: 2689621.3/30

Left Out: 1015.047 $\pm$ 0.164  $\chi^2$ /NDF: 397964.6/24

Right Out: 827.142 $\pm$ 0.139  $\chi^2$ /NDF: 3708278.3/34

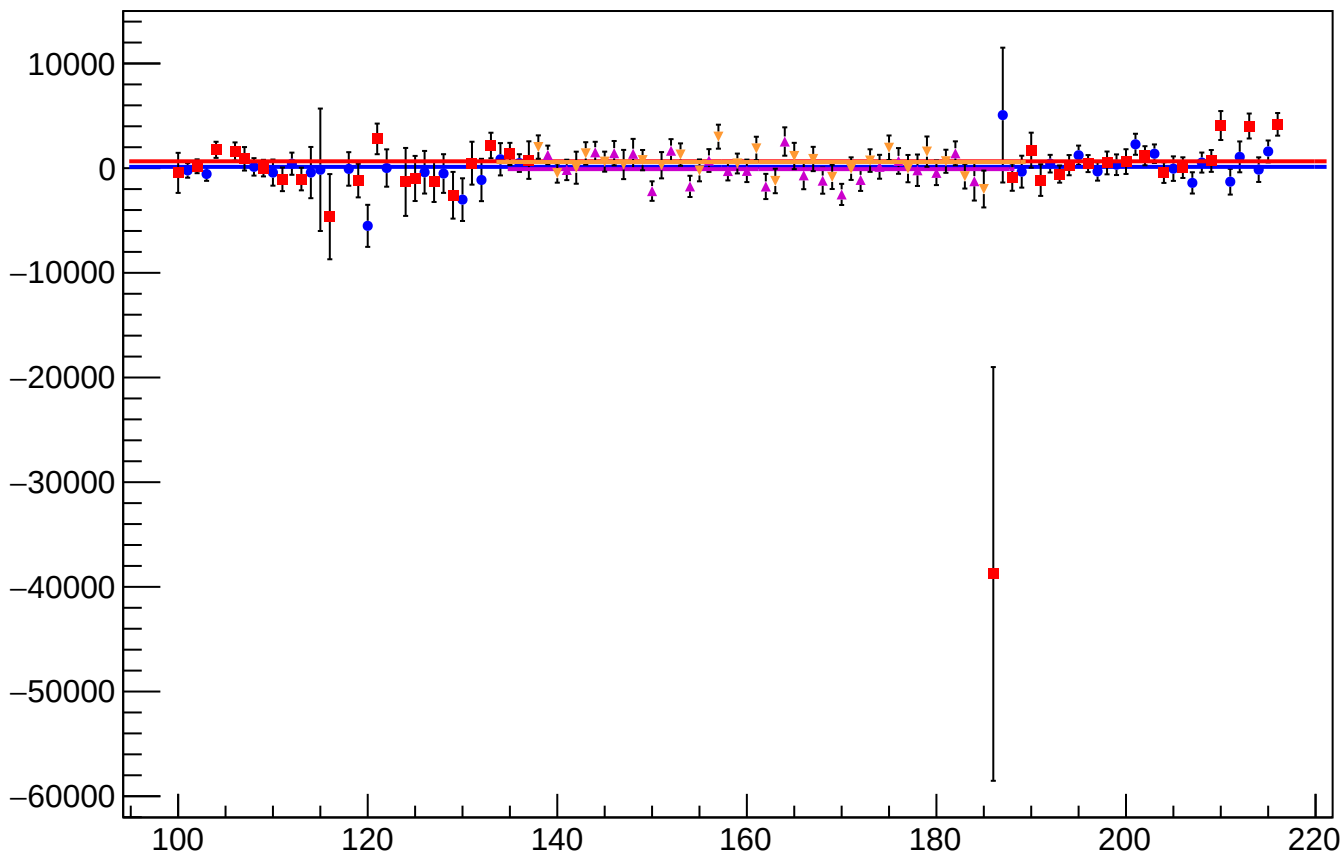
Left In: 1009.673 $\pm$ 0.168  $\chi^2$ /NDF: 498783.6/22

+ sign 932.725 $\pm$ 0.109  $\chi^2$ /NDF: 3535432.1/55

All: 916.790 $\pm$ 0.077  $\chi^2$ /NDF: 8481603.2/113

- sign 901.362 $\pm$ 0.107  $\chi^2$ /NDF: 4904208.2/57

# asym\_sam5\_mean vs Slug



Right In: 123.159 $\pm$ 201.964  $\chi^2$ /NDF: 28.3/30

Left Out: 586.188 $\pm$ 227.585  $\chi^2$ /NDF: 20.8/24

Right Out: 654.253 $\pm$ 193.518  $\chi^2$ /NDF: 57.1/34

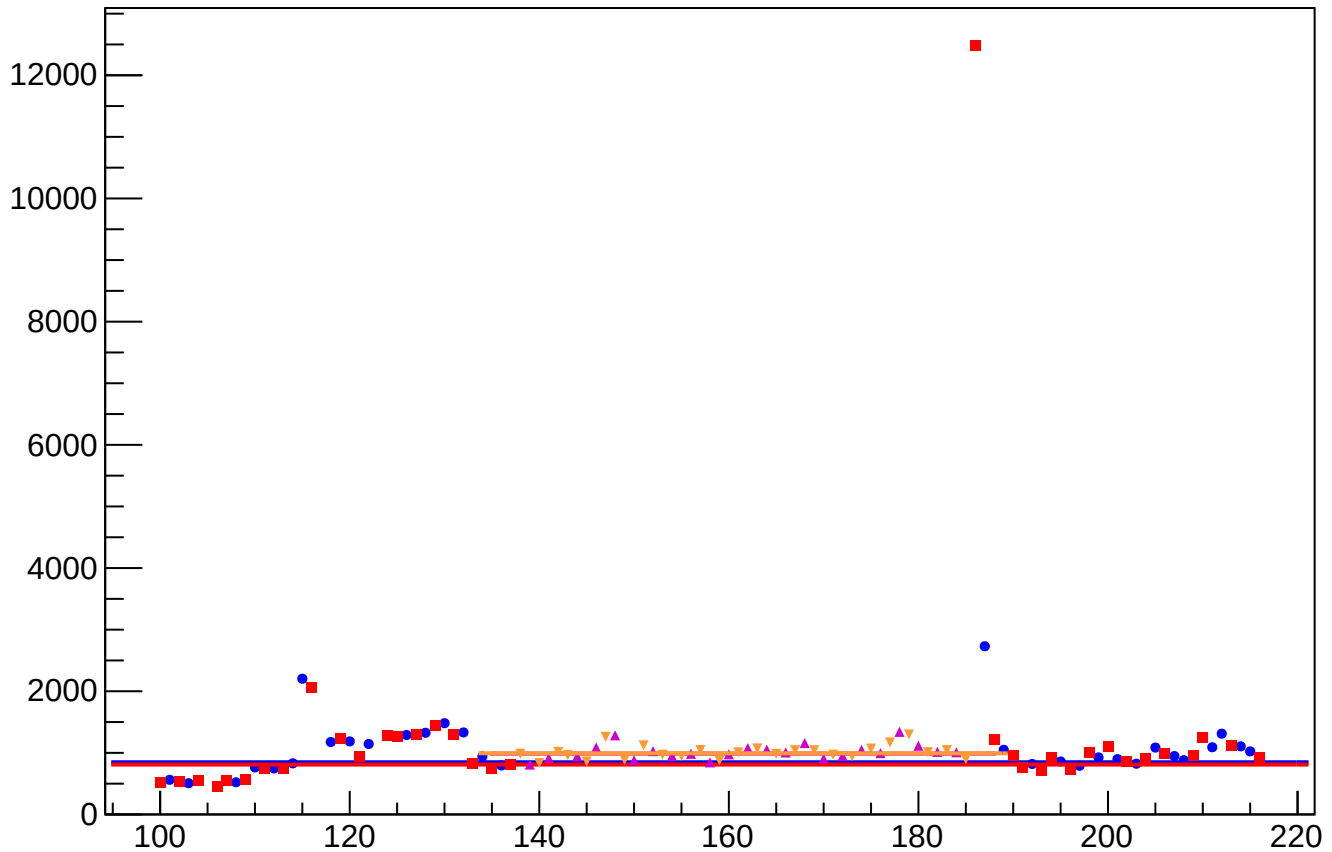
Left In: -92.688 $\pm$ 233.019  $\chi^2$ /NDF: 34.6/22

+ sign 327.154 $\pm$ 151.060  $\chi^2$ /NDF: 51.4/55

All: 338.422 $\pm$ 106.034  $\chi^2$ /NDF: 149.1/113

- sign 349.367 $\pm$ 148.874  $\chi^2$ /NDF: 97.7/57

# asym\_sam5\_rms vs Slug



Right In: 847.389 $\pm$ 0.143  $\chi^2$ /NDF: 2832019.4/30

Left Out: 992.549 $\pm$ 0.161  $\chi^2$ /NDF: 424899.6/24

Right Out: 809.870 $\pm$ 0.137  $\chi^2$ /NDF: 3821873.1/34

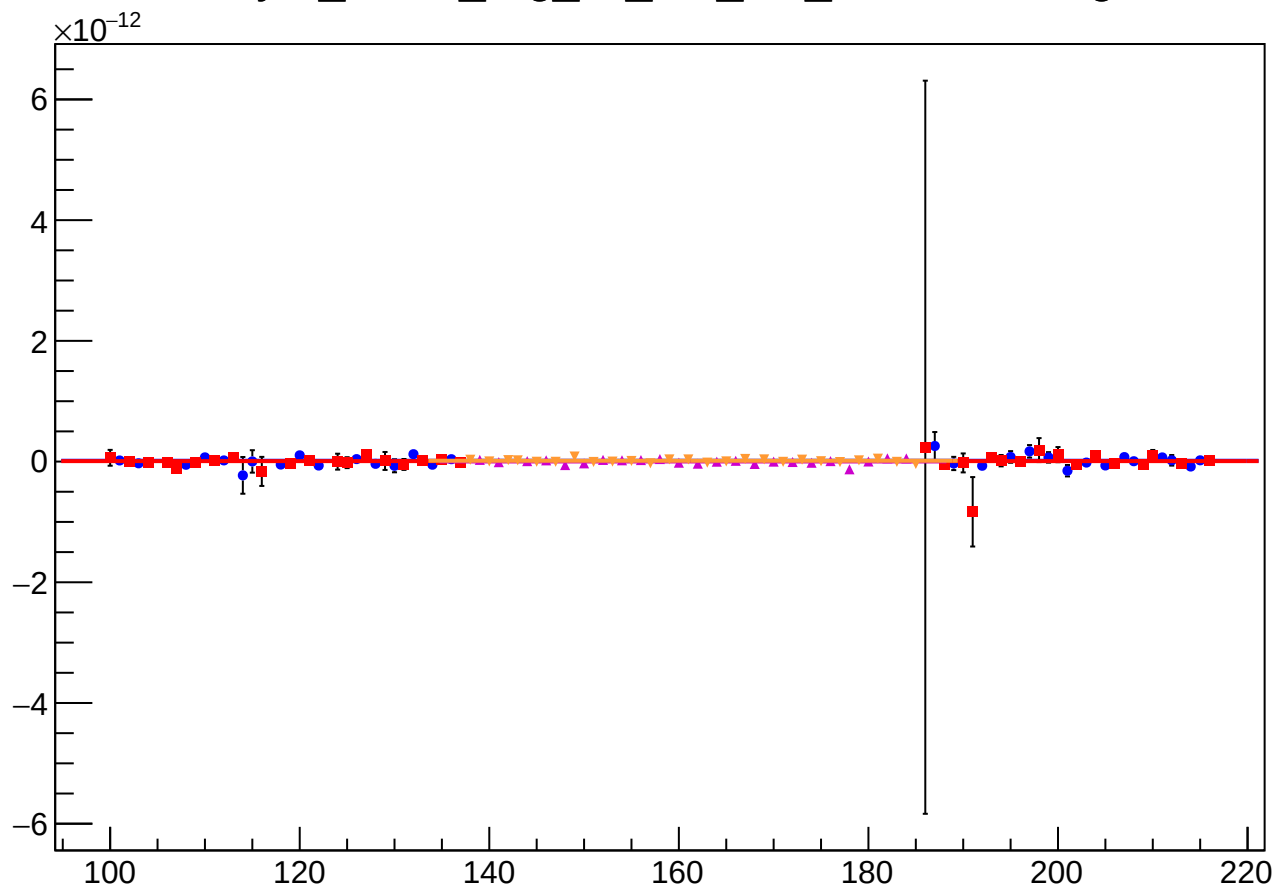
Left In: 987.784 $\pm$ 0.165  $\chi^2$ /NDF: 487733.2/22

+ sign 911.342 $\pm$ 0.107  $\chi^2$ /NDF: 3712098.9/55

All: 896.706 $\pm$ 0.075  $\chi^2$ /NDF: 8748731.0/113

- sign 882.491 $\pm$ 0.105  $\chi^2$ /NDF: 4999622.6/57

# asym\_sam5\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.6/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.9/34

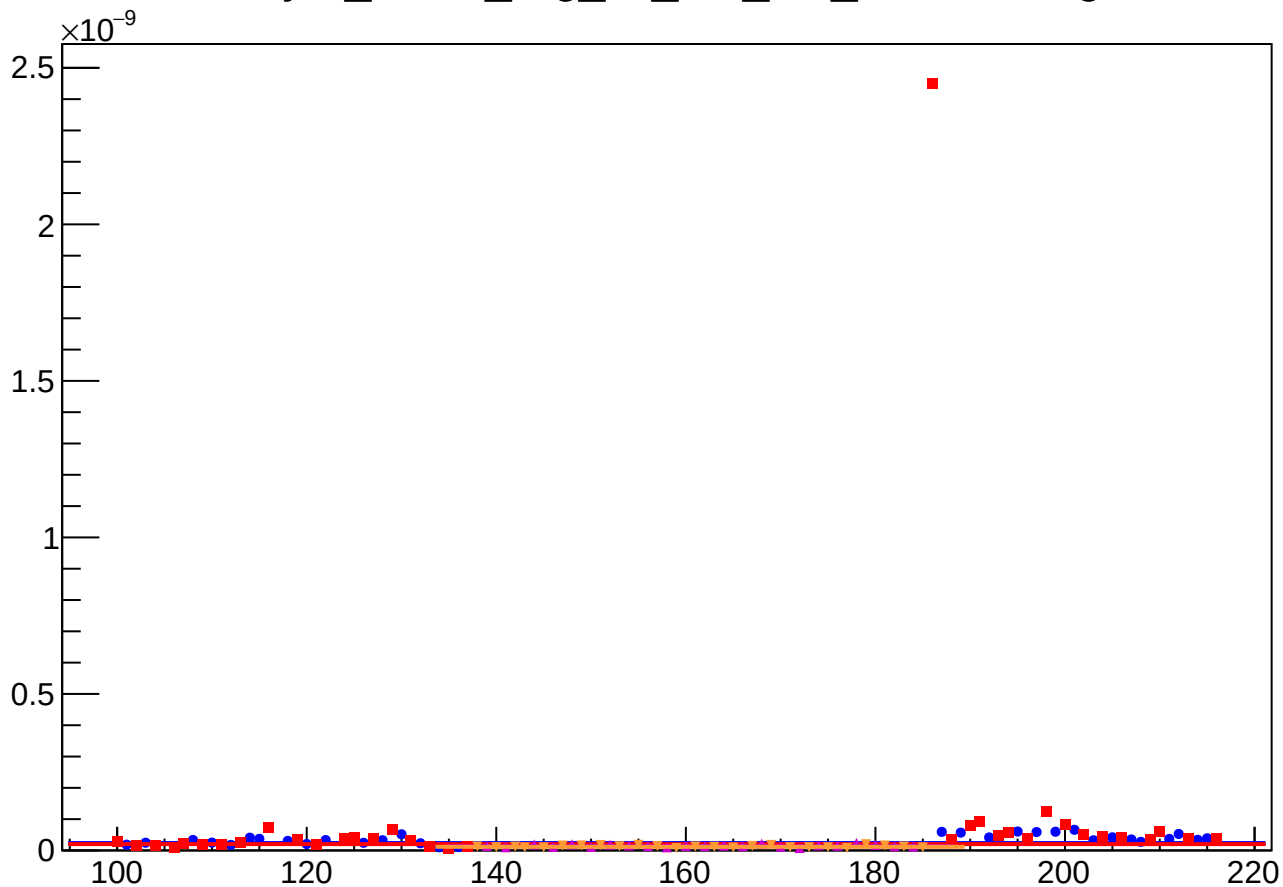
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.8/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.4/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/57

# asym\_sam5\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4285456.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 762184.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6706832.8/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 853838.4/22

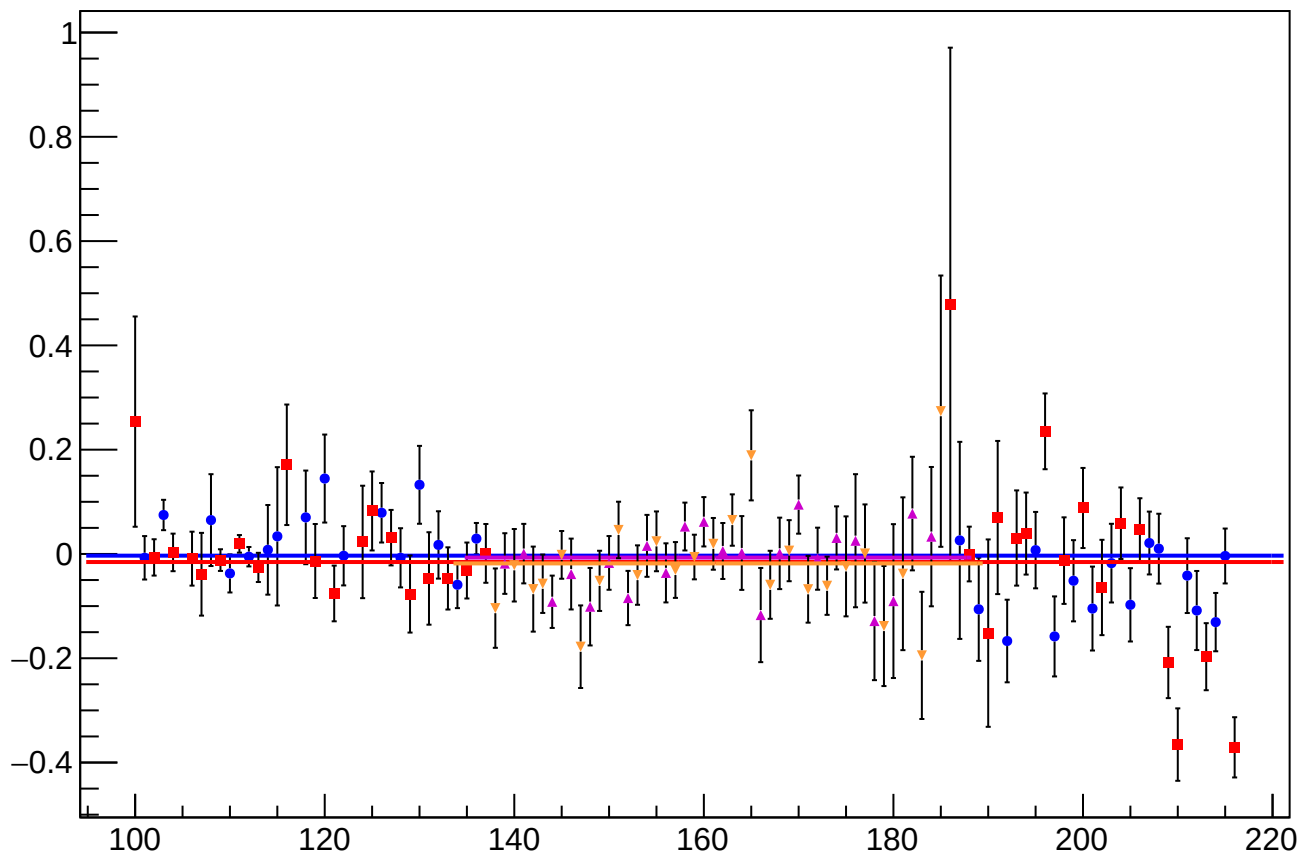
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7751188.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16326760.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8493276.6/57



# asym\_sam5\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 41.6/30

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.5/34

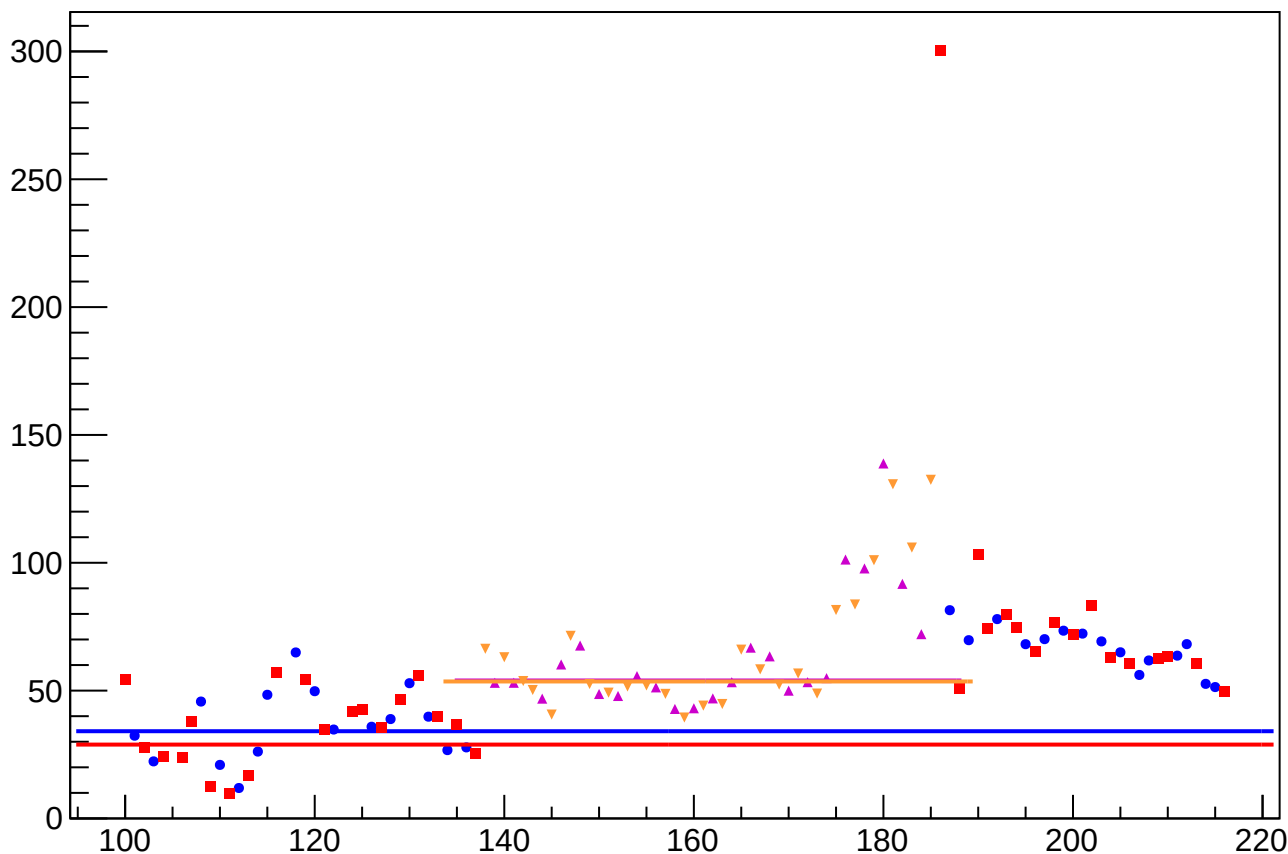
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 66.8/55

All:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 198.5/113

- sign  $-0.013 \pm 0.007$   $\chi^2/\text{NDF}$ : 131.5/57

# asym\_sam5\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $34.122 \pm 0.007$   $\chi^2/\text{NDF}: 9548645.9/30$

Left Out:  $53.582 \pm 0.009$   $\chi^2/\text{NDF}: 2642509.0/24$

Right Out:  $28.889 \pm 0.006$   $\chi^2/\text{NDF}: 13294496.0/34$

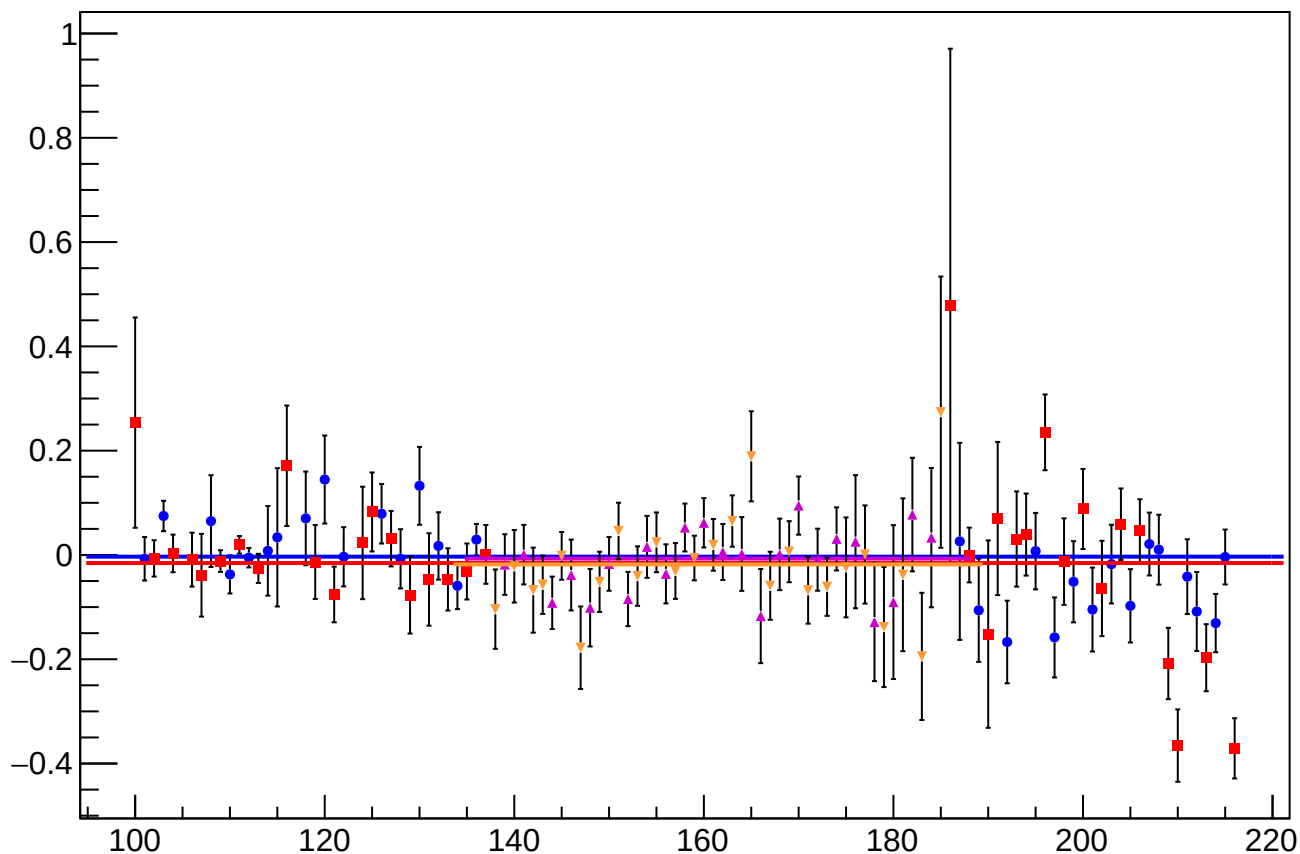
Left In:  $53.961 \pm 0.009$   $\chi^2/\text{NDF}: 2039530.1/22$

+ sign  $40.752 \pm 0.005$   $\chi^2/\text{NDF}: 15238586.9/55$

All:  $38.222 \pm 0.004$   $\chi^2/\text{NDF}: 36182269.6/113$

- sign  $35.988 \pm 0.005$   $\chi^2/\text{NDF}: 20511896.8/57$

# asym\_sam5\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 41.6/30

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.5/34

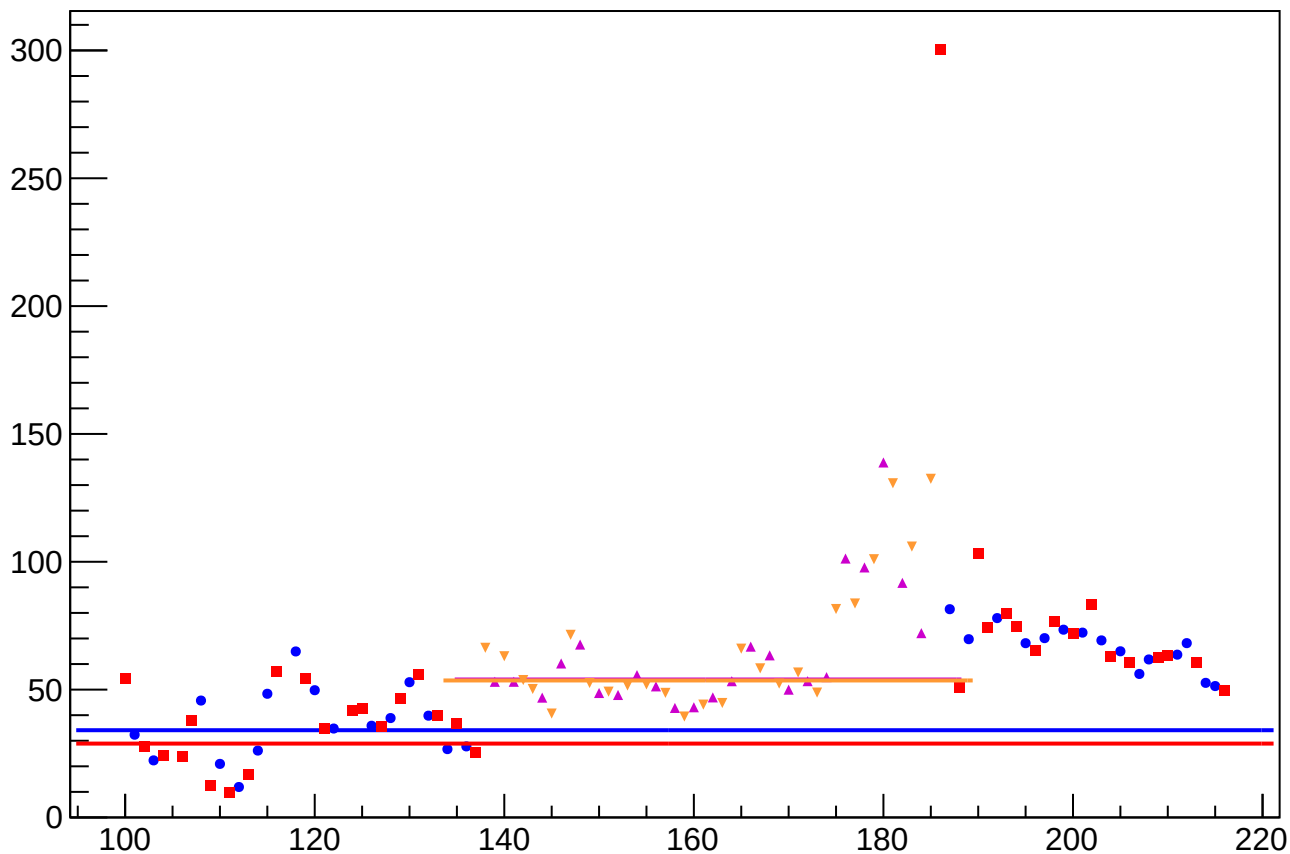
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 66.8/55

All:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 198.5/113

- sign  $-0.013 \pm 0.007$   $\chi^2/\text{NDF}$ : 131.5/57

# asym\_sam5\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.122 $\pm$ 0.007  $\chi^2$ /NDF: 9548645.9/30

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642509.0/24

Right Out: 28.889 $\pm$ 0.006  $\chi^2$ /NDF: 13294496.0/34

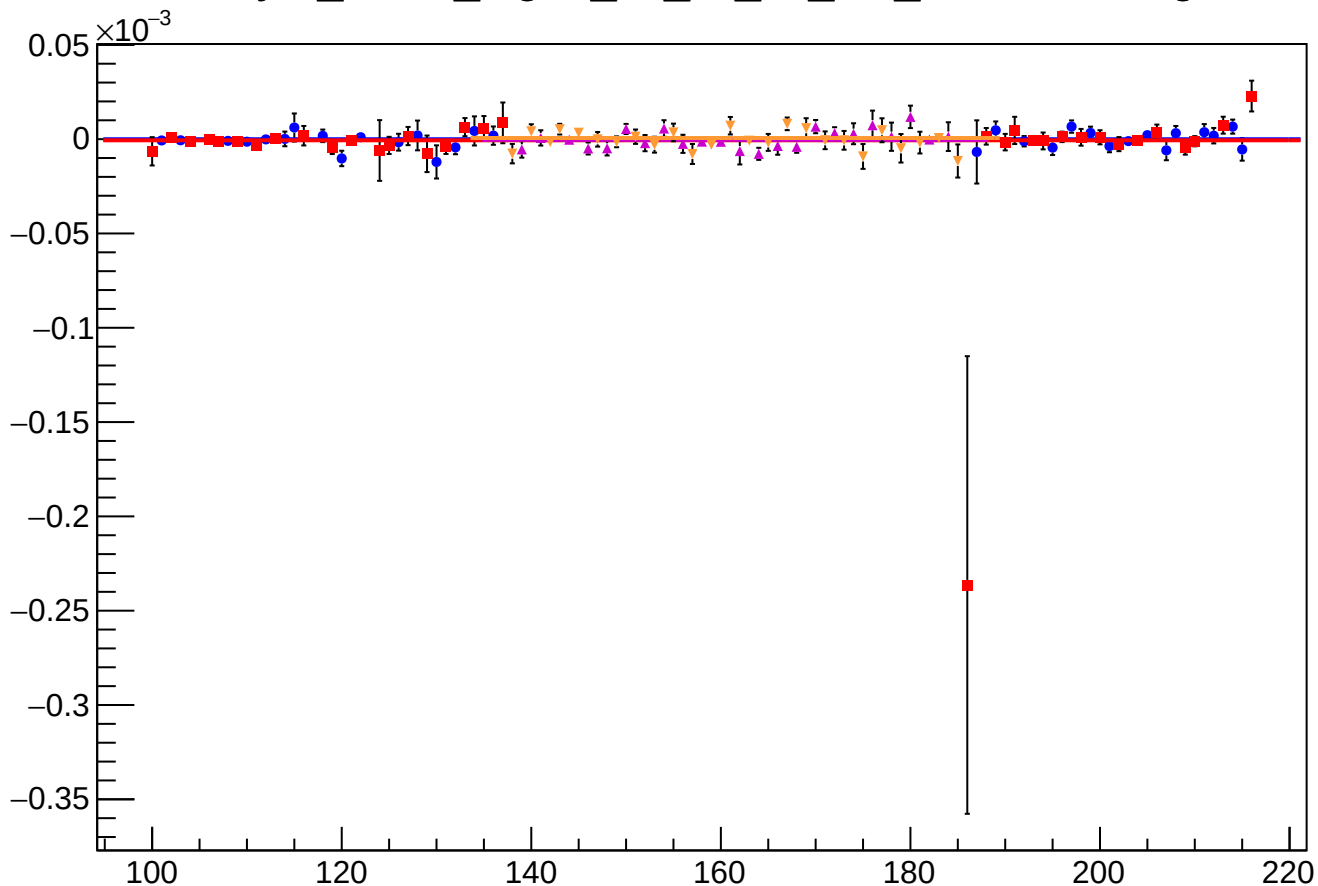
Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039530.1/22

+ sign 40.752 $\pm$ 0.005  $\chi^2$ /NDF: 15238586.9/55

All: 38.222 $\pm$ 0.004  $\chi^2$ /NDF: 36182269.6/113

- sign 35.988 $\pm$ 0.005  $\chi^2$ /NDF: 20511896.8/57

# asym\_sam5\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.2/34

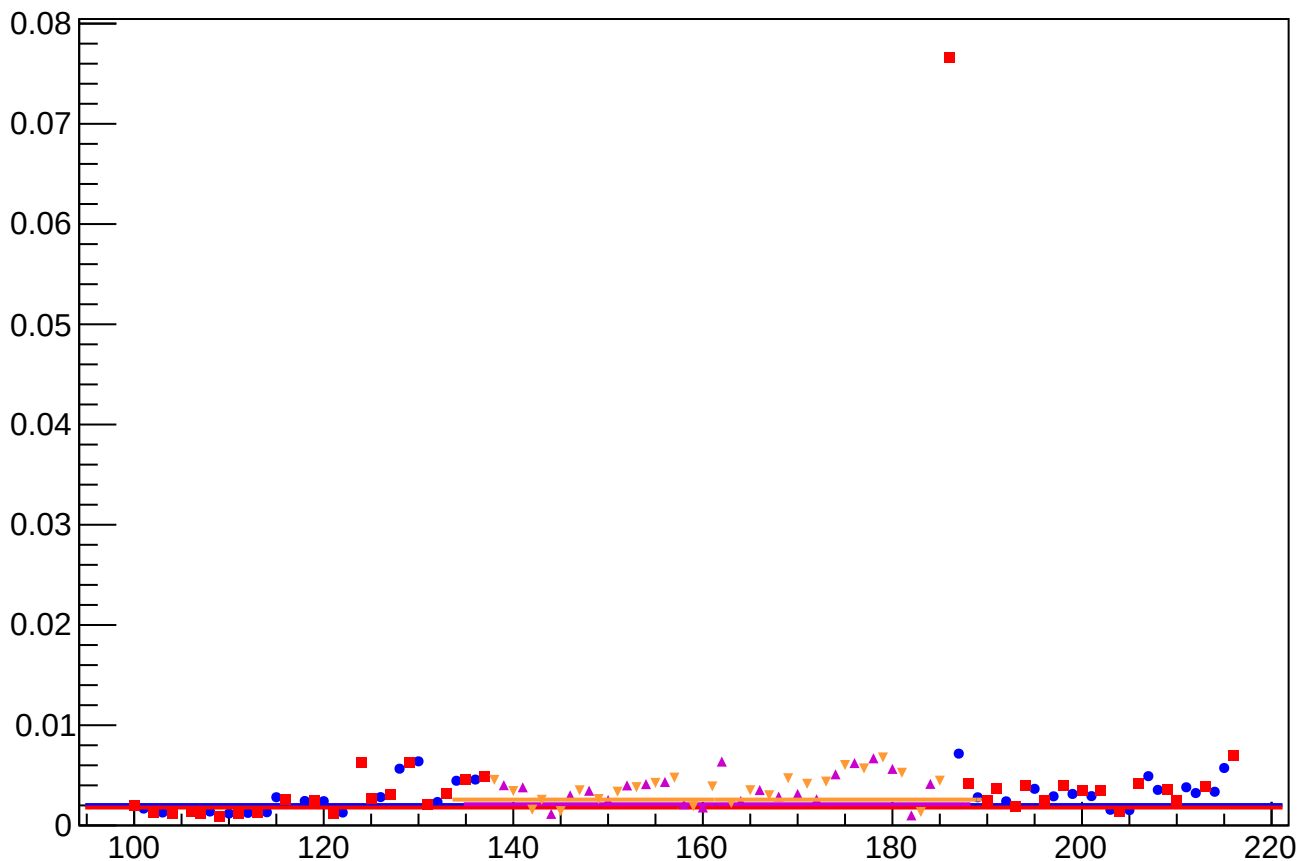
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.4/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 125.2/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.2/57

# asym\_sam5\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7373217.4/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 7112963.2/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9847138.9/34

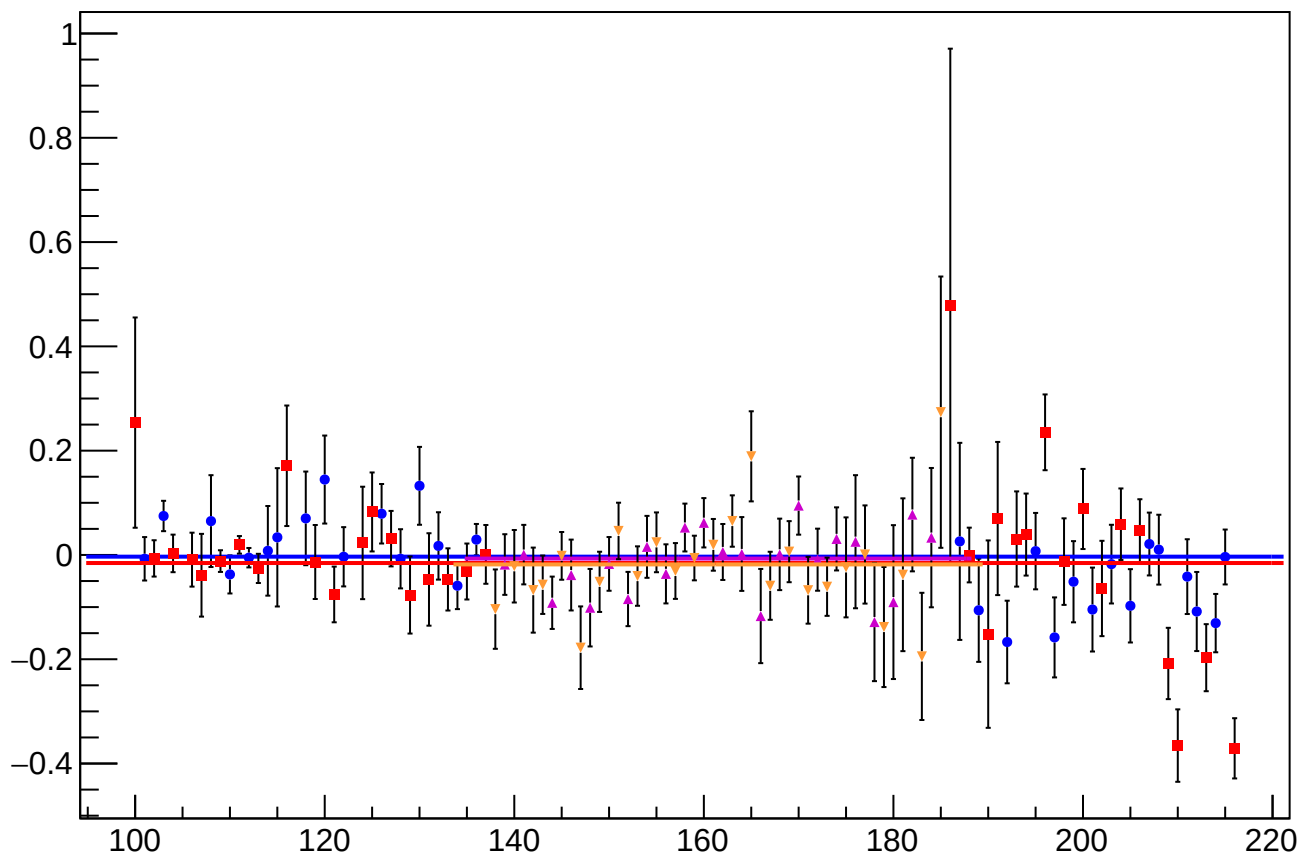
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 9487138.7/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15300018.8/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 35683712.8/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 19697724.6/57

asym\_sam5\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 41.6/30

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.5/34

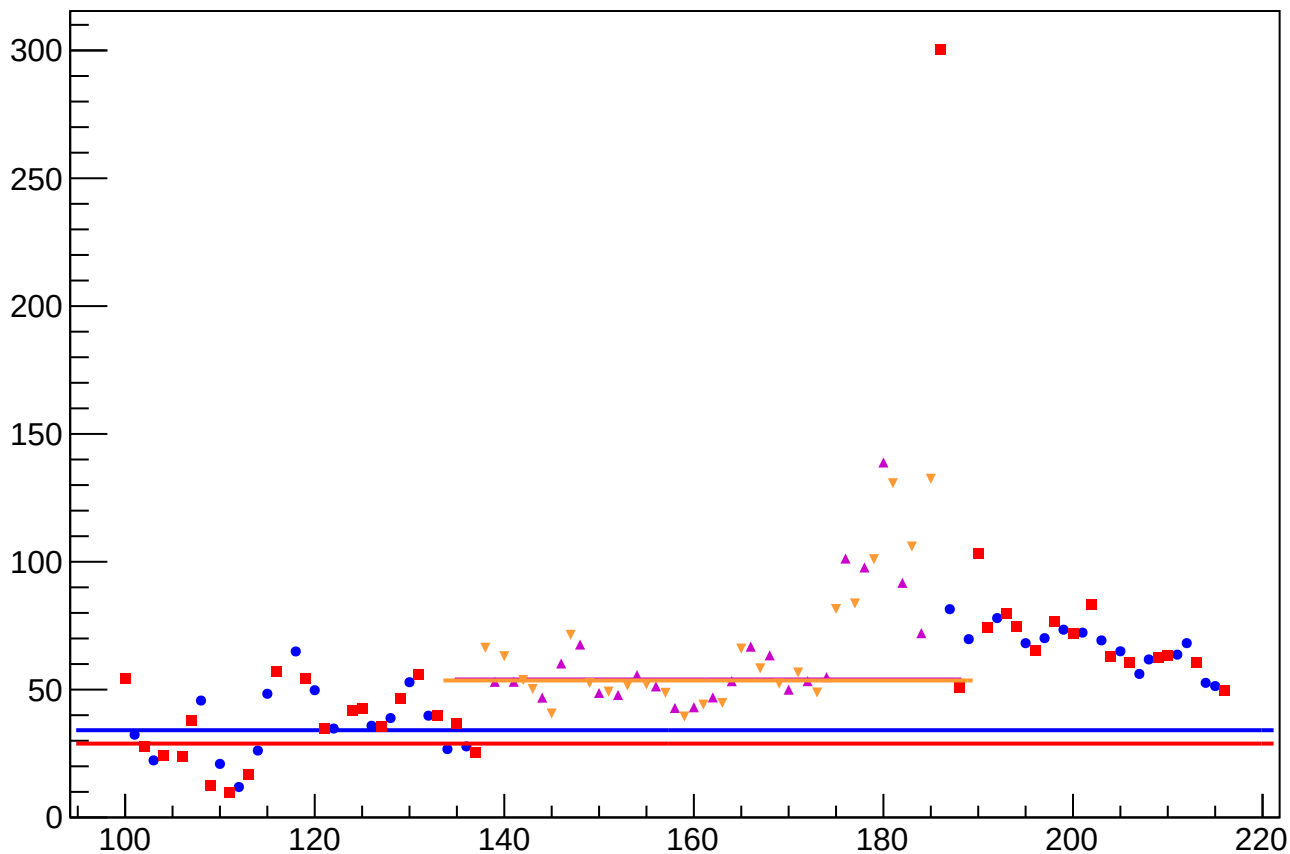
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 66.8/55

All:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 198.5/113

- sign  $-0.013 \pm 0.007$   $\chi^2/\text{NDF}$ : 131.5/57

# asym\_sam5\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 34.122 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 9548798.9/30

Left Out: 53.582 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 2642554.6/24

Right Out: 28.888 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 13294691.5/34

Left In: 53.961 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 2039571.7/22

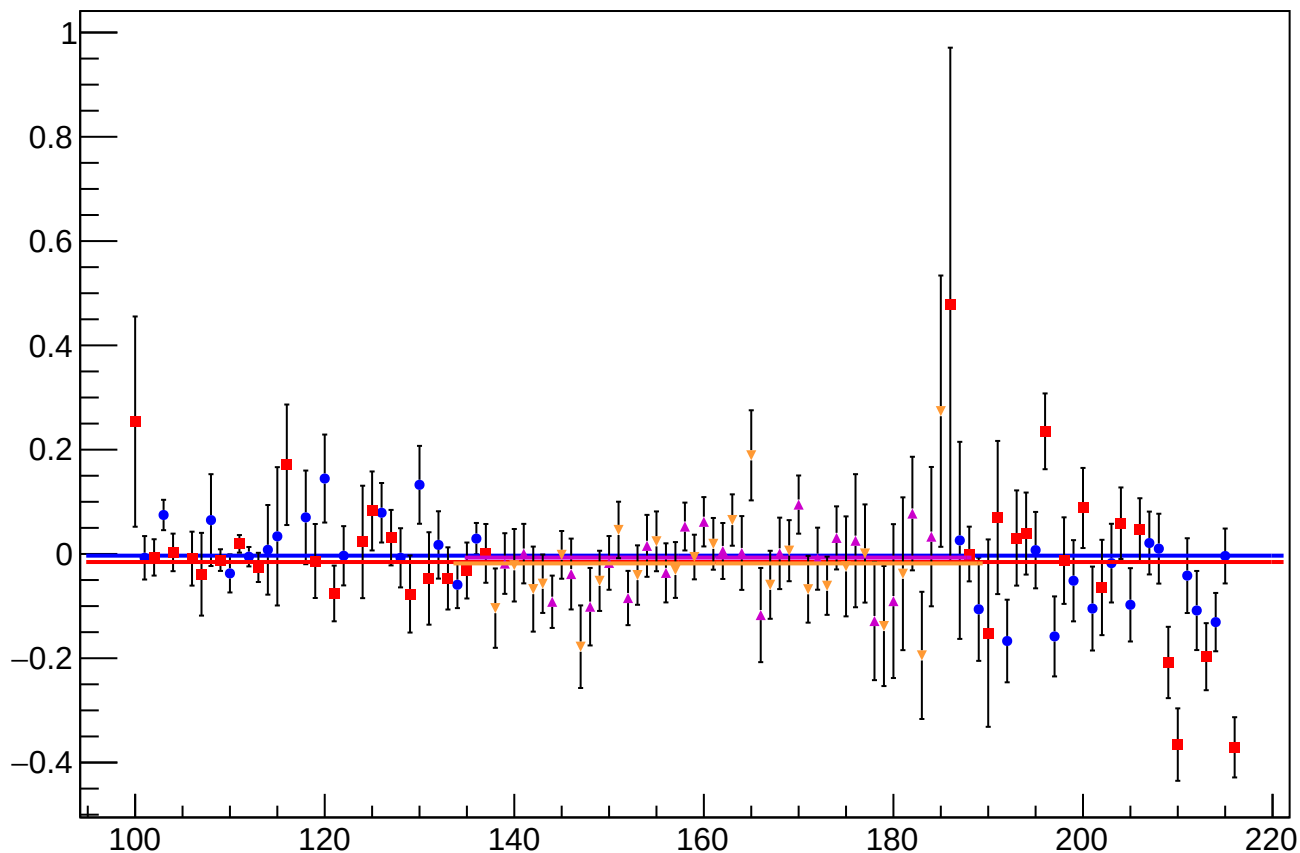
+ sign 40.751 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 15239102.6/55

All: 38.221 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 36183502.9/113

- sign 35.987 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 20512575.7/57



asym\_sam5\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 41.6/30

Left Out:  $-0.018 \pm 0.013$   $\chi^2/\text{NDF}$ : 24.3/24

Right Out:  $-0.015 \pm 0.008$   $\chi^2/\text{NDF}$ : 112.5/34

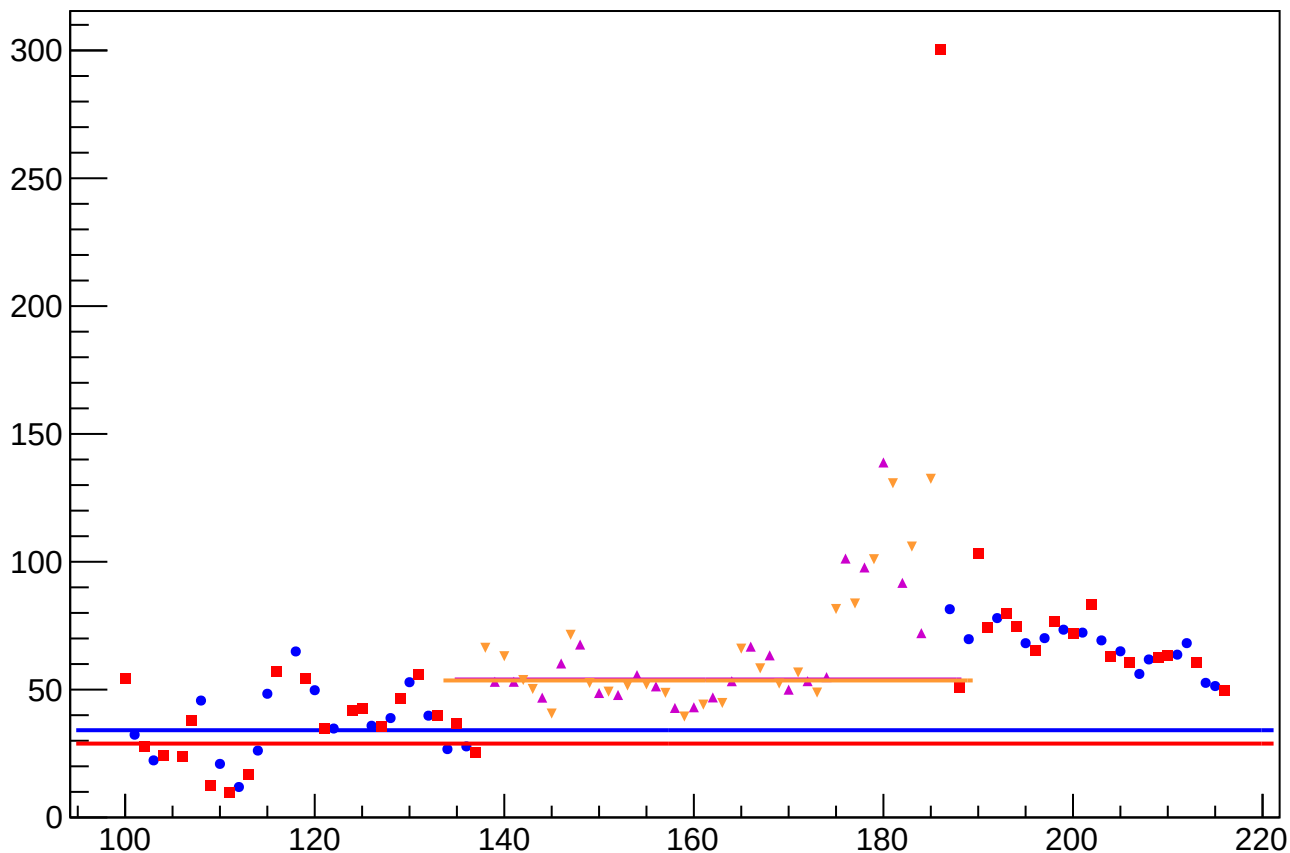
Left In:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 66.8/55

All:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 198.5/113

- sign  $-0.013 \pm 0.007$   $\chi^2/\text{NDF}$ : 131.5/57

asym\_sam5\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.122 $\pm$ 0.007  $\chi^2$ /NDF: 9548798.9/30

Left Out: 53.582 $\pm$ 0.009  $\chi^2$ /NDF: 2642554.6/24

Right Out: 28.888 $\pm$ 0.006  $\chi^2$ /NDF: 13294691.5/34

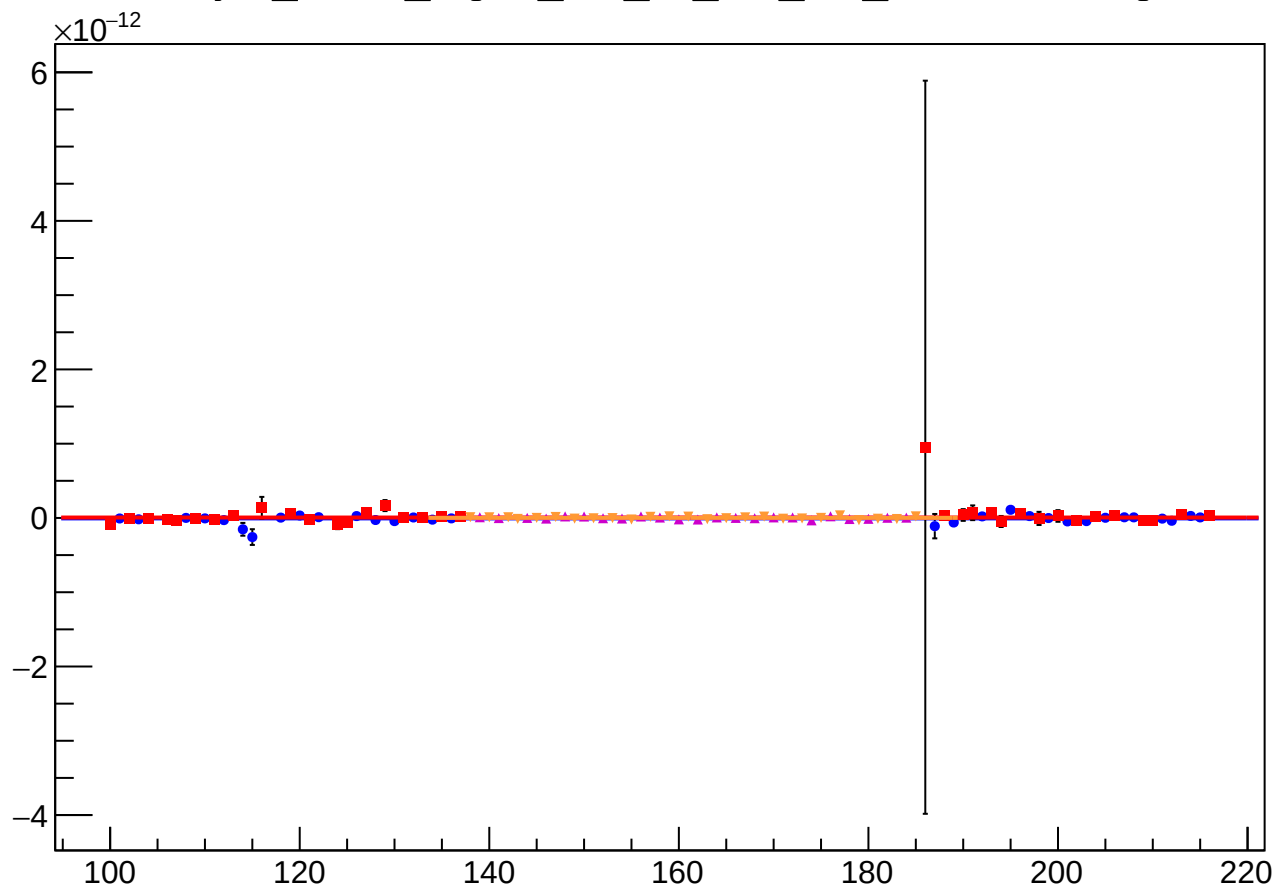
Left In: 53.961 $\pm$ 0.009  $\chi^2$ /NDF: 2039571.7/22

+ sign 40.751 $\pm$ 0.005  $\chi^2$ /NDF: 15239102.6/55

All: 38.221 $\pm$ 0.004  $\chi^2$ /NDF: 36183502.9/113

- sign 35.987 $\pm$ 0.005  $\chi^2$ /NDF: 20512575.7/57

# asym\_sam5\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.6/34

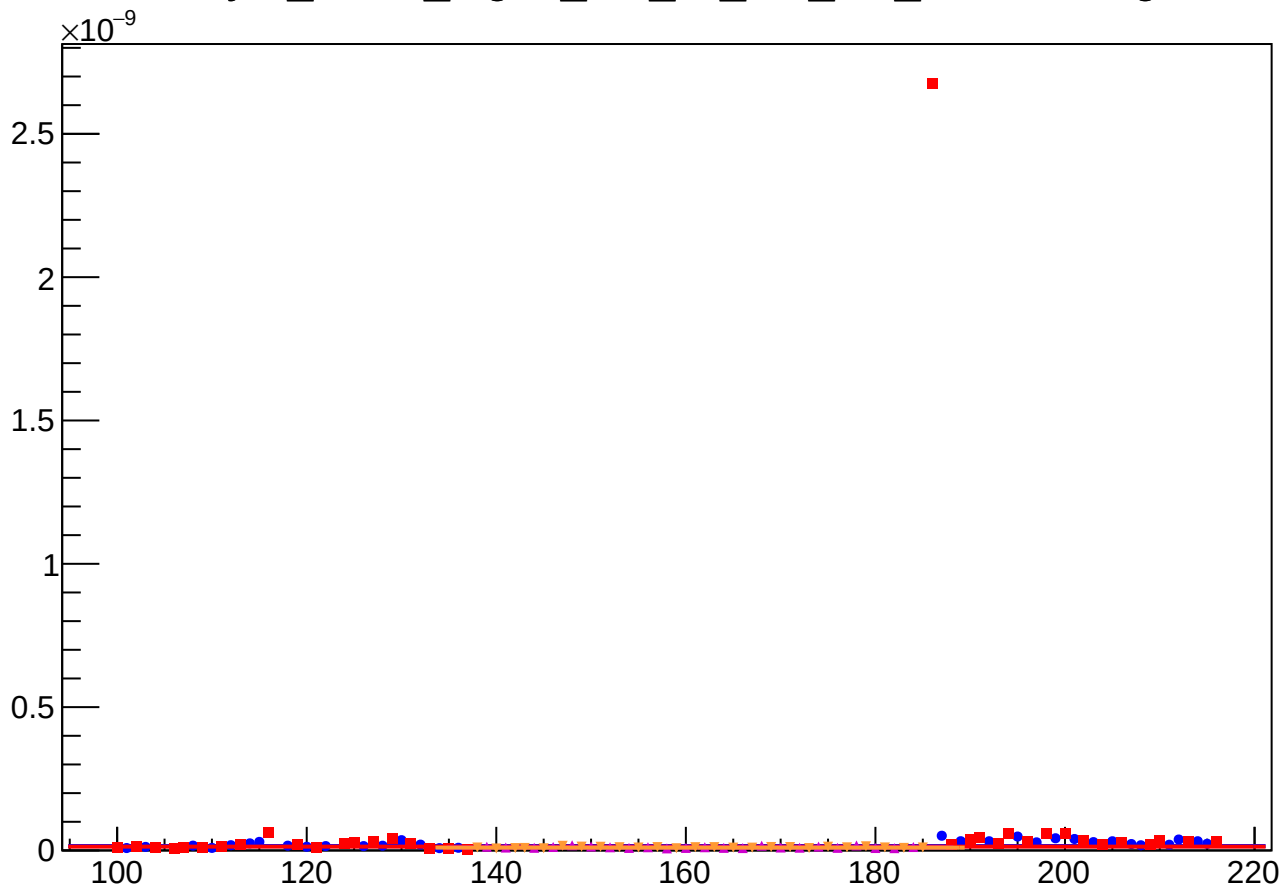
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 52.9/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 112.9/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 59.6/57

# asym\_sam5\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6008854.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1196110.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9339269.3/34

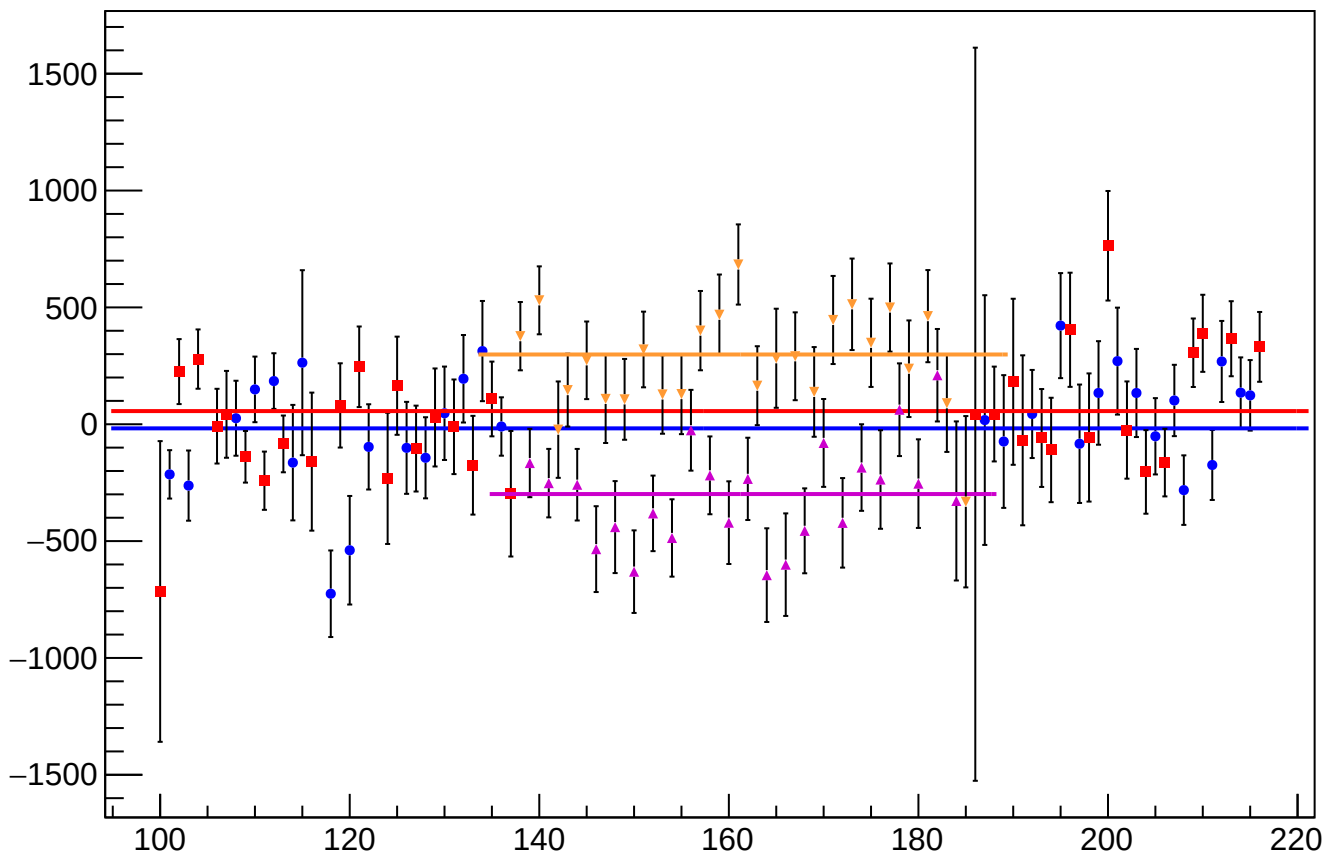
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1313644.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9068894.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20368317.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11299101.7/57

# reg\_asym\_sam6\_mean vs Slug



Right In:  $-17.609 \pm 31.084$   $\chi^2/\text{NDF}: 52.1/30$

Left Out:  $298.517 \pm 36.051$   $\chi^2/\text{NDF}: 26.0/24$

Right Out:  $56.318 \pm 30.680$   $\chi^2/\text{NDF}: 54.5/34$

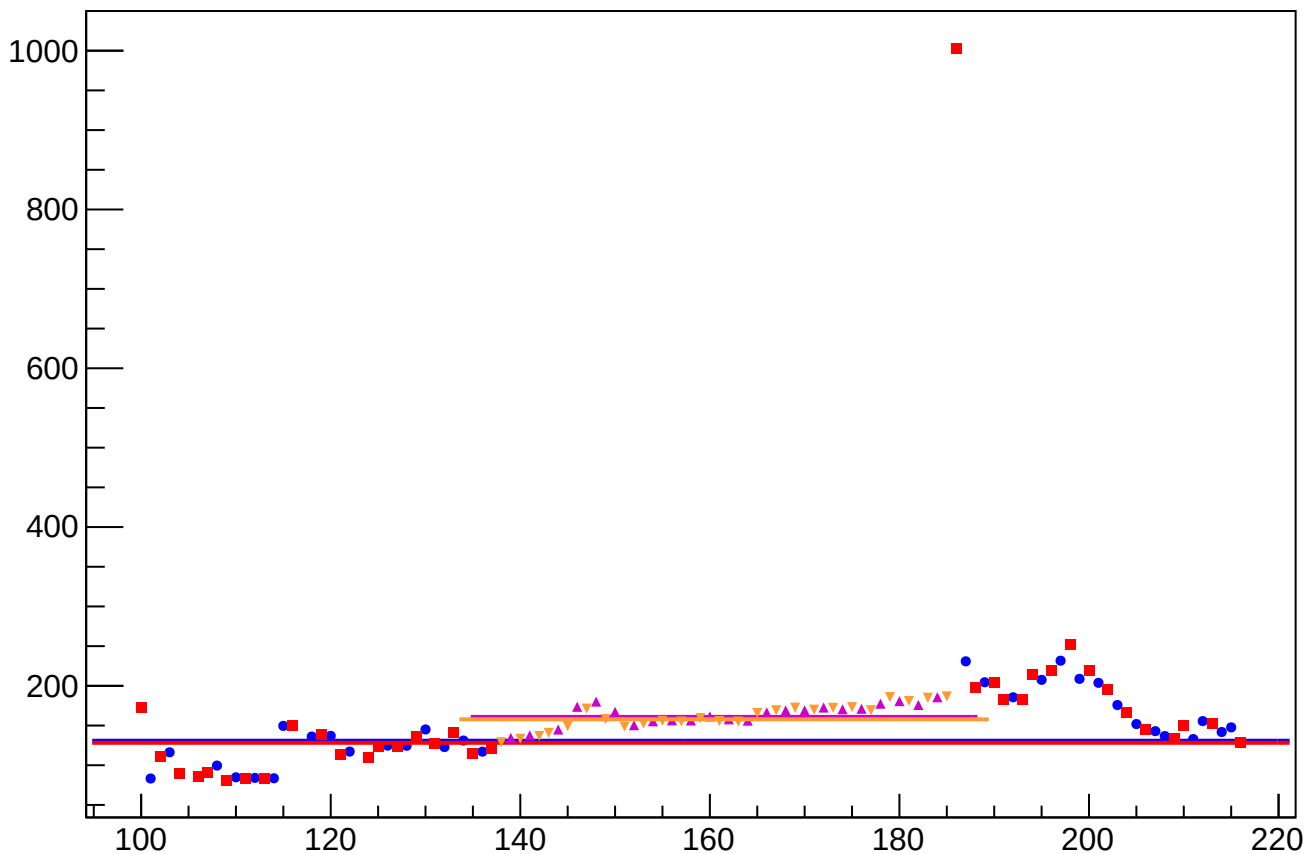
Left In:  $-298.675 \pm 37.727$   $\chi^2/\text{NDF}: 29.4/22$

+ sign  $117.194 \pm 23.541$   $\chi^2/\text{NDF}: 122.2/55$

All:  $17.216 \pm 16.738$   $\chi^2/\text{NDF}: 295.8/113$

- sign  $-84.995 \pm 23.803$   $\chi^2/\text{NDF}: 137.2/57$

# reg\_asym\_sam6\_rms vs Slug



Right In: 130.855 $\pm$ 0.022  $\chi^2$ /NDF: 2788793.7/30

Left Out: 157.836 $\pm$ 0.025  $\chi^2$ /NDF: 377205.2/24

Right Out: 128.278 $\pm$ 0.022  $\chi^2$ /NDF: 4246561.4/34

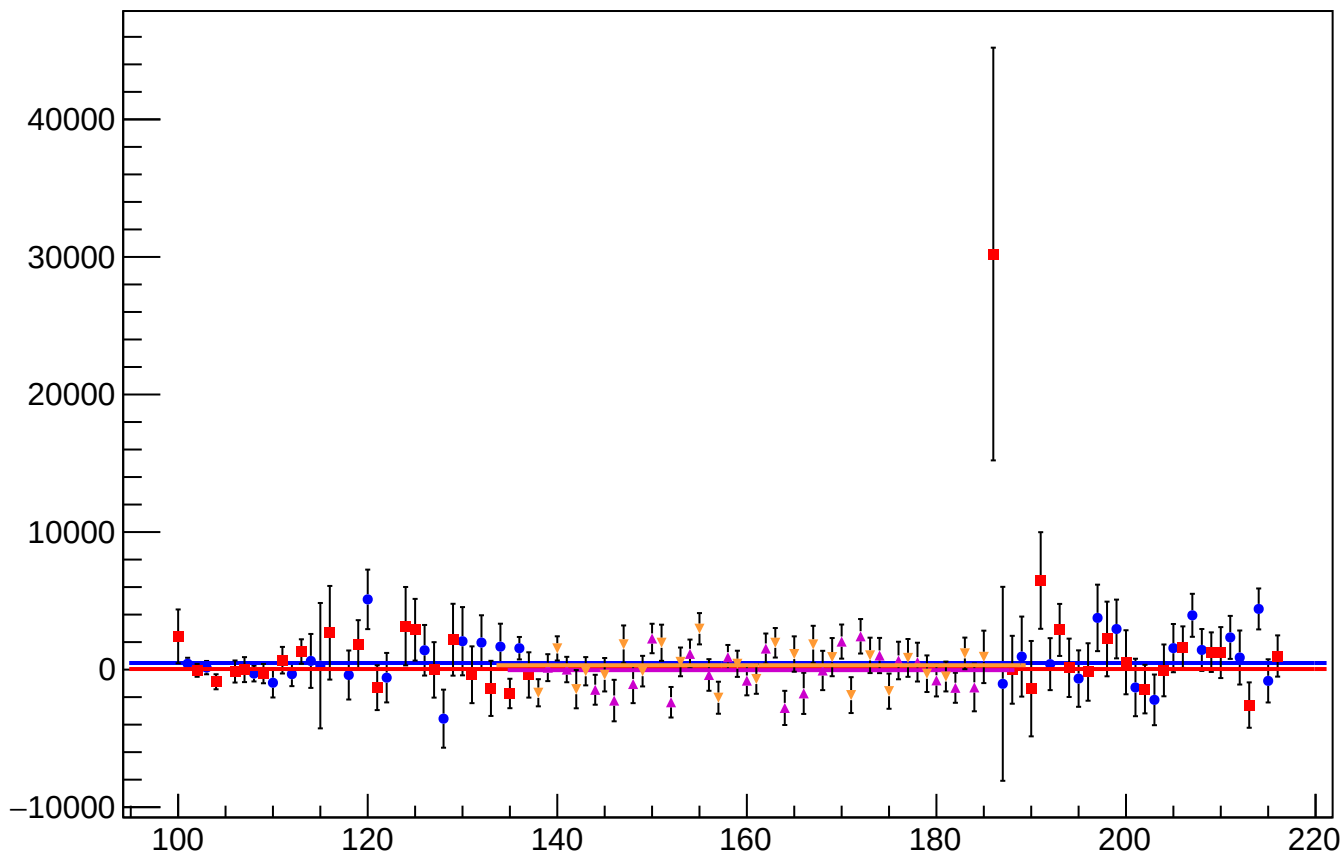
Left In: 160.874 $\pm$ 0.027  $\chi^2$ /NDF: 268330.7/22

+ sign 142.360 $\pm$ 0.017  $\chi^2$ /NDF: 3808568.2/55

All: 141.813 $\pm$ 0.012  $\chi^2$ /NDF: 9224322.3/113

- sign 141.254 $\pm$ 0.017  $\chi^2$ /NDF: 5413568.8/57

# asym\_sam6\_reg\_correction\_mean vs Slug



Right In: 480.740 $\pm$ 208.257  $\chi^2$ /NDF: 38.5/30

Left Out: 319.947 $\pm$ 235.084  $\chi^2$ /NDF:32.5/24

Right Out: 42.828 $\pm$ 210.506  $\chi^2$ /NDF: 32.7/34

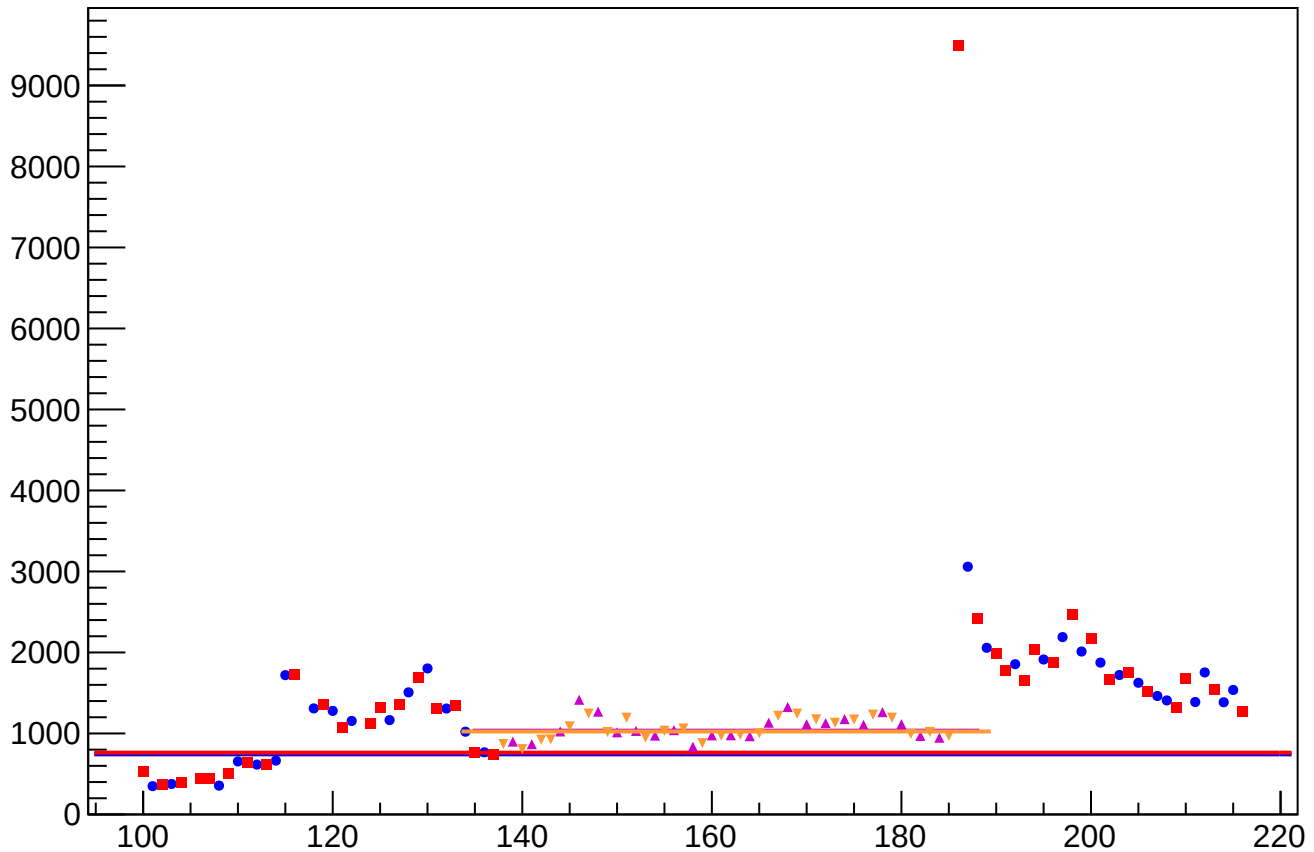
Left In: -39.197 $\pm$ 244.156  $\chi^2$ /NDF:34.8/22

+ sign 410.038 $\pm$ 155.886  $\chi^2$ /NDF: 71.3/55

All: 213.467 $\pm$ 111.460  $\chi^2$ /NDF: 142.1/113

- sign 7.853 $\pm$ 159.431  $\chi^2$ /NDF: 67.5/57

# asym\_sam6\_reg\_correction\_rms vs Slug



Right In: 741.918+/-0.147     $\chi^2/\text{NDF}$ : 12855952.6/30

Left Out: 1024.493+/-0.166     $\chi^2/\text{NDF}$ : 597629.4/24

Right Out: 763.073+/-0.149     $\chi^2/\text{NDF}$ : 12865164.7/34

Left In: 1034.428+/-0.173     $\chi^2/\text{NDF}$ : 628477.2/22

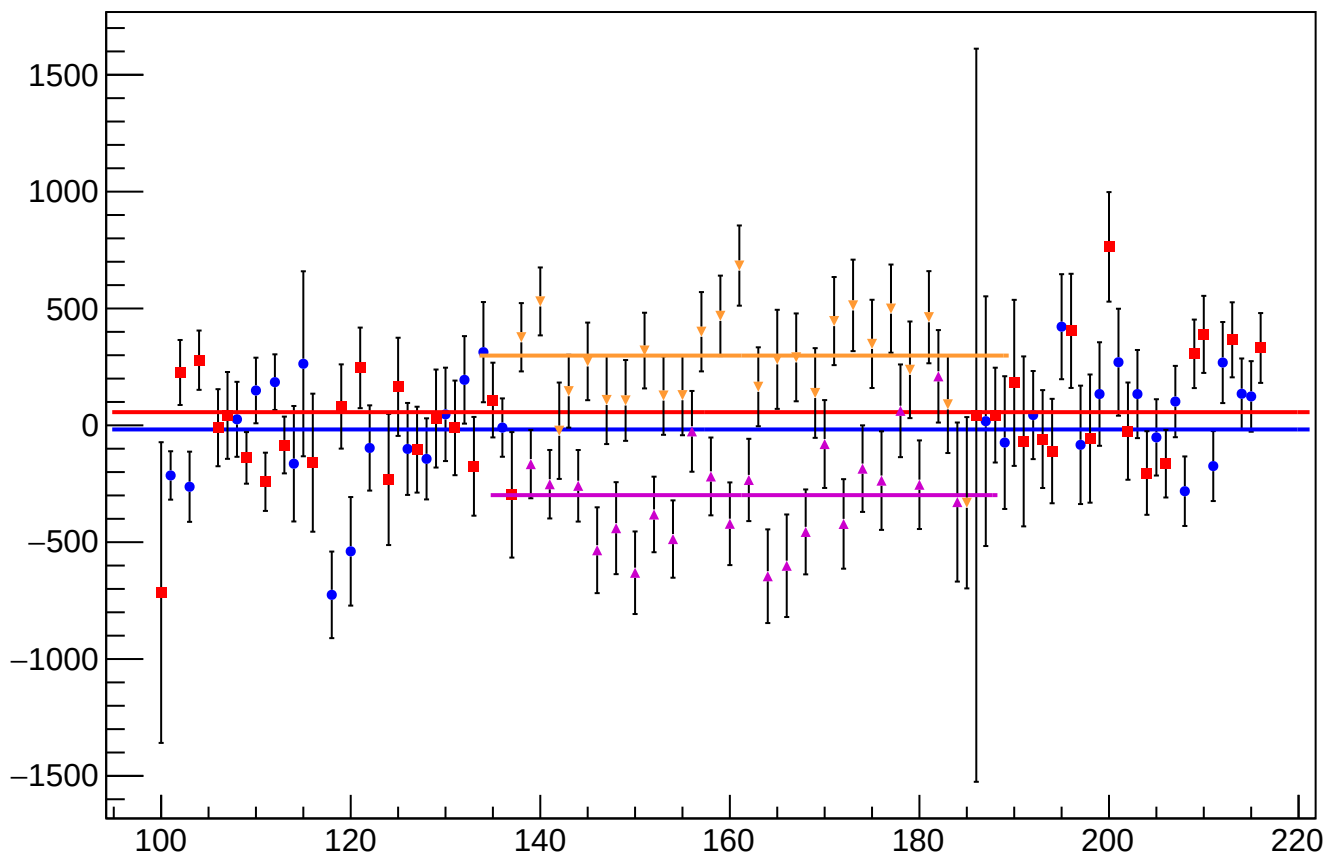
+ sign 866.169+/-0.110     $\chi^2/\text{NDF}$ : 15072646.4/55

All: 872.331+/-0.079     $\chi^2/\text{NDF}$ : 29989729.0/11

- sign 878.776+/-0.113     $\chi^2/\text{NDF}$ : 14910689.0/57



# cor\_asym\_sam6\_mean vs Slug



Right In:  $-17.623 \pm 31.084$   $\chi^2/\text{NDF}$ : 52.1/30

Left Out:  $298.518 \pm 36.051$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $56.413 \pm 30.715$   $\chi^2/\text{NDF}$ : 54.5/34

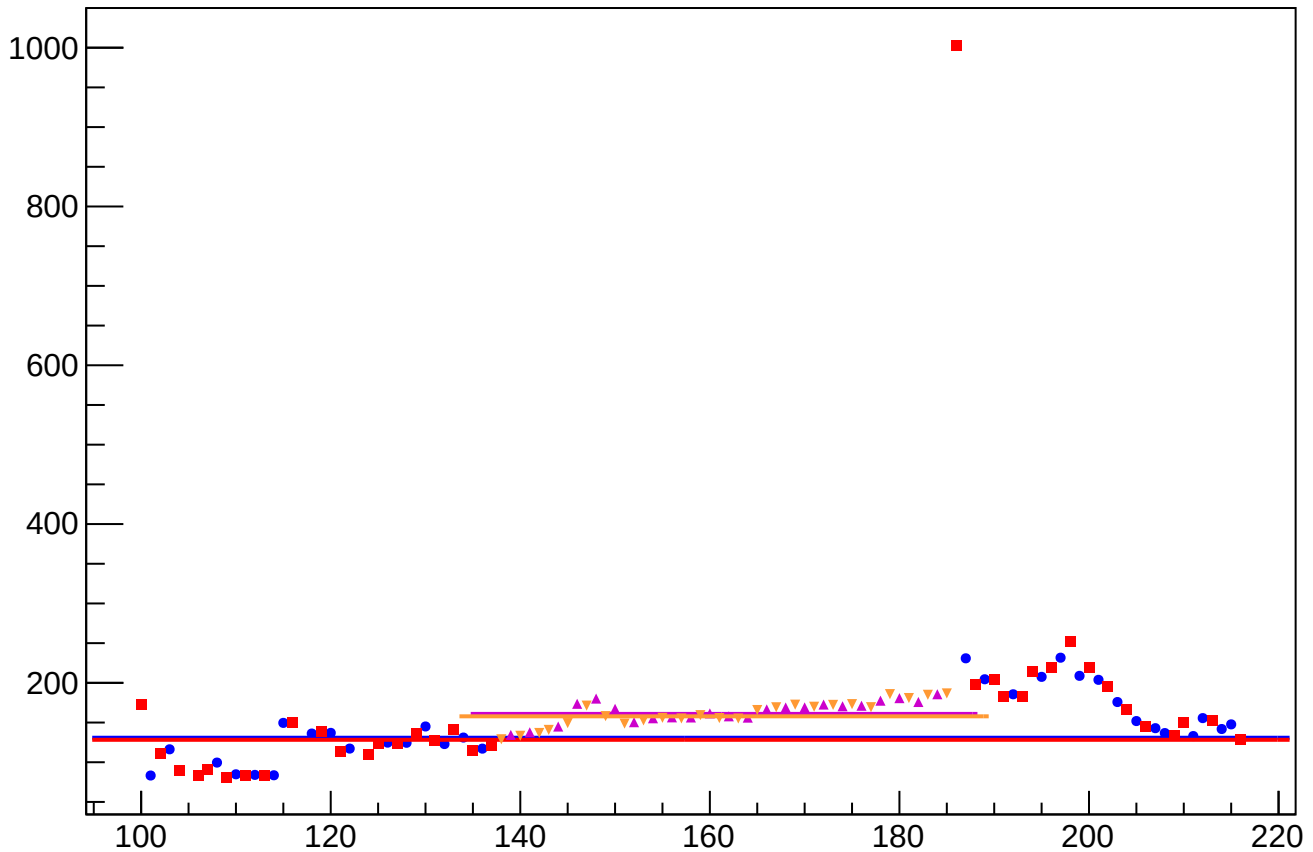
Left In:  $-298.682 \pm 37.727$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $117.187 \pm 23.541$   $\chi^2/\text{NDF}$ : 122.2/55

All:  $17.213 \pm 16.744$   $\chi^2/\text{NDF}$ : 295.8/113

- sign  $-85.132 \pm 23.819$   $\chi^2/\text{NDF}$ : 137.2/57

# cor\_asym\_sam6\_rms vs Slug



Right In: 130.855 $\pm$ 0.022  $\chi^2$ /NDF: 2788791.5/30

Left Out: 157.836 $\pm$ 0.025  $\chi^2$ /NDF: 377205.2/24

Right Out: 128.264 $\pm$ 0.022  $\chi^2$ /NDF: 4258379.2/34

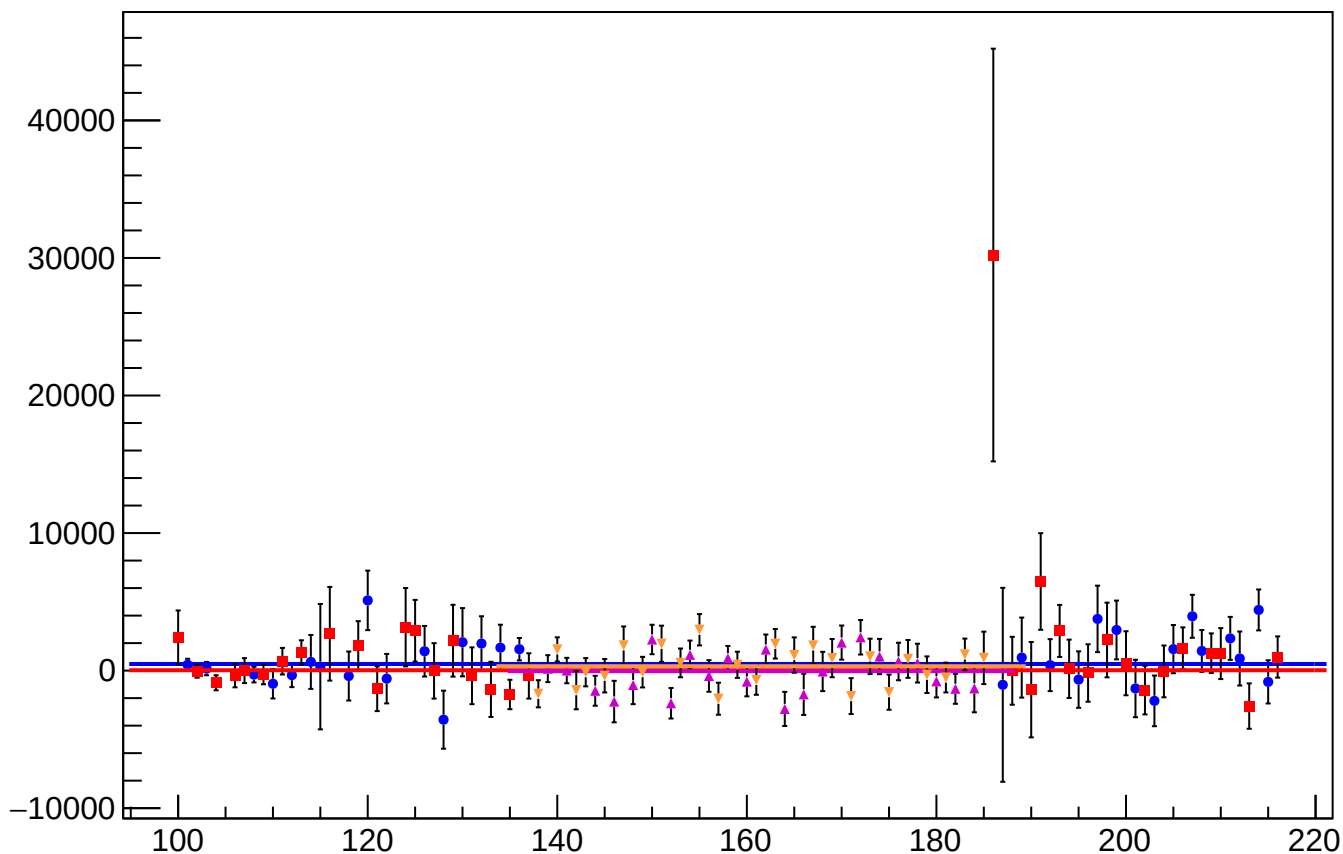
Left In: 160.874 $\pm$ 0.027  $\chi^2$ /NDF: 268330.7/22

+ sign 142.360 $\pm$ 0.017  $\chi^2$ /NDF: 3808564.0/55

All: 141.818 $\pm$ 0.012  $\chi^2$ /NDF: 9236074.5/113

- sign 141.263 $\pm$ 0.017  $\chi^2$ /NDF: 5425362.1/57

# asym\_sam6\_cor\_correction\_mean vs Slug



Right In: 480.845 $\pm$ 208.252  $\chi^2$ /NDF: 38.5/30

Left Out: 319.953 $\pm$ 235.084  $\chi^2$ /NDF:32.5/24

Right Out: 28.790 $\pm$ 210.973  $\chi^2$ /NDF: 32.9/34

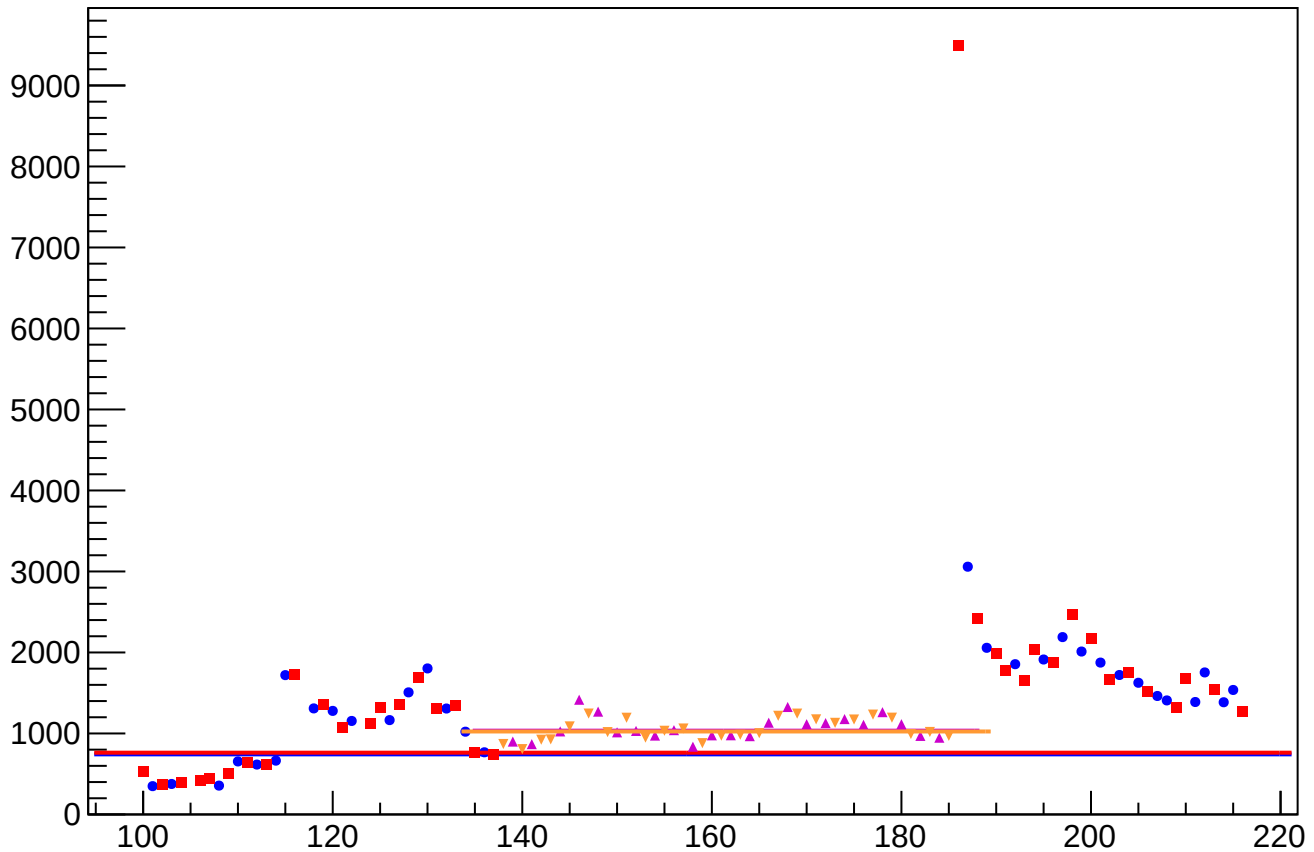
Left In: -39.198 $\pm$ 244.156  $\chi^2$ /NDF:34.8/22

+ sign 410.101 $\pm$ 155.884  $\chi^2$ /NDF: 71.3/55

All: 209.791 $\pm$ 111.528  $\chi^2$ /NDF: 142.4/113

- sign -0.273 $\pm$ 159.633  $\chi^2$ /NDF: 67.7/57

# asym\_sam6\_cor\_correction\_rms vs Slug



Right In: 741.890+/-0.147  $\chi^2/\text{NDF}$ : 12856585.4/30

Left Out: 1024.493+/-0.166  $\chi^2/\text{NDF}$ : 597629.0/24

Right Out: 762.668+/-0.149  $\chi^2/\text{NDF}$ : 12900262.1/34

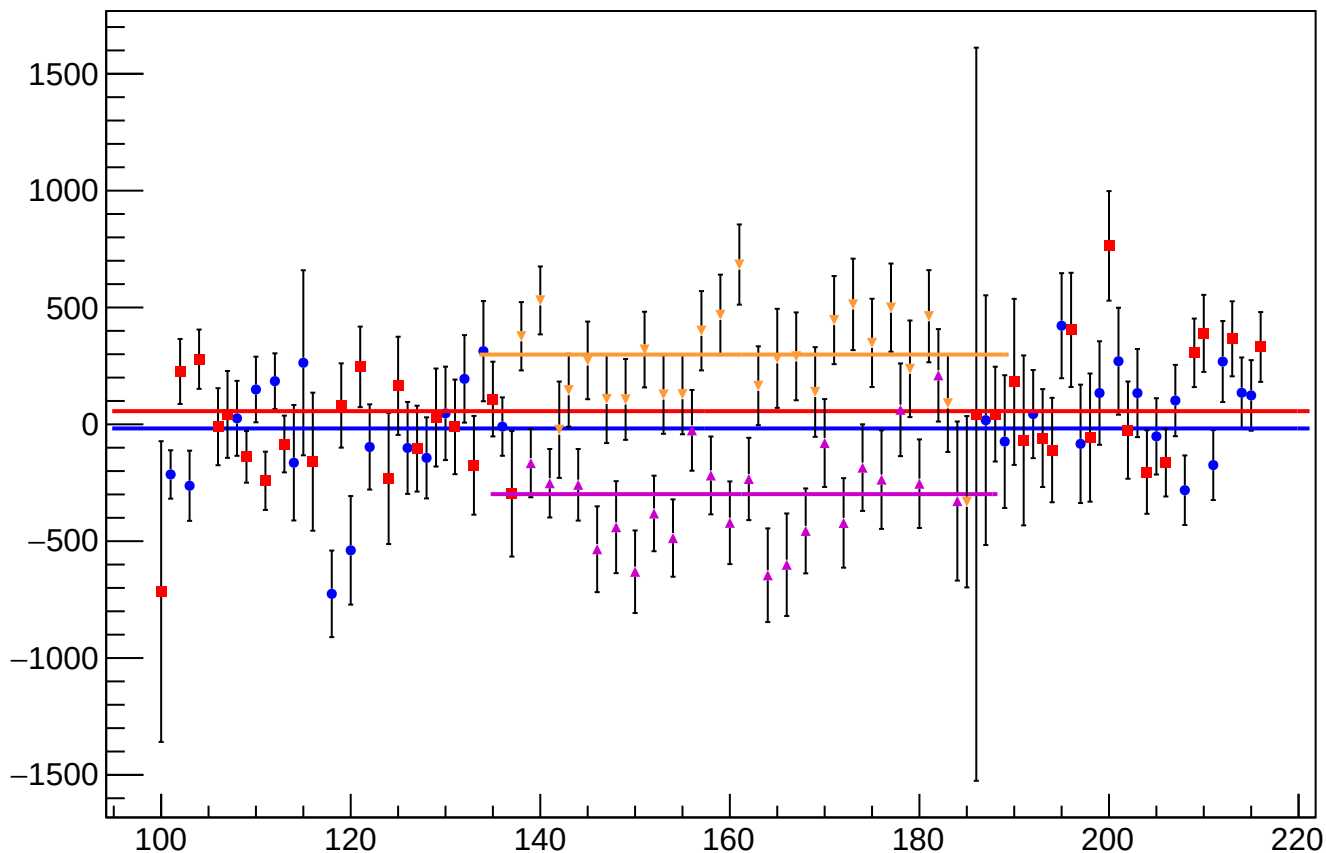
Left In: 1034.428+/-0.173  $\chi^2/\text{NDF}$ : 628474.5/22

+ sign 866.150+/-0.110  $\chi^2/\text{NDF}$ : 15073637.5/55

All: 872.344+/-0.079  $\chi^2/\text{NDF}$ : 30027436.1/111

- sign 878.839+/-0.113  $\chi^2/\text{NDF}$ : 14947330.2/57

# eigen\_cor\_asym\_sam6\_mean vs Slug



Right In:  $-17.623 \pm 31.084$   $\chi^2/\text{NDF}$ : 52.1/30

Left Out:  $298.518 \pm 36.051$   $\chi^2/\text{NDF}$ : 26.0/24

Right Out:  $56.413 \pm 30.715$   $\chi^2/\text{NDF}$ : 54.5/34

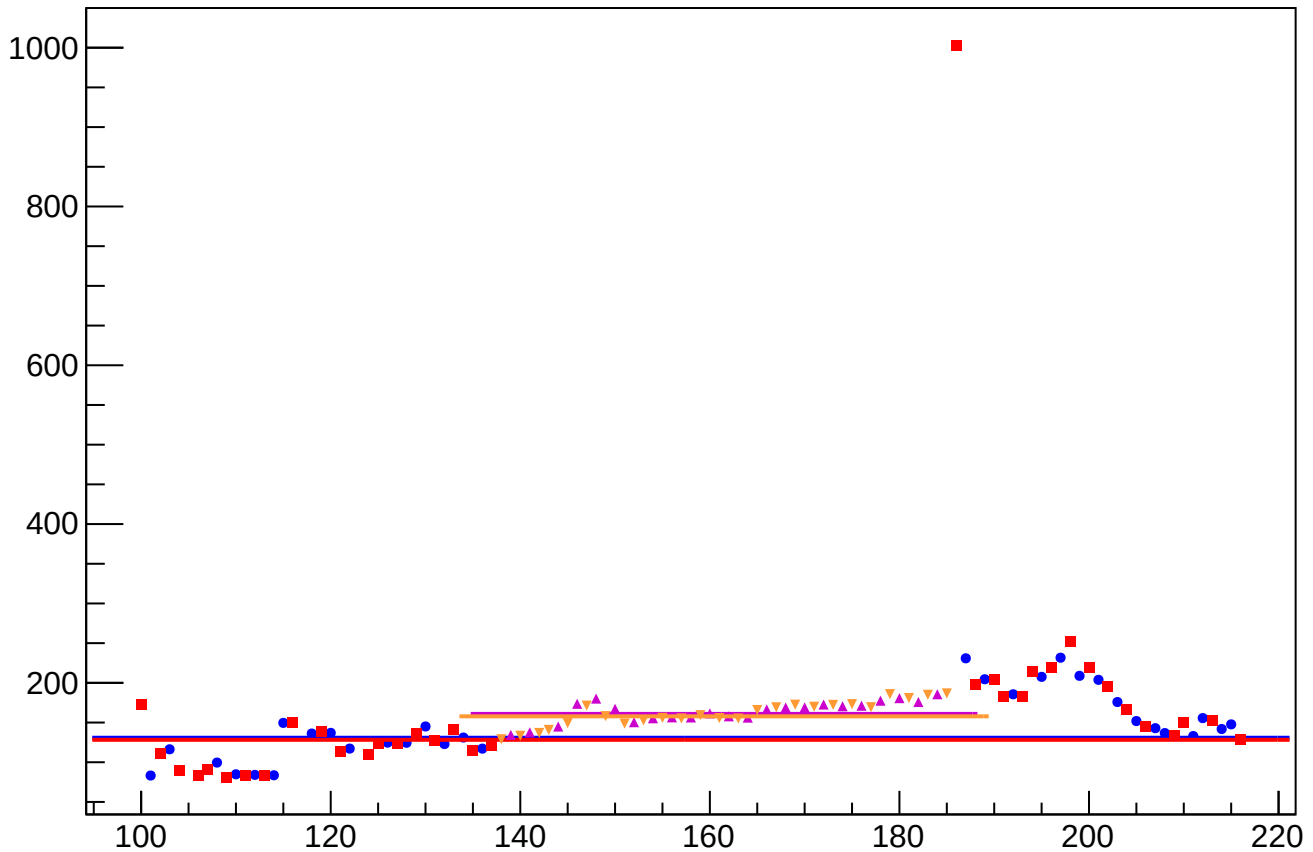
Left In:  $-298.682 \pm 37.727$   $\chi^2/\text{NDF}$ : 29.4/22

+ sign  $117.187 \pm 23.541$   $\chi^2/\text{NDF}$ : 122.2/55

All:  $17.213 \pm 16.744$   $\chi^2/\text{NDF}$ : 295.8/113

- sign  $-85.132 \pm 23.819$   $\chi^2/\text{NDF}$ : 137.2/57

# eigen\_cor\_asym\_sam6\_rms vs Slug



Right In: 130.855 $\pm$ 0.022  $\chi^2$ /NDF: 2788791.5/30

Left Out: 157.836 $\pm$ 0.025  $\chi^2$ /NDF: 377205.2/24

Right Out: 128.264 $\pm$ 0.022  $\chi^2$ /NDF: 4258379.2/34

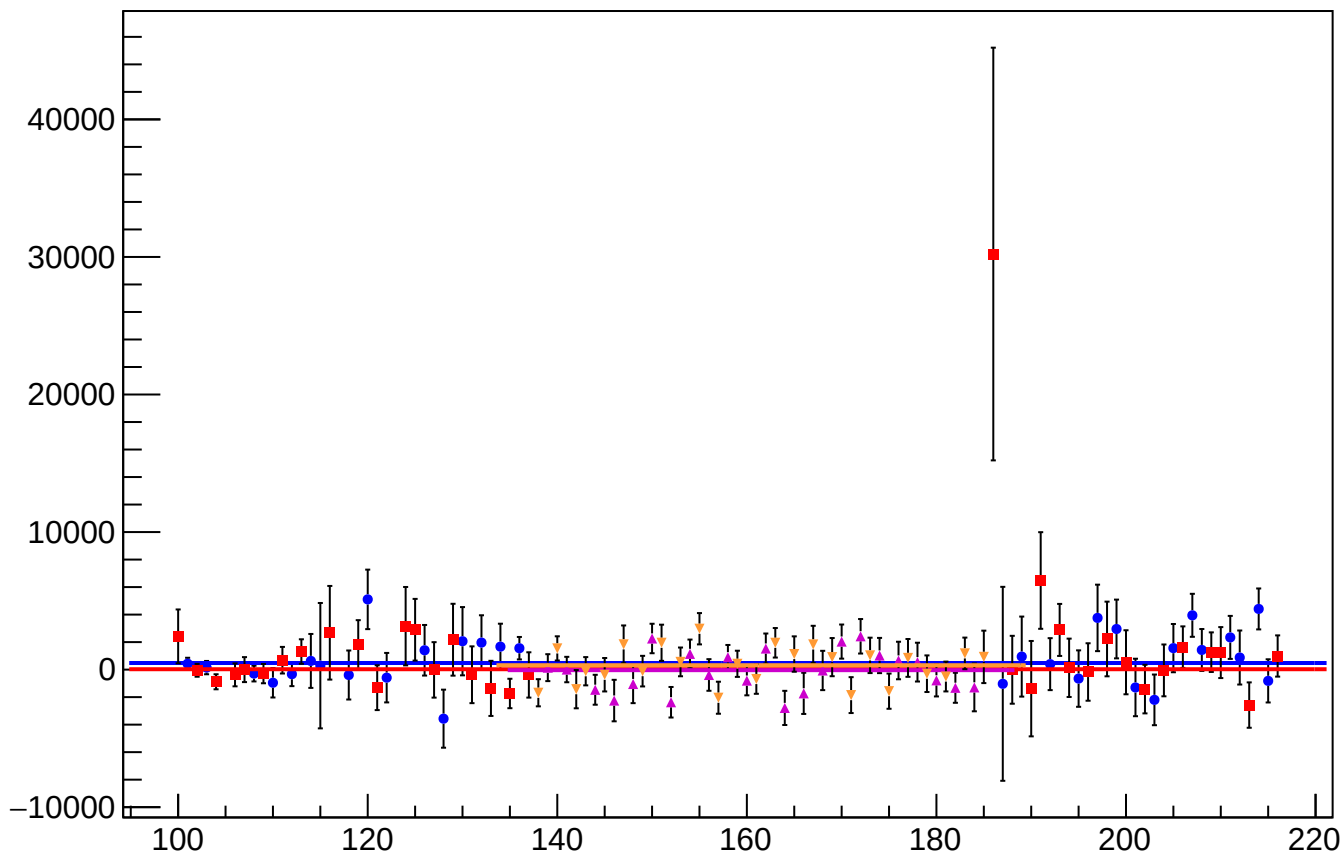
Left In: 160.874 $\pm$ 0.027  $\chi^2$ /NDF: 268330.7/22

+ sign 142.360 $\pm$ 0.017  $\chi^2$ /NDF: 3808564.0/55

All: 141.818 $\pm$ 0.012  $\chi^2$ /NDF: 9236074.5/113

- sign 141.263 $\pm$ 0.017  $\chi^2$ /NDF: 5425362.1/57

# asym\_sam6\_eigen\_cor\_correction\_mean vs Slug



Right In: 480.845 $\pm$ 208.252  $\chi^2$ /NDF: 38.5/30

Left Out: 319.953 $\pm$ 235.084  $\chi^2$ /NDF:32.5/24

Right Out: 28.790 $\pm$ 210.973  $\chi^2$ /NDF: 32.9/34

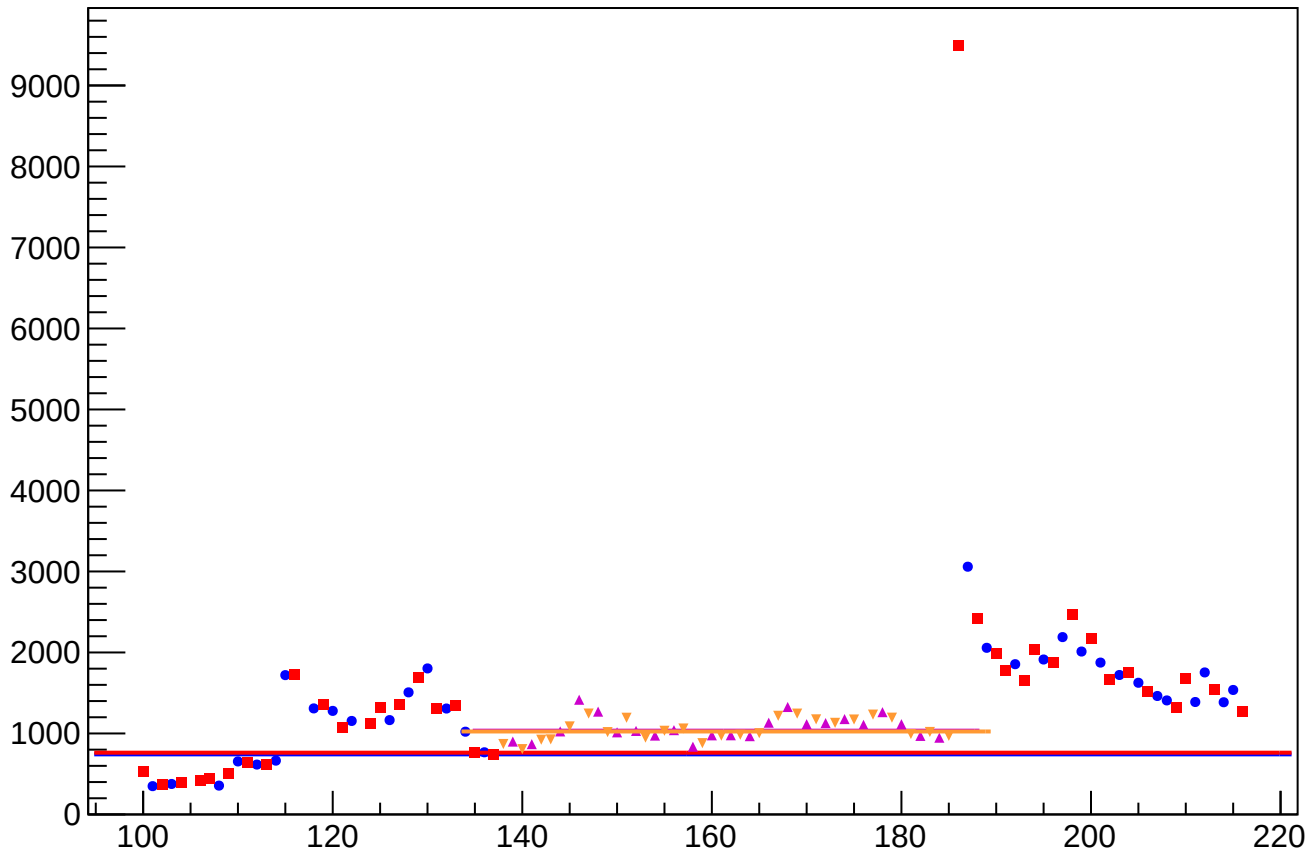
Left In: -39.198 $\pm$ 244.156  $\chi^2$ /NDF:34.8/22

+ sign 410.101 $\pm$ 155.884  $\chi^2$ /NDF: 71.3/55

All: 209.791 $\pm$ 111.528  $\chi^2$ /NDF: 142.4/113

- sign -0.273 $\pm$ 159.633  $\chi^2$ /NDF: 67.7/57

# asym\_sam6\_eigen\_cor\_correction\_rms vs Slug



Right In: 741.890 $\pm$ 0.147  $\chi^2$ /NDF: 12856585.4/30

Left Out: 1024.493 $\pm$ 0.166  $\chi^2$ /NDF: 597629.0/24

Right Out: 762.668 $\pm$ 0.149  $\chi^2$ /NDF: 12900262.1/34

Left In: 1034.428 $\pm$ 0.173  $\chi^2$ /NDF: 628474.5/22

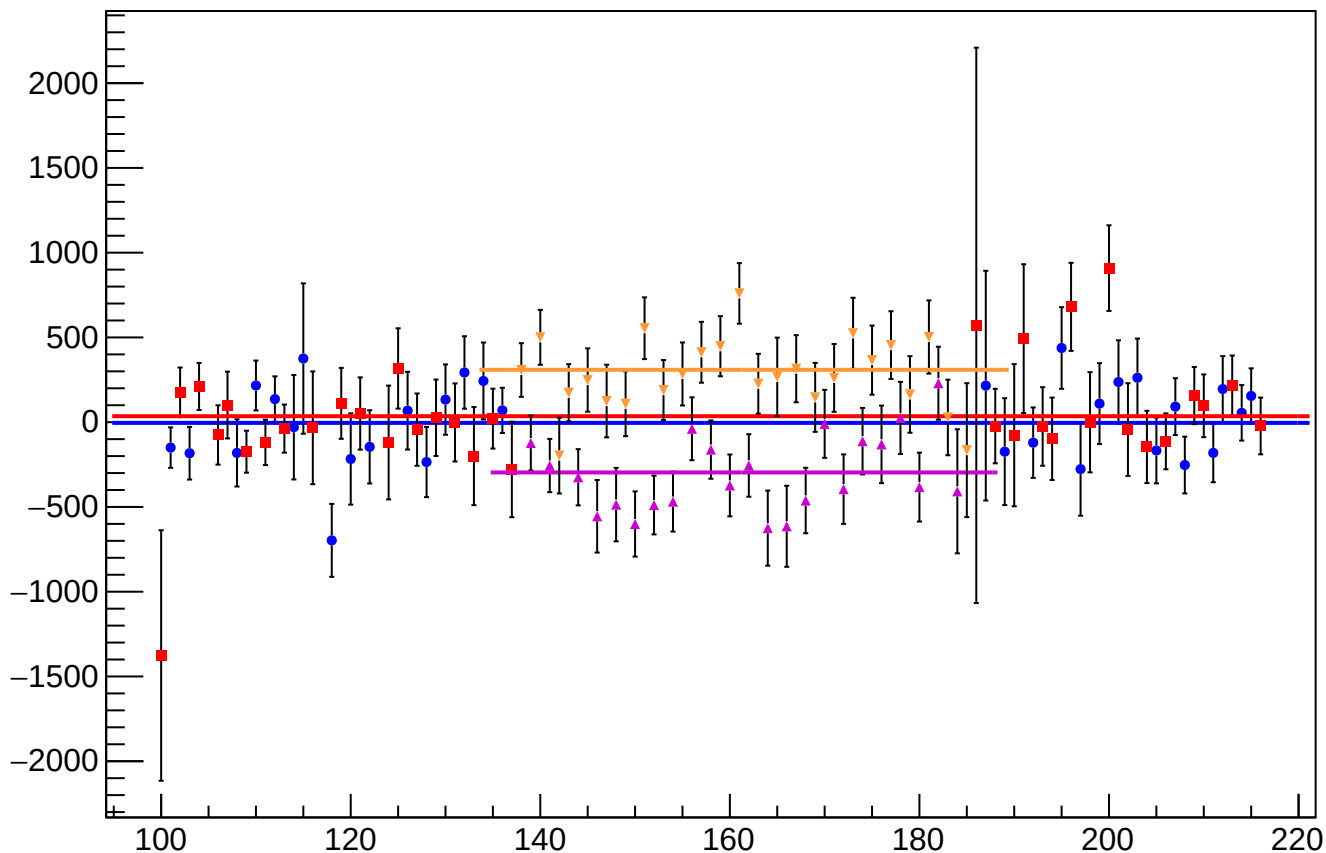
+ sign 866.150 $\pm$ 0.110  $\chi^2$ /NDF: 15073637.5/55

All: 872.344 $\pm$ 0.079  $\chi^2$ /NDF: 30027436.1/11

- sign 878.839 $\pm$ 0.113  $\chi^2$ /NDF: 14947330.2/57



# dit\_asym\_sam6\_mean vs Slug



Right In:  $-4.024 \pm 34.799$   $\chi^2/\text{NDF}$ : 38.3/30

Left Out:  $309.031 \pm 38.901$   $\chi^2/\text{NDF}$ : 25.6/24

Right Out:  $35.274 \pm 34.498$   $\chi^2/\text{NDF}$ : 38.3/34

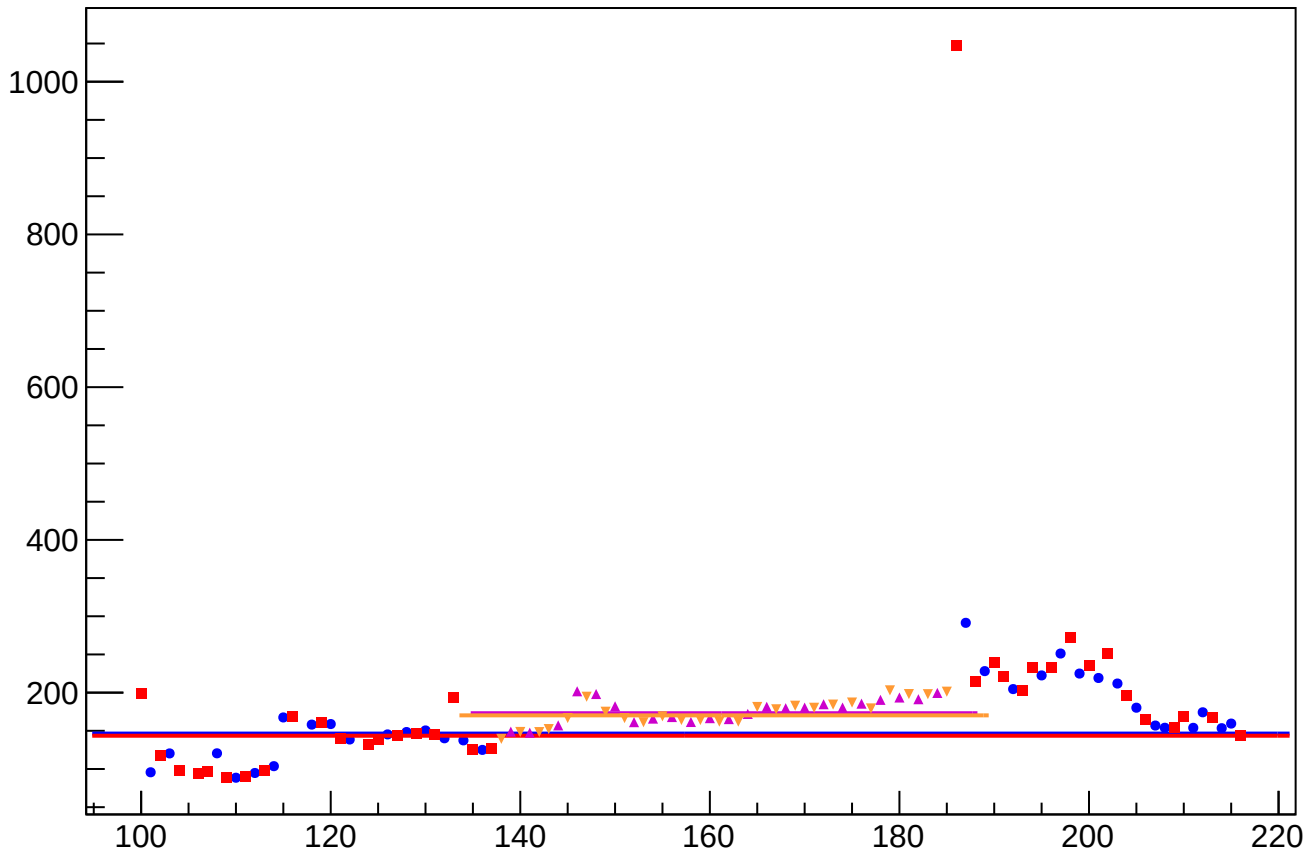
Left In:  $-296.497 \pm 40.607$   $\chi^2/\text{NDF}$ : 27.8/22

+ sign  $135.136 \pm 25.936$   $\chi^2/\text{NDF}$ : 99.9/55

All:  $17.290 \pm 18.464$   $\chi^2/\text{NDF}$ : 246.6/113

- sign  $-103.803 \pm 26.291$   $\chi^2/\text{NDF}$ : 104.8/57

# dit\_asym\_sam6\_rms vs Slug



Right In: 146.369+/-0.025  $\chi^2/\text{NDF}$ : 2729818.2/30

Left Out: 170.240+/-0.028  $\chi^2/\text{NDF}$ :366302.5/24

Right Out: 143.564+/-0.024  $\chi^2/\text{NDF}$ : 4421416.8/34

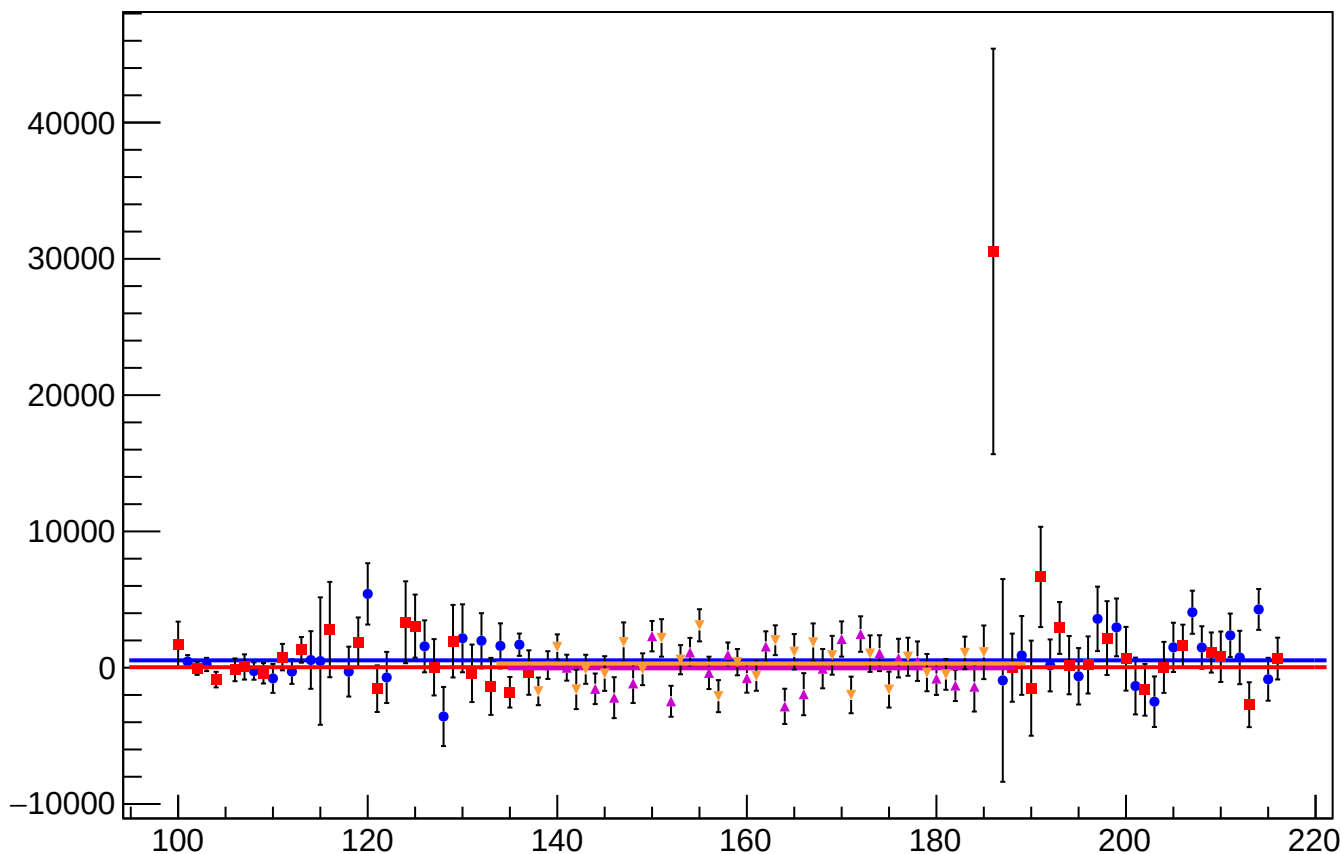
Left In: 173.024+/-0.029  $\chi^2/\text{NDF}$ :293702.8/22

+ sign 156.980+/-0.018  $\chi^2/\text{NDF}$ : 3514458.5/55

All: 156.454+/-0.013  $\chi^2/\text{NDF}$ : 8842651.6/113

- sign 155.913+/-0.019  $\chi^2/\text{NDF}$ : 5326522.9/57

# asym\_sam6\_dit\_correction\_mean vs Slug



Right In: 540.541 $\pm$ 216.534  $\chi^2$ /NDF: 37.7/30

Left Out: 313.641 $\pm$ 242.402  $\chi^2$ /NDF:32.9/24

Right Out: 36.606 $\pm$ 217.279  $\chi^2$ /NDF: 31.6/34

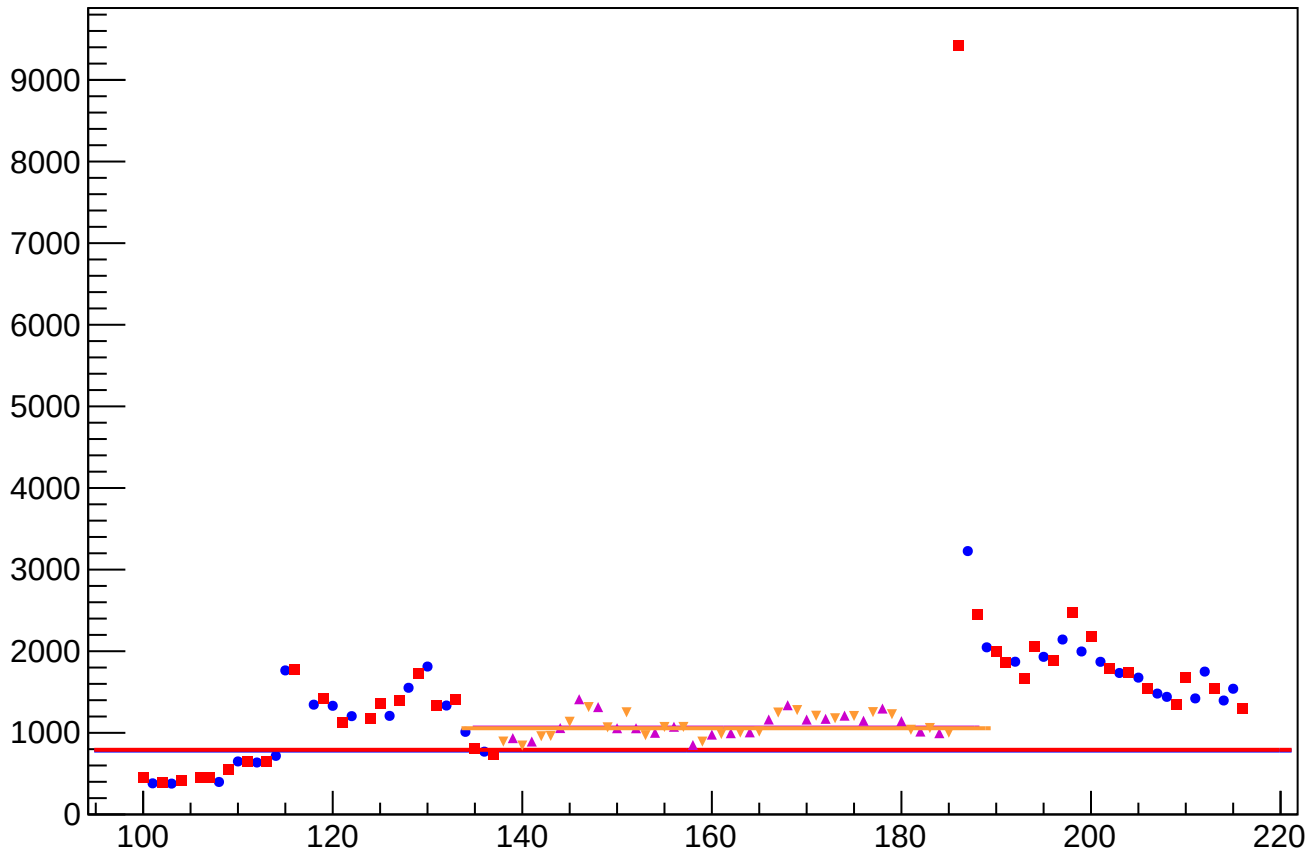
Left In: -47.231 $\pm$ 251.252  $\chi^2$ /NDF:34.4/22

+ sign 439.840 $\pm$ 161.487  $\chi^2$ /NDF: 71.1/55

All: 224.143 $\pm$ 115.187  $\chi^2$ /NDF: 140.7/113

- sign 0.734 $\pm$ 164.348  $\chi^2$ /NDF: 66.0/57

# asym\_sam6\_dit\_correction\_rms vs Slug



Right In: 782.908 $\pm$ 0.153  $\chi^2$ /NDF: 12132305.5/30

Left Out: 1056.328 $\pm$ 0.171  $\chi^2$ /NDF: 610710.4/24

Right Out: 792.066 $\pm$ 0.154  $\chi^2$ /NDF: 12620850.5/34

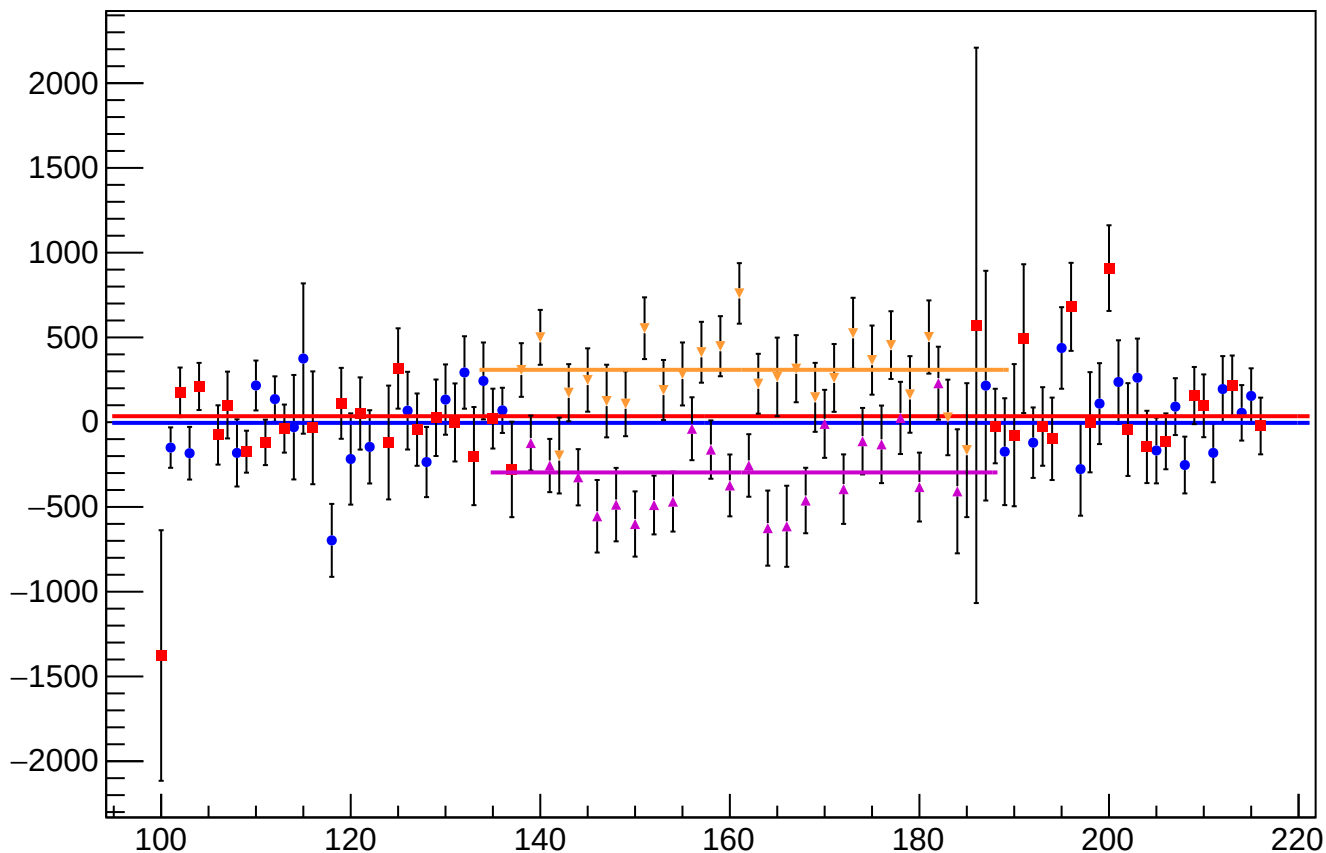
Left In: 1064.691 $\pm$ 0.178  $\chi^2$ /NDF: 611055.8/22

+ sign 904.255 $\pm$ 0.114  $\chi^2$ /NDF: 14158287.1/55

All: 906.446 $\pm$ 0.081  $\chi^2$ /NDF: 28738161.6/11

- sign 908.714 $\pm$ 0.116  $\chi^2$ /NDF: 14579125.5/57

# eigen\_dit\_asym\_sam6\_mean vs Slug



Right In: -4.026 $\pm$ 34.799  $\chi^2/\text{NDF}$ : 38.3/30

Left Out: 309.032 $\pm$ 38.901  $\chi^2/\text{NDF}$ : 25.6/24

Right Out: 35.274 $\pm$ 34.498  $\chi^2/\text{NDF}$ : 38.3/34

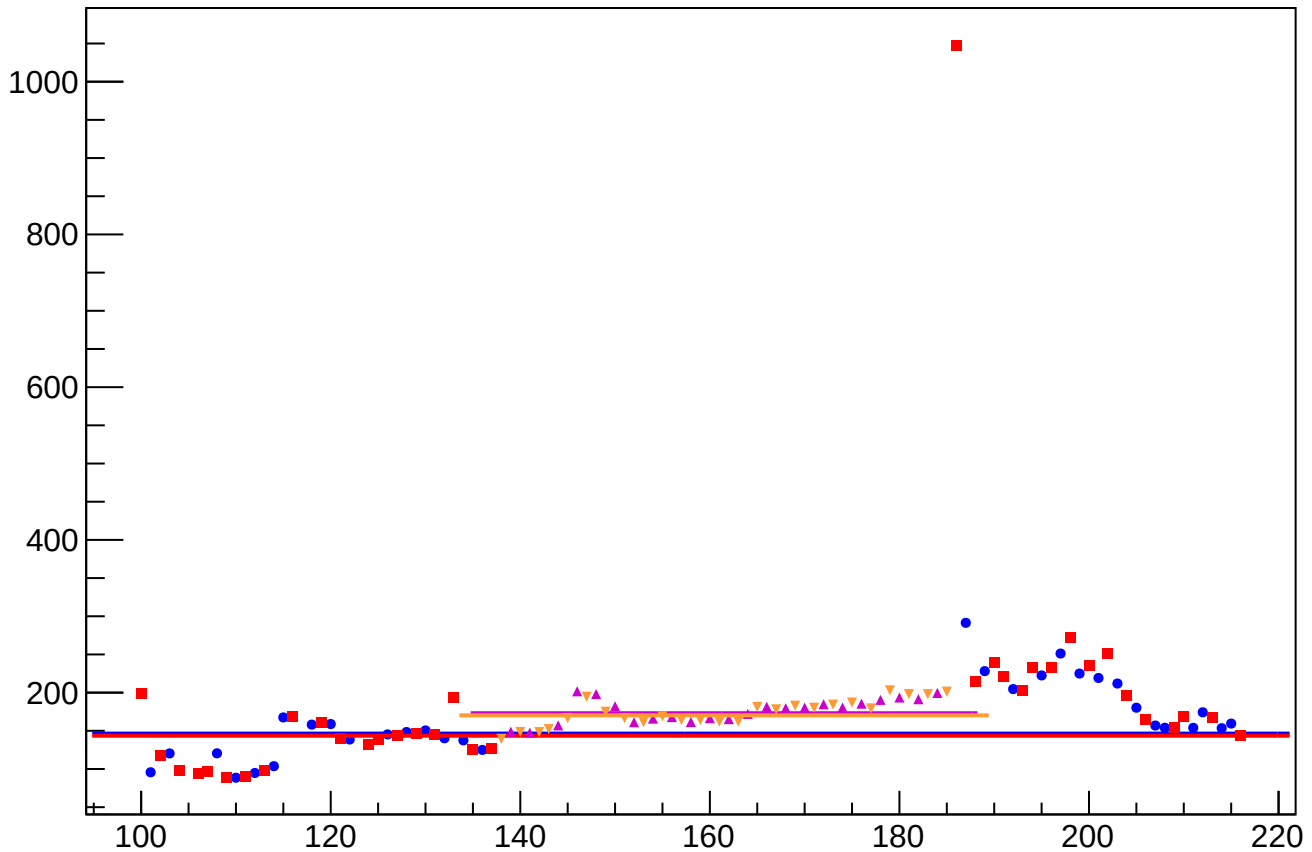
Left In: -296.497 $\pm$ 40.607  $\chi^2/\text{NDF}$ : 27.8/22

+ sign 135.136 $\pm$ 25.936  $\chi^2/\text{NDF}$ : 99.9/55

All: 17.290 $\pm$ 18.464  $\chi^2/\text{NDF}$ : 246.6/113

- sign -103.804 $\pm$ 26.291  $\chi^2/\text{NDF}$ : 104.8/57

# eigen\_dit\_asym\_sam6\_rms vs Slug



Right In: 146.369+/-0.025  $\chi^2/\text{NDF}$ : 2729837.4/30

Left Out: 170.240+/-0.028  $\chi^2/\text{NDF}$ : 366303.1/24

Right Out: 143.563+/-0.024  $\chi^2/\text{NDF}$ : 4421423.8/34

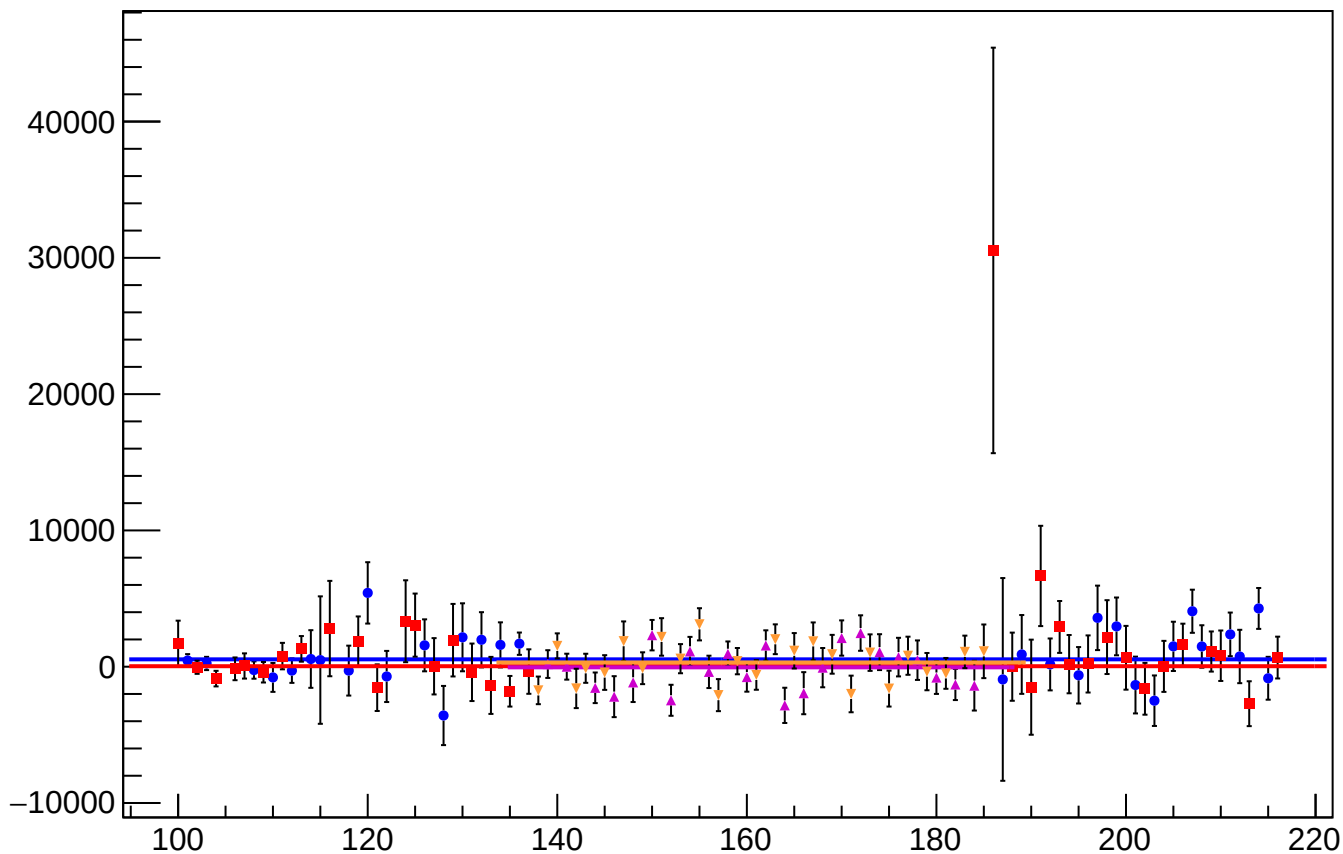
Left In: 173.023+/-0.029  $\chi^2/\text{NDF}$ : 293703.4/22

+ sign 156.980+/-0.018  $\chi^2/\text{NDF}$ : 3514480.7/55

All: 156.454+/-0.013  $\chi^2/\text{NDF}$ : 8842684.2/113

- sign 155.913+/-0.019  $\chi^2/\text{NDF}$ : 5326533.3/57

# asym\_sam6\_eigen\_dit\_correction\_mean vs Slug



Right In: 540.540 $\pm$ 216.534  $\chi^2$ /NDF: 37.7/30

Left Out: 313.641 $\pm$ 242.402  $\chi^2$ /NDF:32.9/24

Right Out: 36.605 $\pm$ 217.279  $\chi^2$ /NDF: 31.6/34

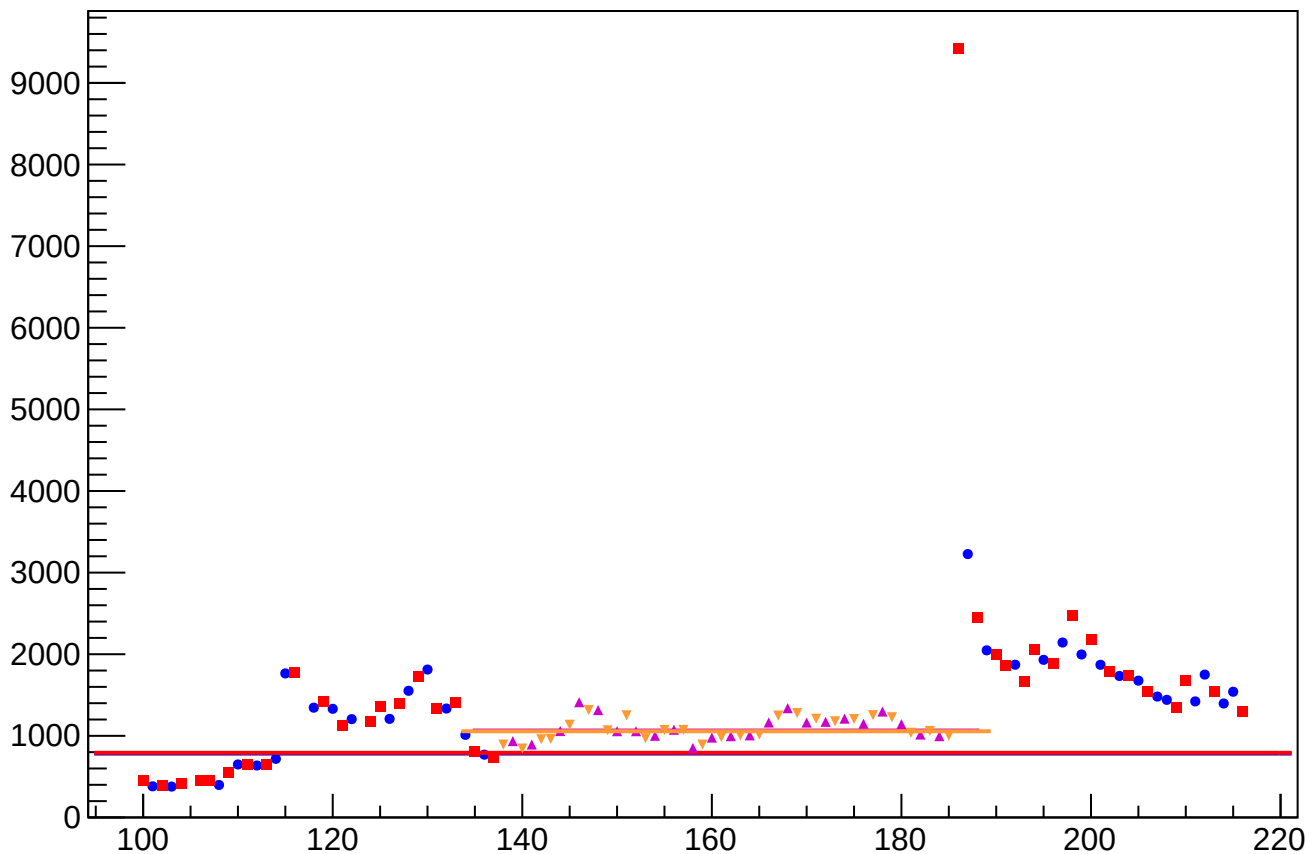
Left In: -47.231 $\pm$ 251.252  $\chi^2$ /NDF:34.4/22

+ sign 439.840 $\pm$ 161.486  $\chi^2$ /NDF: 71.1/55

All: 224.143 $\pm$ 115.187  $\chi^2$ /NDF: 140.7/113

- sign 0.734 $\pm$ 164.348  $\chi^2$ /NDF: 66.0/57

# asym\_sam6\_eigen\_dit\_correction\_rms vs Slug



Right In: 782.907 $\pm$ 0.153  $\chi^2$ /NDF: 12132321.0/30

Left Out: 1056.328 $\pm$ 0.171  $\chi^2$ /NDF: 610715.5/24

Right Out: 792.065 $\pm$ 0.154  $\chi^2$ /NDF: 12620856.4/34

Left In: 1064.691 $\pm$ 0.178  $\chi^2$ /NDF: 611059.3/22

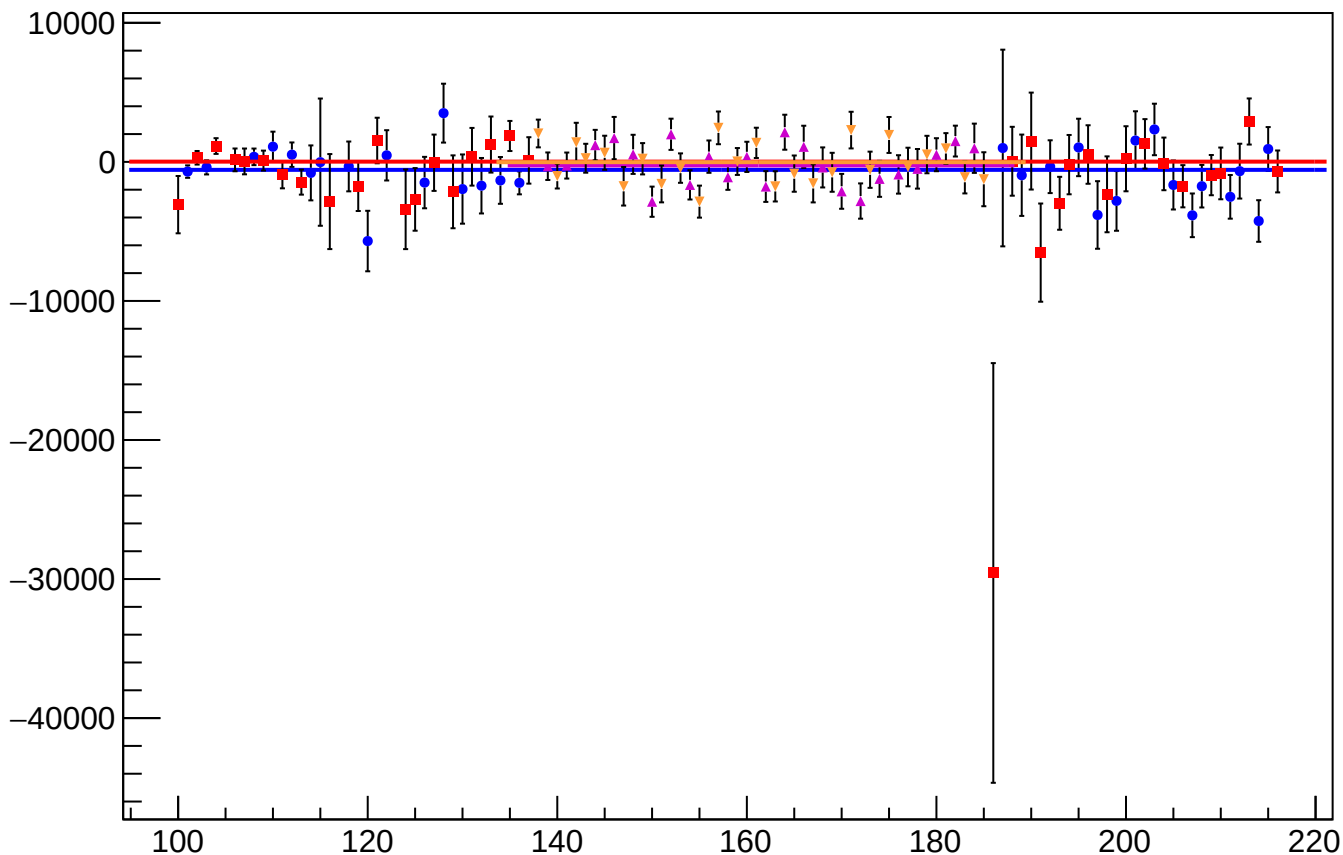
+ sign 904.255 $\pm$ 0.114  $\chi^2$ /NDF: 14158320.7/55

All: 906.445 $\pm$ 0.081  $\chi^2$ /NDF: 28738212.0/11

- sign 908.714 $\pm$ 0.116  $\chi^2$ /NDF: 14579142.2/57



# asym\_sam6\_mean vs Slug



Right In: -573.344 $\pm$ 213.477  $\chi^2$ /NDF: 39.4/30

Left Out: -21.861 $\pm$ 237.972  $\chi^2$ /NDF: 34.5/24

Right Out: 18.204 $\pm$ 215.226  $\chi^2$ /NDF: 36.1/34

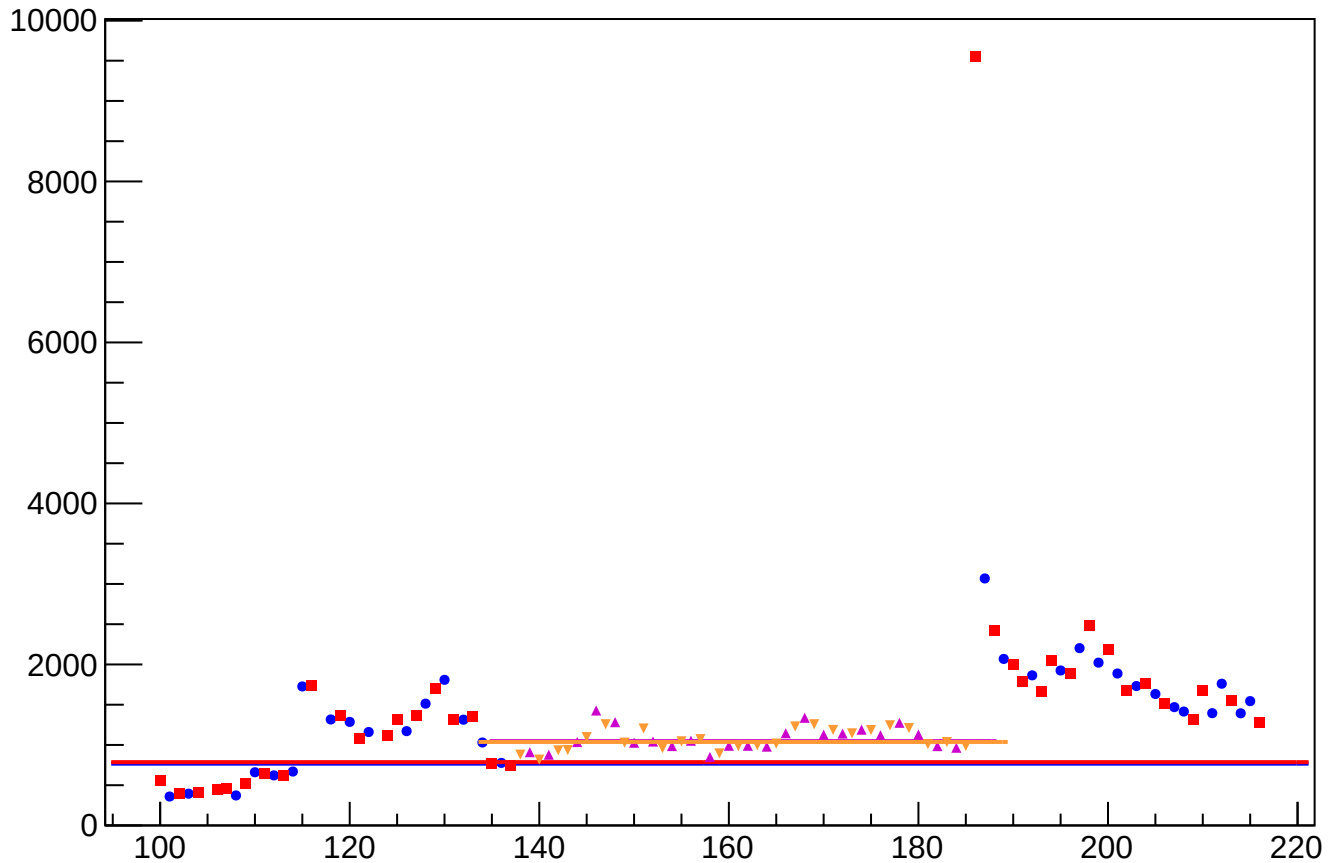
Left In: -255.399 $\pm$ 247.203  $\chi^2$ /NDF: 33.6/22

+ sign -327.437 $\pm$ 158.908  $\chi^2$ /NDF: 76.8/55

All: -216.023 $\pm$ 113.553  $\chi^2$ /NDF: 148.2/113

- sign -99.768 $\pm$ 162.324  $\chi^2$ /NDF: 70.4/57

# asym\_sam6\_rms vs Slug



Right In: 767.650 $\pm$ 0.151  $\chi^2$ /NDF: 12373901.9/30

Left Out: 1037.324 $\pm$ 0.168  $\chi^2$ /NDF: 585511.9/24

Right Out: 786.429 $\pm$ 0.152  $\chi^2$ /NDF: 12457710.5/34

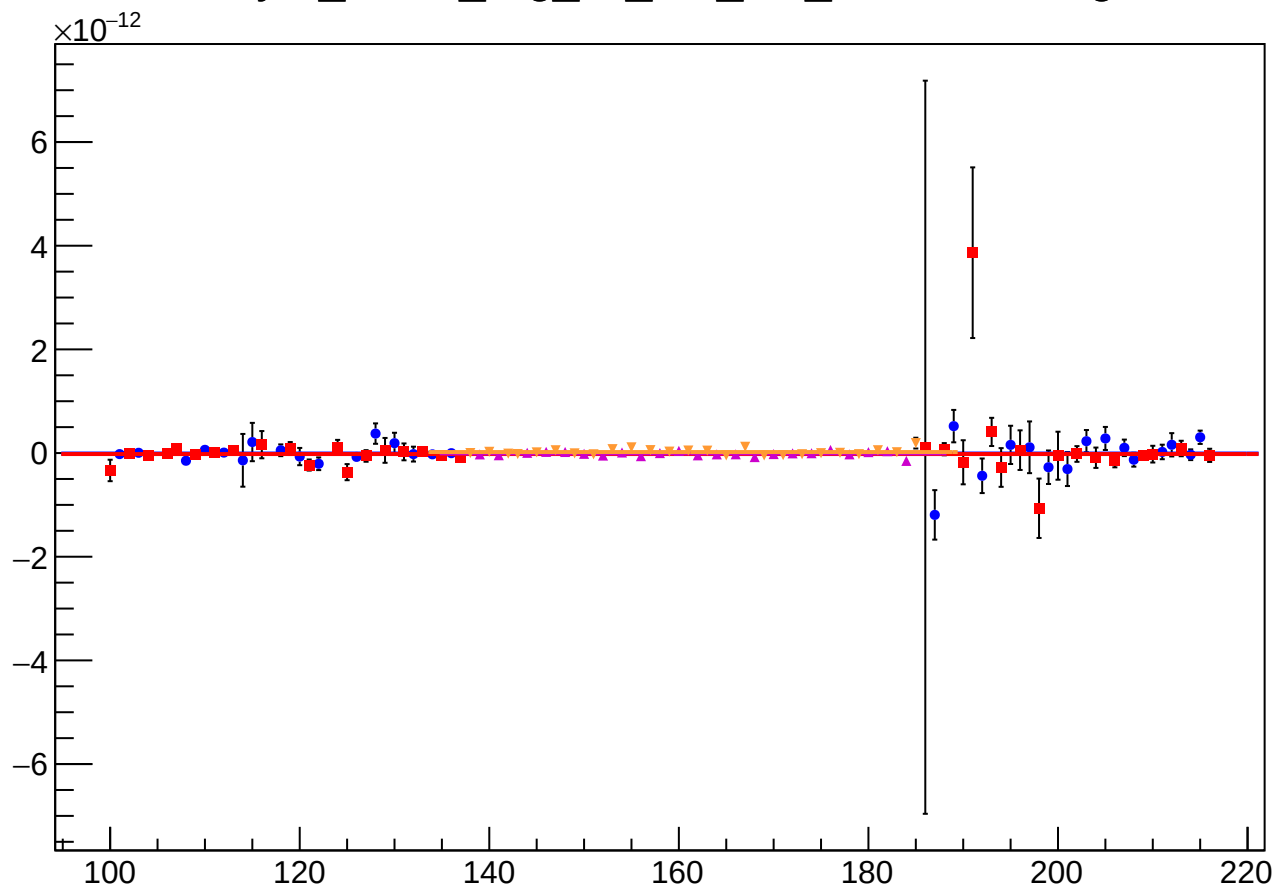
Left In: 1047.629 $\pm$ 0.175  $\chi^2$ /NDF: 613357.0/22

+ sign 887.898 $\pm$ 0.112  $\chi^2$ /NDF: 14382543.4/55

All: 893.357 $\pm$ 0.080  $\chi^2$ /NDF: 28728558.4/11

- sign 899.053 $\pm$ 0.115  $\chi^2$ /NDF: 14341192.2/57

# asym\_sam6\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/34

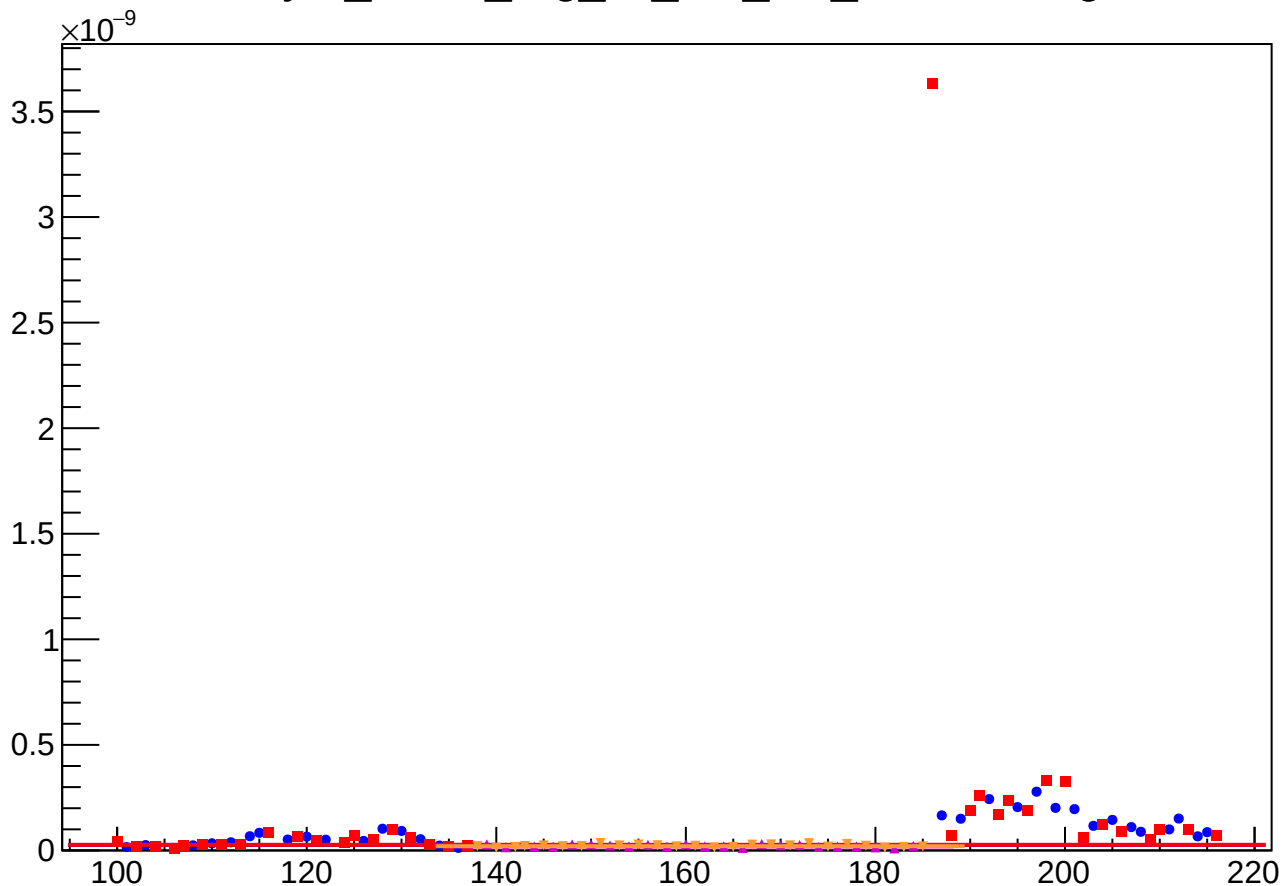
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 131.7/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.4/57

# asym\_sam6\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9700566.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 993542.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8599182.4/34

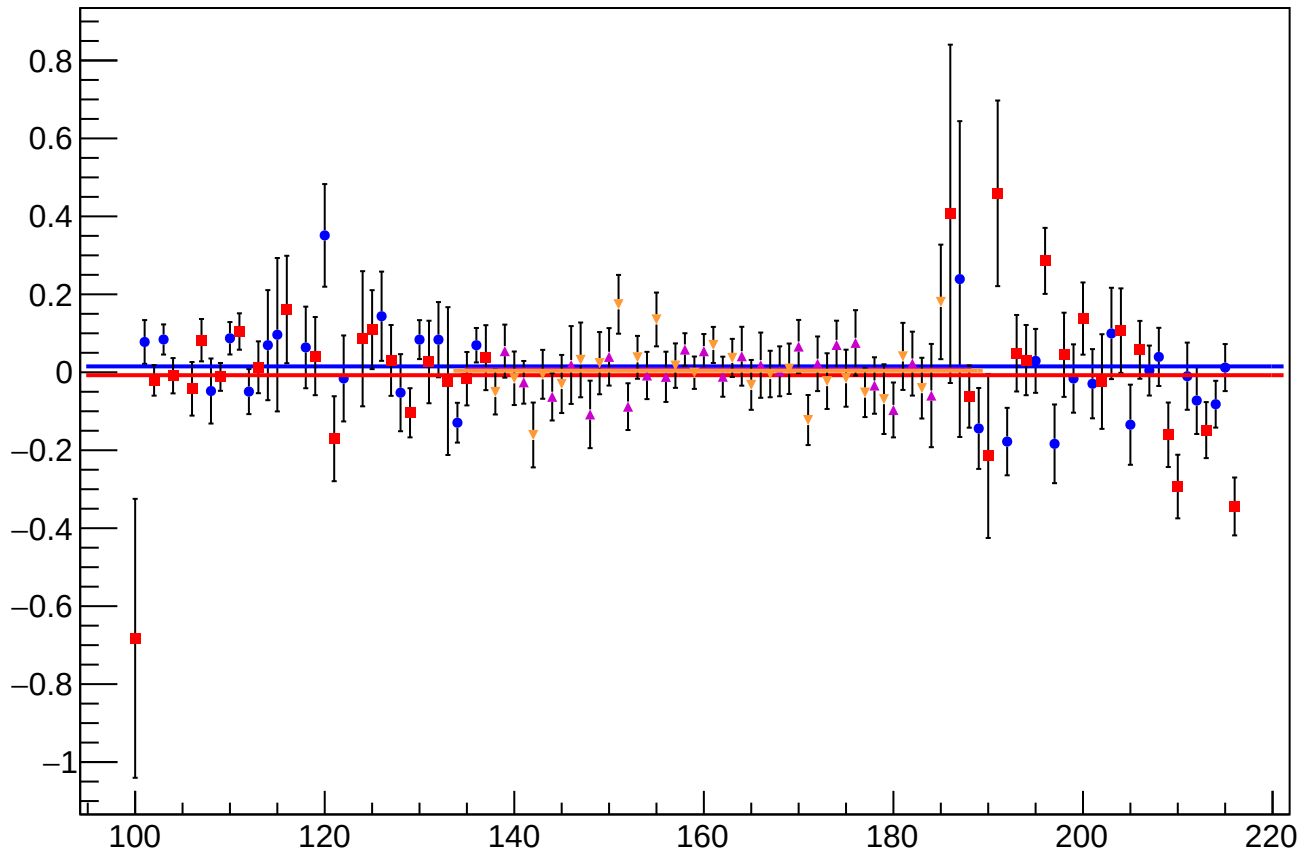
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1048721.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11008723.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21137249.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10118866.8/57

# asym\_sam6\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.015 \pm 0.013$   $\chi^2/\text{NDF}: 48.5/30$

Left Out:  $0.004 \pm 0.013$   $\chi^2/\text{NDF}: 24.8/24$

Right Out:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}: 84.4/34$

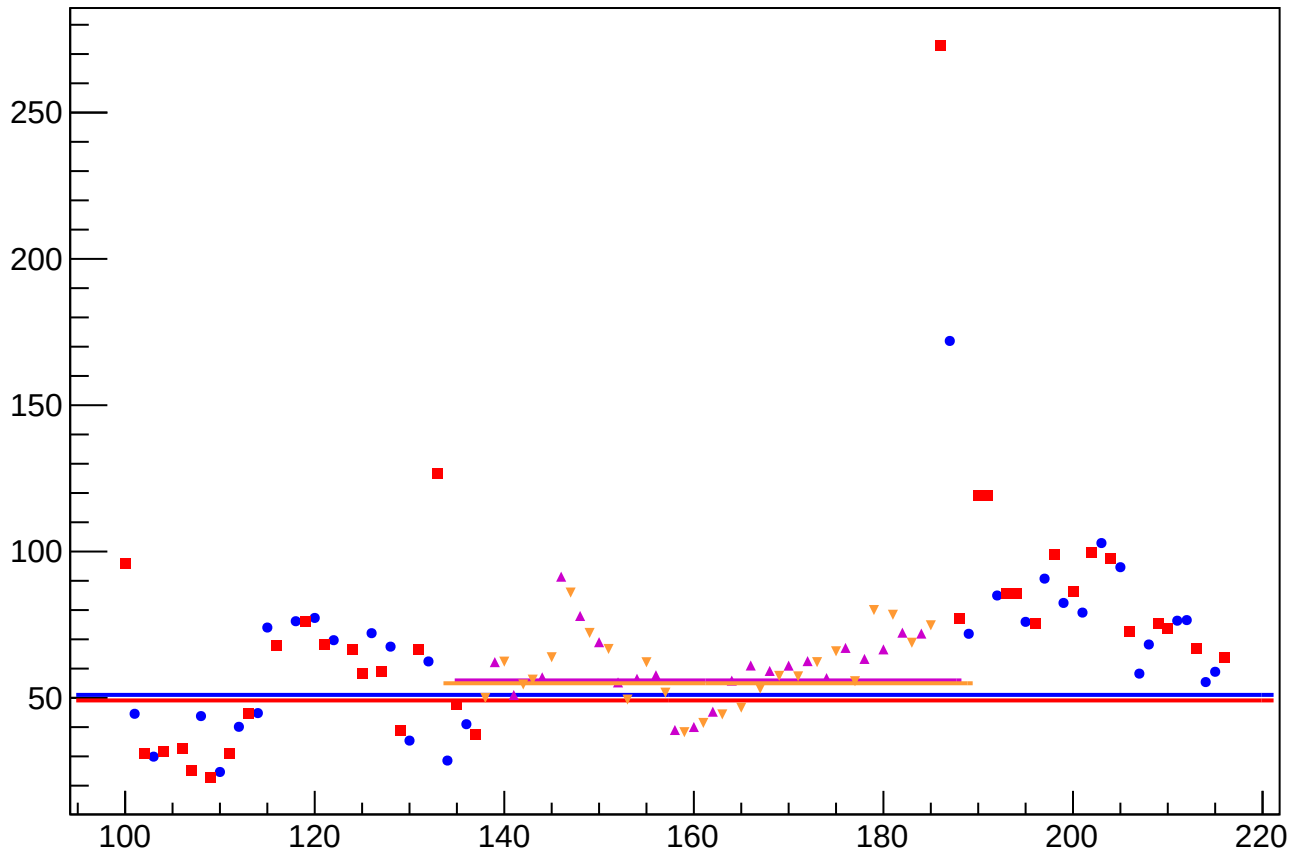
Left In:  $0.007 \pm 0.014$   $\chi^2/\text{NDF}: 15.1/22$

+ sign  $0.010 \pm 0.009$   $\chi^2/\text{NDF}: 73.6/55$

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 174.4/113$

- sign  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}: 100.1/57$

# asym\_sam6\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.018 $\pm$ 0.009  $\chi^2$ /NDF: 5429988.1/30

Left Out: 54.986 $\pm$ 0.009  $\chi^2$ /NDF: 1566844.0/24

Right Out: 49.122 $\pm$ 0.009  $\chi^2$ /NDF: 7697910.8/34

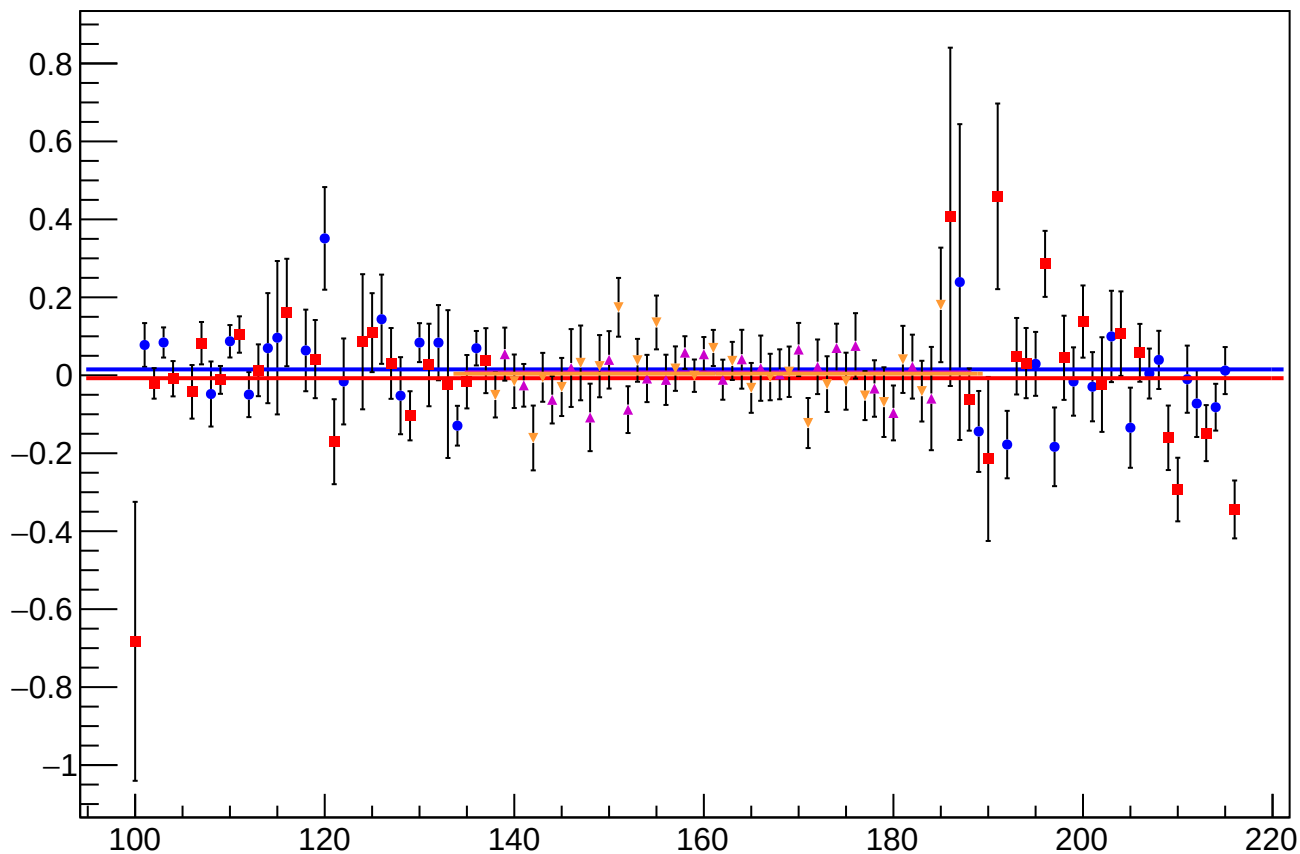
Left In: 55.956 $\pm$ 0.010  $\chi^2$ /NDF: 1406142.1/22

+ sign 52.988 $\pm$ 0.006  $\chi^2$ /NDF: 7091332.5/55

All: 52.668 $\pm$ 0.005  $\chi^2$ /NDF: 16471005.0/113

- sign 52.338 $\pm$ 0.007  $\chi^2$ /NDF: 9374679.5/57

# asym\_sam6\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.015 $\pm$ 0.013  $\chi^2$ /NDF: 48.5/30

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF:24.8/24

Right Out: -0.007 $\pm$ 0.013  $\chi^2$ /NDF: 84.4/34

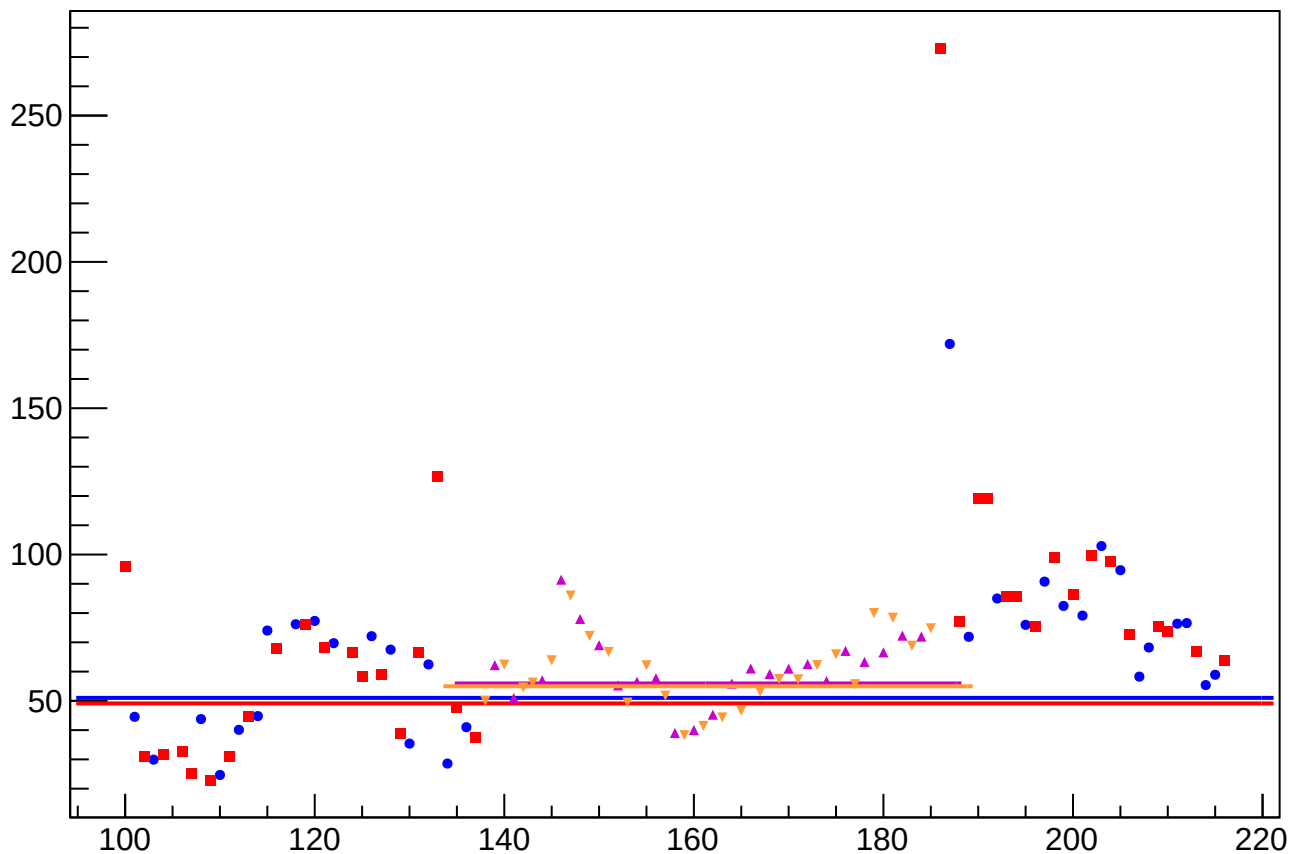
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF:15.1/22

+ sign 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 73.6/55

All: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 174.4/113

- sign -0.001 $\pm$ 0.009  $\chi^2$ /NDF: 100.1/57

asym\_sam6\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.018 $\pm$ 0.009  $\chi^2$ /NDF: 5429988.1/30

Left Out: 54.986 $\pm$ 0.009  $\chi^2$ /NDF: 1566844.0/24

Right Out: 49.122 $\pm$ 0.009  $\chi^2$ /NDF: 7697910.8/34

Left In: 55.956 $\pm$ 0.010  $\chi^2$ /NDF: 1406142.1/22

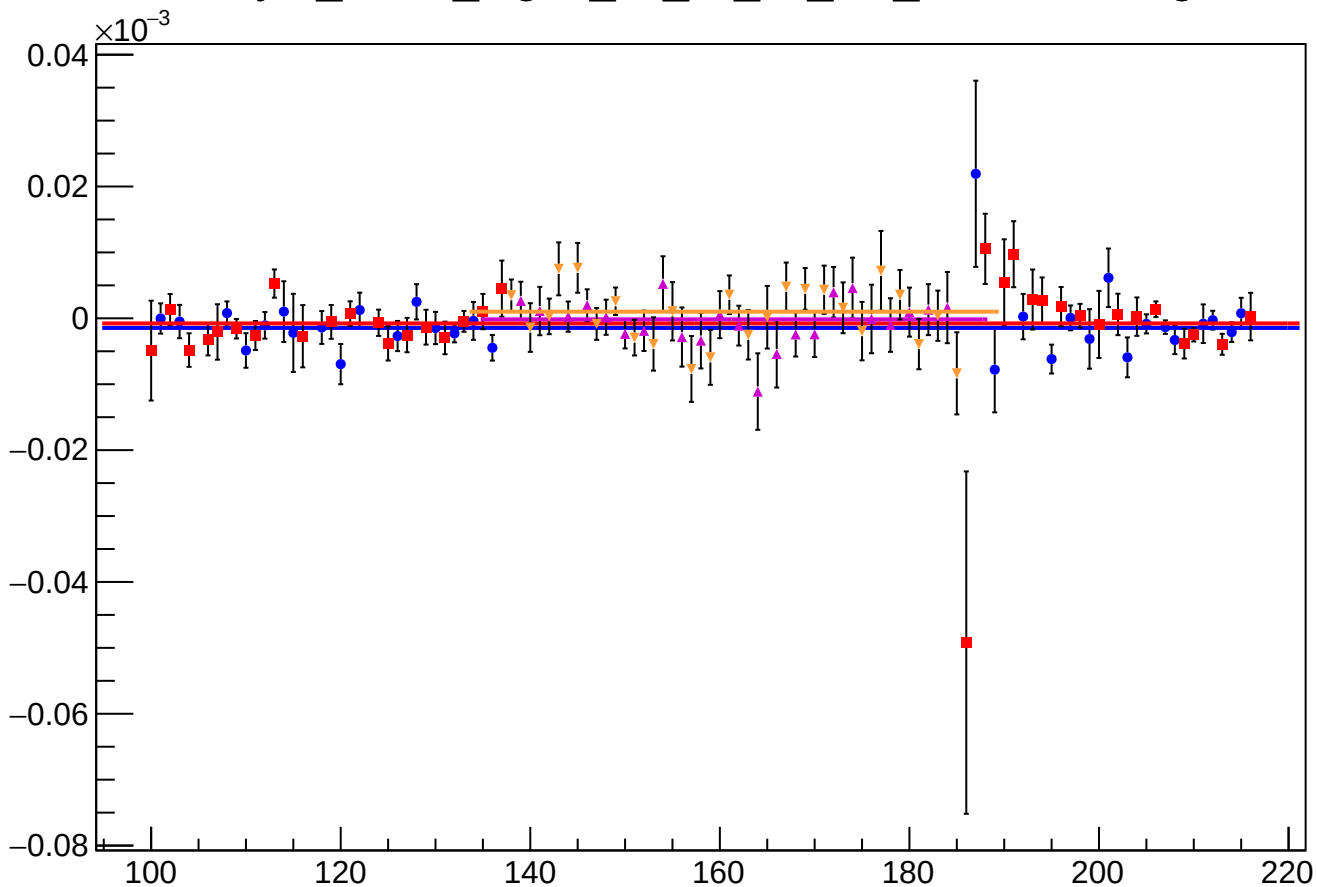
+ sign 52.988 $\pm$ 0.006  $\chi^2$ /NDF: 7091332.5/55

All: 52.668 $\pm$ 0.005  $\chi^2$ /NDF: 16471005.0/113

- sign 52.338 $\pm$ 0.007  $\chi^2$ /NDF: 9374679.5/57



# asym\_sam6\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.8/34

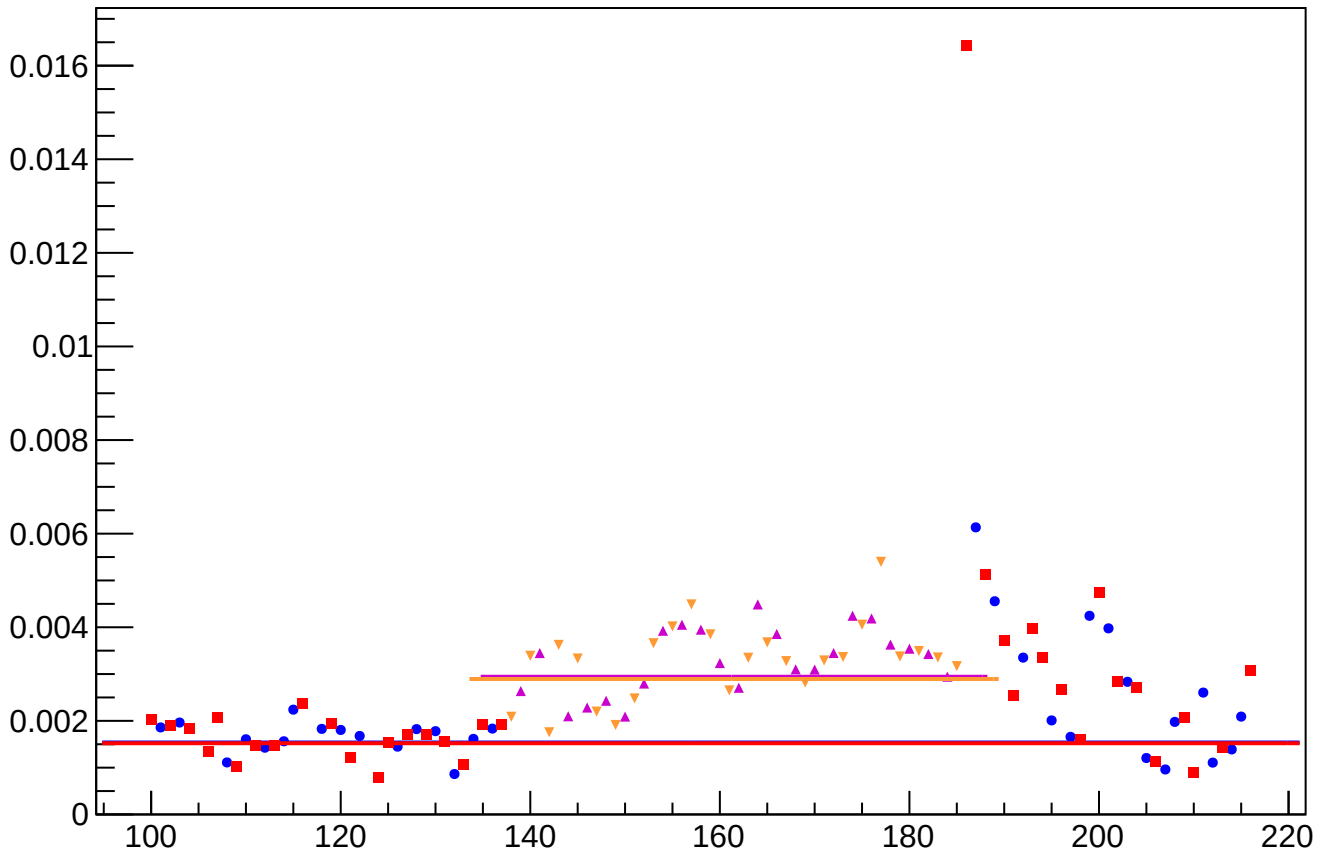
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 69.5/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 132.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.4/57

# asym\_sam6\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5266226.8/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 2642911.8/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7368897.3/34

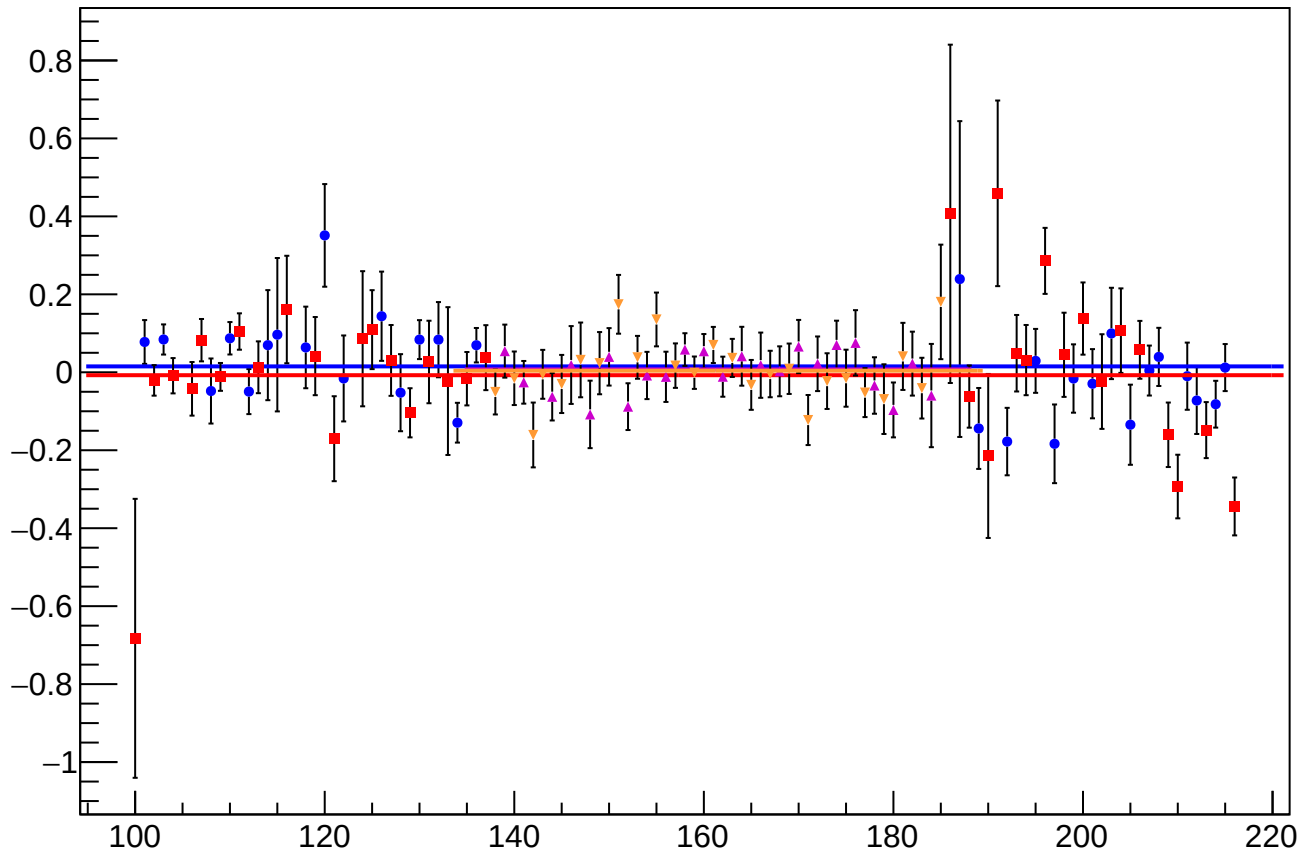
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 1890470.3/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13844636.6/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 29277958.1/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15430398.8/57

# asym\_sam6\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.015 \pm 0.013$   $\chi^2/\text{NDF}: 48.5/30$

Left Out:  $0.004 \pm 0.013$   $\chi^2/\text{NDF}: 24.8/24$

Right Out:  $-0.007 \pm 0.013$   $\chi^2/\text{NDF}: 84.4/34$

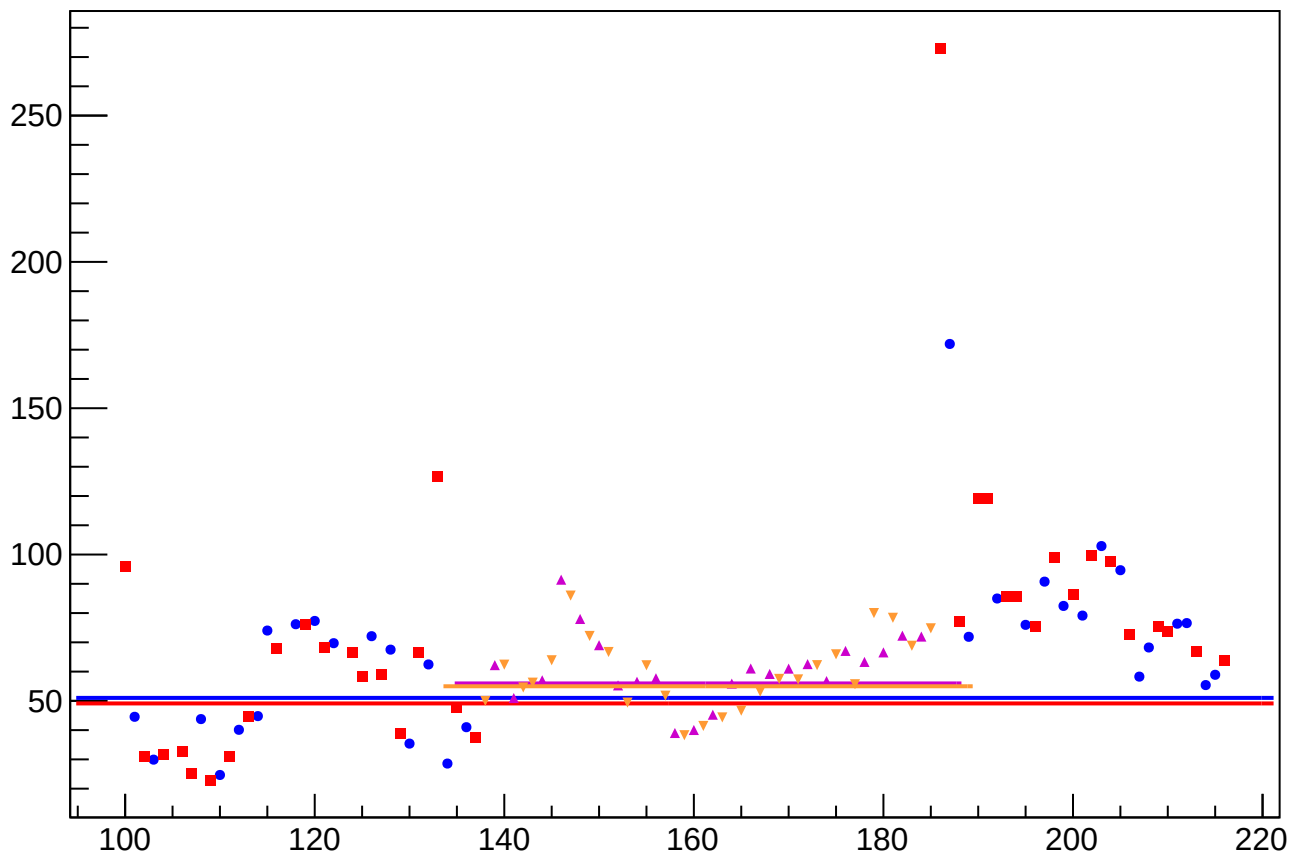
Left In:  $0.007 \pm 0.014$   $\chi^2/\text{NDF}: 15.1/22$

+ sign  $0.010 \pm 0.009$   $\chi^2/\text{NDF}: 73.6/55$

All:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 174.4/113$

- sign  $-0.001 \pm 0.009$   $\chi^2/\text{NDF}: 100.1/57$

# asym\_sam6\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.018 $\pm$ 0.009  $\chi^2$ /NDF: 5430123.7/30

Left Out: 54.985 $\pm$ 0.009  $\chi^2$ /NDF:1566963.9/24

Right Out: 49.122 $\pm$ 0.009  $\chi^2$ /NDF: 7697931.9/34

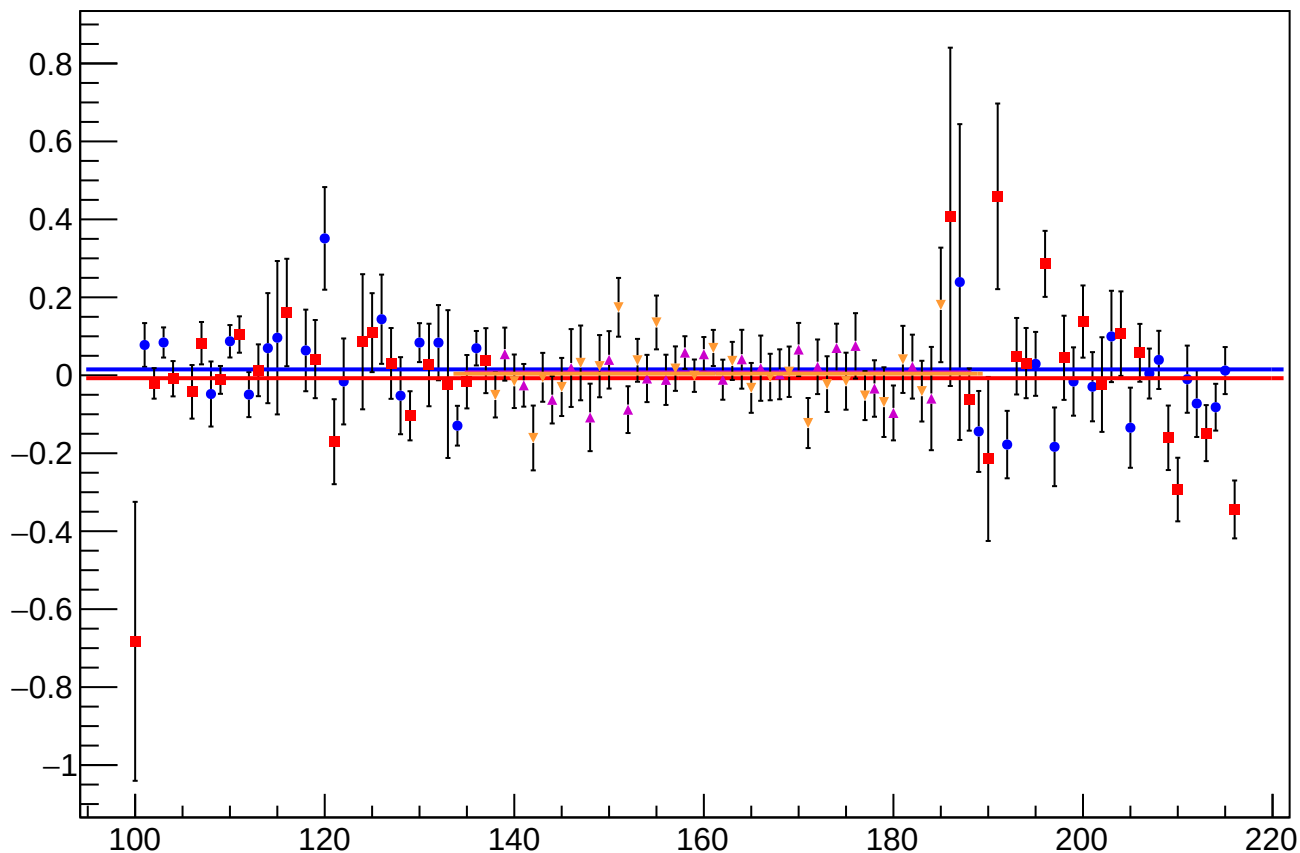
Left In: 55.955 $\pm$ 0.010  $\chi^2$ /NDF:1406309.5/22

+ sign 52.987 $\pm$ 0.006  $\chi^2$ /NDF: 7091570.8/55

All: 52.667 $\pm$ 0.005  $\chi^2$ /NDF: 16471372.7/113

- sign 52.337 $\pm$ 0.007  $\chi^2$ /NDF: 9374809.9/57

asym\_sam6\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.015 $\pm$ 0.013  $\chi^2$ /NDF: 48.5/30

Left Out: 0.004 $\pm$ 0.013  $\chi^2$ /NDF: 24.8/24

Right Out: -0.007 $\pm$ 0.013  $\chi^2$ /NDF: 84.4/34

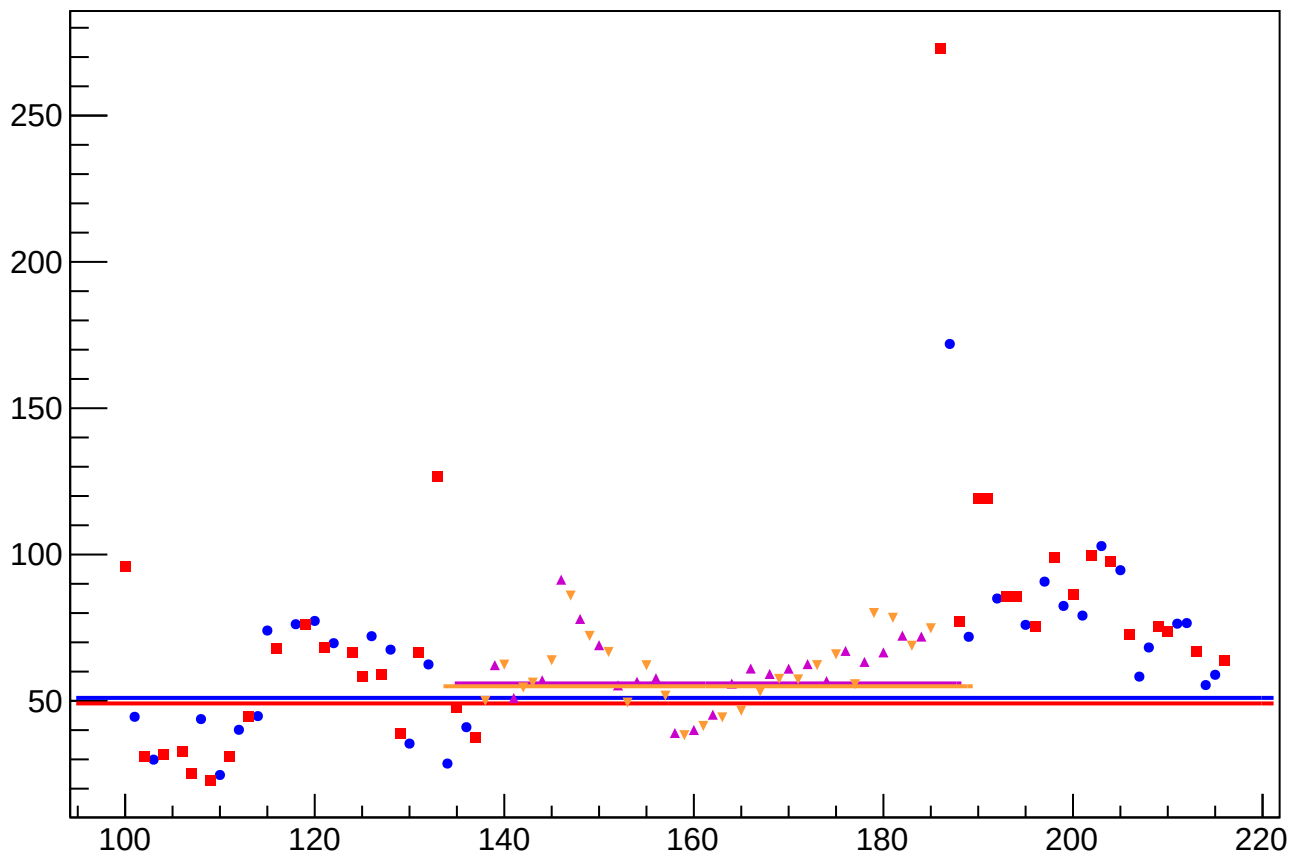
Left In: 0.007 $\pm$ 0.014  $\chi^2$ /NDF: 15.1/22

+ sign 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 73.6/55

All: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 174.4/113

- sign -0.001 $\pm$ 0.009  $\chi^2$ /NDF: 100.1/57

asym\_sam6\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.018 $\pm$ 0.009  $\chi^2$ /NDF: 5430123.7/30

Left Out: 54.985 $\pm$ 0.009  $\chi^2$ /NDF: 1566963.9/24

Right Out: 49.122 $\pm$ 0.009  $\chi^2$ /NDF: 7697931.9/34

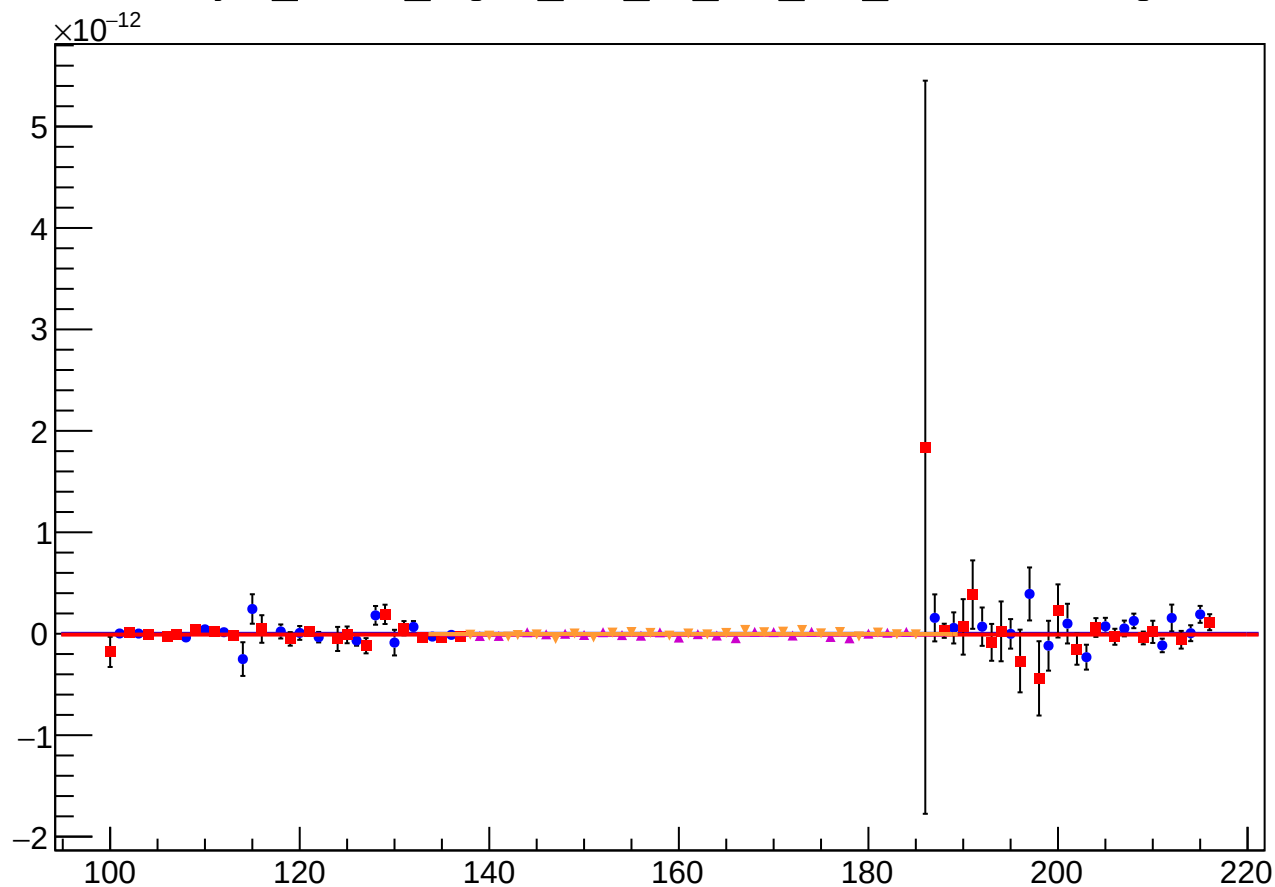
Left In: 55.955 $\pm$ 0.010  $\chi^2$ /NDF: 1406309.5/22

+ sign 52.987 $\pm$ 0.006  $\chi^2$ /NDF: 7091570.8/55

All: 52.667 $\pm$ 0.005  $\chi^2$ /NDF: 16471372.7/113

- sign 52.337 $\pm$ 0.007  $\chi^2$ /NDF: 9374809.9/57

# asym\_sam6\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/34

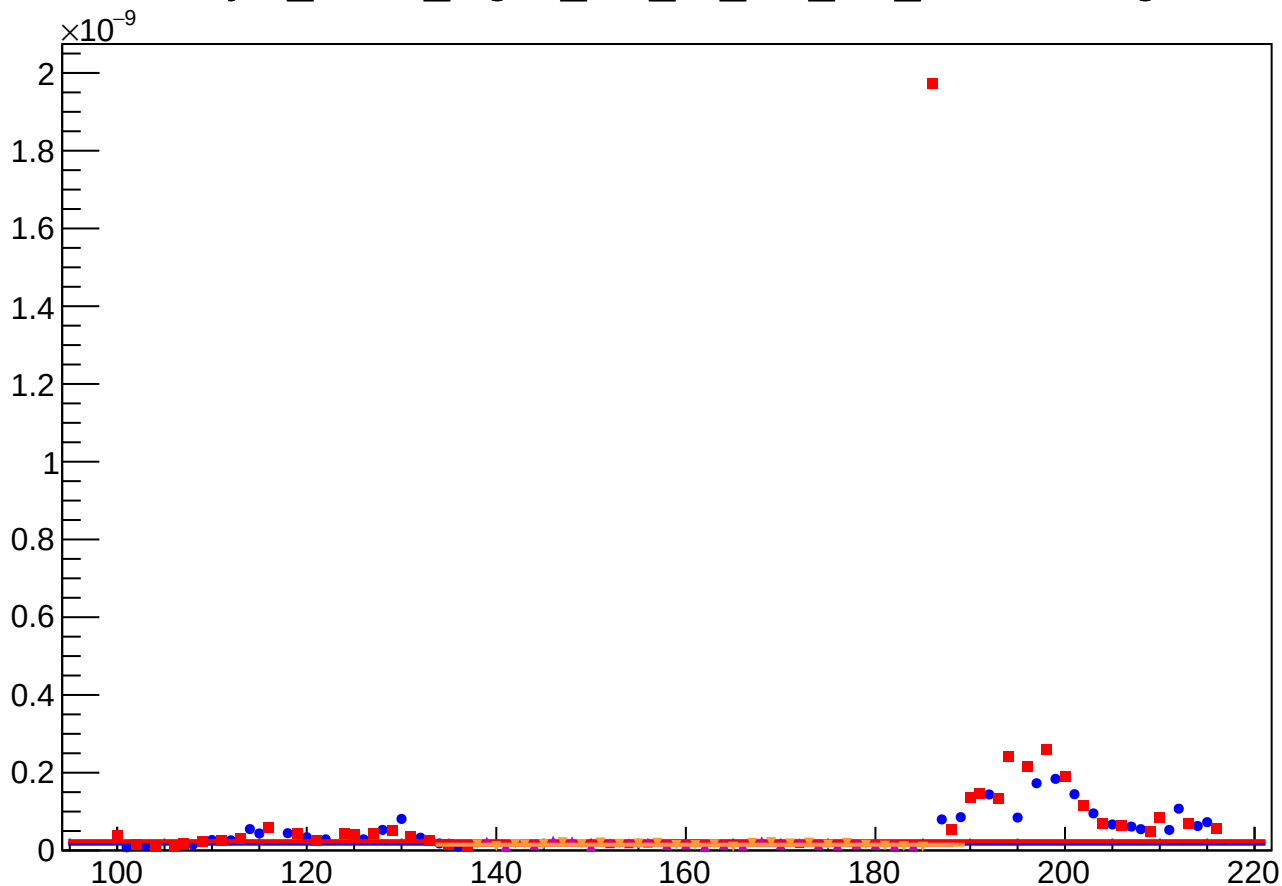
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.1/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 105.4/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.3/57

# asym\_sam6\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13816936.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1401850.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12024326.9/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1427121.6/22

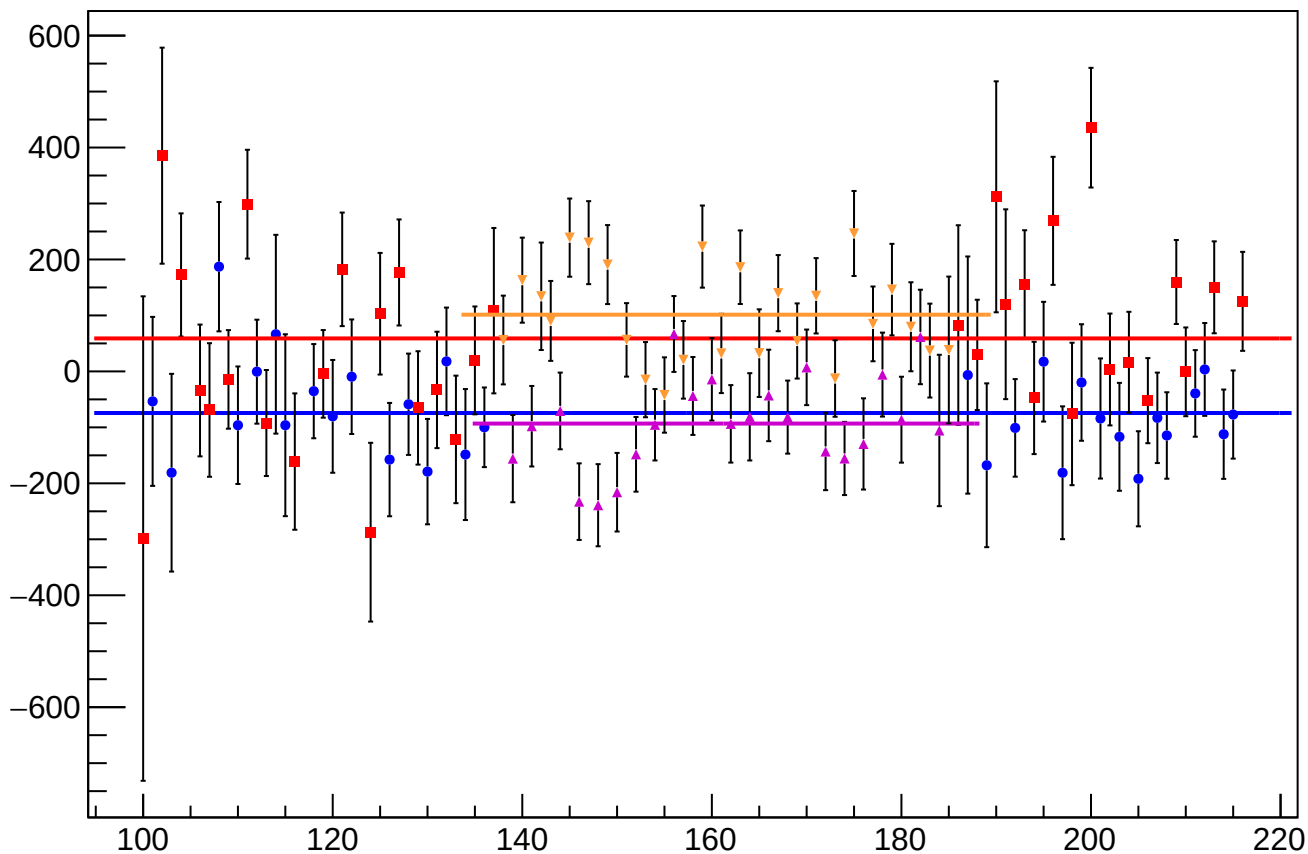
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15437441.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30753137.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15203646.9/57



# reg\_asym\_sam7\_mean vs Slug



Right In:  $-74.345 \pm 17.653$   $\chi^2/\text{NDF}$ : 17.0/30

Left Out:  $101.325 \pm 14.642$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $58.912 \pm 17.620$   $\chi^2/\text{NDF}$ : 60.2/34

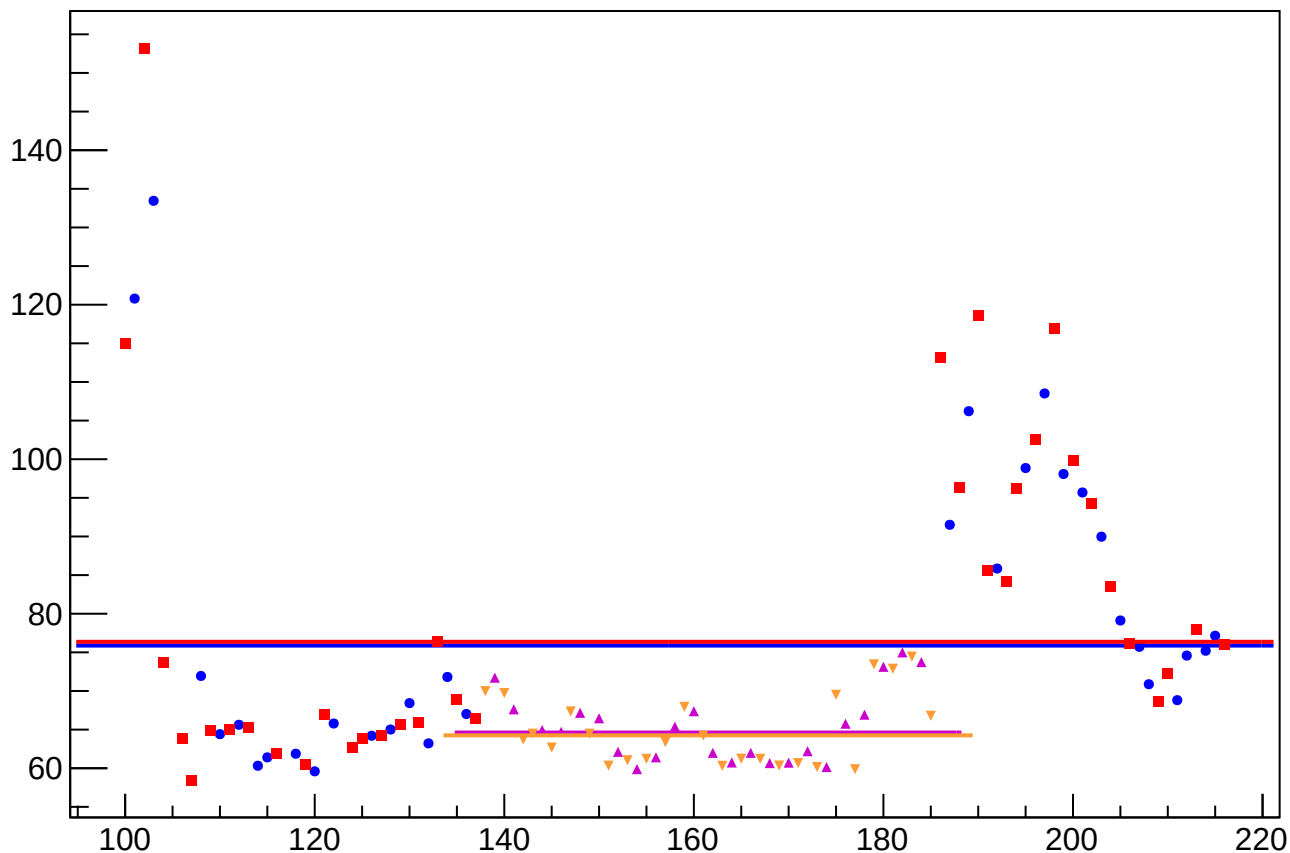
Left In:  $-93.236 \pm 15.137$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $29.730 \pm 11.270$   $\chi^2/\text{NDF}$ : 109.5/55

All:  $1.094 \pm 8.043$   $\chi^2/\text{NDF}$ : 254.6/113

- sign  $-28.629 \pm 11.482$   $\chi^2/\text{NDF}$ : 131.9/57

# reg\_asym\_sam7\_rms vs Slug



Right In: 75.877+/-0.012  $\chi^2/\text{NDF}$ : 1331899.9/30

Left Out: 64.256+/-0.010  $\chi^2/\text{NDF}$ : 177697.9/24

Right Out: 76.366+/-0.012  $\chi^2/\text{NDF}$ : 1611880.9/34

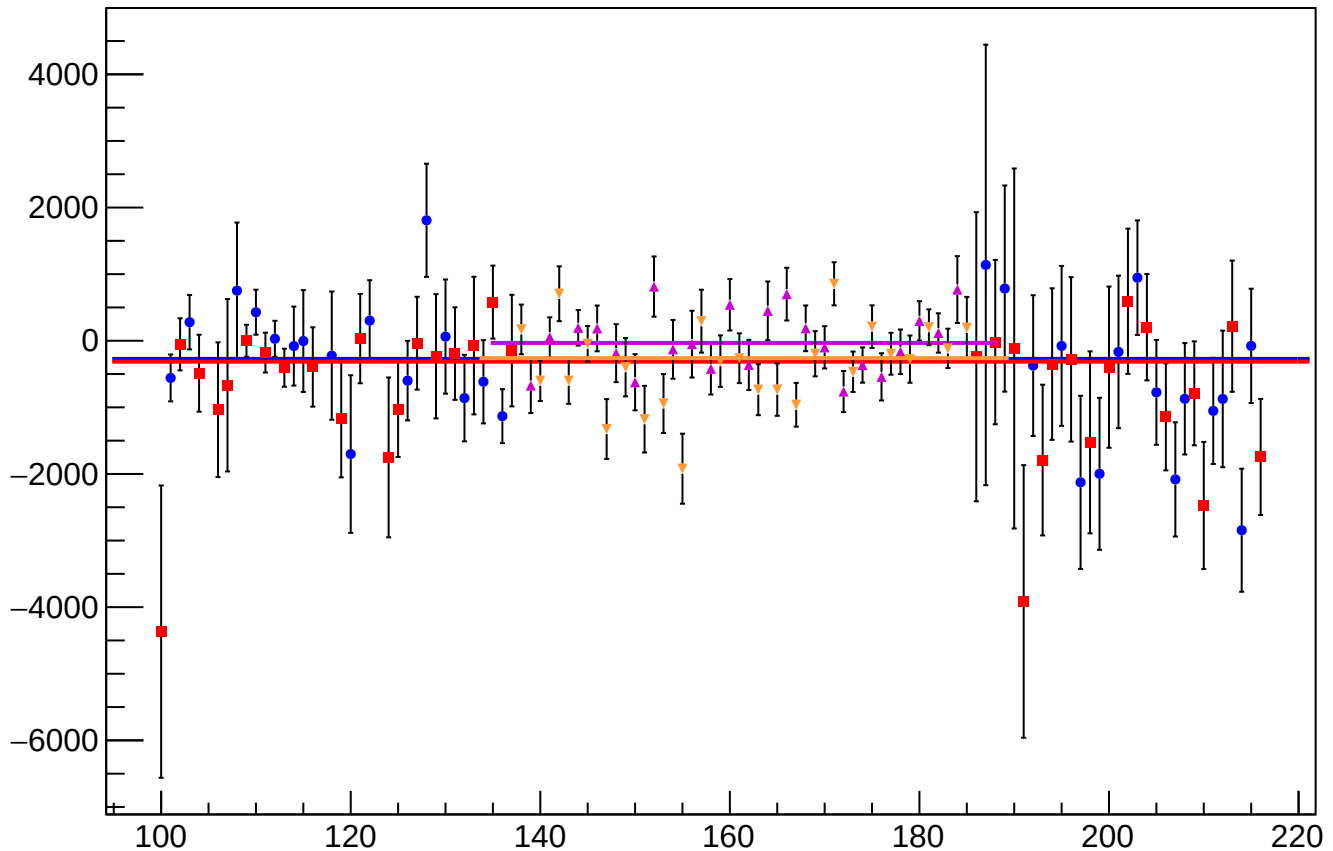
Left In: 64.621+/-0.011  $\chi^2/\text{NDF}$ : 147201.3/22

+ sign 68.992+/-0.008  $\chi^2/\text{NDF}$ : 2023098.5/55

All: 69.294+/-0.006  $\chi^2/\text{NDF}$ : 4296429.9/113

- sign 69.608+/-0.008  $\chi^2/\text{NDF}$ : 2270394.0/57

# asym\_sam7\_reg\_correction\_mean vs Slug



Right In:  $-272.375 \pm 113.144$   $\chi^2/\text{NDF}: 45.2/30$

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}: 58.8/24$

Right Out:  $-314.067 \pm 107.956$   $\chi^2/\text{NDF}: 29.5/34$

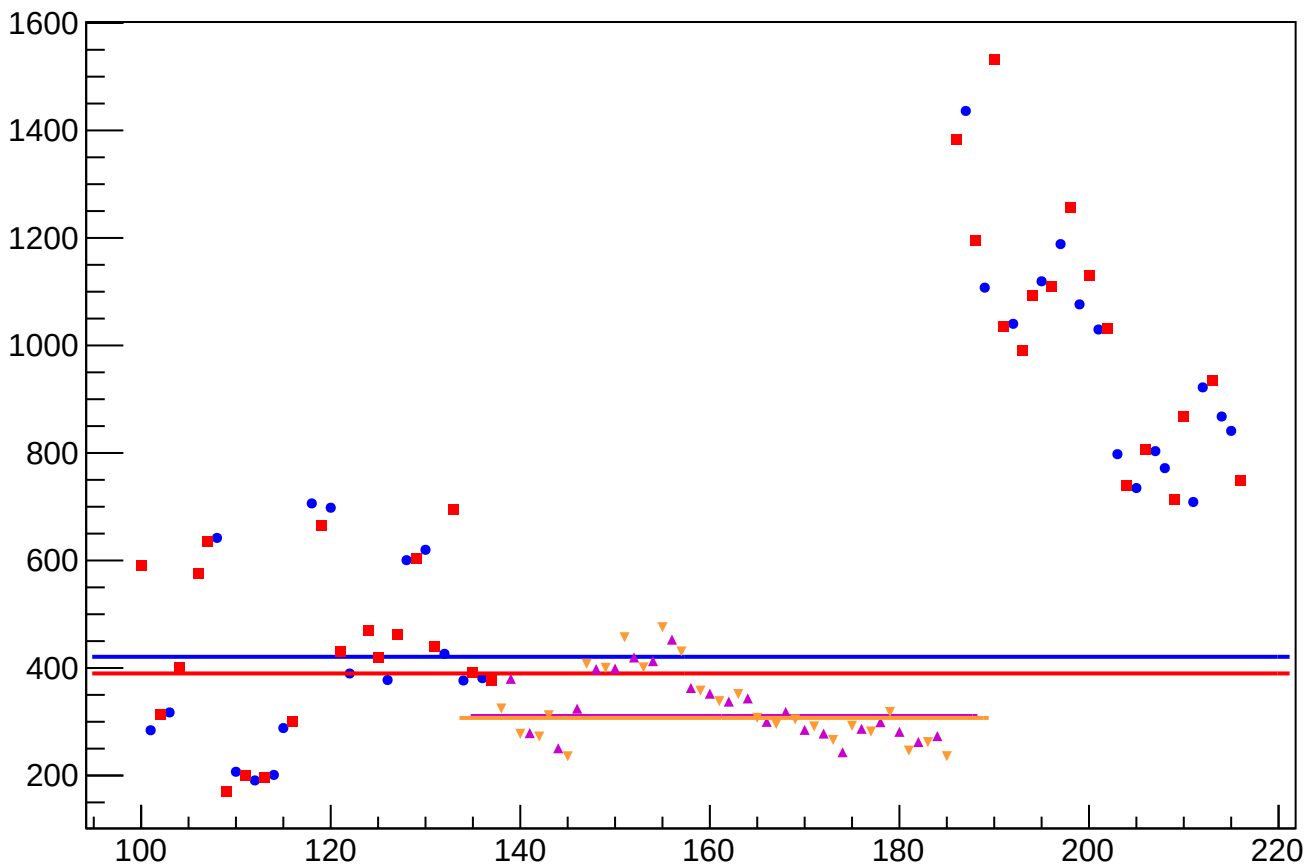
Left In:  $-32.423 \pm 73.837$   $\chi^2/\text{NDF}: 31.7/22$

+ sign  $-264.320 \pm 60.303$   $\chi^2/\text{NDF}: 104.0/55$

All:  $-194.006 \pm 42.866$   $\chi^2/\text{NDF}: 172.6/113$

- sign  $-122.185 \pm 60.946$   $\chi^2/\text{NDF}: 65.8/57$

# asym\_sam7\_reg\_correction\_rms vs Slug



Right In: 420.826+/-0.080  $\chi^2/\text{NDF}$ : 10644600.7/30

Left Out: 307.143+/-0.050  $\chi^2/\text{NDF}$ :1320151.2/24

Right Out: 389.879+/-0.076  $\chi^2/\text{NDF}$ : 13004279.3/34

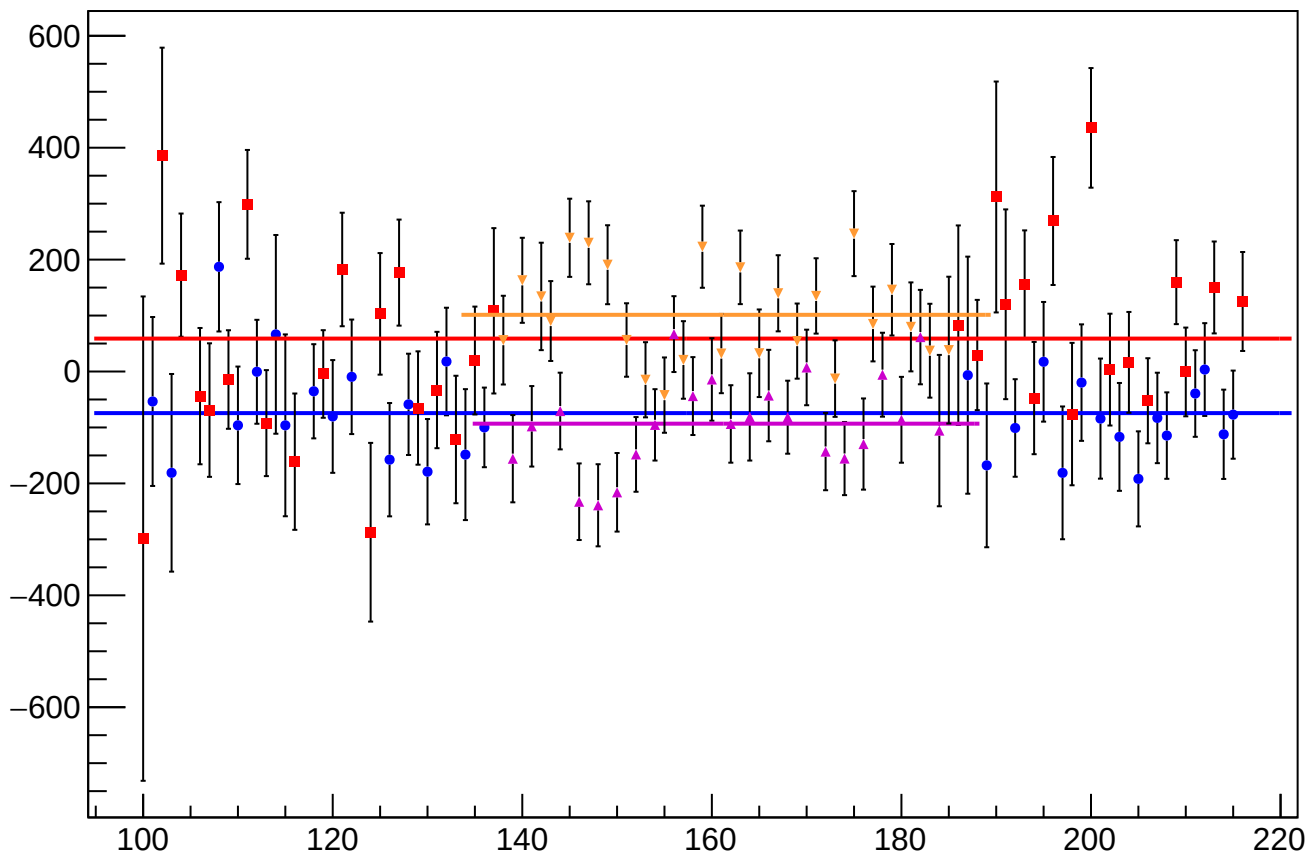
Left In: 310.697+/-0.052  $\chi^2/\text{NDF}$ :1079476.2/22

+ sign 339.436+/-0.043  $\chi^2/\text{NDF}$ : 13410307.6/55

All: 337.703+/-0.030  $\chi^2/\text{NDF}$ : 28230426.2/11

- sign 335.933+/-0.043  $\chi^2/\text{NDF}$ : 14816780.8/57

# cor\_asym\_sam7\_mean vs Slug



Right In:  $-74.347 \pm 17.653$   $\chi^2/\text{NDF}$ : 17.0/30

Left Out:  $101.325 \pm 14.642$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $58.840 \pm 17.633$   $\chi^2/\text{NDF}$ : 60.3/34

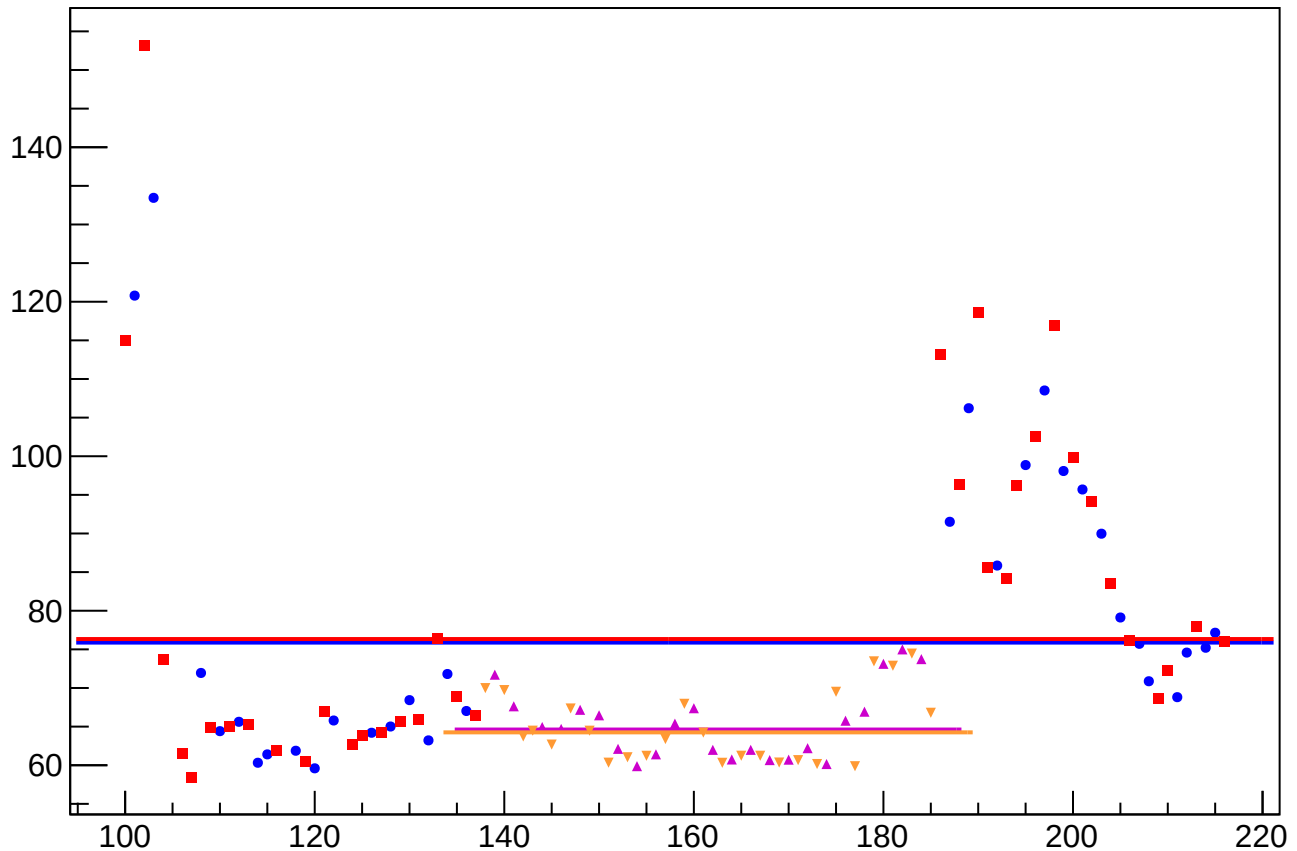
Left In:  $-93.235 \pm 15.137$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $29.729 \pm 11.270$   $\chi^2/\text{NDF}$ : 109.5/55

All:  $1.061 \pm 8.044$   $\chi^2/\text{NDF}$ : 254.7/113

- sign  $-28.714 \pm 11.485$   $\chi^2/\text{NDF}$ : 132.0/57

# cor\_asym\_sam7\_rms vs Slug



Right In:  $75.877 \pm 0.012$   $\chi^2/\text{NDF}$ : 1331900.2/30

Left Out:  $64.256 \pm 0.010$   $\chi^2/\text{NDF}$ : 177697.9/24

Right Out:  $76.335 \pm 0.012$   $\chi^2/\text{NDF}$ : 1619106.6/34

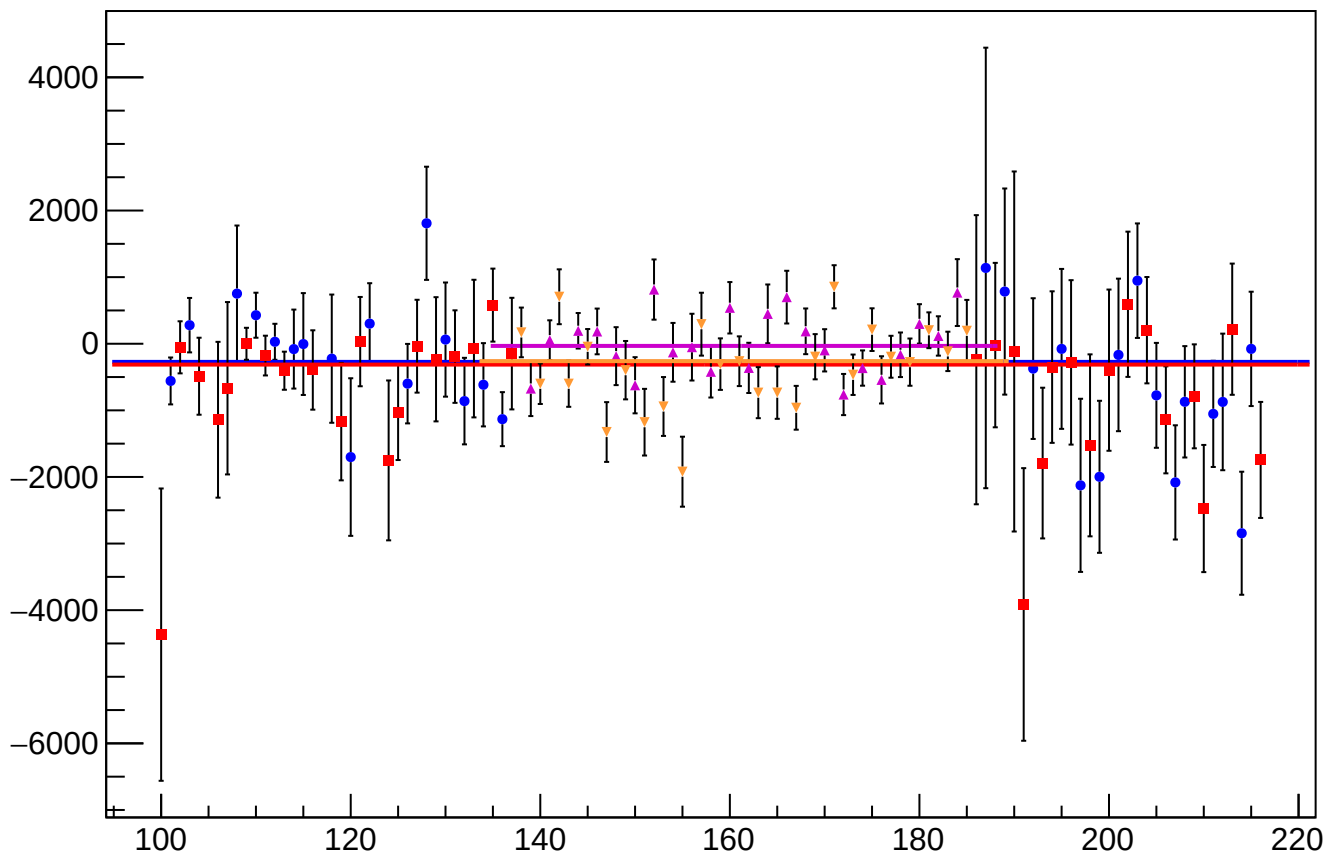
Left In:  $64.621 \pm 0.011$   $\chi^2/\text{NDF}$ : 147201.3/22

+ sign  $68.992 \pm 0.008$   $\chi^2/\text{NDF}$ : 2023098.8/55

All:  $69.286 \pm 0.006$   $\chi^2/\text{NDF}$ : 4300353.8/113

- sign  $69.591 \pm 0.008$   $\chi^2/\text{NDF}$ : 2274482.3/57

# asym\_sam7\_cor\_correction\_mean vs Slug



Right In:  $-272.373 \pm 113.145$   $\chi^2/\text{NDF}$ : 45.2/30

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $-312.907 \pm 108.115$   $\chi^2/\text{NDF}$ : 29.5/34

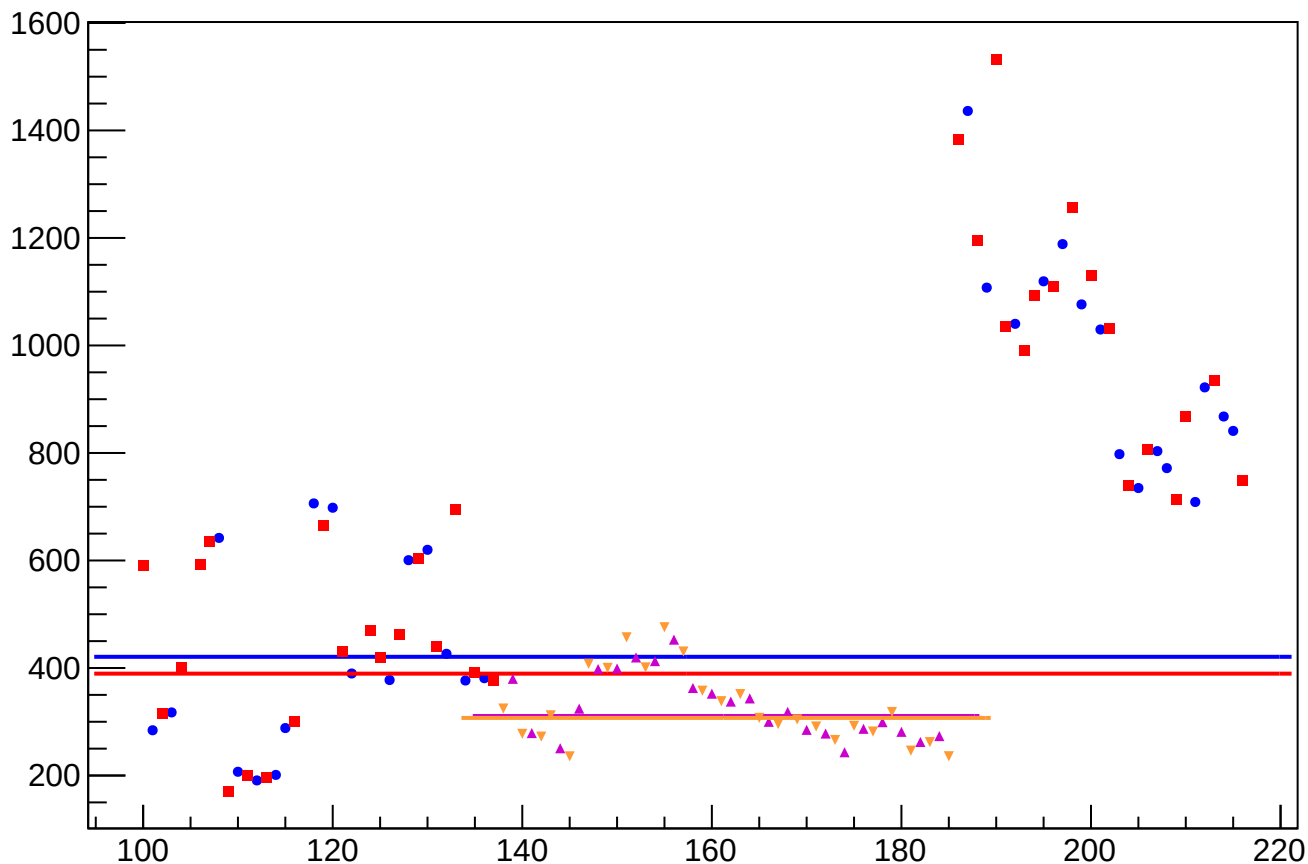
Left In:  $-32.420 \pm 73.837$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-264.320 \pm 60.303$   $\chi^2/\text{NDF}$ : 104.0/55

All:  $-193.767 \pm 42.876$   $\chi^2/\text{NDF}$ : 172.6/113

- sign  $-121.634 \pm 60.974$   $\chi^2/\text{NDF}$ : 65.8/57

# asym\_sam7\_cor\_correction\_rms vs Slug



Right In: 420.829+/-0.080  $\chi^2/\text{NDF}$ : 10644530.6/30

Left Out: 307.143+/-0.050  $\chi^2/\text{NDF}$ :1320147.4/24

Right Out: 389.514+/-0.076  $\chi^2/\text{NDF}$ : 12997127.4/34

Left In: 310.698+/-0.052  $\chi^2/\text{NDF}$ :1079479.8/22

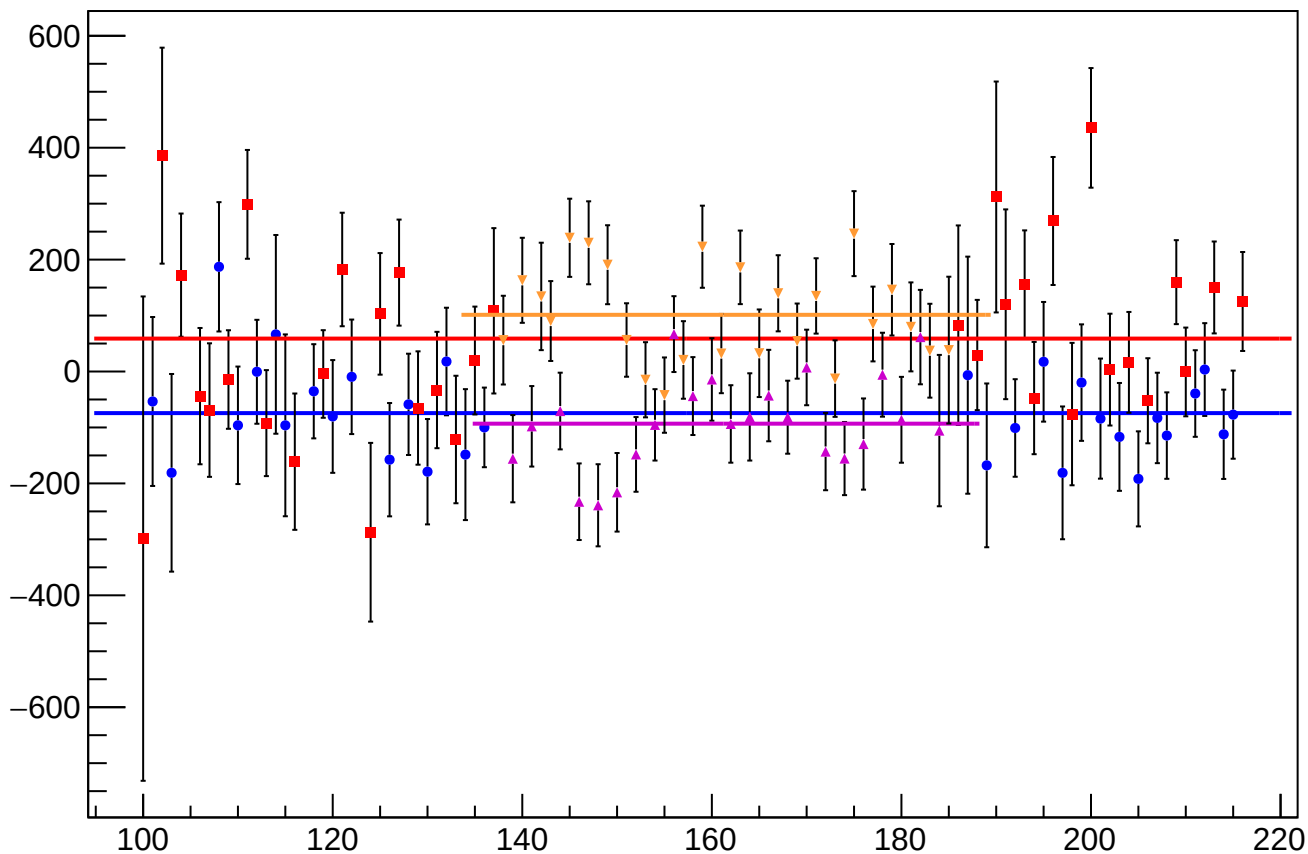
+ sign 339.436+/-0.043  $\chi^2/\text{NDF}$ : 13410294.0/55

All: 337.622+/-0.030  $\chi^2/\text{NDF}$ : 28215394.2/11

- sign 335.767+/-0.043  $\chi^2/\text{NDF}$ : 14801438.4/57



# eigen\_cor\_asym\_sam7\_mean vs Slug



Right In:  $-74.347 \pm 17.653$   $\chi^2/\text{NDF}$ : 17.0/30

Left Out:  $101.325 \pm 14.642$   $\chi^2/\text{NDF}$ : 33.9/24

Right Out:  $58.840 \pm 17.633$   $\chi^2/\text{NDF}$ : 60.3/34

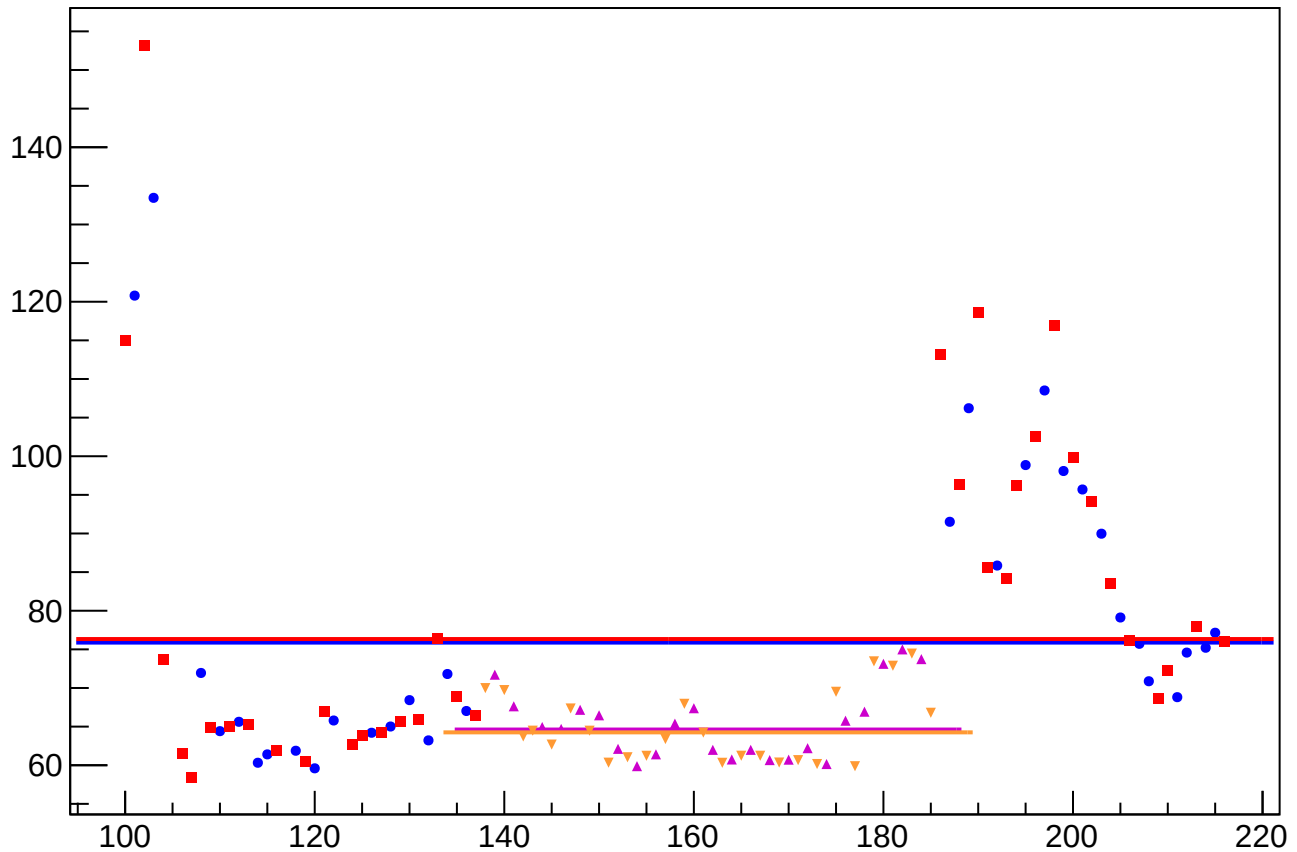
Left In:  $-93.235 \pm 15.137$   $\chi^2/\text{NDF}$ : 28.8/22

+ sign  $29.729 \pm 11.270$   $\chi^2/\text{NDF}$ : 109.5/55

All:  $1.061 \pm 8.044$   $\chi^2/\text{NDF}$ : 254.7/113

- sign  $-28.714 \pm 11.485$   $\chi^2/\text{NDF}$ : 132.0/57

# eigen\_cor\_asym\_sam7\_rms vs Slug



Right In:  $75.877 \pm 0.012$   $\chi^2/\text{NDF}$ : 1331900.2/30

Left Out:  $64.256 \pm 0.010$   $\chi^2/\text{NDF}$ : 177697.9/24

Right Out:  $76.335 \pm 0.012$   $\chi^2/\text{NDF}$ : 1619106.6/34

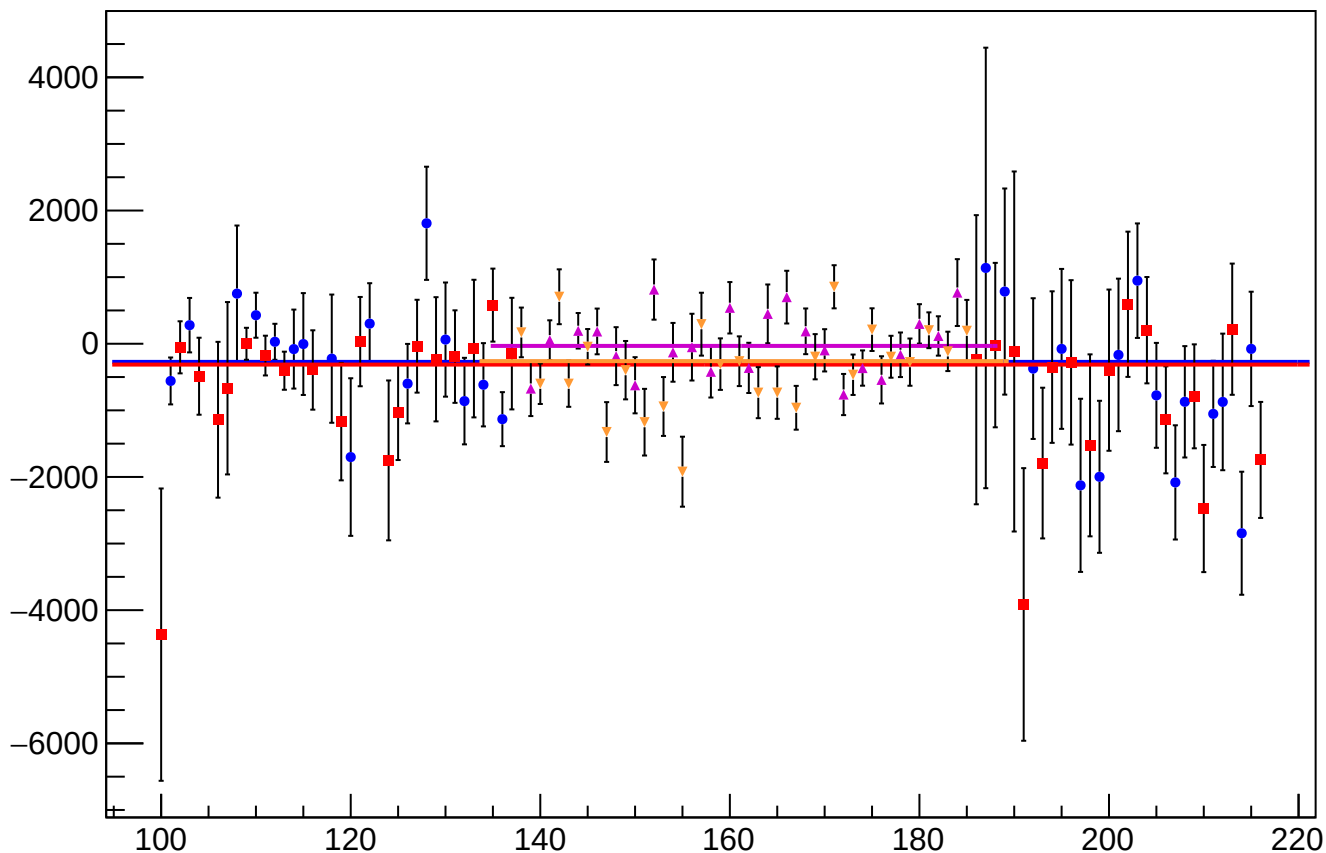
Left In:  $64.621 \pm 0.011$   $\chi^2/\text{NDF}$ : 147201.3/22

+ sign  $68.992 \pm 0.008$   $\chi^2/\text{NDF}$ : 2023098.8/55

All:  $69.286 \pm 0.006$   $\chi^2/\text{NDF}$ : 4300353.8/113

- sign  $69.591 \pm 0.008$   $\chi^2/\text{NDF}$ : 2274482.3/57

asym\_sam7\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-272.373 \pm 113.145$   $\chi^2/\text{NDF}$ : 45.2/30

Left Out:  $-261.124 \pm 71.268$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $-312.907 \pm 108.115$   $\chi^2/\text{NDF}$ : 29.5/34

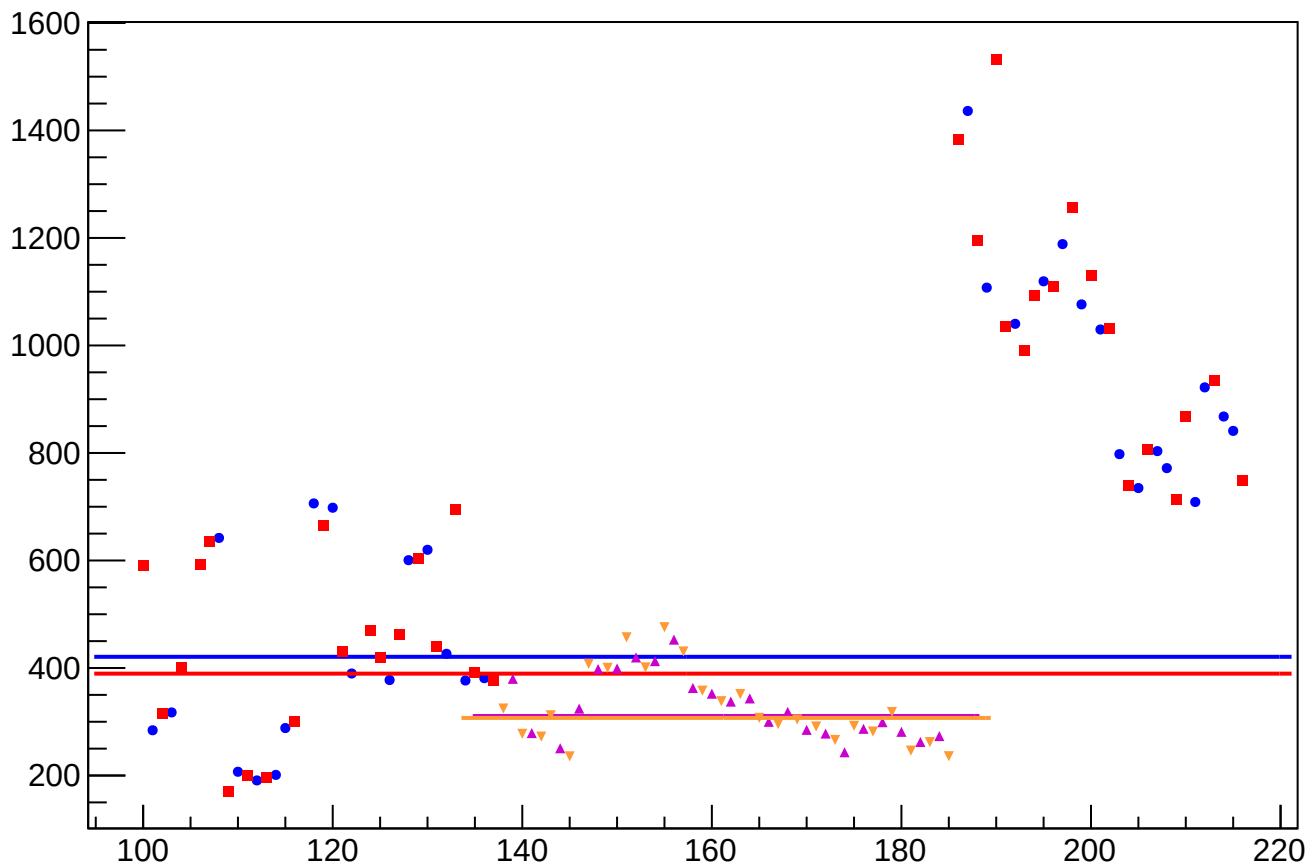
Left In:  $-32.420 \pm 73.837$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $-264.320 \pm 60.303$   $\chi^2/\text{NDF}$ : 104.0/55

All:  $-193.767 \pm 42.876$   $\chi^2/\text{NDF}$ : 172.6/113

- sign  $-121.634 \pm 60.974$   $\chi^2/\text{NDF}$ : 65.8/57

# asym\_sam7\_eigen\_cor\_correction\_rms vs Slug



Right In: 420.829 $\pm$ 0.080  $\chi^2/\text{NDF}$ : 10644530.6/30

Left Out: 307.143 $\pm$ 0.050  $\chi^2/\text{NDF}$ : 1320147.4/24

Right Out: 389.514 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 12997127.4/34

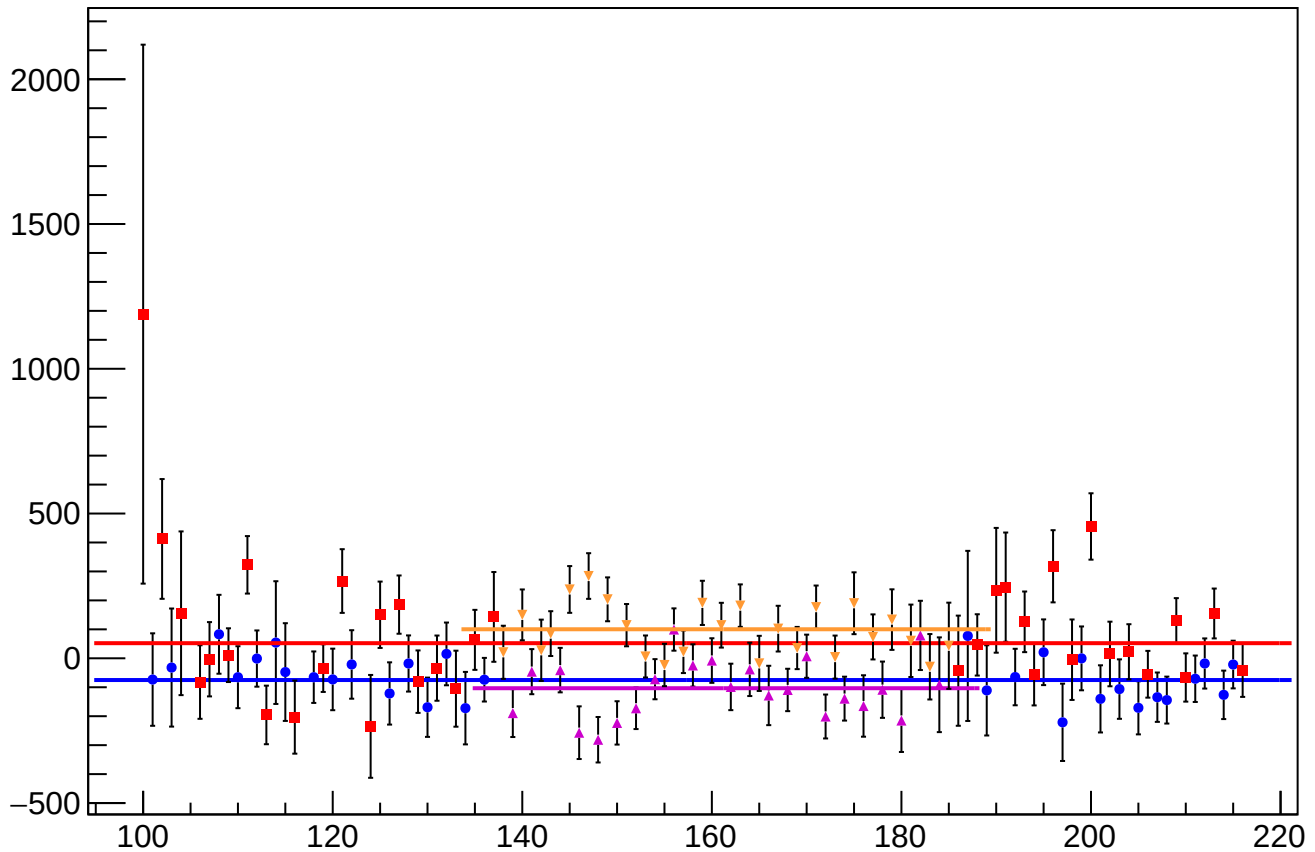
Left In: 310.698 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 1079479.8/22

+ sign 339.436 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 13410294.0/55

All: 337.622 $\pm$ 0.030  $\chi^2/\text{NDF}$ : 28215394.2/11

- sign 335.767 $\pm$ 0.043  $\chi^2/\text{NDF}$ : 14801438.4/57

# dit\_asym\_sam7\_mean vs Slug



Right In:  $-75.066 \pm 18.903$   $\chi^2/\text{NDF}: 11.9/30$

Left Out:  $100.277 \pm 16.625$   $\chi^2/\text{NDF}: 27.7/24$

Right Out:  $52.227 \pm 18.981$   $\chi^2/\text{NDF}: 65.7/34$

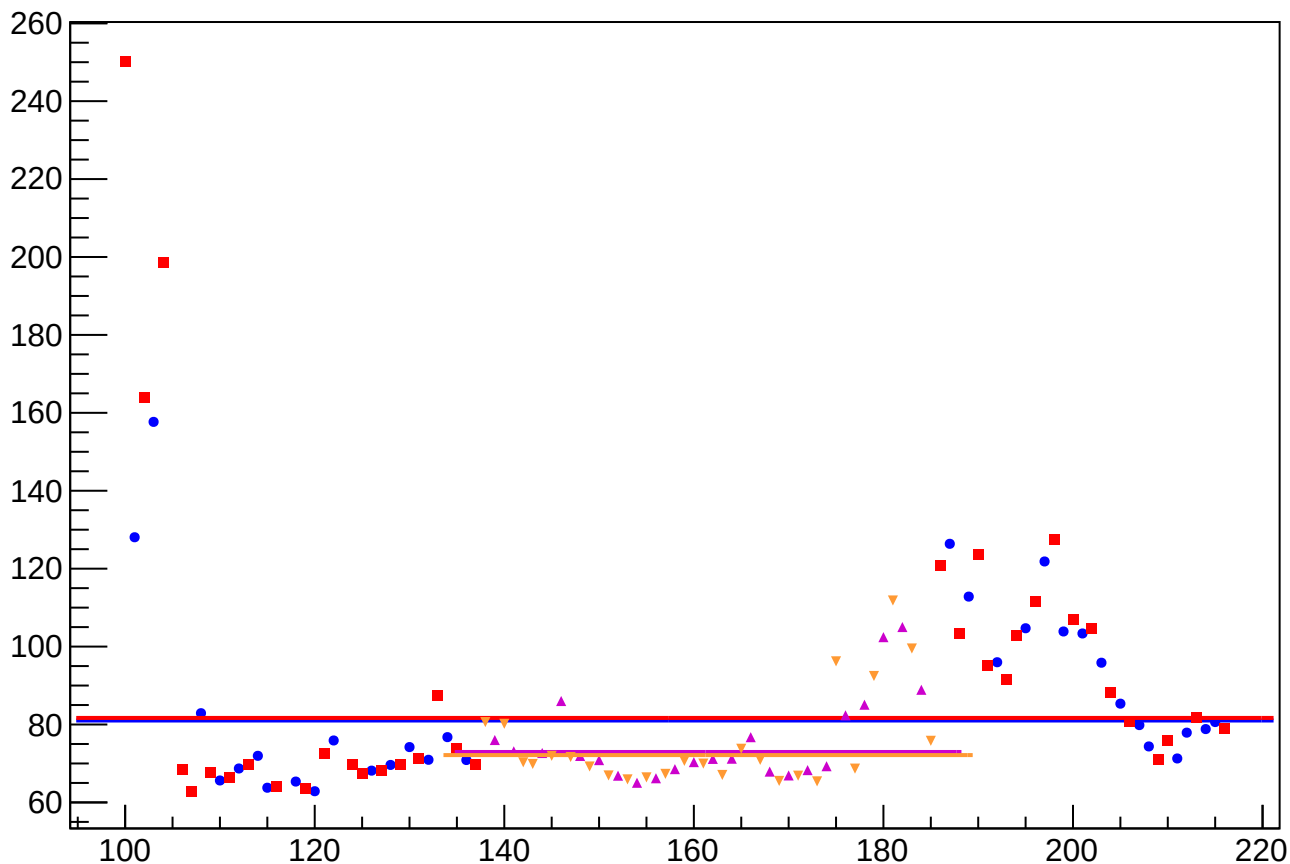
Left In:  $-103.363 \pm 17.260$   $\chi^2/\text{NDF}: 32.7/22$

+ sign  $23.803 \pm 12.484$   $\chi^2/\text{NDF}: 88.1/55$

All:  $-3.924 \pm 8.927$   $\chi^2/\text{NDF}: 233.4/113$

- sign  $-32.937 \pm 12.770$   $\chi^2/\text{NDF}: 135.2/57$

# dit\_asym\_sam7\_rms vs Slug



Right In: 81.026+/-0.013  $\chi^2/\text{NDF}$ : 1505405.5/30

Left Out: 72.150+/-0.012  $\chi^2/\text{NDF}$ : 641970.1/24

Right Out: 81.689+/-0.013  $\chi^2/\text{NDF}$ : 2128719.8/34

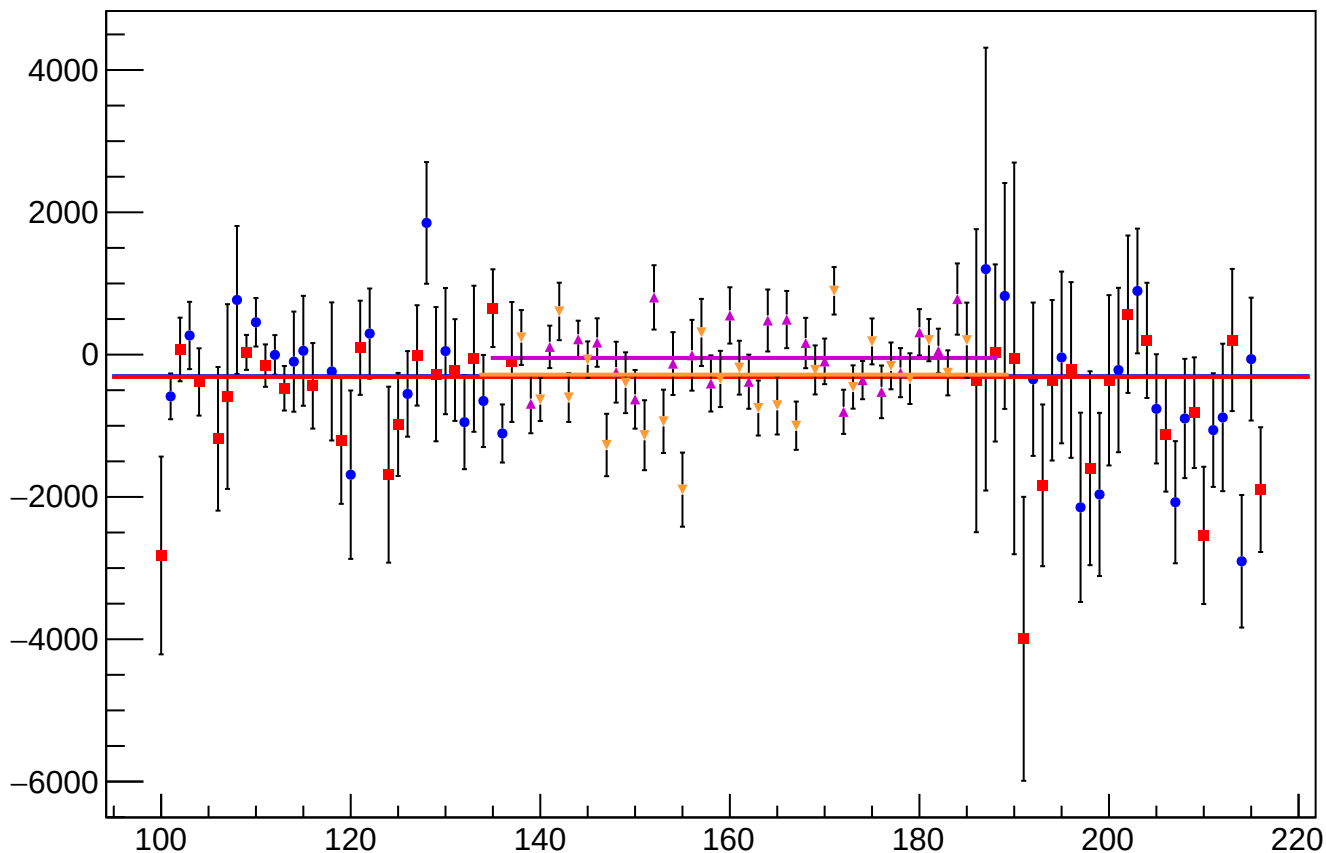
Left In: 72.948+/-0.012  $\chi^2/\text{NDF}$ : 509028.0/22

+ sign 76.021+/-0.009  $\chi^2/\text{NDF}$ : 2396044.4/55

All: 76.453+/-0.006  $\chi^2/\text{NDF}$ : 5270874.4/113

- sign 76.905+/-0.009  $\chi^2/\text{NDF}$ : 2869931.7/57

# asym\_sam7\_dit\_correction\_mean vs Slug



Right In:  $-303.430 \pm 115.075$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-281.205 \pm 72.538$   $\chi^2/\text{NDF}$ : 56.8/24

Right Out:  $-313.358 \pm 109.815$   $\chi^2/\text{NDF}$ : 31.8/34

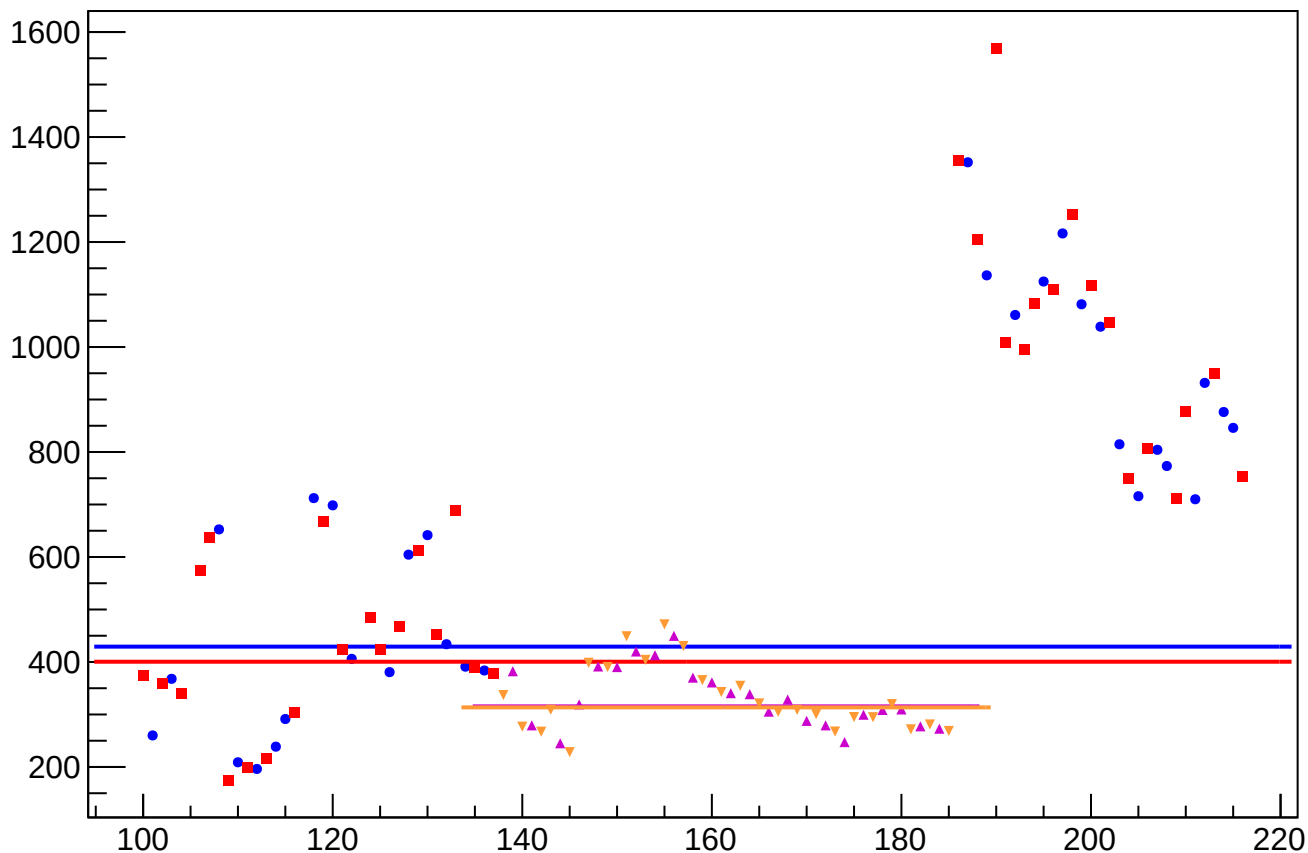
Left In:  $-46.569 \pm 74.897$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-287.524 \pm 61.364$   $\chi^2/\text{NDF}$ : 101.5/55

All:  $-210.046 \pm 43.571$   $\chi^2/\text{NDF}$ : 171.3/113

- sign  $-131.270 \pm 61.876$   $\chi^2/\text{NDF}$ : 66.6/57

# asym\_sam7\_dit\_correction\_rms vs Slug



Right In: 429.242 $\pm$ 0.081  $\chi^2$ /NDF: 10501879.5/30

Left Out: 313.500 $\pm$ 0.051  $\chi^2$ /NDF:1175529.4/24

Right Out: 400.492 $\pm$ 0.078  $\chi^2$ /NDF: 12549031.2/34

Left In: 315.455 $\pm$ 0.053  $\chi^2$ /NDF:1008523.1/22

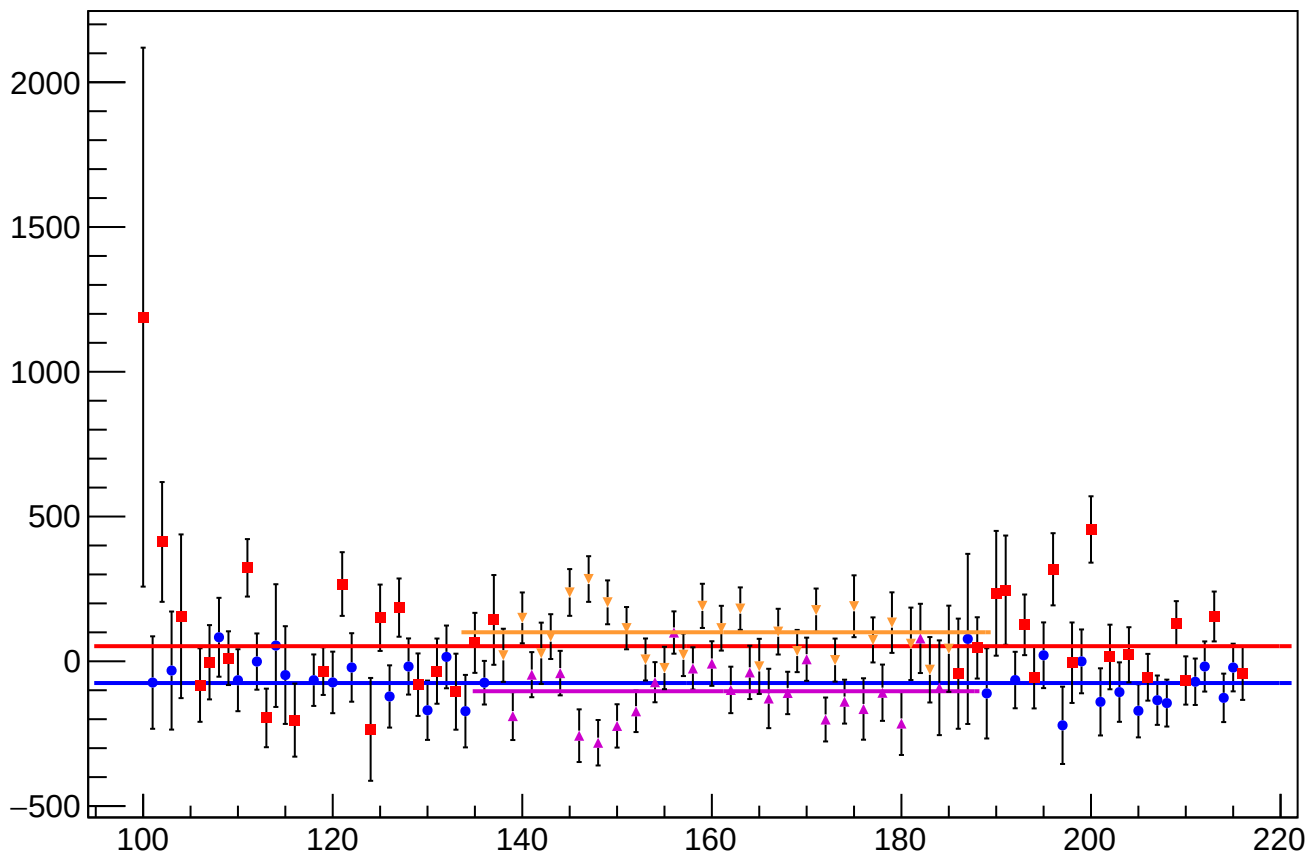
+ sign 346.412 $\pm$ 0.043  $\chi^2$ /NDF: 13125334.7/55

All: 344.449 $\pm$ 0.031  $\chi^2$ /NDF: 27505548.3/11

- sign 342.453 $\pm$ 0.044  $\chi^2$ /NDF: 14376085.9/57



# eigen\_dit\_asym\_sam7\_mean vs Slug



Right In:  $-75.065 \pm 18.903$   $\chi^2/\text{NDF}$ : 11.9/30

Left Out:  $100.276 \pm 16.625$   $\chi^2/\text{NDF}$ : 27.7/24

Right Out:  $52.228 \pm 18.981$   $\chi^2/\text{NDF}$ : 65.7/34

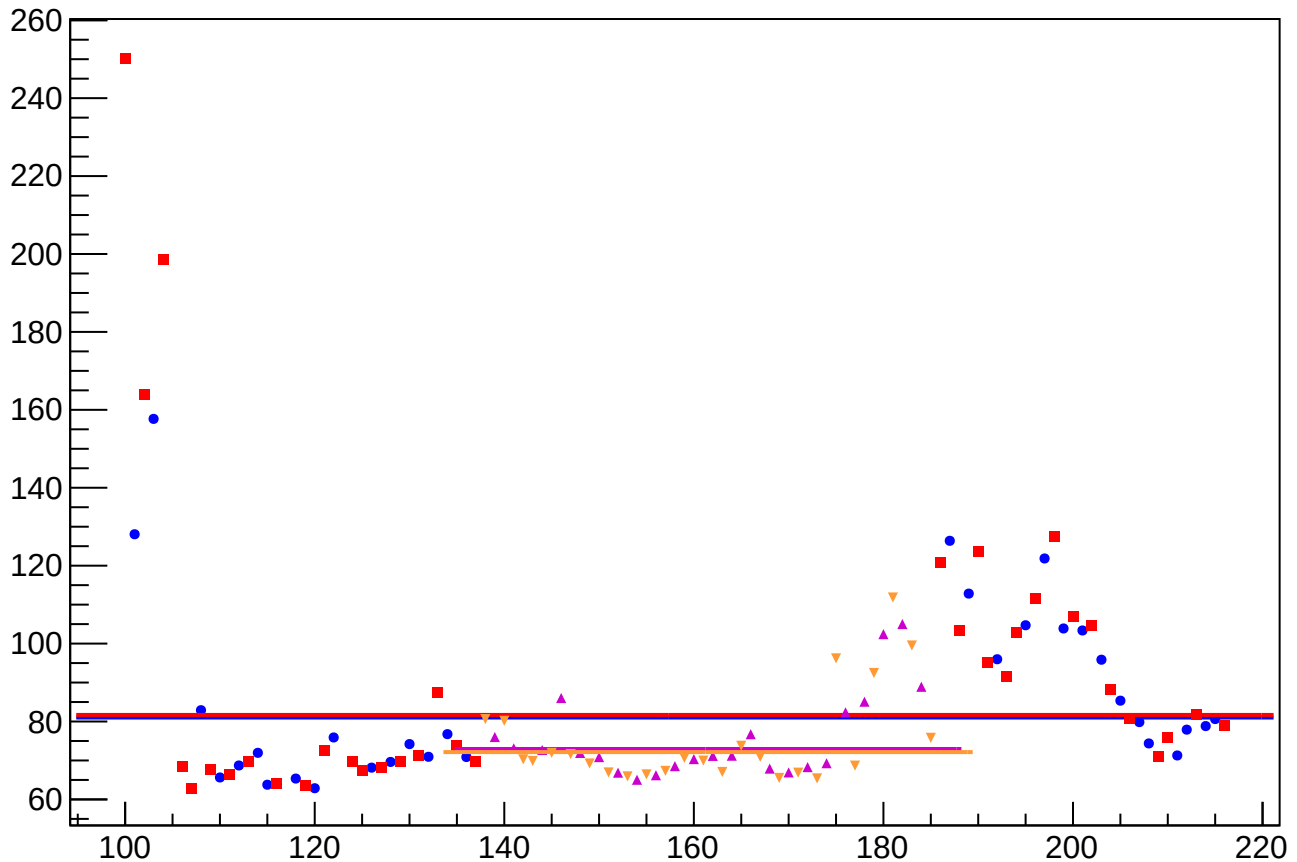
Left In:  $-103.363 \pm 17.260$   $\chi^2/\text{NDF}$ : 32.7/22

+ sign  $23.803 \pm 12.484$   $\chi^2/\text{NDF}$ : 88.1/55

All:  $-3.924 \pm 8.927$   $\chi^2/\text{NDF}$ : 233.4/113

- sign  $-32.936 \pm 12.770$   $\chi^2/\text{NDF}$ : 135.2/57

# eigen\_dit\_asym\_sam7\_rms vs Slug



Right In: 81.026+/-0.013     $\chi^2/\text{NDF}$ : 1505412.3/30

Left Out: 72.150+/-0.012     $\chi^2/\text{NDF}$ : 641967.4/24

Right Out: 81.689+/-0.013     $\chi^2/\text{NDF}$ : 2128721.2/34

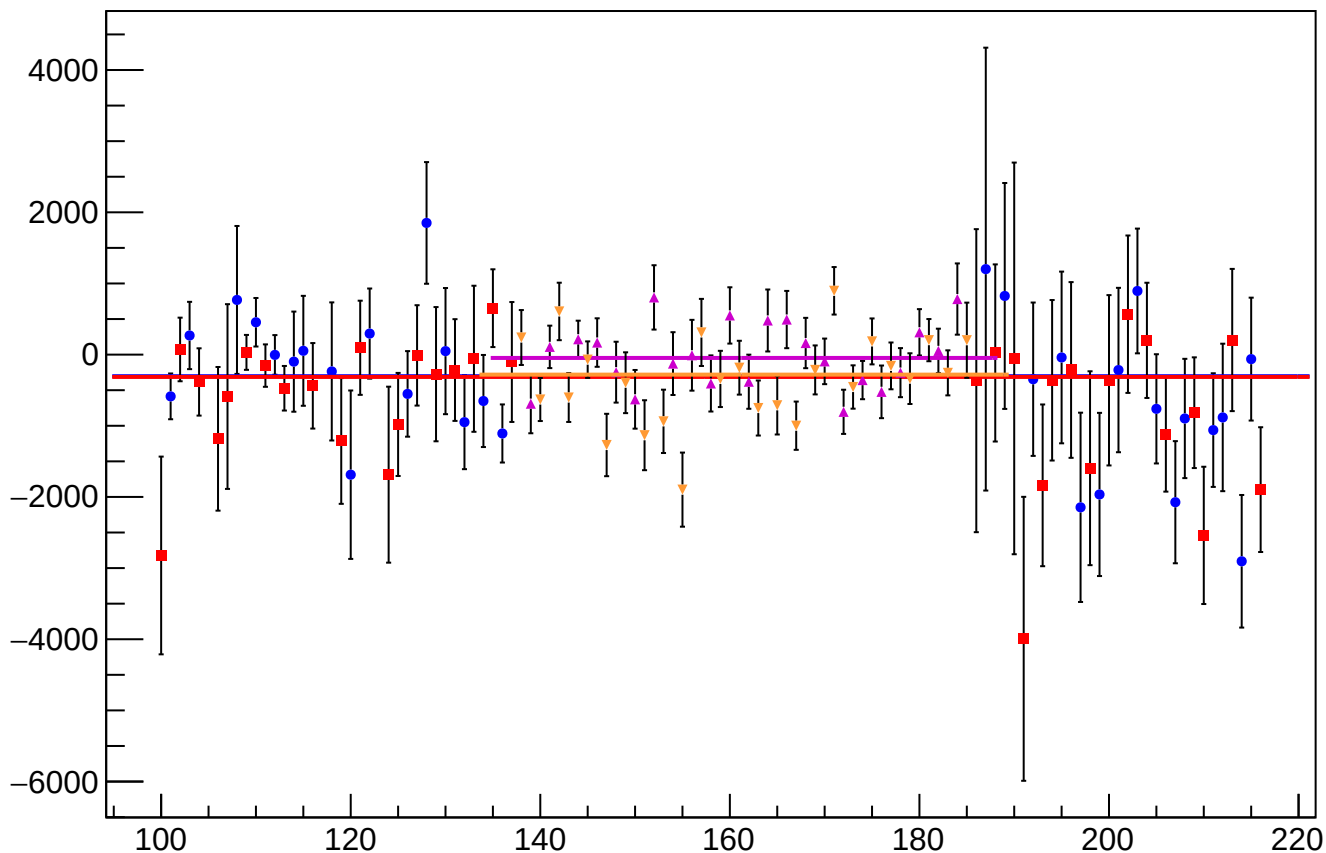
Left In: 72.948+/-0.012     $\chi^2/\text{NDF}$ : 509028.7/22

+ sign 76.021+/-0.009     $\chi^2/\text{NDF}$ : 2396044.9/55

All: 76.453+/-0.006     $\chi^2/\text{NDF}$ : 5270871.9/113

- sign 76.905+/-0.009     $\chi^2/\text{NDF}$ : 2869928.7/57

# asym\_sam7\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-303.427 \pm 115.075$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-281.205 \pm 72.538$   $\chi^2/\text{NDF}$ : 56.8/24

Right Out:  $-313.356 \pm 109.815$   $\chi^2/\text{NDF}$ : 31.8/34

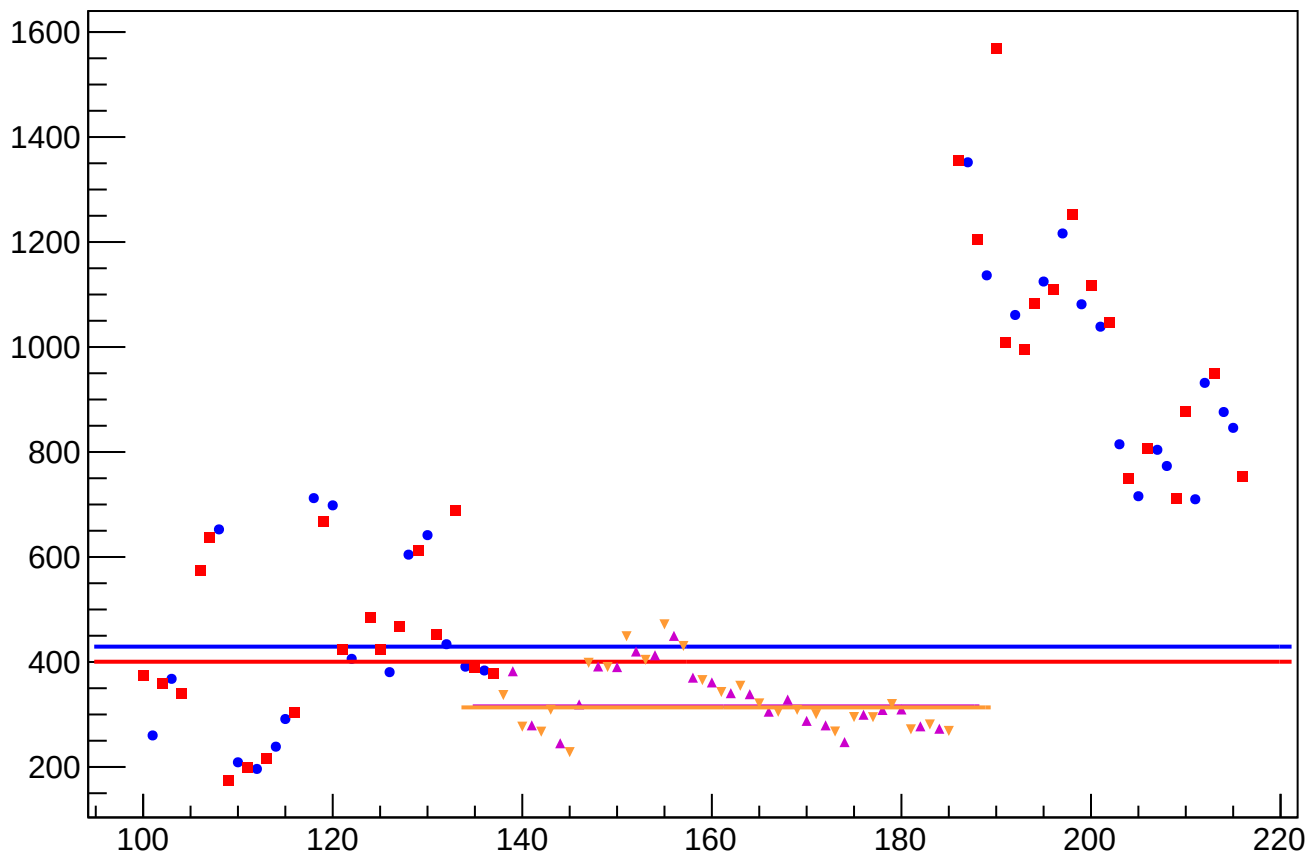
Left In:  $-46.569 \pm 74.897$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-287.524 \pm 61.364$   $\chi^2/\text{NDF}$ : 101.5/55

All:  $-210.046 \pm 43.571$   $\chi^2/\text{NDF}$ : 171.3/113

- sign  $-131.270 \pm 61.876$   $\chi^2/\text{NDF}$ : 66.6/57

# asym\_sam7\_eigen\_dit\_correction\_rms vs Slug



Right In: 429.239 $\pm$ 0.081  $\chi^2$ /NDF: 10502002.6/30

Left Out: 313.500 $\pm$ 0.051  $\chi^2$ /NDF:1175534.8/24

Right Out: 400.490 $\pm$ 0.078  $\chi^2$ /NDF: 12549098.7/34

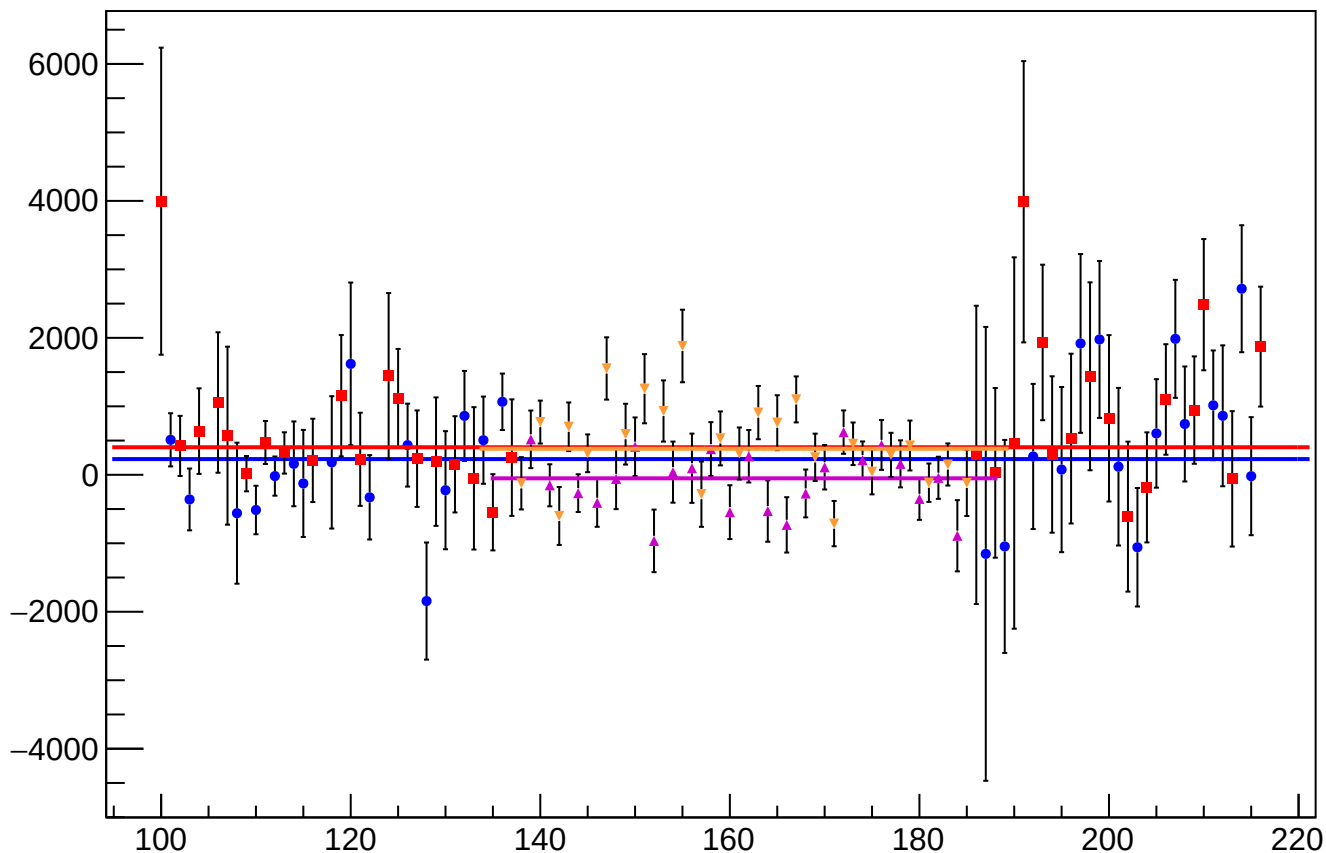
Left In: 315.456 $\pm$ 0.053  $\chi^2$ /NDF:1008521.8/22

+ sign 346.411 $\pm$ 0.043  $\chi^2$ /NDF: 13125394.9/55

All: 344.449 $\pm$ 0.031  $\chi^2$ /NDF: 27505634.3/11

- sign 342.453 $\pm$ 0.044  $\chi^2$ /NDF: 14376112.3/57

# asym\_sam7\_mean vs Slug



Right In:  $229.640 \pm 117.569$   $\chi^2/\text{NDF}$ : 42.4/30

Left Out:  $380.624 \pm 73.057$   $\chi^2/\text{NDF}$ : 55.4/24

Right Out:  $402.514 \pm 112.707$   $\chi^2/\text{NDF}$ : 27.5/34

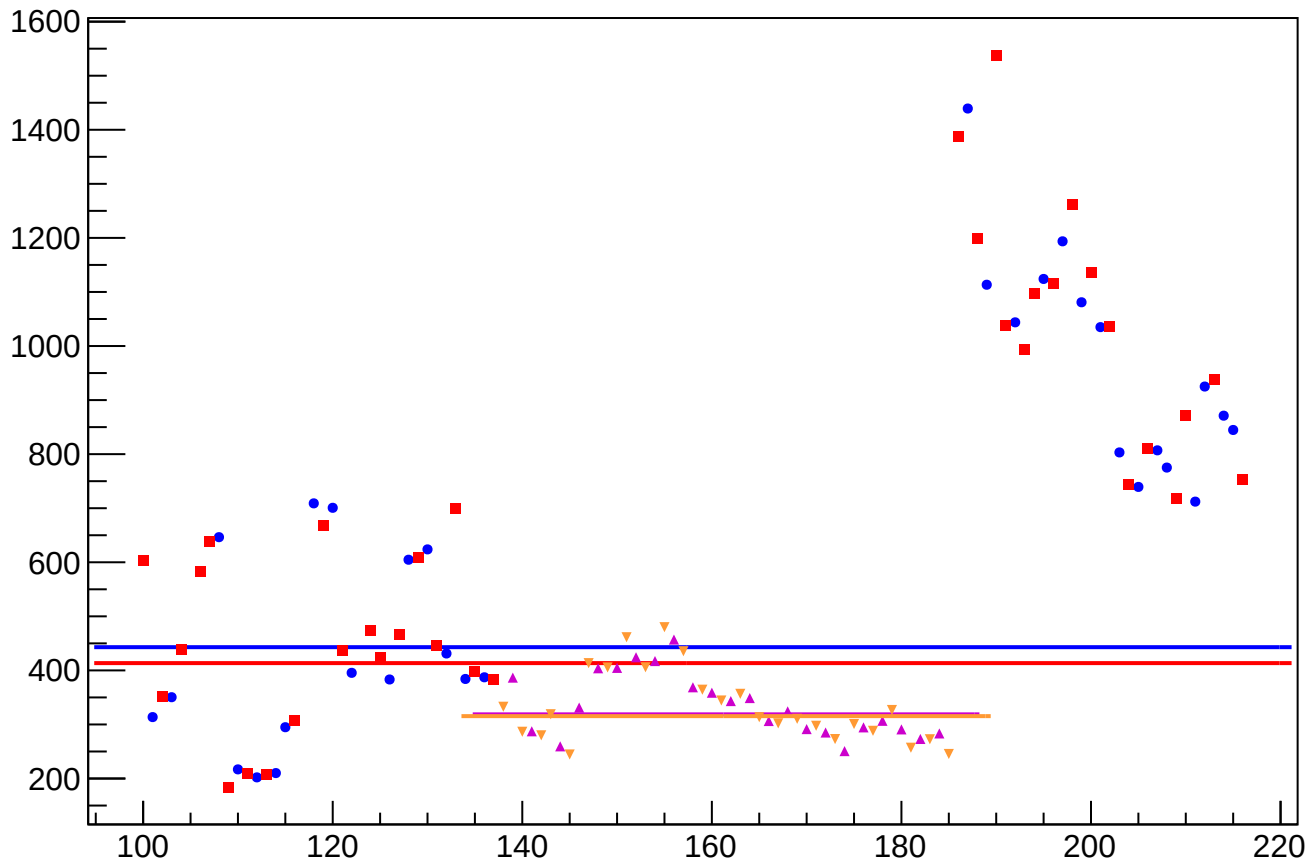
Left In:  $-51.474 \pm 75.629$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $338.564 \pm 62.052$   $\chi^2/\text{NDF}$ : 99.0/55

All:  $215.514 \pm 44.140$   $\chi^2/\text{NDF}$ : 173.8/113

- sign  $89.478 \pm 62.801$   $\chi^2/\text{NDF}$ : 66.9/57

# asym\_sam7\_rms vs Slug



Right In: 442.966 $\pm$ 0.083  $\chi^2$ /NDF: 9928934.6/30

Left Out: 315.396 $\pm$ 0.052  $\chi^2$ /NDF: 1210106.0/24

Right Out: 413.488 $\pm$ 0.080  $\chi^2$ /NDF: 12205069.2/34

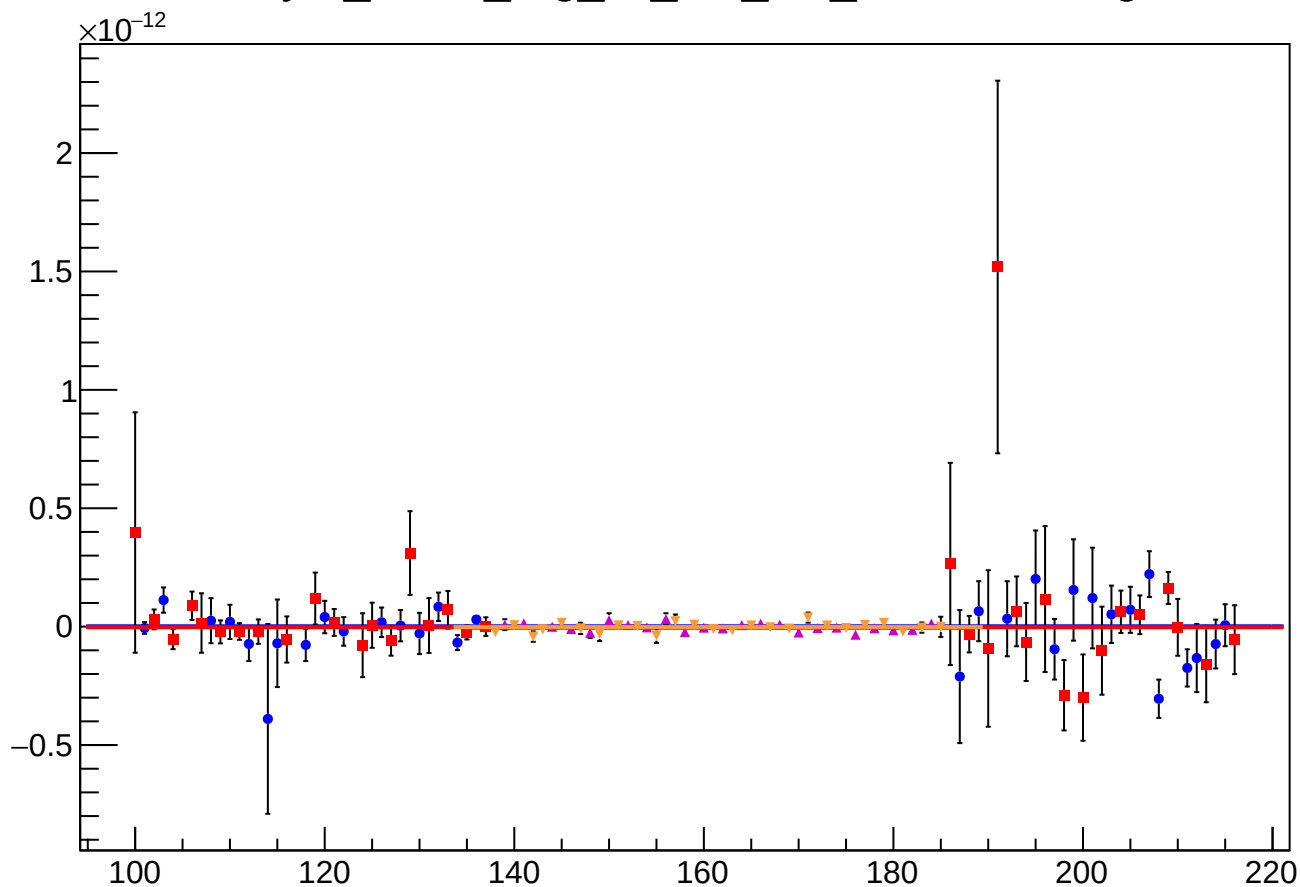
Left In: 318.688 $\pm$ 0.053  $\chi^2$ /NDF: 991604.7/22

+ sign 350.933 $\pm$ 0.044  $\chi^2$ /NDF: 12837850.8/55

All: 349.544 $\pm$ 0.031  $\chi^2$ /NDF: 27012201.0/11

- sign 348.121 $\pm$ 0.044  $\chi^2$ /NDF: 14172322.2/57

# asym\_sam7\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.5/34

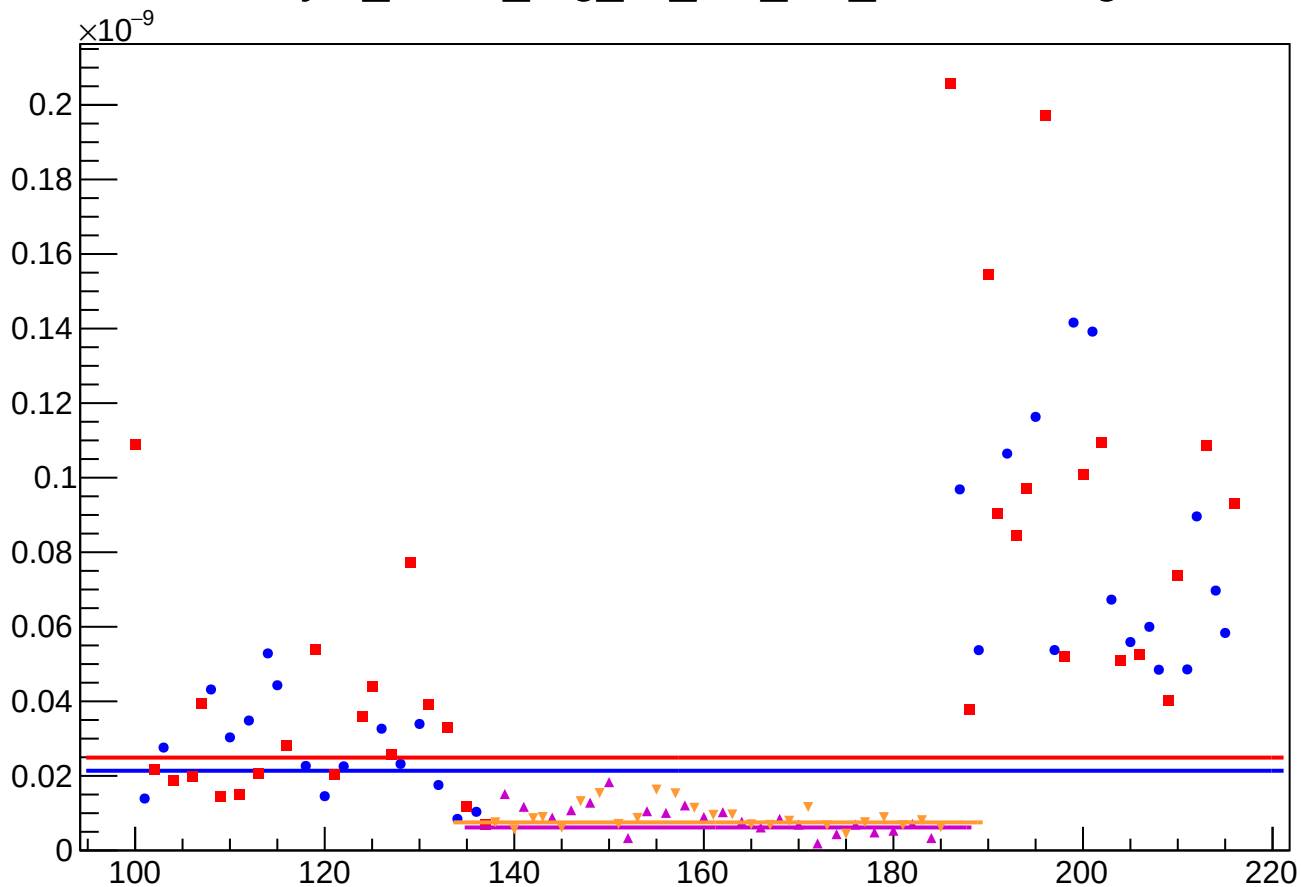
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.8/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 117.4/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.1/57

# asym\_sam7\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6920312.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1208953.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6423068.5/34

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2784673.9/22

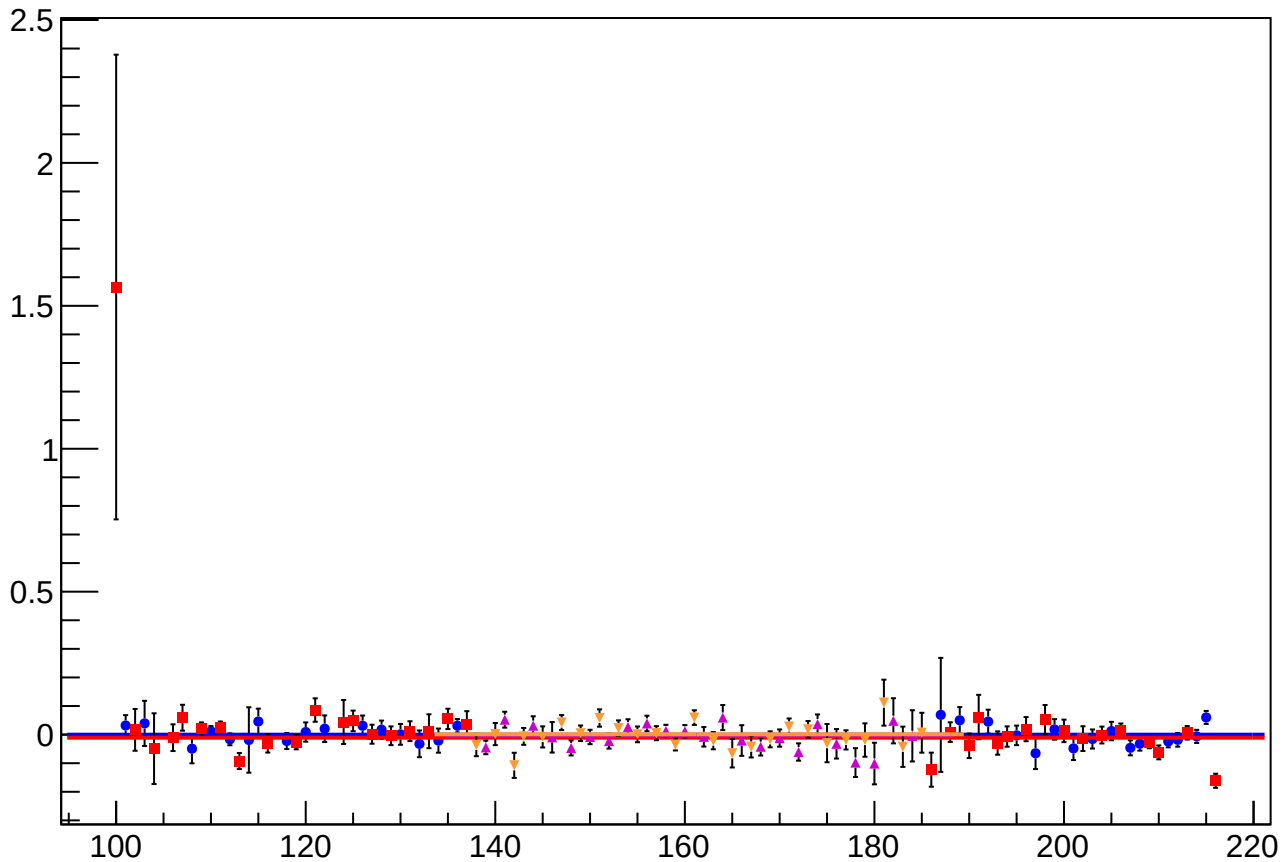
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11427575.6/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 25559271.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13893924.9/57



# asym\_sam7\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 86.9/34

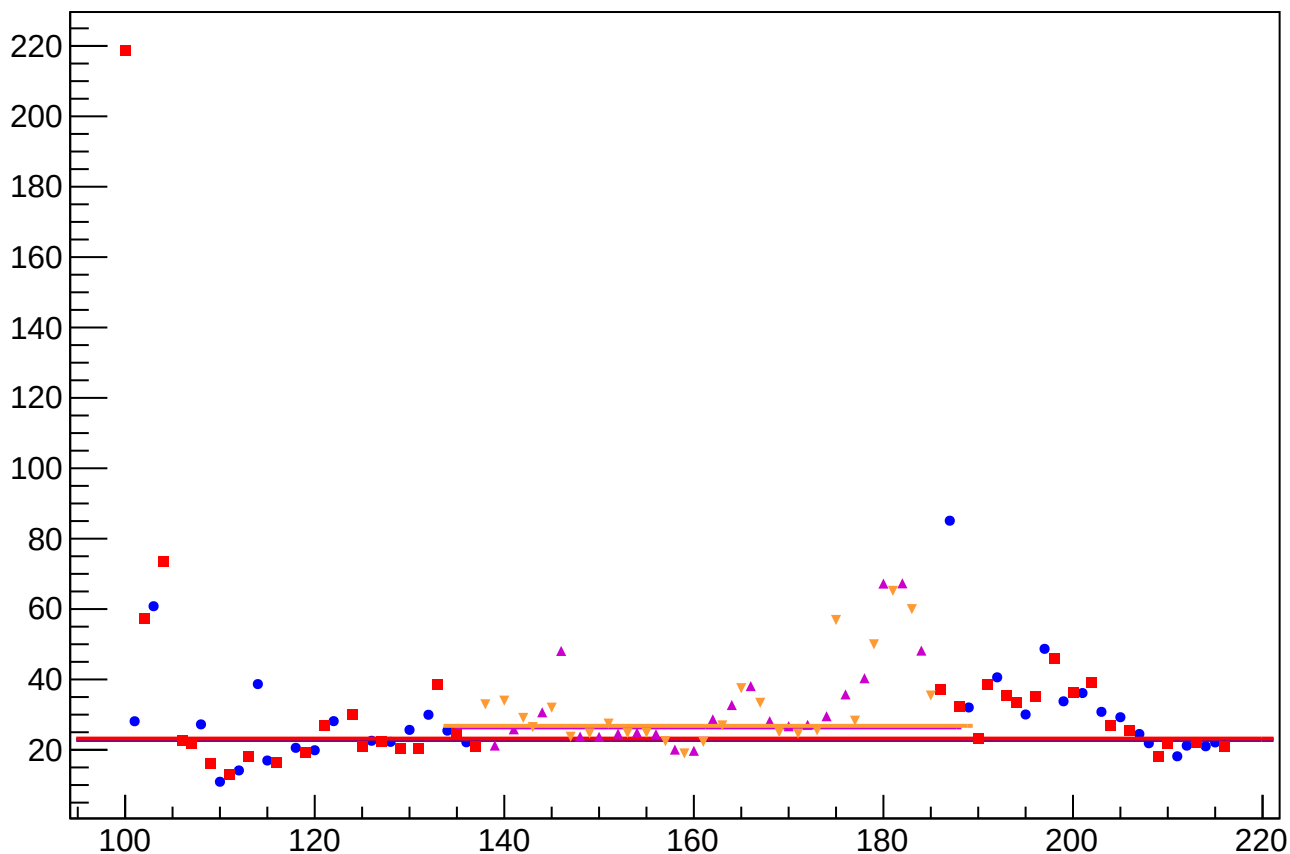
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 178.8/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.6/57

# asym\_sam7\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 22.833+/-0.004  $\chi^2/\text{NDF}$ : 3775846.8/30

Left Out: 26.820+/-0.005  $\chi^2/\text{NDF}$ : 2469807.6/24

Right Out: 23.188+/-0.004  $\chi^2/\text{NDF}$ : 3974549.4/34

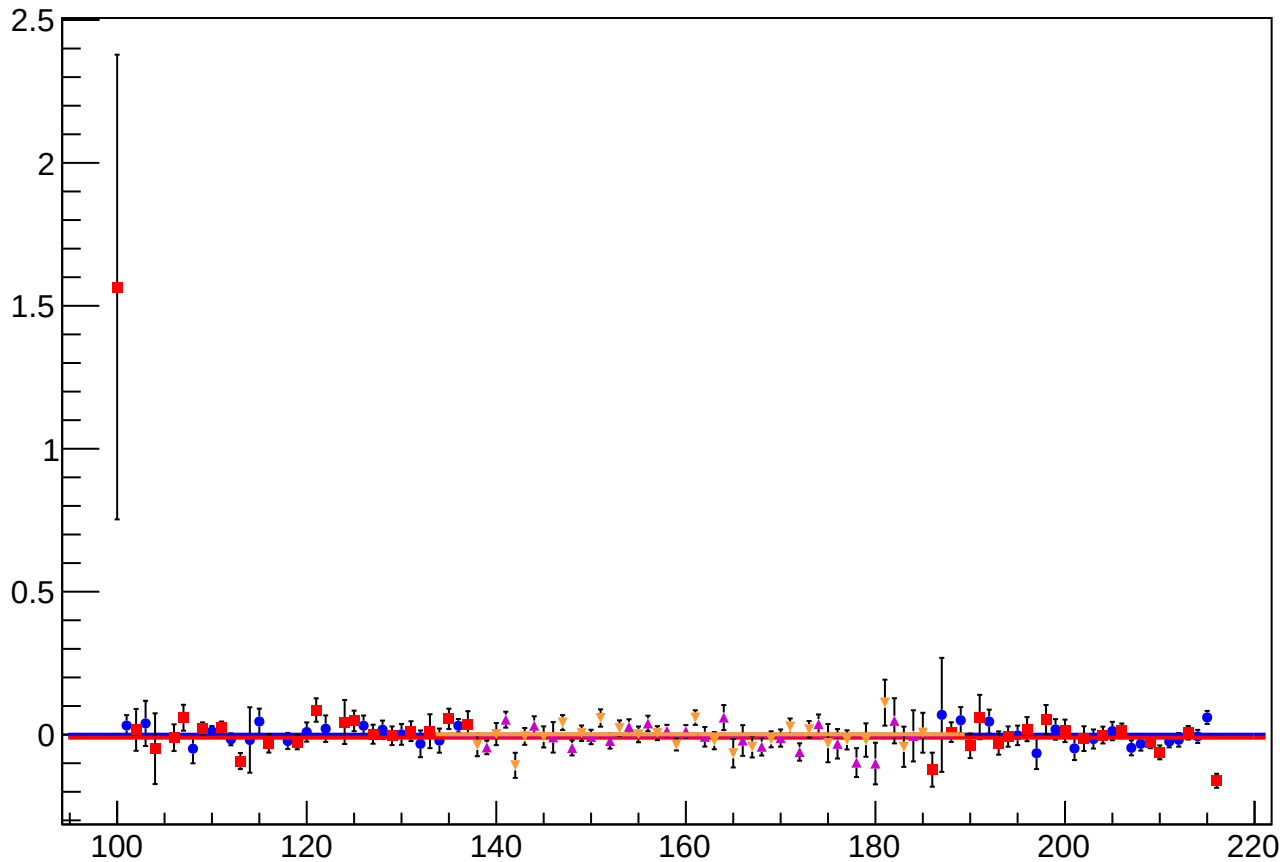
Left In: 26.376+/-0.005  $\chi^2/\text{NDF}$ : 2566400.7/22

+ sign 24.541+/-0.003  $\chi^2/\text{NDF}$ : 6676565.4/55

All: 24.543+/-0.002  $\chi^2/\text{NDF}$ : 13485288.5/113

- sign 24.545+/-0.003  $\chi^2/\text{NDF}$ : 6808722.3/57

# asym\_sam7\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 86.9/34

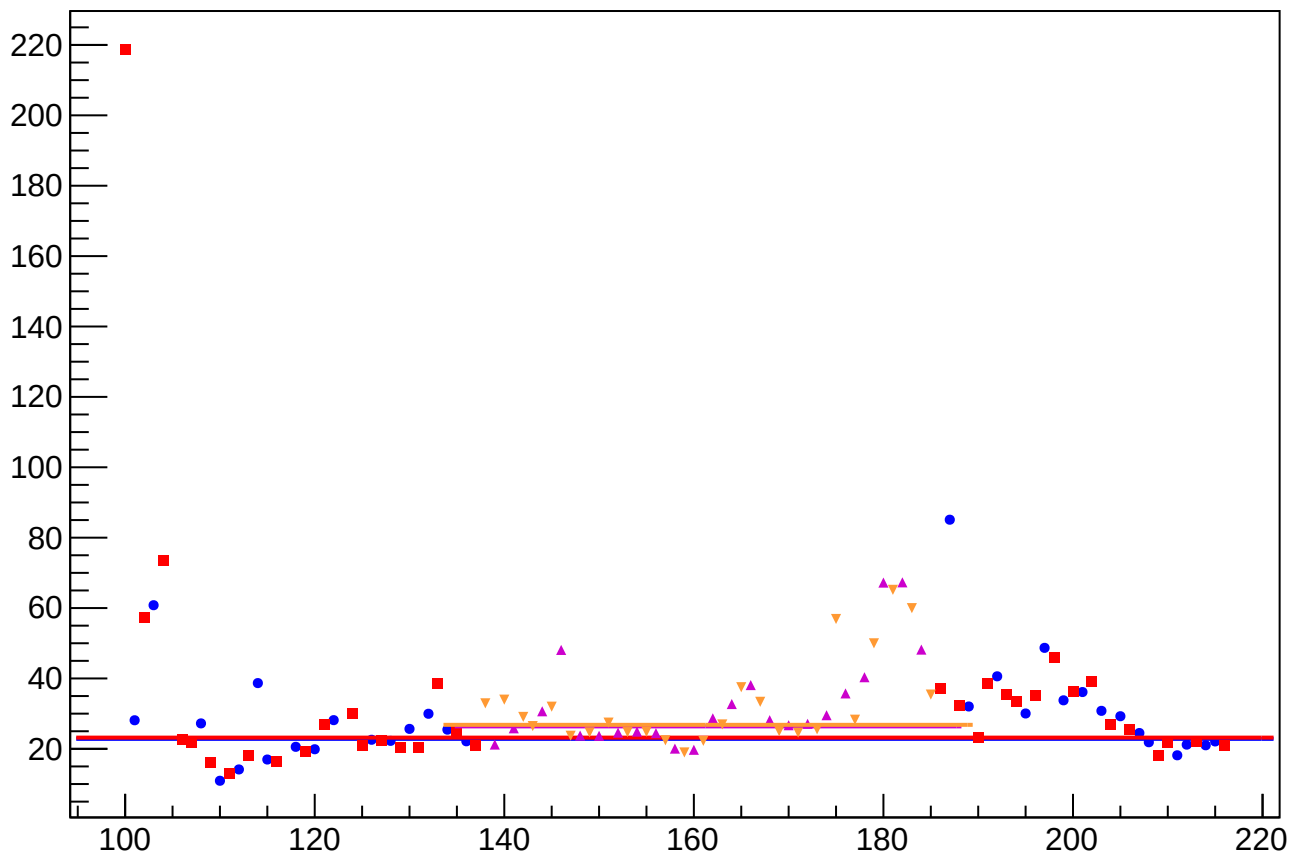
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 178.8/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.6/57

# asym\_sam7\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 22.833+/-0.004  $\chi^2/\text{NDF}$ : 3775846.8/30

Left Out: 26.820+/-0.005  $\chi^2/\text{NDF}$ : 2469807.6/24

Right Out: 23.188+/-0.004  $\chi^2/\text{NDF}$ : 3974549.4/34

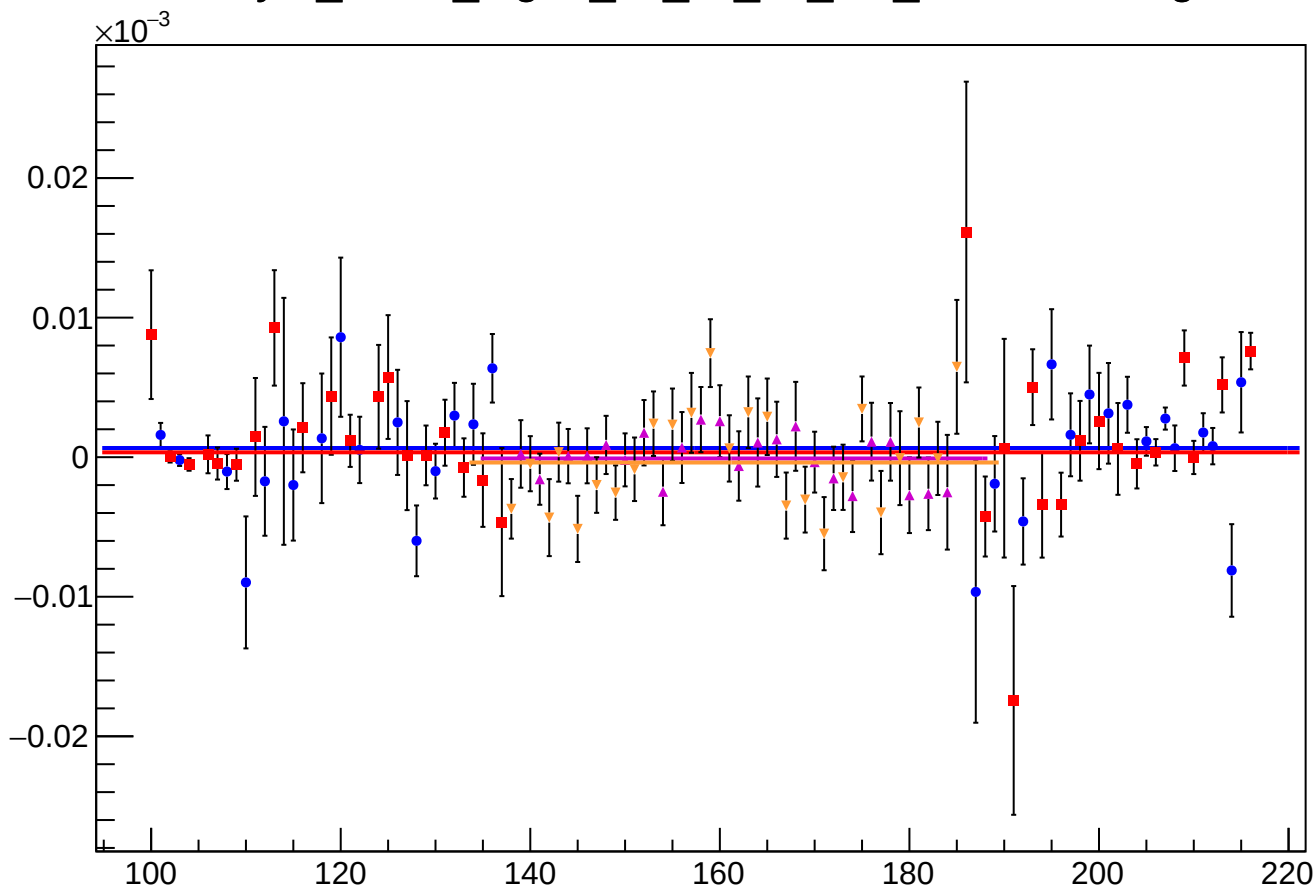
Left In: 26.376+/-0.005  $\chi^2/\text{NDF}$ : 2566400.7/22

+ sign 24.541+/-0.003  $\chi^2/\text{NDF}$ : 6676565.4/55

All: 24.543+/-0.002  $\chi^2/\text{NDF}$ : 13485288.5/113

- sign 24.545+/-0.003  $\chi^2/\text{NDF}$ : 6808722.3/57

# asym\_sam7\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.5/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 84.7/34

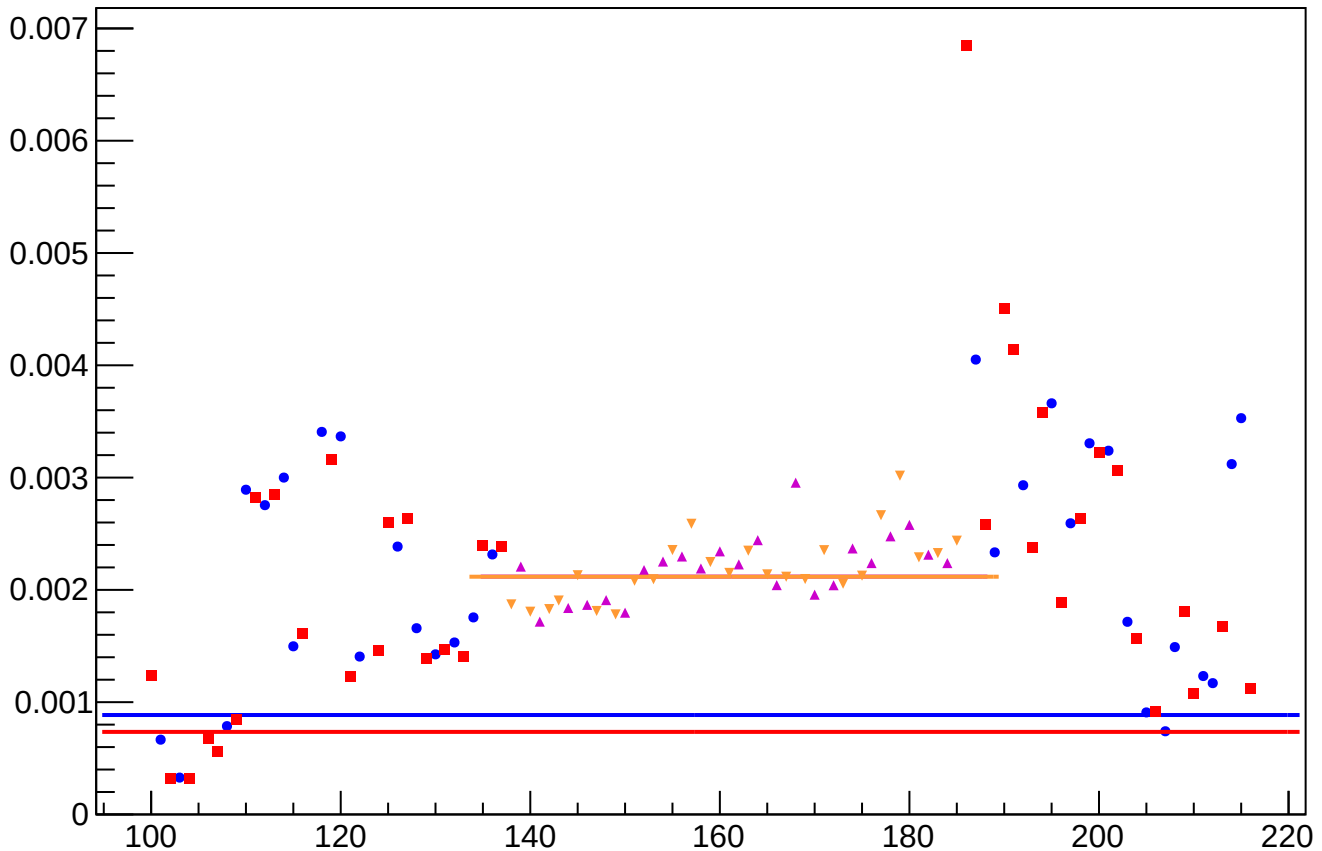
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 103.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 198.9/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 95.6/57

# asym\_sam7\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15152393.1/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 578720.8/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17493119.2/34

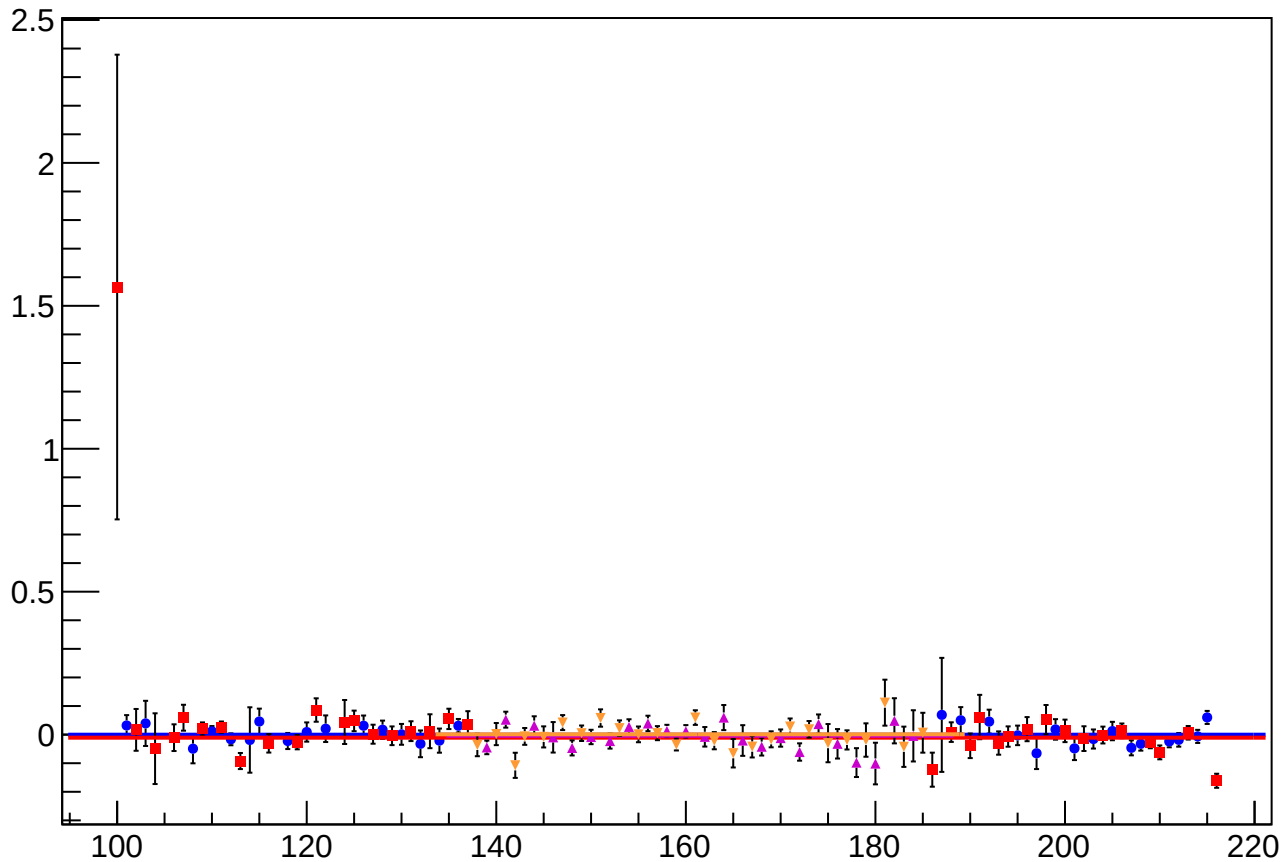
Left In: 0.002 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 588580.3/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 25577136.5/55

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 57038399.0/113

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 30695568.1/57

# asym\_sam7\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 86.8/34

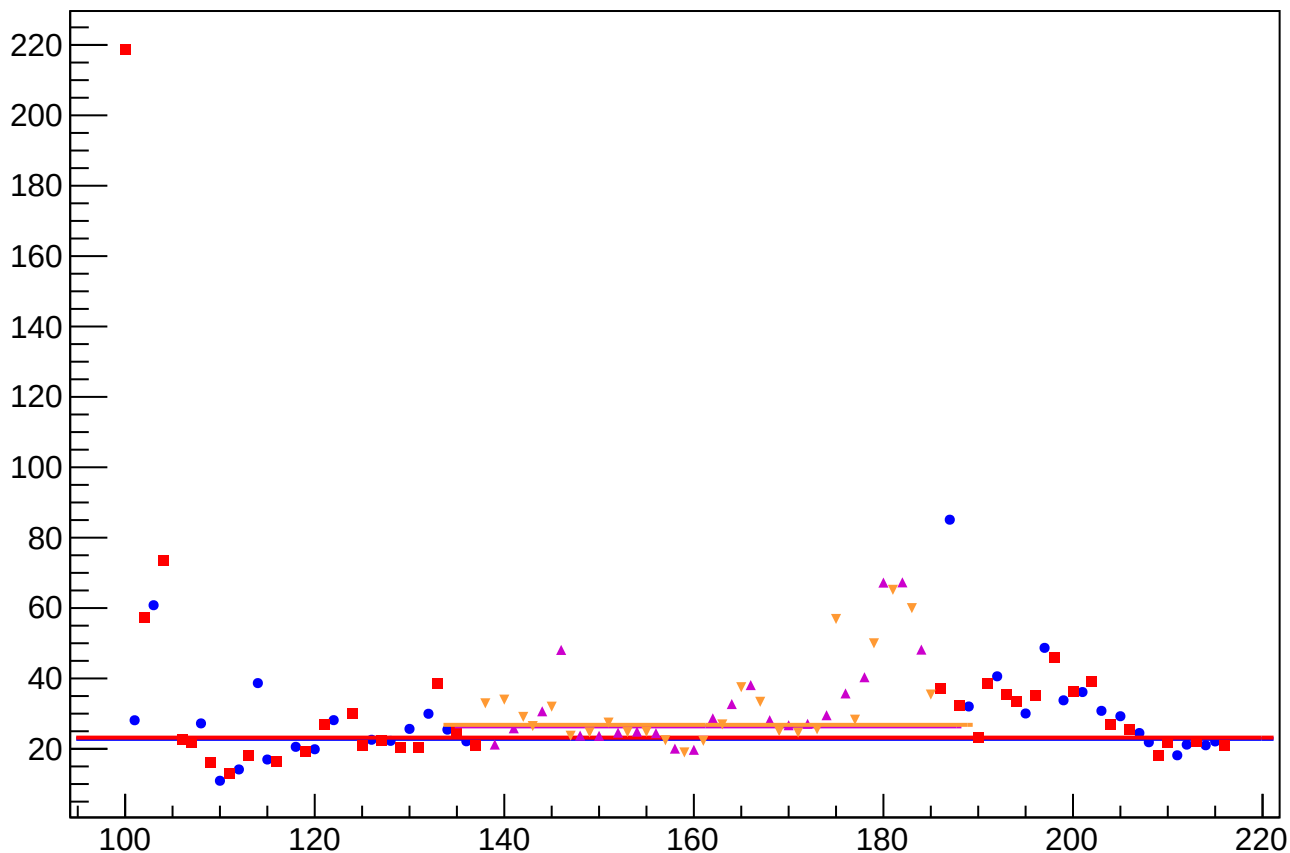
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 178.8/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.6/57

# asym\_sam7\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 22.833+/-0.004  $\chi^2/\text{NDF}$ : 3775575.4/30

Left Out: 26.820+/-0.005  $\chi^2/\text{NDF}$ : 2469855.0/24

Right Out: 23.188+/-0.004  $\chi^2/\text{NDF}$ : 3974343.6/34

Left In: 26.376+/-0.005  $\chi^2/\text{NDF}$ : 2566477.5/22

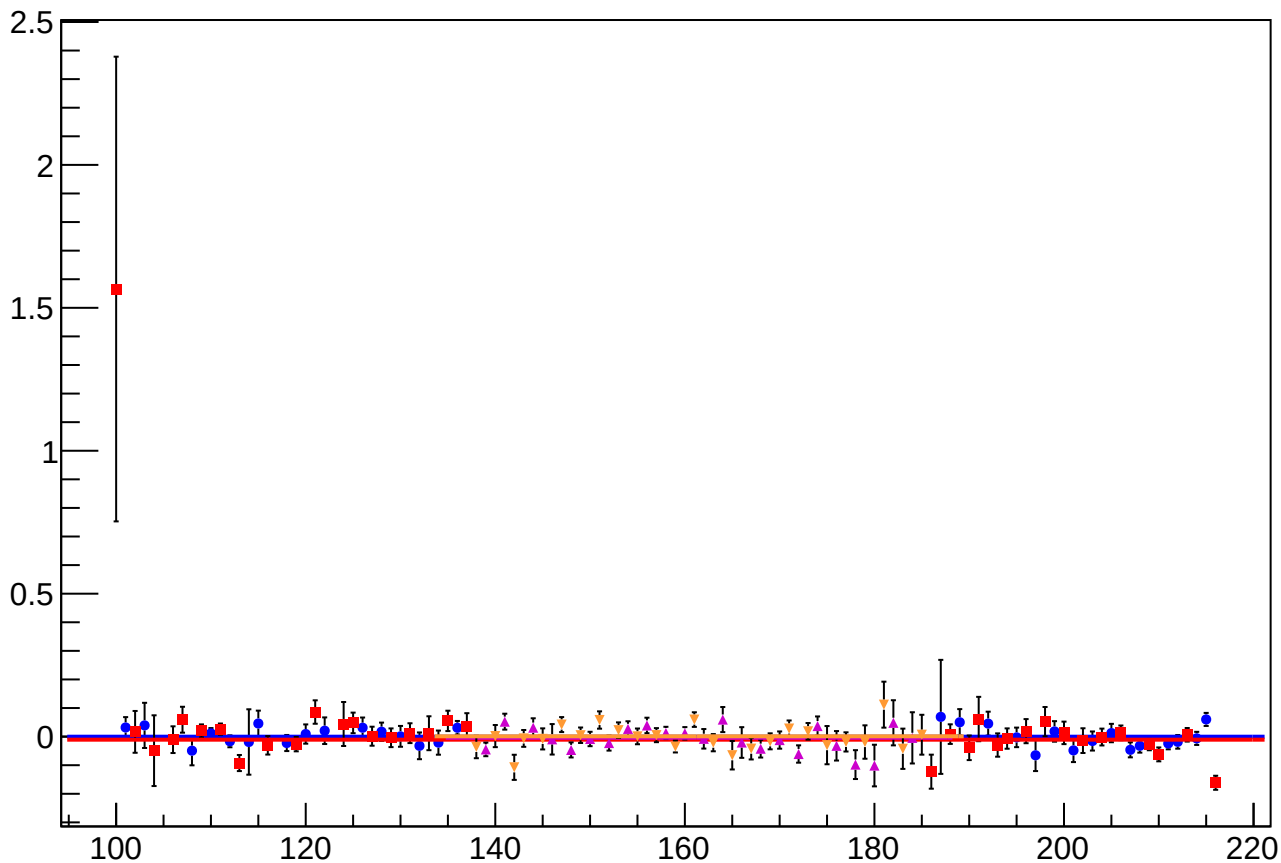
+ sign 24.542+/-0.003  $\chi^2/\text{NDF}$ : 6676245.4/55

All: 24.543+/-0.002  $\chi^2/\text{NDF}$ : 13484824.6/113

- sign 24.545+/-0.003  $\chi^2/\text{NDF}$ : 6808578.6/57



asym\_sam7\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 28.1/30

Left Out:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 30.3/24

Right Out:  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 86.8/34

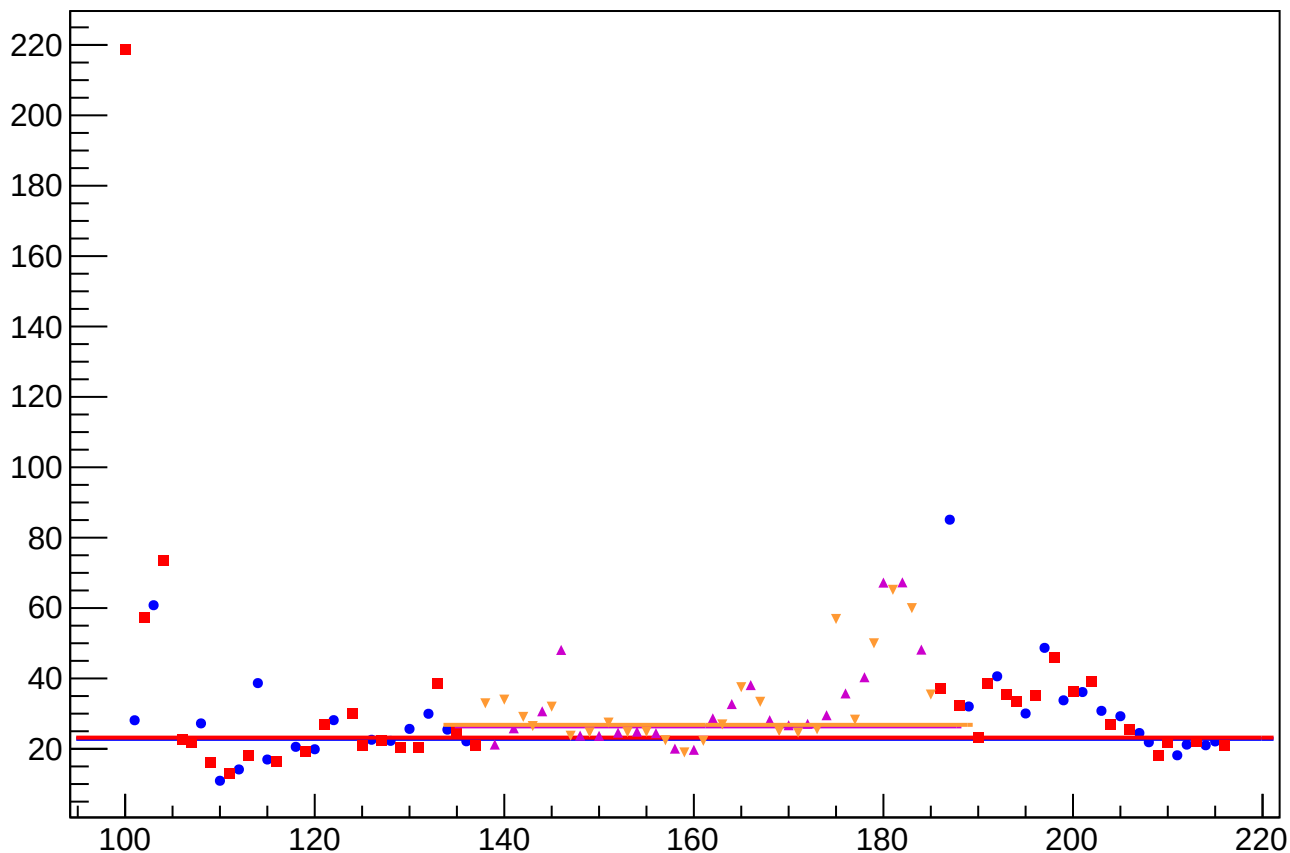
Left In:  $-0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $0.000 \pm 0.004$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 178.8/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 118.6/57

asym\_sam7\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 22.833+/-0.004  $\chi^2/\text{NDF}$ : 3775575.4/30

Left Out: 26.820+/-0.005  $\chi^2/\text{NDF}$ : 2469855.0/24

Right Out: 23.188+/-0.004  $\chi^2/\text{NDF}$ : 3974343.6/34

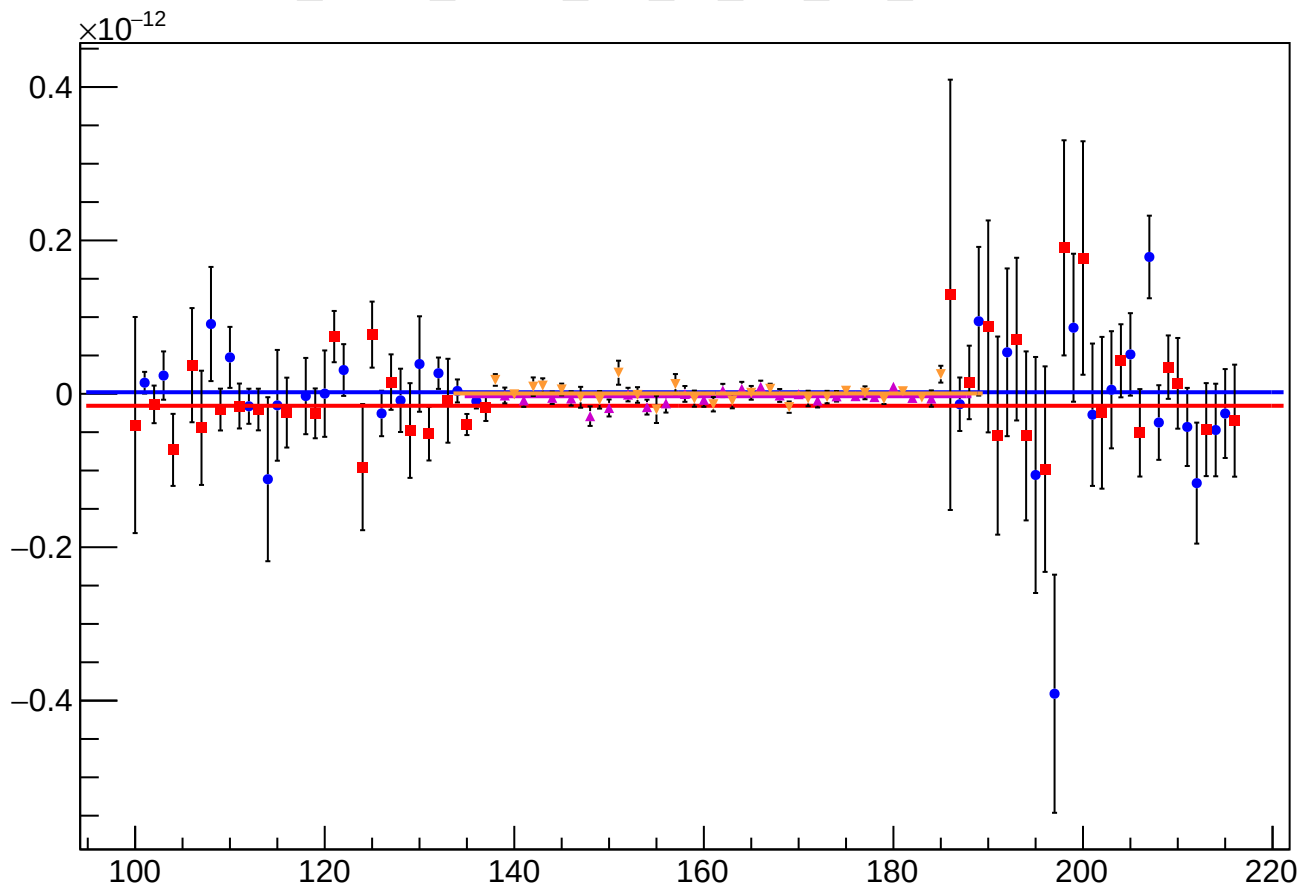
Left In: 26.376+/-0.005  $\chi^2/\text{NDF}$ : 2566477.5/22

+ sign 24.542+/-0.003  $\chi^2/\text{NDF}$ : 6676245.4/55

All: 24.543+/-0.002  $\chi^2/\text{NDF}$ : 13484824.6/113

- sign 24.545+/-0.003  $\chi^2/\text{NDF}$ : 6808578.6/57

# asym\_sam7\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.8/34

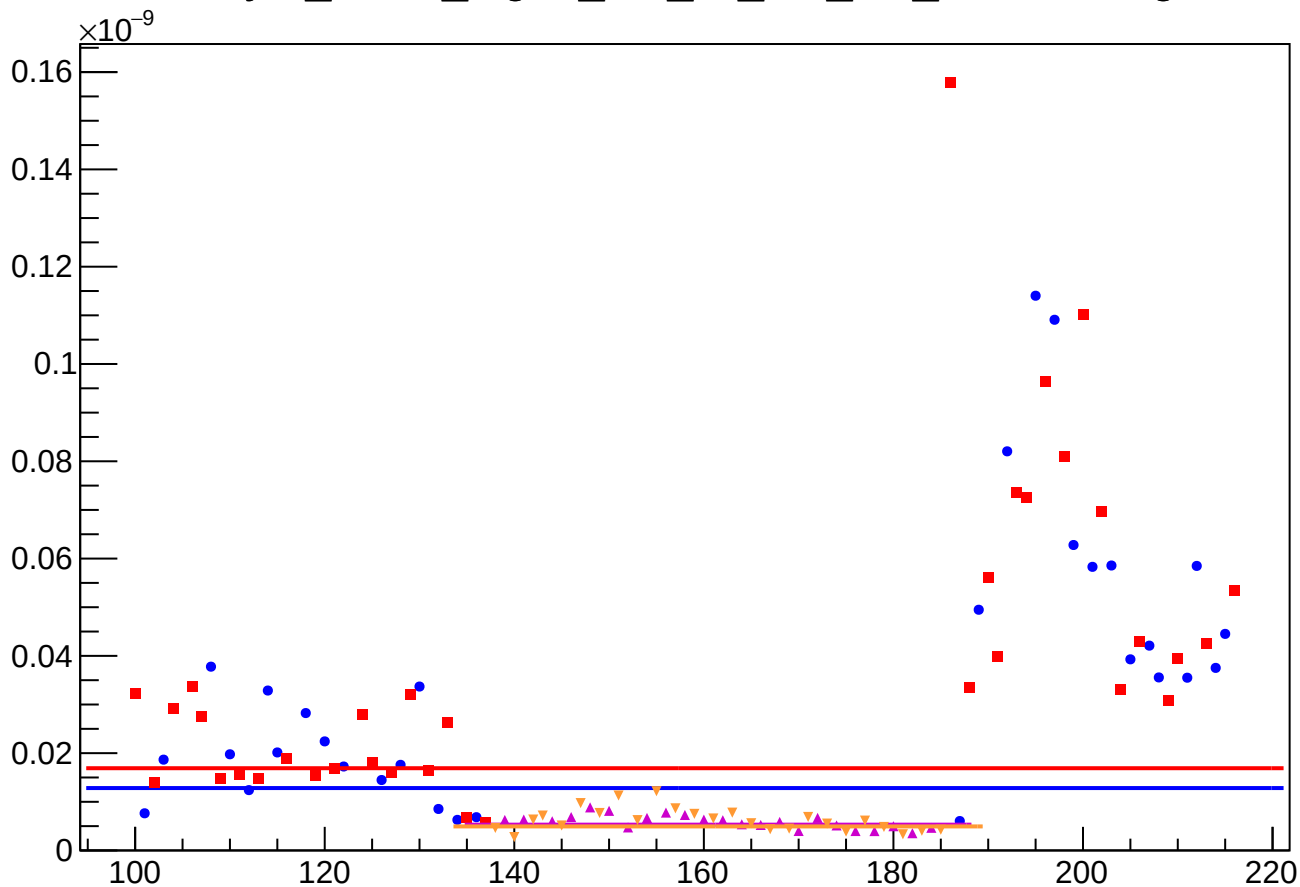
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.8/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.2/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.2/57

asym\_sam7\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10574725.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2747591.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8993818.0/34

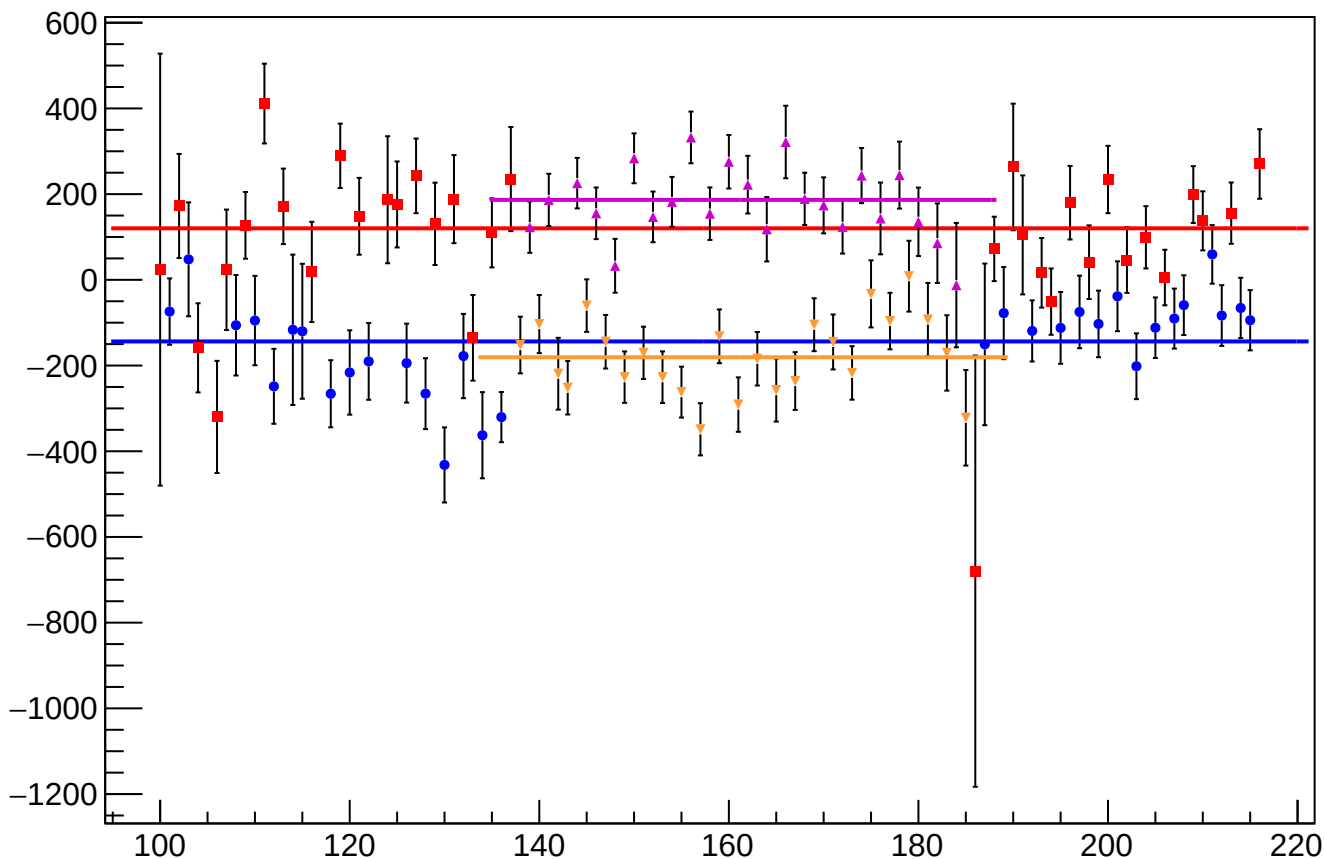
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1247237.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17263258.5/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33440549.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16094027.3/57

# reg\_asym\_sam8\_mean vs Slug



Right In:  $-143.772 \pm 15.116$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $-180.685 \pm 13.419$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $120.216 \pm 15.298$   $\chi^2/\text{NDF}: 68.8/34$

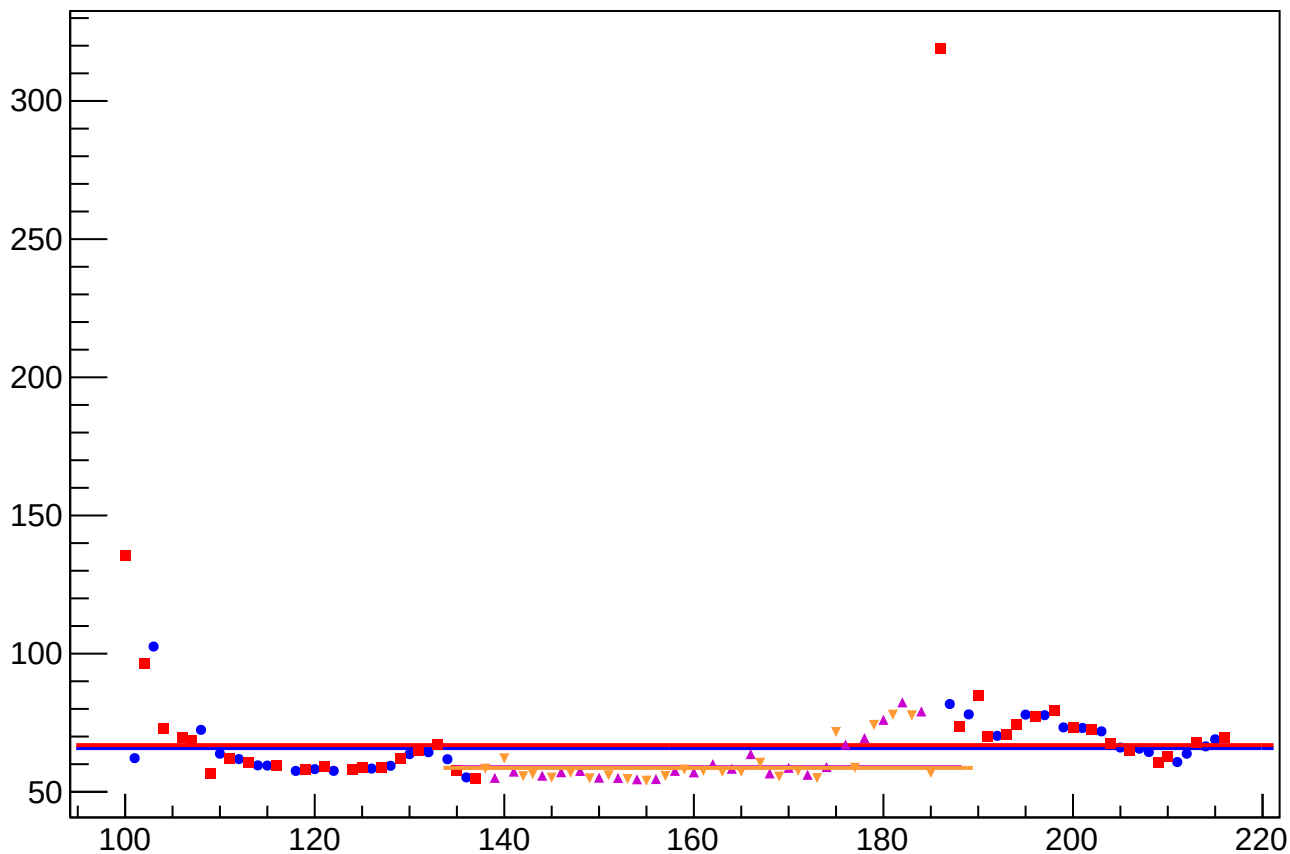
Left In:  $186.567 \pm 13.860$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $-164.417 \pm 10.035$   $\chi^2/\text{NDF}: 94.5/55$

All:  $-7.614 \pm 7.178$   $\chi^2/\text{NDF}: 702.5/113$

- sign  $156.657 \pm 10.271$   $\chi^2/\text{NDF}: 108.1/57$

# reg\_asym\_sam8\_rms vs Slug



Right In: 65.820 $\pm$ 0.011  $\chi^2$ /NDF: 514714.4/30

Left Out: 58.644 $\pm$ 0.009  $\chi^2$ /NDF: 393880.8/24

Right Out: 66.894 $\pm$ 0.011  $\chi^2$ /NDF: 1049629.3/34

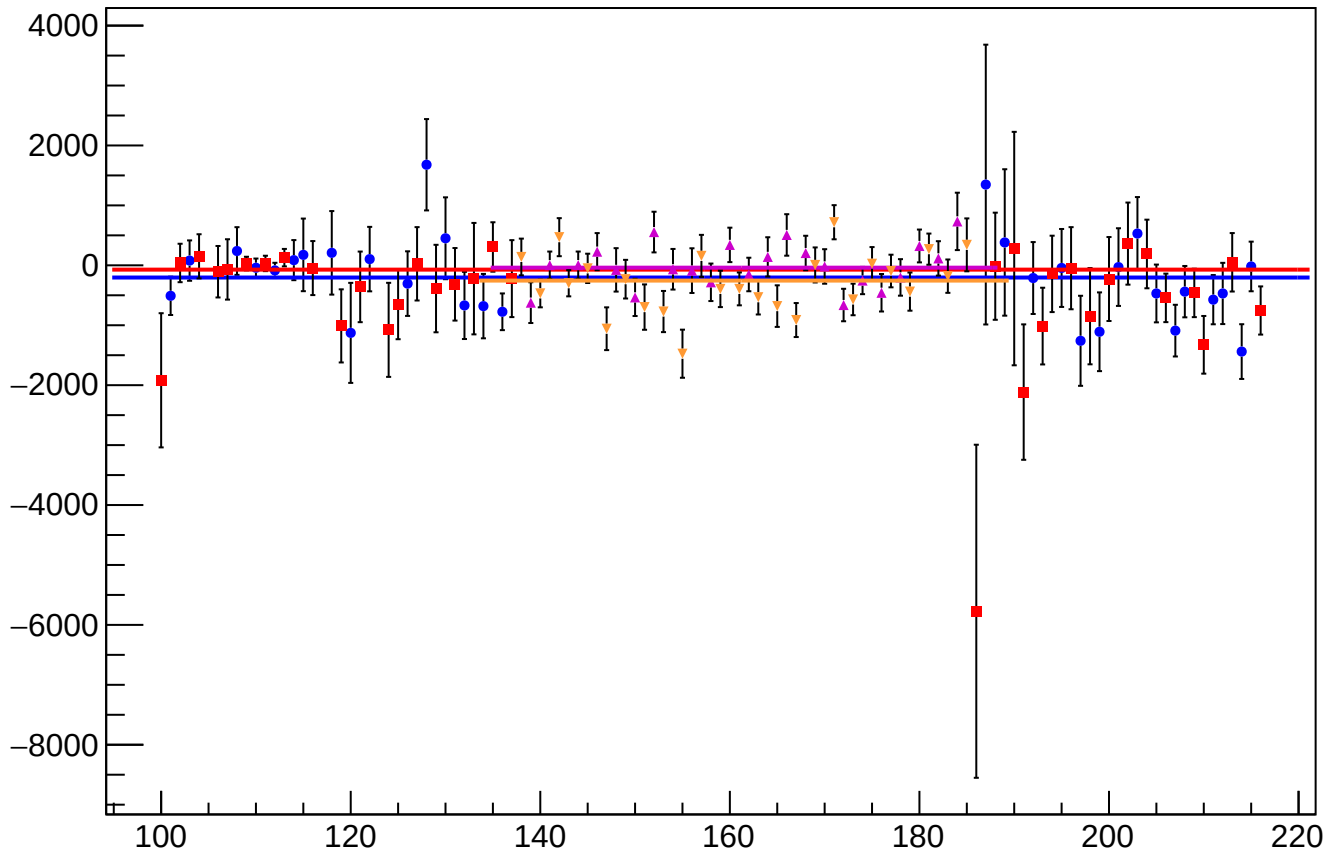
Left In: 58.906 $\pm$ 0.010  $\chi^2$ /NDF: 386820.4/22

+ sign 61.807 $\pm$ 0.007  $\chi^2$ /NDF: 1160704.2/55

All: 62.149 $\pm$ 0.005  $\chi^2$ /NDF: 2901365.2/113

- sign 62.507 $\pm$ 0.007  $\chi^2$ /NDF: 1735904.6/57

# asym\_sam8\_reg\_correction\_mean vs Slug



Right In:  $-203.631 \pm 66.989$   $\chi^2/\text{NDF}$ : 39.5/30

Left Out:  $-254.628 \pm 58.877$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $-71.888 \pm 58.739$   $\chi^2/\text{NDF}$ : 36.4/34

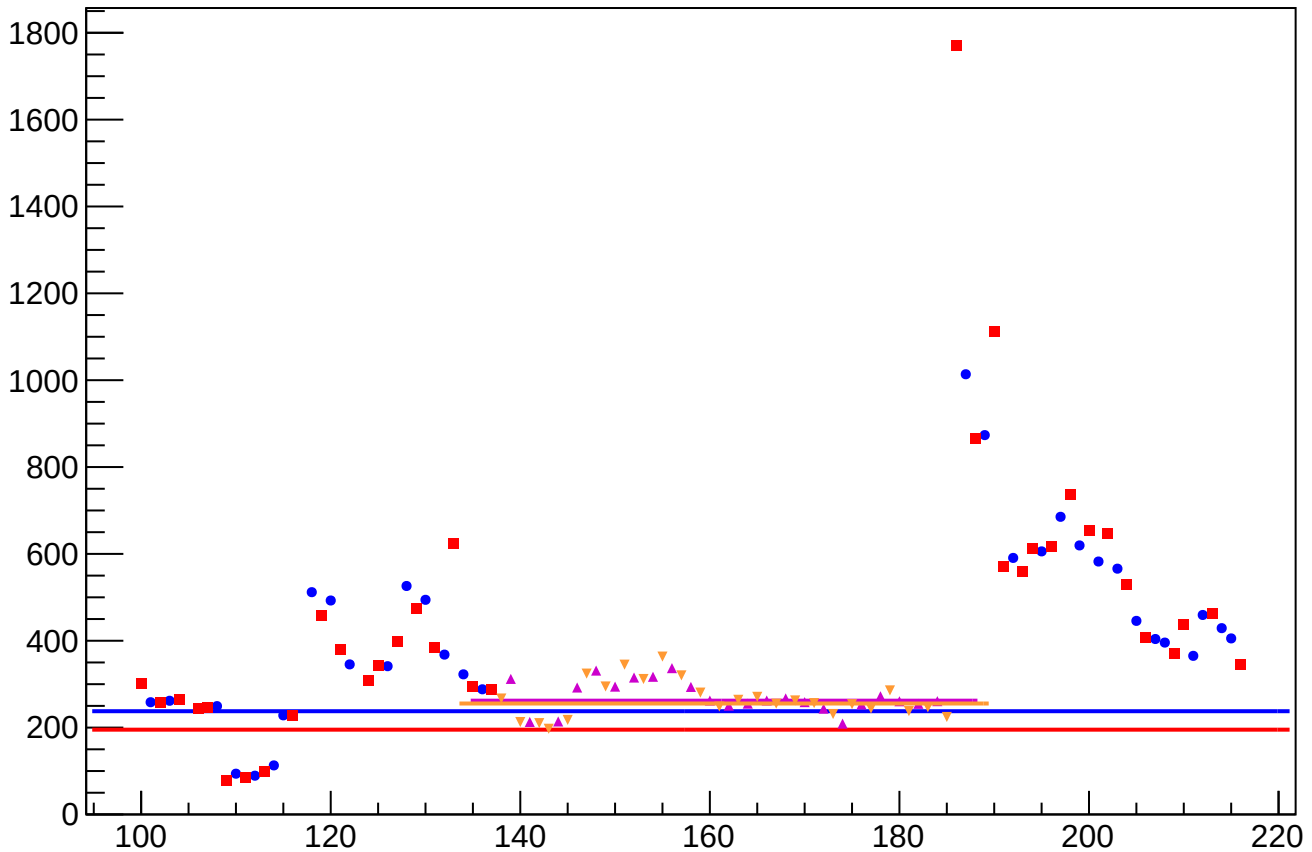
Left In:  $-39.147 \pm 61.883$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-232.403 \pm 44.223$   $\chi^2/\text{NDF}$ : 97.4/55

All:  $-141.102 \pm 30.682$   $\chi^2/\text{NDF}$ : 170.5/113

- sign  $-56.370 \pm 42.603$   $\chi^2/\text{NDF}$ : 64.9/57

# asym\_sam8\_reg\_correction\_rms vs Slug



Right In: 237.751+/-0.047  $\chi^2/\text{NDF}$ : 13020438.2/30

Left Out: 255.469+/-0.042  $\chi^2/\text{NDF}$ : 863866.8/24

Right Out: 195.231+/-0.042  $\chi^2/\text{NDF}$ : 16993639.9/34

Left In: 262.007+/-0.044  $\chi^2/\text{NDF}$ : 670576.2/22

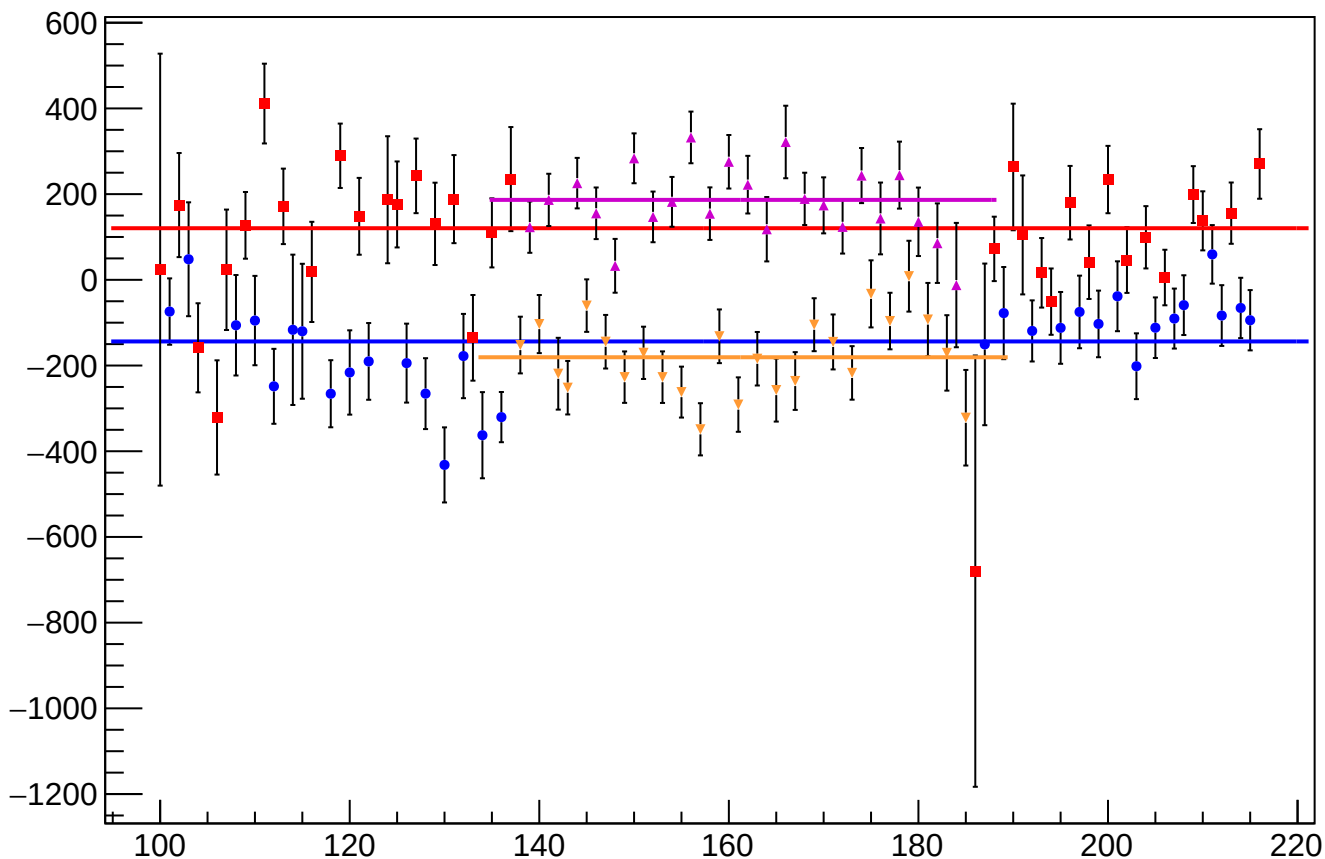
+ sign 247.747+/-0.031  $\chi^2/\text{NDF}$ : 13963244.5/55

All: 236.924+/-0.022  $\chi^2/\text{NDF}$ : 33083480.8/1

- sign 226.880+/-0.030  $\chi^2/\text{NDF}$ : 18889268.0/57



# cor\_asym\_sam8\_mean vs Slug



Right In:  $-143.773 \pm 15.116$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $-180.680 \pm 13.419$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $120.449 \pm 15.302$   $\chi^2/\text{NDF}: 68.5/34$

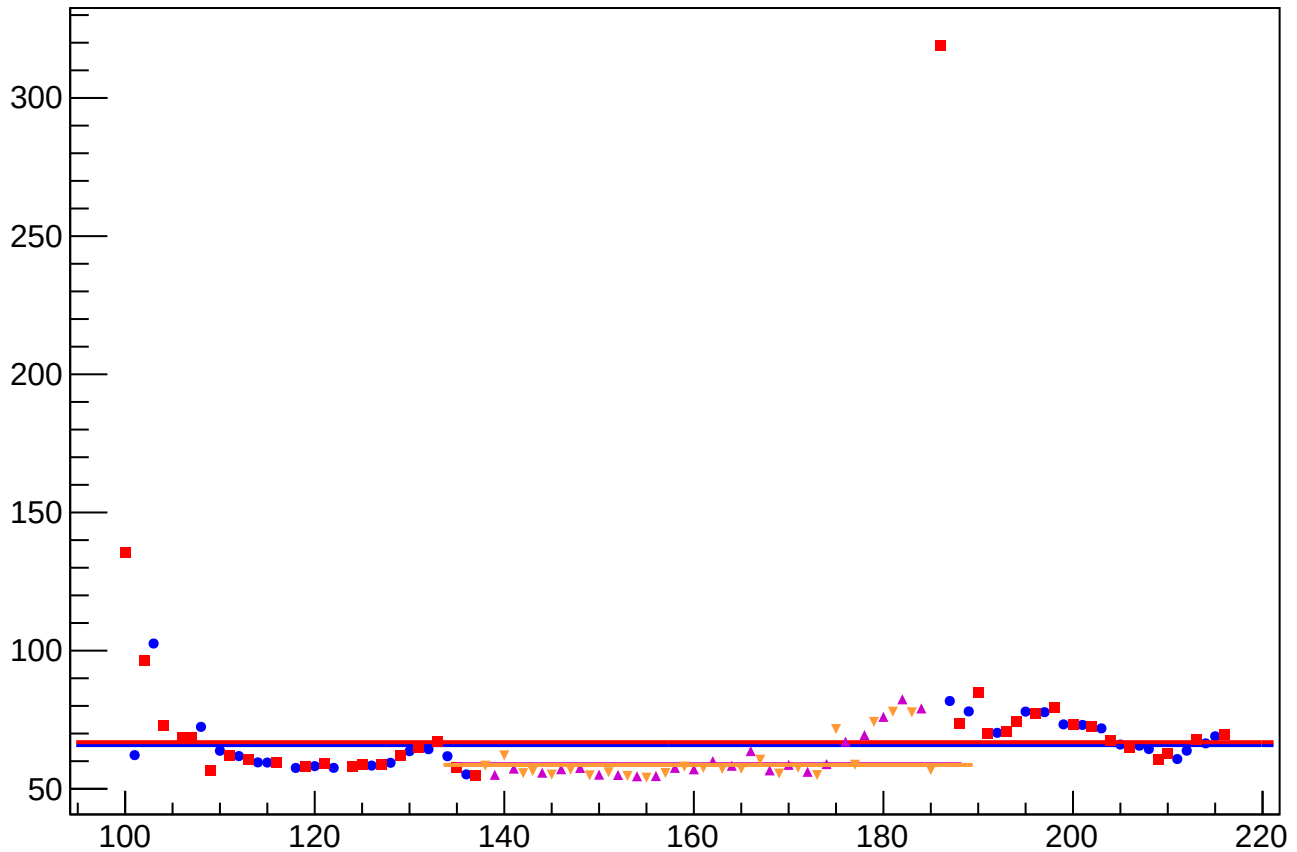
Left In:  $186.567 \pm 13.860$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $-164.415 \pm 10.035$   $\chi^2/\text{NDF}: 94.5/55$

All:  $-7.576 \pm 7.178$   $\chi^2/\text{NDF}: 702.4/113$

- sign  $156.770 \pm 10.273$   $\chi^2/\text{NDF}: 107.7/57$

# cor\_asym\_sam8\_rms vs Slug



Right In: 65.820 $\pm$ 0.011  $\chi^2$ /NDF: 514716.8/30

Left Out: 58.644 $\pm$ 0.009  $\chi^2$ /NDF: 393880.8/24

Right Out: 66.877 $\pm$ 0.011  $\chi^2$ /NDF: 1049224.1/34

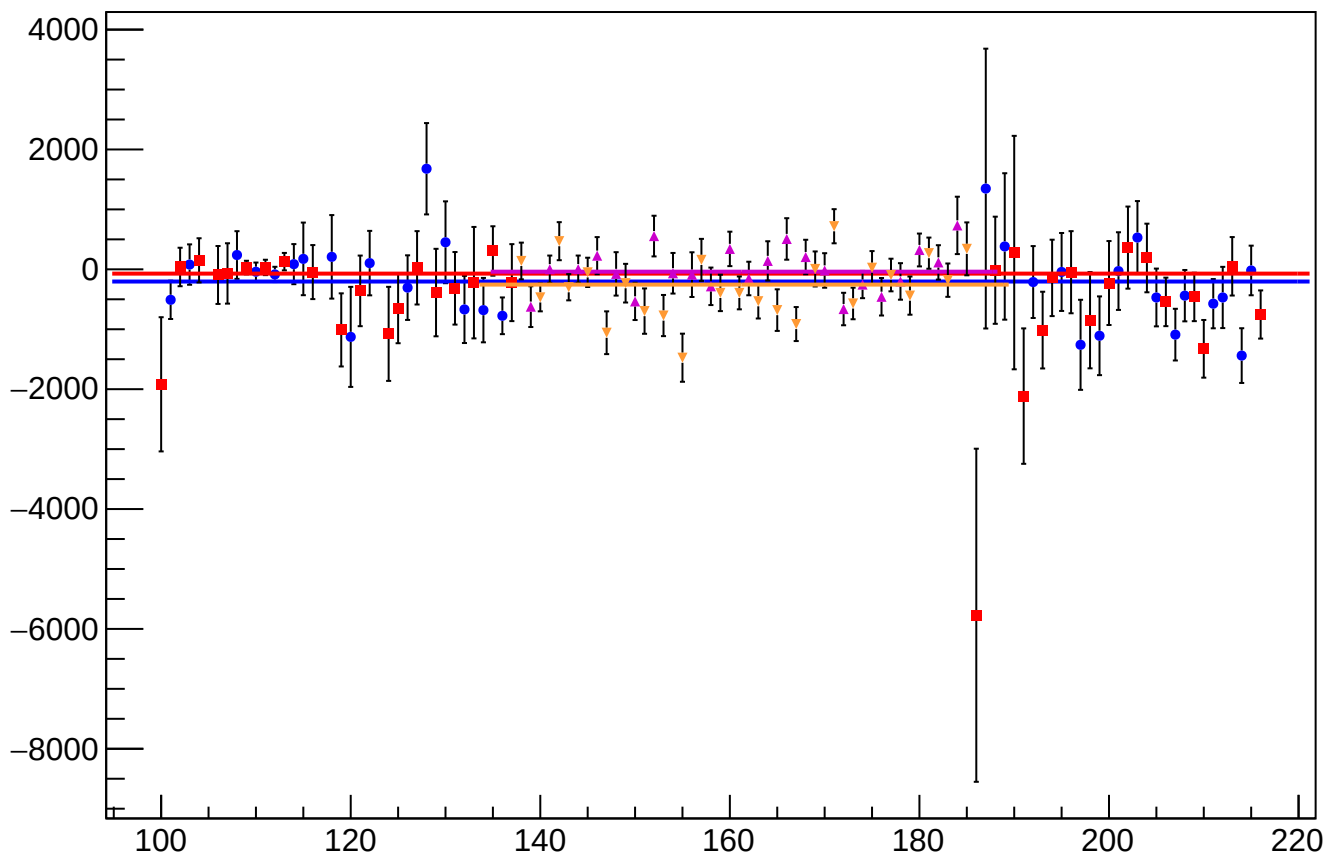
Left In: 58.906 $\pm$ 0.010  $\chi^2$ /NDF: 386820.4/22

+ sign 61.807 $\pm$ 0.007  $\chi^2$ /NDF: 1160706.7/55

All: 62.144 $\pm$ 0.005  $\chi^2$ /NDF: 2899529.3/113

- sign 62.498 $\pm$ 0.007  $\chi^2$ /NDF: 1734180.6/57

# asym\_sam8\_cor\_correction\_mean vs Slug



Right In:  $-203.619 \pm 66.989$   $\chi^2/\text{NDF}$ : 39.5/30

Left Out:  $-254.625 \pm 58.877$   $\chi^2/\text{NDF}$ : 57.6/24

Right Out:  $-71.587 \pm 58.857$   $\chi^2/\text{NDF}$ : 36.4/34

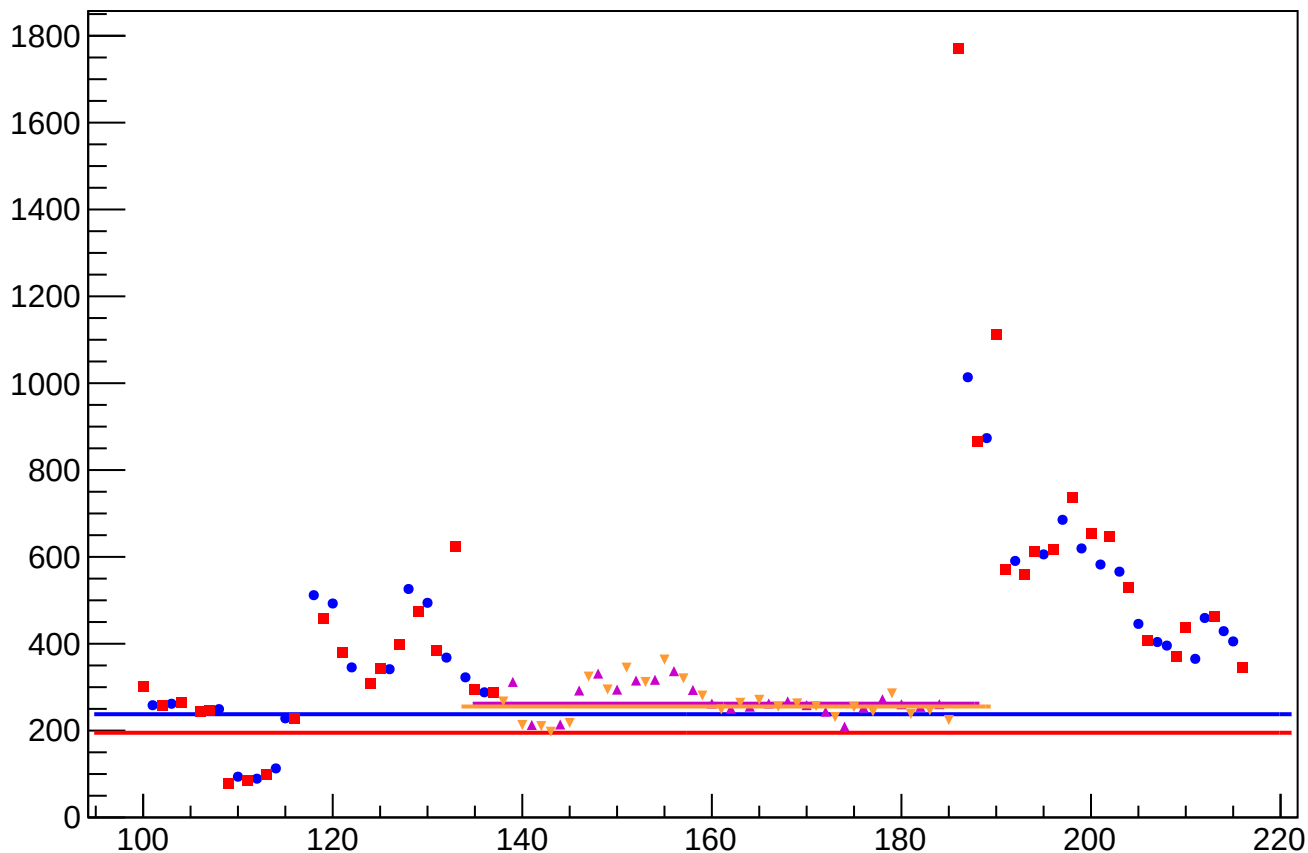
Left In:  $-39.144 \pm 61.883$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-232.396 \pm 44.224$   $\chi^2/\text{NDF}$ : 97.4/55

All:  $-141.092 \pm 30.698$   $\chi^2/\text{NDF}$ : 170.5/113

- sign  $-56.178 \pm 42.648$   $\chi^2/\text{NDF}$ : 64.9/57

# asym\_sam8\_cor\_correction\_rms vs Slug



Right In: 237.752+/-0.047  $\chi^2/\text{NDF}$ : 13020461.9/30

Left Out: 255.469+/-0.042  $\chi^2/\text{NDF}$ : 863867.3/24

Right Out: 195.042+/-0.042  $\chi^2/\text{NDF}$ : 16988898.6/34

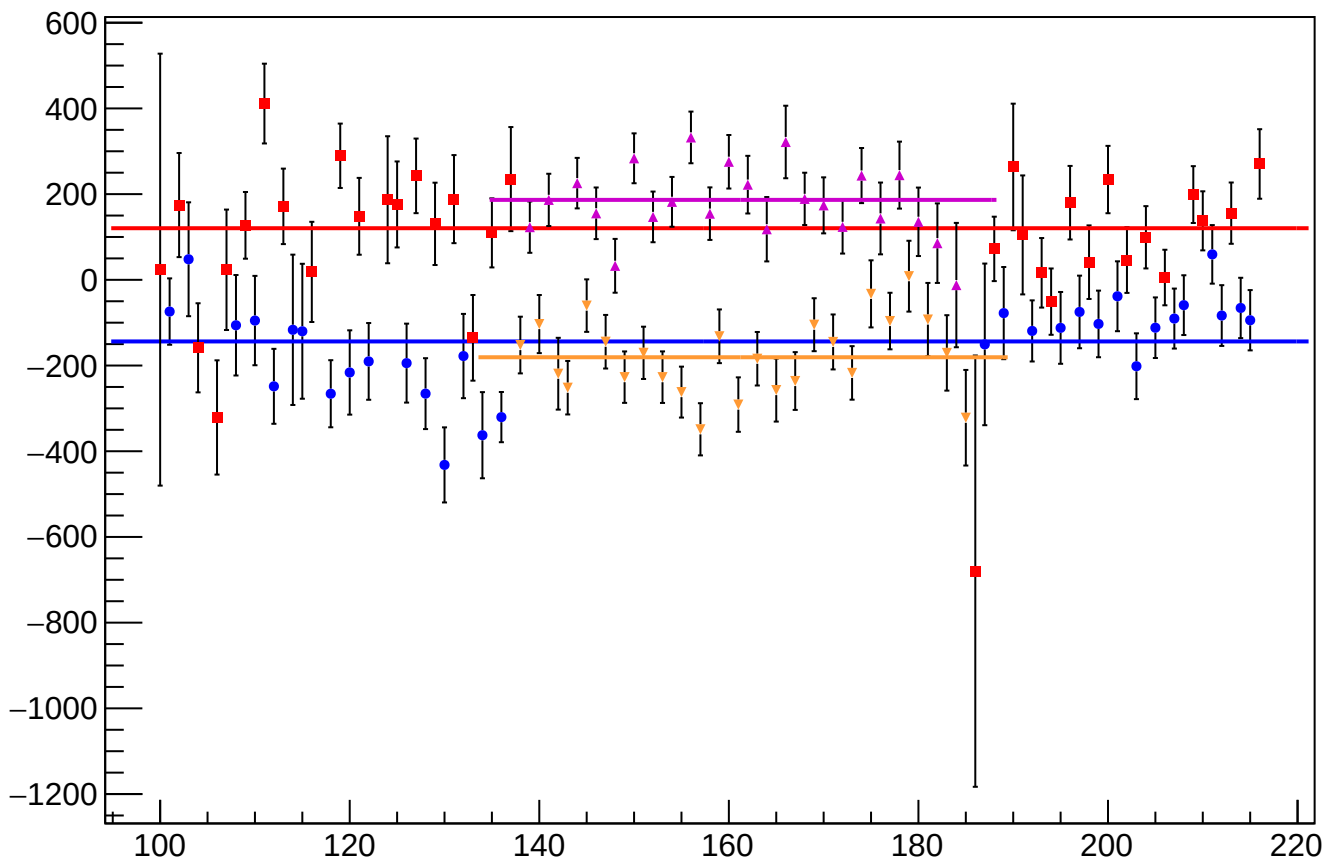
Left In: 262.007+/-0.044  $\chi^2/\text{NDF}$ : 670574.8/22

+ sign 247.748+/-0.031  $\chi^2/\text{NDF}$ : 13963260.1/55

All: 236.919+/-0.022  $\chi^2/\text{NDF}$ : 33083827.6/130

- sign 226.848+/-0.030  $\chi^2/\text{NDF}$ : 18889114.1/57

# eigen\_cor\_asym\_sam8\_mean vs Slug



Right In:  $-143.773 \pm 15.116$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $-180.680 \pm 13.419$   $\chi^2/\text{NDF}: 38.6/24$

Right Out:  $120.449 \pm 15.302$   $\chi^2/\text{NDF}: 68.5/34$

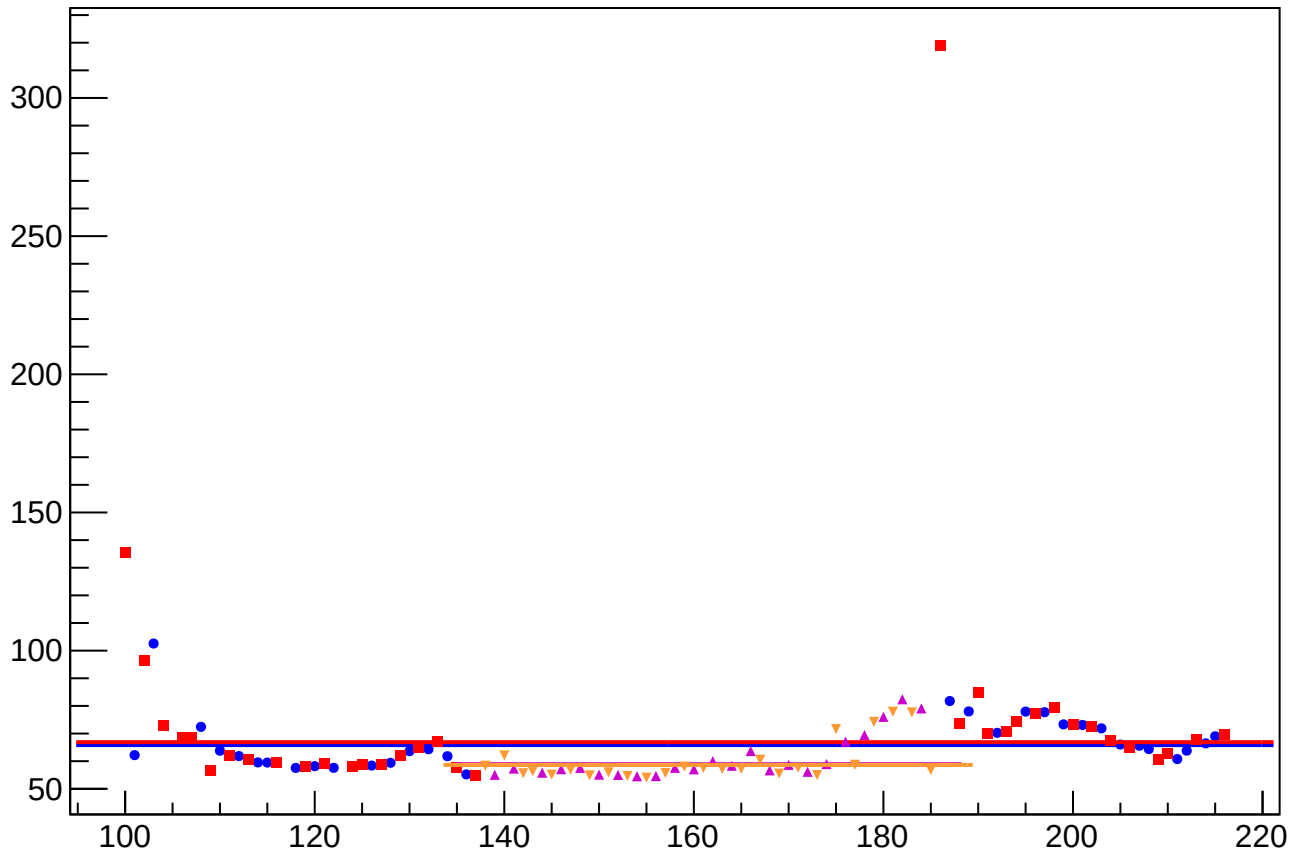
Left In:  $186.567 \pm 13.860$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $-164.415 \pm 10.035$   $\chi^2/\text{NDF}: 94.5/55$

All:  $-7.576 \pm 7.178$   $\chi^2/\text{NDF}: 702.4/113$

- sign  $156.770 \pm 10.273$   $\chi^2/\text{NDF}: 107.7/57$

# eigen\_cor\_asym\_sam8\_rms vs Slug



Right In: 65.820+/-0.011  $\chi^2/\text{NDF}$ : 514716.8/30

Left Out: 58.644+/-0.009  $\chi^2/\text{NDF}$ : 393880.8/24

Right Out: 66.877+/-0.011  $\chi^2/\text{NDF}$ : 1049224.1/34

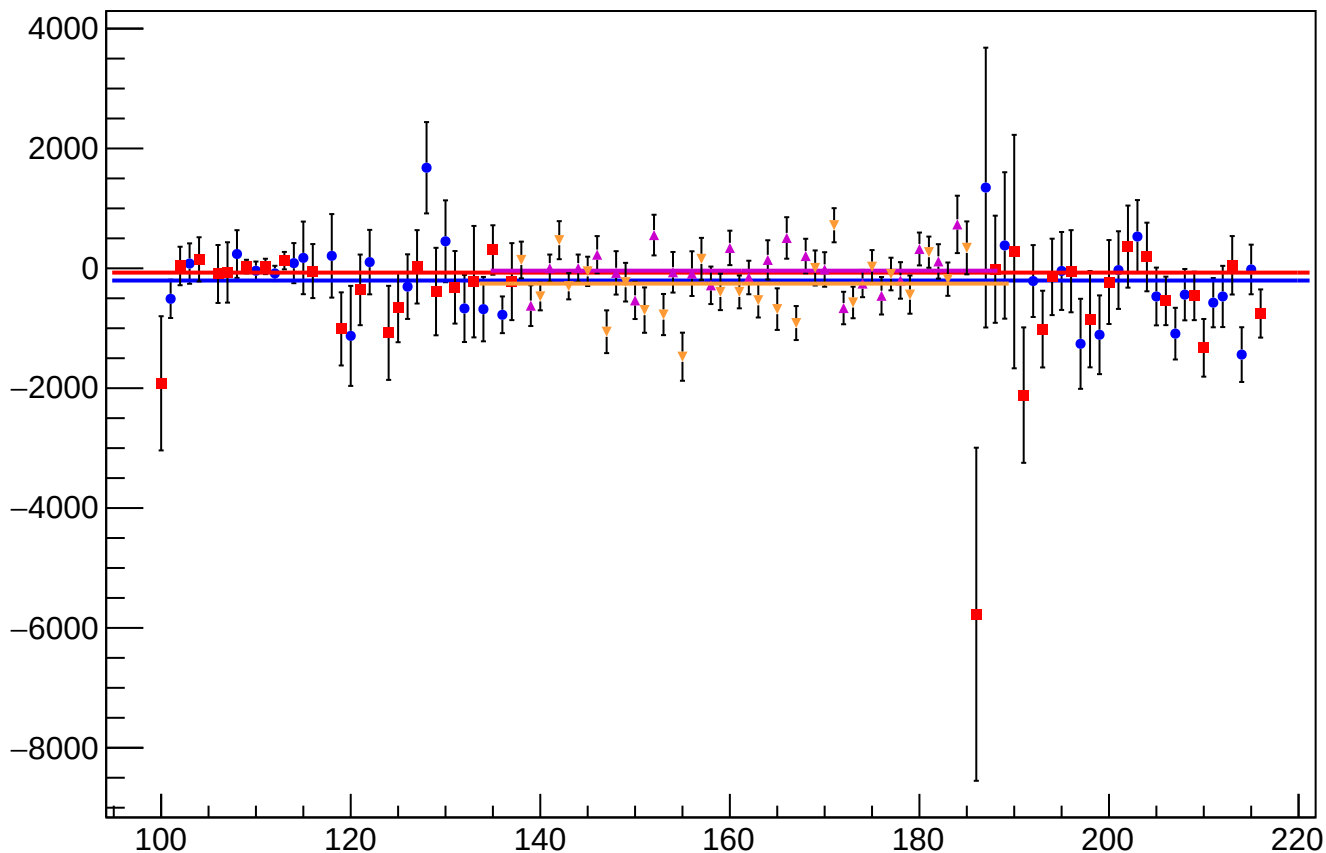
Left In: 58.906+/-0.010  $\chi^2/\text{NDF}$ : 386820.4/22

+ sign 61.807+/-0.007  $\chi^2/\text{NDF}$ : 1160706.7/55

All: 62.144+/-0.005  $\chi^2/\text{NDF}$ : 2899529.3/113

- sign 62.498+/-0.007  $\chi^2/\text{NDF}$ : 1734180.6/57

asym\_sam8\_eigen\_cor\_correction\_mean vs Slug



Right In: -203.619+/-66.989  $\chi^2/\text{NDF}$ : 39.5/30

Left Out: -254.625+/-58.877  $\chi^2/\text{NDF}$ : 57.6/24

Right Out: -71.587+/-58.857  $\chi^2/\text{NDF}$ : 36.4/34

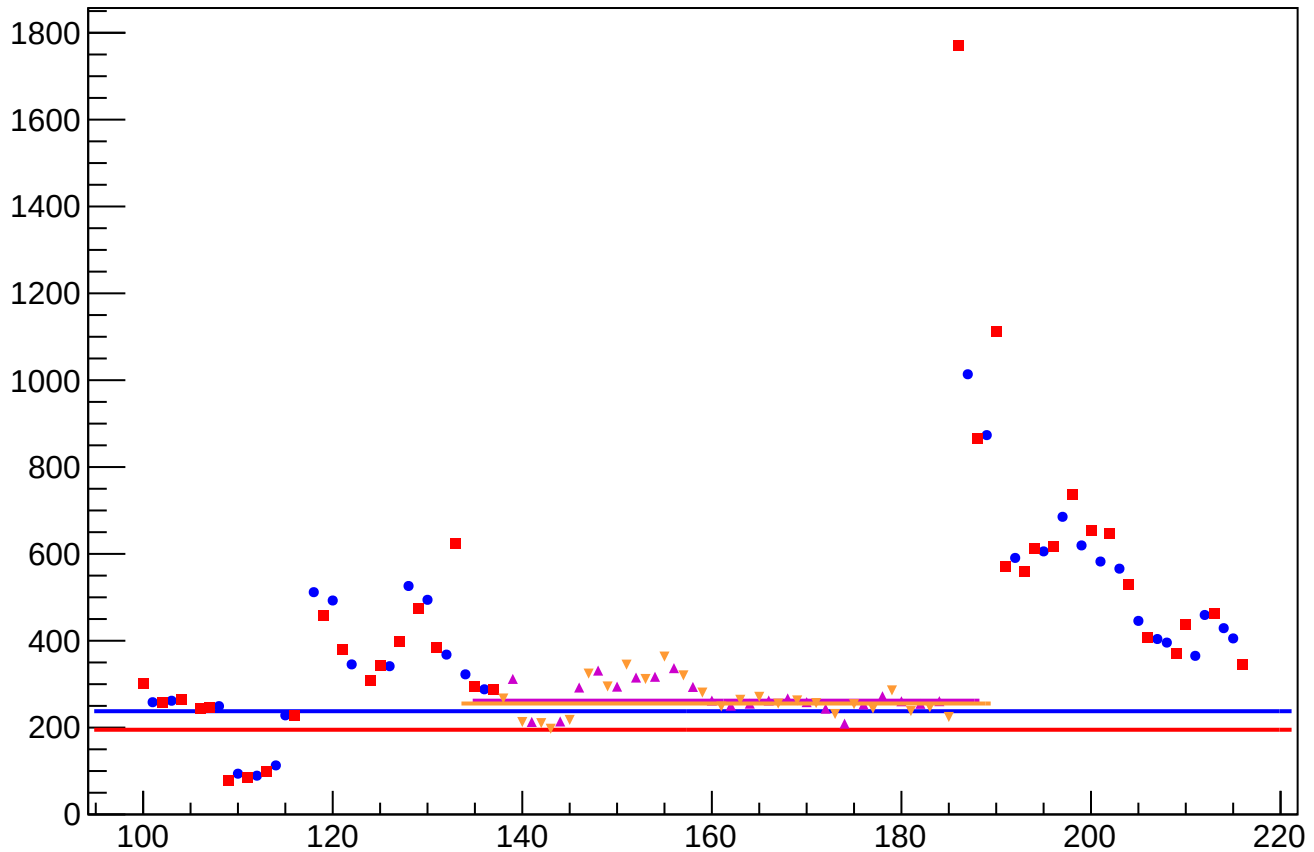
Left In: -39.144+/-61.883  $\chi^2/\text{NDF}$ : 28.3/22

+ sign -232.396+/-44.224  $\chi^2/\text{NDF}$ : 97.4/55

All: -141.092+/-30.698  $\chi^2/\text{NDF}$ : 170.5/113

- sign -56.178+/-42.648  $\chi^2/\text{NDF}$ : 64.9/57

# asym\_sam8\_eigen\_cor\_correction\_rms vs Slug



Right In: 237.752 $\pm$ 0.047  $\chi^2$ /NDF: 13020461.9/30

Left Out: 255.469 $\pm$ 0.042  $\chi^2$ /NDF: 863867.3/24

Right Out: 195.042 $\pm$ 0.042  $\chi^2$ /NDF: 16988898.6/34

Left In: 262.007 $\pm$ 0.044  $\chi^2$ /NDF: 670574.8/22

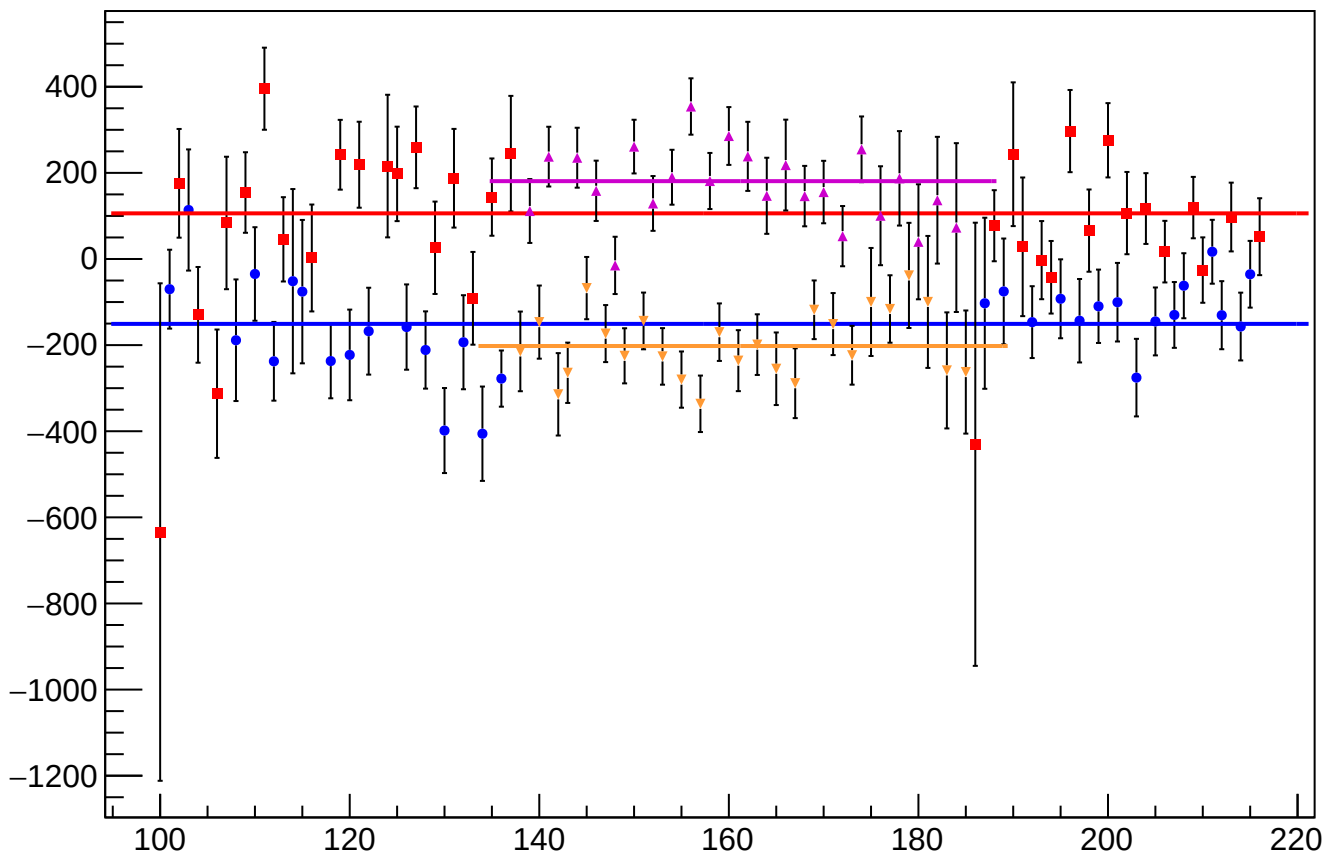
+ sign 247.748 $\pm$ 0.031  $\chi^2$ /NDF: 13963260.1/55

All: 236.919 $\pm$ 0.022  $\chi^2$ /NDF: 33083827.6/1

- sign 226.848 $\pm$ 0.030  $\chi^2$ /NDF: 18889114.1/57



# dit\_asym\_sam8\_mean vs Slug



Right In:  $-150.706 \pm 16.774$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $-202.090 \pm 15.538$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $105.985 \pm 16.936$   $\chi^2/\text{NDF}$ : 58.1/34

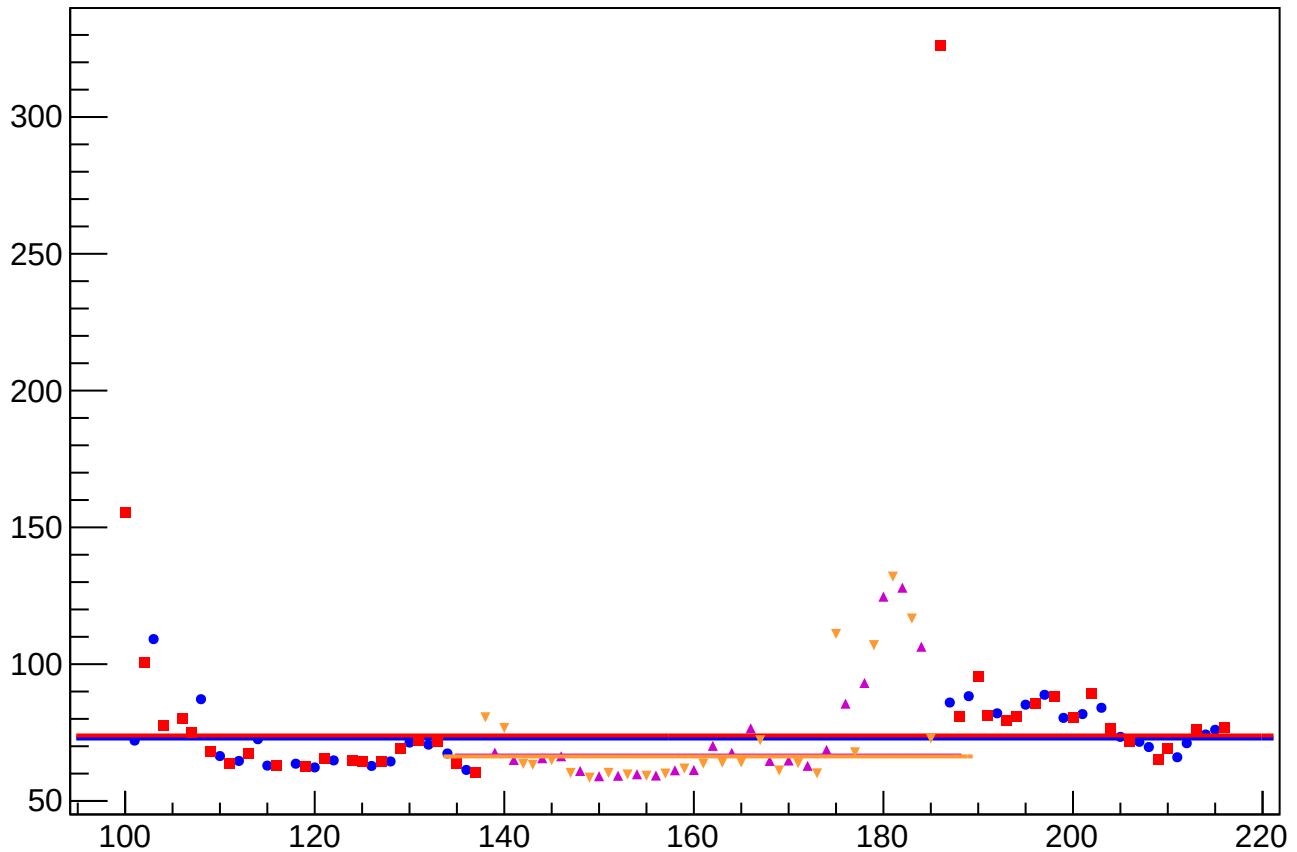
Left In:  $180.784 \pm 16.019$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-178.361 \pm 11.399$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-19.806 \pm 8.143$   $\chi^2/\text{NDF}$ : 556.9/113

- sign  $145.465 \pm 11.638$   $\chi^2/\text{NDF}$ : 98.6/57

# dit\_asym\_sam8\_rms vs Slug



Right In: 72.824 $\pm$ 0.012     $\chi^2$ /NDF: 593590.2/30

Left Out: 66.279 $\pm$ 0.011     $\chi^2$ /NDF: 1393879.2/24

Right Out: 73.936 $\pm$ 0.012     $\chi^2$ /NDF: 1070778.1/34

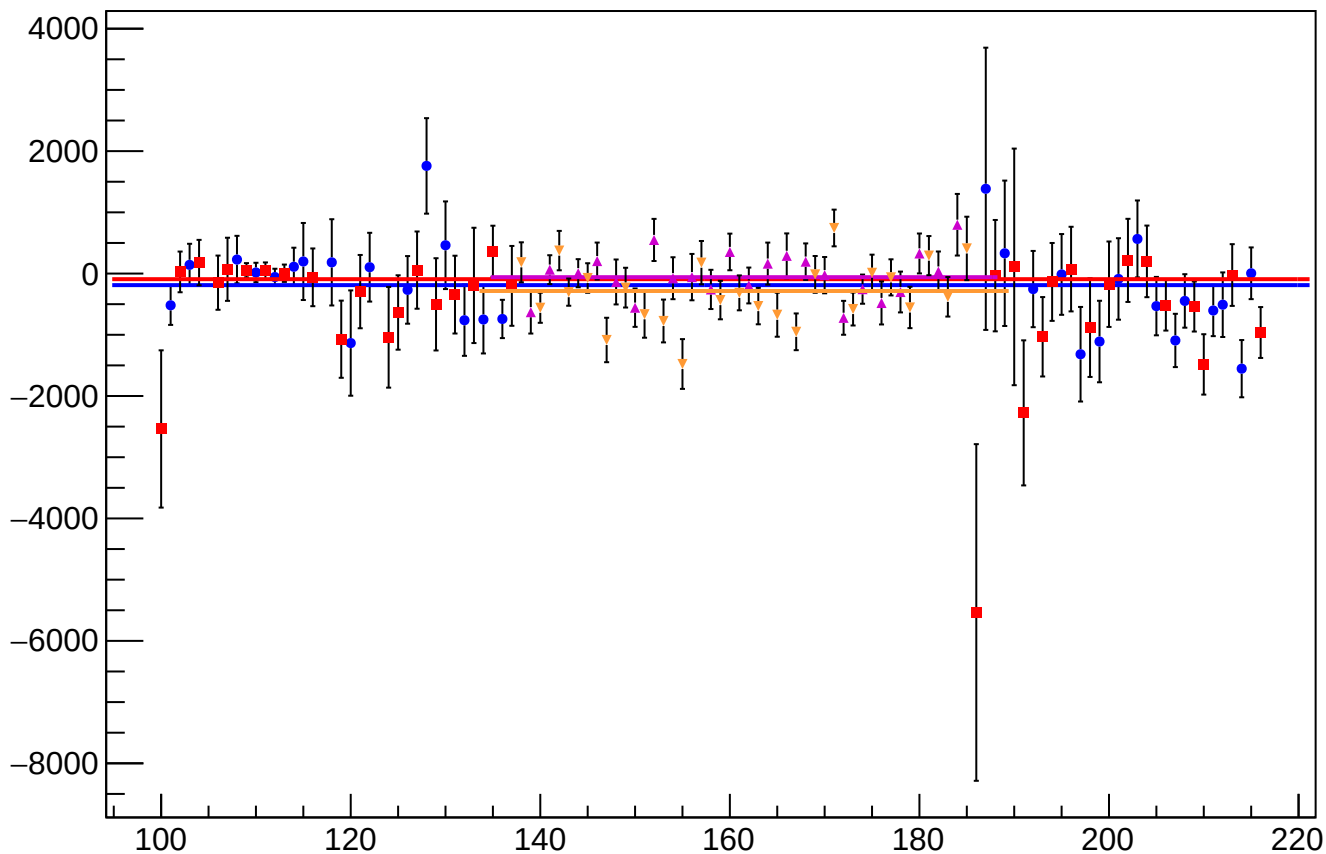
Left In: 66.585 $\pm$ 0.011     $\chi^2$ /NDF: 1158238.0/22

+ sign 69.301 $\pm$ 0.008     $\chi^2$ /NDF: 2151338.7/55

All: 69.671 $\pm$ 0.006     $\chi^2$ /NDF: 4583496.3/113

- sign 70.056 $\pm$ 0.008     $\chi^2$ /NDF: 2427863.7/57

# asym\_sam8\_dit\_correction\_mean vs Slug



Right In:  $-188.901 \pm 68.935$   $\chi^2/\text{NDF}: 42.6/30$

Left Out:  $-284.450 \pm 61.727$   $\chi^2/\text{NDF}: 54.6/24$

Right Out:  $-91.705 \pm 60.429$   $\chi^2/\text{NDF}: 39.3/34$

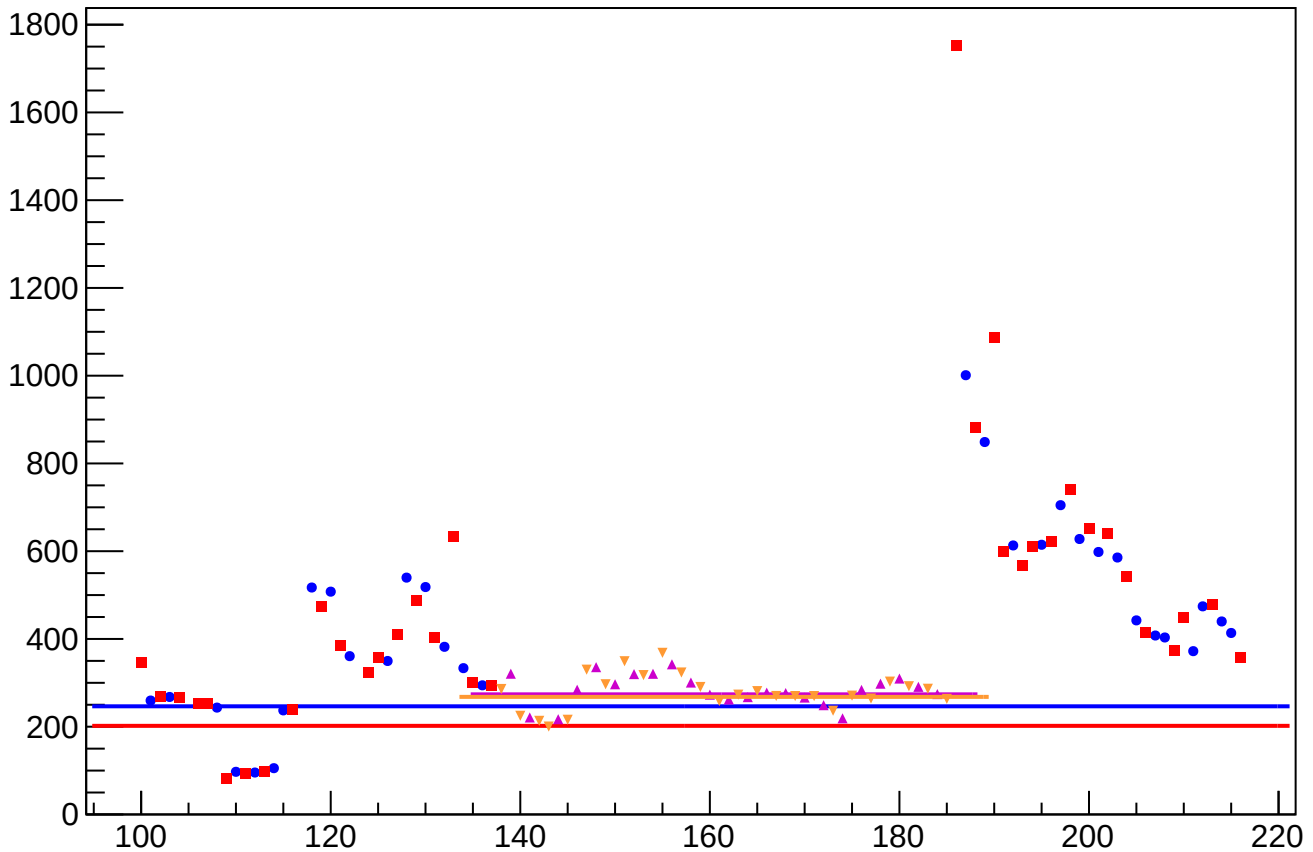
Left In:  $-59.160 \pm 64.636$   $\chi^2/\text{NDF}: 26.8/22$

+ sign  $-241.930 \pm 45.986$   $\chi^2/\text{NDF}: 98.2/55$

All:  $-155.847 \pm 31.845$   $\chi^2/\text{NDF}: 171.3/113$

- sign  $-76.526 \pm 44.142$   $\chi^2/\text{NDF}: 66.3/57$

# asym\_sam8\_dit\_correction\_rms vs Slug



Right In: 246.483+/-0.049  $\chi^2/\text{NDF}$ : 12699639.6/30

Left Out: 267.985+/-0.044  $\chi^2/\text{NDF}$ : 862786.9/24

+ sign 258.417+/-0.033  $\chi^2/\text{NDF}$ : 13670428.6/55

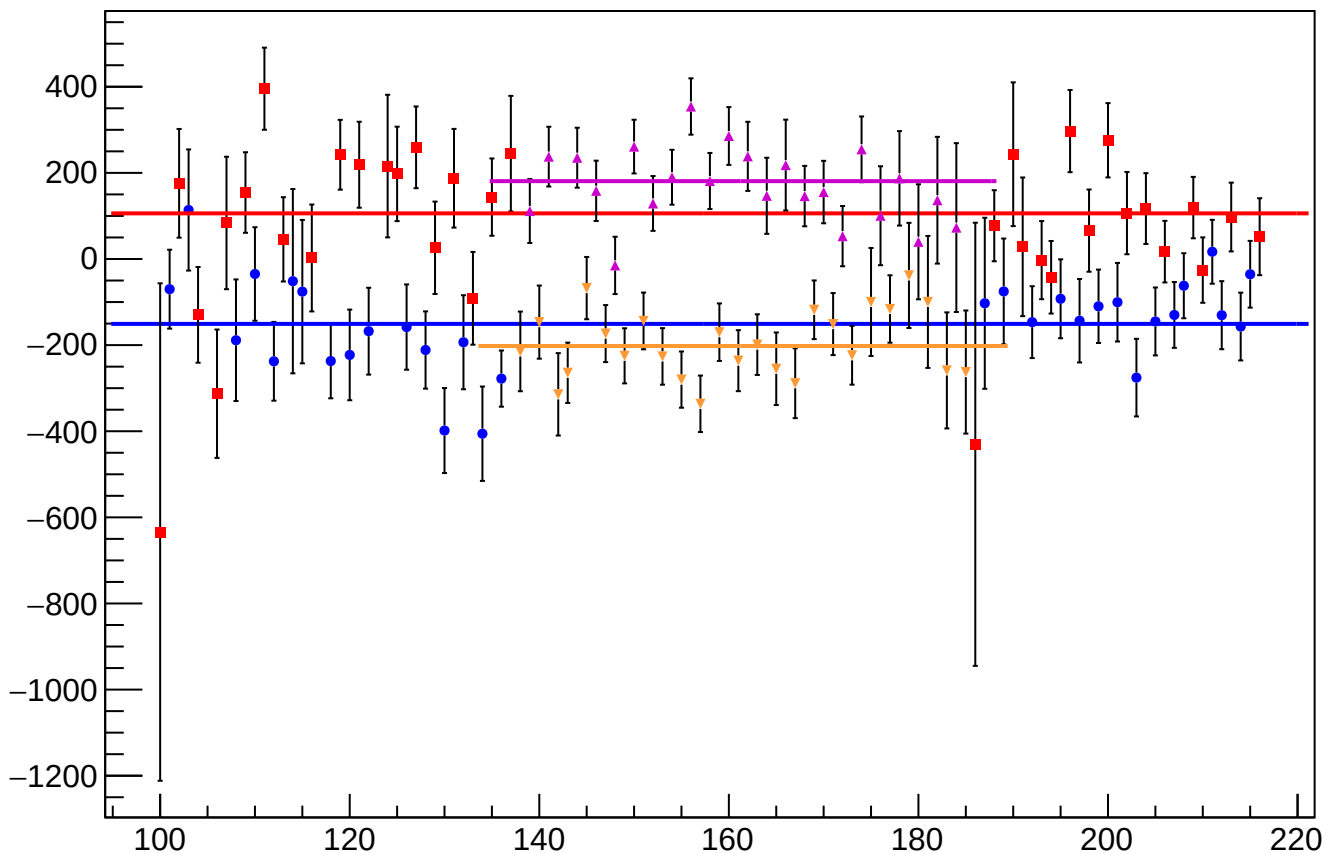
Right Out: 201.951+/-0.043  $\chi^2/\text{NDF}$ : 16756377.1/34

All: 246.458+/-0.023  $\chi^2/\text{NDF}$ : 32653880.0/1

Left In: 273.751+/-0.046  $\chi^2/\text{NDF}$ : 650295.5/22

- sign 235.438+/-0.031  $\chi^2/\text{NDF}$ : 18723551.8/57

# eigen\_dit\_asym\_sam8\_mean vs Slug



Right In:  $-150.706 \pm 16.774$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $-202.090 \pm 15.538$   $\chi^2/\text{NDF}$ : 21.5/24

Right Out:  $105.986 \pm 16.936$   $\chi^2/\text{NDF}$ : 58.1/34

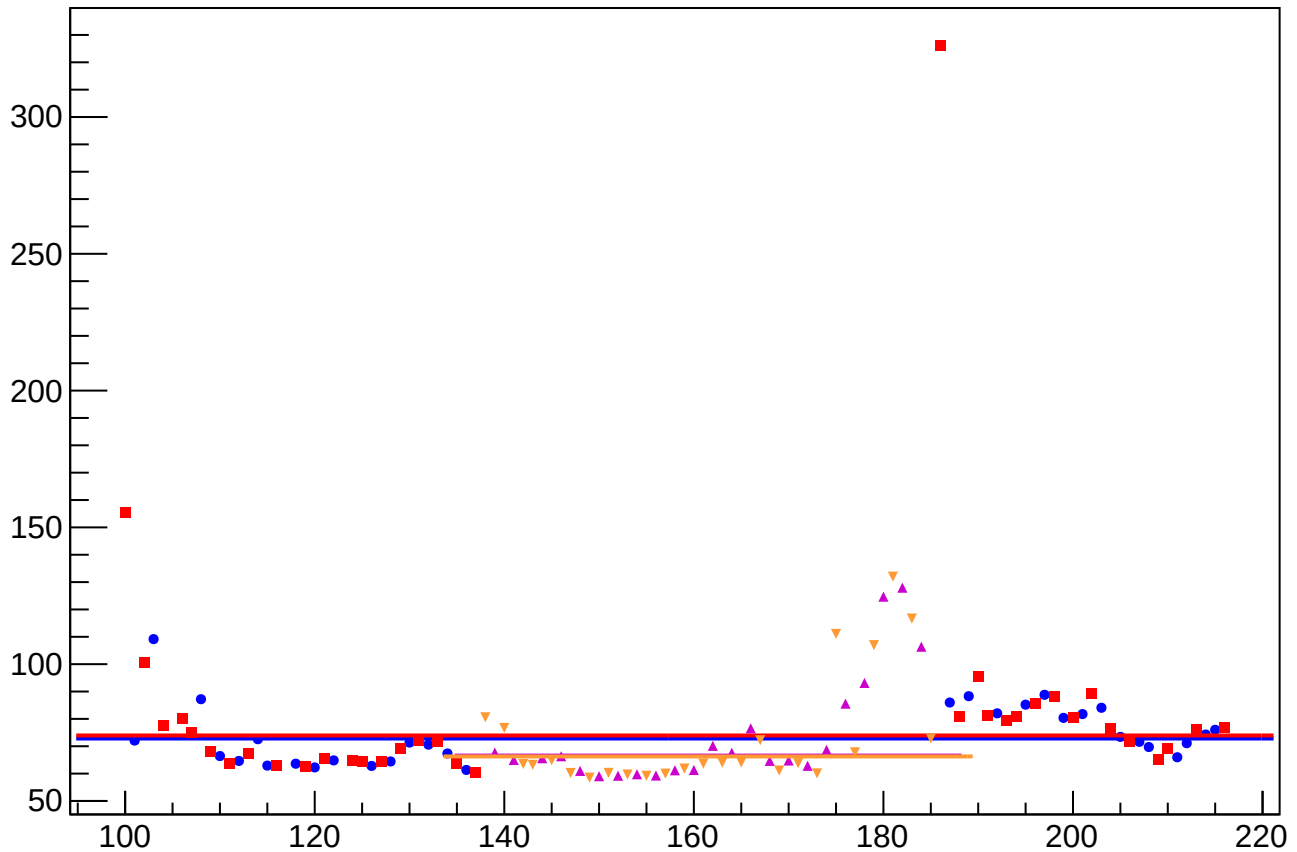
Left In:  $180.785 \pm 16.019$   $\chi^2/\text{NDF}$ : 30.1/22

+ sign  $-178.360 \pm 11.399$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-19.806 \pm 8.143$   $\chi^2/\text{NDF}$ : 556.9/113

- sign  $145.466 \pm 11.638$   $\chi^2/\text{NDF}$ : 98.6/57

# eigen\_dit\_asym\_sam8\_rms vs Slug



Right In: 72.824 $\pm$ 0.012  $\chi^2$ /NDF: 593593.7/30

Left Out: 66.279 $\pm$ 0.011  $\chi^2$ /NDF: 1393881.3/24

Right Out: 73.936 $\pm$ 0.012  $\chi^2$ /NDF: 1070782.6/34

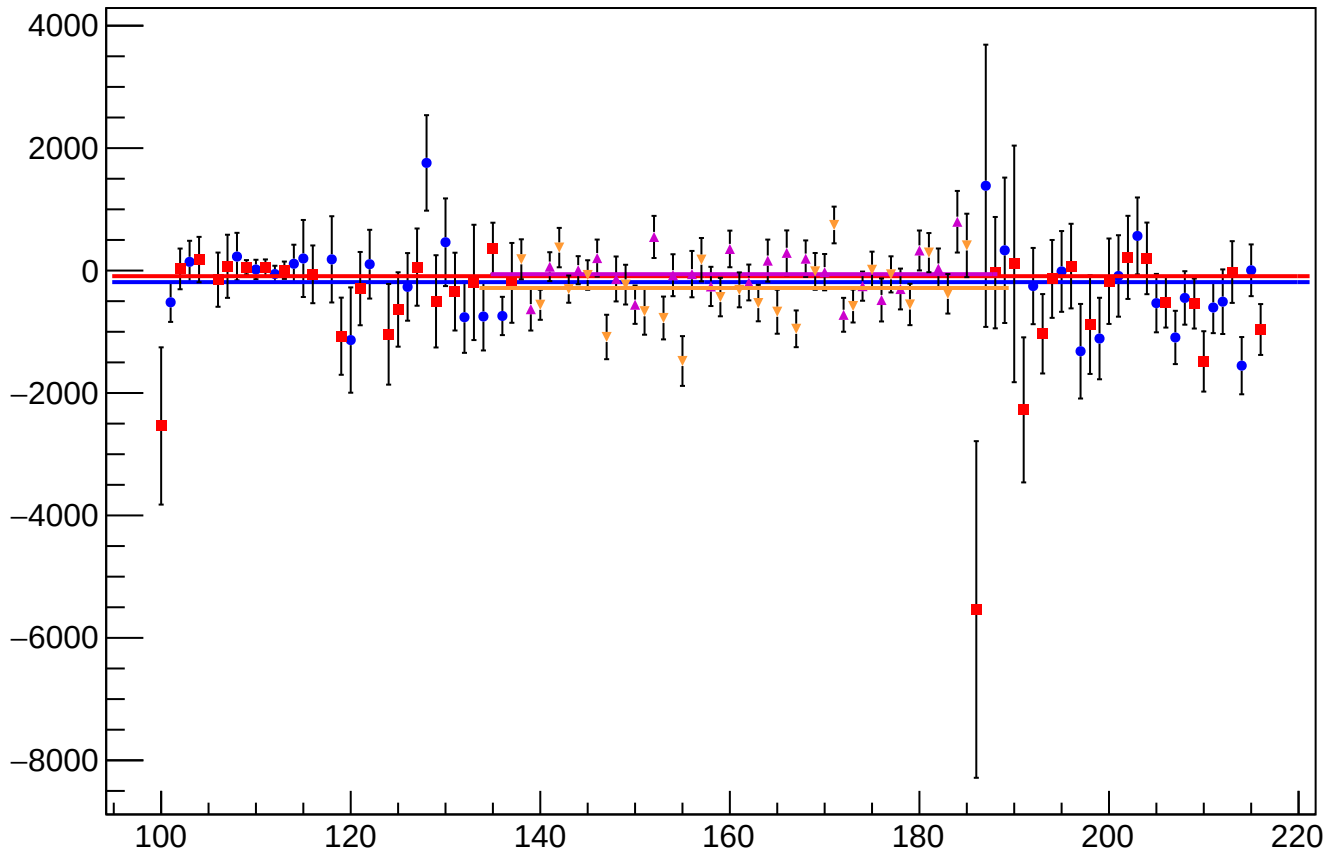
Left In: 66.585 $\pm$ 0.011  $\chi^2$ /NDF: 1158231.7/22

+ sign 69.301 $\pm$ 0.008  $\chi^2$ /NDF: 2151336.2/55

All: 69.671 $\pm$ 0.006  $\chi^2$ /NDF: 4583480.9/113

- sign 70.056 $\pm$ 0.008  $\chi^2$ /NDF: 2427850.8/57

# asym\_sam8\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-188.899 \pm 68.935$   $\chi^2/\text{NDF}: 42.6/30$

Left Out:  $-284.450 \pm 61.727$   $\chi^2/\text{NDF}: 54.6/24$

Right Out:  $-91.704 \pm 60.429$   $\chi^2/\text{NDF}: 39.3/34$

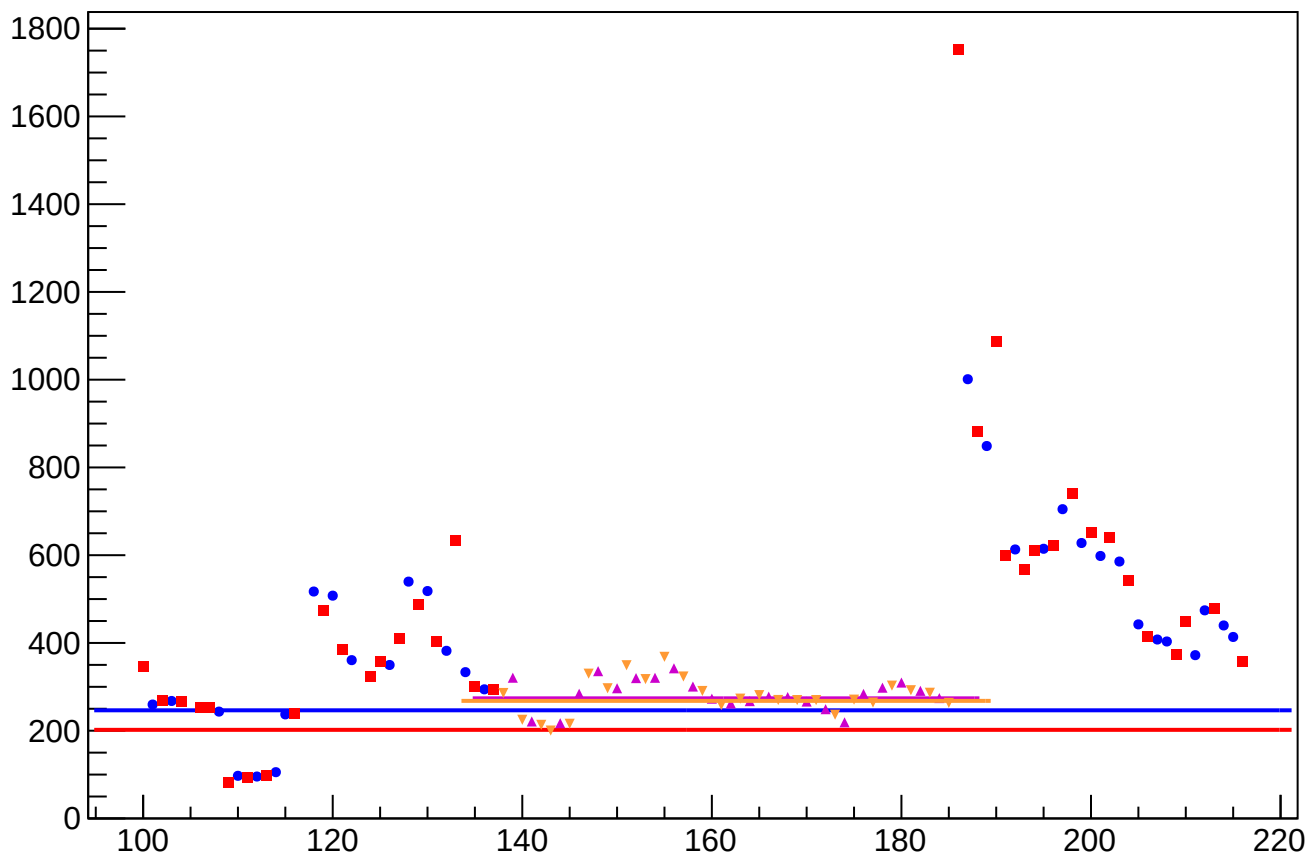
Left In:  $-59.160 \pm 64.636$   $\chi^2/\text{NDF}: 26.8/22$

+ sign  $-241.929 \pm 45.986$   $\chi^2/\text{NDF}: 98.2/55$

All:  $-155.846 \pm 31.845$   $\chi^2/\text{NDF}: 171.3/113$

- sign  $-76.525 \pm 44.142$   $\chi^2/\text{NDF}: 66.3/57$

# asym\_sam8\_eigen\_dit\_correction\_rms vs Slug



Right In: 246.481+/-0.049  $\chi^2/\text{NDF}$ : 12699725.5/30

Left Out: 267.985+/-0.044  $\chi^2/\text{NDF}$ : 862797.1/24

Right Out: 201.950+/-0.043  $\chi^2/\text{NDF}$ : 16756368.4/34

Left In: 273.750+/-0.046  $\chi^2/\text{NDF}$ : 650300.9/22

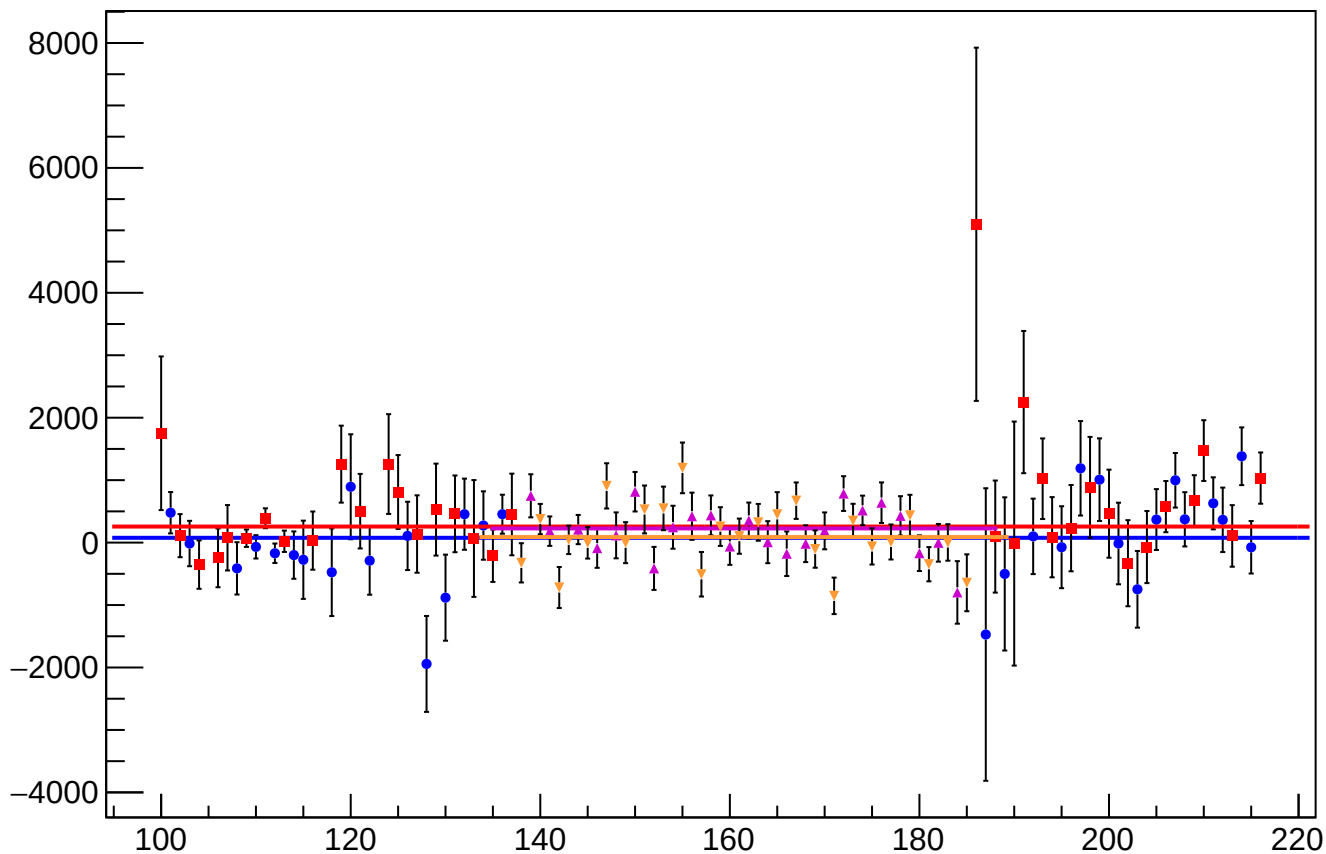
+ sign 258.415+/-0.033  $\chi^2/\text{NDF}$ : 13670533.7/55

All: 246.457+/-0.023  $\chi^2/\text{NDF}$ : 32653959.4/11

- sign 235.437+/-0.031  $\chi^2/\text{NDF}$ : 18723539.3/57



# asym\_sam8\_mean vs Slug



Right In: 76.815+/-74.123     $\chi^2/\text{NDF}$ : 41.9/30

Left Out: 88.397+/-60.666     $\chi^2/\text{NDF}$ : 52.2/24

Right Out: 256.799+/-66.834     $\chi^2/\text{NDF}$ : 37.7/34

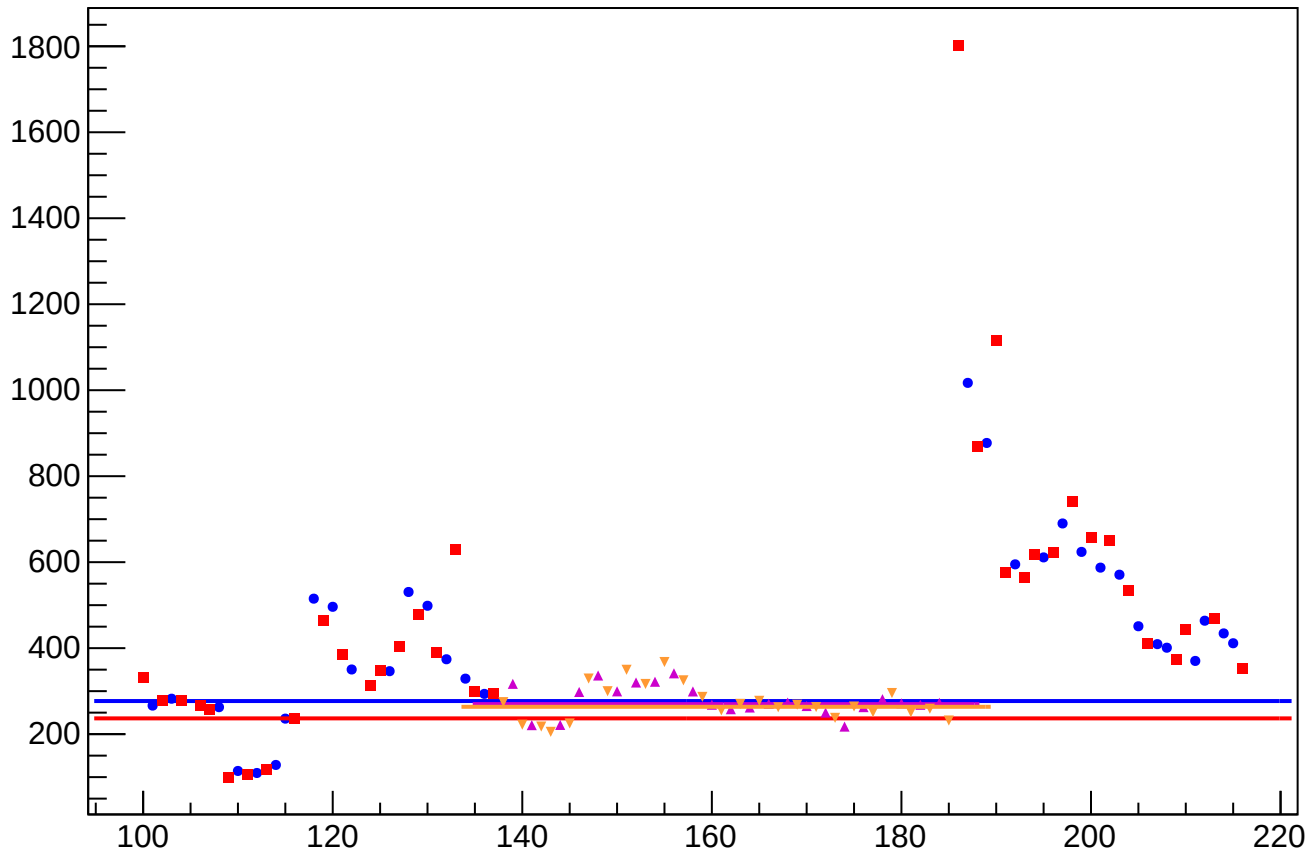
Left In: 226.867+/-63.677     $\chi^2/\text{NDF}$ : 28.8/22

+ sign 83.751+/-46.947     $\chi^2/\text{NDF}$ : 94.1/55

All: 163.859+/-32.894     $\chi^2/\text{NDF}$ : 166.5/113

- sign 241.110+/-46.102     $\chi^2/\text{NDF}$ : 66.7/57

# asym\_sam8\_rms vs Slug



Right In: 276.980+/-0.052  $\chi^2/\text{NDF}$ : 10297223.4/30

Left Out: 263.593+/-0.043  $\chi^2/\text{NDF}$ : 779853.4/24

+ sign 268.963+/-0.033  $\chi^2/\text{NDF}$ : 11116147.1/55

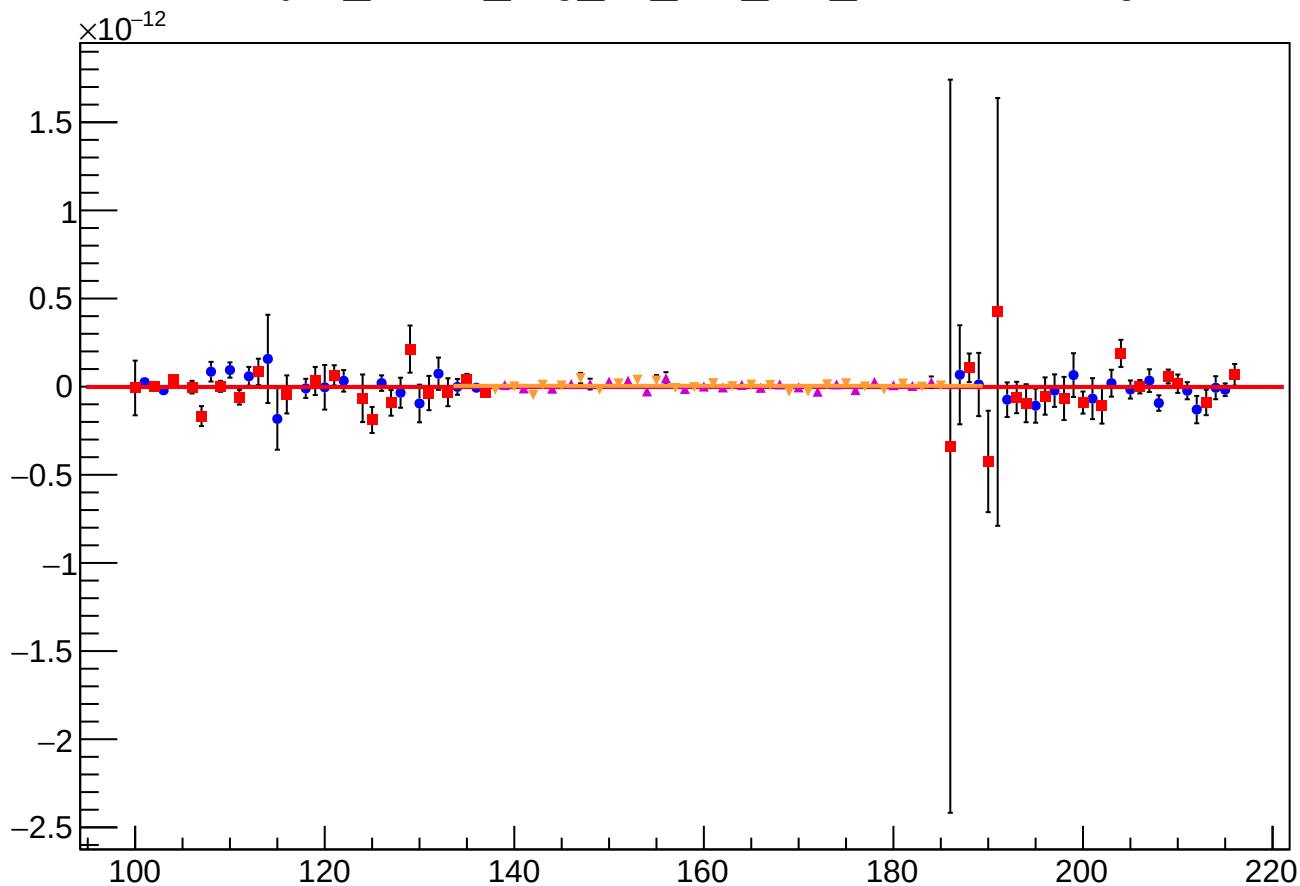
Right Out: 236.648+/-0.047  $\chi^2/\text{NDF}$ : 14060205.1/34

All: 261.385+/-0.023  $\chi^2/\text{NDF}$ : 26140442.0/11

Left In: 269.898+/-0.045  $\chi^2/\text{NDF}$ : 602244.3/22

- sign 254.077+/-0.033  $\chi^2/\text{NDF}$ : 14921921.2/57

# asym\_sam8\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 25.0/30

Left Out: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 27.9/24

Right Out: -0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 50.7/34

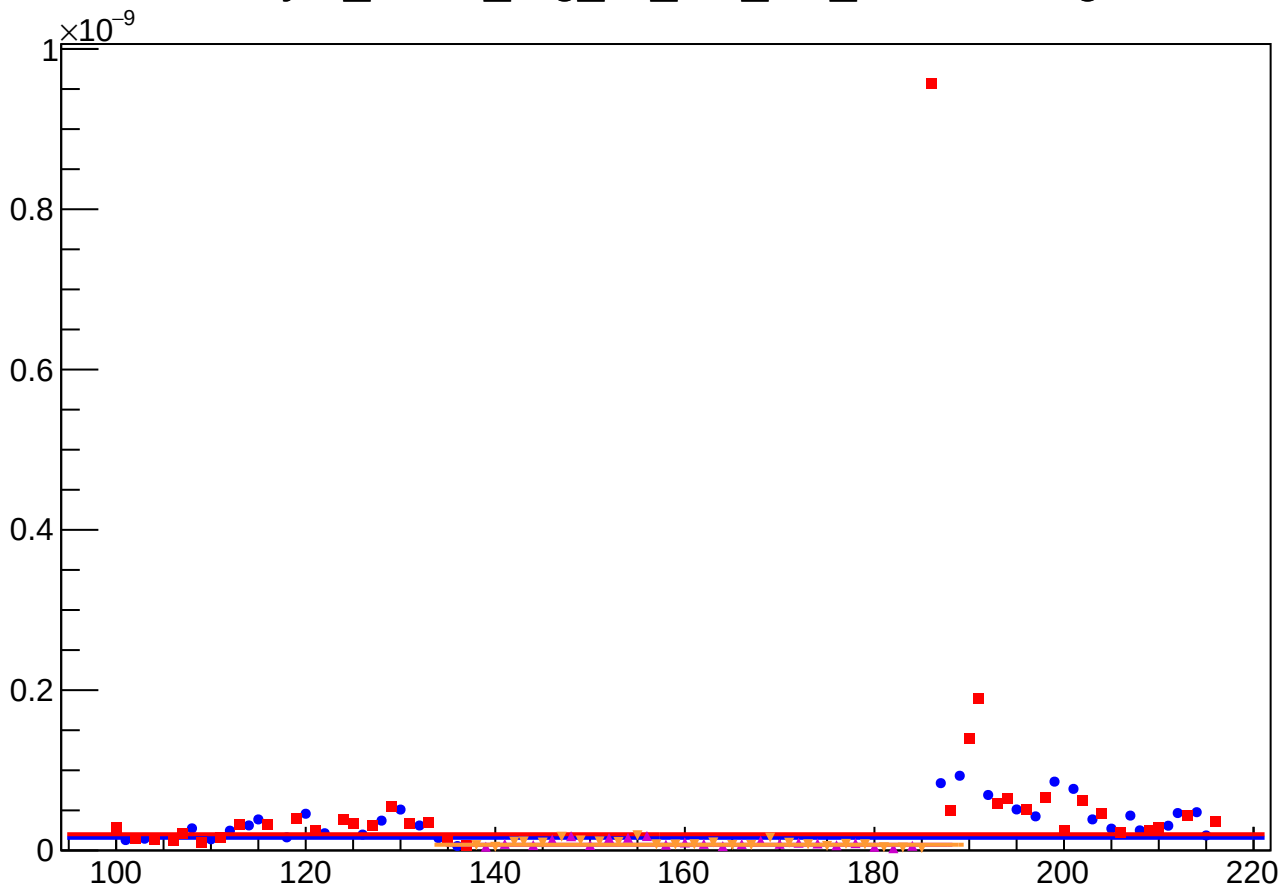
Left In: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 21.5/22

+ sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 53.5/55

All: 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 126.1/113

- sign 0.000 +/- 0.000  $\chi^2/\text{NDF}$ : 72.5/57

# asym\_sam8\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6820503.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1952087.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5063040.2/34

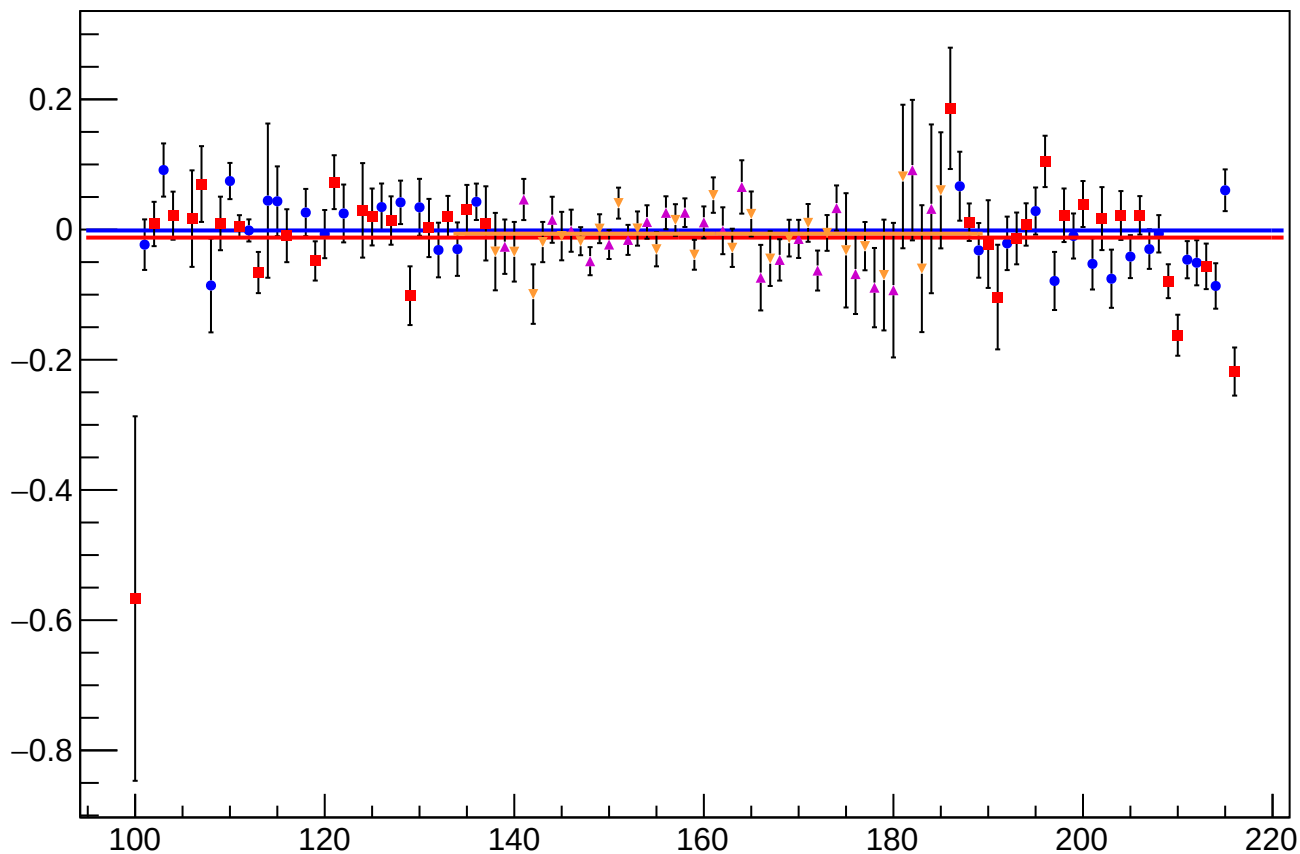
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2053049.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11095221.0/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22156735.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11056512.2/57

# asym\_sam8\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.2/30

Left Out:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 107.9/34

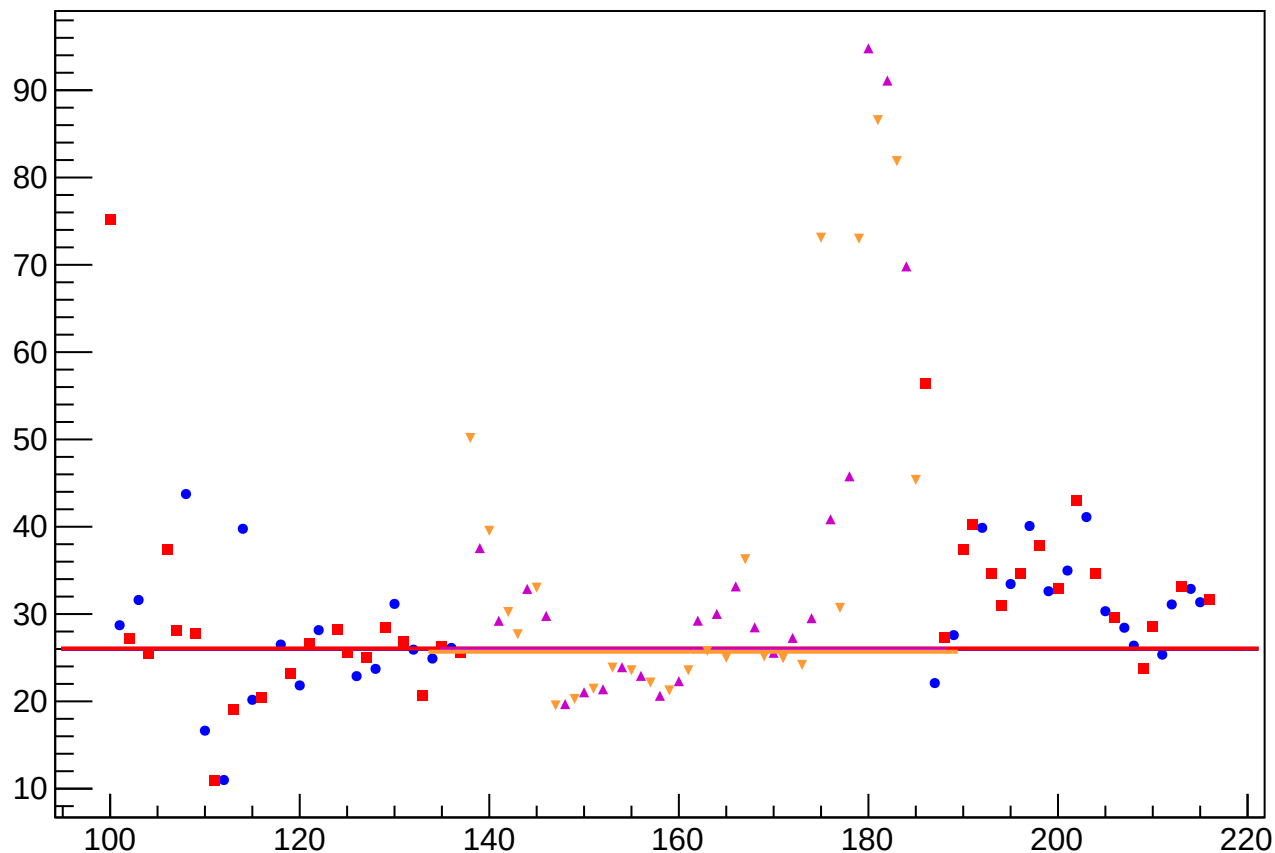
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 73.0/55

All:  $-0.007 \pm 0.003$   $\chi^2/\text{NDF}$ : 210.6/113

- sign  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 136.8/57

# asym\_sam8\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 26.014 $\pm$ 0.004  $\chi^2$ /NDF: 3248036.8/30

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF:3871541.1/24

Right Out: 26.052 $\pm$ 0.004  $\chi^2$ /NDF: 3260166.6/34

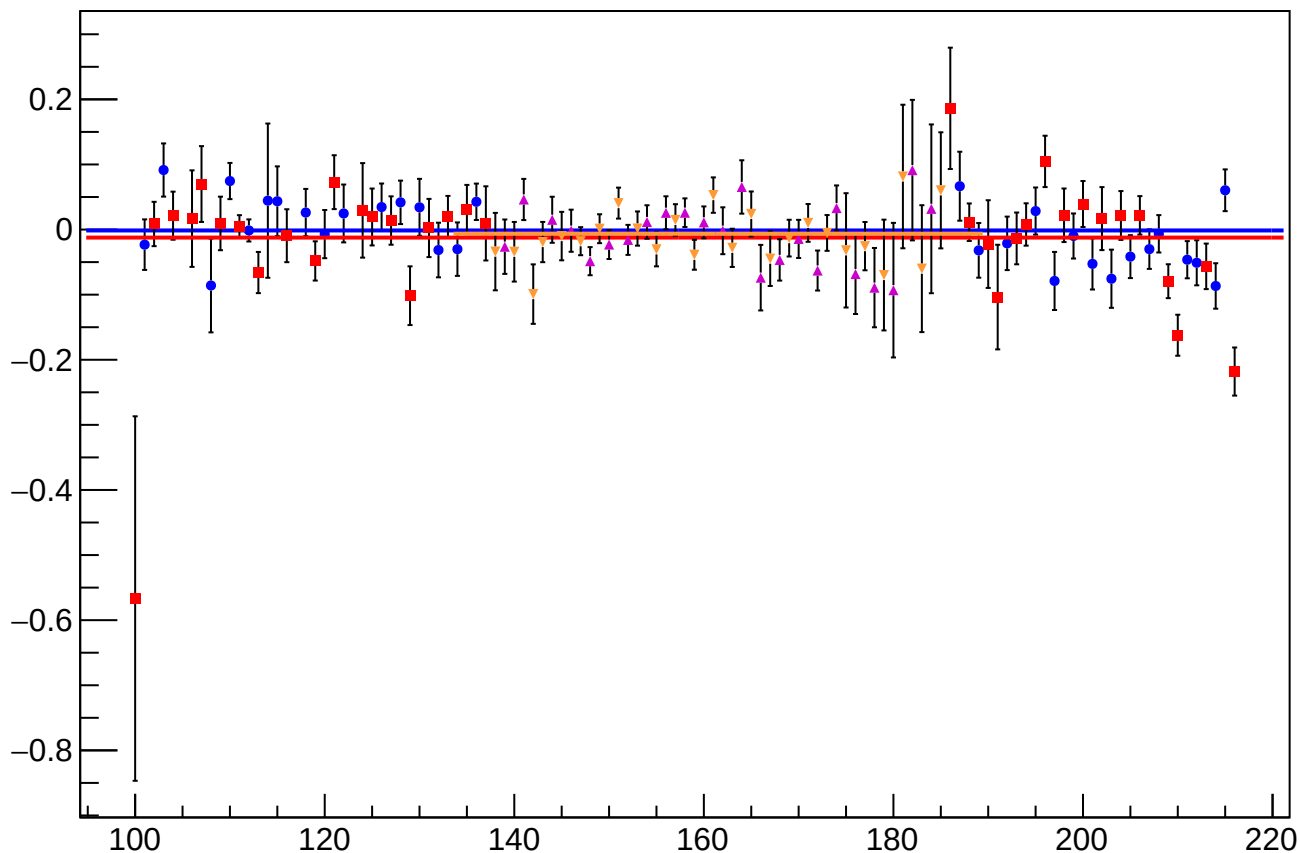
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF:3118335.6/22

+ sign 25.852 $\pm$ 0.003  $\chi^2$ /NDF: 7122264.0/55

All: 25.932 $\pm$ 0.002  $\chi^2$ /NDF: 13502206.3/113

- sign 26.014 $\pm$ 0.003  $\chi^2$ /NDF: 6378656.7/57

# asym\_sam8\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.2/30

Left Out:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 107.9/34

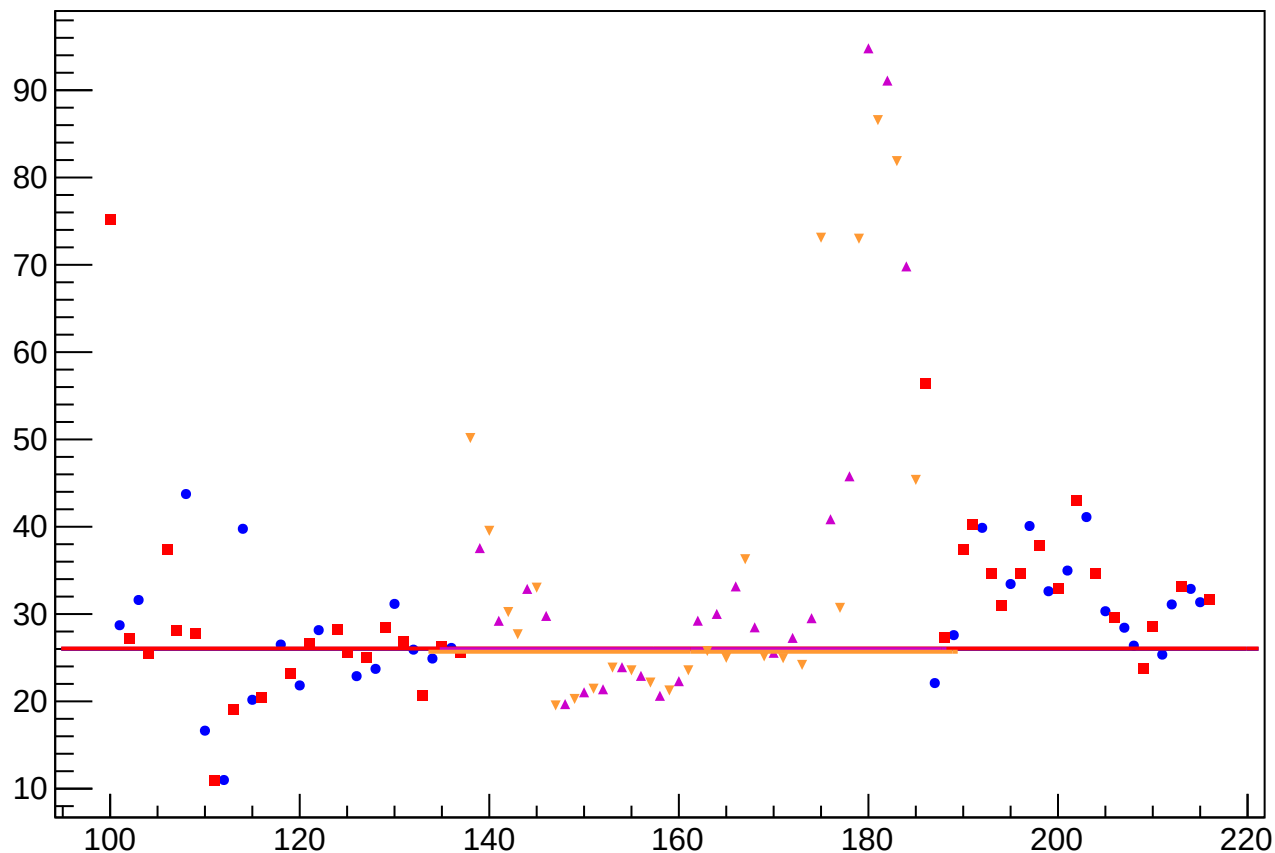
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 73.0/55

All:  $-0.007 \pm 0.003$   $\chi^2/\text{NDF}$ : 210.6/113

- sign  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 136.8/57

# asym\_sam8\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $26.014 \pm 0.004$   $\chi^2/\text{NDF}$ : 3248036.8/30

Left Out:  $25.685 \pm 0.005$   $\chi^2/\text{NDF}$ : 3871541.1/24

Right Out:  $26.052 \pm 0.004$   $\chi^2/\text{NDF}$ : 3260166.6/34

Left In:  $25.972 \pm 0.005$   $\chi^2/\text{NDF}$ : 3118335.6/22

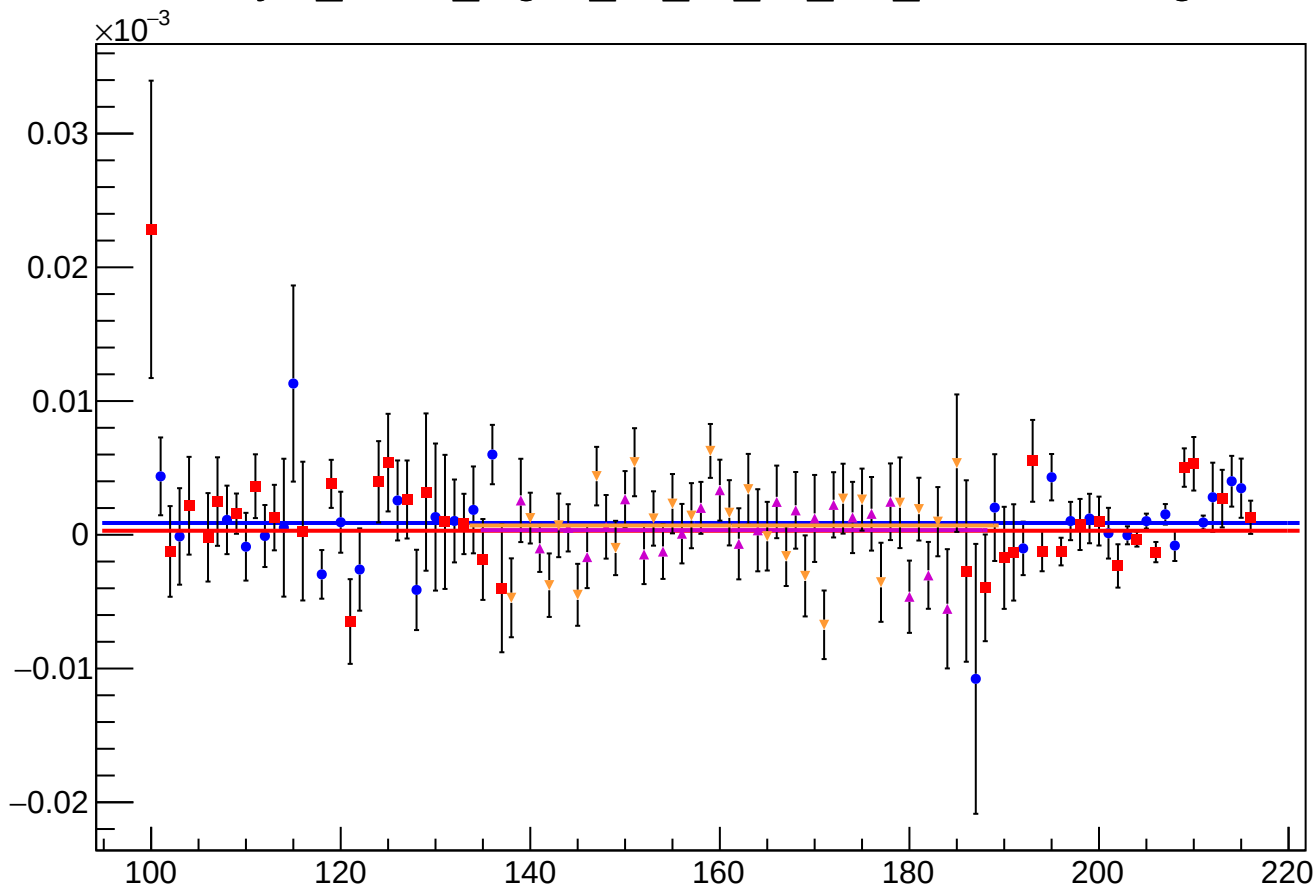
+ sign  $25.852 \pm 0.003$   $\chi^2/\text{NDF}$ : 7122264.0/55

All:  $25.932 \pm 0.002$   $\chi^2/\text{NDF}$ : 13502206.3/113

- sign  $26.014 \pm 0.003$   $\chi^2/\text{NDF}$ : 6378656.7/57



# asym\_sam8\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 34.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:44.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.5/34

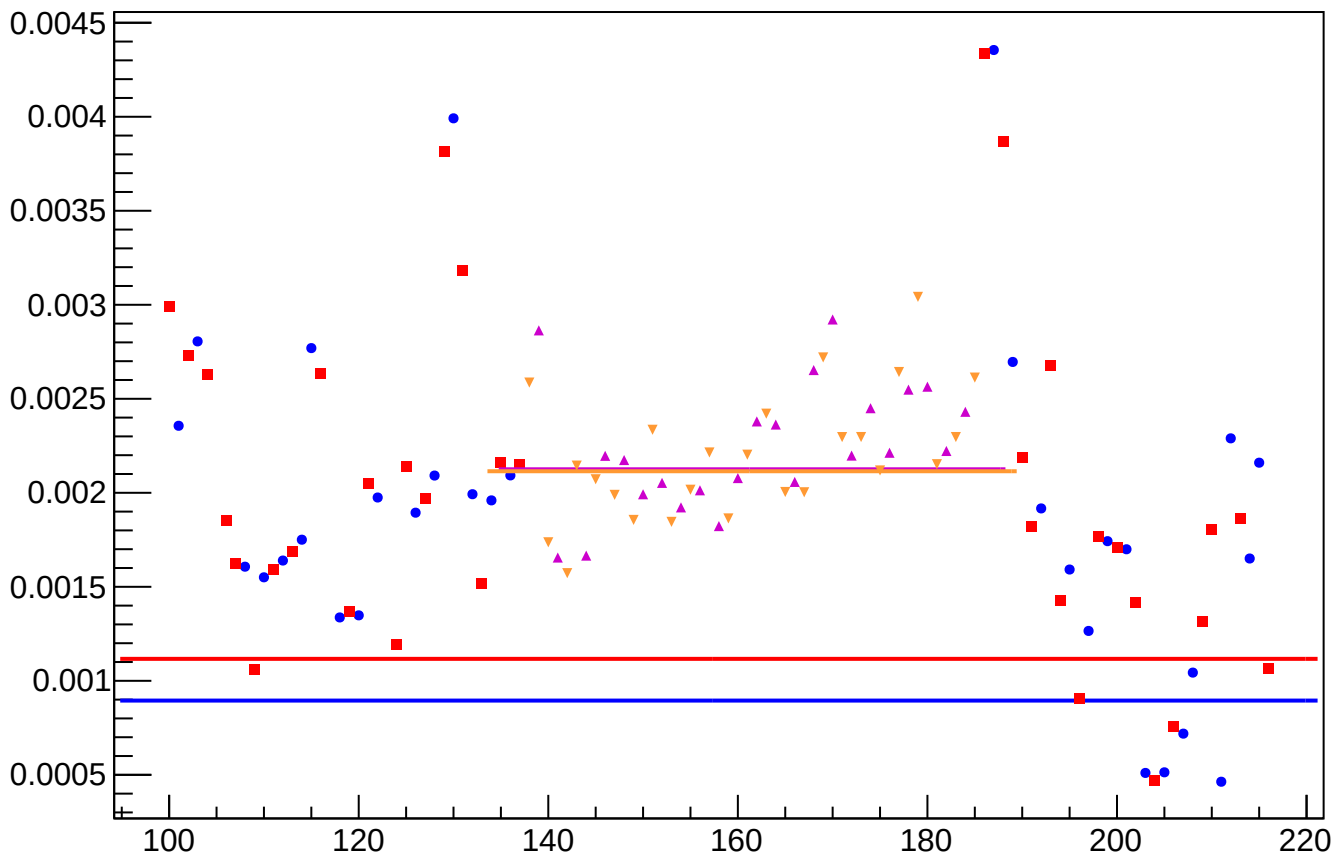
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 78.8/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 155.1/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 73.9/57

# asym\_sam8\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11461484.1/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 743658.4/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9524103.2/34

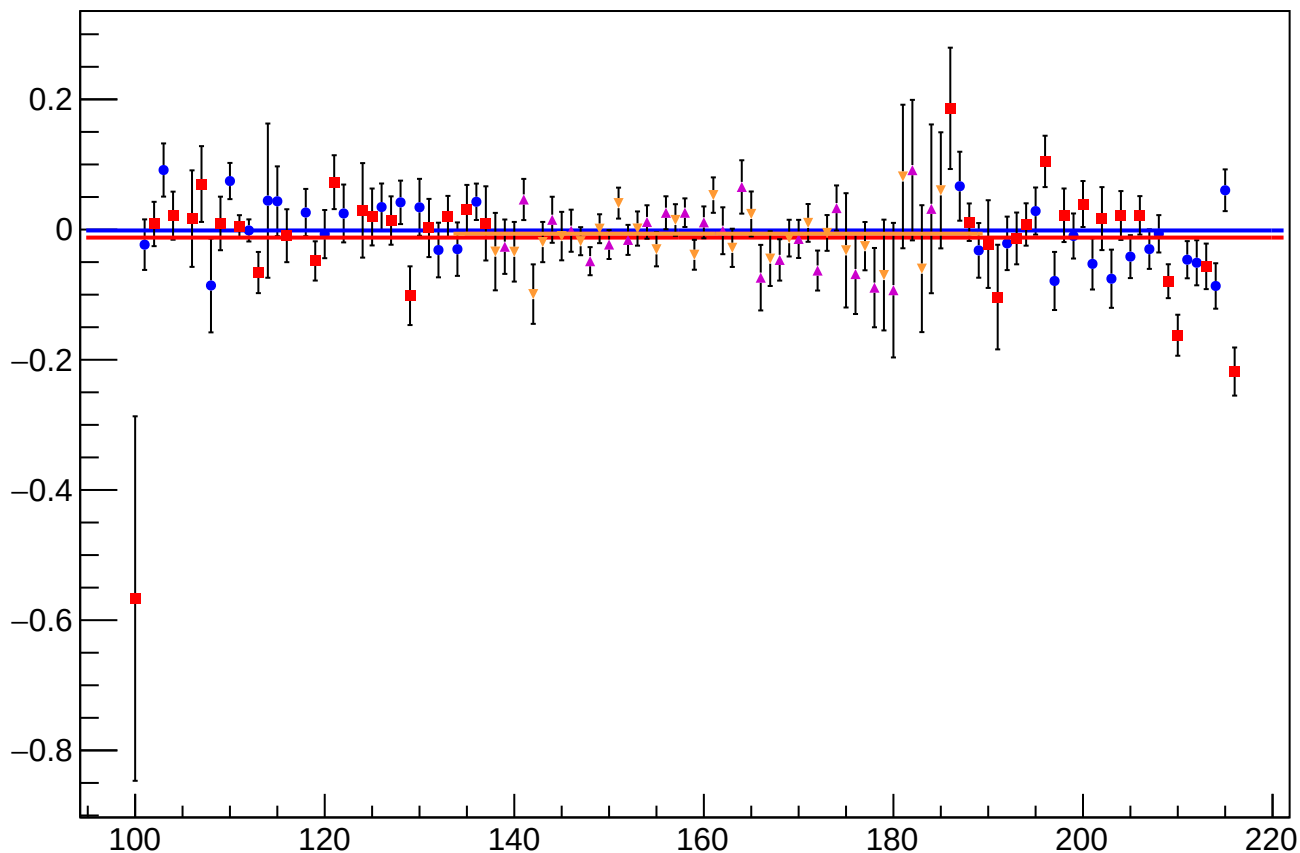
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 837770.9/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 22137678.5/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 39337986.8/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16333706.7/57

# asym\_sam8\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.2/30

Left Out:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 107.9/34

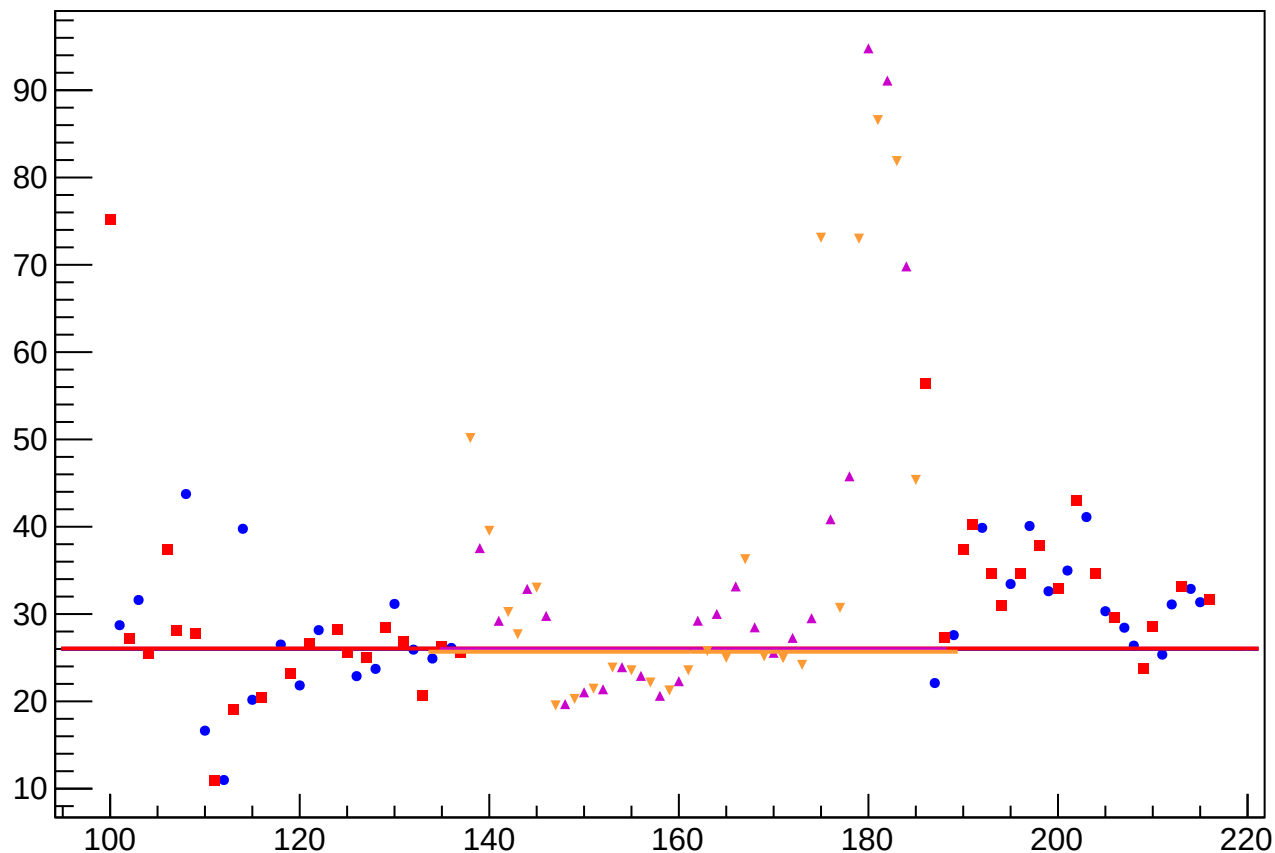
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 73.0/55

All:  $-0.007 \pm 0.003$   $\chi^2/\text{NDF}$ : 210.6/113

- sign  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 136.8/57

# asym\_sam8\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $26.014 \pm 0.004$   $\chi^2/\text{NDF}$ : 3248318.0/30

Left Out:  $25.685 \pm 0.005$   $\chi^2/\text{NDF}$ : 3871544.4/24

Right Out:  $26.051 \pm 0.004$   $\chi^2/\text{NDF}$ : 3260455.1/34

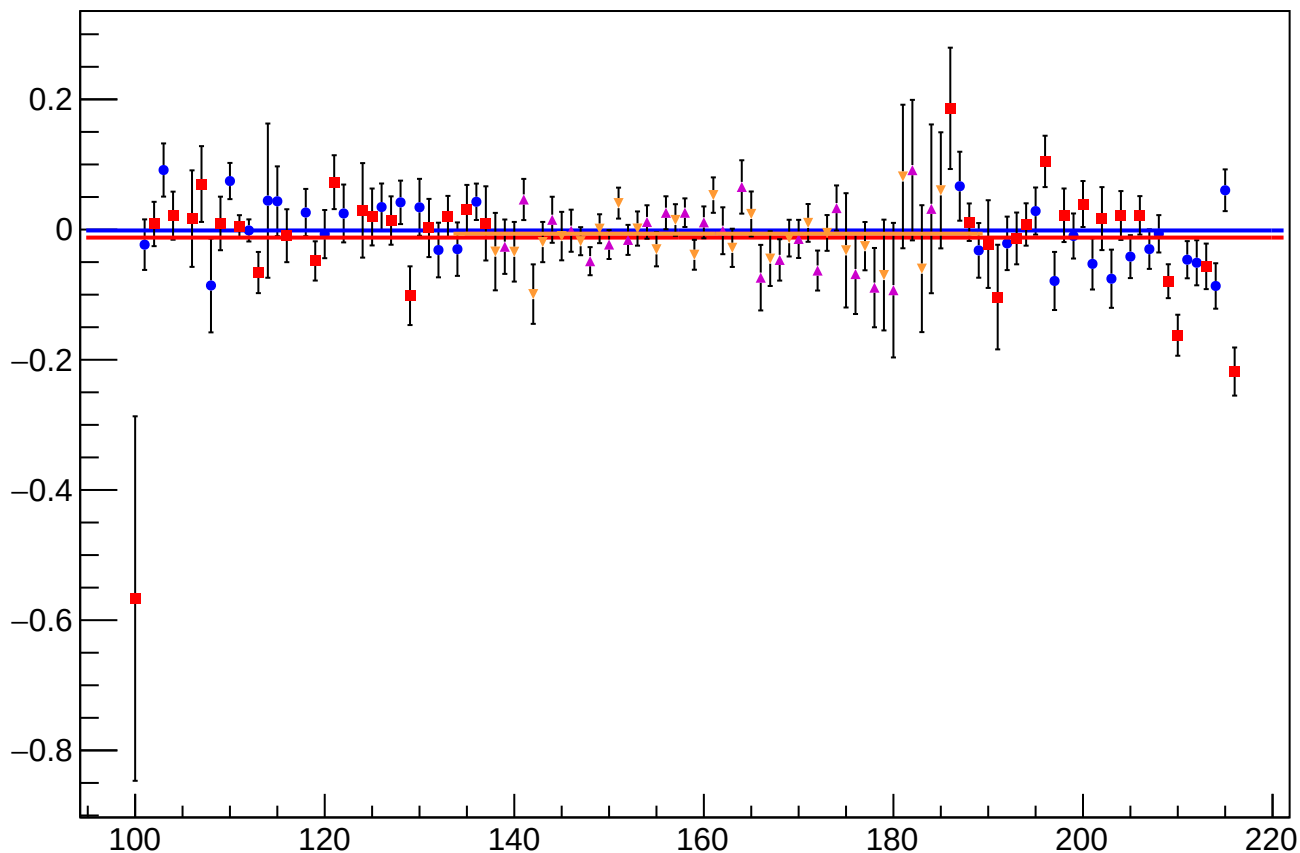
Left In:  $25.972 \pm 0.005$   $\chi^2/\text{NDF}$ : 3118315.0/22

+ sign  $25.852 \pm 0.003$   $\chi^2/\text{NDF}$ : 7122539.6/55

All:  $25.931 \pm 0.002$   $\chi^2/\text{NDF}$ : 13502746.5/113

- sign  $26.014 \pm 0.003$   $\chi^2/\text{NDF}$ : 6378921.9/57

asym\_sam8\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 50.2/30

Left Out:  $-0.006 \pm 0.006$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.006$   $\chi^2/\text{NDF}$ : 107.9/34

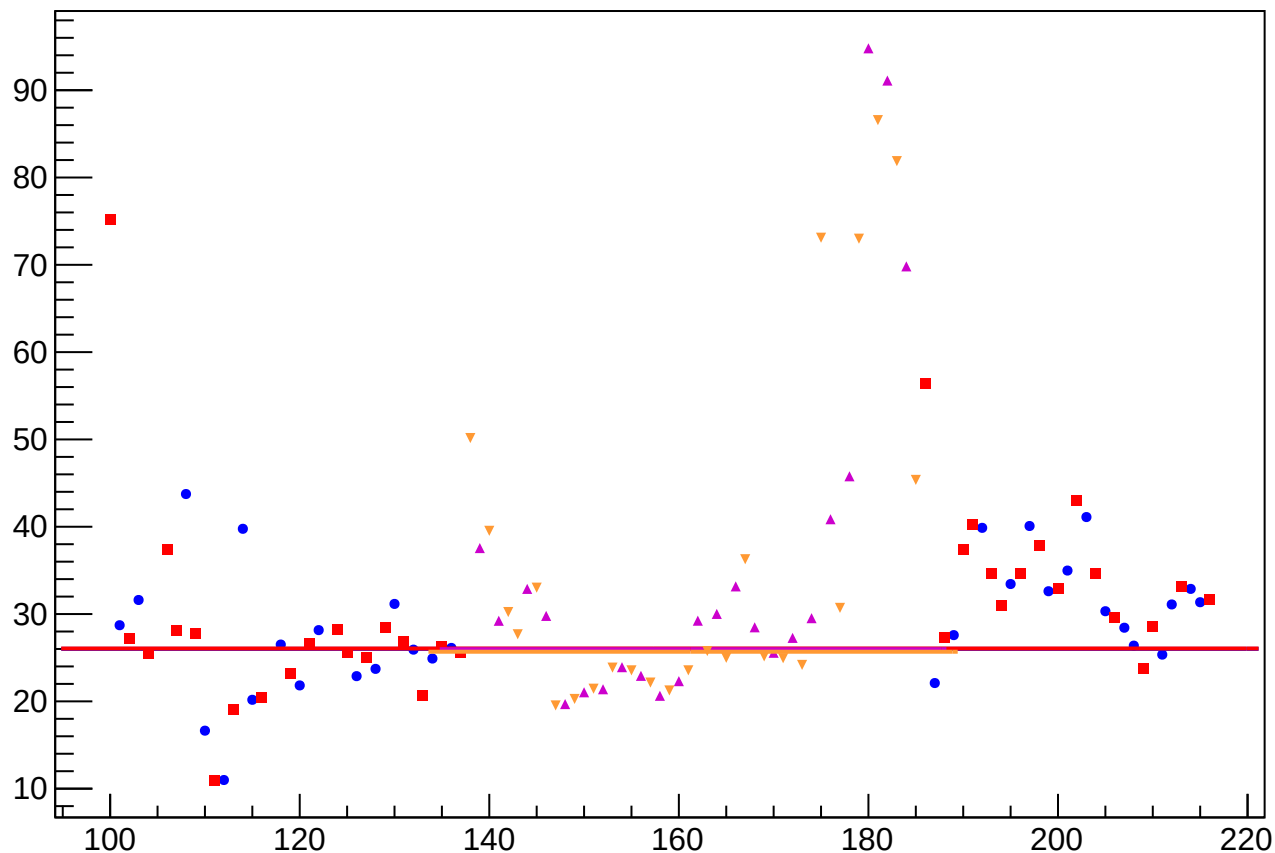
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 73.0/55

All:  $-0.007 \pm 0.003$   $\chi^2/\text{NDF}$ : 210.6/113

- sign  $-0.009 \pm 0.005$   $\chi^2/\text{NDF}$ : 136.8/57

asym\_sam8\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 26.014 $\pm$ 0.004  $\chi^2$ /NDF: 3248318.0/30

Left Out: 25.685 $\pm$ 0.005  $\chi^2$ /NDF: 3871544.4/24

Right Out: 26.051 $\pm$ 0.004  $\chi^2$ /NDF: 3260455.1/34

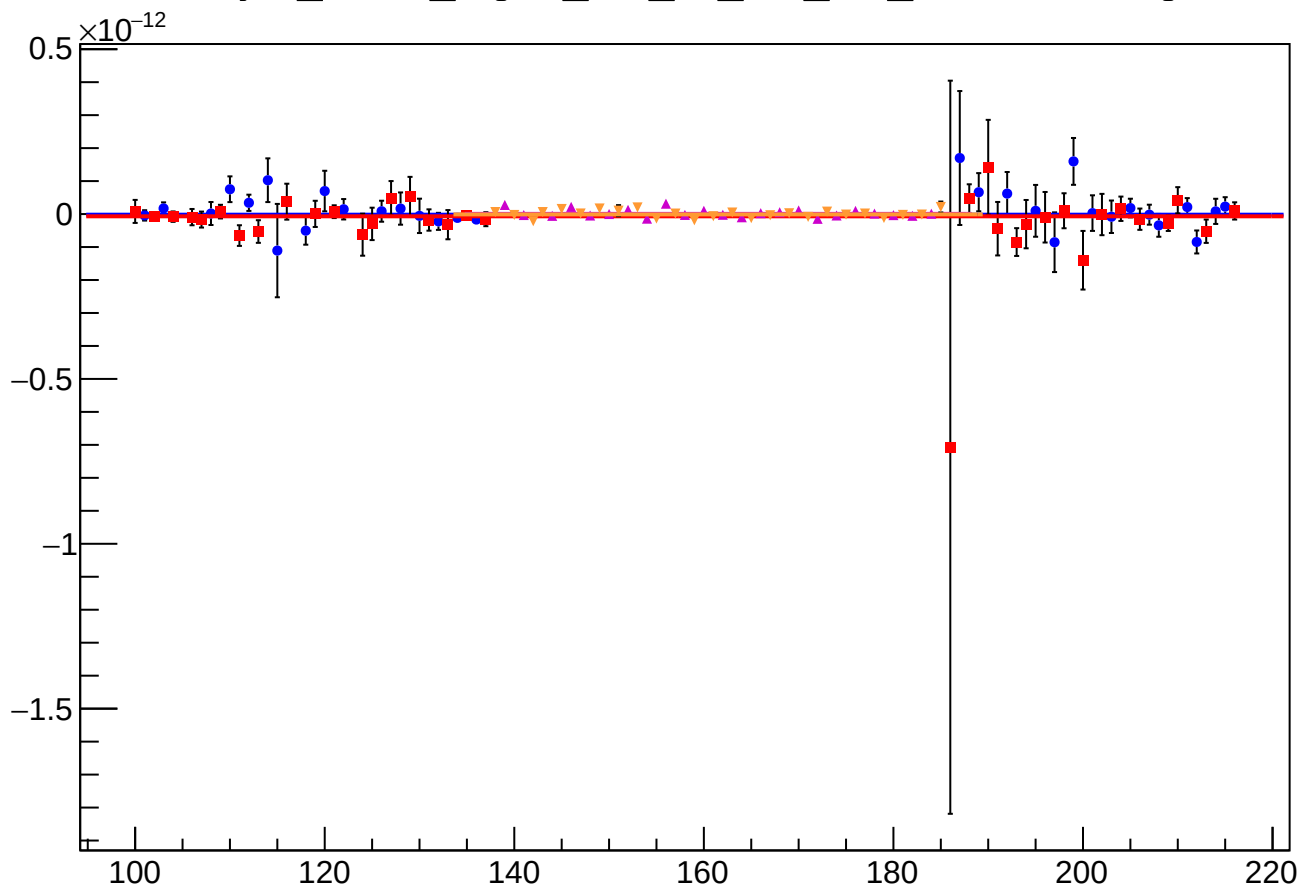
Left In: 25.972 $\pm$ 0.005  $\chi^2$ /NDF: 3118315.0/22

+ sign 25.852 $\pm$ 0.003  $\chi^2$ /NDF: 7122539.6/55

All: 25.931 $\pm$ 0.002  $\chi^2$ /NDF: 13502746.5/113

- sign 26.014 $\pm$ 0.003  $\chi^2$ /NDF: 6378921.9/57

# asym\_sam8\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.0/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.0/34

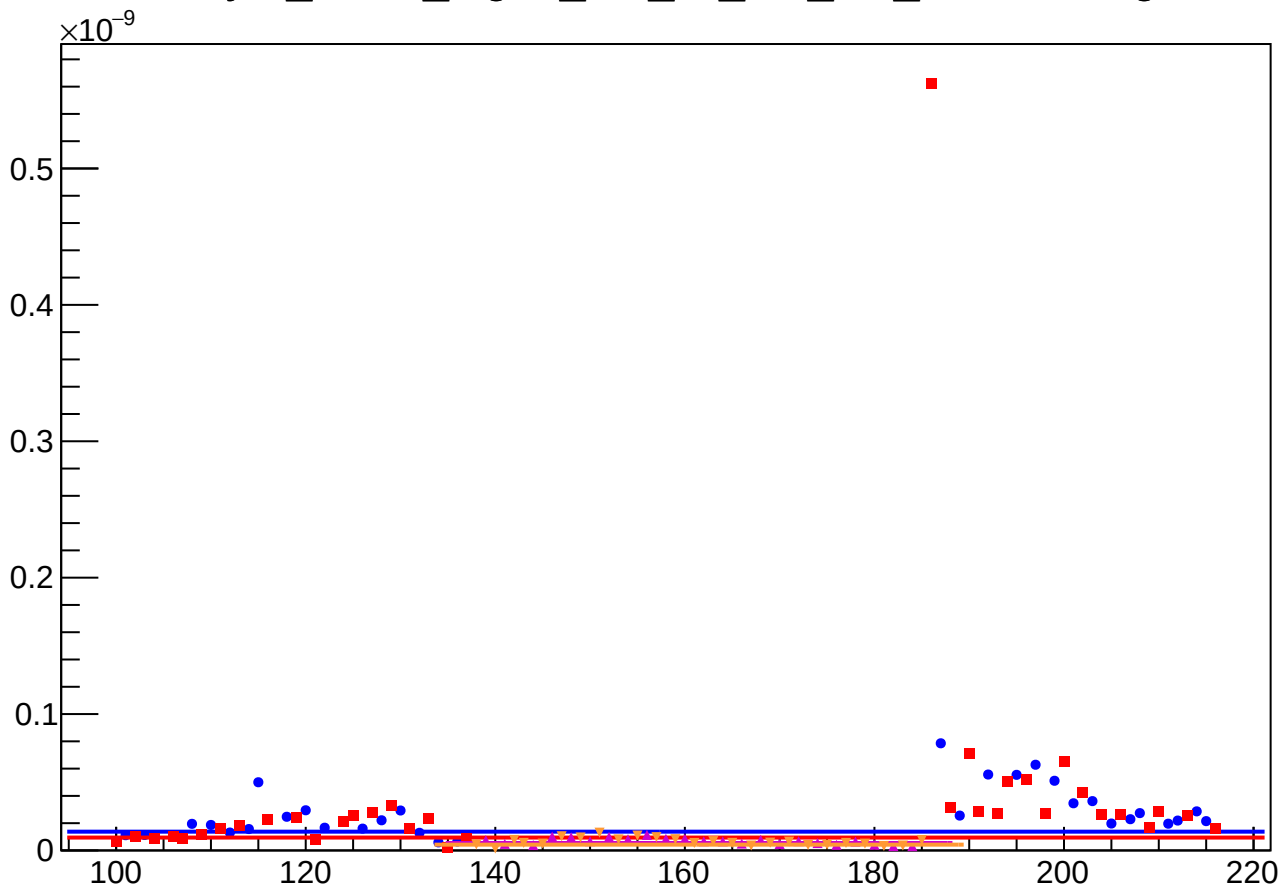
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 63.8/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 121.4/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.5/57

# asym\_sam8\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7491678.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5399109.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11563580.9/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2811616.7/22

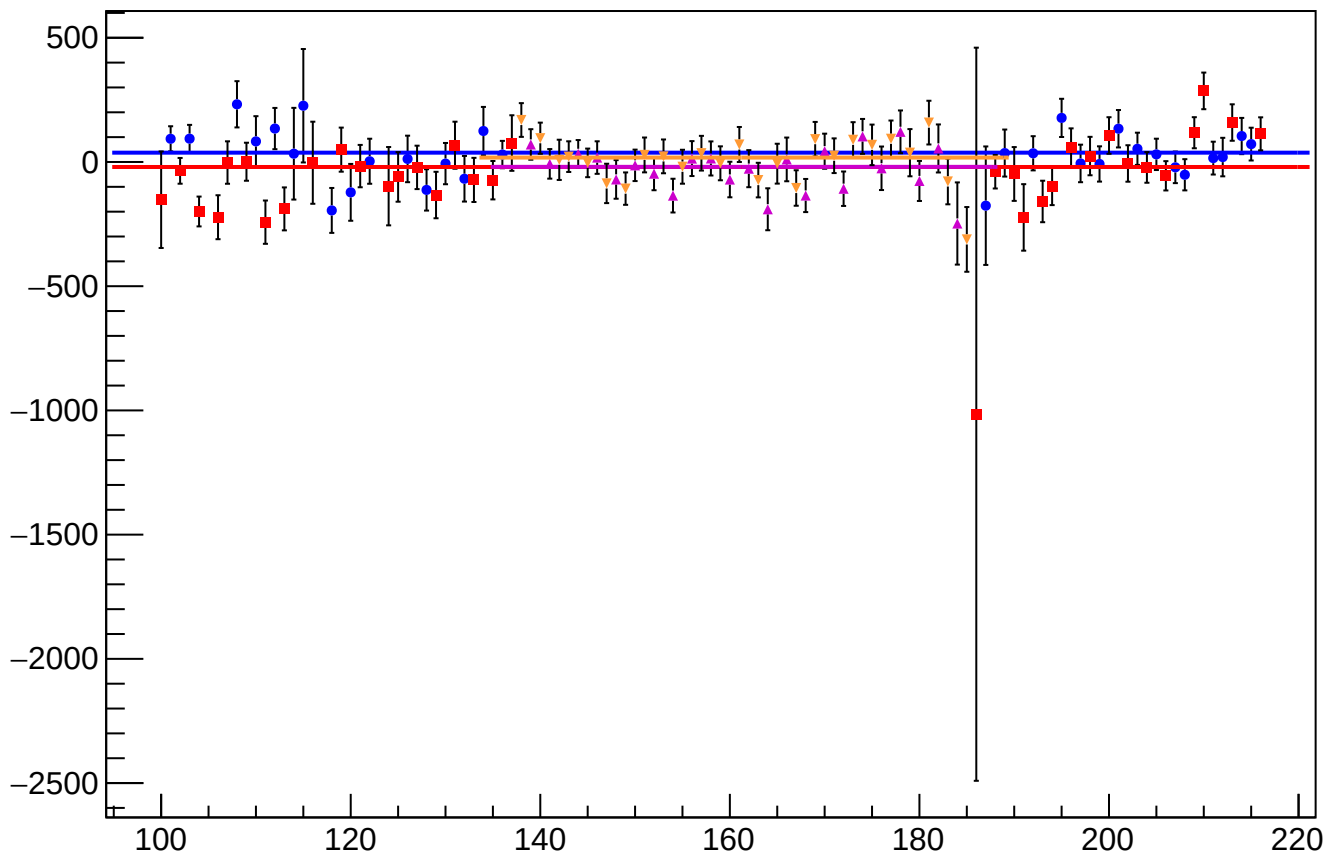
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19958625.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36566817.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16061088.4/57



# reg\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $37.509 \pm 13.786$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $17.800 \pm 14.495$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-20.155 \pm 13.693$   $\chi^2/\text{NDF}$ : 73.5/34

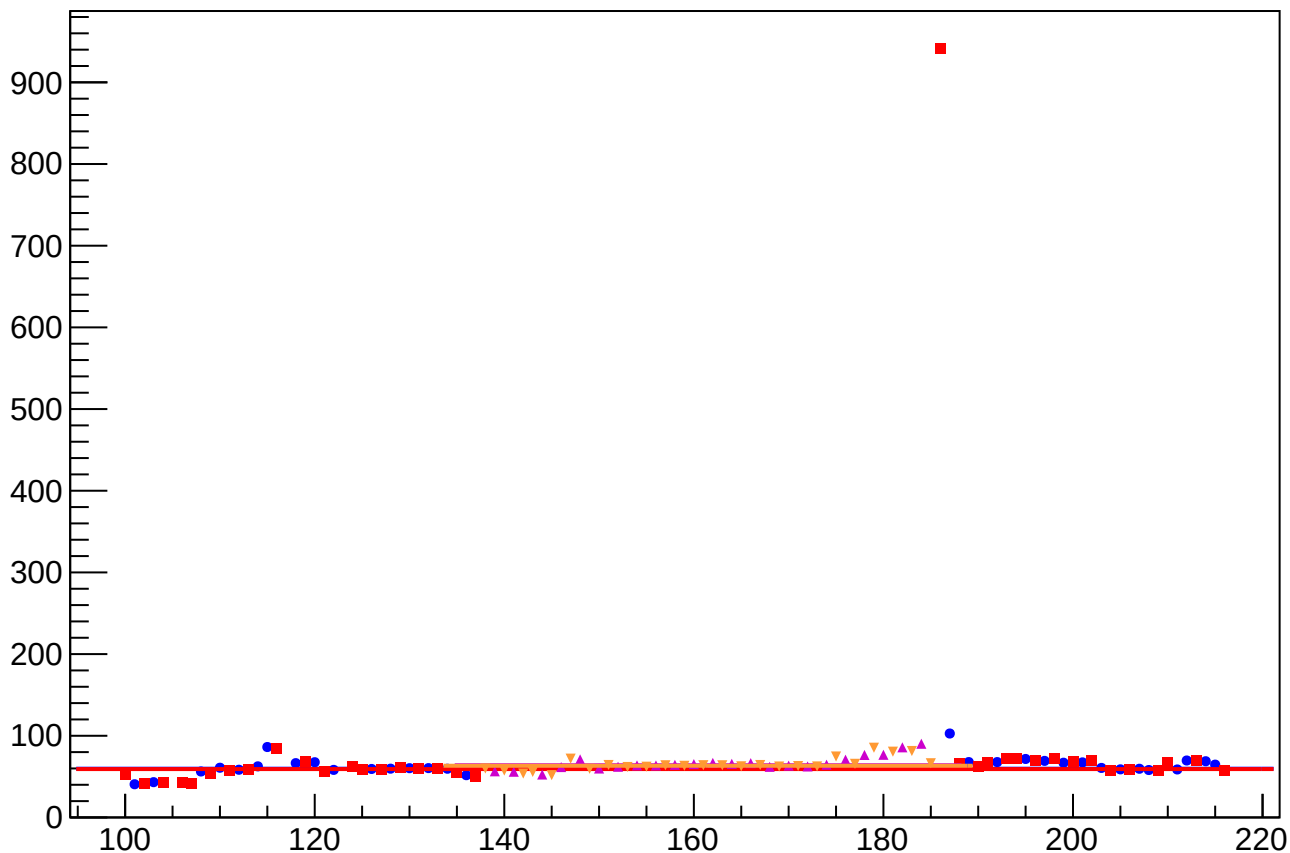
Left In:  $-19.642 \pm 15.040$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $28.148 \pm 9.989$   $\chi^2/\text{NDF}$ : 66.5/55

All:  $4.437 \pm 7.111$   $\chi^2/\text{NDF}$ : 177.7/113

- sign  $-19.923 \pm 10.125$   $\chi^2/\text{NDF}$ : 99.8/57

# reg\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 59.677 $\pm$ 0.010  $\chi^2$ /NDF: 862447.2/30

Left Out: 63.312 $\pm$ 0.010  $\chi^2$ /NDF: 497429.6/24

Right Out: 59.237 $\pm$ 0.010  $\chi^2$ /NDF: 1718147.6/34

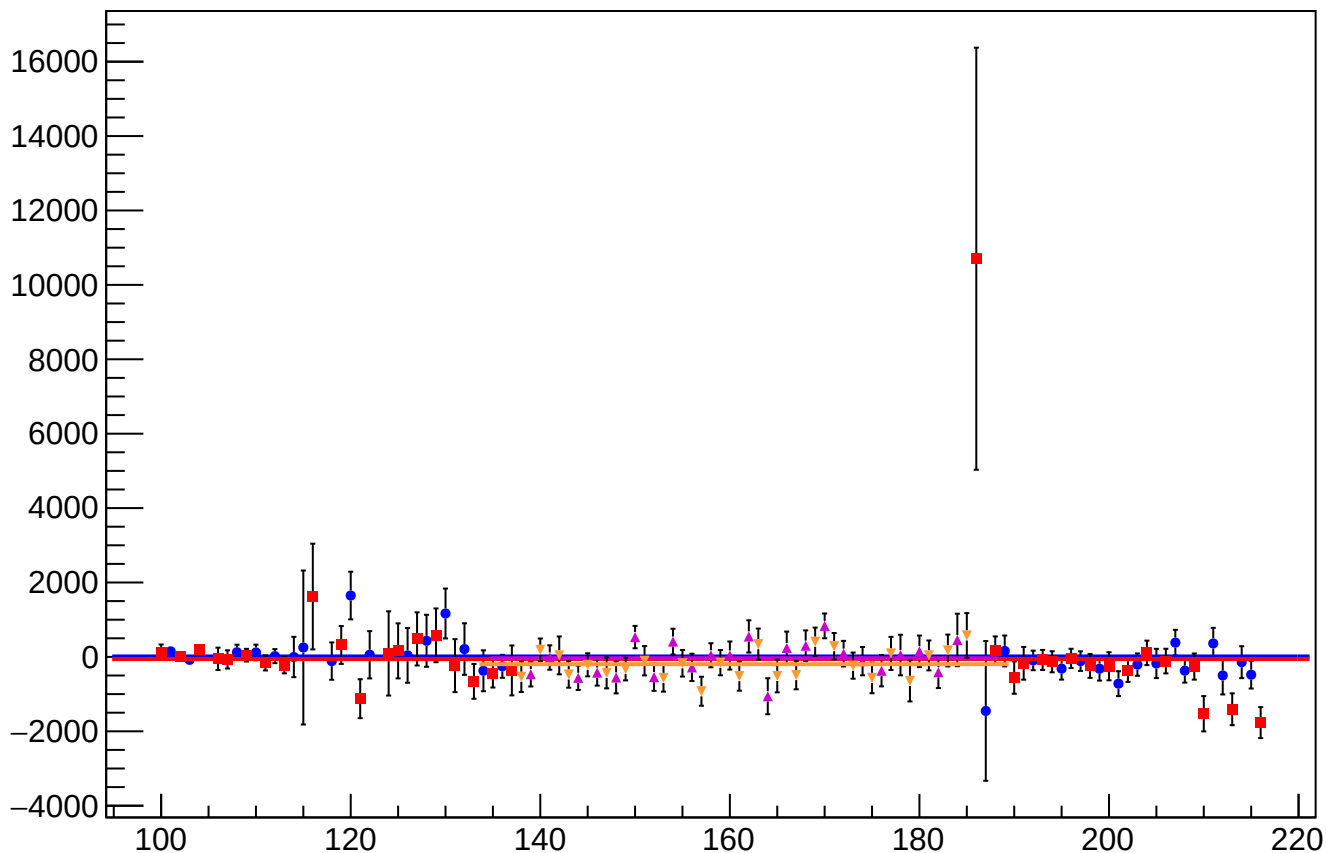
Left In: 63.918 $\pm$ 0.011  $\chi^2$ /NDF: 445309.5/22

+ sign 61.404 $\pm$ 0.007  $\chi^2$ /NDF: 1425922.8/55

All: 61.381 $\pm$ 0.005  $\chi^2$ /NDF: 3695334.7/113

- sign 61.359 $\pm$ 0.007  $\chi^2$ /NDF: 2269391.7/57

# asym\_sam\_15\_avg\_reg\_correction\_mean vs Slug



Right In: 11.843 $\pm$ 41.307  $\chi^2$ /NDF: 32.1/30

Left Out: -195.947 $\pm$ 77.088  $\chi^2$ /NDF:20.6/24

Right Out: -56.332 $\pm$ 43.671  $\chi^2$ /NDF: 65.1/34

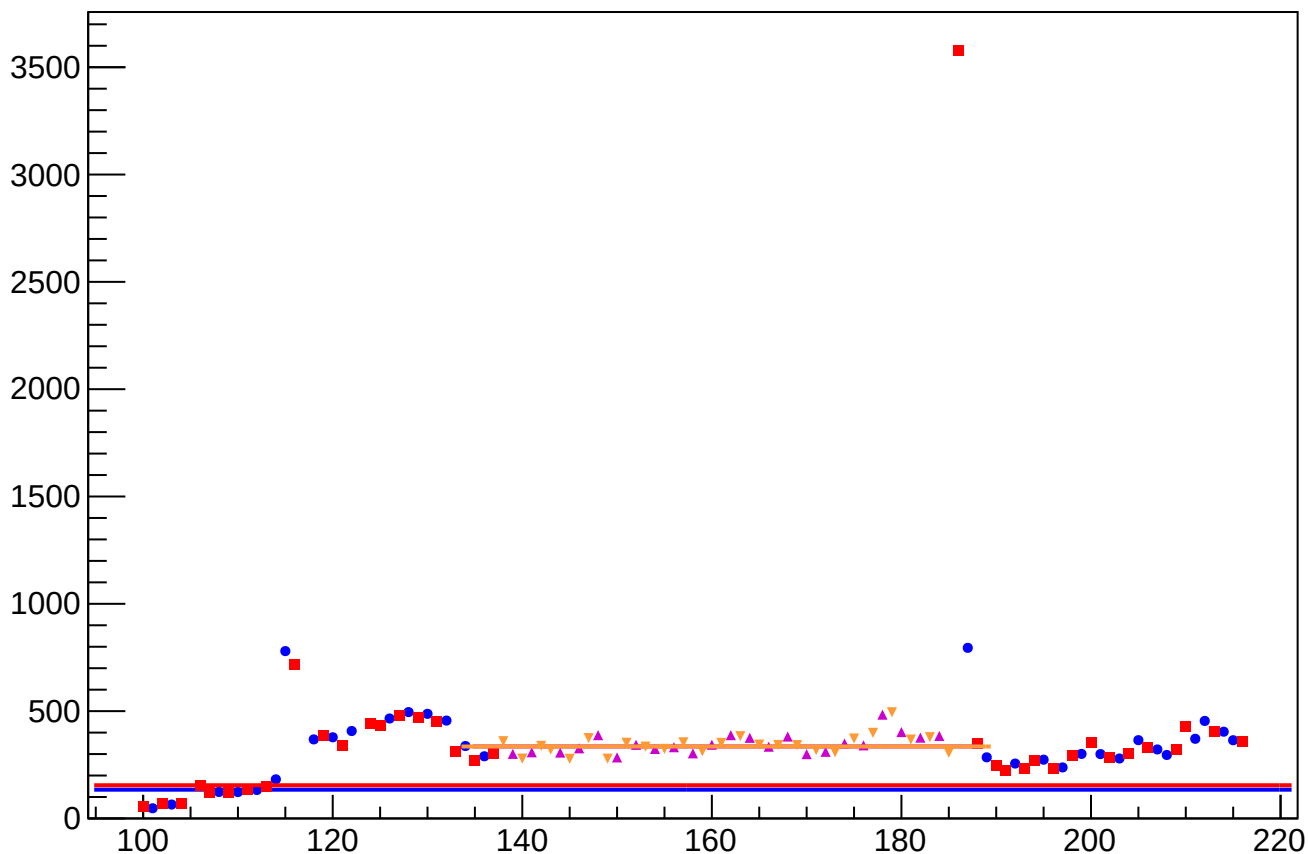
Left In: -36.417 $\pm$ 79.210  $\chi^2$ /NDF:31.1/22

+ sign -34.509 $\pm$ 36.409  $\chi^2$ /NDF: 58.4/55

All: -42.677 $\pm$ 26.370  $\chi^2$ /NDF: 154.7/113

- sign -51.689 $\pm$ 38.244  $\chi^2$ /NDF: 96.2/57

# asym\_sam\_15\_avg\_reg\_correction\_rms vs Slug



Right In: 134.050+/-0.029  $\chi^2/\text{NDF}$ : 16535737.0/30

Left Out: 335.271+/-0.055  $\chi^2/\text{NDF}$ : 563801.0/24

Right Out: 154.739+/-0.031  $\chi^2/\text{NDF}$ : 13705623.1/34

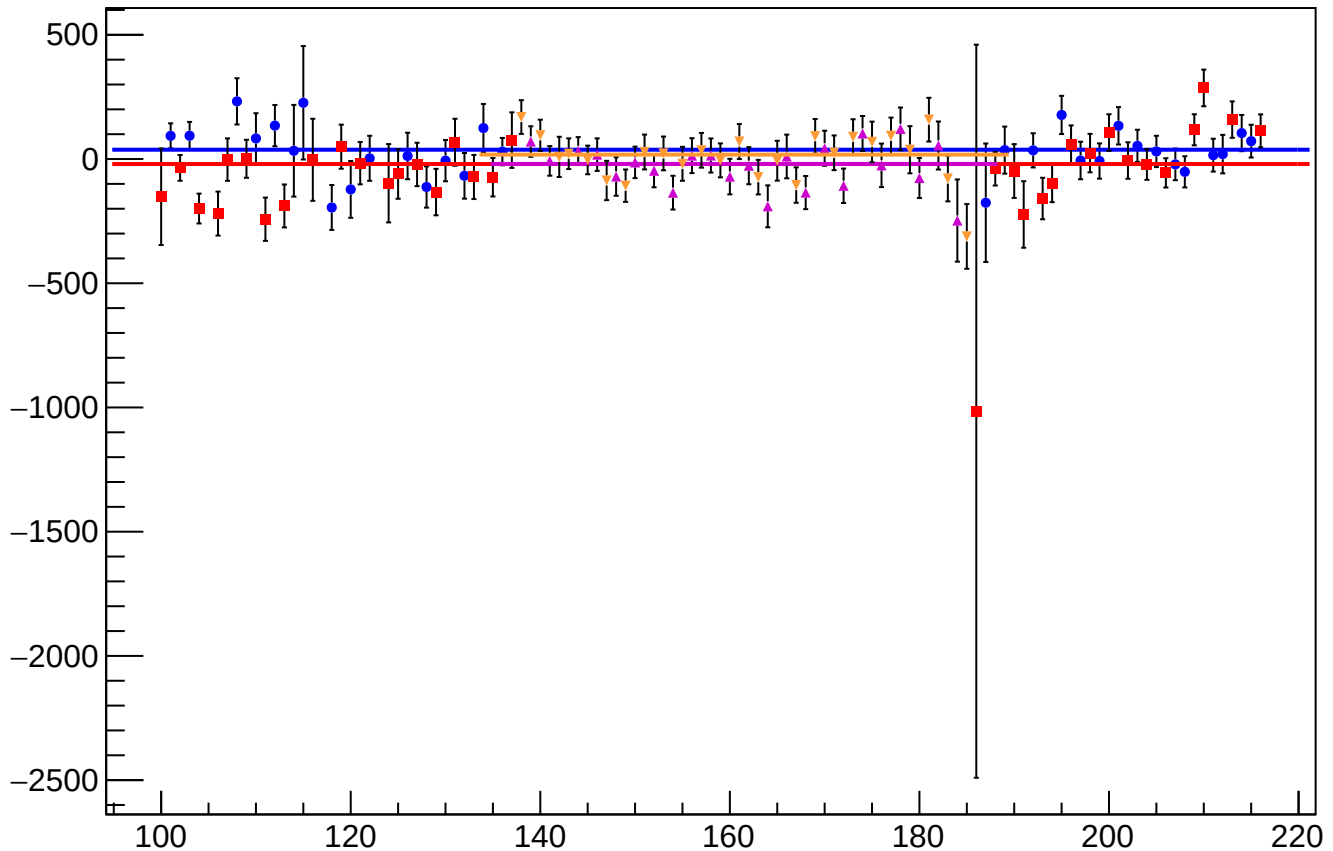
Left In: 335.526+/-0.056  $\chi^2/\text{NDF}$ : 495163.6/22

+ sign 178.937+/-0.026  $\chi^2/\text{NDF}$ : 27686747.2/55

All: 187.469+/-0.019  $\chi^2/\text{NDF}$ : 50108387.6/11

- sign 196.882+/-0.027  $\chi^2/\text{NDF}$ : 22190638.7/57

# cor\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $37.514 \pm 13.786$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $17.804 \pm 14.495$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-20.088 \pm 13.693$   $\chi^2/\text{NDF}$ : 73.4/34

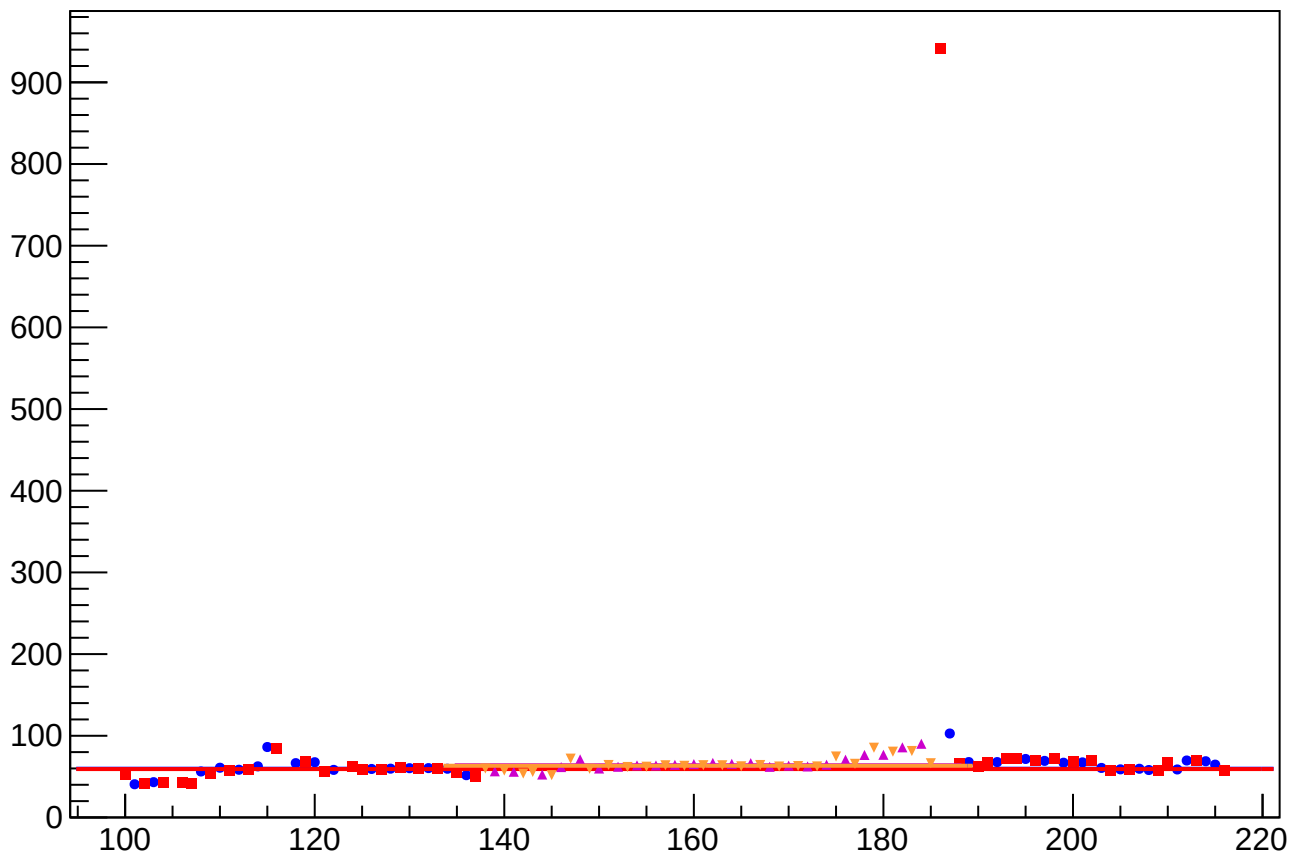
Left In:  $-19.642 \pm 15.040$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $28.153 \pm 9.989$   $\chi^2/\text{NDF}$ : 66.5/55

All:  $4.458 \pm 7.111$   $\chi^2/\text{NDF}$ : 177.6/113

- sign  $-19.886 \pm 10.125$   $\chi^2/\text{NDF}$ : 99.6/57

# cor\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 59.677 $\pm$ 0.010  $\chi^2$ /NDF: 862446.2/30

Left Out: 63.312 $\pm$ 0.010  $\chi^2$ /NDF: 497429.6/24

Right Out: 59.237 $\pm$ 0.010  $\chi^2$ /NDF: 1718571.5/34

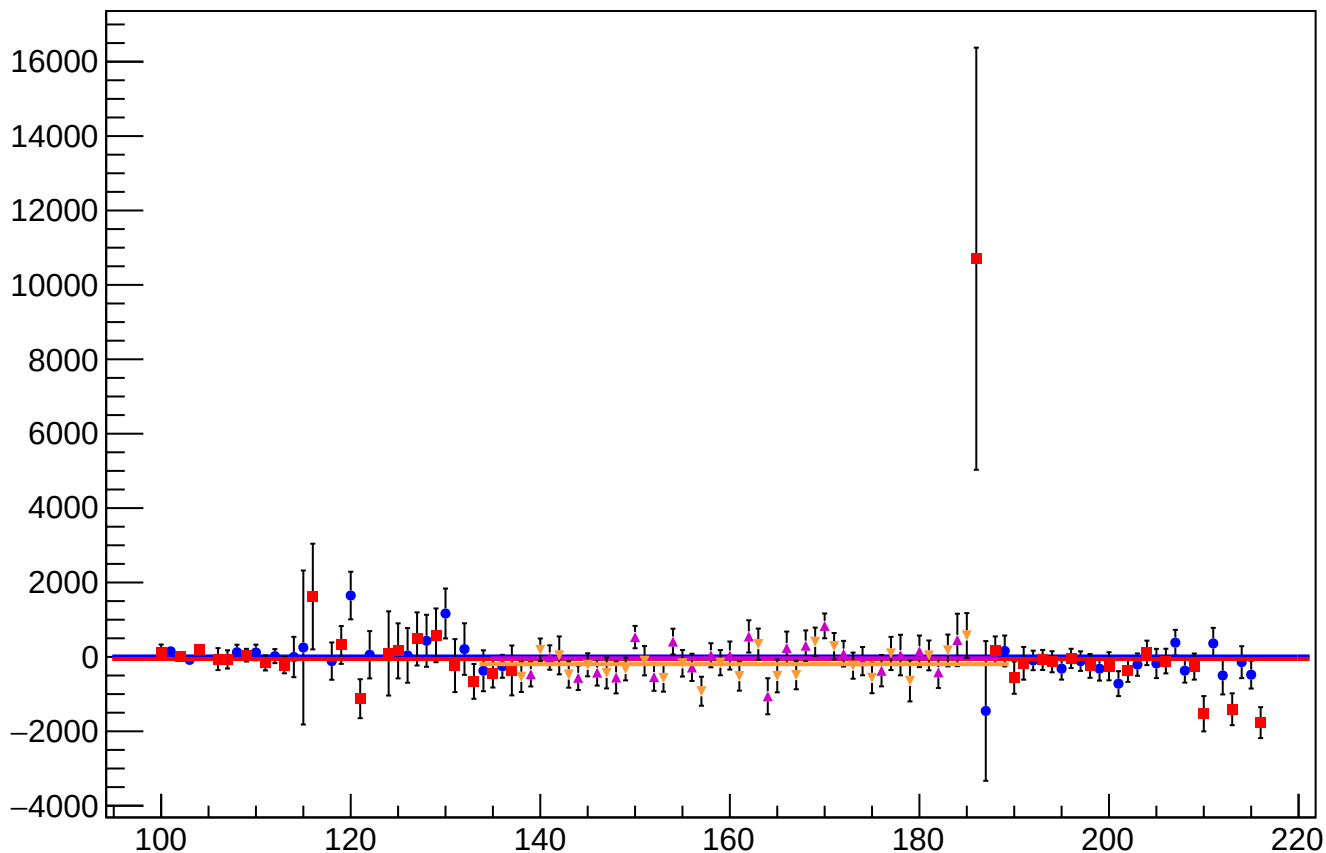
Left In: 63.918 $\pm$ 0.011  $\chi^2$ /NDF: 445309.5/22

+ sign 61.404 $\pm$ 0.007  $\chi^2$ /NDF: 1425921.7/55

All: 61.381 $\pm$ 0.005  $\chi^2$ /NDF: 3695783.7/113

- sign 61.358 $\pm$ 0.007  $\chi^2$ /NDF: 2269841.7/57

asym\_sam\_15\_avg\_cor\_correction\_mean vs Slug



Right In:  $11.848 \pm 41.306$   $\chi^2/\text{NDF}$ : 32.1/30

Left Out:  $-195.942 \pm 77.088$   $\chi^2/\text{NDF}$ : 20.6/24

Right Out:  $-56.559 \pm 43.643$   $\chi^2/\text{NDF}$ : 65.0/34

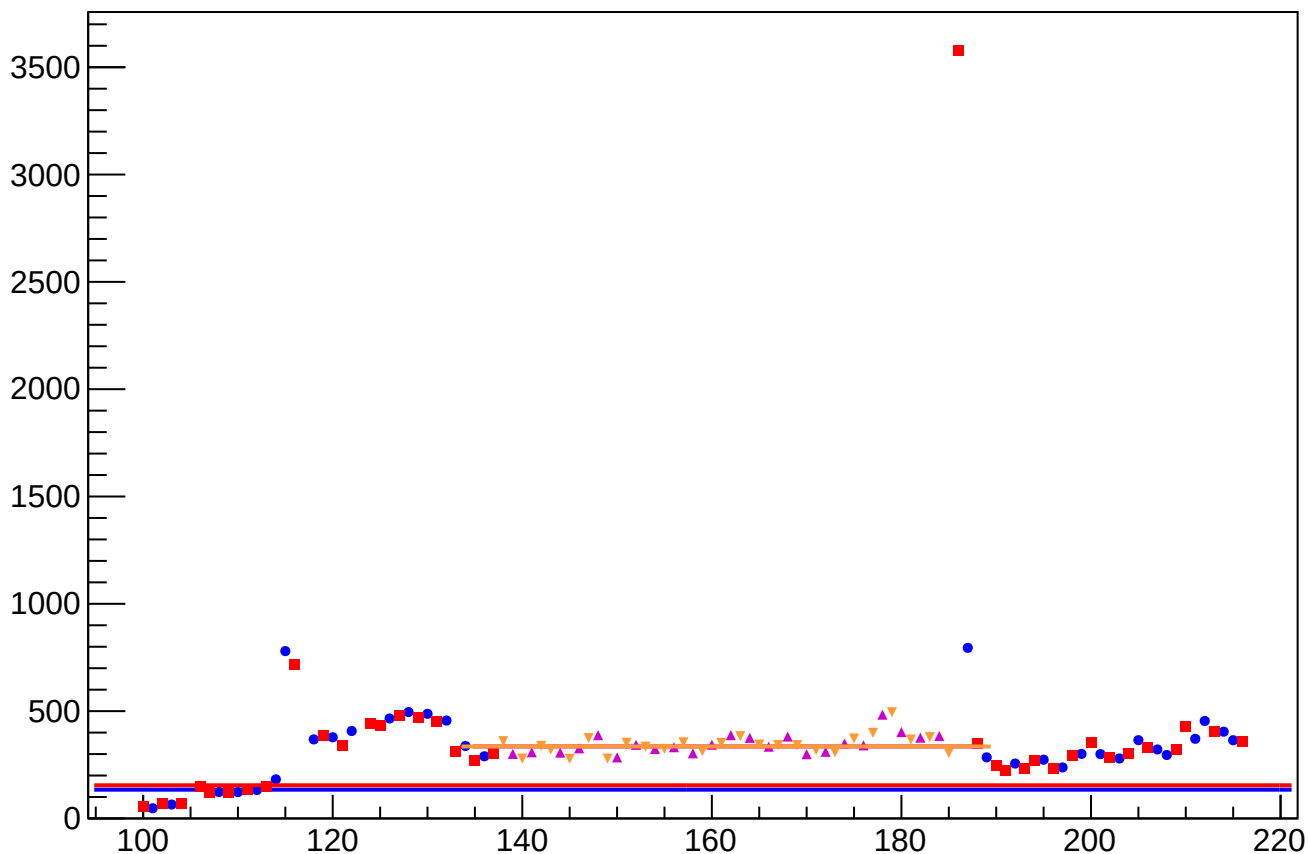
Left In:  $-36.414 \pm 79.210$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-34.503 \pm 36.409$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-42.763 \pm 26.363$   $\chi^2/\text{NDF}$ : 154.7/113

- sign  $-51.867 \pm 38.225$   $\chi^2/\text{NDF}$ : 96.2/57

# asym\_sam\_15\_avg\_cor\_correction\_rms vs Slug



Right In: 134.047+/-0.029  $\chi^2/\text{NDF}$ : 16536118.0/30

Left Out: 335.271+/-0.055  $\chi^2/\text{NDF}$ : 563797.0/24

Right Out: 154.545+/-0.031  $\chi^2/\text{NDF}$ : 13713628.1/34

Left In: 335.526+/-0.056  $\chi^2/\text{NDF}$ : 495170.0/22

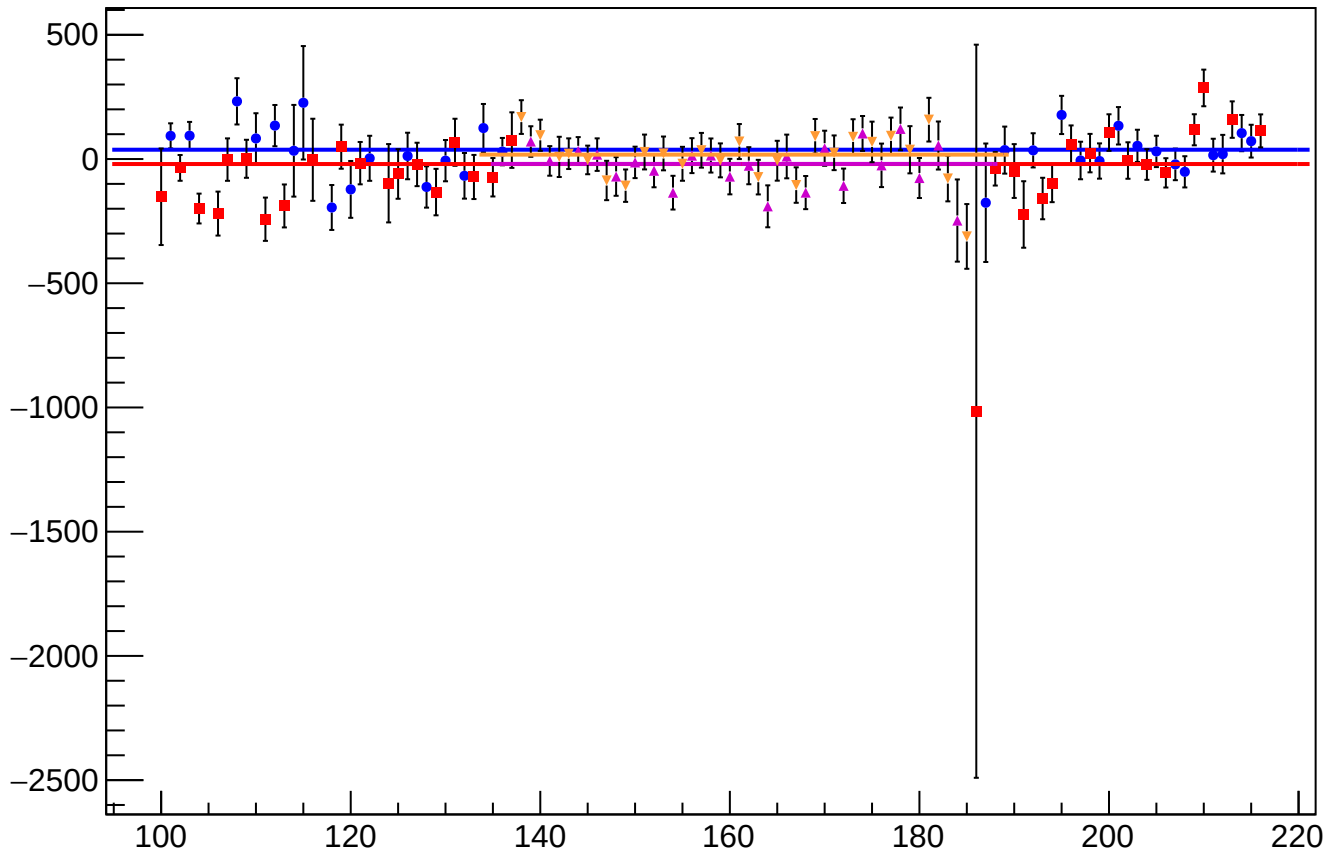
+ sign 178.933+/-0.026  $\chi^2/\text{NDF}$ : 27687591.3/55

All: 187.380+/-0.019  $\chi^2/\text{NDF}$ : 50132145.5/11

- sign 196.692+/-0.027  $\chi^2/\text{NDF}$ : 22218208.4/57



# eigen\_cor\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $37.514 \pm 13.786$   $\chi^2/\text{NDF}$ : 34.0/30

Left Out:  $17.804 \pm 14.495$   $\chi^2/\text{NDF}$ : 31.6/24

Right Out:  $-20.088 \pm 13.693$   $\chi^2/\text{NDF}$ : 73.4/34

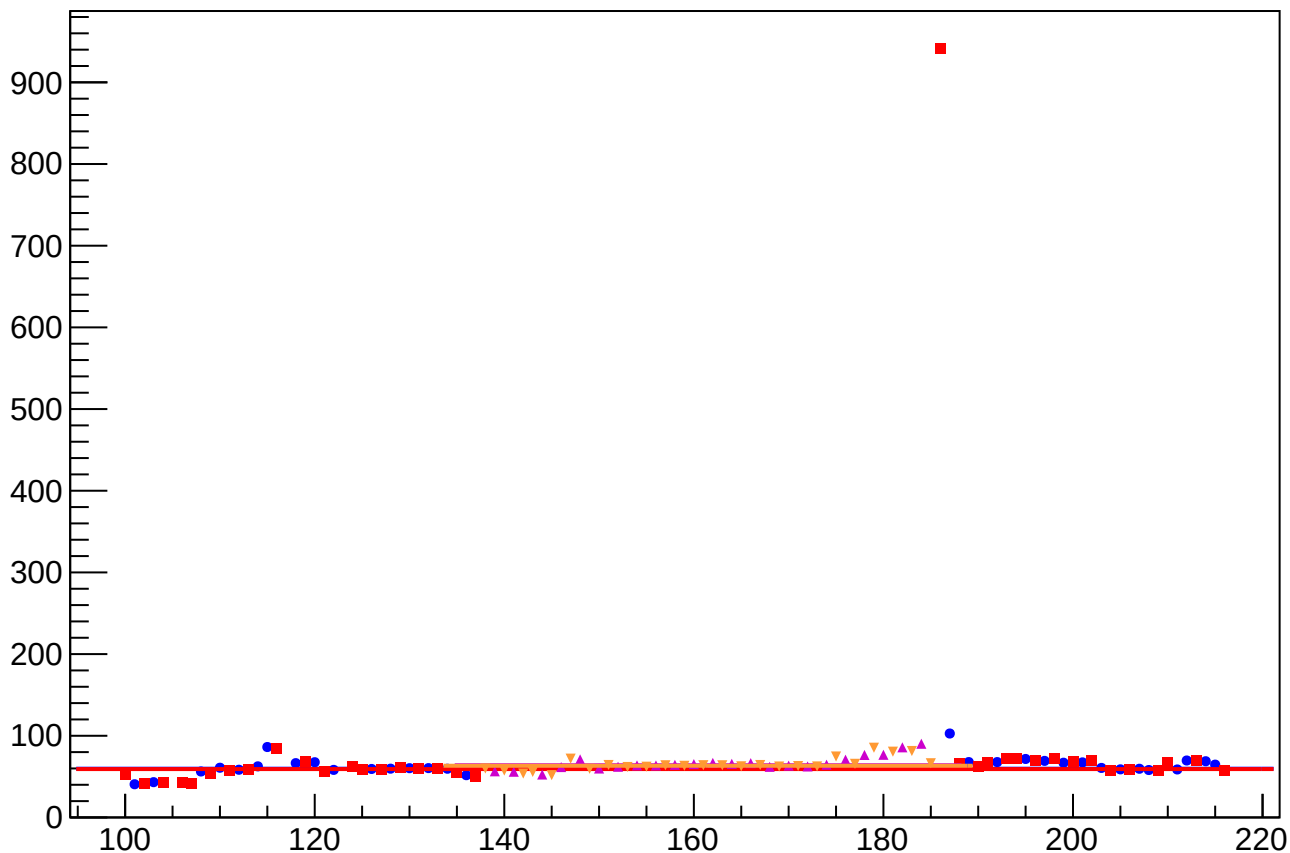
Left In:  $-19.642 \pm 15.040$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $28.153 \pm 9.989$   $\chi^2/\text{NDF}$ : 66.5/55

All:  $4.458 \pm 7.111$   $\chi^2/\text{NDF}$ : 177.6/113

- sign  $-19.886 \pm 10.125$   $\chi^2/\text{NDF}$ : 99.6/57

# eigen\_cor\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 59.677+/-0.010     $\chi^2/\text{NDF}$ : 862446.2/30

Left Out: 63.312+/-0.010     $\chi^2/\text{NDF}$ : 497429.6/24

Right Out: 59.237+/-0.010     $\chi^2/\text{NDF}$ : 1718571.5/34

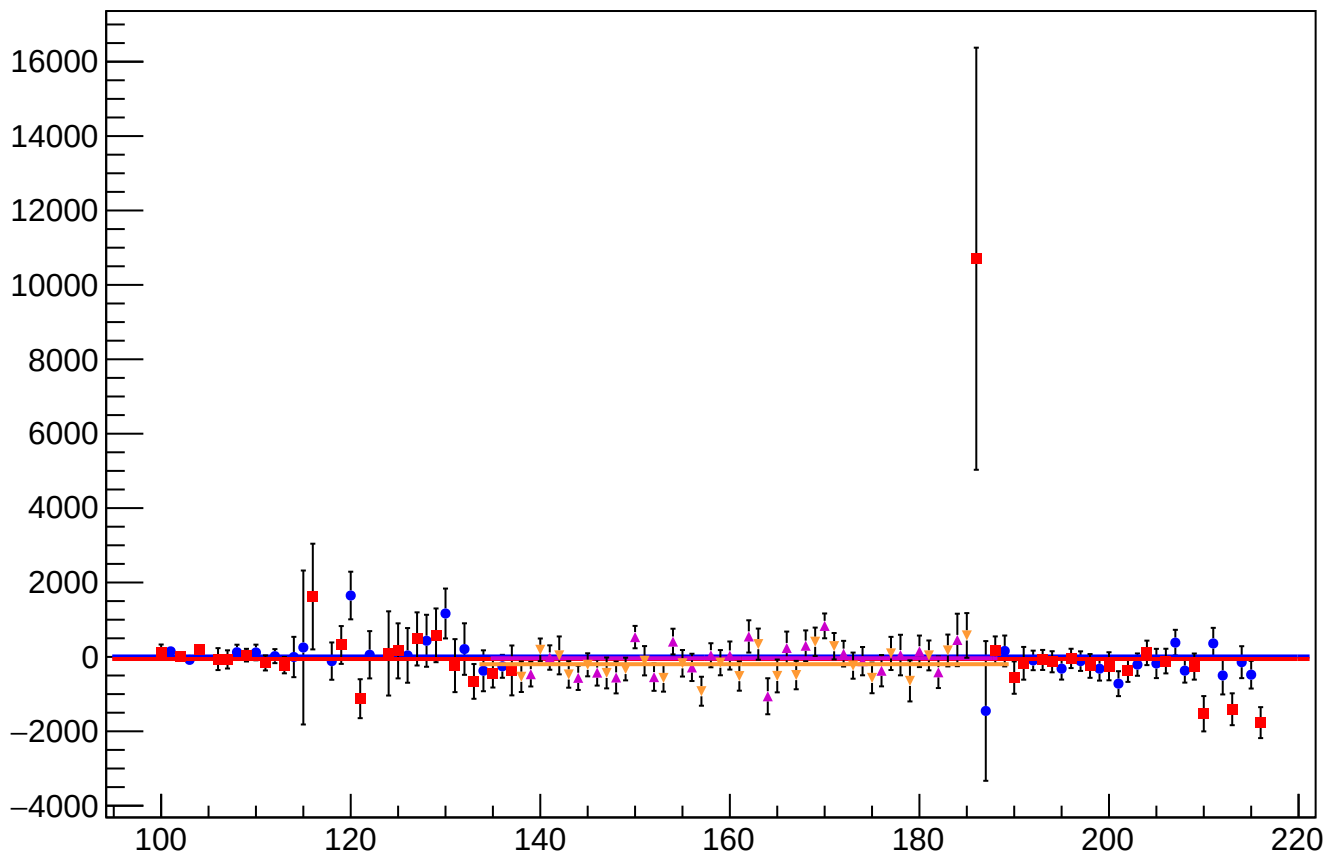
Left In: 63.918+/-0.011     $\chi^2/\text{NDF}$ : 445309.5/22

+ sign 61.404+/-0.007     $\chi^2/\text{NDF}$ : 1425921.7/55

All: 61.381+/-0.005     $\chi^2/\text{NDF}$ : 3695783.7/113

- sign 61.358+/-0.007     $\chi^2/\text{NDF}$ : 2269841.7/57

asym\_sam\_15\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $11.848 \pm 41.306$   $\chi^2/\text{NDF}$ : 32.1/30

Left Out:  $-195.942 \pm 77.088$   $\chi^2/\text{NDF}$ : 20.6/24

Right Out:  $-56.559 \pm 43.643$   $\chi^2/\text{NDF}$ : 65.0/34

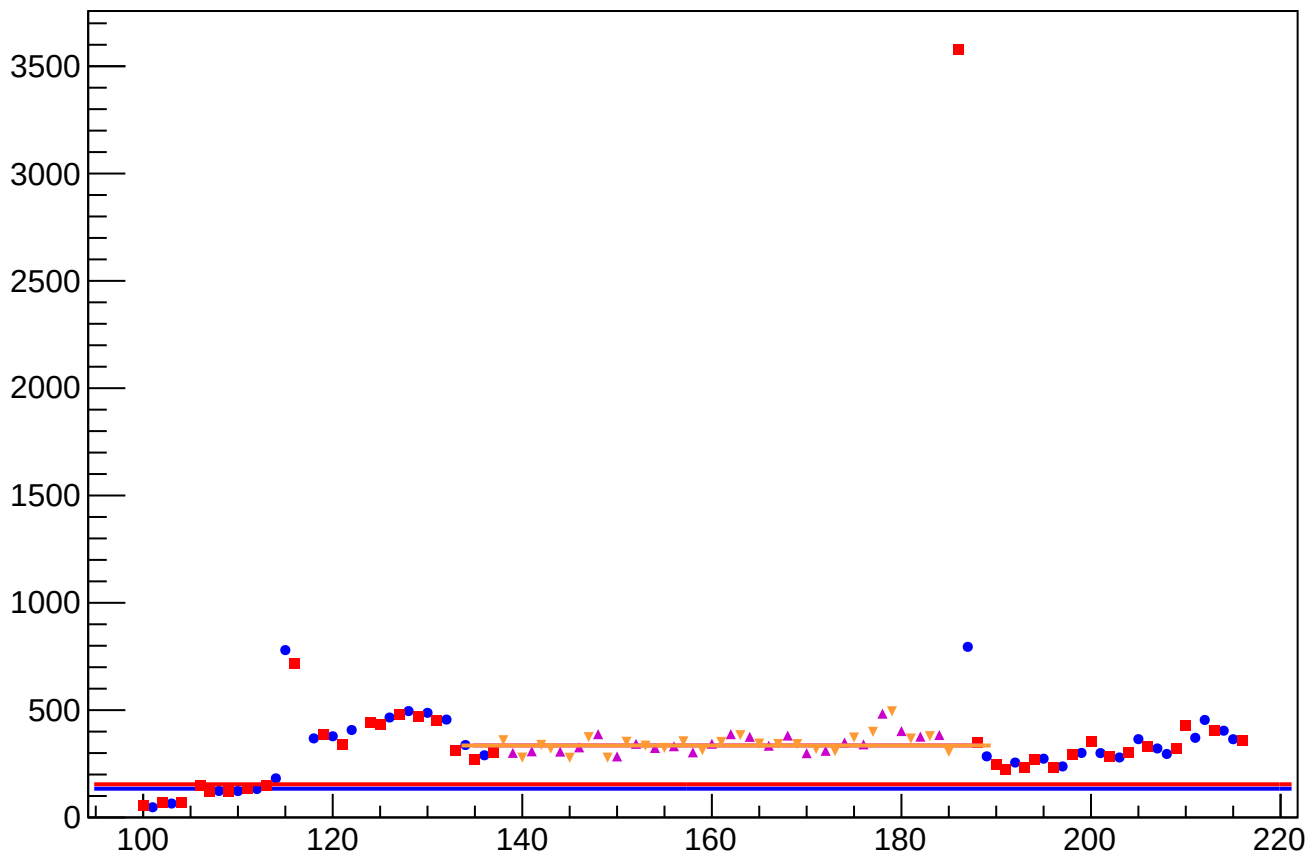
Left In:  $-36.414 \pm 79.210$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-34.503 \pm 36.409$   $\chi^2/\text{NDF}$ : 58.4/55

All:  $-42.763 \pm 26.363$   $\chi^2/\text{NDF}$ : 154.7/113

- sign  $-51.867 \pm 38.225$   $\chi^2/\text{NDF}$ : 96.2/57

asym\_sam\_15\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 134.047 $\pm$ 0.029  $\chi^2$ /NDF: 16536118.0/30

Left Out: 335.271 $\pm$ 0.055  $\chi^2$ /NDF: 563797.0/24

Right Out: 154.545 $\pm$ 0.031  $\chi^2$ /NDF: 13713628.1/34

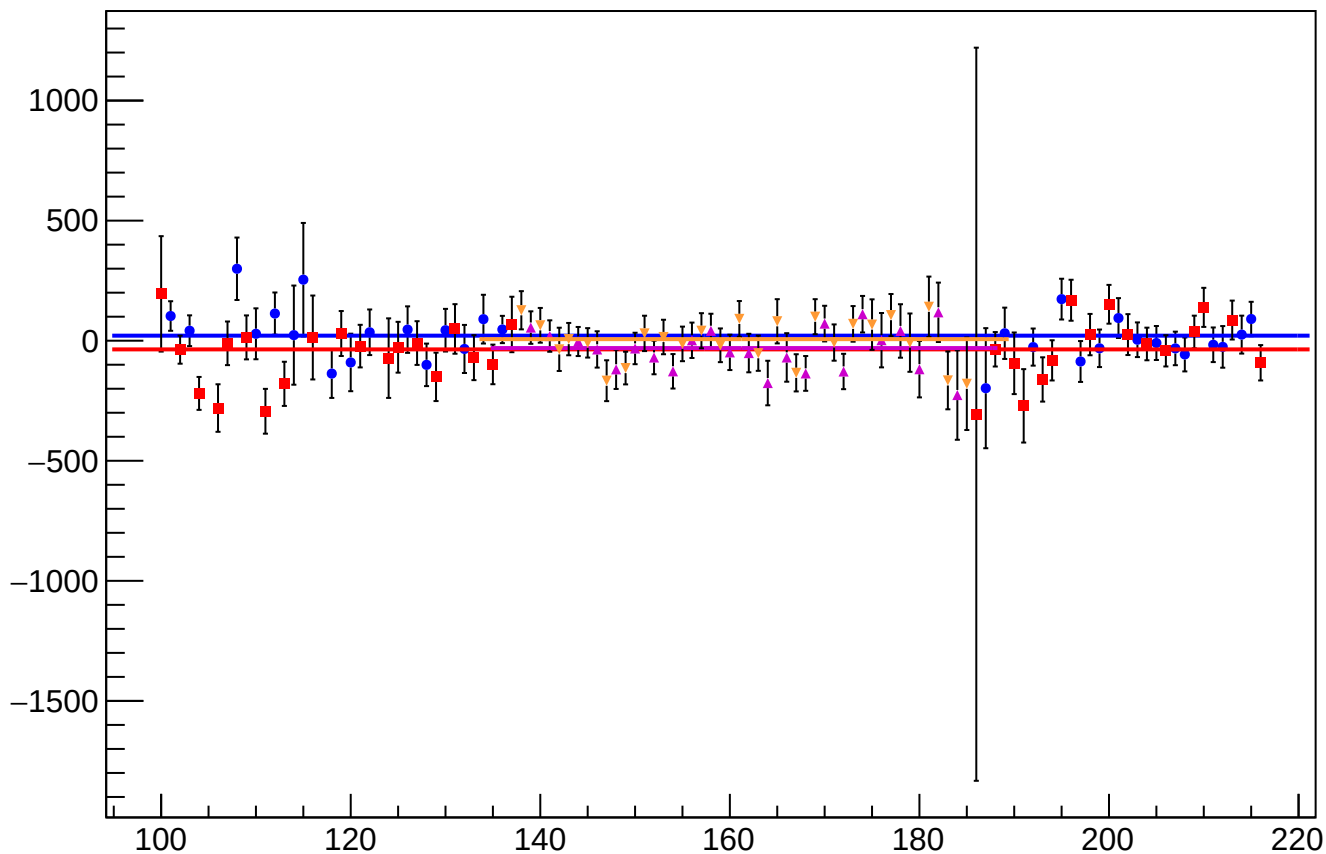
Left In: 335.526 $\pm$ 0.056  $\chi^2$ /NDF: 495170.0/22

+ sign 178.933 $\pm$ 0.026  $\chi^2$ /NDF: 27687591.3/55

All: 187.380 $\pm$ 0.019  $\chi^2$ /NDF: 50132145.5/11

- sign 196.692 $\pm$ 0.027  $\chi^2$ /NDF: 22218208.4/57

dit\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $21.013 \pm 15.237$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $6.469 \pm 15.977$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-36.168 \pm 15.029$   $\chi^2/\text{NDF}$ : 54.5/34

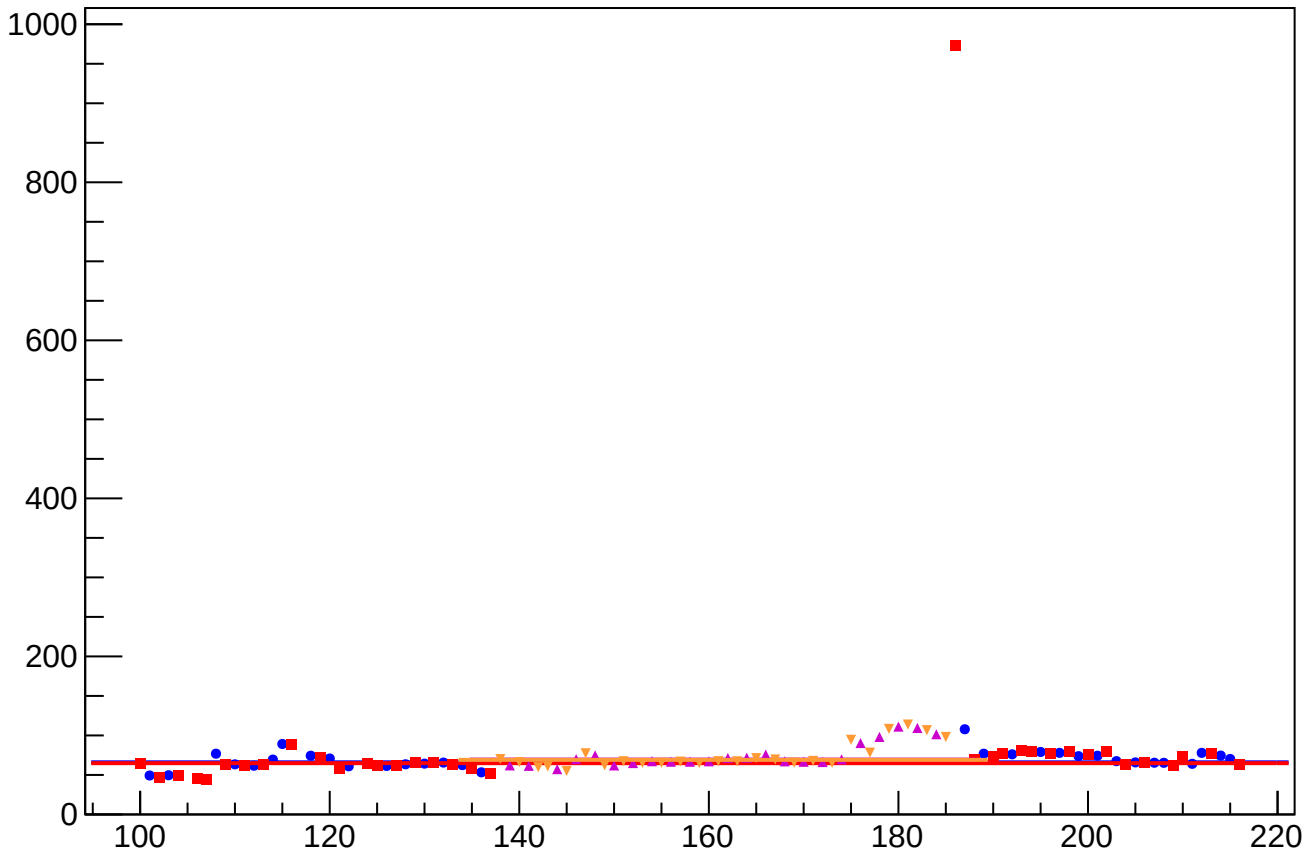
Left In:  $-30.662 \pm 16.503$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $14.086 \pm 11.026$   $\chi^2/\text{NDF}$ : 51.1/55

All:  $-9.609 \pm 7.827$   $\chi^2/\text{NDF}$ : 137.4/113

- sign  $-33.672 \pm 11.112$   $\chi^2/\text{NDF}$ : 77.0/57

# dit\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 65.969 $\pm$ 0.011  $\chi^2$ /NDF: 757662.2/30

Left Out: 69.078 $\pm$ 0.011  $\chi^2$ /NDF: 1074001.6/24

Right Out: 64.906 $\pm$ 0.011  $\chi^2$ /NDF: 1710325.3/34

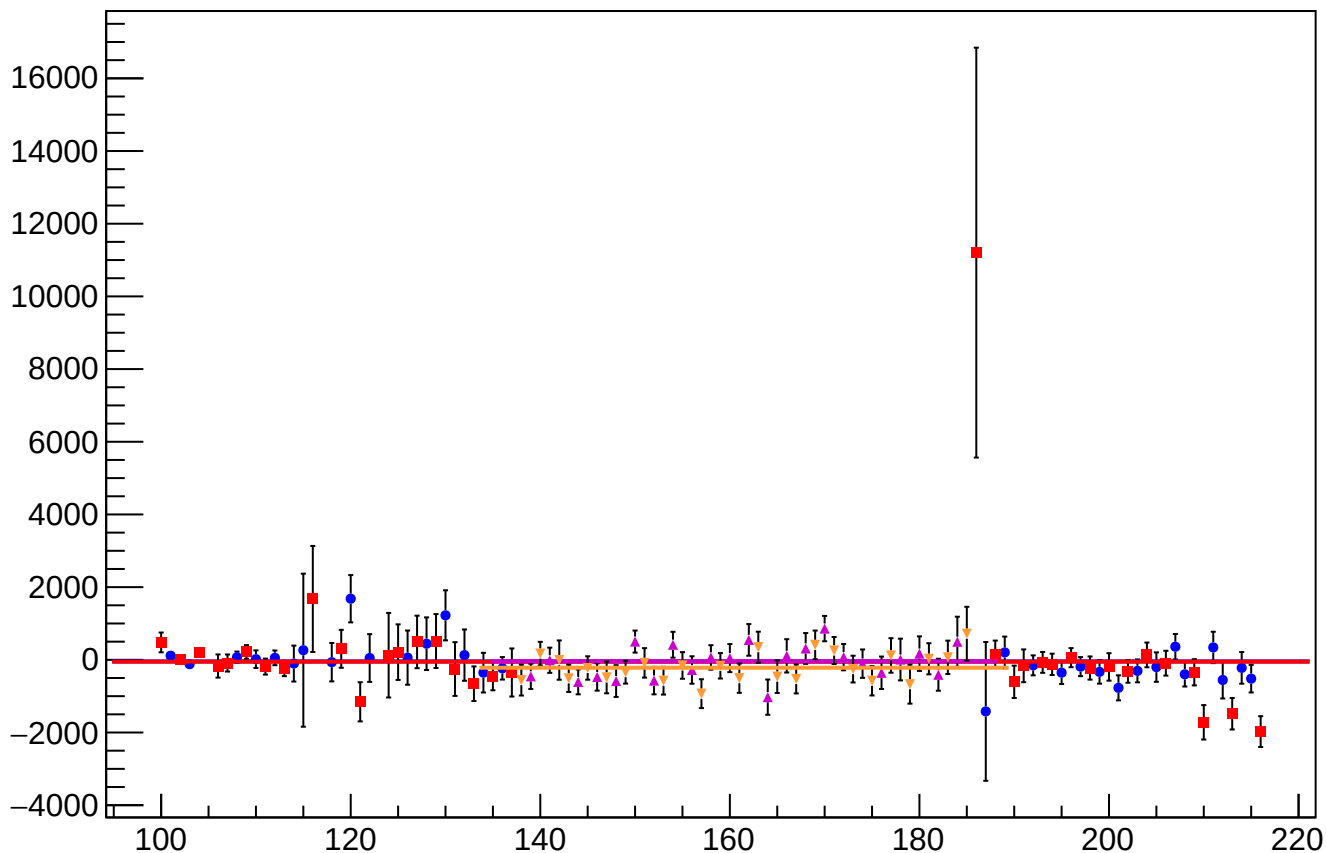
Left In: 69.436 $\pm$ 0.012  $\chi^2$ /NDF: 924607.6/22

+ sign 67.450 $\pm$ 0.008  $\chi^2$ /NDF: 1871331.5/55

All: 67.207 $\pm$ 0.006  $\chi^2$ /NDF: 4590606.5/113

- sign 66.960 $\pm$ 0.008  $\chi^2$ /NDF: 2717313.6/57

# asym\_sam\_15\_avg\_dit\_correction\_mean vs Slug



Right In:  $-42.989 \pm 46.402$   $\chi^2/\text{NDF}$ : 30.4/30

Left Out:  $-217.349 \pm 80.133$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $-50.917 \pm 45.831$   $\chi^2/\text{NDF}$ : 76.9/34

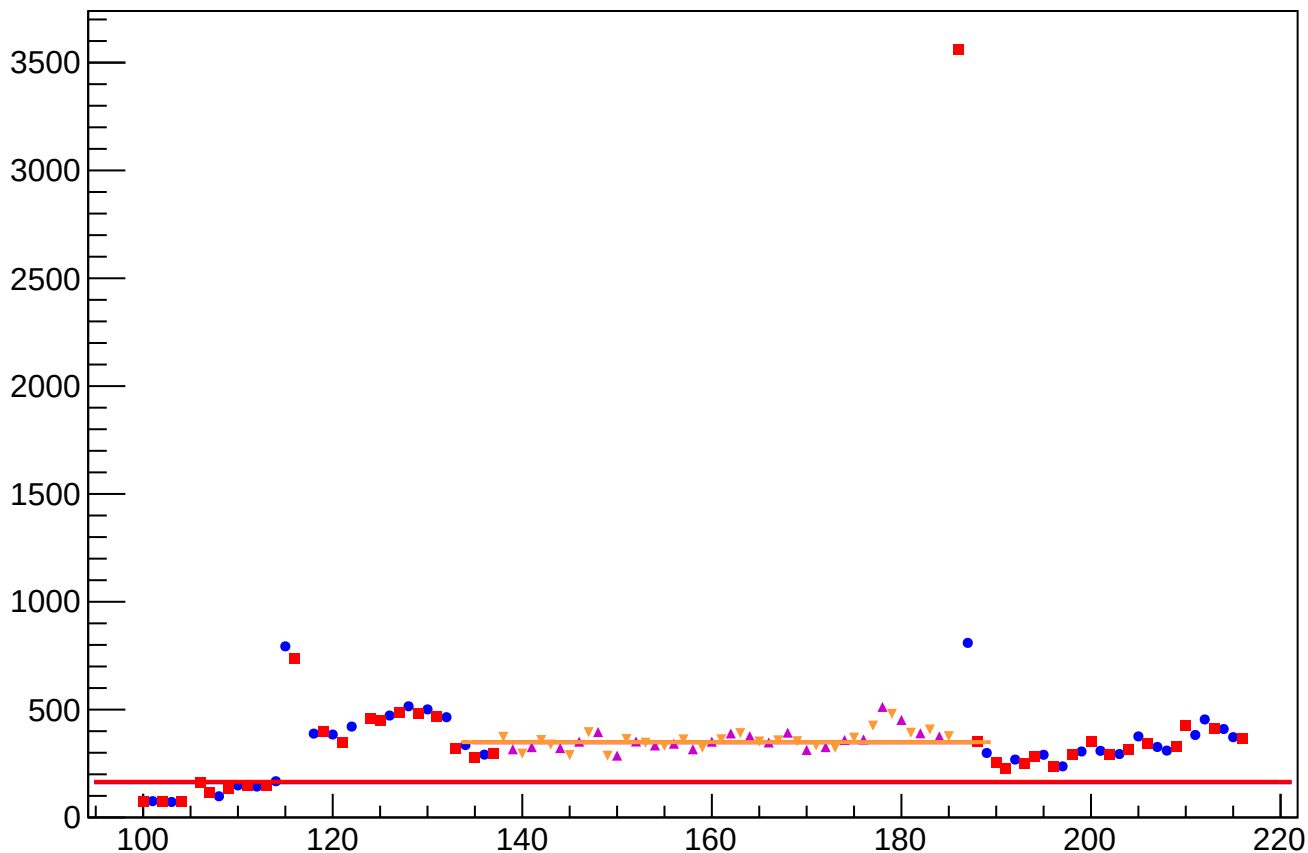
Left In:  $-41.512 \pm 82.256$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-86.772 \pm 40.155$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-67.674 \pm 28.352$   $\chi^2/\text{NDF}$ : 160.6/113

- sign  $-48.689 \pm 40.036$   $\chi^2/\text{NDF}$ : 106.8/57

# asym\_sam\_15\_avg\_dit\_correction\_rms vs Slug



Right In: 163.088 $\pm$ 0.033  $\chi^2$ /NDF: 13461798.7/30

Left Out: 349.177 $\pm$ 0.057  $\chi^2$ /NDF: 524075.5/24

Right Out: 165.281 $\pm$ 0.032  $\chi^2$ /NDF: 12966255.5/34

Left In: 348.560 $\pm$ 0.058  $\chi^2$ /NDF: 525743.6/22

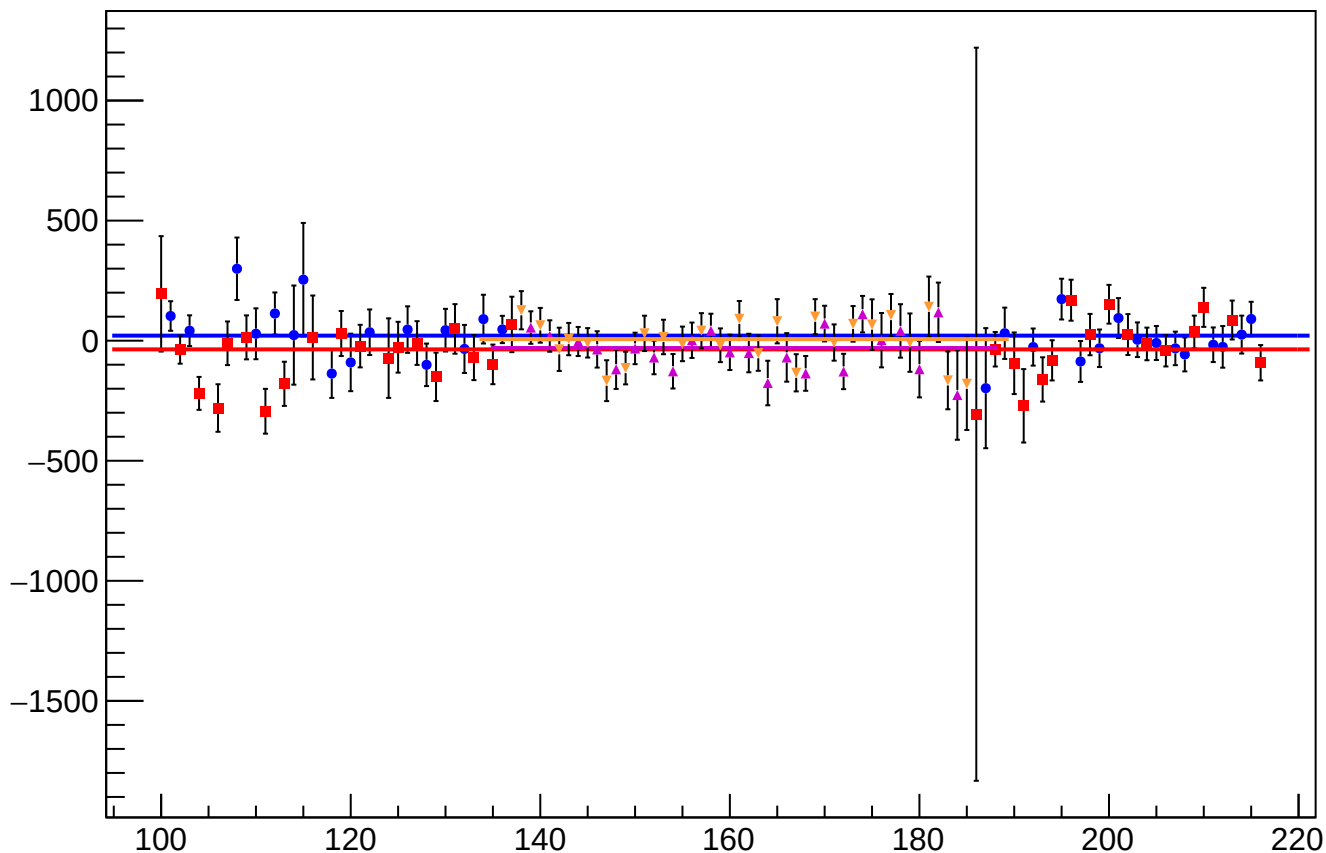
+ sign 209.816 $\pm$ 0.028  $\chi^2$ /NDF: 22063151.4/55

All: 209.256 $\pm$ 0.020  $\chi^2$ /NDF: 43132974.1/11

- sign 208.700 $\pm$ 0.028  $\chi^2$ /NDF: 21069047.3/57



eigen\_dit\_asym\_sam\_15\_avg\_mean vs Slug



Right In:  $21.013 \pm 15.237$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $6.469 \pm 15.977$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-36.167 \pm 15.029$   $\chi^2/\text{NDF}$ : 54.5/34

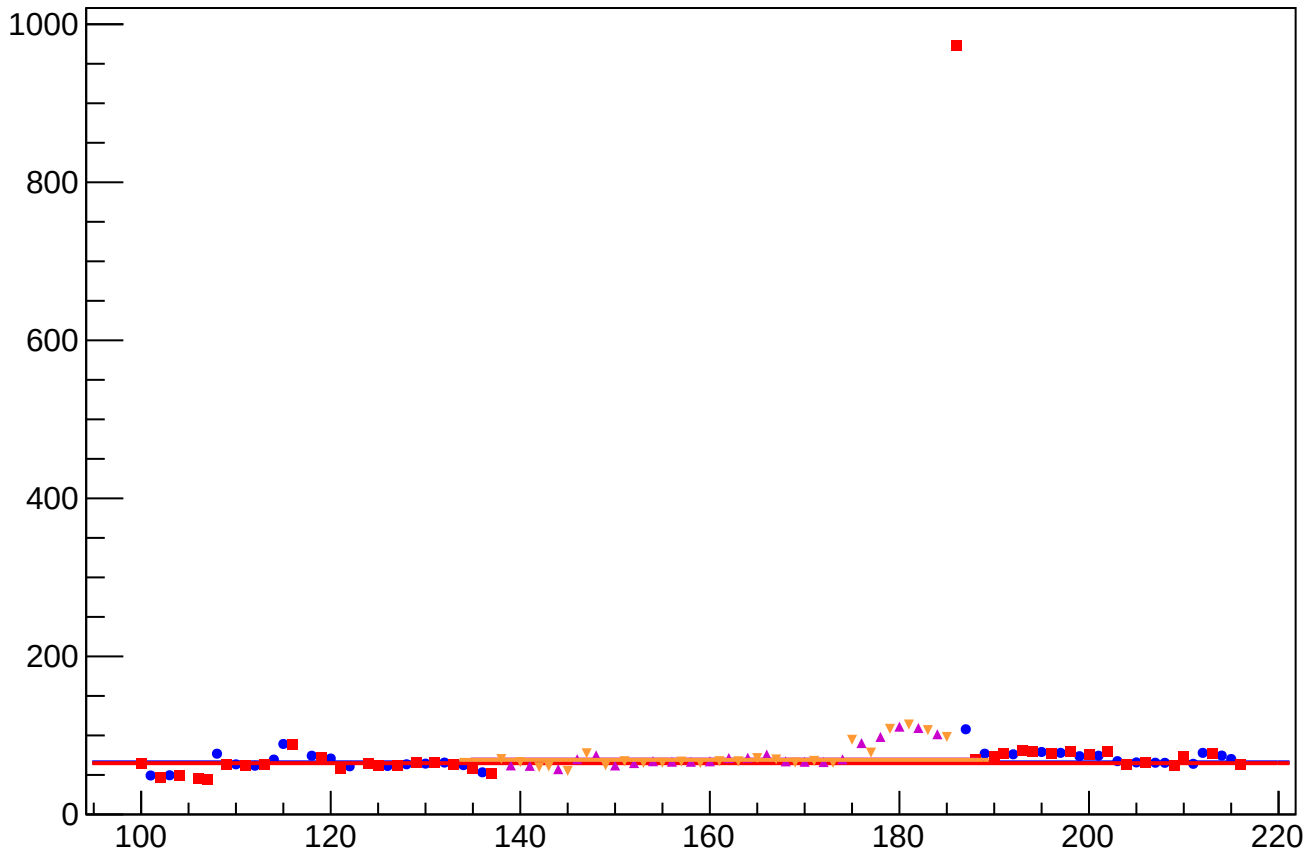
Left In:  $-30.662 \pm 16.503$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $14.086 \pm 11.026$   $\chi^2/\text{NDF}$ : 51.1/55

All:  $-9.609 \pm 7.827$   $\chi^2/\text{NDF}$ : 137.4/113

- sign  $-33.671 \pm 11.112$   $\chi^2/\text{NDF}$ : 77.0/57

# eigen\_dit\_asym\_sam\_15\_avg\_rms vs Slug



Right In: 65.969 $\pm$ 0.011  $\chi^2$ /NDF: 757660.1/30

Left Out: 69.079 $\pm$ 0.011  $\chi^2$ /NDF: 1073983.7/24

Right Out: 64.906 $\pm$ 0.011  $\chi^2$ /NDF: 1710323.9/34

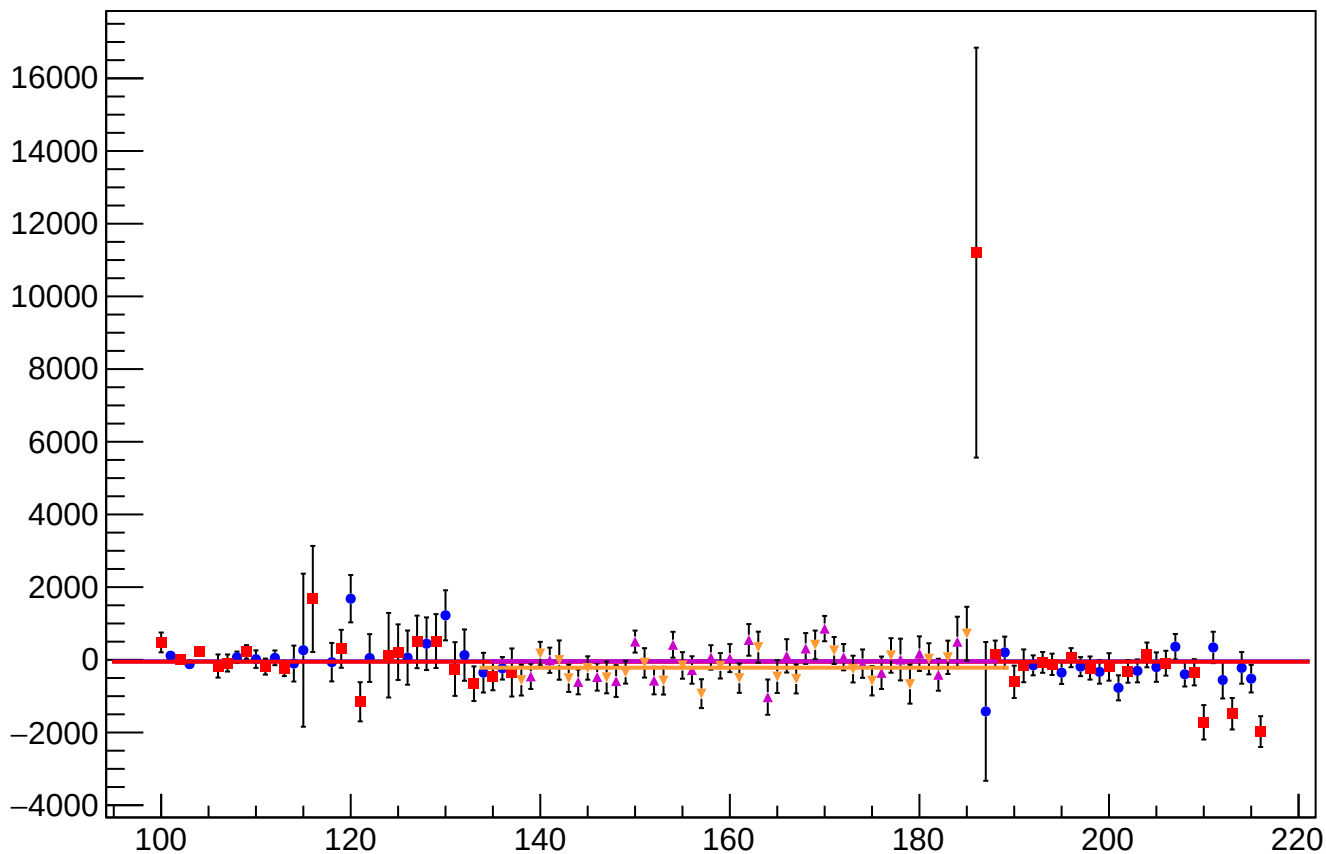
Left In: 69.436 $\pm$ 0.012  $\chi^2$ /NDF: 924591.6/22

+ sign 67.450 $\pm$ 0.008  $\chi^2$ /NDF: 1871315.8/55

All: 67.207 $\pm$ 0.006  $\chi^2$ /NDF: 4590582.3/113

- sign 66.960 $\pm$ 0.008  $\chi^2$ /NDF: 2717305.2/57

asym\_sam\_15\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-42.989 \pm 46.402$   $\chi^2/\text{NDF}$ : 30.4/30

Left Out:  $-217.348 \pm 80.133$   $\chi^2/\text{NDF}$ : 19.3/24

Right Out:  $-50.917 \pm 45.831$   $\chi^2/\text{NDF}$ : 76.9/34

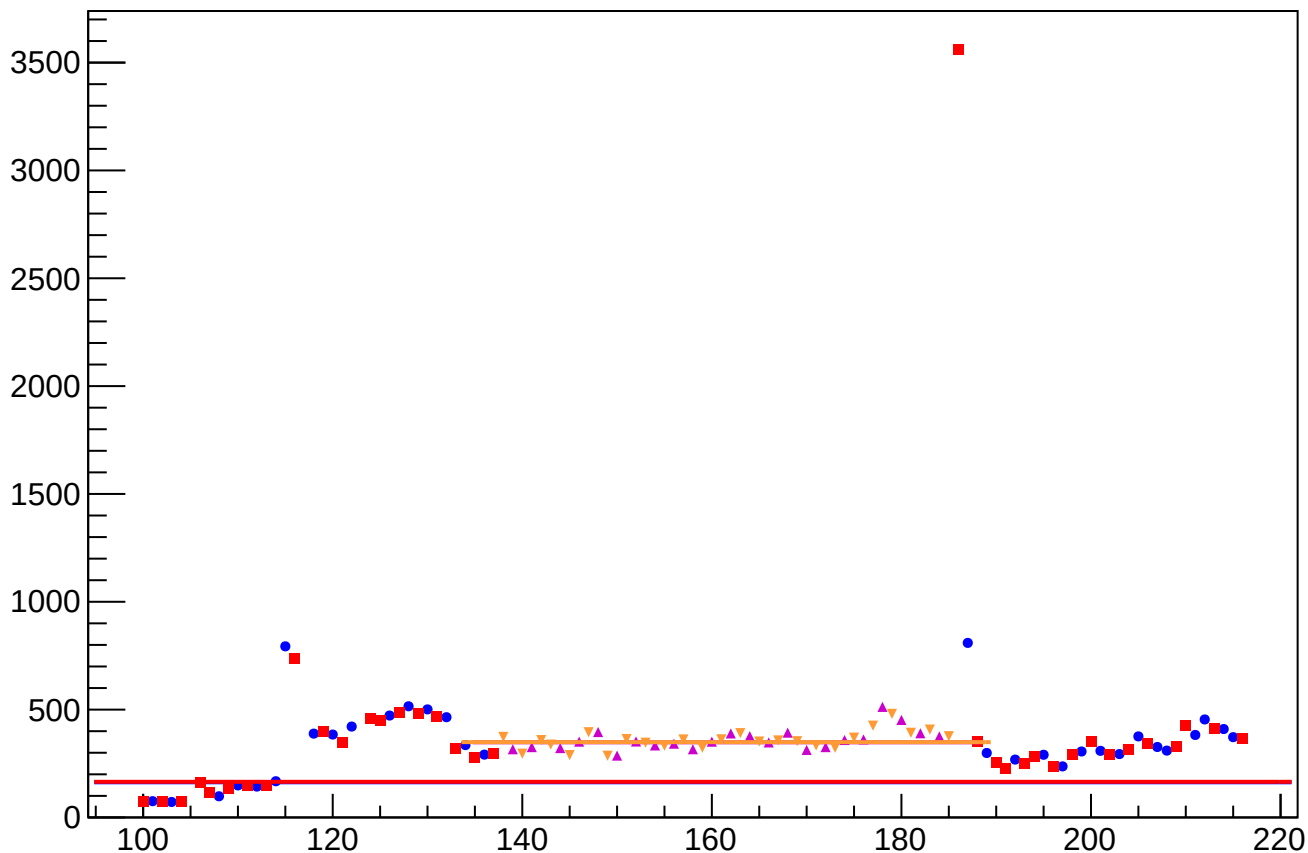
Left In:  $-41.512 \pm 82.256$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $-86.772 \pm 40.155$   $\chi^2/\text{NDF}$ : 53.3/55

All:  $-67.674 \pm 28.352$   $\chi^2/\text{NDF}$ : 160.6/113

- sign  $-48.689 \pm 40.036$   $\chi^2/\text{NDF}$ : 106.8/57

asym\_sam\_15\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 163.088 $\pm$ 0.033  $\chi^2$ /NDF: 13461816.2/30

Left Out: 349.177 $\pm$ 0.057  $\chi^2$ /NDF: 524067.1/24

Right Out: 165.280 $\pm$ 0.032  $\chi^2$ /NDF: 12966294.3/34

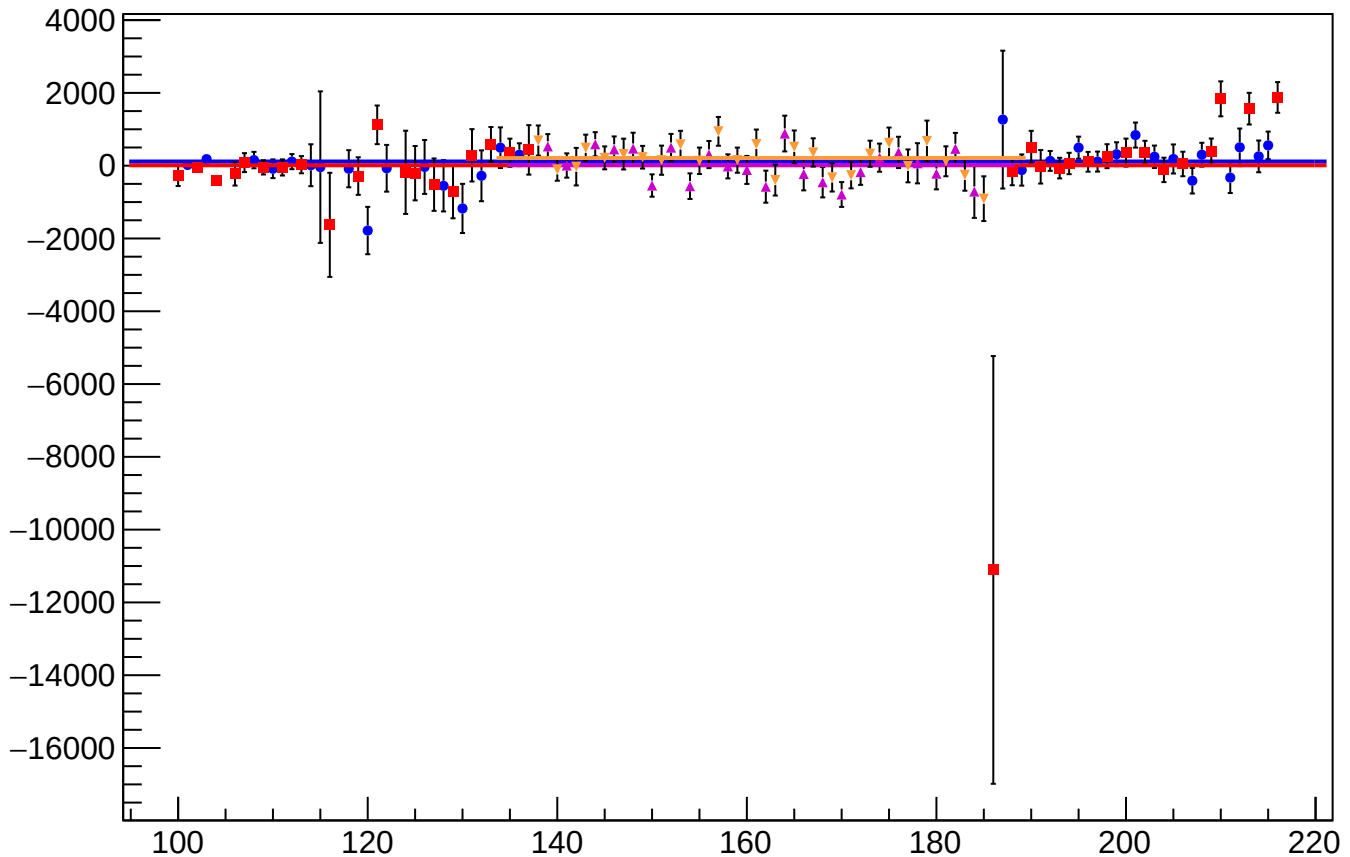
Left In: 348.560 $\pm$ 0.058  $\chi^2$ /NDF: 525736.6/22

+ sign 209.816 $\pm$ 0.028  $\chi^2$ /NDF: 22063223.3/55

All: 209.256 $\pm$ 0.020  $\chi^2$ /NDF: 43133152.9/11

- sign 208.699 $\pm$ 0.028  $\chi^2$ /NDF: 21069154.0/57

# asym\_sam\_15\_avg\_mean vs Slug



Right In: 114.739 $\pm$ 49.844  $\chi^2$ /NDF: 29.4/30

Left Out: 209.819 $\pm$ 78.511  $\chi^2$ /NDF: 21.4/24

Right Out: 10.942 $\pm$ 48.825  $\chi^2$ /NDF: 82.3/34

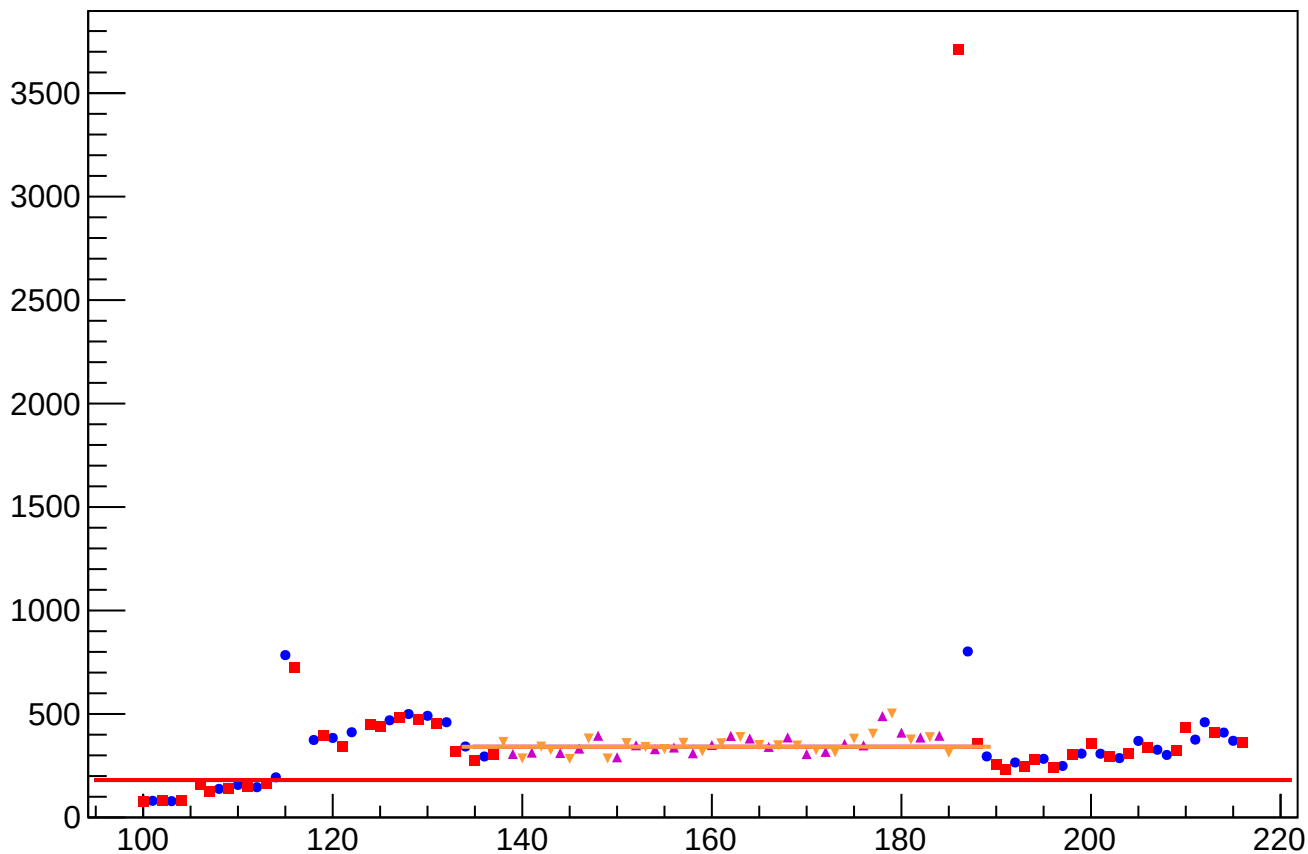
Left In: 18.738 $\pm$ 80.699  $\chi^2$ /NDF: 32.0/22

+ sign 142.053 $\pm$ 42.080  $\chi^2$ /NDF: 51.9/55

All: 77.071 $\pm$ 29.647  $\chi^2$ /NDF: 171.0/113

- sign 13.031 $\pm$ 41.774  $\chi^2$ /NDF: 114.4/57

# asym\_sam\_15\_avg\_rms vs Slug



Right In: 180.536+/-0.035  $\chi^2/\text{NDF}$ : 11777572.4/30

Left Out: 341.585+/-0.056  $\chi^2/\text{NDF}$ : 554287.8/24

Right Out: 181.102+/-0.035  $\chi^2/\text{NDF}$ : 11377876.3/34

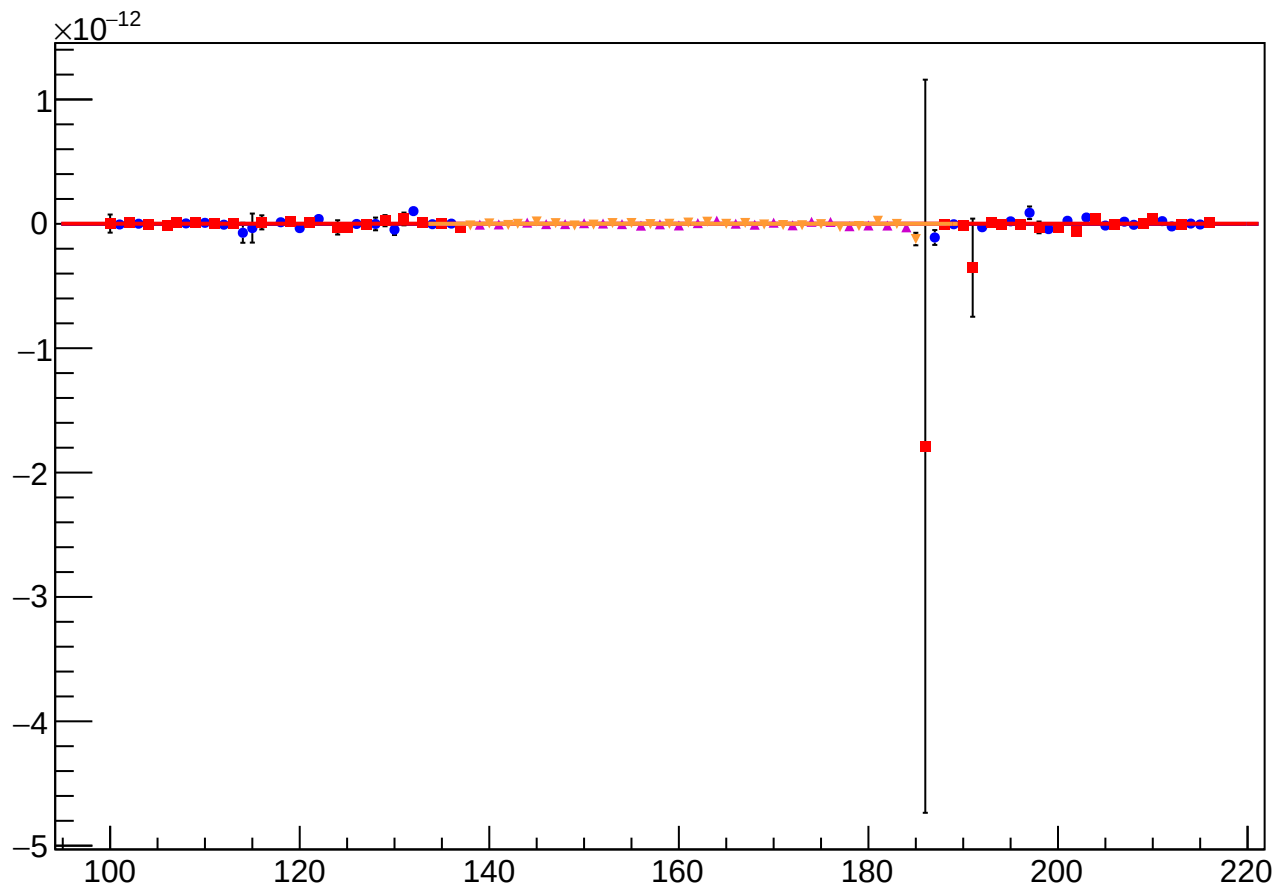
Left In: 341.943+/-0.057  $\chi^2/\text{NDF}$ : 485509.1/22

+ sign 226.801+/-0.030  $\chi^2/\text{NDF}$ : 18329800.0/55

All: 225.492+/-0.021  $\chi^2/\text{NDF}$ : 36012894.5/11

- sign 224.202+/-0.030  $\chi^2/\text{NDF}$ : 17679252.9/57

asym\_sam\_15\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.1/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25.0/34

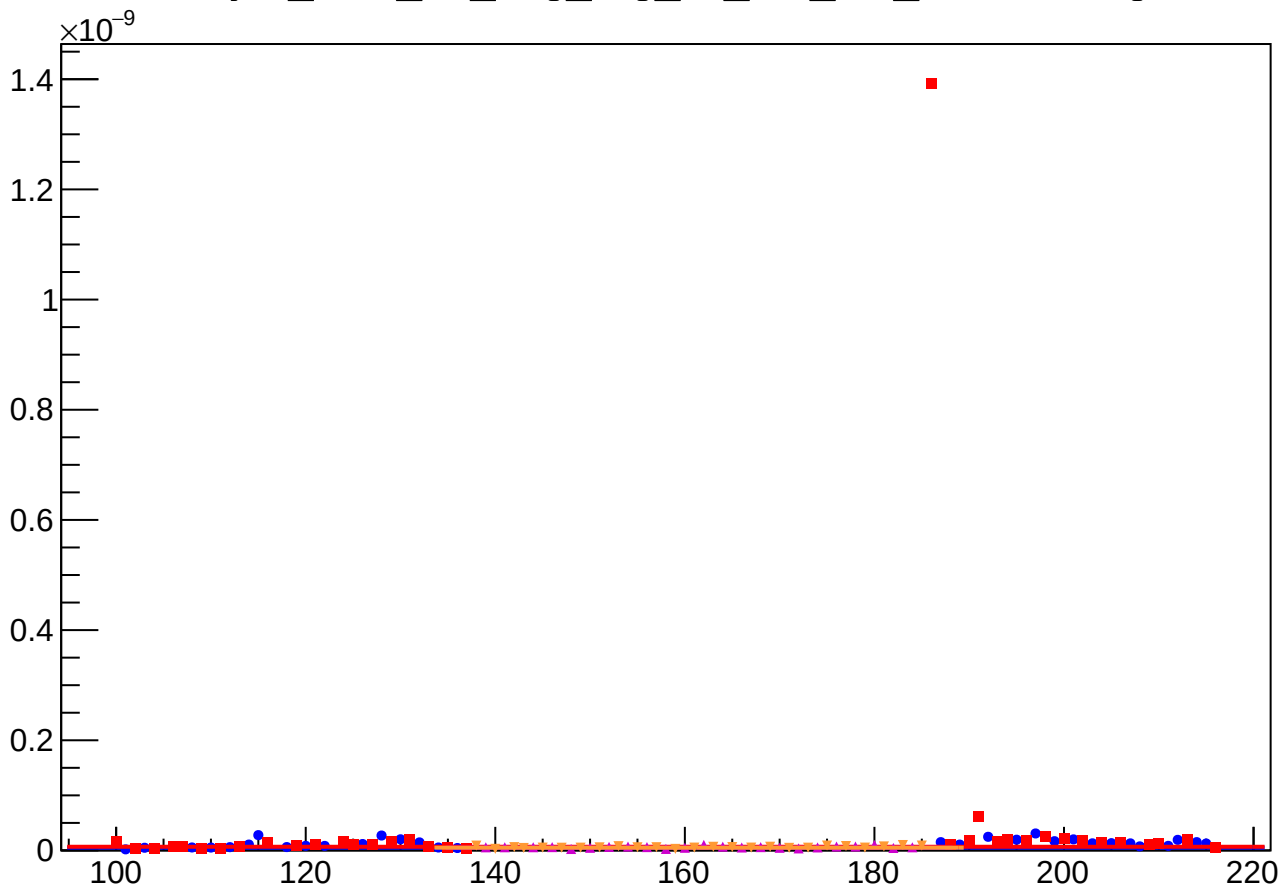
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.5/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 66.8/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 112.6/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 45.8/57

# asym\_sam\_15\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7343274.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1294137.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5687092.0/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1225248.2/22

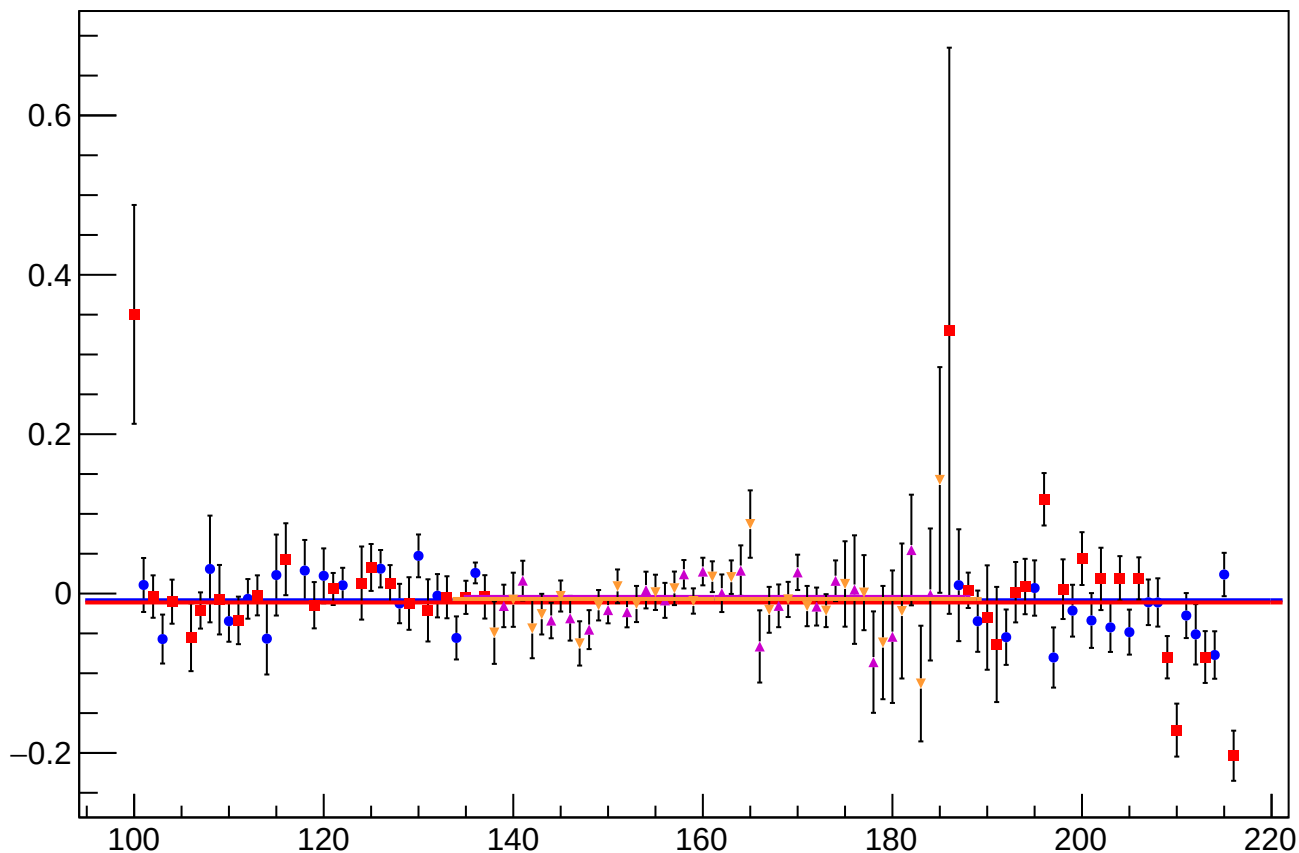
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8638200.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16131136.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7387696.6/57



asym\_sam\_15\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 44.0/30

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 110.6/34

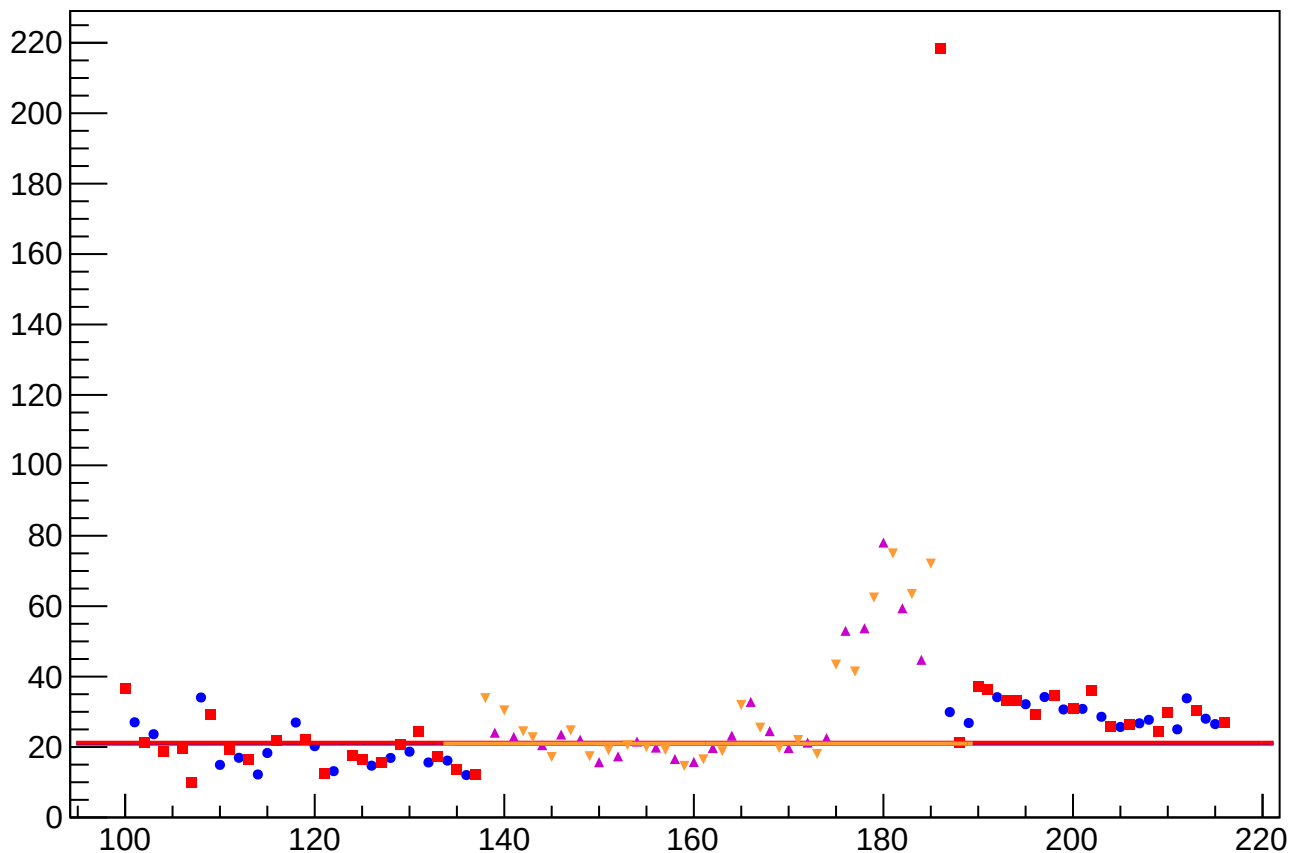
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $-0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 200.5/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 134.7/57

# asym\_sam\_15\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.982 $\pm$ 0.004  $\chi^2$ /NDF: 3984078.6/30

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4467011.5/24

Right Out: 21.230 $\pm$ 0.004  $\chi^2$ /NDF: 4381749.3/34

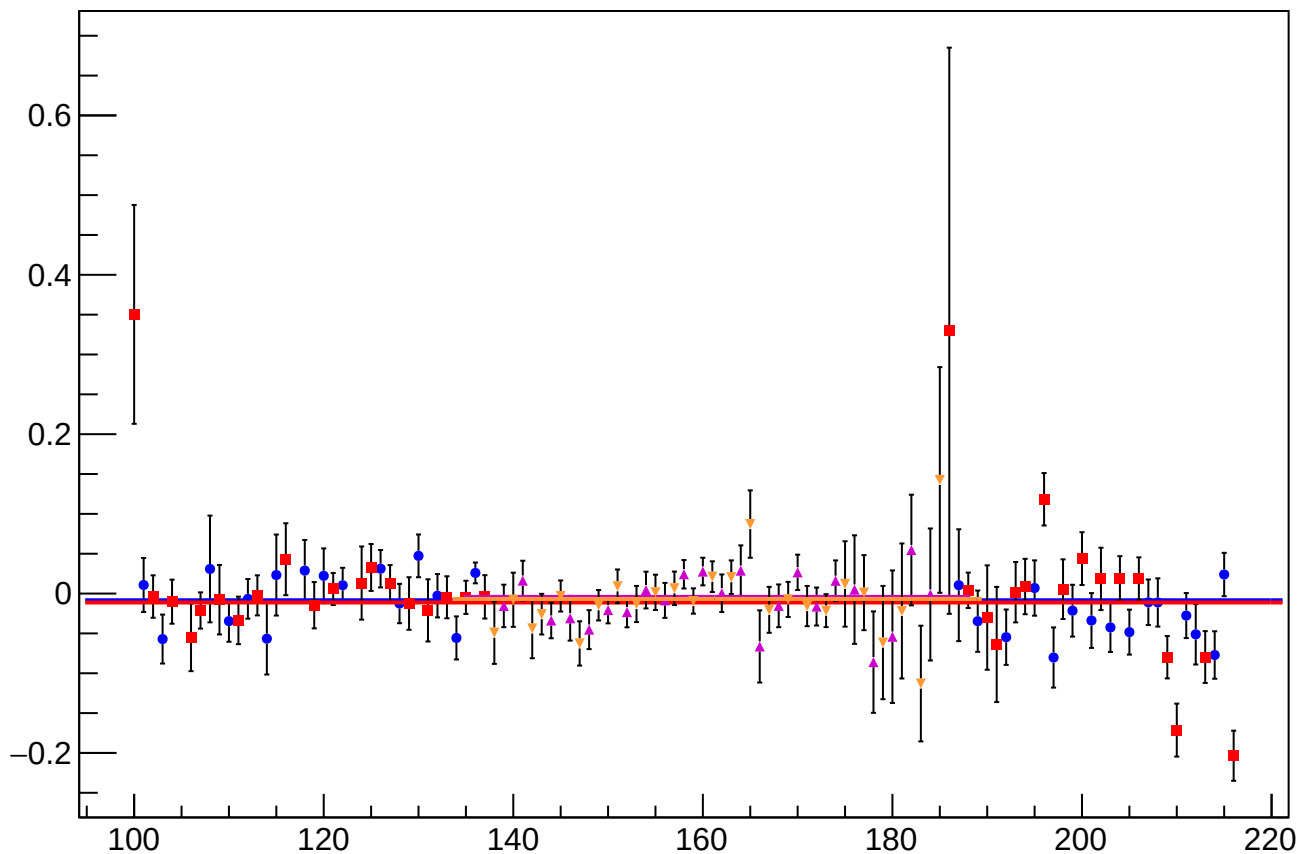
Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534877.7/22

+ sign 20.981 $\pm$ 0.003  $\chi^2$ /NDF: 8451090.1/55

All: 21.016 $\pm$ 0.002  $\chi^2$ /NDF: 16372857.2/113

- sign 21.052 $\pm$ 0.003  $\chi^2$ /NDF: 7921400.7/57

asym\_sam\_15\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 44.0/30

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 110.6/34

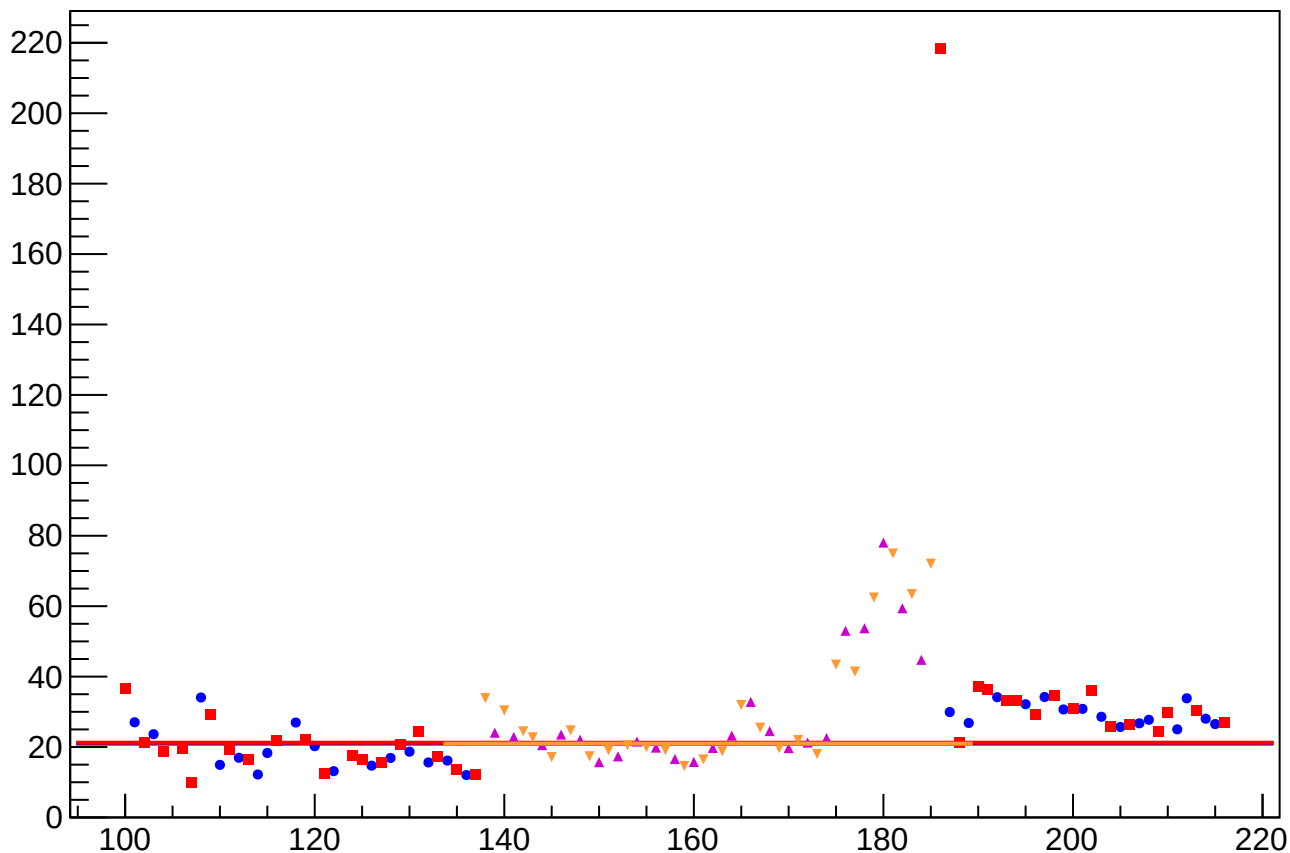
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $-0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 200.5/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 134.7/57

asym\_sam\_15\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.982 $\pm$ 0.004  $\chi^2$ /NDF: 3984078.6/30

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4467011.5/24

Right Out: 21.230 $\pm$ 0.004  $\chi^2$ /NDF: 4381749.3/34

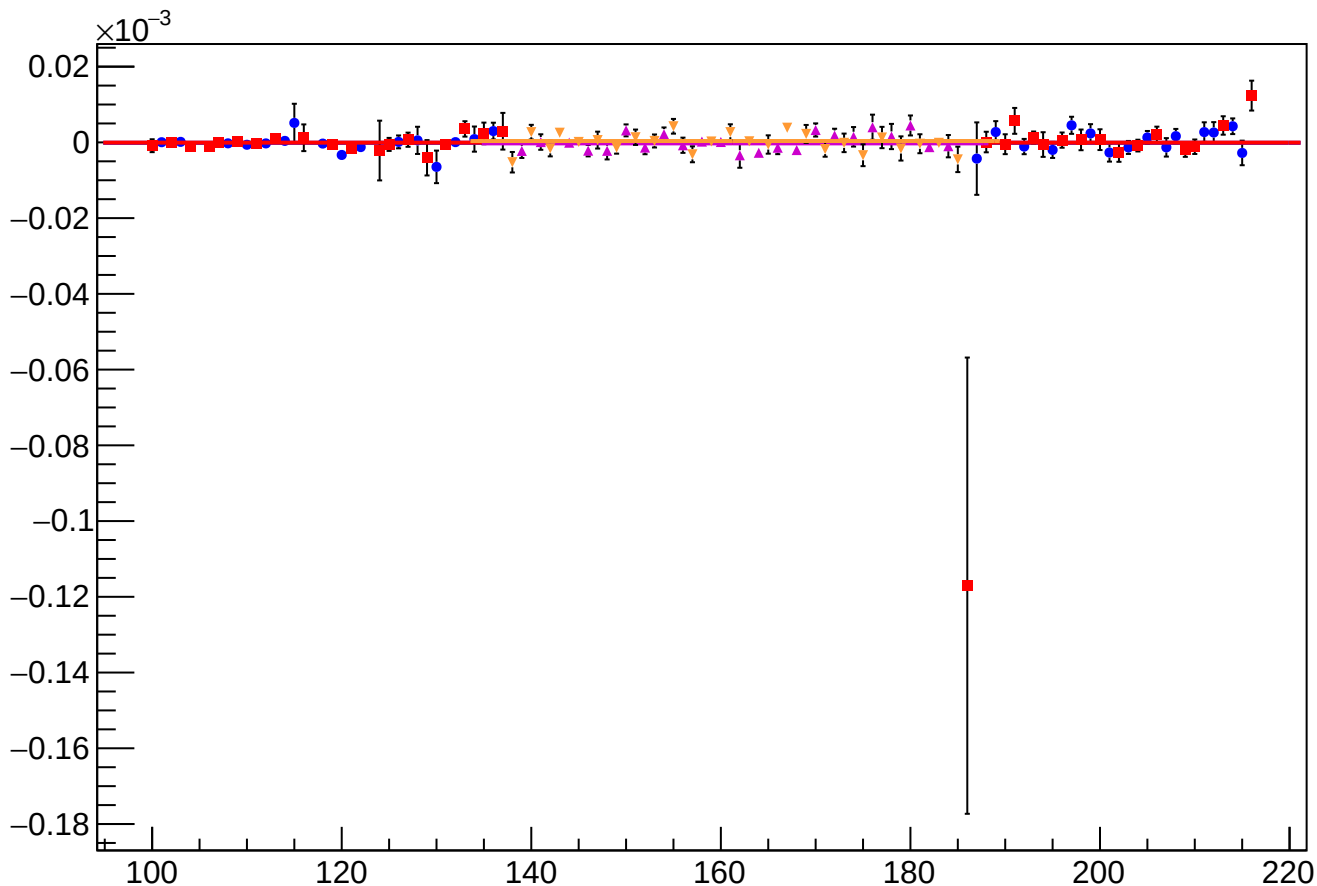
Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534877.7/22

+ sign 20.981 $\pm$ 0.003  $\chi^2$ /NDF: 8451090.1/55

All: 21.016 $\pm$ 0.002  $\chi^2$ /NDF: 16372857.2/113

- sign 21.052 $\pm$ 0.003  $\chi^2$ /NDF: 7921400.7/57

asym\_sam\_15\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.2/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.0/34

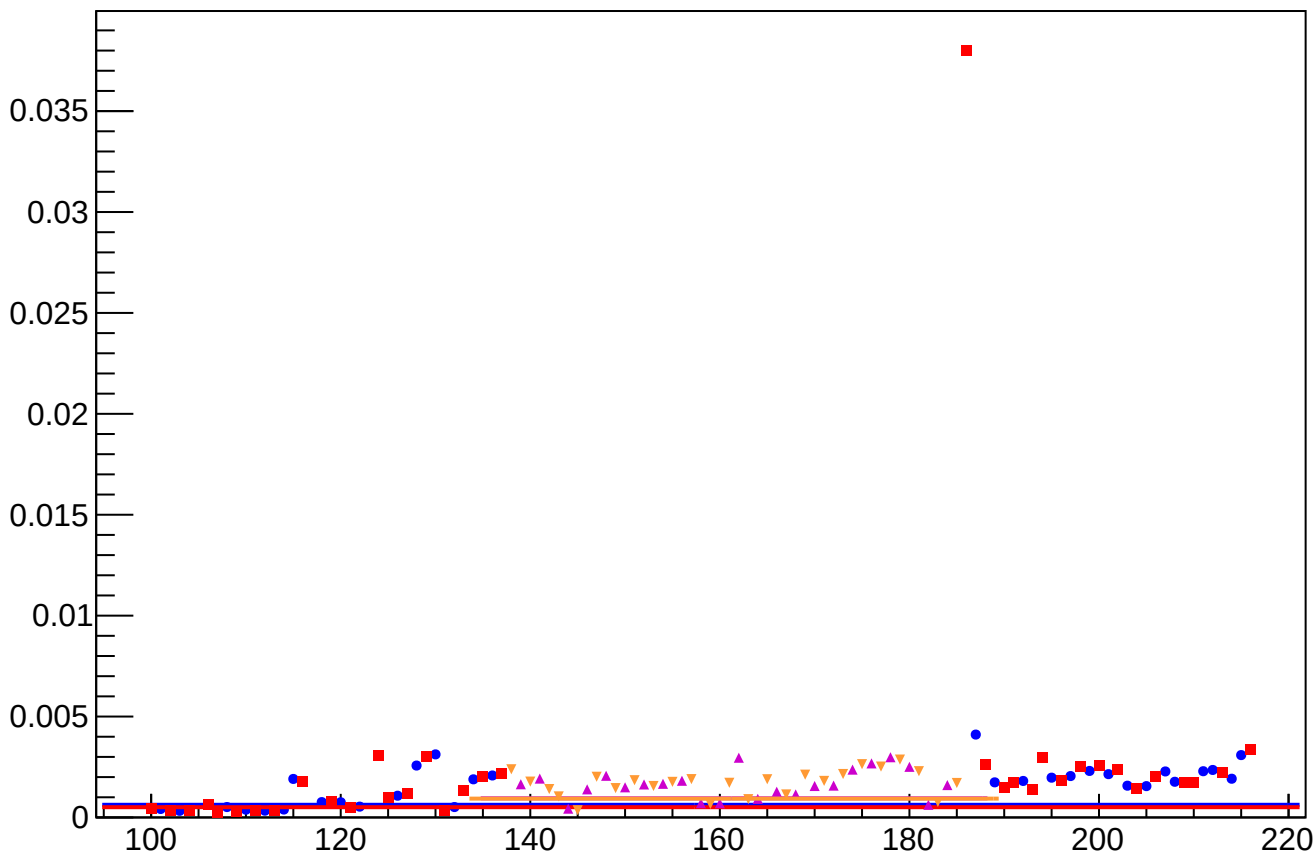
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.2/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 147.0/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 77.0/57

asym\_sam\_15\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 16243967.7/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 11996378.8/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19011623.7/34

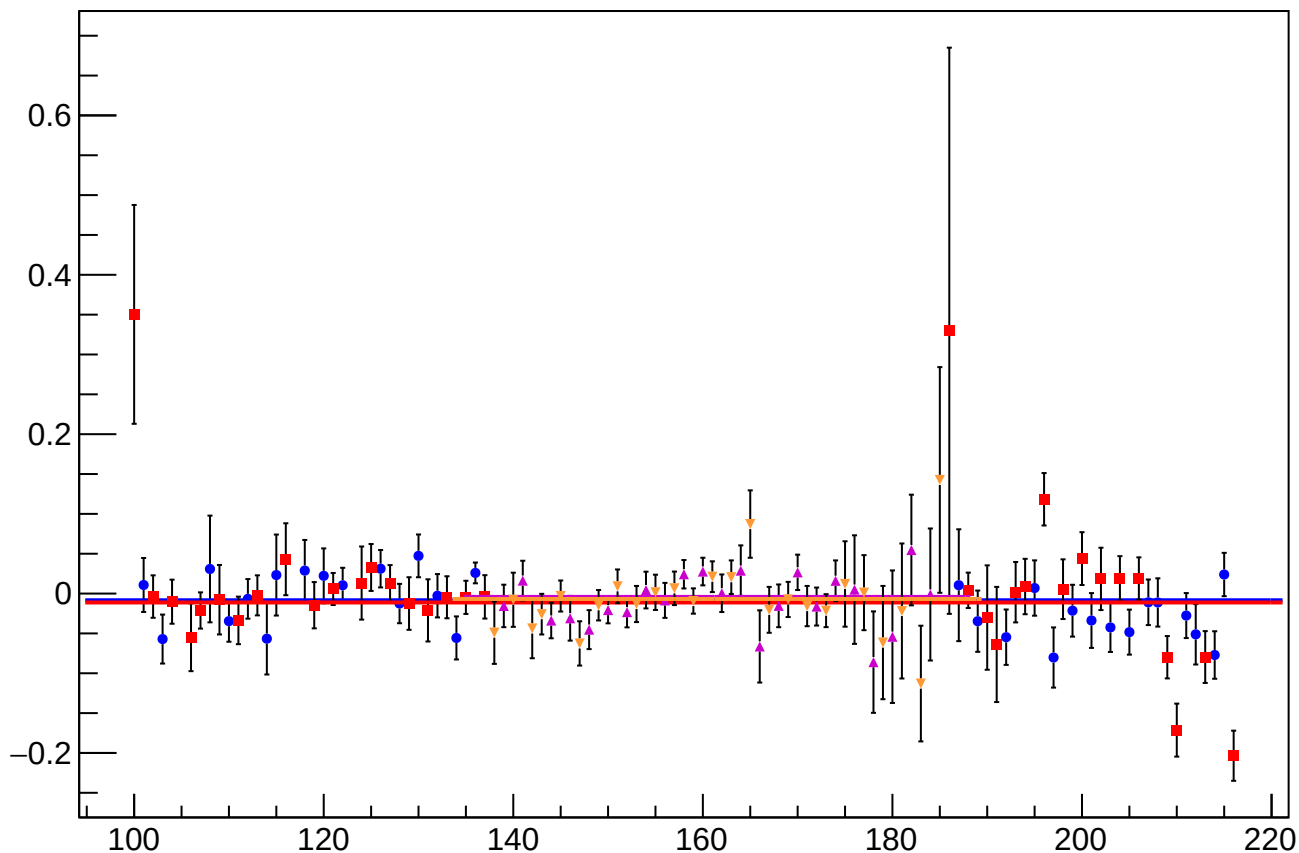
Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9470540.4/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 29990955.0/55

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 62970823.9/113

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 32485318.8/57

asym\_sam\_15\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 44.0/30

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 110.6/34

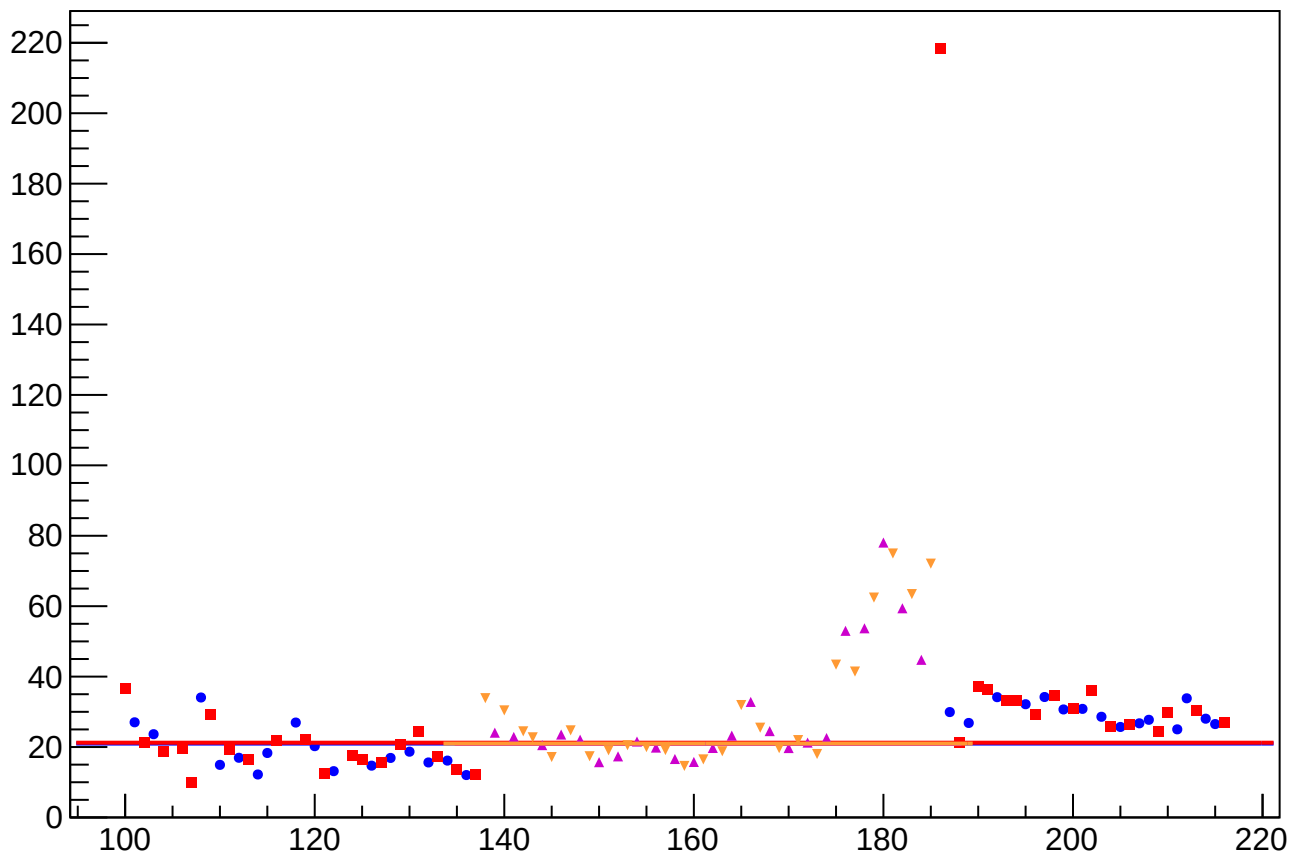
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $-0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 200.5/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 134.7/57

asym\_sam\_15\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.982 $\pm$ 0.004  $\chi^2$ /NDF: 3984076.2/30

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4466984.6/24

Right Out: 21.230 $\pm$ 0.004  $\chi^2$ /NDF: 4381753.7/34

Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534923.5/22

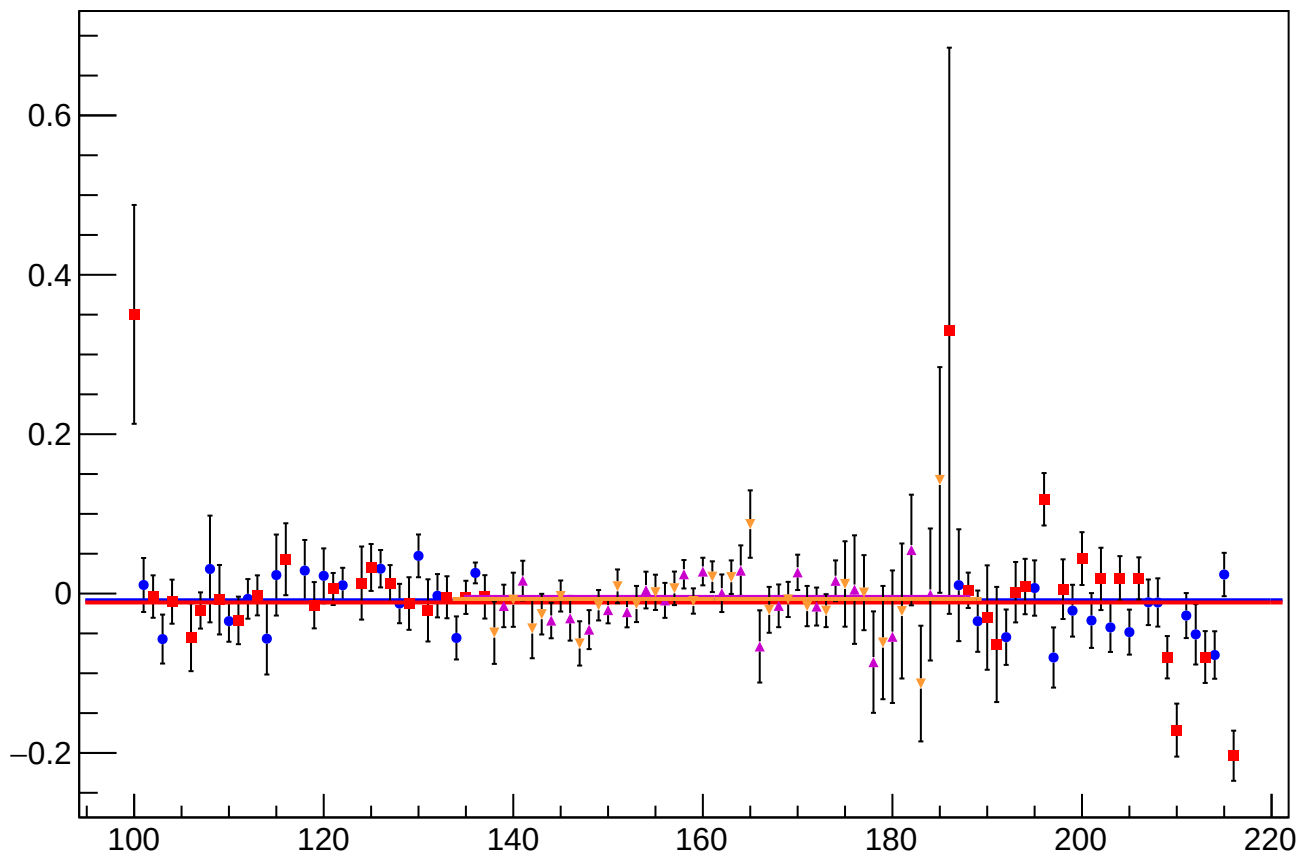
+ sign 20.981 $\pm$ 0.003  $\chi^2$ /NDF: 8451060.8/55

All: 21.016 $\pm$ 0.002  $\chi^2$ /NDF: 16372868.1/113

- sign 21.052 $\pm$ 0.003  $\chi^2$ /NDF: 7921441.7/57



asym\_sam\_15\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 44.0/30

Left Out:  $-0.007 \pm 0.005$   $\chi^2/\text{NDF}$ : 21.8/24

Right Out:  $-0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 110.6/34

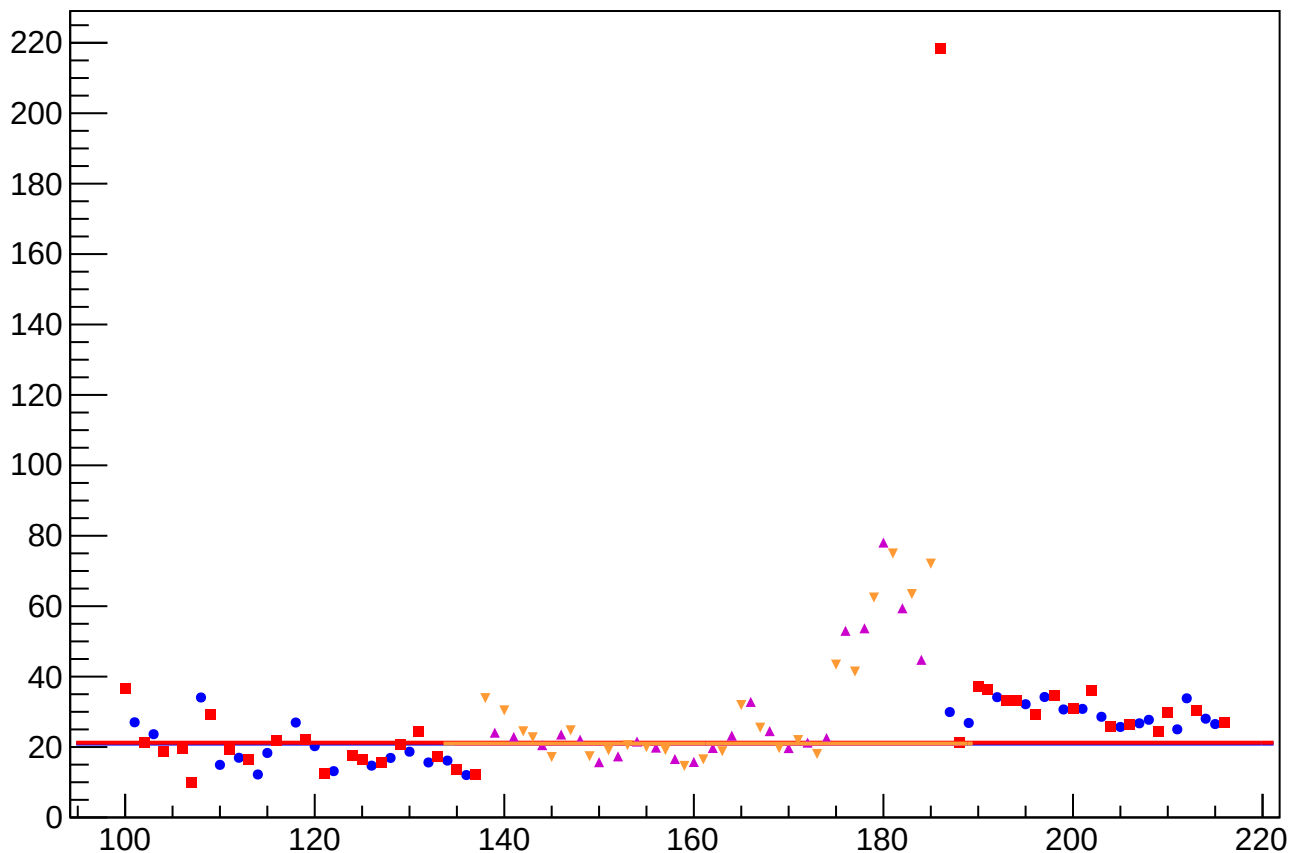
Left In:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 65.8/55

All:  $-0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 200.5/113

- sign  $-0.008 \pm 0.004$   $\chi^2/\text{NDF}$ : 134.7/57

asym\_sam\_15\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.982 $\pm$ 0.004  $\chi^2$ /NDF: 3984076.2/30

Left Out: 20.981 $\pm$ 0.004  $\chi^2$ /NDF: 4466984.6/24

Right Out: 21.230 $\pm$ 0.004  $\chi^2$ /NDF: 4381753.7/34

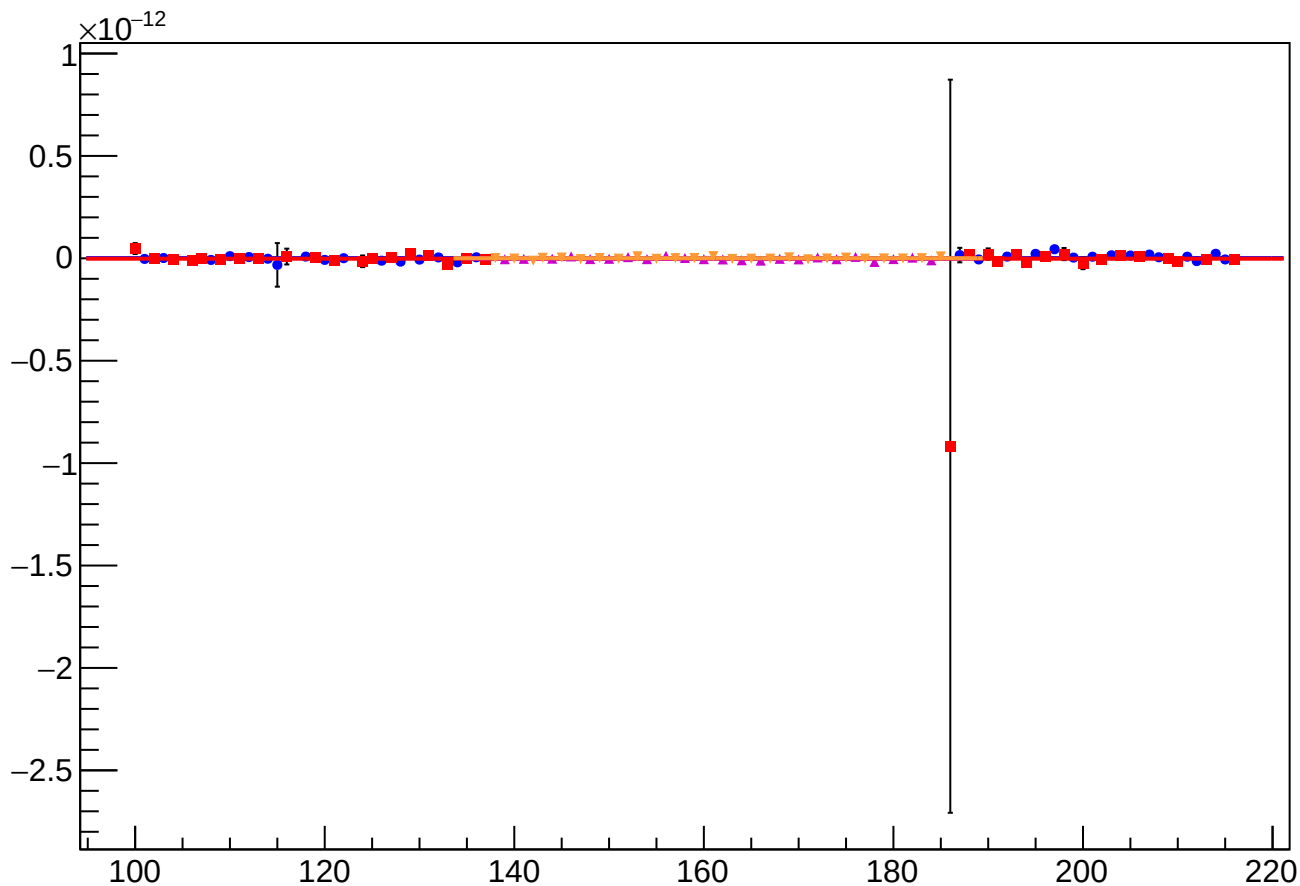
Left In: 20.868 $\pm$ 0.004  $\chi^2$ /NDF: 3534923.5/22

+ sign 20.981 $\pm$ 0.003  $\chi^2$ /NDF: 8451060.8/55

All: 21.016 $\pm$ 0.002  $\chi^2$ /NDF: 16372868.1/113

- sign 21.052 $\pm$ 0.003  $\chi^2$ /NDF: 7921441.7/57

asym\_sam\_15\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.9/34

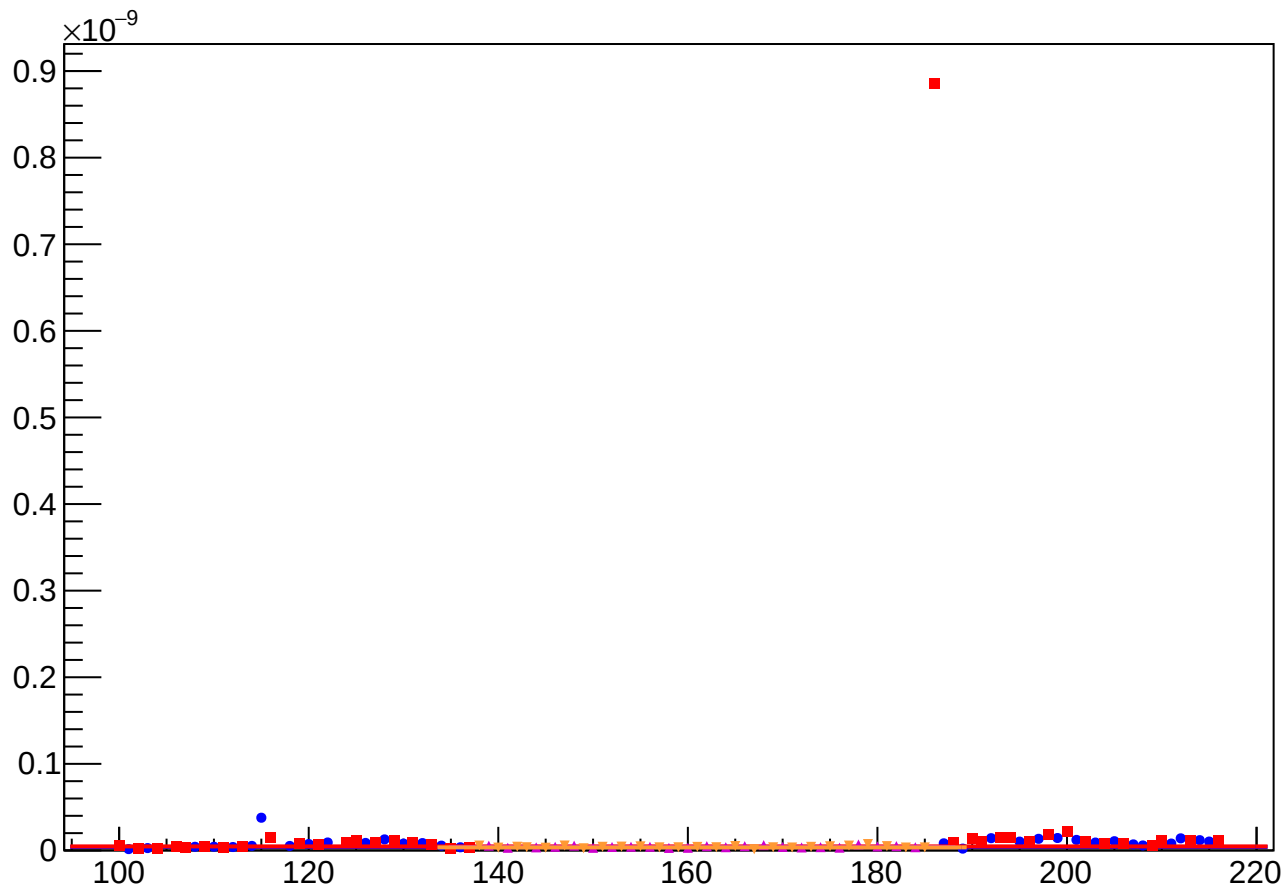
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 43.2/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 98.9/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.7/57

asym\_sam\_15\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9088448.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2527443.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8876675.1/34

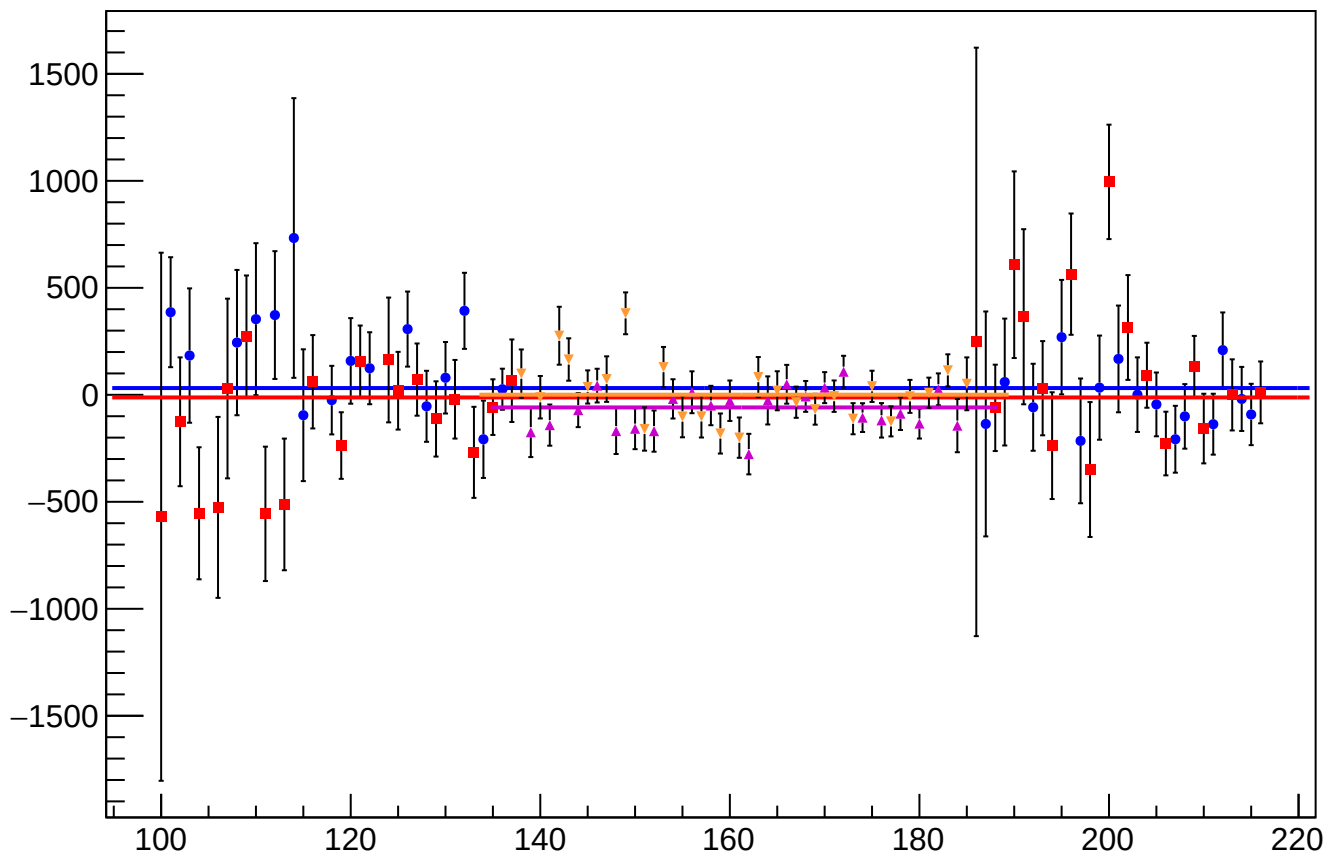
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1198286.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11757385.5/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22390069.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10368931.1/57

# reg\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $31.629 \pm 33.779$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $0.598 \pm 17.319$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $-12.232 \pm 35.435$   $\chi^2/\text{NDF}$ : 46.9/34

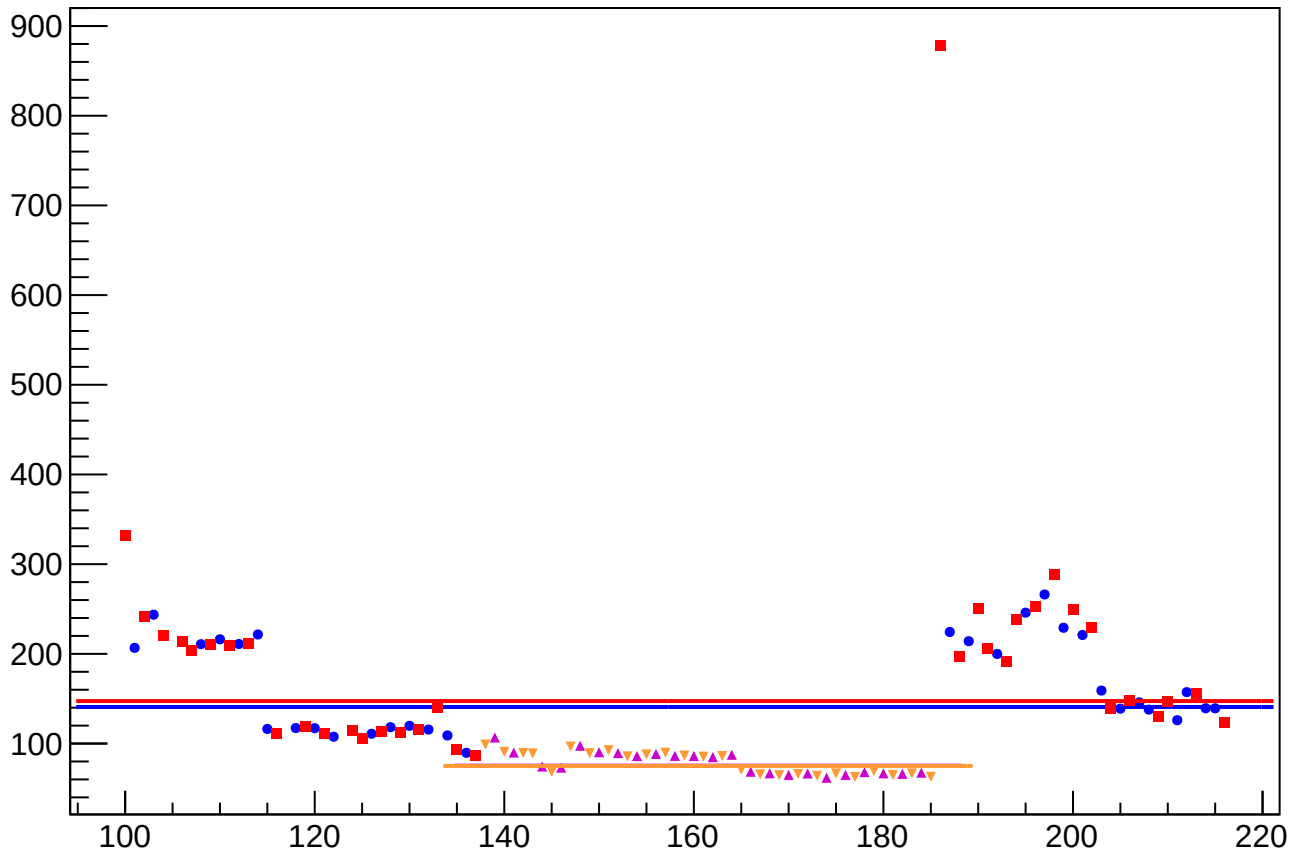
Left In:  $-58.907 \pm 17.879$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $7.057 \pm 15.412$   $\chi^2/\text{NDF}$ : 73.6/55

All:  $-20.198 \pm 11.087$   $\chi^2/\text{NDF}$ : 154.2/113

- sign  $-49.435 \pm 15.962$   $\chi^2/\text{NDF}$ : 74.1/57

# reg\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 140.765 $\pm$ 0.024  $\chi^2$ /NDF: 3176976.7/30

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF: 928107.8/24

Right Out: 147.375 $\pm$ 0.025  $\chi^2$ /NDF: 4286070.7/34

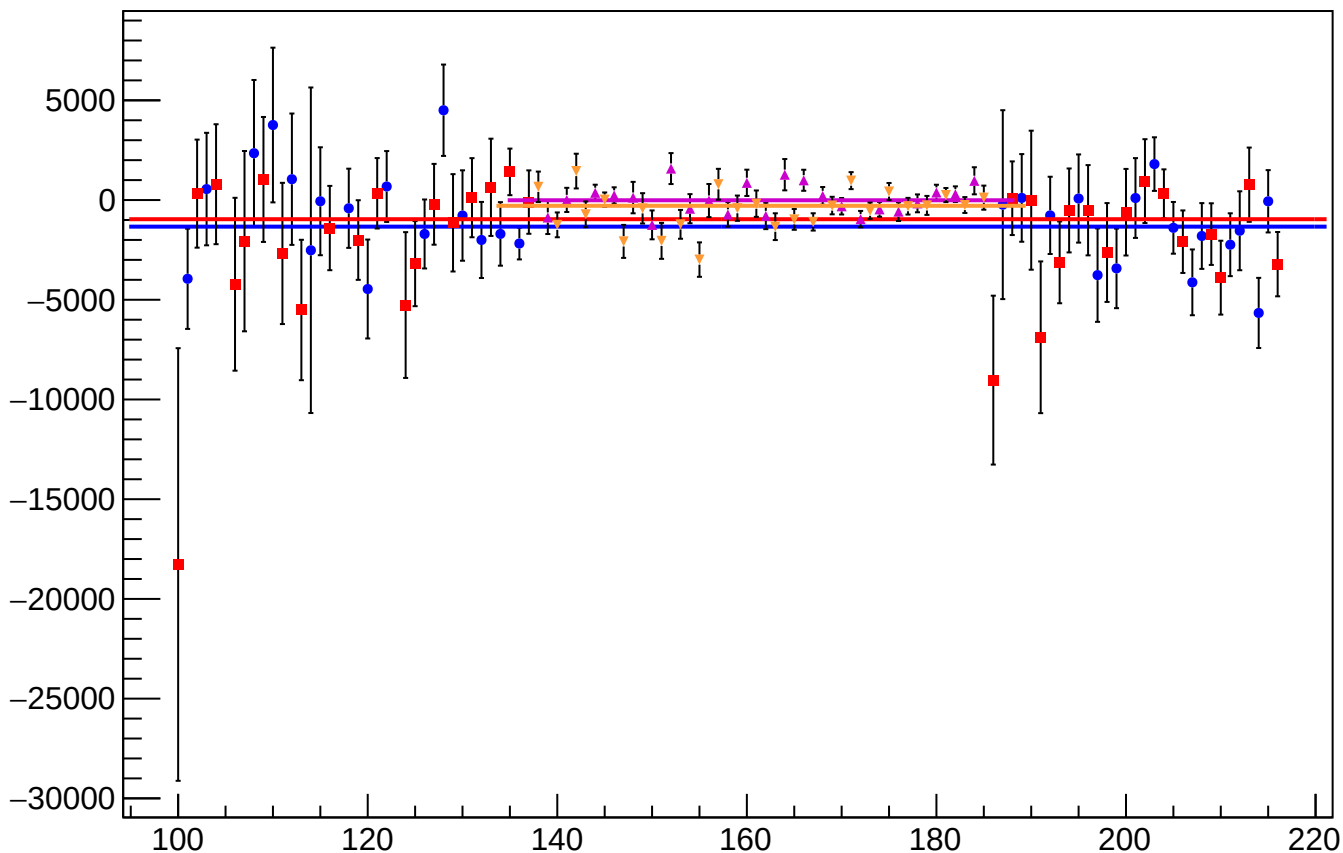
Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF: 837634.2/22

+ sign 88.722 $\pm$ 0.011  $\chi^2$ /NDF: 10100458.0/55

All: 89.323 $\pm$ 0.008  $\chi^2$ /NDF: 21816340.0/113

- sign 89.967 $\pm$ 0.011  $\chi^2$ /NDF: 11709587.9/57

asym\_sam\_26\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1333.605 \pm 332.584$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-960.545 \pm 356.025$   $\chi^2/\text{NDF}$ : 30.8/34

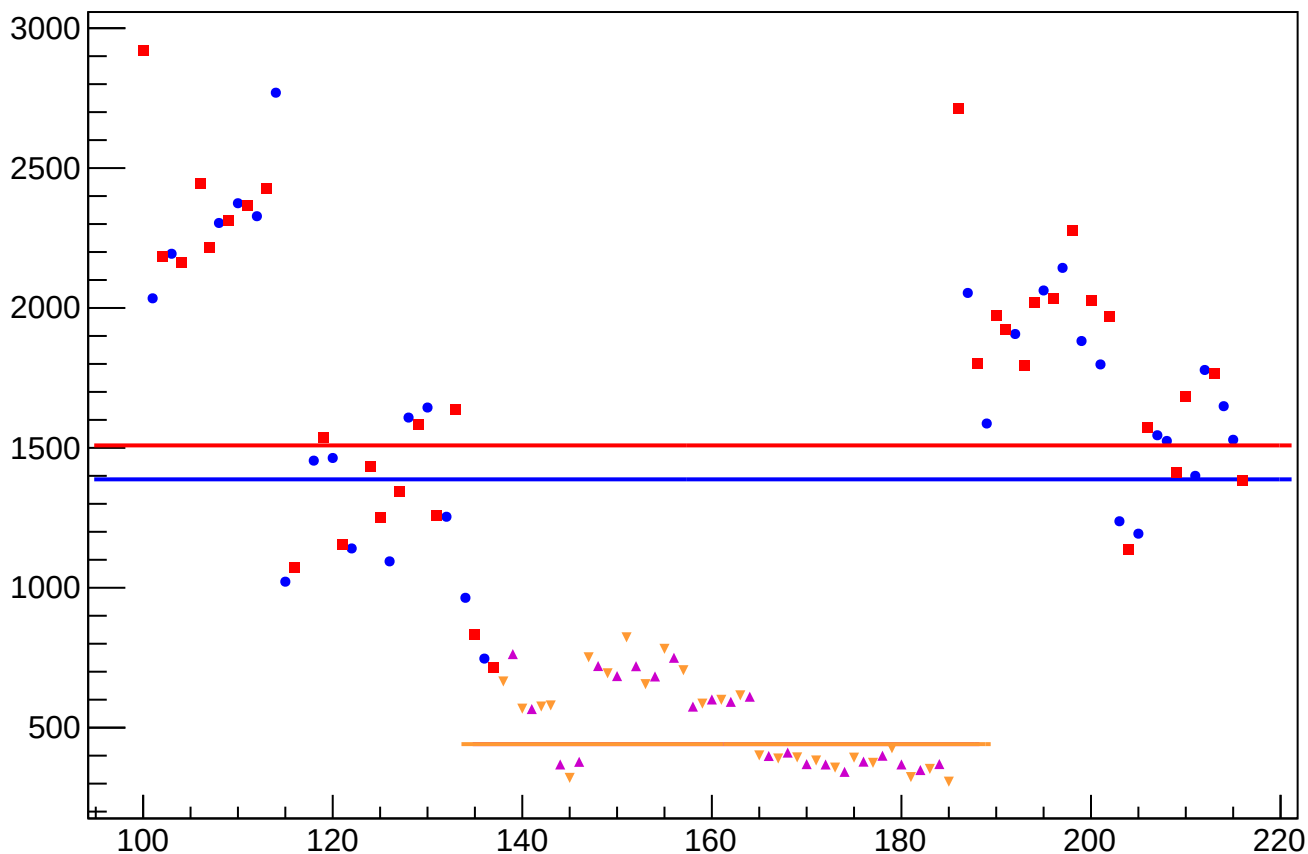
Left In:  $-10.643 \pm 107.669$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-383.224 \pm 100.329$   $\chi^2/\text{NDF}$ : 97.4/55

All:  $-240.665 \pm 71.889$   $\chi^2/\text{NDF}$ : 172.3/113

- sign  $-90.240 \pm 103.060$   $\chi^2/\text{NDF}$ : 70.7/57

# asym\_sam\_26\_avg\_reg\_correction\_rms vs Slug



Right In:  $1387.480 \pm 0.235$   $\chi^2/\text{NDF}: 3433528.4/30$

Left Out:  $441.128 \pm 0.074$   $\chi^2/\text{NDF}: 3234629.2/24$

Right Out:  $1508.801 \pm 0.252$   $\chi^2/\text{NDF}: 3397506.0/34$

Left In:  $441.196 \pm 0.076$   $\chi^2/\text{NDF}: 2682075.8/22$

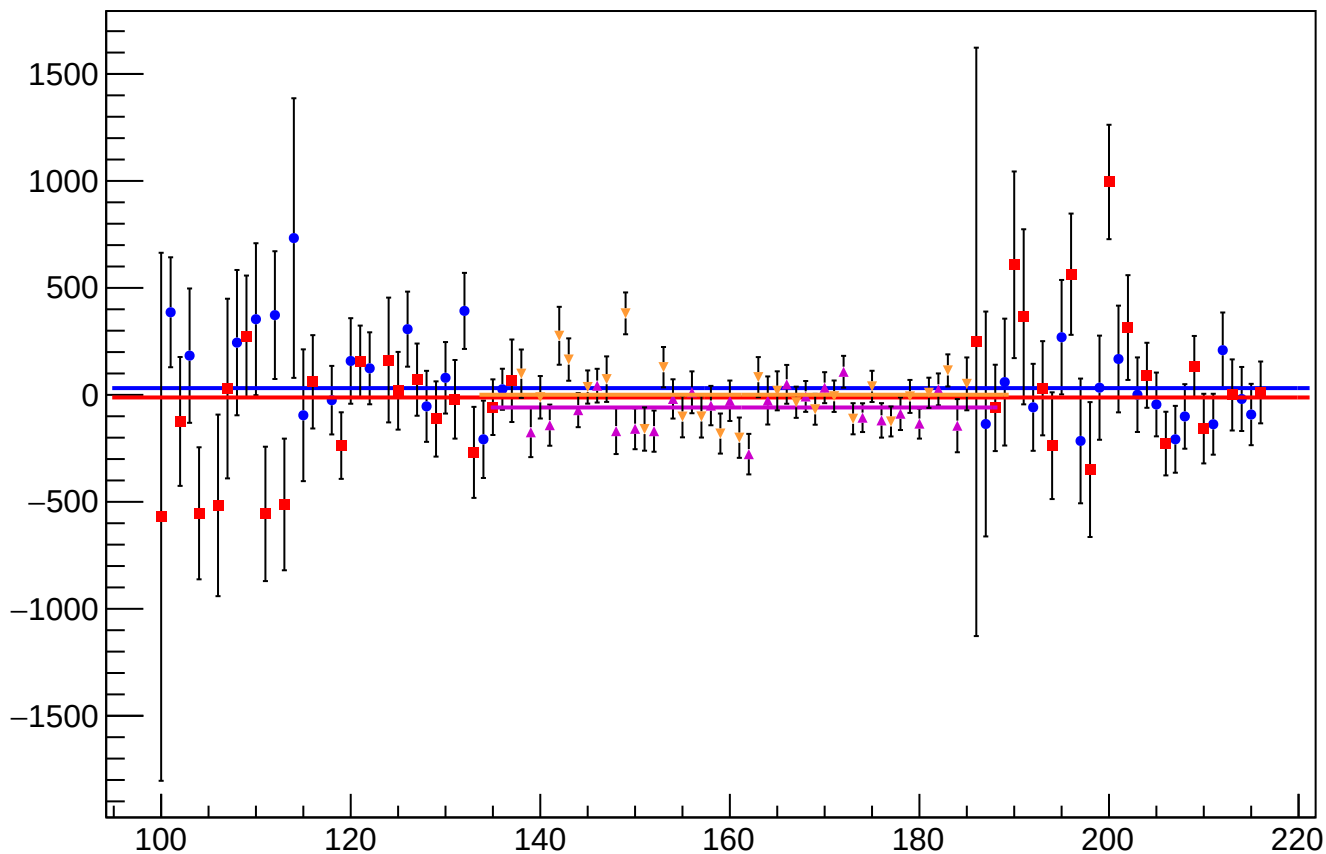
+ sign  $527.248 \pm 0.071$   $\chi^2/\text{NDF}: 21387757.7/55$

All:  $528.906 \pm 0.051$   $\chi^2/\text{NDF}: 43945653.6/11$

- sign  $530.656 \pm 0.073$   $\chi^2/\text{NDF}: 22556773.3/57$



# cor\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $31.617 \pm 33.779$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $0.598 \pm 17.319$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $-12.114 \pm 35.436$   $\chi^2/\text{NDF}$ : 46.8/34

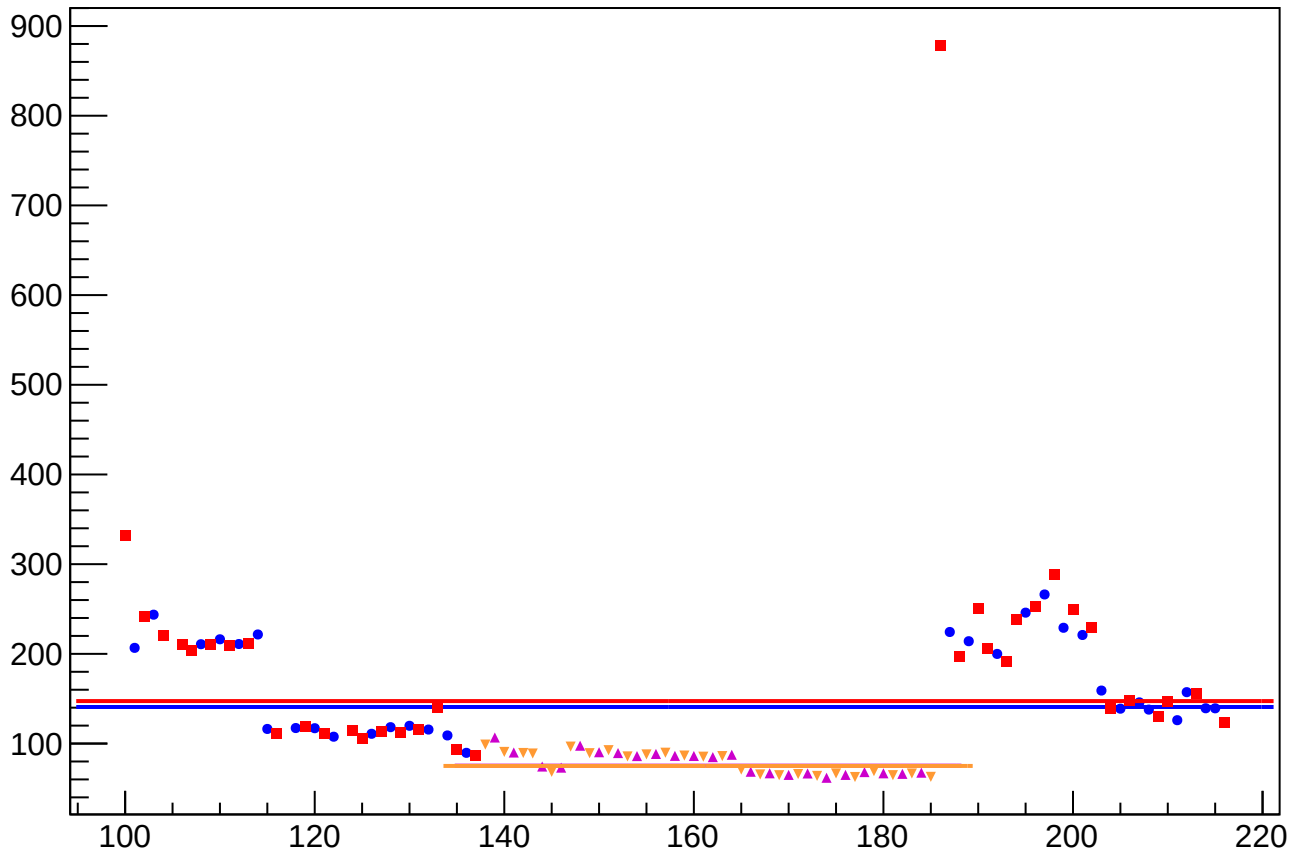
Left In:  $-58.904 \pm 17.879$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $7.055 \pm 15.412$   $\chi^2/\text{NDF}$ : 73.6/55

All:  $-20.187 \pm 11.087$   $\chi^2/\text{NDF}$ : 154.1/113

- sign  $-49.410 \pm 15.962$   $\chi^2/\text{NDF}$ : 74.1/57

# cor\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 140.765 $\pm$ 0.024  $\chi^2$ /NDF: 3176979.2/30

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF: 928107.8/24

Right Out: 147.350 $\pm$ 0.025  $\chi^2$ /NDF: 4281594.7/34

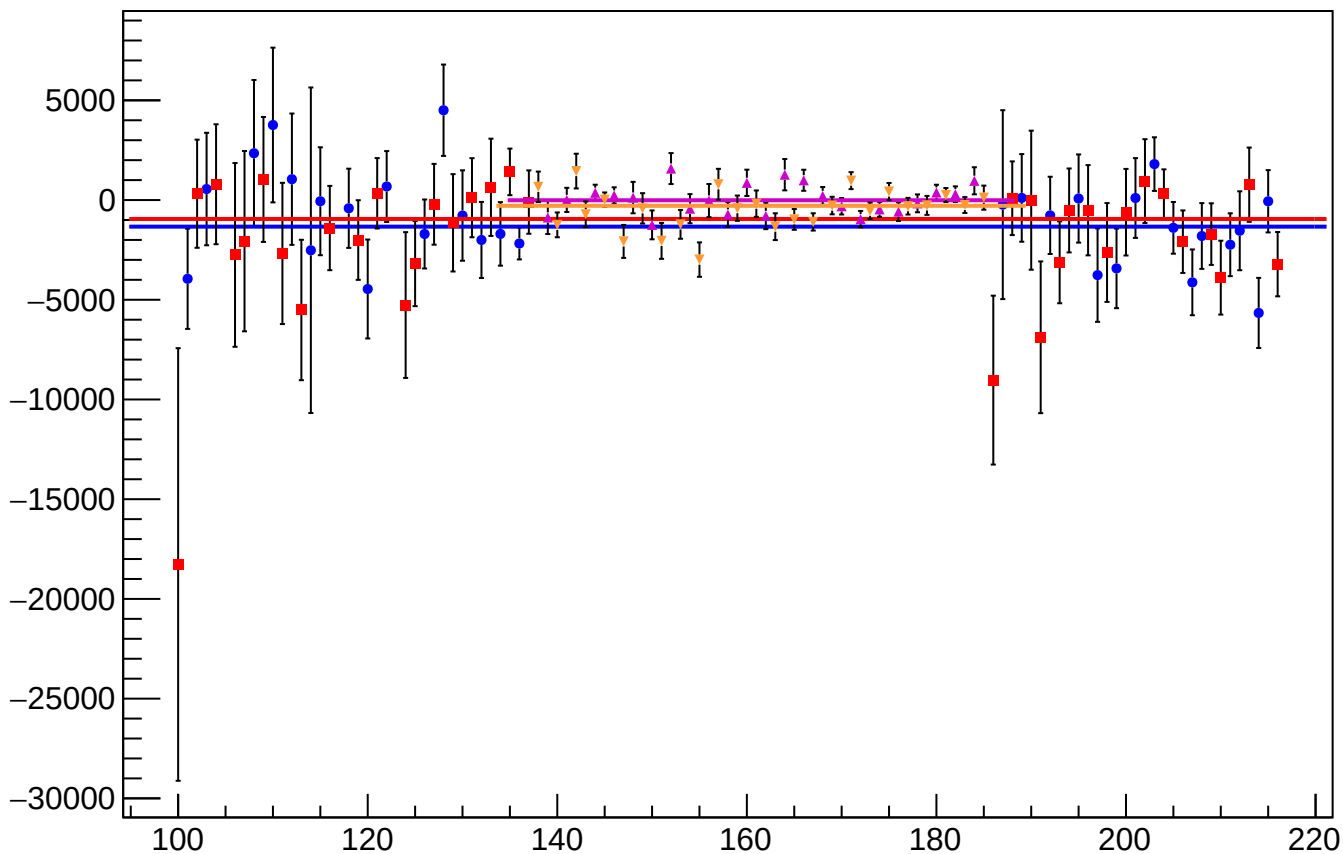
Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF: 837634.2/22

+ sign 88.722 $\pm$ 0.011  $\chi^2$ /NDF: 10100460.0/55

All: 89.320 $\pm$ 0.008  $\chi^2$ /NDF: 21806992.1/113

- sign 89.961 $\pm$ 0.011  $\chi^2$ /NDF: 11700295.8/57

asym\_sam\_26\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1333.599 \pm 332.584$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-949.344 \pm 356.167$   $\chi^2/\text{NDF}$ : 30.4/34

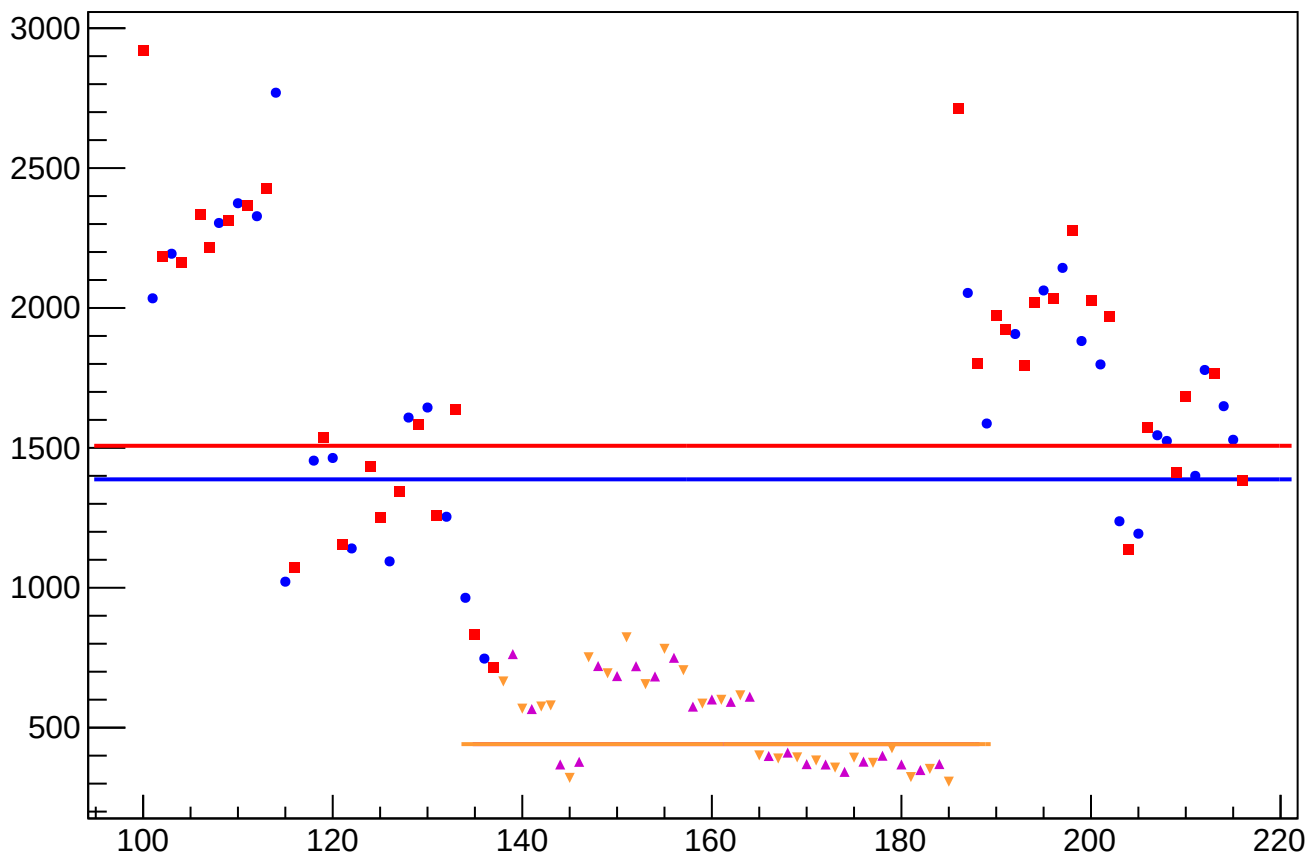
Left In:  $-10.644 \pm 107.670$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-383.223 \pm 100.329$   $\chi^2/\text{NDF}$ : 97.4/55

All:  $-240.185 \pm 71.890$   $\chi^2/\text{NDF}$ : 171.7/113

- sign  $-89.245 \pm 103.063$   $\chi^2/\text{NDF}$ : 70.1/57

# asym\_sam\_26\_avg\_cor\_correction\_rms vs Slug



Right In: 1387.481 $\pm$ 0.235  $\chi^2$ /NDF: 3433558.9/30

Left Out: 441.128 $\pm$ 0.074  $\chi^2$ /NDF: 3234622.5/24

Right Out: 1507.432 $\pm$ 0.252  $\chi^2$ /NDF: 3368956.9/34

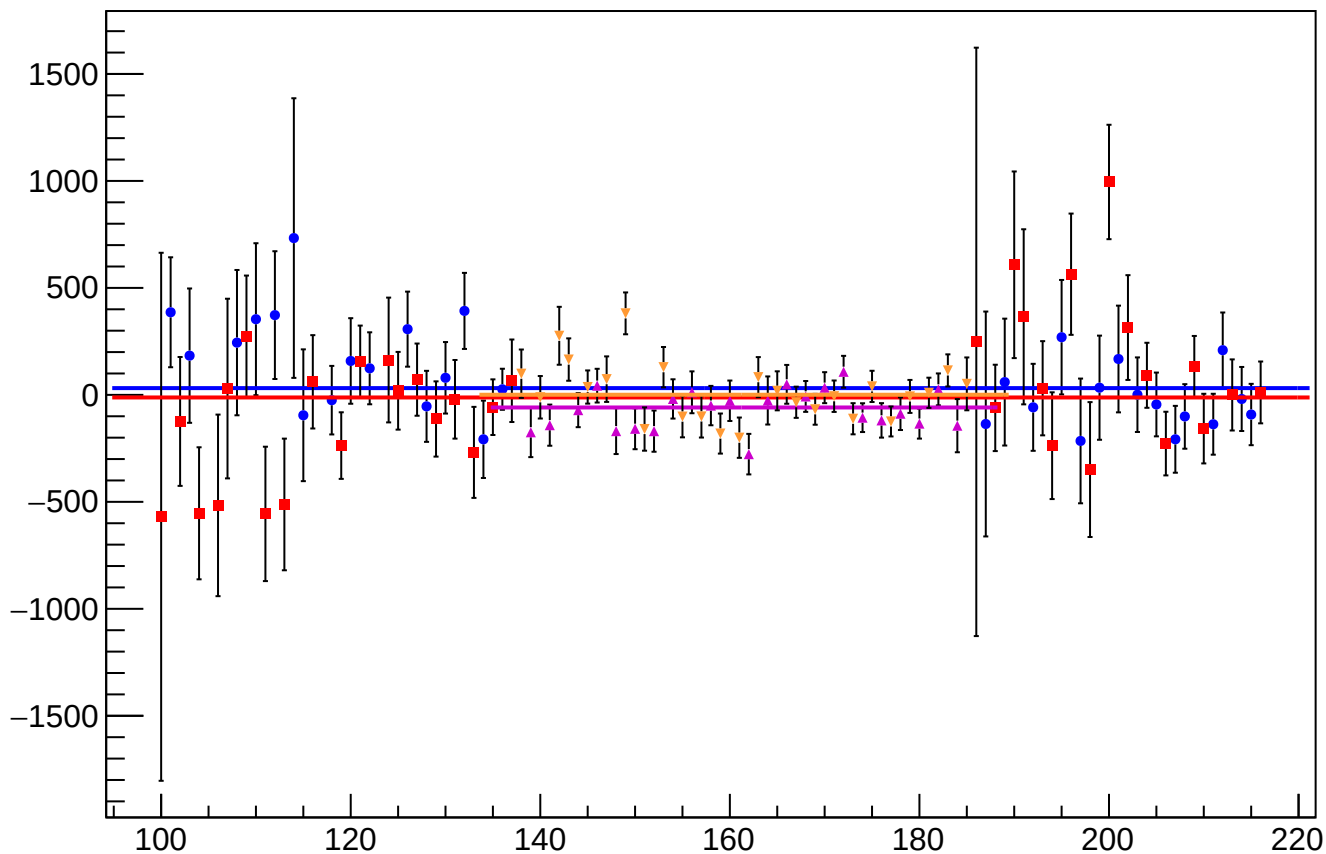
Left In: 441.196 $\pm$ 0.076  $\chi^2$ /NDF: 2682073.9/22

+ sign 527.248 $\pm$ 0.071  $\chi^2$ /NDF: 21387766.0/55

All: 528.819 $\pm$ 0.051  $\chi^2$ /NDF: 43862740.2/11

- sign 530.476 $\pm$ 0.073  $\chi^2$ /NDF: 22473967.0/57

# eigen\_cor\_asym\_sam\_26\_avg\_mean vs Slug



Right In:  $31.617 \pm 33.779$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $0.598 \pm 17.319$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $-12.114 \pm 35.436$   $\chi^2/\text{NDF}$ : 46.8/34

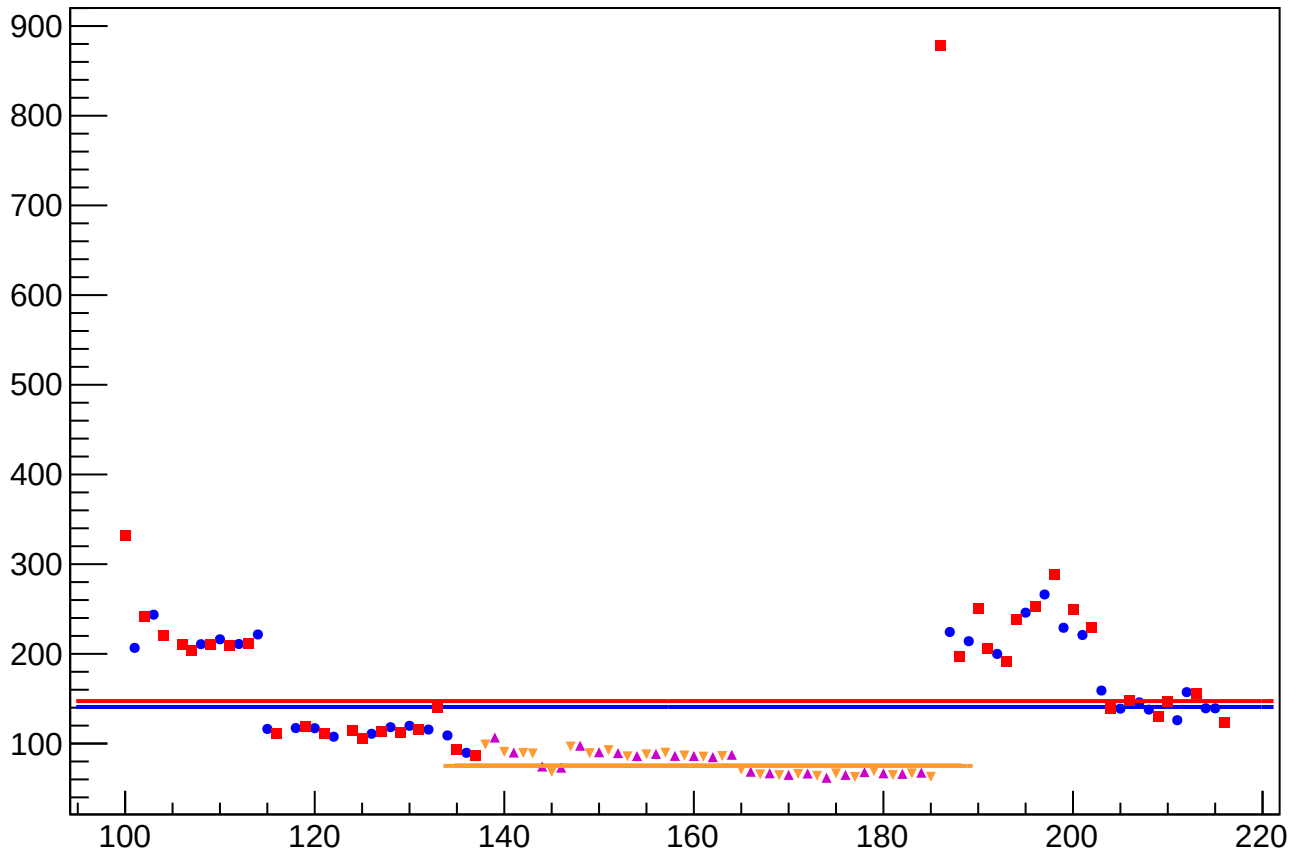
Left In:  $-58.904 \pm 17.879$   $\chi^2/\text{NDF}$ : 25.8/22

+ sign  $7.055 \pm 15.412$   $\chi^2/\text{NDF}$ : 73.6/55

All:  $-20.187 \pm 11.087$   $\chi^2/\text{NDF}$ : 154.1/113

- sign  $-49.410 \pm 15.962$   $\chi^2/\text{NDF}$ : 74.1/57

# eigen\_cor\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 140.765 $\pm$ 0.024  $\chi^2$ /NDF: 3176979.2/30

Left Out: 75.041 $\pm$ 0.012  $\chi^2$ /NDF: 928107.8/24

Right Out: 147.350 $\pm$ 0.025  $\chi^2$ /NDF: 4281594.7/34

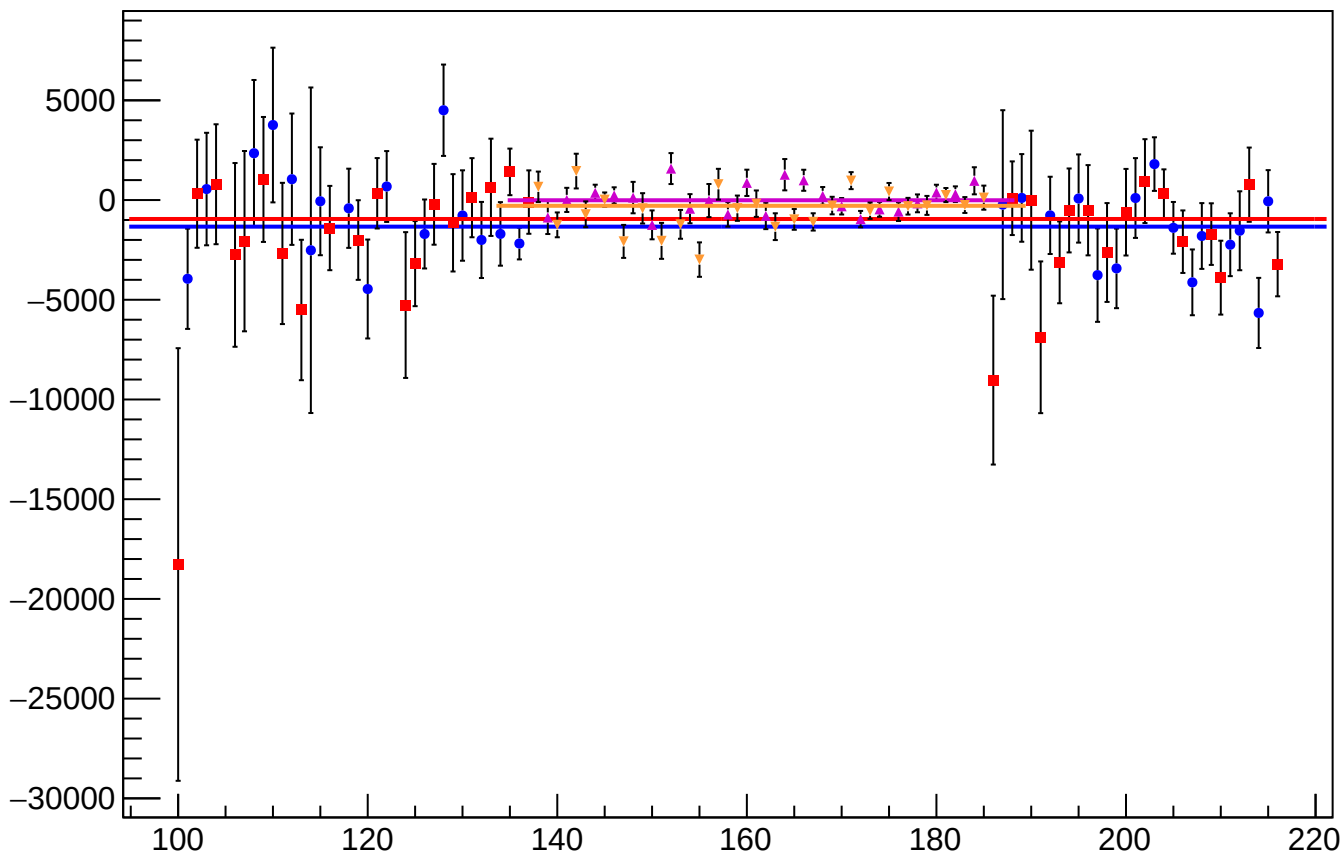
Left In: 75.352 $\pm$ 0.013  $\chi^2$ /NDF: 837634.2/22

+ sign 88.722 $\pm$ 0.011  $\chi^2$ /NDF: 10100460.0/55

All: 89.320 $\pm$ 0.008  $\chi^2$ /NDF: 21806992.1/113

- sign 89.961 $\pm$ 0.011  $\chi^2$ /NDF: 11700295.8/57

asym\_sam\_26\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1333.599 \pm 332.584$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-288.079 \pm 105.231$   $\chi^2/\text{NDF}$ : 53.3/24

Right Out:  $-949.344 \pm 356.167$   $\chi^2/\text{NDF}$ : 30.4/34

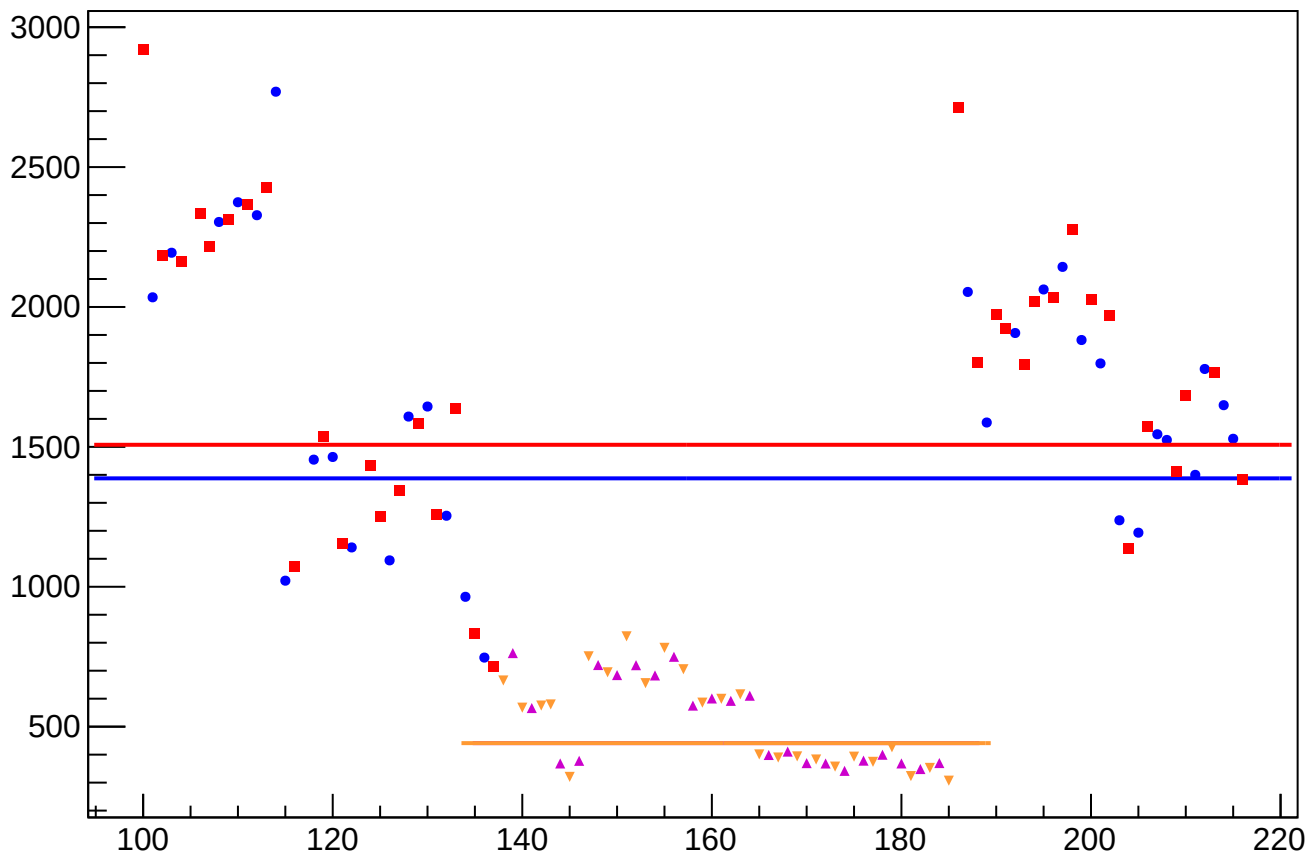
Left In:  $-10.644 \pm 107.670$   $\chi^2/\text{NDF}$ : 33.4/22

+ sign  $-383.223 \pm 100.329$   $\chi^2/\text{NDF}$ : 97.4/55

All:  $-240.185 \pm 71.890$   $\chi^2/\text{NDF}$ : 171.7/113

- sign  $-89.245 \pm 103.063$   $\chi^2/\text{NDF}$ : 70.1/57

asym\_sam\_26\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1387.481 $\pm$ 0.235  $\chi^2$ /NDF: 3433558.9/30

Left Out: 441.128 $\pm$ 0.074  $\chi^2$ /NDF:3234622.5/24

Right Out: 1507.432 $\pm$ 0.252  $\chi^2$ /NDF: 3368956.9/34

Left In: 441.196 $\pm$ 0.076  $\chi^2$ /NDF:2682073.9/22

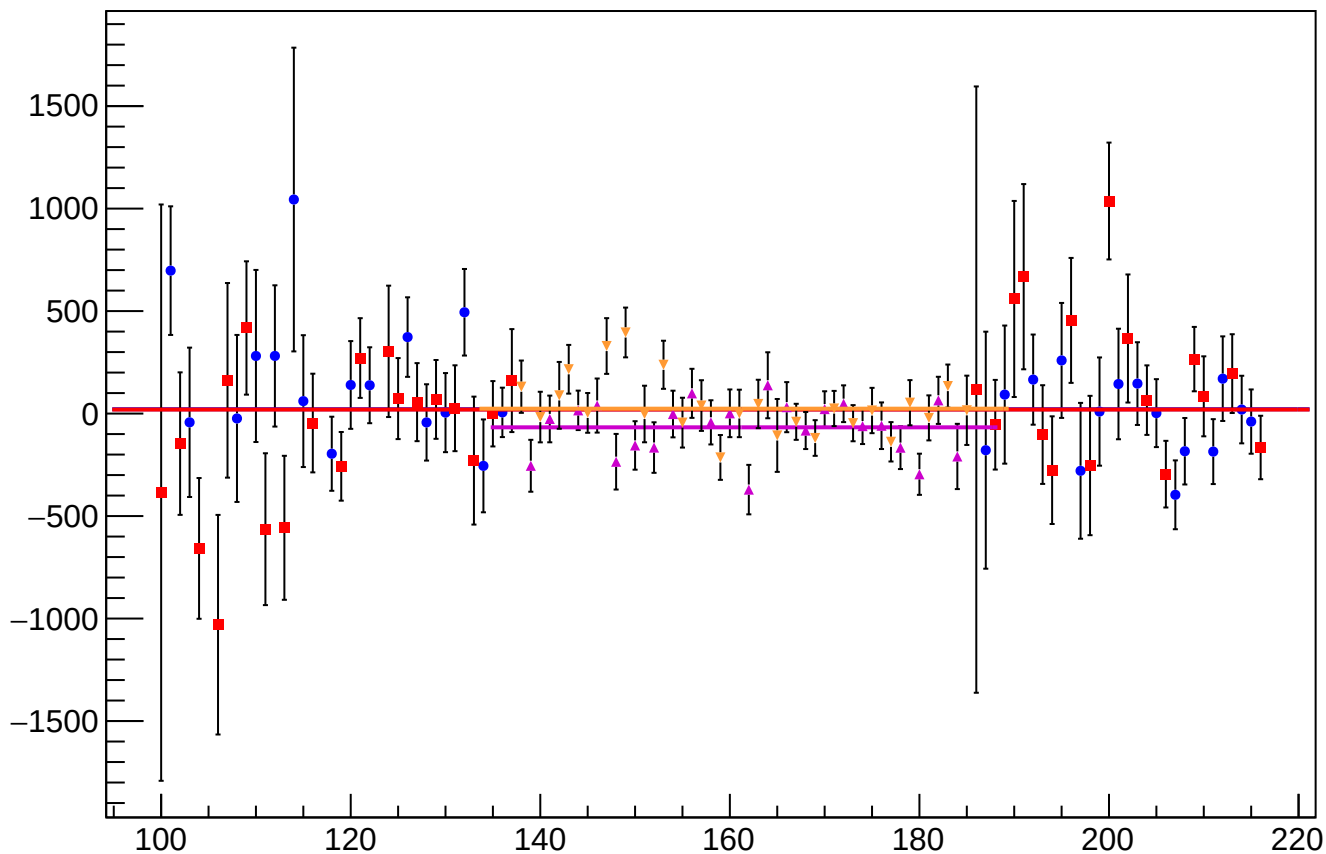
+ sign 527.248 $\pm$ 0.071  $\chi^2$ /NDF: 21387766.0/55

All: 528.819 $\pm$ 0.051  $\chi^2$ /NDF: 43862740.2/11

- sign 530.476 $\pm$ 0.073  $\chi^2$ /NDF: 22473967.0/57



# dit\_asym\_sam\_26\_avg\_mean vs Slug



Right In: 21.117 $\pm$ 38.305  $\chi^2$ /NDF: 32.5/30

Left Out: 23.873 $\pm$ 22.414  $\chi^2$ /NDF: 35.2/24

Right Out: 19.633 $\pm$ 40.155  $\chi^2$ /NDF: 51.5/34

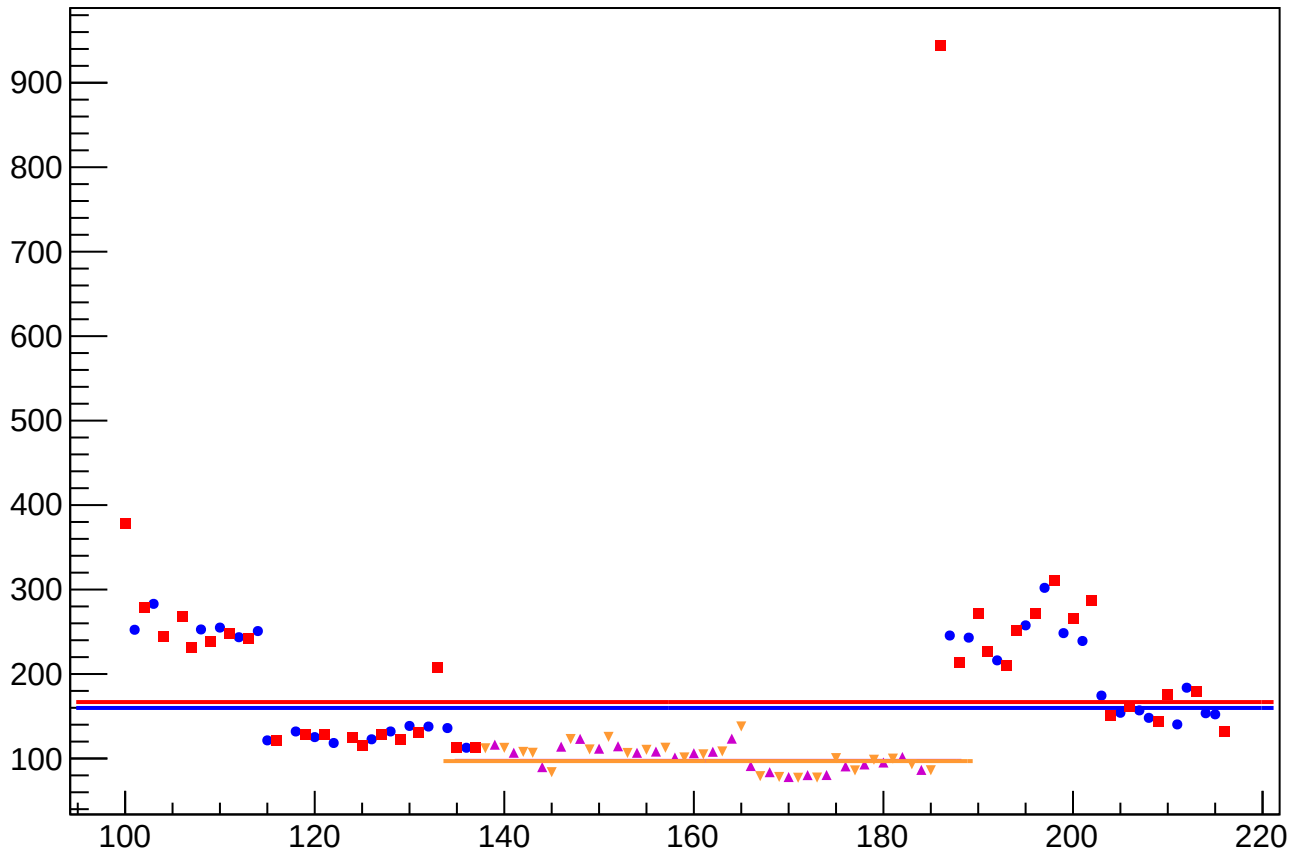
Left In: -67.086 $\pm$ 23.121  $\chi^2$ /NDF: 28.6/22

+ sign 23.170 $\pm$ 19.345  $\chi^2$ /NDF: 67.7/55

All: -9.957 $\pm$ 13.917  $\chi^2$ /NDF: 157.5/113

- sign -45.494 $\pm$ 20.037  $\chi^2$ /NDF: 83.7/57

# dit\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 159.823 $\pm$ 0.027  $\chi^2$ /NDF: 2873379.0/30

Left Out: 96.907 $\pm$ 0.016  $\chi^2$ /NDF:933980.7/24

Right Out: 166.800 $\pm$ 0.028  $\chi^2$ /NDF: 4122206.9/34

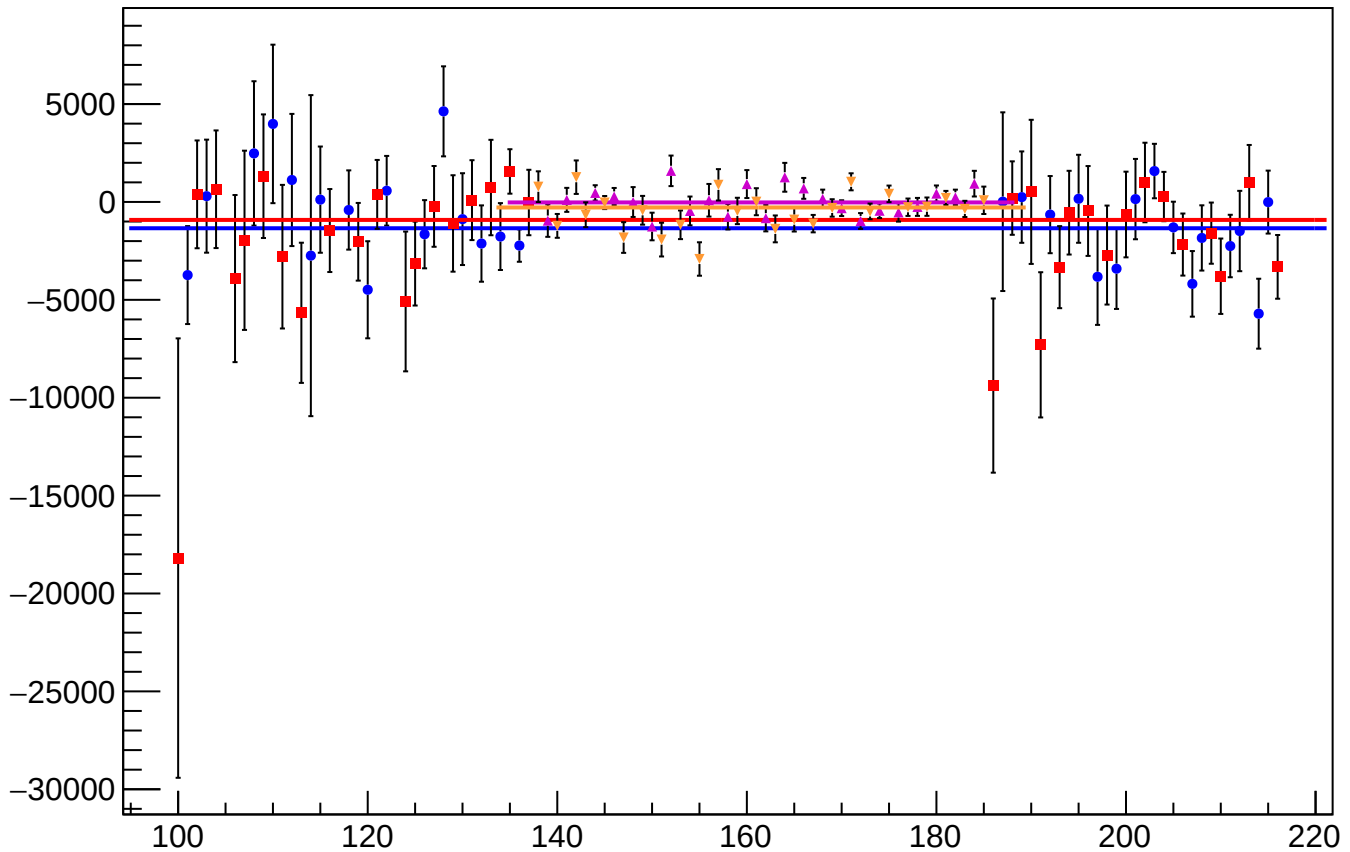
Left In: 97.167 $\pm$ 0.016  $\chi^2$ /NDF:674595.2/22

+ sign 112.955 $\pm$ 0.014  $\chi^2$ /NDF: 7826683.7/55

All: 113.703 $\pm$ 0.010  $\chi^2$ /NDF: 17146408.4/11

- sign 114.505 $\pm$ 0.014  $\chi^2$ /NDF: 9313527.0/57

asym\_sam\_26\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1343.593 \pm 340.765$   $\chi^2/\text{NDF}$ : 34.1/30

Left Out:  $-282.422 \pm 106.394$   $\chi^2/\text{NDF}$ : 50.4/24

Right Out:  $-917.903 \pm 359.840$   $\chi^2/\text{NDF}$ : 32.1/34

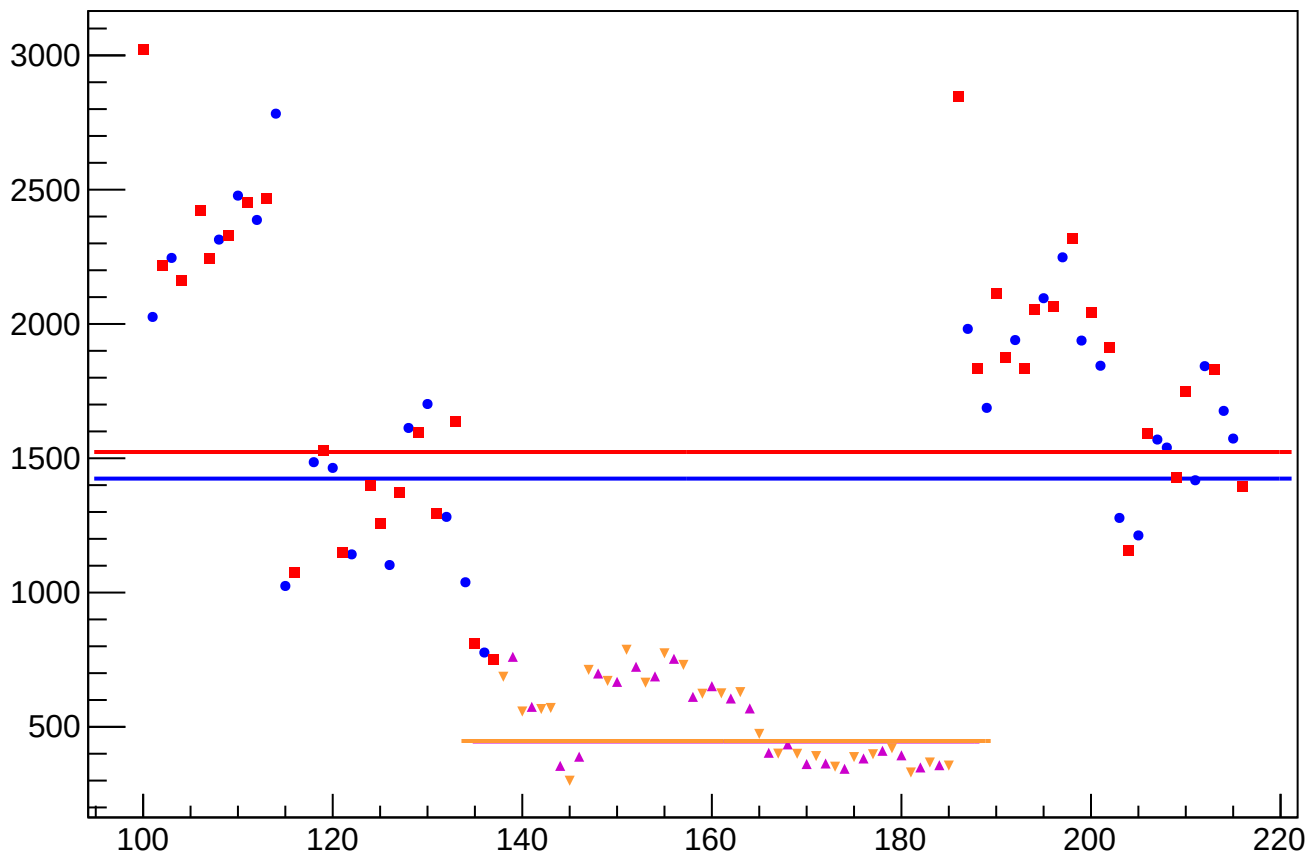
Left In:  $-24.625 \pm 108.884$   $\chi^2/\text{NDF}$ : 32.9/22

+ sign  $-376.679 \pm 101.559$   $\chi^2/\text{NDF}$ : 93.4/55

All:  $-241.695 \pm 72.735$   $\chi^2/\text{NDF}$ : 167.7/113

- sign  $-99.554 \pm 104.217$   $\chi^2/\text{NDF}$ : 70.7/57

# asym\_sam\_26\_avg\_dit\_correction\_rms vs Slug



Right In: 1424.304+/-0.241  $\chi^2$ /NDF: 3333755.1/30

Left Out: 447.386+/-0.075  $\chi^2$ /NDF: 3197771.9/24

Right Out: 1523.330+/-0.254  $\chi^2$ /NDF: 3491887.4/34

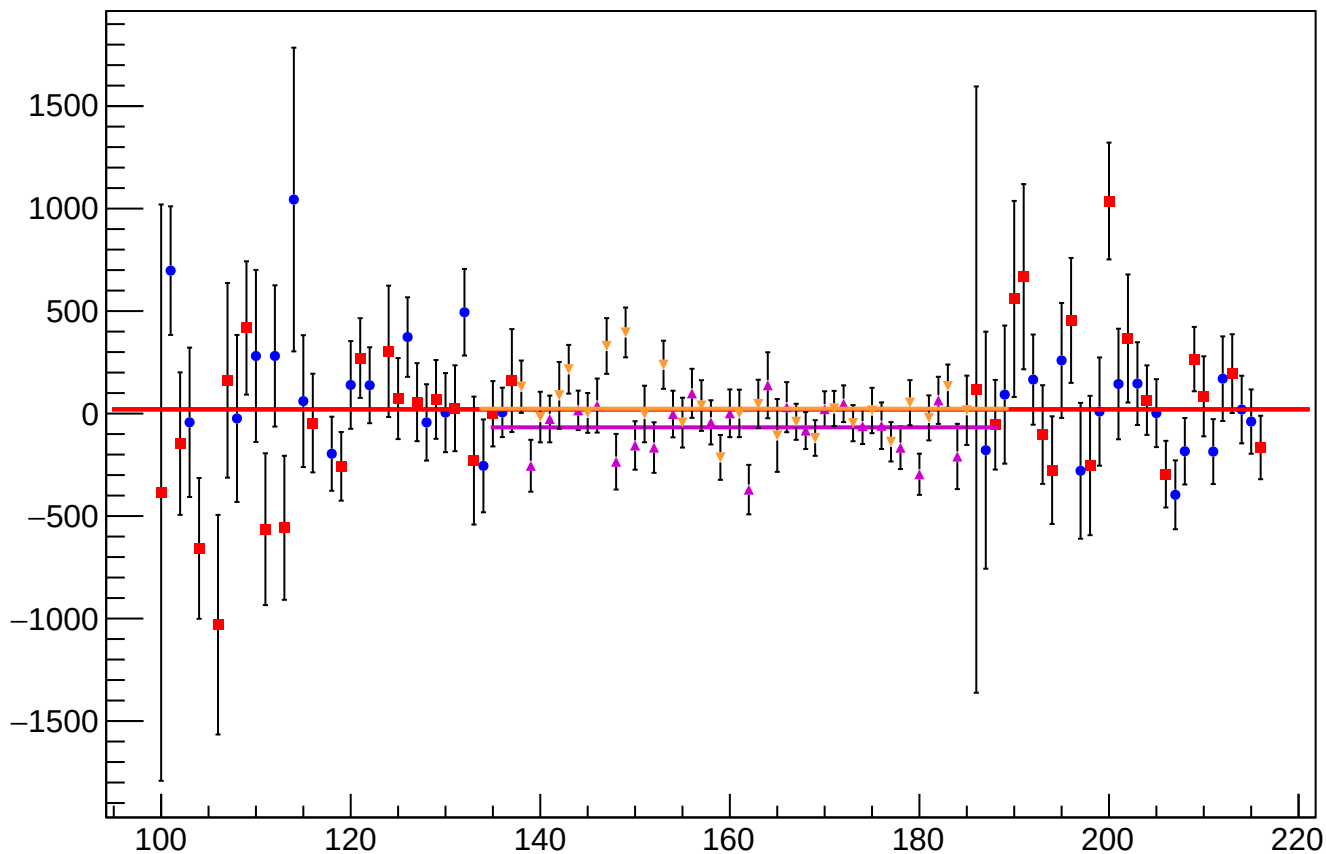
Left In: 445.491+/-0.077  $\chi^2$ /NDF: 2713295.1/22

+ sign 534.159+/-0.072  $\chi^2$ /NDF: 21508985.5/55

All: 535.007+/-0.051  $\chi^2$ /NDF: 44153259.7/11

- sign 535.900+/-0.074  $\chi^2$ /NDF: 22643987.8/57

eigen\_dit\_asym\_sam\_26\_avg\_mean vs Slug



Right In: 21.120 $\pm$ 38.305  $\chi^2$ /NDF: 32.5/30

Left Out: 23.872 $\pm$ 22.414  $\chi^2$ /NDF: 35.2/24

Right Out: 19.633 $\pm$ 40.155  $\chi^2$ /NDF: 51.5/34

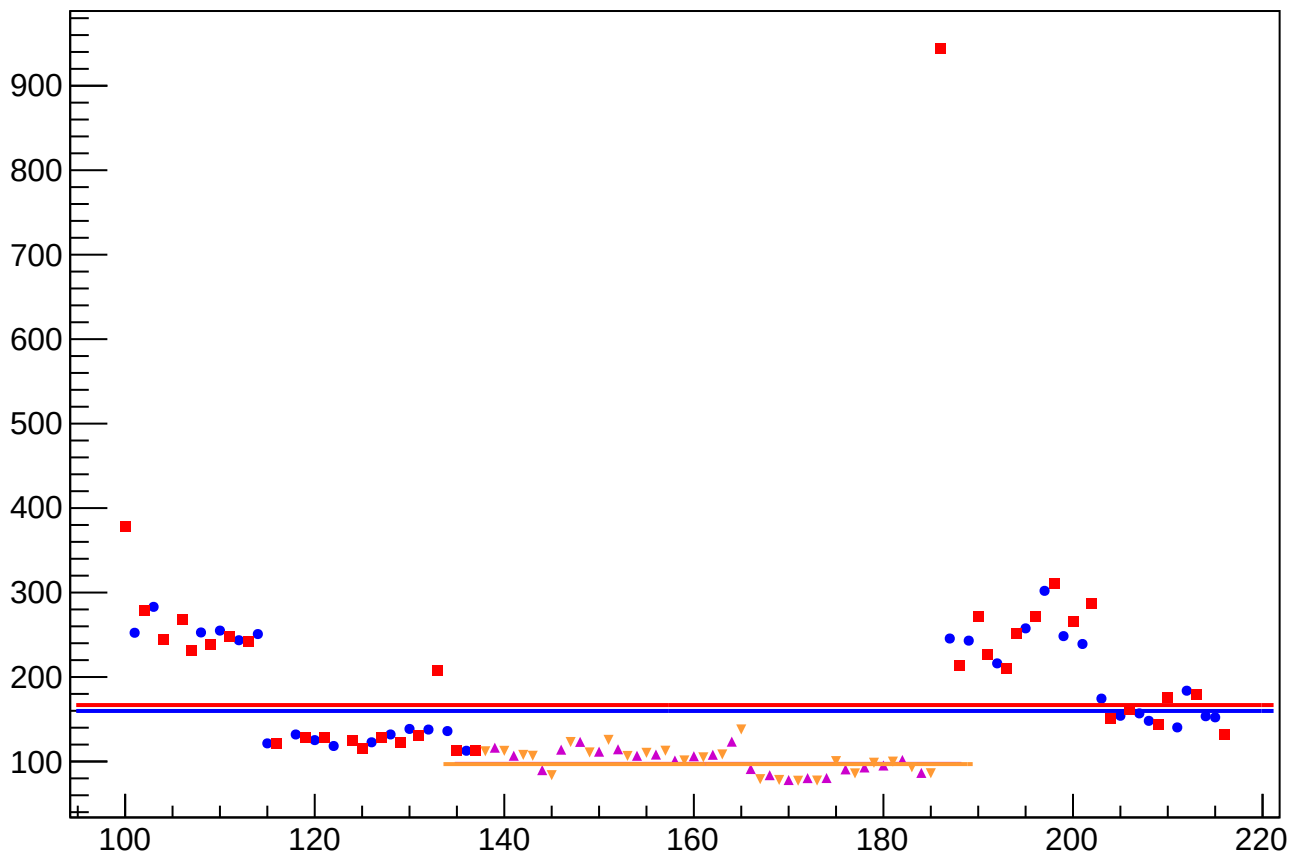
Left In: -67.085 $\pm$ 23.121  $\chi^2$ /NDF: 28.6/22

+ sign 23.170 $\pm$ 19.346  $\chi^2$ /NDF: 67.7/55

All: -9.957 $\pm$ 13.917  $\chi^2$ /NDF: 157.5/113

- sign -45.493 $\pm$ 20.037  $\chi^2$ /NDF: 83.7/57

# eigen\_dit\_asym\_sam\_26\_avg\_rms vs Slug



Right In: 159.822 $\pm$ 0.027  $\chi^2$ /NDF: 2873389.7/30

Left Out: 96.907 $\pm$ 0.016  $\chi^2$ /NDF:933979.3/24

Right Out: 166.800 $\pm$ 0.028  $\chi^2$ /NDF: 4122205.5/34

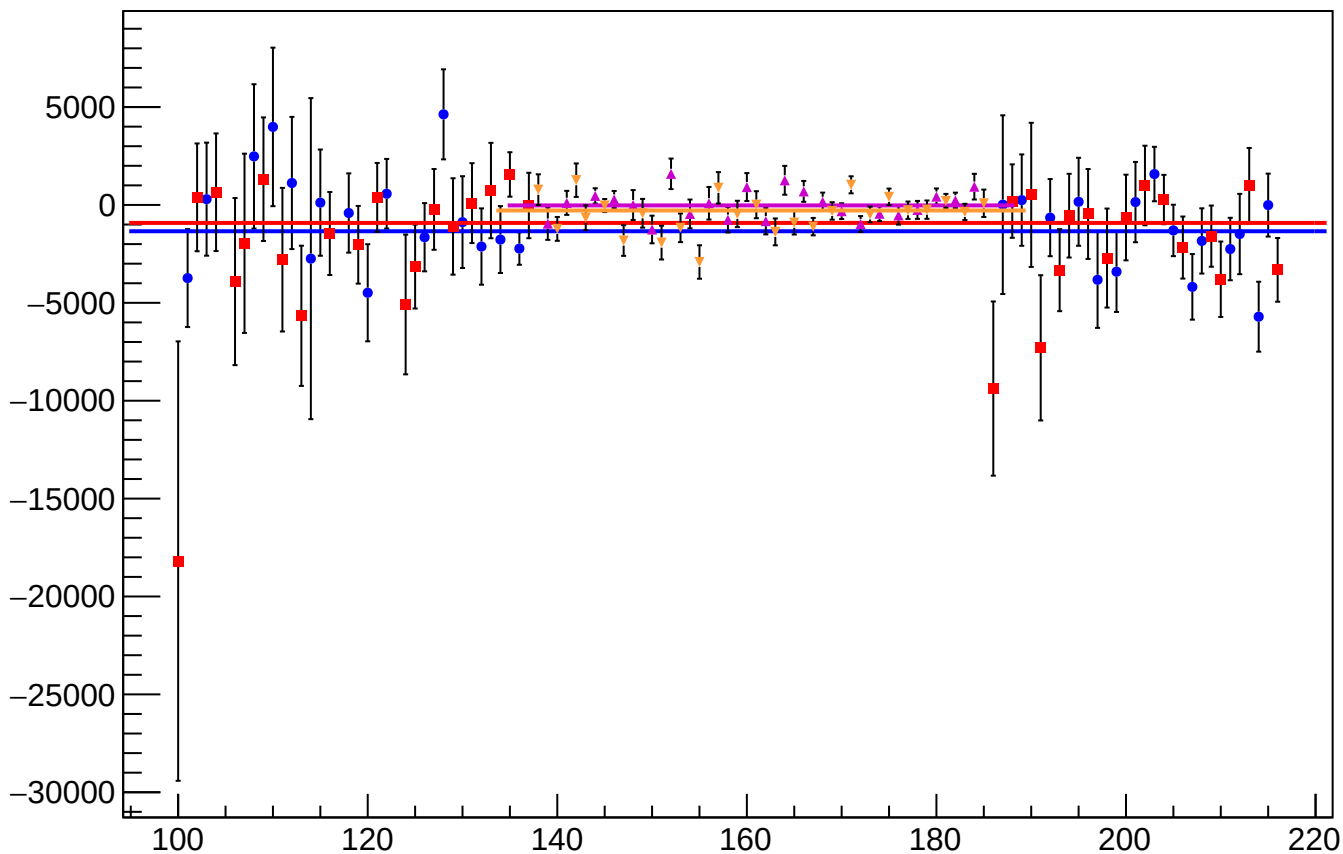
Left In: 97.168 $\pm$ 0.016  $\chi^2$ /NDF:674586.0/22

+ sign 112.955 $\pm$ 0.014  $\chi^2$ /NDF: 7826613.9/55

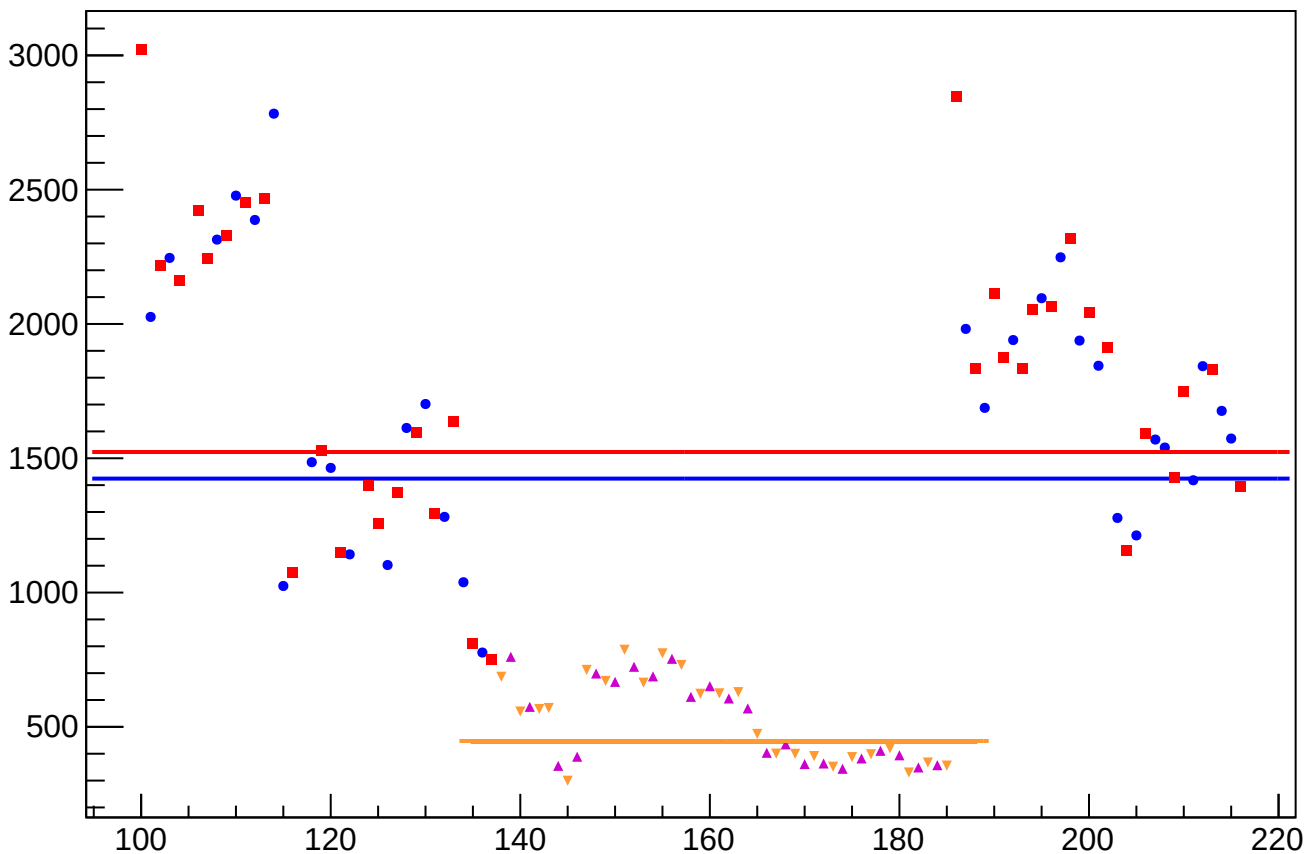
All: 113.703 $\pm$ 0.010  $\chi^2$ /NDF: 17146257.7/1

- sign 114.505 $\pm$ 0.014  $\chi^2$ /NDF: 9313445.1/57

asym\_sam\_26\_avg\_eigen\_dit\_correction\_mean vs Slug



asym\_sam\_26\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1424.304+/-0.241  $\chi^2/\text{NDF}$ : 3333735.4/30

Left Out: 447.385+/-0.075  $\chi^2/\text{NDF}$ : 3197793.9/24

Right Out: 1523.330+/-0.254  $\chi^2/\text{NDF}$ : 3491868.7/34

Left In: 445.491+/-0.077  $\chi^2/\text{NDF}$ : 2713303.9/22

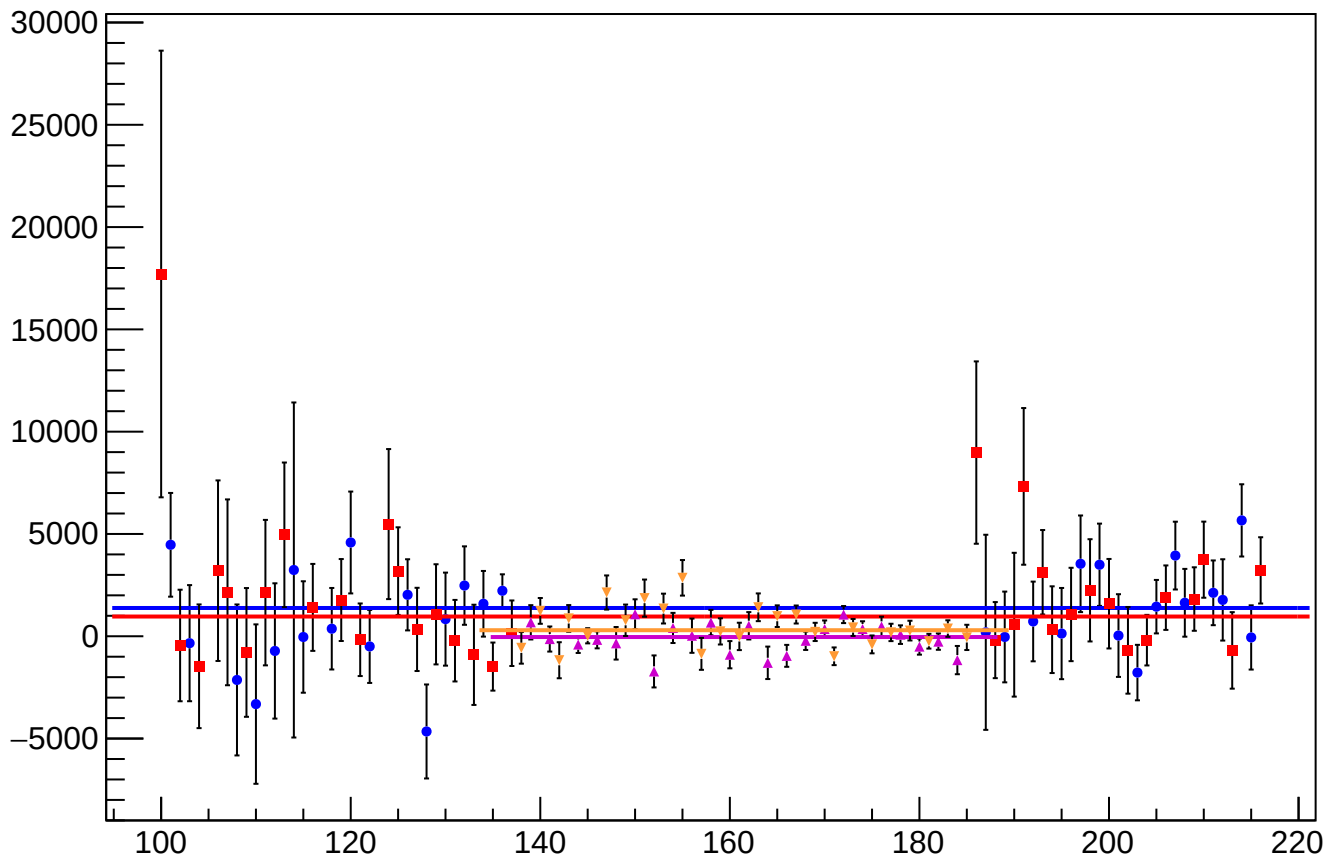
+ sign 534.158+/-0.072  $\chi^2/\text{NDF}$ : 21509014.8/55

All: 535.007+/-0.051  $\chi^2/\text{NDF}$ : 44153305.4/11

- sign 535.900+/-0.074  $\chi^2/\text{NDF}$ : 22644004.2/57



# asym\_sam\_26\_avg\_mean vs Slug



Right In: 1381.844 $\pm$ 334.712  $\chi^2$ /NDF: 34.6/30

Left Out: 295.006 $\pm$ 106.810  $\chi^2$ /NDF: 50.5/24

Right Out: 964.123 $\pm$ 358.194  $\chi^2$ /NDF: 29.1/34

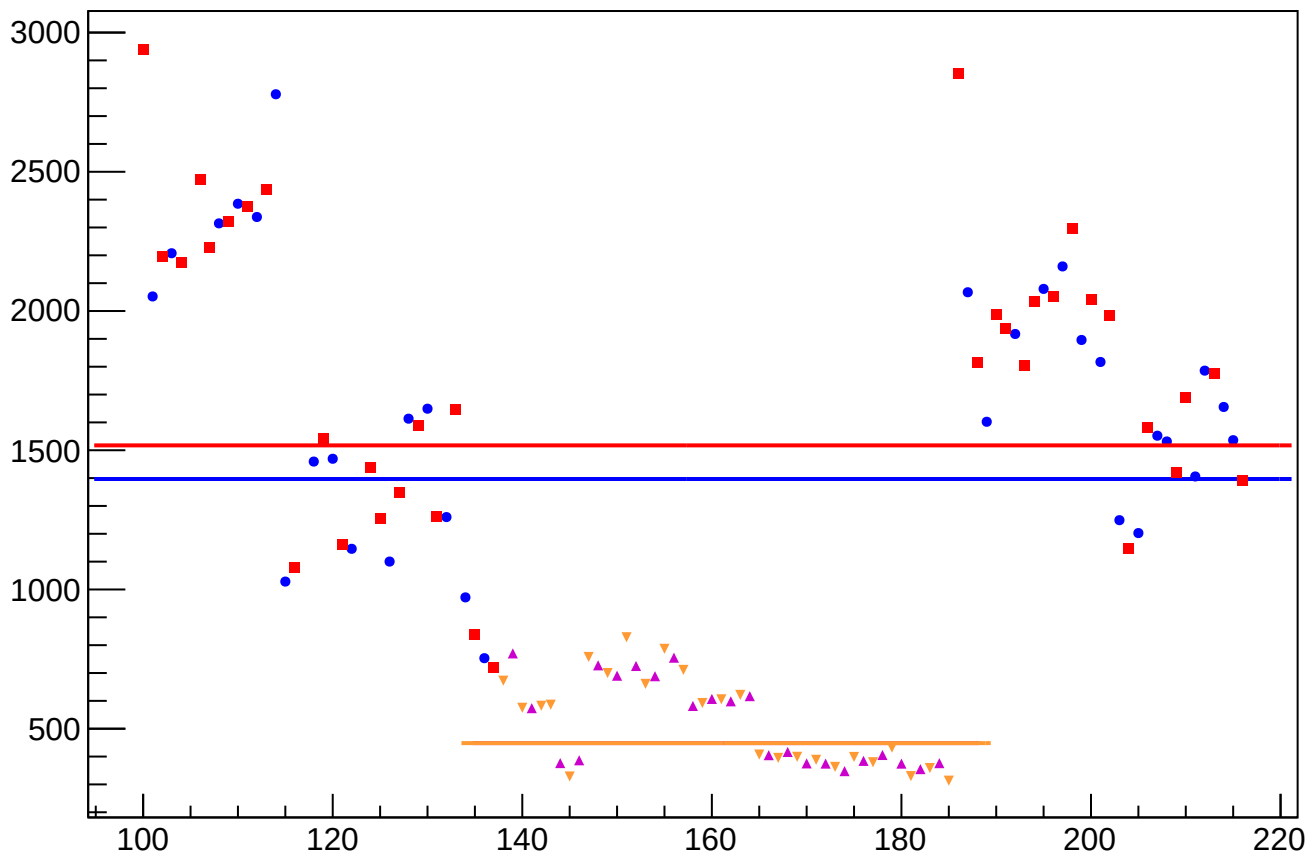
Left In: -38.107 $\pm$ 109.315  $\chi^2$ /NDF: 32.9/22

+ sign 395.452 $\pm$ 101.754  $\chi^2$ /NDF: 94.7/55

All: 226.094 $\pm$ 72.921  $\chi^2$ /NDF: 169.6/113

- sign 47.286 $\pm$ 104.555  $\chi^2$ /NDF: 69.2/57

# asym\_sam\_26\_avg\_rms vs Slug



Right In: 1396.724 $\pm$ 0.237  $\chi^2$ /NDF: 3417774.4/30

Left Out: 448.278 $\pm$ 0.076  $\chi^2$ /NDF:3156909.8/24

Right Out: 1517.479 $\pm$ 0.253  $\chi^2$ /NDF: 3416410.8/34

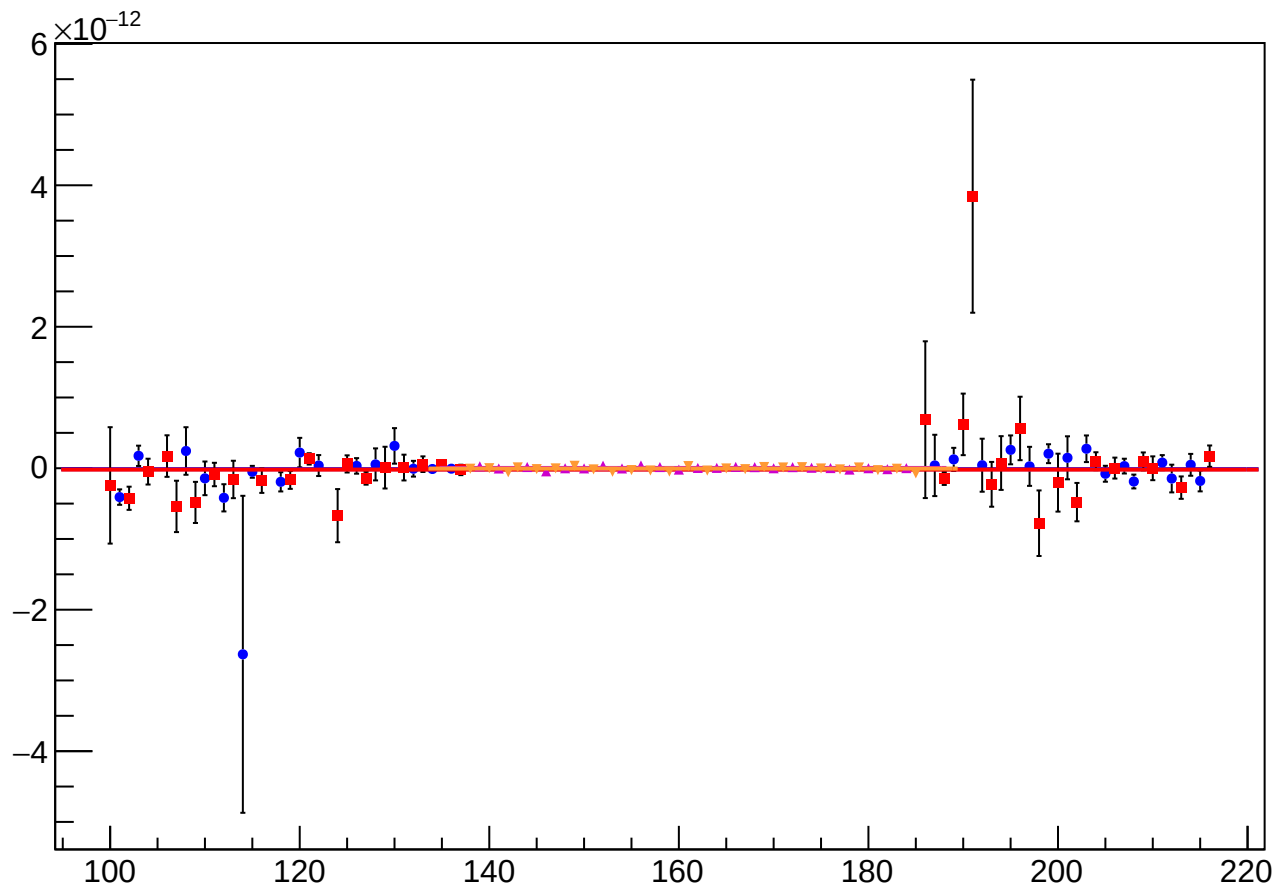
Left In: 448.397 $\pm$ 0.077  $\chi^2$ /NDF:2620759.6/22

+ sign 535.933 $\pm$ 0.072  $\chi^2$ /NDF: 21149310.7/55

All: 537.661 $\pm$ 0.052  $\chi^2$ /NDF: 43485868.8/11

- sign 539.485 $\pm$ 0.074  $\chi^2$ /NDF: 22335372.7/57

asym\_sam\_26\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 41.1/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 23.2/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 49.5/34

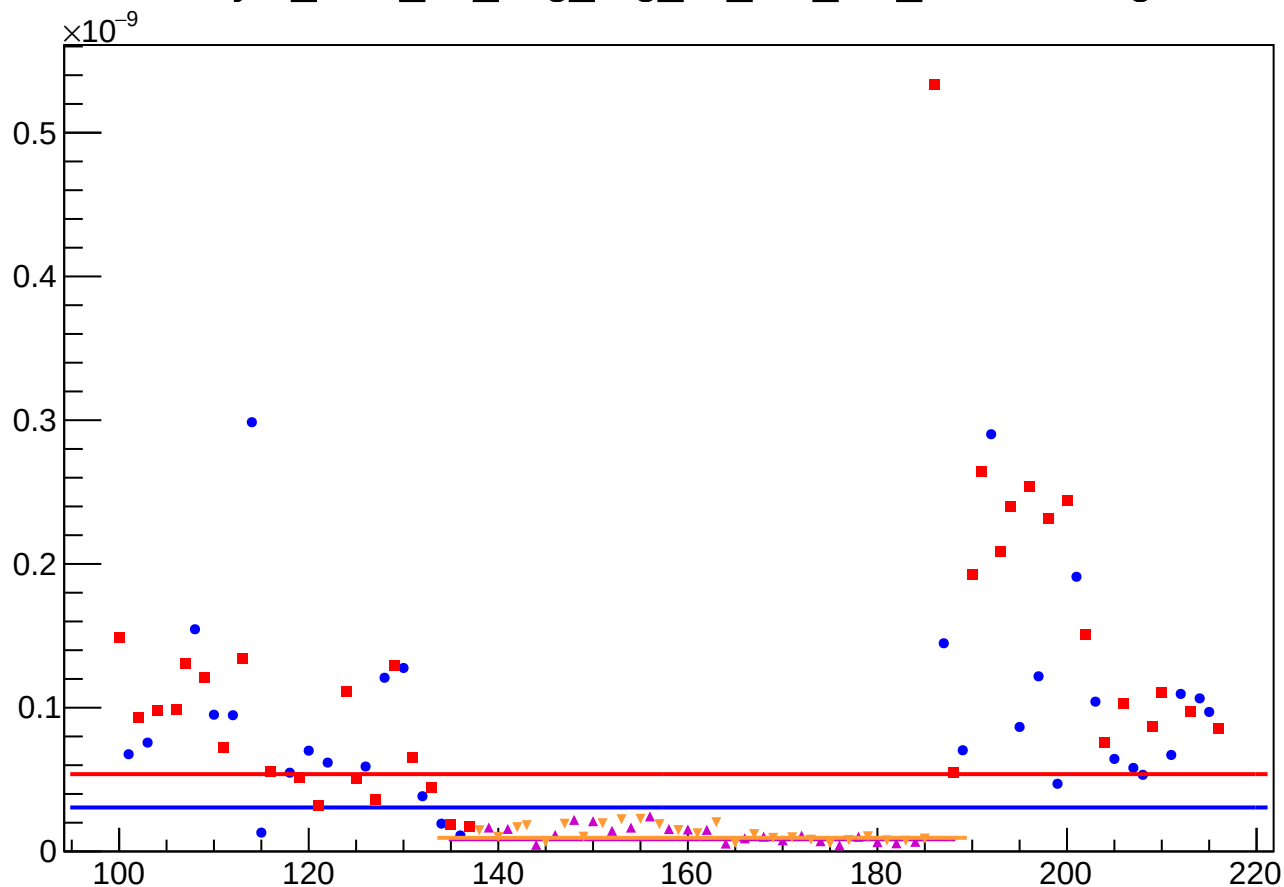
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 16.7/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 64.5/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 134.2/113

- sign 0.000+/-0.000  $\chi^2$ /NDF: 67.2/57

asym\_sam\_26\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 8320180.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2422094.9/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6486752.7/34

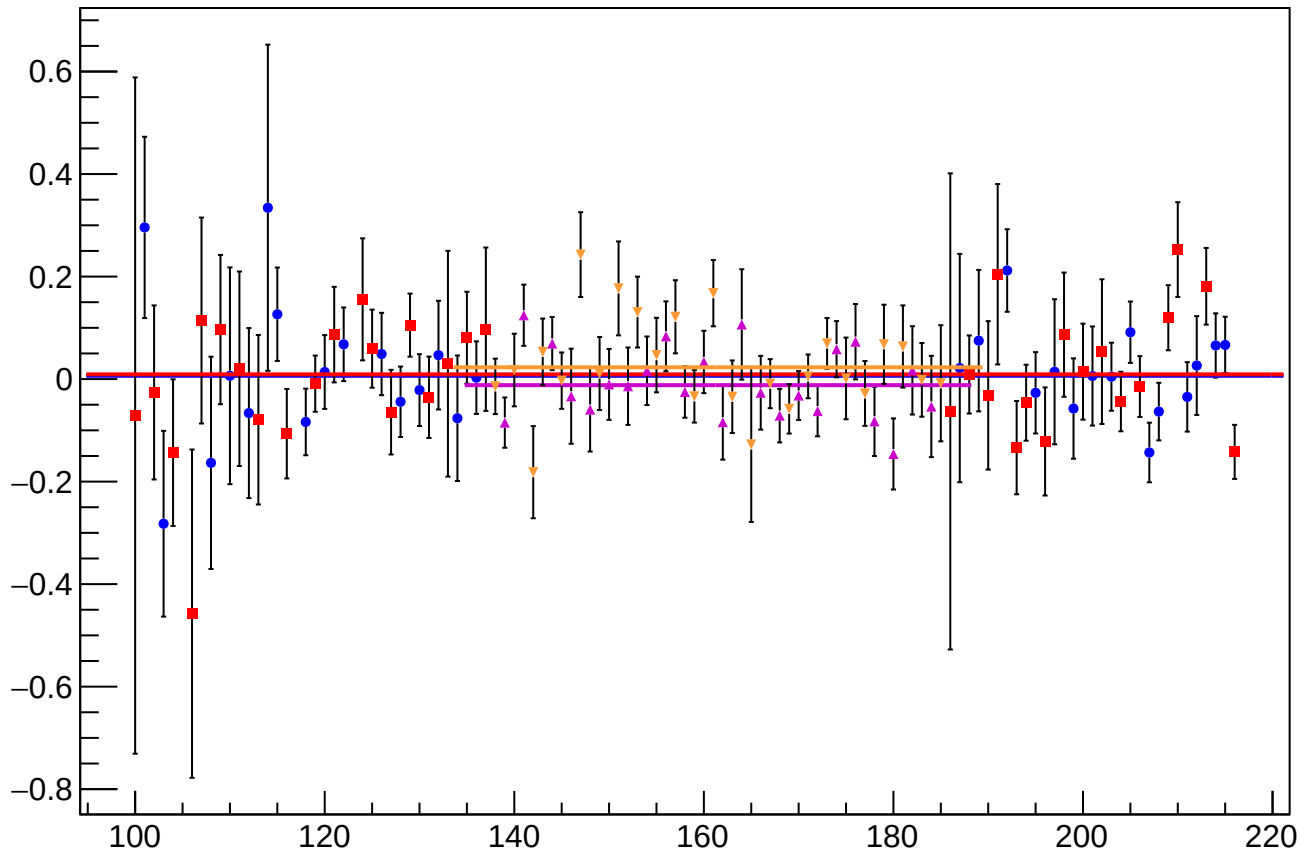
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 2739291.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13951200.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30377650.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16348396.9/57

asym\_sam\_26\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.015$   $\chi^2/\text{NDF}: 33.2/30$

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}: 34.2/24$

Right Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}: 44.1/34$

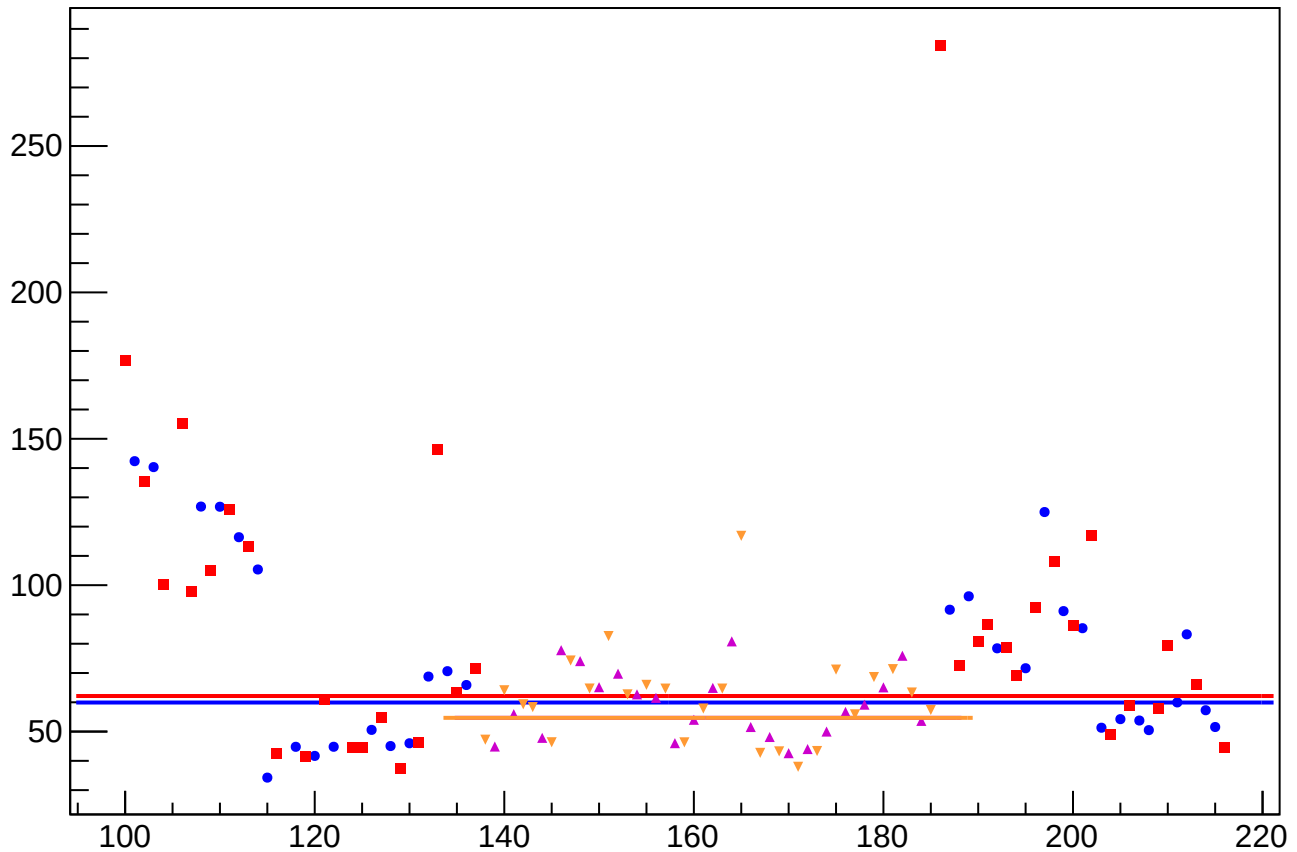
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}: 25.9/22$

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 68.1/55$

All:  $0.007 \pm 0.007$   $\chi^2/\text{NDF}: 141.0/113$

- sign  $-0.003 \pm 0.010$   $\chi^2/\text{NDF}: 71.1/57$

asym\_sam\_26\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $59.921 \pm 0.011$   $\chi^2/\text{NDF}: 3626108.8/30$

Left Out:  $54.686 \pm 0.009$   $\chi^2/\text{NDF}: 1936559.5/24$

Right Out:  $62.143 \pm 0.011$   $\chi^2/\text{NDF}: 4608417.3/34$

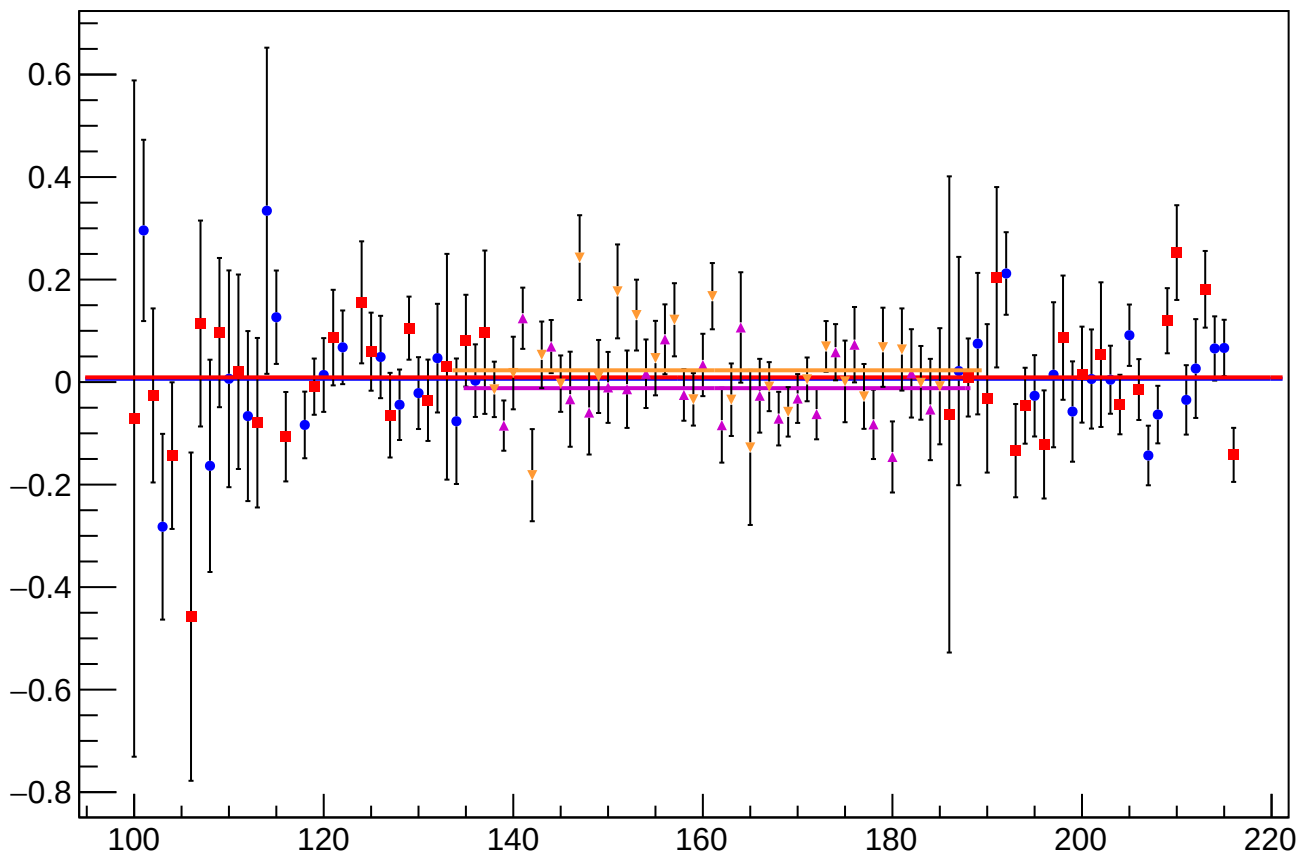
Left In:  $54.688 \pm 0.009$   $\chi^2/\text{NDF}: 1190787.0/22$

+ sign  $56.934 \pm 0.007$   $\chi^2/\text{NDF}: 5703474.6/55$

All:  $57.375 \pm 0.005$   $\chi^2/\text{NDF}: 11778654.3/113$

- sign  $57.843 \pm 0.007$   $\chi^2/\text{NDF}: 6066782.3/57$

asym\_sam\_26\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.015  $\chi^2$ /NDF: 33.2/30

Left Out: 0.023 $\pm$ 0.013  $\chi^2$ /NDF:34.2/24

Right Out: 0.009 $\pm$ 0.015  $\chi^2$ /NDF: 44.1/34

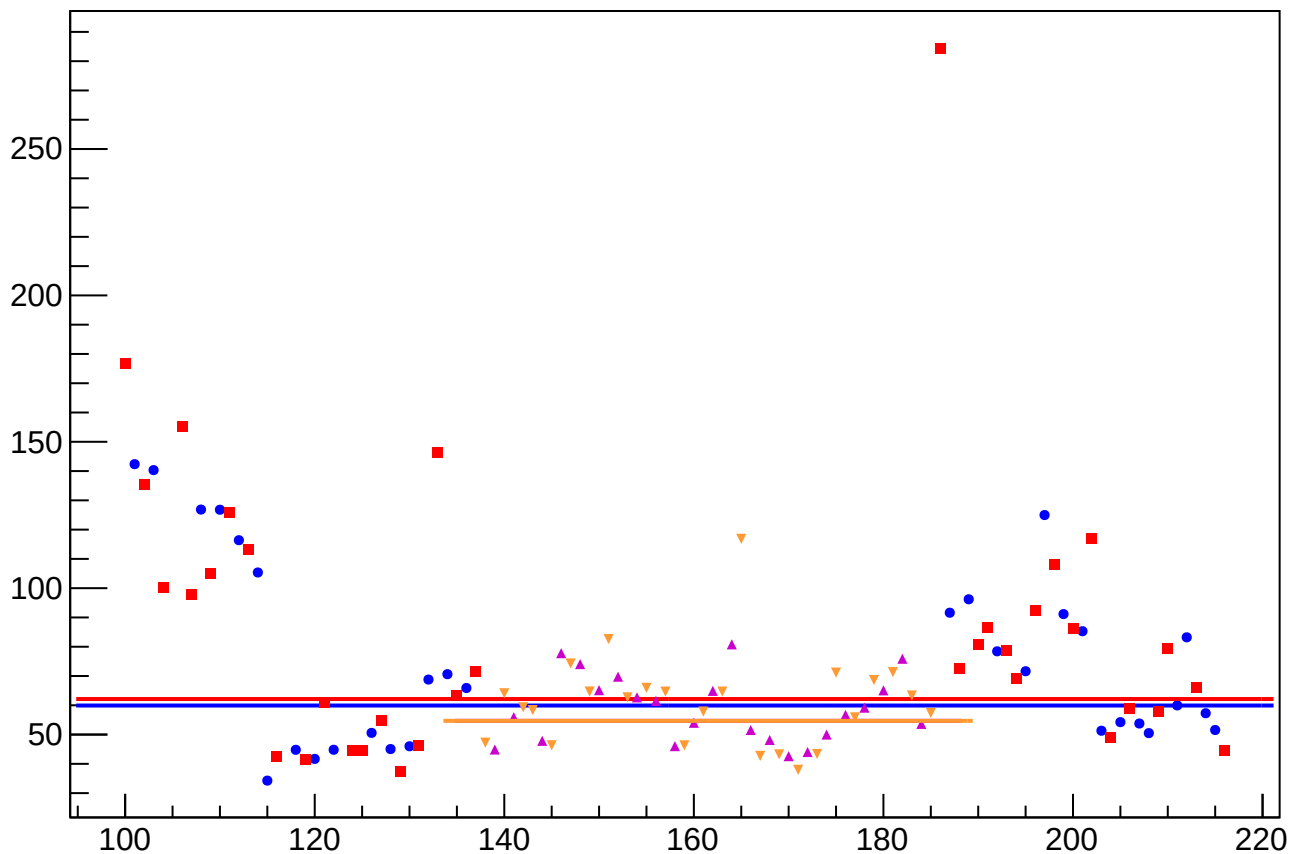
Left In: -0.012 $\pm$ 0.013  $\chi^2$ /NDF:25.9/22

+ sign 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 68.1/55

All: 0.007 $\pm$ 0.007  $\chi^2$ /NDF: 141.0/113

- sign -0.003 $\pm$ 0.010  $\chi^2$ /NDF: 71.1/57

asym\_sam\_26\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 59.921 $\pm$ 0.011  $\chi^2$ /NDF: 3626108.8/30

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF: 1936559.5/24

Right Out: 62.143 $\pm$ 0.011  $\chi^2$ /NDF: 4608417.3/34

Left In: 54.688 $\pm$ 0.009  $\chi^2$ /NDF: 1190787.0/22

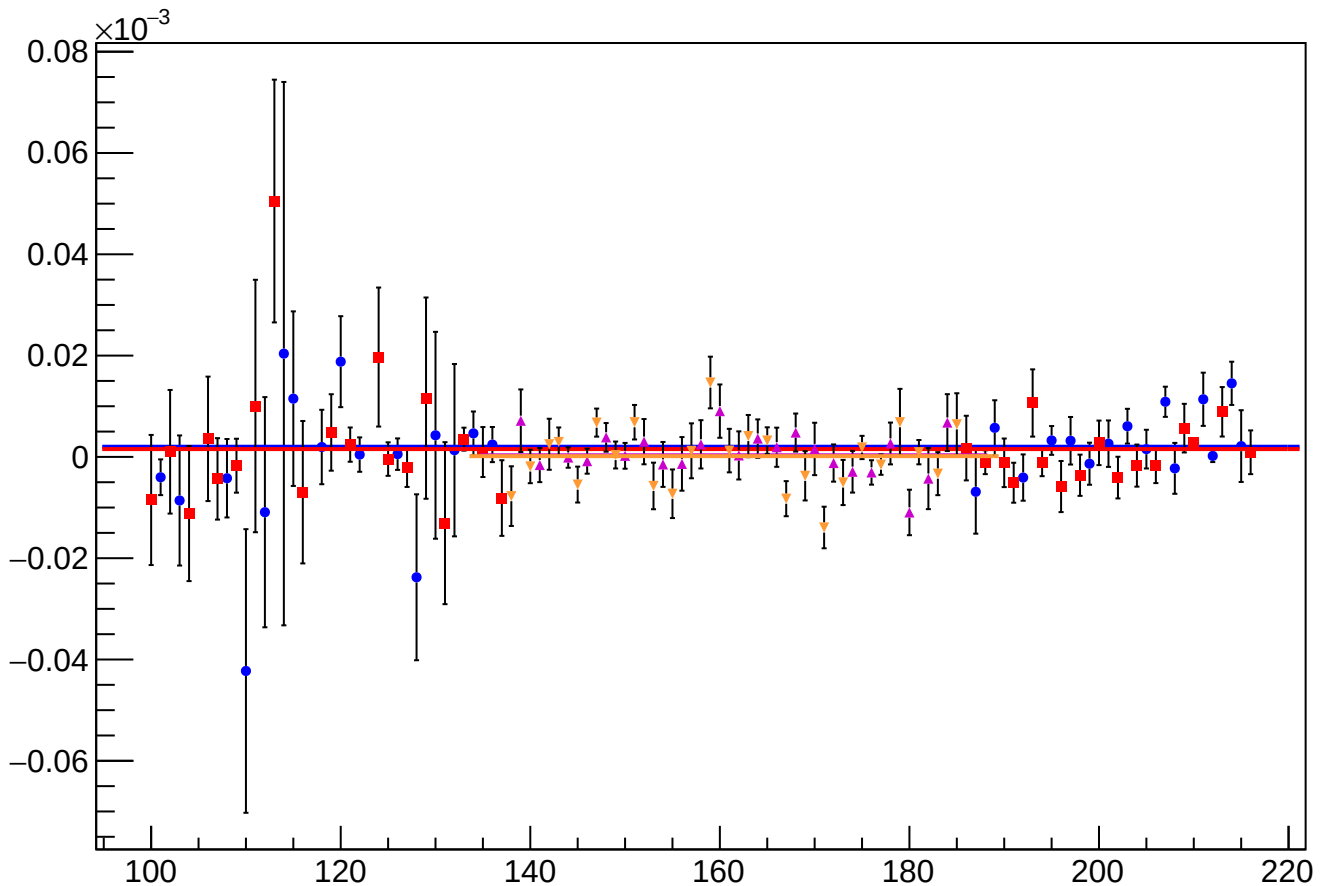
+ sign 56.934 $\pm$ 0.007  $\chi^2$ /NDF: 5703474.6/55

All: 57.375 $\pm$ 0.005  $\chi^2$ /NDF: 11778654.3/113

- sign 57.843 $\pm$ 0.007  $\chi^2$ /NDF: 6066782.3/57



asym\_sam\_26\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.6/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.7/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.4/34

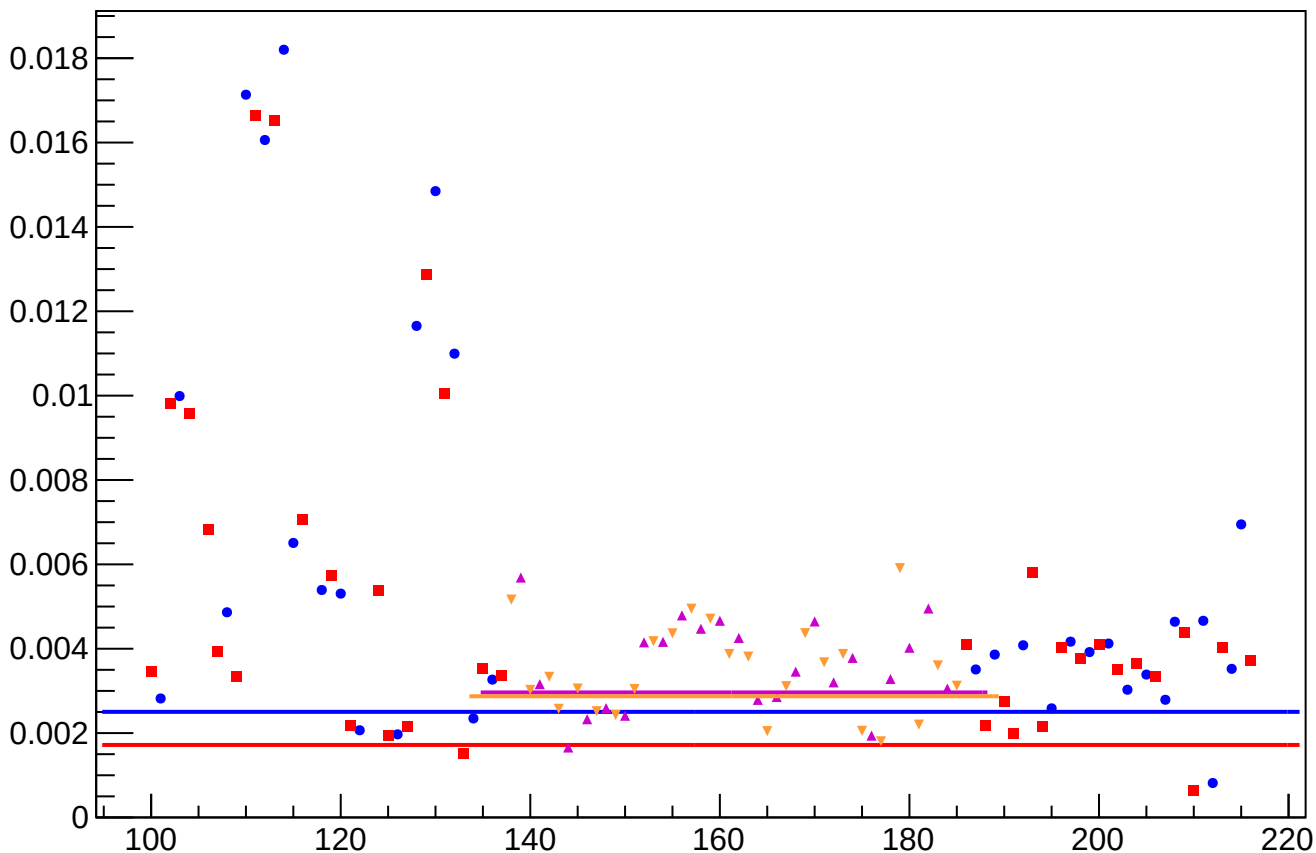
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 100.9/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 157.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.9/57

asym\_sam\_26\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 11724471.0/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3602368.5/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 16192600.5/34

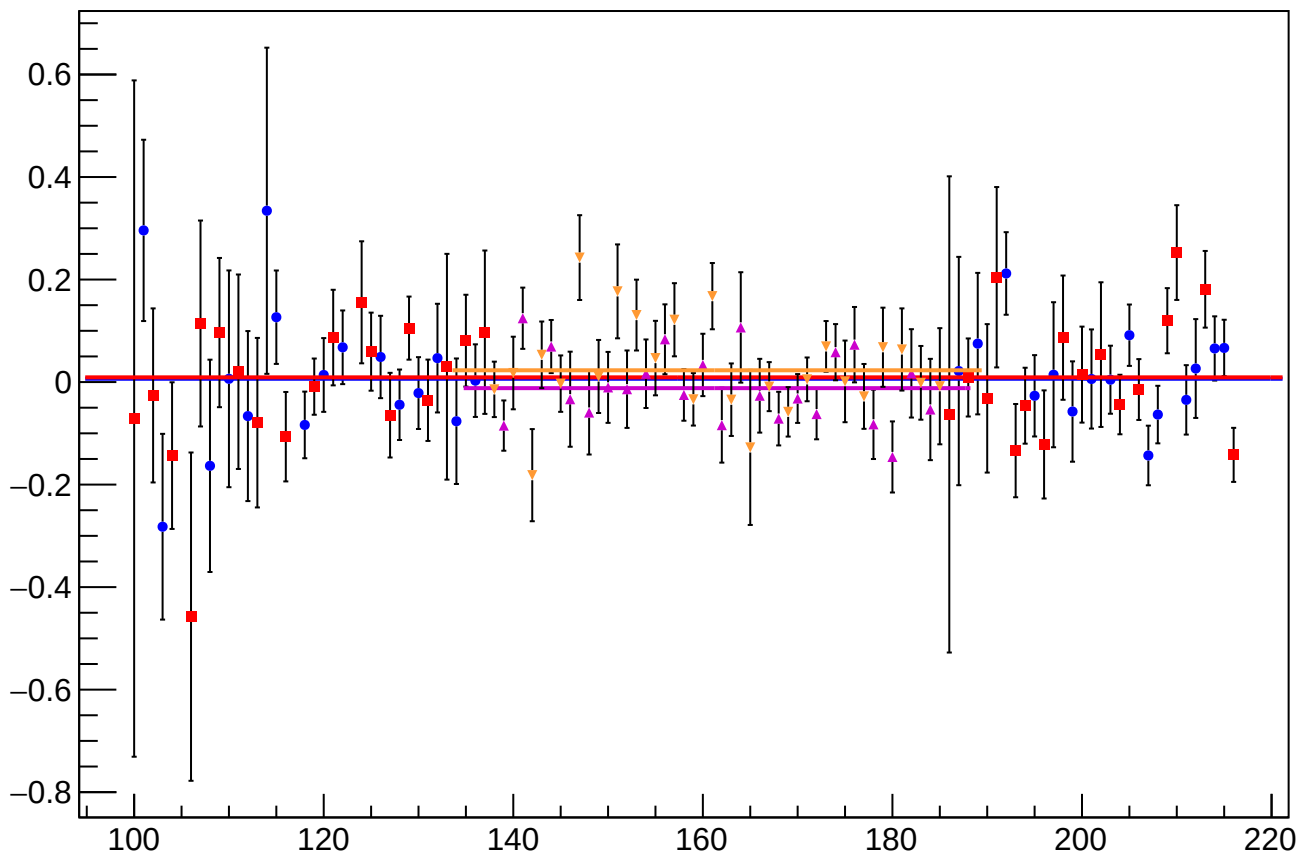
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 3619016.3/22

+ sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 15601593.9/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 40421268.9/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23444380.4/57

asym\_sam\_26\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.006 $\pm$ 0.015  $\chi^2$ /NDF: 33.2/30

Left Out: 0.023 $\pm$ 0.013  $\chi^2$ /NDF:34.2/24

Right Out: 0.009 $\pm$ 0.015  $\chi^2$ /NDF: 44.1/34

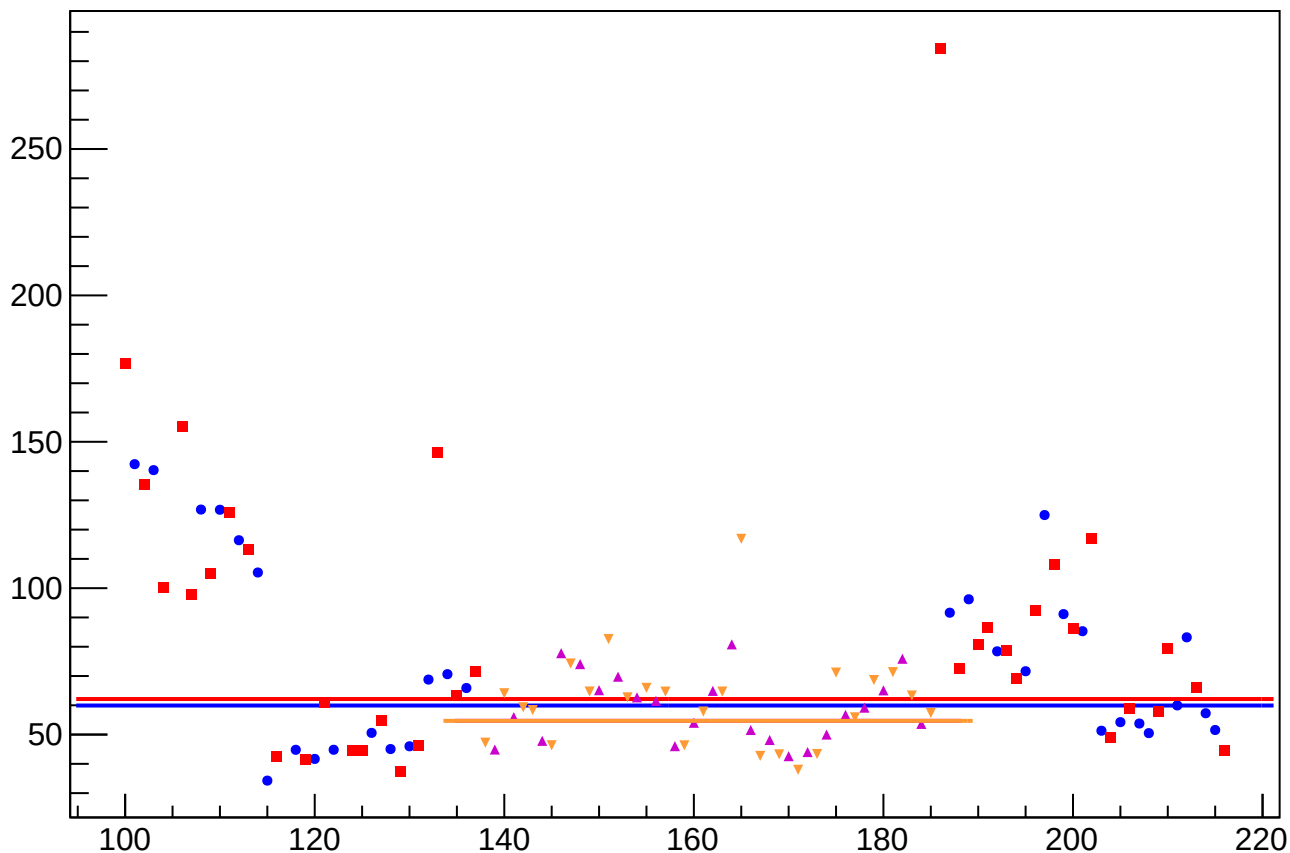
Left In: -0.012 $\pm$ 0.013  $\chi^2$ /NDF:25.9/22

+ sign 0.016 $\pm$ 0.010  $\chi^2$ /NDF: 68.1/55

All: 0.007 $\pm$ 0.007  $\chi^2$ /NDF: 141.0/113

- sign -0.003 $\pm$ 0.010  $\chi^2$ /NDF: 71.1/57

asym\_sam\_26\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 59.921 $\pm$ 0.011  $\chi^2$ /NDF: 3626073.5/30

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF: 1936555.1/24

Right Out: 62.142 $\pm$ 0.011  $\chi^2$ /NDF: 4608402.8/34

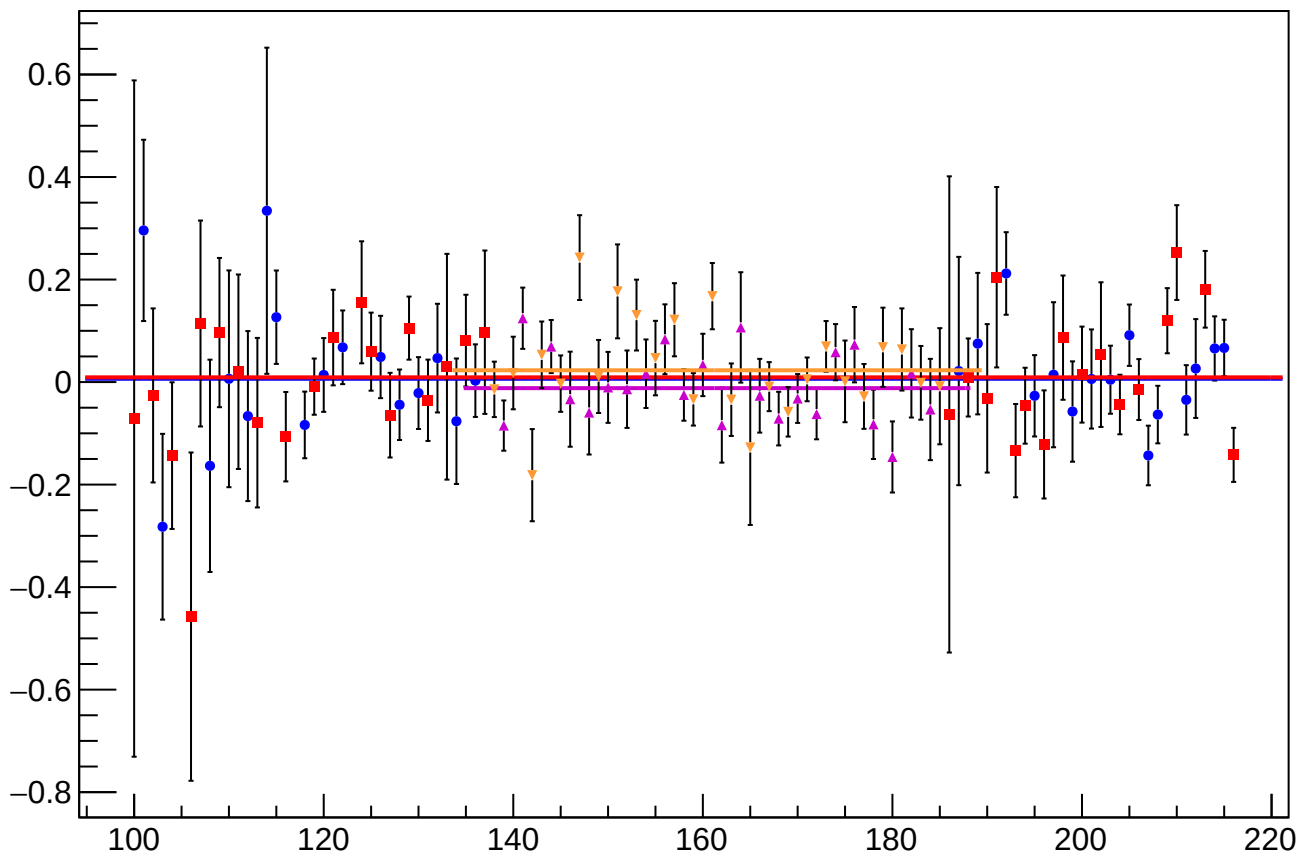
Left In: 54.689 $\pm$ 0.009  $\chi^2$ /NDF: 1190755.4/22

+ sign 56.934 $\pm$ 0.007  $\chi^2$ /NDF: 5703405.6/55

All: 57.375 $\pm$ 0.005  $\chi^2$ /NDF: 11778484.8/113

- sign 57.843 $\pm$ 0.007  $\chi^2$ /NDF: 6066680.6/57

asym\_sam\_26\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.006 \pm 0.015$   $\chi^2/\text{NDF}: 33.2/30$

Left Out:  $0.023 \pm 0.013$   $\chi^2/\text{NDF}: 34.2/24$

Right Out:  $0.009 \pm 0.015$   $\chi^2/\text{NDF}: 44.1/34$

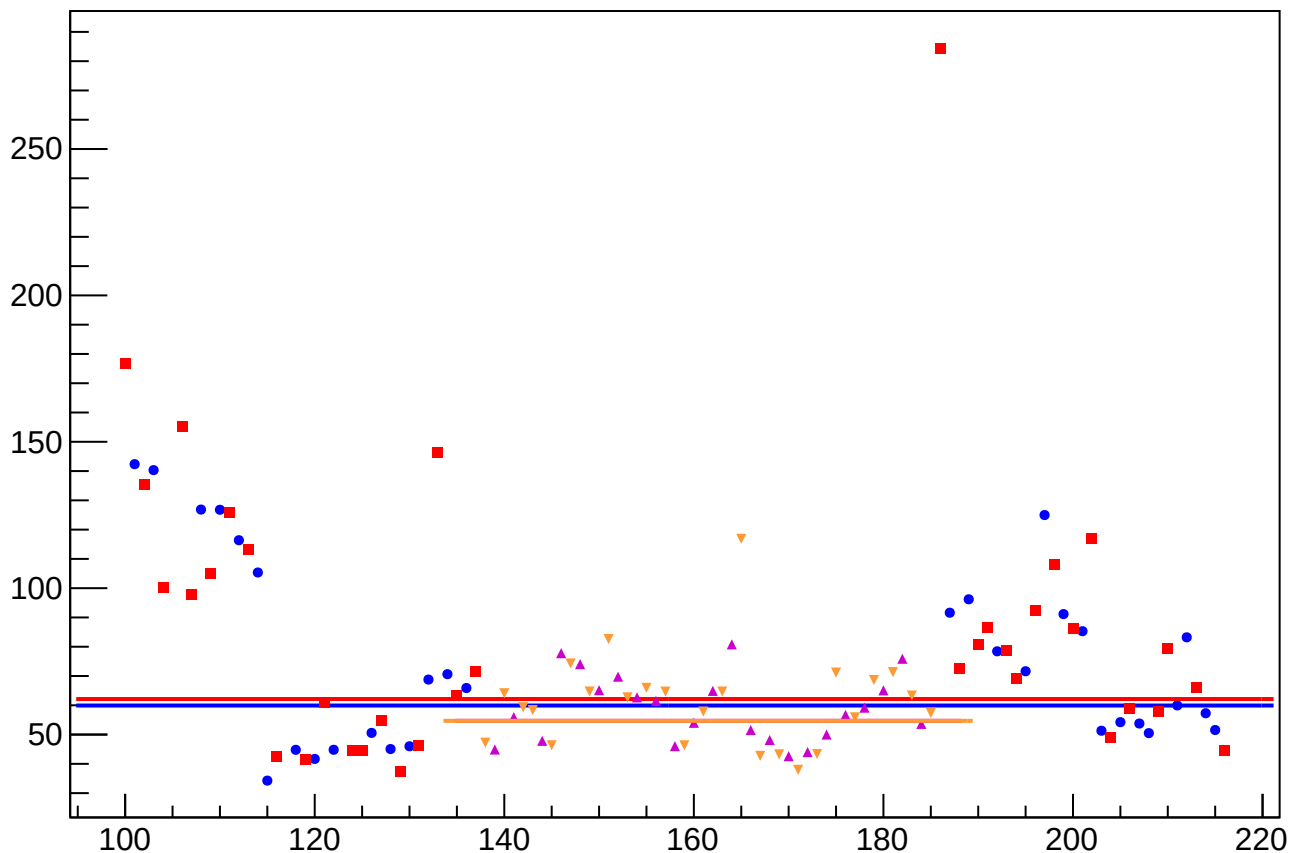
Left In:  $-0.012 \pm 0.013$   $\chi^2/\text{NDF}: 25.9/22$

+ sign  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 68.1/55$

All:  $0.007 \pm 0.007$   $\chi^2/\text{NDF}: 141.0/113$

- sign  $-0.003 \pm 0.010$   $\chi^2/\text{NDF}: 71.1/57$

asym\_sam\_26\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 59.921 $\pm$ 0.011  $\chi^2$ /NDF: 3626073.5/30

Left Out: 54.686 $\pm$ 0.009  $\chi^2$ /NDF: 1936555.1/24

Right Out: 62.142 $\pm$ 0.011  $\chi^2$ /NDF: 4608402.8/34

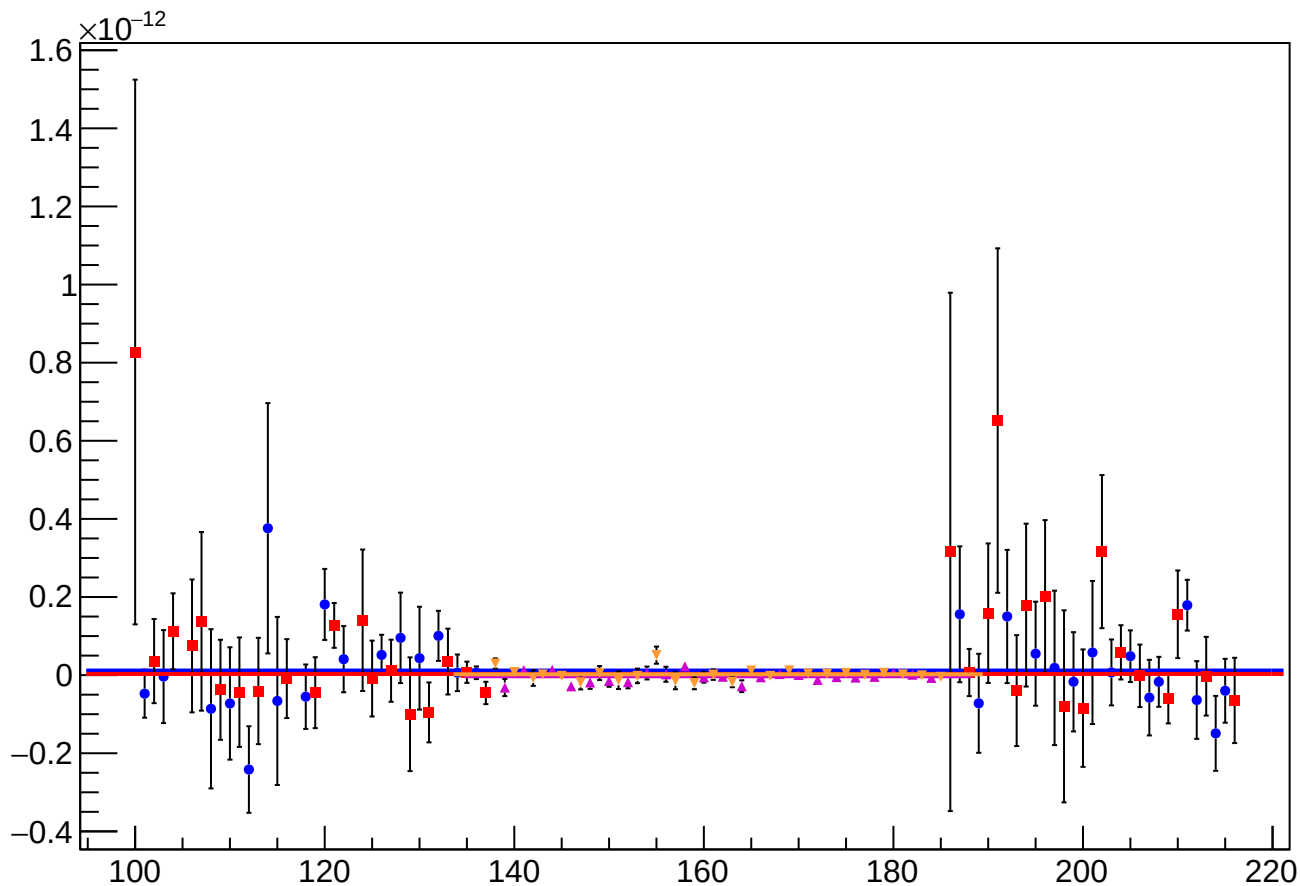
Left In: 54.689 $\pm$ 0.009  $\chi^2$ /NDF: 1190755.4/22

+ sign 56.934 $\pm$ 0.007  $\chi^2$ /NDF: 5703405.6/55

All: 57.375 $\pm$ 0.005  $\chi^2$ /NDF: 11778484.8/113

- sign 57.843 $\pm$ 0.007  $\chi^2$ /NDF: 6066680.6/57

asym\_sam\_26\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.2/34

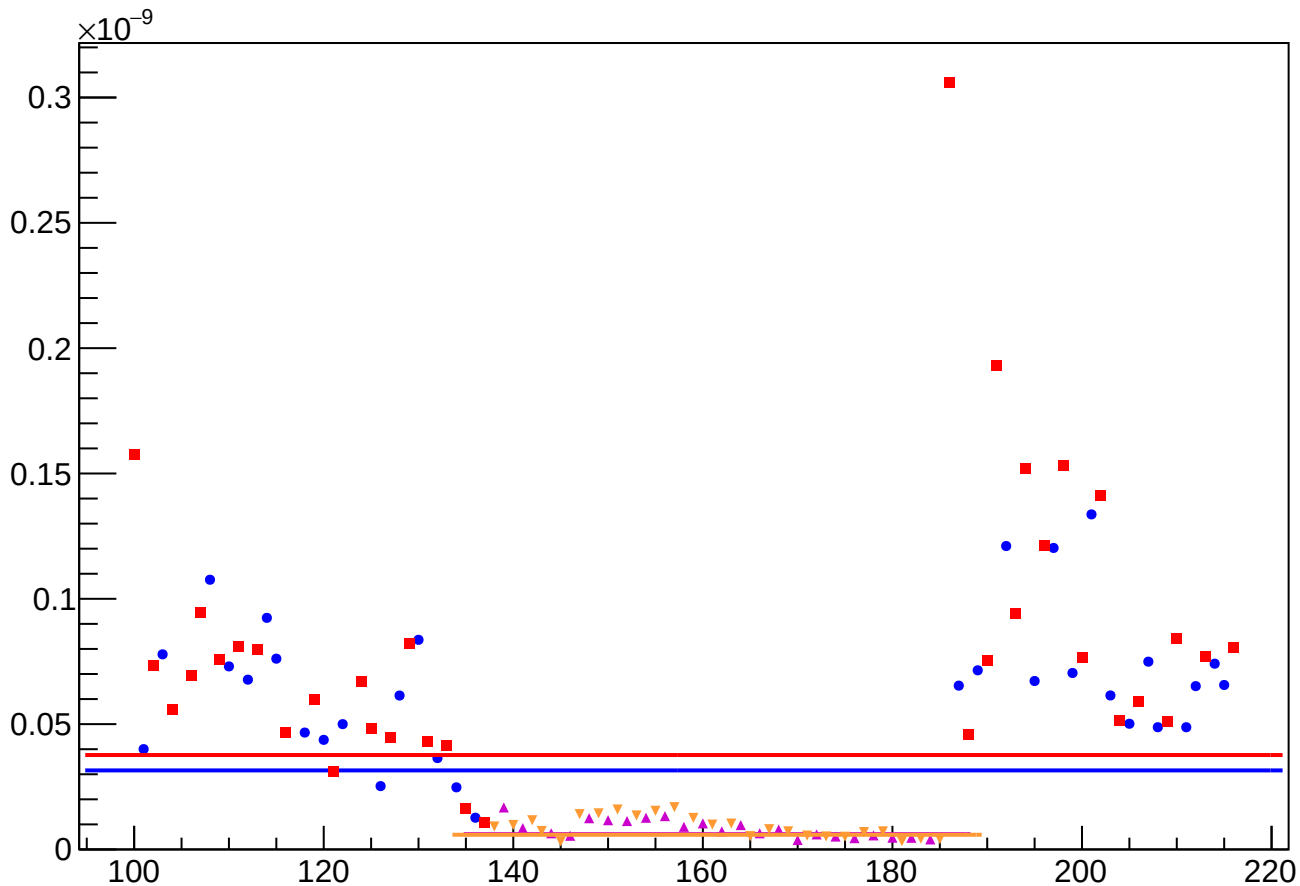
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:33.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.5/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 113.7/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.5/57

asym\_sam\_26\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8850620.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :5538819.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8943130.8/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :3304370.7/22

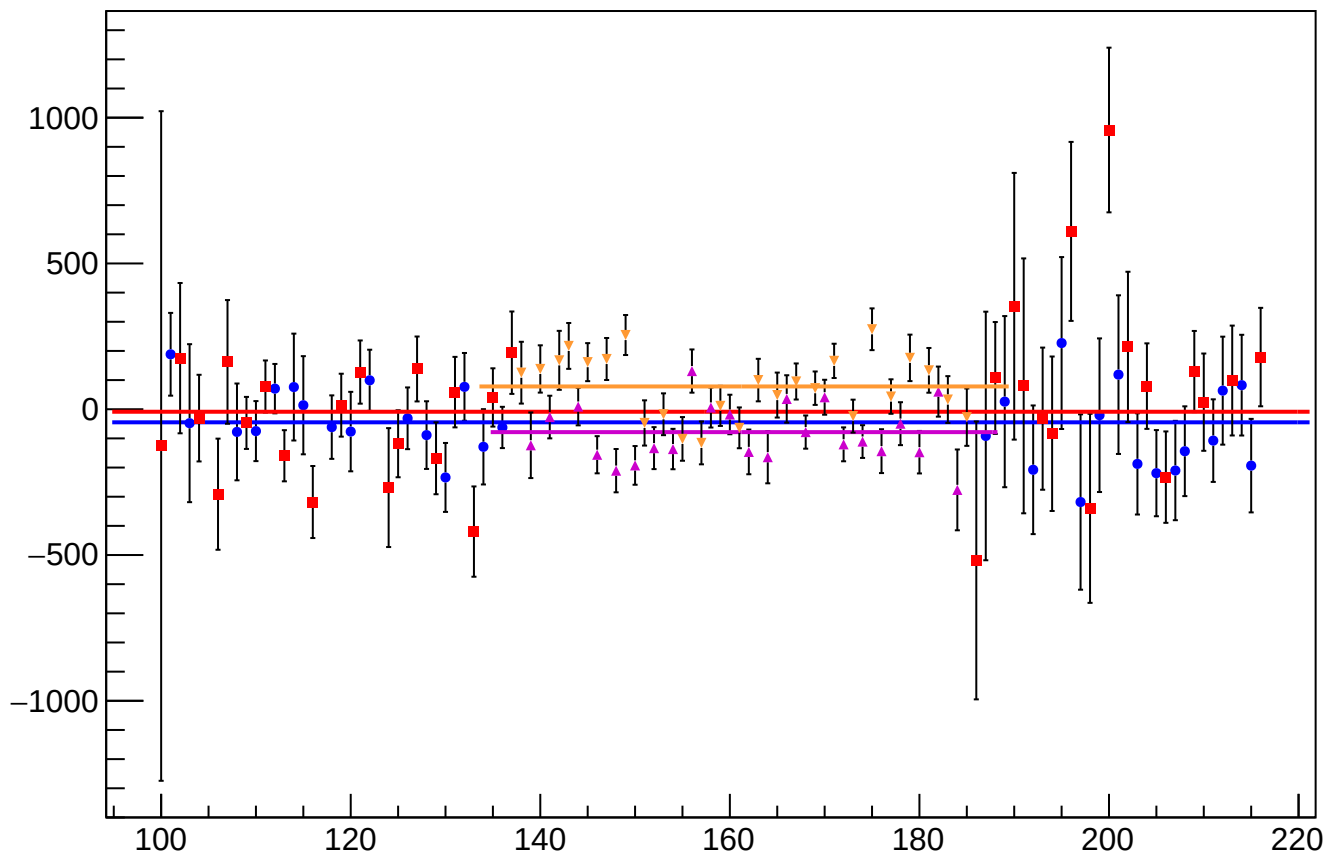
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24122967.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 47176016.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23035640.9/57



# reg\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-44.842 \pm 25.067$   $\chi^2/\text{NDF}: 19.5/30$

Left Out:  $78.159 \pm 14.326$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-8.582 \pm 25.051$   $\chi^2/\text{NDF}: 55.8/34$

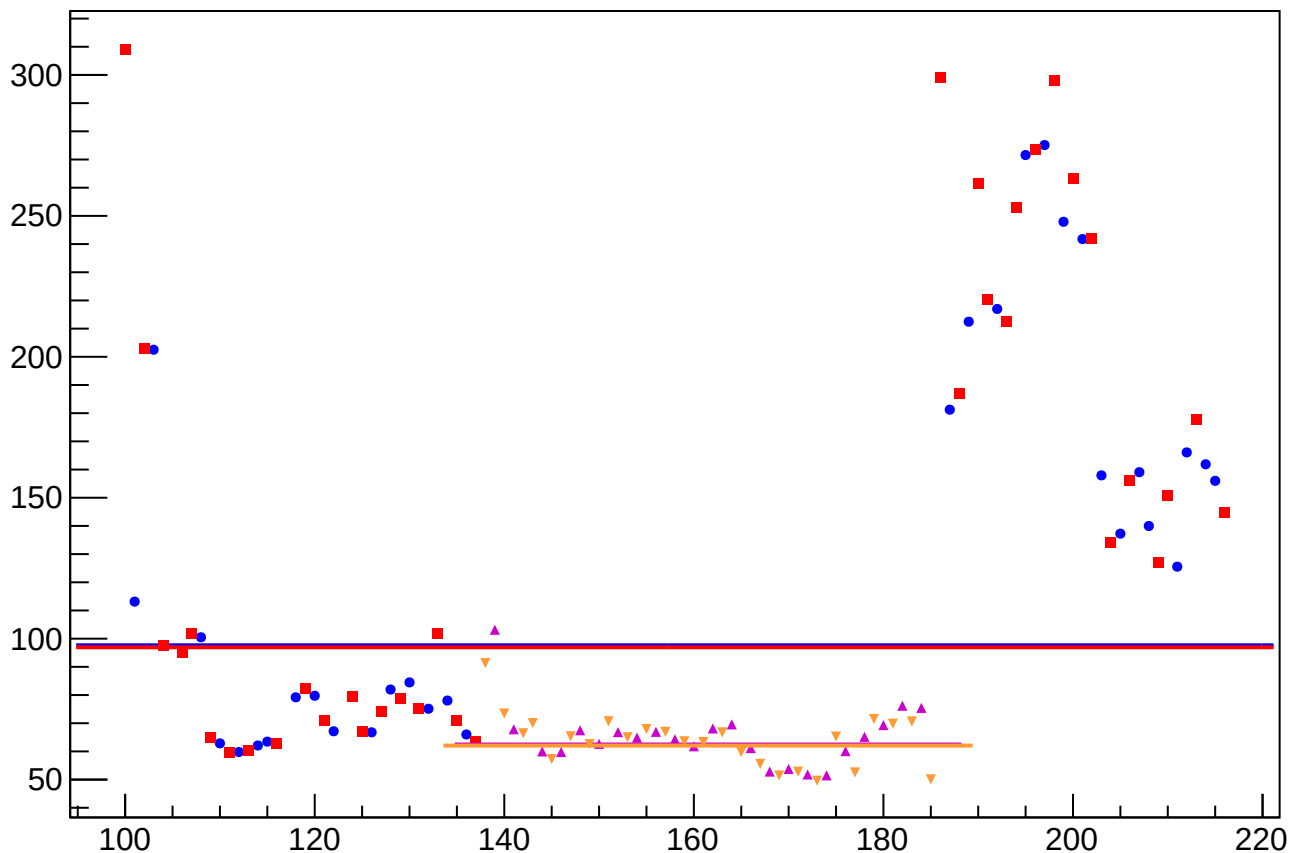
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $47.877 \pm 12.438$   $\chi^2/\text{NDF}: 91.6/55$

All:  $-4.918 \pm 8.903$   $\chi^2/\text{NDF}: 226.7/113$

- sign  $-60.394 \pm 12.750$   $\chi^2/\text{NDF}: 98.2/57$

# reg\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 97.645 $\pm$ 0.018  $\chi^2$ /NDF: 7384625.2/30

Left Out: 62.063 $\pm$ 0.010  $\chi^2$ /NDF: 686530.2/24

Right Out: 96.944 $\pm$ 0.018  $\chi^2$ /NDF: 8617220.4/34

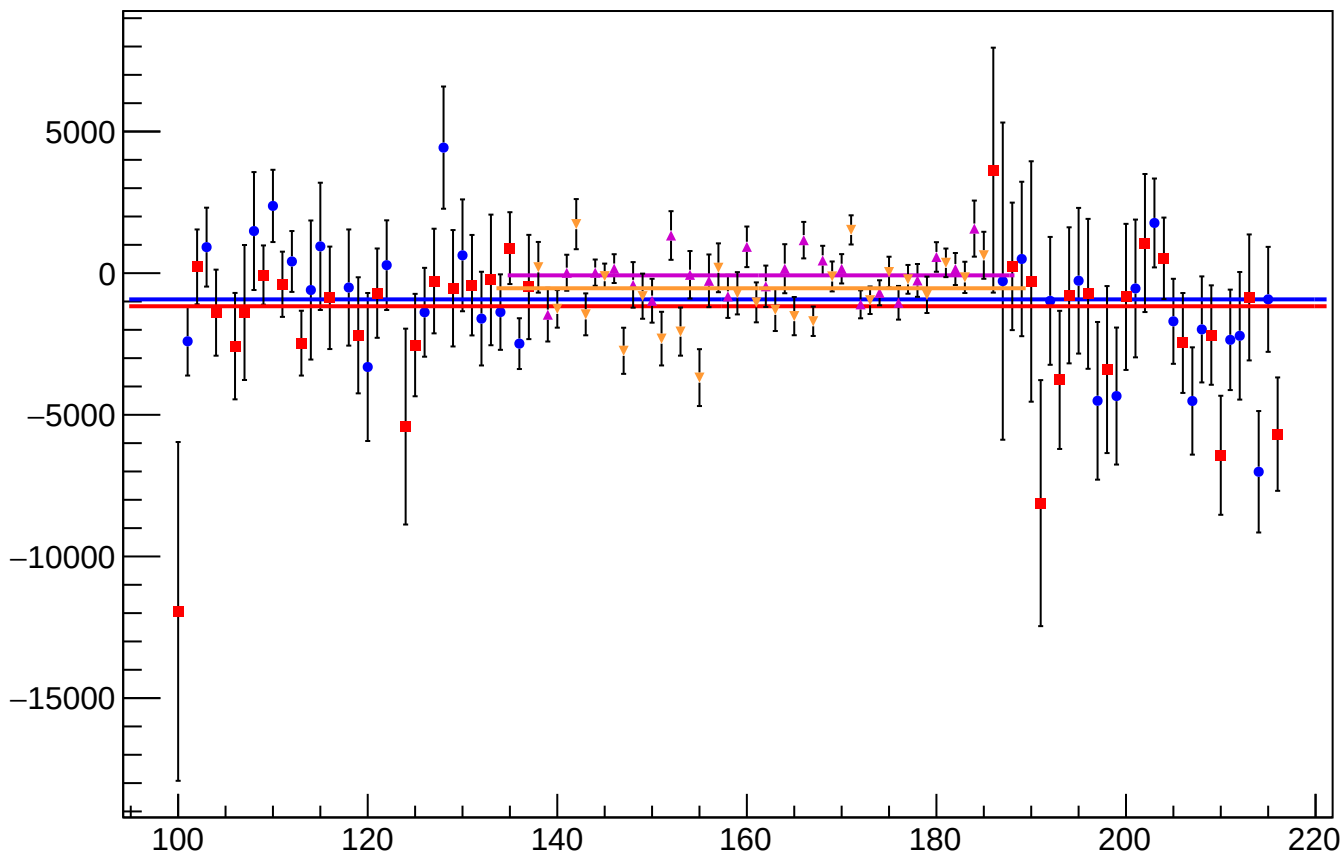
Left In: 62.445 $\pm$ 0.010  $\chi^2$ /NDF: 664644.9/22

+ sign 70.823 $\pm$ 0.009  $\chi^2$ /NDF: 11108810.9/55

All: 71.095 $\pm$ 0.006  $\chi^2$ /NDF: 23203163.8/113

- sign 71.381 $\pm$ 0.009  $\chi^2$ /NDF: 12092385.9/57

asym\_sam\_37\_avg\_reg\_correction\_mean vs Slug



Right In:  $-925.246 \pm 308.132$   $\chi^2/\text{NDF}: 45.4/30$

Left Out:  $-532.779 \pm 127.927$   $\chi^2/\text{NDF}: 69.1/24$

Right Out:  $-1167.736 \pm 311.539$   $\chi^2/\text{NDF}: 34.2/34$

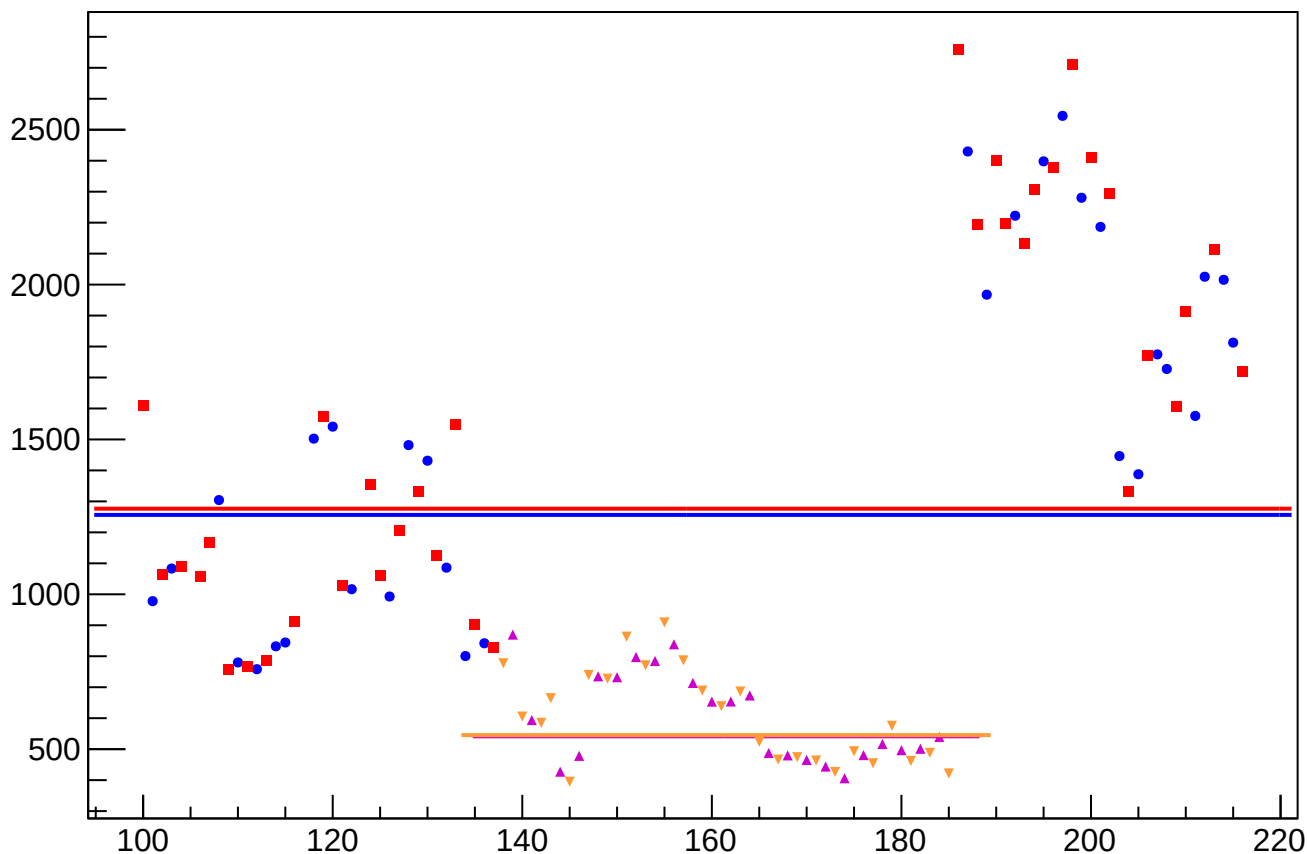
Left In:  $-77.393 \pm 130.317$   $\chi^2/\text{NDF}: 28.4/22$

+ sign  $-590.480 \pm 118.149$   $\chi^2/\text{NDF}: 115.9/55$

All:  $-418.175 \pm 84.268$   $\chi^2/\text{NDF}: 193.1/113$

- sign  $-239.766 \pm 120.223$   $\chi^2/\text{NDF}: 72.9/57$

# asym\_sam\_37\_avg\_reg\_correction\_rms vs Slug



Right In: 1256.377 $\pm$ 0.218  $\chi^2$ /NDF: 4964819.7/30

Left Out: 545.304 $\pm$ 0.090  $\chi^2$ /NDF: 2083690.3/24

Right Out: 1276.456 $\pm$ 0.220  $\chi^2$ /NDF: 5674108.2/34

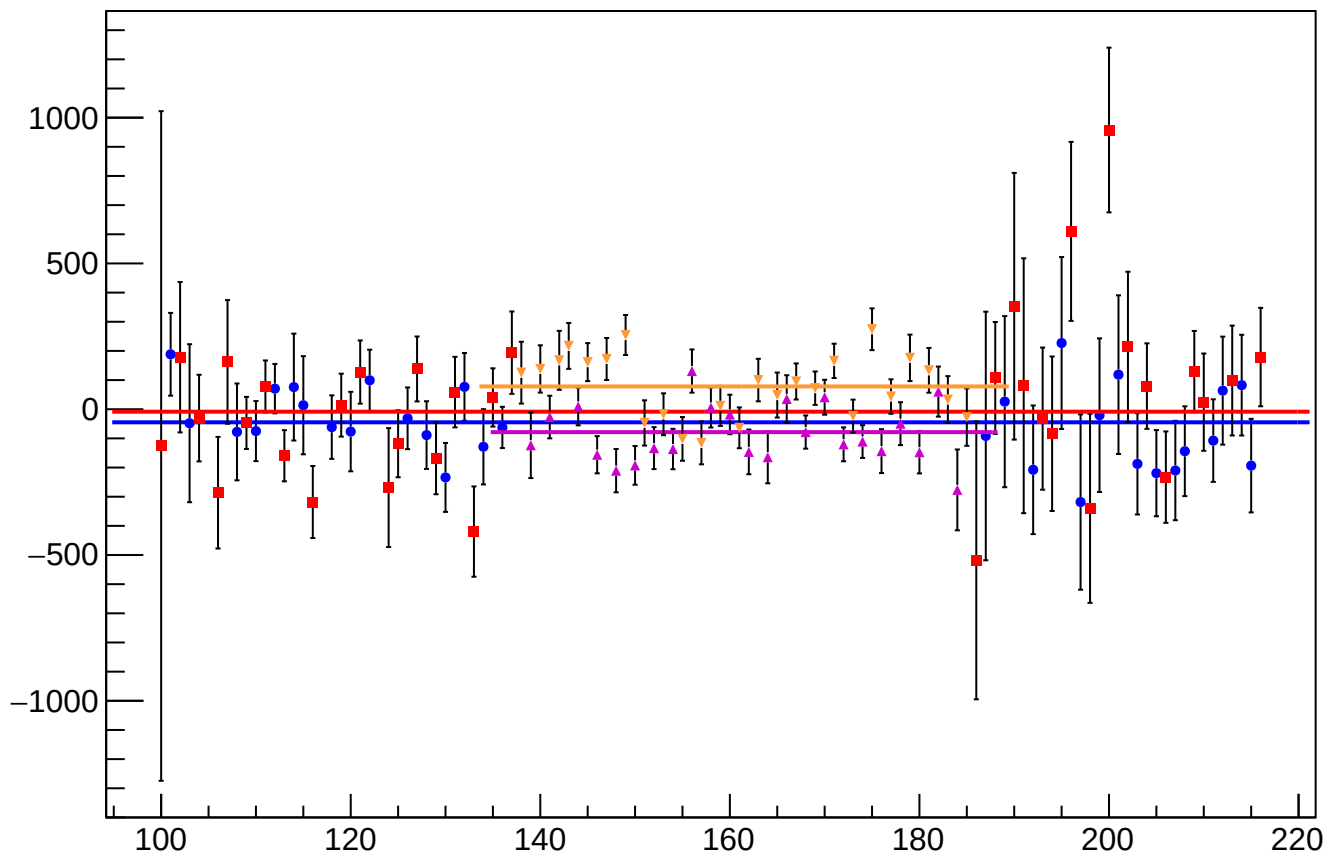
Left In: 541.458 $\pm$ 0.092  $\chi^2$ /NDF: 1840342.7/22

+ sign 649.848 $\pm$ 0.084  $\chi^2$ /NDF: 16133443.5/55

All: 650.371 $\pm$ 0.060  $\chi^2$ /NDF: 33122308.0/11

- sign 650.913 $\pm$ 0.085  $\chi^2$ /NDF: 16988784.6/57

# cor\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-44.849 \pm 25.067$   $\chi^2/\text{NDF}: 19.5/30$

Left Out:  $78.162 \pm 14.326$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-8.424 \pm 25.053$   $\chi^2/\text{NDF}: 55.7/34$

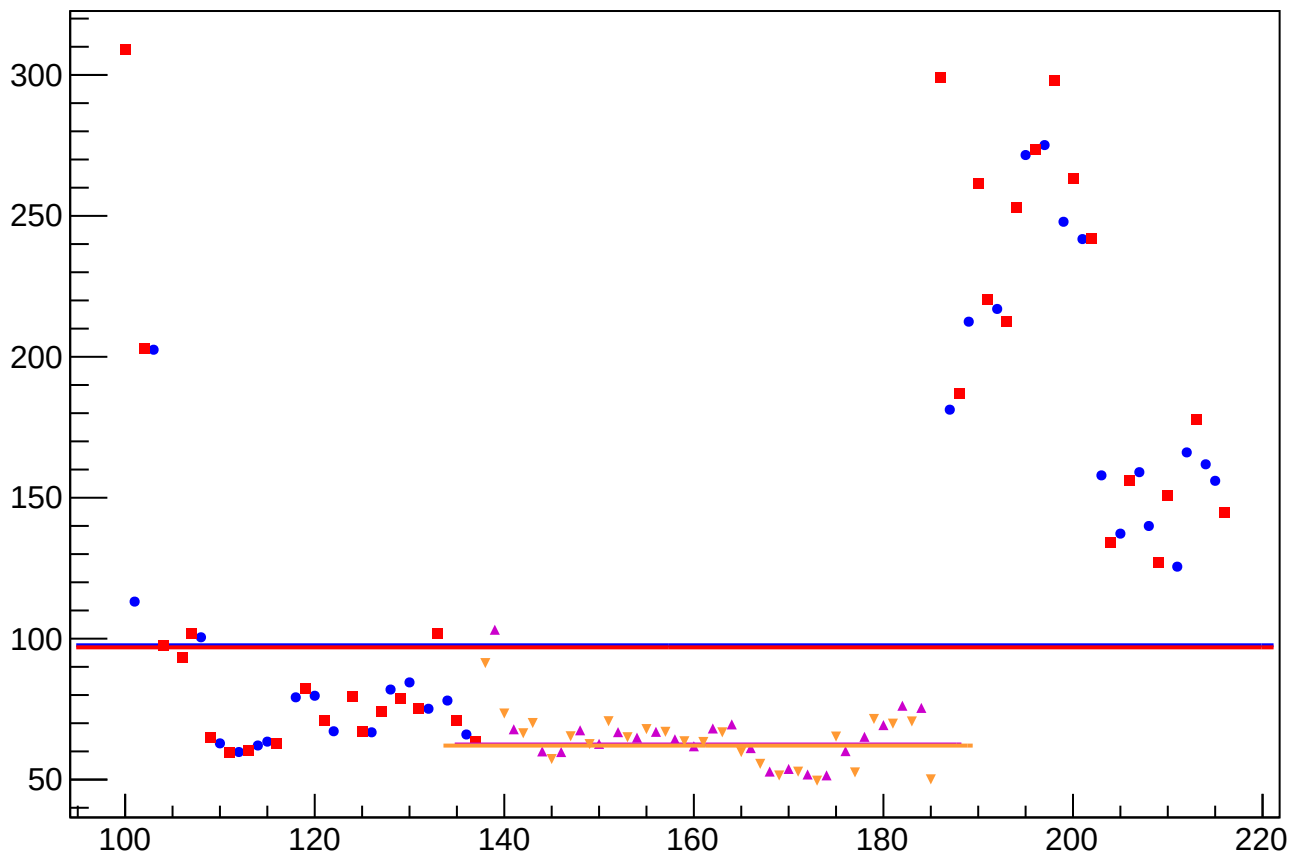
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $47.878 \pm 12.438$   $\chi^2/\text{NDF}: 91.6/55$

All:  $-4.898 \pm 8.903$   $\chi^2/\text{NDF}: 226.7/113$

- sign  $-60.356 \pm 12.750$   $\chi^2/\text{NDF}: 98.2/57$

# cor\_asym\_sam\_37\_avg\_rms vs Slug



Right In:  $97.645 \pm 0.018$   $\chi^2/\text{NDF}$ : 7384627.6/30

Left Out:  $62.063 \pm 0.010$   $\chi^2/\text{NDF}$ : 686530.2/24

Right Out:  $96.915 \pm 0.018$   $\chi^2/\text{NDF}$ : 8617952.9/34

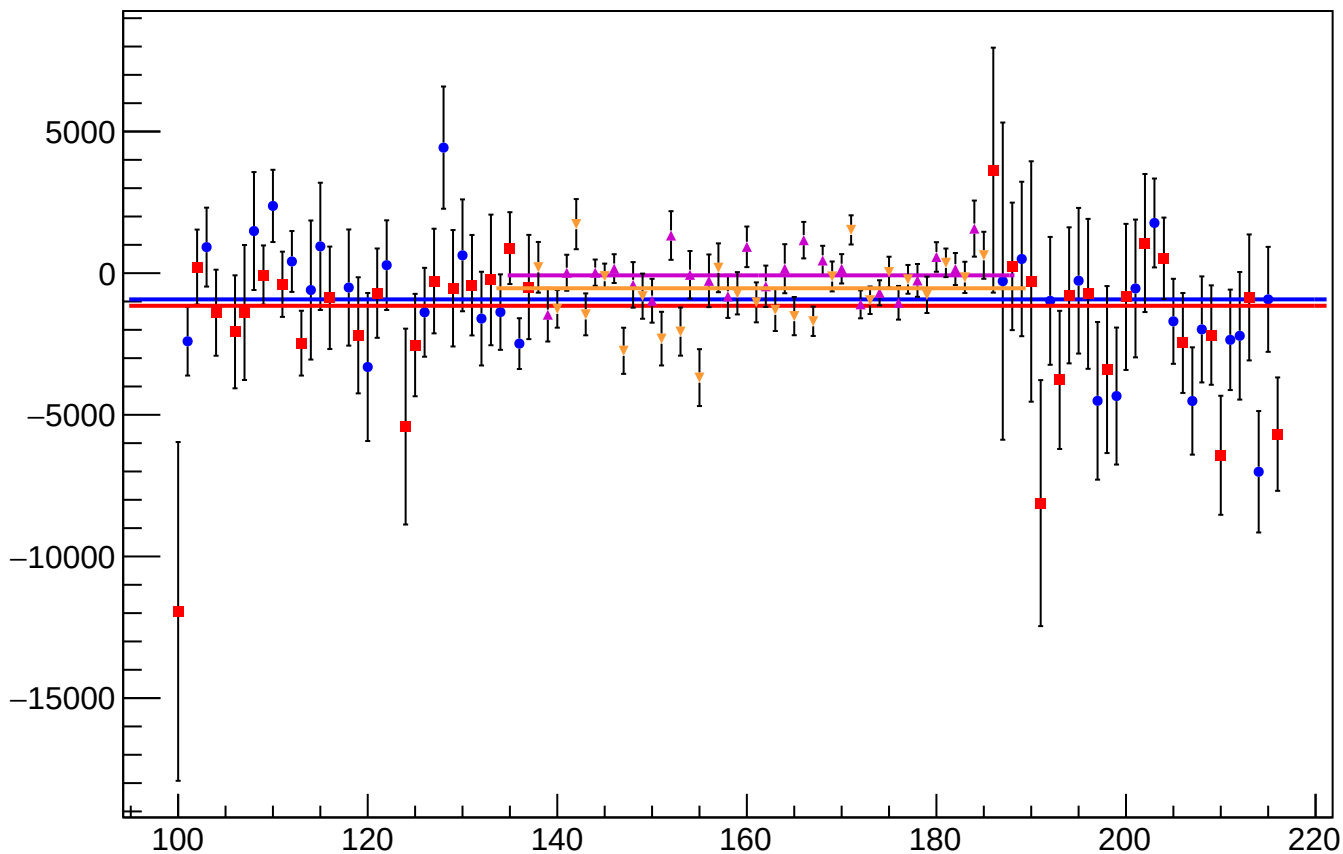
Left In:  $62.445 \pm 0.010$   $\chi^2/\text{NDF}$ : 664644.9/22

+ sign  $70.823 \pm 0.009$   $\chi^2/\text{NDF}$ : 11108812.9/55

All:  $71.091 \pm 0.006$   $\chi^2/\text{NDF}$ : 23198818.3/113

- sign  $71.373 \pm 0.009$   $\chi^2/\text{NDF}$ : 12088097.9/57

asym\_sam\_37\_avg\_cor\_correction\_mean vs Slug



Right In: -925.241 $\pm$ 308.134  $\chi^2/\text{NDF}$ : 45.4/30

Left Out: -532.776 $\pm$ 127.927  $\chi^2/\text{NDF}$ : 69.1/24

Right Out: -1151.477 $\pm$ 312.039  $\chi^2/\text{NDF}$ : 33.8/34

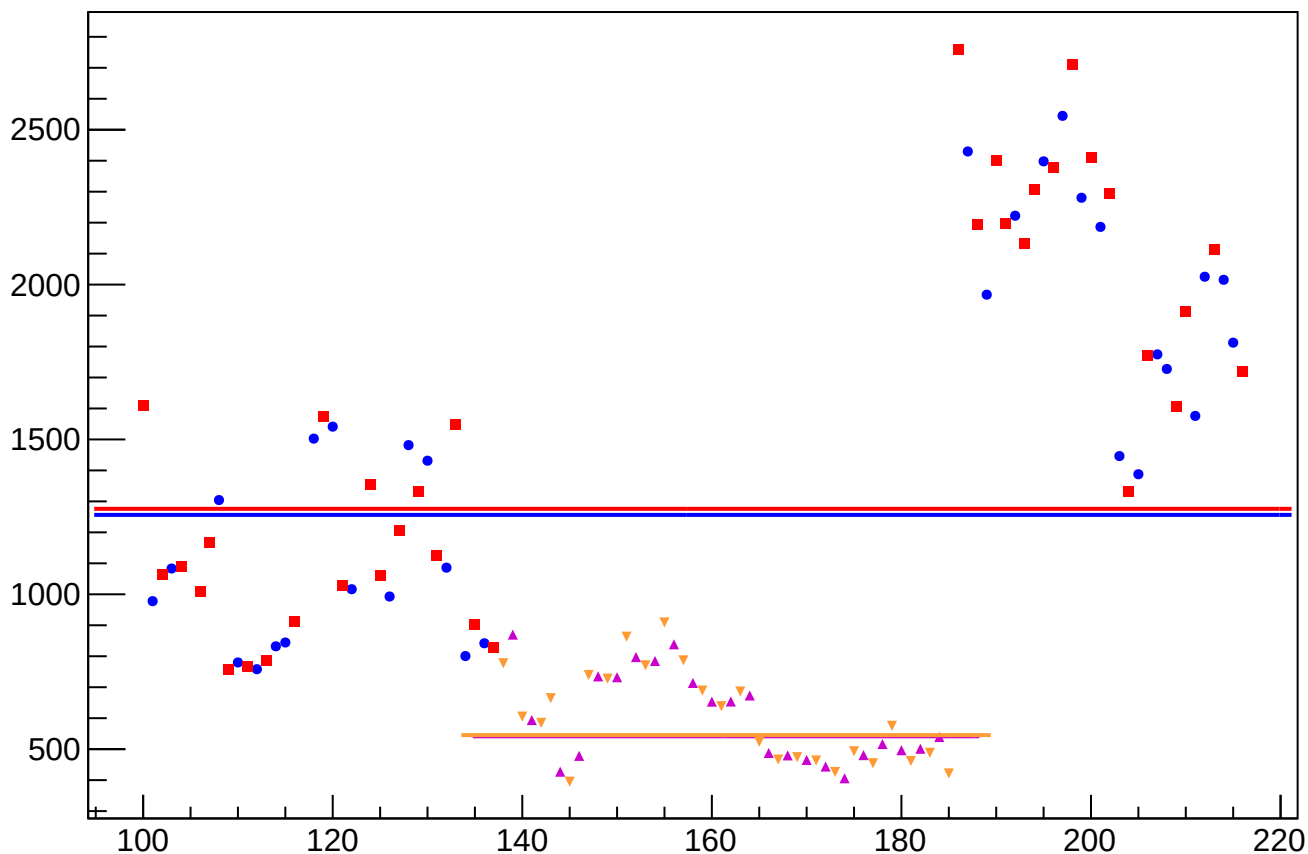
Left In: -77.392 $\pm$ 130.317  $\chi^2/\text{NDF}$ : 28.4/22

+ sign -590.477 $\pm$ 118.149  $\chi^2/\text{NDF}$ : 115.9/55

All: -416.811 $\pm$ 84.277  $\chi^2/\text{NDF}$ : 192.5/113

- sign -236.908 $\pm$ 120.252  $\chi^2/\text{NDF}$ : 72.2/57

asym\_sam\_37\_avg\_cor\_correction\_rms vs Slug



Right In: 1256.384 $\pm$ 0.218  $\chi^2$ /NDF: 4964780.5/30

Left Out: 545.304 $\pm$ 0.090  $\chi^2$ /NDF: 2083686.2/24

Right Out: 1276.023 $\pm$ 0.221  $\chi^2$ /NDF: 5682345.9/34

Left In: 541.458 $\pm$ 0.092  $\chi^2$ /NDF: 1840342.7/22

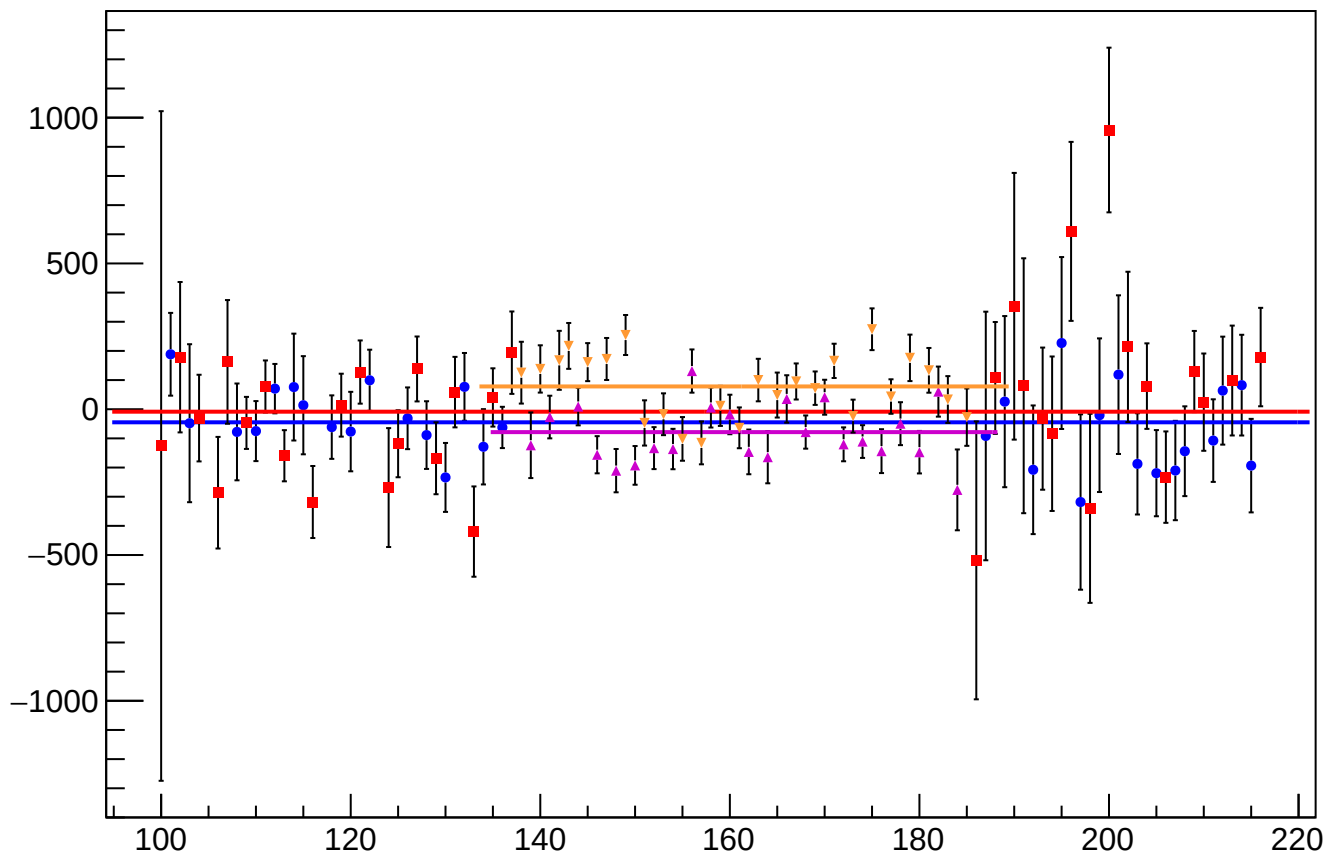
+ sign 649.848 $\pm$ 0.084  $\chi^2$ /NDF: 16133499.0/55

All: 650.193 $\pm$ 0.060  $\chi^2$ /NDF: 33093601.9/11

- sign 650.550 $\pm$ 0.085  $\chi^2$ /NDF: 16960068.2/57



# eigen\_cor\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-44.849 \pm 25.067$   $\chi^2/\text{NDF}: 19.5/30$

Left Out:  $78.162 \pm 14.326$   $\chi^2/\text{NDF}: 53.9/24$

Right Out:  $-8.424 \pm 25.053$   $\chi^2/\text{NDF}: 55.7/34$

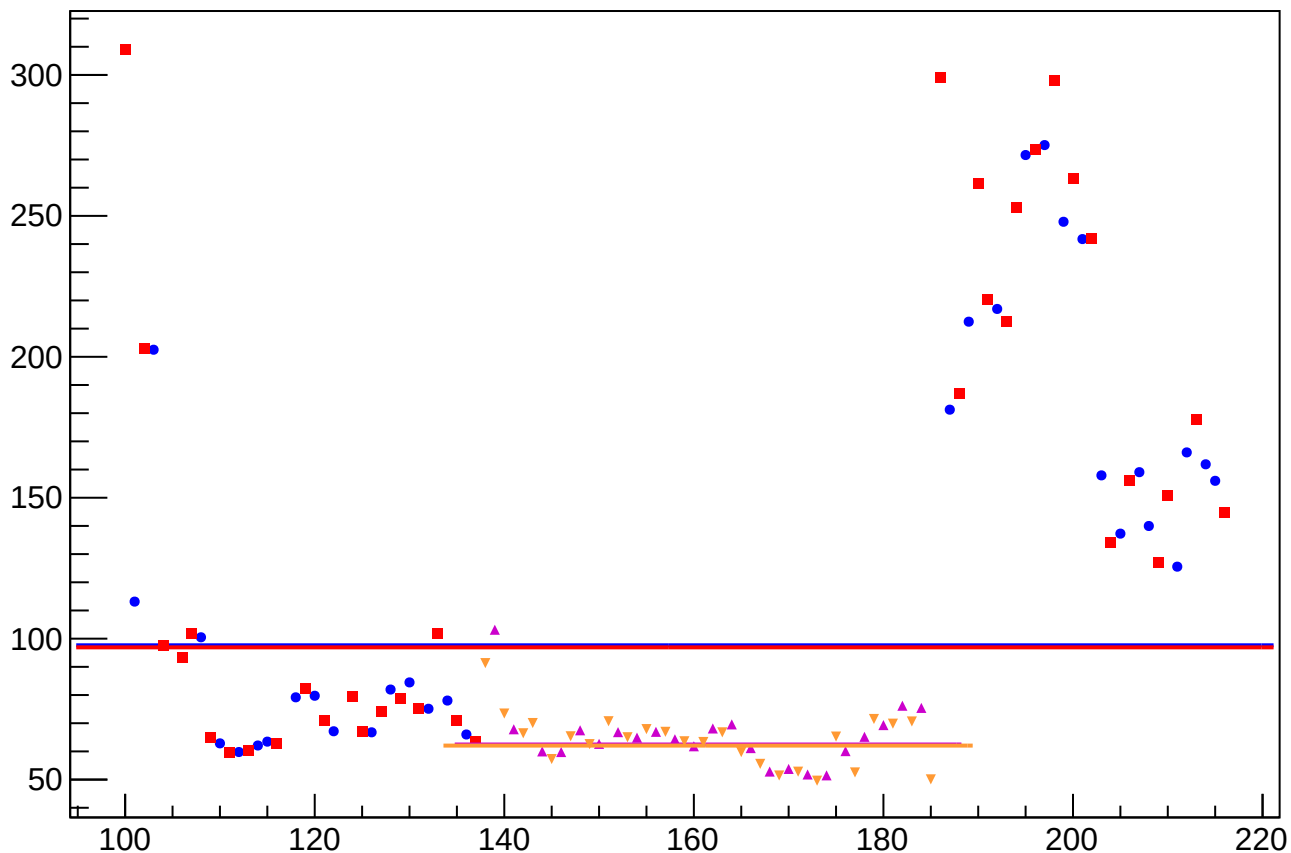
Left In:  $-78.506 \pm 14.811$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $47.878 \pm 12.438$   $\chi^2/\text{NDF}: 91.6/55$

All:  $-4.898 \pm 8.903$   $\chi^2/\text{NDF}: 226.7/113$

- sign  $-60.356 \pm 12.750$   $\chi^2/\text{NDF}: 98.2/57$

# eigen\_cor\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 97.645 $\pm$ 0.018  $\chi^2$ /NDF: 7384627.6/30

Left Out: 62.063 $\pm$ 0.010  $\chi^2$ /NDF:686530.2/24

Right Out: 96.915 $\pm$ 0.018  $\chi^2$ /NDF: 8617952.9/34

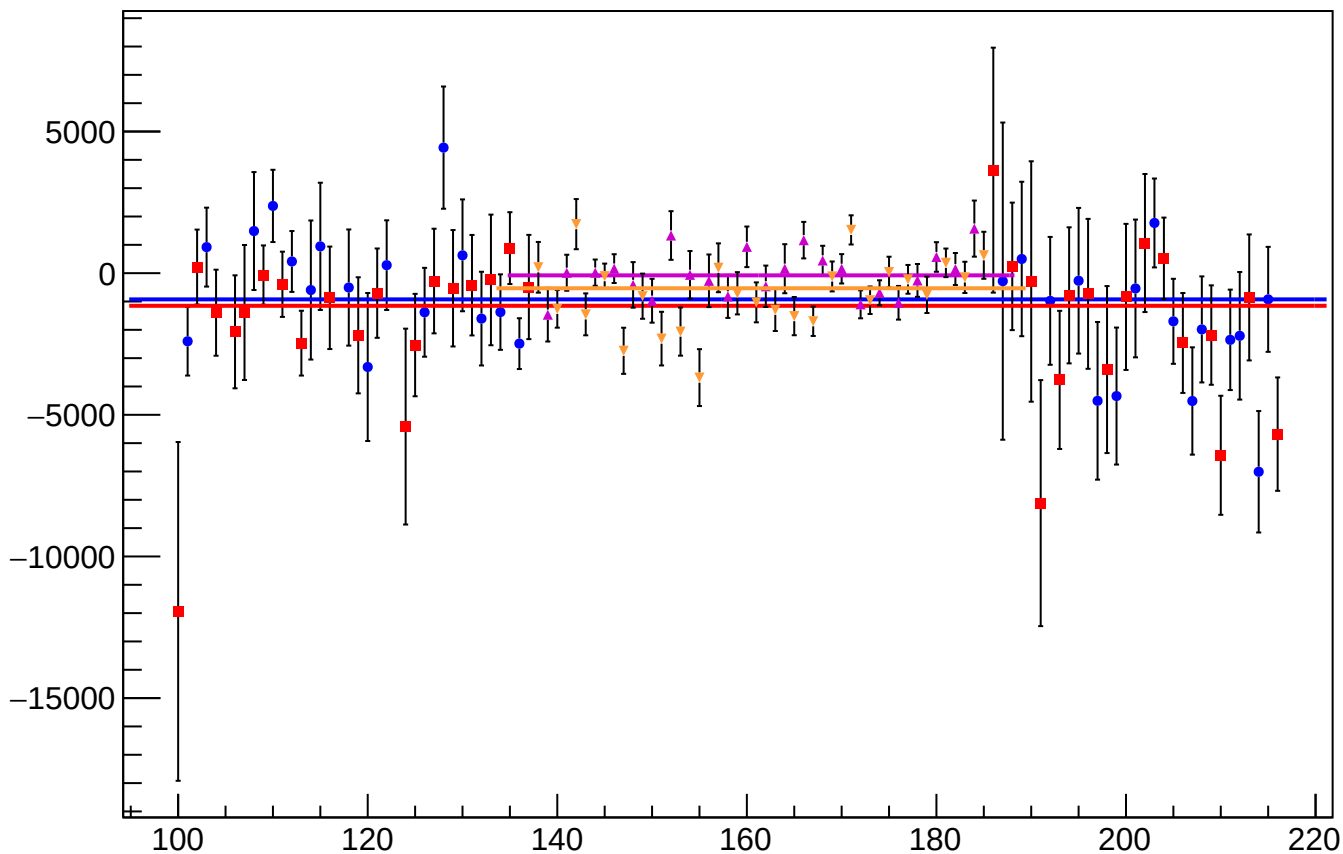
Left In: 62.445 $\pm$ 0.010  $\chi^2$ /NDF:664644.9/22

+ sign 70.823 $\pm$ 0.009  $\chi^2$ /NDF: 11108812.9/55

All: 71.091 $\pm$ 0.006  $\chi^2$ /NDF: 23198818.3/113

- sign 71.373 $\pm$ 0.009  $\chi^2$ /NDF: 12088097.9/57

asym\_sam\_37\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-925.241 \pm 308.134$   $\chi^2/\text{NDF}$ : 45.4/30

Left Out:  $-532.776 \pm 127.927$   $\chi^2/\text{NDF}$ : 69.1/24

Right Out:  $-1151.477 \pm 312.039$   $\chi^2/\text{NDF}$ : 33.8/34

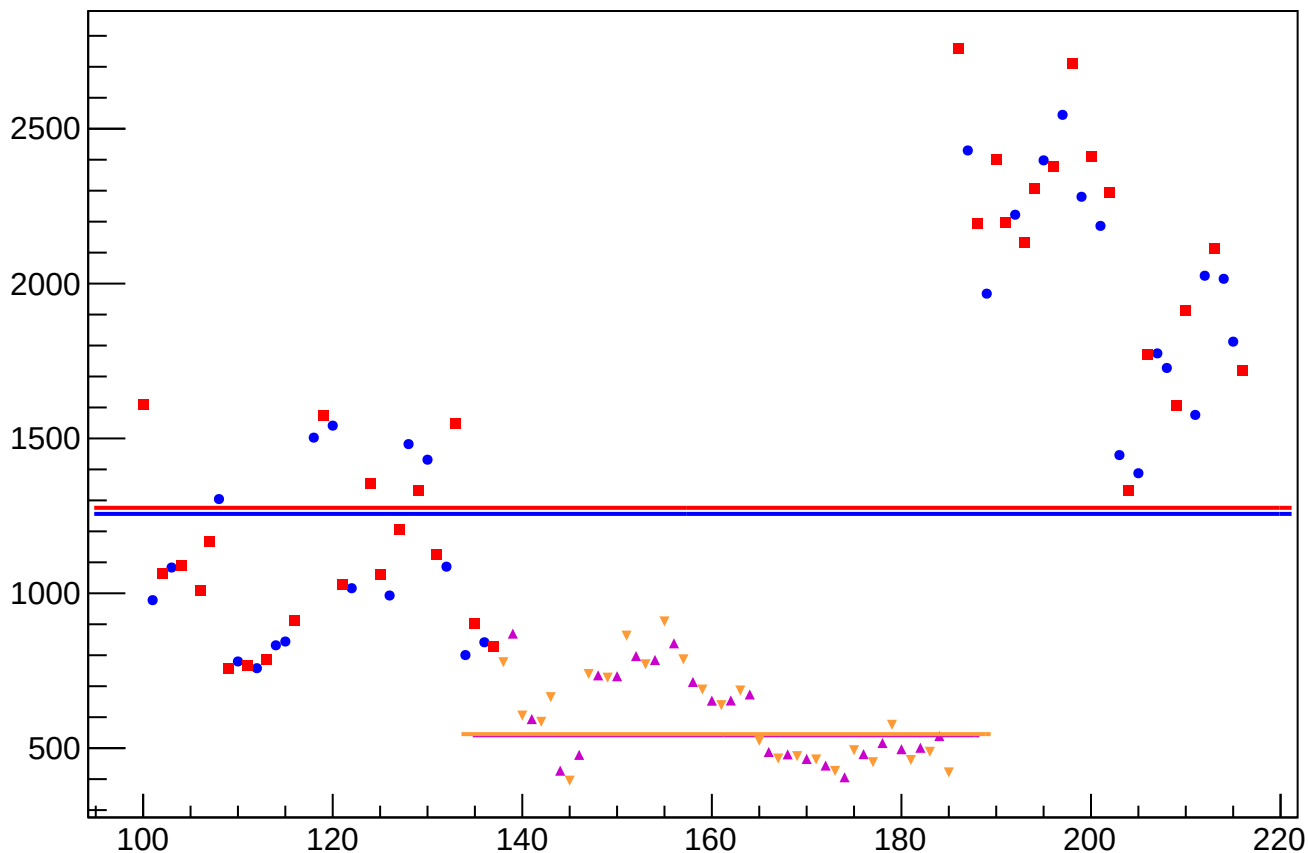
Left In:  $-77.392 \pm 130.317$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-590.477 \pm 118.149$   $\chi^2/\text{NDF}$ : 115.9/55

All:  $-416.811 \pm 84.277$   $\chi^2/\text{NDF}$ : 192.5/113

- sign  $-236.908 \pm 120.252$   $\chi^2/\text{NDF}$ : 72.2/57

asym\_sam\_37\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1256.384+/-0.218  $\chi^2/\text{NDF}$ : 4964780.5/30

Left Out: 545.304+/-0.090  $\chi^2/\text{NDF}$ : 2083686.2/24

Right Out: 1276.023+/-0.221  $\chi^2/\text{NDF}$ : 5682345.9/34

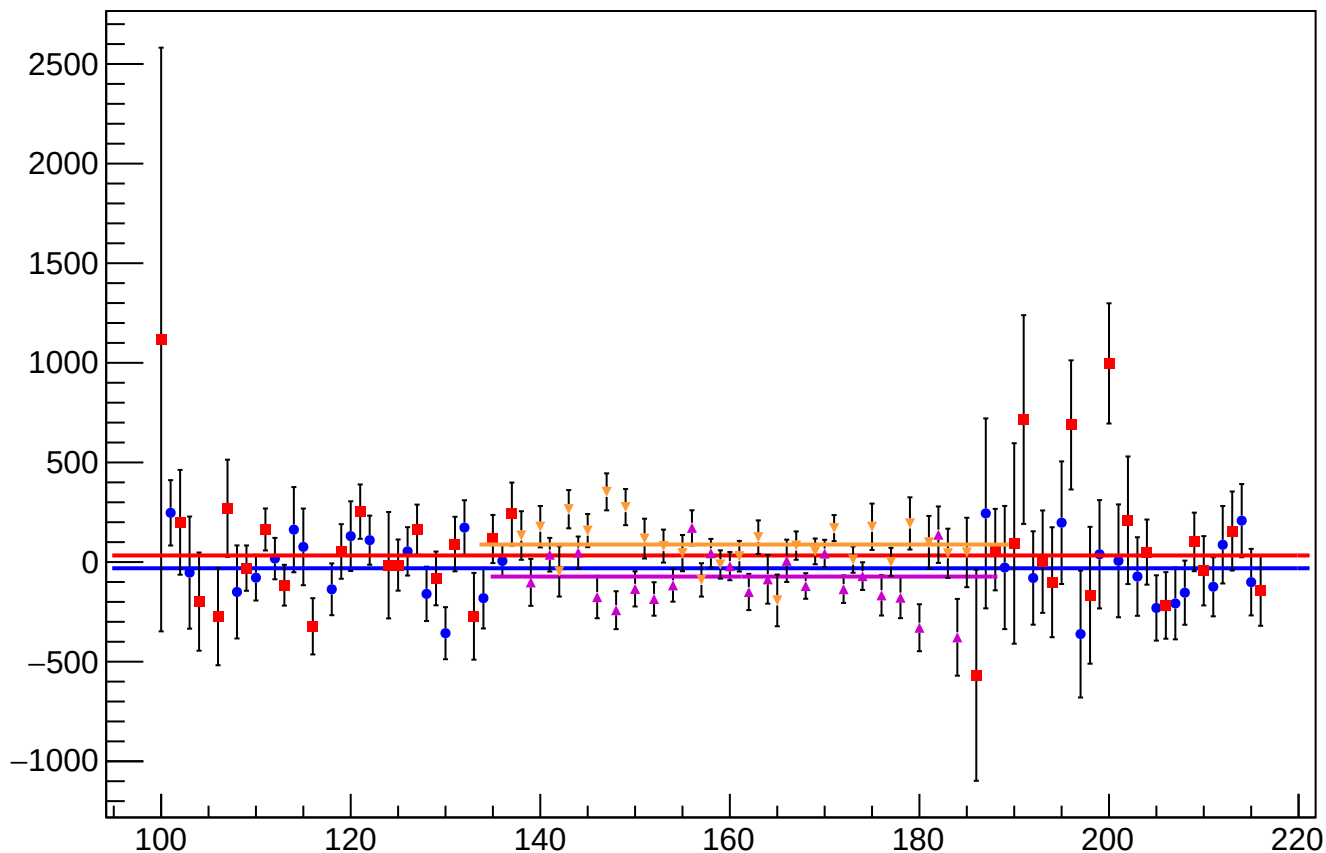
Left In: 541.458+/-0.092  $\chi^2/\text{NDF}$ : 1840342.7/22

+ sign 649.848+/-0.084  $\chi^2/\text{NDF}$ : 16133499.0/55

All: 650.193+/-0.060  $\chi^2/\text{NDF}$ : 33093601.9/11

- sign 650.550+/-0.085  $\chi^2/\text{NDF}$ : 16960068.2/57

# dit\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-31.129 \pm 28.554$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $88.040 \pm 17.745$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $33.216 \pm 29.193$   $\chi^2/\text{NDF}$ : 45.9/34

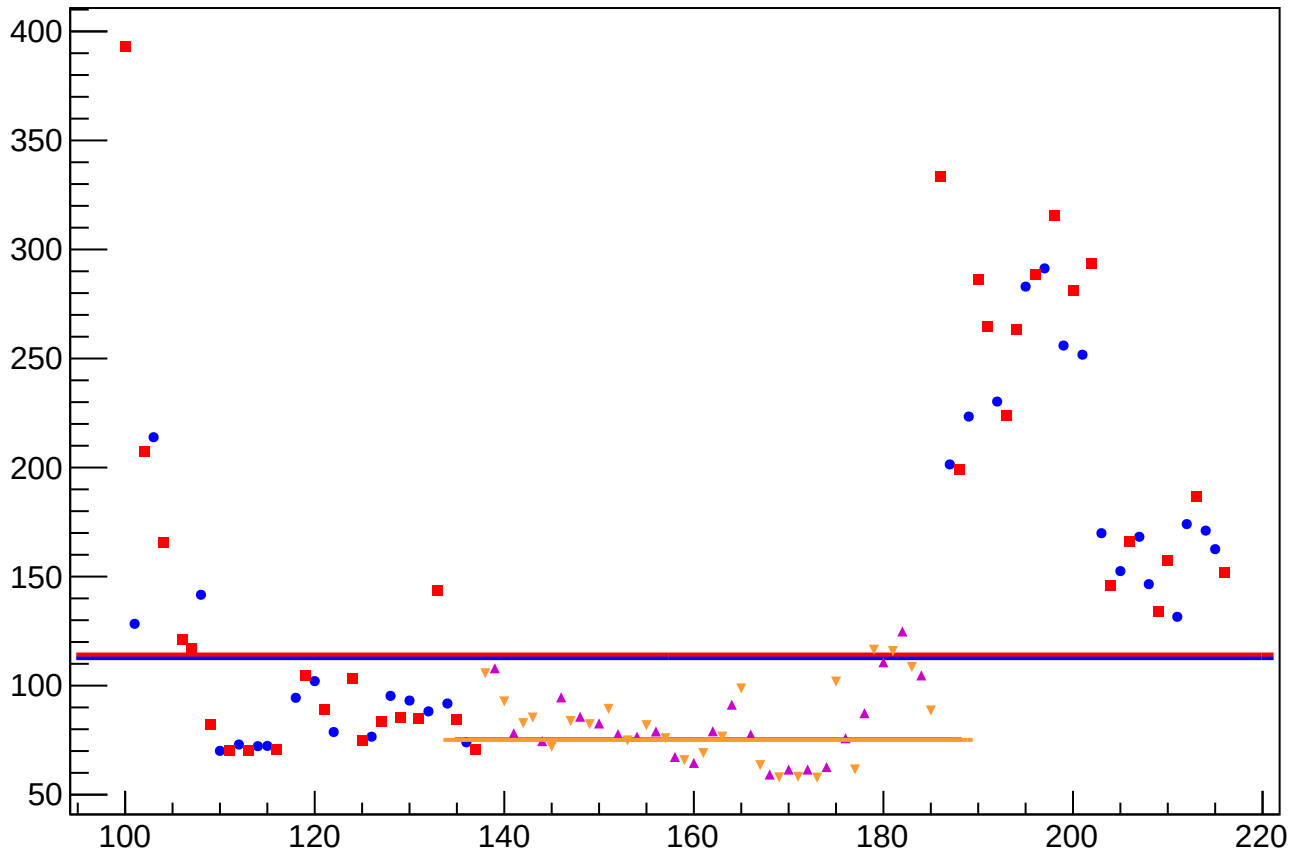
Left In:  $-72.849 \pm 18.276$   $\chi^2/\text{NDF}$ : 38.4/22

+ sign  $54.840 \pm 15.071$   $\chi^2/\text{NDF}$ : 75.7/55

All:  $7.269 \pm 10.802$   $\chi^2/\text{NDF}$ : 190.0/113

- sign  $-42.984 \pm 15.491$   $\chi^2/\text{NDF}$ : 93.8/57

# dit\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 112.610 $\pm$ 0.020  $\chi^2$ /NDF: 6345420.7/30

Left Out: 75.128 $\pm$ 0.013  $\chi^2$ /NDF:1601461.8/24

Right Out: 114.264 $\pm$ 0.021  $\chi^2$ /NDF: 7671906.8/34

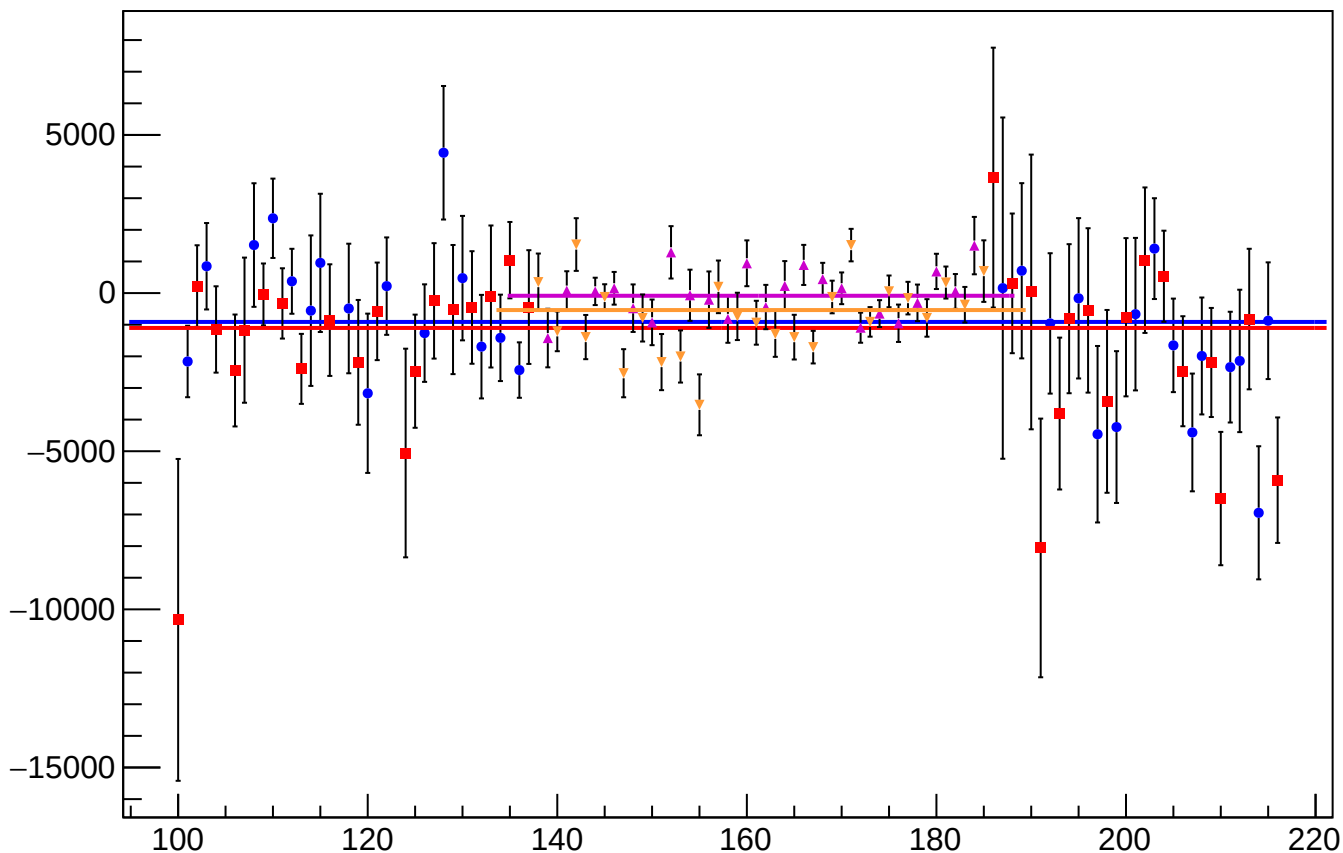
Left In: 75.363 $\pm$ 0.013  $\chi^2$ /NDF:1225318.4/22

+ sign 85.570 $\pm$ 0.011  $\chi^2$ /NDF: 10433037.5/55

All: 85.933 $\pm$ 0.008  $\chi^2$ /NDF: 21884082.0/113

- sign 86.316 $\pm$ 0.011  $\chi^2$ /NDF: 11448662.4/57

asym\_sam\_37\_avg\_dit\_correction\_mean vs Slug



Right In:  $-912.119 \pm 302.141$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-536.789 \pm 124.471$   $\chi^2/\text{NDF}$ : 67.0/24

Right Out:  $-1102.218 \pm 301.703$   $\chi^2/\text{NDF}$ : 36.7/34

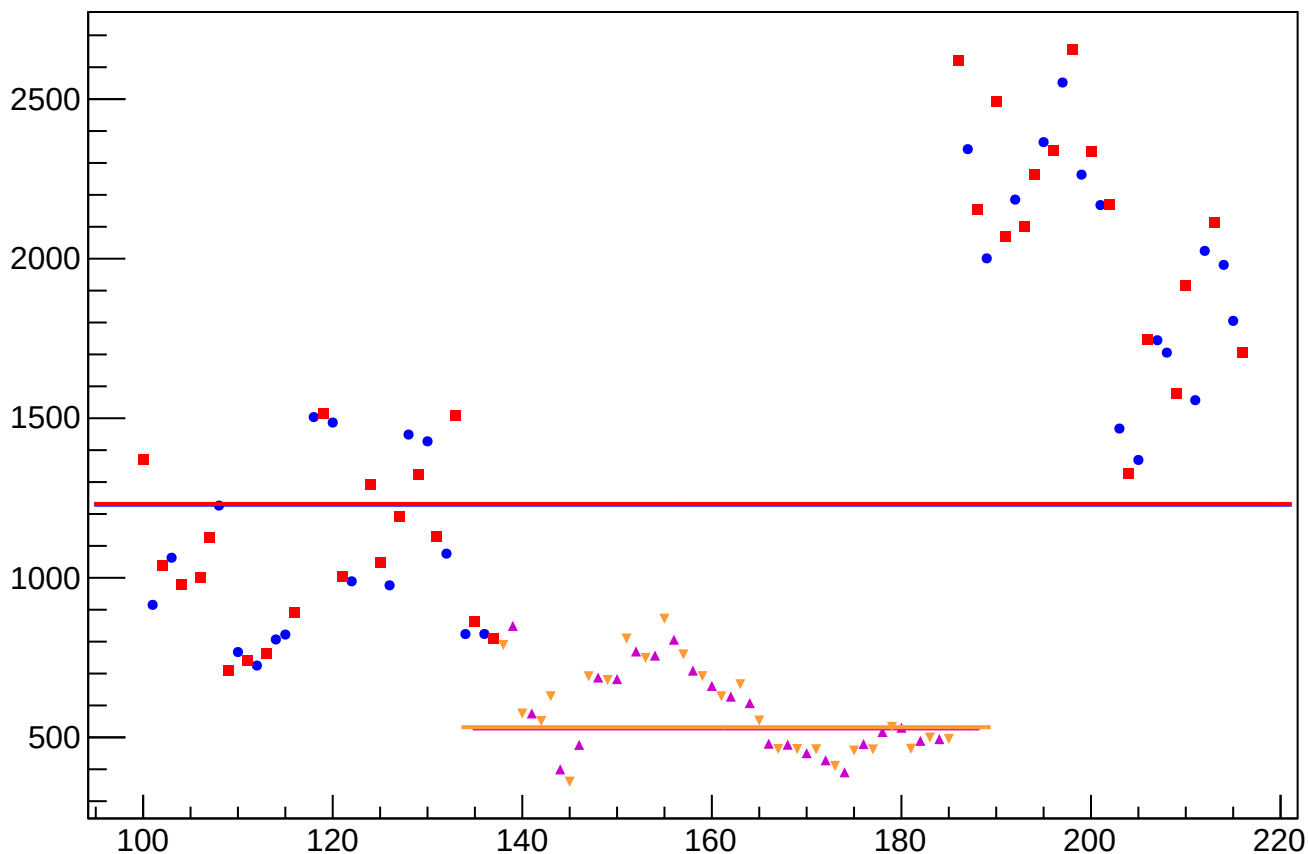
Left In:  $-84.668 \pm 127.039$   $\chi^2/\text{NDF}$ : 27.5/22

+ sign  $-591.246 \pm 115.088$   $\chi^2/\text{NDF}$ : 113.1/55

All:  $-417.615 \pm 82.076$   $\chi^2/\text{NDF}$ : 191.5/113

- sign  $-237.912 \pm 117.083$   $\chi^2/\text{NDF}$ : 73.8/57

# asym\_sam\_37\_avg\_dit\_correction\_rms vs Slug



Right In: 1229.177 $\pm$ 0.214  $\chi^2$ /NDF: 5147219.8/30

Left Out: 531.872 $\pm$ 0.088  $\chi^2$ /NDF:2037750.0/24

Right Out: 1231.541 $\pm$ 0.213  $\chi^2$ /NDF: 5945012.4/34

Left In: 527.986 $\pm$ 0.090  $\chi^2$ /NDF:1800455.5/22

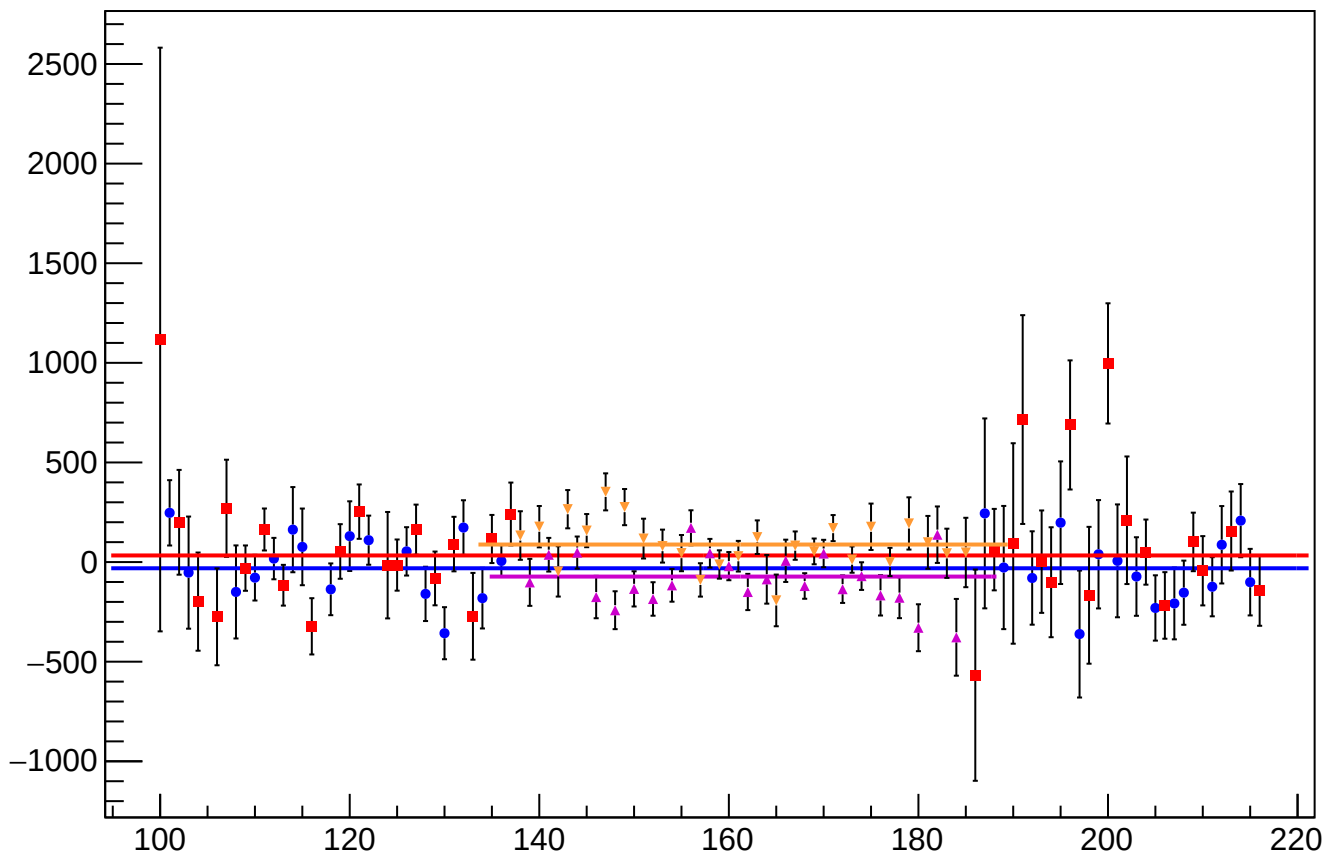
+ sign 633.045 $\pm$ 0.081  $\chi^2$ /NDF: 16291991.1/55

All: 633.486 $\pm$ 0.058  $\chi^2$ /NDF: 33275517.9/1

- sign 633.942 $\pm$ 0.083  $\chi^2$ /NDF: 16983467.1/57



# eigen\_dit\_asym\_sam\_37\_avg\_mean vs Slug



Right In:  $-31.129 \pm 28.554$   $\chi^2/\text{NDF}$ : 26.3/30

Left Out:  $88.040 \pm 17.745$   $\chi^2/\text{NDF}$ : 36.9/24

Right Out:  $33.219 \pm 29.193$   $\chi^2/\text{NDF}$ : 45.9/34

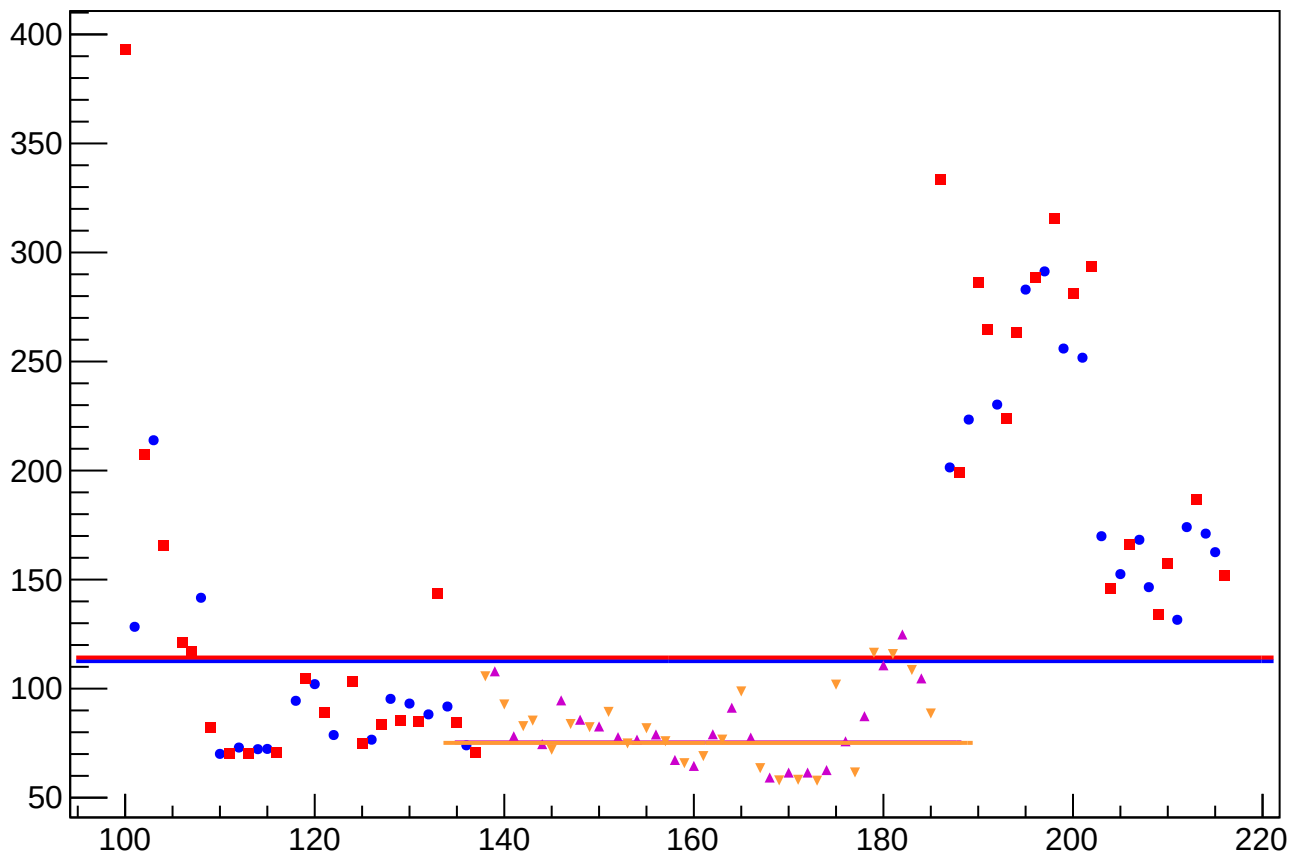
Left In:  $-72.848 \pm 18.276$   $\chi^2/\text{NDF}$ : 38.4/22

+ sign  $54.840 \pm 15.071$   $\chi^2/\text{NDF}$ : 75.7/55

All:  $7.270 \pm 10.802$   $\chi^2/\text{NDF}$ : 190.0/113

- sign  $-42.983 \pm 15.491$   $\chi^2/\text{NDF}$ : 93.8/57

# eigen\_dit\_asym\_sam\_37\_avg\_rms vs Slug



Right In: 112.611 $\pm$ 0.020  $\chi^2$ /NDF: 6345374.6/30

Left Out: 75.128 $\pm$ 0.013  $\chi^2$ /NDF:1601462.6/24

Right Out: 114.264 $\pm$ 0.021  $\chi^2$ /NDF: 7671860.8/34

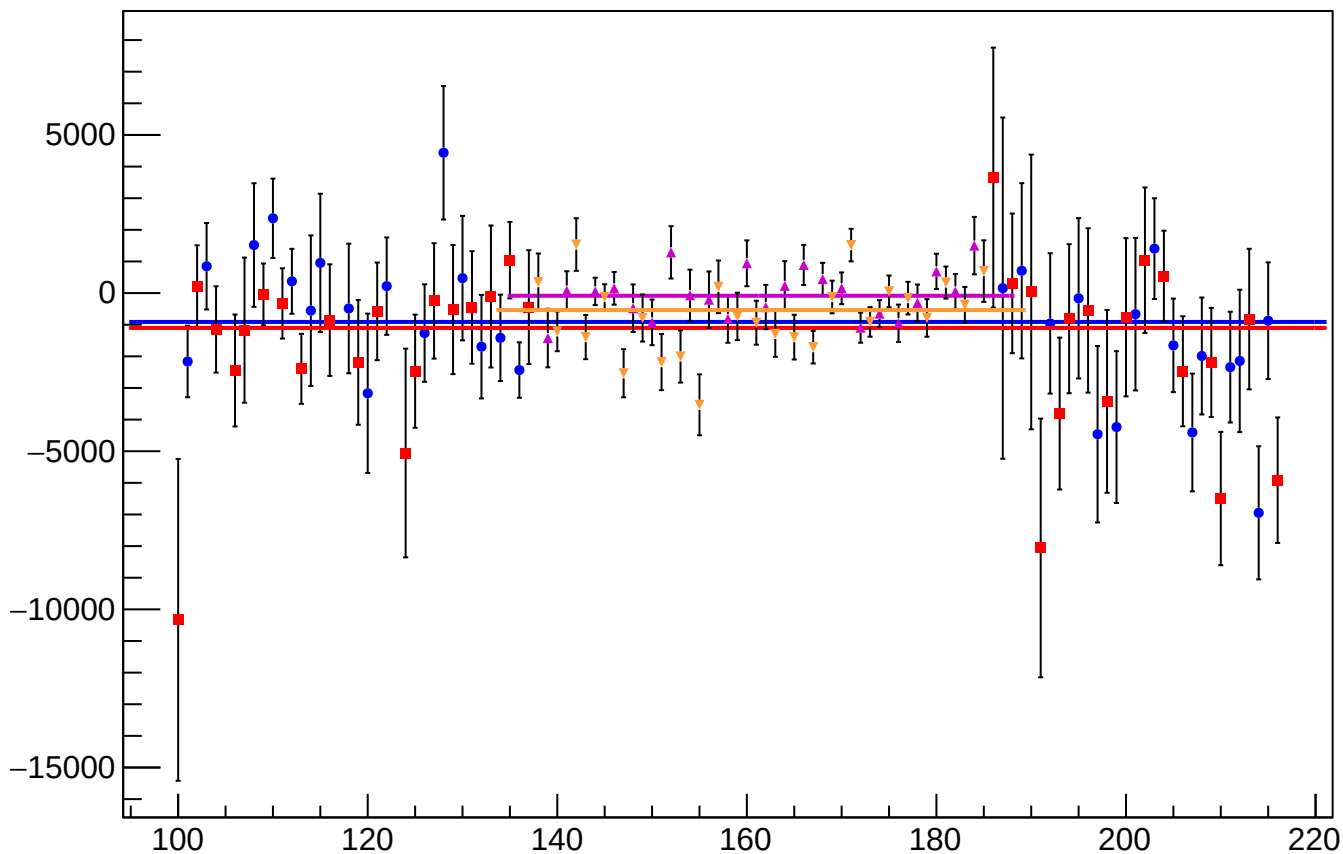
Left In: 75.363 $\pm$ 0.013  $\chi^2$ /NDF:1225319.2/22

+ sign 85.571 $\pm$ 0.011  $\chi^2$ /NDF: 10432999.0/55

All: 85.933 $\pm$ 0.008  $\chi^2$ /NDF: 21884019.9/113

- sign 86.317 $\pm$ 0.011  $\chi^2$ /NDF: 11448638.7/57

asym\_sam\_37\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-912.116 \pm 302.140$   $\chi^2/\text{NDF}$ : 44.7/30

Left Out:  $-536.790 \pm 124.471$   $\chi^2/\text{NDF}$ : 67.0/24

Right Out:  $-1102.216 \pm 301.703$   $\chi^2/\text{NDF}$ : 36.7/34

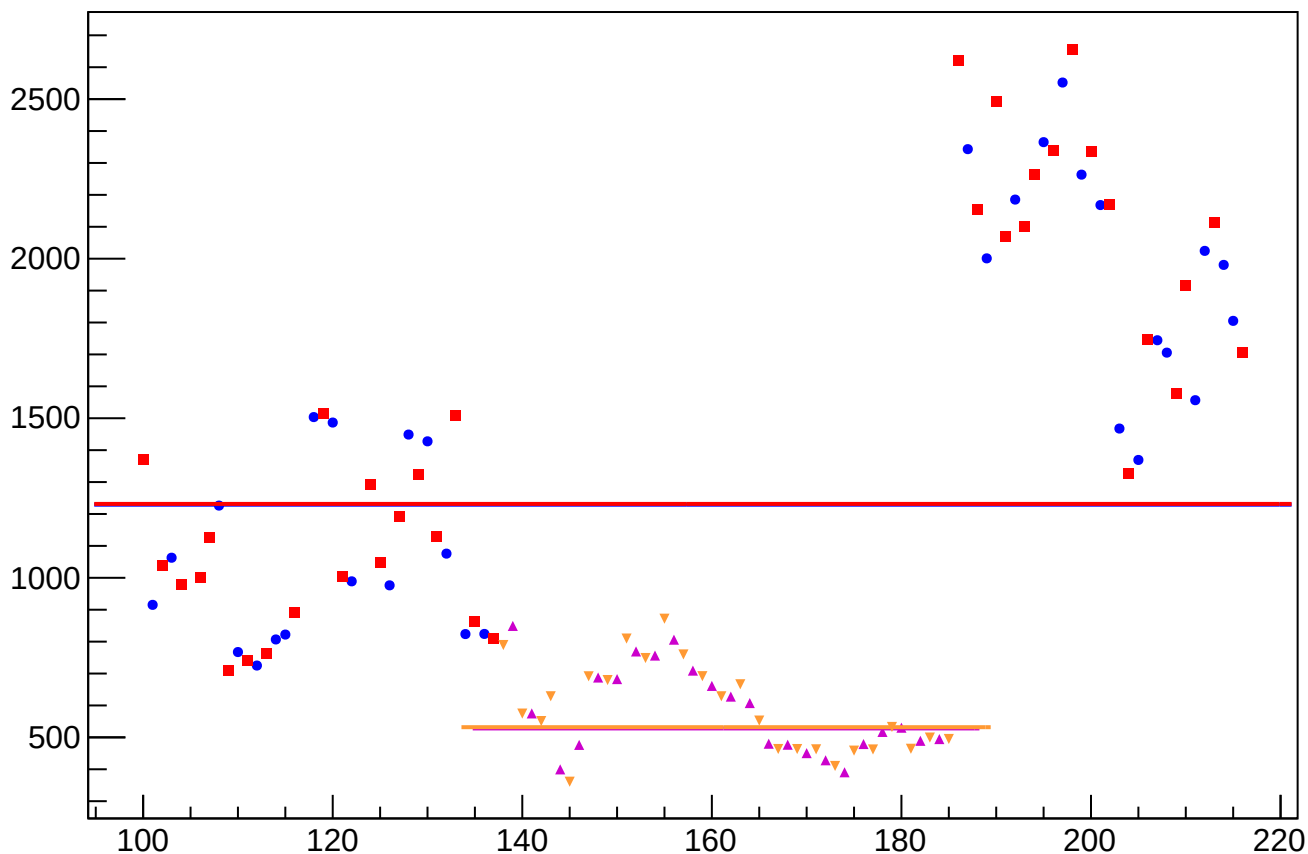
Left In:  $-84.668 \pm 127.039$   $\chi^2/\text{NDF}$ : 27.5/22

+ sign  $-591.246 \pm 115.088$   $\chi^2/\text{NDF}$ : 113.1/55

All:  $-417.615 \pm 82.076$   $\chi^2/\text{NDF}$ : 191.5/113

- sign  $-237.912 \pm 117.083$   $\chi^2/\text{NDF}$ : 73.8/57

asym\_sam\_37\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1229.175 $\pm$ 0.214  $\chi^2$ /NDF: 5147234.7/30

Left Out: 531.872 $\pm$ 0.088  $\chi^2$ /NDF: 2037744.9/24

Right Out: 1231.539 $\pm$ 0.213  $\chi^2$ /NDF: 5945025.3/34

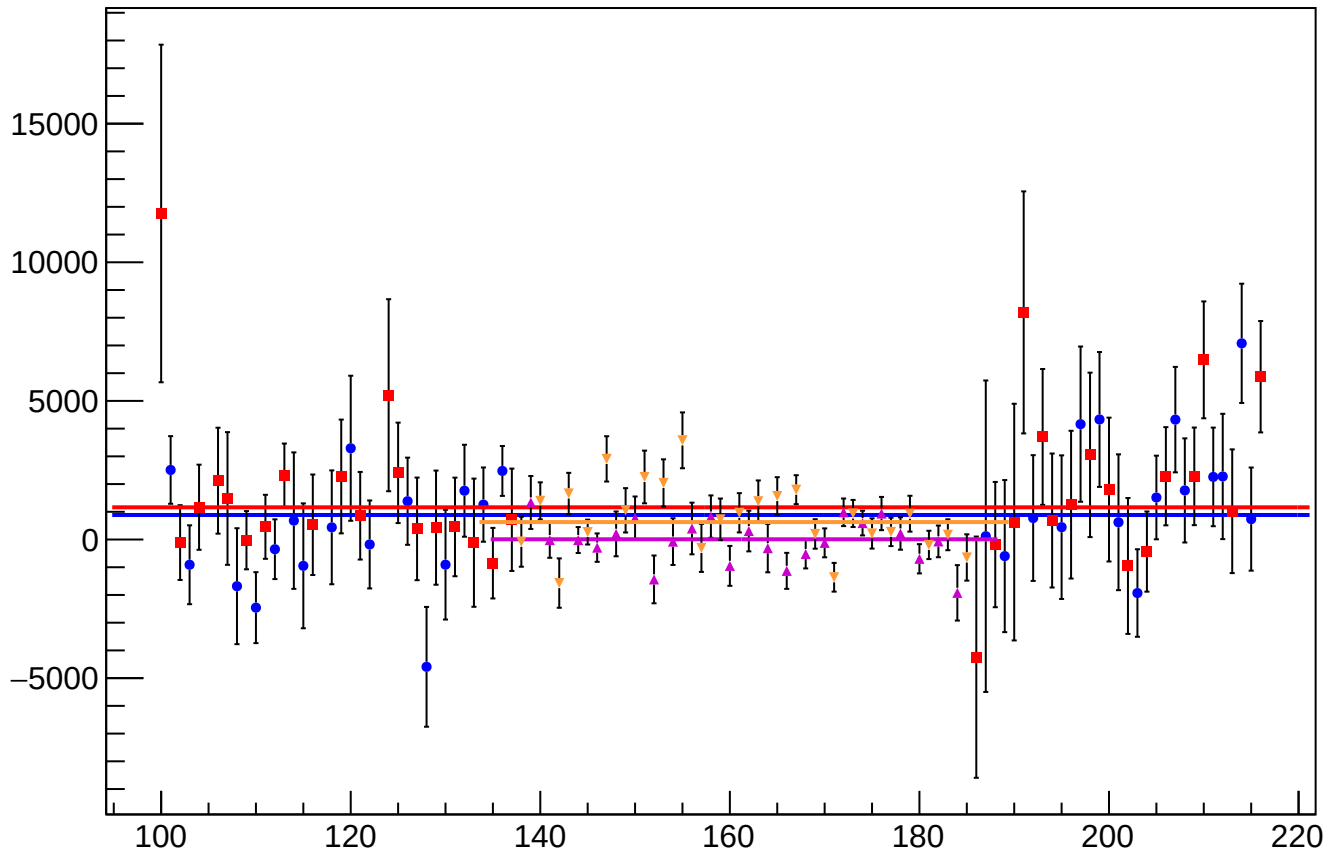
Left In: 527.986 $\pm$ 0.090  $\chi^2$ /NDF: 1800449.7/22

+ sign 633.044 $\pm$ 0.081  $\chi^2$ /NDF: 16291980.7/55

All: 633.485 $\pm$ 0.058  $\chi^2$ /NDF: 33275490.7/11

- sign 633.941 $\pm$ 0.083  $\chi^2$ /NDF: 16983450.3/57

# asym\_sam\_37\_avg\_mean vs Slug



Right In:  $885.212 \pm 309.646$   $\chi^2/\text{NDF}$ : 45.7/30

Left Out:  $629.379 \pm 128.853$   $\chi^2/\text{NDF}$ : 64.9/24

Right Out:  $1161.801 \pm 313.166$   $\chi^2/\text{NDF}$ : 33.2/34

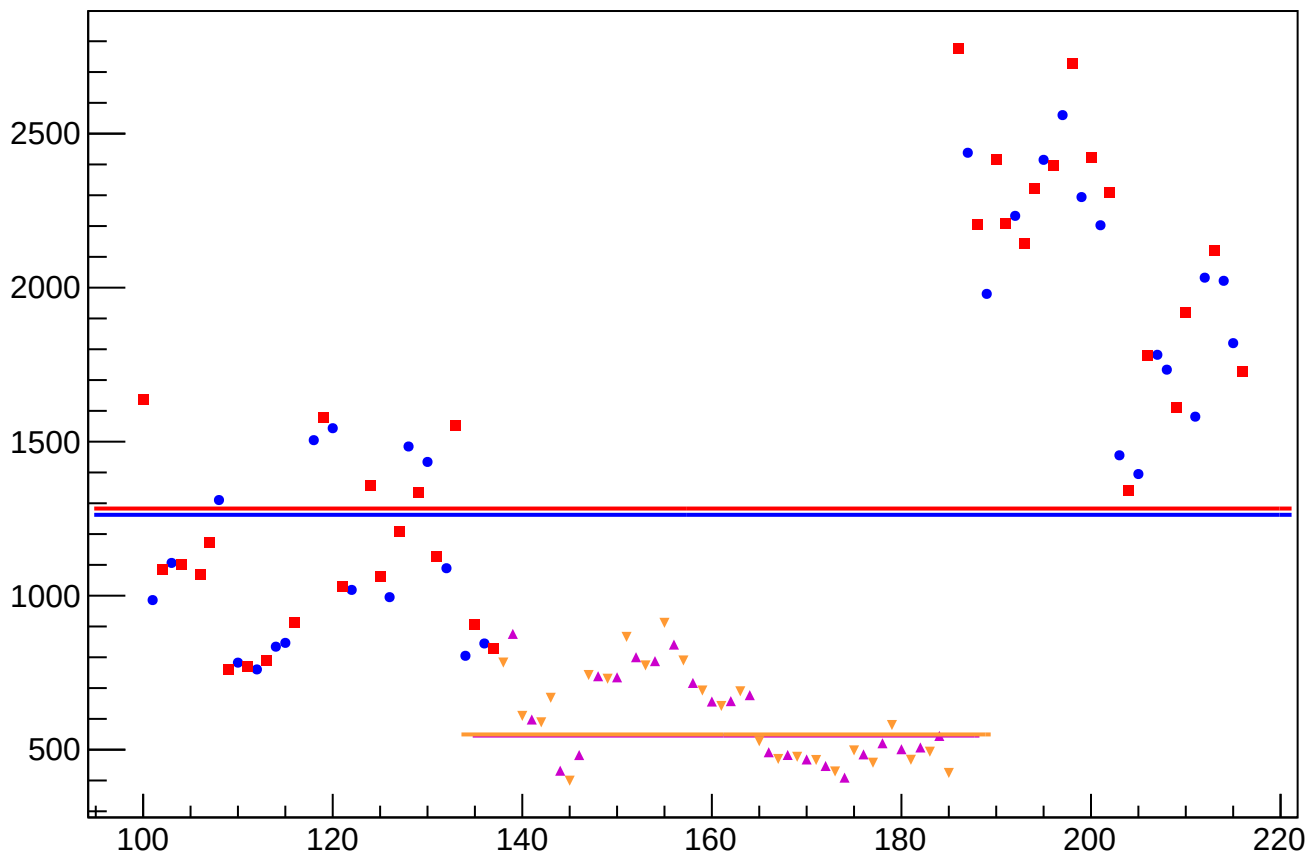
Left In:  $8.460 \pm 131.289$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $667.141 \pm 118.964$   $\chi^2/\text{NDF}$ : 111.2/55

All:  $428.288 \pm 84.858$   $\chi^2/\text{NDF}$ : 191.4/113

- sign  $180.866 \pm 121.080$   $\chi^2/\text{NDF}$ : 72.1/57

# asym\_sam\_37\_avg\_rms vs Slug



Right In: 1262.500+/-0.219  $\chi^2/\text{NDF}$ : 4967484.7/30

Left Out: 549.475+/-0.091  $\chi^2/\text{NDF}$ : 2053905.8/24

Right Out: 1282.885+/-0.221  $\chi^2/\text{NDF}$ : 5679176.7/34

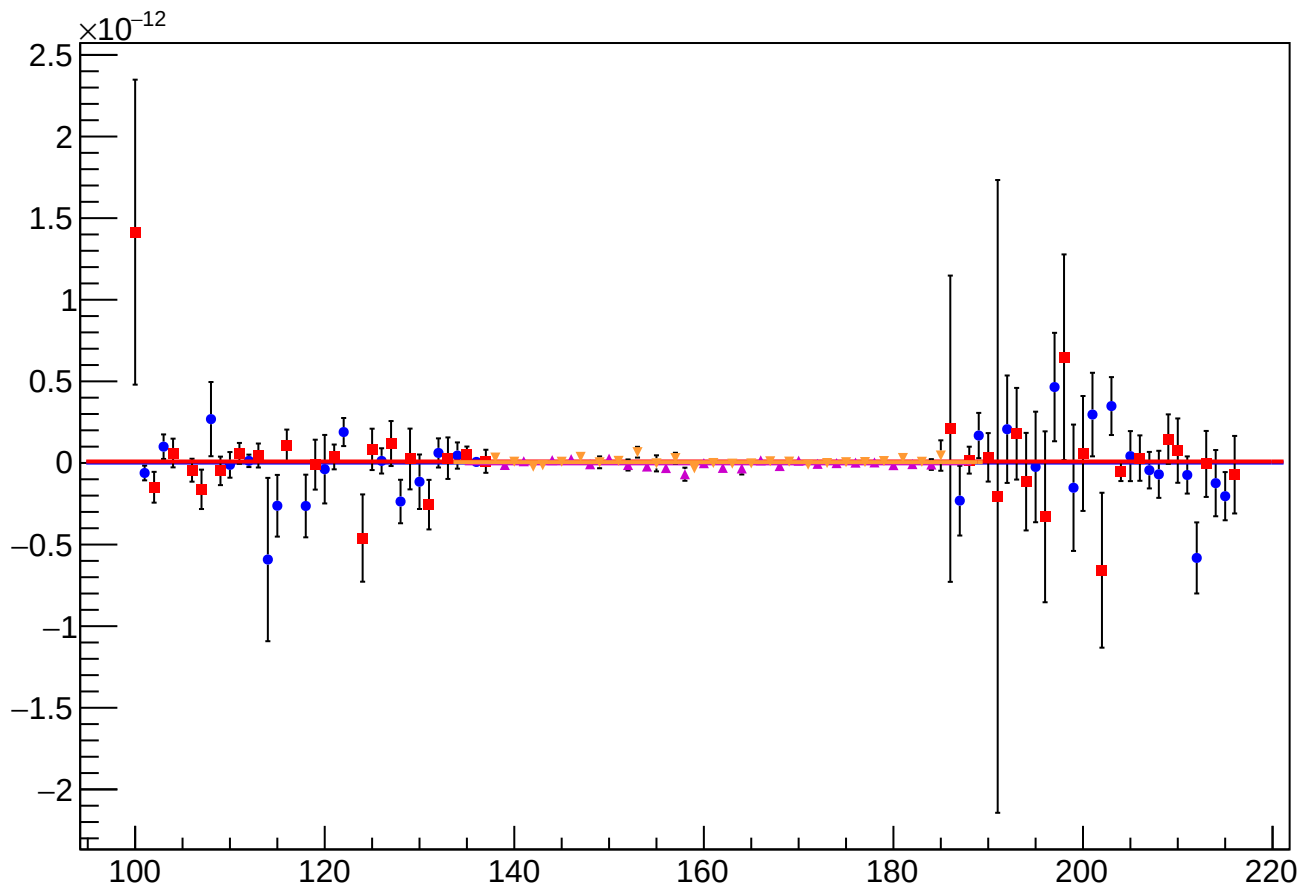
Left In: 545.708+/-0.093  $\chi^2/\text{NDF}$ : 1814508.3/22

+ sign 654.721+/-0.084  $\chi^2/\text{NDF}$ : 16061024.1/55

All: 655.302+/-0.060  $\chi^2/\text{NDF}$ : 32980383.3/11

- sign 655.904+/-0.086  $\chi^2/\text{NDF}$ : 16919262.1/57

asym\_sam\_37\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.7/34

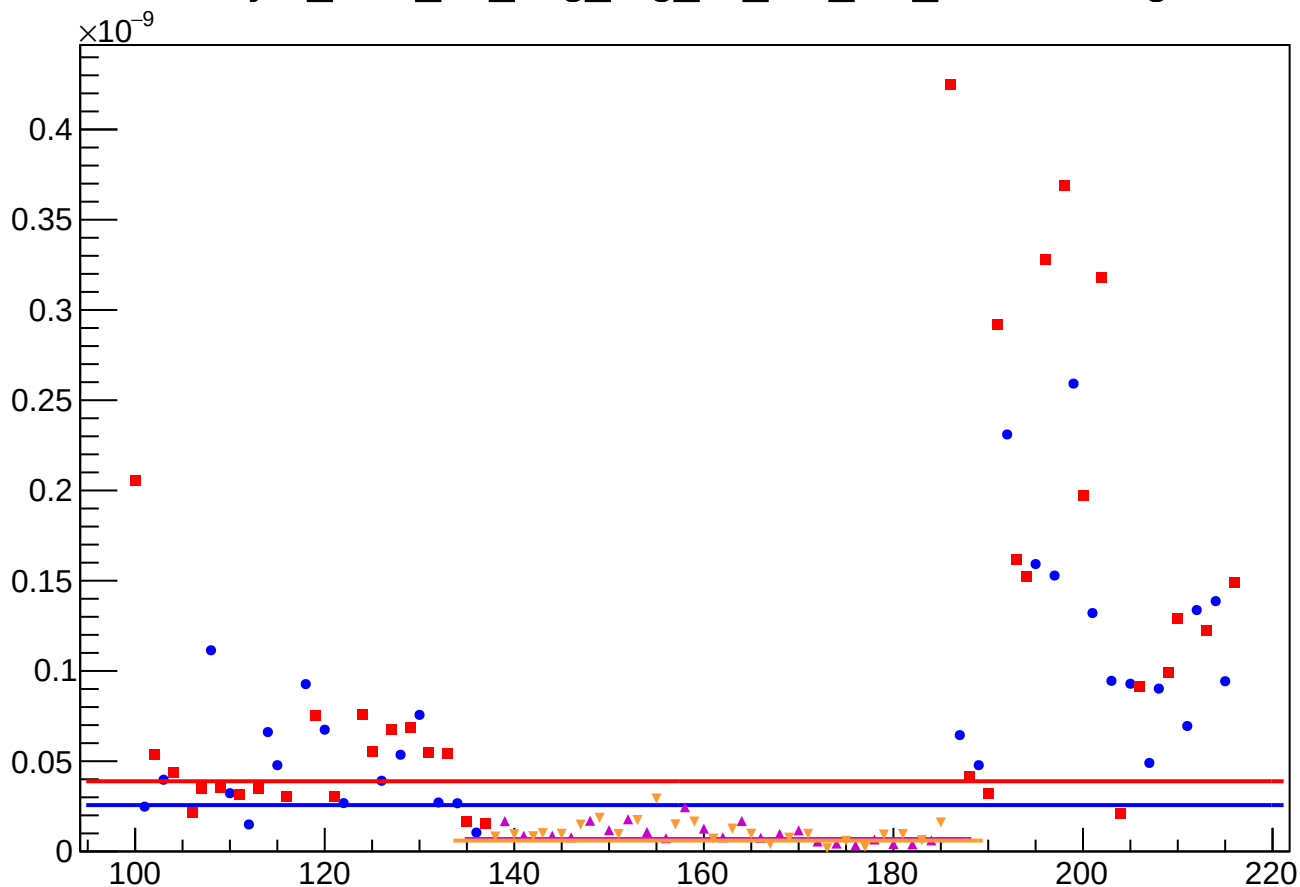
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 56.1/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 103.4/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.0/57

asym\_sam\_37\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7965641.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3623754.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6635630.5/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2417942.7/22

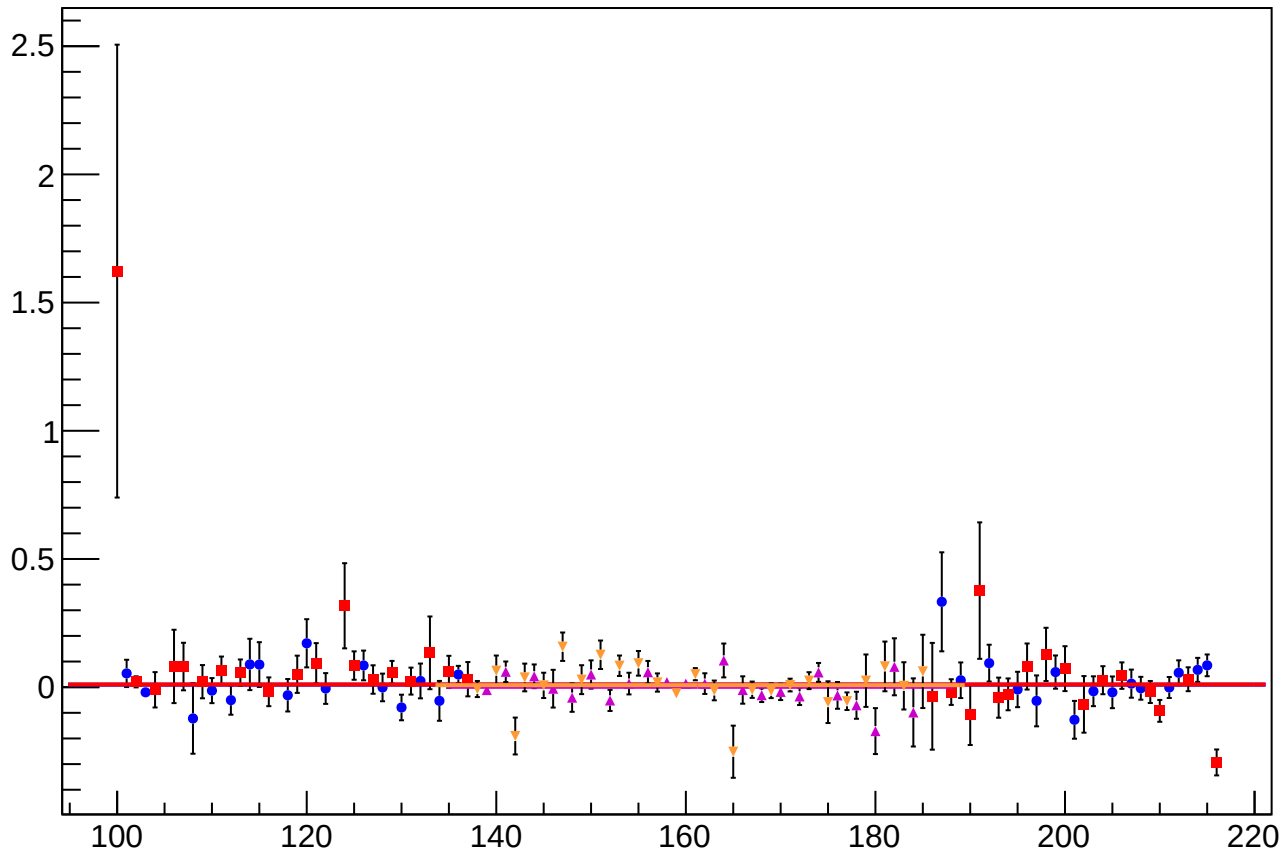
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15476190.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30585044.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15018444.1/57



# asym\_sam\_37\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 66.2/34

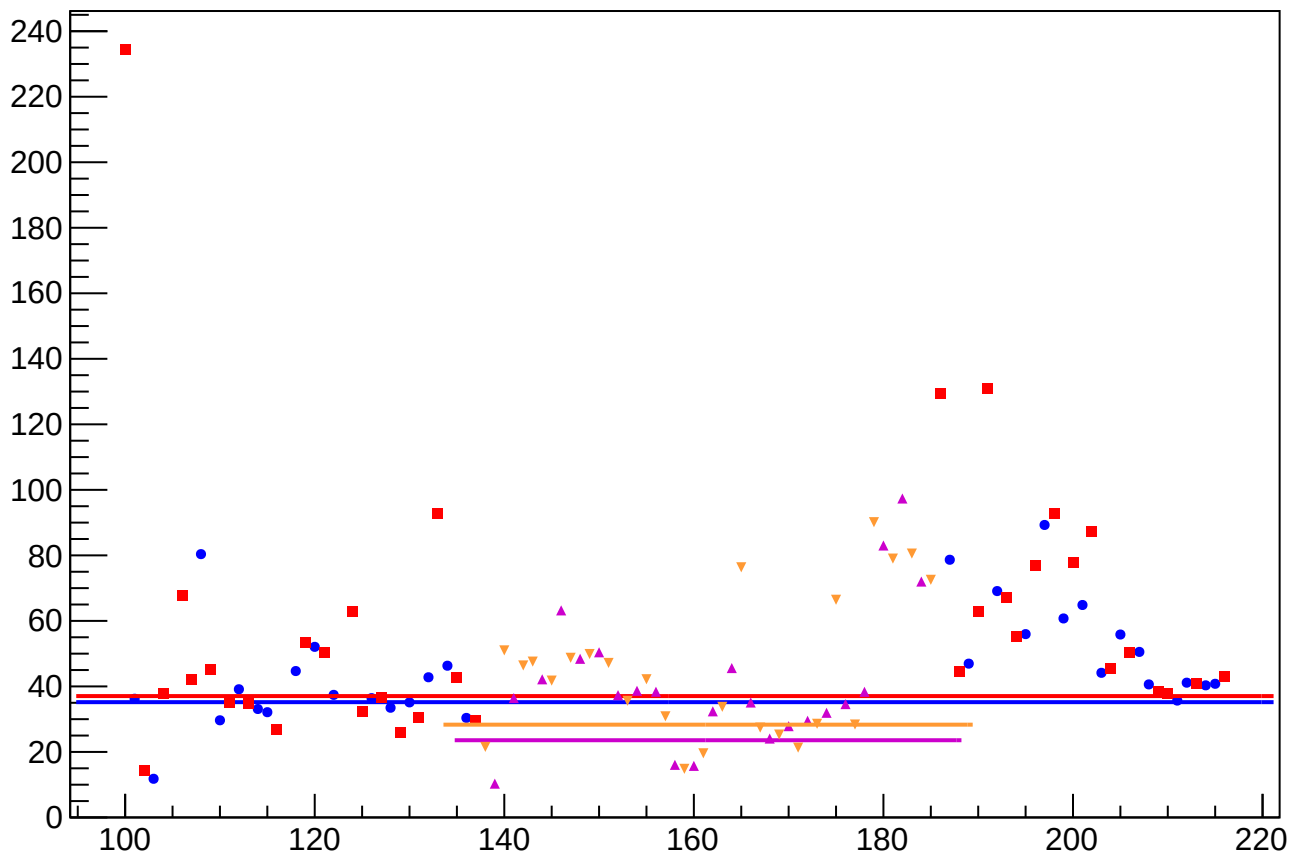
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.009 \pm 0.006$   $\chi^2/\text{NDF}$ : 79.6/55

All:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 171.9/113

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 91.9/57

asym\_sam\_37\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.194+/-0.007  $\chi^2/\text{NDF}$ : 5873617.4/30

Left Out: 28.325+/-0.005  $\chi^2/\text{NDF}$ : 6788307.1/24

Right Out: 37.049+/-0.007  $\chi^2/\text{NDF}$ : 6561157.3/34

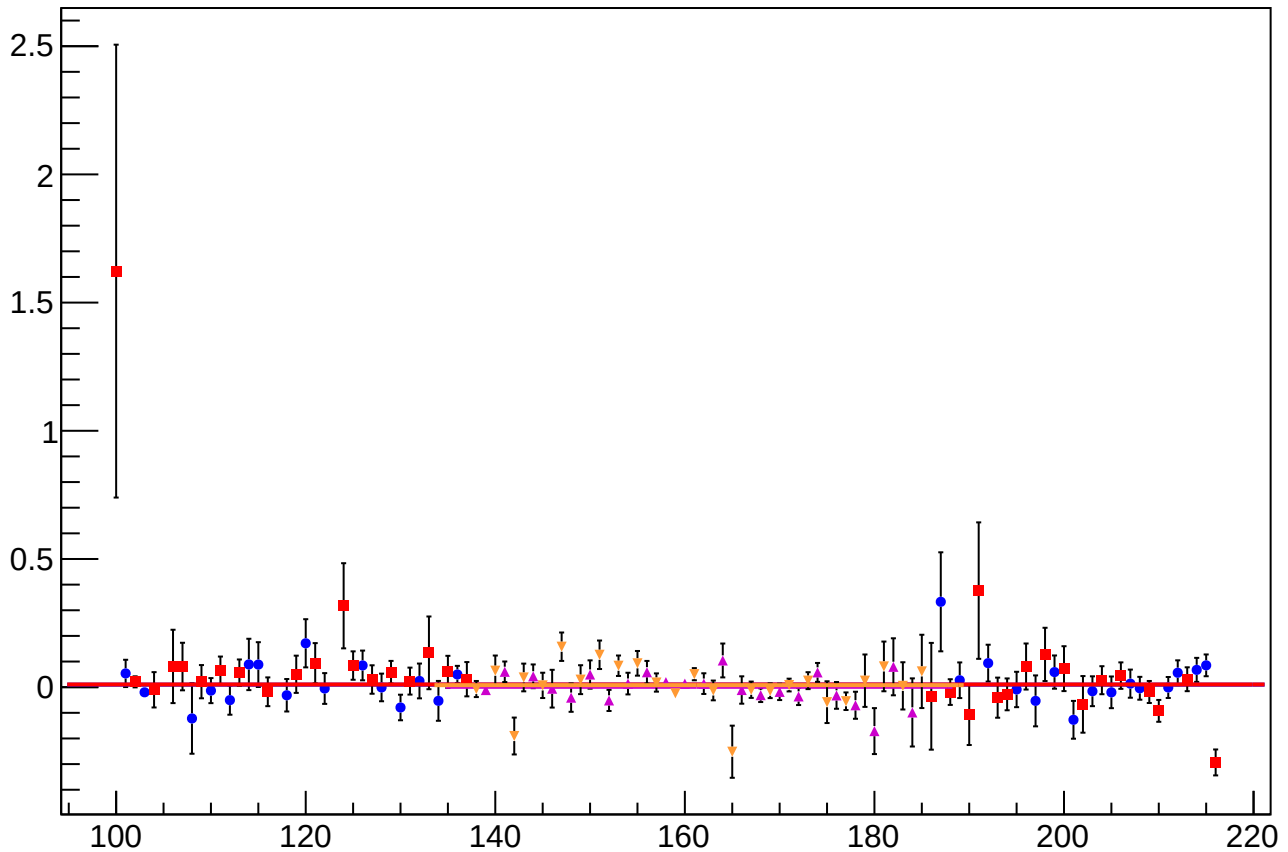
Left In: 23.572+/-0.005  $\chi^2/\text{NDF}$ : 8263833.7/22

+ sign 31.056+/-0.004  $\chi^2/\text{NDF}$ : 13315438.5/55

All: 29.411+/-0.003  $\chi^2/\text{NDF}$ : 30967720.1/113

- sign 27.919+/-0.004  $\chi^2/\text{NDF}$ : 17354061.0/57

asym\_sam\_37\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.009  $\chi^2$ /NDF: 32.0/30

Left Out: 0.008 $\pm$ 0.008  $\chi^2$ /NDF: 47.6/24

Right Out: 0.011 $\pm$ 0.010  $\chi^2$ /NDF: 66.2/34

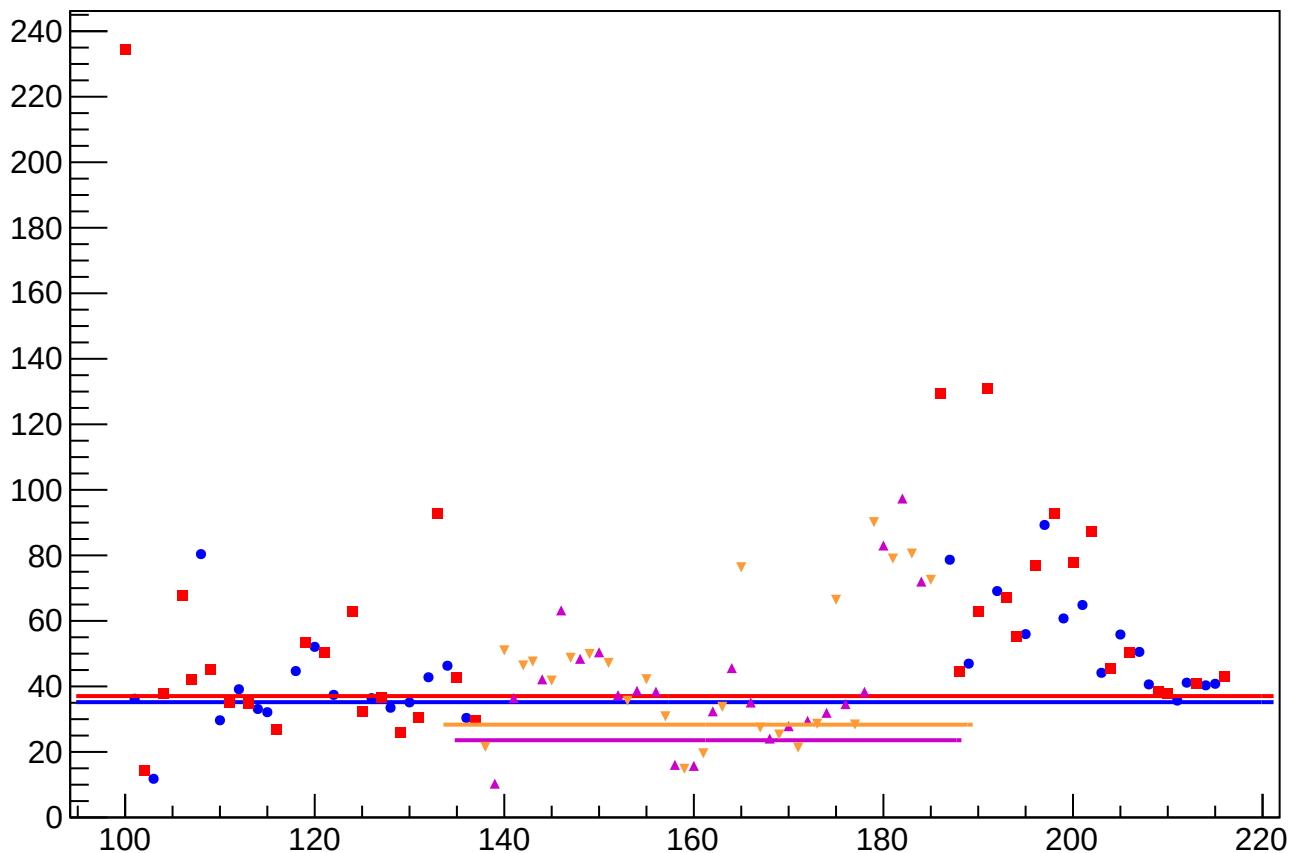
Left In: 0.001 $\pm$ 0.007  $\chi^2$ /NDF: 25.1/22

+ sign 0.009 $\pm$ 0.006  $\chi^2$ /NDF: 79.6/55

All: 0.006 $\pm$ 0.004  $\chi^2$ /NDF: 171.9/113

- sign 0.004 $\pm$ 0.006  $\chi^2$ /NDF: 91.9/57

asym\_sam\_37\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.194+/-0.007  $\chi^2/\text{NDF}$ : 5873617.4/30

Left Out: 28.325+/-0.005  $\chi^2/\text{NDF}$ : 6788307.1/24

Right Out: 37.049+/-0.007  $\chi^2/\text{NDF}$ : 6561157.3/34

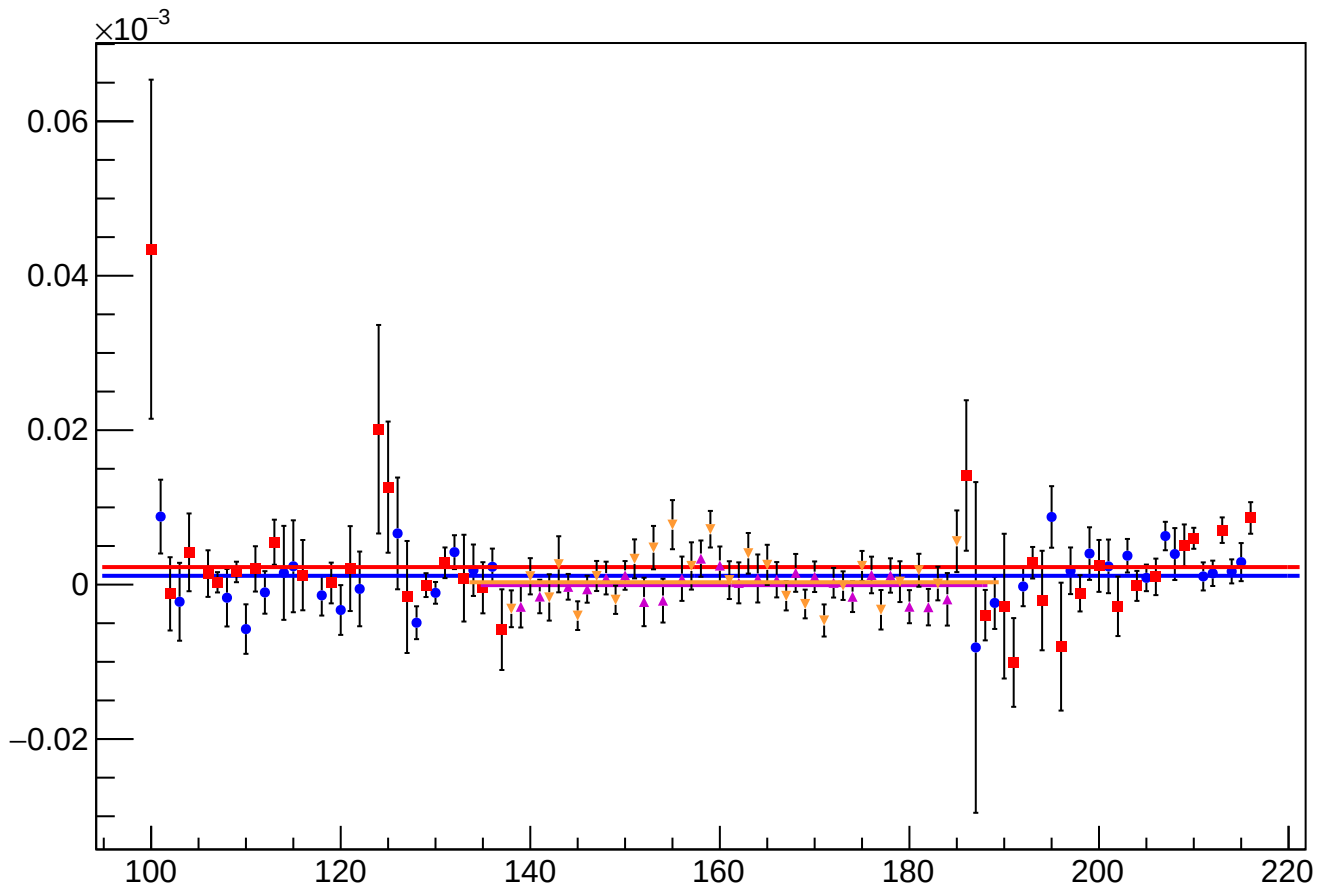
Left In: 23.572+/-0.005  $\chi^2/\text{NDF}$ : 8263833.7/22

+ sign 31.056+/-0.004  $\chi^2/\text{NDF}$ : 13315438.5/55

All: 29.411+/-0.003  $\chi^2/\text{NDF}$ : 30967720.1/113

- sign 27.919+/-0.004  $\chi^2/\text{NDF}$ : 17354061.0/57

asym\_sam\_37\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:45.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.1/34

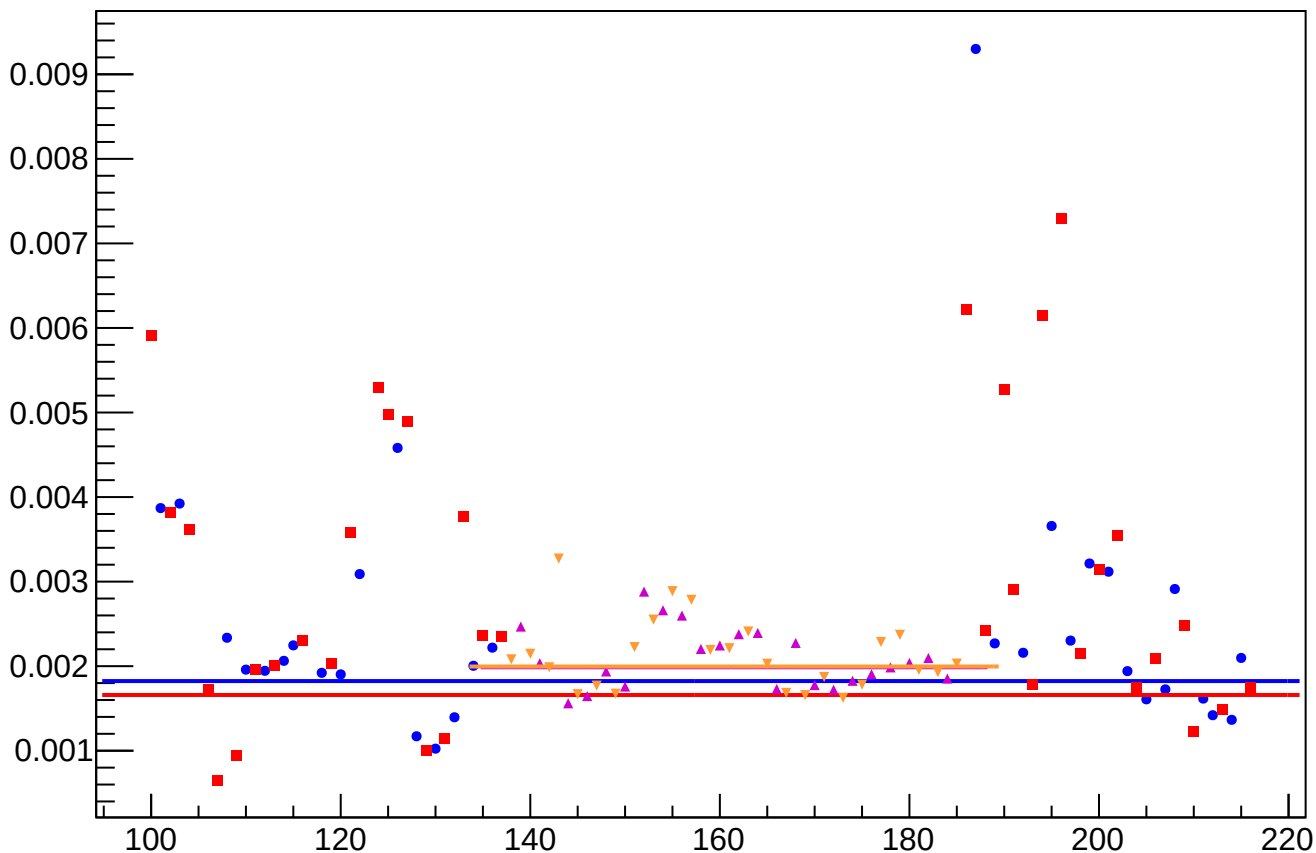
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:12.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 89.3/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 177.7/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.3/57

asym\_sam\_37\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 4169645.8/30$

Left Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 1173308.8/24$

Right Out:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 8978948.4/34$

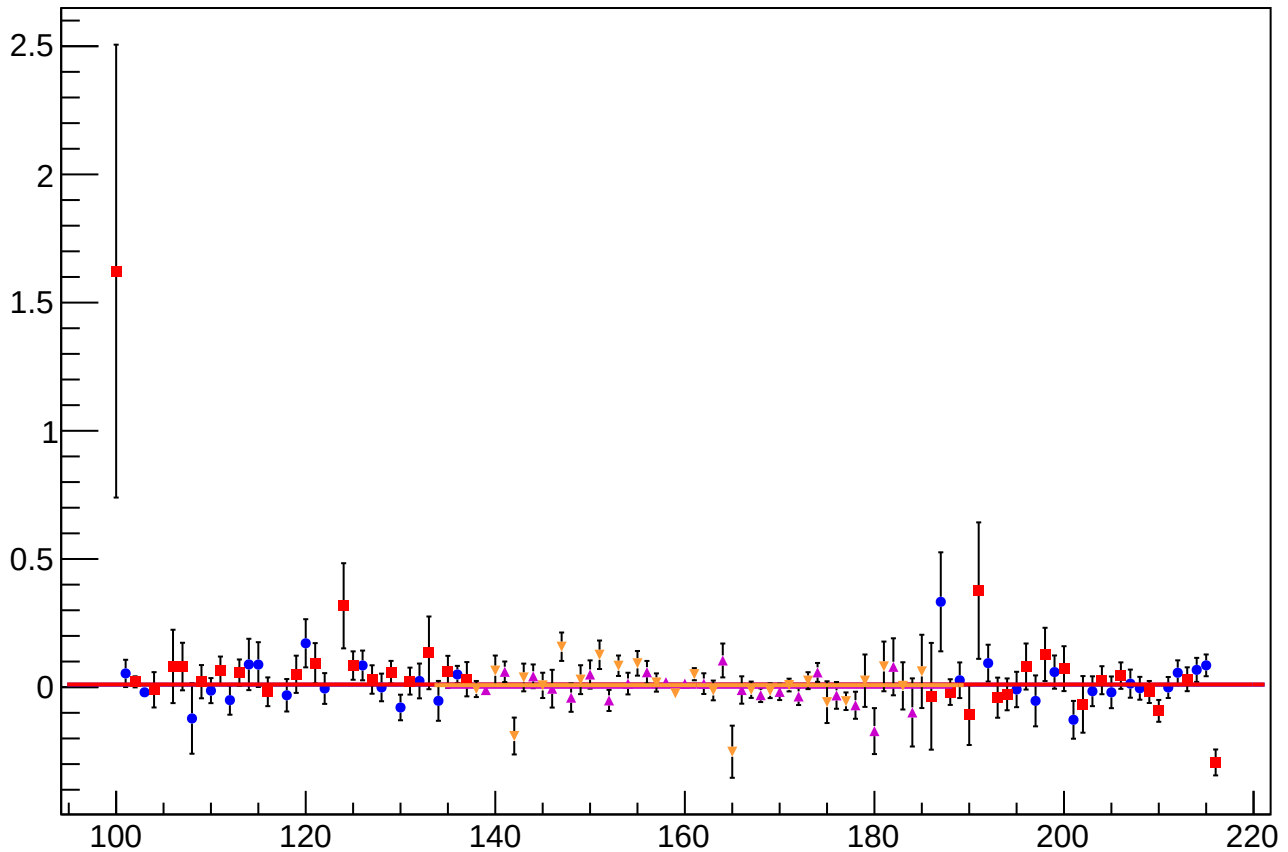
Left In:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 924009.7/22$

+ sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 5482092.6/55$

All:  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 15992406.4/113$

- sign  $0.002 \pm 0.000$   $\chi^2/\text{NDF}: 10419222.2/57$

asym\_sam\_37\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 66.2/34

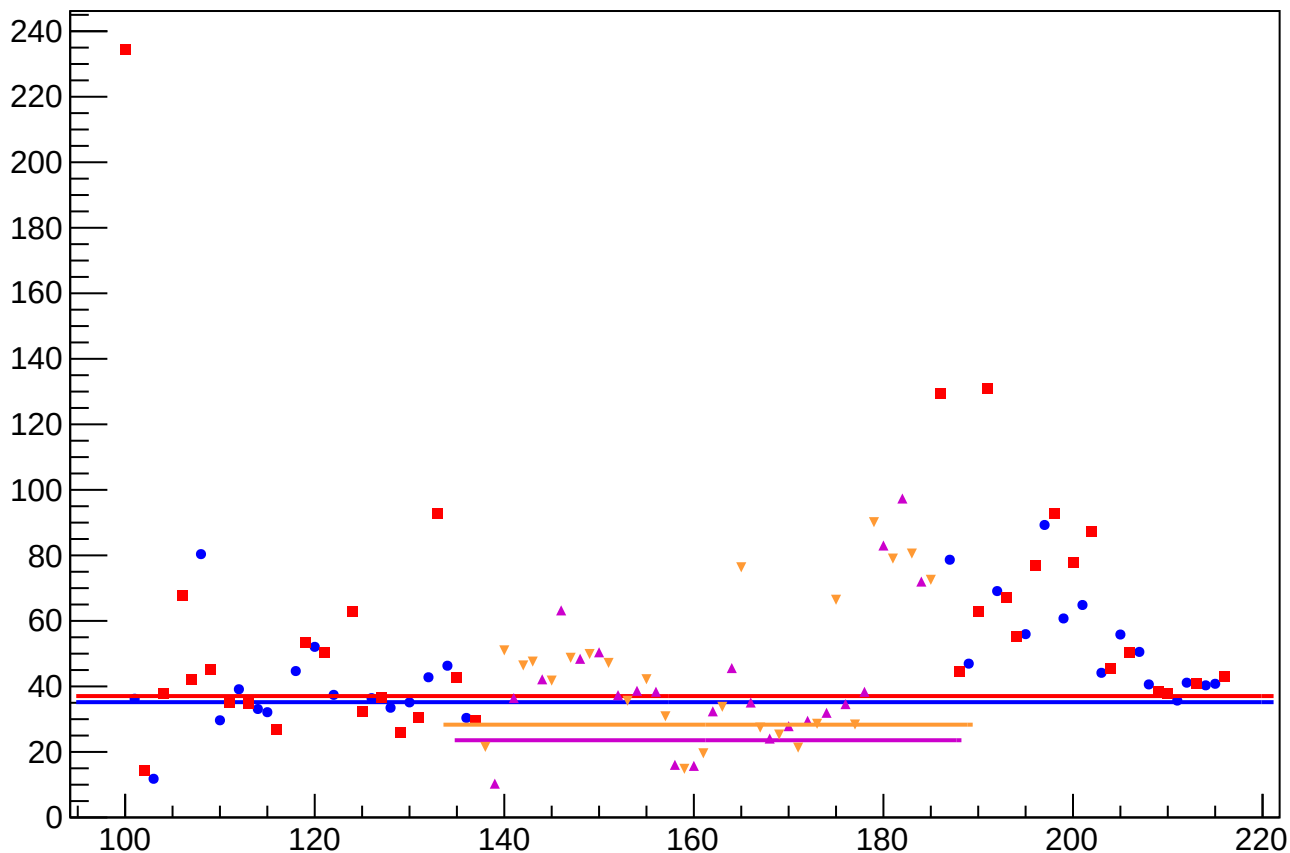
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.009 \pm 0.006$   $\chi^2/\text{NDF}$ : 79.6/55

All:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 171.9/113

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 91.9/57

asym\_sam\_37\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.194+/-0.007  $\chi^2/\text{NDF}$ : 5874060.6/30

Left Out: 28.324+/-0.005  $\chi^2/\text{NDF}$ : 6788766.1/24

Right Out: 37.051+/-0.007  $\chi^2/\text{NDF}$ : 6559934.5/34

Left In: 23.571+/-0.005  $\chi^2/\text{NDF}$ : 8264891.4/22

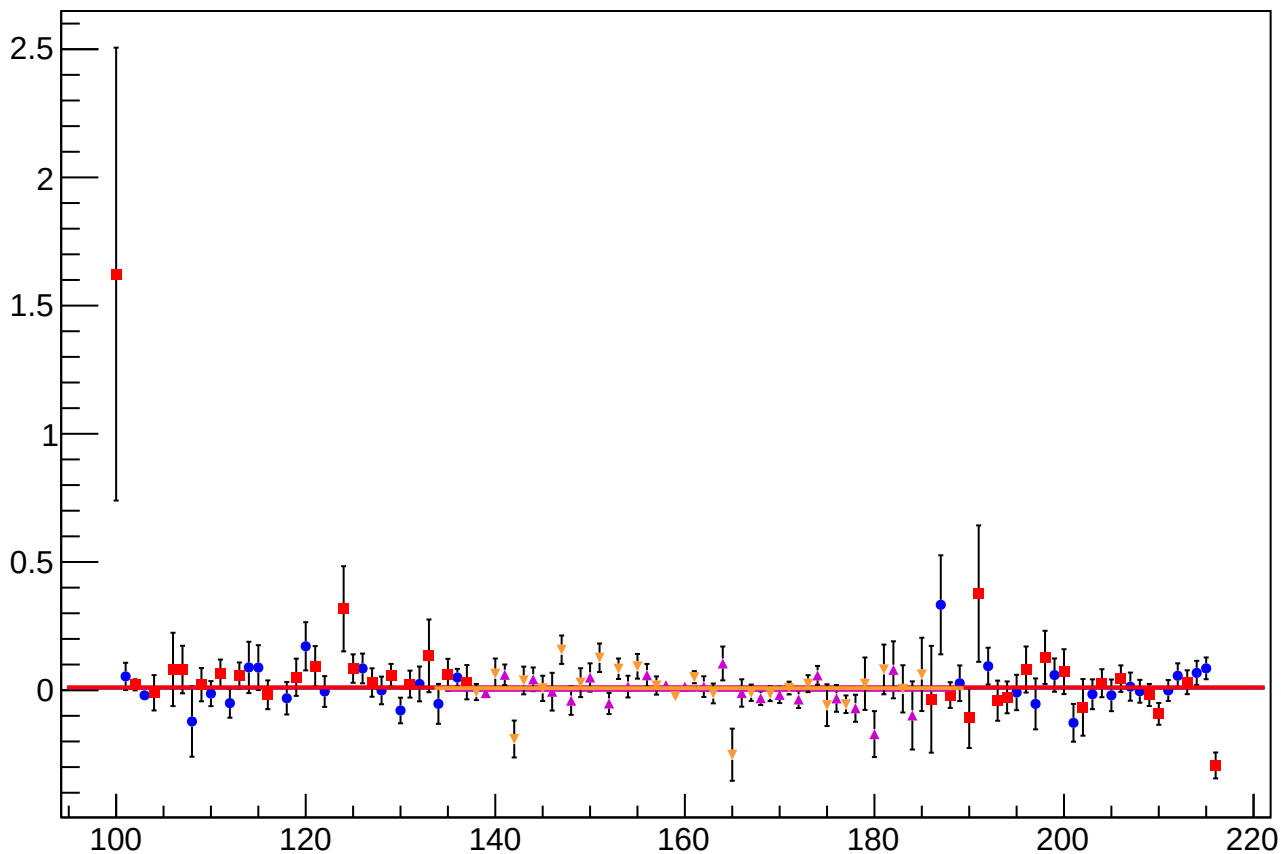
+ sign 31.055+/-0.004  $\chi^2/\text{NDF}$ : 13316311.9/55

All: 29.411+/-0.003  $\chi^2/\text{NDF}$ : 30969614.5/113

- sign 27.919+/-0.004  $\chi^2/\text{NDF}$ : 17355079.3/57



asym\_sam\_37\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 66.2/34

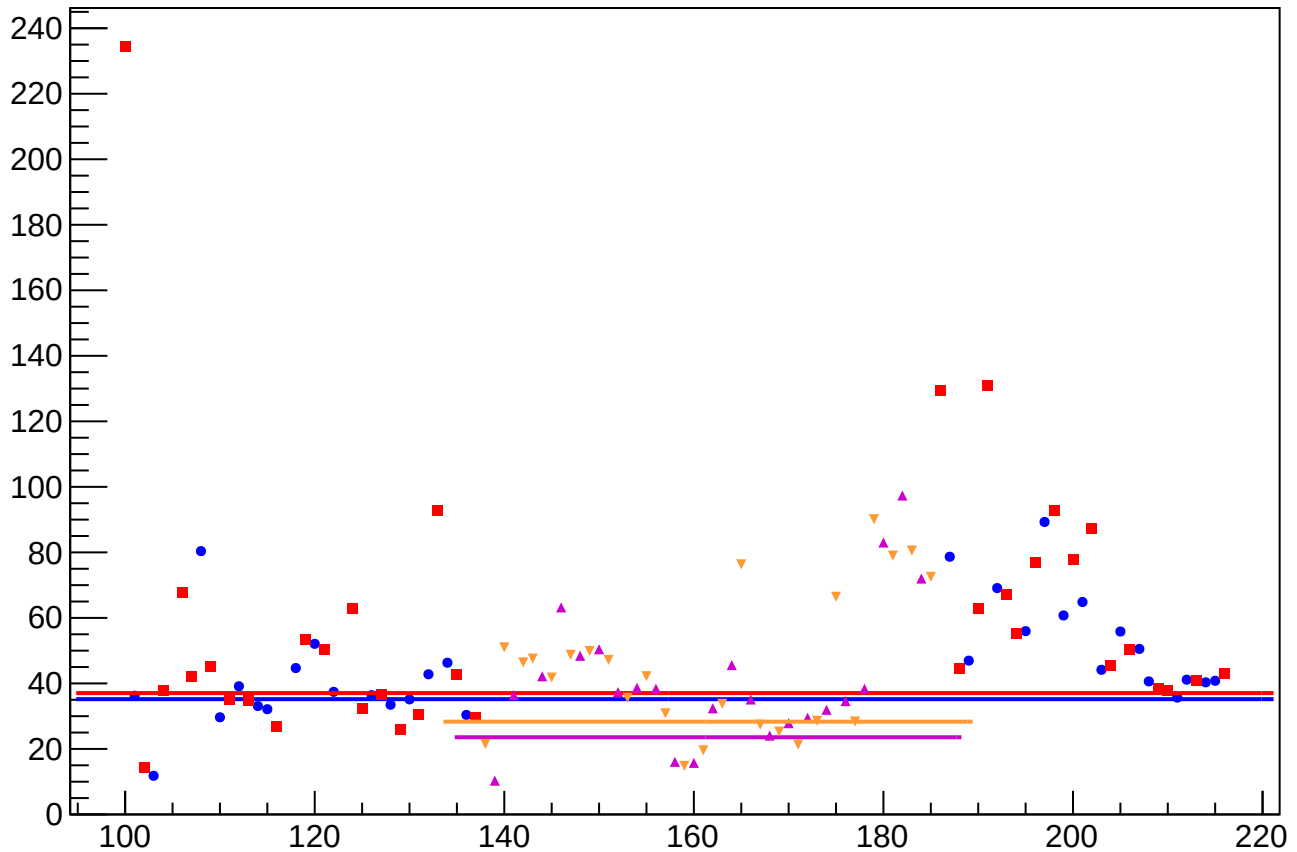
Left In:  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.009 \pm 0.006$   $\chi^2/\text{NDF}$ : 79.6/55

All:  $0.006 \pm 0.004$   $\chi^2/\text{NDF}$ : 171.9/113

- sign  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 91.9/57

asym\_sam\_37\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.194+/-0.007  $\chi^2/\text{NDF}$ : 5874060.6/30

Left Out: 28.324+/-0.005  $\chi^2/\text{NDF}$ : 6788766.1/24

Right Out: 37.051+/-0.007  $\chi^2/\text{NDF}$ : 6559934.5/34

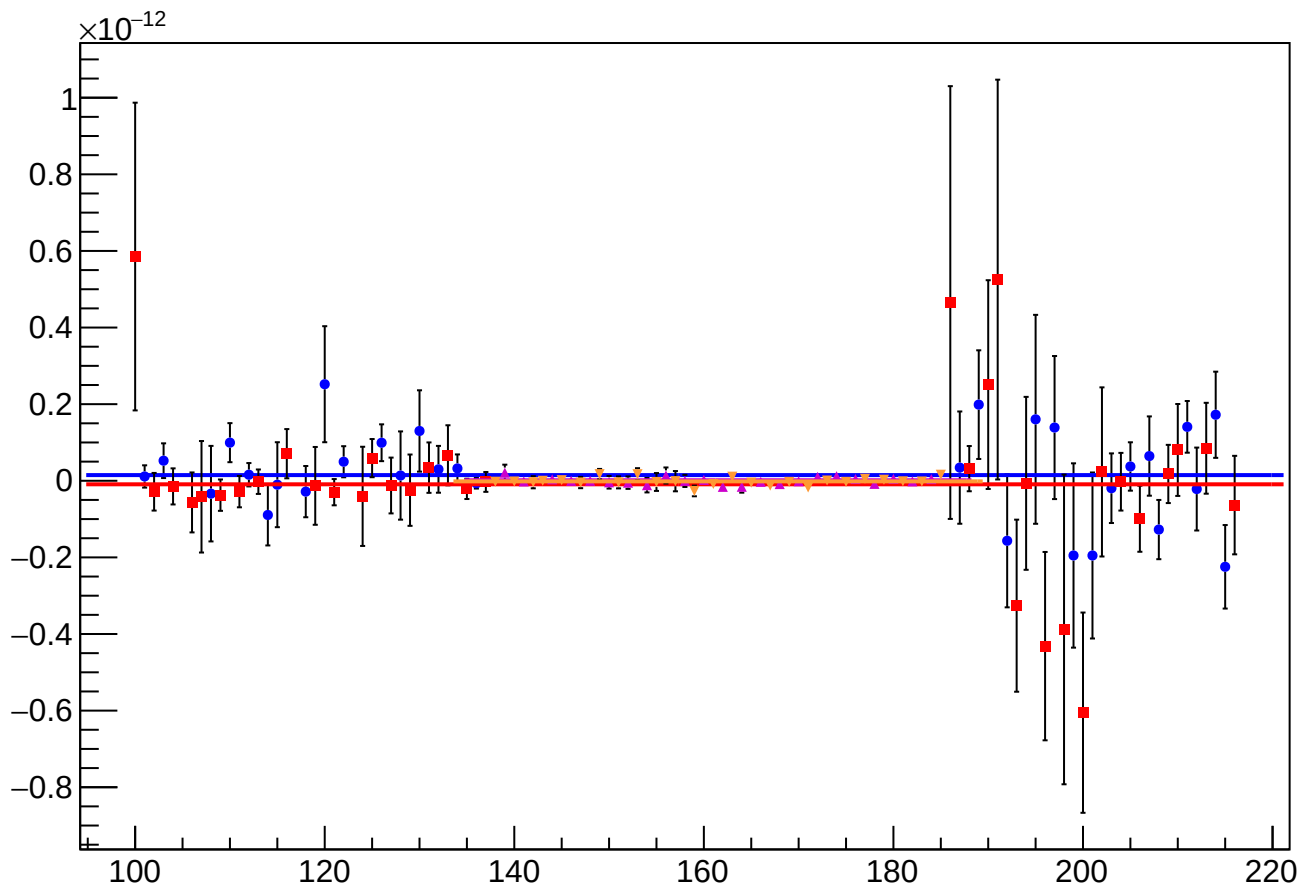
Left In: 23.571+/-0.005  $\chi^2/\text{NDF}$ : 8264891.4/22

+ sign 31.055+/-0.004  $\chi^2/\text{NDF}$ : 13316311.9/55

All: 29.411+/-0.003  $\chi^2/\text{NDF}$ : 30969614.5/113

- sign 27.919+/-0.004  $\chi^2/\text{NDF}$ : 17355079.3/57

asym\_sam\_37\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 35.3/30$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 17.6/24$

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 25.8/34$

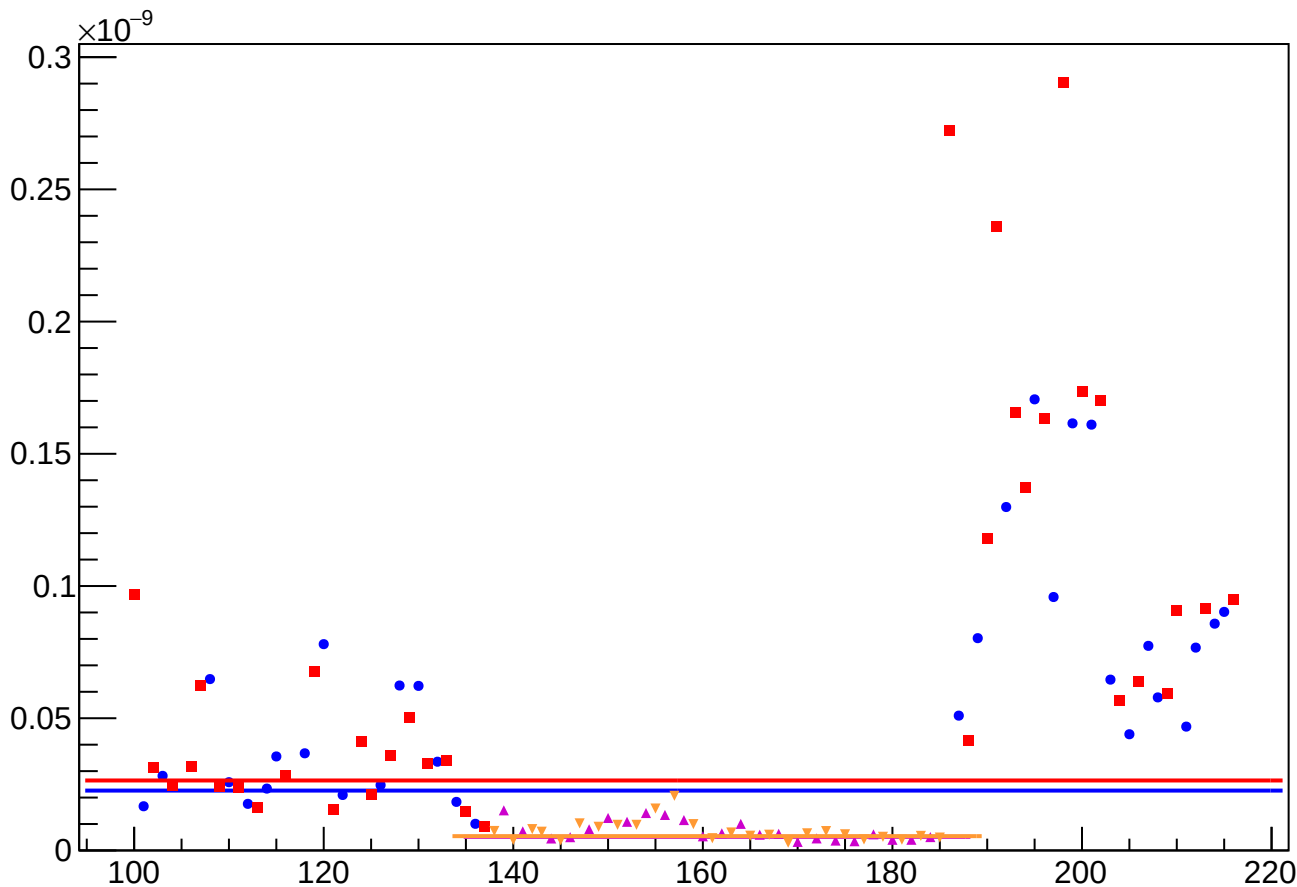
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 15.9/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 56.1/55$

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 99.4/113$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 42.8/57$

asym\_sam\_37\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10396178.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3068356.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10601462.1/34

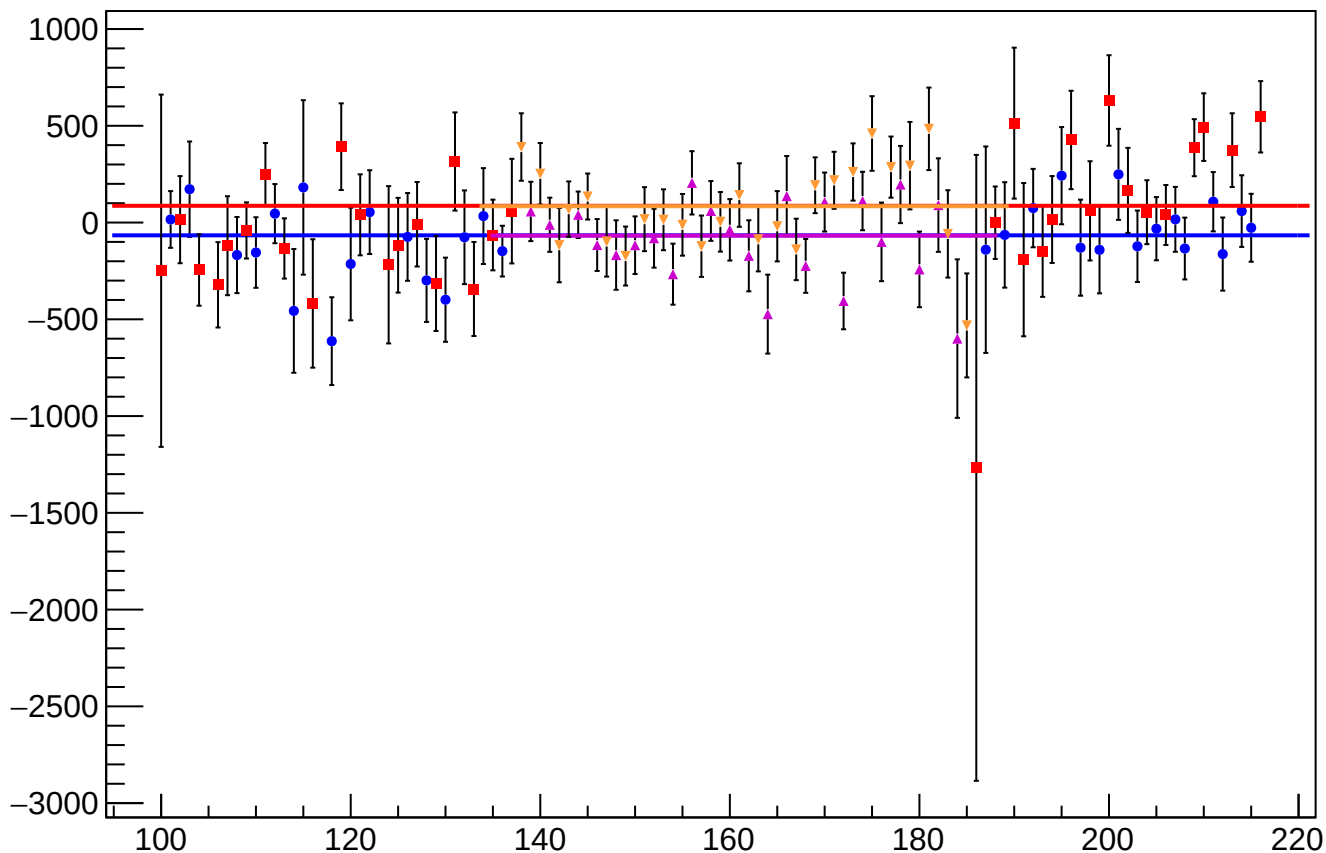
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3390855.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20611076.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 43114474.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22475444.5/57

# reg\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-65.999 \pm 36.083$   $\chi^2/\text{NDF}$ : 21.1/30

Left Out:  $84.324 \pm 33.036$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $86.587 \pm 36.154$   $\chi^2/\text{NDF}$ : 53.6/34

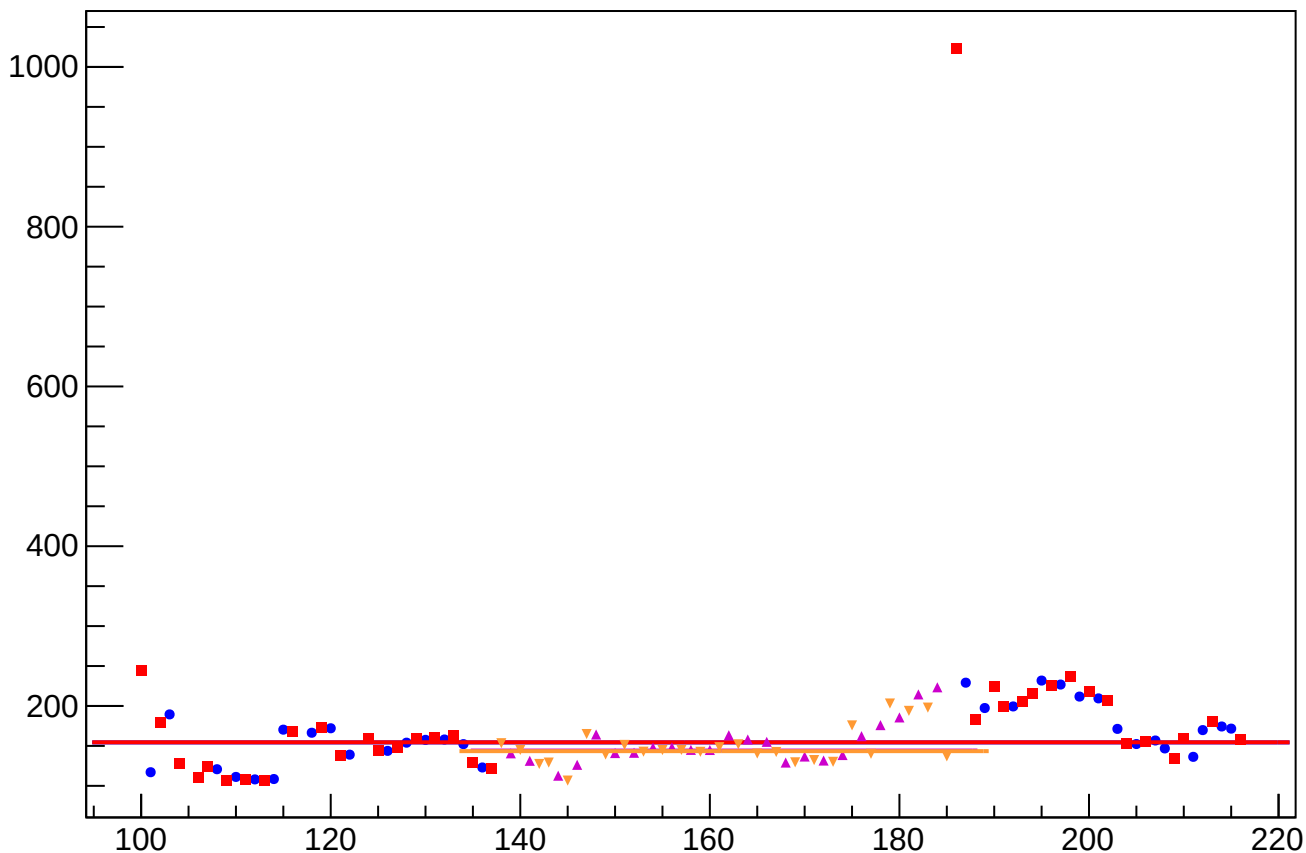
Left In:  $-67.646 \pm 34.137$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $15.777 \pm 24.366$   $\chi^2/\text{NDF}$ : 64.4/55

All:  $10.512 \pm 17.388$   $\chi^2/\text{NDF}$ : 154.2/113

- sign  $5.049 \pm 24.821$   $\chi^2/\text{NDF}$ : 89.7/57

# reg\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 154.360 $\pm$ 0.026  $\chi^2$ /NDF: 1605700.4/30

Left Out: 143.444 $\pm$ 0.023  $\chi^2$ /NDF: 747040.9/24

Right Out: 154.527 $\pm$ 0.026  $\chi^2$ /NDF: 2517914.2/34

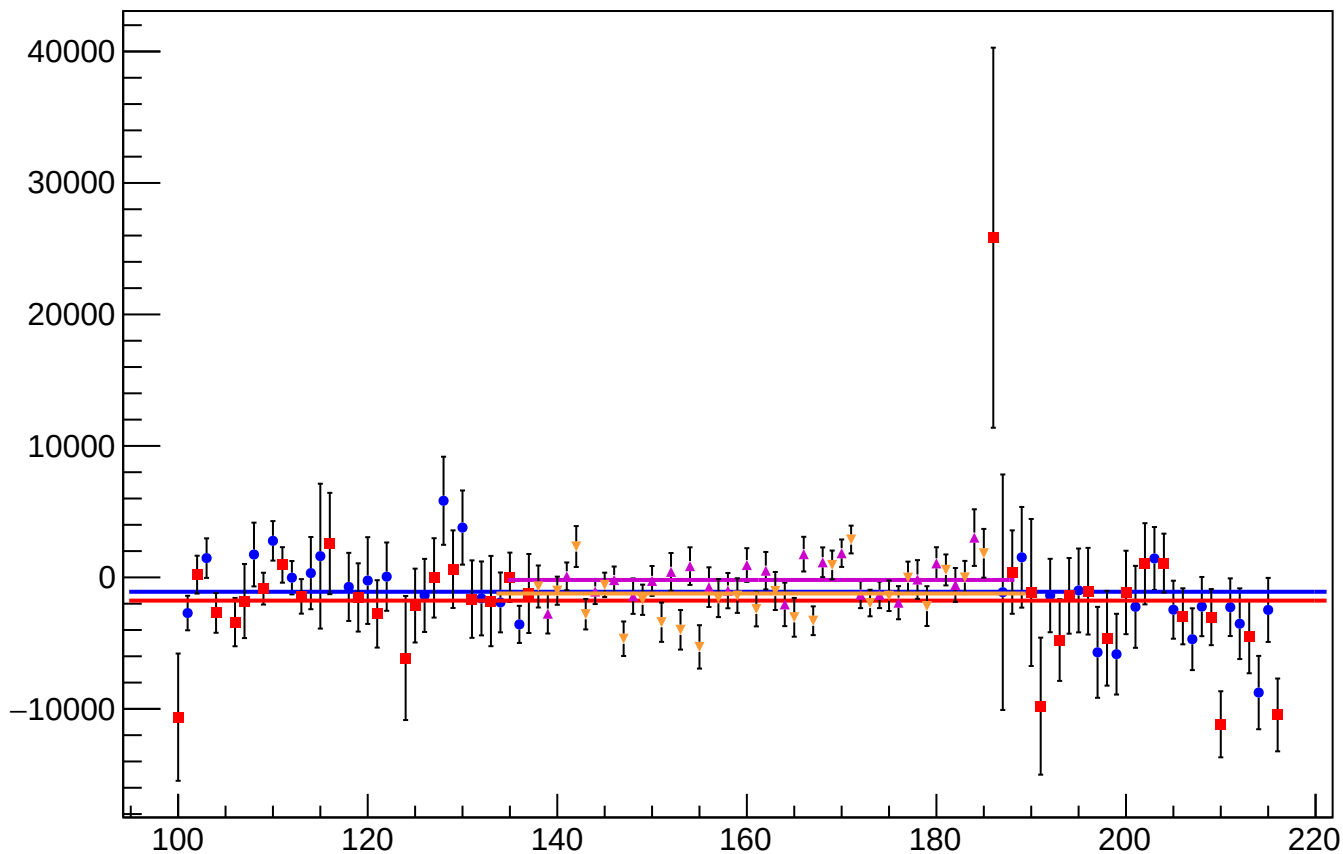
Left In: 144.170 $\pm$ 0.024  $\chi^2$ /NDF: 702713.8/22

+ sign 148.421 $\pm$ 0.017  $\chi^2$ /NDF: 2452318.2/55

All: 148.731 $\pm$ 0.012  $\chi^2$ /NDF: 5760358.7/113

- sign 149.052 $\pm$ 0.018  $\chi^2$ /NDF: 3307383.5/57

# asym\_sam\_48\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1092.782 \pm 408.963$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-1225.049 \pm 251.767$   $\chi^2/\text{NDF}$ : 59.3/24

Right Out:  $-1766.088 \pm 395.676$   $\chi^2/\text{NDF}$ : 51.4/34

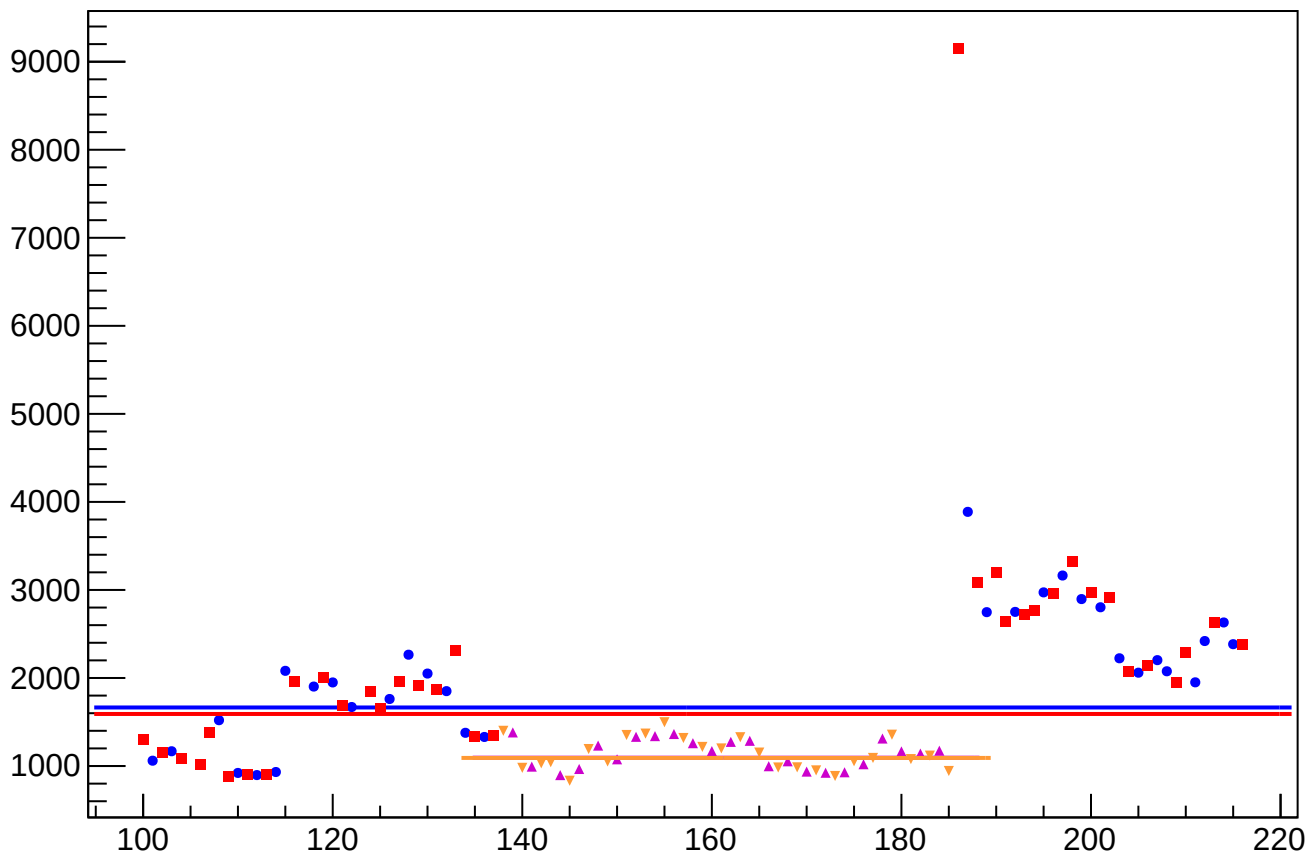
Left In:  $-193.805 \pm 258.922$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-1188.697 \pm 214.397$   $\chi^2/\text{NDF}$ : 101.7/55

All:  $-929.699 \pm 152.394$   $\chi^2/\text{NDF}$ : 190.4/113

- sign  $-665.211 \pm 216.657$   $\chi^2/\text{NDF}$ : 85.8/57

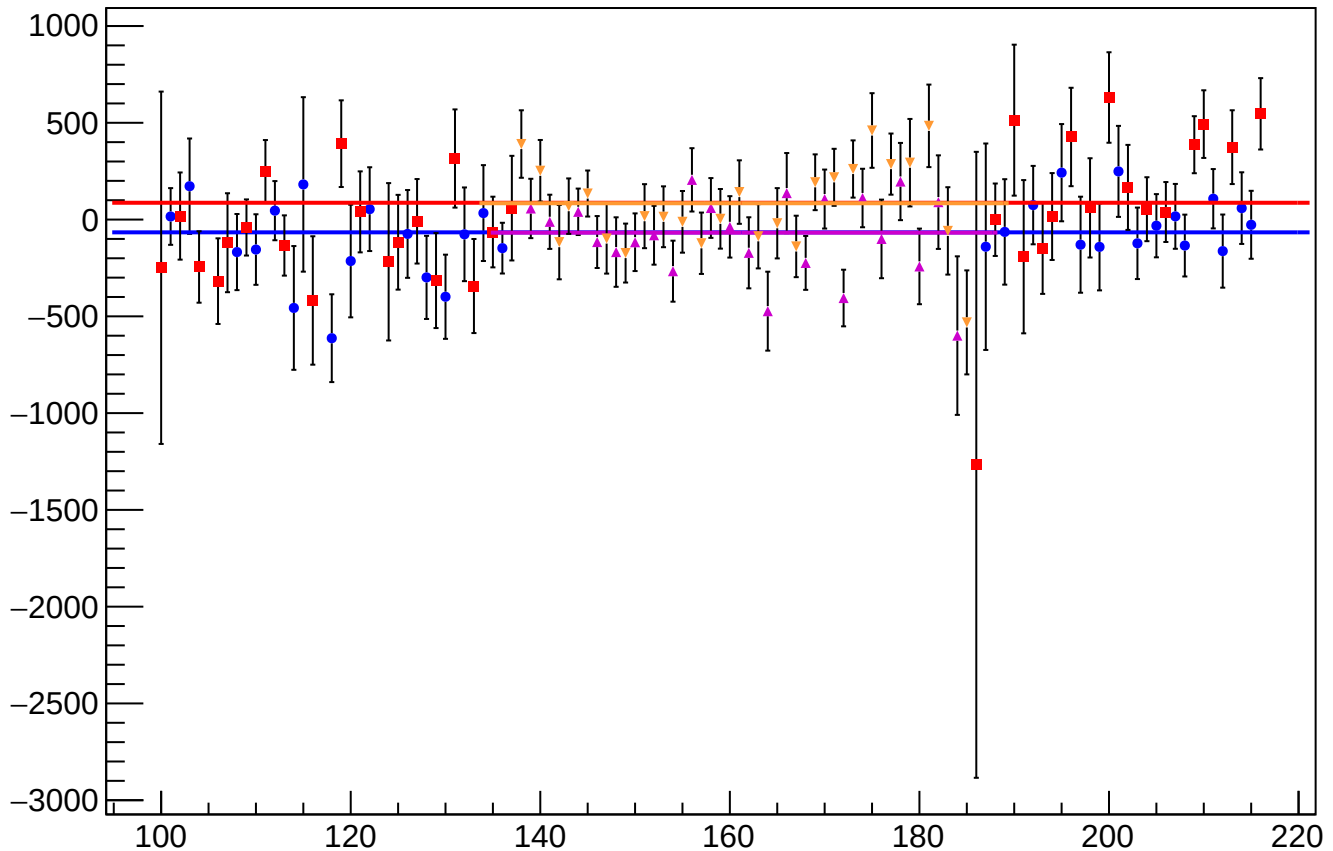
# asym\_sam\_48\_avg\_reg\_correction\_rms vs Slug



|                                 |                             |                             |                             |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Right In: 1665.017 $\pm$ 0.289  | $\chi^2$ /NDF: 5151119.2/30 | + sign 1249.469 $\pm$ 0.152 | $\chi^2$ /NDF: 8891084.5/55 |
| Left Out: 1091.980 $\pm$ 0.178  | $\chi^2$ /NDF: 892442.4/24  | All: 1246.485 $\pm$ 0.108   | $\chi^2$ /NDF: 18770969.4/1 |
| Right Out: 1591.301 $\pm$ 0.280 | $\chi^2$ /NDF: 6938325.9/34 | - sign 1243.437 $\pm$ 0.153 | $\chi^2$ /NDF: 9879101.6/57 |
| Left In: 1094.478 $\pm$ 0.183   | $\chi^2$ /NDF: 732975.2/22  |                             |                             |



# cor\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-66.007 \pm 36.083$   $\chi^2/\text{NDF}$ : 21.1/30

Left Out:  $84.338 \pm 33.036$   $\chi^2/\text{NDF}$ : 33.8/24

Right Out:  $86.834 \pm 36.157$   $\chi^2/\text{NDF}$ : 53.5/34

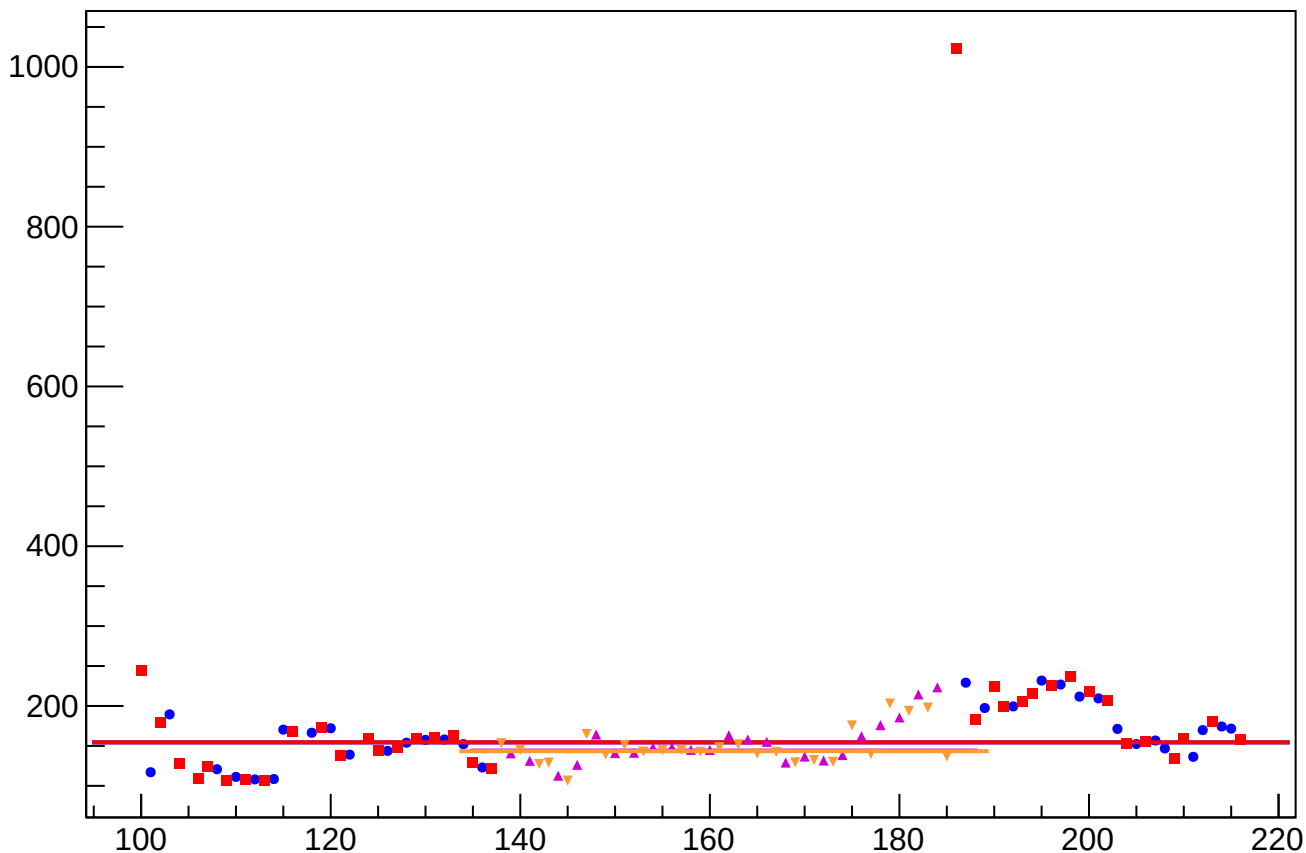
Left In:  $-67.648 \pm 34.137$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $15.782 \pm 24.366$   $\chi^2/\text{NDF}$ : 64.4/55

All:  $10.568 \pm 17.388$   $\chi^2/\text{NDF}$ : 154.1/113

- sign  $5.157 \pm 24.822$   $\chi^2/\text{NDF}$ : 89.7/57

# cor\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 154.360 $\pm$ 0.026  $\chi^2$ /NDF: 1605702.6/30

Left Out: 143.444 $\pm$ 0.023  $\chi^2$ /NDF: 747040.9/24

Right Out: 154.493 $\pm$ 0.026  $\chi^2$ /NDF: 2523413.2/34

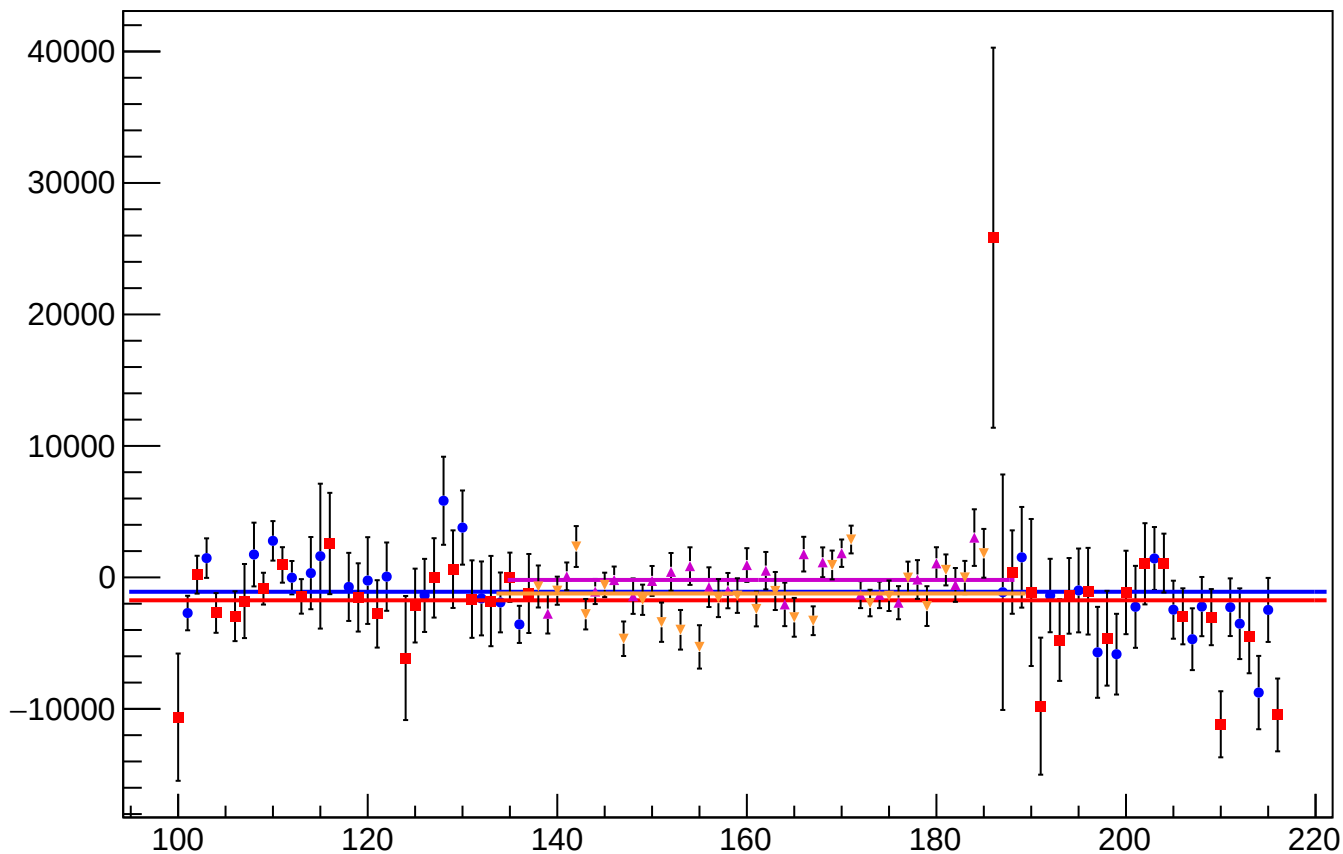
Left In: 144.170 $\pm$ 0.024  $\chi^2$ /NDF: 702713.8/22

+ sign 148.421 $\pm$ 0.017  $\chi^2$ /NDF: 2452320.8/55

All: 148.722 $\pm$ 0.012  $\chi^2$ /NDF: 5765251.6/113

- sign 149.035 $\pm$ 0.018  $\chi^2$ /NDF: 3312307.7/57

asym\_sam\_48\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1092.837 \pm 408.965$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-1225.031 \pm 251.767$   $\chi^2/\text{NDF}$ : 59.3/24

Right Out:  $-1742.731 \pm 396.233$   $\chi^2/\text{NDF}$ : 51.0/34

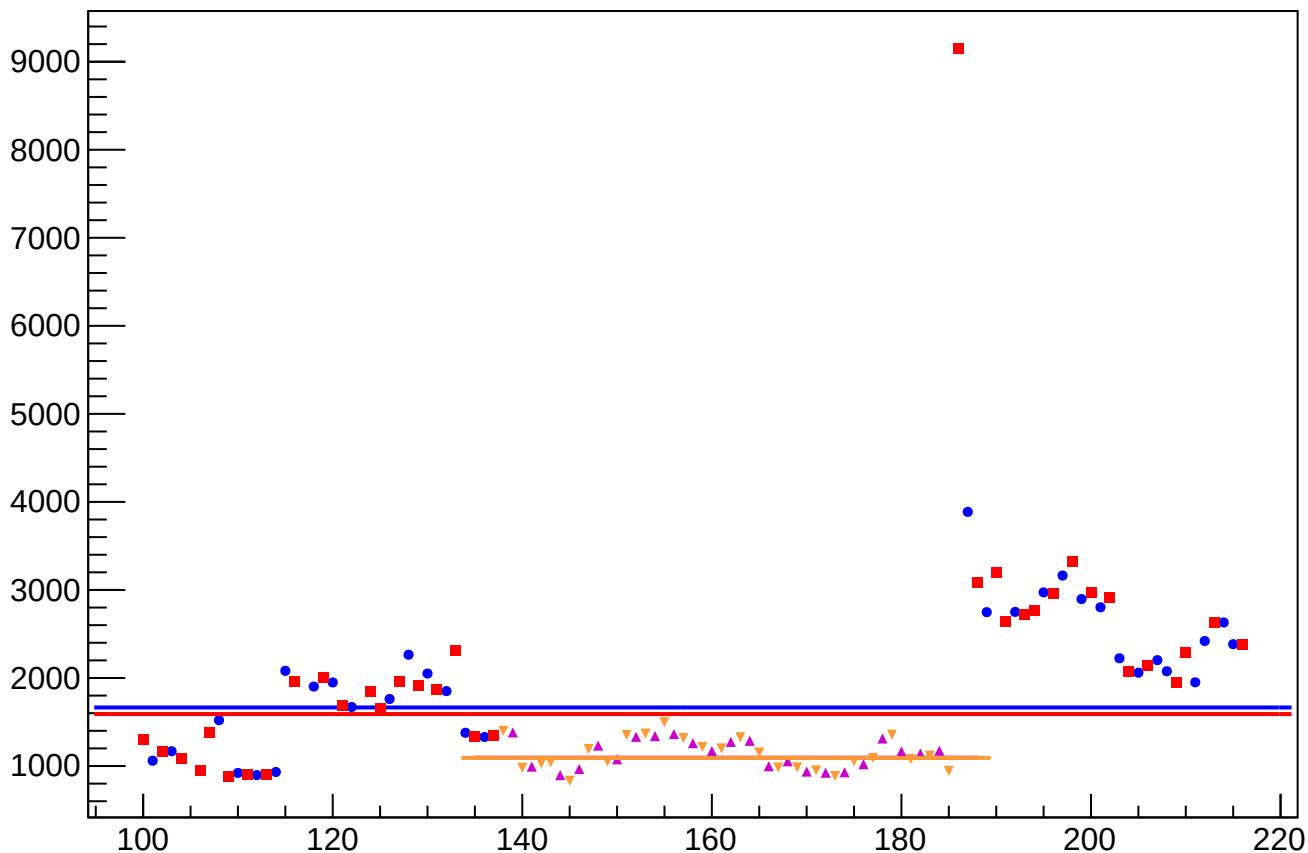
Left In:  $-193.808 \pm 258.922$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-1188.700 \pm 214.397$   $\chi^2/\text{NDF}$ : 101.7/55

All:  $-925.896 \pm 152.426$   $\chi^2/\text{NDF}$ : 189.7/113

- sign  $-657.297 \pm 216.748$   $\chi^2/\text{NDF}$ : 85.0/57

# asym\_sam\_48\_avg\_cor\_correction\_rms vs Slug



Right In:  $1665.031 \pm 0.289$   $\chi^2/\text{NDF}$ : 5150991.2/30

Left Out:  $1091.979 \pm 0.178$   $\chi^2/\text{NDF}$ : 892441.9/24

Right Out:  $1590.248 \pm 0.280$   $\chi^2/\text{NDF}$ : 6967890.1/34

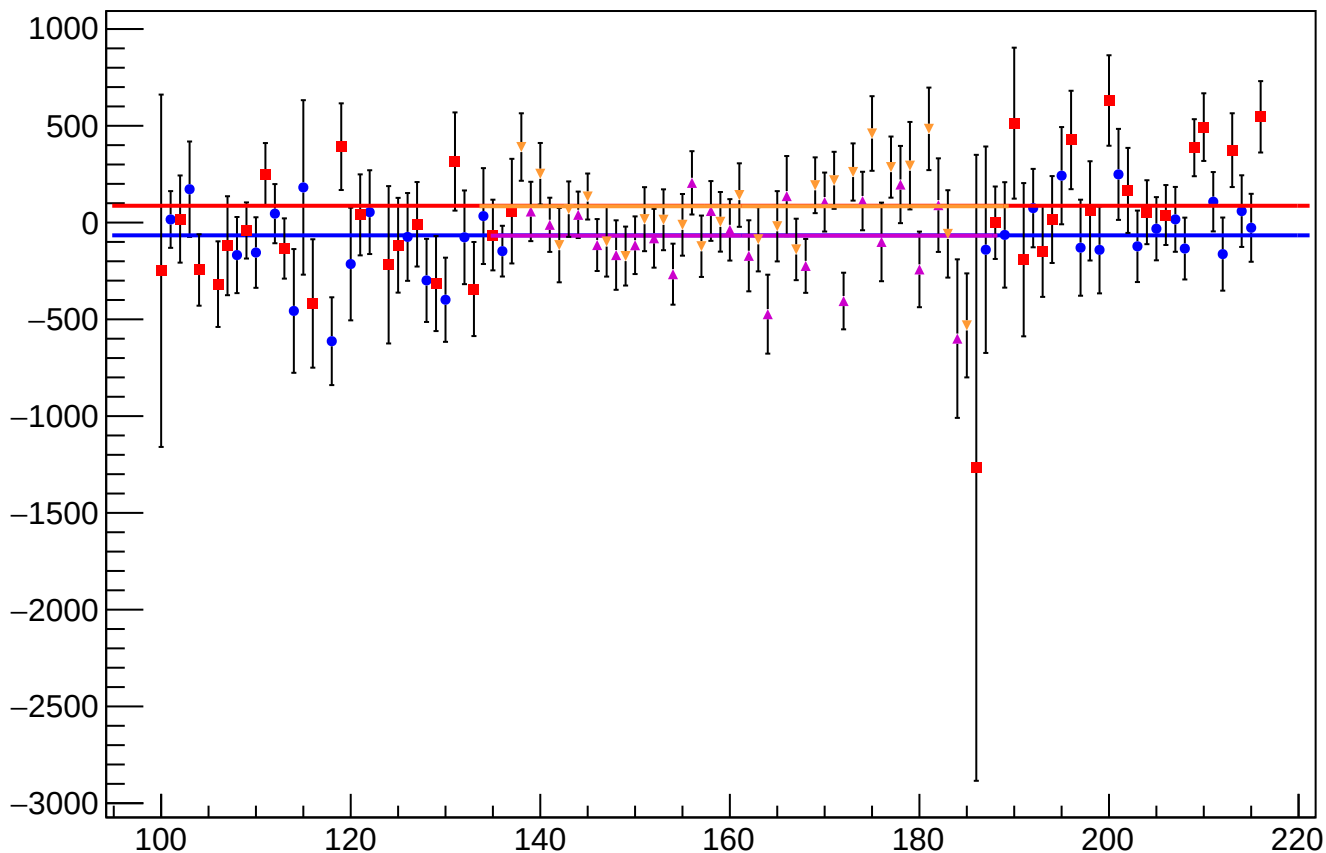
Left In:  $1094.479 \pm 0.183$   $\chi^2/\text{NDF}$ : 732975.7/22

+ sign  $1249.472 \pm 0.152$   $\chi^2/\text{NDF}$ : 8891069.0/55

All:  $1246.187 \pm 0.108$   $\chi^2/\text{NDF}$ : 18787013.0/100

- sign  $1242.829 \pm 0.153$   $\chi^2/\text{NDF}$ : 9894994.7/57

# eigen\_cor\_asym\_sam\_48\_avg\_mean vs Slug



Right In: -66.007 $\pm$ 36.083     $\chi^2/\text{NDF}$ : 21.1/30

Left Out: 84.338 $\pm$ 33.036     $\chi^2/\text{NDF}$ : 33.8/24

Right Out: 86.834 $\pm$ 36.157     $\chi^2/\text{NDF}$ : 53.5/34

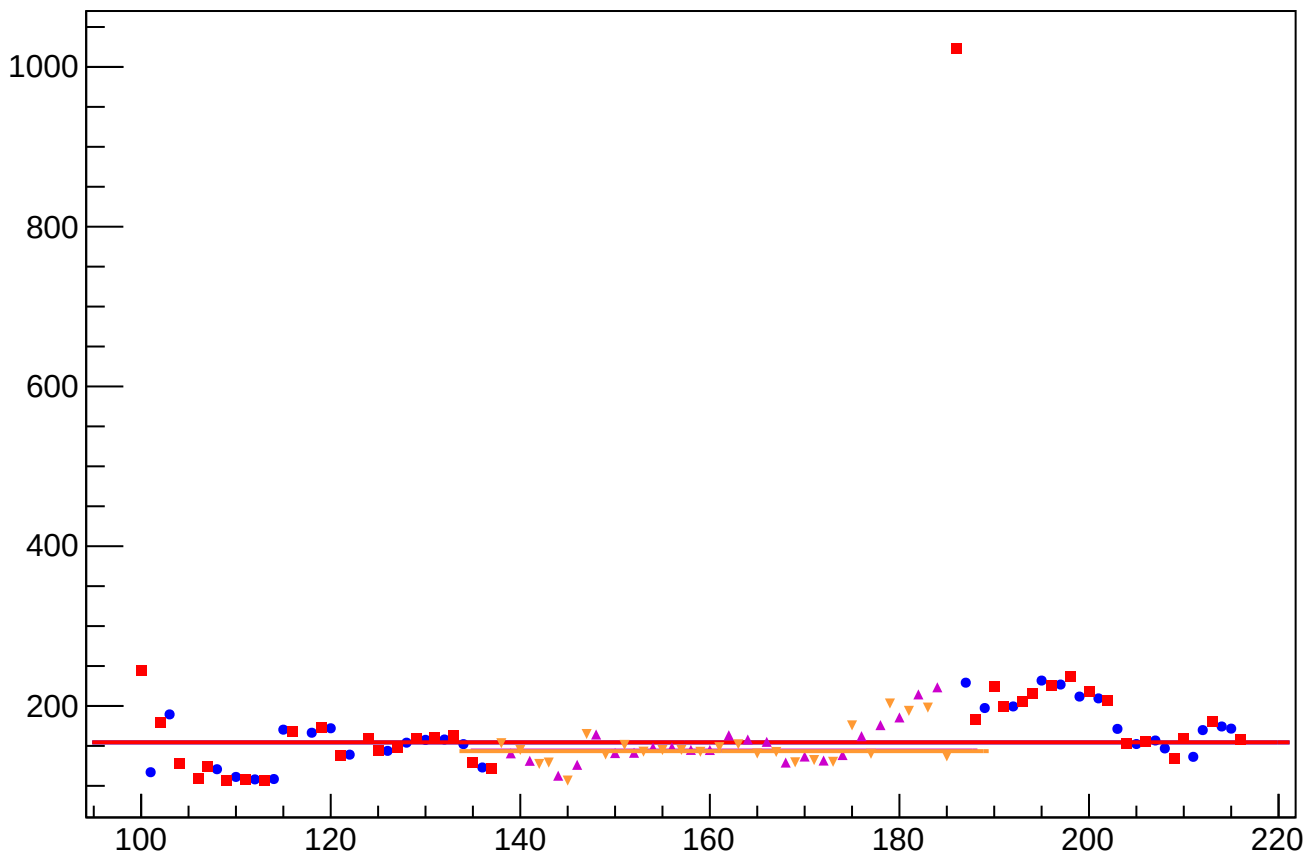
Left In: -67.648 $\pm$ 34.137     $\chi^2/\text{NDF}$ : 26.5/22

+ sign 15.782 $\pm$ 24.366     $\chi^2/\text{NDF}$ : 64.4/55

All: 10.568 $\pm$ 17.388     $\chi^2/\text{NDF}$ : 154.1/113

- sign 5.157 $\pm$ 24.822     $\chi^2/\text{NDF}$ : 89.7/57

# eigen\_cor\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 154.360 $\pm$ 0.026  $\chi^2$ /NDF: 1605702.6/30

Left Out: 143.444 $\pm$ 0.023  $\chi^2$ /NDF: 747040.9/24

Right Out: 154.493 $\pm$ 0.026  $\chi^2$ /NDF: 2523413.2/34

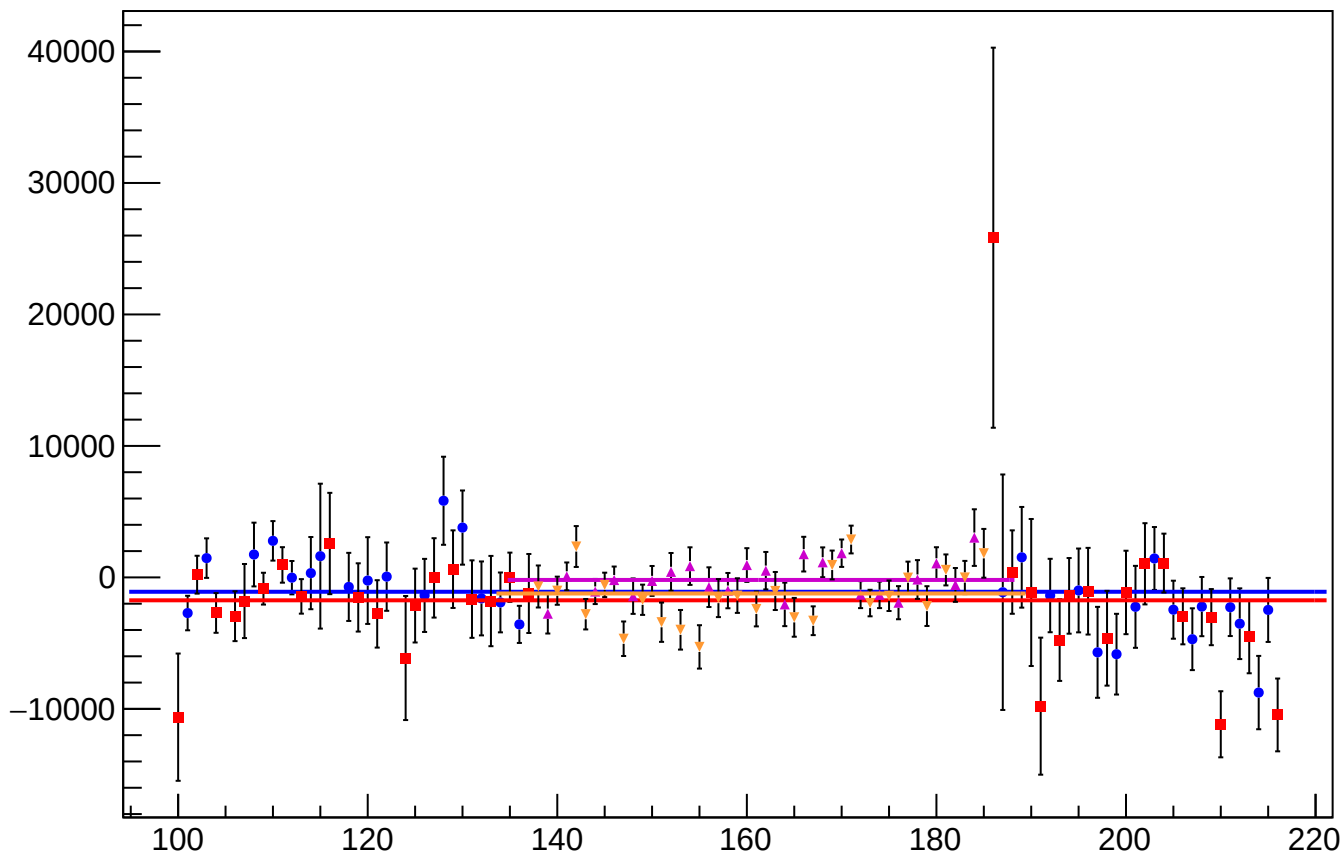
Left In: 144.170 $\pm$ 0.024  $\chi^2$ /NDF: 702713.8/22

+ sign 148.421 $\pm$ 0.017  $\chi^2$ /NDF: 2452320.8/55

All: 148.722 $\pm$ 0.012  $\chi^2$ /NDF: 5765251.6/113

- sign 149.035 $\pm$ 0.018  $\chi^2$ /NDF: 3312307.7/57

asym\_sam\_48\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1092.837 \pm 408.965$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-1225.031 \pm 251.767$   $\chi^2/\text{NDF}$ : 59.3/24

Right Out:  $-1742.731 \pm 396.233$   $\chi^2/\text{NDF}$ : 51.0/34

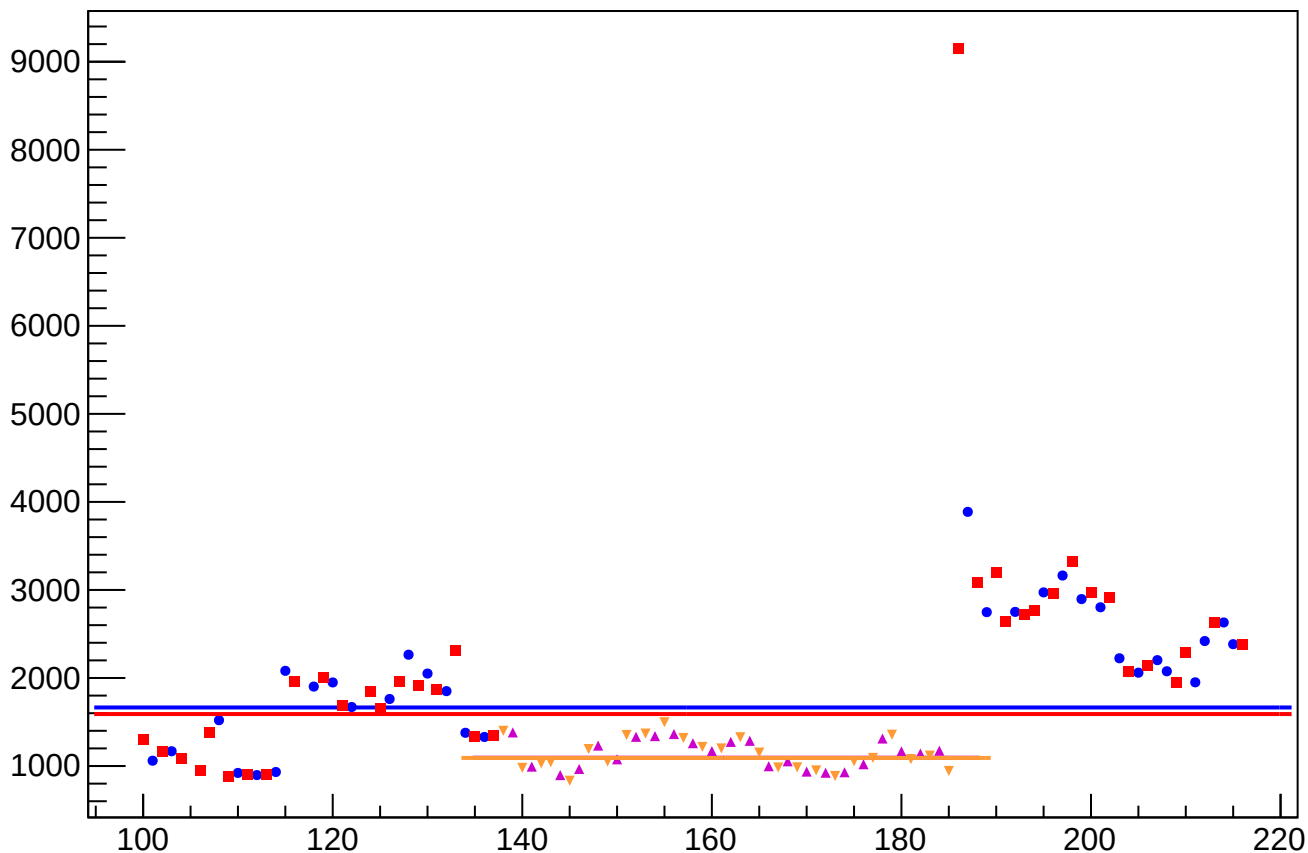
Left In:  $-193.808 \pm 258.922$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-1188.700 \pm 214.397$   $\chi^2/\text{NDF}$ : 101.7/55

All:  $-925.896 \pm 152.426$   $\chi^2/\text{NDF}$ : 189.7/113

- sign  $-657.297 \pm 216.748$   $\chi^2/\text{NDF}$ : 85.0/57

asym\_sam\_48\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1665.031 $\pm$ 0.289  $\chi^2$ /NDF: 5150991.2/30

Left Out: 1091.979 $\pm$ 0.178  $\chi^2$ /NDF: 892441.9/24

Right Out: 1590.248 $\pm$ 0.280  $\chi^2$ /NDF: 6967890.1/34

Left In: 1094.479 $\pm$ 0.183  $\chi^2$ /NDF: 732975.7/22

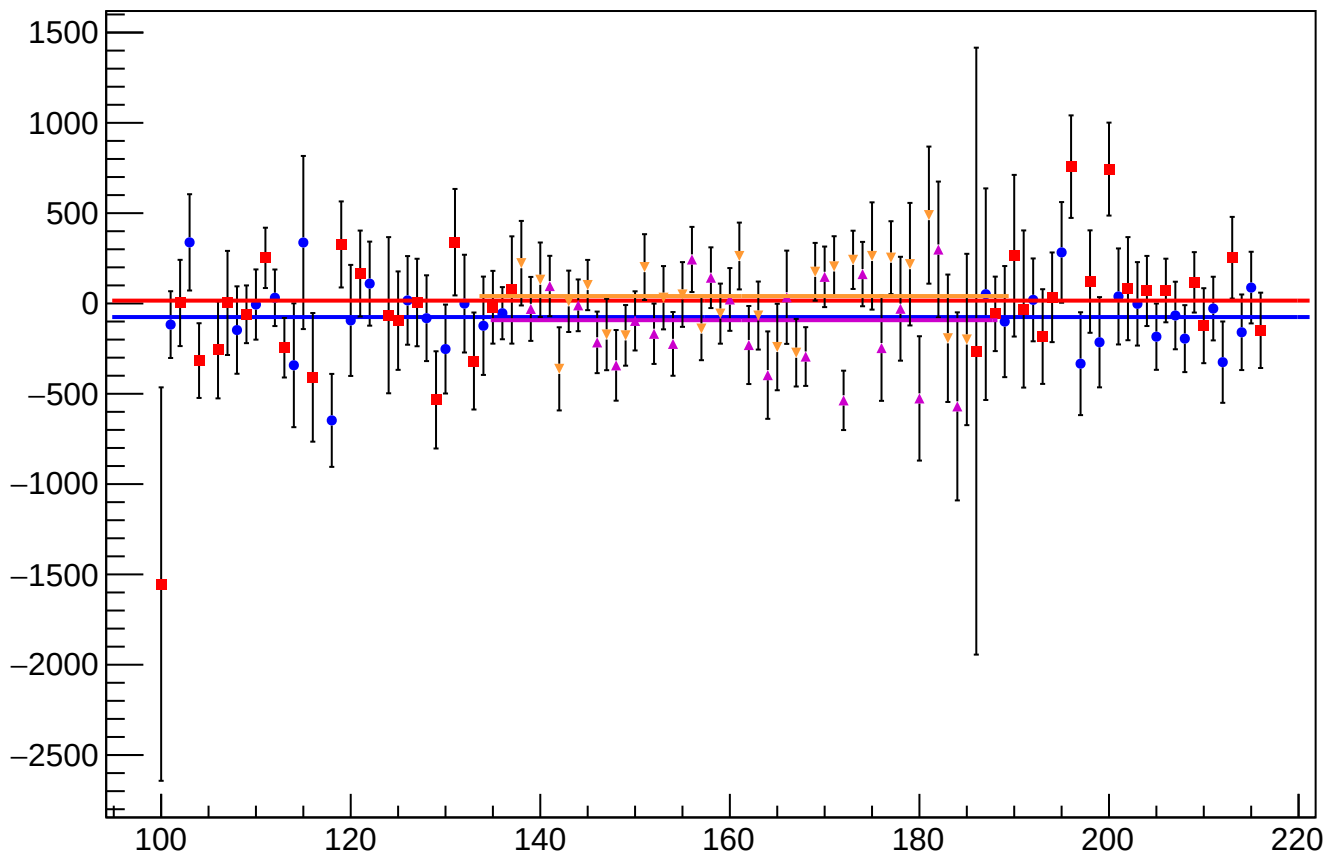
+ sign 1249.472 $\pm$ 0.152  $\chi^2$ /NDF: 8891069.0/55

All: 1246.187 $\pm$ 0.108  $\chi^2$ /NDF: 18787013.0/100

- sign 1242.829 $\pm$ 0.153  $\chi^2$ /NDF: 9894994.7/57



dit\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-75.225 \pm 40.659$   $\chi^2/\text{NDF}$ : 17.1/30

Left Out:  $41.086 \pm 39.177$   $\chi^2/\text{NDF}$ : 22.3/24

Right Out:  $15.769 \pm 40.451$   $\chi^2/\text{NDF}$ : 39.9/34

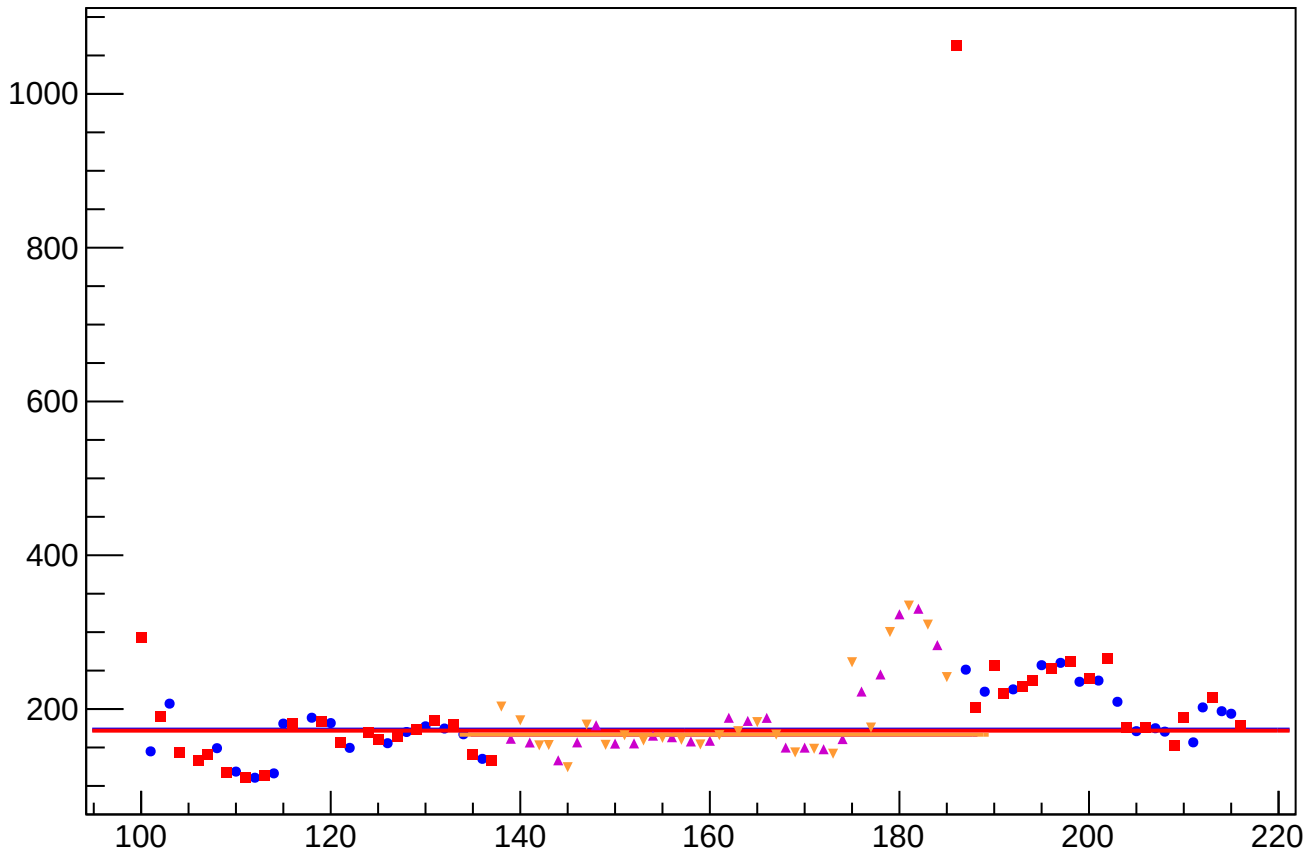
Left In:  $-92.556 \pm 40.165$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $-14.911 \pm 28.212$   $\chi^2/\text{NDF}$ : 43.6/55

All:  $-26.722 \pm 20.050$   $\chi^2/\text{NDF}$ : 117.0/113

- sign  $-38.777 \pm 28.502$   $\chi^2/\text{NDF}$ : 73.1/57

dit\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 173.247 $\pm$ 0.029  $\chi^2$ /NDF: 1757662.7/30

Left Out: 166.599 $\pm$ 0.028  $\chi^2$ /NDF:1719835.6/24

Right Out: 171.903 $\pm$ 0.029  $\chi^2$ /NDF: 2759945.1/34

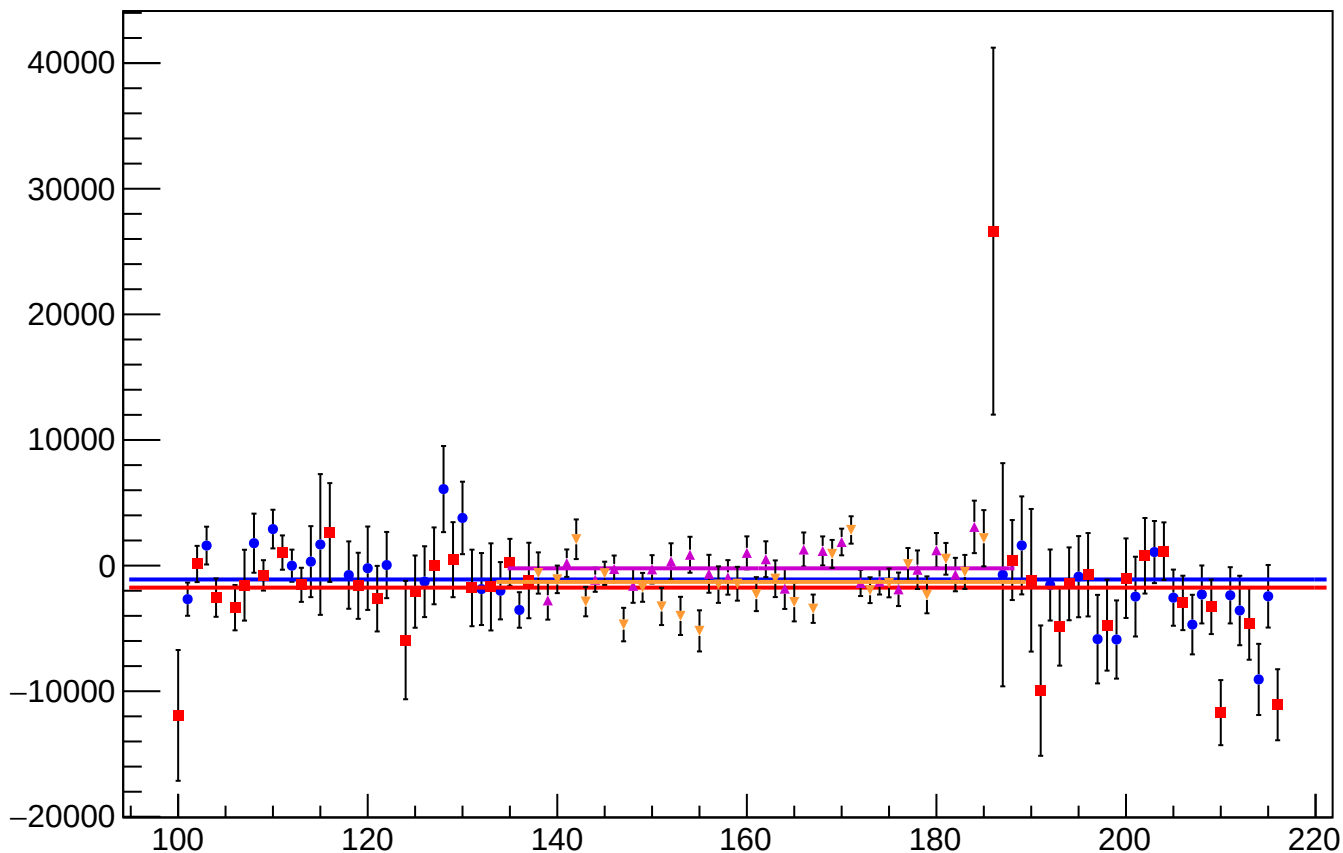
Left In: 166.308 $\pm$ 0.028  $\chi^2$ /NDF:1392466.3/22

+ sign 169.800 $\pm$ 0.020  $\chi^2$ /NDF: 3505231.0/55

All: 169.446 $\pm$ 0.014  $\chi^2$ /NDF: 7677544.4/113

- sign 169.086 $\pm$ 0.020  $\chi^2$ /NDF: 4171680.3/57

asym\_sam\_48\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1102.984 \pm 414.138$   $\chi^2/\text{NDF}$ : 42.8/30

Left Out:  $-1298.333 \pm 256.961$   $\chi^2/\text{NDF}$ : 55.1/24

Right Out:  $-1752.374 \pm 399.806$   $\chi^2/\text{NDF}$ : 54.0/34

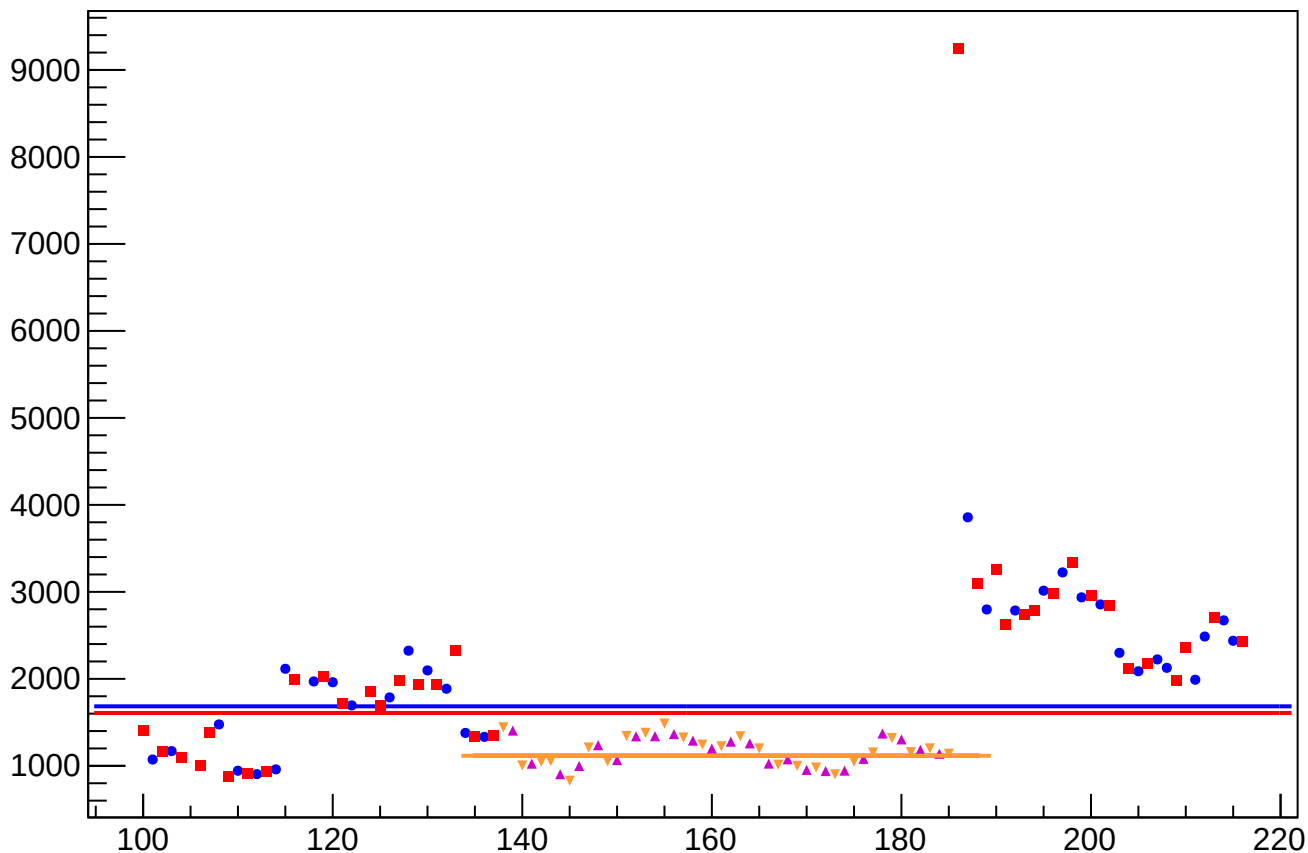
Left In:  $-217.285 \pm 264.388$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-1244.032 \pm 218.346$   $\chi^2/\text{NDF}$ : 98.1/55

All:  $-966.972 \pm 155.160$   $\chi^2/\text{NDF}$ : 187.9/113

- sign  $-684.342 \pm 220.530$   $\chi^2/\text{NDF}$ : 86.5/57

# asym\_sam\_48\_avg\_dit\_correction\_rms vs Slug



Right In: 1684.295 $\pm$ 0.293  $\chi^2$ /NDF: 5246243.7/30

Left Out: 1116.034 $\pm$ 0.182  $\chi^2$ /NDF: 867489.3/24

Right Out: 1607.881 $\pm$ 0.283  $\chi^2$ /NDF: 6961928.7/34

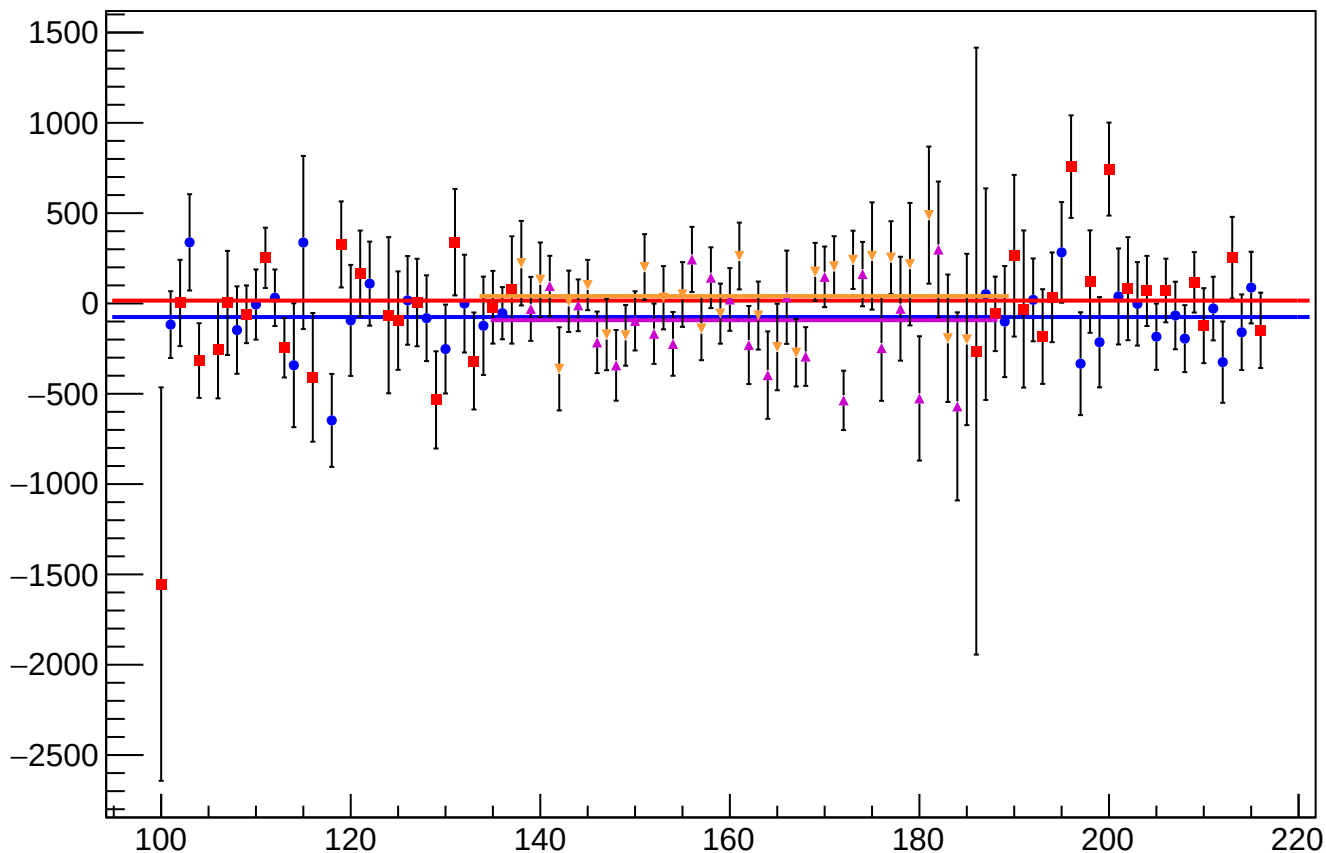
Left In: 1117.831 $\pm$ 0.187  $\chi^2$ /NDF: 729387.1/22

+ sign 1273.994 $\pm$ 0.154  $\chi^2$ /NDF: 8832615.9/55

All: 1270.497 $\pm$ 0.110  $\chi^2$ /NDF: 18615528.8/100

- sign 1266.931 $\pm$ 0.156  $\chi^2$ /NDF: 9781877.0/57

eigen\_dit\_asym\_sam\_48\_avg\_mean vs Slug



Right In:  $-75.222 \pm 40.659$   $\chi^2/\text{NDF}$ : 17.1/30

Left Out:  $41.088 \pm 39.177$   $\chi^2/\text{NDF}$ : 22.3/24

Right Out:  $15.771 \pm 40.451$   $\chi^2/\text{NDF}$ : 39.9/34

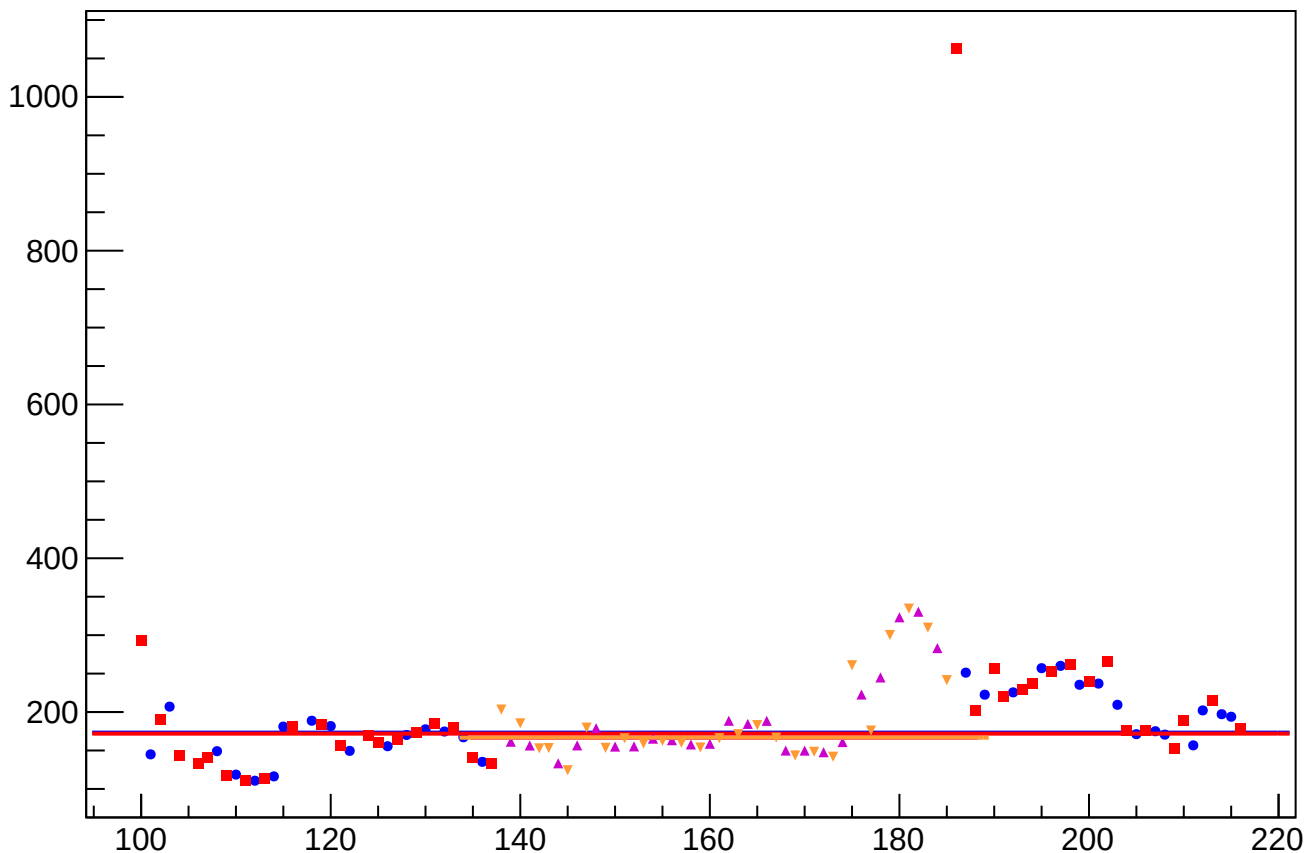
Left In:  $-92.556 \pm 40.165$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $-14.908 \pm 28.212$   $\chi^2/\text{NDF}$ : 43.6/55

All:  $-26.720 \pm 20.050$   $\chi^2/\text{NDF}$ : 117.0/113

- sign  $-38.776 \pm 28.502$   $\chi^2/\text{NDF}$ : 73.1/57

# eigen\_dit\_asym\_sam\_48\_avg\_rms vs Slug



Right In: 173.247+/-0.029  $\chi^2/\text{NDF}$ : 1757643.0/30

Left Out: 166.599+/-0.028  $\chi^2/\text{NDF}$ : 1719829.4/24

Right Out: 171.903+/-0.029  $\chi^2/\text{NDF}$ : 2759946.8/34

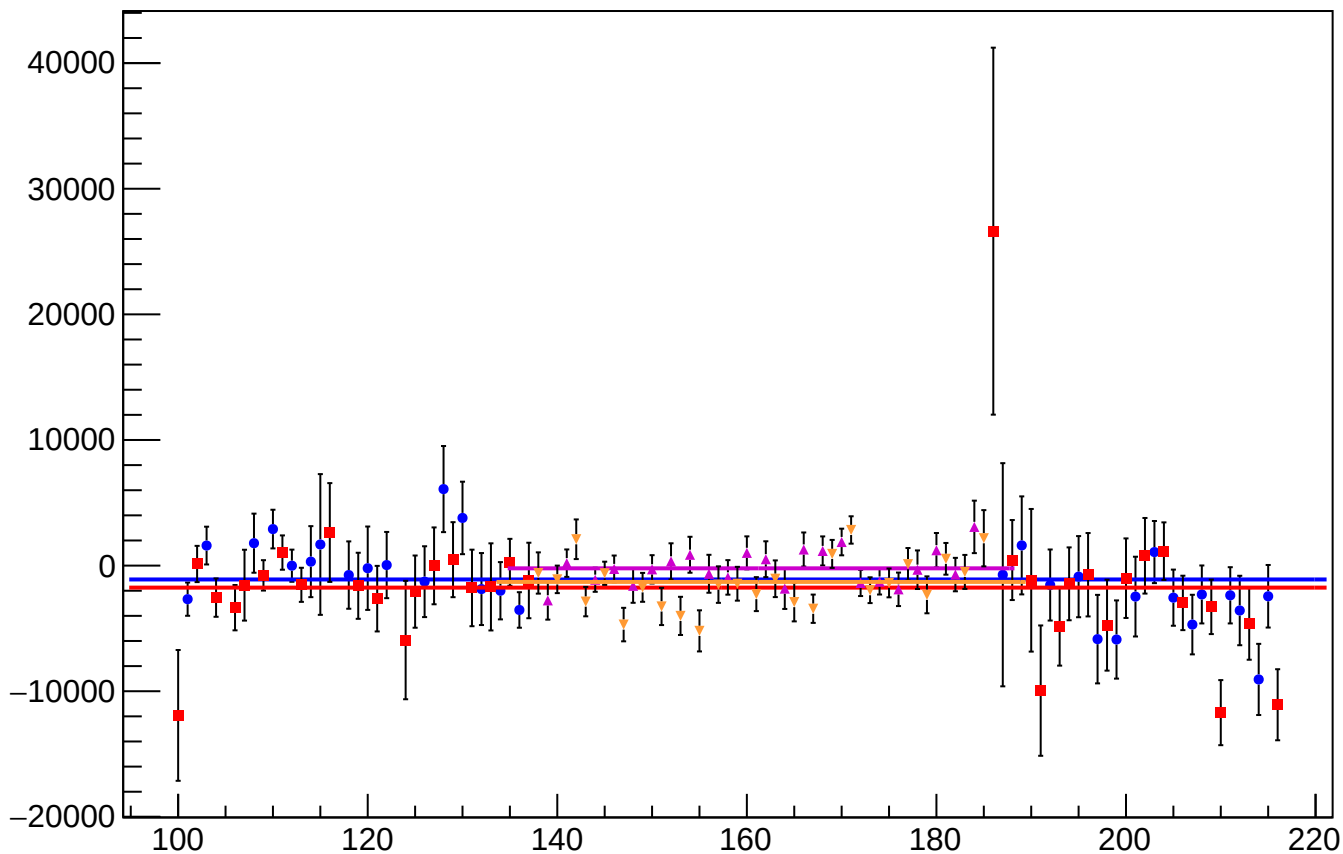
Left In: 166.308+/-0.028  $\chi^2/\text{NDF}$ : 1392446.1/22

+ sign 169.800+/-0.020  $\chi^2/\text{NDF}$ : 3505201.9/55

All: 169.446+/-0.014  $\chi^2/\text{NDF}$ : 7677494.7/113

- sign 169.086+/-0.020  $\chi^2/\text{NDF}$ : 4171659.6/57

asym\_sam\_48\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1102.982 \pm 414.138$   $\chi^2/\text{NDF}$ : 42.8/30

Left Out:  $-1298.330 \pm 256.961$   $\chi^2/\text{NDF}$ : 55.1/24

Right Out:  $-1752.370 \pm 399.805$   $\chi^2/\text{NDF}$ : 54.0/34

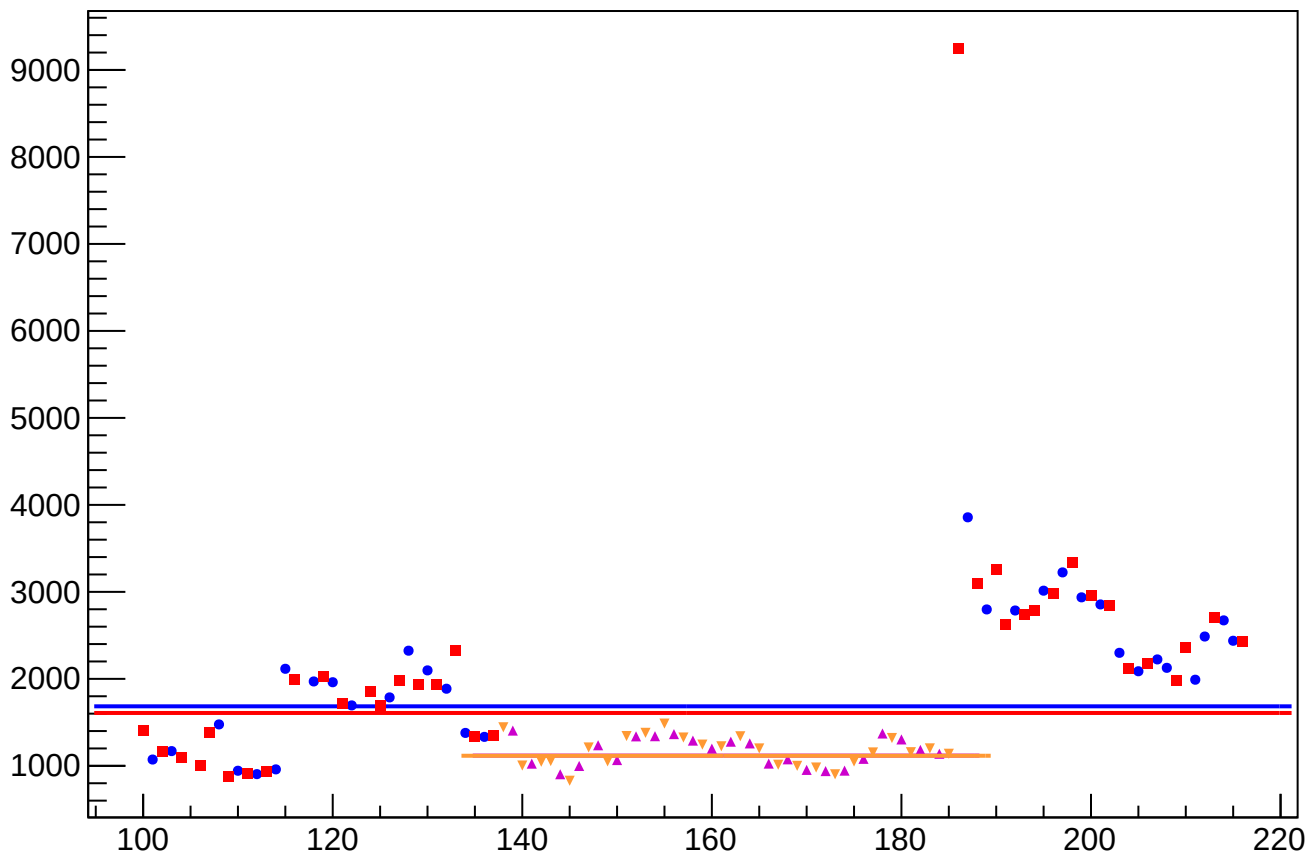
Left In:  $-217.283 \pm 264.388$   $\chi^2/\text{NDF}$ : 22.2/22

+ sign  $-1244.029 \pm 218.346$   $\chi^2/\text{NDF}$ : 98.1/55

All:  $-966.969 \pm 155.160$   $\chi^2/\text{NDF}$ : 187.9/113

- sign  $-684.340 \pm 220.529$   $\chi^2/\text{NDF}$ : 86.5/57

asym\_sam\_48\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1684.293 $\pm$ 0.293  $\chi^2$ /NDF: 5246245.1/30

Left Out: 1116.032 $\pm$ 0.182  $\chi^2$ /NDF: 867491.2/24

Right Out: 1607.879 $\pm$ 0.283  $\chi^2$ /NDF: 6961928.8/34

Left In: 1117.829 $\pm$ 0.187  $\chi^2$ /NDF: 729386.0/22

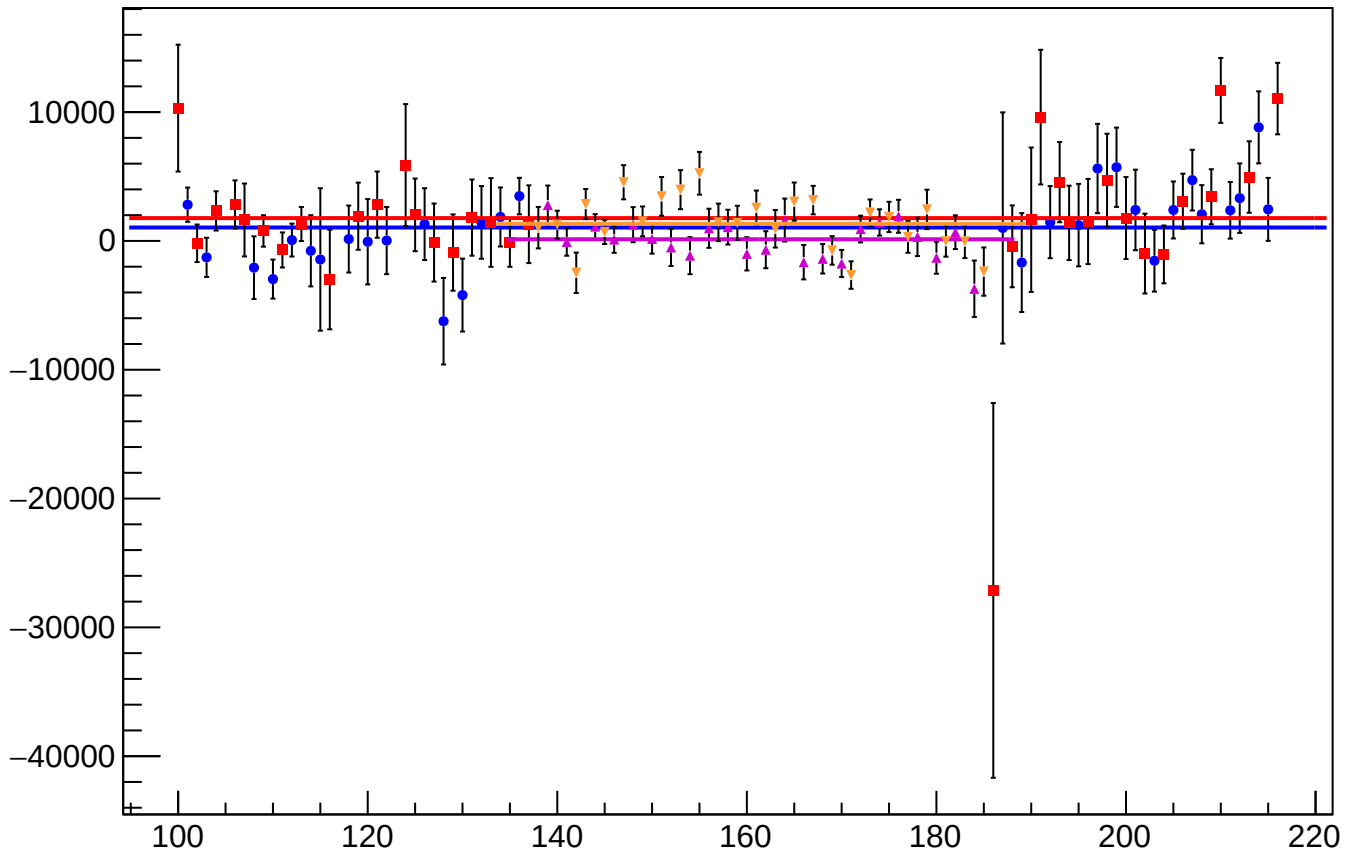
+ sign 1273.992 $\pm$ 0.154  $\chi^2$ /NDF: 8832628.2/55

All: 1270.495 $\pm$ 0.110  $\chi^2$ /NDF: 18615547.7/100

- sign 1266.929 $\pm$ 0.156  $\chi^2$ /NDF: 9781883.6/57



# asym\_sam\_48\_avg\_mean vs Slug



Right In:  $1042.483 \pm 411.350$   $\chi^2/\text{NDF}$ : 43.6/30

Left Out:  $1334.704 \pm 254.187$   $\chi^2/\text{NDF}$ : 55.7/24

Right Out:  $1771.832 \pm 398.149$   $\chi^2/\text{NDF}$ : 53.6/34

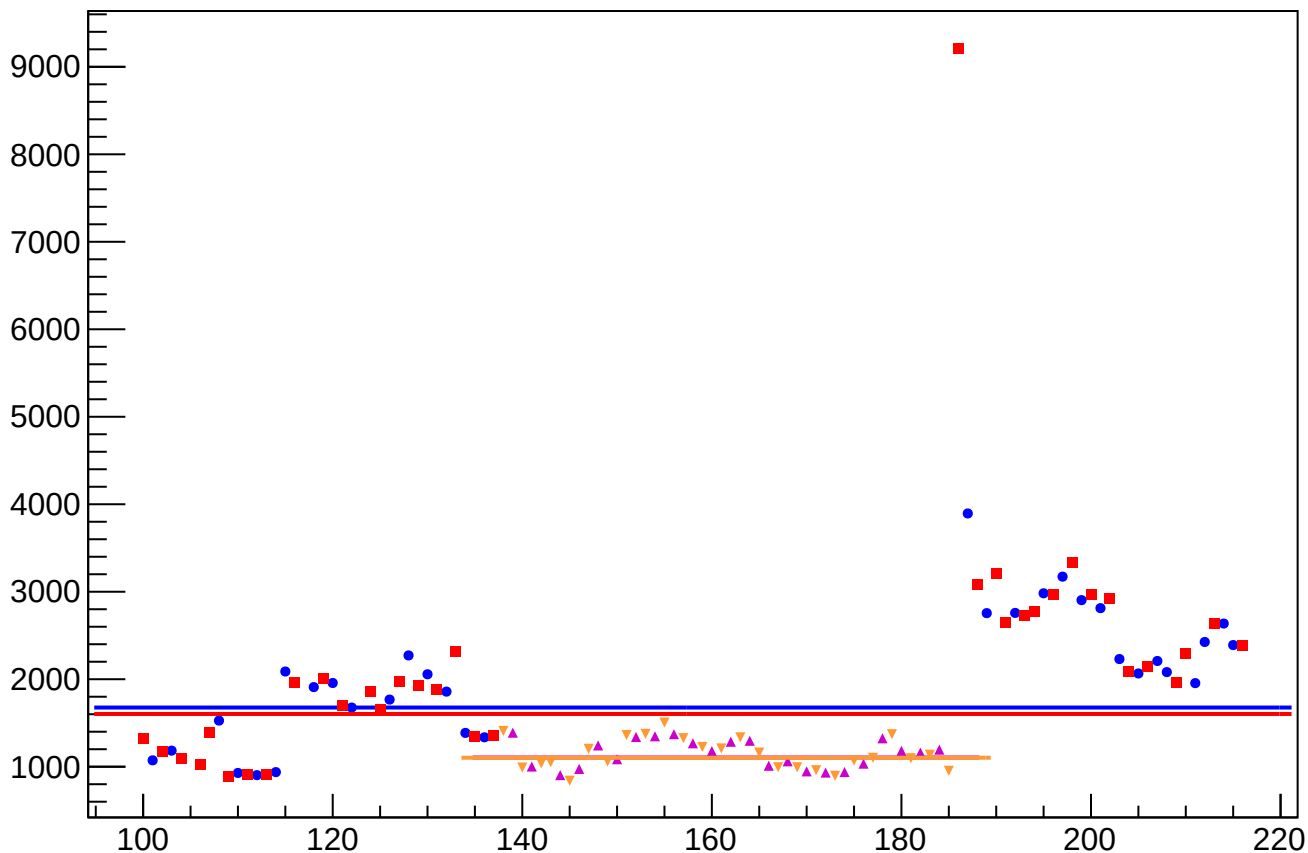
Left In:  $128.368 \pm 261.415$   $\chi^2/\text{NDF}$ : 24.0/22

+ sign  $1253.955 \pm 216.234$   $\chi^2/\text{NDF}$ : 99.7/55

All:  $942.014 \pm 153.703$   $\chi^2/\text{NDF}$ : 193.3/113

- sign  $623.434 \pm 218.523$   $\chi^2/\text{NDF}$ : 89.5/57

# asym\_sam\_48\_avg\_rms vs Slug



Right In: 1676.435 $\pm$ 0.291  $\chi^2$ /NDF: 5083640.3/30

Left Out: 1102.700 $\pm$ 0.180  $\chi^2$ /NDF: 880468.6/24

Right Out: 1602.775 $\pm$ 0.282  $\chi^2$ /NDF: 6867854.5/34

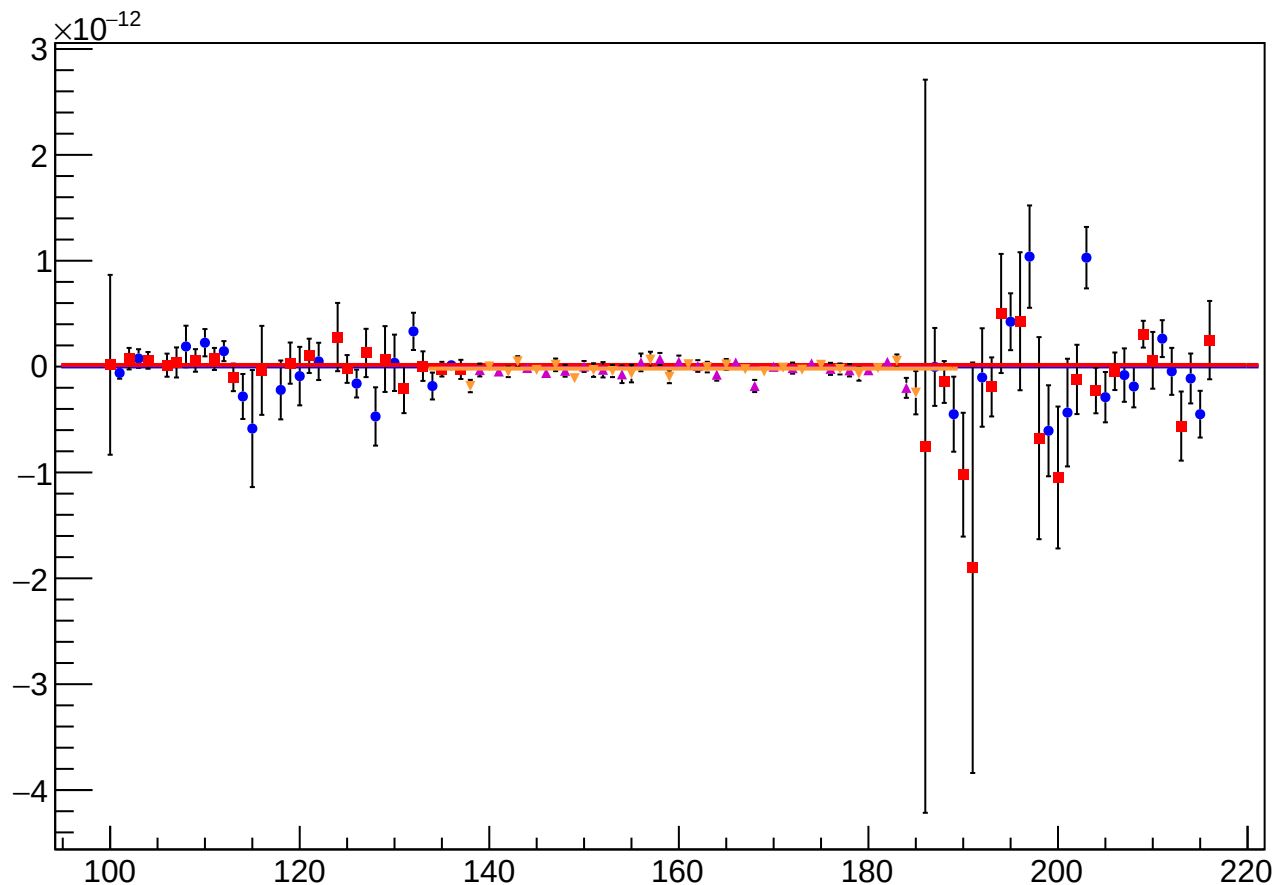
Left In: 1105.200 $\pm$ 0.185  $\chi^2$ /NDF: 723304.5/22

+ sign 1261.239 $\pm$ 0.153  $\chi^2$ /NDF: 8779704.3/55

All: 1258.195 $\pm$ 0.109  $\chi^2$ /NDF: 18554339.4/100

- sign 1255.086 $\pm$ 0.155  $\chi^2$ /NDF: 9773834.0/57

asym\_sam\_48\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.4/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.7/34

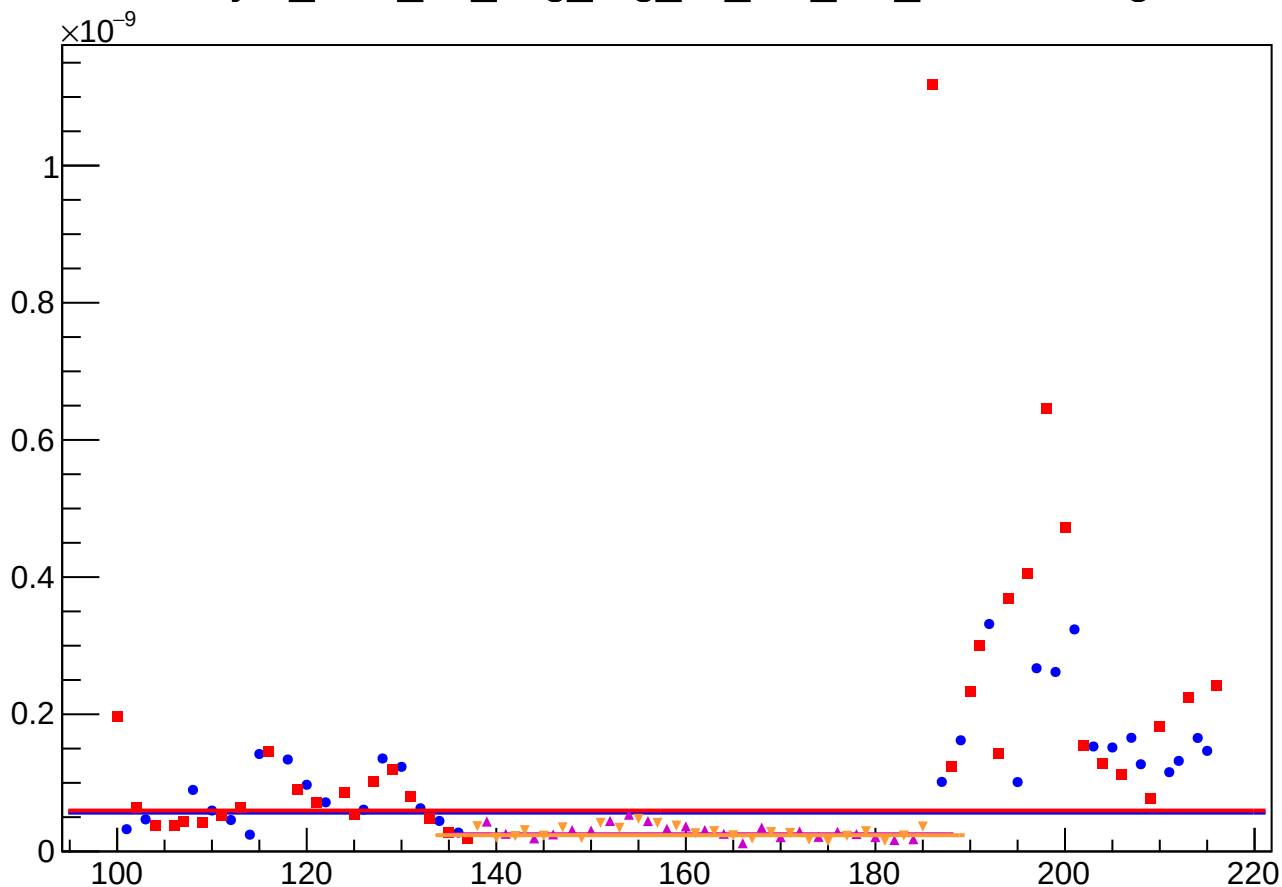
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.1/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 82.5/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 135.6/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.7/57

asym\_sam\_48\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6640207.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1433511.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7020430.7/34

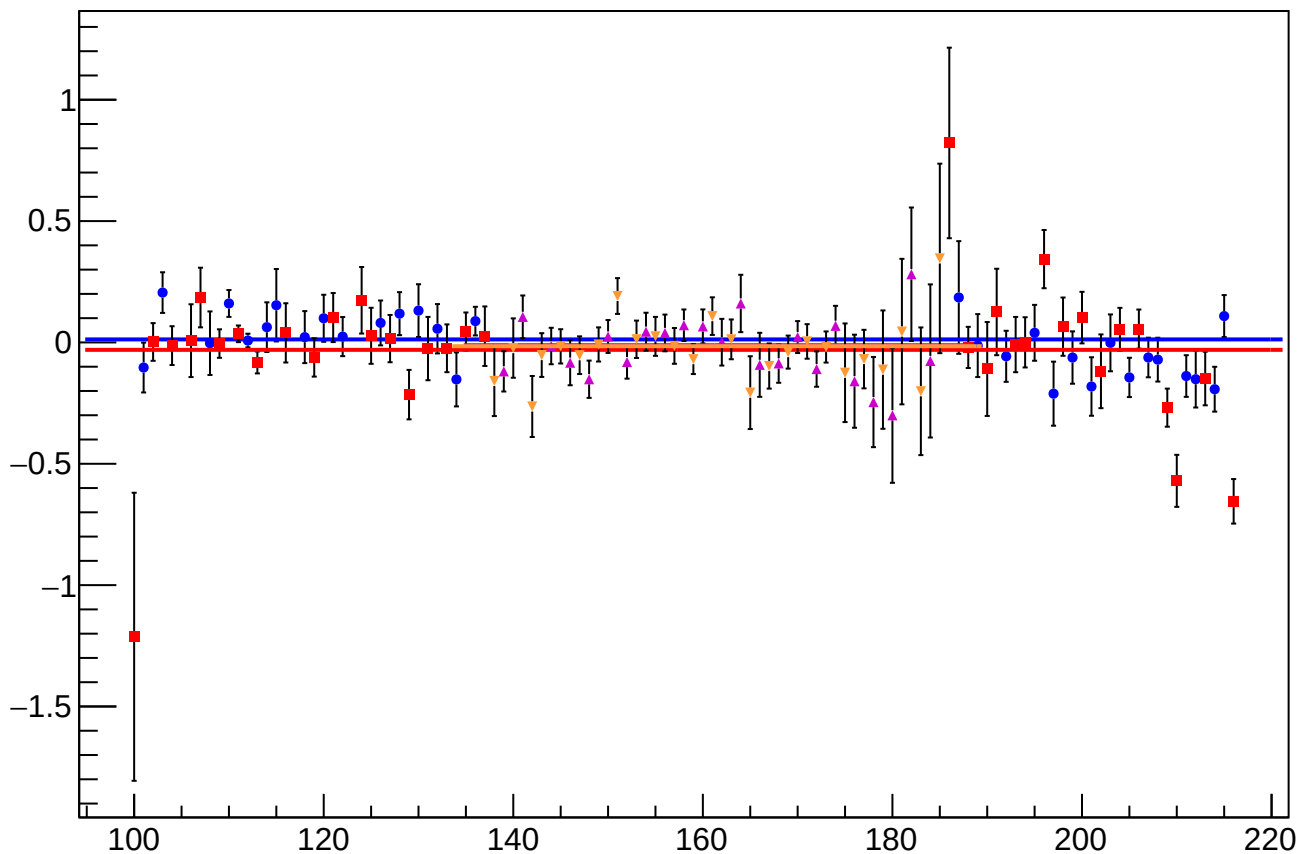
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1544727.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11131905.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22676202.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11504583.7/57

asym\_sam\_48\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 46.6/30

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 124.0/34

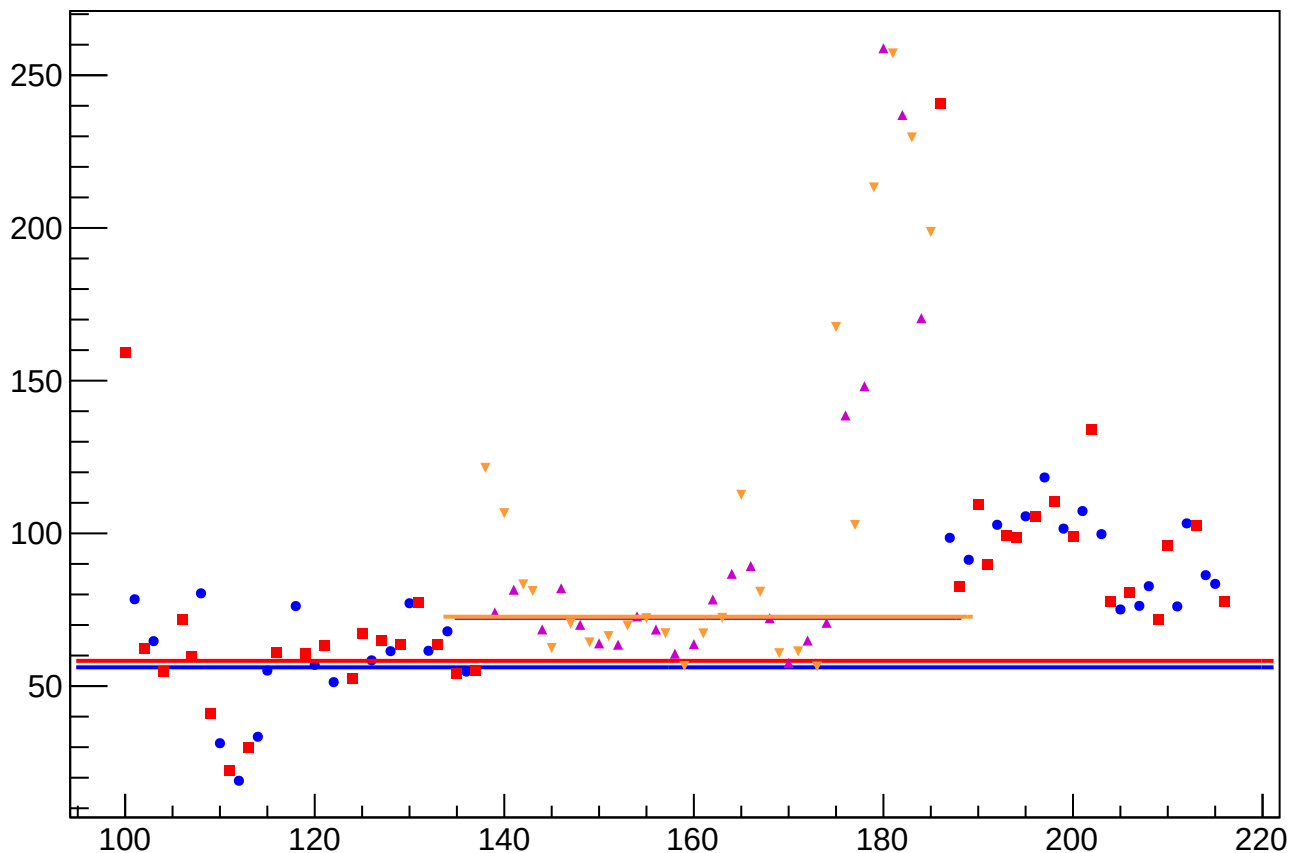
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.001 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.7/55

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 219.8/113

- sign  $-0.023 \pm 0.012$   $\chi^2/\text{NDF}$ : 147.9/57

asym\_sam\_48\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 56.138+/-0.010  $\chi^2/\text{NDF}$ : 8019876.3/30

Left Out: 72.715+/-0.013  $\chi^2/\text{NDF}$ : 3961158.6/24

Right Out: 58.265+/-0.011  $\chi^2/\text{NDF}$ : 7158166.6/34

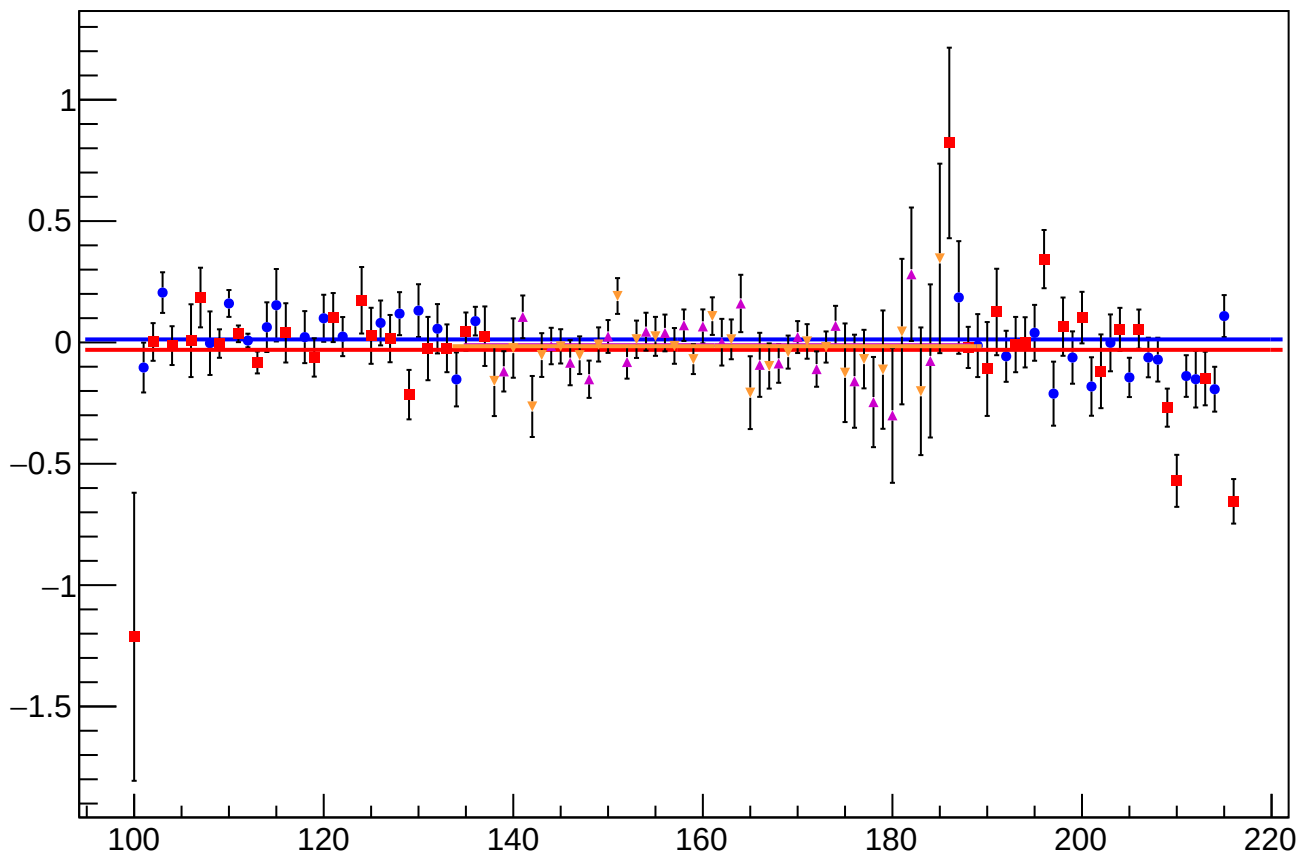
Left In: 72.298+/-0.013  $\chi^2/\text{NDF}$ : 2790214.3/22

+ sign 62.828+/-0.008  $\chi^2/\text{NDF}$ : 12997094.6/55

All: 63.351+/-0.006  $\chi^2/\text{NDF}$ : 23662278.1/113

- sign 63.888+/-0.008  $\chi^2/\text{NDF}$ : 10656672.1/57

asym\_sam\_48\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}: 46.6/30$

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}: 21.6/24$

Right Out:  $-0.031 \pm 0.015$   $\chi^2/\text{NDF}: 124.0/34$

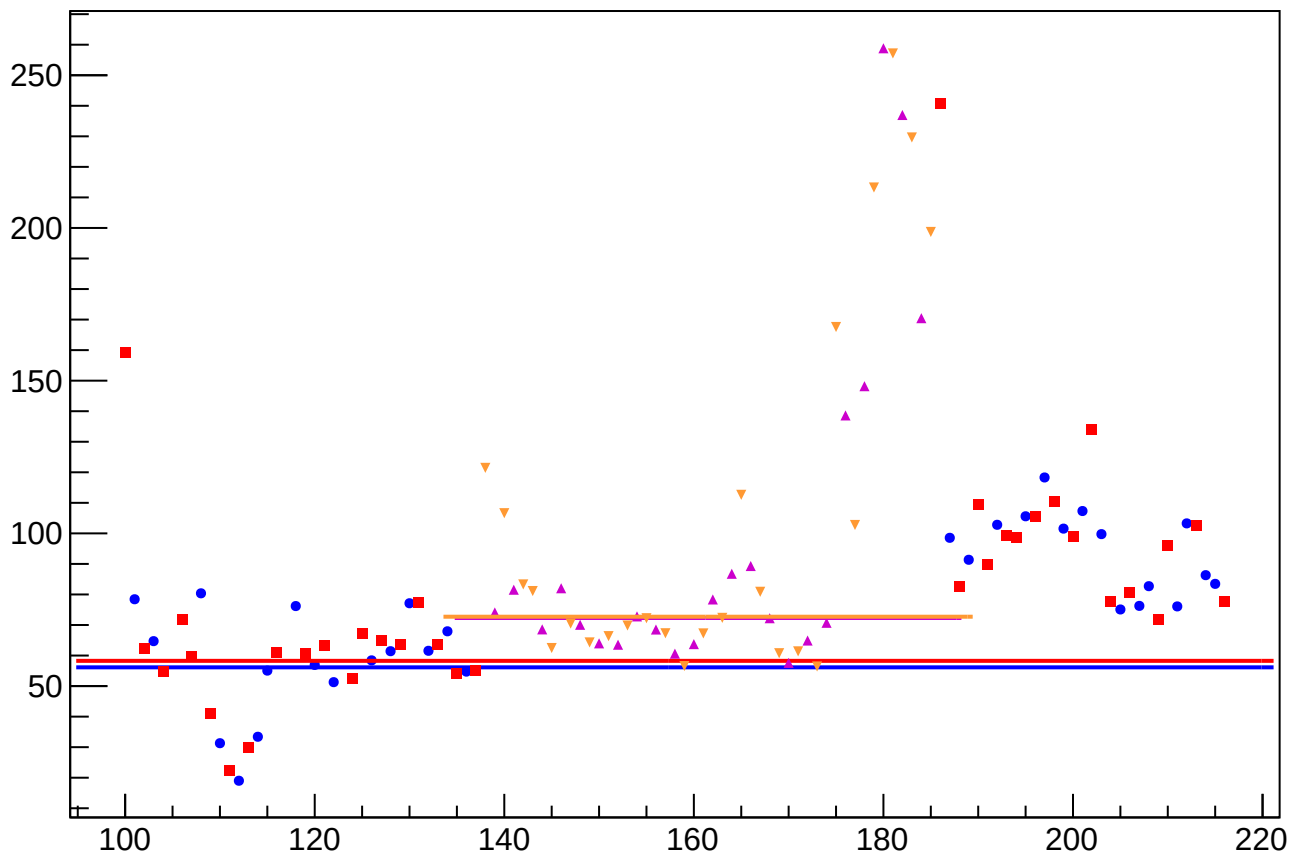
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $0.001 \pm 0.011$   $\chi^2/\text{NDF}: 69.7/55$

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}: 219.8/113$

- sign  $-0.023 \pm 0.012$   $\chi^2/\text{NDF}: 147.9/57$

asym\_sam\_48\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 56.138 $\pm$ 0.010  $\chi^2$ /NDF: 8019876.3/30

Left Out: 72.715 $\pm$ 0.013  $\chi^2$ /NDF: 3961158.6/24

Right Out: 58.265 $\pm$ 0.011  $\chi^2$ /NDF: 7158166.6/34

Left In: 72.298 $\pm$ 0.013  $\chi^2$ /NDF: 2790214.3/22

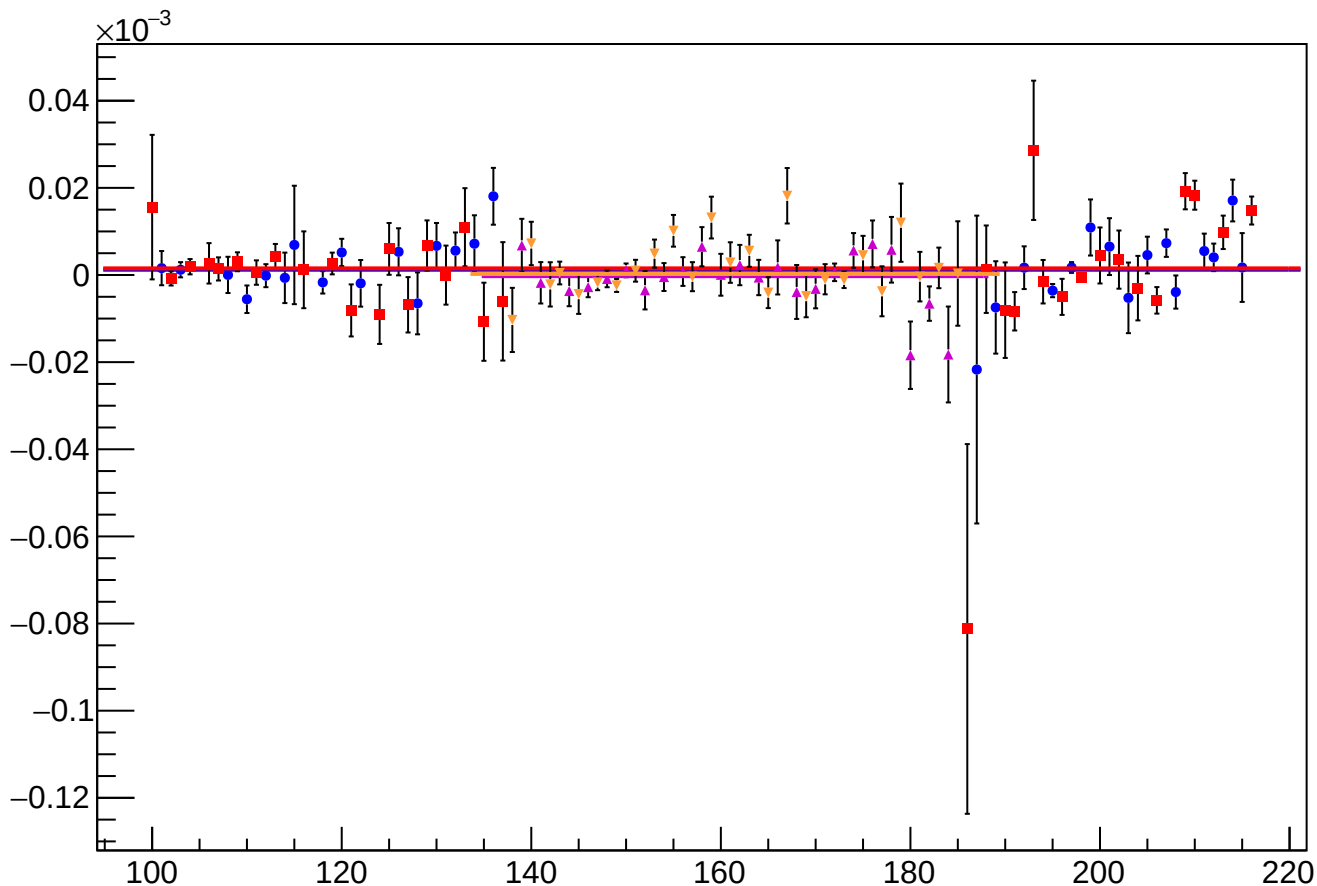
+ sign 62.828 $\pm$ 0.008  $\chi^2$ /NDF: 12997094.6/55

All: 63.351 $\pm$ 0.006  $\chi^2$ /NDF: 23662278.1/113

- sign 63.888 $\pm$ 0.008  $\chi^2$ /NDF: 10656672.1/57



asym\_sam\_48\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 107.9/34

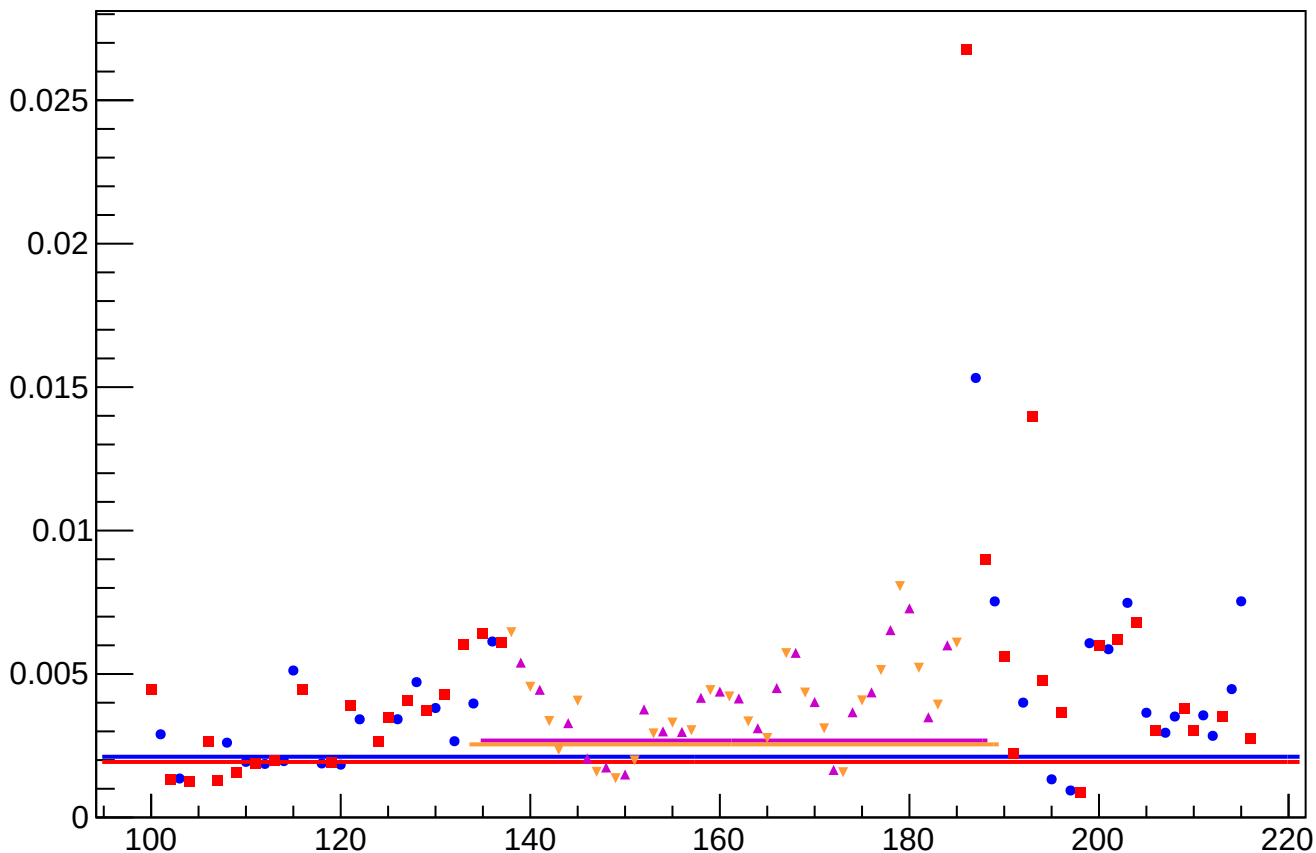
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 98.5/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 234.4/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 135.9/57

asym\_sam\_48\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 10533595.7/30

Left Out: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 7499900.9/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13251483.5/34

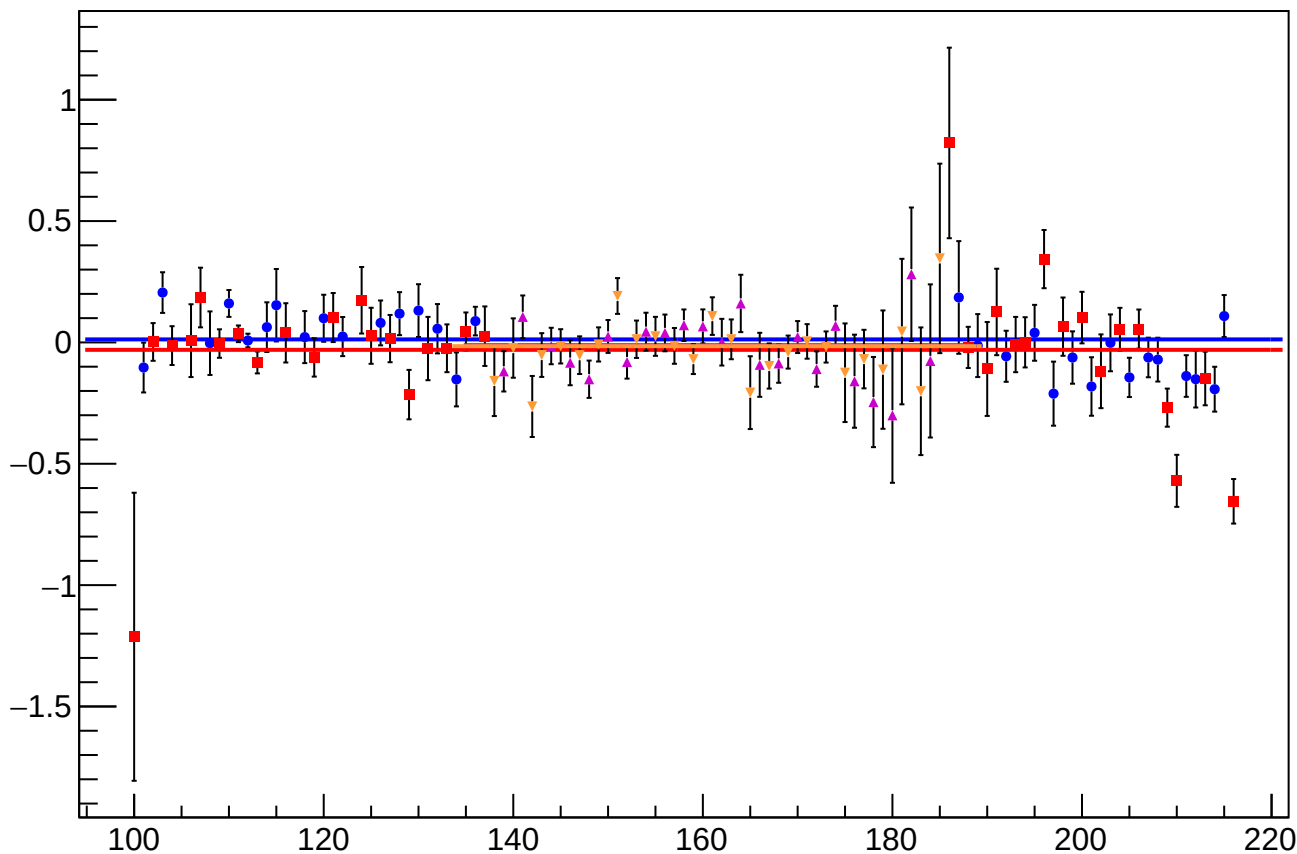
Left In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 6504235.2/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18512011.8/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 39712468.4/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 21152454.0/57

asym\_sam\_48\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 46.6/30

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 123.9/34

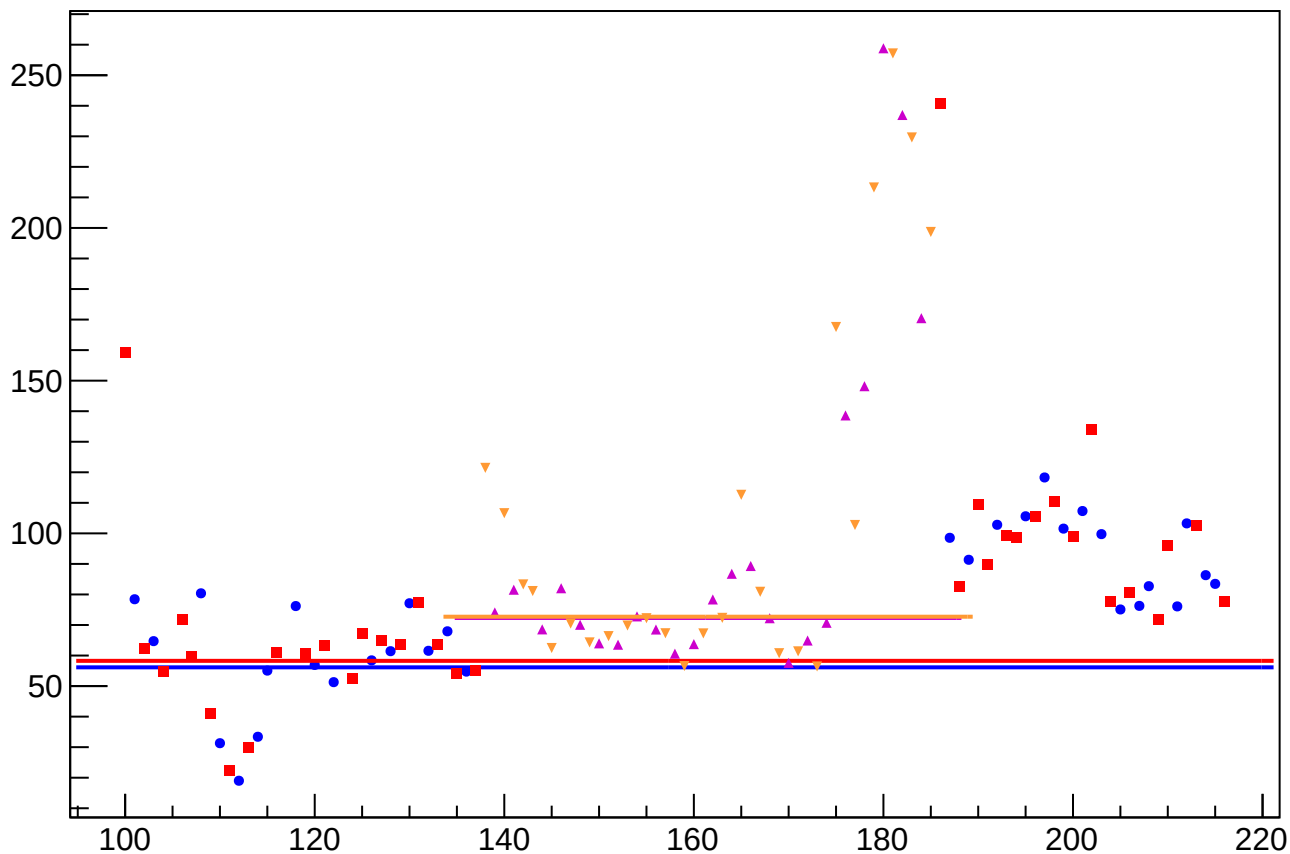
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.001 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.7/55

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 219.8/113

- sign  $-0.023 \pm 0.012$   $\chi^2/\text{NDF}$ : 147.9/57

asym\_sam\_48\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 56.137 $\pm$ 0.010  $\chi^2$ /NDF: 8020155.9/30

Left Out: 72.716 $\pm$ 0.013  $\chi^2$ /NDF: 3961100.5/24

Right Out: 58.264 $\pm$ 0.011  $\chi^2$ /NDF: 7158498.4/34

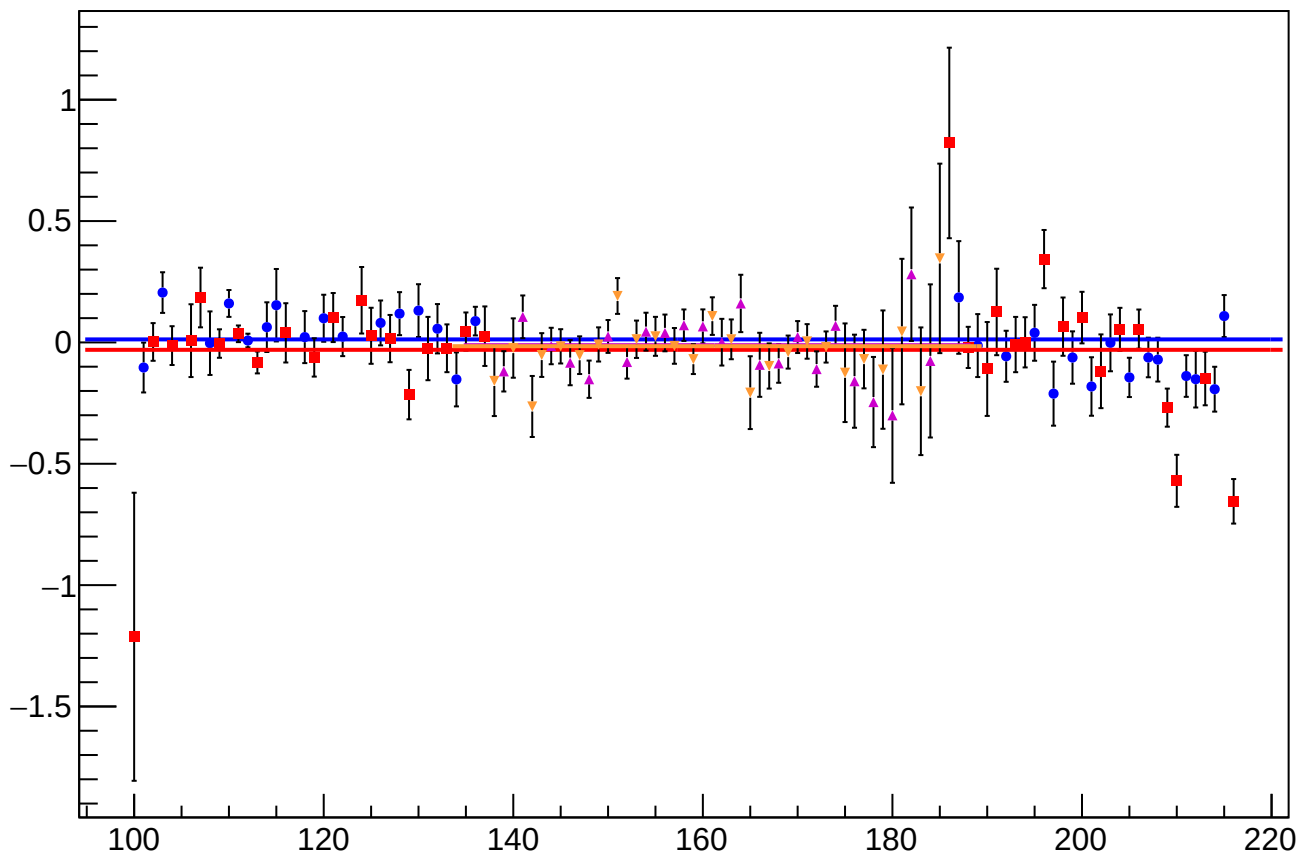
Left In: 72.298 $\pm$ 0.013  $\chi^2$ /NDF: 2790146.5/22

+ sign 62.828 $\pm$ 0.008  $\chi^2$ /NDF: 12997512.4/55

All: 63.351 $\pm$ 0.006  $\chi^2$ /NDF: 23663111.3/113

- sign 63.887 $\pm$ 0.008  $\chi^2$ /NDF: 10657086.1/57

asym\_sam\_48\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.012 \pm 0.015$   $\chi^2/\text{NDF}$ : 46.6/30

Left Out:  $-0.016 \pm 0.018$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-0.031 \pm 0.015$   $\chi^2/\text{NDF}$ : 123.9/34

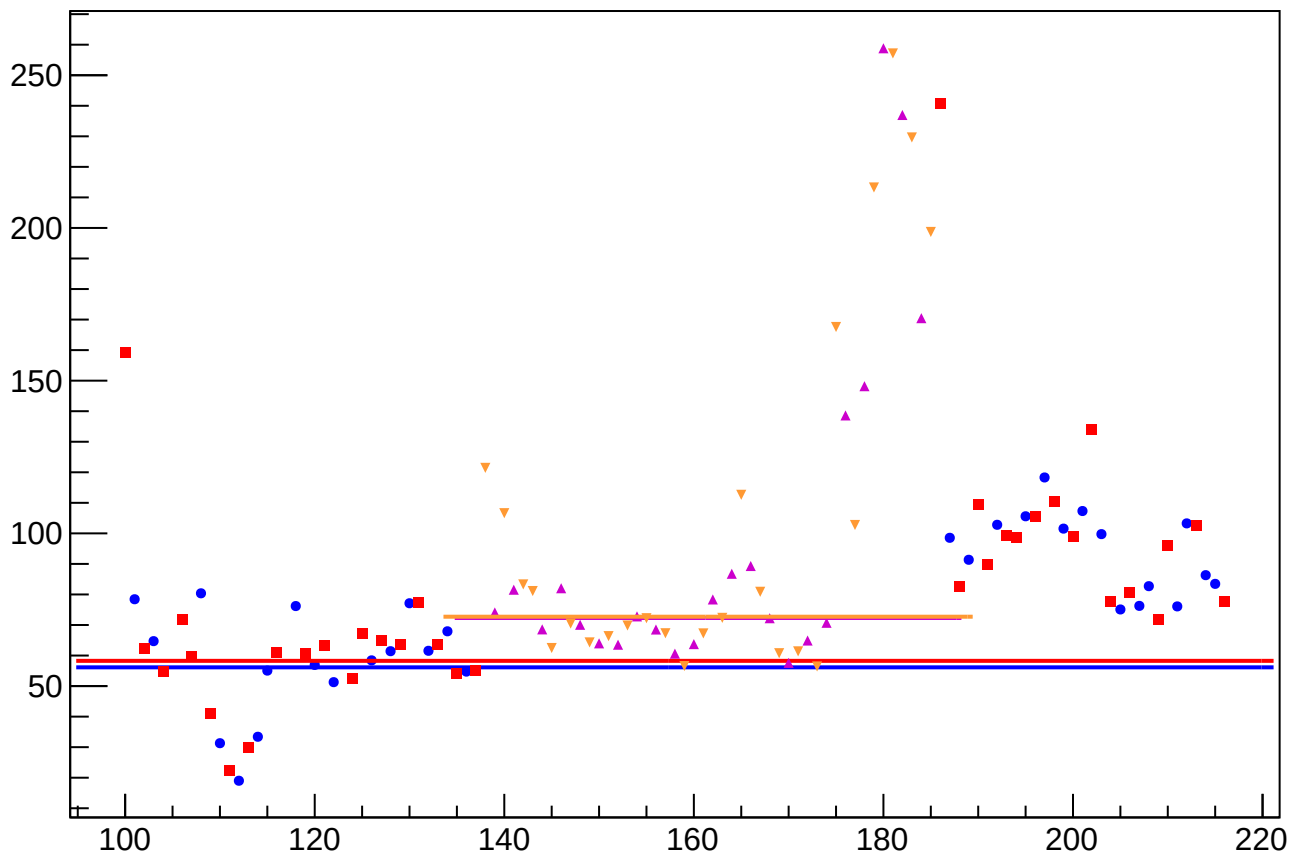
Left In:  $-0.011 \pm 0.018$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $0.001 \pm 0.011$   $\chi^2/\text{NDF}$ : 69.7/55

All:  $-0.011 \pm 0.008$   $\chi^2/\text{NDF}$ : 219.8/113

- sign  $-0.023 \pm 0.012$   $\chi^2/\text{NDF}$ : 147.9/57

asym\_sam\_48\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 56.137 $\pm$ 0.010  $\chi^2$ /NDF: 8020155.9/30

Left Out: 72.716 $\pm$ 0.013  $\chi^2$ /NDF: 3961100.5/24

Right Out: 58.264 $\pm$ 0.011  $\chi^2$ /NDF: 7158498.4/34

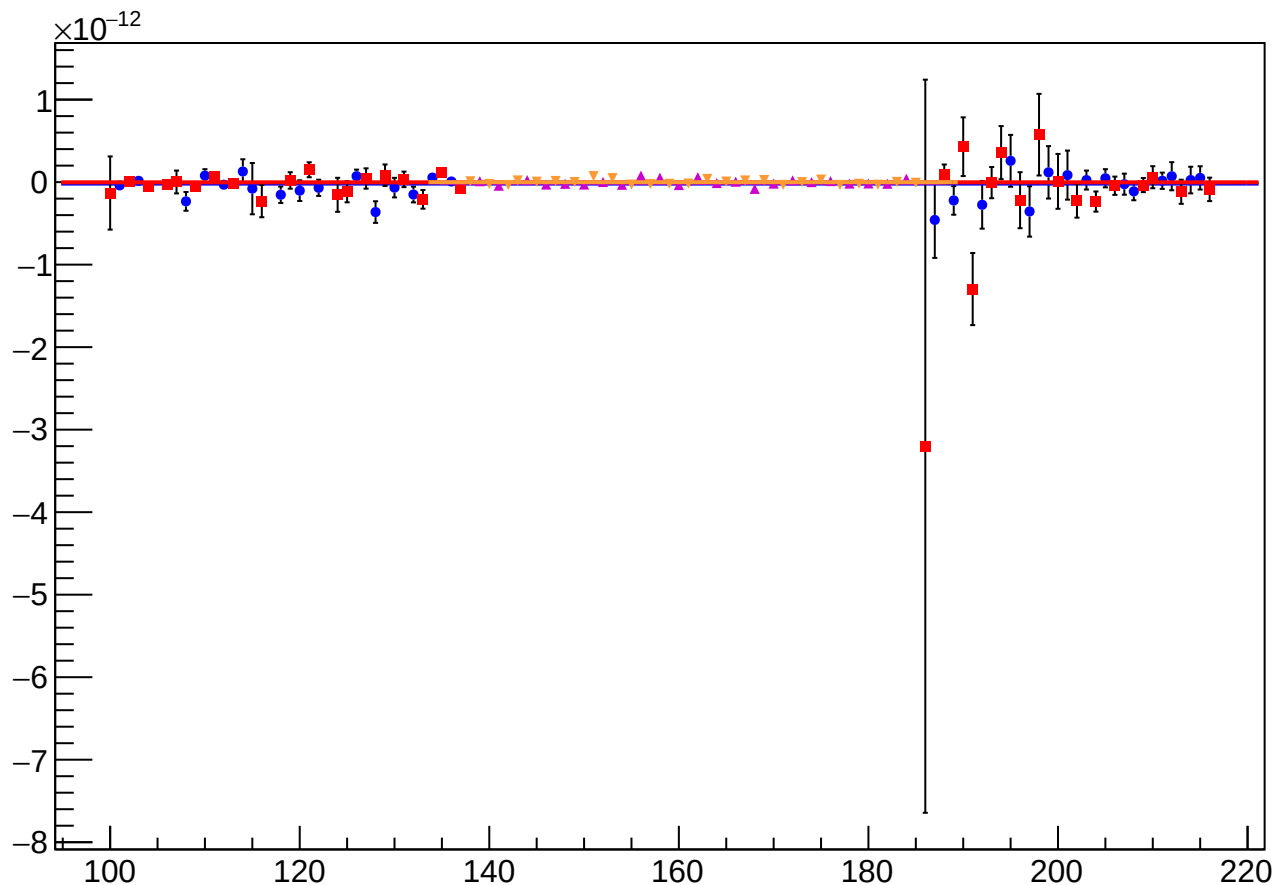
Left In: 72.298 $\pm$ 0.013  $\chi^2$ /NDF: 2790146.5/22

+ sign 62.828 $\pm$ 0.008  $\chi^2$ /NDF: 12997512.4/55

All: 63.351 $\pm$ 0.006  $\chi^2$ /NDF: 23663111.3/113

- sign 63.887 $\pm$ 0.008  $\chi^2$ /NDF: 10657086.1/57

asym\_sam\_48\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 30.3/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 27.9/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 44.3/34

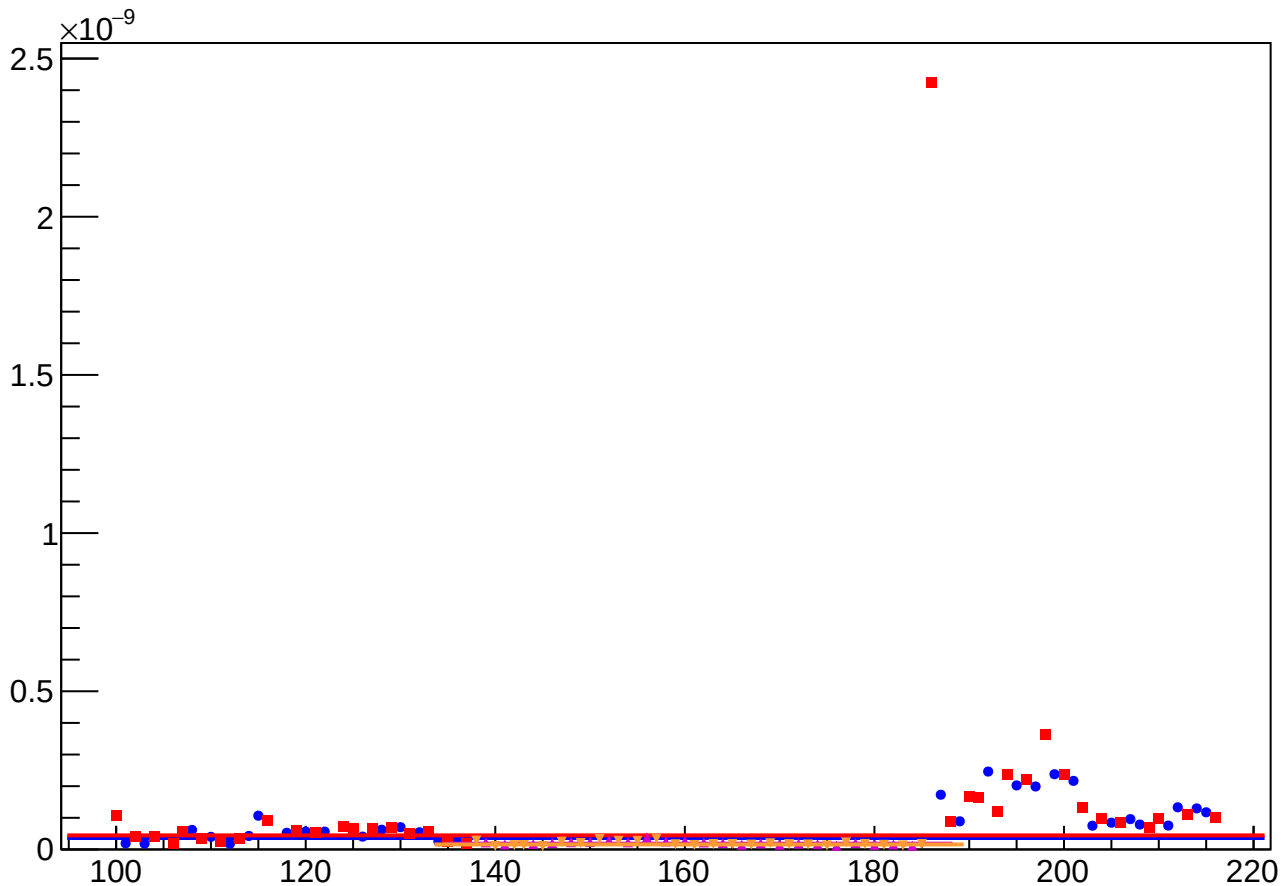
Left In: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.3/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 59.6/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 142.5/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 82.6/57

asym\_sam\_48\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10281926.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2331257.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8911593.4/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1621439.8/22

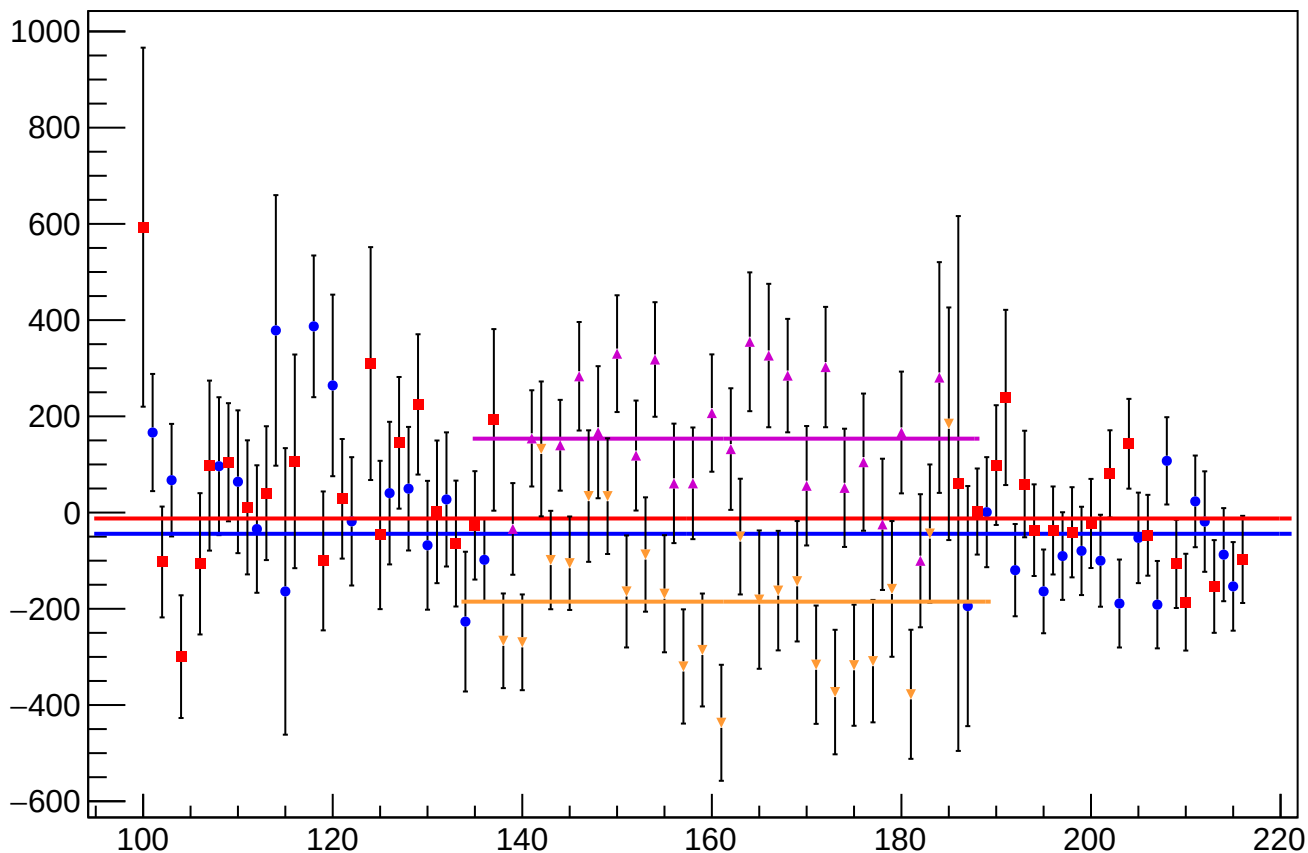
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16647877.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 32793301.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15754696.0/57



# reg\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-44.113 \pm 20.295$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-185.146 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $-12.301 \pm 20.058$   $\chi^2/\text{NDF}$ : 32.6/34

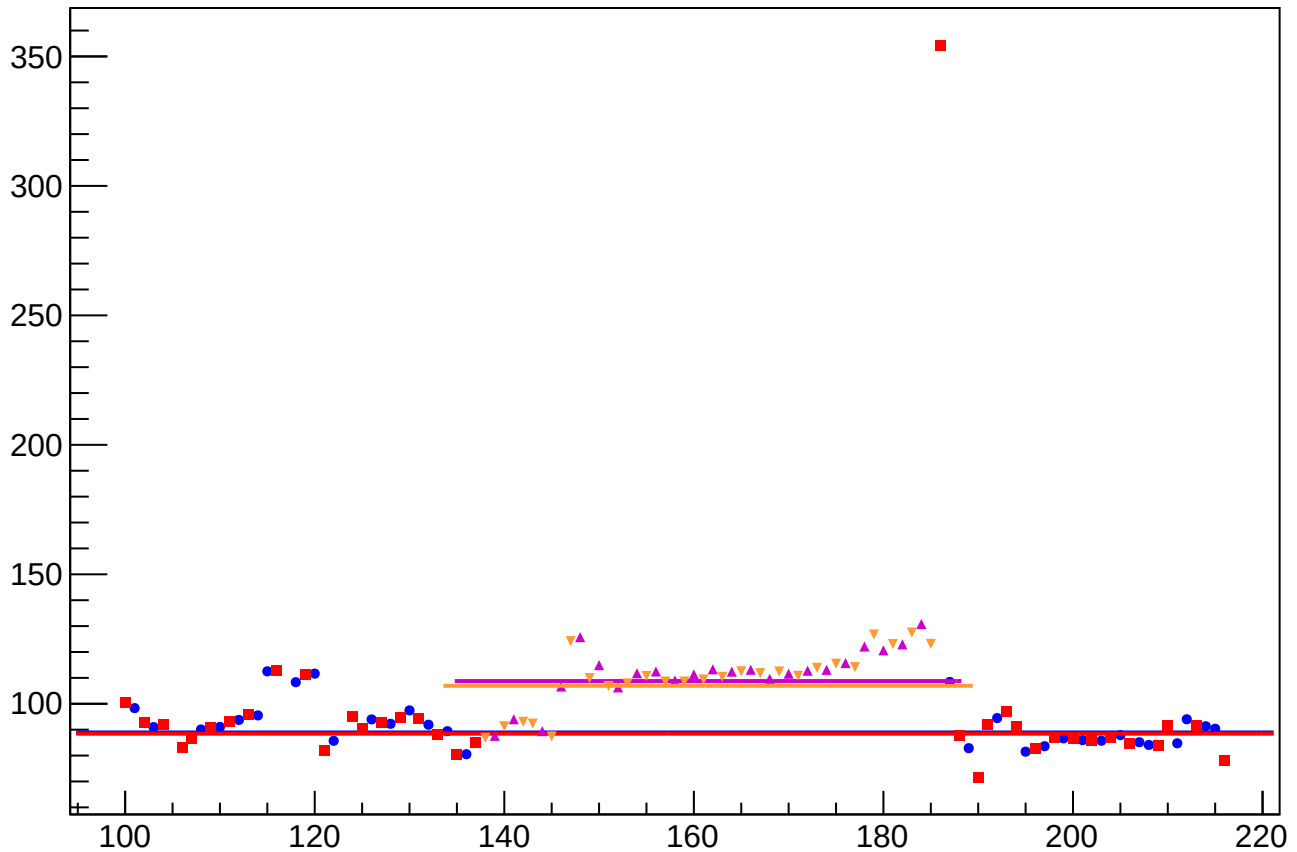
Left In:  $153.627 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-101.638 \pm 15.617$   $\chi^2/\text{NDF}$ : 88.9/55

All:  $-26.083 \pm 11.098$   $\chi^2/\text{NDF}$ : 218.4/113

- sign  $51.004 \pm 15.774$   $\chi^2/\text{NDF}$ : 82.2/57

# reg\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 88.918 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 197442.0/30

Left Out: 106.954 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 464271.3/24

Right Out: 88.457 $\pm$ 0.014  $\chi^2/\text{NDF}$ : 680917.7/34

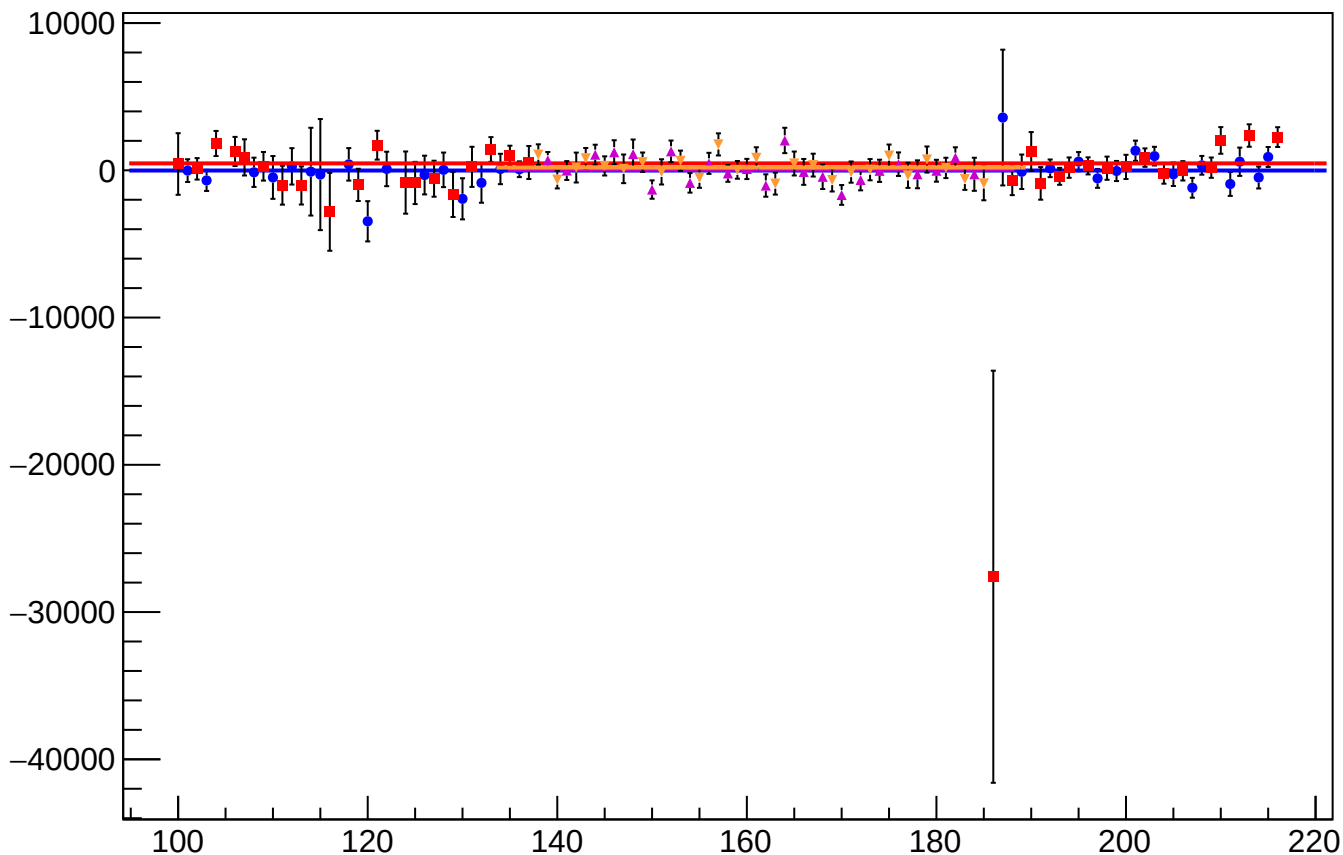
Left In: 108.781 $\pm$ 0.018  $\chi^2/\text{NDF}$ : 358436.3/22

+ sign 96.274 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 1306025.3/55

All: 96.243 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3128821.6/113

- sign 96.211 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 1822779.8/57

# asym\_sam\_15\_dd\_reg\_correction\_mean vs Slug



Right In:  $-14.650 \pm 152.941$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $186.456 \pm 148.819$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $469.671 \pm 150.743$   $\chi^2/\text{NDF}$ : 45.5/34

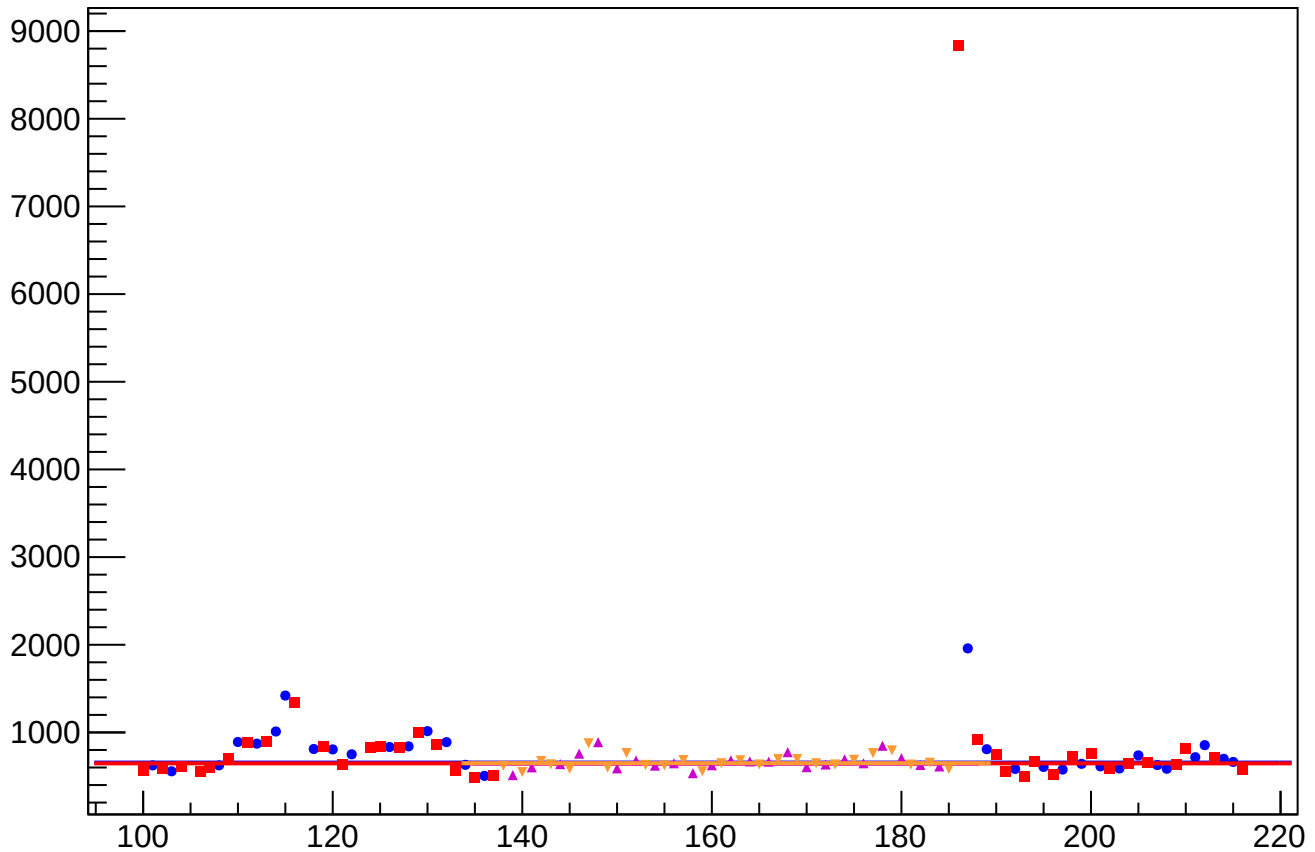
Left In:  $43.249 \pm 152.059$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $88.650 \pm 106.659$   $\chi^2/\text{NDF}$ : 45.7/55

All:  $173.168 \pm 75.558$   $\chi^2/\text{NDF}$ : 130.1/113

- sign  $258.314 \pm 107.053$   $\chi^2/\text{NDF}$ : 83.2/57

# asym\_sam\_15\_dd\_reg\_correction\_rms vs Slug



Right In: 656.340 $\pm$ 0.108  $\chi^2$ /NDF: 1232631.9/30

Left Out: 649.189 $\pm$ 0.105  $\chi^2$ /NDF: 418364.7/24

+ sign 652.667 $\pm$ 0.075  $\chi^2$ /NDF: 1653242.5/55

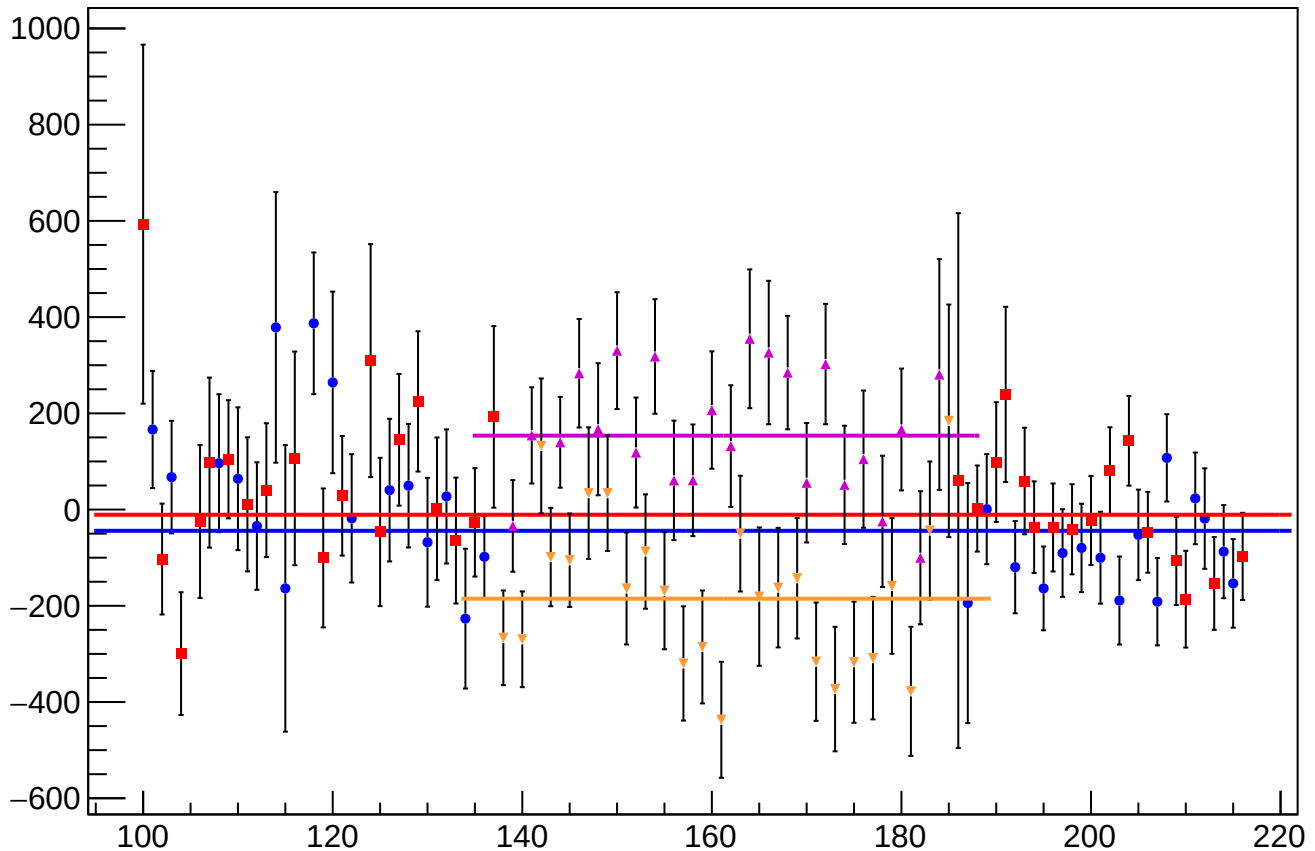
Right Out: 647.166 $\pm$ 0.107  $\chi^2$ /NDF: 2080421.2/34

All: 649.163 $\pm$ 0.053  $\chi^2$ /NDF: 4297534.7/113

Left In: 644.072 $\pm$ 0.108  $\chi^2$ /NDF: 559119.9/22

- sign 645.633 $\pm$ 0.076  $\chi^2$ /NDF: 2639958.6/57

# cor\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-44.111 \pm 20.295$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-185.148 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.0/24

Right Out:  $-10.733 \pm 20.086$   $\chi^2/\text{NDF}$ : 32.2/34

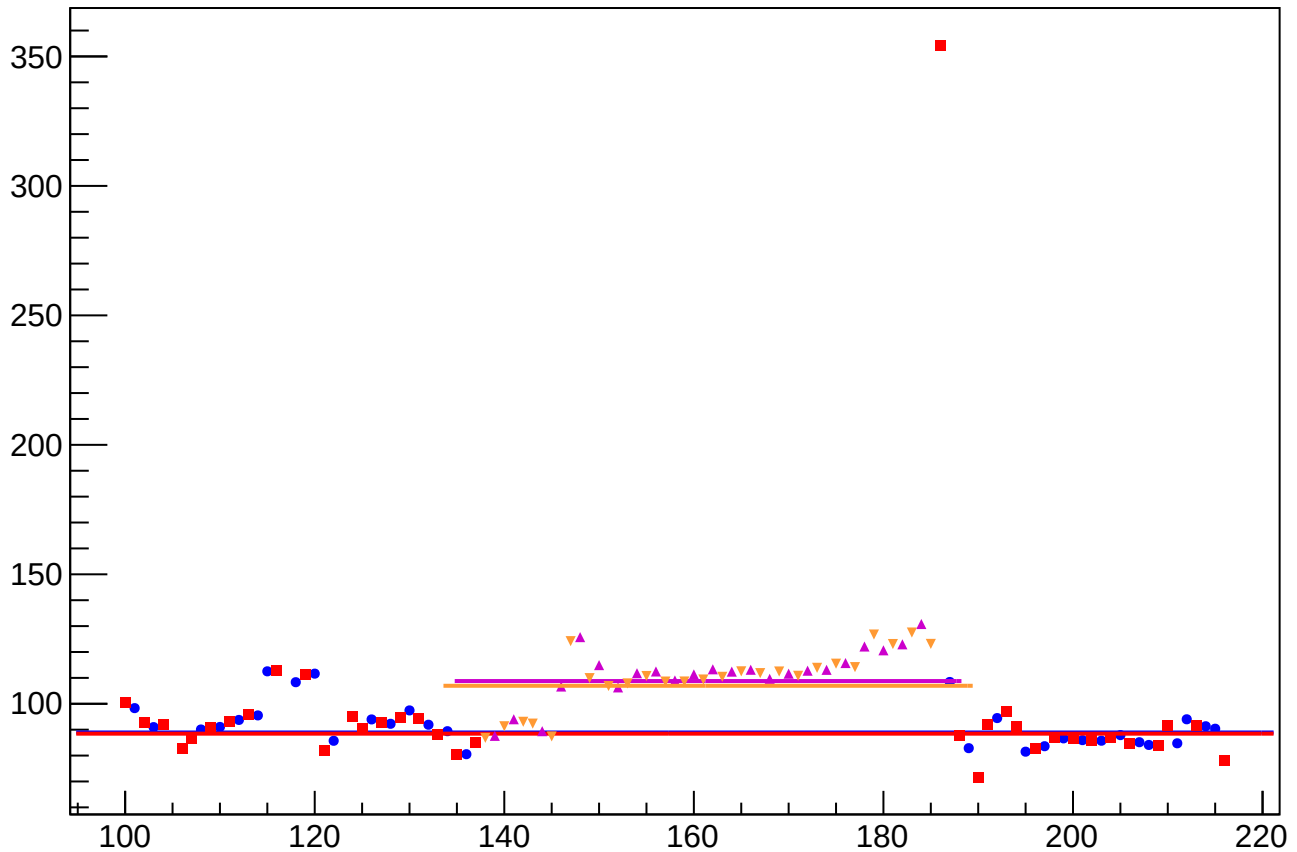
Left In:  $153.632 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-101.638 \pm 15.617$   $\chi^2/\text{NDF}$ : 88.9/55

All:  $-25.614 \pm 11.103$   $\chi^2/\text{NDF}$ : 218.1/113

- sign  $52.083 \pm 15.788$   $\chi^2/\text{NDF}$ : 81.3/57

# cor\_asym\_sam\_15\_dd\_rms vs Slug



Right In:  $88.918 \pm 0.014$   $\chi^2/\text{NDF}$ : 197442.0/30

Left Out:  $106.954 \pm 0.017$   $\chi^2/\text{NDF}$ : 464271.4/24

Right Out:  $88.462 \pm 0.014$   $\chi^2/\text{NDF}$ : 681017.9/34

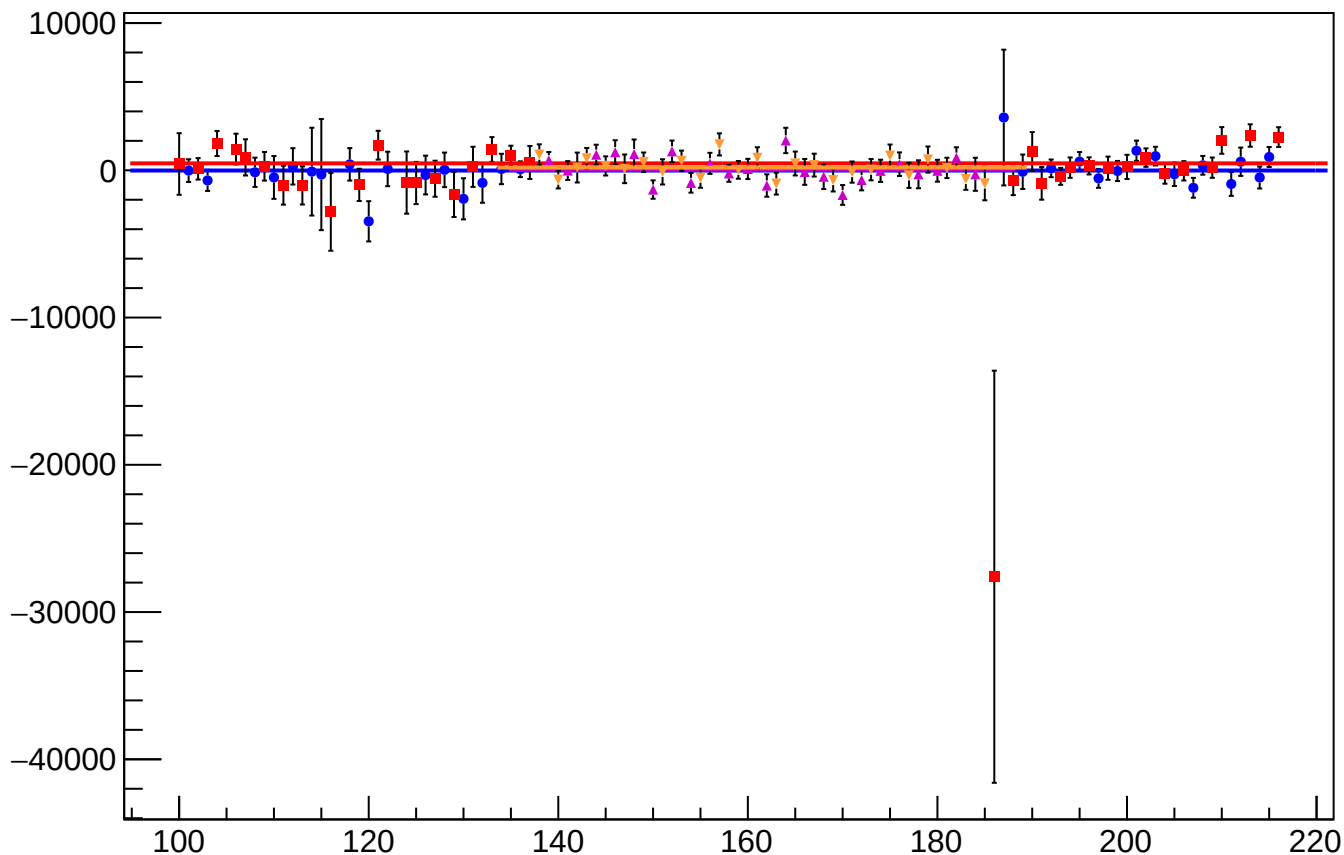
Left In:  $108.781 \pm 0.018$   $\chi^2/\text{NDF}$ : 358436.4/22

+ sign  $96.274 \pm 0.011$   $\chi^2/\text{NDF}$ : 1306025.3/55

All:  $96.251 \pm 0.008$   $\chi^2/\text{NDF}$ : 3127635.0/113

- sign  $96.228 \pm 0.011$   $\chi^2/\text{NDF}$ : 1821600.8/57

# asym\_sam\_15\_dd\_cor\_correction\_mean vs Slug



Right In: -14.652 $\pm$ 152.941  $\chi^2/\text{NDF}$ : 25.7/30

Left Out: 186.450 $\pm$ 148.819  $\chi^2/\text{NDF}$ : 19.1/24

Right Out: 471.080 $\pm$ 150.926  $\chi^2/\text{NDF}$ : 45.7/34

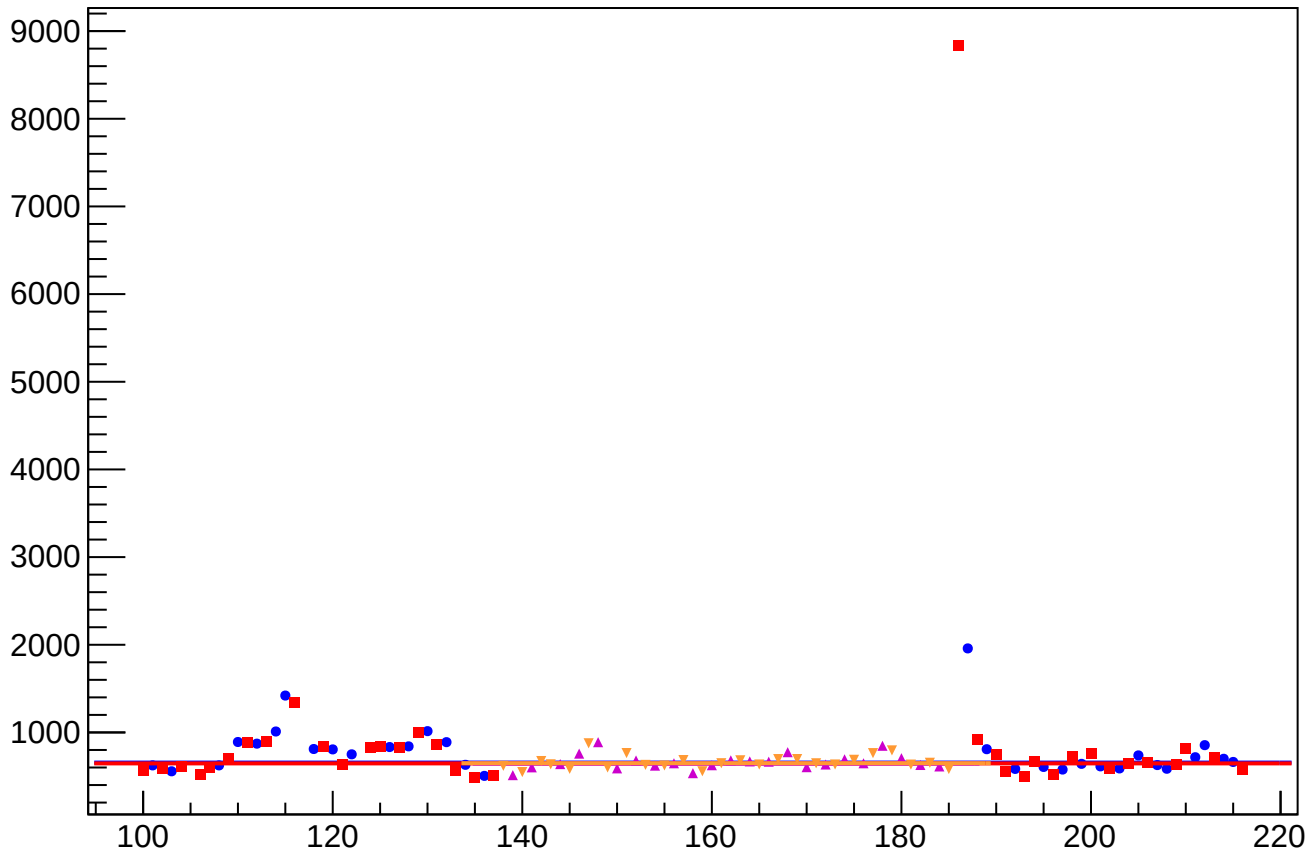
Left In: 43.251 $\pm$ 152.059  $\chi^2/\text{NDF}$ : 33.7/22

+ sign 88.645 $\pm$ 106.659  $\chi^2/\text{NDF}$ : 45.7/55

All: 173.339 $\pm$ 75.581  $\chi^2/\text{NDF}$ : 130.3/113

- sign 258.765 $\pm$ 107.119  $\chi^2/\text{NDF}$ : 83.4/57

# asym\_sam\_15\_dd\_cor\_correction\_rms vs Slug



Right In: 656.340 $\pm$ 0.108  $\chi^2$ /NDF: 1232631.8/30

Left Out: 649.189 $\pm$ 0.105  $\chi^2$ /NDF: 418365.4/24

Right Out: 646.818 $\pm$ 0.107  $\chi^2$ /NDF: 2089752.8/34

Left In: 644.072 $\pm$ 0.108  $\chi^2$ /NDF: 559121.0/22

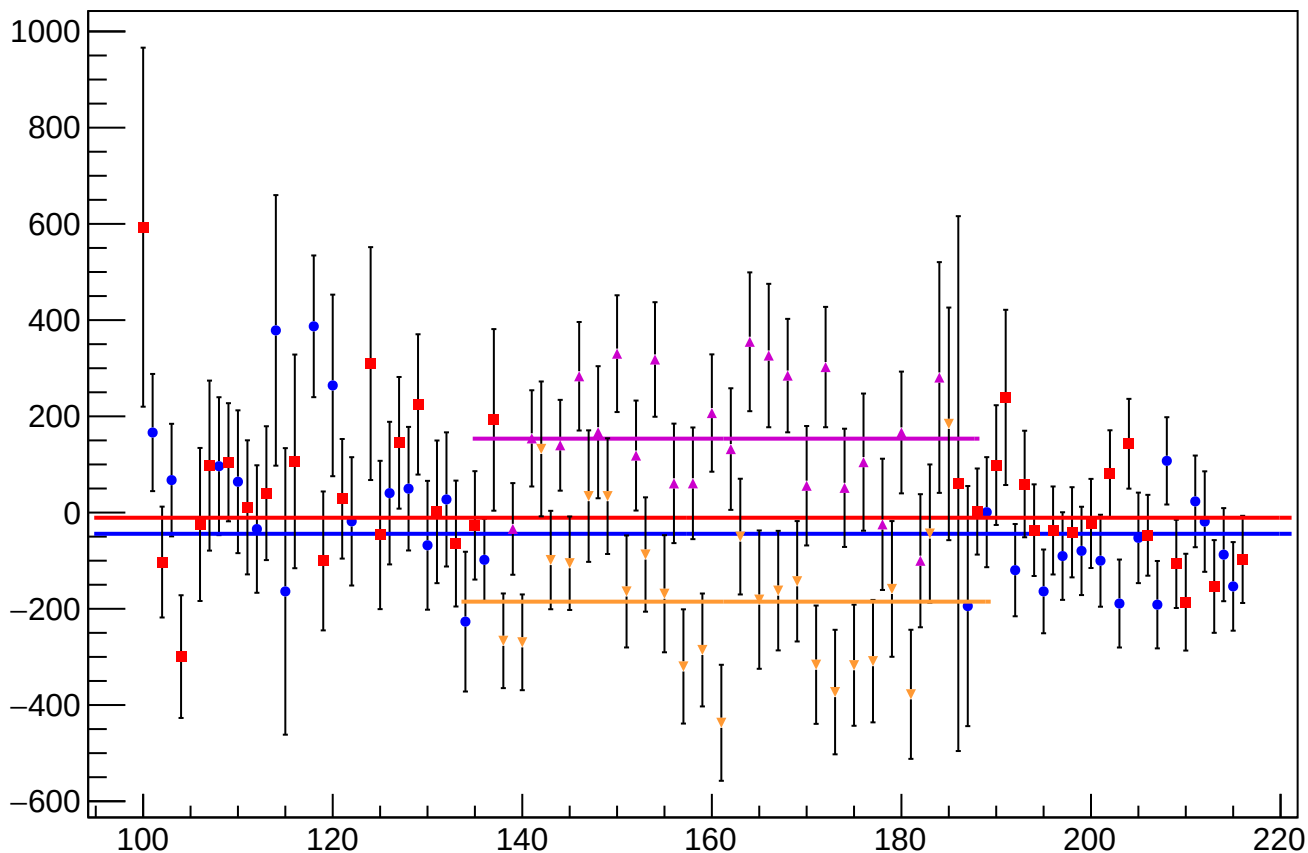
+ sign 652.667 $\pm$ 0.075  $\chi^2$ /NDF: 1653243.1/55

All: 649.077 $\pm$ 0.053  $\chi^2$ /NDF: 4306997.2/113

- sign 645.455 $\pm$ 0.076  $\chi^2$ /NDF: 2649202.4/57



# eigen\_cor\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-44.111 \pm 20.295$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $-185.148 \pm 24.452$   $\chi^2/\text{NDF}$ : 33.0/24

Right Out:  $-10.733 \pm 20.086$   $\chi^2/\text{NDF}$ : 32.2/34

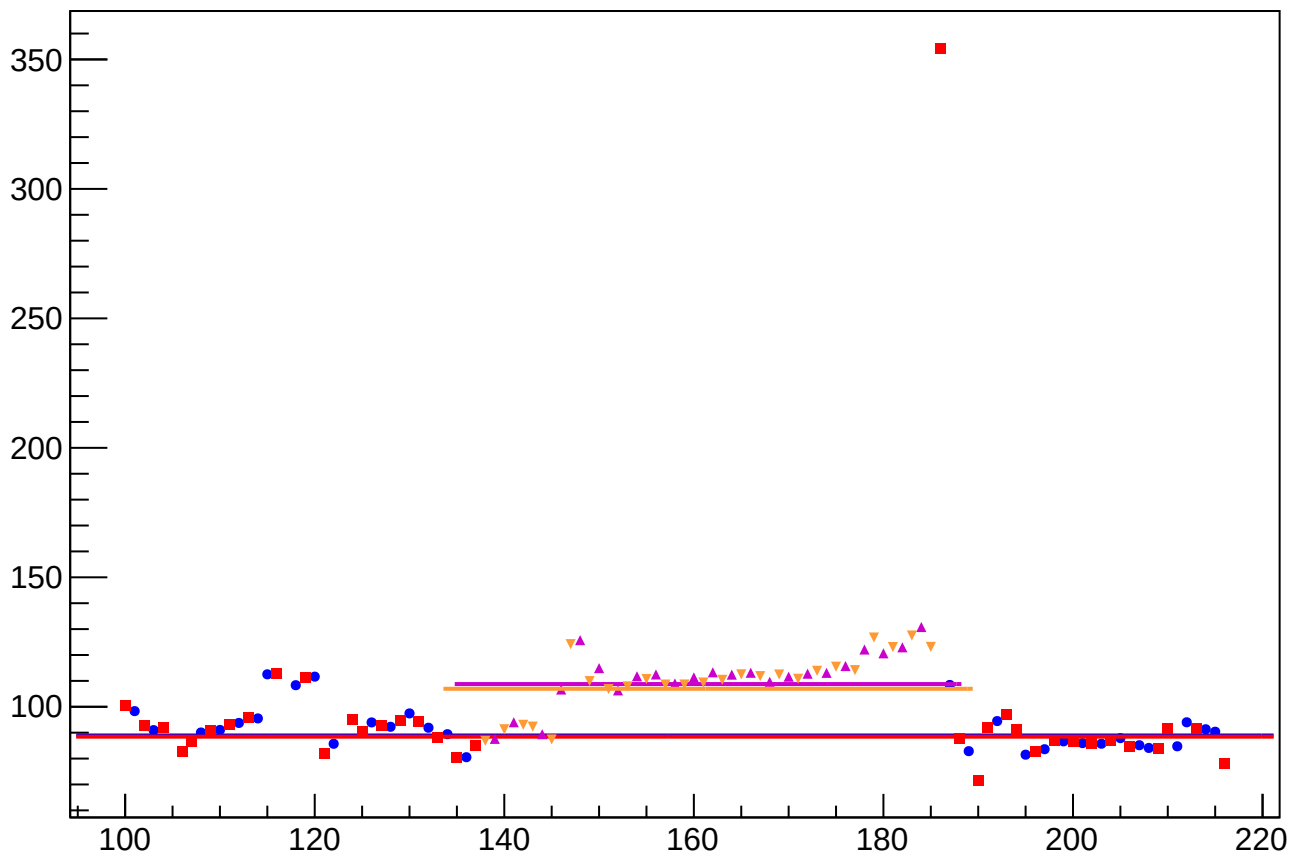
Left In:  $153.632 \pm 25.538$   $\chi^2/\text{NDF}$ : 23.5/22

+ sign  $-101.638 \pm 15.617$   $\chi^2/\text{NDF}$ : 88.9/55

All:  $-25.614 \pm 11.103$   $\chi^2/\text{NDF}$ : 218.1/113

- sign  $52.083 \pm 15.788$   $\chi^2/\text{NDF}$ : 81.3/57

# eigen\_cor\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 88.918+/-0.014     $\chi^2$ /NDF: 197442.0/30

Left Out: 106.954+/-0.017     $\chi^2$ /NDF: 464271.4/24

Right Out: 88.462+/-0.014     $\chi^2$ /NDF: 681017.9/34

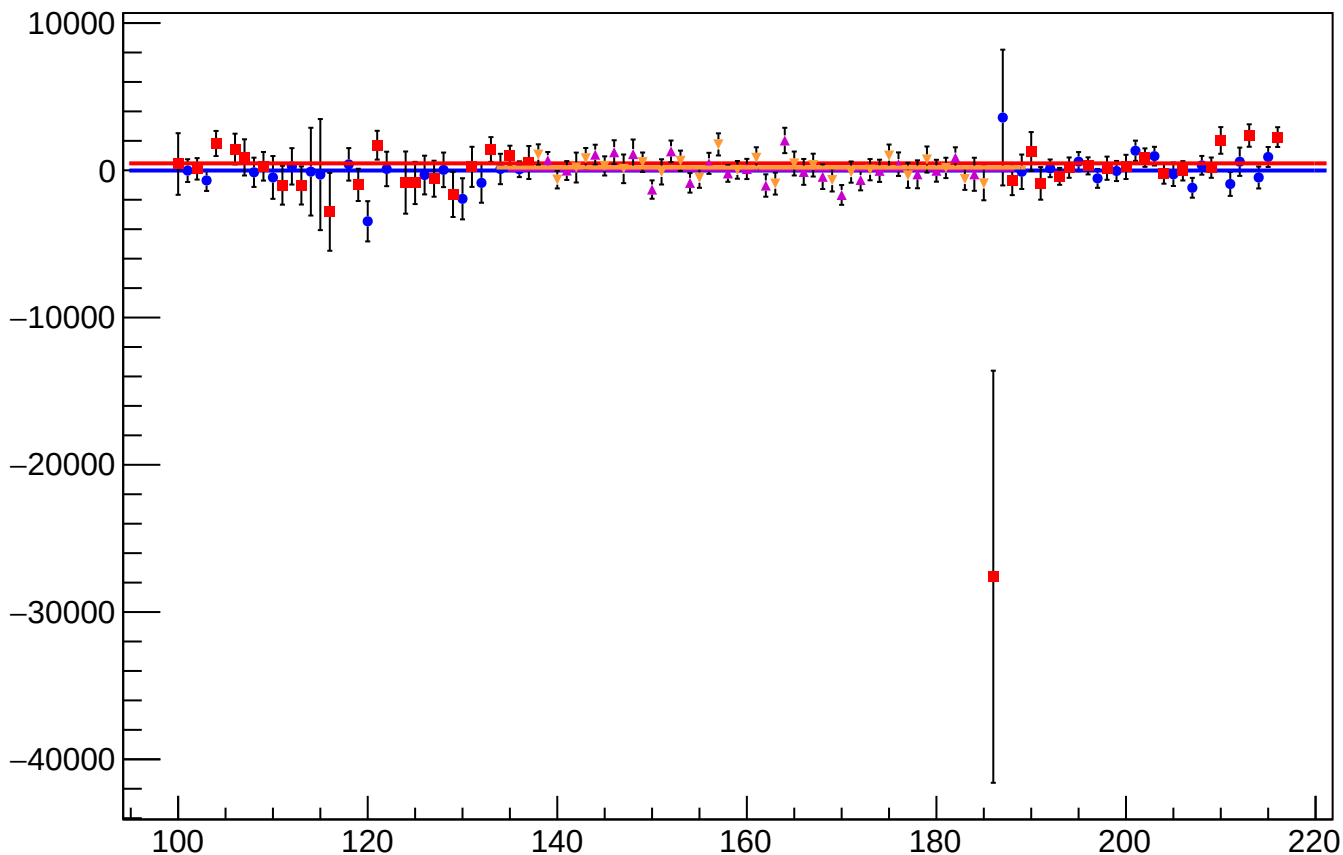
Left In: 108.781+/-0.018     $\chi^2$ /NDF: 358436.4/22

+ sign 96.274+/-0.011     $\chi^2$ /NDF: 1306025.3/55

All: 96.251+/-0.008     $\chi^2$ /NDF: 3127635.0/113

- sign 96.228+/-0.011     $\chi^2$ /NDF: 1821600.8/57

asym\_sam\_15\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-14.652 \pm 152.941$   $\chi^2/\text{NDF}$ : 25.7/30

Left Out:  $186.450 \pm 148.819$   $\chi^2/\text{NDF}$ : 19.1/24

Right Out:  $471.080 \pm 150.926$   $\chi^2/\text{NDF}$ : 45.7/34

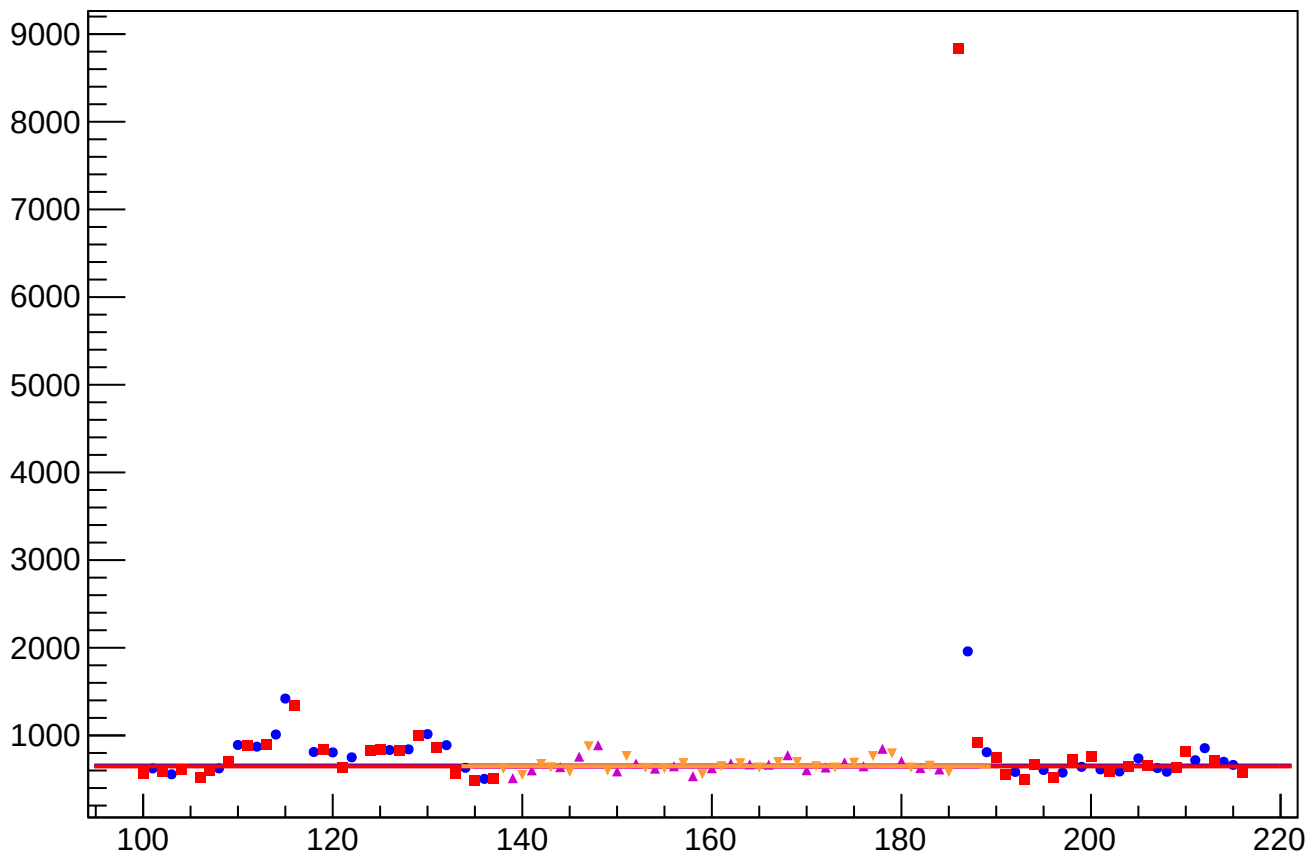
Left In:  $43.251 \pm 152.059$   $\chi^2/\text{NDF}$ : 33.7/22

+ sign  $88.645 \pm 106.659$   $\chi^2/\text{NDF}$ : 45.7/55

All:  $173.339 \pm 75.581$   $\chi^2/\text{NDF}$ : 130.3/113

- sign  $258.765 \pm 107.119$   $\chi^2/\text{NDF}$ : 83.4/57

asym\_sam\_15\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 656.340 $\pm$ 0.108  $\chi^2$ /NDF: 1232631.8/30

Left Out: 649.189 $\pm$ 0.105  $\chi^2$ /NDF: 418365.4/24

Right Out: 646.818 $\pm$ 0.107  $\chi^2$ /NDF: 2089752.8/34

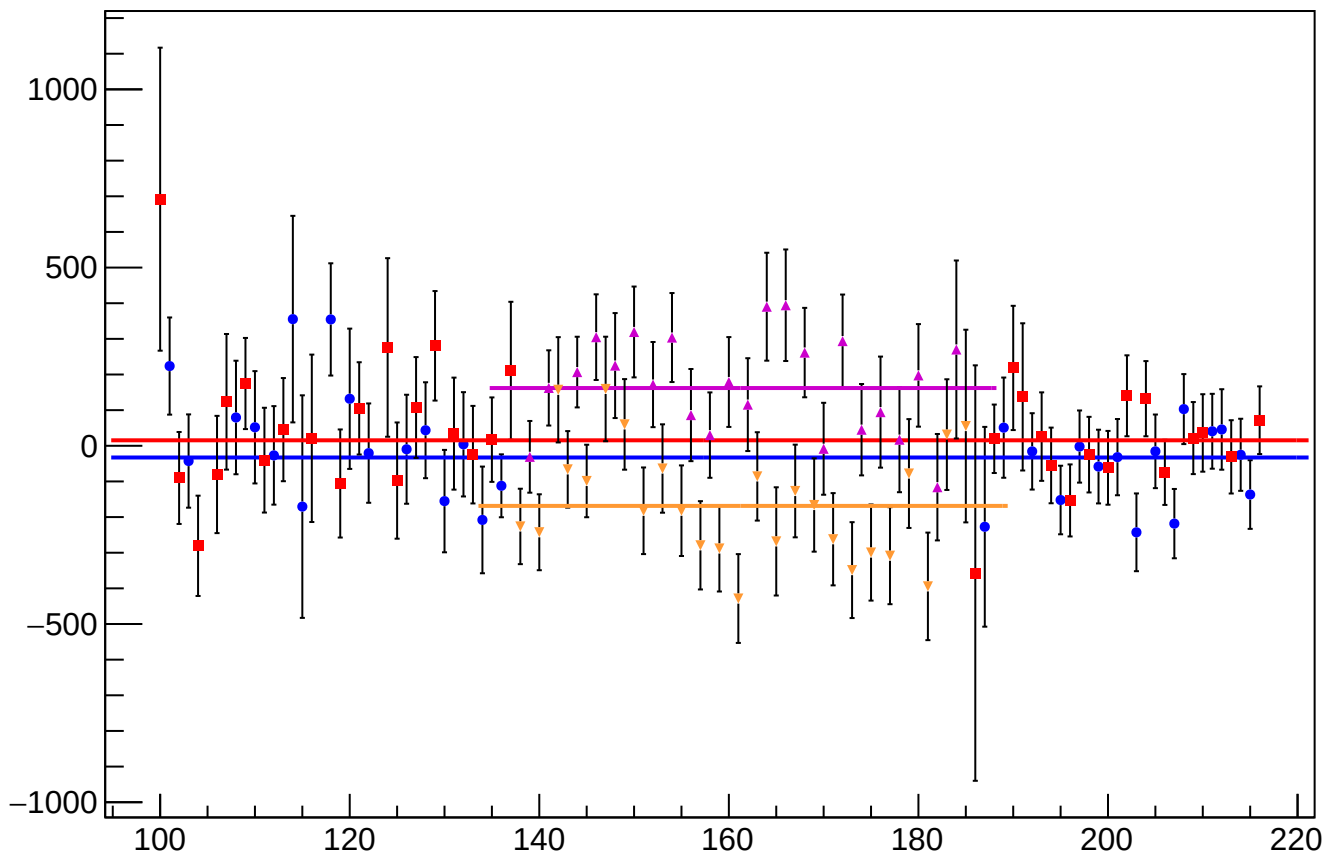
Left In: 644.072 $\pm$ 0.108  $\chi^2$ /NDF: 559121.0/22

+ sign 652.667 $\pm$ 0.075  $\chi^2$ /NDF: 1653243.1/55

All: 649.077 $\pm$ 0.053  $\chi^2$ /NDF: 4306997.2/113

- sign 645.455 $\pm$ 0.076  $\chi^2$ /NDF: 2649202.4/57

# dit\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-32.838 \pm 22.090$   $\chi^2/\text{NDF}$ : 30.4/30

Left Out:  $-168.634 \pm 25.819$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $15.394 \pm 21.969$   $\chi^2/\text{NDF}$ : 27.3/34

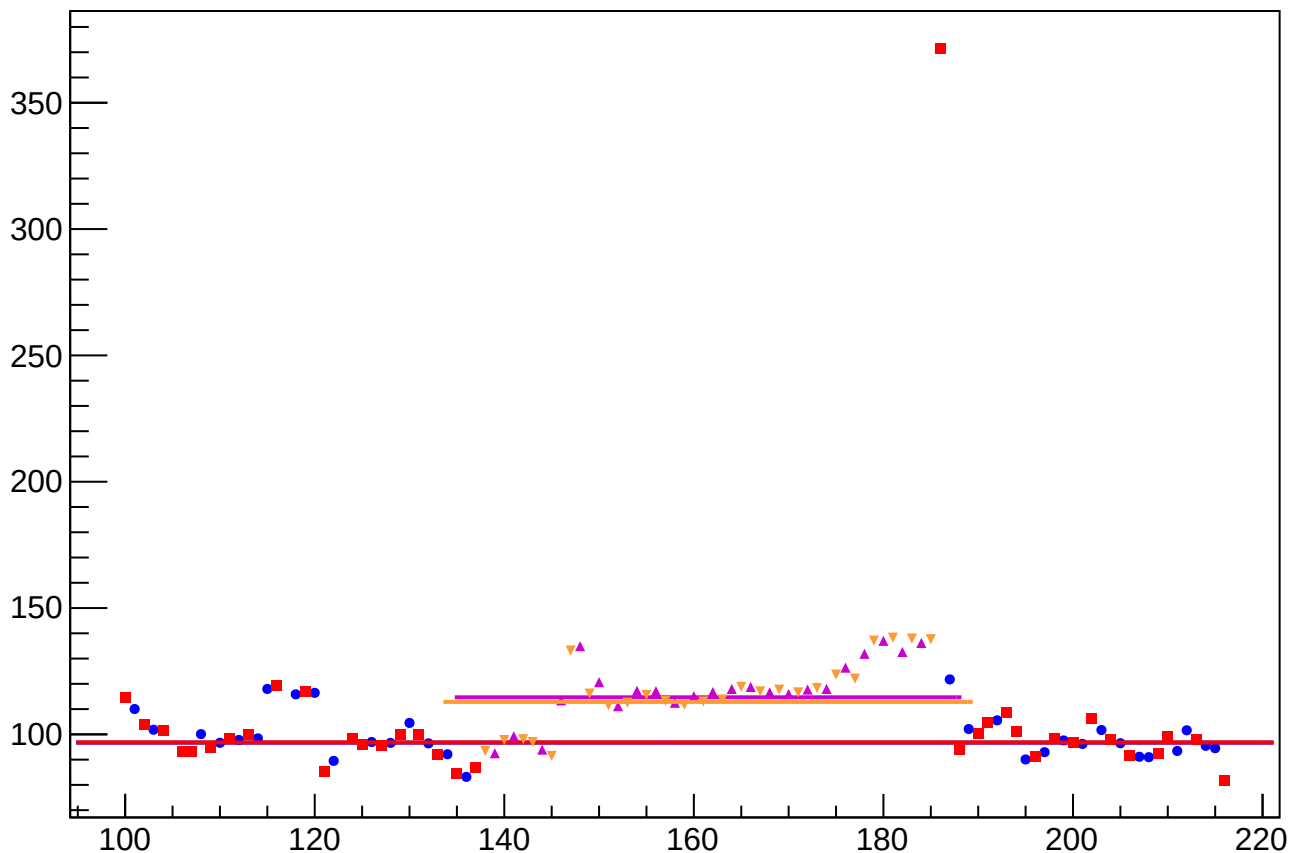
Left In:  $162.028 \pm 26.948$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-90.229 \pm 16.785$   $\chi^2/\text{NDF}$ : 78.7/55

All:  $-9.321 \pm 11.954$   $\chi^2/\text{NDF}$ : 194.5/113

- sign  $73.941 \pm 17.028$   $\chi^2/\text{NDF}$ : 68.6/57

# dit\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 96.735+/-0.016     $\chi^2/\text{NDF}$ : 212007.4/30

Left Out: 112.850+/-0.018     $\chi^2/\text{NDF}$ :512260.6/24

Right Out: 96.824+/-0.016     $\chi^2/\text{NDF}$ : 669003.8/34

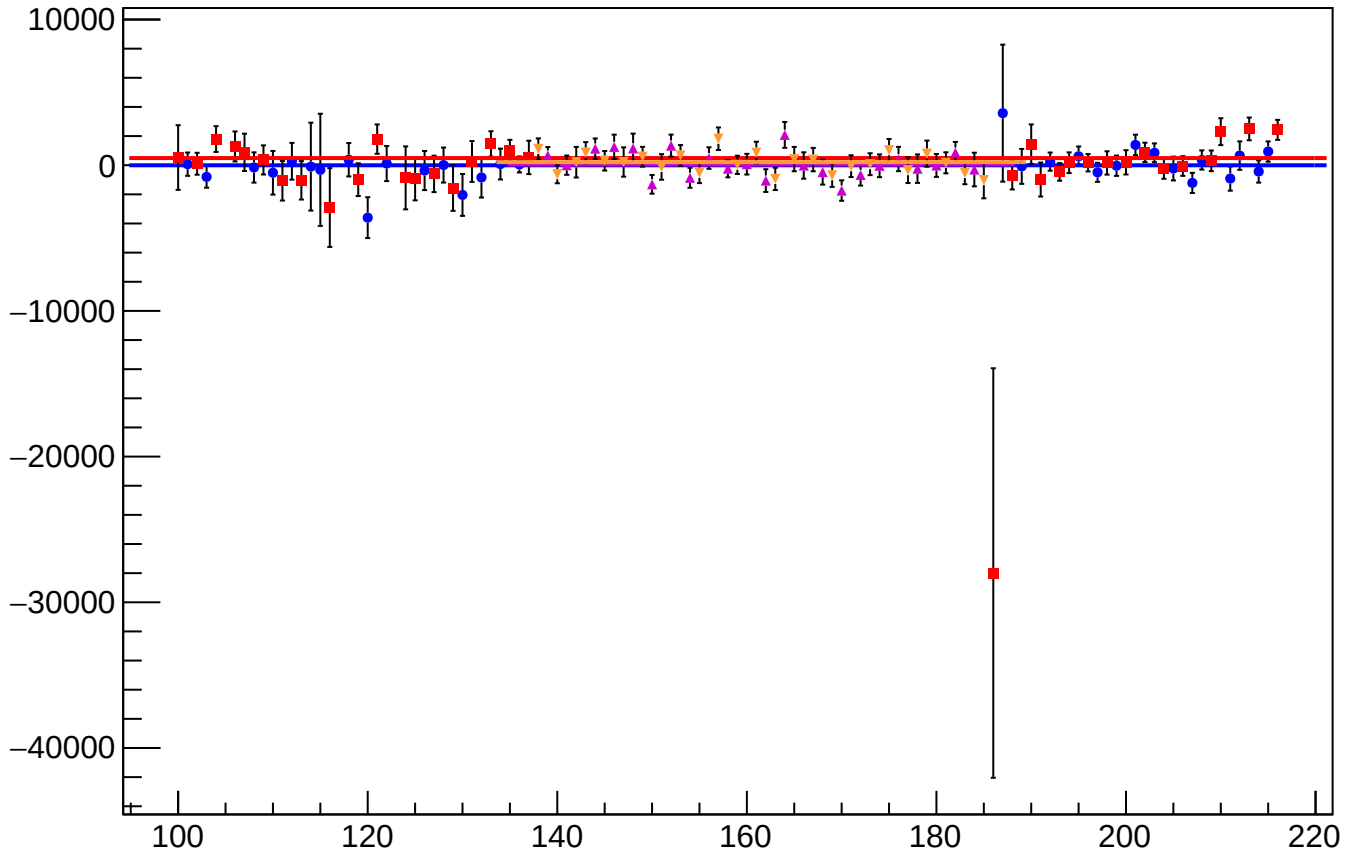
Left In: 114.677+/-0.019     $\chi^2/\text{NDF}$ :409932.2/22

+ sign 103.546+/-0.012     $\chi^2/\text{NDF}$ : 1174055.8/55

All:  $103.746 \pm 0.008$      $\chi^2/\text{NDF}: 2780924.4/113$

- sign 103.952+/-0.012     $\chi^2/\text{NDF}$ : 1606290.6/57

# asym\_sam\_15\_dd\_dit\_correction\_mean vs Slug



Right In: -5.097 $\pm$ 157.160  $\chi^2/\text{NDF}$ : 25.6/30

Left Out: 209.377 $\pm$ 153.925  $\chi^2/\text{NDF}$ : 18.9/24

Right Out: 491.207 $\pm$ 155.325  $\chi^2/\text{NDF}$ : 47.9/34

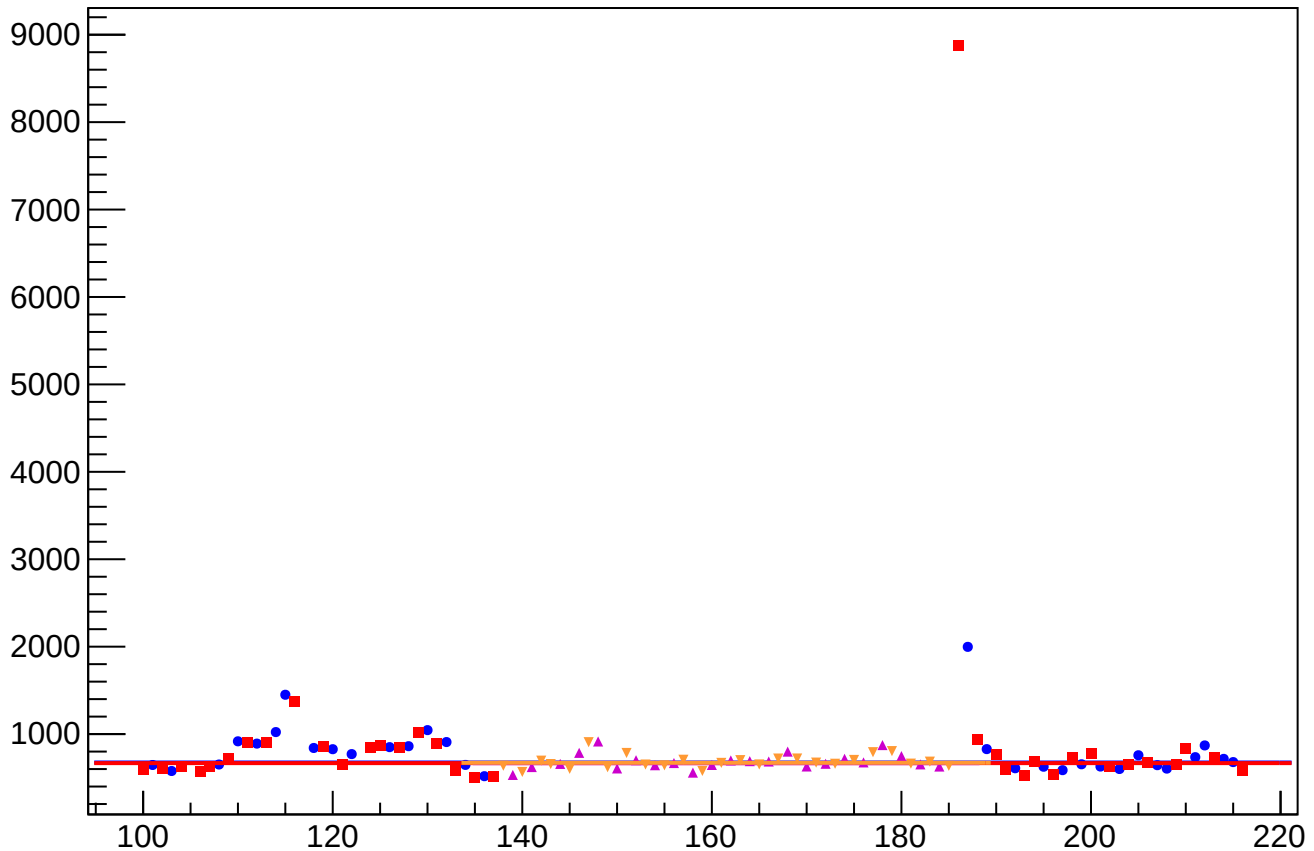
Left In: 50.266 $\pm$ 157.485  $\chi^2/\text{NDF}$ : 33.3/22

+ sign 104.370 $\pm$ 109.968  $\chi^2/\text{NDF}$ : 45.5/55

All: 188.600 $\pm$ 77.977  $\chi^2/\text{NDF}$ : 131.8/113

- sign 273.782 $\pm$ 110.587  $\chi^2/\text{NDF}$ : 85.1/57

# asym\_sam\_15\_dd\_dit\_correction\_rms vs Slug



Right In: 674.896 $\pm$ 0.111  $\chi^2$ /NDF: 1210943.9/30

Left Out: 671.849 $\pm$ 0.109  $\chi^2$ /NDF: 399159.9/24

Right Out: 667.854 $\pm$ 0.110  $\chi^2$ /NDF: 1997182.2/34

Left In: 667.341 $\pm$ 0.111  $\chi^2$ /NDF: 546903.6/22

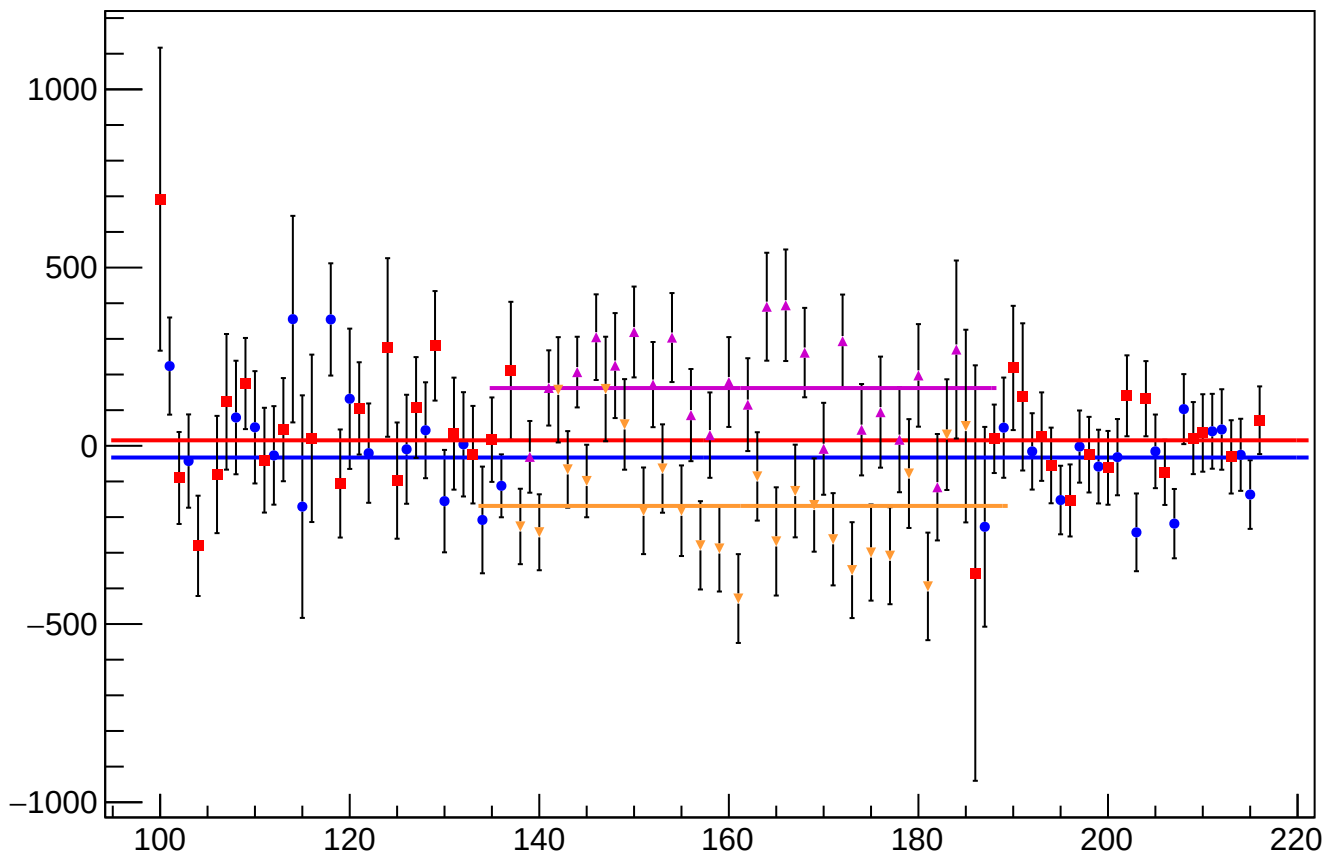
+ sign 673.340 $\pm$ 0.078  $\chi^2$ /NDF: 1610487.6/55

All: 670.487 $\pm$ 0.055  $\chi^2$ /NDF: 4157292.8/113

- sign 667.601 $\pm$ 0.078  $\chi^2$ /NDF: 2544096.6/57



# eigen\_dit\_asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-32.838 \pm 22.090$   $\chi^2/\text{NDF}$ : 30.4/30

Left Out:  $-168.635 \pm 25.819$   $\chi^2/\text{NDF}$ : 32.4/24

Right Out:  $15.394 \pm 21.969$   $\chi^2/\text{NDF}$ : 27.3/34

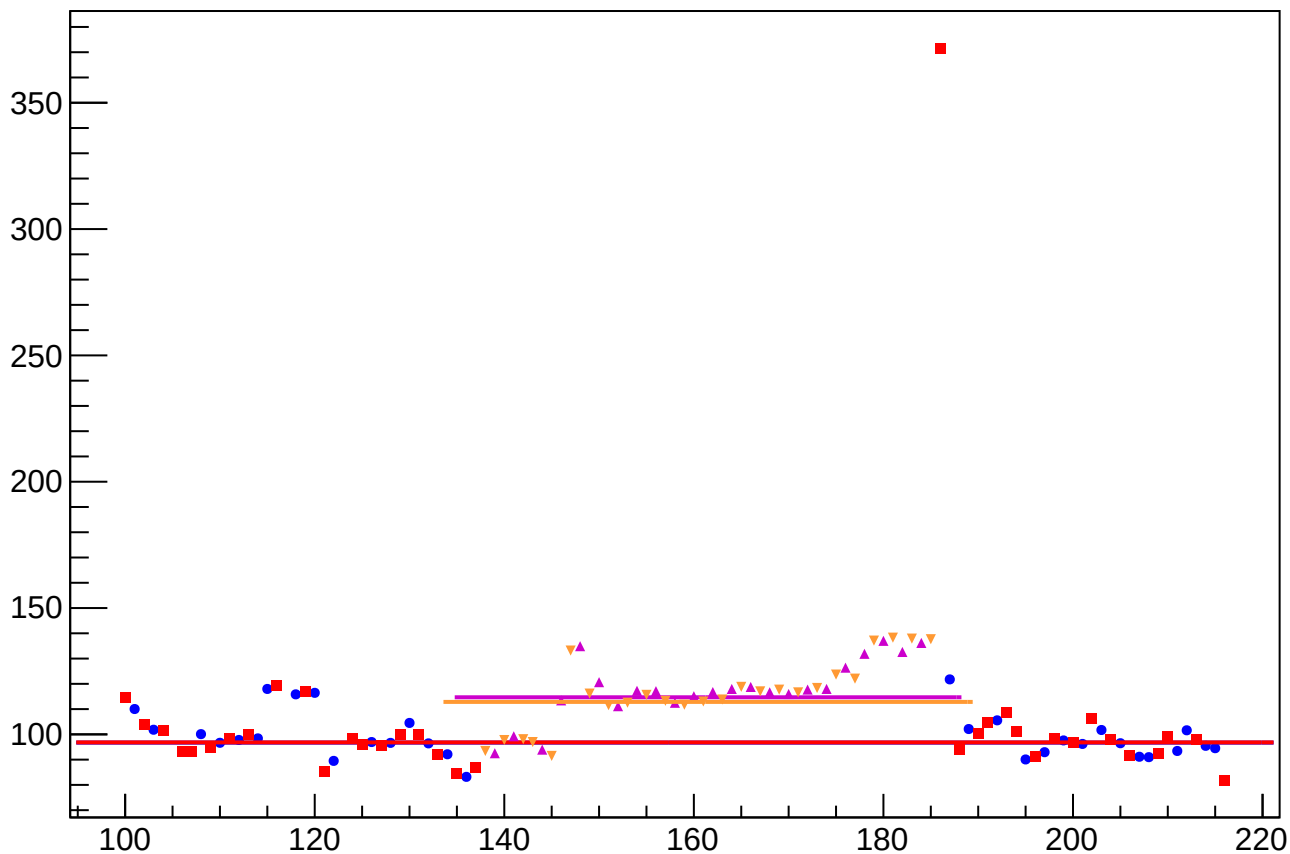
Left In:  $162.028 \pm 26.948$   $\chi^2/\text{NDF}$ : 23.6/22

+ sign  $-90.229 \pm 16.785$   $\chi^2/\text{NDF}$ : 78.7/55

All:  $-9.322 \pm 11.954$   $\chi^2/\text{NDF}$ : 194.5/113

- sign  $73.940 \pm 17.028$   $\chi^2/\text{NDF}$ : 68.6/57

# eigen\_dit\_asym\_sam\_15\_dd\_rms vs Slug



Right In: 96.735+/-0.016  $\chi^2/\text{NDF}$ : 212010.8/30

Left Out: 112.850+/-0.018  $\chi^2/\text{NDF}$ : 512254.2/24

Right Out: 96.824+/-0.016  $\chi^2/\text{NDF}$ : 669008.6/34

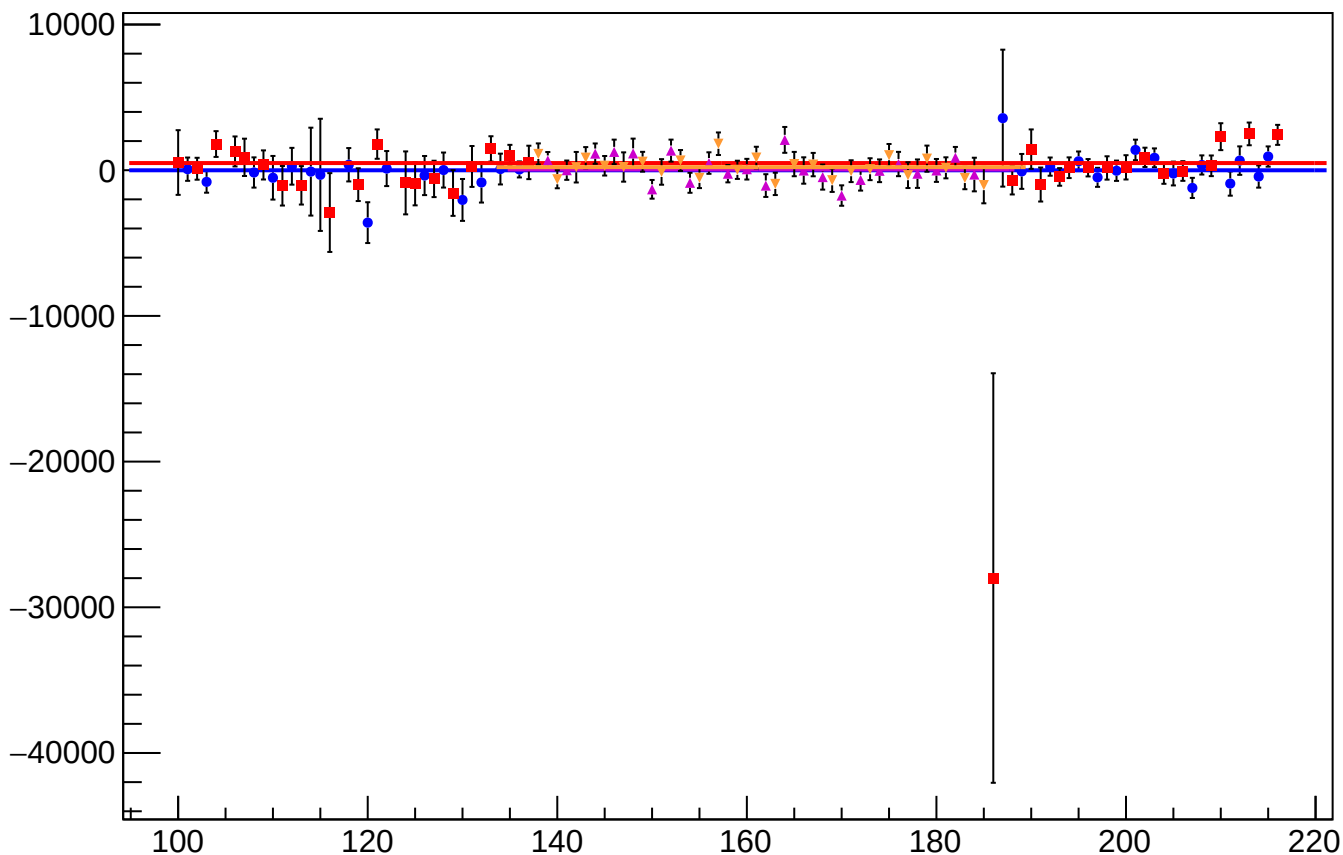
Left In: 114.677+/-0.019  $\chi^2/\text{NDF}$ : 409929.2/22

+ sign 103.546+/-0.012  $\chi^2/\text{NDF}$ : 1174062.3/55

All: 103.746+/-0.008  $\chi^2/\text{NDF}$ : 2780949.1/113

- sign 103.952+/-0.012  $\chi^2/\text{NDF}$ : 1606308.9/57

asym\_sam\_15\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-5.097 \pm 157.160$   $\chi^2/\text{NDF}$ : 25.6/30

Left Out:  $209.377 \pm 153.926$   $\chi^2/\text{NDF}$ : 18.9/24

Right Out:  $491.208 \pm 155.325$   $\chi^2/\text{NDF}$ : 47.9/34

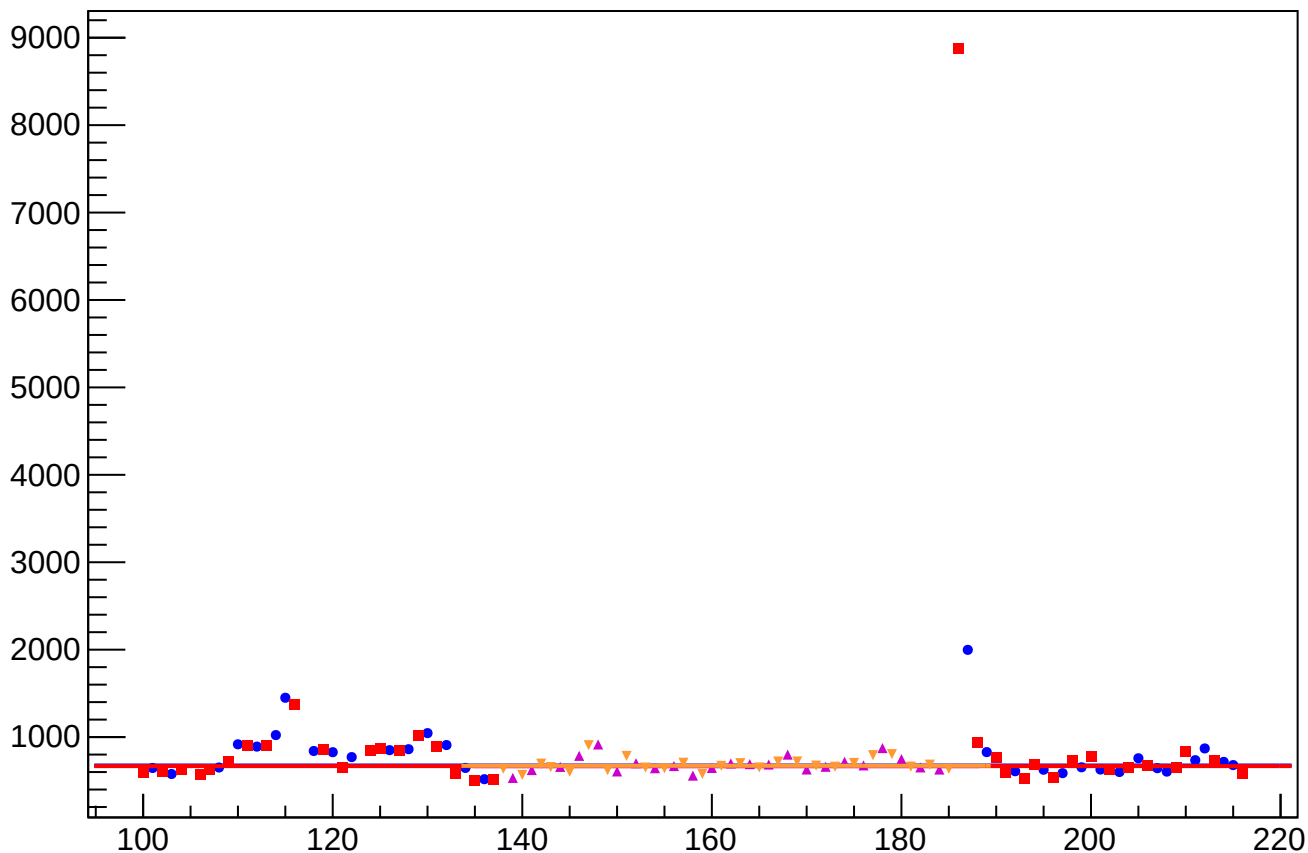
Left In:  $50.267 \pm 157.485$   $\chi^2/\text{NDF}$ : 33.3/22

+ sign  $104.370 \pm 109.968$   $\chi^2/\text{NDF}$ : 45.5/55

All:  $188.600 \pm 77.977$   $\chi^2/\text{NDF}$ : 131.8/113

- sign  $273.783 \pm 110.587$   $\chi^2/\text{NDF}$ : 85.1/57

asym\_sam\_15\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 674.895 $\pm$ 0.111  $\chi^2$ /NDF: 1210944.0/30

Left Out: 671.849 $\pm$ 0.109  $\chi^2$ /NDF:399160.3/24

Right Out: 667.853 $\pm$ 0.110  $\chi^2$ /NDF: 1997188.8/34

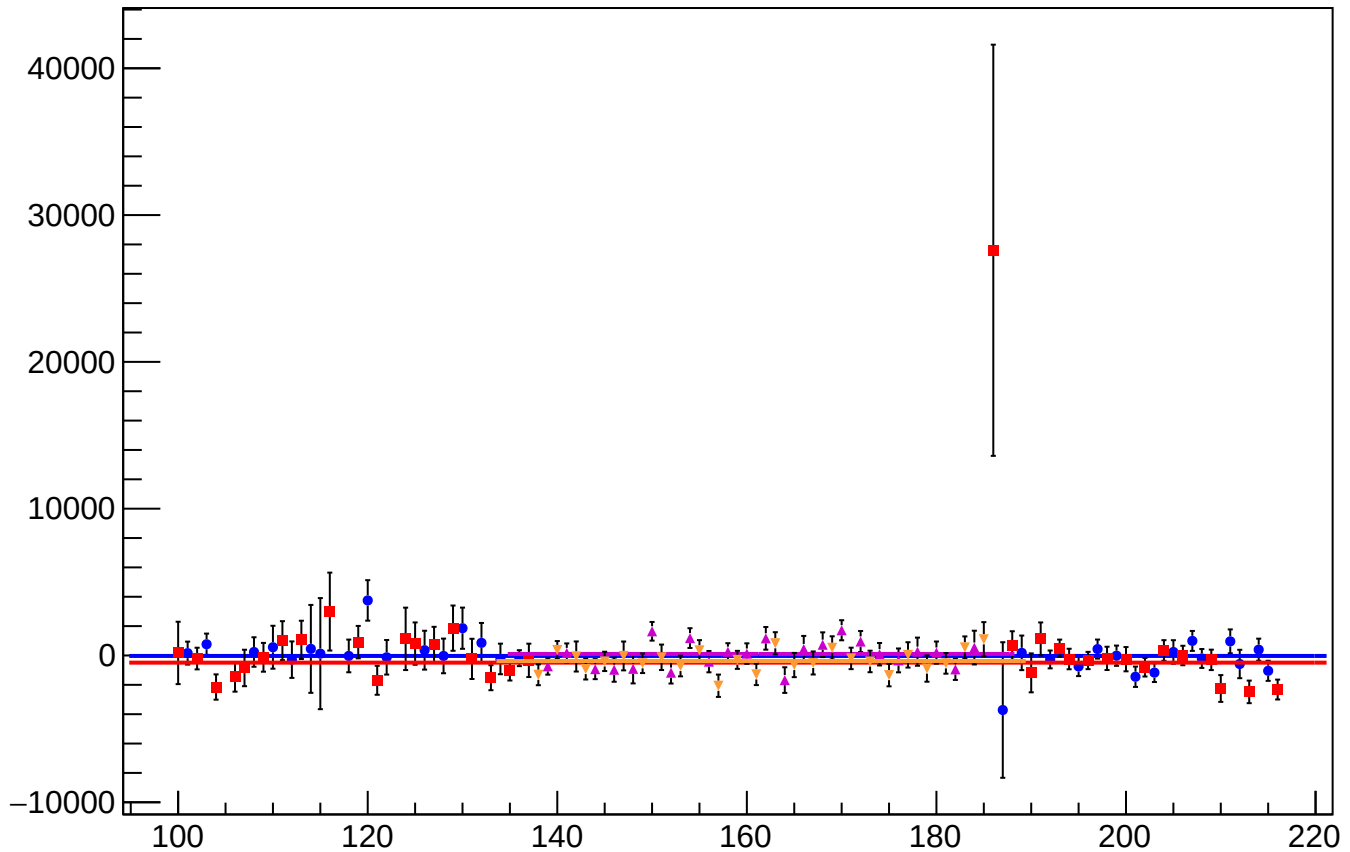
Left In: 667.342 $\pm$ 0.111  $\chi^2$ /NDF:546905.8/22

+ sign 673.340 $\pm$ 0.078  $\chi^2$ /NDF: 1610487.8/55

All: 670.487 $\pm$ 0.055  $\chi^2$ /NDF: 4157301.7/113

- sign 667.601 $\pm$ 0.078  $\chi^2$ /NDF: 2544105.3/57

# asym\_sam\_15\_dd\_mean vs Slug



Right In:  $-31.944 \pm 154.463$   $\chi^2/\text{NDF}$ : 28.2/30

Left Out:  $-377.221 \pm 150.952$   $\chi^2/\text{NDF}$ : 21.4/24

Right Out:  $-487.881 \pm 152.319$   $\chi^2/\text{NDF}$ : 50.5/34

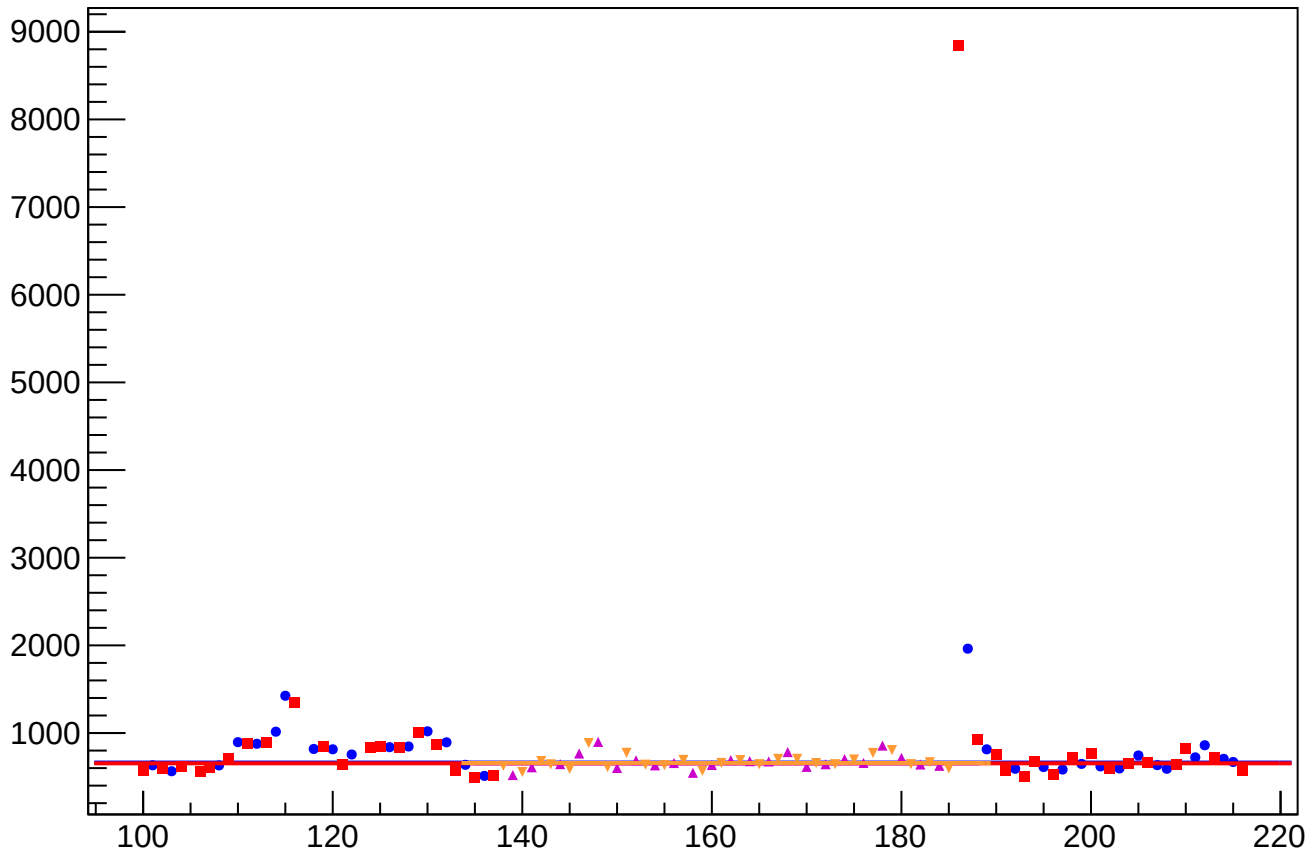
Left In:  $103.321 \pm 154.335$   $\chi^2/\text{NDF}$ : 35.5/22

+ sign  $-208.551 \pm 107.959$   $\chi^2/\text{NDF}$ : 52.1/55

All:  $-202.385 \pm 76.498$   $\chi^2/\text{NDF}$ : 145.6/113

- sign  $-196.168 \pm 108.411$   $\chi^2/\text{NDF}$ : 93.4/57

# asym\_sam\_15\_dd\_rms vs Slug



Right In: 663.249+/-0.109     $\chi^2/\text{NDF}$ : 1204933.2/30

Left Out: 658.672+/-0.107     $\chi^2/\text{NDF}$ : 409684.4/24

Right Out: 654.461+/-0.108     $\chi^2/\text{NDF}$ : 2038925.8/34

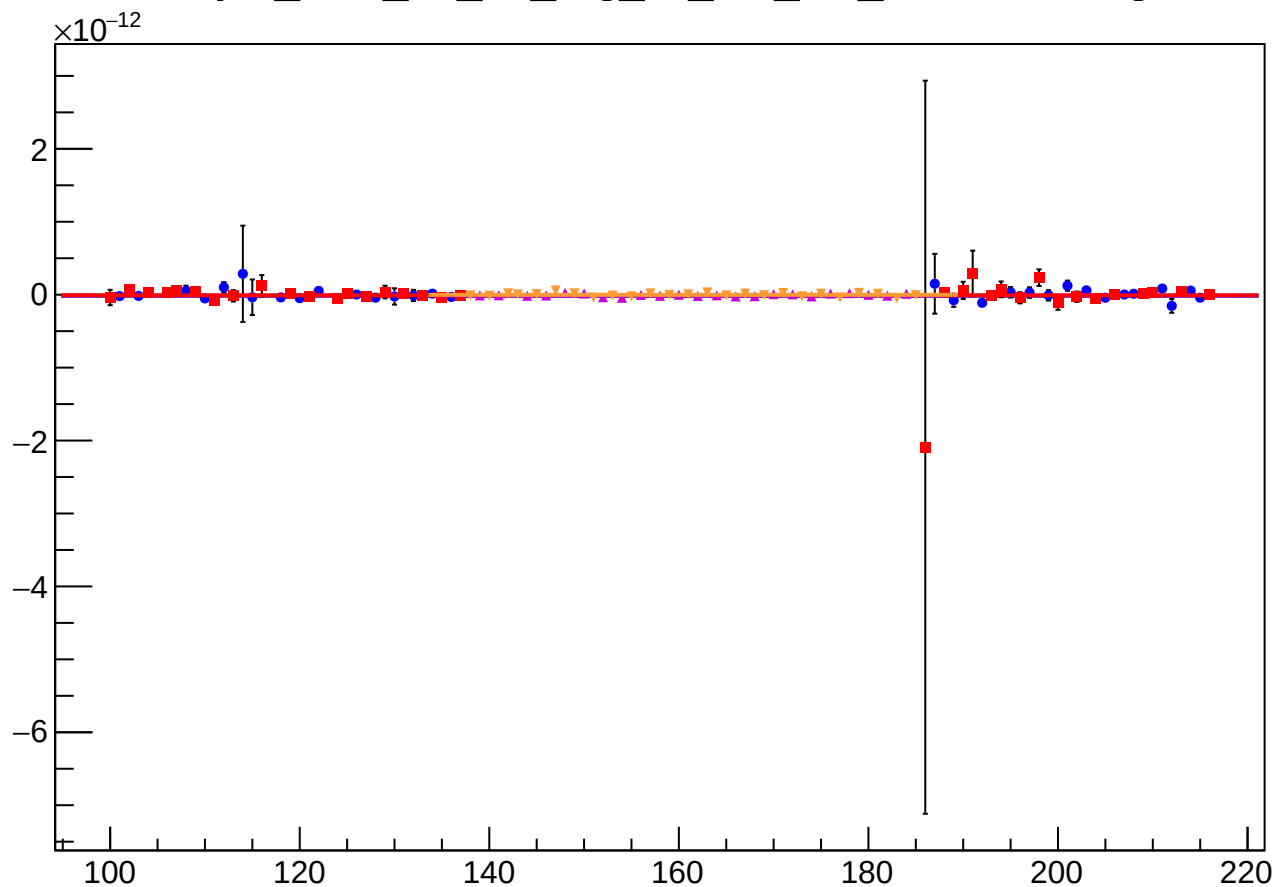
Left In: 653.950+/-0.109     $\chi^2/\text{NDF}$ : 542078.1/22

+ sign 660.908+/-0.076     $\chi^2/\text{NDF}$ : 1615515.7/55

All: 657.572+/-0.054     $\chi^2/\text{NDF}$ : 4200365.1/113

- sign 654.209+/-0.077     $\chi^2/\text{NDF}$ : 2581015.0/57

# asym\_sam\_15\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 29.0/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 31.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 28.2/34

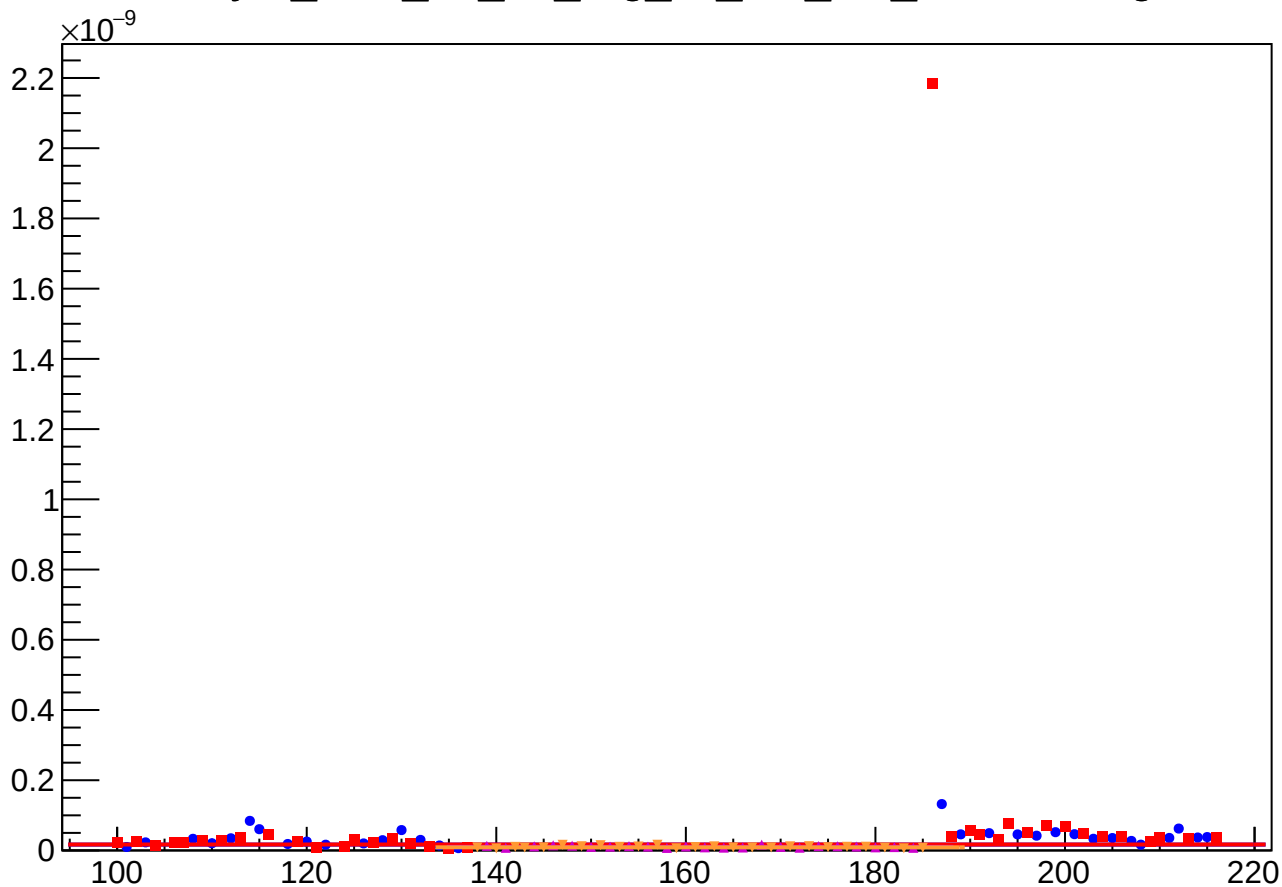
Left In: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 15.6/22

+ sign -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 63.1/55

All: -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 107.6/113

- sign -0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 43.8/57

# asym\_sam\_15\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7122641.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1037287.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7992485.4/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 659247.6/22

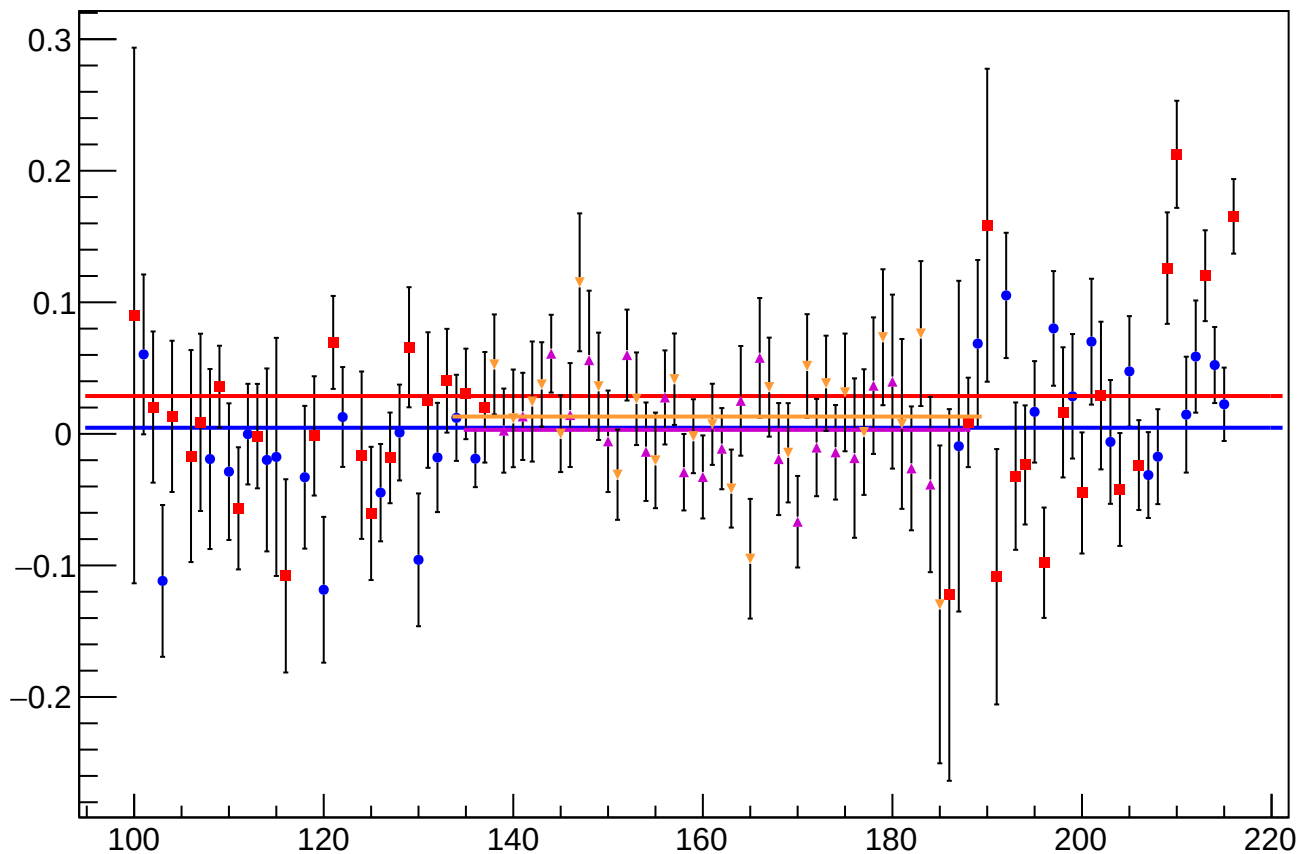
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10164541.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20375615.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10055492.7/57



# asym\_sam\_15\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 36.6/30$

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}: 25.4/24$

Right Out:  $0.029 \pm 0.008$   $\chi^2/\text{NDF}: 96.0/34$

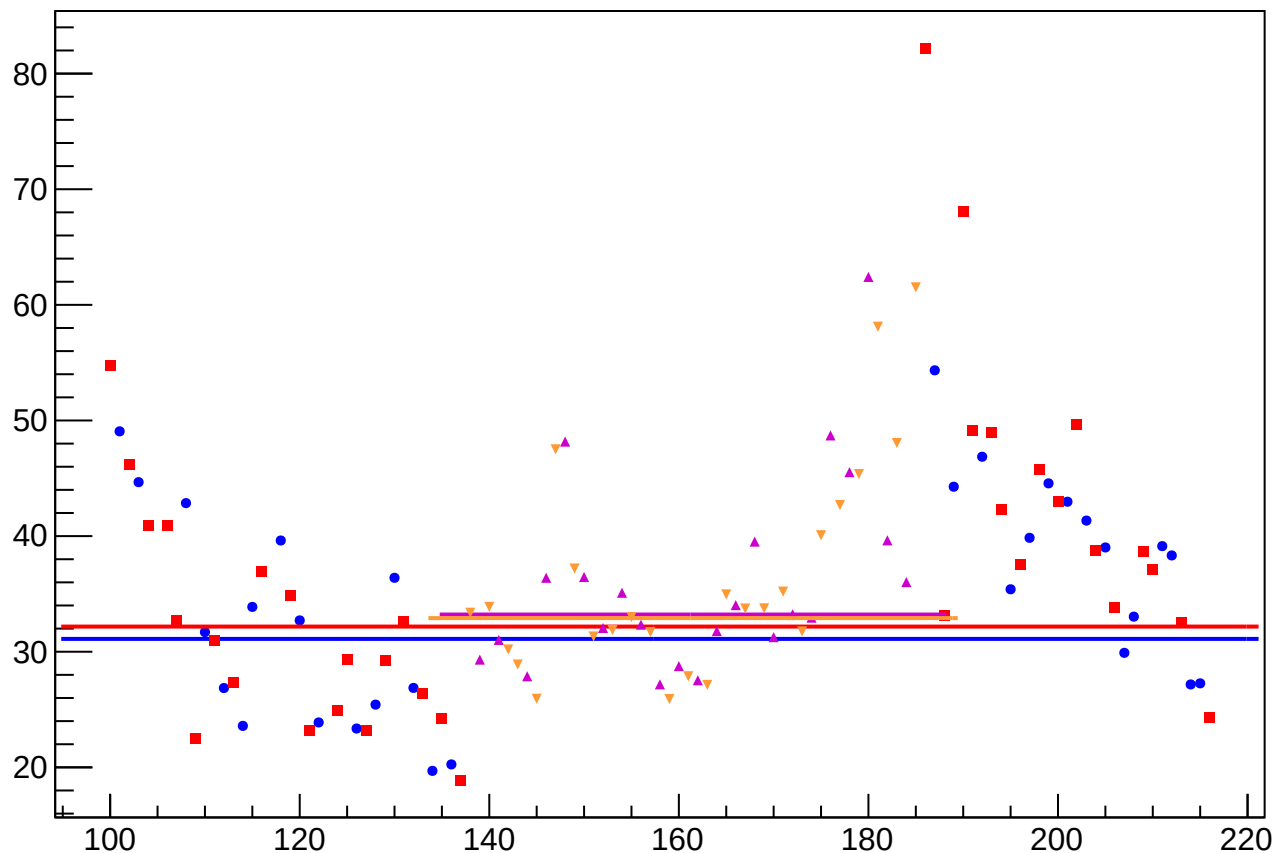
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}: 19.2/22$

+ sign  $0.009 \pm 0.005$   $\chi^2/\text{NDF}: 62.6/55$

All:  $0.013 \pm 0.004$   $\chi^2/\text{NDF}: 184.3/113$

- sign  $0.017 \pm 0.005$   $\chi^2/\text{NDF}: 120.7/57$

# asym\_sam\_15\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $31.110 \pm 0.005$   $\chi^2/\text{NDF}$ : 2579351.2/30

Left Out:  $32.907 \pm 0.005$   $\chi^2/\text{NDF}$ : 1427924.1/24

Right Out:  $32.176 \pm 0.005$   $\chi^2/\text{NDF}$ : 2651394.0/34

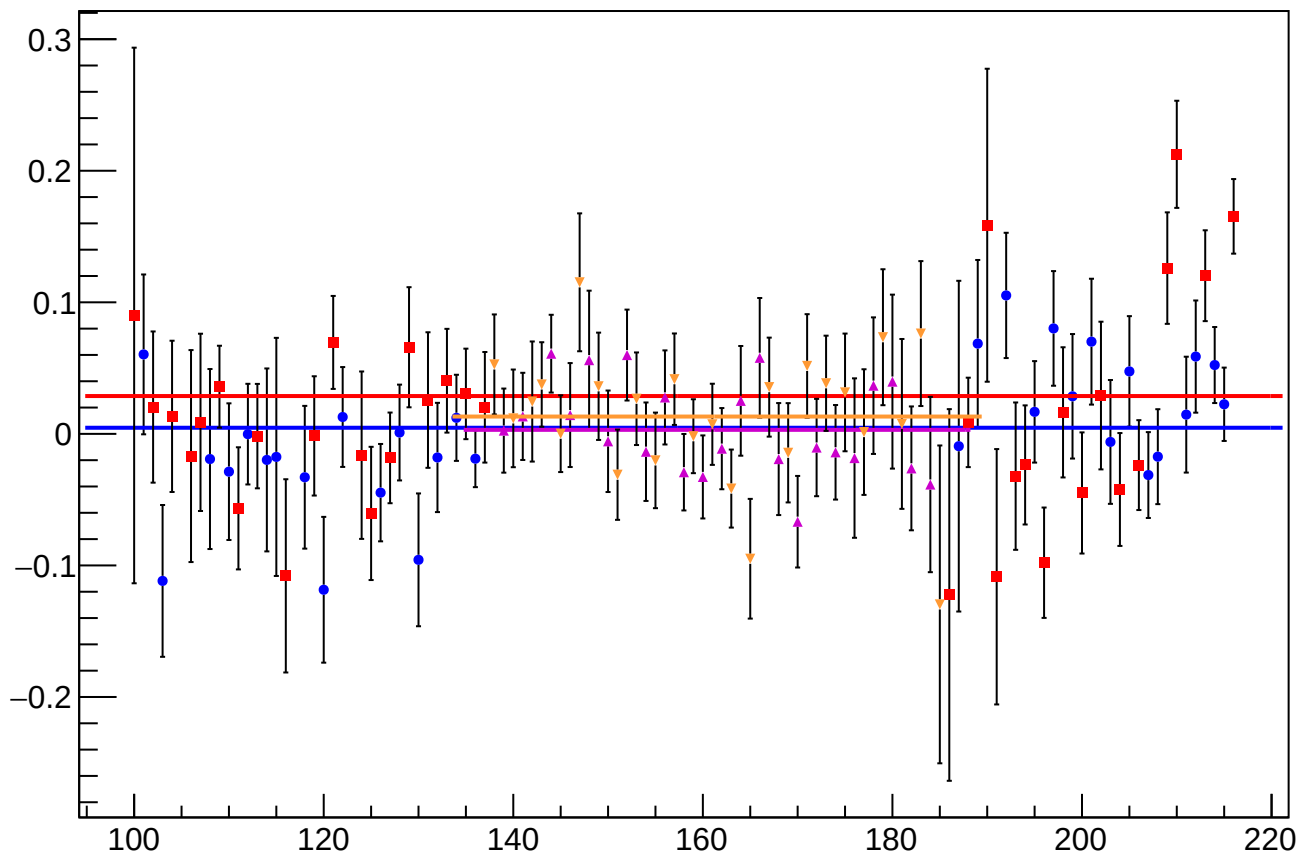
Left In:  $33.217 \pm 0.006$   $\chi^2/\text{NDF}$ : 1221447.0/22

+ sign  $31.978 \pm 0.004$   $\chi^2/\text{NDF}$ : 4063938.0/55

All:  $32.315 \pm 0.003$   $\chi^2/\text{NDF}$ : 7971082.9/113

- sign  $32.672 \pm 0.004$   $\chi^2/\text{NDF}$ : 3890708.9/57

asym\_sam\_15\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 36.6/30$

Left Out:  $0.013 \pm 0.008$   $\chi^2/\text{NDF}: 25.4/24$

Right Out:  $0.029 \pm 0.008$   $\chi^2/\text{NDF}: 96.0/34$

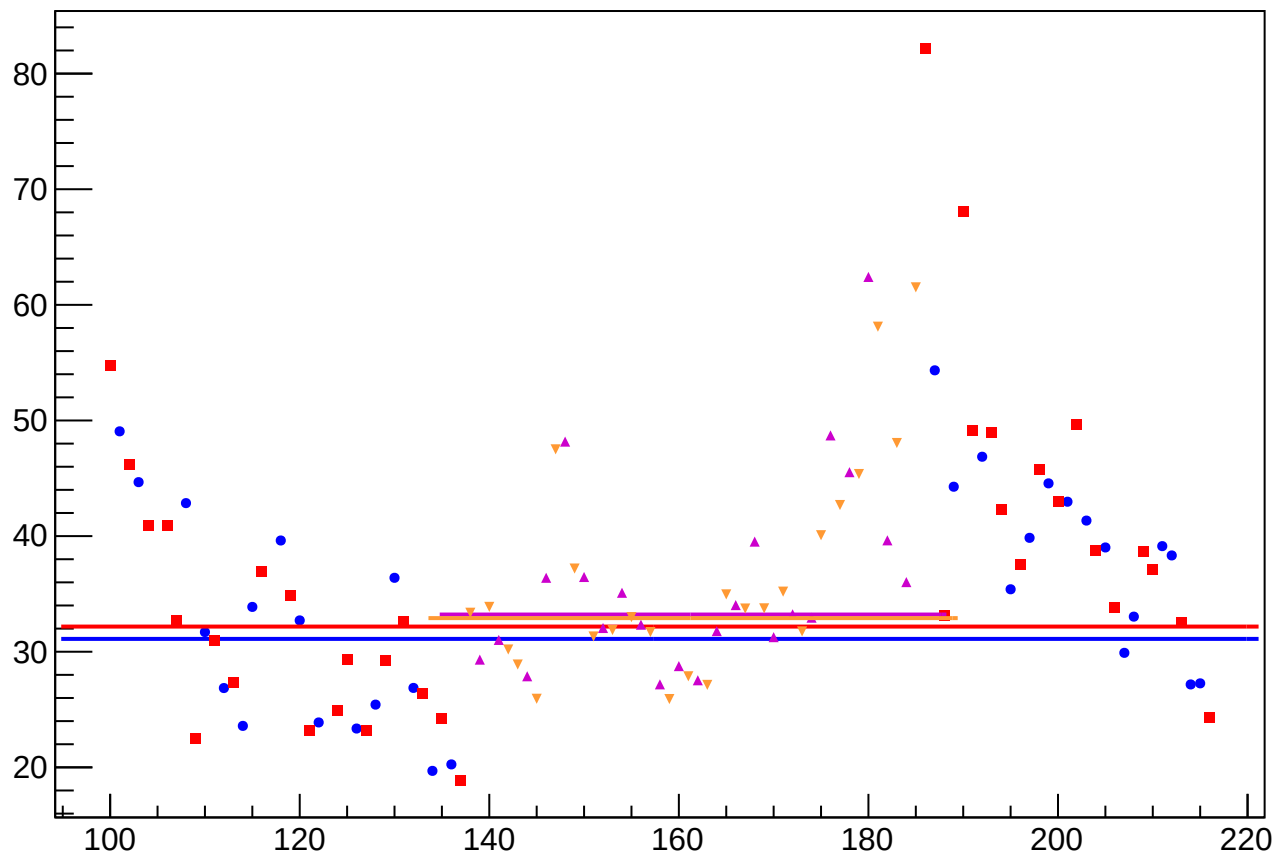
Left In:  $0.003 \pm 0.008$   $\chi^2/\text{NDF}: 19.2/22$

+ sign  $0.009 \pm 0.005$   $\chi^2/\text{NDF}: 62.6/55$

All:  $0.013 \pm 0.004$   $\chi^2/\text{NDF}: 184.3/113$

- sign  $0.017 \pm 0.005$   $\chi^2/\text{NDF}: 120.7/57$

asym\_sam\_15\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.110 $\pm$ 0.005  $\chi^2$ /NDF: 2579351.2/30

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF: 1427924.1/24

Right Out: 32.176 $\pm$ 0.005  $\chi^2$ /NDF: 2651394.0/34

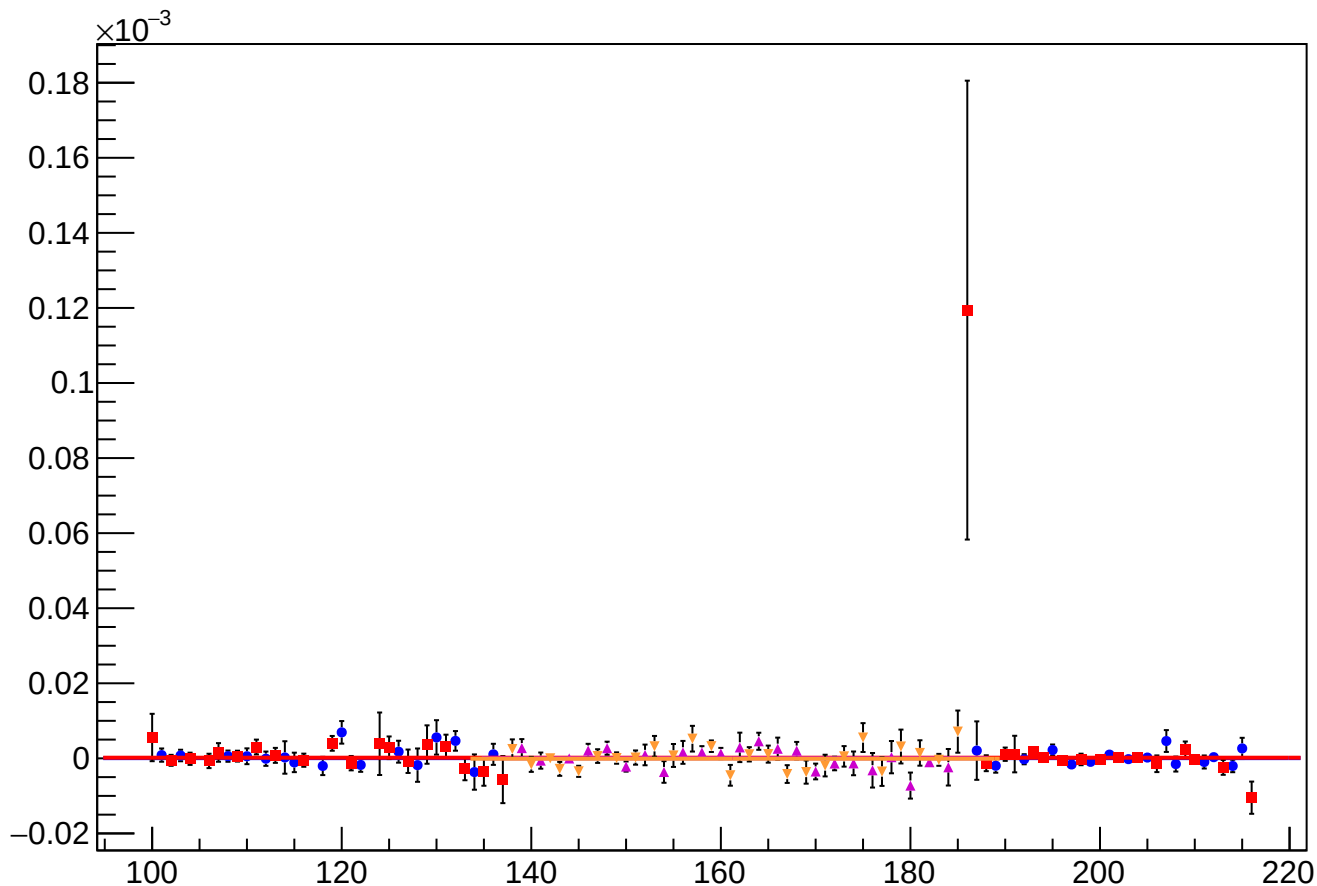
Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF: 1221447.0/22

+ sign 31.978 $\pm$ 0.004  $\chi^2$ /NDF: 4063938.0/55

All: 32.315 $\pm$ 0.003  $\chi^2$ /NDF: 7971082.9/113

- sign 32.672 $\pm$ 0.004  $\chi^2$ /NDF: 3890708.9/57

asym\_sam\_15\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.2/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.1/34

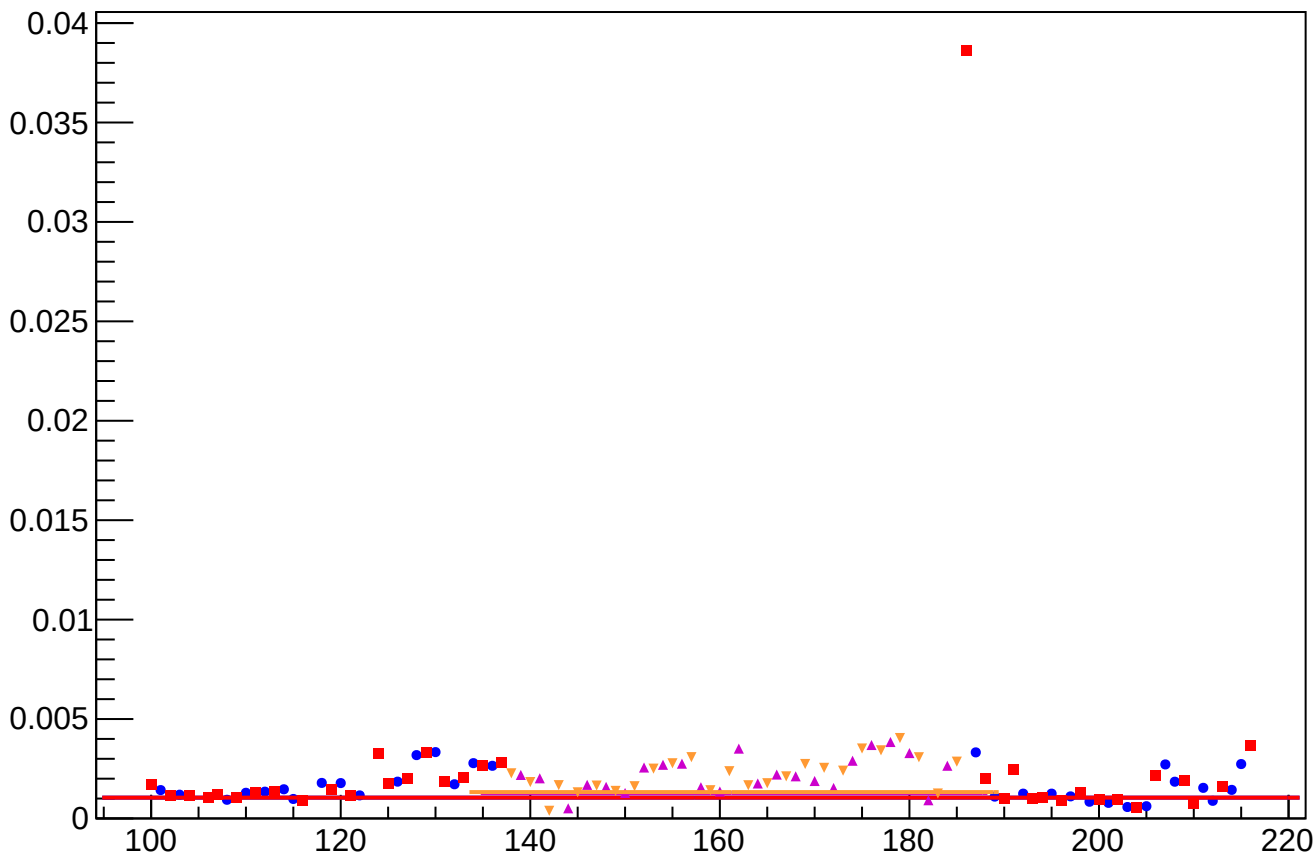
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.4/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 116.7/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.2/57

asym\_sam\_15\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6823467.7/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ :11159347.0/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6945087.5/34

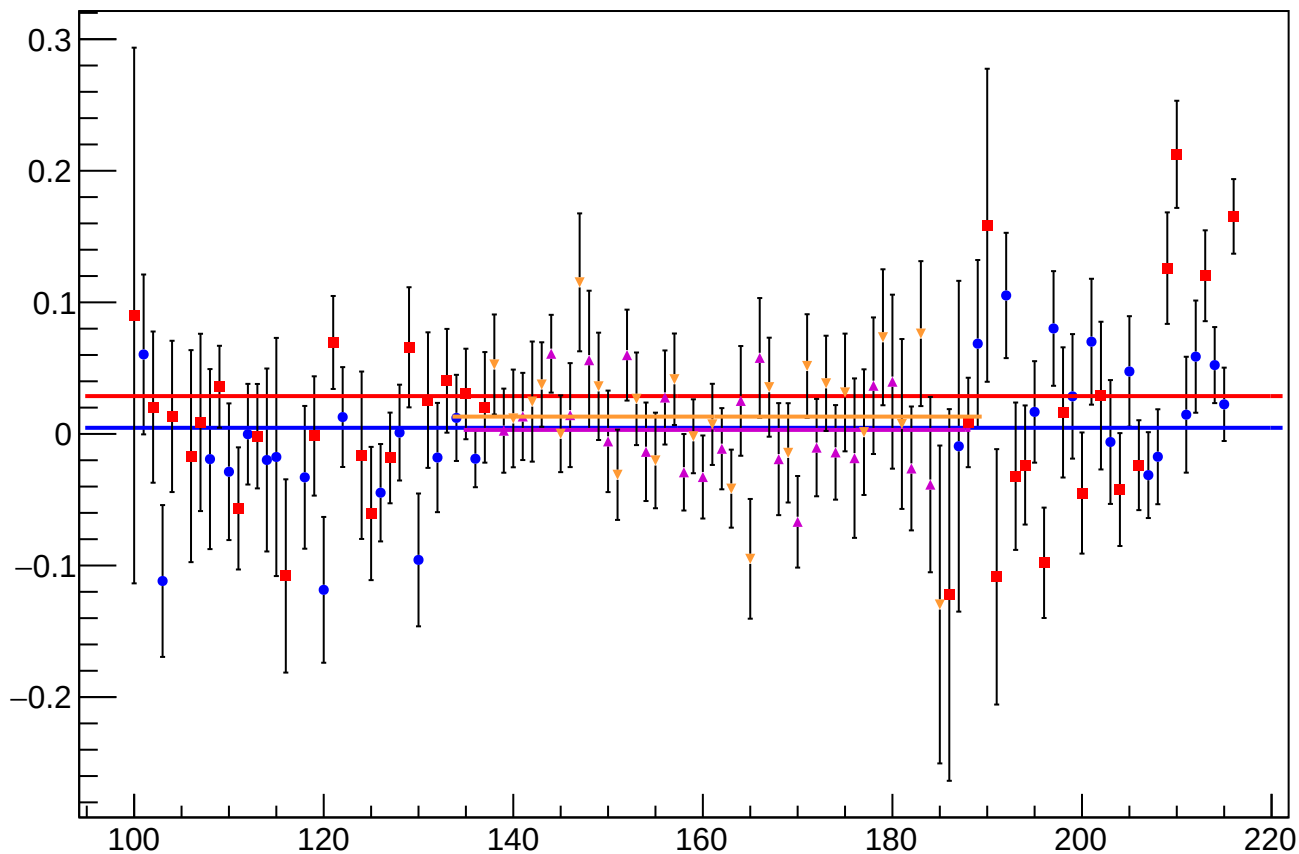
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ :9878422.3/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 18731605.8/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 36085181.4/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 17346939.9/57

asym\_sam\_15\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 36.6/30

Left Out: 0.013 $\pm$ 0.008  $\chi^2$ /NDF: 25.4/24

Right Out: 0.029 $\pm$ 0.008  $\chi^2$ /NDF: 96.0/34

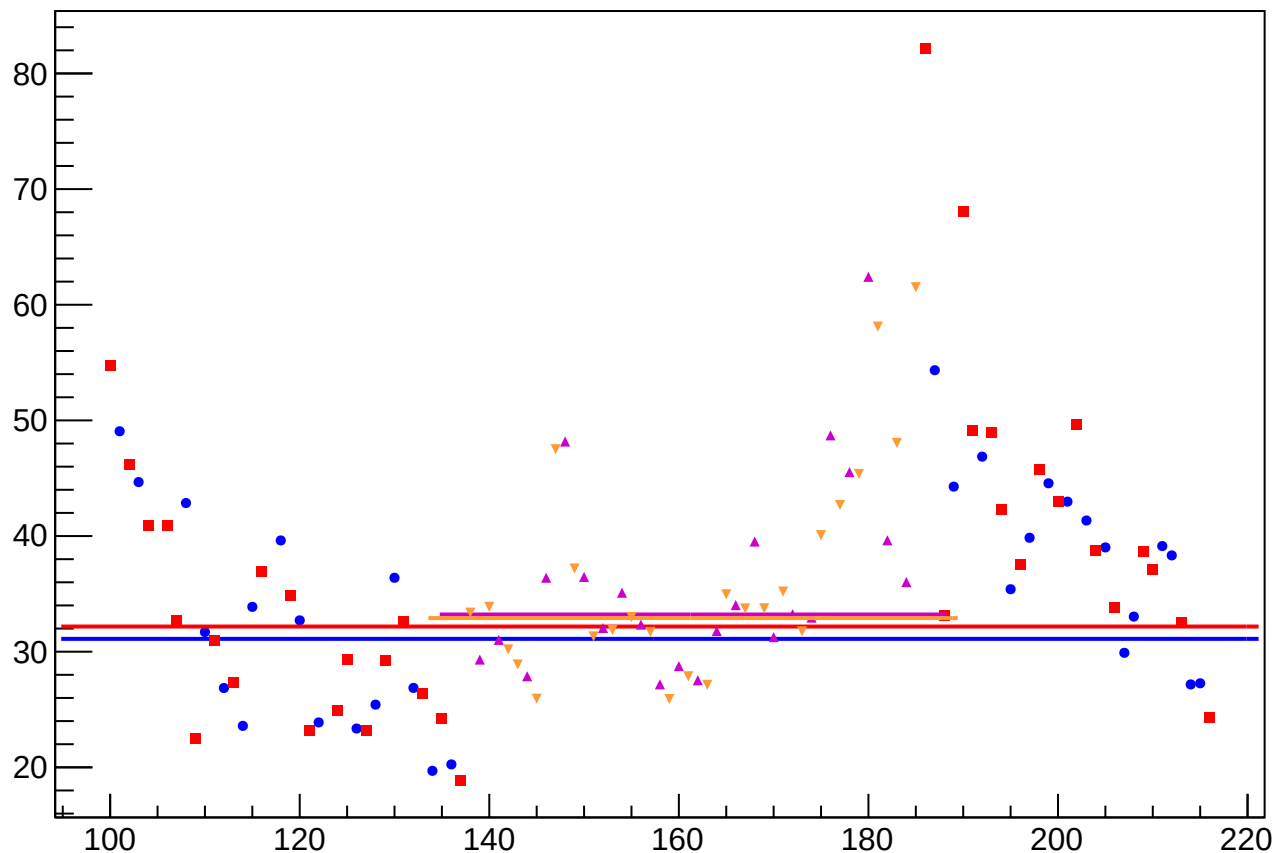
Left In: 0.003 $\pm$ 0.008  $\chi^2$ /NDF: 19.2/22

+ sign 0.009 $\pm$ 0.005  $\chi^2$ /NDF: 62.6/55

All: 0.013 $\pm$ 0.004  $\chi^2$ /NDF: 184.3/113

- sign 0.017 $\pm$ 0.005  $\chi^2$ /NDF: 120.7/57

asym\_sam\_15\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 31.109 $\pm$ 0.005  $\chi^2$ /NDF: 2579528.1/30

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF: 1427993.7/24

Right Out: 32.175 $\pm$ 0.005  $\chi^2$ /NDF: 2651789.0/34

Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF: 1221516.5/22

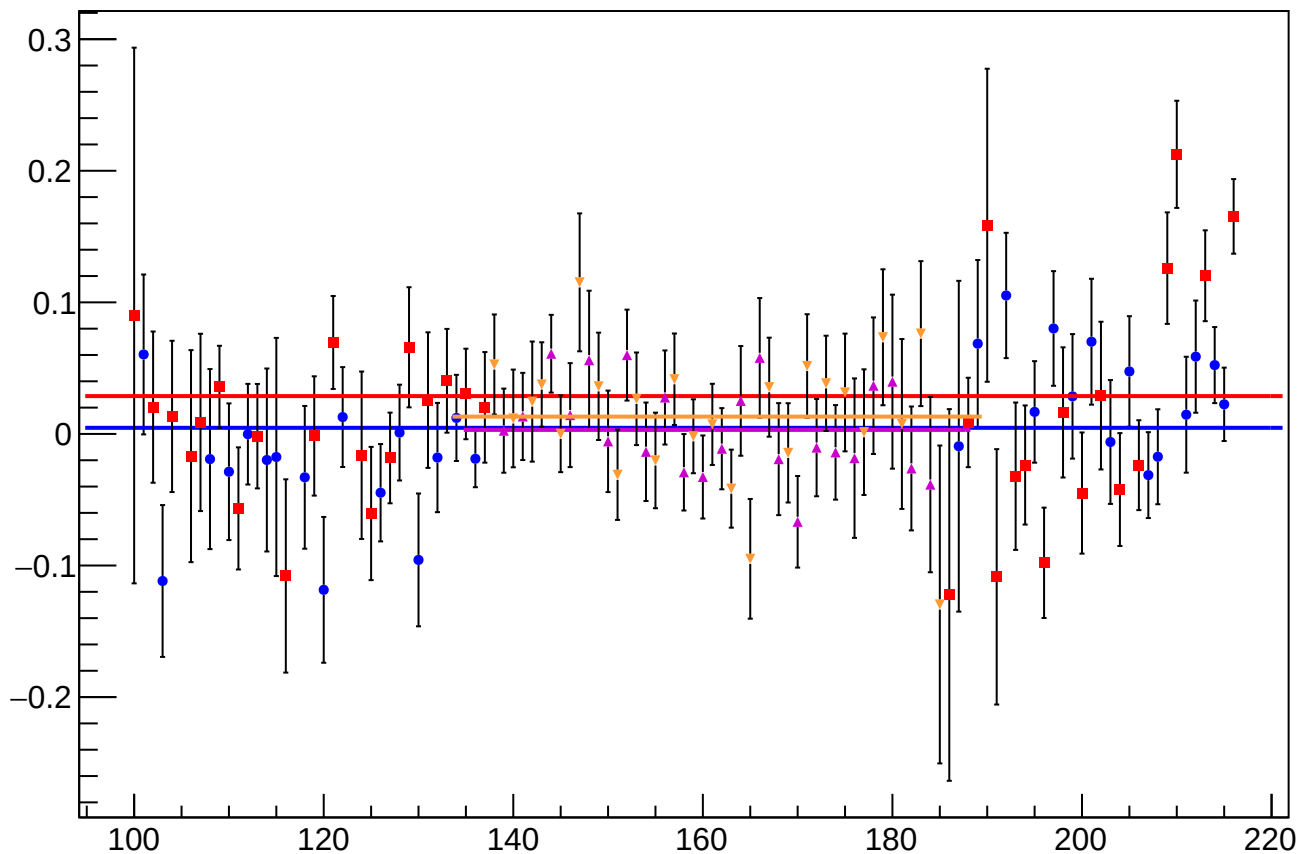
+ sign 31.977 $\pm$ 0.004  $\chi^2$ /NDF: 4064222.6/55

All: 32.314 $\pm$ 0.003  $\chi^2$ /NDF: 7971863.5/113

- sign 32.672 $\pm$ 0.004  $\chi^2$ /NDF: 3891215.5/57



asym\_sam\_15\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 36.6/30

Left Out: 0.013 $\pm$ 0.008  $\chi^2$ /NDF:25.4/24

Right Out: 0.029 $\pm$ 0.008  $\chi^2$ /NDF: 96.0/34

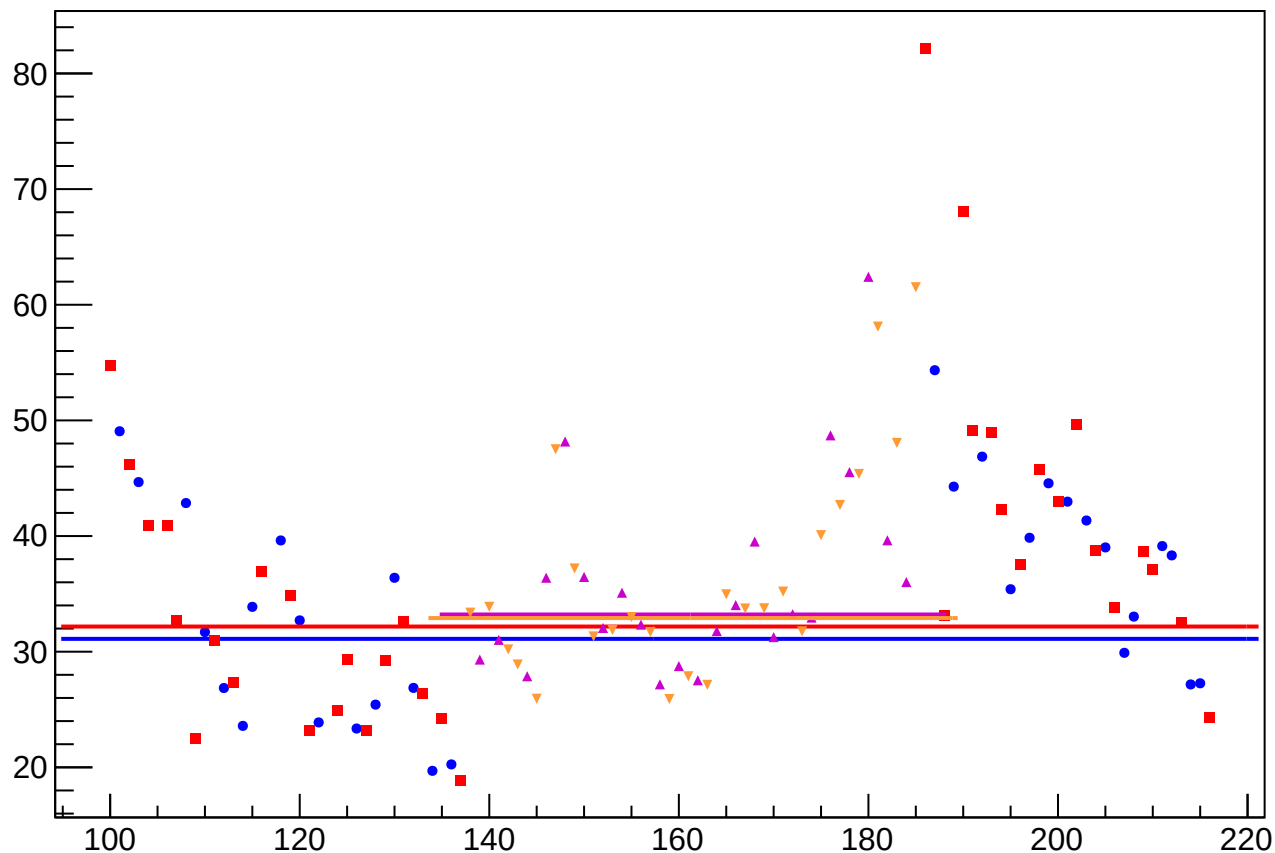
Left In: 0.003 $\pm$ 0.008  $\chi^2$ /NDF:19.2/22

+ sign 0.009 $\pm$ 0.005  $\chi^2$ /NDF: 62.6/55

All: 0.013 $\pm$ 0.004  $\chi^2$ /NDF: 184.3/113

- sign 0.017 $\pm$ 0.005  $\chi^2$ /NDF: 120.7/57

asym\_sam\_15\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 31.109 $\pm$ 0.005  $\chi^2$ /NDF: 2579528.1/30

Left Out: 32.907 $\pm$ 0.005  $\chi^2$ /NDF: 1427993.7/24

Right Out: 32.175 $\pm$ 0.005  $\chi^2$ /NDF: 2651789.0/34

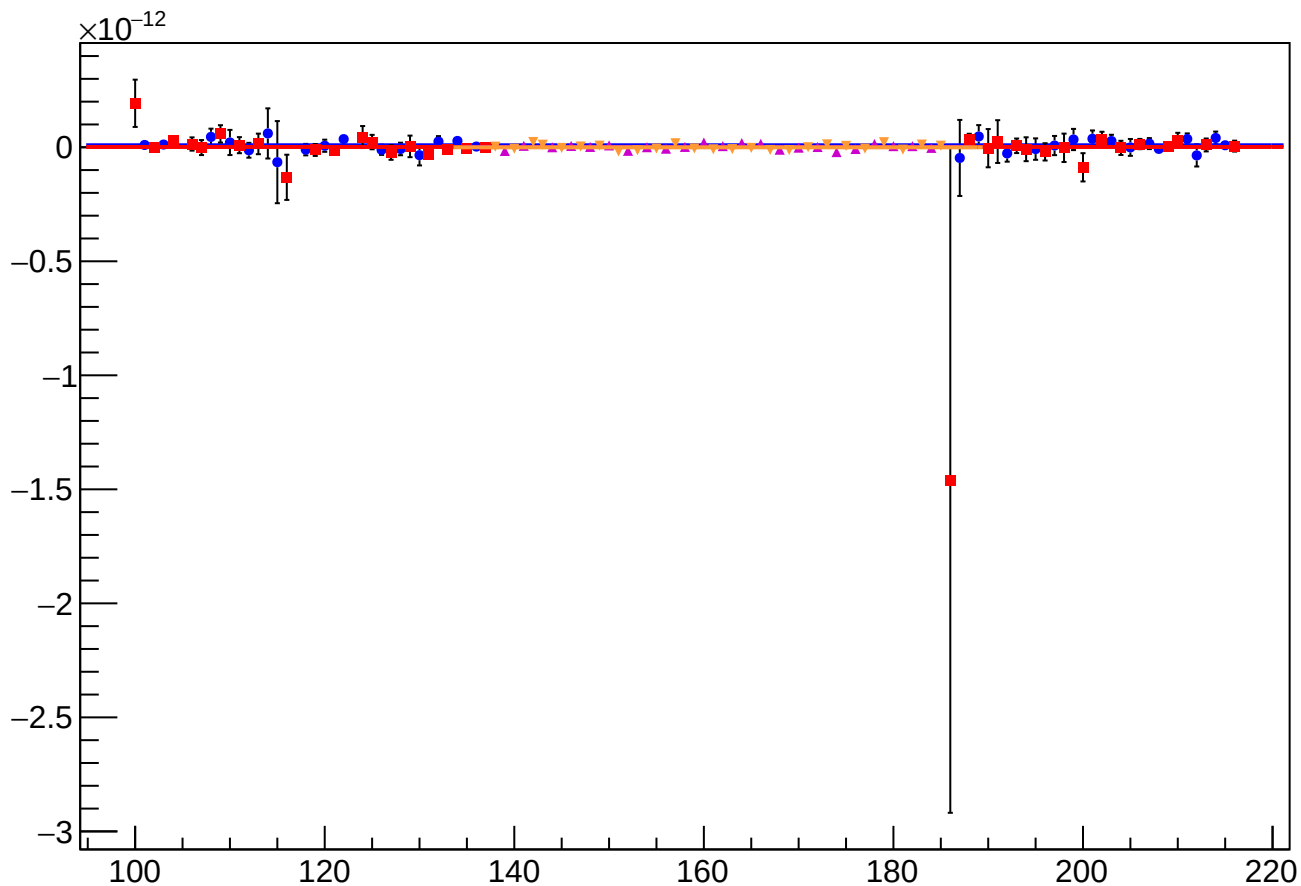
Left In: 33.217 $\pm$ 0.006  $\chi^2$ /NDF: 1221516.5/22

+ sign 31.977 $\pm$ 0.004  $\chi^2$ /NDF: 4064222.6/55

All: 32.314 $\pm$ 0.003  $\chi^2$ /NDF: 7971863.5/113

- sign 32.672 $\pm$ 0.004  $\chi^2$ /NDF: 3891215.5/57

asym\_sam\_15\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.6/34

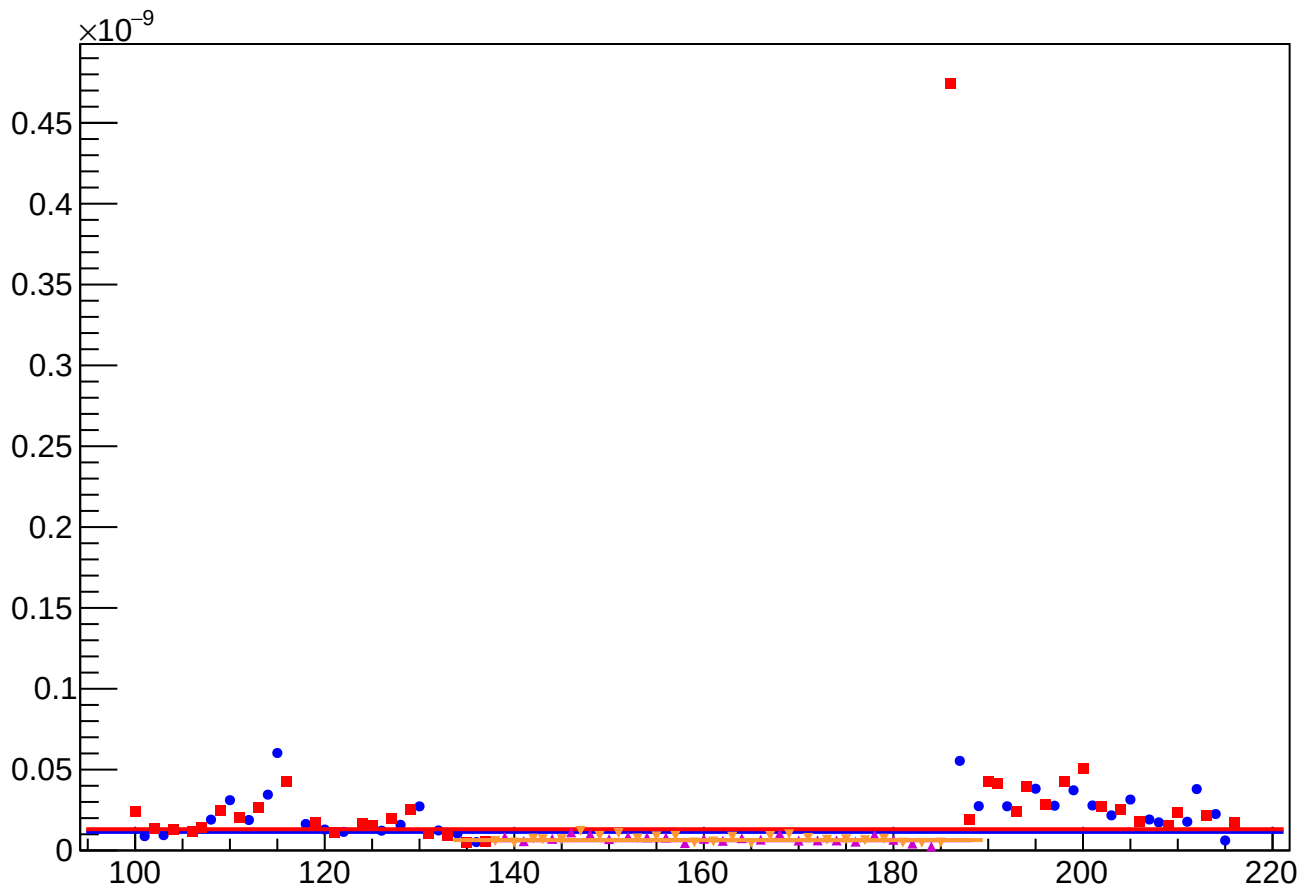
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 99.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.9/57

asym\_sam\_15\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8311642.1/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1879116.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7688124.9/34

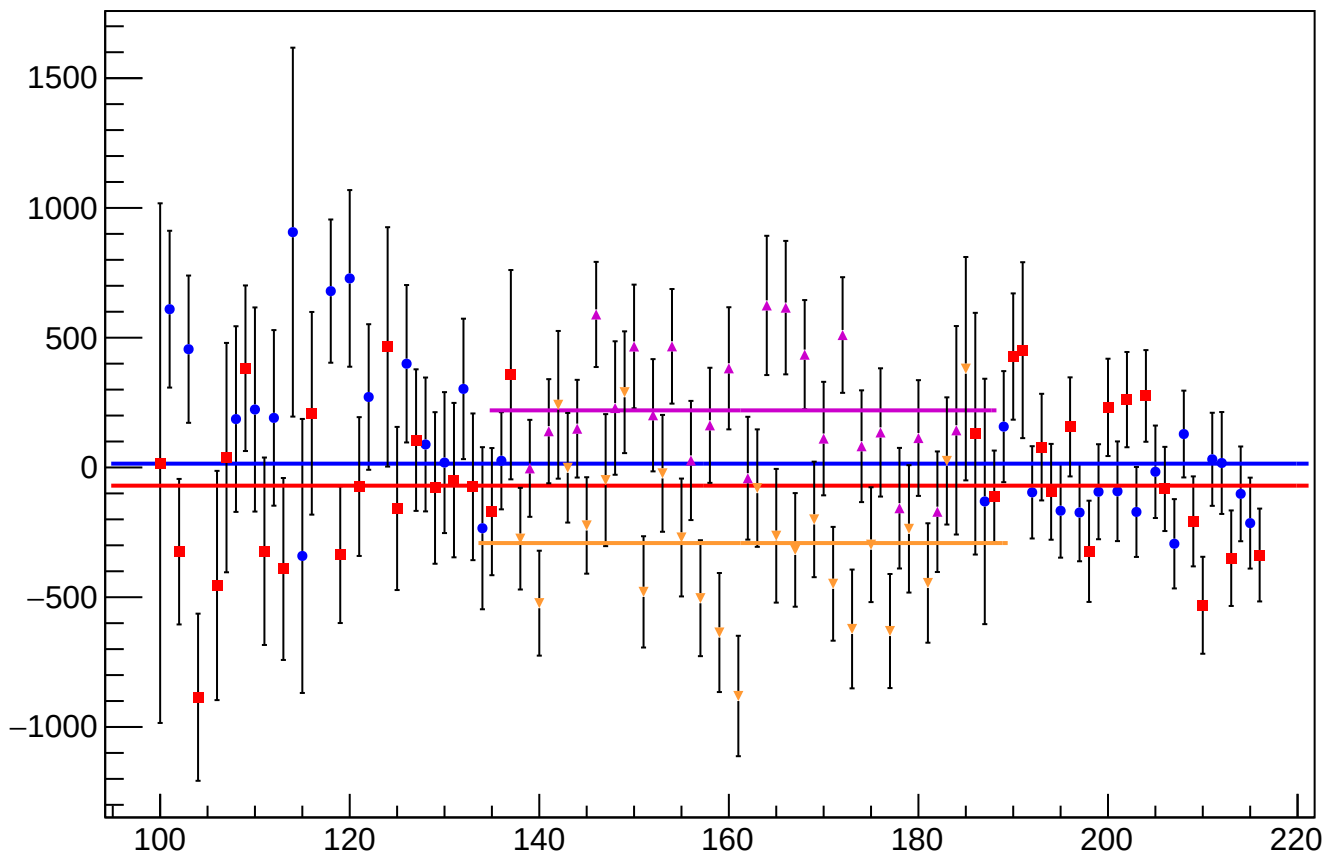
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2127144.3/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13006858.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27162350.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14152034.0/57

# reg\_asym\_sam\_26\_dd\_mean vs Slug



Right In: 14.649 $\pm$ 40.617  $\chi^2$ /NDF: 34.2/30

Left Out: -291.313 $\pm$ 45.614  $\chi^2$ /NDF:36.4/24

Right Out: -70.130 $\pm$ 40.807  $\chi^2$ /NDF: 47.4/34

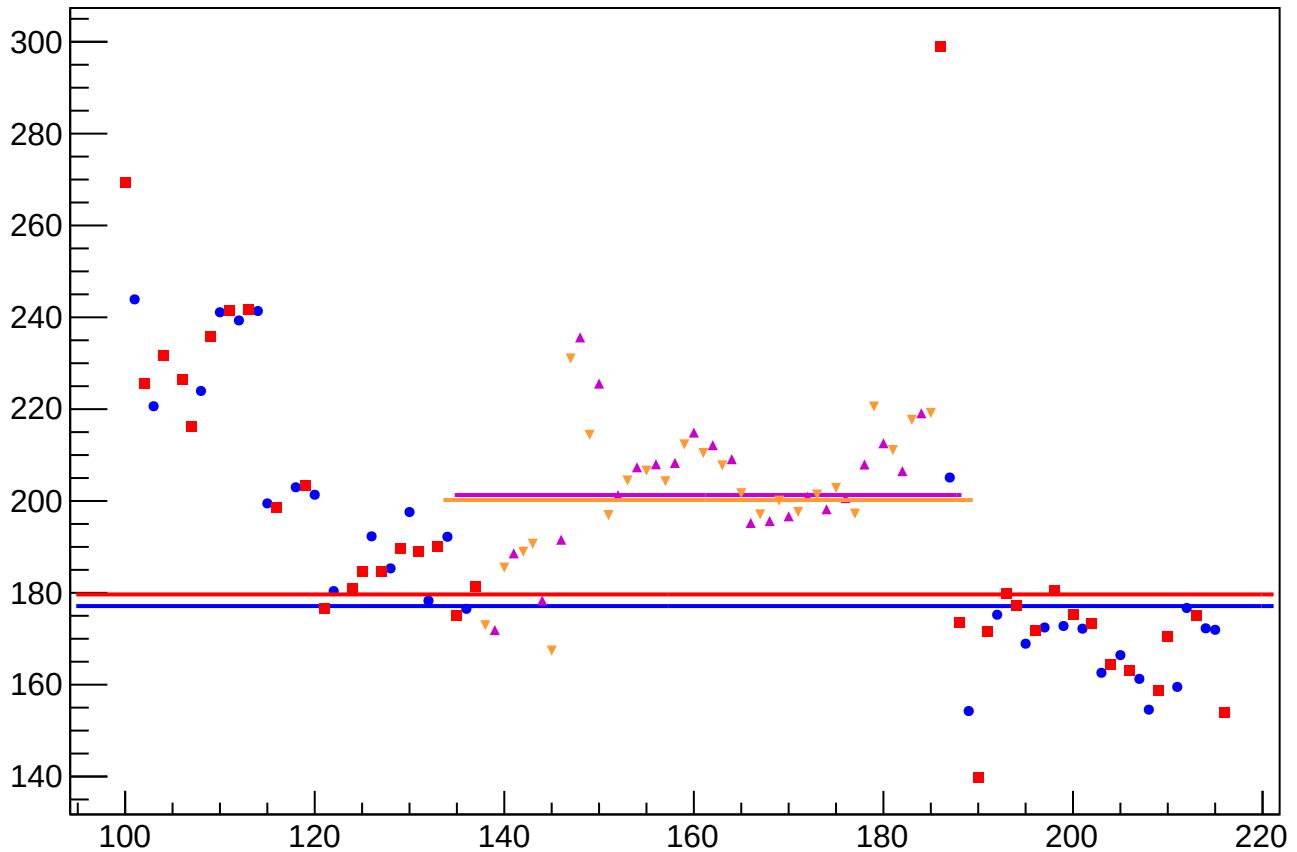
Left In: 219.974 $\pm$ 47.146  $\chi^2$ /NDF:23.7/22

+ sign -120.662 $\pm$ 30.334  $\chi^2$ /NDF: 95.7/55

All: -34.756 $\pm$ 21.631  $\chi^2$ /NDF: 204.8/113

- sign 54.124 $\pm$ 30.855  $\chi^2$ /NDF: 92.8/57

# reg\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 177.116 $\pm$ 0.029  $\chi^2$ /NDF: 505570.9/30

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF:204393.9/24

Right Out: 179.651 $\pm$ 0.029  $\chi^2$ /NDF: 680258.8/34

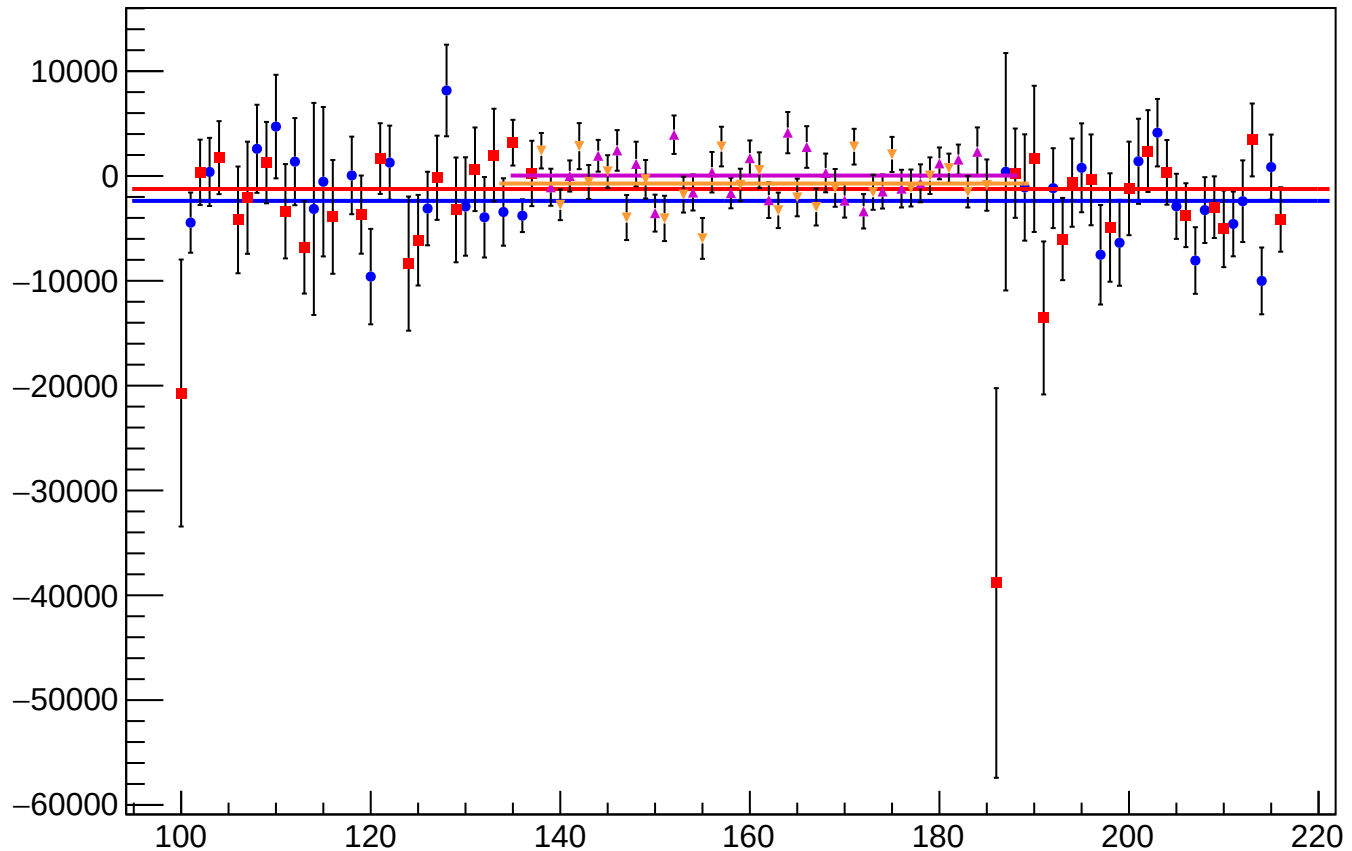
Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF:181646.8/22

+ sign 187.329 $\pm$ 0.021  $\chi^2$ /NDF: 995908.8/55

All: 188.112 $\pm$ 0.015  $\chi^2$ /NDF: 2101568.9/113

- sign 188.922 $\pm$ 0.022  $\chi^2$ /NDF: 1102949.4/57

# asym\_sam\_26\_dd\_reg\_correction\_mean vs Slug



Right In:  $-2376.402 \pm 636.958$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-720.700 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-1243.008 \pm 666.590$   $\chi^2/\text{NDF}$ : 30.4/34

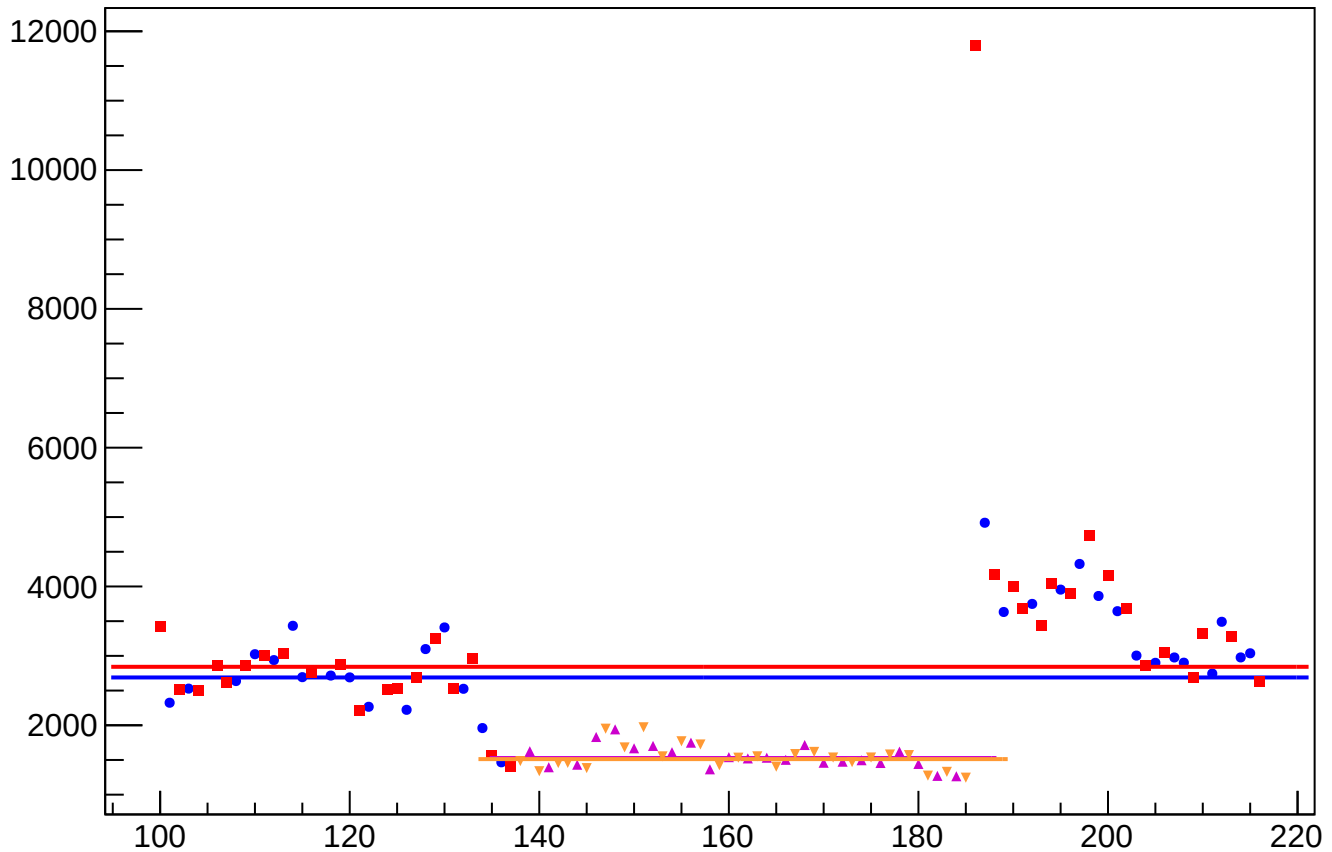
Left In:  $39.277 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-1098.574 \pm 304.294$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $-690.330 \pm 219.275$   $\chi^2/\text{NDF}$ : 150.0/113

- sign  $-249.356 \pm 316.257$   $\chi^2/\text{NDF}$ : 67.7/57

# asym\_sam\_26\_dd\_reg\_correction\_rms vs Slug



Right In:  $2688.871 \pm 0.450$   $\chi^2/\text{NDF}: 2695703.8/30$

Left Out:  $1512.365 \pm 0.245$   $\chi^2/\text{NDF}: 442558.0/24$

Right Out:  $2842.330 \pm 0.471$   $\chi^2/\text{NDF}: 2983649.2/34$

Left In:  $1527.964 \pm 0.254$   $\chi^2/\text{NDF}: 373844.4/22$

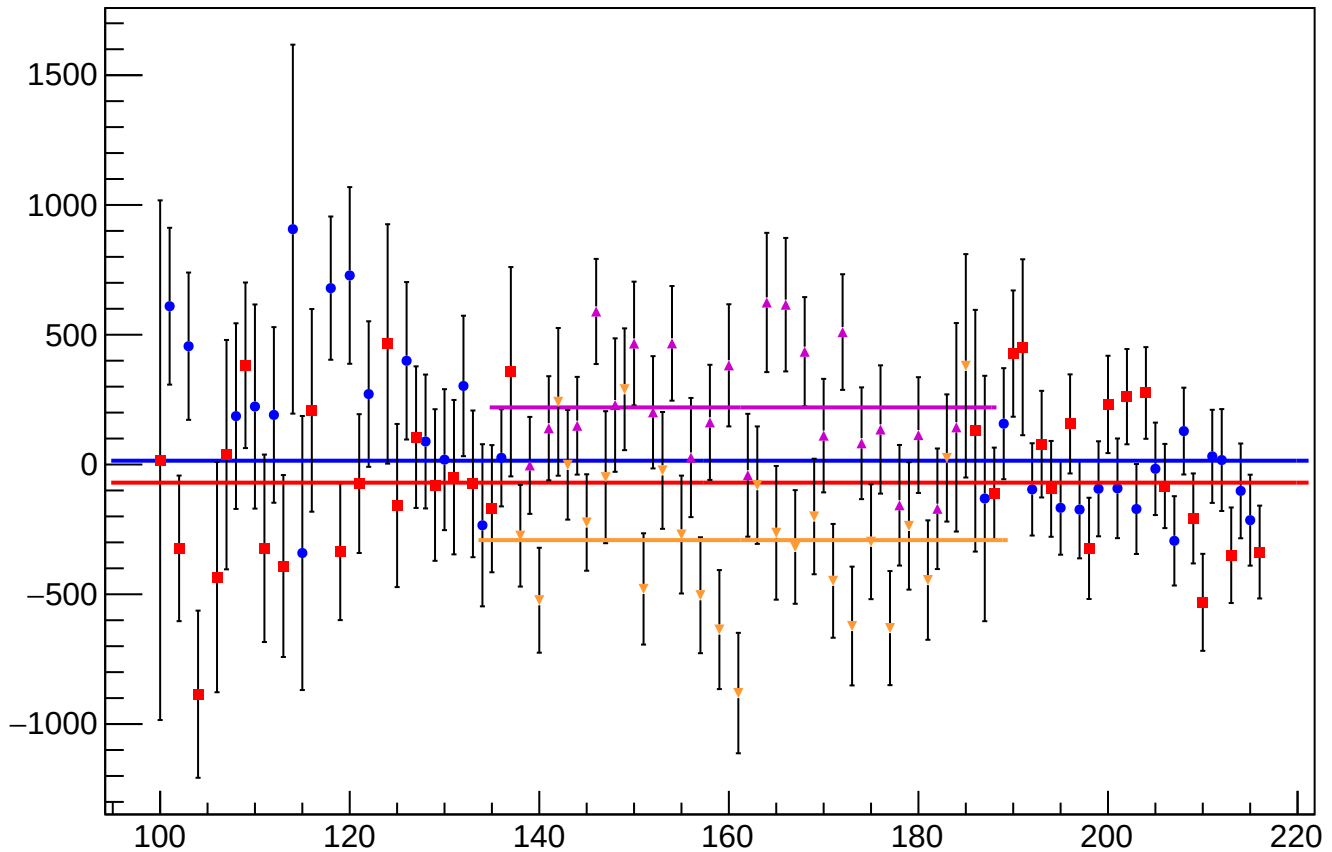
+ sign  $1780.873 \pm 0.215$   $\chi^2/\text{NDF}: 8404346.7/55$

All:  $1801.519 \pm 0.155$   $\chi^2/\text{NDF}: 17806518.3/100$

- sign  $1823.819 \pm 0.224$   $\chi^2/\text{NDF}: 9383021.2/57$



# cor\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $14.641 \pm 40.617$   $\chi^2/\text{NDF}: 34.2/30$

Left Out:  $-291.316 \pm 45.614$   $\chi^2/\text{NDF}: 36.4/24$

Right Out:  $-69.881 \pm 40.809$   $\chi^2/\text{NDF}: 47.3/34$

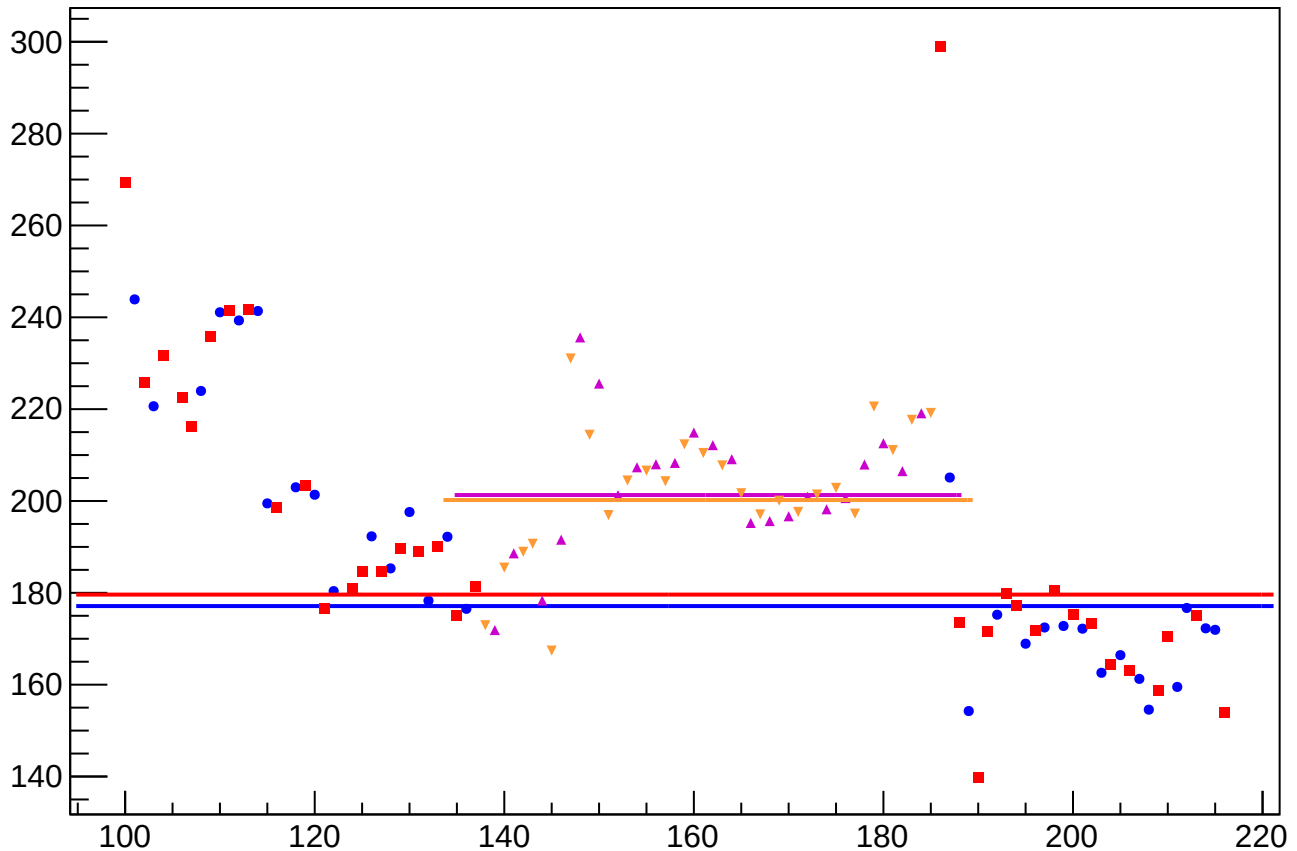
Left In:  $219.983 \pm 47.146$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $-120.668 \pm 30.334$   $\chi^2/\text{NDF}: 95.7/55$

All:  $-34.687 \pm 21.631$   $\chi^2/\text{NDF}: 204.7/113$

- sign  $54.275 \pm 30.855$   $\chi^2/\text{NDF}: 92.7/57$

# cor\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 177.116 $\pm$ 0.029  $\chi^2$ /NDF: 505571.5/30

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF:204394.0/24

Right Out: 179.615 $\pm$ 0.029  $\chi^2$ /NDF: 676607.6/34

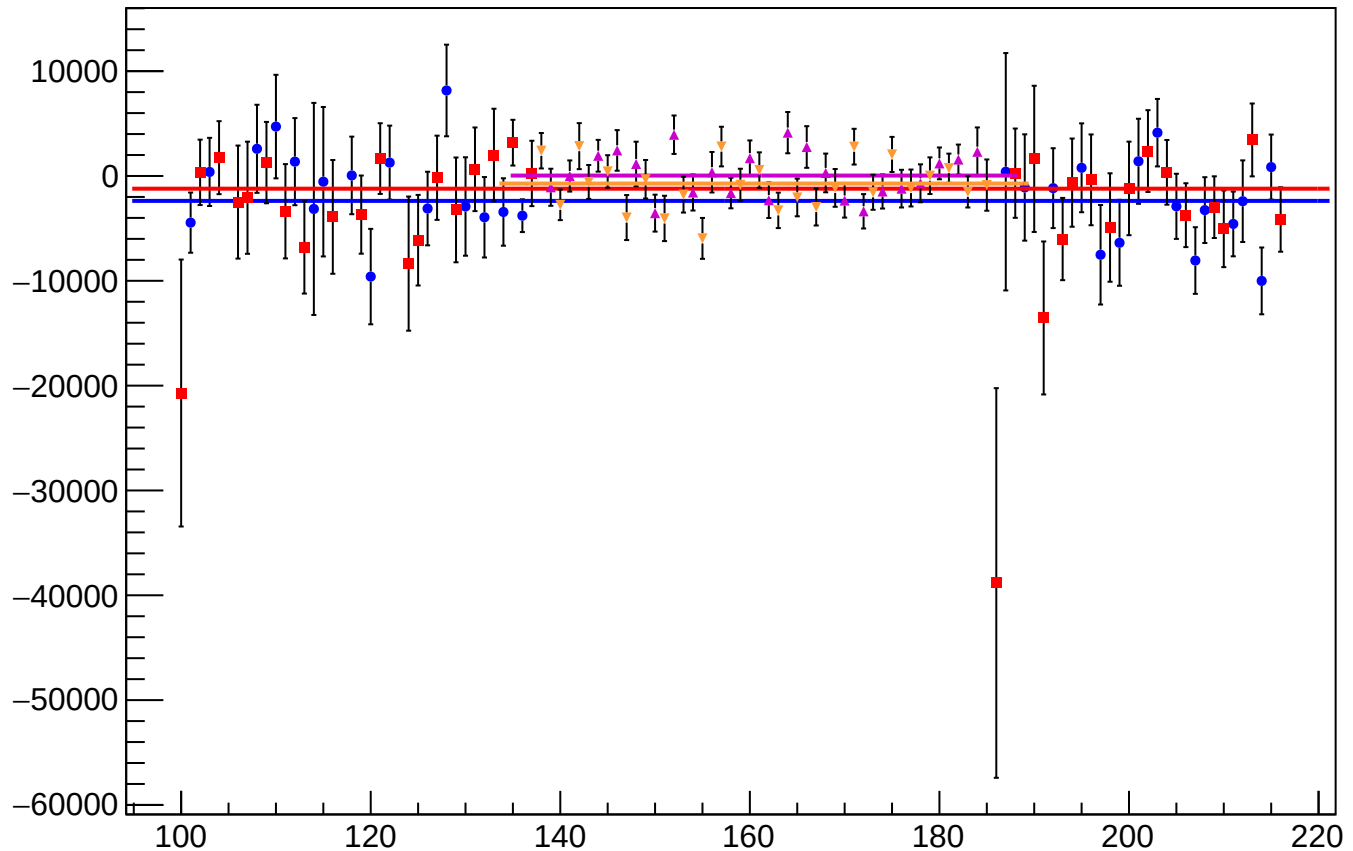
Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF:181646.8/22

+ sign 187.329 $\pm$ 0.021  $\chi^2$ /NDF: 995909.3/55

All: 188.102 $\pm$ 0.015  $\chi^2$ /NDF: 2098639.0/113

- sign 188.902 $\pm$ 0.022  $\chi^2$ /NDF: 1100086.6/57

# asym\_sam\_26\_dd\_cor\_correction\_mean vs Slug



Right In:  $-2376.388 \pm 636.959$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-720.705 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-1211.637 \pm 667.223$   $\chi^2/\text{NDF}$ : 30.1/34

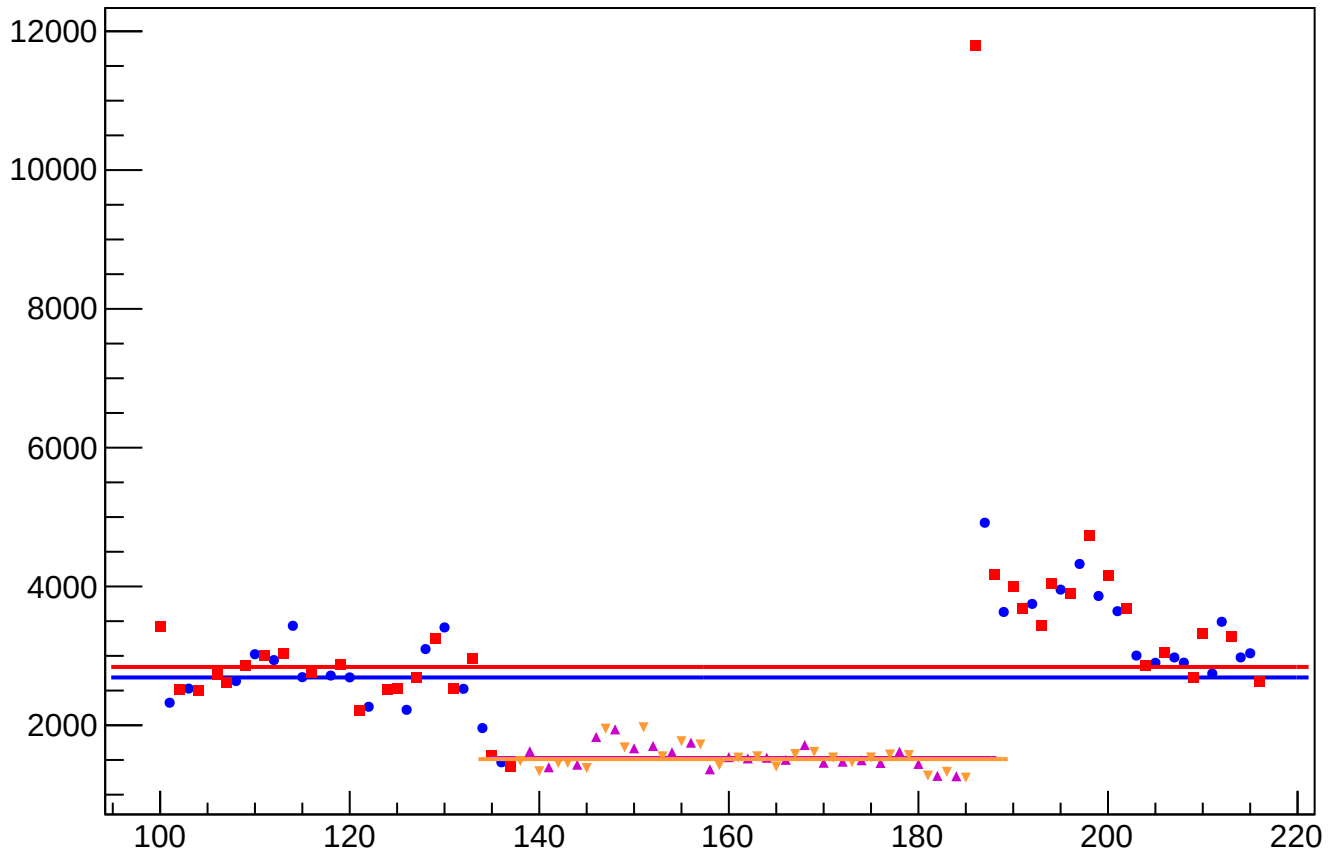
Left In:  $39.275 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-1098.574 \pm 304.294$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $-686.829 \pm 219.298$   $\chi^2/\text{NDF}$ : 149.6/113

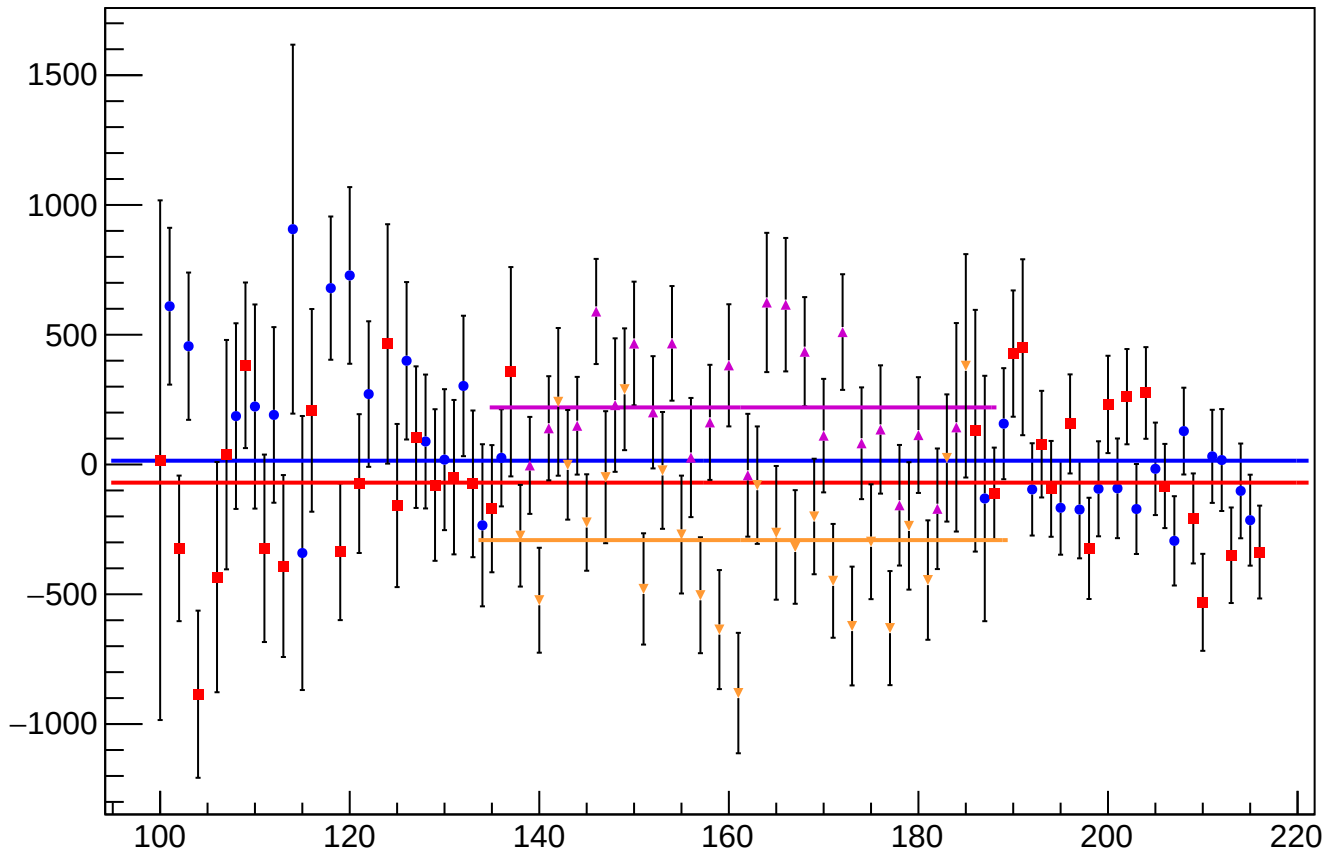
- sign  $-241.883 \pm 316.324$   $\chi^2/\text{NDF}$ : 67.2/57

# asym\_sam\_26\_dd\_cor\_correction\_rms vs Slug



|                             |                                    |                         |                                      |
|-----------------------------|------------------------------------|-------------------------|--------------------------------------|
| Right In: 2688.875+/-0.450  | $\chi^2/\text{NDF}$ : 2695696.2/30 | + sign 1780.874+/-0.215 | $\chi^2/\text{NDF}$ : 8404357.1/55   |
| Left Out: 1512.365+/-0.245  | $\chi^2/\text{NDF}$ : 442559.1/24  | All: 1801.081+/-0.155   | $\chi^2/\text{NDF}$ : 17778499.1/100 |
| Right Out: 2840.252+/-0.472 | $\chi^2/\text{NDF}$ : 2984296.9/34 | - sign 1822.917+/-0.224 | $\chi^2/\text{NDF}$ : 9355792.0/57   |
| Left In: 1527.964+/-0.254   | $\chi^2/\text{NDF}$ : 373845.3/22  |                         |                                      |

# eigen\_cor\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $14.641 \pm 40.617$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $-291.316 \pm 45.614$   $\chi^2/\text{NDF}$ : 36.4/24

Right Out:  $-69.881 \pm 40.809$   $\chi^2/\text{NDF}$ : 47.3/34

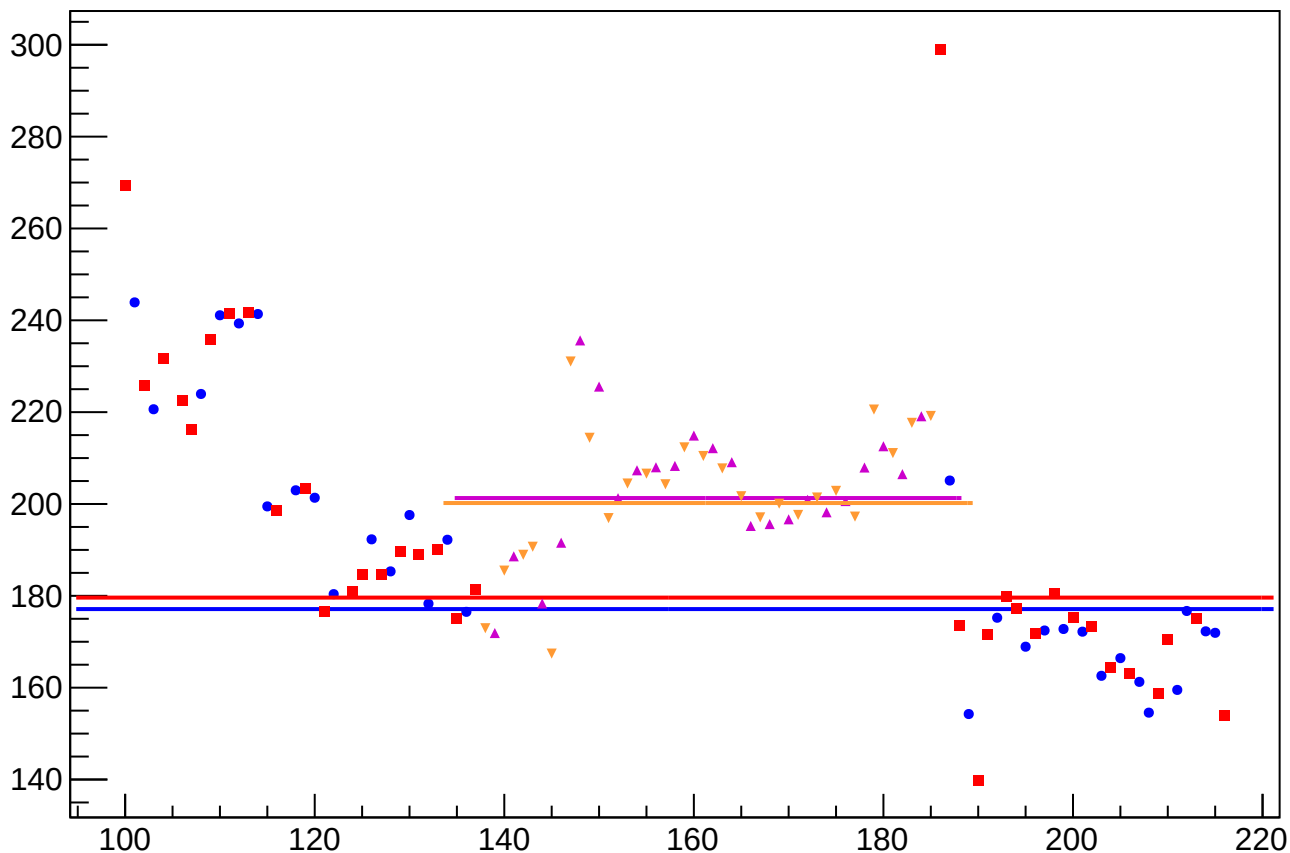
Left In:  $219.983 \pm 47.146$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-120.668 \pm 30.334$   $\chi^2/\text{NDF}$ : 95.7/55

All:  $-34.687 \pm 21.631$   $\chi^2/\text{NDF}$ : 204.7/113

- sign  $54.275 \pm 30.855$   $\chi^2/\text{NDF}$ : 92.7/57

# eigen\_cor\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 177.116 $\pm$ 0.029  $\chi^2$ /NDF: 505571.5/30

Left Out: 200.210 $\pm$ 0.032  $\chi^2$ /NDF: 204394.0/24

Right Out: 179.615 $\pm$ 0.029  $\chi^2$ /NDF: 676607.6/34

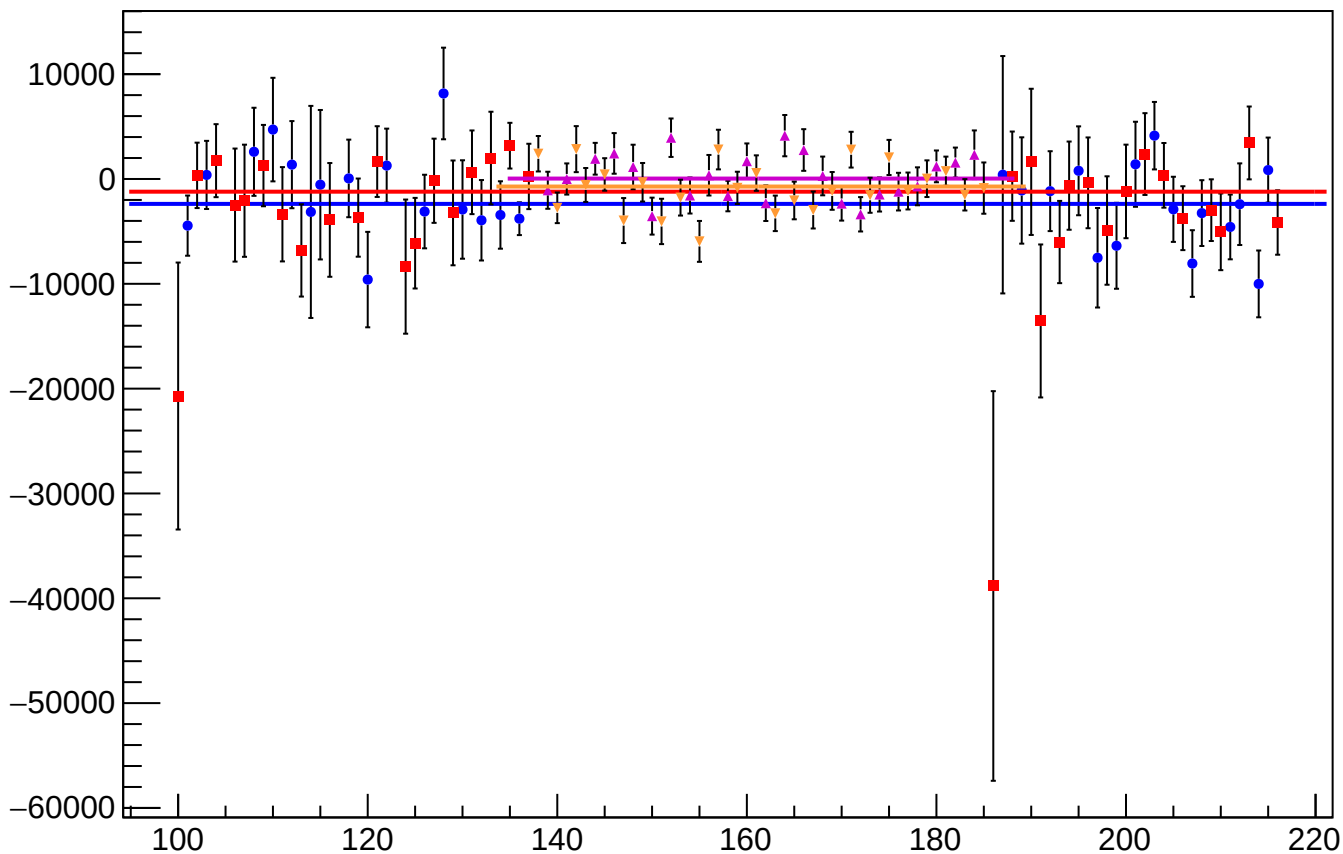
Left In: 201.297 $\pm$ 0.033  $\chi^2$ /NDF: 181646.8/22

+ sign 187.329 $\pm$ 0.021  $\chi^2$ /NDF: 995909.3/55

All: 188.102 $\pm$ 0.015  $\chi^2$ /NDF: 2098639.0/113

- sign 188.902 $\pm$ 0.022  $\chi^2$ /NDF: 1100086.6/57

asym\_sam\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-2376.388 \pm 636.959$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-720.705 \pm 346.376$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $-1211.637 \pm 667.223$   $\chi^2/\text{NDF}$ : 30.1/34

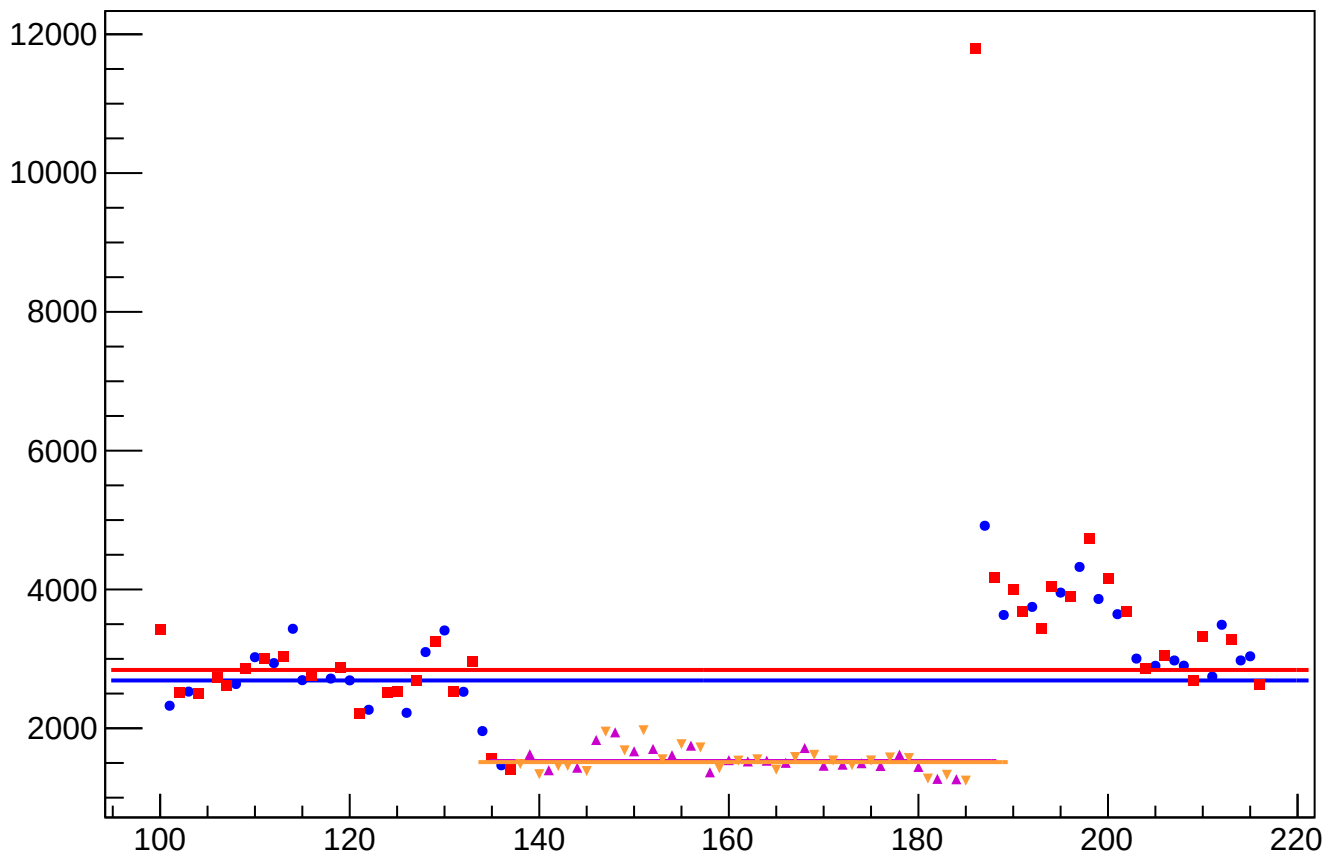
Left In:  $39.275 \pm 359.265$   $\chi^2/\text{NDF}$ : 34.4/22

+ sign  $-1098.574 \pm 304.294$   $\chi^2/\text{NDF}$ : 78.5/55

All:  $-686.829 \pm 219.298$   $\chi^2/\text{NDF}$ : 149.6/113

- sign  $-241.883 \pm 316.324$   $\chi^2/\text{NDF}$ : 67.2/57

asym\_sam\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In:  $2688.875 \pm 0.450$   $\chi^2/\text{NDF}: 2695696.2/30$

Left Out:  $1512.365 \pm 0.245$   $\chi^2/\text{NDF}: 442559.1/24$

Right Out:  $2840.252 \pm 0.472$   $\chi^2/\text{NDF}: 2984296.9/34$

Left In:  $1527.964 \pm 0.254$   $\chi^2/\text{NDF}: 373845.3/22$

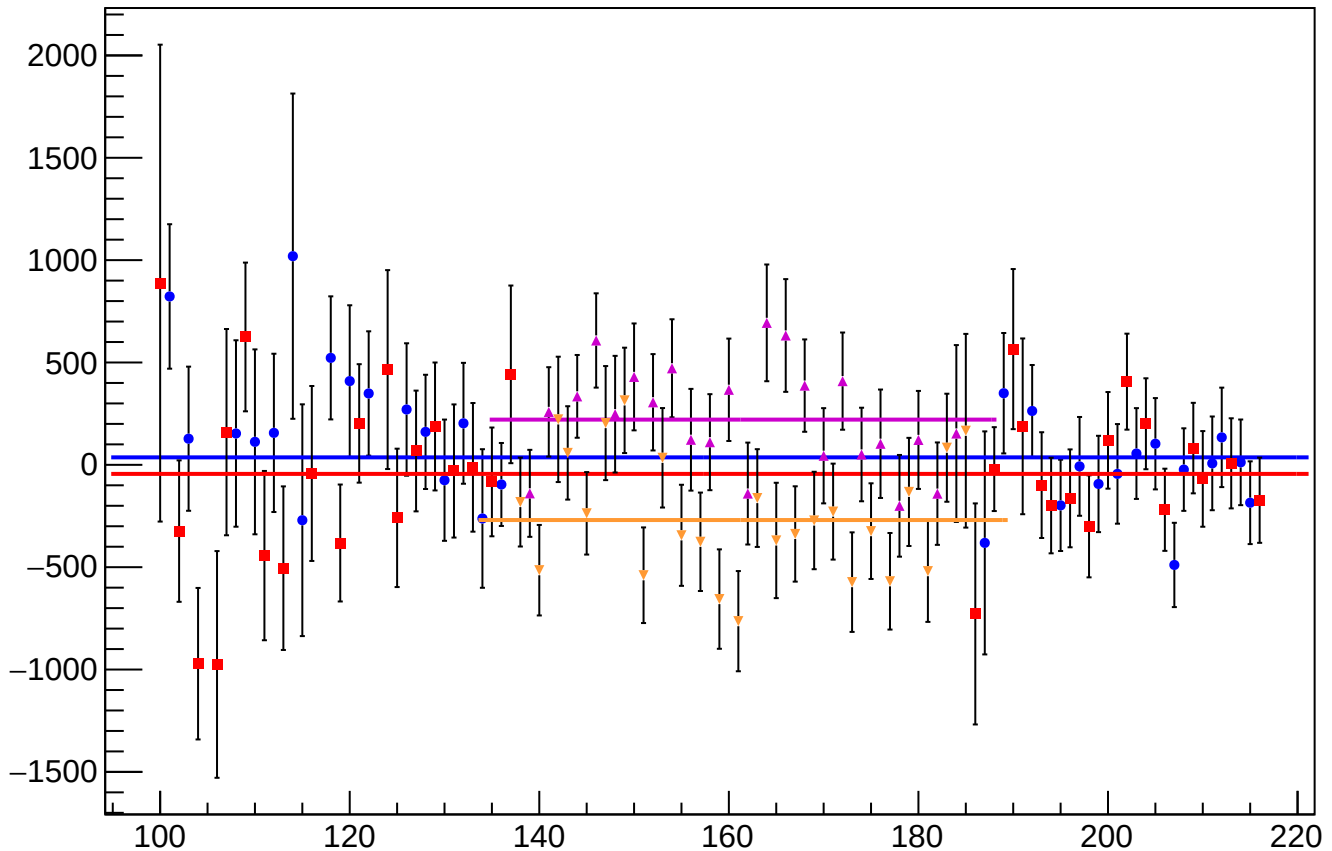
+ sign  $1780.874 \pm 0.215$   $\chi^2/\text{NDF}: 8404357.1/55$

All:  $1801.081 \pm 0.155$   $\chi^2/\text{NDF}: 17778499.1/171$

- sign  $1822.917 \pm 0.224$   $\chi^2/\text{NDF}: 9355792.0/57$



# dit\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $36.532 \pm 48.582$   $\chi^2/\text{NDF}$ : 26.5/30

Left Out:  $-269.678 \pm 49.158$   $\chi^2/\text{NDF}$ : 31.5/24

Right Out:  $-44.264 \pm 48.991$   $\chi^2/\text{NDF}$ : 34.9/34

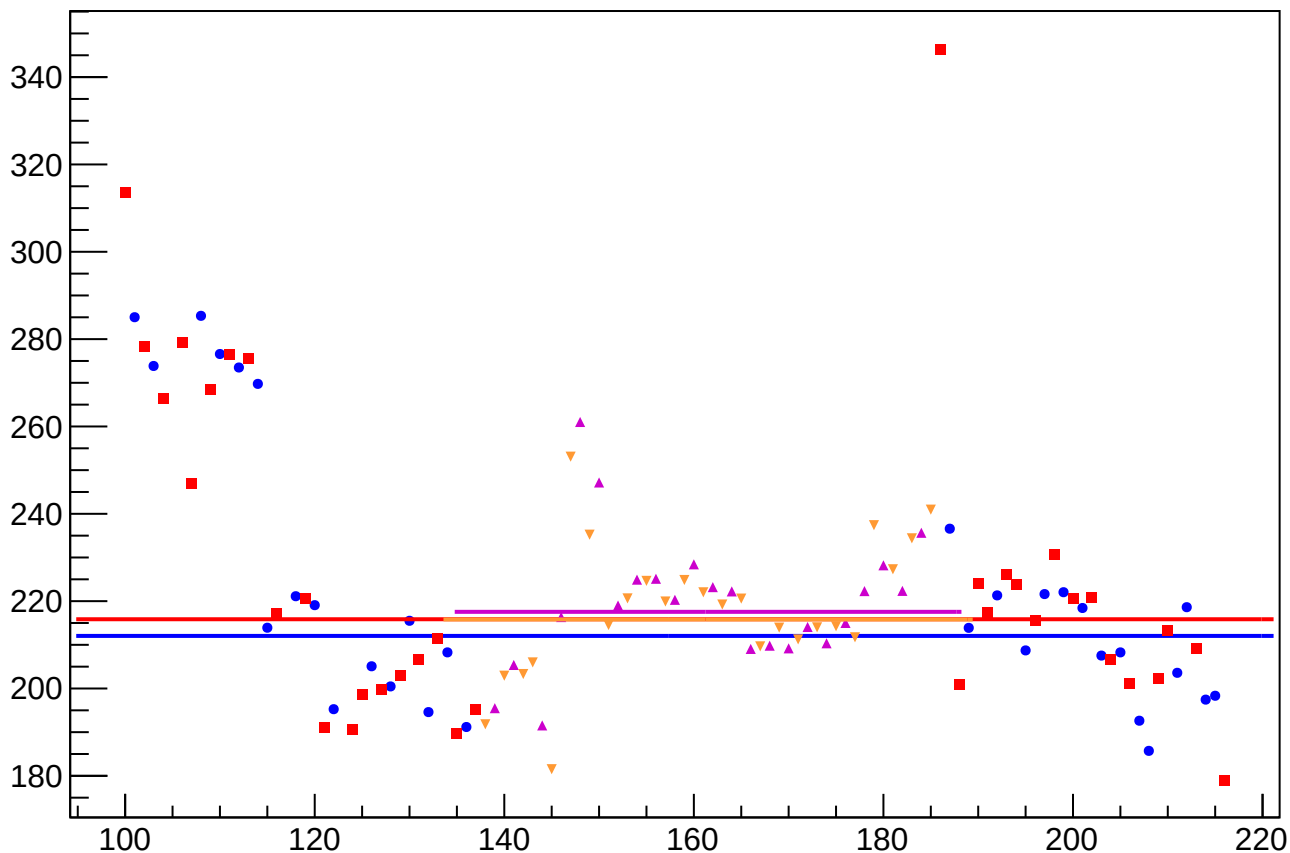
Left In:  $220.926 \pm 50.956$   $\chi^2/\text{NDF}$ : 23.4/22

+ sign  $-114.771 \pm 34.554$   $\chi^2/\text{NDF}$ : 77.6/55

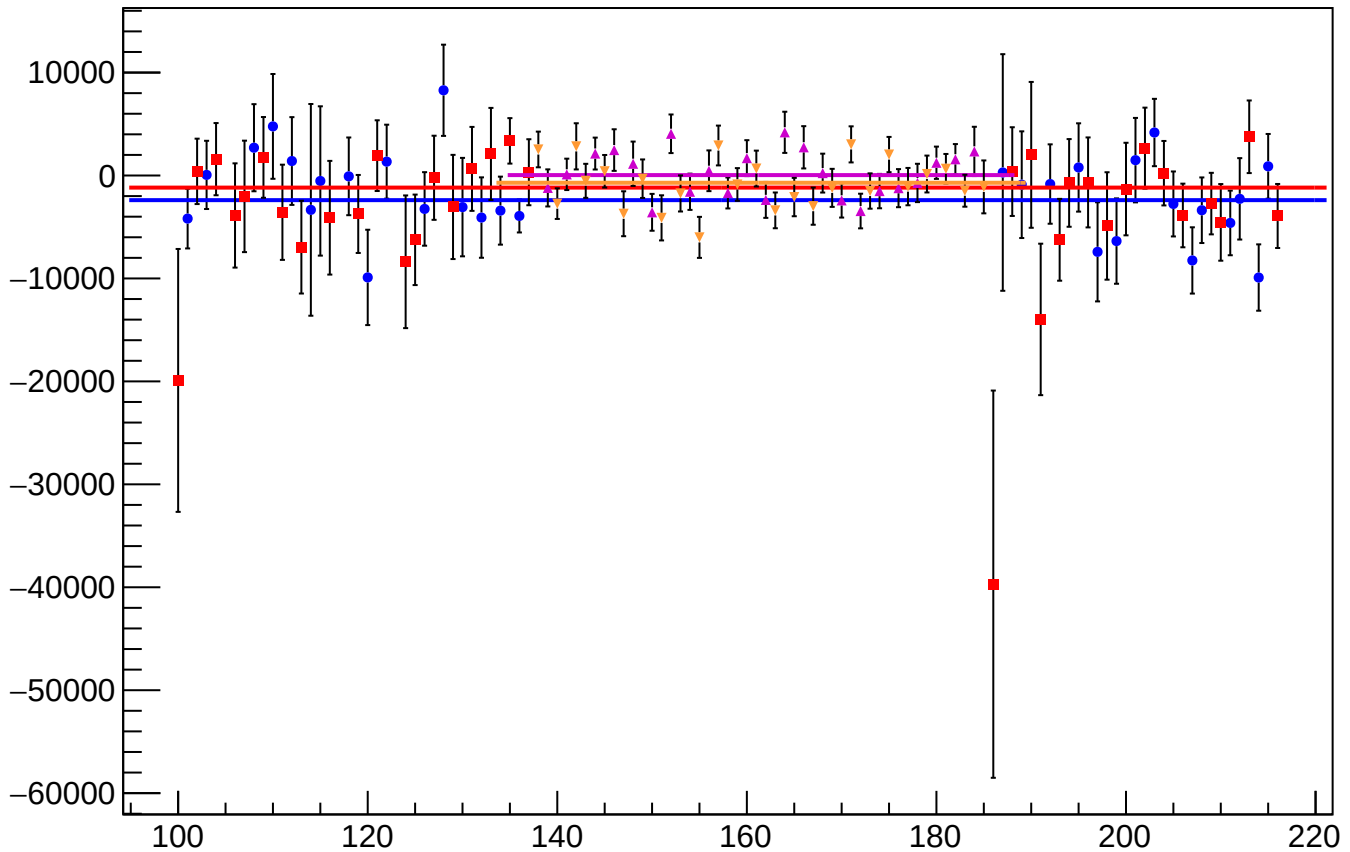
All:  $-17.982 \pm 24.699$   $\chi^2/\text{NDF}$ : 166.0/113

- sign  $83.120 \pm 35.316$   $\chi^2/\text{NDF}$ : 72.3/57

# dit\_asym\_sam\_26\_dd\_rms vs Slug



# asym\_sam\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $-2393.904 \pm 648.170$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-704.012 \pm 355.462$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-1175.264 \pm 676.314$   $\chi^2/\text{NDF}$ : 30.8/34

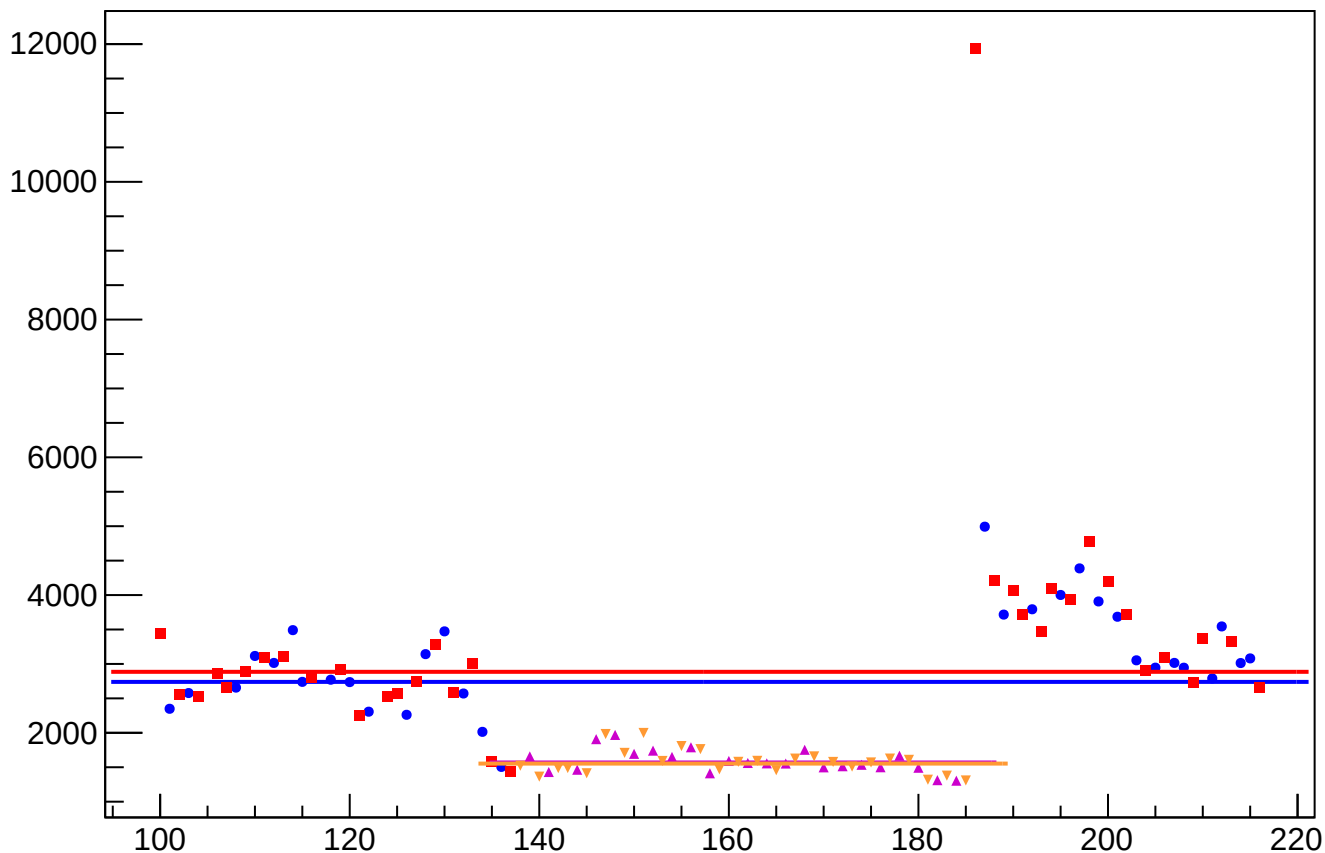
Left In:  $39.658 \pm 368.873$   $\chi^2/\text{NDF}$ : 34.3/22

+ sign  $-1094.739 \pm 311.671$   $\chi^2/\text{NDF}$ : 77.5/55

All:  $-683.196 \pm 224.563$   $\chi^2/\text{NDF}$ : 148.7/113

- sign  $-238.893 \pm 323.837$   $\chi^2/\text{NDF}$ : 67.6/57

# asym\_sam\_26\_dd\_dit\_correction\_rms vs Slug



Right In:  $2739.270 \pm 0.458$   $\chi^2/\text{NDF}$ : 2626916.5/30

Left Out:  $1553.019 \pm 0.251$   $\chi^2/\text{NDF}$ : 409933.8/24

Right Out:  $2885.495 \pm 0.478$   $\chi^2/\text{NDF}$ : 2943964.7/34

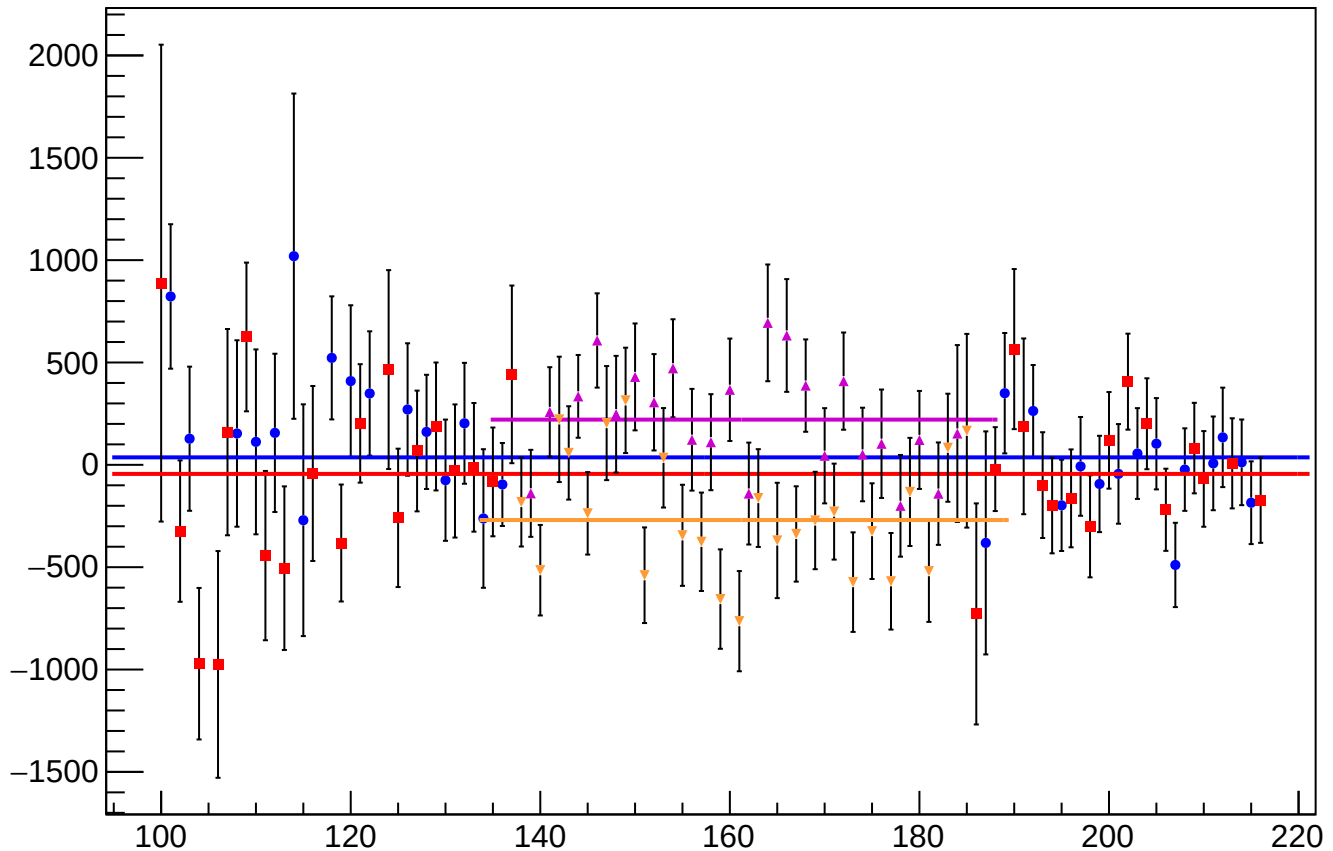
Left In:  $1569.383 \pm 0.261$   $\chi^2/\text{NDF}$ : 357481.9/22

+ sign  $1827.297 \pm 0.220$   $\chi^2/\text{NDF}$ : 8186893.2/55

All:  $1848.377 \pm 0.159$   $\chi^2/\text{NDF}$ : 17344739.7/100

- sign  $1871.135 \pm 0.229$   $\chi^2/\text{NDF}$ : 9138820.1/57

# eigen\_dit\_asym\_sam\_26\_dd\_mean vs Slug



Right In:  $36.536 \pm 48.582$   $\chi^2/\text{NDF}$ : 26.5/30

Left Out:  $-269.680 \pm 49.158$   $\chi^2/\text{NDF}$ : 31.5/24

Right Out:  $-44.264 \pm 48.991$   $\chi^2/\text{NDF}$ : 34.9/34

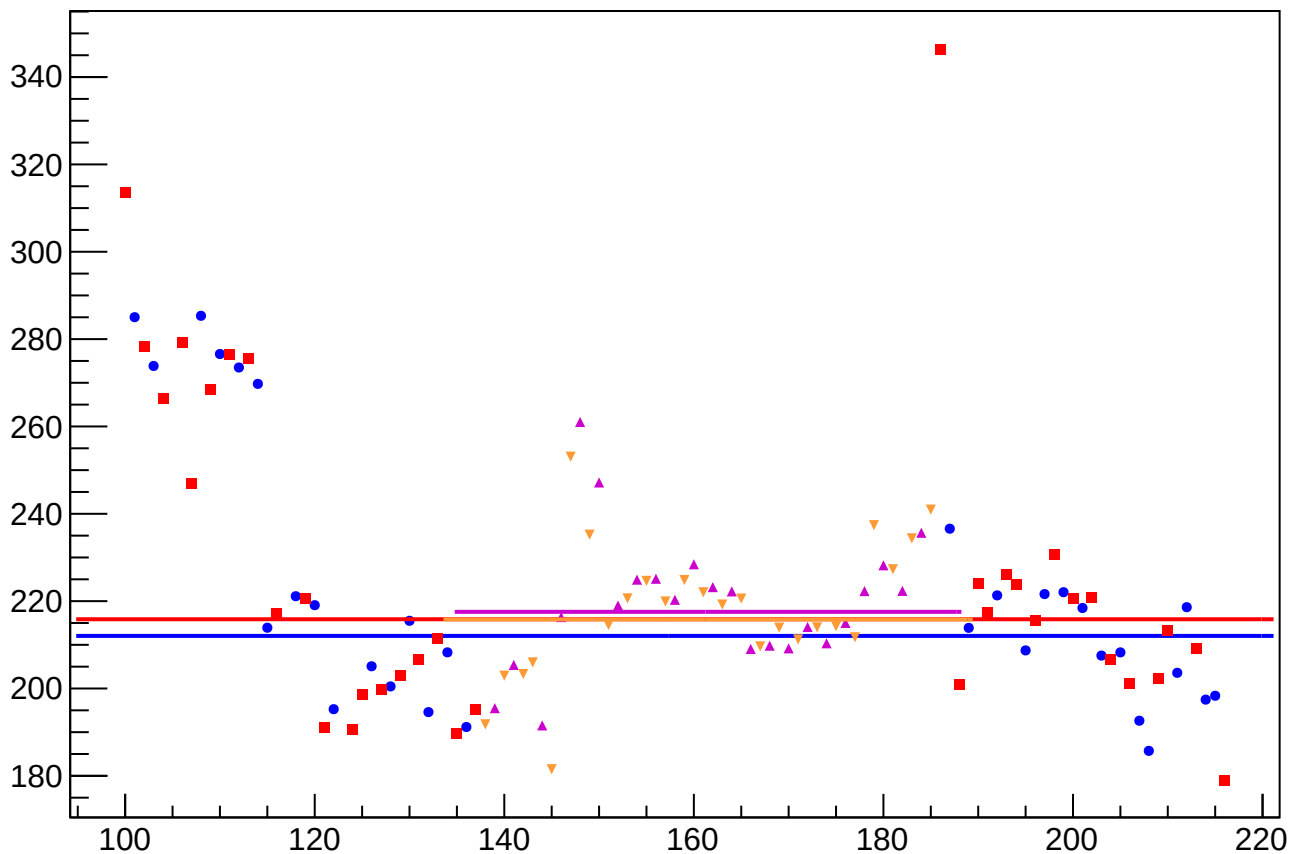
Left In:  $220.927 \pm 50.956$   $\chi^2/\text{NDF}$ : 23.4/22

+ sign  $-114.769 \pm 34.554$   $\chi^2/\text{NDF}$ : 77.6/55

All:  $-17.981 \pm 24.698$   $\chi^2/\text{NDF}$ : 166.0/113

- sign  $83.121 \pm 35.316$   $\chi^2/\text{NDF}$ : 72.3/57

# eigen\_dit\_asym\_sam\_26\_dd\_rms vs Slug



Right In: 212.041 $\pm$ 0.034  $\chi^2/\text{NDF}$ : 435168.8/30

Left Out: 215.806 $\pm$ 0.035  $\chi^2/\text{NDF}$ :188703.4/24

Right Out: 215.857 $\pm$ 0.035  $\chi^2/\text{NDF}$ : 569837.8/34

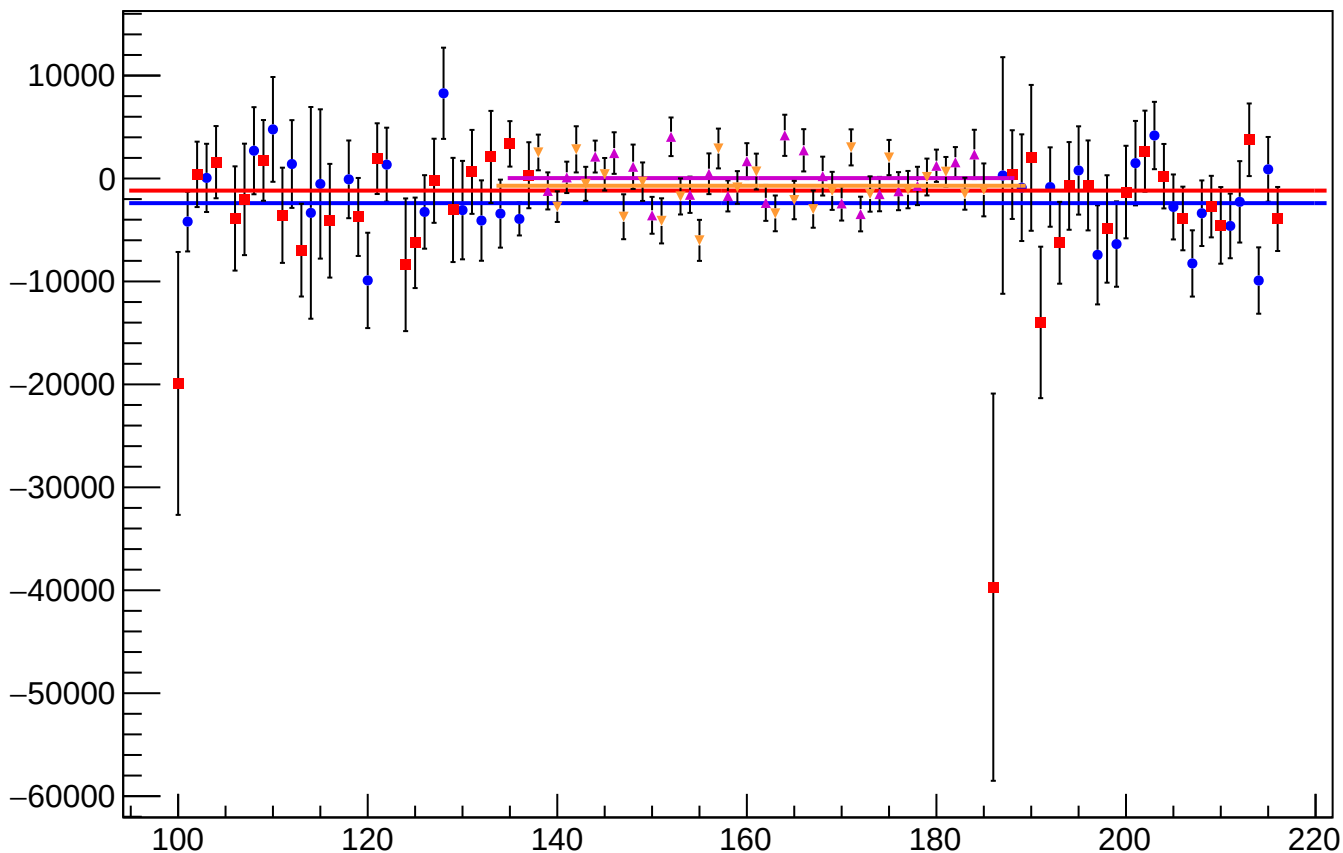
Left In: 217.555 $\pm$ 0.036  $\chi^2/\text{NDF}$ :161069.0/22

+ sign 213.902 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 629809.0/55

All: 215.257 $\pm$ 0.017  $\chi^2/\text{NDF}$ : 1368159.3/113

- sign 216.672 $\pm$ 0.025  $\chi^2/\text{NDF}$ : 732060.4/57

asym\_sam\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-2393.902 \pm 648.169$   $\chi^2/\text{NDF}$ : 34.6/30

Left Out:  $-704.012 \pm 355.462$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-1175.263 \pm 676.314$   $\chi^2/\text{NDF}$ : 30.8/34

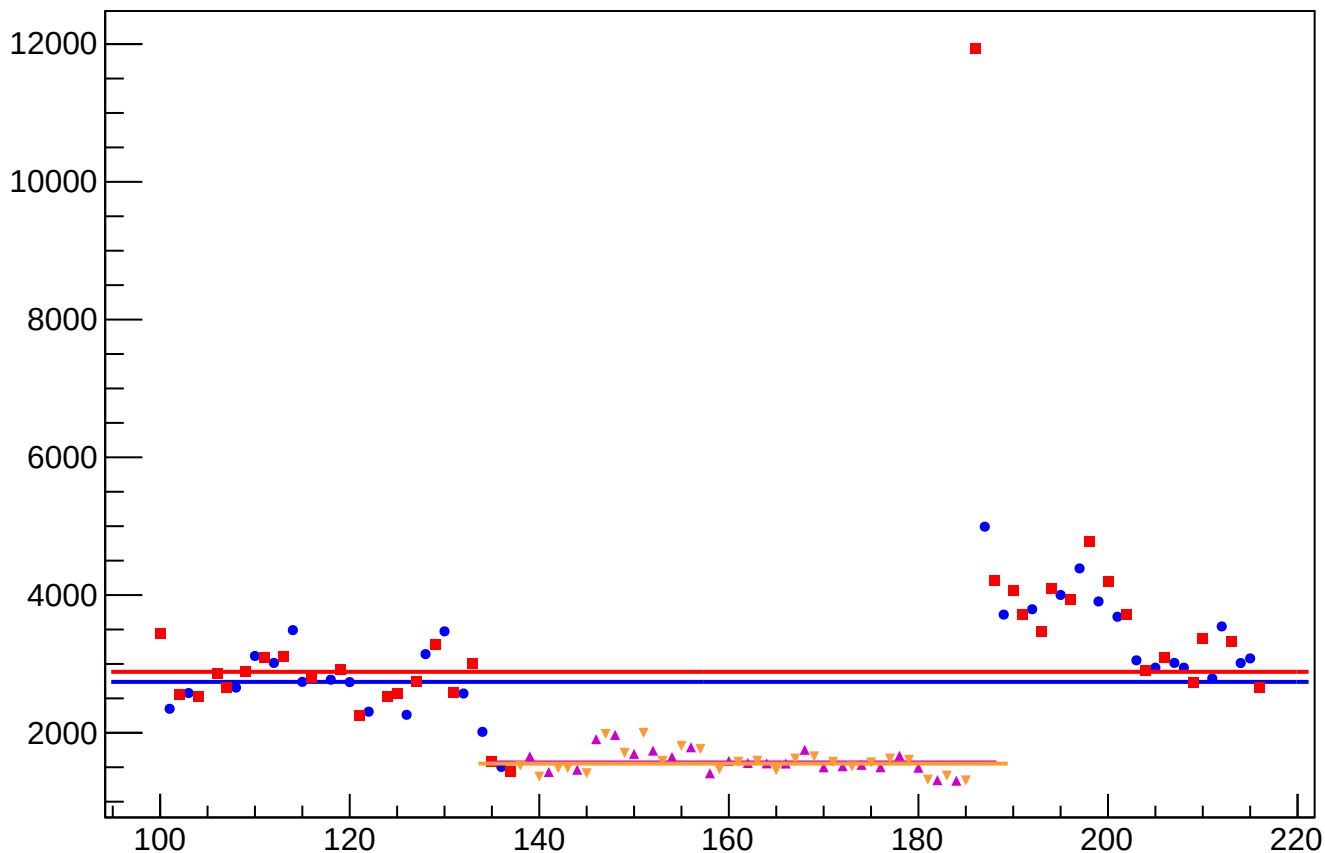
Left In:  $39.657 \pm 368.873$   $\chi^2/\text{NDF}$ : 34.3/22

+ sign  $-1094.739 \pm 311.671$   $\chi^2/\text{NDF}$ : 77.5/55

All:  $-683.196 \pm 224.562$   $\chi^2/\text{NDF}$ : 148.7/113

- sign  $-238.894 \pm 323.837$   $\chi^2/\text{NDF}$ : 67.6/57

asym\_sam\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 2739.268 $\pm$ 0.458  $\chi^2/\text{NDF}$ : 2626915.5/30

Left Out: 1553.020 $\pm$ 0.251  $\chi^2/\text{NDF}$ : 409936.6/24

Right Out: 2885.493 $\pm$ 0.478  $\chi^2/\text{NDF}$ : 2943966.9/34

Left In: 1569.383 $\pm$ 0.261  $\chi^2/\text{NDF}$ : 357484.6/22

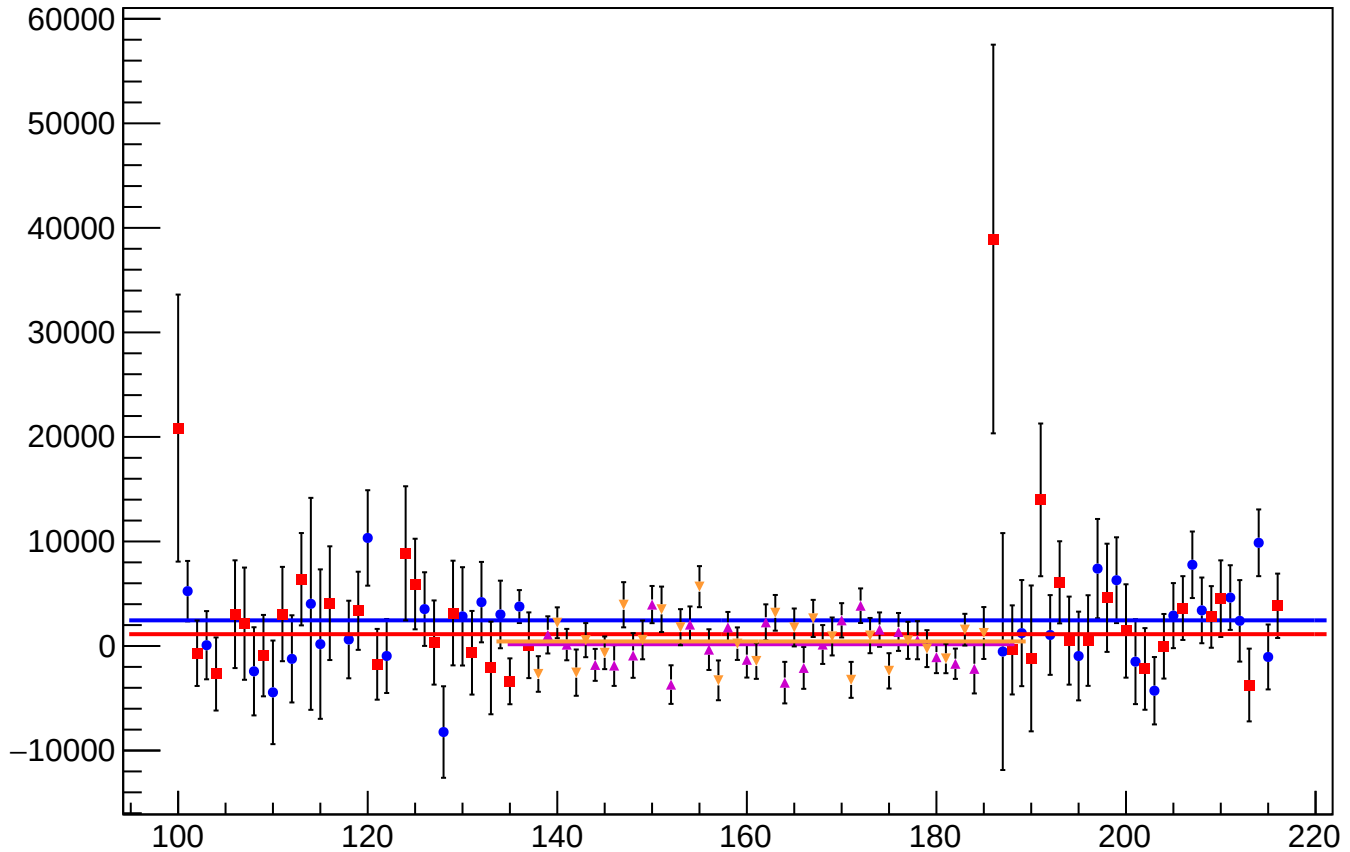
+ sign 1827.297 $\pm$ 0.220  $\chi^2/\text{NDF}$ : 8186878.6/55

All: 1848.377 $\pm$ 0.159  $\chi^2/\text{NDF}$ : 17344716.5/100

- sign 1871.135 $\pm$ 0.229  $\chi^2/\text{NDF}$ : 9138811.8/57



# asym\_sam\_26\_dd\_mean vs Slug



Right In: 2453.144+/-639.070  $\chi^2/\text{NDF}$ : 35.0/30

Left Out: 437.522+/-349.581  $\chi^2/\text{NDF}$ : 38.9/24

Right Out: 1130.675+/-668.603  $\chi^2/\text{NDF}$ : 30.3/34

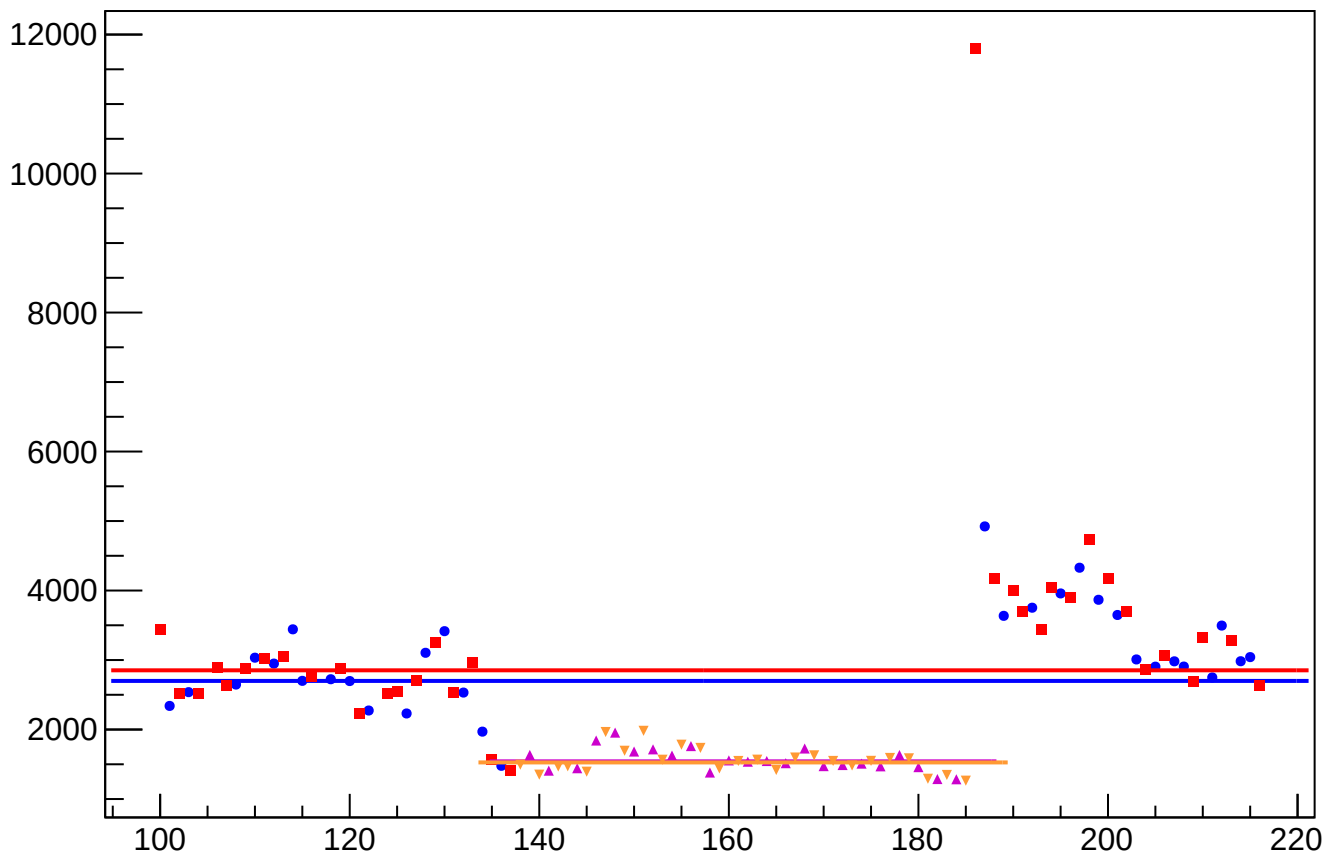
Left In: 169.827+/-362.550  $\chi^2/\text{NDF}$ : 33.0/22

+ sign 901.742+/-306.694  $\chi^2/\text{NDF}$ : 81.6/55

All: 654.812+/-220.991  $\chi^2/\text{NDF}$ : 147.8/113

- sign 388.154+/-318.709  $\chi^2/\text{NDF}$ : 64.9/57

# asym\_sam\_26\_dd\_rms vs Slug



Right In: 2699.450+/-0.452  $\chi^2/\text{NDF}$ : 2653824.1/30

Left Out: 1526.726+/-0.247  $\chi^2/\text{NDF}$ : 429467.0/24

Right Out: 2852.054+/-0.473  $\chi^2/\text{NDF}$ : 2950796.1/34

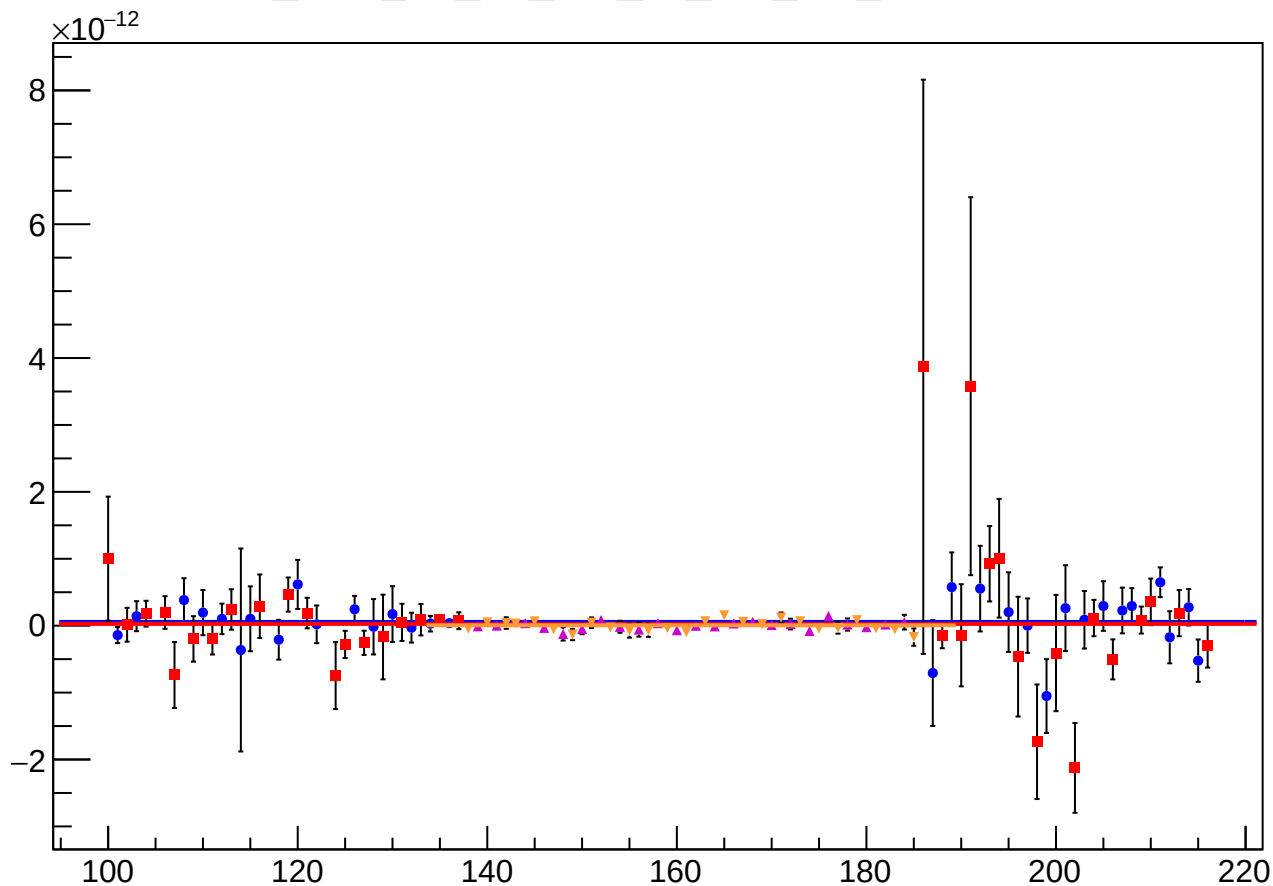
Left In: 1542.262+/-0.256  $\chi^2/\text{NDF}$ : 362291.1/22

+ sign 1796.817+/-0.217  $\chi^2/\text{NDF}$ : 8267003.0/55

All: 1817.521+/-0.156  $\chi^2/\text{NDF}$ : 17530368.7/100

- sign 1839.878+/-0.225  $\chi^2/\text{NDF}$ : 9244410.3/57

asym\_sam\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 28.3/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :30.8/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 46.0/34

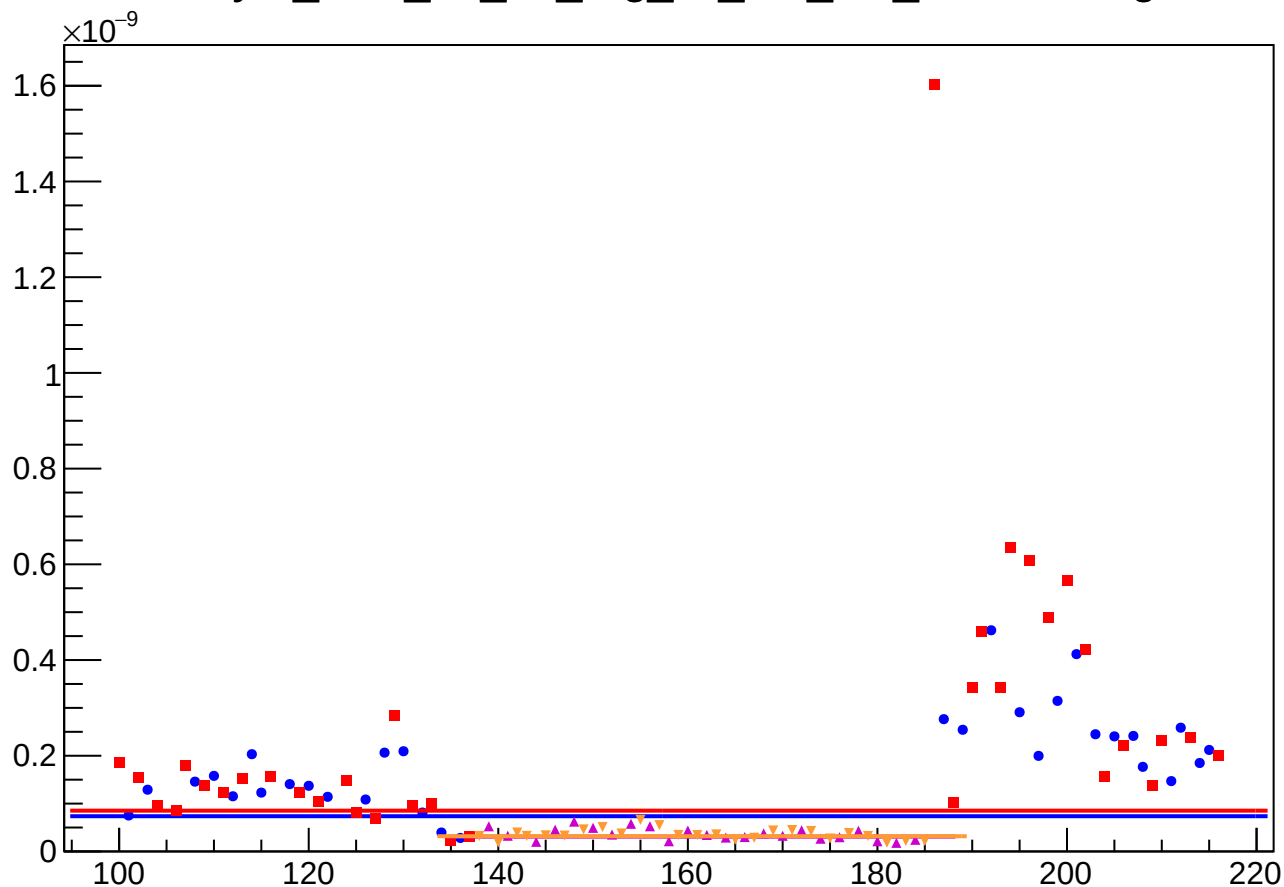
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :17.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 61.0/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 124.2/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 63.2/57

asym\_sam\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 8616120.9/30$

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 1231140.2/24$

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 8635403.5/34$

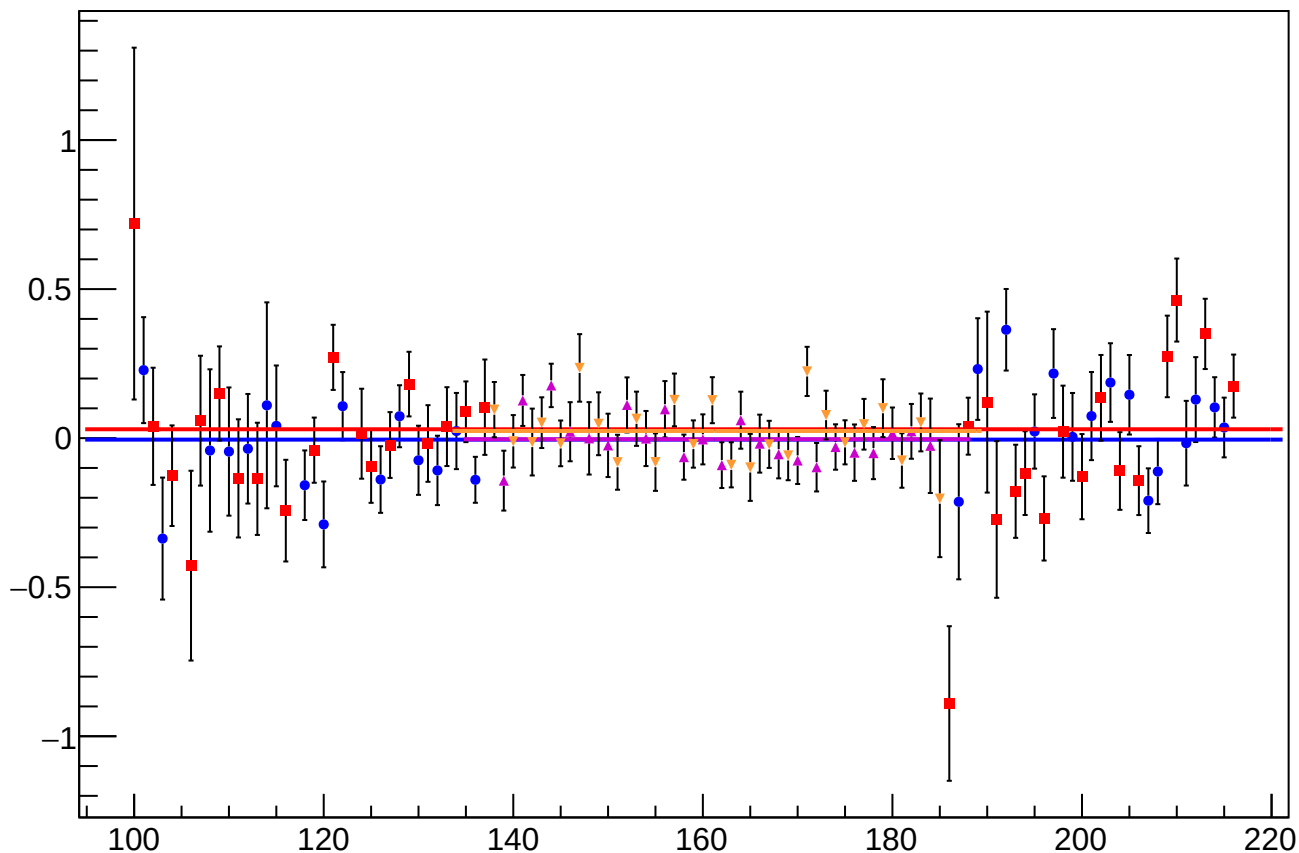
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 1593815.4/22$

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 12525137.3/55$

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 26214317.8/113$

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}: 13687504.1/57$

# asym\_sam\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.024$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $0.030 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.7/34

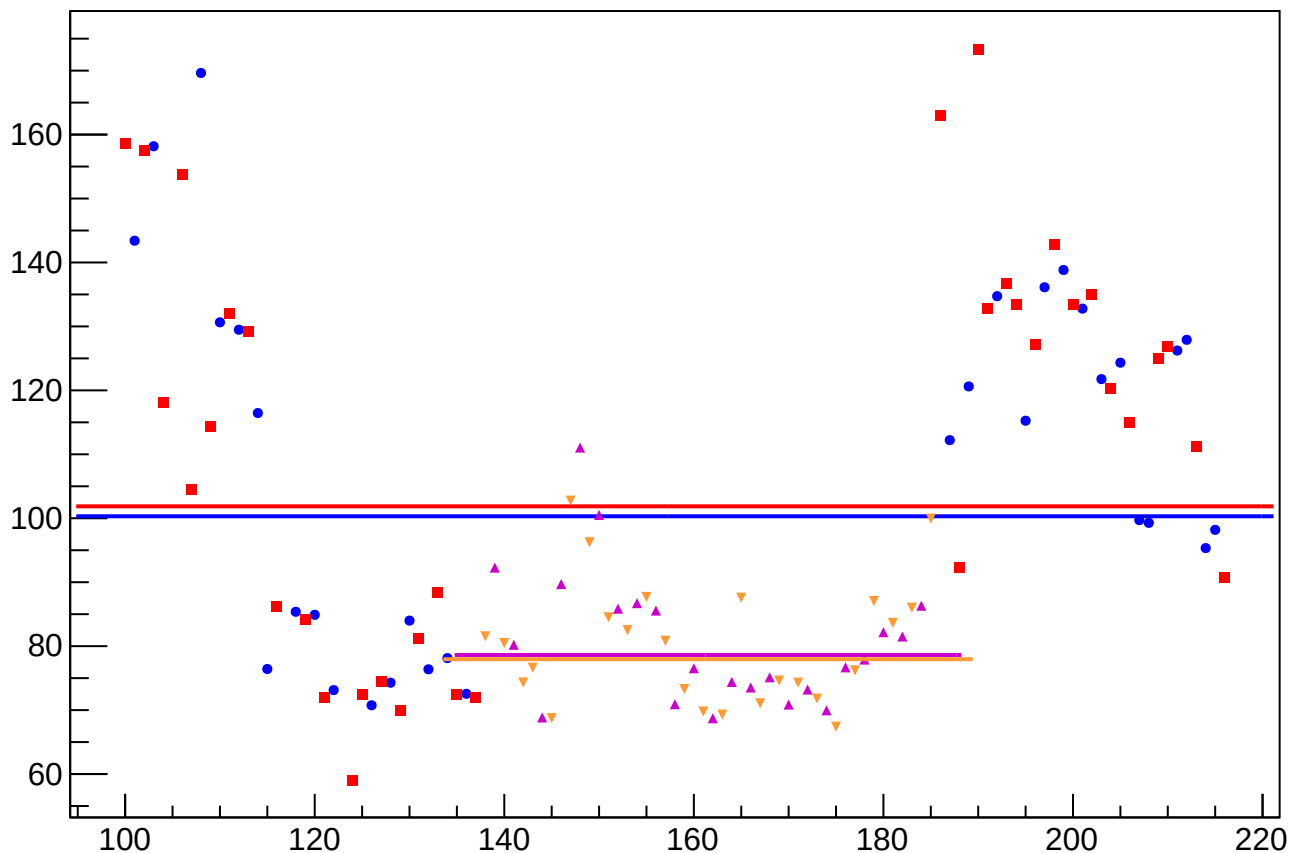
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.014 \pm 0.014$   $\chi^2/\text{NDF}$ : 66.4/55

All:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 153.3/113

- sign  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 86.8/57

# asym\_sam\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $100.309 \pm 0.017$   $\chi^2/\text{NDF}$ : 2209206.4/30

Left Out:  $77.957 \pm 0.013$   $\chi^2/\text{NDF}$ : 439703.9/24

Right Out:  $101.865 \pm 0.017$   $\chi^2/\text{NDF}$ : 2551425.9/34

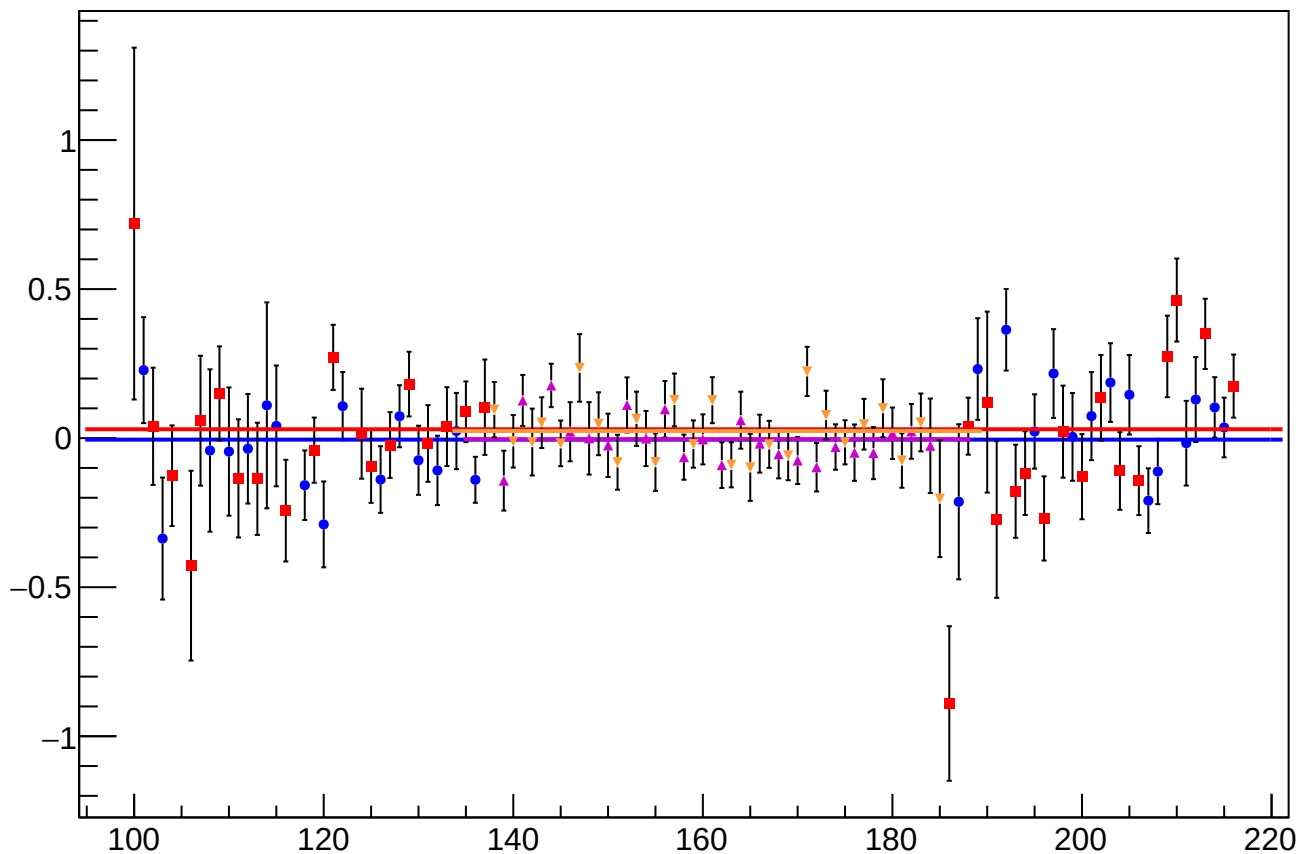
Left In:  $78.615 \pm 0.013$   $\chi^2/\text{NDF}$ : 497808.4/22

+ sign  $86.060 \pm 0.010$   $\chi^2/\text{NDF}$ : 3784983.6/55

All:  $86.695 \pm 0.007$   $\chi^2/\text{NDF}$ : 8023139.0/113

- sign  $87.367 \pm 0.010$   $\chi^2/\text{NDF}$ : 4229990.5/57

asym\_sam\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.024$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $0.030 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.7/34

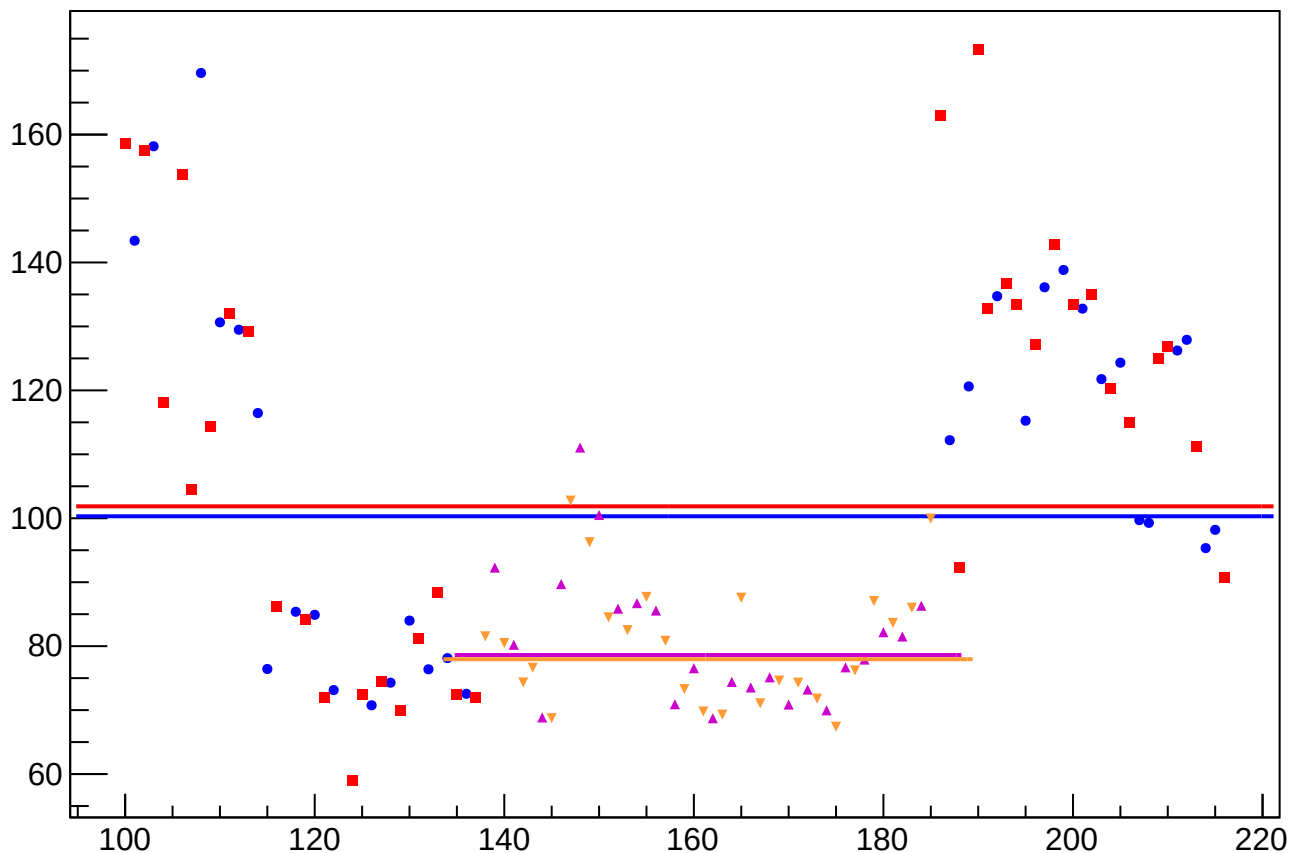
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.014 \pm 0.014$   $\chi^2/\text{NDF}$ : 66.4/55

All:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 153.3/113

- sign  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 100.309 $\pm$ 0.017  $\chi^2$ /NDF: 2209206.4/30

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF:439703.9/24

+ sign 86.060 $\pm$ 0.010  $\chi^2$ /NDF: 3784983.6/55

Right Out: 101.865 $\pm$ 0.017  $\chi^2$ /NDF: 2551425.9/34

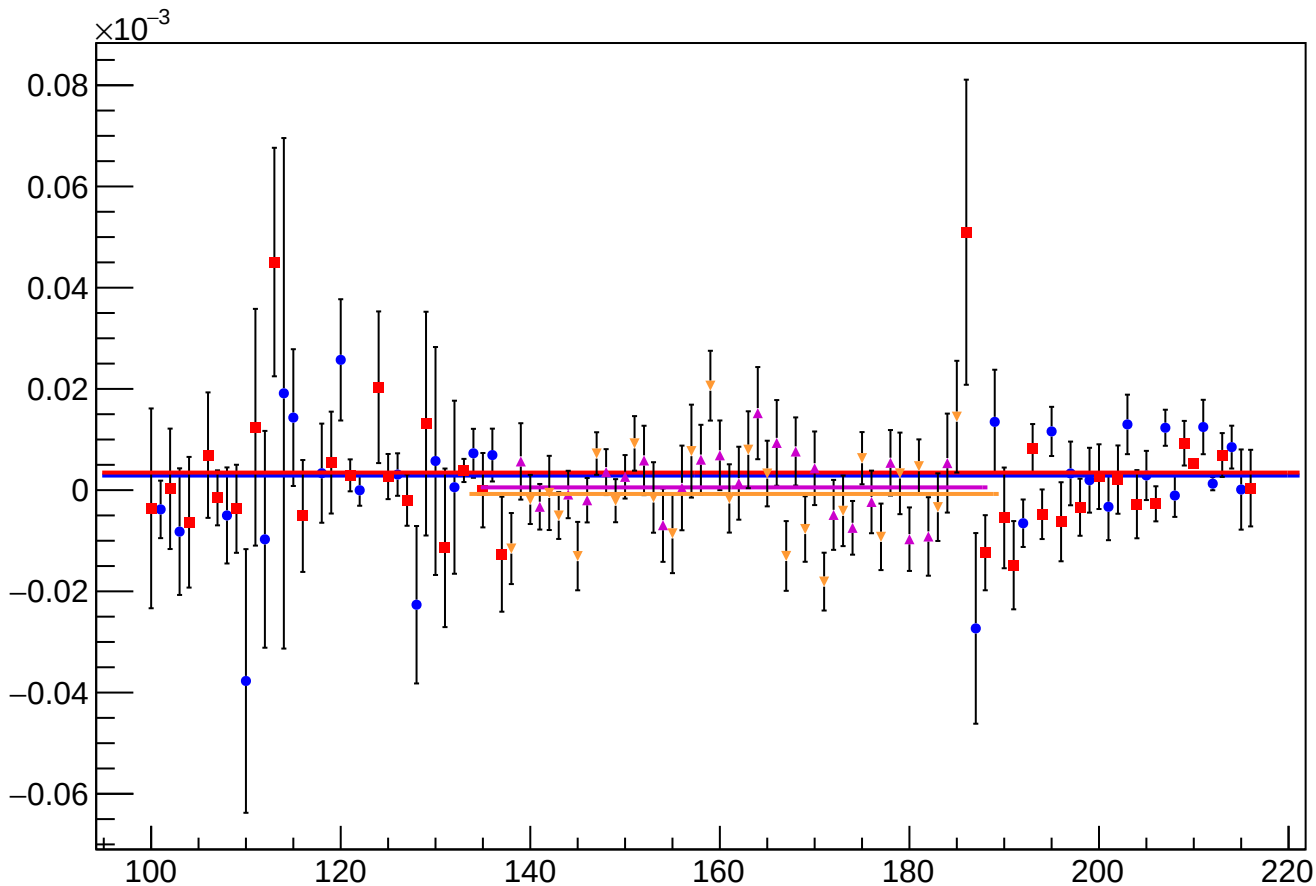
All: 86.695 $\pm$ 0.007  $\chi^2$ /NDF: 8023139.0/113

Left In: 78.615 $\pm$ 0.013  $\chi^2$ /NDF:497808.4/22

- sign 87.367 $\pm$ 0.010  $\chi^2$ /NDF: 4229990.5/57



asym\_sam\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.4/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.6/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.6/34

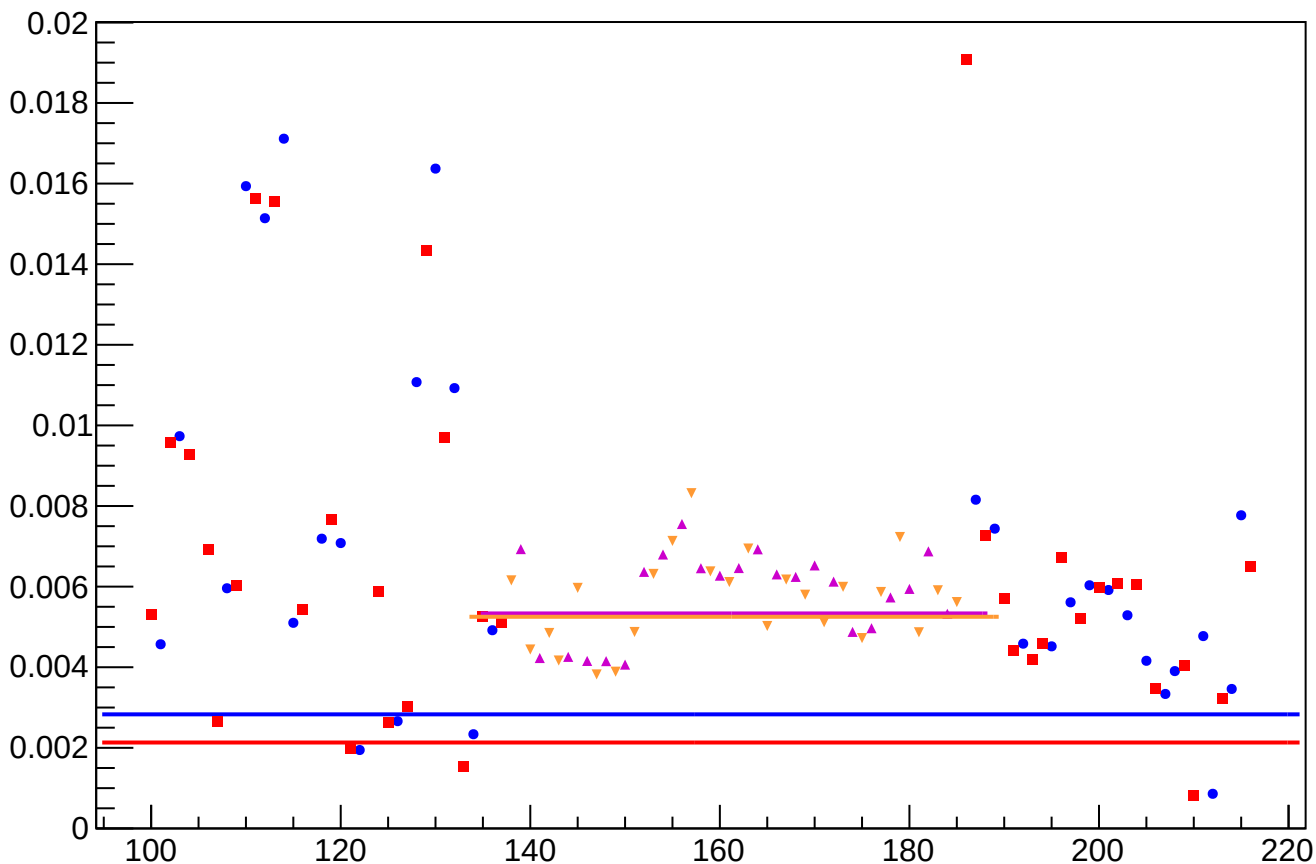
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.6/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 97.9/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 163.6/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.3/57

asym\_sam\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 13978345.1/30

Left Out: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:1511867.7/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 18091693.6/34

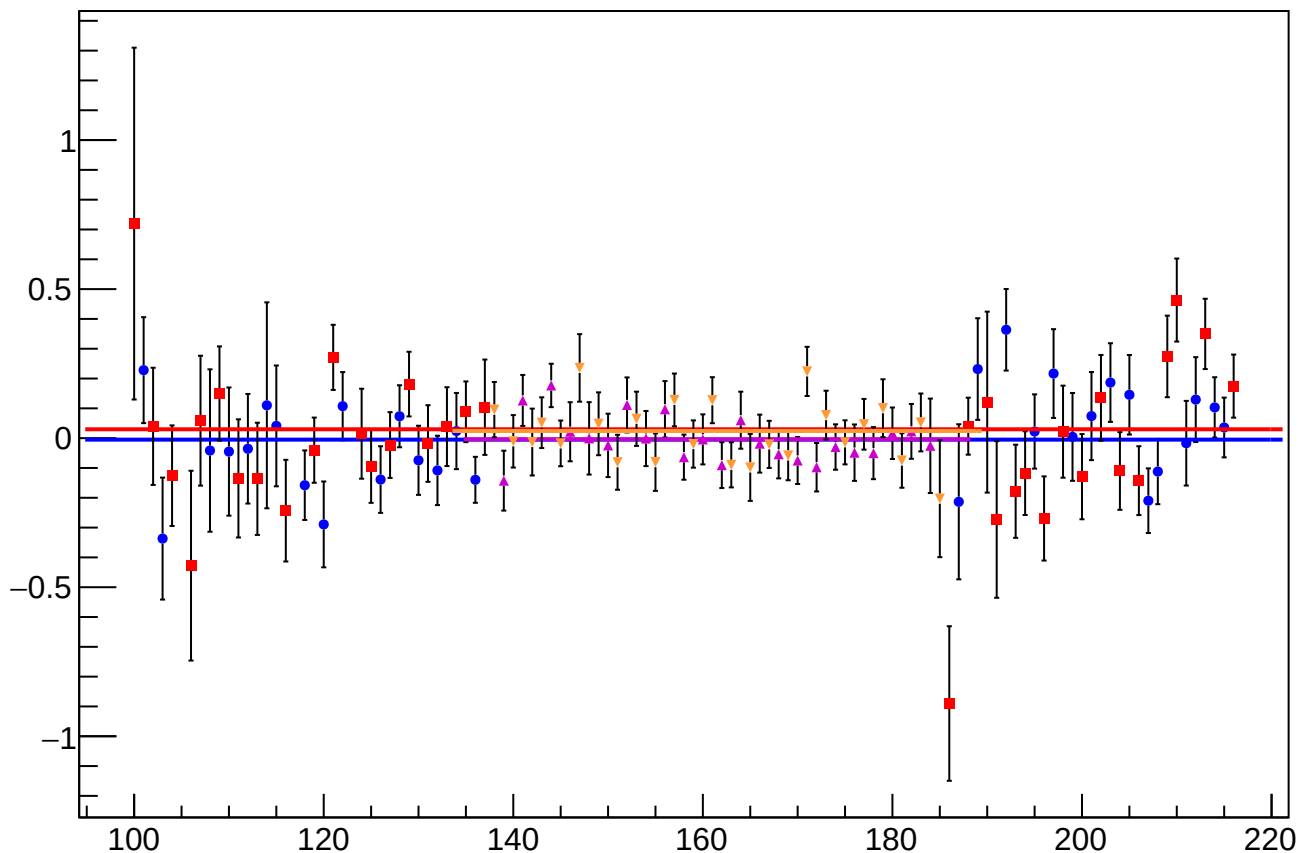
Left In: 0.005 $\pm$ 0.000  $\chi^2$ /NDF:1508187.9/22

+ sign 0.004 $\pm$ 0.000  $\chi^2$ /NDF: 20783463.0/55

All: 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 51529978.1/113

- sign 0.003 $\pm$ 0.000  $\chi^2$ /NDF: 29334114.1/57

asym\_sam\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.024$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $0.030 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.7/34

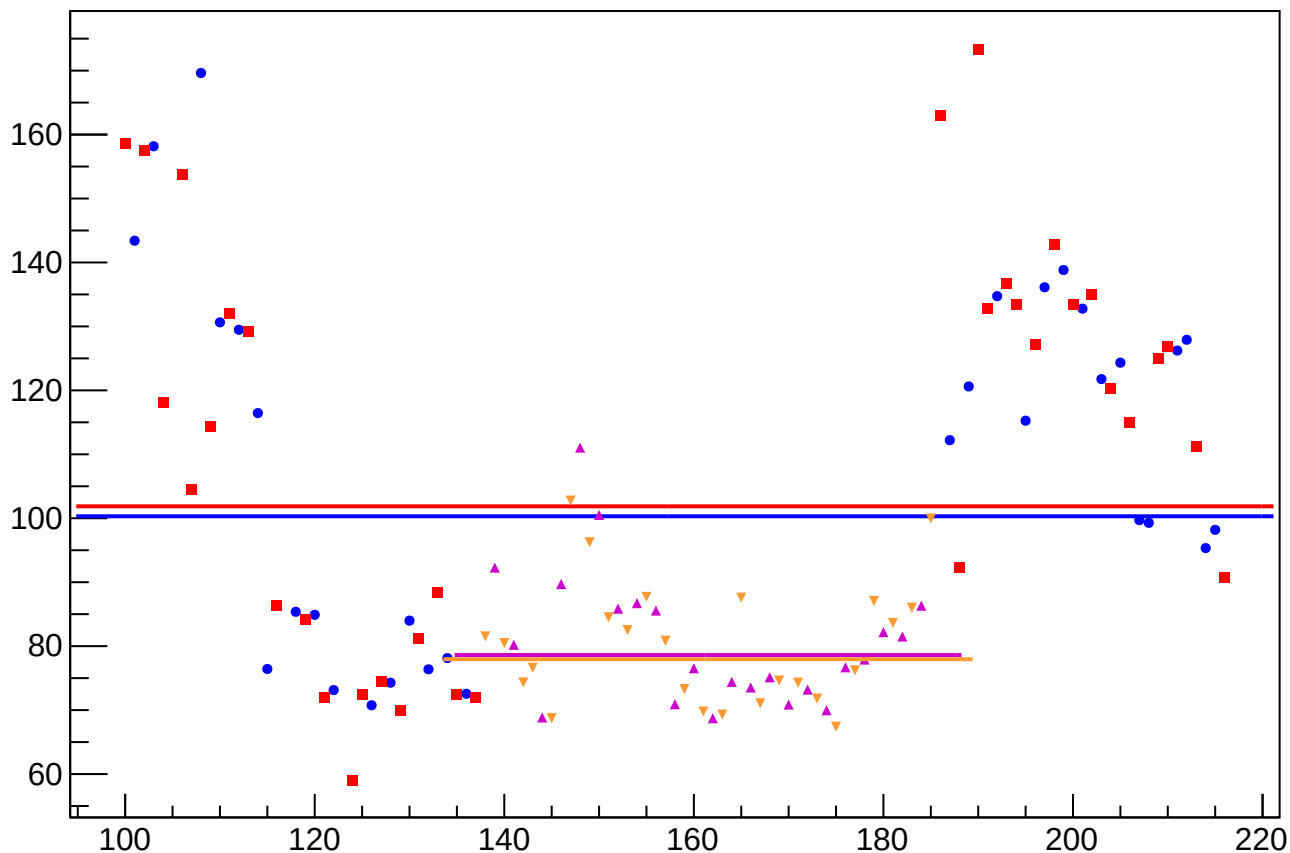
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.014 \pm 0.014$   $\chi^2/\text{NDF}$ : 66.4/55

All:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 153.3/113

- sign  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 100.307 $\pm$ 0.017  $\chi^2$ /NDF: 2209345.5/30

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF:439744.9/24

+ sign 86.059 $\pm$ 0.010  $\chi^2$ /NDF: 3785052.2/55

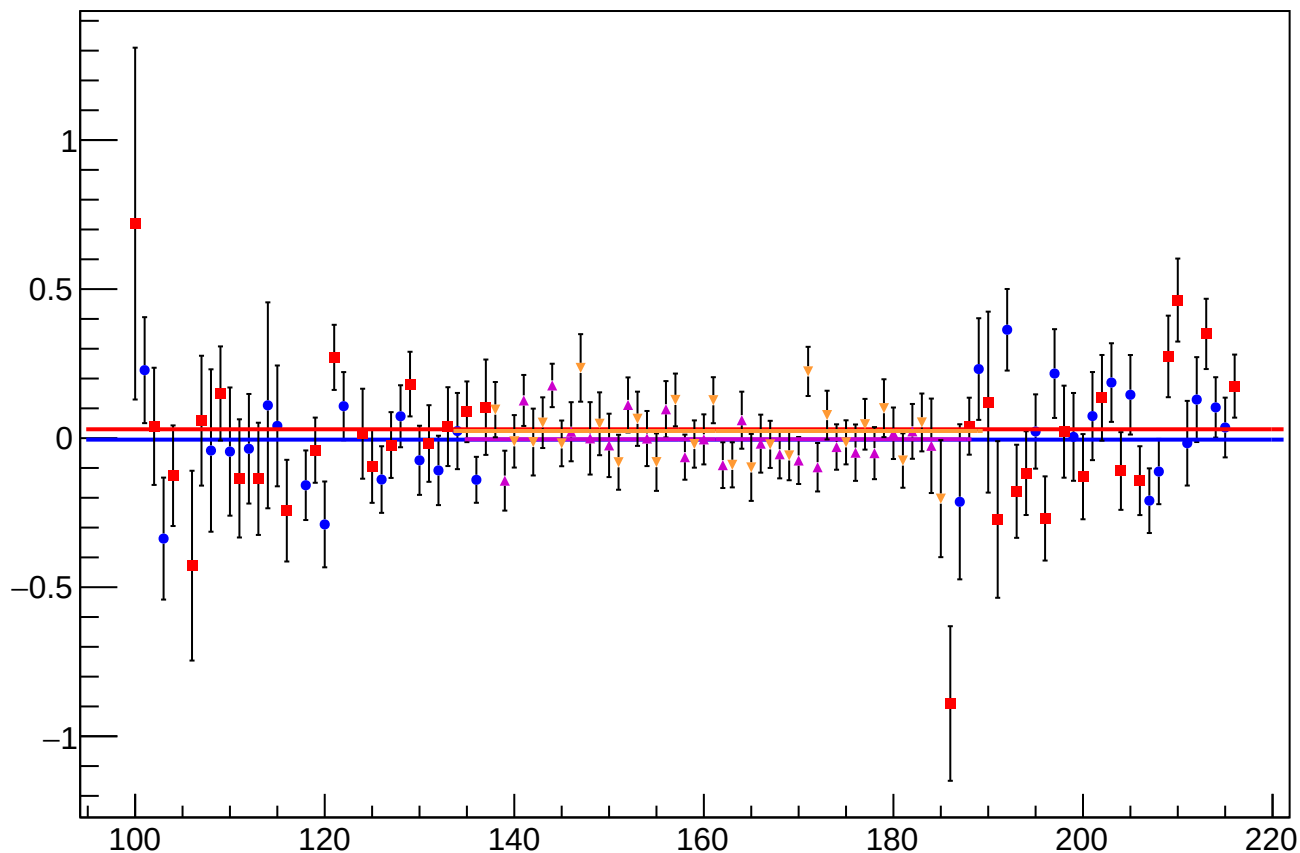
Right Out: 101.864 $\pm$ 0.017  $\chi^2$ /NDF: 2551538.6/34

All: 86.694 $\pm$ 0.007  $\chi^2$ /NDF: 8023294.7/113

- sign 87.366 $\pm$ 0.010  $\chi^2$ /NDF: 4230079.7/57

Left In: 78.614 $\pm$ 0.013  $\chi^2$ /NDF:497846.3/22

asym\_sam\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.005 \pm 0.024$   $\chi^2/\text{NDF}$ : 39.9/30

Left Out:  $0.024 \pm 0.018$   $\chi^2/\text{NDF}$ : 25.5/24

Right Out:  $0.030 \pm 0.024$   $\chi^2/\text{NDF}$ : 66.7/34

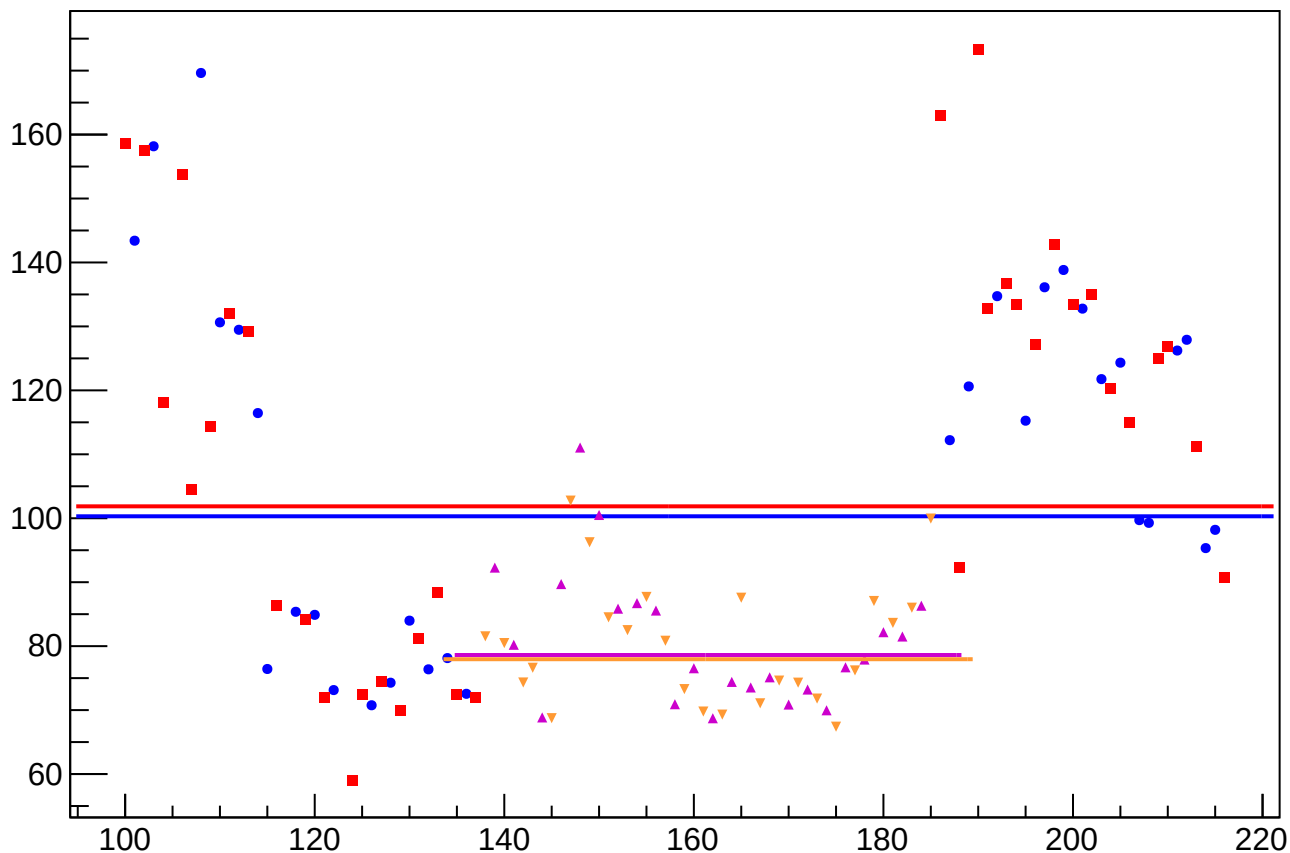
Left In:  $-0.004 \pm 0.019$   $\chi^2/\text{NDF}$ : 18.9/22

+ sign  $0.014 \pm 0.014$   $\chi^2/\text{NDF}$ : 66.4/55

All:  $0.011 \pm 0.010$   $\chi^2/\text{NDF}$ : 153.3/113

- sign  $0.009 \pm 0.015$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 100.307 $\pm$ 0.017  $\chi^2$ /NDF: 2209345.5/30

Left Out: 77.957 $\pm$ 0.013  $\chi^2$ /NDF:439744.9/24

Right Out: 101.864 $\pm$ 0.017  $\chi^2$ /NDF: 2551538.6/34

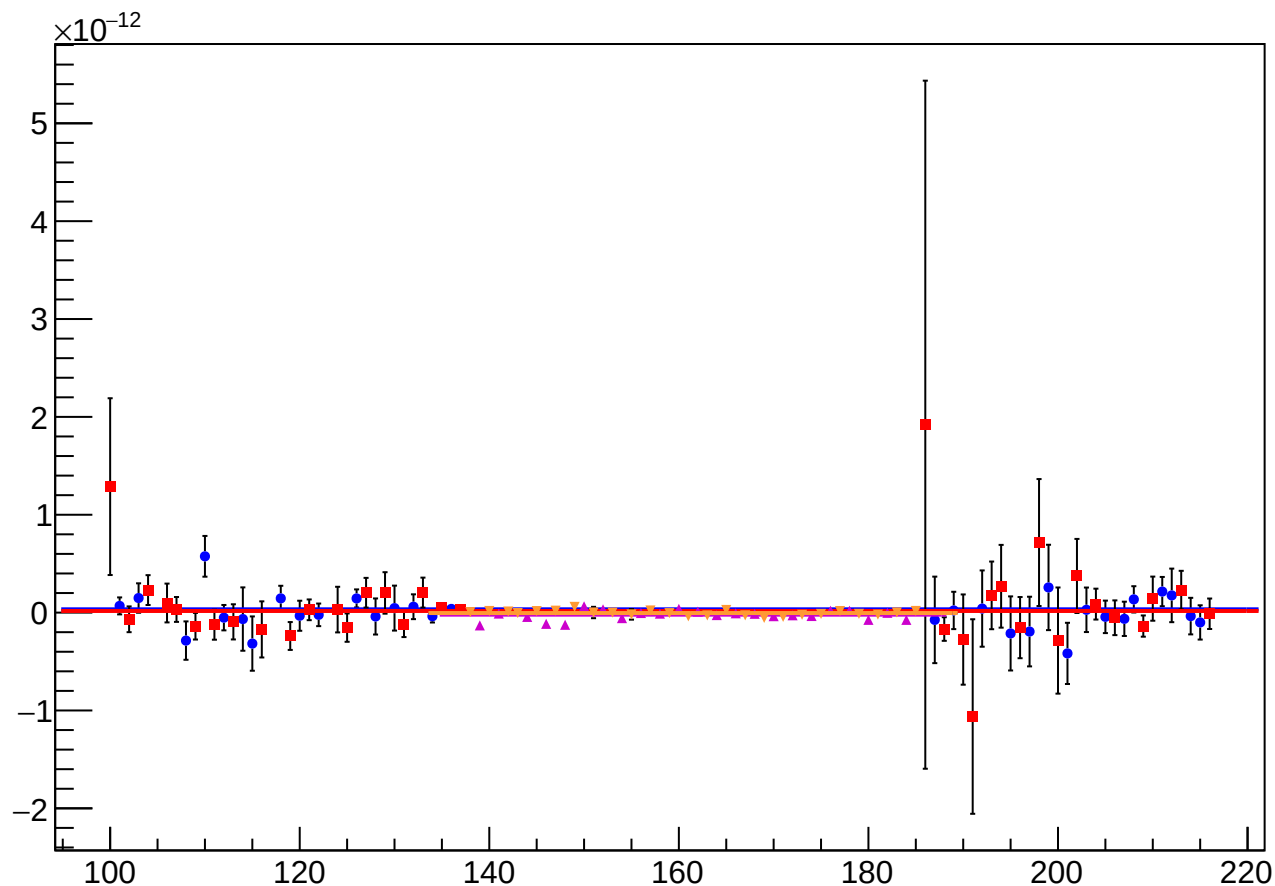
Left In: 78.614 $\pm$ 0.013  $\chi^2$ /NDF:497846.3/22

+ sign 86.059 $\pm$ 0.010  $\chi^2$ /NDF: 3785052.2/55

All: 86.694 $\pm$ 0.007  $\chi^2$ /NDF: 8023294.7/113

- sign 87.366 $\pm$ 0.010  $\chi^2$ /NDF: 4230079.7/57

asym\_sam\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.4/34

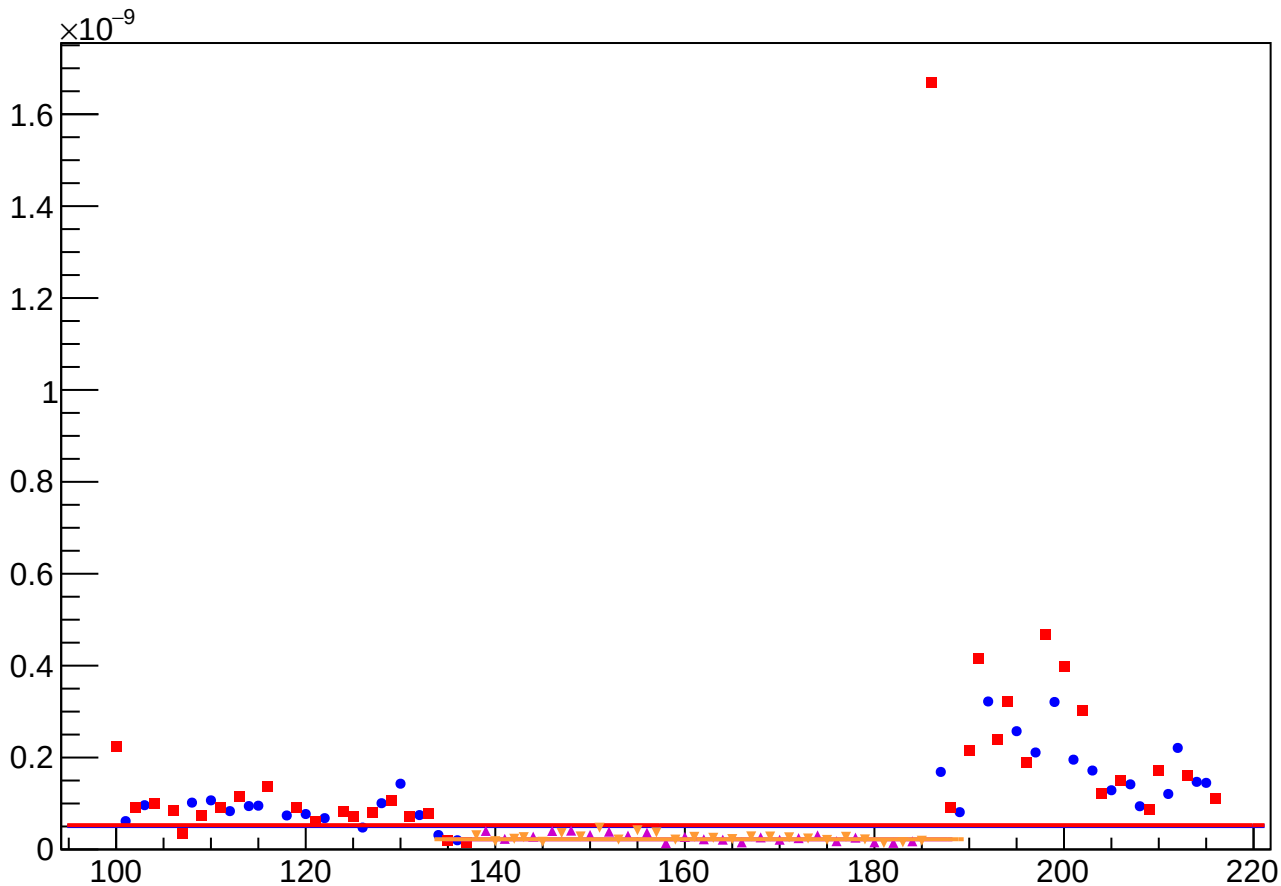
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.7/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 116.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 72.5/57

asym\_sam\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11674681.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2302790.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12987729.9/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2802318.8/22

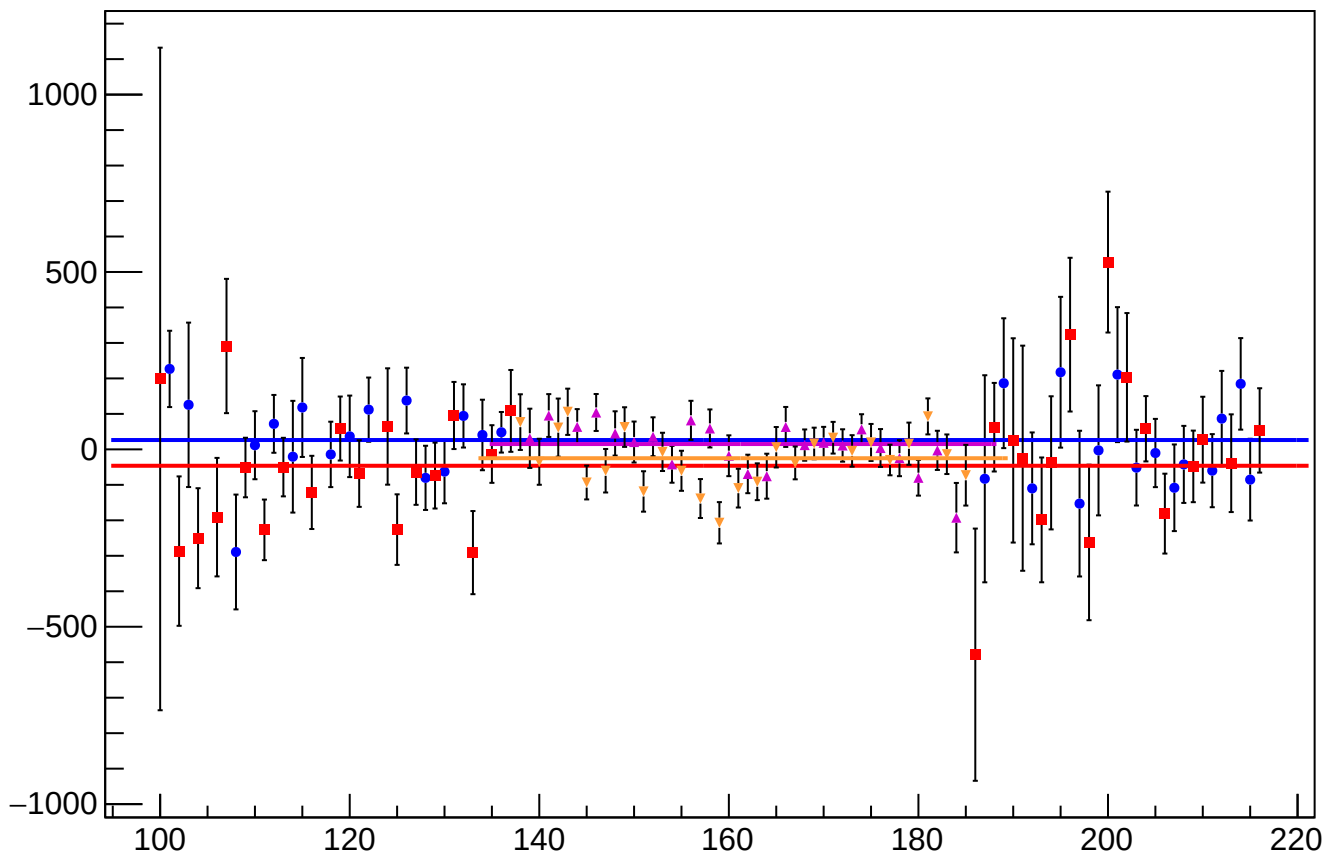
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17965232.9/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37895301.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19929534.9/57



# reg\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $26.326 \pm 19.903$   $\chi^2/\text{NDF}: 23.8/30$

Left Out:  $-24.988 \pm 10.888$   $\chi^2/\text{NDF}: 43.1/24$

Right Out:  $-46.223 \pm 20.341$   $\chi^2/\text{NDF}: 48.0/34$

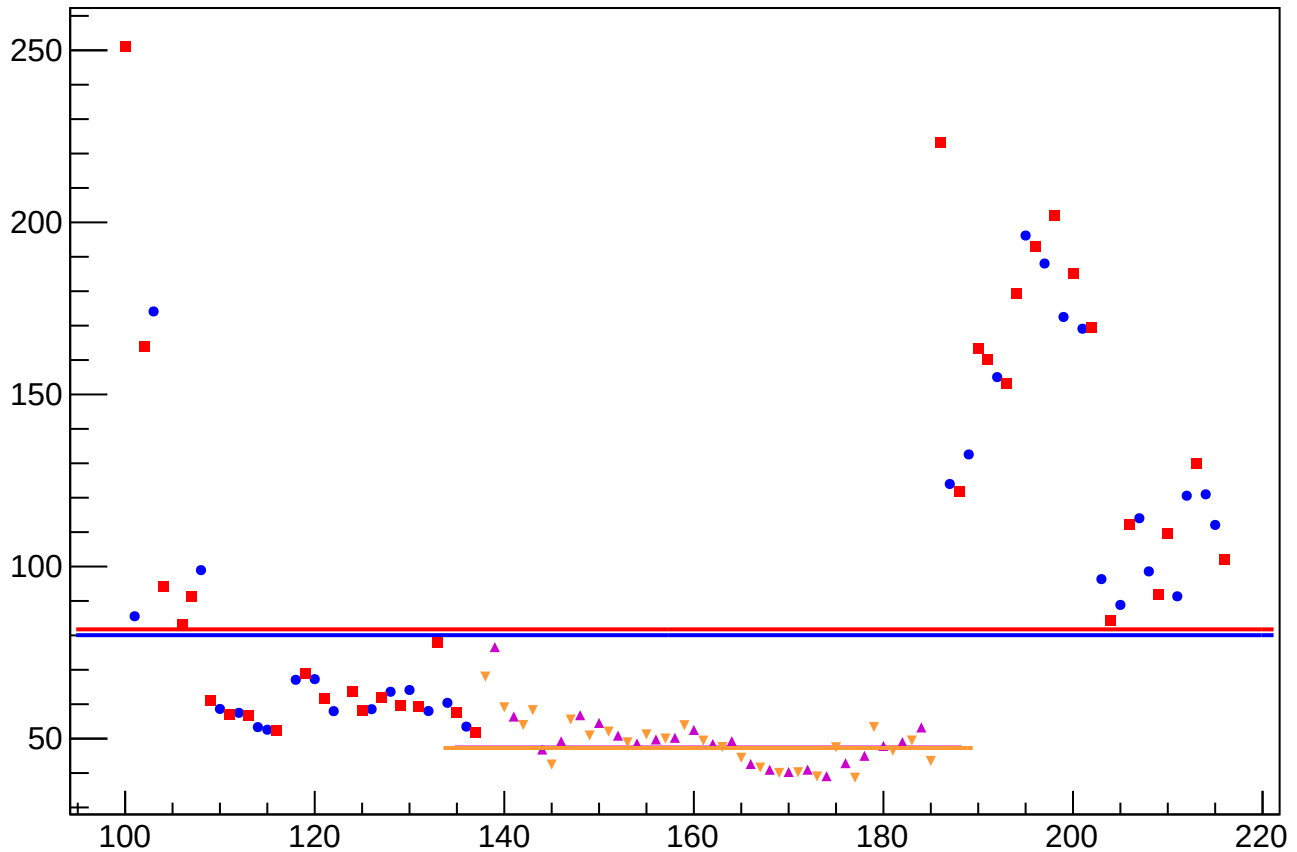
Left In:  $14.994 \pm 11.218$   $\chi^2/\text{NDF}: 24.7/22$

+ sign  $-13.169 \pm 9.552$   $\chi^2/\text{NDF}: 72.0/55$

All:  $-6.420 \pm 6.848$   $\chi^2/\text{NDF}: 152.7/113$

- sign  $0.717 \pm 9.823$   $\chi^2/\text{NDF}: 79.7/57$

# reg\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 80.059+/-0.014  $\chi^2/\text{NDF}$ : 5400683.0/30

Left Out: 47.284+/-0.008  $\chi^2/\text{NDF}$ : 717249.8/24

Right Out: 81.749+/-0.014  $\chi^2/\text{NDF}$ : 6317877.6/34

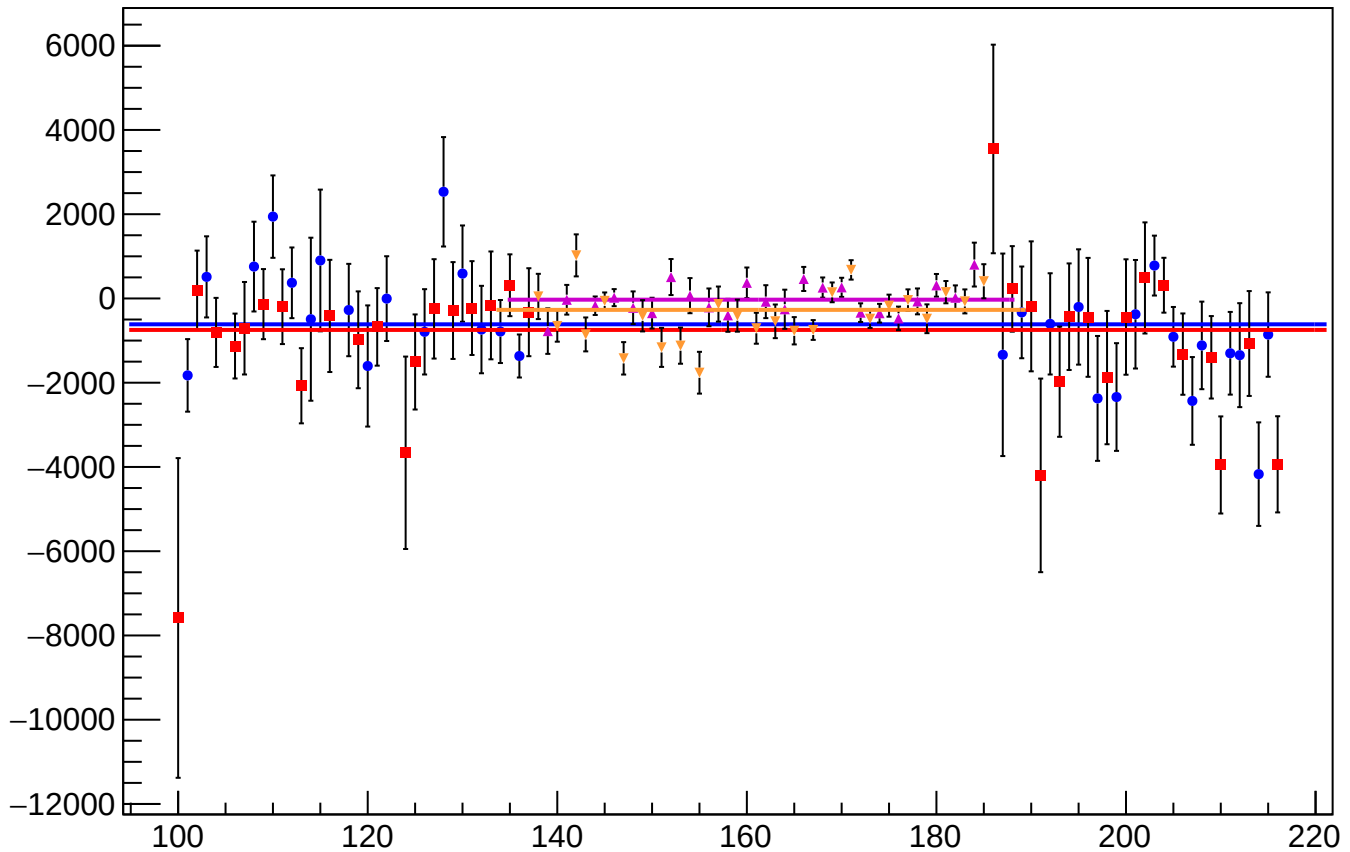
Left In: 47.425+/-0.008  $\chi^2/\text{NDF}$ : 655736.9/22

+ sign 54.832+/-0.007  $\chi^2/\text{NDF}$ : 10292111.1/55

All: 55.123+/-0.005  $\chi^2/\text{NDF}$ : 21636335.7/113

- sign 55.430+/-0.007  $\chi^2/\text{NDF}$ : 11340416.0/57

# asym\_sam\_37\_dd\_reg\_correction\_mean vs Slug



Right In:  $-613.856 \pm 180.575$   $\chi^2/\text{NDF}$ : 44.3/30

Left Out:  $-271.031 \pm 62.346$   $\chi^2/\text{NDF}$ : 73.9/24

Right Out:  $-747.117 \pm 182.813$   $\chi^2/\text{NDF}$ : 40.7/34

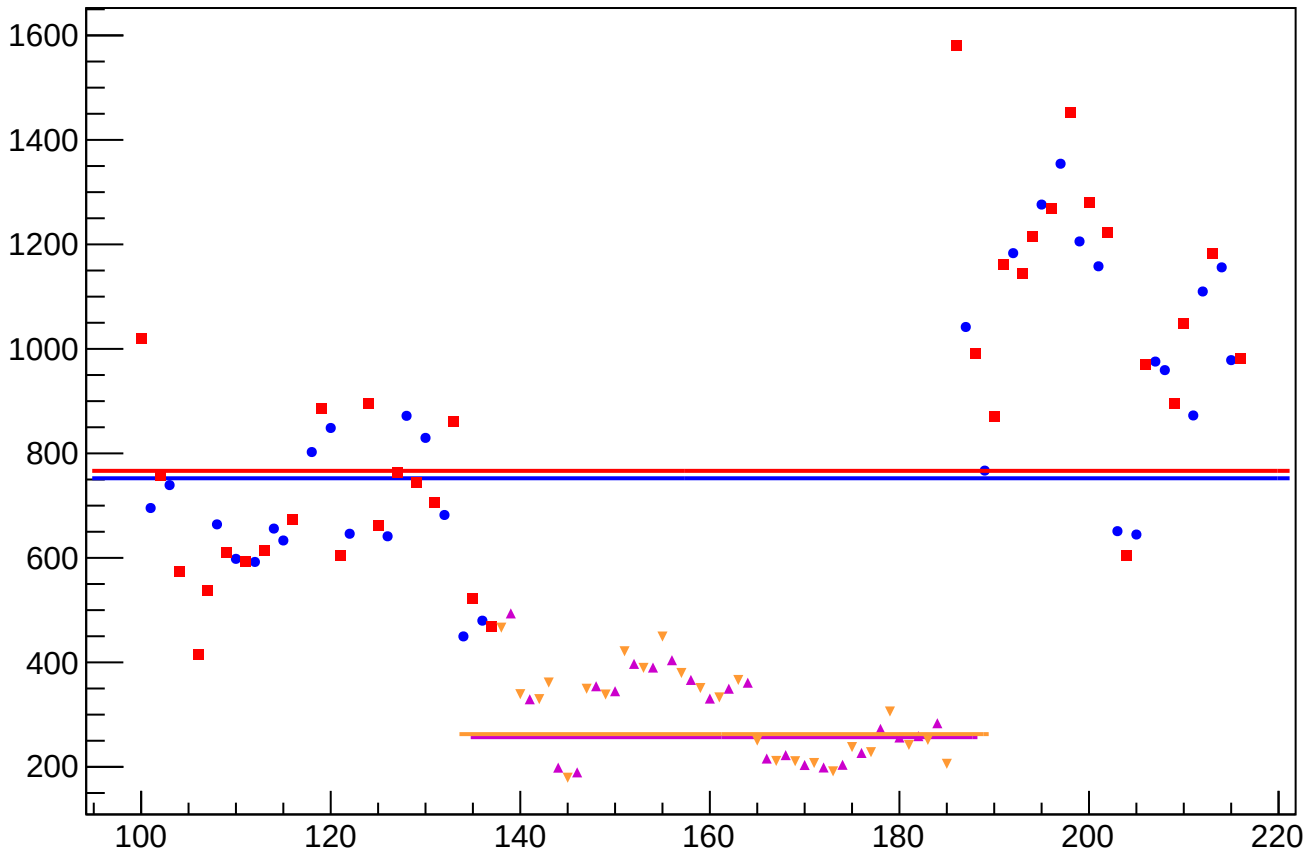
Left In:  $-29.200 \pm 62.671$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-307.546 \pm 58.932$   $\chi^2/\text{NDF}$ : 121.4/55

All:  $-206.725 \pm 41.795$   $\chi^2/\text{NDF}$ : 206.2/113

- sign  $-104.698 \pm 59.284$   $\chi^2/\text{NDF}$ : 78.9/57

# asym\_sam\_37\_dd\_reg\_correction\_rms vs Slug



Right In: 752.360 $\pm$ 0.128  $\chi^2$ /NDF: 3285244.4/30

Left Out: 262.679 $\pm$ 0.044  $\chi^2$ /NDF: 2893255.4/24

Right Out: 766.561 $\pm$ 0.129  $\chi^2$ /NDF: 3960653.8/34

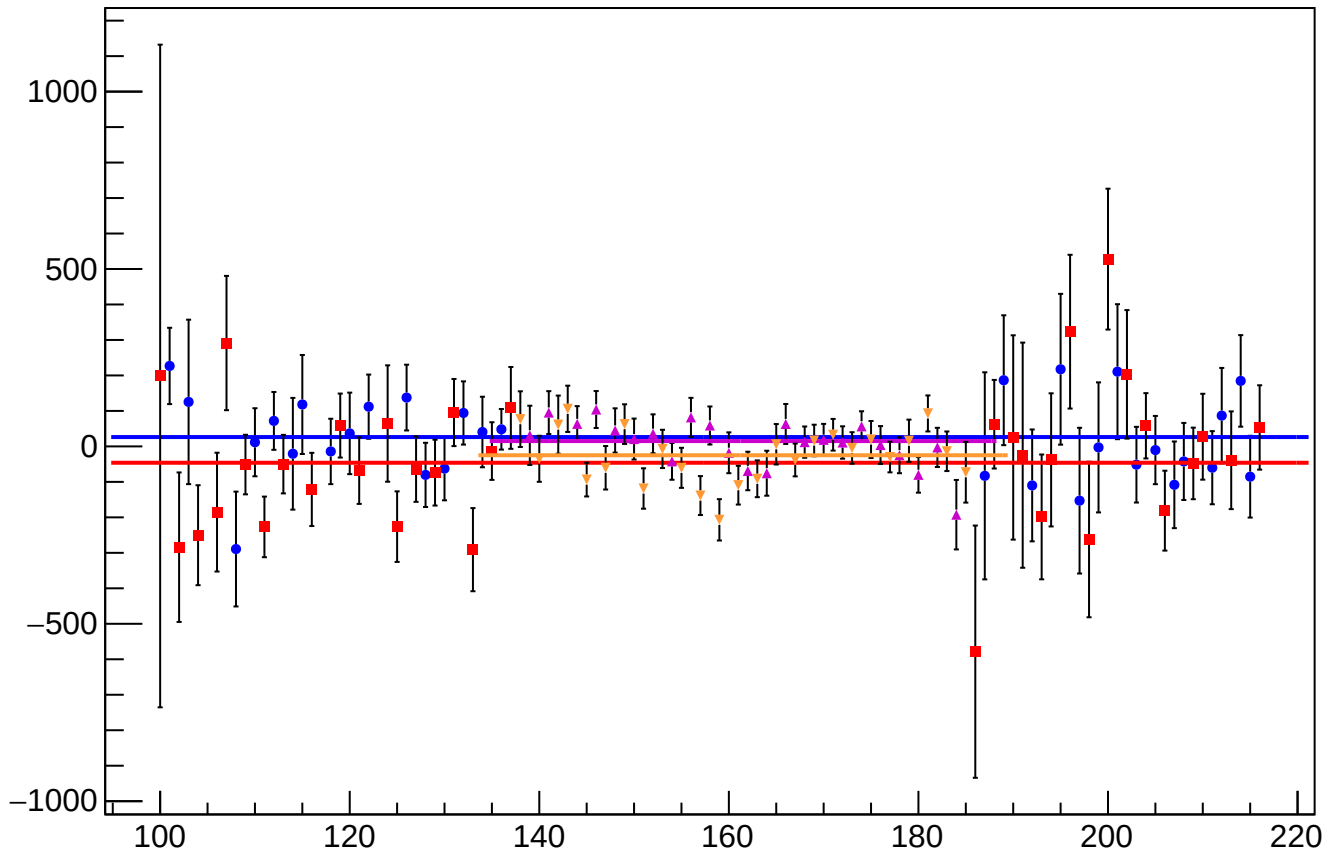
Left In: 256.842 $\pm$ 0.044  $\chi^2$ /NDF: 2639200.9/22

+ sign 314.835 $\pm$ 0.042  $\chi^2$ /NDF: 19319641.5/55

All: 312.653 $\pm$ 0.030  $\chi^2$ /NDF: 39838070.8/1

- sign 310.445 $\pm$ 0.042  $\chi^2$ /NDF: 20512914.1/57

# cor\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $26.320 \pm 19.903$   $\chi^2/\text{NDF}: 23.8/30$

Left Out:  $-24.985 \pm 10.888$   $\chi^2/\text{NDF}: 43.1/24$

Right Out:  $-46.096 \pm 20.342$   $\chi^2/\text{NDF}: 47.9/34$

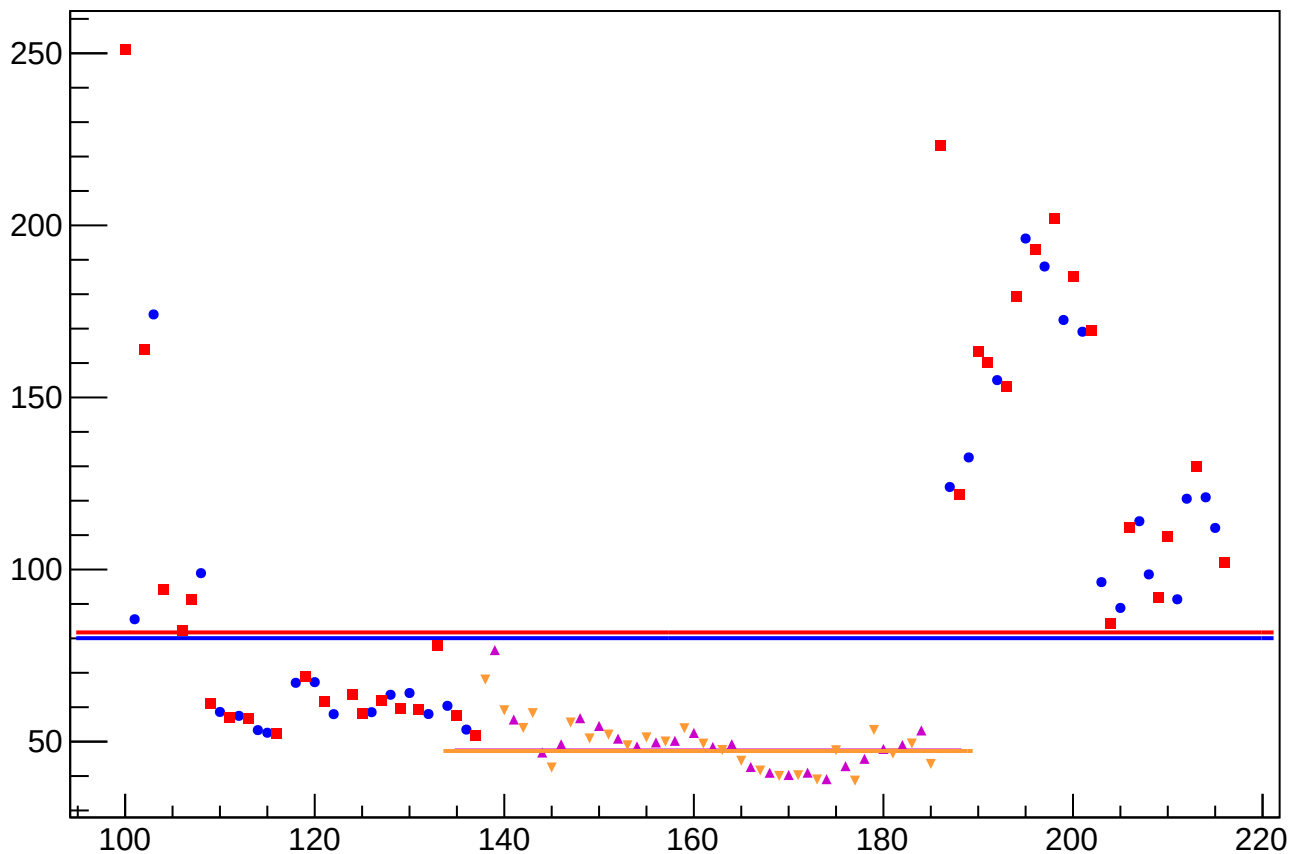
Left In:  $14.992 \pm 11.218$   $\chi^2/\text{NDF}: 24.7/22$

+ sign  $-13.168 \pm 9.552$   $\chi^2/\text{NDF}: 72.0/55$

All:  $-6.406 \pm 6.848$   $\chi^2/\text{NDF}: 152.6/113$

- sign  $0.746 \pm 9.823$   $\chi^2/\text{NDF}: 79.6/57$

# cor\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 80.059+/-0.014  $\chi^2/\text{NDF}$ : 5400685.4/30

Left Out: 47.284+/-0.008  $\chi^2/\text{NDF}$ : 717249.7/24

Right Out: 81.734+/-0.014  $\chi^2/\text{NDF}$ : 6317919.8/34

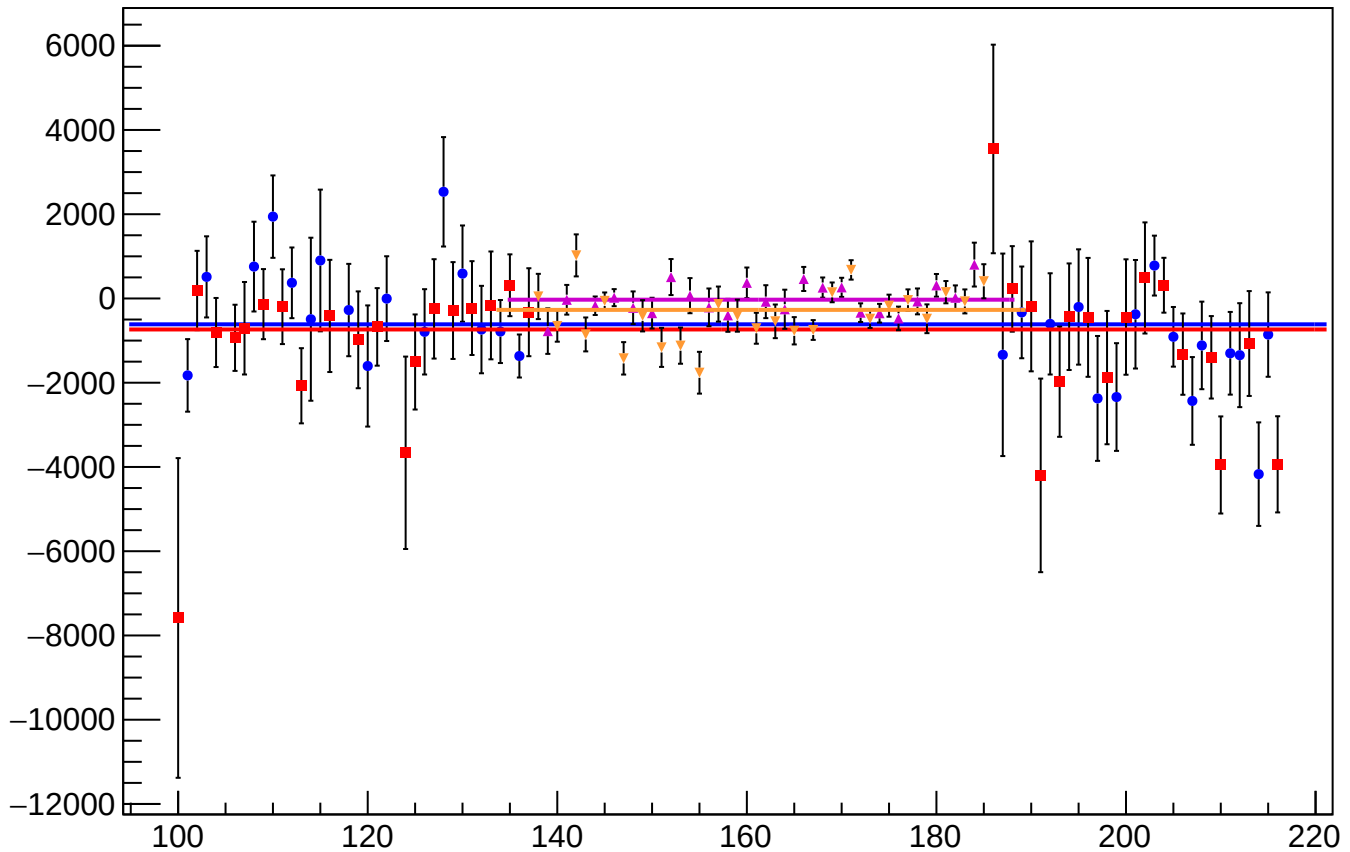
Left In: 47.425+/-0.008  $\chi^2/\text{NDF}$ : 655736.9/22

+ sign 54.832+/-0.007  $\chi^2/\text{NDF}$ : 10292112.8/55

All: 55.121+/-0.005  $\chi^2/\text{NDF}$ : 21632172.7/113

- sign 55.426+/-0.007  $\chi^2/\text{NDF}$ : 11336303.0/57

# asym\_sam\_37\_dd\_cor\_correction\_mean vs Slug



Right In: -613.857 $\pm$ 180.575  $\chi^2/\text{NDF}$ : 44.3/30

Left Out: -271.027 $\pm$ 62.346  $\chi^2/\text{NDF}$ : 73.9/24

Right Out: -736.050 $\pm$ 183.022  $\chi^2/\text{NDF}$ : 40.5/34

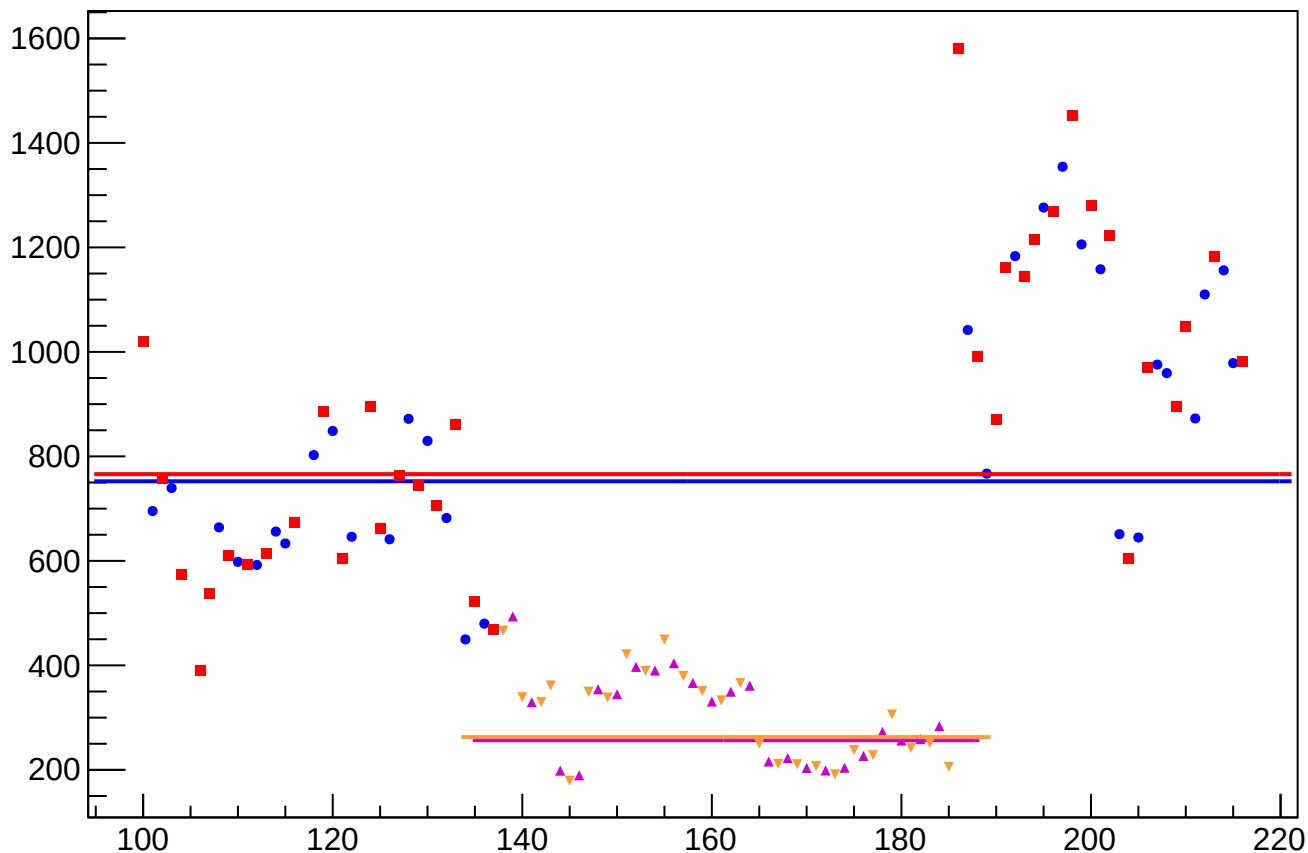
Left In: -29.202 $\pm$ 62.671  $\chi^2/\text{NDF}$ : 24.4/22

+ sign -307.541 $\pm$ 58.932  $\chi^2/\text{NDF}$ : 121.4/55

All: -206.082 $\pm$ 41.798  $\chi^2/\text{NDF}$ : 205.6/113

- sign -103.384 $\pm$ 59.291  $\chi^2/\text{NDF}$ : 78.2/57

# asym\_sam\_37\_dd\_cor\_correction\_rms vs Slug



Right In: 752.363 $\pm$ 0.128  $\chi^2$ /NDF: 3285240.3/30

Left Out: 262.679 $\pm$ 0.044  $\chi^2$ /NDF: 2893257.1/24

Right Out: 766.096 $\pm$ 0.129  $\chi^2$ /NDF: 3999517.1/34

Left In: 256.842 $\pm$ 0.044  $\chi^2$ /NDF: 2639196.2/22

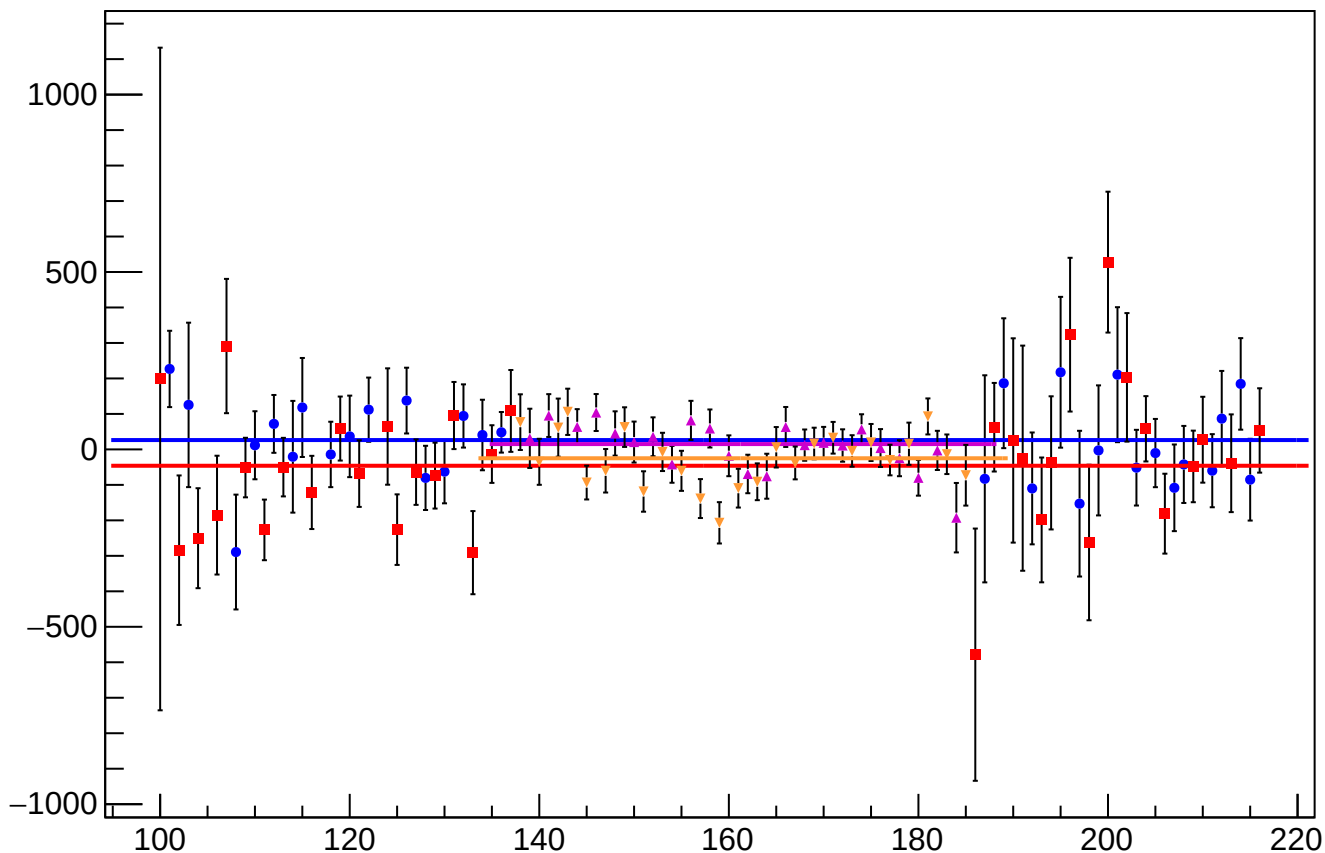
+ sign 314.835 $\pm$ 0.042  $\chi^2$ /NDF: 19319701.2/55

All: 312.575 $\pm$ 0.030  $\chi^2$ /NDF: 39823641.7/1

- sign 310.287 $\pm$ 0.042  $\chi^2$ /NDF: 20498021.5/57



# eigen\_cor\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $26.320 \pm 19.903$   $\chi^2/\text{NDF}: 23.8/30$

Left Out:  $-24.985 \pm 10.888$   $\chi^2/\text{NDF}: 43.1/24$

Right Out:  $-46.096 \pm 20.342$   $\chi^2/\text{NDF}: 47.9/34$

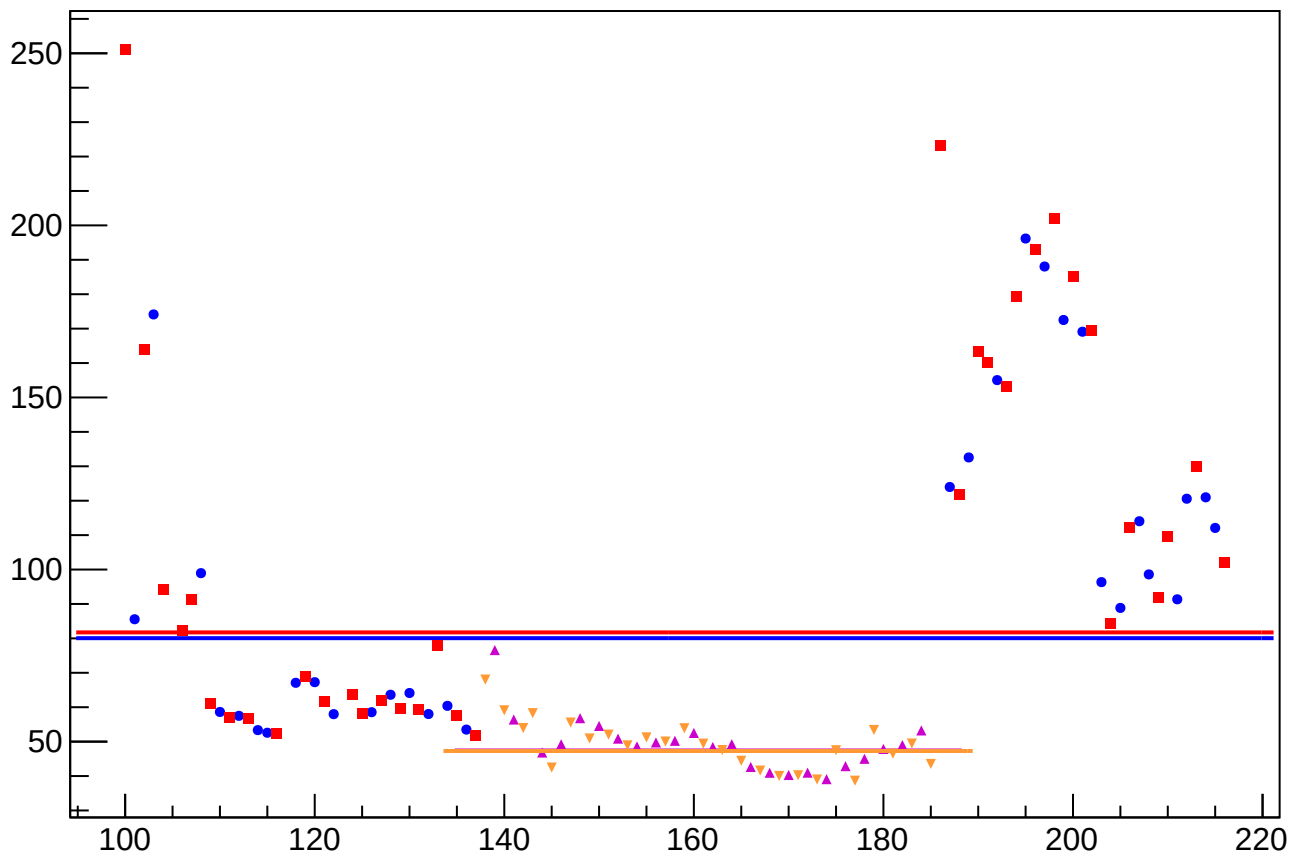
Left In:  $14.992 \pm 11.218$   $\chi^2/\text{NDF}: 24.7/22$

+ sign  $-13.168 \pm 9.552$   $\chi^2/\text{NDF}: 72.0/55$

All:  $-6.406 \pm 6.848$   $\chi^2/\text{NDF}: 152.6/113$

- sign  $0.746 \pm 9.823$   $\chi^2/\text{NDF}: 79.6/57$

# eigen\_cor\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 80.059+/-0.014  $\chi^2$ /NDF: 5400685.4/30

Left Out: 47.284+/-0.008  $\chi^2$ /NDF: 717249.7/24

Right Out: 81.734+/-0.014  $\chi^2$ /NDF: 6317919.8/34

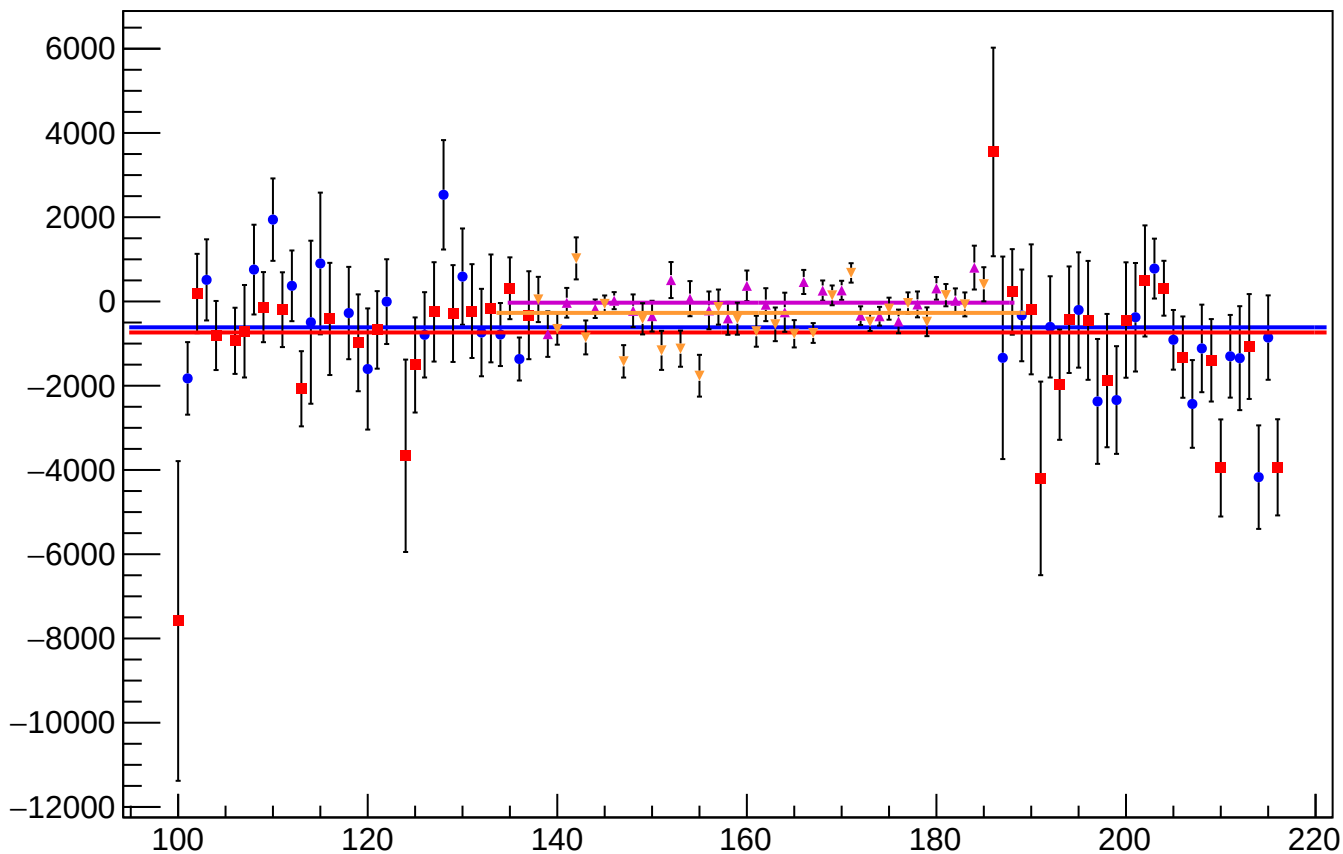
Left In: 47.425+/-0.008  $\chi^2$ /NDF: 655736.9/22

+ sign 54.832+/-0.007  $\chi^2$ /NDF: 10292112.8/55

All: 55.121+/-0.005  $\chi^2$ /NDF: 21632172.7/113

- sign 55.426+/-0.007  $\chi^2$ /NDF: 11336303.0/57

asym\_sam\_37\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-613.857 \pm 180.575$   $\chi^2/\text{NDF}$ : 44.3/30

Left Out:  $-271.027 \pm 62.346$   $\chi^2/\text{NDF}$ : 73.9/24

Right Out:  $-736.050 \pm 183.022$   $\chi^2/\text{NDF}$ : 40.5/34

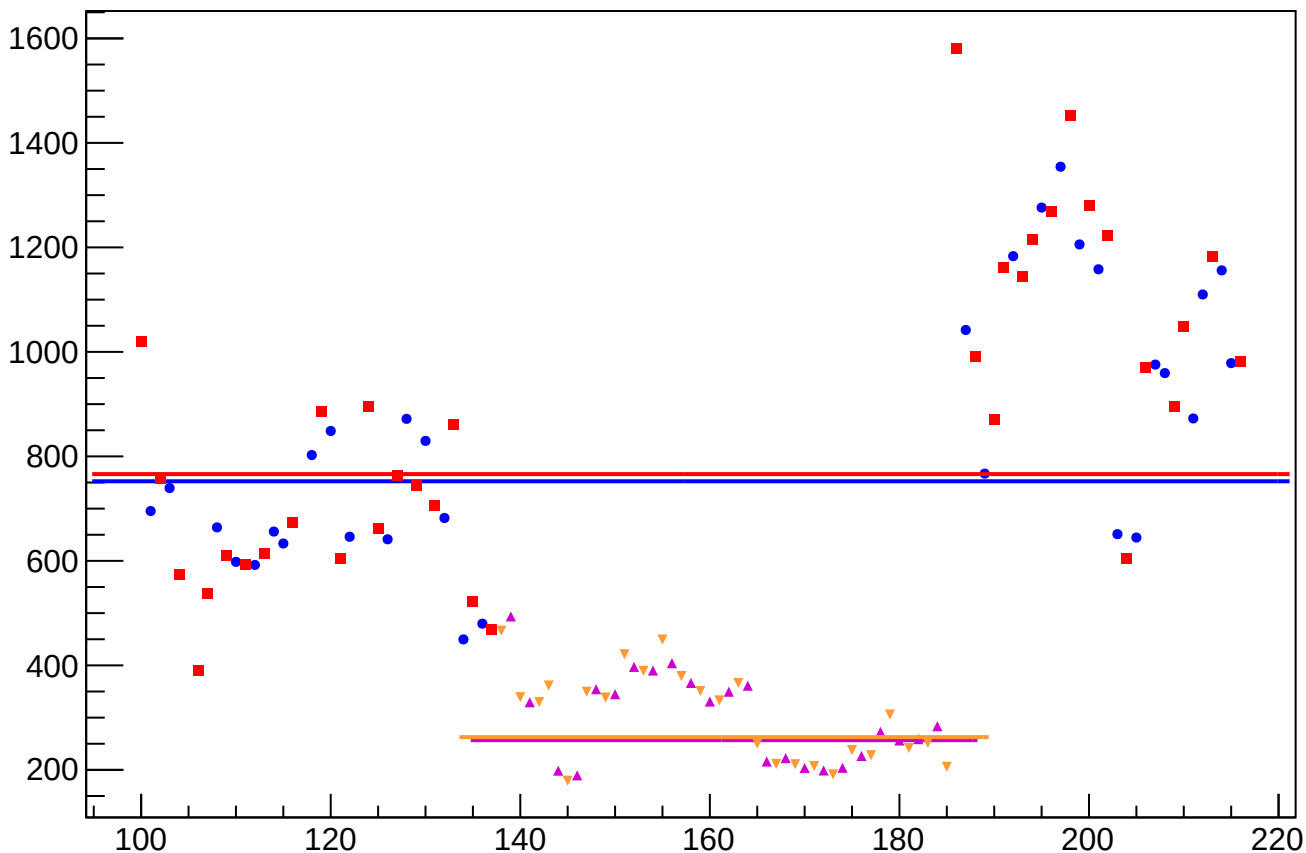
Left In:  $-29.202 \pm 62.671$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-307.541 \pm 58.932$   $\chi^2/\text{NDF}$ : 121.4/55

All:  $-206.082 \pm 41.798$   $\chi^2/\text{NDF}$ : 205.6/113

- sign  $-103.384 \pm 59.291$   $\chi^2/\text{NDF}$ : 78.2/57

asym\_sam\_37\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 752.363+/-0.128  $\chi^2/\text{NDF}$ : 3285240.3/30

Left Out: 262.679+/-0.044  $\chi^2/\text{NDF}$ : 2893257.1/24

Right Out: 766.096+/-0.129  $\chi^2/\text{NDF}$ : 3999517.1/34

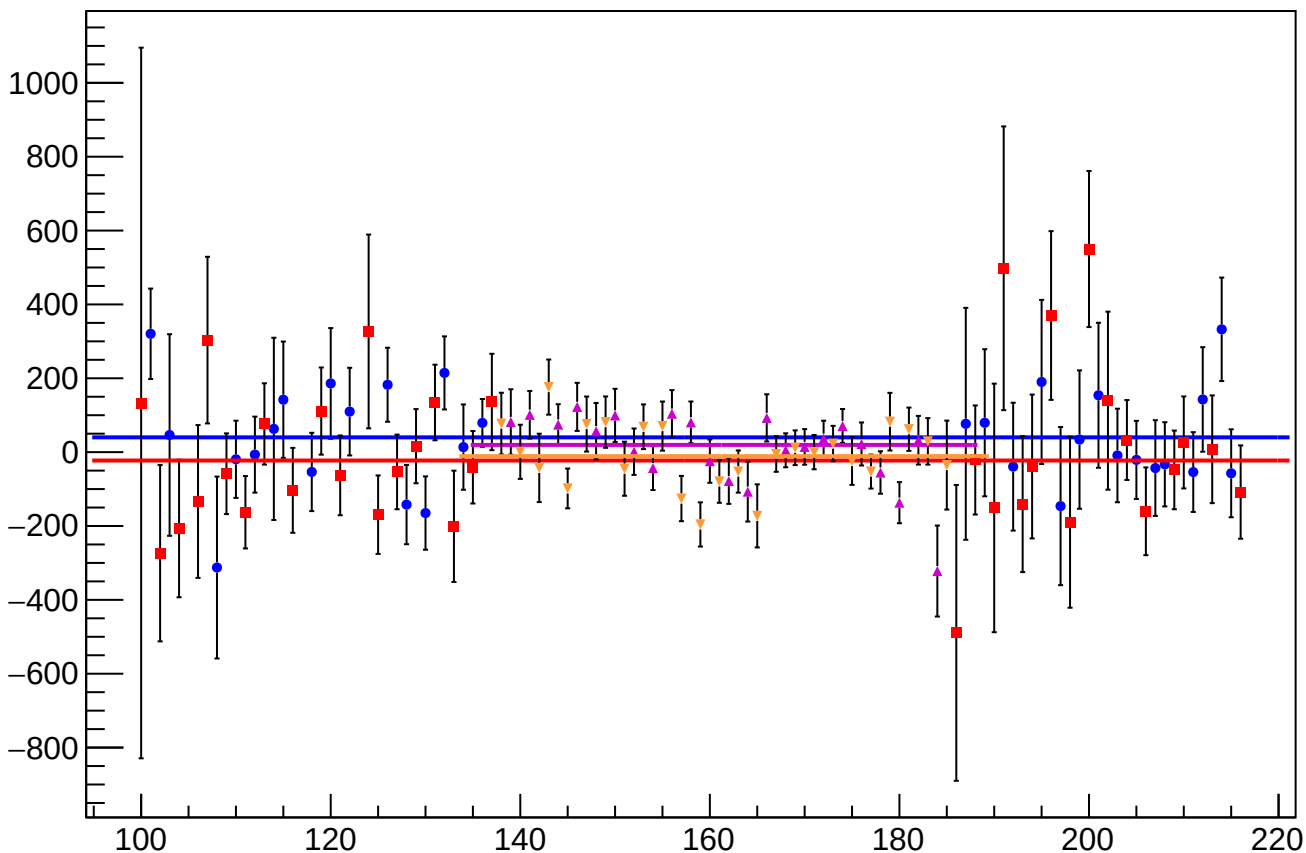
Left In: 256.842+/-0.044  $\chi^2/\text{NDF}$ : 2639196.2/22

+ sign 314.835+/-0.042  $\chi^2/\text{NDF}$ : 19319701.2/55

All: 312.575+/-0.030  $\chi^2/\text{NDF}$ : 39823641.7/11

- sign 310.287+/-0.042  $\chi^2/\text{NDF}$ : 20498021.5/57

# dit\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $40.022 \pm 22.600$   $\chi^2/\text{NDF}$ : 32.4/30

Left Out:  $-10.823 \pm 12.306$   $\chi^2/\text{NDF}$ : 40.4/24

Right Out:  $-22.660 \pm 23.467$   $\chi^2/\text{NDF}$ : 35.9/34

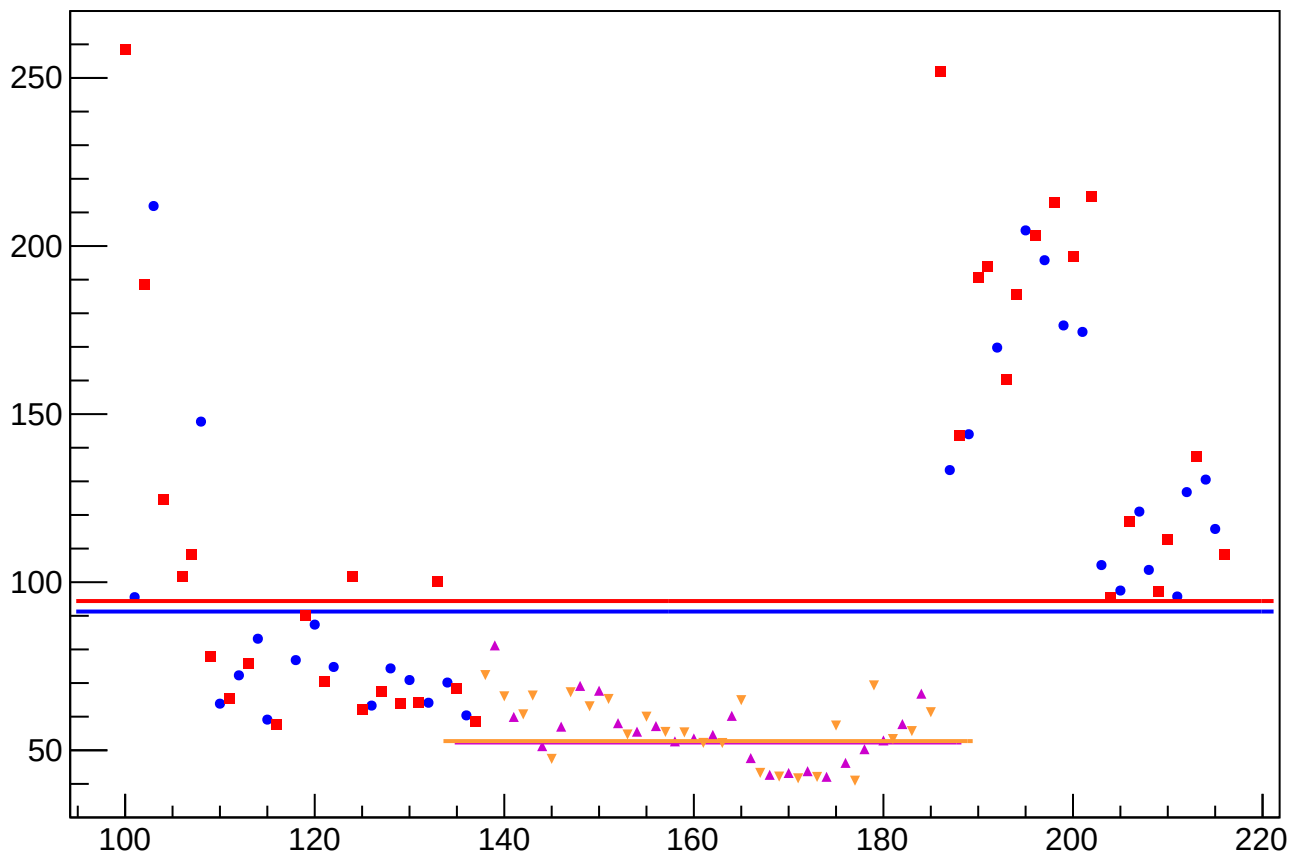
Left In:  $19.597 \pm 12.546$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $0.805 \pm 10.808$   $\chi^2/\text{NDF}$ : 76.7/55

All:  $5.394 \pm 7.731$   $\chi^2/\text{NDF}$ : 152.3/113

- sign  $10.204 \pm 11.064$   $\chi^2/\text{NDF}$ : 75.2/57

# dit\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 91.274 $\pm$ 0.016  $\chi^2$ /NDF: 4716413.7/30

Left Out: 52.731 $\pm$ 0.009  $\chi^2$ /NDF: 1167195.4/24

Right Out: 94.392 $\pm$ 0.017  $\chi^2$ /NDF: 5794553.9/34

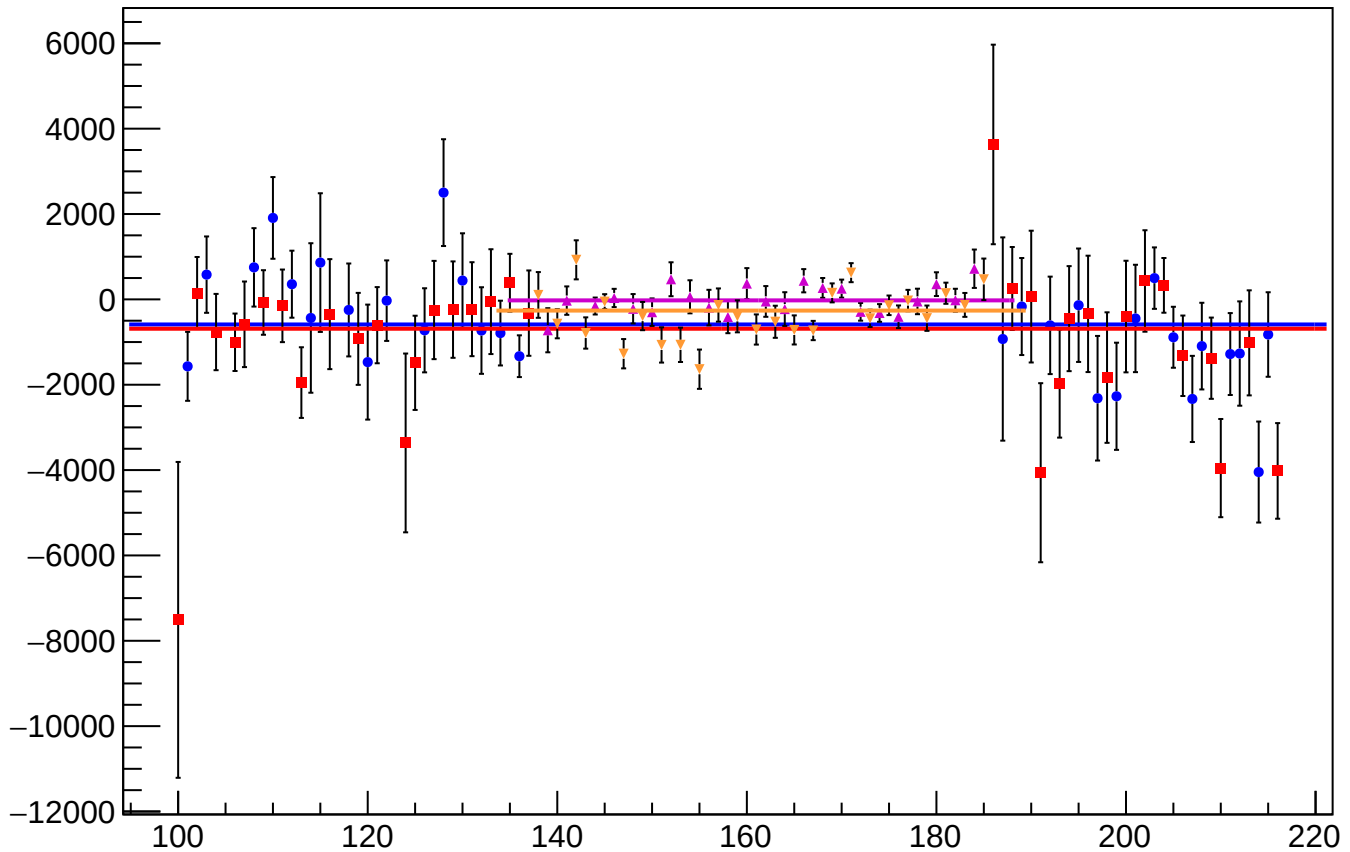
Left In: 52.314 $\pm$ 0.009  $\chi^2$ /NDF: 891847.5/22

+ sign 61.545 $\pm$ 0.008  $\chi^2$ /NDF: 10370255.9/55

All: 61.605 $\pm$ 0.005  $\chi^2$ /NDF: 22057898.5/113

- sign 61.667 $\pm$ 0.008  $\chi^2$ /NDF: 11687518.0/57

# asym\_sam\_37\_dd\_dit\_correction\_mean vs Slug



Right In:  $-588.112 \pm 175.089$   $\chi^2/\text{NDF}$ : 43.2/30

Left Out:  $-262.582 \pm 58.501$   $\chi^2/\text{NDF}$ : 72.2/24

Right Out:  $-688.013 \pm 174.618$   $\chi^2/\text{NDF}$ : 44.0/34

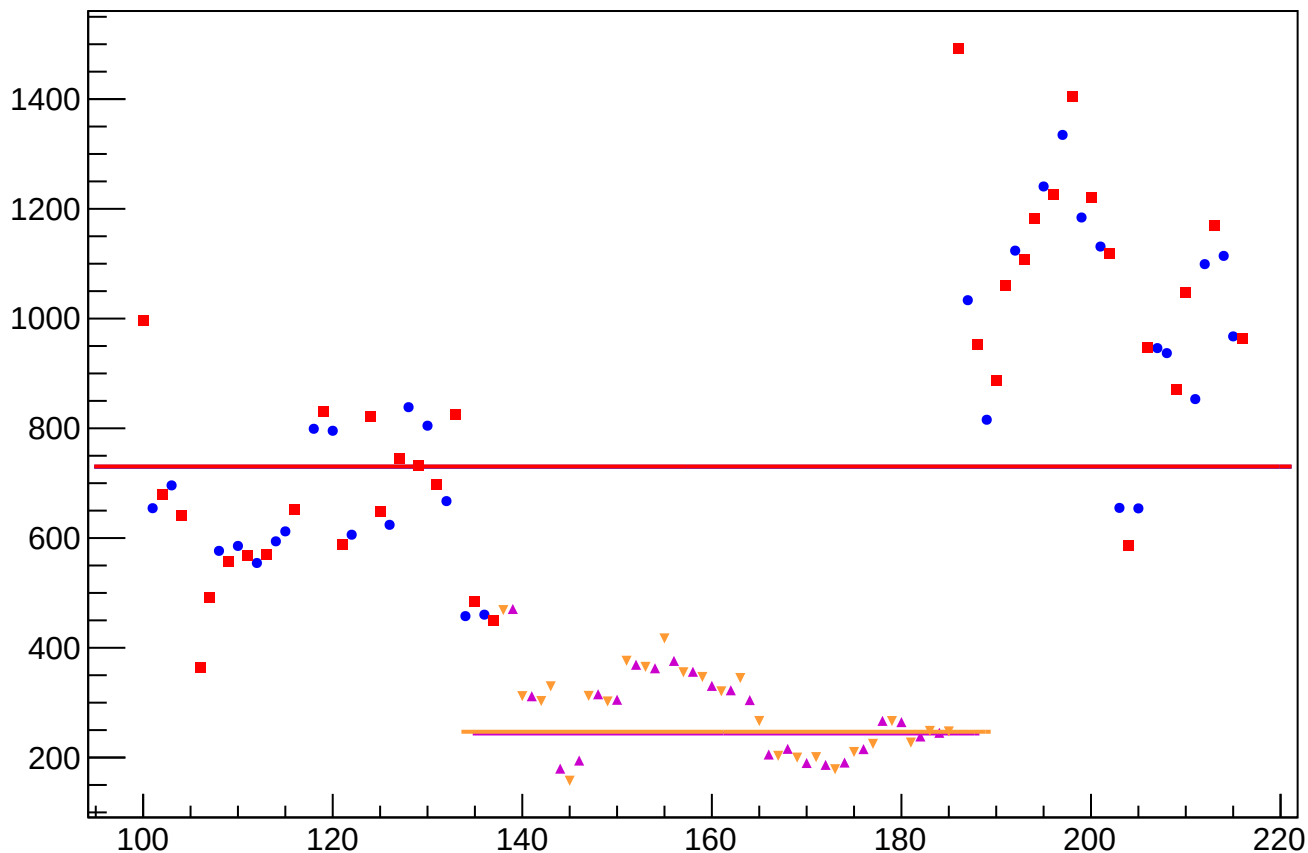
Left In:  $-23.469 \pm 59.397$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-295.273 \pm 55.486$   $\chi^2/\text{NDF}$ : 118.5/55

All:  $-195.185 \pm 39.496$   $\chi^2/\text{NDF}$ : 206.2/113

- sign  $-92.385 \pm 56.233$   $\chi^2/\text{NDF}$ : 81.1/57

# asym\_sam\_37\_dd\_dit\_correction\_rms vs Slug



Right In: 729.957 $\pm$ 0.124  $\chi^2$ /NDF: 3357225.6/30

Left Out: 246.995 $\pm$ 0.041  $\chi^2$ /NDF:2925691.6/24

Right Out: 730.436 $\pm$ 0.123  $\chi^2$ /NDF: 4252187.8/34

Left In: 243.825 $\pm$ 0.042  $\chi^2$ /NDF:2490545.8/22

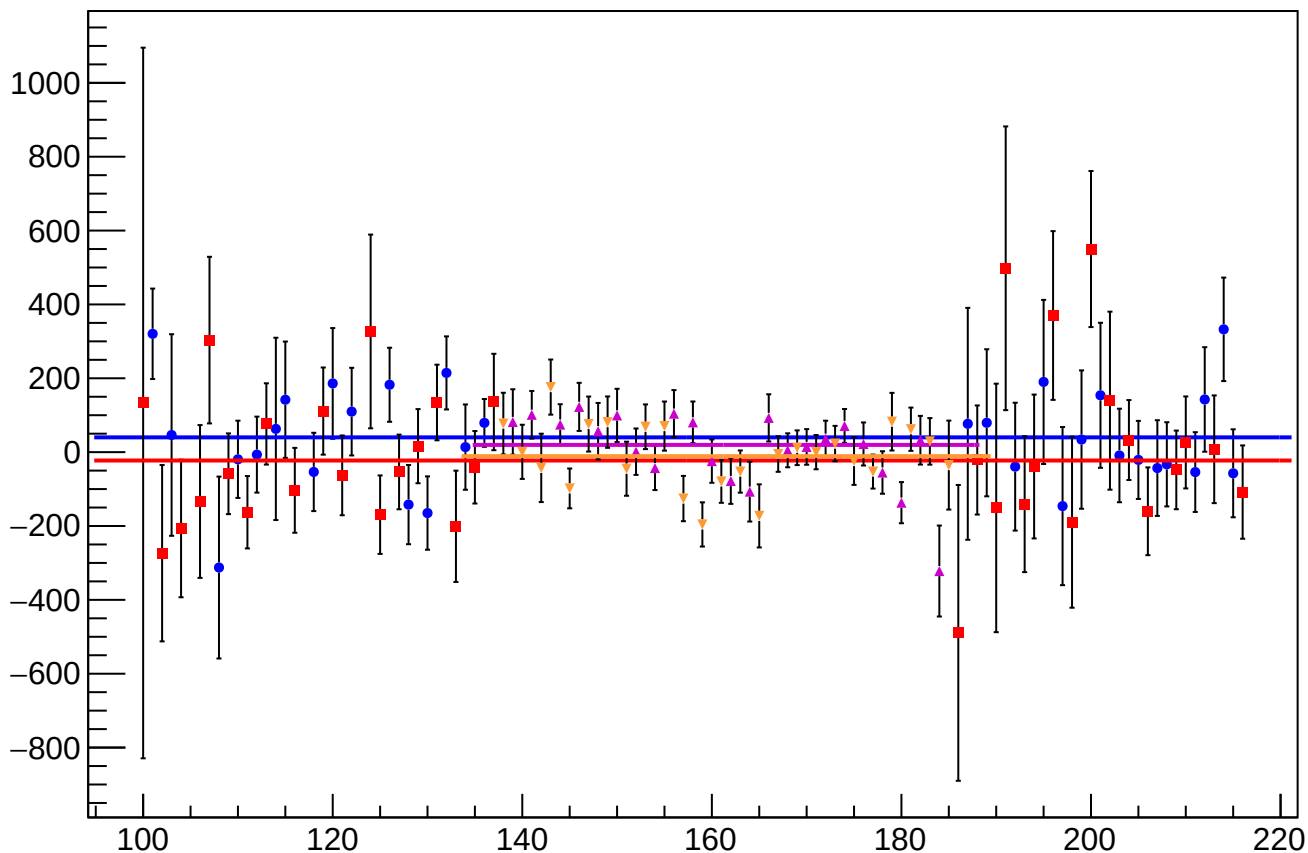
+ sign 295.497 $\pm$ 0.039  $\chi^2$ /NDF: 19971986.8/55

All: 294.901 $\pm$ 0.028  $\chi^2$ /NDF: 40636028.0/1

- sign 294.289 $\pm$ 0.040  $\chi^2$ /NDF: 20663573.1/57



# eigen\_dit\_asym\_sam\_37\_dd\_mean vs Slug



Right In:  $40.023 \pm 22.600$   $\chi^2/\text{NDF}$ : 32.4/30

Left Out:  $-10.822 \pm 12.306$   $\chi^2/\text{NDF}$ : 40.4/24

Right Out:  $-22.659 \pm 23.467$   $\chi^2/\text{NDF}$ : 35.9/34

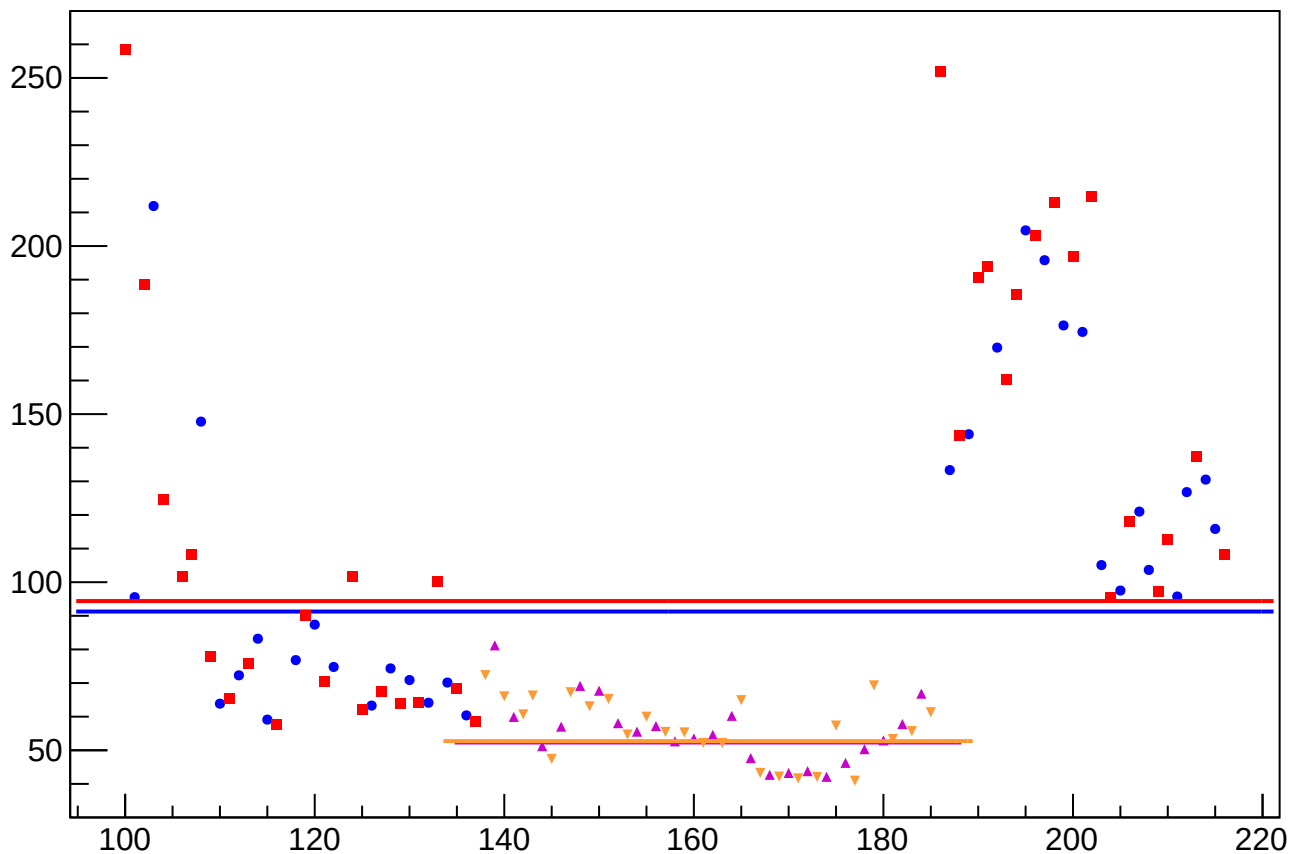
Left In:  $19.598 \pm 12.546$   $\chi^2/\text{NDF}$ : 36.8/22

+ sign  $0.805 \pm 10.808$   $\chi^2/\text{NDF}$ : 76.7/55

All:  $5.395 \pm 7.731$   $\chi^2/\text{NDF}$ : 152.3/113

- sign  $10.205 \pm 11.064$   $\chi^2/\text{NDF}$ : 75.2/57

eigen\_dit\_asym\_sam\_37\_dd\_rms vs Slug



Right In: 91.274 $\pm$ 0.016  $\chi^2$ /NDF: 4716448.4/30

Left Out: 52.731 $\pm$ 0.009  $\chi^2$ /NDF: 1167223.2/24

Right Out: 94.392 $\pm$ 0.017  $\chi^2$ /NDF: 5794559.1/34

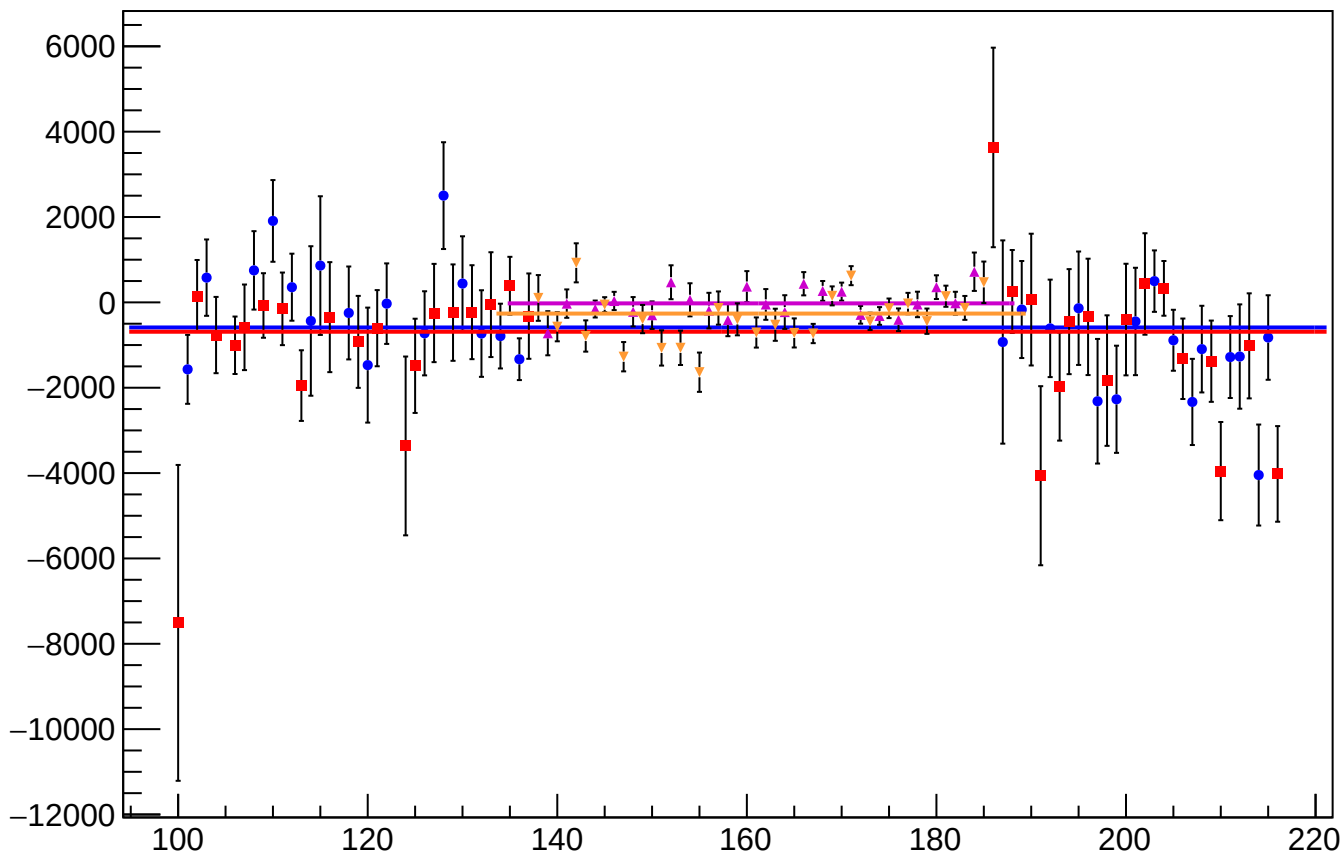
Left In: 52.314 $\pm$ 0.009  $\chi^2$ /NDF: 891856.0/22

+ sign 61.545 $\pm$ 0.008  $\chi^2$ /NDF: 10370275.6/55

All: 61.605 $\pm$ 0.005  $\chi^2$ /NDF: 22057900.8/113

- sign 61.667 $\pm$ 0.008  $\chi^2$ /NDF: 11687500.7/57

asym\_sam\_37\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-588.112 \pm 175.089$   $\chi^2/\text{NDF}$ : 43.2/30

Left Out:  $-262.582 \pm 58.501$   $\chi^2/\text{NDF}$ : 72.2/24

Right Out:  $-688.012 \pm 174.618$   $\chi^2/\text{NDF}$ : 44.0/34

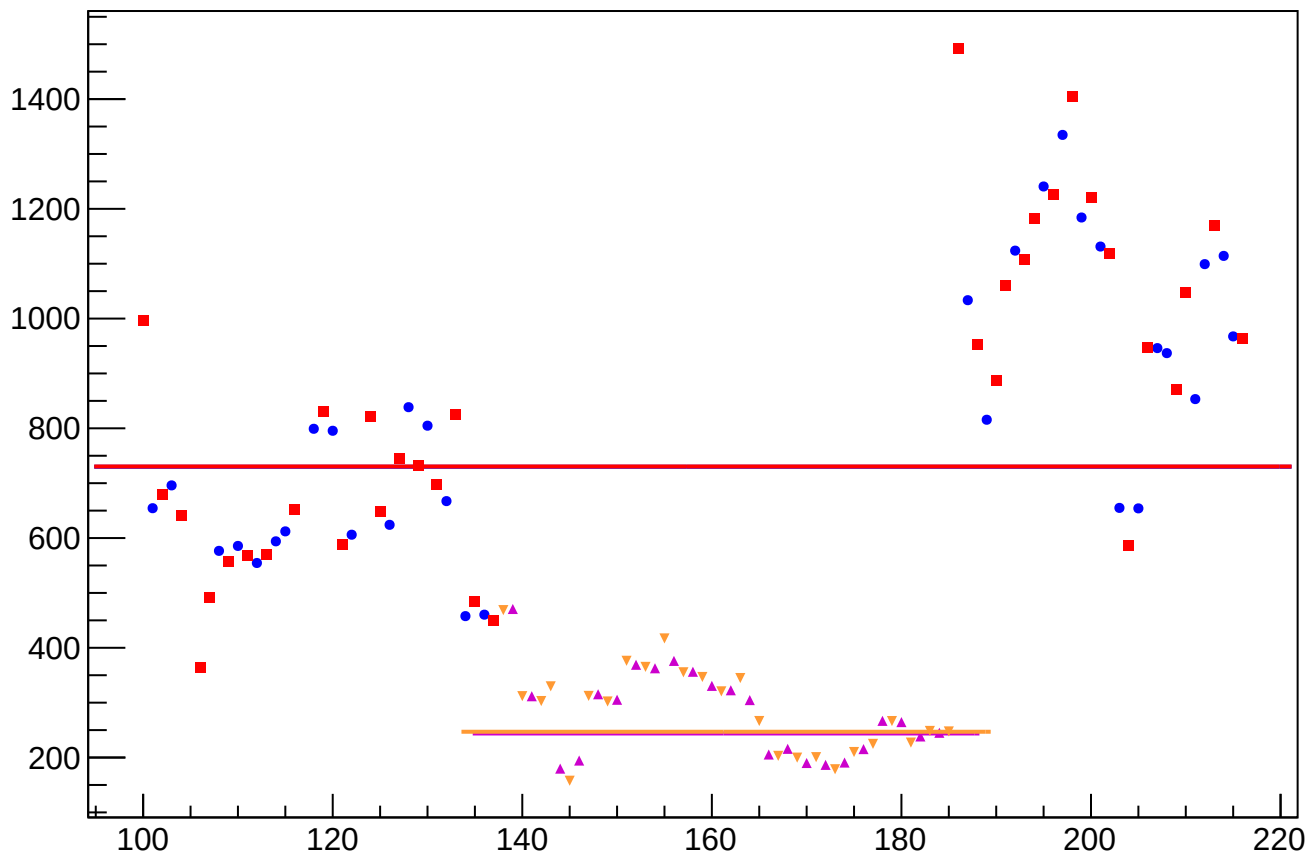
Left In:  $-23.469 \pm 59.397$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-295.273 \pm 55.486$   $\chi^2/\text{NDF}$ : 118.5/55

All:  $-195.185 \pm 39.496$   $\chi^2/\text{NDF}$ : 206.2/113

- sign  $-92.385 \pm 56.232$   $\chi^2/\text{NDF}$ : 81.1/57

asym\_sam\_37\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 729.957 $\pm$ 0.124  $\chi^2$ /NDF: 3357204.6/30

Left Out: 246.995 $\pm$ 0.041  $\chi^2$ /NDF: 2925680.1/24

Right Out: 730.435 $\pm$ 0.123  $\chi^2$ /NDF: 4252178.7/34

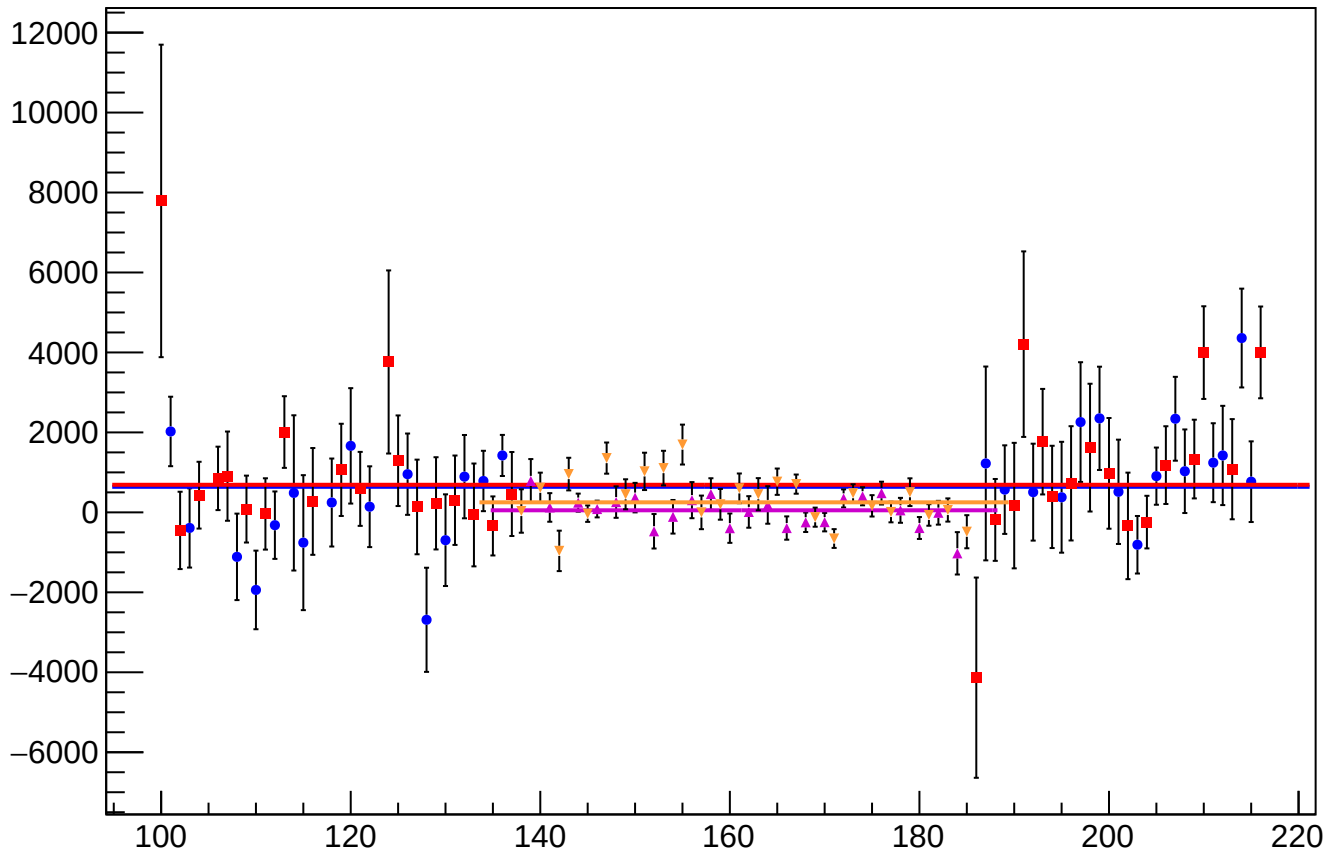
Left In: 243.825 $\pm$ 0.042  $\chi^2$ /NDF: 2490539.0/22

+ sign 295.497 $\pm$ 0.039  $\chi^2$ /NDF: 19971970.9/55

All: 294.901 $\pm$ 0.028  $\chi^2$ /NDF: 40636005.3/1

- sign 294.288 $\pm$ 0.040  $\chi^2$ /NDF: 20663566.3/57

# asym\_sam\_37\_dd\_mean vs Slug



Right In:  $639.635 \pm 182.092$   $\chi^2/\text{NDF}$ : 46.3/30

Left Out:  $251.109 \pm 63.424$   $\chi^2/\text{NDF}$ : 67.5/24

Right Out:  $689.955 \pm 184.594$   $\chi^2/\text{NDF}$ : 41.2/34

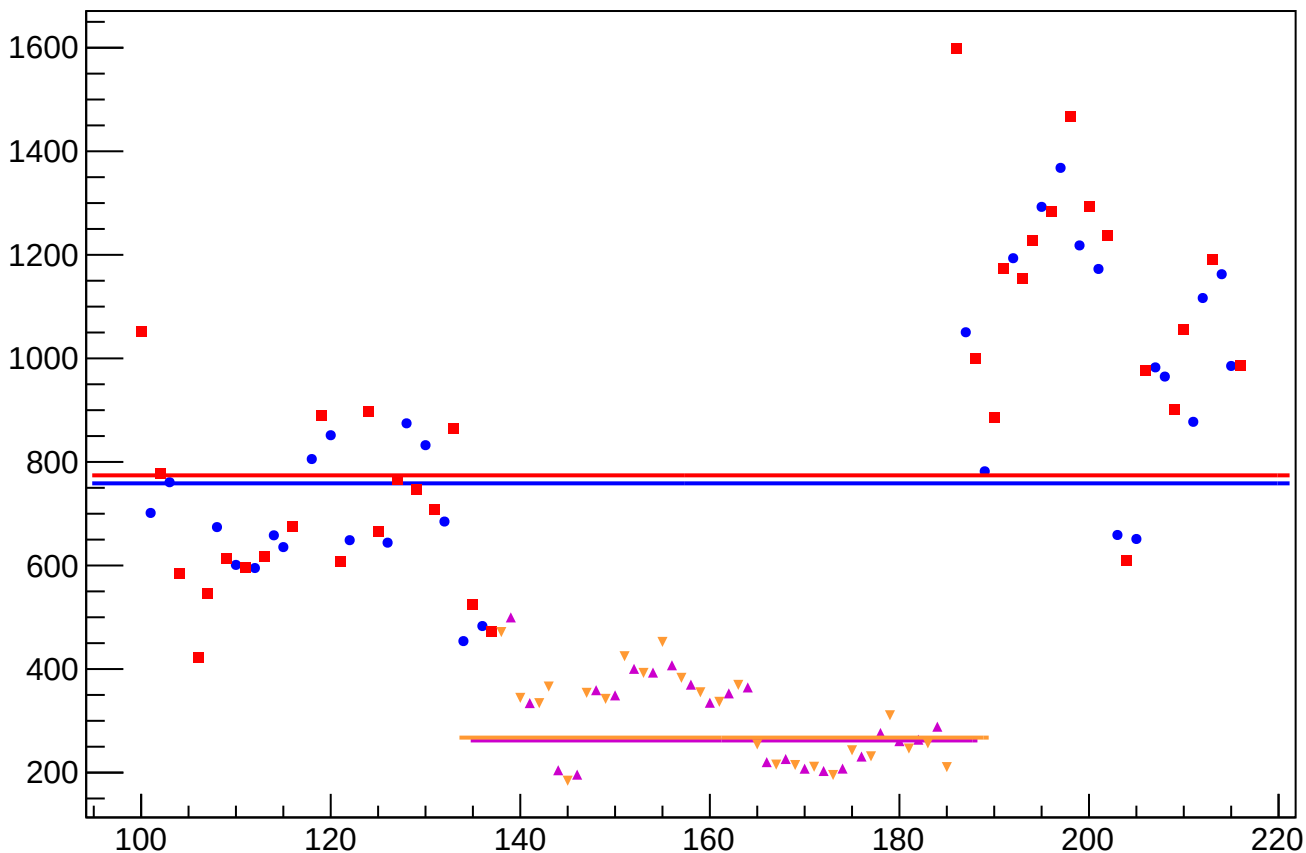
Left In:  $51.707 \pm 63.843$   $\chi^2/\text{NDF}$ : 26.8/22

+ sign  $293.145 \pm 59.894$   $\chi^2/\text{NDF}$ : 117.9/55

All:  $207.157 \pm 42.507$   $\chi^2/\text{NDF}$ : 200.7/113

- sign  $119.896 \pm 60.336$   $\chi^2/\text{NDF}$ : 78.7/57

# asym\_sam\_37\_dd\_rms vs Slug



Right In: 758.652 $\pm$ 0.129  $\chi^2$ /NDF: 3291457.7/30

Left Out: 267.589 $\pm$ 0.045  $\chi^2$ /NDF: 2801460.2/24

Right Out: 774.101 $\pm$ 0.131  $\chi^2$ /NDF: 3940459.5/34

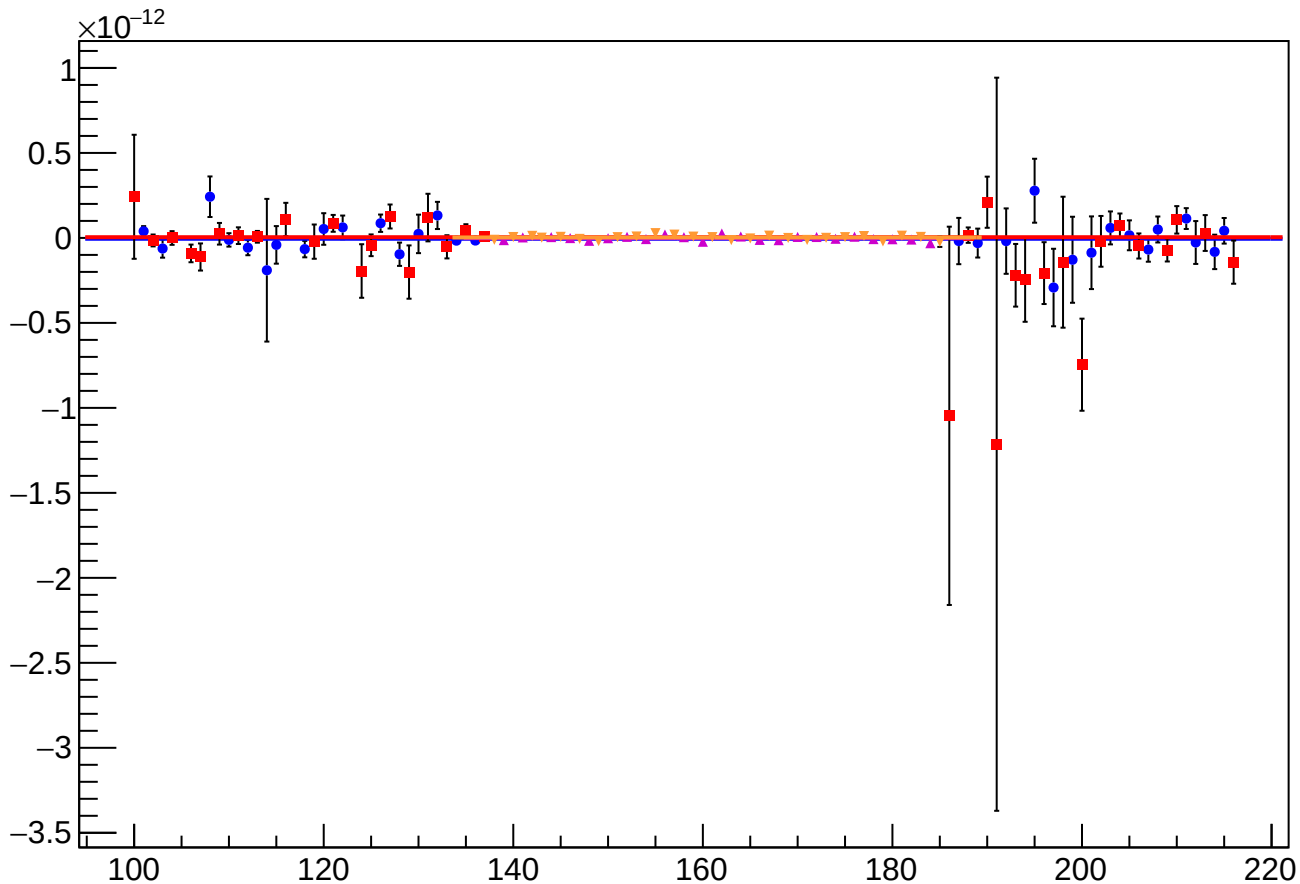
Left In: 262.092 $\pm$ 0.045  $\chi^2$ /NDF: 2537465.8/22

+ sign 320.718 $\pm$ 0.042  $\chi^2$ /NDF: 19064578.7/55

All: 318.770 $\pm$ 0.030  $\chi^2$ /NDF: 39289731.9/11

- sign 316.794 $\pm$ 0.043  $\chi^2$ /NDF: 20220893.2/57

# asym\_sam\_37\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.5/34

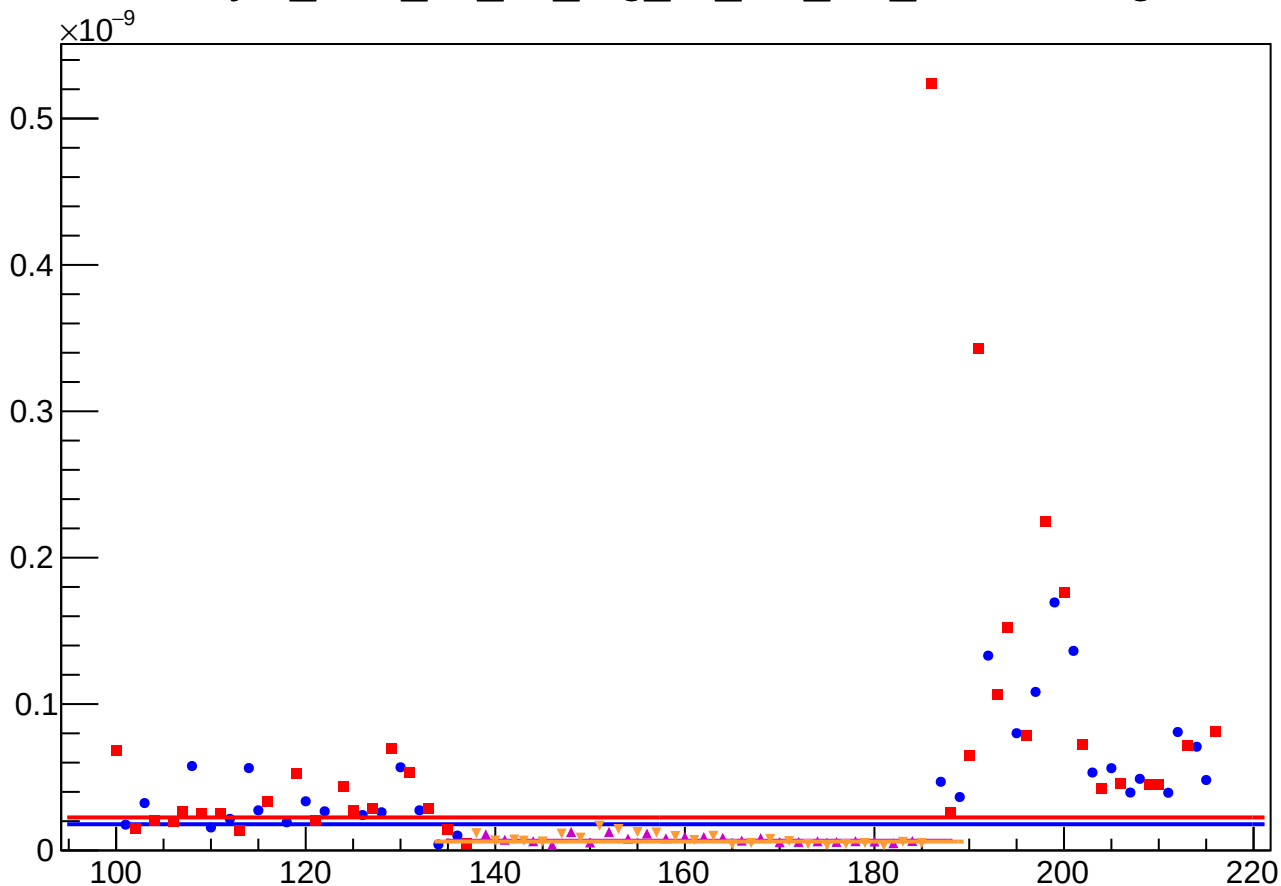
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12.3/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.8/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 101.6/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 53.0/57

asym\_sam\_37\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8136824.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2413933.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6861103.2/34

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 1176996.8/22

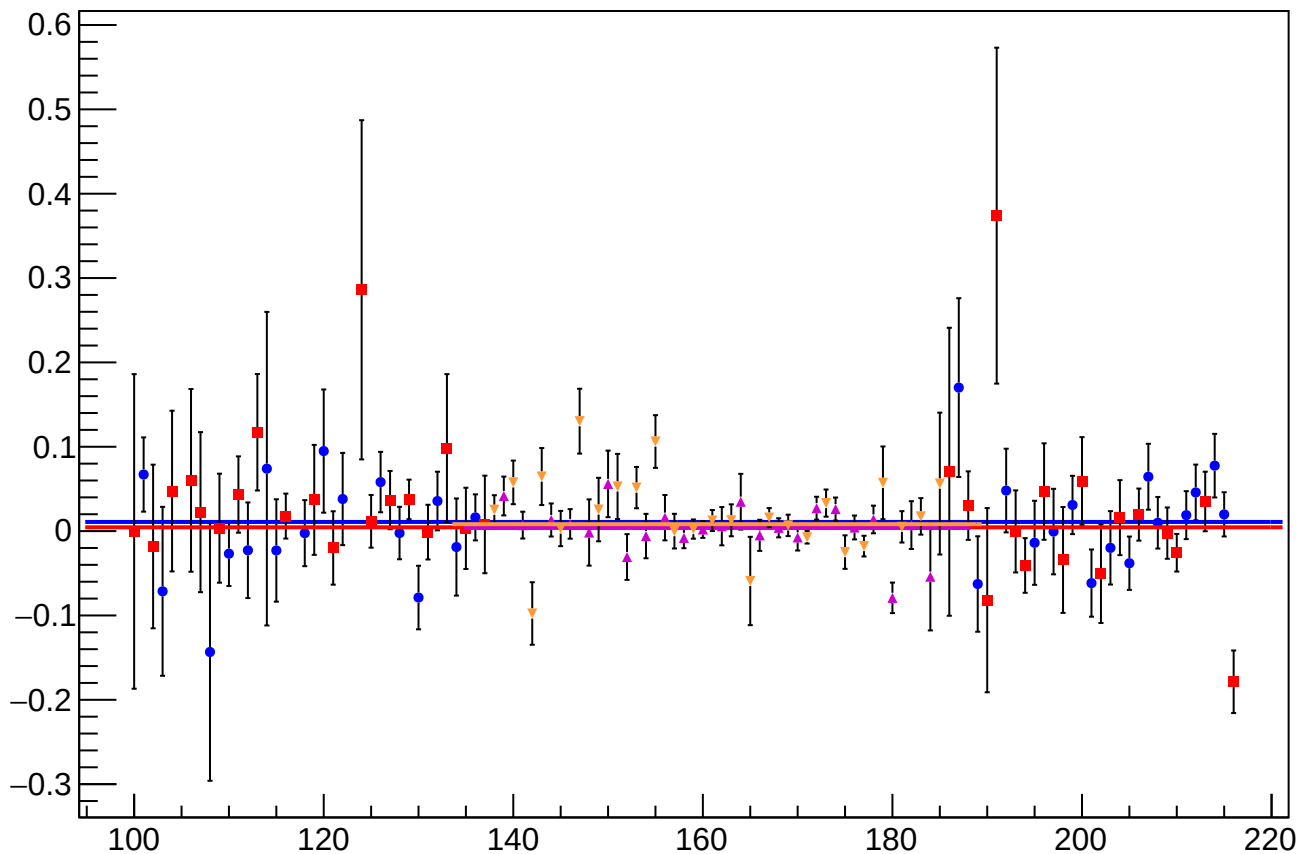
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13899903.7/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 26342885.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12368702.5/57



# asym\_sam\_37\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}$ : 32.8/30

Left Out:  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.6/34

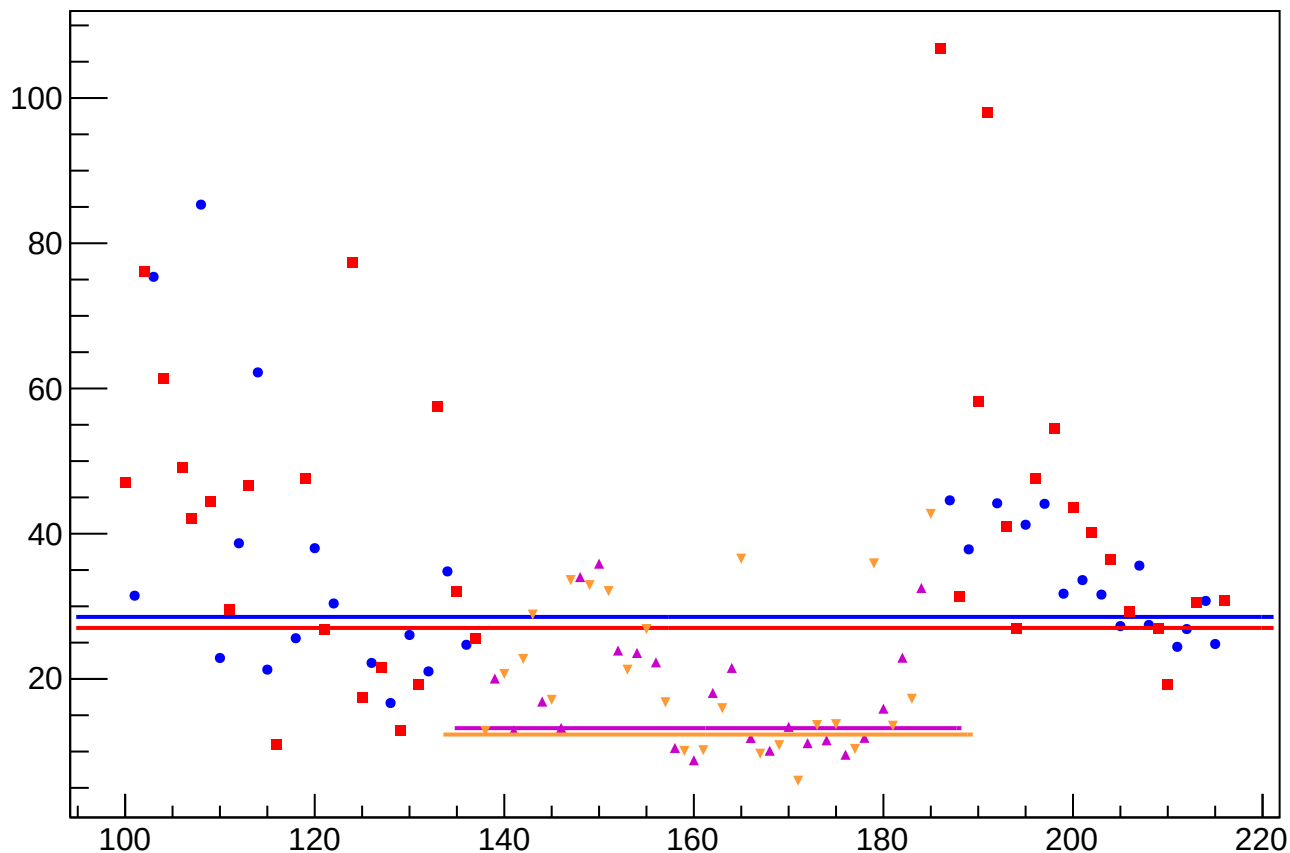
Left In:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.2/22

+ sign  $0.009 \pm 0.003$   $\chi^2/\text{NDF}$ : 91.7/55

All:  $0.006 \pm 0.002$   $\chi^2/\text{NDF}$ : 177.7/113

- sign  $0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 84.9/57

# asym\_sam\_37\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $28.542 \pm 0.005$   $\chi^2/\text{NDF}: 2333384.0/30$

Left Out:  $12.343 \pm 0.002$   $\chi^2/\text{NDF}: 6743594.0/24$

Right Out:  $27.023 \pm 0.005$   $\chi^2/\text{NDF}: 6009461.3/34$

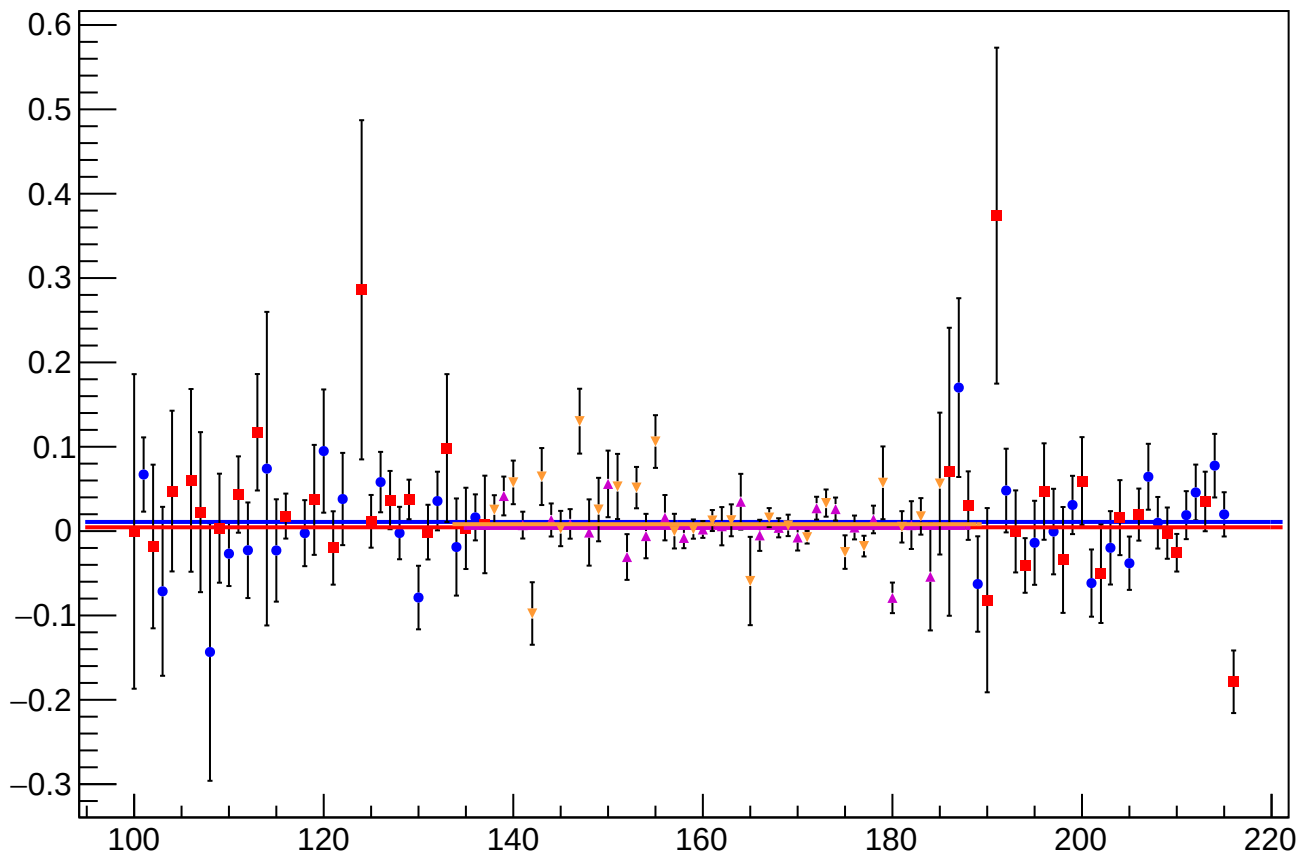
Left In:  $13.225 \pm 0.003$   $\chi^2/\text{NDF}: 3870352.4/22$

+ sign  $15.304 \pm 0.002$   $\chi^2/\text{NDF}: 17118003.2/55$

All:  $15.611 \pm 0.002$   $\chi^2/\text{NDF}: 32722885.4/113$

- sign  $15.945 \pm 0.002$   $\chi^2/\text{NDF}: 15564517.3/57$

asym\_sam\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.011 $\pm$ 0.007  $\chi^2$ /NDF: 32.8/30

Left Out: 0.008 $\pm$ 0.003  $\chi^2$ /NDF:58.8/24

Right Out: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 47.6/34

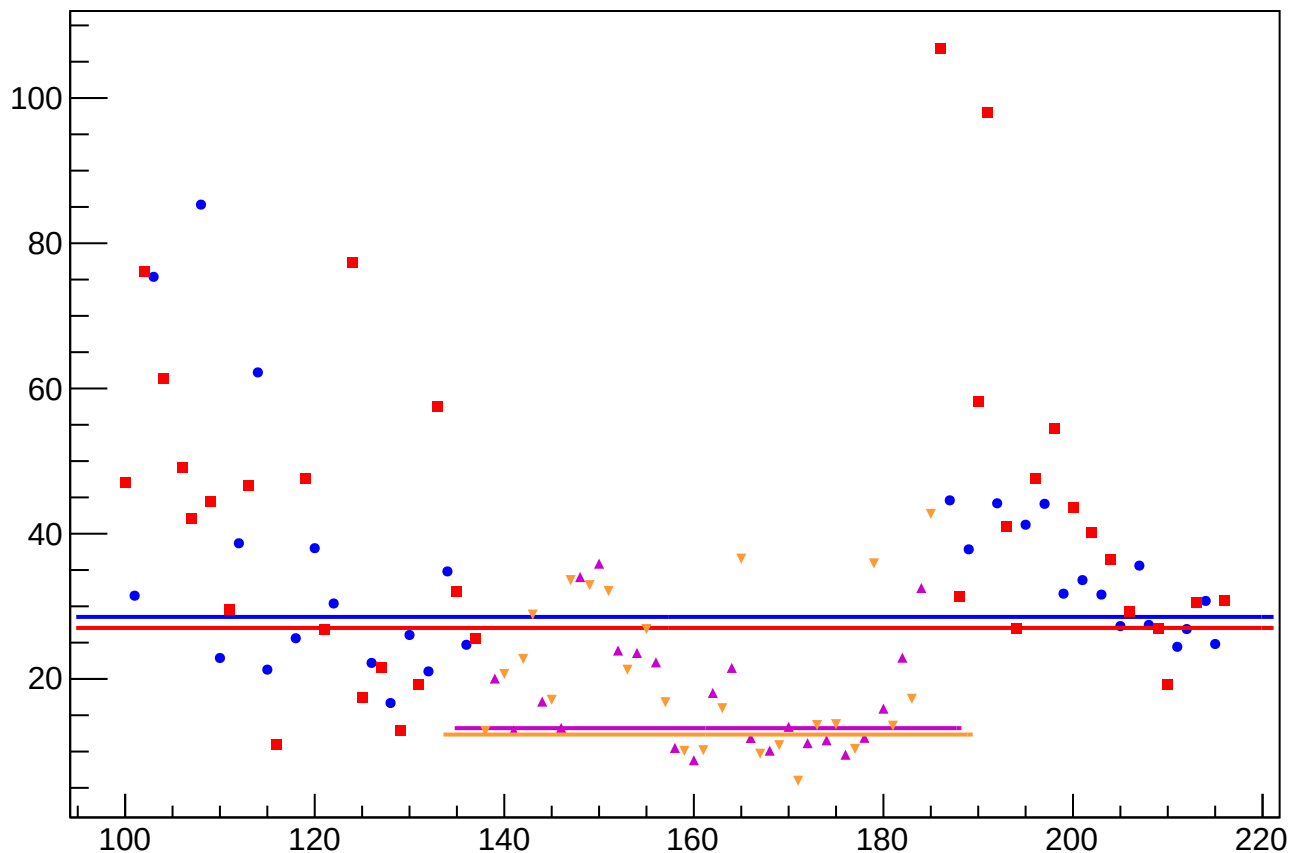
Left In: 0.004 $\pm$ 0.004  $\chi^2$ /NDF:37.2/22

+ sign 0.009 $\pm$ 0.003  $\chi^2$ /NDF: 91.7/55

All: 0.006 $\pm$ 0.002  $\chi^2$ /NDF: 177.7/113

- sign 0.004 $\pm$ 0.003  $\chi^2$ /NDF: 84.9/57

asym\_sam\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $28.542 \pm 0.005$   $\chi^2/\text{NDF}: 2333384.0/30$

Left Out:  $12.343 \pm 0.002$   $\chi^2/\text{NDF}: 6743594.0/24$

Right Out:  $27.023 \pm 0.005$   $\chi^2/\text{NDF}: 6009461.3/34$

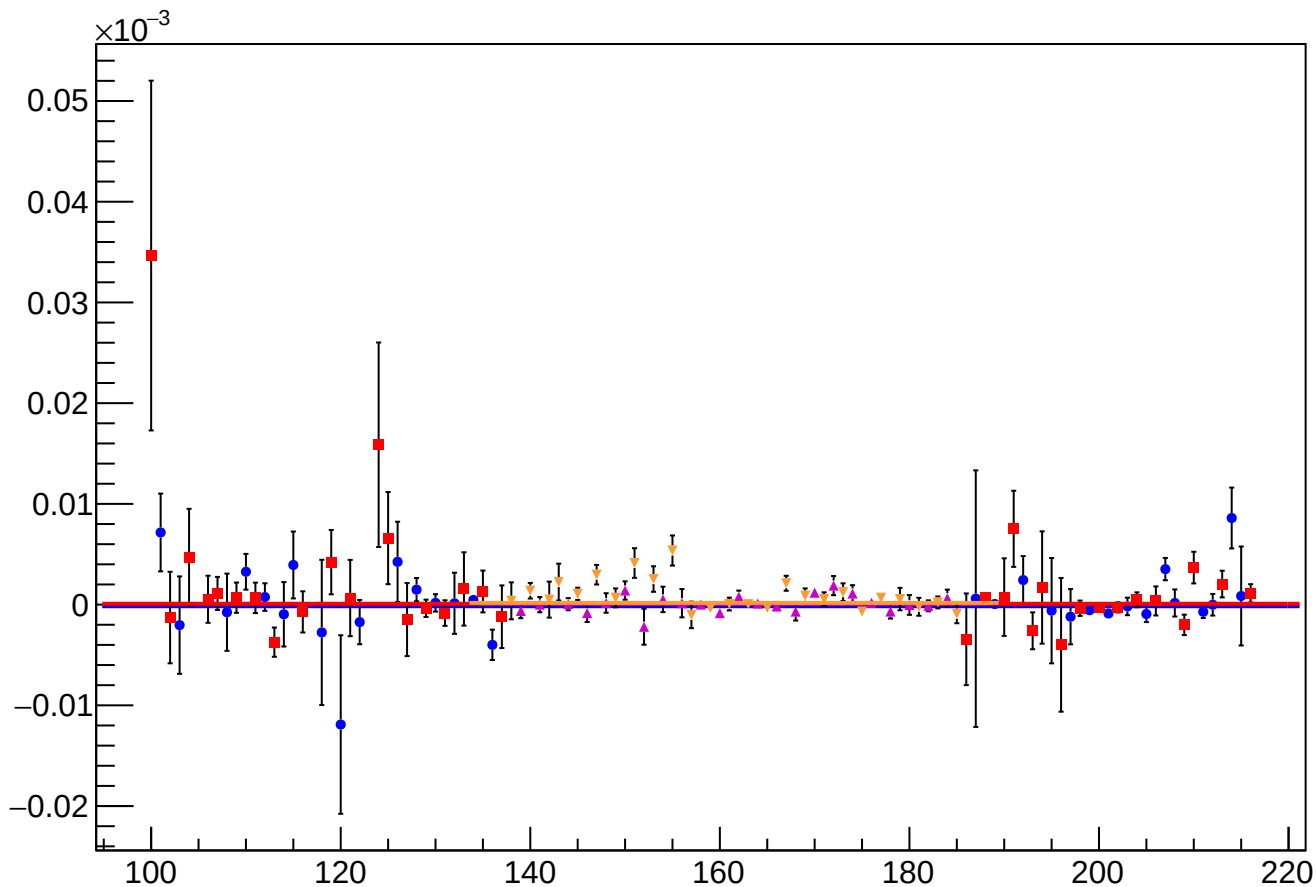
Left In:  $13.225 \pm 0.003$   $\chi^2/\text{NDF}: 3870352.4/22$

+ sign  $15.304 \pm 0.002$   $\chi^2/\text{NDF}: 17118003.2/55$

All:  $15.611 \pm 0.002$   $\chi^2/\text{NDF}: 32722885.4/113$

- sign  $15.945 \pm 0.002$   $\chi^2/\text{NDF}: 15564517.3/57$

asym\_sam\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 51.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 61.5/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.4/34

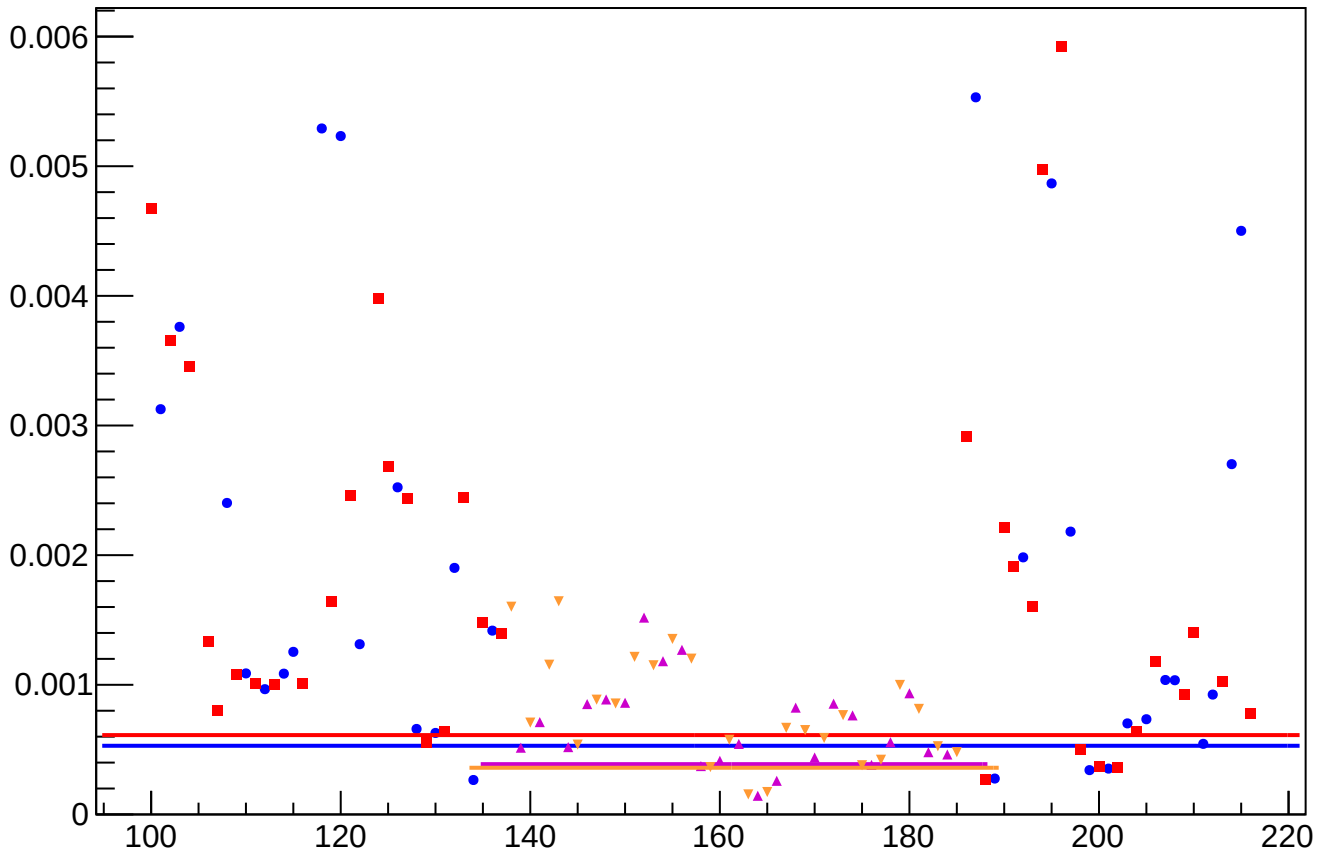
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.5/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 115.2/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 184.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 68.9/57

asym\_sam\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}: 14987583.8/30$

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}: 14019628.7/24$

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}: 13101932.3/34$

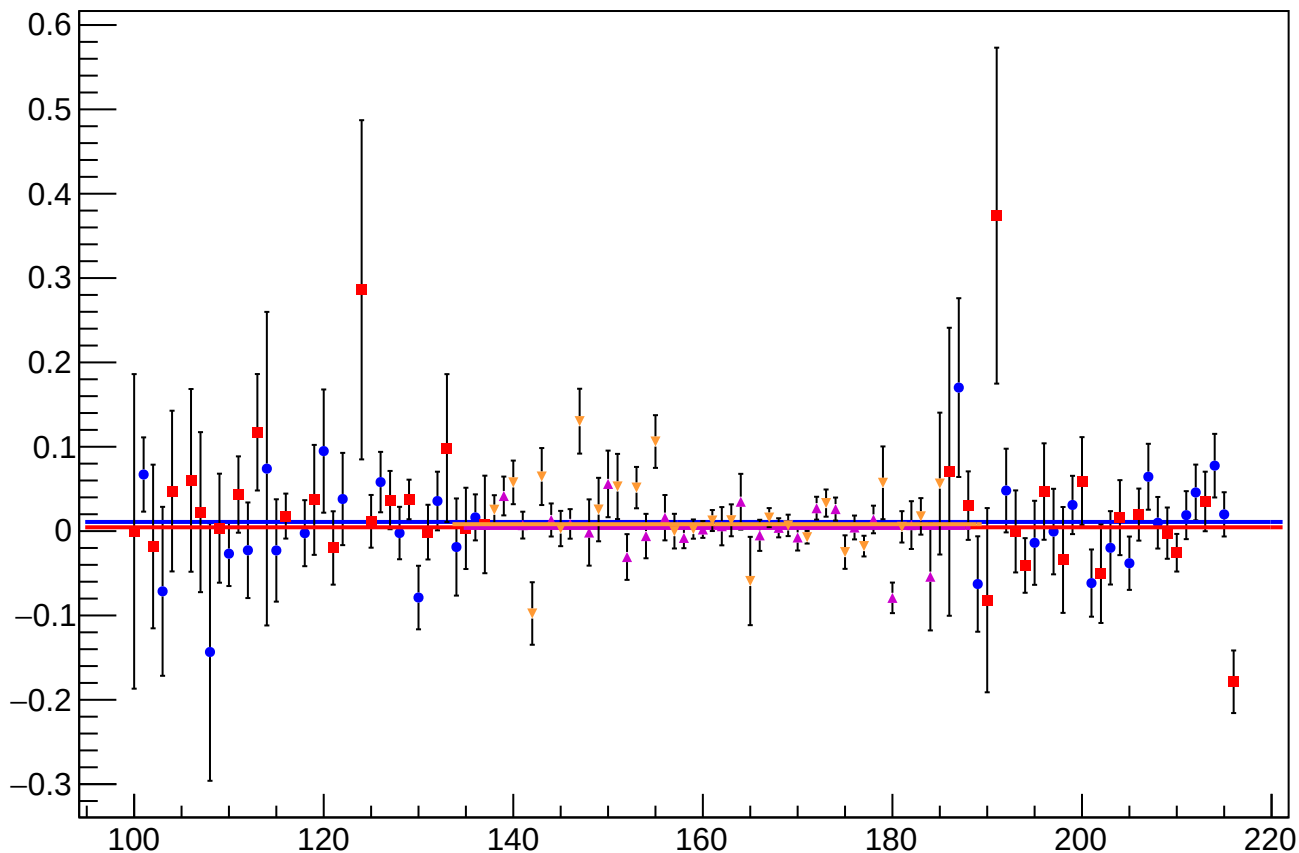
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}: 10459340.6/22$

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}: 30474049.3/55$

All: 0.000+/-0.000  $\chi^2/\text{NDF}: 56259279.6/113$

- sign 0.000+/-0.000  $\chi^2/\text{NDF}: 25616459.2/57$

asym\_sam\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.011 $\pm$ 0.007  $\chi^2$ /NDF: 32.8/30

Left Out: 0.008 $\pm$ 0.003  $\chi^2$ /NDF: 58.8/24

Right Out: 0.005 $\pm$ 0.007  $\chi^2$ /NDF: 47.6/34

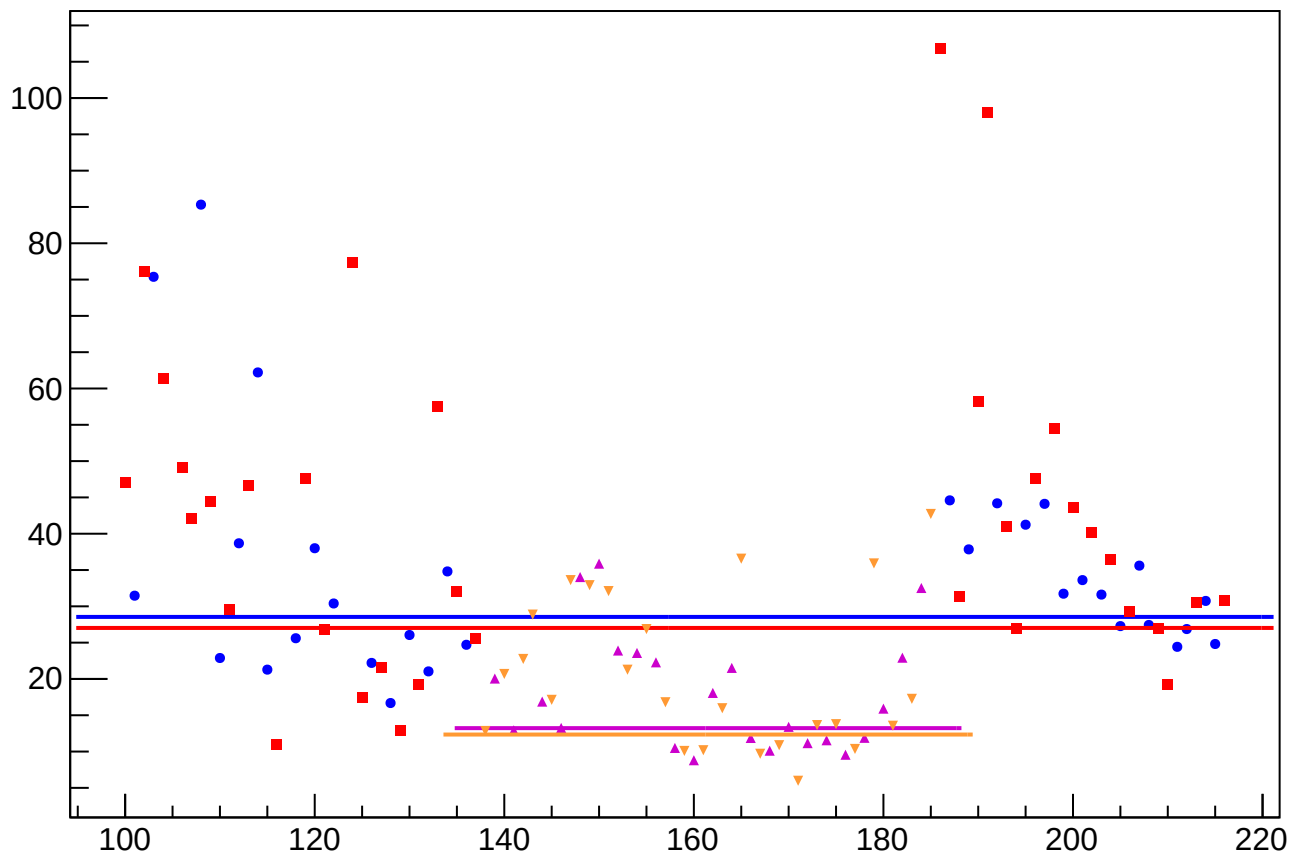
Left In: 0.004 $\pm$ 0.004  $\chi^2$ /NDF: 37.2/22

+ sign 0.009 $\pm$ 0.003  $\chi^2$ /NDF: 91.7/55

All: 0.006 $\pm$ 0.002  $\chi^2$ /NDF: 177.7/113

- sign 0.004 $\pm$ 0.003  $\chi^2$ /NDF: 84.9/57

asym\_sam\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 28.543 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 2333284.3/30

Left Out: 12.343 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 6743823.4/24

Right Out: 27.024 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 6009166.2/34

Left In: 13.225 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 3870507.9/22

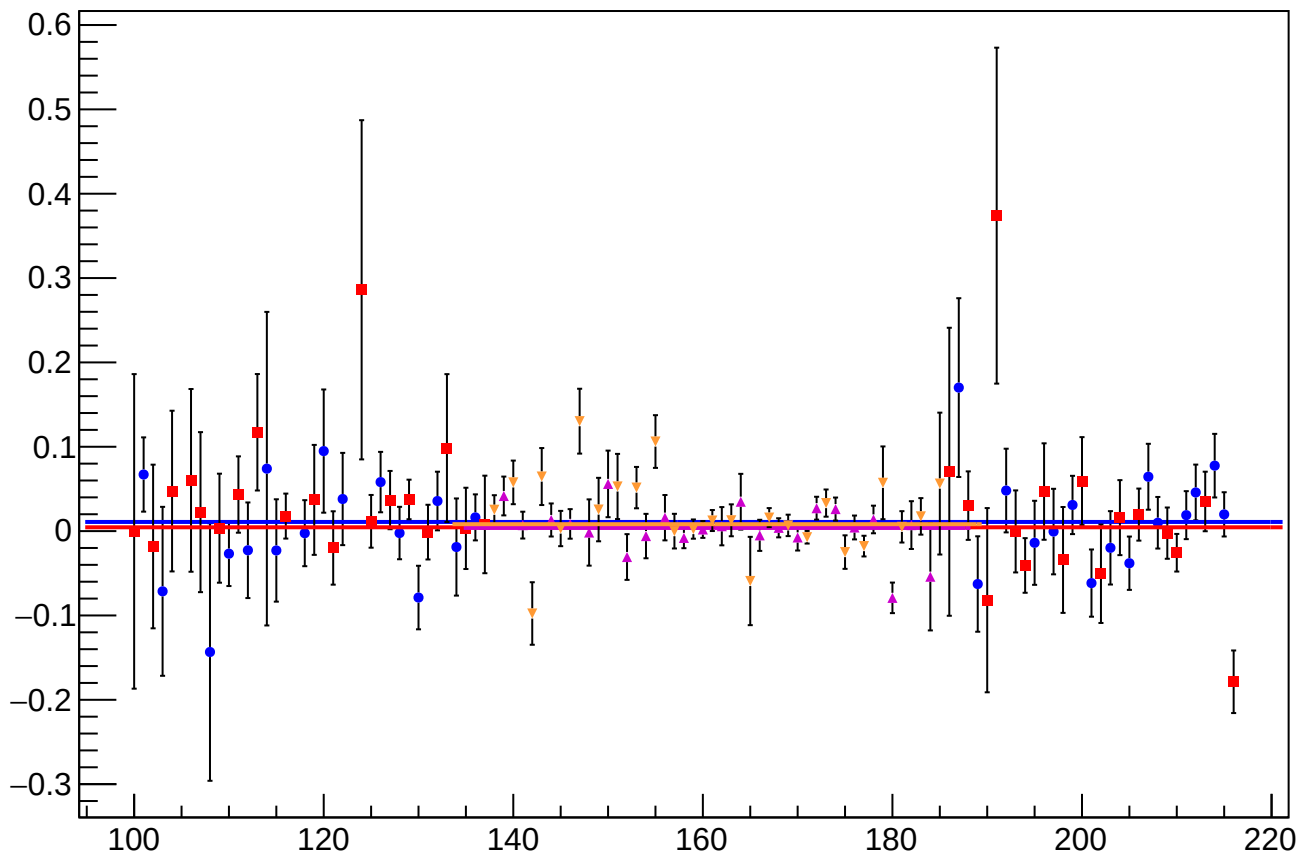
+ sign 15.304 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 17118326.3/55

All: 15.611 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 32723303.7/113

- sign 15.945 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 15564616.2/57



asym\_sam\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}$ : 32.8/30

Left Out:  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 58.8/24

Right Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 47.6/34

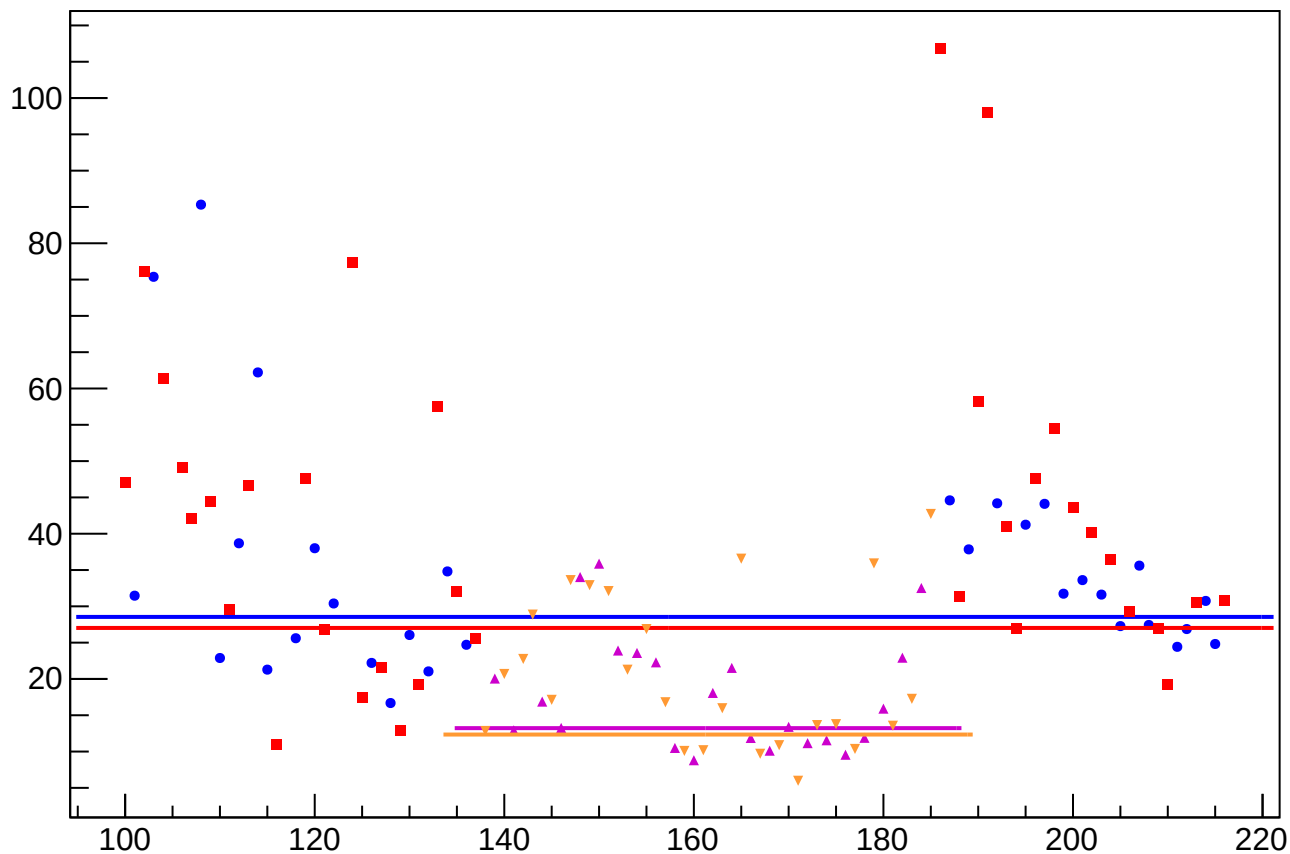
Left In:  $0.004 \pm 0.004$   $\chi^2/\text{NDF}$ : 37.2/22

+ sign  $0.009 \pm 0.003$   $\chi^2/\text{NDF}$ : 91.7/55

All:  $0.006 \pm 0.002$   $\chi^2/\text{NDF}$ : 177.7/113

- sign  $0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 84.9/57

asym\_sam\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 28.543 $\pm$ 0.005  $\chi^2$ /NDF: 2333284.3/30

Left Out: 12.343 $\pm$ 0.002  $\chi^2$ /NDF: 6743823.4/24

Right Out: 27.024 $\pm$ 0.005  $\chi^2$ /NDF: 6009166.2/34

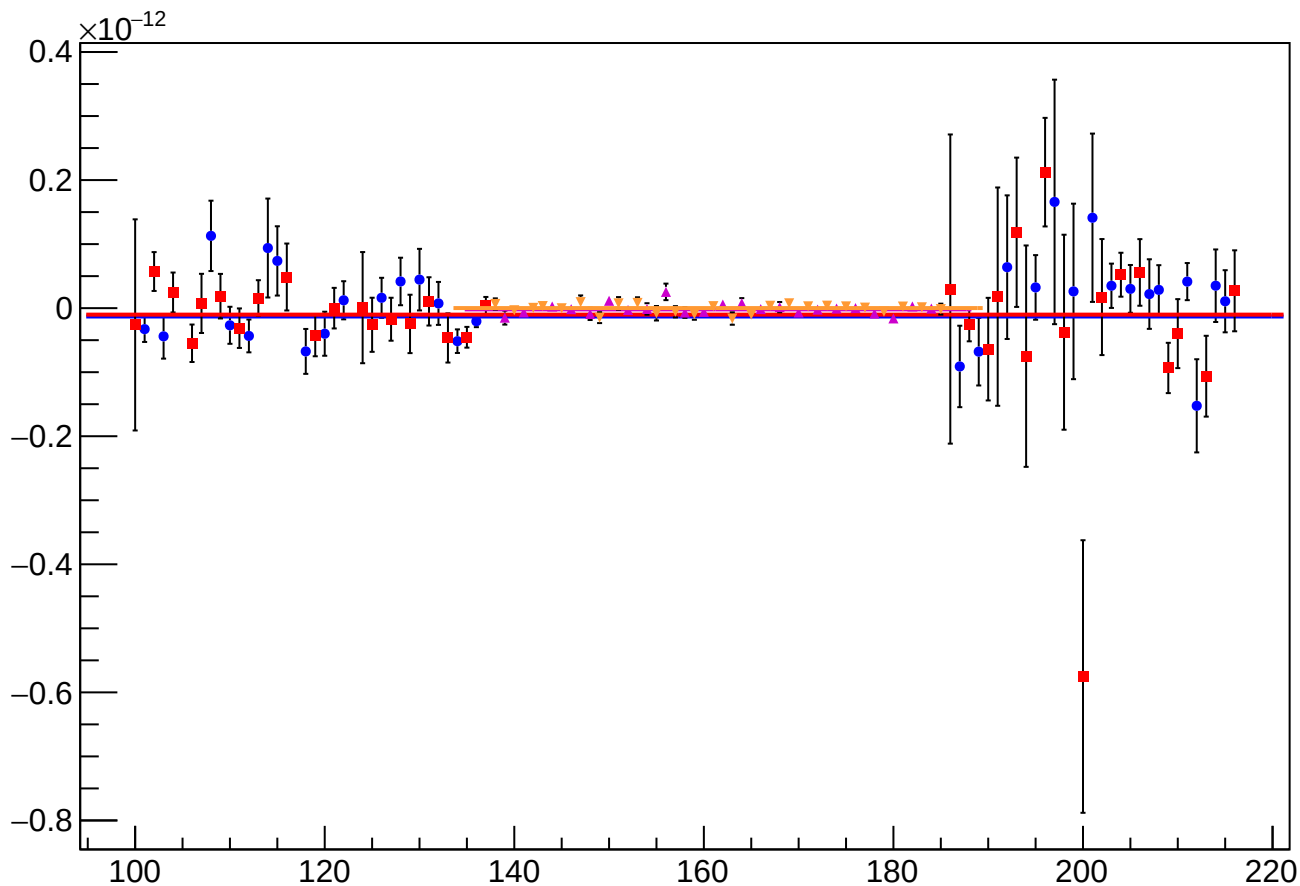
Left In: 13.225 $\pm$ 0.003  $\chi^2$ /NDF: 3870507.9/22

+ sign 15.304 $\pm$ 0.002  $\chi^2$ /NDF: 17118326.3/55

All: 15.611 $\pm$ 0.002  $\chi^2$ /NDF: 32723303.7/113

- sign 15.945 $\pm$ 0.002  $\chi^2$ /NDF: 15564616.2/57

asym\_sam\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug

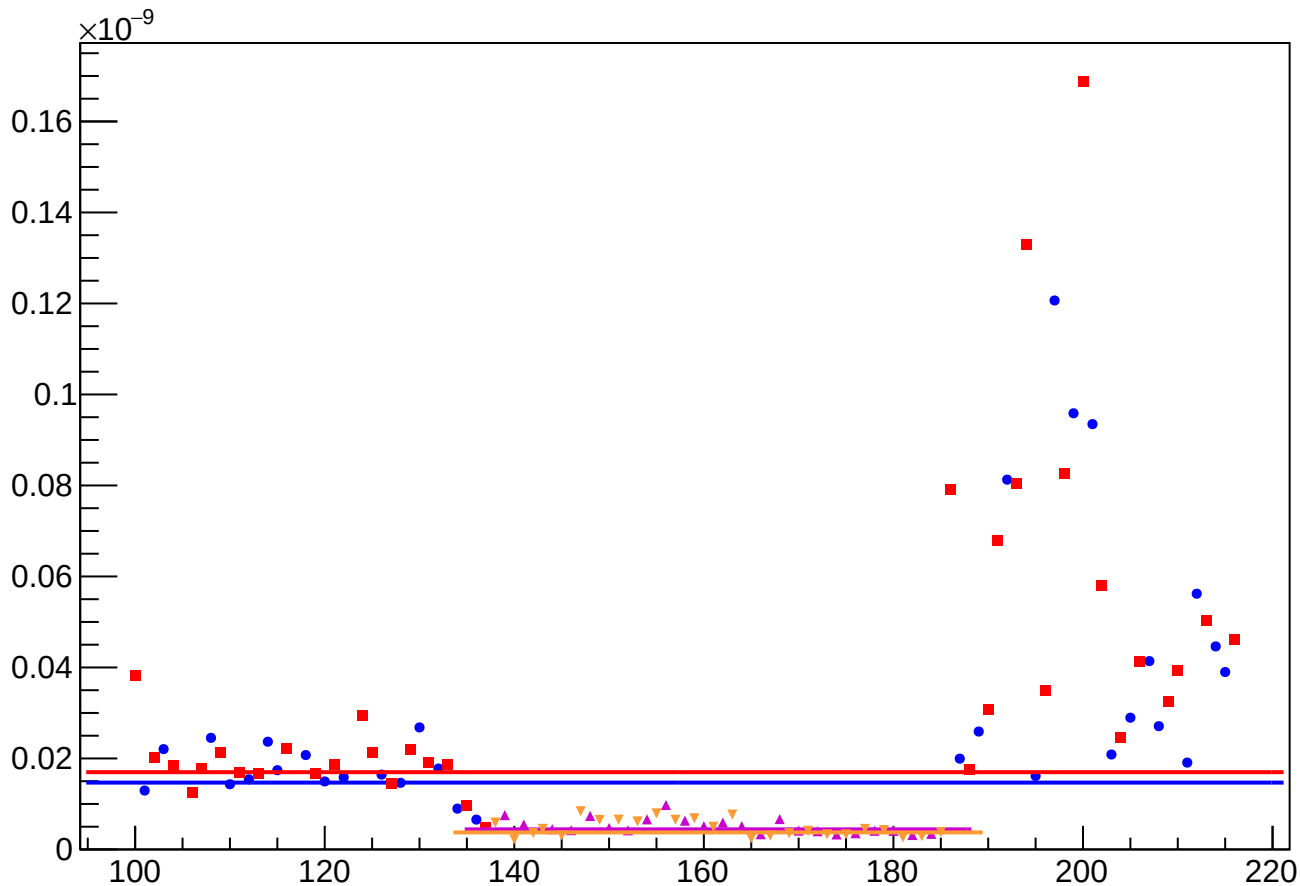


+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 73.0/55$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 150.3/113$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 76.1/57$

asym\_sam\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7819394.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3083424.2/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8146333.0/34

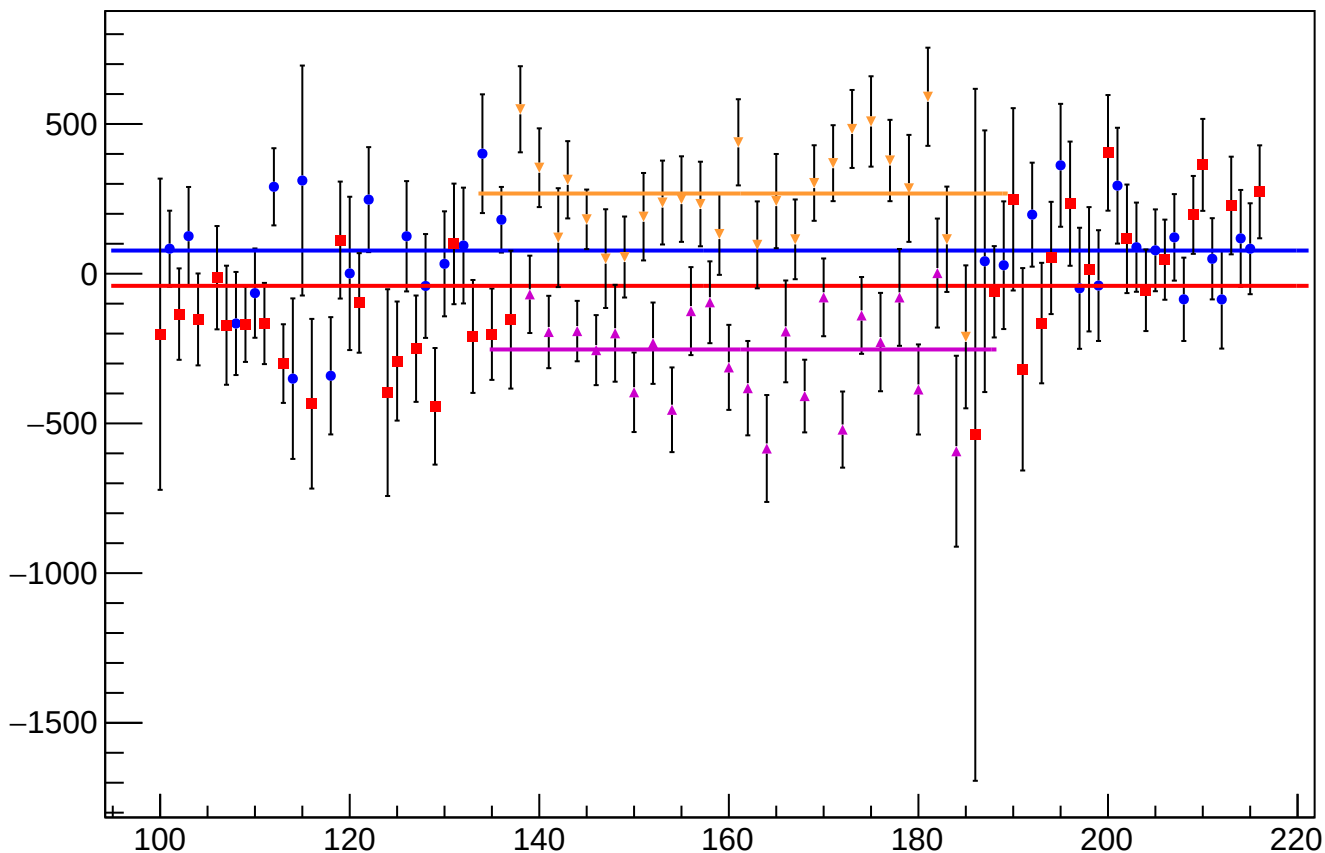
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1736522.0/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18561125.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36876886.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17928306.6/57

# reg\_asym\_sam\_48\_dd\_mean vs Slug



Right In: 77.337 $\pm$ 30.164  $\chi^2$ /NDF: 25.5/30

Left Out: 267.782 $\pm$ 28.407  $\chi^2$ /NDF:31.0/24

Right Out: -40.550 $\pm$ 29.949  $\chi^2$ /NDF: 48.7/34

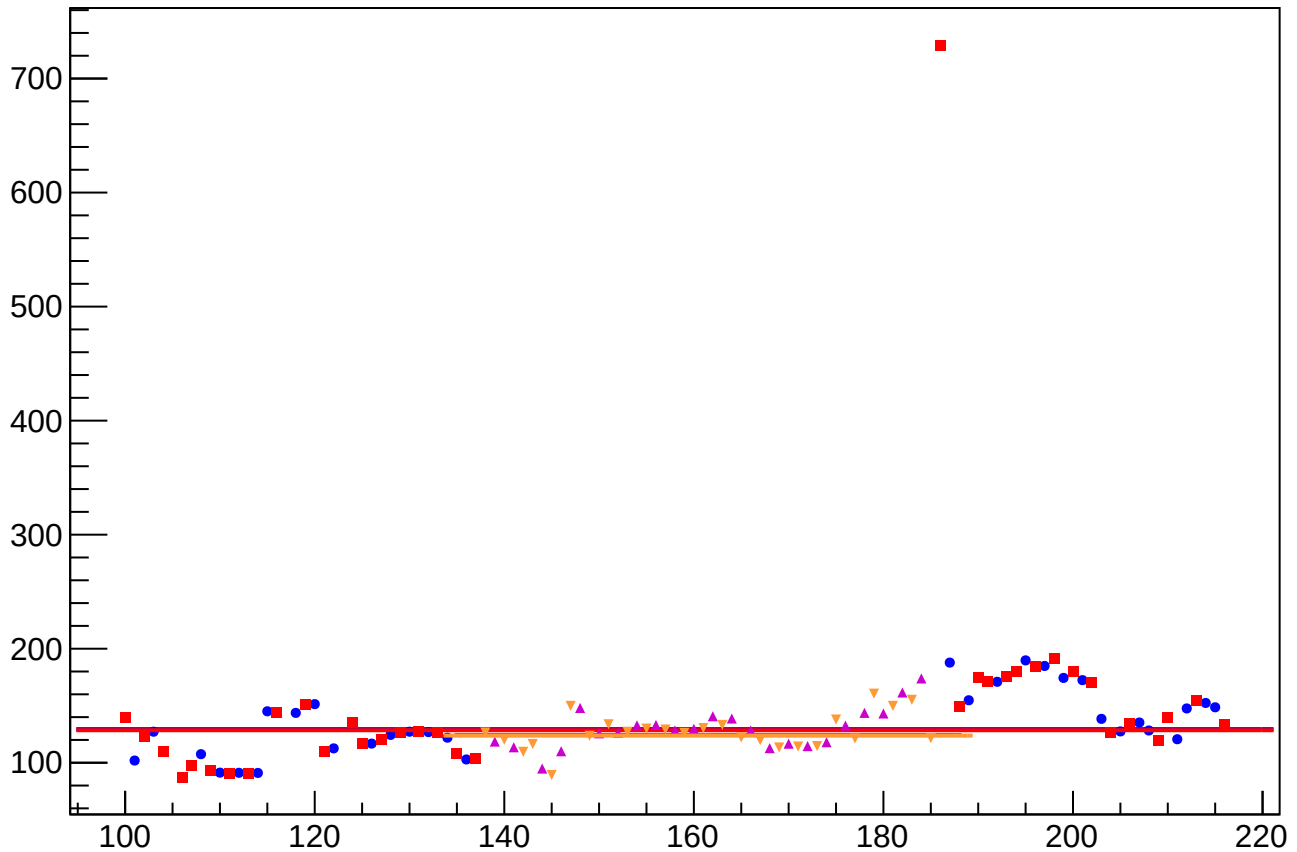
Left In: -253.048 $\pm$ 29.313  $\chi^2$ /NDF:26.2/22

+ sign 178.265 $\pm$ 20.680  $\chi^2$ /NDF: 77.6/55

All: 16.704 $\pm$ 14.717  $\chi^2$ /NDF: 301.8/113

- sign -149.078 $\pm$ 20.949  $\chi^2$ /NDF: 100.6/57

# reg\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 129.456+/-0.021  $\chi^2/\text{NDF}$ : 1489242.4/30

Left Out: 123.807+/-0.020  $\chi^2/\text{NDF}$ : 598444.2/24

Right Out: 128.505+/-0.021  $\chi^2/\text{NDF}$ : 2387880.6/34

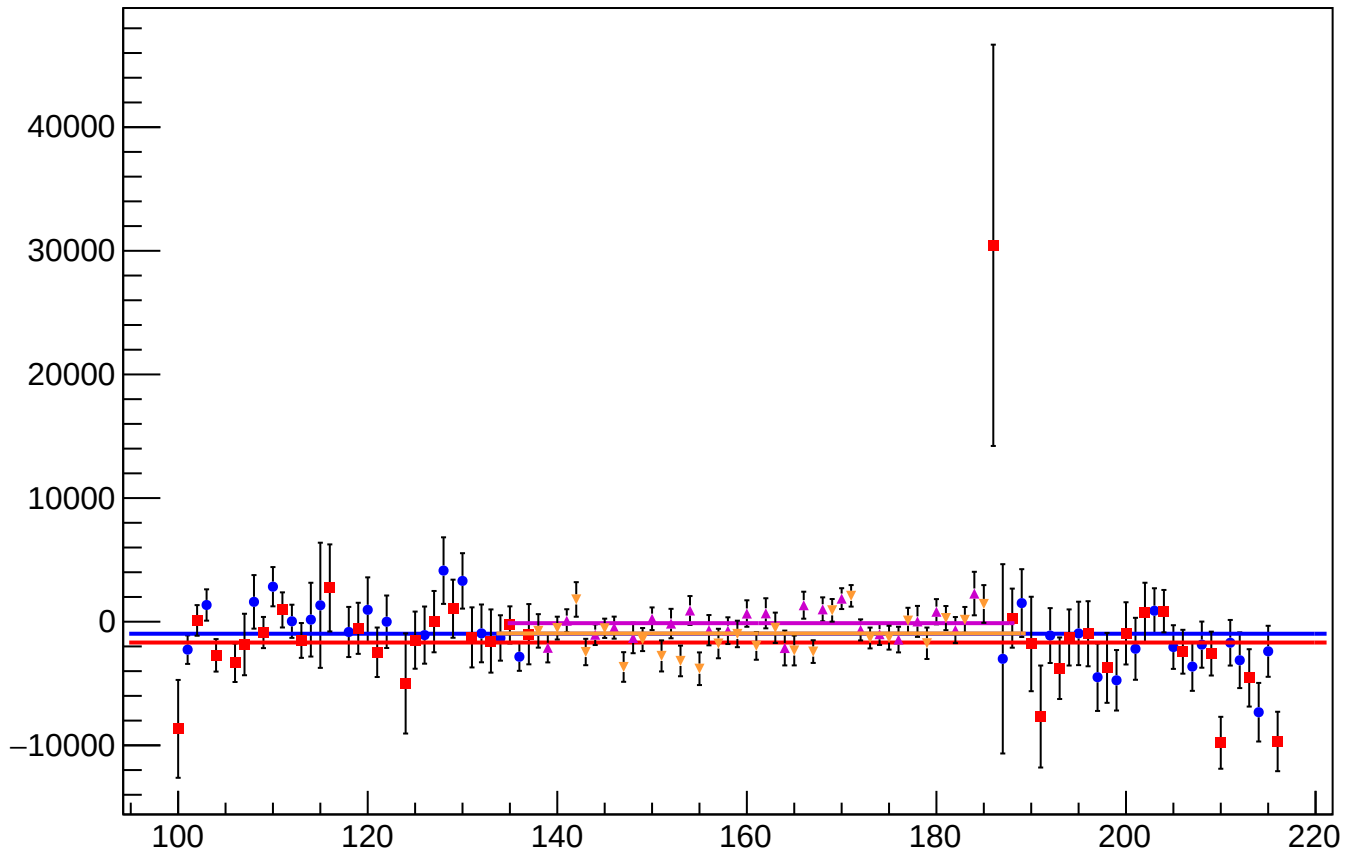
Left In: 124.259+/-0.021  $\chi^2/\text{NDF}$ : 557214.9/22

+ sign 126.463+/-0.015  $\chi^2/\text{NDF}$ : 2124857.1/55

All: 126.400+/-0.010  $\chi^2/\text{NDF}$ : 5090524.4/113

- sign 126.336+/-0.015  $\chi^2/\text{NDF}$ : 2965630.6/57

# asym\_sam\_48\_dd\_reg\_correction\_mean vs Slug



Right In:  $-973.510 \pm 351.116$   $\chi^2/\text{NDF}$ : 40.7/30

Left Out:  $-947.720 \pm 211.794$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1685.359 \pm 344.885$   $\chi^2/\text{NDF}$ : 55.6/34

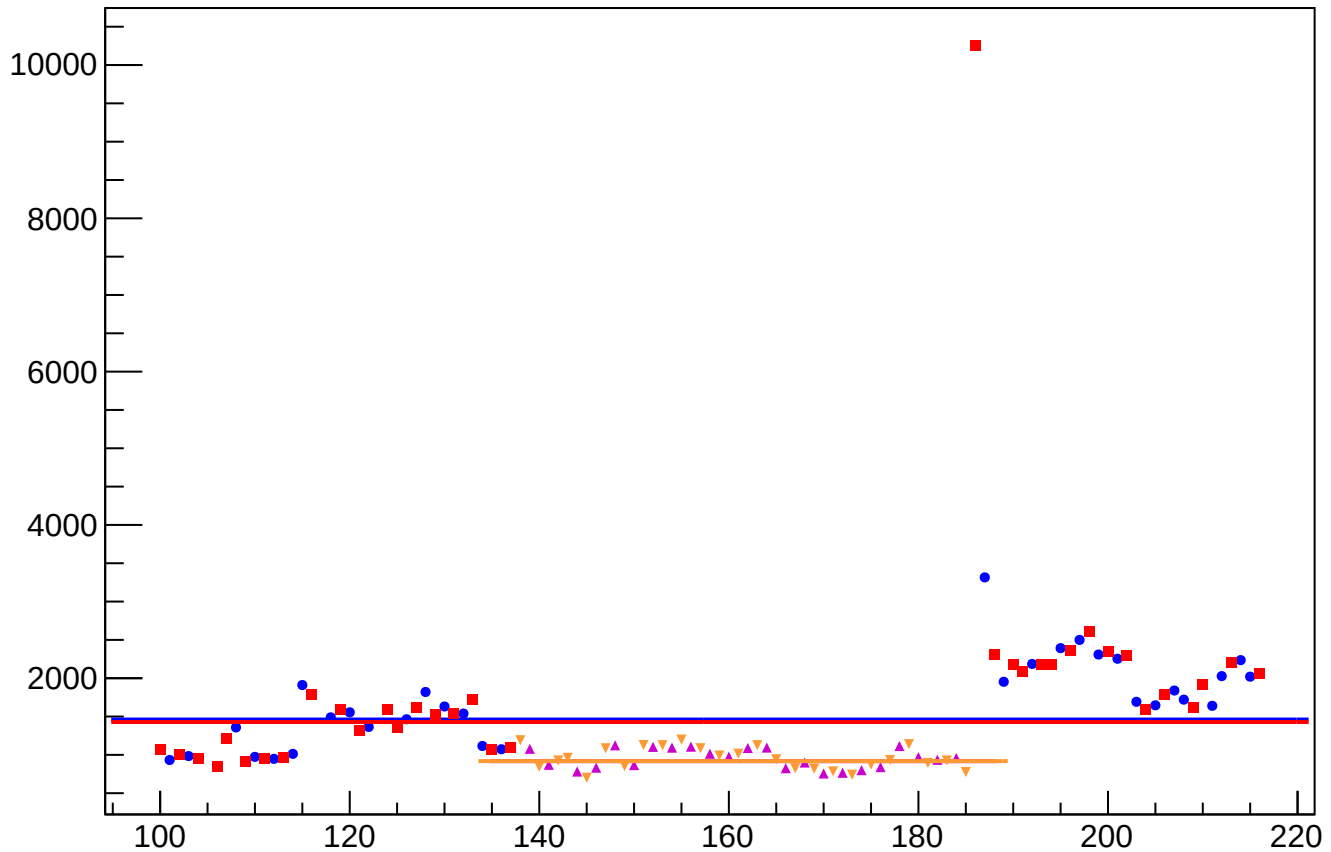
Left In:  $-118.433 \pm 217.165$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-954.601 \pm 181.355$   $\chi^2/\text{NDF}$ : 91.0/55

All:  $-761.544 \pm 129.082$   $\chi^2/\text{NDF}$ : 188.0/113

- sign  $-563.313 \pm 183.769$   $\chi^2/\text{NDF}$ : 94.8/57

# asym\_sam\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 1460.894+/-0.248  $\chi^2/\text{NDF}$ : 3667731.8/30

Left Out: 918.501+/-0.150  $\chi^2/\text{NDF}$ : 887820.0/24

Right Out: 1428.631+/-0.244  $\chi^2/\text{NDF}$ : 4944723.3/34

Left In: 918.214+/-0.154  $\chi^2/\text{NDF}$ : 666262.3/22

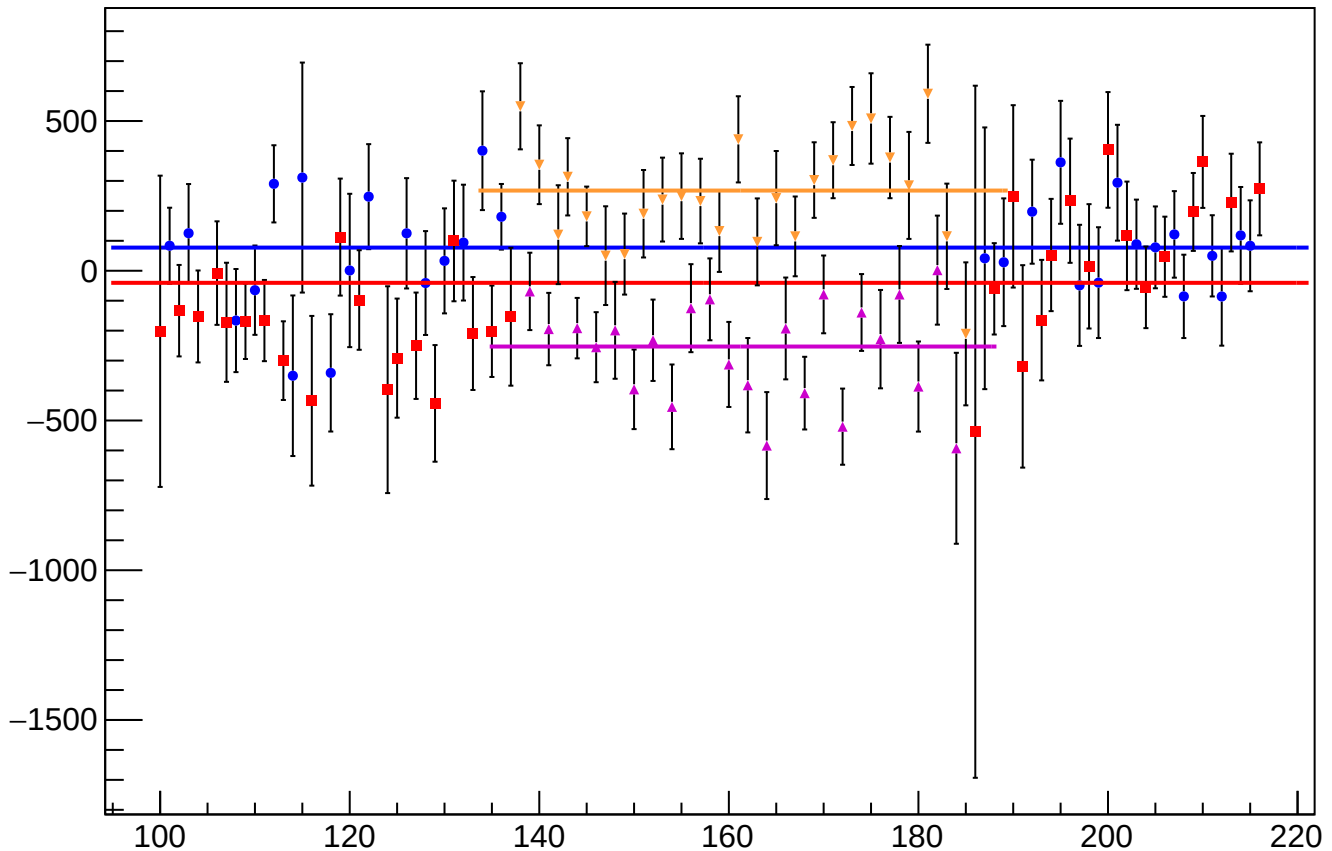
+ sign 1063.202+/-0.128  $\chi^2/\text{NDF}$ : 8054927.1/55

All: 1063.167+/-0.091  $\chi^2/\text{NDF}$ : 16802759.8/1

- sign 1063.131+/-0.130  $\chi^2/\text{NDF}$ : 8747832.5/57



# cor\_asym\_sam\_48\_dd\_mean vs Slug



Right In:  $77.331 \pm 30.164$   $\chi^2/\text{NDF}$ : 25.5/30

Left Out:  $267.791 \pm 28.407$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $-40.326 \pm 29.951$   $\chi^2/\text{NDF}$ : 48.7/34

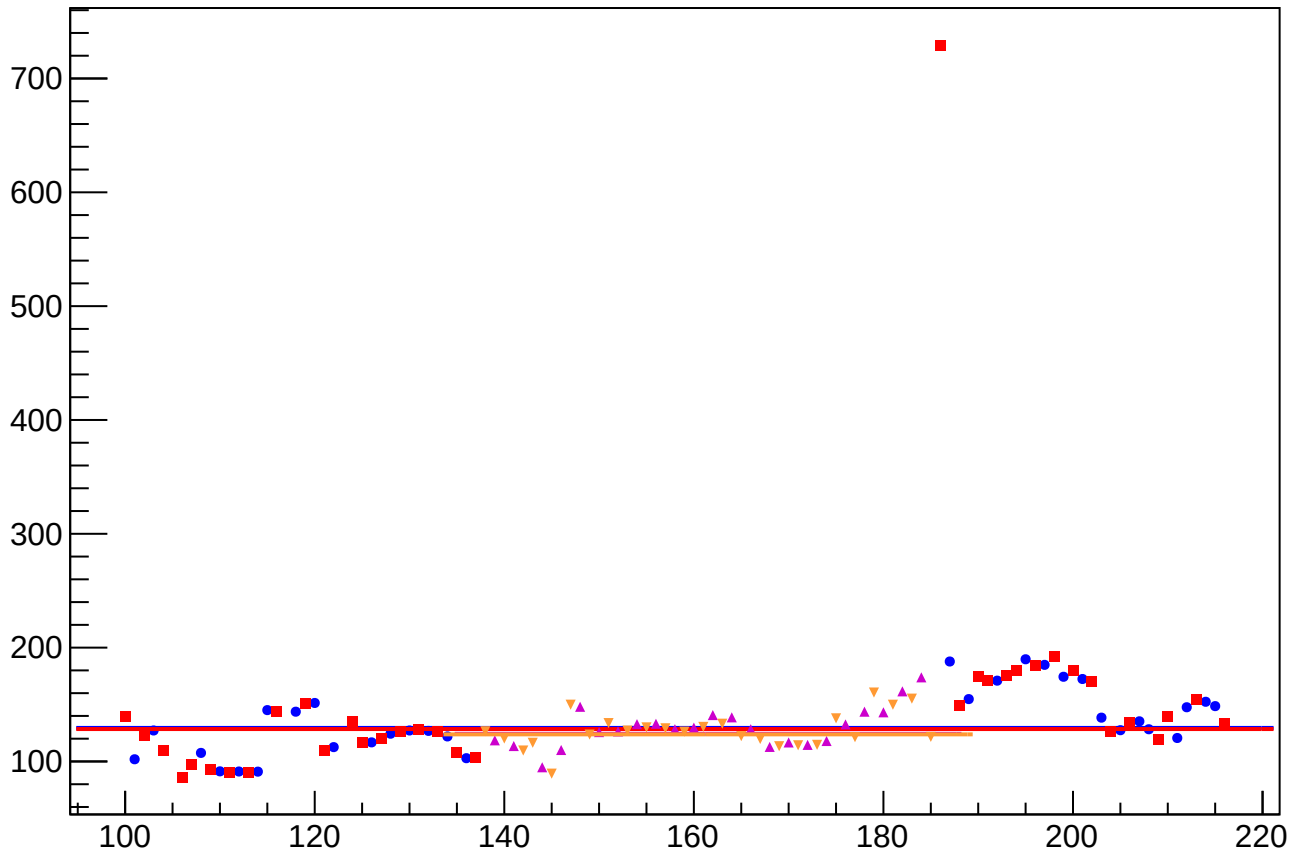
Left In:  $-253.051 \pm 29.313$   $\chi^2/\text{NDF}$ : 26.2/22

+ sign  $178.266 \pm 20.680$   $\chi^2/\text{NDF}$ : 77.6/55

All:  $16.760 \pm 14.717$   $\chi^2/\text{NDF}$ : 301.8/113

- sign  $-148.978 \pm 20.949$   $\chi^2/\text{NDF}$ : 100.6/57

# cor\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 129.456+/-0.021  $\chi^2/\text{NDF}$ : 1489242.3/30

Left Out: 123.807+/-0.020  $\chi^2/\text{NDF}$ : 598444.2/24

Right Out: 128.478+/-0.021  $\chi^2/\text{NDF}$ : 2393854.4/34

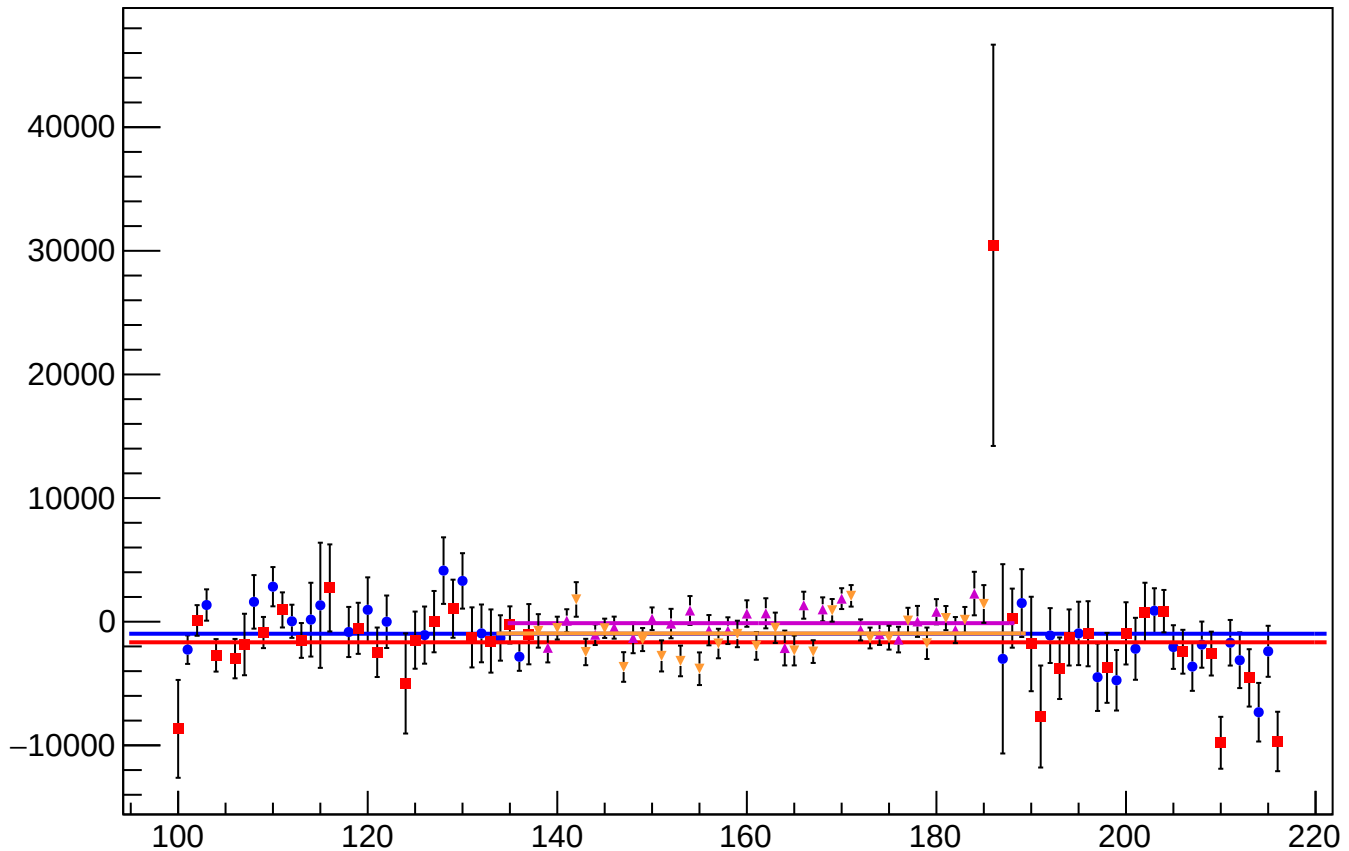
Left In: 124.259+/-0.021  $\chi^2/\text{NDF}$ : 557214.9/22

+ sign 126.463+/-0.015  $\chi^2/\text{NDF}$ : 2124857.2/55

All: 126.394+/-0.010  $\chi^2/\text{NDF}$ : 5096238.9/113

- sign 126.323+/-0.015  $\chi^2/\text{NDF}$ : 2971336.6/57

# asym\_sam\_48\_dd\_cor\_correction\_mean vs Slug



Right In:  $-973.570 \pm 351.117$   $\chi^2/\text{NDF}$ : 40.7/30

Left Out:  $-947.709 \pm 211.794$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1666.262 \pm 345.283$   $\chi^2/\text{NDF}$ : 55.1/34

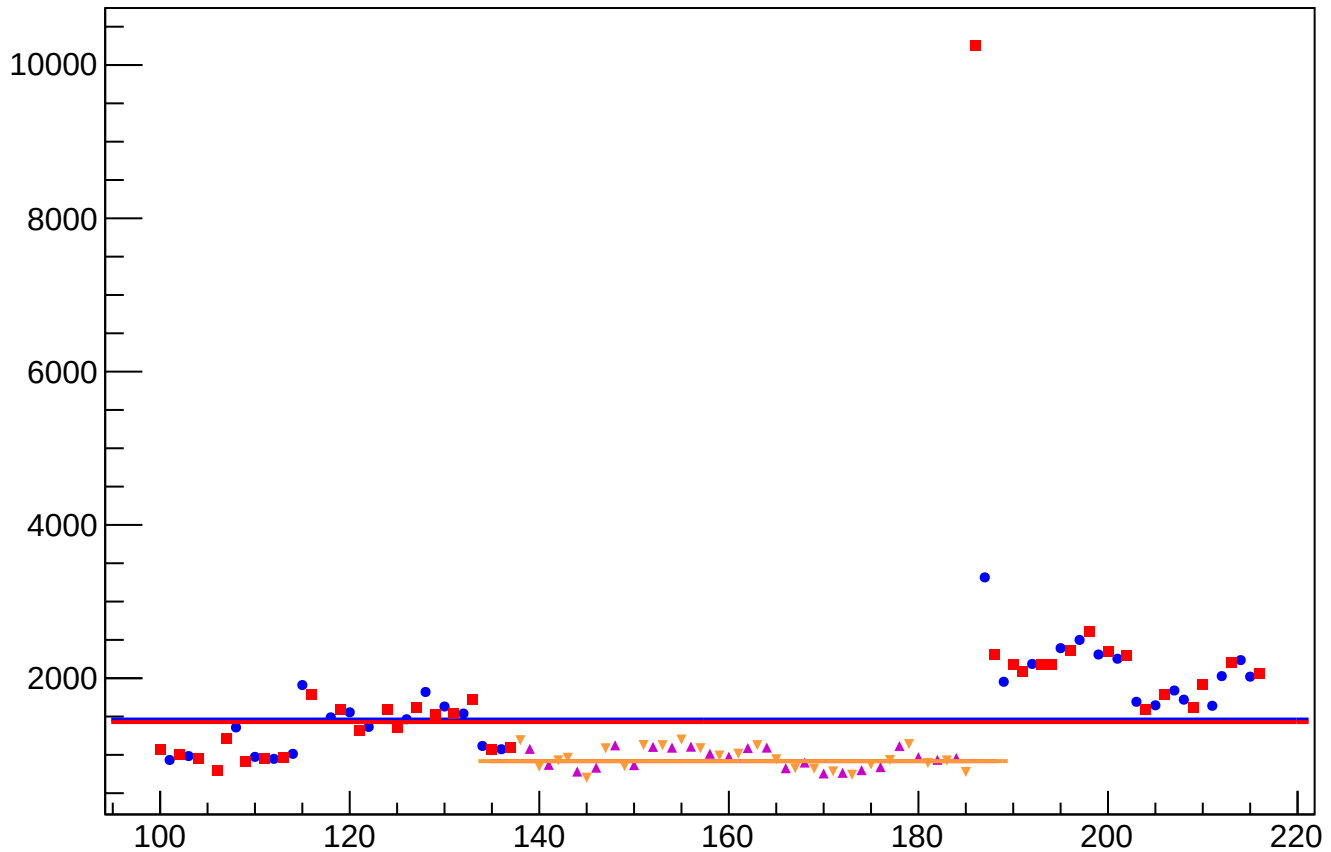
Left In:  $-118.435 \pm 217.165$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-954.609 \pm 181.355$   $\chi^2/\text{NDF}$ : 91.0/55

All:  $-758.580 \pm 129.103$   $\chi^2/\text{NDF}$ : 187.3/113

- sign  $-557.168 \pm 183.829$   $\chi^2/\text{NDF}$ : 93.9/57

# asym\_sam\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 1460.903+/-0.248  $\chi^2/\text{NDF}$ : 3667629.8/30

Left Out: 918.501+/-0.150  $\chi^2/\text{NDF}$ : 887819.5/24

Right Out: 1427.616+/-0.244  $\chi^2/\text{NDF}$ : 4979756.7/34

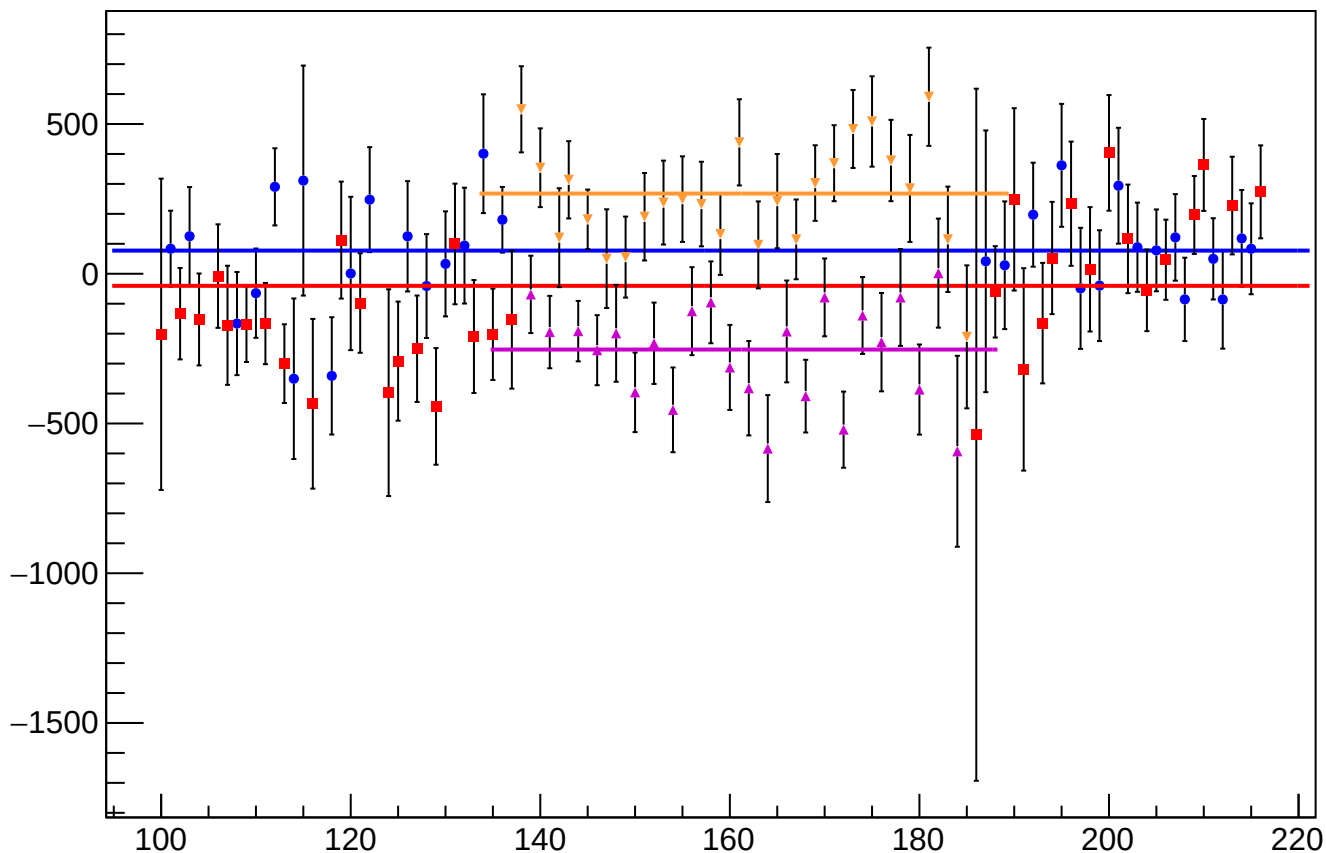
Left In: 918.214+/-0.154  $\chi^2/\text{NDF}$ : 666263.4/22

+ sign 1063.204+/-0.128  $\chi^2/\text{NDF}$ : 8054914.1/55

All: 1062.908+/-0.091  $\chi^2/\text{NDF}$ : 16820170.7/1

- sign 1062.604+/-0.130  $\chi^2/\text{NDF}$ : 8765245.8/57

# eigen\_cor\_asym\_sam\_48\_dd\_mean vs Slug



Right In:  $77.331 \pm 30.164$   $\chi^2/\text{NDF}: 25.5/30$

Left Out:  $267.791 \pm 28.407$   $\chi^2/\text{NDF}: 31.0/24$

Right Out:  $-40.326 \pm 29.951$   $\chi^2/\text{NDF}: 48.7/34$

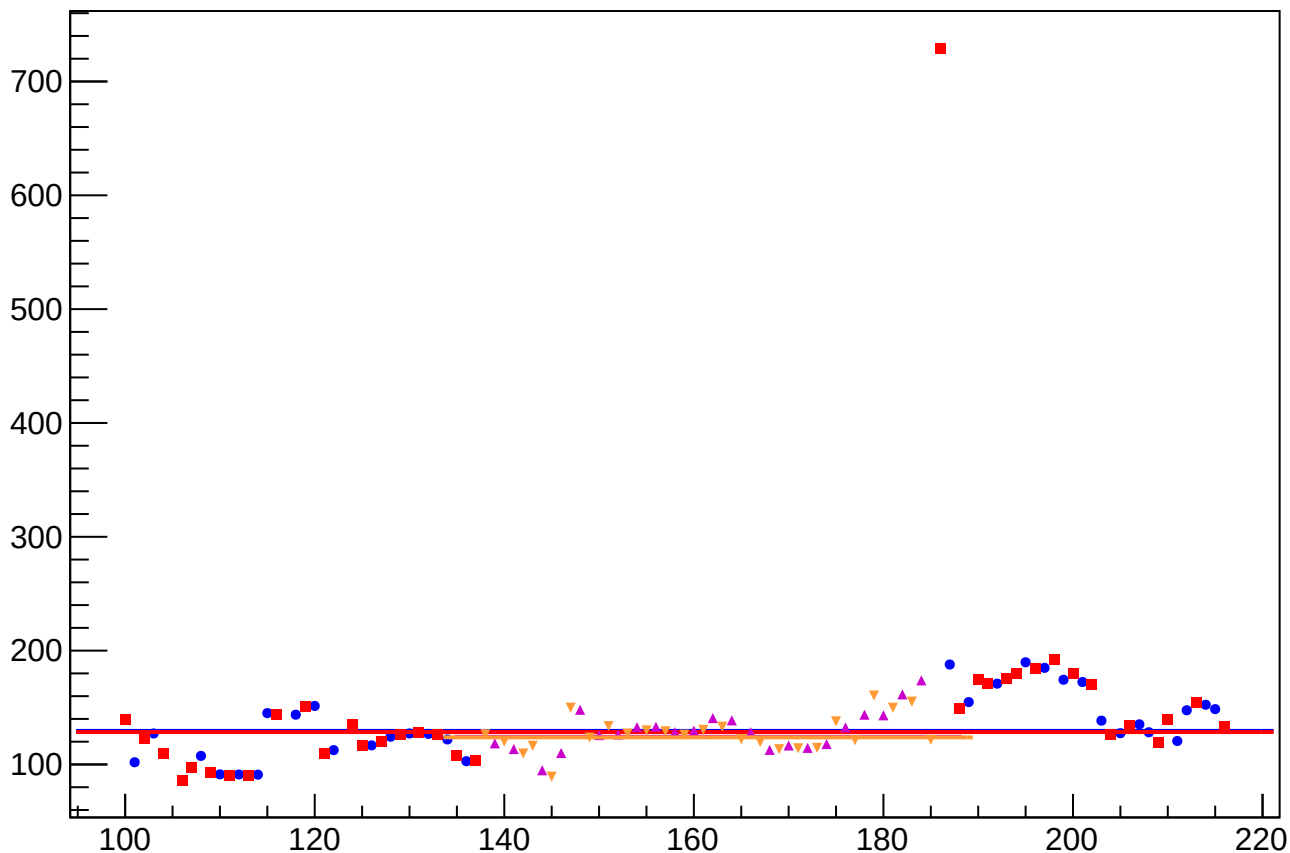
Left In:  $-253.051 \pm 29.313$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $178.266 \pm 20.680$   $\chi^2/\text{NDF}: 77.6/55$

All:  $16.760 \pm 14.717$   $\chi^2/\text{NDF}: 301.8/113$

- sign  $-148.978 \pm 20.949$   $\chi^2/\text{NDF}: 100.6/57$

# eigen\_cor\_asym\_sam\_48\_dd\_rms vs Slug



Right In:  $129.456 \pm 0.021$   $\chi^2/\text{NDF}: 1489242.3/30$

Left Out:  $123.807 \pm 0.020$   $\chi^2/\text{NDF}: 598444.2/24$

Right Out:  $128.478 \pm 0.021$   $\chi^2/\text{NDF}: 2393854.4/34$

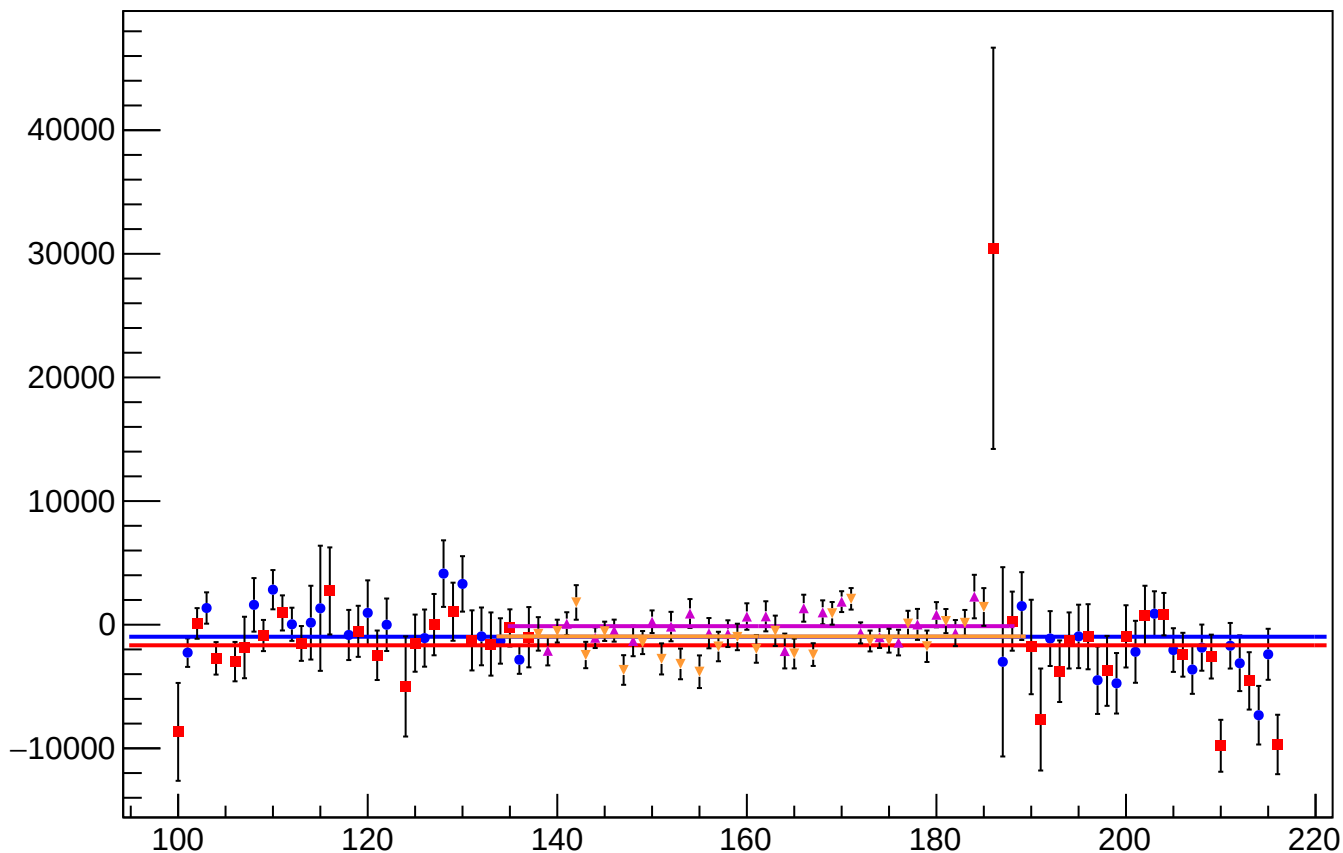
Left In:  $124.259 \pm 0.021$   $\chi^2/\text{NDF}: 557214.9/22$

+ sign  $126.463 \pm 0.015$   $\chi^2/\text{NDF}: 2124857.2/55$

All:  $126.394 \pm 0.010$   $\chi^2/\text{NDF}: 5096238.9/113$

- sign  $126.323 \pm 0.015$   $\chi^2/\text{NDF}: 2971336.6/57$

asym\_sam\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-973.570 \pm 351.117$   $\chi^2/\text{NDF}$ : 40.7/30

Left Out:  $-947.709 \pm 211.794$   $\chi^2/\text{NDF}$ : 50.3/24

Right Out:  $-1666.262 \pm 345.283$   $\chi^2/\text{NDF}$ : 55.1/34

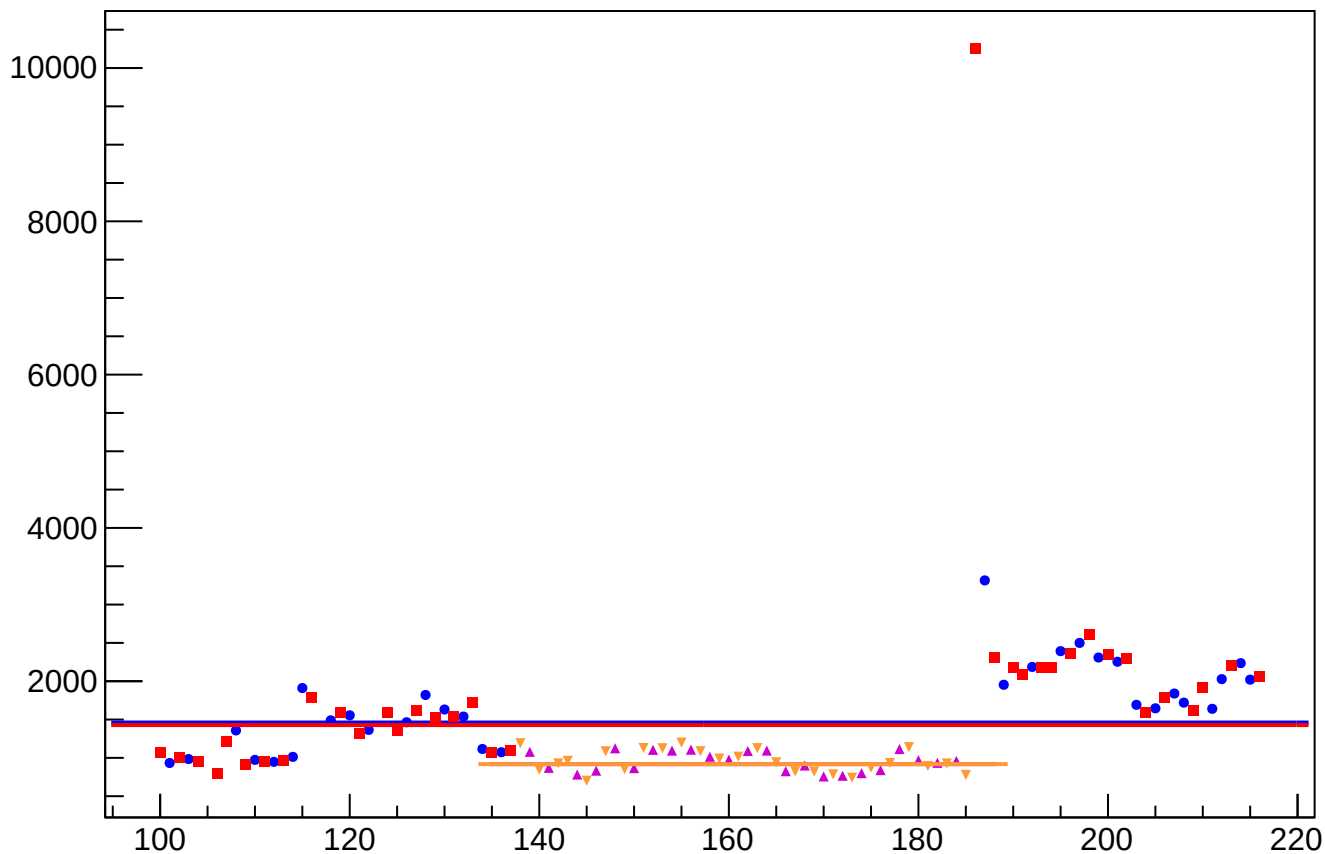
Left In:  $-118.435 \pm 217.165$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $-954.609 \pm 181.355$   $\chi^2/\text{NDF}$ : 91.0/55

All:  $-758.580 \pm 129.103$   $\chi^2/\text{NDF}$ : 187.3/113

- sign  $-557.168 \pm 183.829$   $\chi^2/\text{NDF}$ : 93.9/57

asym\_sam\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1460.903+/-0.248  $\chi^2/\text{NDF}$ : 3667629.8/30

Left Out: 918.501+/-0.150  $\chi^2/\text{NDF}$ : 887819.5/24

Right Out: 1427.616+/-0.244  $\chi^2/\text{NDF}$ : 4979756.7/34

Left In: 918.214+/-0.154  $\chi^2/\text{NDF}$ : 666263.4/22

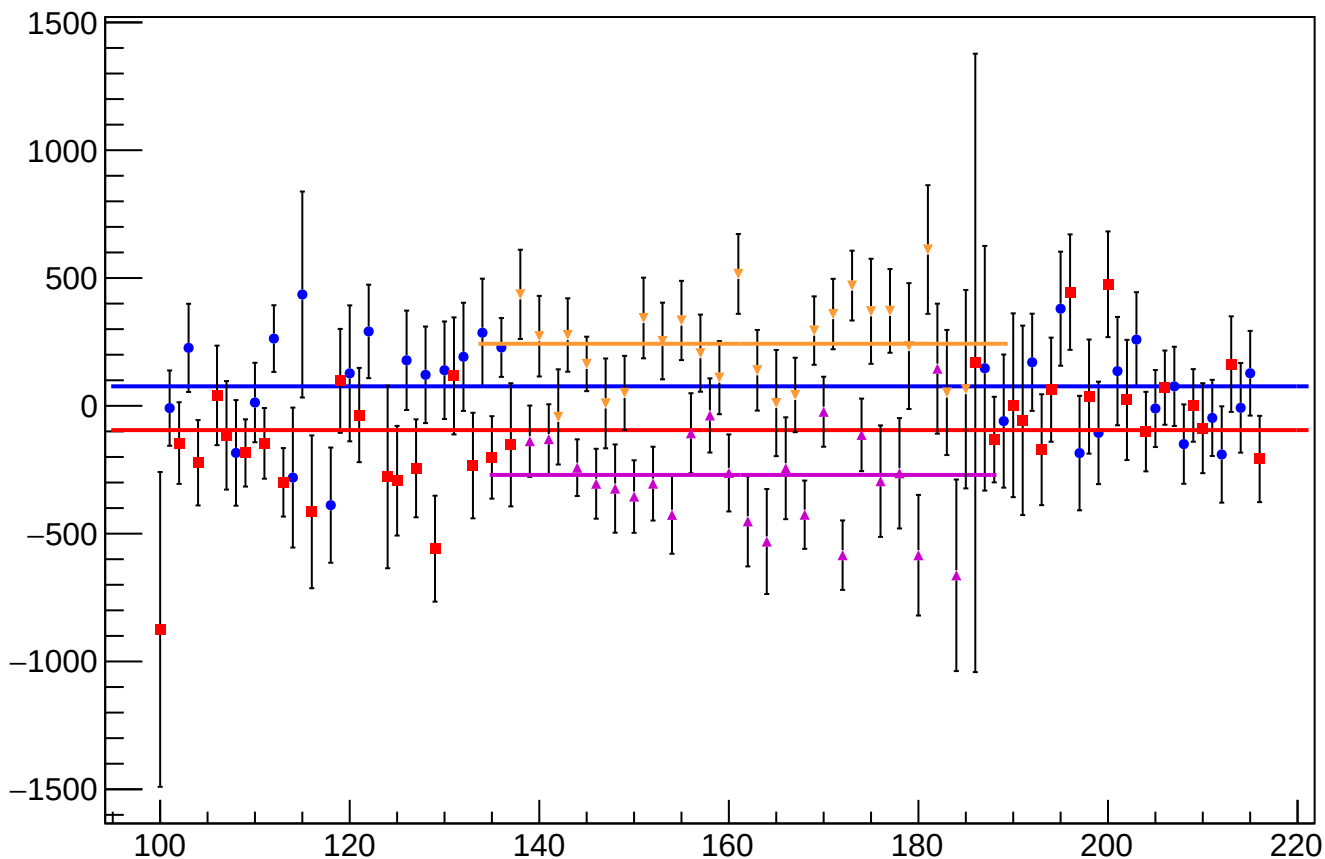
+ sign 1063.204+/-0.128  $\chi^2/\text{NDF}$ : 8054914.1/55

All: 1062.908+/-0.091  $\chi^2/\text{NDF}$ : 16820170.7/1

- sign 1062.604+/-0.130  $\chi^2/\text{NDF}$ : 8765245.8/57



# dit\_asym\_sam\_48\_dd\_mean vs Slug



Right In:  $76.310 \pm 32.949$   $\chi^2/\text{NDF}$ : 27.6/30

Left Out:  $242.890 \pm 32.138$   $\chi^2/\text{NDF}$ : 23.7/24

Right Out:  $-94.952 \pm 32.488$   $\chi^2/\text{NDF}$ : 35.4/34

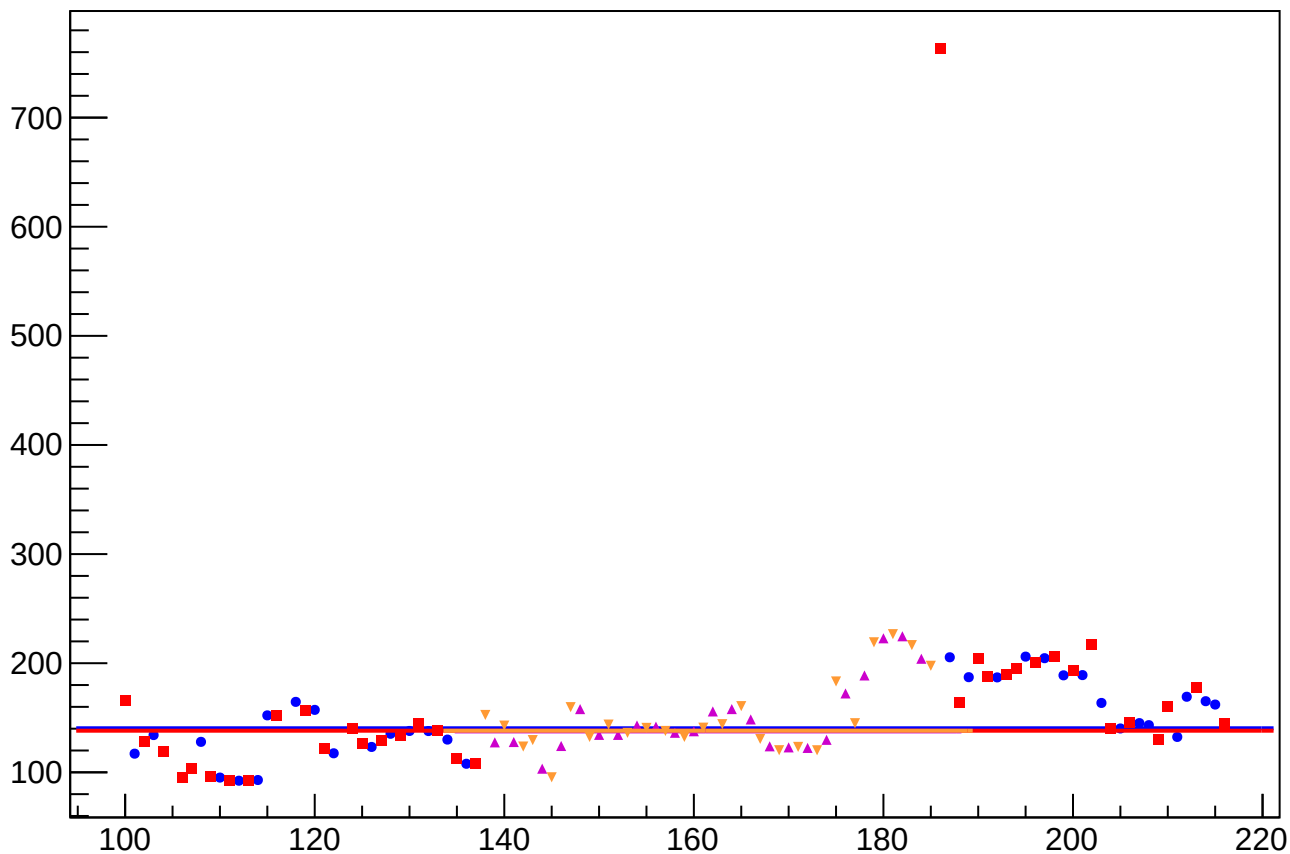
Left In:  $-270.243 \pm 32.893$   $\chi^2/\text{NDF}$ : 26.7/22

+ sign  $161.673 \pm 23.006$   $\chi^2/\text{NDF}$ : 64.4/55

All:  $-9.116 \pm 16.306$   $\chi^2/\text{NDF}$ : 251.6/113

- sign  $-181.511 \pm 23.114$   $\chi^2/\text{NDF}$ : 76.4/57

# dit\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 140.370 $\pm$ 0.023  $\chi^2$ /NDF: 1750204.3/30

Left Out: 138.127 $\pm$ 0.023  $\chi^2$ /NDF:1338308.5/24

Right Out: 138.149 $\pm$ 0.023  $\chi^2$ /NDF: 2764826.7/34

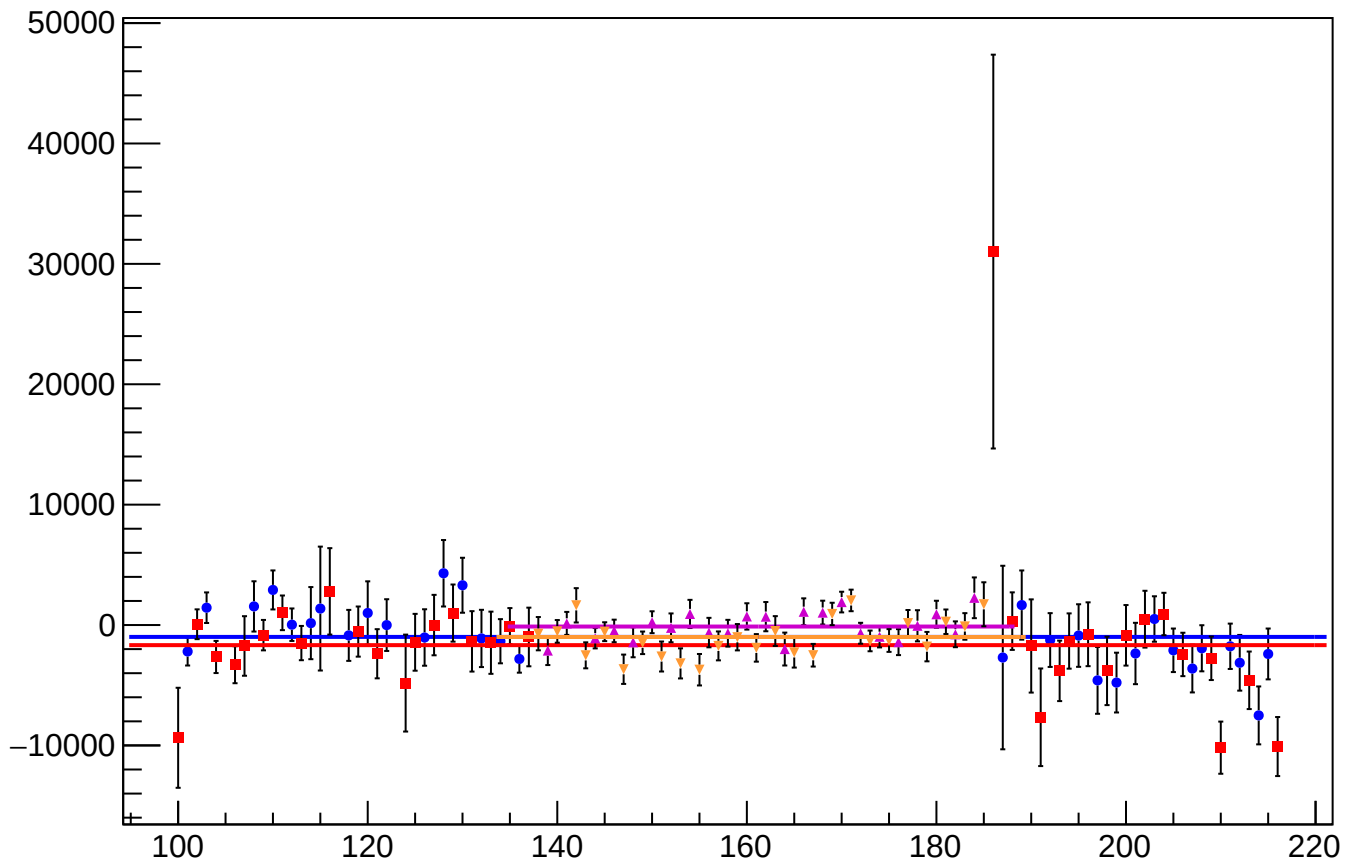
Left In: 137.491 $\pm$ 0.023  $\chi^2$ /NDF:1109333.5/22

+ sign 139.221 $\pm$ 0.016  $\chi^2$ /NDF: 3093260.1/55

All: 138.526 $\pm$ 0.012  $\chi^2$ /NDF: 6971491.7/113

- sign 137.824 $\pm$ 0.016  $\chi^2$ /NDF: 3874565.2/57

# asym\_sam\_48\_dd\_dit\_correction\_mean vs Slug



Right In: -986.305 $\pm$ 355.576  $\chi^2$ /NDF: 40.6/30

Left Out: -993.237 $\pm$ 215.652  $\chi^2$ /NDF: 46.9/24

Right Out: -1670.181 $\pm$ 347.922  $\chi^2$ /NDF: 57.2/34

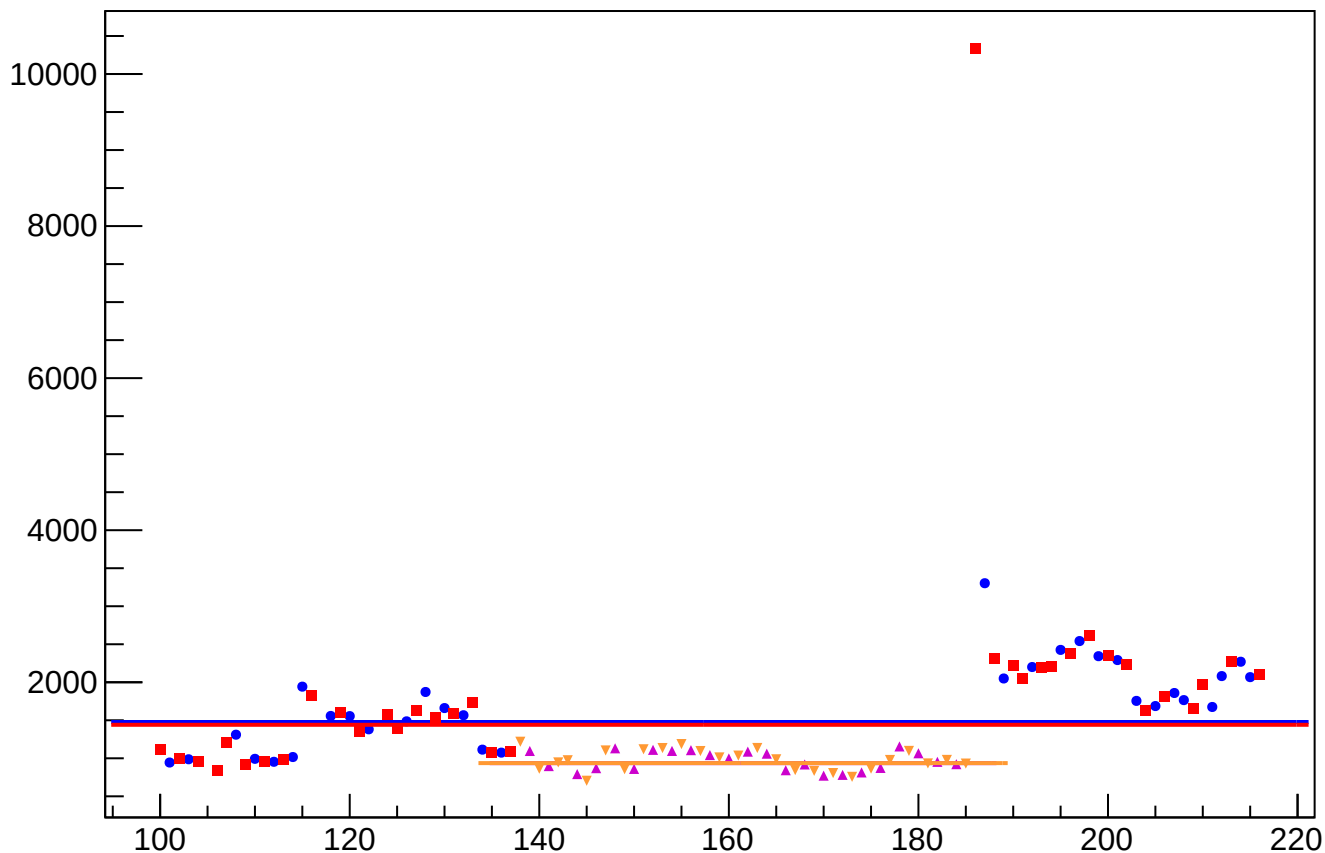
Left In: -124.857 $\pm$ 221.367  $\chi^2$ /NDF: 23.9/22

+ sign -991.373 $\pm$ 184.390  $\chi^2$ /NDF: 87.5/55

All: -783.466 $\pm$ 131.216  $\chi^2$ /NDF: 185.2/113

- sign -570.164 $\pm$ 186.768  $\chi^2$ /NDF: 95.1/57

# asym\_sam\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 1477.347+/-0.251  $\chi^2/\text{NDF}$ : 3798199.3/30

Left Out: 936.743+/-0.152  $\chi^2/\text{NDF}$ : 832449.3/24

Right Out: 1440.753+/-0.246  $\chi^2/\text{NDF}$ : 4993729.0/34

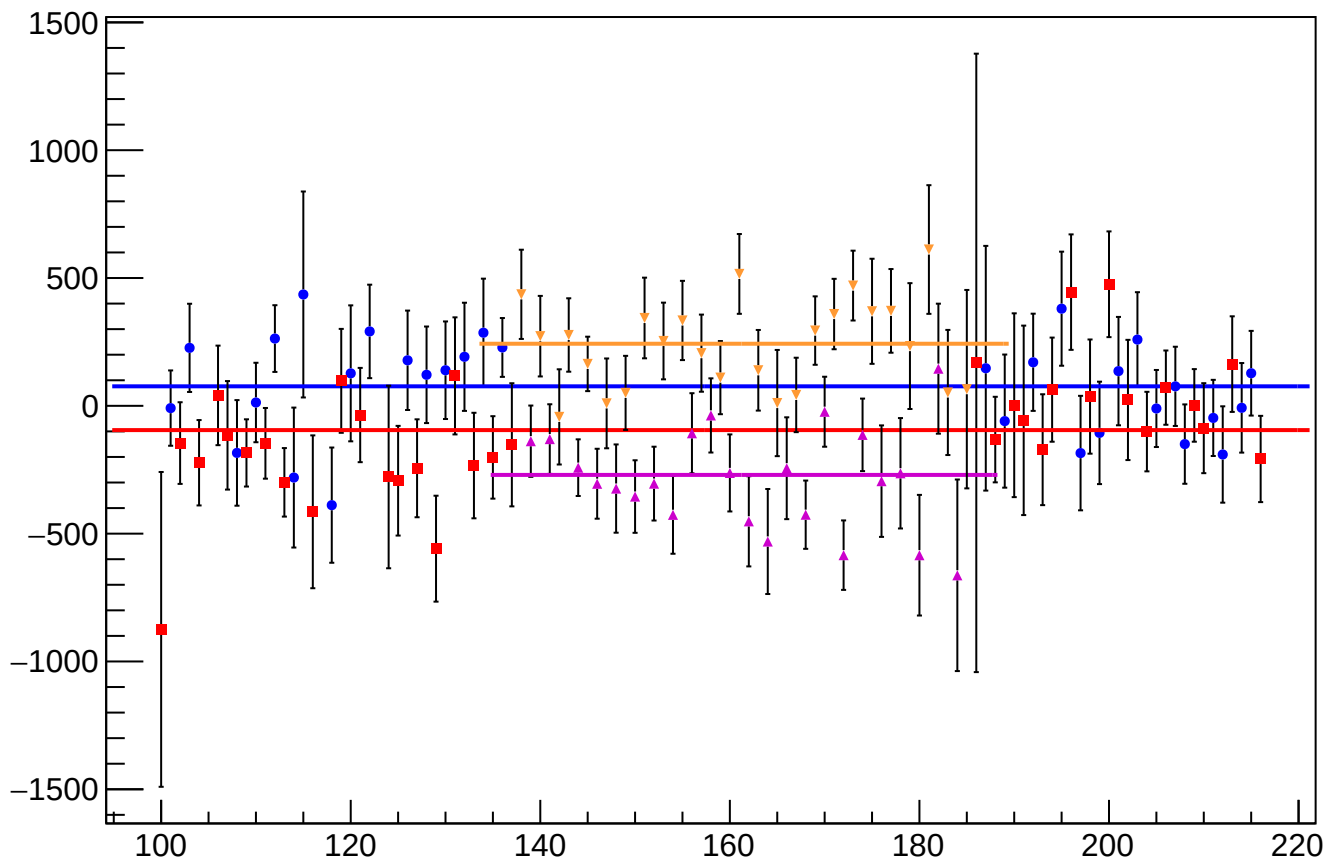
Left In: 936.380+/-0.157  $\chi^2/\text{NDF}$ : 642749.3/22

+ sign 1082.119+/-0.130  $\chi^2/\text{NDF}$ : 8010452.8/55

All: 1081.923+/-0.093  $\chi^2/\text{NDF}$ : 16638850.0/100

- sign 1081.723+/-0.132  $\chi^2/\text{NDF}$ : 8628392.6/57

# eigen\_dit\_asym\_sam\_48\_dd\_mean vs Slug



Right In:  $76.312 \pm 32.949$   $\chi^2/\text{NDF}: 27.6/30$

Left Out:  $242.892 \pm 32.138$   $\chi^2/\text{NDF}: 23.7/24$

Right Out:  $-94.950 \pm 32.488$   $\chi^2/\text{NDF}: 35.4/34$

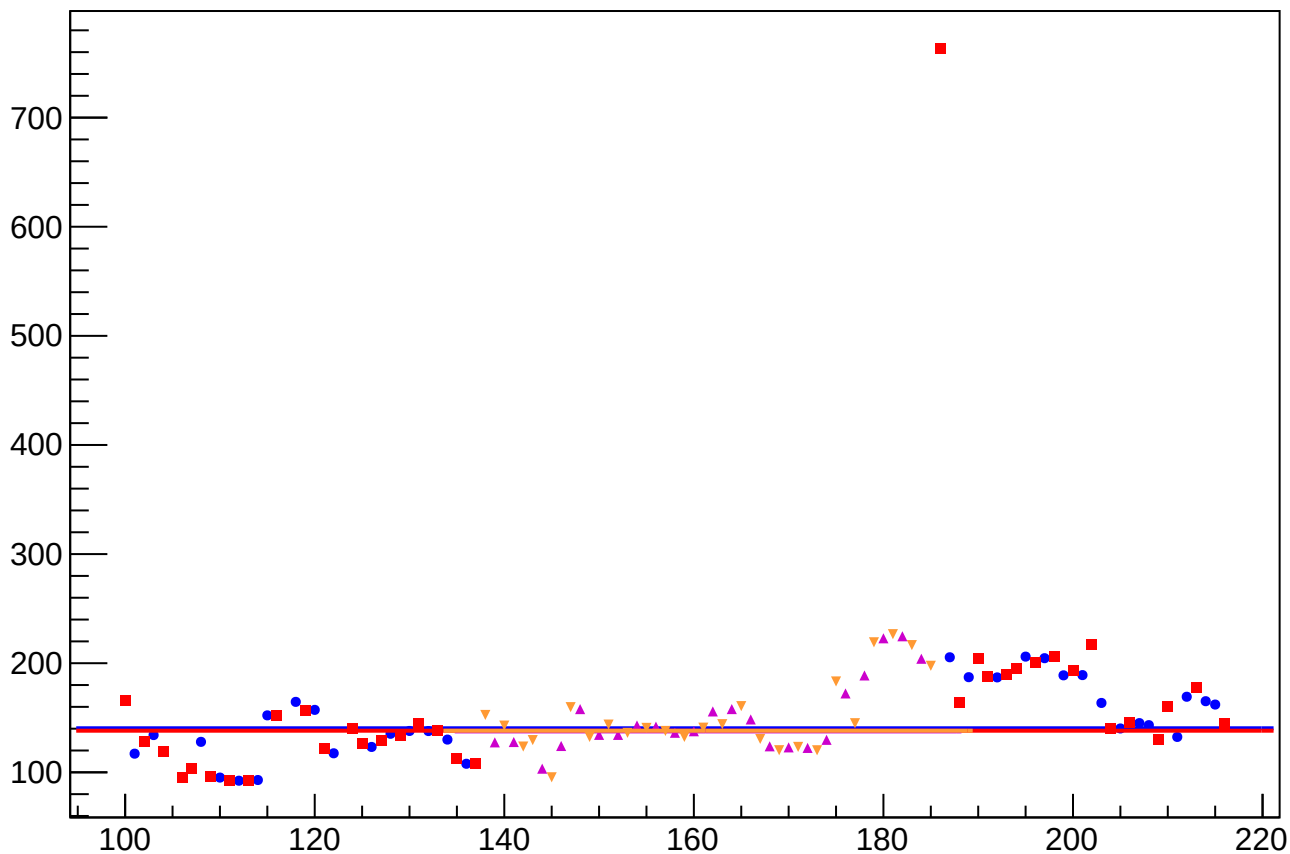
Left In:  $-270.244 \pm 32.893$   $\chi^2/\text{NDF}: 26.7/22$

+ sign  $161.675 \pm 23.006$   $\chi^2/\text{NDF}: 64.4/55$

All:  $-9.115 \pm 16.306$   $\chi^2/\text{NDF}: 251.6/113$

- sign  $-181.511 \pm 23.114$   $\chi^2/\text{NDF}: 76.4/57$

# eigen\_dit\_asym\_sam\_48\_dd\_rms vs Slug



Right In: 140.370 $\pm$ 0.023  $\chi^2$ /NDF: 1750186.2/30

Left Out: 138.127 $\pm$ 0.023  $\chi^2$ /NDF:1338311.7/24

Right Out: 138.149 $\pm$ 0.023  $\chi^2$ /NDF: 2764830.9/34

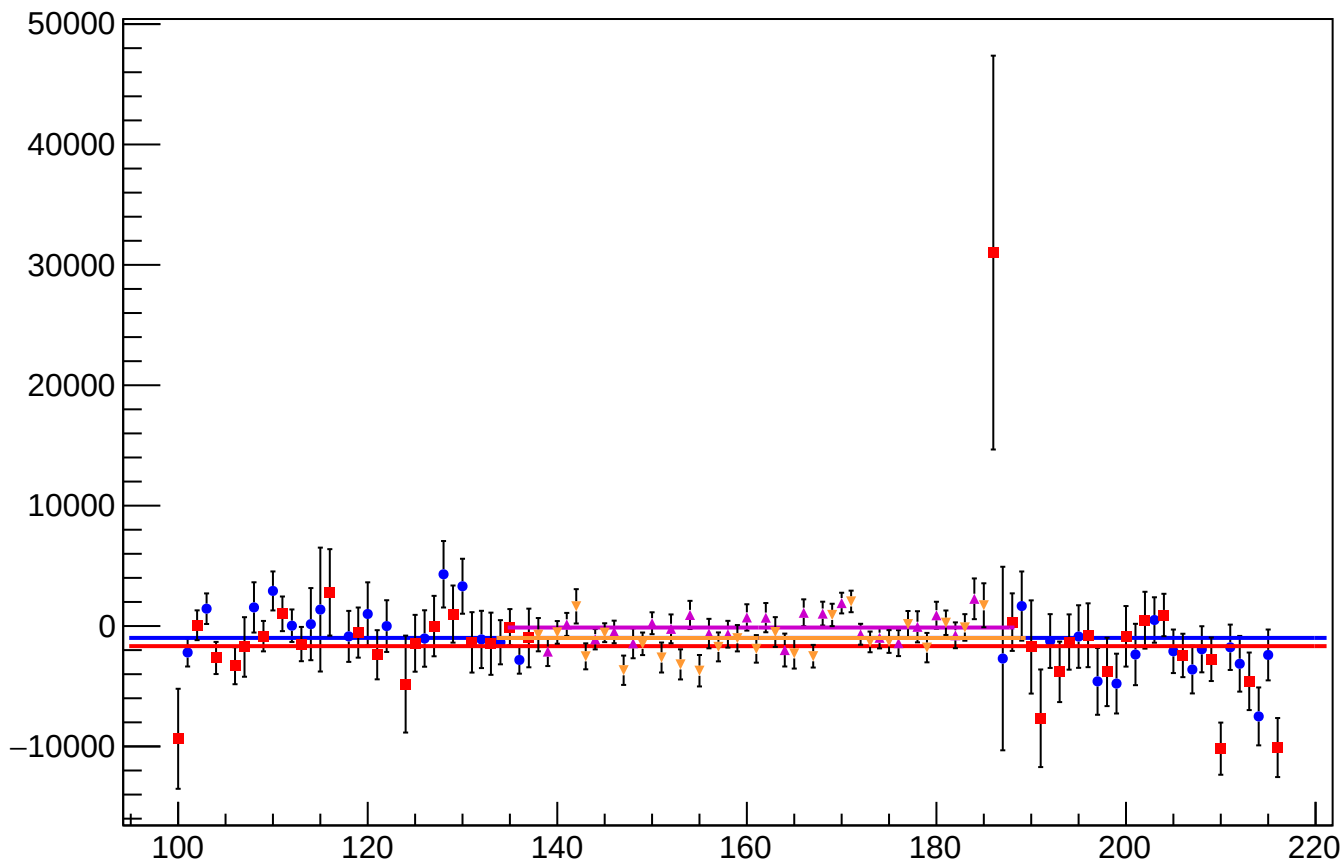
Left In: 137.491 $\pm$ 0.023  $\chi^2$ /NDF:1109319.8/22

+ sign 139.221 $\pm$ 0.016  $\chi^2$ /NDF: 3093244.9/55

All: 138.526 $\pm$ 0.012  $\chi^2$ /NDF: 6971466.9/113

- sign 137.824 $\pm$ 0.016  $\chi^2$ /NDF: 3874555.7/57

asym\_sam\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -986.304+/-355.576  $\chi^2/\text{NDF}$ : 40.6/30

Left Out: -993.235+/-215.652  $\chi^2/\text{NDF}$ : 46.9/24

Right Out: -1670.179+/-347.922  $\chi^2/\text{NDF}$ : 57.2/34

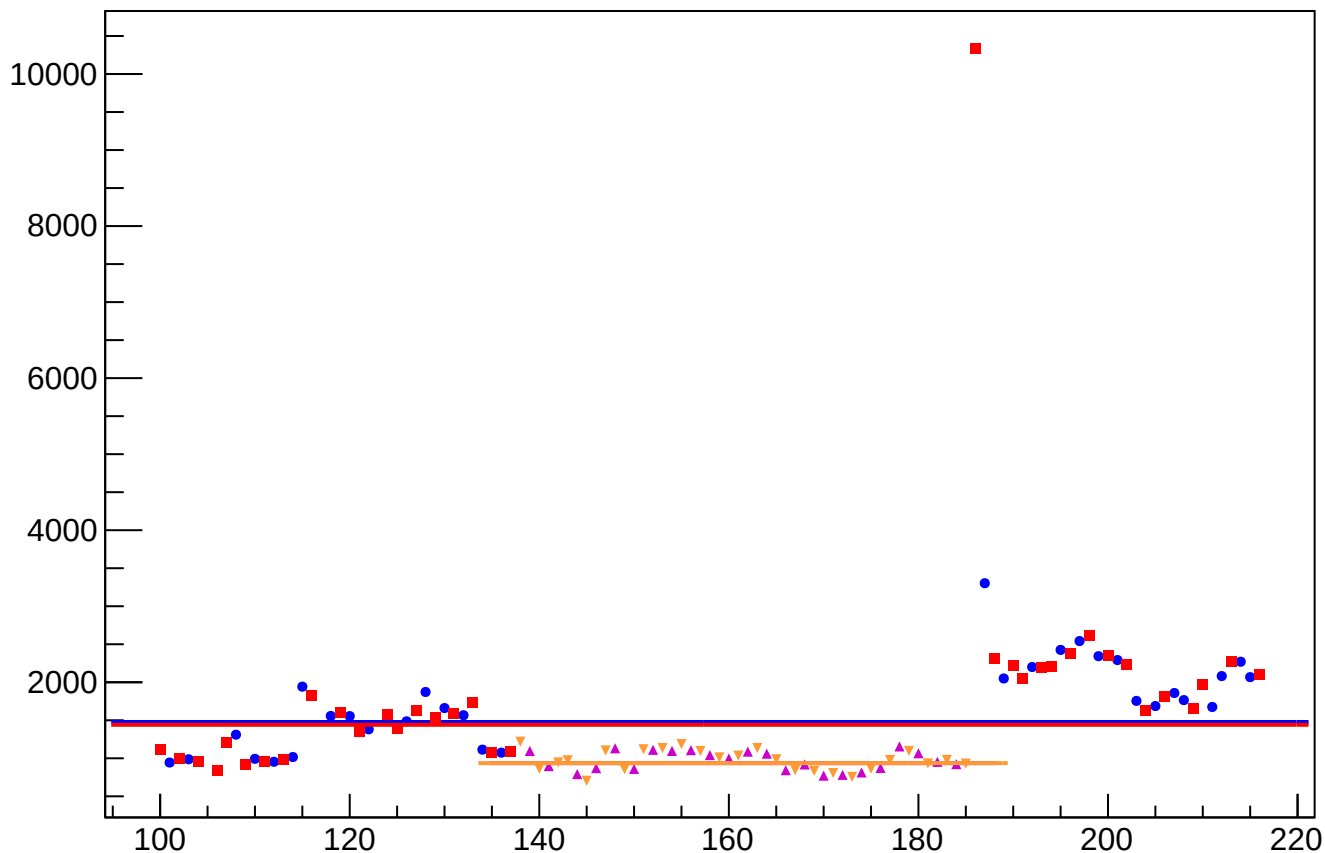
Left In: -124.856+/-221.366  $\chi^2/\text{NDF}$ : 23.9/22

+ sign -991.371+/-184.390  $\chi^2/\text{NDF}$ : 87.5/55

All: -783.465+/-131.216  $\chi^2/\text{NDF}$ : 185.2/113

- sign -570.162+/-186.768  $\chi^2/\text{NDF}$ : 95.1/57

asym\_sam\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1477.346 $\pm$ 0.251  $\chi^2$ /NDF: 3798191.7/30

Left Out: 936.742 $\pm$ 0.152  $\chi^2$ /NDF: 832452.0/24

Right Out: 1440.753 $\pm$ 0.246  $\chi^2$ /NDF: 4993721.2/34

Left In: 936.379 $\pm$ 0.157  $\chi^2$ /NDF: 642748.0/22

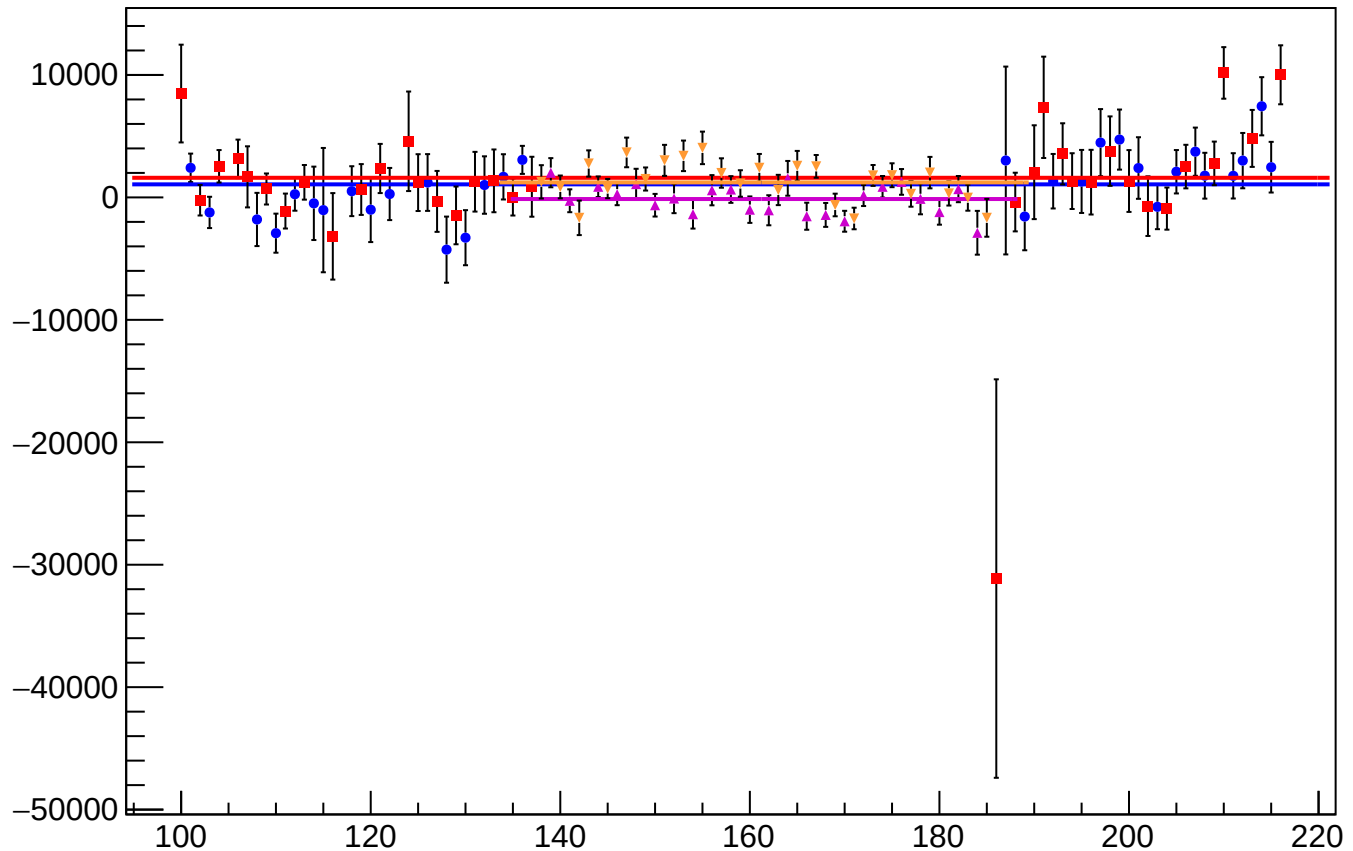
+ sign 1082.118 $\pm$ 0.130  $\chi^2$ /NDF: 8010460.7/55

All: 1081.922 $\pm$ 0.093  $\chi^2$ /NDF: 16638857.3/100

- sign 1081.722 $\pm$ 0.132  $\chi^2$ /NDF: 8628392.0/57



# asym\_sam\_48\_dd\_mean vs Slug



Right In: 1065.476 $\pm$ 352.679  $\chi^2/\text{NDF}$ : 41.9/30

Left Out: 1225.521 $\pm$ 213.843  $\chi^2/\text{NDF}$ : 48.5/24

Right Out: 1601.768 $\pm$ 346.502  $\chi^2/\text{NDF}$ : 59.4/34

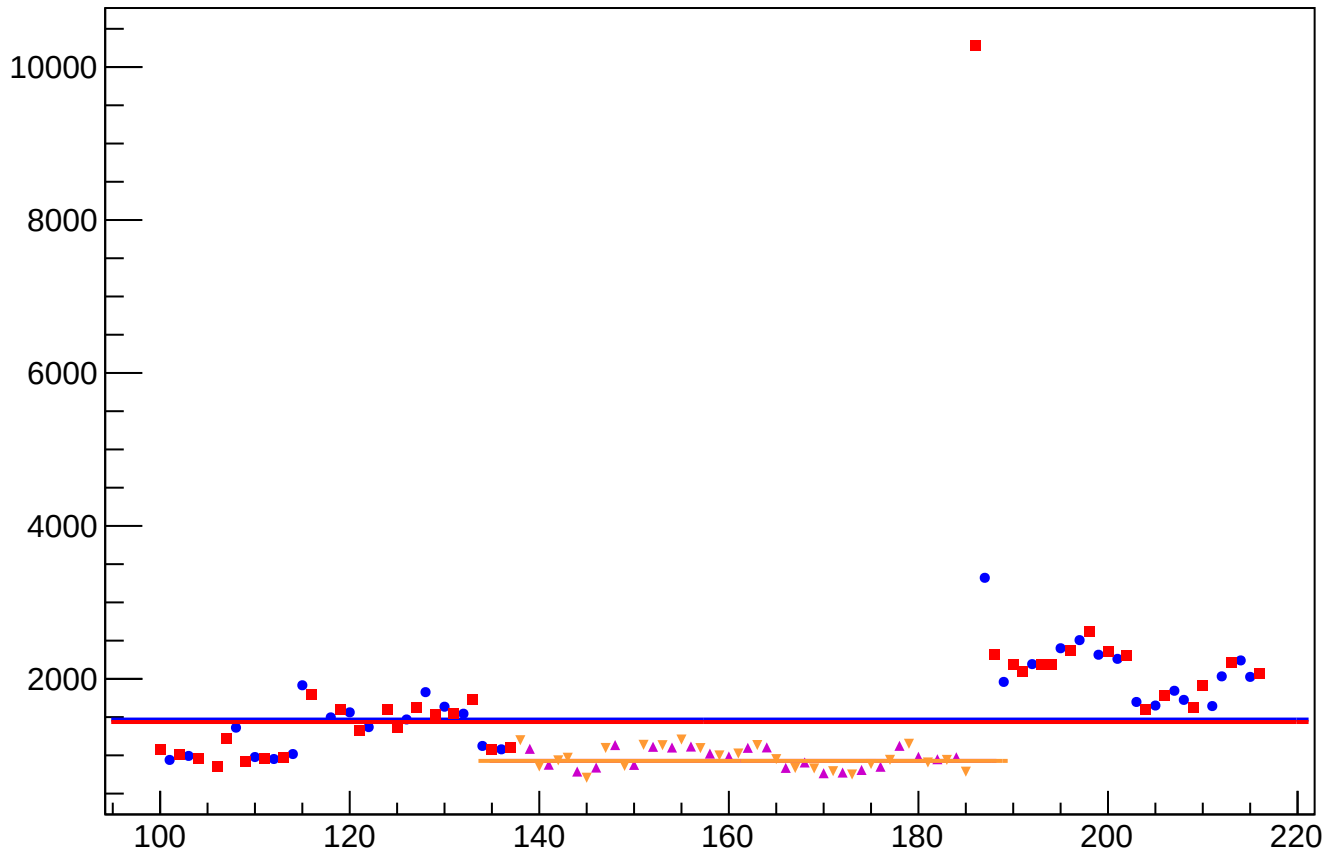
Left In: -132.834 $\pm$ 219.278  $\chi^2/\text{NDF}$ : 25.8/22

+ sign 1182.498 $\pm$ 182.856  $\chi^2/\text{NDF}$ : 90.6/55

All: 778.266 $\pm$ 130.151  $\chi^2/\text{NDF}$ : 203.6/113

- sign 363.190 $\pm$ 185.292  $\chi^2/\text{NDF}$ : 103.1/57

# asym\_sam\_48\_dd\_rms vs Slug



Right In: 1468.038 $\pm$ 0.249  $\chi^2$ /NDF: 3638015.2/30

Left Out: 927.610 $\pm$ 0.151  $\chi^2$ /NDF: 875127.3/24

Right Out: 1435.875 $\pm$ 0.245  $\chi^2$ /NDF: 4912318.0/34

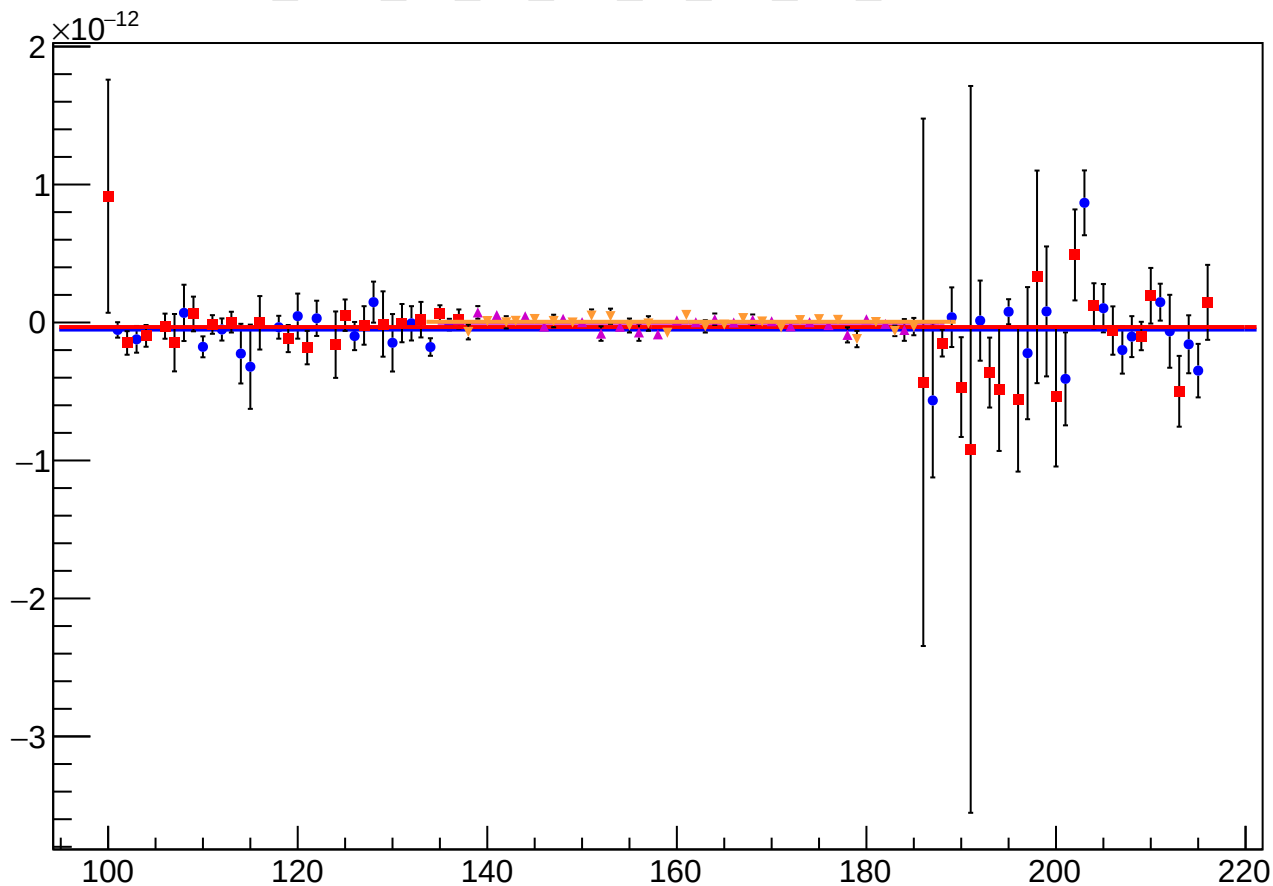
Left In: 927.321 $\pm$ 0.155  $\chi^2$ /NDF: 656539.8/22

+ sign 1072.886 $\pm$ 0.129  $\chi^2$ /NDF: 7946921.1/55

All: 1072.817 $\pm$ 0.092  $\chi^2$ /NDF: 16591995.7/100

- sign 1072.746 $\pm$ 0.131  $\chi^2$ /NDF: 8645074.0/57

asym\_sam\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.0/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.5/34

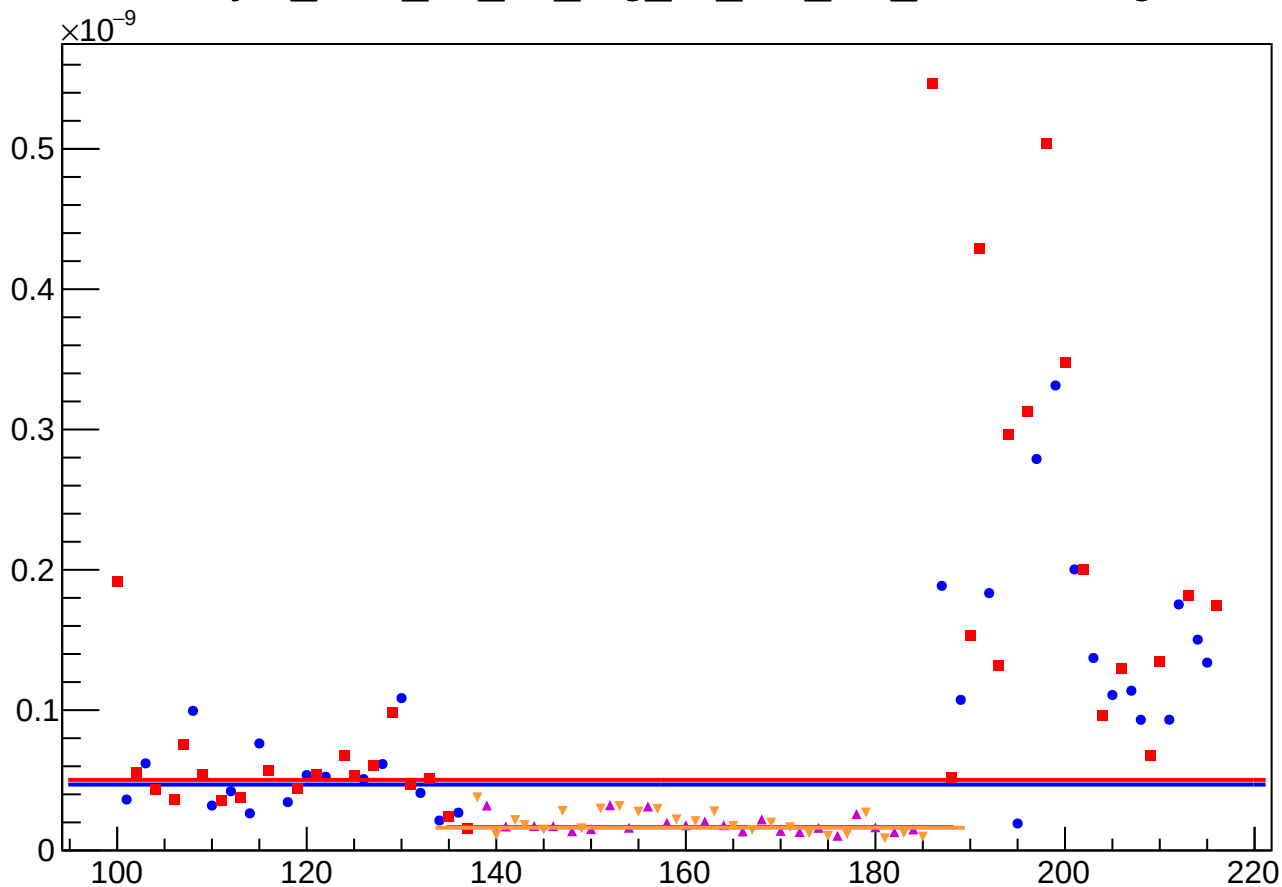
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 27.7/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 71.6/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 130.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 58.3/57

asym\_sam\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6590442.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2009728.9/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 6685566.5/34

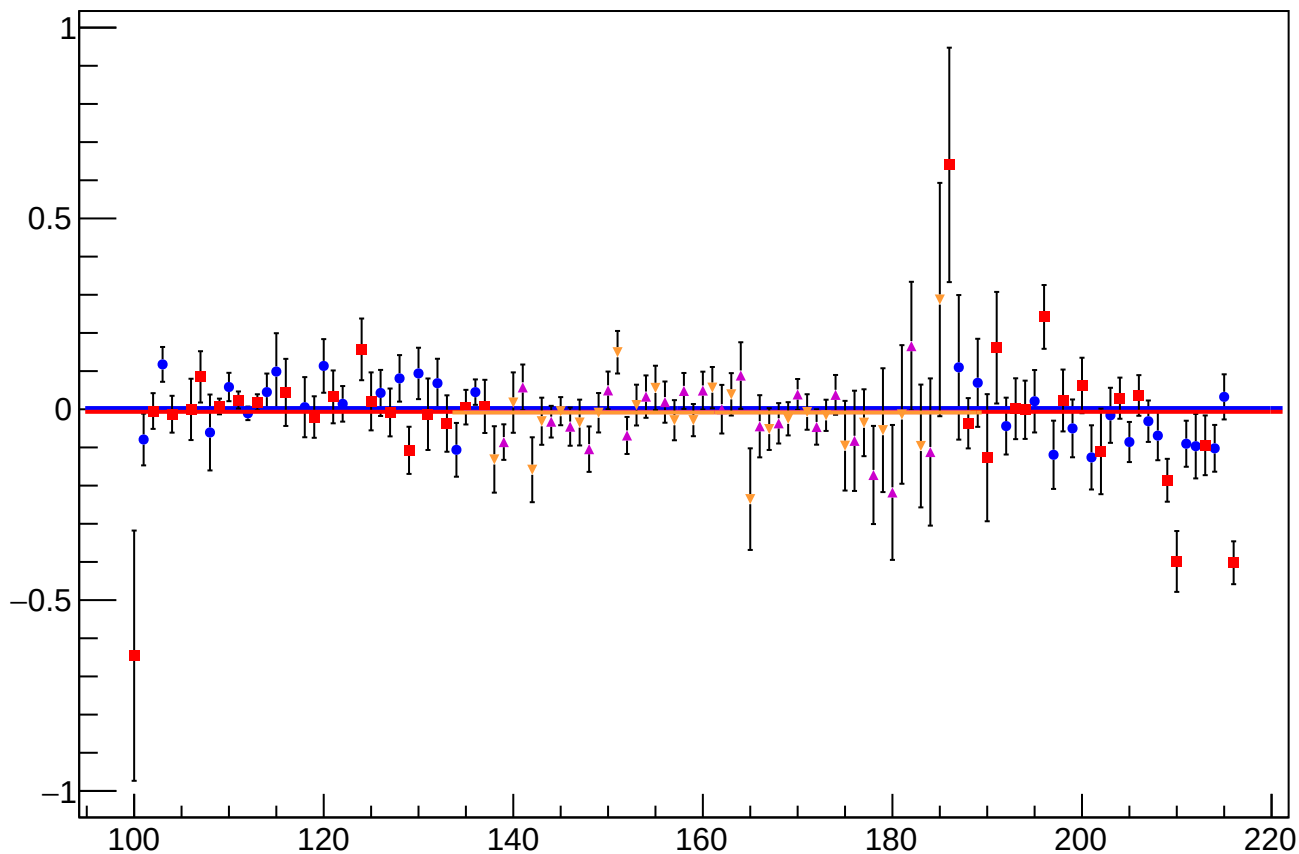
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 928356.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12928529.9/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25153854.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 12211229.4/57

asym\_sam\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 41.5/30

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/24

Right Out:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}$ : 120.9/34

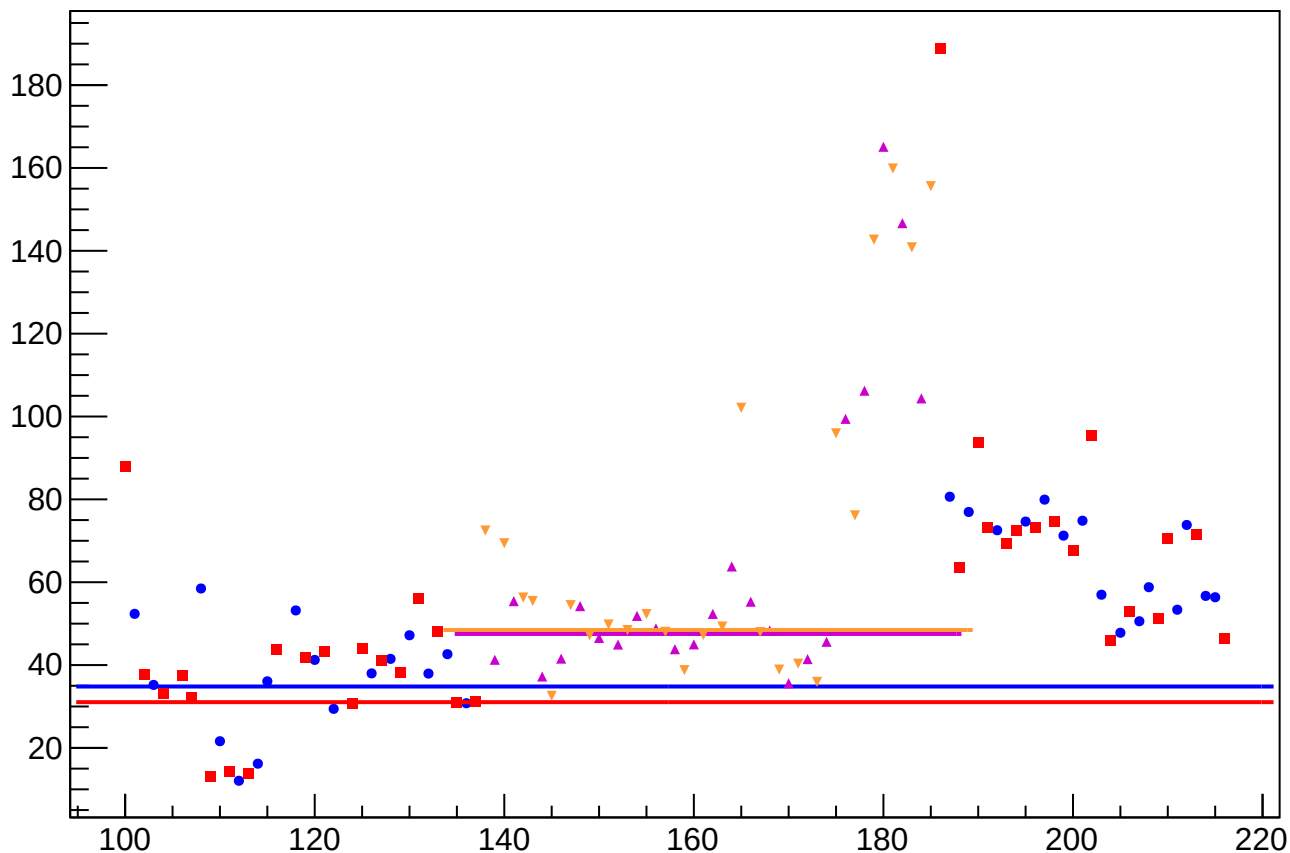
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}$ : 23.2/22

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 65.2/55

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 209.7/113

- sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}$ : 144.2/57

# asym\_sam\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $34.824 \pm 0.007$   $\chi^2/\text{NDF}$ : 9081518.7/30

Left Out:  $48.471 \pm 0.008$   $\chi^2/\text{NDF}$ : 4373812.0/24

Right Out:  $31.046 \pm 0.006$   $\chi^2/\text{NDF}$ : 11329241.1/34

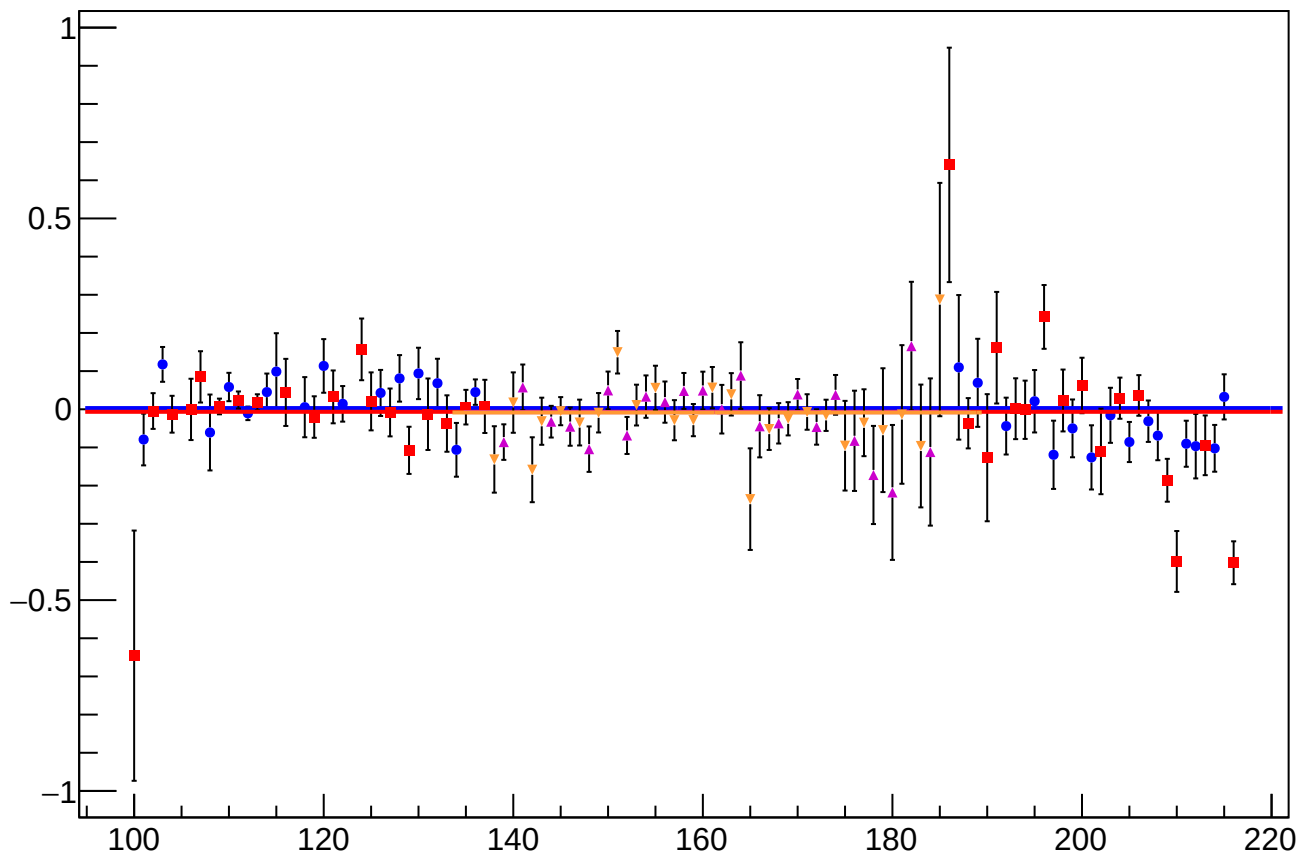
Left In:  $47.505 \pm 0.009$   $\chi^2/\text{NDF}$ : 3075161.5/22

+ sign  $40.061 \pm 0.005$   $\chi^2/\text{NDF}$ : 15047459.2/55

All:  $38.277 \pm 0.004$   $\chi^2/\text{NDF}$ : 32131793.8/113

- sign  $36.679 \pm 0.005$   $\chi^2/\text{NDF}$ : 16866112.8/57

asym\_sam\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 41.5/30$

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/24$

Right Out:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 120.9/34$

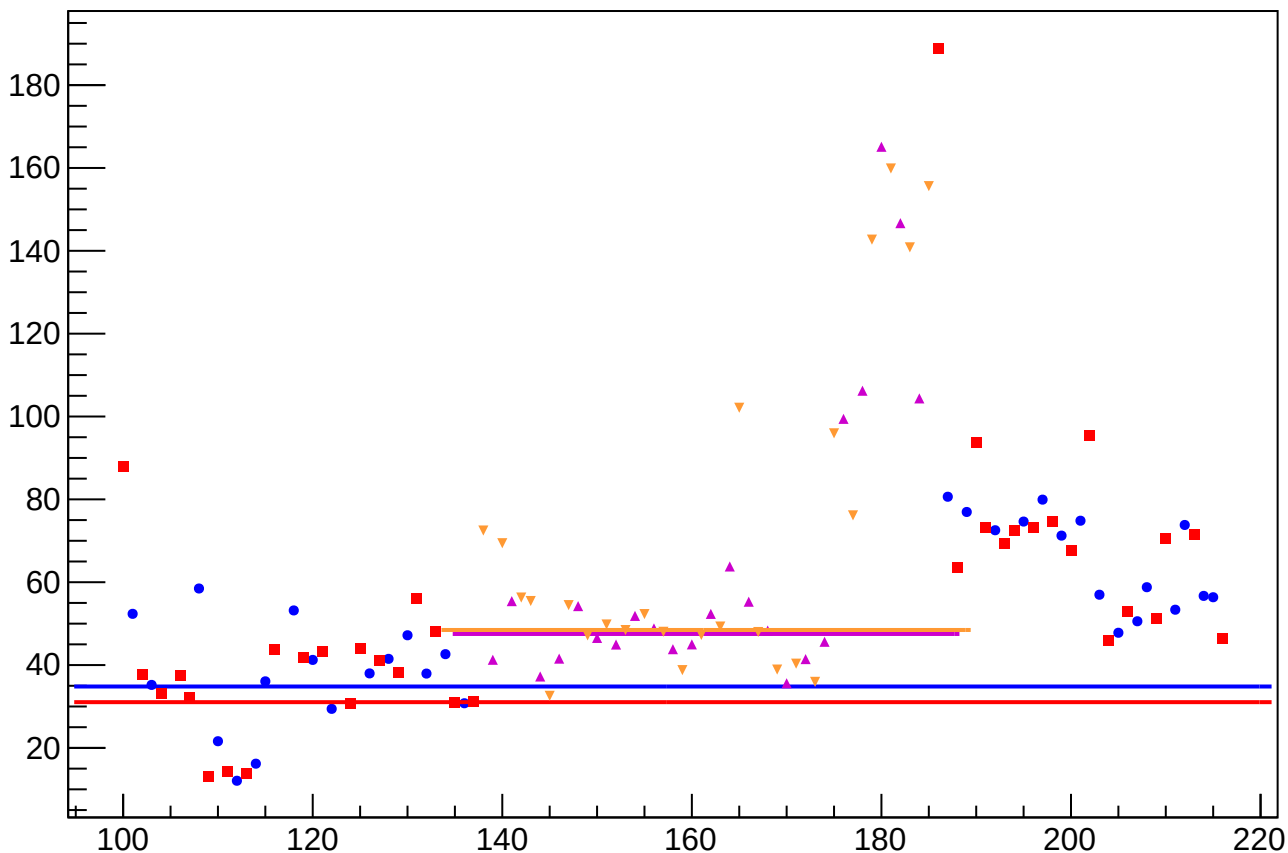
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/22$

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}: 65.2/55$

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}: 209.7/113$

- sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}: 144.2/57$

asym\_sam\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.824+/-0.007  $\chi^2/\text{NDF}$ : 9081518.7/30

Left Out: 48.471+/-0.008  $\chi^2/\text{NDF}$ : 4373812.0/24

Right Out: 31.046+/-0.006  $\chi^2/\text{NDF}$ : 11329241.1/34

Left In: 47.505+/-0.009  $\chi^2/\text{NDF}$ : 3075161.5/22

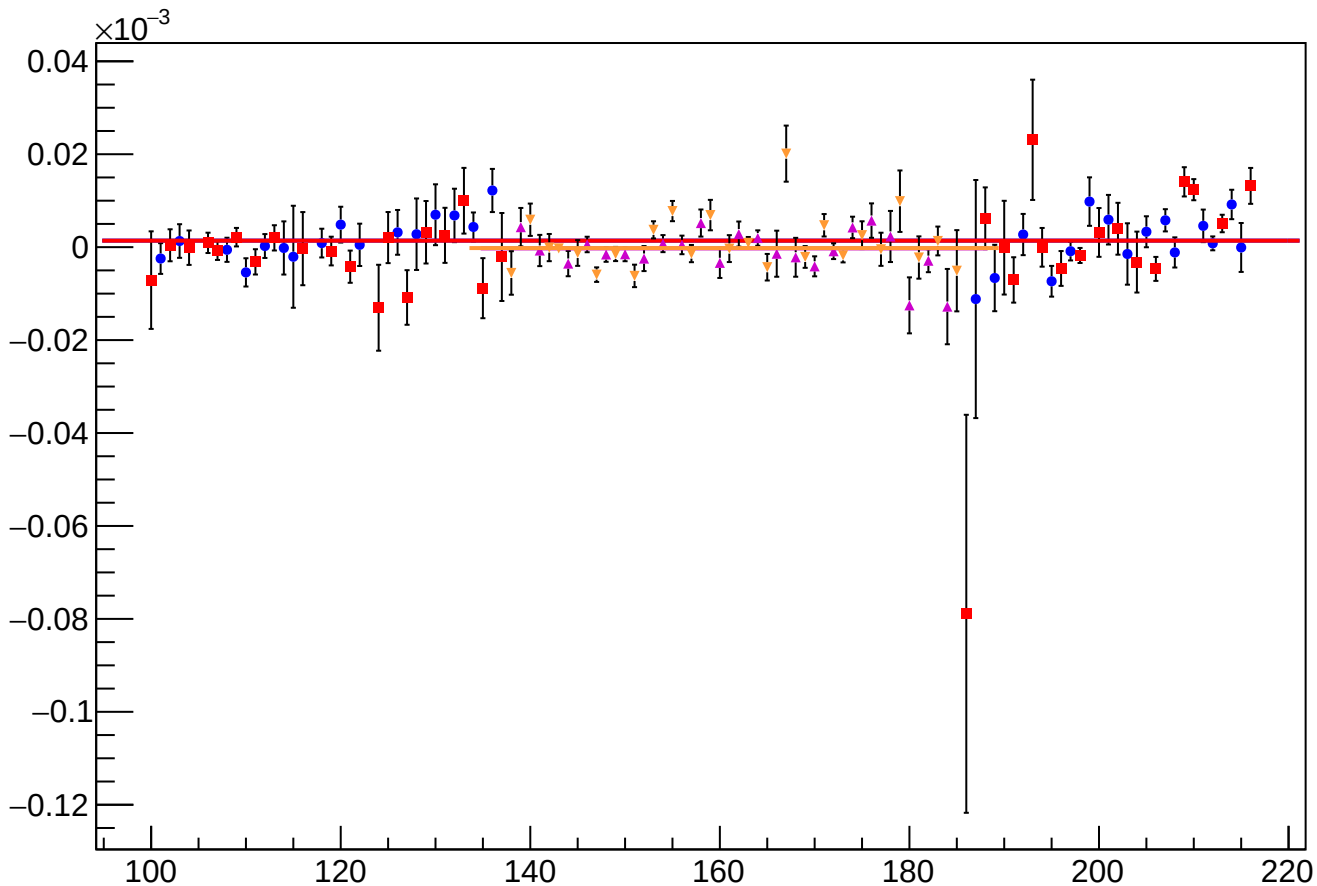
+ sign 40.061+/-0.005  $\chi^2/\text{NDF}$ : 15047459.2/55

All: 38.277+/-0.004  $\chi^2/\text{NDF}$ : 32131793.8/113

- sign 36.679+/-0.005  $\chi^2/\text{NDF}$ : 16866112.8/57



asym\_sam\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 41.1/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:71.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 94.6/34

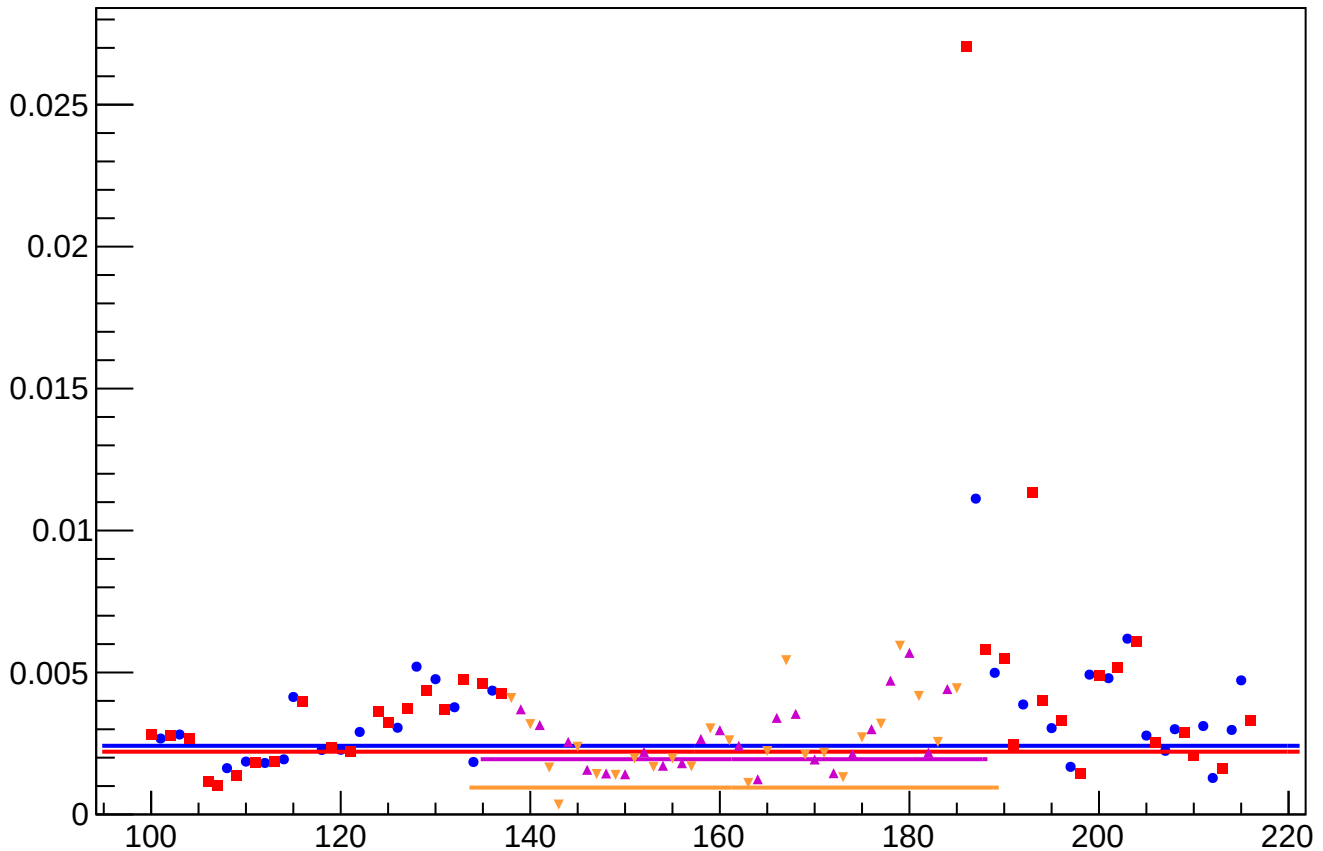
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:30.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 118.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 248.9/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 130.2/57

asym\_sam\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 5909597.5/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 17608951.7/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 8704026.0/34

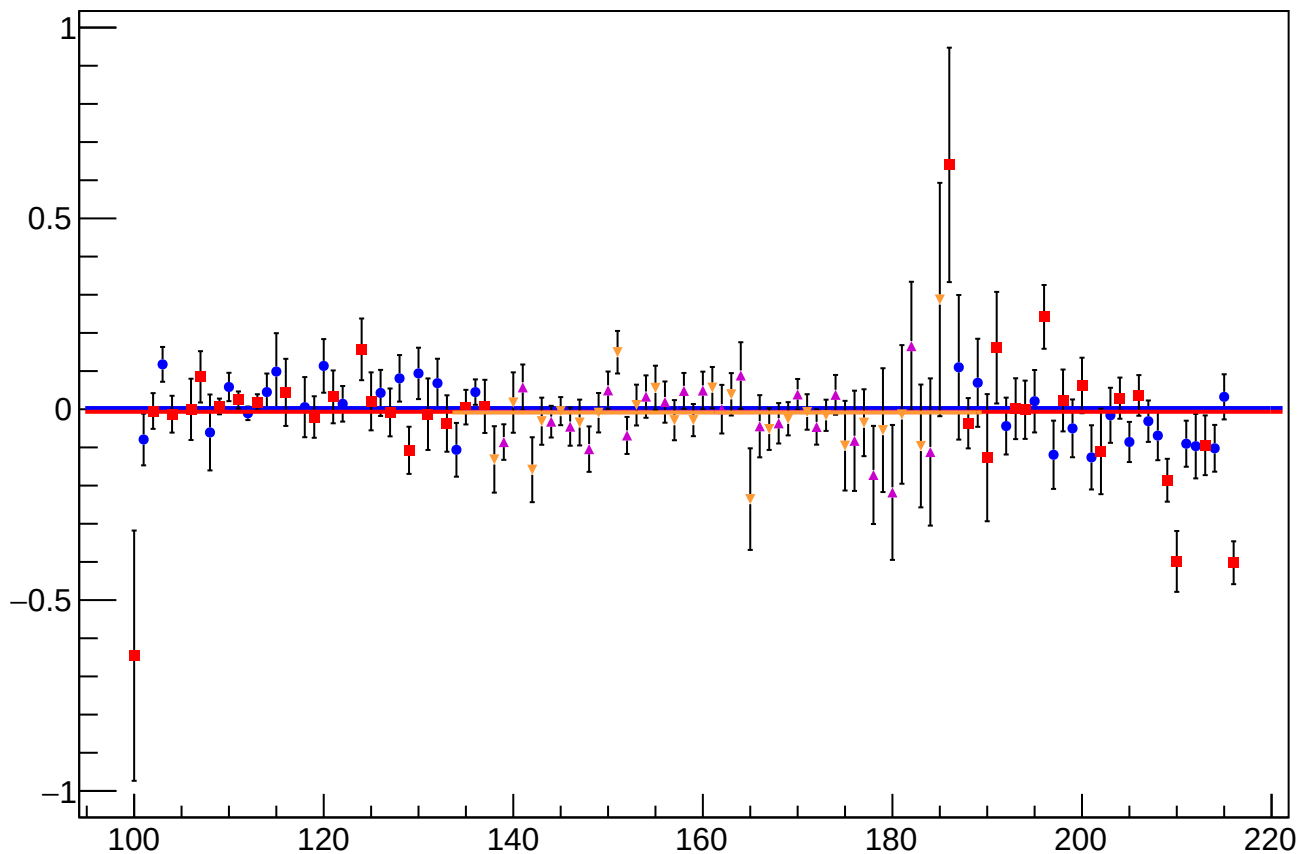
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 4362371.5/22

+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 32721347.1/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 52392953.8/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 13306935.1/57

asym\_sam\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 41.5/30$

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/24$

Right Out:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 120.9/34$

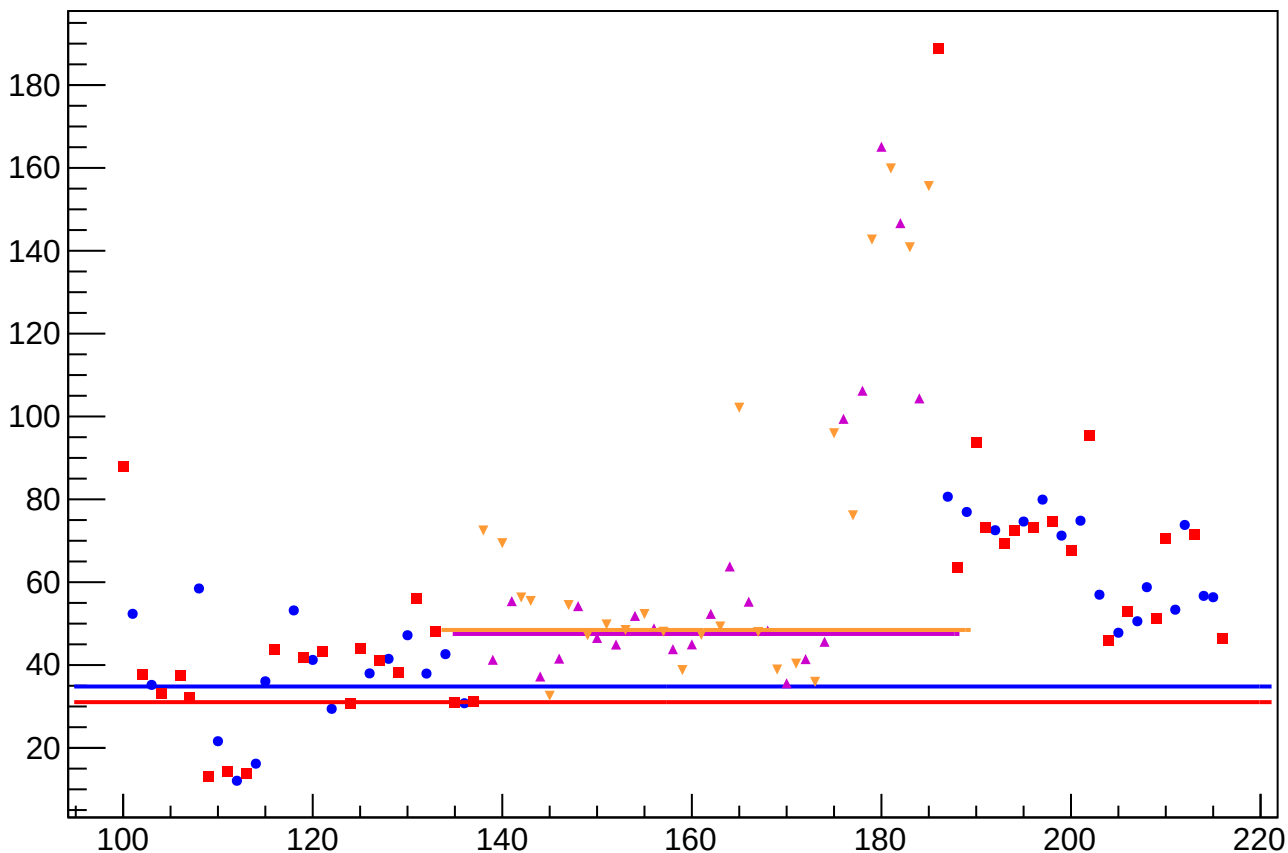
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/22$

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}: 65.2/55$

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}: 209.7/113$

- sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}: 144.2/57$

asym\_sam\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 34.822+/-0.007  $\chi^2/\text{NDF}$ : 9082371.3/30

Left Out: 48.471+/-0.008  $\chi^2/\text{NDF}$ : 4373775.4/24

Right Out: 31.046+/-0.006  $\chi^2/\text{NDF}$ : 11329541.6/34

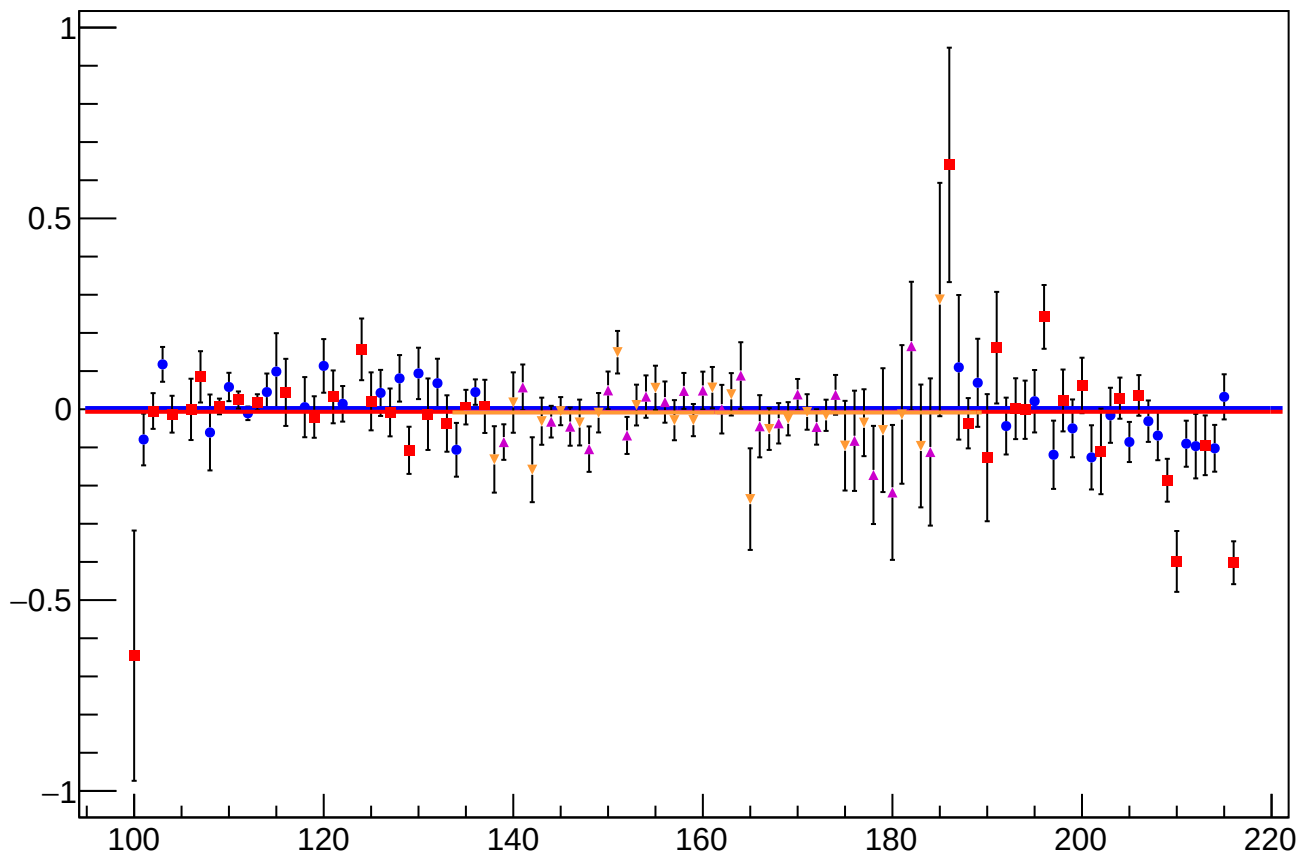
Left In: 47.505+/-0.009  $\chi^2/\text{NDF}$ : 3075116.0/22

+ sign 40.060+/-0.005  $\chi^2/\text{NDF}$ : 15048681.9/55

All: 38.276+/-0.004  $\chi^2/\text{NDF}$ : 32133358.2/113

- sign 36.678+/-0.005  $\chi^2/\text{NDF}$ : 16866544.6/57

asym\_sam\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}: 41.5/30$

Left Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/24$

Right Out:  $-0.007 \pm 0.009$   $\chi^2/\text{NDF}: 120.9/34$

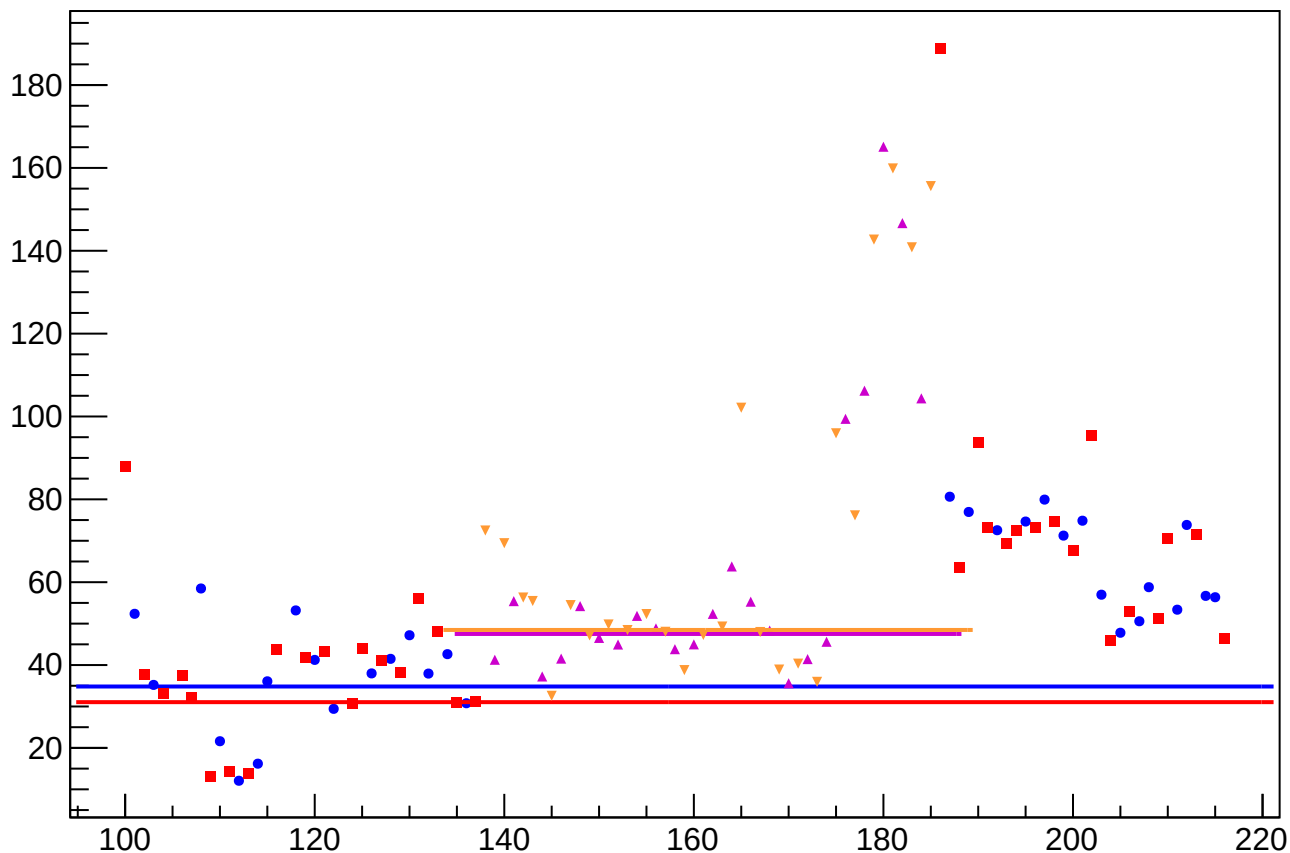
Left In:  $-0.007 \pm 0.012$   $\chi^2/\text{NDF}: 23.2/22$

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}: 65.2/55$

All:  $-0.004 \pm 0.005$   $\chi^2/\text{NDF}: 209.7/113$

- sign  $-0.007 \pm 0.007$   $\chi^2/\text{NDF}: 144.2/57$

asym\_sam\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.822+/-0.007  $\chi^2/\text{NDF}$ : 9082371.3/30

Left Out: 48.471+/-0.008  $\chi^2/\text{NDF}$ : 4373775.4/24

Right Out: 31.046+/-0.006  $\chi^2/\text{NDF}$ : 11329541.6/34

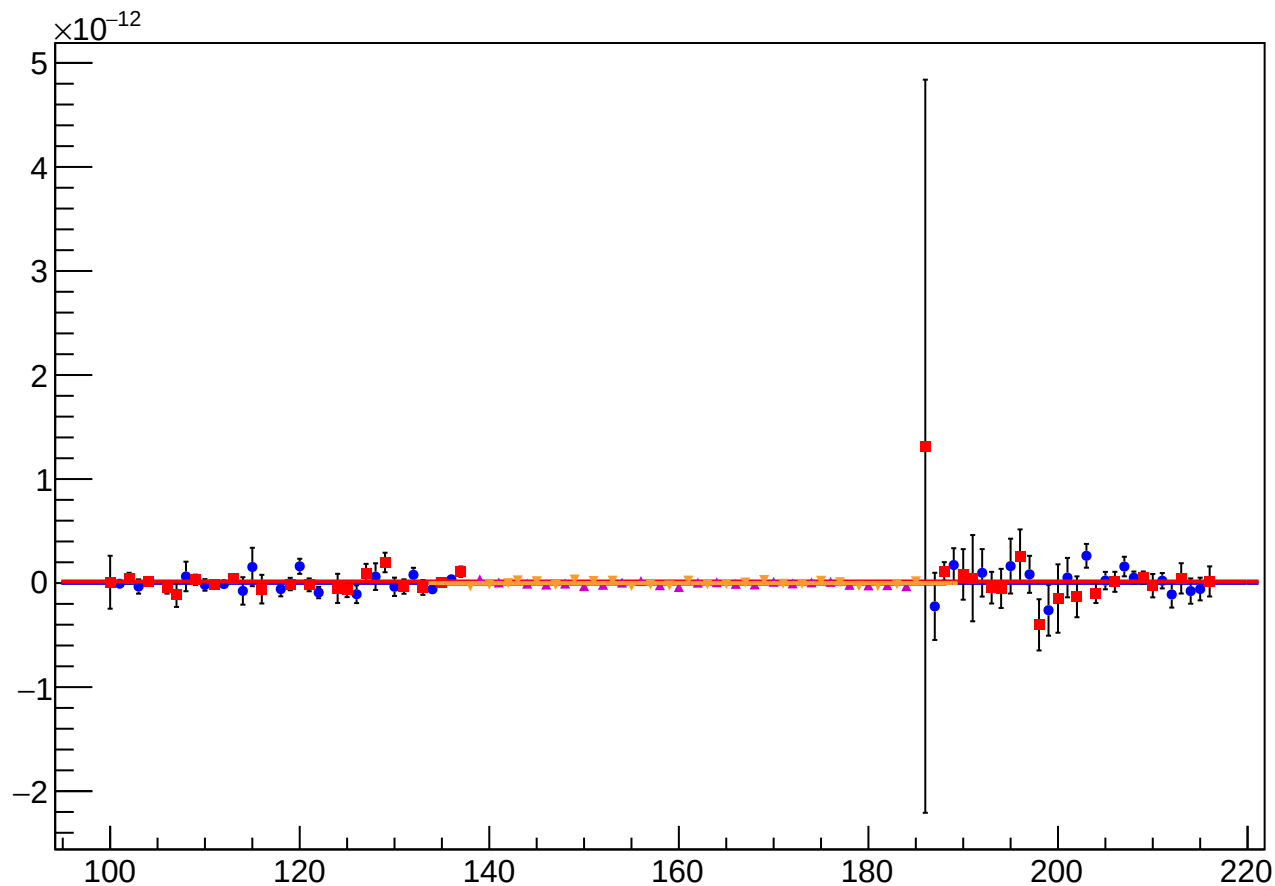
Left In: 47.505+/-0.009  $\chi^2/\text{NDF}$ : 3075116.0/22

+ sign 40.060+/-0.005  $\chi^2/\text{NDF}$ : 15048681.9/55

All: 38.276+/-0.004  $\chi^2/\text{NDF}$ : 32133358.2/113

- sign 36.678+/-0.005  $\chi^2/\text{NDF}$ : 16866544.6/57

asym\_sam\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:31.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 23.2/34

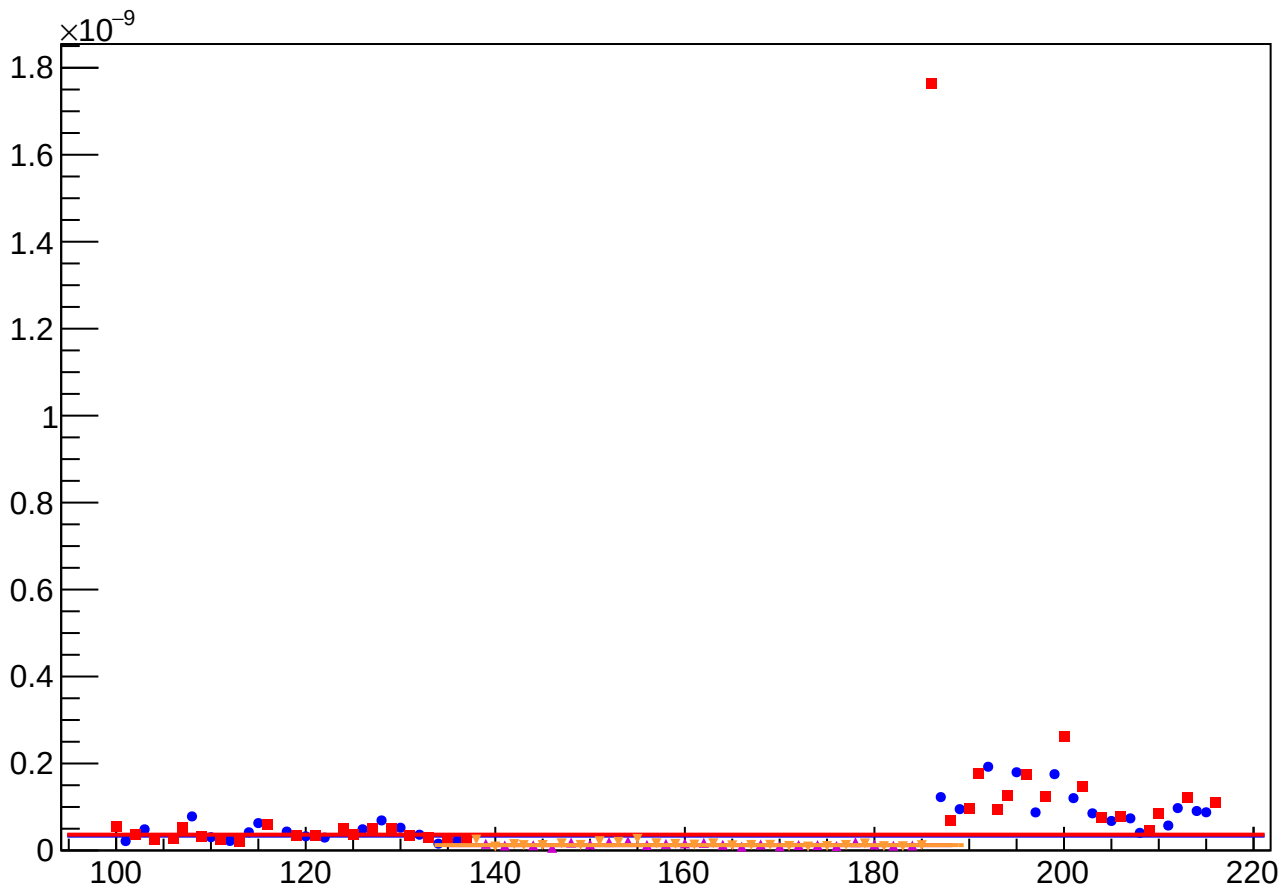
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.1/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 64.5/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 110.3/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.1/57

asym\_sam\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8398240.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1915201.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8154756.5/34

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1925839.7/22

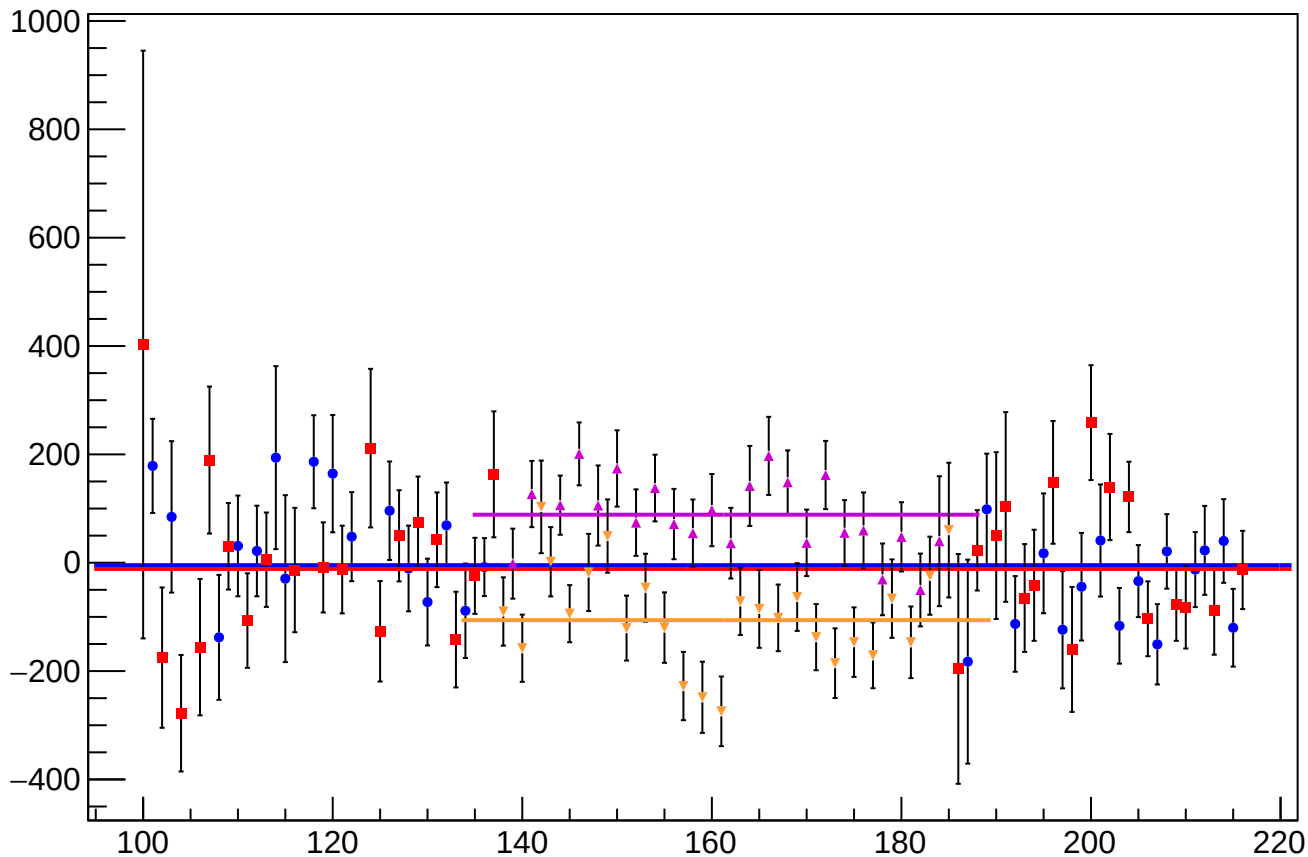
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 16723799.4/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33926114.7/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17201880.9/57



# reg\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-4.532 \pm 15.435$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $-106.100 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $-11.484 \pm 15.724$   $\chi^2/\text{NDF}$ : 46.7/34

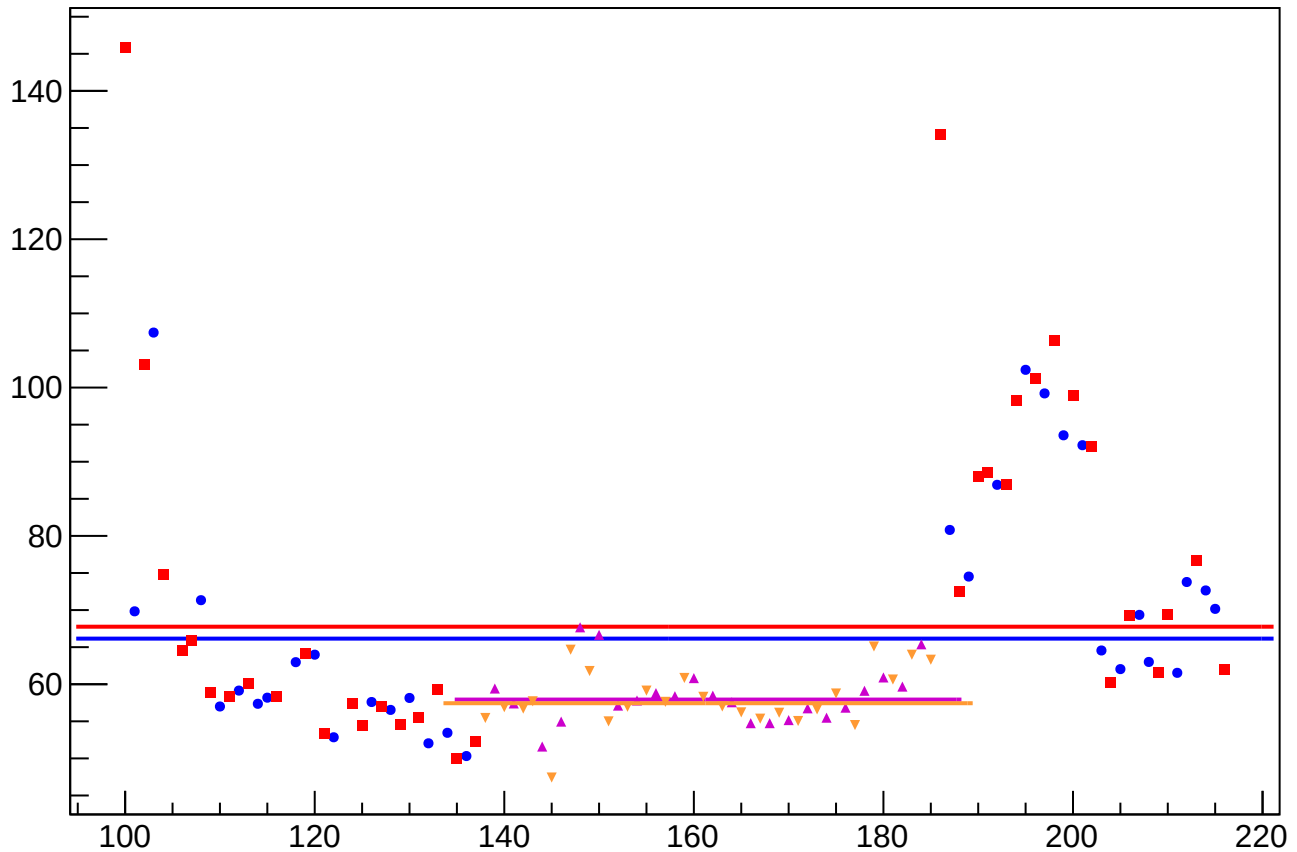
Left In:  $88.619 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-63.611 \pm 9.983$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $-10.416 \pm 7.159$   $\chi^2/\text{NDF}$ : 252.4/113

- sign  $45.903 \pm 10.272$   $\chi^2/\text{NDF}$ : 93.9/57

# reg\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $66.151 \pm 0.011$   $\chi^2/\text{NDF}: 1510165.6/30$

Left Out:  $57.440 \pm 0.009$   $\chi^2/\text{NDF}: 174555.9/24$

Right Out:  $67.758 \pm 0.011$   $\chi^2/\text{NDF}: 1994066.4/34$

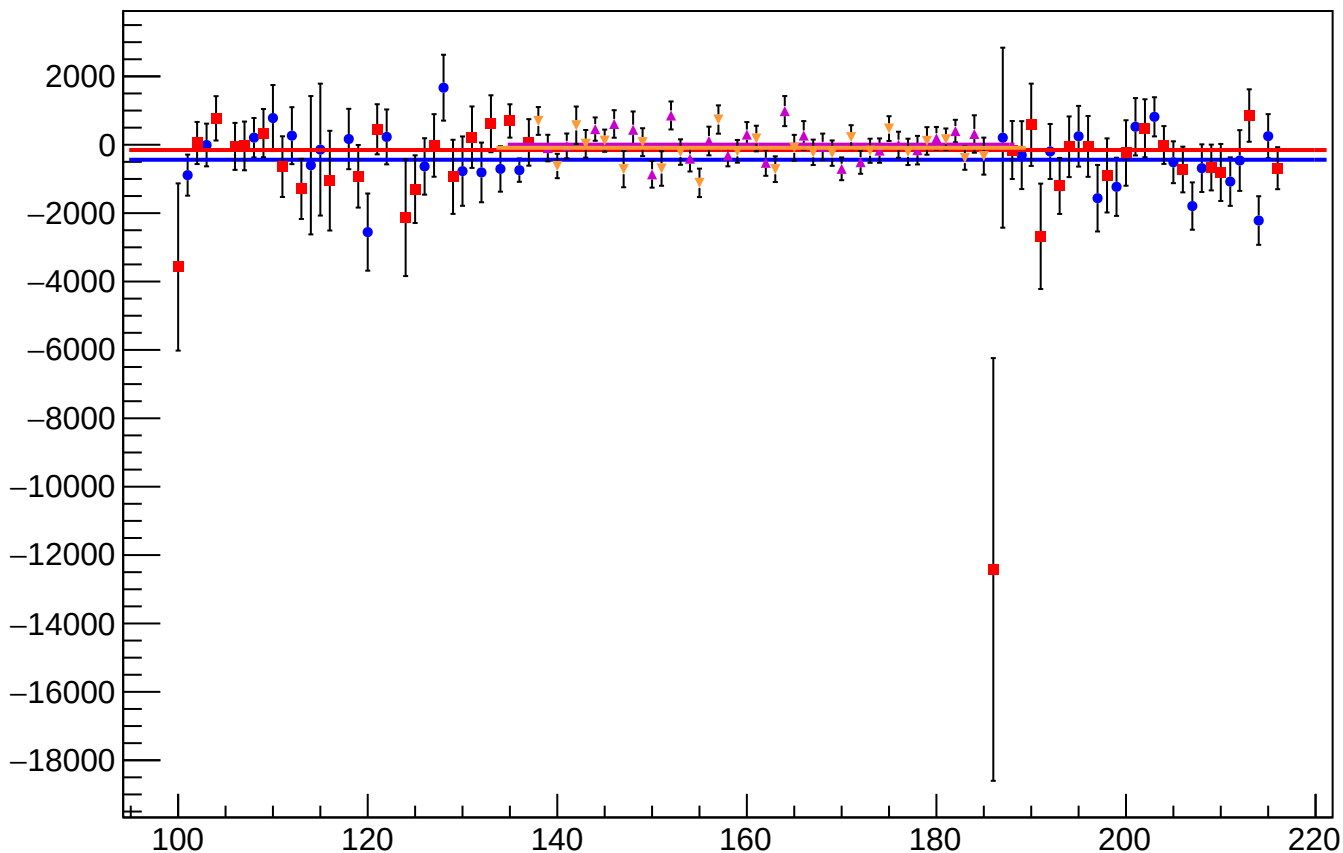
Left In:  $57.933 \pm 0.010$   $\chi^2/\text{NDF}: 135903.0/22$

+ sign  $61.084 \pm 0.007$   $\chi^2/\text{NDF}: 2055254.1/55$

All:  $61.590 \pm 0.005$   $\chi^2/\text{NDF}: 4643428.9/113$

- sign  $62.125 \pm 0.007$   $\chi^2/\text{NDF}: 2577607.6/57$

asym\_sam\_13\_57\_dd\_reg\_correction\_mean vs Slug



Right In:  $-438.717 \pm 133.614$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-89.059 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-153.878 \pm 137.053$   $\chi^2/\text{NDF}$ : 30.0/34

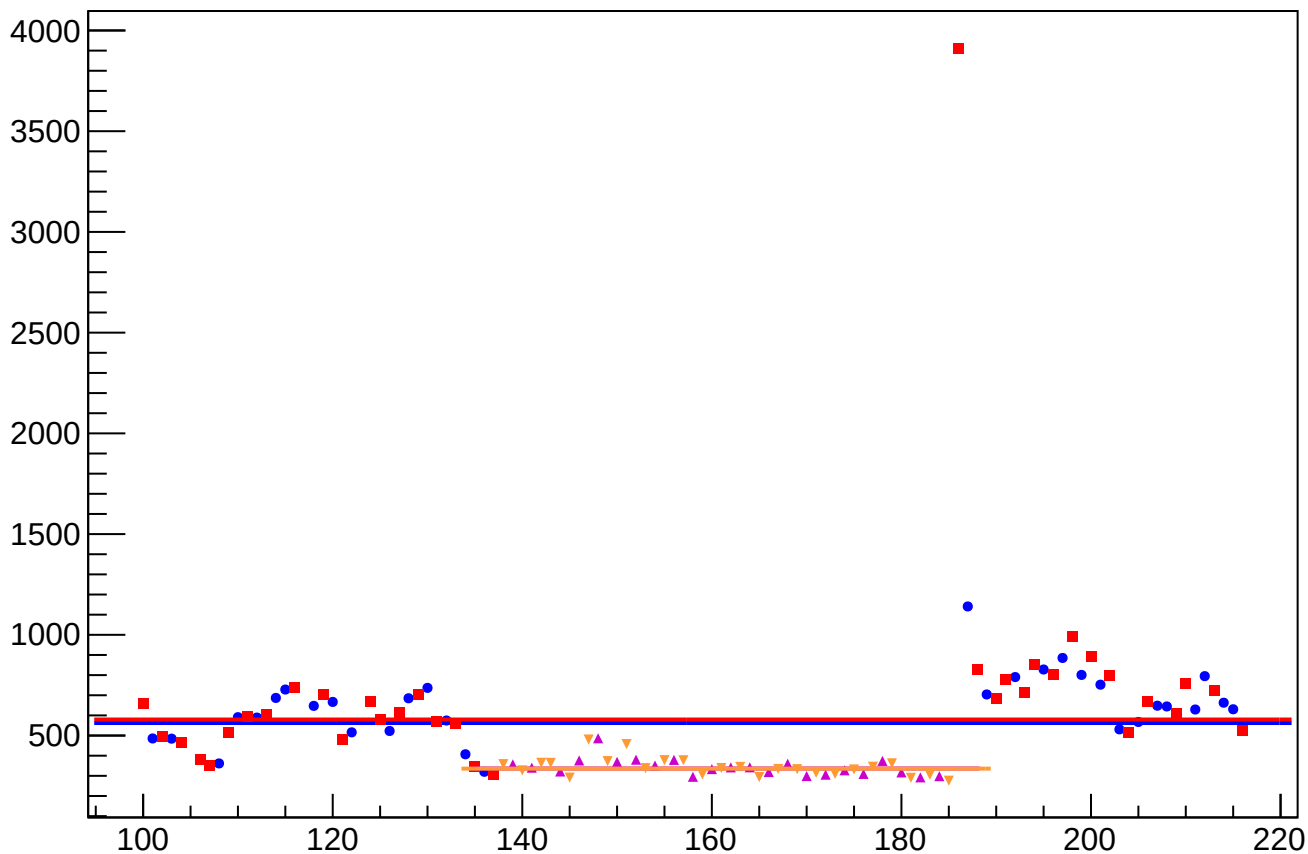
Left In:  $3.046 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-176.251 \pm 66.722$   $\chi^2/\text{NDF}$ : 71.7/55

All:  $-108.154 \pm 47.819$   $\chi^2/\text{NDF}$ : 138.4/113

- sign  $-36.234 \pm 68.569$   $\chi^2/\text{NDF}$ : 64.5/57

asym\_sam\_13\_57\_dd\_reg\_correction\_rms vs Slug



Right In:  $562.244 \pm 0.094$   $\chi^2/\text{NDF}: 2826975.6/30$

Left Out:  $335.894 \pm 0.054$   $\chi^2/\text{NDF}: 533835.0/24$

Right Out:  $579.605 \pm 0.097$   $\chi^2/\text{NDF}: 3455220.4/34$

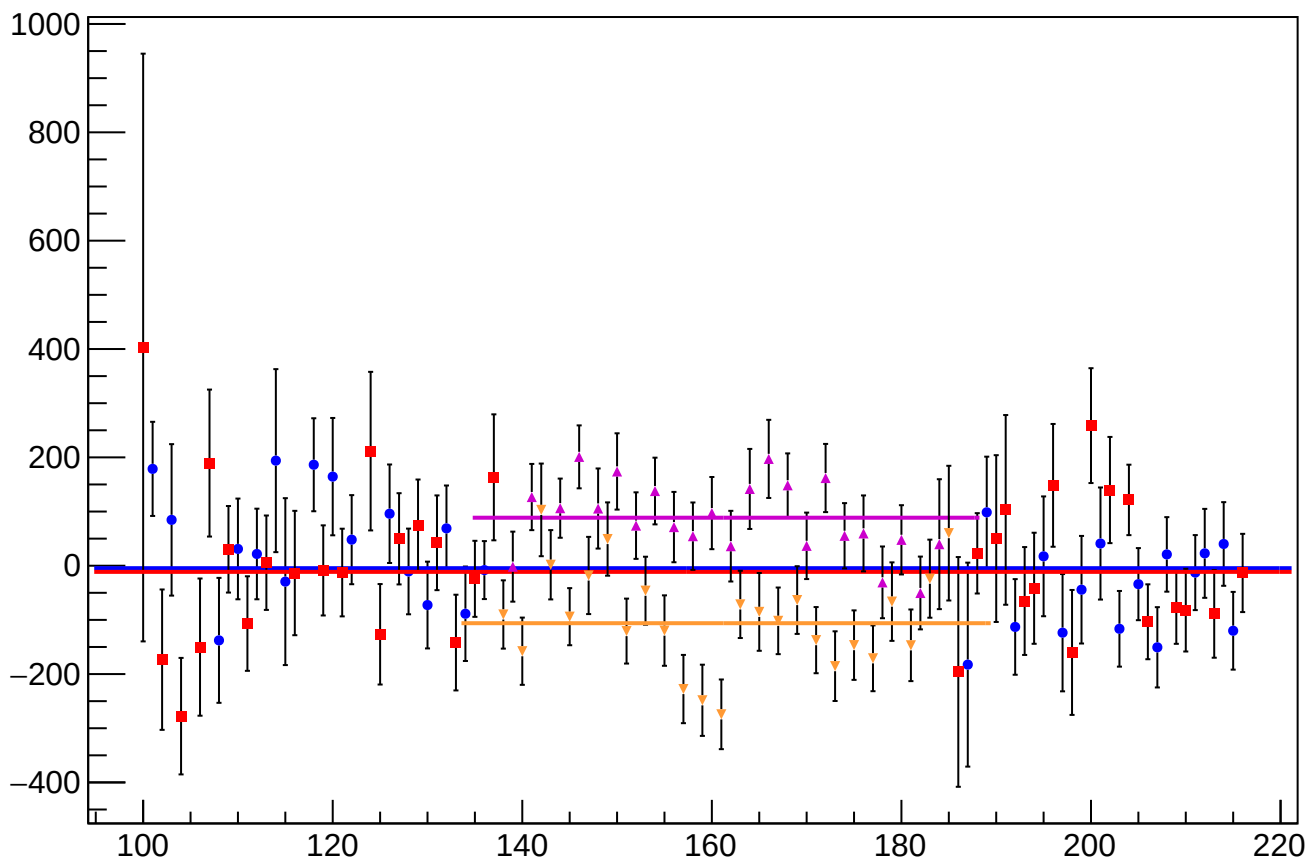
Left In:  $336.343 \pm 0.056$   $\chi^2/\text{NDF}: 414202.1/22$

+ sign  $392.338 \pm 0.047$   $\chi^2/\text{NDF}: 7669217.3/55$

All:  $394.719 \pm 0.034$   $\chi^2/\text{NDF}: 16267584.4/110$

- sign  $397.234 \pm 0.048$   $\chi^2/\text{NDF}: 8593128.1/57$

# cor\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-4.536 \pm 15.435$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $-106.099 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $-11.343 \pm 15.726$   $\chi^2/\text{NDF}$ : 46.6/34

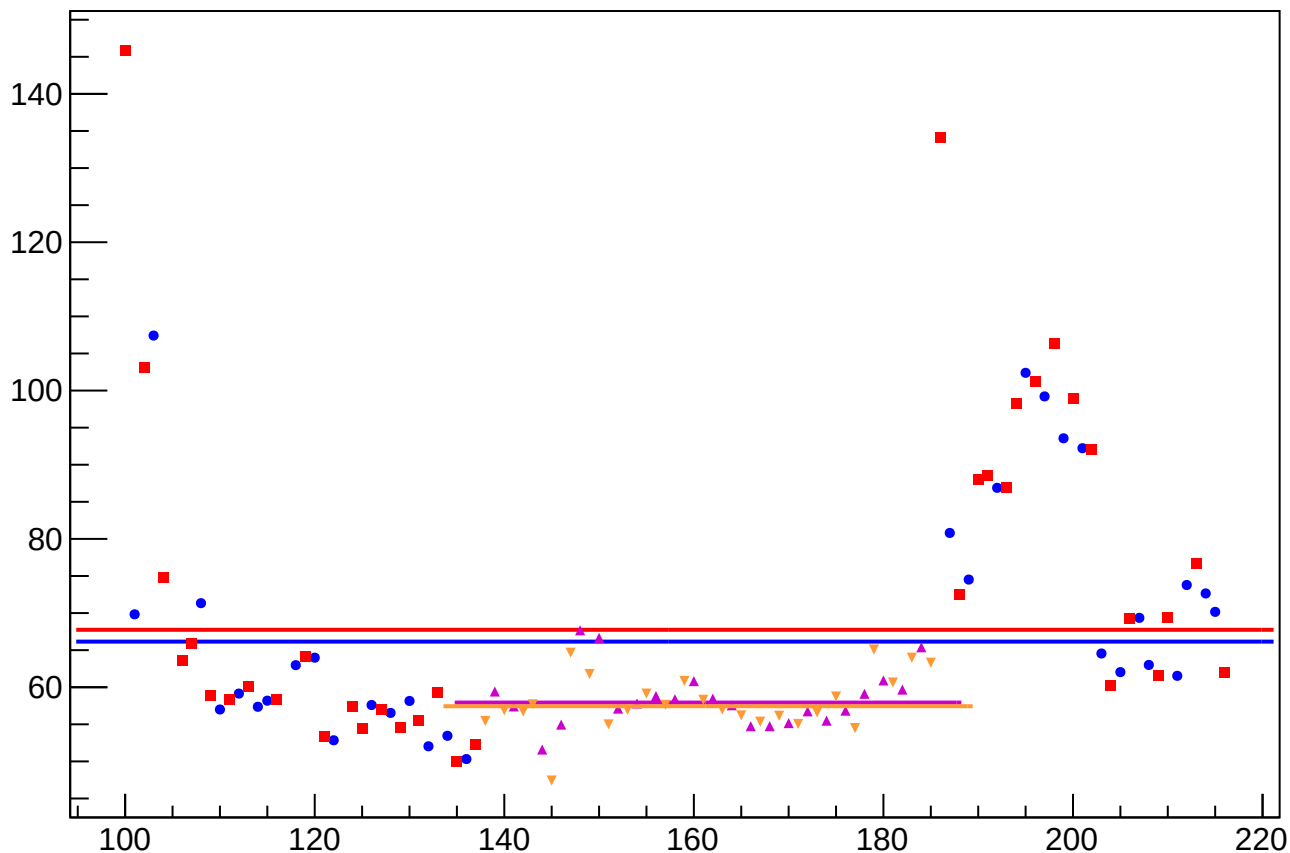
Left In:  $88.621 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-63.613 \pm 9.983$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $-10.387 \pm 7.159$   $\chi^2/\text{NDF}$ : 252.3/113

- sign  $45.969 \pm 10.272$   $\chi^2/\text{NDF}$ : 93.7/57

# cor\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $66.151 \pm 0.011$   $\chi^2/\text{NDF}: 1510167.6/30$

Left Out:  $57.440 \pm 0.009$   $\chi^2/\text{NDF}: 174555.9/24$

Right Out:  $67.743 \pm 0.011$   $\chi^2/\text{NDF}: 1995164.2/34$

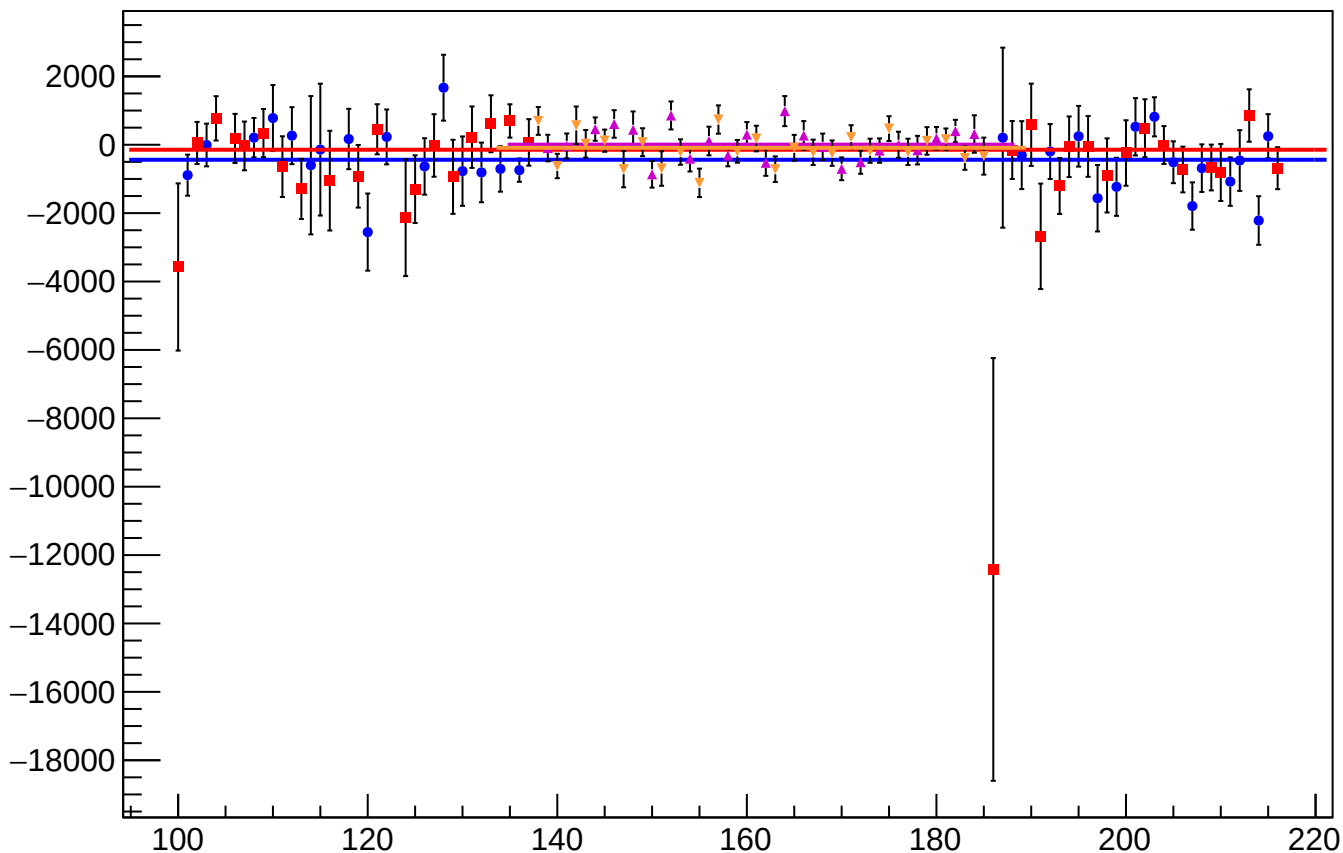
Left In:  $57.933 \pm 0.010$   $\chi^2/\text{NDF}: 135903.0/22$

+ sign  $61.084 \pm 0.007$   $\chi^2/\text{NDF}: 2055256.2/55$

All:  $61.587 \pm 0.005$   $\chi^2/\text{NDF}: 4643026.2/113$

- sign  $62.119 \pm 0.007$   $\chi^2/\text{NDF}: 2577337.5/57$

asym\_sam\_13\_57\_dd\_cor\_correction\_mean vs Slug



Right In:  $-438.701 \pm 133.614$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-89.061 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-145.742 \pm 137.289$   $\chi^2/\text{NDF}$ : 30.2/34

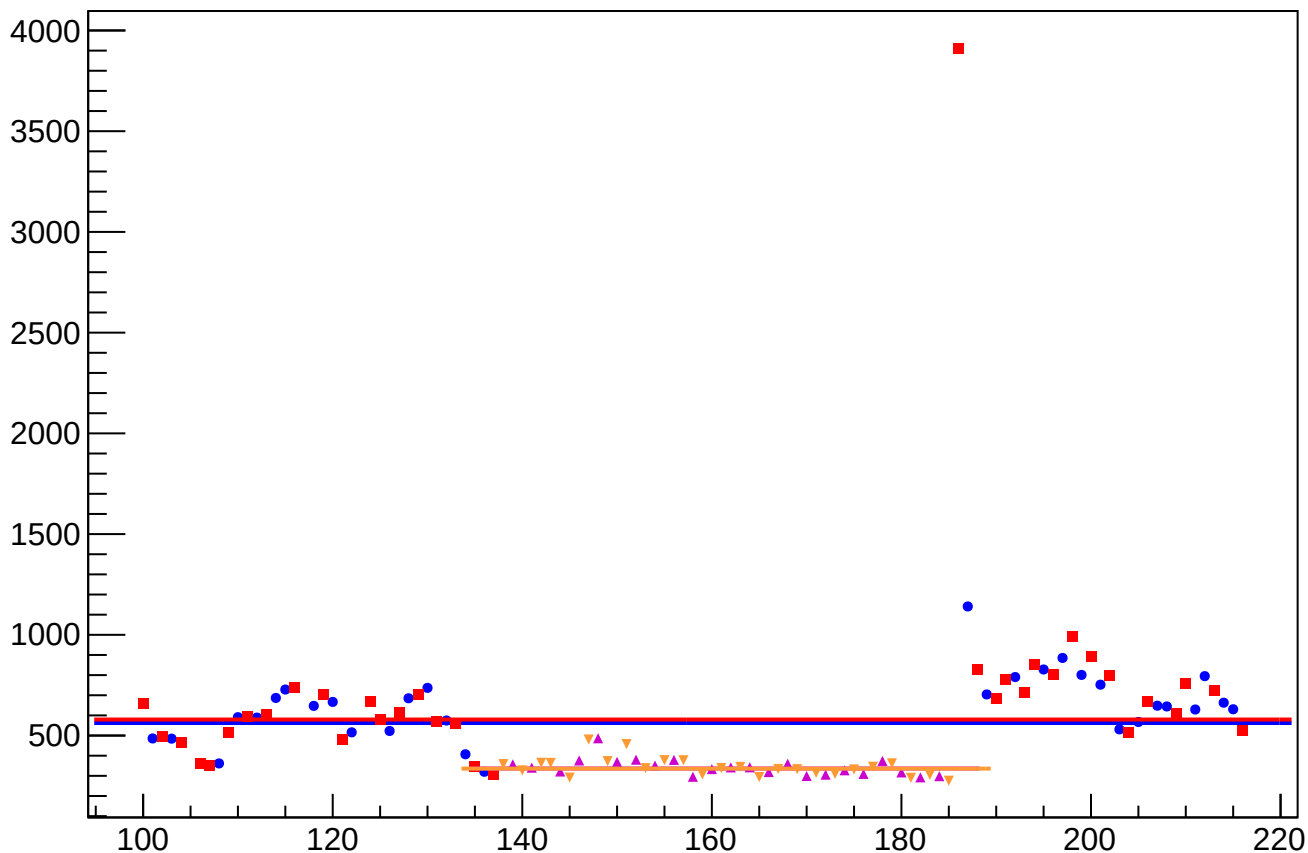
Left In:  $3.047 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-176.248 \pm 66.722$   $\chi^2/\text{NDF}$ : 71.7/55

All:  $-107.145 \pm 47.829$   $\chi^2/\text{NDF}$ : 138.6/113

- sign  $-34.100 \pm 68.599$   $\chi^2/\text{NDF}$ : 64.6/57

asym\_sam\_13\_57\_dd\_cor\_correction\_rms vs Slug



Right In: 562.246 $\pm$ 0.094  $\chi^2$ /NDF: 2826941.0/30

Left Out: 335.894 $\pm$ 0.054  $\chi^2$ /NDF: 533835.9/24

Right Out: 579.536 $\pm$ 0.097  $\chi^2$ /NDF: 3474604.9/34

Left In: 336.343 $\pm$ 0.056  $\chi^2$ /NDF: 414205.9/22

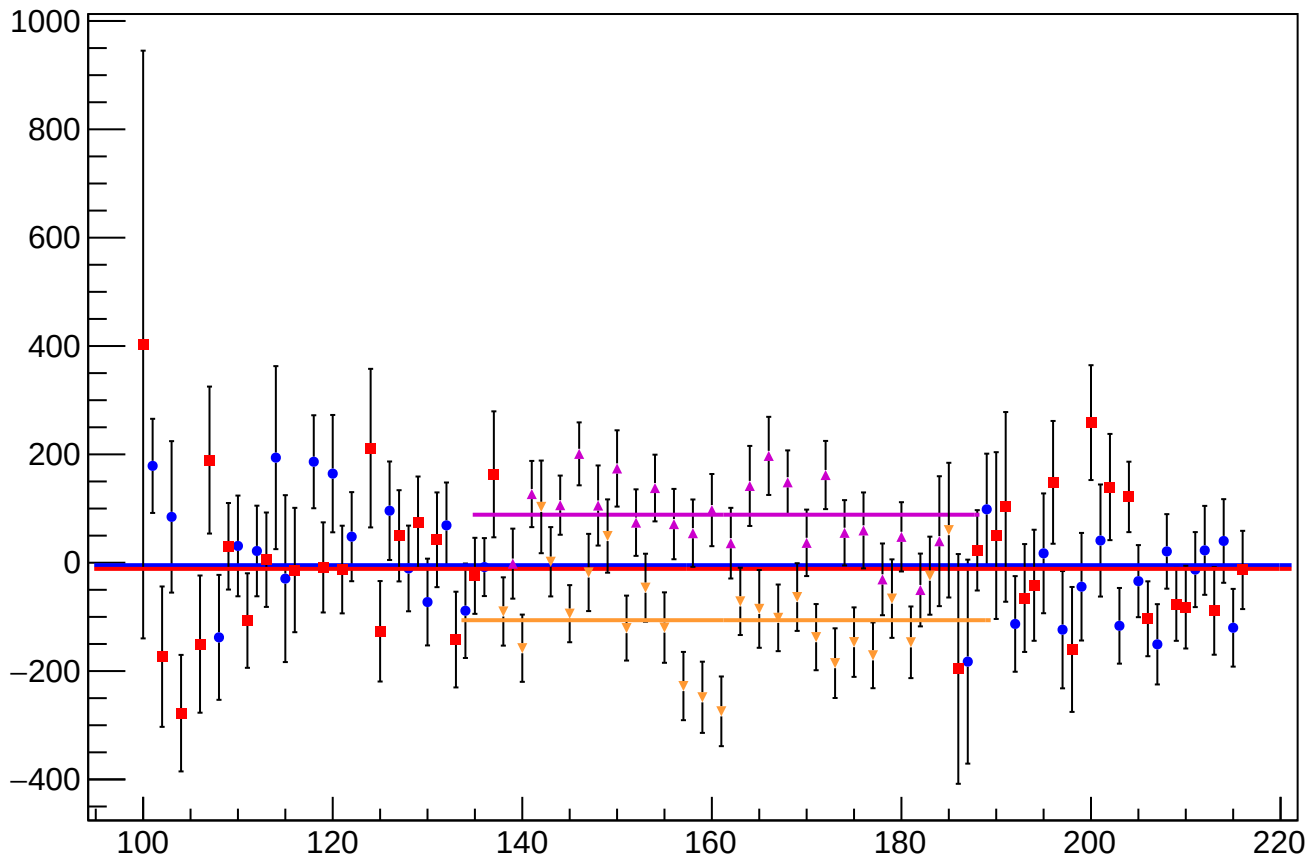
+ sign 392.338 $\pm$ 0.047  $\chi^2$ /NDF: 7669239.7/55

All: 394.633 $\pm$ 0.034  $\chi^2$ /NDF: 16271763.8/11

- sign 397.060 $\pm$ 0.049  $\chi^2$ /NDF: 8597654.7/57



# eigen\_cor\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $-4.536 \pm 15.435$   $\chi^2/\text{NDF}$ : 34.2/30

Left Out:  $-106.099 \pm 13.089$   $\chi^2/\text{NDF}$ : 40.7/24

Right Out:  $-11.343 \pm 15.726$   $\chi^2/\text{NDF}$ : 46.6/34

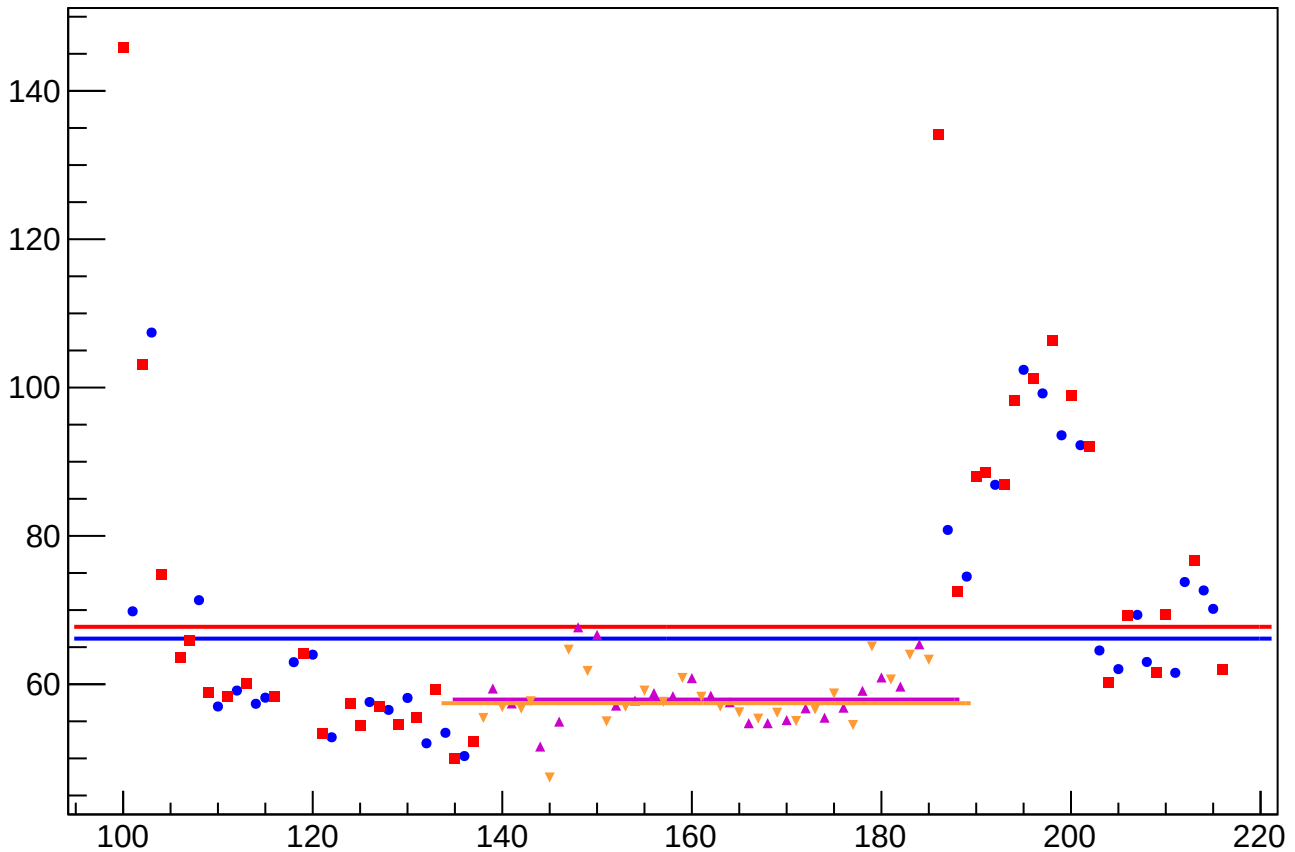
Left In:  $88.621 \pm 13.566$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-63.613 \pm 9.983$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $-10.387 \pm 7.159$   $\chi^2/\text{NDF}$ : 252.3/113

- sign  $45.969 \pm 10.272$   $\chi^2/\text{NDF}$ : 93.7/57

# eigen\_cor\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $66.151 \pm 0.011$   $\chi^2/\text{NDF}: 1510167.6/30$

Left Out:  $57.440 \pm 0.009$   $\chi^2/\text{NDF}: 174555.9/24$

Right Out:  $67.743 \pm 0.011$   $\chi^2/\text{NDF}: 1995164.2/34$

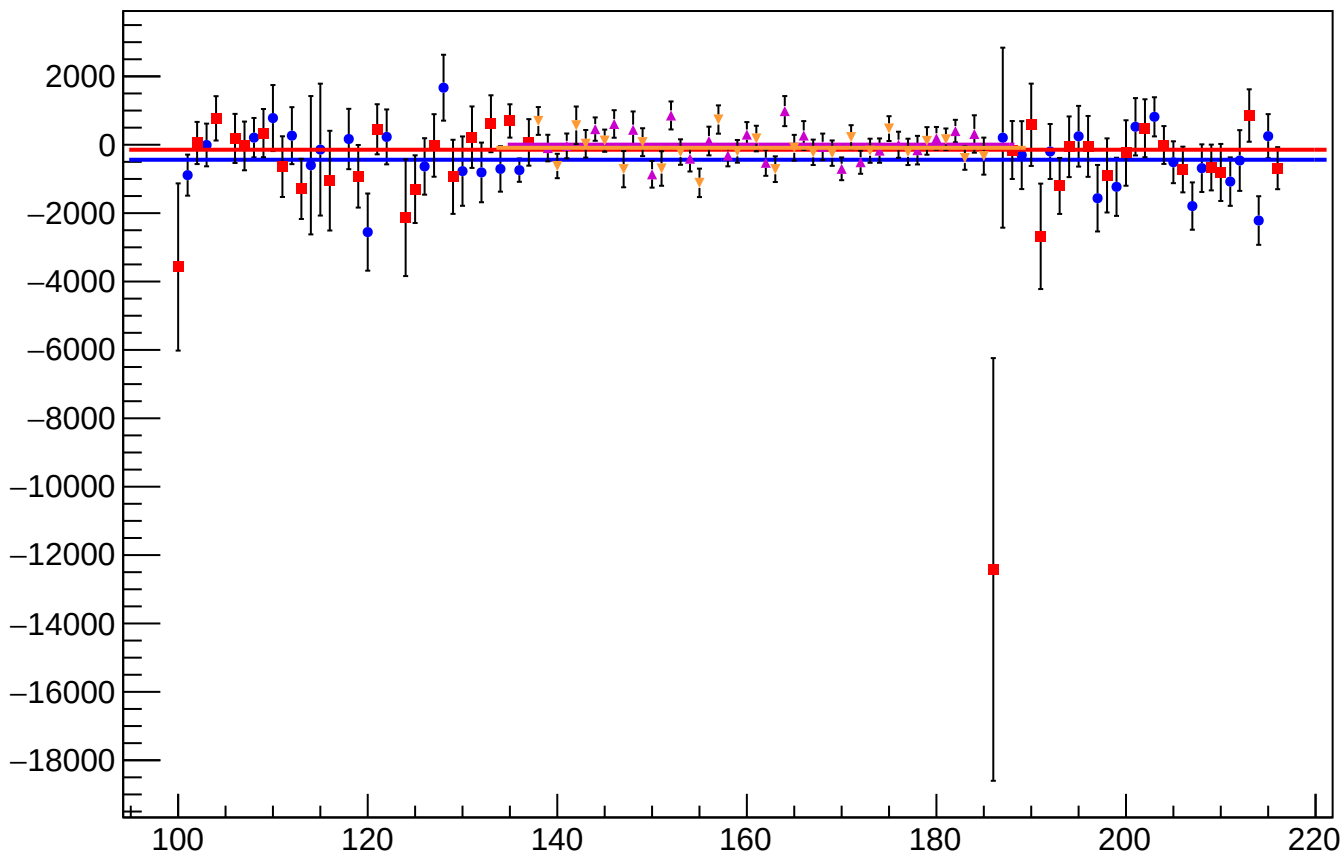
Left In:  $57.933 \pm 0.010$   $\chi^2/\text{NDF}: 135903.0/22$

+ sign  $61.084 \pm 0.007$   $\chi^2/\text{NDF}: 2055256.2/55$

All:  $61.587 \pm 0.005$   $\chi^2/\text{NDF}: 4643026.2/113$

- sign  $62.119 \pm 0.007$   $\chi^2/\text{NDF}: 2577337.5/57$

asym\_sam\_13\_57\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-438.701 \pm 133.614$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-89.061 \pm 77.011$   $\chi^2/\text{NDF}$ : 29.9/24

Right Out:  $-145.742 \pm 137.289$   $\chi^2/\text{NDF}$ : 30.2/34

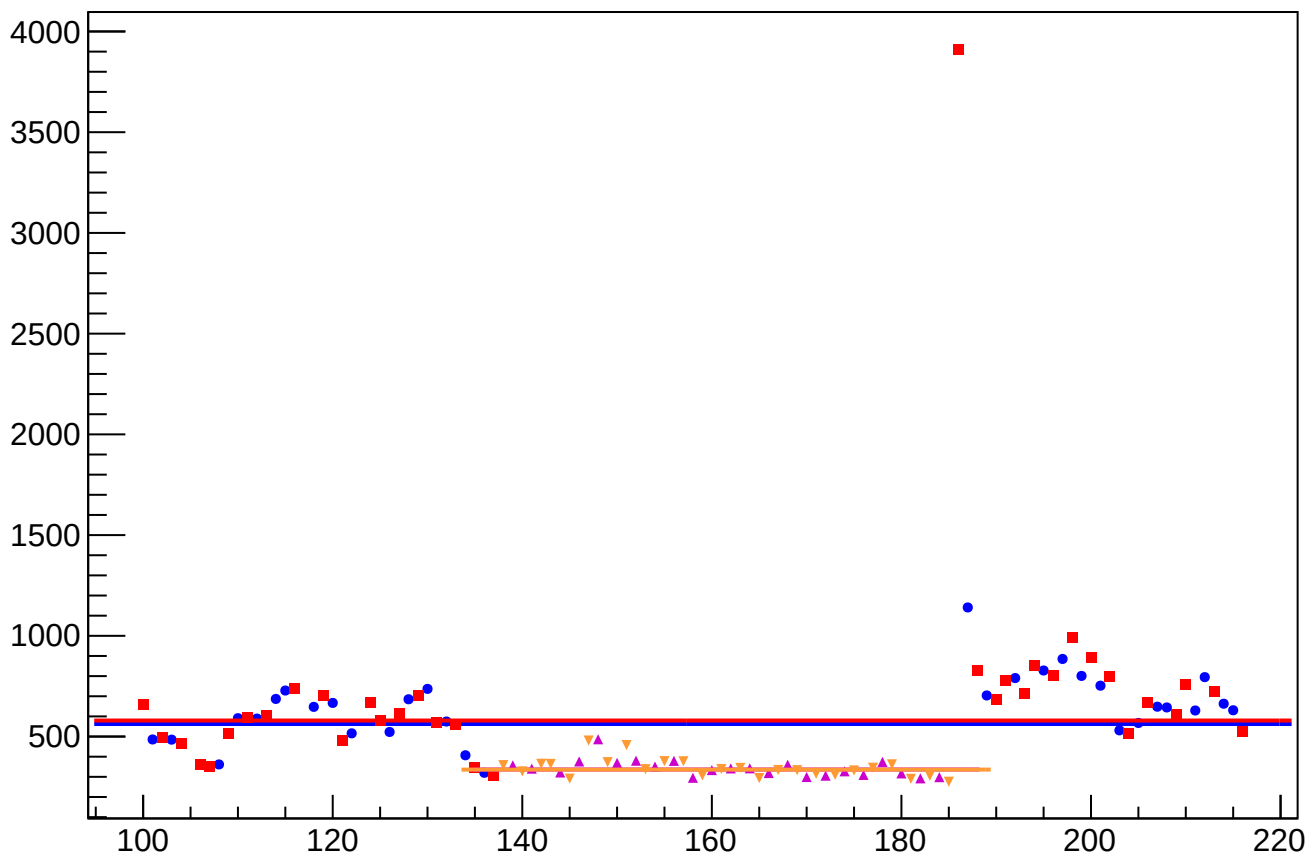
Left In:  $3.047 \pm 79.193$   $\chi^2/\text{NDF}$ : 33.6/22

+ sign  $-176.248 \pm 66.722$   $\chi^2/\text{NDF}$ : 71.7/55

All:  $-107.145 \pm 47.829$   $\chi^2/\text{NDF}$ : 138.6/113

- sign  $-34.100 \pm 68.599$   $\chi^2/\text{NDF}$ : 64.6/57

asym\_sam\_13\_57\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 562.246+/-0.094  $\chi^2/\text{NDF}$ : 2826941.0/30

Left Out: 335.894+/-0.054  $\chi^2/\text{NDF}$ : 533835.9/24

Right Out: 579.536+/-0.097  $\chi^2/\text{NDF}$ : 3474604.9/34

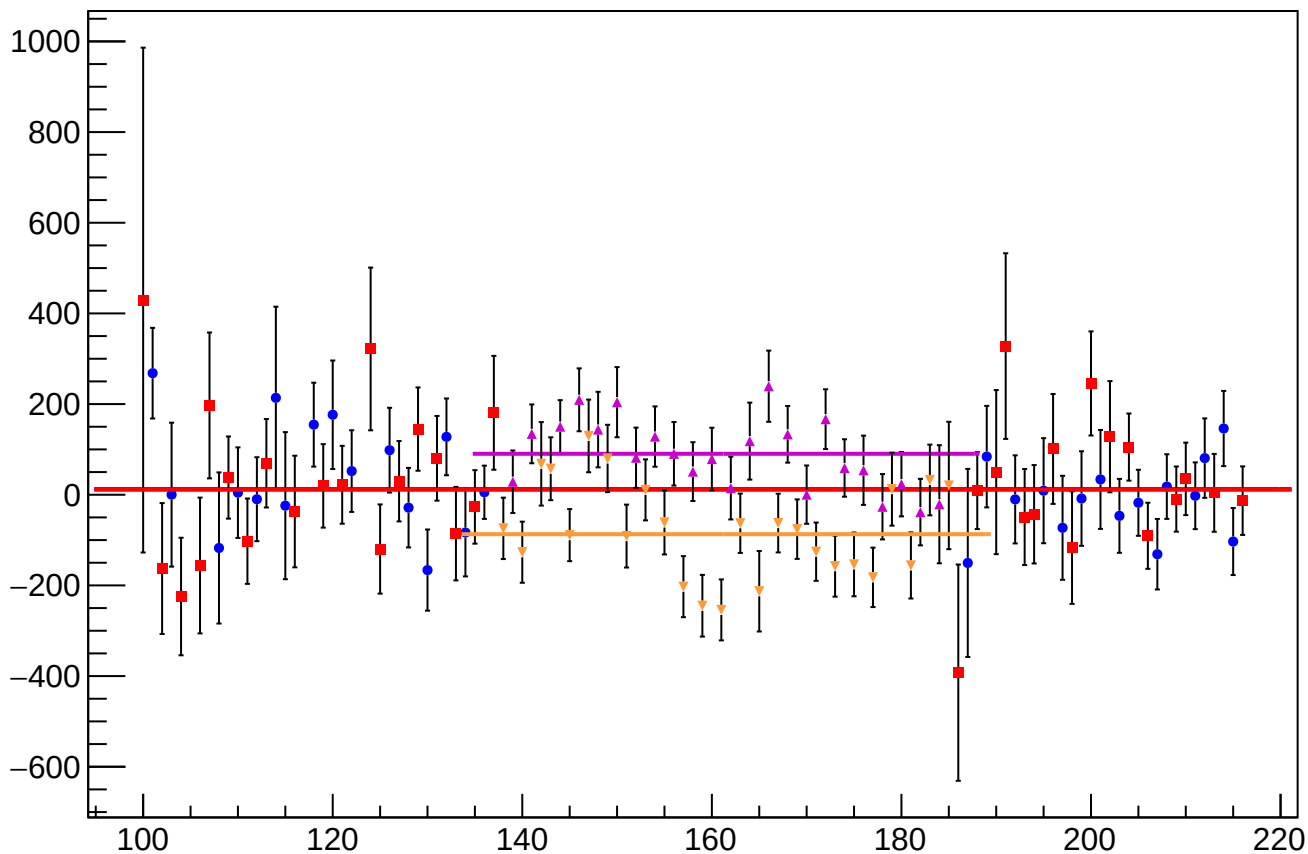
Left In: 336.343+/-0.056  $\chi^2/\text{NDF}$ : 414205.9/22

+ sign 392.338+/-0.047  $\chi^2/\text{NDF}$ : 7669239.7/55

All: 394.633+/-0.034  $\chi^2/\text{NDF}$ : 16271763.8/11

- sign 397.060+/-0.049  $\chi^2/\text{NDF}$ : 8597654.7/57

# dit\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $12.305 \pm 16.786$   $\chi^2/\text{NDF}$ : 32.1/30

Left Out:  $-86.957 \pm 14.175$   $\chi^2/\text{NDF}$ : 48.8/24

Right Out:  $11.158 \pm 17.280$   $\chi^2/\text{NDF}$ : 36.8/34

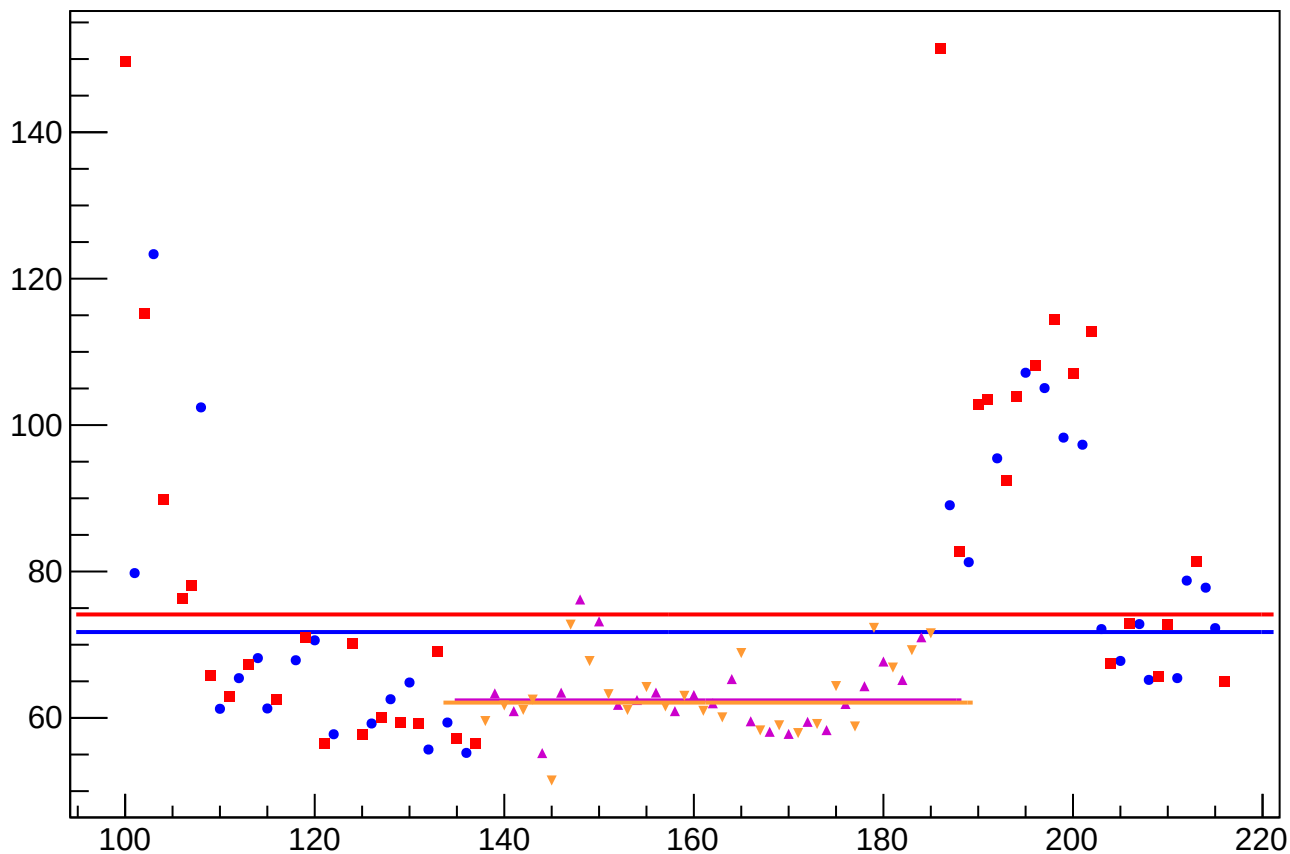
Left In:  $90.363 \pm 14.656$   $\chi^2/\text{NDF}$ : 25.0/22

+ sign  $-45.638 \pm 10.830$   $\chi^2/\text{NDF}$ : 101.3/55

All:  $4.169 \pm 7.778$   $\chi^2/\text{NDF}$ : 219.1/113

- sign  $57.224 \pm 11.177$   $\chi^2/\text{NDF}$ : 74.0/57

dit\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 71.730 $\pm$ 0.012  $\chi^2$ /NDF: 1519926.1/30

Left Out: 62.093 $\pm$ 0.010  $\chi^2$ /NDF:233343.0/24

Right Out: 74.133 $\pm$ 0.012  $\chi^2$ /NDF: 2084235.5/34

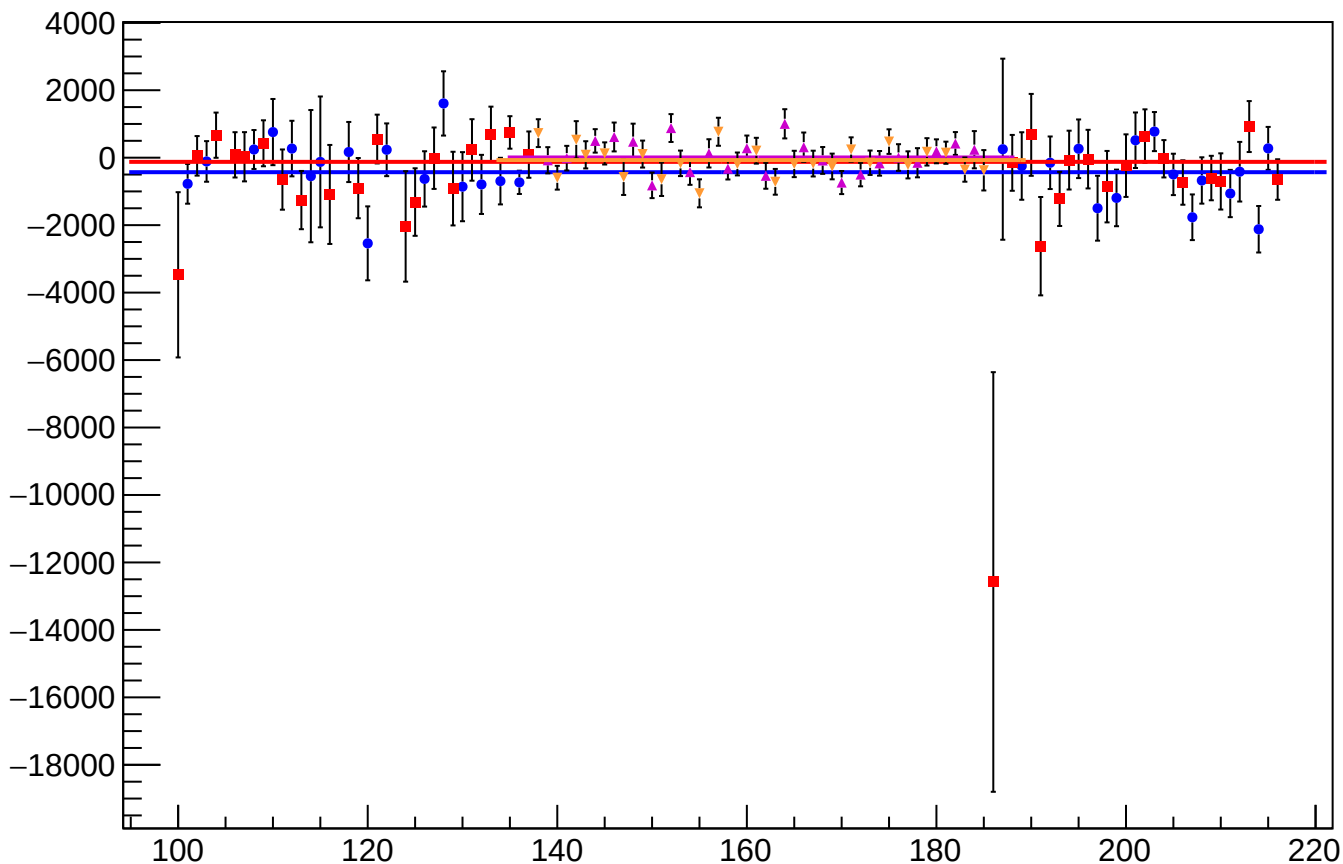
Left In: 62.395 $\pm$ 0.010  $\chi^2$ /NDF:188814.3/22

+ sign 66.105 $\pm$ 0.008  $\chi^2$ /NDF: 2138086.6/55

All: 66.686 $\pm$ 0.005  $\chi^2$ /NDF: 4959749.5/113

- sign 67.306 $\pm$ 0.008  $\chi^2$ /NDF: 2809743.9/57

# asym\_sam\_13\_57\_dd\_dit\_correction\_mean vs Slug



Right In:  $-430.195 \pm 132.850$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $-71.324 \pm 78.399$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-123.671 \pm 135.270$   $\chi^2/\text{NDF}$ : 31.4/34

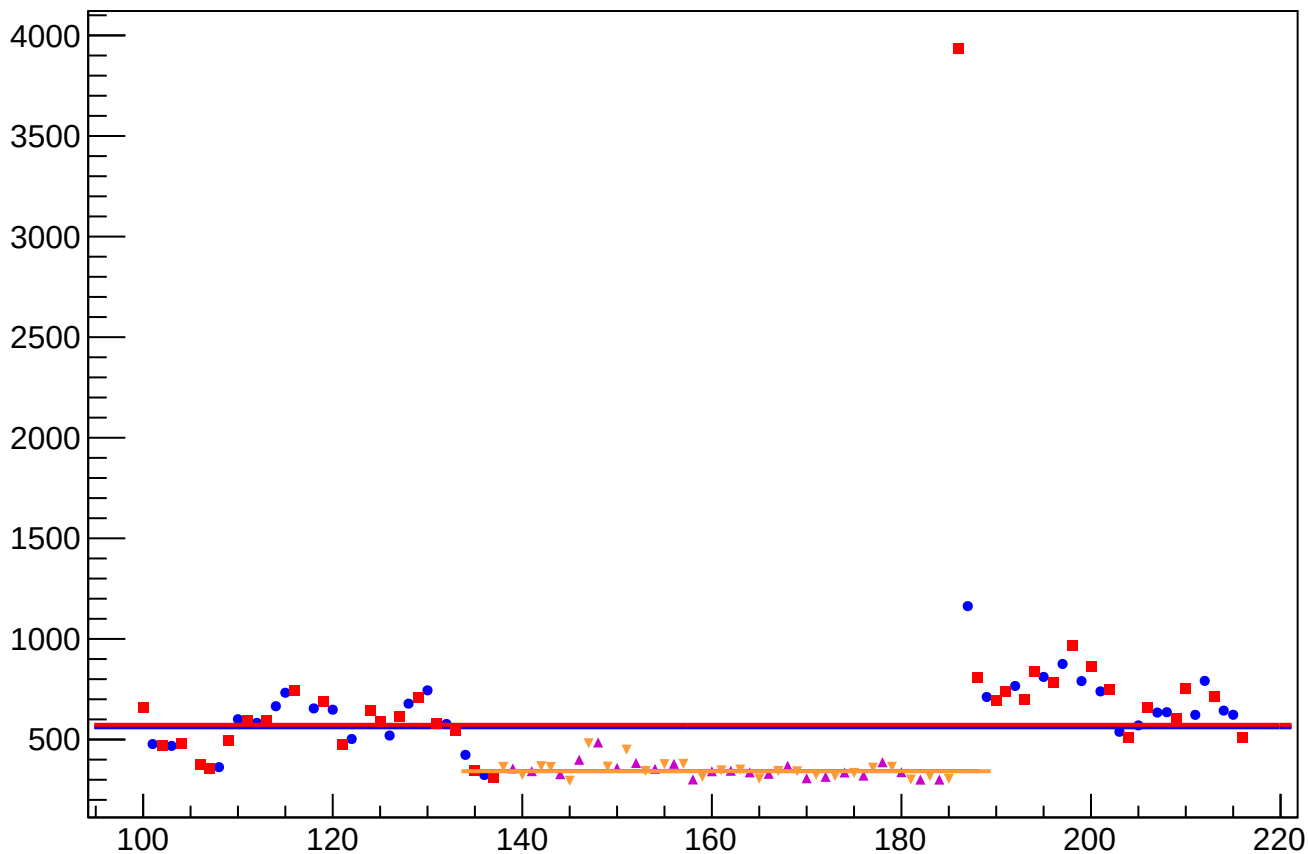
Left In:  $6.134 \pm 80.760$   $\chi^2/\text{NDF}$ : 34.0/22

+ sign  $-164.022 \pm 67.519$   $\chi^2/\text{NDF}$ : 69.6/55

All:  $-97.810 \pm 48.375$   $\chi^2/\text{NDF}$ : 137.7/113

- sign  $-27.976 \pm 69.342$   $\chi^2/\text{NDF}$ : 66.1/57

asym\_sam\_13\_57\_dd\_dit\_correction\_rms vs Slug



Right In: 560.701 $\pm$ 0.094  $\chi^2$ /NDF: 2677911.5/30

Left Out: 342.502 $\pm$ 0.055  $\chi^2$ /NDF: 434208.3/24

Right Out: 573.213 $\pm$ 0.096  $\chi^2$ /NDF: 3322961.0/34

Left In: 343.245 $\pm$ 0.057  $\chi^2$ /NDF: 372991.6/22

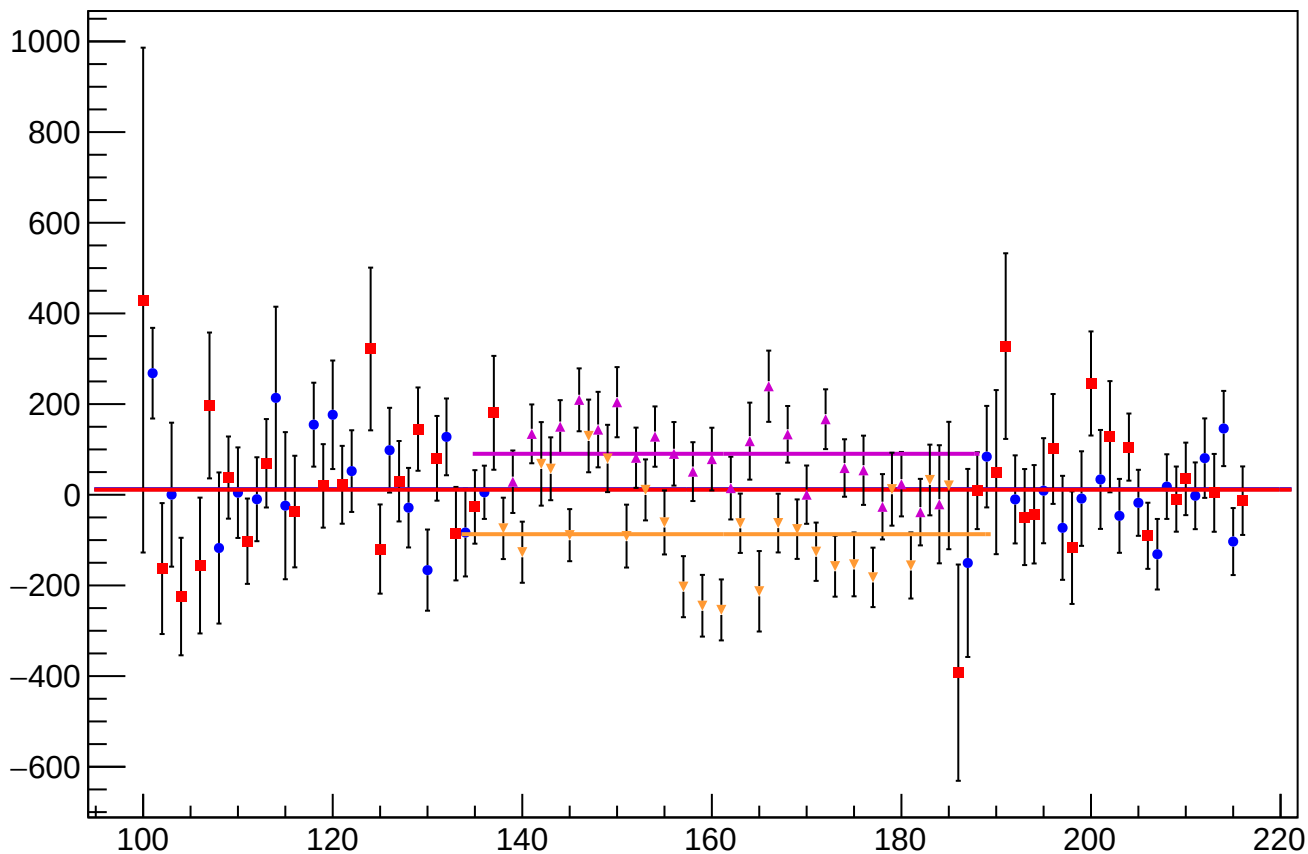
+ sign 398.864 $\pm$ 0.048  $\chi^2$ /NDF: 7113762.4/55

All: 401.205 $\pm$ 0.034  $\chi^2$ /NDF: 15076141.5/11

- sign 403.675 $\pm$ 0.049  $\chi^2$ /NDF: 7957436.6/57



# eigen\_dit\_asym\_sam\_13\_57\_dd\_mean vs Slug



Right In:  $12.306 \pm 16.786$   $\chi^2/\text{NDF}$ : 32.1/30

Left Out:  $-86.957 \pm 14.175$   $\chi^2/\text{NDF}$ : 48.8/24

Right Out:  $11.158 \pm 17.280$   $\chi^2/\text{NDF}$ : 36.8/34

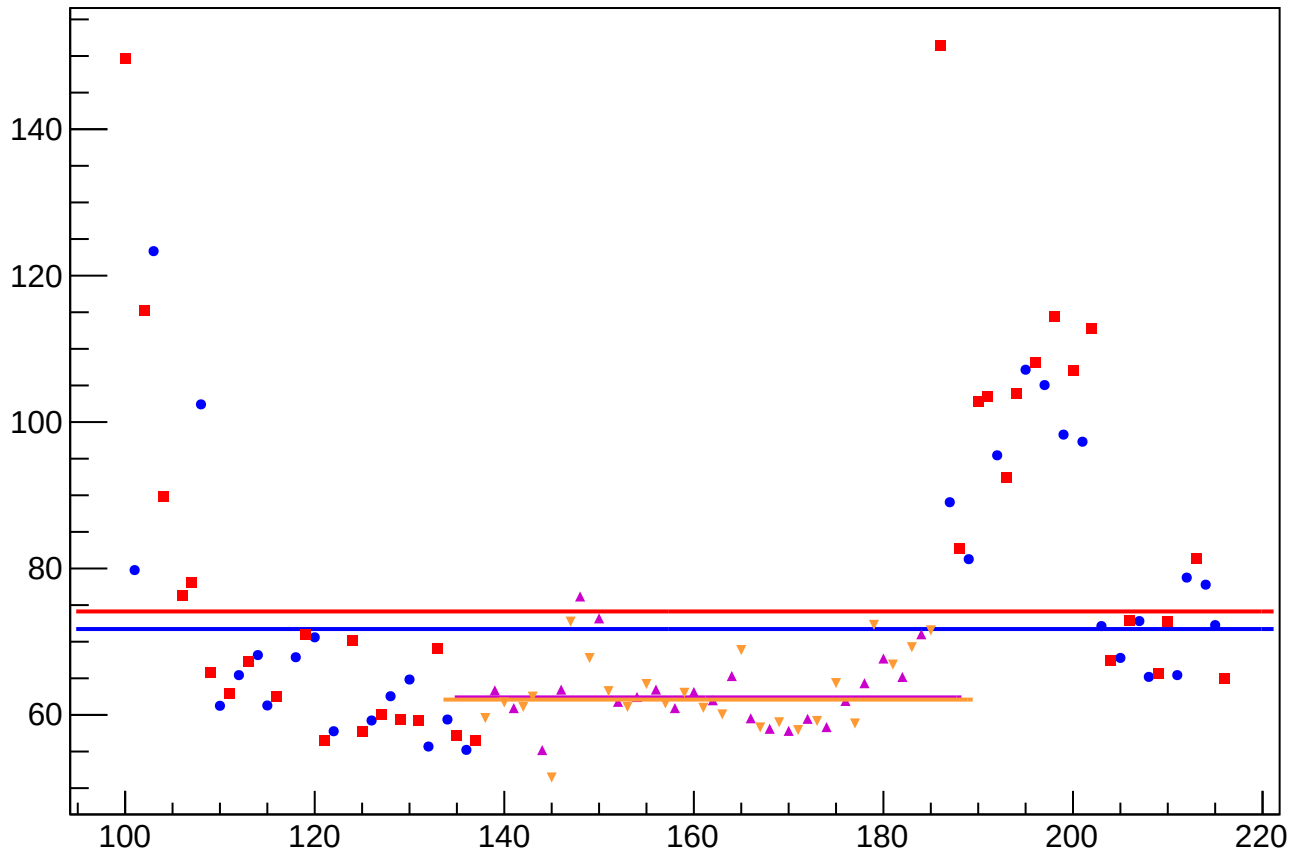
Left In:  $90.363 \pm 14.656$   $\chi^2/\text{NDF}$ : 25.0/22

+ sign  $-45.638 \pm 10.830$   $\chi^2/\text{NDF}$ : 101.3/55

All:  $4.169 \pm 7.778$   $\chi^2/\text{NDF}$ : 219.1/113

- sign  $57.224 \pm 11.177$   $\chi^2/\text{NDF}$ : 74.0/57

eigen\_dit\_asym\_sam\_13\_57\_dd\_rms vs Slug



Right In:  $71.730 \pm 0.012$   $\chi^2/\text{NDF}: 1519948.7/30$

Left Out:  $62.093 \pm 0.010$   $\chi^2/\text{NDF}: 233347.2/24$

Right Out:  $74.133 \pm 0.012$   $\chi^2/\text{NDF}: 2084239.8/34$

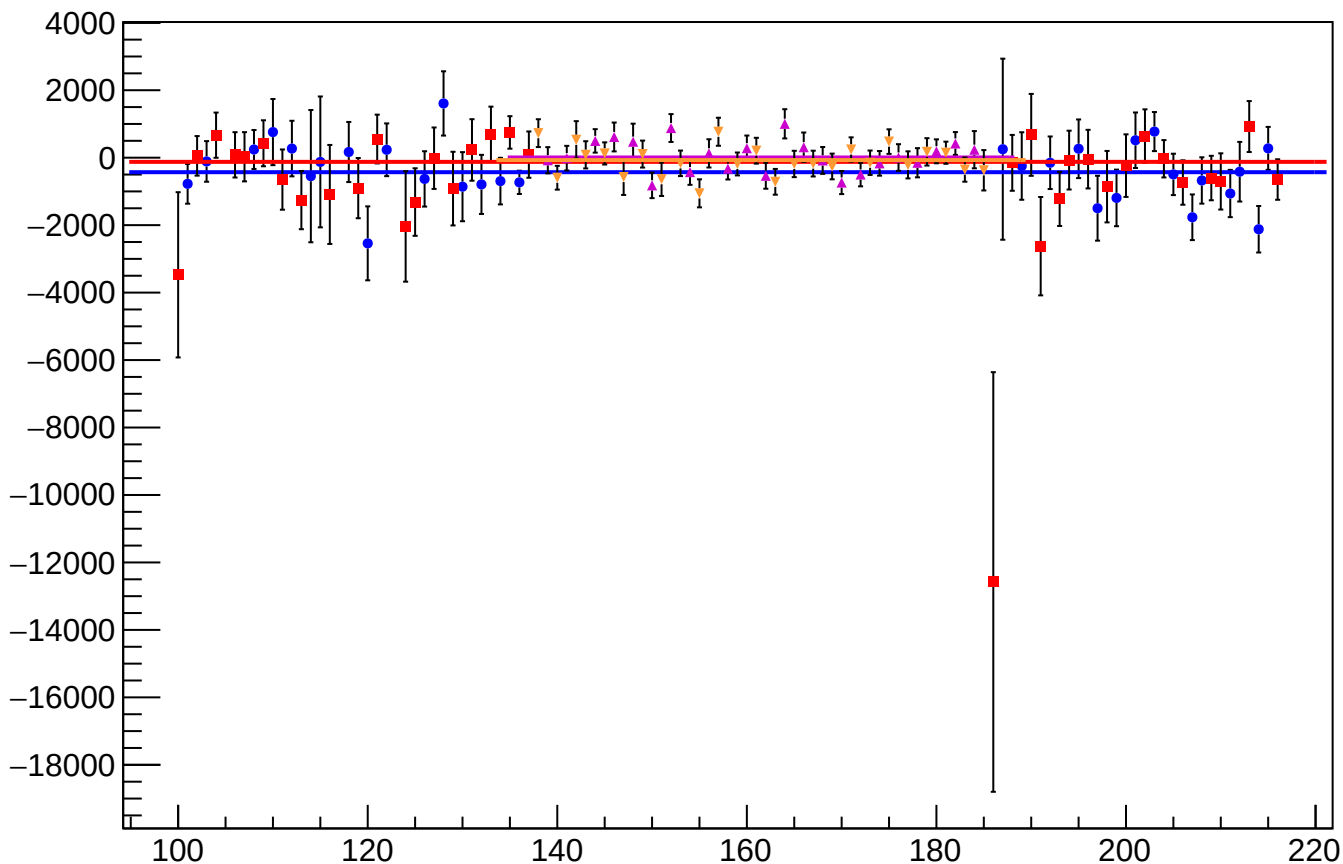
Left In:  $62.395 \pm 0.010$   $\chi^2/\text{NDF}: 188817.4/22$

+ sign  $66.105 \pm 0.008$   $\chi^2/\text{NDF}: 2138111.4/55$

All:  $66.686 \pm 0.005$   $\chi^2/\text{NDF}: 4959774.3/113$

- sign  $67.306 \pm 0.008$   $\chi^2/\text{NDF}: 2809743.7/57$

asym\_sam\_13\_57\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-430.195 \pm 132.850$   $\chi^2/\text{NDF}$ : 35.6/30

Left Out:  $-71.324 \pm 78.399$   $\chi^2/\text{NDF}$ : 28.6/24

Right Out:  $-123.671 \pm 135.270$   $\chi^2/\text{NDF}$ : 31.4/34

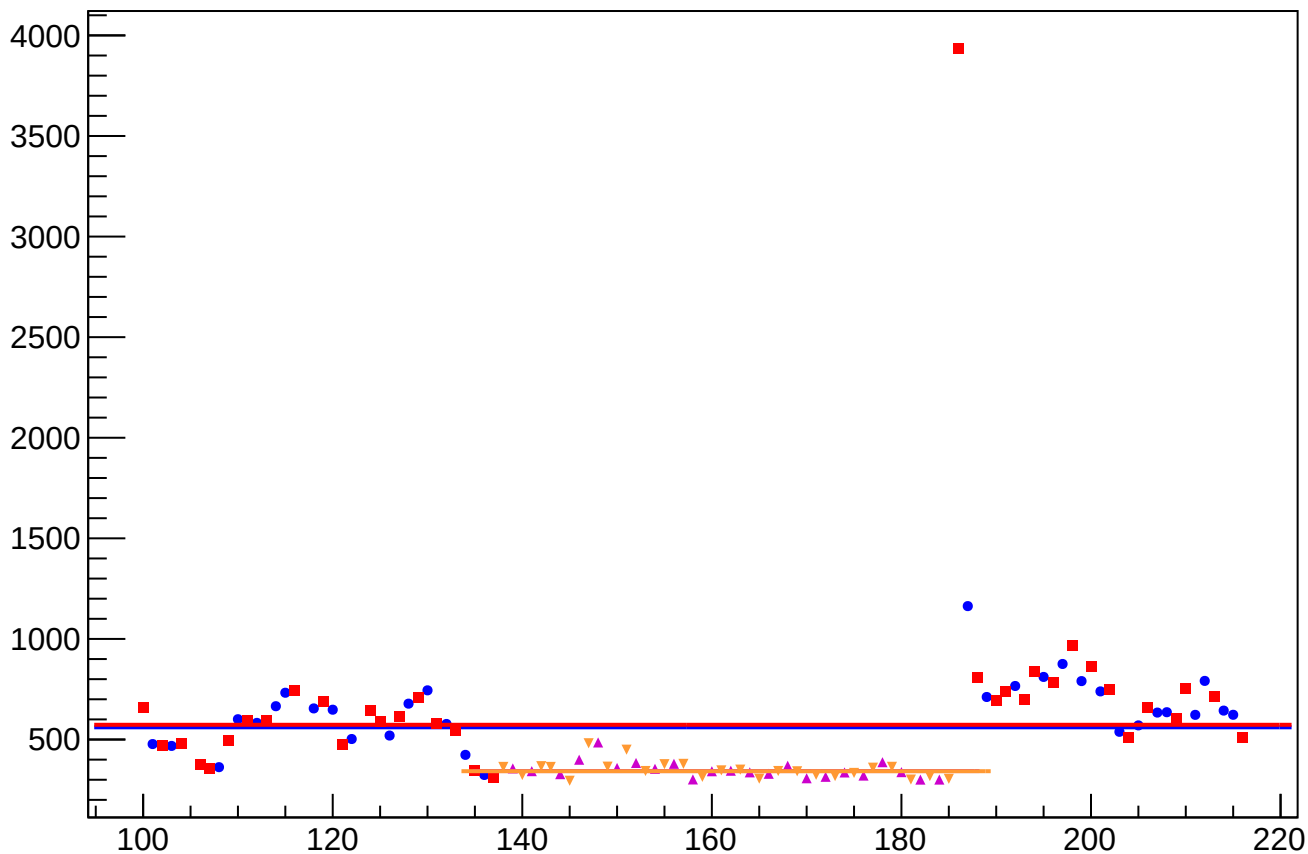
Left In:  $6.134 \pm 80.760$   $\chi^2/\text{NDF}$ : 34.0/22

+ sign  $-164.022 \pm 67.519$   $\chi^2/\text{NDF}$ : 69.6/55

All:  $-97.810 \pm 48.375$   $\chi^2/\text{NDF}$ : 137.7/113

- sign  $-27.975 \pm 69.342$   $\chi^2/\text{NDF}$ : 66.1/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 560.700 $\pm$ 0.094  $\chi^2$ /NDF: 2677914.9/30

Left Out: 342.502 $\pm$ 0.055  $\chi^2$ /NDF: 434210.5/24

Right Out: 573.213 $\pm$ 0.096  $\chi^2$ /NDF: 3322966.7/34

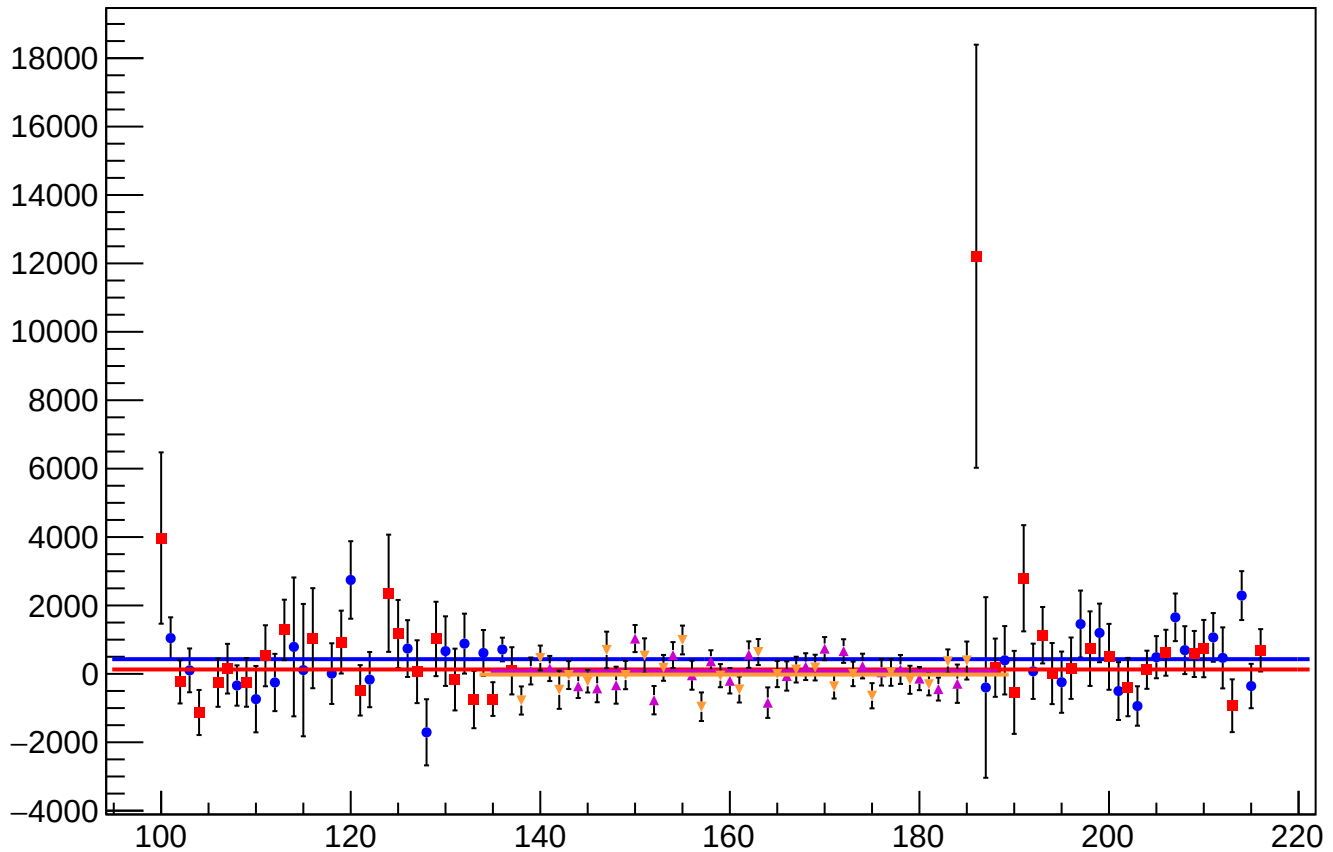
Left In: 343.245 $\pm$ 0.057  $\chi^2$ /NDF: 372993.5/22

+ sign 398.864 $\pm$ 0.048  $\chi^2$ /NDF: 7113750.5/55

All: 401.205 $\pm$ 0.034  $\chi^2$ /NDF: 15076112.7/11

- sign 403.675 $\pm$ 0.049  $\chi^2$ /NDF: 7957419.4/57

# asym\_sam\_13\_57\_dd\_mean vs Slug



Right In: 429.645 $\pm$ 134.830  $\chi^2$ /NDF: 38.1/30

Left Out: -20.272 $\pm$ 78.196  $\chi^2$ /NDF:31.4/24

Right Out: 128.703 $\pm$ 138.349  $\chi^2$ /NDF: 32.0/34

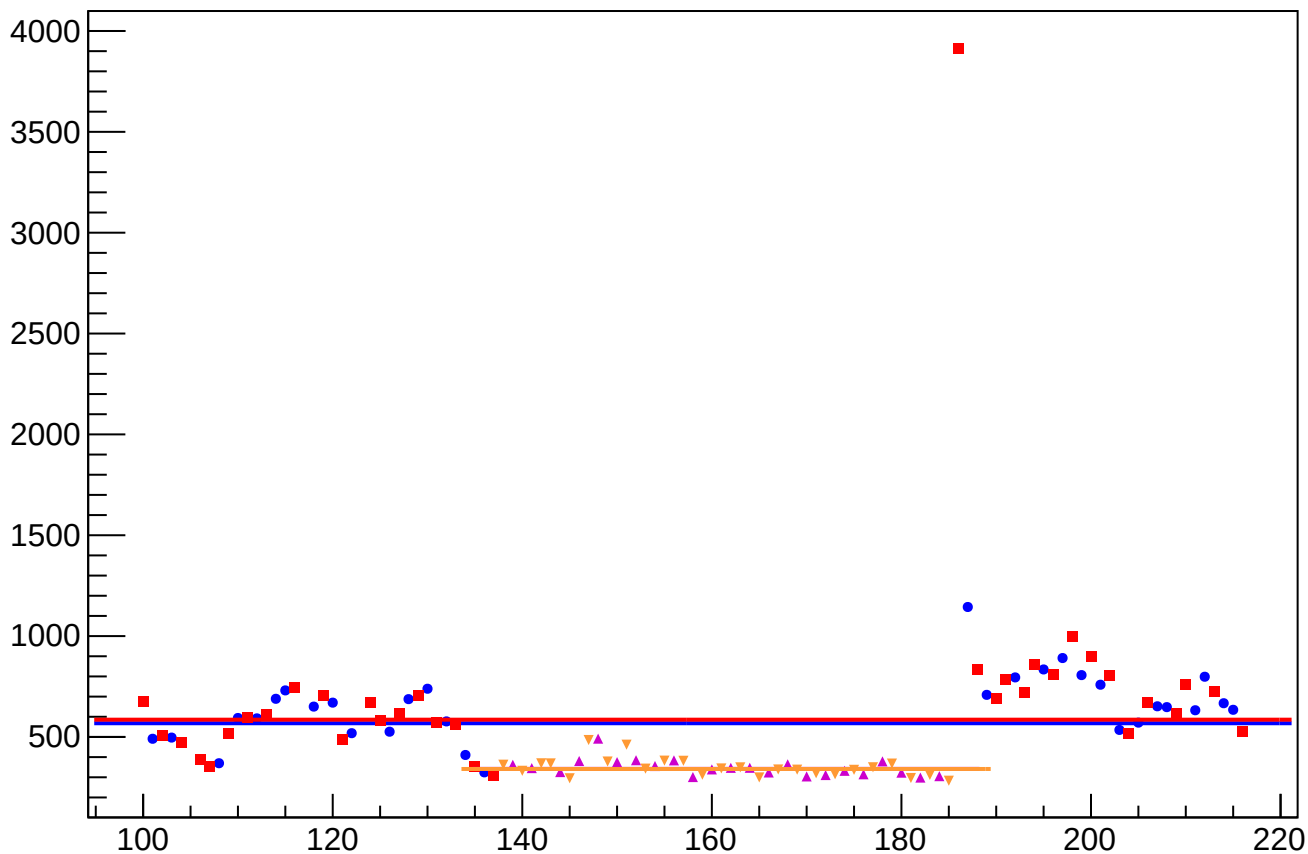
Left In: 78.719 $\pm$ 80.410  $\chi^2$ /NDF:32.9/22

+ sign 92.971 $\pm$ 67.643  $\chi^2$ /NDF: 77.9/55

All: 92.178 $\pm$ 48.481  $\chi^2$ /NDF: 142.9/113

- sign 91.340 $\pm$ 69.521  $\chi^2$ /NDF: 65.0/57

# asym\_sam\_13\_57\_dd\_rms vs Slug



Right In: 567.940 $\pm$ 0.095  $\chi^2$ /NDF: 2758700.7/30

Left Out: 341.199 $\pm$ 0.055  $\chi^2$ /NDF: 510854.5/24

Right Out: 585.596 $\pm$ 0.098  $\chi^2$ /NDF: 3387285.9/34

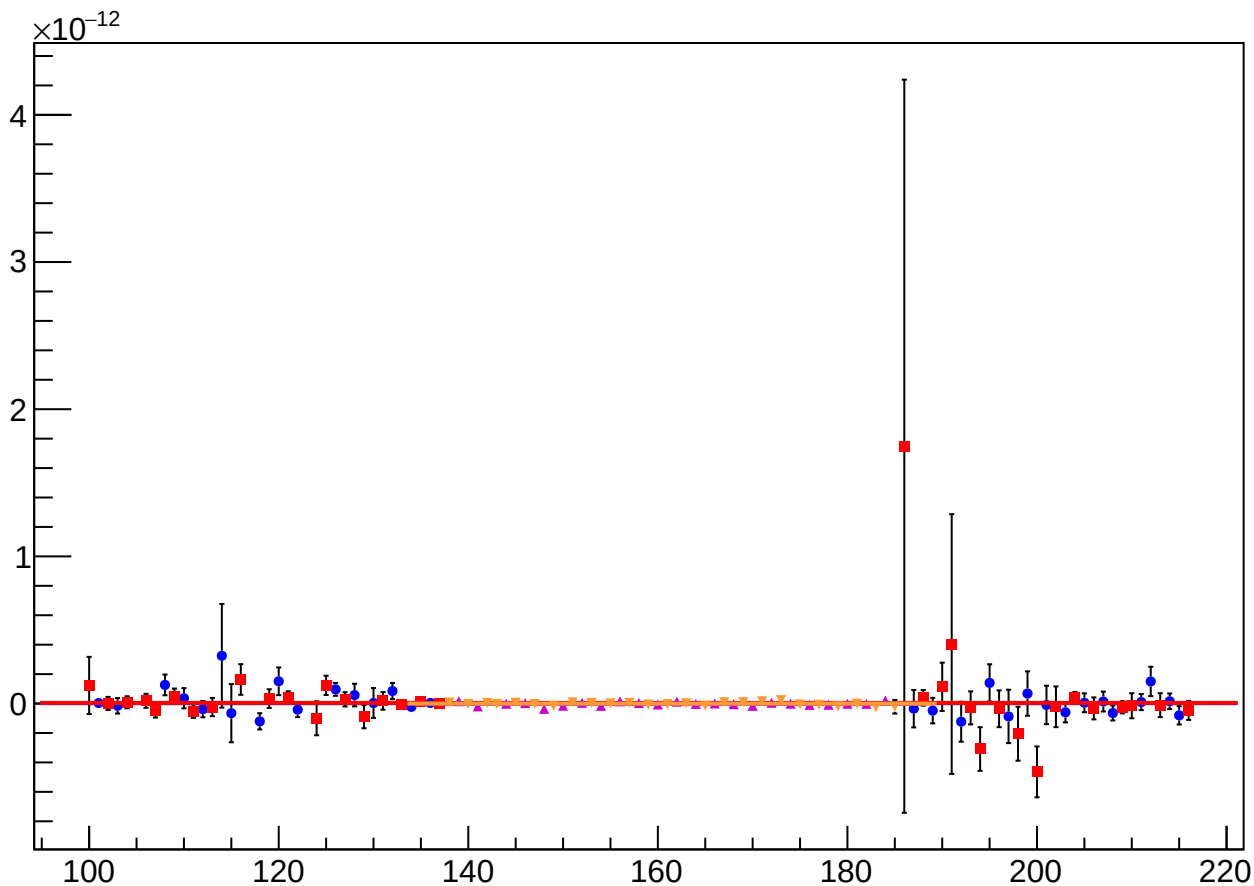
Left In: 341.622 $\pm$ 0.057  $\chi^2$ /NDF: 396885.0/22

+ sign 398.269 $\pm$ 0.048  $\chi^2$ /NDF: 7502042.1/55

All: 400.681 $\pm$ 0.034  $\chi^2$ /NDF: 15940580.5/11

- sign 403.228 $\pm$ 0.049  $\chi^2$ /NDF: 8433311.3/57

# asym\_sam\_13\_57\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.8/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 31.3/34

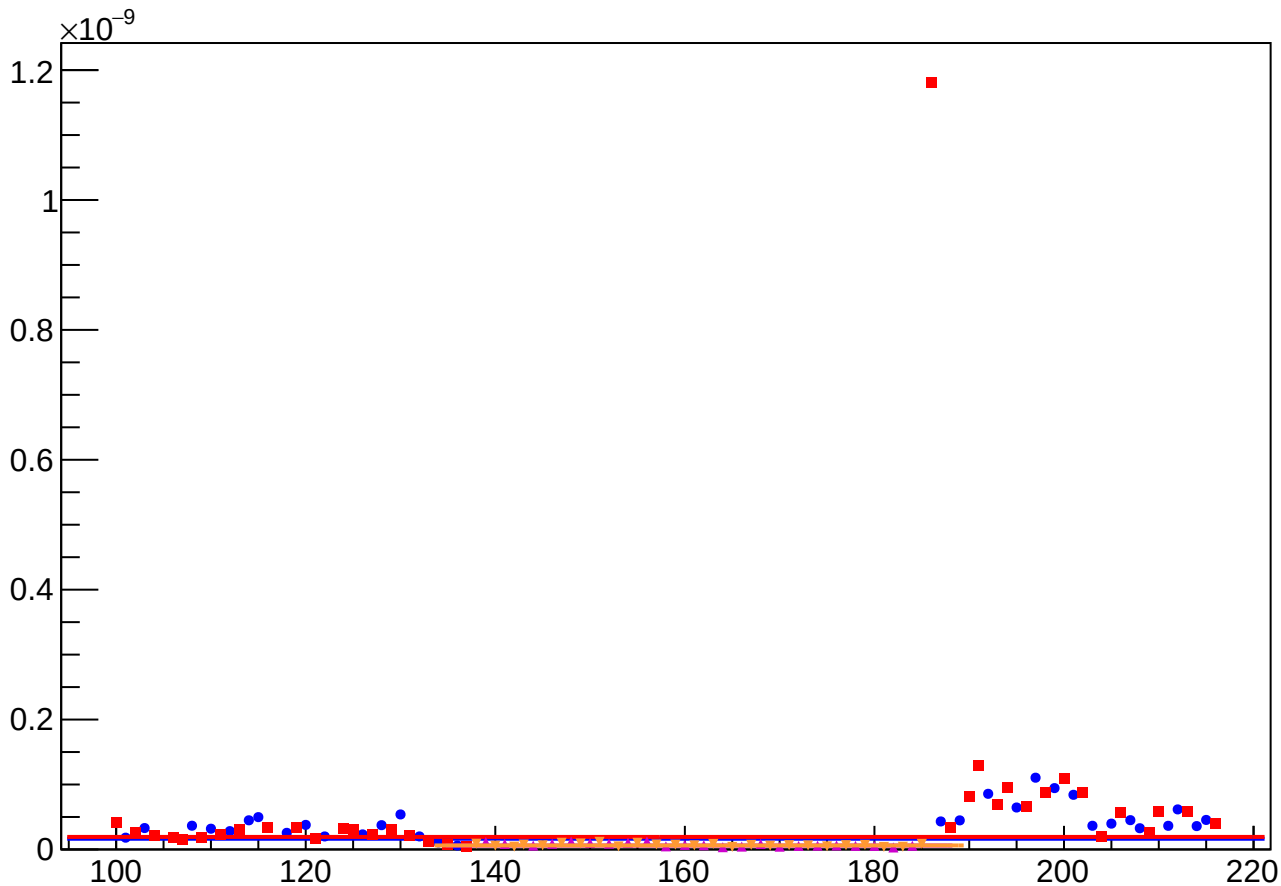
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14.4/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.2/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 96.7/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.2/57

asym\_sam\_13\_57\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8595964.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1159883.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7383252.8/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1660677.6/22

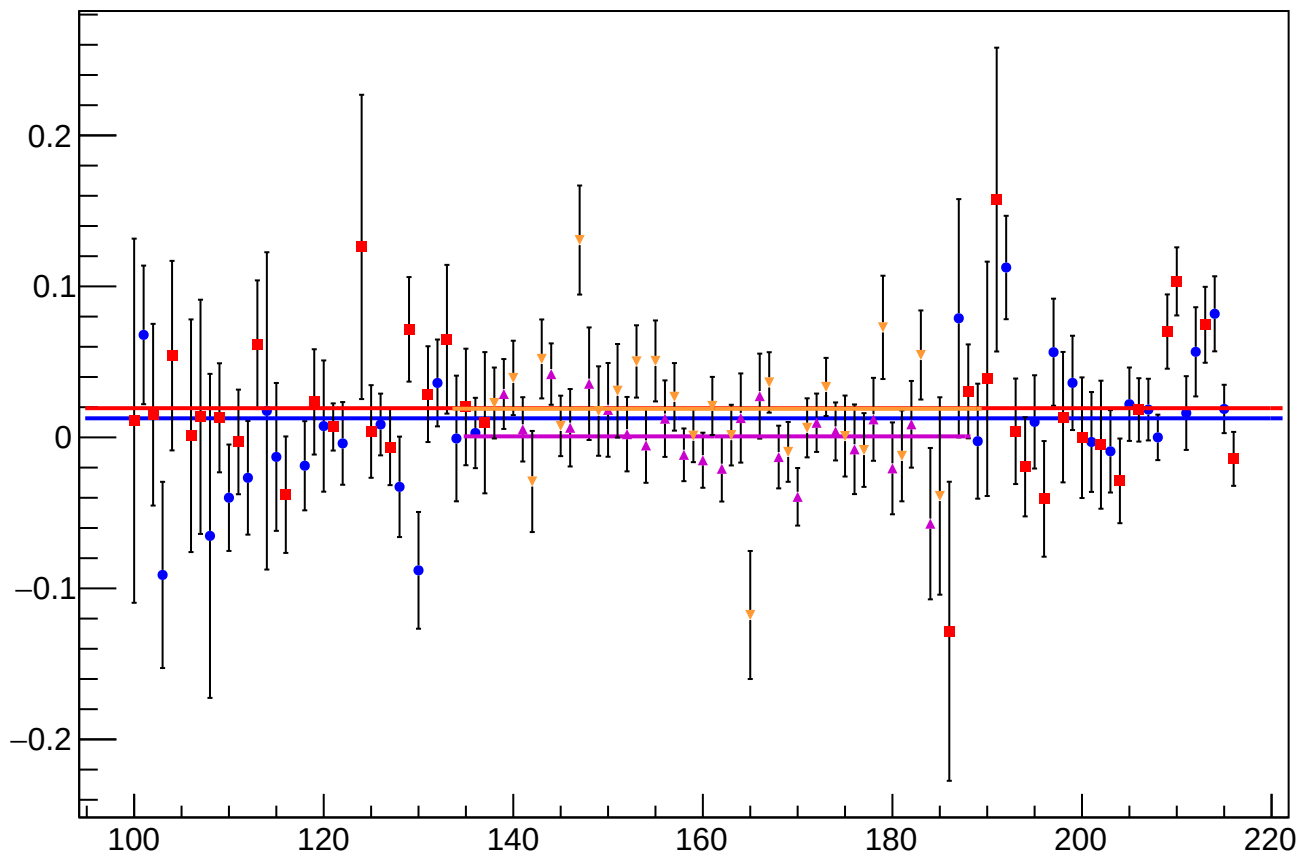
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13188640.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 26830995.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13641923.5/57



asym\_sam\_13\_57\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}: 43.0/30$

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}: 41.2/24$

Right Out:  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 48.7/34$

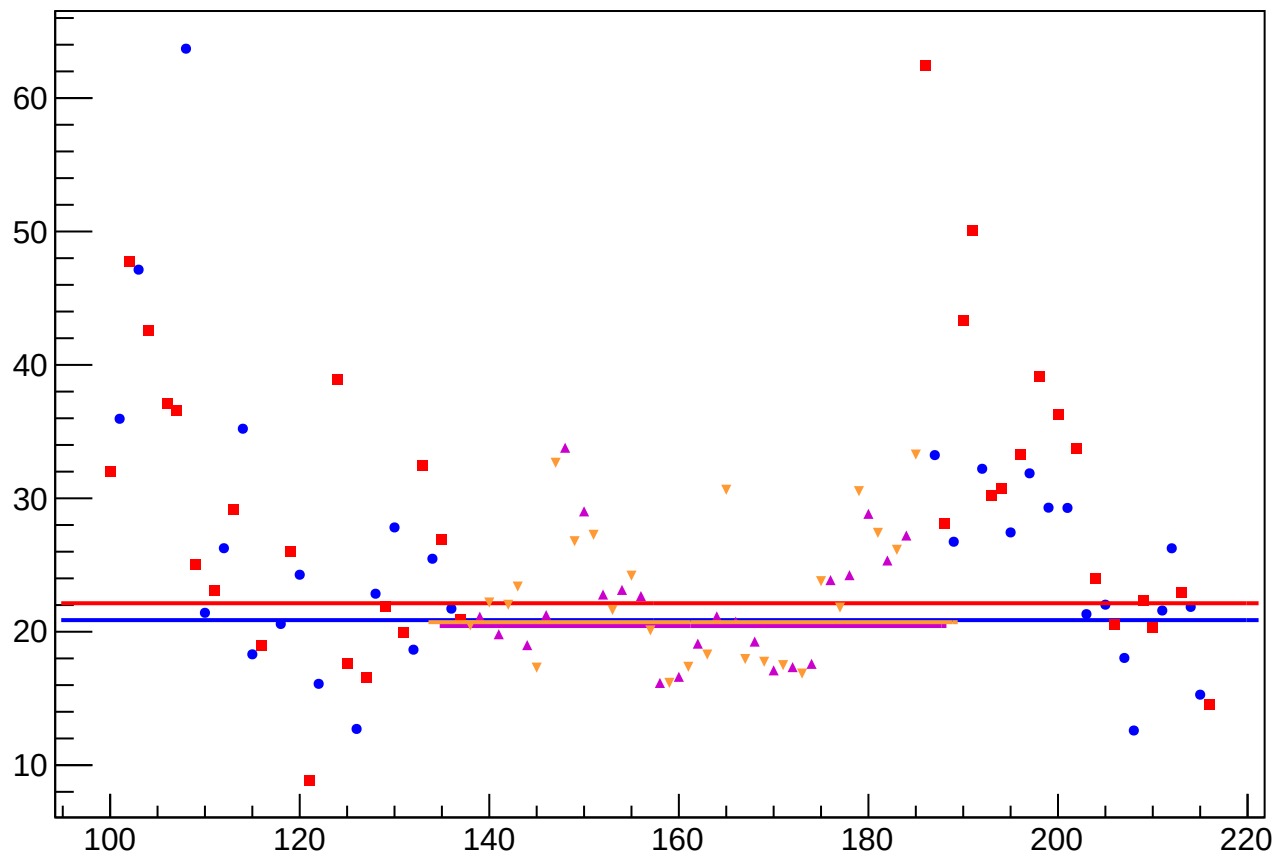
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}: 17.7/22$

+ sign  $0.016 \pm 0.004$   $\chi^2/\text{NDF}: 84.9/55$

All:  $0.013 \pm 0.003$   $\chi^2/\text{NDF}: 159.5/113$

- sign  $0.009 \pm 0.004$   $\chi^2/\text{NDF}: 72.7/57$

asym\_sam\_13\_57\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.871 $\pm$ 0.004  $\chi^2$ /NDF: 3321379.5/30

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF:1506374.1/24

Right Out: 22.136 $\pm$ 0.004  $\chi^2$ /NDF: 4843600.7/34

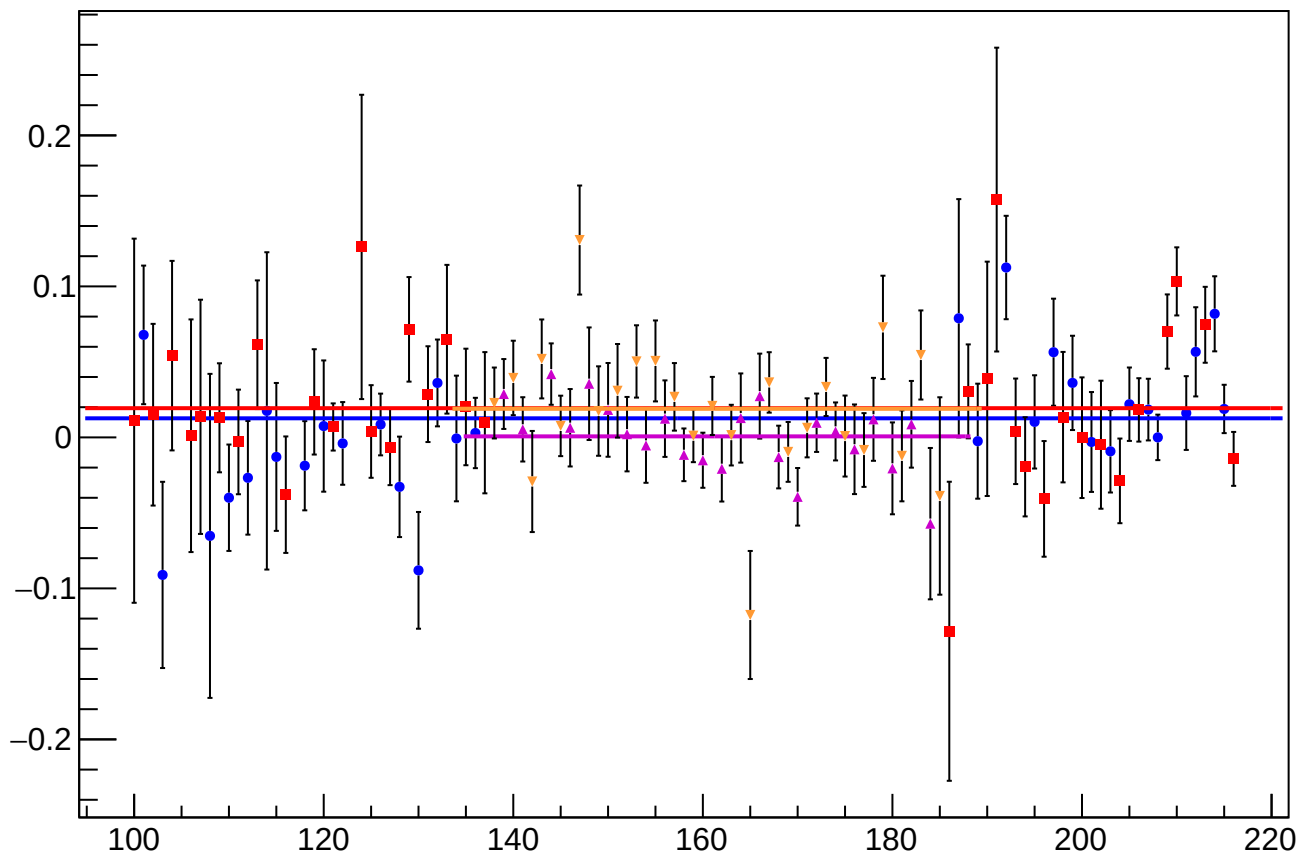
Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF:1173949.1/22

+ sign 20.790 $\pm$ 0.003  $\chi^2$ /NDF: 4828676.7/55

All: 20.977 $\pm$ 0.002  $\chi^2$ /NDF: 10962986.6/113

- sign 21.180 $\pm$ 0.003  $\chi^2$ /NDF: 6122732.1/57

asym\_sam\_13\_57\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}: 43.0/30$

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}: 41.2/24$

Right Out:  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 48.7/34$

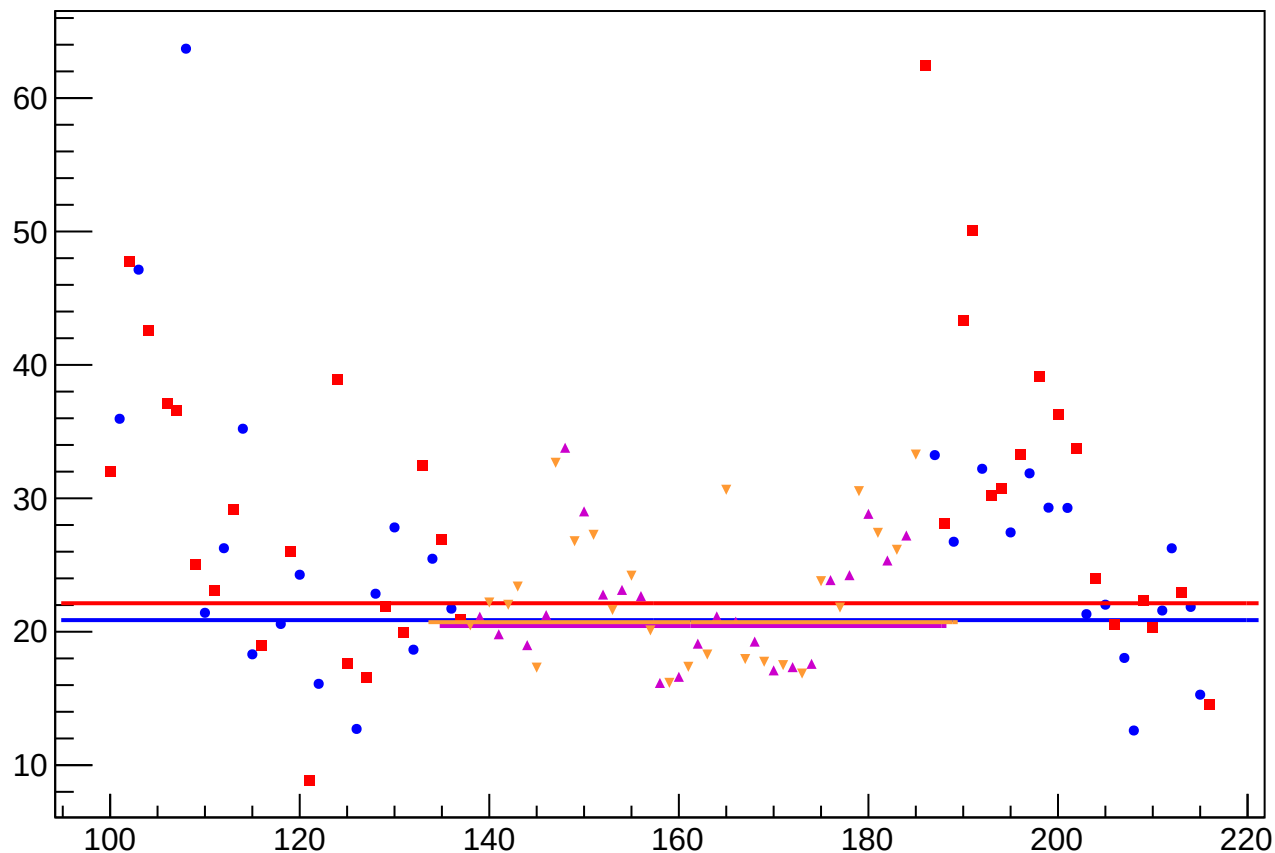
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}: 17.7/22$

+ sign  $0.016 \pm 0.004$   $\chi^2/\text{NDF}: 84.9/55$

All:  $0.013 \pm 0.003$   $\chi^2/\text{NDF}: 159.5/113$

- sign  $0.009 \pm 0.004$   $\chi^2/\text{NDF}: 72.7/57$

asym\_sam\_13\_57\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.871 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 3321379.5/30

Left Out: 20.718 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 1506374.1/24

Right Out: 22.136 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 4843600.7/34

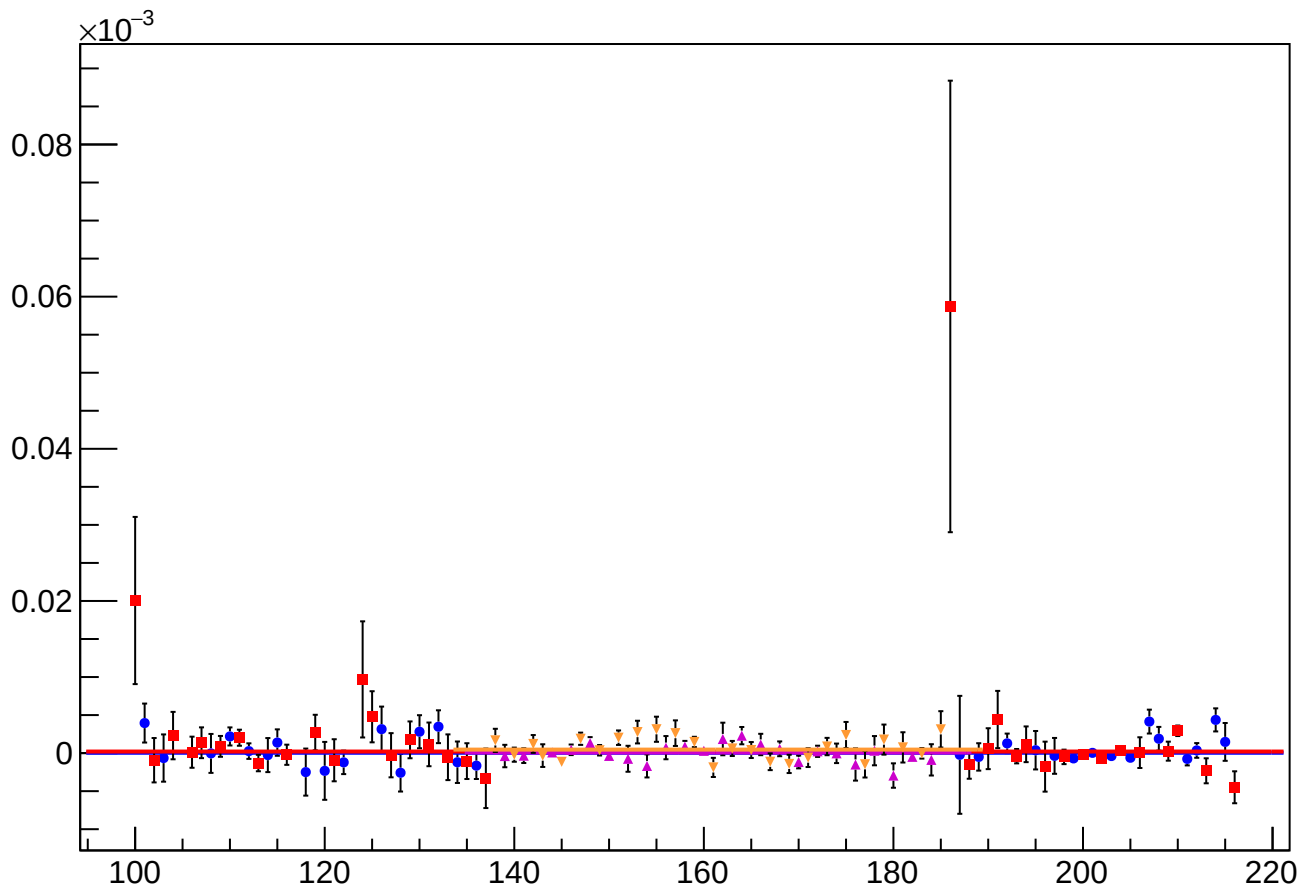
Left In: 20.429 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 1173949.1/22

+ sign 20.790 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 4828676.7/55

All: 20.977 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 10962986.6/113

- sign 21.180 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 6122732.1/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:36.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.5/34

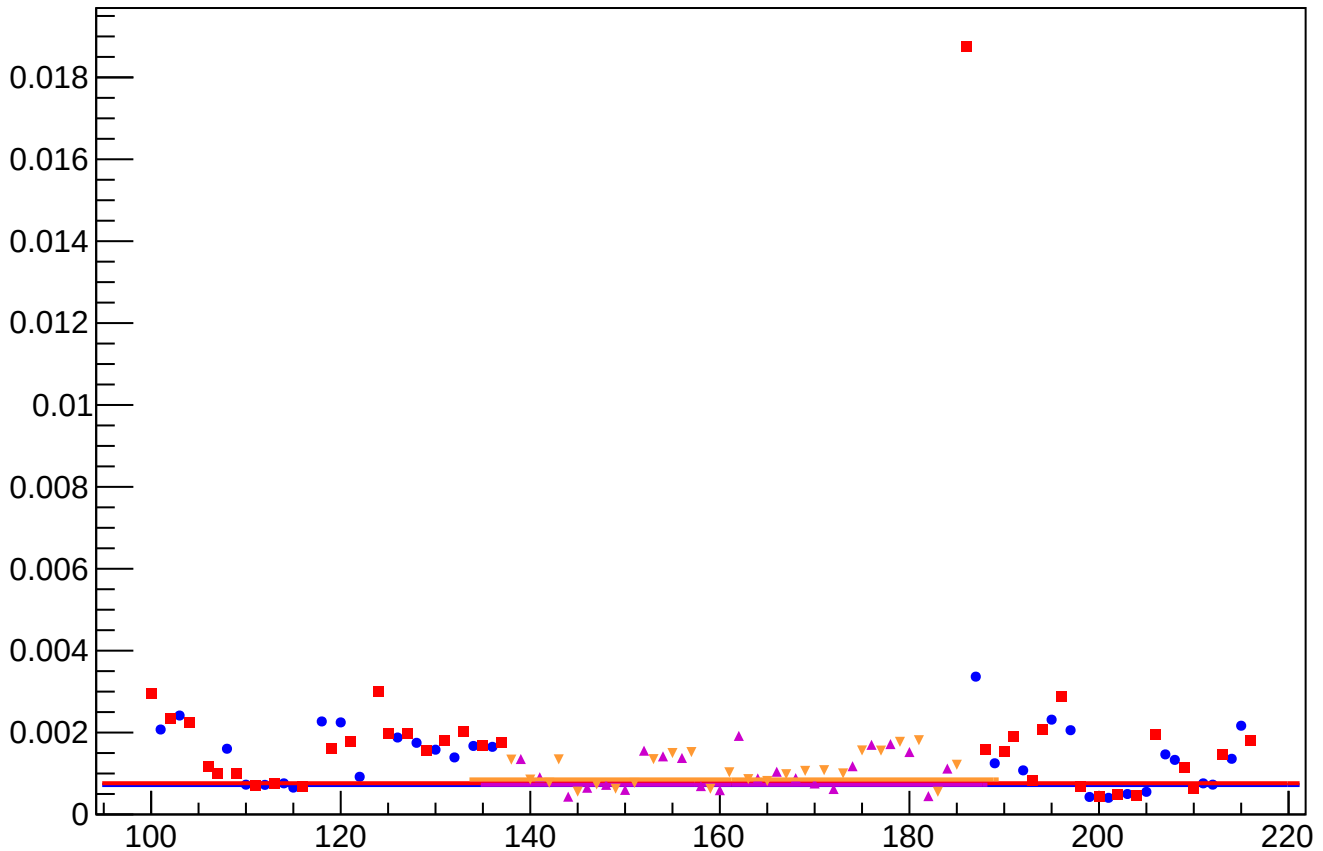
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 77.3/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 146.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 69.3/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10253323.6/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 4439075.2/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10685194.6/34

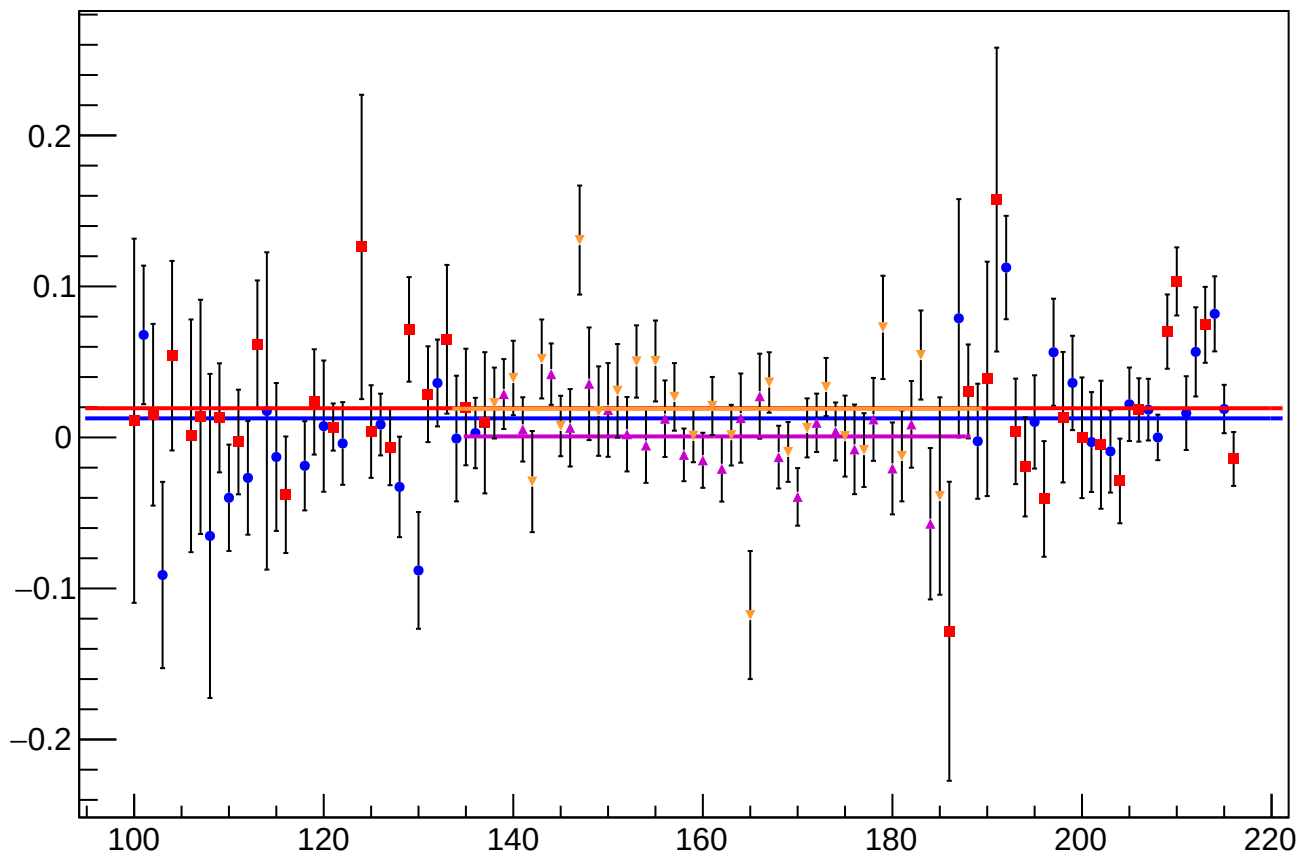
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5805288.5/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15140638.0/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31752051.7/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16525548.3/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.005$   $\chi^2/\text{NDF}$ : 43.0/30

Left Out:  $0.019 \pm 0.005$   $\chi^2/\text{NDF}$ : 41.2/24

Right Out:  $0.019 \pm 0.006$   $\chi^2/\text{NDF}$ : 48.7/34

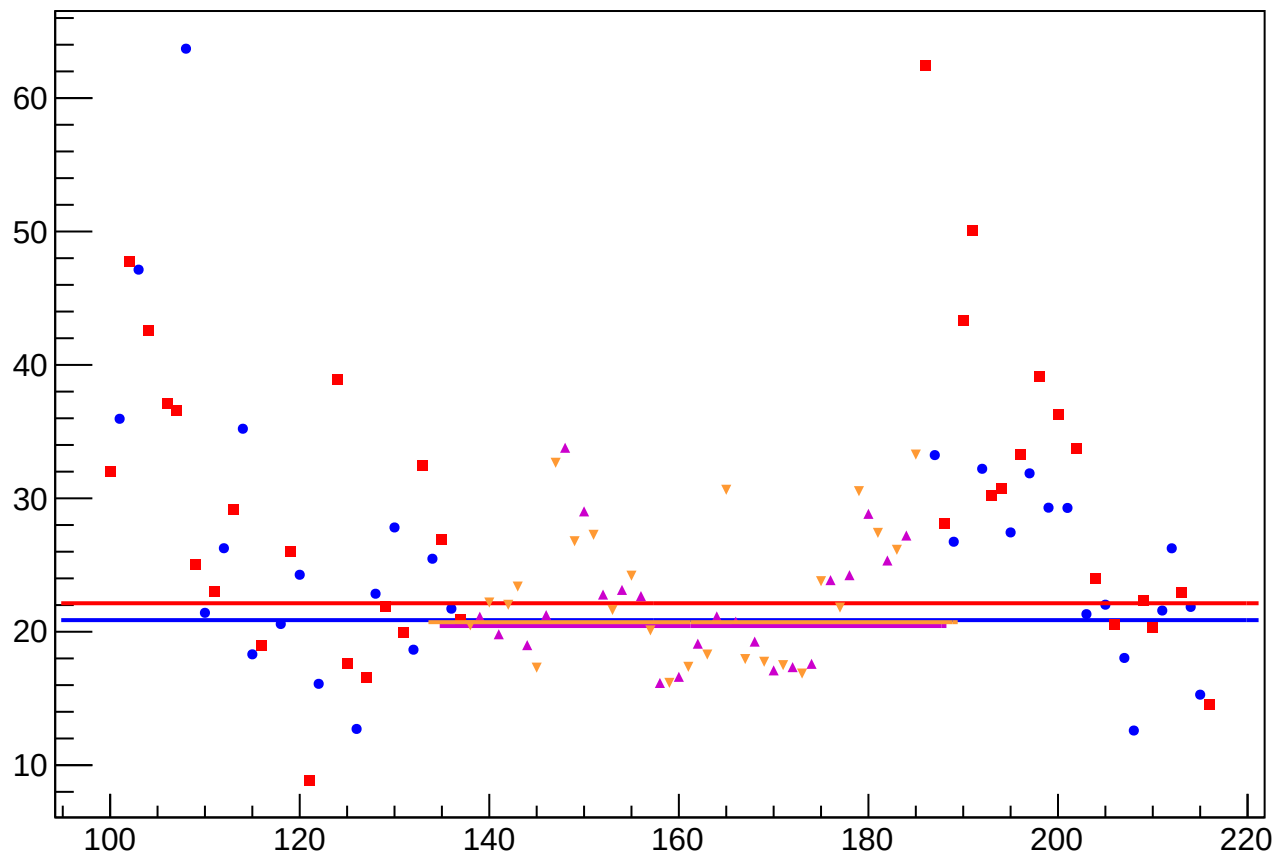
Left In:  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 17.7/22

+ sign  $0.016 \pm 0.004$   $\chi^2/\text{NDF}$ : 84.9/55

All:  $0.013 \pm 0.003$   $\chi^2/\text{NDF}$ : 159.5/113

- sign  $0.009 \pm 0.004$   $\chi^2/\text{NDF}$ : 72.7/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 20.871+/-0.004  $\chi^2/\text{NDF}$ : 3321252.5/30

Left Out: 20.718+/-0.003  $\chi^2/\text{NDF}$ : 1506475.9/24

Right Out: 22.136+/-0.004  $\chi^2/\text{NDF}$ : 4843071.9/34

Left In: 20.429+/-0.003  $\chi^2/\text{NDF}$ : 1173995.4/22

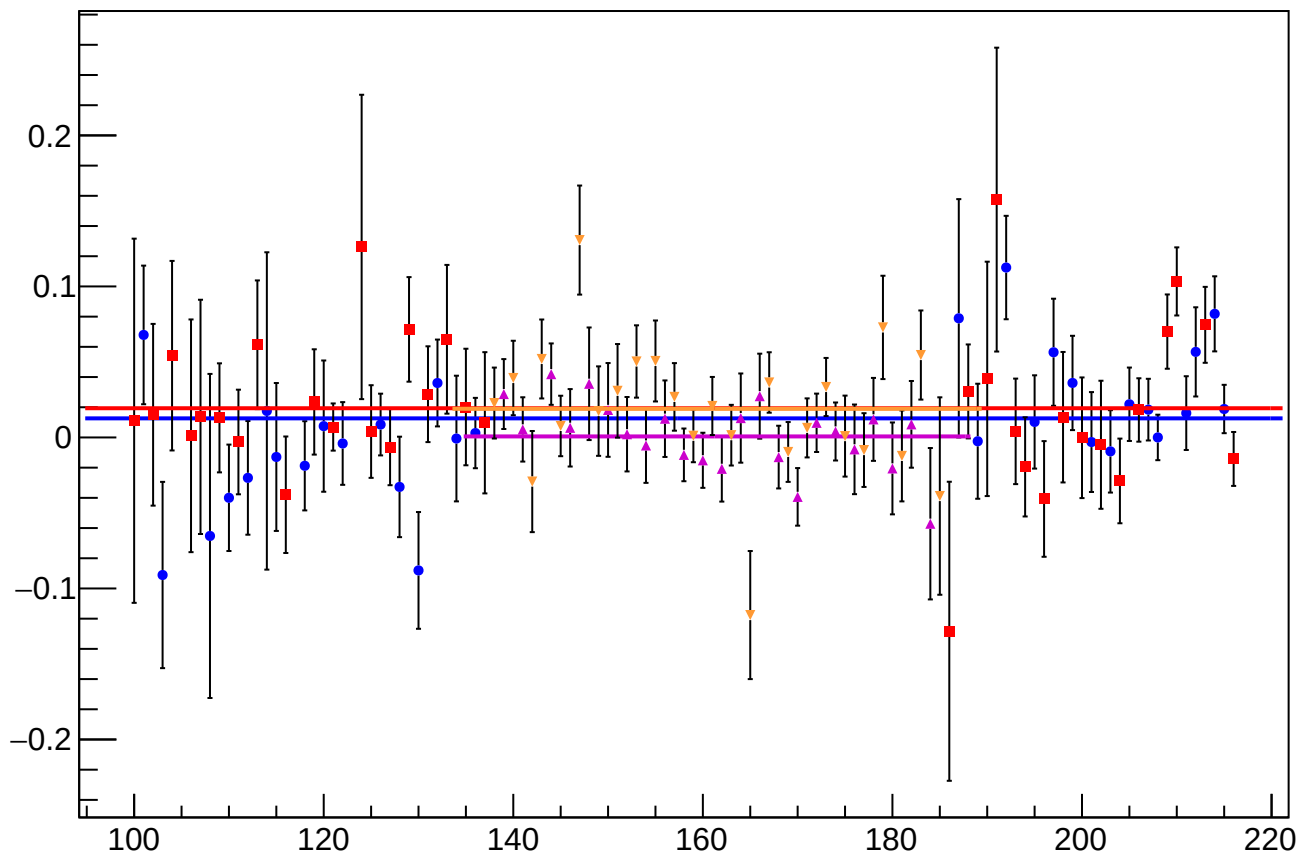
+ sign 20.790+/-0.003  $\chi^2/\text{NDF}$ : 4828655.2/55

All: 20.977+/-0.002  $\chi^2/\text{NDF}$ : 10962531.2/113

- sign 21.180+/-0.003  $\chi^2/\text{NDF}$ : 6122292.8/57



asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.013 $\pm$ 0.005  $\chi^2$ /NDF: 43.0/30

Left Out: 0.019 $\pm$ 0.005  $\chi^2$ /NDF:41.2/24

Right Out: 0.019 $\pm$ 0.006  $\chi^2$ /NDF: 48.7/34

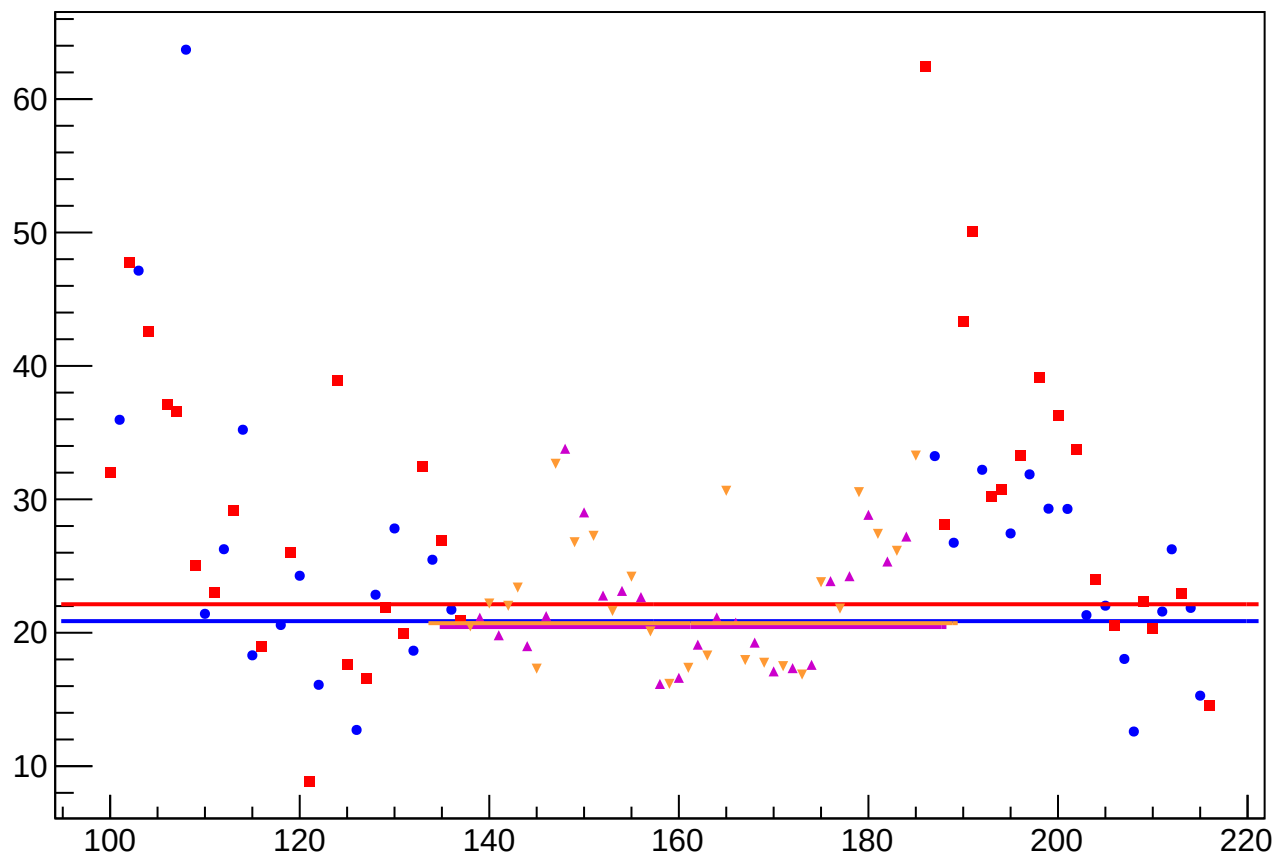
Left In: 0.001 $\pm$ 0.005  $\chi^2$ /NDF:17.7/22

+ sign 0.016 $\pm$ 0.004  $\chi^2$ /NDF: 84.9/55

All: 0.013 $\pm$ 0.003  $\chi^2$ /NDF: 159.5/113

- sign 0.009 $\pm$ 0.004  $\chi^2$ /NDF: 72.7/57

asym\_sam\_13\_57\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 20.871 $\pm$ 0.004  $\chi^2$ /NDF: 3321252.5/30

Left Out: 20.718 $\pm$ 0.003  $\chi^2$ /NDF: 1506475.9/24

Right Out: 22.136 $\pm$ 0.004  $\chi^2$ /NDF: 4843071.9/34

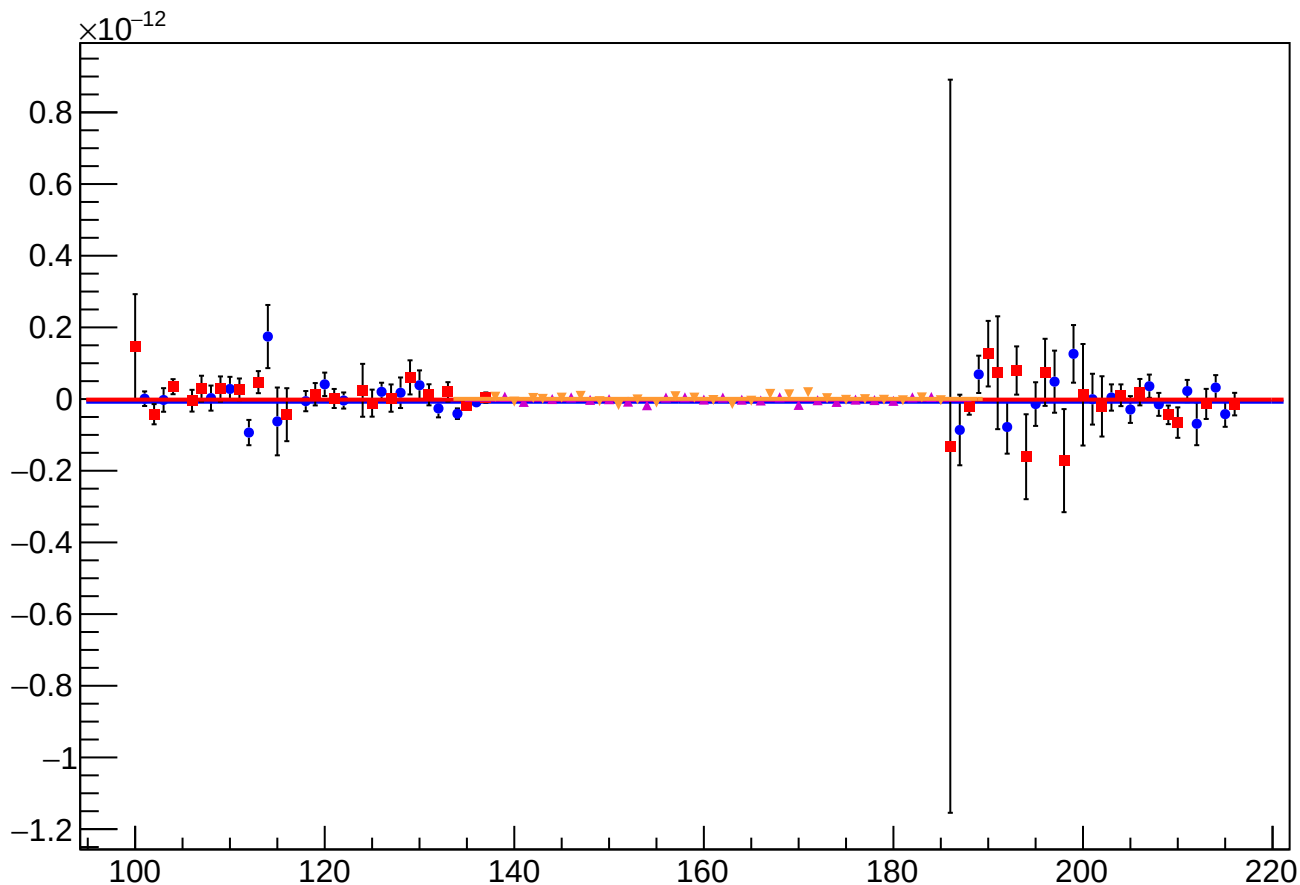
Left In: 20.429 $\pm$ 0.003  $\chi^2$ /NDF: 1173995.4/22

+ sign 20.790 $\pm$ 0.003  $\chi^2$ /NDF: 4828655.2/55

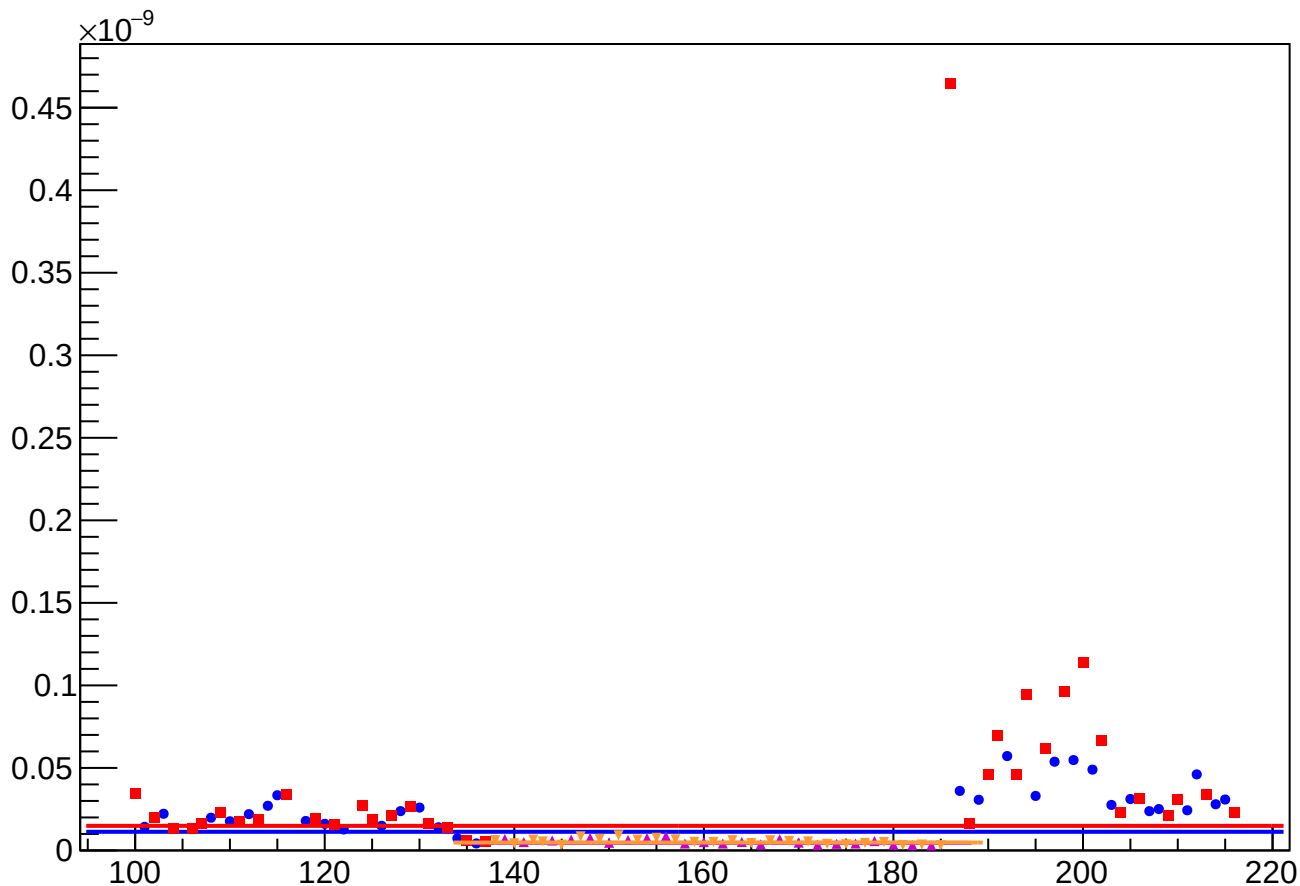
All: 20.977 $\pm$ 0.002  $\chi^2$ /NDF: 10962531.2/113

- sign 21.180 $\pm$ 0.003  $\chi^2$ /NDF: 6122292.8/57

asym\_sam\_13\_57\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



asym\_sam\_13\_57\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11394396.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2118264.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9839074.5/34

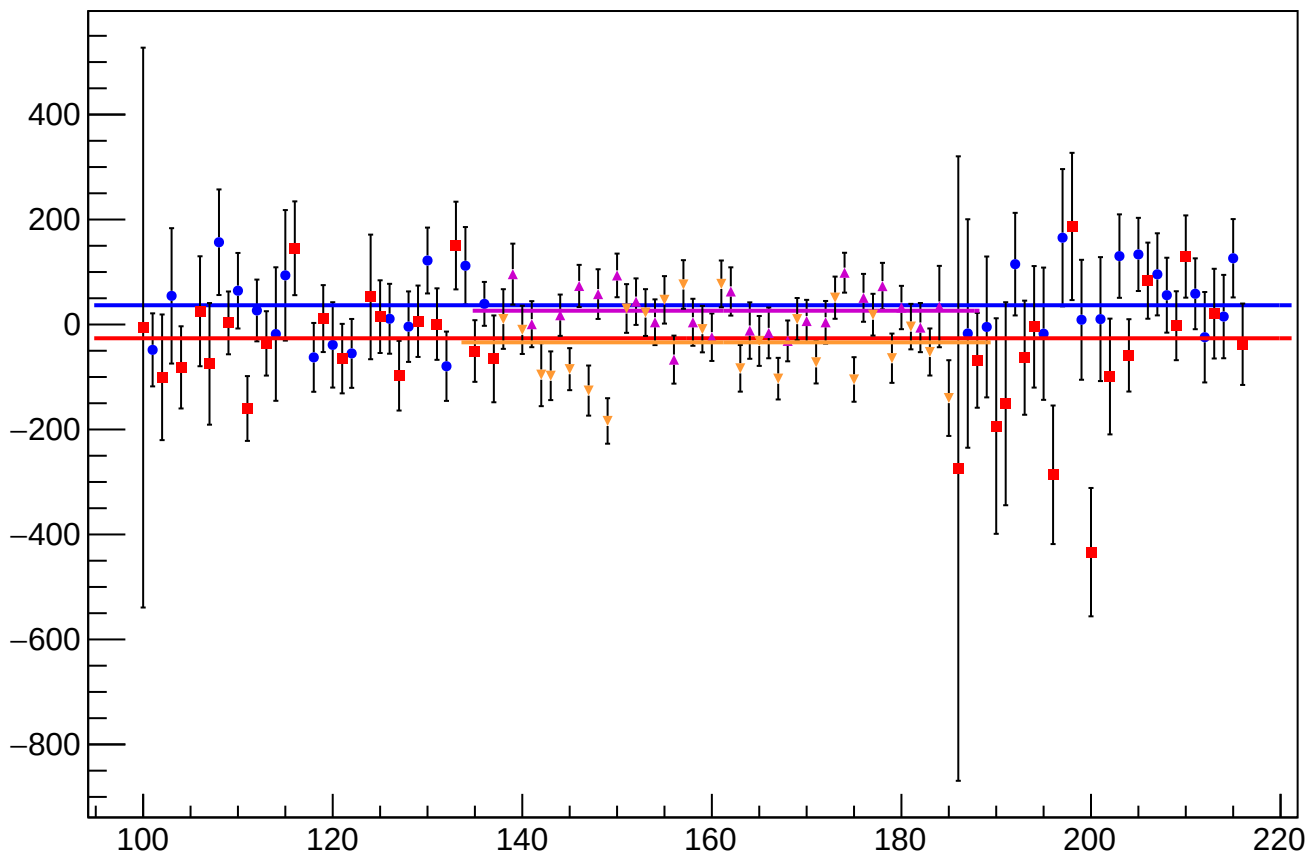
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1908439.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17922363.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37418838.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19489725.0/57

# reg\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $36.697 \pm 13.943$   $\chi^2/\text{NDF}: 23.3/30$

Left Out:  $-33.956 \pm 8.993$   $\chi^2/\text{NDF}: 58.7/24$

Right Out:  $-26.211 \pm 14.116$   $\chi^2/\text{NDF}: 44.1/34$

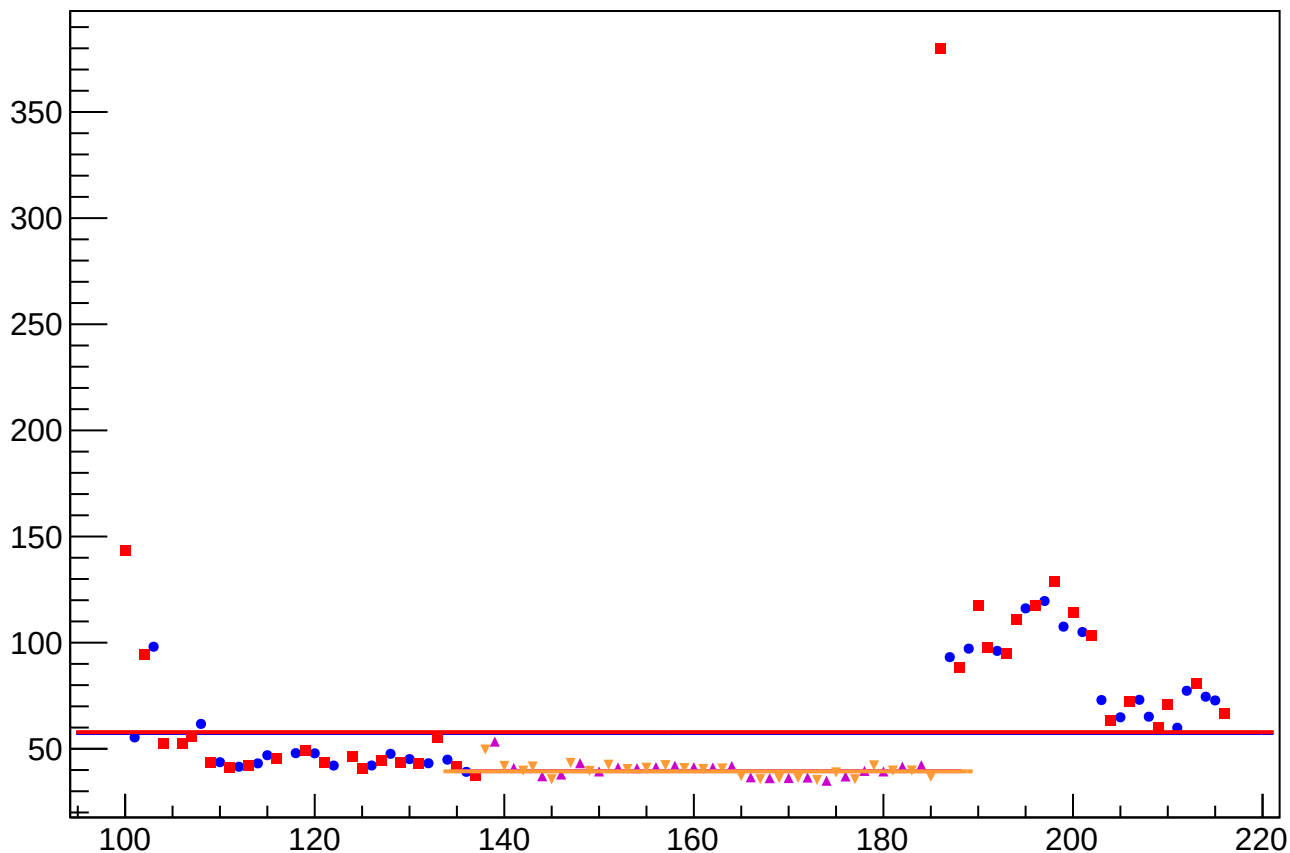
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}: 22.5/22$

+ sign  $-13.198 \pm 7.558$   $\chi^2/\text{NDF}: 100.1/55$

All:  $-1.669 \pm 5.411$   $\chi^2/\text{NDF}: 181.1/113$

- sign  $10.451 \pm 7.749$   $\chi^2/\text{NDF}: 76.2/57$

# reg\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 57.432 $\pm$ 0.010  $\chi^2$ /NDF: 4028096.9/30

Left Out: 39.383 $\pm$ 0.006  $\chi^2$ /NDF: 228799.9/24

Right Out: 57.837 $\pm$ 0.010  $\chi^2$ /NDF: 5221395.4/34

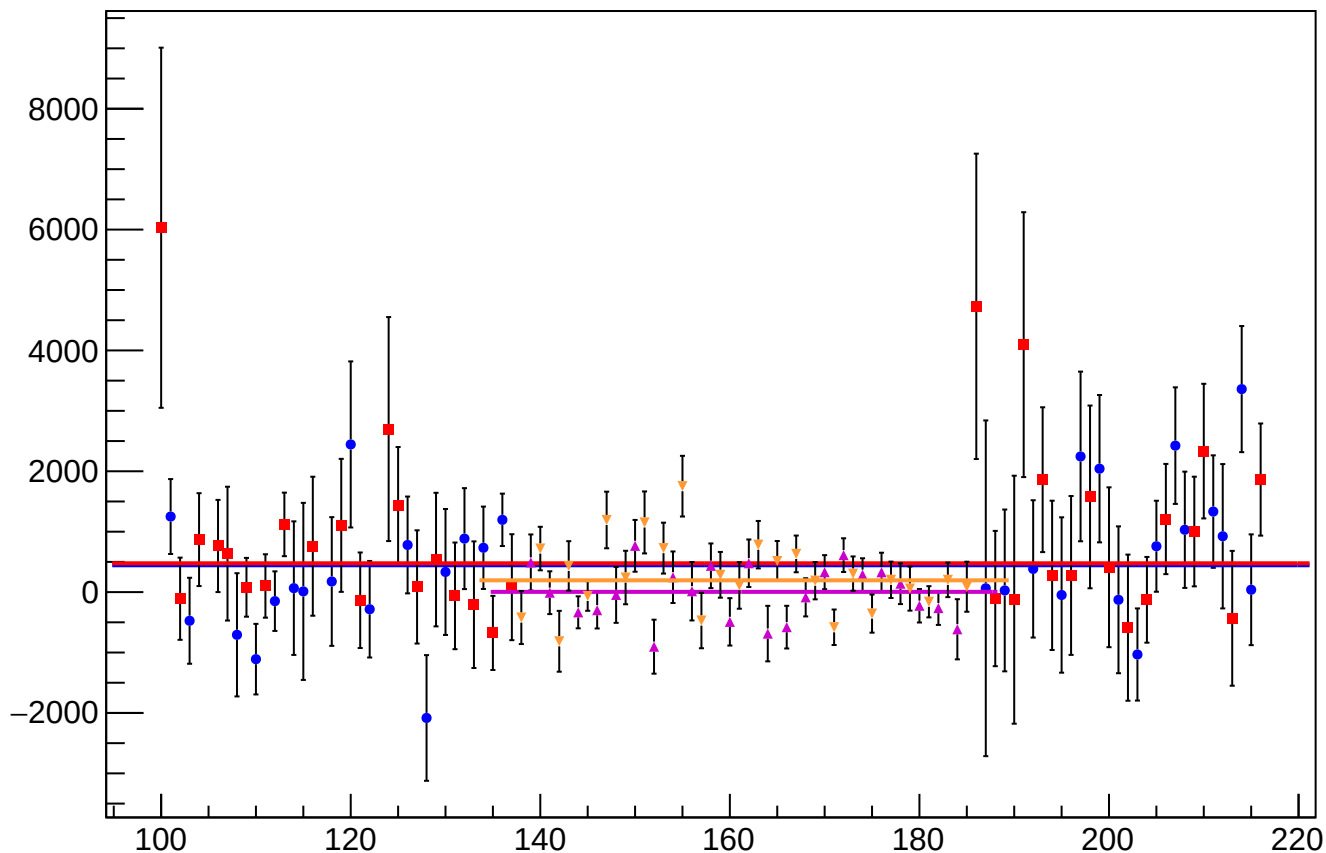
Left In: 39.491 $\pm$ 0.007  $\chi^2$ /NDF: 251801.8/22

+ sign 44.686 $\pm$ 0.005  $\chi^2$ /NDF: 6623801.4/55

All: 44.849 $\pm$ 0.004  $\chi^2$ /NDF: 14459015.9/113

- sign 45.020 $\pm$ 0.005  $\chi^2$ /NDF: 7833307.4/57

asym\_sam\_15\_37\_dd\_reg\_correction\_mean vs Slug



Right In:  $444.156 \pm 153.076$   $\chi^2/\text{NDF}$ : 47.4/30

Left Out:  $195.029 \pm 70.093$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $477.037 \pm 152.808$   $\chi^2/\text{NDF}$ : 31.4/34

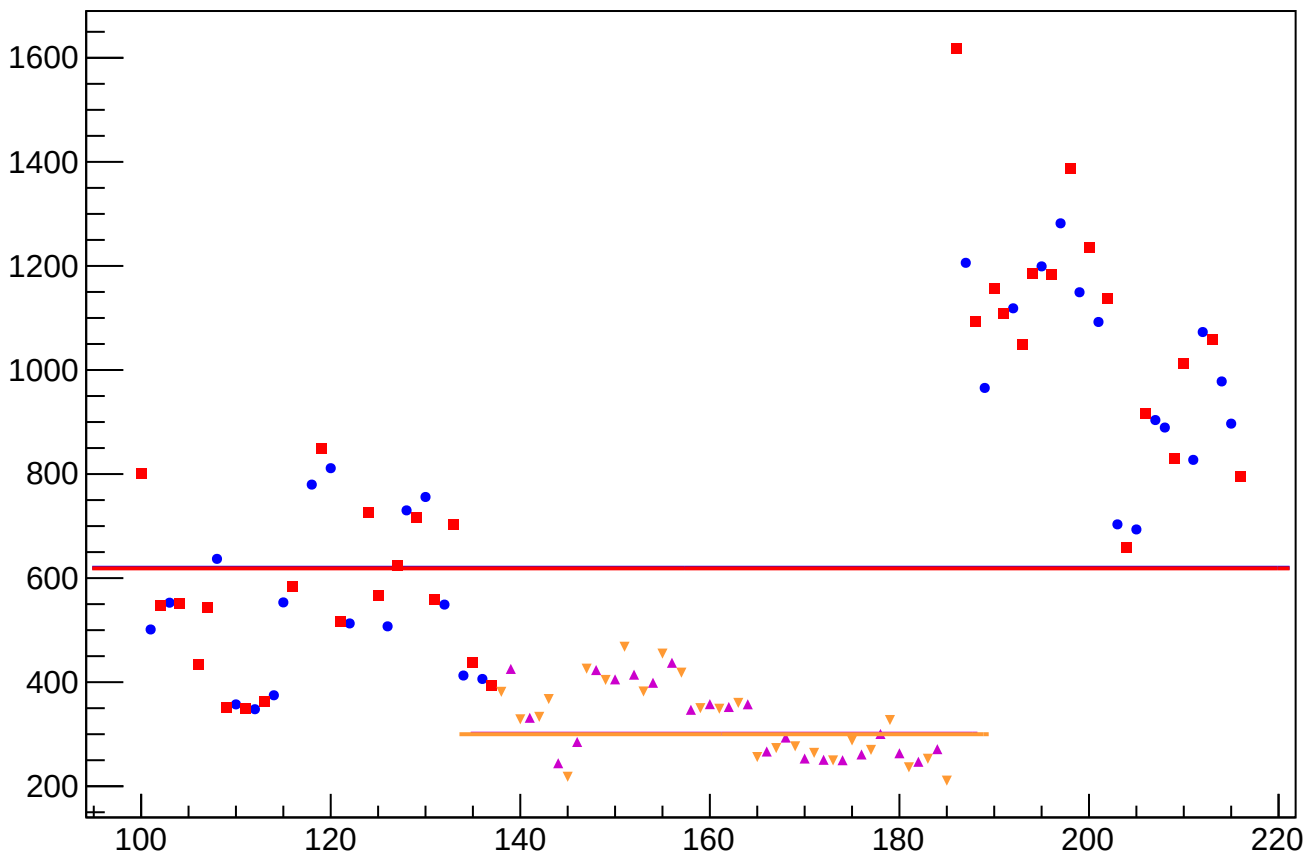
Left In:  $4.015 \pm 71.981$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $238.210 \pm 63.729$   $\chi^2/\text{NDF}$ : 98.2/55

All:  $165.660 \pm 45.547$   $\chi^2/\text{NDF}$ : 172.4/113

- sign  $89.915 \pm 65.118$   $\chi^2/\text{NDF}$ : 71.6/57

asym\_sam\_15\_37\_dd\_reg\_correction\_rms vs Slug



Right In: 619.894 $\pm$ 0.108  $\chi^2$ /NDF: 5423153.2/30

Left Out: 299.976 $\pm$ 0.050  $\chi^2$ /NDF: 1808461.5/24

Right Out: 618.751 $\pm$ 0.108  $\chi^2$ /NDF: 6490395.1/34

Left In: 301.000 $\pm$ 0.051  $\chi^2$ /NDF: 1407198.4/22

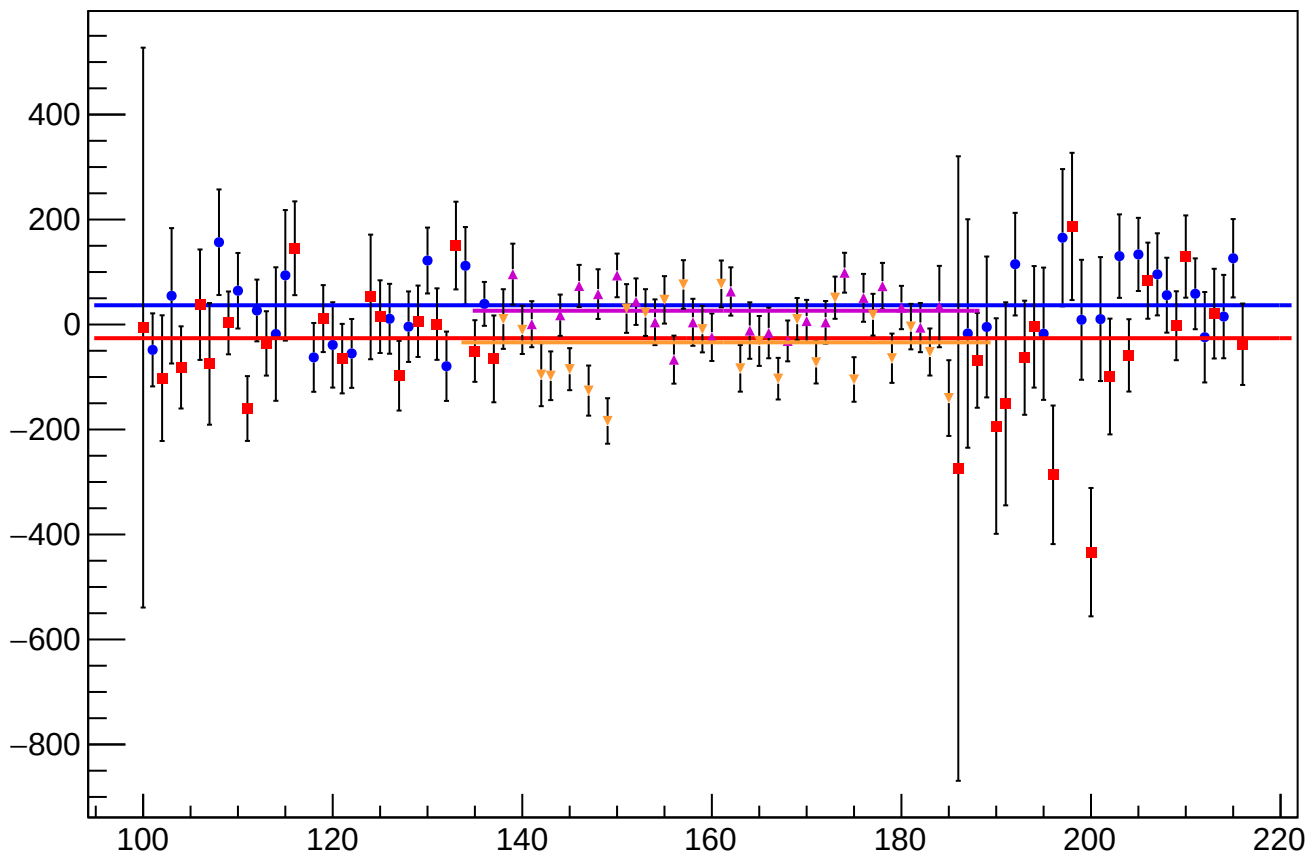
+ sign 355.427 $\pm$ 0.045  $\chi^2$ /NDF: 14453101.0/55

All: 357.029 $\pm$ 0.032  $\chi^2$ /NDF: 29430786.4/1

- sign 358.702 $\pm$ 0.046  $\chi^2$ /NDF: 14975100.4/57



# cor\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $36.701 \pm 13.943$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $-33.955 \pm 8.993$   $\chi^2/\text{NDF}$ : 58.7/24

Right Out:  $-26.014 \pm 14.117$   $\chi^2/\text{NDF}$ : 44.3/34

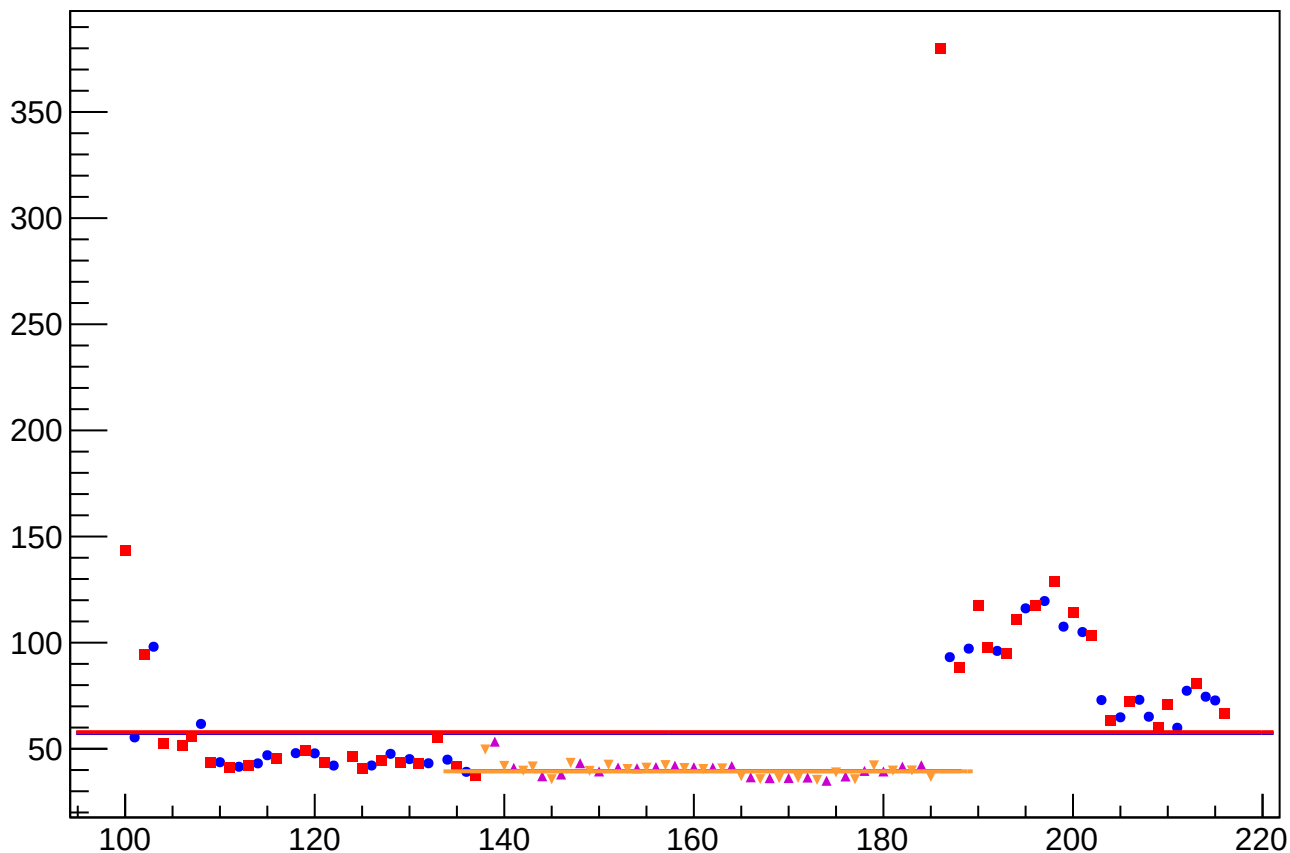
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}$ : 22.5/22

+ sign  $-13.196 \pm 7.558$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $-1.639 \pm 5.411$   $\chi^2/\text{NDF}$ : 181.2/113

- sign  $10.513 \pm 7.750$   $\chi^2/\text{NDF}$ : 76.3/57

# cor\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 57.432 $\pm$ 0.010  $\chi^2$ /NDF: 4028099.9/30

Left Out: 39.383 $\pm$ 0.006  $\chi^2$ /NDF: 228799.9/24

Right Out: 57.823 $\pm$ 0.010  $\chi^2$ /NDF: 5223268.6/34

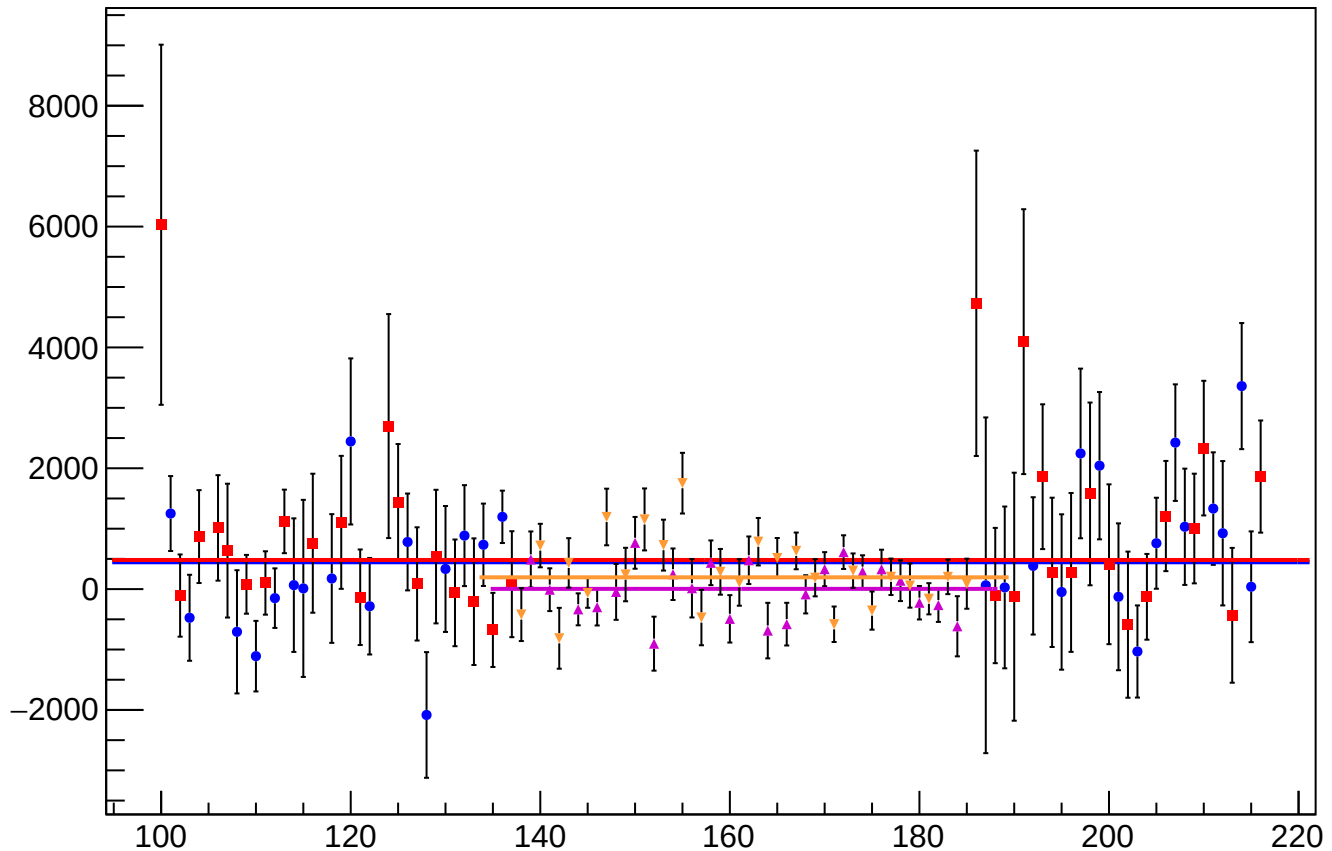
Left In: 39.491 $\pm$ 0.007  $\chi^2$ /NDF: 251801.8/22

+ sign 44.686 $\pm$ 0.005  $\chi^2$ /NDF: 6623804.4/55

All: 44.846 $\pm$ 0.004  $\chi^2$ /NDF: 14457016.7/113

- sign 45.015 $\pm$ 0.005  $\chi^2$ /NDF: 7831359.7/57

asym\_sam\_15\_37\_dd\_cor\_correction\_mean vs Slug



Right In:  $444.160 \pm 153.076$   $\chi^2/\text{NDF}$ : 47.4/30

Left Out:  $195.028 \pm 70.093$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $482.213 \pm 153.544$   $\chi^2/\text{NDF}$ : 31.6/34

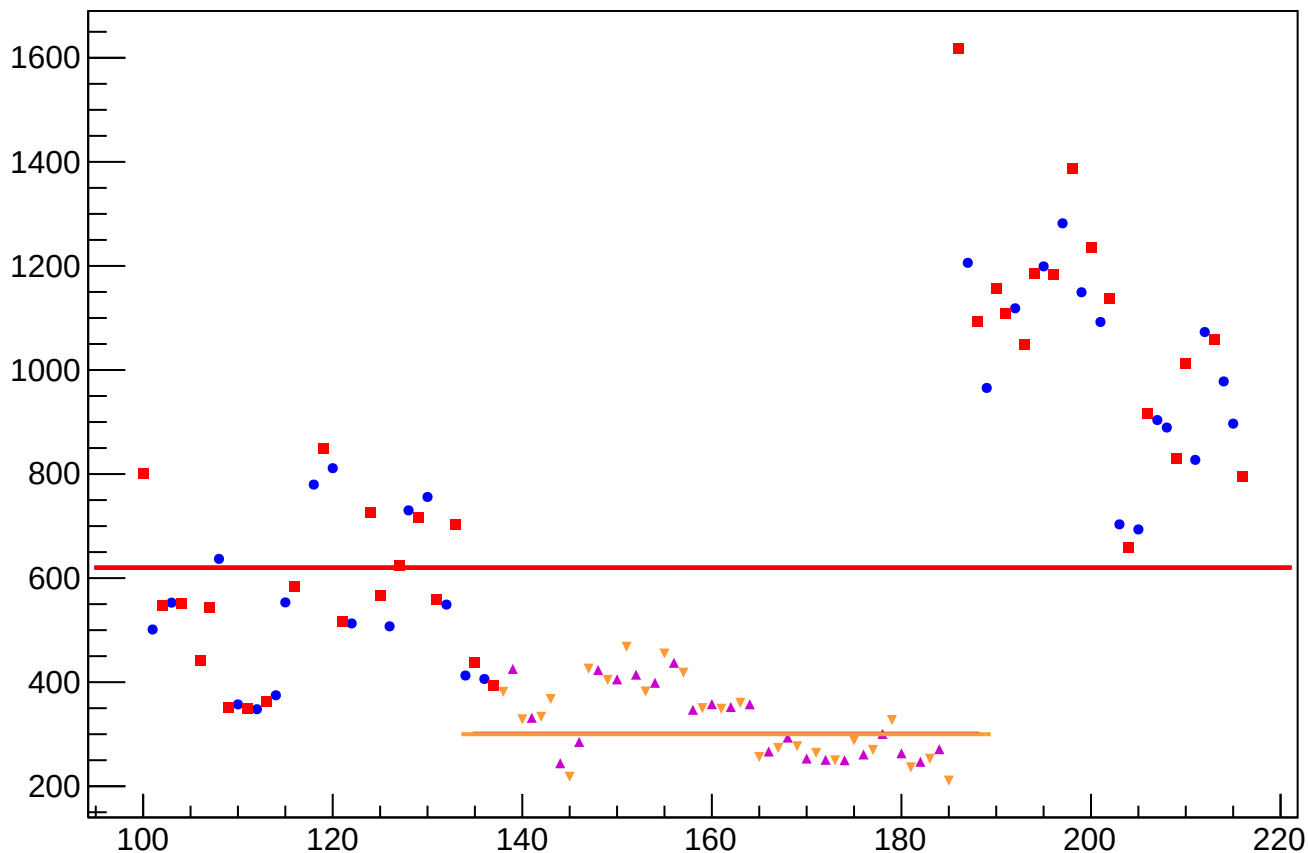
Left In:  $4.014 \pm 71.981$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $238.210 \pm 63.729$   $\chi^2/\text{NDF}$ : 98.2/55

All:  $165.851 \pm 45.566$   $\chi^2/\text{NDF}$ : 172.8/113

- sign  $90.173 \pm 65.175$   $\chi^2/\text{NDF}$ : 72.0/57

asym\_sam\_15\_37\_dd\_cor\_correction\_rms vs Slug



Right In: 619.896 $\pm$ 0.108  $\chi^2$ /NDF: 5423131.9/30

Left Out: 299.976 $\pm$ 0.050  $\chi^2$ /NDF: 1808454.4/24

Right Out: 620.772 $\pm$ 0.109  $\chi^2$ /NDF: 6455124.8/34

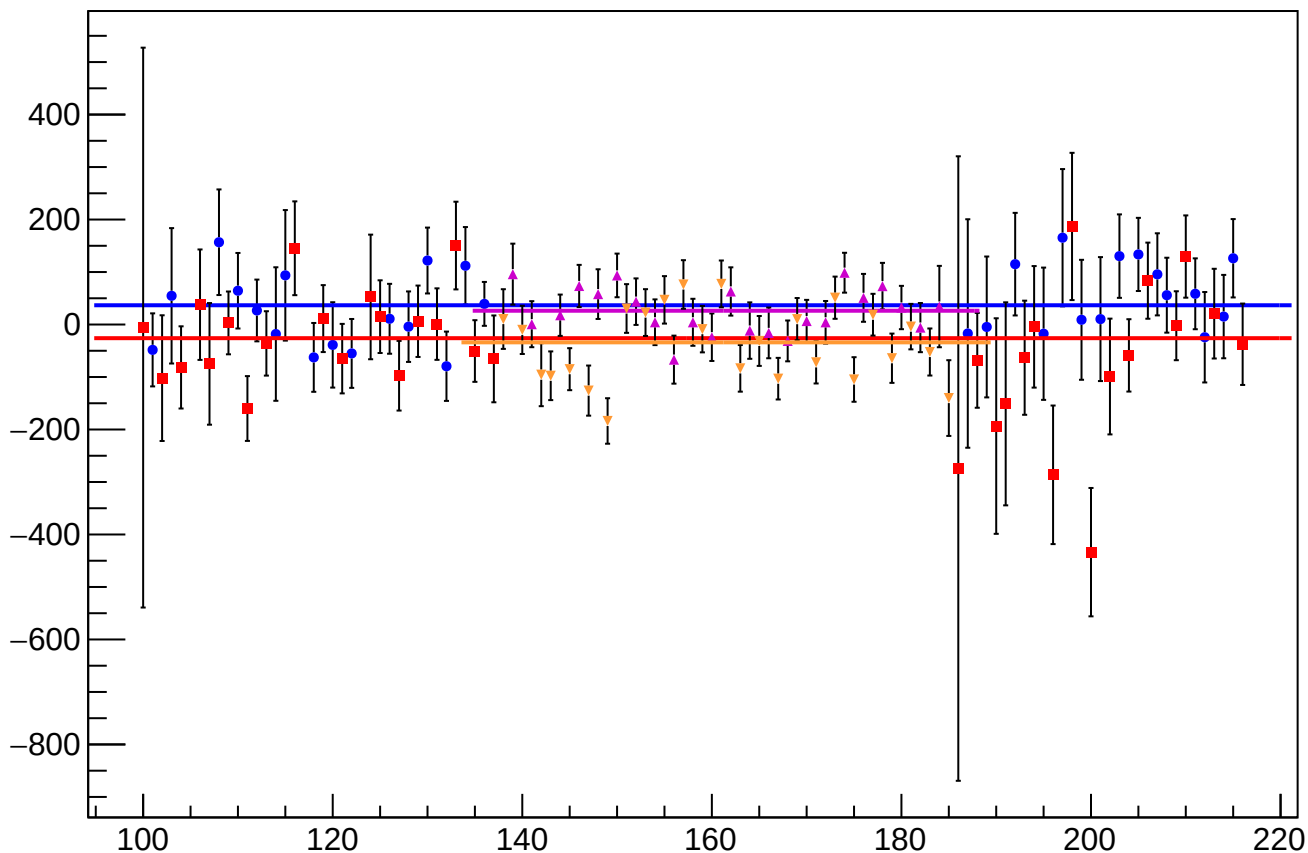
Left In: 300.999 $\pm$ 0.051  $\chi^2$ /NDF: 1407206.0/22

+ sign 355.427 $\pm$ 0.045  $\chi^2$ /NDF: 14453139.8/55

All: 356.985 $\pm$ 0.032  $\chi^2$ /NDF: 29429521.2/11

- sign 358.614 $\pm$ 0.046  $\chi^2$ /NDF: 14973936.7/57

# eigen\_cor\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $36.701 \pm 13.943$   $\chi^2/\text{NDF}: 23.3/30$

Left Out:  $-33.955 \pm 8.993$   $\chi^2/\text{NDF}: 58.7/24$

Right Out:  $-26.014 \pm 14.117$   $\chi^2/\text{NDF}: 44.3/34$

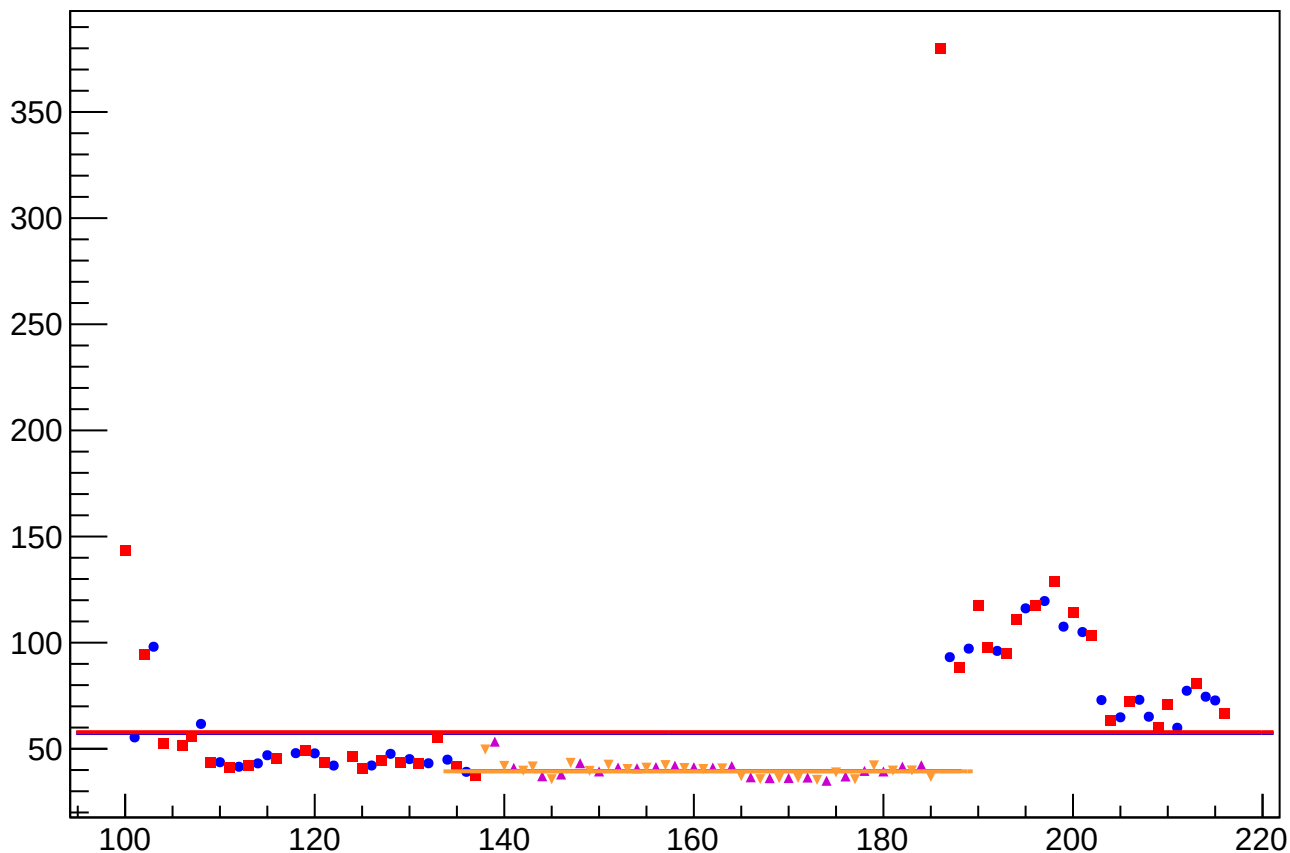
Left In:  $26.267 \pm 9.271$   $\chi^2/\text{NDF}: 22.5/22$

+ sign  $-13.196 \pm 7.558$   $\chi^2/\text{NDF}: 100.1/55$

All:  $-1.639 \pm 5.411$   $\chi^2/\text{NDF}: 181.2/113$

- sign  $10.513 \pm 7.750$   $\chi^2/\text{NDF}: 76.3/57$

eigen\_cor\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 57.432 $\pm$ 0.010  $\chi^2$ /NDF: 4028099.9/30

Left Out: 39.383 $\pm$ 0.006  $\chi^2$ /NDF: 228799.9/24

Right Out: 57.823 $\pm$ 0.010  $\chi^2$ /NDF: 5223268.6/34

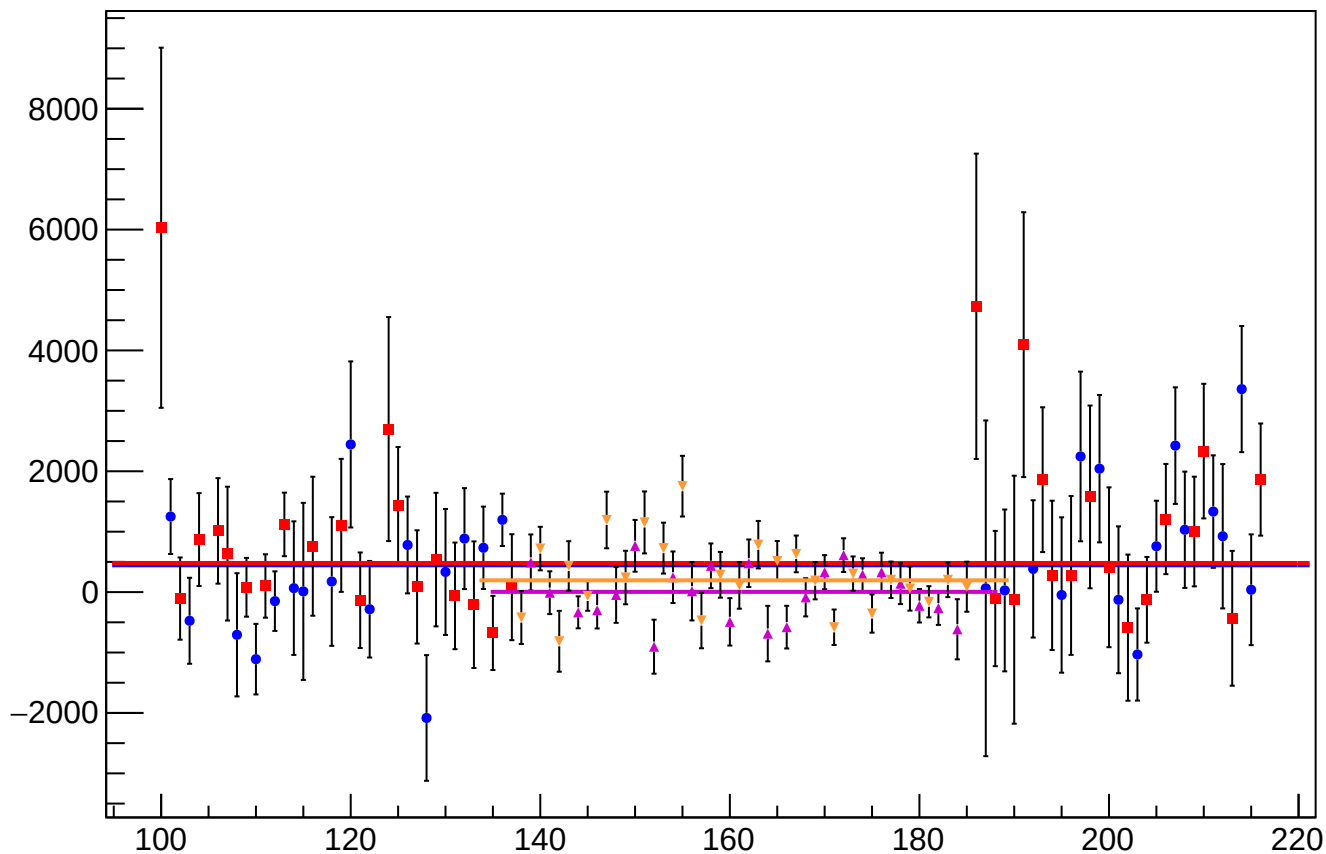
Left In: 39.491 $\pm$ 0.007  $\chi^2$ /NDF: 251801.8/22

+ sign 44.686 $\pm$ 0.005  $\chi^2$ /NDF: 6623804.4/55

All: 44.846 $\pm$ 0.004  $\chi^2$ /NDF: 14457016.7/113

- sign 45.015 $\pm$ 0.005  $\chi^2$ /NDF: 7831359.7/57

asym\_sam\_15\_37\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $444.160 \pm 153.076$   $\chi^2/\text{NDF}$ : 47.4/30

Left Out:  $195.028 \pm 70.093$   $\chi^2/\text{NDF}$ : 48.6/24

Right Out:  $482.213 \pm 153.544$   $\chi^2/\text{NDF}$ : 31.6/34

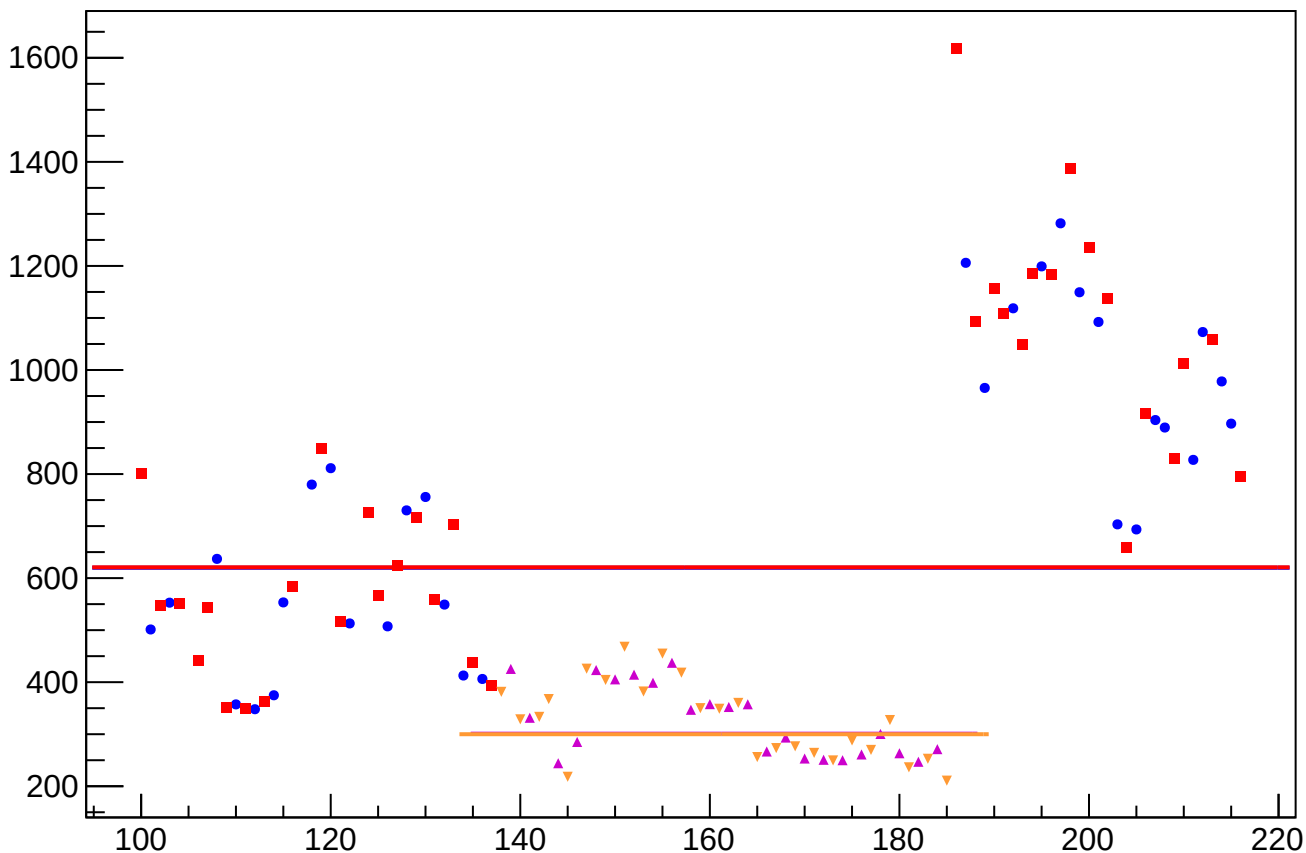
Left In:  $4.014 \pm 71.981$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $238.210 \pm 63.729$   $\chi^2/\text{NDF}$ : 98.2/55

All:  $165.851 \pm 45.566$   $\chi^2/\text{NDF}$ : 172.8/113

- sign  $90.173 \pm 65.175$   $\chi^2/\text{NDF}$ : 72.0/57

asym\_sam\_15\_37\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 619.896 $\pm$ 0.108  $\chi^2$ /NDF: 5423131.9/30

Left Out: 299.976 $\pm$ 0.050  $\chi^2$ /NDF: 1808454.4/24

Right Out: 620.772 $\pm$ 0.109  $\chi^2$ /NDF: 6455124.8/34

Left In: 300.999 $\pm$ 0.051  $\chi^2$ /NDF: 1407206.0/22

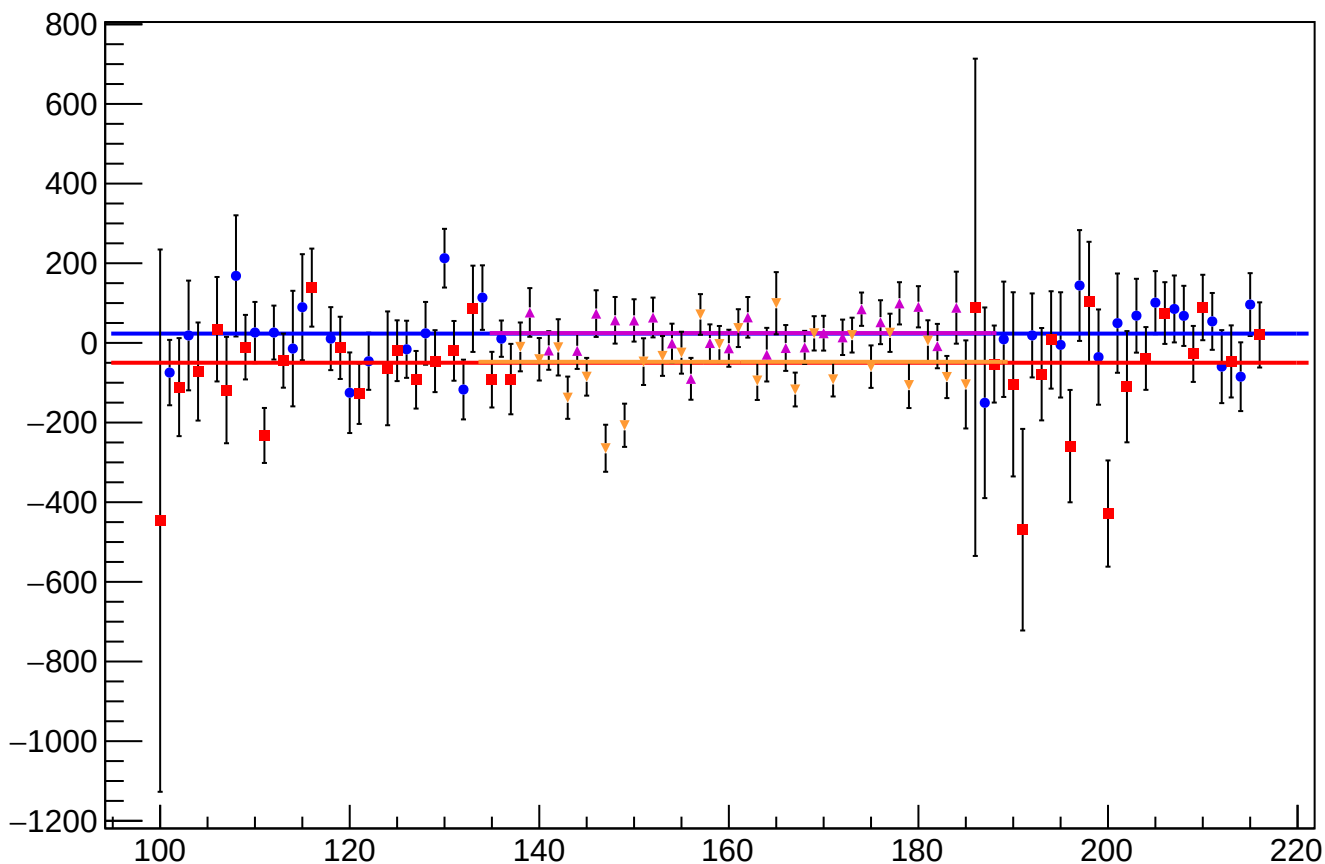
+ sign 355.427 $\pm$ 0.045  $\chi^2$ /NDF: 14453139.8/55

All: 356.985 $\pm$ 0.032  $\chi^2$ /NDF: 29429521.2/11

- sign 358.614 $\pm$ 0.046  $\chi^2$ /NDF: 14973936.7/57



# dit\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $23.352 \pm 15.542$   $\chi^2/\text{NDF}$ : 24.6/30

Left Out:  $-47.480 \pm 10.392$   $\chi^2/\text{NDF}$ : 54.7/24

Right Out:  $-49.838 \pm 16.057$   $\chi^2/\text{NDF}$ : 37.2/34

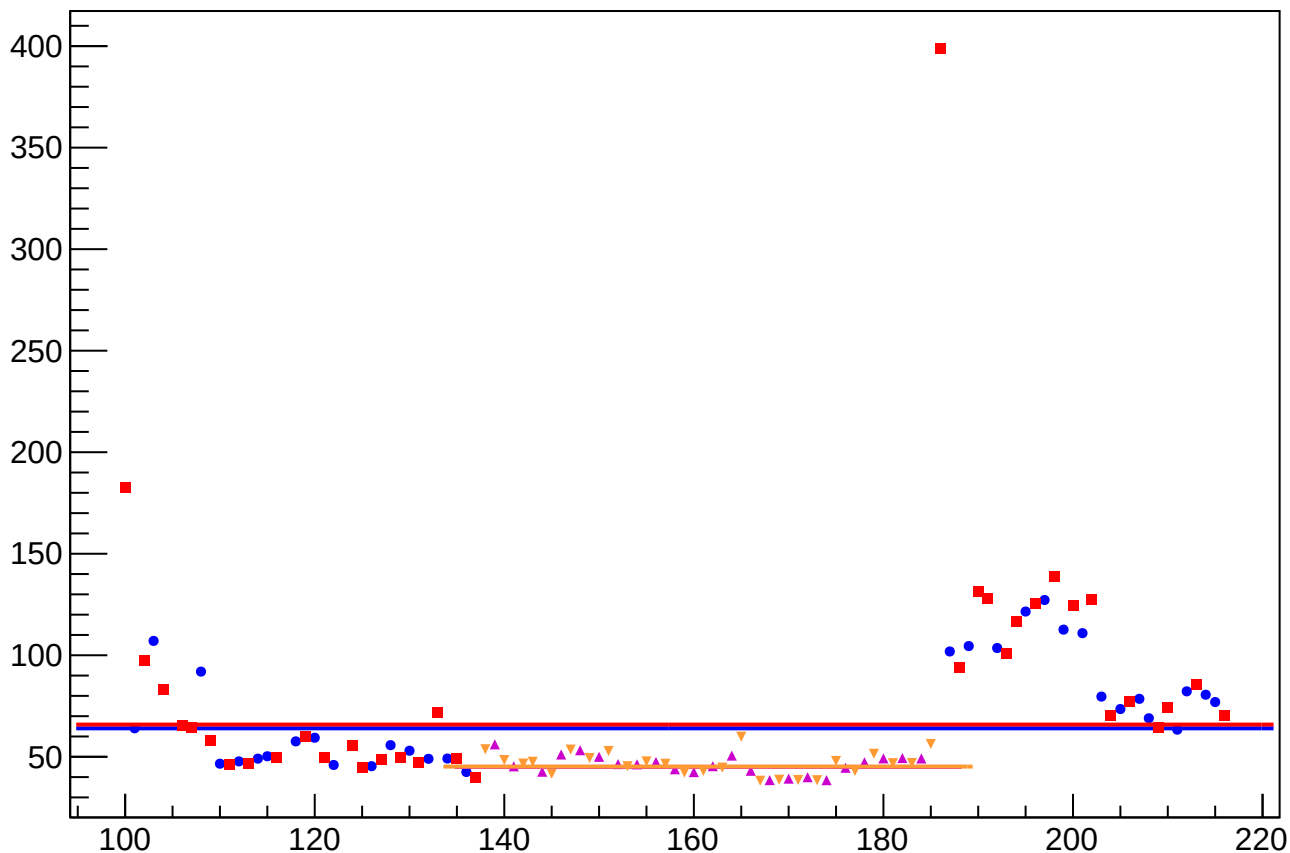
Left In:  $24.687 \pm 10.660$   $\chi^2/\text{NDF}$ : 19.7/22

+ sign  $-25.596 \pm 8.639$   $\chi^2/\text{NDF}$ : 93.7/55

All:  $-12.233 \pm 6.192$   $\chi^2/\text{NDF}$ : 170.5/113

- sign  $1.889 \pm 8.881$   $\chi^2/\text{NDF}$ : 71.9/57

# dit\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In:  $64.011 \pm 0.011$   $\chi^2/\text{NDF}: 3715149.3/30$

Left Out:  $45.175 \pm 0.007$   $\chi^2/\text{NDF}: 489860.2/24$

Right Out:  $65.862 \pm 0.011$   $\chi^2/\text{NDF}: 4833690.4/34$

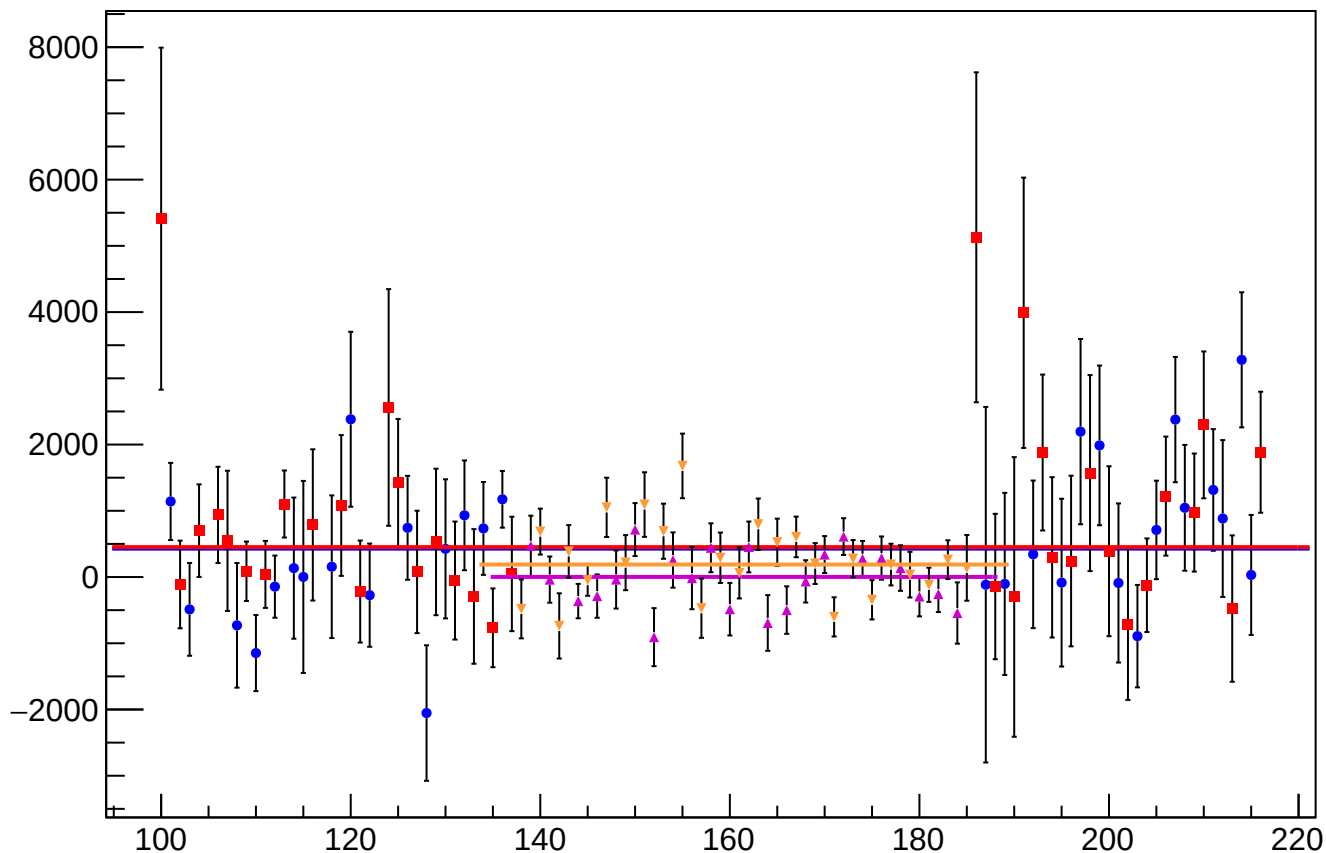
Left In:  $45.017 \pm 0.008$   $\chi^2/\text{NDF}: 372690.8/22$

+ sign  $50.994 \pm 0.006$   $\chi^2/\text{NDF}: 6235003.8/55$

All:  $51.189 \pm 0.004$   $\chi^2/\text{NDF}: 13782850.1/113$

- sign  $51.394 \pm 0.006$   $\chi^2/\text{NDF}: 7545767.0/57$

asym\_sam\_15\_37\_dd\_dit\_correction\_mean vs Slug



Right In:  $429.002 \pm 150.175$   $\chi^2/\text{NDF}: 47.3/30$

Left Out:  $188.812 \pm 69.714$   $\chi^2/\text{NDF}: 46.8/24$

Right Out:  $451.571 \pm 147.778$   $\chi^2/\text{NDF}: 34.8/34$

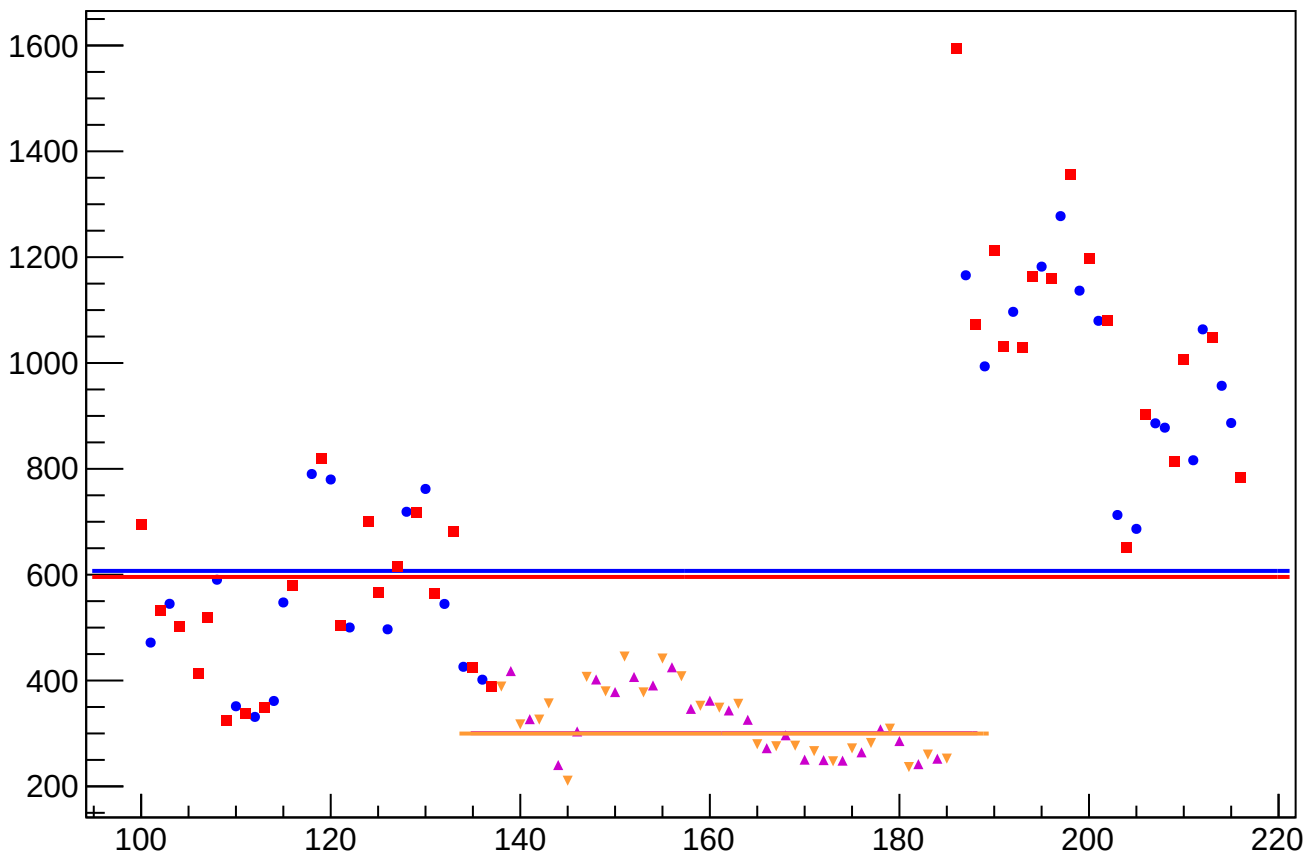
Left In:  $1.655 \pm 71.712$   $\chi^2/\text{NDF}: 32.2/22$

+ sign  $231.396 \pm 63.233$   $\chi^2/\text{NDF}: 96.1/55$

All:  $160.850 \pm 45.160$   $\chi^2/\text{NDF}: 173.2/113$

- sign  $87.410 \pm 64.517$   $\chi^2/\text{NDF}: 74.5/57$

asym\_sam\_15\_37\_dd\_dit\_correction\_rms vs Slug



Right In: 607.144+/-0.106  $\chi^2/\text{NDF}$ : 5585729.5/30

Left Out: 299.798+/-0.049  $\chi^2/\text{NDF}$ : 1577420.4/24

Right Out: 595.712+/-0.104  $\chi^2/\text{NDF}$ : 6811138.1/34

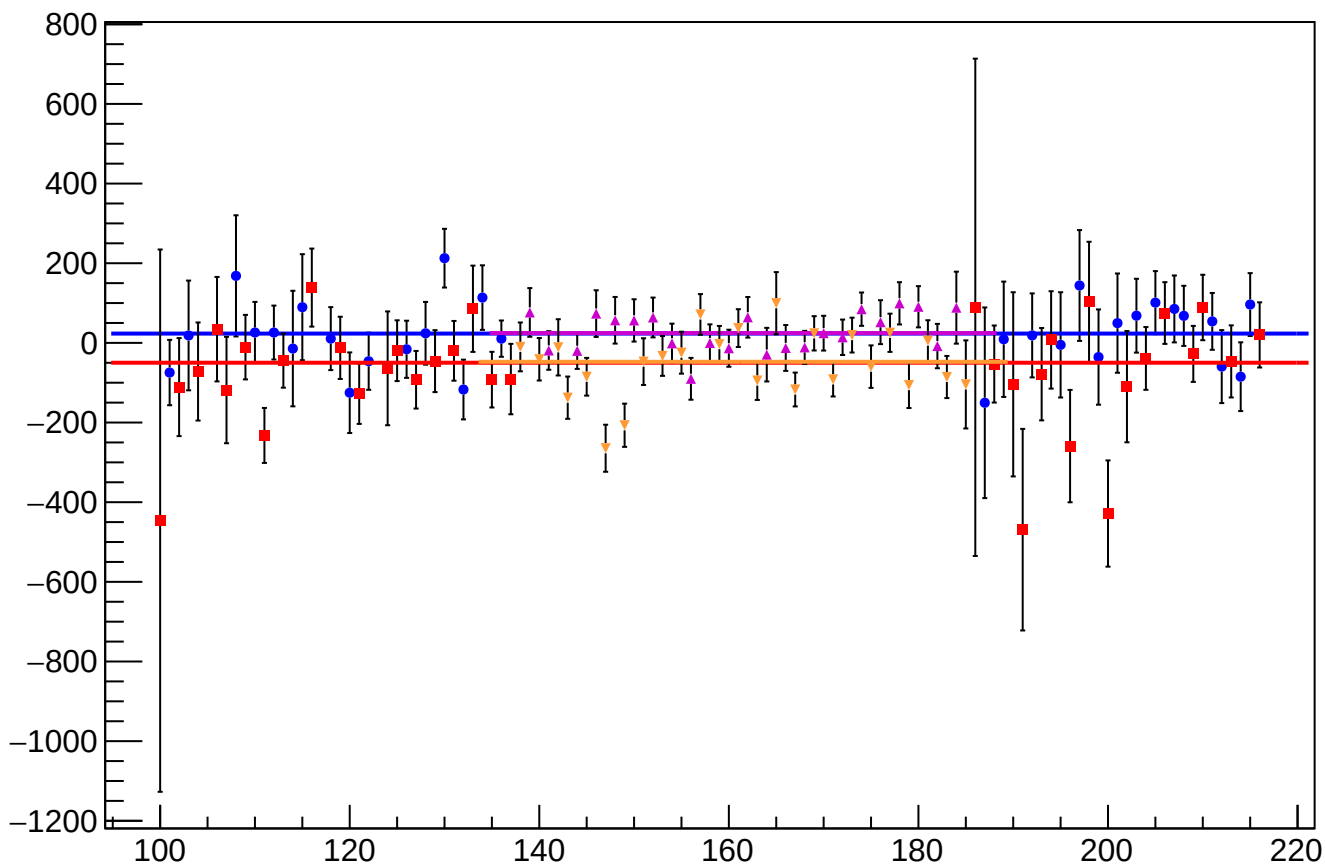
Left In: 300.544+/-0.051  $\chi^2/\text{NDF}$ : 1259270.5/22

+ sign 354.288+/-0.045  $\chi^2/\text{NDF}$ : 14055008.8/55

All: 355.521+/-0.032  $\chi^2/\text{NDF}$ : 28585139.0/139

- sign 356.804+/-0.046  $\chi^2/\text{NDF}$ : 14528578.9/57

# eigen\_dit\_asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $23.351 \pm 15.542$   $\chi^2/\text{NDF}: 24.6/30$

Left Out:  $-47.480 \pm 10.392$   $\chi^2/\text{NDF}: 54.7/24$

Right Out:  $-49.839 \pm 16.057$   $\chi^2/\text{NDF}: 37.2/34$

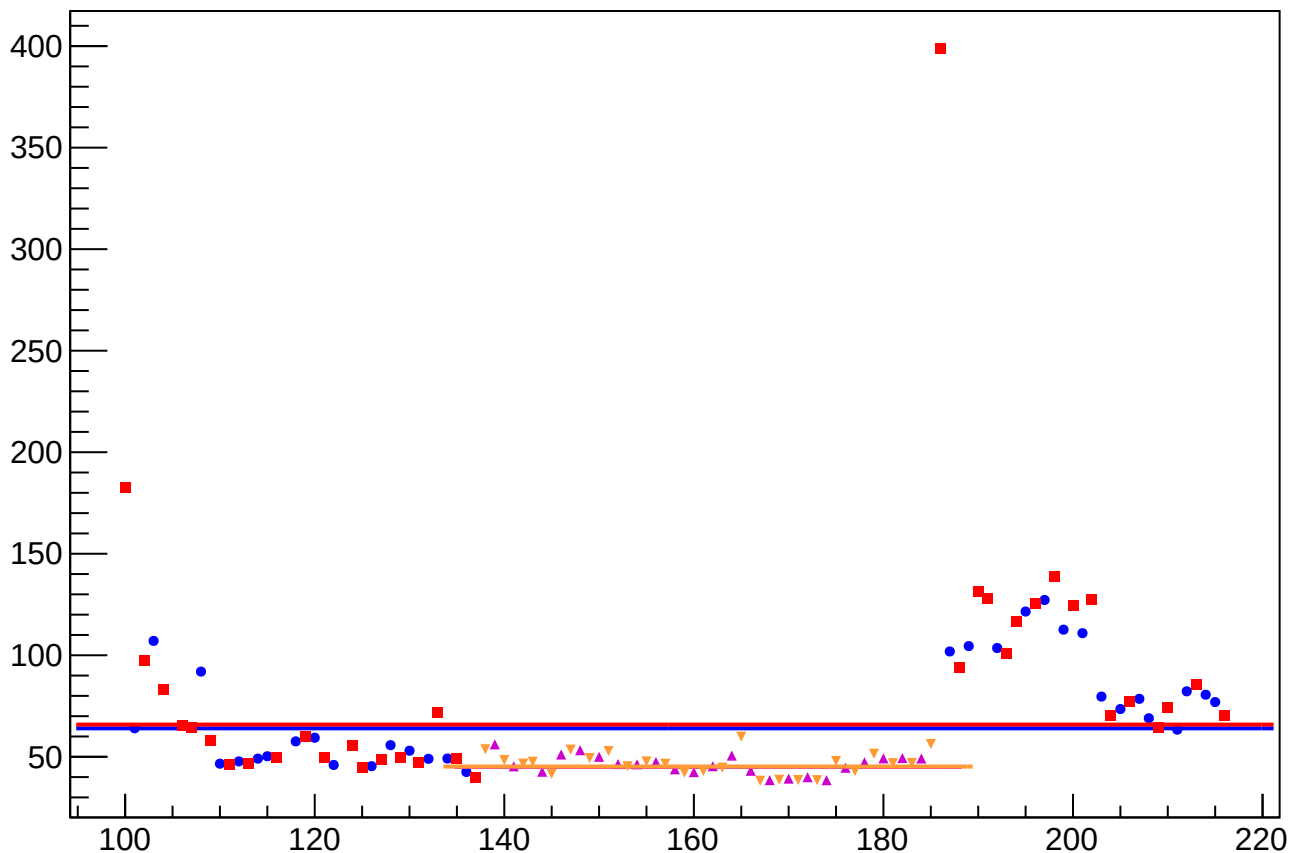
Left In:  $24.687 \pm 10.660$   $\chi^2/\text{NDF}: 19.7/22$

+ sign  $-25.597 \pm 8.639$   $\chi^2/\text{NDF}: 93.7/55$

All:  $-12.234 \pm 6.192$   $\chi^2/\text{NDF}: 170.5/113$

- sign  $1.889 \pm 8.881$   $\chi^2/\text{NDF}: 71.9/57$

# eigen\_dit\_asym\_sam\_15\_37\_dd\_rms vs Slug



Right In:  $64.011 \pm 0.011$   $\chi^2/\text{NDF}: 3715153.8/30$

Left Out:  $45.175 \pm 0.007$   $\chi^2/\text{NDF}: 489860.2/24$

Right Out:  $65.862 \pm 0.011$   $\chi^2/\text{NDF}: 4833694.0/34$

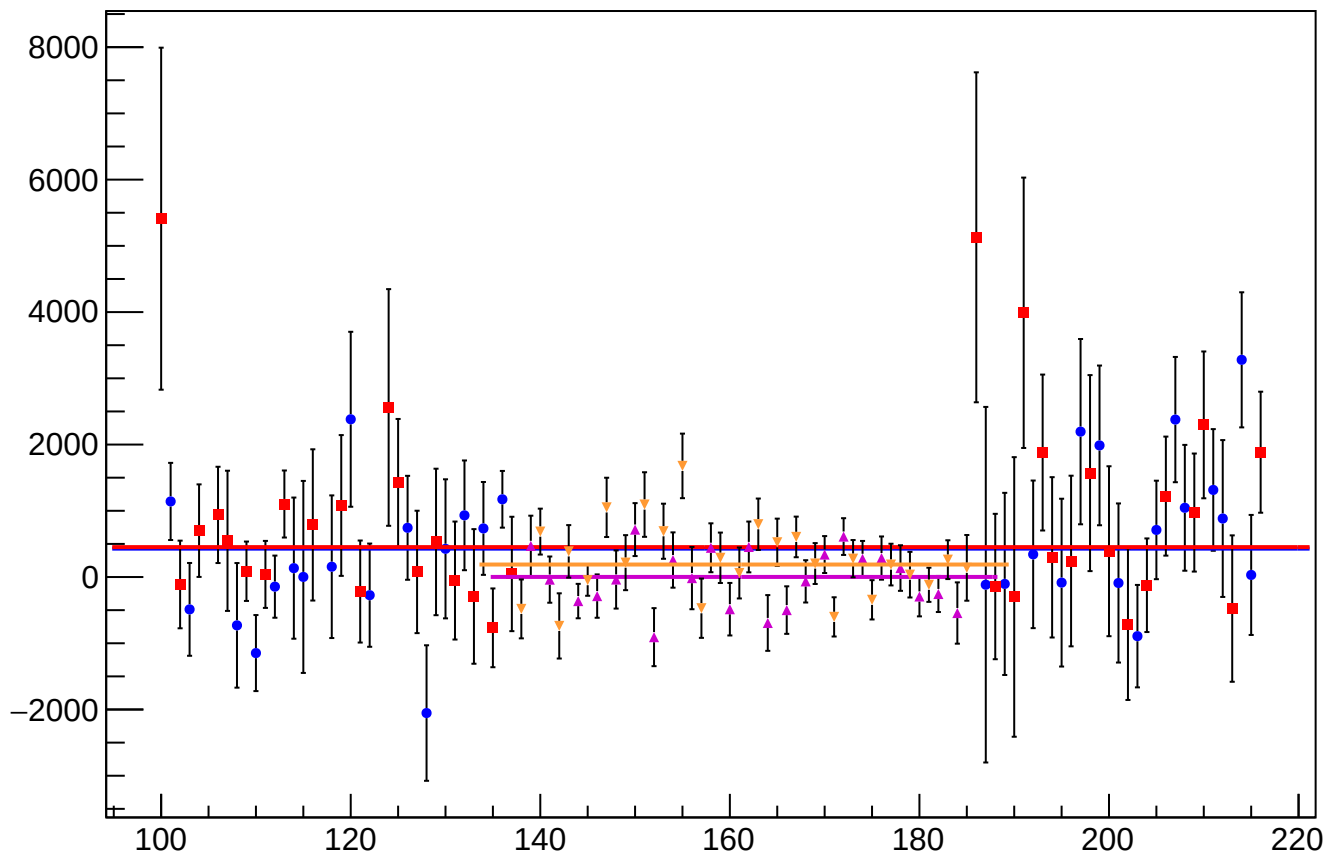
Left In:  $45.017 \pm 0.008$   $\chi^2/\text{NDF}: 372691.9/22$

+ sign  $50.994 \pm 0.006$   $\chi^2/\text{NDF}: 6235007.9/55$

All:  $51.189 \pm 0.004$   $\chi^2/\text{NDF}: 13782857.0/113$

- sign  $51.394 \pm 0.006$   $\chi^2/\text{NDF}: 7545769.3/57$

asym\_sam\_15\_37\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 429.000 $\pm$ 150.175  $\chi^2$ /NDF: 47.3/30

Left Out: 188.813 $\pm$ 69.714  $\chi^2$ /NDF:46.8/24

Right Out: 451.570 $\pm$ 147.778  $\chi^2$ /NDF: 34.8/34

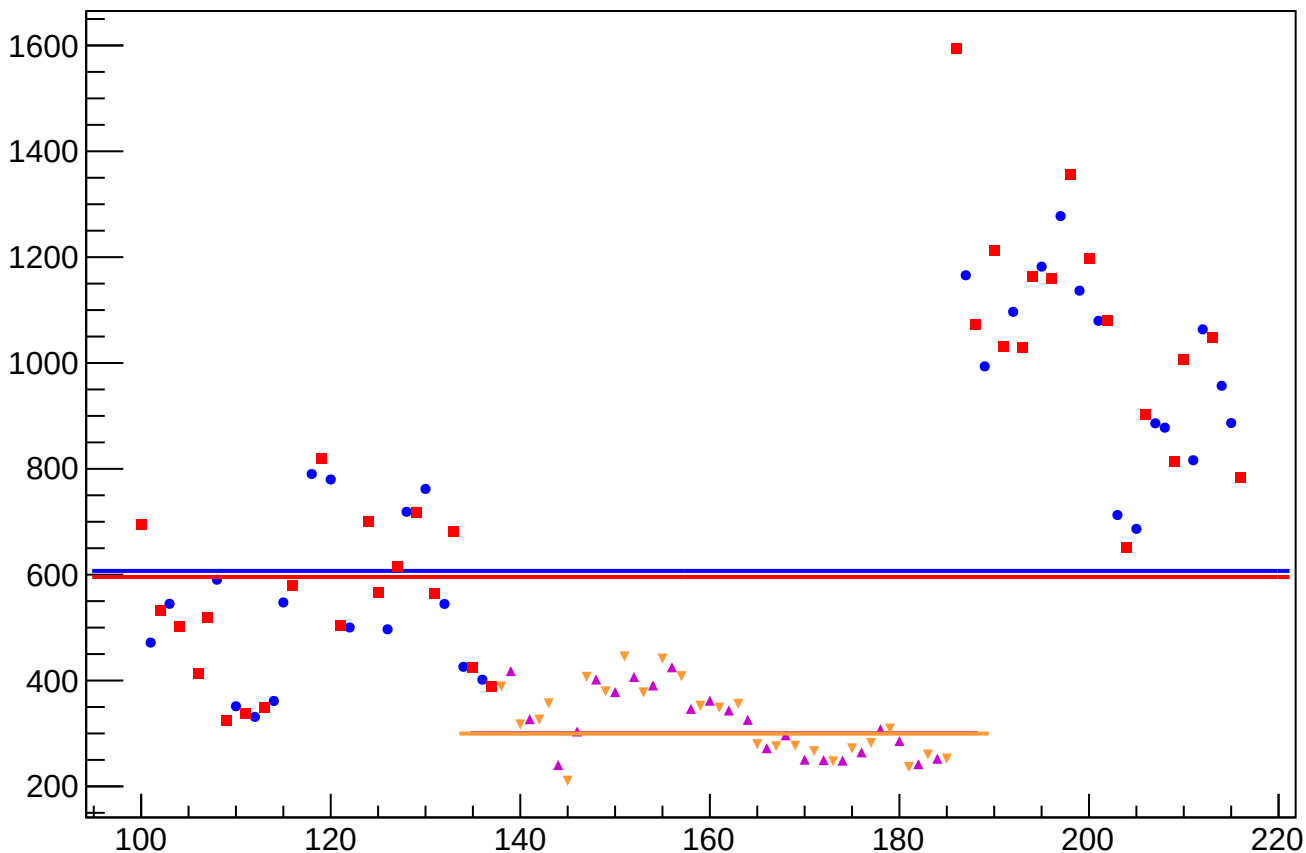
Left In: 1.654 $\pm$ 71.712  $\chi^2$ /NDF:32.2/22

+ sign 231.396 $\pm$ 63.233  $\chi^2$ /NDF: 96.1/55

All: 160.850 $\pm$ 45.160  $\chi^2$ /NDF: 173.2/113

- sign 87.410 $\pm$ 64.517  $\chi^2$ /NDF: 74.5/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 607.143+/-0.106  $\chi^2/\text{NDF}$ : 5585749.4/30

Left Out: 299.798+/-0.049  $\chi^2/\text{NDF}$ : 1577421.4/24

Right Out: 595.711+/-0.104  $\chi^2/\text{NDF}$ : 6811152.3/34

Left In: 300.544+/-0.051  $\chi^2/\text{NDF}$ : 1259265.2/22

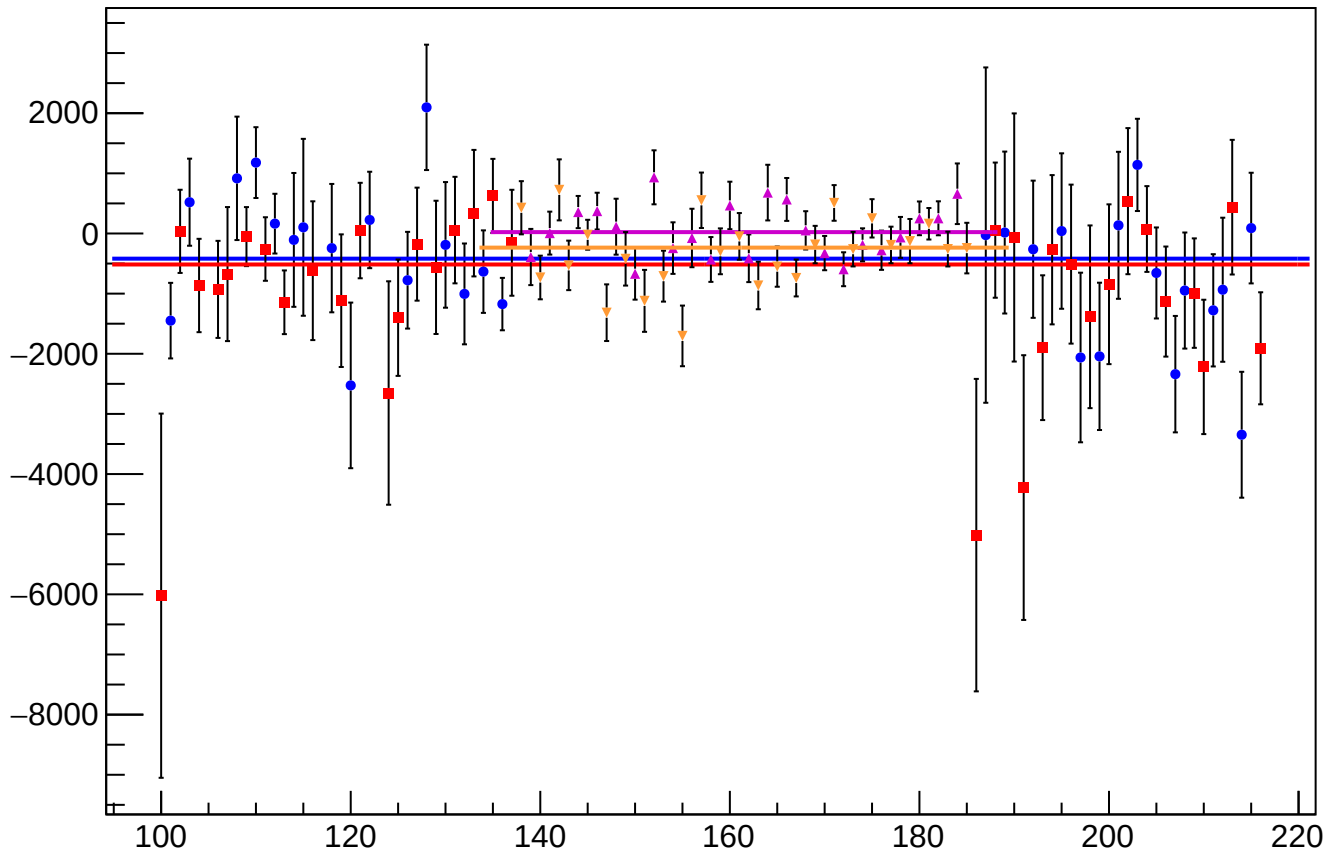
+ sign 354.288+/-0.045  $\chi^2/\text{NDF}$ : 14054994.1/55

All: 355.521+/-0.032  $\chi^2/\text{NDF}$ : 28585088.3/11

- sign 356.804+/-0.046  $\chi^2/\text{NDF}$ : 14528542.7/57



# asym\_sam\_15\_37\_dd\_mean vs Slug



Right In:  $-418.588 \pm 153.980$   $\chi^2/\text{NDF}$ : 48.9/30

Left Out:  $-235.168 \pm 70.741$   $\chi^2/\text{NDF}$ : 47.5/24

Right Out:  $-515.455 \pm 154.007$   $\chi^2/\text{NDF}$ : 30.1/34

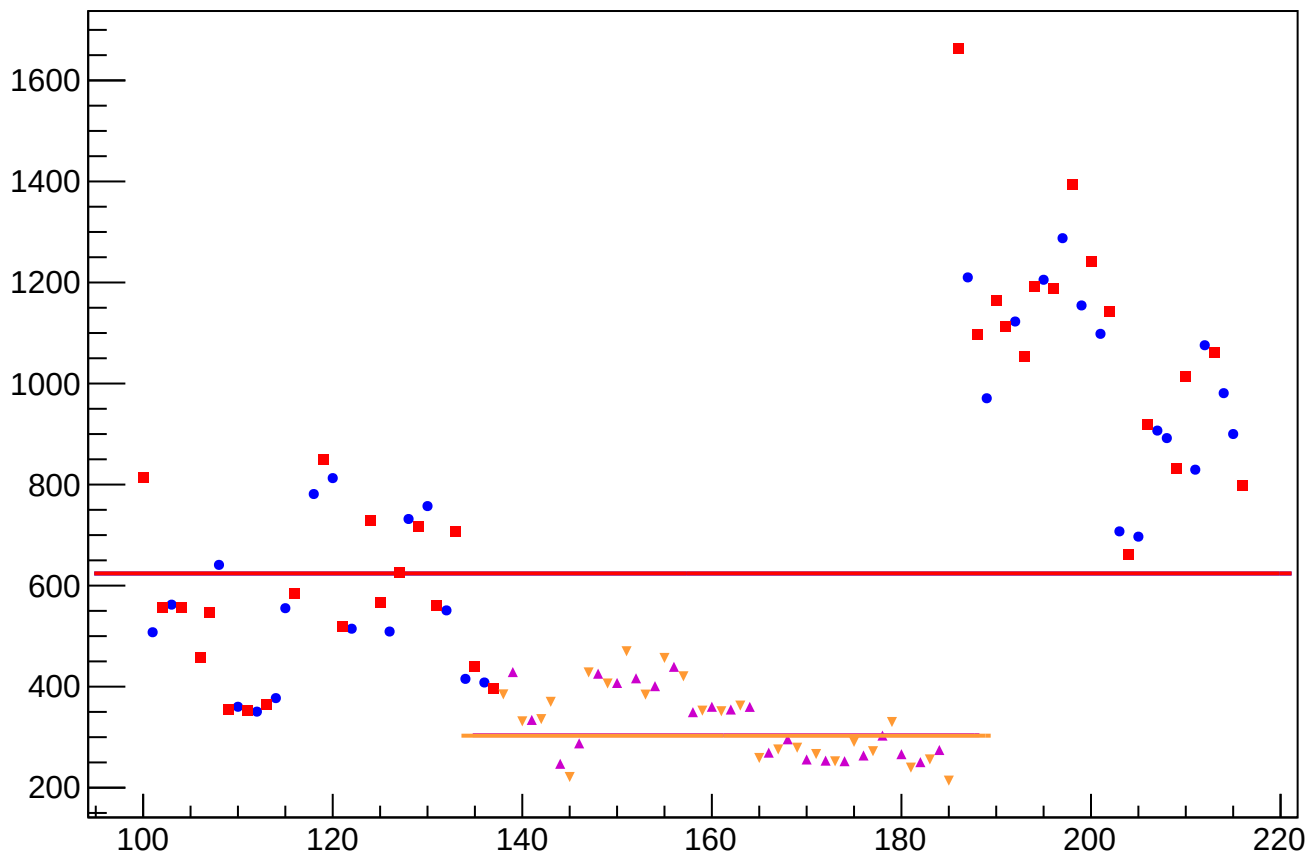
Left In:  $22.662 \pm 72.642$   $\chi^2/\text{NDF}$ : 29.9/22

+ sign  $-267.135 \pm 64.282$   $\chi^2/\text{NDF}$ : 97.5/55

All:  $-173.296 \pm 45.947$   $\chi^2/\text{NDF}$ : 171.8/113

- sign  $-75.271 \pm 65.700$   $\chi^2/\text{NDF}$ : 69.9/57

# asym\_sam\_15\_37\_dd\_rms vs Slug



Right In: 623.895+/-0.109  $\chi^2/\text{NDF}$ : 5387687.3/30

Left Out: 302.944+/-0.050  $\chi^2/\text{NDF}$ : 1766061.8/24

Right Out: 624.170+/-0.109  $\chi^2/\text{NDF}$ : 6427429.8/34

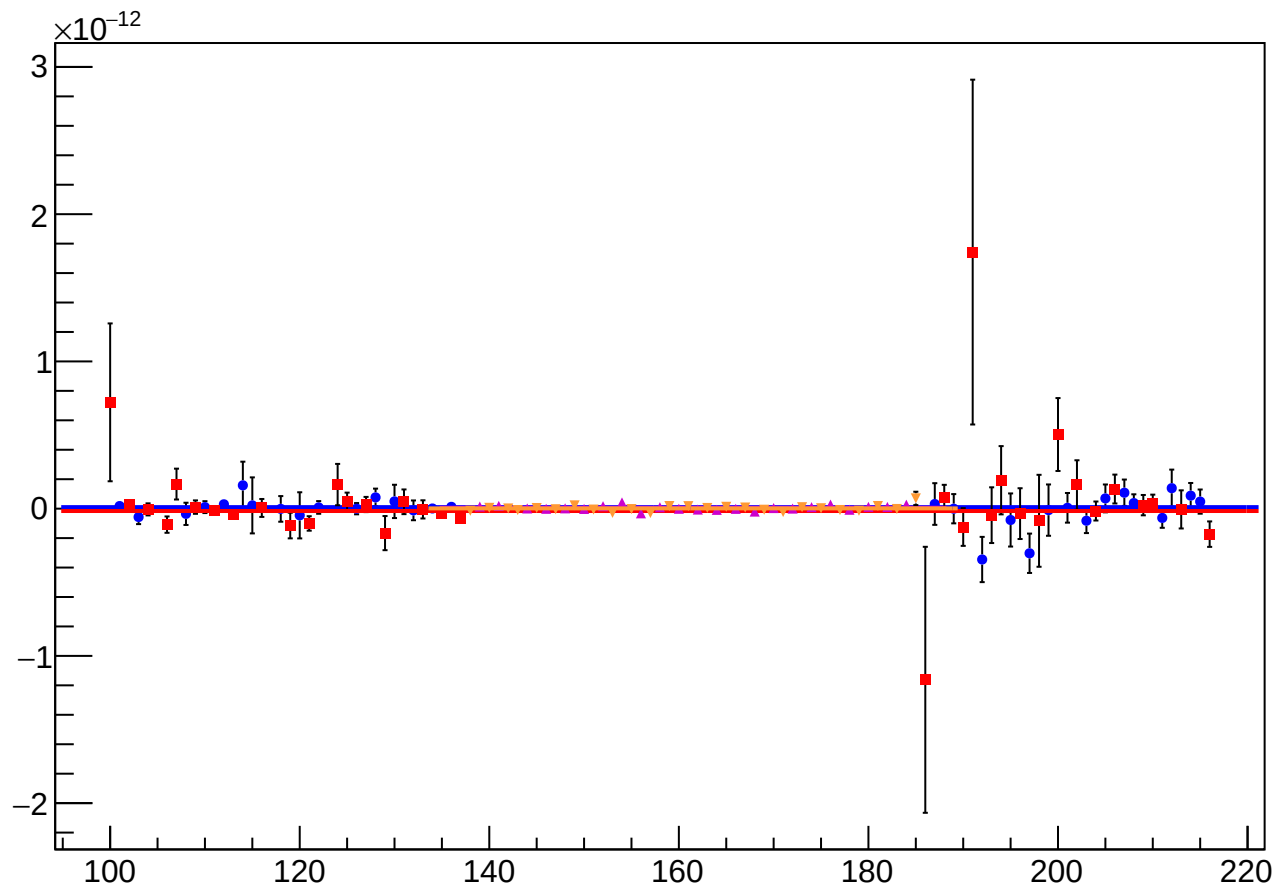
Left In: 303.923+/-0.051  $\chi^2/\text{NDF}$ : 1376278.3/22

+ sign 358.879+/-0.045  $\chi^2/\text{NDF}$ : 14328611.7/55

All: 360.506+/-0.032  $\chi^2/\text{NDF}$ : 29209091.7/11

- sign 362.206+/-0.046  $\chi^2/\text{NDF}$ : 14877860.8/57

# asym\_sam\_15\_37\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.9/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.9/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 43.0/34

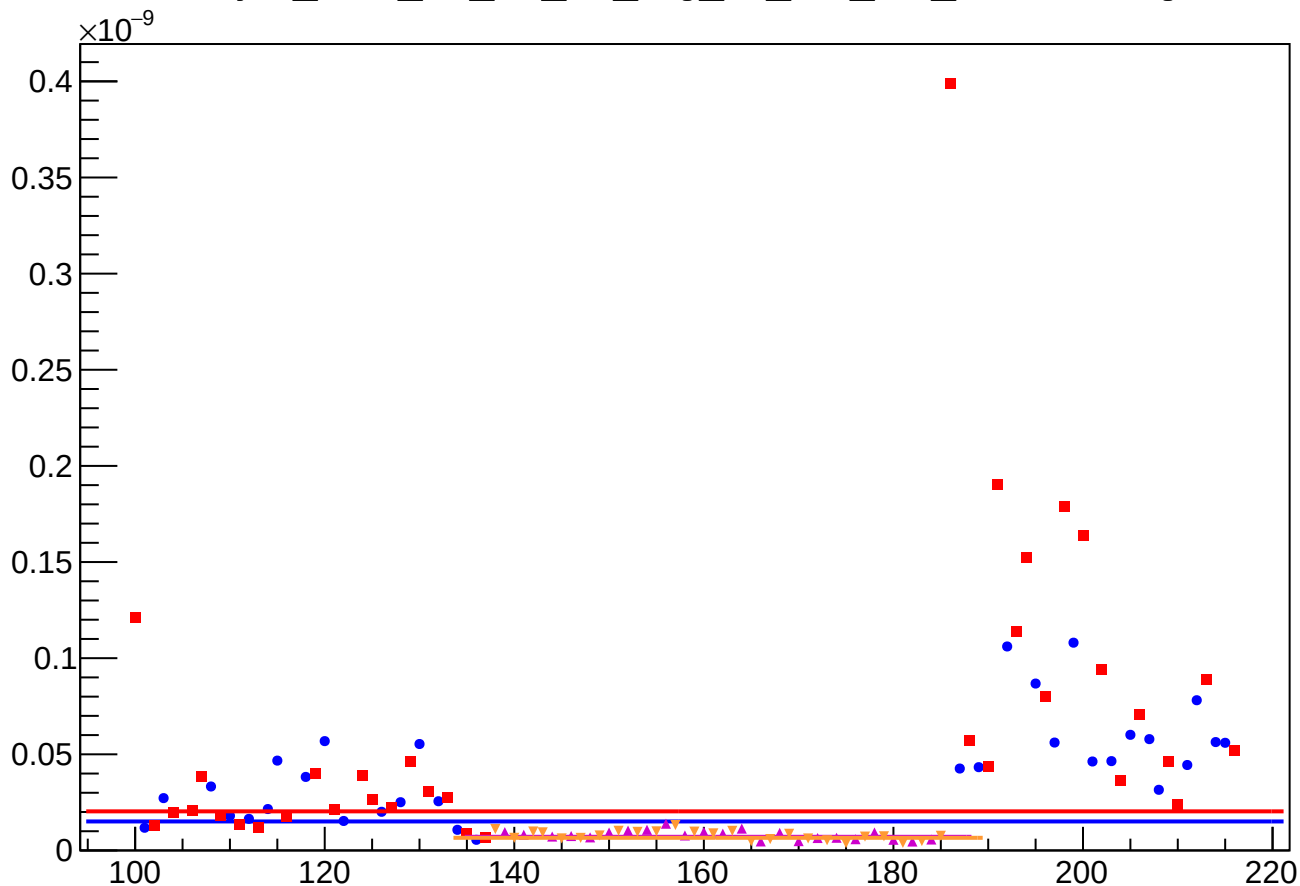
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.9/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 66.1/57

asym\_sam\_15\_37\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7955893.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1479029.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7176309.0/34

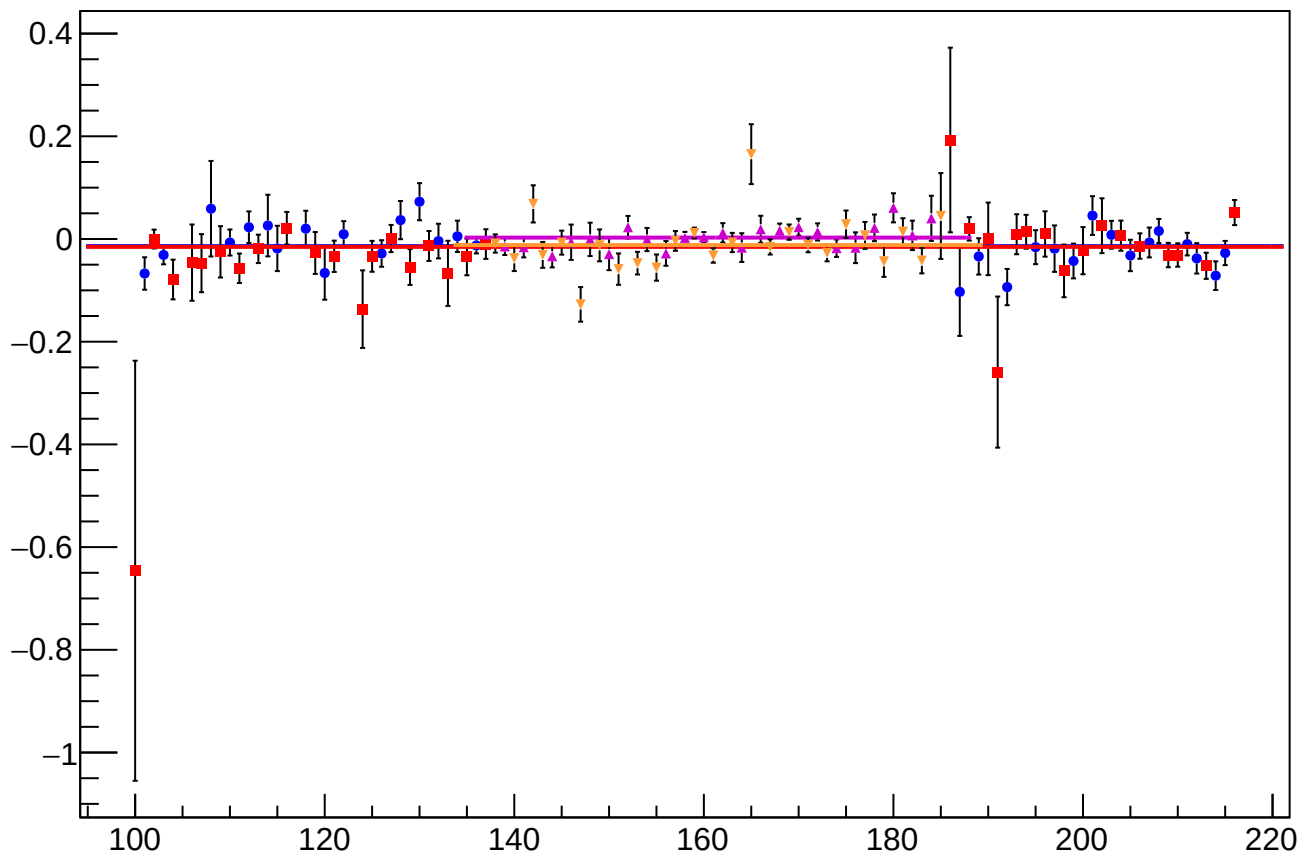
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 981529.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11670666.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 23410283.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11670801.3/57

asym\_sam\_15\_37\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.005$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.3/34

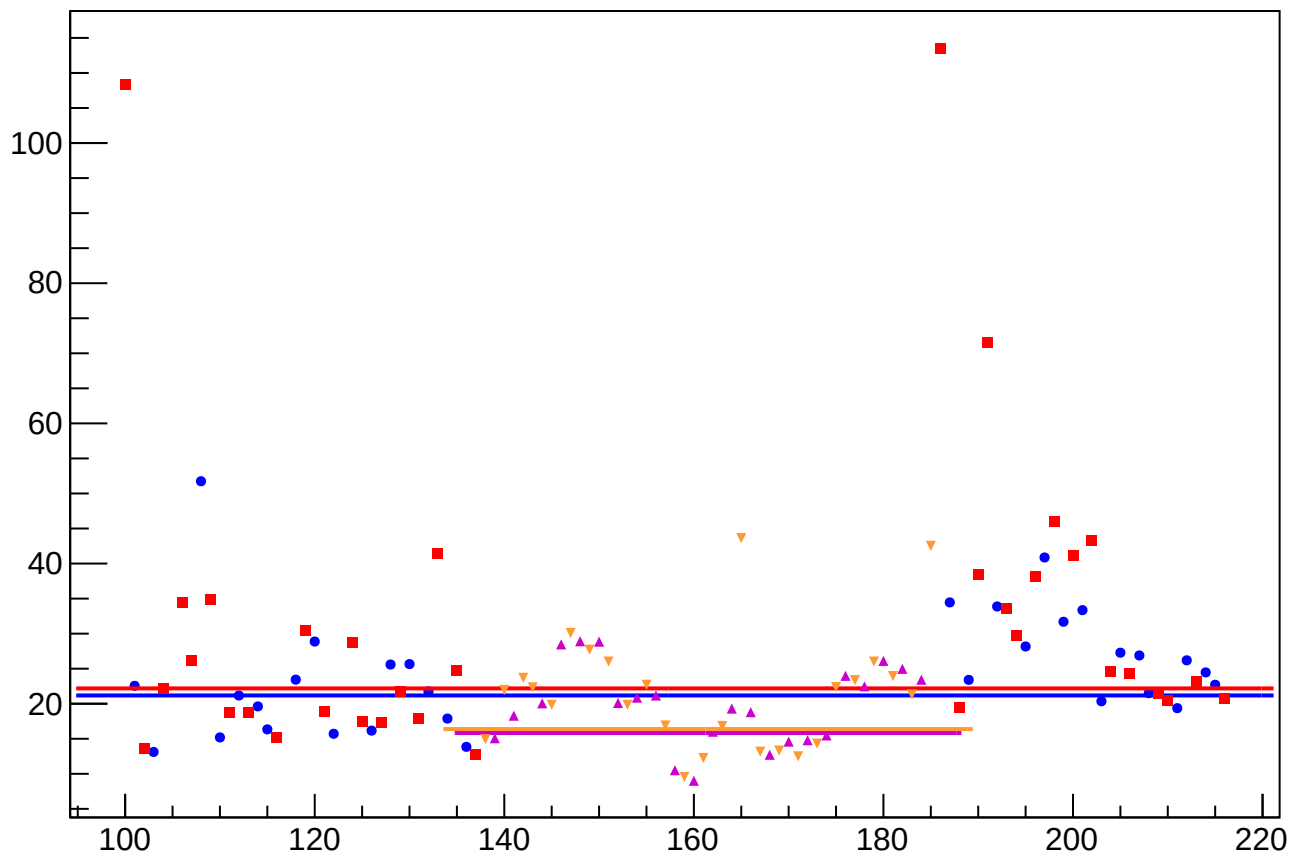
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.013 \pm 0.003$   $\chi^2/\text{NDF}$ : 88.7/55

All:  $-0.008 \pm 0.002$   $\chi^2/\text{NDF}$ : 155.4/113

- sign  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/57

asym\_sam\_15\_37\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 21.181 $\pm$ 0.004  $\chi^2$ /NDF: 2940430.7/30

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030028.3/24

Right Out: 22.187 $\pm$ 0.004  $\chi^2$ /NDF: 4122588.3/34

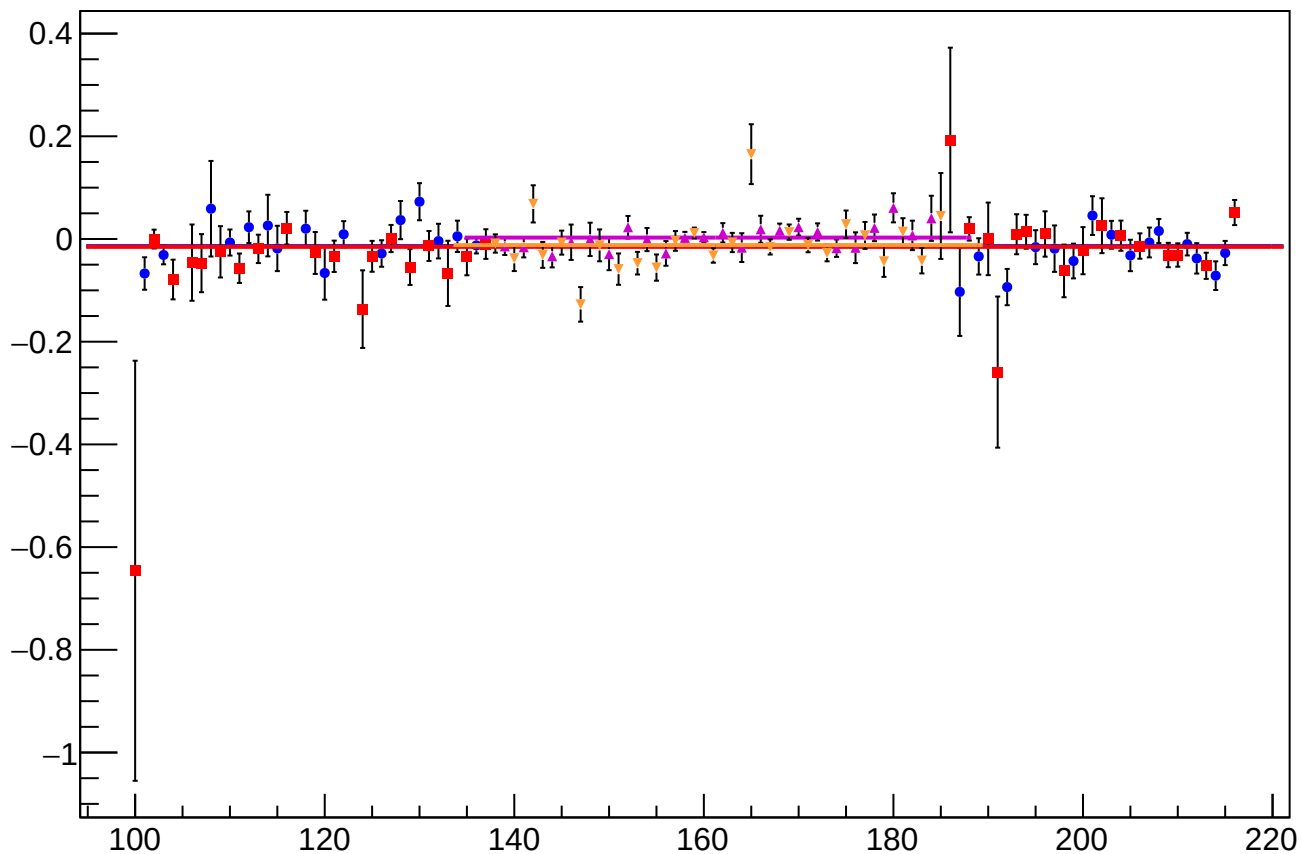
Left In: 15.824 $\pm$ 0.003  $\chi^2$ /NDF: 3654469.7/22

+ sign 18.167 $\pm$ 0.002  $\chi^2$ /NDF: 8002620.1/55

All: 18.086 $\pm$ 0.002  $\chi^2$ /NDF: 17480953.8/113

- sign 18.002 $\pm$ 0.002  $\chi^2$ /NDF: 9475748.3/57

asym\_sam\_15\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: -0.014 $\pm$ 0.005  $\chi^2$ /NDF: 35.1/30

Left Out: -0.012 $\pm$ 0.004  $\chi^2$ /NDF: 53.4/24

Right Out: -0.015 $\pm$ 0.006  $\chi^2$ /NDF: 36.3/34

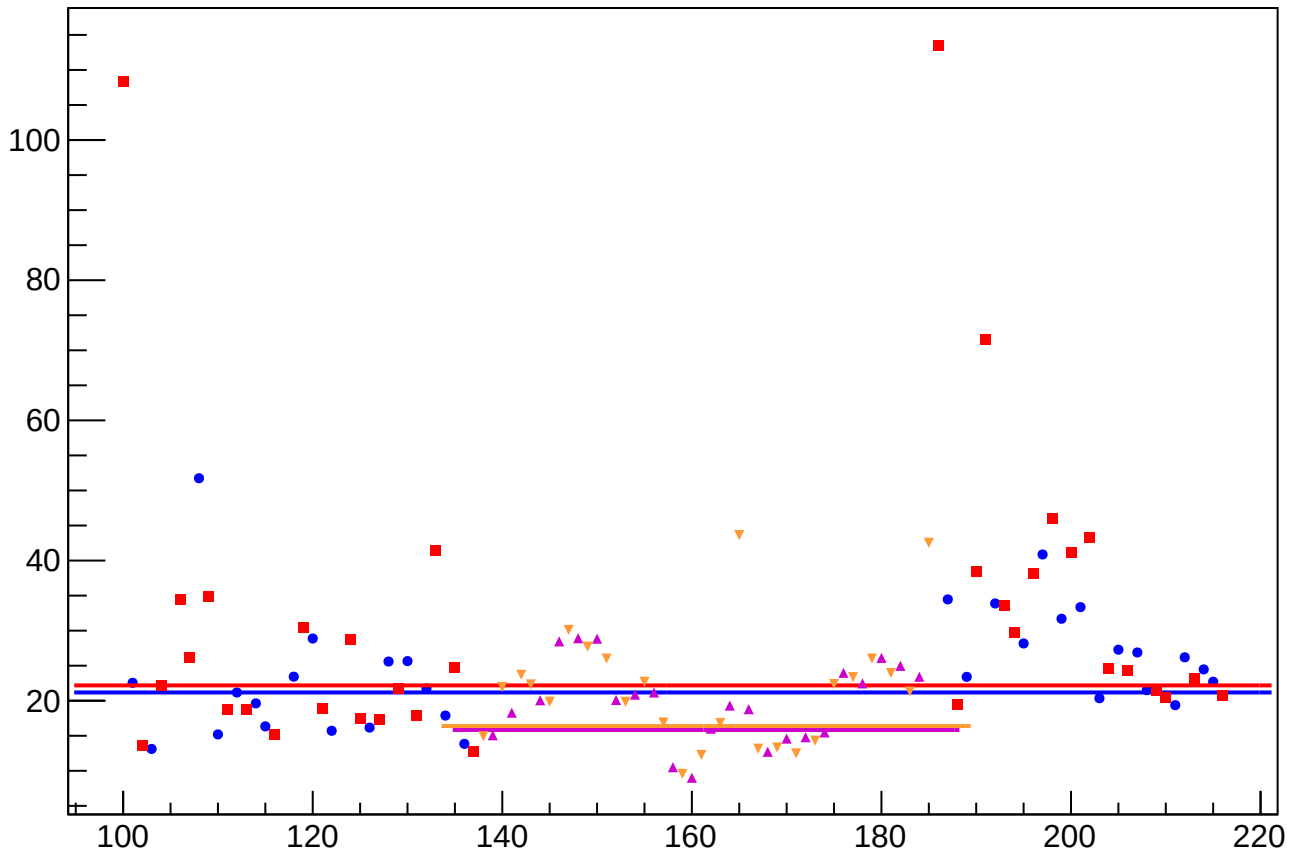
Left In: 0.003 $\pm$ 0.004  $\chi^2$ /NDF: 19.8/22

+ sign -0.013 $\pm$ 0.003  $\chi^2$ /NDF: 88.7/55

All: -0.008 $\pm$ 0.002  $\chi^2$ /NDF: 155.4/113

- sign -0.003 $\pm$ 0.003  $\chi^2$ /NDF: 62.8/57

asym\_sam\_15\_37\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 21.181 $\pm$ 0.004  $\chi^2$ /NDF: 2940430.7/30

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030028.3/24

Right Out: 22.187 $\pm$ 0.004  $\chi^2$ /NDF: 4122588.3/34

Left In: 15.824 $\pm$ 0.003  $\chi^2$ /NDF: 3654469.7/22

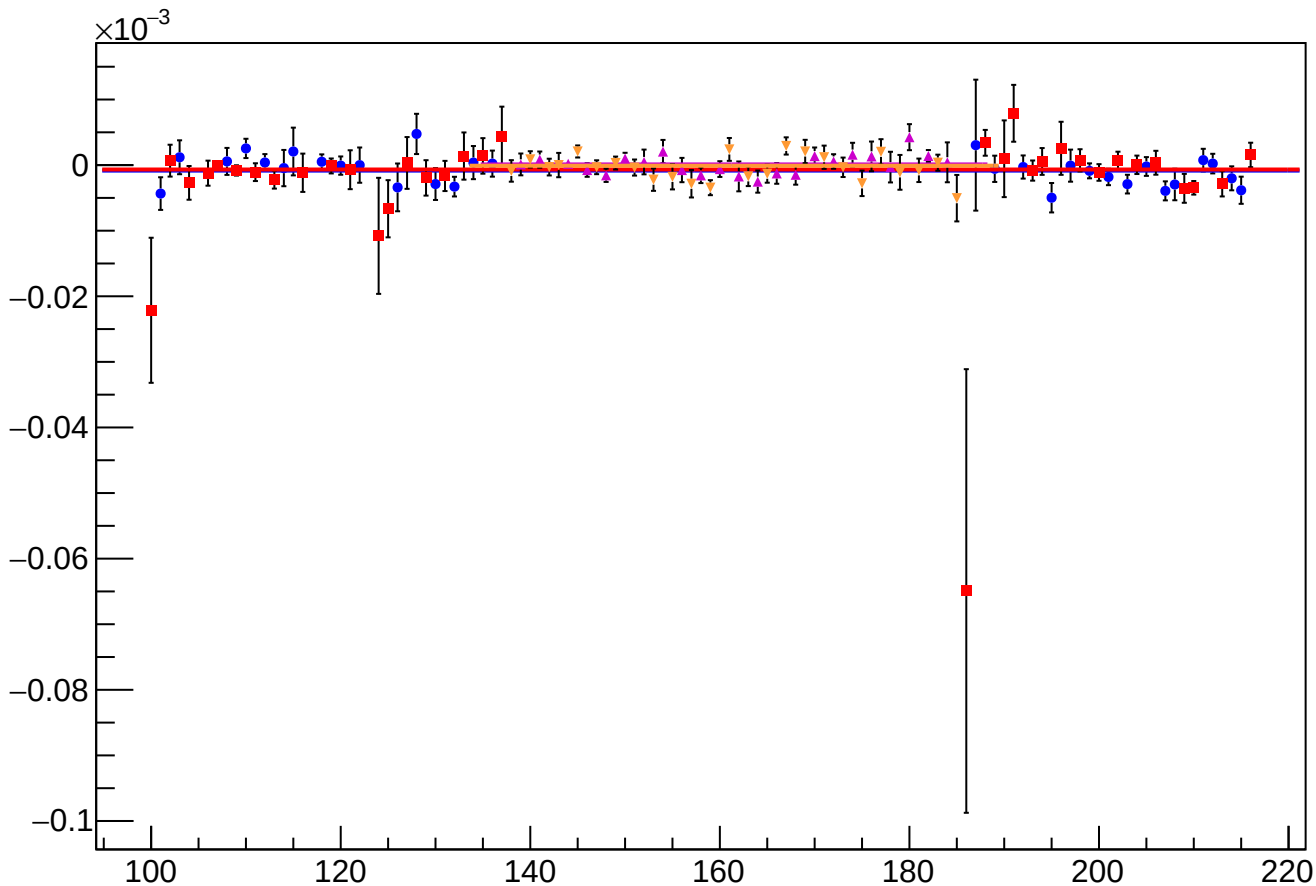
+ sign 18.167 $\pm$ 0.002  $\chi^2$ /NDF: 8002620.1/55

All: 18.086 $\pm$ 0.002  $\chi^2$ /NDF: 17480953.8/113

- sign 18.002 $\pm$ 0.002  $\chi^2$ /NDF: 9475748.3/57



asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.1/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 39.8/34

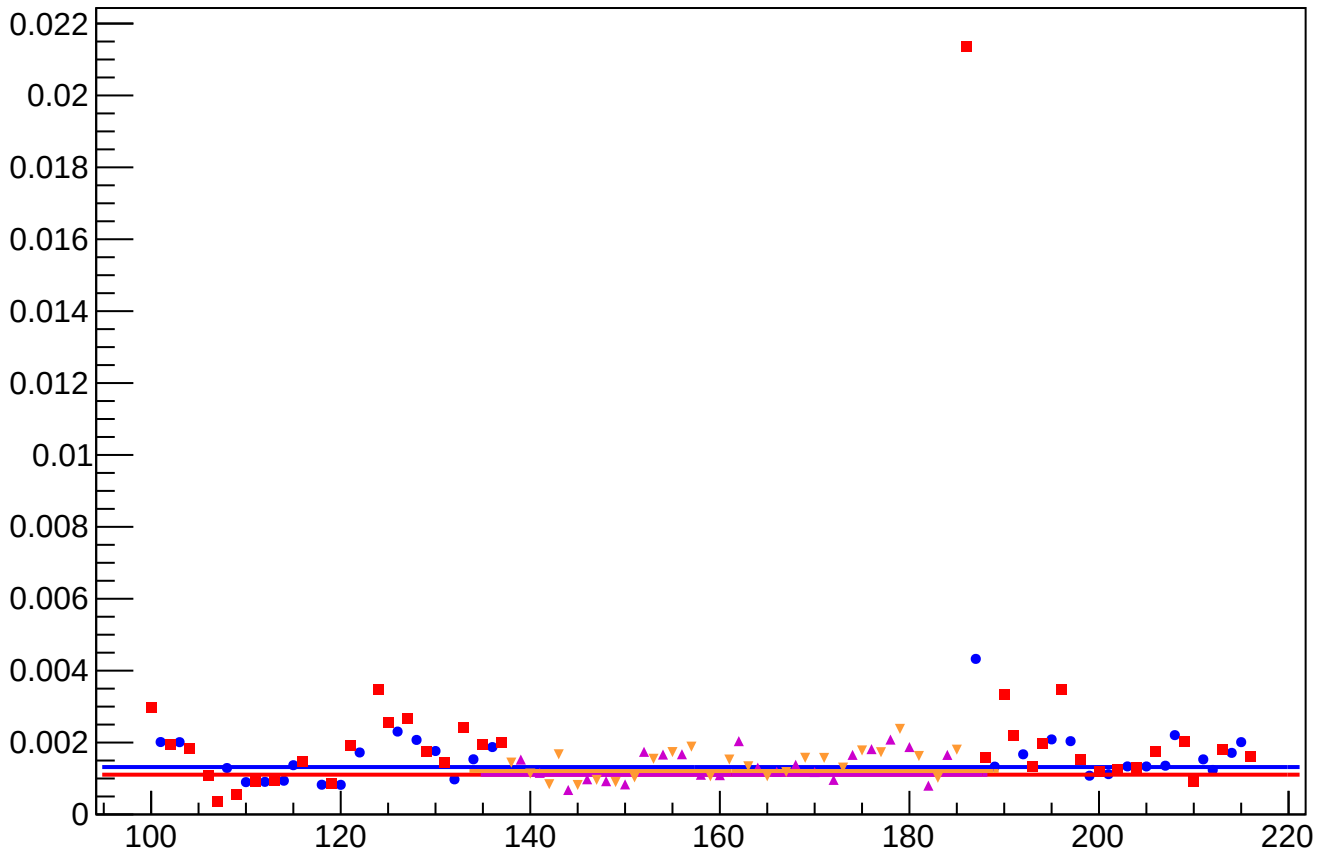
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 21.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 74.4/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 140.3/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 65.6/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3436007.7/30

Left Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2720984.6/24

Right Out: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8800067.9/34

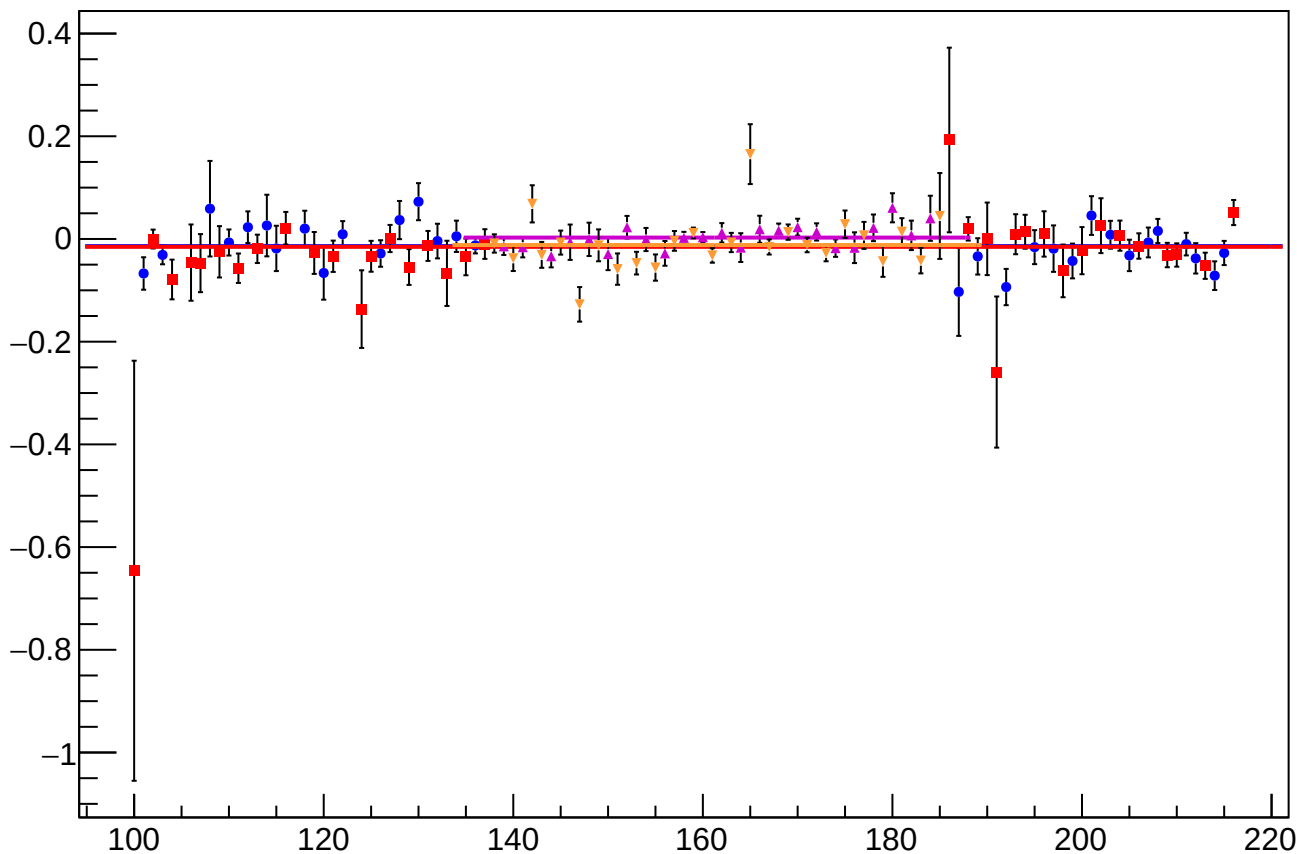
Left In: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3494983.4/22

+ sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 6288927.8/55

All: 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19127621.9/113

- sign 0.001 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 12295125.8/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.005$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.3/34

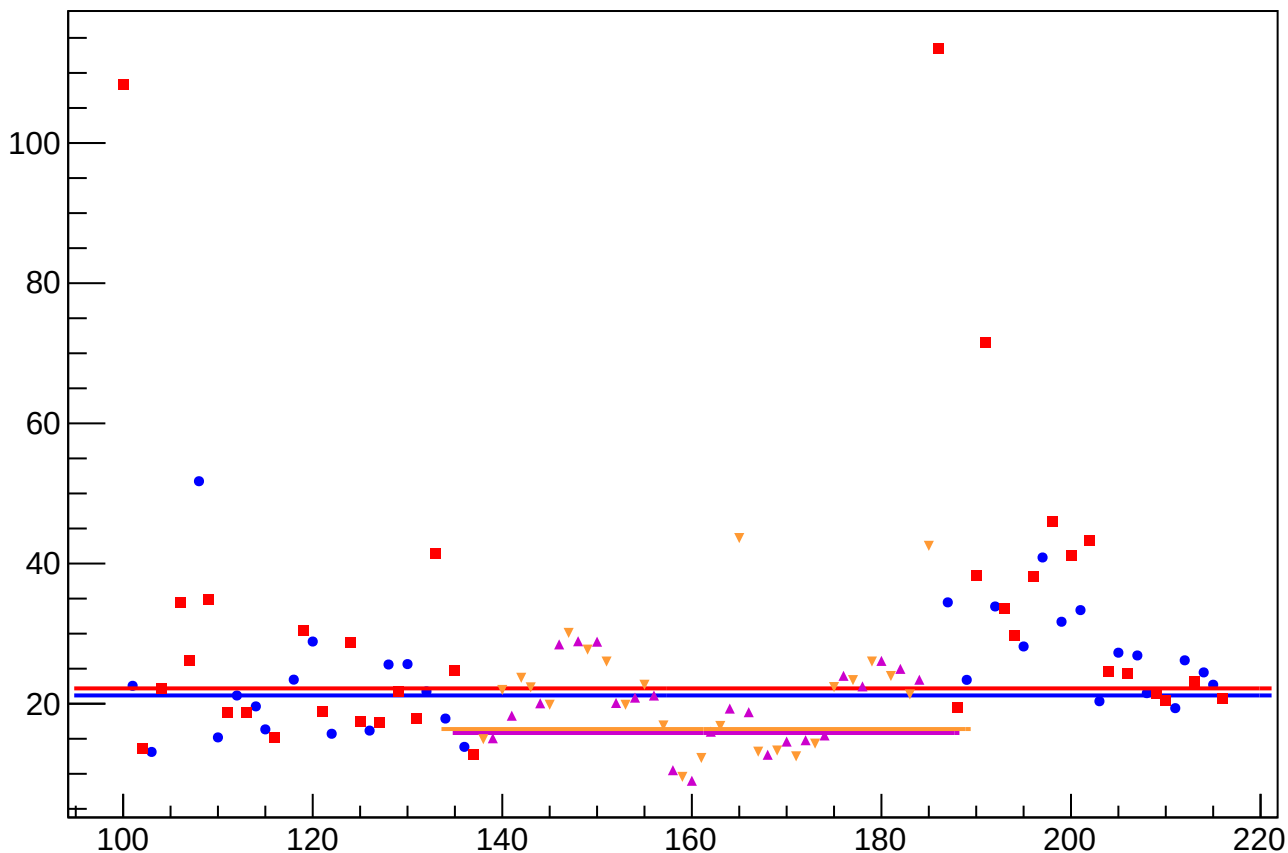
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.013 \pm 0.003$   $\chi^2/\text{NDF}$ : 88.7/55

All:  $-0.008 \pm 0.002$   $\chi^2/\text{NDF}$ : 155.4/113

- sign  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 21.181 $\pm$ 0.004  $\chi^2$ /NDF: 2940455.0/30

Left Out: 16.387 $\pm$ 0.003  $\chi^2$ /NDF: 4030277.2/24

Right Out: 22.188 $\pm$ 0.004  $\chi^2$ /NDF: 4122333.0/34

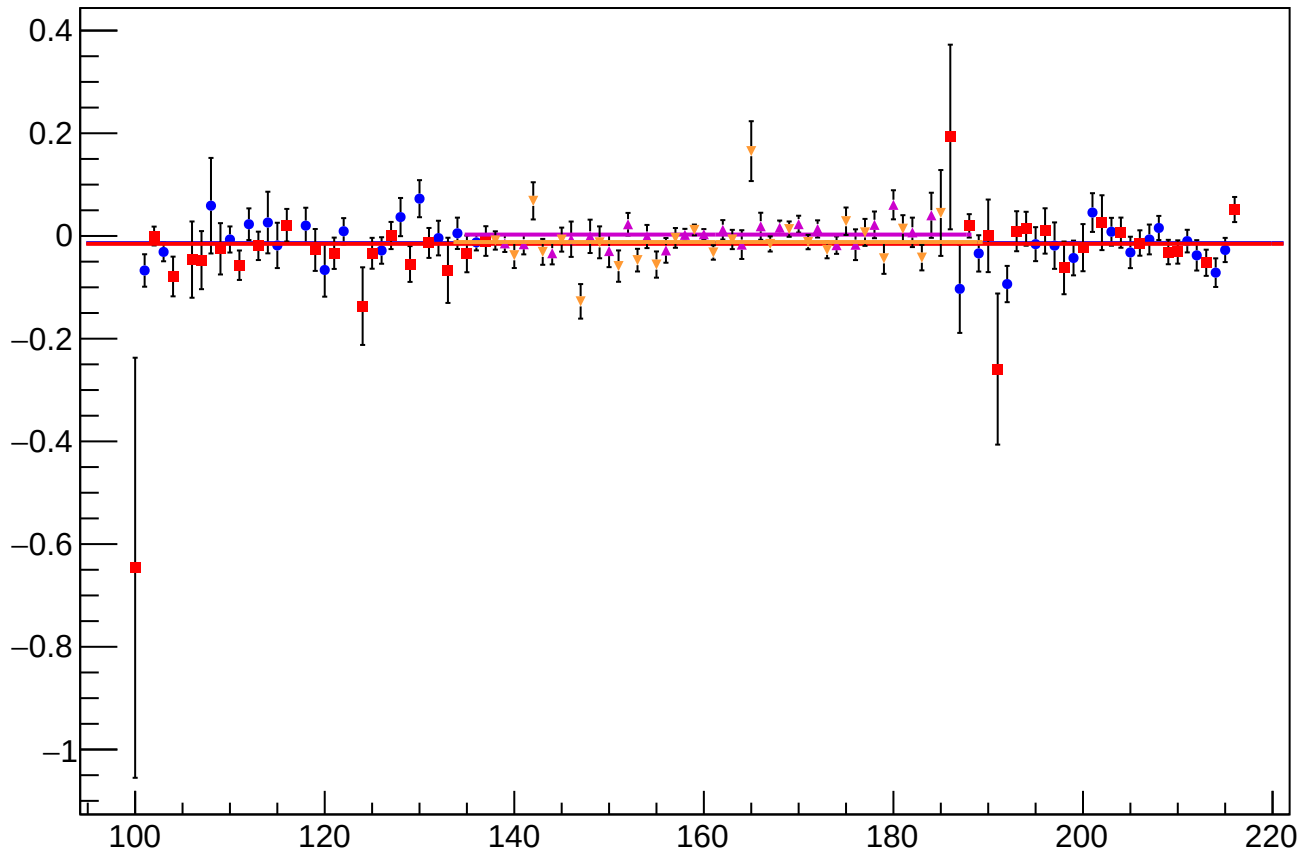
Left In: 15.823 $\pm$ 0.003  $\chi^2$ /NDF: 3654834.3/22

+ sign 18.167 $\pm$ 0.002  $\chi^2$ /NDF: 8002980.7/55

All: 18.086 $\pm$ 0.002  $\chi^2$ /NDF: 17481740.1/113

- sign 18.002 $\pm$ 0.002  $\chi^2$ /NDF: 9476175.4/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.014 \pm 0.005$   $\chi^2/\text{NDF}$ : 35.1/30

Left Out:  $-0.012 \pm 0.004$   $\chi^2/\text{NDF}$ : 53.4/24

Right Out:  $-0.015 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.3/34

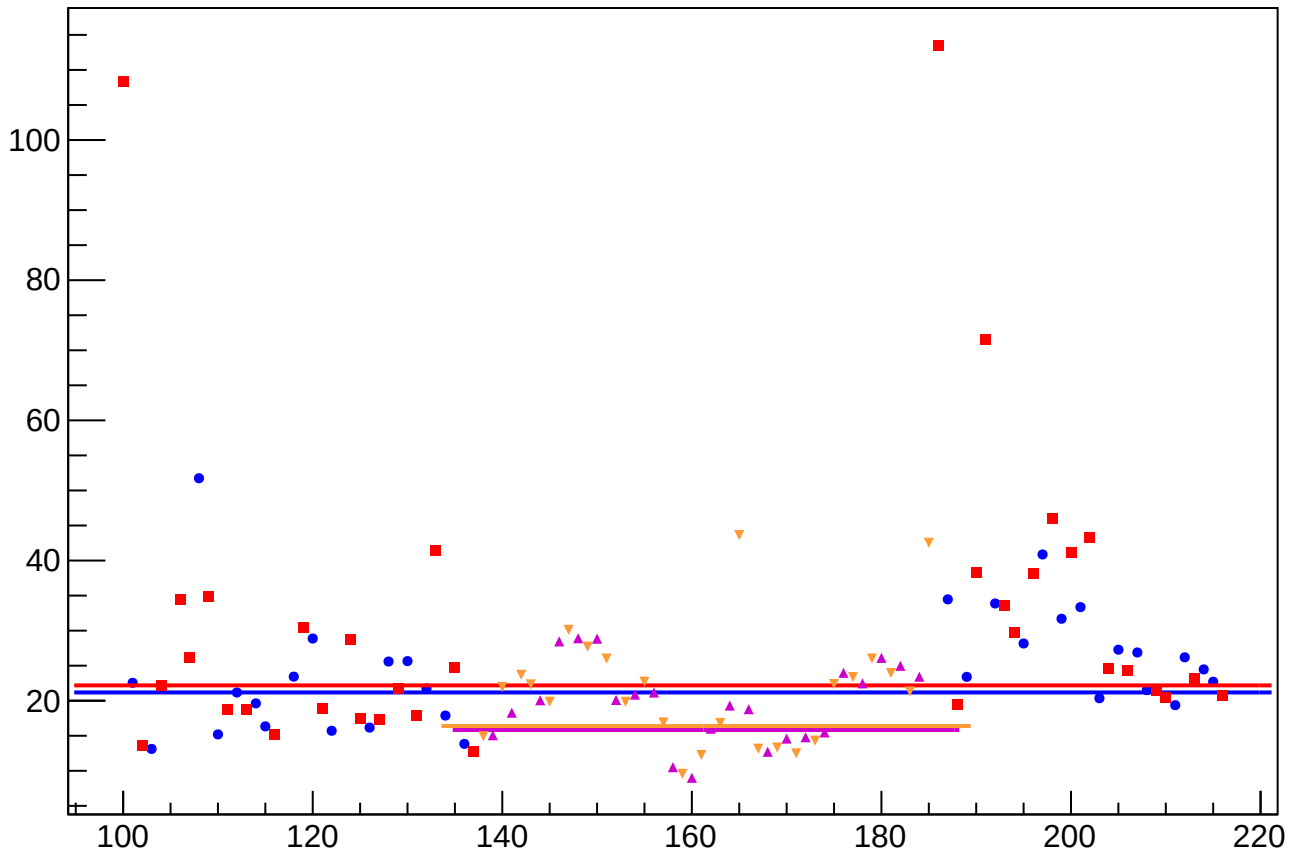
Left In:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 19.8/22

+ sign  $-0.013 \pm 0.003$   $\chi^2/\text{NDF}$ : 88.7/55

All:  $-0.008 \pm 0.002$   $\chi^2/\text{NDF}$ : 155.4/113

- sign  $-0.003 \pm 0.003$   $\chi^2/\text{NDF}$ : 62.8/57

asym\_sam\_15\_37\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $21.181 \pm 0.004$   $\chi^2/\text{NDF}: 2940455.0/30$

Left Out:  $16.387 \pm 0.003$   $\chi^2/\text{NDF}: 4030277.2/24$

Right Out:  $22.188 \pm 0.004$   $\chi^2/\text{NDF}: 4122333.0/34$

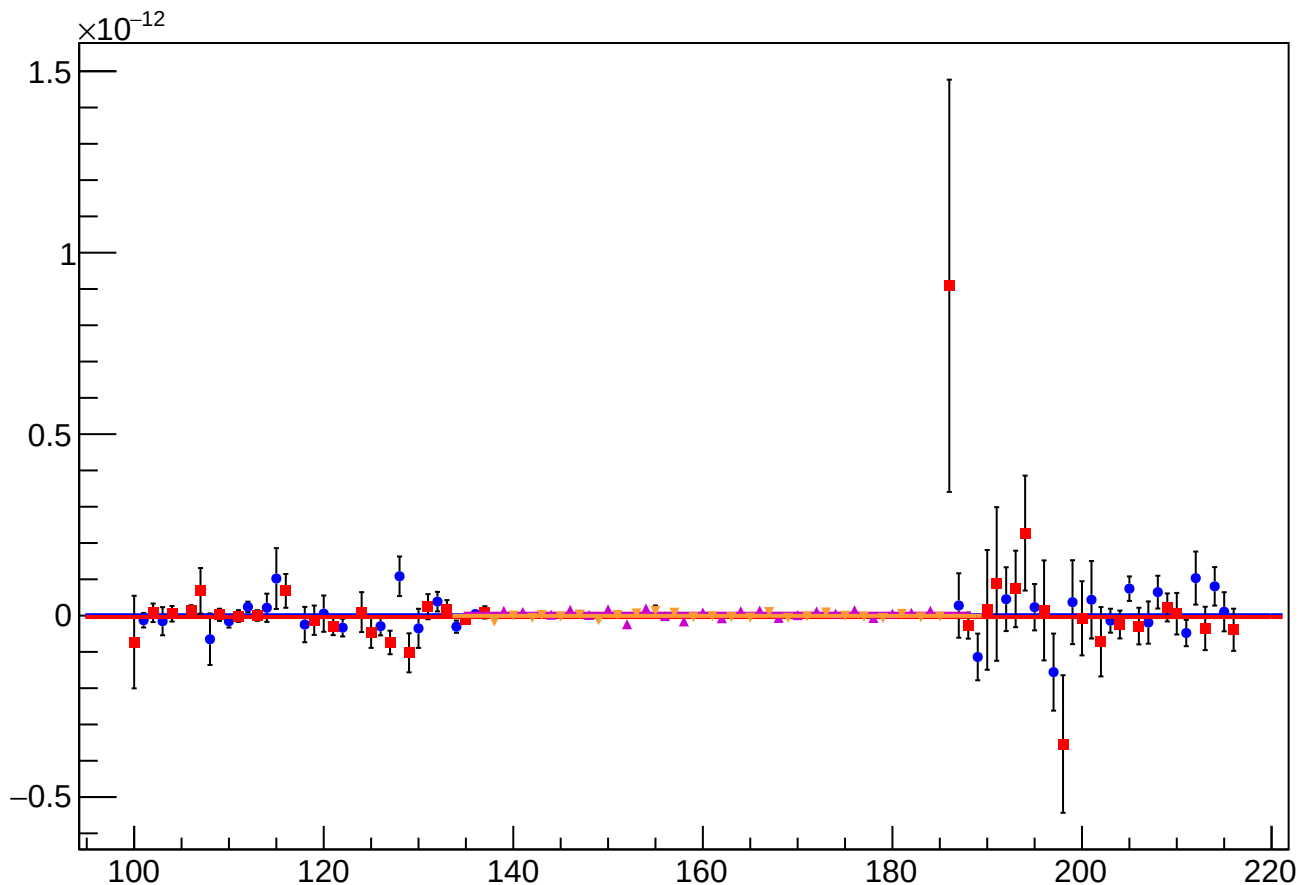
Left In:  $15.823 \pm 0.003$   $\chi^2/\text{NDF}: 3654834.3/22$

+ sign  $18.167 \pm 0.002$   $\chi^2/\text{NDF}: 8002980.7/55$

All:  $18.086 \pm 0.002$   $\chi^2/\text{NDF}: 17481740.1/113$

- sign  $18.002 \pm 0.002$   $\chi^2/\text{NDF}: 9476175.4/57$

asym\_sam\_15\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2$ /NDF: 39.6/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 19.1/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 30.7/34

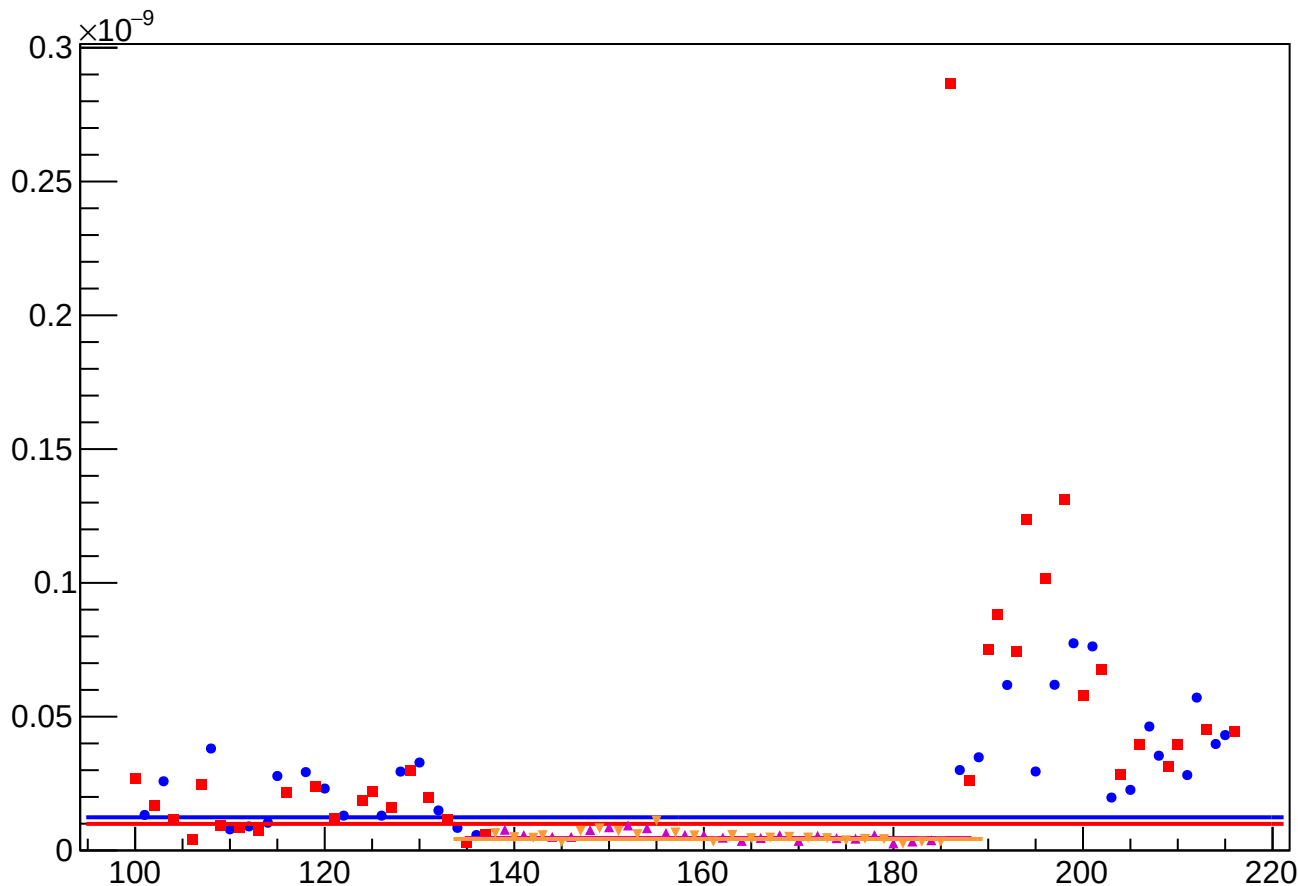
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 37.9/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 58.8/55

All: 0.000+/-0.000  $\chi^2$ /NDF: 139.2/113

- sign 0.000+/-0.000  $\chi^2$ /NDF: 72.8/57

asym\_sam\_15\_37\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9944483.2/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2583638.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13442102.2/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2508440.7/22

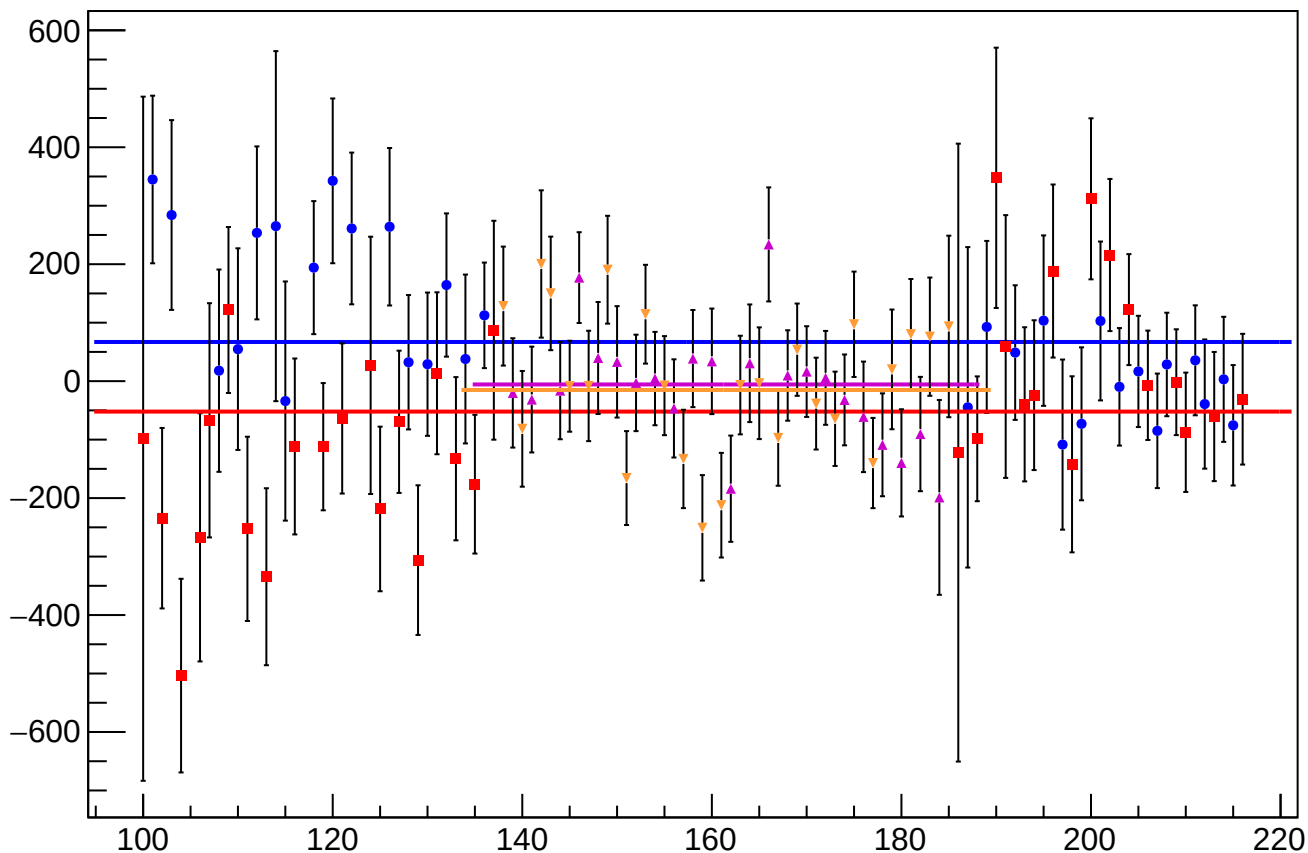
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17948995.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 36668867.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18654752.8/57



# reg\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $66.996 \pm 22.268$   $\chi^2/\text{NDF}: 28.2/30$

Left Out:  $-15.100 \pm 17.957$   $\chi^2/\text{NDF}: 41.6/24$

Right Out:  $-52.063 \pm 22.874$   $\chi^2/\text{NDF}: 46.7/34$

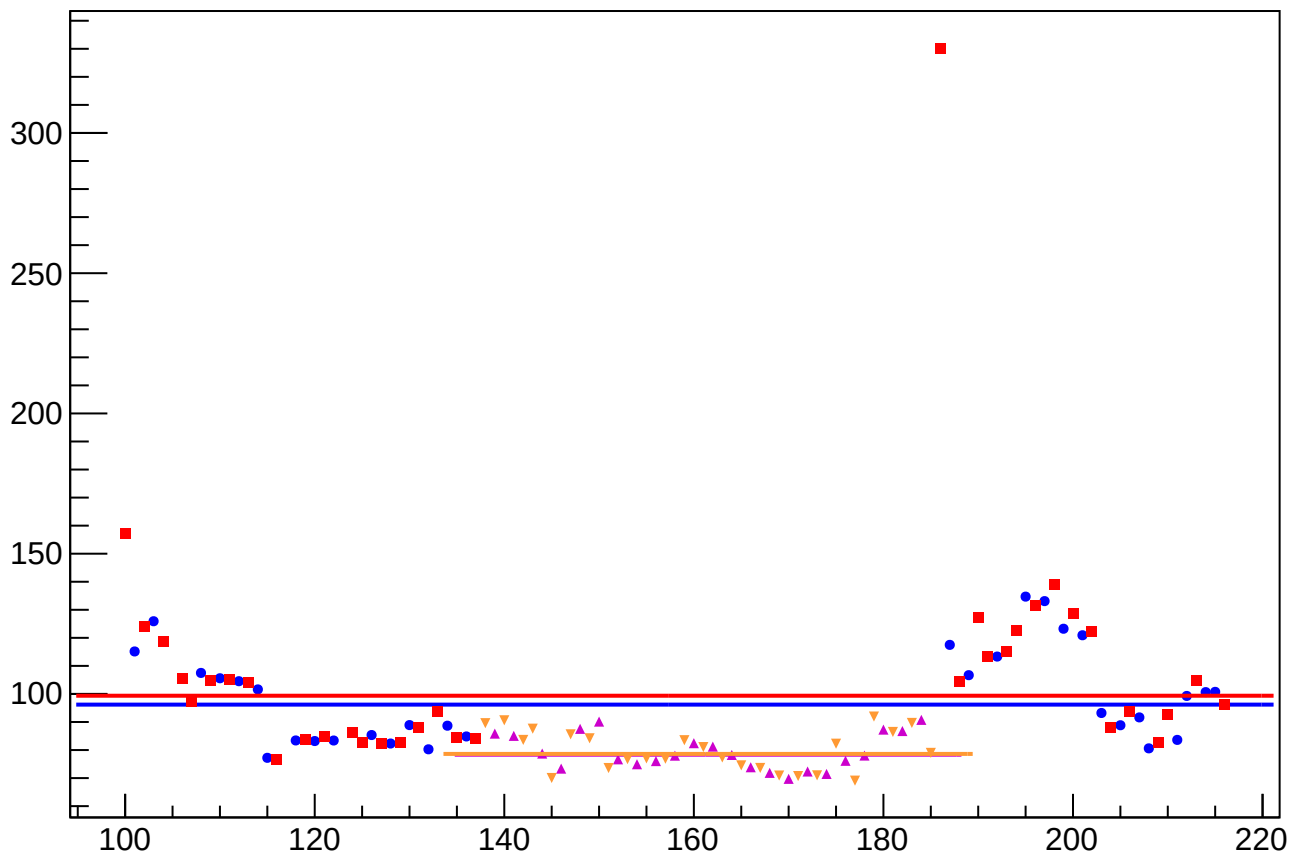
Left In:  $-5.629 \pm 18.382$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $17.250 \pm 13.978$   $\chi^2/\text{NDF}: 78.1/55$

All:  $-2.792 \pm 10.006$   $\chi^2/\text{NDF}: 154.5/113$

- sign  $-23.850 \pm 14.328$   $\chi^2/\text{NDF}: 72.2/57$

# reg\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 96.193 $\pm$ 0.016  $\chi^2$ /NDF: 934151.9/30

Left Out: 78.618 $\pm$ 0.013  $\chi^2$ /NDF:307235.6/24

Right Out: 99.363 $\pm$ 0.016  $\chi^2$ /NDF: 1413296.5/34

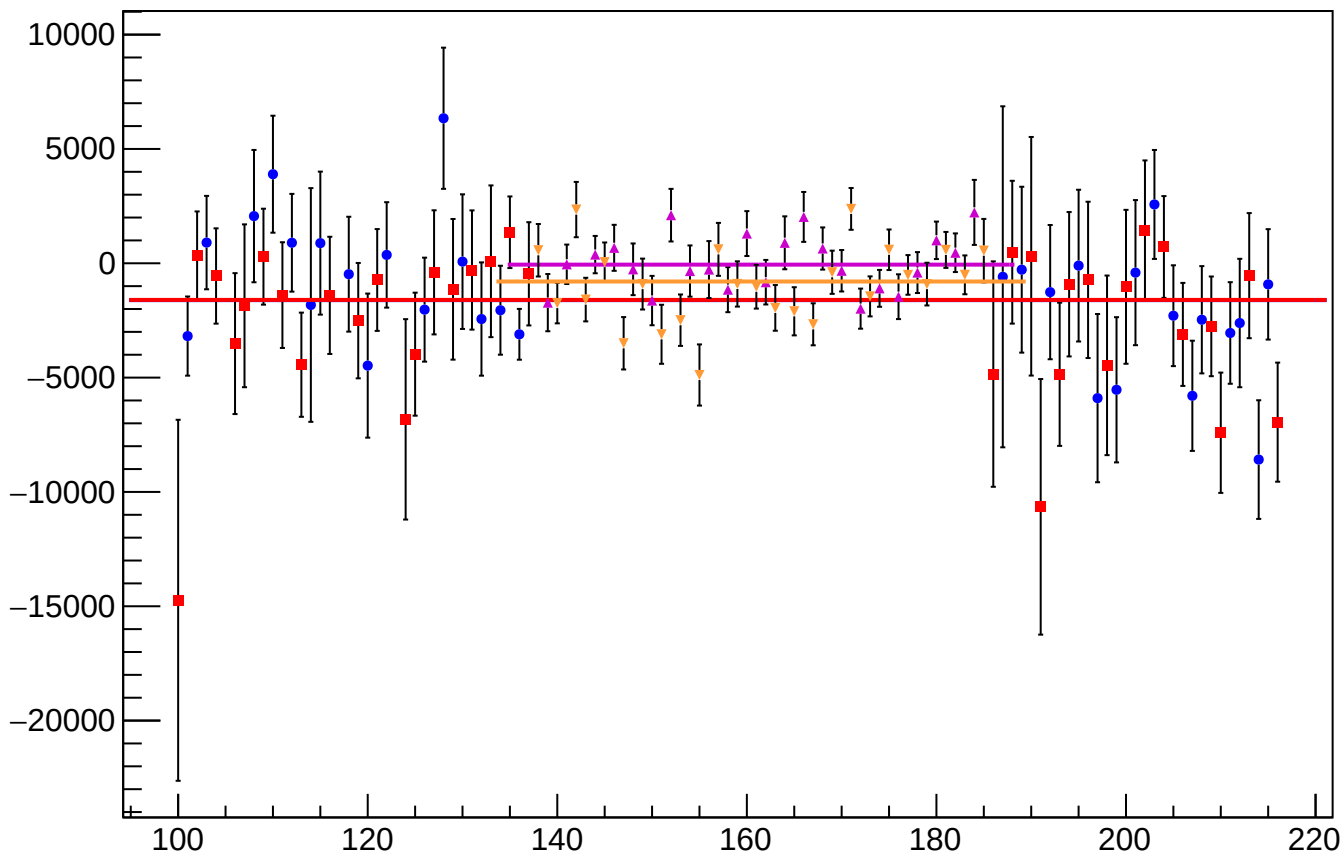
Left In: 78.334 $\pm$ 0.013  $\chi^2$ /NDF:209146.2/22

+ sign 85.544 $\pm$ 0.010  $\chi^2$ /NDF: 1996312.3/55

All: 86.052 $\pm$ 0.007  $\chi^2$ /NDF: 4651214.3/113

- sign 86.586 $\pm$ 0.010  $\chi^2$ /NDF: 2649482.2/57

asym\_sam\_24\_68\_dd\_reg\_correction\_mean vs Slug



Right In: -1611.512 $\pm$ 435.944  $\chi^2$ /NDF: 38.9/30

Left Out: -797.000 $\pm$ 197.884  $\chi^2$ /NDF: 59.5/24

Right Out: -1602.042 $\pm$ 452.504  $\chi^2$ /NDF: 31.2/34

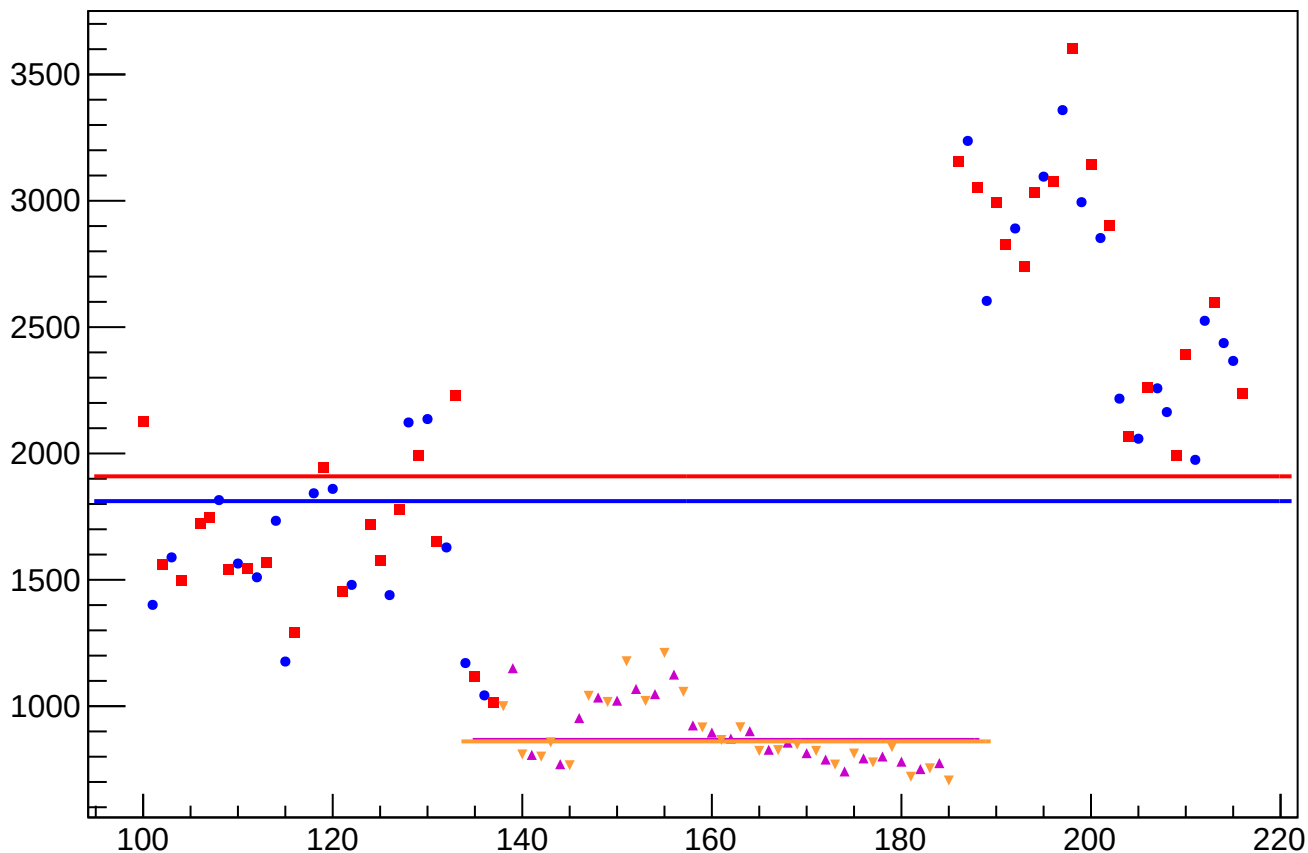
Left In: -59.494 $\pm$ 204.437  $\chi^2$ /NDF: 30.5/22

+ sign -936.153 $\pm$ 180.189  $\chi^2$ /NDF: 101.3/55

All: -638.829 $\pm$ 129.521  $\chi^2$ /NDF: 178.3/113

- sign -320.977 $\pm$ 186.305  $\chi^2$ /NDF: 71.4/57

asym\_sam\_24\_68\_dd\_reg\_correction\_rms vs Slug



Right In: 1811.408 $\pm$ 0.308  $\chi^2$ /NDF: 3746909.5/30

Left Out: 860.492 $\pm$ 0.140  $\chi^2$ /NDF: 699252.0/24

Right Out: 1909.537 $\pm$ 0.320  $\chi^2$ /NDF: 3719823.4/34

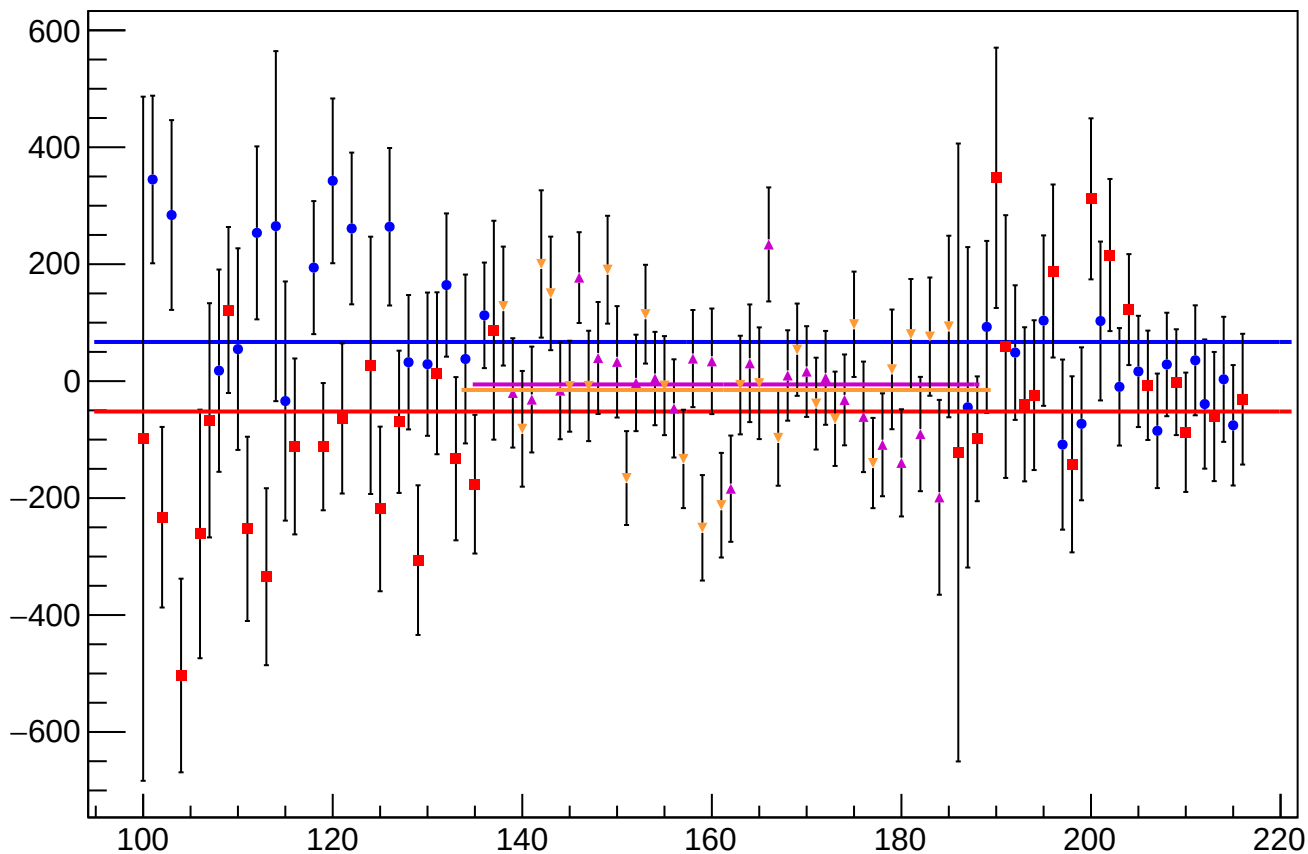
Left In: 866.351 $\pm$ 0.145  $\chi^2$ /NDF: 613257.7/22

+ sign 1022.949 $\pm$ 0.127  $\chi^2$ /NDF: 12336388.5/55

All: 1032.730 $\pm$ 0.092  $\chi^2$ /NDF: 25509213.3/100

- sign 1043.186 $\pm$ 0.132  $\chi^2$ /NDF: 13160632.3/57

# cor\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $66.990 \pm 22.268$   $\chi^2/\text{NDF}: 28.2/30$

Left Out:  $-15.098 \pm 17.957$   $\chi^2/\text{NDF}: 41.6/24$

Right Out:  $-51.945 \pm 22.874$   $\chi^2/\text{NDF}: 46.6/34$

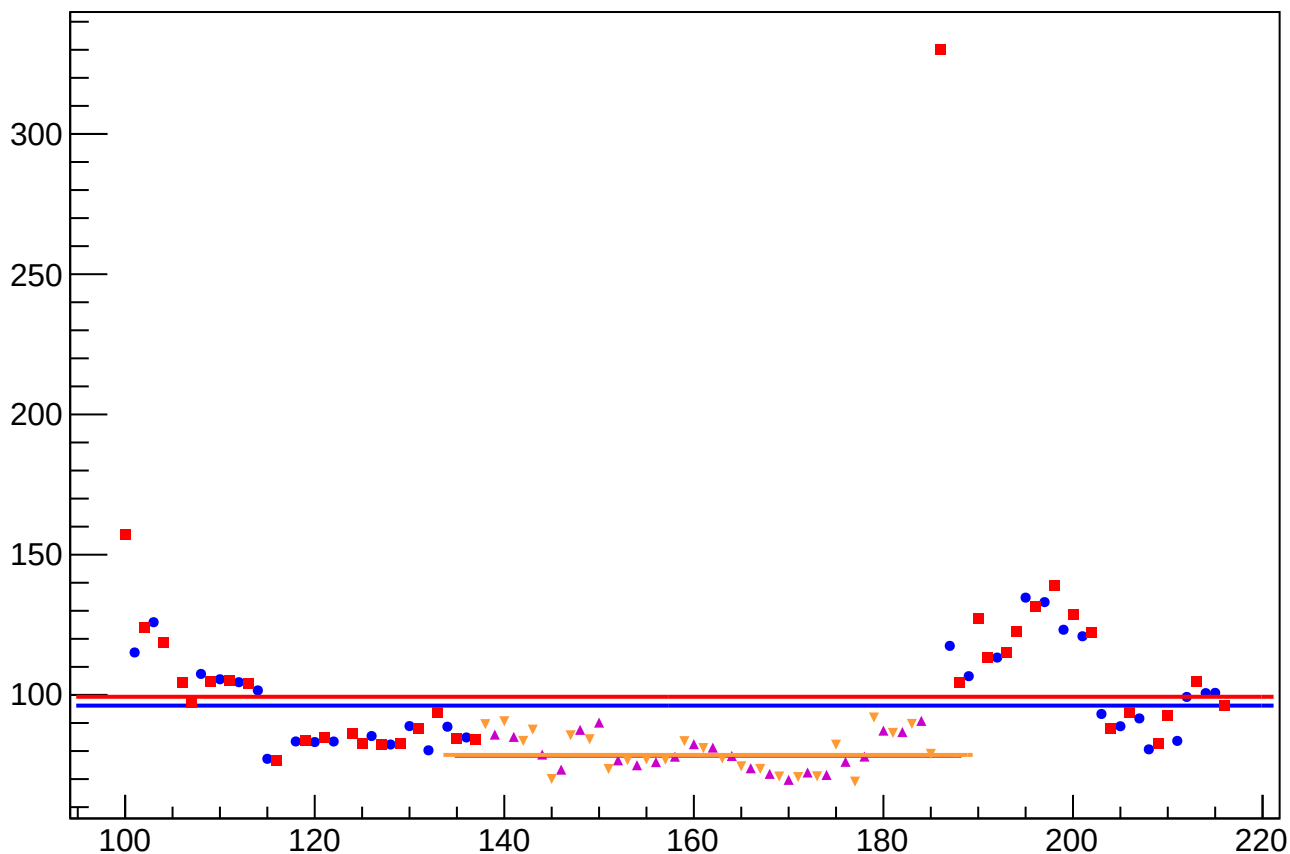
Left In:  $-5.626 \pm 18.382$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $17.249 \pm 13.978$   $\chi^2/\text{NDF}: 78.1/55$

All:  $-2.768 \pm 10.006$   $\chi^2/\text{NDF}: 154.4/113$

- sign  $-23.801 \pm 14.328$   $\chi^2/\text{NDF}: 72.1/57$

cor\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 96.193 $\pm$ 0.016  $\chi^2$ /NDF: 934153.5/30

Left Out: 78.618 $\pm$ 0.013  $\chi^2$ /NDF: 307235.6/24

Right Out: 99.348 $\pm$ 0.016  $\chi^2$ /NDF: 1412837.9/34

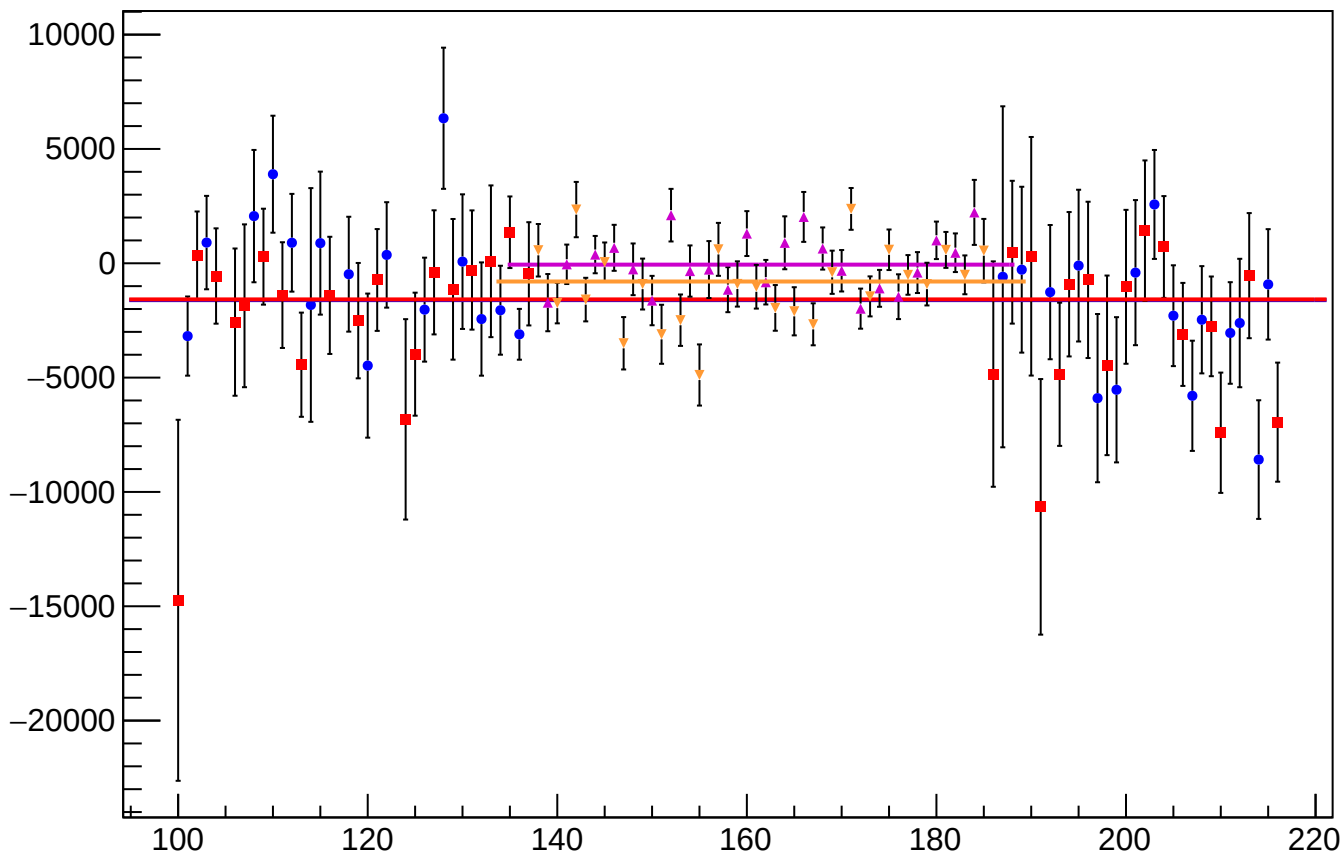
Left In: 78.334 $\pm$ 0.013  $\chi^2$ /NDF: 209146.2/22

+ sign 85.544 $\pm$ 0.010  $\chi^2$ /NDF: 1996314.2/55

All: 86.049 $\pm$ 0.007  $\chi^2$ /NDF: 4649257.3/113

- sign 86.580 $\pm$ 0.010  $\chi^2$ /NDF: 2647584.8/57

asym\_sam\_24\_68\_dd\_cor\_correction\_mean vs Slug



Right In:  $-1611.500 \pm 435.945$   $\chi^2/\text{NDF}$ : 38.9/30

Left Out:  $-797.000 \pm 197.884$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $-1580.239 \pm 452.925$   $\chi^2/\text{NDF}$ : 30.9/34

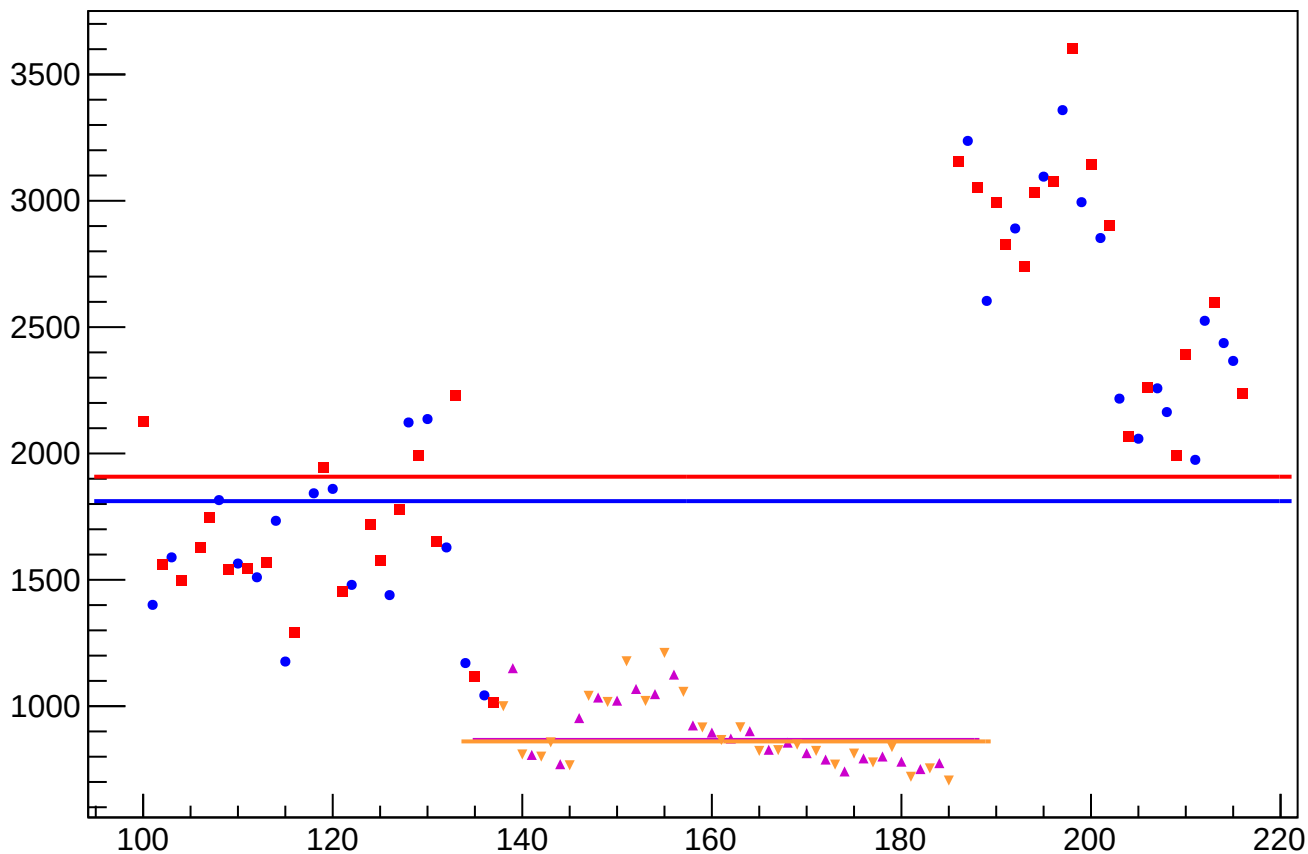
Left In:  $-59.494 \pm 204.437$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $-936.150 \pm 180.189$   $\chi^2/\text{NDF}$ : 101.3/55

All:  $-636.897 \pm 129.531$   $\chi^2/\text{NDF}$ : 177.8/113

- sign  $-316.883 \pm 186.335$   $\chi^2/\text{NDF}$ : 70.8/57

asym\_sam\_24\_68\_dd\_cor\_correction\_rms vs Slug



Right In: 1811.412 $\pm$ 0.308  $\chi^2$ /NDF: 3746895.2/30

Left Out: 860.492 $\pm$ 0.140  $\chi^2$ /NDF: 699250.7/24

Right Out: 1908.067 $\pm$ 0.320  $\chi^2$ /NDF: 3727381.3/34

Left In: 866.352 $\pm$ 0.145  $\chi^2$ /NDF: 613256.3/22

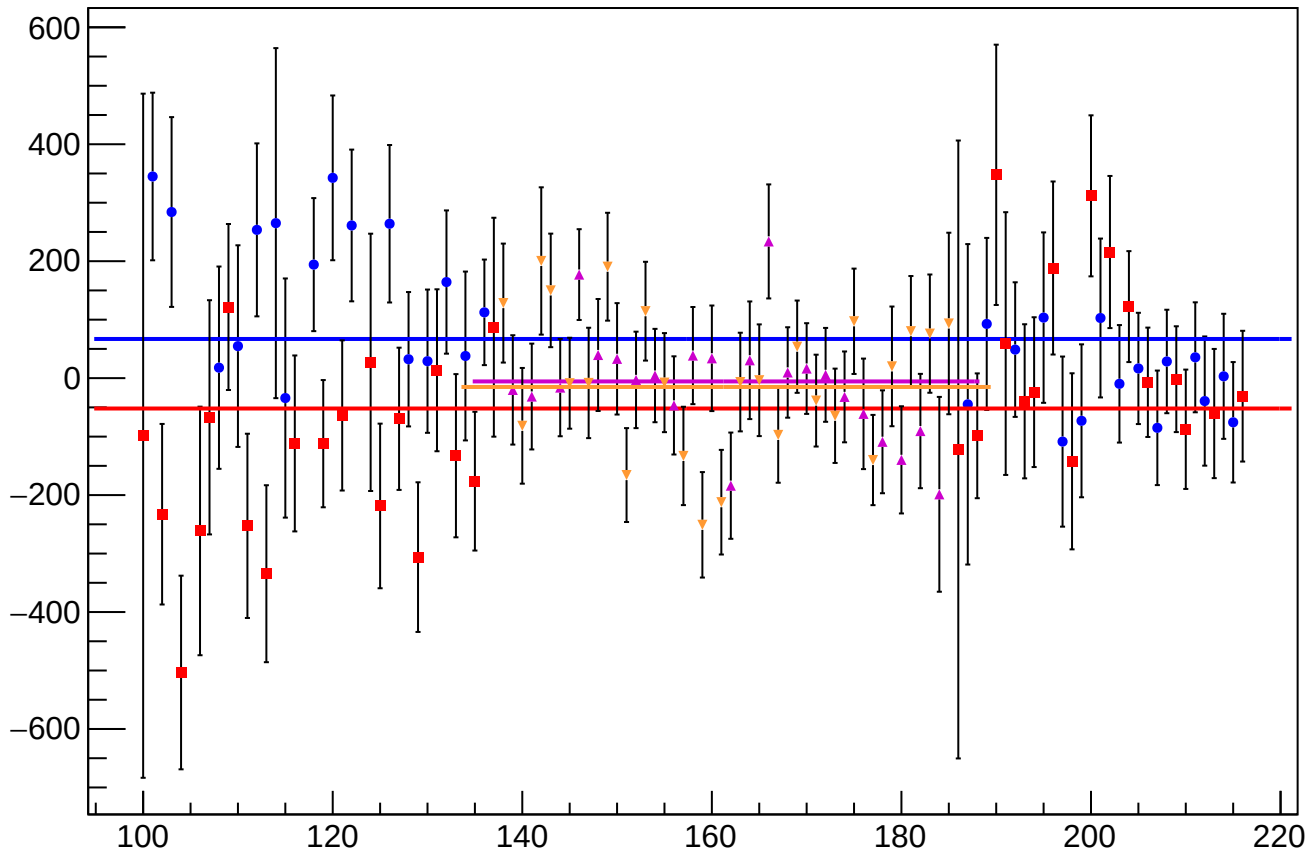
+ sign 1022.949 $\pm$ 0.127  $\chi^2$ /NDF: 12336407.8/55

All: 1032.476 $\pm$ 0.092  $\chi^2$ /NDF: 25477710.9/1

- sign 1042.664 $\pm$ 0.132  $\chi^2$ /NDF: 13129733.0/57



# eigen\_cor\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $66.990 \pm 22.268$   $\chi^2/\text{NDF}: 28.2/30$

Left Out:  $-15.098 \pm 17.957$   $\chi^2/\text{NDF}: 41.6/24$

Right Out:  $-51.945 \pm 22.874$   $\chi^2/\text{NDF}: 46.6/34$

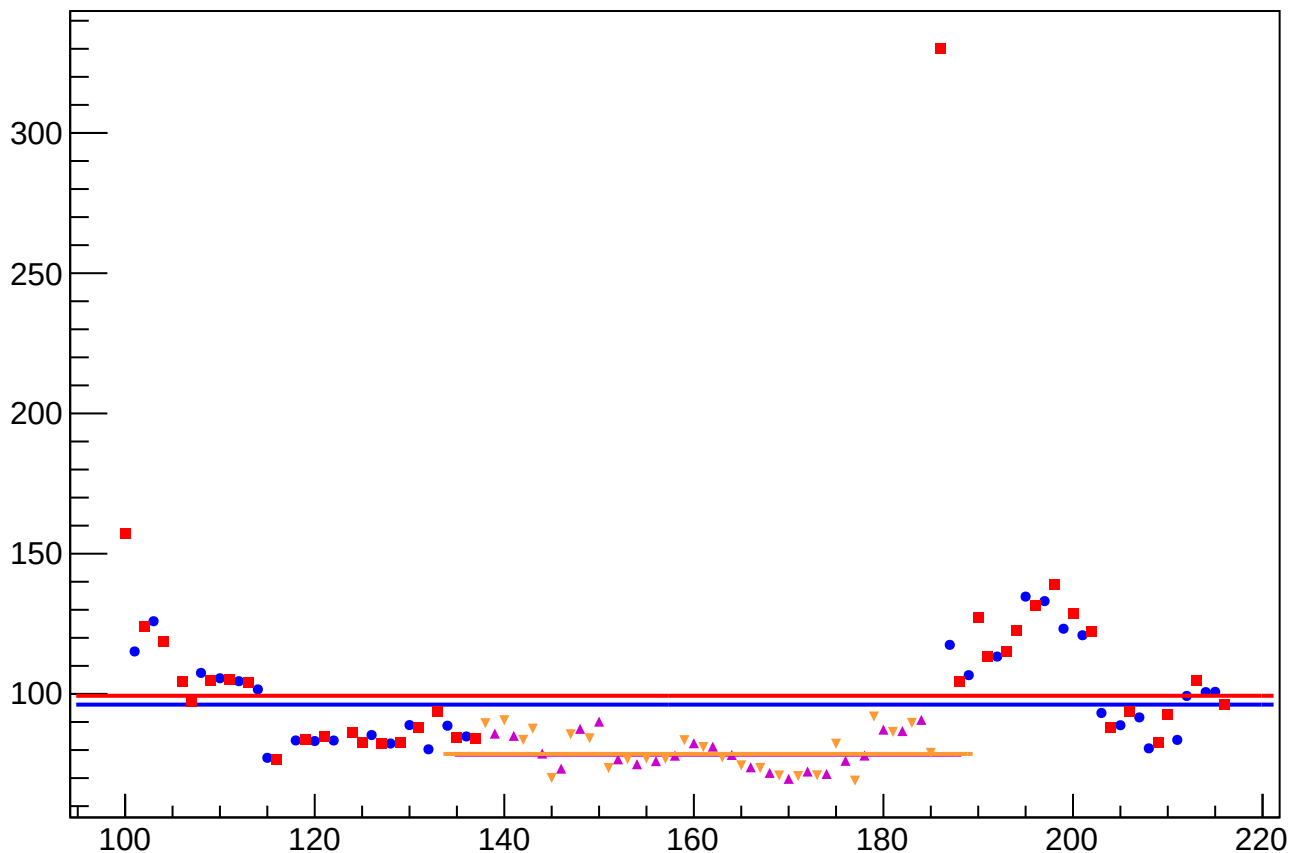
Left In:  $-5.626 \pm 18.382$   $\chi^2/\text{NDF}: 23.0/22$

+ sign  $17.249 \pm 13.978$   $\chi^2/\text{NDF}: 78.1/55$

All:  $-2.768 \pm 10.006$   $\chi^2/\text{NDF}: 154.4/113$

- sign  $-23.801 \pm 14.328$   $\chi^2/\text{NDF}: 72.1/57$

eigen\_cor\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 96.193 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 934153.5/30

Left Out: 78.618 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 307235.6/24

Right Out: 99.348 $\pm$ 0.016  $\chi^2/\text{NDF}$ : 1412837.9/34

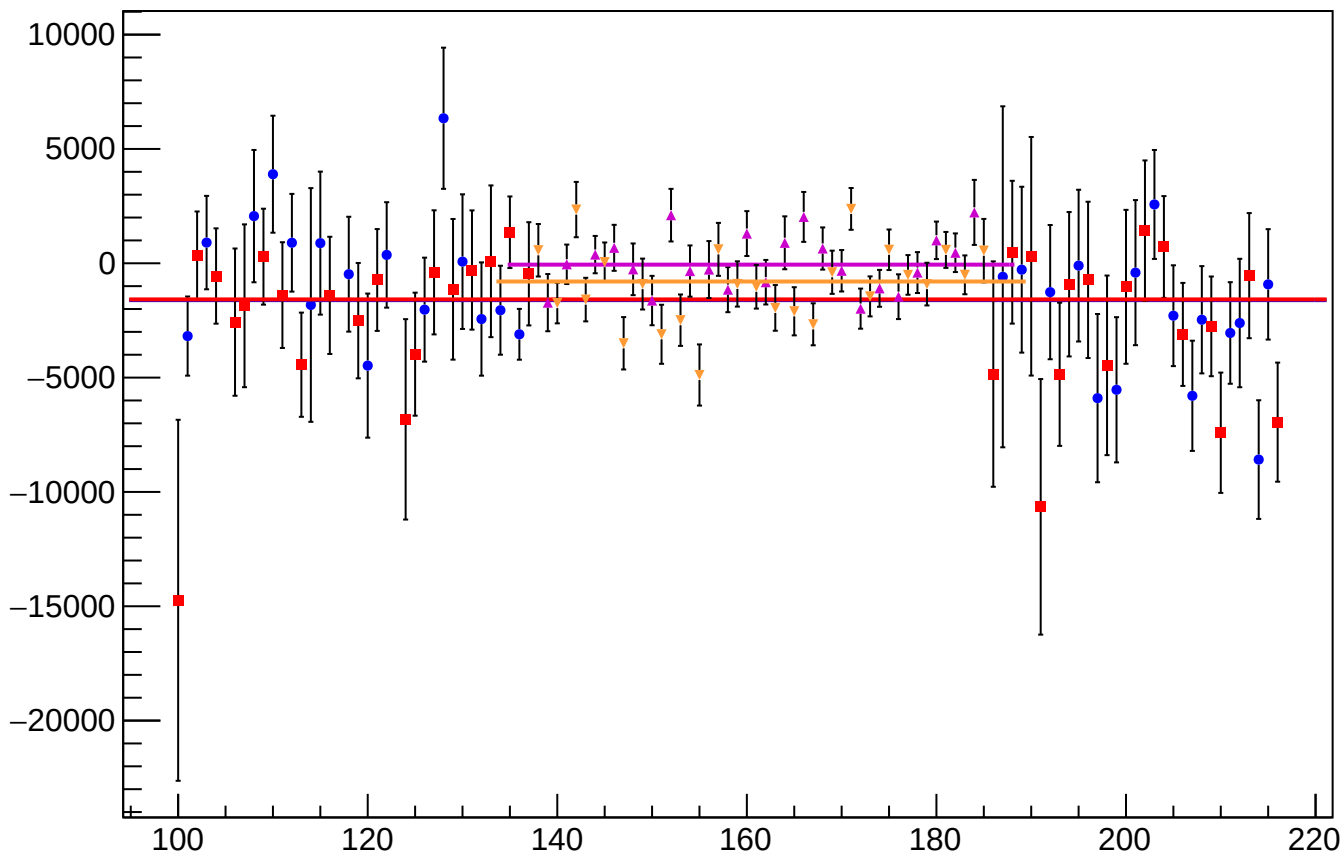
Left In: 78.334 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 209146.2/22

+ sign 85.544 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 1996314.2/55

All: 86.049 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 4649257.3/113

- sign 86.580 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 2647584.8/57

asym\_sam\_24\_68\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1611.500 \pm 435.945$   $\chi^2/\text{NDF}$ : 38.9/30

Left Out:  $-797.000 \pm 197.884$   $\chi^2/\text{NDF}$ : 59.5/24

Right Out:  $-1580.239 \pm 452.925$   $\chi^2/\text{NDF}$ : 30.9/34

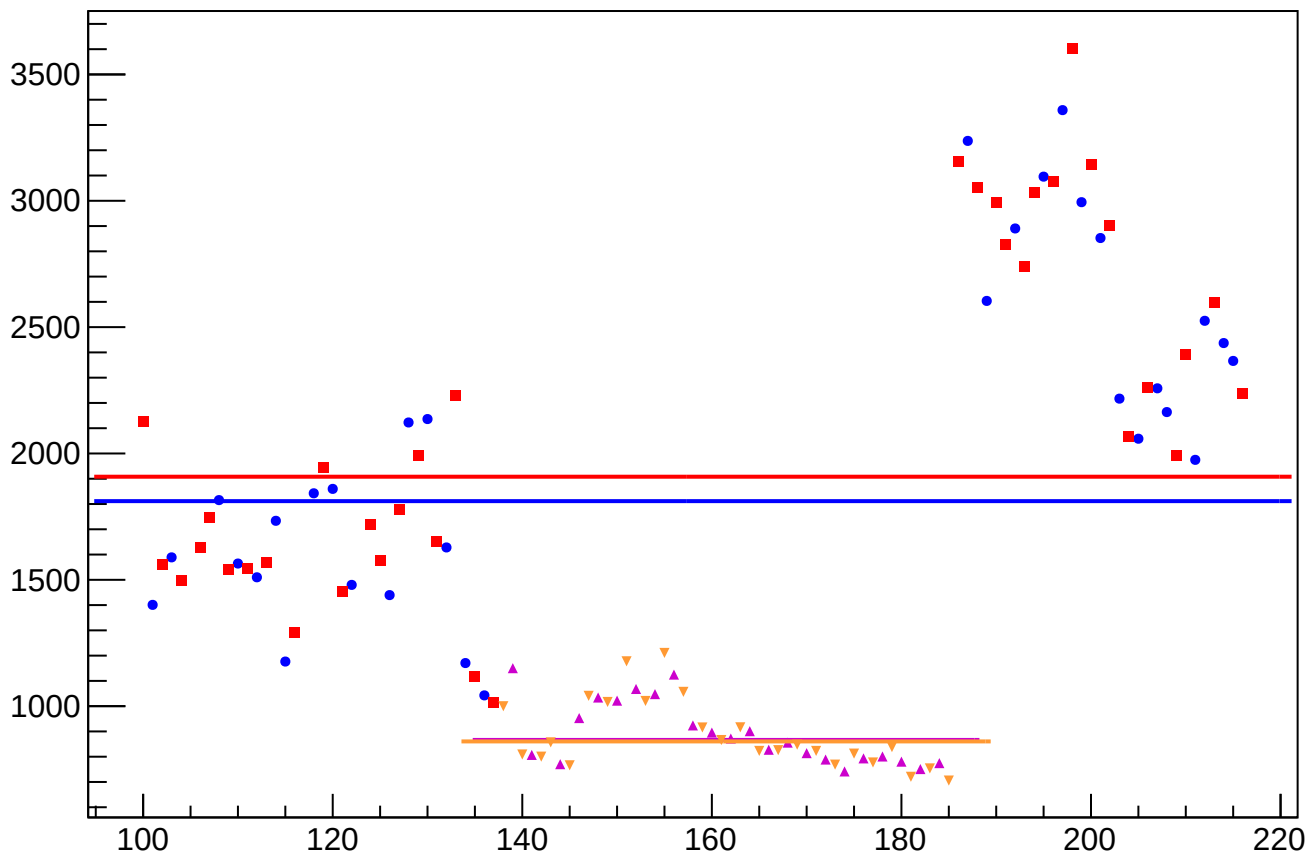
Left In:  $-59.494 \pm 204.437$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $-936.150 \pm 180.189$   $\chi^2/\text{NDF}$ : 101.3/55

All:  $-636.897 \pm 129.531$   $\chi^2/\text{NDF}$ : 177.8/113

- sign  $-316.883 \pm 186.335$   $\chi^2/\text{NDF}$ : 70.8/57

asym\_sam\_24\_68\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 1811.412 $\pm$ 0.308  $\chi^2$ /NDF: 3746895.2/30

Left Out: 860.492 $\pm$ 0.140  $\chi^2$ /NDF: 699250.7/24

Right Out: 1908.067 $\pm$ 0.320  $\chi^2$ /NDF: 3727381.3/34

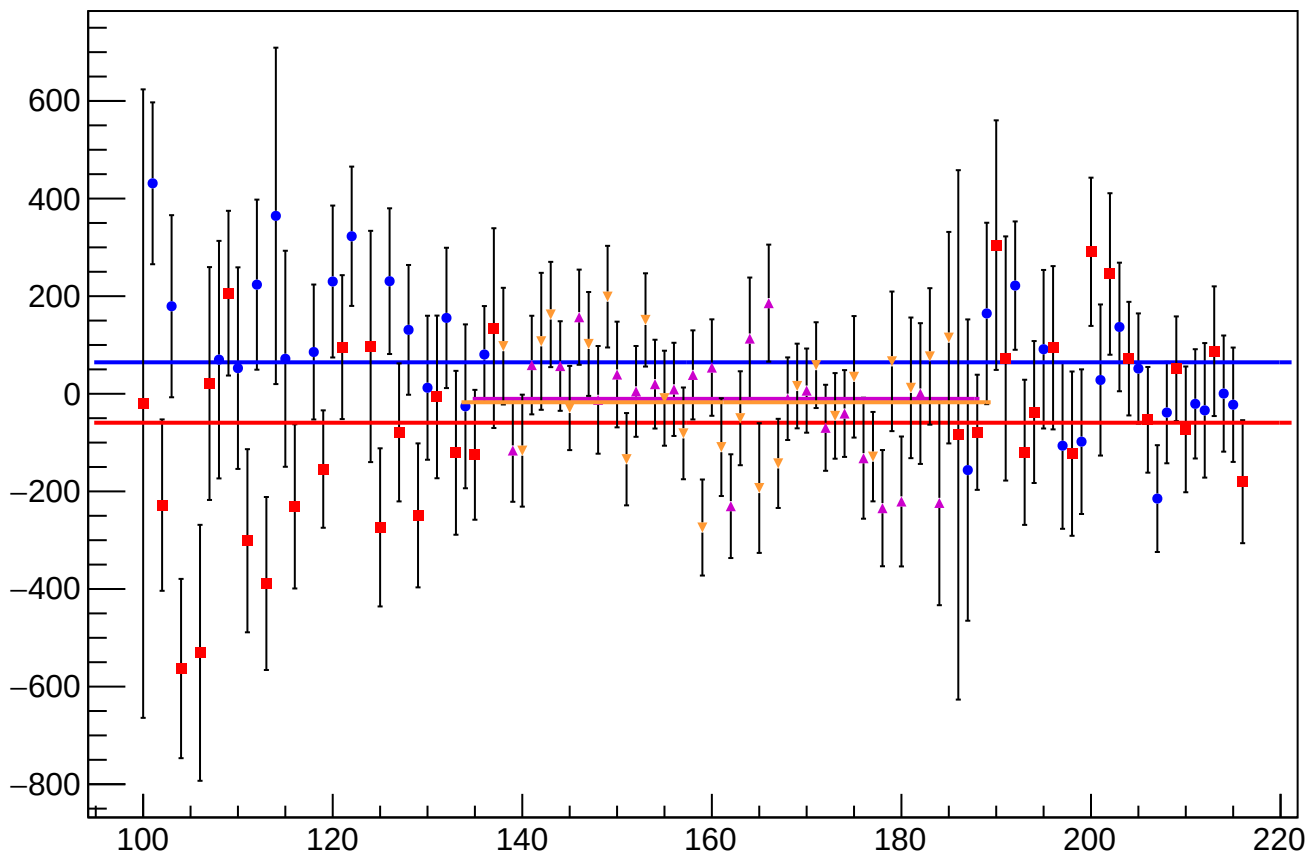
Left In: 866.352 $\pm$ 0.145  $\chi^2$ /NDF: 613256.3/22

+ sign 1022.949 $\pm$ 0.127  $\chi^2$ /NDF: 12336407.8/55

All: 1032.476 $\pm$ 0.092  $\chi^2$ /NDF: 25477710.9/1

- sign 1042.664 $\pm$ 0.132  $\chi^2$ /NDF: 13129733.0/57

# dit\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $64.498 \pm 25.929$   $\chi^2/\text{NDF}: 27.9/30$

Left Out:  $-17.356 \pm 20.987$   $\chi^2/\text{NDF}: 31.2/24$

Right Out:  $-59.310 \pm 26.518$   $\chi^2/\text{NDF}: 44.1/34$

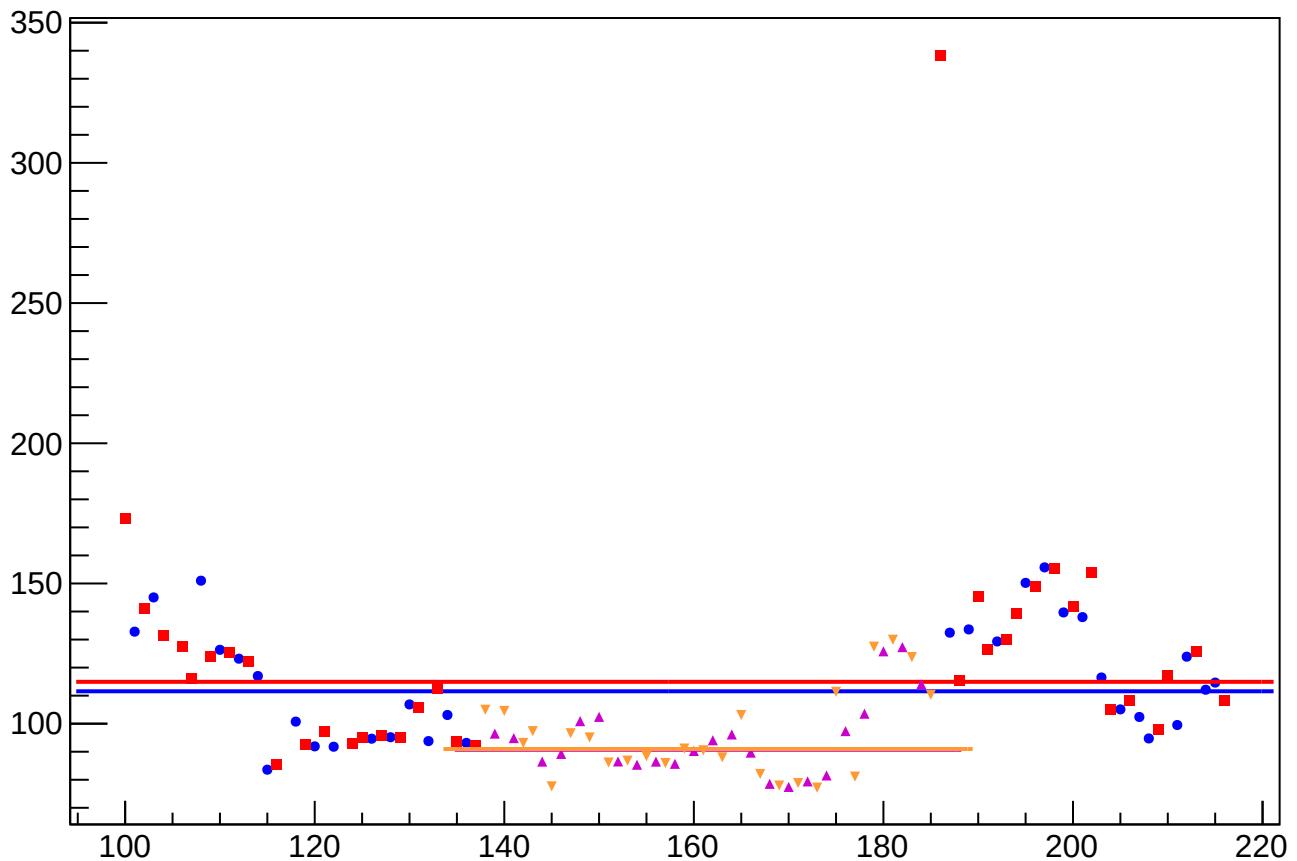
Left In:  $-10.412 \pm 21.503$   $\chi^2/\text{NDF}: 22.6/22$

+ sign  $15.044 \pm 16.313$   $\chi^2/\text{NDF}: 65.1/55$

All:  $-6.854 \pm 11.670$   $\chi^2/\text{NDF}: 137.6/113$

- sign  $-29.810 \pm 16.702$   $\chi^2/\text{NDF}: 68.8/57$

dit\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 111.554 $\pm$ 0.018  $\chi^2$ /NDF: 1014820.0/30

Left Out: 90.967 $\pm$ 0.015  $\chi^2$ /NDF: 784523.6/24

+ sign 99.116 $\pm$ 0.012  $\chi^2$ /NDF: 2561153.0/55

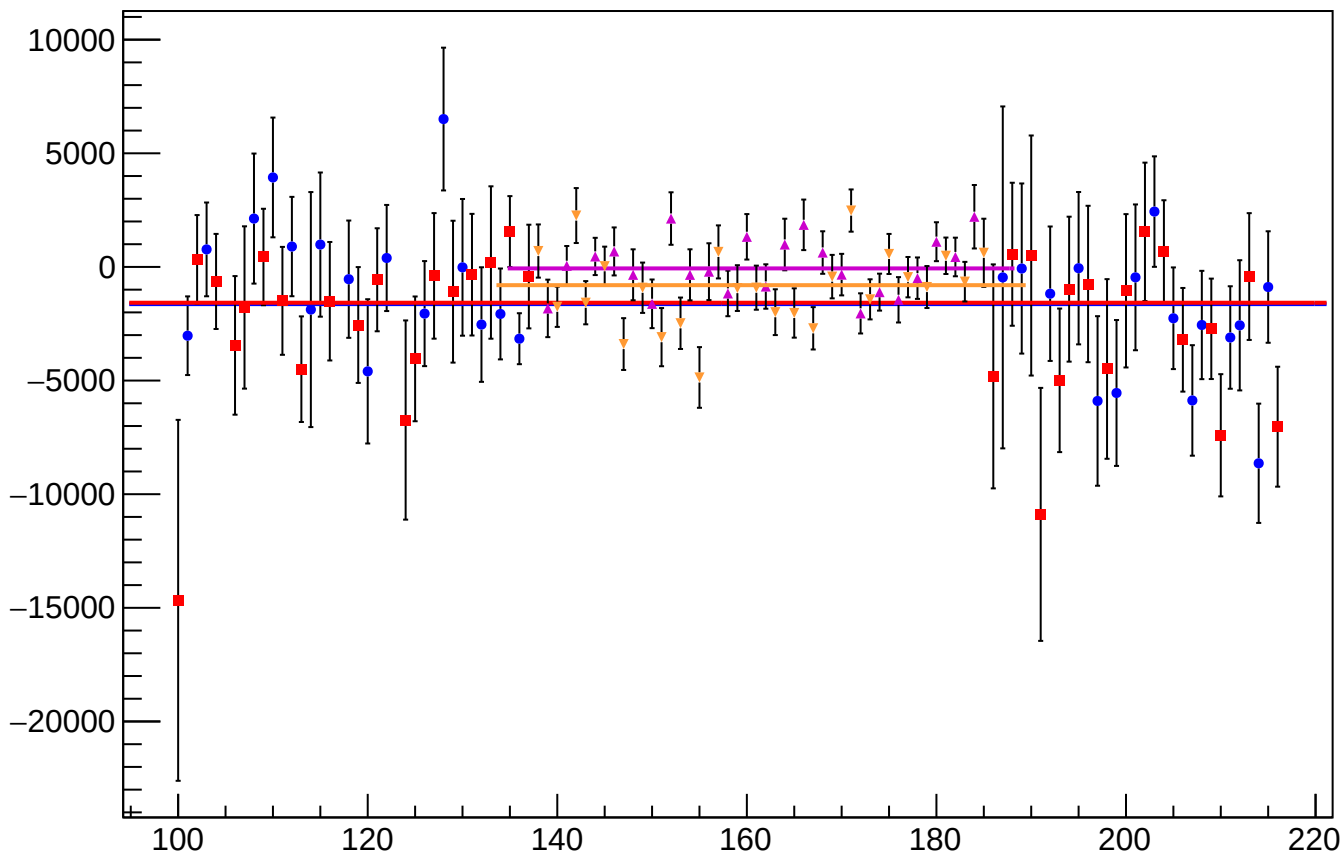
Right Out: 114.924 $\pm$ 0.019  $\chi^2$ /NDF: 1369135.1/34

All: 99.696 $\pm$ 0.008  $\chi^2$ /NDF: 5489162.0/113

Left In: 90.690 $\pm$ 0.015  $\chi^2$ /NDF: 545969.6/22

- sign 100.304 $\pm$ 0.012  $\chi^2$ /NDF: 2922830.4/57

asym\_sam\_24\_68\_dd\_dit\_correction\_mean vs Slug



Right In: -1636.115 $\pm$ 442.004  $\chi^2$ /NDF: 38.3/30

Left Out: -802.532 $\pm$ 199.851  $\chi^2$ /NDF: 58.3/24

Right Out: -1575.766 $\pm$ 457.391  $\chi^2$ /NDF: 31.9/34

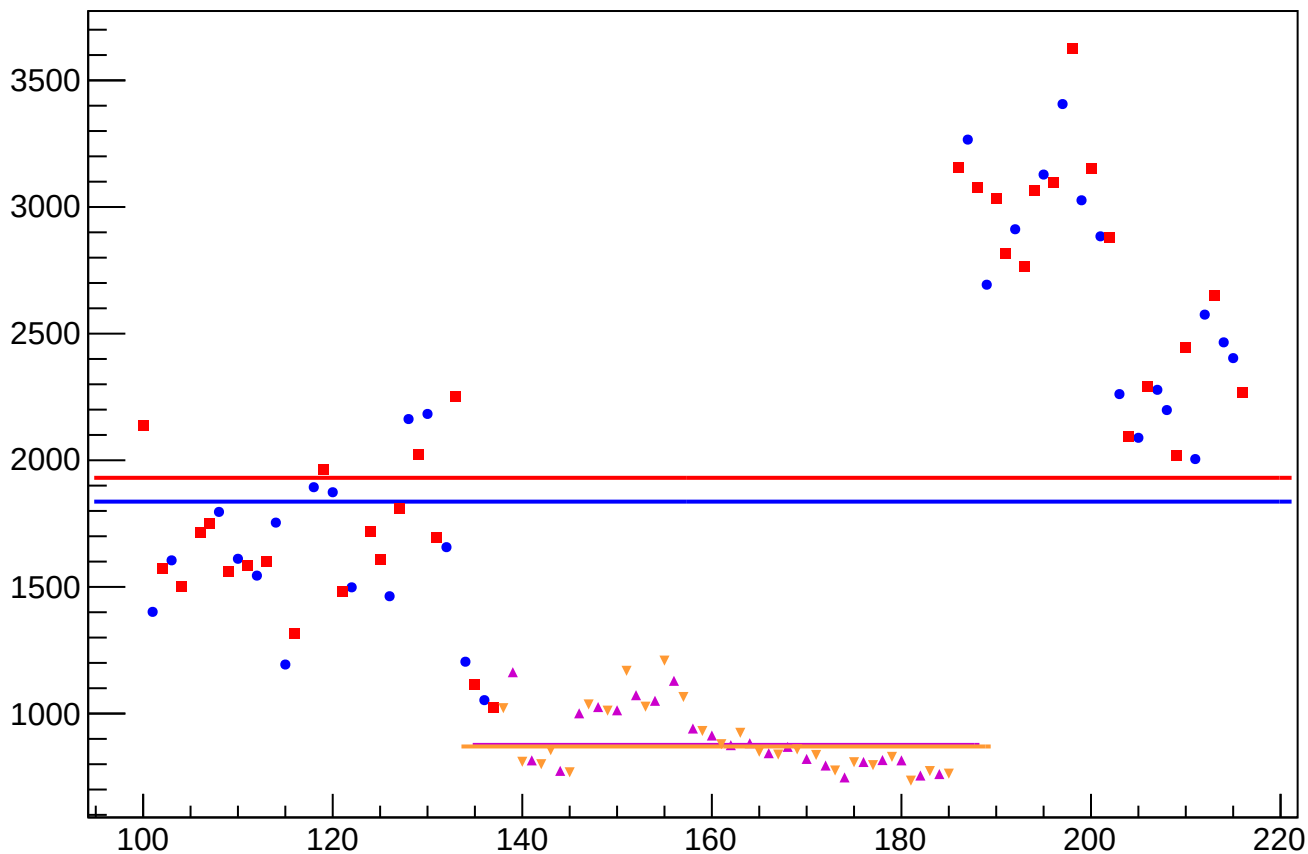
Left In: -65.218 $\pm$ 206.677  $\chi^2$ /NDF: 30.7/22

+ sign -944.022 $\pm$ 182.102  $\chi^2$ /NDF: 99.6/55

All: -643.169 $\pm$ 130.916  $\chi^2$ /NDF: 176.9/113

- sign -321.345 $\pm$ 188.342  $\chi^2$ /NDF: 71.7/57

asym\_sam\_24\_68\_dd\_dit\_correction\_rms vs Slug



Right In: 1836.753+/-0.313  $\chi^2/\text{NDF}$ : 3759994.7/30

Left Out: 870.009+/-0.141  $\chi^2/\text{NDF}$ : 647274.1/24

+ sign 1034.101+/-0.129  $\chi^2/\text{NDF}$ : 12350865.8/55

Right Out: 1930.760+/-0.323  $\chi^2/\text{NDF}$ : 3708944.4/34

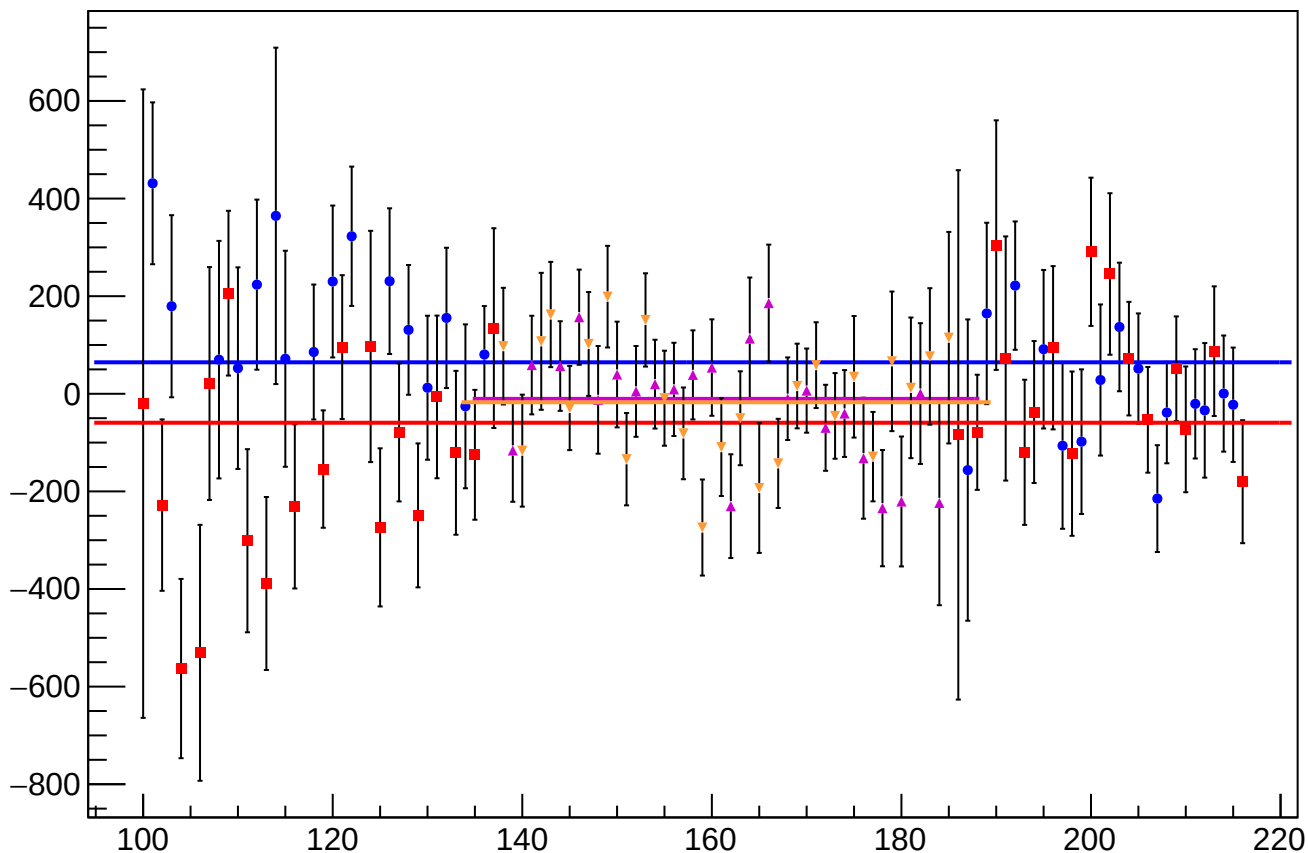
All: 1044.233+/-0.093  $\chi^2/\text{NDF}$ : 25497518.1/100

- sign 1055.070+/-0.133  $\chi^2/\text{NDF}$ : 13133838.6/57

Left In: 876.273+/-0.146  $\chi^2/\text{NDF}$ : 597200.7/22



# eigen\_dit\_asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $64.502 \pm 25.928$   $\chi^2/\text{NDF}$ : 27.9/30

Left Out:  $-17.356 \pm 20.987$   $\chi^2/\text{NDF}$ : 31.2/24

Right Out:  $-59.309 \pm 26.518$   $\chi^2/\text{NDF}$ : 44.1/34

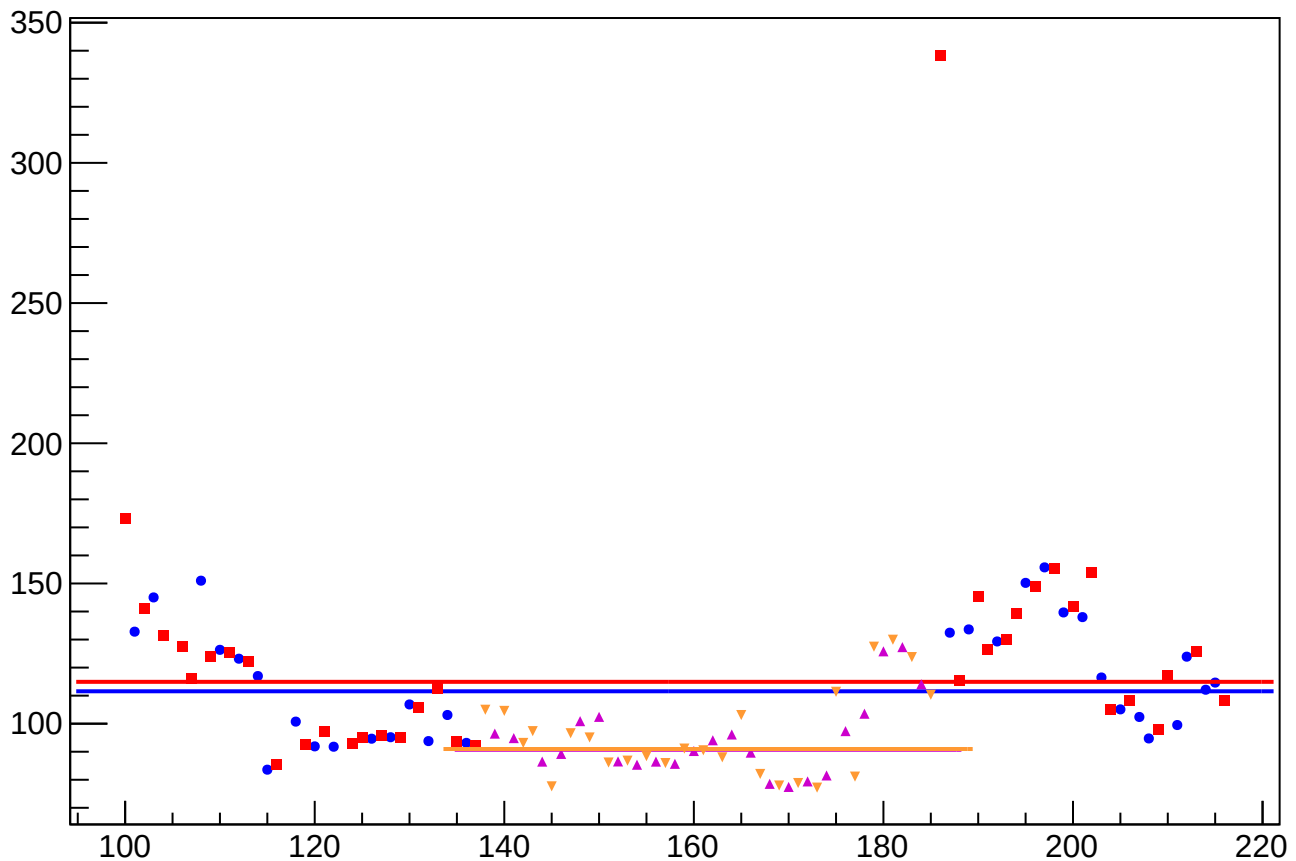
Left In:  $-10.412 \pm 21.503$   $\chi^2/\text{NDF}$ : 22.6/22

+ sign  $15.045 \pm 16.313$   $\chi^2/\text{NDF}$ : 65.1/55

All:  $-6.853 \pm 11.670$   $\chi^2/\text{NDF}$ : 137.6/113

- sign  $-29.809 \pm 16.702$   $\chi^2/\text{NDF}$ : 68.8/57

eigen\_dit\_asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 111.554 $\pm$ 0.018  $\chi^2$ /NDF: 1014834.3/30

Left Out: 90.967 $\pm$ 0.015  $\chi^2$ /NDF: 784529.9/24

Right Out: 114.924 $\pm$ 0.019  $\chi^2$ /NDF: 1369152.6/34

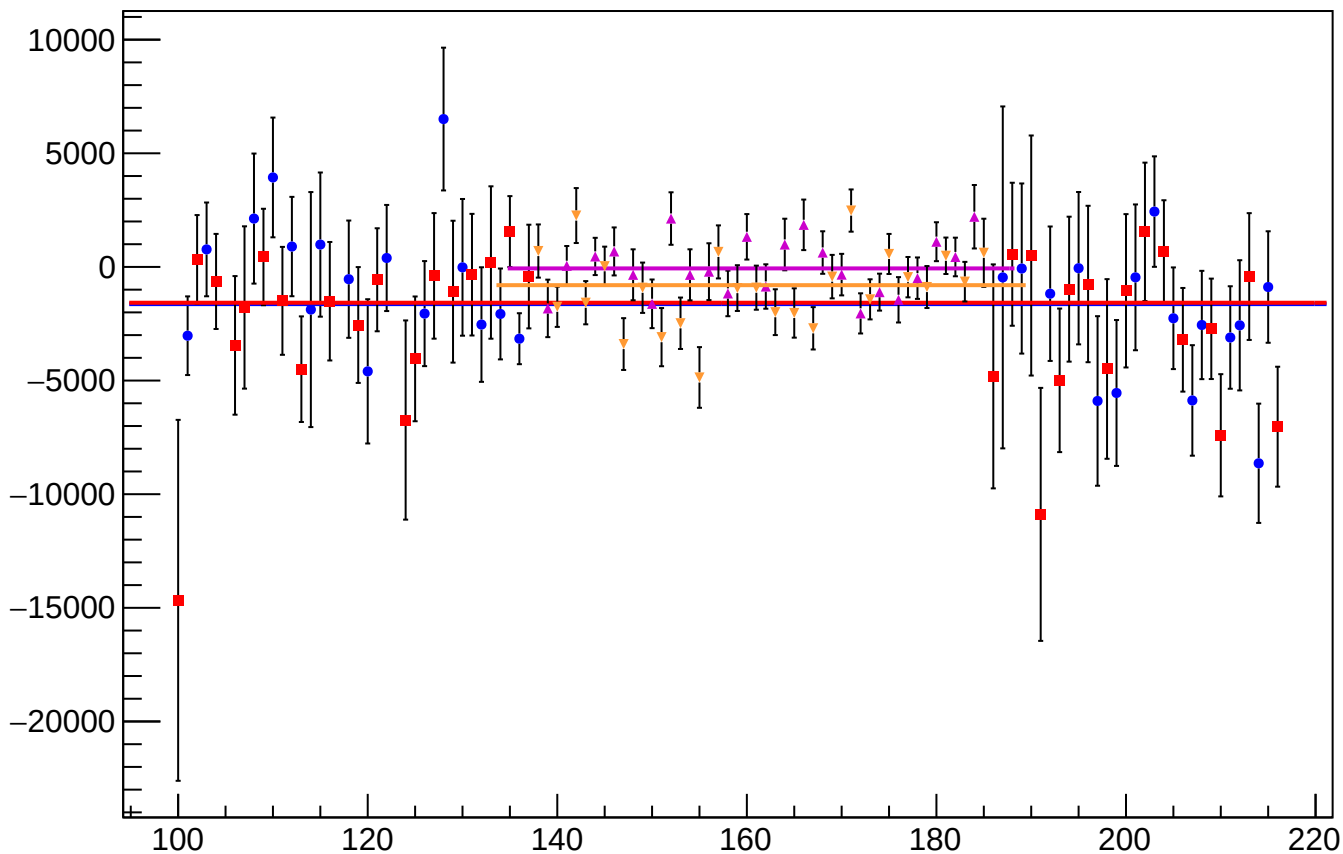
Left In: 90.690 $\pm$ 0.015  $\chi^2$ /NDF: 545960.7/22

+ sign 99.116 $\pm$ 0.012  $\chi^2$ /NDF: 2561129.8/55

All: 99.696 $\pm$ 0.008  $\chi^2$ /NDF: 5489121.9/113

- sign 100.304 $\pm$ 0.012  $\chi^2$ /NDF: 2922813.9/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: -1636.111 $\pm$ 442.003  $\chi^2$ /NDF: 38.3/30

Left Out: -802.531 $\pm$ 199.851  $\chi^2$ /NDF: 58.3/24

Right Out: -1575.763 $\pm$ 457.390  $\chi^2$ /NDF: 31.9/34

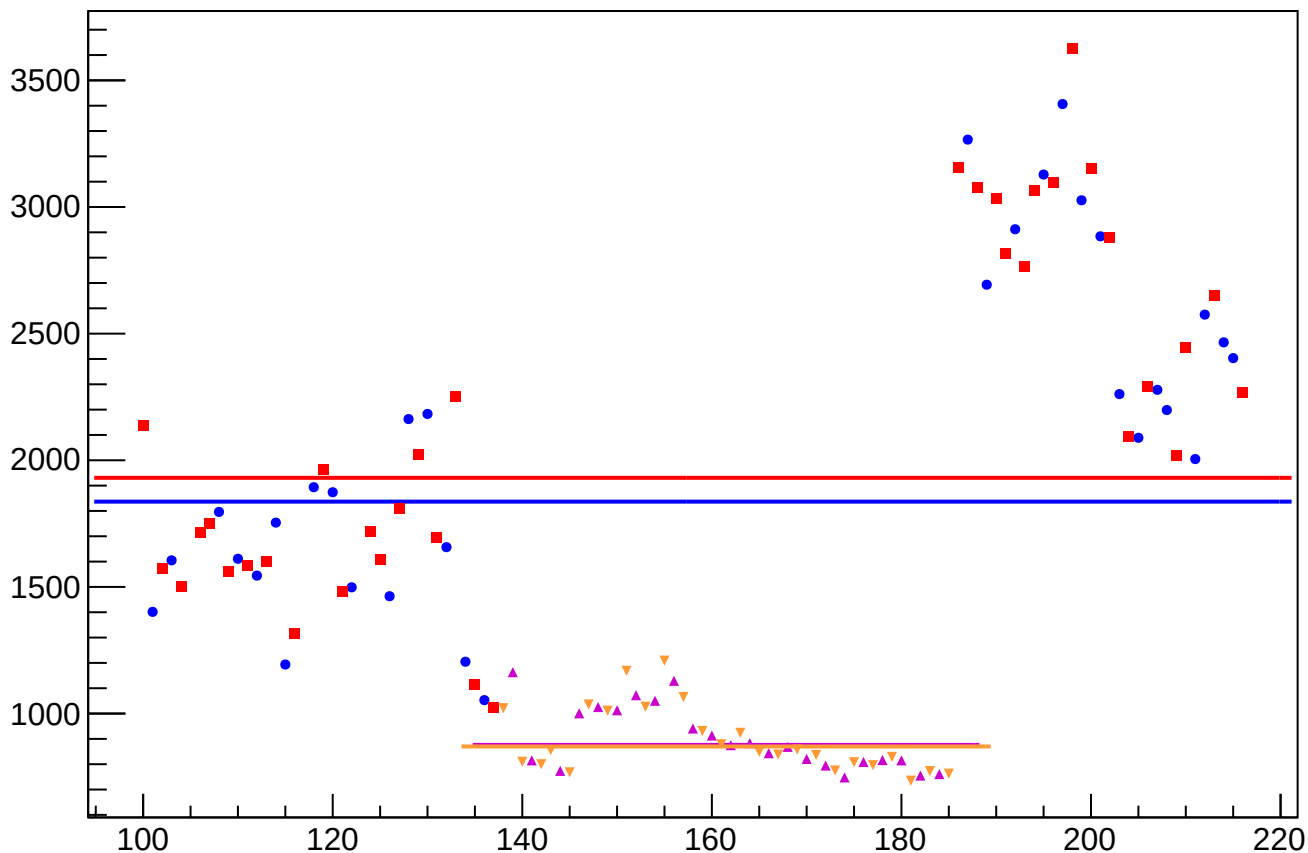
Left In: -65.218 $\pm$ 206.677  $\chi^2$ /NDF: 30.7/22

+ sign -944.020 $\pm$ 182.102  $\chi^2$ /NDF: 99.6/55

All: -643.168 $\pm$ 130.916  $\chi^2$ /NDF: 176.9/113

- sign -321.344 $\pm$ 188.342  $\chi^2$ /NDF: 71.7/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 1836.751 $\pm$ 0.313  $\chi^2$ /NDF: 3760003.9/30

Left Out: 870.008 $\pm$ 0.141  $\chi^2$ /NDF: 647275.9/24

+ sign 1034.100 $\pm$ 0.129  $\chi^2$ /NDF: 12350864.6/55

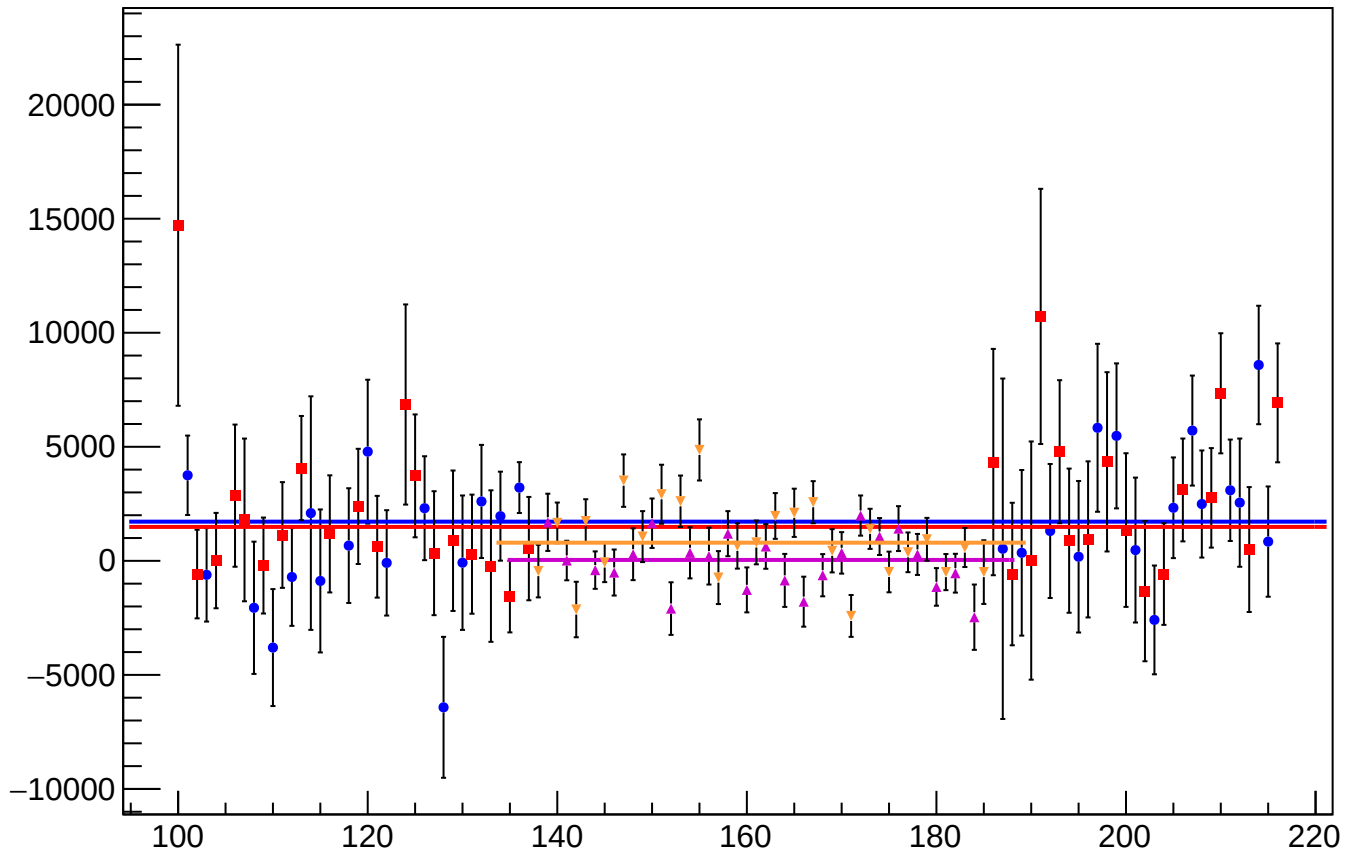
Right Out: 1930.757 $\pm$ 0.323  $\chi^2$ /NDF: 3708958.3/34

All: 1044.232 $\pm$ 0.093  $\chi^2$ /NDF: 25497519.0/1

Left In: 876.272 $\pm$ 0.146  $\chi^2$ /NDF: 597200.9/22

- sign 1055.069 $\pm$ 0.133  $\chi^2$ /NDF: 13133840.8/57

# asym\_sam\_24\_68\_dd\_mean vs Slug



Right In:  $1718.238 \pm 436.844$   $\chi^2/\text{NDF}$ : 39.0/30

Left Out:  $796.287 \pm 198.802$   $\chi^2/\text{NDF}$ : 57.2/24

Right Out:  $1487.657 \pm 453.403$   $\chi^2/\text{NDF}$ : 31.0/34

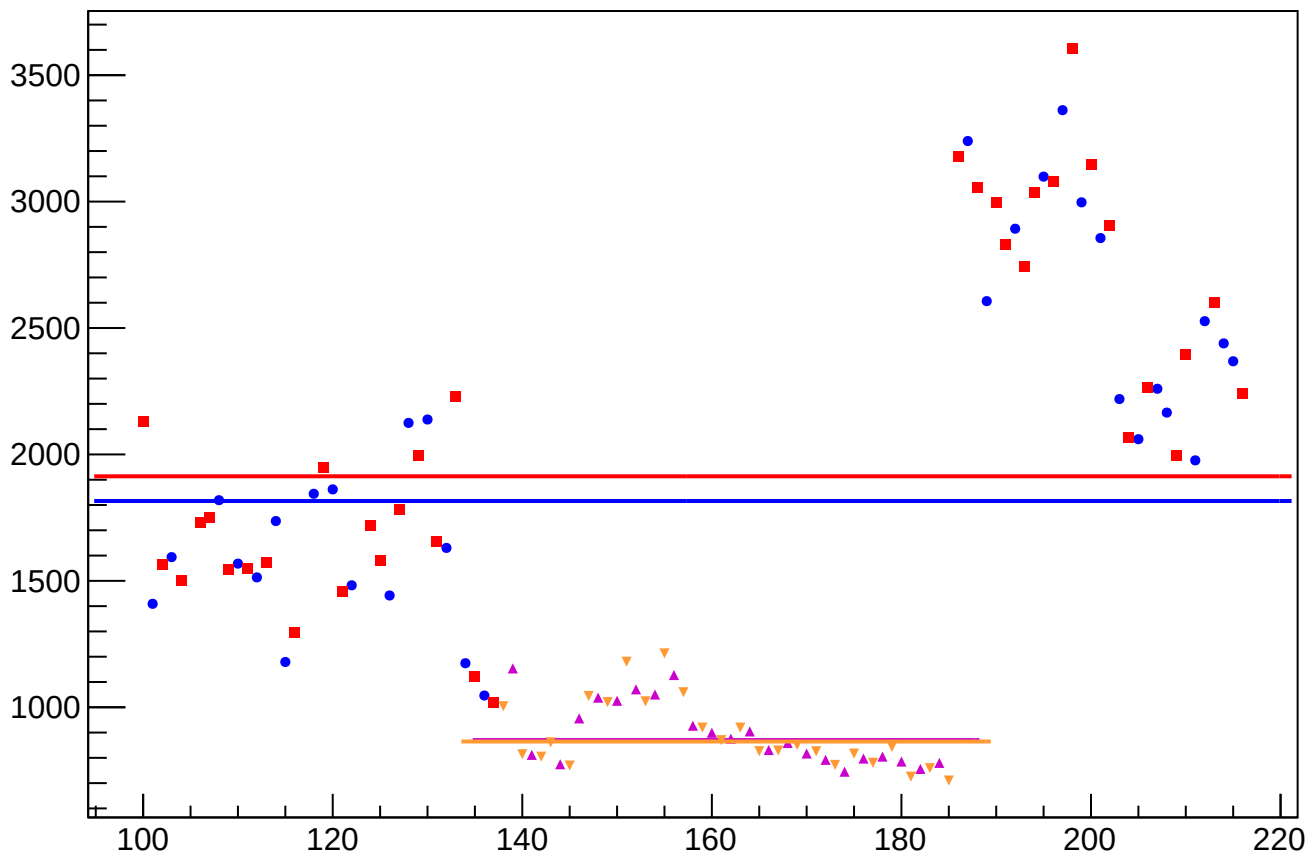
Left In:  $39.746 \pm 205.349$   $\chi^2/\text{NDF}$ : 29.7/22

+ sign  $954.467 \pm 180.946$   $\chi^2/\text{NDF}$ : 99.9/55

All:  $631.428 \pm 130.055$   $\chi^2/\text{NDF}$ : 175.6/113

- sign  $286.195 \pm 187.059$   $\chi^2/\text{NDF}$ : 69.1/57

# asym\_sam\_24\_68\_dd\_rms vs Slug



Right In: 1815.791 $\pm$ 0.309  $\chi^2$ /NDF: 3723615.1/30

Left Out: 864.637 $\pm$ 0.141  $\chi^2$ /NDF: 688948.2/24

+ sign 1027.827 $\pm$ 0.128  $\chi^2$ /NDF: 12267337.5/55

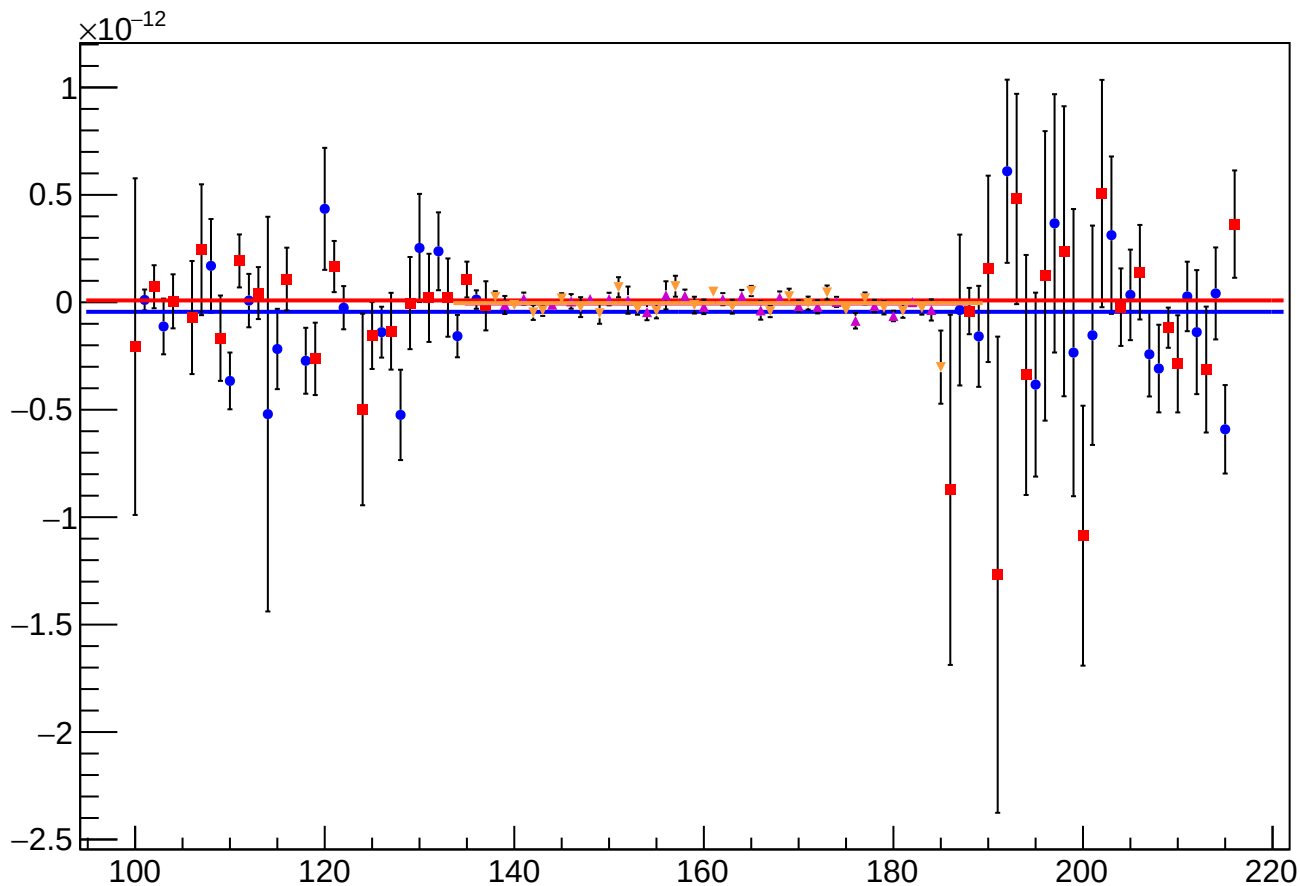
Right Out: 1913.554 $\pm$ 0.321  $\chi^2$ /NDF: 3704765.1/34

All: 1037.535 $\pm$ 0.092  $\chi^2$ /NDF: 25374119.8/1

- sign 1047.911 $\pm$ 0.132  $\chi^2$ /NDF: 13094871.9/57

Left In: 870.346 $\pm$ 0.145  $\chi^2$ /NDF: 604520.6/22

asym\_sam\_24\_68\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 42.7/30$

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 38.7/24$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 29.1/34$

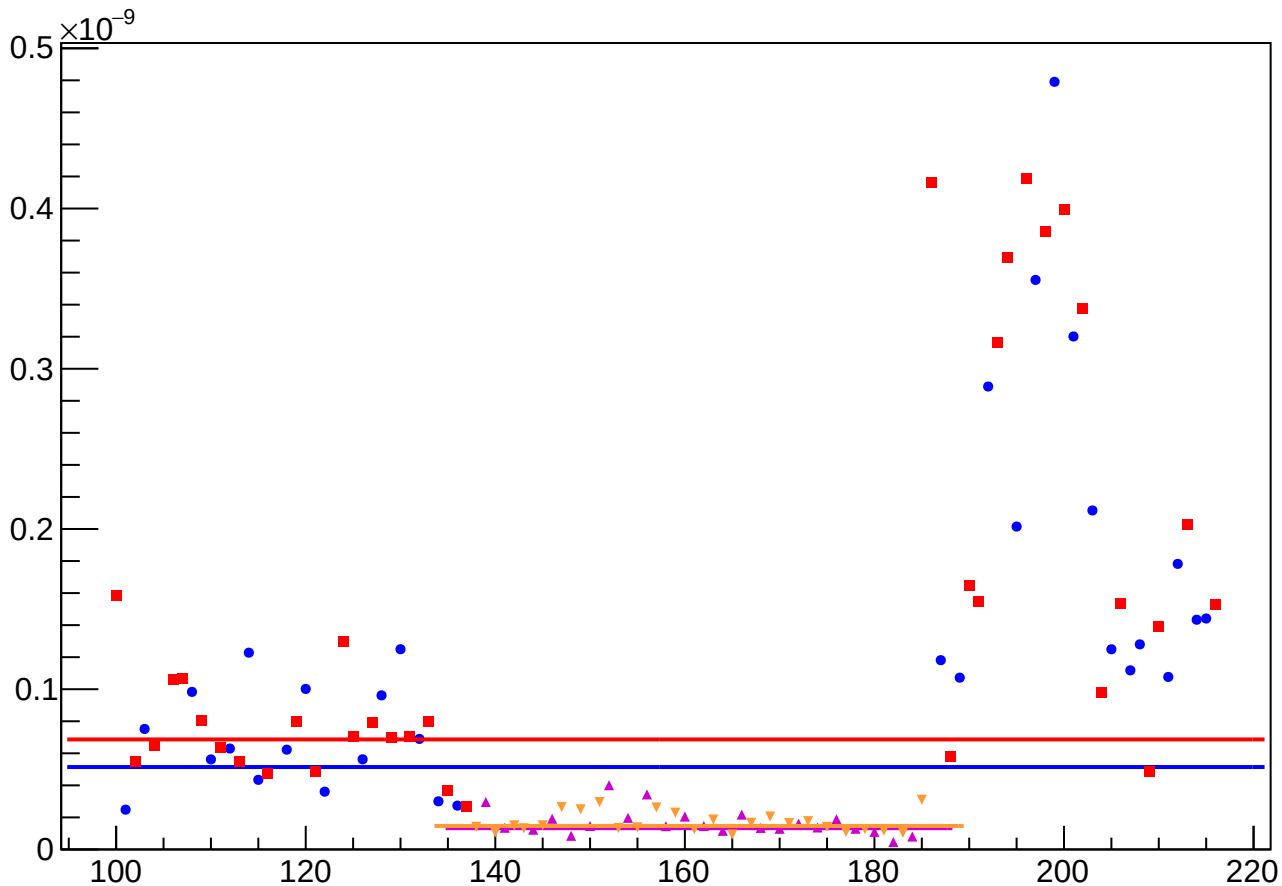
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 20.6/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 84.2/55$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 134.2/113$

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 50.0/57$

asym\_sam\_24\_68\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7351062.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1073691.3/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 5863256.1/34

Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ :1970835.1/22

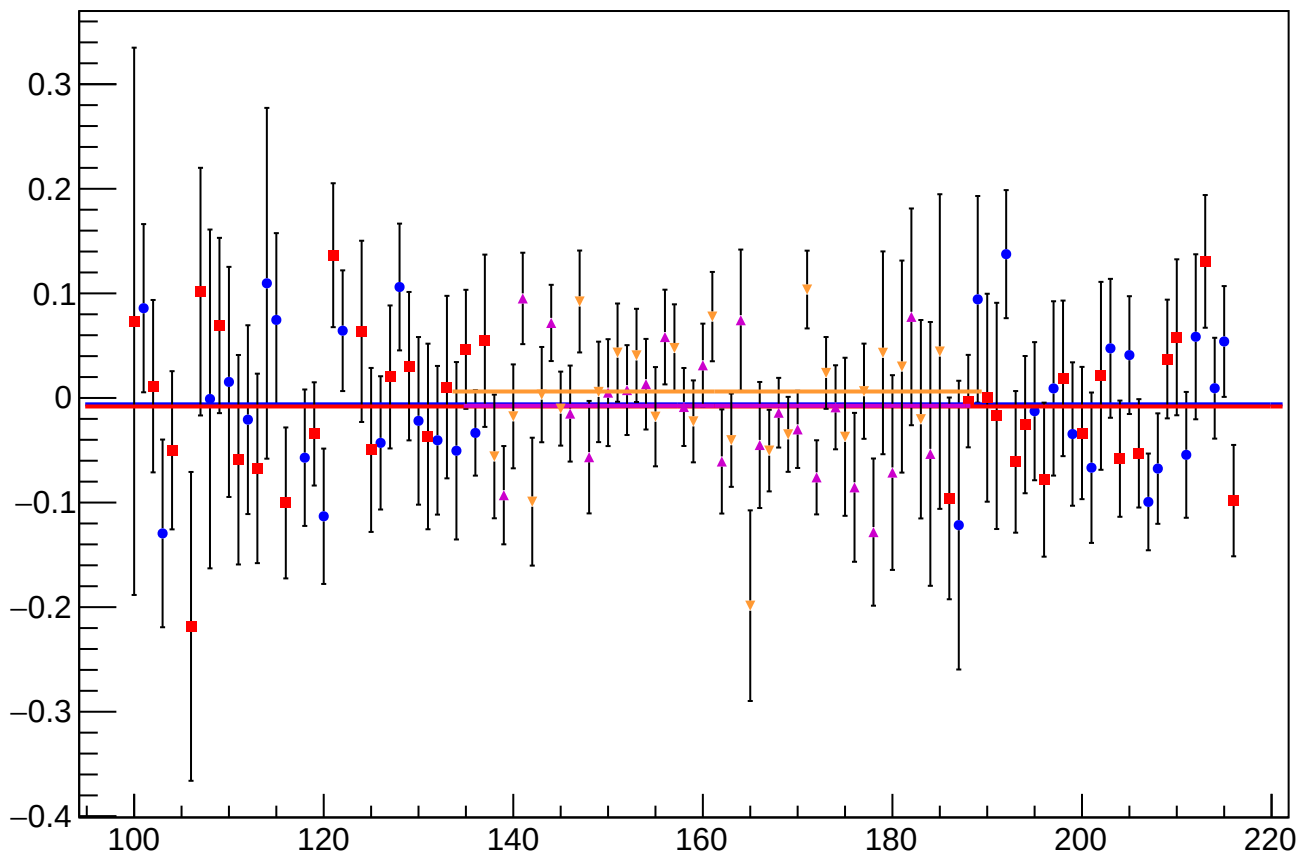
+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 13035778.5/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 27986570.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 14896908.5/57



asym\_sam\_24\_68\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 27.8/34

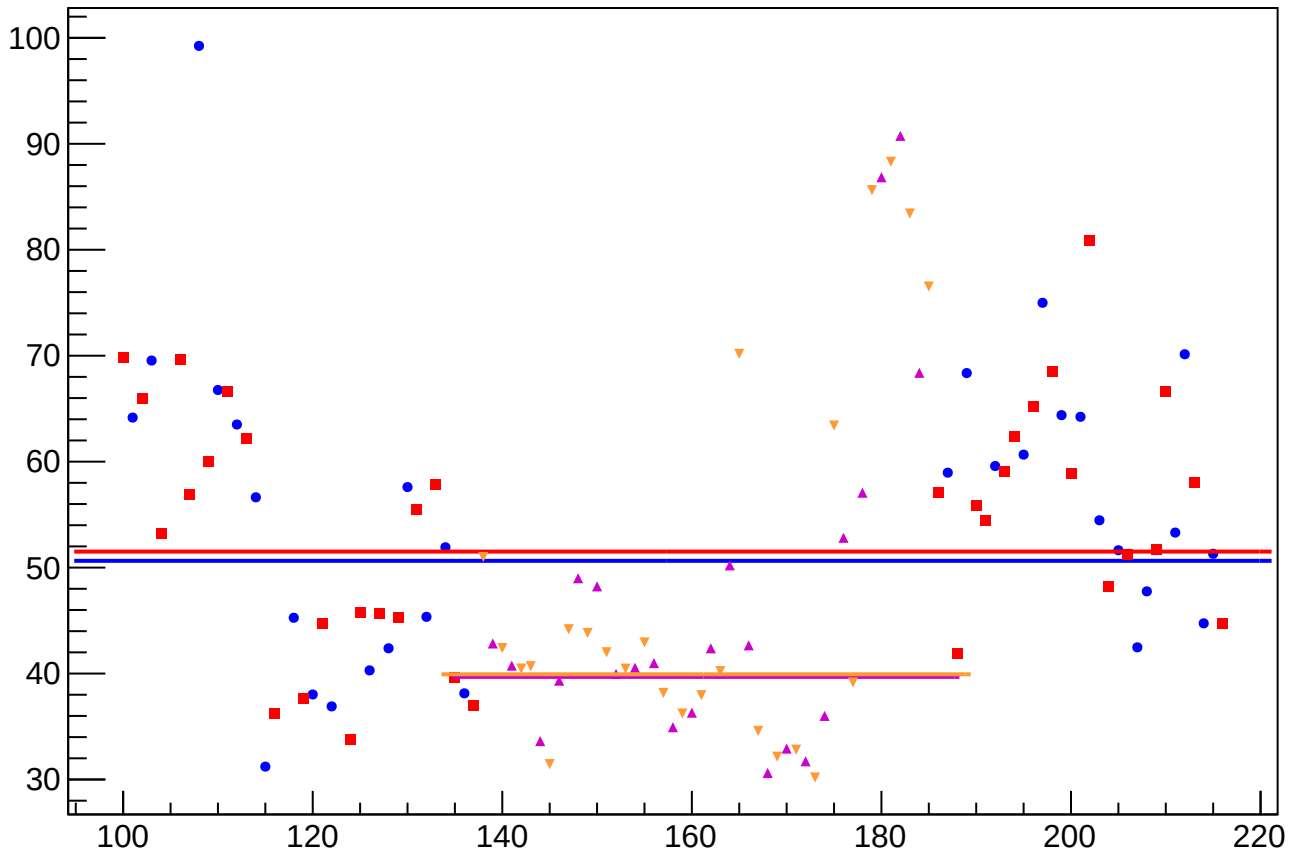
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.4/55

All:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 58.2/57

asym\_sam\_24\_68\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.640 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 1743375.8/30

Left Out: 39.930 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 2475485.4/24

Right Out: 51.512 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 1498172.1/34

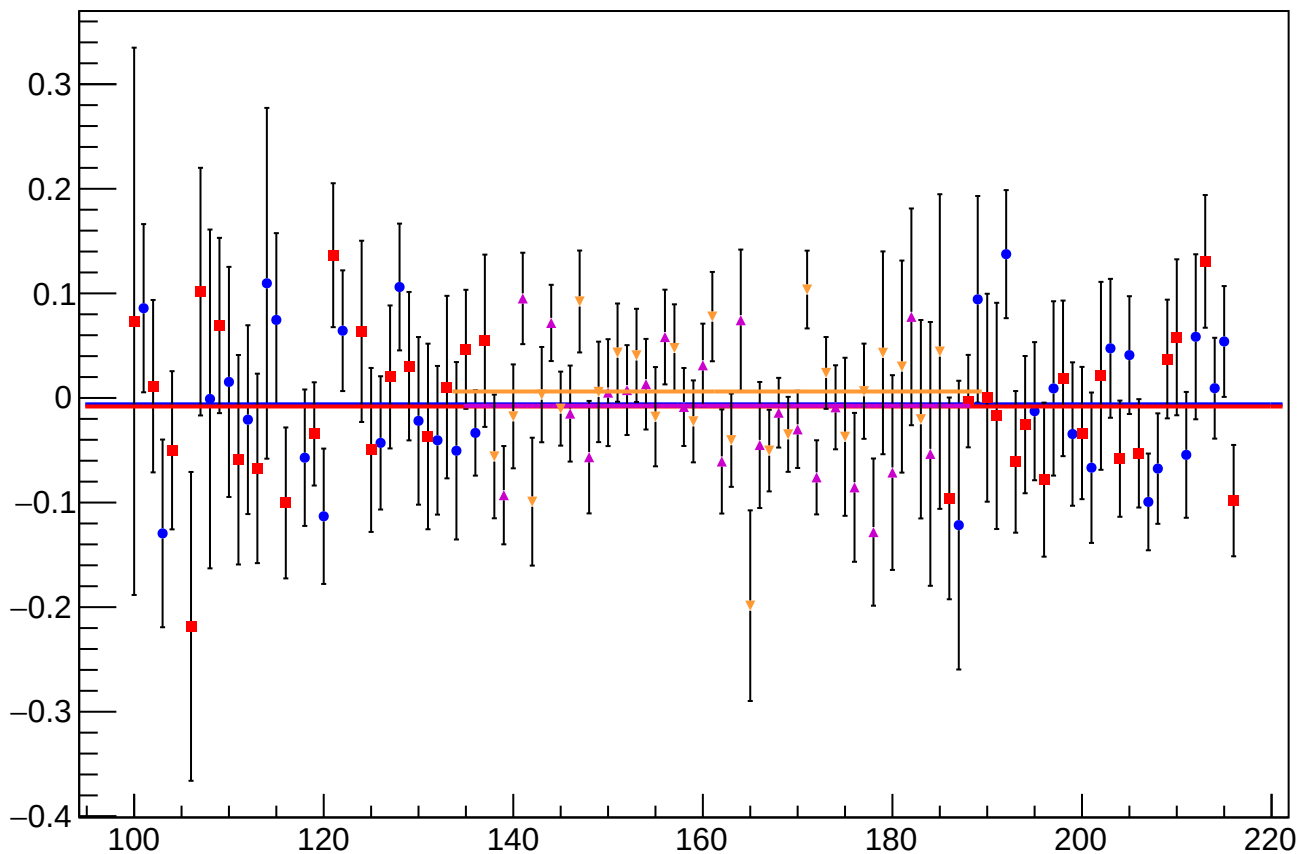
Left In: 39.686 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 1915871.4/22

+ sign 44.072 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 5187128.3/55

All: 44.213 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 9759492.3/113

- sign 44.359 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 4570912.3/57

asym\_sam\_24\_68\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 27.8/34

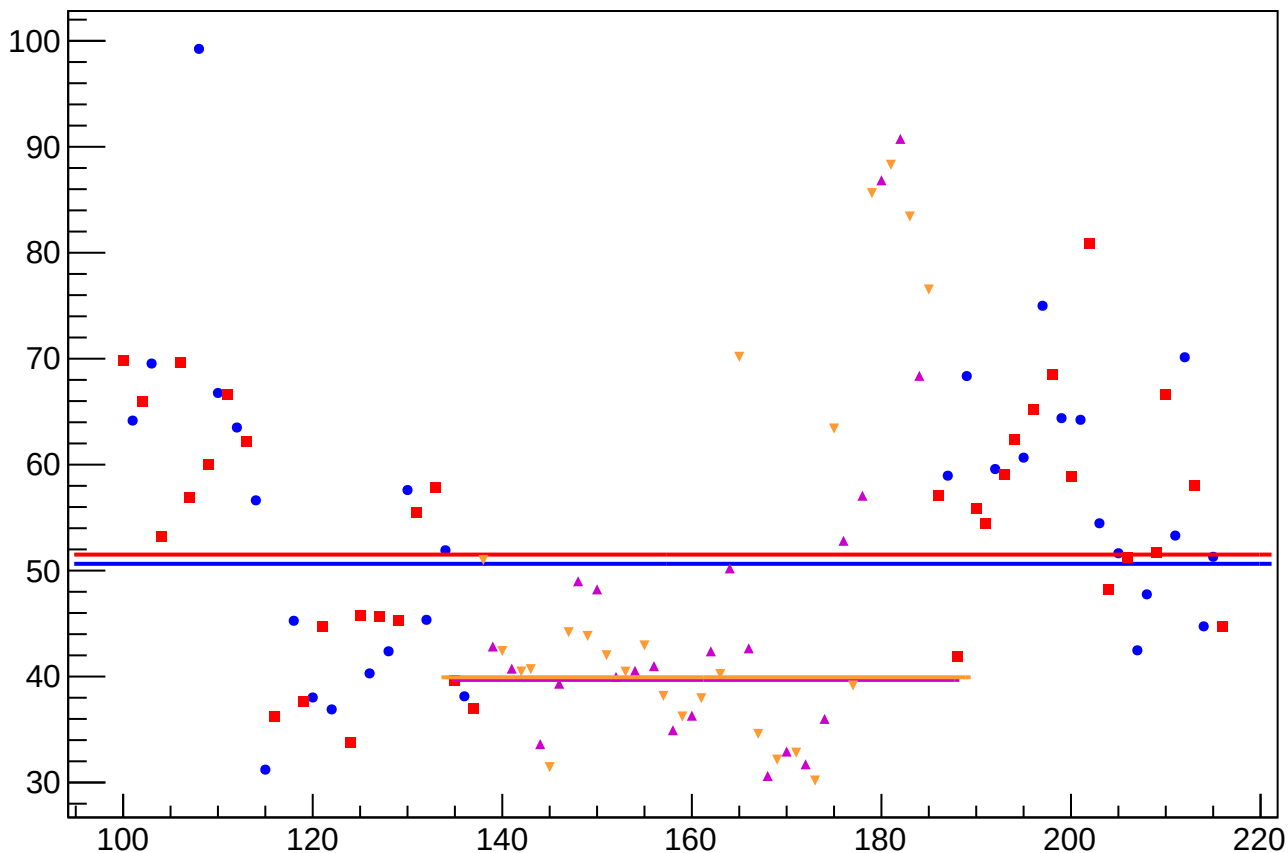
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.4/55

All:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 58.2/57

asym\_sam\_24\_68\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.640 $\pm$ 0.009  $\chi^2$ /NDF: 1743375.8/30

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475485.4/24

Right Out: 51.512 $\pm$ 0.009  $\chi^2$ /NDF: 1498172.1/34

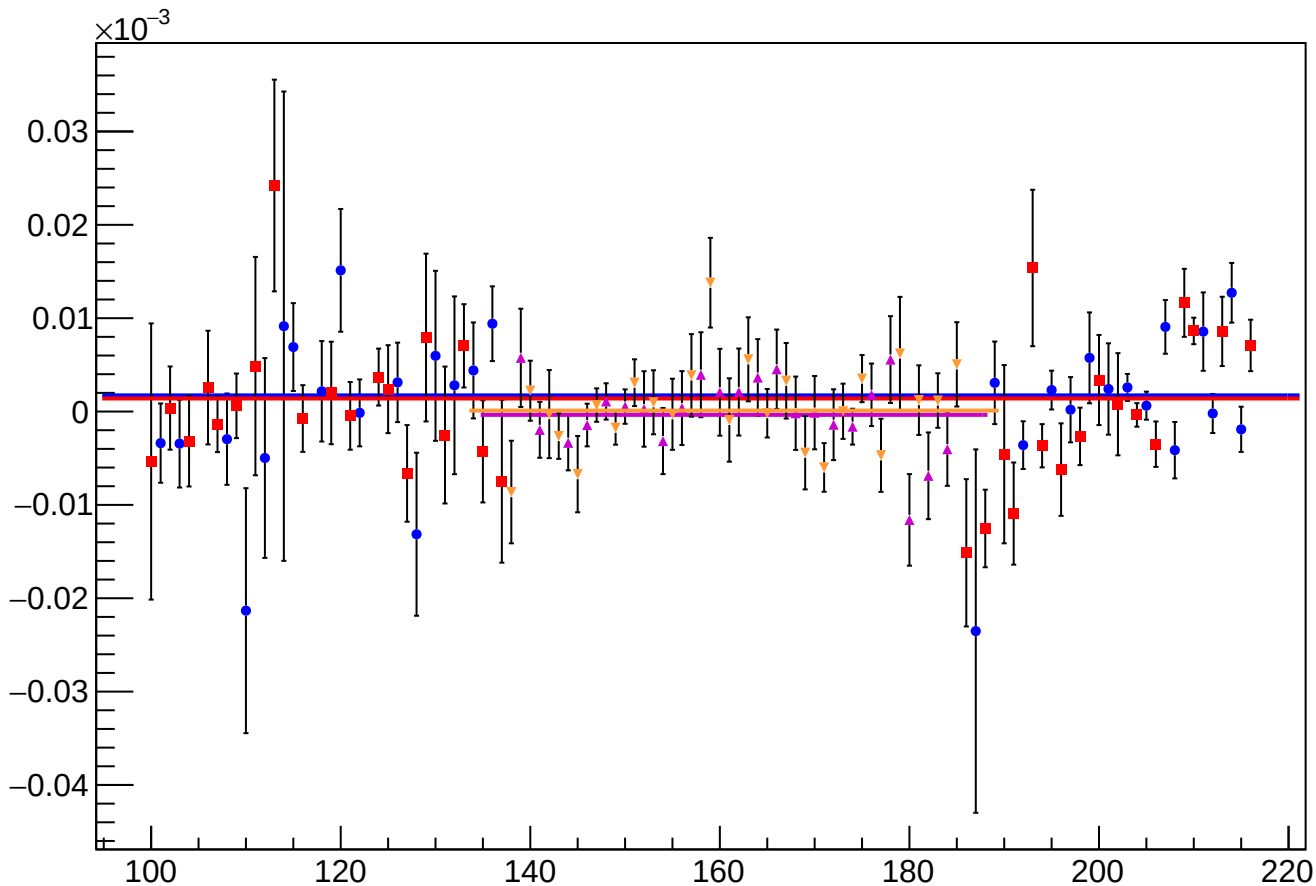
Left In: 39.686 $\pm$ 0.007  $\chi^2$ /NDF: 1915871.4/22

+ sign 44.072 $\pm$ 0.005  $\chi^2$ /NDF: 5187128.3/55

All: 44.213 $\pm$ 0.004  $\chi^2$ /NDF: 9759492.3/113

- sign 44.359 $\pm$ 0.005  $\chi^2$ /NDF: 4570912.3/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 55.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.2/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 95.3/34

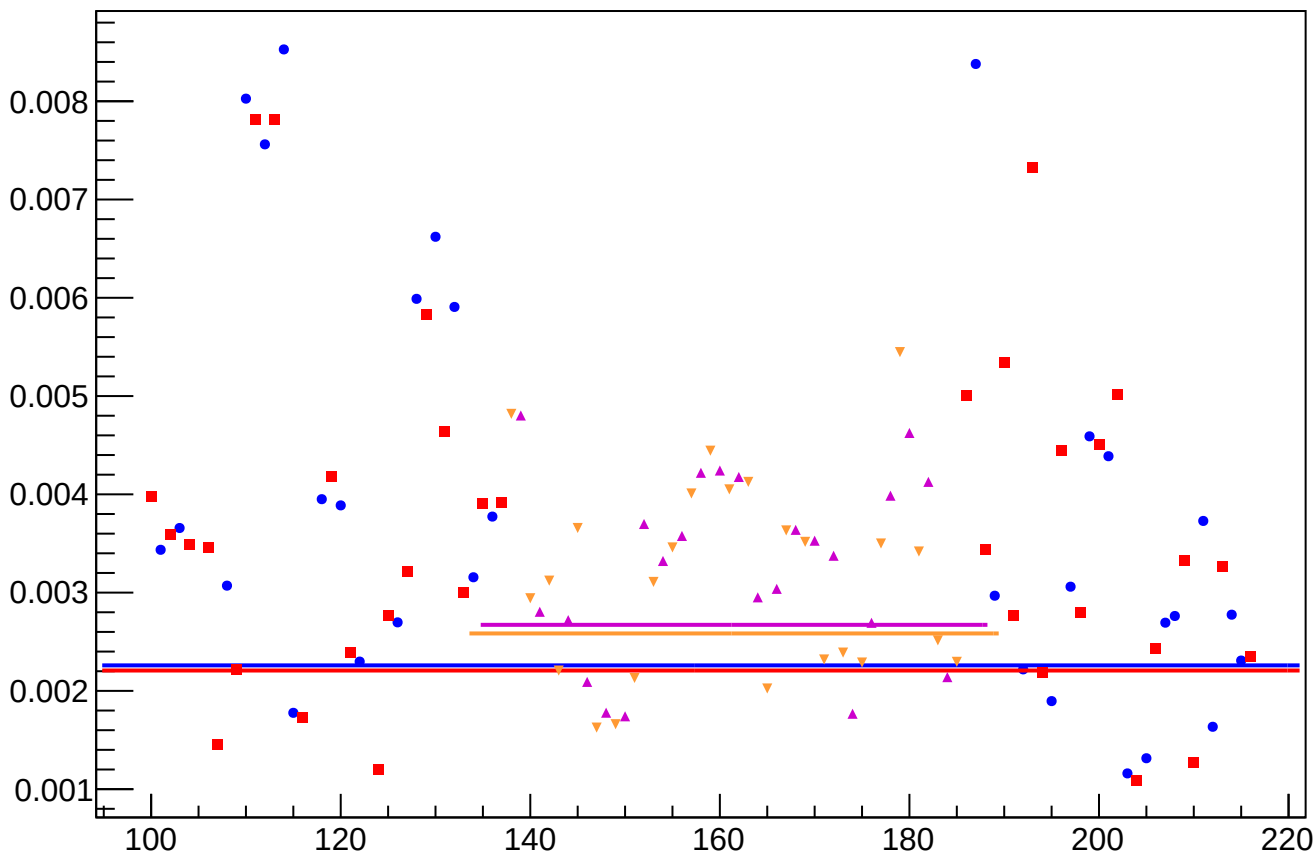
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 92.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 210.8/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 117.9/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6994539.5/30

Left Out: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3892707.7/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8740685.5/34

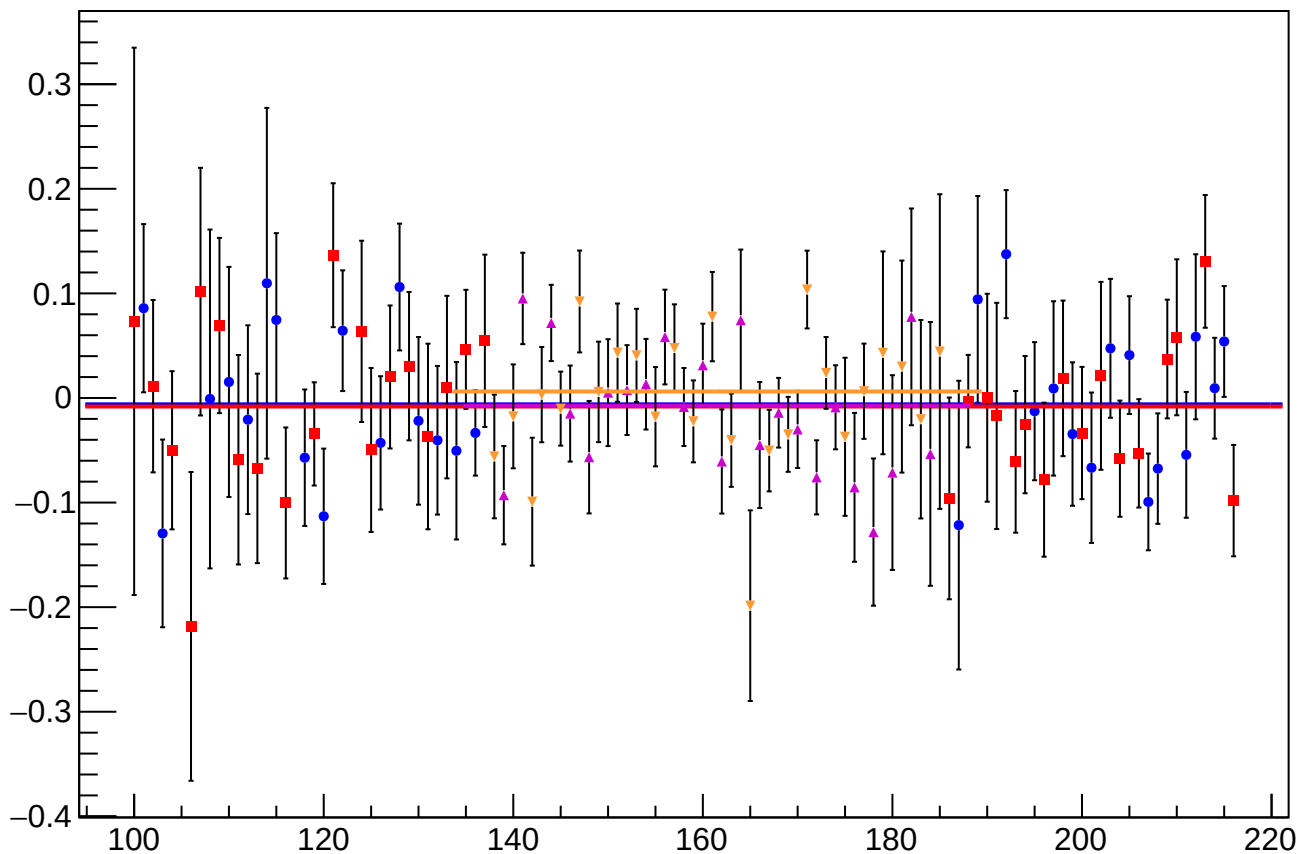
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3825662.0/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11170788.0/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 24286944.0/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13115959.7/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 27.8/34

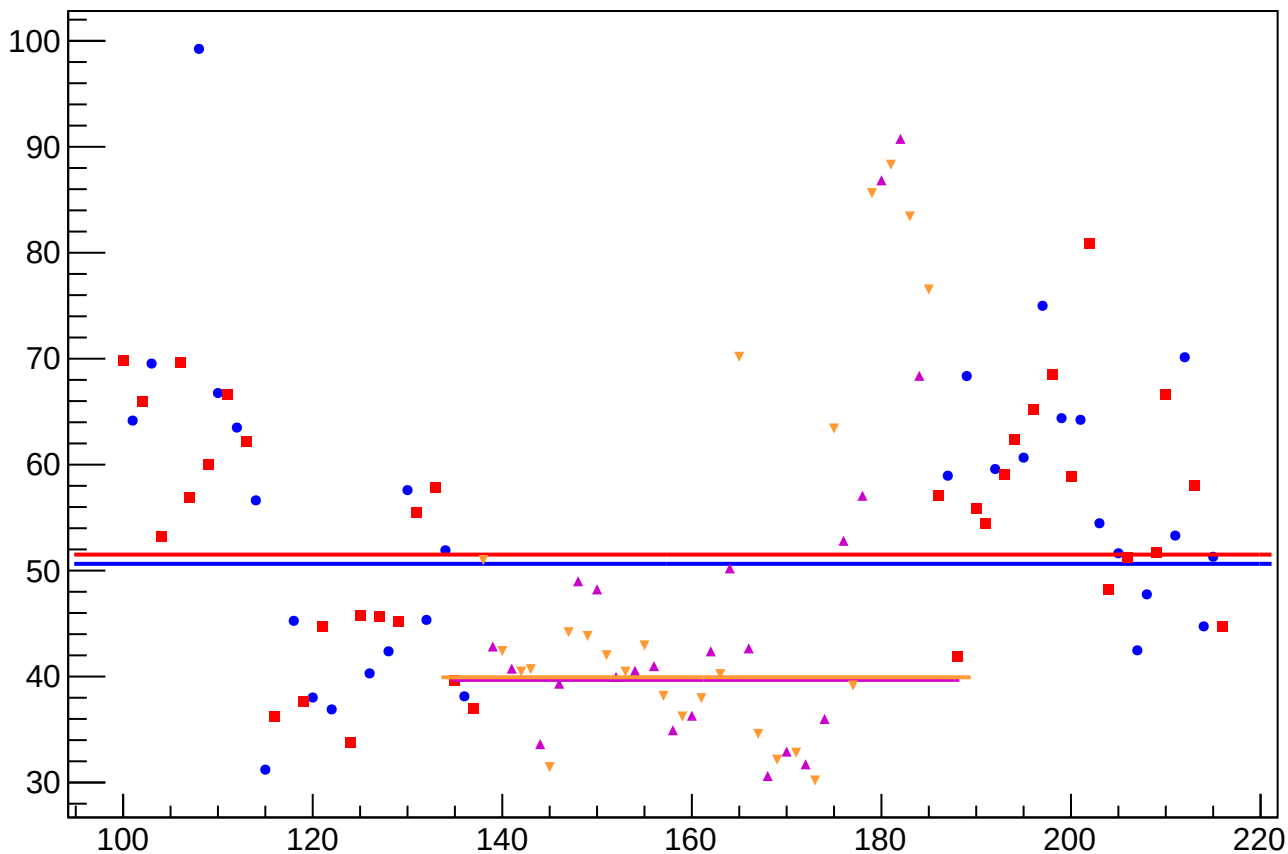
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.4/55

All:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 58.2/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 50.639 $\pm$ 0.009  $\chi^2$ /NDF: 1743454.4/30

Left Out: 39.930 $\pm$ 0.007  $\chi^2$ /NDF: 2475527.1/24

Right Out: 51.511 $\pm$ 0.009  $\chi^2$ /NDF: 1498201.6/34

Left In: 39.685 $\pm$ 0.007  $\chi^2$ /NDF: 1915901.2/22

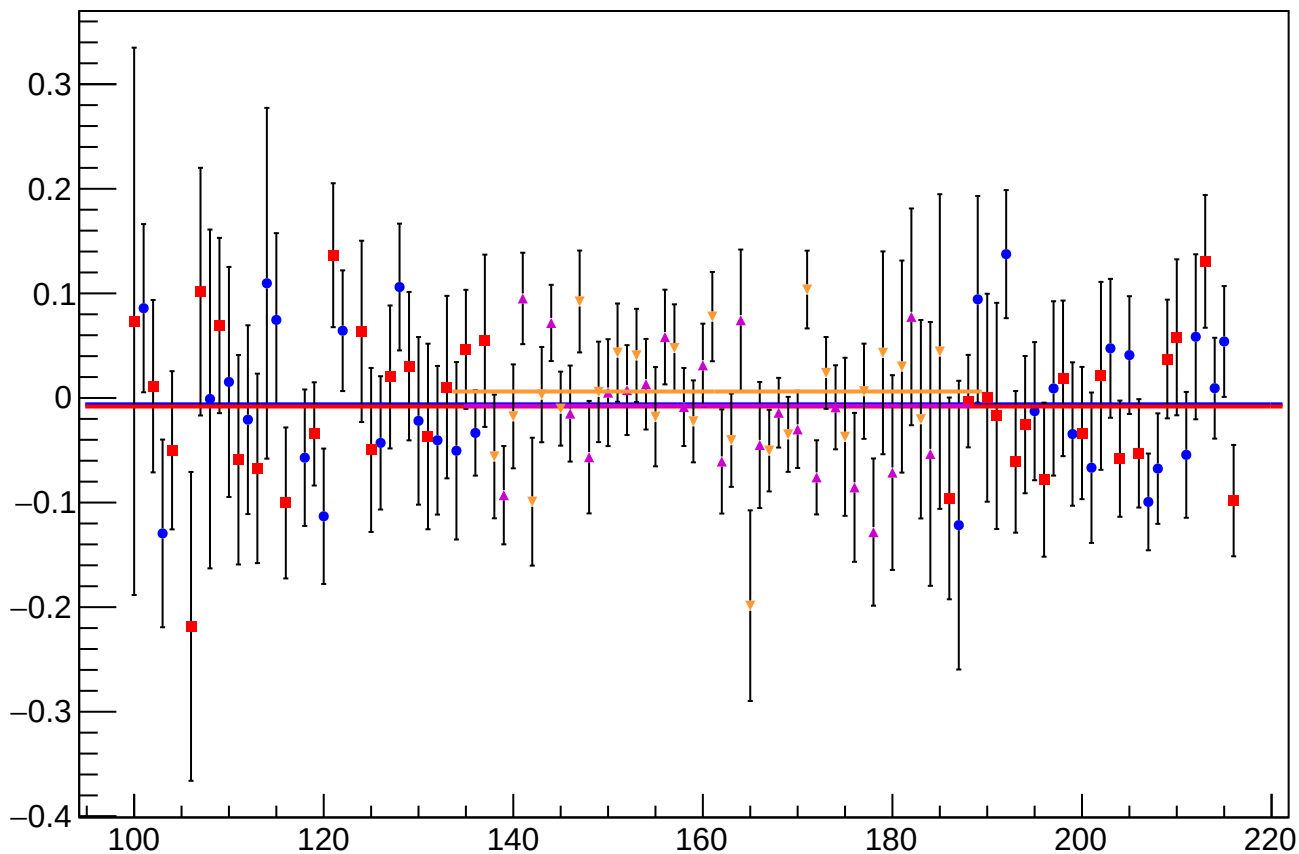
+ sign 44.071 $\pm$ 0.005  $\chi^2$ /NDF: 5187057.5/55

All: 44.213 $\pm$ 0.004  $\chi^2$ /NDF: 9759416.3/113

- sign 44.359 $\pm$ 0.005  $\chi^2$ /NDF: 4570907.8/57



asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.006 \pm 0.012$   $\chi^2/\text{NDF}$ : 31.9/30

Left Out:  $0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-0.008 \pm 0.012$   $\chi^2/\text{NDF}$ : 27.8/34

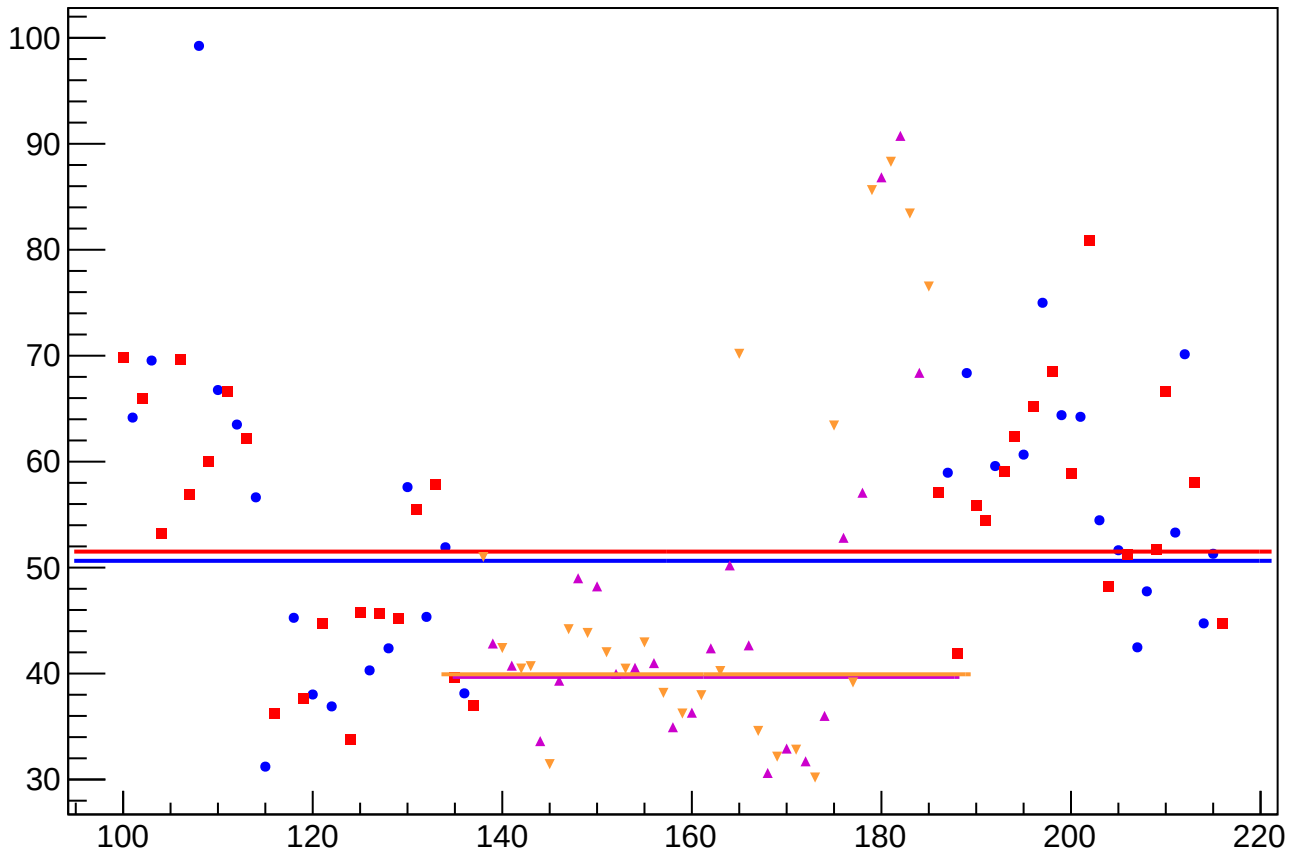
Left In:  $-0.007 \pm 0.010$   $\chi^2/\text{NDF}$ : 30.4/22

+ sign  $0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.4/55

All:  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 122.3/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 58.2/57

asym\_sam\_24\_68\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 50.639 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 1743454.4/30

Left Out: 39.930 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 2475527.1/24

Right Out: 51.511 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 1498201.6/34

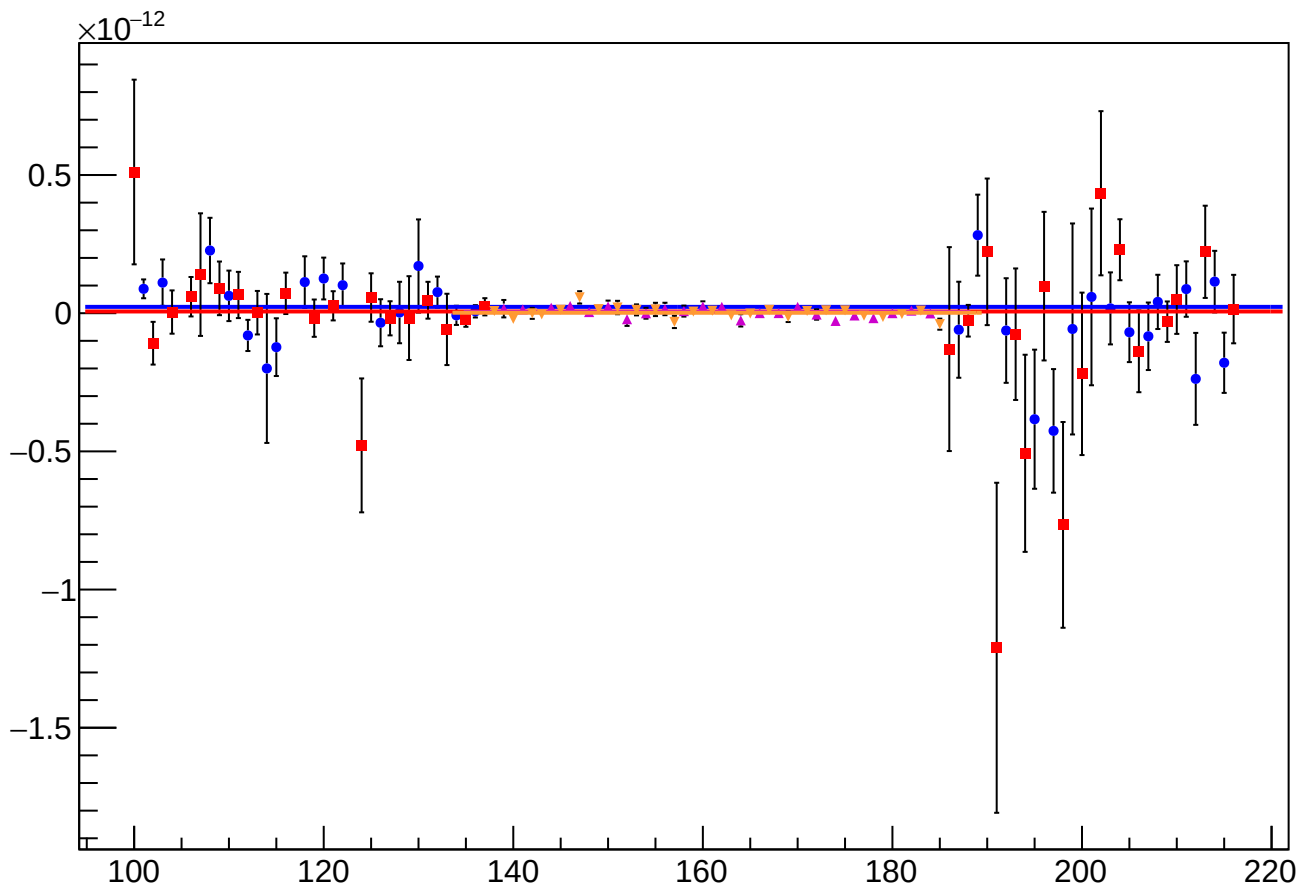
Left In: 39.685 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 1915901.2/22

+ sign 44.071 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 5187057.5/55

All: 44.213 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 9759416.3/113

- sign 44.359 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 4570907.8/57

asym\_sam\_24\_68\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.9/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:28.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.9/34

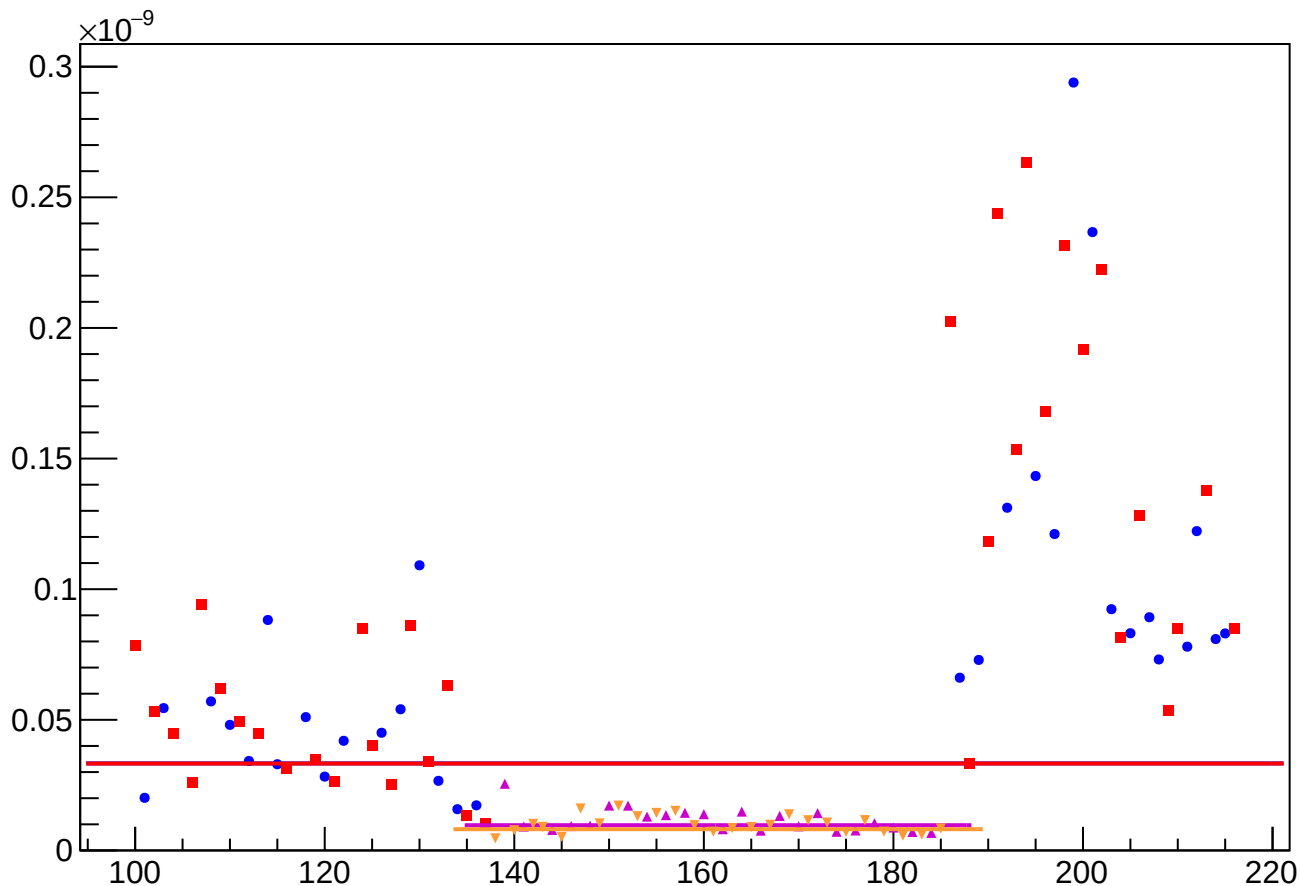
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:27.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 70.5/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 134.1/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 63.5/57

asym\_sam\_24\_68\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9349642.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2354980.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10866867.4/34

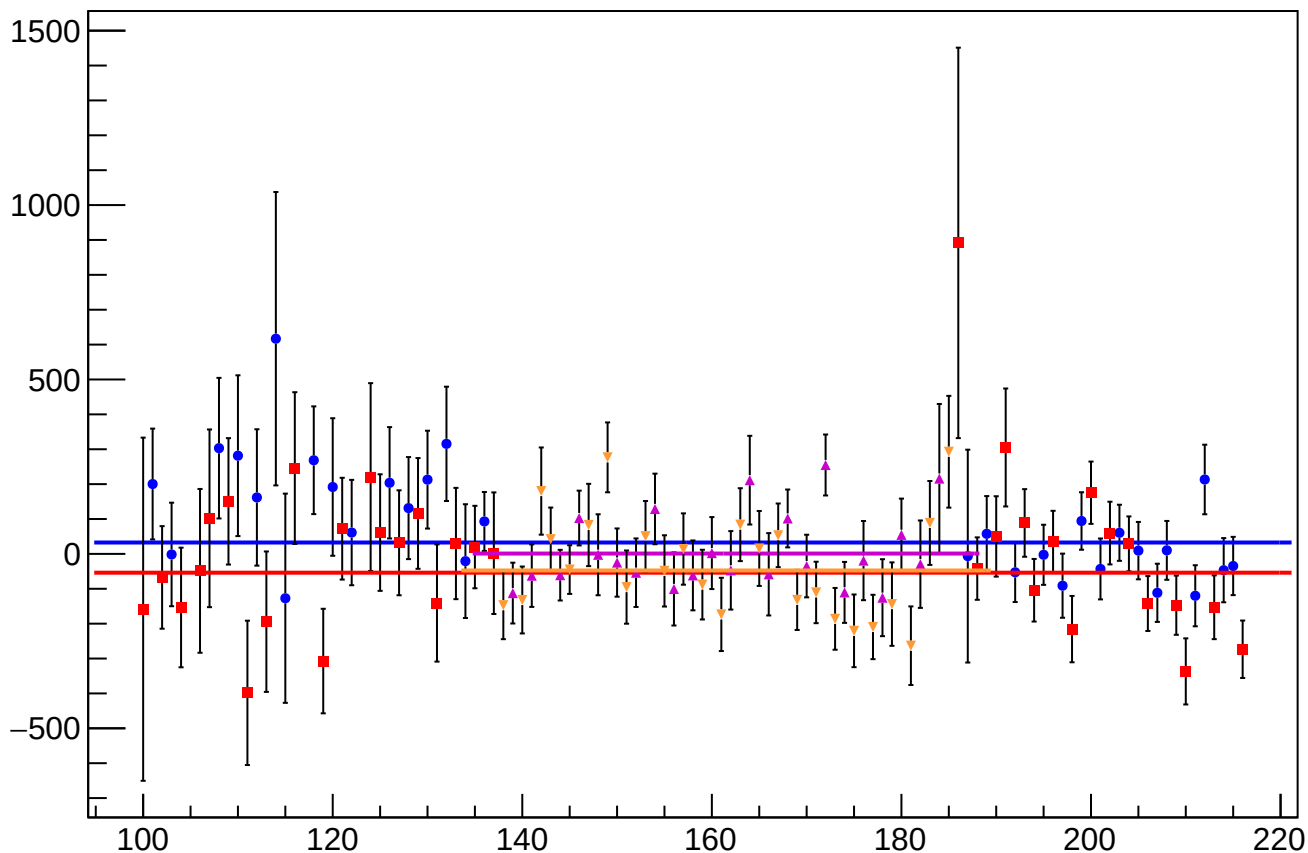
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2106161.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19310072.4/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38737627.7/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 19044254.3/57

# reg\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $32.637 \pm 20.083$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $-47.524 \pm 19.983$   $\chi^2/\text{NDF}$ : 44.0/24

Right Out:  $-53.862 \pm 20.329$   $\chi^2/\text{NDF}$ : 58.4/34

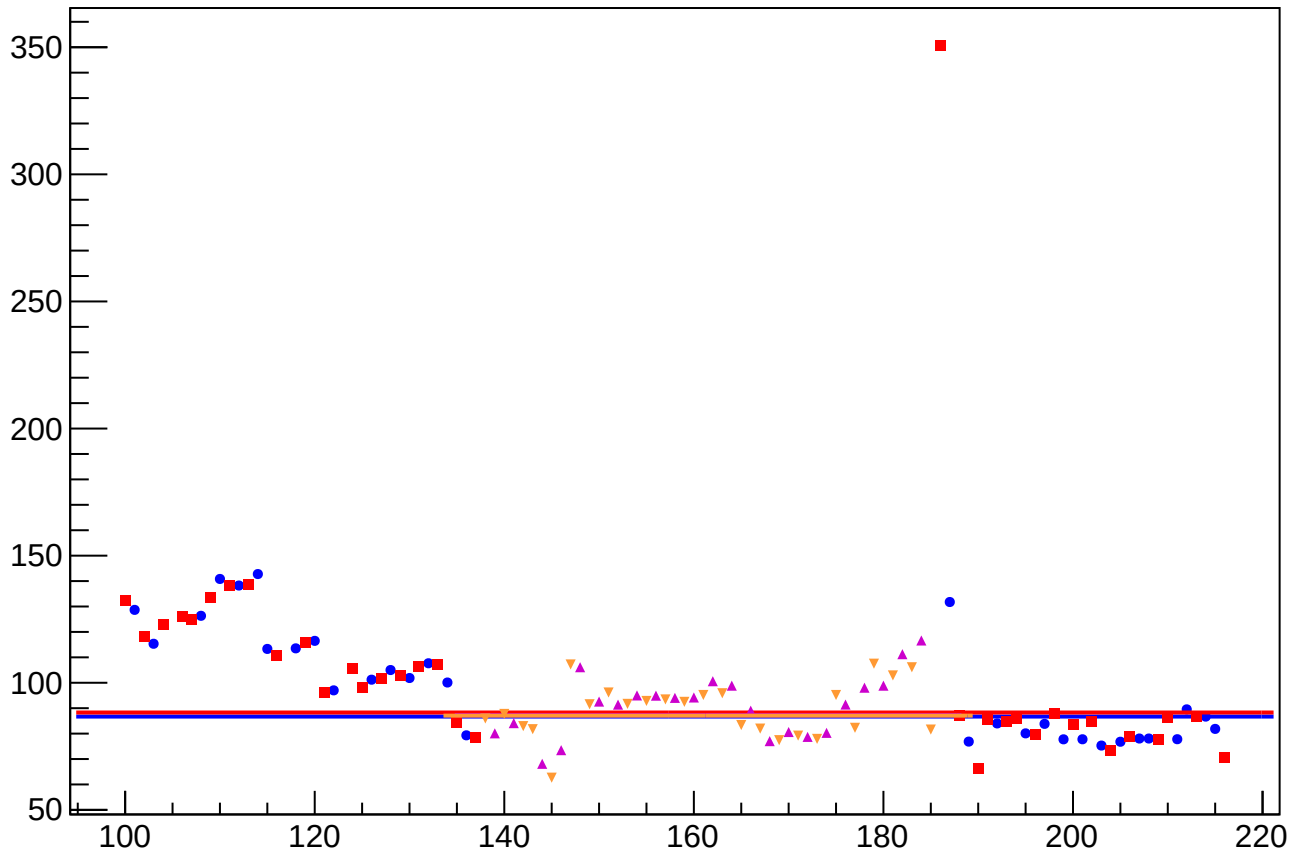
Left In:  $0.986 \pm 20.604$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-7.643 \pm 14.165$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-17.020 \pm 10.123$   $\chi^2/\text{NDF}$ : 172.3/113

- sign  $-26.806 \pm 14.471$   $\chi^2/\text{NDF}$ : 87.4/57

# reg\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 86.705 $\pm$ 0.014  $\chi^2$ /NDF: 1101447.0/30

Left Out: 87.072 $\pm$ 0.014  $\chi^2$ /NDF: 620626.5/24

Right Out: 88.301 $\pm$ 0.014  $\chi^2$ /NDF: 1617316.1/34

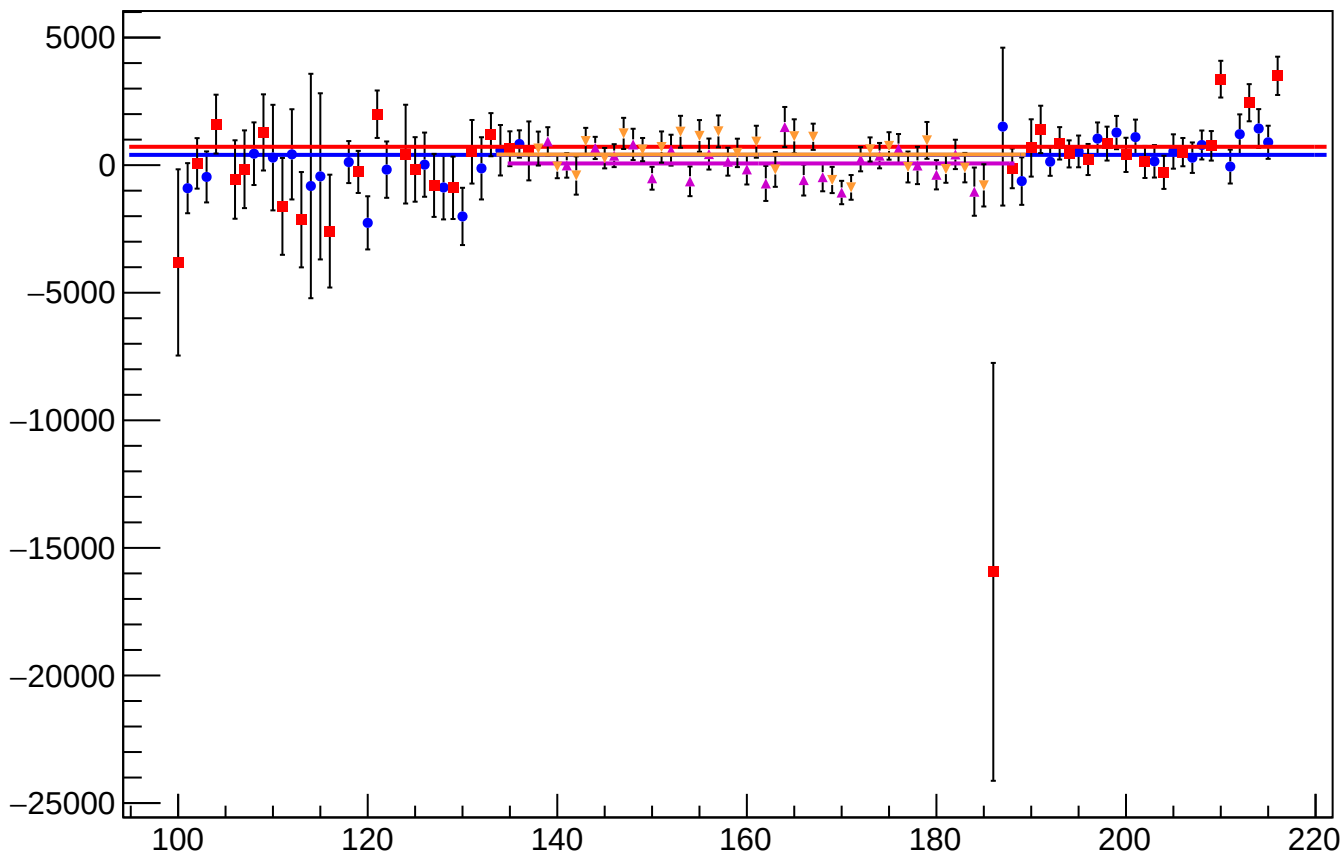
Left In: 87.257 $\pm$ 0.015  $\chi^2$ /NDF: 595793.1/22

+ sign 86.890 $\pm$ 0.010  $\chi^2$ /NDF: 1722407.8/55

All: 87.328 $\pm$ 0.007  $\chi^2$ /NDF: 3942040.9/113

- sign 87.786 $\pm$ 0.010  $\chi^2$ /NDF: 2215714.2/57

asym\_sam\_26\_48\_dd\_reg\_correction\_mean vs Slug



Right In: 402.577 $\pm$ 146.564  $\chi^2$ /NDF: 26.4/30

Left Out: 416.424 $\pm$ 112.336  $\chi^2$ /NDF:32.4/24

Right Out: 719.194 $\pm$ 145.433  $\chi^2$ /NDF: 60.7/34

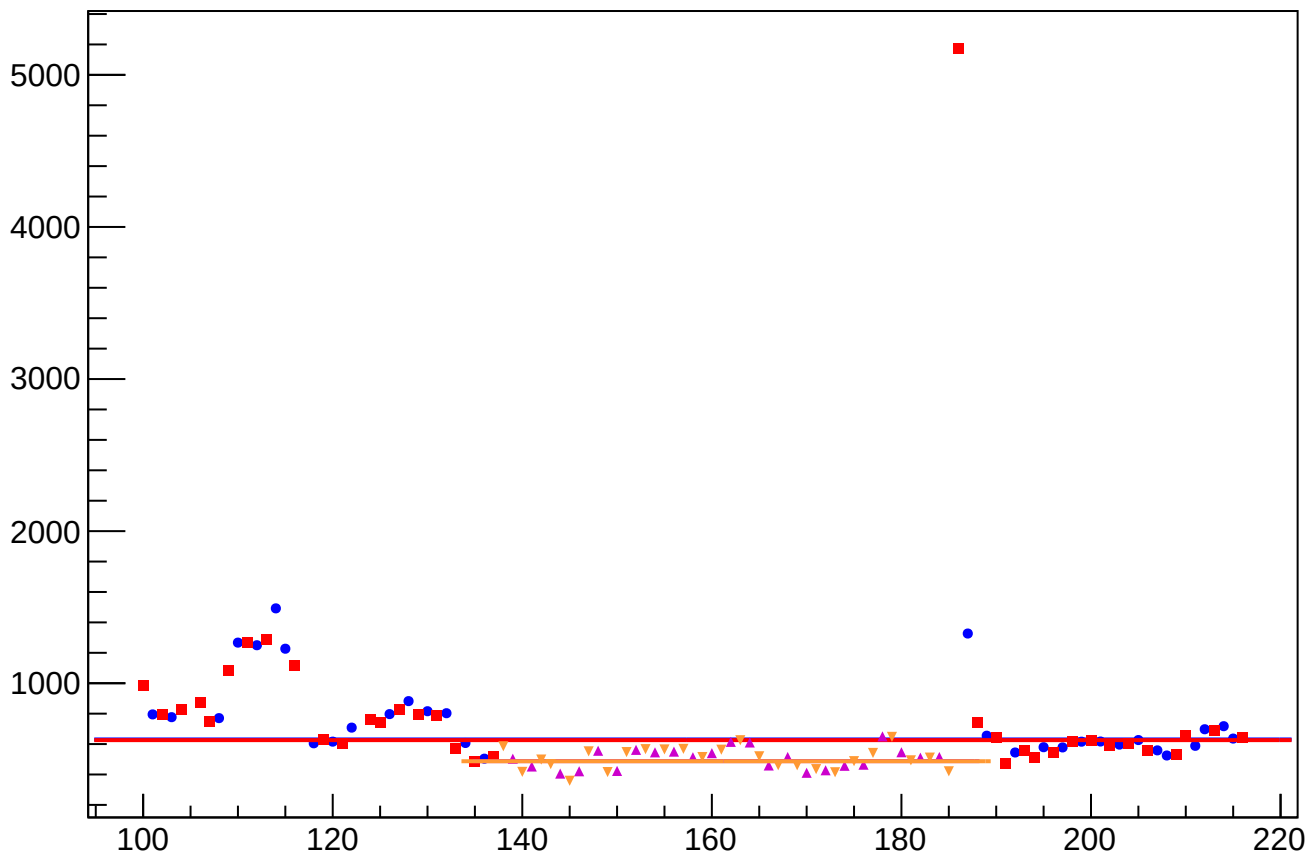
Left In: 66.675 $\pm$ 115.419  $\chi^2$ /NDF:27.5/22

+ sign 411.300 $\pm$ 89.159  $\chi^2$ /NDF: 58.8/55

All: 365.711 $\pm$ 63.482  $\chi^2$ /NDF: 159.9/113

- sign 318.836 $\pm$ 90.408  $\chi^2$ /NDF: 100.6/57

asym\_sam\_26\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 630.210 $\pm$ 0.104  $\chi^2$ /NDF: 1372670.9/30

Left Out: 487.081 $\pm$ 0.079  $\chi^2$ /NDF: 821265.9/24

Right Out: 625.909 $\pm$ 0.103  $\chi^2$ /NDF: 2224801.2/34

Left In: 487.930 $\pm$ 0.082  $\chi^2$ /NDF: 634269.5/22

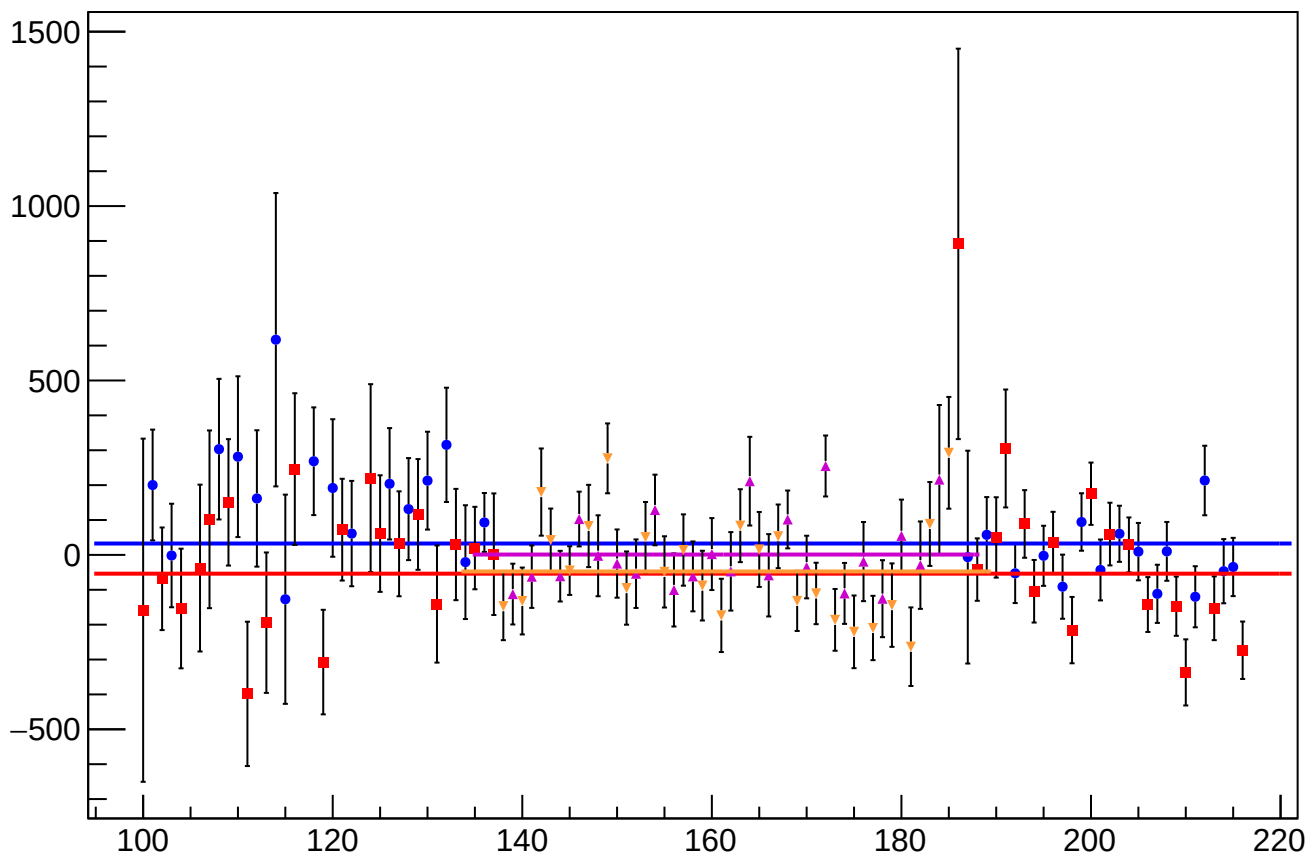
+ sign 540.048 $\pm$ 0.063  $\chi^2$ /NDF: 3395439.3/55

All: 540.641 $\pm$ 0.045  $\chi^2$ /NDF: 7359229.3/113

- sign 541.251 $\pm$ 0.064  $\chi^2$ /NDF: 3963610.3/57



# cor\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $32.631 \pm 20.083$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $-47.532 \pm 19.983$   $\chi^2/\text{NDF}$ : 44.0/24

Right Out:  $-53.802 \pm 20.332$   $\chi^2/\text{NDF}$ : 58.4/34

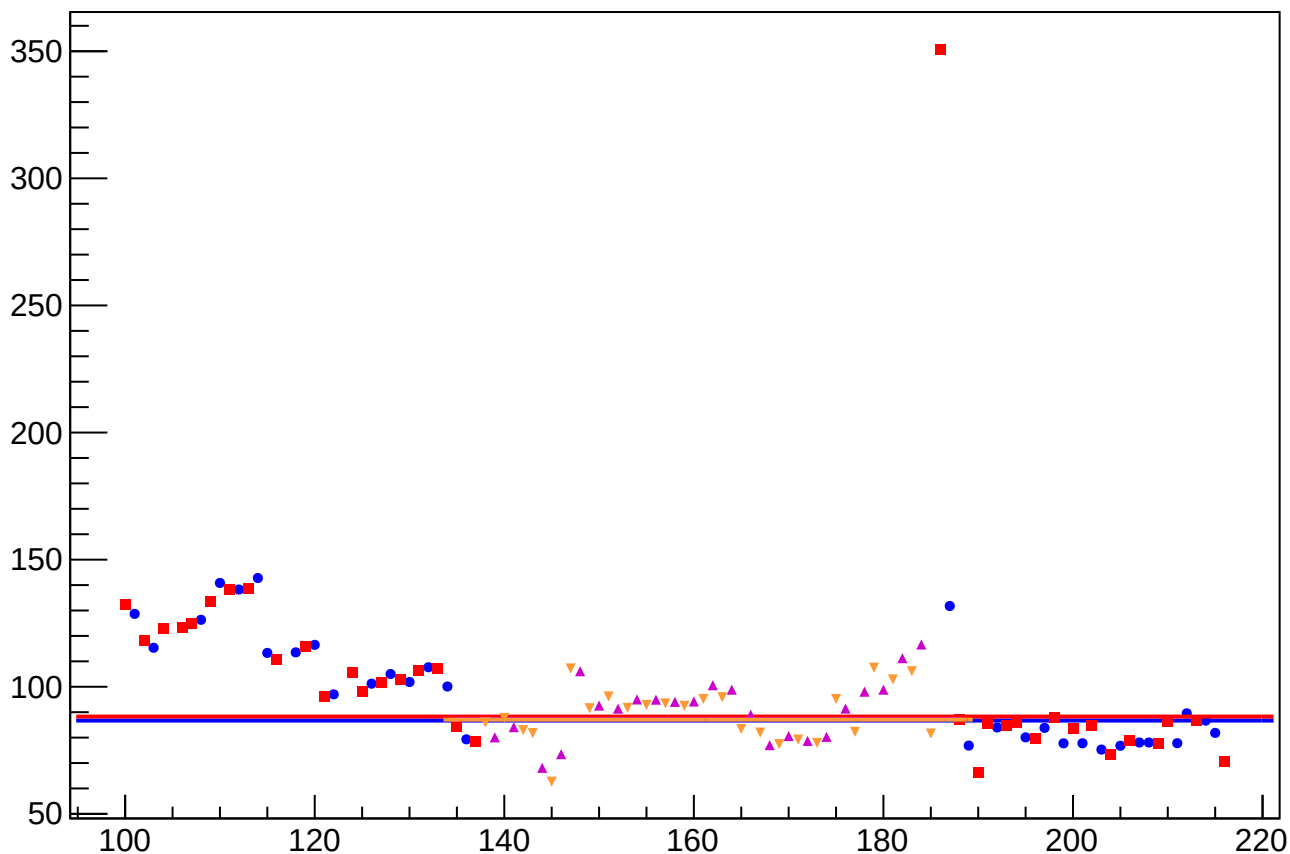
Left In:  $0.988 \pm 20.604$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-7.649 \pm 14.165$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-17.006 \pm 10.123$   $\chi^2/\text{NDF}$ : 172.3/113

- sign  $-26.771 \pm 14.472$   $\chi^2/\text{NDF}$ : 87.4/57

# cor\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 86.705 $\pm$ 0.014  $\chi^2$ /NDF: 1101447.4/30

Left Out: 87.072 $\pm$ 0.014  $\chi^2$ /NDF: 620626.5/24

Right Out: 88.271 $\pm$ 0.014  $\chi^2$ /NDF: 1608391.5/34

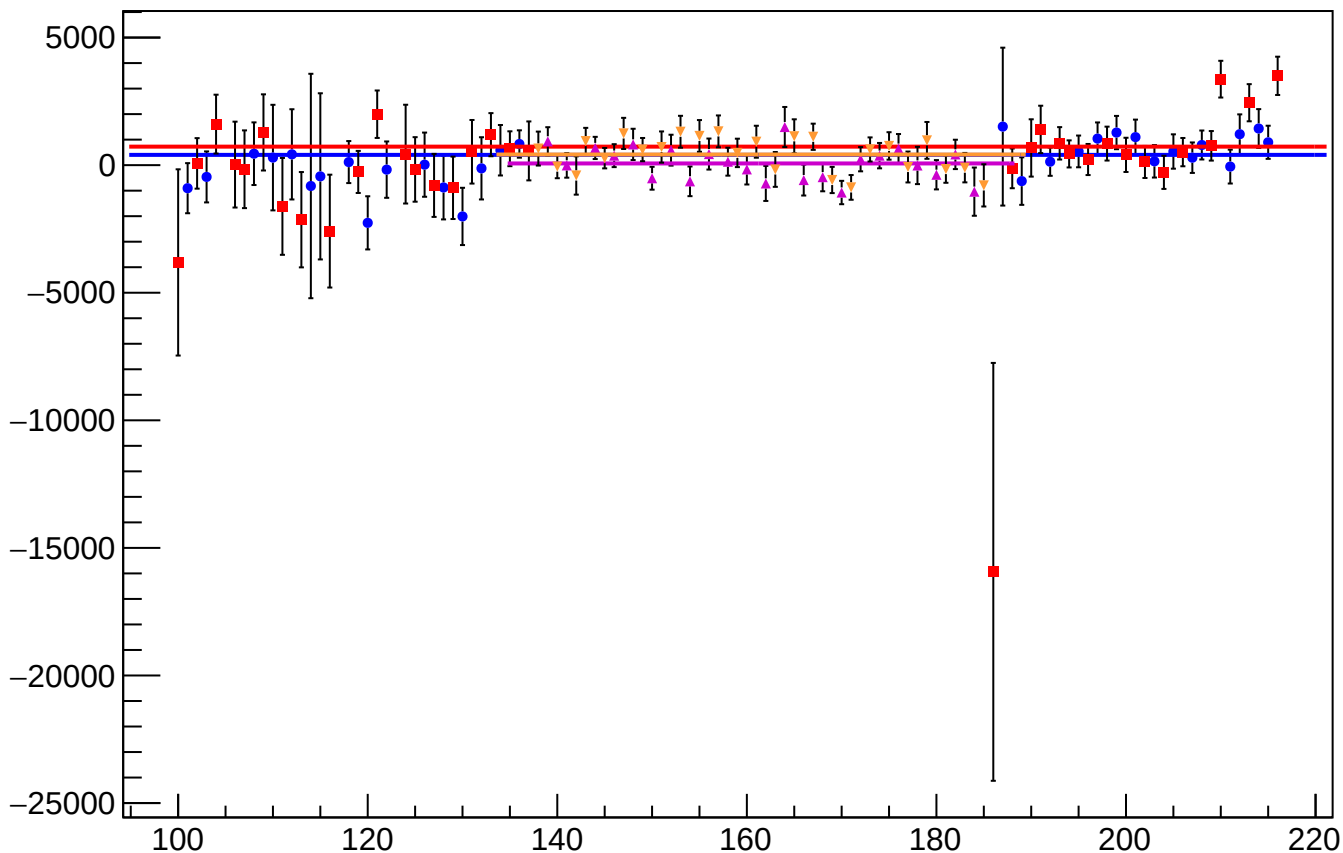
Left In: 87.257 $\pm$ 0.015  $\chi^2$ /NDF: 595793.1/22

+ sign 86.890 $\pm$ 0.010  $\chi^2$ /NDF: 1722408.2/55

All: 87.321 $\pm$ 0.007  $\chi^2$ /NDF: 3932832.6/113

- sign 87.770 $\pm$ 0.010  $\chi^2$ /NDF: 2206639.9/57

asym\_sam\_26\_48\_dd\_cor\_correction\_mean vs Slug



Right In: 402.574 $\pm$ 146.564  $\chi^2$ /NDF: 26.4/30

Left Out: 416.416 $\pm$ 112.336  $\chi^2$ /NDF: 32.4/24

Right Out: 725.476 $\pm$ 145.543  $\chi^2$ /NDF: 60.2/34

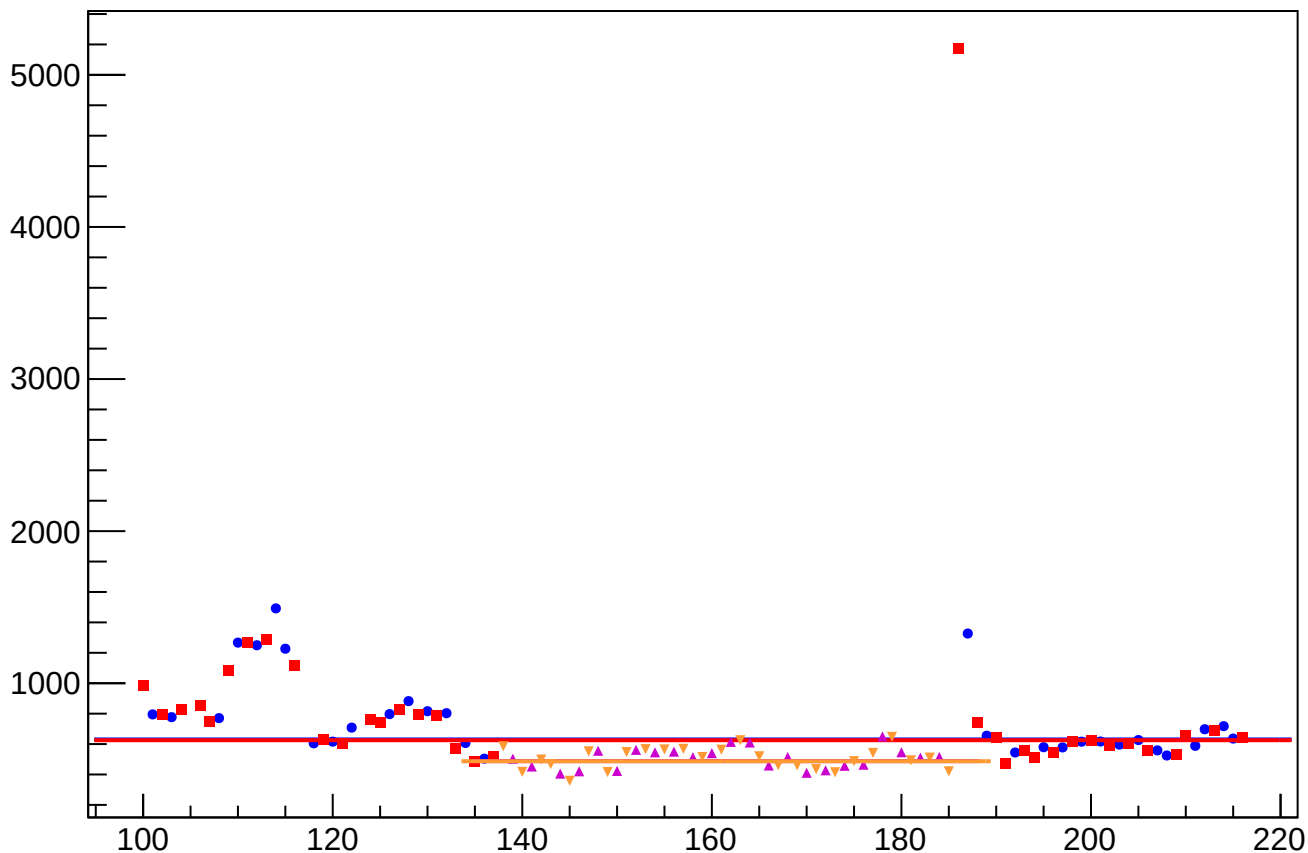
Left In: 66.674 $\pm$ 115.419  $\chi^2$ /NDF: 27.5/22

+ sign 411.294 $\pm$ 89.159  $\chi^2$ /NDF: 58.8/55

All: 366.801 $\pm$ 63.491  $\chi^2$ /NDF: 159.6/113

- sign 321.027 $\pm$ 90.434  $\chi^2$ /NDF: 100.3/57

asym\_sam\_26\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 630.210 $\pm$ 0.104  $\chi^2$ /NDF: 1372682.9/30

Left Out: 487.081 $\pm$ 0.079  $\chi^2$ /NDF: 821261.6/24

Right Out: 625.393 $\pm$ 0.103  $\chi^2$ /NDF: 2209562.8/34

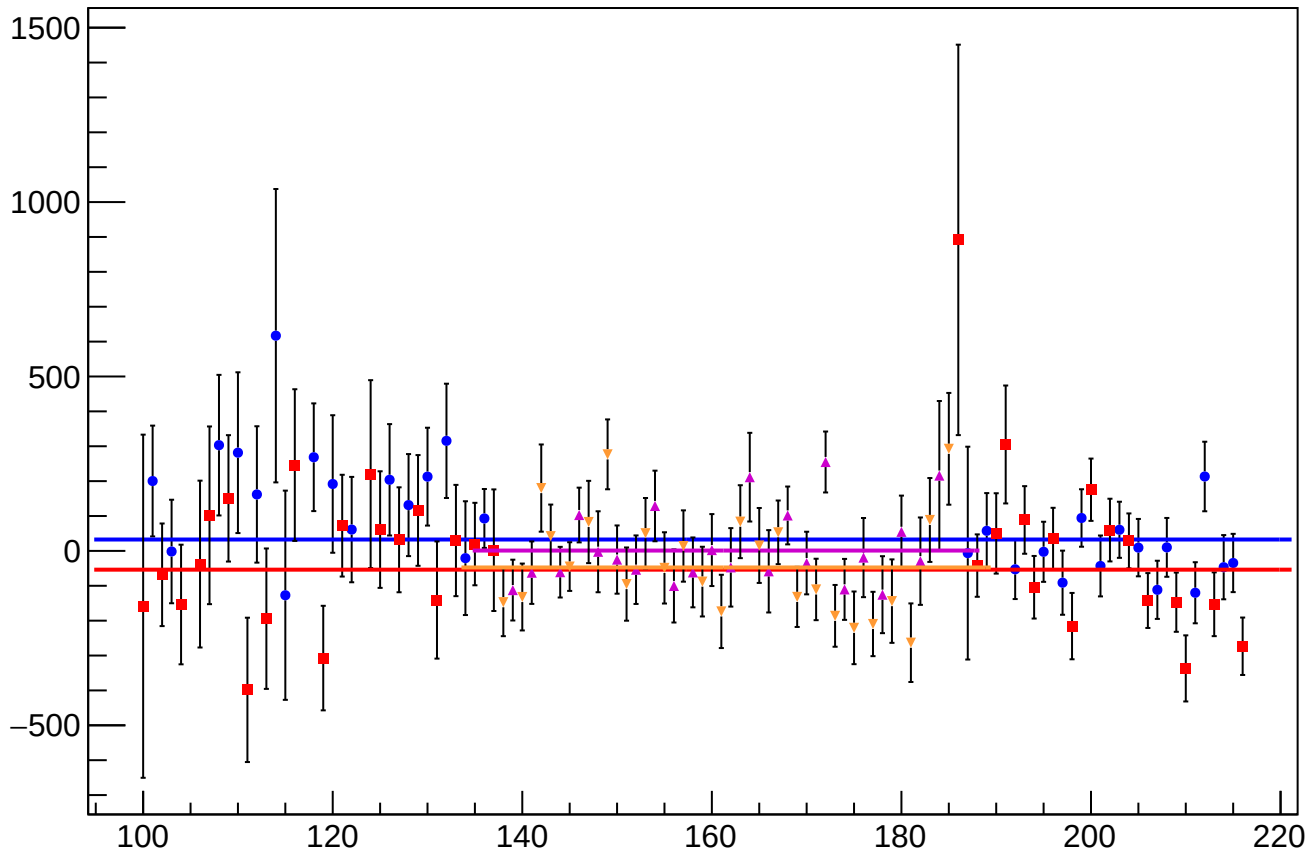
Left In: 487.930 $\pm$ 0.082  $\chi^2$ /NDF: 634273.3/22

+ sign 540.048 $\pm$ 0.063  $\chi^2$ /NDF: 3395444.2/55

All: 540.518 $\pm$ 0.045  $\chi^2$ /NDF: 7334687.2/113

- sign 541.003 $\pm$ 0.064  $\chi^2$ /NDF: 3939129.9/57

# eigen\_cor\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $32.631 \pm 20.083$   $\chi^2/\text{NDF}$ : 32.0/30

Left Out:  $-47.532 \pm 19.983$   $\chi^2/\text{NDF}$ : 44.0/24

Right Out:  $-53.802 \pm 20.332$   $\chi^2/\text{NDF}$ : 58.4/34

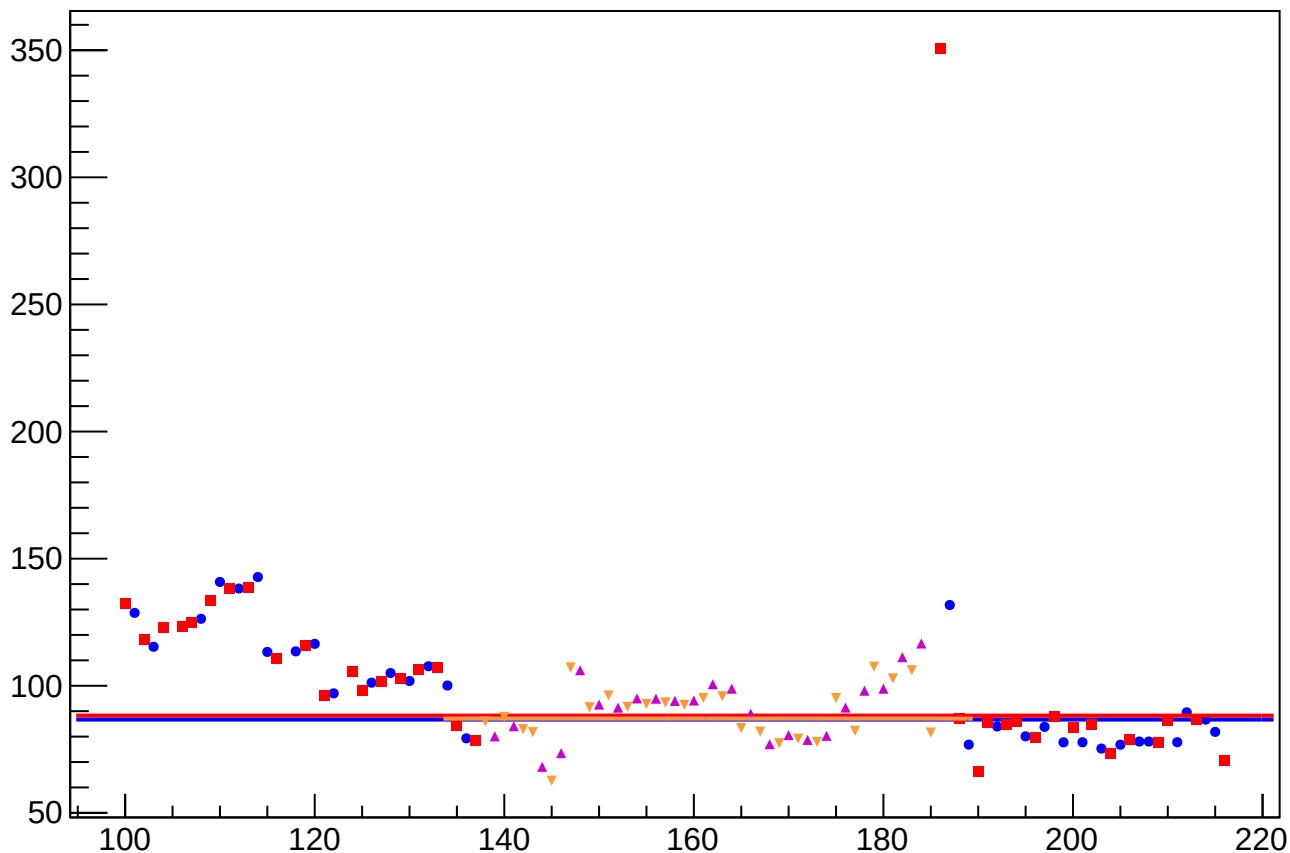
Left In:  $0.988 \pm 20.604$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-7.649 \pm 14.165$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-17.006 \pm 10.123$   $\chi^2/\text{NDF}$ : 172.3/113

- sign  $-26.771 \pm 14.472$   $\chi^2/\text{NDF}$ : 87.4/57

# eigen\_cor\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 86.705 $\pm$ 0.014     $\chi^2$ /NDF: 1101447.4/30

Left Out: 87.072 $\pm$ 0.014     $\chi^2$ /NDF: 620626.5/24

Right Out: 88.271 $\pm$ 0.014     $\chi^2$ /NDF: 1608391.5/34

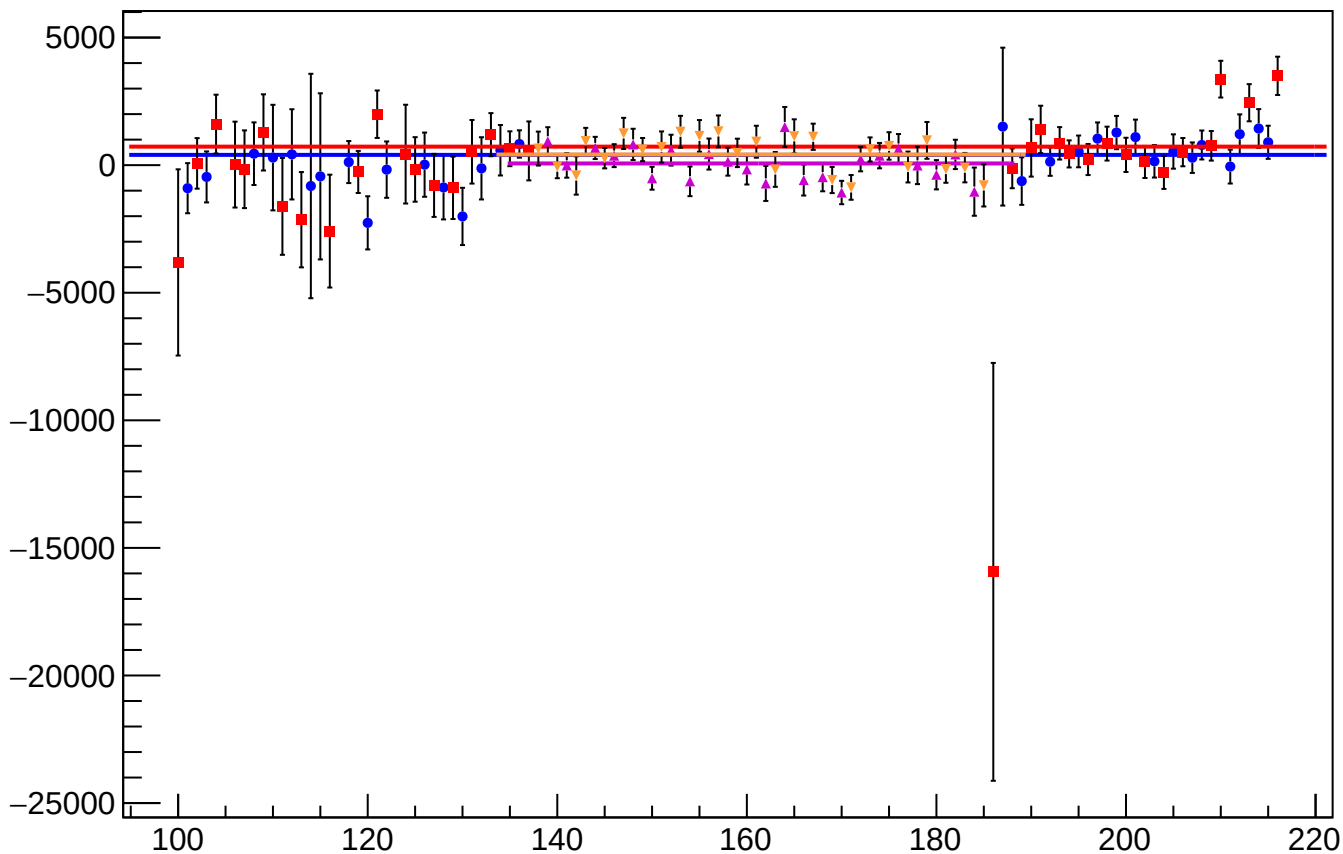
Left In: 87.257 $\pm$ 0.015     $\chi^2$ /NDF: 595793.1/22

+ sign 86.890 $\pm$ 0.010     $\chi^2$ /NDF: 1722408.2/55

All: 87.321 $\pm$ 0.007     $\chi^2$ /NDF: 3932832.6/113

- sign 87.770 $\pm$ 0.010     $\chi^2$ /NDF: 2206639.9/57

asym\_sam\_26\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 402.574 $\pm$ 146.564  $\chi^2$ /NDF: 26.4/30

Left Out: 416.416 $\pm$ 112.336  $\chi^2$ /NDF: 32.4/24

Right Out: 725.476 $\pm$ 145.543  $\chi^2$ /NDF: 60.2/34

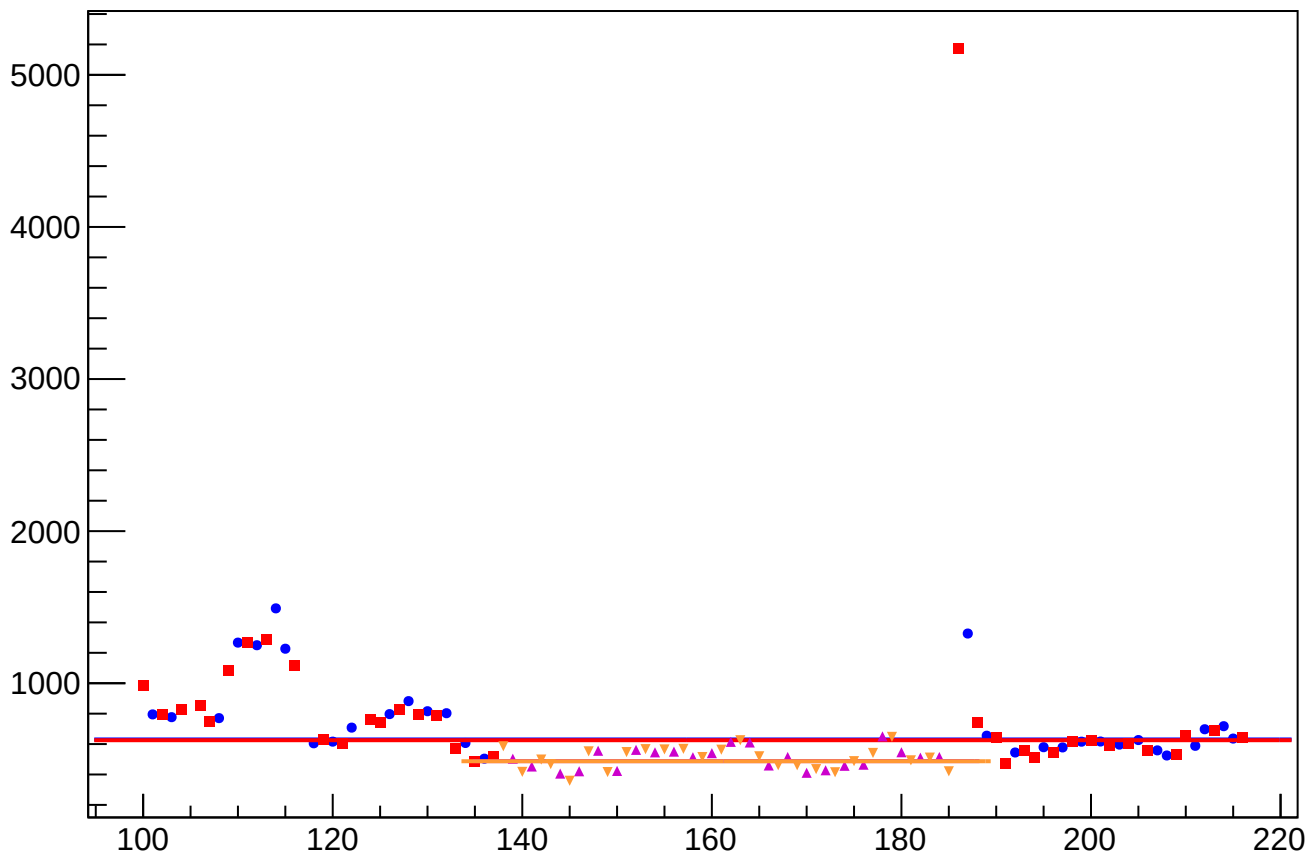
Left In: 66.674 $\pm$ 115.419  $\chi^2$ /NDF: 27.5/22

+ sign 411.294 $\pm$ 89.159  $\chi^2$ /NDF: 58.8/55

All: 366.801 $\pm$ 63.491  $\chi^2$ /NDF: 159.6/113

- sign 321.027 $\pm$ 90.434  $\chi^2$ /NDF: 100.3/57

asym\_sam\_26\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 630.210 $\pm$ 0.104  $\chi^2$ /NDF: 1372682.9/30

Left Out: 487.081 $\pm$ 0.079  $\chi^2$ /NDF: 821261.6/24

Right Out: 625.393 $\pm$ 0.103  $\chi^2$ /NDF: 2209562.8/34

Left In: 487.930 $\pm$ 0.082  $\chi^2$ /NDF: 634273.3/22

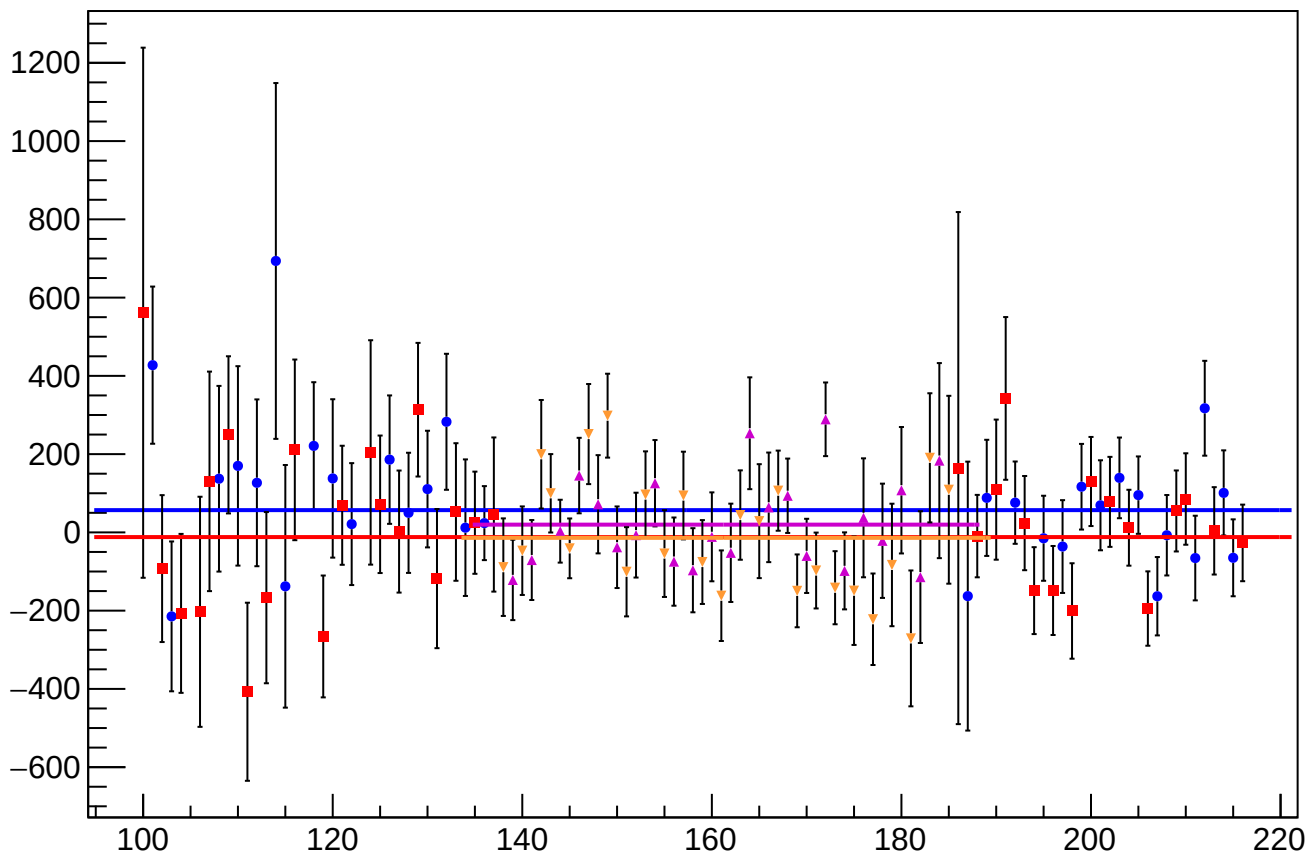
+ sign 540.048 $\pm$ 0.063  $\chi^2$ /NDF: 3395444.2/55

All: 540.518 $\pm$ 0.045  $\chi^2$ /NDF: 7334687.2/113

- sign 541.003 $\pm$ 0.064  $\chi^2$ /NDF: 3939129.9/57



# dit\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 56.876 $\pm$ 24.114  $\chi^2/\text{NDF}$ : 27.5/30

Left Out: -13.904 $\pm$ 22.916  $\chi^2/\text{NDF}$ : 36.4/24

Right Out: -11.979 $\pm$ 24.410  $\chi^2/\text{NDF}$ : 32.6/34

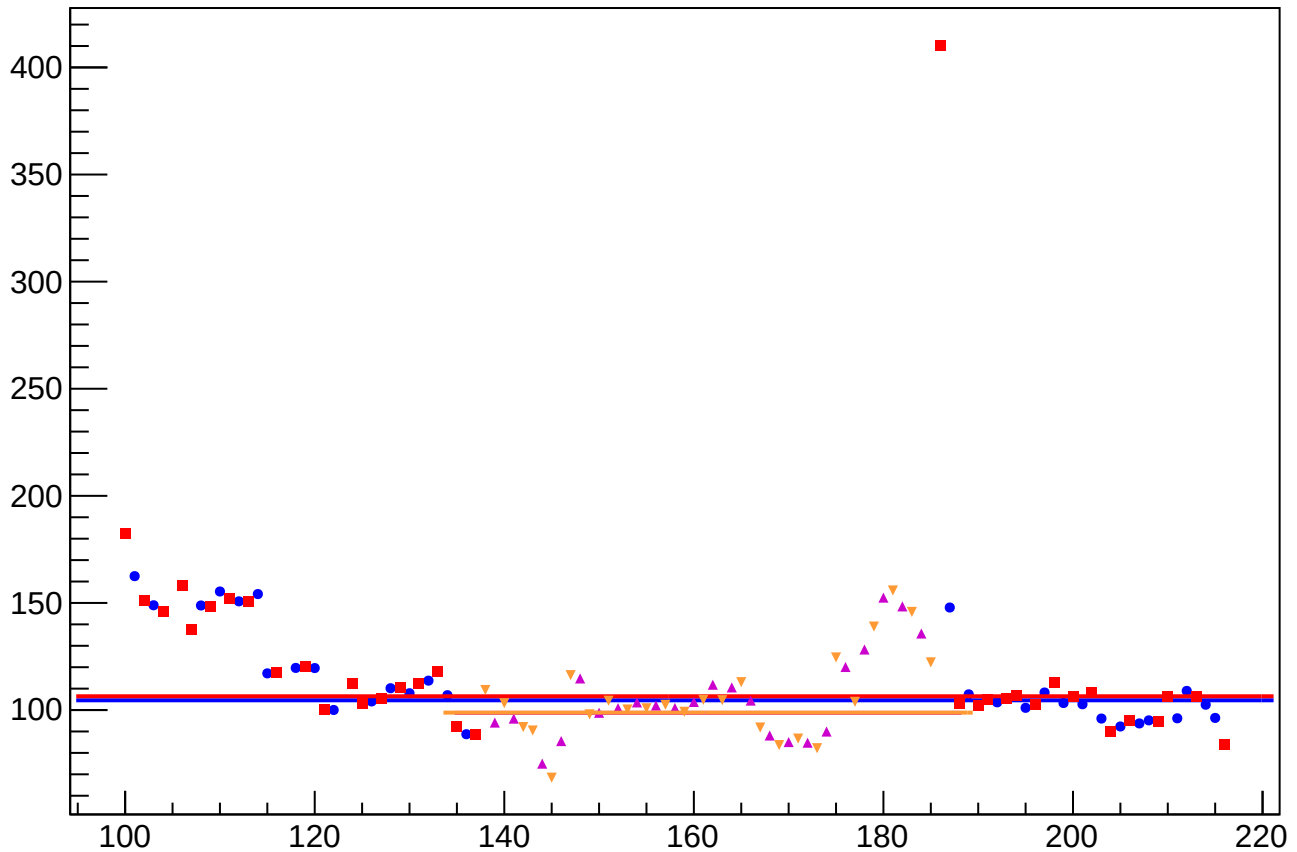
Left In: 19.805 $\pm$ 23.571  $\chi^2/\text{NDF}$ : 23.3/22

+ sign 19.685 $\pm$ 16.611  $\chi^2/\text{NDF}$ : 68.4/55

All: 12.233 $\pm$ 11.866  $\chi^2/\text{NDF}$ : 125.7/113

- sign 4.469 $\pm$ 16.956  $\chi^2/\text{NDF}$ : 56.8/57

dit\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 104.554 $\pm$ 0.017  $\chi^2$ /NDF: 790600.8/30

Left Out: 98.799 $\pm$ 0.016  $\chi^2$ /NDF:1185806.0/24

Right Out: 106.434 $\pm$ 0.017  $\chi^2$ /NDF: 1285786.0/34

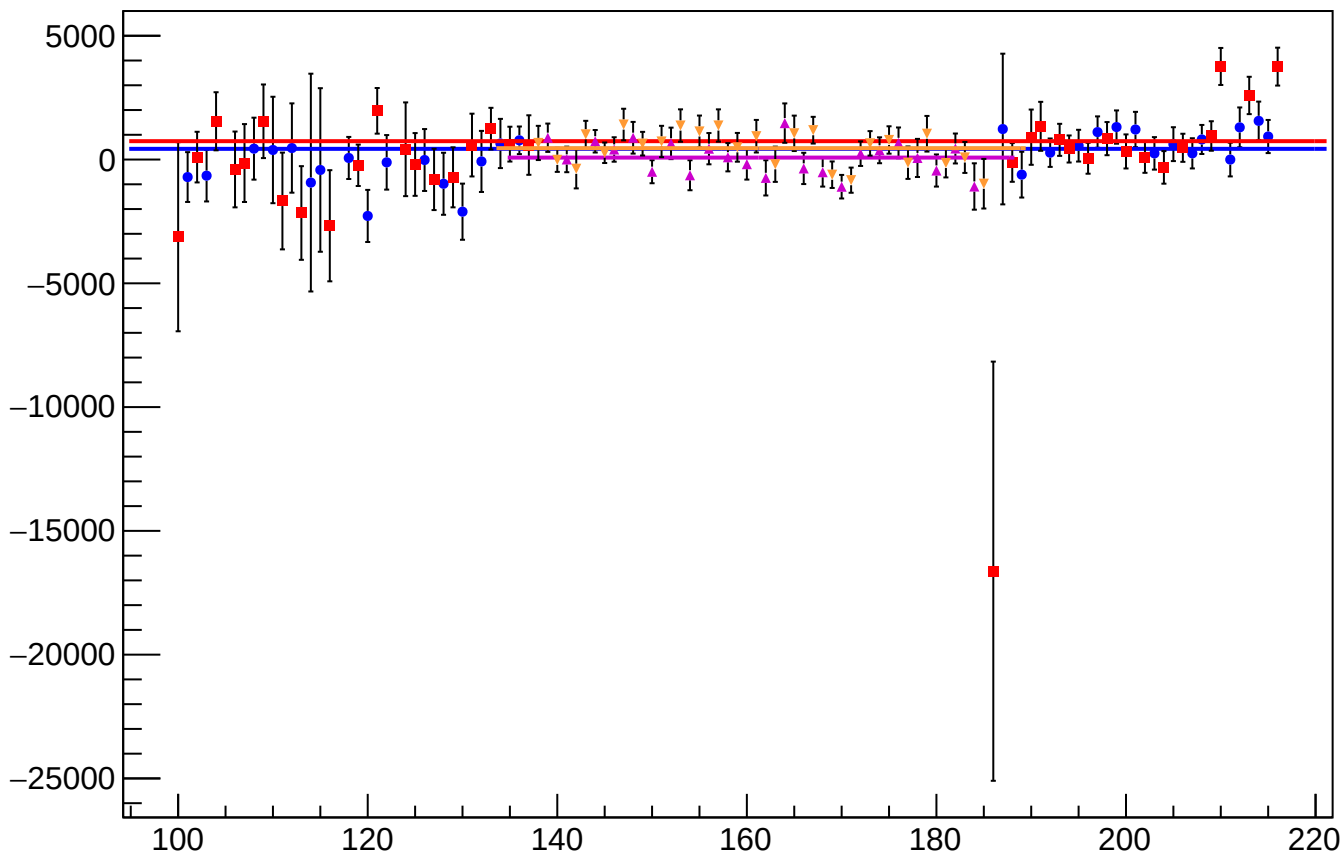
Left In: 98.673 $\pm$ 0.017  $\chi^2$ /NDF:987817.0/22

+ sign 101.530 $\pm$ 0.012  $\chi^2$ /NDF: 2036268.5/55

All: 101.965 $\pm$ 0.008  $\chi^2$ /NDF: 4417283.2/113

- sign 102.418 $\pm$ 0.012  $\chi^2$ /NDF: 2378217.6/57

asym\_sam\_26\_48\_dd\_dit\_correction\_mean vs Slug



Right In:  $432.159 \pm 150.210$   $\chi^2/\text{NDF}: 27.0/30$

Left Out:  $459.094 \pm 118.111$   $\chi^2/\text{NDF}: 30.8/24$

Right Out:  $742.141 \pm 148.367$   $\chi^2/\text{NDF}: 65.8/34$

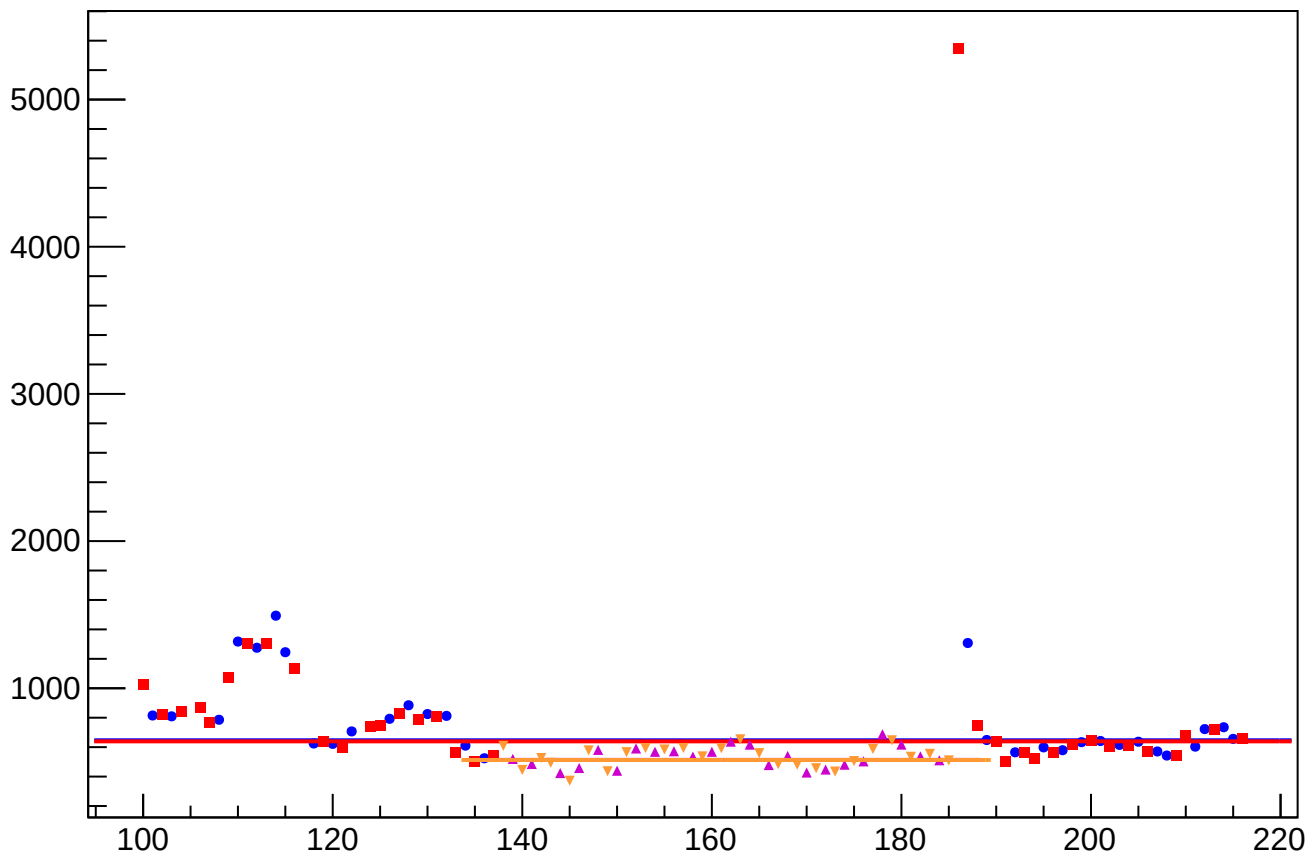
Left In:  $78.791 \pm 121.436$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $448.803 \pm 92.846$   $\chi^2/\text{NDF}: 57.8/55$

All:  $397.481 \pm 66.047$   $\chi^2/\text{NDF}: 162.5/113$

- sign  $344.906 \pm 93.973$   $\chi^2/\text{NDF}: 104.0/57$

asym\_sam\_26\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 646.567 $\pm$ 0.106  $\chi^2$ /NDF: 1319381.0/30

Left Out: 512.768 $\pm$ 0.084  $\chi^2$ /NDF: 799239.4/24

Right Out: 639.330 $\pm$ 0.105  $\chi^2$ /NDF: 2158377.6/34

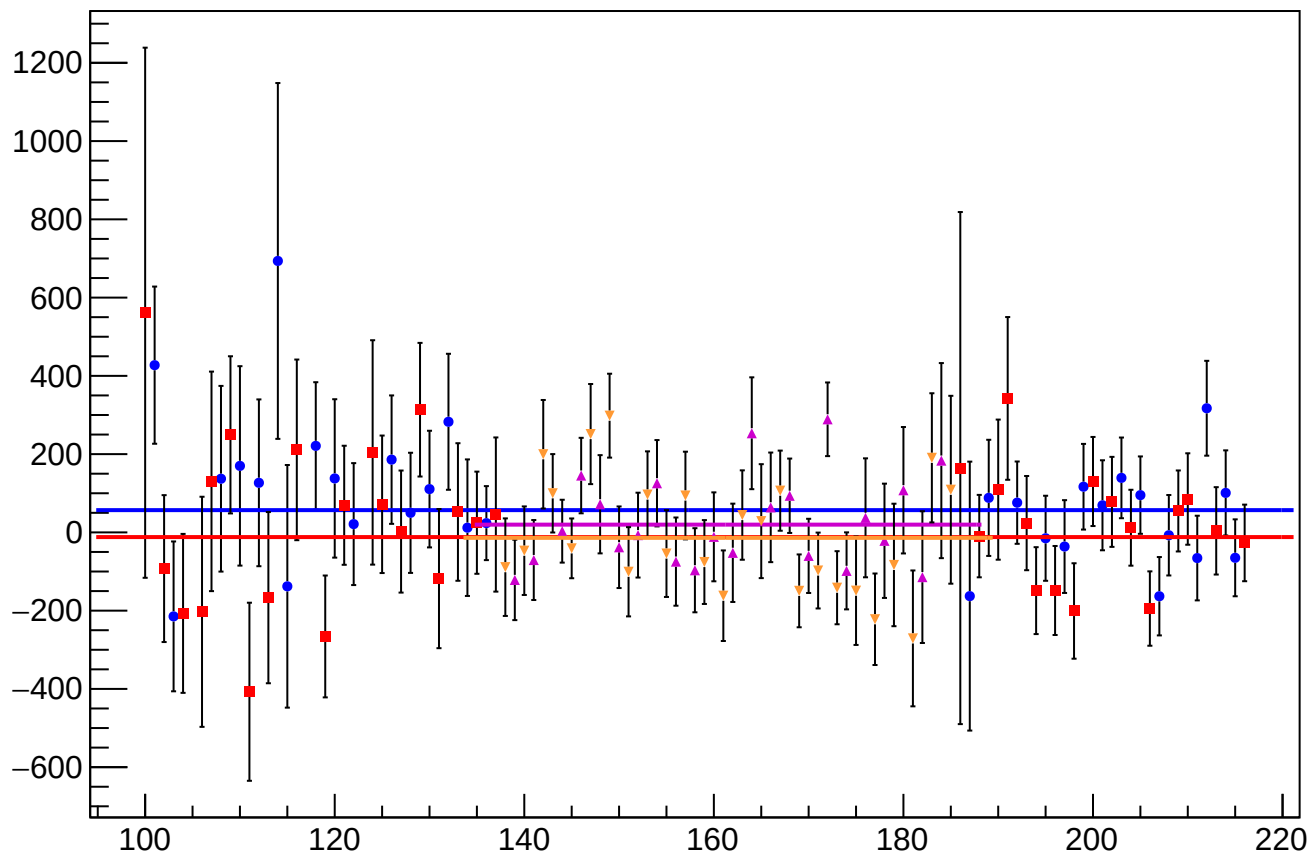
Left In: 513.375 $\pm$ 0.086  $\chi^2$ /NDF: 634000.2/22

+ sign 563.887 $\pm$ 0.066  $\chi^2$ /NDF: 3099192.2/55

All: 563.895 $\pm$ 0.047  $\chi^2$ /NDF: 6754723.3/113

- sign 563.904 $\pm$ 0.066  $\chi^2$ /NDF: 3655531.1/57

# eigen\_dit\_asym\_sam\_26\_48\_dd\_mean vs Slug



Right In: 56.875 $\pm$ 24.114  $\chi^2$ /NDF: 27.5/30

Left Out: -13.906 $\pm$ 22.916  $\chi^2$ /NDF:36.4/24

Right Out: -11.981 $\pm$ 24.410  $\chi^2$ /NDF: 32.6/34

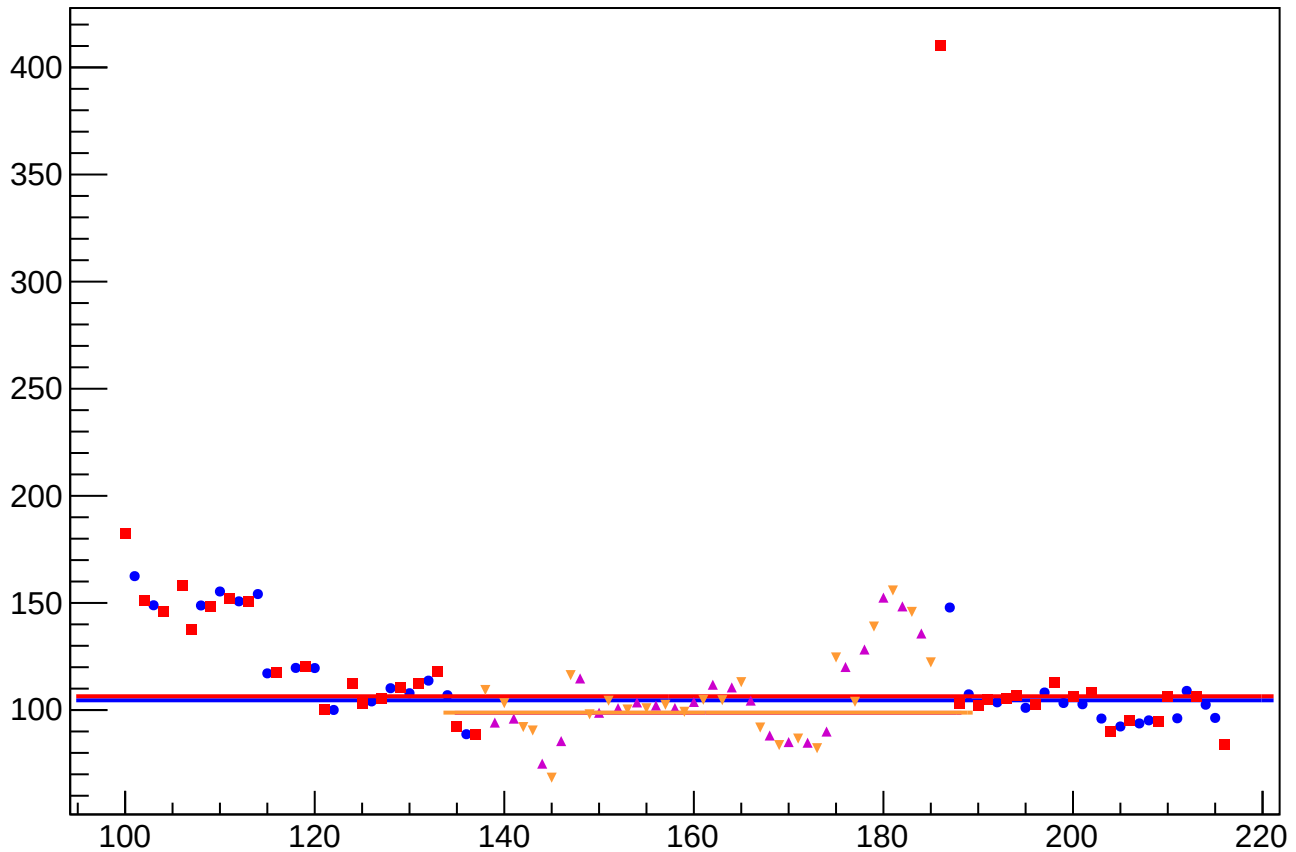
Left In: 19.805 $\pm$ 23.571  $\chi^2$ /NDF:23.3/22

+ sign 19.684 $\pm$ 16.611  $\chi^2$ /NDF: 68.4/55

All: 12.232 $\pm$ 11.866  $\chi^2$ /NDF: 125.7/113

- sign 4.468 $\pm$ 16.956  $\chi^2$ /NDF: 56.8/57

eigen\_dit\_asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 104.554 $\pm$ 0.017  $\chi^2$ /NDF: 790592.2/30

Left Out: 98.799 $\pm$ 0.016  $\chi^2$ /NDF:1185809.9/24

Right Out: 106.434 $\pm$ 0.017  $\chi^2$ /NDF: 1285778.7/34

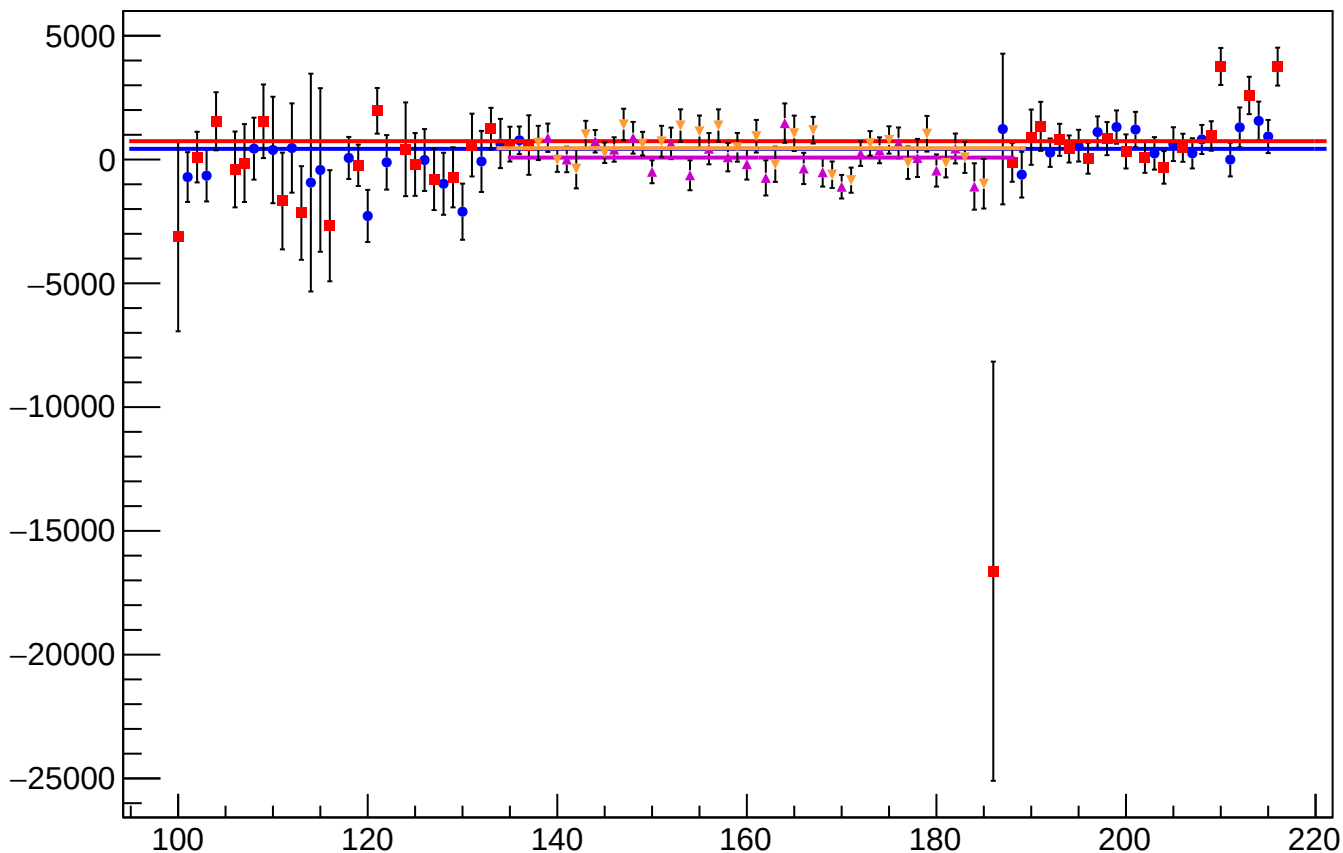
Left In: 98.673 $\pm$ 0.017  $\chi^2$ /NDF:987808.4/22

+ sign 101.530 $\pm$ 0.012  $\chi^2$ /NDF: 2036265.9/55

All: 101.965 $\pm$ 0.008  $\chi^2$ /NDF: 4417266.2/113

- sign 102.418 $\pm$ 0.012  $\chi^2$ /NDF: 2378203.1/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $432.159 \pm 150.210$   $\chi^2/\text{NDF}: 27.0/30$

Left Out:  $459.092 \pm 118.111$   $\chi^2/\text{NDF}: 30.8/24$

Right Out:  $742.139 \pm 148.367$   $\chi^2/\text{NDF}: 65.8/34$

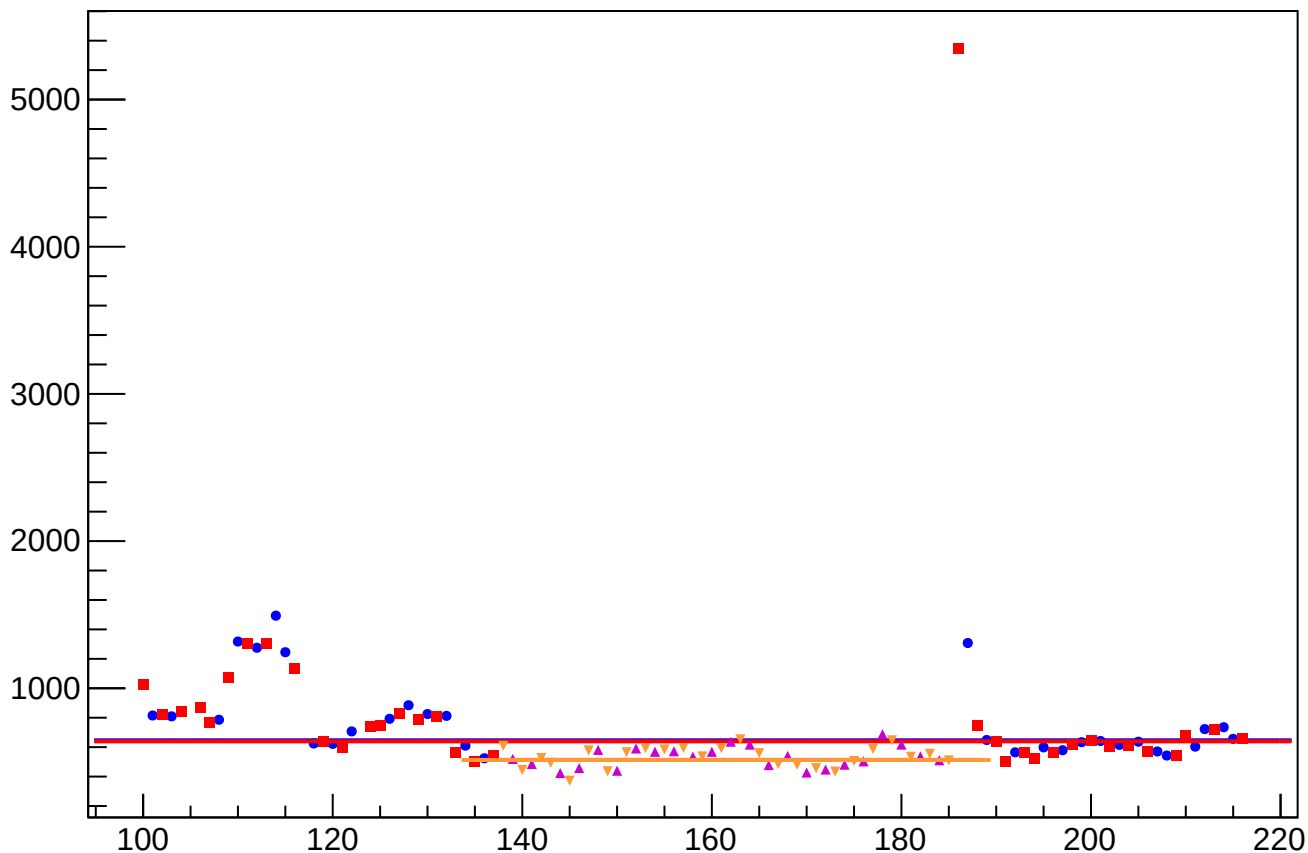
Left In:  $78.791 \pm 121.436$   $\chi^2/\text{NDF}: 26.2/22$

+ sign  $448.802 \pm 92.846$   $\chi^2/\text{NDF}: 57.8/55$

All:  $397.480 \pm 66.047$   $\chi^2/\text{NDF}: 162.5/113$

- sign  $344.905 \pm 93.973$   $\chi^2/\text{NDF}: 104.0/57$

asym\_sam\_26\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 646.566 $\pm$ 0.106  $\chi^2$ /NDF: 1319377.6/30

Left Out: 512.768 $\pm$ 0.084  $\chi^2$ /NDF: 799239.0/24

Right Out: 639.328 $\pm$ 0.105  $\chi^2$ /NDF: 2158373.9/34

Left In: 513.374 $\pm$ 0.086  $\chi^2$ /NDF: 633997.9/22

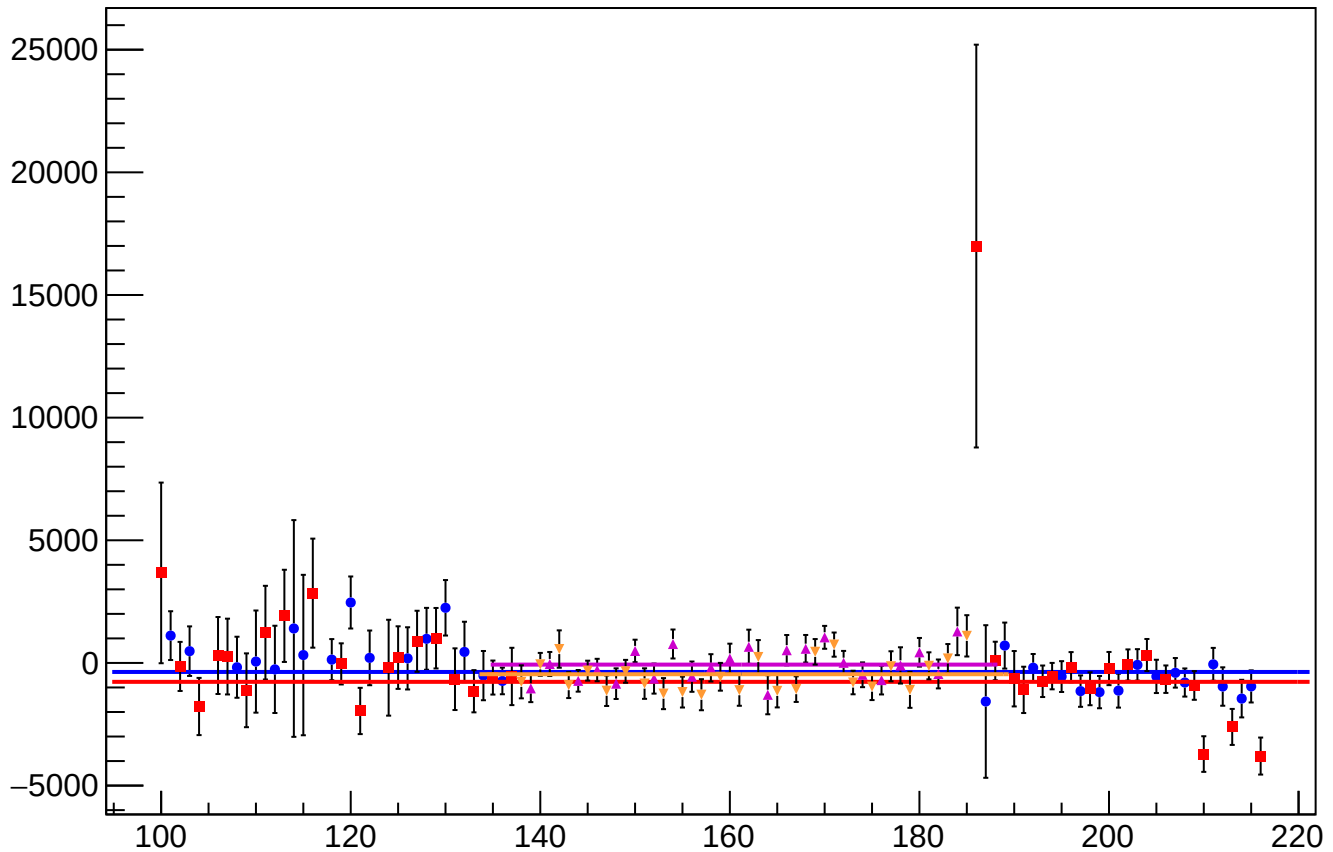
+ sign 563.887 $\pm$ 0.066  $\chi^2$ /NDF: 3099181.2/55

All: 563.895 $\pm$ 0.047  $\chi^2$ /NDF: 6754695.3/113

- sign 563.903 $\pm$ 0.066  $\chi^2$ /NDF: 3655514.0/57



# asym\_sam\_26\_48\_dd\_mean vs Slug



Right In:  $-367.613 \pm 148.076$   $\chi^2/\text{NDF}$ : 28.9/30

Left Out:  $-459.862 \pm 114.233$   $\chi^2/\text{NDF}$ : 30.8/24

Right Out:  $-770.764 \pm 147.032$   $\chi^2/\text{NDF}$ : 67.3/34

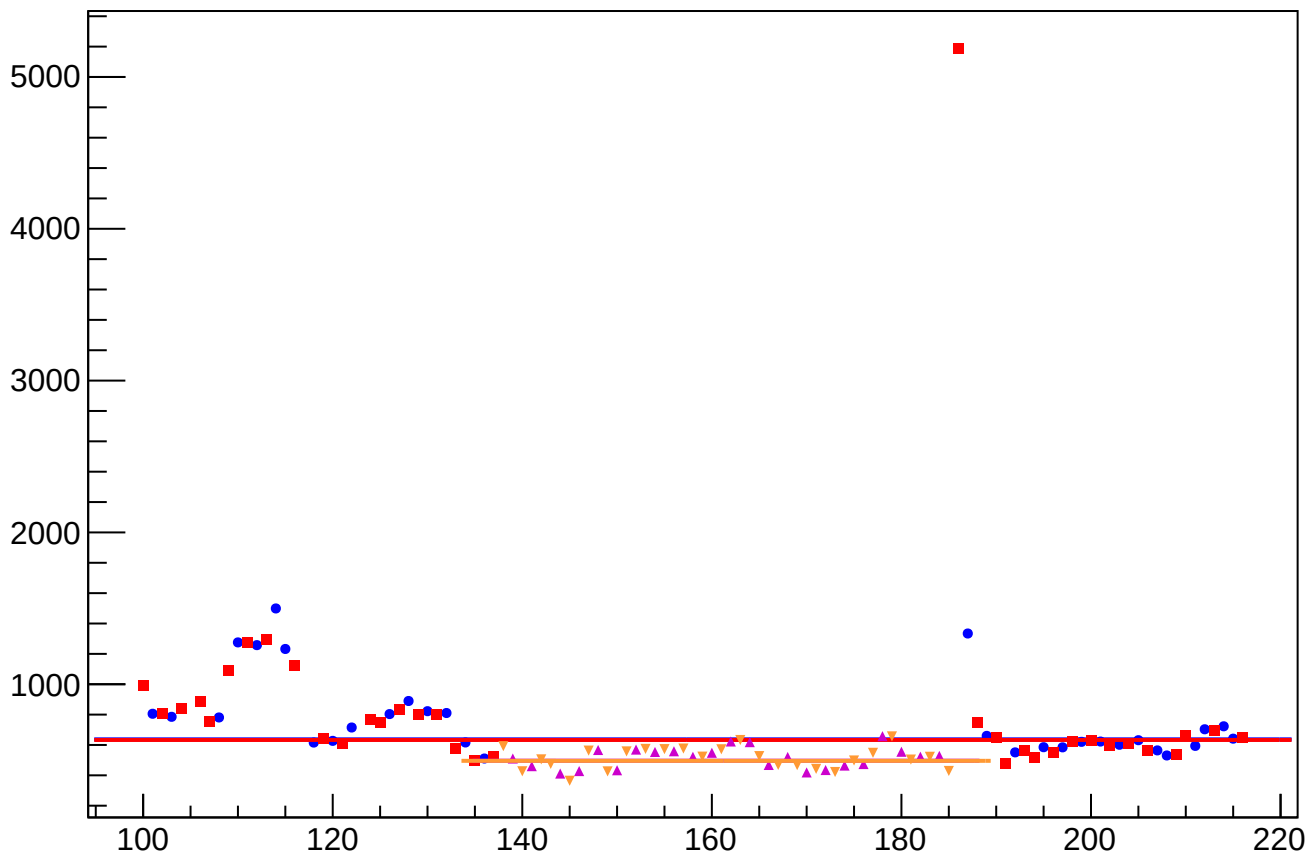
Left In:  $-68.043 \pm 117.366$   $\chi^2/\text{NDF}$ : 28.6/22

+ sign  $-425.445 \pm 90.447$   $\chi^2/\text{NDF}$ : 60.0/55

All:  $-384.080 \pm 64.403$   $\chi^2/\text{NDF}$ : 170.3/113

- sign  $-341.536 \pm 91.727$   $\chi^2/\text{NDF}$ : 109.9/57

# asym\_sam\_26\_48\_dd\_rms vs Slug



Right In: 636.864 $\pm$ 0.105  $\chi^2$ /NDF: 1359710.8/30

Left Out: 495.514 $\pm$ 0.081  $\chi^2$ /NDF: 804659.4/24

+ sign 548.251 $\pm$ 0.064  $\chi^2$ /NDF: 3306874.2/55

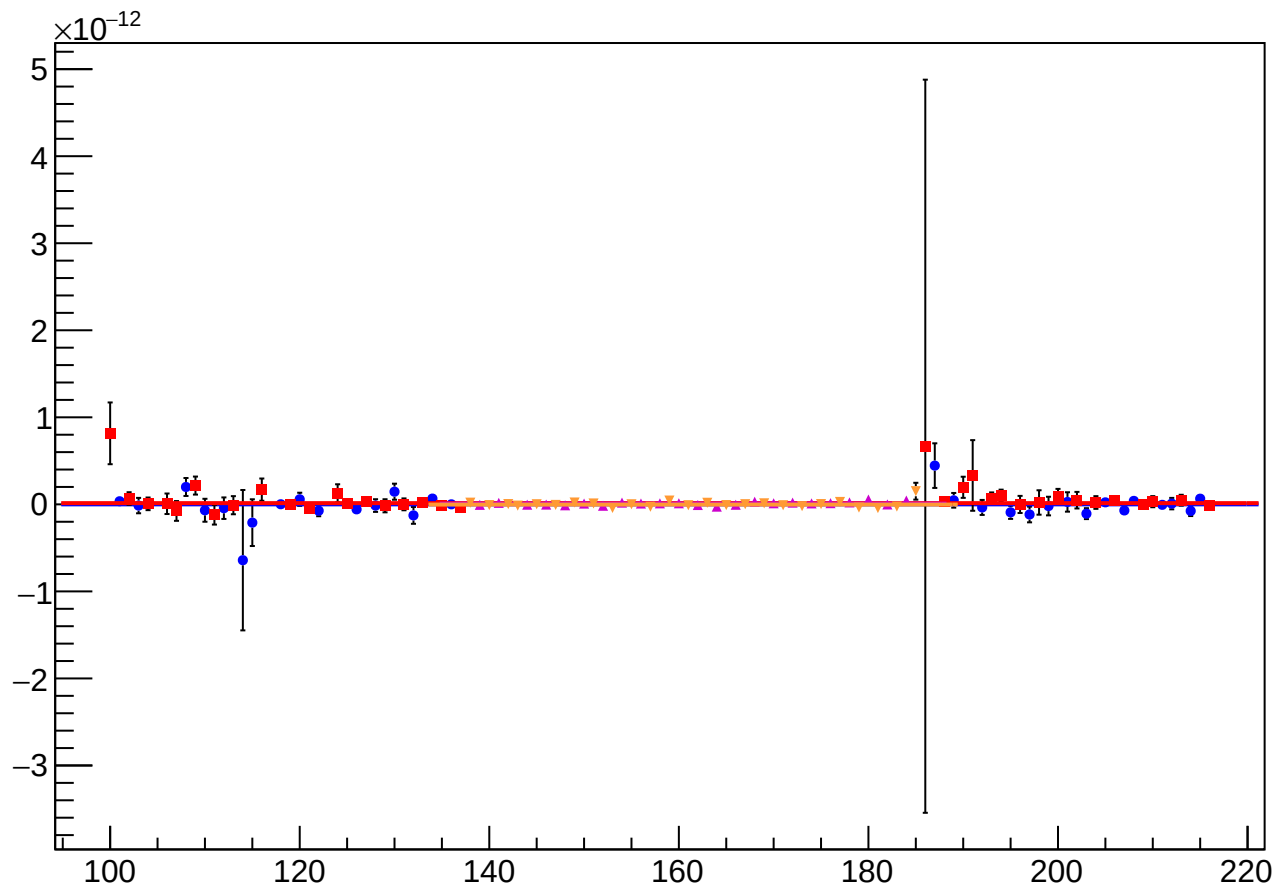
Right Out: 633.025 $\pm$ 0.104  $\chi^2$ /NDF: 2202620.3/34

All: 548.875 $\pm$ 0.046  $\chi^2$ /NDF: 7188276.2/113

Left In: 496.307 $\pm$ 0.083  $\chi^2$ /NDF: 622356.2/22

- sign 549.517 $\pm$ 0.065  $\chi^2$ /NDF: 3881208.7/57

asym\_sam\_26\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 32.8/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 25.1/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 26.7/34

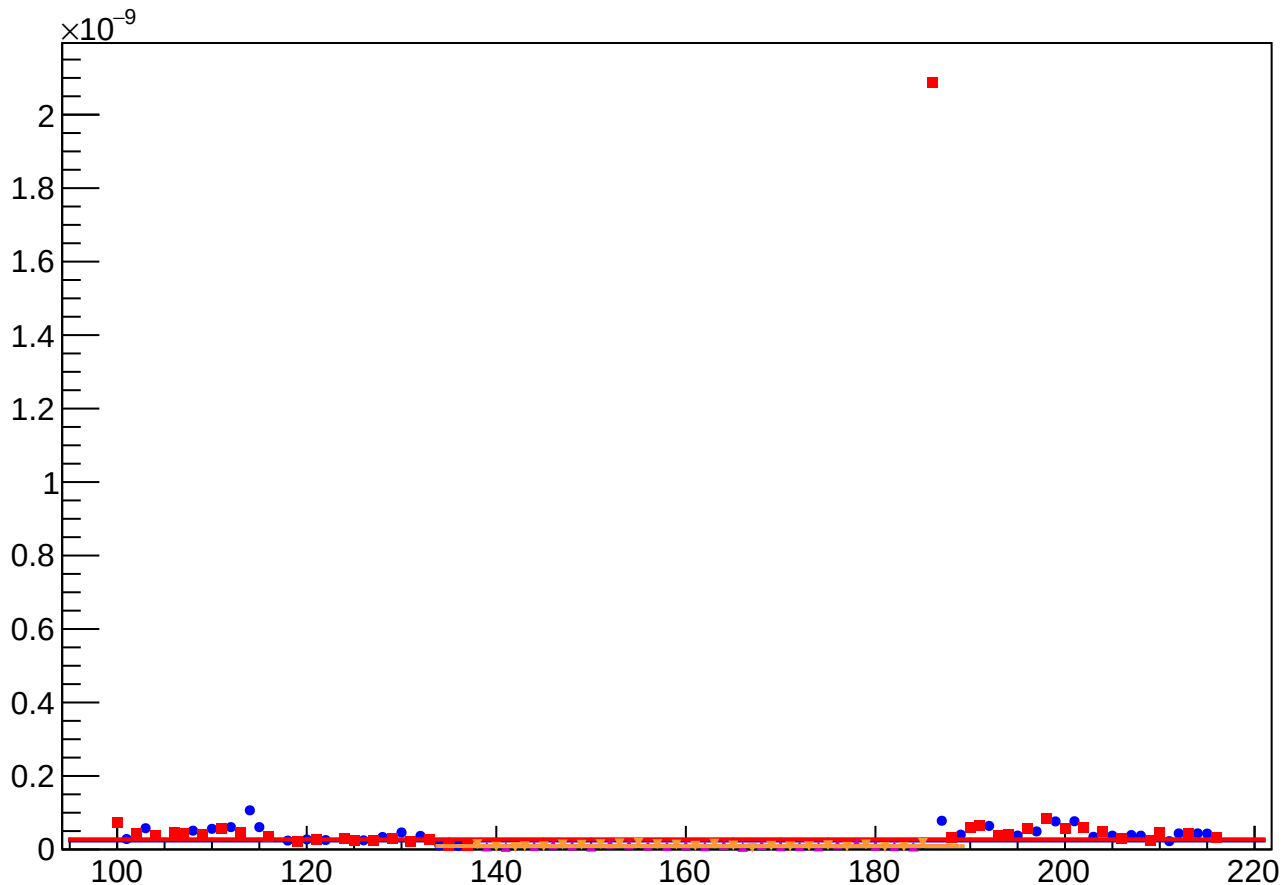
Left In: 0.000+/-0.000  $\chi^2$ /NDF: 15.5/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 57.9/55

All: 0.000+/-0.000  $\chi^2$ /NDF: 105.3/113

- sign 0.000+/-0.000  $\chi^2$ /NDF: 42.6/57

# asym\_sam\_26\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5874451.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1832944.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4414355.9/34

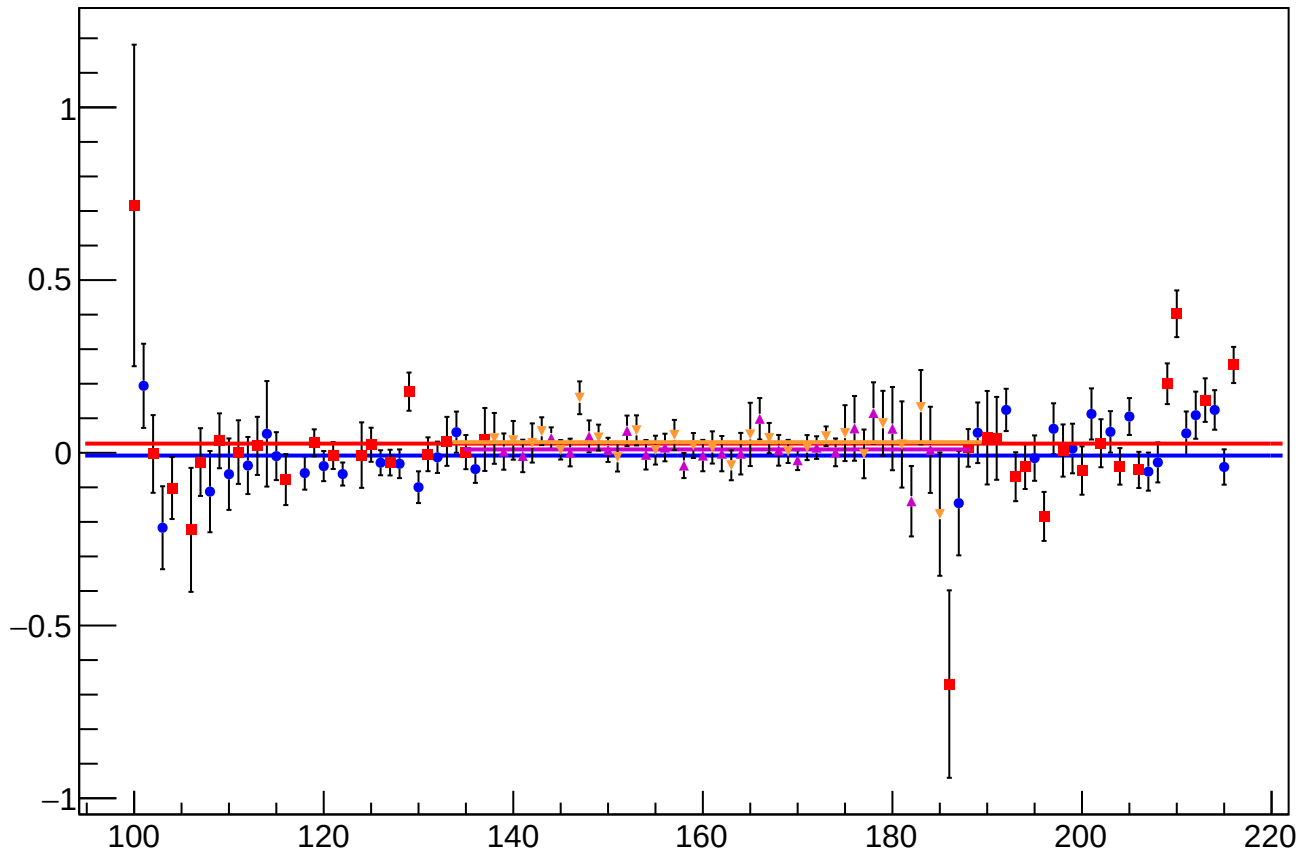
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 622904.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12147820.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22430338.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10230530.8/57

asym\_sam\_26\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 44.4/30

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $0.027 \pm 0.011$   $\chi^2/\text{NDF}$ : 105.6/34

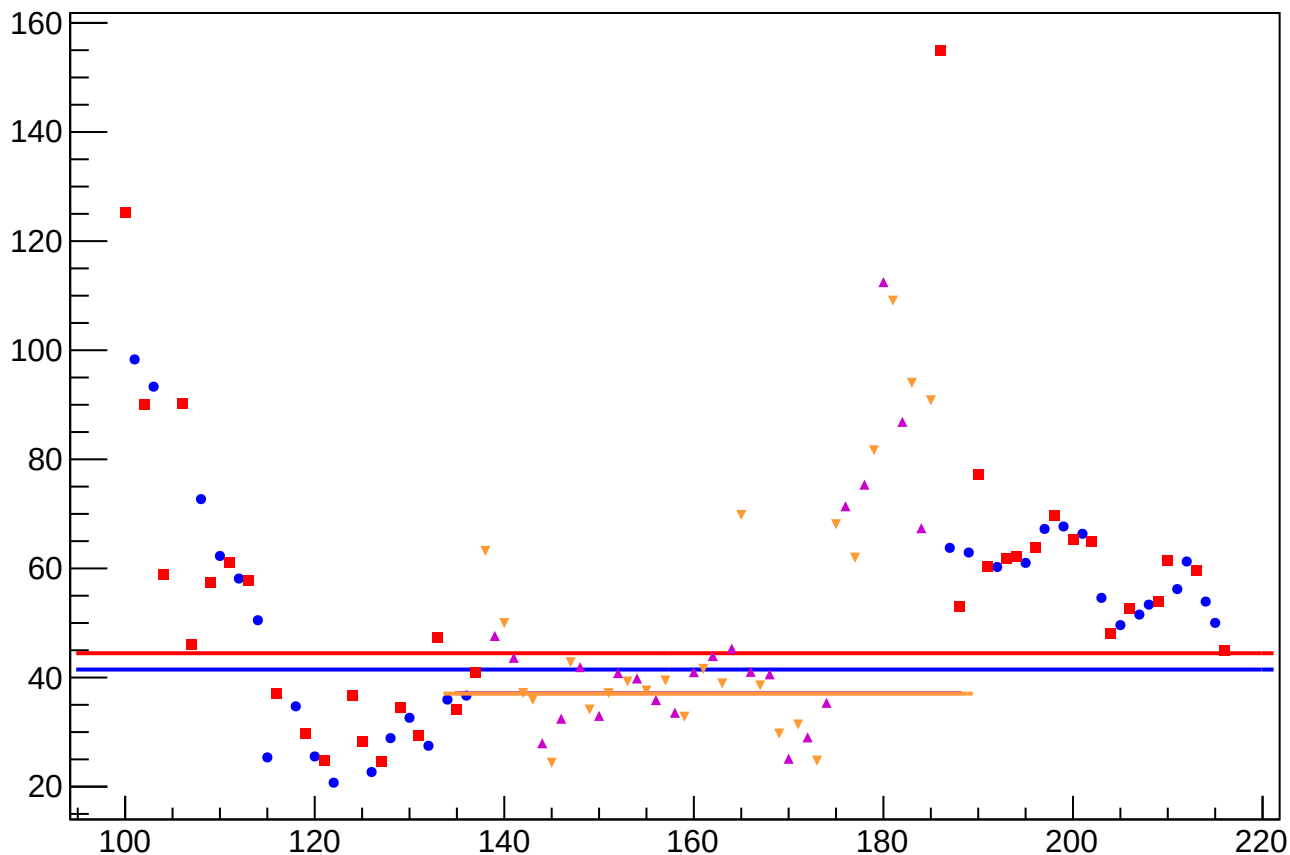
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 70.2/55

All:  $0.015 \pm 0.005$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 120.2/57

asym\_sam\_26\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.467+/-0.007  $\chi^2/\text{NDF}$ : 5328505.3/30

Left Out: 37.057+/-0.006  $\chi^2/\text{NDF}$ : 4053719.8/24

Right Out: 44.458+/-0.008  $\chi^2/\text{NDF}$ : 4586682.3/34

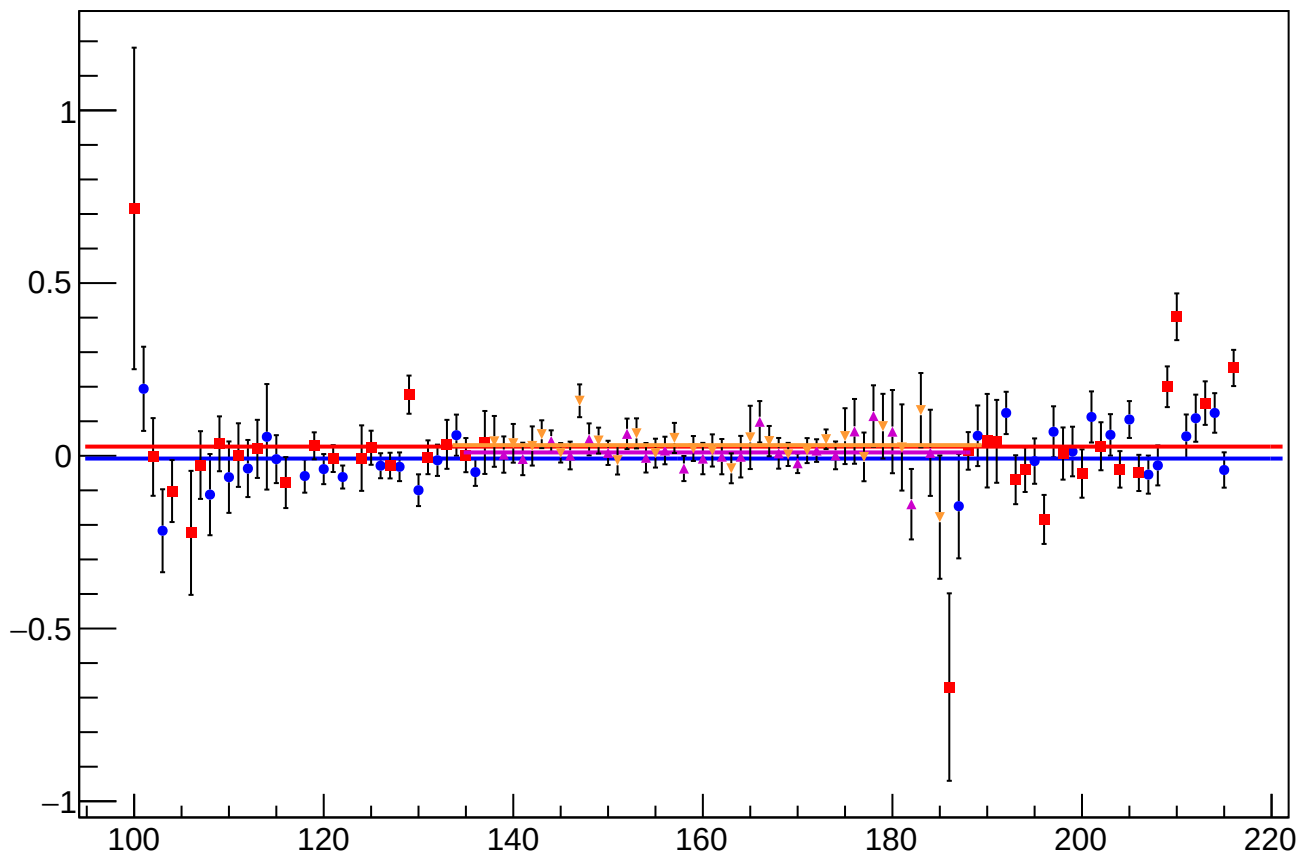
Left In: 37.127+/-0.007  $\chi^2/\text{NDF}$ : 3012795.5/22

+ sign 38.995+/-0.005  $\chi^2/\text{NDF}$ : 9587432.7/55

All: 39.608+/-0.003  $\chi^2/\text{NDF}$ : 17744163.2/113

- sign 40.267+/-0.005  $\chi^2/\text{NDF}$ : 8123343.8/57

asym\_sam\_26\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 44.4/30

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $0.027 \pm 0.011$   $\chi^2/\text{NDF}$ : 105.6/34

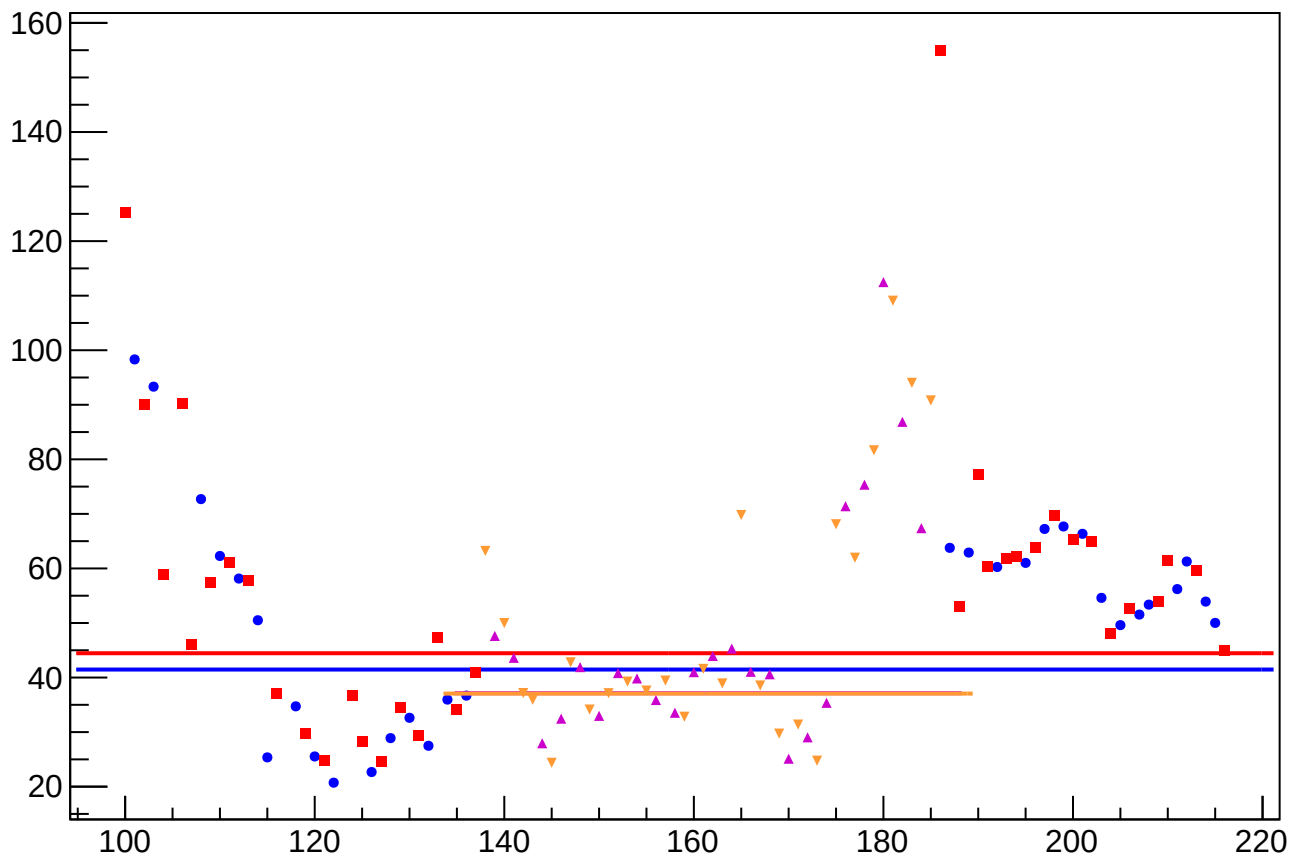
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 70.2/55

All:  $0.015 \pm 0.005$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 120.2/57

asym\_sam\_26\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.467+/-0.007  $\chi^2/\text{NDF}$ : 5328505.3/30

Left Out: 37.057+/-0.006  $\chi^2/\text{NDF}$ : 4053719.8/24

Right Out: 44.458+/-0.008  $\chi^2/\text{NDF}$ : 4586682.3/34

Left In: 37.127+/-0.007  $\chi^2/\text{NDF}$ : 3012795.5/22

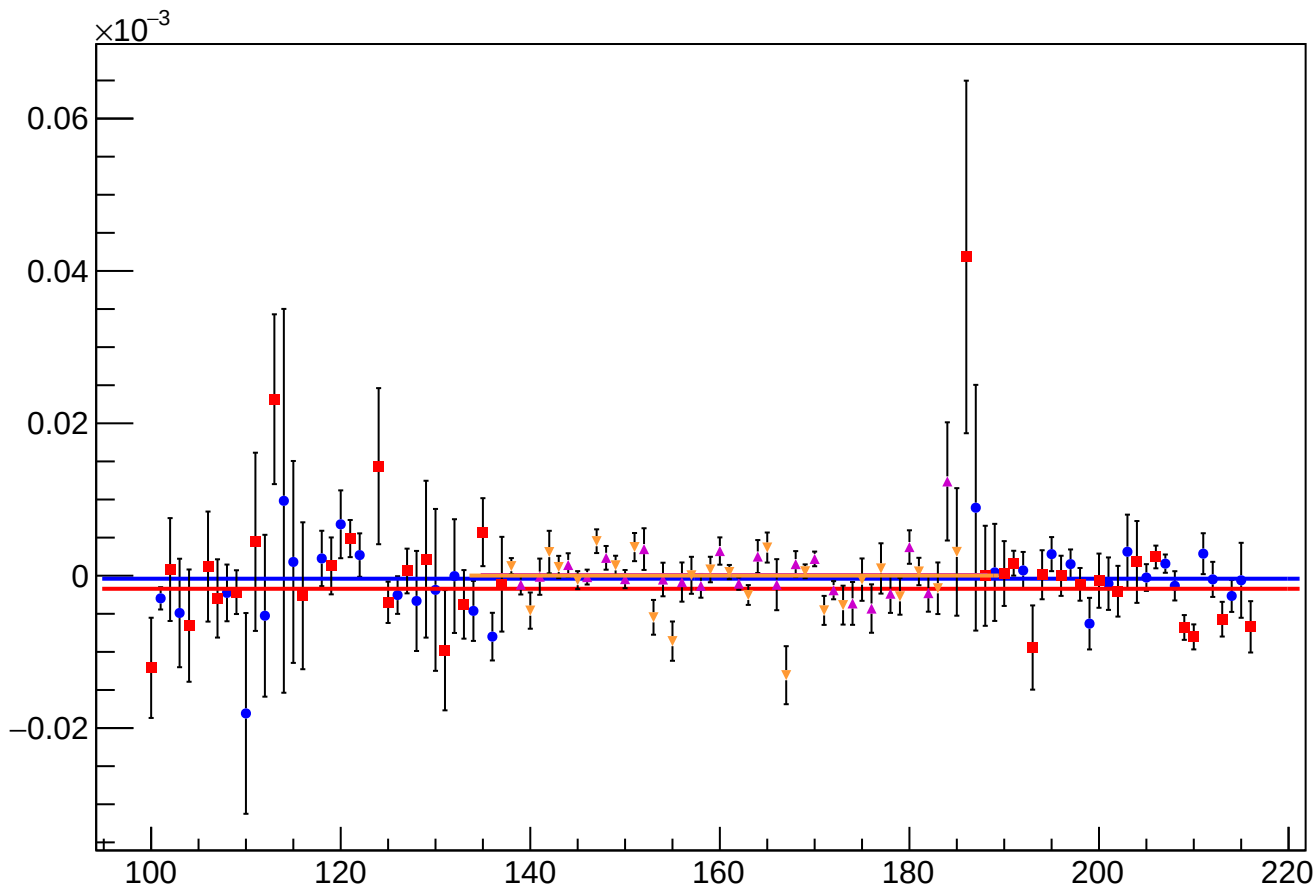
+ sign 38.995+/-0.005  $\chi^2/\text{NDF}$ : 9587432.7/55

All: 39.608+/-0.003  $\chi^2/\text{NDF}$ : 17744163.2/113

- sign 40.267+/-0.005  $\chi^2/\text{NDF}$ : 8123343.8/57



asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.1/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.3/34

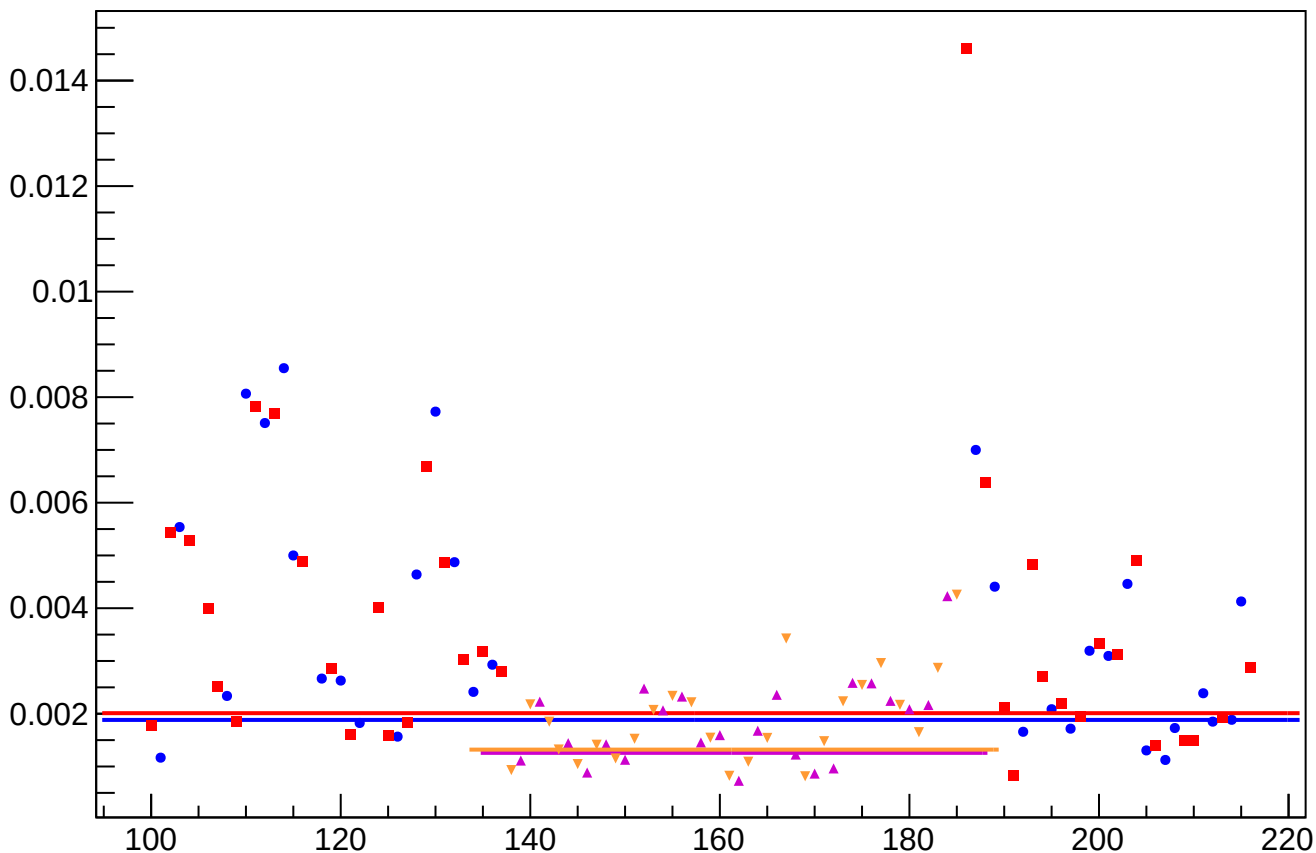
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 99.2/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 213.6/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 113.9/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7196016.6/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5632532.9/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8640461.1/34

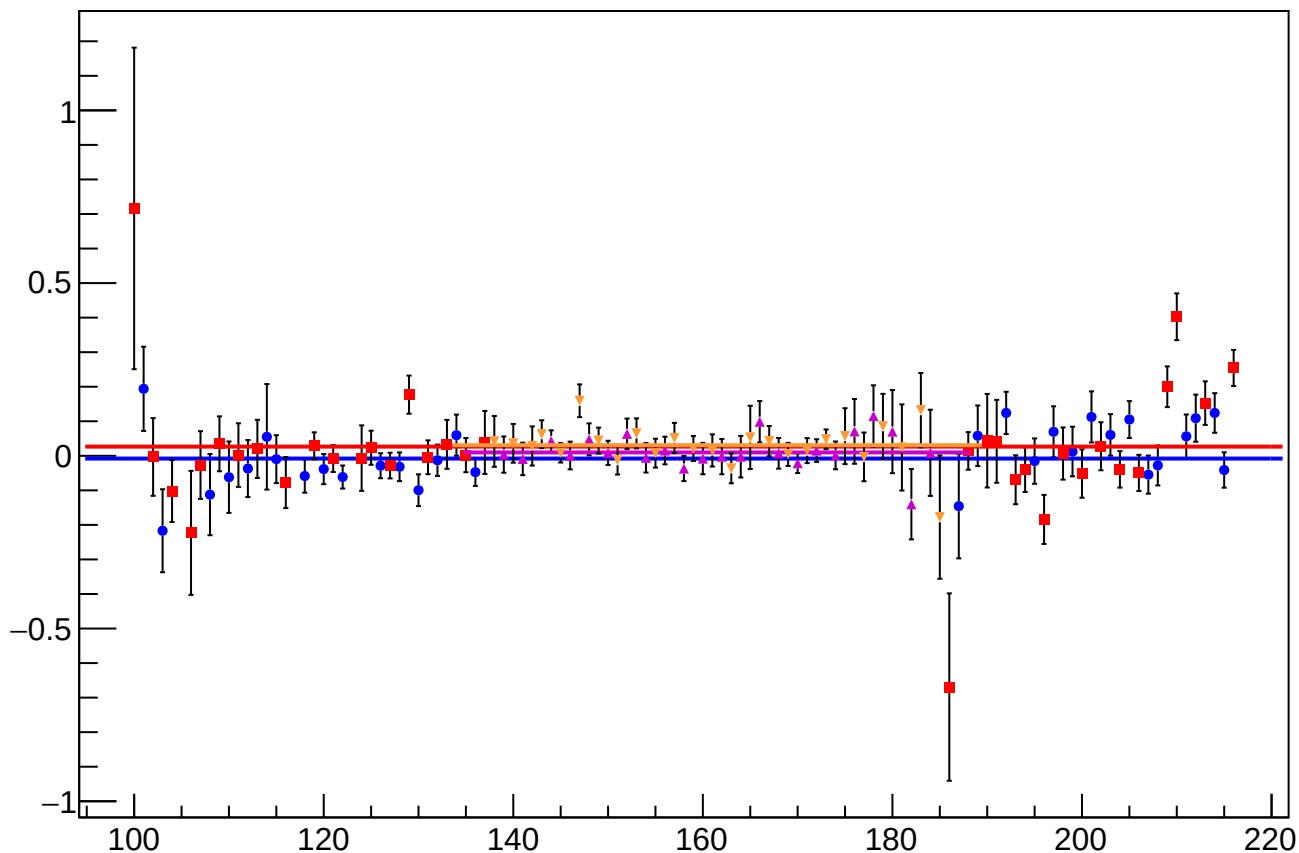
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5369001.1/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 14581873.5/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31506173.5/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16916469.6/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 44.4/30

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $0.027 \pm 0.011$   $\chi^2/\text{NDF}$ : 105.6/34

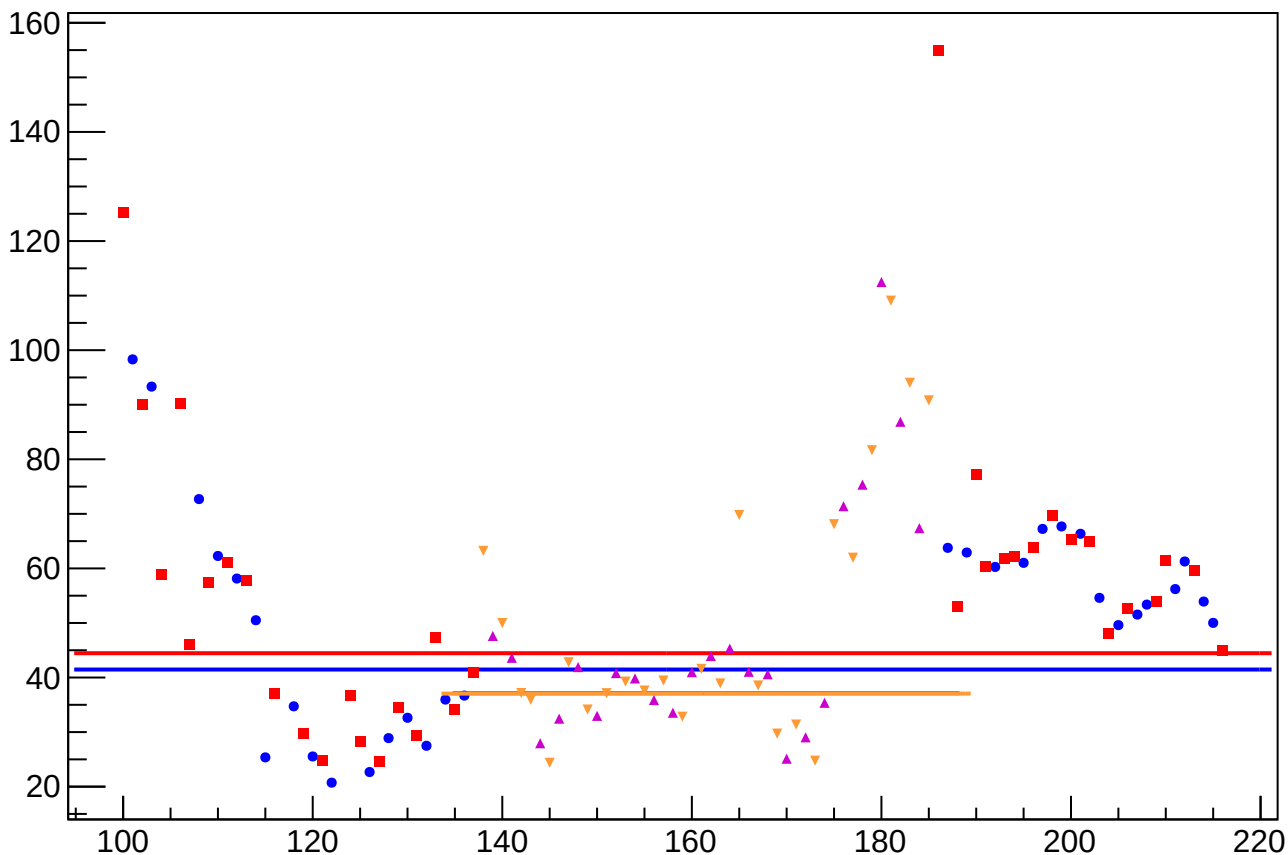
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 70.2/55

All:  $0.015 \pm 0.005$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 120.2/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 41.467 $\pm$ 0.007  $\chi^2$ /NDF: 5328372.3/30

Left Out: 37.057 $\pm$ 0.006  $\chi^2$ /NDF: 4053728.9/24

Right Out: 44.458 $\pm$ 0.008  $\chi^2$ /NDF: 4586463.4/34

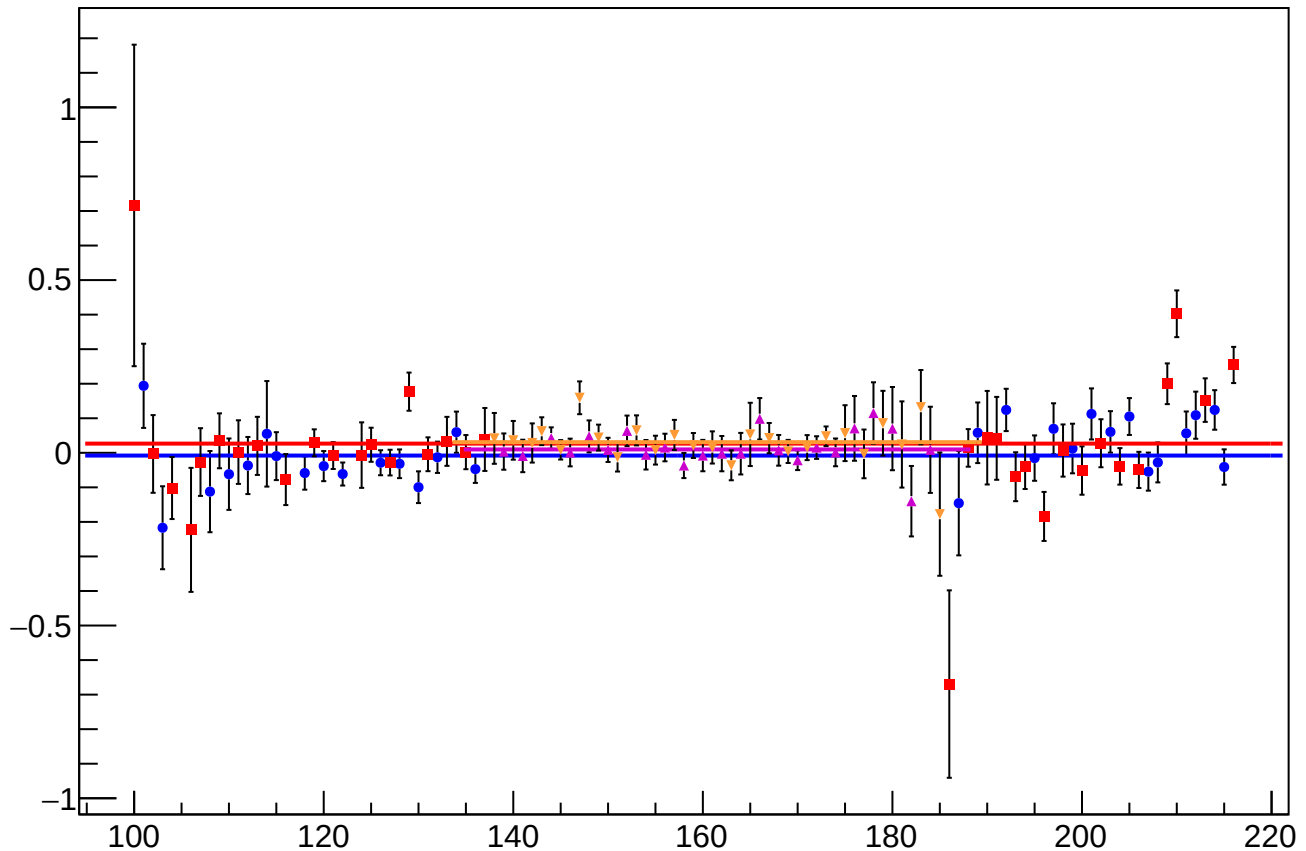
Left In: 37.127 $\pm$ 0.007  $\chi^2$ /NDF: 3012767.1/22

+ sign 38.995 $\pm$ 0.005  $\chi^2$ /NDF: 9587339.1/55

All: 39.608 $\pm$ 0.003  $\chi^2$ /NDF: 17743877.7/113

- sign 40.268 $\pm$ 0.005  $\chi^2$ /NDF: 8123152.0/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.010$   $\chi^2/\text{NDF}$ : 44.4/30

Left Out:  $0.031 \pm 0.009$   $\chi^2/\text{NDF}$ : 17.8/24

Right Out:  $0.027 \pm 0.011$   $\chi^2/\text{NDF}$ : 105.6/34

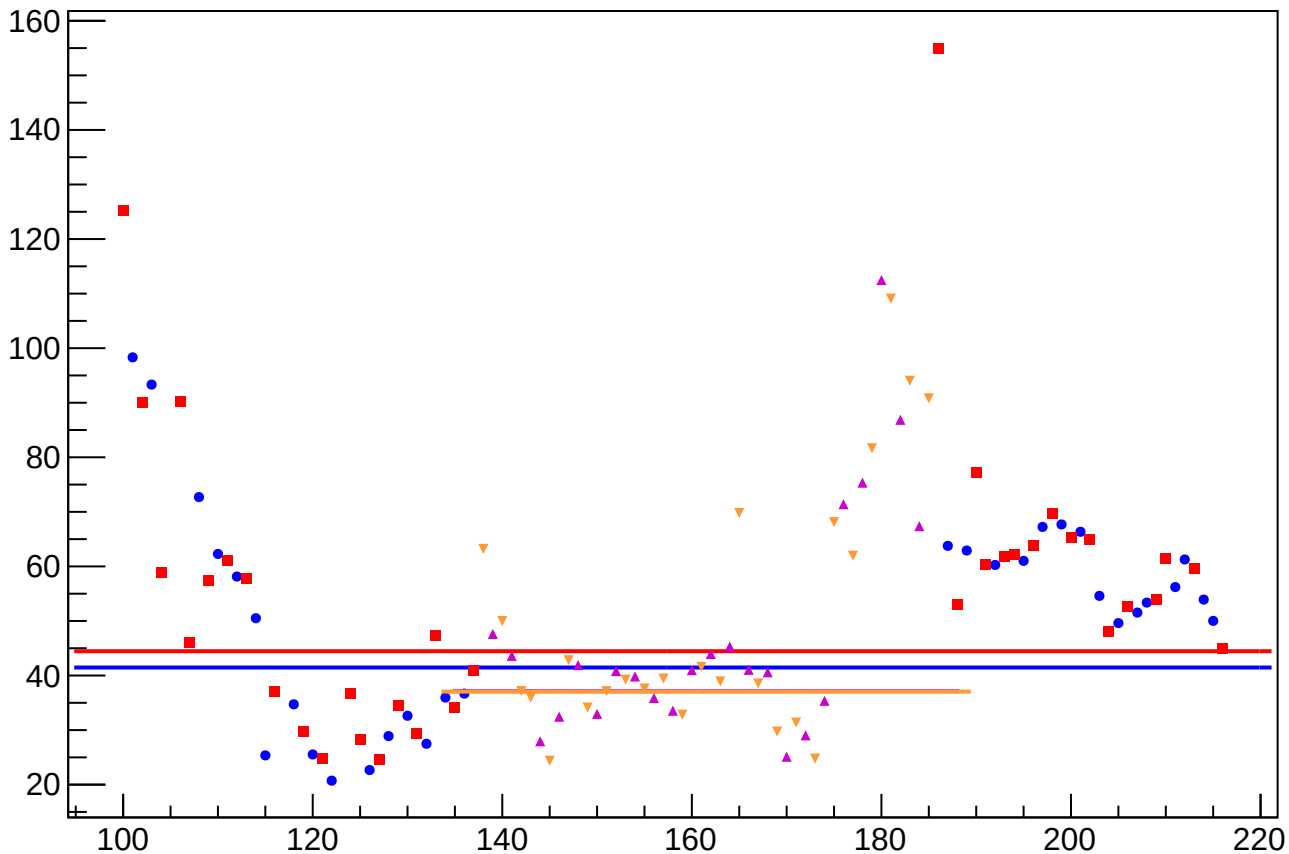
Left In:  $0.010 \pm 0.009$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.014 \pm 0.007$   $\chi^2/\text{NDF}$ : 70.2/55

All:  $0.015 \pm 0.005$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 120.2/57

asym\_sam\_26\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 41.467 $\pm$ 0.007  $\chi^2$ /NDF: 5328372.3/30

Left Out: 37.057 $\pm$ 0.006  $\chi^2$ /NDF: 4053728.9/24

Right Out: 44.458 $\pm$ 0.008  $\chi^2$ /NDF: 4586463.4/34

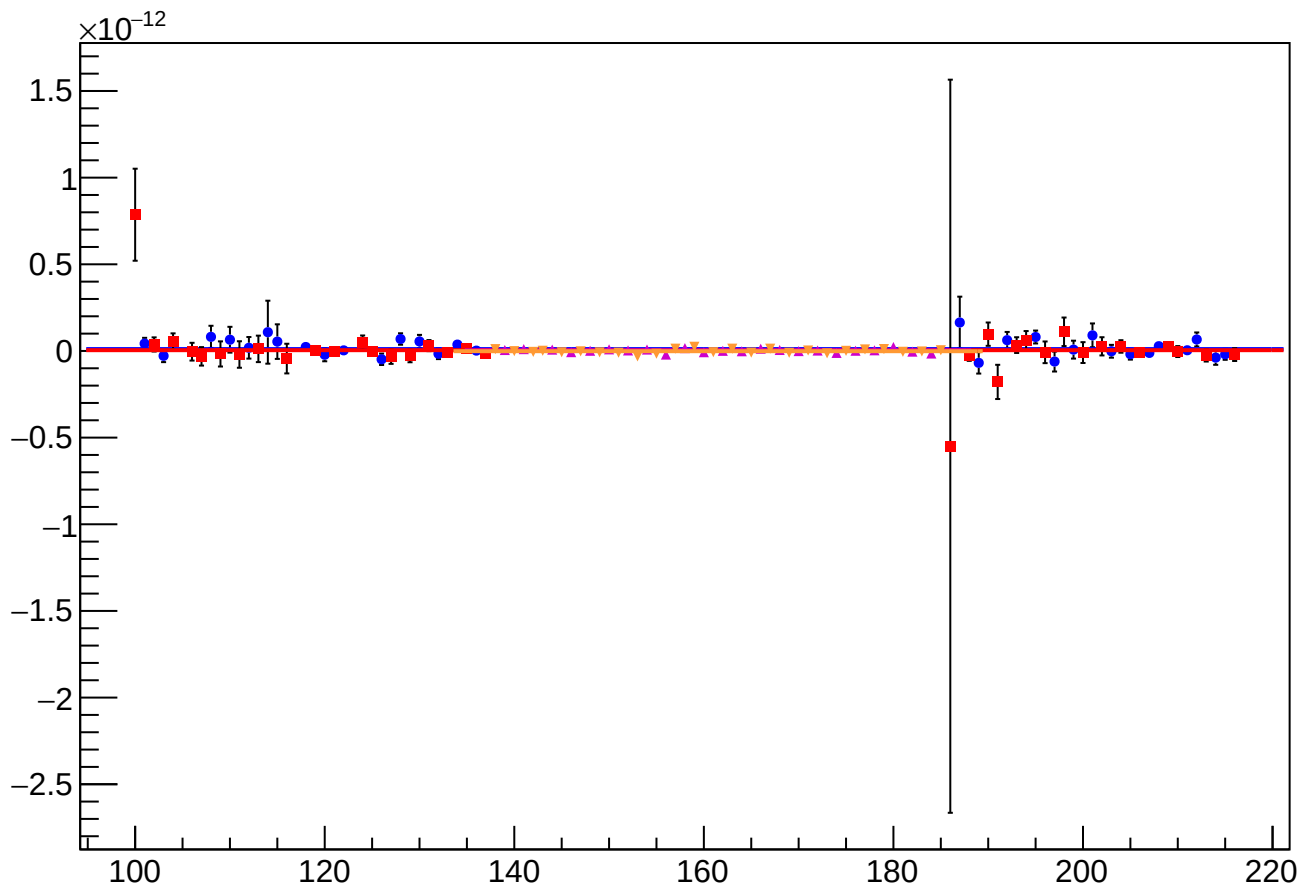
Left In: 37.127 $\pm$ 0.007  $\chi^2$ /NDF: 3012767.1/22

+ sign 38.995 $\pm$ 0.005  $\chi^2$ /NDF: 9587339.1/55

All: 39.608 $\pm$ 0.003  $\chi^2$ /NDF: 17743877.7/113

- sign 40.268 $\pm$ 0.005  $\chi^2$ /NDF: 8123152.0/57

asym\_sam\_26\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33.7/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 26.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29.9/34

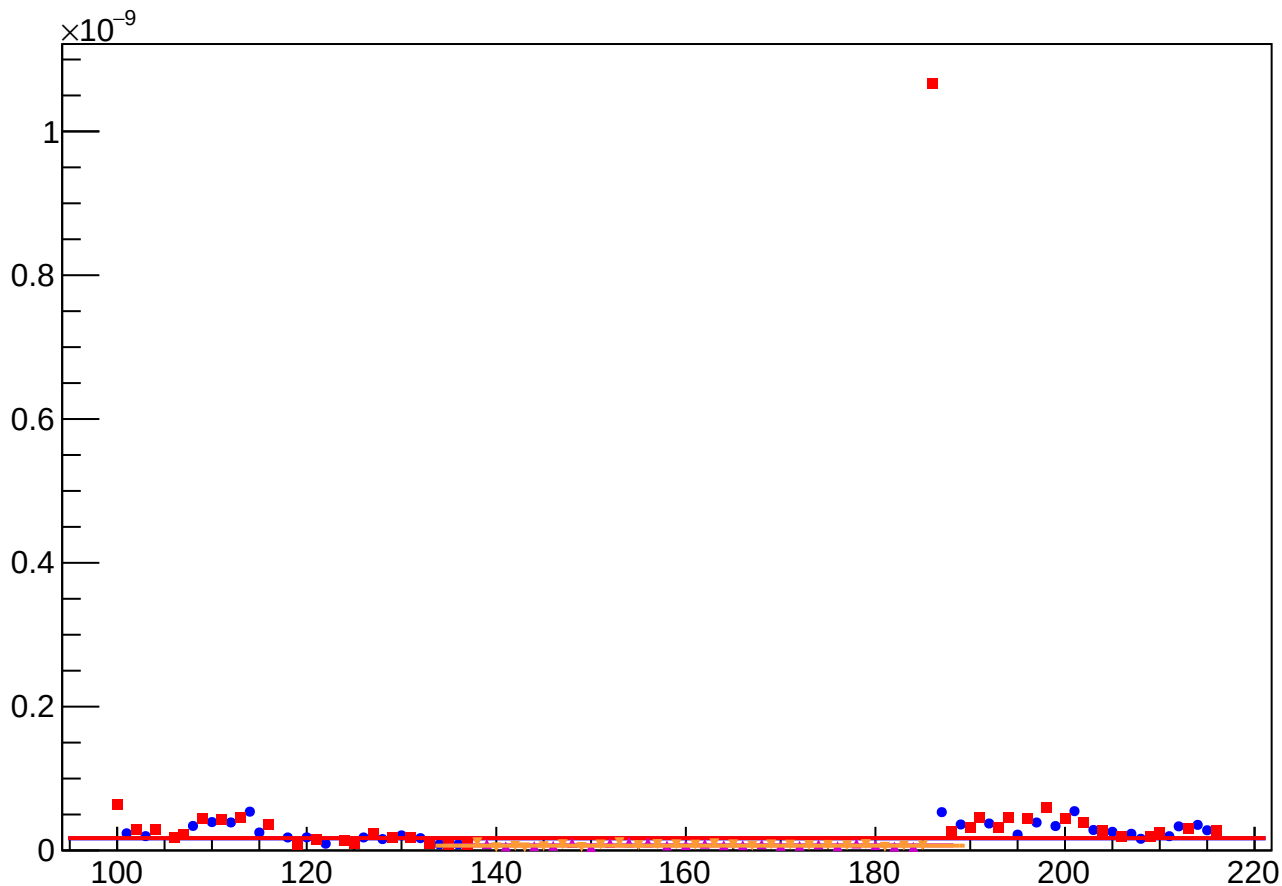
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.6/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 64.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 116.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 50.5/57

asym\_sam\_26\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6390431.0/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1953818.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7823270.1/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1431998.0/22

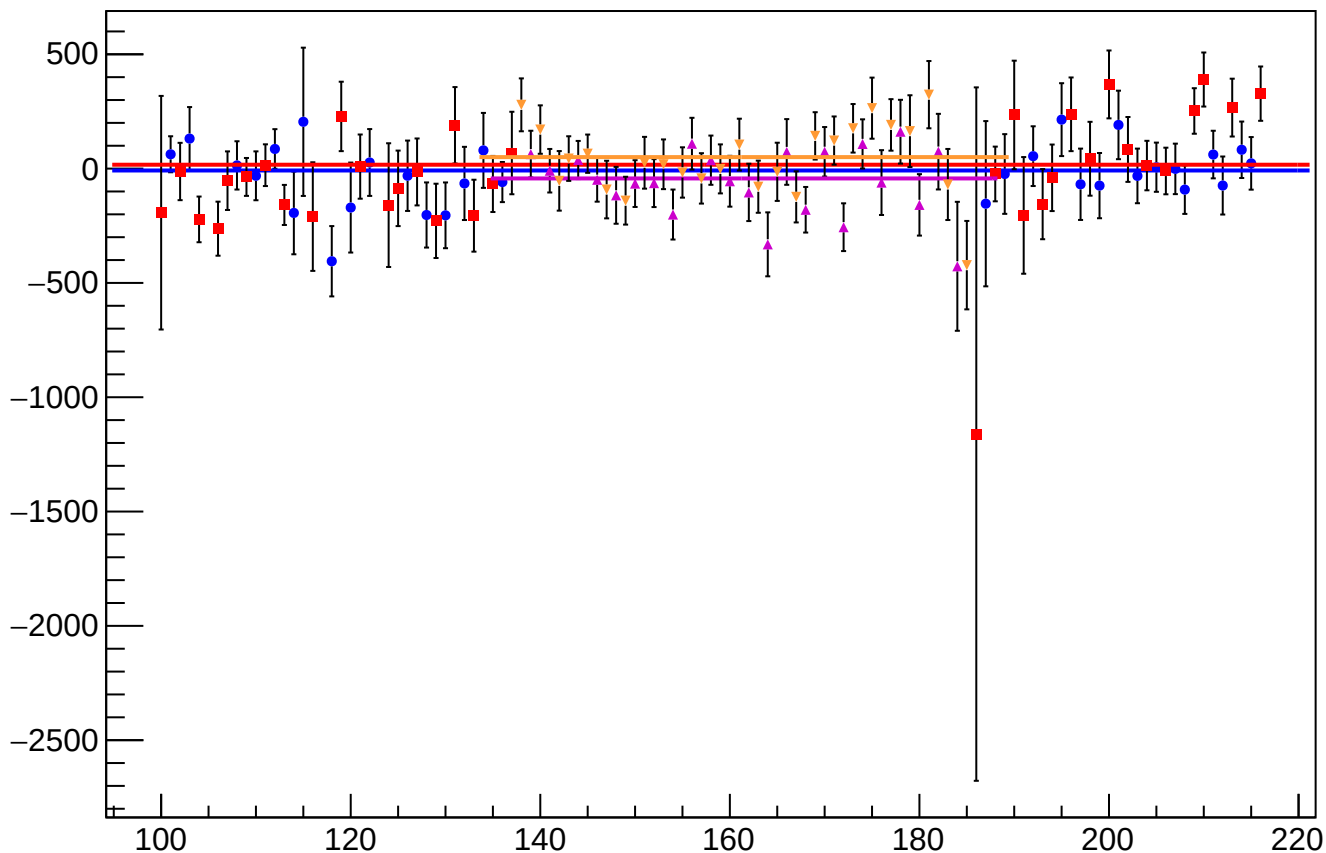
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14746287.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 29953121.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15139580.5/57



# reg\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-8.190 \pm 22.814$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $50.314 \pm 22.958$   $\chi^2/\text{NDF}$ : 33.5/24

Right Out:  $16.992 \pm 22.539$   $\chi^2/\text{NDF}$ : 63.7/34

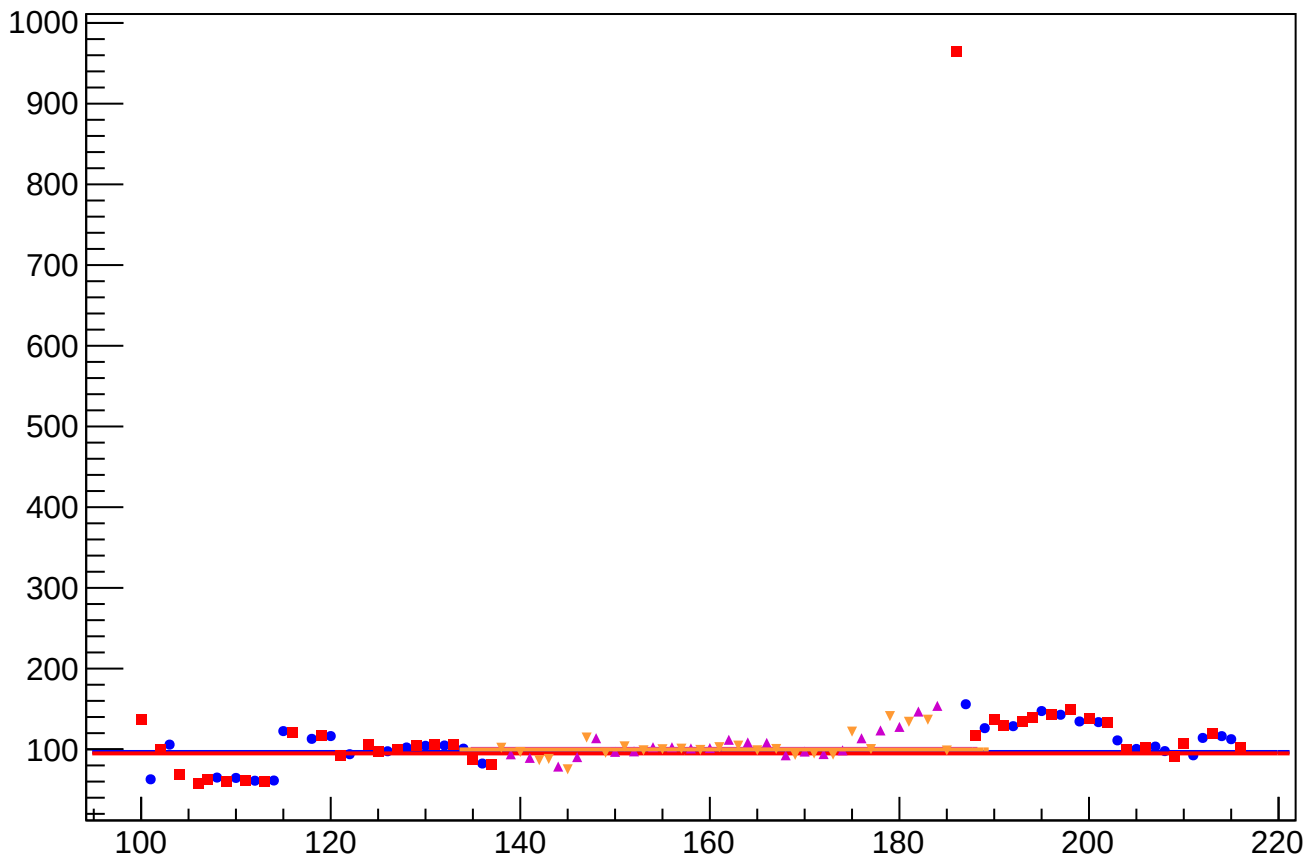
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $20.879 \pm 16.183$   $\chi^2/\text{NDF}$ : 59.7/55

All:  $4.888 \pm 11.502$   $\chi^2/\text{NDF}$ : 155.4/113

- sign  $-11.438 \pm 16.352$   $\chi^2/\text{NDF}$ : 93.7/57

# reg\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 96.675+/-0.016  $\chi^2$ /NDF: 2316713.8/30

Left Out: 99.839+/-0.016  $\chi^2$ /NDF: 697768.7/24

Right Out: 94.911+/-0.016  $\chi^2$ /NDF: 3545542.9/34

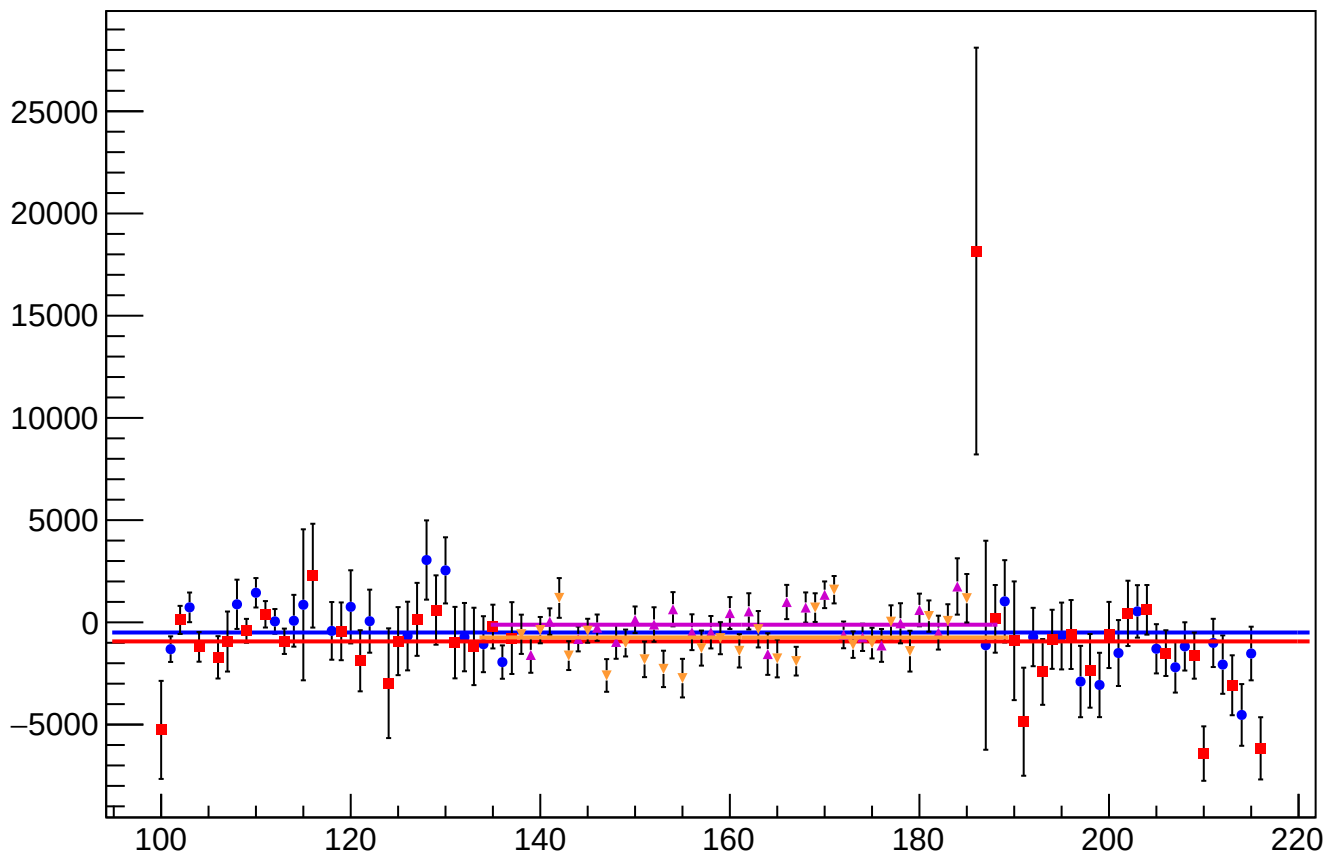
Left In: 100.498+/-0.017  $\chi^2$ /NDF: 656850.1/22

+ sign 98.247+/-0.011  $\chi^2$ /NDF: 3033591.1/55

All: 97.906+/-0.008  $\chi^2$ /NDF: 7295990.6/113

- sign 97.557+/-0.012  $\chi^2$ /NDF: 4260601.9/57

asym\_sam\_1548\_avg\_reg\_correction\_mean vs Slug



Right In:  $-496.315 \pm 211.759$   $\chi^2/\text{NDF}: 43.2/30$

Left Out:  $-738.364 \pm 156.311$   $\chi^2/\text{NDF}: 49.7/24$

Right Out:  $-932.596 \pm 203.094$   $\chi^2/\text{NDF}: 57.5/34$

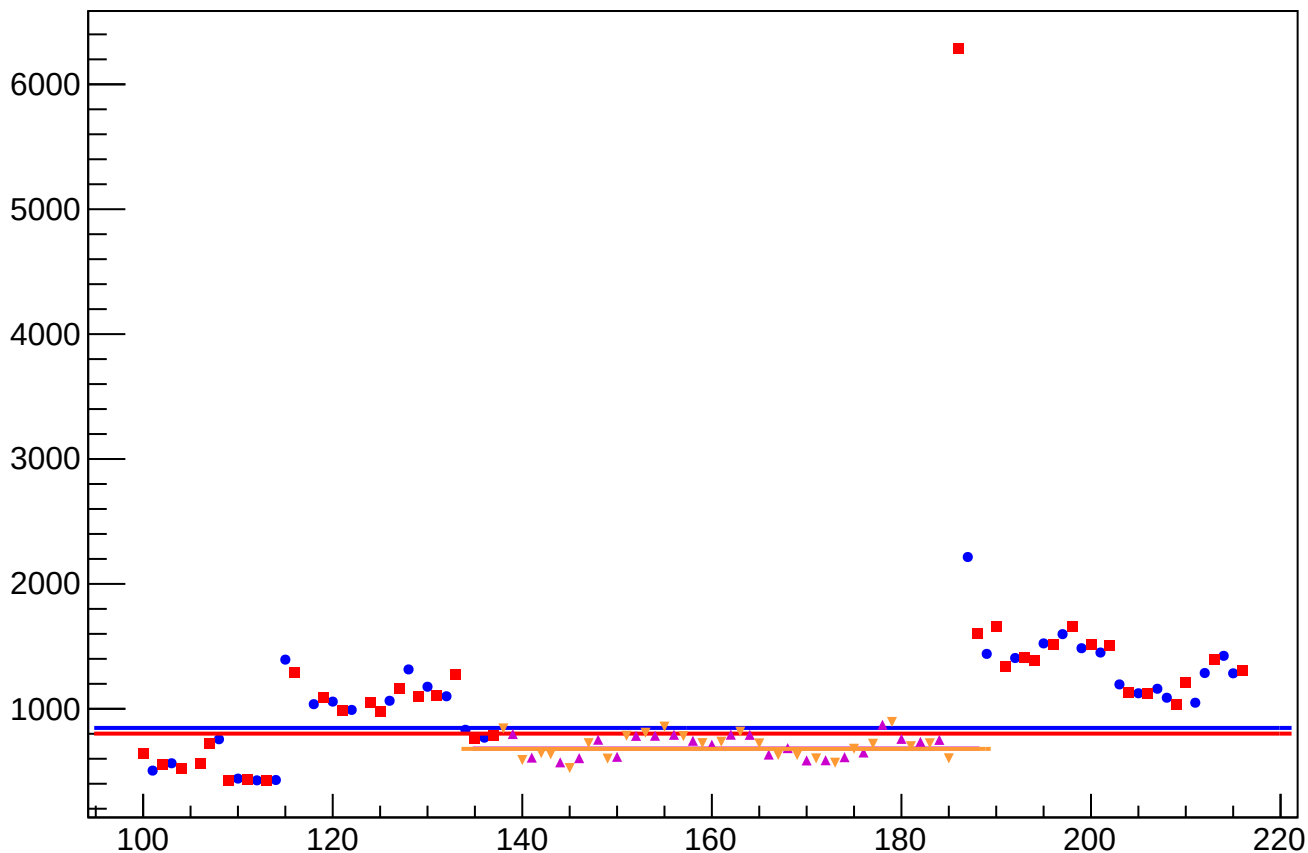
Left In:  $-115.639 \pm 160.990$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $-652.994 \pm 125.760$   $\chi^2/\text{NDF}: 93.7/55$

All:  $-542.294 \pm 89.067$   $\chi^2/\text{NDF}: 186.4/113$

- sign  $-430.889 \pm 126.161$   $\chi^2/\text{NDF}: 91.2/57$

asym\_sam\_1548\_avg\_reg\_correction\_rms vs Slug



Right In: 846.959+/-0.150  $\chi^2/\text{NDF}$ : 6326808.4/30

Left Out: 679.146+/-0.111  $\chi^2/\text{NDF}$ : 737419.7/24

Right Out: 801.311+/-0.144  $\chi^2/\text{NDF}$ : 8129795.1/34

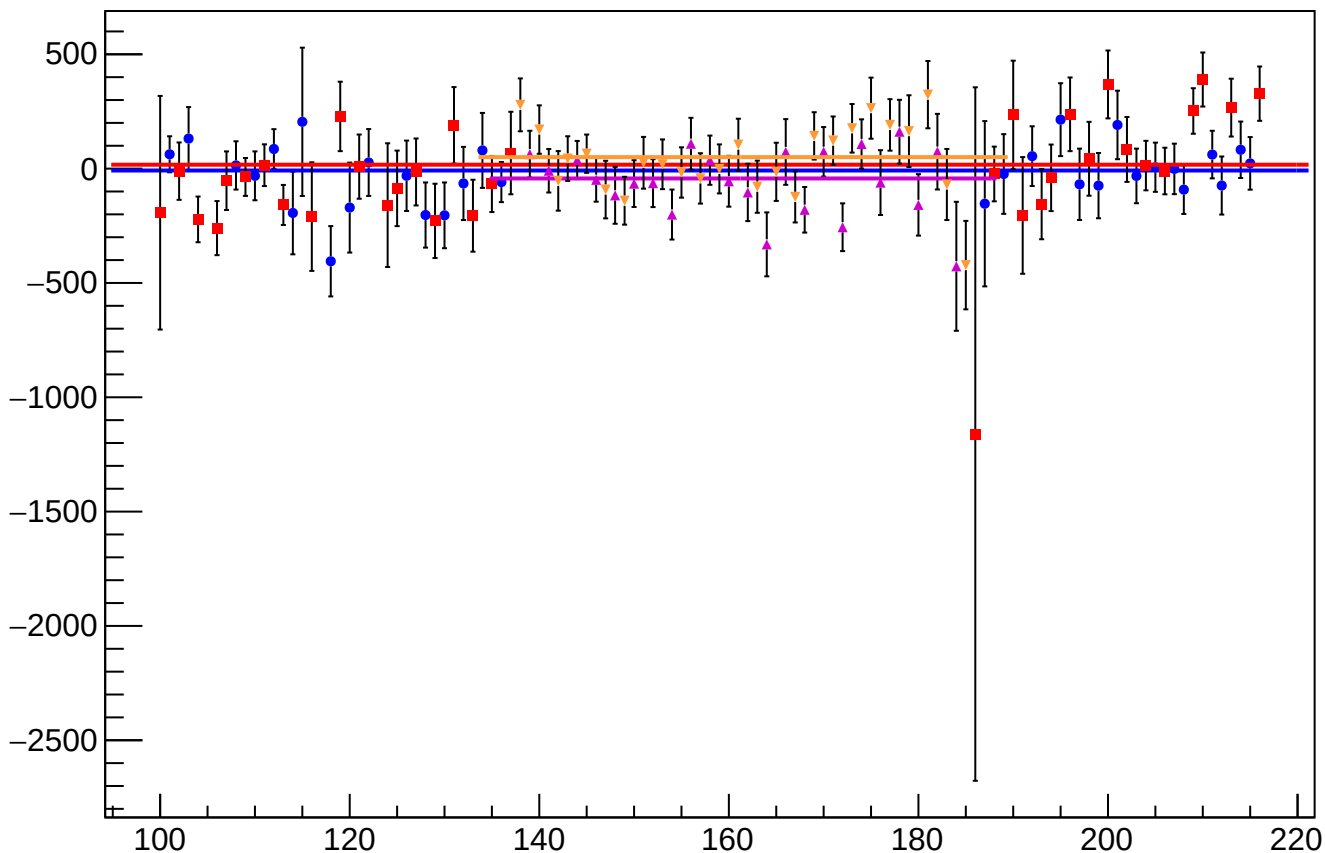
Left In: 681.893+/-0.114  $\chi^2/\text{NDF}$ : 573812.4/22

+ sign 738.333+/-0.089  $\chi^2/\text{NDF}$ : 7877248.3/55

All: 733.170+/-0.063  $\chi^2/\text{NDF}$ : 17012266.6/11

- sign 727.975+/-0.089  $\chi^2/\text{NDF}$ : 9128255.3/57

# cor\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-8.192 \pm 22.814$   $\chi^2/\text{NDF}: 23.0/30$

Left Out:  $50.322 \pm 22.958$   $\chi^2/\text{NDF}: 33.4/24$

Right Out:  $17.144 \pm 22.540$   $\chi^2/\text{NDF}: 63.6/34$

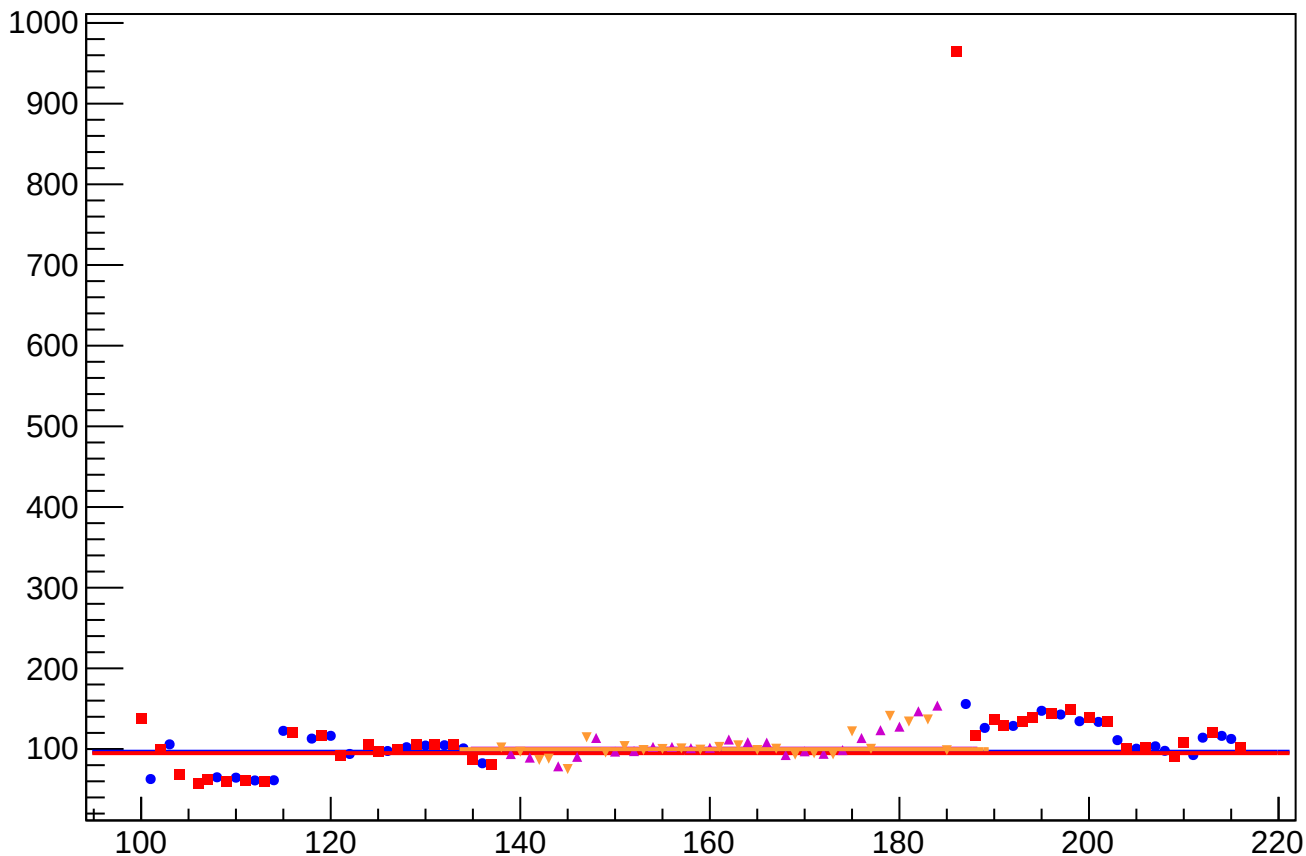
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}: 26.6/22$

+ sign  $20.882 \pm 16.183$   $\chi^2/\text{NDF}: 59.7/55$

All:  $4.929 \pm 11.502$   $\chi^2/\text{NDF}: 155.3/113$

- sign  $-11.359 \pm 16.352$   $\chi^2/\text{NDF}: 93.6/57$

# cor\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 96.675 $\pm$ 0.016  $\chi^2$ /NDF: 2316714.8/30

Left Out: 99.839 $\pm$ 0.016  $\chi^2$ /NDF: 697768.8/24

Right Out: 94.902 $\pm$ 0.016  $\chi^2$ /NDF: 3548988.5/34

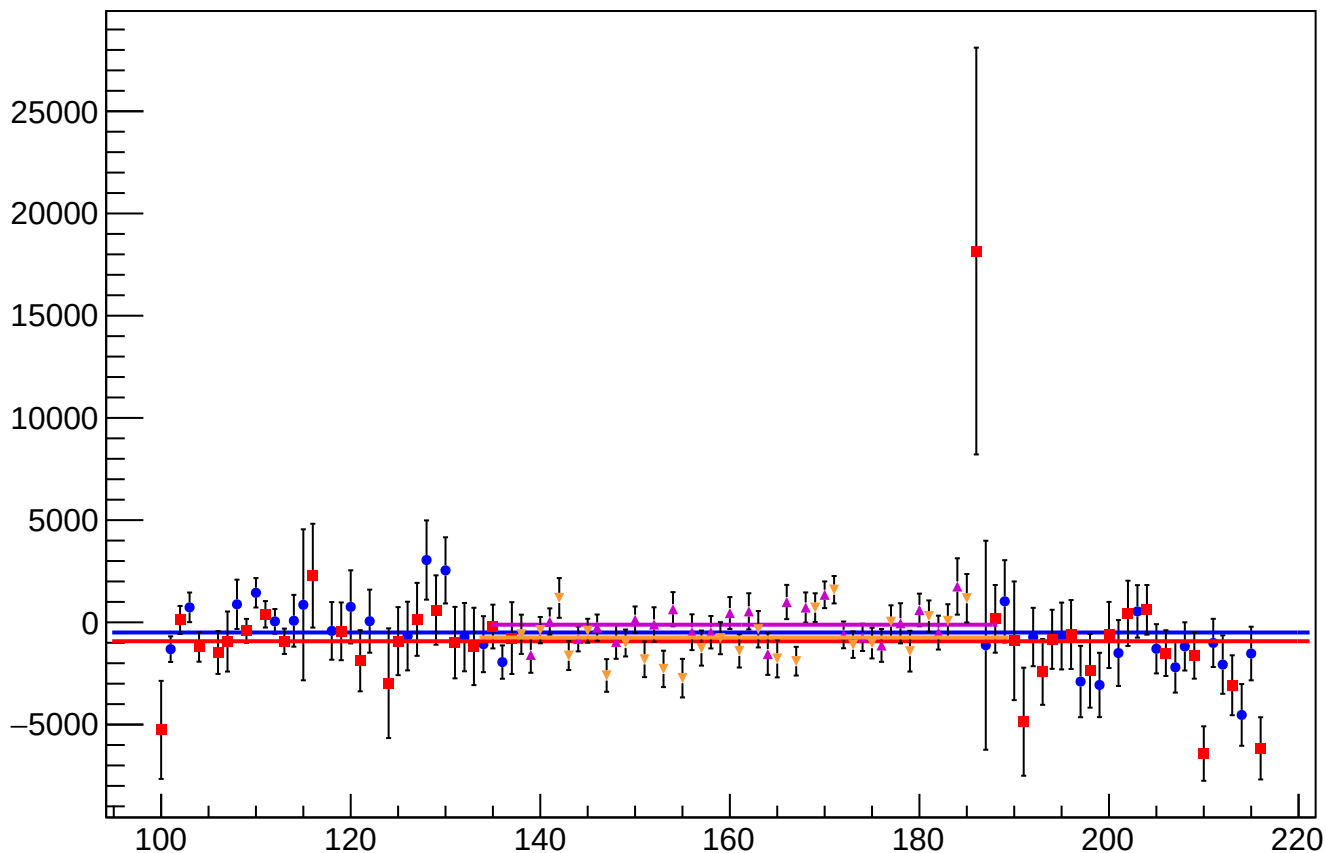
Left In: 100.498 $\pm$ 0.017  $\chi^2$ /NDF: 656850.1/22

+ sign 98.247 $\pm$ 0.011  $\chi^2$ /NDF: 3033592.0/55

All: 97.903 $\pm$ 0.008  $\chi^2$ /NDF: 7299656.9/113

- sign 97.553 $\pm$ 0.012  $\chi^2$ /NDF: 4264241.9/57

asym\_sam\_1548\_avg\_cor\_correction\_mean vs Slug



Right In:  $-496.340 \pm 211.761$   $\chi^2/\text{NDF}: 43.2/30$

Left Out:  $-738.352 \pm 156.311$   $\chi^2/\text{NDF}: 49.7/24$

Right Out:  $-923.546 \pm 203.185$   $\chi^2/\text{NDF}: 57.2/34$

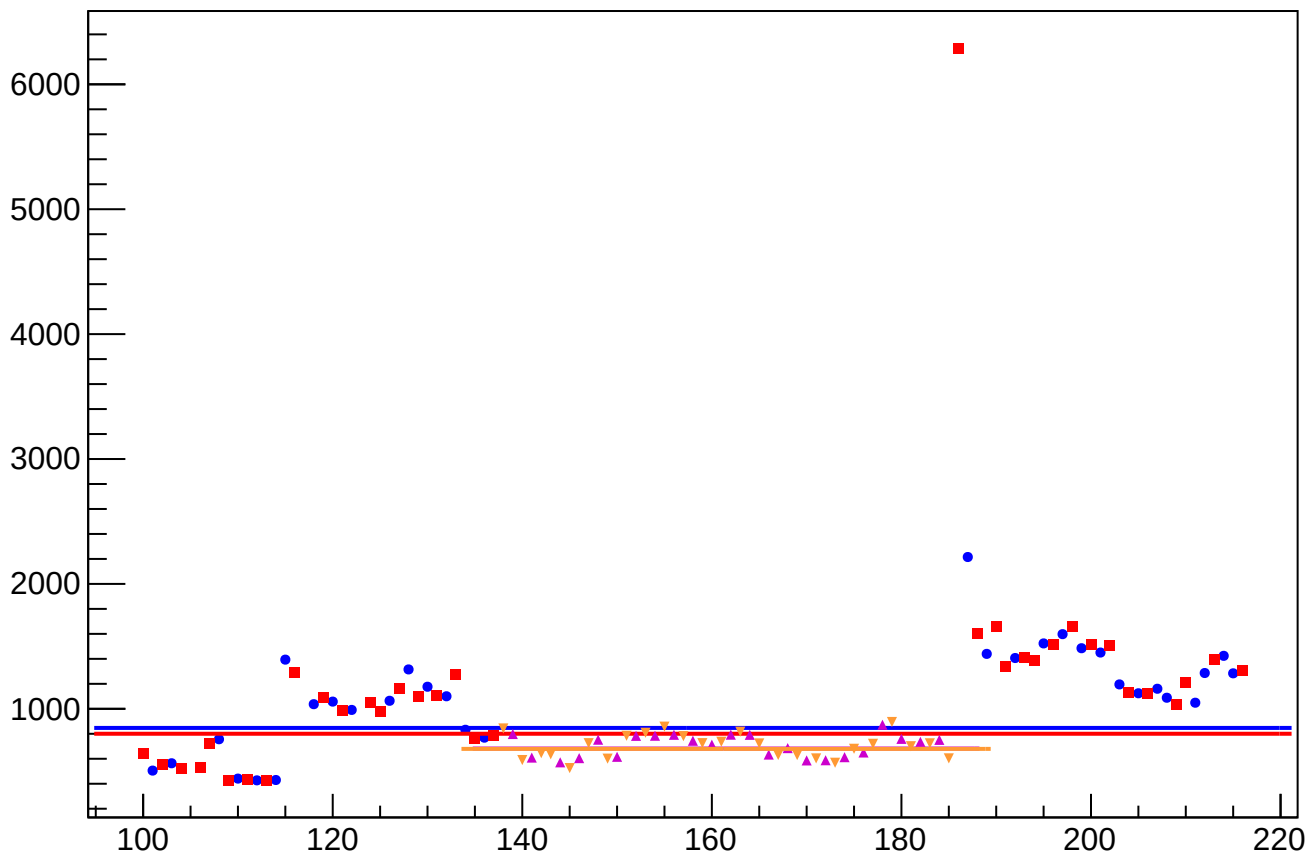
Left In:  $-115.639 \pm 160.990$   $\chi^2/\text{NDF}: 23.7/22$

+ sign  $-652.996 \pm 125.761$   $\chi^2/\text{NDF}: 93.7/55$

All:  $-540.489 \pm 89.075$   $\chi^2/\text{NDF}: 186.0/113$

- sign  $-427.225 \pm 126.183$   $\chi^2/\text{NDF}: 90.7/57$

asym\_sam\_1548\_avg\_cor\_correction\_rms vs Slug



Right In: 846.968 $\pm$ 0.150  $\chi^2$ /NDF: 6326626.5/30

Left Out: 679.146 $\pm$ 0.111  $\chi^2$ /NDF: 737418.6/24

Right Out: 800.273 $\pm$ 0.144  $\chi^2$ /NDF: 8158459.6/34

Left In: 681.893 $\pm$ 0.114  $\chi^2$ /NDF: 573813.6/22

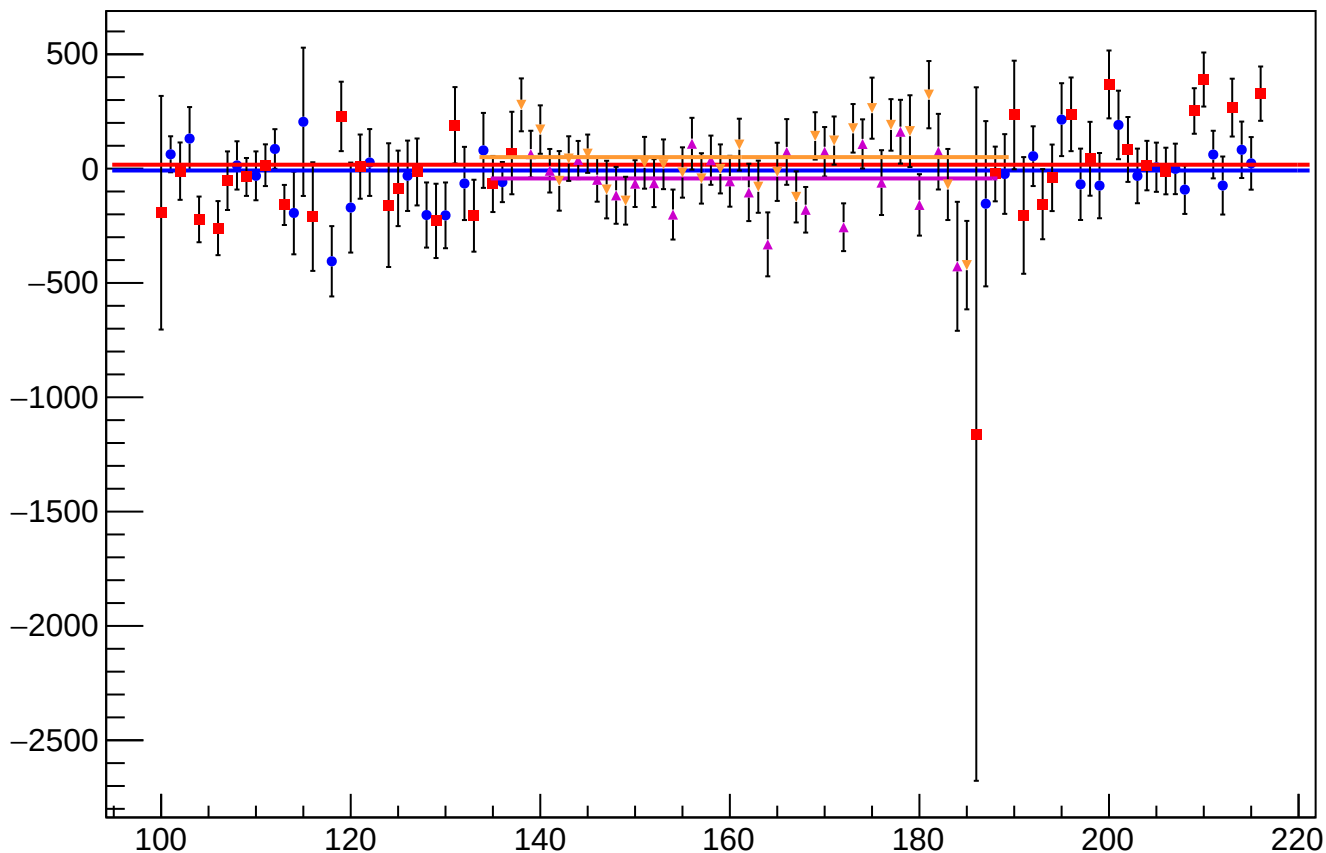
+ sign 738.336 $\pm$ 0.089  $\chi^2$ /NDF: 7877149.0/55

All: 732.961 $\pm$ 0.063  $\chi^2$ /NDF: 17033823.0/11

- sign 727.549 $\pm$ 0.089  $\chi^2$ /NDF: 9149341.3/57



# eigen\_cor\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-8.192 \pm 22.814$   $\chi^2/\text{NDF}$ : 23.0/30

Left Out:  $50.322 \pm 22.958$   $\chi^2/\text{NDF}$ : 33.4/24

Right Out:  $17.144 \pm 22.540$   $\chi^2/\text{NDF}$ : 63.6/34

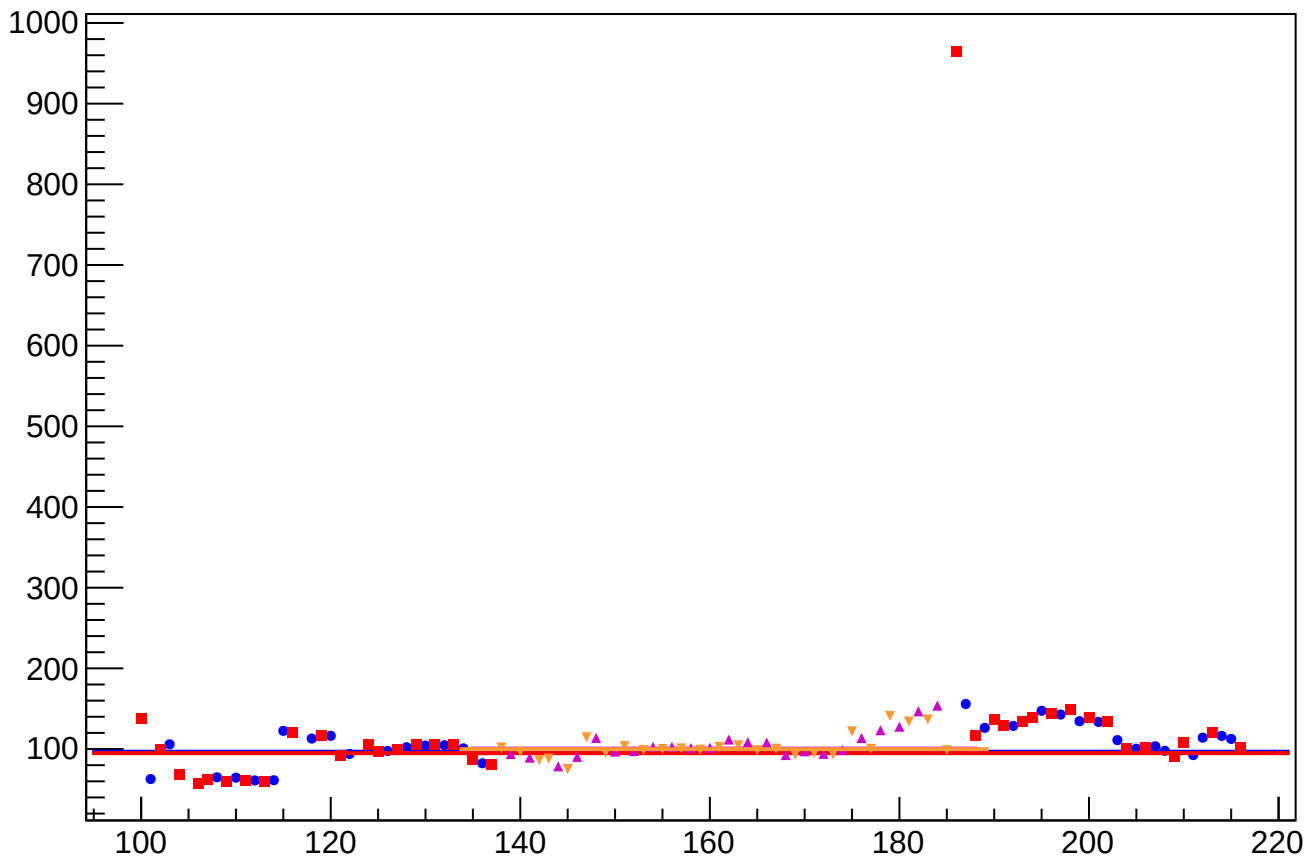
Left In:  $-43.026 \pm 23.758$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $20.882 \pm 16.183$   $\chi^2/\text{NDF}$ : 59.7/55

All:  $4.929 \pm 11.502$   $\chi^2/\text{NDF}$ : 155.3/113

- sign  $-11.359 \pm 16.352$   $\chi^2/\text{NDF}$ : 93.6/57

# eigen\_cor\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 96.675 $\pm$ 0.016     $\chi^2$ /NDF: 2316714.8/30

Left Out: 99.839 $\pm$ 0.016     $\chi^2$ /NDF: 697768.8/24

Right Out: 94.902 $\pm$ 0.016     $\chi^2$ /NDF: 3548988.5/34

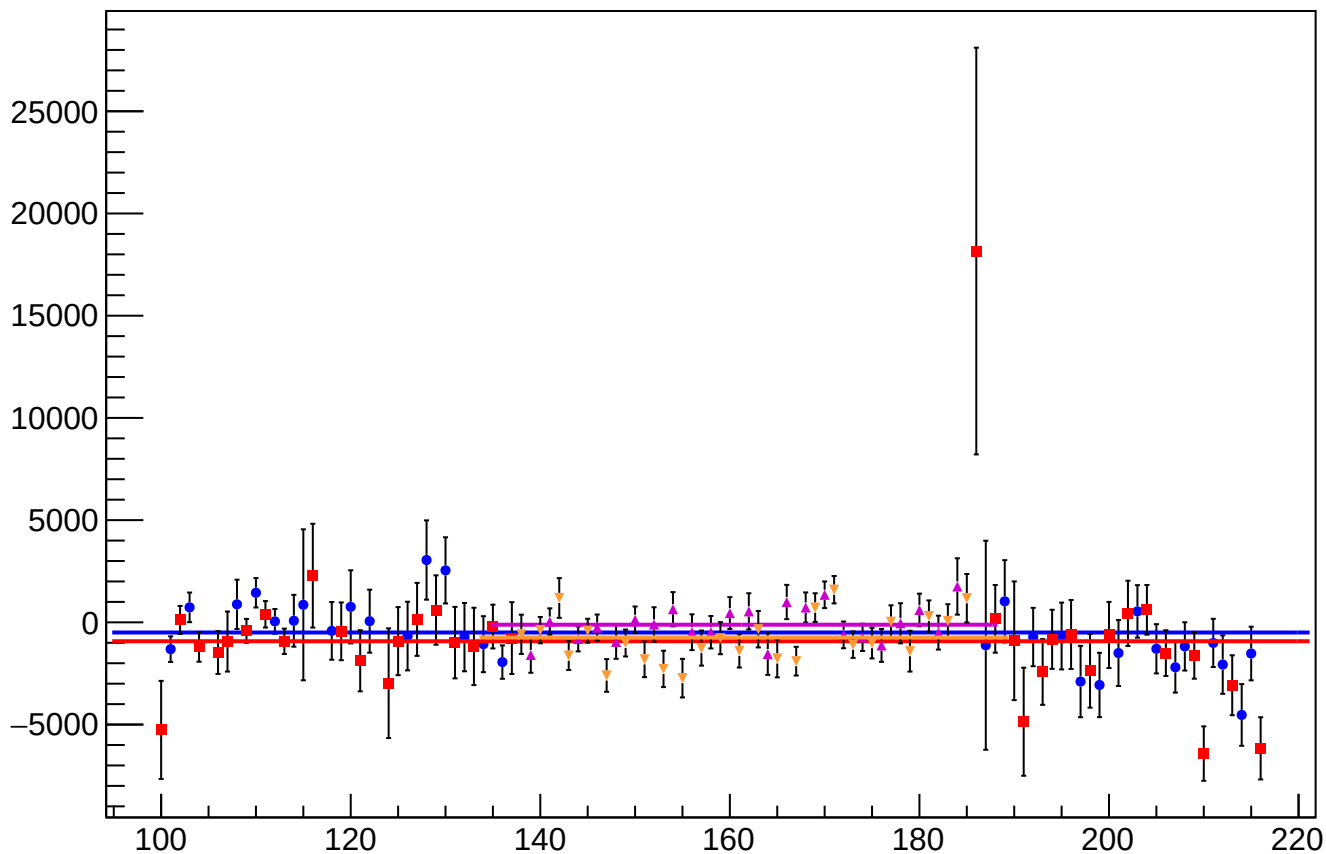
Left In: 100.498 $\pm$ 0.017     $\chi^2$ /NDF: 656850.1/22

+ sign 98.247 $\pm$ 0.011     $\chi^2$ /NDF: 3033592.0/55

All: 97.903 $\pm$ 0.008     $\chi^2$ /NDF: 7299656.9/113

- sign 97.553 $\pm$ 0.012     $\chi^2$ /NDF: 4264241.9/57

asym\_sam\_1548\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In: -496.340 $\pm$ 211.761  $\chi^2$ /NDF: 43.2/30

Left Out: -738.352 $\pm$ 156.311  $\chi^2$ /NDF: 49.7/24

Right Out: -923.546 $\pm$ 203.185  $\chi^2$ /NDF: 57.2/34

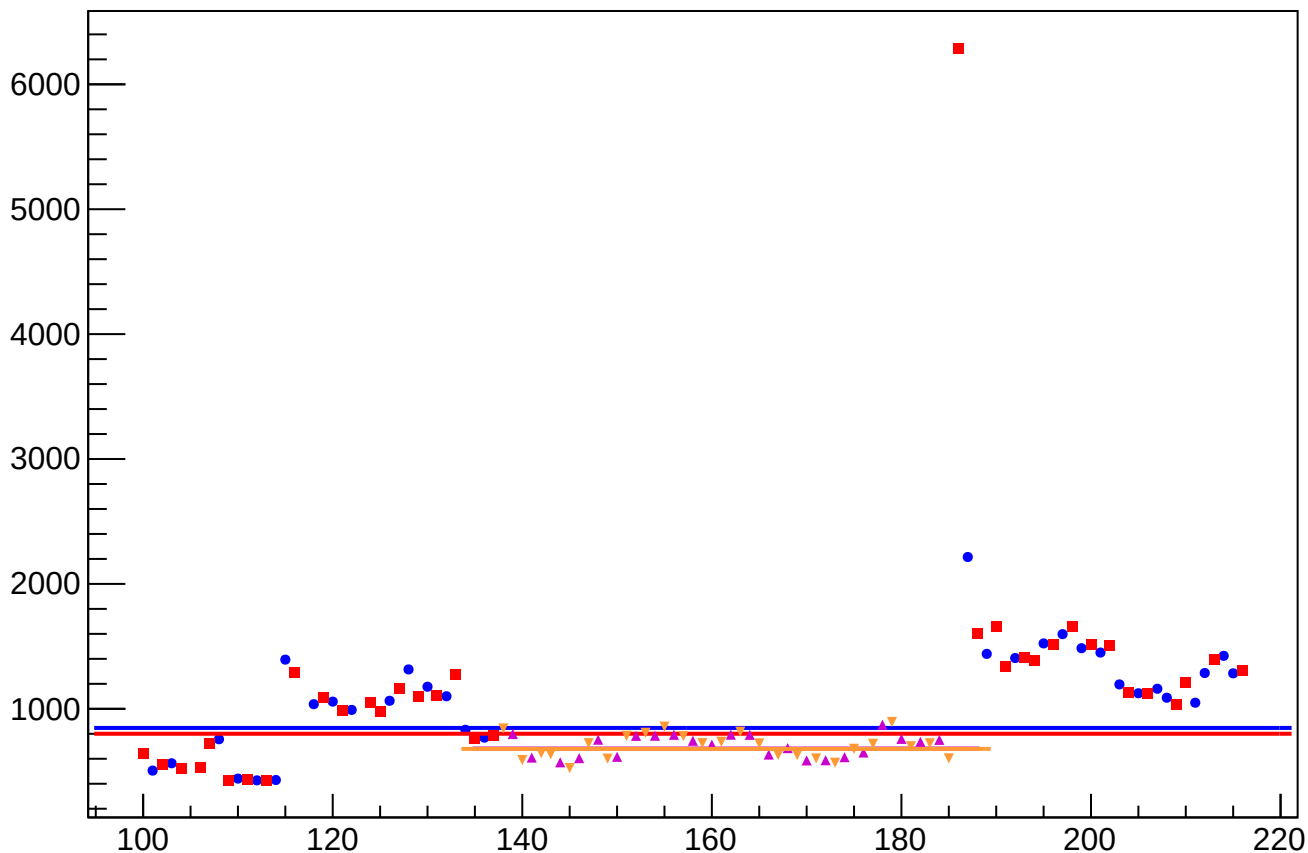
Left In: -115.639 $\pm$ 160.990  $\chi^2$ /NDF: 23.7/22

+ sign -652.996 $\pm$ 125.761  $\chi^2$ /NDF: 93.7/55

All: -540.489 $\pm$ 89.075  $\chi^2$ /NDF: 186.0/113

- sign -427.225 $\pm$ 126.183  $\chi^2$ /NDF: 90.7/57

asym\_sam\_1548\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 846.968 $\pm$ 0.150  $\chi^2$ /NDF: 6326626.5/30

Left Out: 679.146 $\pm$ 0.111  $\chi^2$ /NDF: 737418.6/24

Right Out: 800.273 $\pm$ 0.144  $\chi^2$ /NDF: 8158459.6/34

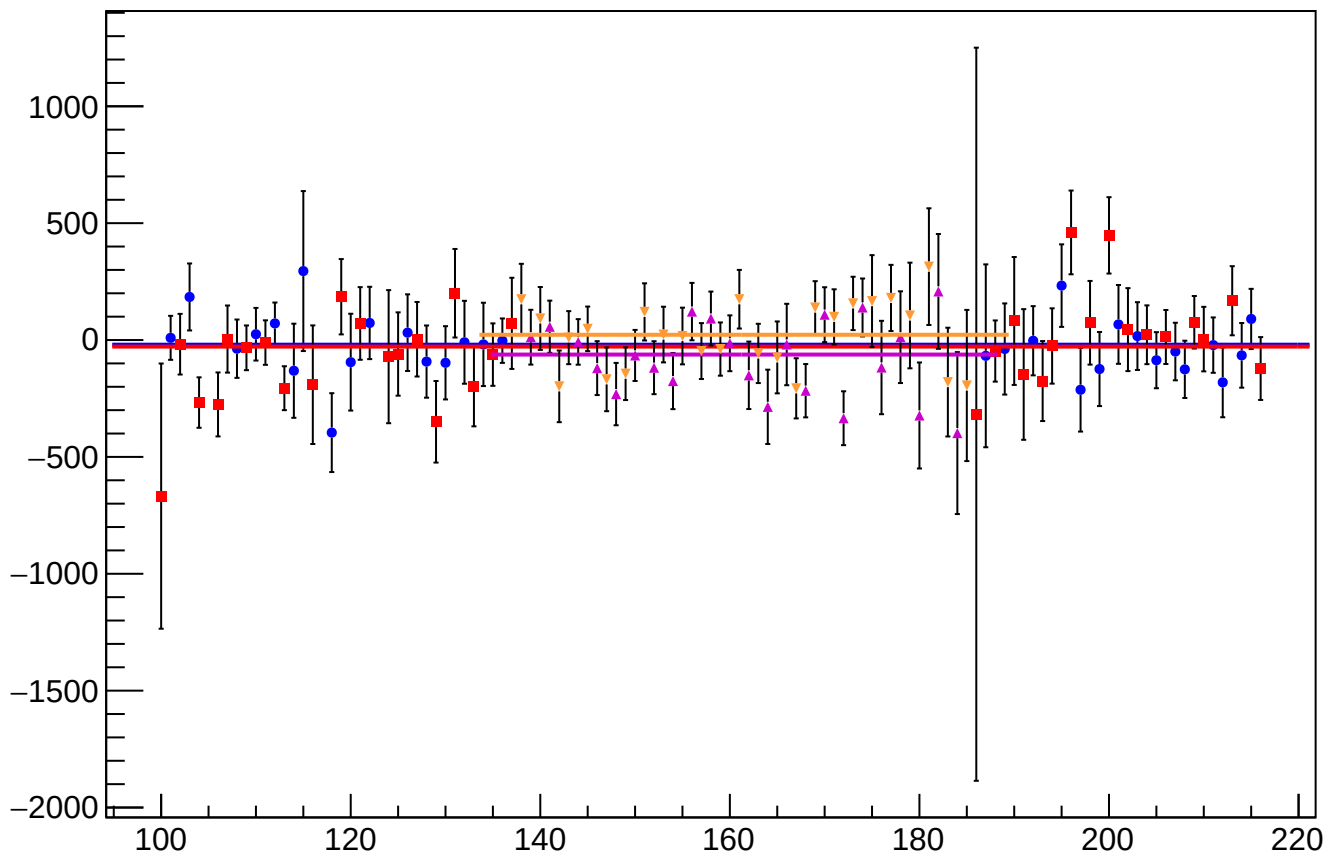
Left In: 681.893 $\pm$ 0.114  $\chi^2$ /NDF: 573813.6/22

+ sign 738.336 $\pm$ 0.089  $\chi^2$ /NDF: 7877149.0/55

All: 732.961 $\pm$ 0.063  $\chi^2$ /NDF: 17033823.0/11

- sign 727.549 $\pm$ 0.089  $\chi^2$ /NDF: 9149341.3/57

# dit\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-19.915 \pm 25.379$   $\chi^2/\text{NDF}$ : 17.7/30

Left Out:  $22.542 \pm 26.643$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-28.008 \pm 25.006$   $\chi^2/\text{NDF}$ : 43.0/34

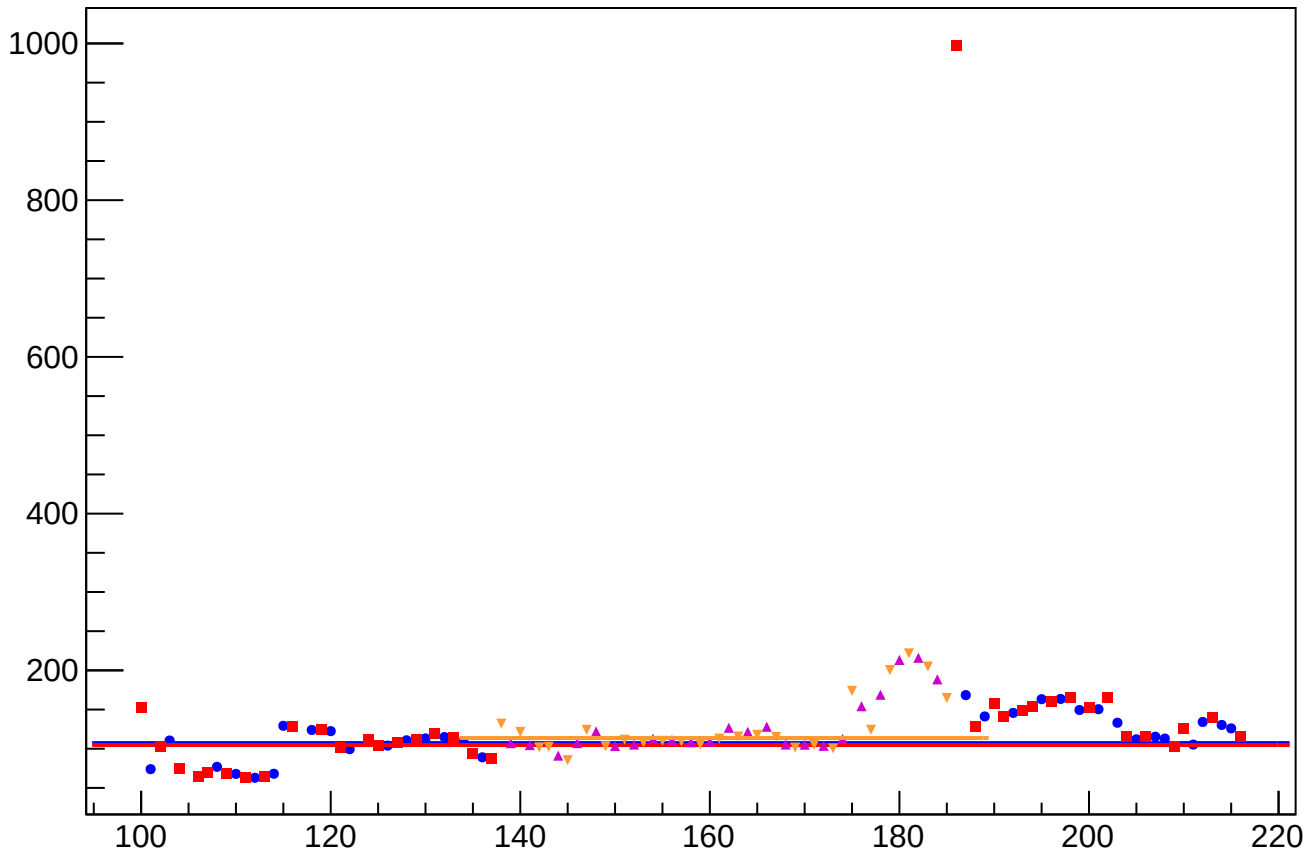
Left In:  $-62.169 \pm 27.339$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $0.283 \pm 18.376$   $\chi^2/\text{NDF}$ : 40.6/55

All:  $-21.554 \pm 13.021$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $-43.569 \pm 18.452$   $\chi^2/\text{NDF}$ : 71.1/57

dit\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 107.171 $\pm$ 0.018  $\chi^2$ /NDF: 2467506.7/30

Left Out: 113.766 $\pm$ 0.019  $\chi^2$ /NDF:1579920.3/24

Right Out: 104.721 $\pm$ 0.018  $\chi^2$ /NDF: 3774963.7/34

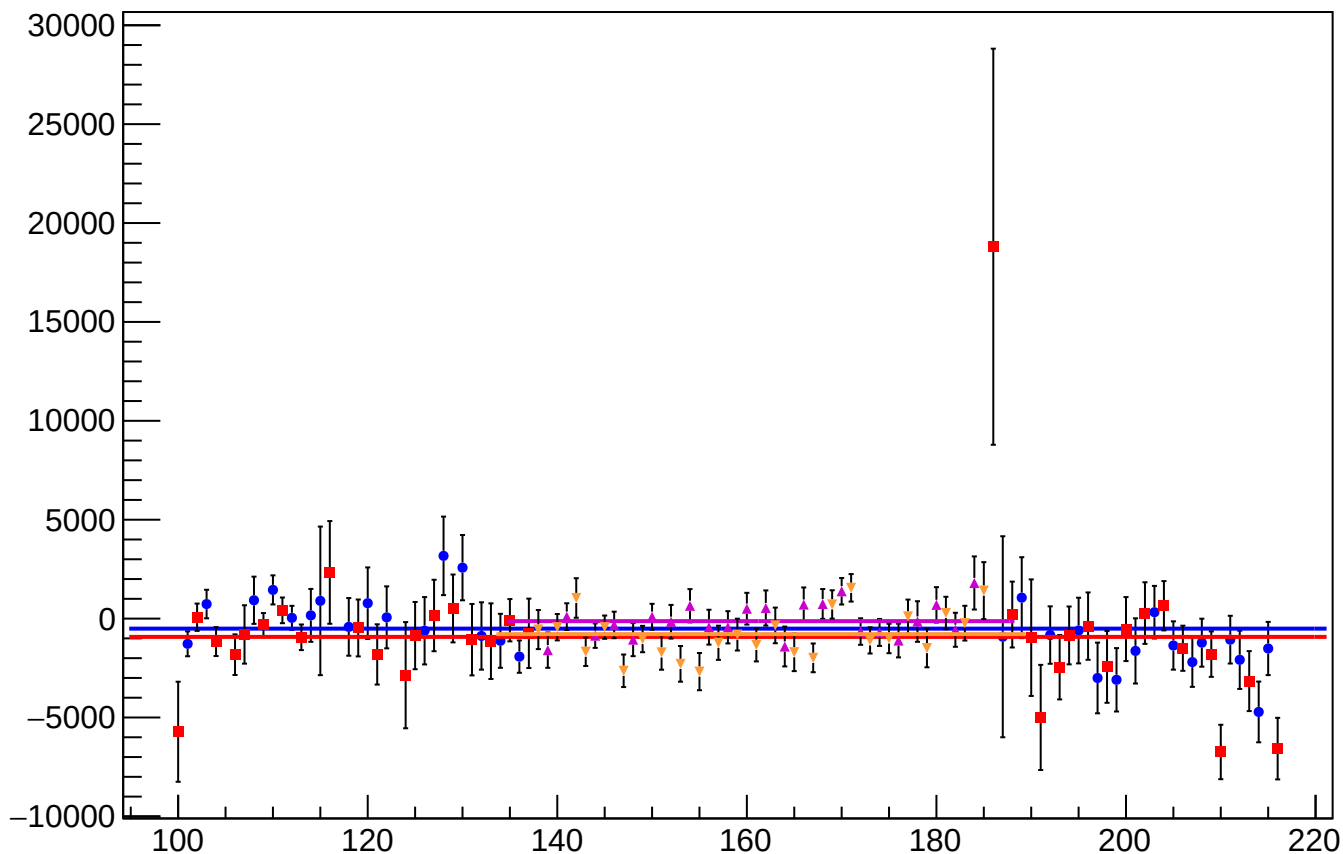
Left In: 113.677 $\pm$ 0.019  $\chi^2$ /NDF:1316044.6/22

+ sign 110.308 $\pm$ 0.013  $\chi^2$ /NDF: 4111676.3/55

All: 109.558 $\pm$ 0.009  $\chi^2$ /NDF: 9326238.0/113

- sign 108.801 $\pm$ 0.013  $\chi^2$ /NDF: 5207857.9/57

asym\_sam\_1548\_avg\_dit\_correction\_mean vs Slug



Right In: -506.847 $\pm$ 214.554  $\chi^2$ /NDF: 43.2/30

Left Out: -784.286 $\pm$ 160.482  $\chi^2$ /NDF: 45.4/24

Right Out: -924.535 $\pm$ 205.654  $\chi^2$ /NDF: 60.9/34

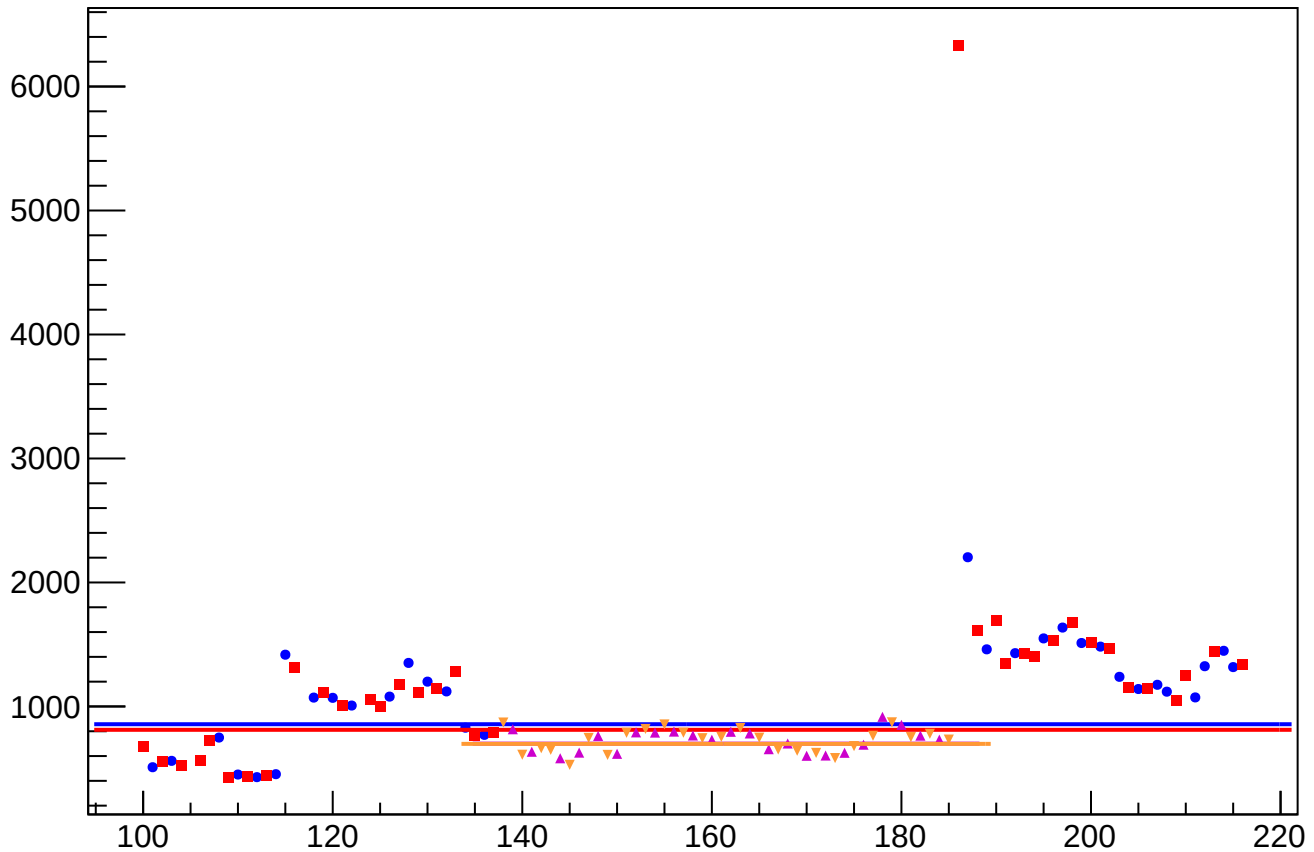
Left In: -128.155 $\pm$ 165.255  $\chi^2$ /NDF: 22.7/22

+ sign -684.753 $\pm$ 128.510  $\chi^2$ /NDF: 89.6/55

All: -562.980 $\pm$ 90.979  $\chi^2$ /NDF: 184.2/113

- sign -440.621 $\pm$ 128.819  $\chi^2$ /NDF: 92.7/57

# asym\_sam\_1548\_avg\_dit\_correction\_rms vs Slug



Right In: 856.693 $\pm$ 0.152  $\chi^2$ /NDF: 6458719.9/30

Left Out: 698.237 $\pm$ 0.113  $\chi^2$ /NDF: 714686.8/24

Right Out: 811.623 $\pm$ 0.145  $\chi^2$ /NDF: 8144803.5/34

Left In: 700.079 $\pm$ 0.117  $\chi^2$ /NDF: 584318.7/22

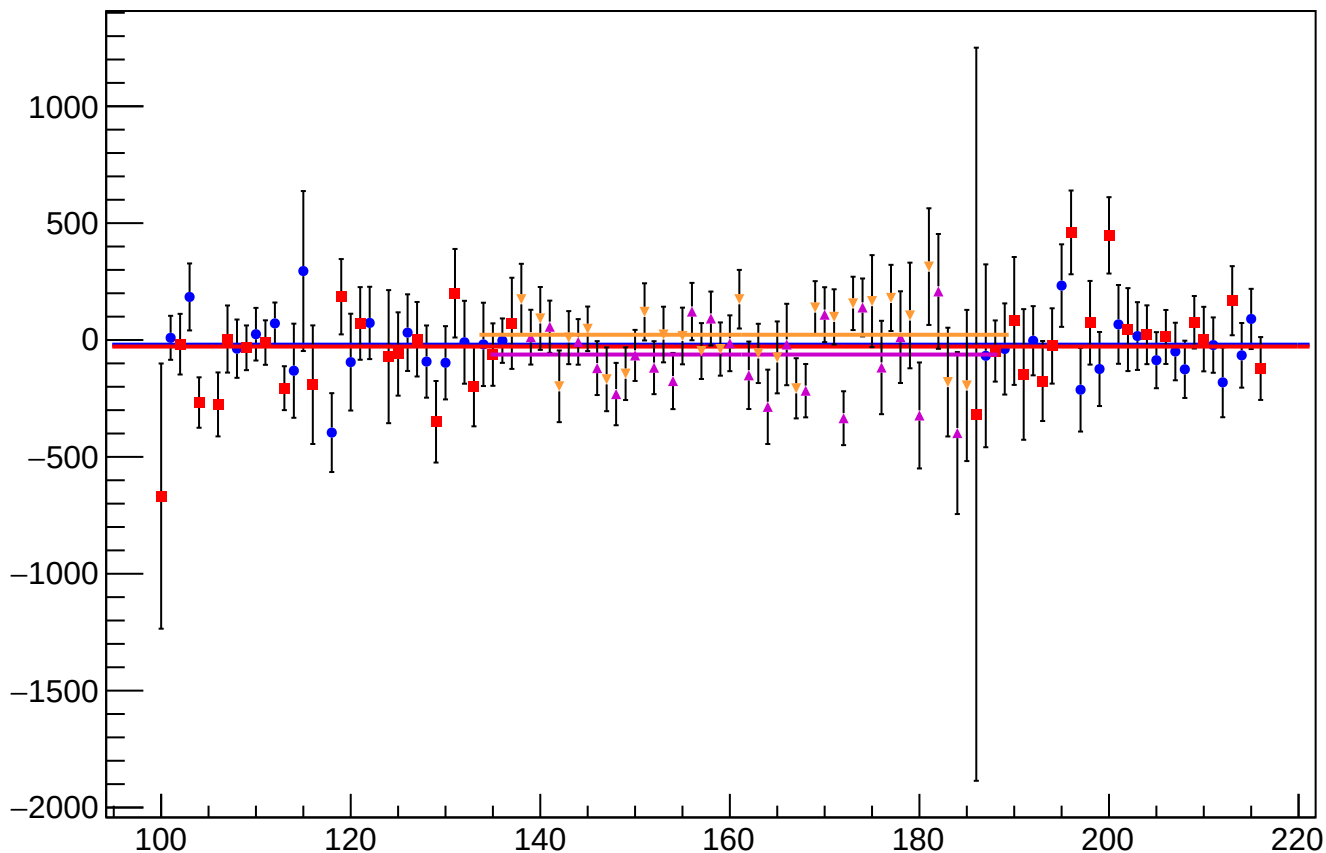
+ sign 755.084 $\pm$ 0.091  $\chi^2$ /NDF: 7872918.5/55

All: 749.478 $\pm$ 0.064  $\chi^2$ /NDF: 16967186.1/11

- sign 743.844 $\pm$ 0.091  $\chi^2$ /NDF: 9086636.3/57



# eigen\_dit\_asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $-19.914 \pm 25.379$   $\chi^2/\text{NDF}$ : 17.7/30

Left Out:  $22.544 \pm 26.643$   $\chi^2/\text{NDF}$ : 21.6/24

Right Out:  $-28.007 \pm 25.006$   $\chi^2/\text{NDF}$ : 43.0/34

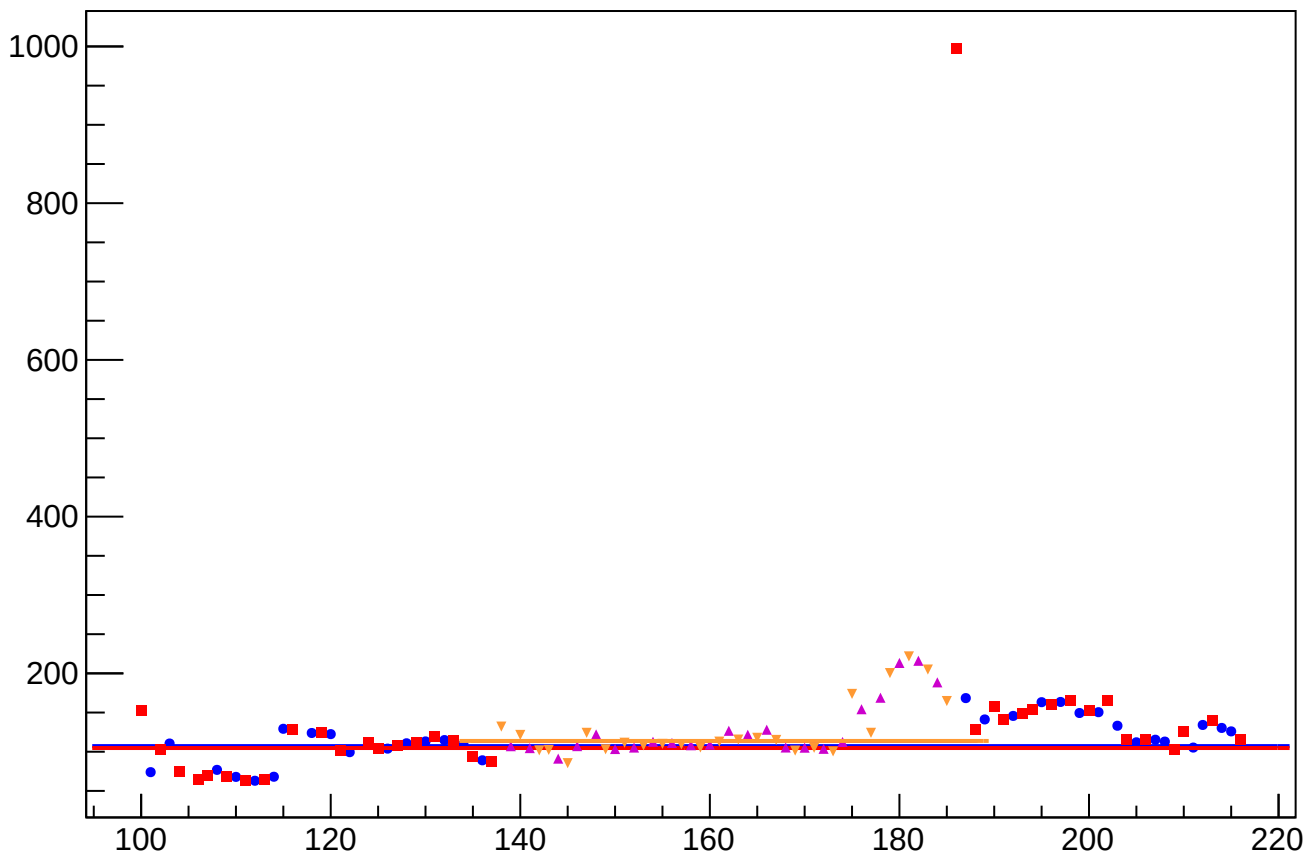
Left In:  $-62.169 \pm 27.339$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $0.284 \pm 18.376$   $\chi^2/\text{NDF}$ : 40.6/55

All:  $-21.553 \pm 13.021$   $\chi^2/\text{NDF}$ : 114.6/113

- sign  $-43.569 \pm 18.452$   $\chi^2/\text{NDF}$ : 71.1/57

eigen\_dit\_asym\_sam\_1548\_avg\_rms vs Slug



Right In: 107.171+/-0.018  $\chi^2/\text{NDF}$ : 2467486.2/30

Left Out: 113.766+/-0.019  $\chi^2/\text{NDF}$ :1579910.8/24

Right Out: 104.721+/-0.018  $\chi^2/\text{NDF}$ : 3774961.5/34

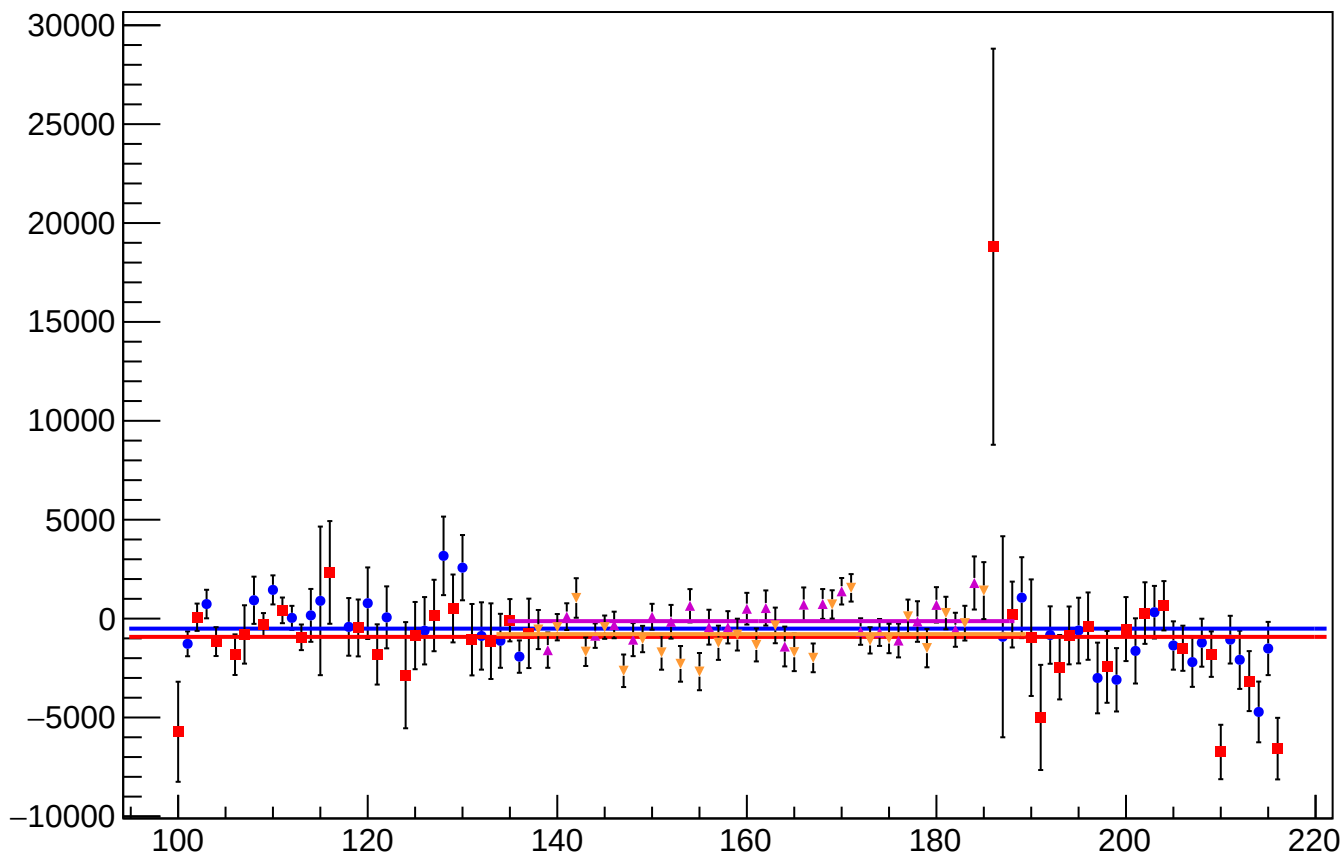
Left In: 113.677+/-0.019  $\chi^2/\text{NDF}$ :1316023.5/22

+ sign 110.308+/-0.013  $\chi^2/\text{NDF}$ : 4111650.5/55

All: 109.558+/-0.009  $\chi^2/\text{NDF}$ : 9326195.0/113

- sign 108.801+/-0.013  $\chi^2/\text{NDF}$ : 5207840.9/57

asym\_sam\_1548\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -506.846 $\pm$ 214.554  $\chi^2/\text{NDF}$ : 43.2/30

Left Out: -784.284 $\pm$ 160.482  $\chi^2/\text{NDF}$ : 45.4/24

Right Out: -924.534 $\pm$ 205.654  $\chi^2/\text{NDF}$ : 60.9/34

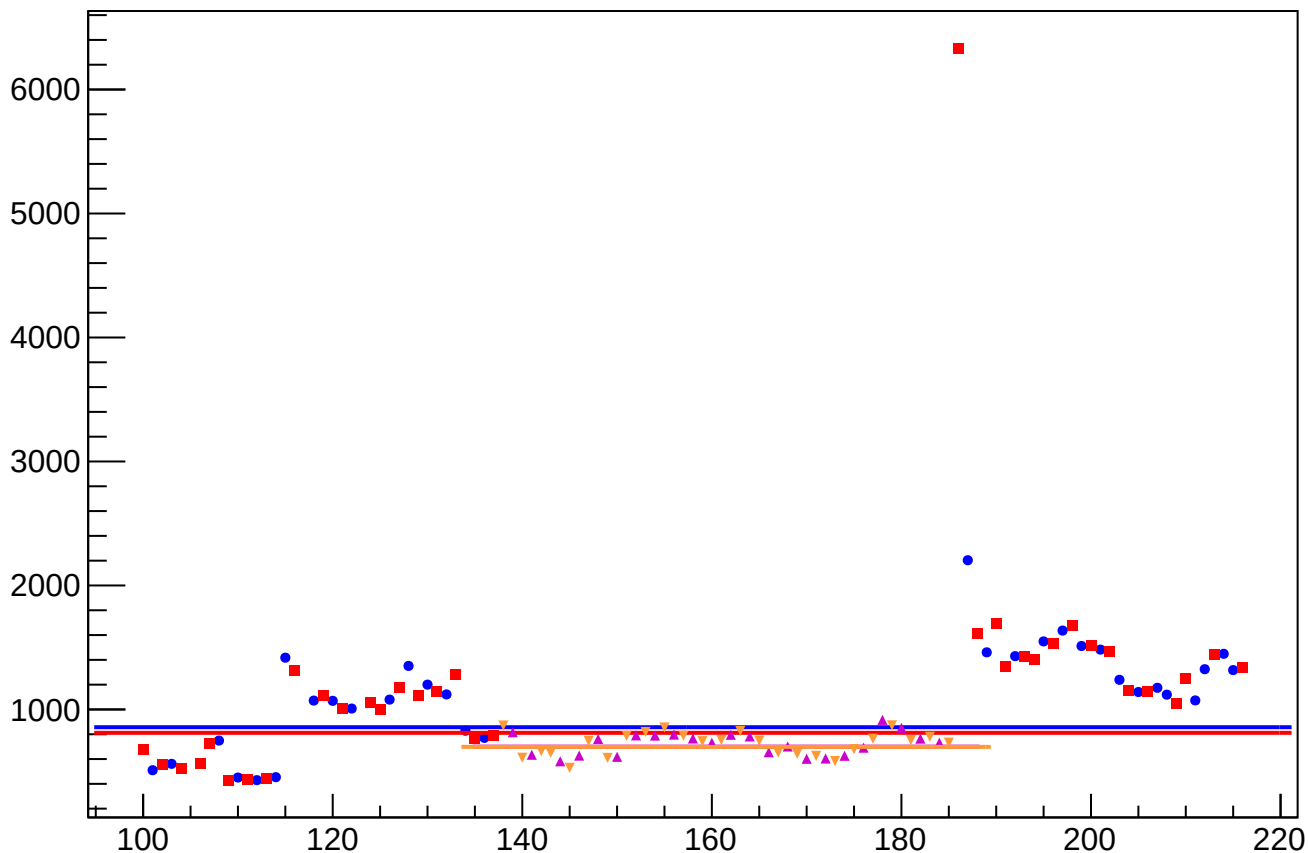
Left In: -128.154 $\pm$ 165.255  $\chi^2/\text{NDF}$ : 22.7/22

+ sign -684.752 $\pm$ 128.510  $\chi^2/\text{NDF}$ : 89.6/55

All: -562.979 $\pm$ 90.979  $\chi^2/\text{NDF}$ : 184.2/113

- sign -440.620 $\pm$ 128.819  $\chi^2/\text{NDF}$ : 92.7/57

asym\_sam\_1548\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 856.692+/-0.152  $\chi^2/\text{NDF}$ : 6458719.9/30

Left Out: 698.236+/-0.113  $\chi^2/\text{NDF}$ : 714685.1/24

Right Out: 811.622+/-0.145  $\chi^2/\text{NDF}$ : 8144799.0/34

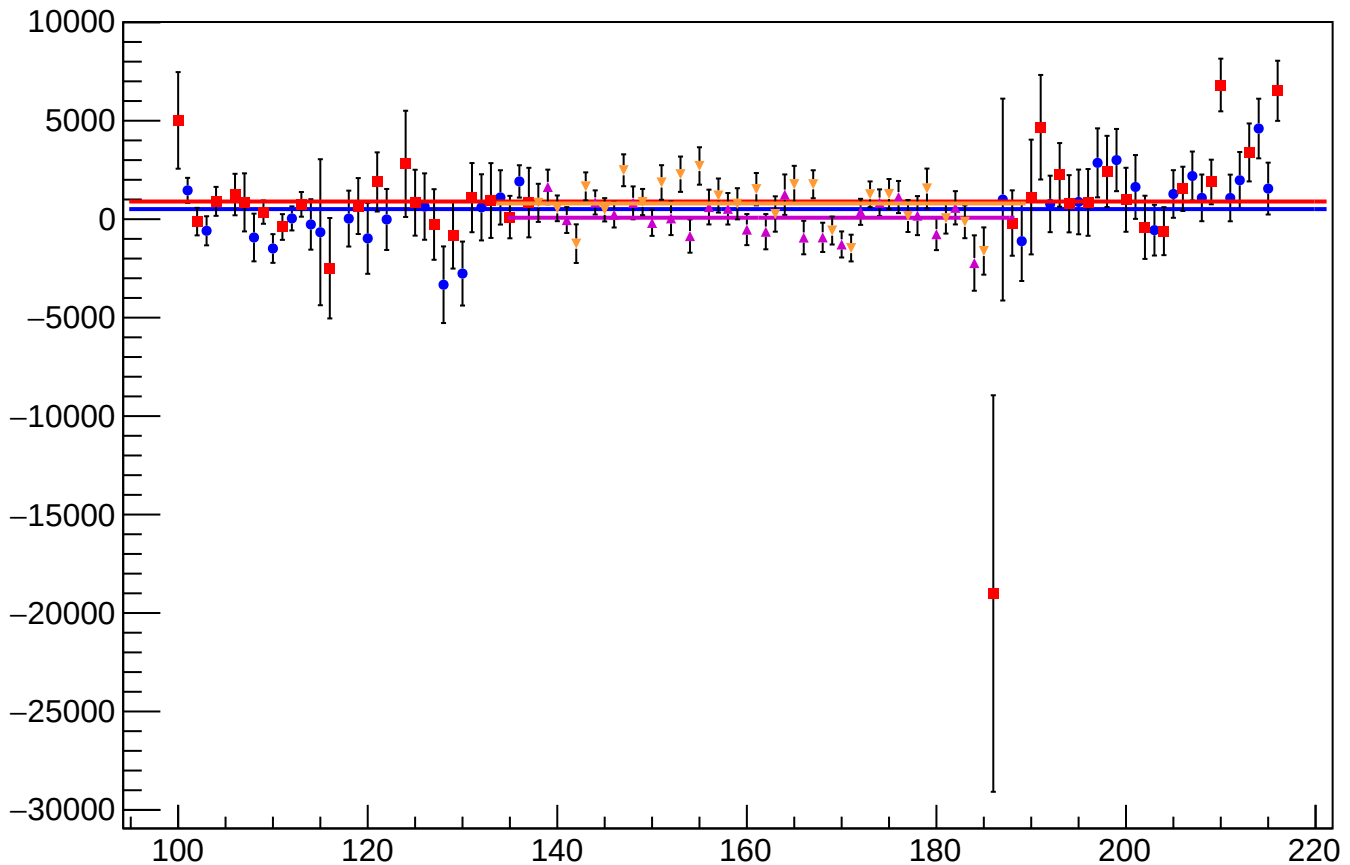
Left In: 700.079+/-0.117  $\chi^2/\text{NDF}$ : 584314.1/22

+ sign 755.083+/-0.091  $\chi^2/\text{NDF}$ : 7872916.6/55

All: 749.477+/-0.064  $\chi^2/\text{NDF}$ : 16967174.1/11

- sign 743.844+/-0.091  $\chi^2/\text{NDF}$ : 9086626.3/57

# asym\_sam\_1548\_avg\_mean vs Slug



Right In:  $512.022 \pm 213.601$   $\chi^2/\text{NDF}: 44.3/30$

Left Out:  $796.905 \pm 158.142$   $\chi^2/\text{NDF}: 46.4/24$

Right Out:  $897.310 \pm 204.942$   $\chi^2/\text{NDF}: 61.7/34$

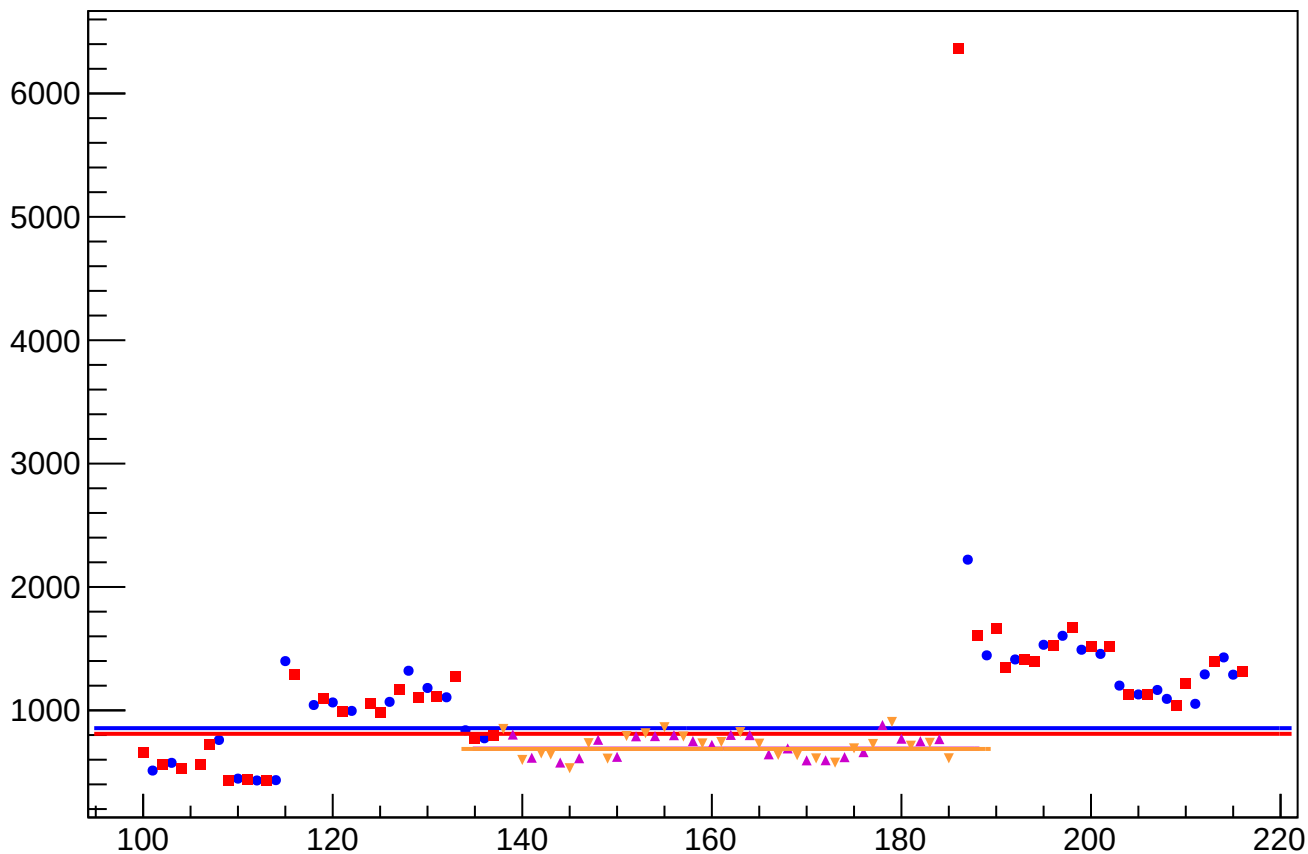
Left In:  $73.501 \pm 162.879$   $\chi^2/\text{NDF}: 24.9/22$

+ sign  $696.039 \pm 127.099$   $\chi^2/\text{NDF}: 91.9/55$

All:  $544.720 \pm 90.019$   $\chi^2/\text{NDF}: 191.2/113$

- sign  $392.414 \pm 127.513$   $\chi^2/\text{NDF}: 96.5/57$

# asym\_sam\_1548\_avg\_rms vs Slug



Right In: 855.681+/-0.151  $\chi^2/\text{NDF}$ : 6220187.8/30

Left Out: 687.243+/-0.112  $\chi^2/\text{NDF}$ : 727994.0/24

Right Out: 809.751+/-0.145  $\chi^2/\text{NDF}$ : 8025596.2/34

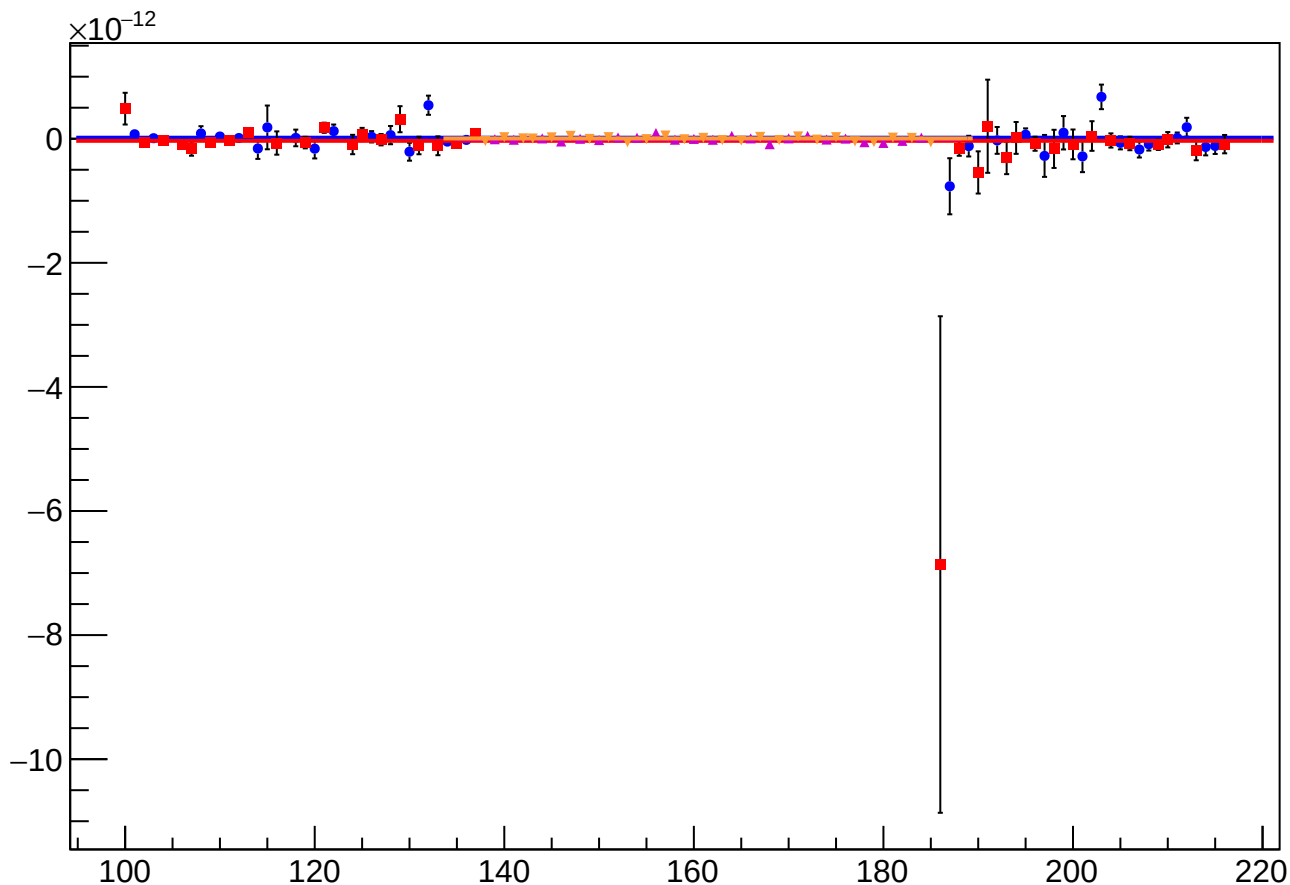
Left In: 689.997+/-0.115  $\chi^2/\text{NDF}$ : 567089.0/22

+ sign 746.880+/-0.090  $\chi^2/\text{NDF}$ : 7751511.2/55

All: 741.635+/-0.064  $\chi^2/\text{NDF}$ : 16769555.8/1

- sign 736.356+/-0.090  $\chi^2/\text{NDF}$ : 9011210.7/57

asym\_sam\_1548\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.0/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.9/34

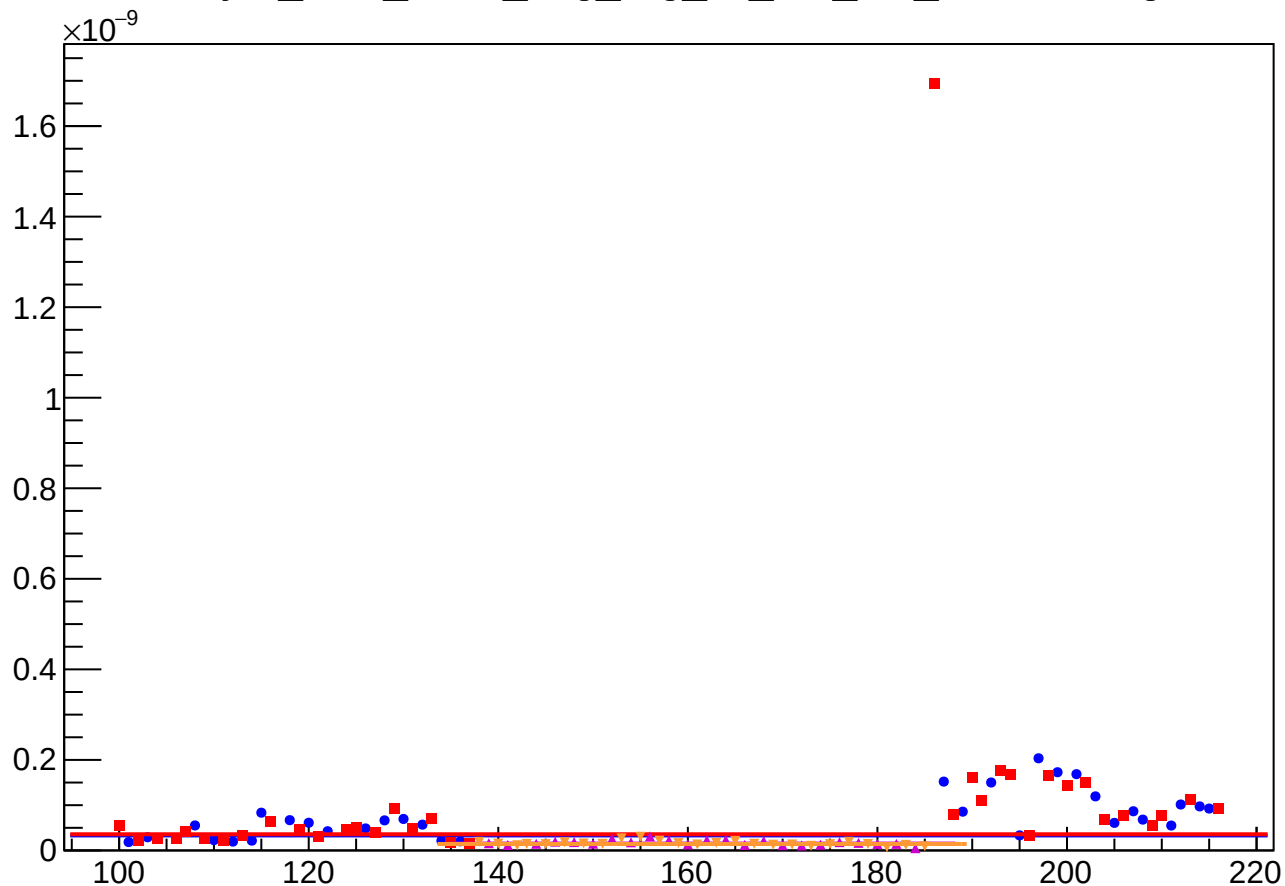
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 26.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.0/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 140.8/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.3/57

asym\_sam\_1548\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6895895.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 992947.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6228241.8/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1107168.2/22

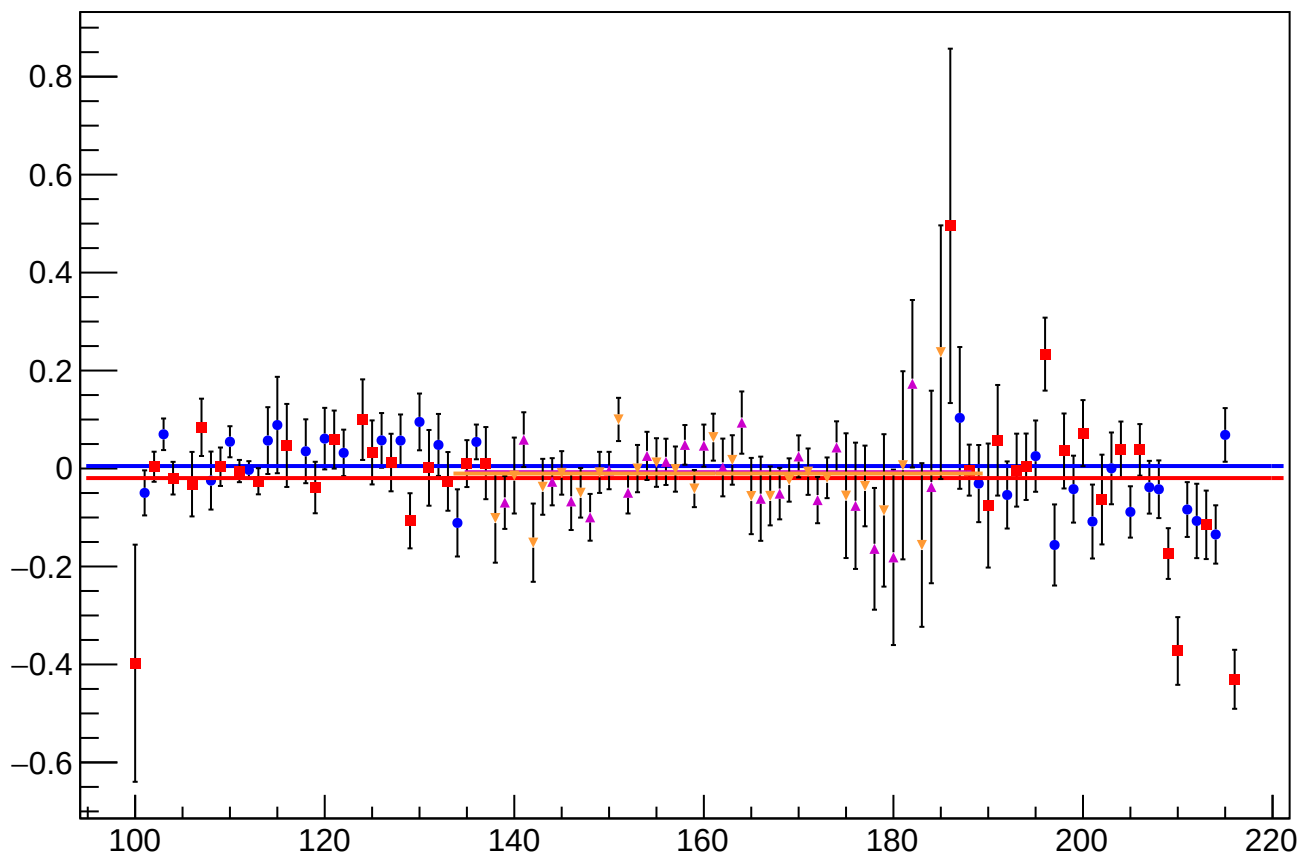
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11029777.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21641662.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10566233.8/57



asym\_sam\_1548\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.009  $\chi^2$ /NDF: 44.5/30

Left Out: -0.010 $\pm$ 0.011  $\chi^2$ /NDF: 18.1/24

Right Out: -0.020 $\pm$ 0.009  $\chi^2$ /NDF: 118.2/34

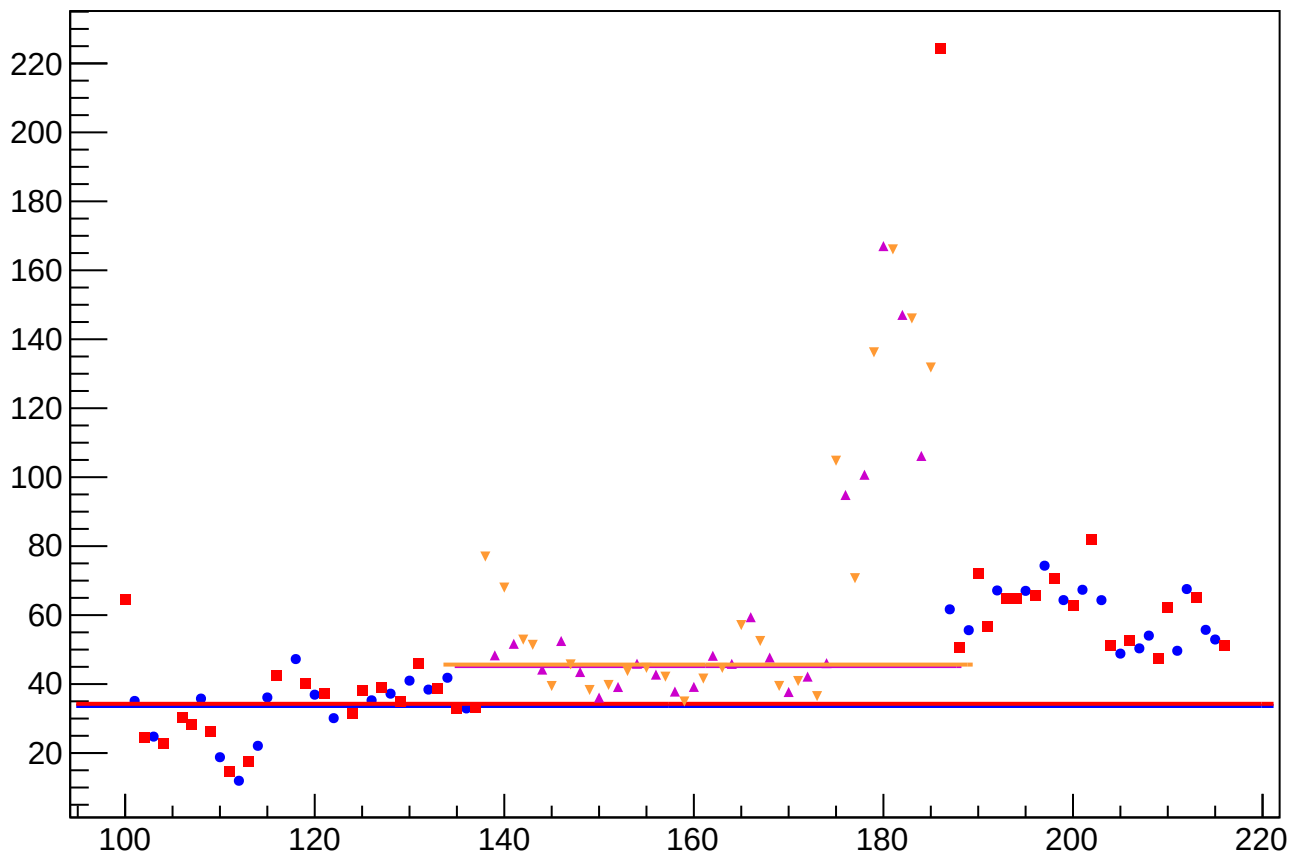
Left In: -0.008 $\pm$ 0.011  $\chi^2$ /NDF: 23.3/22

+ sign -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 63.8/55

All: -0.008 $\pm$ 0.005  $\chi^2$ /NDF: 208.0/113

- sign -0.015 $\pm$ 0.007  $\chi^2$ /NDF: 142.2/57

asym\_sam\_1548\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.648+/-0.006  $\chi^2/\text{NDF}$ : 8237421.1/30

Left Out: 45.650+/-0.008  $\chi^2/\text{NDF}$ : 4015230.2/24

Right Out: 34.277+/-0.006  $\chi^2/\text{NDF}$ : 7888980.3/34

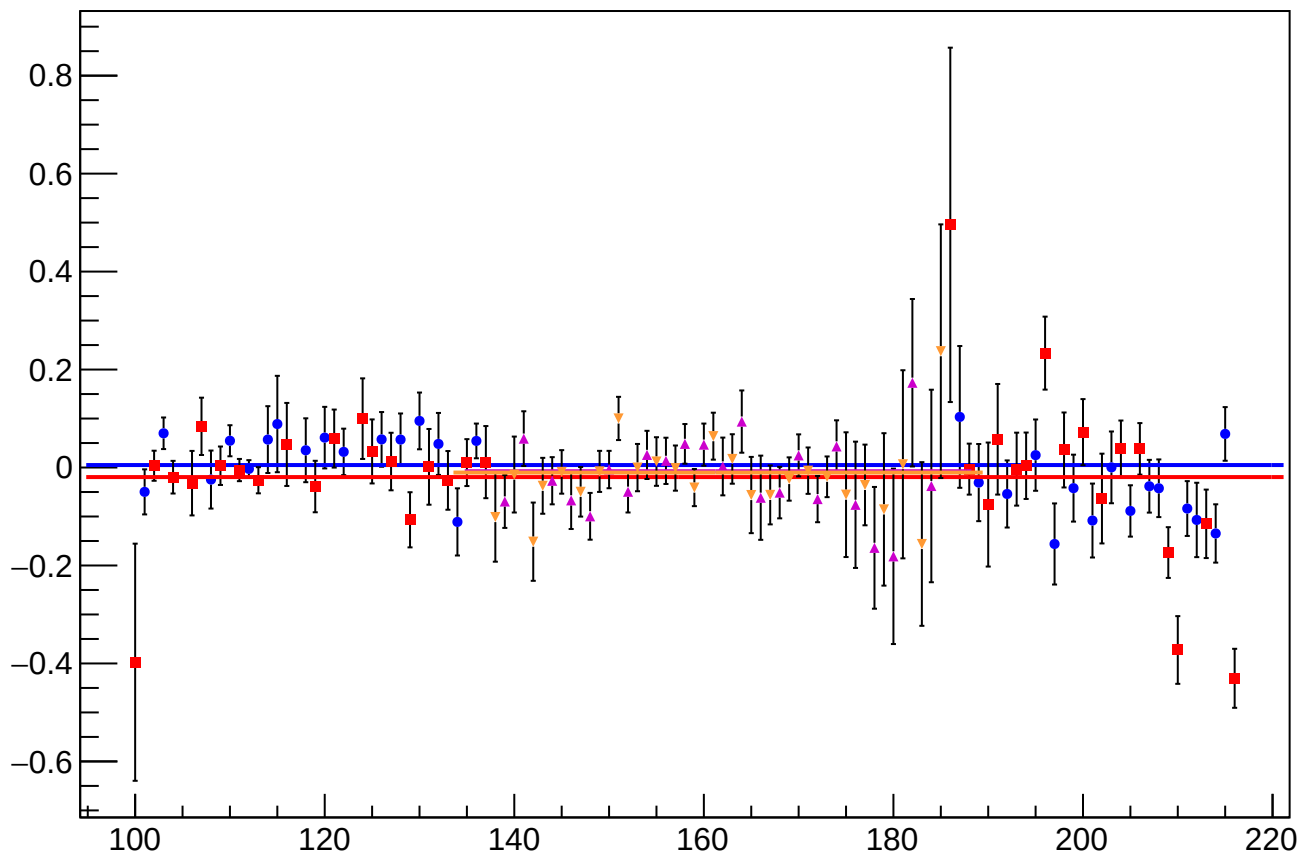
Left In: 45.217+/-0.008  $\chi^2/\text{NDF}$ : 2992534.4/22

+ sign 38.225+/-0.005  $\chi^2/\text{NDF}$ : 13654675.8/55

All: 38.313+/-0.003  $\chi^2/\text{NDF}$ : 25680912.8/113

- sign 38.403+/-0.005  $\chi^2/\text{NDF}$ : 12025586.4/57

asym\_sam\_1548\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.005 $\pm$ 0.009  $\chi^2$ /NDF: 44.5/30

Left Out: -0.010 $\pm$ 0.011  $\chi^2$ /NDF: 18.1/24

Right Out: -0.020 $\pm$ 0.009  $\chi^2$ /NDF: 118.2/34

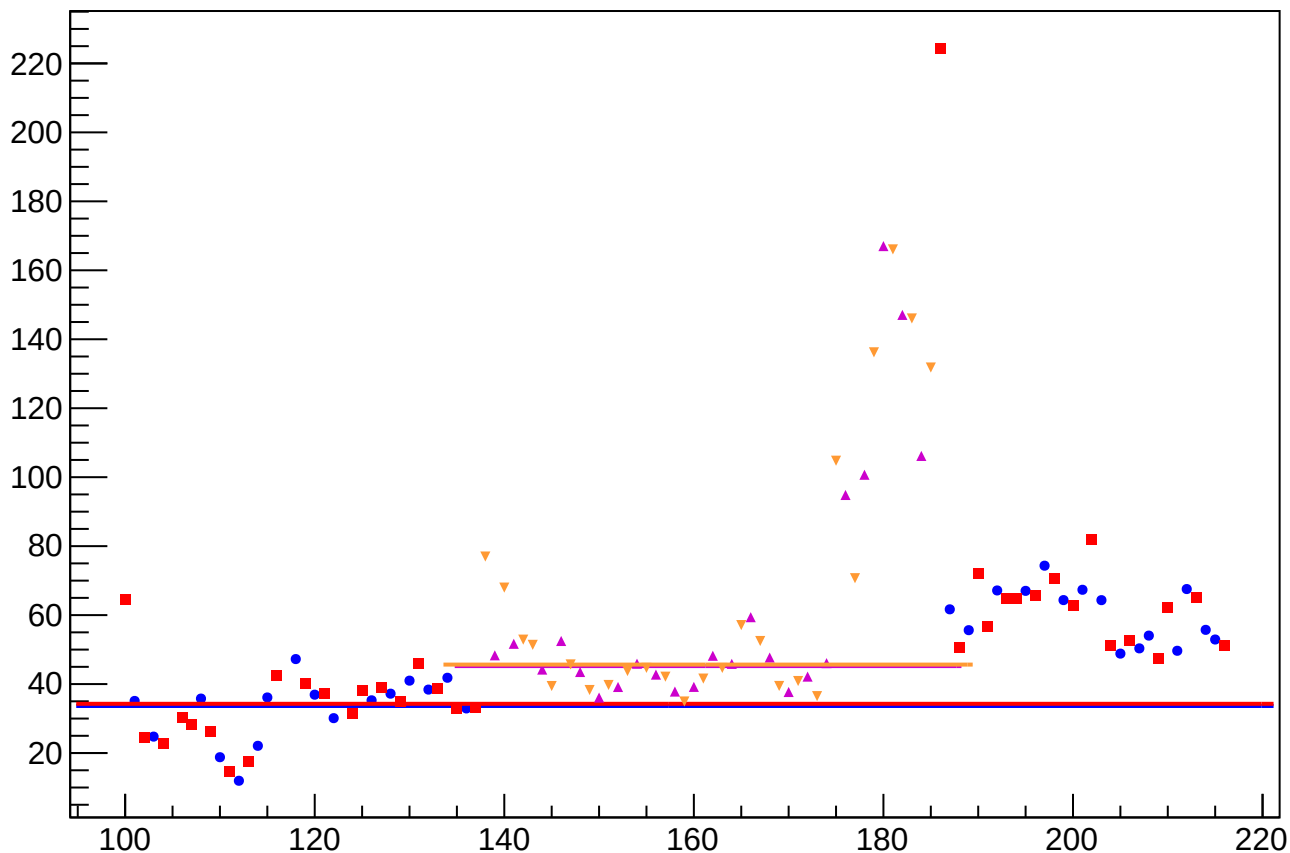
Left In: -0.008 $\pm$ 0.011  $\chi^2$ /NDF: 23.3/22

+ sign -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 63.8/55

All: -0.008 $\pm$ 0.005  $\chi^2$ /NDF: 208.0/113

- sign -0.015 $\pm$ 0.007  $\chi^2$ /NDF: 142.2/57

asym\_sam\_1548\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.648 $\pm$ 0.006  $\chi^2$ /NDF: 8237421.1/30

Left Out: 45.650 $\pm$ 0.008  $\chi^2$ /NDF: 4015230.2/24

Right Out: 34.277 $\pm$ 0.006  $\chi^2$ /NDF: 7888980.3/34

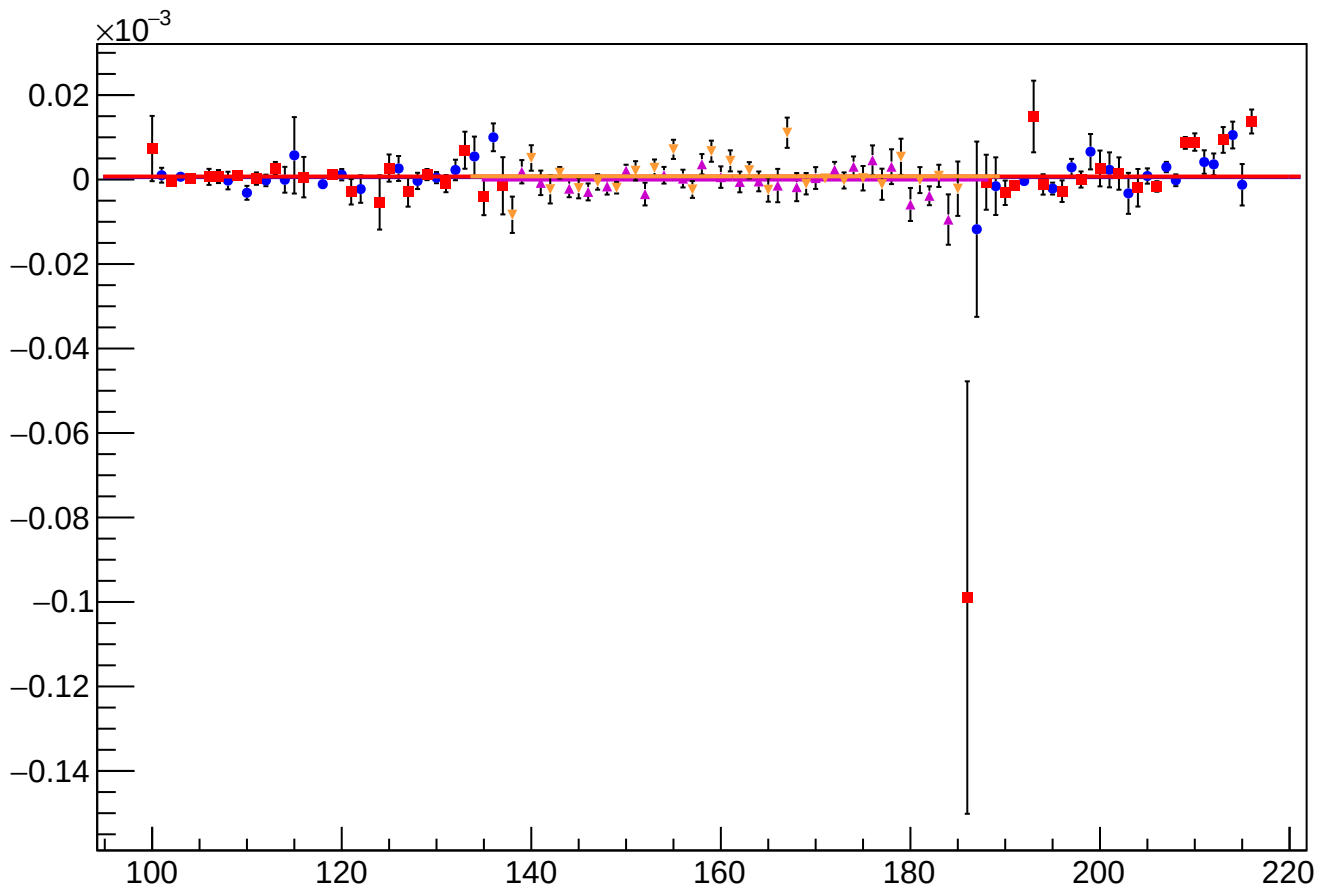
Left In: 45.217 $\pm$ 0.008  $\chi^2$ /NDF: 2992534.4/22

+ sign 38.225 $\pm$ 0.005  $\chi^2$ /NDF: 13654675.8/55

All: 38.313 $\pm$ 0.003  $\chi^2$ /NDF: 25680912.8/113

- sign 38.403 $\pm$ 0.005  $\chi^2$ /NDF: 12025586.4/57

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:46.2/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 112.6/34

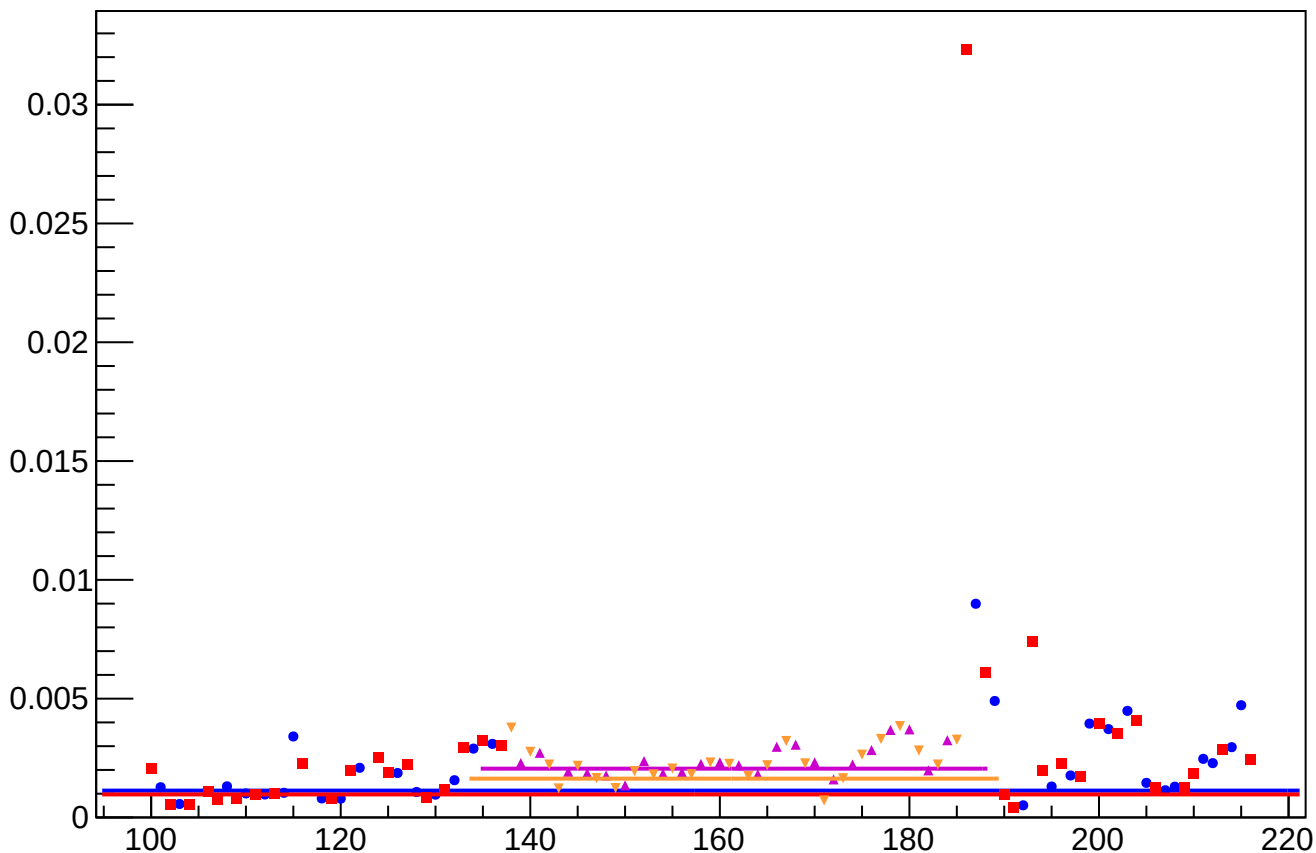
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:24.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 92.4/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 231.1/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 138.7/57

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10217723.6/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6495366.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13775356.6/34

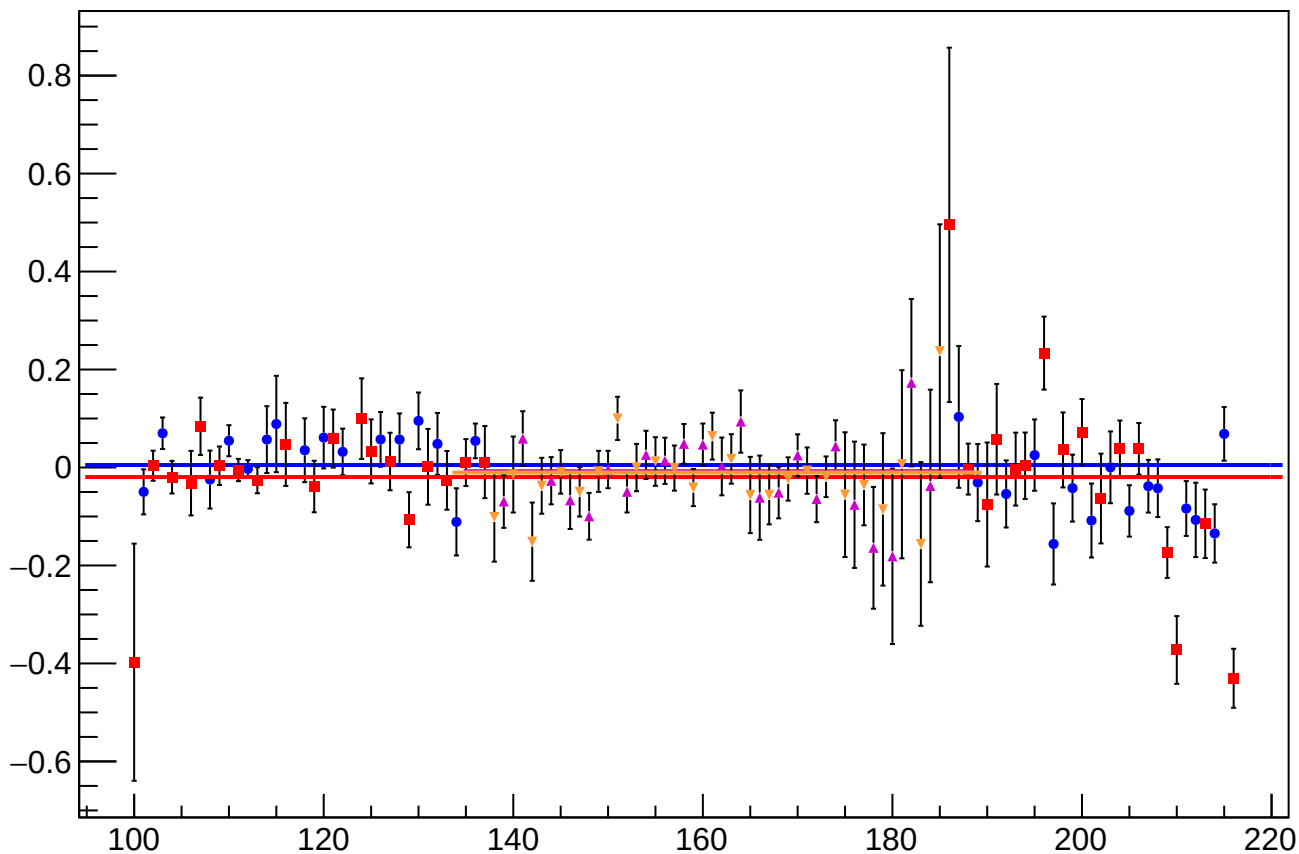
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2093048.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 18594637.2/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 41746757.7/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 23019801.0/57

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 44.5/30

Left Out:  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.1/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 118.2/34

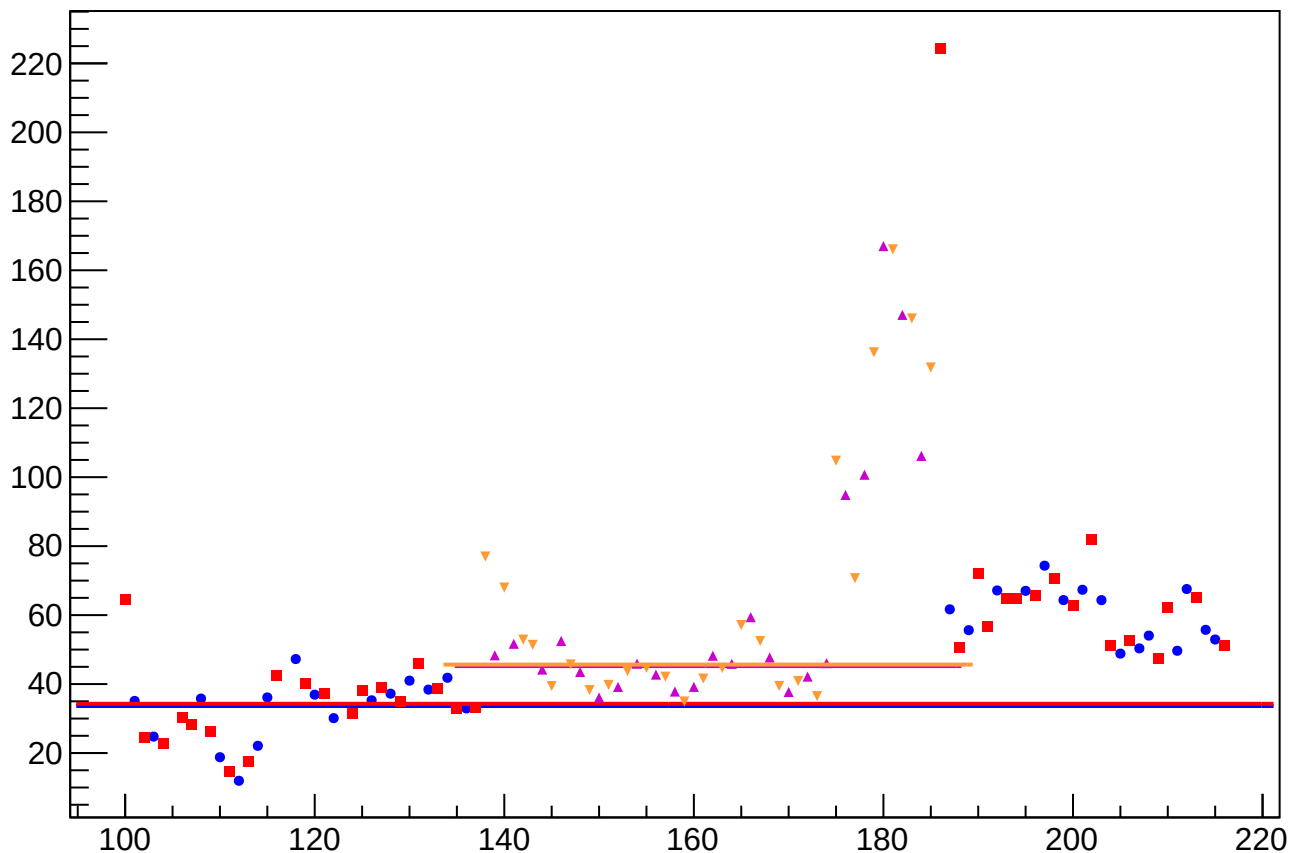
Left In:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.7/55

All:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 208.0/113

- sign  $-0.015 \pm 0.007$   $\chi^2/\text{NDF}$ : 142.2/57

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 33.648 $\pm$ 0.006  $\chi^2$ /NDF: 8237713.7/30

Left Out: 45.651 $\pm$ 0.008  $\chi^2$ /NDF: 4015154.4/24

Right Out: 34.276 $\pm$ 0.006  $\chi^2$ /NDF: 7889225.4/34

Left In: 45.218 $\pm$ 0.008  $\chi^2$ /NDF: 2992449.1/22

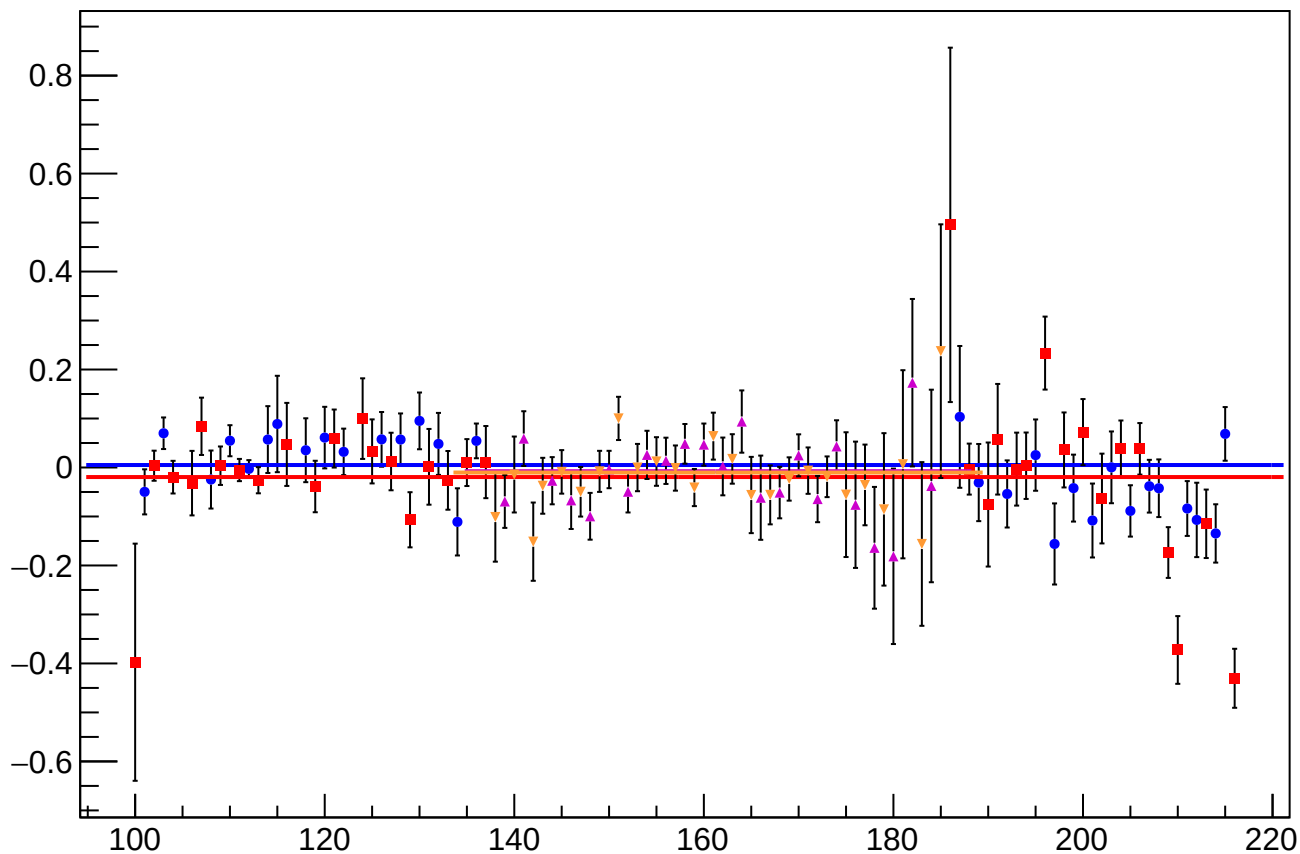
+ sign 38.225 $\pm$ 0.005  $\chi^2$ /NDF: 13655129.4/55

All: 38.313 $\pm$ 0.003  $\chi^2$ /NDF: 25681708.6/113

- sign 38.403 $\pm$ 0.005  $\chi^2$ /NDF: 12025927.5/57



asym\_sam\_1548\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.005 \pm 0.009$   $\chi^2/\text{NDF}$ : 44.5/30

Left Out:  $-0.010 \pm 0.011$   $\chi^2/\text{NDF}$ : 18.1/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 118.2/34

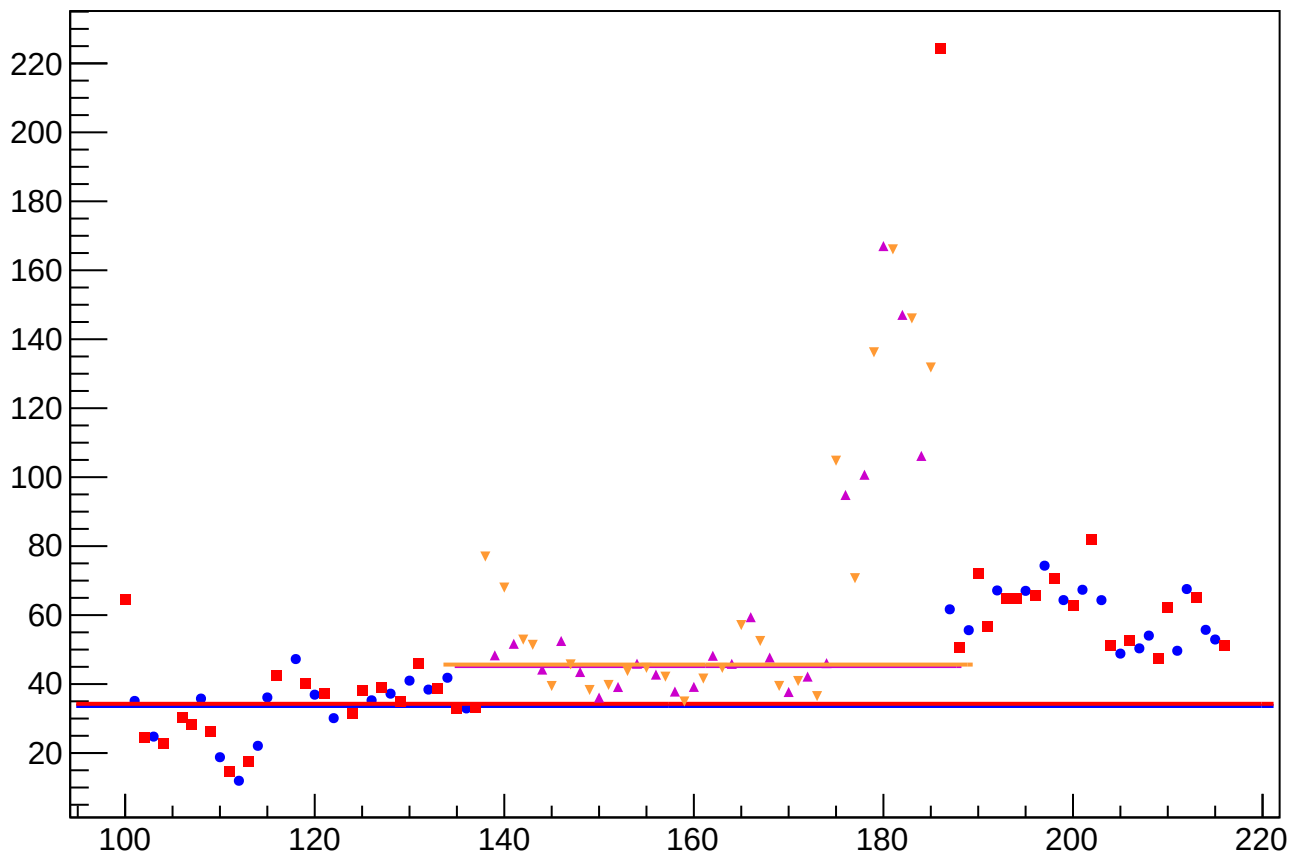
Left In:  $-0.008 \pm 0.011$   $\chi^2/\text{NDF}$ : 23.3/22

+ sign  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 63.7/55

All:  $-0.008 \pm 0.005$   $\chi^2/\text{NDF}$ : 208.0/113

- sign  $-0.015 \pm 0.007$   $\chi^2/\text{NDF}$ : 142.2/57

asym\_sam\_1548\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 33.648+/-0.006  $\chi^2/\text{NDF}$ : 8237713.7/30

Left Out: 45.651+/-0.008  $\chi^2/\text{NDF}$ : 4015154.4/24

Right Out: 34.276+/-0.006  $\chi^2/\text{NDF}$ : 7889225.4/34

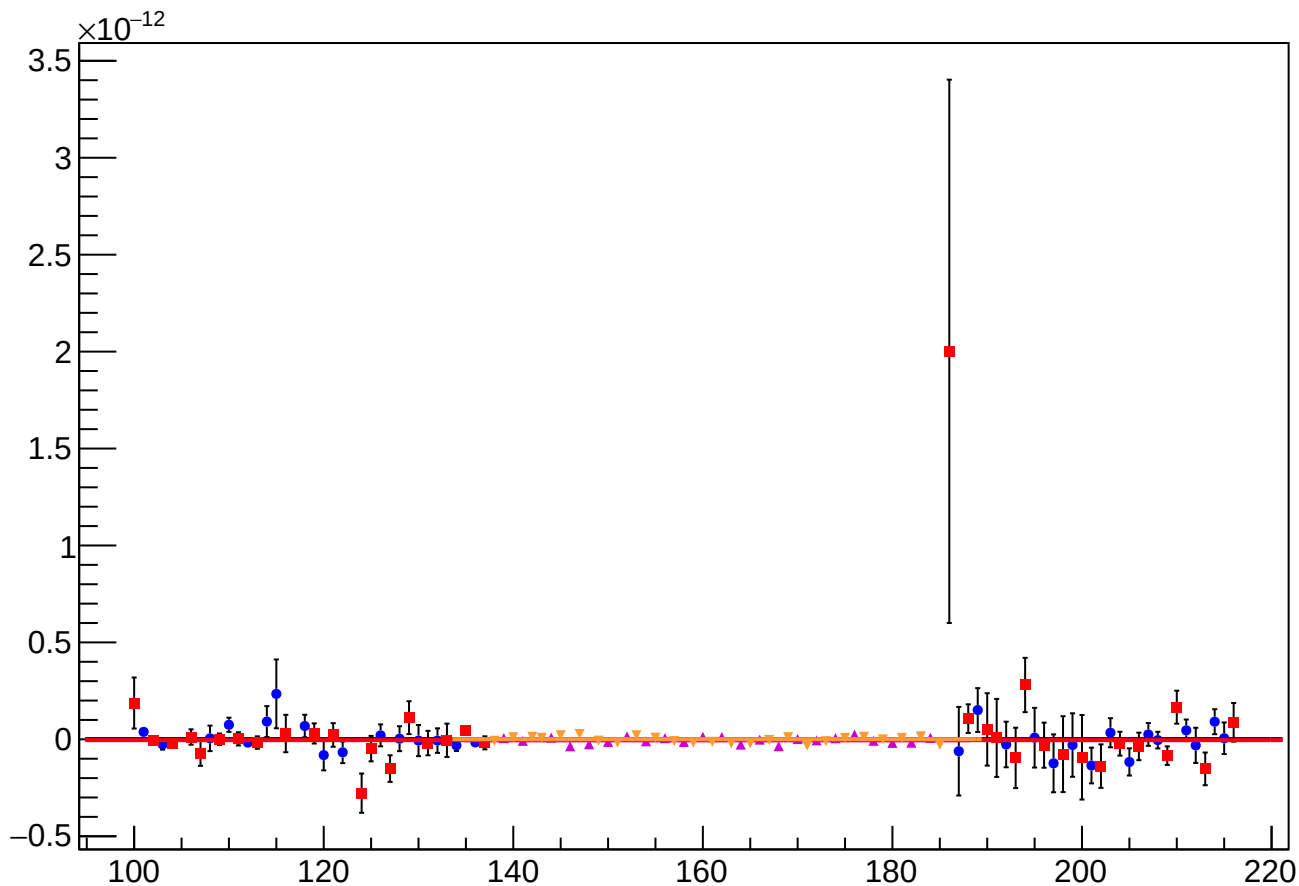
Left In: 45.218+/-0.008  $\chi^2/\text{NDF}$ : 2992449.1/22

+ sign 38.225+/-0.005  $\chi^2/\text{NDF}$ : 13655129.4/55

All: 38.313+/-0.003  $\chi^2/\text{NDF}$ : 25681708.6/113

- sign 38.403+/-0.005  $\chi^2/\text{NDF}$ : 12025927.5/57

asym\_sam\_1548\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 29.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 45.2/34

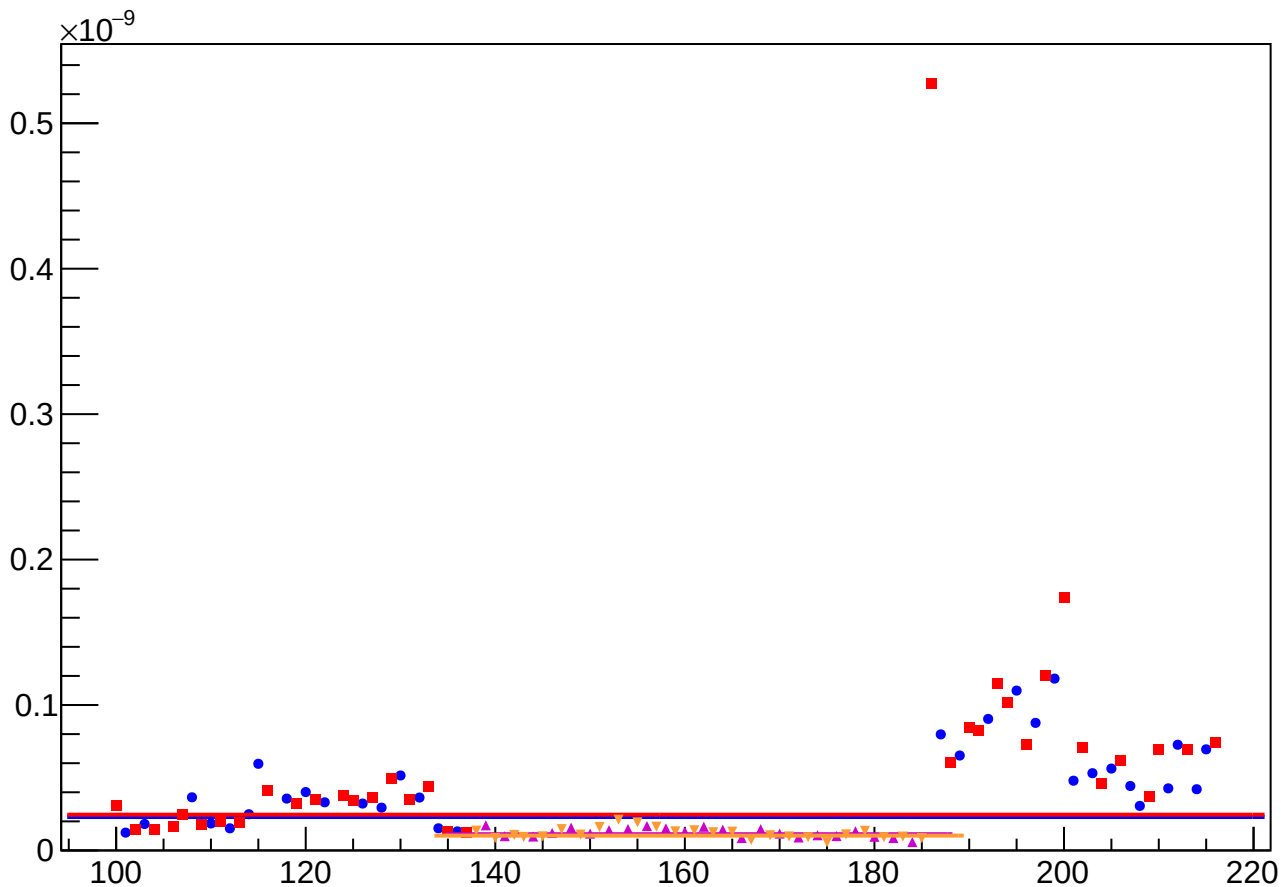
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:23.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 54.9/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 125.7/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.8/57

asym\_sam\_1548\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8259908.8/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :2257651.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9376993.6/34

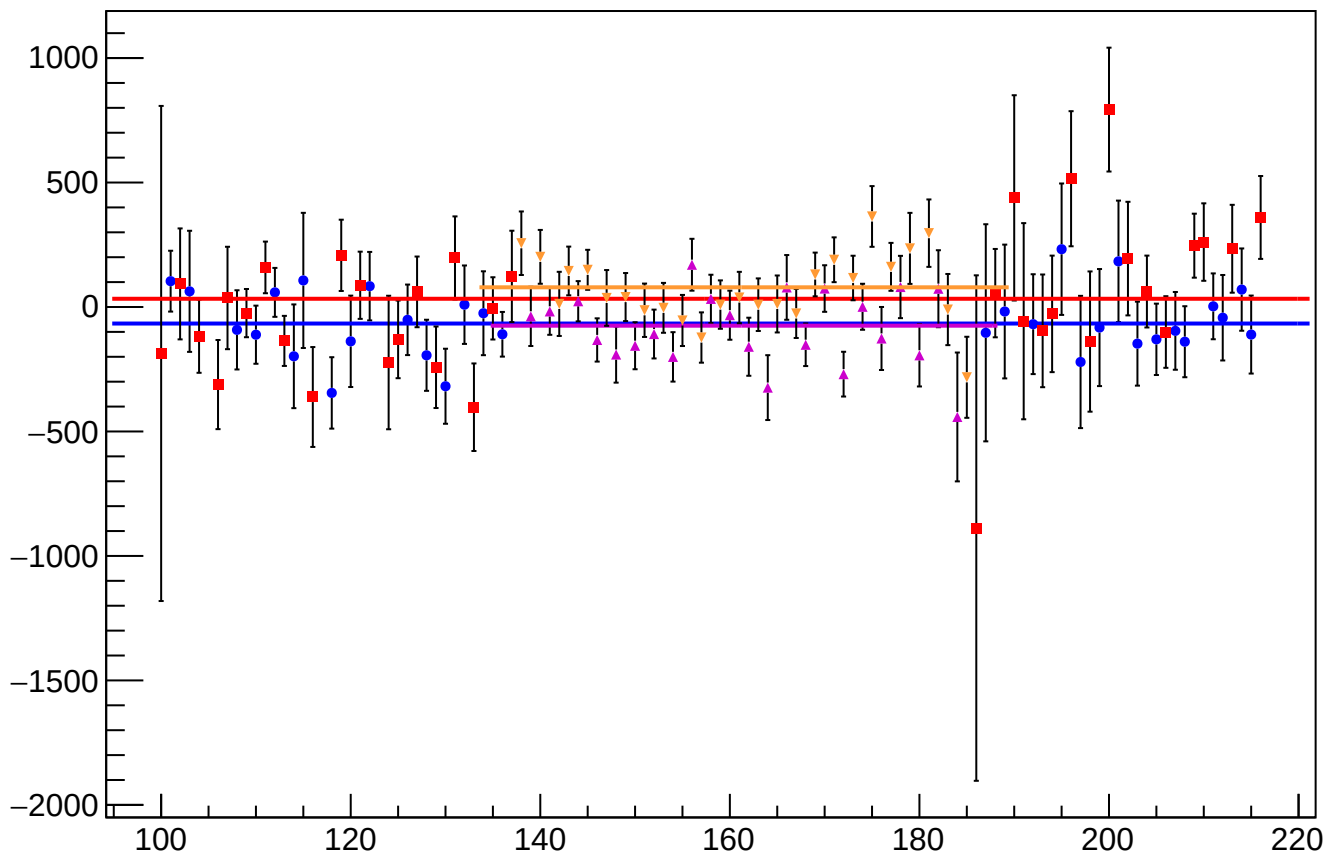
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1536588.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15063839.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 30493838.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15284648.0/57

# reg\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-66.433 \pm 28.166$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $79.098 \pm 21.102$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $33.048 \pm 28.132$   $\chi^2/\text{NDF}$ : 53.9/34

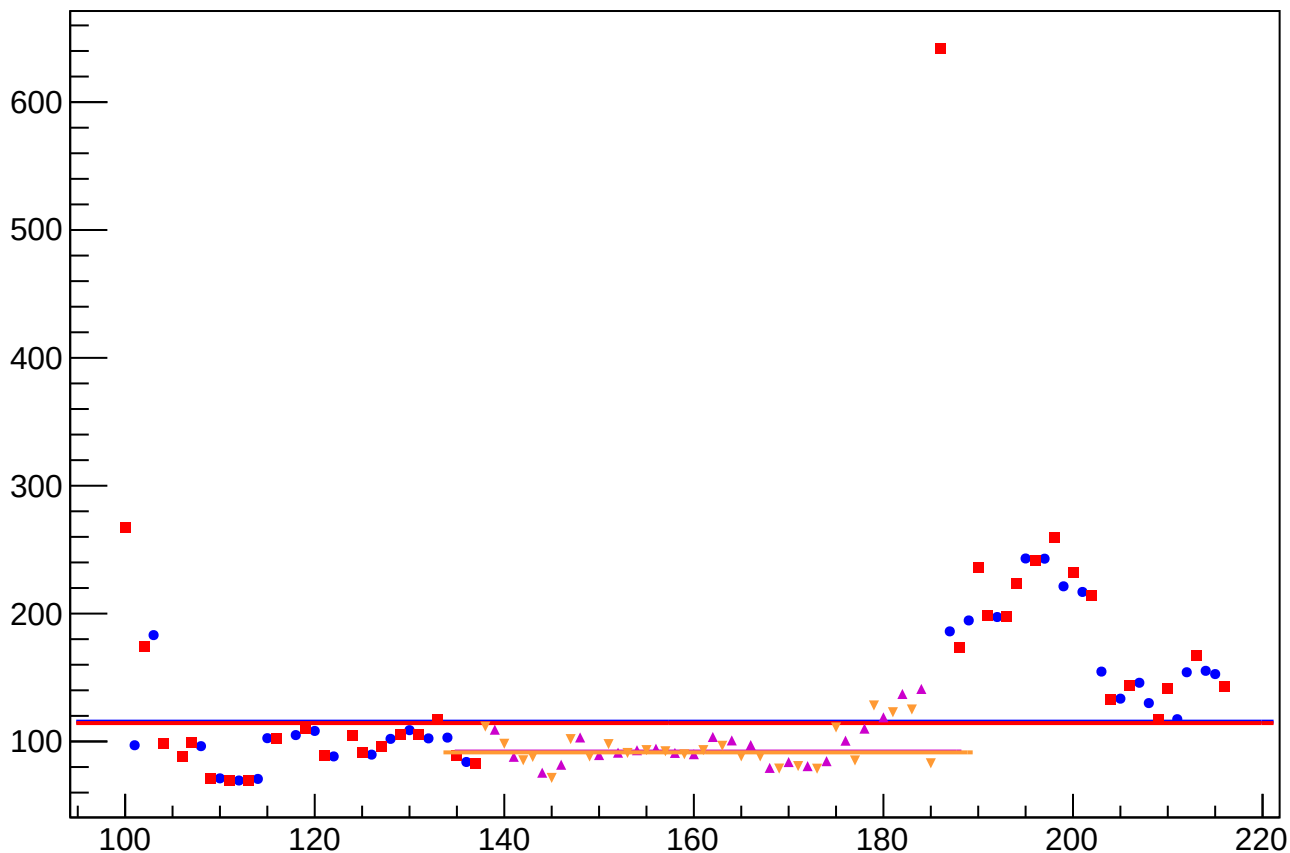
Left In:  $-75.048 \pm 21.837$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $26.779 \pm 16.888$   $\chi^2/\text{NDF}$ : 67.6/55

All:  $-3.165 \pm 12.068$   $\chi^2/\text{NDF}$ : 169.8/113

- sign  $-34.406 \pm 17.250$   $\chi^2/\text{NDF}$ : 95.8/57

# reg\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 115.492+/-0.020  $\chi^2/\text{NDF}$ : 4309295.4/30

Left Out: 91.462+/-0.015  $\chi^2/\text{NDF}$ : 751213.9/24

Right Out: 114.370+/-0.020  $\chi^2/\text{NDF}$ : 5710597.6/34

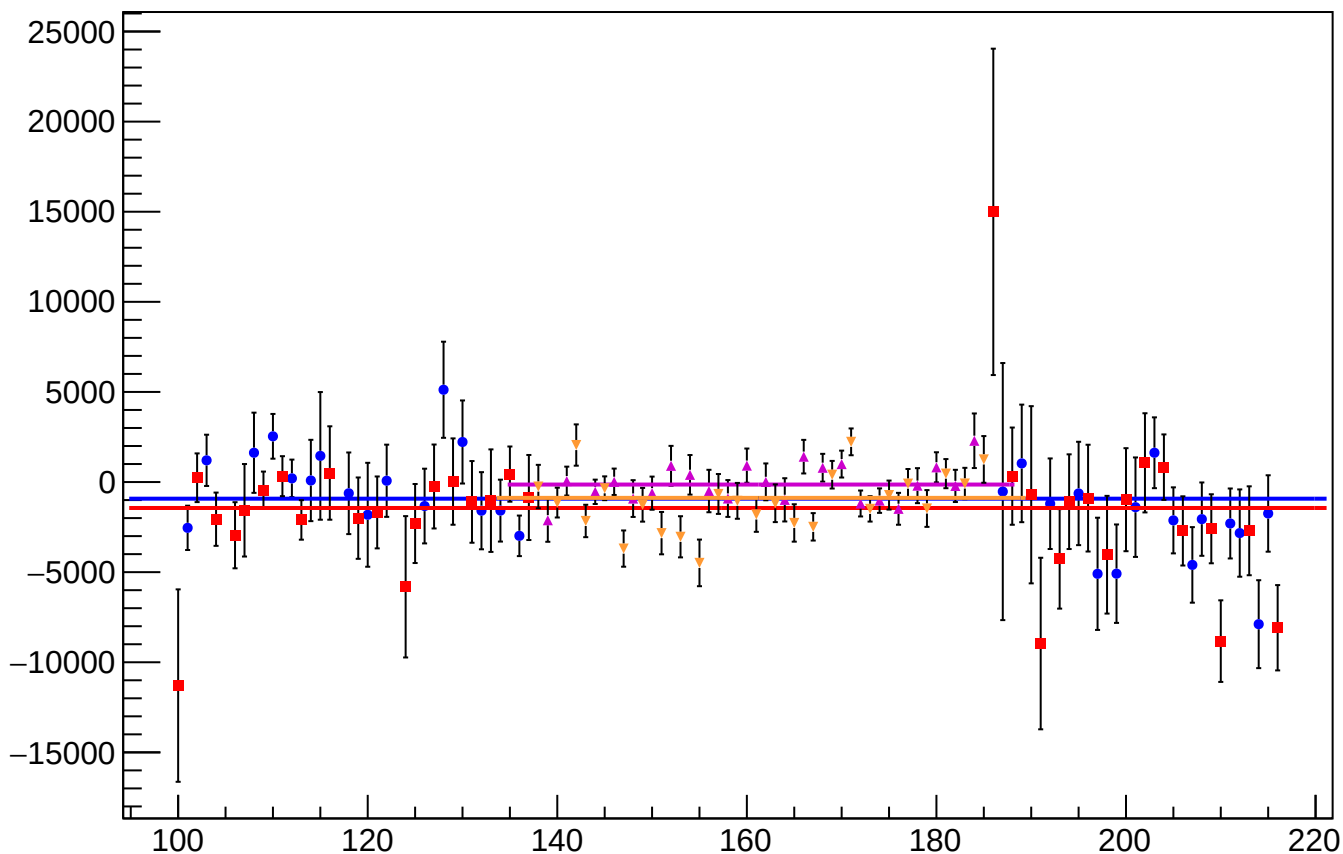
Left In: 92.100+/-0.015  $\chi^2/\text{NDF}$ : 699590.1/22

+ sign 100.101+/-0.012  $\chi^2/\text{NDF}$ : 5992929.1/55

All: 100.283+/-0.009  $\chi^2/\text{NDF}$ : 13185687.8/131

- sign 100.474+/-0.012  $\chi^2/\text{NDF}$ : 7192281.7/57

asym\_sam\_3748\_avg\_reg\_correction\_mean vs Slug



Right In: -923.123+/-347.214  $\chi^2/\text{NDF}$ : 45.3/30

Left Out: -878.463+/-182.188  $\chi^2/\text{NDF}$ : 67.7/24

Right Out: -1439.354+/-341.336  $\chi^2/\text{NDF}$ : 43.9/34

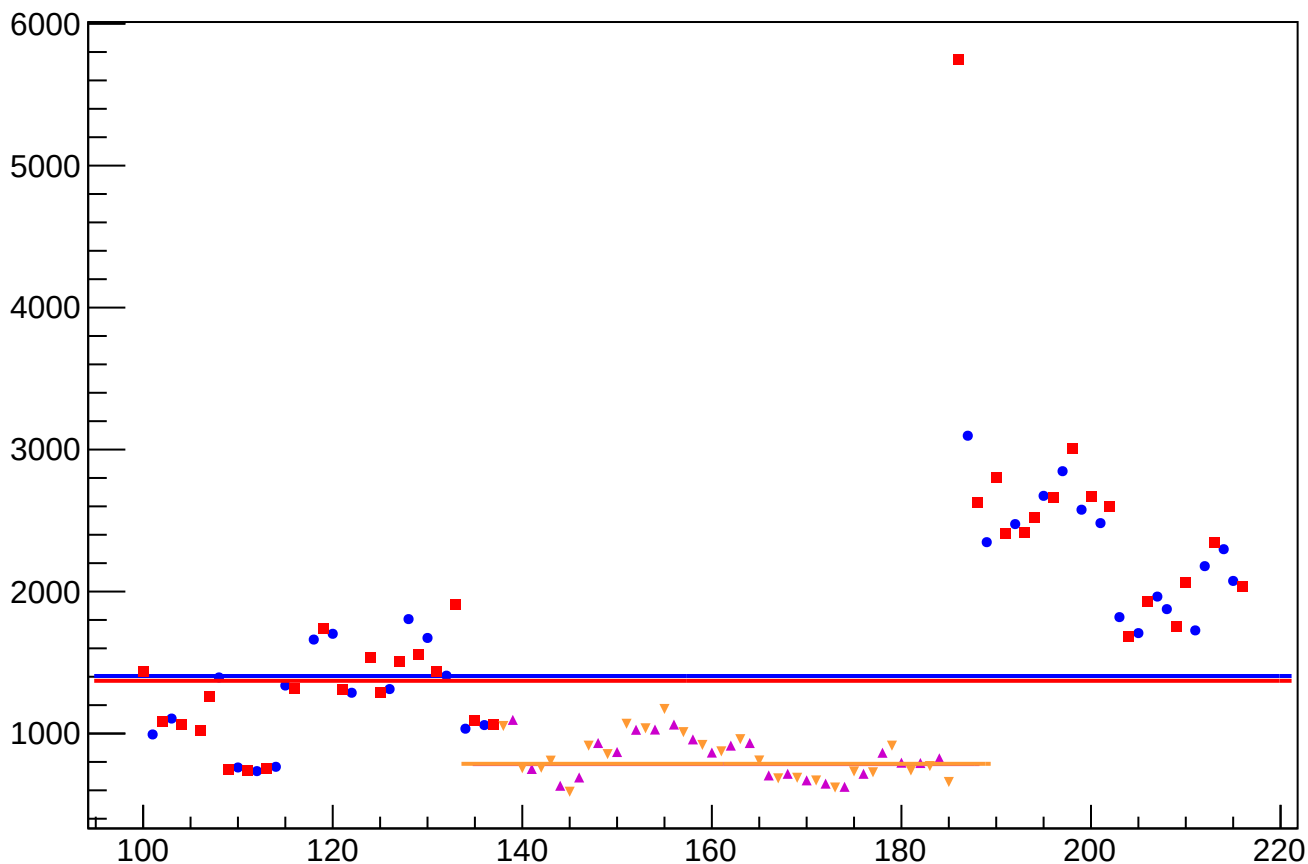
Left In: -138.728+/-186.573  $\chi^2/\text{NDF}$ : 24.2/22

+ sign -888.104+/-161.328  $\chi^2/\text{NDF}$ : 113.1/55

All: -666.318+/-114.910  $\chi^2/\text{NDF}$ : 196.2/113

- sign -437.924+/-163.713  $\chi^2/\text{NDF}$ : 79.3/57

asym\_sam\_3748\_avg\_reg\_correction\_rms vs Slug



Right In: 1405.267 $\pm$ 0.246  $\chi^2$ /NDF: 5509705.6/30

Left Out: 786.758 $\pm$ 0.129  $\chi^2$ /NDF: 1210893.0/24

Right Out: 1371.460 $\pm$ 0.241  $\chi^2$ /NDF: 6996683.1/34

Left In: 784.833 $\pm$ 0.132  $\chi^2$ /NDF: 1063747.2/22

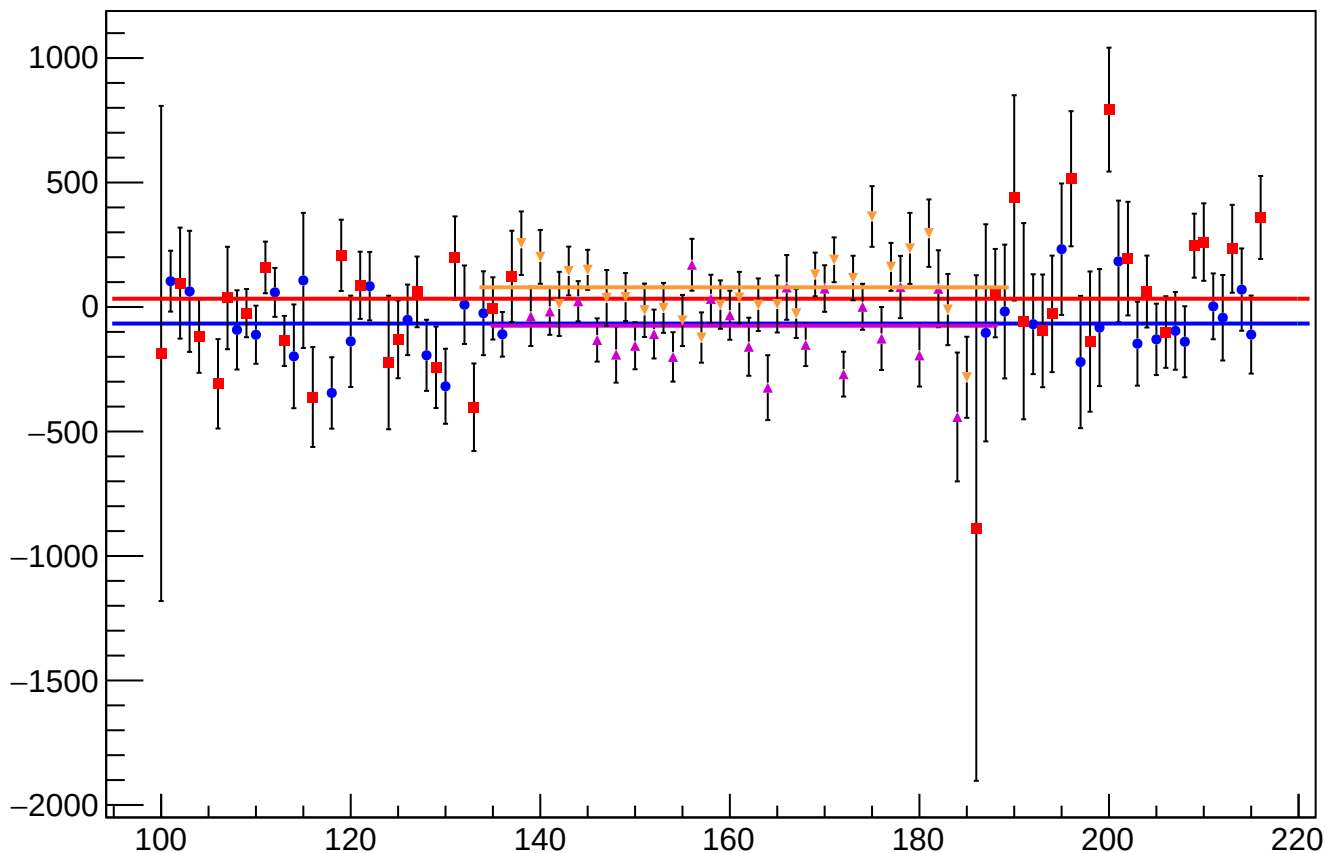
+ sign 920.285 $\pm$ 0.114  $\chi^2$ /NDF: 11696889.5/55

All: 920.037 $\pm$ 0.081  $\chi^2$ /NDF: 24305730.2/11

- sign 919.781 $\pm$ 0.116  $\chi^2$ /NDF: 12608831.0/57



# cor\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-66.443 \pm 28.166$   $\chi^2/\text{NDF}$ : 18.6/30

Left Out:  $79.106 \pm 21.102$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $33.224 \pm 28.134$   $\chi^2/\text{NDF}$ : 53.8/34

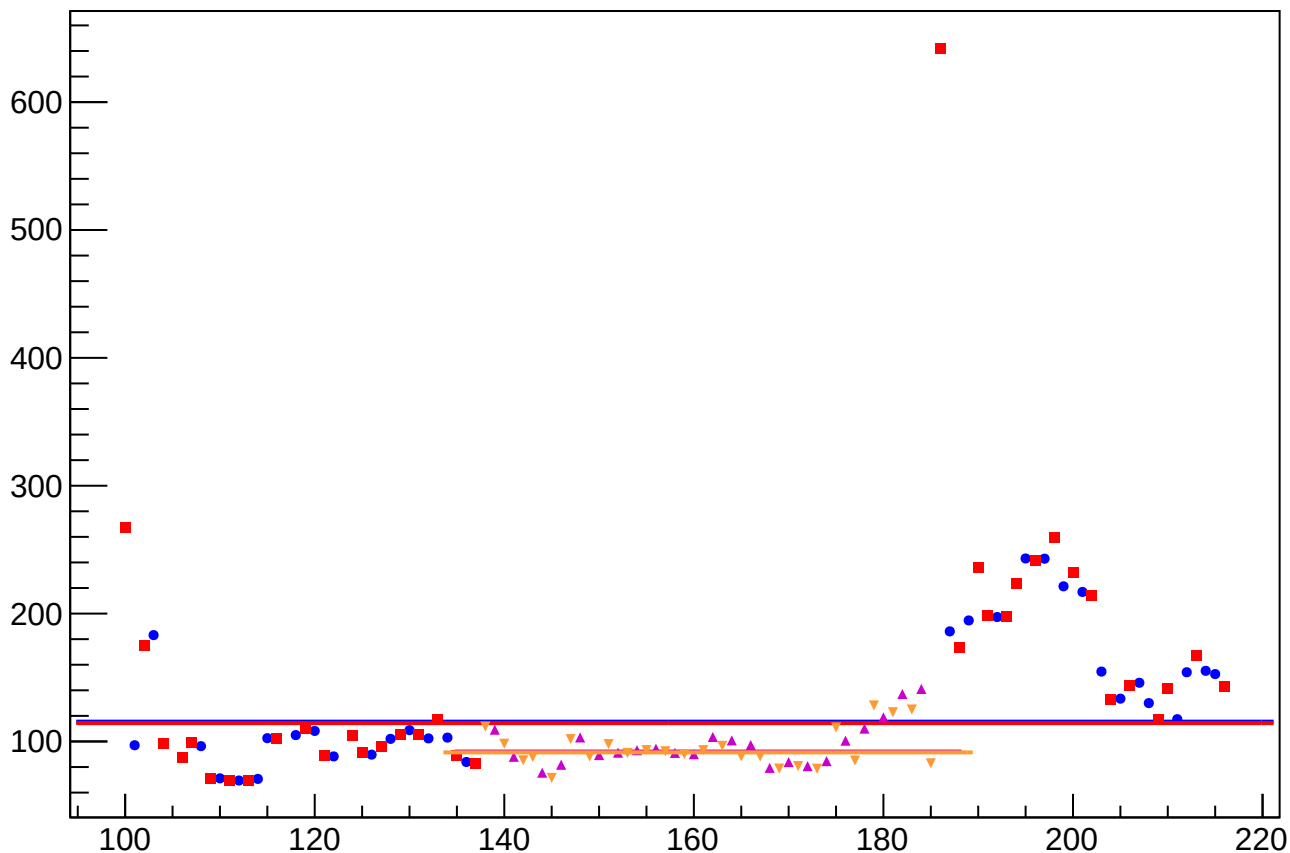
Left In:  $-75.049 \pm 21.837$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $26.781 \pm 16.888$   $\chi^2/\text{NDF}$ : 67.6/55

All:  $-3.133 \pm 12.068$   $\chi^2/\text{NDF}$ : 169.7/113

- sign  $-34.344 \pm 17.251$   $\chi^2/\text{NDF}$ : 95.7/57

cor\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 115.492 $\pm$ 0.020  $\chi^2$ /NDF: 4309298.4/30

Left Out: 91.462 $\pm$ 0.015  $\chi^2$ /NDF: 751213.9/24

Right Out: 114.342 $\pm$ 0.020  $\chi^2$ /NDF: 5714864.0/34

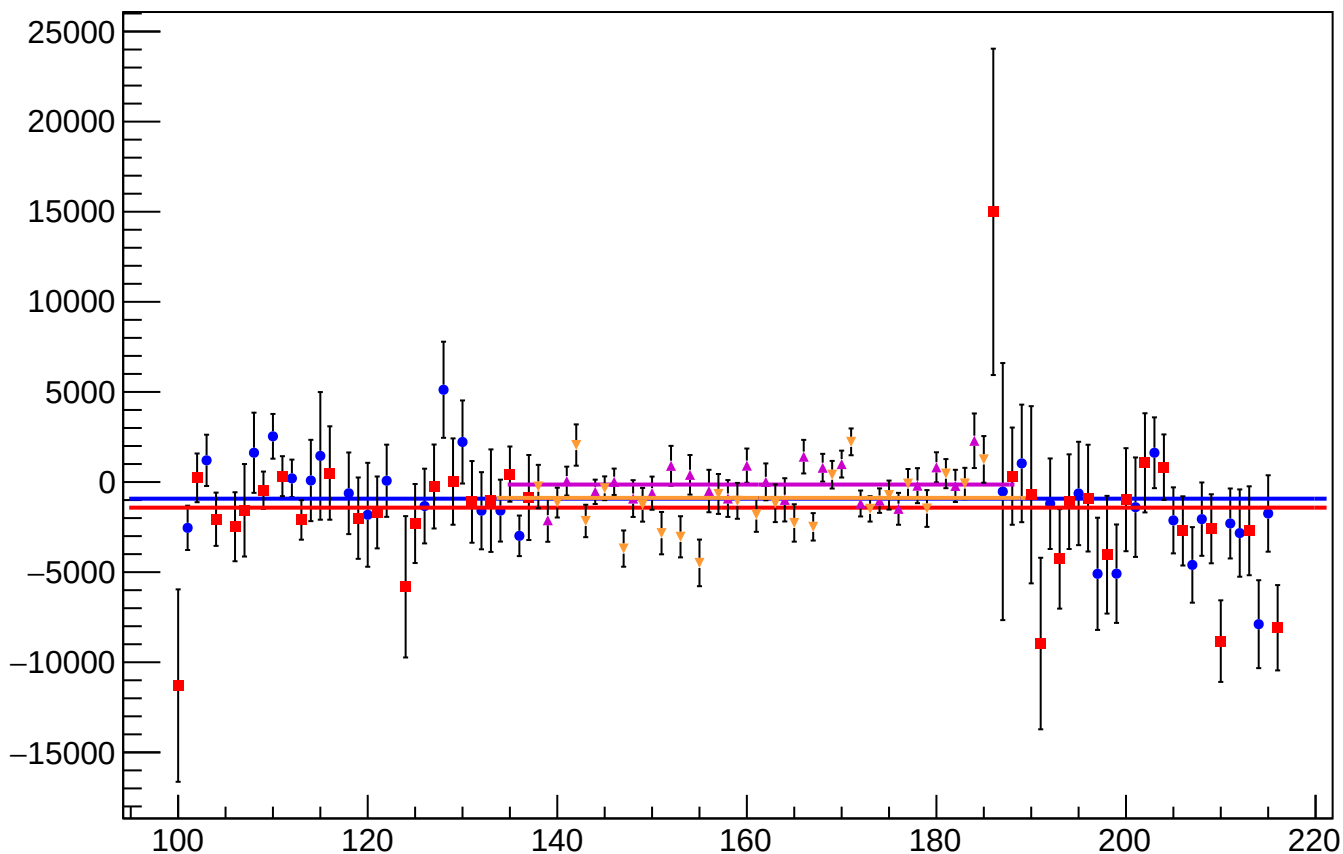
Left In: 92.100 $\pm$ 0.015  $\chi^2$ /NDF: 699590.1/22

+ sign 100.101 $\pm$ 0.012  $\chi^2$ /NDF: 5992932.2/55

All: 100.278 $\pm$ 0.009  $\chi^2$ /NDF: 13187881.6/13

- sign 100.462 $\pm$ 0.012  $\chi^2$ /NDF: 7194501.1/57

asym\_sam\_3748\_avg\_cor\_correction\_mean vs Slug



Right In:  $-923.144 \pm 347.216$   $\chi^2/\text{NDF}$ : 45.3/30

Left Out:  $-878.453 \pm 182.188$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $-1420.610 \pm 341.835$   $\chi^2/\text{NDF}$ : 43.5/34

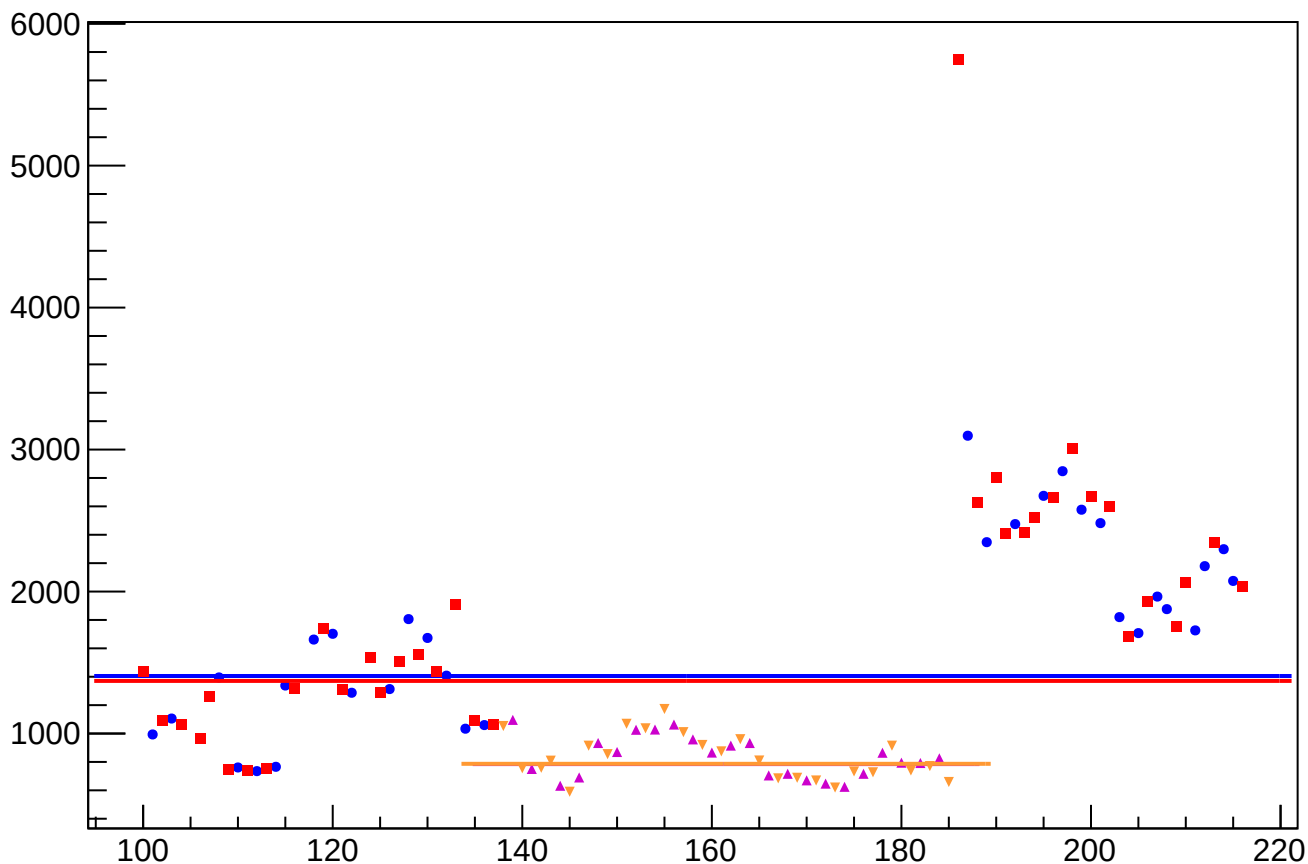
Left In:  $-138.730 \pm 186.573$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-888.101 \pm 161.328$   $\chi^2/\text{NDF}$ : 113.1/55

All:  $-663.942 \pm 114.929$   $\chi^2/\text{NDF}$ : 195.5/113

- sign  $-432.951 \pm 163.768$   $\chi^2/\text{NDF}$ : 78.5/57

asym\_sam\_3748\_avg\_cor\_correction\_rms vs Slug



Right In: 1405.277 $\pm$ 0.246  $\chi^2$ /NDF: 5509629.7/30

Left Out: 786.758 $\pm$ 0.129  $\chi^2$ /NDF: 1210893.0/24

Right Out: 1370.706 $\pm$ 0.242  $\chi^2$ /NDF: 7013562.9/34

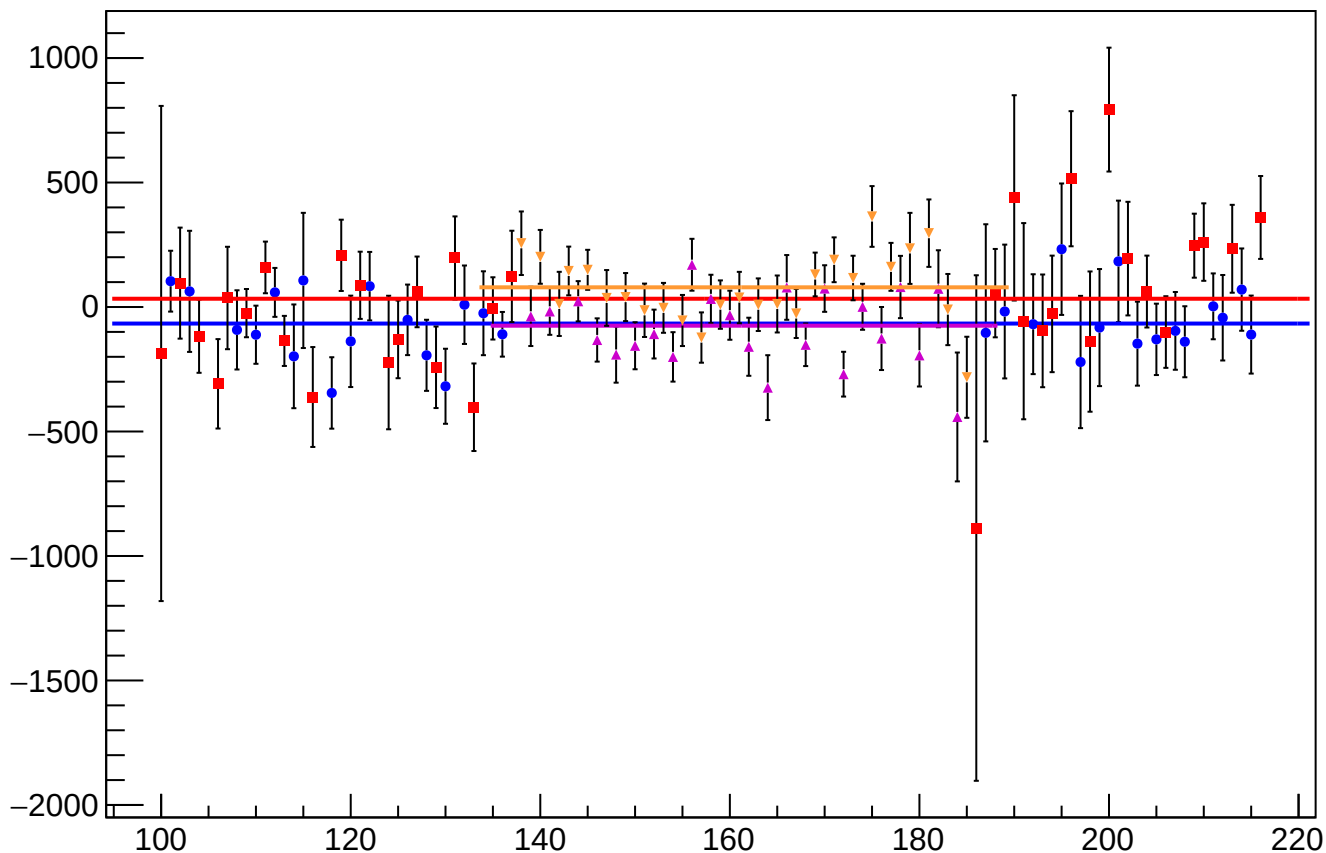
Left In: 784.833 $\pm$ 0.132  $\chi^2$ /NDF: 1063746.9/22

+ sign 920.286 $\pm$ 0.114  $\chi^2$ /NDF: 11696926.9/55

All: 919.803 $\pm$ 0.081  $\chi^2$ /NDF: 24300788.4/11

- sign 919.305 $\pm$ 0.116  $\chi^2$ /NDF: 12603825.1/57

# eigen\_cor\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-66.443 \pm 28.166$   $\chi^2/\text{NDF}: 18.6/30$

Left Out:  $79.106 \pm 21.102$   $\chi^2/\text{NDF}: 32.0/24$

Right Out:  $33.224 \pm 28.134$   $\chi^2/\text{NDF}: 53.8/34$

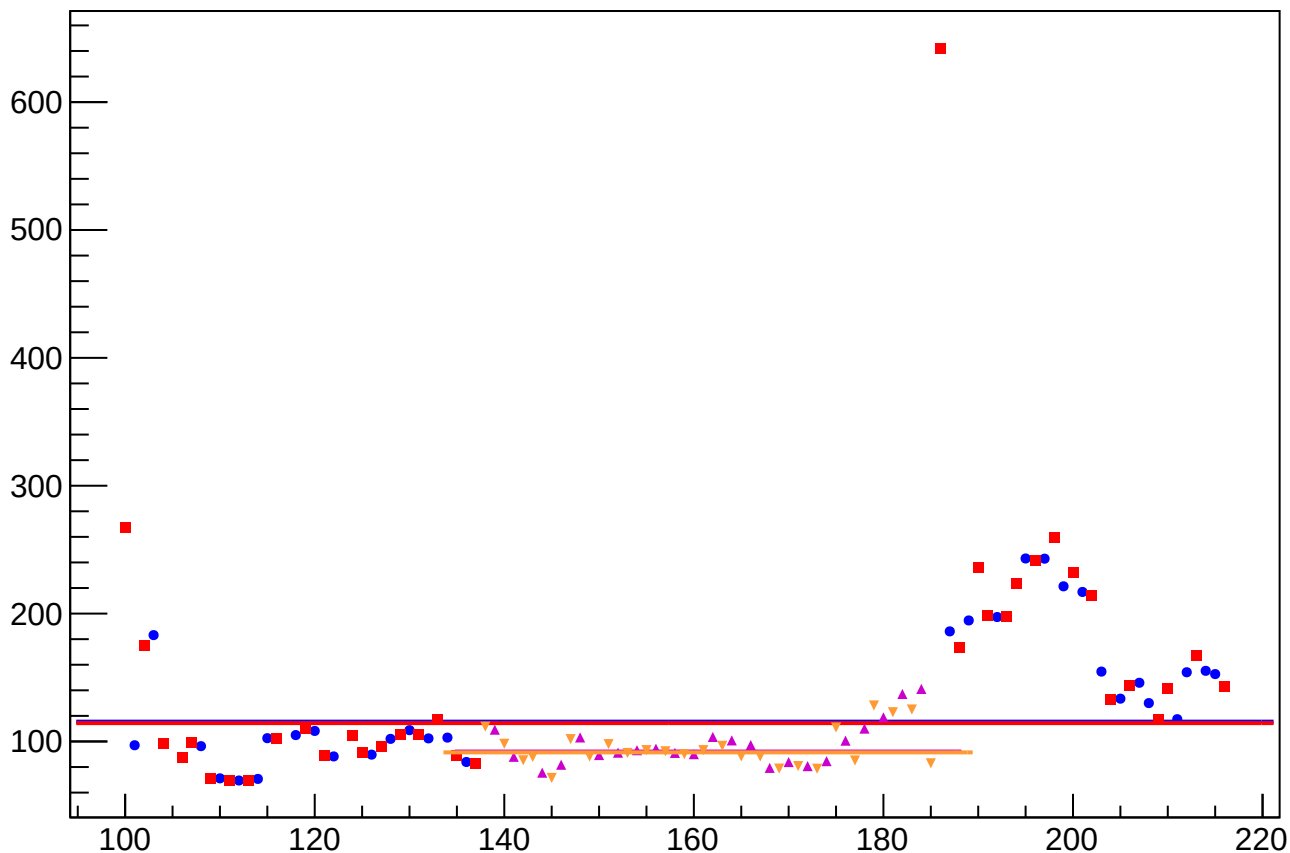
Left In:  $-75.049 \pm 21.837$   $\chi^2/\text{NDF}: 32.6/22$

+ sign  $26.781 \pm 16.888$   $\chi^2/\text{NDF}: 67.6/55$

All:  $-3.133 \pm 12.068$   $\chi^2/\text{NDF}: 169.7/113$

- sign  $-34.344 \pm 17.251$   $\chi^2/\text{NDF}: 95.7/57$

# eigen\_cor\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 115.492 $\pm$ 0.020  $\chi^2$ /NDF: 4309298.4/30

Left Out: 91.462 $\pm$ 0.015  $\chi^2$ /NDF: 751213.9/24

Right Out: 114.342 $\pm$ 0.020  $\chi^2$ /NDF: 5714864.0/34

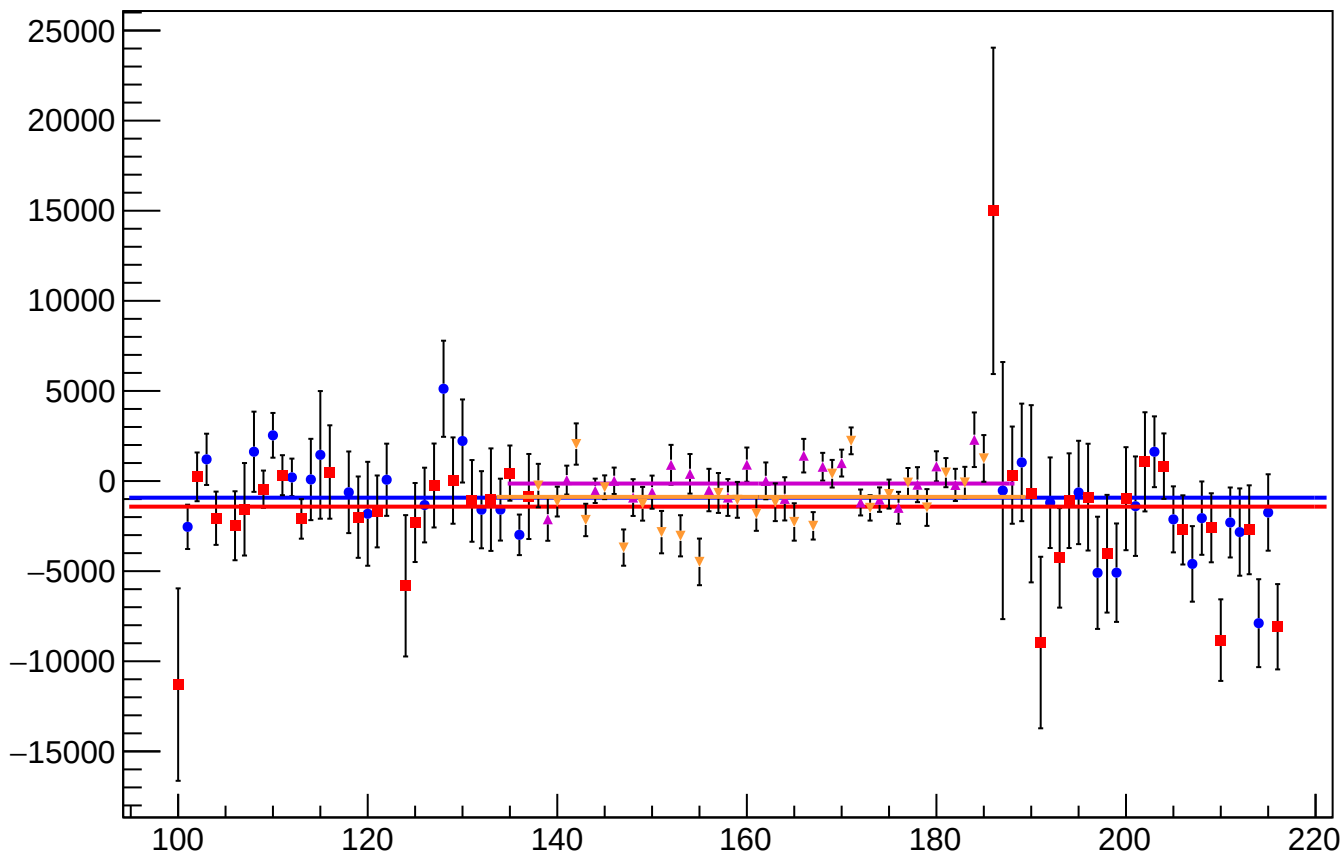
Left In: 92.100 $\pm$ 0.015  $\chi^2$ /NDF: 699590.1/22

+ sign 100.101 $\pm$ 0.012  $\chi^2$ /NDF: 5992932.2/55

All: 100.278 $\pm$ 0.009  $\chi^2$ /NDF: 13187881.6/13

- sign 100.462 $\pm$ 0.012  $\chi^2$ /NDF: 7194501.1/57

asym\_sam\_3748\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-923.144 \pm 347.216$   $\chi^2/\text{NDF}$ : 45.3/30

Left Out:  $-878.453 \pm 182.188$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $-1420.610 \pm 341.835$   $\chi^2/\text{NDF}$ : 43.5/34

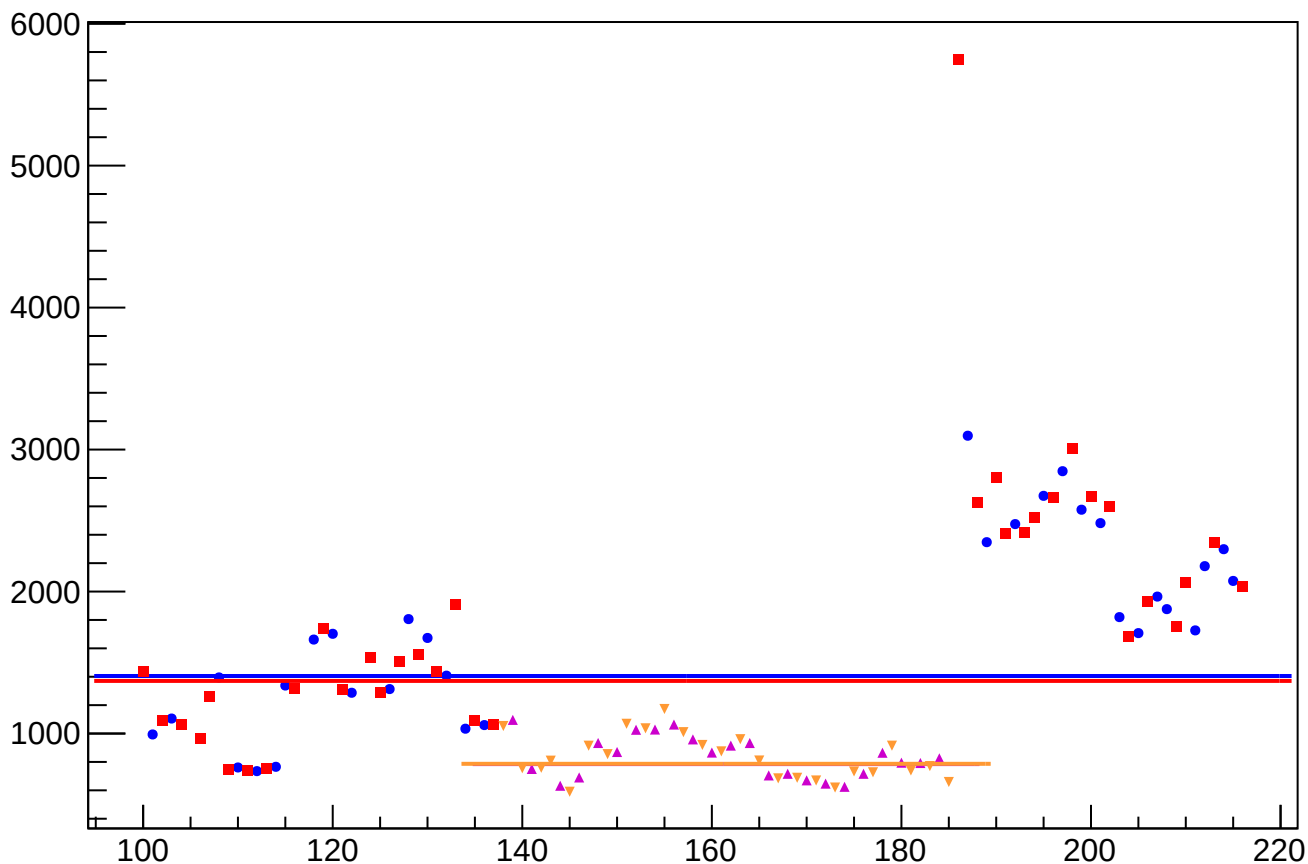
Left In:  $-138.730 \pm 186.573$   $\chi^2/\text{NDF}$ : 24.2/22

+ sign  $-888.101 \pm 161.328$   $\chi^2/\text{NDF}$ : 113.1/55

All:  $-663.942 \pm 114.929$   $\chi^2/\text{NDF}$ : 195.5/113

- sign  $-432.951 \pm 163.768$   $\chi^2/\text{NDF}$ : 78.5/57

asym\_sam\_3748\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1405.277+/-0.246  $\chi^2/\text{NDF}$ : 5509629.7/30

Left Out: 786.758+/-0.129  $\chi^2/\text{NDF}$ : 1210893.0/24

Right Out: 1370.706+/-0.242  $\chi^2/\text{NDF}$ : 7013562.9/34

Left In: 784.833+/-0.132  $\chi^2/\text{NDF}$ : 1063746.9/22

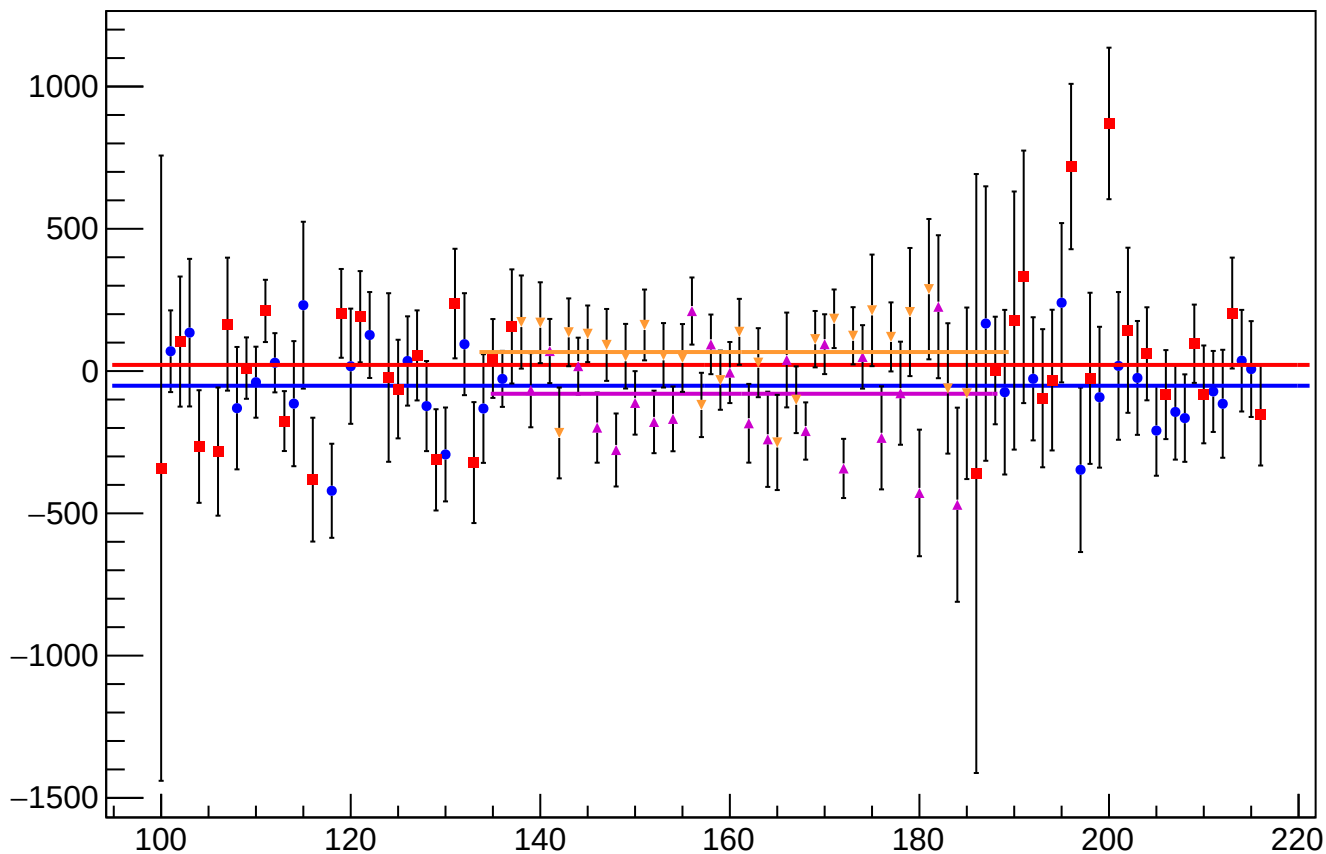
+ sign 920.286+/-0.114  $\chi^2/\text{NDF}$ : 11696926.9/55

All: 919.803+/-0.081  $\chi^2/\text{NDF}$ : 24300788.4/11

- sign 919.305+/-0.116  $\chi^2/\text{NDF}$ : 12603825.1/57



# dit\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-51.560 \pm 31.043$   $\chi^2/\text{NDF}: 17.8/30$

Left Out:  $66.896 \pm 25.584$   $\chi^2/\text{NDF}: 19.6/24$

Right Out:  $21.636 \pm 31.153$   $\chi^2/\text{NDF}: 45.3/34$

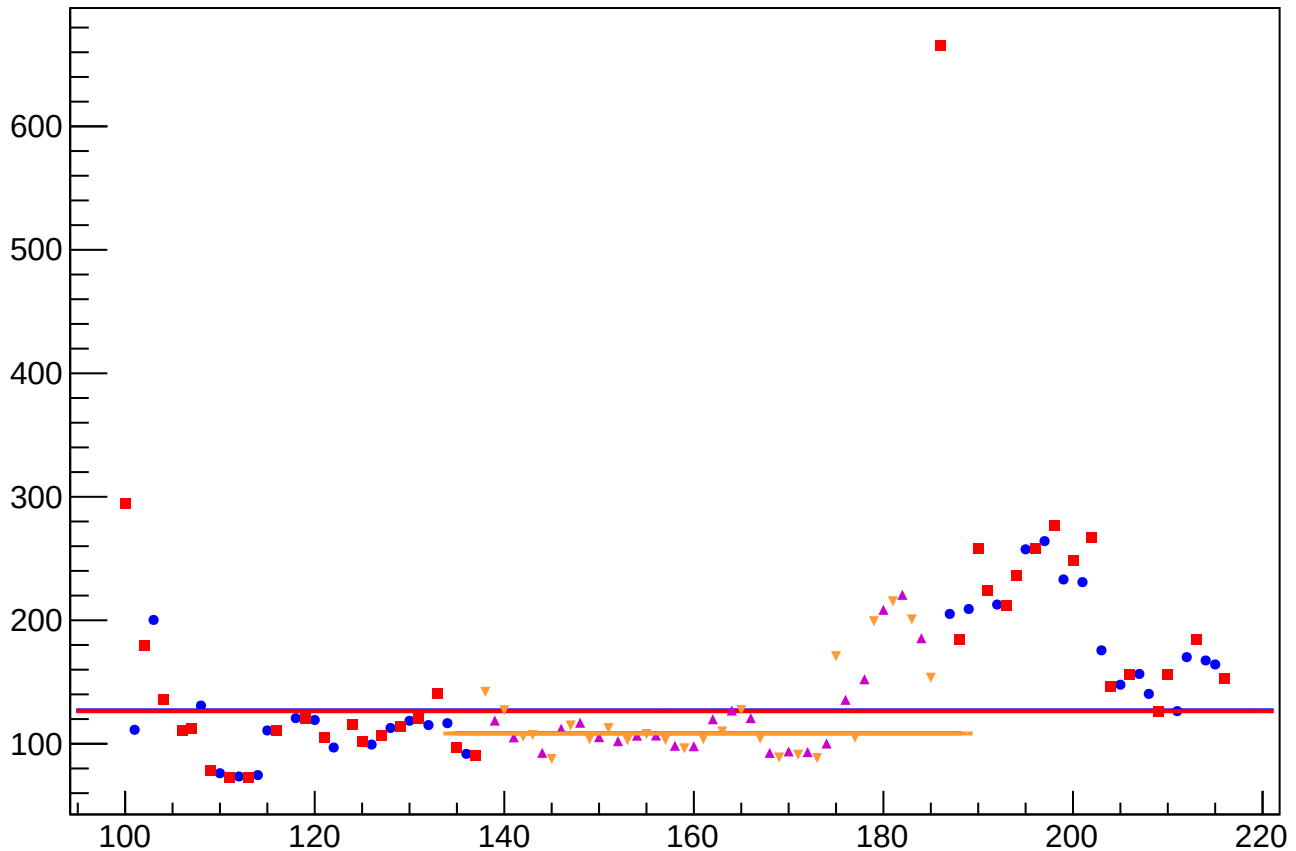
Left In:  $-79.766 \pm 26.299$   $\chi^2/\text{NDF}: 36.9/22$

+ sign  $18.983 \pm 19.743$   $\chi^2/\text{NDF}: 46.1/55$

All:  $-8.794 \pm 14.083$   $\chi^2/\text{NDF}: 138.6/113$

- sign  $-37.571 \pm 20.095$   $\chi^2/\text{NDF}: 88.4/57$

dit\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 127.058 $\pm$ 0.022  $\chi^2$ /NDF: 4236975.4/30

Left Out: 108.330 $\pm$ 0.018  $\chi^2$ /NDF: 1774599.9/24

Right Out: 126.338 $\pm$ 0.022  $\chi^2$ /NDF: 5670919.7/34

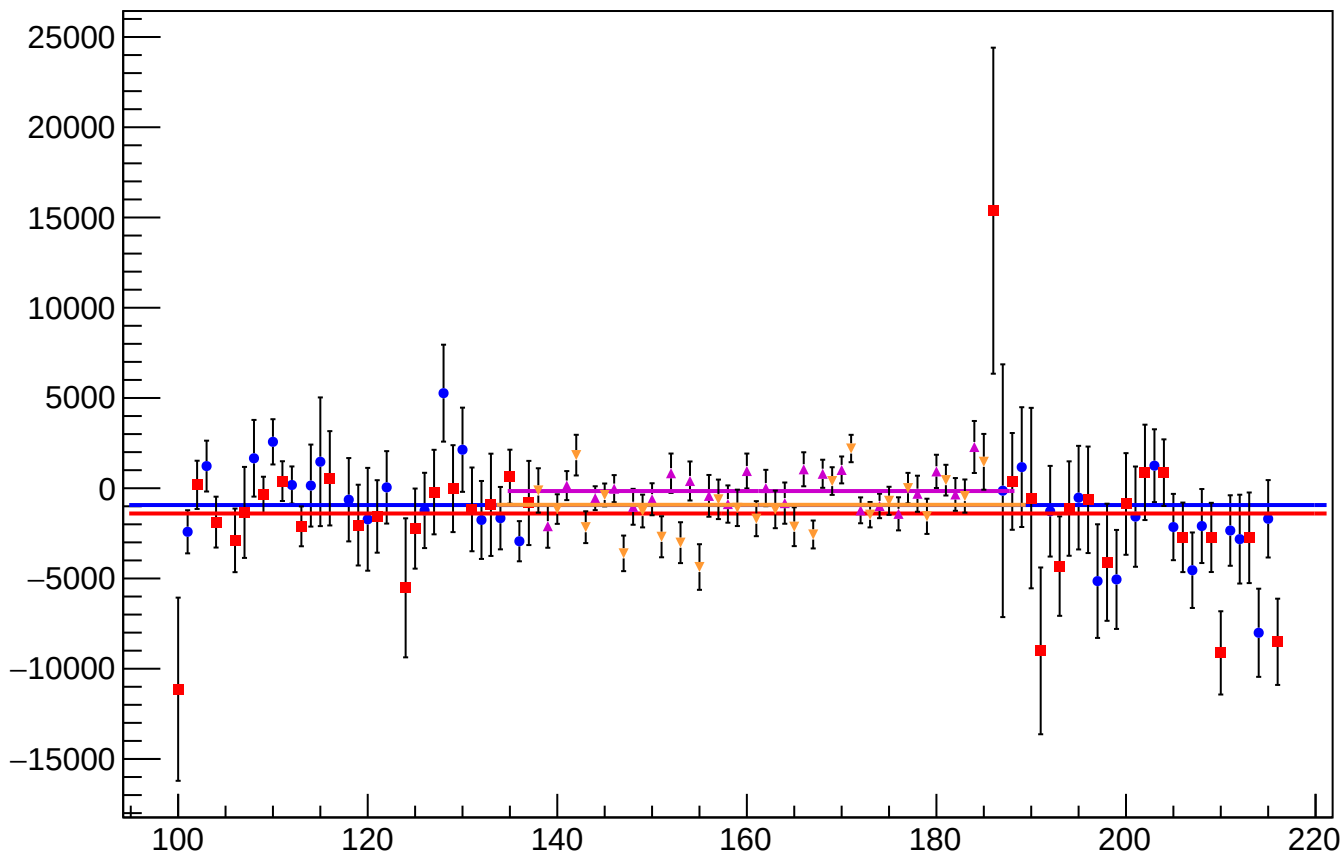
Left In: 108.492 $\pm$ 0.019  $\chi^2$ /NDF: 1379398.3/22

+ sign 115.905 $\pm$ 0.014  $\chi^2$ /NDF: 6445045.4/55

All: 115.912 $\pm$ 0.010  $\chi^2$ /NDF: 13878577.6/11

- sign 115.918 $\pm$ 0.014  $\chi^2$ /NDF: 7433531.8/57

asym\_sam\_3748\_avg\_dit\_correction\_mean vs Slug



Right In: -931.542 $\pm$ 346.596  $\chi^2$ /NDF: 45.1/30

Left Out: -918.735 $\pm$ 182.461  $\chi^2$ /NDF: 64.1/24

Right Out: -1400.164 $\pm$ 338.609  $\chi^2$ /NDF: 46.6/34

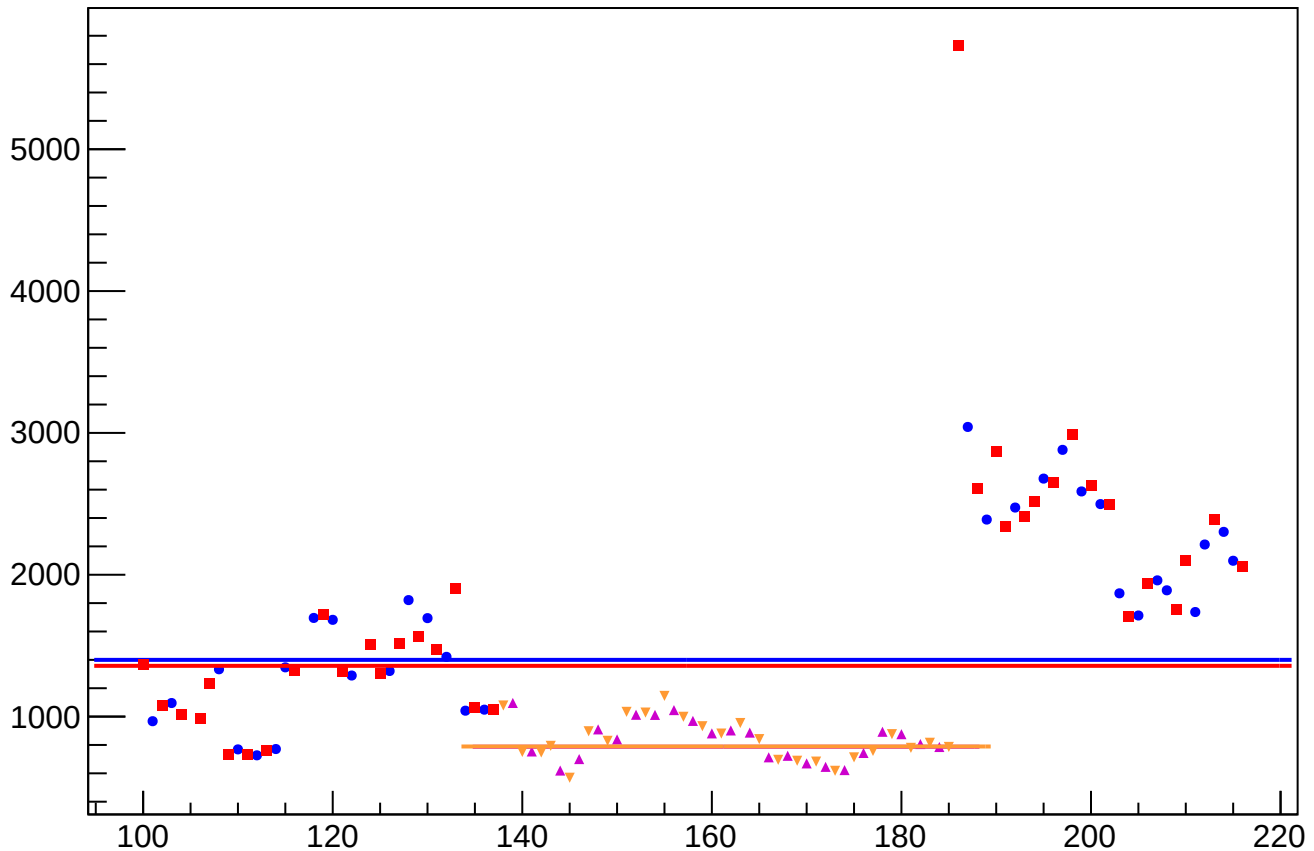
Left In: -155.874 $\pm$ 187.116  $\chi^2$ /NDF: 23.1/22

+ sign -921.514 $\pm$ 161.455  $\chi^2$ /NDF: 109.2/55

All: -687.617 $\pm$ 114.977  $\chi^2$ /NDF: 193.5/113

- sign -446.954 $\pm$ 163.774  $\chi^2$ /NDF: 80.0/57

asym\_sam\_3748\_avg\_dit\_correction\_rms vs Slug



Right In:  $1399.925 \pm 0.245$   $\chi^2/\text{NDF}$ : 5669945.2/30

Left Out:  $789.250 \pm 0.129$   $\chi^2/\text{NDF}$ : 1176799.1/24

Right Out:  $1357.855 \pm 0.239$   $\chi^2/\text{NDF}$ : 7141037.2/34

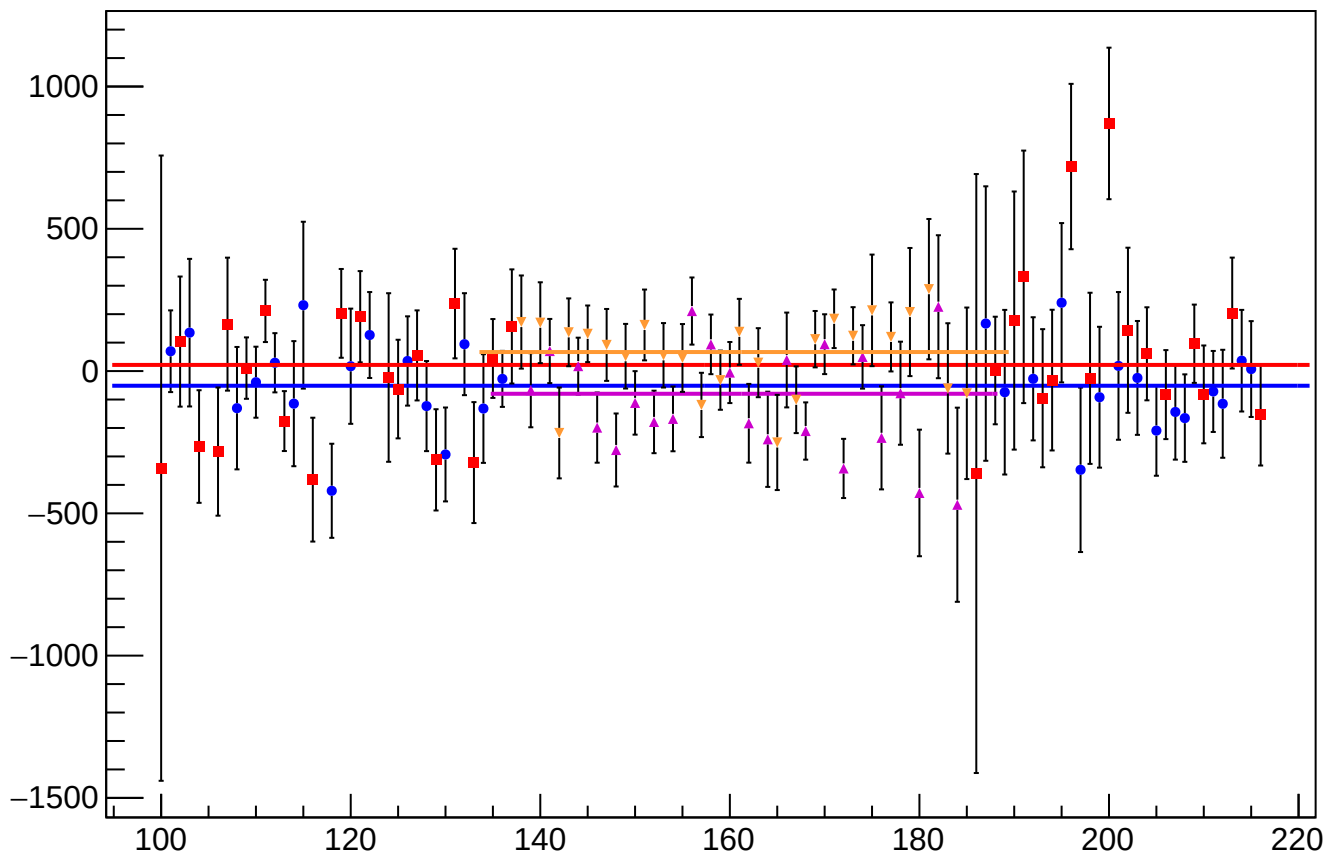
Left In:  $787.390 \pm 0.132$   $\chi^2/\text{NDF}$ : 1041390.9/22

+ sign  $921.765 \pm 0.114$   $\chi^2/\text{NDF}$ : 11708200.8/55

All:  $921.309 \pm 0.081$   $\chi^2/\text{NDF}$ : 24239359.5/11

- sign  $920.840 \pm 0.116$   $\chi^2/\text{NDF}$ : 12531126.4/57

# eigen\_dit\_asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $-51.558 \pm 31.043$   $\chi^2/\text{NDF}: 17.8/30$

Left Out:  $66.898 \pm 25.584$   $\chi^2/\text{NDF}: 19.6/24$

Right Out:  $21.639 \pm 31.153$   $\chi^2/\text{NDF}: 45.3/34$

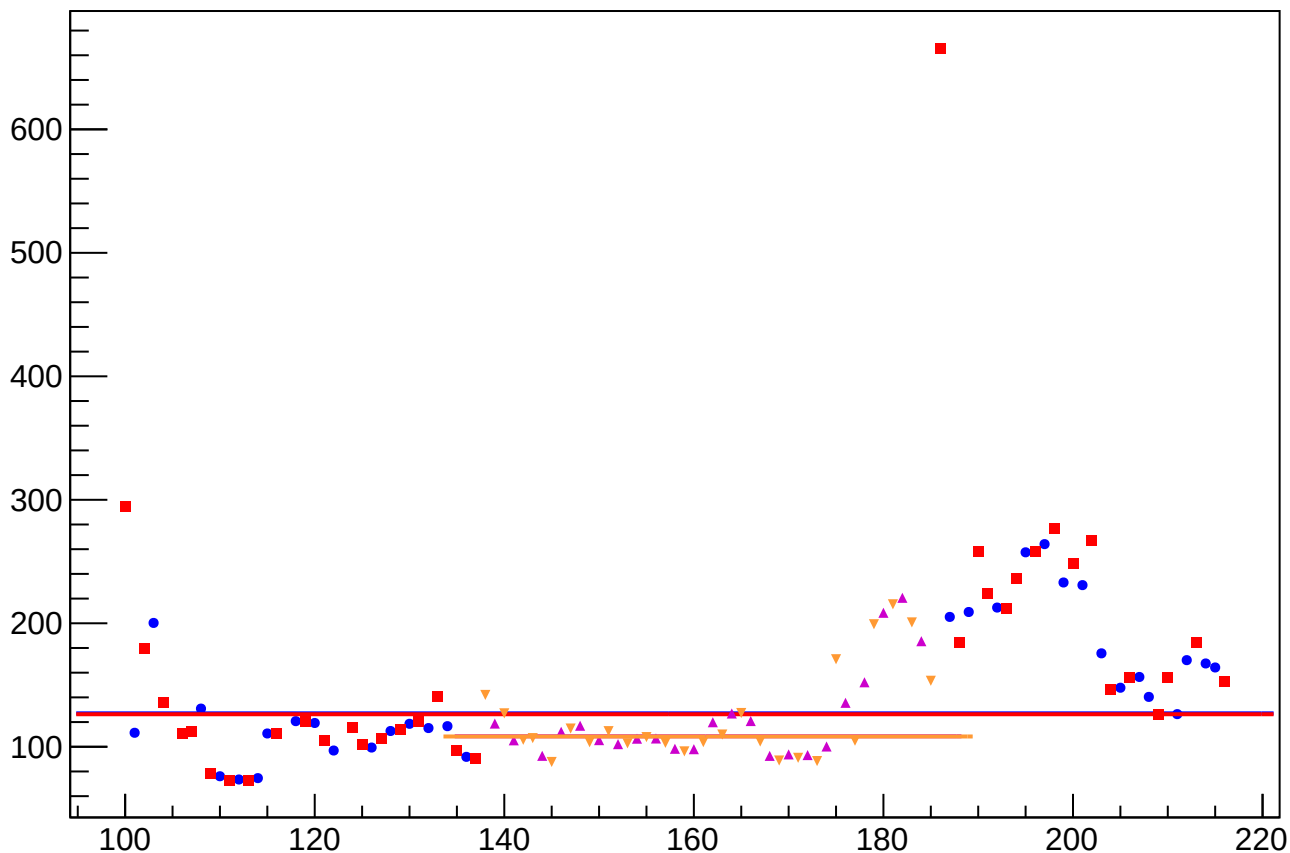
Left In:  $-79.766 \pm 26.299$   $\chi^2/\text{NDF}: 36.9/22$

+ sign  $18.985 \pm 19.743$   $\chi^2/\text{NDF}: 46.1/55$

All:  $-8.792 \pm 14.083$   $\chi^2/\text{NDF}: 138.6/113$

- sign  $-37.570 \pm 20.095$   $\chi^2/\text{NDF}: 88.4/57$

eigen\_dit\_asym\_sam\_3748\_avg\_rms vs Slug



Right In: 127.058 $\pm$ 0.022  $\chi^2$ /NDF: 4236958.4/30

Left Out: 108.330 $\pm$ 0.018  $\chi^2$ /NDF: 1774594.6/24

Right Out: 126.338 $\pm$ 0.022  $\chi^2$ /NDF: 5670918.7/34

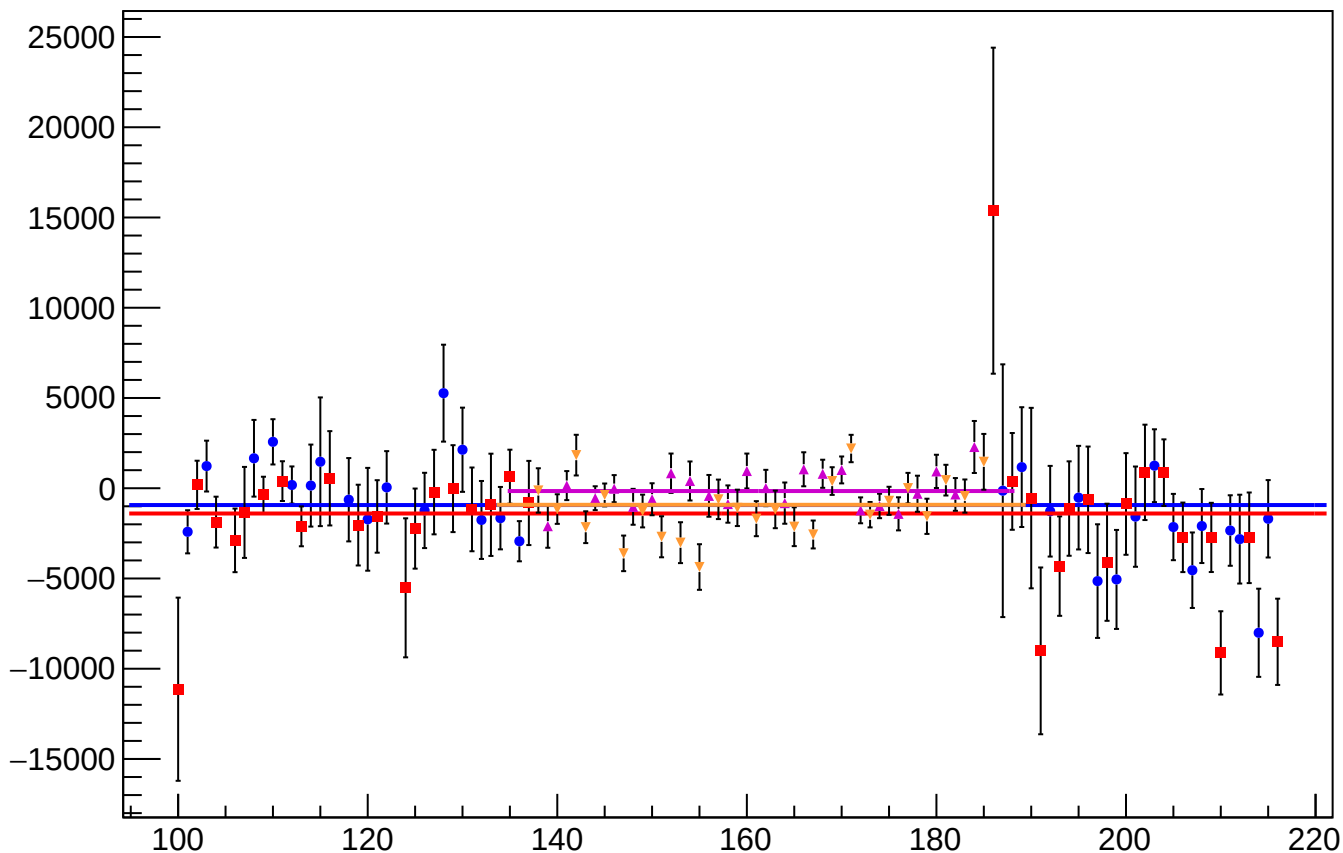
Left In: 108.493 $\pm$ 0.019  $\chi^2$ /NDF: 1379379.3/22

+ sign 115.905 $\pm$ 0.014  $\chi^2$ /NDF: 6445013.8/55

All: 115.912 $\pm$ 0.010  $\chi^2$ /NDF: 13878517.7/11

- sign 115.919 $\pm$ 0.014  $\chi^2$ /NDF: 7433503.5/57

asym\_sam\_3748\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-931.539 \pm 346.596$   $\chi^2/\text{NDF}: 45.1/30$

Left Out:  $-918.734 \pm 182.461$   $\chi^2/\text{NDF}: 64.1/24$

Right Out:  $-1400.161 \pm 338.608$   $\chi^2/\text{NDF}: 46.6/34$

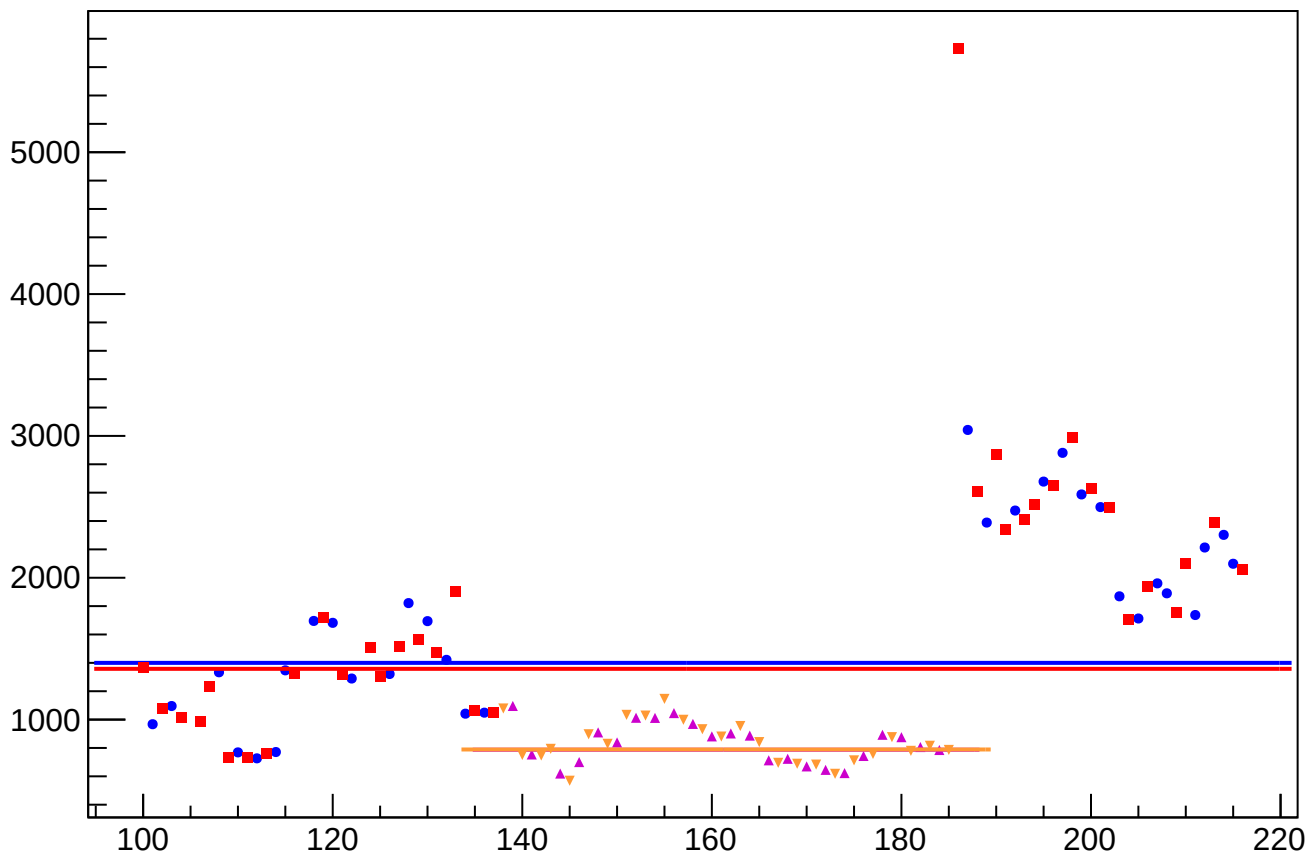
Left In:  $-155.873 \pm 187.115$   $\chi^2/\text{NDF}: 23.1/22$

+ sign  $-921.513 \pm 161.455$   $\chi^2/\text{NDF}: 109.2/55$

All:  $-687.615 \pm 114.977$   $\chi^2/\text{NDF}: 193.5/113$

- sign  $-446.953 \pm 163.773$   $\chi^2/\text{NDF}: 80.0/57$

asym\_sam\_3748\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1399.923 $\pm$ 0.245  $\chi^2$ /NDF: 5669958.1/30

Left Out: 789.248 $\pm$ 0.129  $\chi^2$ /NDF: 1176801.9/24

Right Out: 1357.853 $\pm$ 0.239  $\chi^2$ /NDF: 7141045.6/34

Left In: 787.388 $\pm$ 0.132  $\chi^2$ /NDF: 1041391.2/22

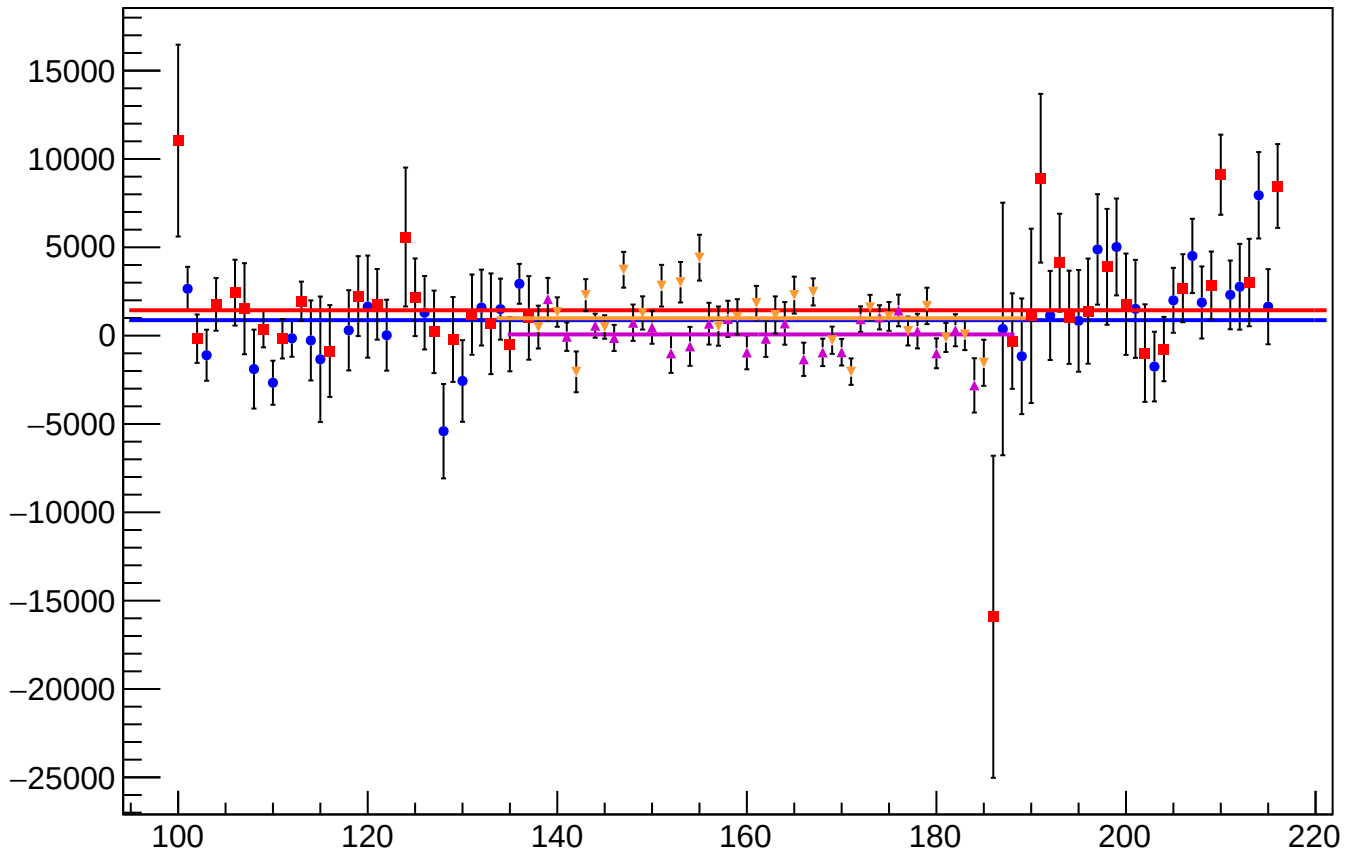
+ sign 921.764 $\pm$ 0.114  $\chi^2$ /NDF: 11708217.6/55

All: 921.308 $\pm$ 0.081  $\chi^2$ /NDF: 24239387.9/11

- sign 920.839 $\pm$ 0.116  $\chi^2$ /NDF: 12531137.9/57



# asym\_sam\_3748\_avg\_mean vs Slug



Right In:  $876.986 \pm 348.842$   $\chi^2/\text{NDF}$ : 46.2/30

Left Out:  $985.656 \pm 183.601$   $\chi^2/\text{NDF}$ : 63.7/24

Right Out:  $1437.112 \pm 343.037$   $\chi^2/\text{NDF}$ : 44.6/34

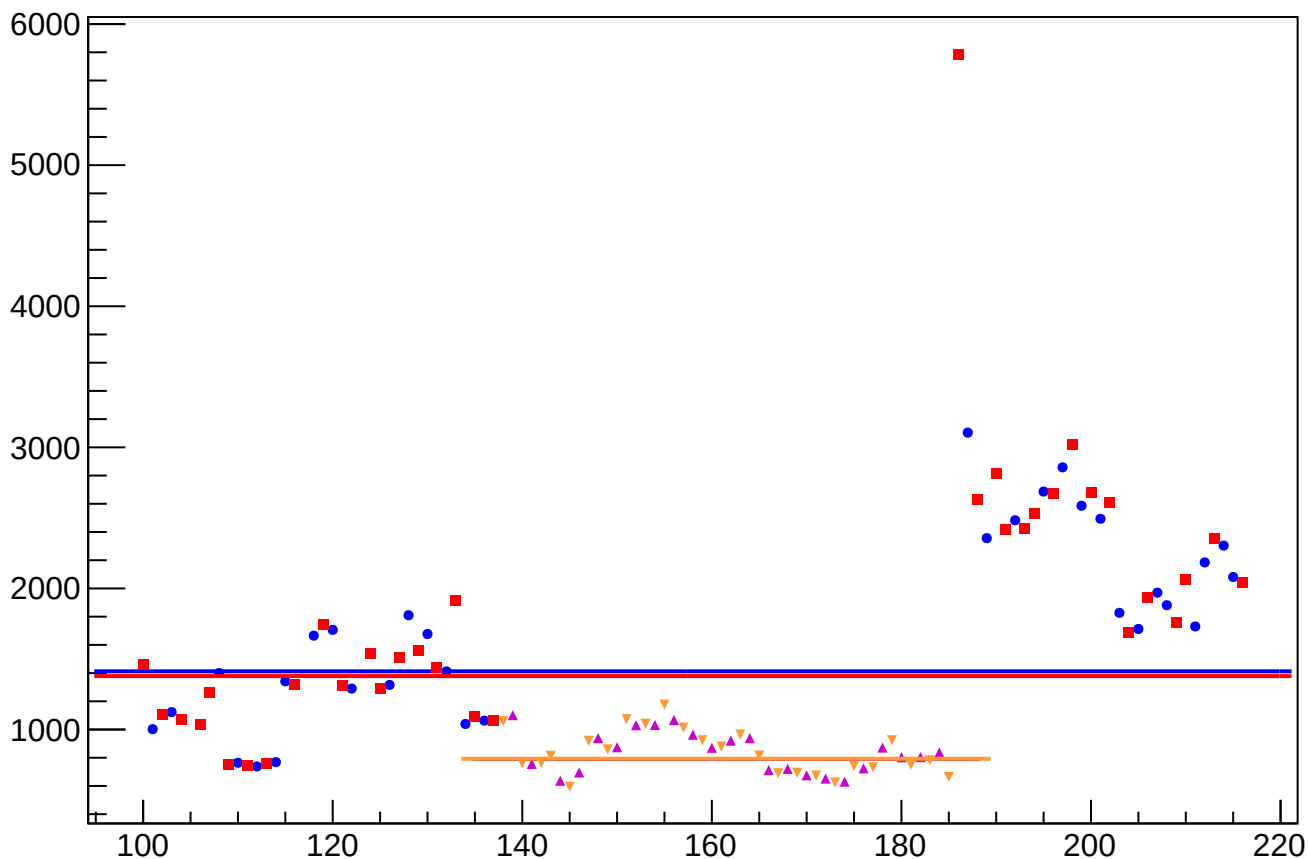
Left In:  $70.089 \pm 188.036$   $\chi^2/\text{NDF}$ : 24.4/22

+ sign  $962.084 \pm 162.472$   $\chi^2/\text{NDF}$ : 110.0/55

All:  $678.262 \pm 115.730$   $\chi^2/\text{NDF}$ : 197.5/113

- sign  $385.934 \pm 164.889$   $\chi^2/\text{NDF}$ : 81.3/57

# asym\_sam\_3748\_avg\_rms vs Slug



Right In: 1412.498 $\pm$ 0.247  $\chi^2$ /NDF: 5480458.4/30

Left Out: 793.051 $\pm$ 0.130  $\chi^2$ /NDF: 1193972.3/24

Right Out: 1378.702 $\pm$ 0.243  $\chi^2$ /NDF: 6968793.3/34

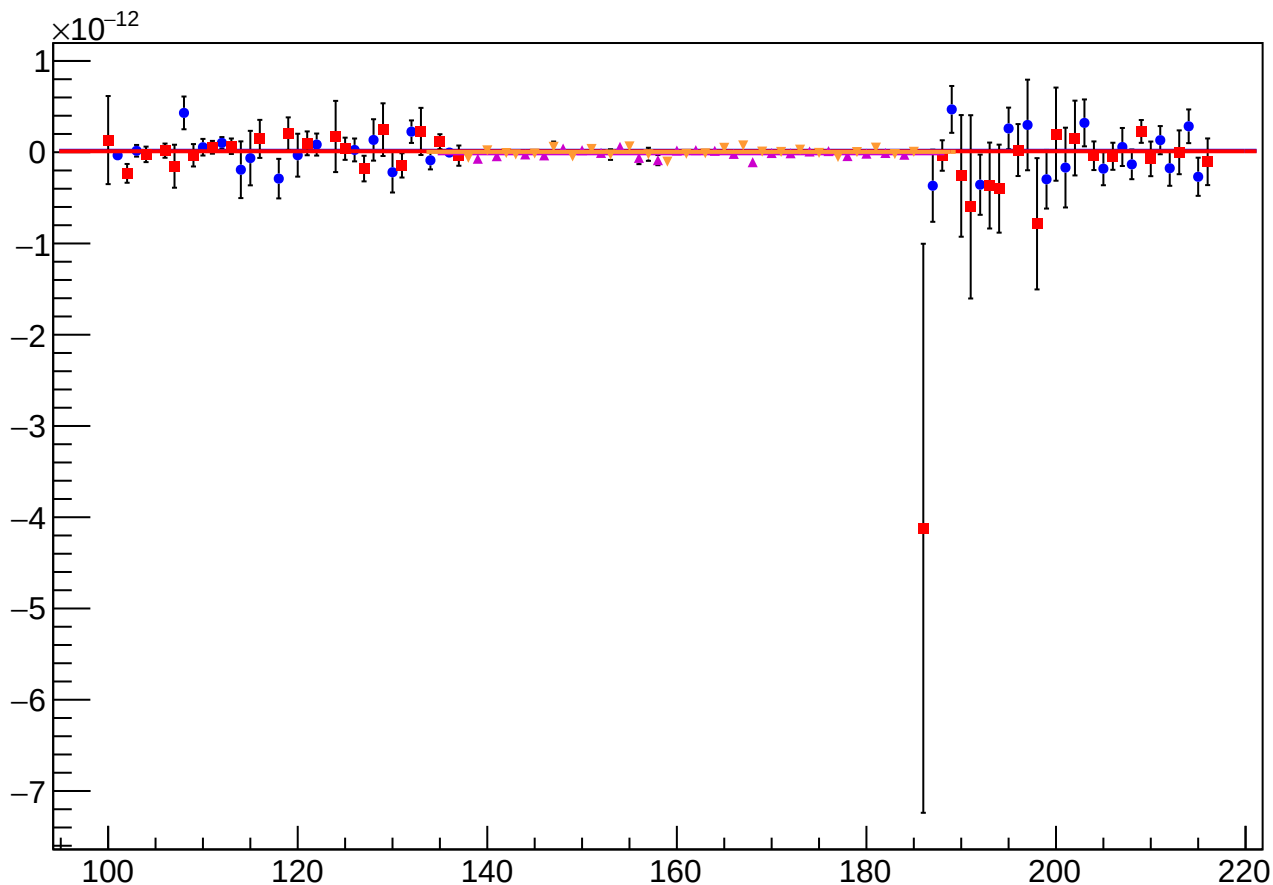
Left In: 791.155 $\pm$ 0.133  $\chi^2$ /NDF: 1049107.7/22

+ sign 927.421 $\pm$ 0.115  $\chi^2$ /NDF: 11612842.2/55

All: 927.167 $\pm$ 0.082  $\chi^2$ /NDF: 24142375.5/11

- sign 926.906 $\pm$ 0.117  $\chi^2$ /NDF: 12529523.4/57

asym\_sam\_3748\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 33.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 24.7/34

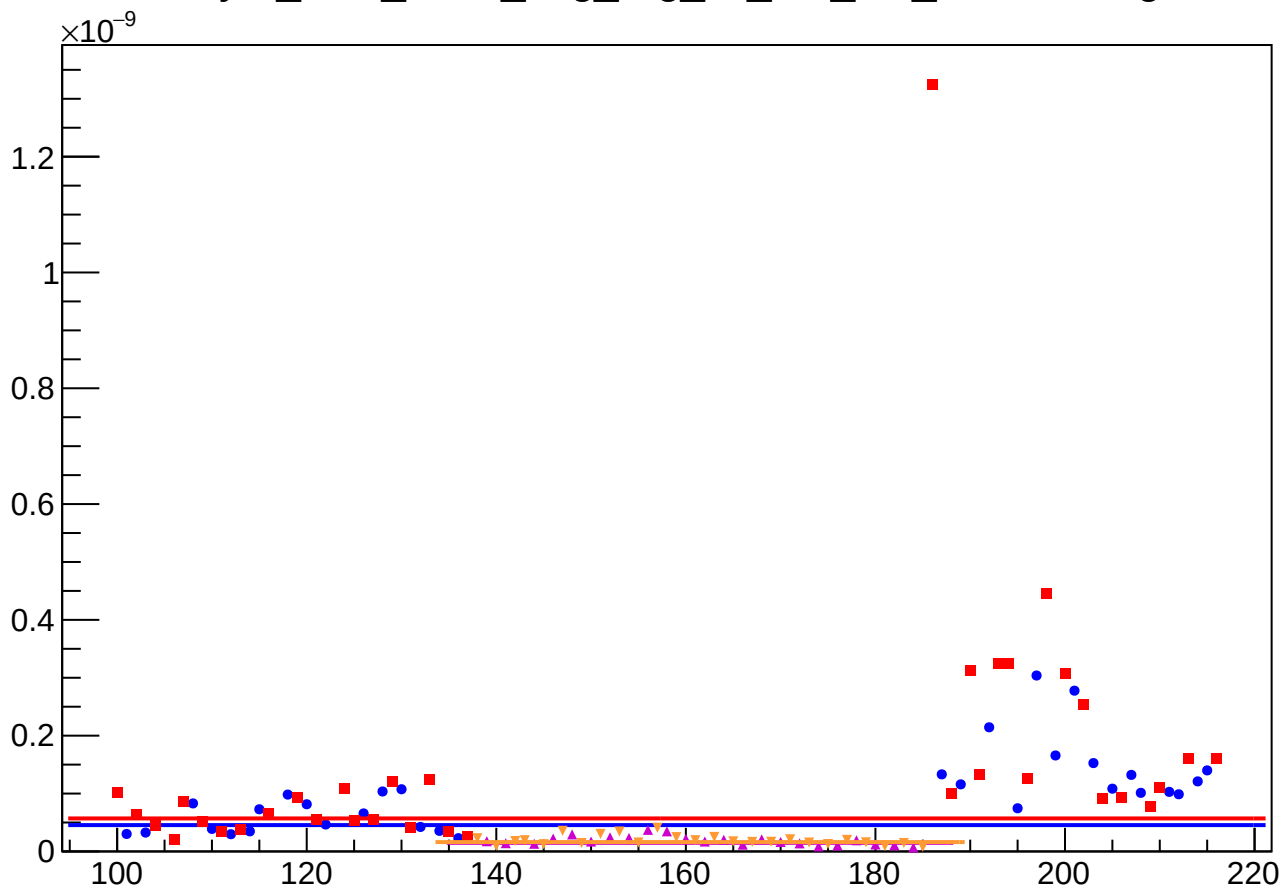
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:25.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 68.1/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 122.0/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 50.7/57

asym\_sam\_3748\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6225756.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1725685.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6331372.8/34

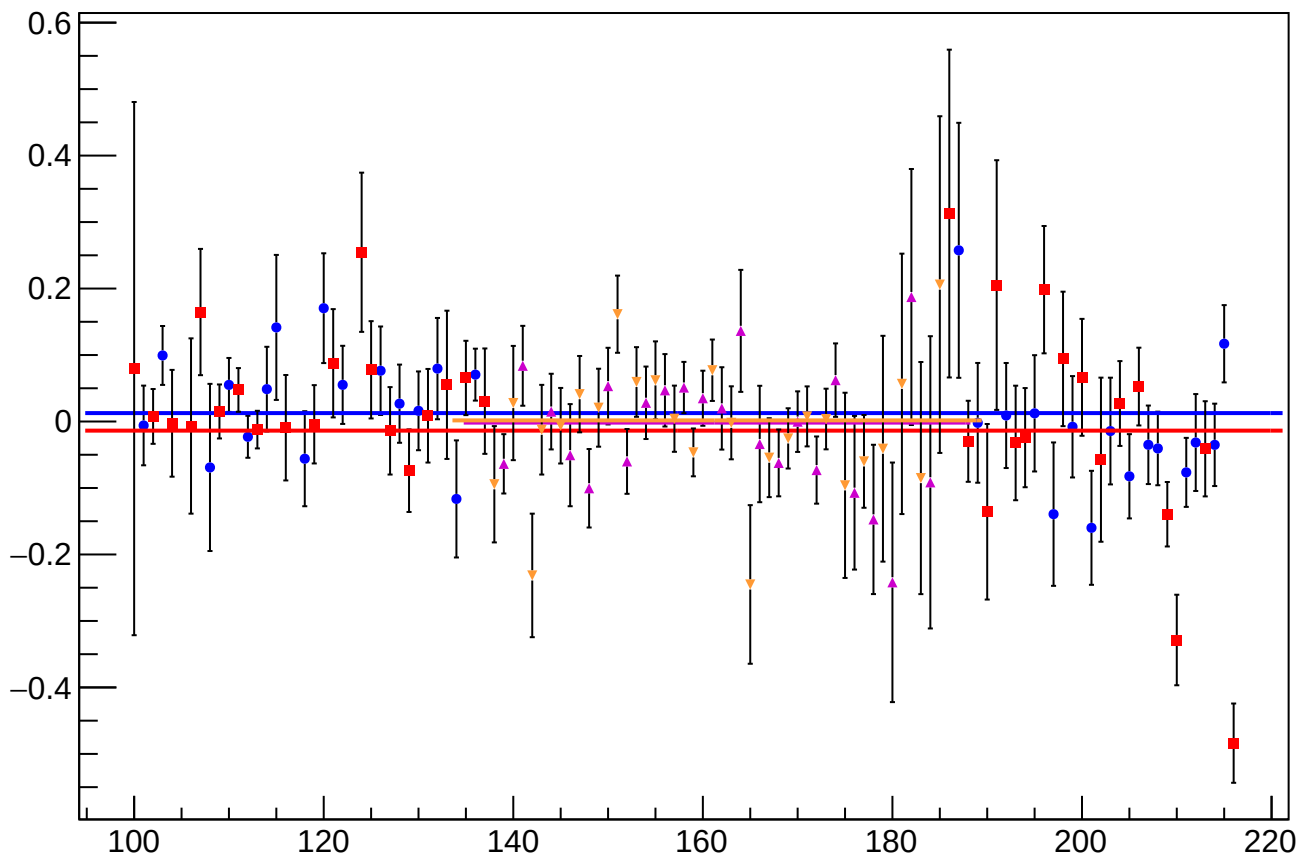
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1661952.2/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11699507.2/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25281082.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13536140.5/57

asym\_sam\_3748\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.011$   $\chi^2/\text{NDF}: 38.5/30$

Left Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}: 30.4/24$

Right Out:  $-0.014 \pm 0.011$   $\chi^2/\text{NDF}: 123.0/34$

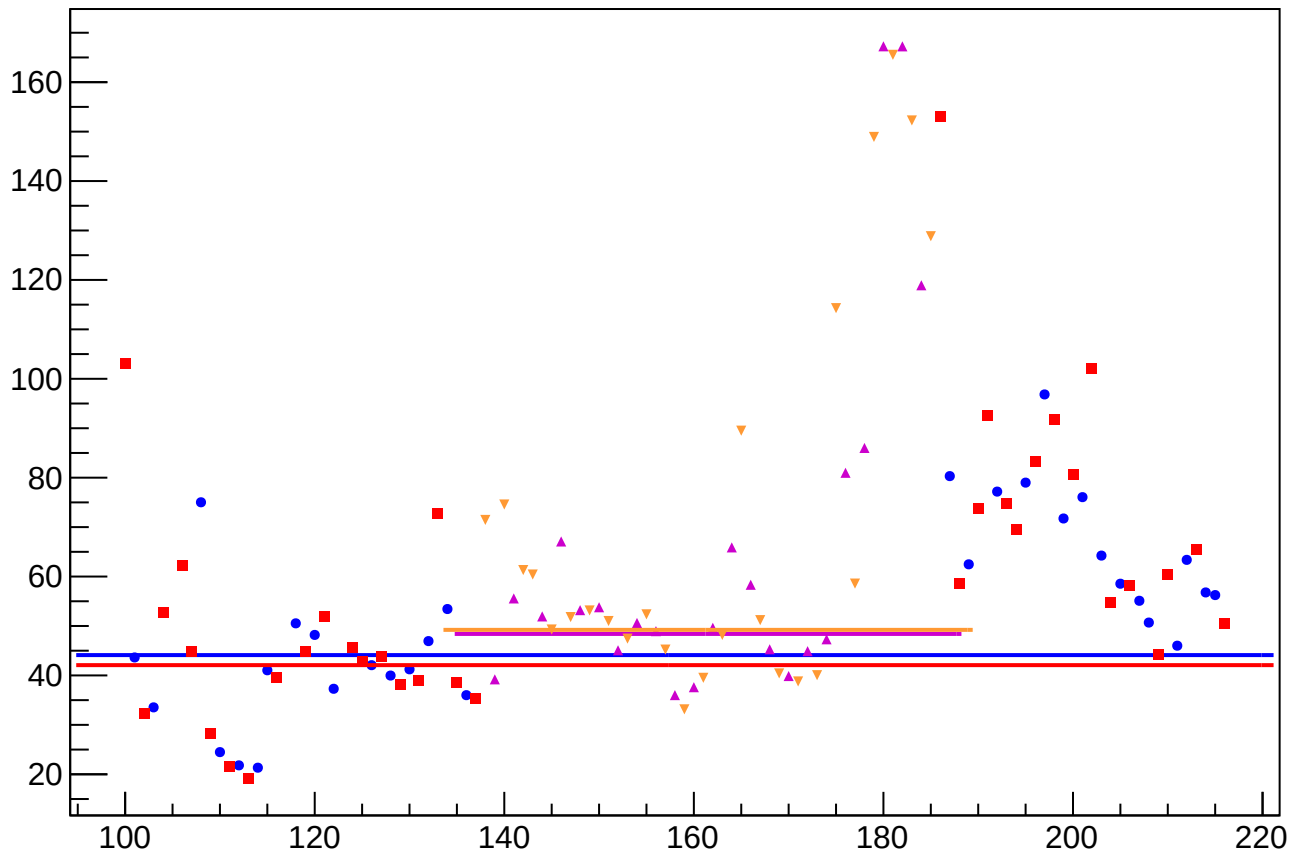
Left In:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}: 26.1/22$

+ sign  $0.008 \pm 0.008$   $\chi^2/\text{NDF}: 69.3/55$

All:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}: 220.9/113$

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}: 149.6/57$

asym\_sam\_3748\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $44.112 \pm 0.008$   $\chi^2/\text{NDF}: 4616873.1/30$

Left Out:  $49.216 \pm 0.009$   $\chi^2/\text{NDF}: 4171670.0/24$

Right Out:  $42.081 \pm 0.008$   $\chi^2/\text{NDF}: 6509029.6/34$

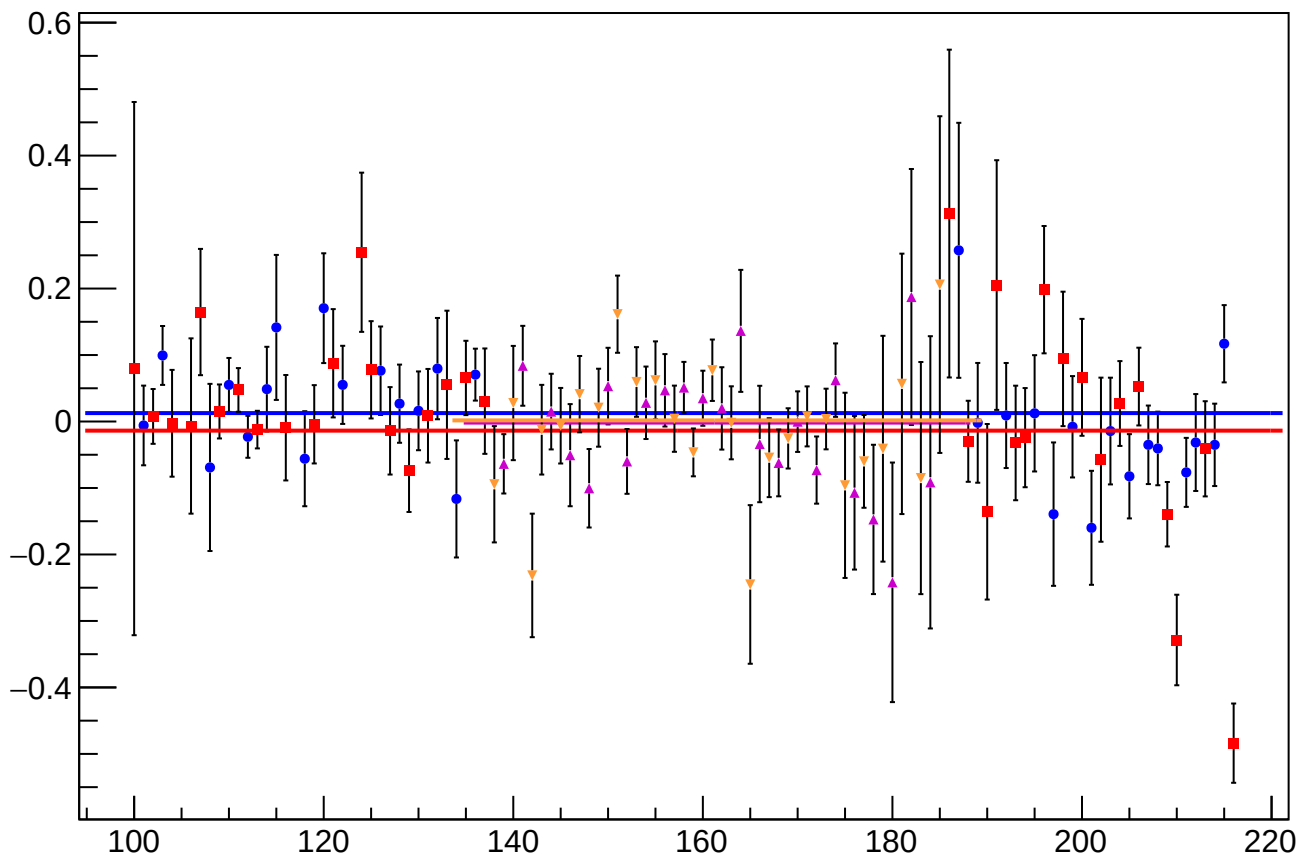
Left In:  $48.392 \pm 0.009$   $\chi^2/\text{NDF}: 3033240.8/22$

+ sign  $46.398 \pm 0.006$   $\chi^2/\text{NDF}: 8978761.8/55$

All:  $45.598 \pm 0.004$   $\chi^2/\text{NDF}: 18853501.9/113$

- sign  $44.815 \pm 0.006$   $\chi^2/\text{NDF}: 9837341.4/57$

asym\_sam\_3748\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.011$   $\chi^2/\text{NDF}: 38.5/30$

Left Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}: 30.4/24$

Right Out:  $-0.014 \pm 0.011$   $\chi^2/\text{NDF}: 123.0/34$

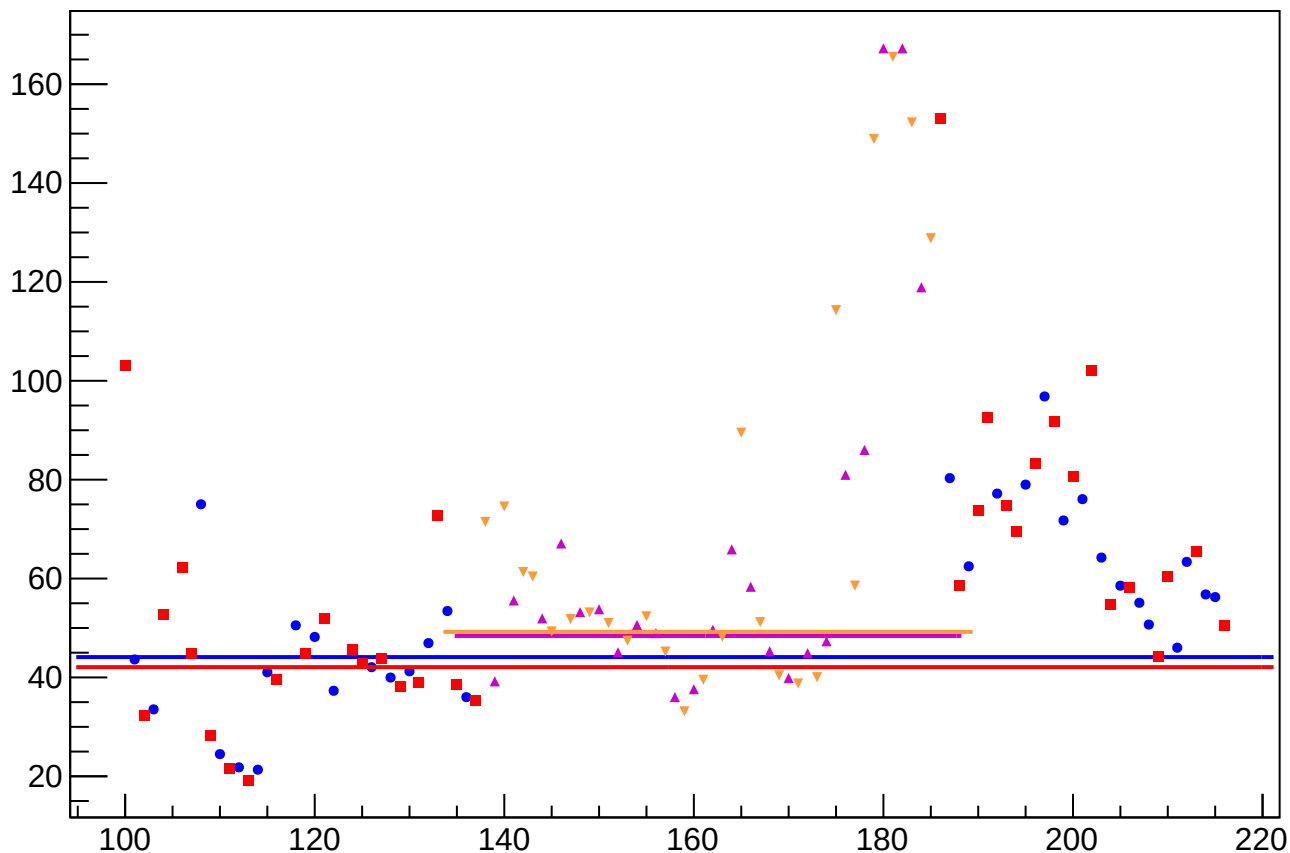
Left In:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}: 26.1/22$

+ sign  $0.008 \pm 0.008$   $\chi^2/\text{NDF}: 69.3/55$

All:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}: 220.9/113$

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}: 149.6/57$

asym\_sam\_3748\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 44.112 $\pm$ 0.008  $\chi^2$ /NDF: 4616873.1/30

Left Out: 49.216 $\pm$ 0.009  $\chi^2$ /NDF: 4171670.0/24

Right Out: 42.081 $\pm$ 0.008  $\chi^2$ /NDF: 6509029.6/34

Left In: 48.392 $\pm$ 0.009  $\chi^2$ /NDF: 3033240.8/22

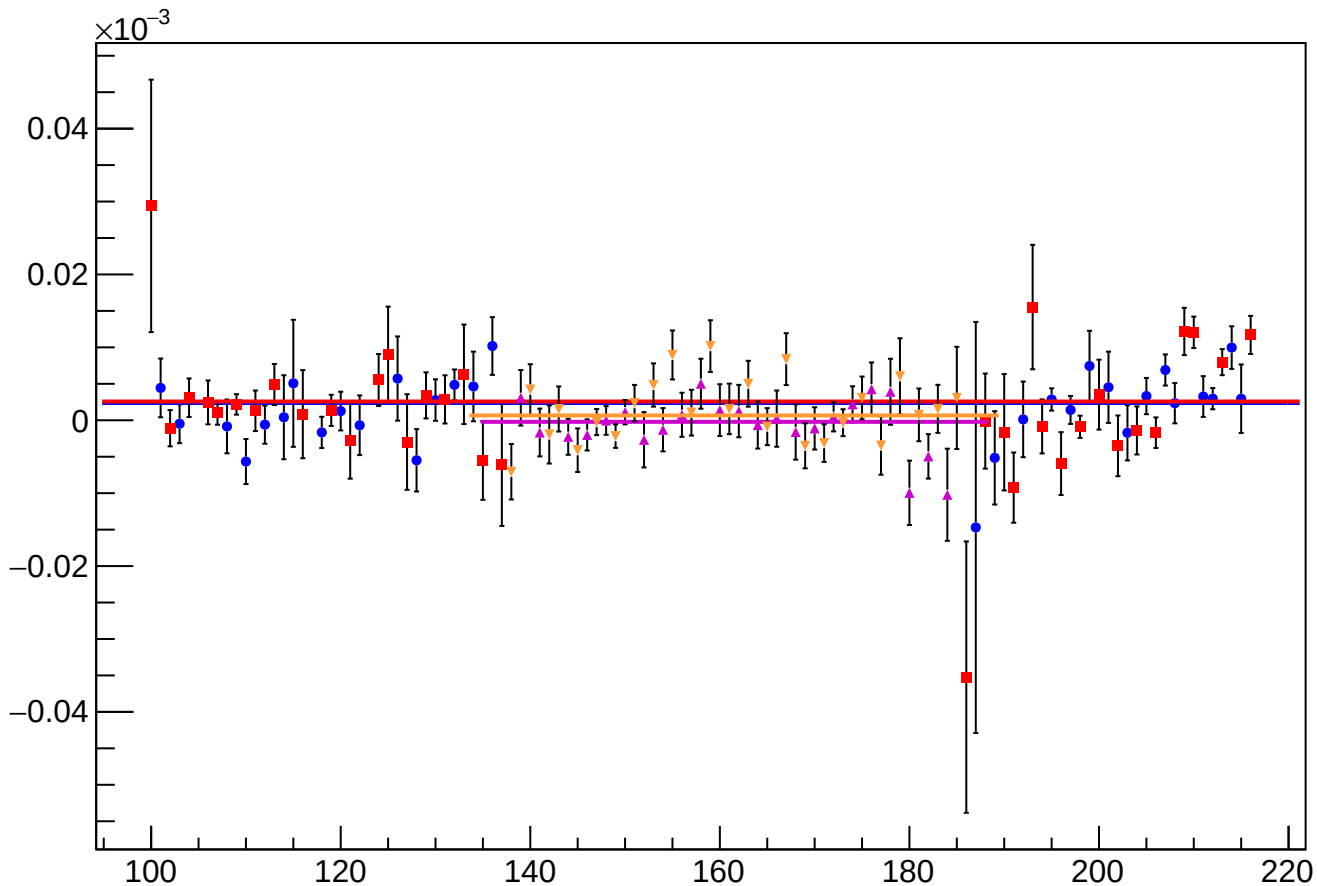
+ sign 46.398 $\pm$ 0.006  $\chi^2$ /NDF: 8978761.8/55

All: 45.598 $\pm$ 0.004  $\chi^2$ /NDF: 18853501.9/113

- sign 44.815 $\pm$ 0.006  $\chi^2$ /NDF: 9837341.4/57



asym\_sam\_3748\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.4/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:41.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 94.0/34

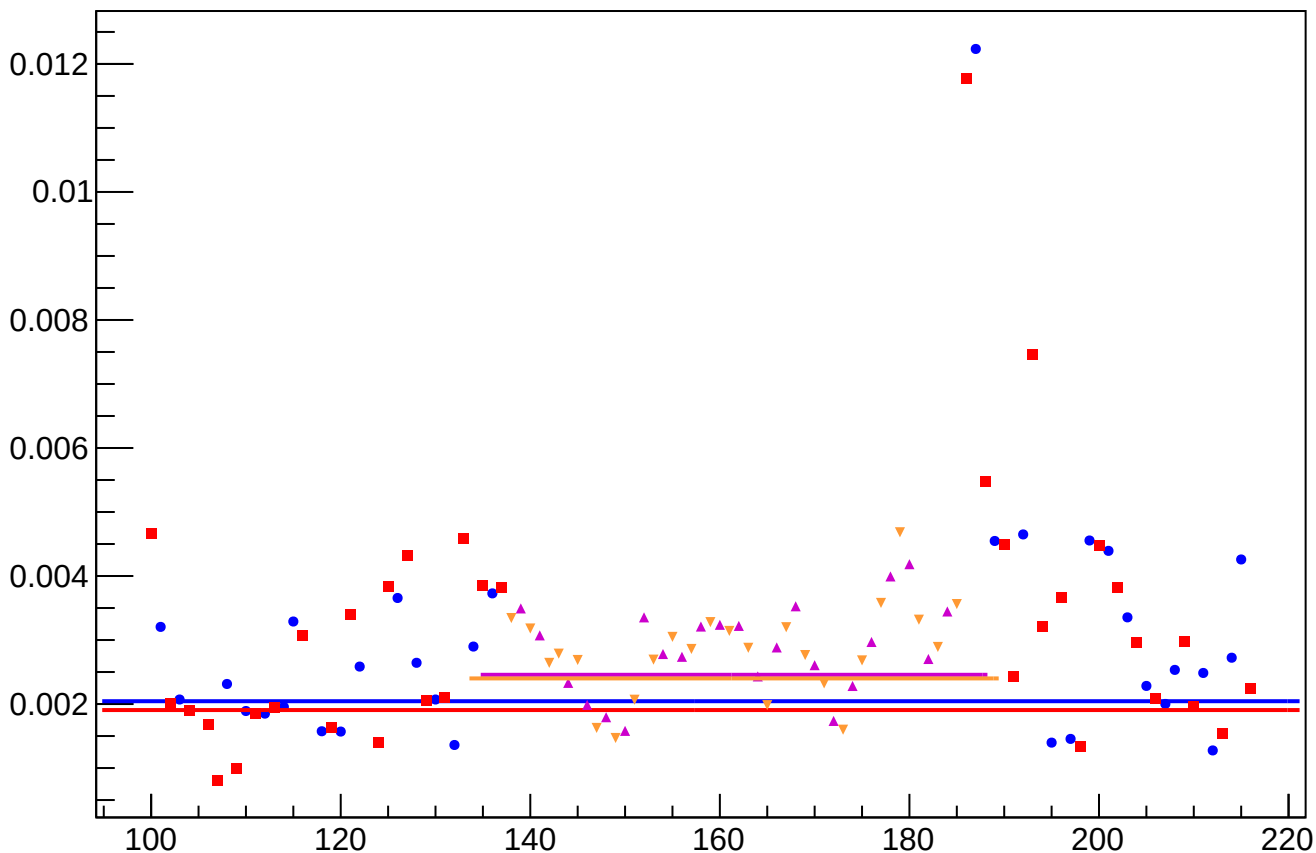
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 86.9/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 213.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 126.6/57

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 5363827.4/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3123870.1/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7910087.5/34

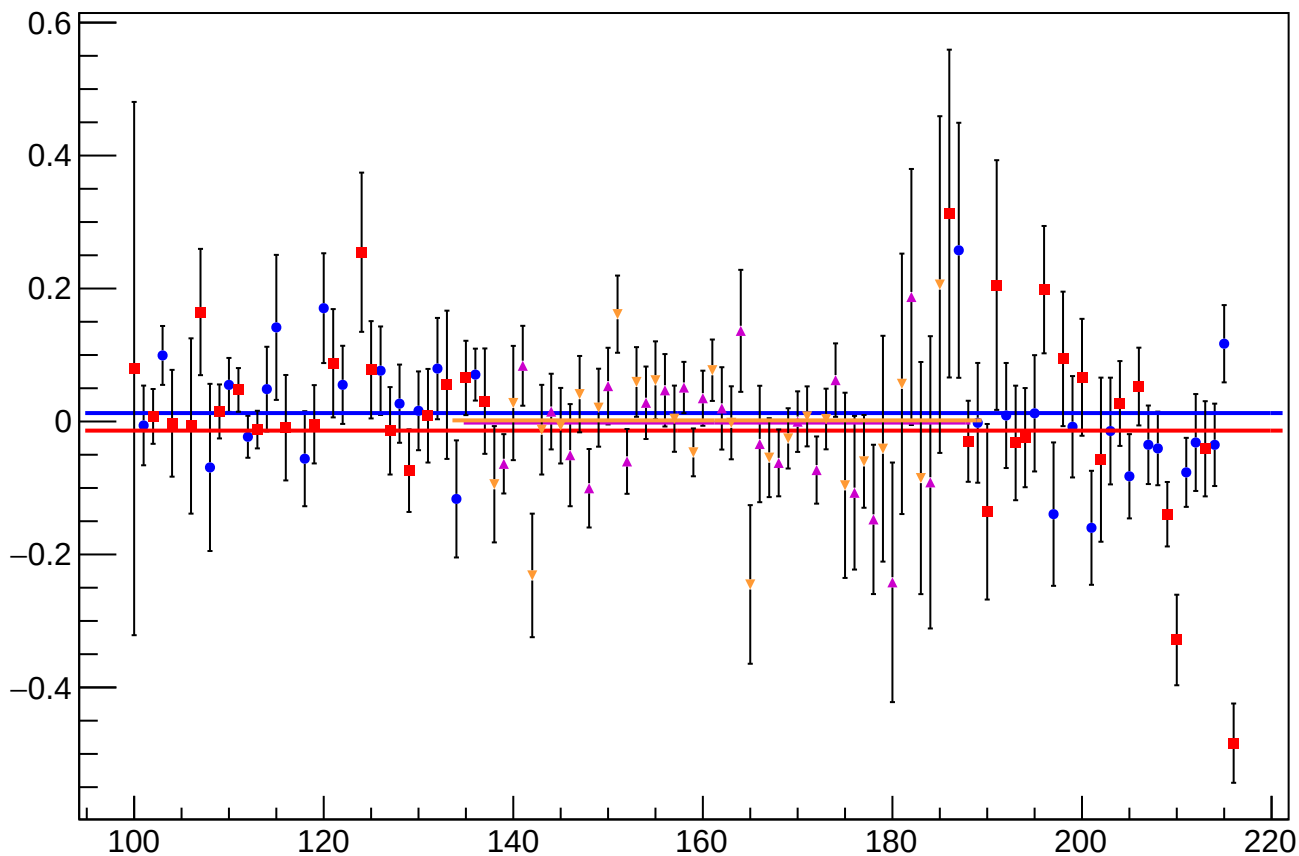
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2629718.7/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8912405.6/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 20490466.8/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 11539083.5/57

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 38.5/30

Left Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $-0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 123.0/34

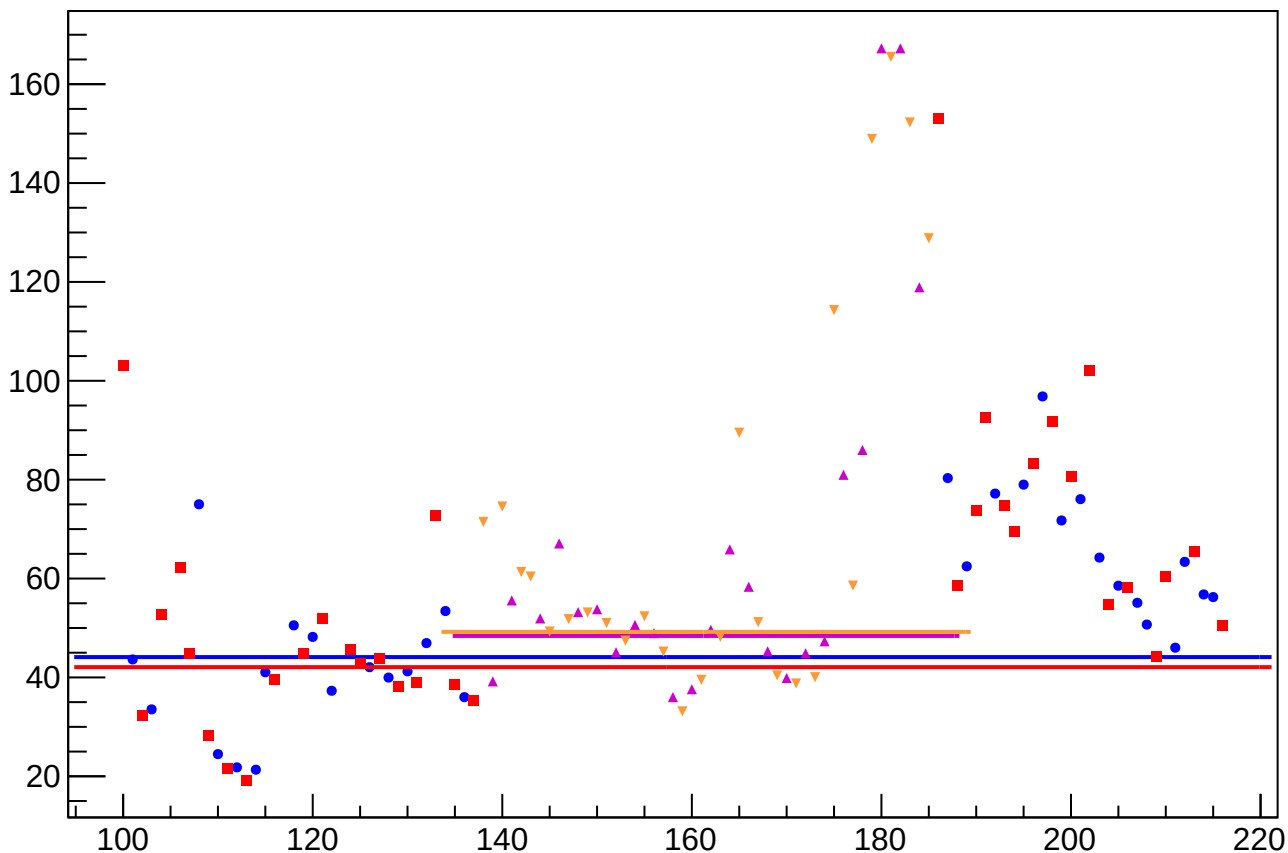
Left In:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 69.3/55

All:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 220.9/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 149.6/57

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 44.113+/-0.008  $\chi^2/\text{NDF}$ : 4616725.6/30

Left Out: 49.217+/-0.009  $\chi^2/\text{NDF}$ : 4171640.8/24

Right Out: 42.082+/-0.008  $\chi^2/\text{NDF}$ : 6508932.7/34

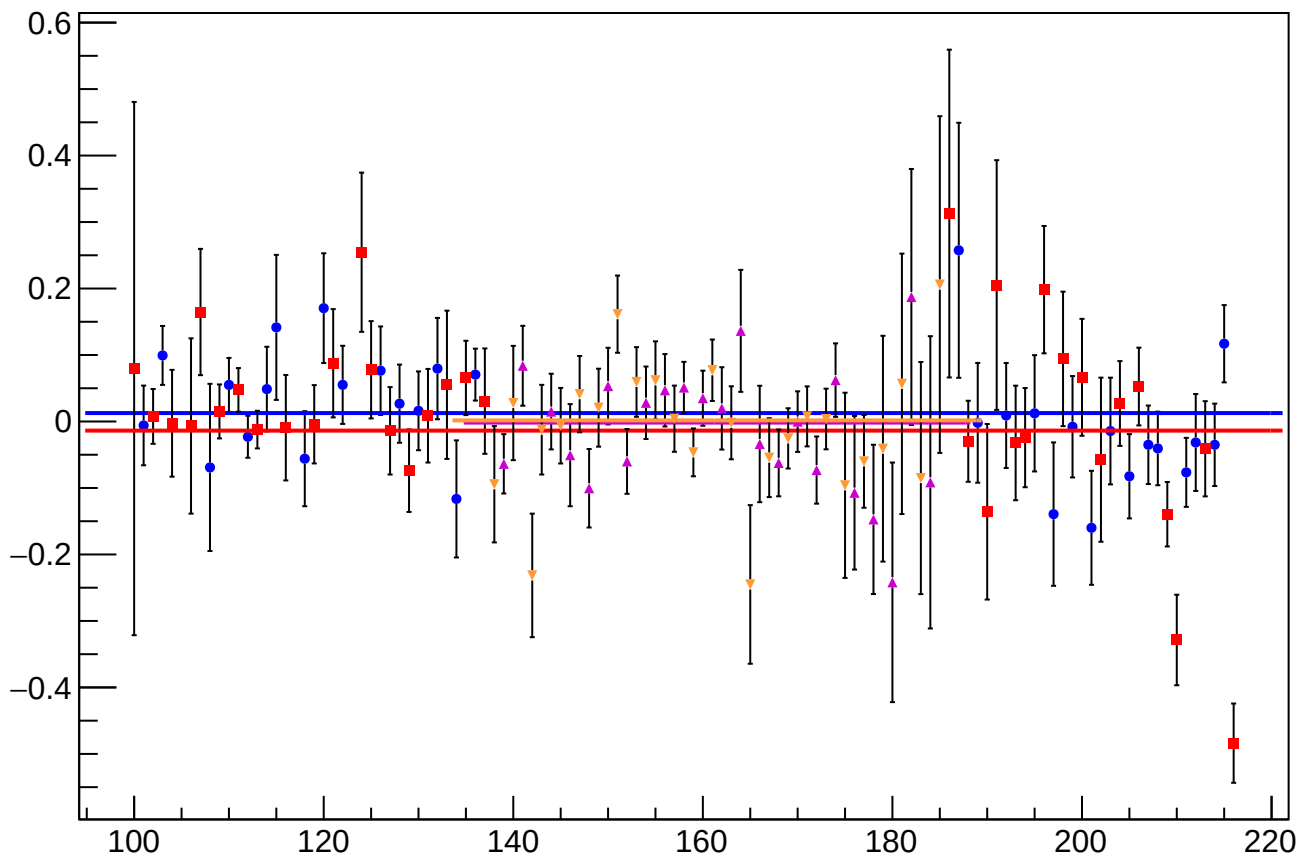
Left In: 48.393+/-0.009  $\chi^2/\text{NDF}$ : 3033208.4/22

+ sign 46.399+/-0.006  $\chi^2/\text{NDF}$ : 8978599.8/55

All: 45.599+/-0.004  $\chi^2/\text{NDF}$ : 18853215.7/113

- sign 44.816+/-0.006  $\chi^2/\text{NDF}$ : 9837219.4/57

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.013 \pm 0.011$   $\chi^2/\text{NDF}$ : 38.5/30

Left Out:  $0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 30.4/24

Right Out:  $-0.014 \pm 0.011$   $\chi^2/\text{NDF}$ : 123.0/34

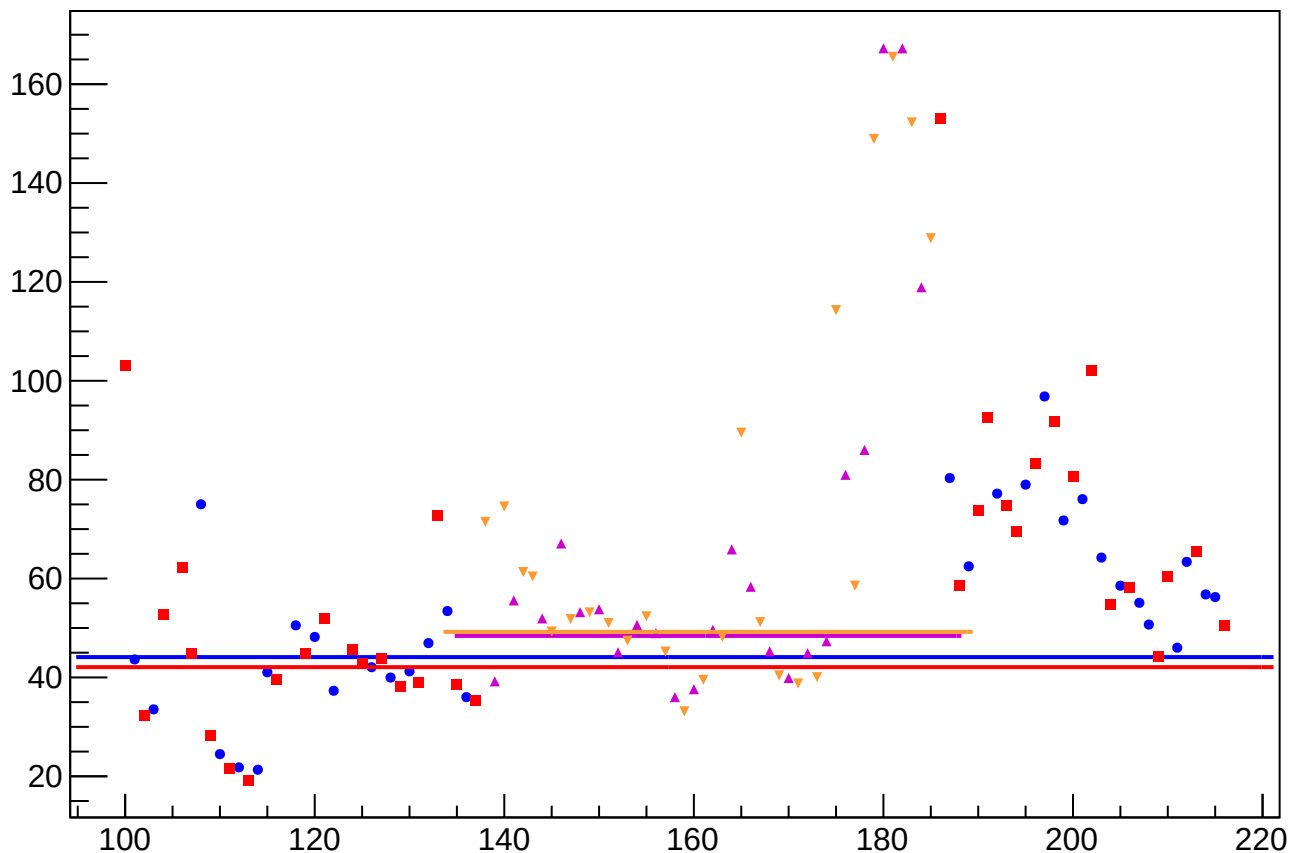
Left In:  $-0.002 \pm 0.012$   $\chi^2/\text{NDF}$ : 26.1/22

+ sign  $0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 69.3/55

All:  $-0.000 \pm 0.006$   $\chi^2/\text{NDF}$ : 220.9/113

- sign  $-0.008 \pm 0.008$   $\chi^2/\text{NDF}$ : 149.6/57

asym\_sam\_3748\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 44.113 $\pm$ 0.008  $\chi^2$ /NDF: 4616725.6/30

Left Out: 49.217 $\pm$ 0.009  $\chi^2$ /NDF: 4171640.8/24

Right Out: 42.082 $\pm$ 0.008  $\chi^2$ /NDF: 6508932.7/34

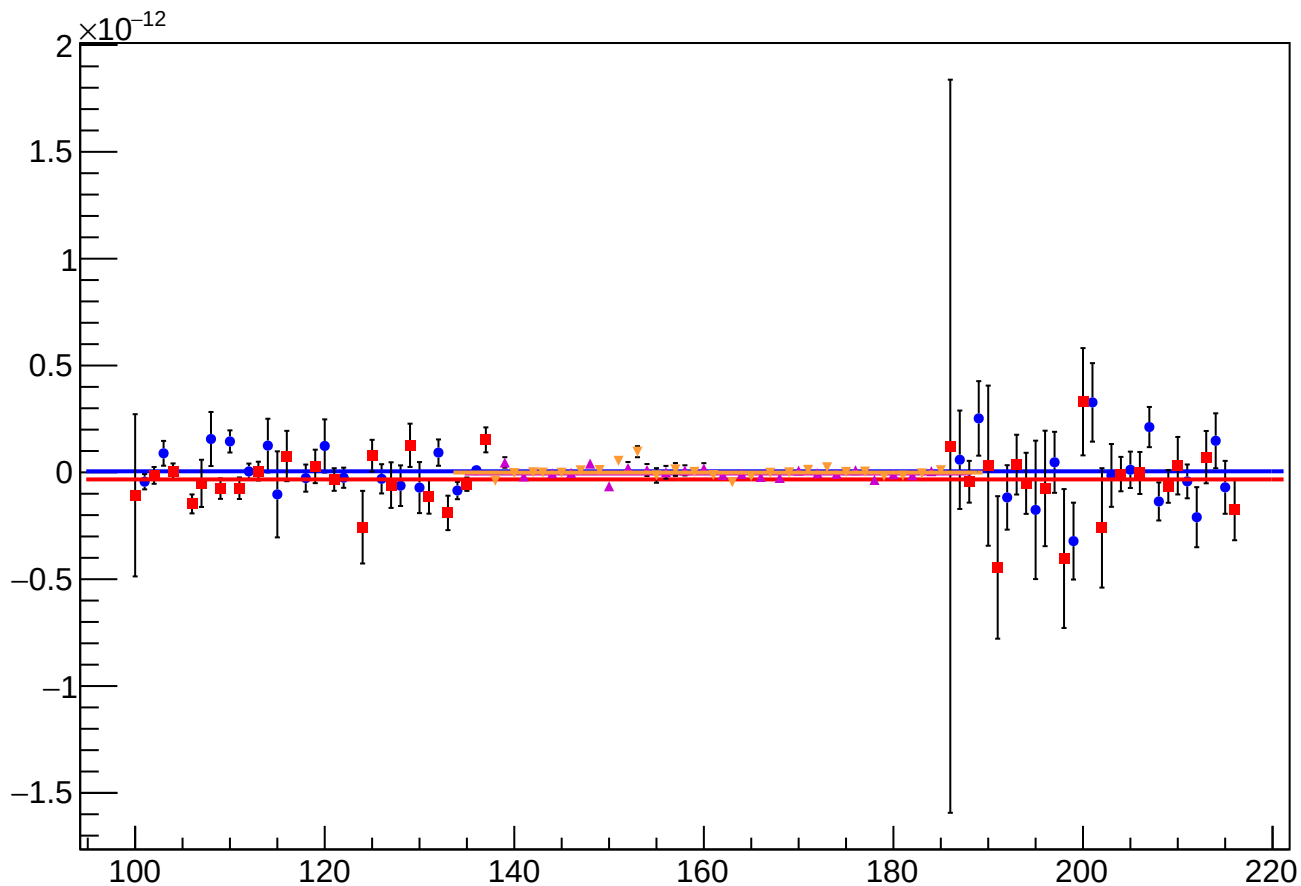
Left In: 48.393 $\pm$ 0.009  $\chi^2$ /NDF: 3033208.4/22

+ sign 46.399 $\pm$ 0.006  $\chi^2$ /NDF: 8978599.8/55

All: 45.599 $\pm$ 0.004  $\chi^2$ /NDF: 18853215.7/113

- sign 44.816 $\pm$ 0.006  $\chi^2$ /NDF: 9837219.4/57

asym\_sam\_3748\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 37.0/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 41.7/34

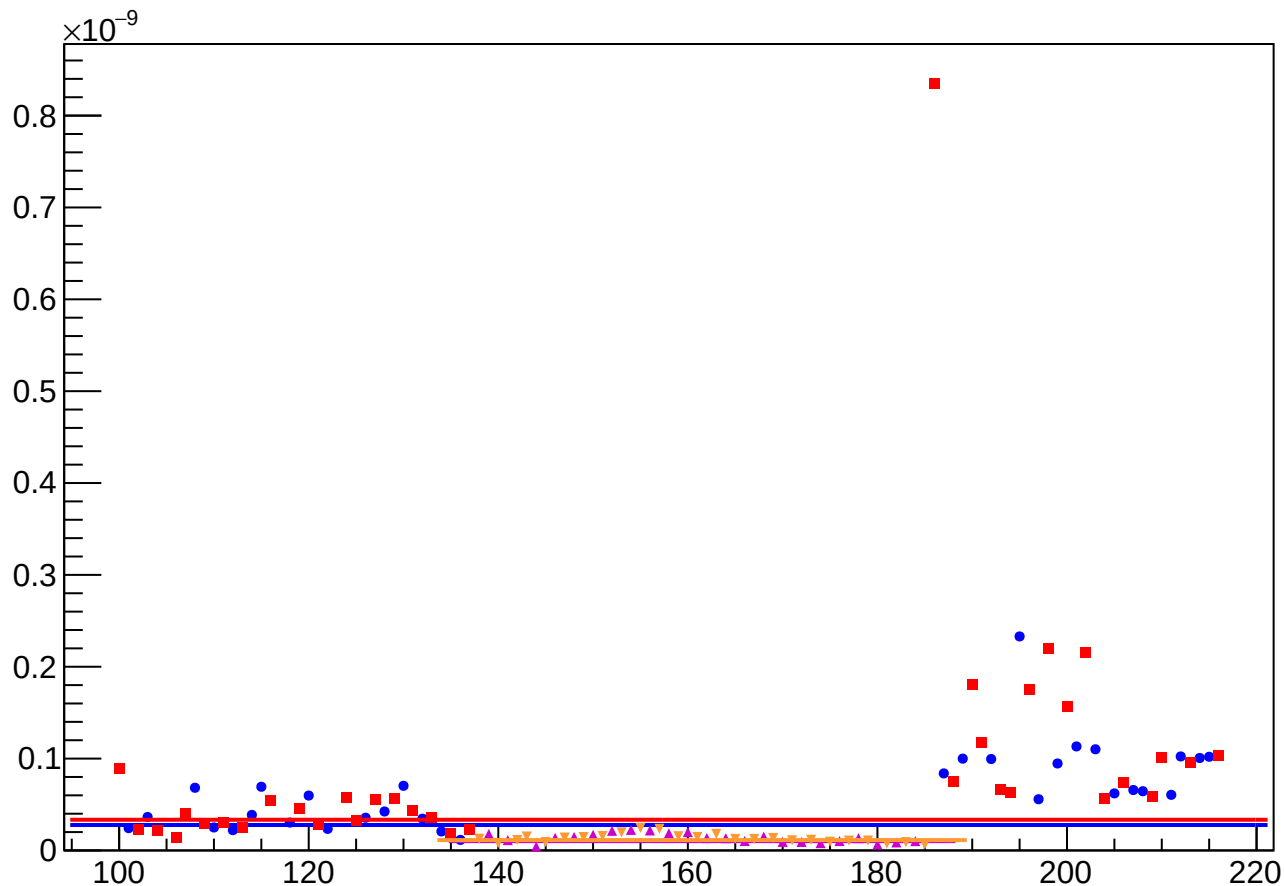
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 28.4/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 82.0/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 159.4/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 75.0/57

asym\_sam\_3748\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9141843.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2206266.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8008848.5/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4024430.8/22

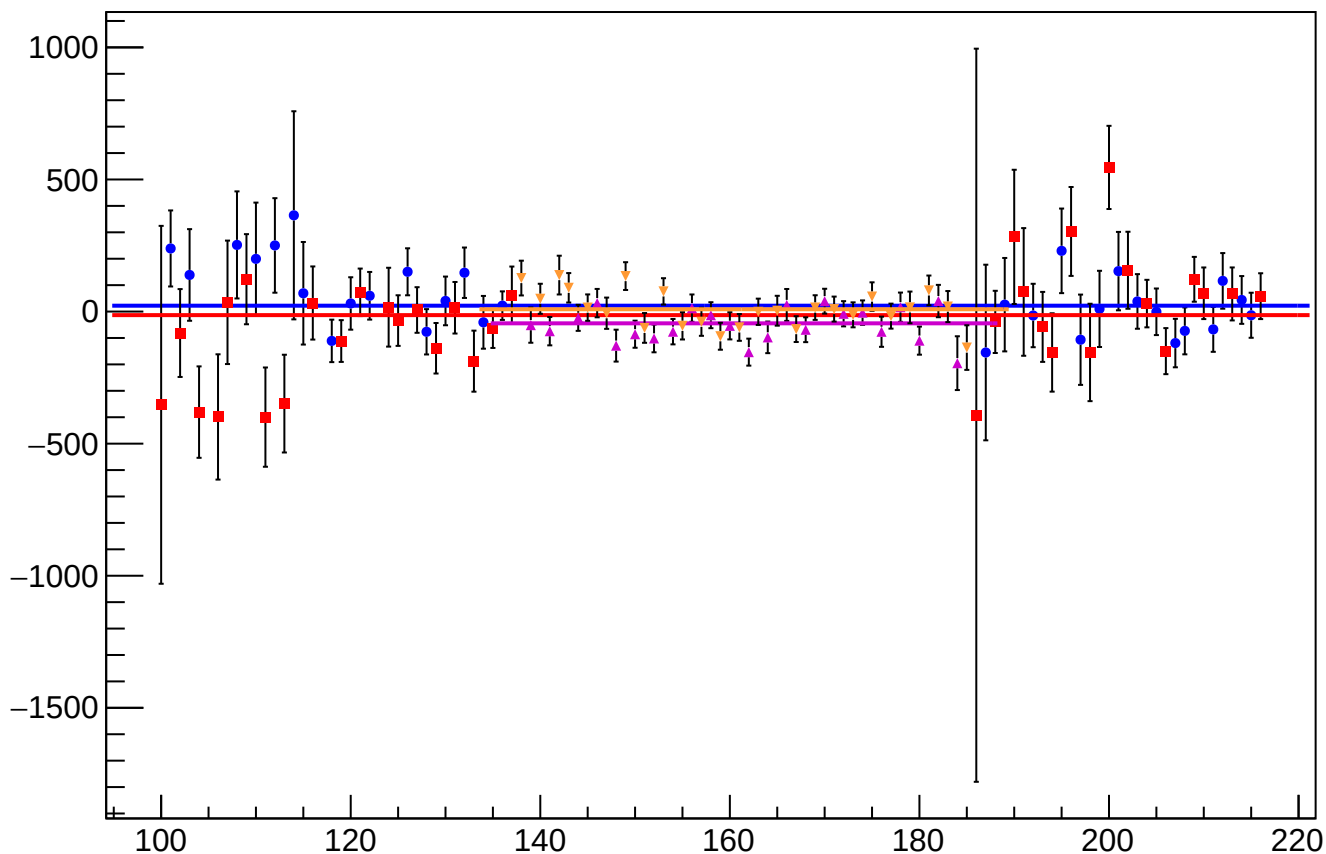
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 15620790.8/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 34623907.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18887925.8/57



# reg\_asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $22.219 \pm 19.111$   $\chi^2/\text{NDF}$ : 24.8/30

Left Out:  $8.756 \pm 10.770$   $\chi^2/\text{NDF}$ : 34.6/24

Right Out:  $-13.473 \pm 20.106$   $\chi^2/\text{NDF}$ : 51.5/34

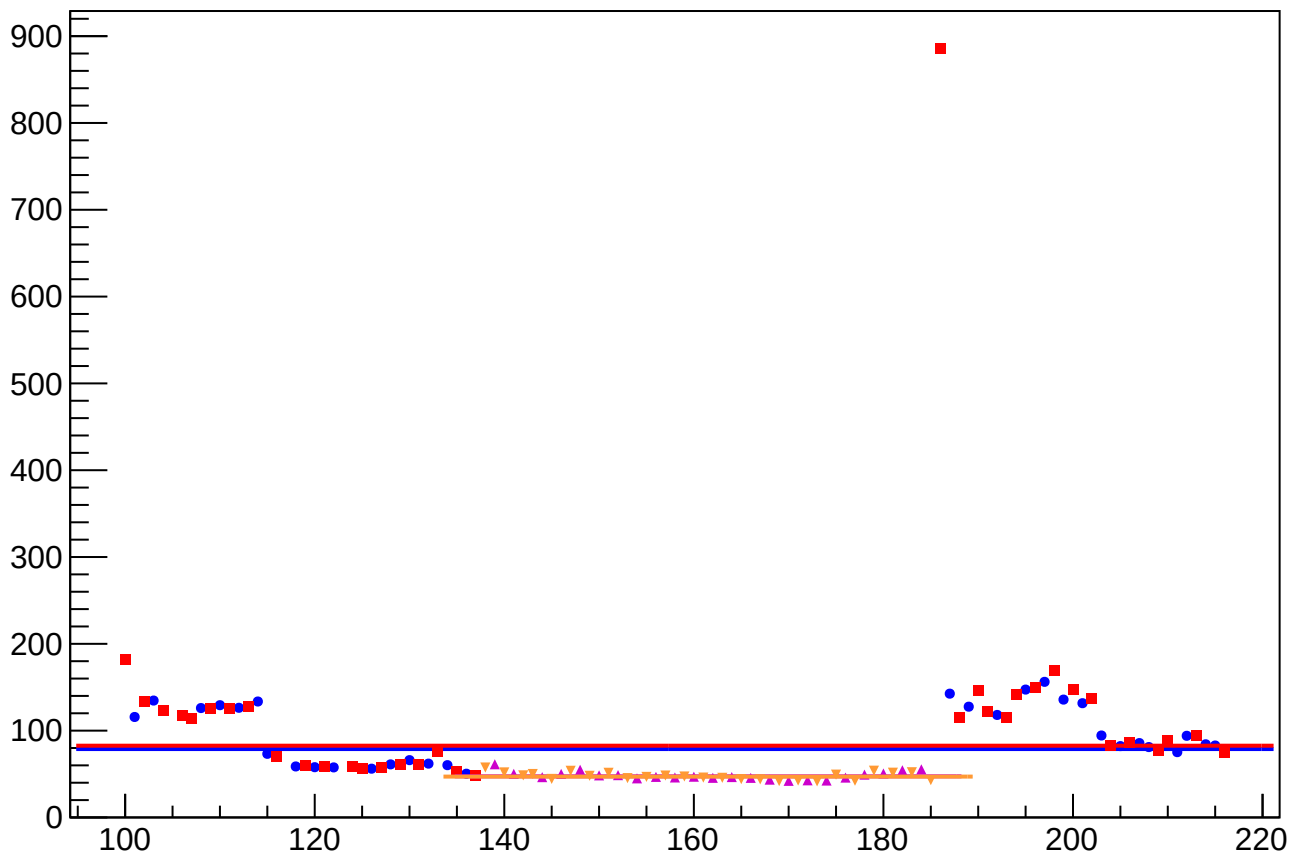
Left In:  $-44.541 \pm 11.149$   $\chi^2/\text{NDF}$ : 27.0/22

+ sign  $12.001 \pm 9.382$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-11.671 \pm 6.761$   $\chi^2/\text{NDF}$ : 153.4/113

- sign  $-37.235 \pm 9.750$   $\chi^2/\text{NDF}$ : 80.3/57

# reg\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 78.799 $\pm$ 0.014  $\chi^2$ /NDF: 3902661.6/30

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.663 $\pm$ 0.014  $\chi^2$ /NDF: 5046964.7/34

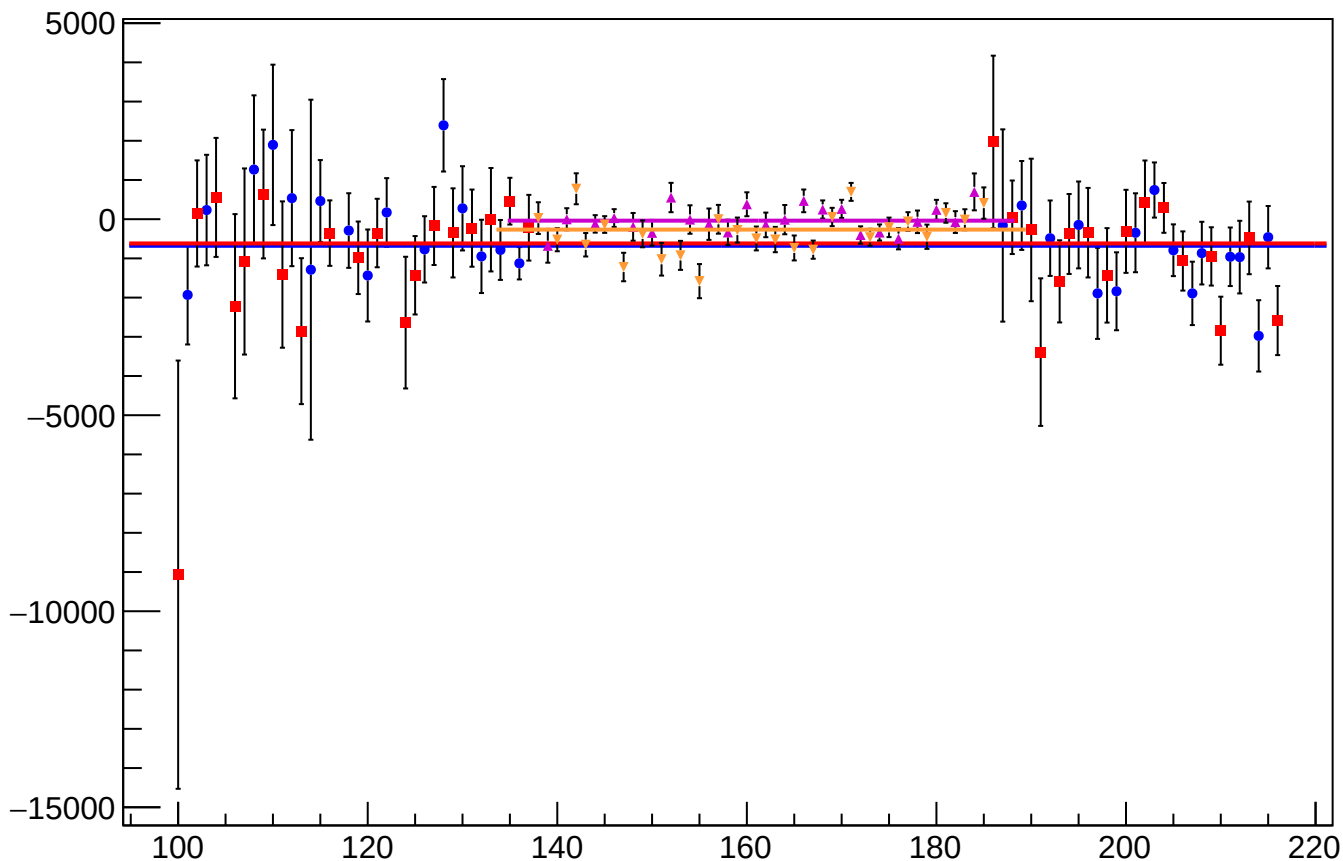
Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

+ sign 54.713 $\pm$ 0.007  $\chi^2$ /NDF: 8376088.1/55

All: 55.178 $\pm$ 0.005  $\chi^2$ /NDF: 18414005.7/113

- sign 55.680 $\pm$ 0.007  $\chi^2$ /NDF: 10027707.9/57

asym\_sam\_1526\_avg\_reg\_correction\_mean vs Slug



Right In:  $-677.995 \pm 165.414$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $-265.684 \pm 58.031$   $\chi^2/\text{NDF}$ : 69.8/24

Right Out:  $-618.607 \pm 176.603$   $\chi^2/\text{NDF}$ : 33.4/34

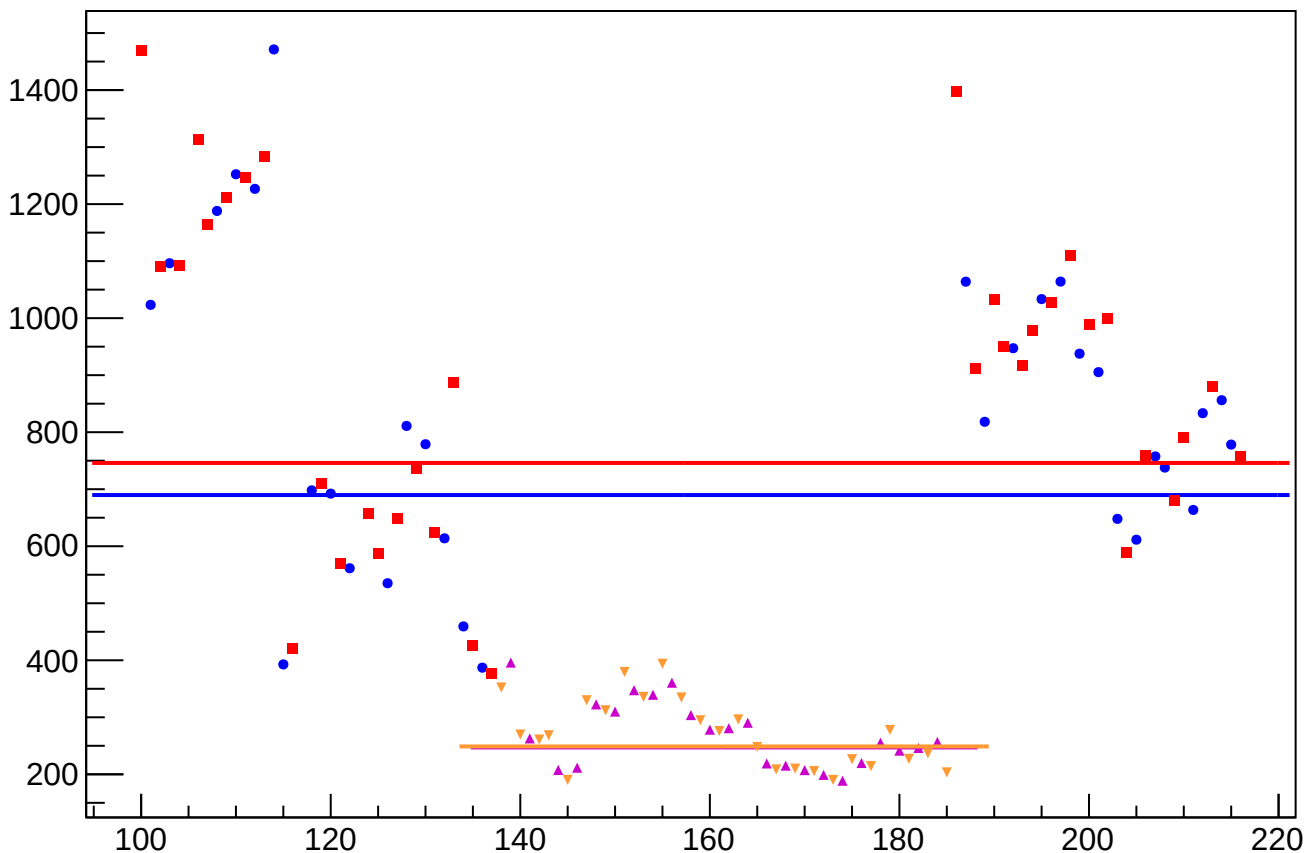
Left In:  $-37.530 \pm 59.159$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-310.869 \pm 54.759$   $\chi^2/\text{NDF}$ : 108.3/55

All:  $-206.101 \pm 39.185$   $\chi^2/\text{NDF}$ : 185.5/113

- sign  $-96.157 \pm 56.096$   $\chi^2/\text{NDF}$ : 69.7/57

asym\_sam\_1526\_avg\_reg\_correction\_rms vs Slug



Right In:  $689.788 \pm 0.117$   $\chi^2/\text{NDF}$ : 3462117.1/30

Left Out:  $248.891 \pm 0.041$   $\chi^2/\text{NDF}$ : 1663709.5/24

Right Out:  $746.076 \pm 0.125$   $\chi^2/\text{NDF}$ : 3576763.0/34

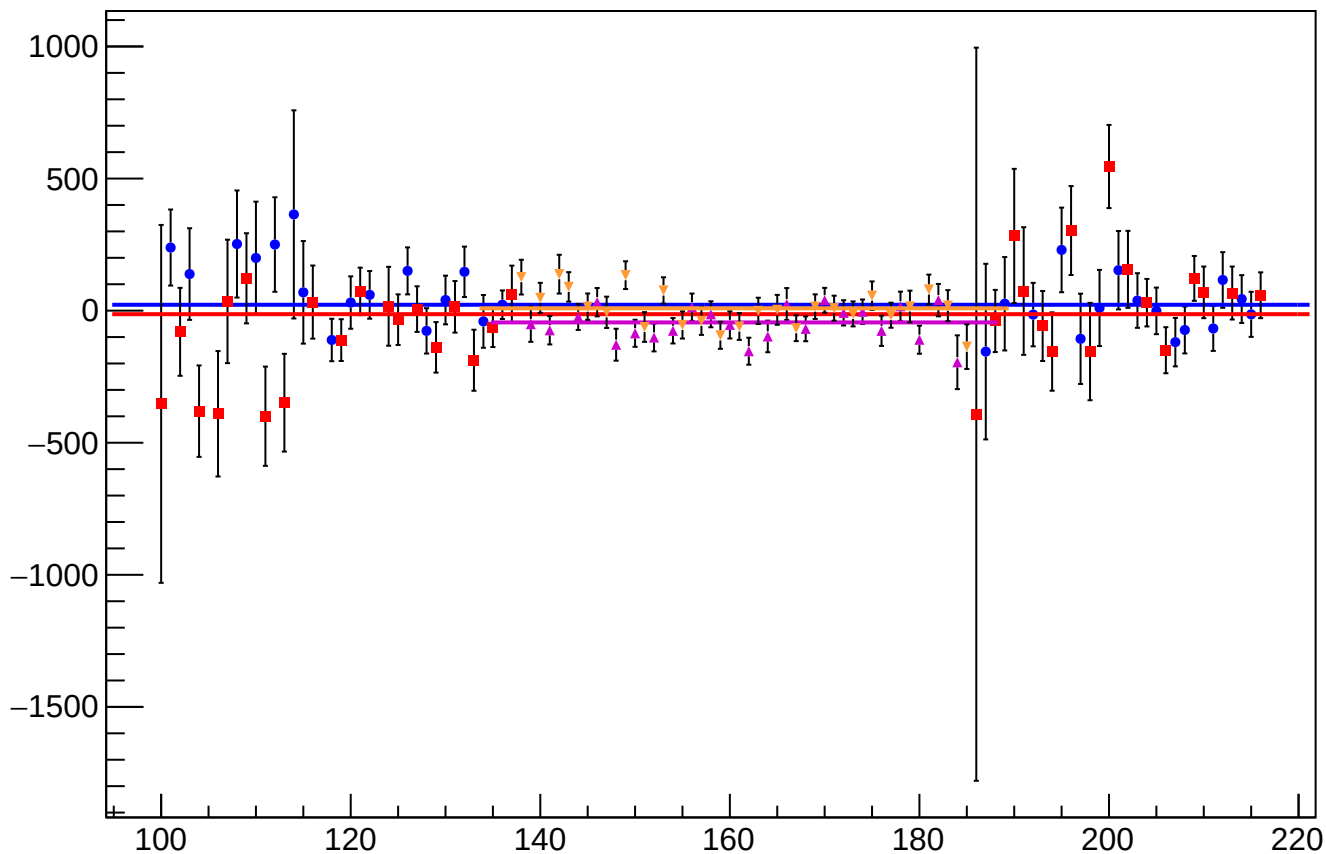
Left In:  $247.109 \pm 0.042$   $\chi^2/\text{NDF}$ : 1484450.6/22

+ sign  $297.209 \pm 0.039$   $\chi^2/\text{NDF}$ : 17777597.3/55

All:  $297.327 \pm 0.028$   $\chi^2/\text{NDF}$ : 37193354.0/11

- sign  $297.452 \pm 0.040$   $\chi^2/\text{NDF}$ : 19415737.5/57

# cor\_asym\_sam\_1526\_avg\_mean vs Slug



Right In: 22.213 $\pm$ 19.111  $\chi^2$ /NDF: 24.8/30

Left Out: 8.758 $\pm$ 10.770  $\chi^2$ /NDF:34.6/24

Right Out: -13.389 $\pm$ 20.106  $\chi^2$ /NDF: 51.4/34

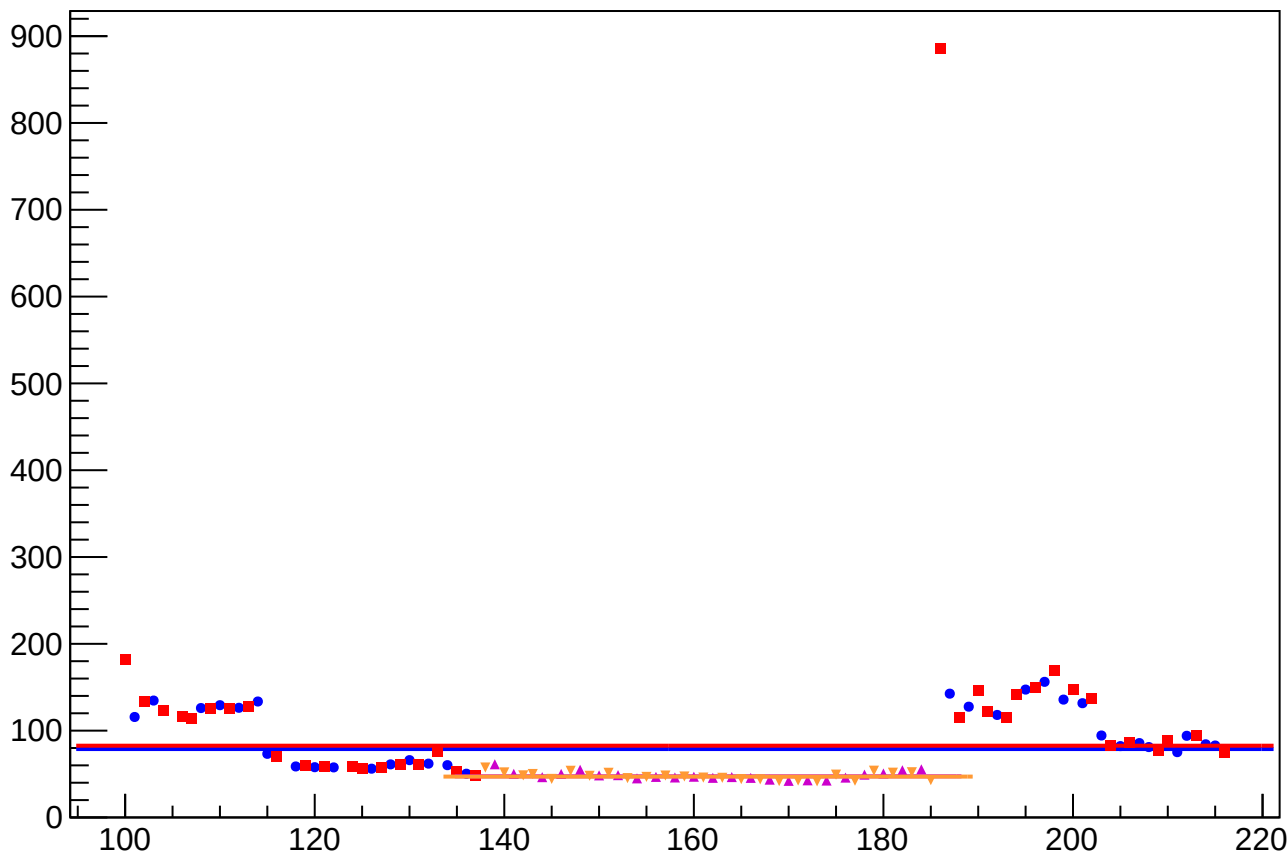
Left In: -44.540 $\pm$ 11.149  $\chi^2$ /NDF:27.0/22

+ sign 12.001 $\pm$ 9.382  $\chi^2$ /NDF: 59.8/55

All: -11.661 $\pm$ 6.761  $\chi^2$ /NDF: 153.2/113

- sign -37.215 $\pm$ 9.750  $\chi^2$ /NDF: 80.2/57

# cor\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 78.799 $\pm$ 0.014  $\chi^2$ /NDF: 3902663.9/30

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.655 $\pm$ 0.014  $\chi^2$ /NDF: 5044708.3/34

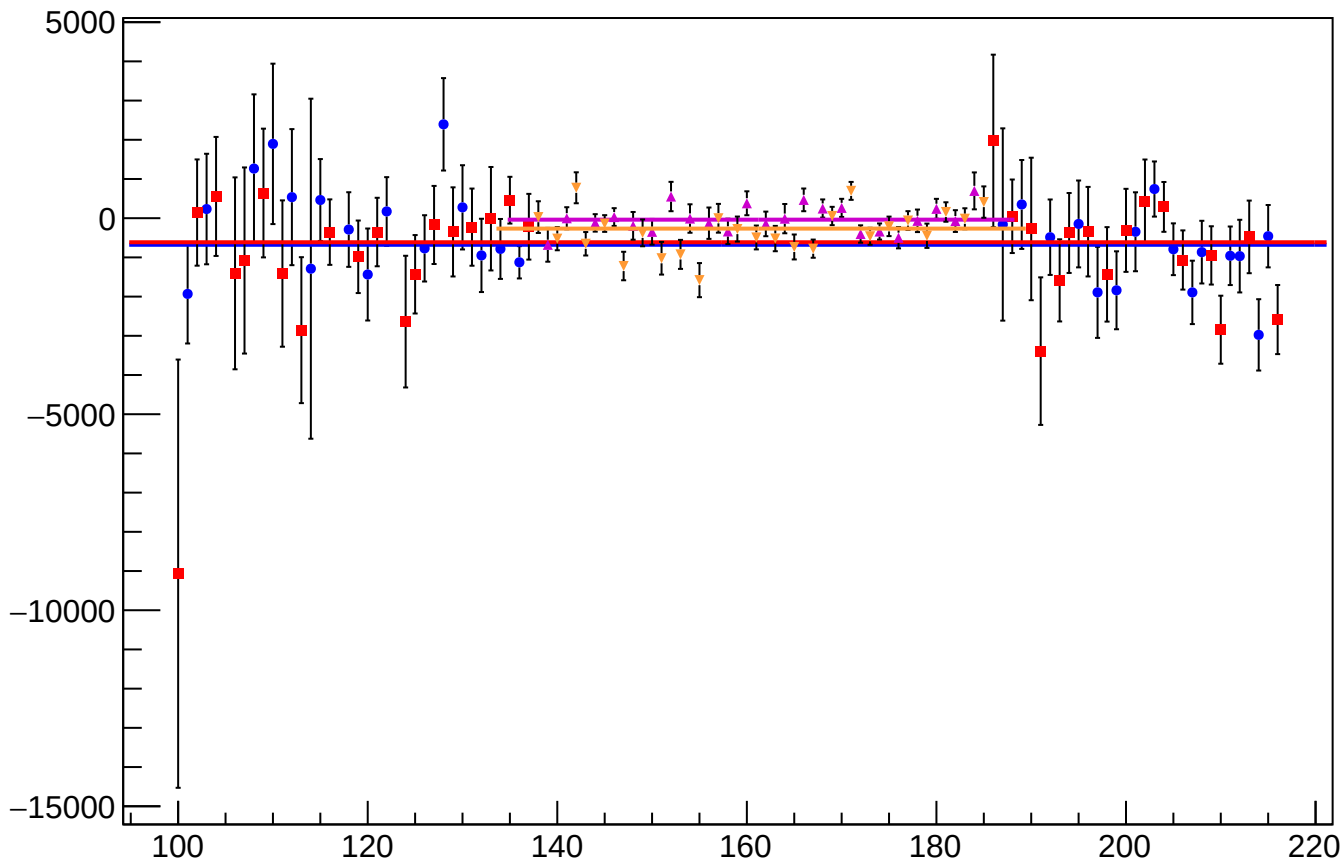
Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

+ sign 54.713 $\pm$ 0.007  $\chi^2$ /NDF: 8376090.2/55

All: 55.177 $\pm$ 0.005  $\chi^2$ /NDF: 18409562.4/113

- sign 55.678 $\pm$ 0.007  $\chi^2$ /NDF: 10023304.6/57

asym\_sam\_1526\_avg\_cor\_correction\_mean vs Slug



Right In:  $-677.989 \pm 165.414$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $-265.680 \pm 58.031$   $\chi^2/\text{NDF}$ : 69.8/24

Right Out:  $-613.717 \pm 176.644$   $\chi^2/\text{NDF}$ : 33.0/34

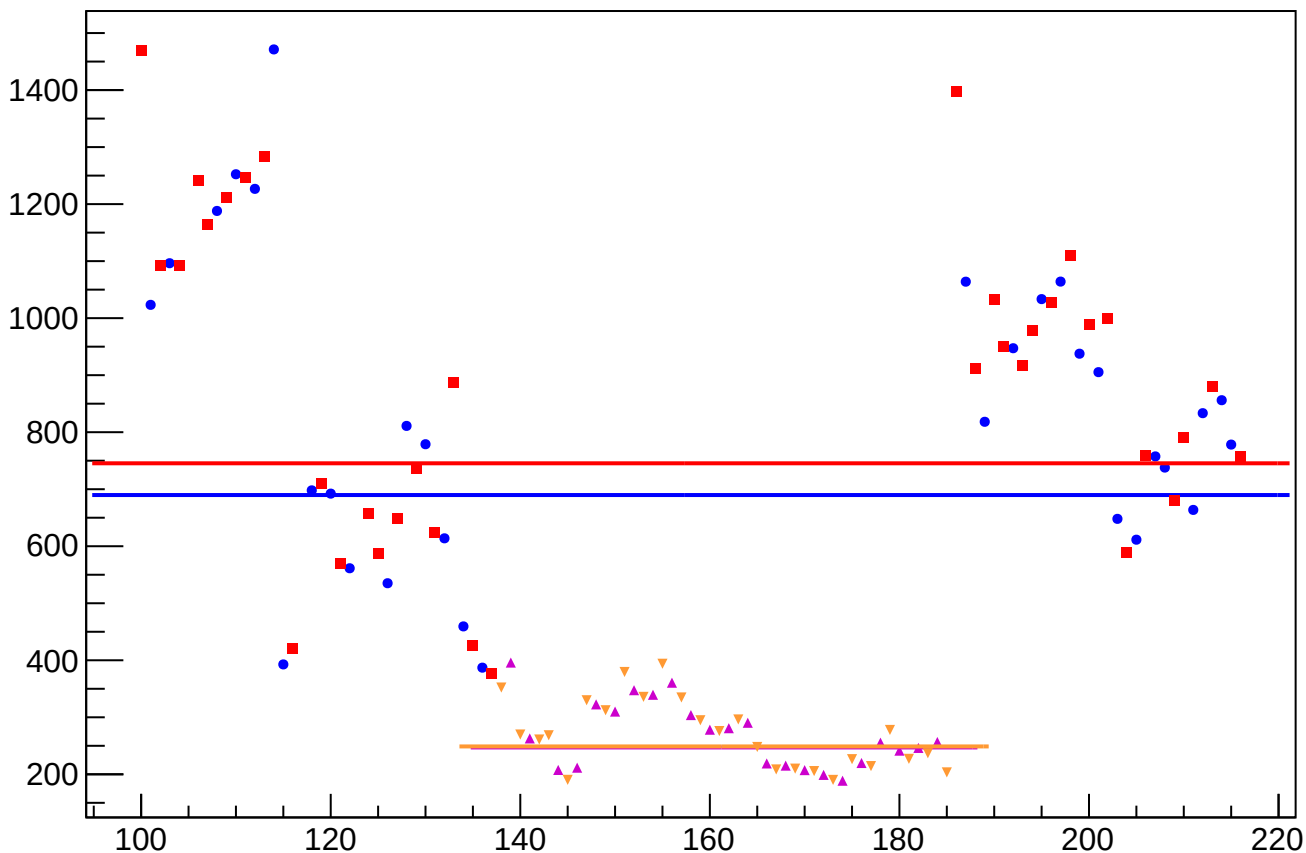
Left In:  $-37.527 \pm 59.159$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-310.865 \pm 54.759$   $\chi^2/\text{NDF}$ : 108.3/55

All:  $-205.848 \pm 39.185$   $\chi^2/\text{NDF}$ : 185.0/113

- sign  $-95.636 \pm 56.097$   $\chi^2/\text{NDF}$ : 69.2/57

asym\_sam\_1526\_avg\_cor\_correction\_rms vs Slug



Right In:  $689.788 \pm 0.117$   $\chi^2/\text{NDF}: 3462157.2/30$

Left Out:  $248.891 \pm 0.041$   $\chi^2/\text{NDF}: 1663717.9/24$

Right Out:  $745.454 \pm 0.125$   $\chi^2/\text{NDF}: 3542470.3/34$

Left In:  $247.109 \pm 0.042$   $\chi^2/\text{NDF}: 1484445.1/22$

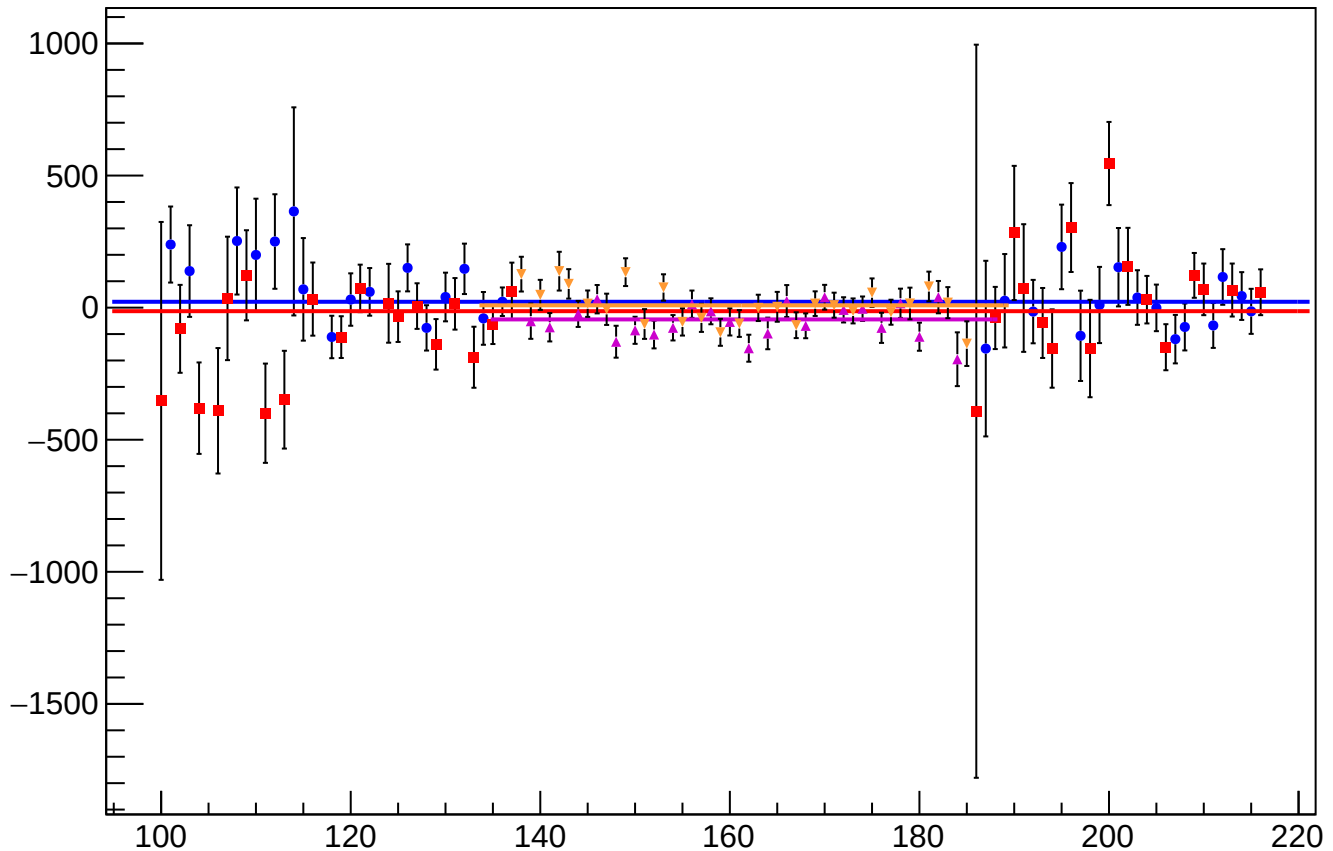
+ sign  $297.208 \pm 0.039$   $\chi^2/\text{NDF}: 17777642.3/55$

All:  $297.286 \pm 0.028$   $\chi^2/\text{NDF}: 37117303.7/1$

- sign  $297.368 \pm 0.040$   $\chi^2/\text{NDF}: 19339653.2/57$



# eigen\_cor\_asym\_sam\_1526\_avg\_mean vs Slug



Right In: 22.213 $\pm$ 19.111  $\chi^2$ /NDF: 24.8/30

Left Out: 8.758 $\pm$ 10.770  $\chi^2$ /NDF: 34.6/24

Right Out: -13.389 $\pm$ 20.106  $\chi^2$ /NDF: 51.4/34

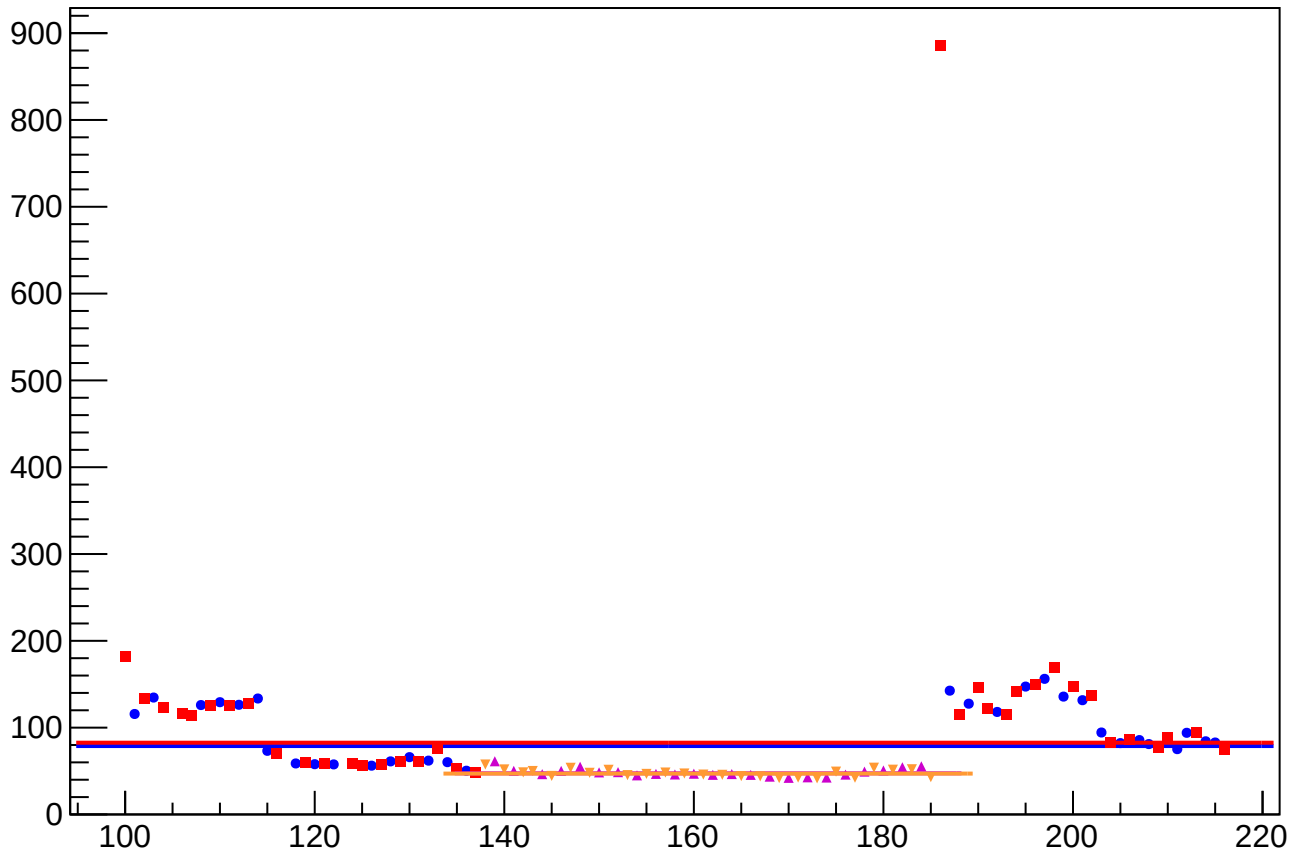
Left In: -44.540 $\pm$ 11.149  $\chi^2$ /NDF: 27.0/22

+ sign 12.001 $\pm$ 9.382  $\chi^2$ /NDF: 59.8/55

All: -11.661 $\pm$ 6.761  $\chi^2$ /NDF: 153.2/113

- sign -37.215 $\pm$ 9.750  $\chi^2$ /NDF: 80.2/57

eigen\_cor\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 78.799 $\pm$ 0.014  $\chi^2$ /NDF: 3902663.9/30

Left Out: 47.064 $\pm$ 0.008  $\chi^2$ /NDF: 287590.7/24

Right Out: 82.655 $\pm$ 0.014  $\chi^2$ /NDF: 5044708.3/34

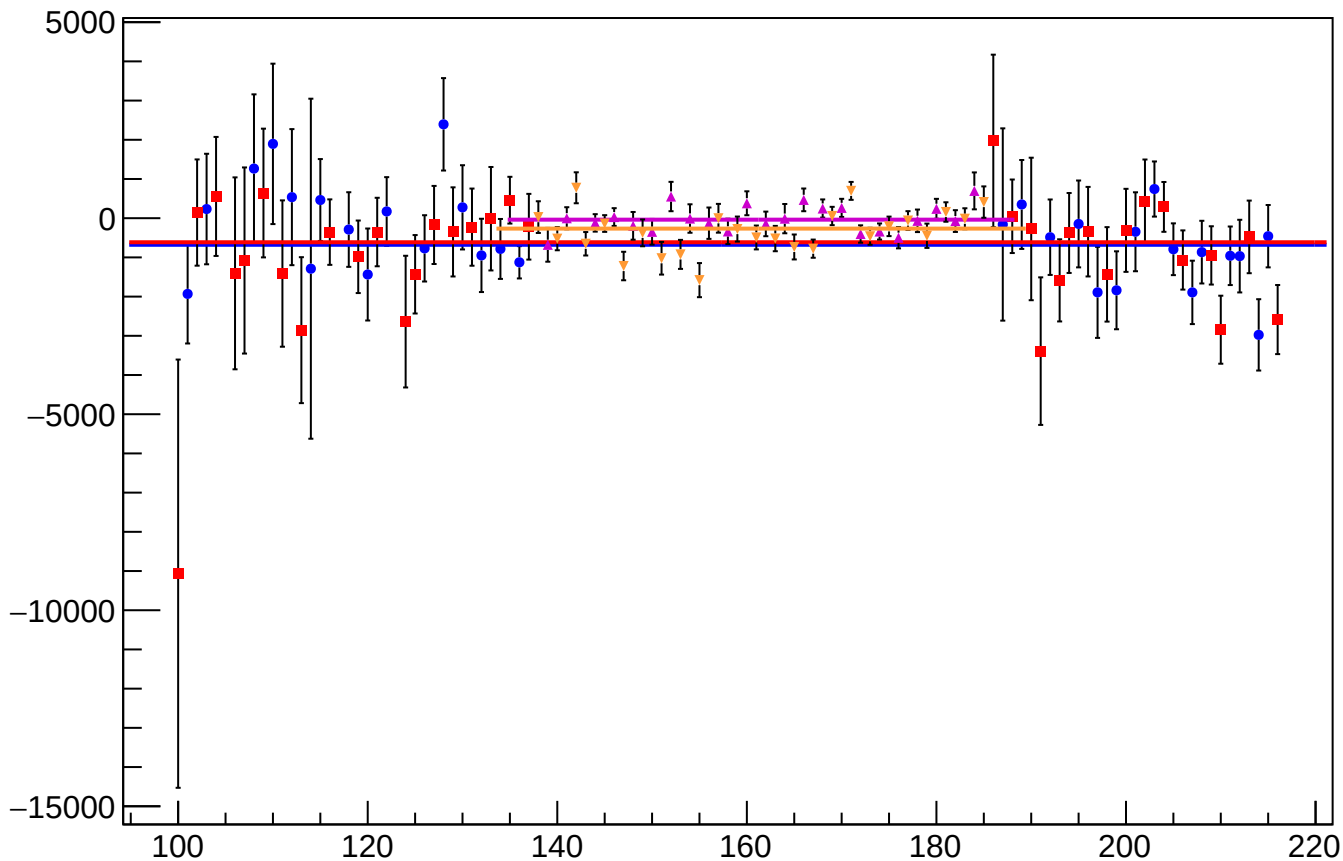
Left In: 47.384 $\pm$ 0.008  $\chi^2$ /NDF: 271036.5/22

+ sign 54.713 $\pm$ 0.007  $\chi^2$ /NDF: 8376090.2/55

All: 55.177 $\pm$ 0.005  $\chi^2$ /NDF: 18409562.4/113

- sign 55.678 $\pm$ 0.007  $\chi^2$ /NDF: 10023304.6/57

asym\_sam\_1526\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-677.989 \pm 165.414$   $\chi^2/\text{NDF}$ : 33.0/30

Left Out:  $-265.680 \pm 58.031$   $\chi^2/\text{NDF}$ : 69.8/24

Right Out:  $-613.717 \pm 176.644$   $\chi^2/\text{NDF}$ : 33.0/34

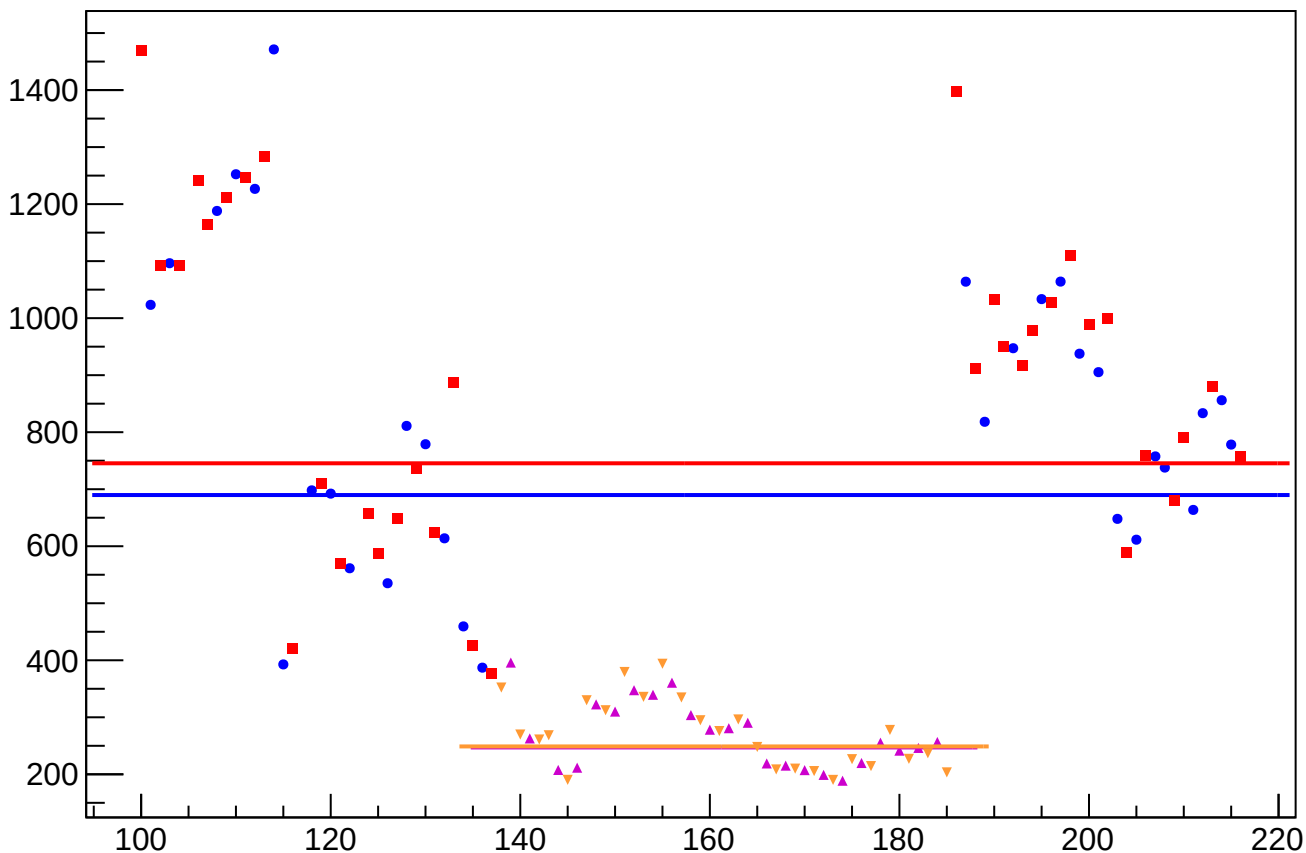
Left In:  $-37.527 \pm 59.159$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-310.865 \pm 54.759$   $\chi^2/\text{NDF}$ : 108.3/55

All:  $-205.848 \pm 39.185$   $\chi^2/\text{NDF}$ : 185.0/113

- sign  $-95.636 \pm 56.097$   $\chi^2/\text{NDF}$ : 69.2/57

asym\_sam\_1526\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 689.788+/-0.117  $\chi^2/\text{NDF}$ : 3462157.2/30

Left Out: 248.891+/-0.041  $\chi^2/\text{NDF}$ :1663717.9/24

Right Out: 745.454+/-0.125  $\chi^2/\text{NDF}$ : 3542470.3/34

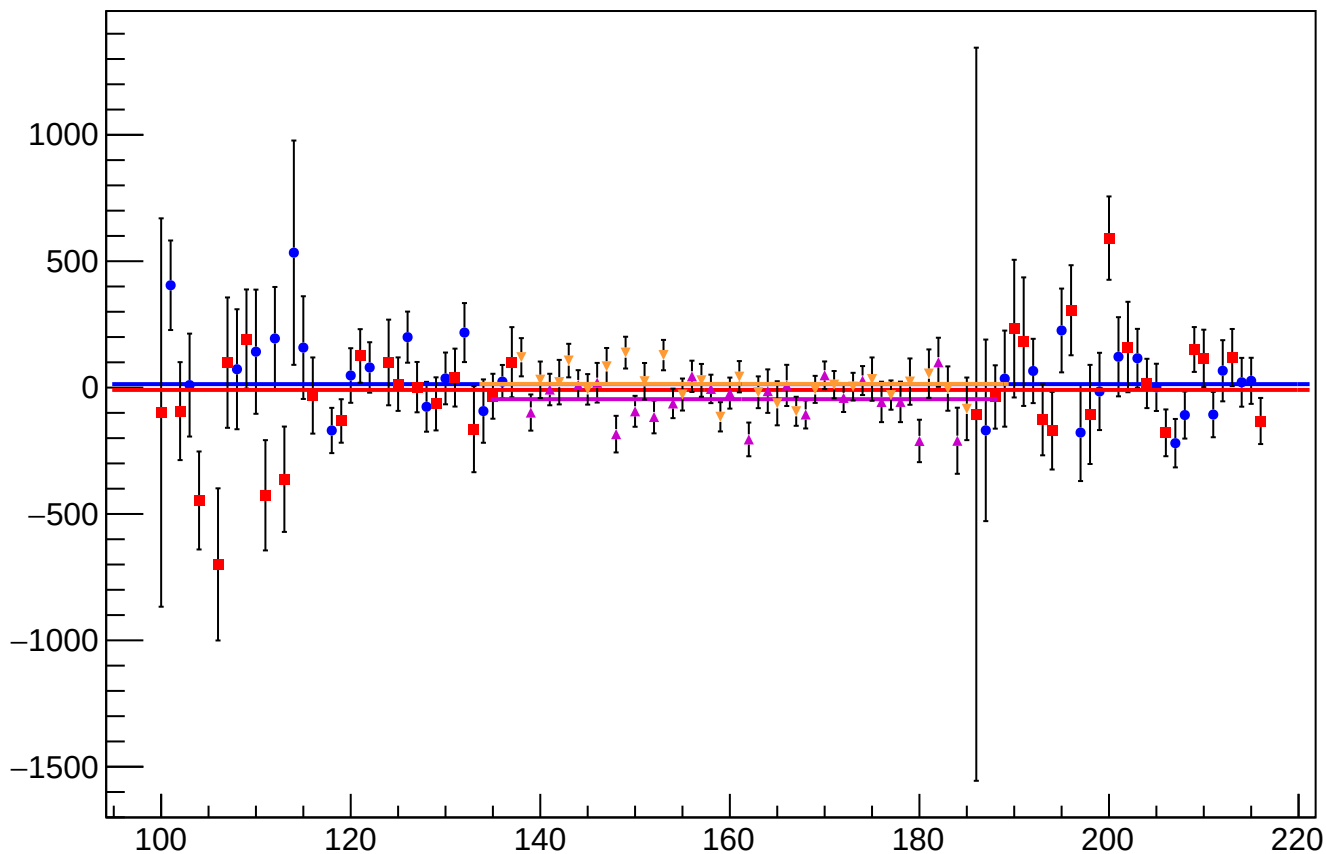
Left In: 247.109+/-0.042  $\chi^2/\text{NDF}$ :1484445.1/22

+ sign 297.208+/-0.039  $\chi^2/\text{NDF}$ : 17777642.3/55

All: 297.286+/-0.028  $\chi^2/\text{NDF}$ : 37117303.7/1

- sign 297.368+/-0.040  $\chi^2/\text{NDF}$ : 19339653.2/57

dit\_asym\_sam\_1526\_avg\_mean vs Slug



Right In: 13.683 $\pm$ 21.344  $\chi^2$ /NDF: 34.7/30

Left Out: 14.498 $\pm$ 13.454  $\chi^2$ /NDF: 24.5/24

Right Out: -9.160 $\pm$ 22.589  $\chi^2$ /NDF: 56.2/34

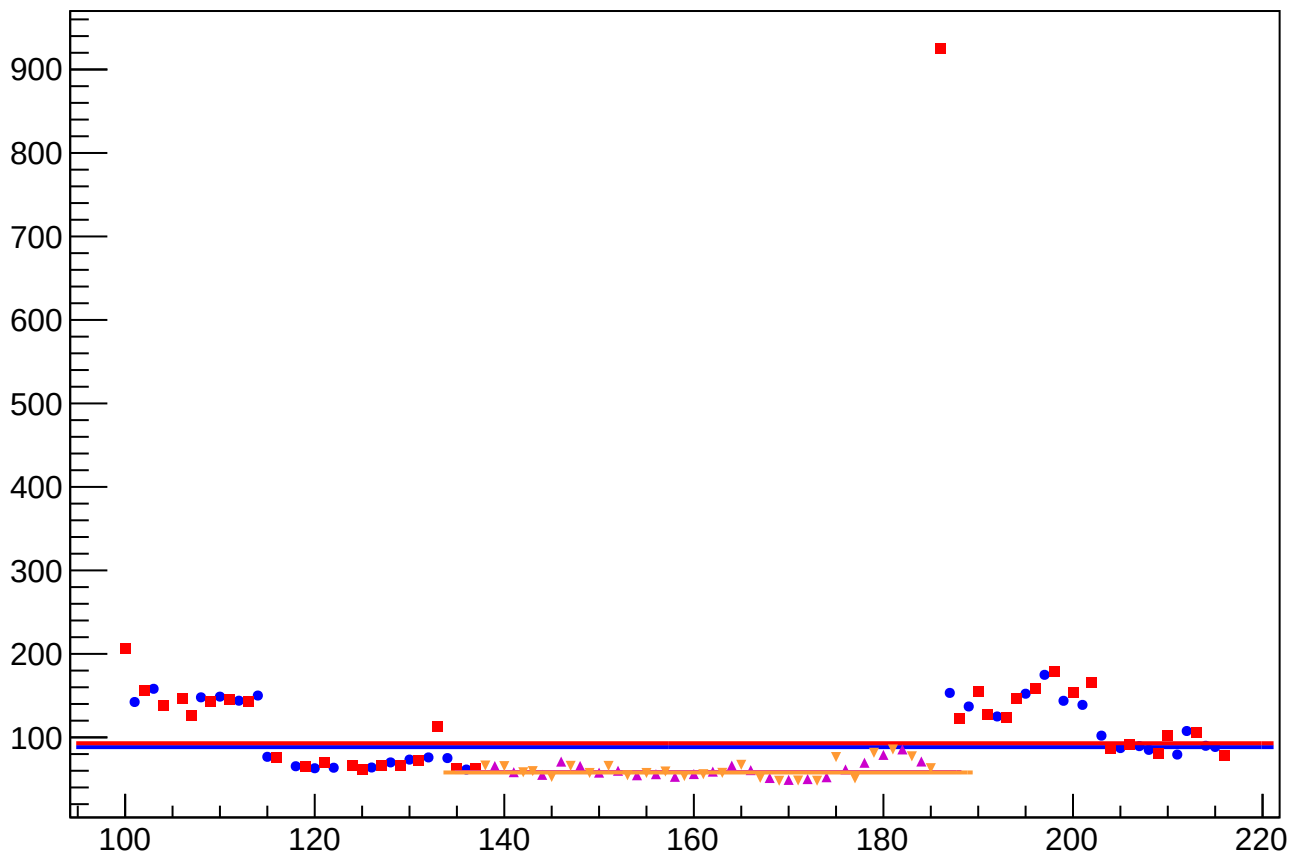
Left In: -45.806 $\pm$ 13.931  $\chi^2$ /NDF: 30.7/22

+ sign 14.266 $\pm$ 11.382  $\chi^2$ /NDF: 59.3/55

All: -9.698 $\pm$ 8.211  $\chi^2$ /NDF: 157.3/113

- sign -35.708 $\pm$ 11.857  $\chi^2$ /NDF: 88.8/57

dit\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 88.316 $\pm$ 0.015  $\chi^2$ /NDF: 3473505.6/30

Left Out: 57.965 $\pm$ 0.010  $\chi^2$ /NDF: 896947.4/24

Right Out: 92.974 $\pm$ 0.016  $\chi^2$ /NDF: 4692478.3/34

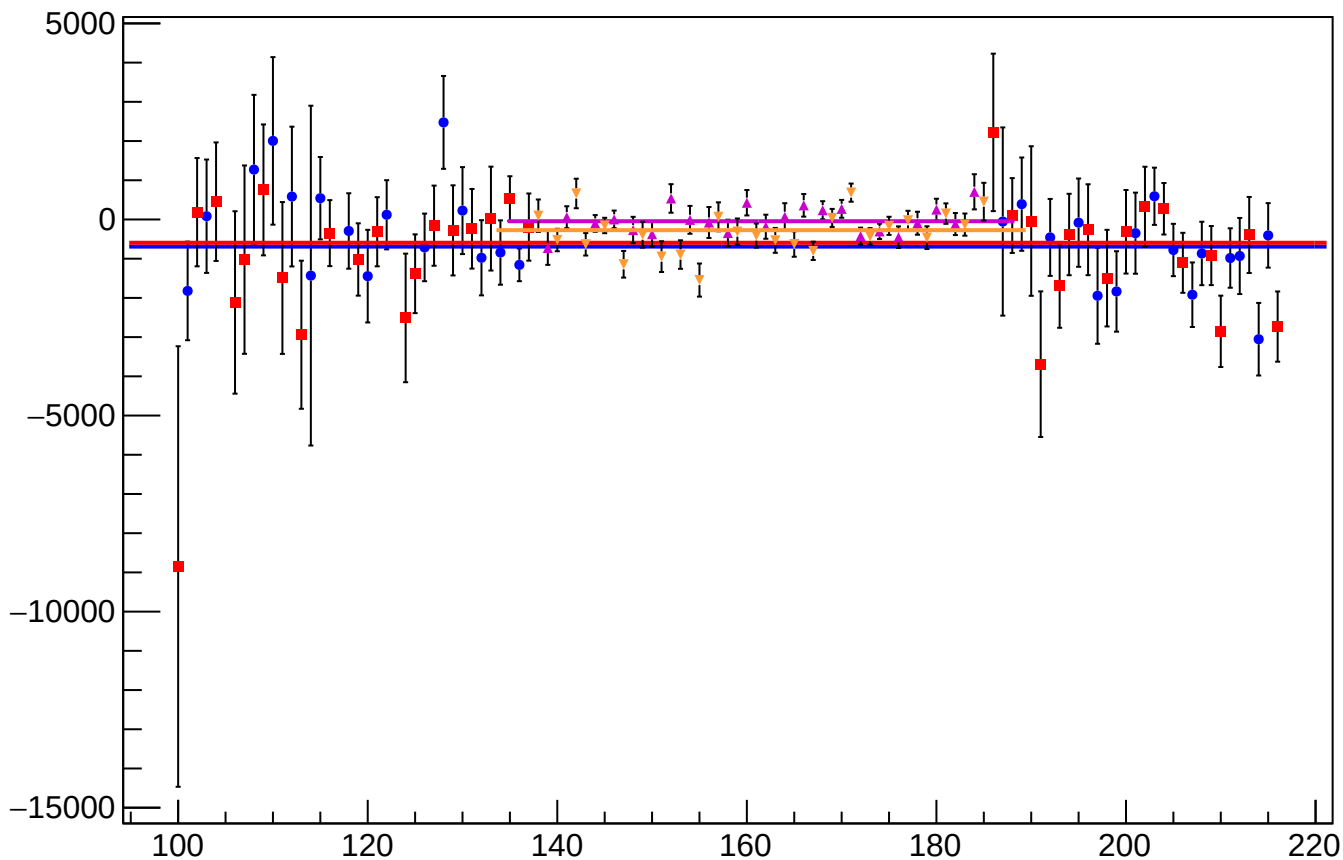
Left In: 58.479 $\pm$ 0.010  $\chi^2$ /NDF: 649919.9/22

+ sign 66.596 $\pm$ 0.008  $\chi^2$ /NDF: 7264685.6/55

All: 67.262 $\pm$ 0.006  $\chi^2$ /NDF: 16000237.7/113

- sign 67.984 $\pm$ 0.008  $\chi^2$ /NDF: 8721284.7/57

asym\_sam\_1526\_avg\_dit\_correction\_mean vs Slug



Right In:  $-691.650 \pm 168.992$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-272.513 \pm 57.274$   $\chi^2/\text{NDF}$ : 65.8/24

Right Out:  $-593.383 \pm 178.322$   $\chi^2/\text{NDF}$ : 35.1/34

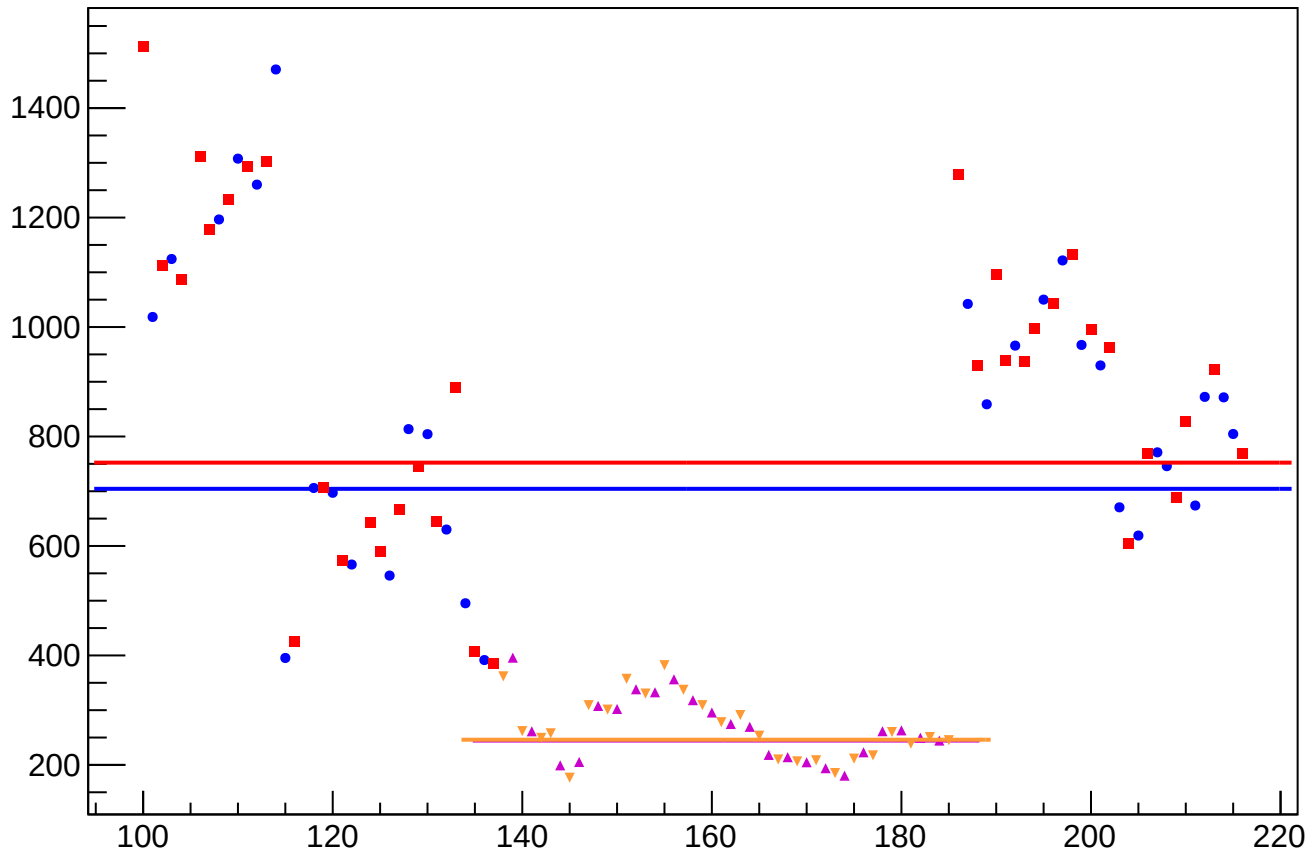
Left In:  $-44.553 \pm 58.614$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $-315.697 \pm 54.243$   $\chi^2/\text{NDF}$ : 103.5/55

All:  $-209.733 \pm 38.855$   $\chi^2/\text{NDF}$ : 181.5/113

- sign  $-98.068 \pm 55.683$   $\chi^2/\text{NDF}$ : 70.2/57

# asym\_sam\_1526\_avg\_dit\_correction\_rms vs Slug



Right In: 704.410 $\pm$ 0.119  $\chi^2$ /NDF: 3512677.5/30

Left Out: 246.017 $\pm$ 0.040  $\chi^2$ /NDF:1680565.1/24

Right Out: 752.252 $\pm$ 0.126  $\chi^2$ /NDF: 3708121.0/34

Left In: 244.450 $\pm$ 0.041  $\chi^2$ /NDF:1596988.0/22

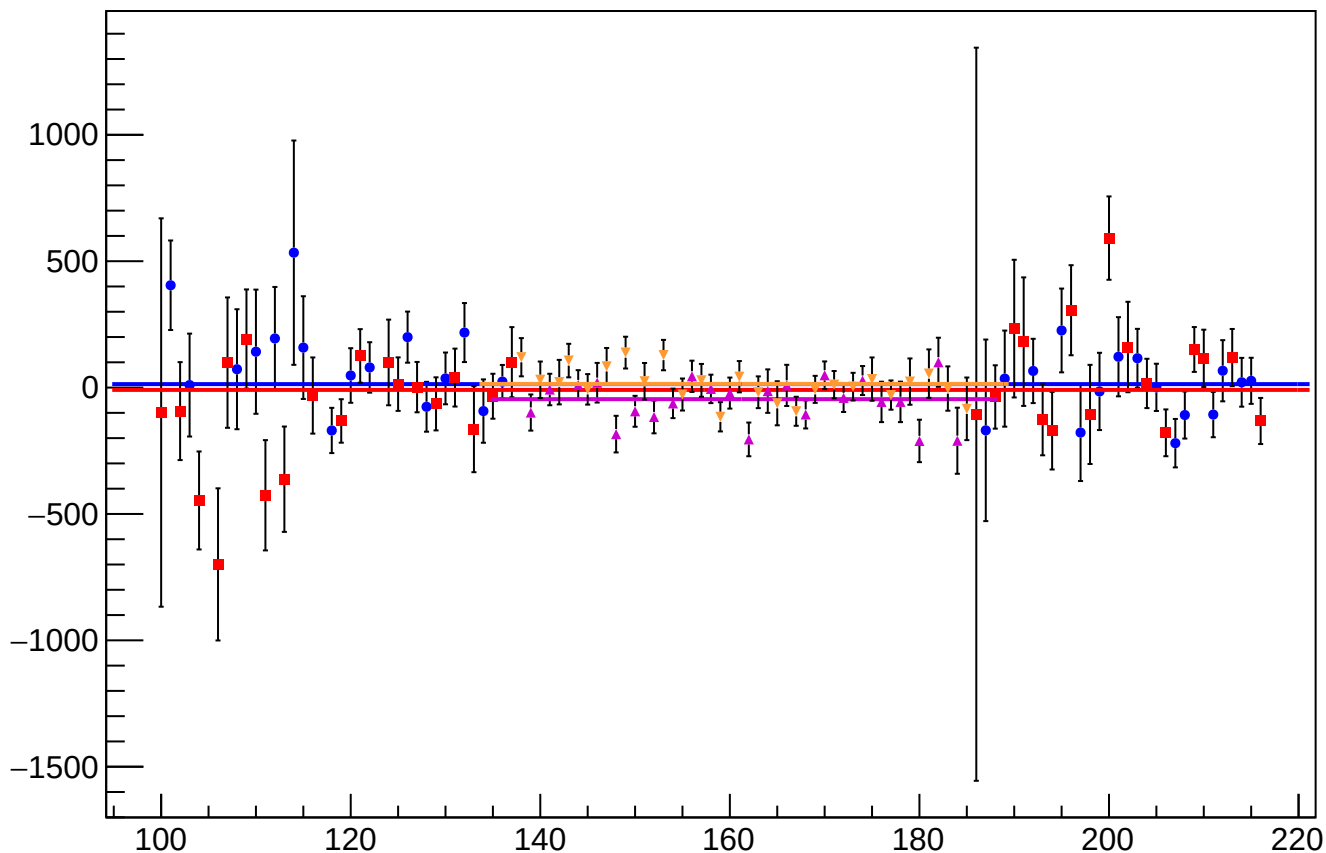
+ sign 293.245 $\pm$ 0.038  $\chi^2$ /NDF: 18392637.4/55

All: 293.595 $\pm$ 0.027  $\chi^2$ /NDF: 38334943.7/1

- sign 293.965 $\pm$ 0.039  $\chi^2$ /NDF: 19942134.8/57



# eigen\_dit\_asym\_sam\_1526\_avg\_mean vs Slug



Right In: 13.684 $\pm$ 21.344  $\chi^2$ /NDF: 34.7/30

Left Out: 14.498 $\pm$ 13.454  $\chi^2$ /NDF: 24.5/24

Right Out: -9.159 $\pm$ 22.589  $\chi^2$ /NDF: 56.2/34

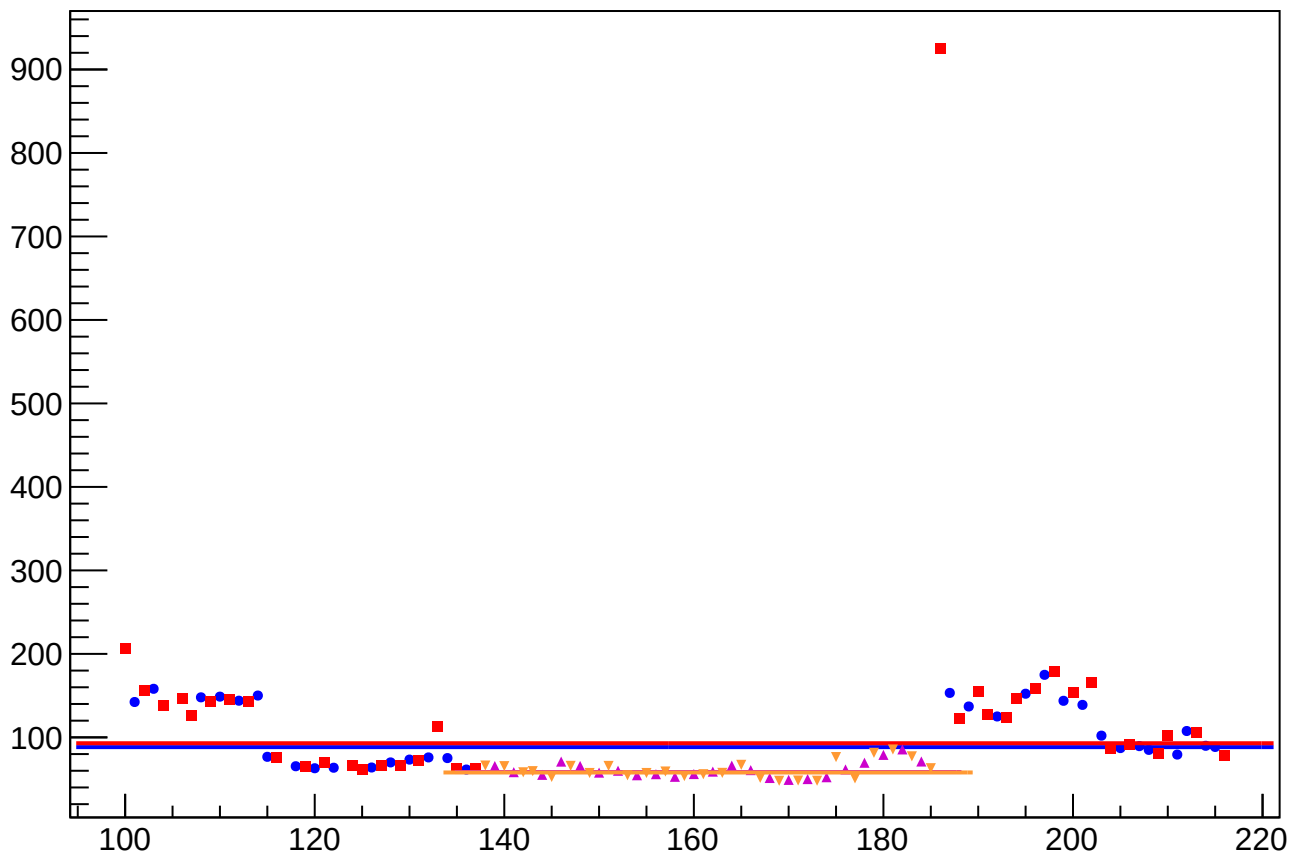
Left In: -45.805 $\pm$ 13.931  $\chi^2$ /NDF: 30.7/22

+ sign 14.266 $\pm$ 11.382  $\chi^2$ /NDF: 59.3/55

All: -9.698 $\pm$ 8.211  $\chi^2$ /NDF: 157.3/113

- sign -35.707 $\pm$ 11.858  $\chi^2$ /NDF: 88.8/57

# eigen\_dit\_asym\_sam\_1526\_avg\_rms vs Slug



Right In: 88.316 $\pm$ 0.015  $\chi^2$ /NDF: 3473510.0/30

Left Out: 57.965 $\pm$ 0.010  $\chi^2$ /NDF:896952.8/24

Right Out: 92.974 $\pm$ 0.016  $\chi^2$ /NDF: 4692488.3/34

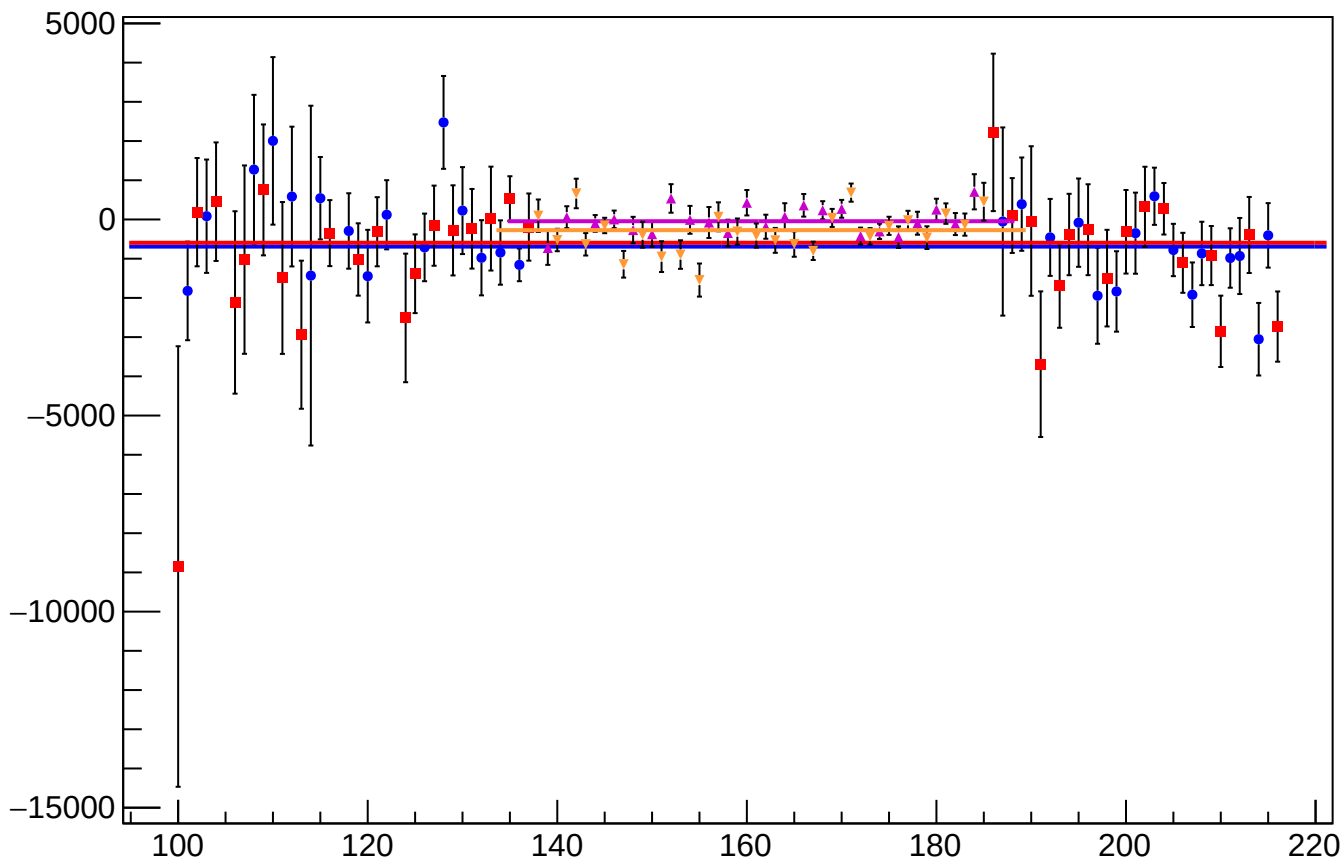
Left In: 58.479 $\pm$ 0.010  $\chi^2$ /NDF:649911.4/22

+ sign 66.596 $\pm$ 0.008  $\chi^2$ /NDF: 7264637.9/55

All: 67.262 $\pm$ 0.006  $\chi^2$ /NDF: 16000121.3/113

- sign 67.984 $\pm$ 0.008  $\chi^2$ /NDF: 8721214.5/57

asym\_sam\_1526\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-691.648 \pm 168.992$   $\chi^2/\text{NDF}$ : 32.2/30

Left Out:  $-272.512 \pm 57.274$   $\chi^2/\text{NDF}$ : 65.8/24

Right Out:  $-593.382 \pm 178.322$   $\chi^2/\text{NDF}$ : 35.1/34

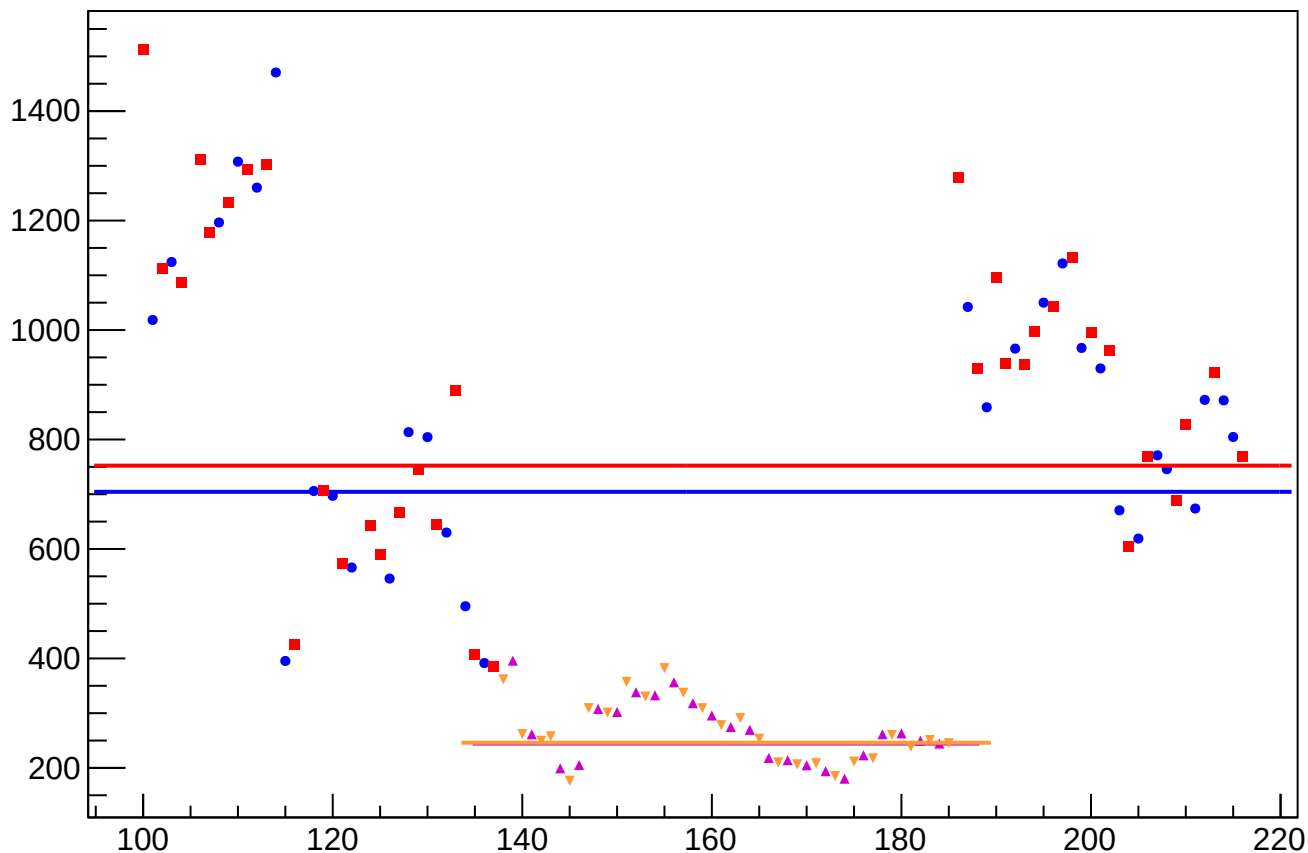
Left In:  $-44.552 \pm 58.614$   $\chi^2/\text{NDF}$ : 26.5/22

+ sign  $-315.696 \pm 54.243$   $\chi^2/\text{NDF}$ : 103.5/55

All:  $-209.732 \pm 38.855$   $\chi^2/\text{NDF}$ : 181.5/113

- sign  $-98.068 \pm 55.683$   $\chi^2/\text{NDF}$ : 70.2/57

asym\_sam\_1526\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 704.410 $\pm$ 0.119  $\chi^2$ /NDF: 3512661.3/30

Left Out: 246.016 $\pm$ 0.040  $\chi^2$ /NDF:1680566.1/24

Right Out: 752.252 $\pm$ 0.126  $\chi^2$ /NDF: 3708100.7/34

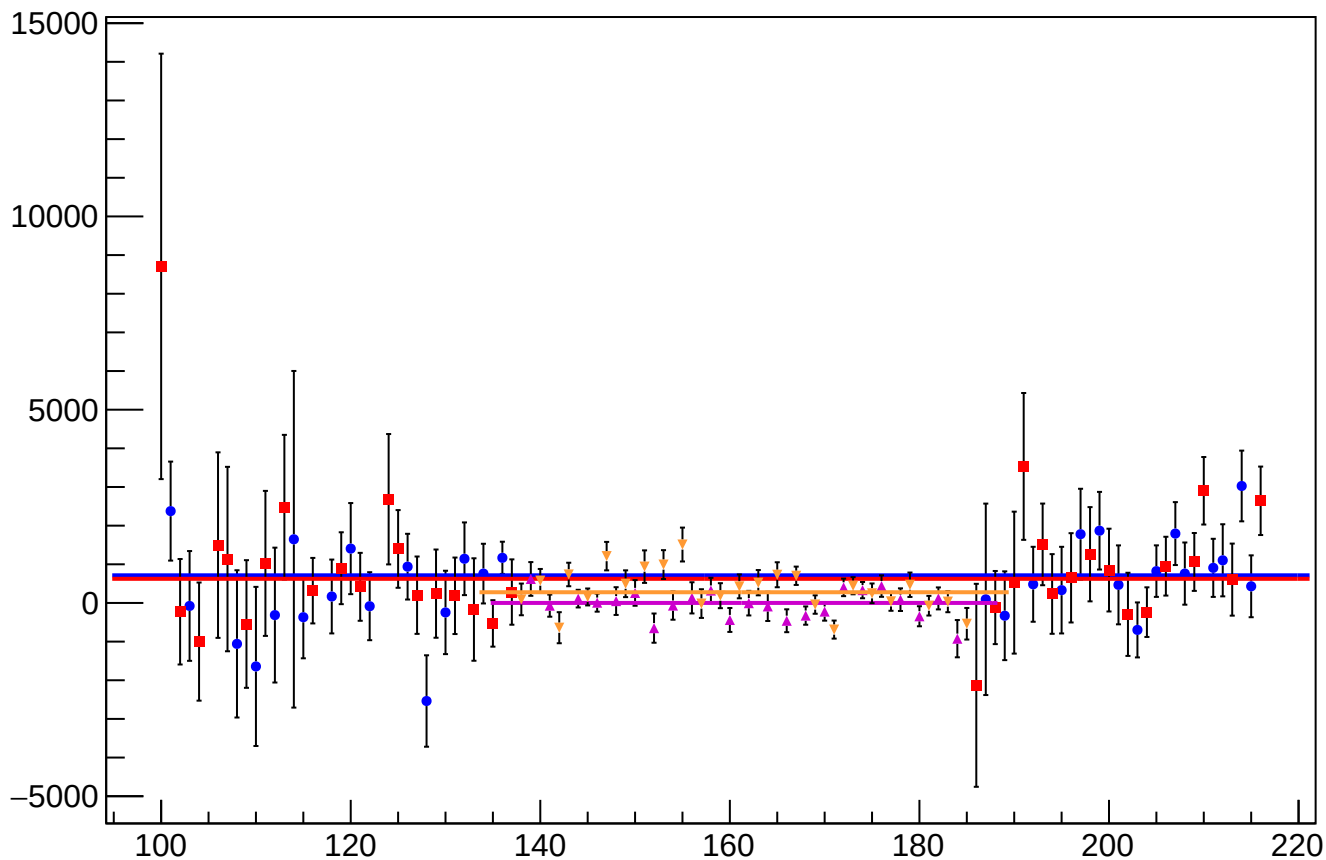
Left In: 244.450 $\pm$ 0.041  $\chi^2$ /NDF:1596977.8/22

+ sign 293.244 $\pm$ 0.038  $\chi^2$ /NDF: 18392649.2/55

All: 293.595 $\pm$ 0.027  $\chi^2$ /NDF: 38334946.7/1

- sign 293.964 $\pm$ 0.039  $\chi^2$ /NDF: 19942125.9/57

# asym\_sam\_1526\_avg\_mean vs Slug



Right In:  $715.257 \pm 166.830$   $\chi^2/\text{NDF}$ : 32.7/30

Left Out:  $277.077 \pm 59.149$   $\chi^2/\text{NDF}$ : 64.1/24

Right Out:  $624.435 \pm 178.168$   $\chi^2/\text{NDF}$ : 32.7/34

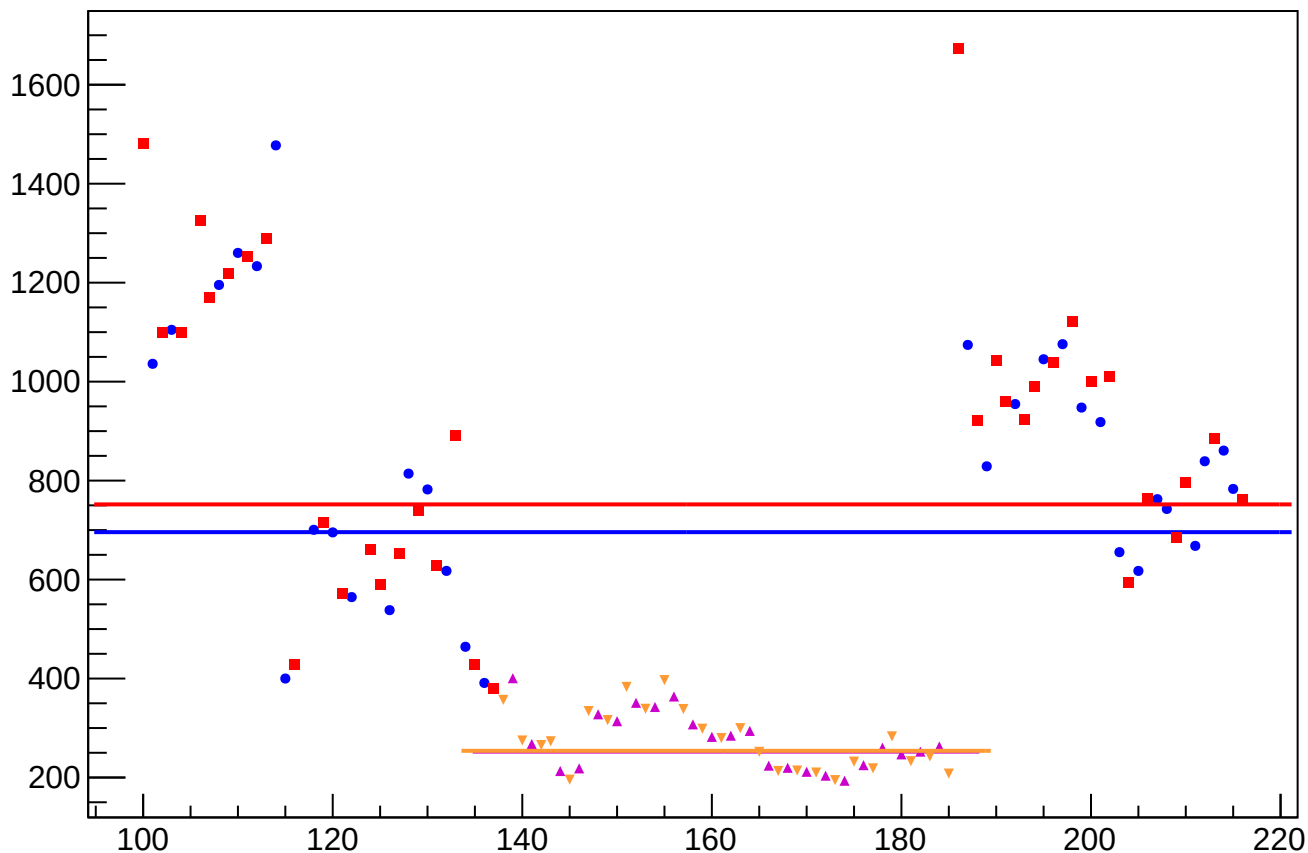
Left In:  $0.556 \pm 60.356$   $\chi^2/\text{NDF}$ : 28.1/22

+ sign  $326.006 \pm 55.748$   $\chi^2/\text{NDF}$ : 102.9/55

All:  $198.671 \pm 39.912$   $\chi^2/\text{NDF}$ : 185.4/113

- sign  $64.781 \pm 57.165$   $\chi^2/\text{NDF}$ : 71.9/57

# asym\_sam\_1526\_avg\_rms vs Slug



Right In: 695.857+/-0.118     $\chi^2/\text{NDF}$ : 3446786.1/30

Left Out: 253.953+/-0.042     $\chi^2/\text{NDF}$ :1590761.5/24

Right Out: 751.918+/-0.126     $\chi^2/\text{NDF}$ : 3643754.0/34

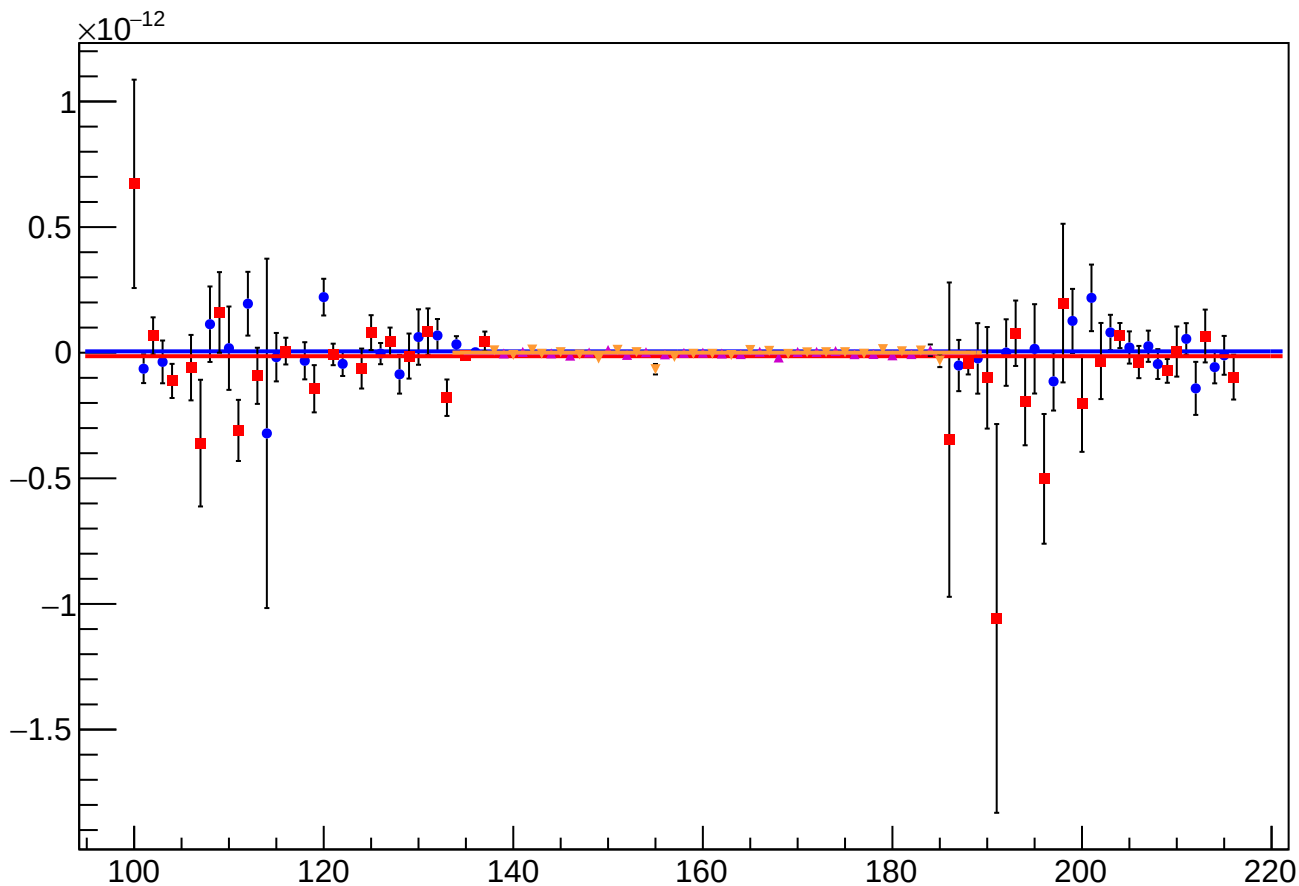
Left In: 252.390+/-0.043     $\chi^2/\text{NDF}$ :1412169.8/22

+ sign 303.298+/-0.039     $\chi^2/\text{NDF}$ : 17503124.2/55

All: 303.550+/-0.028     $\chi^2/\text{NDF}$ : 36662054.7/11

- sign 303.814+/-0.040     $\chi^2/\text{NDF}$ : 19158847.1/57

# asym\_sam\_1526\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.8/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:26.9/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 44.6/34

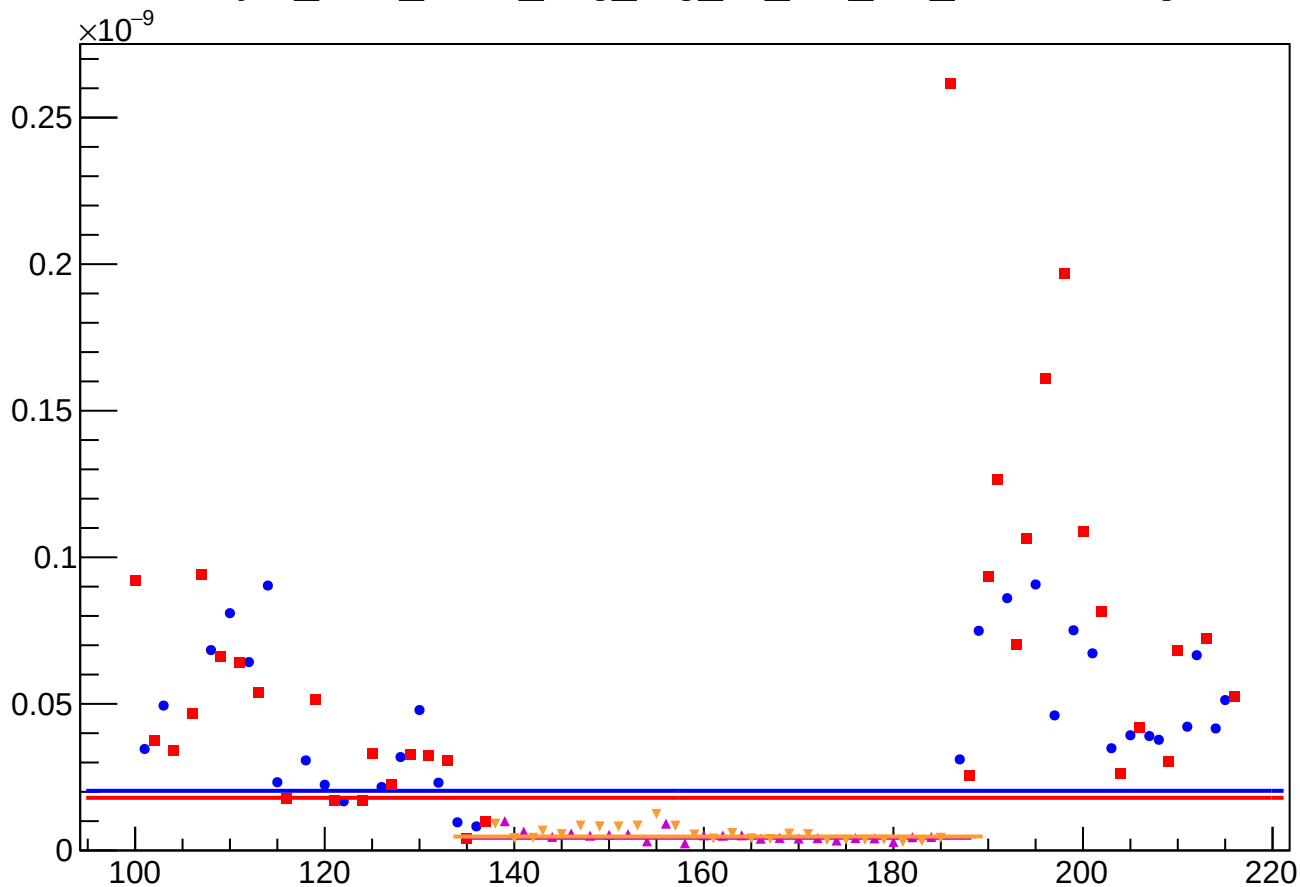
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:14.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 55.9/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 117.3/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 60.2/57

asym\_sam\_1526\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6794362.4/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1613401.1/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9424136.9/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :983290.8/22

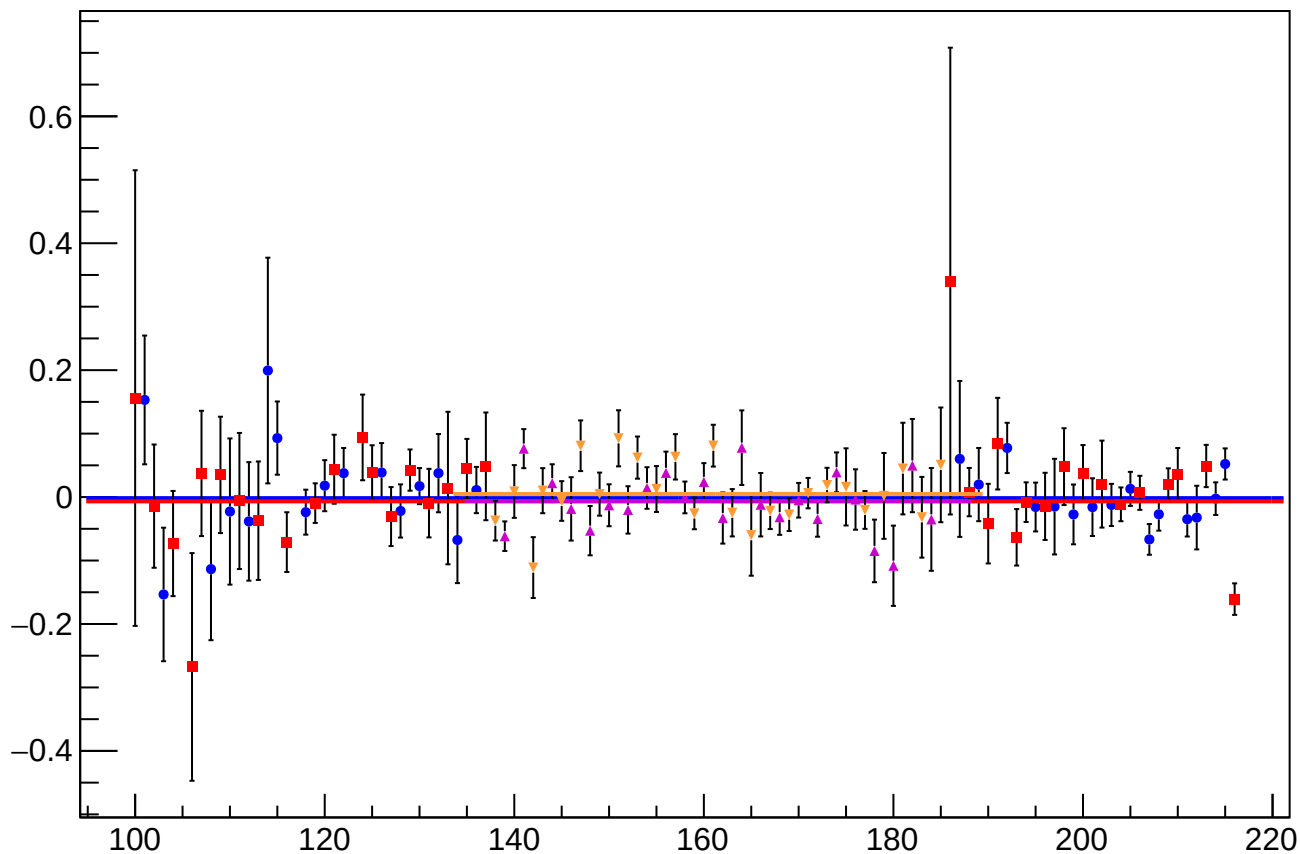
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13632533.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 28106540.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14387097.4/57



asym\_sam\_1526\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.1/34

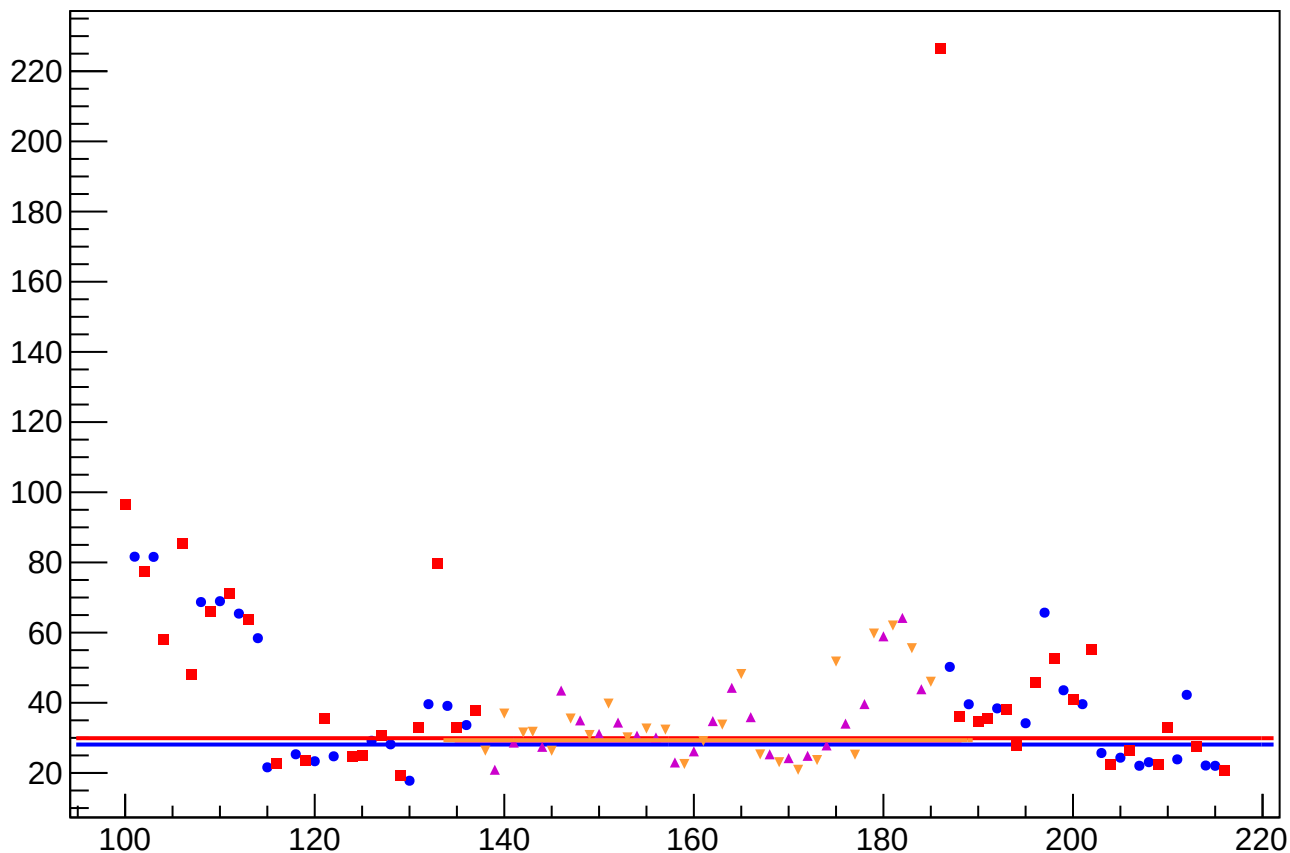
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 165.0/113

- sign  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 95.1/57

asym\_sam\_1526\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 28.101 $\pm$ 0.005  $\chi^2$ /NDF: 4337159.9/30

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687159.2/24

Right Out: 29.908 $\pm$ 0.005  $\chi^2$ /NDF: 4951863.3/34

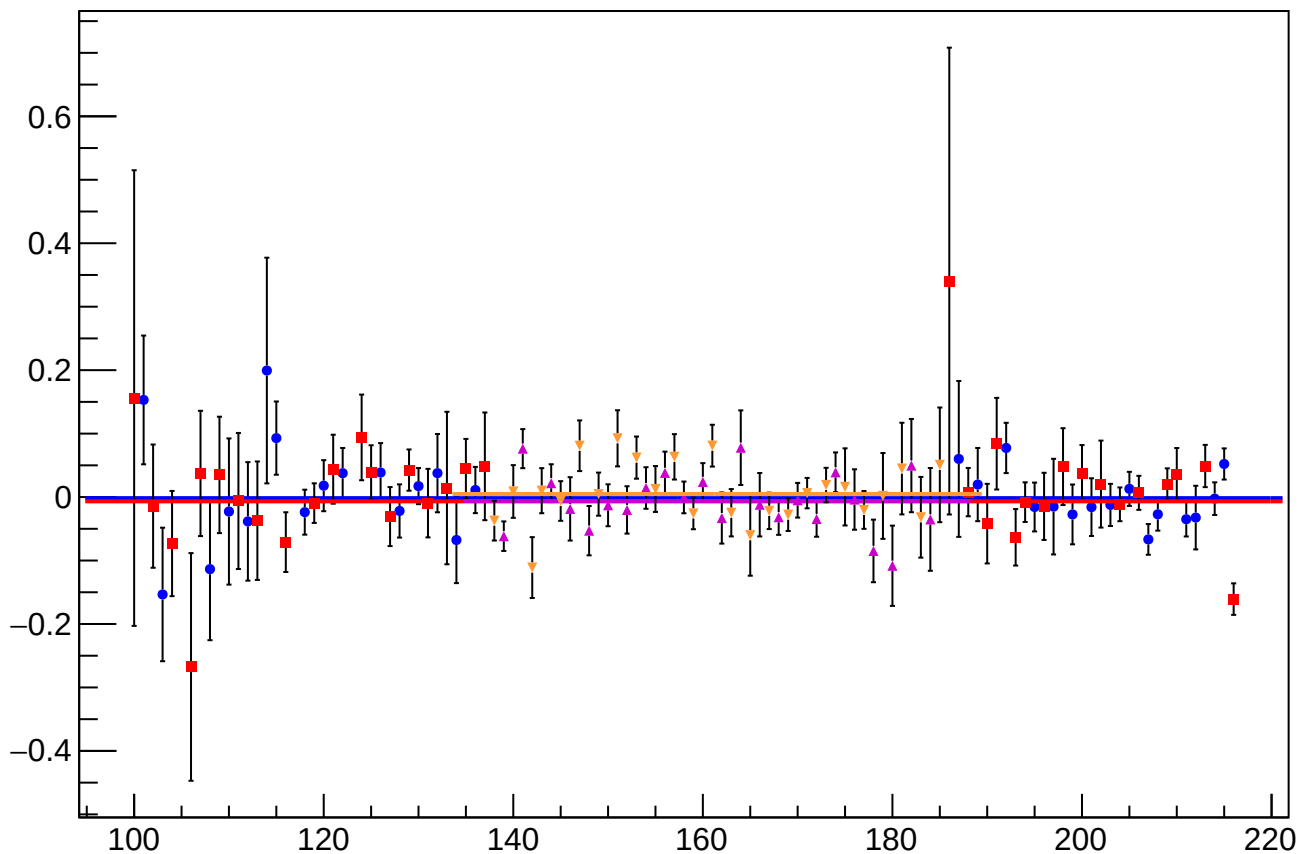
Left In: 29.226 $\pm$ 0.005  $\chi^2$ /NDF: 2097657.8/22

+ sign 28.723 $\pm$ 0.004  $\chi^2$ /NDF: 7054398.4/55

All: 29.120 $\pm$ 0.003  $\chi^2$ /NDF: 14138156.9/113

- sign 29.551 $\pm$ 0.004  $\chi^2$ /NDF: 7057914.7/57

asym\_sam\_1526\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.1/34

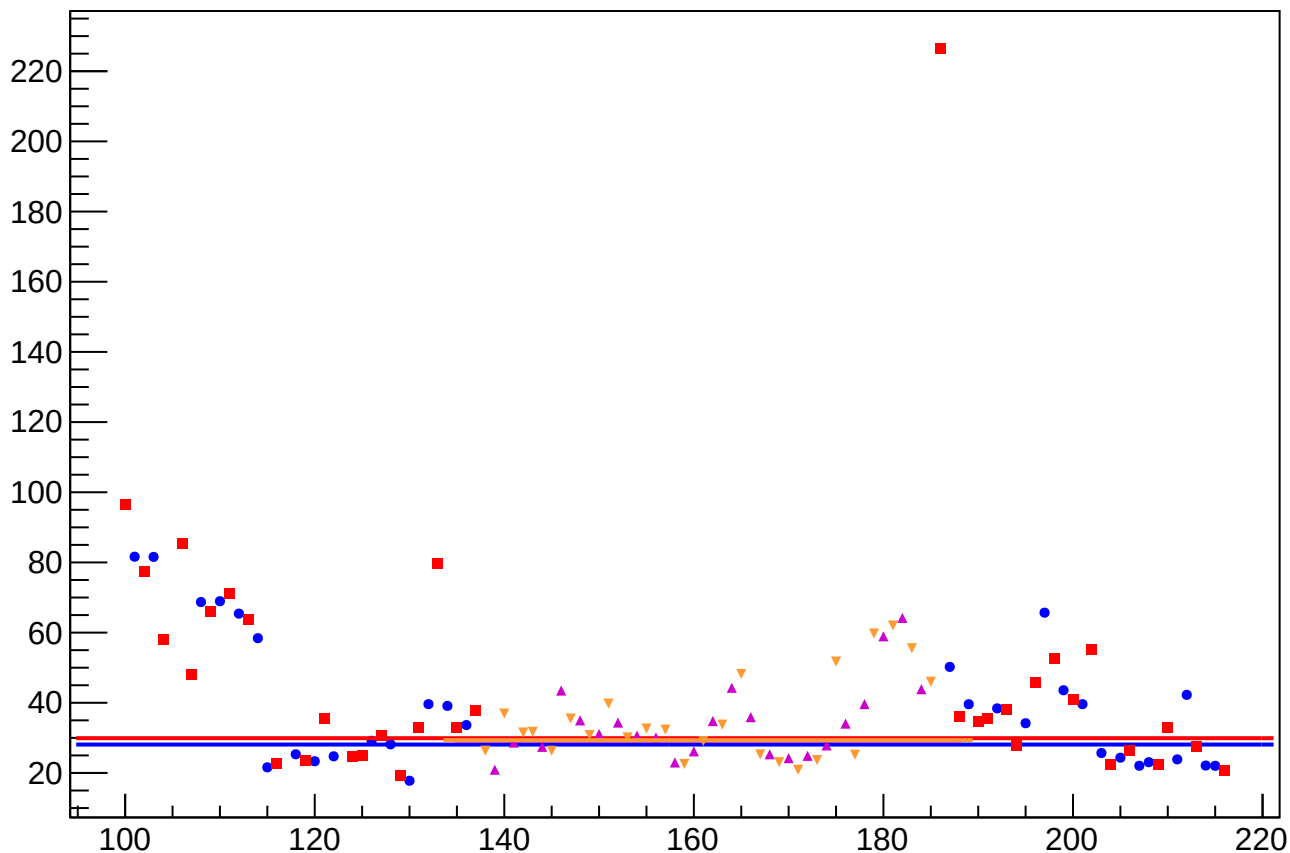
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 165.0/113

- sign  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 95.1/57

asym\_sam\_1526\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 28.101 $\pm$ 0.005  $\chi^2$ /NDF: 4337159.9/30

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687159.2/24

Right Out: 29.908 $\pm$ 0.005  $\chi^2$ /NDF: 4951863.3/34

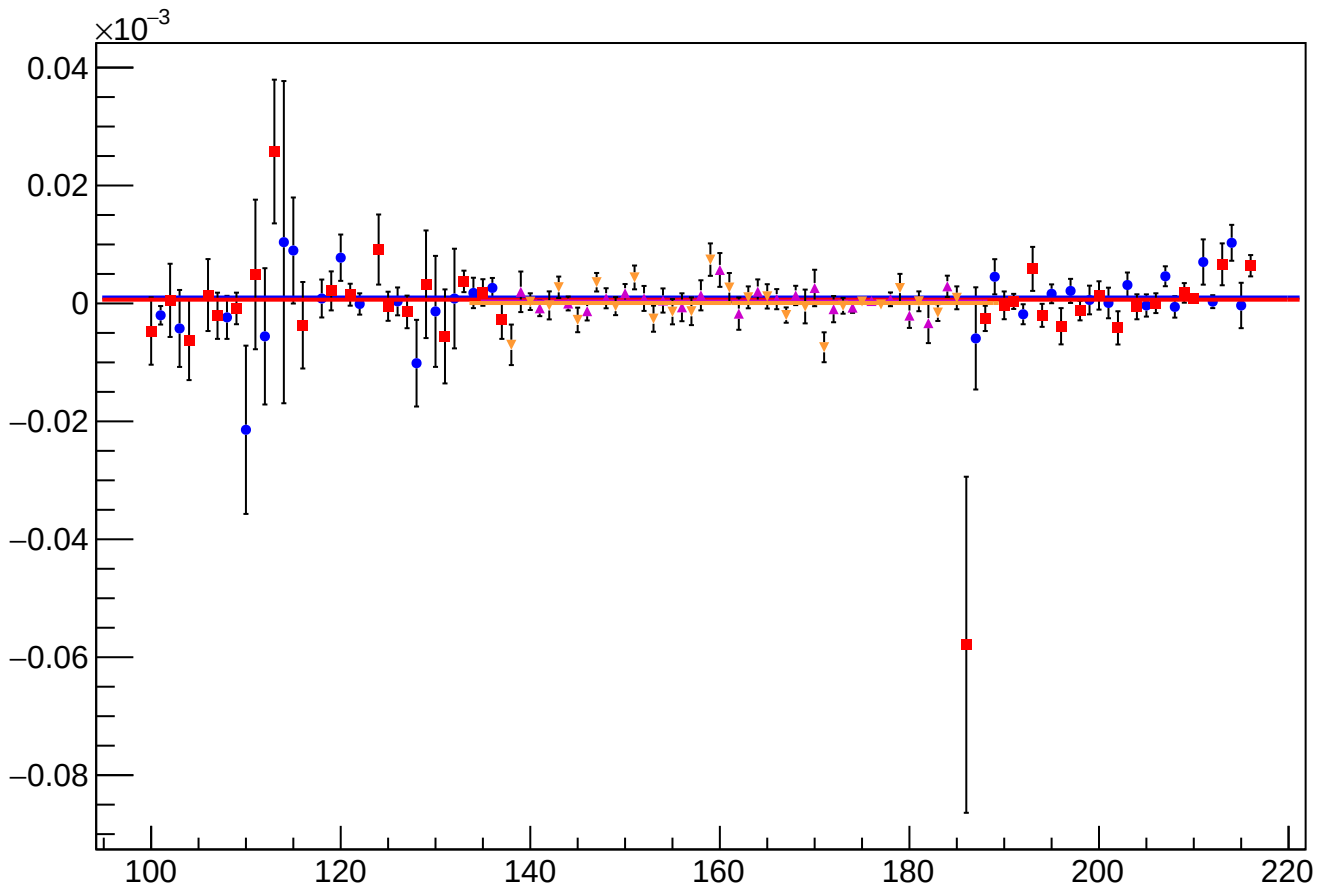
Left In: 29.226 $\pm$ 0.005  $\chi^2$ /NDF: 2097657.8/22

+ sign 28.723 $\pm$ 0.004  $\chi^2$ /NDF: 7054398.4/55

All: 29.120 $\pm$ 0.003  $\chi^2$ /NDF: 14138156.9/113

- sign 29.551 $\pm$ 0.004  $\chi^2$ /NDF: 7057914.7/57

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.7/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 46.3/34

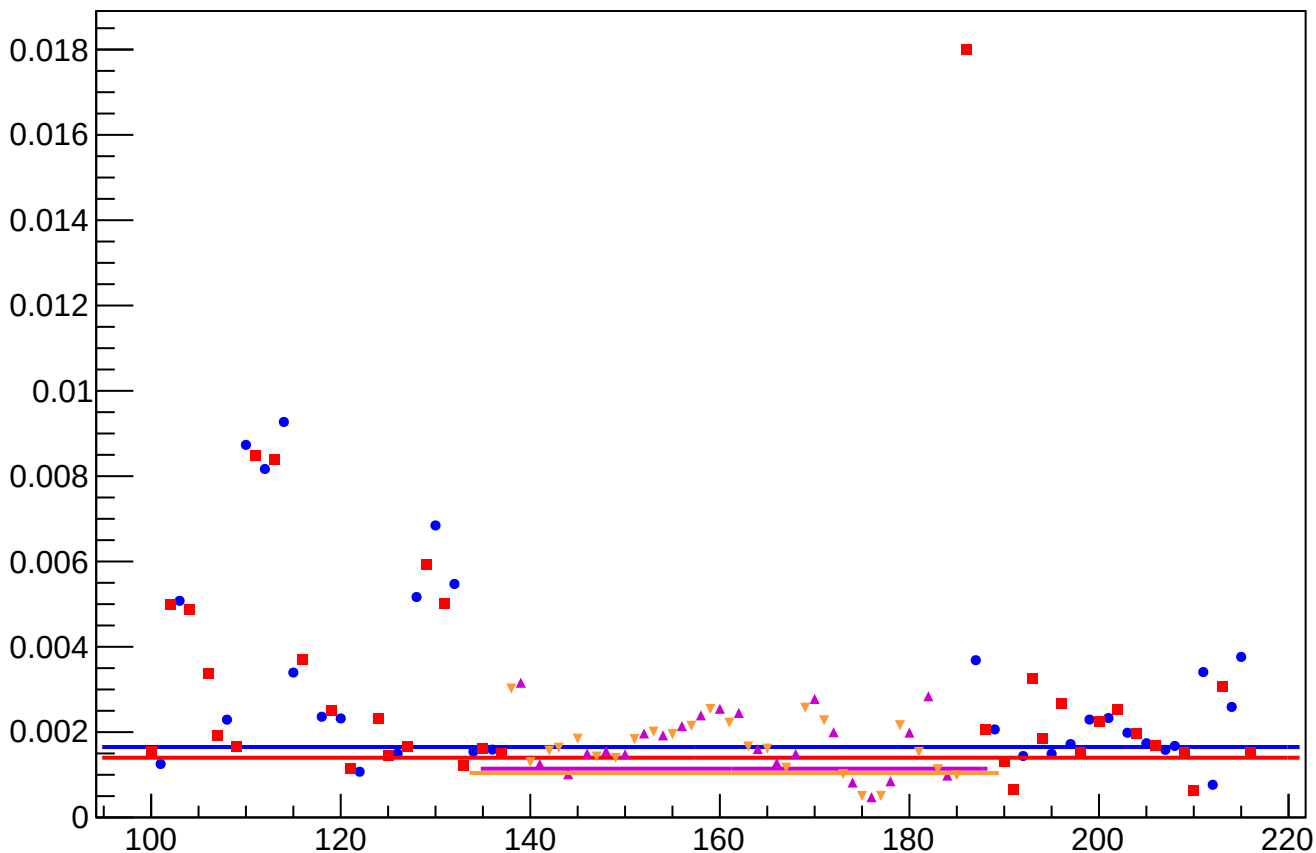
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.5/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 149.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.2/57

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 7009858.2/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9825407.0/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10247080.2/34

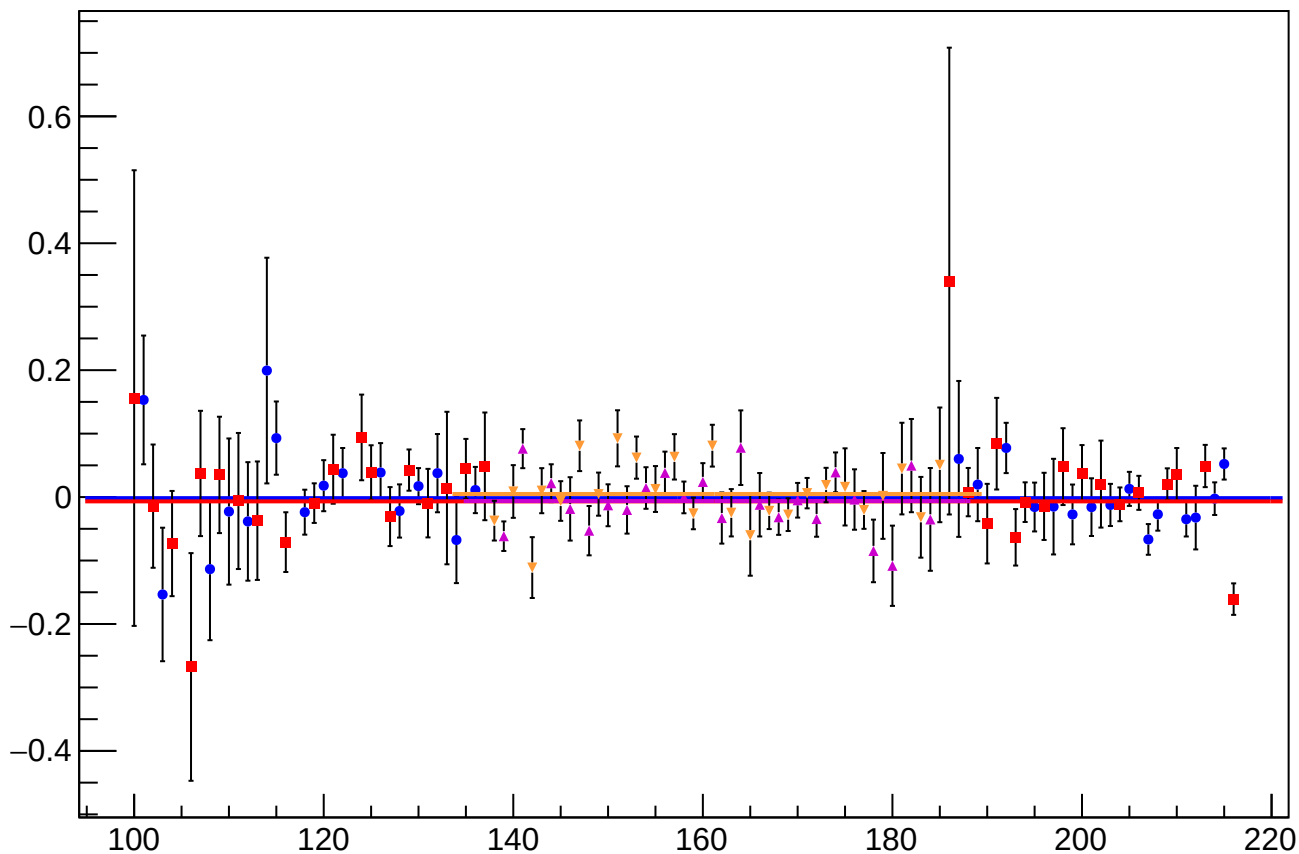
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8291862.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 19655999.2/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 38760741.3/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 19092484.3/57

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.1/34

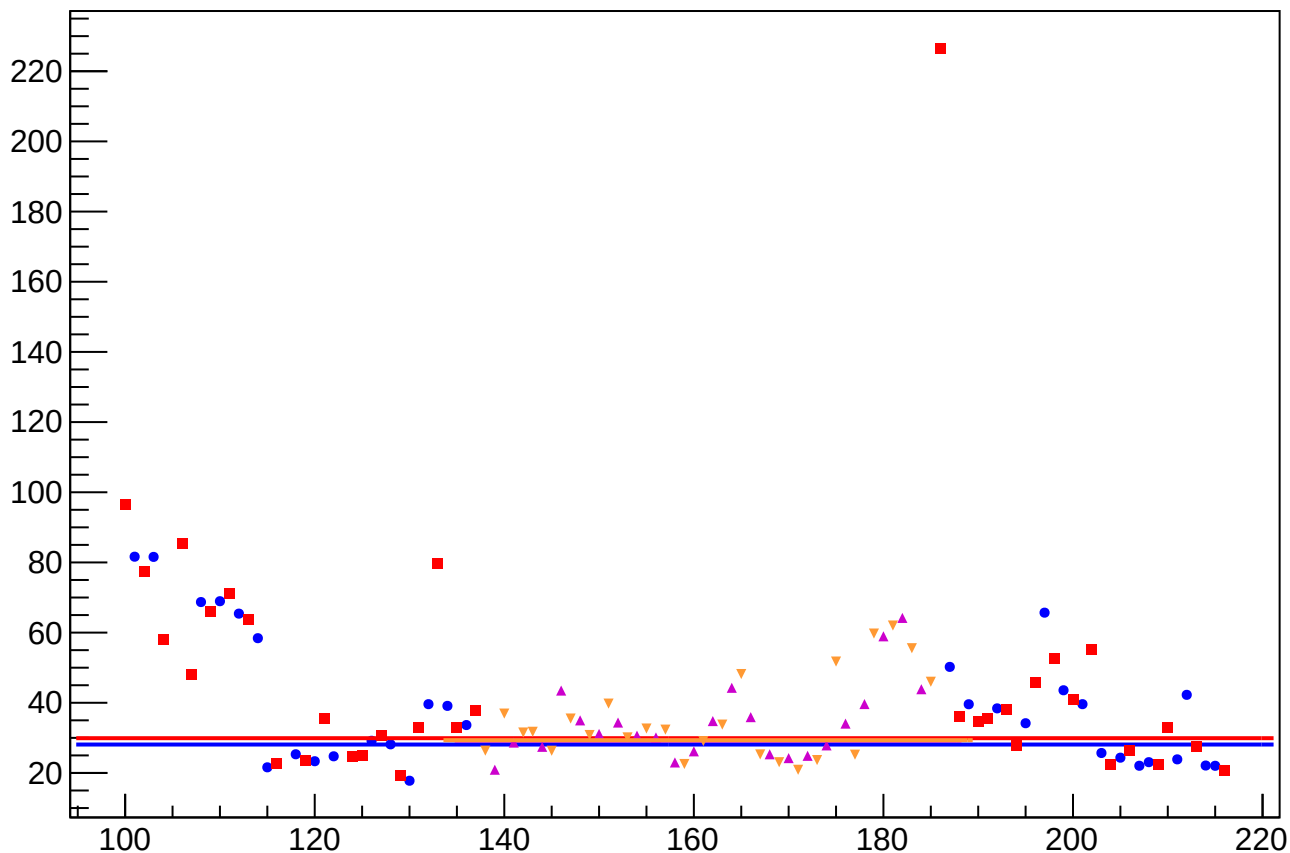
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 165.0/113

- sign  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 95.1/57

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 28.101 $\pm$ 0.005  $\chi^2$ /NDF: 4337370.2/30

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687200.3/24

Right Out: 29.907 $\pm$ 0.005  $\chi^2$ /NDF: 4952055.4/34

Left In: 29.227 $\pm$ 0.005  $\chi^2$ /NDF: 2097621.4/22

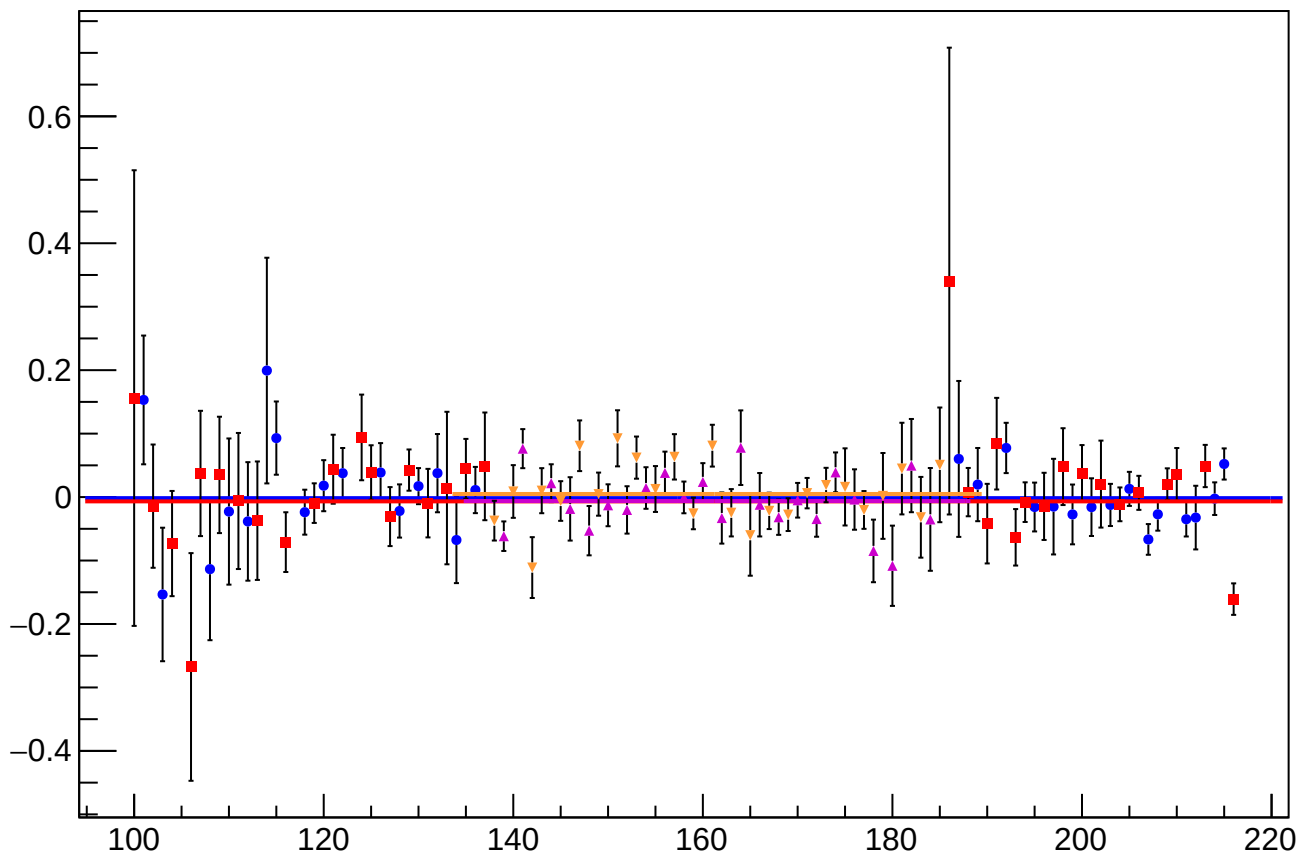
+ sign 28.723 $\pm$ 0.004  $\chi^2$ /NDF: 7054682.0/55

All: 29.120 $\pm$ 0.003  $\chi^2$ /NDF: 14138577.7/113

- sign 29.551 $\pm$ 0.004  $\chi^2$ /NDF: 7058046.0/57



asym\_sam\_1526\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.002 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 34.0/24

Right Out:  $-0.007 \pm 0.008$   $\chi^2/\text{NDF}$ : 64.1/34

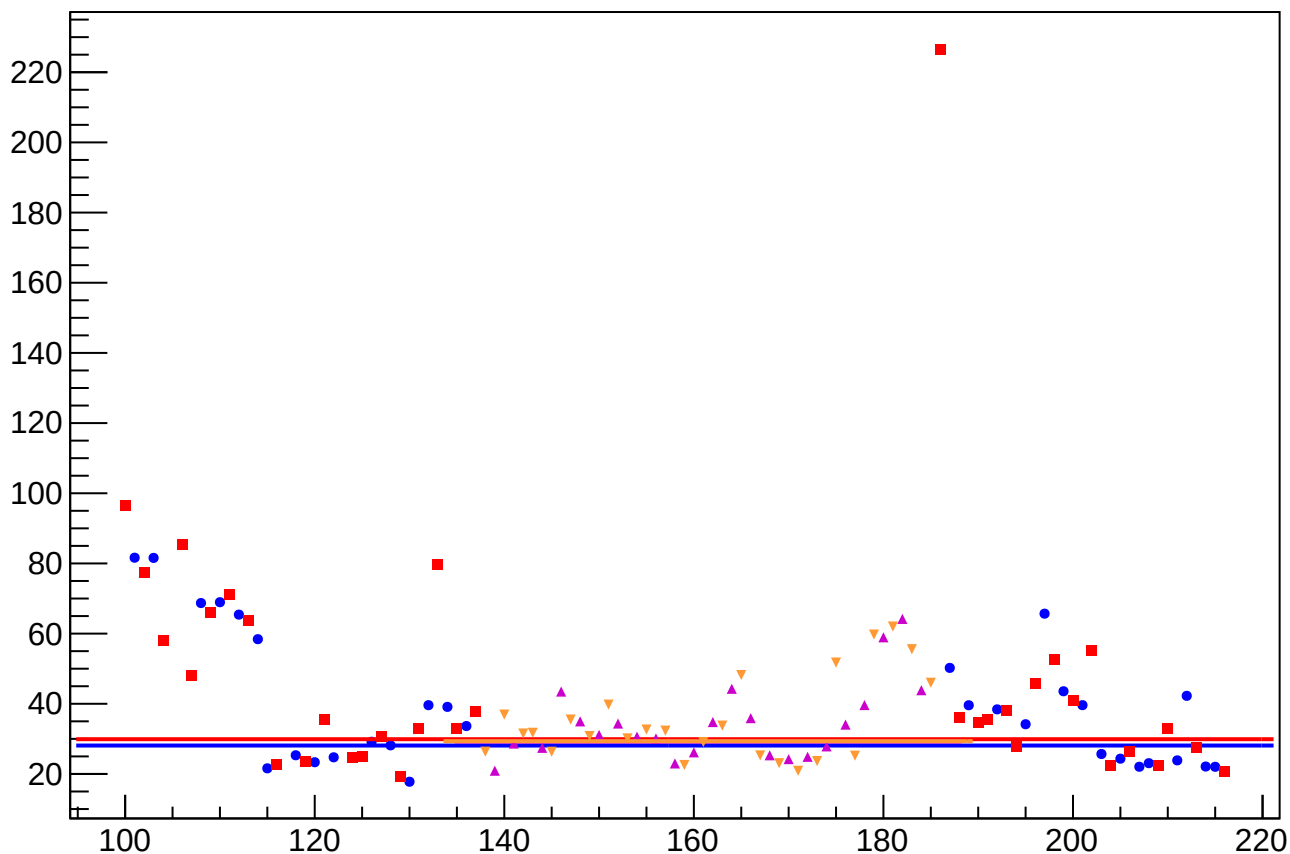
Left In:  $-0.006 \pm 0.007$   $\chi^2/\text{NDF}$ : 31.0/22

+ sign  $0.002 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.7/55

All:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 165.0/113

- sign  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 95.1/57

asym\_sam\_1526\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 28.101 $\pm$ 0.005  $\chi^2$ /NDF: 4337370.2/30

Left Out: 29.338 $\pm$ 0.005  $\chi^2$ /NDF: 2687200.3/24

Right Out: 29.907 $\pm$ 0.005  $\chi^2$ /NDF: 4952055.4/34

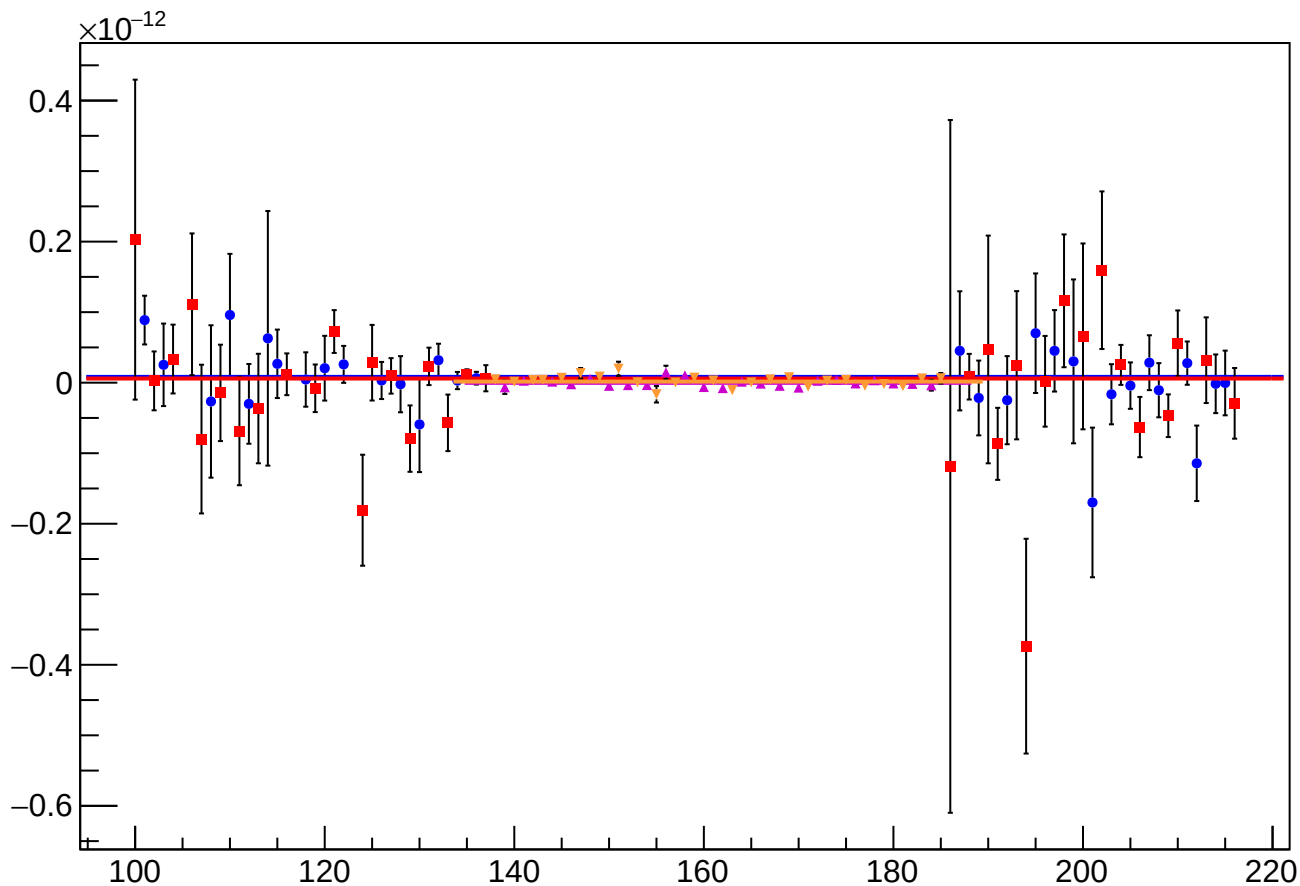
Left In: 29.227 $\pm$ 0.005  $\chi^2$ /NDF: 2097621.4/22

+ sign 28.723 $\pm$ 0.004  $\chi^2$ /NDF: 7054682.0/55

All: 29.120 $\pm$ 0.003  $\chi^2$ /NDF: 14138577.7/113

- sign 29.551 $\pm$ 0.004  $\chi^2$ /NDF: 7058046.0/57

asym\_sam\_1526\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.5/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:35.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.7/34

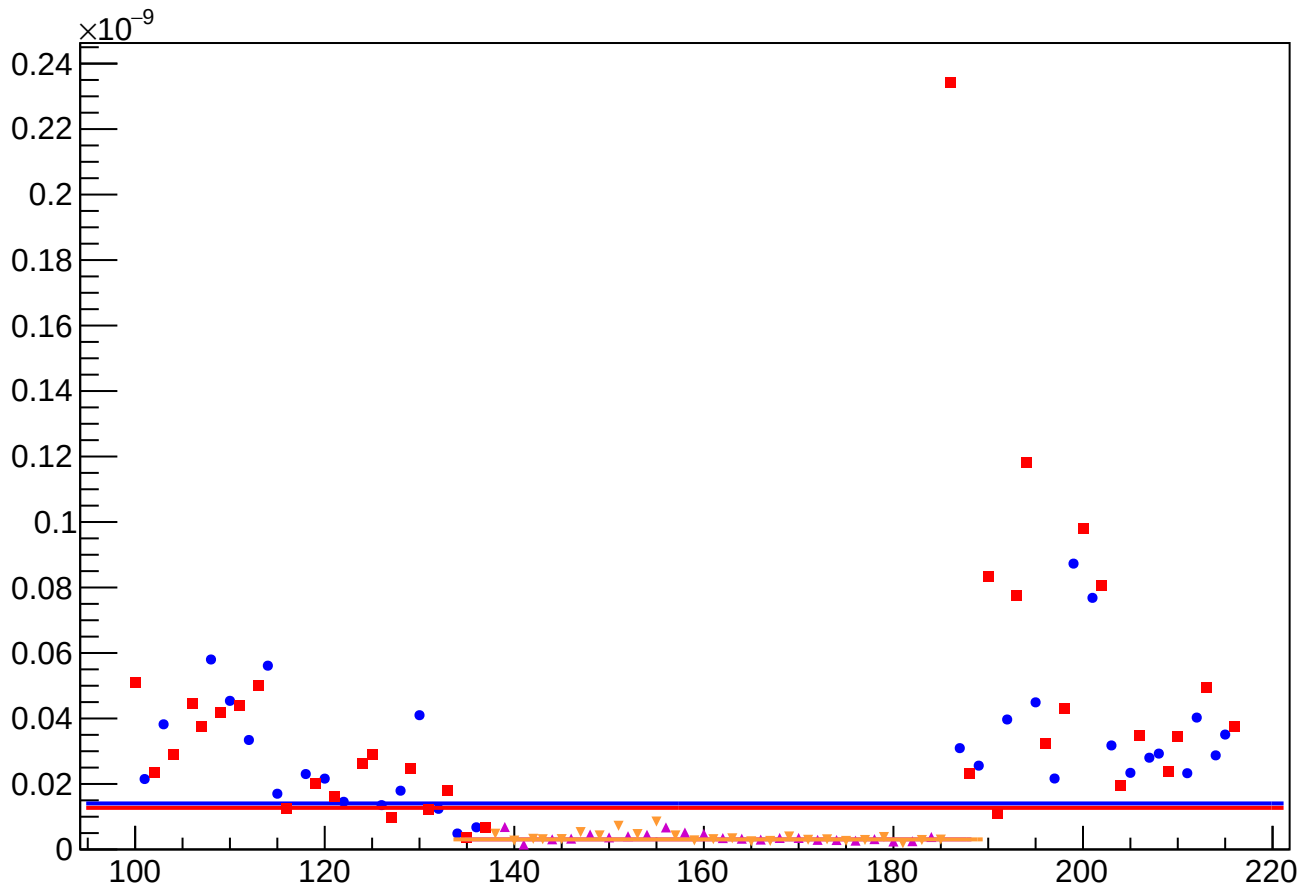
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.6/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 122.3/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 62.5/57

asym\_sam\_1526\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9038438.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2024861.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12556257.8/34

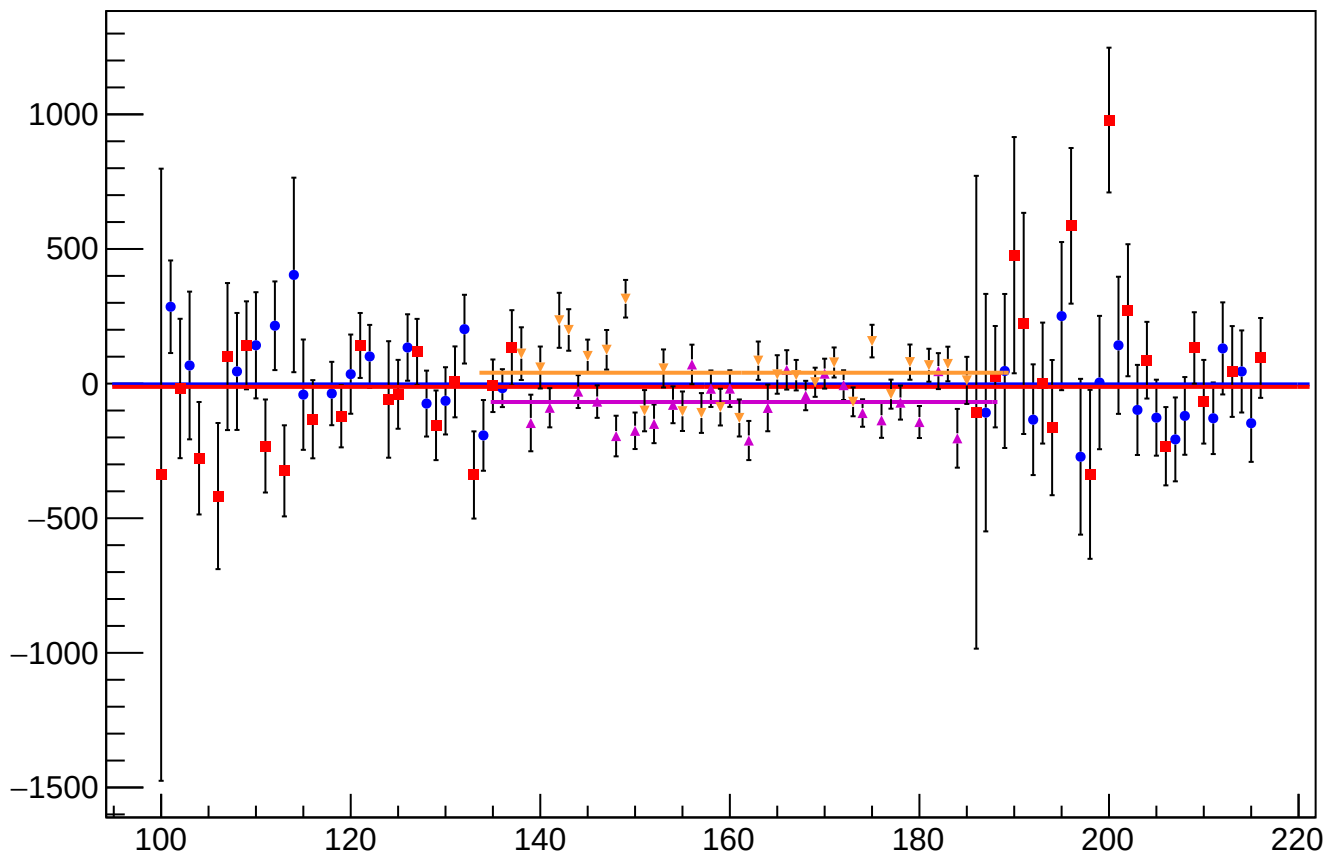
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2149738.1/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19123034.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40033336.4/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20909897.1/57

# reg\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $-2.905 \pm 27.457$   $\chi^2/\text{NDF}$ : 22.6/30

Left Out:  $40.342 \pm 13.402$   $\chi^2/\text{NDF}$ : 59.4/24

Right Out:  $-12.098 \pm 28.541$   $\chi^2/\text{NDF}$ : 47.8/34

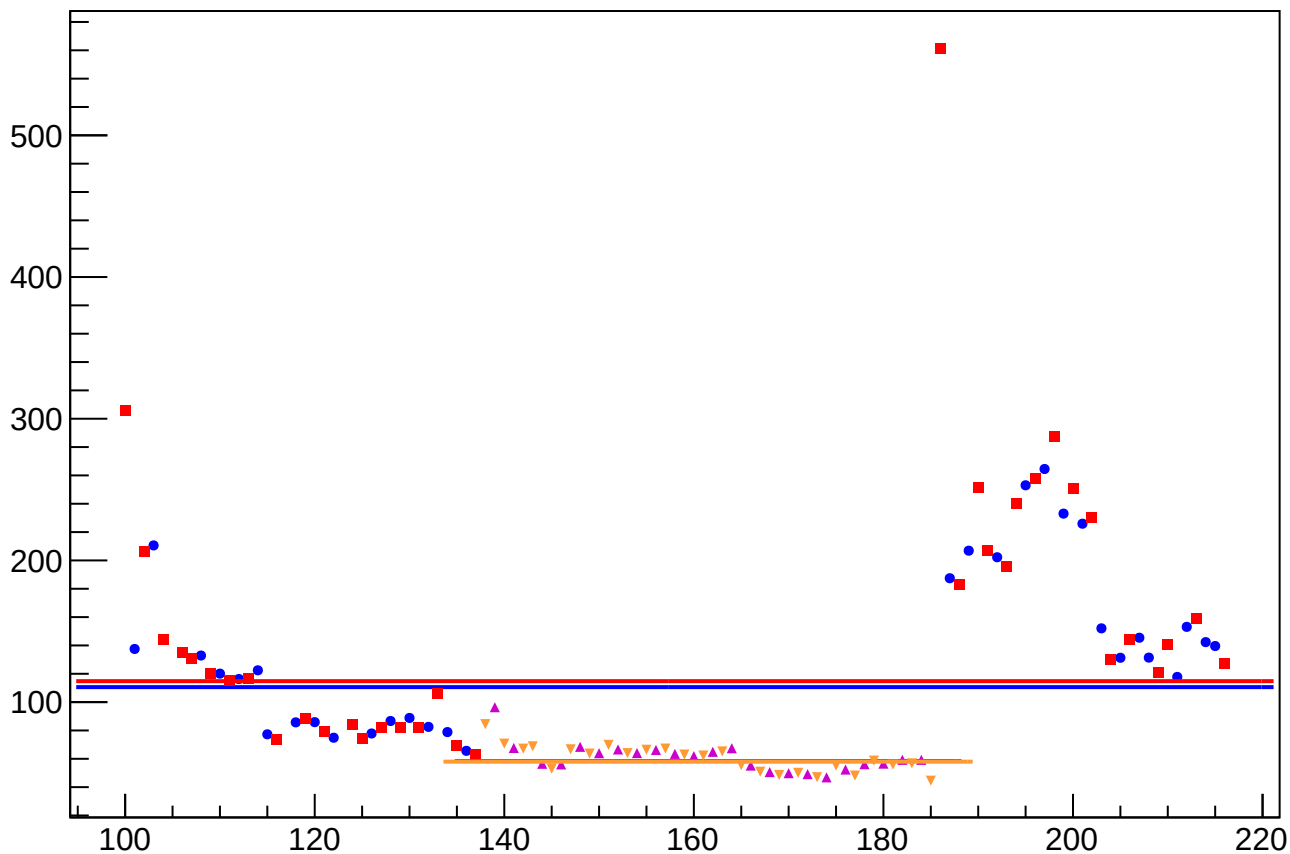
Left In:  $-68.344 \pm 13.866$   $\chi^2/\text{NDF}$ : 31.8/22

+ sign  $32.021 \pm 12.044$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-11.225 \pm 8.664$   $\chi^2/\text{NDF}$ : 193.4/113

- sign  $-57.603 \pm 12.472$   $\chi^2/\text{NDF}$ : 82.7/57

# reg\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 110.579 $\pm$ 0.019  $\chi^2$ /NDF: 5327874.7/30

Left Out: 57.996 $\pm$ 0.009  $\chi^2$ /NDF: 807648.8/24

Right Out: 114.799 $\pm$ 0.020  $\chi^2$ /NDF: 6344671.0/34

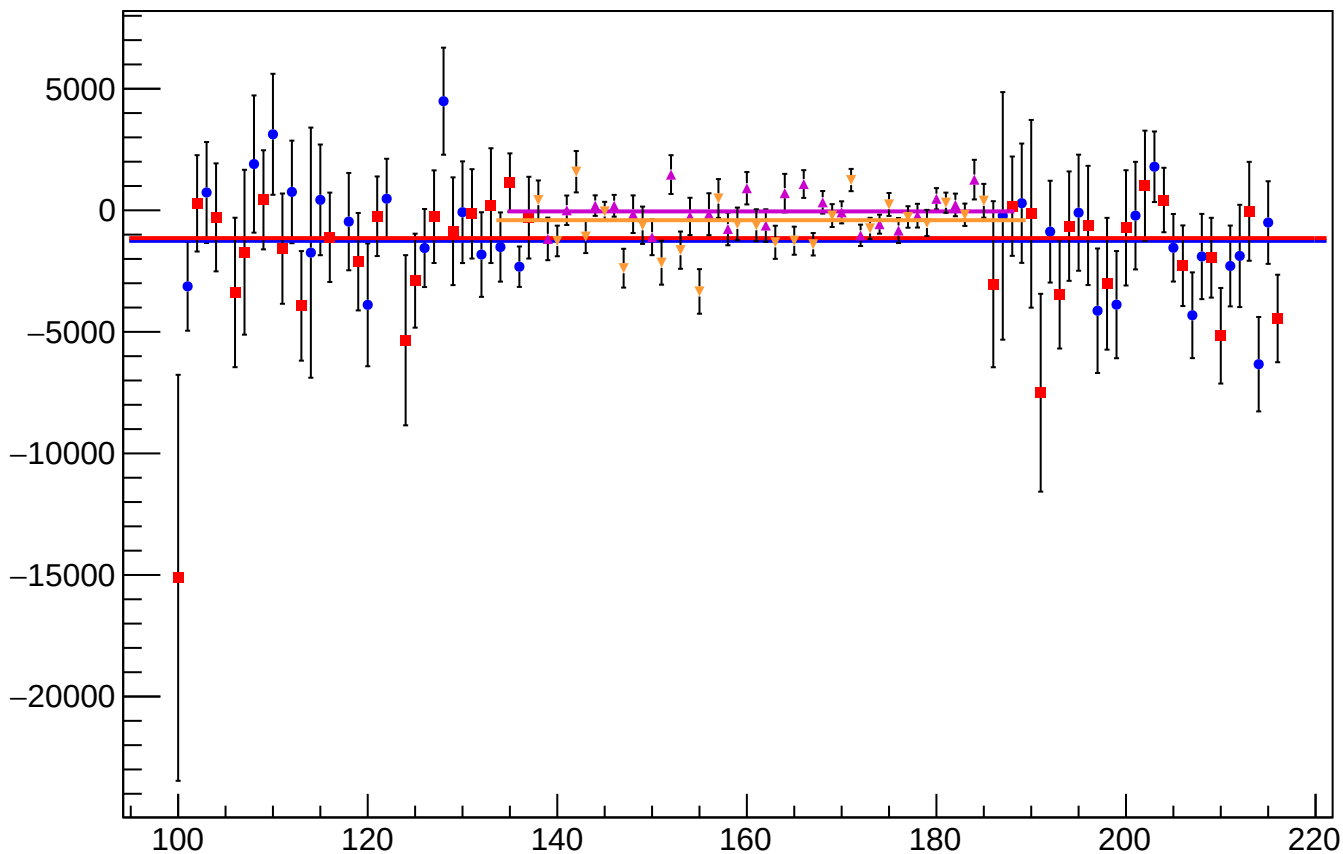
Left In: 58.397 $\pm$ 0.010  $\chi^2$ /NDF: 735208.2/22

+ sign 68.113 $\pm$ 0.009  $\chi^2$ /NDF: 12059626.2/55

All: 68.622 $\pm$ 0.006  $\chi^2$ /NDF: 25466044.3/113

- sign 69.167 $\pm$ 0.009  $\chi^2$ /NDF: 13399023.3/57

asym\_sam\_3726\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1255.552 \pm 330.533$   $\chi^2/\text{NDF}$ : 37.8/30

Left Out:  $-406.322 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-1144.074 \pm 349.121$   $\chi^2/\text{NDF}$ : 29.5/34

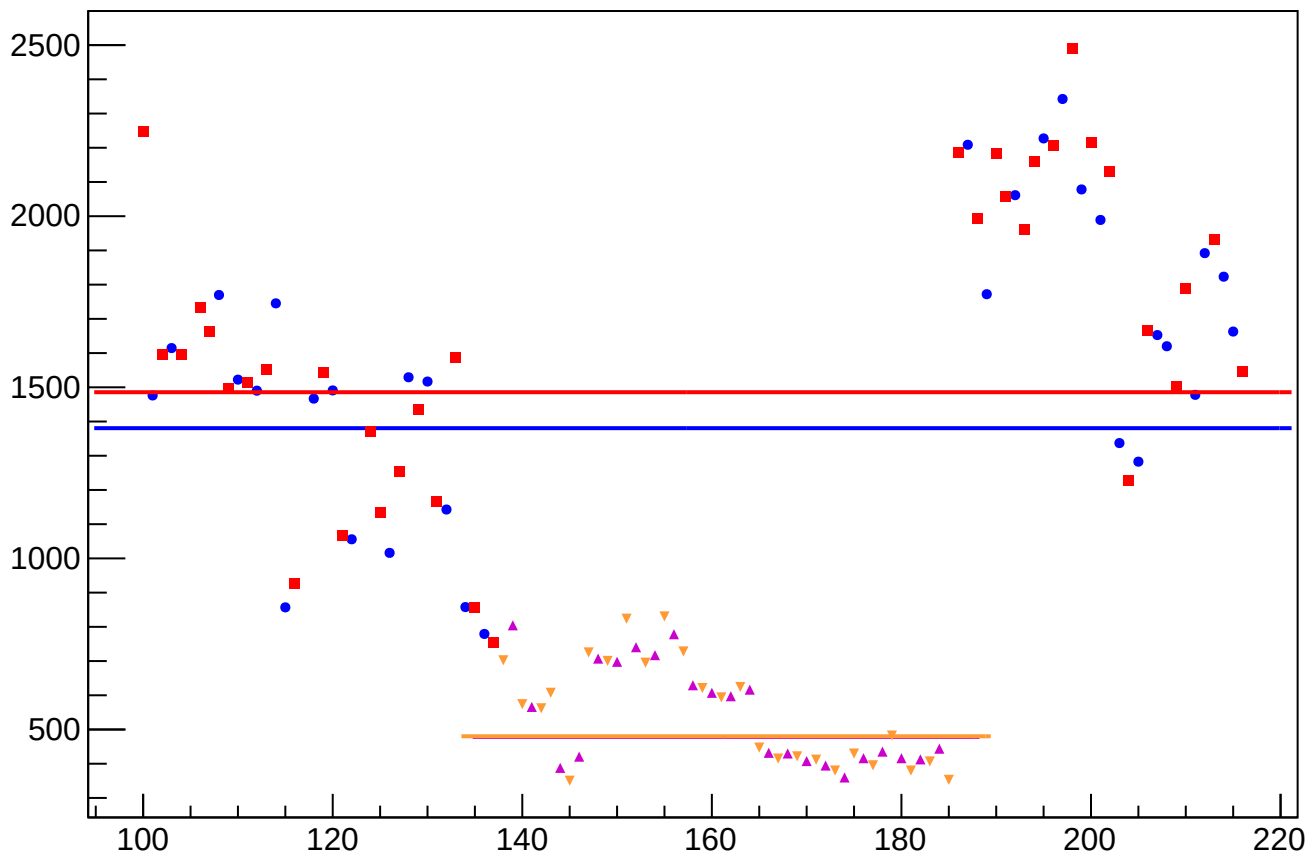
Left In:  $-44.831 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-495.849 \pm 107.320$   $\chi^2/\text{NDF}$ : 106.9/55

All:  $-328.820 \pm 76.776$   $\chi^2/\text{NDF}$ : 181.3/113

- sign  $-153.722 \pm 109.882$   $\chi^2/\text{NDF}$ : 69.4/57

asym\_sam\_3726\_avg\_reg\_correction\_rms vs Slug



Right In: 1380.581 $\pm$ 0.234  $\chi^2$ /NDF: 3337809.7/30

Left Out: 480.162 $\pm$ 0.080  $\chi^2$ /NDF: 2582213.9/24

Right Out: 1485.639 $\pm$ 0.247  $\chi^2$ /NDF: 3082622.9/34

Left In: 478.084 $\pm$ 0.082  $\chi^2$ /NDF: 2215520.4/22

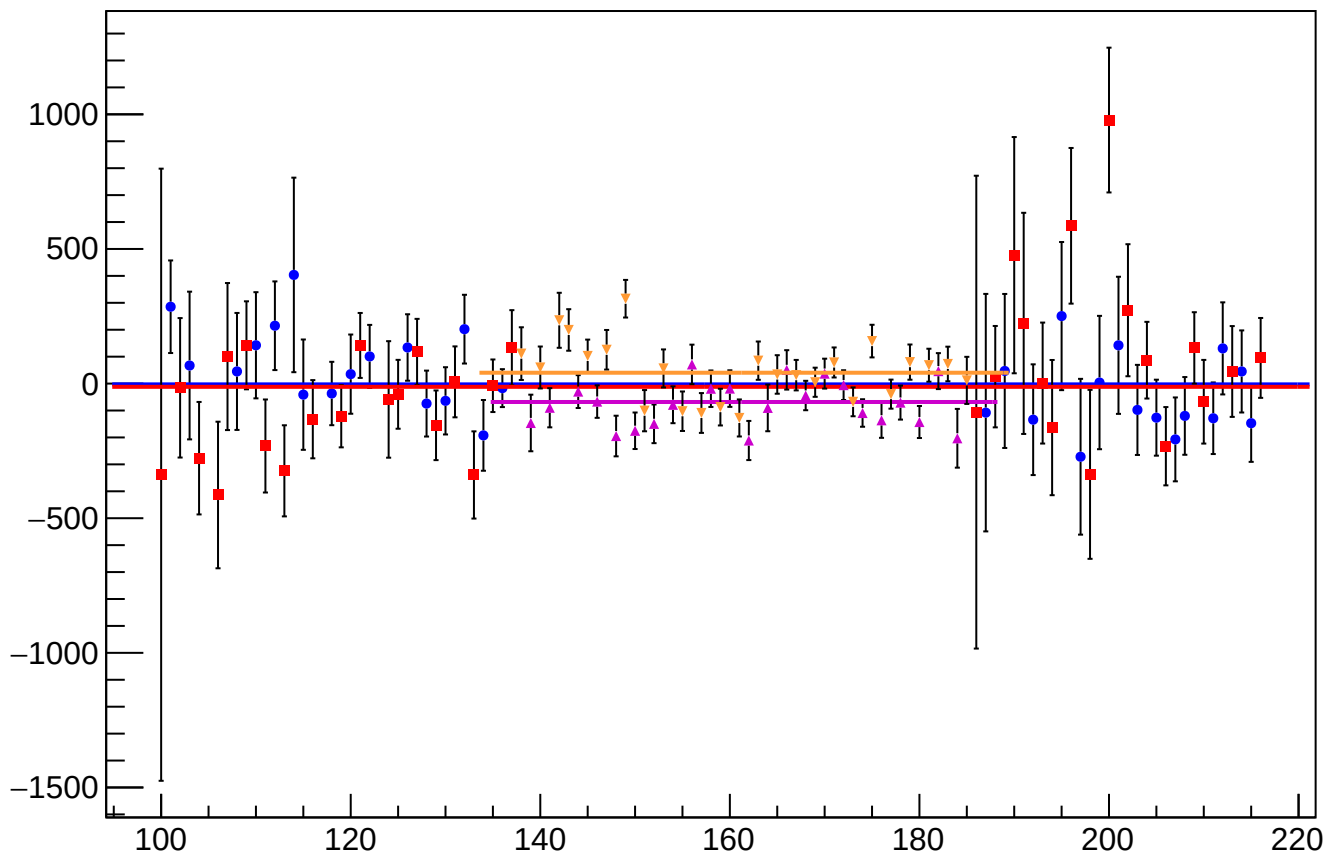
+ sign 575.086 $\pm$ 0.076  $\chi^2$ /NDF: 19197272.7/55

All: 576.456 $\pm$ 0.054  $\chi^2$ /NDF: 39503724.7/11

- sign 577.892 $\pm$ 0.078  $\chi^2$ /NDF: 20305784.5/57



# cor\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $-2.913 \pm 27.457$   $\chi^2/\text{NDF}$ : 22.6/30

Left Out:  $40.344 \pm 13.402$   $\chi^2/\text{NDF}$ : 59.4/24

Right Out:  $-11.997 \pm 28.542$   $\chi^2/\text{NDF}$ : 47.8/34

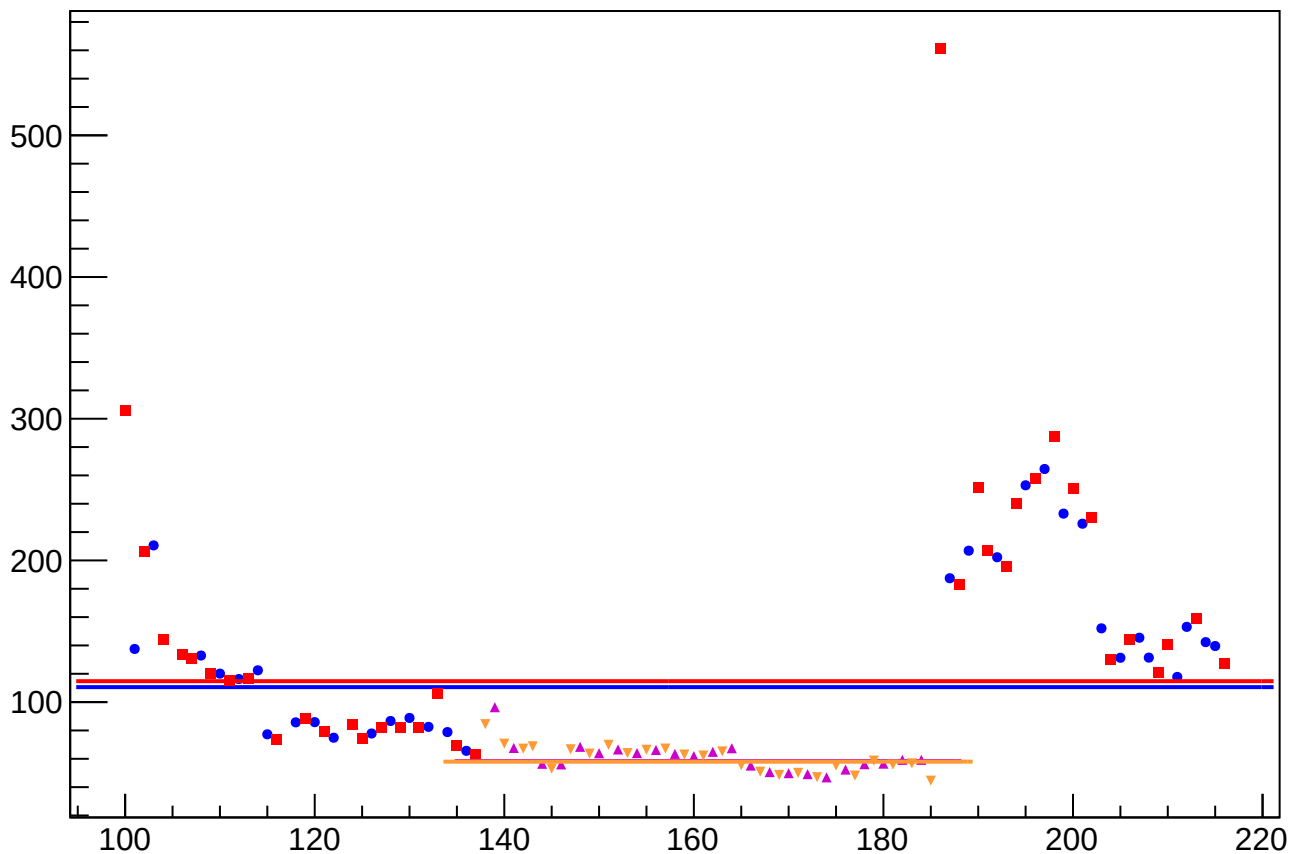
Left In:  $-68.343 \pm 13.866$   $\chi^2/\text{NDF}$ : 31.7/22

+ sign  $32.021 \pm 12.044$   $\chi^2/\text{NDF}$ : 84.0/55

All:  $-11.216 \pm 8.664$   $\chi^2/\text{NDF}$ : 193.4/113

- sign  $-57.584 \pm 12.472$   $\chi^2/\text{NDF}$ : 82.7/57

cor\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 110.579 $\pm$ 0.019  $\chi^2$ /NDF: 5327877.7/30

Left Out: 57.996 $\pm$ 0.009  $\chi^2$ /NDF:807648.7/24

Right Out: 114.776 $\pm$ 0.020  $\chi^2$ /NDF: 6342864.7/34

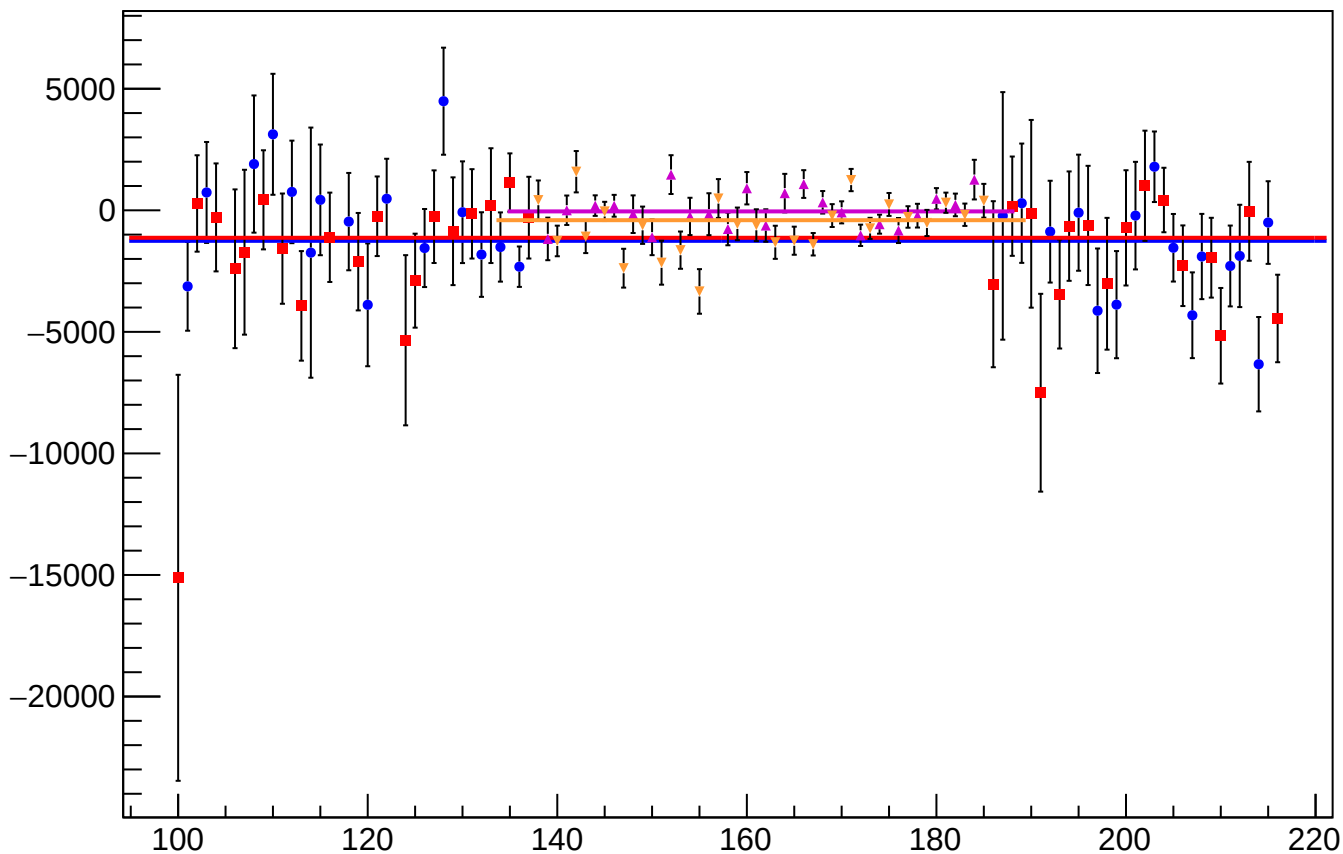
Left In: 58.397 $\pm$ 0.010  $\chi^2$ /NDF:735208.2/22

+ sign 68.113 $\pm$ 0.009  $\chi^2$ /NDF: 12059628.5/55

All: 68.619 $\pm$ 0.006  $\chi^2$ /NDF: 25458632.5/113

- sign 69.162 $\pm$ 0.009  $\chi^2$ /NDF: 13391680.4/57

asym\_sam\_3726\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1255.537 \pm 330.534$   $\chi^2/\text{NDF}$ : 37.8/30

Left Out:  $-406.320 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-1129.892 \pm 349.386$   $\chi^2/\text{NDF}$ : 29.1/34

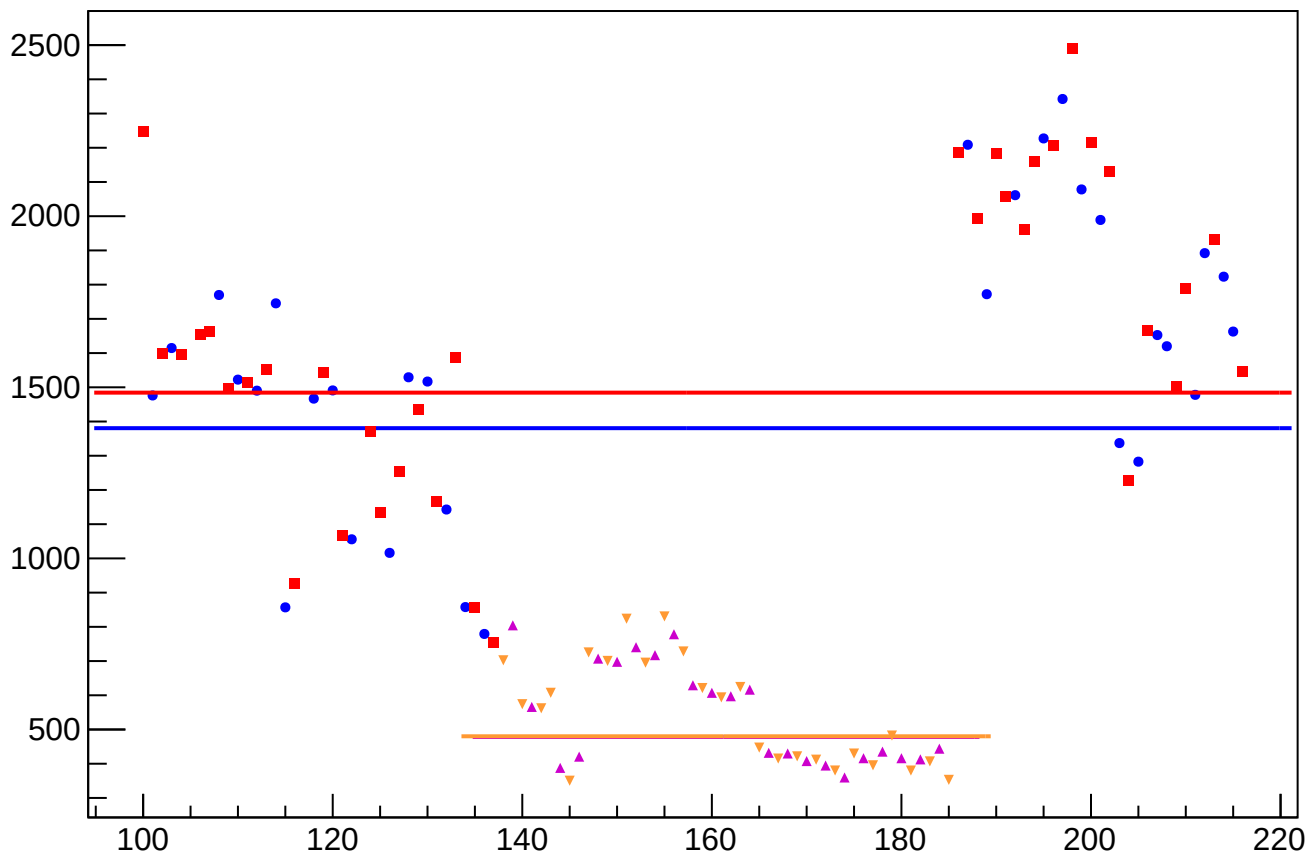
Left In:  $-44.830 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-495.846 \pm 107.320$   $\chi^2/\text{NDF}$ : 106.9/55

All:  $-328.073 \pm 76.779$   $\chi^2/\text{NDF}$ : 180.7/113

- sign  $-152.170 \pm 109.890$   $\chi^2/\text{NDF}$ : 68.8/57

asym\_sam\_3726\_avg\_cor\_correction\_rms vs Slug



Right In: 1380.583 $\pm$ 0.234  $\chi^2/\text{NDF}$ : 3337836.2/30

Left Out: 480.162 $\pm$ 0.080  $\chi^2/\text{NDF}$ : 2582209.1/24

Right Out: 1484.413 $\pm$ 0.247  $\chi^2/\text{NDF}$ : 3075128.0/34

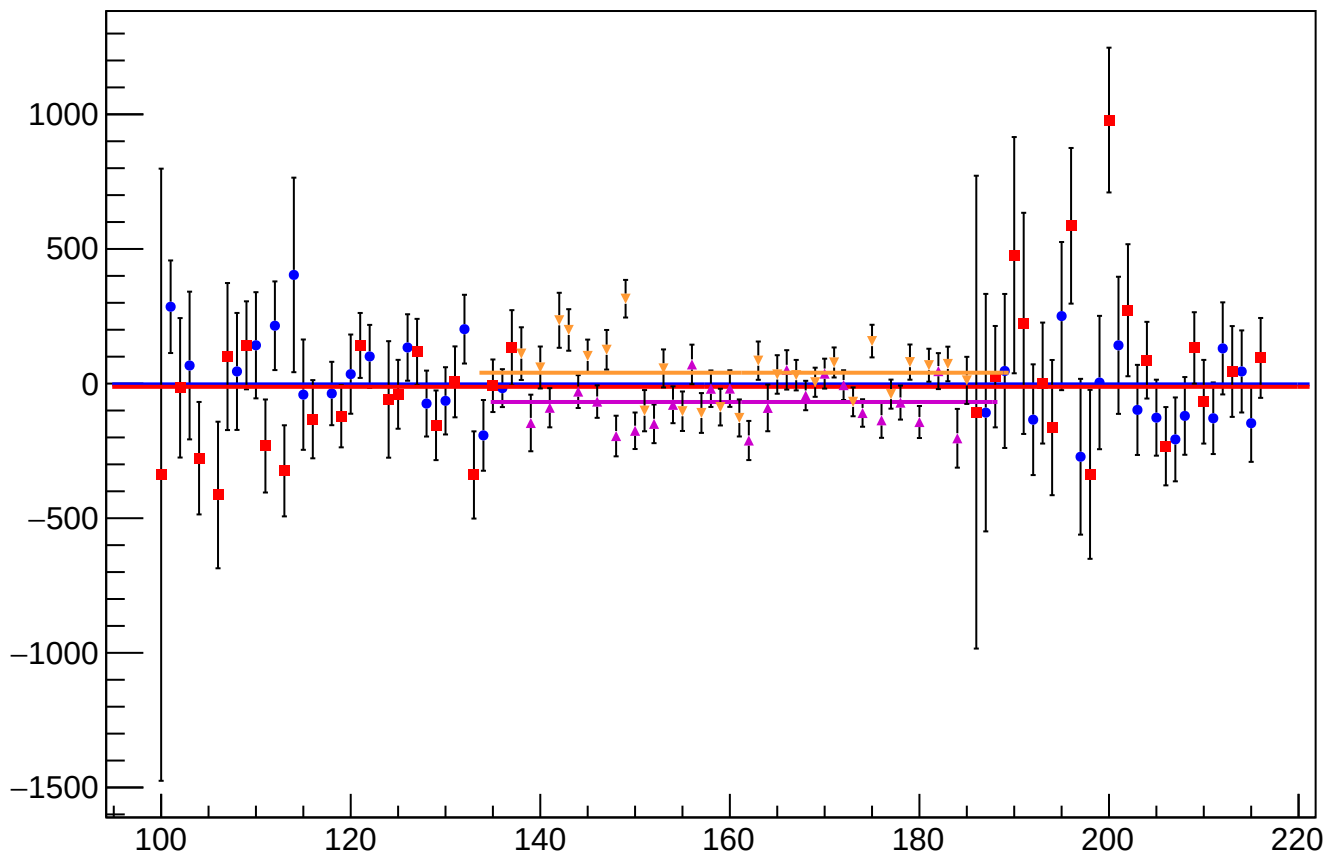
Left In: 478.084 $\pm$ 0.082  $\chi^2/\text{NDF}$ : 2215518.9/22

+ sign 575.086 $\pm$ 0.076  $\chi^2/\text{NDF}$ : 19197302.1/55

All: 576.330 $\pm$ 0.054  $\chi^2/\text{NDF}$ : 39439192.3/11

- sign 577.635 $\pm$ 0.078  $\chi^2/\text{NDF}$ : 20241339.4/57

# eigen\_cor\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $-2.913 \pm 27.457$   $\chi^2/\text{NDF}: 22.6/30$

Left Out:  $40.344 \pm 13.402$   $\chi^2/\text{NDF}: 59.4/24$

Right Out:  $-11.997 \pm 28.542$   $\chi^2/\text{NDF}: 47.8/34$

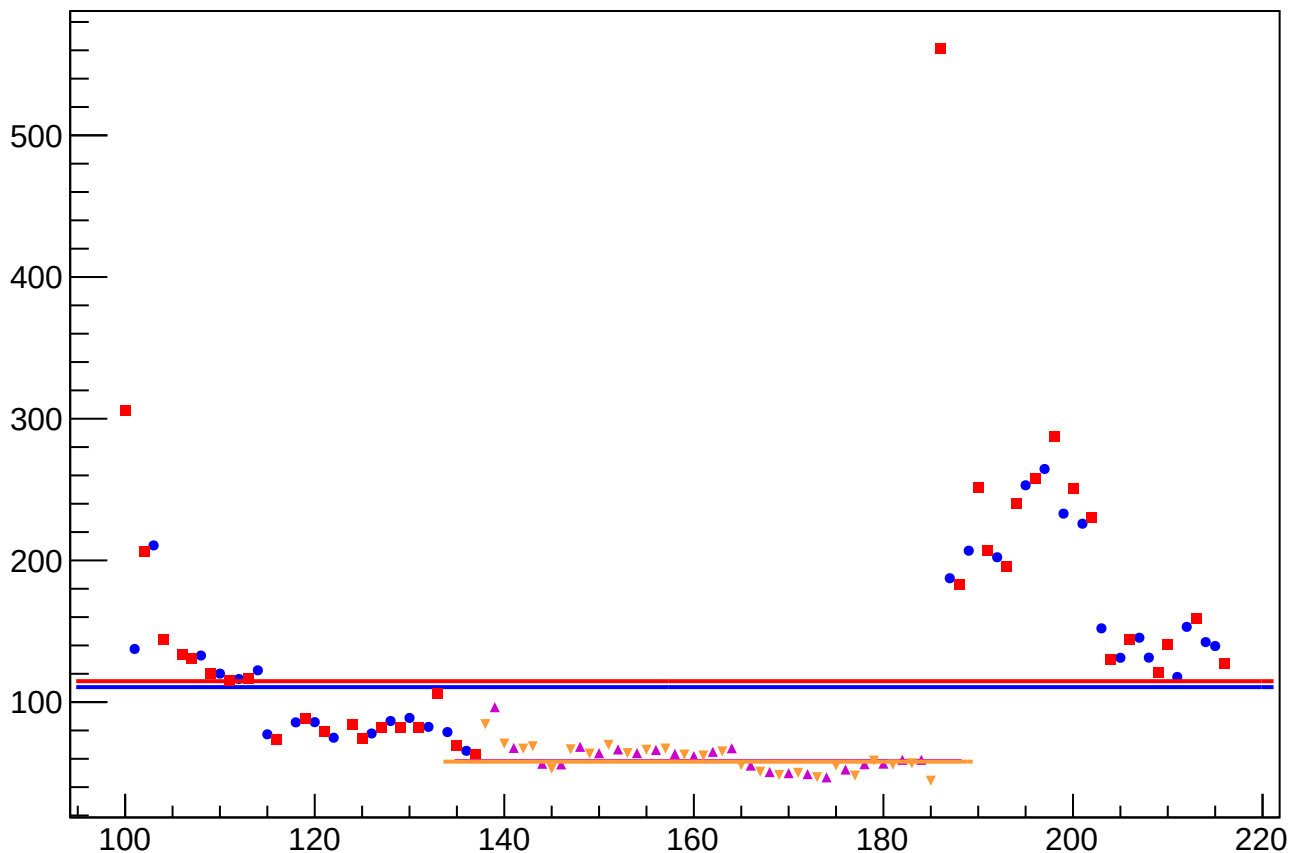
Left In:  $-68.343 \pm 13.866$   $\chi^2/\text{NDF}: 31.7/22$

+ sign  $32.021 \pm 12.044$   $\chi^2/\text{NDF}: 84.0/55$

All:  $-11.216 \pm 8.664$   $\chi^2/\text{NDF}: 193.4/113$

- sign  $-57.584 \pm 12.472$   $\chi^2/\text{NDF}: 82.7/57$

# eigen\_cor\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 110.579±/0.019  $\chi^2/\text{NDF}$ : 5327877.7/30

Left Out: 57.996±/0.009  $\chi^2/\text{NDF}$ :807648.7/24

Right Out: 114.776±/0.020  $\chi^2/\text{NDF}$ : 6342864.7/34

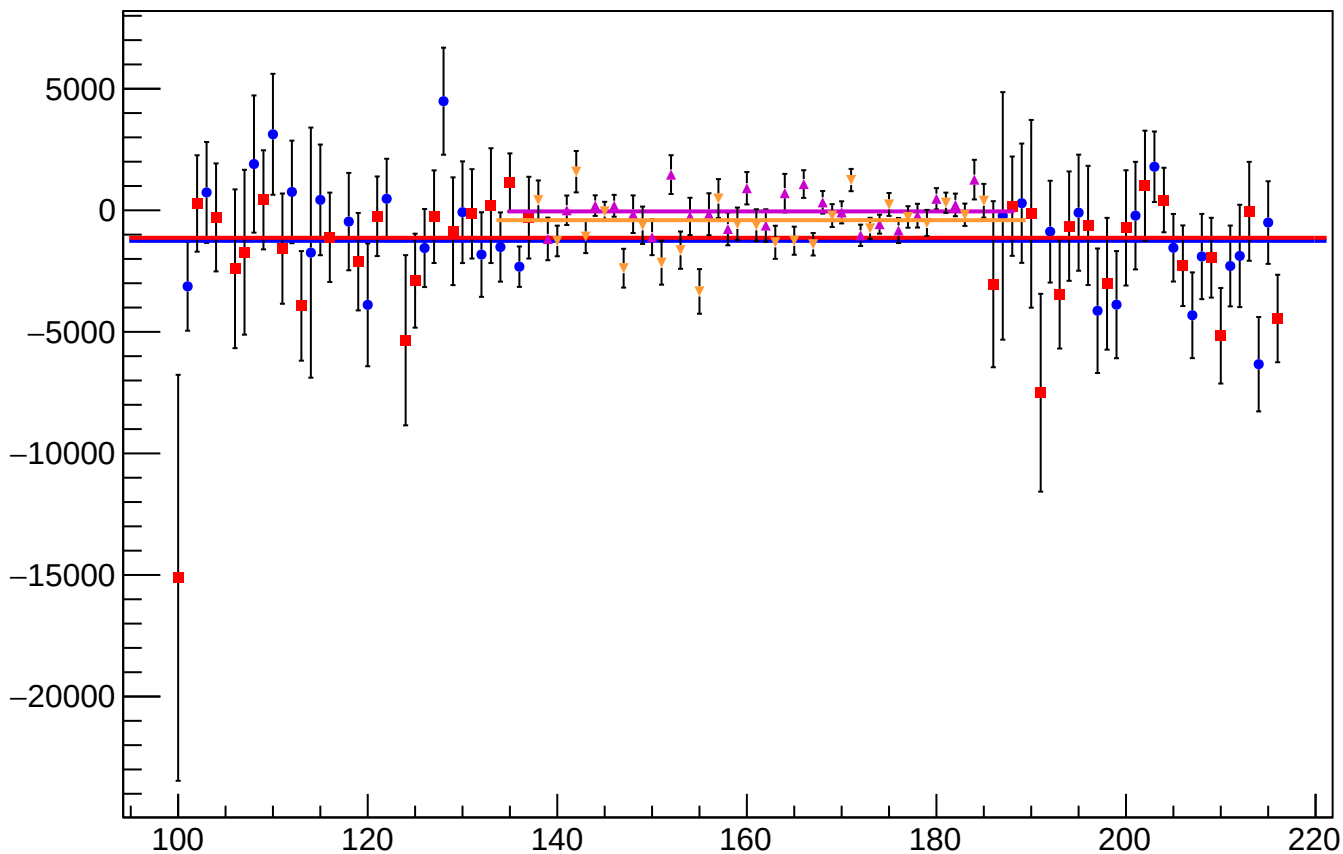
Left In: 58.397±/0.010  $\chi^2/\text{NDF}$ :735208.2/22

+ sign 68.113±/0.009  $\chi^2/\text{NDF}$ : 12059628.5/55

All: 68.619±/0.006  $\chi^2/\text{NDF}$ : 25458632.5/113

- sign 69.162±/0.009  $\chi^2/\text{NDF}$ : 13391680.4/57

asym\_sam\_3726\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1255.537 \pm 330.534$   $\chi^2/\text{NDF}$ : 37.8/30

Left Out:  $-406.320 \pm 113.468$   $\chi^2/\text{NDF}$ : 63.2/24

Right Out:  $-1129.892 \pm 349.386$   $\chi^2/\text{NDF}$ : 29.1/34

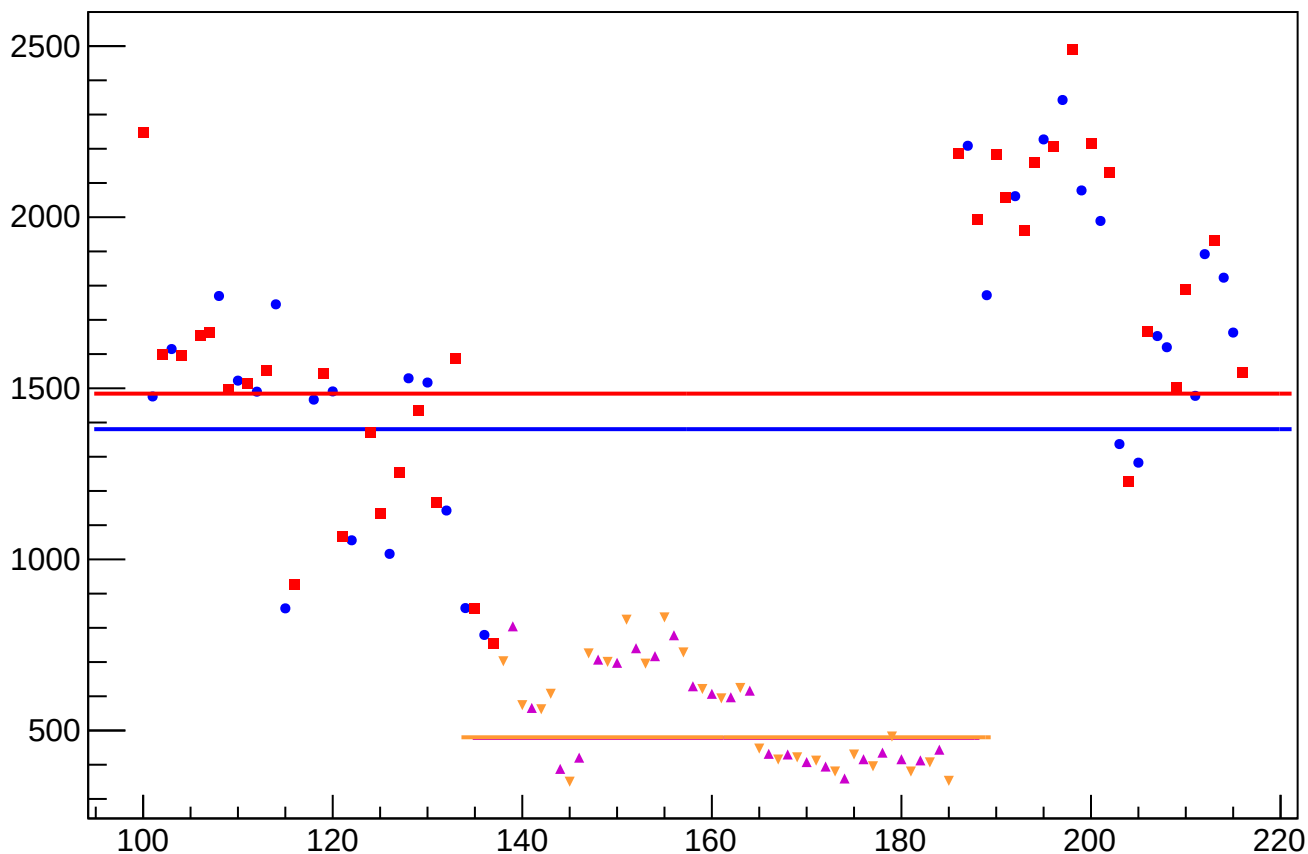
Left In:  $-44.830 \pm 115.765$   $\chi^2/\text{NDF}$ : 31.1/22

+ sign  $-495.846 \pm 107.320$   $\chi^2/\text{NDF}$ : 106.9/55

All:  $-328.073 \pm 76.779$   $\chi^2/\text{NDF}$ : 180.7/113

- sign  $-152.170 \pm 109.890$   $\chi^2/\text{NDF}$ : 68.8/57

asym\_sam\_3726\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1380.583 $\pm$ 0.234  $\chi^2$ /NDF: 3337836.2/30

Left Out: 480.162 $\pm$ 0.080  $\chi^2$ /NDF: 2582209.1/24

Right Out: 1484.413 $\pm$ 0.247  $\chi^2$ /NDF: 3075128.0/34

Left In: 478.084 $\pm$ 0.082  $\chi^2$ /NDF: 2215518.9/22

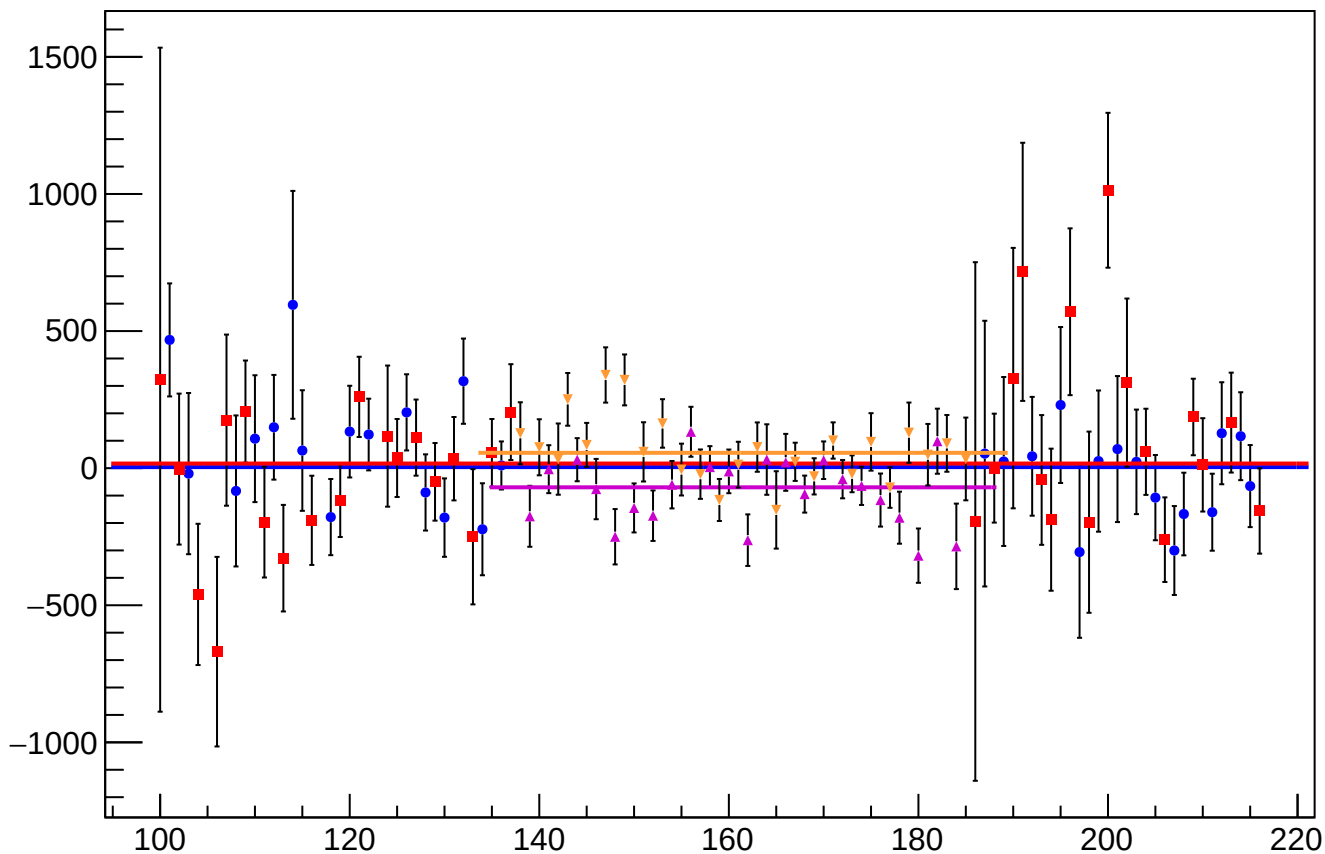
+ sign 575.086 $\pm$ 0.076  $\chi^2$ /NDF: 19197302.1/55

All: 576.330 $\pm$ 0.054  $\chi^2$ /NDF: 39439192.3/11

- sign 577.635 $\pm$ 0.078  $\chi^2$ /NDF: 20241339.4/57



# dit\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $3.822 \pm 31.179$   $\chi^2/\text{NDF}: 30.9/30$

Left Out:  $55.949 \pm 17.949$   $\chi^2/\text{NDF}: 38.3/24$

Right Out:  $16.900 \pm 32.542$   $\chi^2/\text{NDF}: 48.9/34$

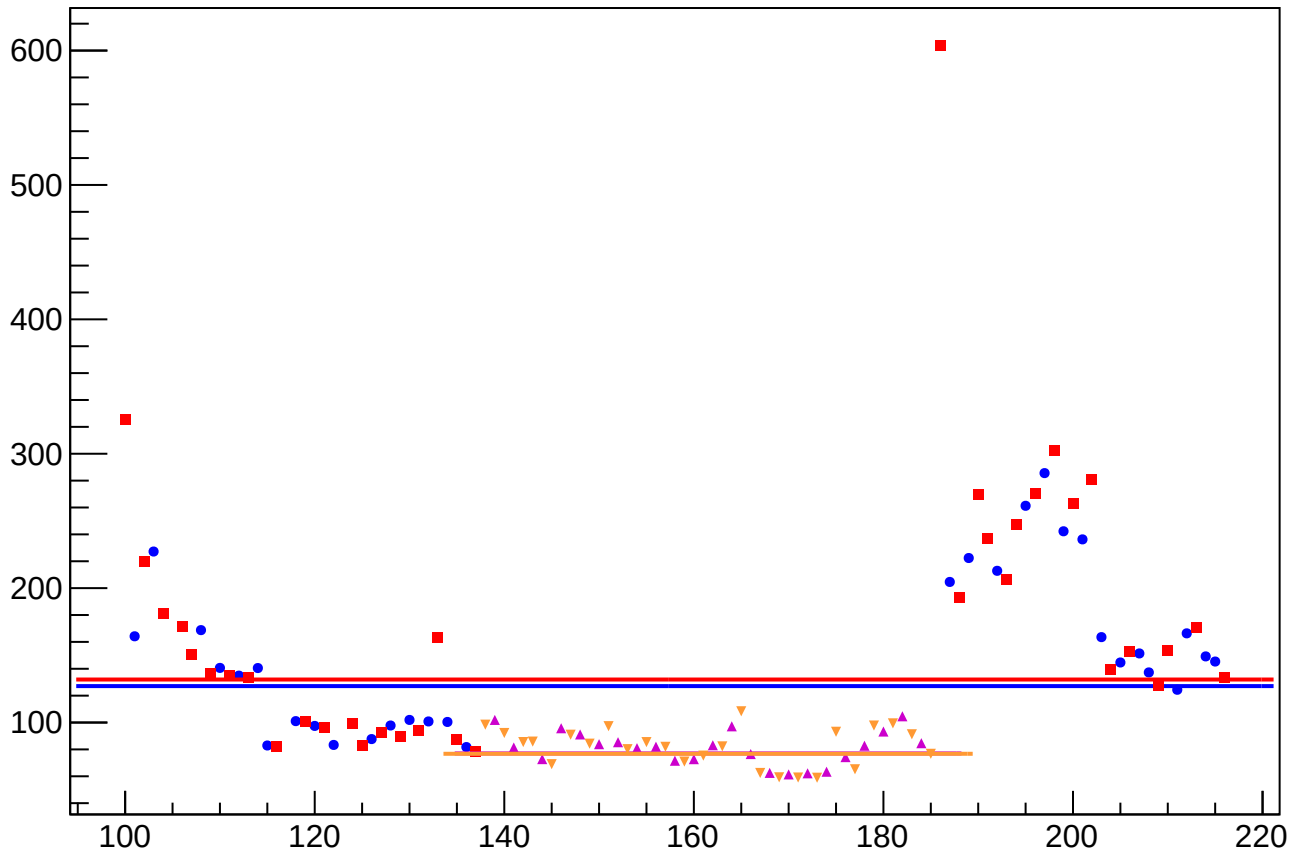
Left In:  $-69.844 \pm 18.497$   $\chi^2/\text{NDF}: 34.5/22$

+ sign  $42.973 \pm 15.556$   $\chi^2/\text{NDF}: 71.3/55$

All:  $-1.325 \pm 11.181$   $\chi^2/\text{NDF}: 176.9/113$

- sign  $-48.663 \pm 16.081$   $\chi^2/\text{NDF}: 88.8/57$

dit\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 127.104 $\pm$ 0.022  $\chi^2$ /NDF: 4310470.4/30

Left Out: 76.744 $\pm$ 0.013  $\chi^2$ /NDF:1234629.1/24

Right Out: 132.005 $\pm$ 0.023  $\chi^2$ /NDF: 5560839.3/34

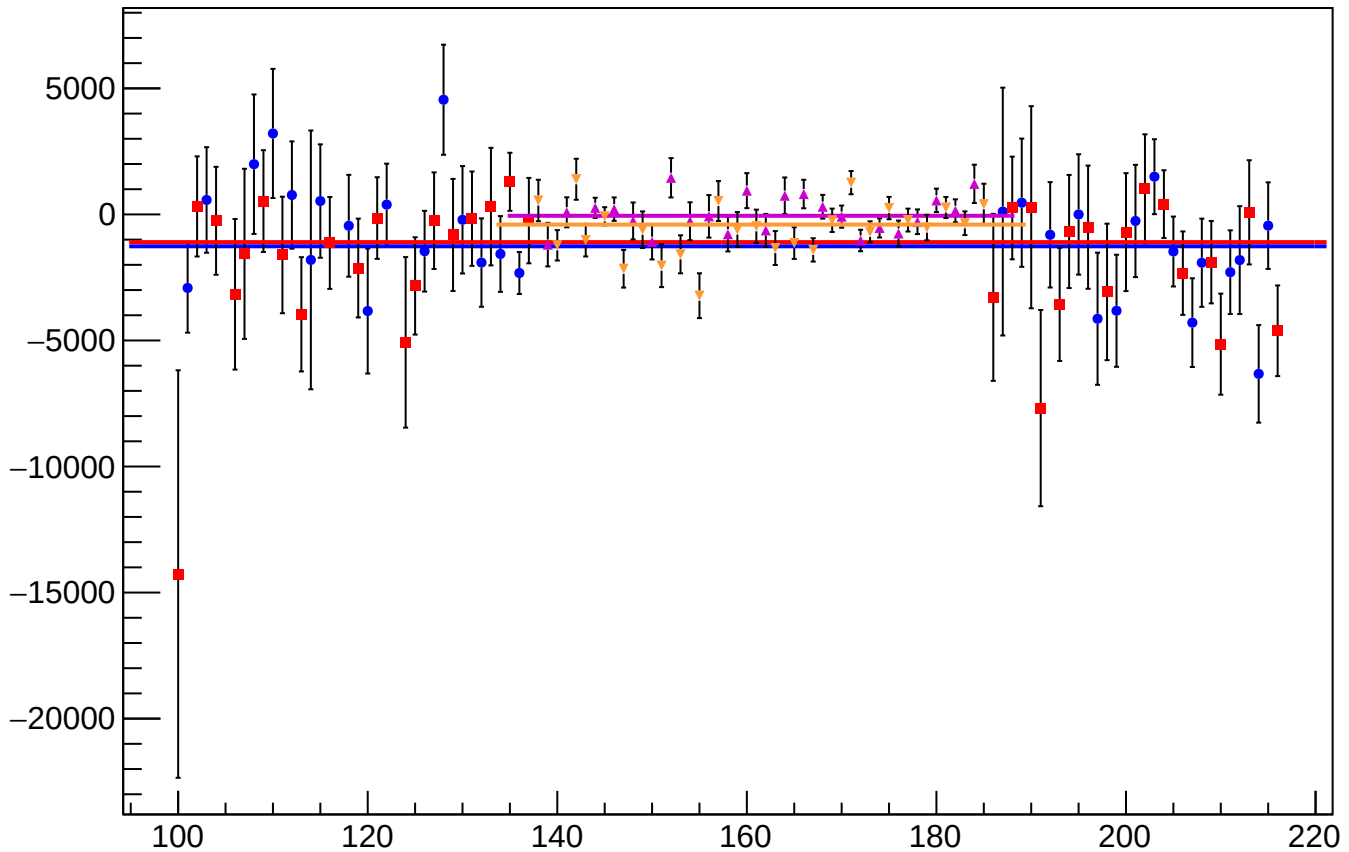
Left In: 77.018 $\pm$ 0.013  $\chi^2$ /NDF:858871.7/22

+ sign 89.279 $\pm$ 0.011  $\chi^2$ /NDF: 9464019.3/55

All: 89.843 $\pm$ 0.008  $\chi^2$ /NDF: 20205130.1/113

- sign 90.445 $\pm$ 0.011  $\chi^2$ /NDF: 10735682.9/57

asym\_sam\_3726\_avg\_dit\_correction\_mean vs Slug



Right In:  $-1264.890 \pm 332.191$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-403.375 \pm 111.773$   $\chi^2/\text{NDF}$ : 60.7/24

Right Out:  $-1098.609 \pm 346.988$   $\chi^2/\text{NDF}$ : 31.3/34

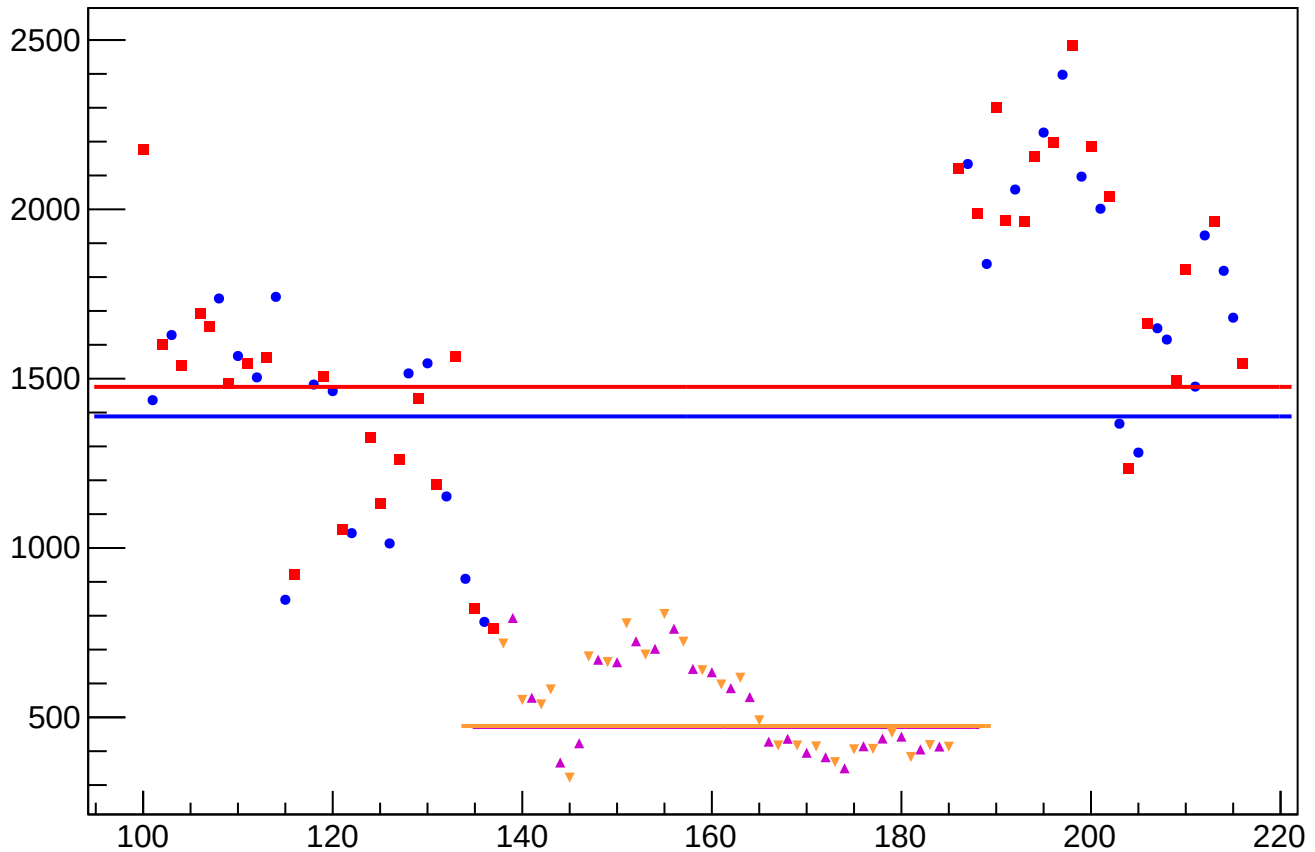
Left In:  $-54.192 \pm 114.223$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-490.991 \pm 105.937$   $\chi^2/\text{NDF}$ : 103.5/55

All:  $-327.640 \pm 75.797$   $\chi^2/\text{NDF}$ : 178.5/113

- sign  $-156.303 \pm 108.496$   $\chi^2/\text{NDF}$ : 70.1/57

asym\_sam\_3726\_avg\_dit\_correction\_rms vs Slug



Right In: 1388.561+/-0.235  $\chi^2/\text{NDF}$ : 3313638.6/30

Left Out: 474.294+/-0.079  $\chi^2/\text{NDF}$ : 2538995.4/24

+ sign 567.275+/-0.075  $\chi^2/\text{NDF}$ : 19461539.1/55

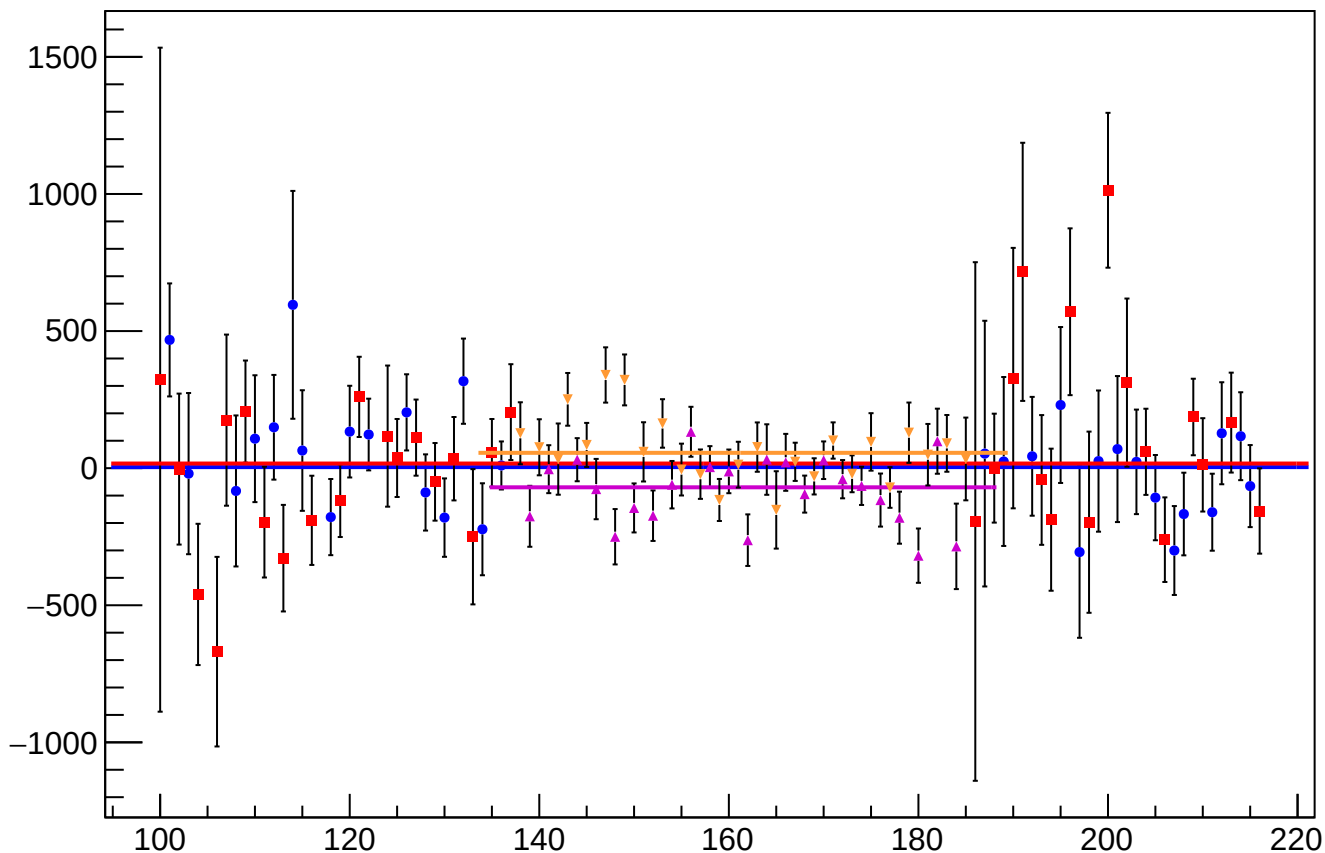
Right Out: 1475.740+/-0.245  $\chi^2/\text{NDF}$ : 3142973.3/34

All: 568.431+/-0.054  $\chi^2/\text{NDF}$ : 39930177.0/11

Left In: 471.456+/-0.081  $\chi^2/\text{NDF}$ : 2209343.4/22

- sign 569.643+/-0.077  $\chi^2/\text{NDF}$ : 20468150.2/57

# eigen\_dit\_asym\_sam\_3726\_avg\_mean vs Slug



Right In:  $3.823 \pm 31.179$   $\chi^2/\text{NDF}$ : 30.9/30

Left Out:  $55.948 \pm 17.949$   $\chi^2/\text{NDF}$ : 38.3/24

Right Out:  $16.903 \pm 32.542$   $\chi^2/\text{NDF}$ : 48.9/34

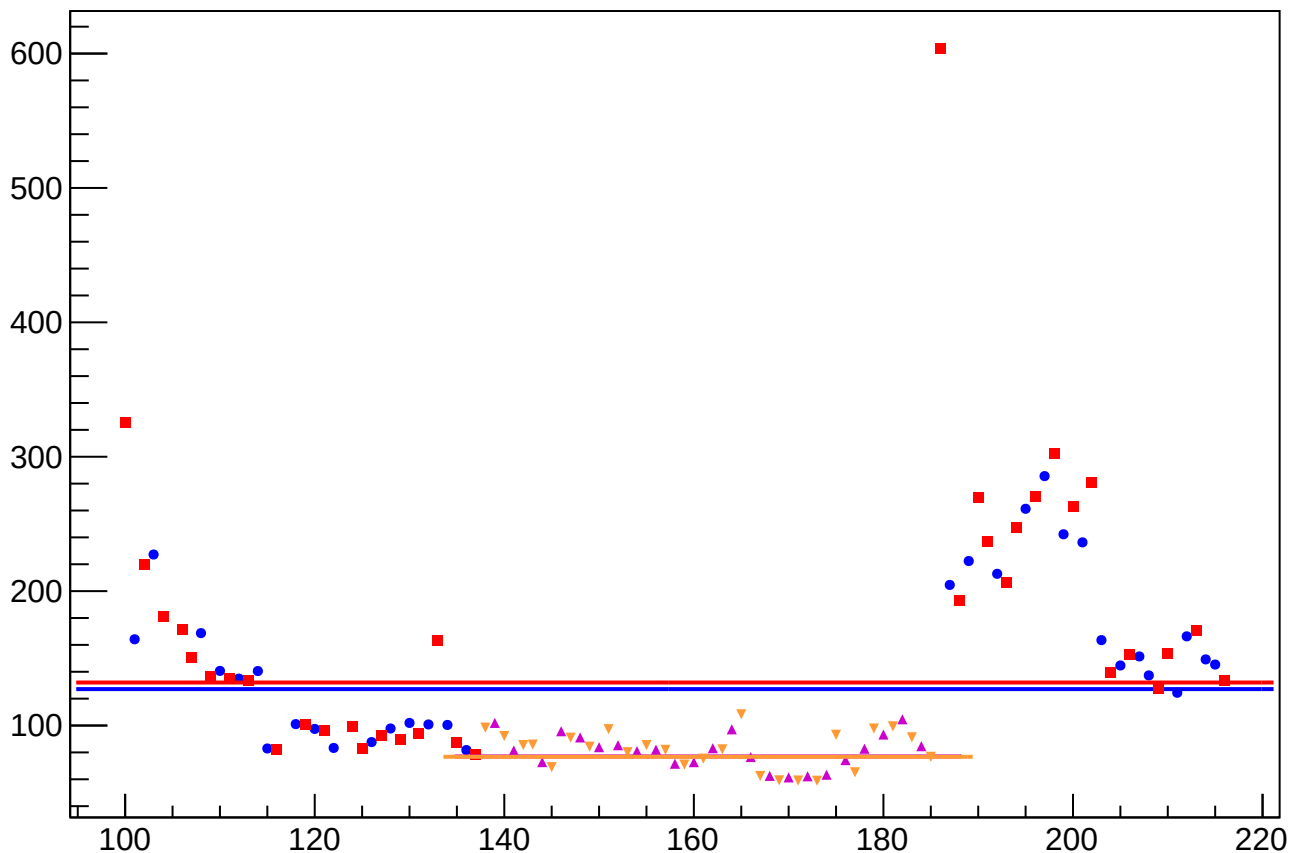
Left In:  $-69.843 \pm 18.497$   $\chi^2/\text{NDF}$ : 34.5/22

+ sign  $42.973 \pm 15.556$   $\chi^2/\text{NDF}$ : 71.3/55

All:  $-1.324 \pm 11.181$   $\chi^2/\text{NDF}$ : 176.9/113

- sign  $-48.661 \pm 16.081$   $\chi^2/\text{NDF}$ : 88.8/57

eigen\_dit\_asym\_sam\_3726\_avg\_rms vs Slug



Right In: 127.104 $\pm$ 0.022  $\chi^2$ /NDF: 4310483.4/30

Left Out: 76.744 $\pm$ 0.013  $\chi^2$ /NDF:1234627.7/24

Right Out: 132.005 $\pm$ 0.023  $\chi^2$ /NDF: 5560850.1/34

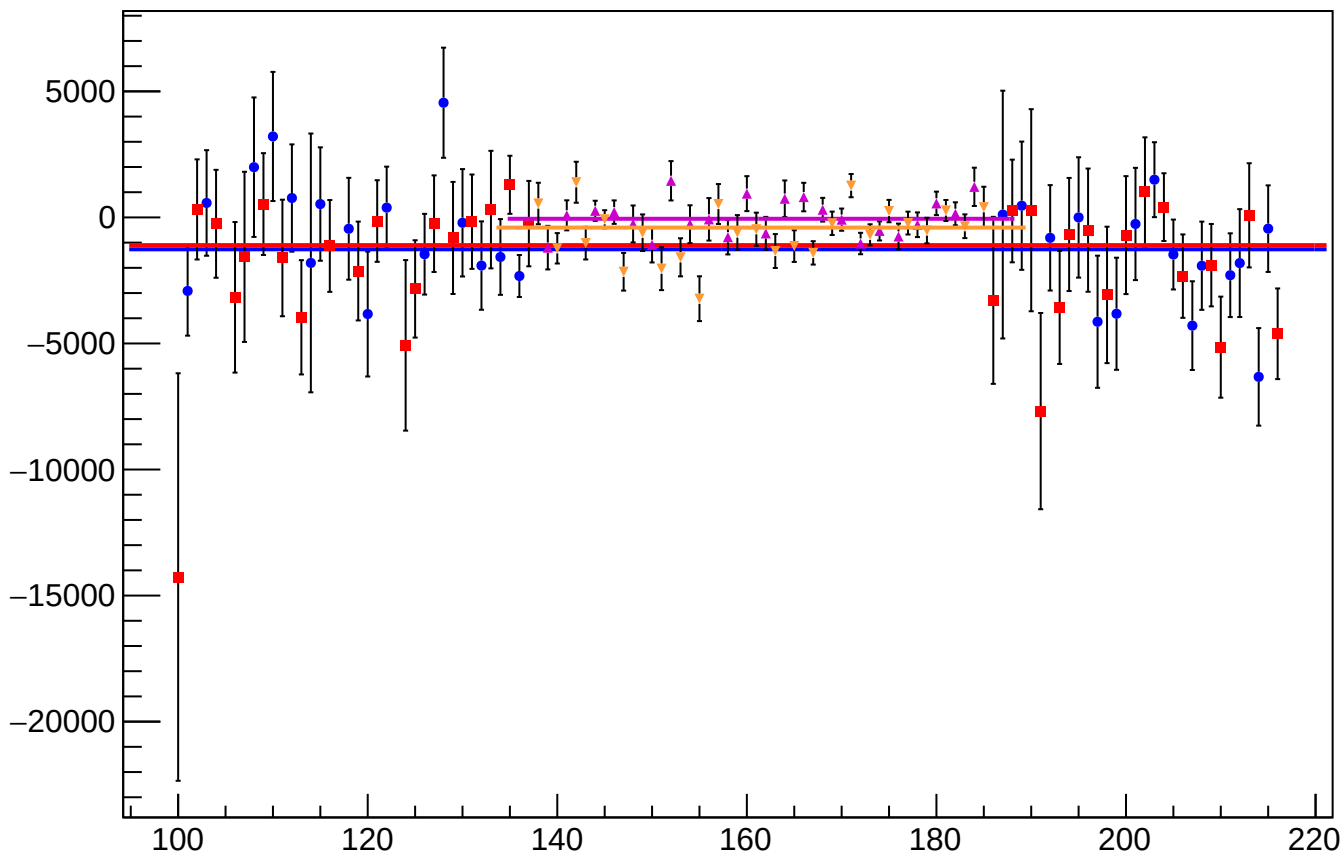
Left In: 77.018 $\pm$ 0.013  $\chi^2$ /NDF:858863.2/22

+ sign 89.279 $\pm$ 0.011  $\chi^2$ /NDF: 9463960.3/55

All: 89.843 $\pm$ 0.008  $\chi^2$ /NDF: 20205009.7/113

- sign 90.445 $\pm$ 0.011  $\chi^2$ /NDF: 10735621.0/57

asym\_sam\_3726\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1264.887 \pm 332.190$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-403.375 \pm 111.773$   $\chi^2/\text{NDF}$ : 60.7/24

Right Out:  $-1098.608 \pm 346.988$   $\chi^2/\text{NDF}$ : 31.3/34

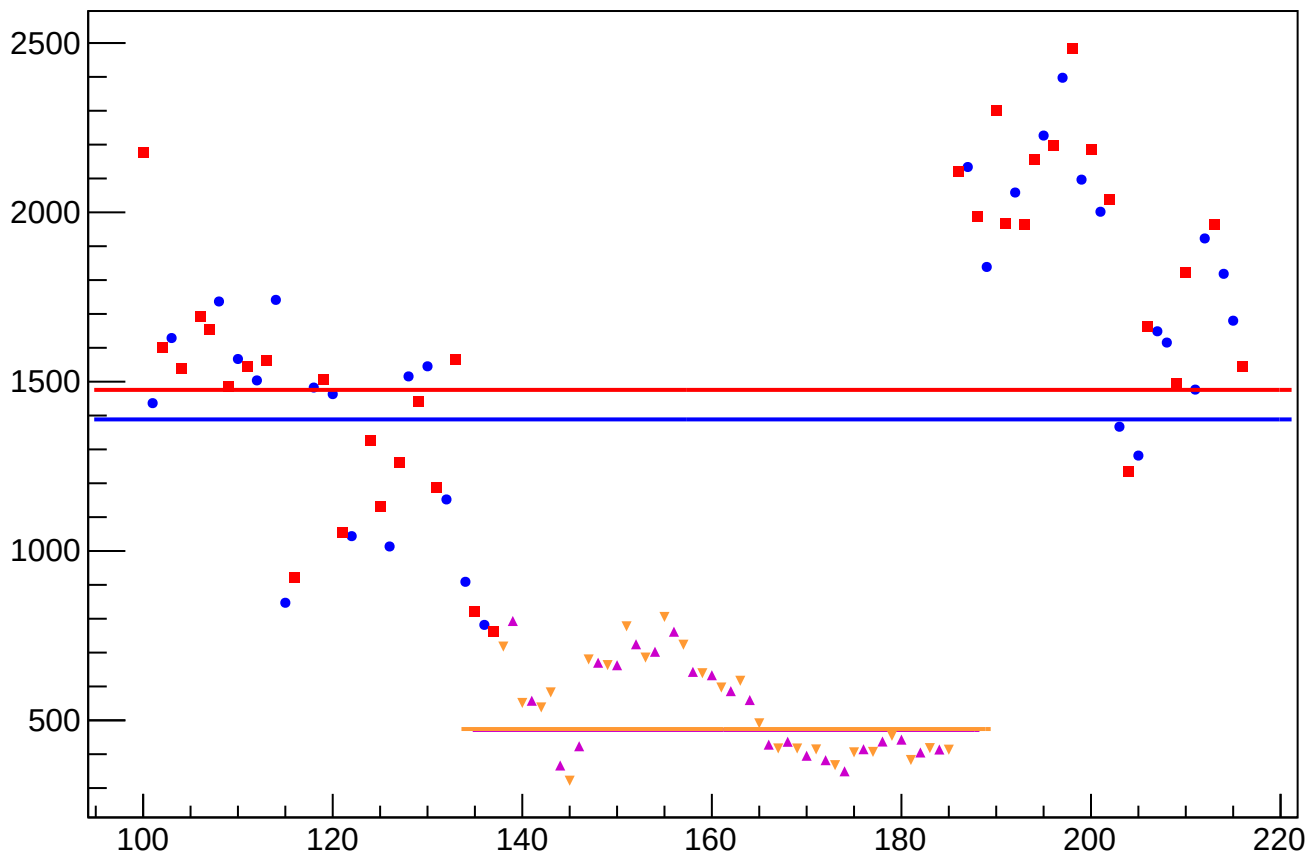
Left In:  $-54.192 \pm 114.223$   $\chi^2/\text{NDF}$ : 30.7/22

+ sign  $-490.991 \pm 105.937$   $\chi^2/\text{NDF}$ : 103.5/55

All:  $-327.640 \pm 75.797$   $\chi^2/\text{NDF}$ : 178.5/113

- sign  $-156.303 \pm 108.496$   $\chi^2/\text{NDF}$ : 70.1/57

asym\_sam\_3726\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1388.560+/-0.235  $\chi^2/\text{NDF}$ : 3313631.1/30

Left Out: 474.294+/-0.079  $\chi^2/\text{NDF}$ : 2538999.2/24

Right Out: 1475.738+/-0.245  $\chi^2/\text{NDF}$ : 3142969.9/34

Left In: 471.456+/-0.081  $\chi^2/\text{NDF}$ : 2209338.4/22

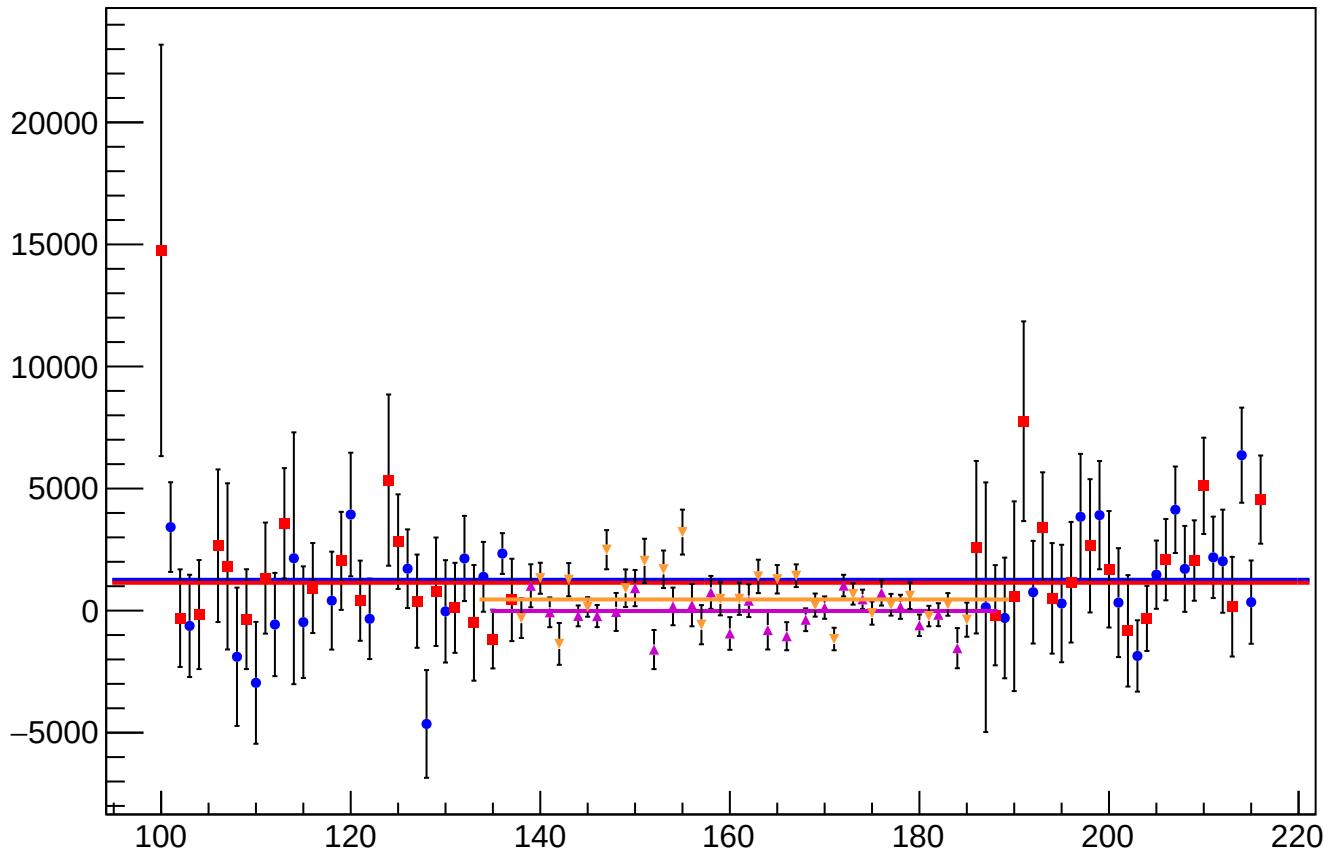
+ sign 567.275+/-0.075  $\chi^2/\text{NDF}$ : 19461538.8/55

All: 568.431+/-0.054  $\chi^2/\text{NDF}$ : 39930162.6/11

- sign 569.643+/-0.077  $\chi^2/\text{NDF}$ : 20468136.0/57



# asym\_sam\_3726\_avg\_mean vs Slug



Right In: 1262.700 $\pm$ 332.016  $\chi^2$ /NDF: 37.6/30

Left Out: 457.286 $\pm$ 114.351  $\chi^2$ /NDF:59.4/24

Right Out: 1140.358 $\pm$ 350.733  $\chi^2$ /NDF: 28.0/34

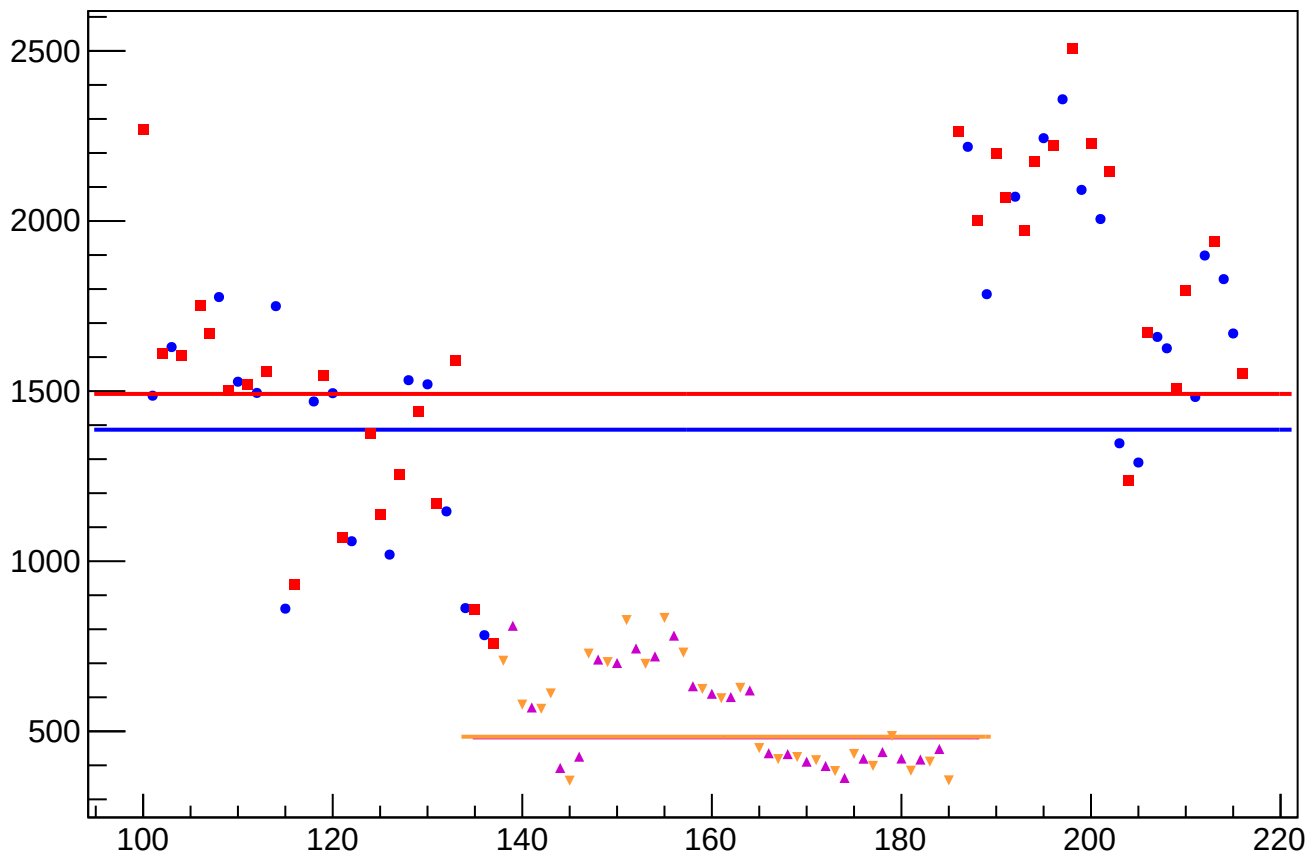
Left In: -15.089 $\pm$ 116.701  $\chi^2$ /NDF:30.3/22

+ sign 542.694 $\pm$ 108.118  $\chi^2$ /NDF: 102.2/55

All: 326.673 $\pm$ 77.359  $\chi^2$ /NDF: 178.4/113

- sign 100.081 $\pm$ 110.732  $\chi^2$ /NDF: 68.0/57

# asym\_sam\_3726\_avg\_rms vs Slug



Right In: 1386.613 $\pm$ 0.235  $\chi^2$ /NDF: 3346918.1/30

Left Out: 484.128 $\pm$ 0.081  $\chi^2$ /NDF:2548479.4/24

Right Out: 1491.756 $\pm$ 0.248  $\chi^2$ /NDF: 3112489.5/34

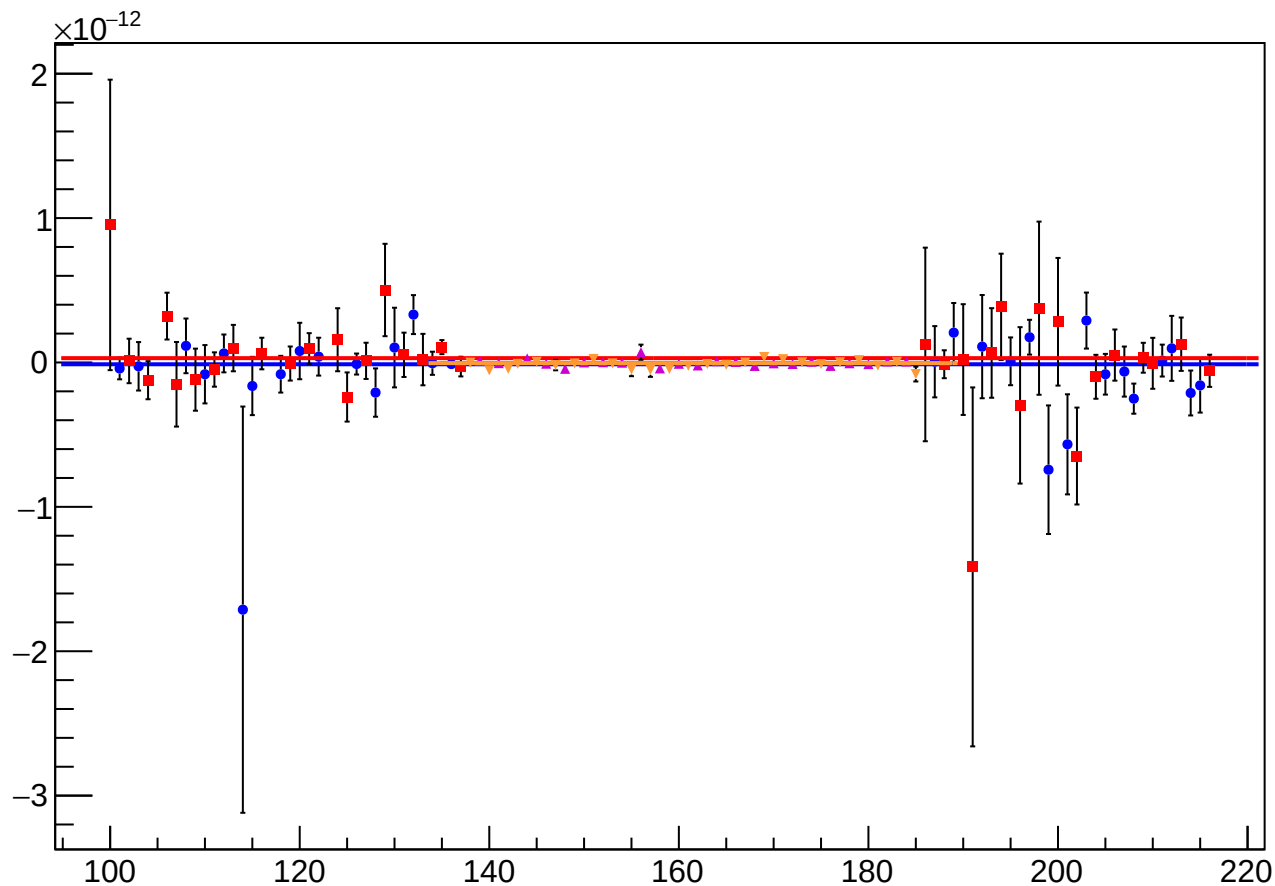
Left In: 482.160 $\pm$ 0.083  $\chi^2$ /NDF:2186689.9/22

+ sign 579.830 $\pm$ 0.076  $\chi^2$ /NDF: 19105586.6/55

All: 581.276 $\pm$ 0.055  $\chi^2$ /NDF: 39325543.0/11

- sign 582.793 $\pm$ 0.078  $\chi^2$ /NDF: 20219223.6/57

asym\_sam\_3726\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 31.0/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.0/34

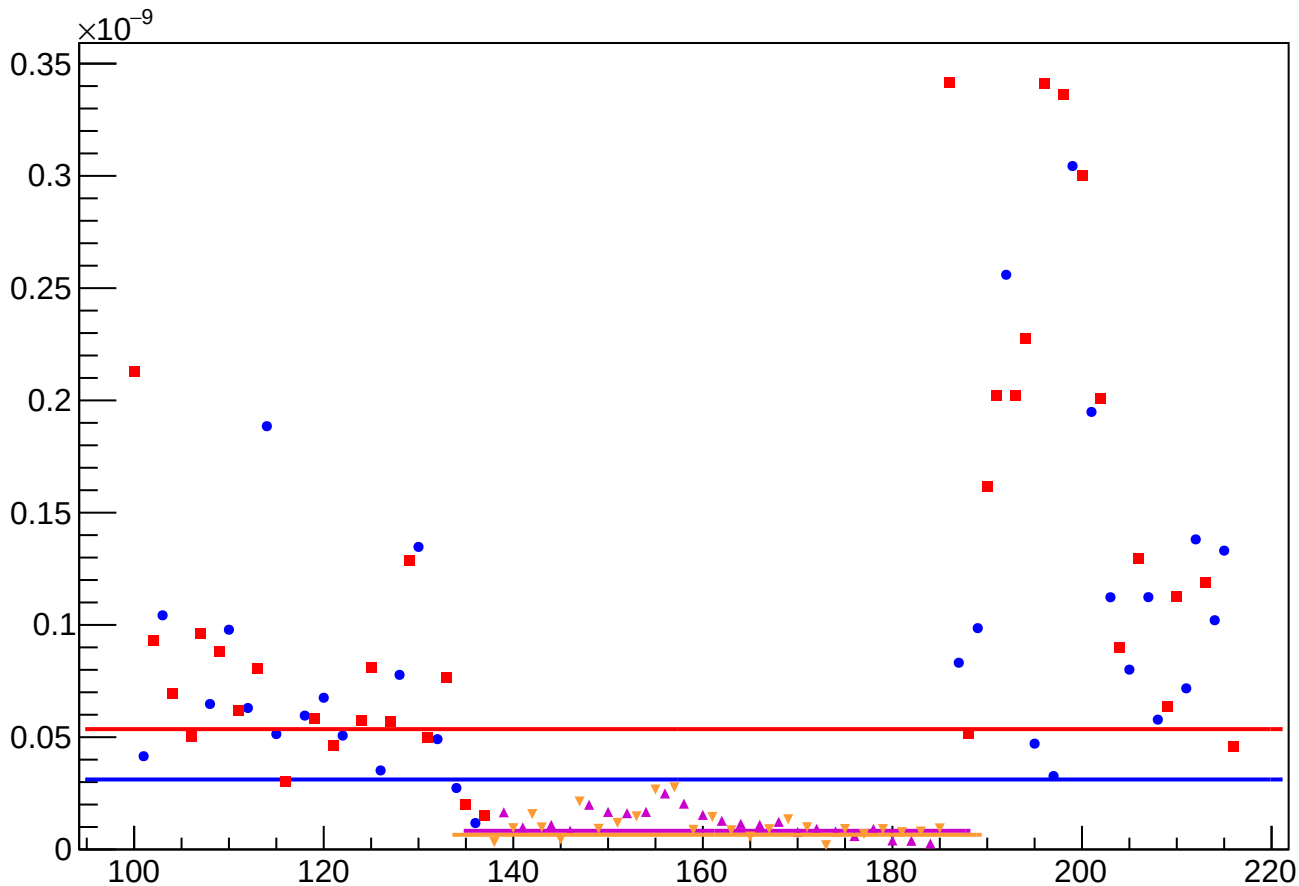
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.0/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.5/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 104.8/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.1/57

asym\_sam\_3726\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8545273.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3737127.3/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6715054.6/34

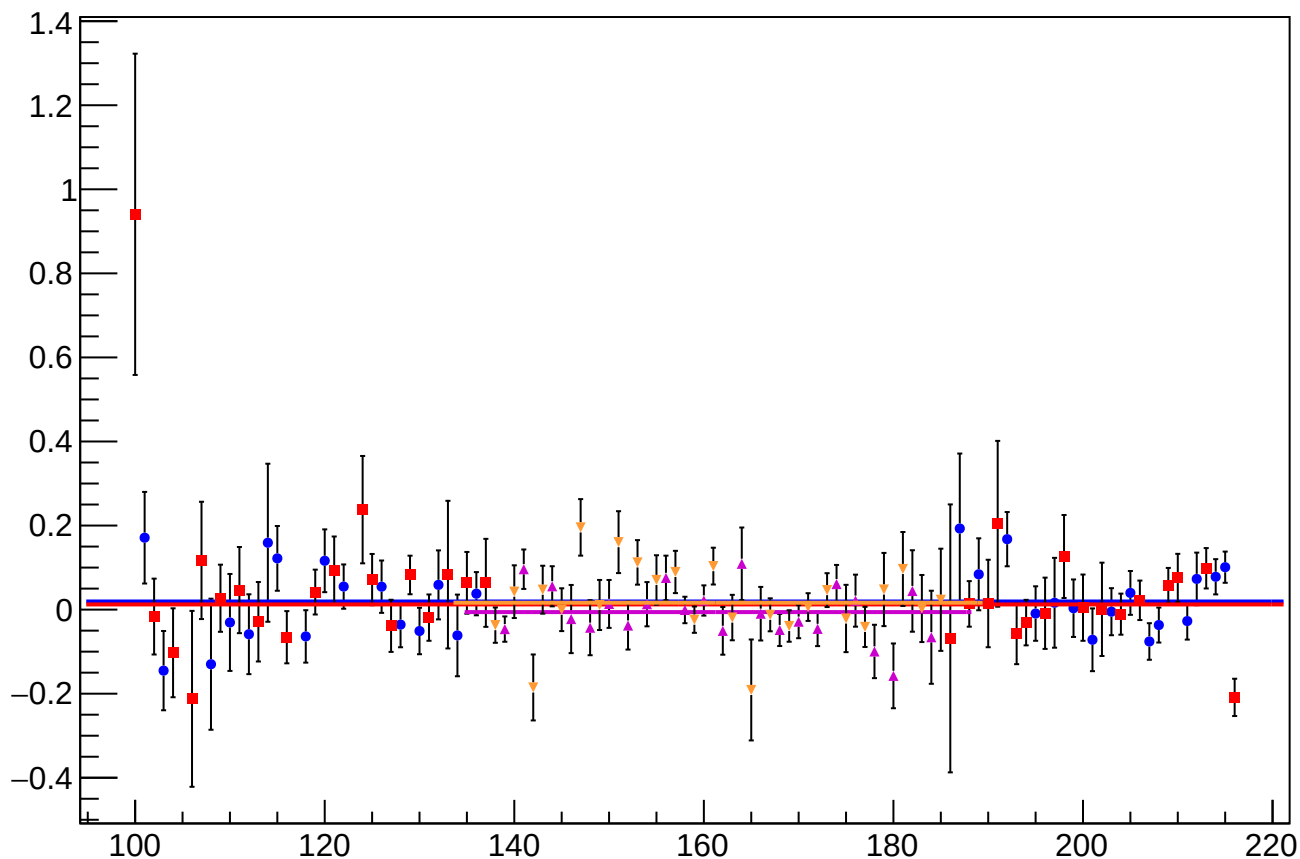
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2799238.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16794428.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 33969617.8/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16832954.5/57

asym\_sam\_3726\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}: 41.2/30$

Left Out:  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 41.1/24$

Right Out:  $0.012 \pm 0.012$   $\chi^2/\text{NDF}: 55.1/34$

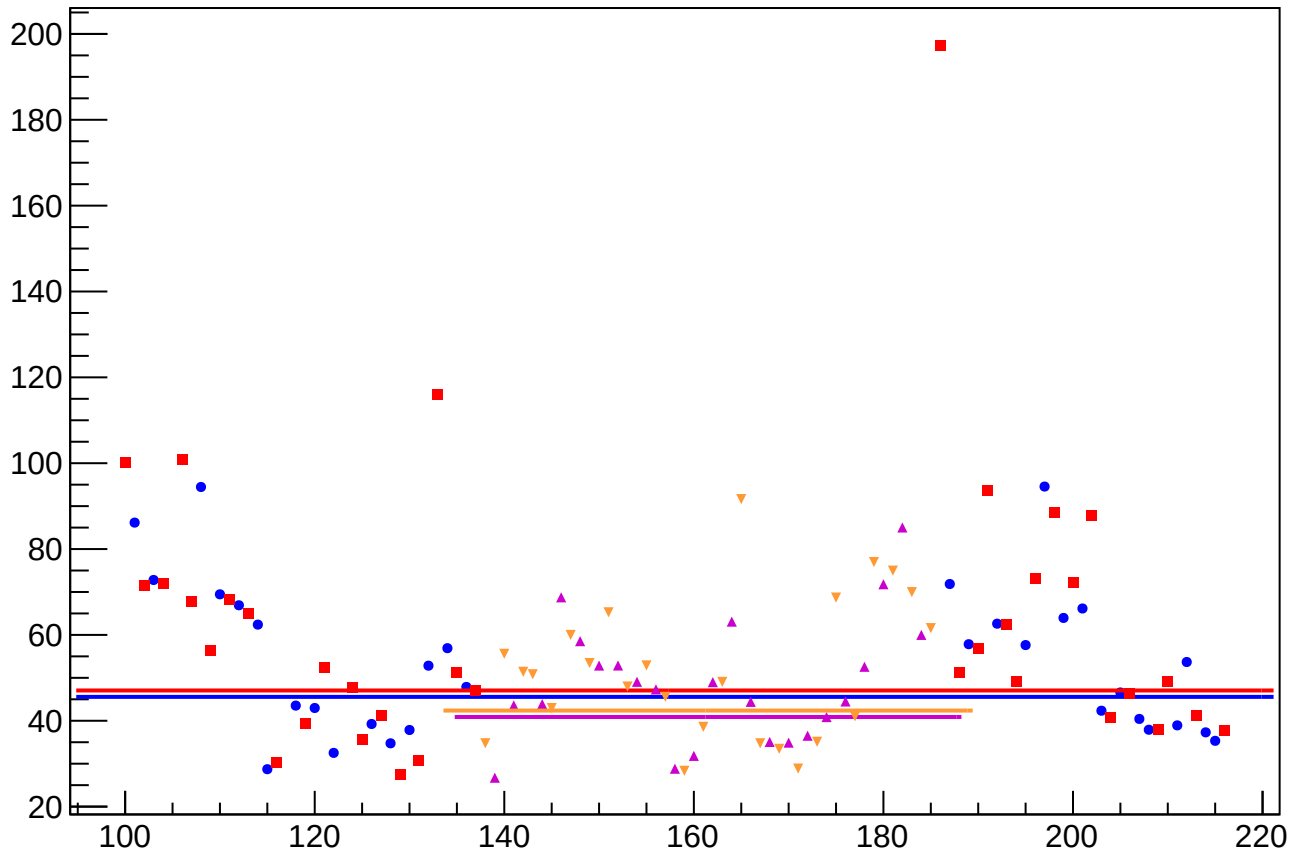
Left In:  $-0.006 \pm 0.010$   $\chi^2/\text{NDF}: 26.0/22$

+ sign  $0.018 \pm 0.008$   $\chi^2/\text{NDF}: 82.3/55$

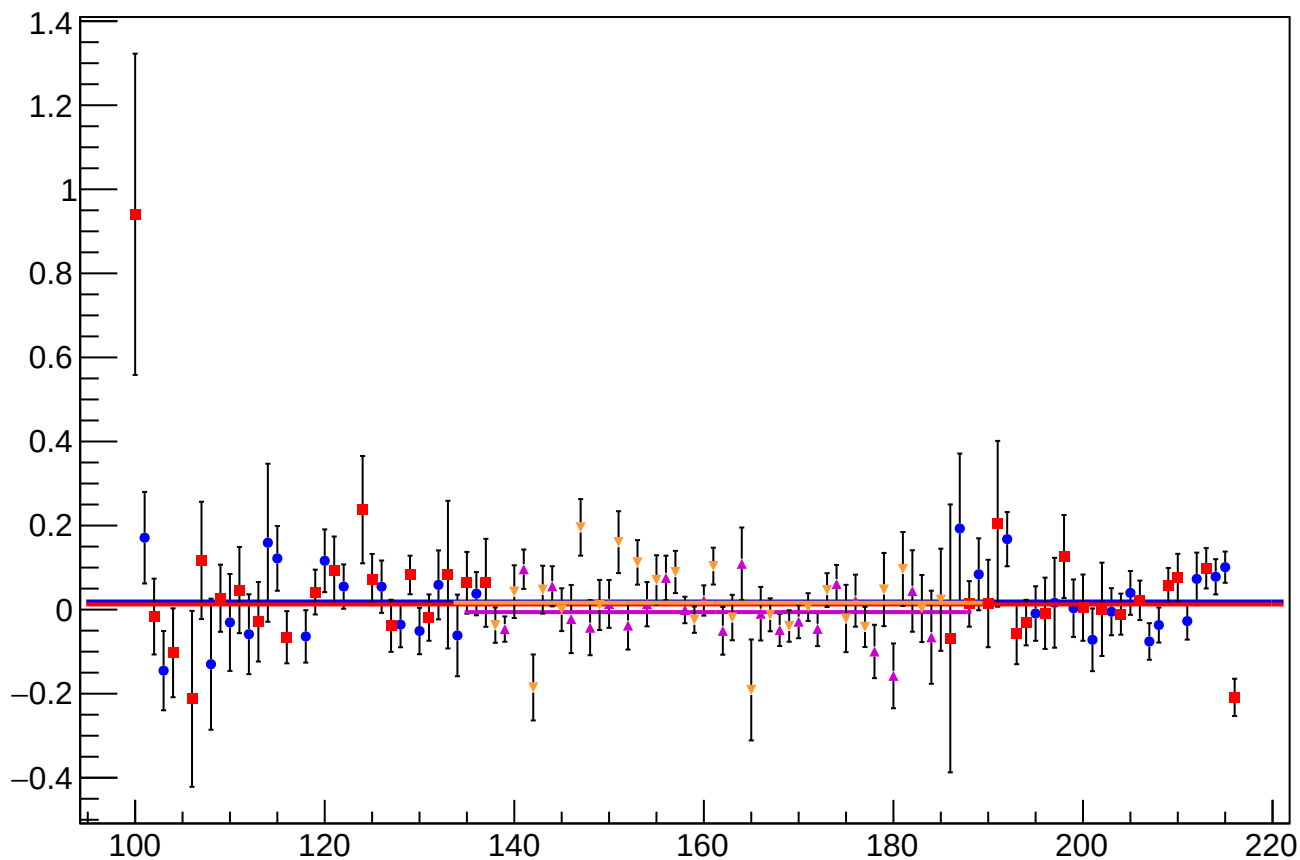
All:  $0.010 \pm 0.005$   $\chi^2/\text{NDF}: 166.8/113$

- sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}: 82.5/57$

asym\_sam\_3726\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



asym\_sam\_3726\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}: 41.2/30$

Left Out:  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 41.1/24$

Right Out:  $0.012 \pm 0.012$   $\chi^2/\text{NDF}: 55.1/34$

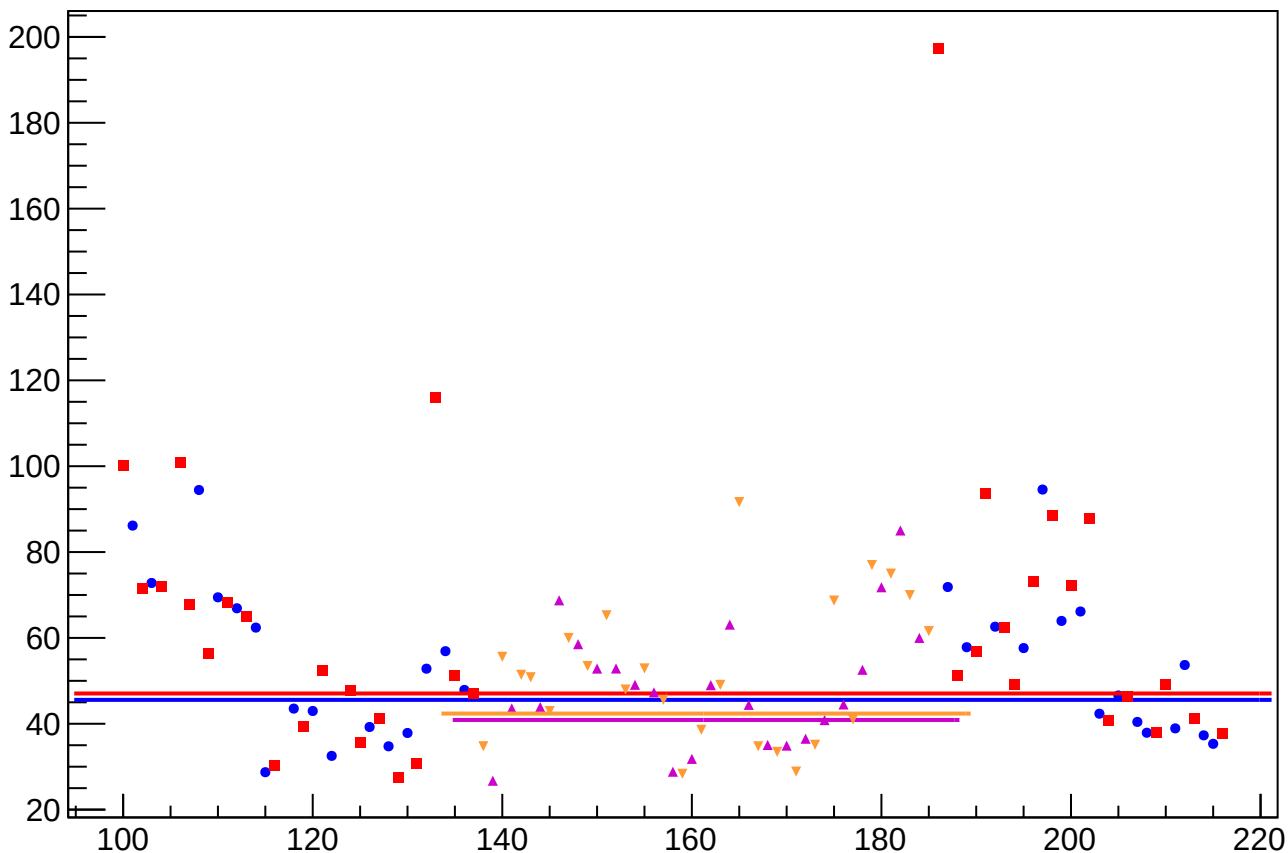
Left In:  $-0.006 \pm 0.010$   $\chi^2/\text{NDF}: 26.0/22$

+ sign  $0.018 \pm 0.008$   $\chi^2/\text{NDF}: 82.3/55$

All:  $0.010 \pm 0.005$   $\chi^2/\text{NDF}: 166.8/113$

- sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}: 82.5/57$

asym\_sam\_3726\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 45.566+/-0.008  $\chi^2/\text{NDF}$ : 2676611.0/30

Left Out: 42.375+/-0.007  $\chi^2/\text{NDF}$ : 3190972.5/24

Right Out: 47.055+/-0.008  $\chi^2/\text{NDF}$ : 3738500.5/34

Left In: 40.881+/-0.007  $\chi^2/\text{NDF}$ : 2678327.2/22

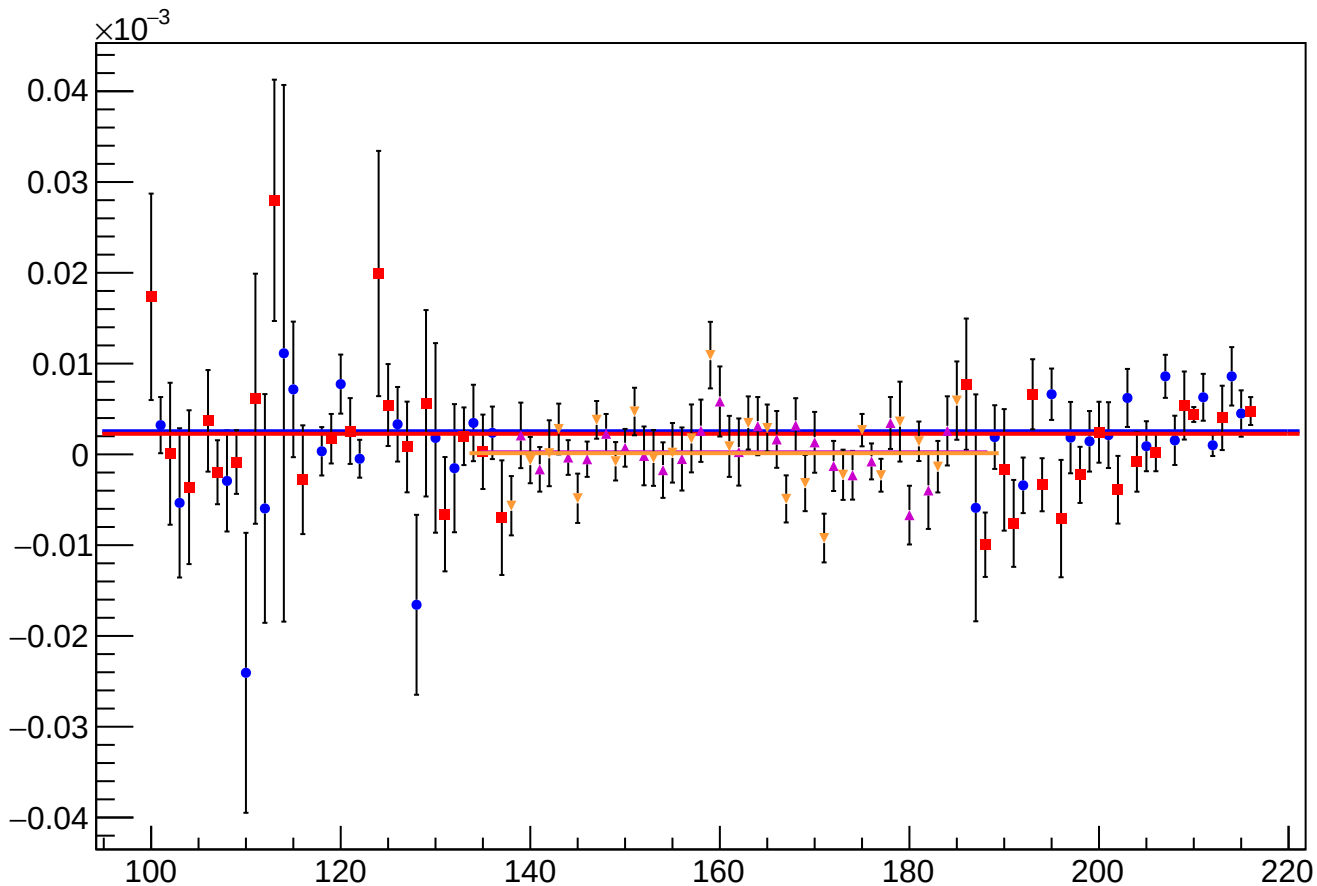
+ sign 43.844+/-0.005  $\chi^2/\text{NDF}$ : 5955132.9/55

All: 43.709+/-0.004  $\chi^2/\text{NDF}$ : 12687404.9/113

- sign 43.570+/-0.005  $\chi^2/\text{NDF}$ : 6730999.4/57



asym\_sam\_3726\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:49.9/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 57.1/34

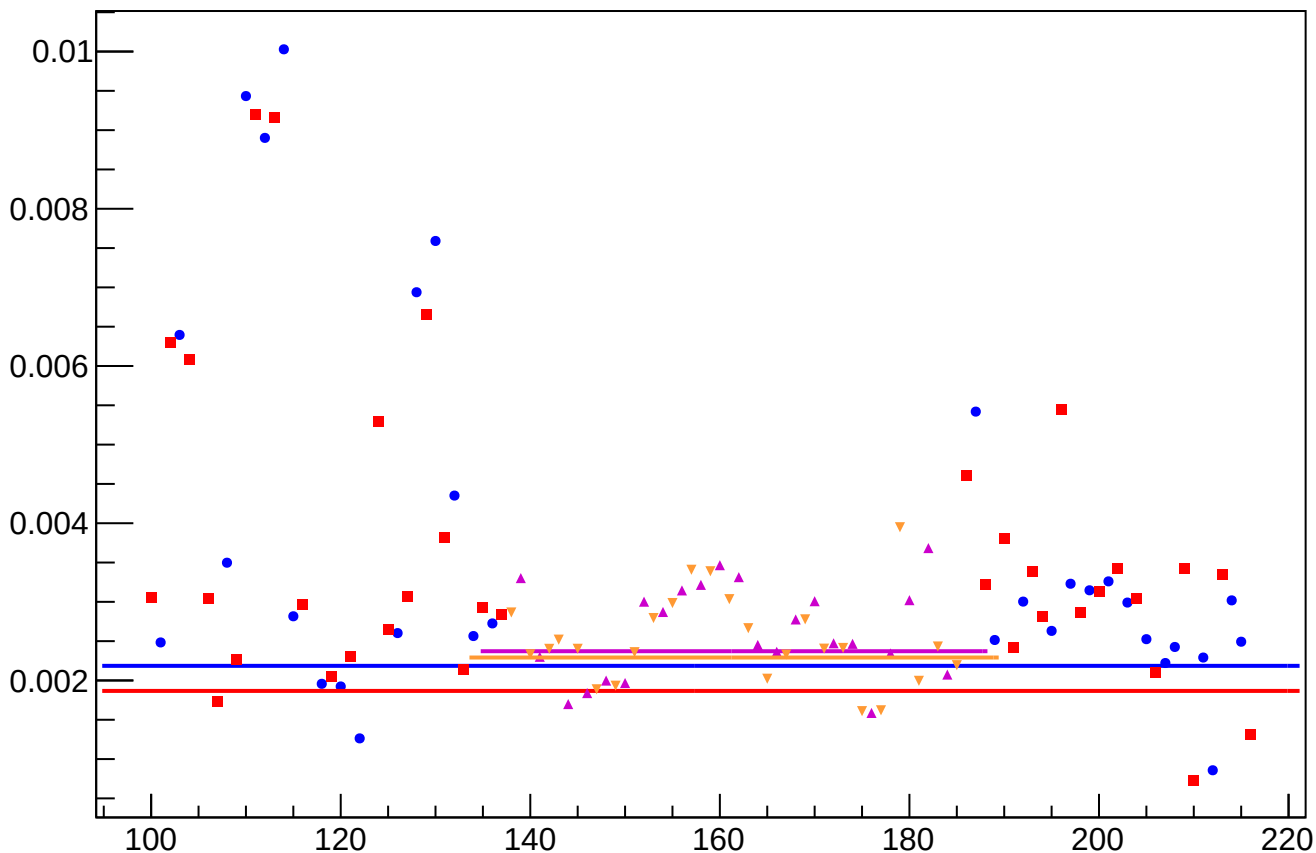
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 97.6/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 177.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 79.9/57

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 7201335.6/30

Left Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:1818891.6/24

Right Out: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 11538919.4/34

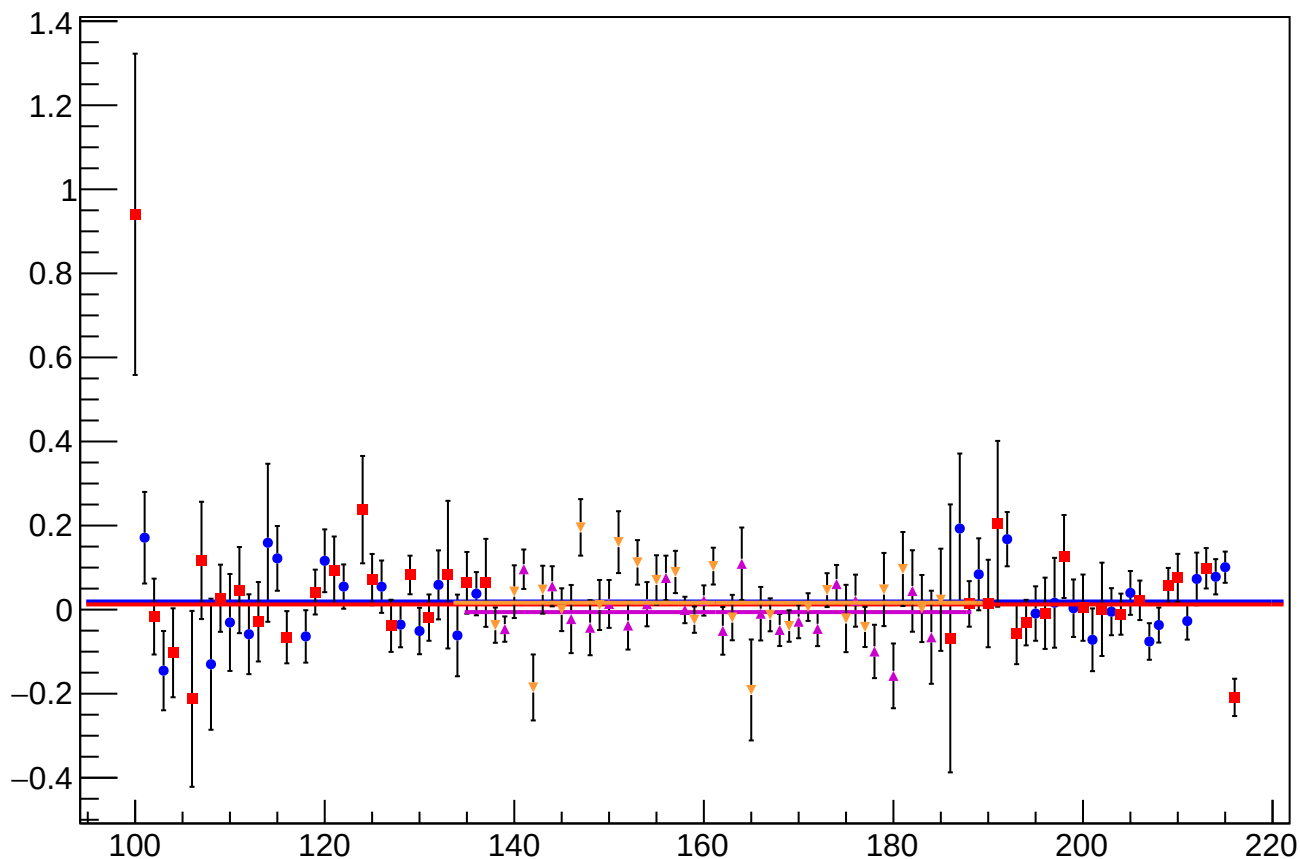
Left In: 0.002 $\pm$ 0.000  $\chi^2$ /NDF:2020314.6/22

+ sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 9057088.2/55

All: 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 23627777.6/113

- sign 0.002 $\pm$ 0.000  $\chi^2$ /NDF: 14415565.0/57

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}: 41.2/30$

Left Out:  $0.016 \pm 0.010$   $\chi^2/\text{NDF}: 41.1/24$

Right Out:  $0.012 \pm 0.012$   $\chi^2/\text{NDF}: 55.1/34$

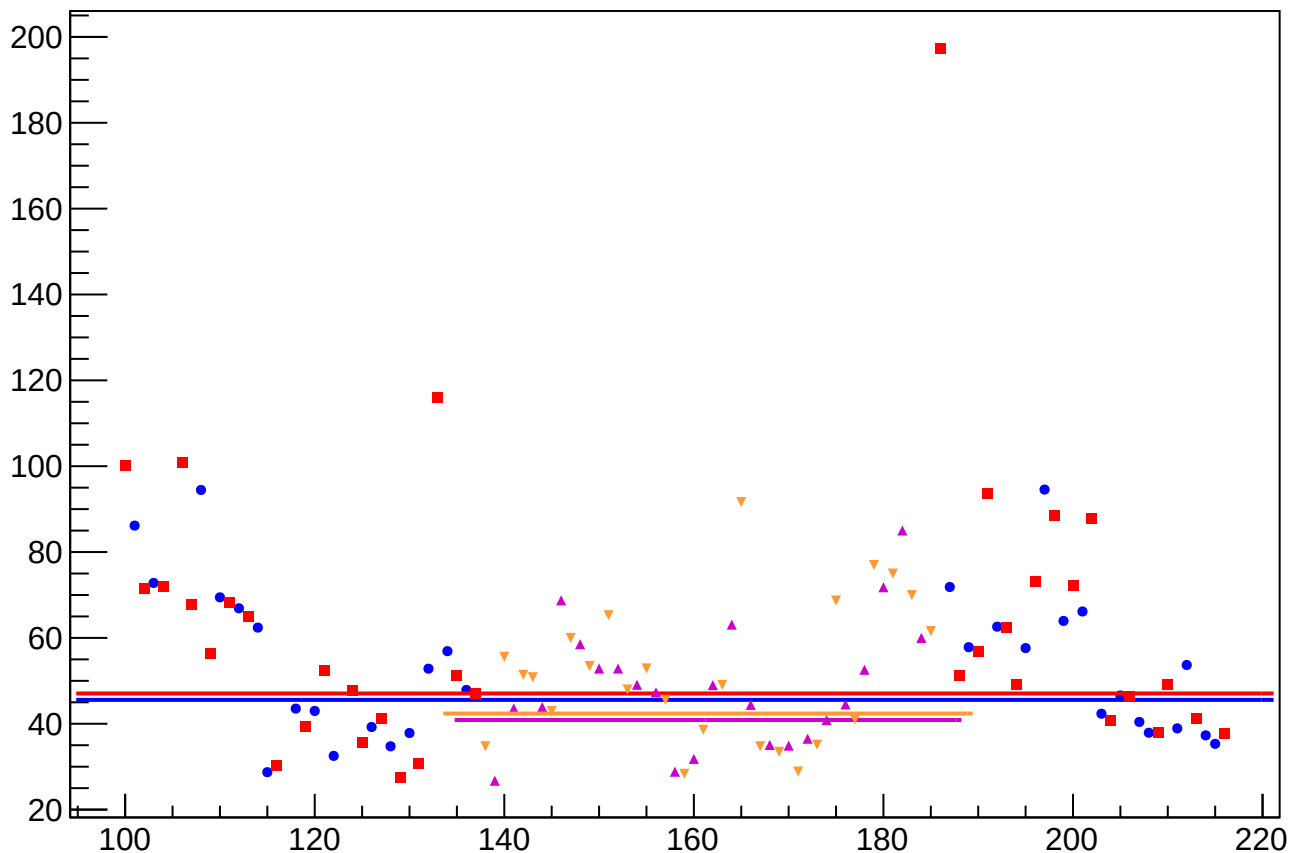
Left In:  $-0.006 \pm 0.010$   $\chi^2/\text{NDF}: 26.0/22$

+ sign  $0.018 \pm 0.008$   $\chi^2/\text{NDF}: 82.3/55$

All:  $0.010 \pm 0.005$   $\chi^2/\text{NDF}: 166.8/113$

- sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}: 82.5/57$

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 45.566 $\pm$ 0.008  $\chi^2$ /NDF: 2676557.4/30

Left Out: 42.375 $\pm$ 0.007  $\chi^2$ /NDF: 3190999.9/24

Right Out: 47.055 $\pm$ 0.008  $\chi^2$ /NDF: 3738444.6/34

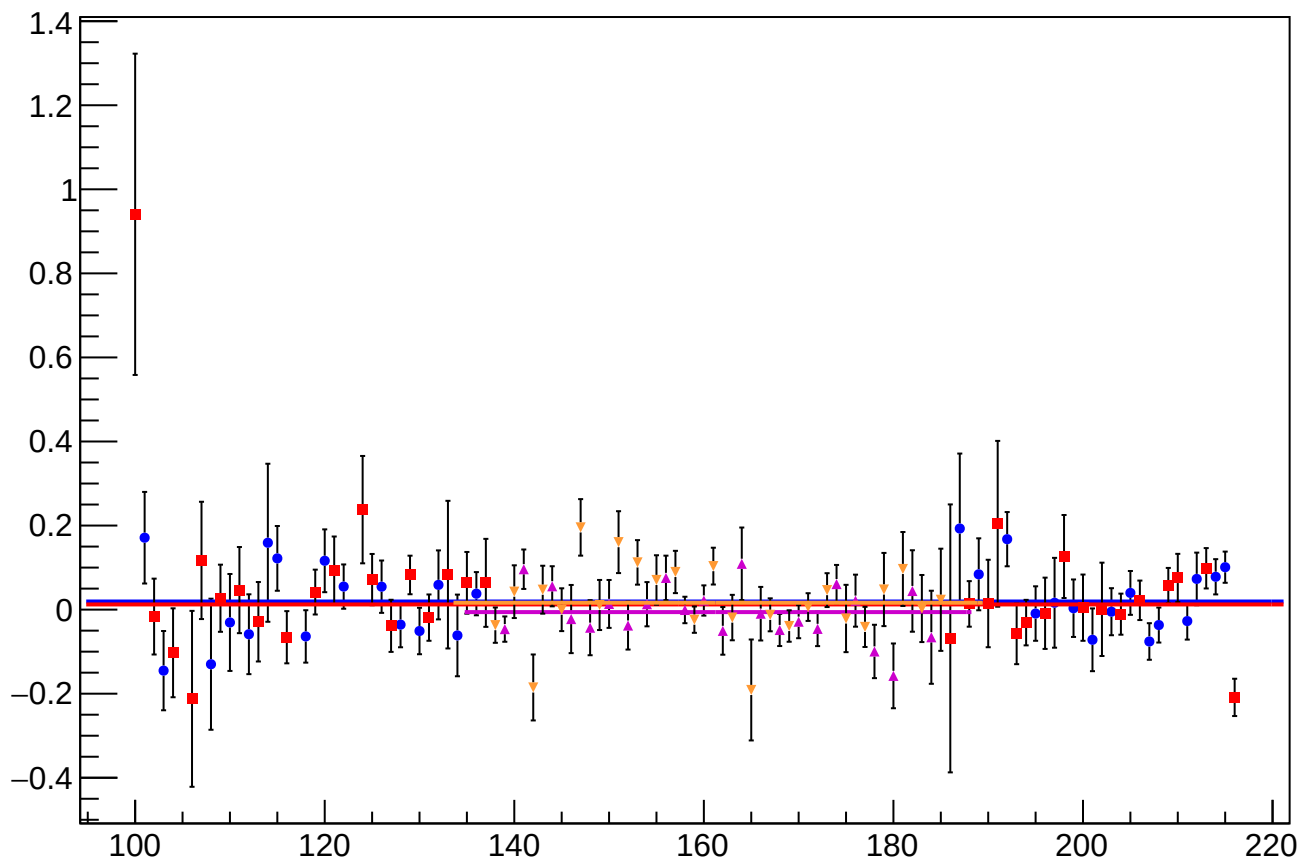
Left In: 40.881 $\pm$ 0.007  $\chi^2$ /NDF: 2678344.3/22

+ sign 43.844 $\pm$ 0.005  $\chi^2$ /NDF: 5955091.0/55

All: 43.709 $\pm$ 0.004  $\chi^2$ /NDF: 12687287.1/113

- sign 43.571 $\pm$ 0.005  $\chi^2$ /NDF: 6730923.9/57

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.019 \pm 0.011$   $\chi^2/\text{NDF}$ : 41.2/30

Left Out:  $0.016 \pm 0.010$   $\chi^2/\text{NDF}$ : 41.1/24

Right Out:  $0.012 \pm 0.012$   $\chi^2/\text{NDF}$ : 55.1/34

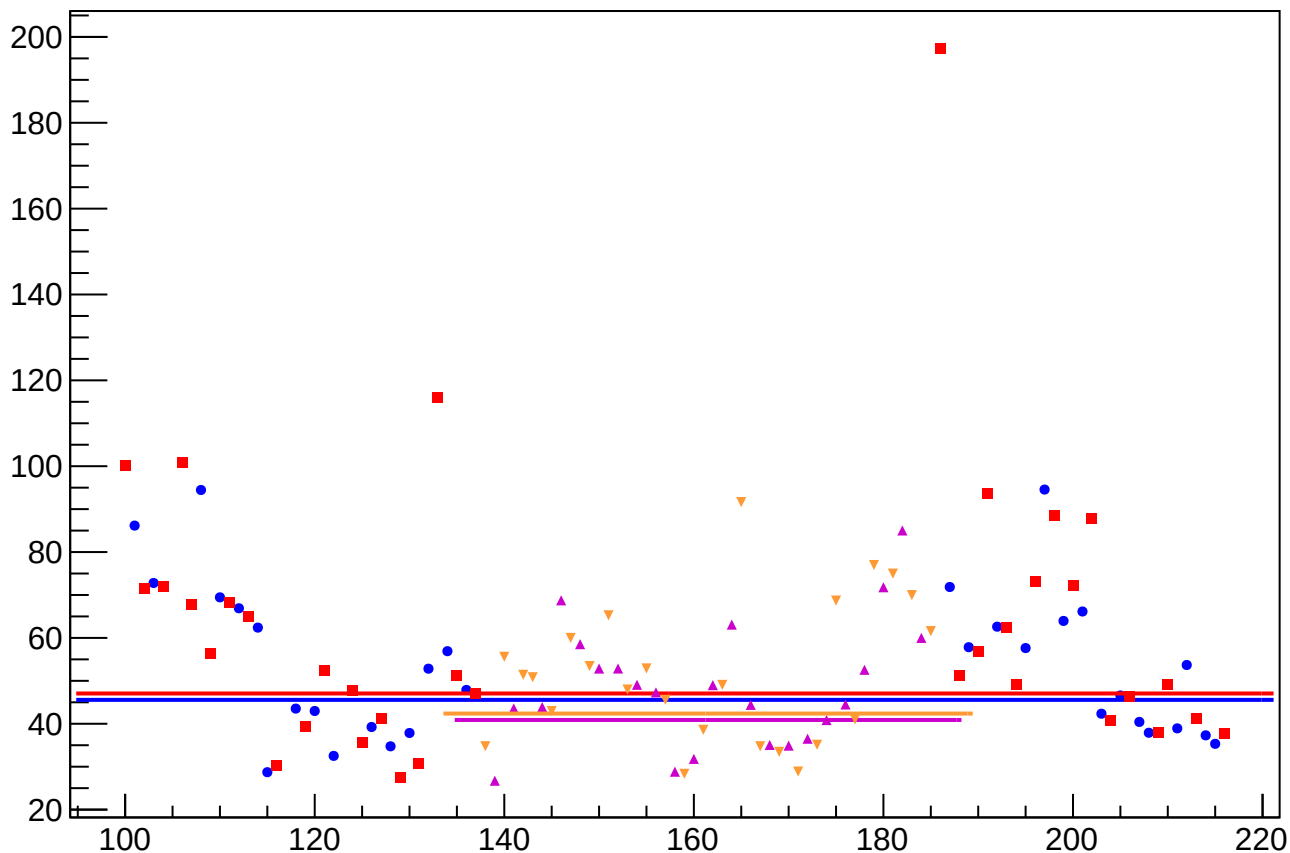
Left In:  $-0.006 \pm 0.010$   $\chi^2/\text{NDF}$ : 26.0/22

+ sign  $0.018 \pm 0.008$   $\chi^2/\text{NDF}$ : 82.3/55

All:  $0.010 \pm 0.005$   $\chi^2/\text{NDF}$ : 166.8/113

- sign  $0.002 \pm 0.008$   $\chi^2/\text{NDF}$ : 82.5/57

asym\_sam\_3726\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 45.566 $\pm$ 0.008  $\chi^2$ /NDF: 2676557.4/30

Left Out: 42.375 $\pm$ 0.007  $\chi^2$ /NDF: 3190999.9/24

Right Out: 47.055 $\pm$ 0.008  $\chi^2$ /NDF: 3738444.6/34

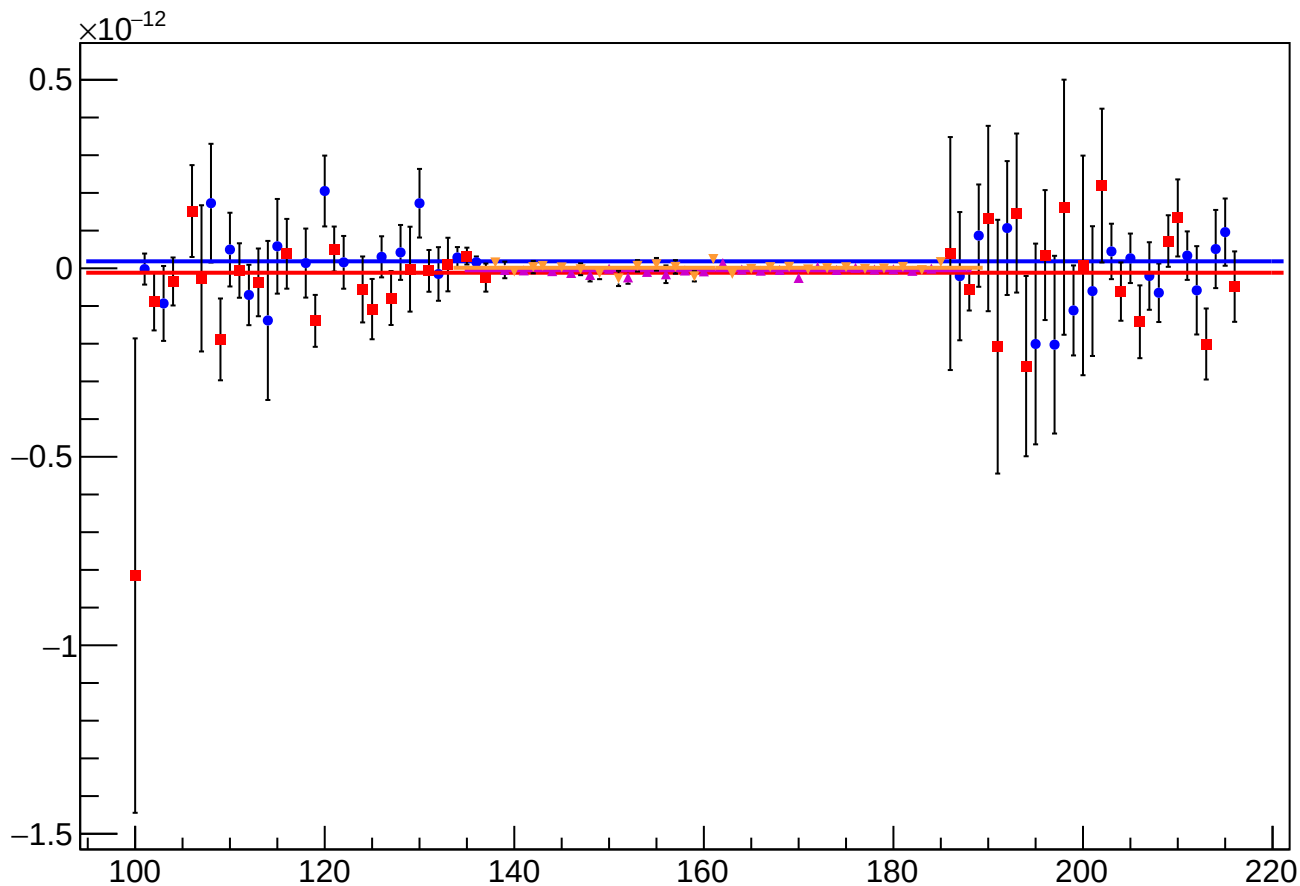
Left In: 40.881 $\pm$ 0.007  $\chi^2$ /NDF: 2678344.3/22

+ sign 43.844 $\pm$ 0.005  $\chi^2$ /NDF: 5955091.0/55

All: 43.709 $\pm$ 0.004  $\chi^2$ /NDF: 12687287.1/113

- sign 43.571 $\pm$ 0.005  $\chi^2$ /NDF: 6730923.9/57

asym\_sam\_3726\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 18.2/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 19.7/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.4/34

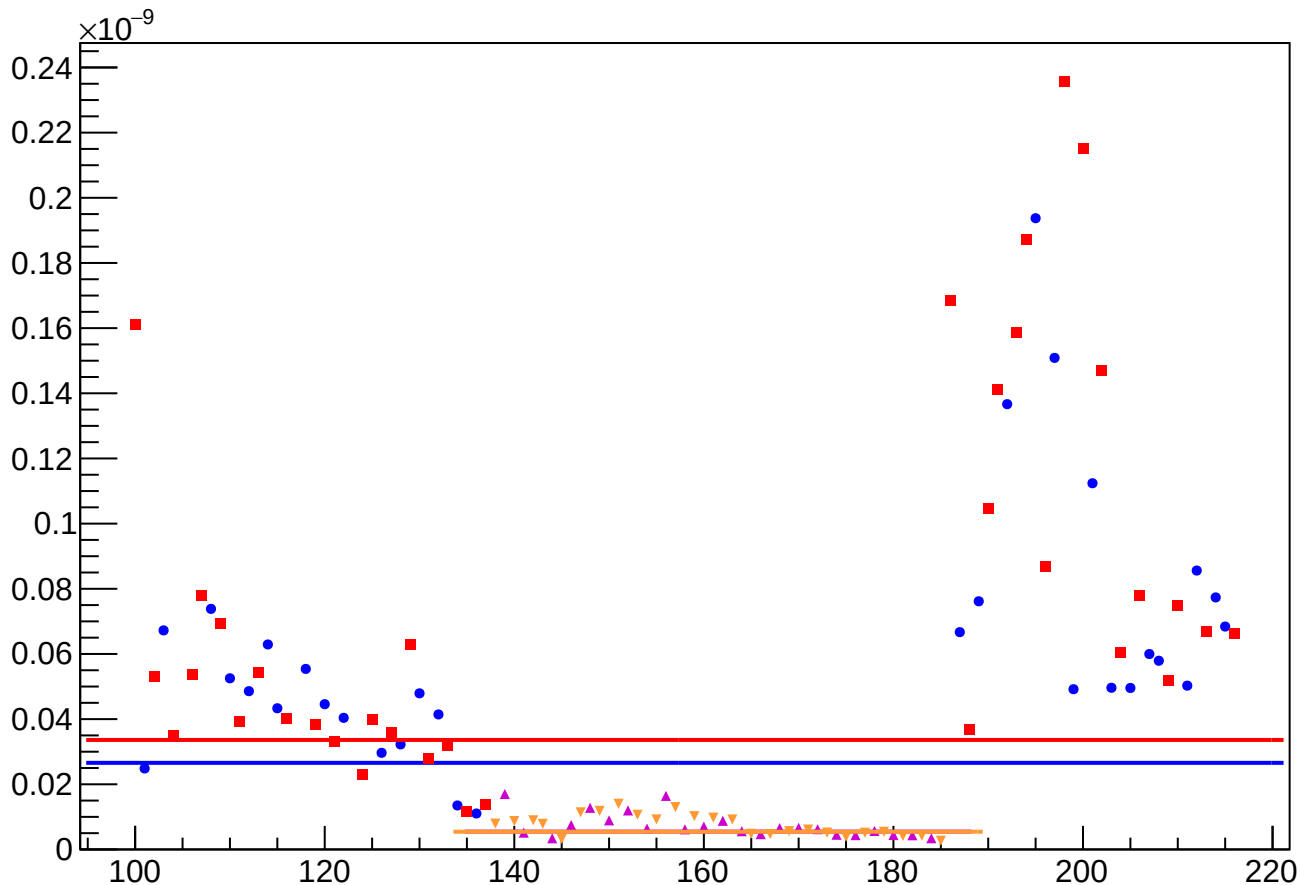
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.5/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 95.9/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 46.9/57

asym\_sam\_3726\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9817263.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3789045.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9612398.7/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2801443.3/22

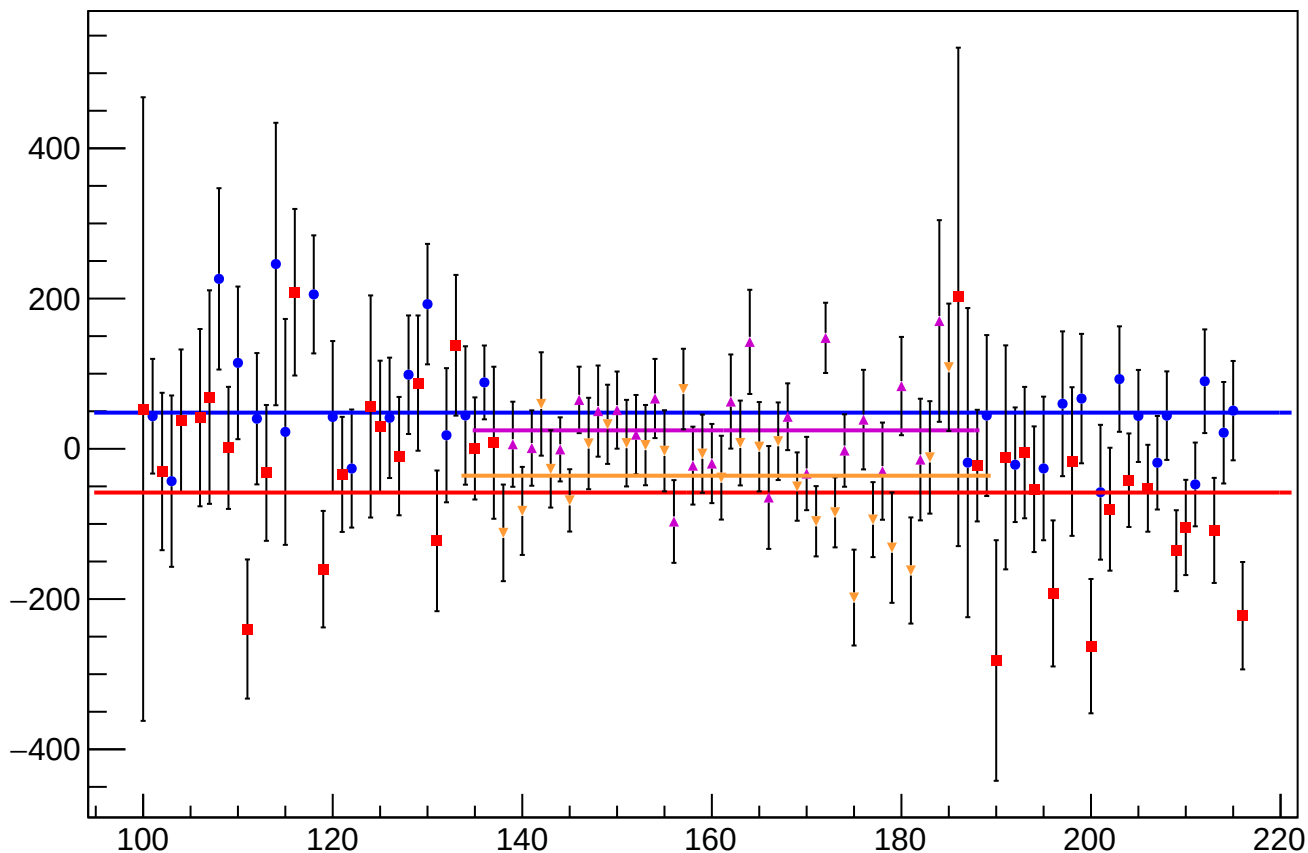
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 21862911.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 44536648.6/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 22673412.3/57



# reg\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $48.165 \pm 14.254$   $\chi^2/\text{NDF}$ : 21.8/30

Left Out:  $-35.787 \pm 11.119$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-58.211 \pm 14.554$   $\chi^2/\text{NDF}$ : 44.5/34

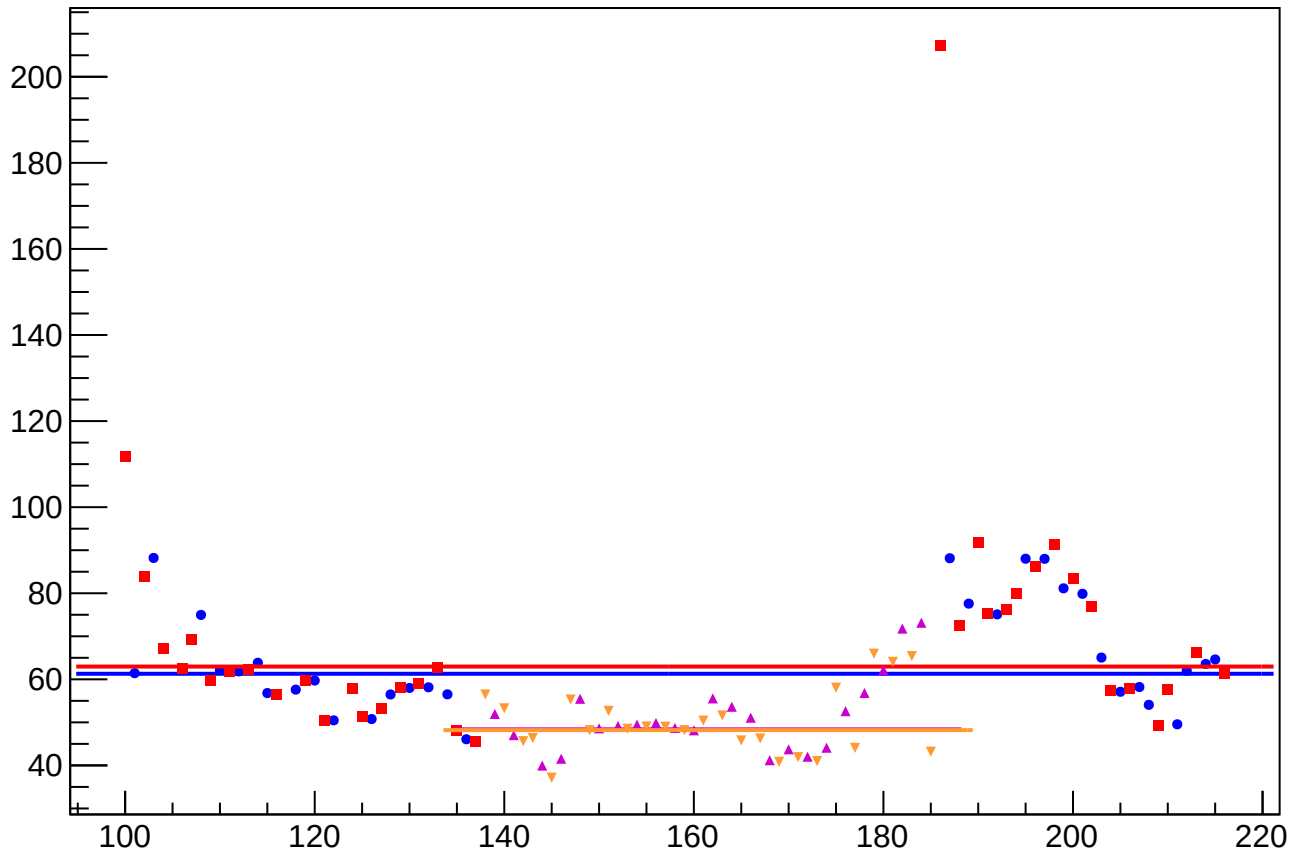
Left In:  $24.572 \pm 11.471$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-4.026 \pm 8.767$   $\chi^2/\text{NDF}$ : 77.0/55

All:  $-5.546 \pm 6.283$   $\chi^2/\text{NDF}$ : 167.3/113

- sign  $-7.150 \pm 9.009$   $\chi^2/\text{NDF}$ : 90.2/57

# reg\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 61.290 $\pm$ 0.010  $\chi^2$ /NDF: 1220796.2/30

Left Out: 48.198 $\pm$ 0.008  $\chi^2$ /NDF: 780285.2/24

Right Out: 62.969 $\pm$ 0.010  $\chi^2$ /NDF: 1653864.9/34

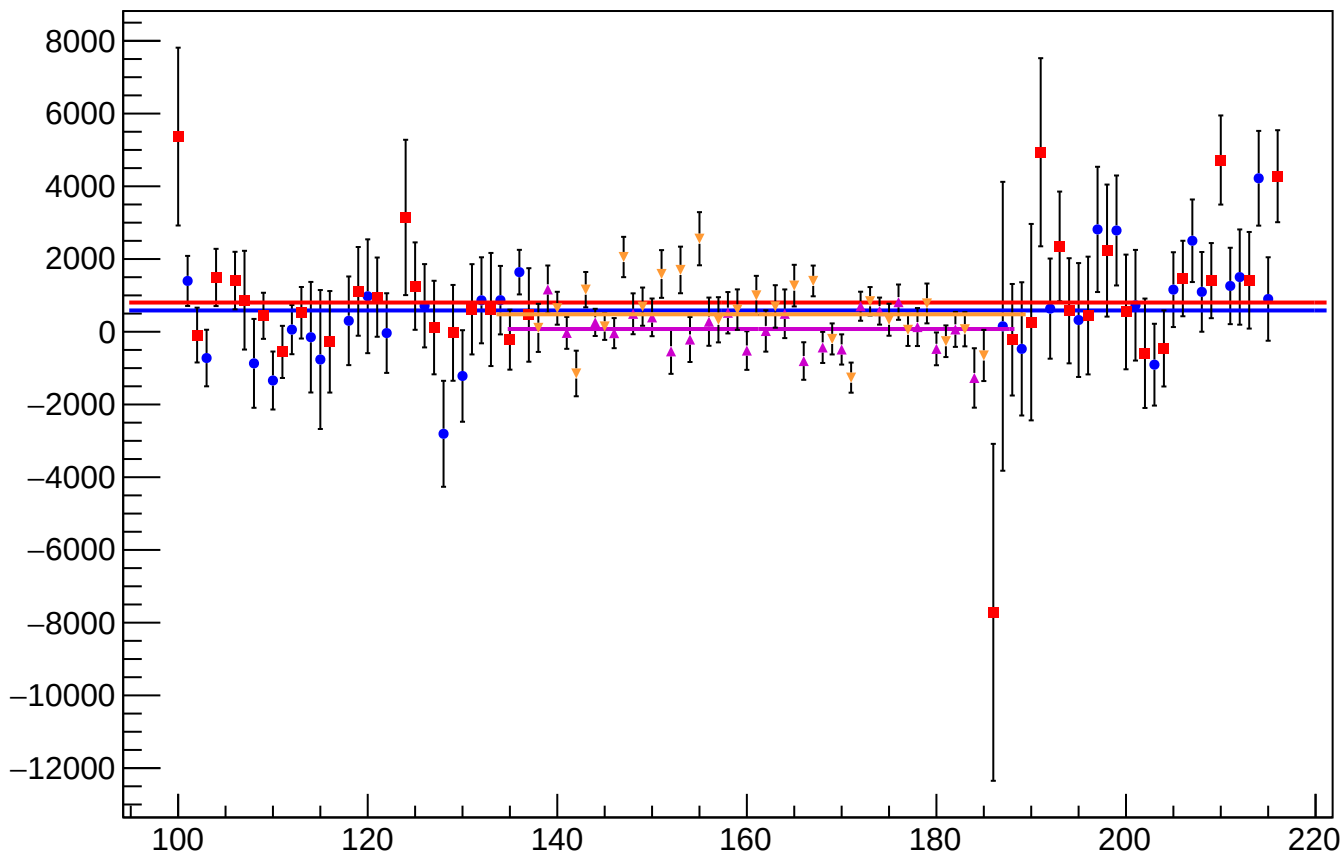
Left In: 48.381 $\pm$ 0.008  $\chi^2$ /NDF: 695381.8/22

+ sign 53.151 $\pm$ 0.006  $\chi^2$ /NDF: 3049865.0/55

All: 53.550 $\pm$ 0.004  $\chi^2$ /NDF: 6647146.5/113

- sign 53.971 $\pm$ 0.006  $\chi^2$ /NDF: 3588776.2/57

asym\_sam\_15\_48\_dd\_reg\_correction\_mean vs Slug



Right In: 585.648 $\pm$ 196.610  $\chi^2$ /NDF: 41.9/30

Left Out: 480.215 $\pm$ 100.526  $\chi^2$ /NDF: 69.2/24

Right Out: 803.521 $\pm$ 191.720  $\chi^2$ /NDF: 43.9/34

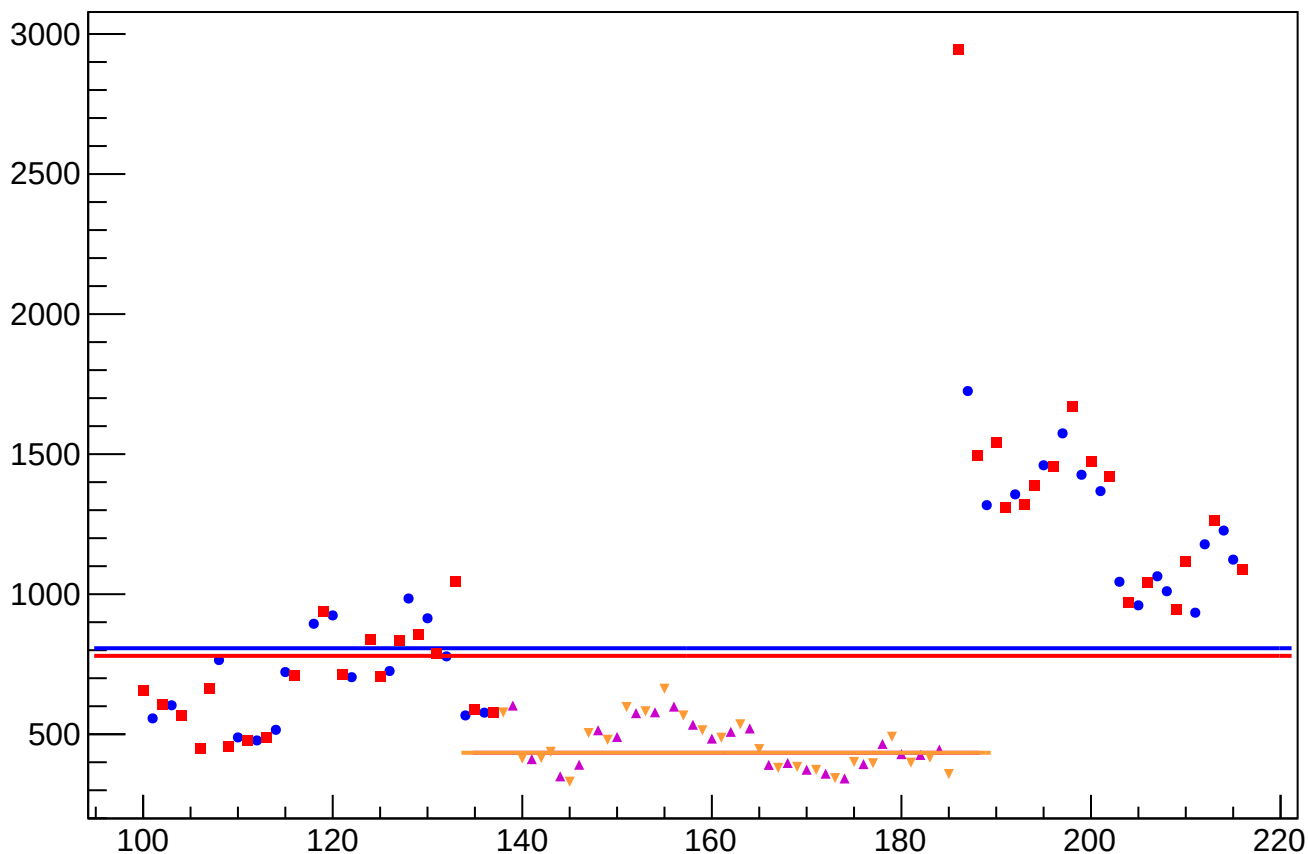
Left In: 75.662 $\pm$ 103.128  $\chi^2$ /NDF: 24.5/22

+ sign 502.066 $\pm$ 89.505  $\chi^2$ /NDF: 111.4/55

All: 372.457 $\pm$ 63.750  $\chi^2$ /NDF: 195.2/113

- sign 239.004 $\pm$ 90.822  $\chi^2$ /NDF: 79.5/57

asym\_sam\_15\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 807.060 $\pm$ 0.139  $\chi^2$ /NDF: 4568540.1/30

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF: 1243704.6/24

Right Out: 779.828 $\pm$ 0.136  $\chi^2$ /NDF: 6204238.8/34

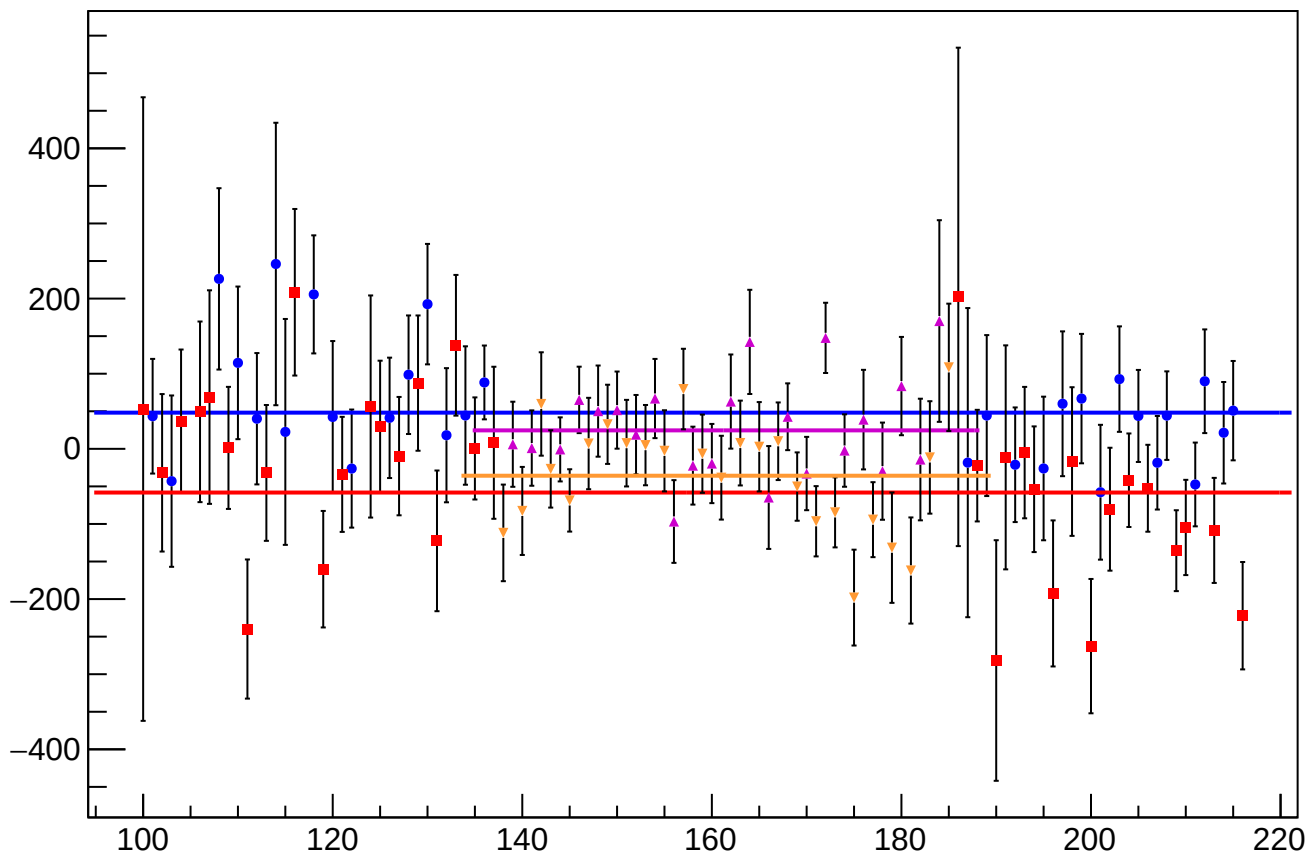
Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF: 1094788.8/22

+ sign 511.271 $\pm$ 0.063  $\chi^2$ /NDF: 11522344.6/55

All: 511.331 $\pm$ 0.045  $\chi^2$ /NDF: 23876642.1/11

- sign 511.393 $\pm$ 0.064  $\chi^2$ /NDF: 12354295.7/57

# cor\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $48.168 \pm 14.254$   $\chi^2/\text{NDF}$ : 21.8/30

Left Out:  $-35.792 \pm 11.119$   $\chi^2/\text{NDF}$ : 33.7/24

Right Out:  $-58.184 \pm 14.558$   $\chi^2/\text{NDF}$ : 44.6/34

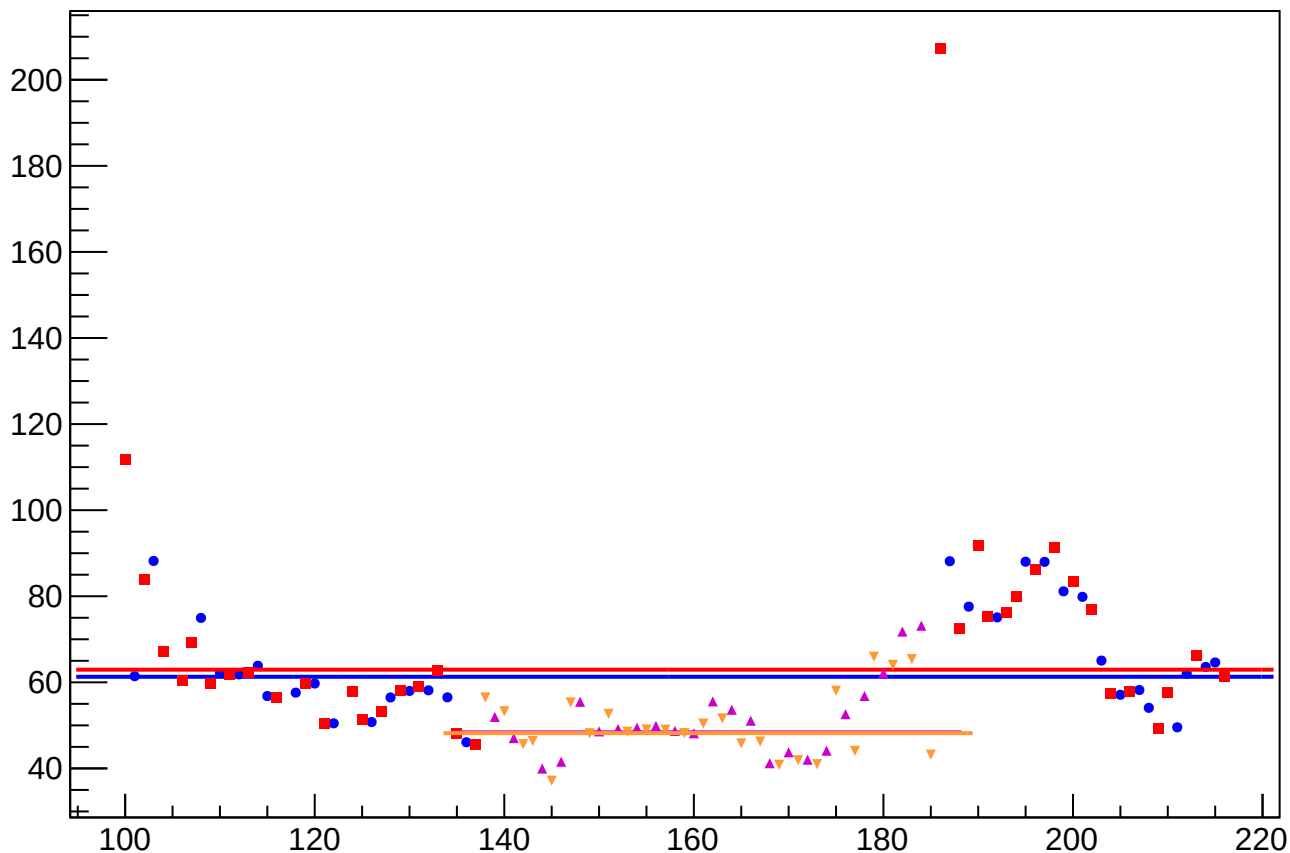
Left In:  $24.573 \pm 11.471$   $\chi^2/\text{NDF}$ : 25.7/22

+ sign  $-4.029 \pm 8.767$   $\chi^2/\text{NDF}$ : 77.0/55

All:  $-5.536 \pm 6.283$   $\chi^2/\text{NDF}$ : 167.3/113

- sign  $-7.128 \pm 9.010$   $\chi^2/\text{NDF}$ : 90.2/57

# cor\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 61.290 $\pm$ 0.010  $\chi^2$ /NDF: 1220799.7/30

Left Out: 48.198 $\pm$ 0.008  $\chi^2$ /NDF: 780285.2/24

Right Out: 62.940 $\pm$ 0.010  $\chi^2$ /NDF: 1654927.0/34

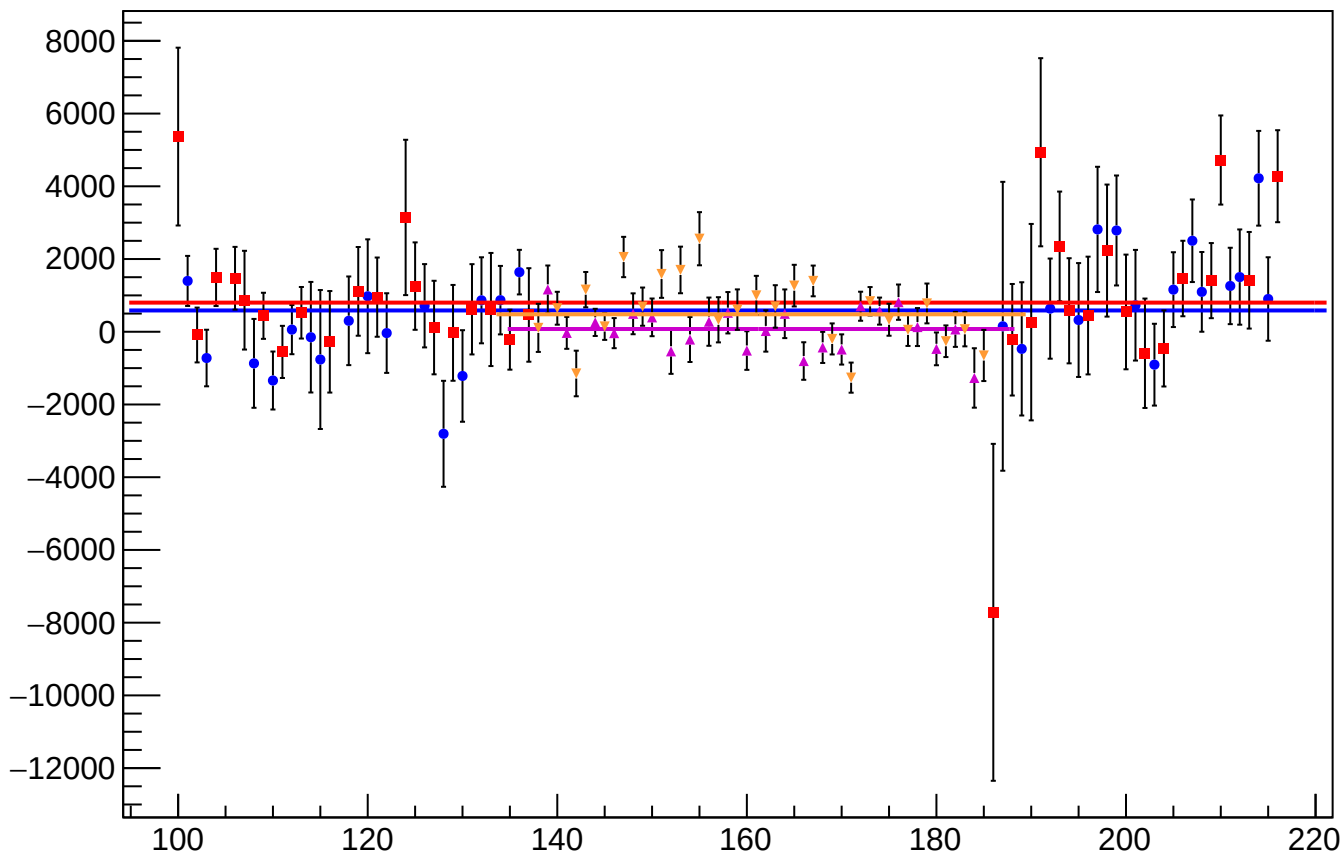
Left In: 48.381 $\pm$ 0.008  $\chi^2$ /NDF: 695381.8/22

+ sign 53.151 $\pm$ 0.006  $\chi^2$ /NDF: 3049868.9/55

All: 53.543 $\pm$ 0.004  $\chi^2$ /NDF: 6642532.0/113

- sign 53.958 $\pm$ 0.006  $\chi^2$ /NDF: 3584430.2/57

asym\_sam\_15\_48\_dd\_cor\_correction\_mean vs Slug



Right In: 585.677 $\pm$ 196.611  $\chi^2$ /NDF: 41.9/30

Left Out: 480.210 $\pm$ 100.526  $\chi^2$ /NDF: 69.2/24

Right Out: 801.254 $\pm$ 192.625  $\chi^2$ /NDF: 43.9/34

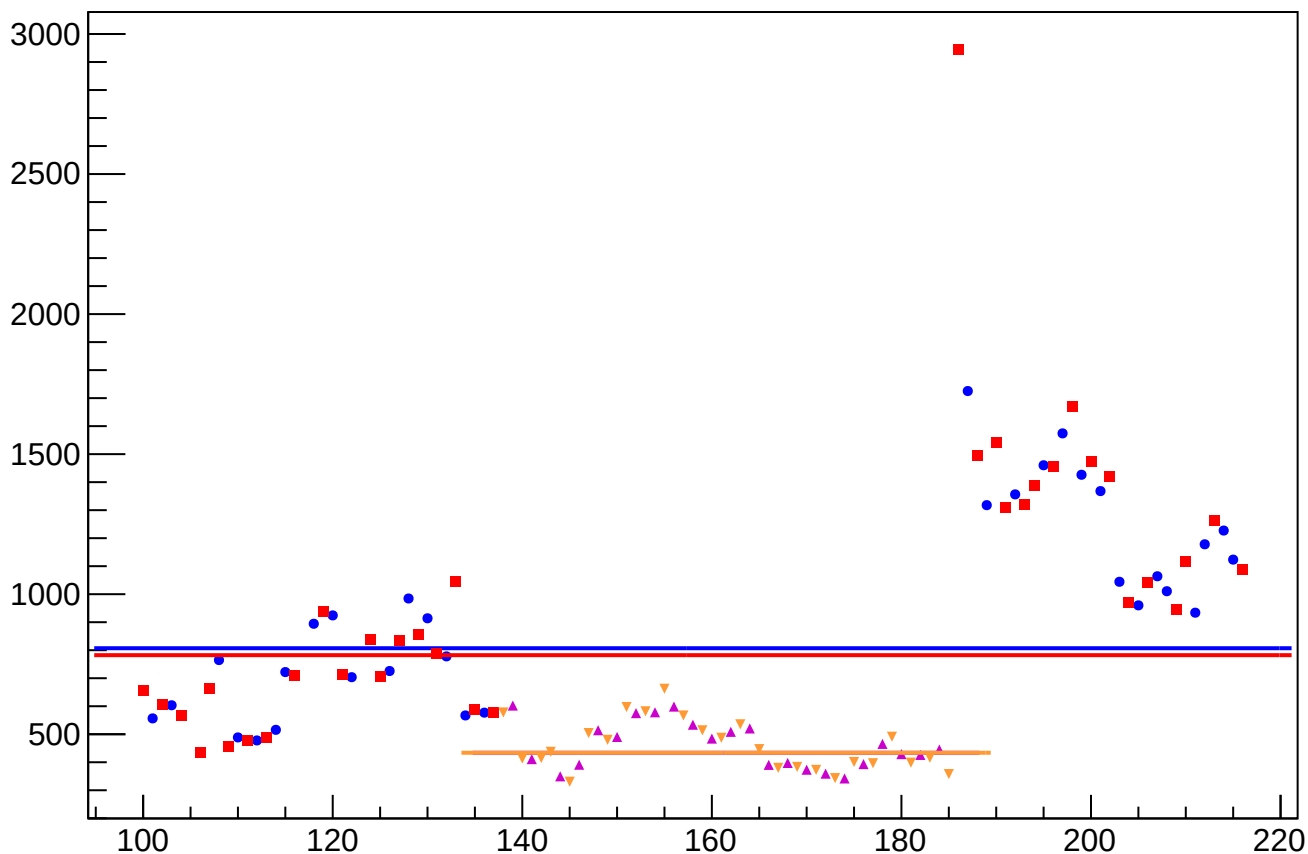
Left In: 75.665 $\pm$ 103.128  $\chi^2$ /NDF: 24.5/22

+ sign 502.068 $\pm$ 89.505  $\chi^2$ /NDF: 111.4/55

All: 371.763 $\pm$ 63.783  $\chi^2$ /NDF: 195.1/113

- sign 237.311 $\pm$ 90.918  $\chi^2$ /NDF: 79.4/57

asym\_sam\_15\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 807.065 $\pm$ 0.139  $\chi^2$ /NDF: 4568458.2/30

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF:1243702.1/24

Right Out: 782.324 $\pm$ 0.136  $\chi^2$ /NDF: 6171542.9/34

Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF:1094788.4/22

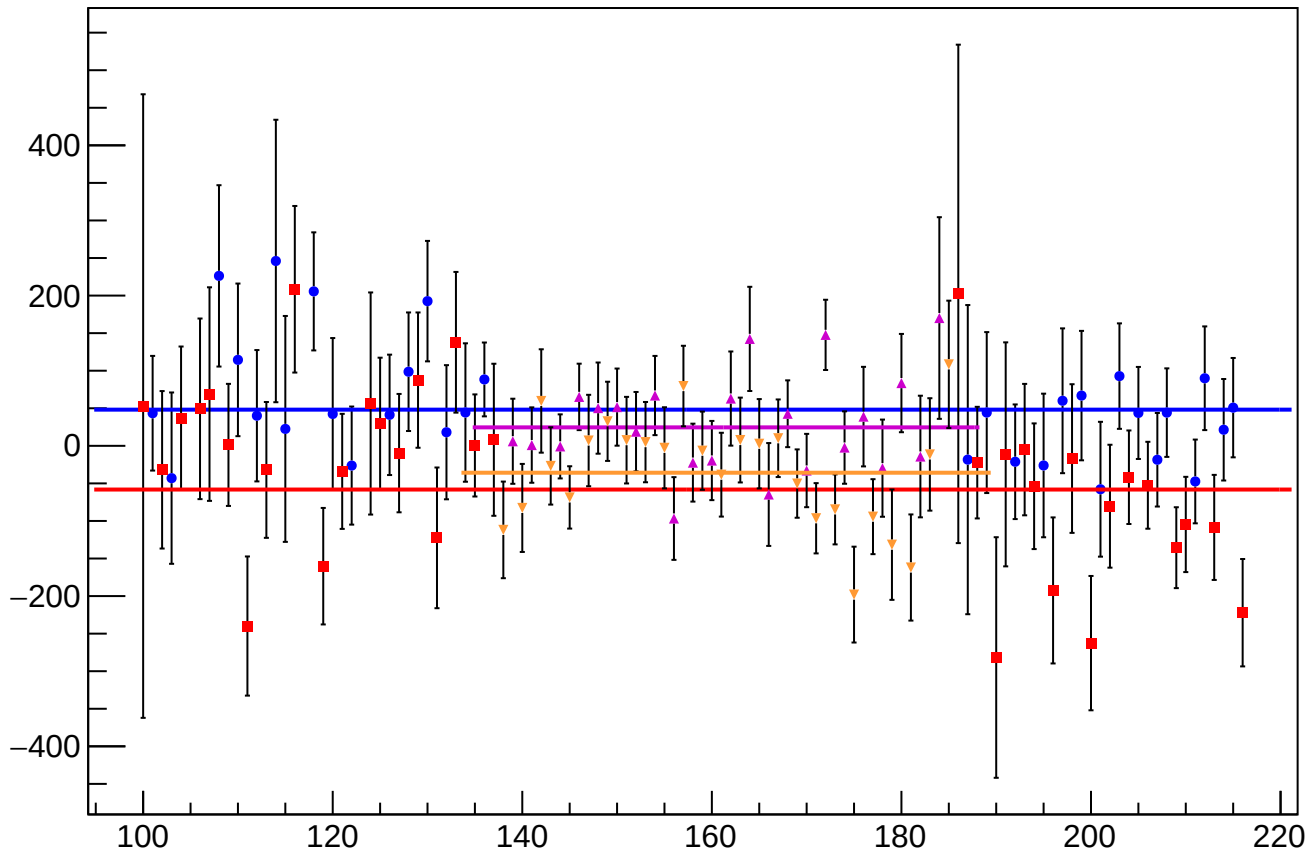
+ sign 511.271 $\pm$ 0.063  $\chi^2$ /NDF: 11522366.4/55

All: 511.326 $\pm$ 0.045  $\chi^2$ /NDF: 23879761.9/11

- sign 511.383 $\pm$ 0.064  $\chi^2$ /NDF: 12357394.0/57



eigen\_cor\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $48.168 \pm 14.254$   $\chi^2/\text{NDF}: 21.8/30$

Left Out:  $-35.792 \pm 11.119$   $\chi^2/\text{NDF}: 33.7/24$

Right Out:  $-58.184 \pm 14.558$   $\chi^2/\text{NDF}: 44.6/34$

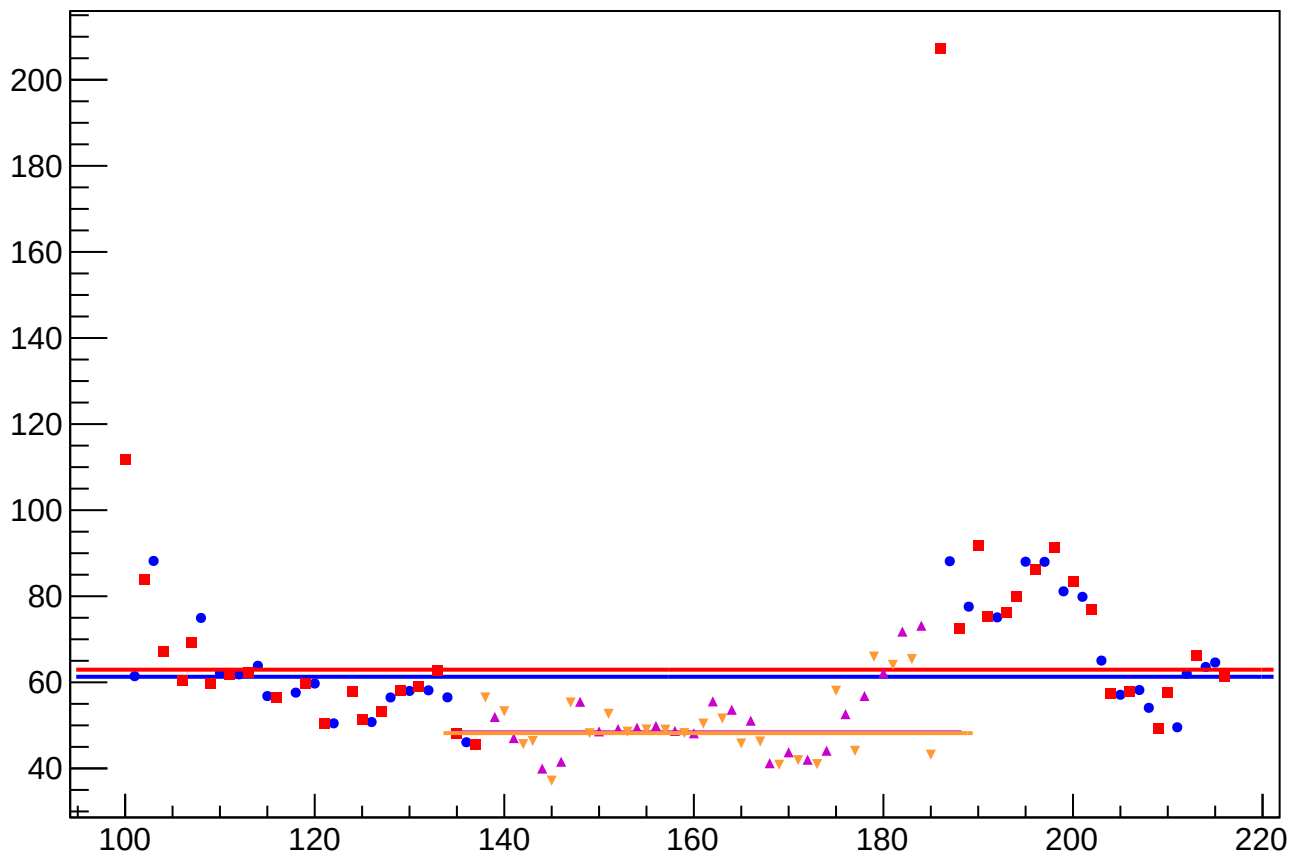
Left In:  $24.573 \pm 11.471$   $\chi^2/\text{NDF}: 25.7/22$

+ sign  $-4.029 \pm 8.767$   $\chi^2/\text{NDF}: 77.0/55$

All:  $-5.536 \pm 6.283$   $\chi^2/\text{NDF}: 167.3/113$

- sign  $-7.128 \pm 9.010$   $\chi^2/\text{NDF}: 90.2/57$

# eigen\_cor\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 61.290 $\pm$ 0.010  $\chi^2$ /NDF: 1220799.7/30

Left Out: 48.198 $\pm$ 0.008  $\chi^2$ /NDF: 780285.2/24

Right Out: 62.940 $\pm$ 0.010  $\chi^2$ /NDF: 1654927.0/34

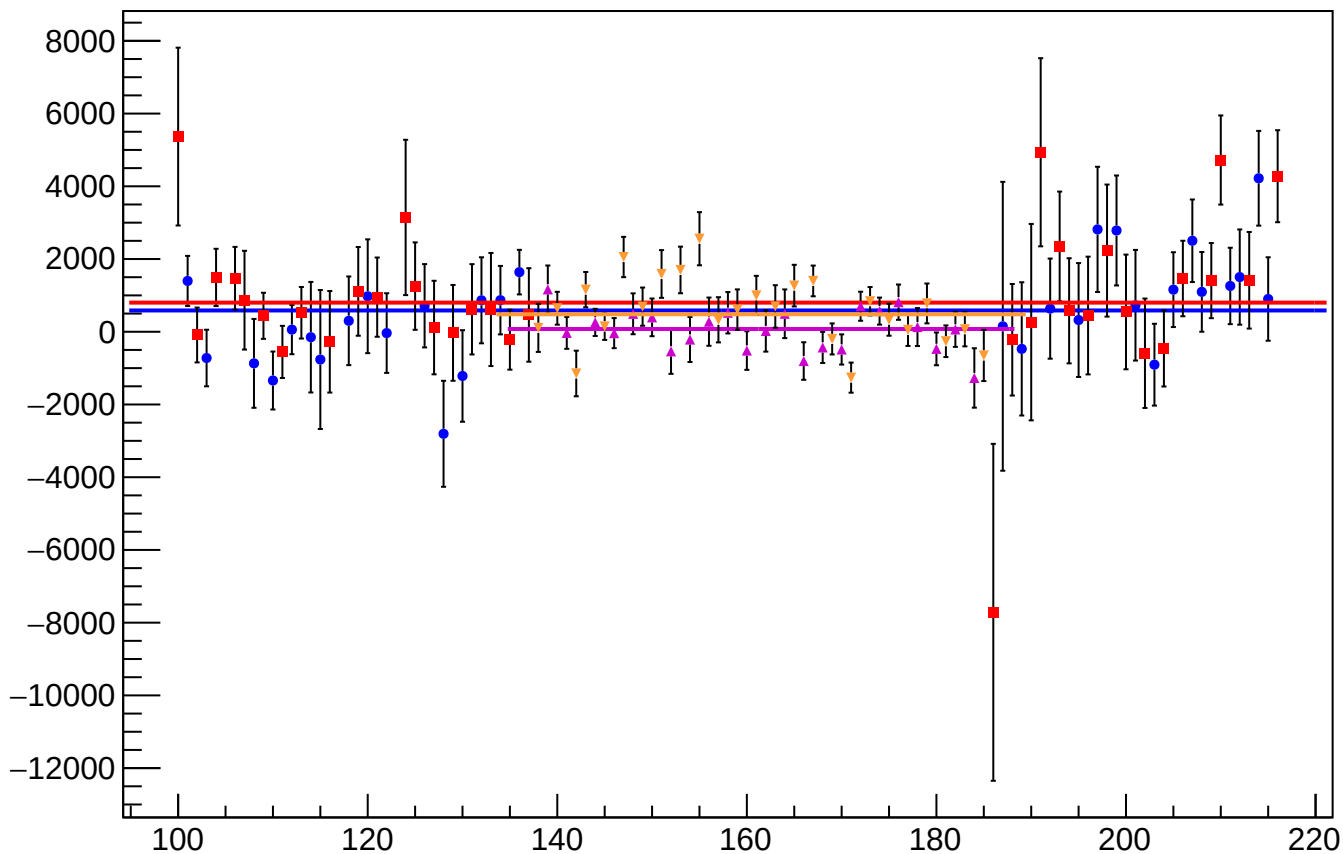
Left In: 48.381 $\pm$ 0.008  $\chi^2$ /NDF: 695381.8/22

+ sign 53.151 $\pm$ 0.006  $\chi^2$ /NDF: 3049868.9/55

All: 53.543 $\pm$ 0.004  $\chi^2$ /NDF: 6642532.0/113

- sign 53.958 $\pm$ 0.006  $\chi^2$ /NDF: 3584430.2/57

asym\_sam\_15\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $585.677 \pm 196.611$   $\chi^2/\text{NDF}: 41.9/30$

Left Out:  $480.210 \pm 100.526$   $\chi^2/\text{NDF}: 69.2/24$

Right Out:  $801.254 \pm 192.625$   $\chi^2/\text{NDF}: 43.9/34$

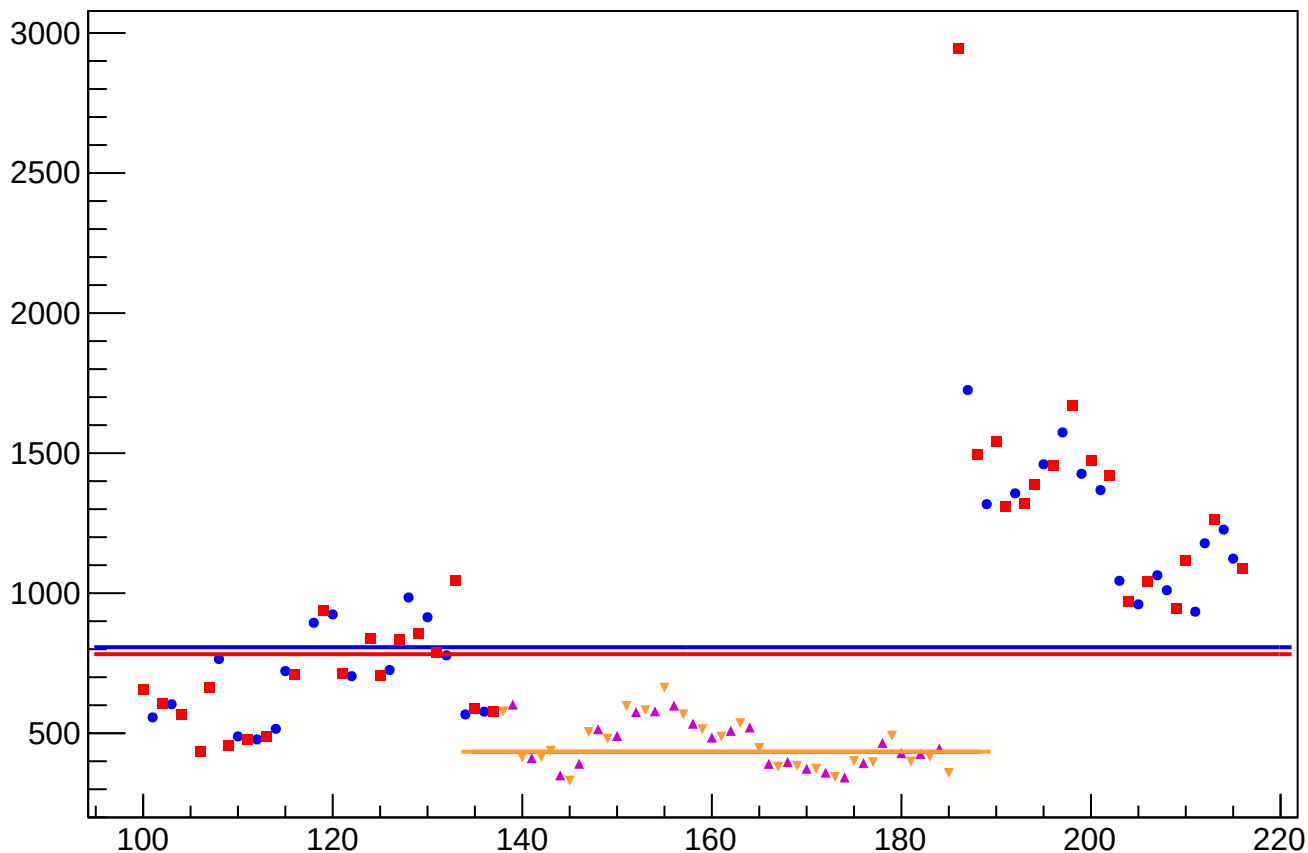
Left In:  $75.665 \pm 103.128$   $\chi^2/\text{NDF}: 24.5/22$

+ sign  $502.068 \pm 89.505$   $\chi^2/\text{NDF}: 111.4/55$

All:  $371.763 \pm 63.783$   $\chi^2/\text{NDF}: 195.1/113$

- sign  $237.311 \pm 90.918$   $\chi^2/\text{NDF}: 79.4/57$

asym\_sam\_15\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 807.065 $\pm$ 0.139  $\chi^2$ /NDF: 4568458.2/30

Left Out: 433.945 $\pm$ 0.071  $\chi^2$ /NDF:1243702.1/24

Right Out: 782.324 $\pm$ 0.136  $\chi^2$ /NDF: 6171542.9/34

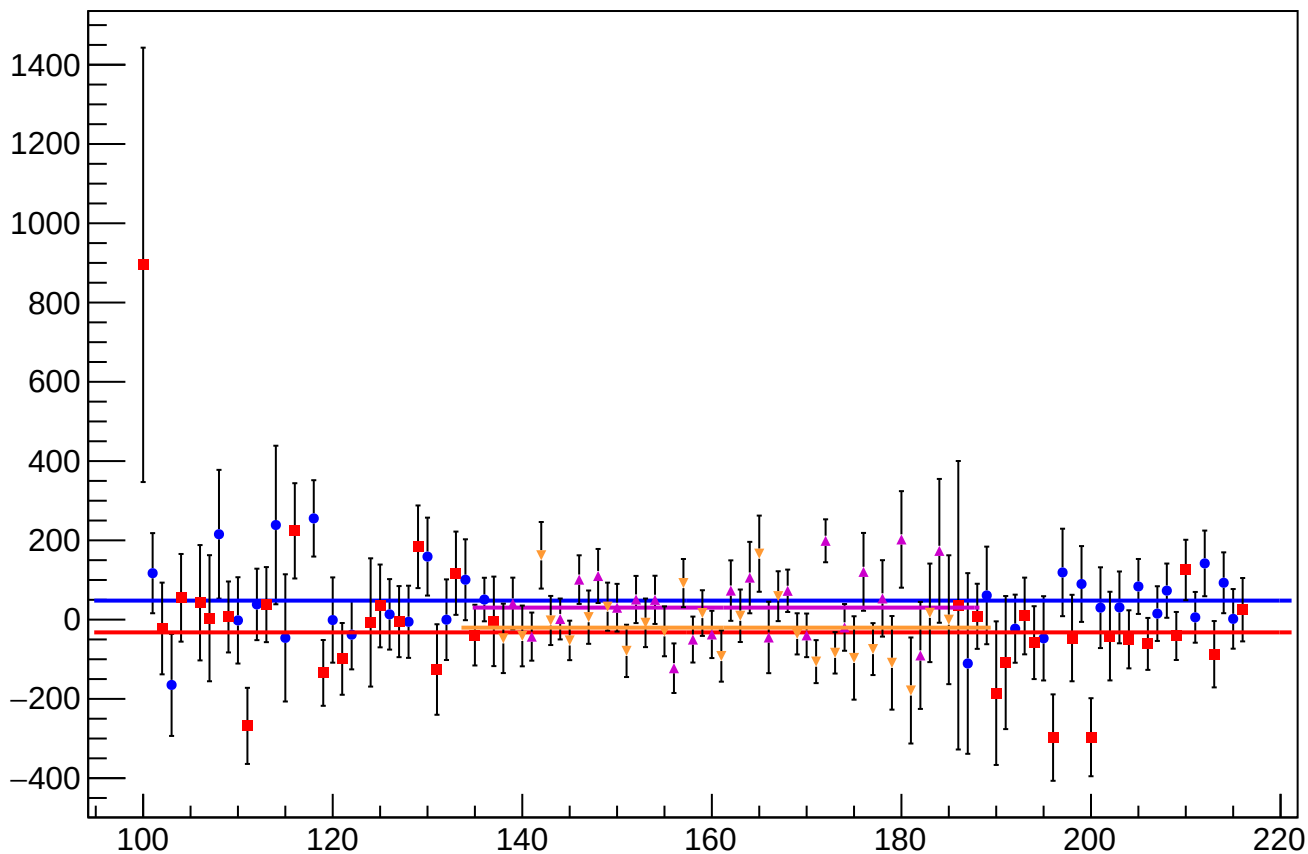
Left In: 433.722 $\pm$ 0.073  $\chi^2$ /NDF:1094788.4/22

+ sign 511.271 $\pm$ 0.063  $\chi^2$ /NDF: 11522366.4/55

All: 511.326 $\pm$ 0.045  $\chi^2$ /NDF: 23879761.9/11

- sign 511.383 $\pm$ 0.064  $\chi^2$ /NDF: 12357394.0/57

# dit\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $47.975 \pm 16.323$   $\chi^2/\text{NDF}$ : 19.5/30

Left Out:  $-20.270 \pm 13.636$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-32.186 \pm 16.550$   $\chi^2/\text{NDF}$ : 44.9/34

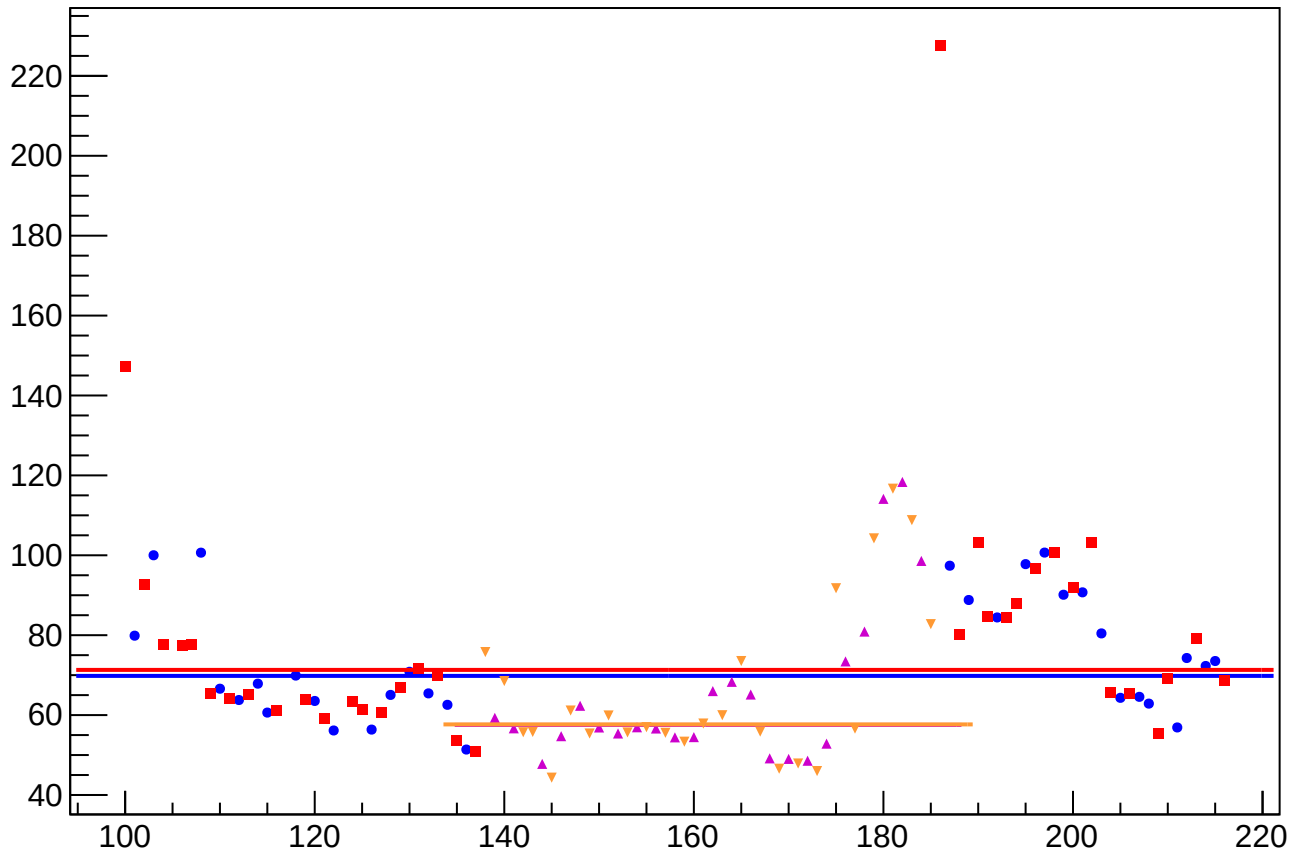
Left In:  $30.318 \pm 13.979$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $7.781 \pm 10.465$   $\chi^2/\text{NDF}$ : 55.0/55

All:  $6.072 \pm 7.474$   $\chi^2/\text{NDF}$ : 140.8/113

- sign  $4.292 \pm 10.679$   $\chi^2/\text{NDF}$ : 85.8/57

# dit\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 69.813+/-0.012  $\chi^2$ /NDF: 1336251.4/30

Left Out: 57.668+/-0.010  $\chi^2$ /NDF:1909743.5/24

Right Out: 71.312+/-0.012  $\chi^2$ /NDF: 1700094.7/34

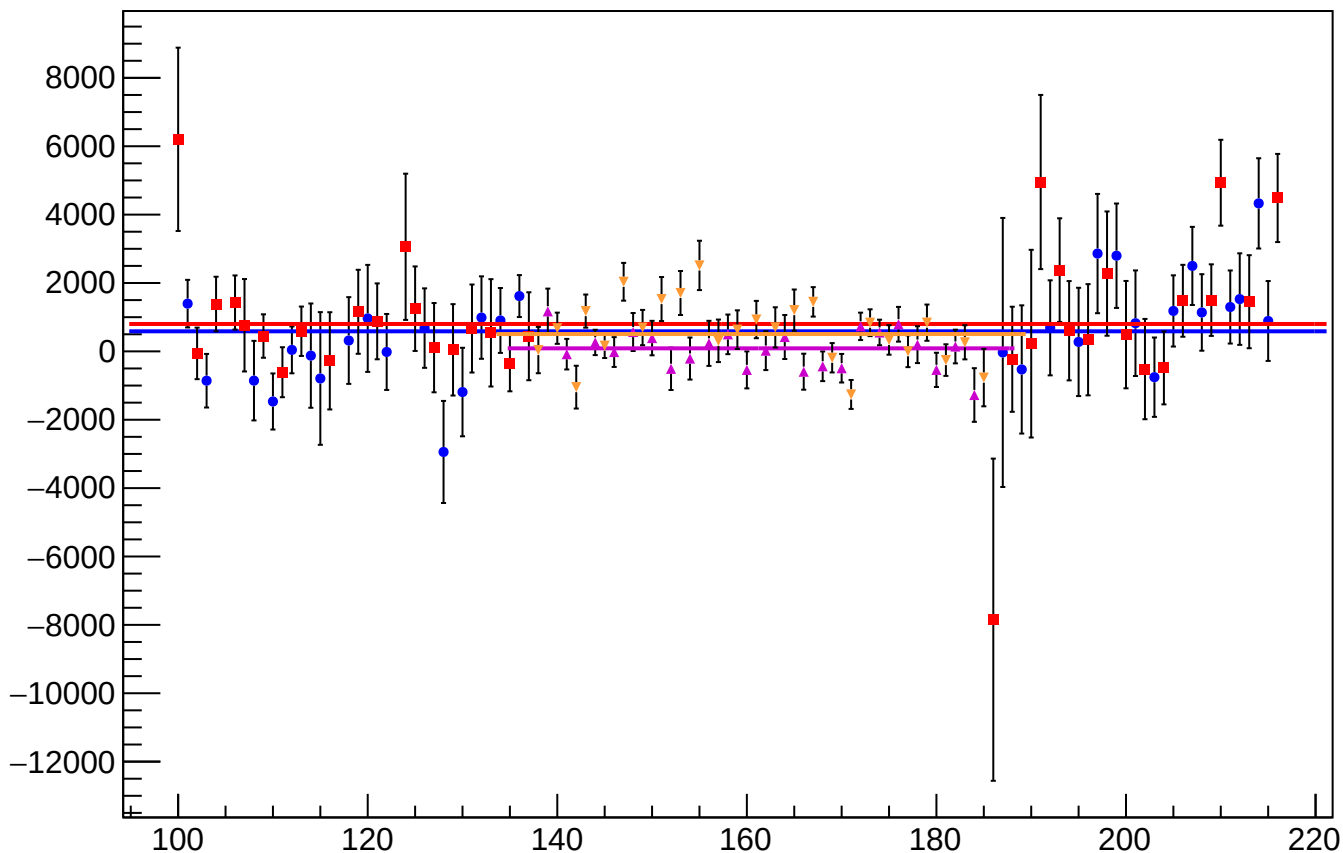
Left In: 57.539+/-0.010  $\chi^2$ /NDF:1443279.4/22

+ sign 62.660+/-0.007  $\chi^2$ /NDF: 3898103.8/55

All: 62.961+/-0.005  $\chi^2$ /NDF: 7853277.7/113

- sign 63.274+/-0.008  $\chi^2$ /NDF: 3951801.4/57

asym\_sam\_15\_48\_dd\_dit\_correction\_mean vs Slug



Right In:  $586.888 \pm 199.066$   $\chi^2/\text{NDF}: 42.8/30$

Left Out:  $507.171 \pm 101.776$   $\chi^2/\text{NDF}: 65.8/24$

Right Out:  $801.360 \pm 193.736$   $\chi^2/\text{NDF}: 46.0/34$

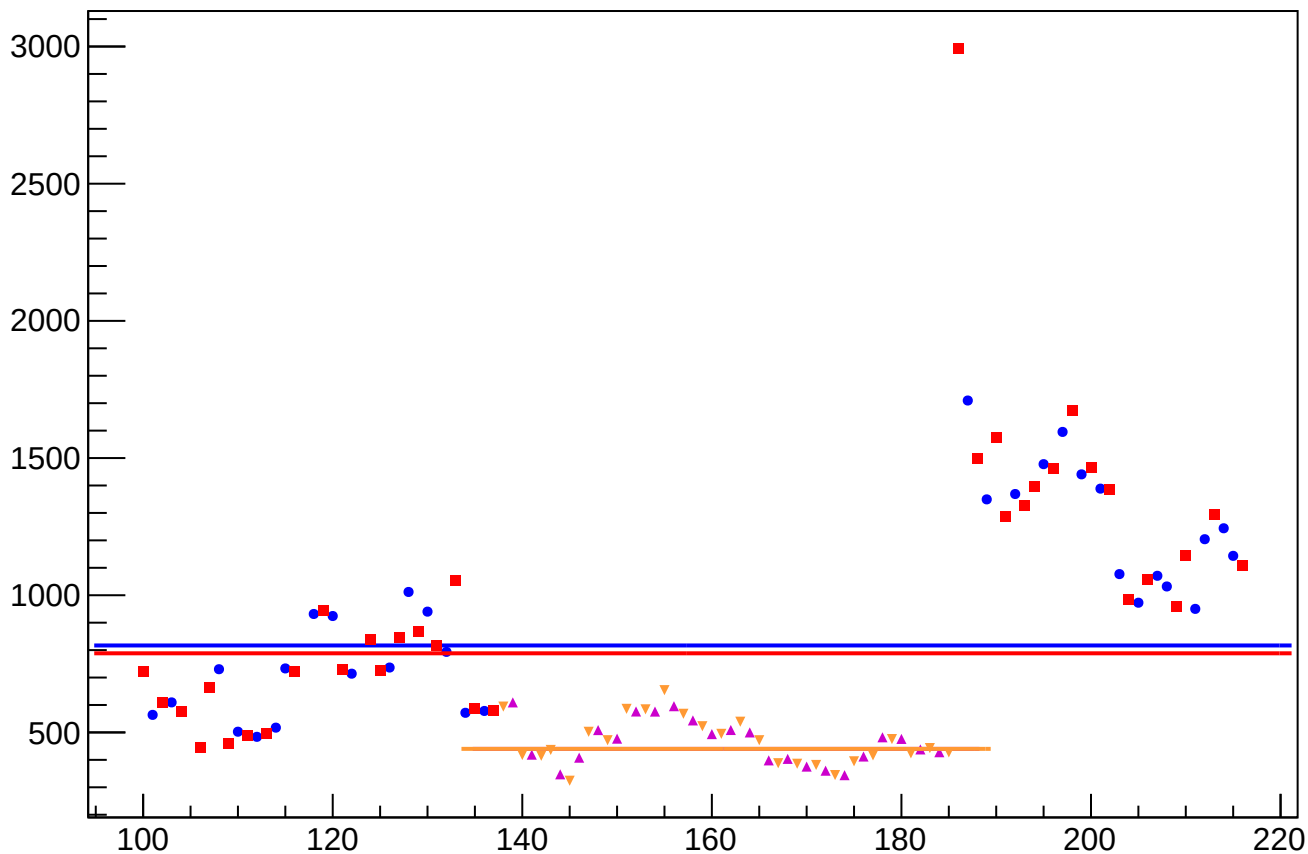
Left In:  $88.471 \pm 104.542$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $523.690 \pm 90.619$   $\chi^2/\text{NDF}: 108.8/55$

All:  $388.541 \pm 64.561$   $\chi^2/\text{NDF}: 193.0/113$

- sign  $249.236 \pm 92.002$   $\chi^2/\text{NDF}: 79.7/57$

asym\_sam\_15\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 816.927 $\pm$ 0.141  $\chi^2$ /NDF: 4620890.3/30

Left Out: 440.075 $\pm$ 0.072  $\chi^2$ /NDF: 1196985.5/24

Right Out: 788.361 $\pm$ 0.137  $\chi^2$ /NDF: 6185621.8/34

Left In: 439.877 $\pm$ 0.074  $\chi^2$ /NDF: 1061910.1/22

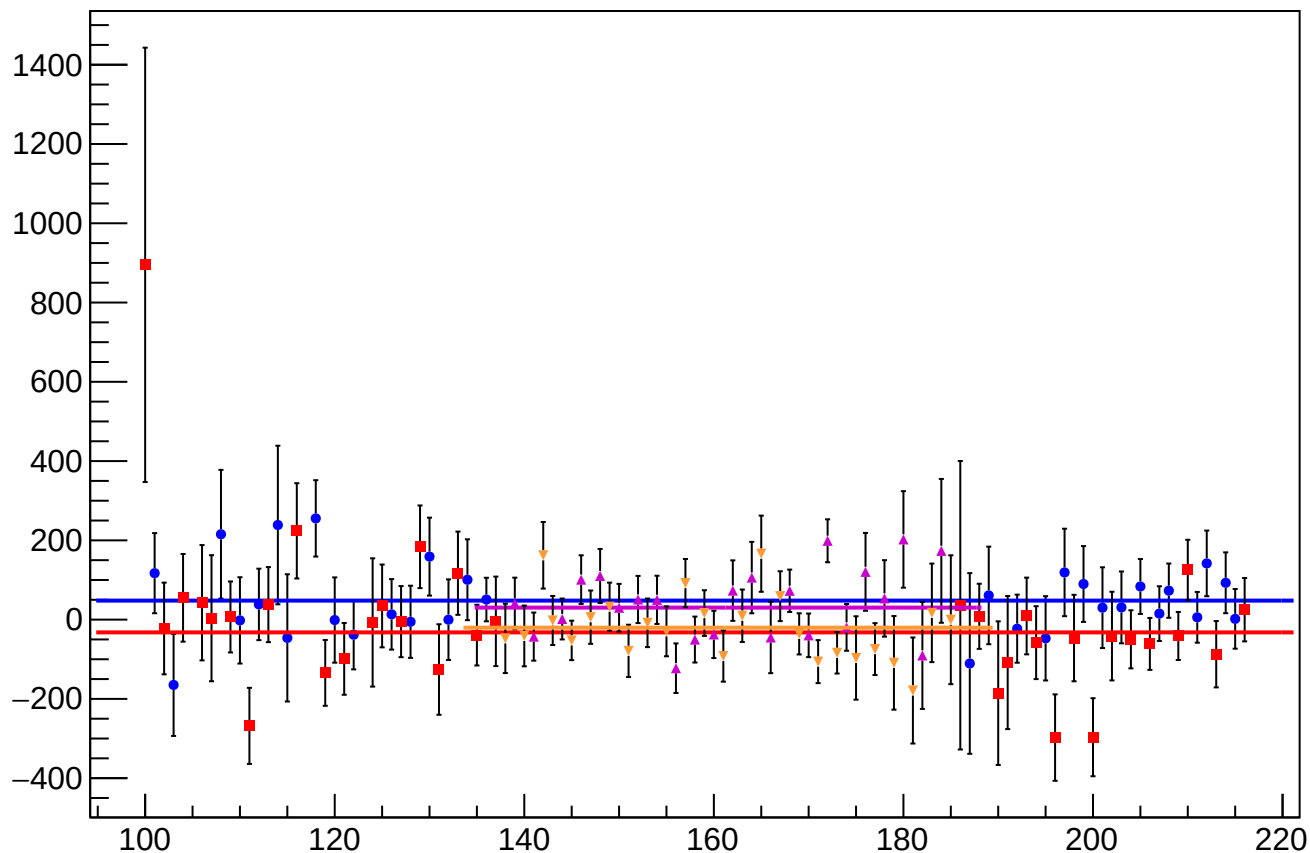
+ sign 518.169 $\pm$ 0.064  $\chi^2$ /NDF: 11500181.0/55

All: 518.315 $\pm$ 0.046  $\chi^2$ /NDF: 23759466.2/11

- sign 518.465 $\pm$ 0.065  $\chi^2$ /NDF: 12259274.8/57



# eigen\_dit\_asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $47.973 \pm 16.323$   $\chi^2/\text{NDF}$ : 19.5/30

Left Out:  $-20.271 \pm 13.636$   $\chi^2/\text{NDF}$ : 25.1/24

Right Out:  $-32.187 \pm 16.550$   $\chi^2/\text{NDF}$ : 44.9/34

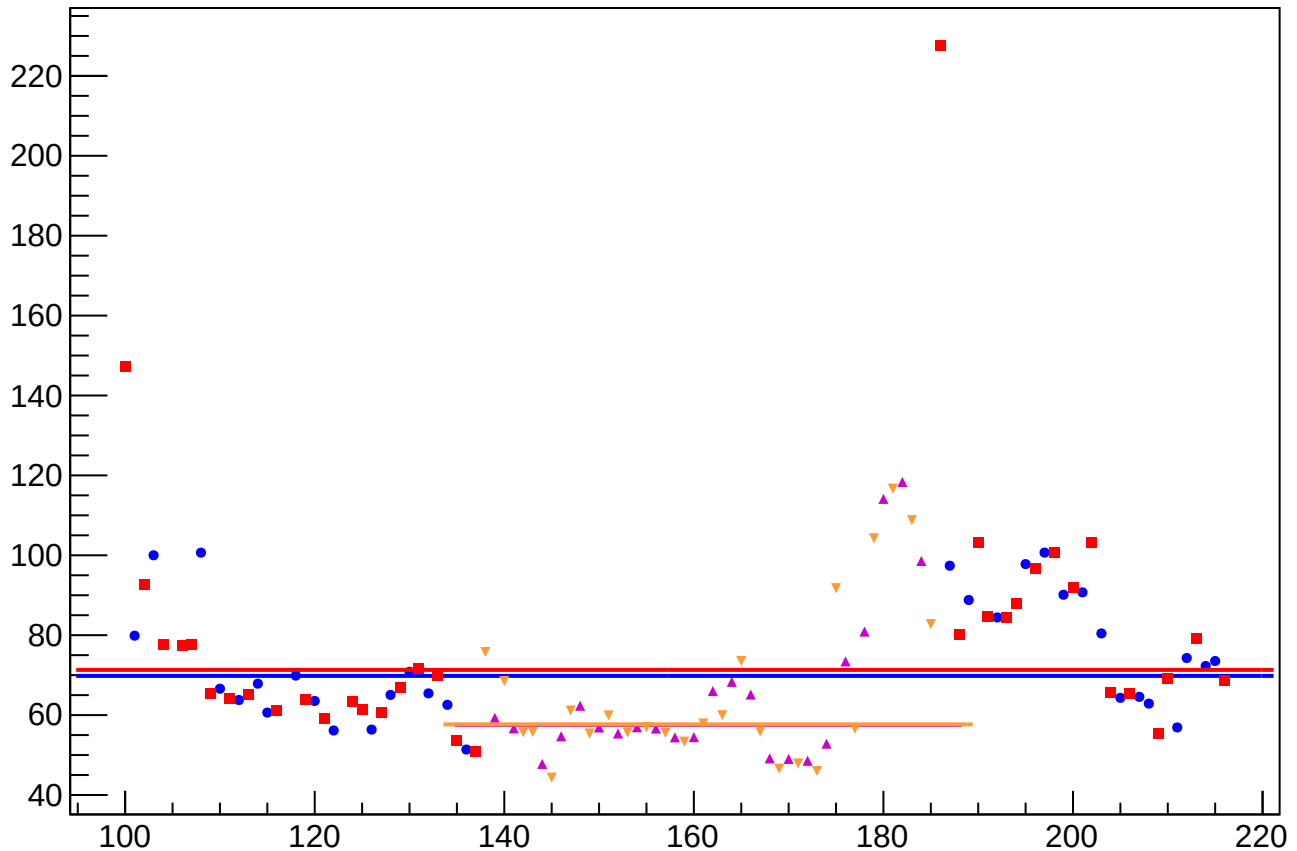
Left In:  $30.318 \pm 13.979$   $\chi^2/\text{NDF}$ : 32.6/22

+ sign  $7.780 \pm 10.465$   $\chi^2/\text{NDF}$ : 55.0/55

All:  $6.071 \pm 7.474$   $\chi^2/\text{NDF}$ : 140.8/113

- sign  $4.292 \pm 10.679$   $\chi^2/\text{NDF}$ : 85.8/57

# eigen\_dit\_asym\_sam\_15\_48\_dd\_rms vs Slug



Right In: 69.813+/-0.012  $\chi^2/\text{NDF}$ : 1336224.6/30

Left Out: 57.668+/-0.010  $\chi^2/\text{NDF}$ : 1909739.8/24

Right Out: 71.312+/-0.012  $\chi^2/\text{NDF}$ : 1700099.0/34

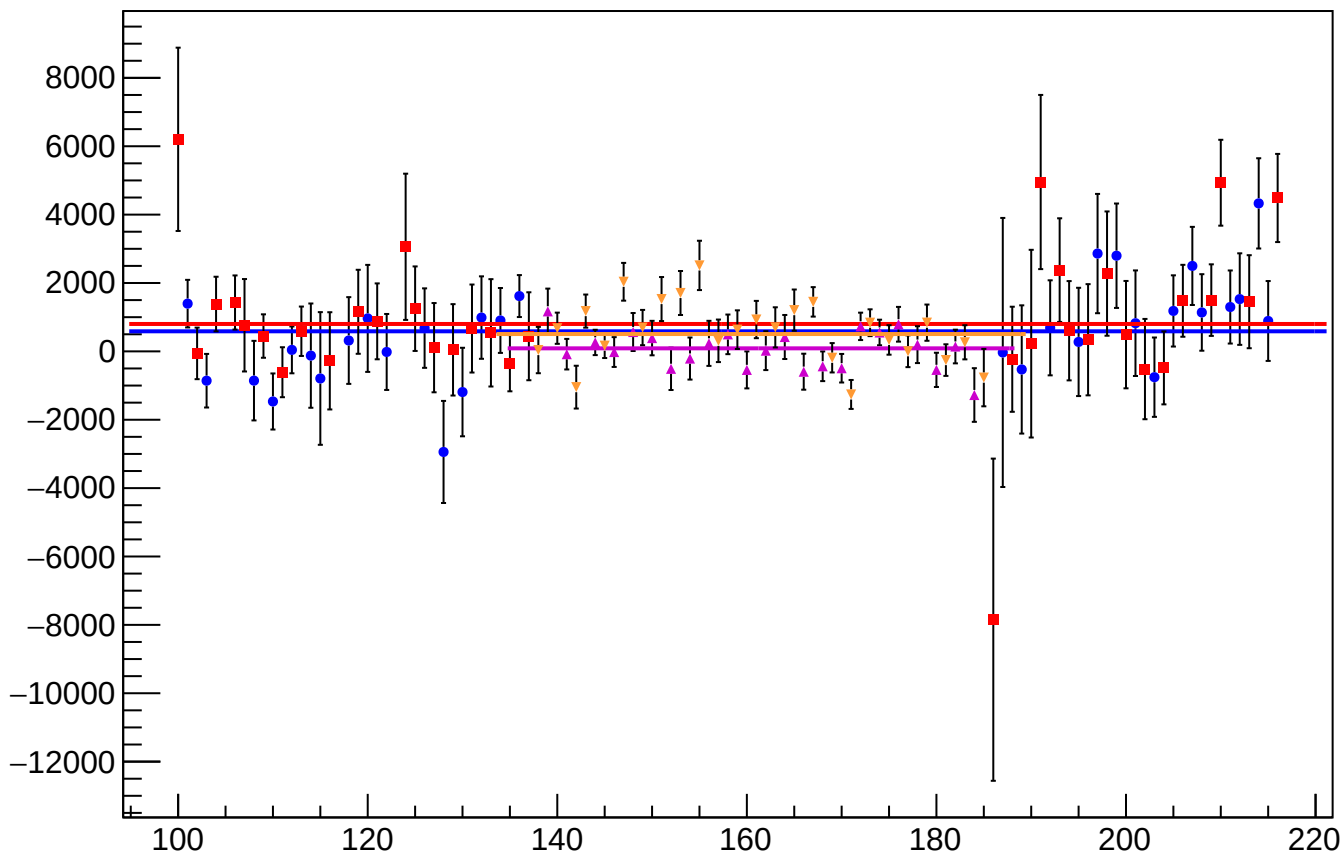
Left In: 57.539+/-0.010  $\chi^2/\text{NDF}$ : 1443262.3/22

+ sign 62.660+/-0.007  $\chi^2/\text{NDF}$ : 3898054.6/55

All: 62.961+/-0.005  $\chi^2/\text{NDF}$ : 7853204.9/113

- sign 63.274+/-0.008  $\chi^2/\text{NDF}$ : 3951778.2/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $586.886 \pm 199.066$   $\chi^2/\text{NDF}: 42.8/30$

Left Out:  $507.170 \pm 101.776$   $\chi^2/\text{NDF}: 65.8/24$

Right Out:  $801.358 \pm 193.736$   $\chi^2/\text{NDF}: 46.0/34$

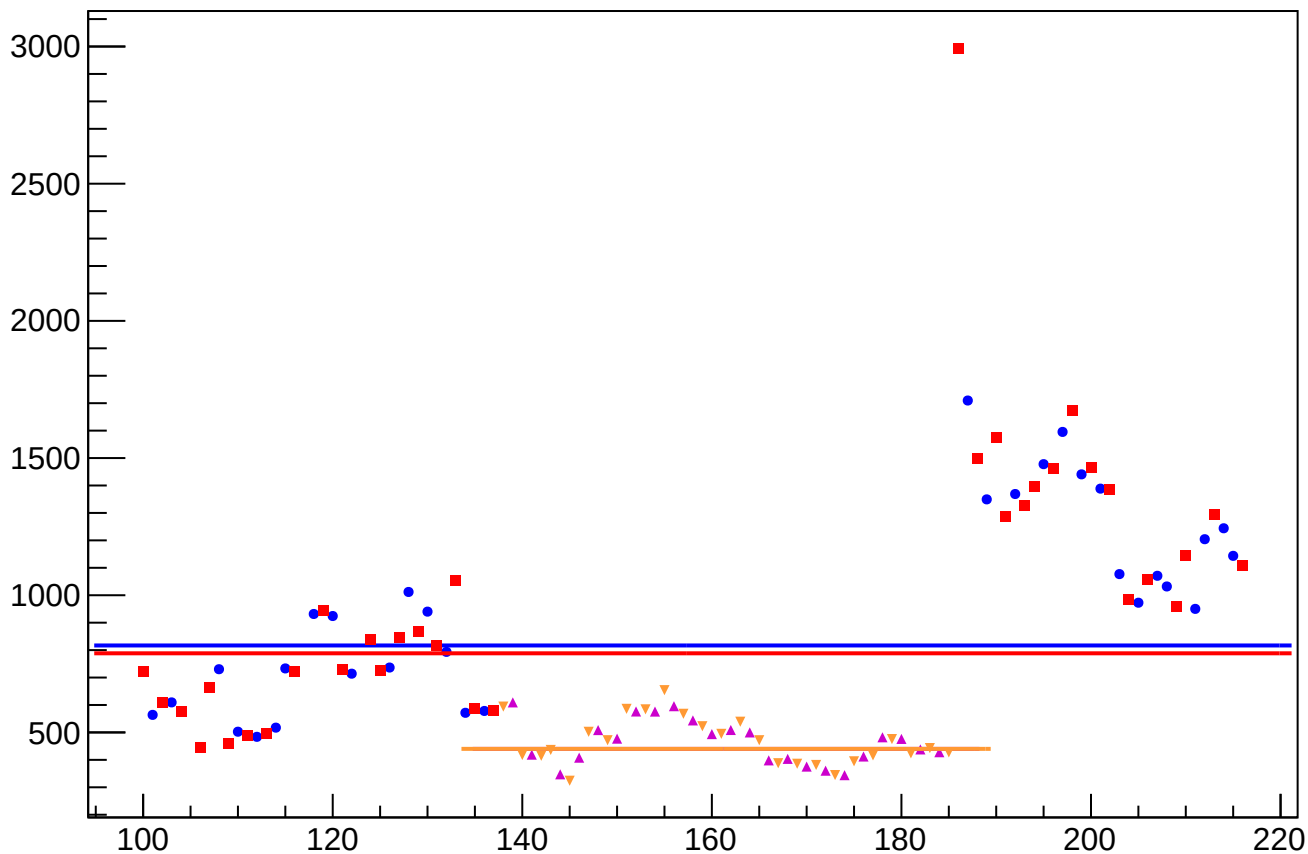
Left In:  $88.471 \pm 104.541$   $\chi^2/\text{NDF}: 23.3/22$

+ sign  $523.689 \pm 90.619$   $\chi^2/\text{NDF}: 108.8/55$

All:  $388.540 \pm 64.561$   $\chi^2/\text{NDF}: 193.0/113$

- sign  $249.235 \pm 92.002$   $\chi^2/\text{NDF}: 79.7/57$

asym\_sam\_15\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 816.926 $\pm$ 0.141  $\chi^2/\text{NDF}$ : 4620895.2/30

Left Out: 440.074 $\pm$ 0.072  $\chi^2/\text{NDF}$ : 1196993.4/24

Right Out: 788.361 $\pm$ 0.137  $\chi^2/\text{NDF}$ : 6185628.0/34

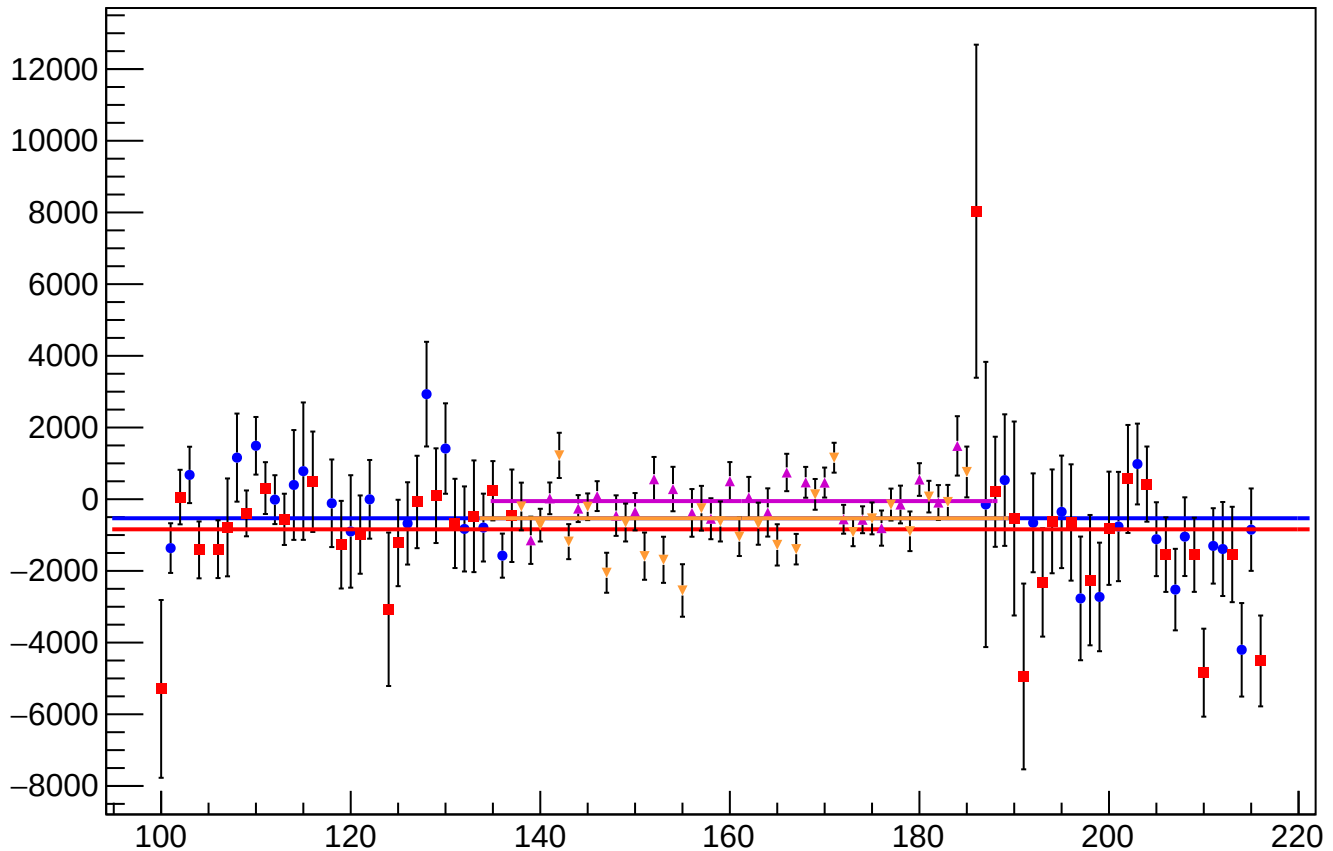
Left In: 439.876 $\pm$ 0.074  $\chi^2/\text{NDF}$ : 1061916.6/22

+ sign 518.168 $\pm$ 0.064  $\chi^2/\text{NDF}$ : 11500214.9/55

All: 518.313 $\pm$ 0.046  $\chi^2/\text{NDF}$ : 23759536.5/11

- sign 518.463 $\pm$ 0.065  $\chi^2/\text{NDF}$ : 12259311.1/57

# asym\_sam\_15\_48\_dd\_mean vs Slug



Right In:  $-531.206 \pm 197.461$   $\chi^2/\text{NDF}: 43.4/30$

Left Out:  $-531.569 \pm 101.245$   $\chi^2/\text{NDF}: 65.6/24$

Right Out:  $-839.987 \pm 192.797$   $\chi^2/\text{NDF}: 44.5/34$

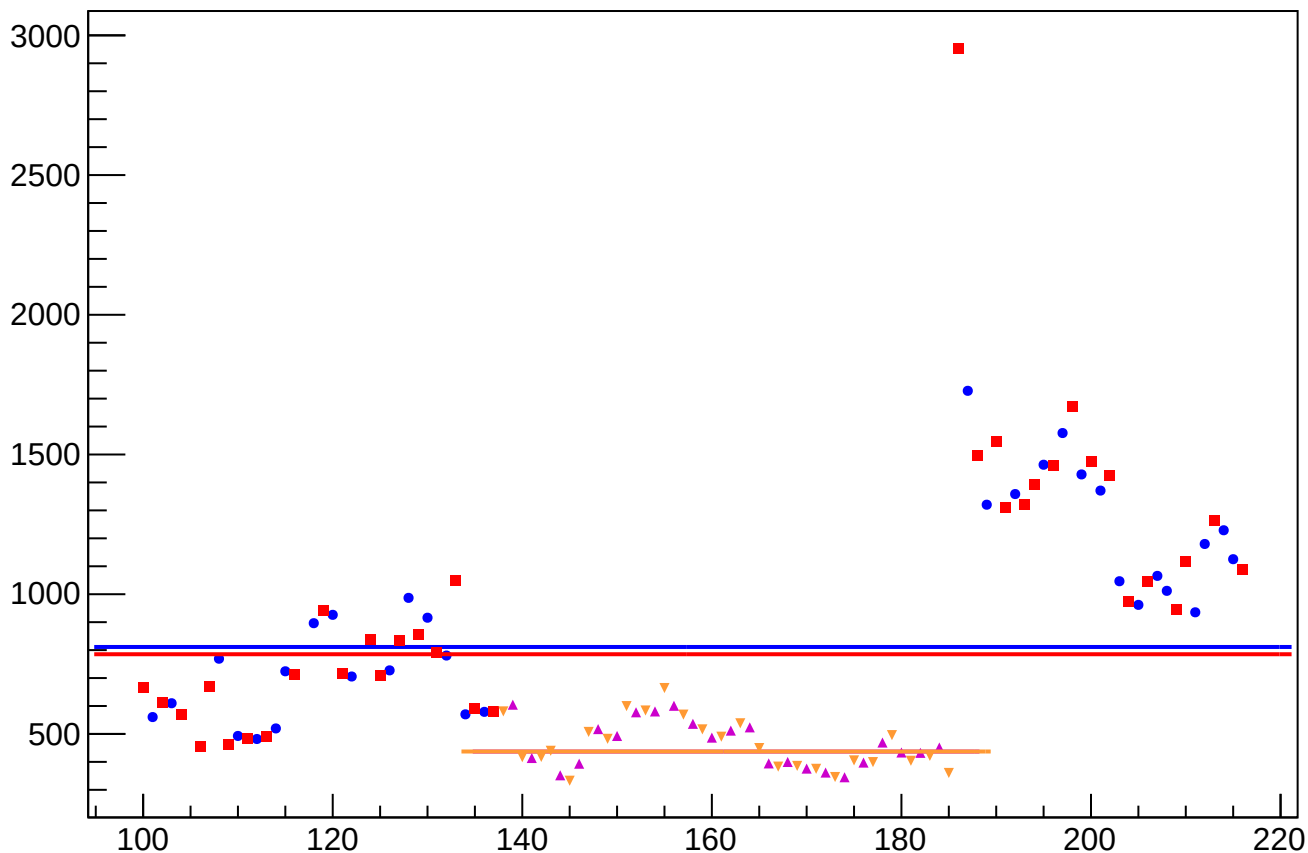
Left In:  $-52.554 \pm 103.870$   $\chi^2/\text{NDF}: 24.1/22$

+ sign  $-531.494 \pm 90.093$   $\chi^2/\text{NDF}: 109.0/55$

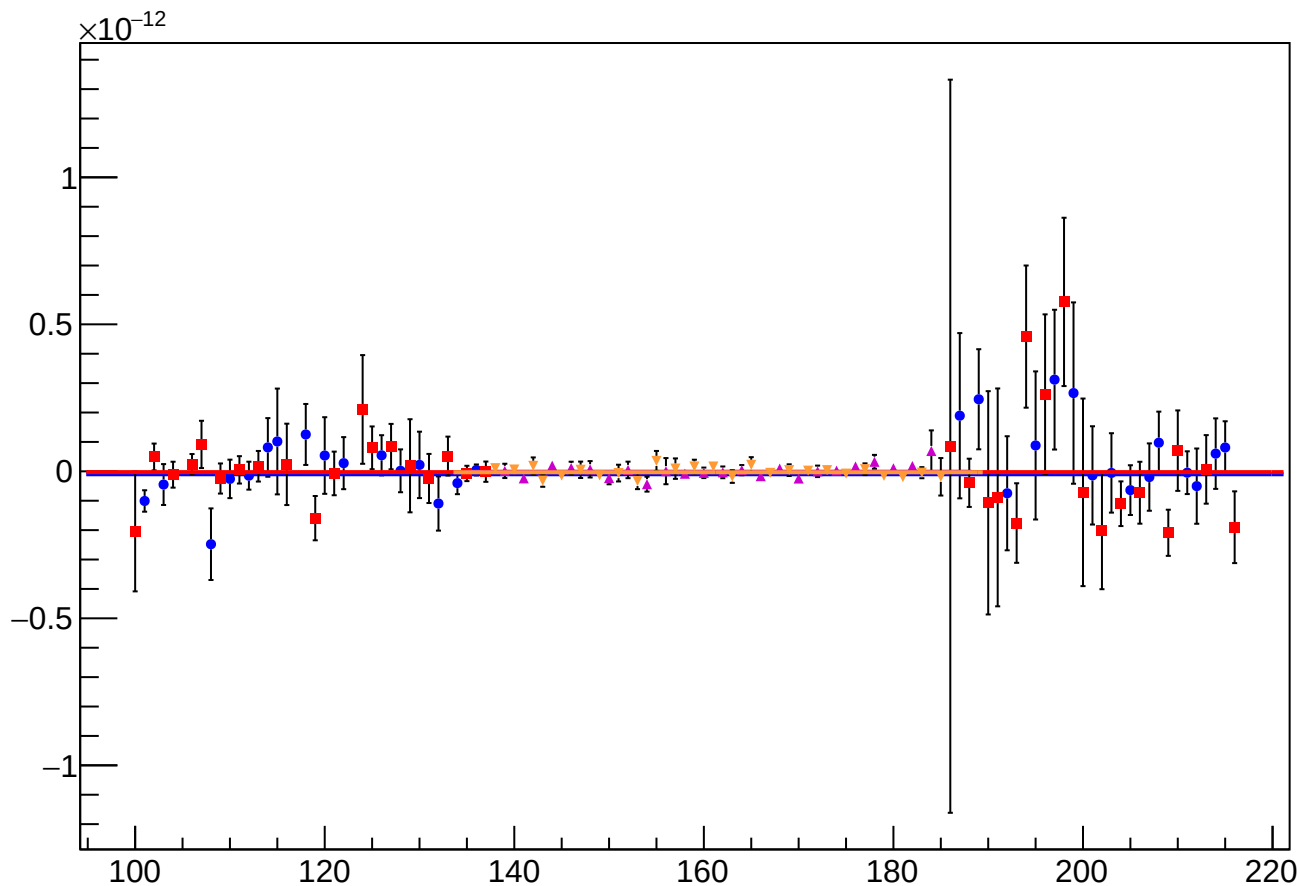
All:  $-382.839 \pm 64.177$   $\chi^2/\text{NDF}: 196.0/113$

- sign  $-229.694 \pm 91.443$   $\chi^2/\text{NDF}: 81.5/57$

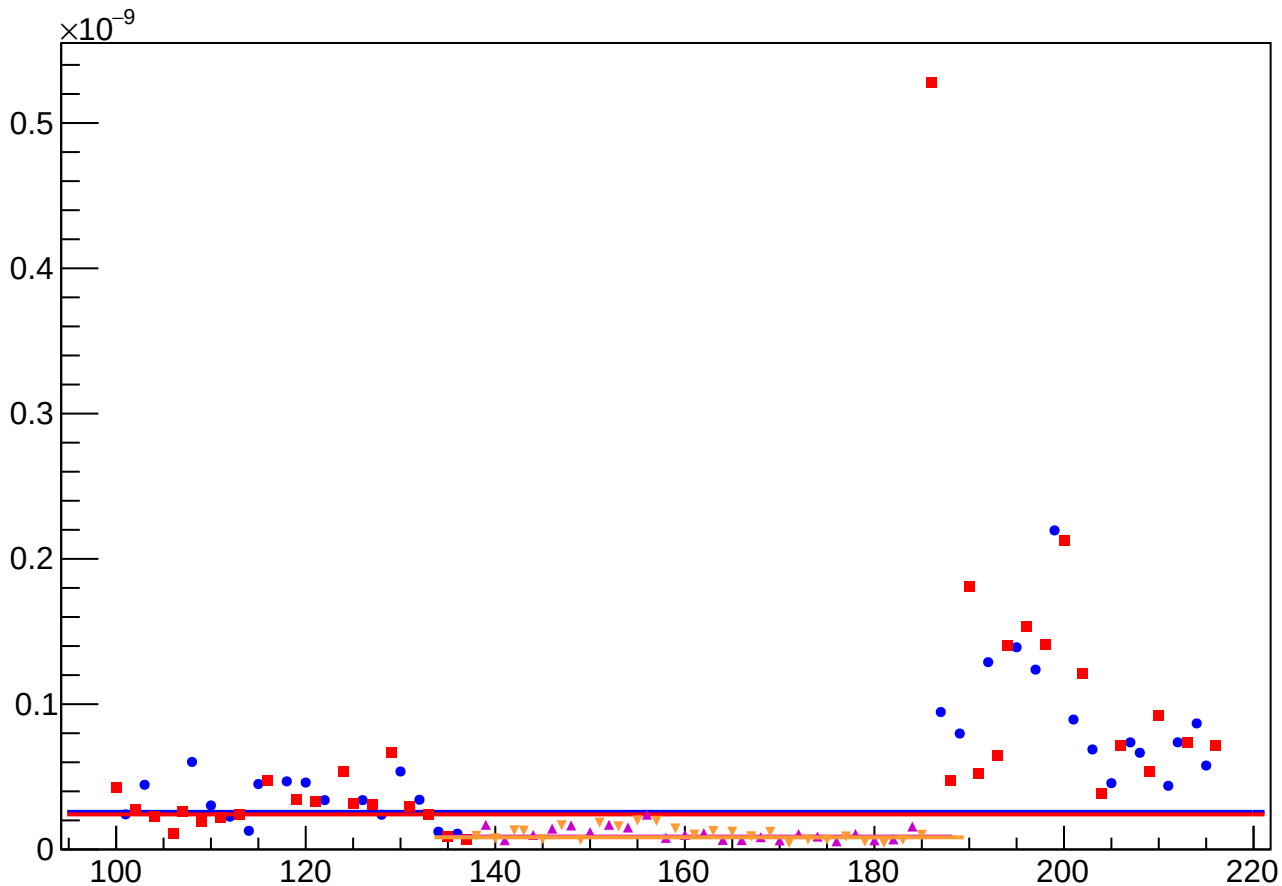
# asym\_sam\_15\_48\_dd\_rms vs Slug



asym\_sam\_15\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



# asym\_sam\_15\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7086513.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2207304.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7252187.9/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1644276.1/22

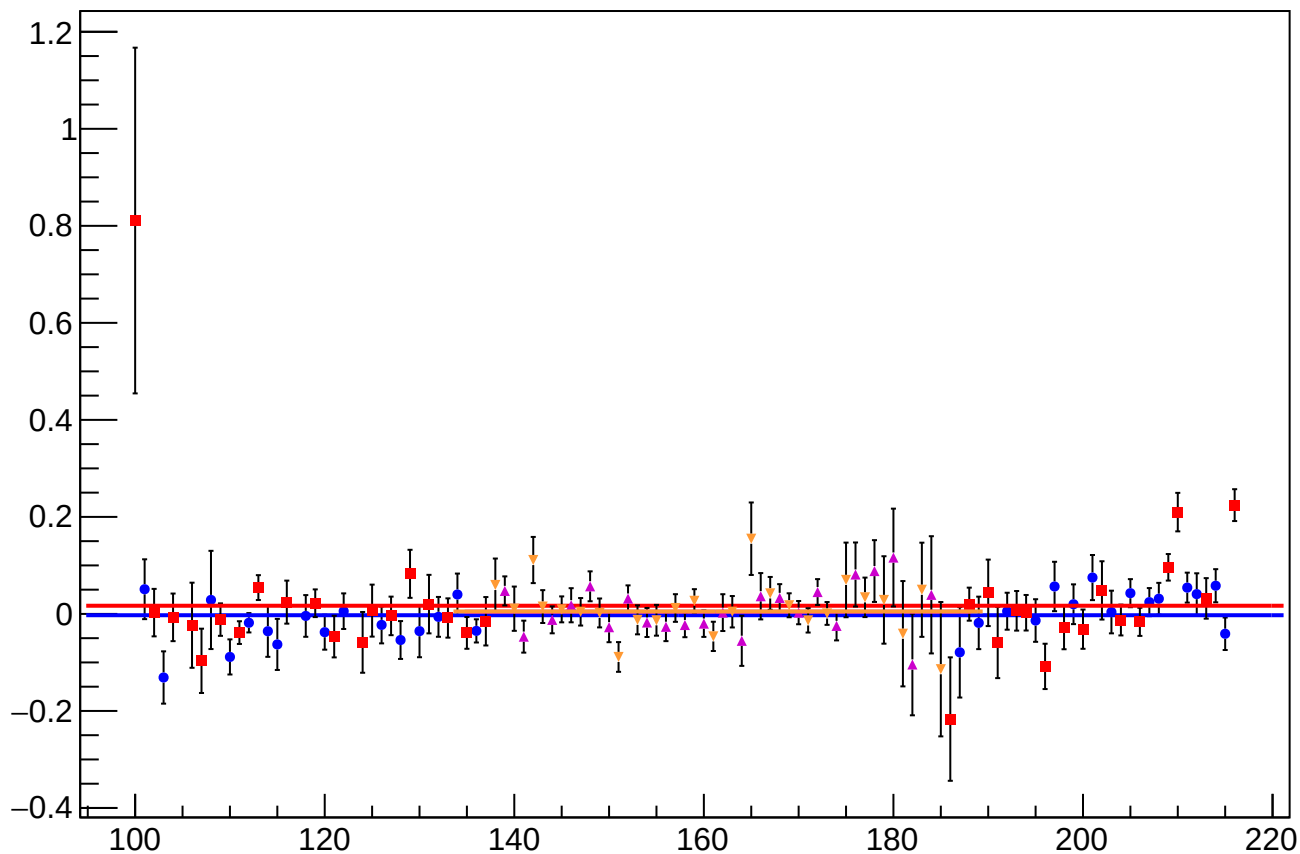
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13391593.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 25567885.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12151154.1/57



asym\_sam\_15\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}: 39.3/30$

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 28.4/24$

Right Out:  $0.017 \pm 0.007$   $\chi^2/\text{NDF}: 115.3/34$

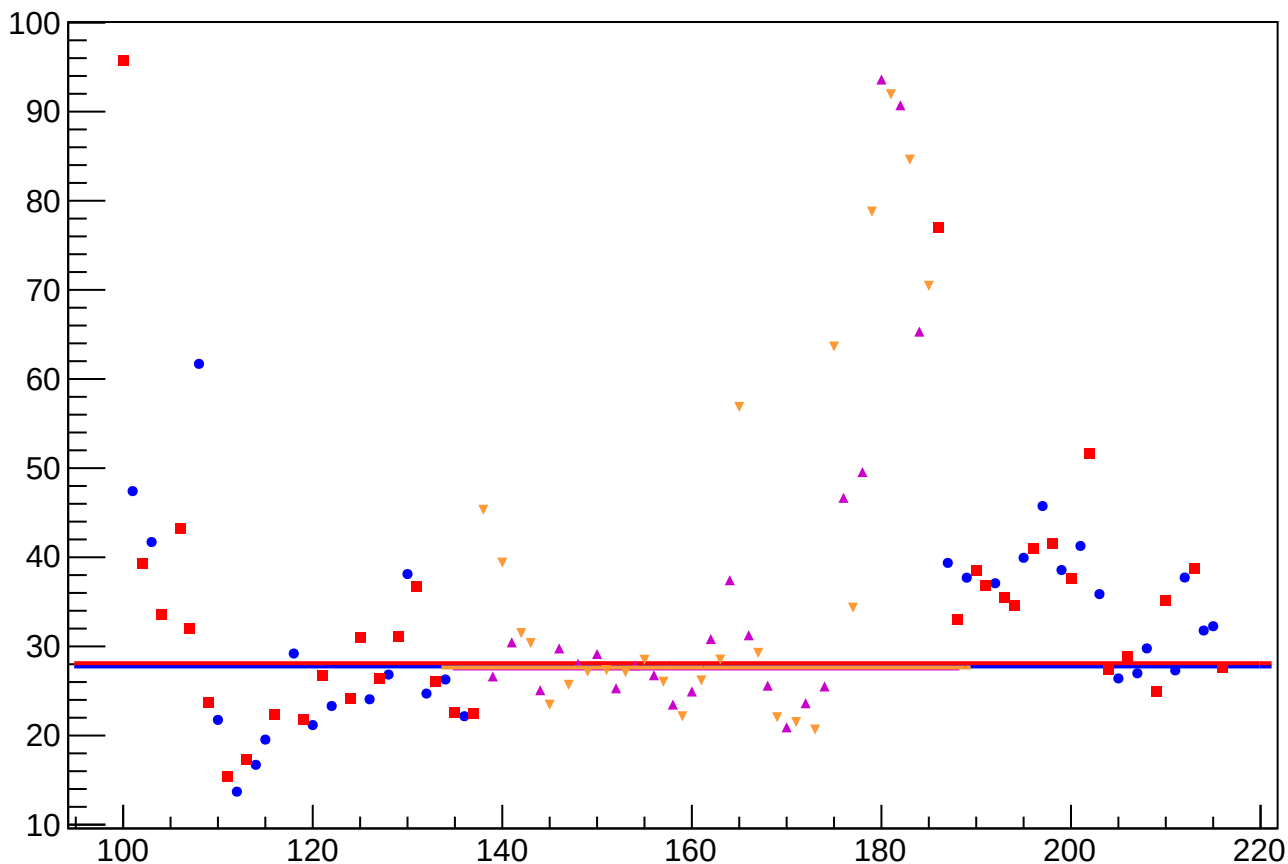
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}: 25.1/22$

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}: 68.4/55$

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}: 212.4/113$

- sign  $0.011 \pm 0.005$   $\chi^2/\text{NDF}: 142.0/57$

asym\_sam\_15\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 27.753+/-0.005  $\chi^2/\text{NDF}$ : 3247381.3/30

Left Out: 27.635+/-0.005  $\chi^2/\text{NDF}$ : 3974084.8/24

Right Out: 28.118+/-0.005  $\chi^2/\text{NDF}$ : 3046234.5/34

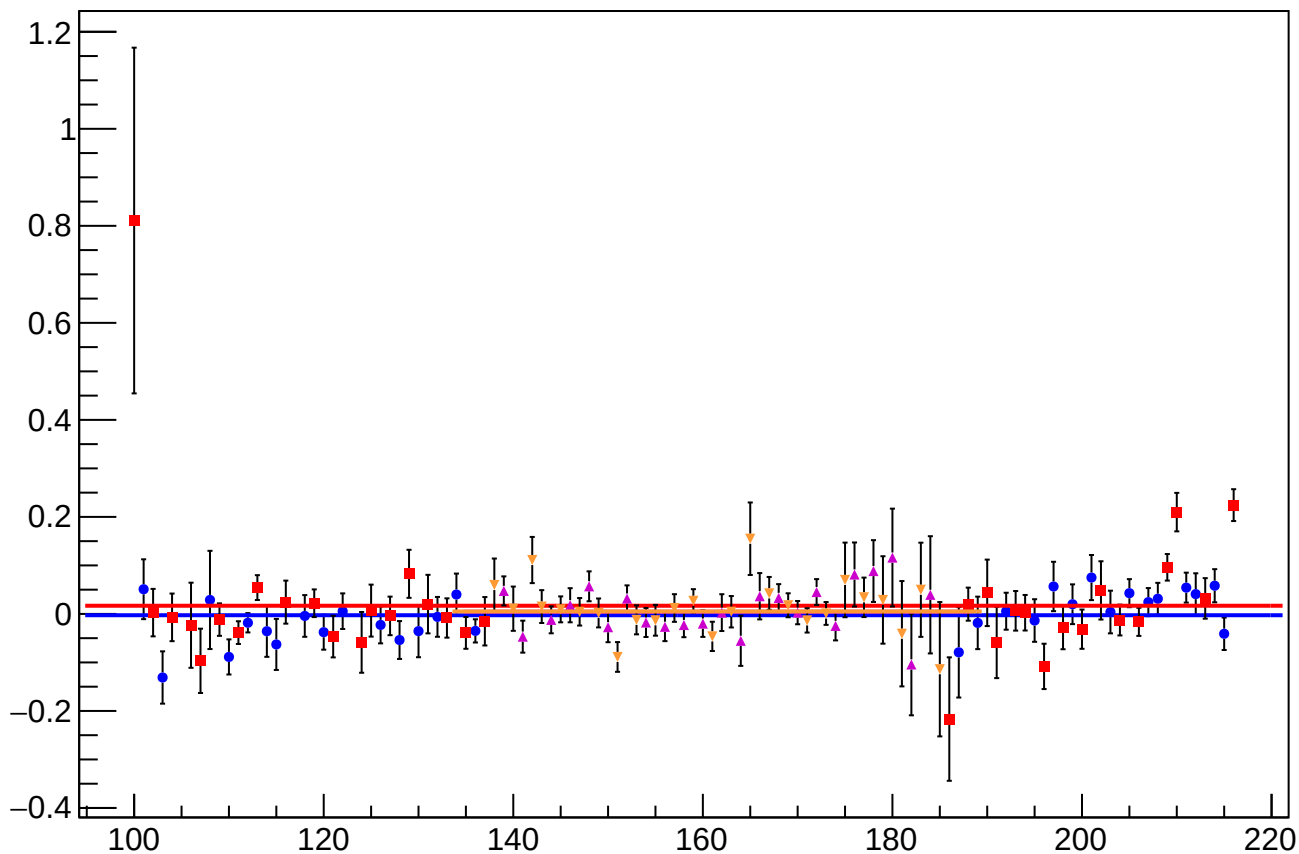
Left In: 27.524+/-0.005  $\chi^2/\text{NDF}$ : 2634540.9/22

+ sign 27.694+/-0.003  $\chi^2/\text{NDF}$ : 7221765.4/55

All: 27.761+/-0.002  $\chi^2/\text{NDF}$ : 12910768.9/113

- sign 27.830+/-0.003  $\chi^2/\text{NDF}$ : 5688222.2/57

asym\_sam\_15\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 39.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 115.3/34

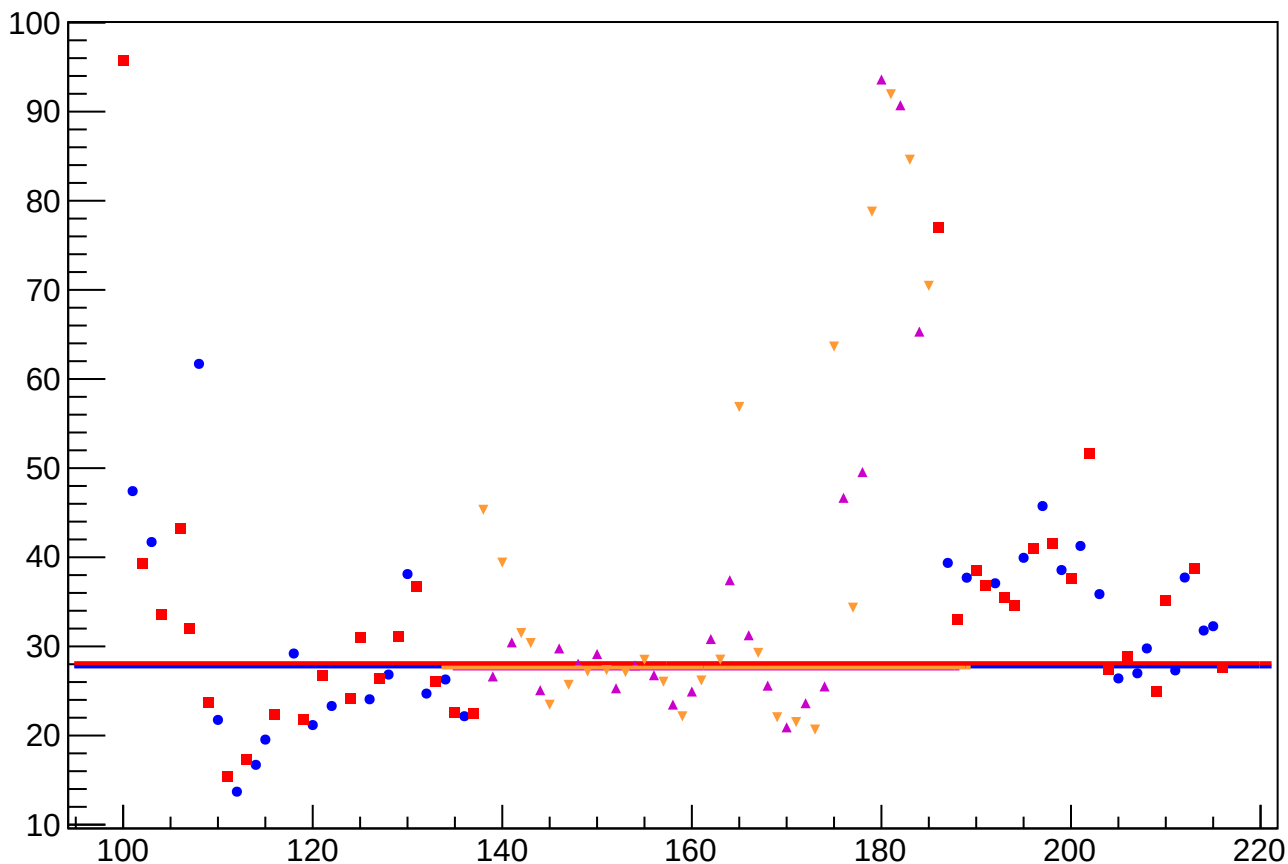
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 212.4/113

- sign  $0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 142.0/57

asym\_sam\_15\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 27.753 $\pm$ 0.005  $\chi^2$ /NDF: 3247381.3/30

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF: 3974084.8/24

Right Out: 28.118 $\pm$ 0.005  $\chi^2$ /NDF: 3046234.5/34

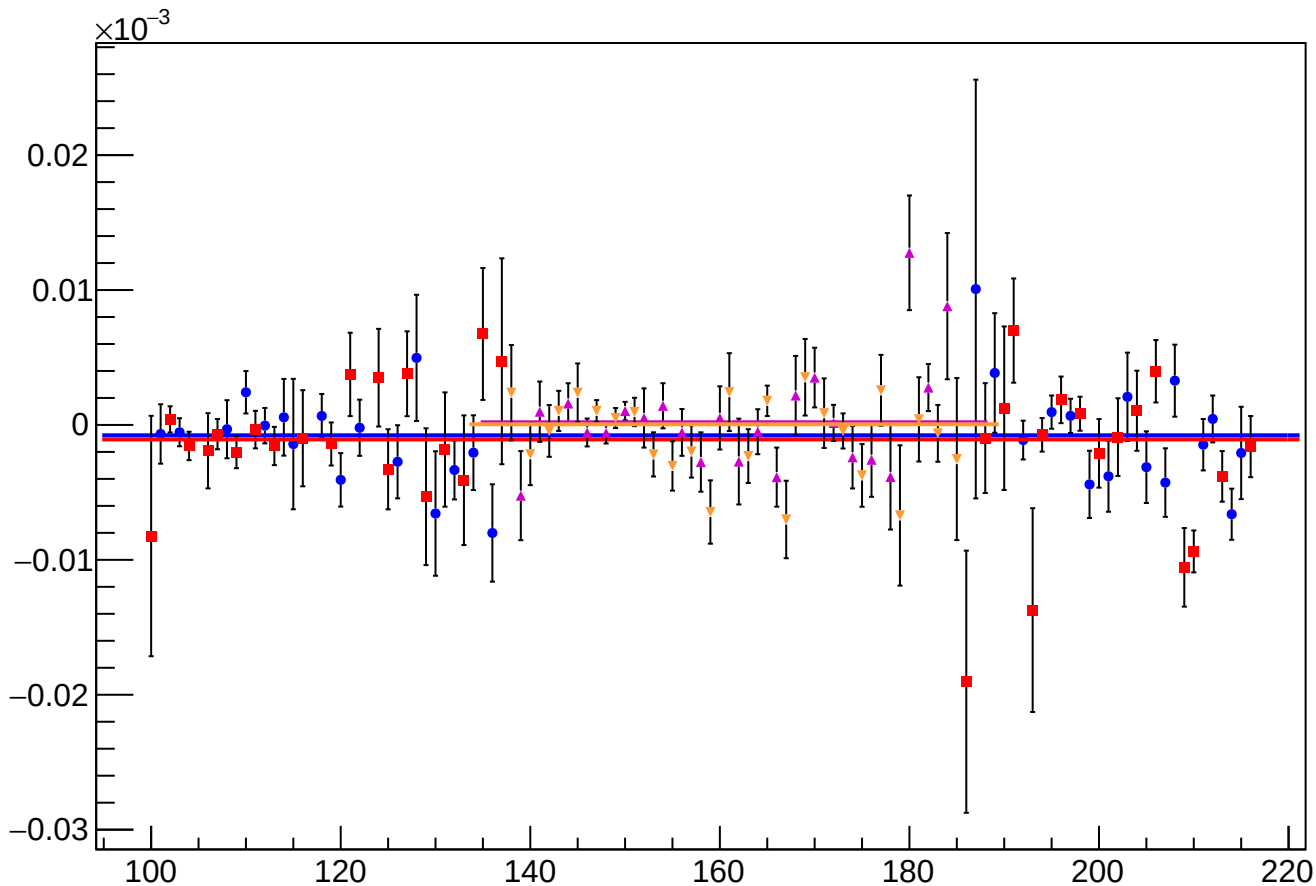
Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF: 2634540.9/22

+ sign 27.694 $\pm$ 0.003  $\chi^2$ /NDF: 7221765.4/55

All: 27.761 $\pm$ 0.002  $\chi^2$ /NDF: 12910768.9/113

- sign 27.830 $\pm$ 0.003  $\chi^2$ /NDF: 5688222.2/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 42.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.0/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 78.5/34

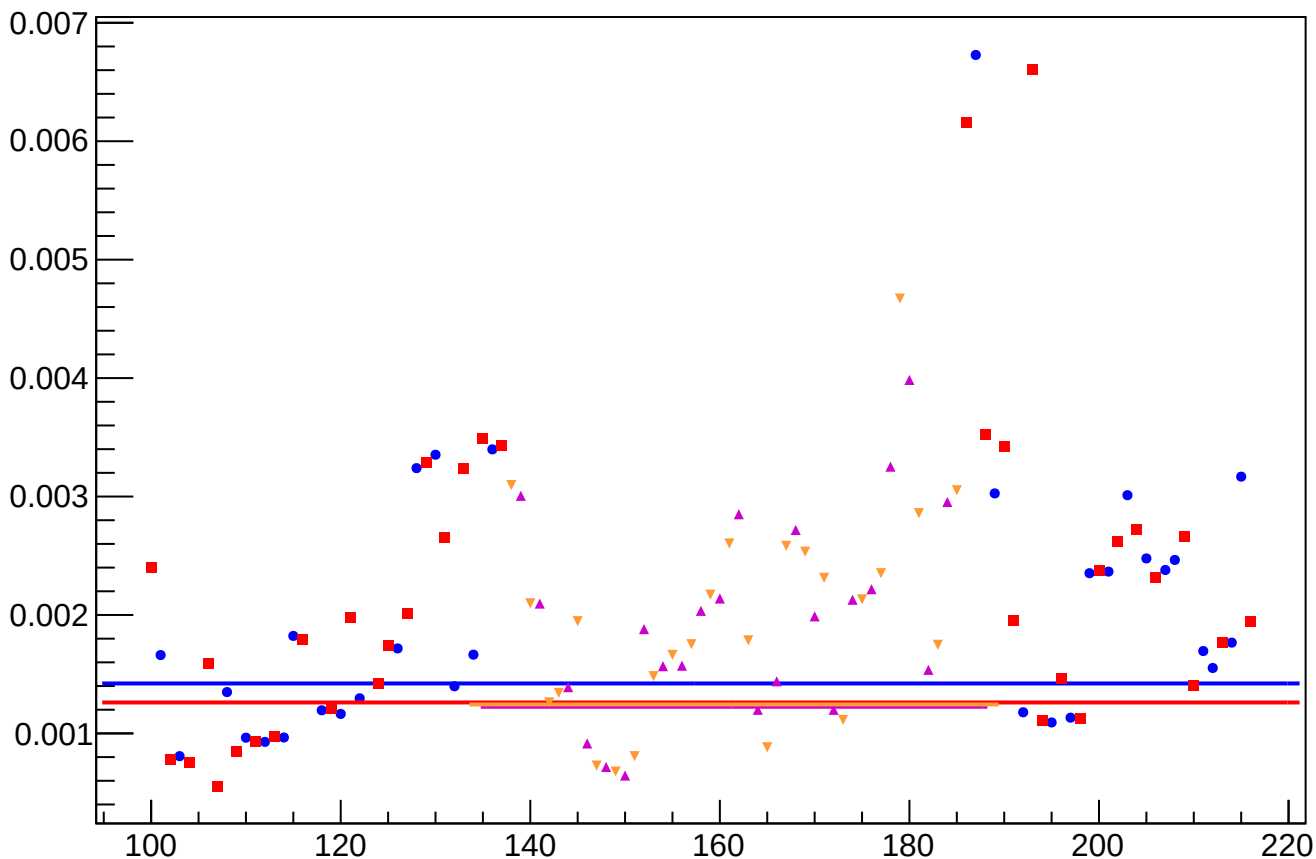
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:33.3/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 81.8/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 201.0/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 119.1/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 5965874.2/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8341059.1/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9109025.1/34

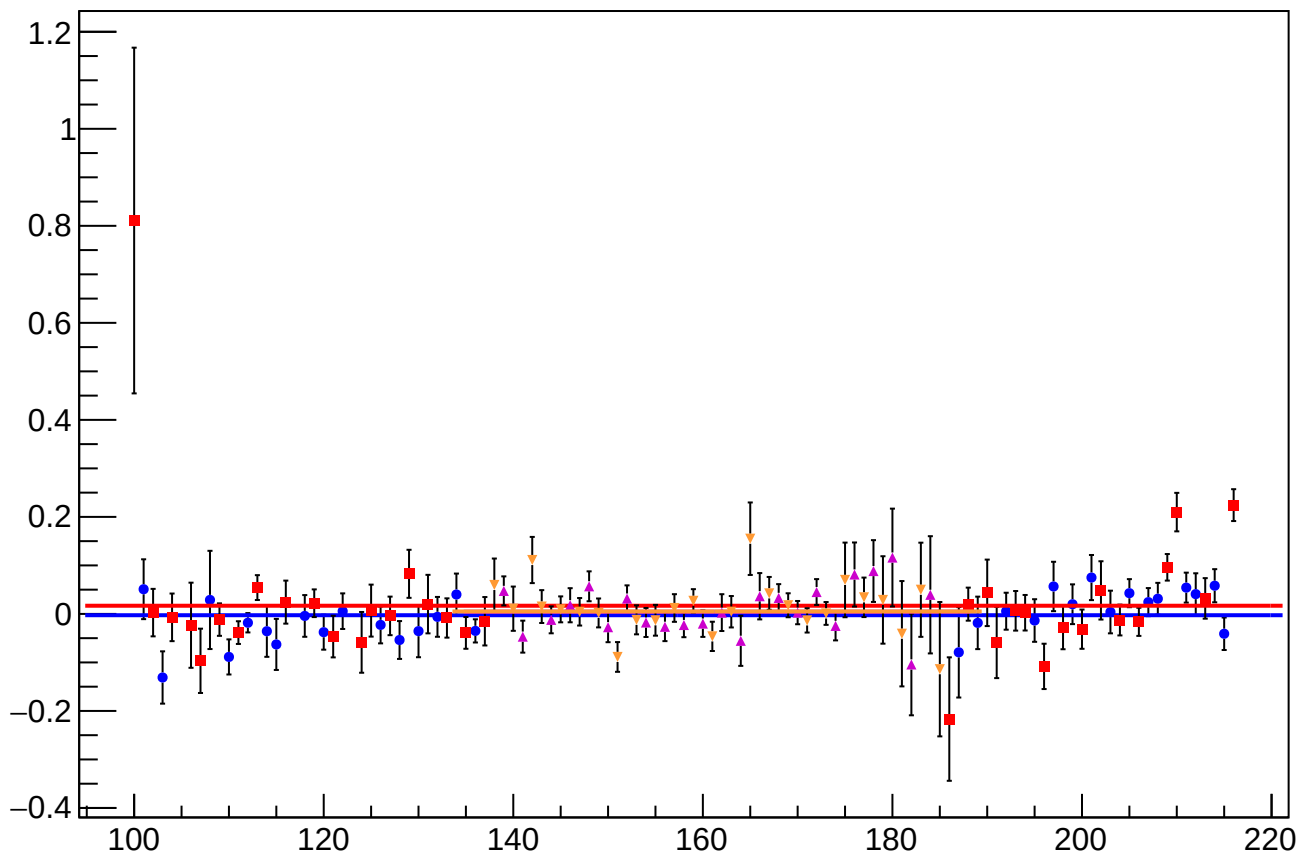
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7822849.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 14572563.7/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31630013.4/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 16943703.8/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 39.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 115.3/34

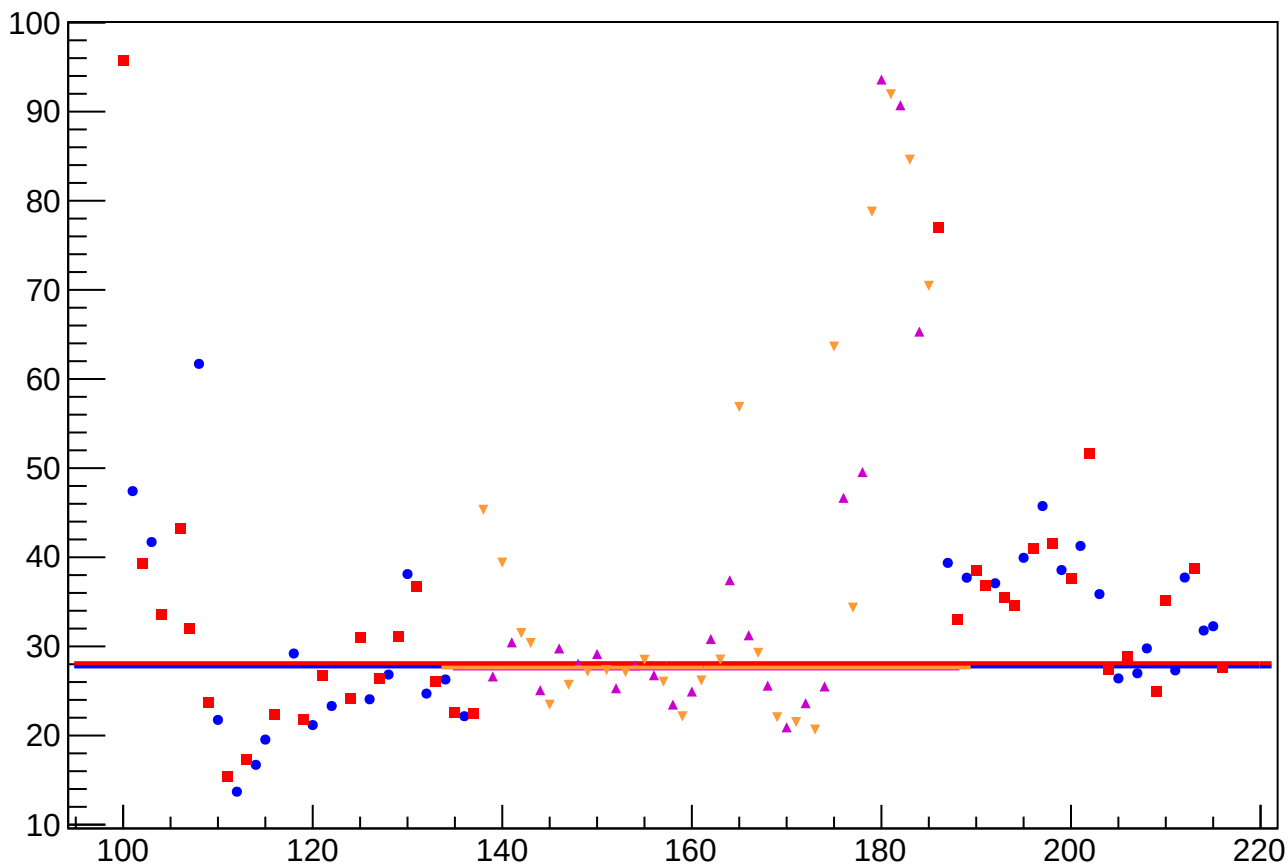
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 212.4/113

- sign  $0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 142.0/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 27.753 $\pm$ 0.005  $\chi^2$ /NDF: 3247358.5/30

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF: 3974025.3/24

Right Out: 28.118 $\pm$ 0.005  $\chi^2$ /NDF: 3046329.2/34

Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF: 2634508.8/22

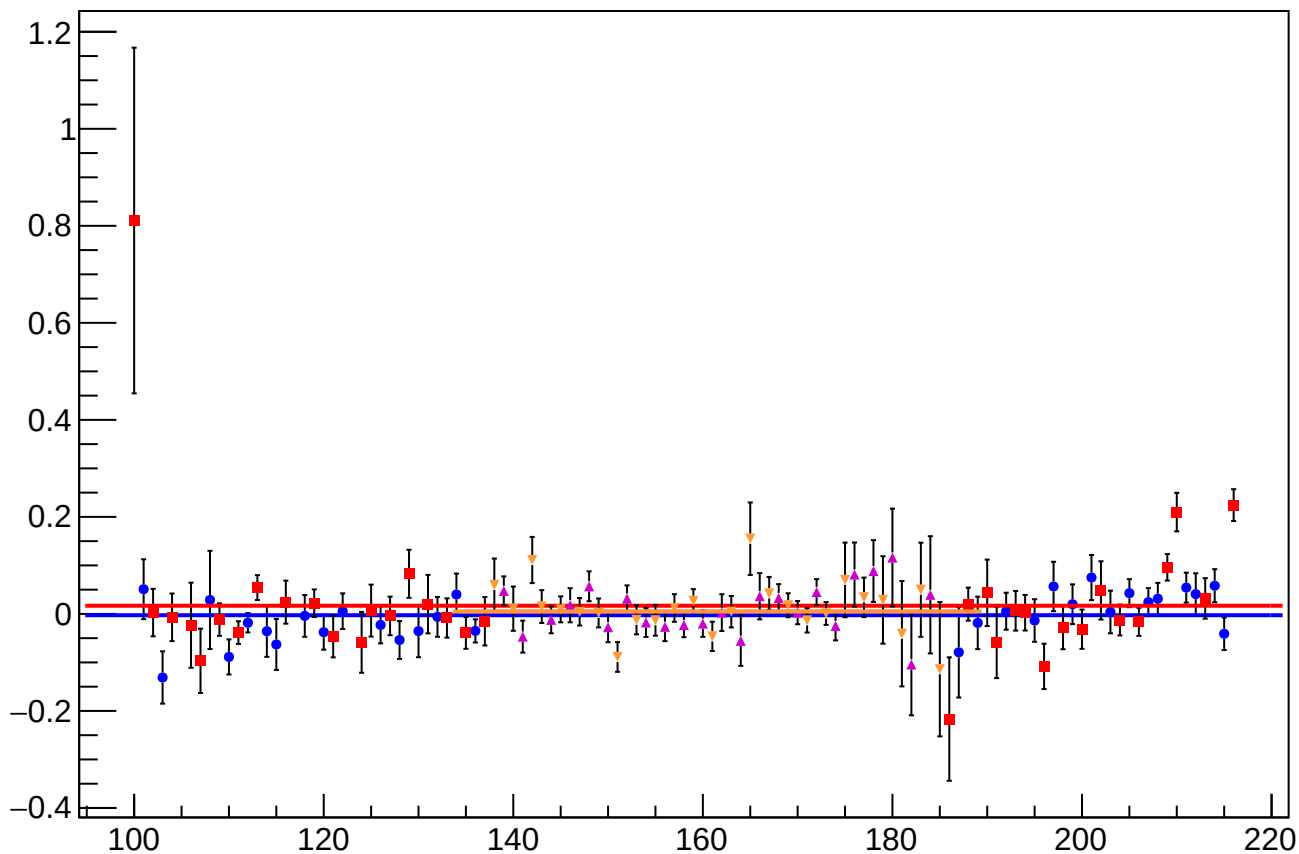
+ sign 27.694 $\pm$ 0.003  $\chi^2$ /NDF: 7221680.9/55

All: 27.762 $\pm$ 0.002  $\chi^2$ /NDF: 12910739.9/113

- sign 27.830 $\pm$ 0.003  $\chi^2$ /NDF: 5688278.3/57



asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 39.3/30

Left Out:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 28.4/24

Right Out:  $0.017 \pm 0.007$   $\chi^2/\text{NDF}$ : 115.3/34

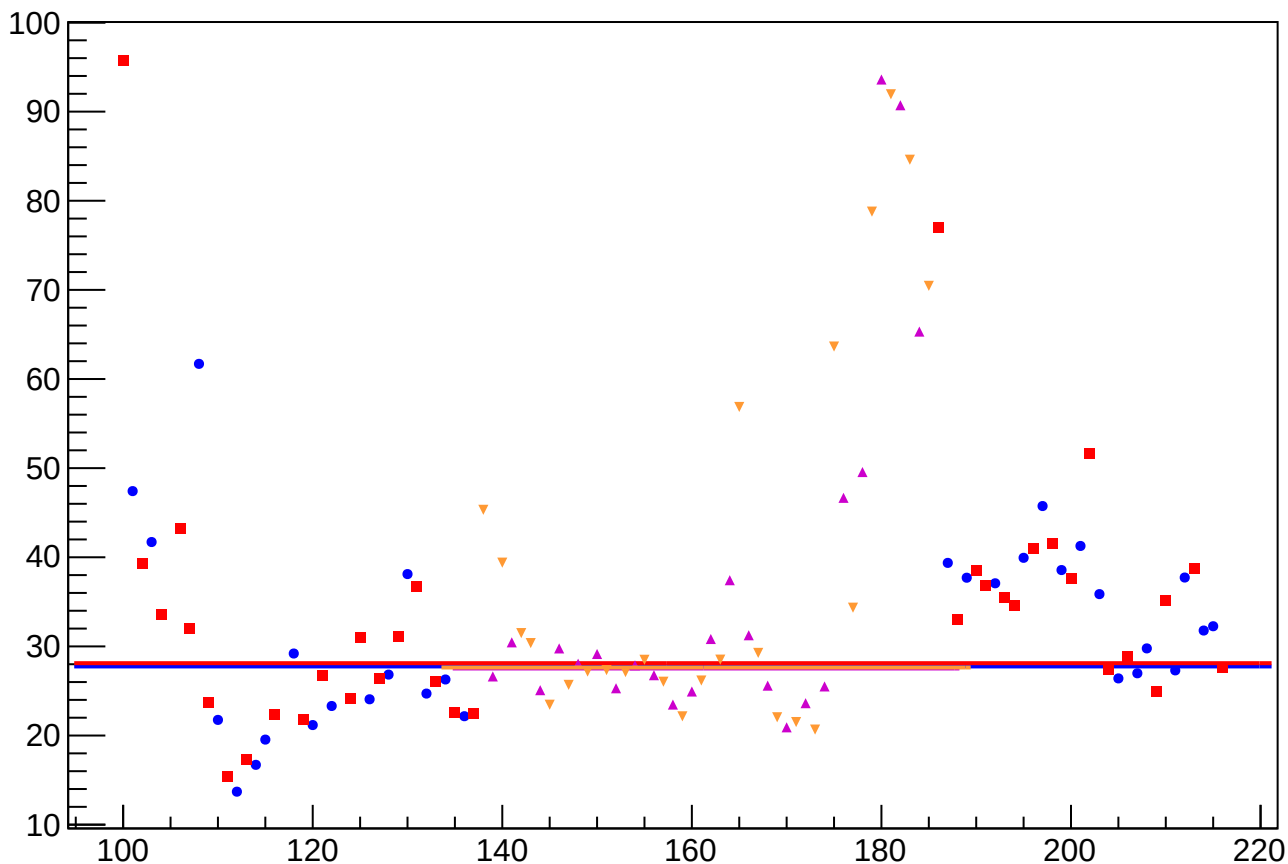
Left In:  $0.005 \pm 0.007$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $0.001 \pm 0.005$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 212.4/113

- sign  $0.011 \pm 0.005$   $\chi^2/\text{NDF}$ : 142.0/57

asym\_sam\_15\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 27.753 $\pm$ 0.005  $\chi^2$ /NDF: 3247358.5/30

Left Out: 27.635 $\pm$ 0.005  $\chi^2$ /NDF: 3974025.3/24

Right Out: 28.118 $\pm$ 0.005  $\chi^2$ /NDF: 3046329.2/34

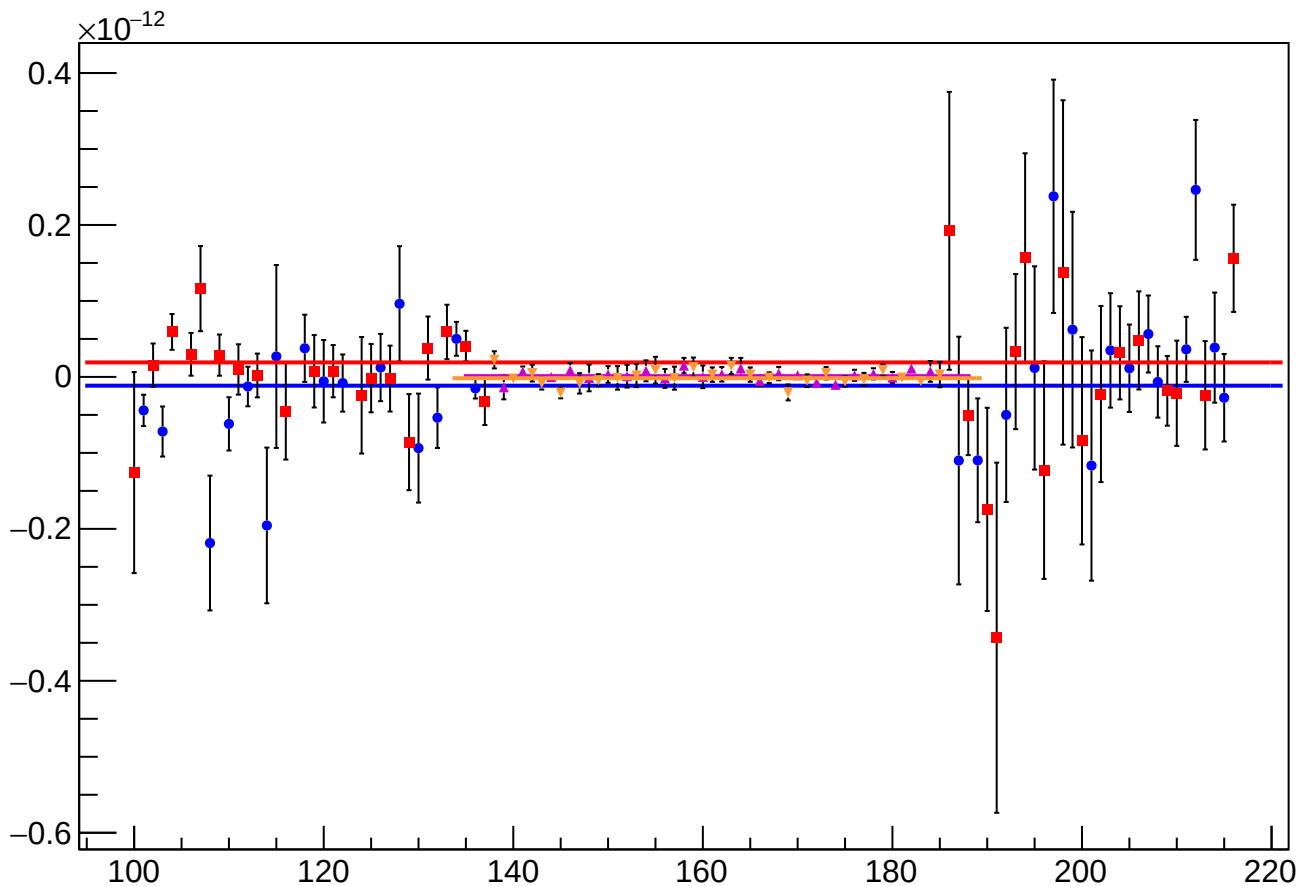
Left In: 27.524 $\pm$ 0.005  $\chi^2$ /NDF: 2634508.8/22

+ sign 27.694 $\pm$ 0.003  $\chi^2$ /NDF: 7221680.9/55

All: 27.762 $\pm$ 0.002  $\chi^2$ /NDF: 12910739.9/113

- sign 27.830 $\pm$ 0.003  $\chi^2$ /NDF: 5688278.3/57

asym\_sam\_15\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.7/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.8/34

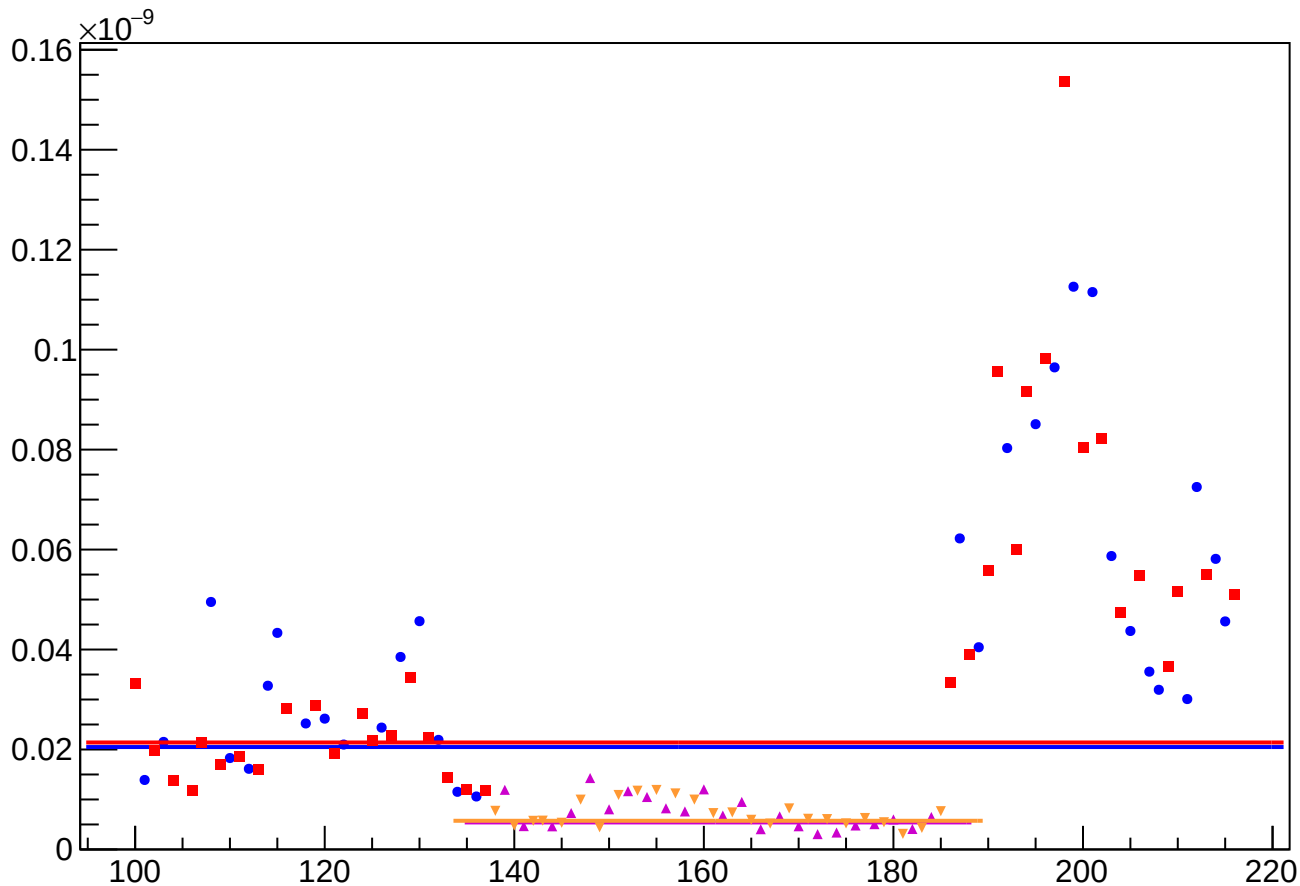
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 73.9/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 133.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 56.0/57

asym\_sam\_15\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8413468.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2645460.0/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 7355094.3/34

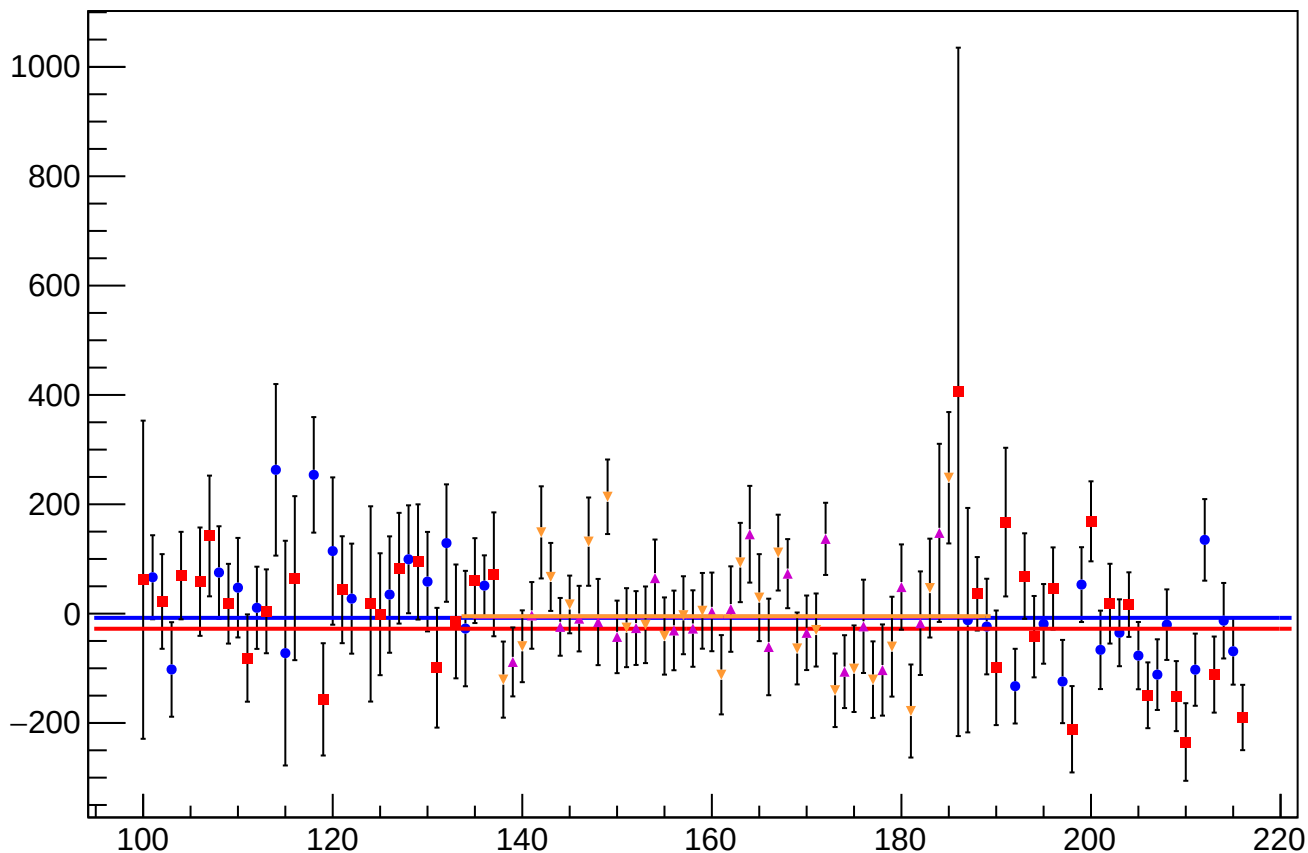
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 3476696.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19086585.3/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 38917693.5/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 19796376.8/57

# reg\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-7.729 \pm 14.290$   $\chi^2/\text{NDF}$ : 36.3/30

Left Out:  $-4.742 \pm 14.432$   $\chi^2/\text{NDF}$ : 47.4/24

Right Out:  $-27.652 \pm 14.315$   $\chi^2/\text{NDF}$ : 58.8/34

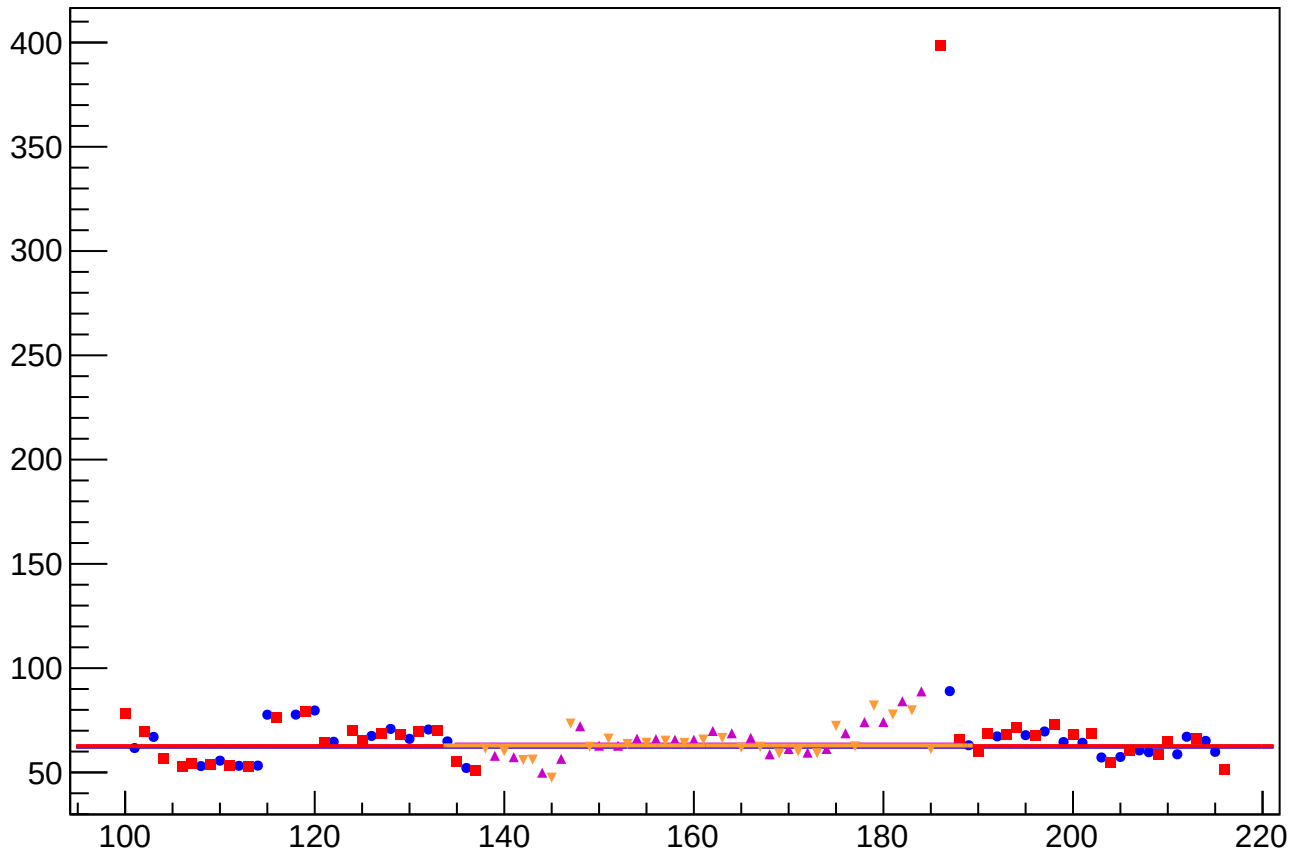
Left In:  $-5.776 \pm 14.931$   $\chi^2/\text{NDF}$ : 18.3/22

+ sign  $-6.250 \pm 10.154$   $\chi^2/\text{NDF}$ : 83.7/55

All:  $-11.617 \pm 7.243$   $\chi^2/\text{NDF}$ : 162.5/113

- sign  $-17.175 \pm 10.333$   $\chi^2/\text{NDF}$ : 78.3/57

# reg\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.315 $\pm$ 0.010  $\chi^2$ /NDF: 399238.7/30

Left Out: 62.976 $\pm$ 0.010  $\chi^2$ /NDF: 526859.8/24

Right Out: 62.610 $\pm$ 0.010  $\chi^2$ /NDF: 1104312.1/34

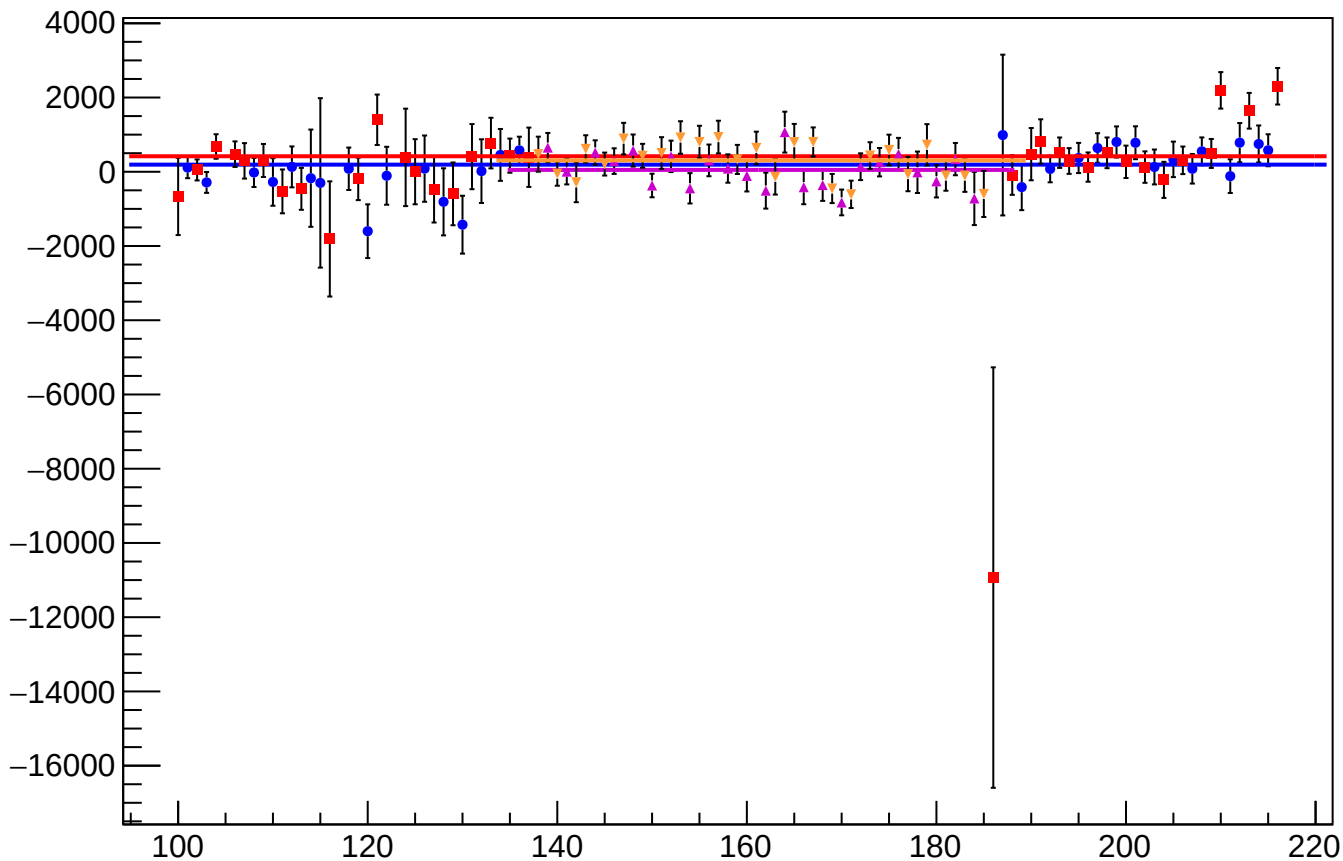
Left In: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 496926.2/22

+ sign 62.642 $\pm$ 0.007  $\chi^2$ /NDF: 928219.4/55

All: 62.804 $\pm$ 0.005  $\chi^2$ /NDF: 2533161.3/113

- sign 62.972 $\pm$ 0.007  $\chi^2$ /NDF: 1603908.2/57

asym\_sam\_37\_48\_dd\_reg\_correction\_mean vs Slug



Right In:  $191.813 \pm 86.617$   $\chi^2/\text{NDF}$ : 28.5/30

Left Out:  $307.183 \pm 82.361$   $\chi^2/\text{NDF}$ : 30.6/24

Right Out:  $417.974 \pm 83.707$   $\chi^2/\text{NDF}$ : 59.6/34

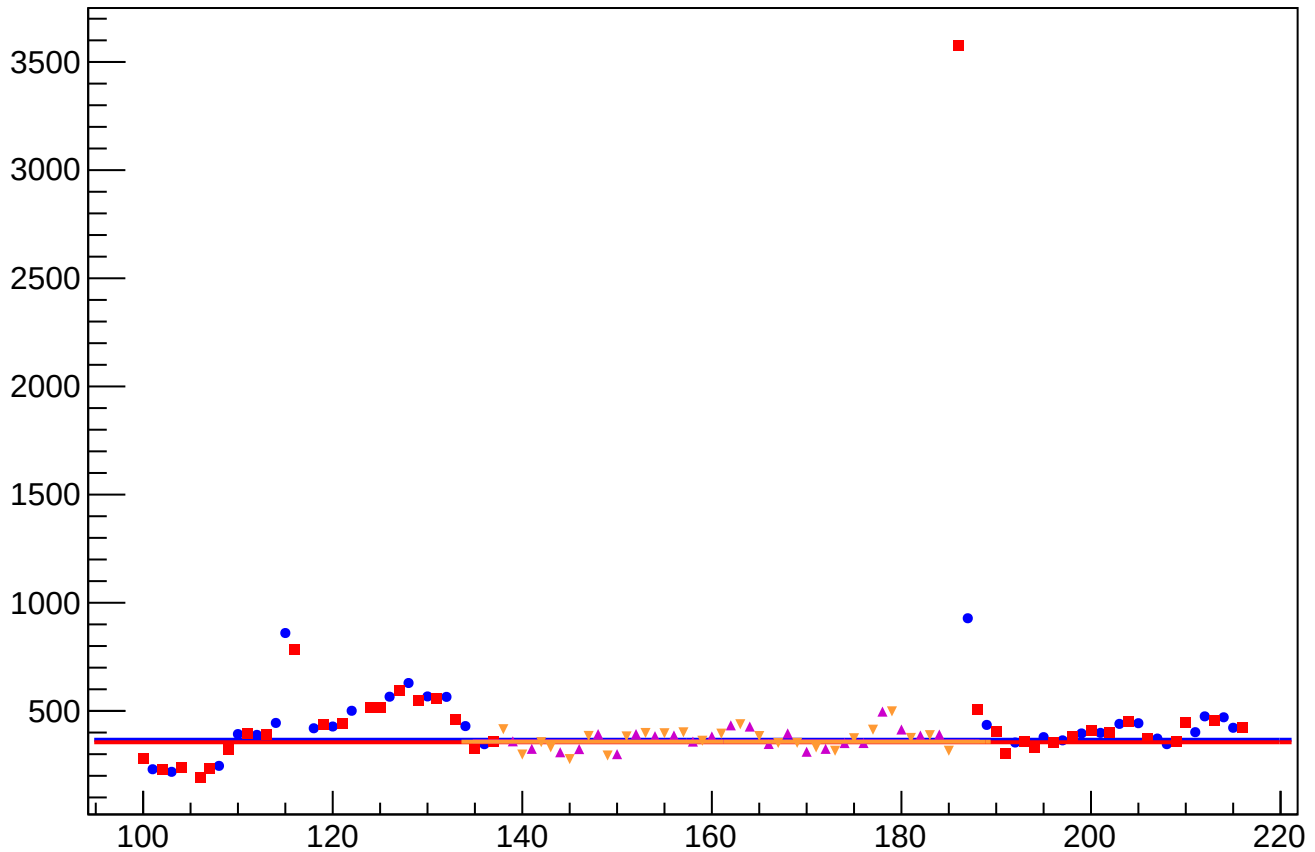
Left In:  $50.030 \pm 84.838$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $252.401 \pm 59.686$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $244.423 \pm 42.169$   $\chi^2/\text{NDF}$ : 156.4/113

- sign  $236.470 \pm 59.586$   $\chi^2/\text{NDF}$ : 96.4/57

asym\_sam\_37\_48\_dd\_reg\_correction\_rms vs Slug



Right In: 366.693 $\pm$ 0.061  $\chi^2$ /NDF: 2434222.1/30

Left Out: 357.731 $\pm$ 0.058  $\chi^2$ /NDF: 683730.4/24

Right Out: 355.128 $\pm$ 0.059  $\chi^2$ /NDF: 3203148.7/34

Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519759.9/22

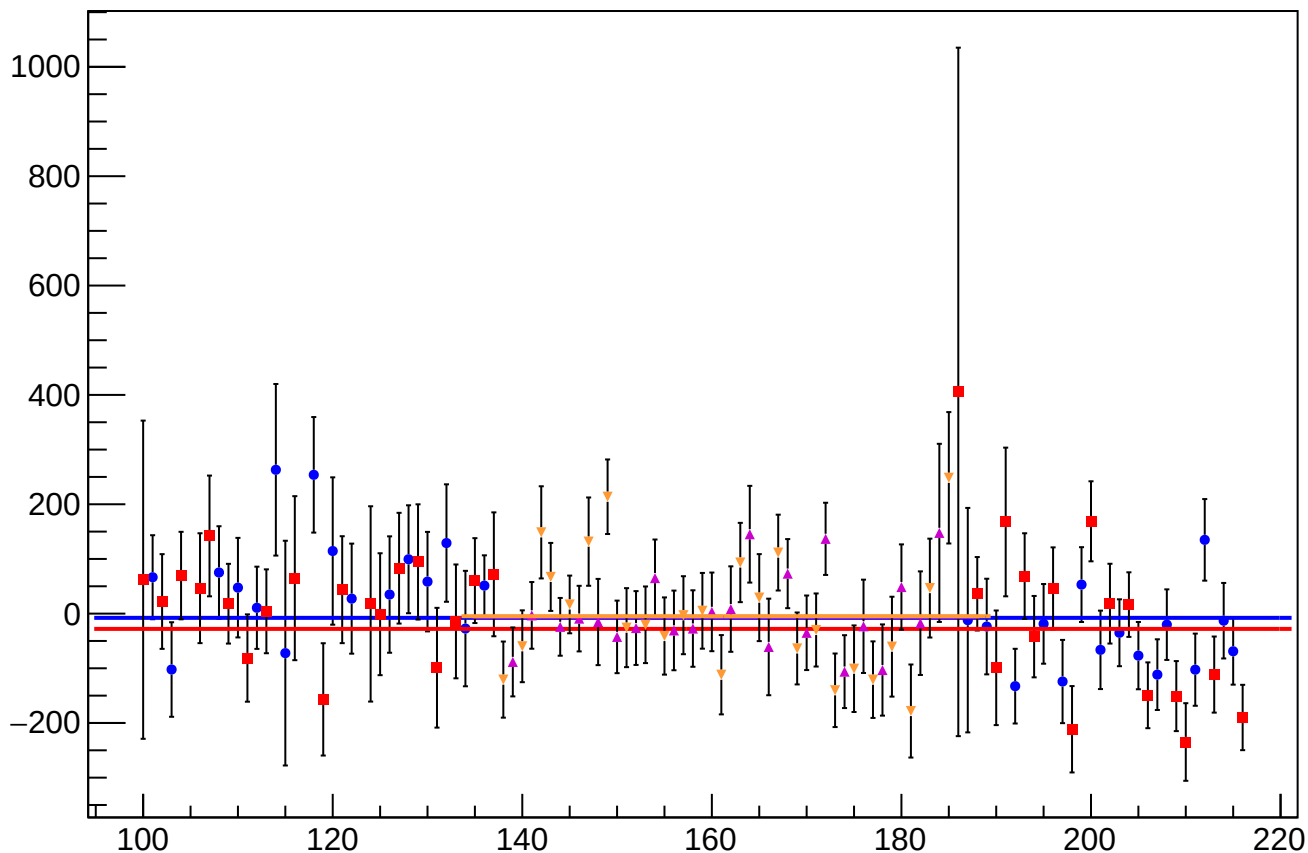
+ sign 361.987 $\pm$ 0.042  $\chi^2$ /NDF: 3129197.0/55

All: 359.595 $\pm$ 0.030  $\chi^2$ /NDF: 6861029.7/113

- sign 357.211 $\pm$ 0.042  $\chi^2$ /NDF: 3725418.4/57



# cor\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-7.733 \pm 14.290$   $\chi^2/\text{NDF}: 36.3/30$

Left Out:  $-4.748 \pm 14.432$   $\chi^2/\text{NDF}: 47.4/24$

Right Out:  $-27.946 \pm 14.319$   $\chi^2/\text{NDF}: 58.6/34$

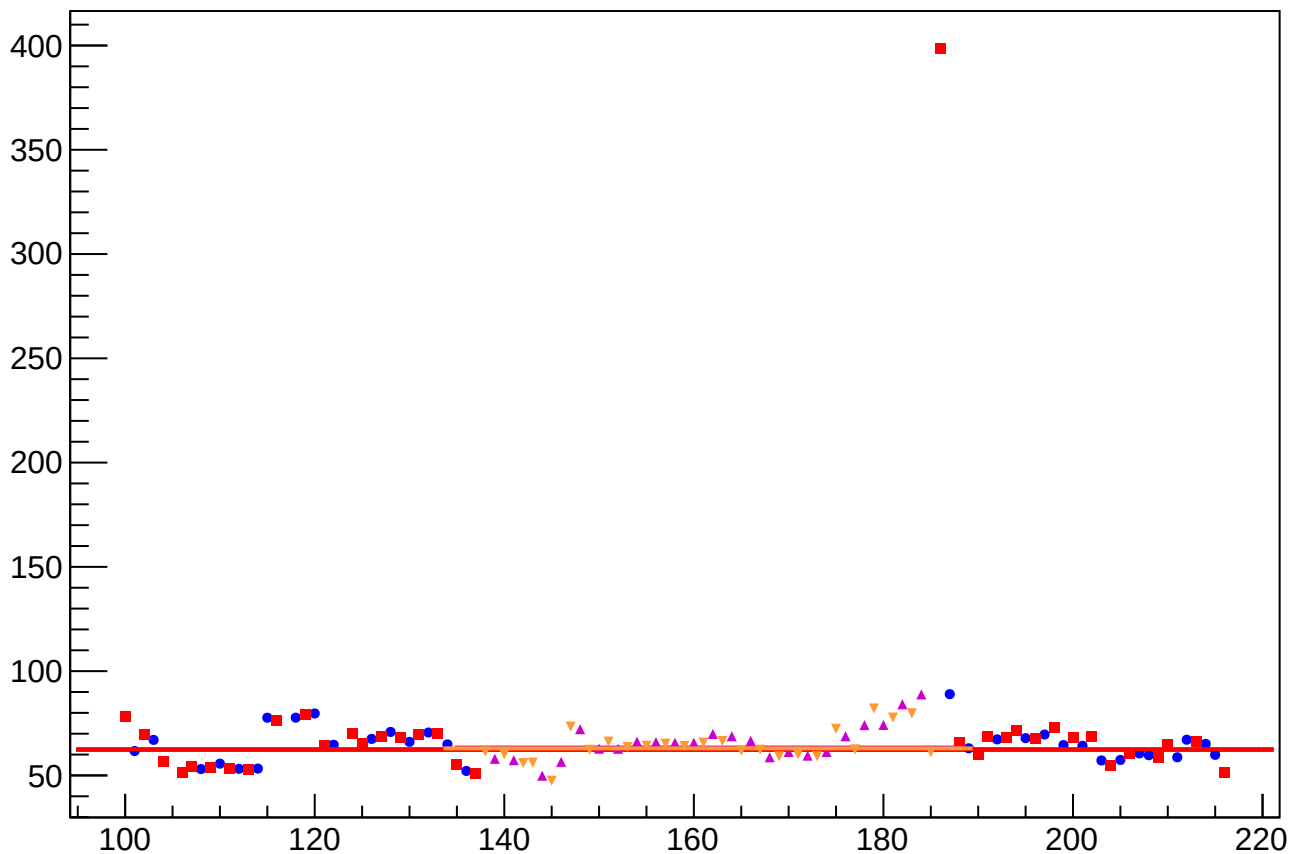
Left In:  $-5.775 \pm 14.931$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-6.255 \pm 10.154$   $\chi^2/\text{NDF}: 83.7/55$

All:  $-11.692 \pm 7.243$   $\chi^2/\text{NDF}: 162.4/113$

- sign  $-17.324 \pm 10.335$   $\chi^2/\text{NDF}: 78.1/57$

# cor\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.315 $\pm$ 0.010     $\chi^2$ /NDF: 399238.9/30

Left Out: 62.976 $\pm$ 0.010     $\chi^2$ /NDF: 526859.8/24

Right Out: 62.594 $\pm$ 0.010     $\chi^2$ /NDF: 1108223.0/34

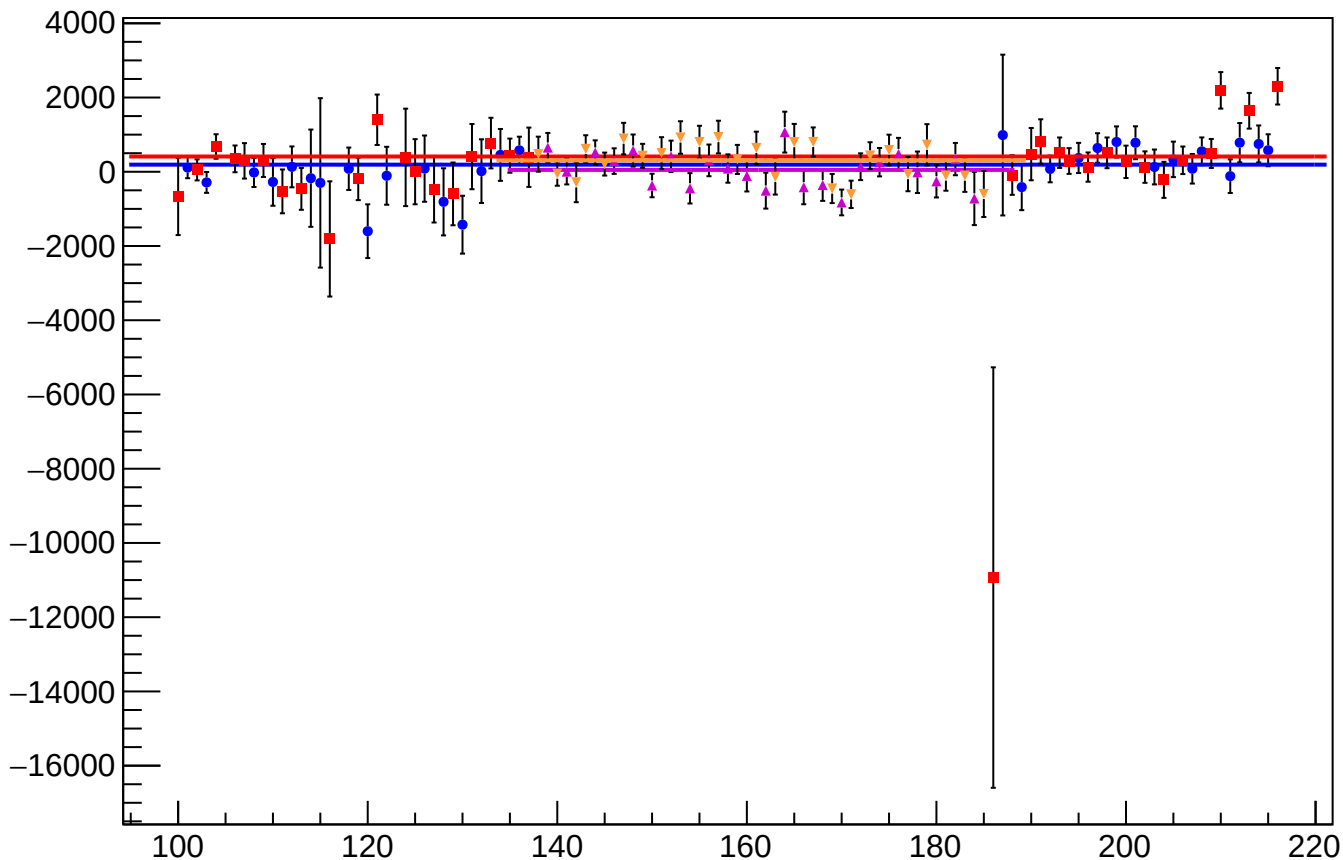
Left In: 63.365 $\pm$ 0.011     $\chi^2$ /NDF: 496926.2/22

+ sign 62.642 $\pm$ 0.007     $\chi^2$ /NDF: 928219.6/55

All: 62.800 $\pm$ 0.005     $\chi^2$ /NDF: 2537132.6/113

- sign 62.964 $\pm$ 0.007     $\chi^2$ /NDF: 1607928.6/57

asym\_sam\_37\_48\_dd\_cor\_correction\_mean vs Slug



Right In:  $191.818 \pm 86.617$   $\chi^2/\text{NDF}$ : 28.5/30

Left Out:  $307.177 \pm 82.361$   $\chi^2/\text{NDF}$ : 30.6/24

Right Out:  $410.965 \pm 83.928$   $\chi^2/\text{NDF}$ : 59.5/34

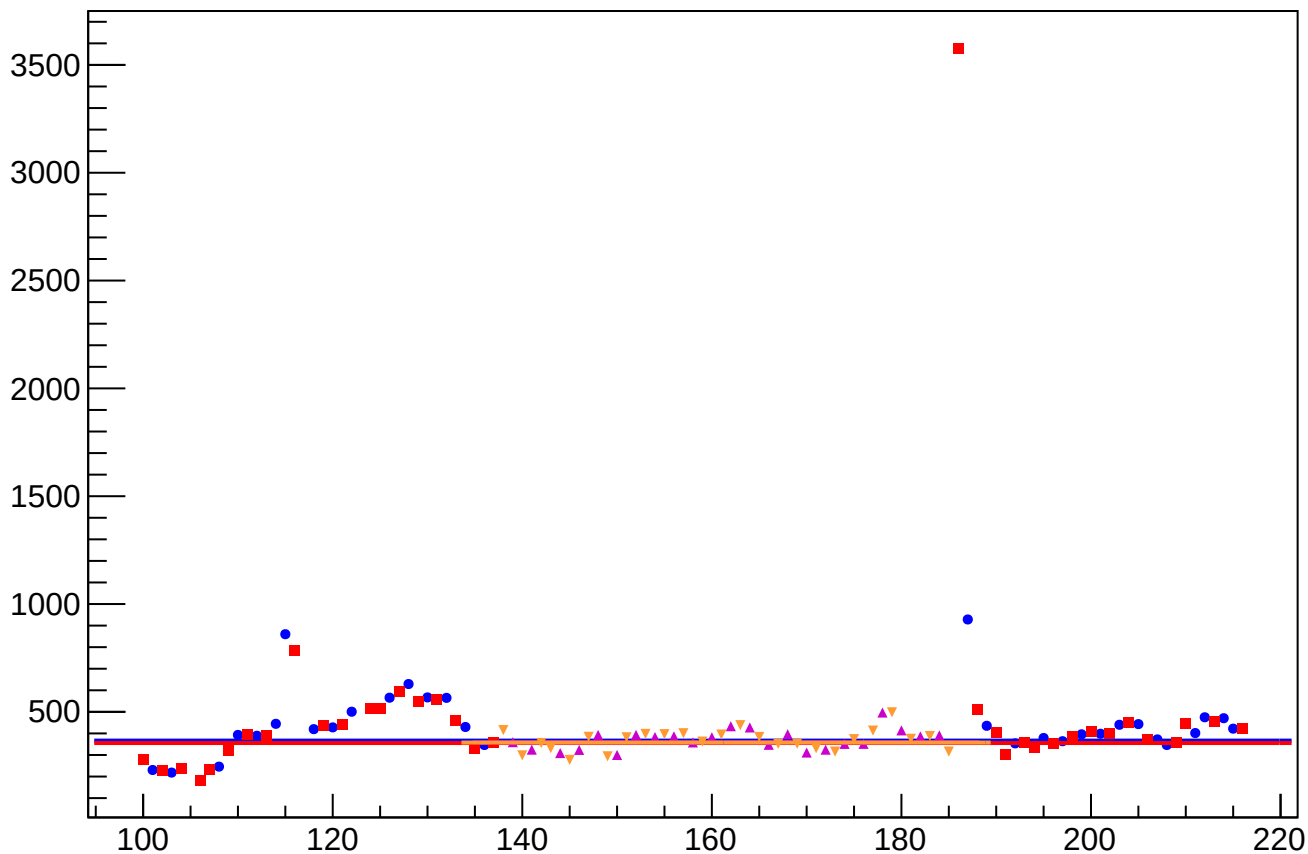
Left In:  $50.029 \pm 84.838$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $252.401 \pm 59.686$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $242.418 \pm 42.197$   $\chi^2/\text{NDF}$ : 156.1/113

- sign  $232.443 \pm 59.665$   $\chi^2/\text{NDF}$ : 96.0/57

asym\_sam\_37\_48\_dd\_cor\_correction\_rms vs Slug



Right In: 366.695 $\pm$ 0.061  $\chi^2$ /NDF: 2434131.1/30

Left Out: 357.732 $\pm$ 0.058  $\chi^2$ /NDF: 683726.4/24

Right Out: 355.434 $\pm$ 0.059  $\chi^2$ /NDF: 3216922.9/34

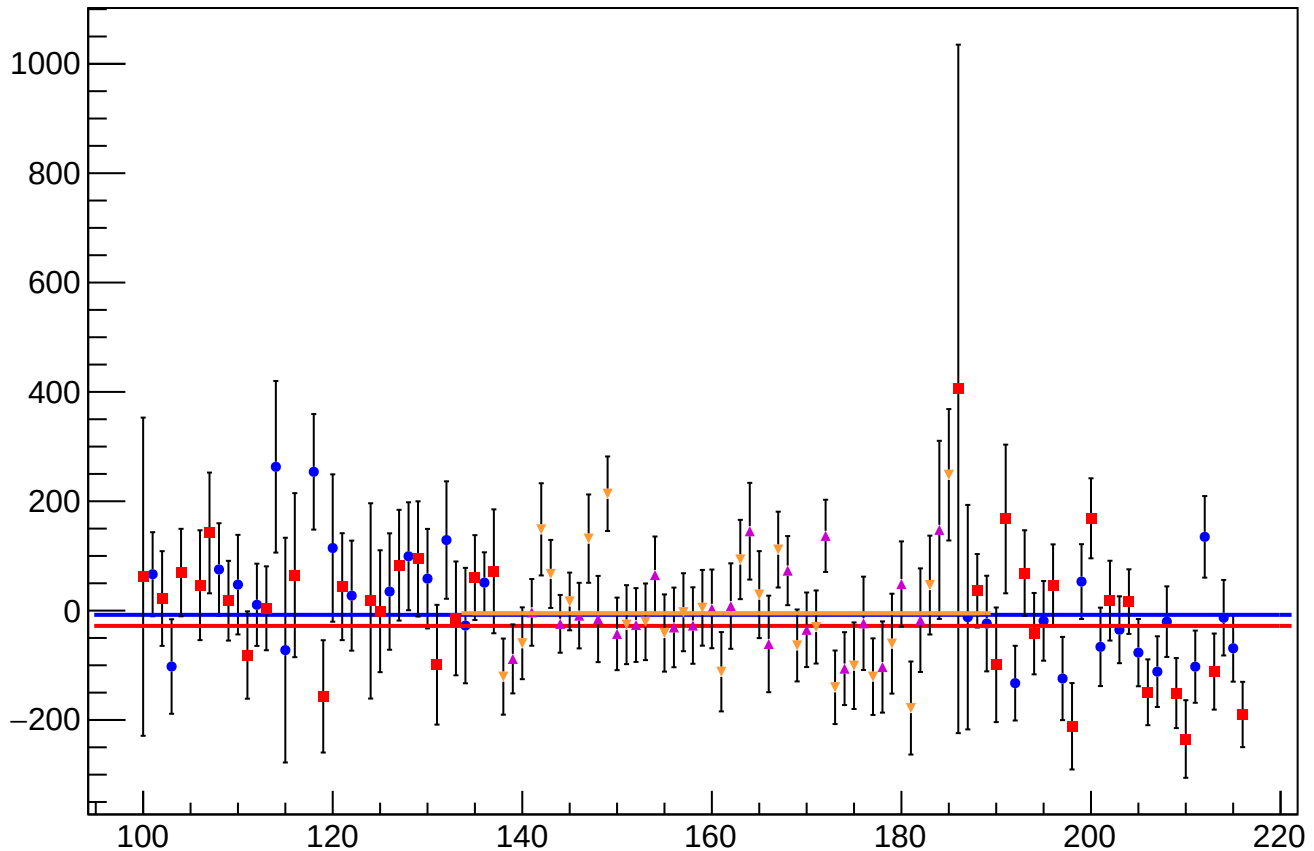
Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519762.7/22

+ sign 361.988 $\pm$ 0.042  $\chi^2$ /NDF: 3129105.4/55

All: 359.679 $\pm$ 0.030  $\chi^2$ /NDF: 6873929.0/113

- sign 357.371 $\pm$ 0.042  $\chi^2$ /NDF: 3738838.9/57

# eigen\_cor\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In:  $-7.733 \pm 14.290$   $\chi^2/\text{NDF}: 36.3/30$

Left Out:  $-4.748 \pm 14.432$   $\chi^2/\text{NDF}: 47.4/24$

Right Out:  $-27.946 \pm 14.319$   $\chi^2/\text{NDF}: 58.6/34$

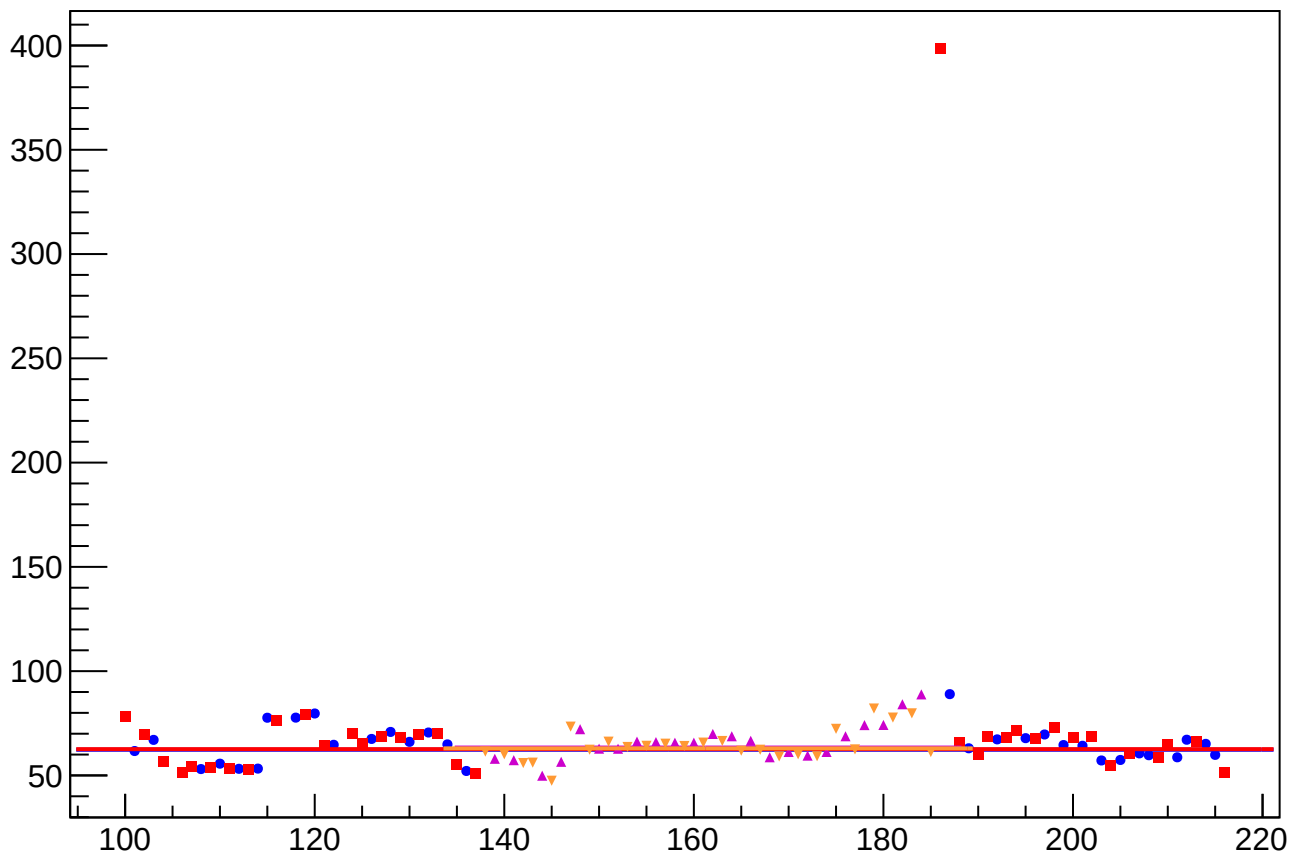
Left In:  $-5.775 \pm 14.931$   $\chi^2/\text{NDF}: 18.3/22$

+ sign  $-6.255 \pm 10.154$   $\chi^2/\text{NDF}: 83.7/55$

All:  $-11.692 \pm 7.243$   $\chi^2/\text{NDF}: 162.4/113$

- sign  $-17.324 \pm 10.335$   $\chi^2/\text{NDF}: 78.1/57$

# eigen\_cor\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 62.315 $\pm$ 0.010  $\chi^2$ /NDF: 399238.9/30

Left Out: 62.976 $\pm$ 0.010  $\chi^2$ /NDF: 526859.8/24

Right Out: 62.594 $\pm$ 0.010  $\chi^2$ /NDF: 1108223.0/34

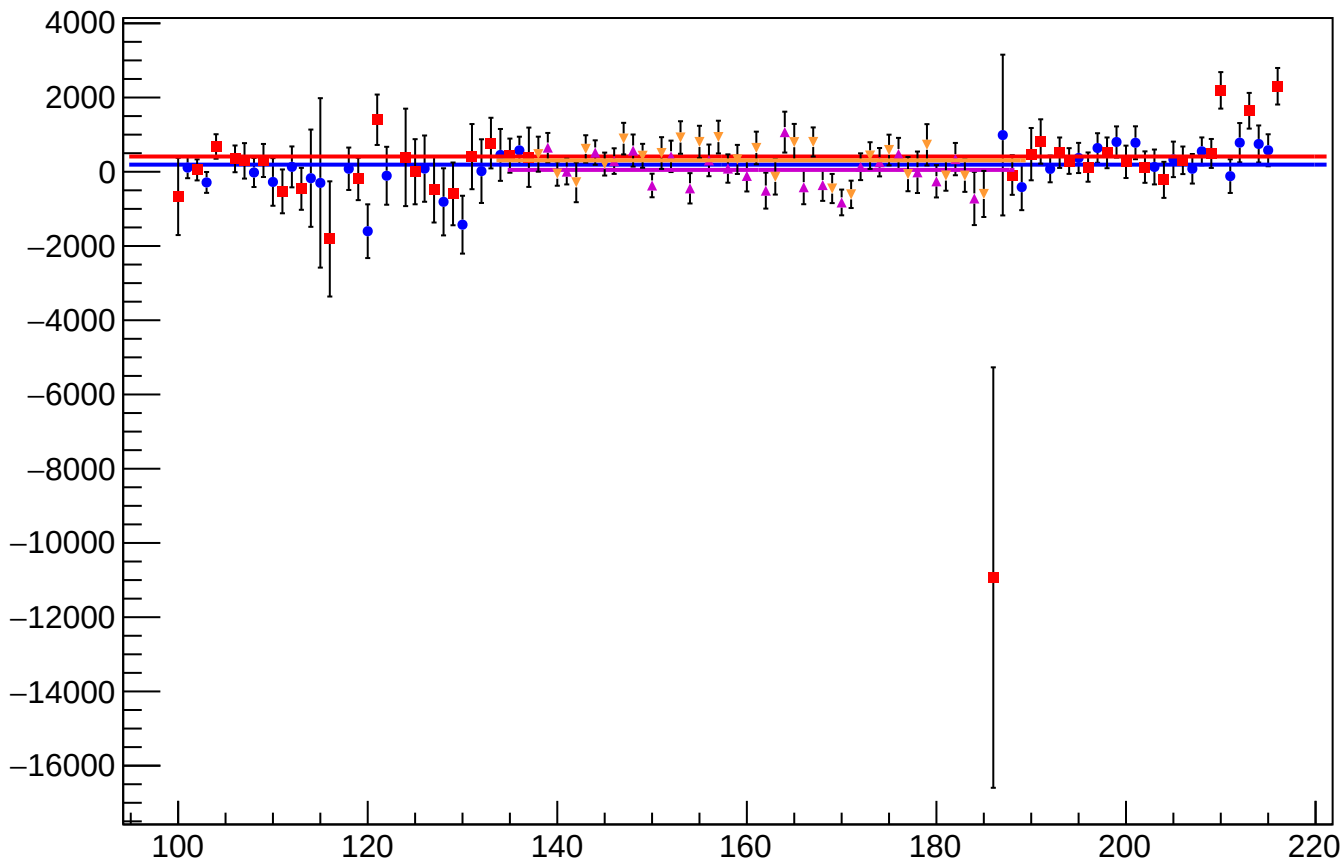
Left In: 63.365 $\pm$ 0.011  $\chi^2$ /NDF: 496926.2/22

+ sign 62.642 $\pm$ 0.007  $\chi^2$ /NDF: 928219.6/55

All: 62.800 $\pm$ 0.005  $\chi^2$ /NDF: 2537132.6/113

- sign 62.964 $\pm$ 0.007  $\chi^2$ /NDF: 1607928.6/57

asym\_sam\_37\_48\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $191.818 \pm 86.617$   $\chi^2/\text{NDF}$ : 28.5/30

Left Out:  $307.177 \pm 82.361$   $\chi^2/\text{NDF}$ : 30.6/24

Right Out:  $410.965 \pm 83.928$   $\chi^2/\text{NDF}$ : 59.5/34

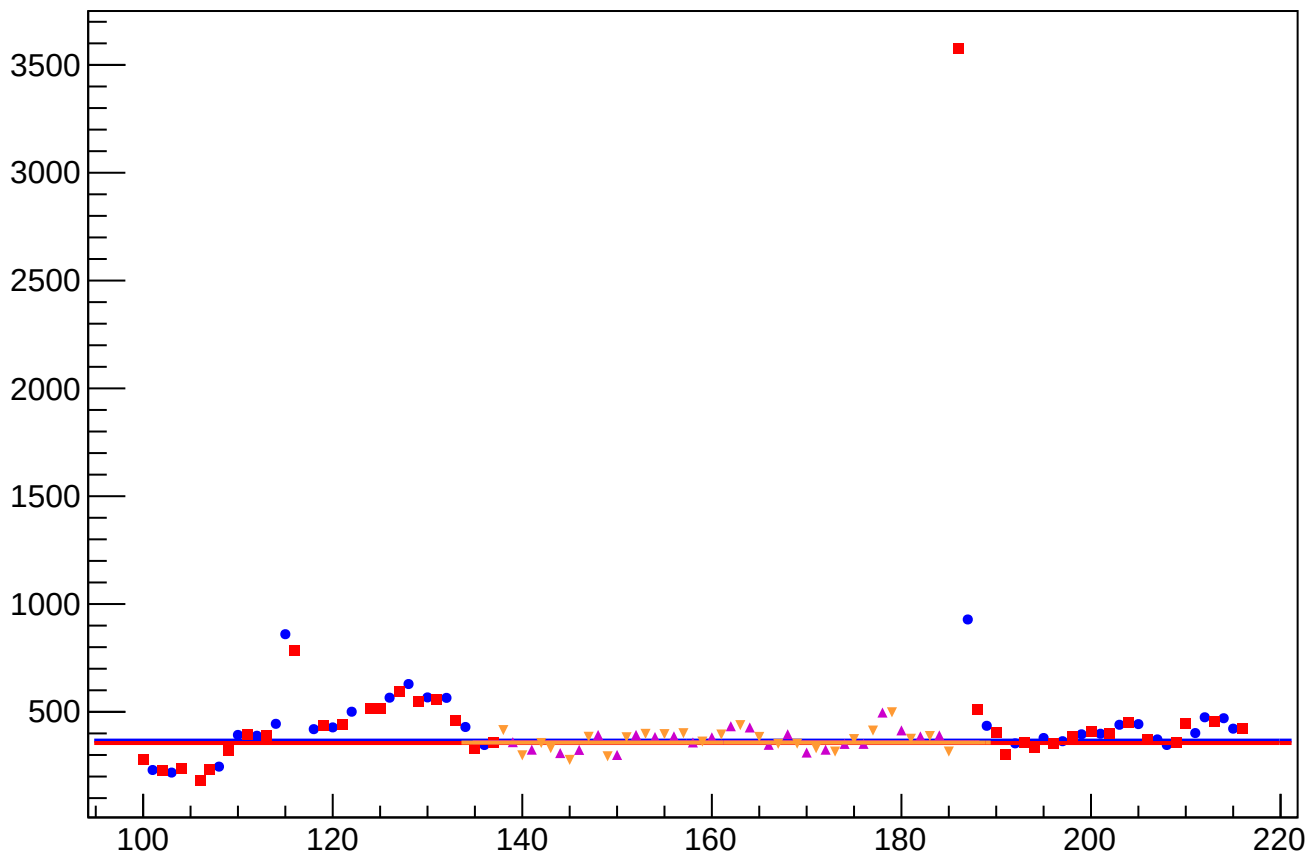
Left In:  $50.029 \pm 84.838$   $\chi^2/\text{NDF}$ : 27.3/22

+ sign  $252.401 \pm 59.686$   $\chi^2/\text{NDF}$ : 60.1/55

All:  $242.418 \pm 42.197$   $\chi^2/\text{NDF}$ : 156.1/113

- sign  $232.443 \pm 59.665$   $\chi^2/\text{NDF}$ : 96.0/57

asym\_sam\_37\_48\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 366.695 $\pm$ 0.061  $\chi^2$ /NDF: 2434131.1/30

Left Out: 357.732 $\pm$ 0.058  $\chi^2$ /NDF: 683726.4/24

Right Out: 355.434 $\pm$ 0.059  $\chi^2$ /NDF: 3216922.9/34

Left In: 359.350 $\pm$ 0.060  $\chi^2$ /NDF: 519762.7/22

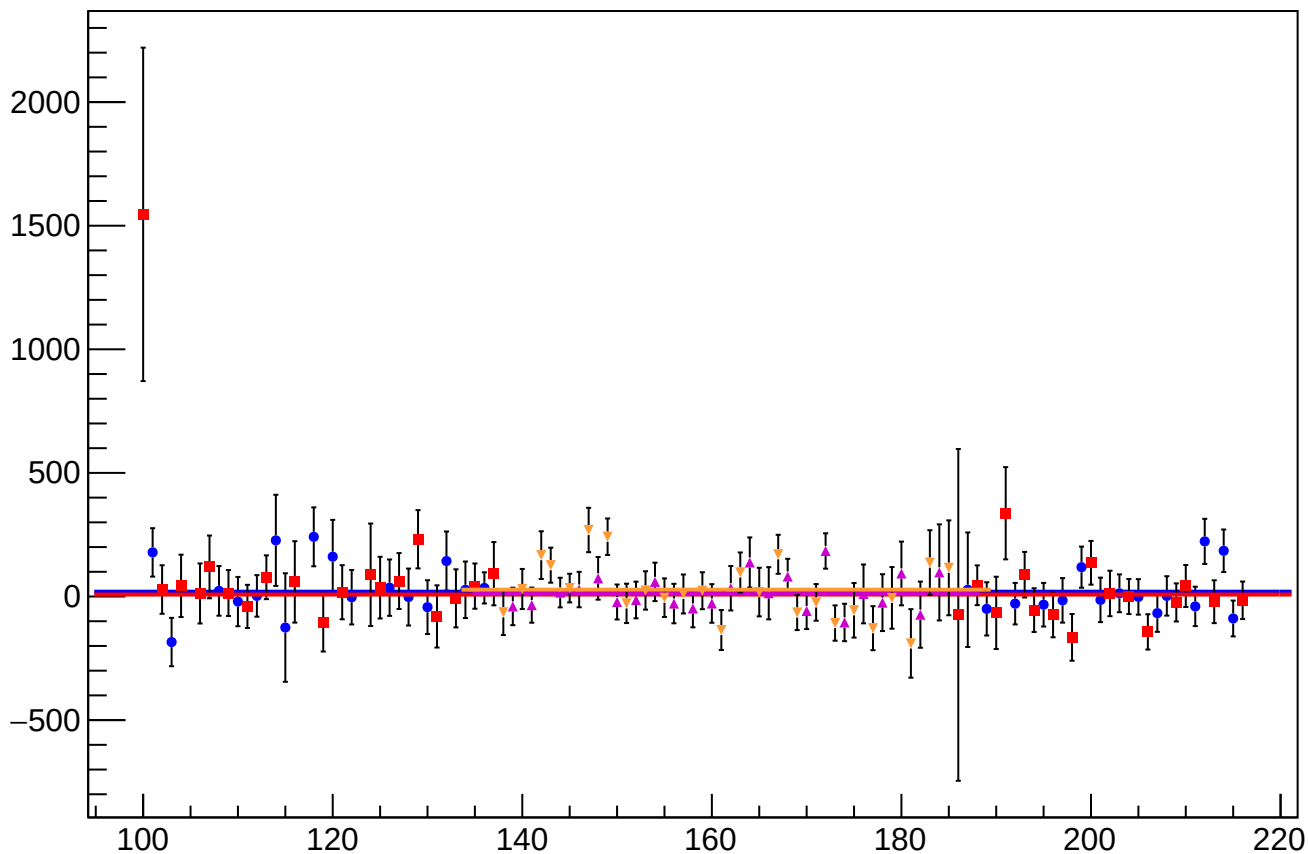
+ sign 361.988 $\pm$ 0.042  $\chi^2$ /NDF: 3129105.4/55

All: 359.679 $\pm$ 0.030  $\chi^2$ /NDF: 6873929.0/113

- sign 357.371 $\pm$ 0.042  $\chi^2$ /NDF: 3738838.9/57



# dit\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: 19.506 $\pm$ 16.903     $\chi^2$ /NDF: 30.6/30

Left Out: 27.627 $\pm$ 16.742     $\chi^2$ /NDF: 42.4/24

Right Out: 7.949 $\pm$ 17.180     $\chi^2$ /NDF: 29.4/34

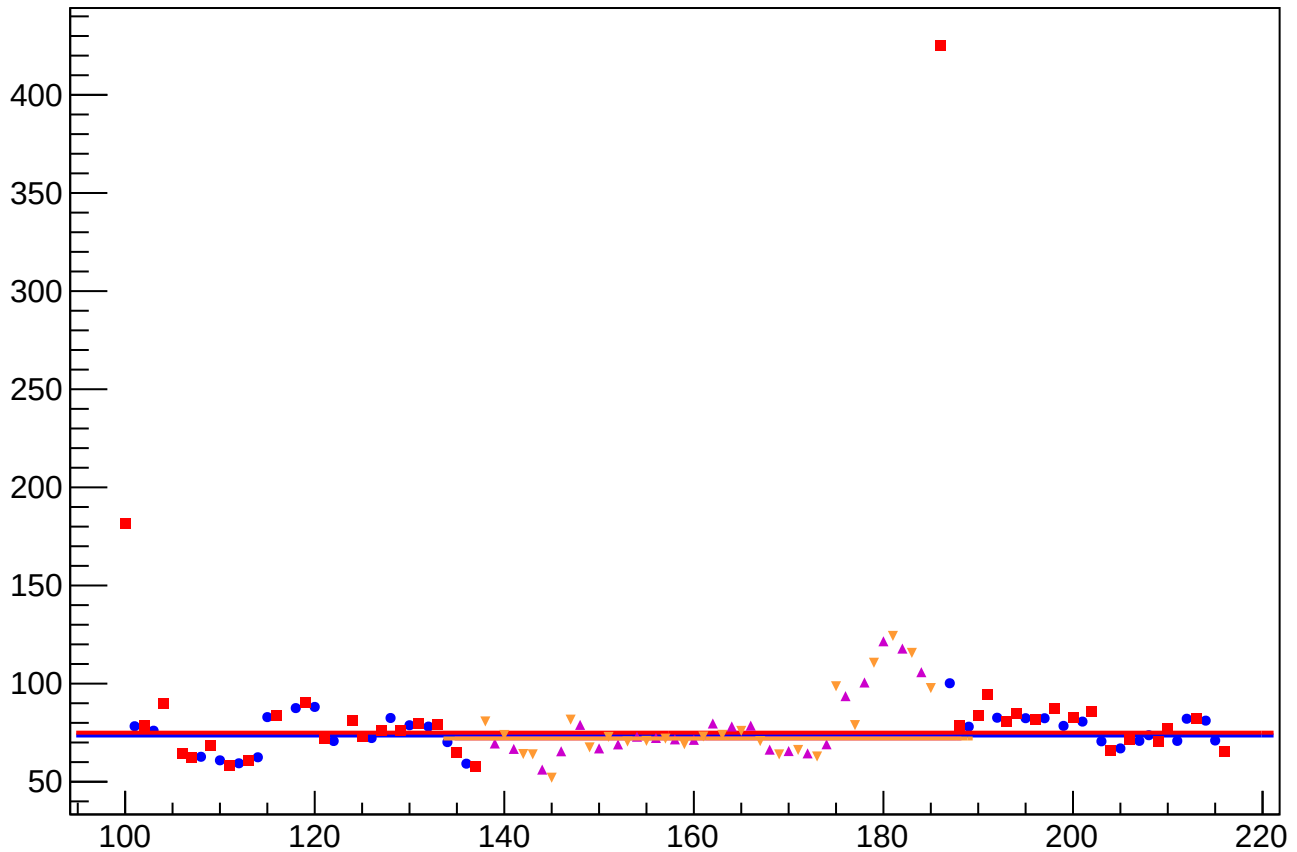
Left In: 10.521 $\pm$ 17.225     $\chi^2$ /NDF: 16.1/22

+ sign 23.606 $\pm$ 11.895     $\chi^2$ /NDF: 73.0/55

All: 16.579 $\pm$ 8.504     $\chi^2$ /NDF: 119.2/113

- sign 9.232 $\pm$ 12.164     $\chi^2$ /NDF: 45.5/57

# dit\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 73.563 $\pm$ 0.012  $\chi^2$ /NDF: 474218.7/30

Left Out: 72.041 $\pm$ 0.012  $\chi^2$ /NDF: 1269471.8/24

Right Out: 75.006 $\pm$ 0.012  $\chi^2$ /NDF: 1151756.2/34

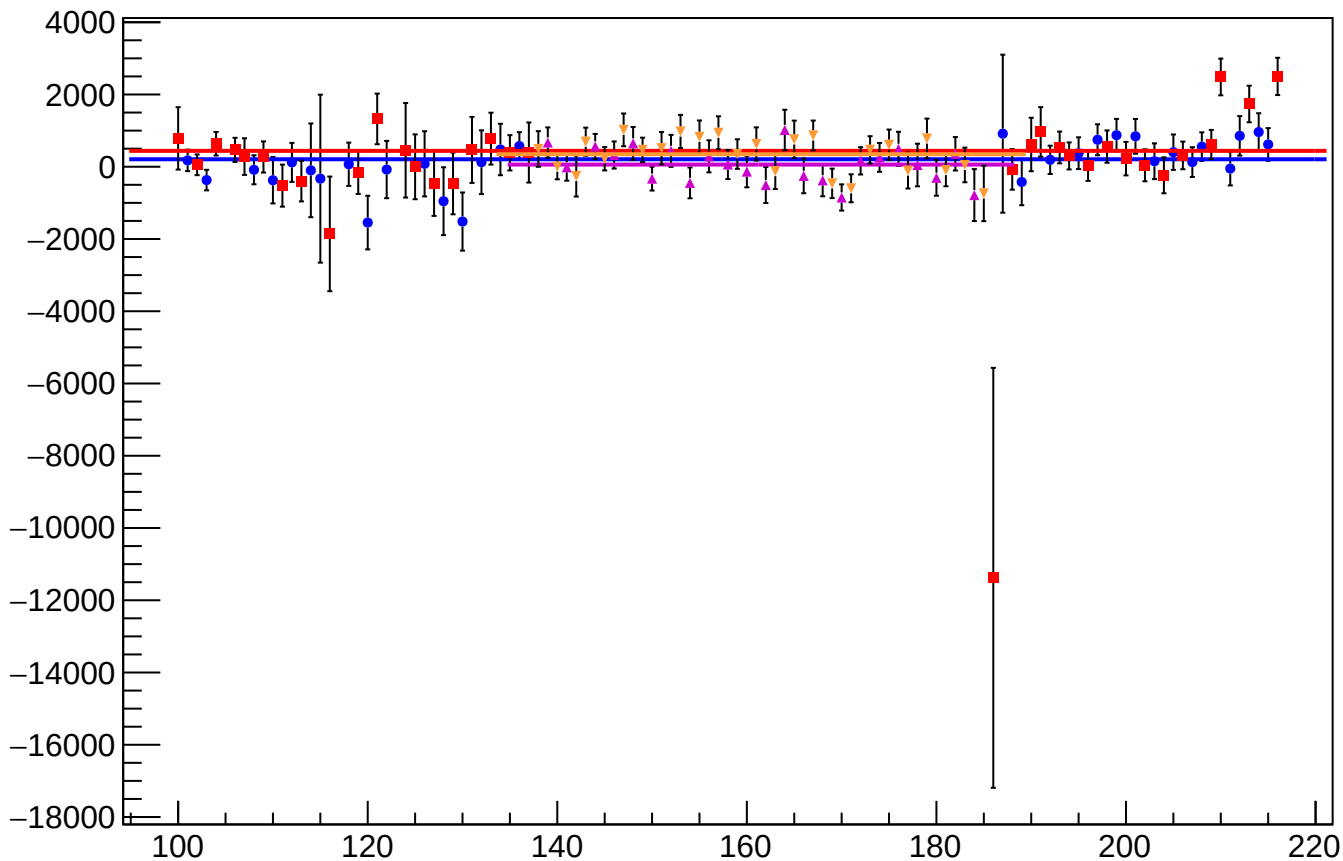
Left In: 72.092 $\pm$ 0.012  $\chi^2$ /NDF: 1058857.2/22

+ sign 72.794 $\pm$ 0.008  $\chi^2$ /NDF: 1751876.0/55

All: 73.165 $\pm$ 0.006  $\chi^2$ /NDF: 3995162.6/113

- sign 73.553 $\pm$ 0.009  $\chi^2$ /NDF: 2239310.3/57

asym\_sam\_37\_48\_dd\_dit\_correction\_mean vs Slug



Right In: 206.760 $\pm$ 90.268  $\chi^2$ /NDF: 30.9/30

Left Out: 345.973 $\pm$ 86.822  $\chi^2$ /NDF: 28.9/24

Right Out: 439.959 $\pm$ 86.407  $\chi^2$ /NDF: 63.5/34

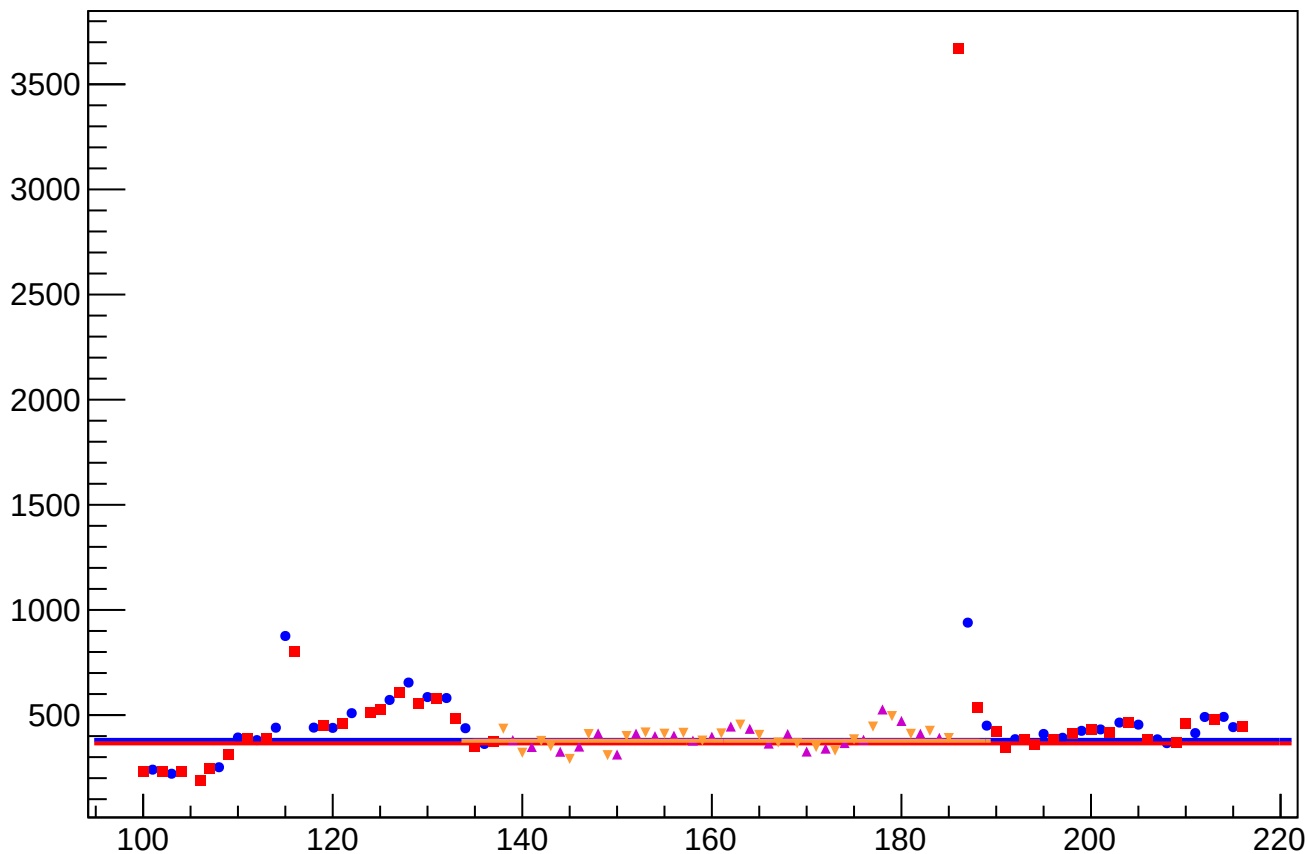
Left In: 59.908 $\pm$ 89.411  $\chi^2$ /NDF: 25.8/22

+ sign 279.074 $\pm$ 62.575  $\chi^2$ /NDF: 61.1/55

All: 267.670 $\pm$ 44.091  $\chi^2$ /NDF: 159.8/113

- sign 256.426 $\pm$ 62.134  $\chi^2$ /NDF: 98.7/57

asym\_sam\_37\_48\_dd\_dit\_correction\_rms vs Slug



Right In: 382.032 $\pm$ 0.064  $\chi^2$ /NDF: 2503829.1/30

Left Out: 377.797 $\pm$ 0.061  $\chi^2$ /NDF: 636714.9/24

Right Out: 365.309 $\pm$ 0.061  $\chi^2$ /NDF: 3507646.6/34

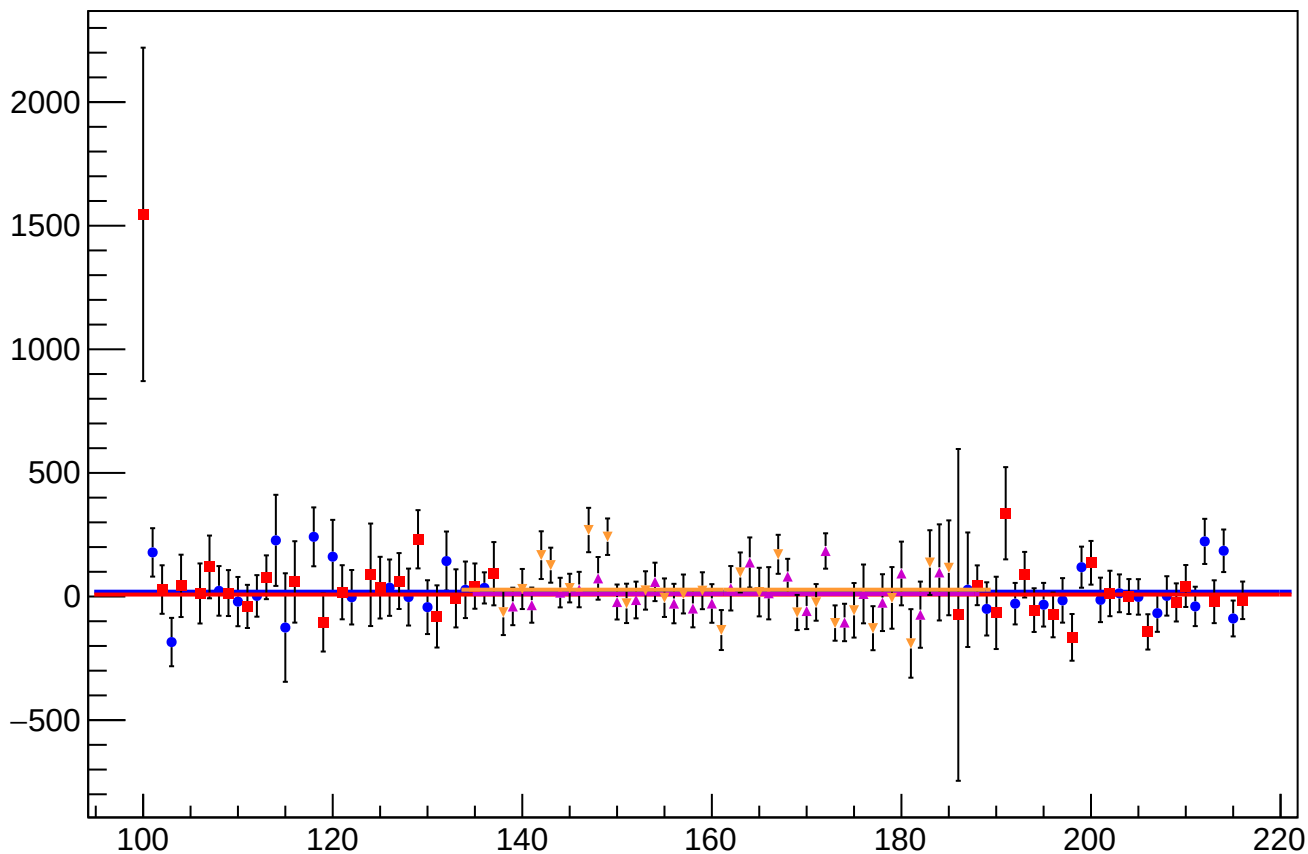
Left In: 378.869 $\pm$ 0.063  $\chi^2$ /NDF: 527685.1/22

+ sign 379.832 $\pm$ 0.044  $\chi^2$ /NDF: 3142830.7/55

All: 375.816 $\pm$ 0.031  $\chi^2$ /NDF: 7218306.4/113

- sign 371.857 $\pm$ 0.044  $\chi^2$ /NDF: 4059120.0/57

# eigen\_dit\_asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: 19.506 $\pm$ 16.903  $\chi^2$ /NDF: 30.6/30

Left Out: 27.626 $\pm$ 16.742  $\chi^2$ /NDF: 42.4/24

Right Out: 7.948 $\pm$ 17.179  $\chi^2$ /NDF: 29.4/34

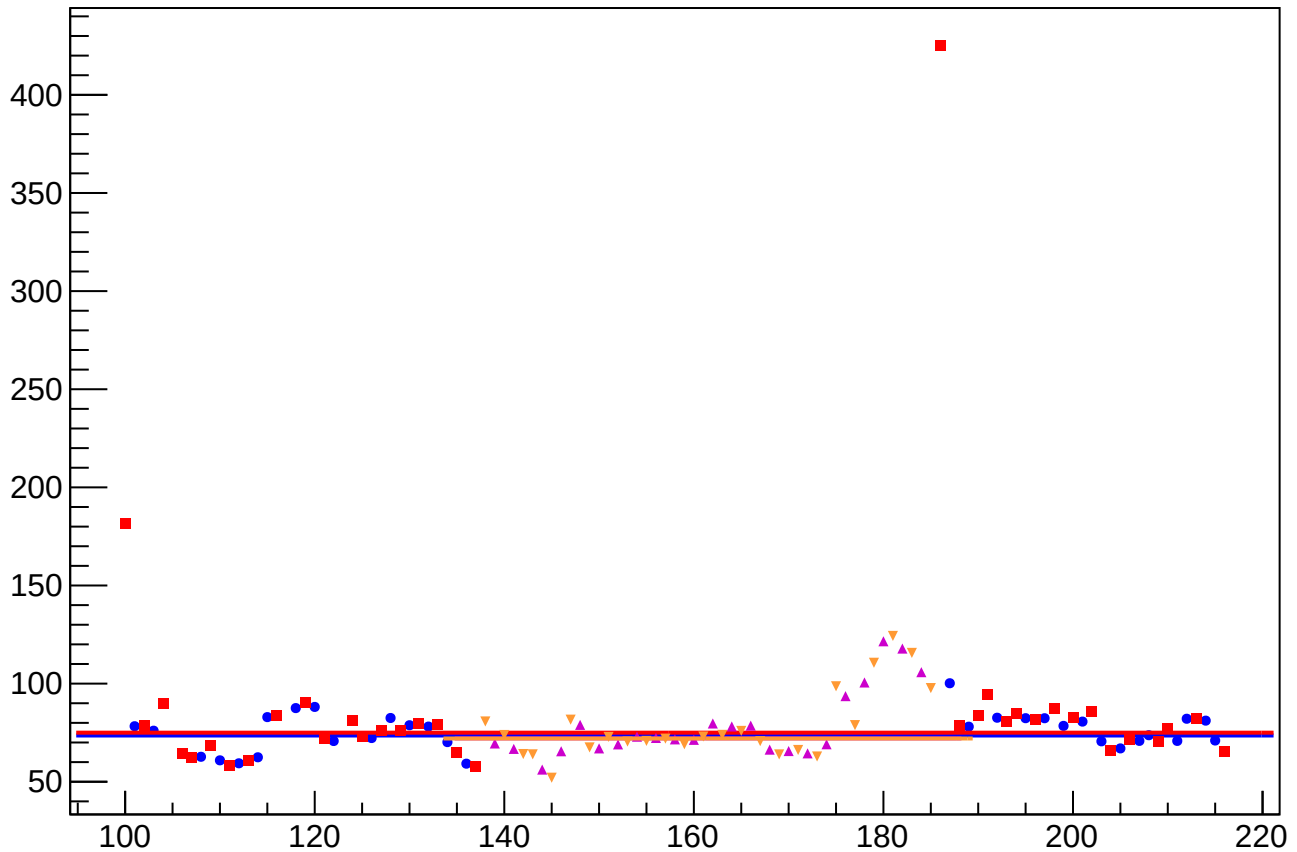
Left In: 10.521 $\pm$ 17.225  $\chi^2$ /NDF: 16.1/22

+ sign 23.605 $\pm$ 11.895  $\chi^2$ /NDF: 73.0/55

All: 16.579 $\pm$ 8.504  $\chi^2$ /NDF: 119.2/113

- sign 9.231 $\pm$ 12.164  $\chi^2$ /NDF: 45.5/57

eigen\_dit\_asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 73.563 $\pm$ 0.012  $\chi^2$ /NDF: 474214.1/30

Left Out: 72.041 $\pm$ 0.012  $\chi^2$ /NDF: 1269479.1/24

Right Out: 75.006 $\pm$ 0.012  $\chi^2$ /NDF: 1151754.3/34

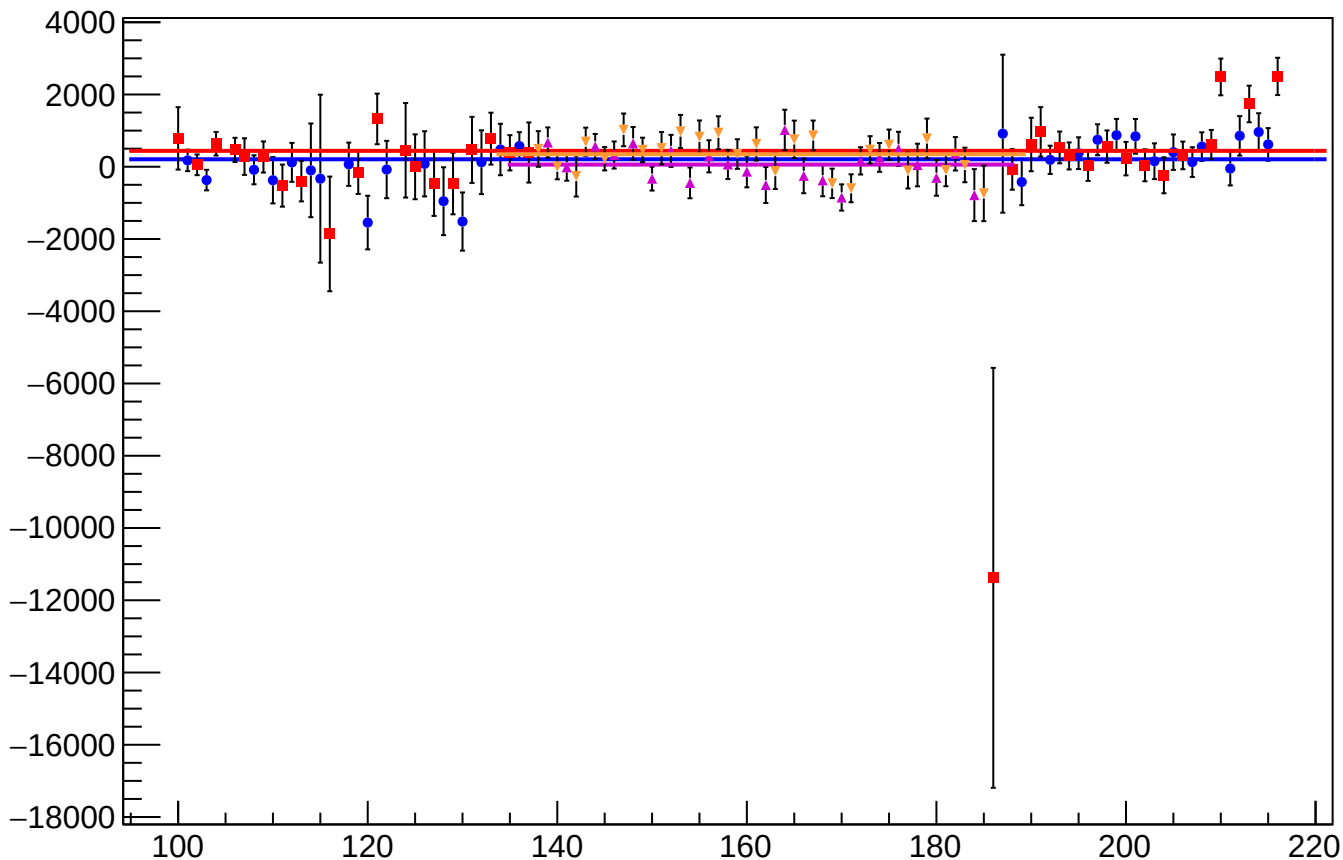
Left In: 72.092 $\pm$ 0.012  $\chi^2$ /NDF: 1058847.4/22

+ sign 72.794 $\pm$ 0.008  $\chi^2$ /NDF: 1751878.1/55

All: 73.165 $\pm$ 0.006  $\chi^2$ /NDF: 3995152.4/113

- sign 73.553 $\pm$ 0.009  $\chi^2$ /NDF: 2239297.9/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In: 206.760 $\pm$ 90.268  $\chi^2/\text{NDF}$ : 30.9/30

Left Out: 345.972 $\pm$ 86.822  $\chi^2/\text{NDF}$ :28.9/24

Right Out: 439.959 $\pm$ 86.407  $\chi^2/\text{NDF}$ : 63.5/34

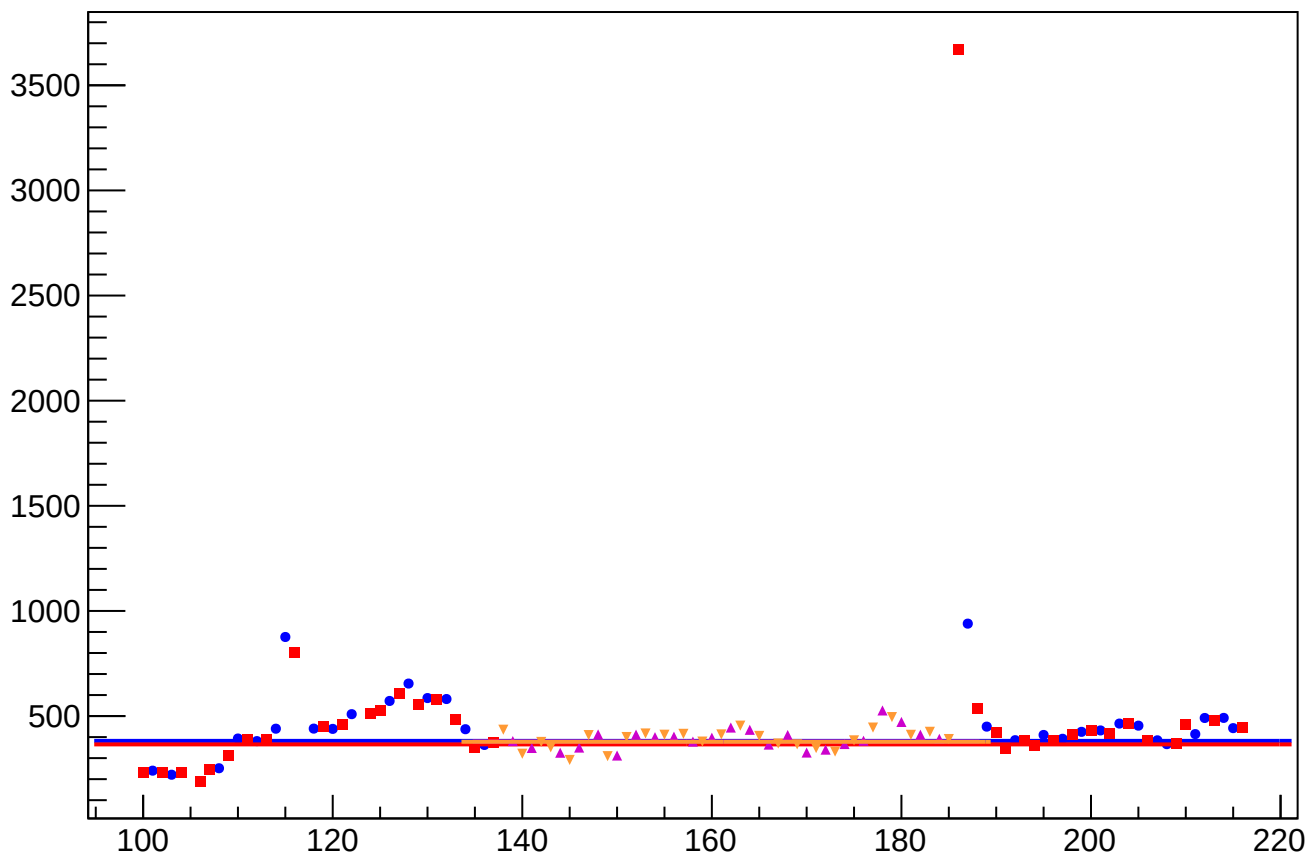
Left In: 59.907 $\pm$ 89.411  $\chi^2/\text{NDF}$ :25.8/22

+ sign 279.074 $\pm$ 62.575  $\chi^2/\text{NDF}$ : 61.1/55

All: 267.669 $\pm$ 44.090  $\chi^2/\text{NDF}$ : 159.8/113

- sign 256.426 $\pm$ 62.134  $\chi^2/\text{NDF}$ : 98.7/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 382.032 $\pm$ 0.064  $\chi^2$ /NDF: 2503814.2/30

Left Out: 377.796 $\pm$ 0.061  $\chi^2$ /NDF: 636714.9/24

Right Out: 365.308 $\pm$ 0.061  $\chi^2$ /NDF: 3507631.4/34

Left In: 378.869 $\pm$ 0.063  $\chi^2$ /NDF: 527680.9/22

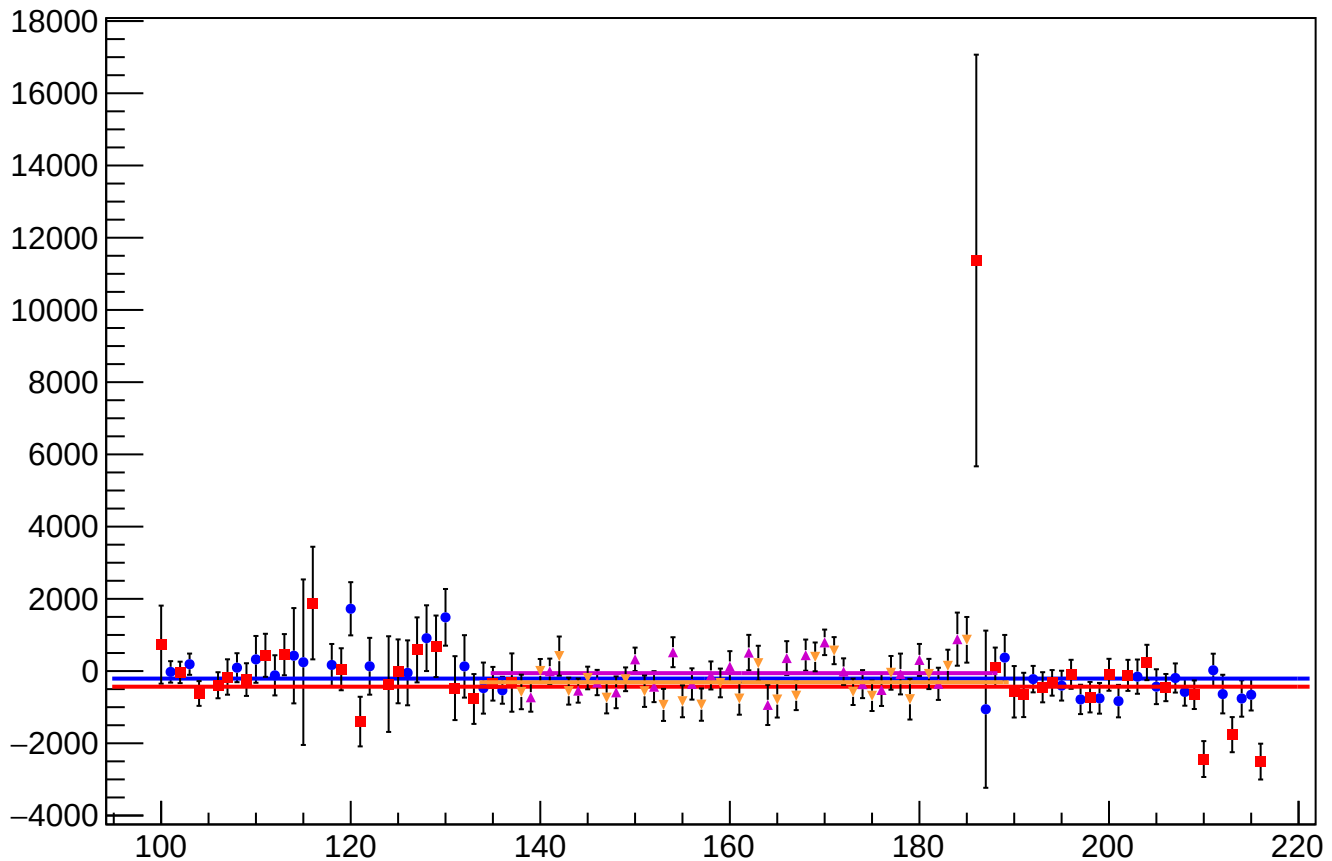
+ sign 379.832 $\pm$ 0.044  $\chi^2$ /NDF: 3142816.3/55

All: 375.816 $\pm$ 0.031  $\chi^2$ /NDF: 7218272.2/113

- sign 371.857 $\pm$ 0.044  $\chi^2$ /NDF: 4059100.0/57



# asym\_sam\_37\_48\_dd\_mean vs Slug



Right In: -208.105+/-88.258     $\chi^2/\text{NDF}$ : 29.7/30

Left Out: -309.330+/-83.706     $\chi^2/\text{NDF}$ : 30.0/24

Right Out: -432.883+/-85.458     $\chi^2/\text{NDF}$ : 68.0/34

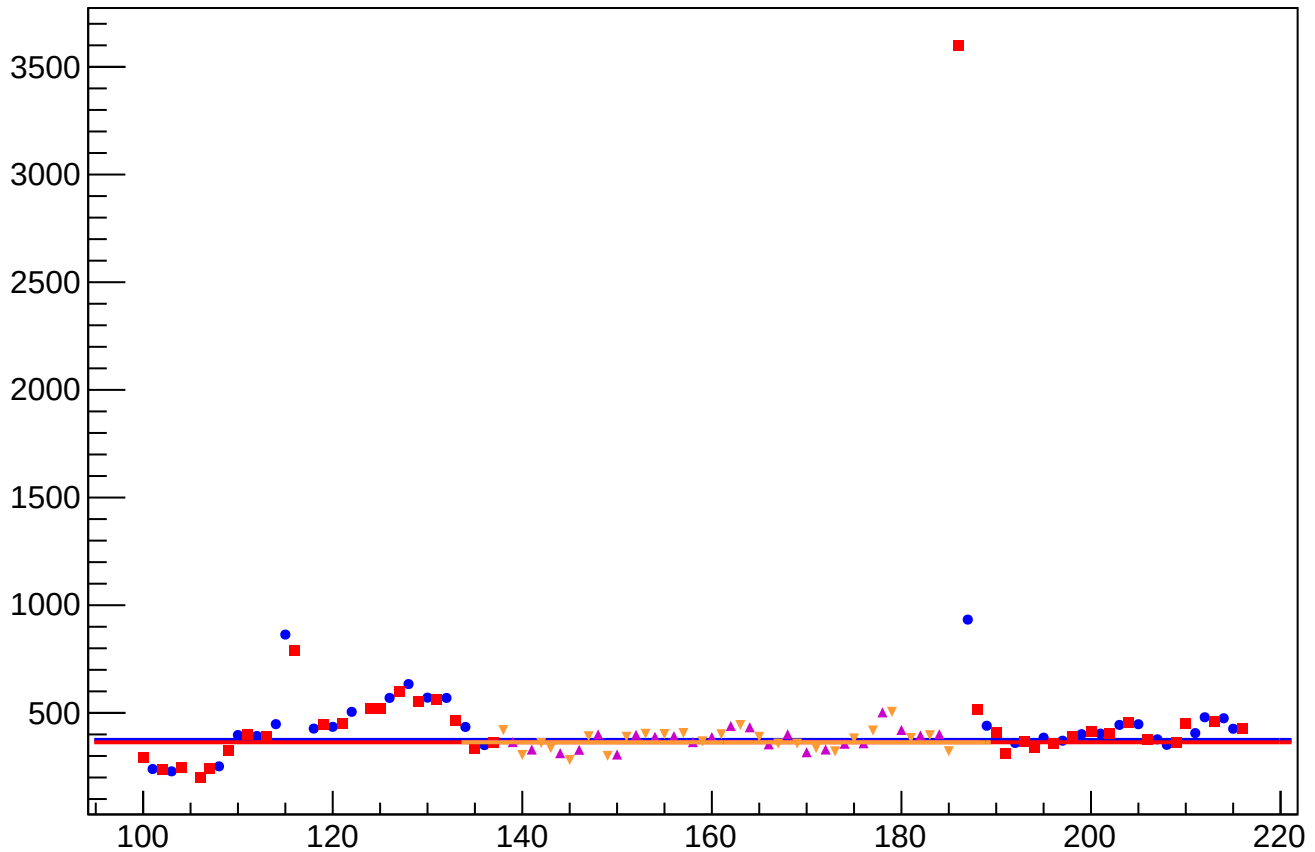
Left In: -57.543+/-86.225     $\chi^2/\text{NDF}$ : 28.0/22

+ sign -261.396+/-60.735     $\chi^2/\text{NDF}$ : 60.3/55

All: -254.138+/-42.933     $\chi^2/\text{NDF}$ : 165.9/113

- sign -246.889+/-60.697     $\chi^2/\text{NDF}$ : 105.5/57

# asym\_sam\_37\_48\_dd\_rms vs Slug



Right In: 374.605 $\pm$ 0.062  $\chi^2$ /NDF: 2251664.7/30

Left Out: 363.714 $\pm$ 0.059  $\chi^2$ /NDF: 669244.7/24

Right Out: 363.622 $\pm$ 0.060  $\chi^2$ /NDF: 2997529.1/34

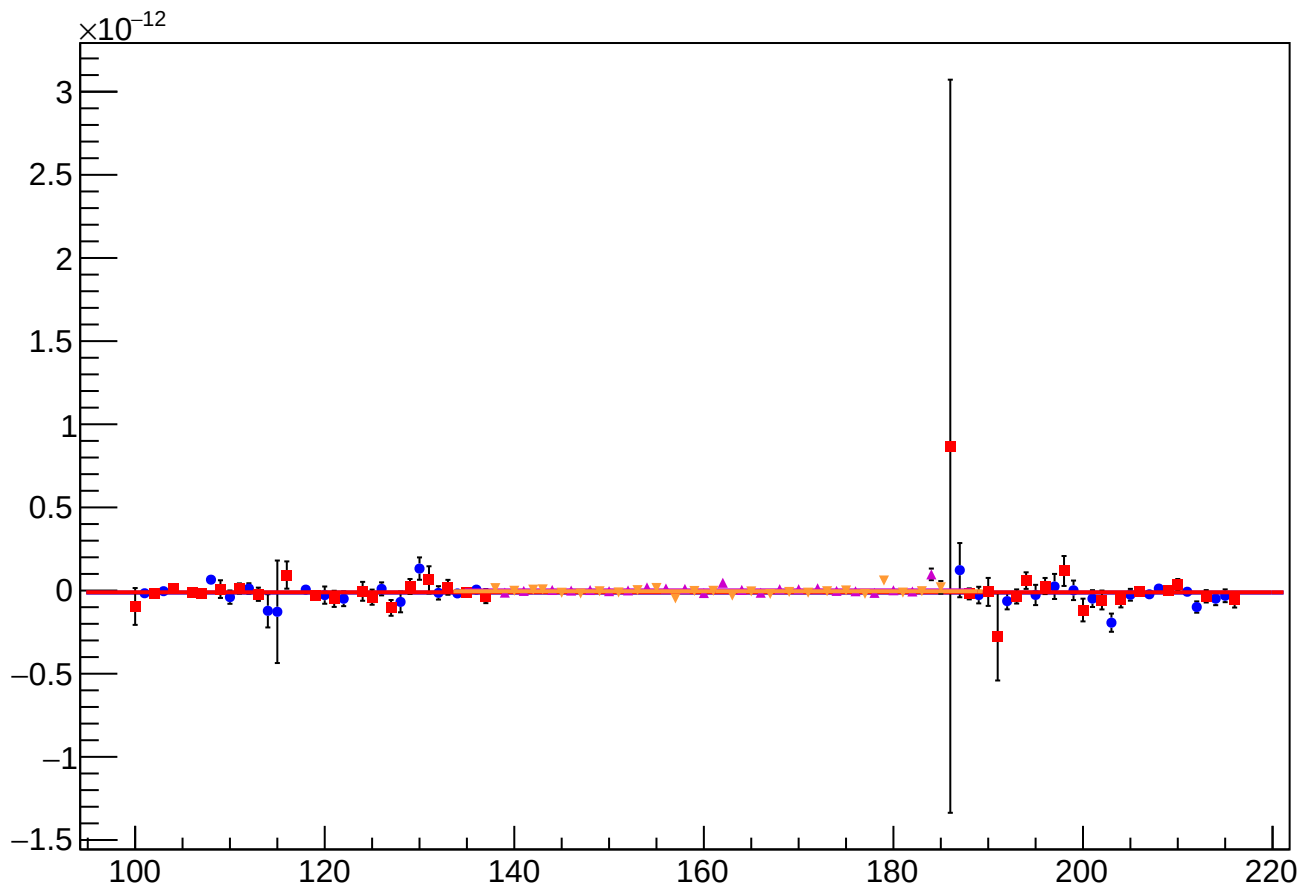
Left In: 365.324 $\pm$ 0.061  $\chi^2$ /NDF: 509496.4/22

+ sign 368.871 $\pm$ 0.043  $\chi^2$ /NDF: 2936943.0/55

All: 366.667 $\pm$ 0.030  $\chi^2$ /NDF: 6449627.3/113

- sign 364.466 $\pm$ 0.043  $\chi^2$ /NDF: 3507418.4/57

asym\_sam\_37\_48\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 40.3/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF:21.9/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 26.6/34

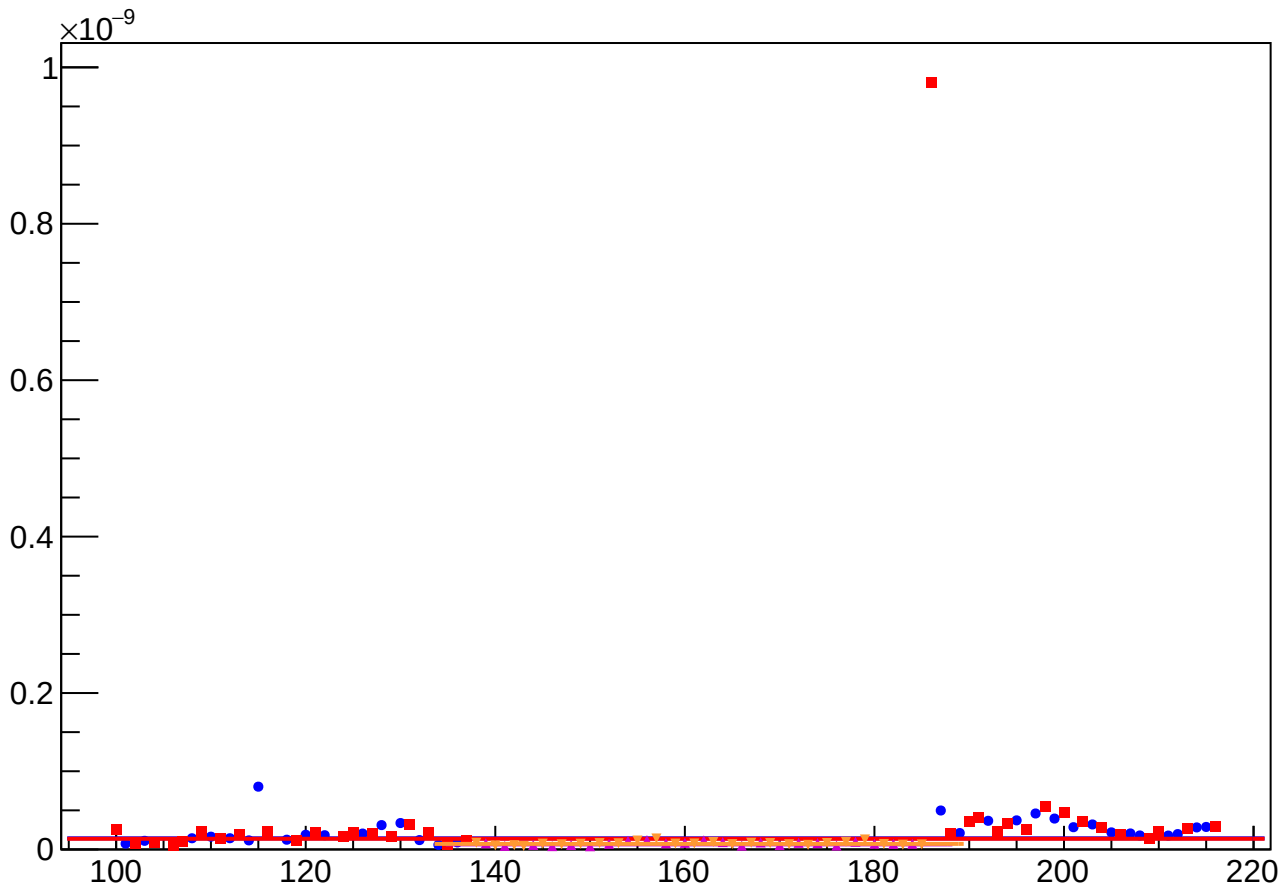
Left In: 0.000+/-0.000  $\chi^2$ /NDF:21.7/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 63.9/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 118.0/113

- sign -0.000+/-0.000  $\chi^2$ /NDF: 52.1/57

asym\_sam\_37\_48\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 4631361.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 872904.8/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5343983.5/34

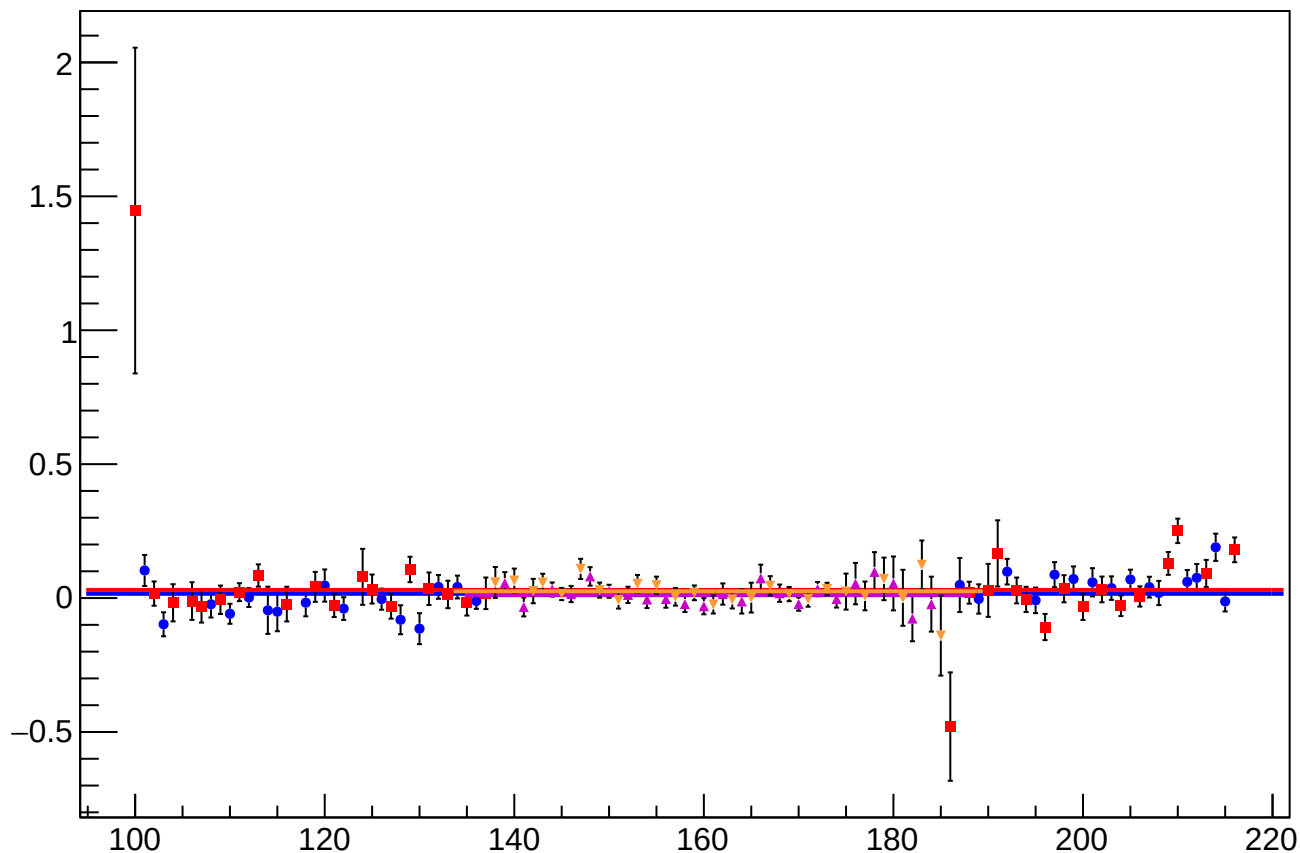
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1216388.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8204640.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17663111.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9381775.8/57

asym\_sam\_37\_48\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.008$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}: 17.4/24$

Right Out:  $0.030 \pm 0.009$   $\chi^2/\text{NDF}: 79.4/34$

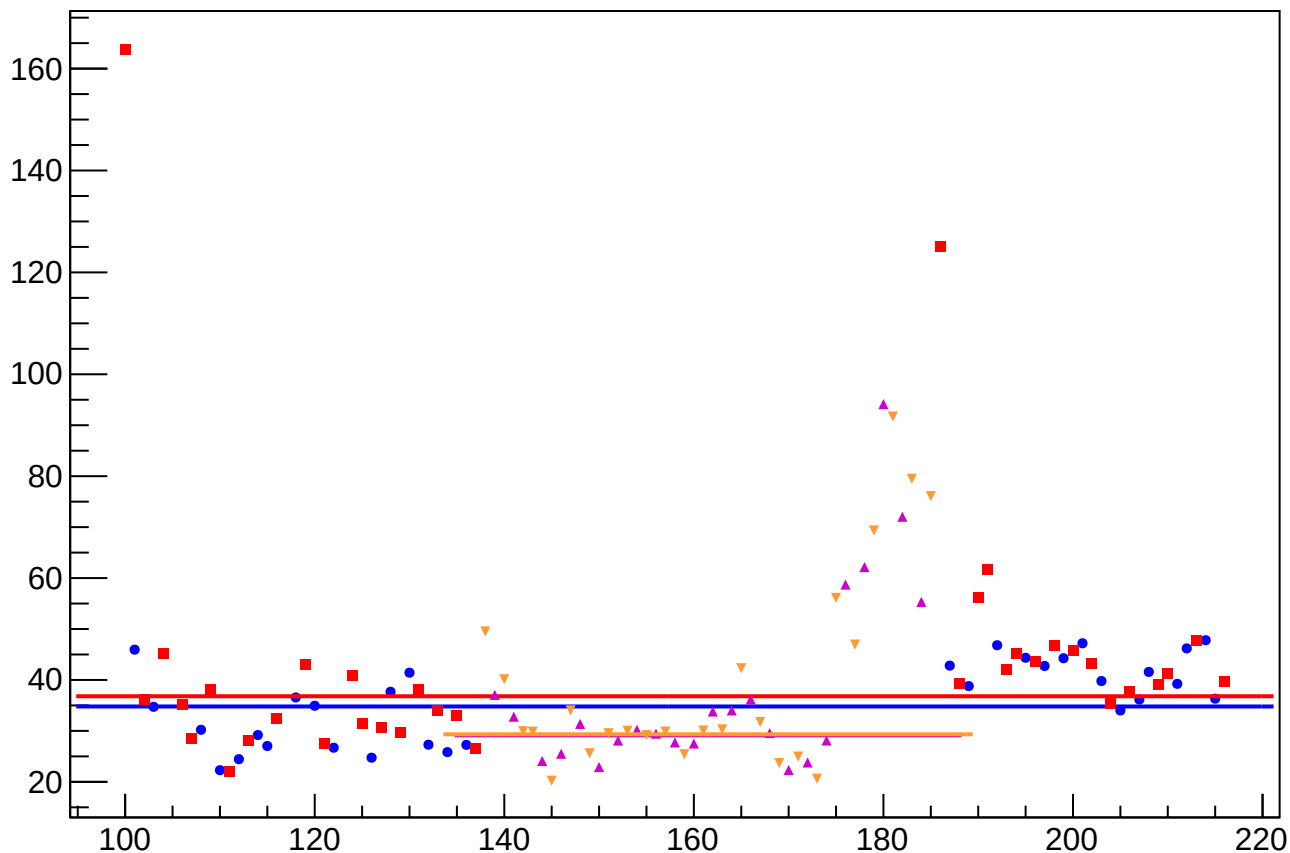
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}: 19.0/22$

+ sign  $0.021 \pm 0.005$   $\chi^2/\text{NDF}: 70.7/55$

All:  $0.020 \pm 0.004$   $\chi^2/\text{NDF}: 172.1/113$

- sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 101.3/57$

asym\_sam\_37\_48\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $34.794 \pm 0.006$   $\chi^2/\text{NDF}: 1839443.8/30$

Left Out:  $29.335 \pm 0.005$   $\chi^2/\text{NDF}: 3874774.5/24$

Right Out:  $36.802 \pm 0.006$   $\chi^2/\text{NDF}: 1924317.8/34$

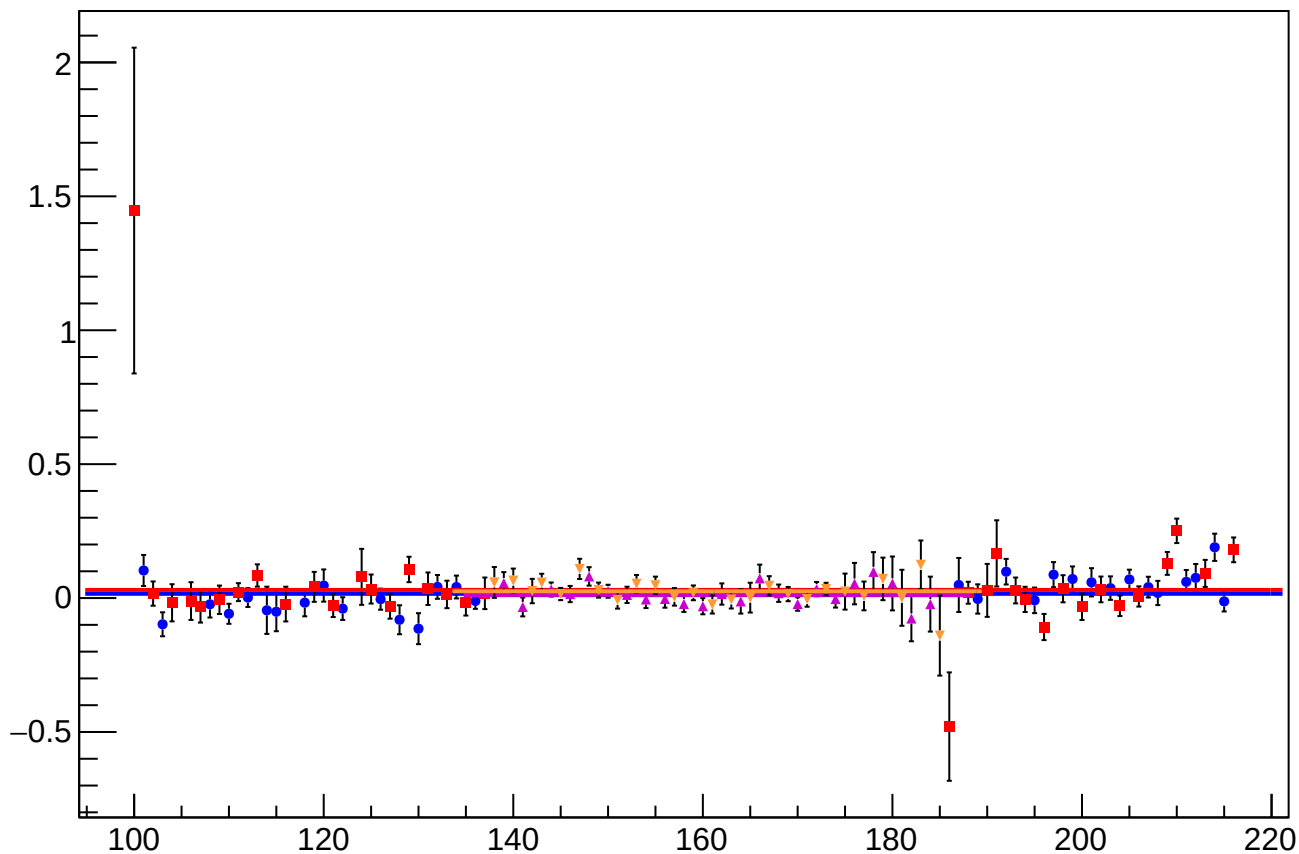
Left In:  $29.125 \pm 0.005$   $\chi^2/\text{NDF}: 2839115.6/22$

+ sign  $31.692 \pm 0.004$   $\chi^2/\text{NDF}: 6213789.7/55$

All:  $31.999 \pm 0.003$   $\chi^2/\text{NDF}: 11913438.2/113$

- sign  $32.325 \pm 0.004$   $\chi^2/\text{NDF}: 5686389.7/57$

asym\_sam\_37\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.008$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}: 17.4/24$

Right Out:  $0.030 \pm 0.009$   $\chi^2/\text{NDF}: 79.4/34$

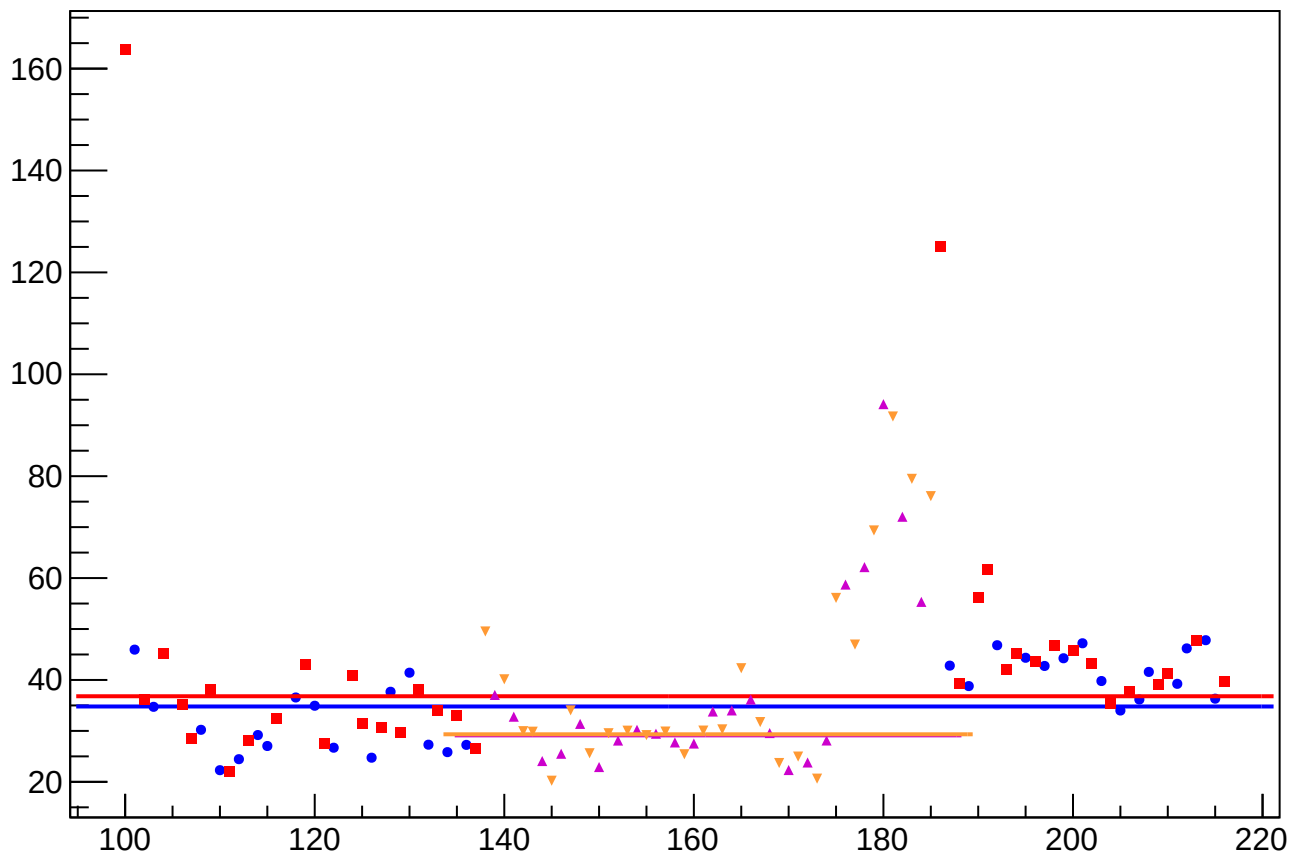
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}: 19.0/22$

+ sign  $0.021 \pm 0.005$   $\chi^2/\text{NDF}: 70.7/55$

All:  $0.020 \pm 0.004$   $\chi^2/\text{NDF}: 172.1/113$

- sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 101.3/57$

asym\_sam\_37\_48\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.794 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 1839443.8/30

Left Out: 29.335 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 3874774.5/24

Right Out: 36.802 $\pm$ 0.006  $\chi^2/\text{NDF}$ : 1924317.8/34

Left In: 29.125 $\pm$ 0.005  $\chi^2/\text{NDF}$ : 2839115.6/22

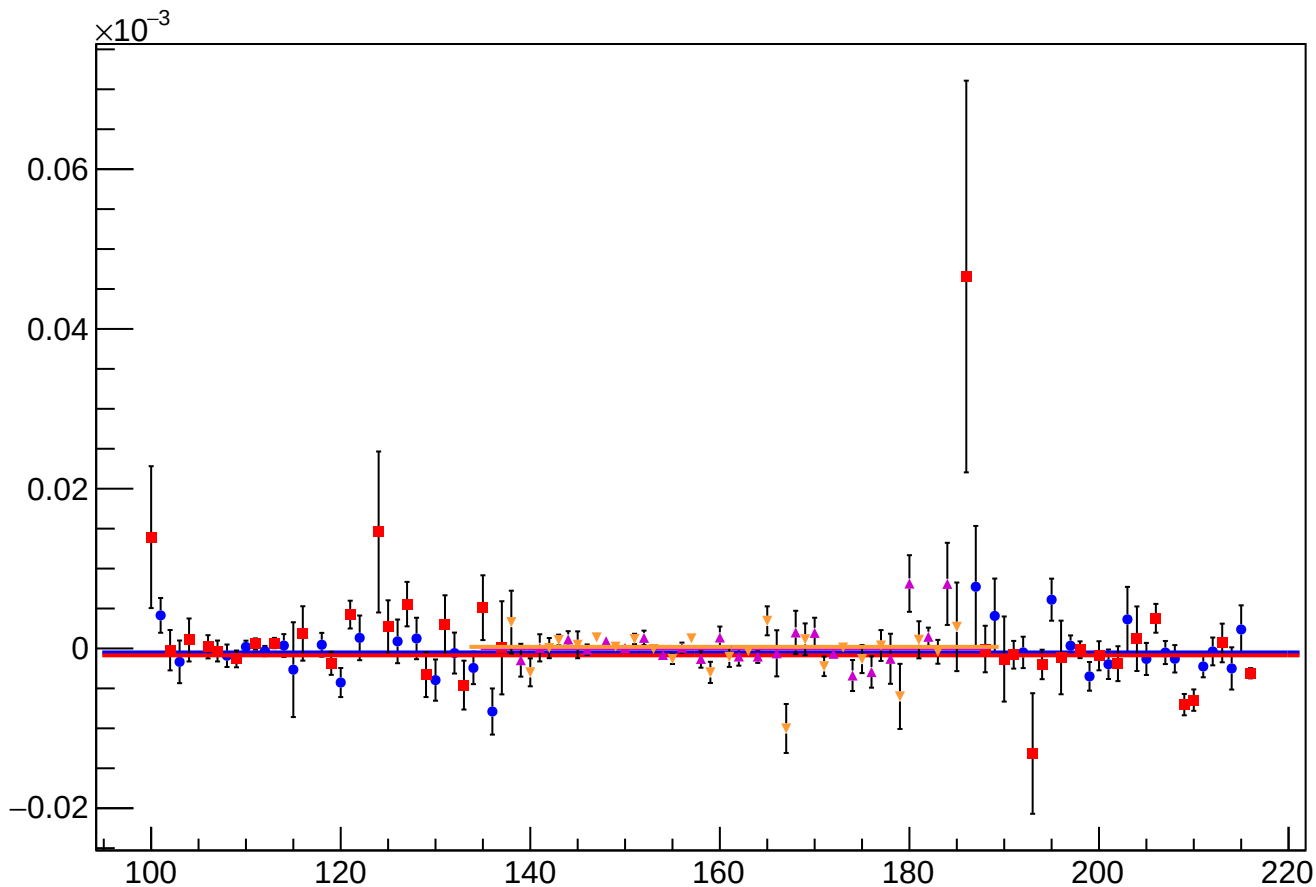
+ sign 31.692 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 6213789.7/55

All: 31.999 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 11913438.2/113

- sign 32.325 $\pm$ 0.004  $\chi^2/\text{NDF}$ : 5686389.7/57



asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 104.1/34

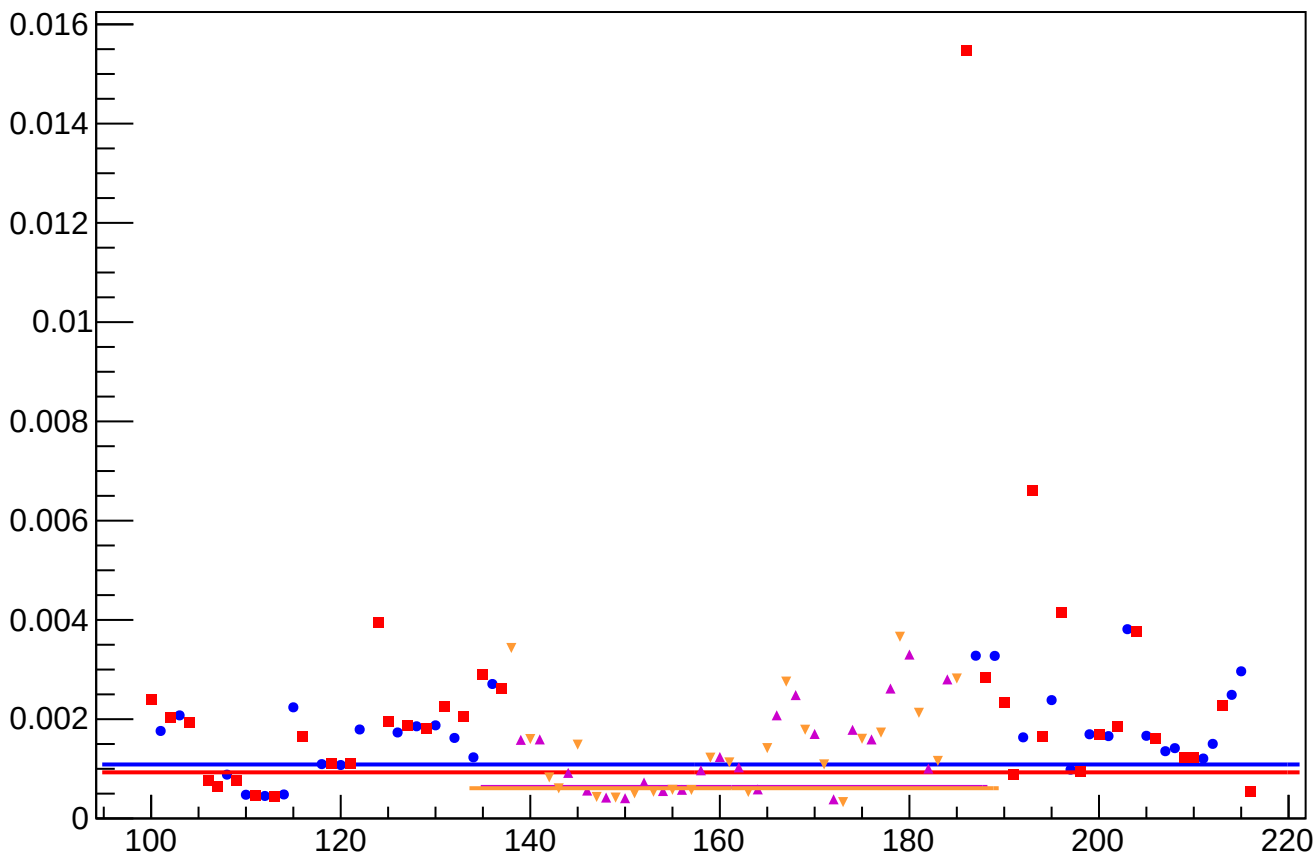
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 32.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 94.9/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 241.4/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 144.3/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug

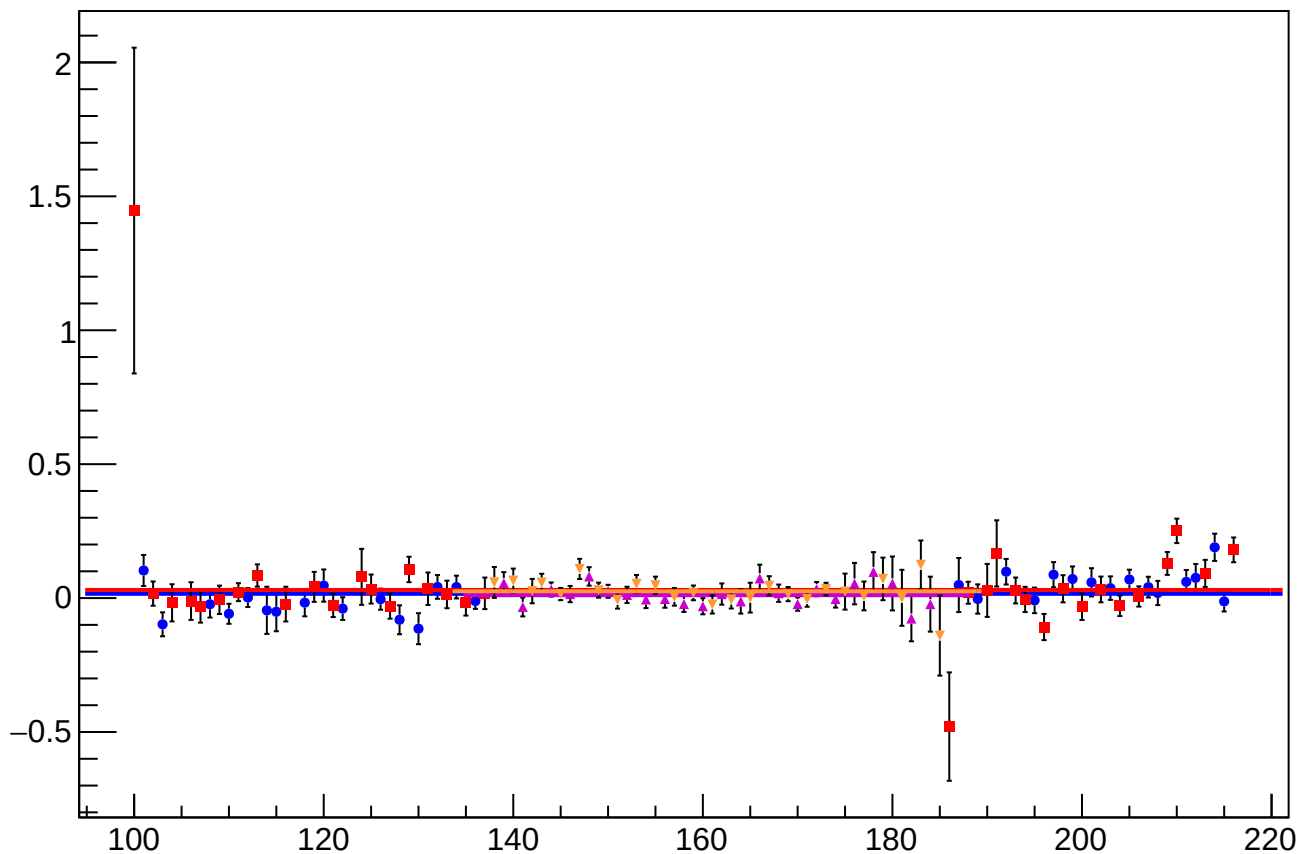


+ sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 24655230.9/55

All: 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 48363966.2/113

- sign 0.001 $\pm$ 0.000  $\chi^2$ /NDF: 23707172.2/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.016 \pm 0.008$   $\chi^2/\text{NDF}: 52.5/30$

Left Out:  $0.025 \pm 0.007$   $\chi^2/\text{NDF}: 17.4/24$

Right Out:  $0.030 \pm 0.009$   $\chi^2/\text{NDF}: 79.4/34$

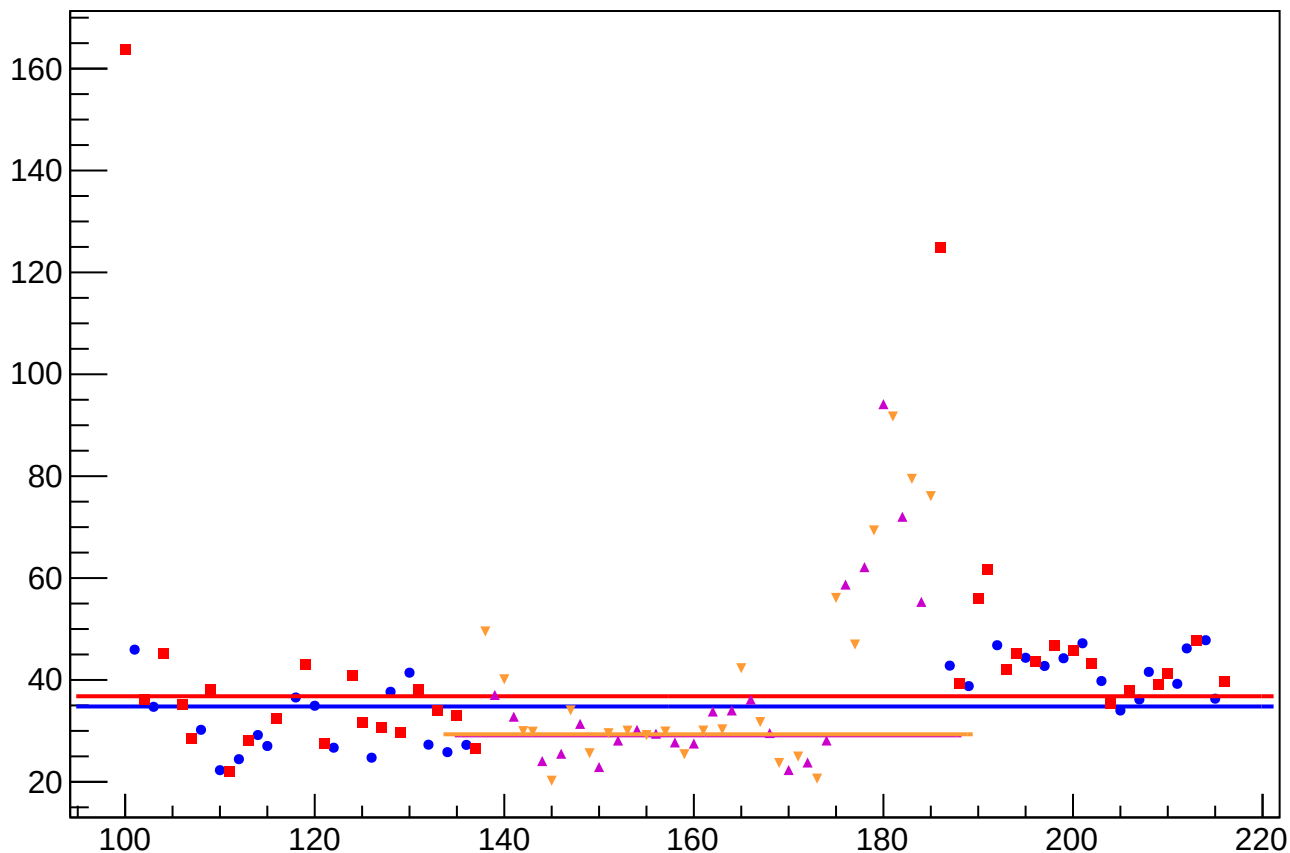
Left In:  $0.011 \pm 0.007$   $\chi^2/\text{NDF}: 19.0/22$

+ sign  $0.021 \pm 0.005$   $\chi^2/\text{NDF}: 70.7/55$

All:  $0.020 \pm 0.004$   $\chi^2/\text{NDF}: 172.1/113$

- sign  $0.019 \pm 0.006$   $\chi^2/\text{NDF}: 101.3/57$

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 34.794 $\pm$ 0.006  $\chi^2$ /NDF: 1839339.9/30

Left Out: 29.334 $\pm$ 0.005  $\chi^2$ /NDF: 3874839.0/24

Right Out: 36.802 $\pm$ 0.006  $\chi^2$ /NDF: 1924193.8/34

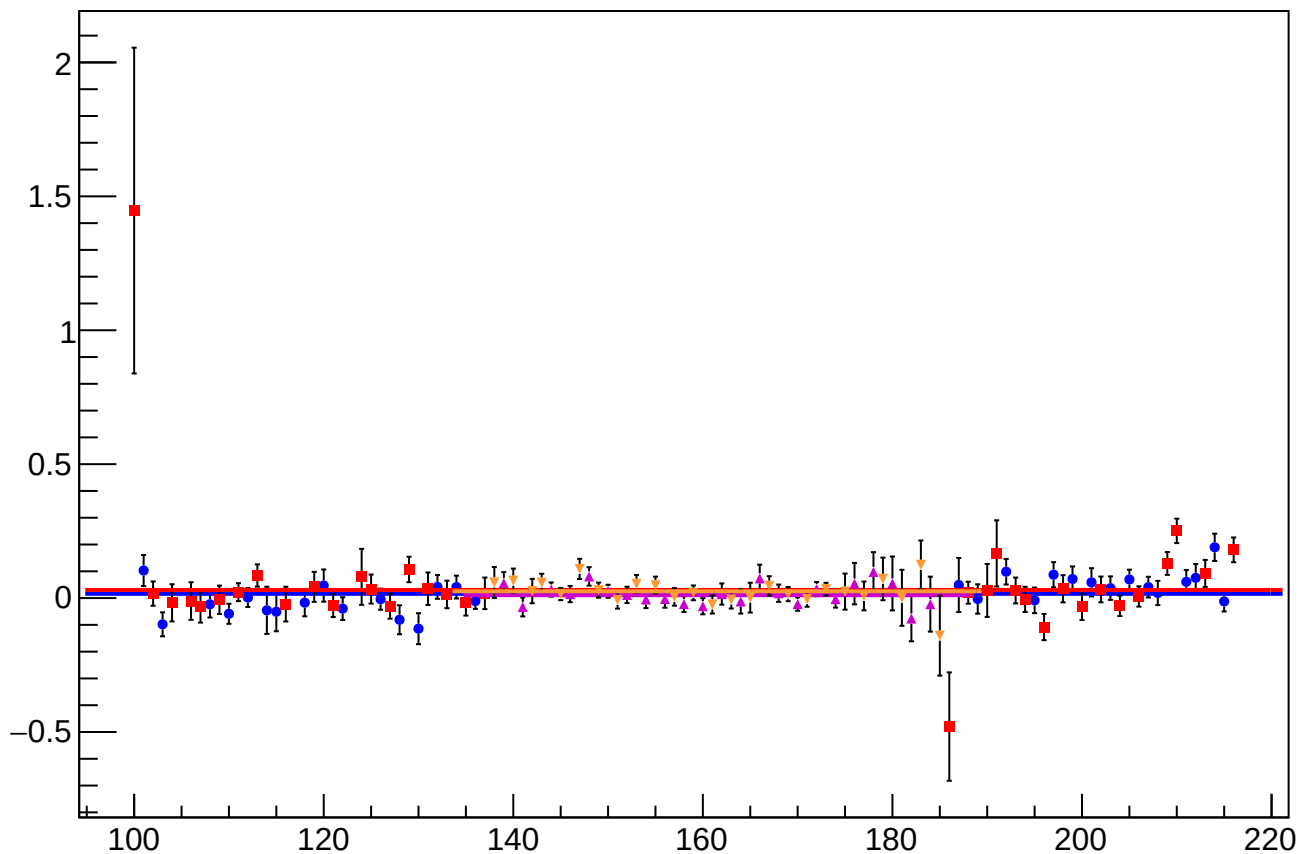
Left In: 29.124 $\pm$ 0.005  $\chi^2$ /NDF: 2839078.4/22

+ sign 31.692 $\pm$ 0.004  $\chi^2$ /NDF: 6213777.2/55

All: 31.999 $\pm$ 0.003  $\chi^2$ /NDF: 11913318.0/113

- sign 32.324 $\pm$ 0.004  $\chi^2$ /NDF: 5686279.6/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.016 $\pm$ 0.008  $\chi^2$ /NDF: 52.5/30

Left Out: 0.025 $\pm$ 0.007  $\chi^2$ /NDF:17.4/24

Right Out: 0.030 $\pm$ 0.009  $\chi^2$ /NDF: 79.4/34

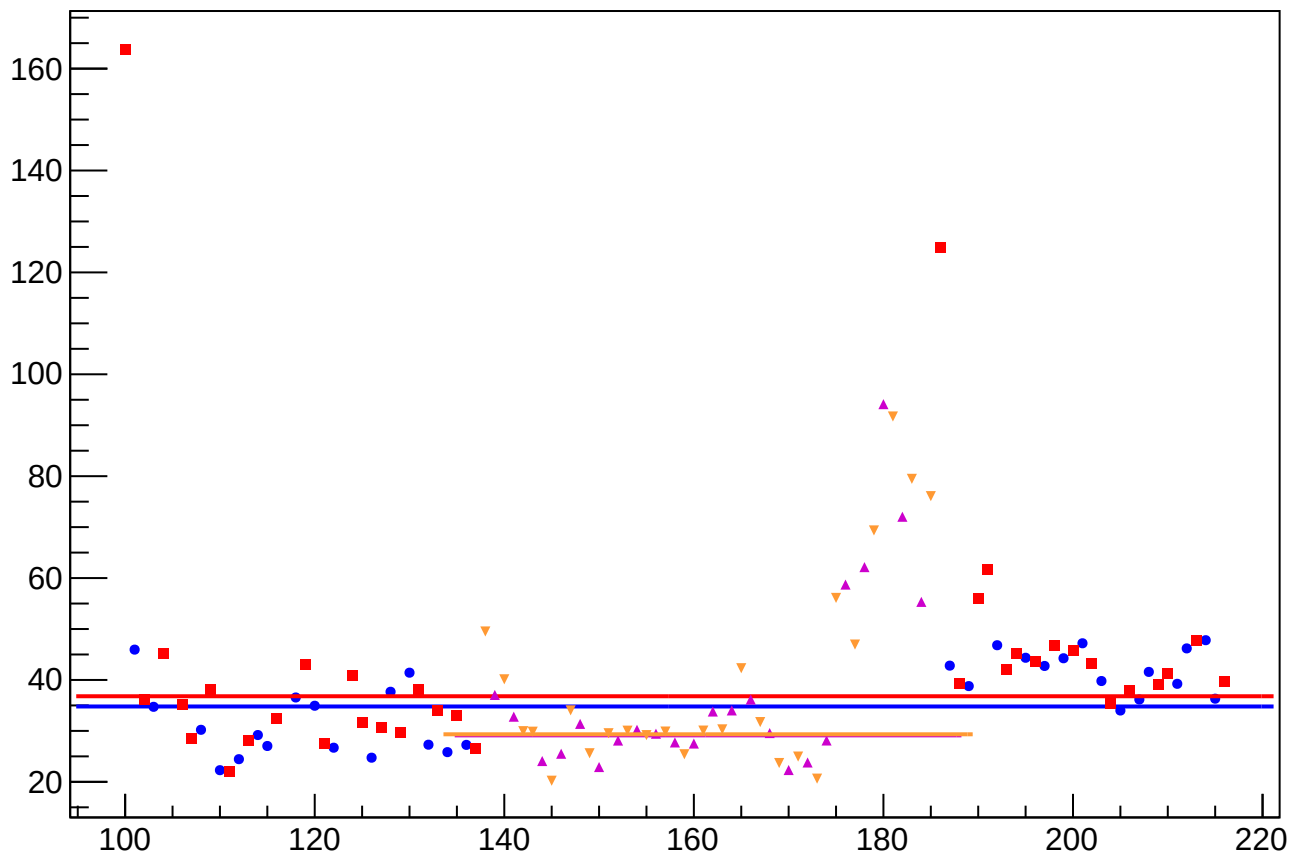
Left In: 0.011 $\pm$ 0.007  $\chi^2$ /NDF:19.0/22

+ sign 0.021 $\pm$ 0.005  $\chi^2$ /NDF: 70.7/55

All: 0.020 $\pm$ 0.004  $\chi^2$ /NDF: 172.1/113

- sign 0.019 $\pm$ 0.006  $\chi^2$ /NDF: 101.3/57

asym\_sam\_37\_48\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 34.794 $\pm$ 0.006  $\chi^2$ /NDF: 1839339.9/30

Left Out: 29.334 $\pm$ 0.005  $\chi^2$ /NDF: 3874839.0/24

Right Out: 36.802 $\pm$ 0.006  $\chi^2$ /NDF: 1924193.8/34

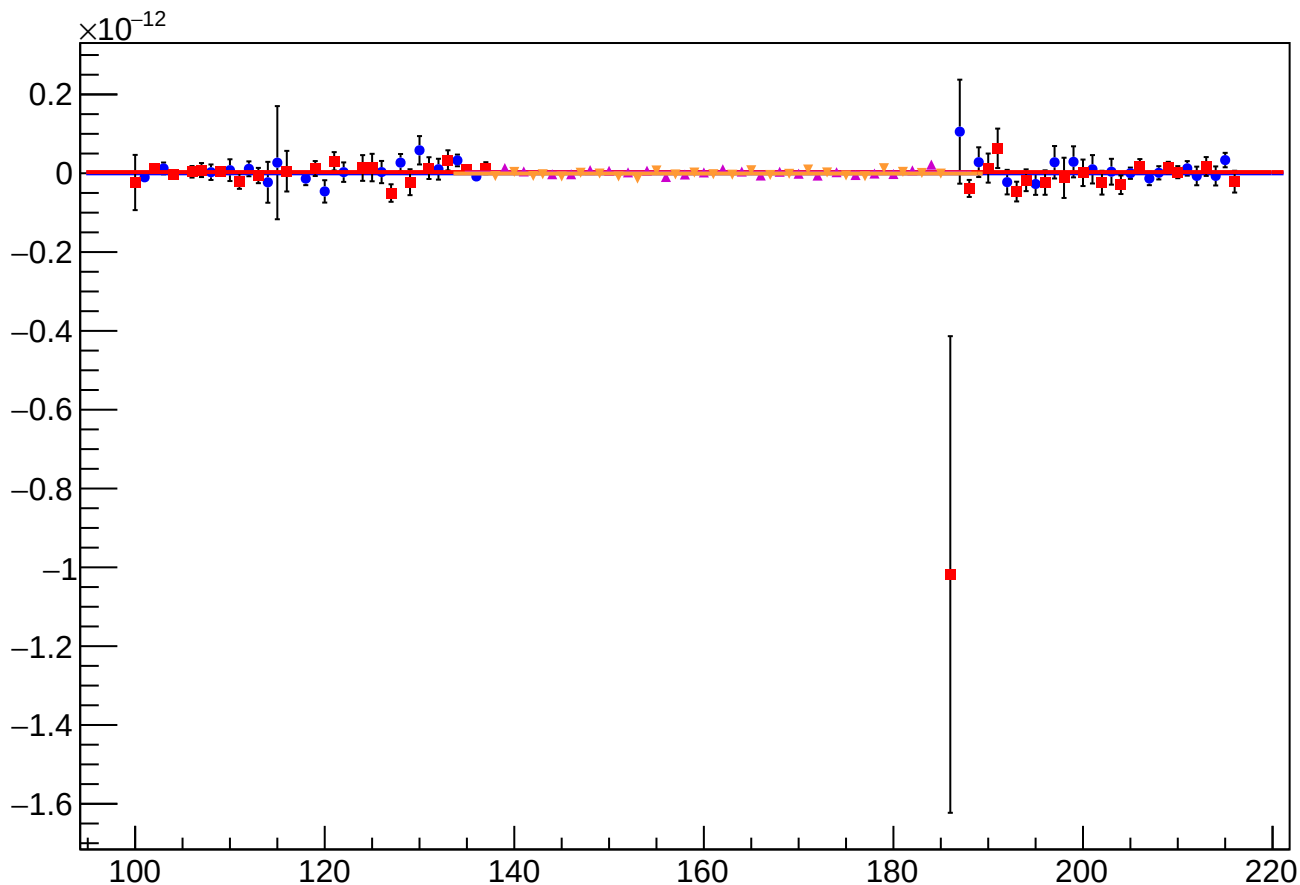
Left In: 29.124 $\pm$ 0.005  $\chi^2$ /NDF: 2839078.4/22

+ sign 31.692 $\pm$ 0.004  $\chi^2$ /NDF: 6213777.2/55

All: 31.999 $\pm$ 0.003  $\chi^2$ /NDF: 11913318.0/113

- sign 32.324 $\pm$ 0.004  $\chi^2$ /NDF: 5686279.6/57

asym\_sam\_37\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.4/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 15.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.3/34

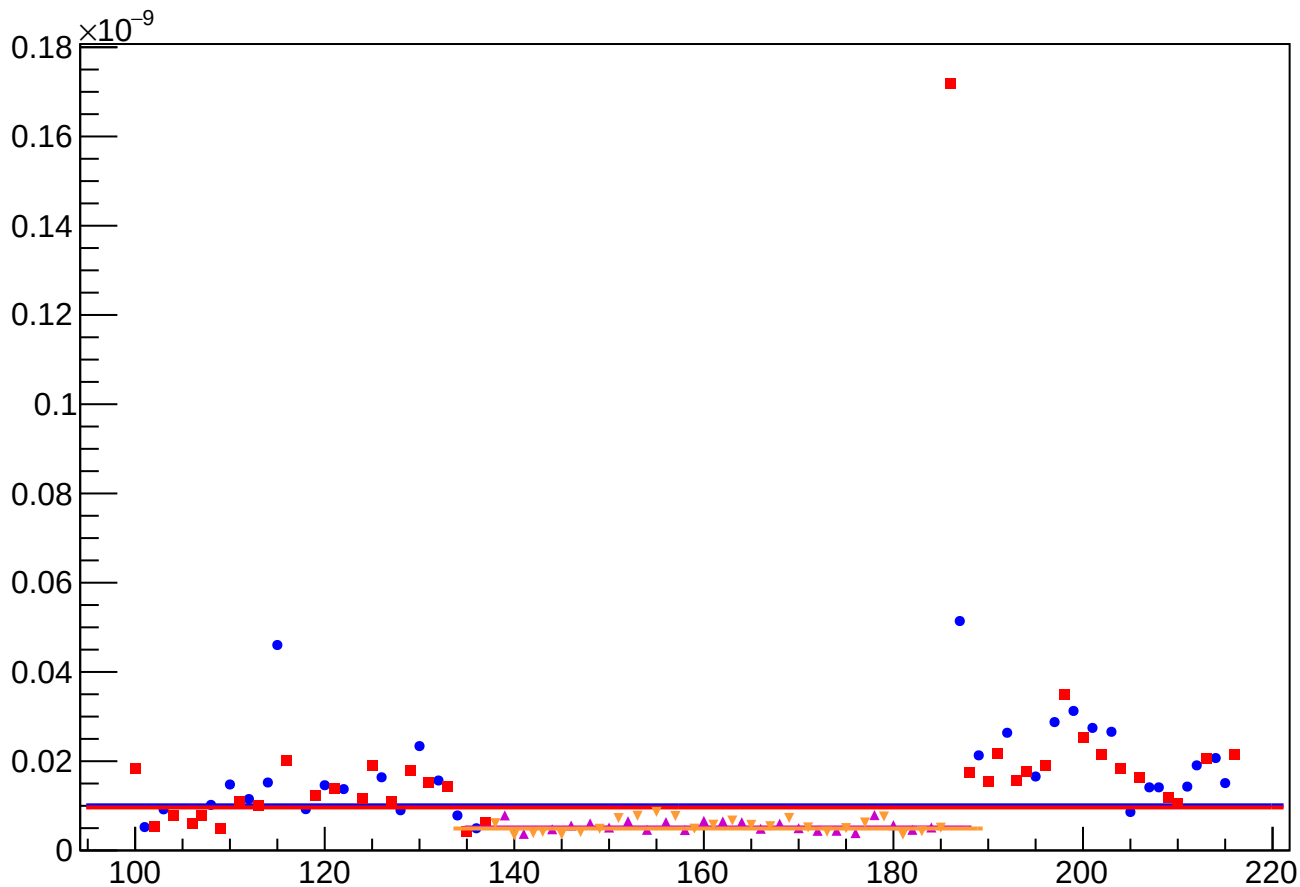
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 16.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.5/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 91.3/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.0/57

asym\_sam\_37\_48\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7028737.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1871499.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6525295.4/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 976775.4/22

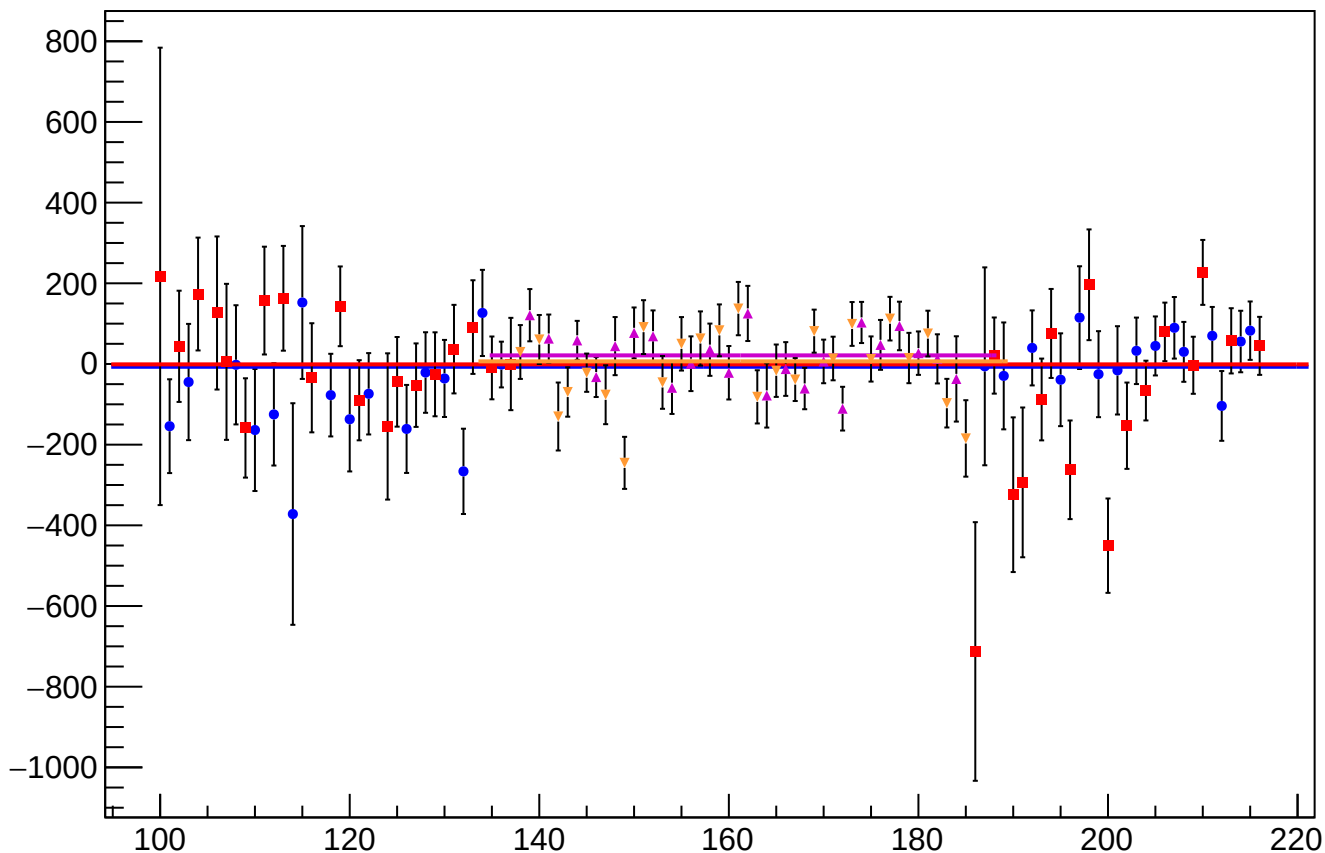
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13252907.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24149667.3/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10869067.8/57



# reg\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-6.908 \pm 17.602$   $\chi^2/\text{NDF}$ : 26.2/30

Left Out:  $6.523 \pm 12.287$   $\chi^2/\text{NDF}$ : 50.6/24

Right Out:  $-0.955 \pm 18.234$   $\chi^2/\text{NDF}$ : 57.7/34

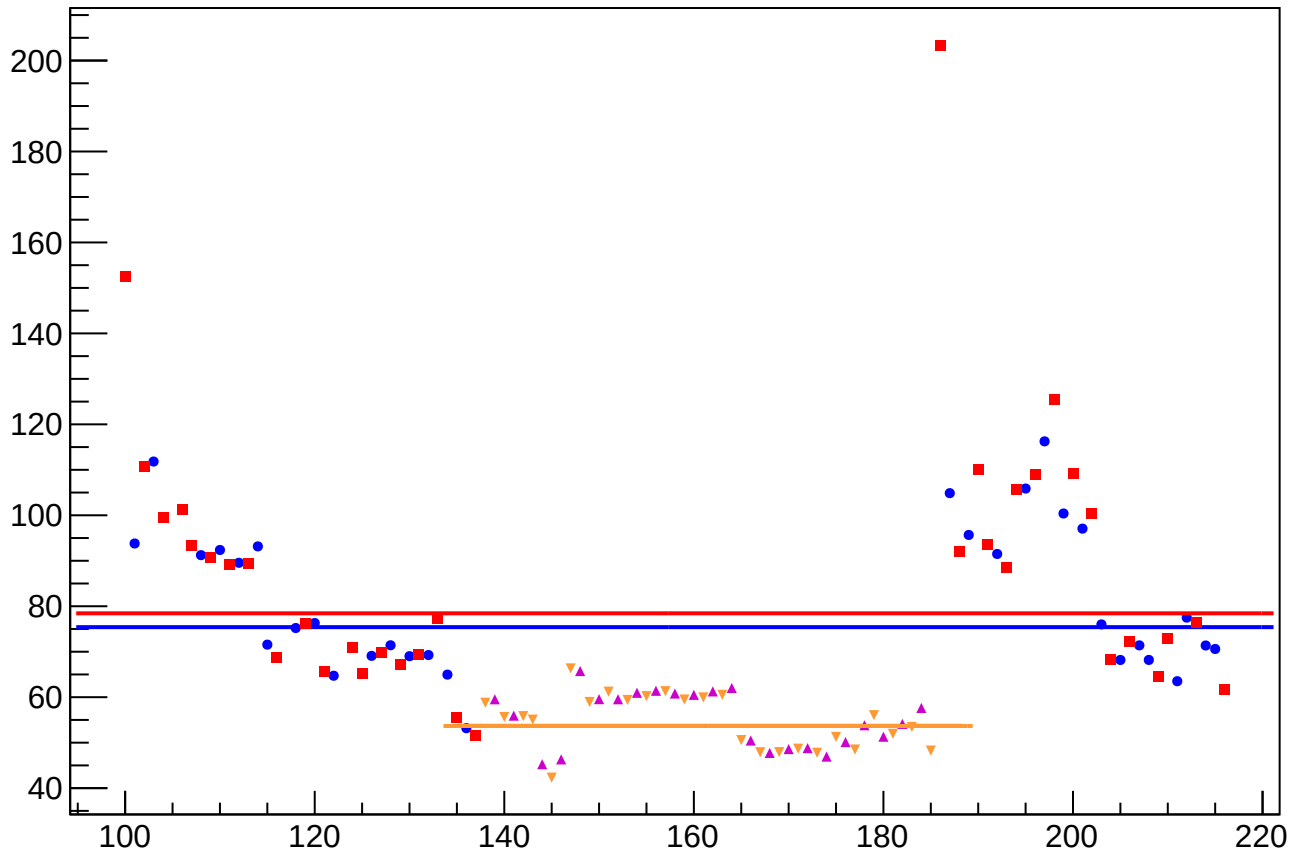
Left In:  $21.336 \pm 12.649$   $\chi^2/\text{NDF}$ : 25.4/22

+ sign  $2.122 \pm 10.075$   $\chi^2/\text{NDF}$ : 77.2/55

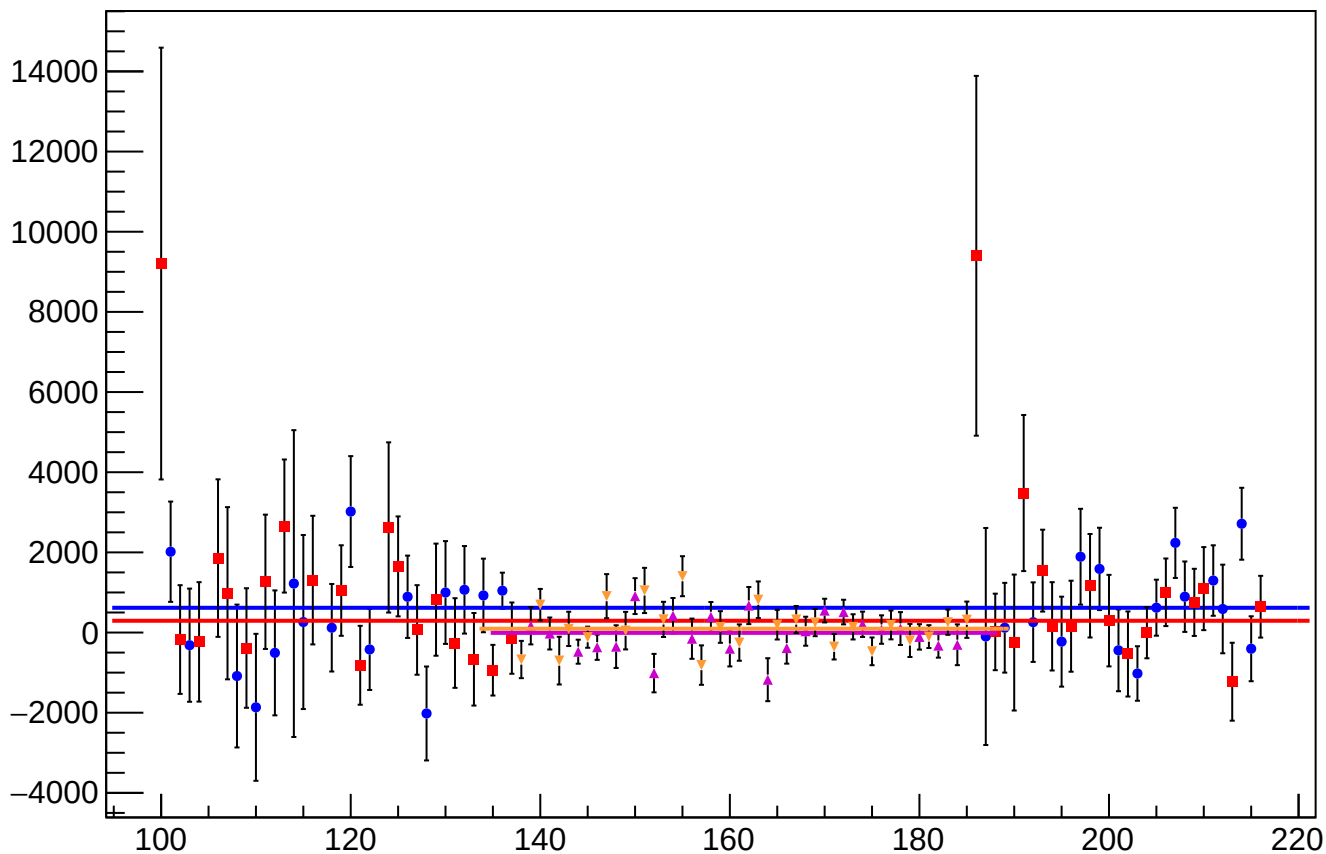
All:  $7.922 \pm 7.234$   $\chi^2/\text{NDF}$ : 162.0/113

- sign  $14.094 \pm 10.393$   $\chi^2/\text{NDF}$ : 84.1/57

# reg\_asym\_sam\_15\_26\_dd\_rms vs Slug



asym\_sam\_15\_26\_dd\_reg\_correction\_mean vs Slug



Right In:  $617.675 \pm 179.362$   $\chi^2/\text{NDF}$ : 36.8/30

Left Out:  $95.456 \pm 77.134$   $\chi^2/\text{NDF}$ : 33.2/24

Right Out:  $294.034 \pm 189.321$   $\chi^2/\text{NDF}$ : 30.0/34

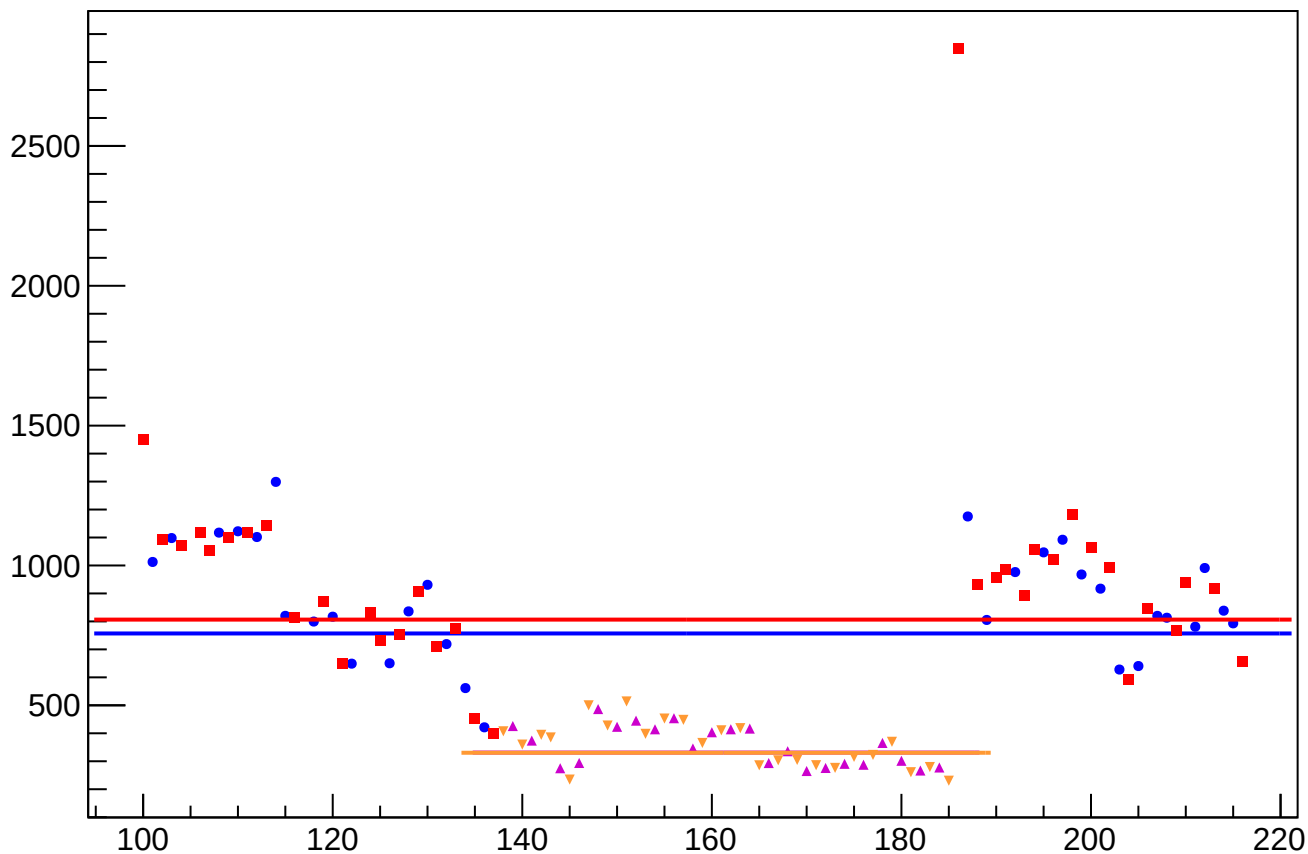
Left In:  $-7.879 \pm 79.125$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $176.962 \pm 70.860$   $\chi^2/\text{NDF}$ : 77.1/55

All:  $109.076 \pm 50.847$   $\chi^2/\text{NDF}$ : 143.5/113

- sign  $37.016 \pm 73.006$   $\chi^2/\text{NDF}$ : 64.5/57

asym\_sam\_15\_26\_dd\_reg\_correction\_rms vs Slug



Right In: 756.919 $\pm$ 0.127  $\chi^2$ /NDF: 2637966.4/30

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752470.5/24

Right Out: 806.451 $\pm$ 0.134  $\chi^2$ /NDF: 3007120.2/34

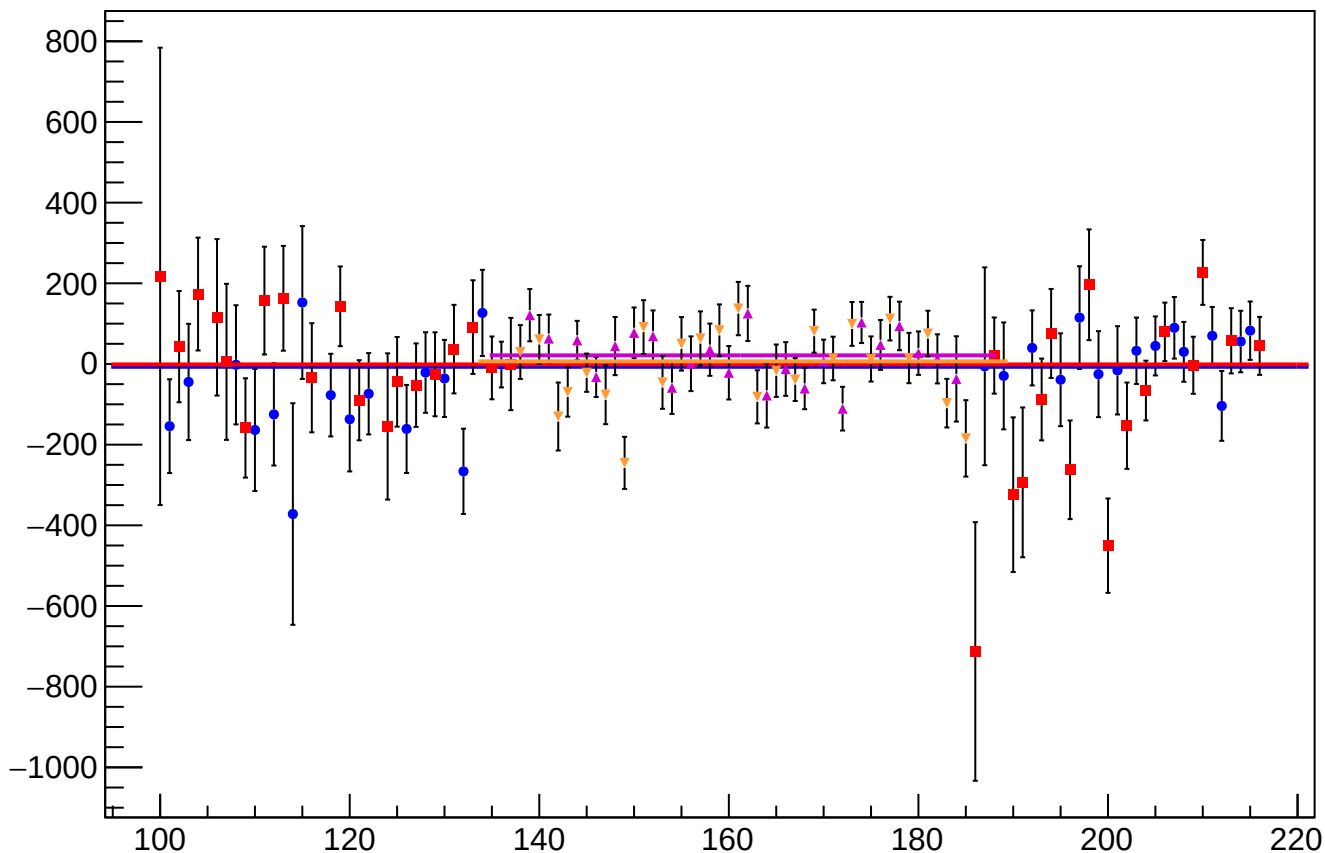
Left In: 331.059 $\pm$ 0.056  $\chi^2$ /NDF: 1325602.5/22

+ sign 396.974 $\pm$ 0.050  $\chi^2$ /NDF: 13934594.7/55

All: 399.291 $\pm$ 0.036  $\chi^2$ /NDF: 29007163.7/1

- sign 401.750 $\pm$ 0.052  $\chi^2$ /NDF: 15068160.6/57

# cor\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-6.902 \pm 17.602$   $\chi^2/\text{NDF}: 26.2/30$

Left Out:  $6.526 \pm 12.287$   $\chi^2/\text{NDF}: 50.6/24$

Right Out:  $-1.114 \pm 18.238$   $\chi^2/\text{NDF}: 57.6/34$

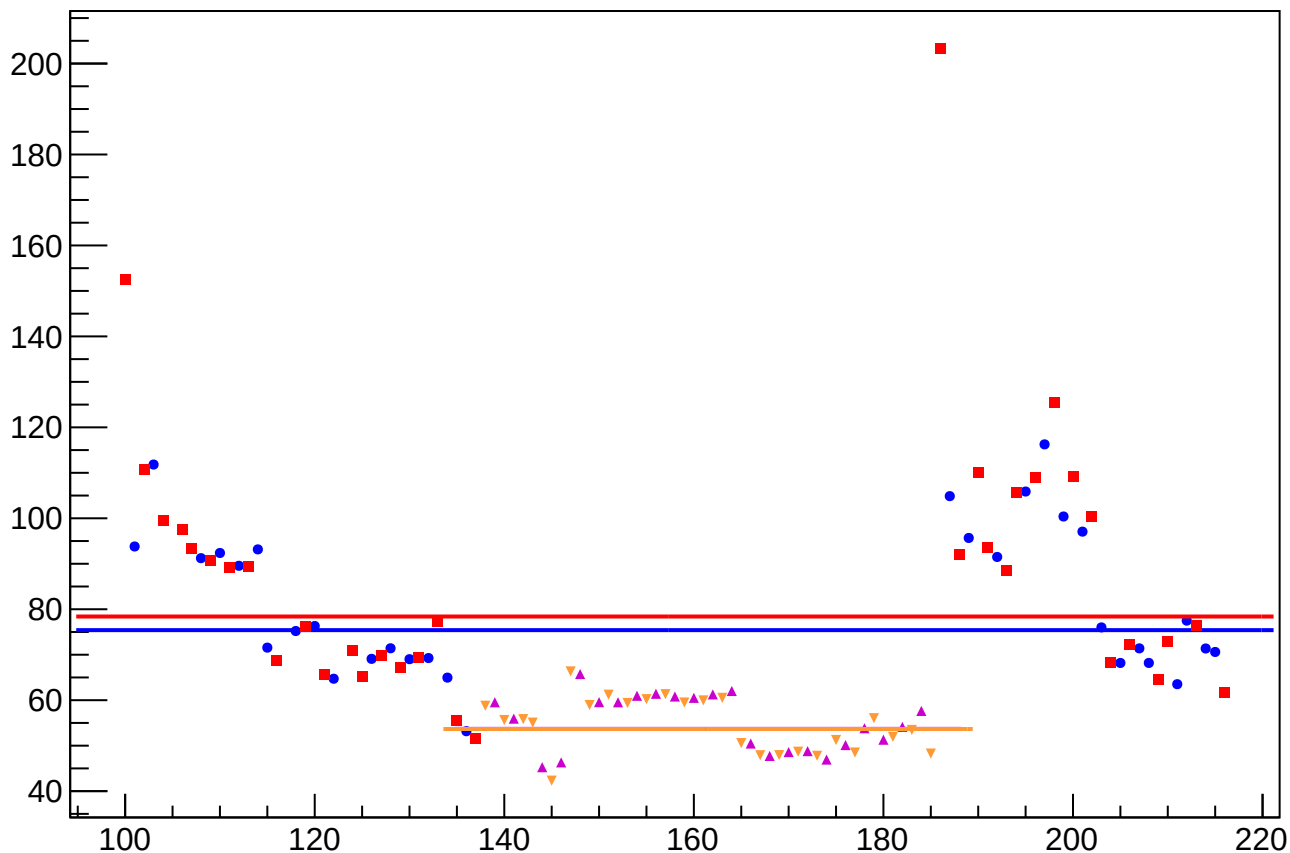
Left In:  $21.335 \pm 12.649$   $\chi^2/\text{NDF}: 25.4/22$

+ sign  $2.126 \pm 10.075$   $\chi^2/\text{NDF}: 77.2/55$

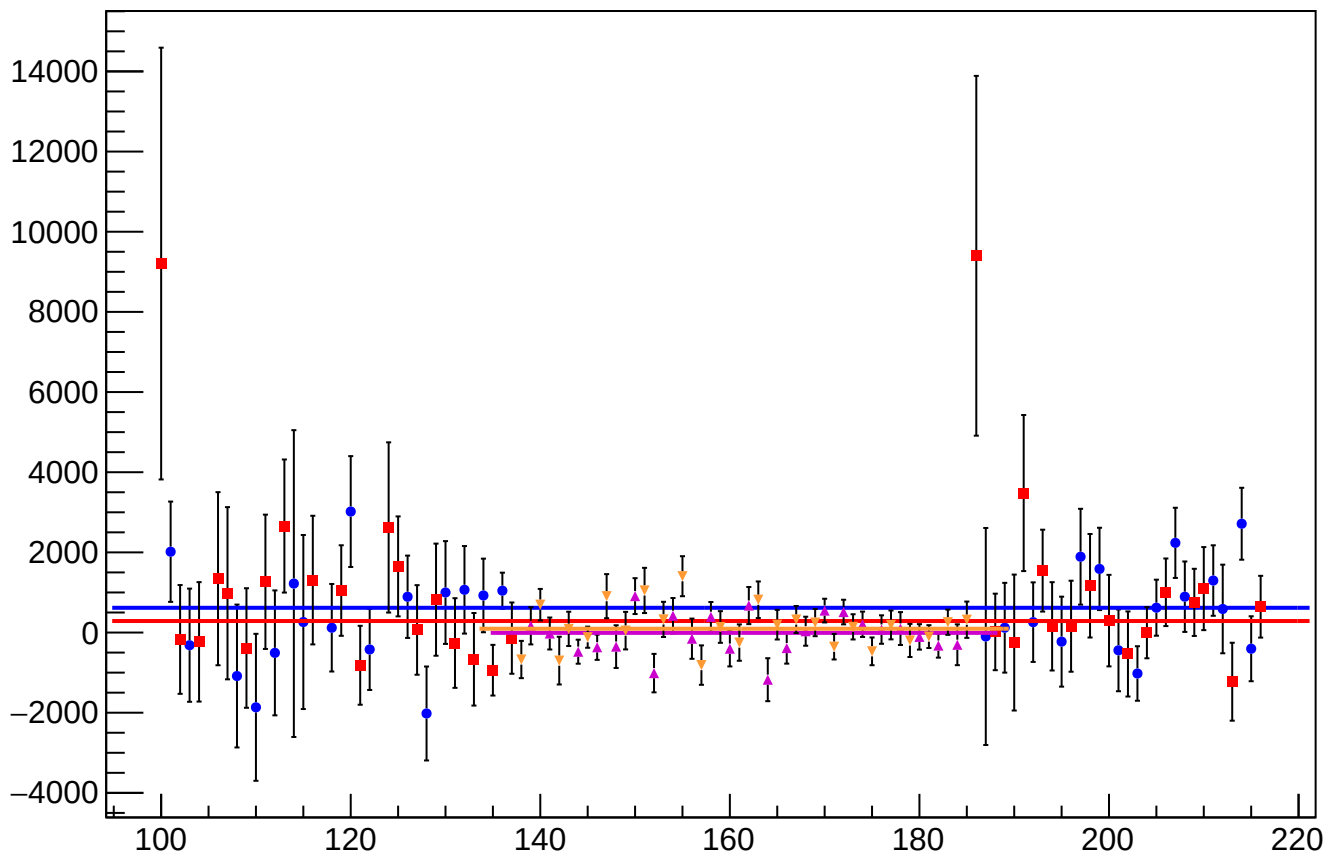
All:  $7.899 \pm 7.234$   $\chi^2/\text{NDF}: 161.9/113$

- sign  $14.043 \pm 10.394$   $\chi^2/\text{NDF}: 84.0/57$

# cor\_asym\_sam\_15\_26\_dd\_rms vs Slug



asym\_sam\_15\_26\_dd\_cor\_correction\_mean vs Slug



Right In:  $617.673 \pm 179.362$   $\chi^2/\text{NDF}$ : 36.8/30

Left Out:  $95.458 \pm 77.134$   $\chi^2/\text{NDF}$ : 33.2/24

Right Out:  $287.655 \pm 189.474$   $\chi^2/\text{NDF}$ : 29.6/34

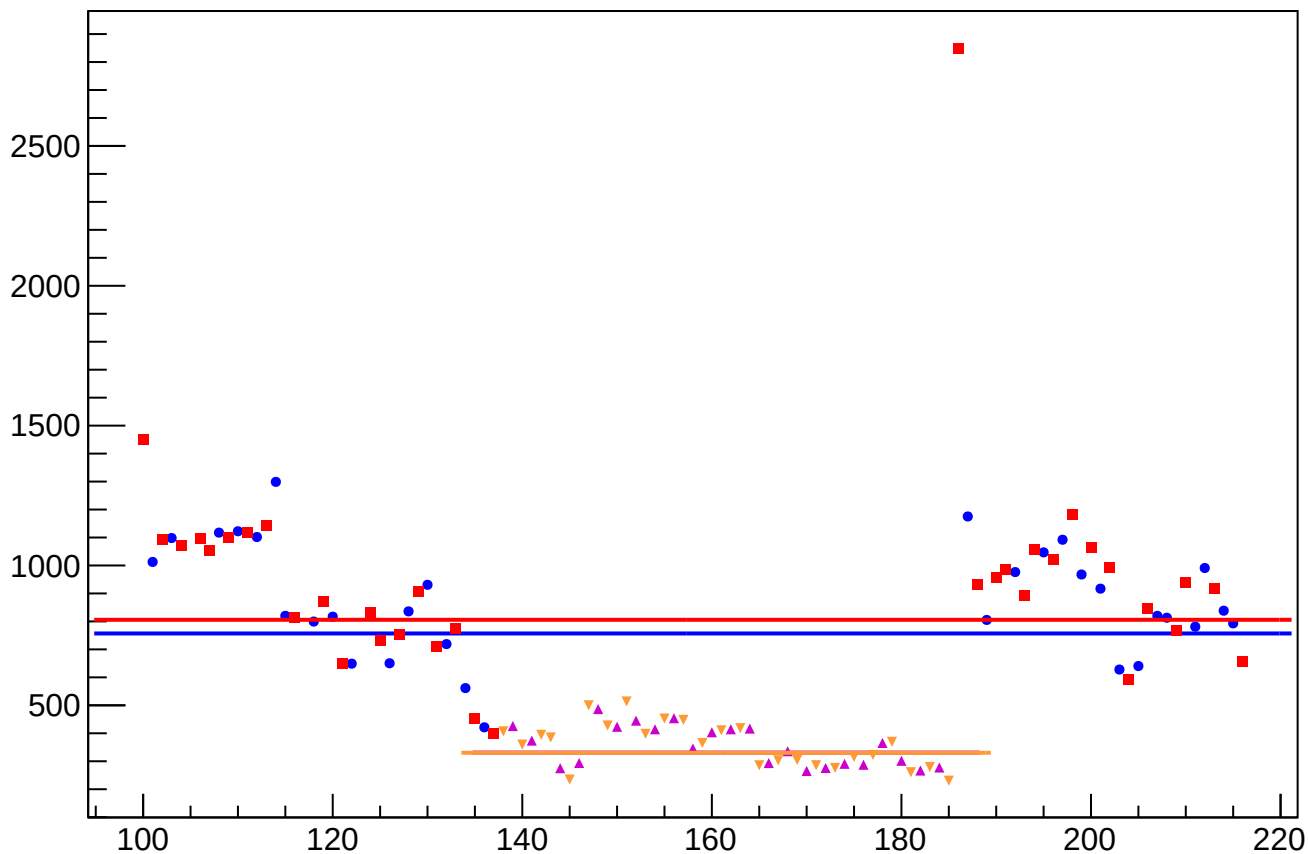
Left In:  $-7.875 \pm 79.125$   $\chi^2/\text{NDF}$ : 32.3/22

+ sign  $176.963 \pm 70.860$   $\chi^2/\text{NDF}$ : 77.1/55

All:  $108.597 \pm 50.850$   $\chi^2/\text{NDF}$ : 143.0/113

- sign  $36.010 \pm 73.014$   $\chi^2/\text{NDF}$ : 64.0/57

asym\_sam\_15\_26\_dd\_cor\_correction\_rms vs Slug



Right In: 756.919 $\pm$ 0.127  $\chi^2$ /NDF: 2637989.2/30

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752469.2/24

Right Out: 805.786 $\pm$ 0.134  $\chi^2$ /NDF: 2992921.6/34

Left In: 331.058 $\pm$ 0.056  $\chi^2$ /NDF: 1325610.1/22

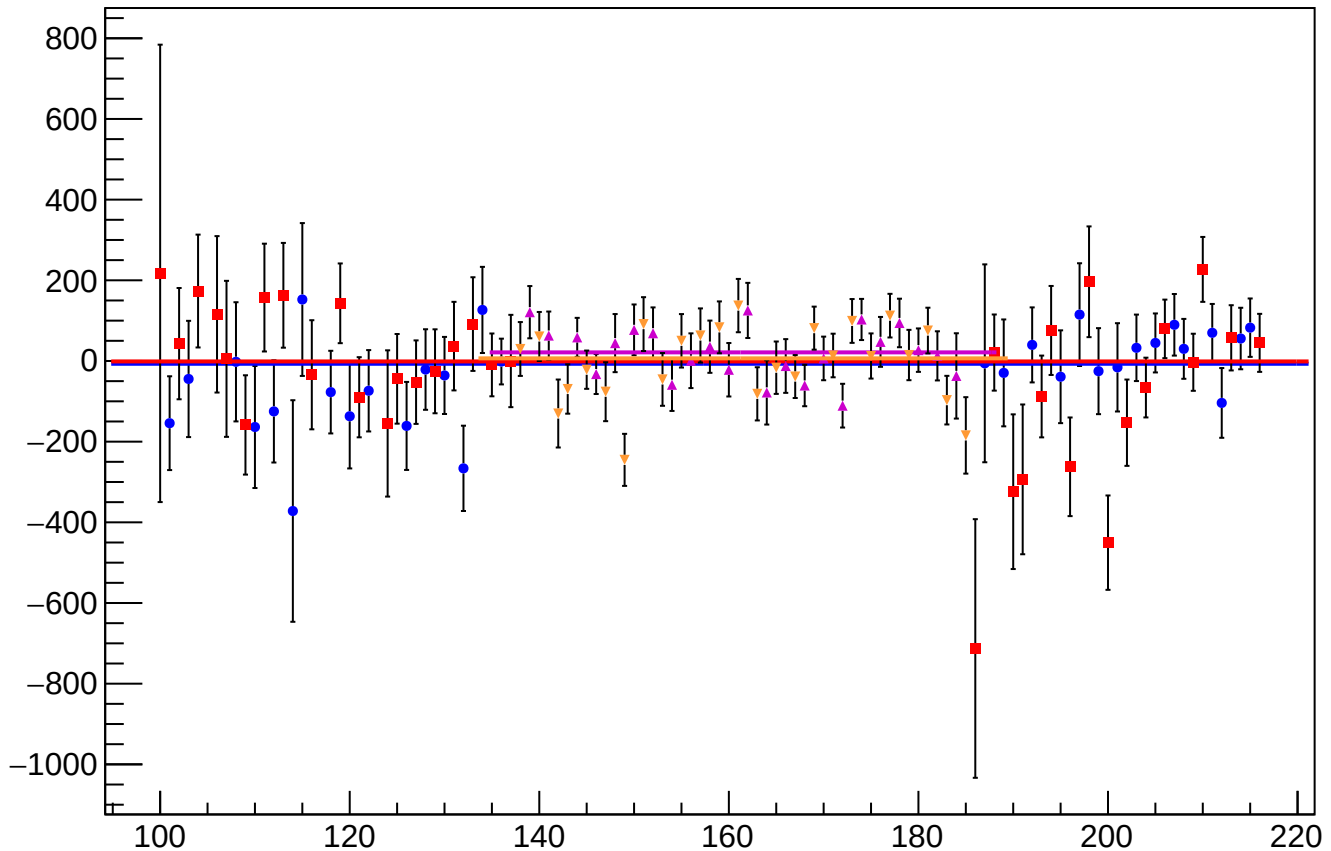
+ sign 396.974 $\pm$ 0.050  $\chi^2$ /NDF: 13934614.0/55

All: 399.195 $\pm$ 0.036  $\chi^2$ /NDF: 28947897.2/13

- sign 401.554 $\pm$ 0.052  $\chi^2$ /NDF: 15009229.8/57



# eigen\_cor\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-6.902 \pm 17.602$   $\chi^2/\text{NDF}: 26.2/30$

Left Out:  $6.526 \pm 12.287$   $\chi^2/\text{NDF}: 50.6/24$

Right Out:  $-1.114 \pm 18.238$   $\chi^2/\text{NDF}: 57.6/34$

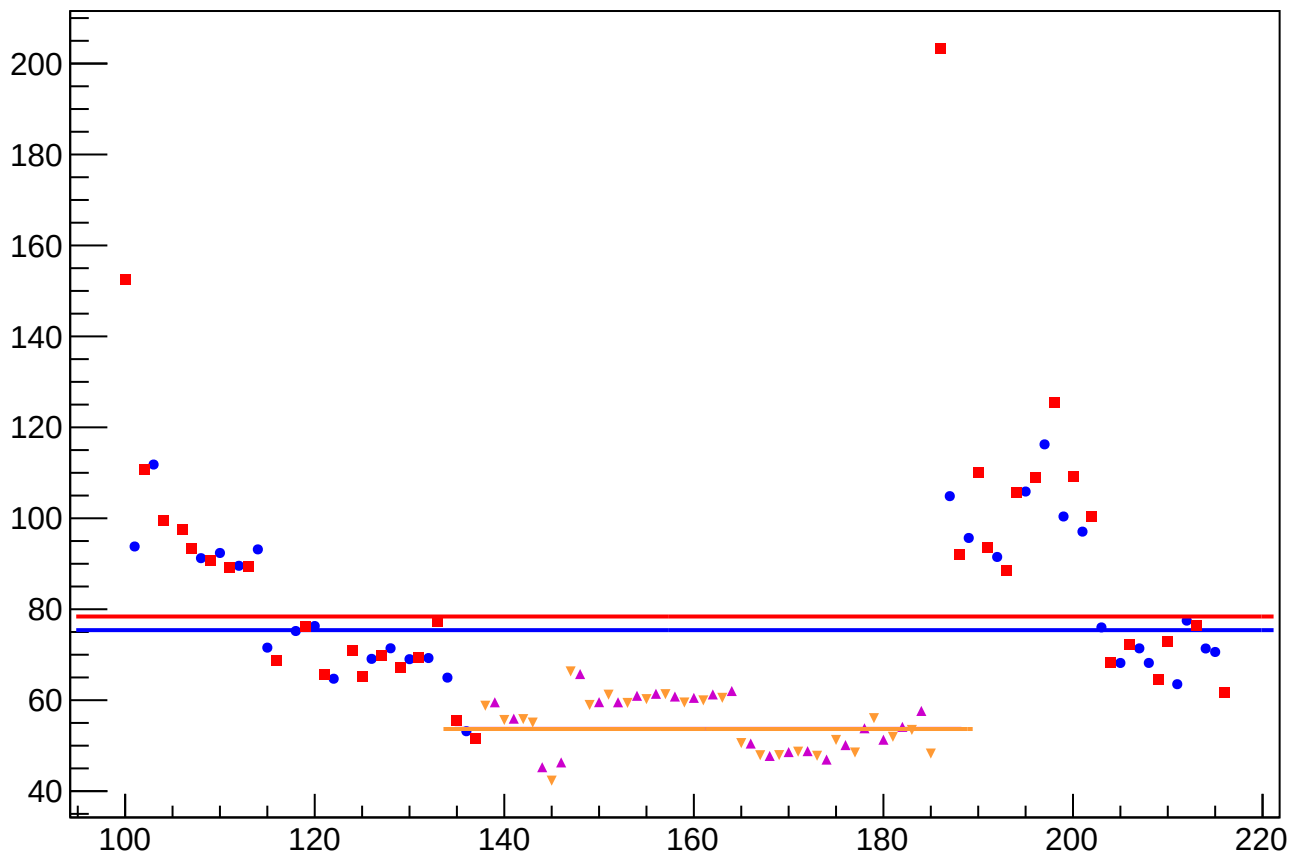
Left In:  $21.335 \pm 12.649$   $\chi^2/\text{NDF}: 25.4/22$

+ sign  $2.126 \pm 10.075$   $\chi^2/\text{NDF}: 77.2/55$

All:  $7.899 \pm 7.234$   $\chi^2/\text{NDF}: 161.9/113$

- sign  $14.043 \pm 10.394$   $\chi^2/\text{NDF}: 84.0/57$

# eigen\_cor\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 75.404 $\pm$ 0.012  $\chi^2$ /NDF: 1419374.8/30

Left Out: 53.666 $\pm$ 0.009  $\chi^2$ /NDF: 472206.8/24

Right Out: 78.403 $\pm$ 0.013  $\chi^2$ /NDF: 2066351.0/34

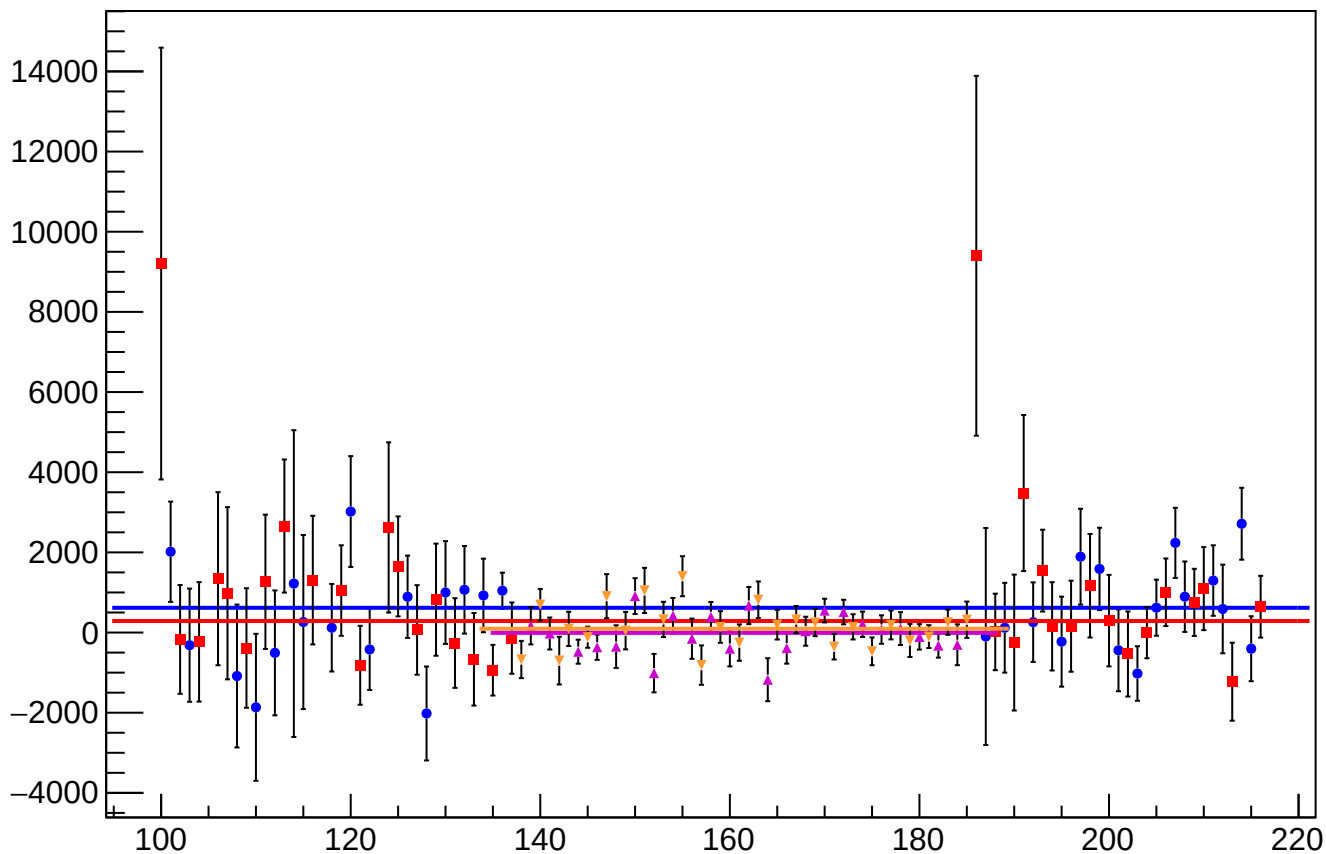
Left In: 53.695 $\pm$ 0.009  $\chi^2$ /NDF: 471343.7/22

+ sign 60.788 $\pm$ 0.007  $\chi^2$ /NDF: 3942540.5/55

All: 61.239 $\pm$ 0.005  $\chi^2$ /NDF: 8967130.7/113

- sign 61.720 $\pm$ 0.007  $\chi^2$ /NDF: 5016296.6/57

asym\_sam\_15\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In: 617.673 $\pm$ 179.362  $\chi^2$ /NDF: 36.8/30

Left Out: 95.458 $\pm$ 77.134  $\chi^2$ /NDF:33.2/24

Right Out: 287.655 $\pm$ 189.474  $\chi^2$ /NDF: 29.6/34

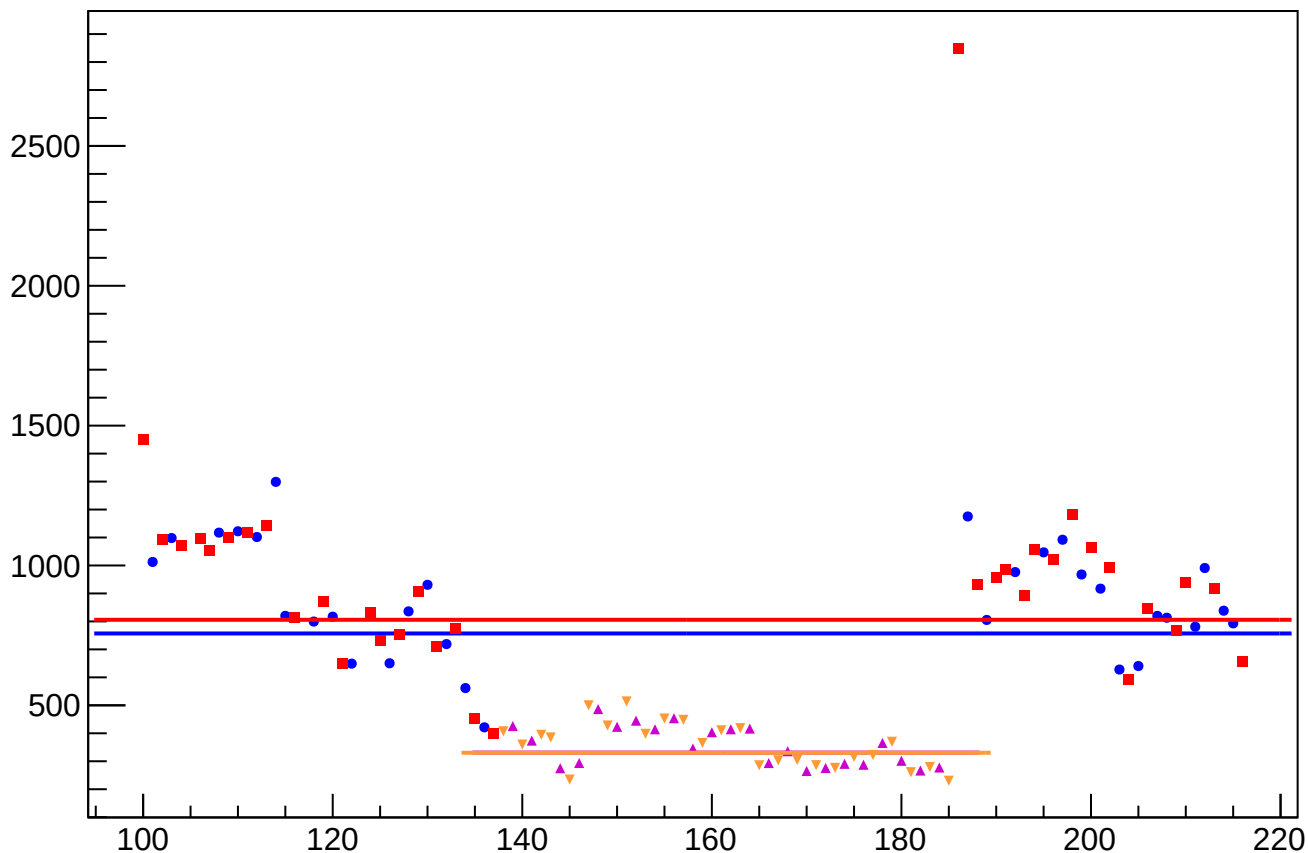
Left In: -7.875 $\pm$ 79.125  $\chi^2$ /NDF:32.3/22

+ sign 176.963 $\pm$ 70.860  $\chi^2$ /NDF: 77.1/55

All: 108.597 $\pm$ 50.850  $\chi^2$ /NDF: 143.0/113

- sign 36.010 $\pm$ 73.014  $\chi^2$ /NDF: 64.0/57

asym\_sam\_15\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 756.919 $\pm$ 0.127  $\chi^2$ /NDF: 2637989.2/30

Left Out: 330.405 $\pm$ 0.055  $\chi^2$ /NDF: 1752469.2/24

Right Out: 805.786 $\pm$ 0.134  $\chi^2$ /NDF: 2992921.6/34

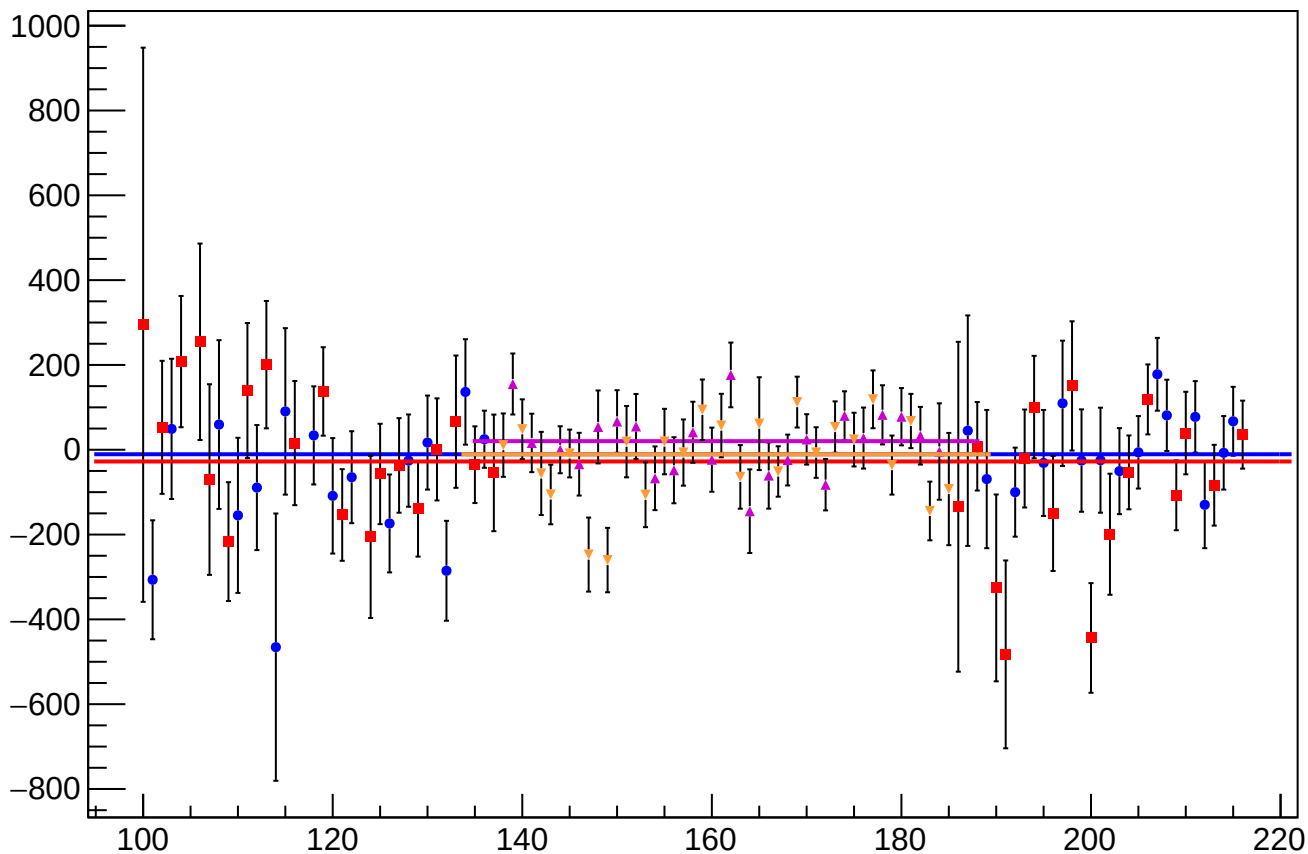
Left In: 331.058 $\pm$ 0.056  $\chi^2$ /NDF: 1325610.1/22

+ sign 396.974 $\pm$ 0.050  $\chi^2$ /NDF: 13934614.0/55

All: 399.195 $\pm$ 0.036  $\chi^2$ /NDF: 28947897.2/1

- sign 401.554 $\pm$ 0.052  $\chi^2$ /NDF: 15009229.8/57

# dit\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-10.621 \pm 20.185$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $-10.614 \pm 14.311$   $\chi^2/\text{NDF}$ : 42.2/24

Right Out:  $-27.643 \pm 20.798$   $\chi^2/\text{NDF}$ : 42.9/34

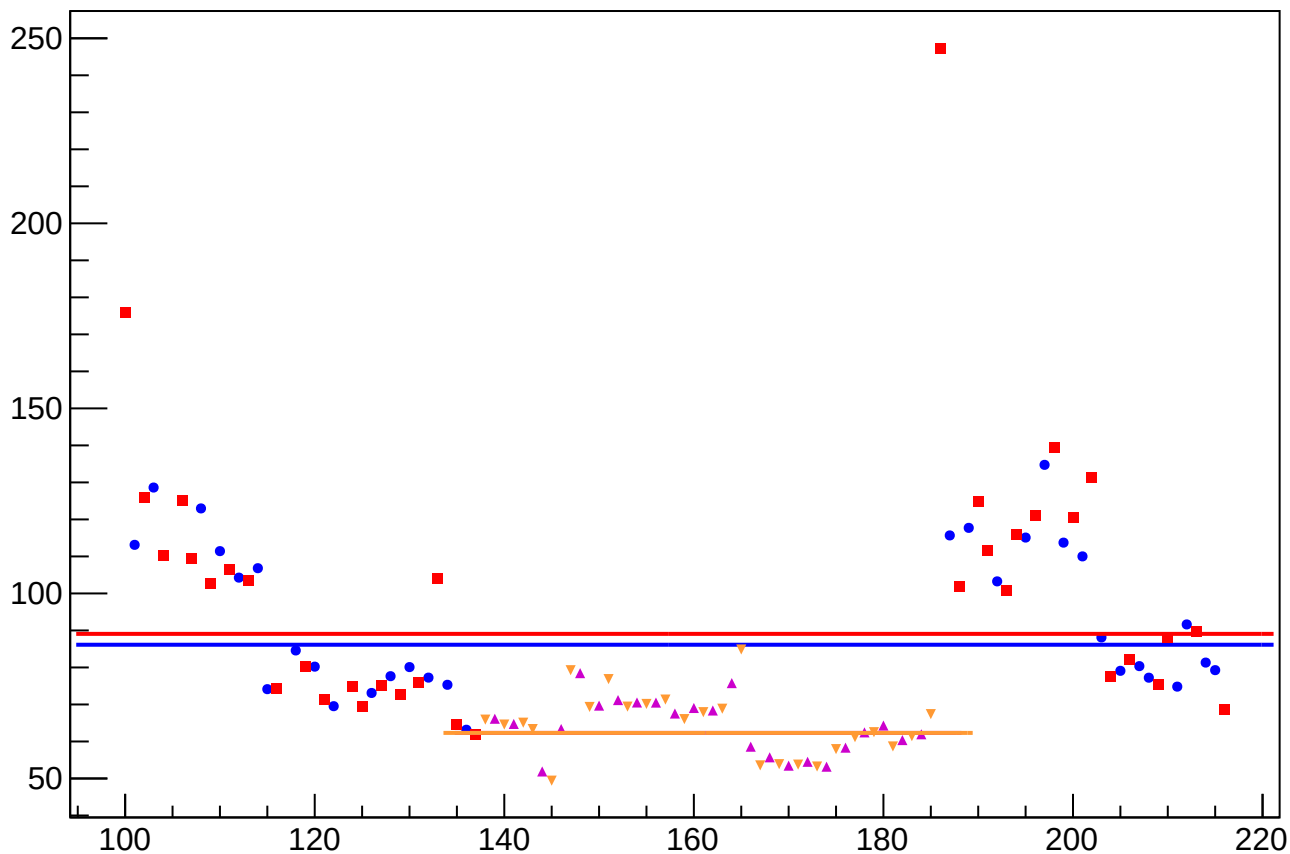
Left In:  $20.306 \pm 14.750$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-10.616 \pm 11.674$   $\chi^2/\text{NDF}$ : 71.4/55

All:  $-3.403 \pm 8.378$   $\chi^2/\text{NDF}$ : 140.3/113

- sign  $4.259 \pm 12.031$   $\chi^2/\text{NDF}$ : 68.1/57

dit\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 86.139+/-0.014  $\chi^2/\text{NDF}$ : 1475693.8/30

Left Out: 62.316+/-0.010  $\chi^2/\text{NDF}$ : 636269.1/24

Right Out: 89.075+/-0.015  $\chi^2/\text{NDF}$ : 2215680.7/34

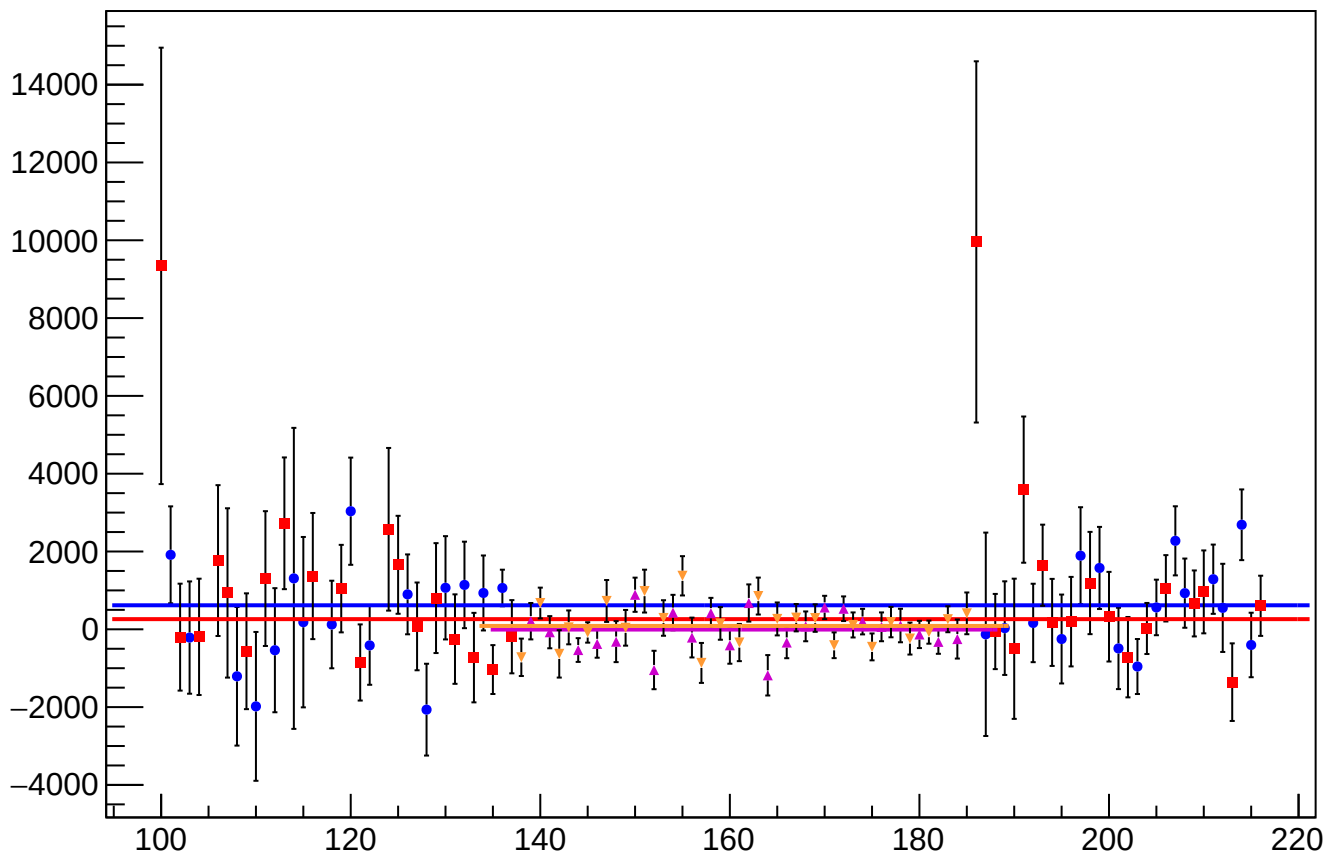
Left In: 62.310+/-0.010  $\chi^2/\text{NDF}$ : 484549.5/22

+ sign 70.285+/-0.008  $\chi^2/\text{NDF}$ : 3965913.4/55

All: 70.761+/-0.006  $\chi^2/\text{NDF}$ : 8876840.5/113

- sign 71.267+/-0.009  $\chi^2/\text{NDF}$ : 4904059.0/57

asym\_sam\_15\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $617.433 \pm 183.912$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $86.985 \pm 79.837$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $261.356 \pm 191.563$   $\chi^2/\text{NDF}$ : 32.1/34

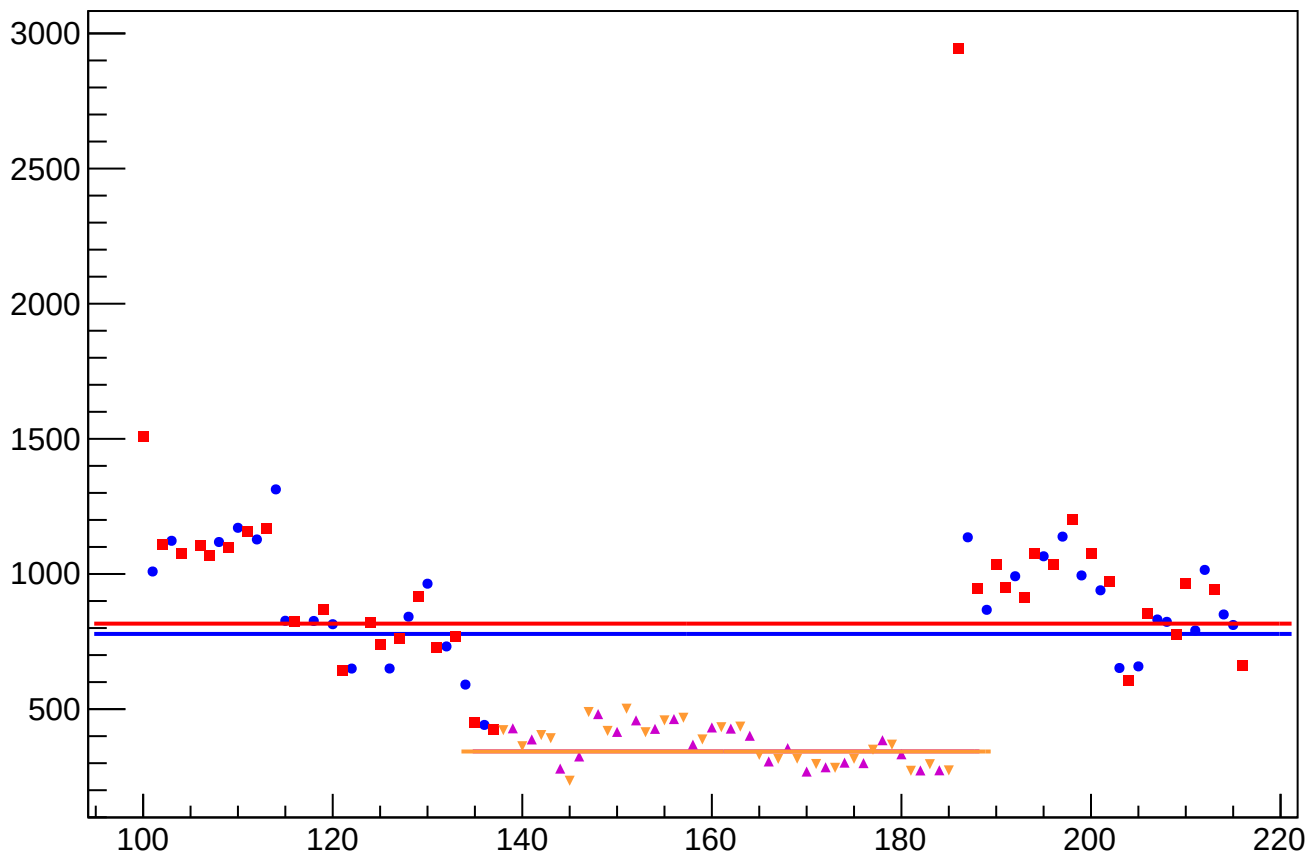
Left In:  $-6.497 \pm 82.111$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $171.094 \pm 73.234$   $\chi^2/\text{NDF}$ : 74.4/55

All:  $105.130 \pm 52.557$   $\chi^2/\text{NDF}$ : 142.2/113

- sign  $35.077 \pm 75.470$   $\chi^2/\text{NDF}$ : 66.1/57

asym\_sam\_15\_26\_dd\_dit\_correction\_rms vs Slug



Right In: 778.207 $\pm$ 0.130  $\chi^2$ /NDF: 2493179.5/30

Left Out: 343.225 $\pm$ 0.056  $\chi^2$ /NDF: 1595394.3/24

Right Out: 816.295 $\pm$ 0.135  $\chi^2$ /NDF: 3002106.4/34

Left In: 343.717 $\pm$ 0.058  $\chi^2$ /NDF: 1258376.8/22

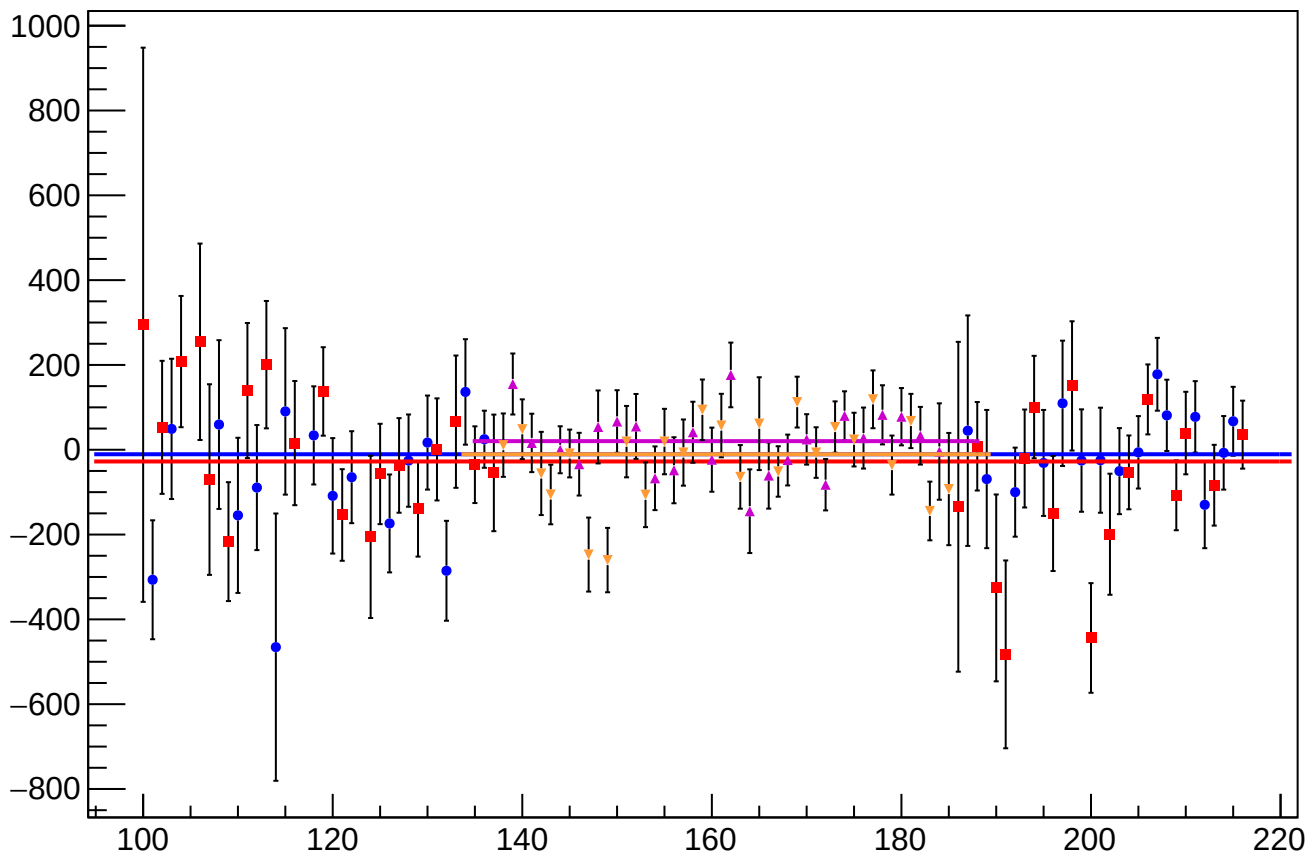
+ sign 412.197 $\pm$ 0.052  $\chi^2$ /NDF: 13502535.8/55

All: 414.558 $\pm$ 0.037  $\chi^2$ /NDF: 28049852.8/131

- sign 417.066 $\pm$ 0.053  $\chi^2$ /NDF: 14543029.9/57



# eigen\_dit\_asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-10.622 \pm 20.185$   $\chi^2/\text{NDF}$ : 29.2/30

Left Out:  $-10.613 \pm 14.311$   $\chi^2/\text{NDF}$ : 42.2/24

Right Out:  $-27.643 \pm 20.798$   $\chi^2/\text{NDF}$ : 42.9/34

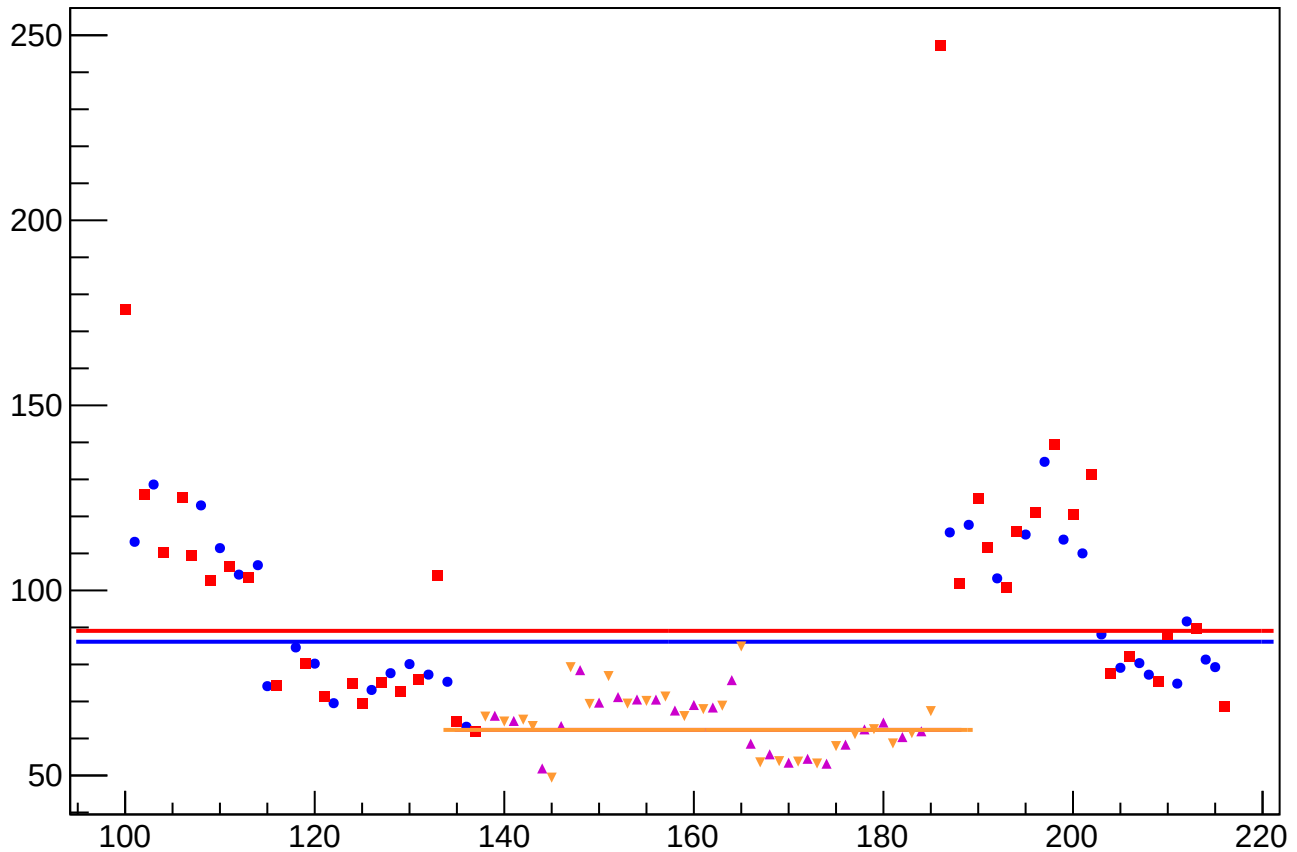
Left In:  $20.306 \pm 14.750$   $\chi^2/\text{NDF}$ : 21.7/22

+ sign  $-10.616 \pm 11.674$   $\chi^2/\text{NDF}$ : 71.4/55

All:  $-3.403 \pm 8.378$   $\chi^2/\text{NDF}$ : 140.3/113

- sign  $4.259 \pm 12.031$   $\chi^2/\text{NDF}$ : 68.1/57

eigen\_dit\_asym\_sam\_15\_26\_dd\_rms vs Slug



Right In: 86.139+/-0.014  $\chi^2$ /NDF: 1475705.9/30

Left Out: 62.316+/-0.010  $\chi^2$ /NDF: 636268.2/24

Right Out: 89.075+/-0.015  $\chi^2$ /NDF: 2215669.5/34

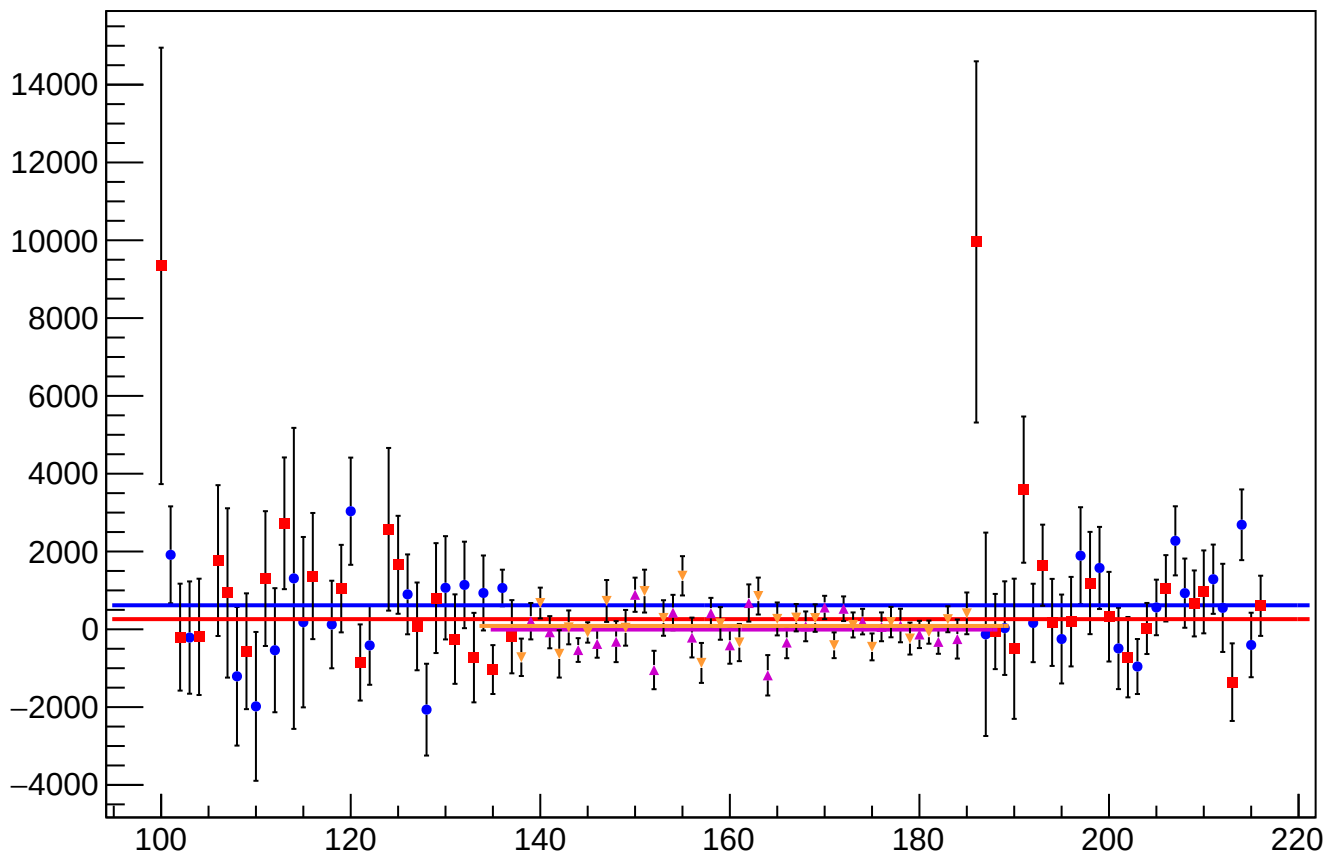
Left In: 62.311+/-0.010  $\chi^2$ /NDF: 484544.3/22

+ sign 70.285+/-0.008  $\chi^2$ /NDF: 3965890.6/55

All: 70.762+/-0.006  $\chi^2$ /NDF: 8876760.3/113

- sign 71.268+/-0.009  $\chi^2$ /NDF: 4903999.6/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $617.433 \pm 183.912$   $\chi^2/\text{NDF}$ : 35.7/30

Left Out:  $86.985 \pm 79.837$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $261.357 \pm 191.564$   $\chi^2/\text{NDF}$ : 32.1/34

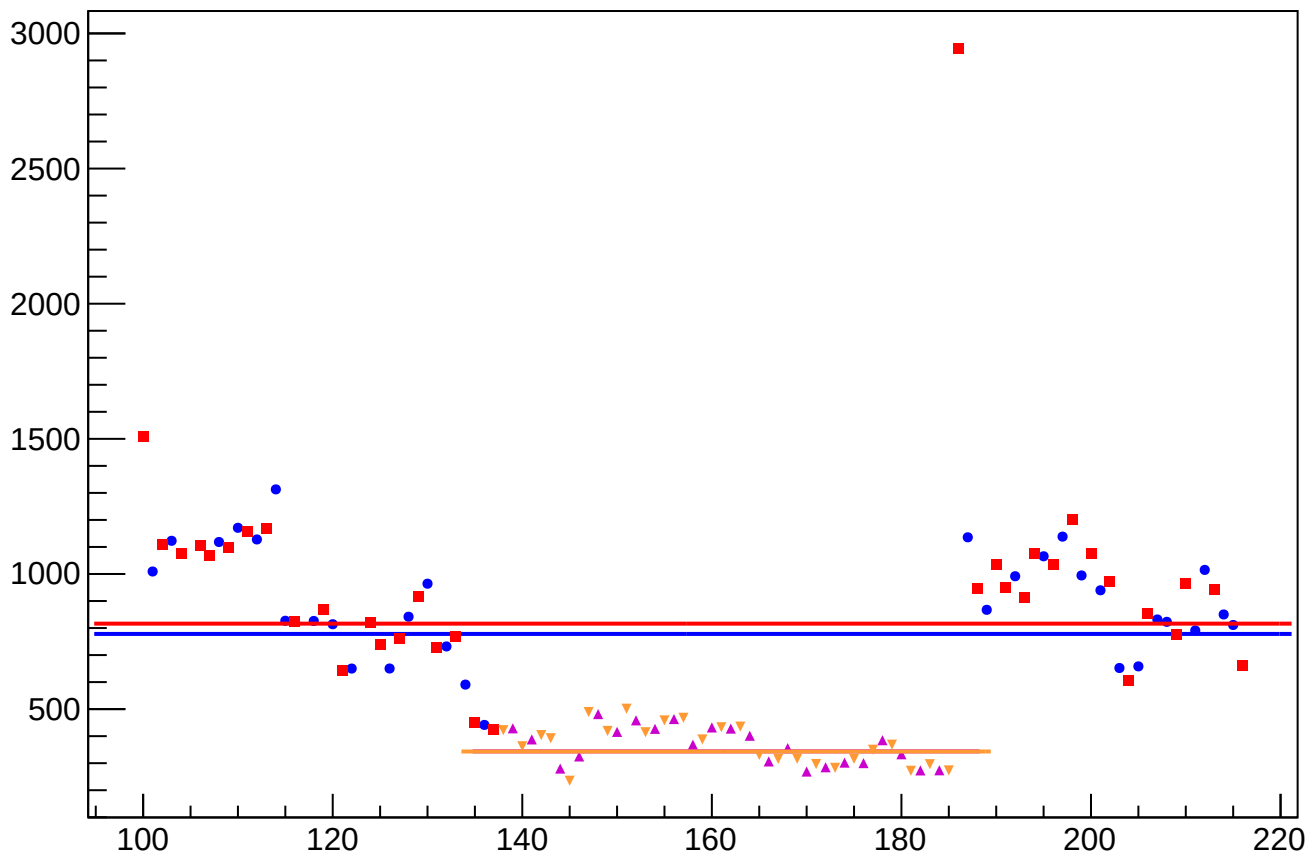
Left In:  $-6.497 \pm 82.111$   $\chi^2/\text{NDF}$ : 32.4/22

+ sign  $171.095 \pm 73.234$   $\chi^2/\text{NDF}$ : 74.4/55

All:  $105.130 \pm 52.557$   $\chi^2/\text{NDF}$ : 142.2/113

- sign  $35.077 \pm 75.470$   $\chi^2/\text{NDF}$ : 66.1/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 778.207 $\pm$ 0.130  $\chi^2$ /NDF: 2493166.8/30

Left Out: 343.225 $\pm$ 0.056  $\chi^2$ /NDF: 1595415.4/24

Right Out: 816.296 $\pm$ 0.135  $\chi^2$ /NDF: 3002092.5/34

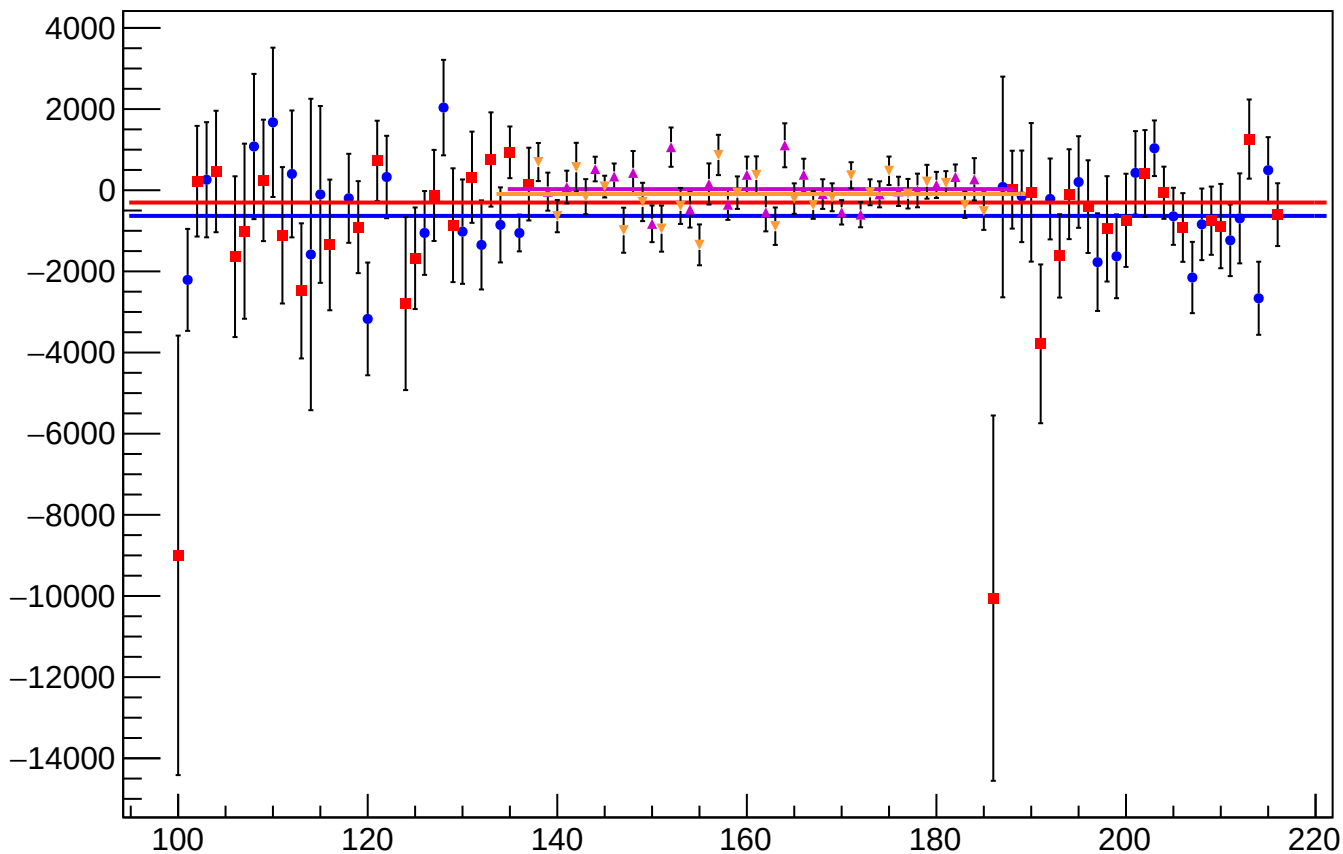
Left In: 343.717 $\pm$ 0.058  $\chi^2$ /NDF: 1258392.0/22

+ sign 412.197 $\pm$ 0.052  $\chi^2$ /NDF: 13502547.0/55

All: 414.559 $\pm$ 0.037  $\chi^2$ /NDF: 28049866.0/13

- sign 417.066 $\pm$ 0.053  $\chi^2$ /NDF: 14543031.7/57

# asym\_sam\_15\_26\_dd\_mean vs Slug



Right In:  $-632.476 \pm 180.383$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-92.671 \pm 78.184$   $\chi^2/\text{NDF}$ : 34.2/24

Right Out:  $-303.001 \pm 190.321$   $\chi^2/\text{NDF}$ : 29.8/34

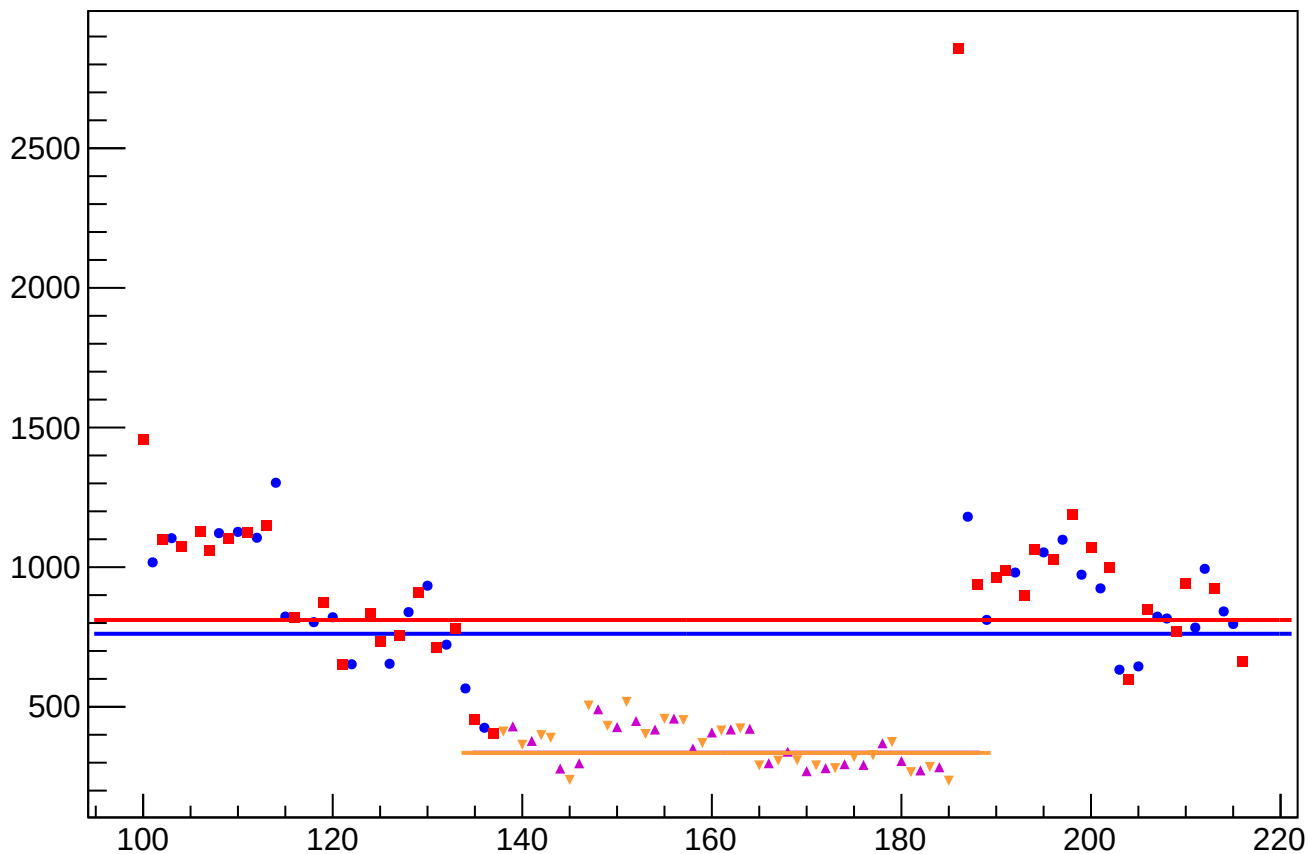
Left In:  $27.173 \pm 80.207$   $\chi^2/\text{NDF}$ : 30.9/22

+ sign  $-178.043 \pm 71.736$   $\chi^2/\text{NDF}$ : 78.2/55

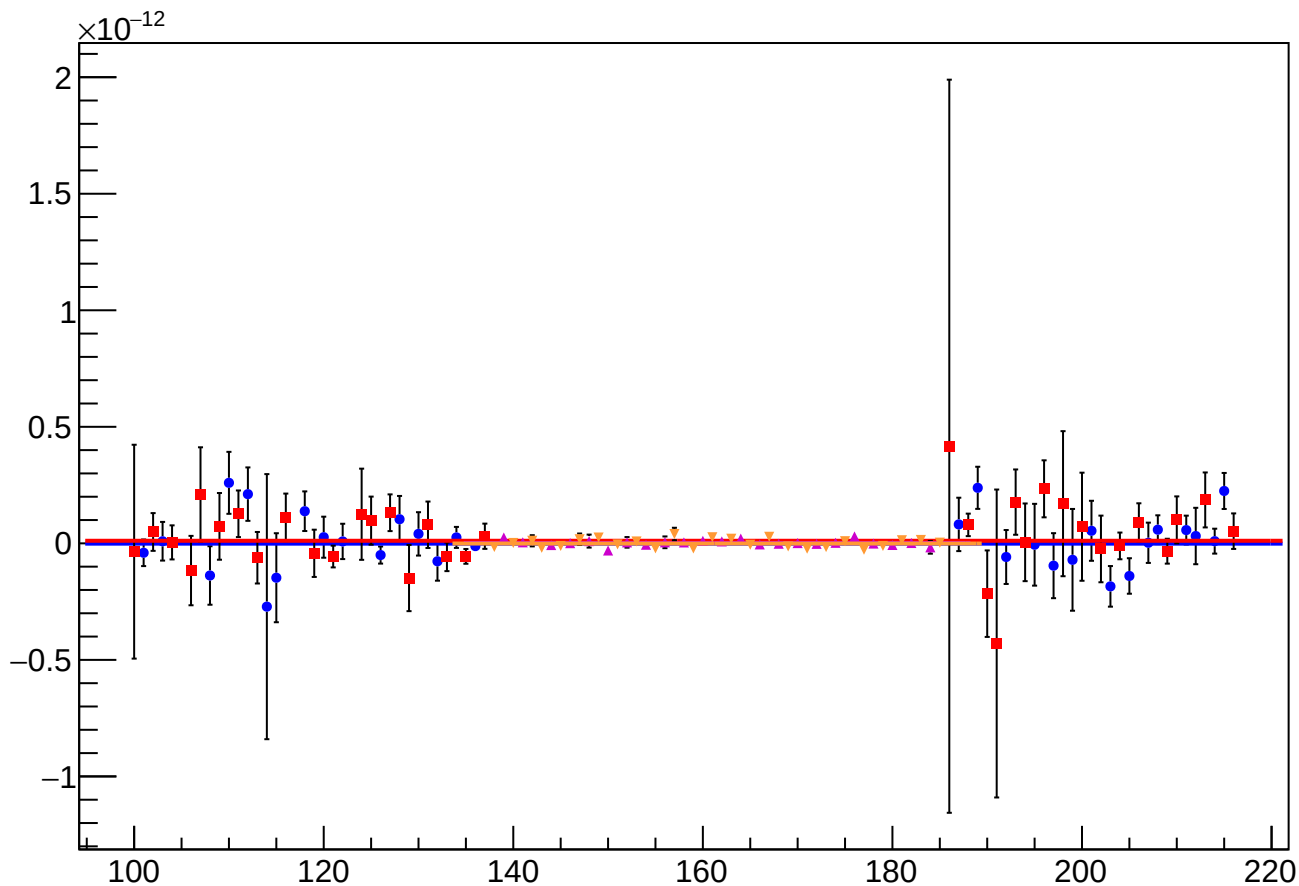
All:  $-102.655 \pm 51.477$   $\chi^2/\text{NDF}$ : 143.7/113

- sign  $-22.623 \pm 73.912$   $\chi^2/\text{NDF}$ : 63.3/57

# asym\_sam\_15\_26\_dd\_rms vs Slug



asym\_sam\_15\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 44.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.3/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.4/34

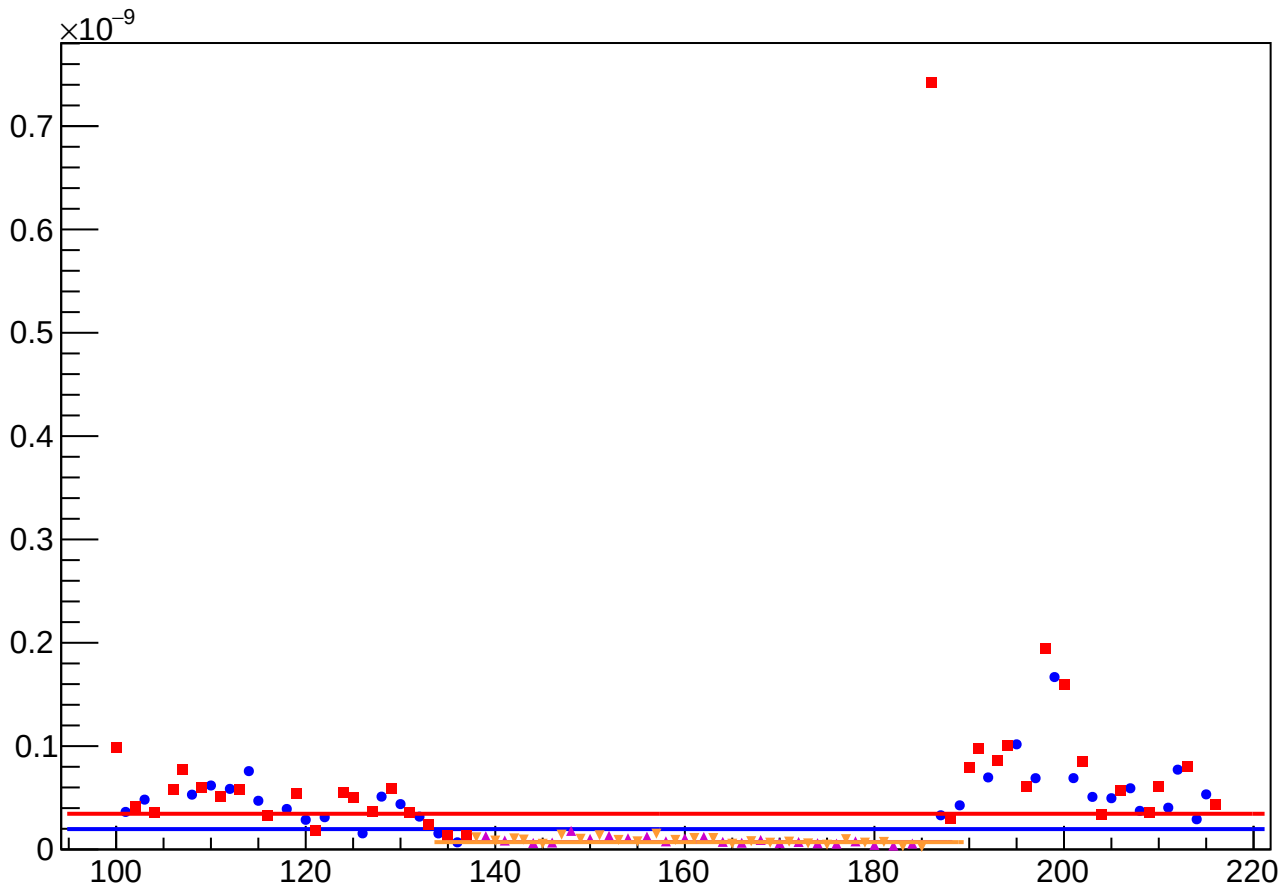
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.8/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 77.6/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 125.7/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 47.6/57

asym\_sam\_15\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 8419889.6/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 2000233.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 5298210.5/34

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 1604062.0/22

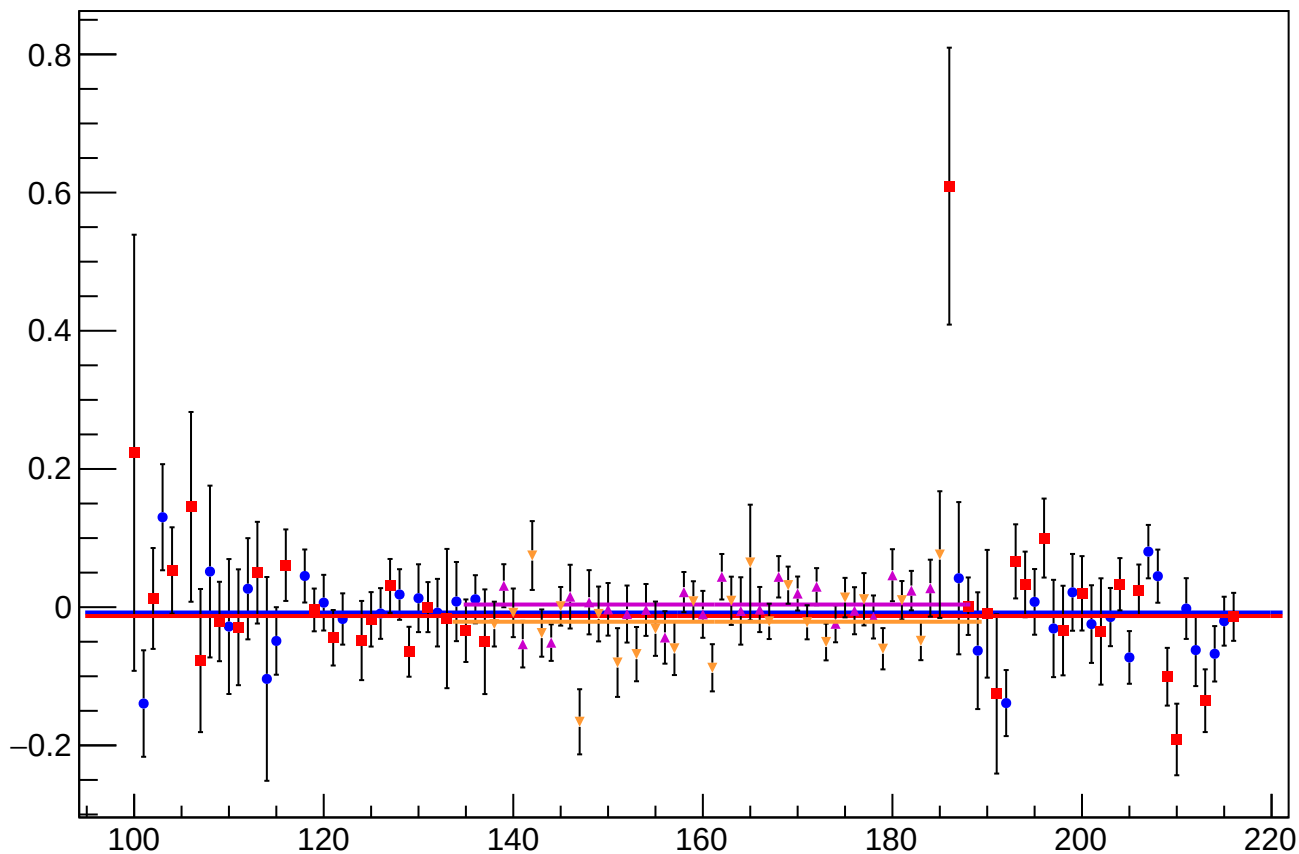
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 13671864.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27968796.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 14286852.1/57



asym\_sam\_15\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 55.6/34

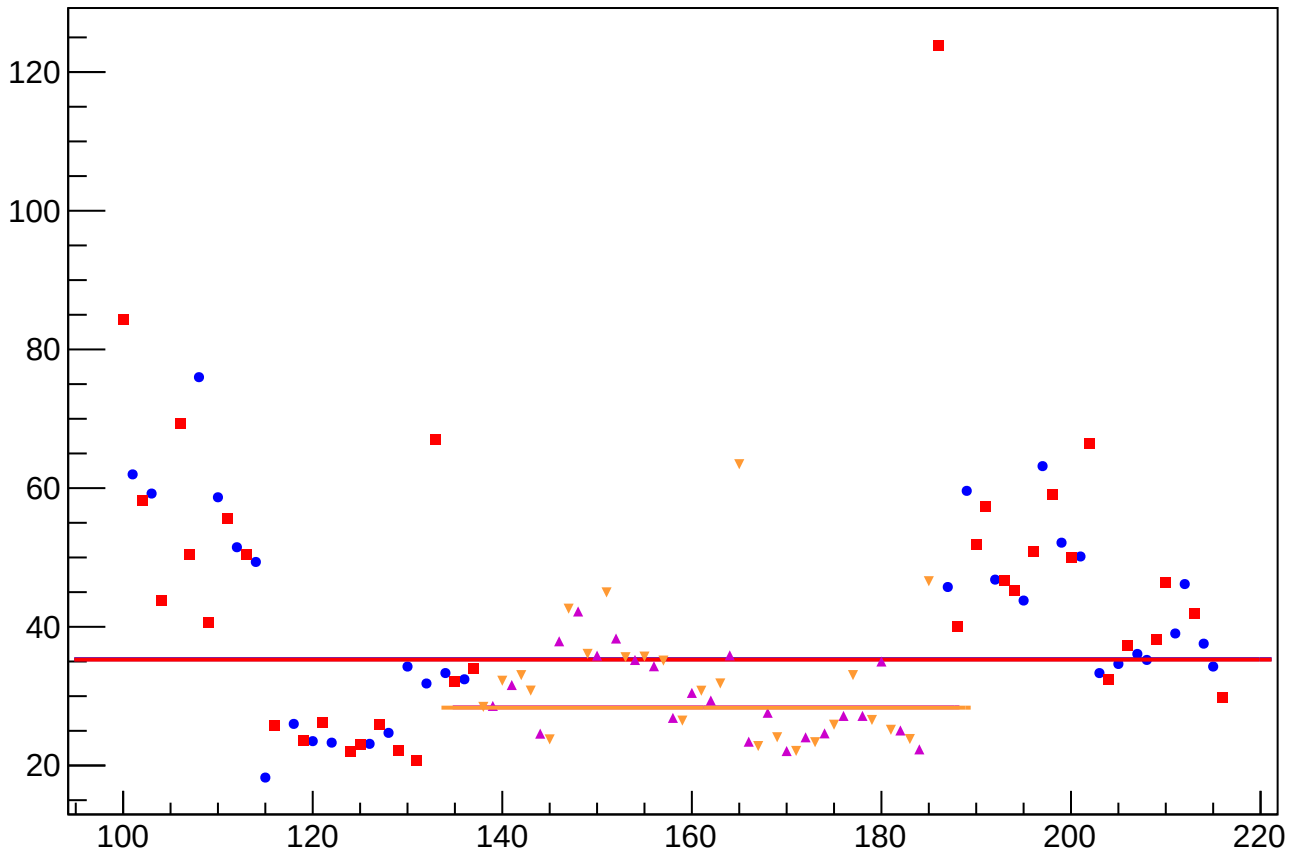
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.005$   $\chi^2/\text{NDF}$ : 71.8/55

All:  $-0.009 \pm 0.004$   $\chi^2/\text{NDF}$ : 151.6/113

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 76.6/57

asym\_sam\_15\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.327 $\pm$ 0.006  $\chi^2$ /NDF: 3148879.6/30

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF: 1733592.1/24

Right Out: 35.272 $\pm$ 0.006  $\chi^2$ /NDF: 4175655.0/34

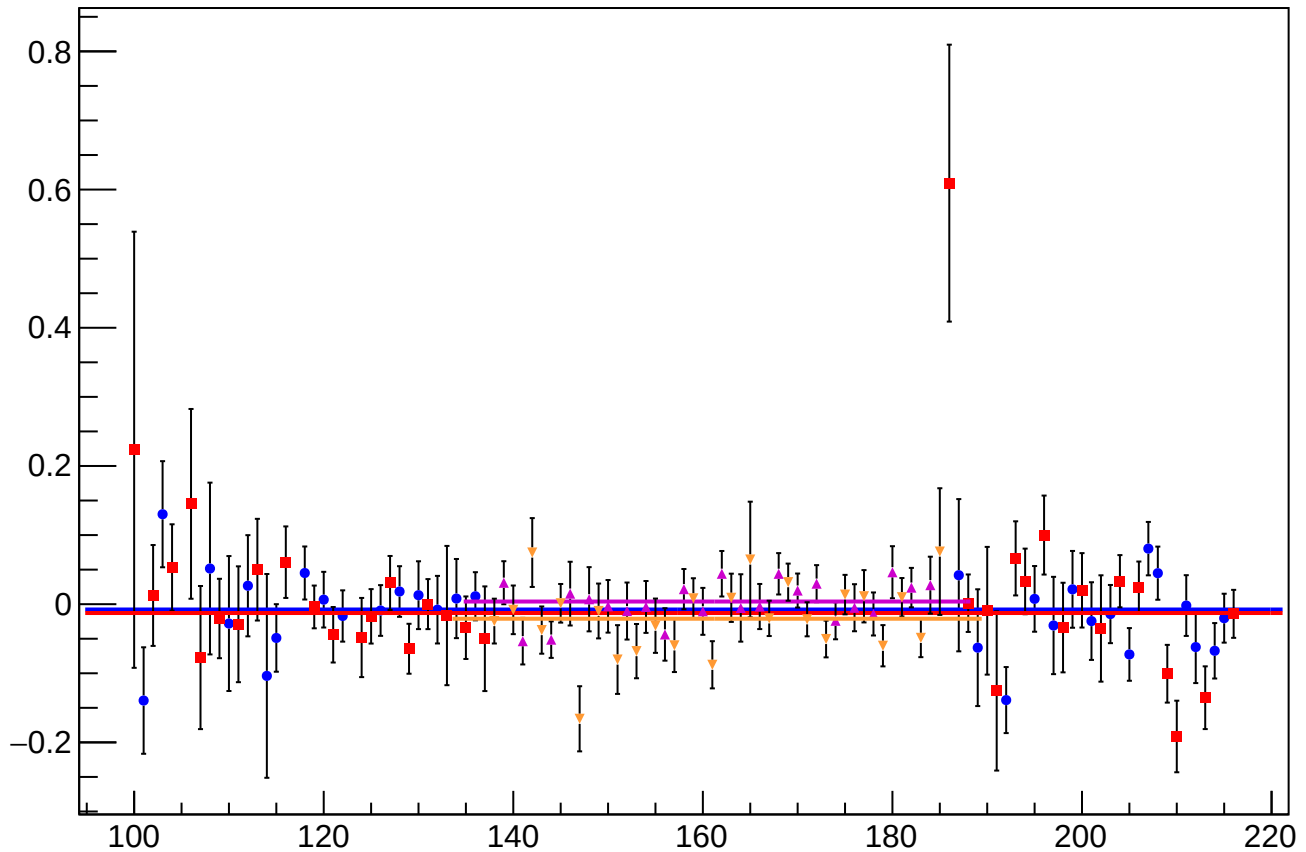
Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF: 1098849.1/22

+ sign 30.960 $\pm$ 0.004  $\chi^2$ /NDF: 5704815.1/55

All: 31.010 $\pm$ 0.003  $\chi^2$ /NDF: 11761323.8/113

- sign 31.062 $\pm$ 0.004  $\chi^2$ /NDF: 6056147.1/57

asym\_sam\_15\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 55.6/34

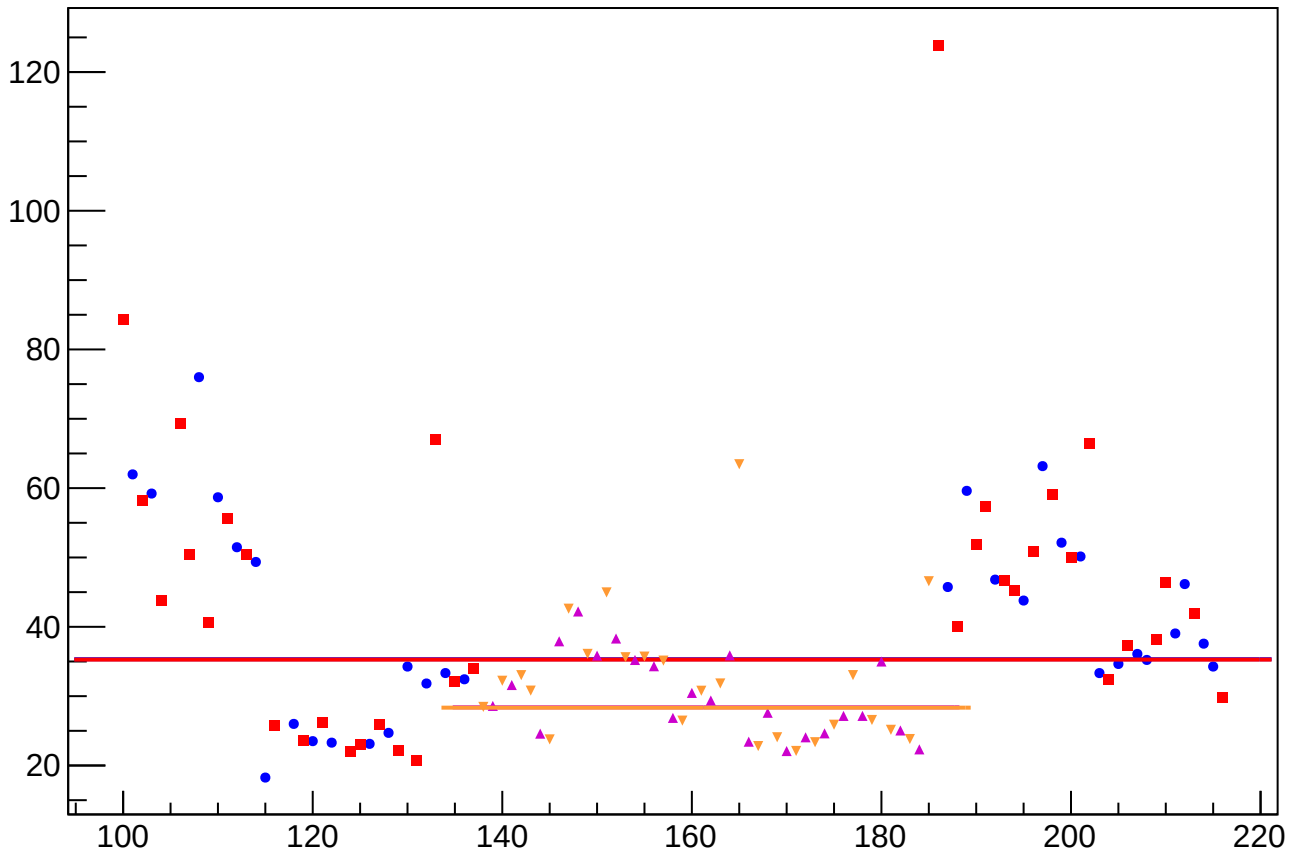
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.005$   $\chi^2/\text{NDF}$ : 71.8/55

All:  $-0.009 \pm 0.004$   $\chi^2/\text{NDF}$ : 151.6/113

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 76.6/57

asym\_sam\_15\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.327 $\pm$ 0.006  $\chi^2$ /NDF: 3148879.6/30

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF: 1733592.1/24

Right Out: 35.272 $\pm$ 0.006  $\chi^2$ /NDF: 4175655.0/34

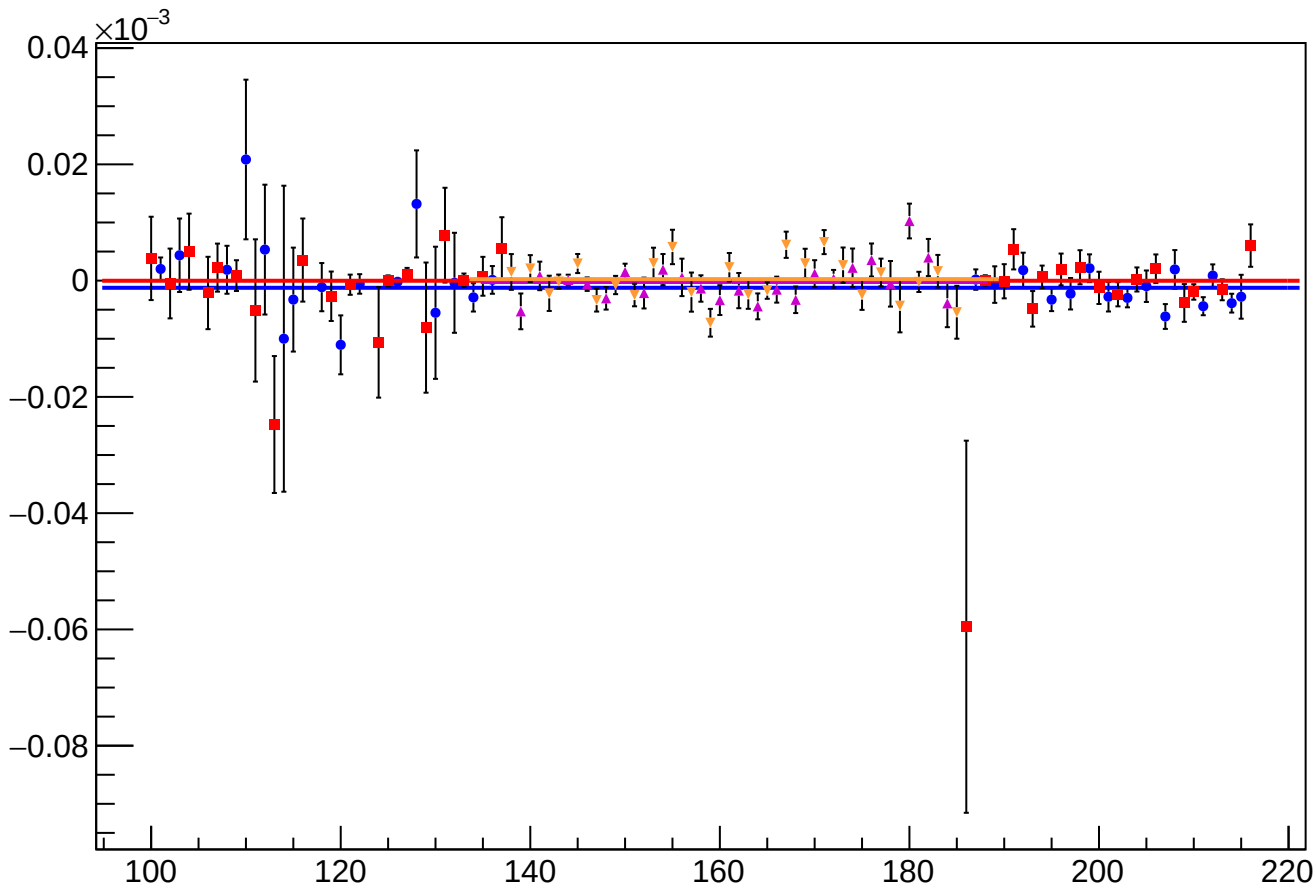
Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF: 1098849.1/22

+ sign 30.960 $\pm$ 0.004  $\chi^2$ /NDF: 5704815.1/55

All: 31.010 $\pm$ 0.003  $\chi^2$ /NDF: 11761323.8/113

- sign 31.062 $\pm$ 0.004  $\chi^2$ /NDF: 6056147.1/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 36.8/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 50.8/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 30.6/34

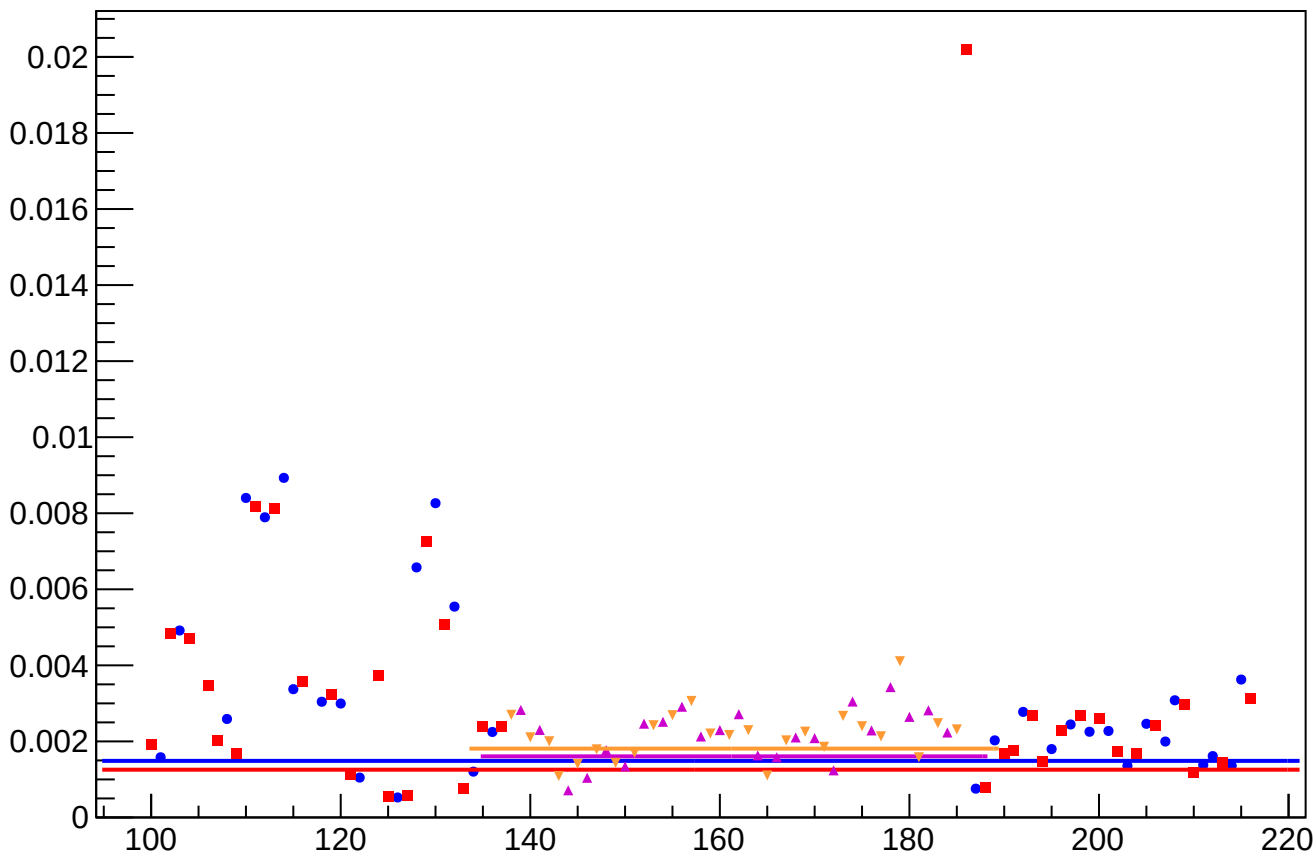
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 93.7/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 158.7/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 64.0/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10420020.9/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 3433566.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 12189718.2/34

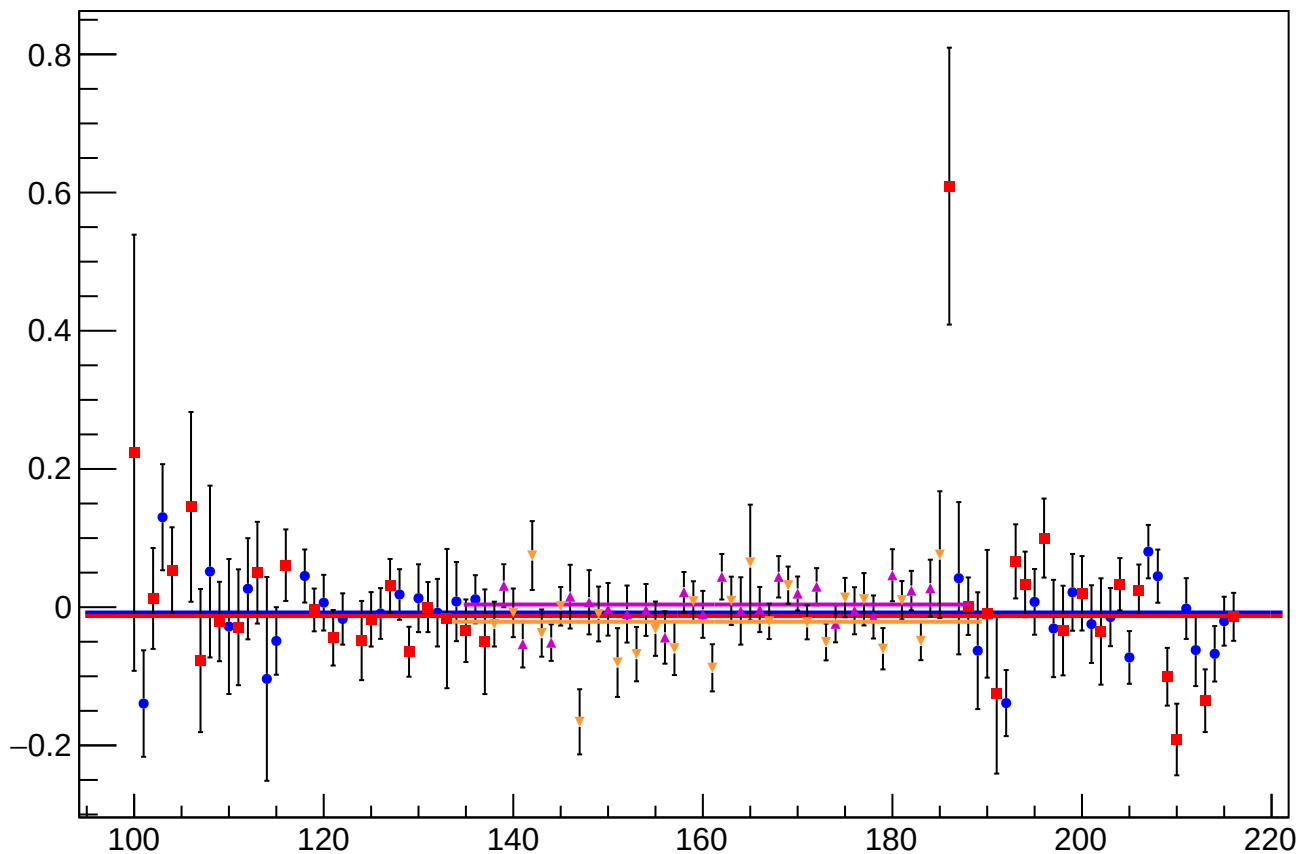
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 6034225.5/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 14432770.5/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 34118319.4/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 19012415.2/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 55.7/34

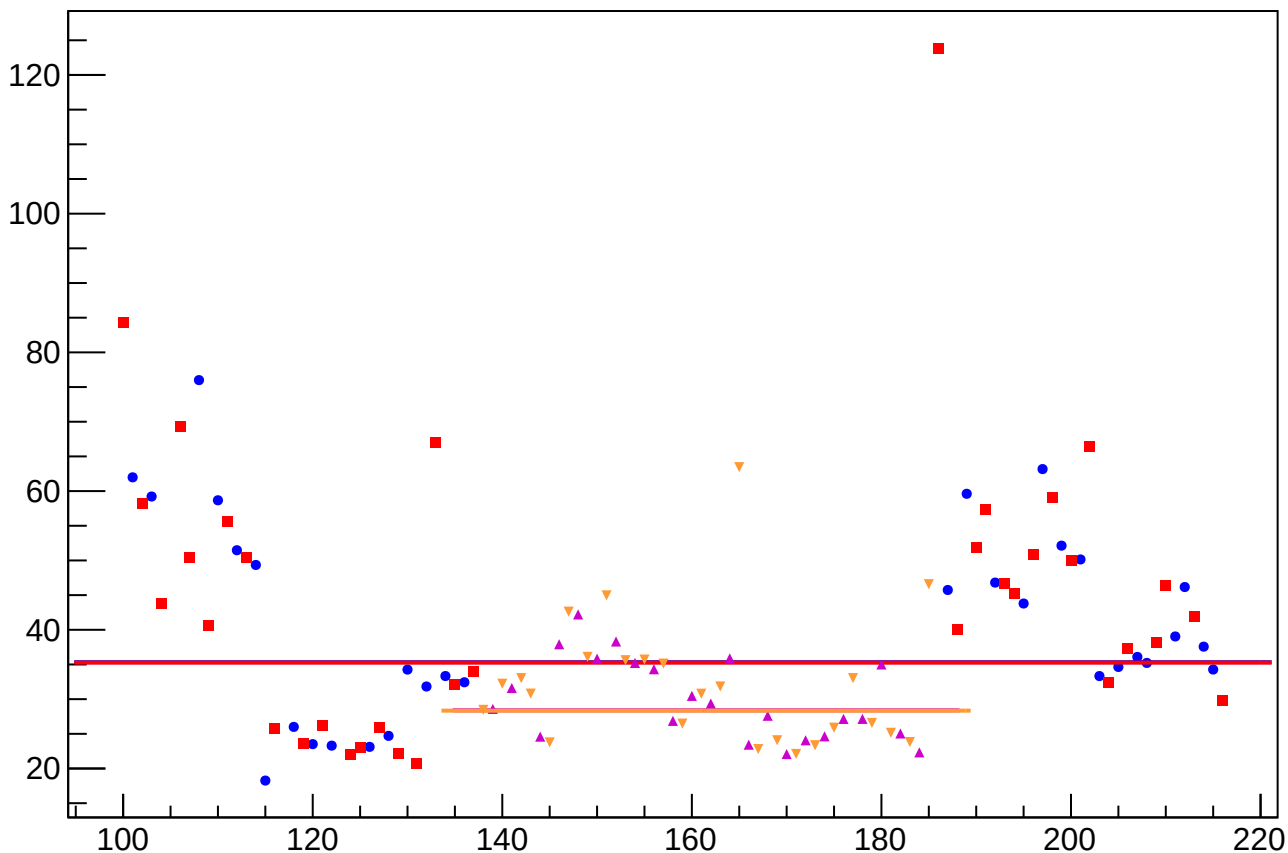
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.005$   $\chi^2/\text{NDF}$ : 71.8/55

All:  $-0.009 \pm 0.004$   $\chi^2/\text{NDF}$ : 151.6/113

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 76.6/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 35.327 $\pm$ 0.006  $\chi^2$ /NDF: 3148747.9/30

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF:1733585.3/24

Right Out: 35.272 $\pm$ 0.006  $\chi^2$ /NDF: 4175765.0/34

Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF:1098852.1/22

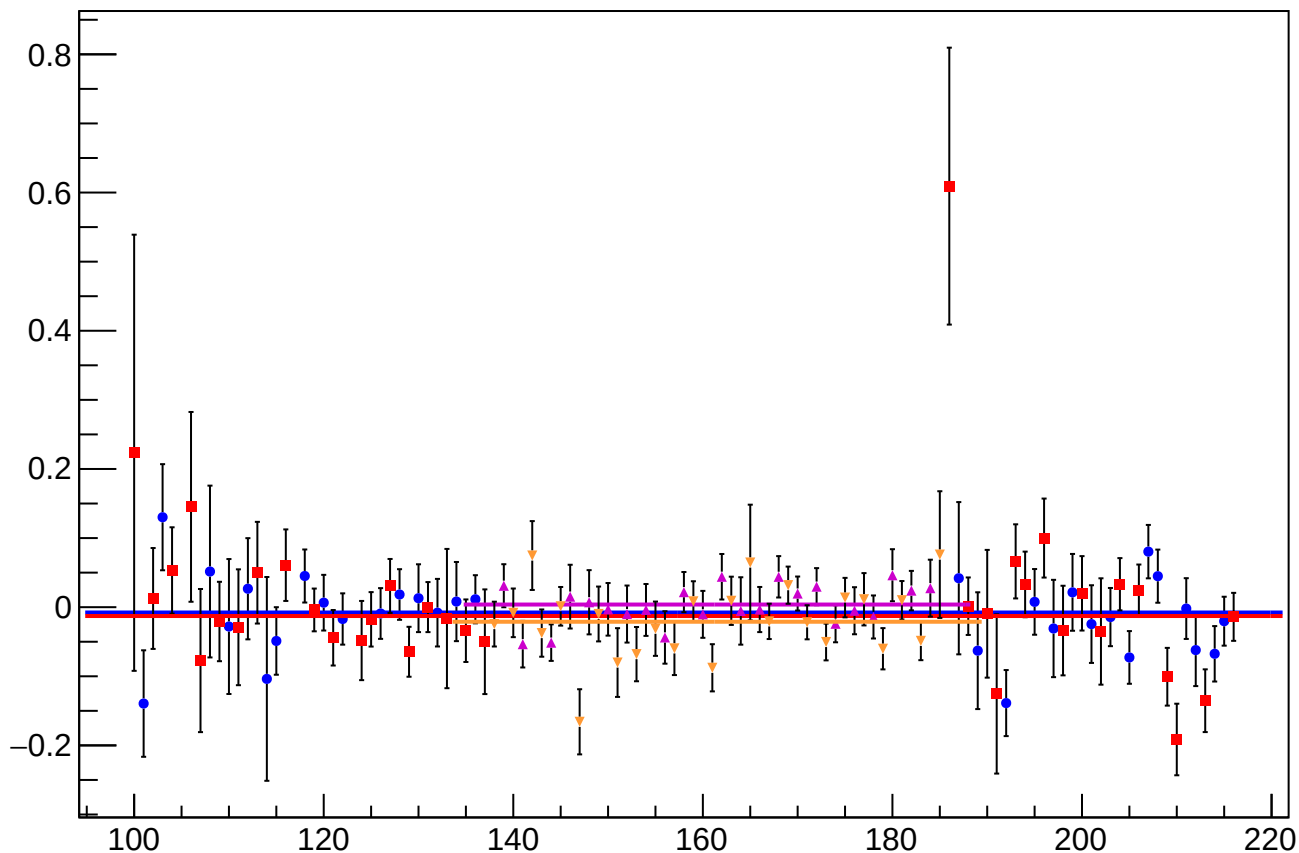
+ sign 30.961 $\pm$ 0.004  $\chi^2$ /NDF: 5704667.7/55

All: 31.010 $\pm$ 0.003  $\chi^2$ /NDF: 11761156.3/113

- sign 31.062 $\pm$ 0.004  $\chi^2$ /NDF: 6056126.8/57



asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.008 \pm 0.009$   $\chi^2/\text{NDF}$ : 33.1/30

Left Out:  $-0.021 \pm 0.007$   $\chi^2/\text{NDF}$ : 37.2/24

Right Out:  $-0.013 \pm 0.009$   $\chi^2/\text{NDF}$ : 55.7/34

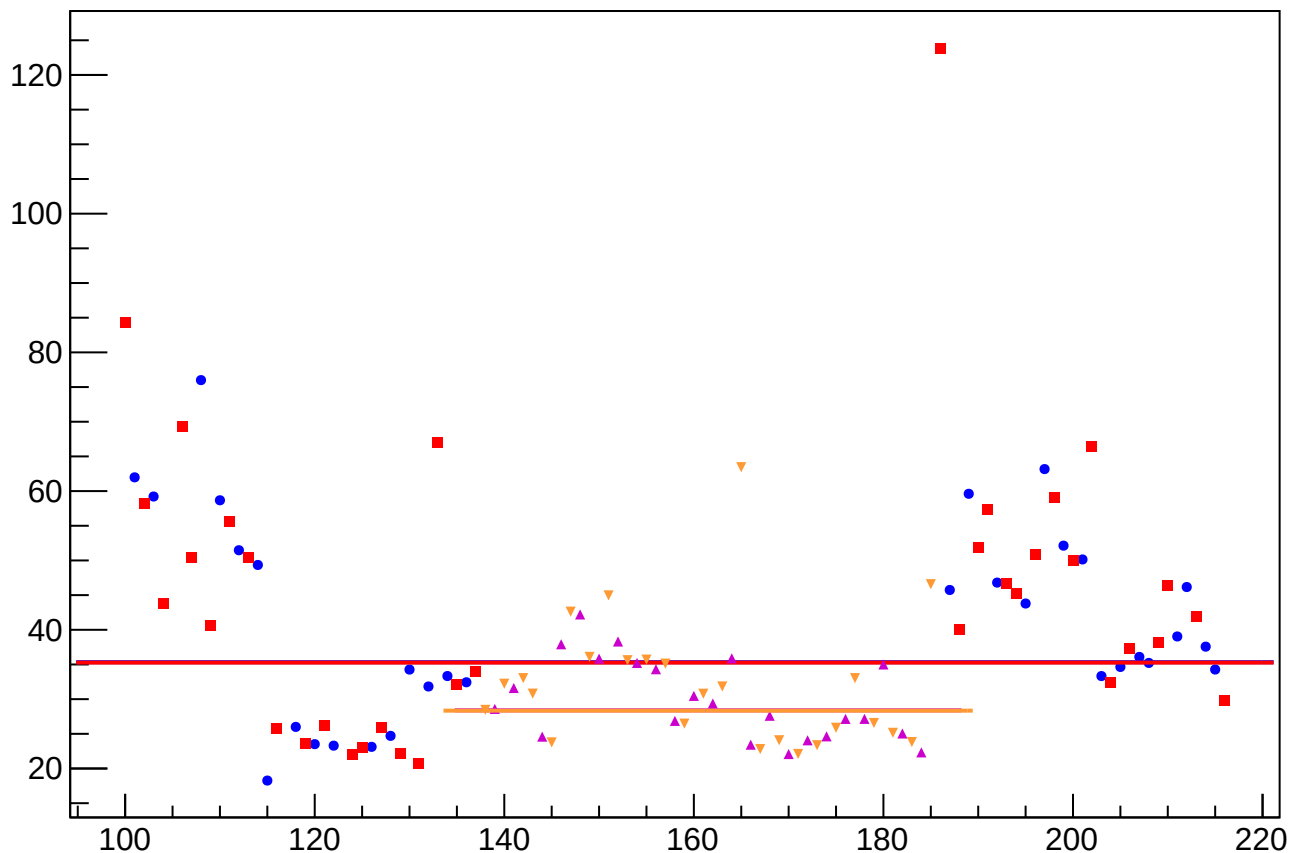
Left In:  $0.004 \pm 0.007$   $\chi^2/\text{NDF}$ : 18.7/22

+ sign  $-0.016 \pm 0.005$   $\chi^2/\text{NDF}$ : 71.8/55

All:  $-0.009 \pm 0.004$   $\chi^2/\text{NDF}$ : 151.6/113

- sign  $-0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 76.6/57

asym\_sam\_15\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 35.327 $\pm$ 0.006  $\chi^2$ /NDF: 3148747.9/30

Left Out: 28.342 $\pm$ 0.005  $\chi^2$ /NDF: 1733585.3/24

Right Out: 35.272 $\pm$ 0.006  $\chi^2$ /NDF: 4175765.0/34

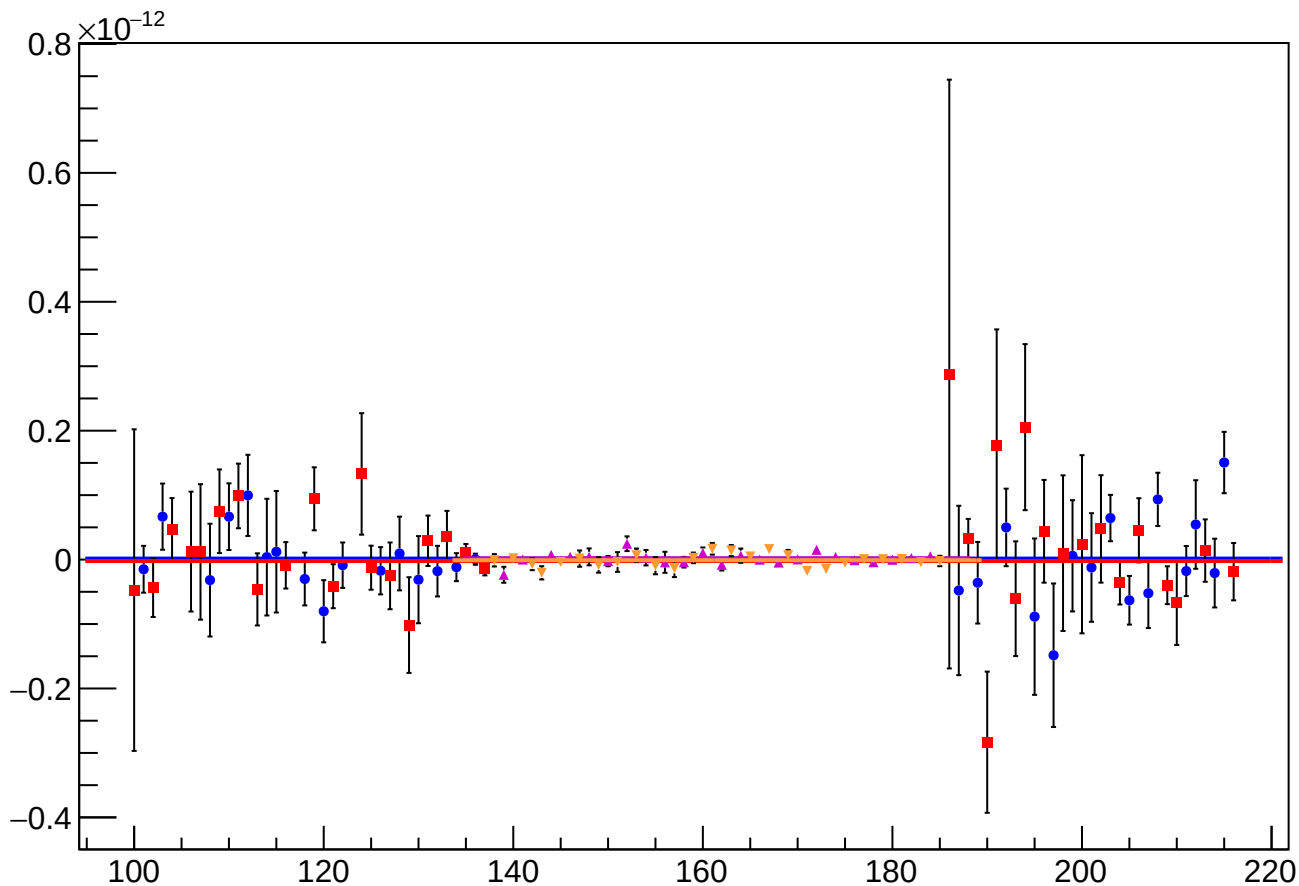
Left In: 28.389 $\pm$ 0.005  $\chi^2$ /NDF: 1098852.1/22

+ sign 30.961 $\pm$ 0.004  $\chi^2$ /NDF: 5704667.7/55

All: 31.010 $\pm$ 0.003  $\chi^2$ /NDF: 11761156.3/113

- sign 31.062 $\pm$ 0.004  $\chi^2$ /NDF: 6056126.8/57

asym\_sam\_15\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.9/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:34.1/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.2/34

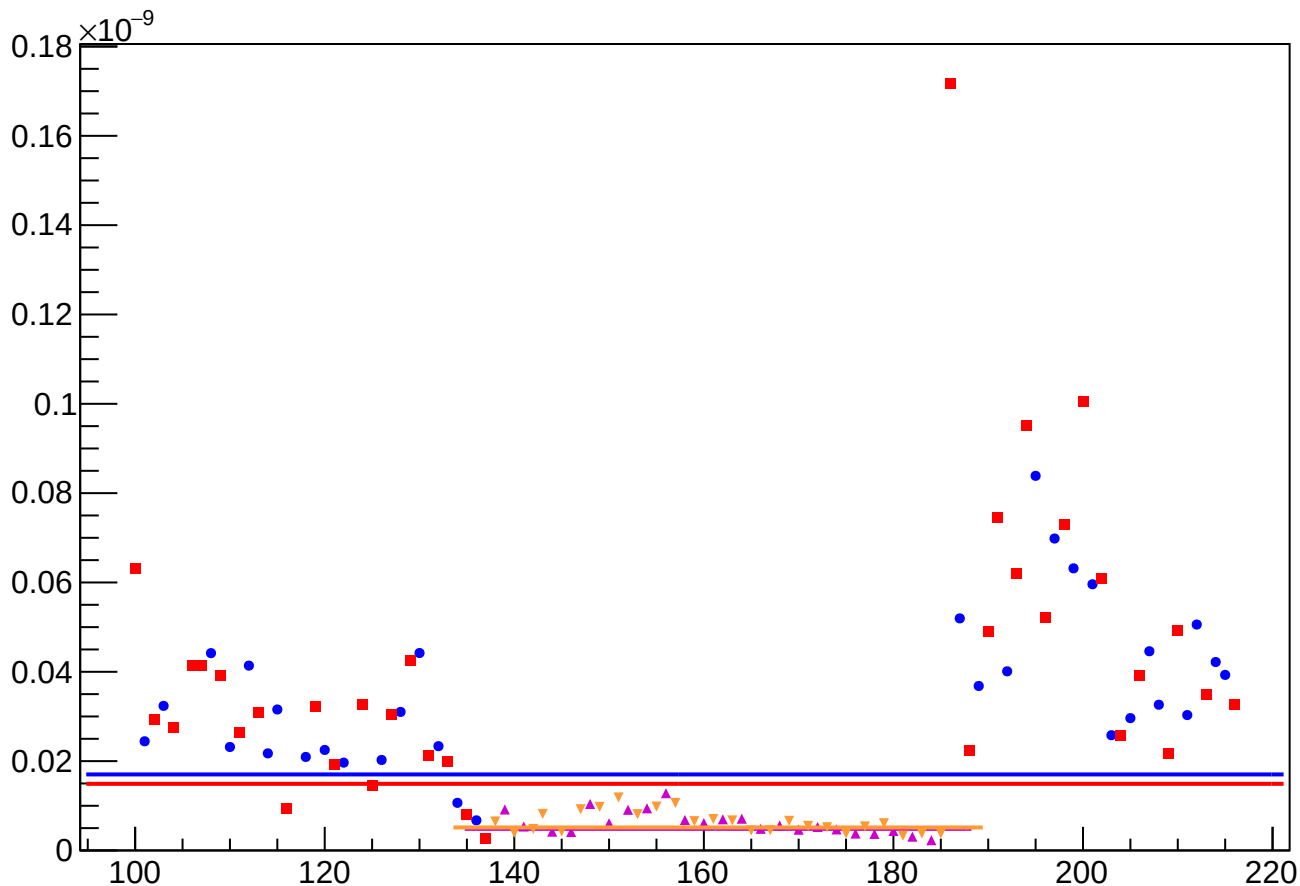
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 71.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 132.0/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.2/57

asym\_sam\_15\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9939978.5/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3035355.5/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12006202.0/34

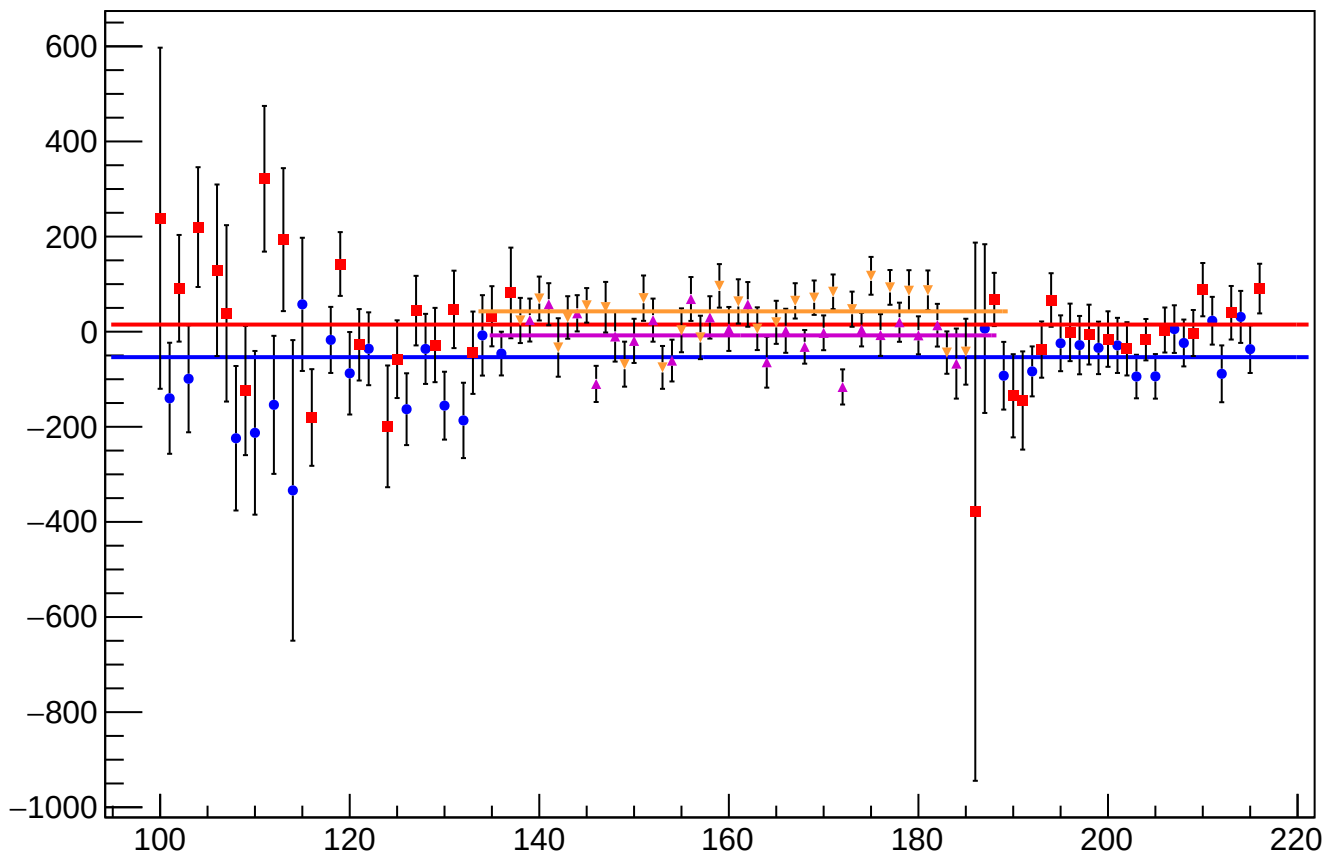
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 3040812.9/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20063856.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 40550319.2/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20408678.4/57

# reg\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-53.559 \pm 11.866$   $\chi^2/\text{NDF}$ : 22.5/30

Left Out:  $42.765 \pm 8.698$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $14.969 \pm 12.179$   $\chi^2/\text{NDF}$ : 37.6/34

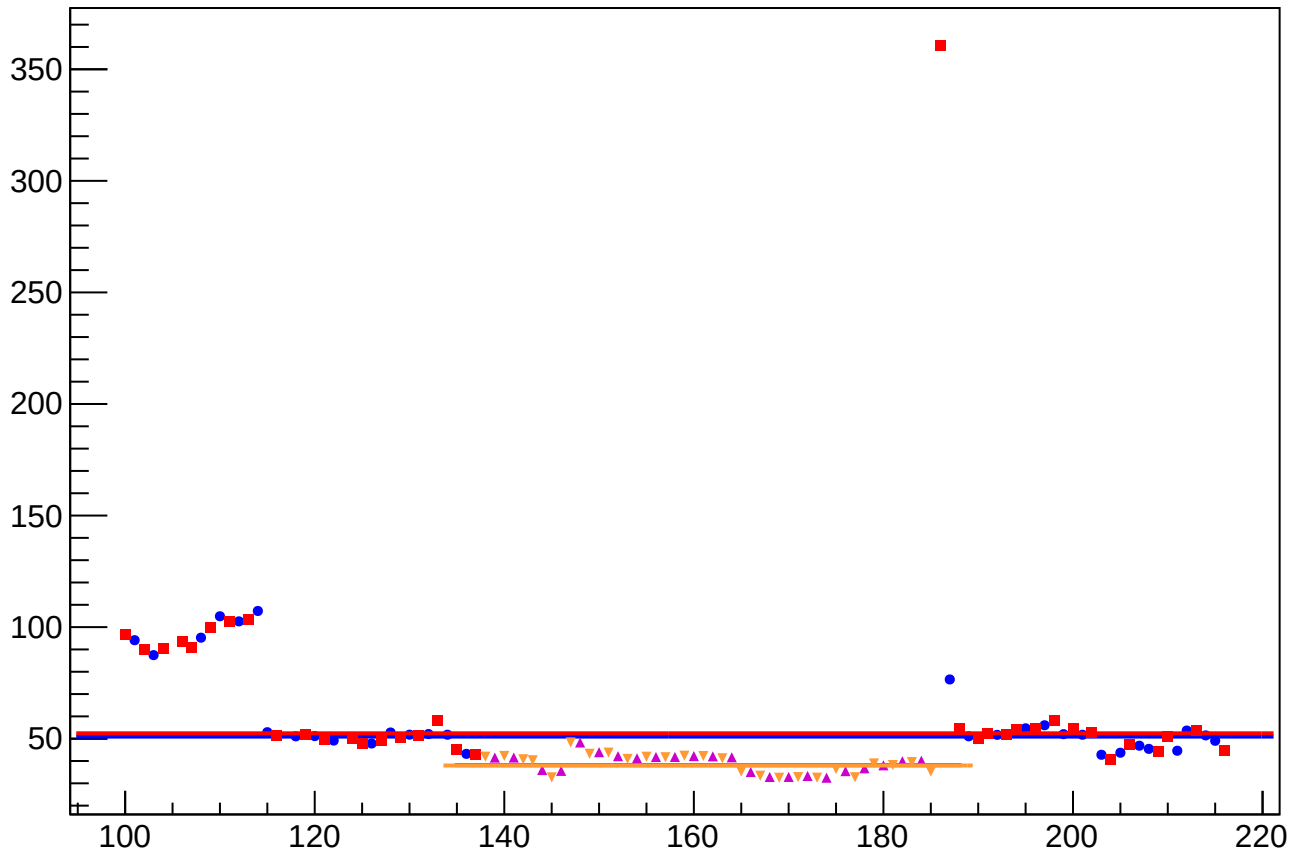
Left In:  $-7.783 \pm 8.974$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $9.099 \pm 7.015$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $4.792 \pm 5.033$   $\chi^2/\text{NDF}$ : 171.3/113

- sign  $0.223 \pm 7.225$   $\chi^2/\text{NDF}$ : 70.4/57

# reg\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 50.945+/-0.008  $\chi^2/\text{NDF}$ : 1484476.0/30

Left Out: 37.990+/-0.006  $\chi^2/\text{NDF}$ : 513605.5/24

Right Out: 52.412+/-0.009  $\chi^2/\text{NDF}$ : 2282690.5/34

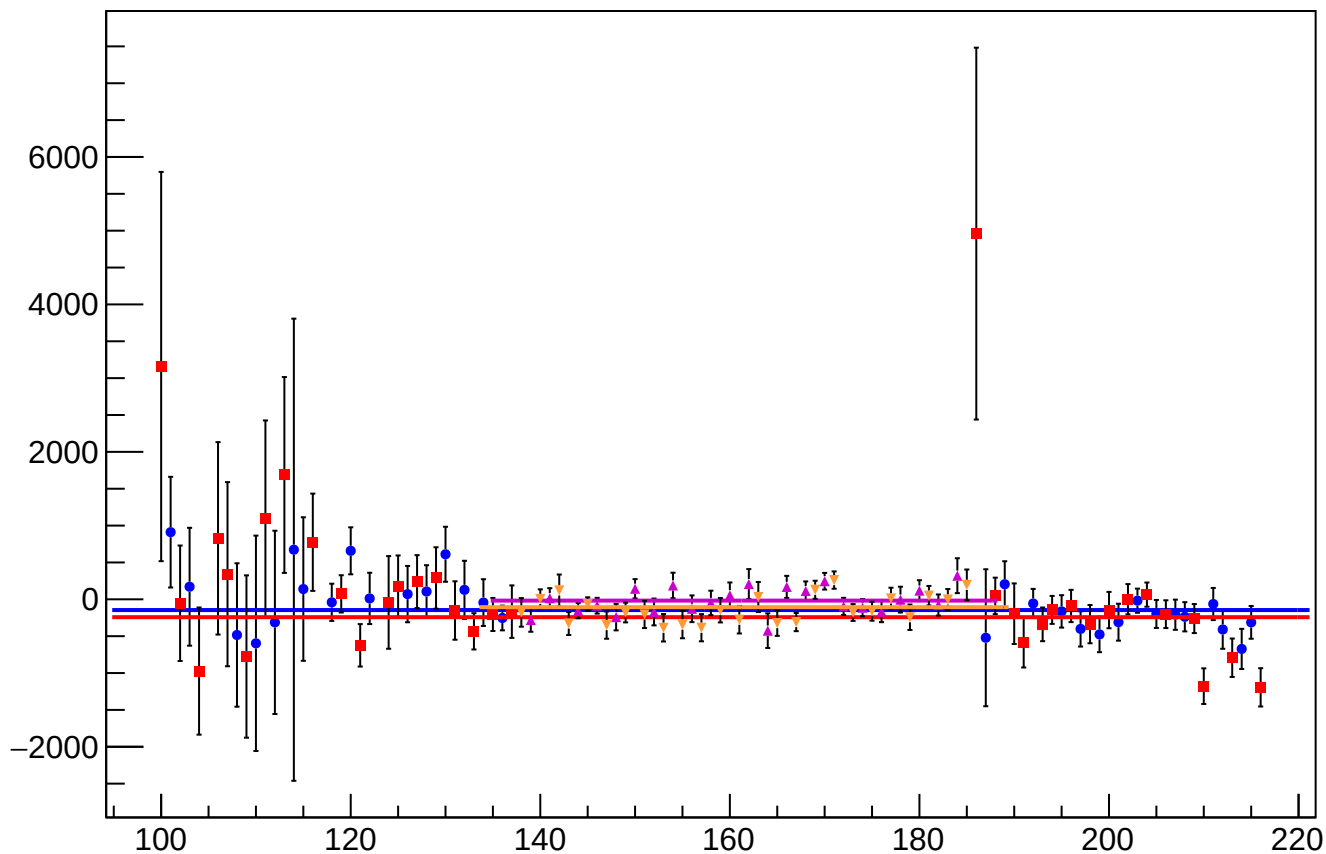
Left In: 38.133+/-0.006  $\chi^2/\text{NDF}$ : 428309.7/22

+ sign 42.518+/-0.005  $\chi^2/\text{NDF}$ : 3548730.2/55

All: 42.828+/-0.004  $\chi^2/\text{NDF}$ : 8049608.7/113

- sign 43.158+/-0.005  $\chi^2/\text{NDF}$ : 4492799.6/57

asym\_sam\_37\_26\_dd\_reg\_correction\_mean vs Slug



Right In:  $-145.761 \pm 49.610$   $\chi^2/\text{NDF}$ : 26.7/30

Left Out:  $-106.506 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-242.367 \pm 49.946$   $\chi^2/\text{NDF}$ : 63.4/34

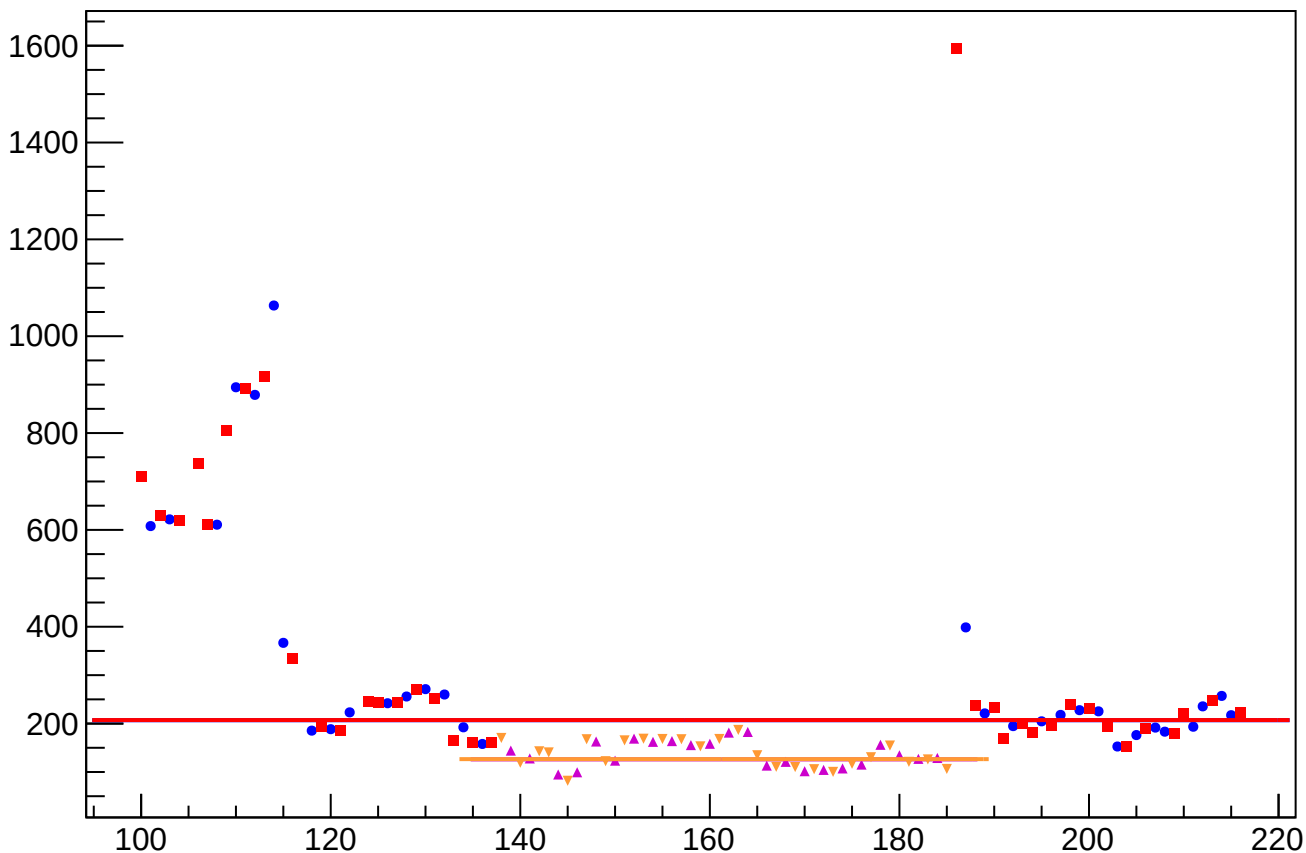
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-116.793 \pm 25.396$   $\chi^2/\text{NDF}$ : 64.8/55

All:  $-97.566 \pm 18.111$   $\chi^2/\text{NDF}$ : 172.5/113

- sign  $-77.671 \pm 25.834$   $\chi^2/\text{NDF}$ : 106.5/57

asym\_sam\_37\_26\_dd\_reg\_correction\_rms vs Slug



Right In: 206.871+/-0.035  $\chi^2/\text{NDF}$ : 3577893.4/30

Left Out: 126.561+/-0.021  $\chi^2/\text{NDF}$ : 1758158.3/24

Right Out: 207.249+/-0.035  $\chi^2/\text{NDF}$ : 4835244.4/34

Left In: 126.013+/-0.021  $\chi^2/\text{NDF}$ : 1410655.7/22

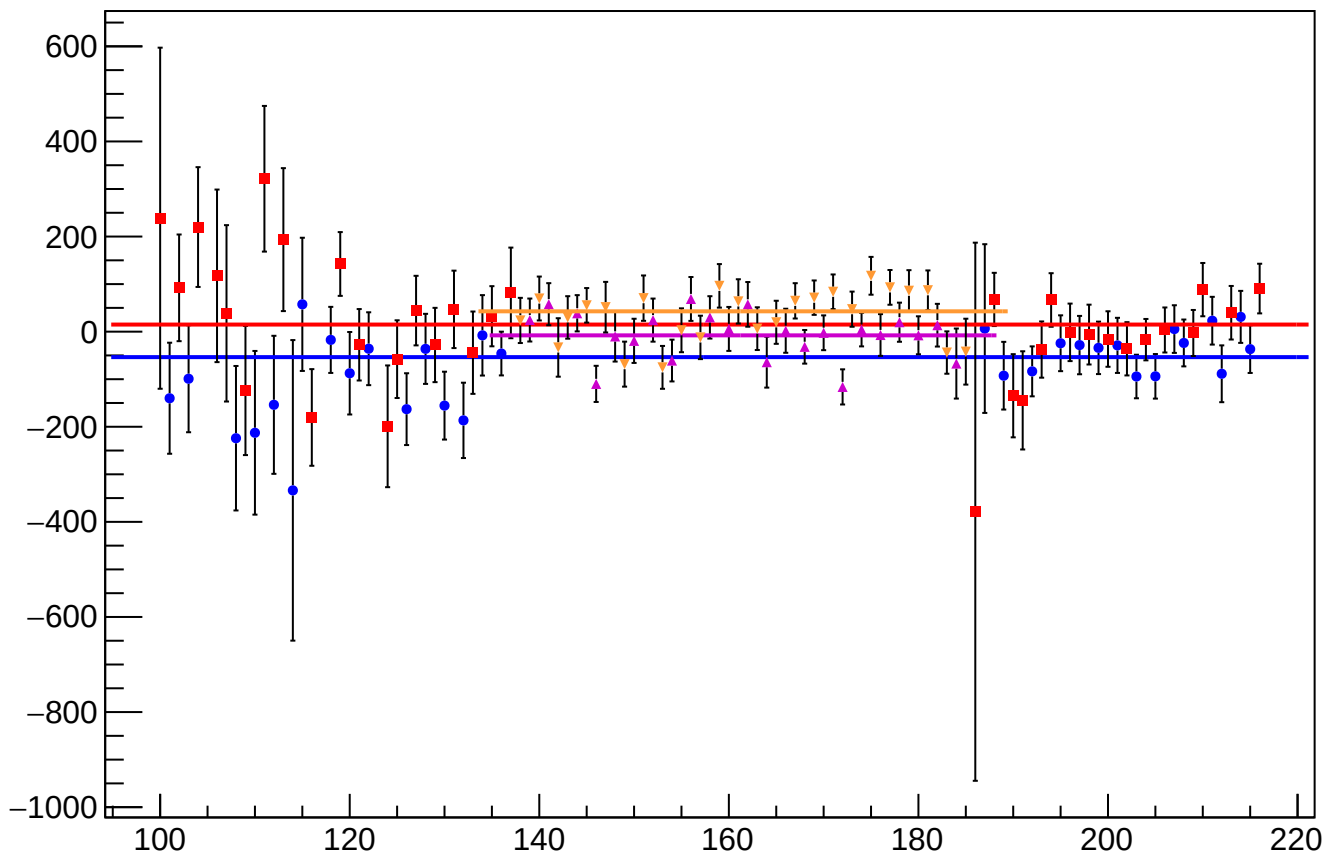
+ sign 147.606+/-0.018  $\chi^2/\text{NDF}$ : 9203786.7/55

All: 147.675+/-0.013  $\chi^2/\text{NDF}$ : 19325025.1/11

- sign 147.746+/-0.018  $\chi^2/\text{NDF}$ : 10121208.6/57



# cor\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-53.557 \pm 11.866$   $\chi^2/\text{NDF}: 22.5/30$

Left Out:  $42.767 \pm 8.698$   $\chi^2/\text{NDF}: 34.7/24$

Right Out:  $14.919 \pm 12.179$   $\chi^2/\text{NDF}: 37.5/34$

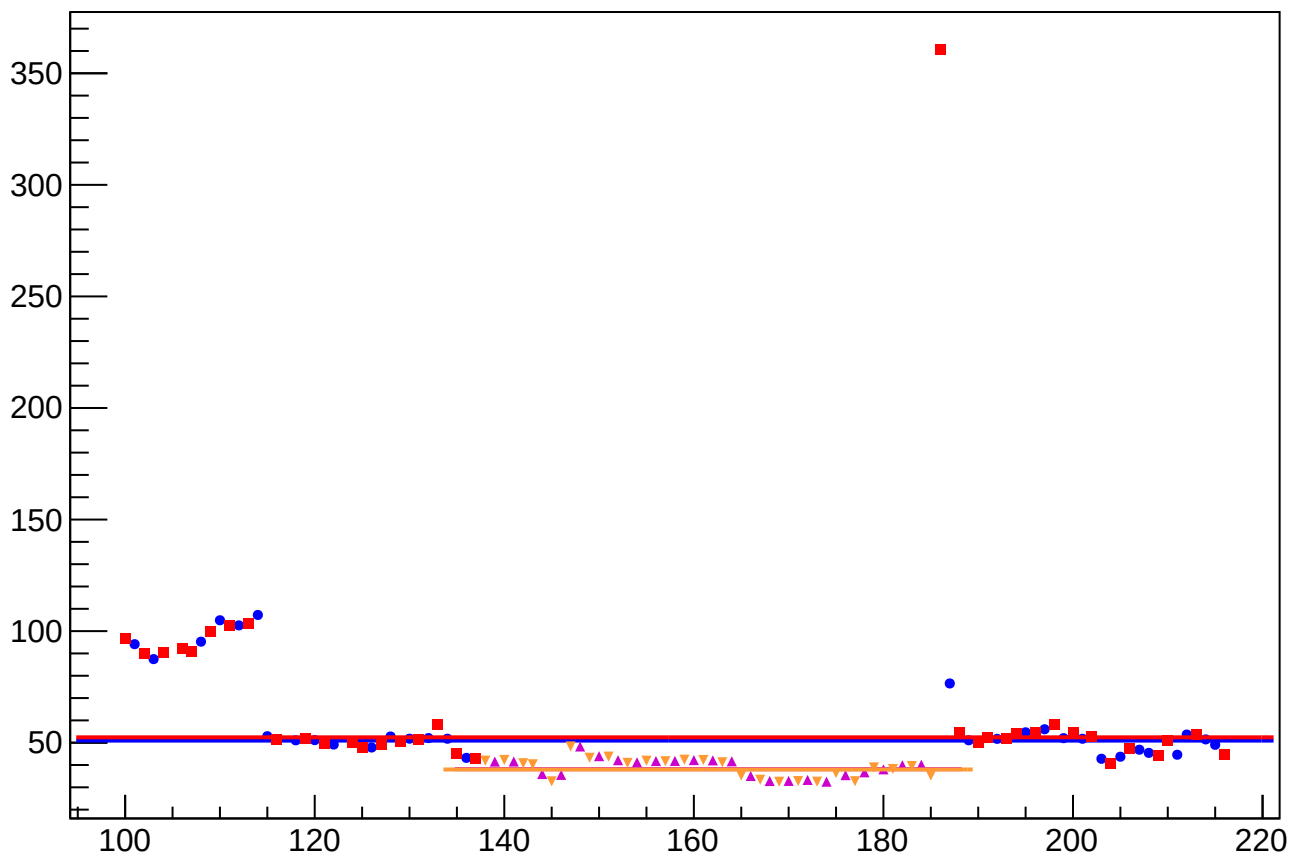
Left In:  $-7.785 \pm 8.974$   $\chi^2/\text{NDF}: 30.6/22$

+ sign  $9.101 \pm 7.015$   $\chi^2/\text{NDF}: 100.1/55$

All:  $4.784 \pm 5.033$   $\chi^2/\text{NDF}: 171.2/113$

- sign  $0.205 \pm 7.225$   $\chi^2/\text{NDF}: 70.4/57$

# cor\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 50.945+/-0.008     $\chi^2/\text{NDF}$ : 1484476.2/30

Left Out: 37.990+/-0.006     $\chi^2/\text{NDF}$ : 513605.5/24

Right Out: 52.403+/-0.009     $\chi^2/\text{NDF}$ : 2274055.7/34

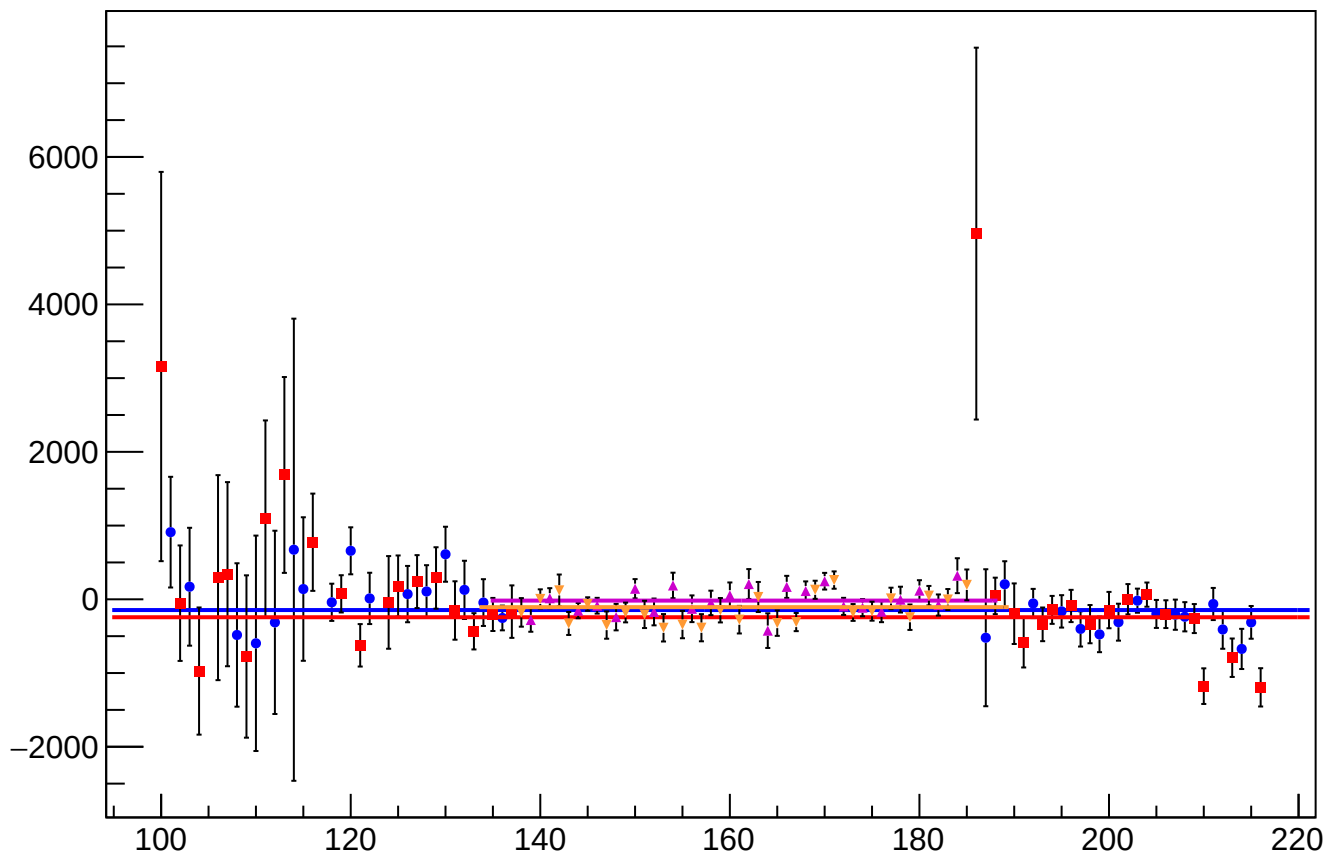
Left In: 38.133+/-0.006     $\chi^2/\text{NDF}$ : 428309.7/22

+ sign 42.518+/-0.005     $\chi^2/\text{NDF}$ : 3548730.3/55

All: 42.827+/-0.004     $\chi^2/\text{NDF}$ : 8038552.3/113

- sign 43.154+/-0.005     $\chi^2/\text{NDF}$ : 4481828.6/57

asym\_sam\_37\_26\_dd\_cor\_correction\_mean vs Slug



Right In:  $-145.758 \pm 49.610$   $\chi^2/\text{NDF}$ : 26.7/30

Left Out:  $-106.505 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-243.233 \pm 49.951$   $\chi^2/\text{NDF}$ : 62.8/34

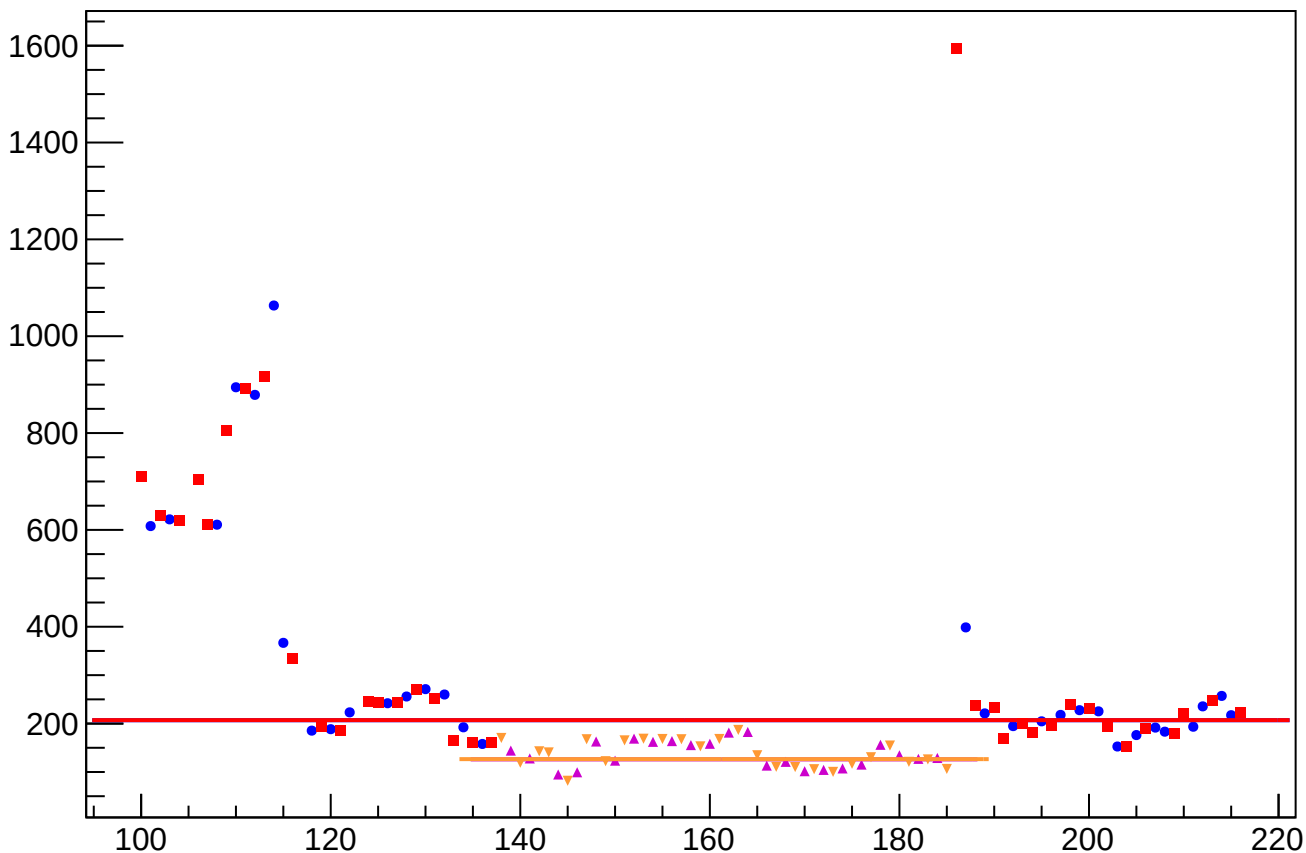
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-116.792 \pm 25.396$   $\chi^2/\text{NDF}$ : 64.8/55

All:  $-97.676 \pm 18.111$   $\chi^2/\text{NDF}$ : 172.0/113

- sign  $-77.895 \pm 25.835$   $\chi^2/\text{NDF}$ : 106.0/57

asym\_sam\_37\_26\_dd\_cor\_correction\_rms vs Slug



Right In: 206.871+/-0.035  $\chi^2/\text{NDF}$ : 3577902.1/30

Left Out: 126.561+/-0.021  $\chi^2/\text{NDF}$ : 1758151.9/24

Right Out: 207.115+/-0.035  $\chi^2/\text{NDF}$ : 4762320.6/34

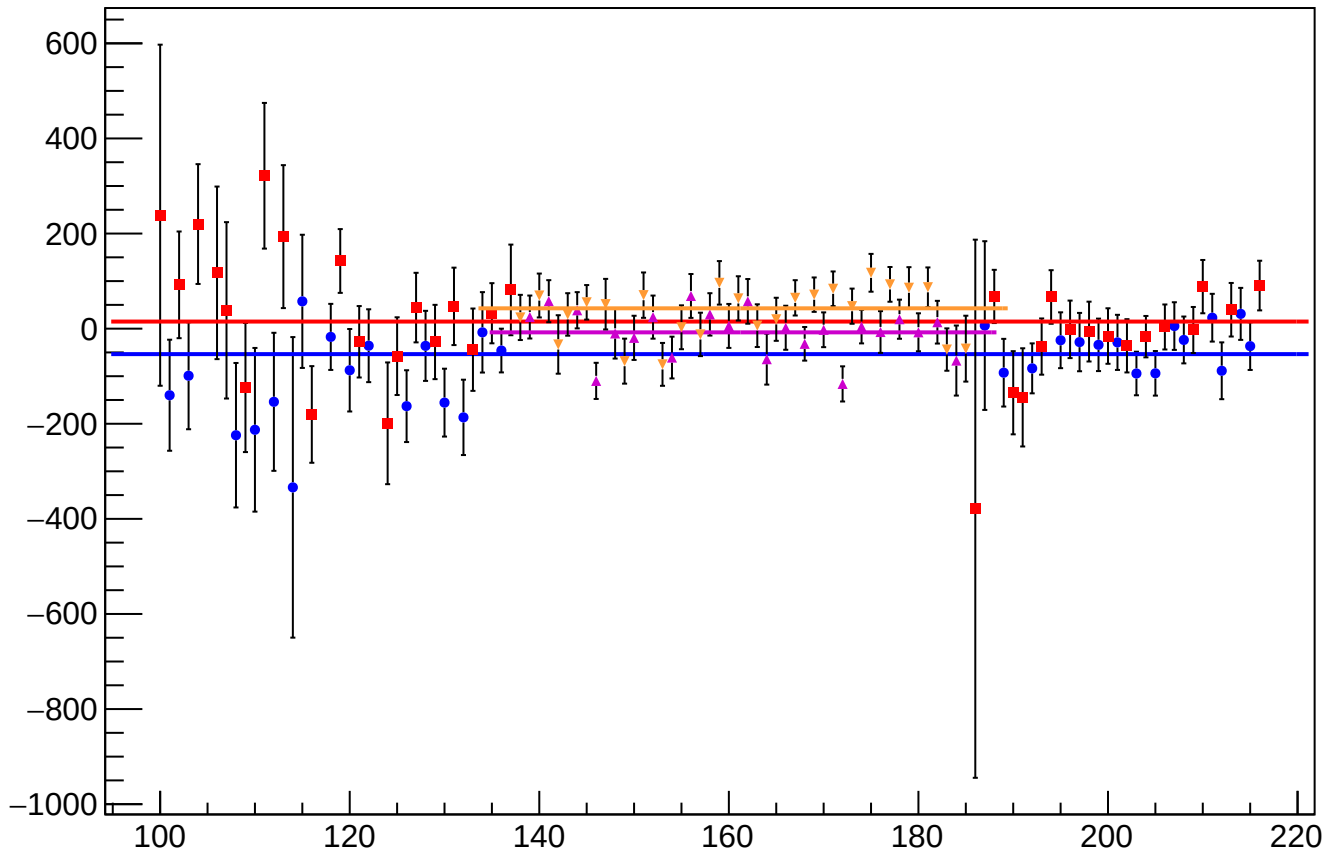
Left In: 126.013+/-0.021  $\chi^2/\text{NDF}$ : 1410664.0/22

+ sign 147.606+/-0.018  $\chi^2/\text{NDF}$ : 9203781.4/55

All: 147.656+/-0.013  $\chi^2/\text{NDF}$ : 19238831.5/11

- sign 147.708+/-0.018  $\chi^2/\text{NDF}$ : 10035034.5/57

# eigen\_cor\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-53.557 \pm 11.866$   $\chi^2/\text{NDF}$ : 22.5/30

Left Out:  $42.767 \pm 8.698$   $\chi^2/\text{NDF}$ : 34.7/24

Right Out:  $14.919 \pm 12.179$   $\chi^2/\text{NDF}$ : 37.5/34

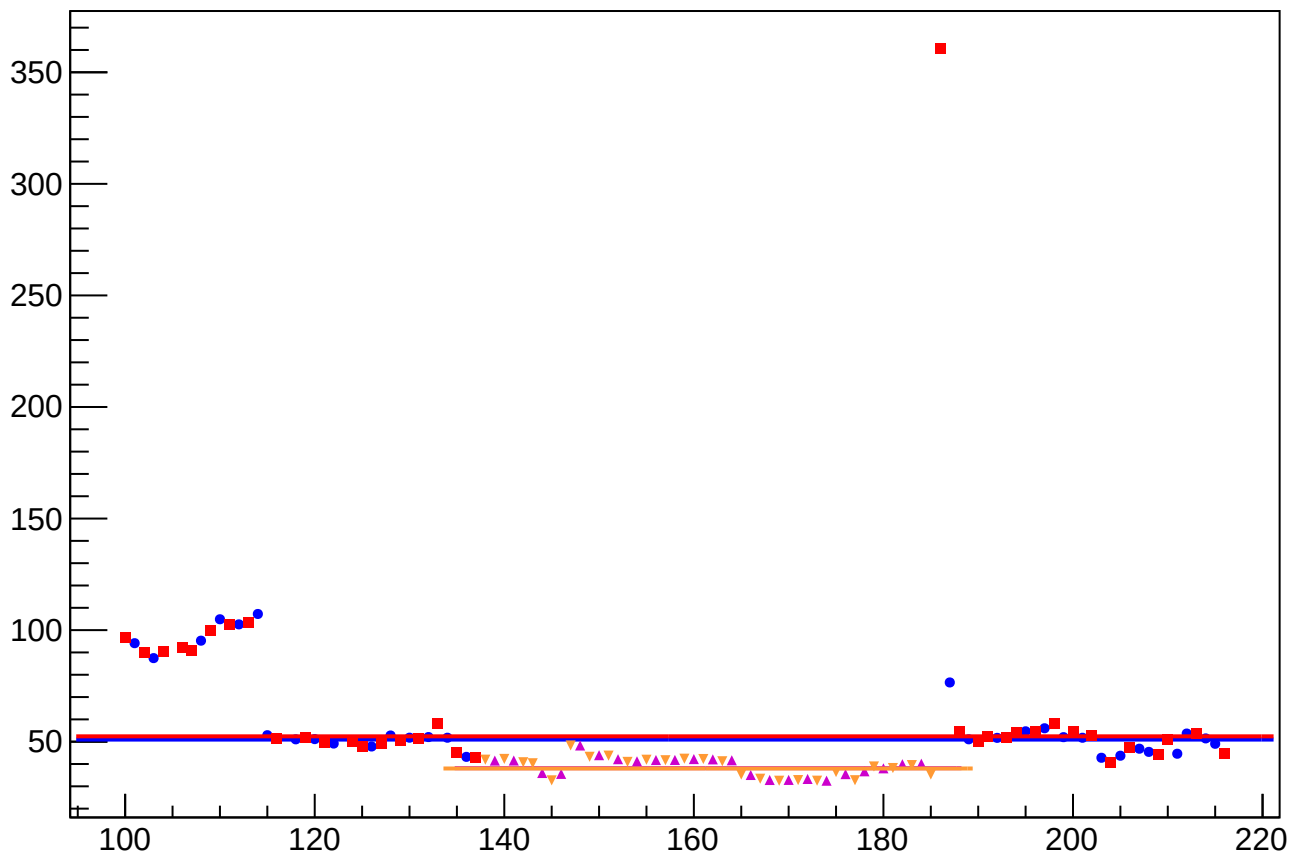
Left In:  $-7.785 \pm 8.974$   $\chi^2/\text{NDF}$ : 30.6/22

+ sign  $9.101 \pm 7.015$   $\chi^2/\text{NDF}$ : 100.1/55

All:  $4.784 \pm 5.033$   $\chi^2/\text{NDF}$ : 171.2/113

- sign  $0.205 \pm 7.225$   $\chi^2/\text{NDF}$ : 70.4/57

# eigen\_cor\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 50.945 $\pm$ 0.008  $\chi^2$ /NDF: 1484476.2/30

Left Out: 37.990 $\pm$ 0.006  $\chi^2$ /NDF: 513605.5/24

Right Out: 52.403 $\pm$ 0.009  $\chi^2$ /NDF: 2274055.7/34

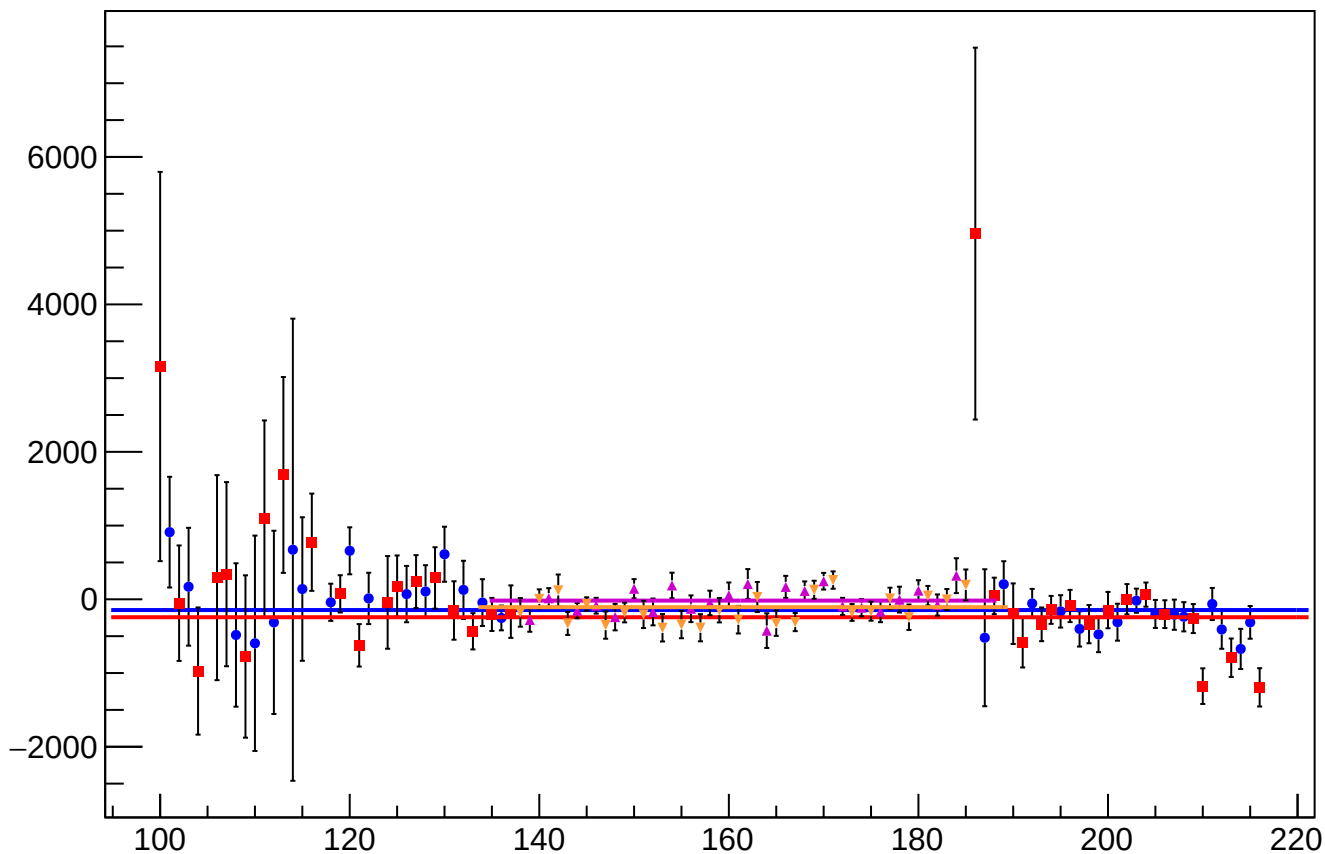
Left In: 38.133 $\pm$ 0.006  $\chi^2$ /NDF: 428309.7/22

+ sign 42.518 $\pm$ 0.005  $\chi^2$ /NDF: 3548730.3/55

All: 42.827 $\pm$ 0.004  $\chi^2$ /NDF: 8038552.3/113

- sign 43.154 $\pm$ 0.005  $\chi^2$ /NDF: 4481828.6/57

asym\_sam\_37\_26\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-145.758 \pm 49.610$   $\chi^2/\text{NDF}$ : 26.7/30

Left Out:  $-106.505 \pm 29.563$   $\chi^2/\text{NDF}$ : 37.6/24

Right Out:  $-243.233 \pm 49.951$   $\chi^2/\text{NDF}$ : 62.8/34

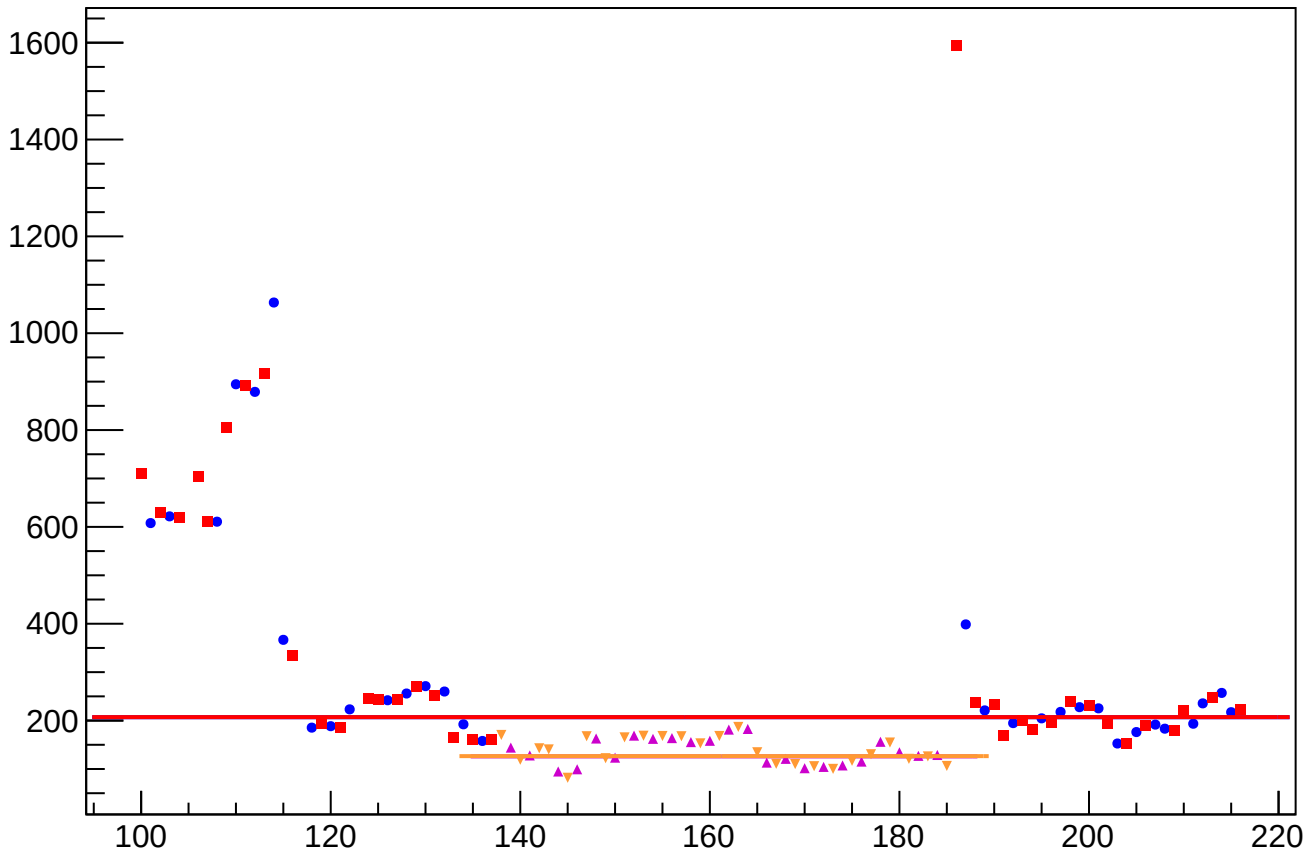
Left In:  $-17.517 \pm 30.185$   $\chi^2/\text{NDF}$ : 28.2/22

+ sign  $-116.792 \pm 25.396$   $\chi^2/\text{NDF}$ : 64.8/55

All:  $-97.676 \pm 18.111$   $\chi^2/\text{NDF}$ : 172.0/113

- sign  $-77.895 \pm 25.835$   $\chi^2/\text{NDF}$ : 106.0/57

asym\_sam\_37\_26\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 206.871+/-0.035  $\chi^2/\text{NDF}$ : 3577902.1/30

Left Out: 126.561+/-0.021  $\chi^2/\text{NDF}$ : 1758151.9/24

Right Out: 207.115+/-0.035  $\chi^2/\text{NDF}$ : 4762320.6/34

Left In: 126.013+/-0.021  $\chi^2/\text{NDF}$ : 1410664.0/22

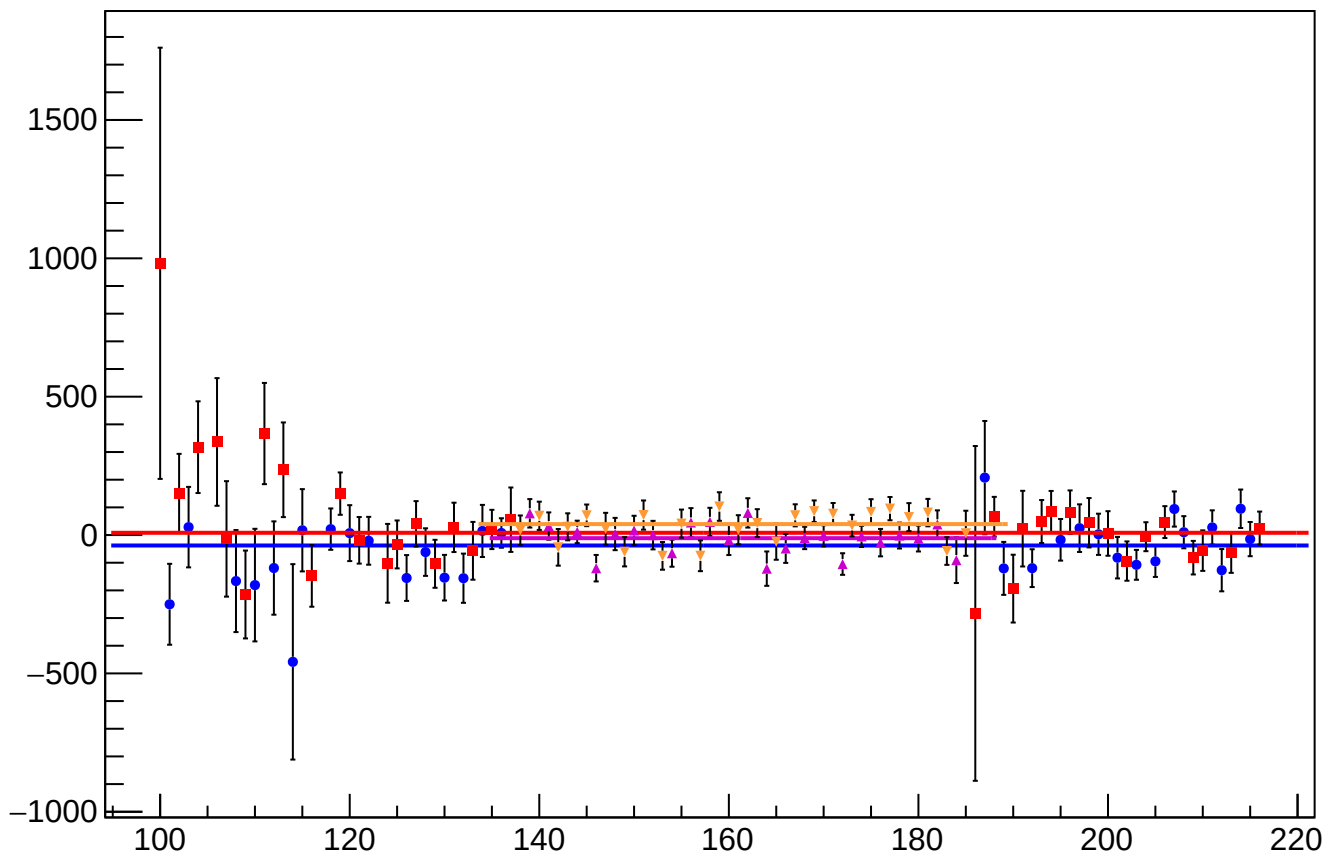
+ sign 147.606+/-0.018  $\chi^2/\text{NDF}$ : 9203781.4/55

All: 147.656+/-0.013  $\chi^2/\text{NDF}$ : 19238831.5/11

- sign 147.708+/-0.018  $\chi^2/\text{NDF}$ : 10035034.5/57



# dit\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-37.758 \pm 14.453$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $39.563 \pm 9.745$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $8.183 \pm 14.950$   $\chi^2/\text{NDF}$ : 37.1/34

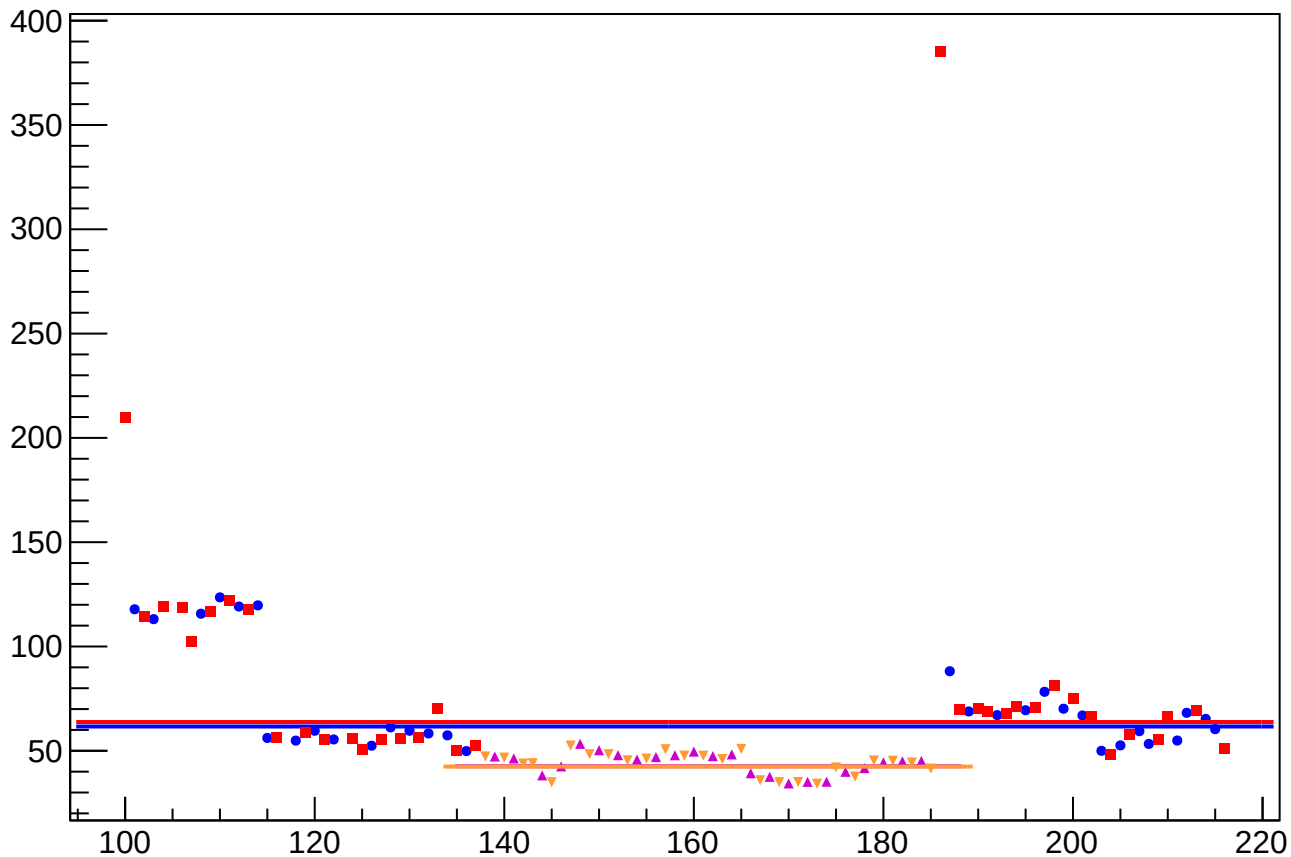
Left In:  $-11.306 \pm 10.077$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $15.398 \pm 8.080$   $\chi^2/\text{NDF}$ : 80.9/55

All:  $5.436 \pm 5.809$   $\chi^2/\text{NDF}$ : 150.2/113

- sign  $-5.218 \pm 8.356$   $\chi^2/\text{NDF}$ : 66.1/57

# dit\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In:  $61.645 \pm 0.010$   $\chi^2/\text{NDF}: 1773836.1/30$

Left Out:  $42.426 \pm 0.007$   $\chi^2/\text{NDF}: 698766.0/24$

Right Out:  $63.802 \pm 0.011$   $\chi^2/\text{NDF}: 2679499.7/34$

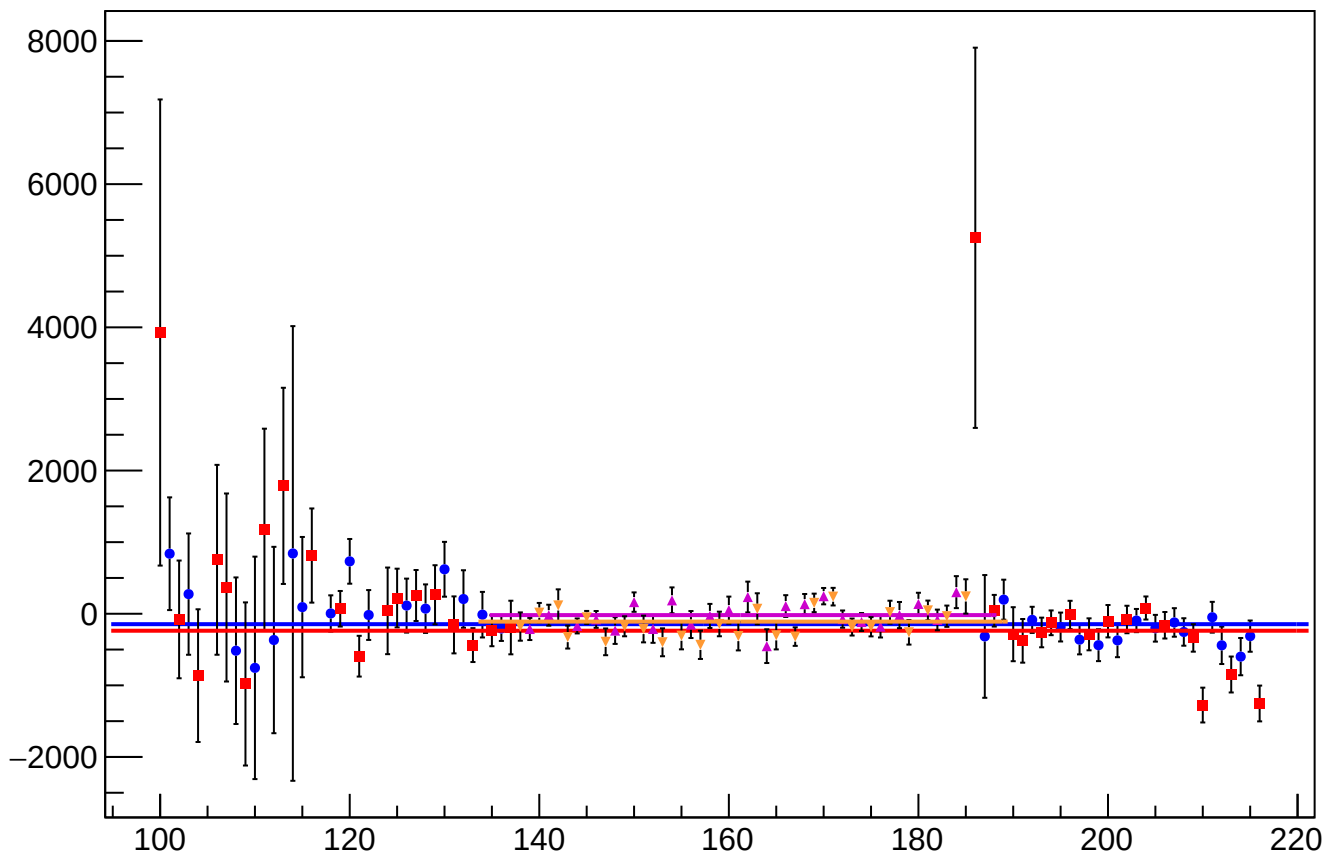
Left In:  $42.579 \pm 0.007$   $\chi^2/\text{NDF}: 589897.0/22$

+ sign  $48.433 \pm 0.006$   $\chi^2/\text{NDF}: 4903613.1/55$

All:  $48.808 \pm 0.004$   $\chi^2/\text{NDF}: 10953254.9/113$

- sign  $49.209 \pm 0.006$   $\chi^2/\text{NDF}: 6040719.3/57$

asym\_sam\_37\_26\_dd\_dit\_correction\_mean vs Slug



Right In:  $-145.570 \pm 48.005$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $-109.869 \pm 30.759$   $\chi^2/\text{NDF}$ : 36.3/24

Right Out:  $-236.978 \pm 47.516$   $\chi^2/\text{NDF}$ : 71.6/34

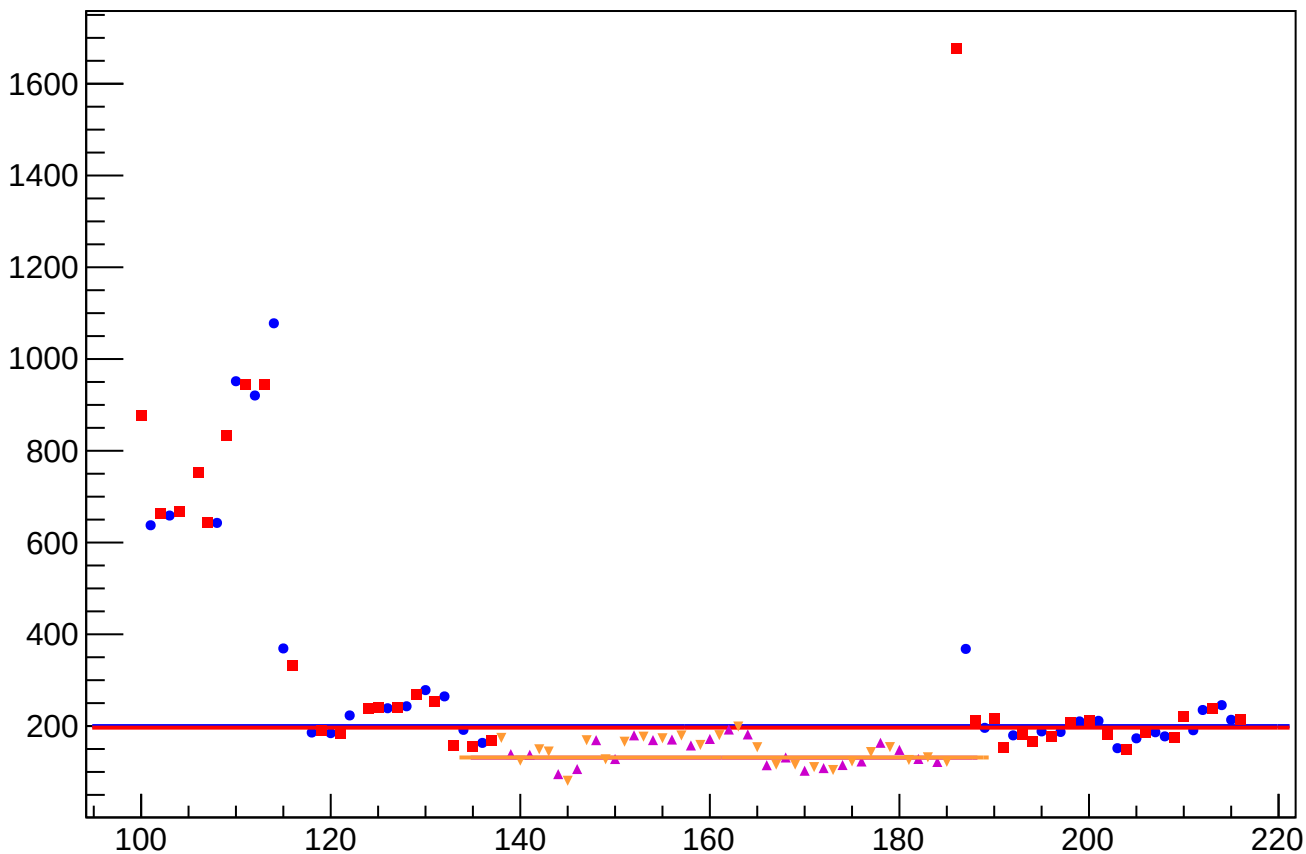
Left In:  $-18.838 \pm 31.477$   $\chi^2/\text{NDF}$ : 27.2/22

+ sign  $-120.260 \pm 25.899$   $\chi^2/\text{NDF}$ : 64.4/55

All:  $-103.043 \pm 18.433$   $\chi^2/\text{NDF}$ : 178.7/113

- sign  $-85.368 \pm 26.241$   $\chi^2/\text{NDF}$ : 113.5/57

asym\_sam\_37\_26\_dd\_dit\_correction\_rms vs Slug



Right In: 199.957 $\pm$ 0.034  $\chi^2$ /NDF: 3661837.7/30

Left Out: 131.515 $\pm$ 0.022  $\chi^2$ /NDF:1902958.8/24

Right Out: 196.567 $\pm$ 0.034  $\chi^2$ /NDF: 5080490.1/34

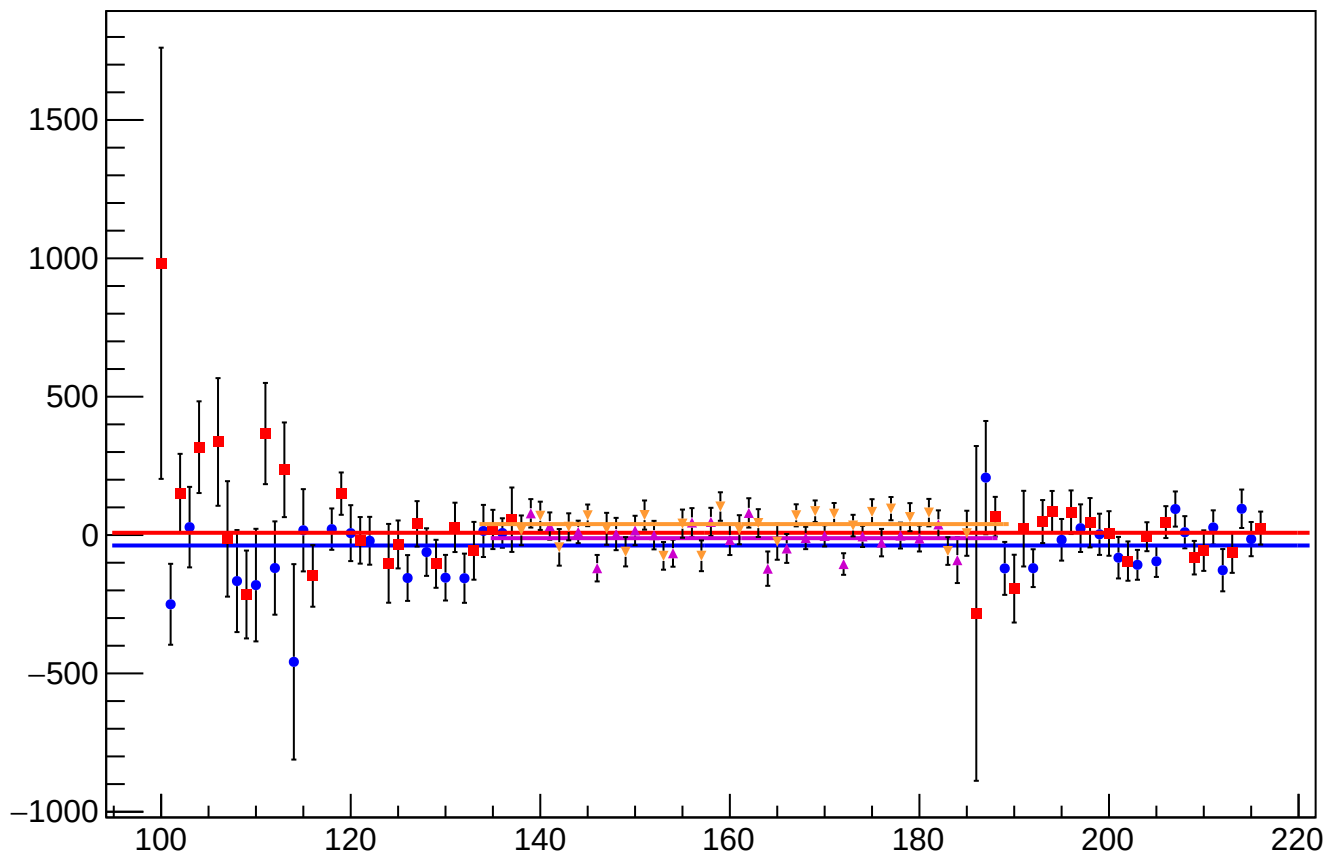
Left In: 131.074 $\pm$ 0.022  $\chi^2$ /NDF:1467806.6/22

+ sign 151.435 $\pm$ 0.018  $\chi^2$ /NDF: 8446913.0/55

All: 151.244 $\pm$ 0.013  $\chi^2$ /NDF: 17636181.5/11

- sign 151.048 $\pm$ 0.019  $\chi^2$ /NDF: 9189048.4/57

# eigen\_dit\_asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $-37.757 \pm 14.453$   $\chi^2/\text{NDF}$ : 31.6/30

Left Out:  $39.564 \pm 9.745$   $\chi^2/\text{NDF}$ : 29.6/24

Right Out:  $8.184 \pm 14.950$   $\chi^2/\text{NDF}$ : 37.1/34

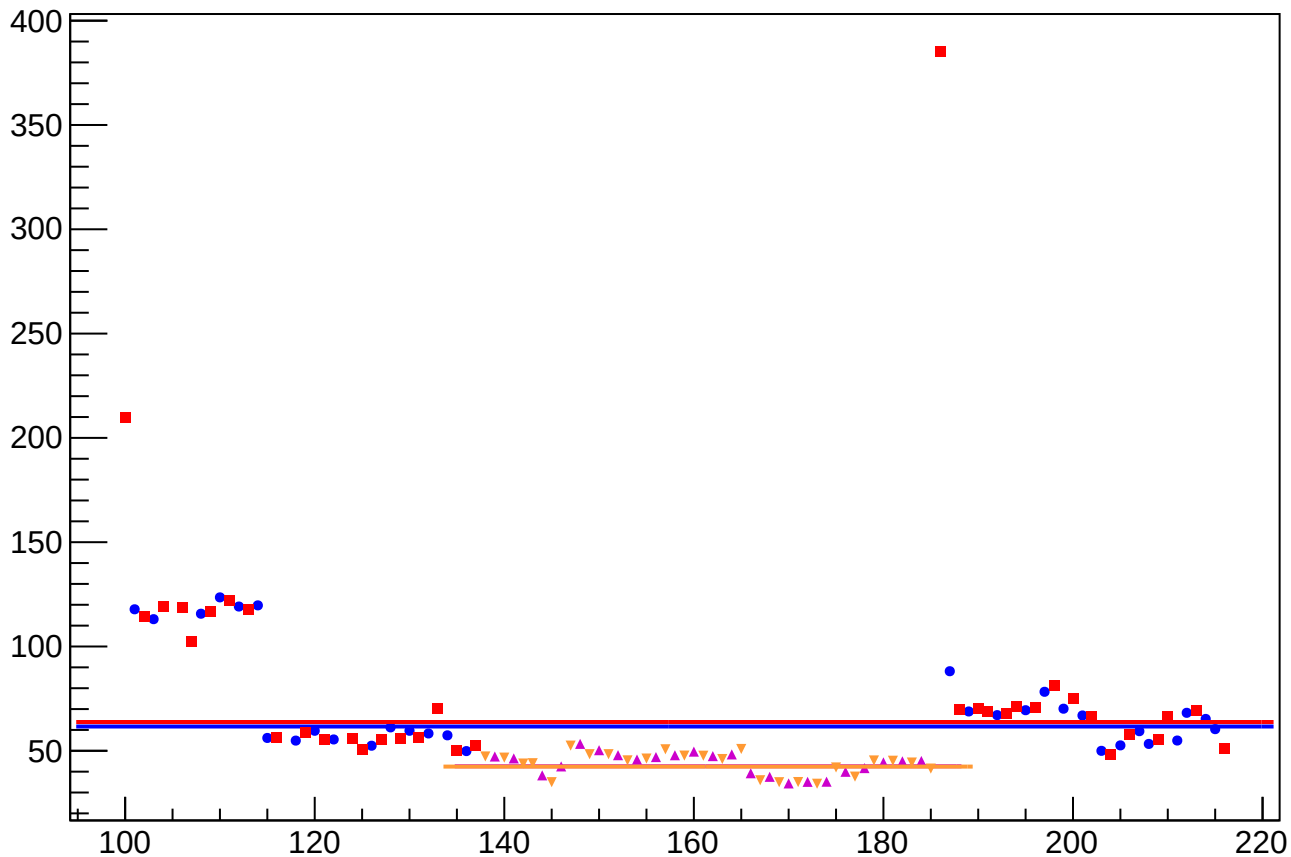
Left In:  $-11.306 \pm 10.077$   $\chi^2/\text{NDF}$ : 27.9/22

+ sign  $15.399 \pm 8.080$   $\chi^2/\text{NDF}$ : 80.9/55

All:  $5.437 \pm 5.809$   $\chi^2/\text{NDF}$ : 150.2/113

- sign  $-5.217 \pm 8.356$   $\chi^2/\text{NDF}$ : 66.1/57

# eigen\_dit\_asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 61.645 $\pm$ 0.010  $\chi^2$ /NDF: 1773826.2/30

Left Out: 42.426 $\pm$ 0.007  $\chi^2$ /NDF: 698784.4/24

Right Out: 63.802 $\pm$ 0.011  $\chi^2$ /NDF: 2679462.4/34

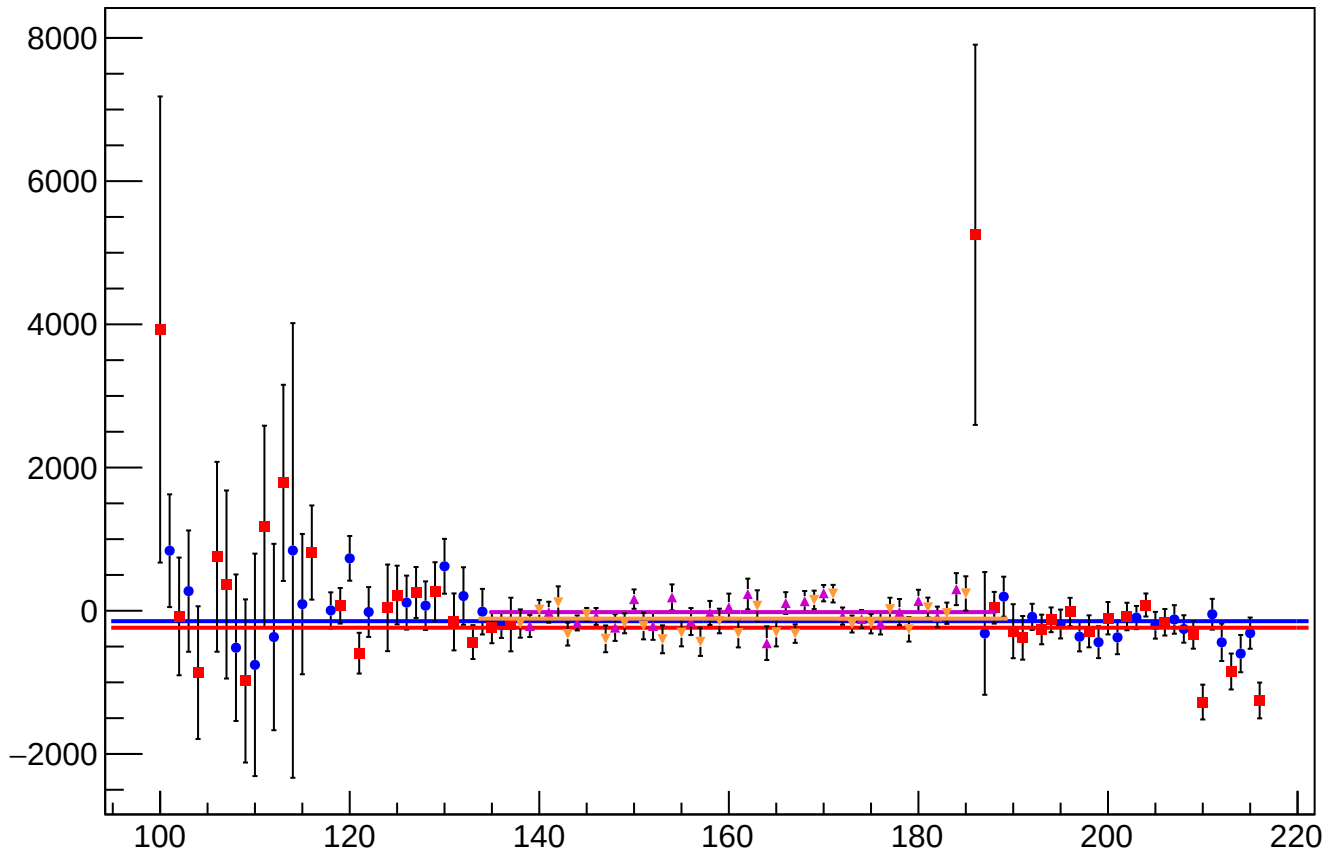
Left In: 42.579 $\pm$ 0.007  $\chi^2$ /NDF: 589901.9/22

+ sign 48.433 $\pm$ 0.006  $\chi^2$ /NDF: 4903634.6/55

All: 48.808 $\pm$ 0.004  $\chi^2$ /NDF: 10953290.9/113

- sign 49.209 $\pm$ 0.006  $\chi^2$ /NDF: 6040731.0/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-145.571 \pm 48.005$   $\chi^2/\text{NDF}$ : 27.7/30

Left Out:  $-109.869 \pm 30.759$   $\chi^2/\text{NDF}$ : 36.3/24

Right Out:  $-236.977 \pm 47.516$   $\chi^2/\text{NDF}$ : 71.6/34

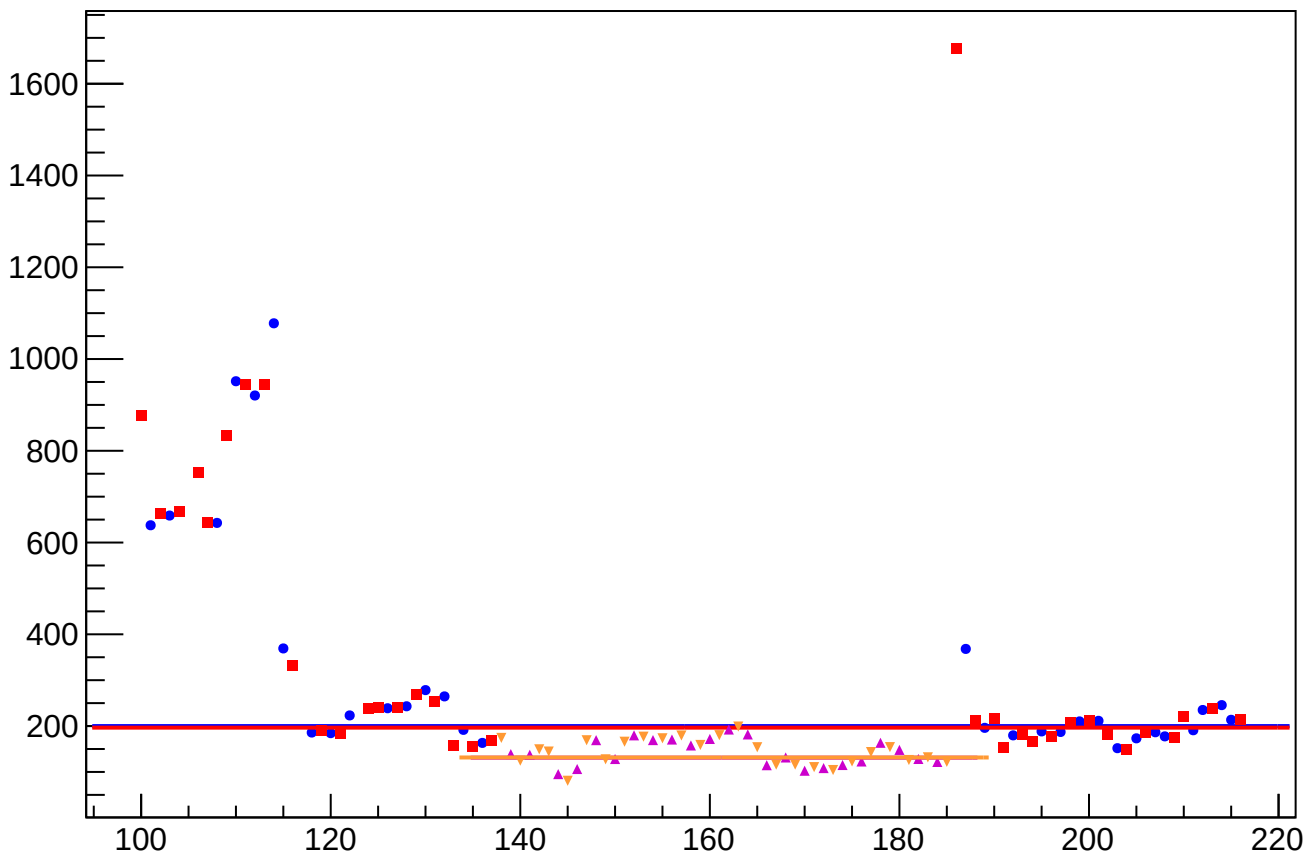
Left In:  $-18.838 \pm 31.477$   $\chi^2/\text{NDF}$ : 27.2/22

+ sign  $-120.260 \pm 25.899$   $\chi^2/\text{NDF}$ : 64.4/55

All:  $-103.043 \pm 18.433$   $\chi^2/\text{NDF}$ : 178.7/113

- sign  $-85.368 \pm 26.241$   $\chi^2/\text{NDF}$ : 113.5/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In: 199.957 $\pm$ 0.034  $\chi^2$ /NDF: 3661838.0/30

Left Out: 131.515 $\pm$ 0.022  $\chi^2$ /NDF:1902951.8/24

Right Out: 196.566 $\pm$ 0.034  $\chi^2$ /NDF: 5080497.4/34

Left In: 131.074 $\pm$ 0.022  $\chi^2$ /NDF:1467810.7/22

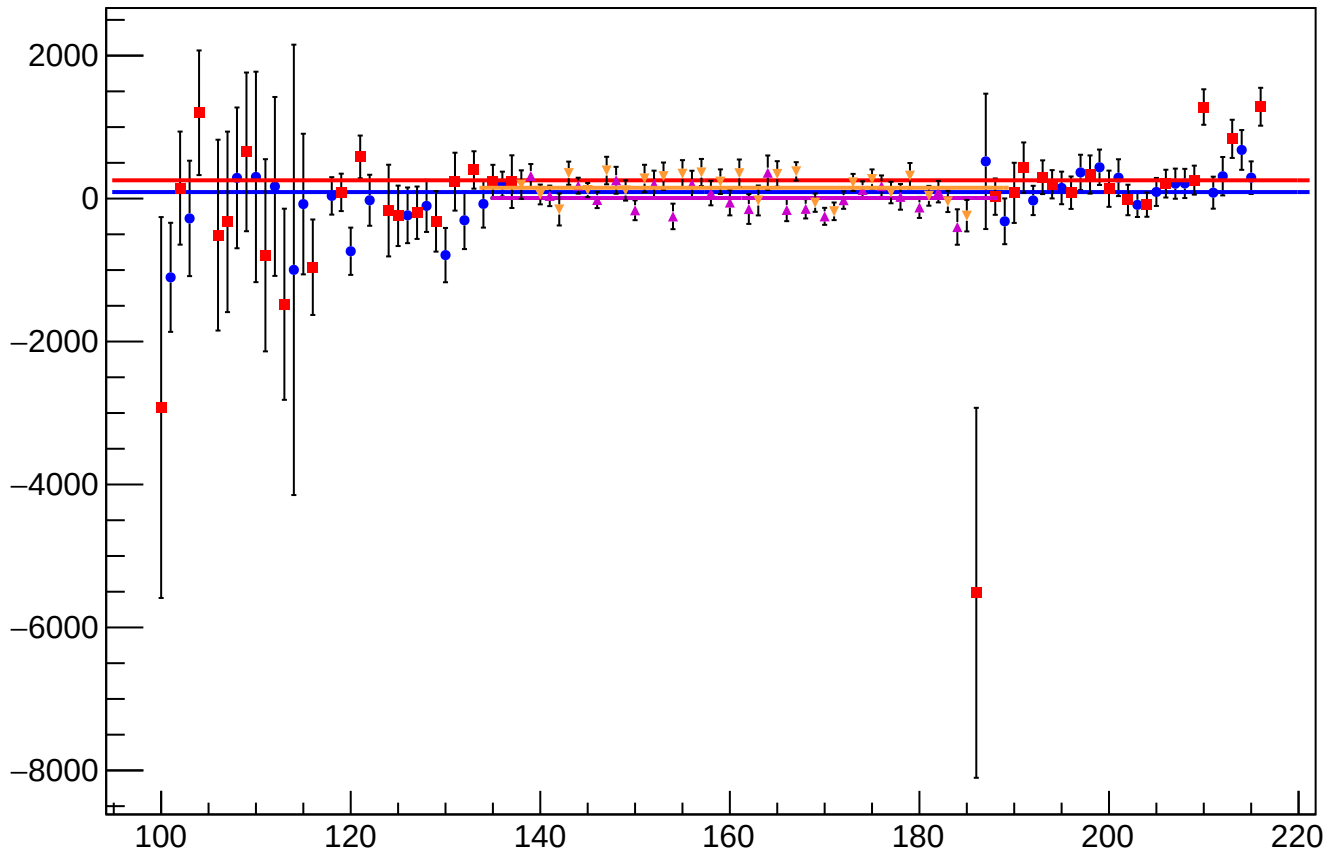
+ sign 151.435 $\pm$ 0.018  $\chi^2$ /NDF: 8446845.8/55

All: 151.244 $\pm$ 0.013  $\chi^2$ /NDF: 17636066.7/11

- sign 151.048 $\pm$ 0.019  $\chi^2$ /NDF: 9189000.7/57



# asym\_sam\_37\_26\_dd\_mean vs Slug



Right In:  $91.055 \pm 51.159$   $\chi^2/\text{NDF}$ : 31.0/30

Left Out:  $151.108 \pm 30.952$   $\chi^2/\text{NDF}$ : 33.1/24

Right Out:  $255.597 \pm 51.615$   $\chi^2/\text{NDF}$ : 65.8/34

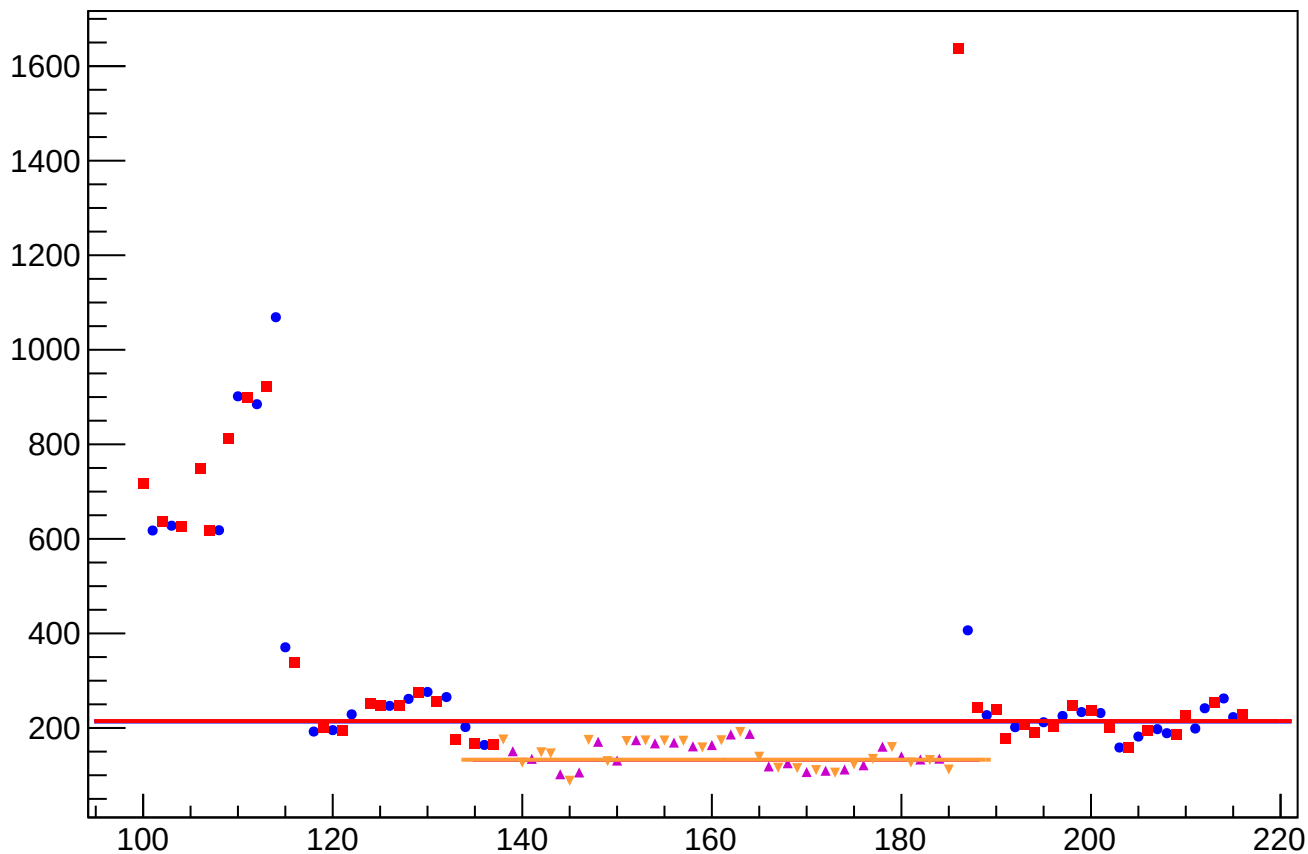
Left In:  $7.941 \pm 31.621$   $\chi^2/\text{NDF}$ : 29.5/22

+ sign  $135.016 \pm 26.482$   $\chi^2/\text{NDF}$ : 65.1/55

All:  $105.806 \pm 18.894$   $\chi^2/\text{NDF}$ : 179.6/113

- sign  $75.525 \pm 26.964$   $\chi^2/\text{NDF}$ : 112.0/57

# asym\_sam\_37\_26\_dd\_rms vs Slug



Right In: 213.683 $\pm$ 0.036  $\chi^2$ /NDF: 3478598.9/30

Left Out: 132.876 $\pm$ 0.022  $\chi^2$ /NDF:1592310.5/24

Right Out: 214.636 $\pm$ 0.036  $\chi^2$ /NDF: 4703813.4/34

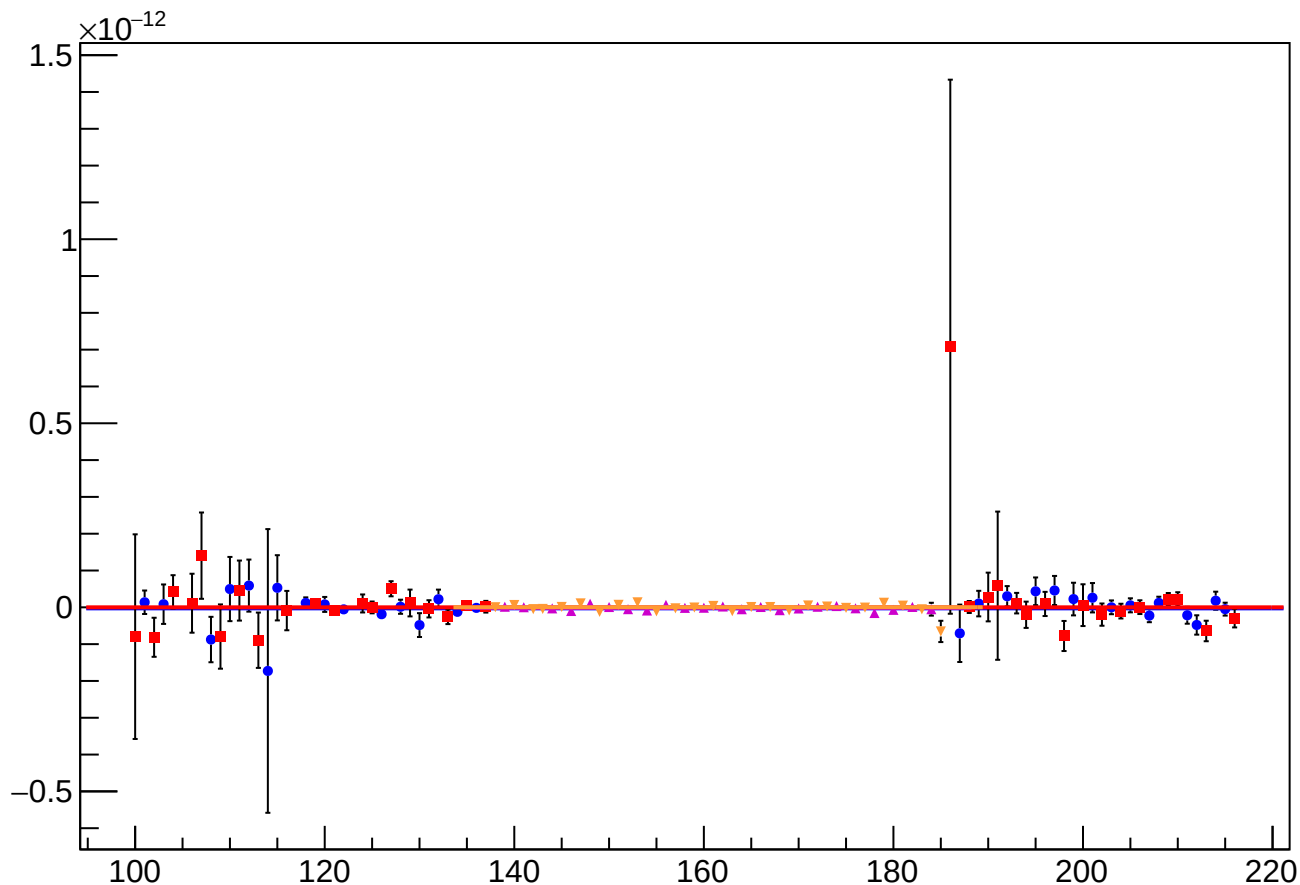
Left In: 132.342 $\pm$ 0.022  $\chi^2$ /NDF:1277761.6/22

+ sign 154.529 $\pm$ 0.019  $\chi^2$ /NDF: 8723741.2/55

All: 154.662 $\pm$ 0.013  $\chi^2$ /NDF: 18402054.7/11

- sign 154.799 $\pm$ 0.019  $\chi^2$ /NDF: 9678210.9/57

asym\_sam\_37\_26\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 24.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 32.2/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 34.1/34

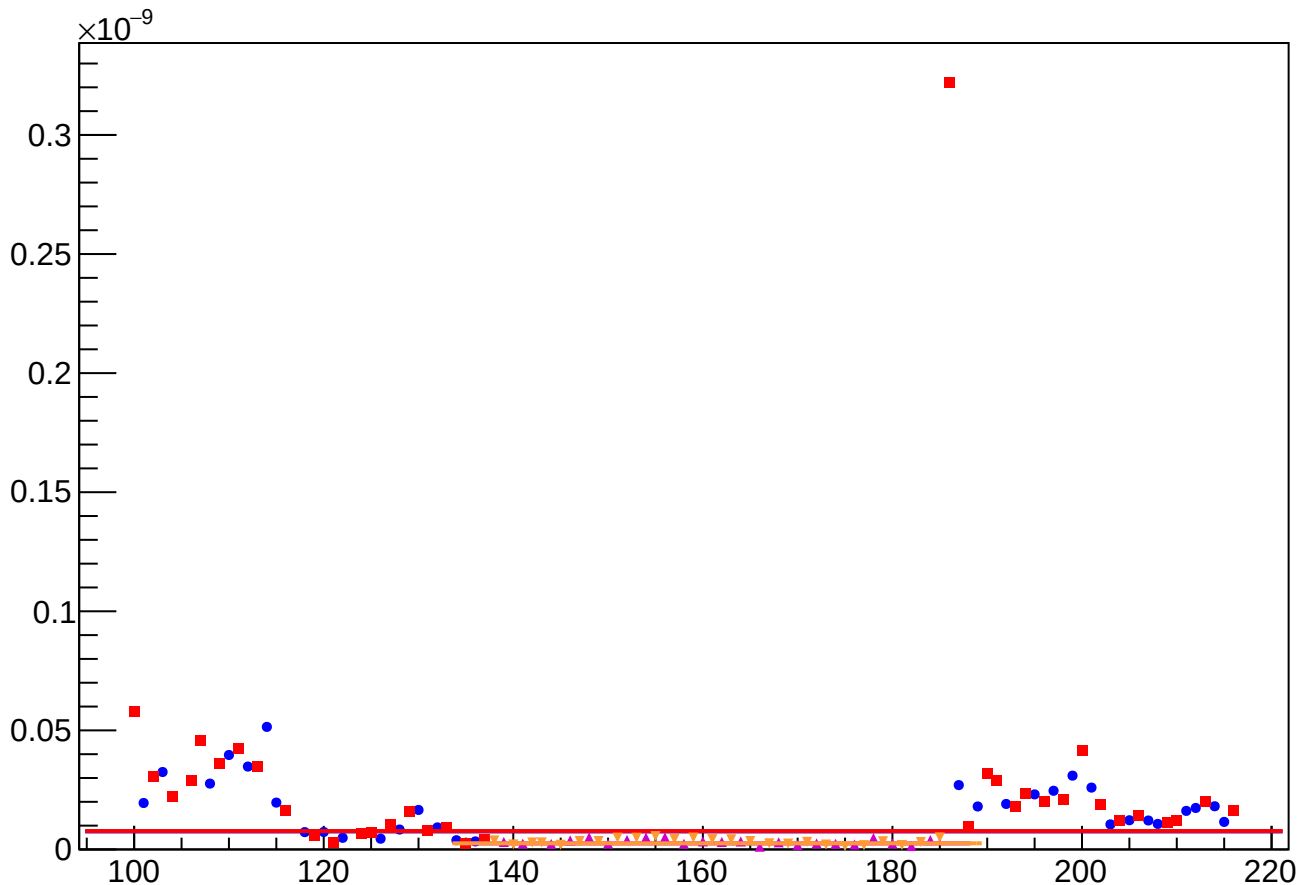
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 14.9/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 57.3/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 107.1/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 49.1/57

asym\_sam\_37\_26\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7248102.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2174042.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 8163961.9/34

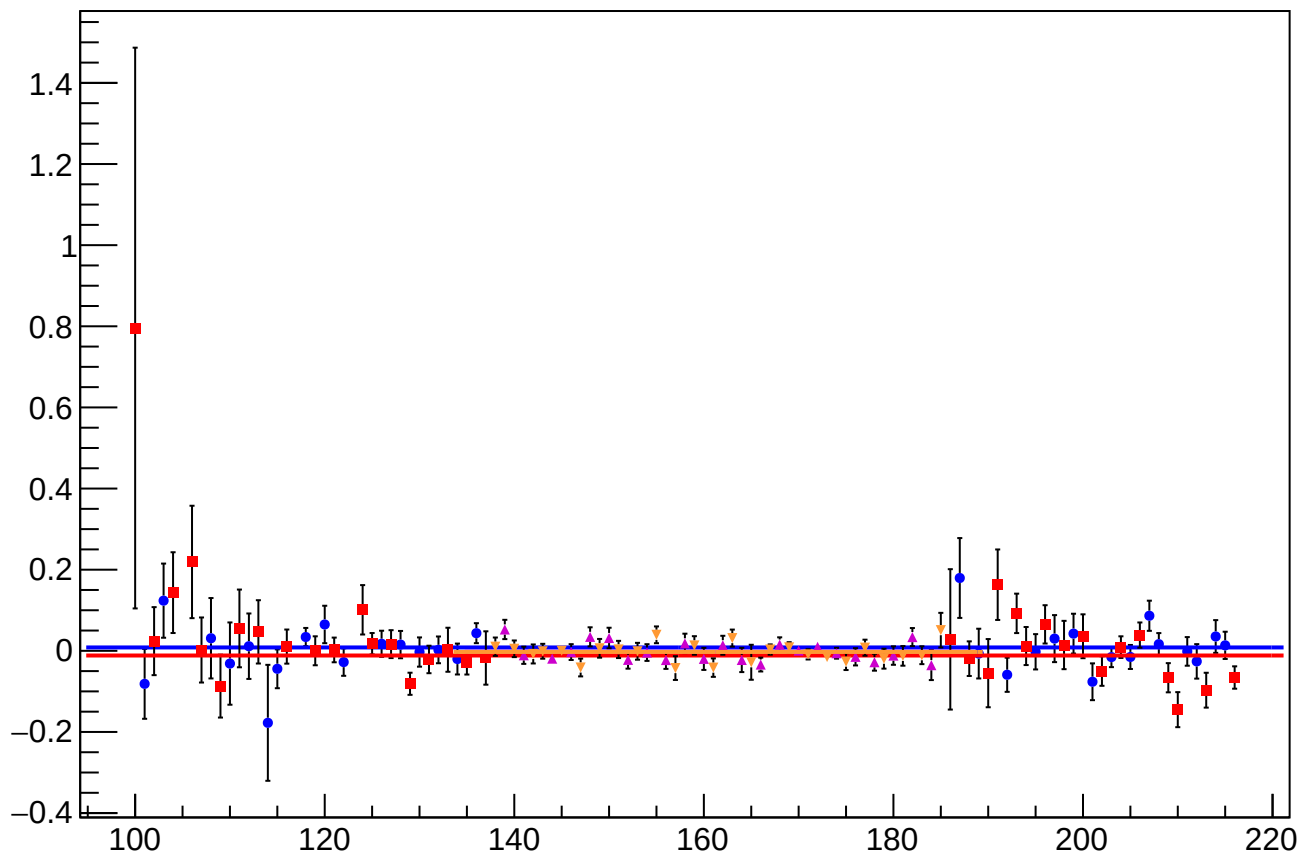
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1530752.8/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13934902.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27920403.5/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13981486.7/57

asym\_sam\_37\_26\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 58.6/34

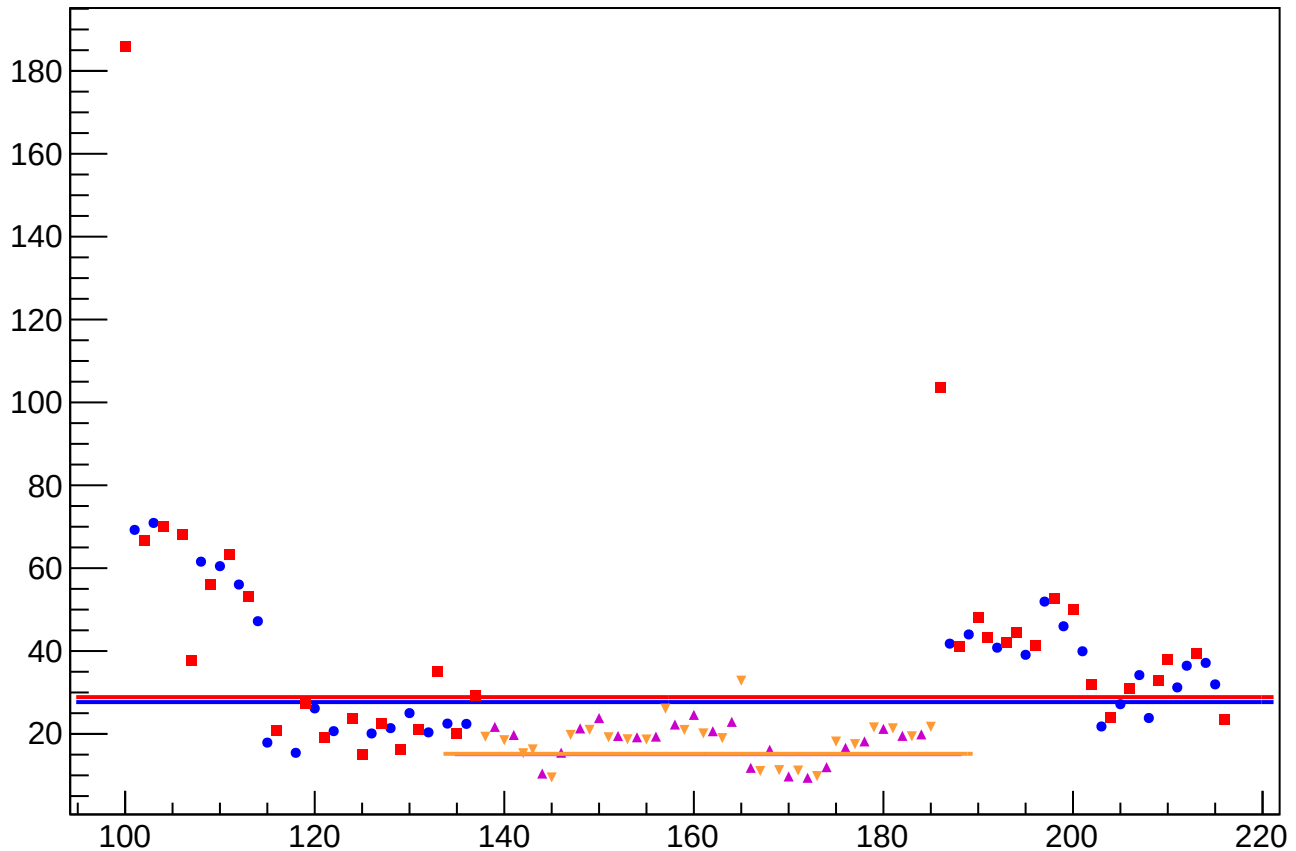
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.000 \pm 0.003$   $\chi^2/\text{NDF}$ : 54.3/55

All:  $-0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 141.8/113

- sign  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_37\_26\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 27.677 $\pm$ 0.005  $\chi^2$ /NDF: 4582370.9/30

Left Out: 15.202 $\pm$ 0.003  $\chi^2$ /NDF: 3441921.2/24

Right Out: 28.878 $\pm$ 0.005  $\chi^2$ /NDF: 5632080.4/34

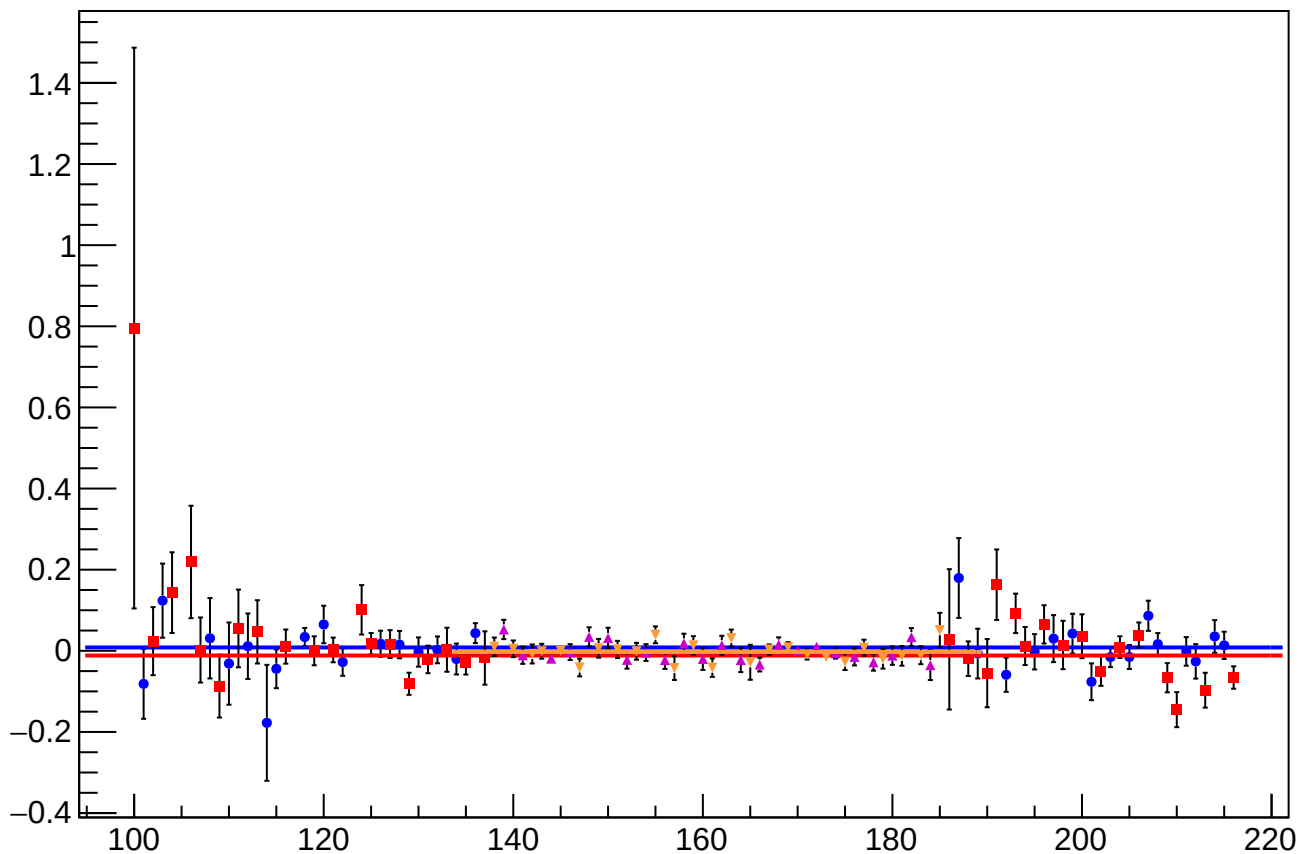
Left In: 15.116 $\pm$ 0.003  $\chi^2$ /NDF: 3402288.3/22

+ sign 17.959 $\pm$ 0.002  $\chi^2$ /NDF: 13035991.4/55

All: 18.034 $\pm$ 0.002  $\chi^2$ /NDF: 27711883.4/113

- sign 18.115 $\pm$ 0.002  $\chi^2$ /NDF: 14673701.5/57

asym\_sam\_37\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 58.6/34

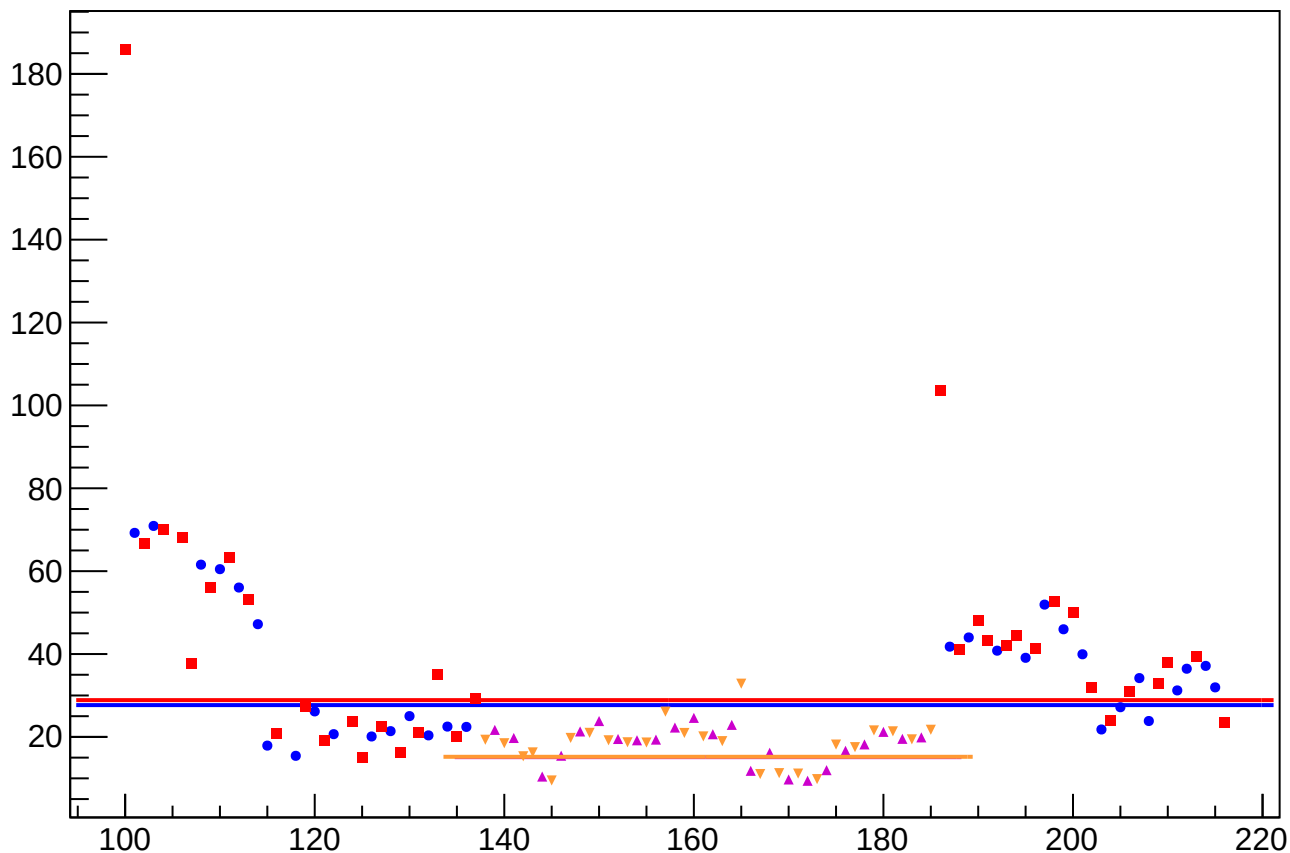
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.000 \pm 0.003$   $\chi^2/\text{NDF}$ : 54.3/55

All:  $-0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 141.8/113

- sign  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_37\_26\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $27.677 \pm 0.005$   $\chi^2/\text{NDF}: 4582370.9/30$

Left Out:  $15.202 \pm 0.003$   $\chi^2/\text{NDF}: 3441921.2/24$

Right Out:  $28.878 \pm 0.005$   $\chi^2/\text{NDF}: 5632080.4/34$

Left In:  $15.116 \pm 0.003$   $\chi^2/\text{NDF}: 3402288.3/22$

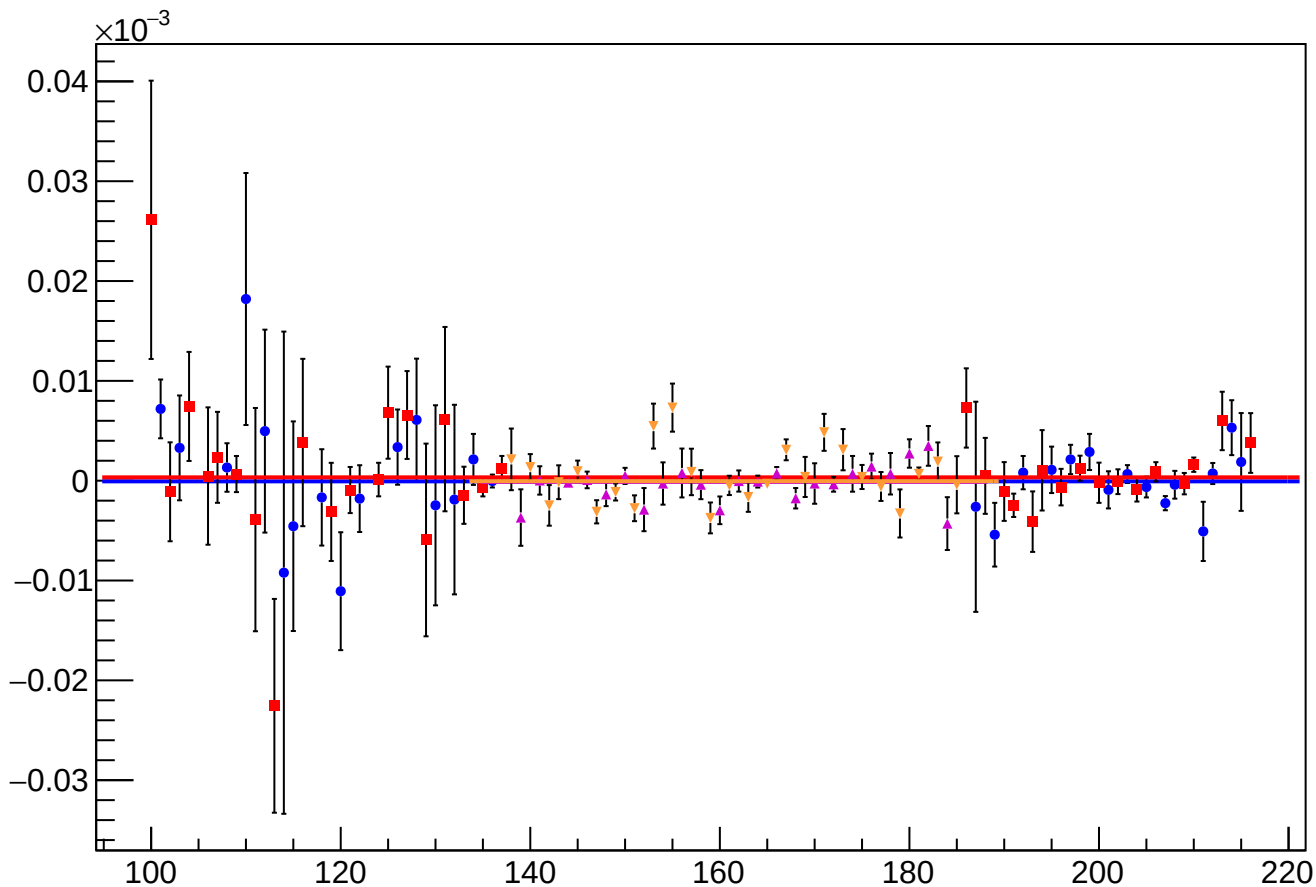
+ sign  $17.959 \pm 0.002$   $\chi^2/\text{NDF}: 13035991.4/55$

All:  $18.034 \pm 0.002$   $\chi^2/\text{NDF}: 27711883.4/113$

- sign  $18.115 \pm 0.002$   $\chi^2/\text{NDF}: 14673701.5/57$



asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.8/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.0/34

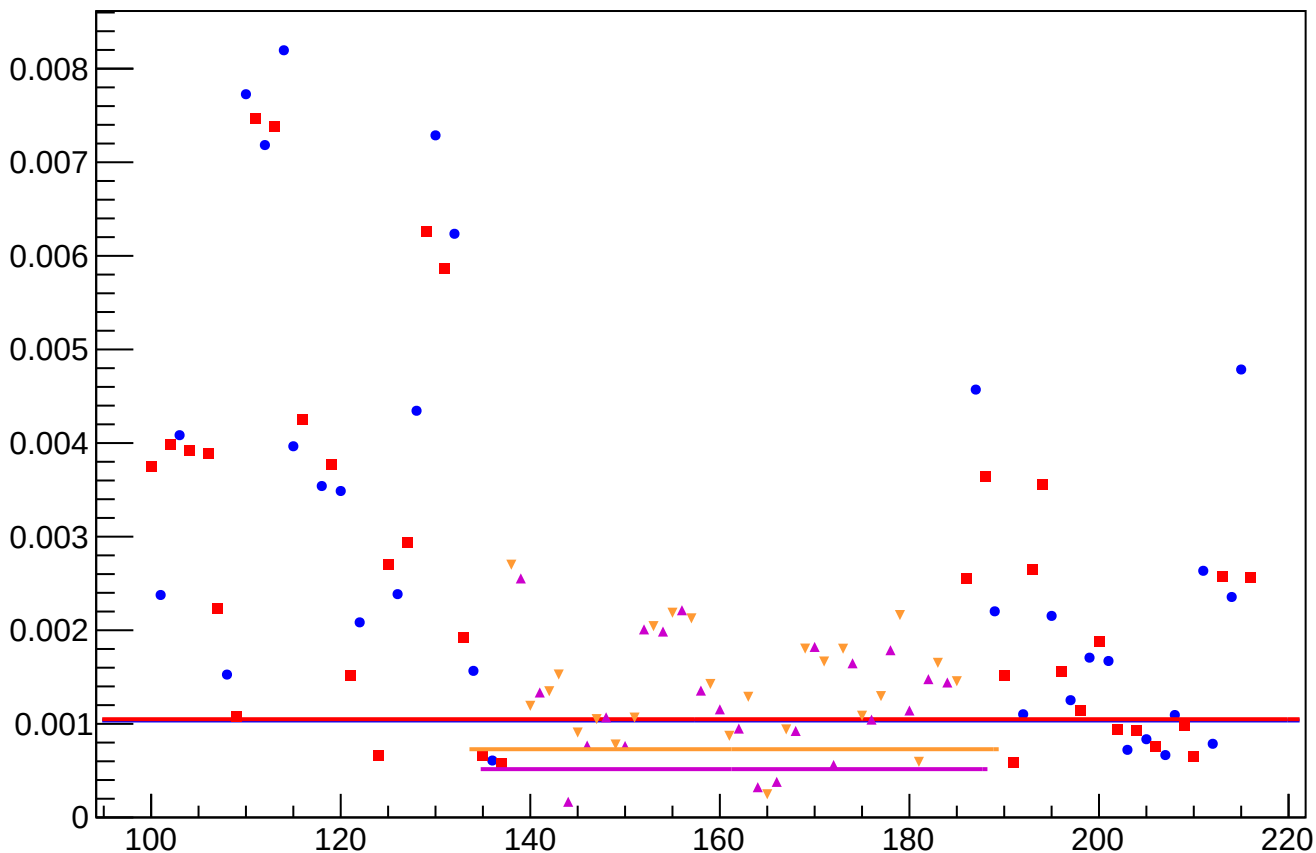
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25.5/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 105.1/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 172.4/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 67.2/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11749769.1/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13120515.6/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 12140767.1/34

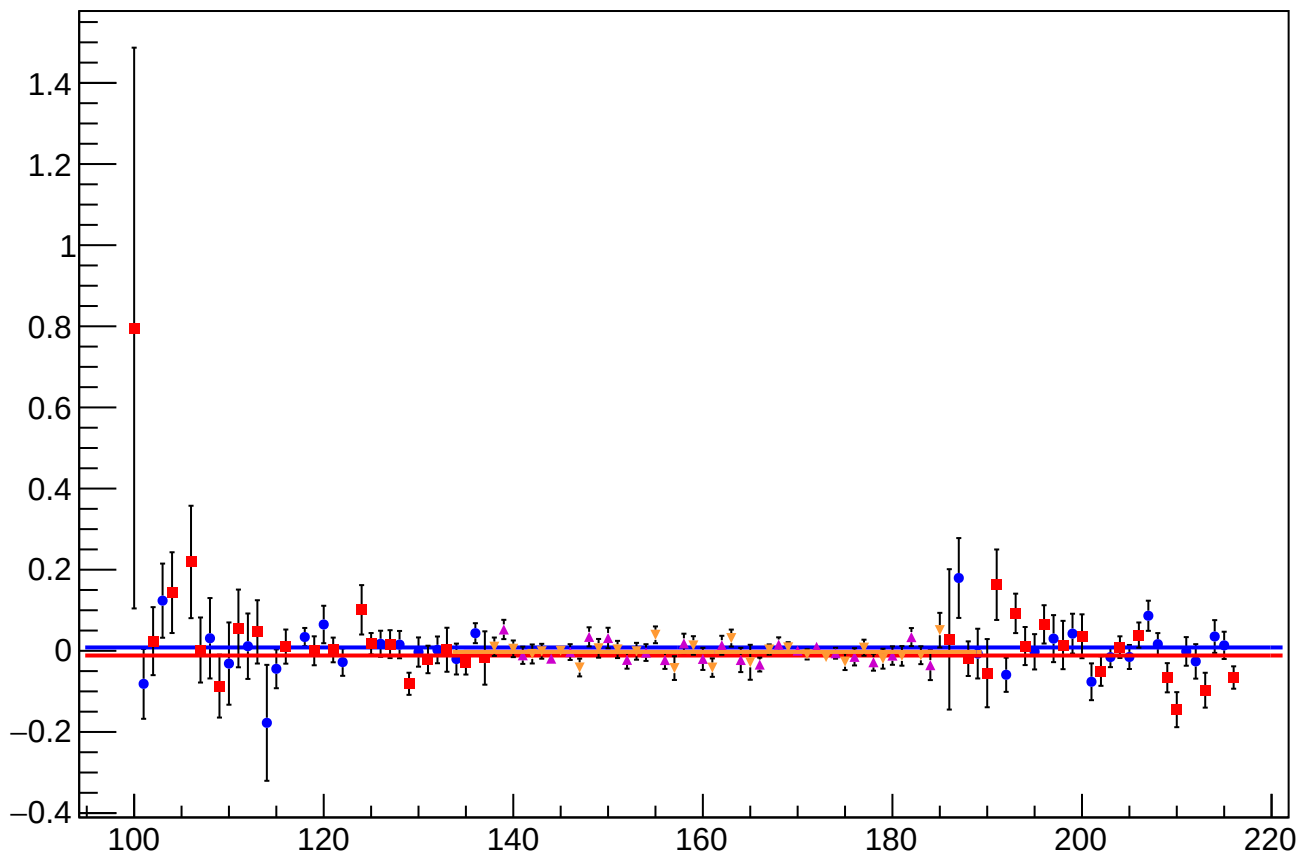
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15027708.0/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 26251616.8/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 59254492.7/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 31813877.0/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 58.6/34

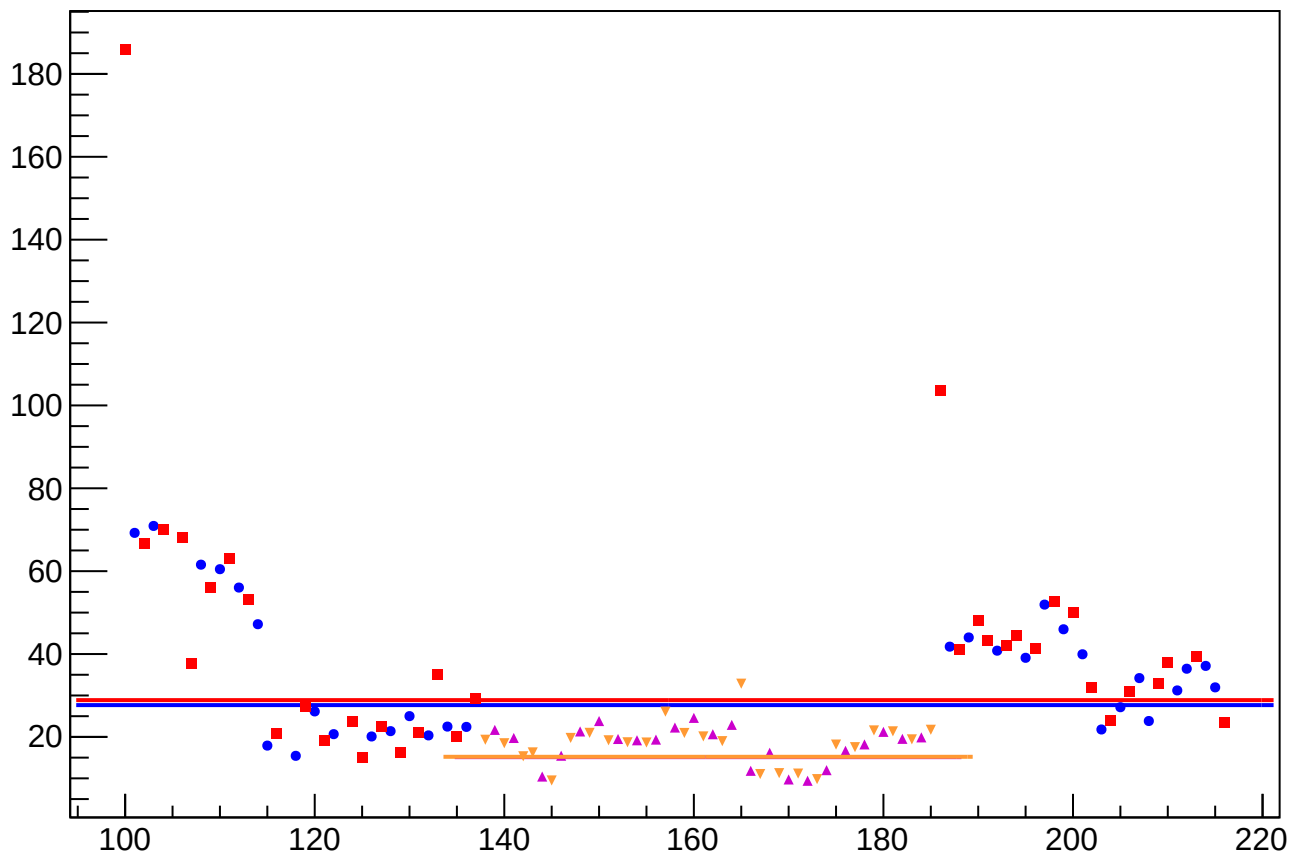
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.000 \pm 0.003$   $\chi^2/\text{NDF}$ : 54.3/55

All:  $-0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 141.8/113

- sign  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 27.676+/-0.005  $\chi^2/\text{NDF}$ : 4582741.5/30

Left Out: 15.202+/-0.003  $\chi^2/\text{NDF}$ : 3442015.2/24

Right Out: 28.878+/-0.005  $\chi^2/\text{NDF}$ : 5632217.7/34

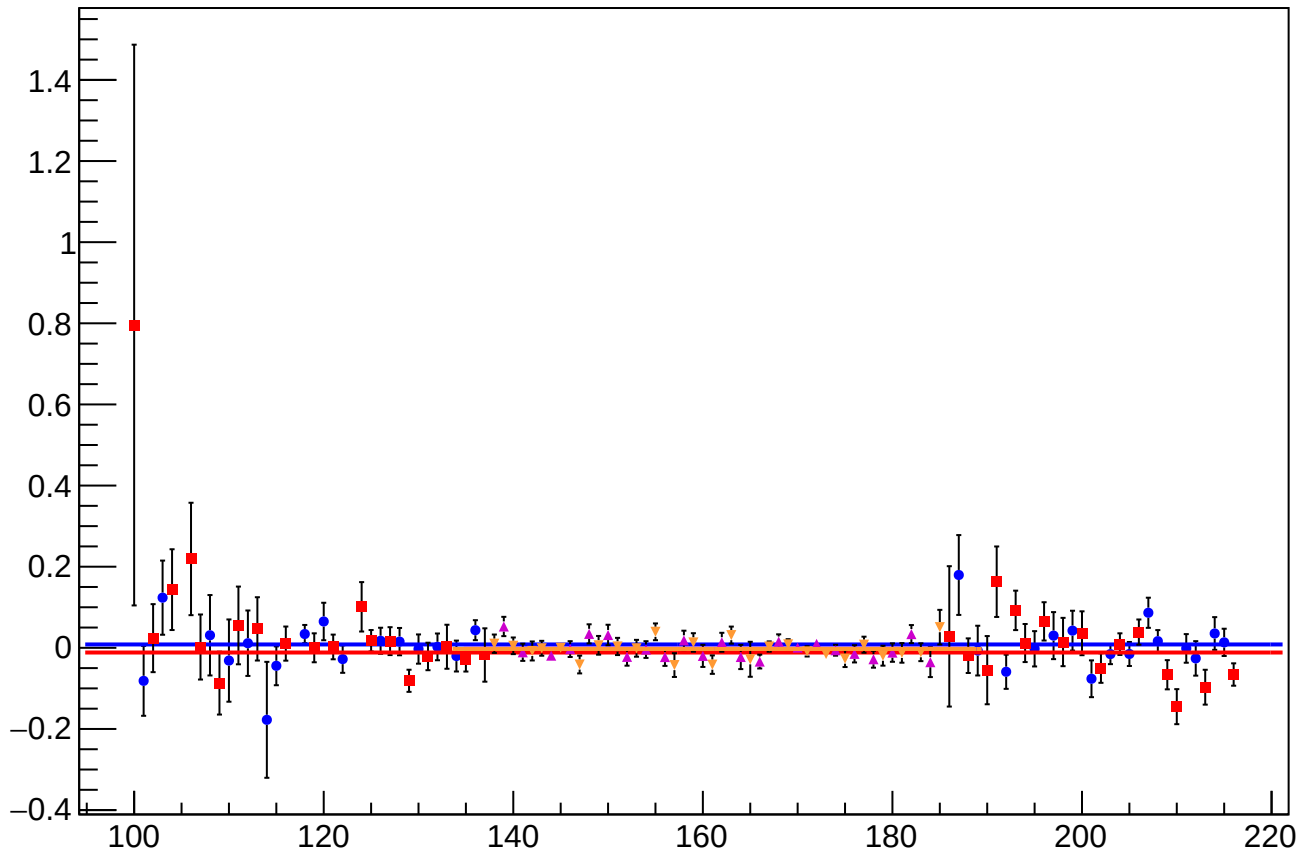
Left In: 15.117+/-0.003  $\chi^2/\text{NDF}$ : 3402318.1/22

+ sign 17.959+/-0.002  $\chi^2/\text{NDF}$ : 13036007.2/55

All: 18.034+/-0.002  $\chi^2/\text{NDF}$ : 27711932.8/113

- sign 18.115+/-0.002  $\chi^2/\text{NDF}$ : 14673732.0/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $0.008 \pm 0.007$   $\chi^2/\text{NDF}$ : 29.7/30

Left Out:  $-0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 22.6/24

Right Out:  $-0.012 \pm 0.007$   $\chi^2/\text{NDF}$ : 58.6/34

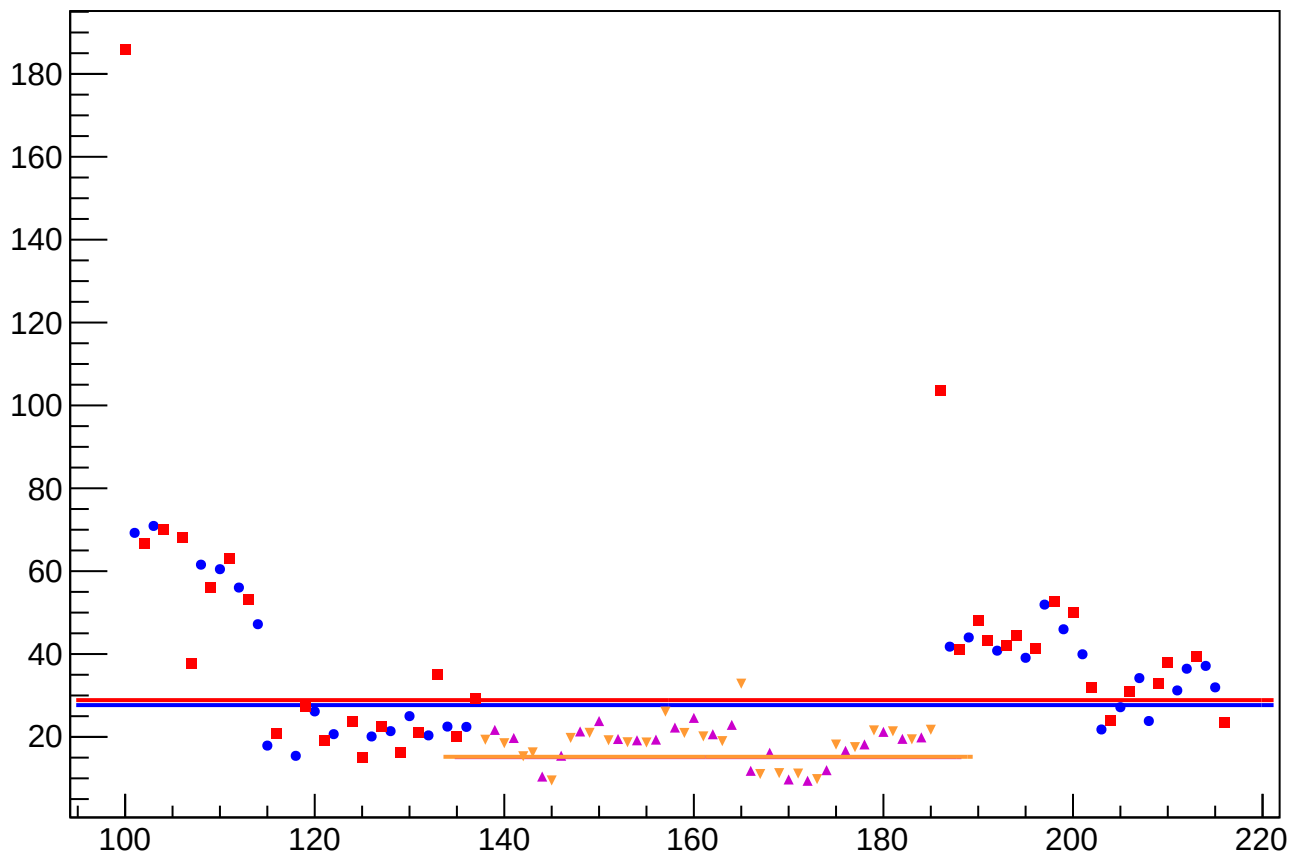
Left In:  $-0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $-0.000 \pm 0.003$   $\chi^2/\text{NDF}$ : 54.3/55

All:  $-0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 141.8/113

- sign  $-0.004 \pm 0.003$   $\chi^2/\text{NDF}$ : 86.8/57

asym\_sam\_37\_26\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 27.676 $\pm$ 0.005  $\chi^2$ /NDF: 4582741.5/30

Left Out: 15.202 $\pm$ 0.003  $\chi^2$ /NDF: 3442015.2/24

Right Out: 28.878 $\pm$ 0.005  $\chi^2$ /NDF: 5632217.7/34

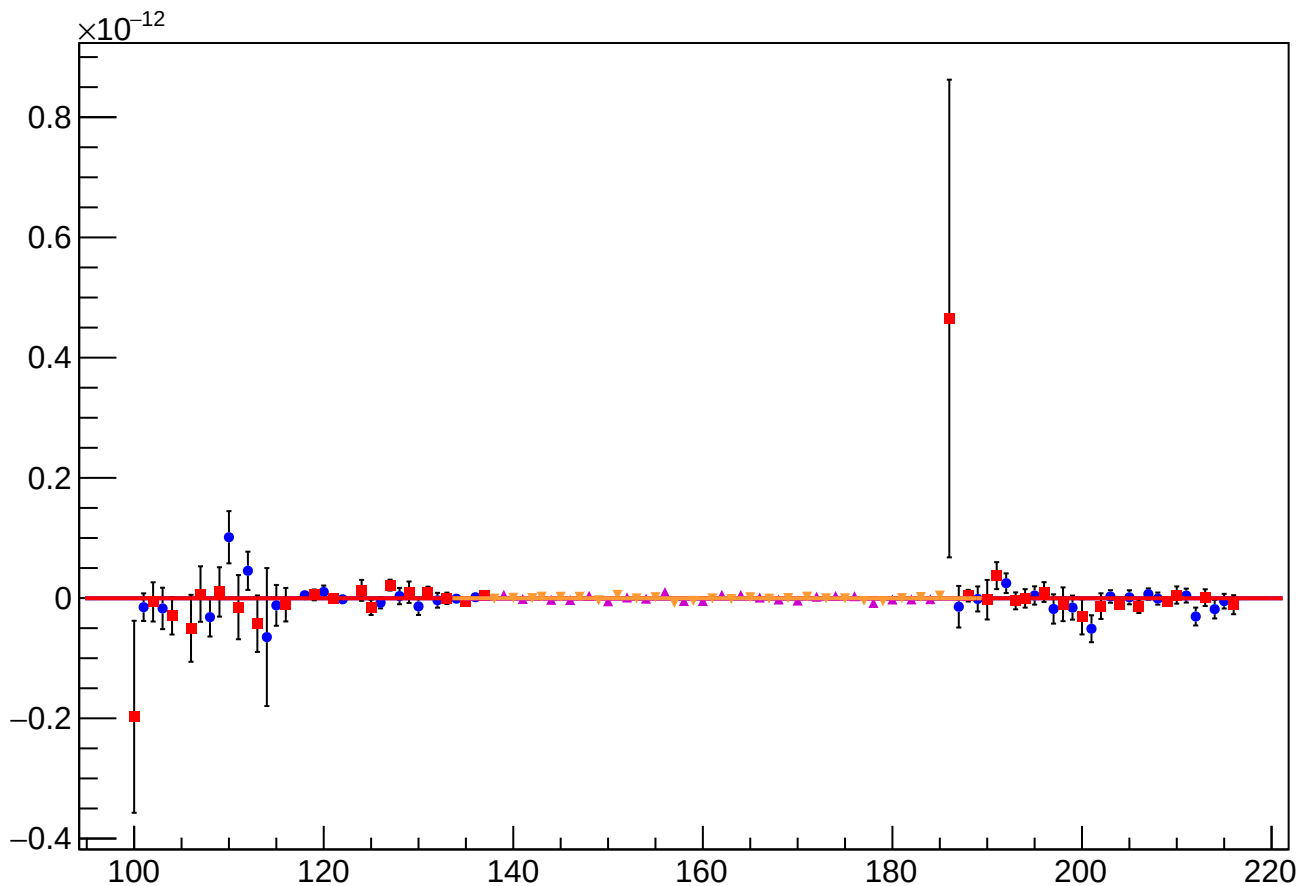
Left In: 15.117 $\pm$ 0.003  $\chi^2$ /NDF: 3402318.1/22

+ sign 17.959 $\pm$ 0.002  $\chi^2$ /NDF: 13036007.2/55

All: 18.034 $\pm$ 0.002  $\chi^2$ /NDF: 27711932.8/113

- sign 18.115 $\pm$ 0.002  $\chi^2$ /NDF: 14673732.0/57

asym\_sam\_37\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.4/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 21.4/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 27.0/34

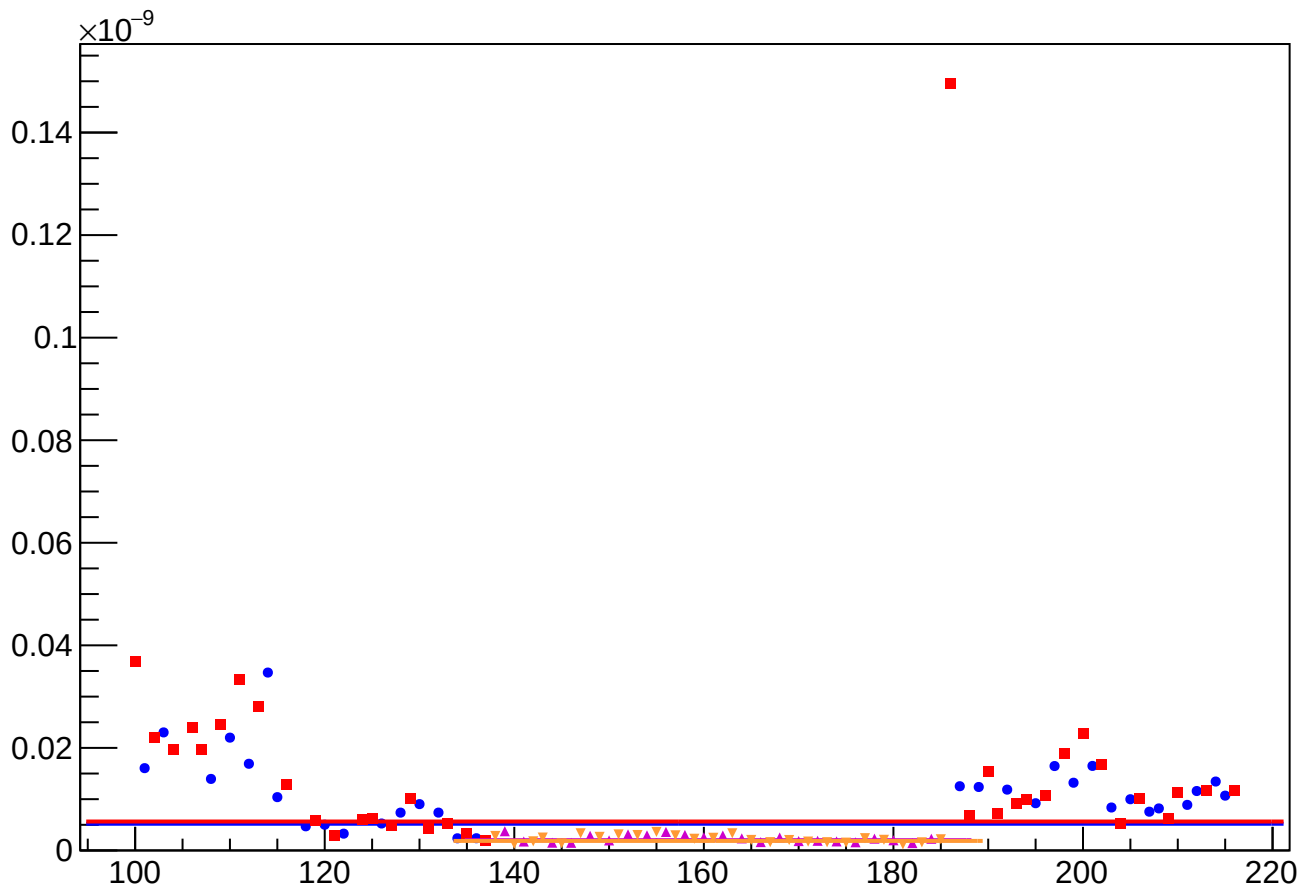
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 39.5/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.8/55

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 116.9/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 66.5/57

asym\_sam\_37\_26\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9166306.9/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2645485.0/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9190804.3/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1948585.8/22

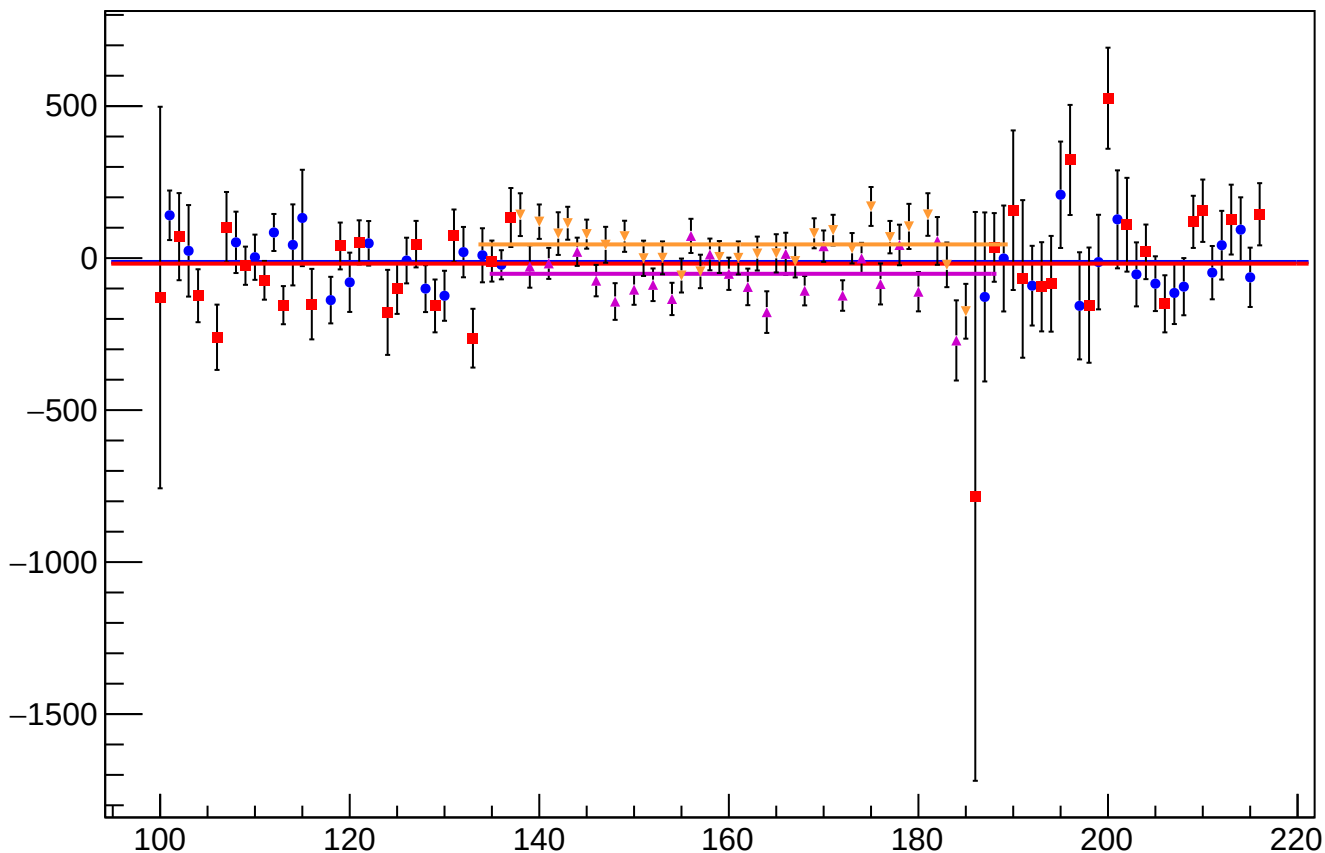
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18291444.4/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35997331.9/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 17607493.4/57



# reg\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-12.713 \pm 16.728$   $\chi^2/\text{NDF}: 22.6/30$

Left Out:  $45.093 \pm 11.495$   $\chi^2/\text{NDF}: 31.3/24$

Right Out:  $-18.200 \pm 16.739$   $\chi^2/\text{NDF}: 61.0/34$

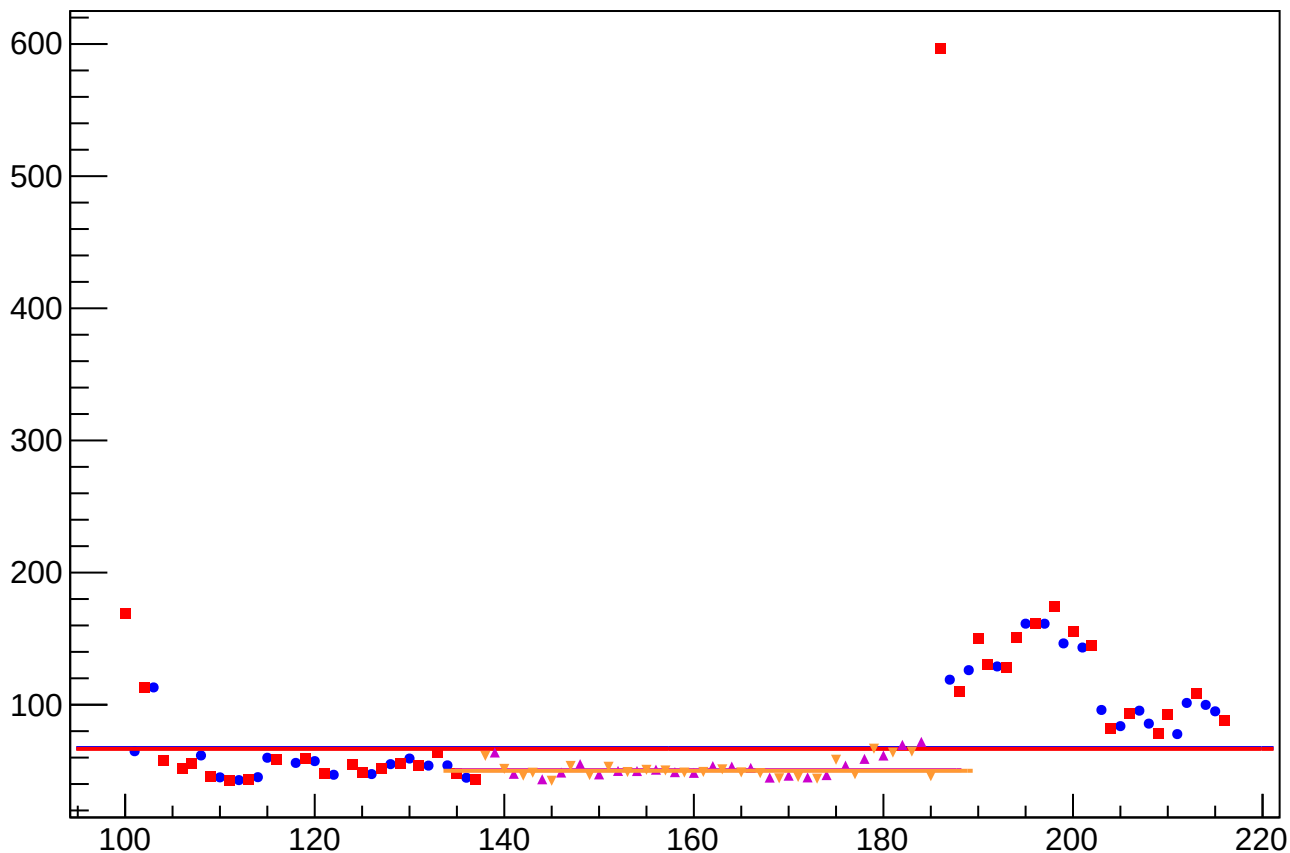
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}: 35.9/22$

+ sign  $26.553 \pm 9.474$   $\chi^2/\text{NDF}: 62.0/55$

All:  $-6.065 \pm 6.782$   $\chi^2/\text{NDF}: 185.8/113$

- sign  $-40.361 \pm 9.714$   $\chi^2/\text{NDF}: 99.5/57$

# reg\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 67.233+/-0.012  $\chi^2/\text{NDF}$ : 5567209.8/30

Left Out: 50.021+/-0.008  $\chi^2/\text{NDF}$ : 509100.0/24

Right Out: 66.600+/-0.012  $\chi^2/\text{NDF}$ : 7020809.7/34

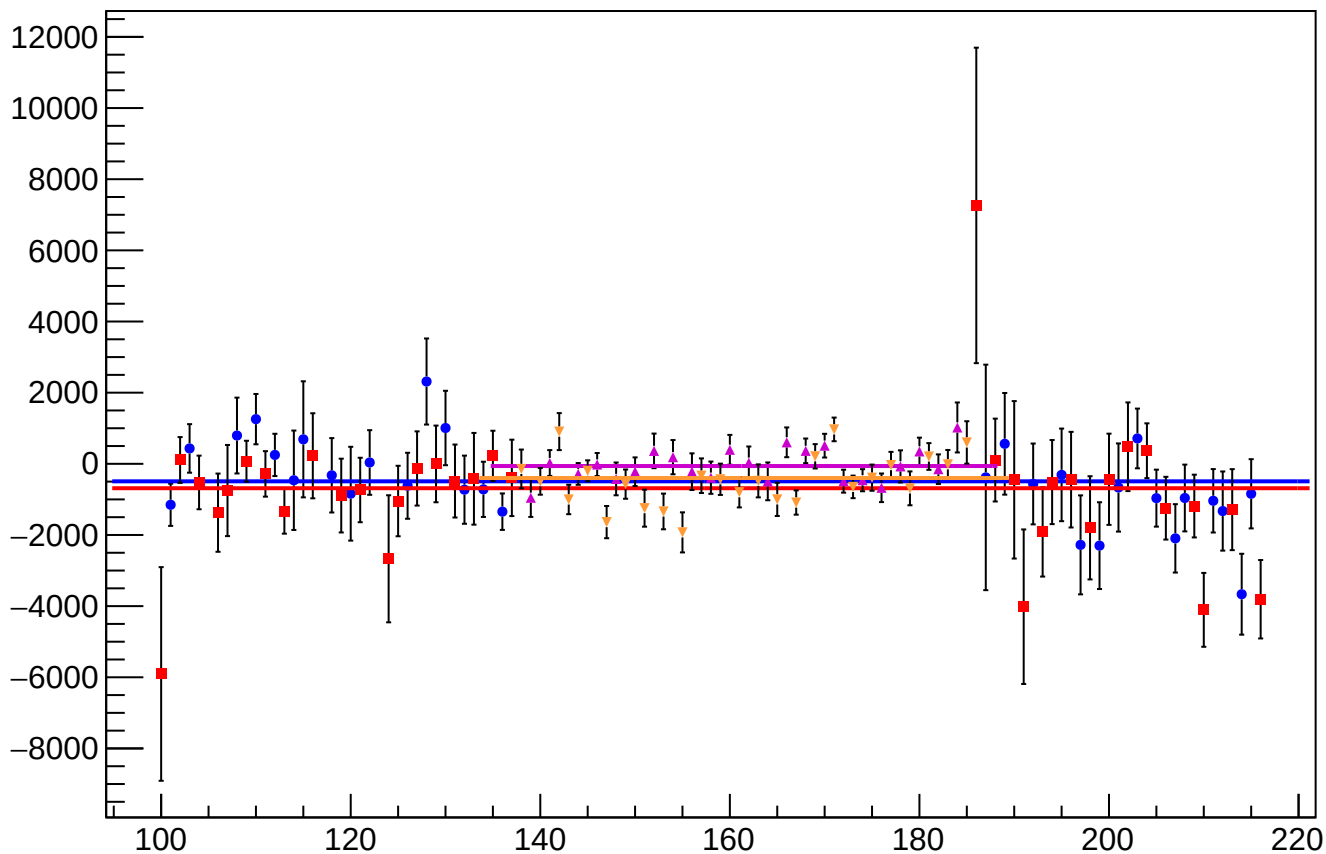
Left In: 50.512+/-0.008  $\chi^2/\text{NDF}$ : 503409.2/22

+ sign 55.541+/-0.007  $\chi^2/\text{NDF}$ : 7514573.8/55

All: 55.731+/-0.005  $\chi^2/\text{NDF}$ : 16265758.1/113

- sign 55.931+/-0.007  $\chi^2/\text{NDF}$ : 8749537.7/57

asym\_sam\_1357\_avg\_reg\_correction\_mean vs Slug



Right In: -491.873+/-165.531  $\chi^2/\text{NDF}$ : 42.3/30

Left Out: -399.363+/-82.064  $\chi^2/\text{NDF}$ : 65.4/24

Right Out: -686.081+/-167.441  $\chi^2/\text{NDF}$ : 42.9/34

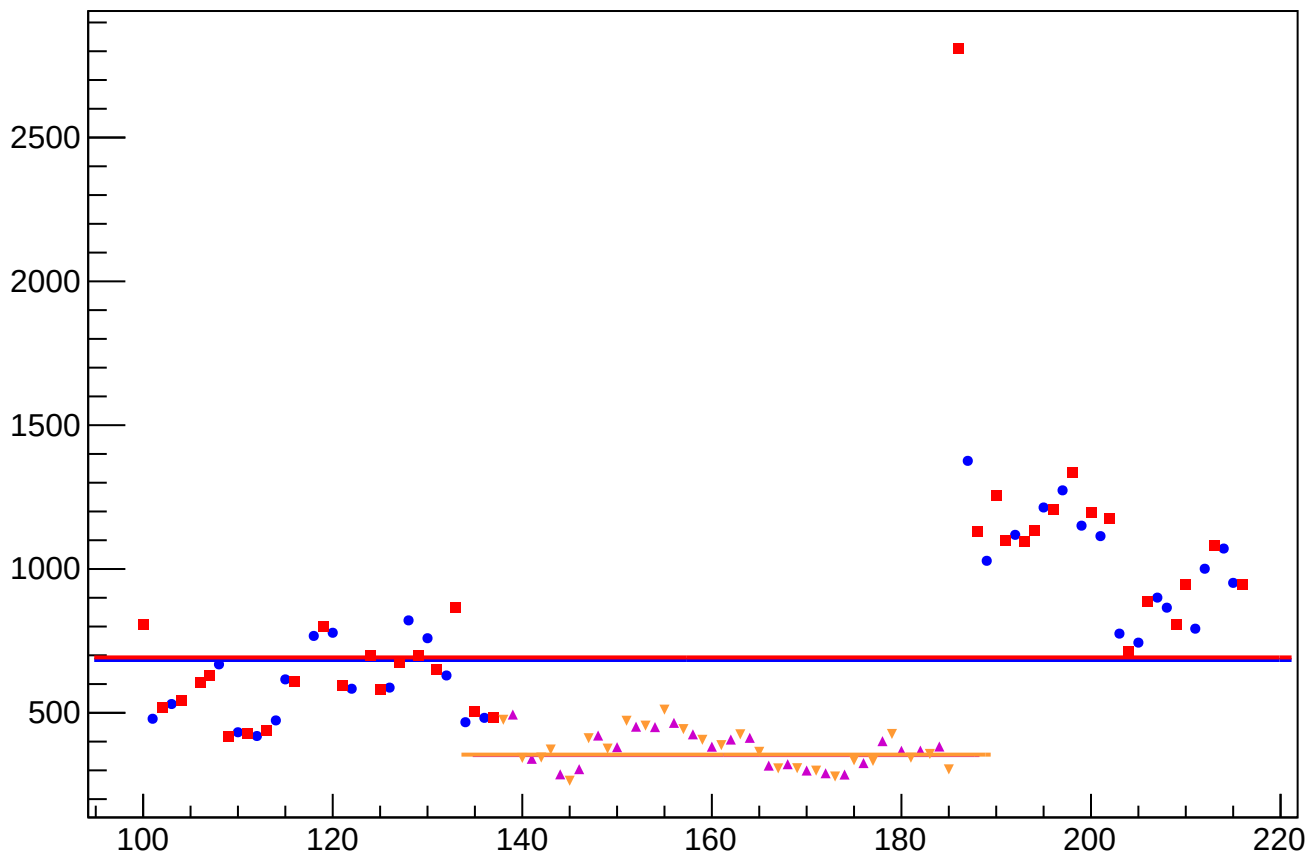
Left In: -62.038+/-83.892  $\chi^2/\text{NDF}$ : 23.9/22

+ sign -417.614+/-73.524  $\chi^2/\text{NDF}$ : 107.9/55

All: -304.732+/-52.505  $\chi^2/\text{NDF}$ : 190.7/113

- sign -187.257+/-75.005  $\chi^2/\text{NDF}$ : 77.9/57

asym\_sam\_1357\_avg\_reg\_correction\_rms vs Slug



Right In:  $683.702 \pm 0.117$   $\chi^2/\text{NDF}$ : 4129885.0/30

Left Out:  $354.670 \pm 0.058$   $\chi^2/\text{NDF}$ : 1145465.6/24

Right Out:  $692.629 \pm 0.118$   $\chi^2/\text{NDF}$ : 5026611.0/34

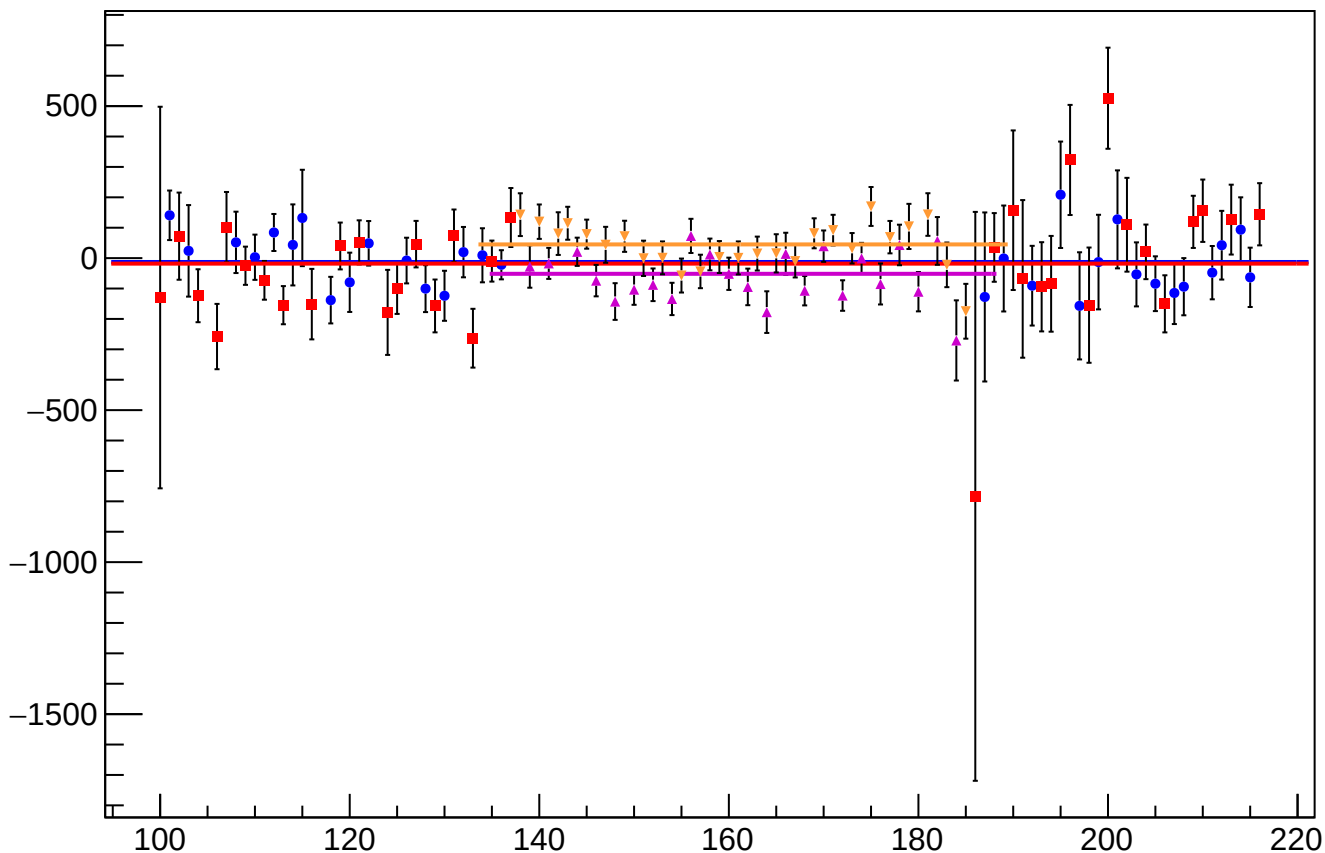
Left In:  $353.110 \pm 0.059$   $\chi^2/\text{NDF}$ : 1004127.0/22

+ sign  $419.584 \pm 0.052$   $\chi^2/\text{NDF}$ : 11618570.5/55

All:  $420.394 \pm 0.037$   $\chi^2/\text{NDF}$ : 24222871.7/11

- sign  $421.237 \pm 0.053$   $\chi^2/\text{NDF}$ : 12603806.2/57

# cor\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-12.717 \pm 16.728$   $\chi^2/\text{NDF}: 22.6/30$

Left Out:  $45.096 \pm 11.495$   $\chi^2/\text{NDF}: 31.3/24$

Right Out:  $-18.116 \pm 16.739$   $\chi^2/\text{NDF}: 60.9/34$

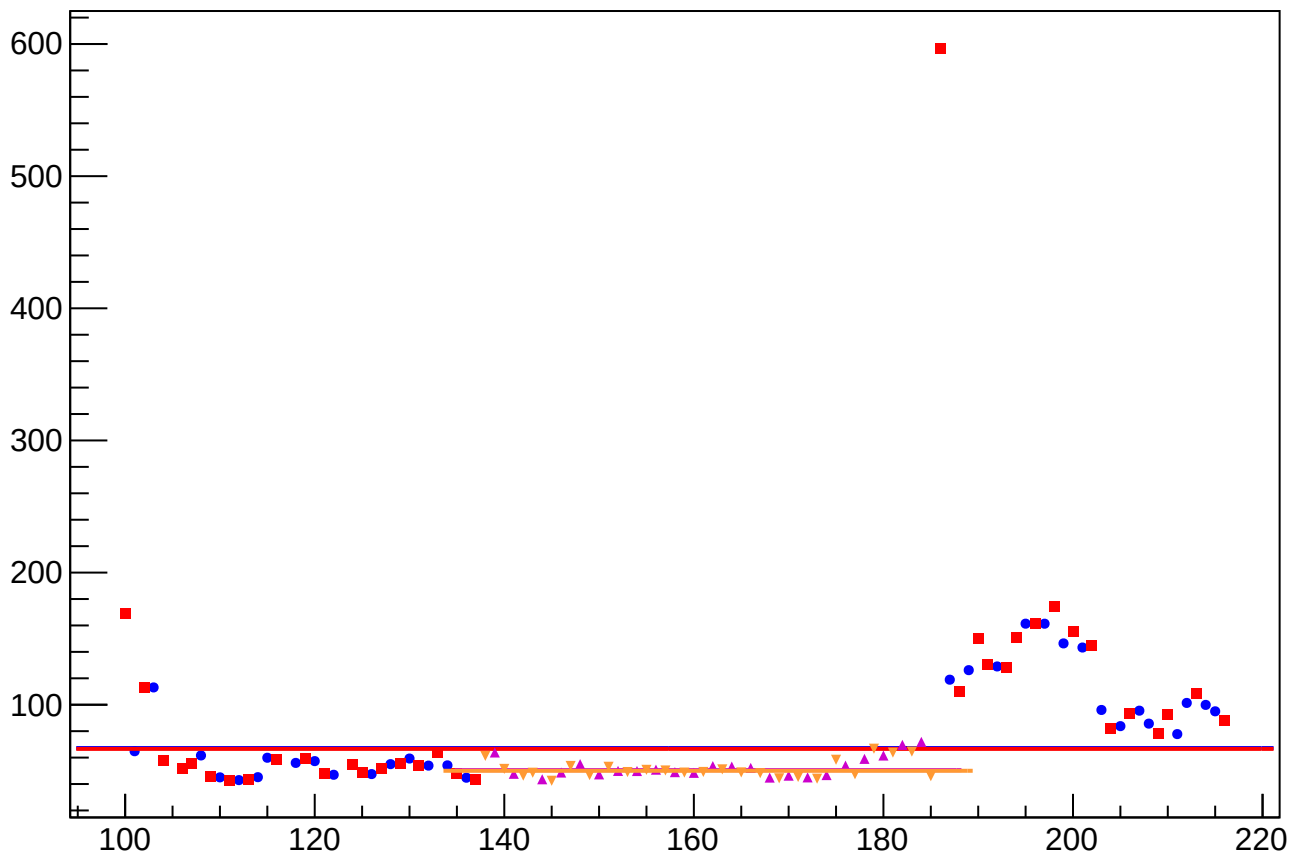
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}: 35.8/22$

+ sign  $26.554 \pm 9.474$   $\chi^2/\text{NDF}: 62.0/55$

All:  $-6.050 \pm 6.782$   $\chi^2/\text{NDF}: 185.7/113$

- sign  $-40.333 \pm 9.714$   $\chi^2/\text{NDF}: 99.4/57$

cor\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 67.233+/-0.012  $\chi^2/\text{NDF}$ : 5567212.1/30

Left Out: 50.021+/-0.008  $\chi^2/\text{NDF}$ : 509100.0/24

Right Out: 66.593+/-0.012  $\chi^2/\text{NDF}$ : 7022579.9/34

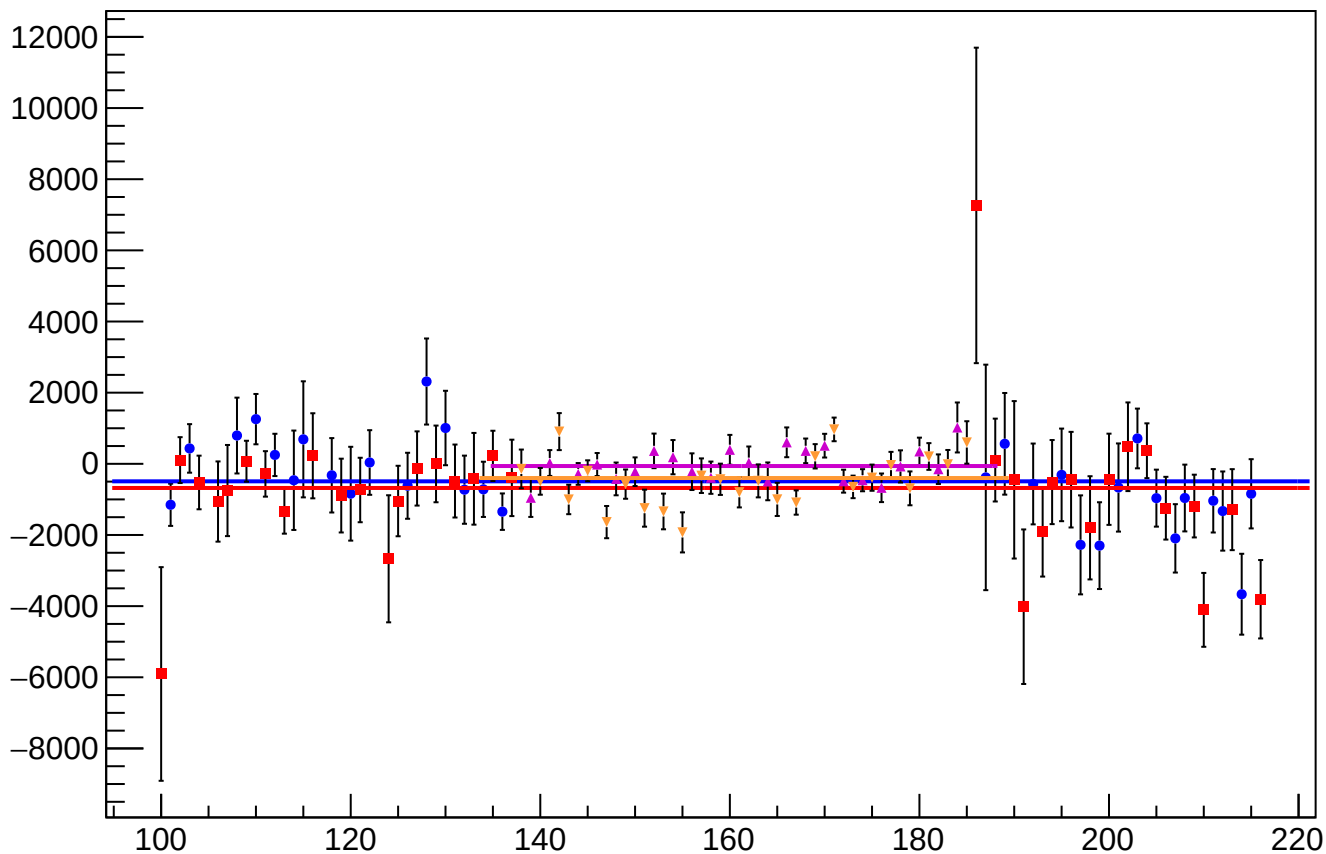
Left In: 50.512+/-0.008  $\chi^2/\text{NDF}$ : 503409.2/22

+ sign 55.541+/-0.007  $\chi^2/\text{NDF}$ : 7514576.1/55

All: 55.730+/-0.005  $\chi^2/\text{NDF}$ : 16266423.6/113

- sign 55.928+/-0.007  $\chi^2/\text{NDF}$ : 8750221.7/57

asym\_sam\_1357\_avg\_cor\_correction\_mean vs Slug



Right In:  $-491.862 \pm 165.532$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-399.358 \pm 82.064$   $\chi^2/\text{NDF}$ : 65.4/24

Right Out:  $-678.721 \pm 167.548$   $\chi^2/\text{NDF}$ : 42.6/34

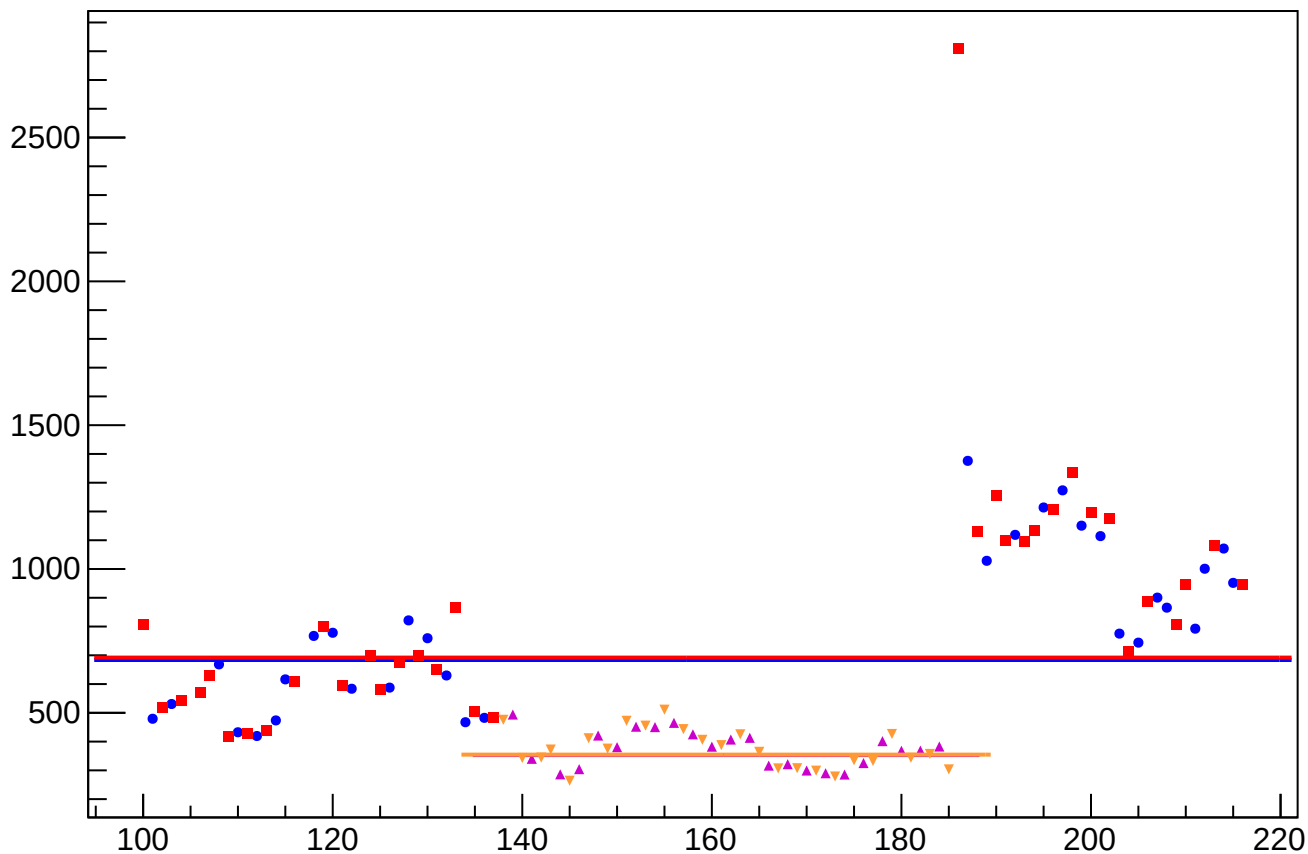
Left In:  $-62.038 \pm 83.892$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-417.608 \pm 73.524$   $\chi^2/\text{NDF}$ : 107.9/55

All:  $-303.957 \pm 52.508$   $\chi^2/\text{NDF}$ : 190.2/113

- sign  $-185.653 \pm 75.014$   $\chi^2/\text{NDF}$ : 77.4/57

asym\_sam\_1357\_avg\_cor\_correction\_rms vs Slug



Right In:  $683.708 \pm 0.117$   $\chi^2/\text{NDF}$ : 4129790.2/30

Left Out:  $354.670 \pm 0.058$   $\chi^2/\text{NDF}$ : 1145468.3/24

Right Out:  $692.000 \pm 0.118$   $\chi^2/\text{NDF}$ : 5036512.9/34

Left In:  $353.110 \pm 0.059$   $\chi^2/\text{NDF}$ : 1004126.9/22

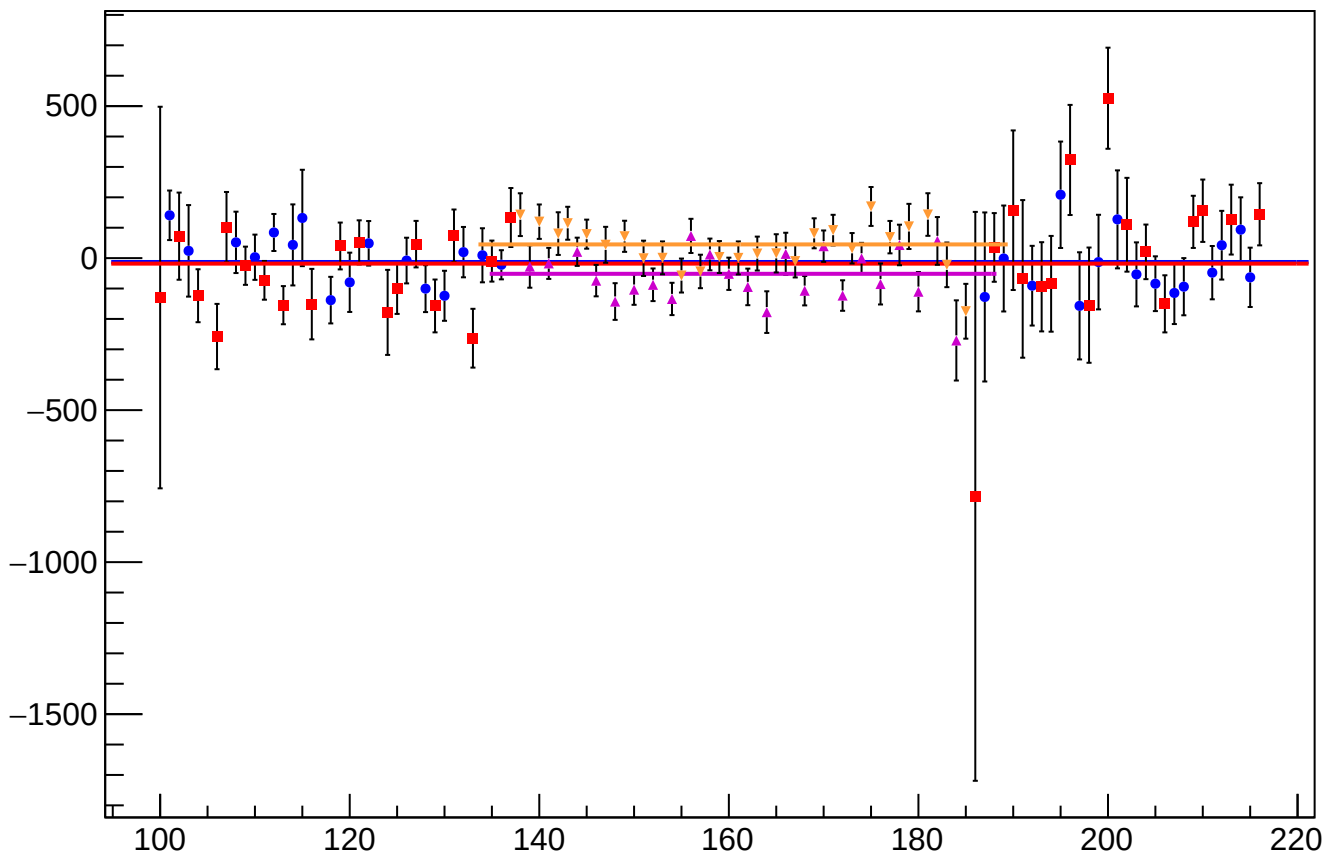
+ sign  $419.585 \pm 0.052$   $\chi^2/\text{NDF}$ : 11618624.7/55

All:  $420.298 \pm 0.037$   $\chi^2/\text{NDF}$ : 24201711.7/11

- sign  $421.041 \pm 0.053$   $\chi^2/\text{NDF}$ : 12582702.4/57



# eigen\_cor\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-12.717 \pm 16.728$   $\chi^2/\text{NDF}$ : 22.6/30

Left Out:  $45.096 \pm 11.495$   $\chi^2/\text{NDF}$ : 31.3/24

Right Out:  $-18.116 \pm 16.739$   $\chi^2/\text{NDF}$ : 60.9/34

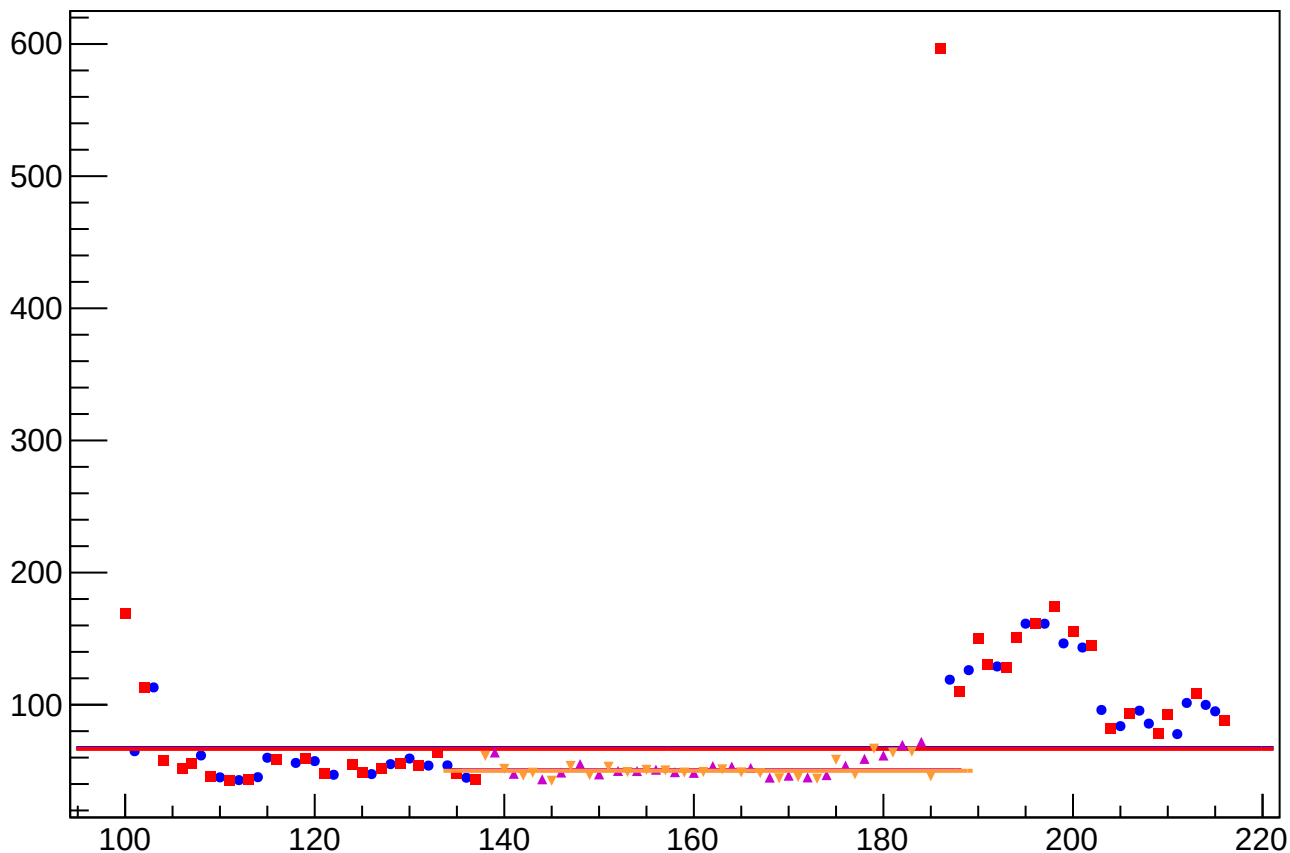
Left In:  $-51.616 \pm 11.929$   $\chi^2/\text{NDF}$ : 35.8/22

+ sign  $26.554 \pm 9.474$   $\chi^2/\text{NDF}$ : 62.0/55

All:  $-6.050 \pm 6.782$   $\chi^2/\text{NDF}$ : 185.7/113

- sign  $-40.333 \pm 9.714$   $\chi^2/\text{NDF}$ : 99.4/57

# eigen\_cor\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 67.233+/-0.012     $\chi^2/\text{NDF}$ : 5567212.1/30

Left Out: 50.021+/-0.008     $\chi^2/\text{NDF}$ : 509100.0/24

Right Out: 66.593+/-0.012     $\chi^2/\text{NDF}$ : 7022579.9/34

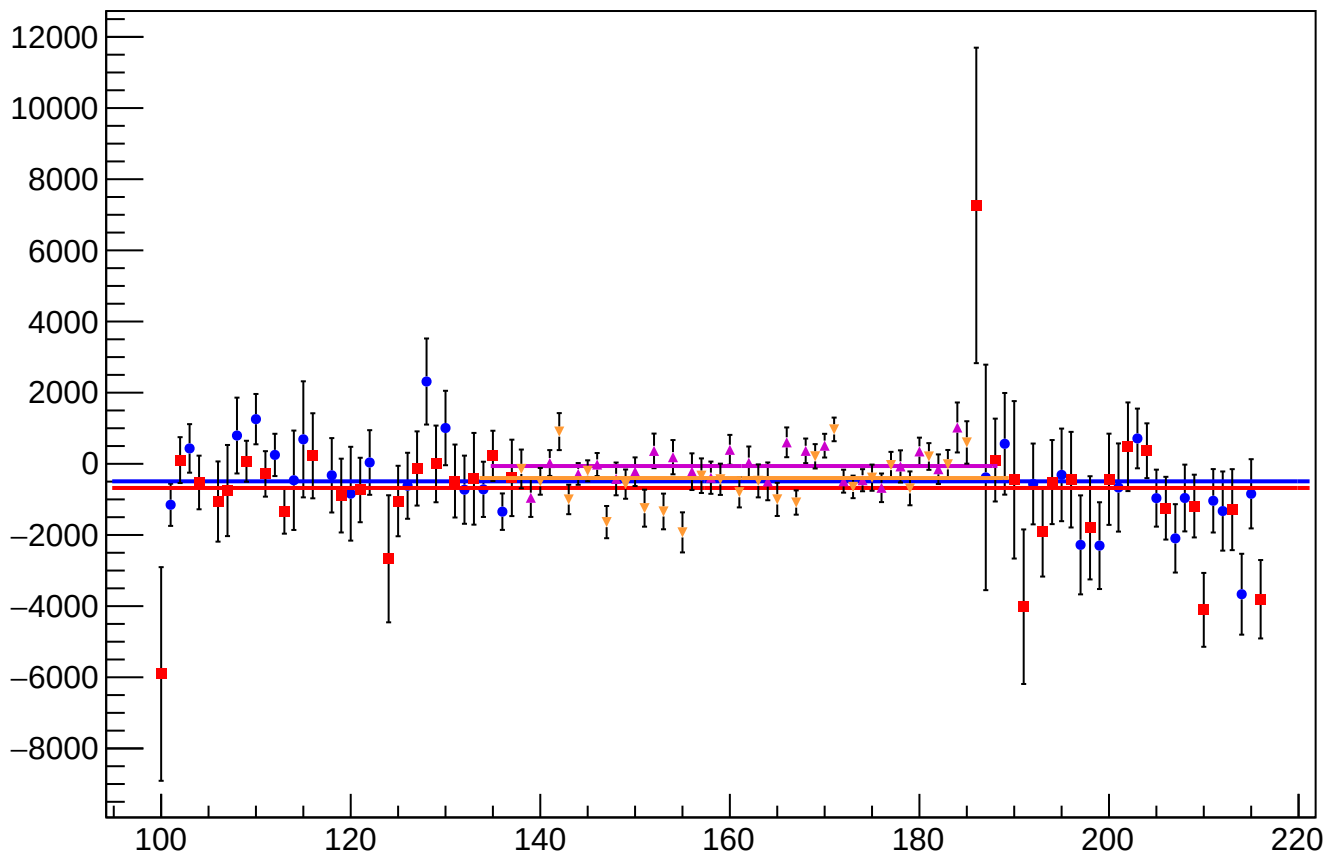
Left In: 50.512+/-0.008     $\chi^2/\text{NDF}$ : 503409.2/22

+ sign 55.541+/-0.007     $\chi^2/\text{NDF}$ : 7514576.1/55

All: 55.730+/-0.005     $\chi^2/\text{NDF}$ : 16266423.6/113

- sign 55.928+/-0.007     $\chi^2/\text{NDF}$ : 8750221.7/57

asym\_sam\_1357\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-491.862 \pm 165.532$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-399.358 \pm 82.064$   $\chi^2/\text{NDF}$ : 65.4/24

Right Out:  $-678.721 \pm 167.548$   $\chi^2/\text{NDF}$ : 42.6/34

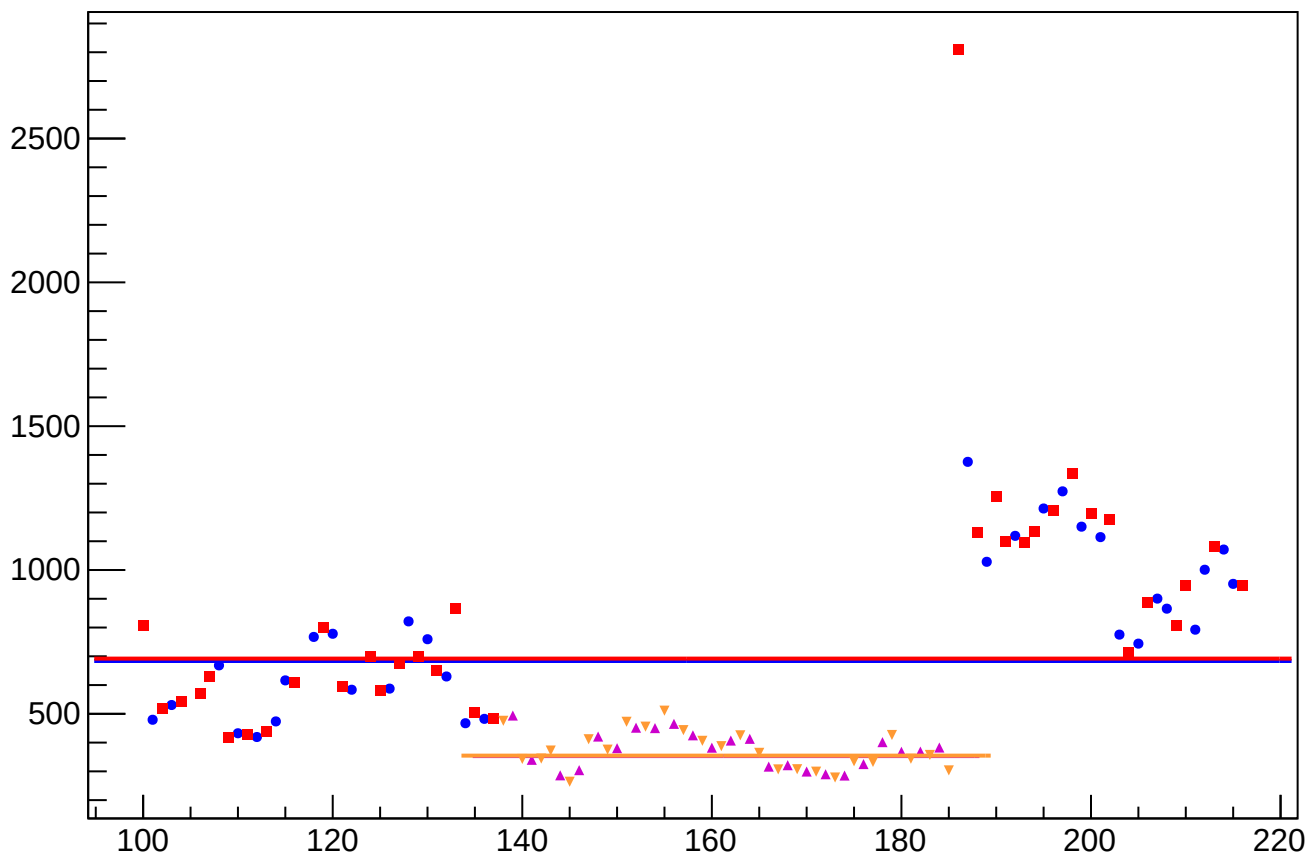
Left In:  $-62.038 \pm 83.892$   $\chi^2/\text{NDF}$ : 23.9/22

+ sign  $-417.608 \pm 73.524$   $\chi^2/\text{NDF}$ : 107.9/55

All:  $-303.957 \pm 52.508$   $\chi^2/\text{NDF}$ : 190.2/113

- sign  $-185.653 \pm 75.014$   $\chi^2/\text{NDF}$ : 77.4/57

asym\_sam\_1357\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 683.708 $\pm$ 0.117  $\chi^2$ /NDF: 4129790.2/30

Left Out: 354.670 $\pm$ 0.058  $\chi^2$ /NDF:1145468.3/24

Right Out: 692.000 $\pm$ 0.118  $\chi^2$ /NDF: 5036512.9/34

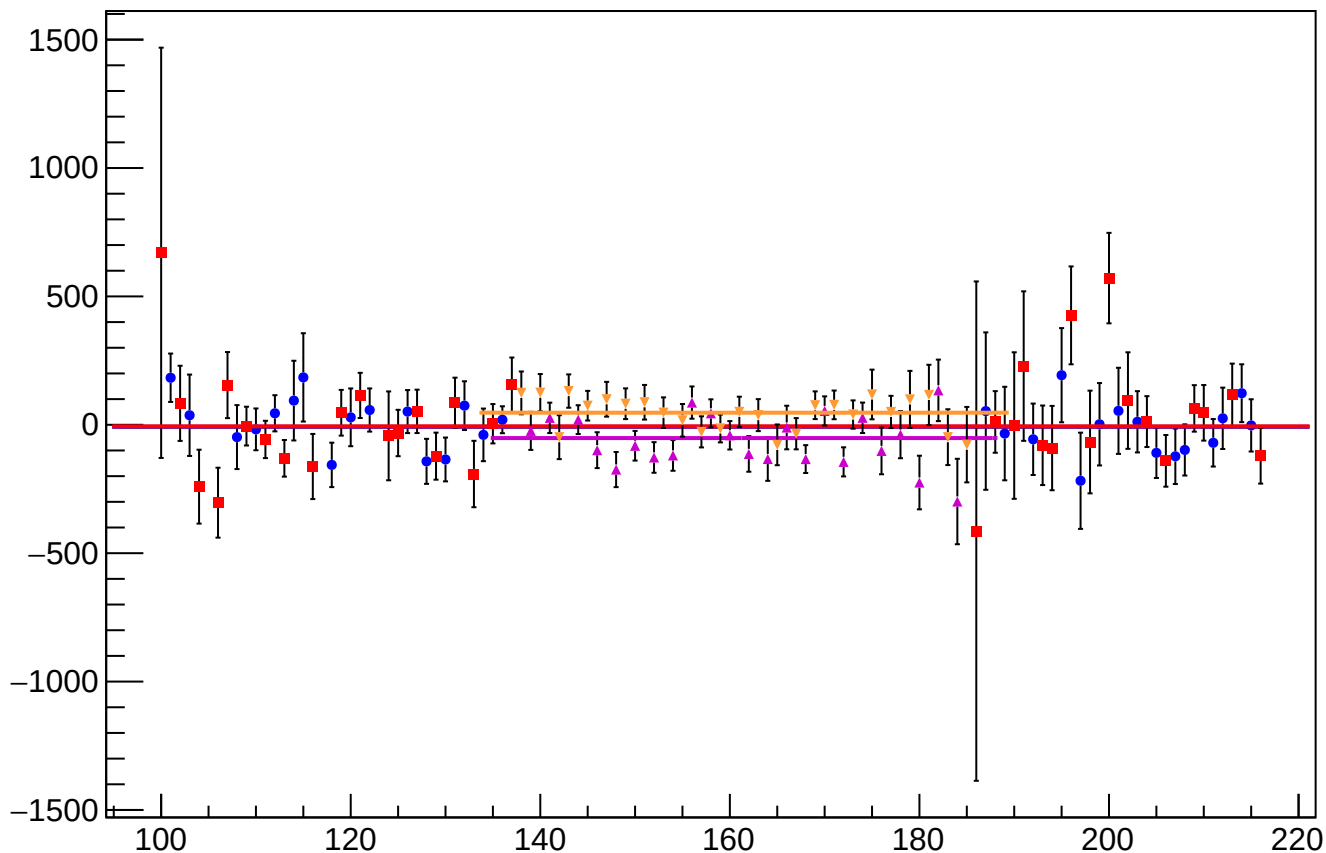
Left In: 353.110 $\pm$ 0.059  $\chi^2$ /NDF:1004126.9/22

+ sign 419.585 $\pm$ 0.052  $\chi^2$ /NDF: 11618624.7/55

All: 420.298 $\pm$ 0.037  $\chi^2$ /NDF: 24201711.7/11

- sign 421.041 $\pm$ 0.053  $\chi^2$ /NDF: 12582702.4/57

dit\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-7.735 \pm 18.482$   $\chi^2/\text{NDF}$ : 24.1/30

Left Out:  $47.151 \pm 13.511$   $\chi^2/\text{NDF}$ : 17.0/24

Right Out:  $-6.063 \pm 18.980$   $\chi^2/\text{NDF}$ : 47.2/34

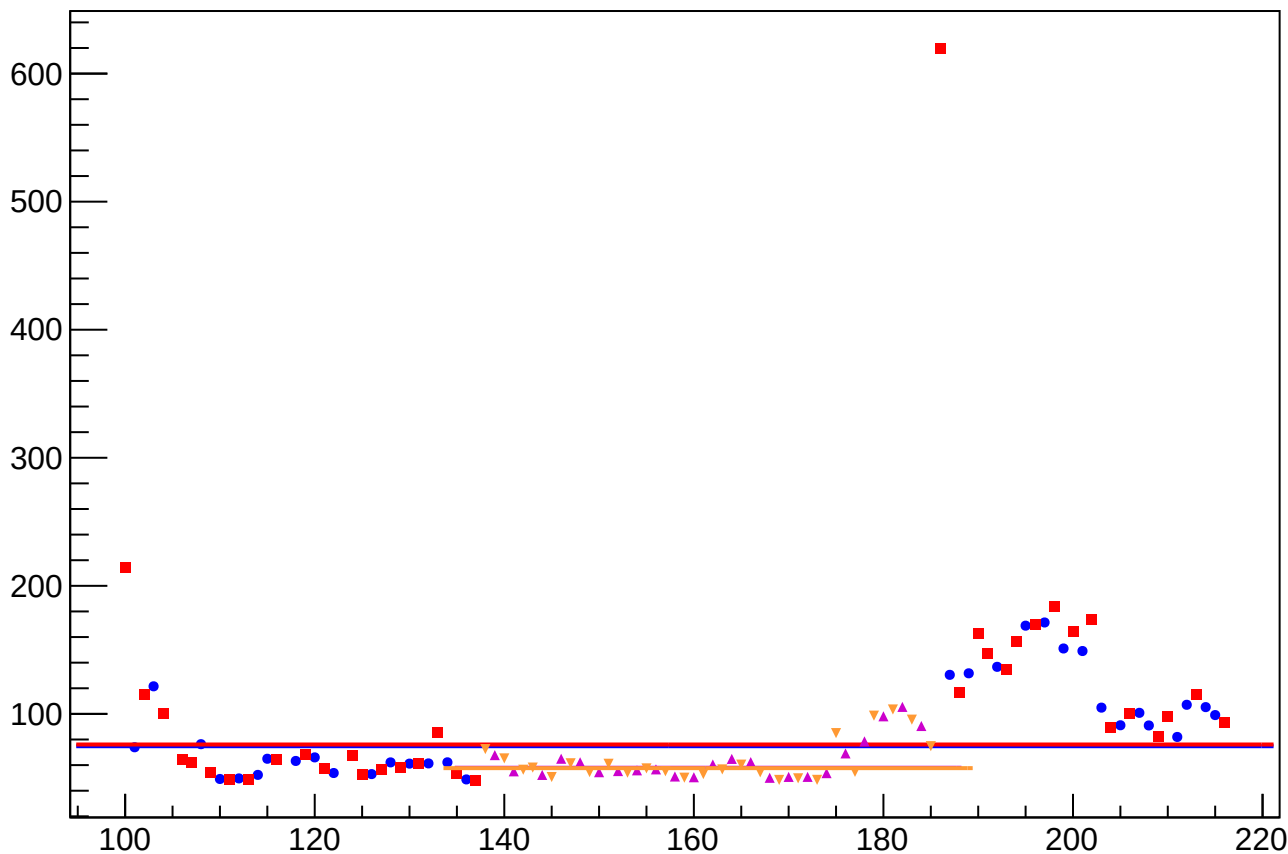
Left In:  $-51.652 \pm 13.934$   $\chi^2/\text{NDF}$ : 38.2/22

+ sign  $28.035 \pm 10.907$   $\chi^2/\text{NDF}$ : 46.9/55

All:  $-2.893 \pm 7.825$   $\chi^2/\text{NDF}$ : 152.6/113

- sign  $-35.687 \pm 11.232$   $\chi^2/\text{NDF}$ : 89.2/57

# dit\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 74.755 $\pm$ 0.013  $\chi^2$ /NDF: 4969507.4/30

Left Out: 57.631 $\pm$ 0.010  $\chi^2$ /NDF: 1365448.6/24

Right Out: 76.099 $\pm$ 0.013  $\chi^2$ /NDF: 6375675.6/34

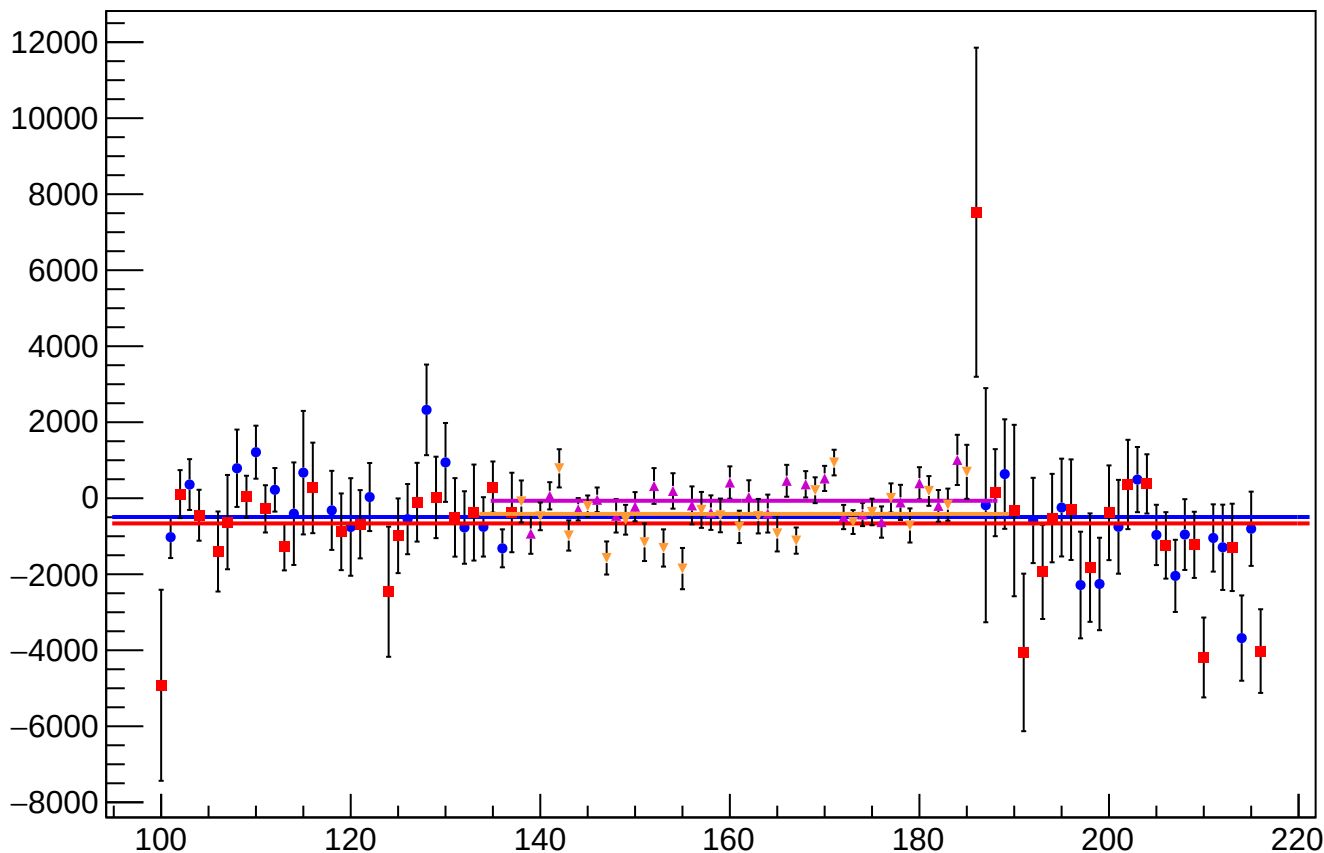
Left In: 57.940 $\pm$ 0.010  $\chi^2$ /NDF: 1124523.3/22

+ sign 63.595 $\pm$ 0.008  $\chi^2$ /NDF: 7453887.4/55

All: 63.937 $\pm$ 0.006  $\chi^2$ /NDF: 16147640.3/113

- sign 64.299 $\pm$ 0.008  $\chi^2$ /NDF: 8689711.3/57

# asym\_sam\_1357\_avg\_dit\_correction\_mean vs Slug



Right In: -494.187 $\pm$ 162.653  $\chi^2/\text{NDF}$ : 41.1/30

Left Out: -413.053 $\pm$ 81.134  $\chi^2/\text{NDF}$ : 61.3/24

Right Out: -662.594 $\pm$ 163.104  $\chi^2/\text{NDF}$ : 45.7/34

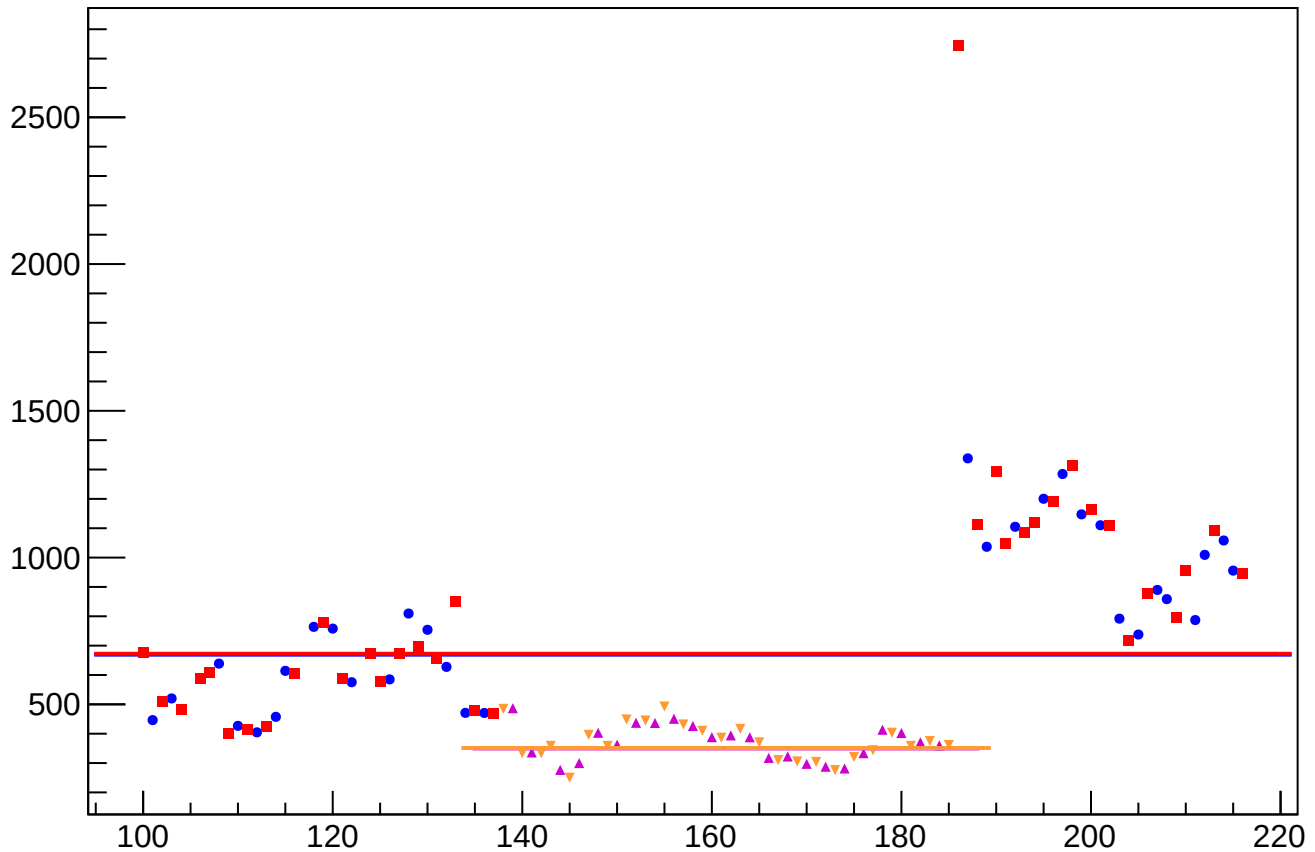
Left In: -66.637 $\pm$ 83.082  $\chi^2/\text{NDF}$ : 22.9/22

+ sign -429.219 $\pm$ 72.603  $\chi^2/\text{NDF}$ : 102.6/55

All: -311.650 $\pm$ 51.835  $\chi^2/\text{NDF}$ : 187.1/113

- sign -189.412 $\pm$ 74.031  $\chi^2/\text{NDF}$ : 79.1/57

# asym\_sam\_1357\_avg\_dit\_correction\_rms vs Slug



Right In: 669.424 $\pm$ 0.115  $\chi^2/\text{NDF}$ : 4395899.9/30

Left Out: 351.264 $\pm$ 0.057  $\chi^2/\text{NDF}$ : 1118247.7/24

Right Out: 672.262 $\pm$ 0.115  $\chi^2/\text{NDF}$ : 5301092.7/34

Left In: 349.813 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 990366.6/22

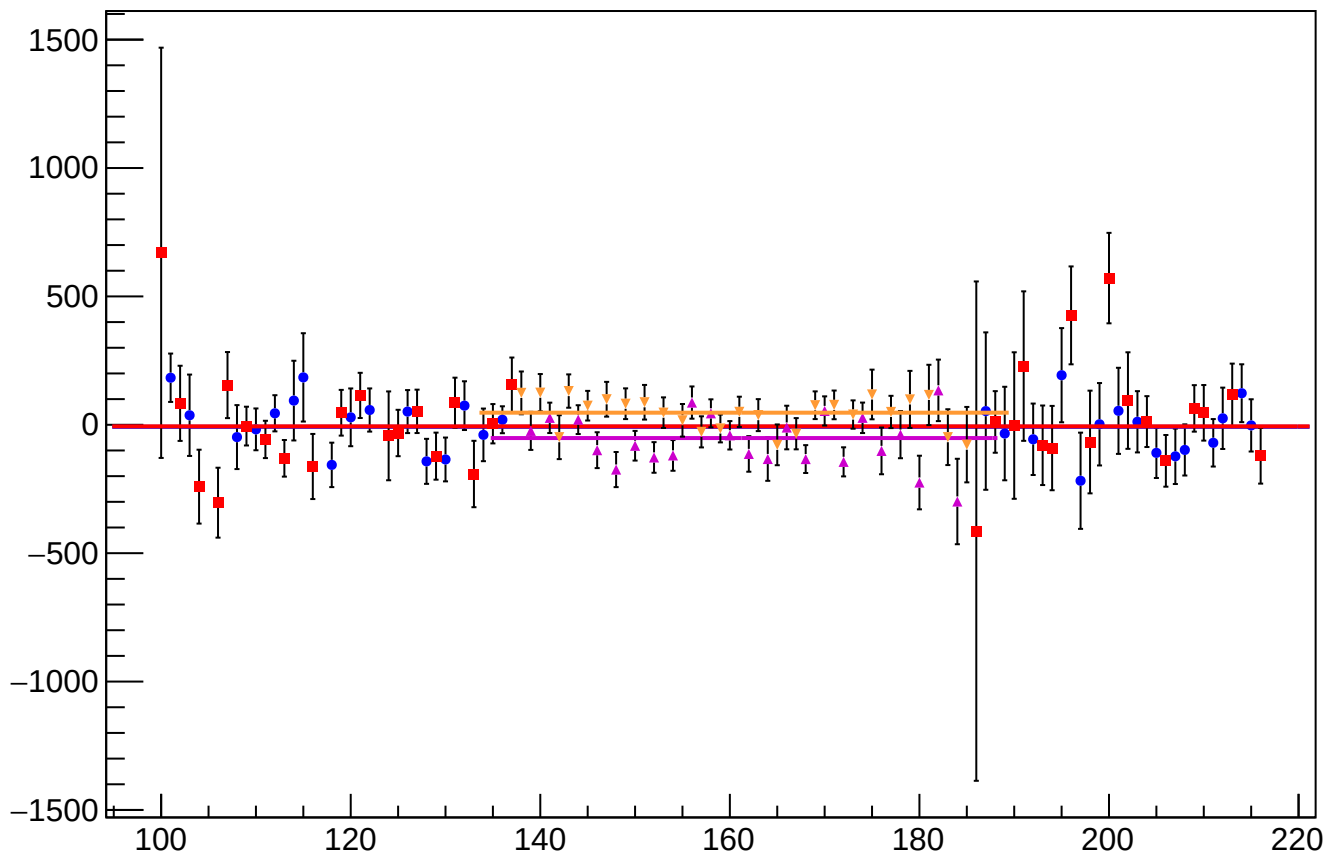
+ sign 414.656 $\pm$ 0.051  $\chi^2/\text{NDF}$ : 11641855.4/55

All: 415.433 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 24140127.8/11

- sign 416.242 $\pm$ 0.052  $\chi^2/\text{NDF}$ : 12497804.5/57



# eigen\_dit\_asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $-7.735 \pm 18.482$   $\chi^2/\text{NDF}$ : 24.1/30

Left Out:  $47.151 \pm 13.511$   $\chi^2/\text{NDF}$ : 17.0/24

Right Out:  $-6.061 \pm 18.980$   $\chi^2/\text{NDF}$ : 47.2/34

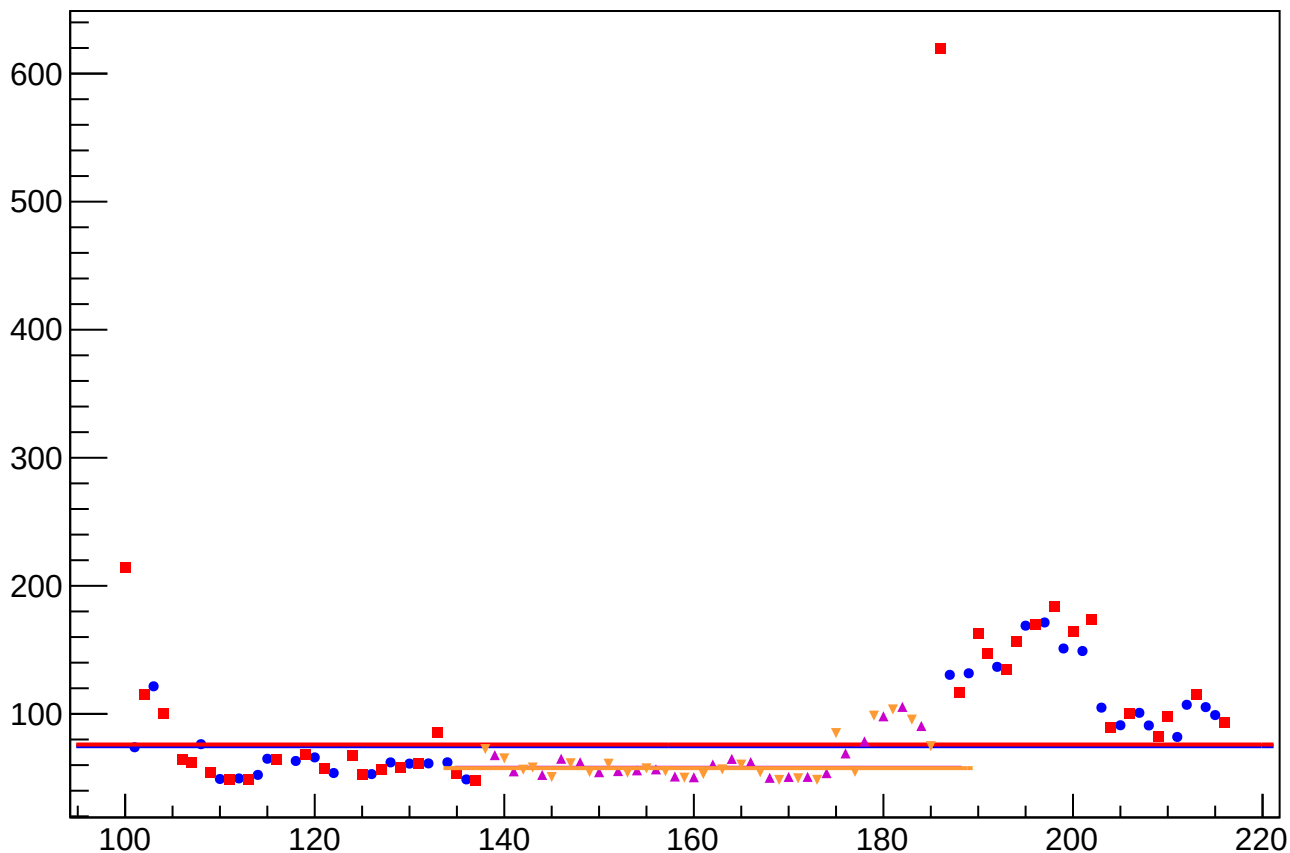
Left In:  $-51.651 \pm 13.934$   $\chi^2/\text{NDF}$ : 38.2/22

+ sign  $28.035 \pm 10.908$   $\chi^2/\text{NDF}$ : 46.9/55

All:  $-2.892 \pm 7.825$   $\chi^2/\text{NDF}$ : 152.6/113

- sign  $-35.686 \pm 11.232$   $\chi^2/\text{NDF}$ : 89.2/57

eigen\_dit\_asym\_sam\_1357\_avg\_rms vs Slug



Right In: 74.755 $\pm$ 0.013  $\chi^2$ /NDF: 4969482.3/30

Left Out: 57.631 $\pm$ 0.010  $\chi^2$ /NDF: 1365443.1/24

Right Out: 76.099 $\pm$ 0.013  $\chi^2$ /NDF: 6375655.9/34

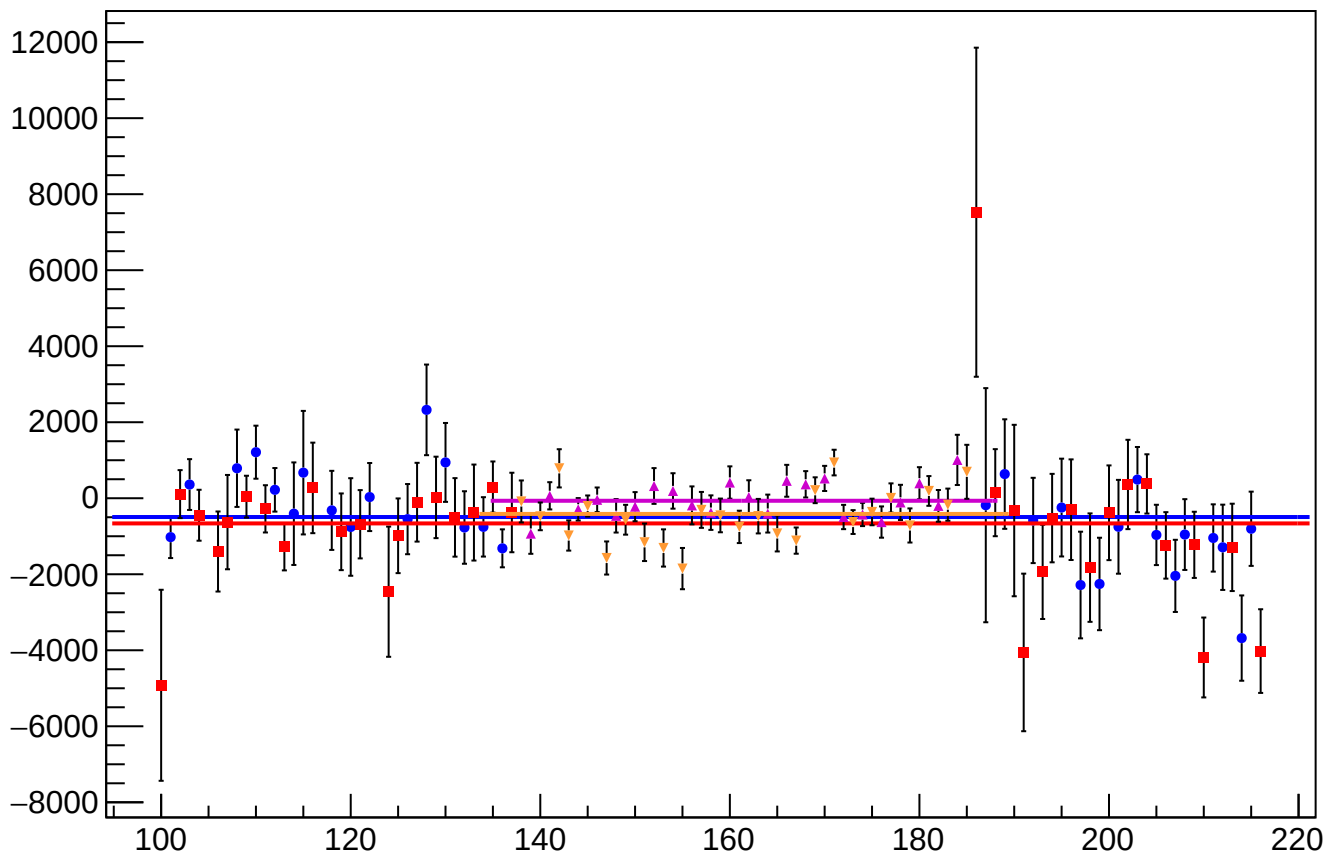
Left In: 57.940 $\pm$ 0.010  $\chi^2$ /NDF: 1124509.8/22

+ sign 63.595 $\pm$ 0.008  $\chi^2$ /NDF: 7453854.8/55

All: 63.937 $\pm$ 0.006  $\chi^2$ /NDF: 16147570.2/113

- sign 64.299 $\pm$ 0.008  $\chi^2$ /NDF: 8689673.6/57

asym\_sam\_1357\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In: -494.186 $\pm$ 162.652     $\chi^2/\text{NDF}$ : 41.1/30

Left Out: -413.053 $\pm$ 81.134     $\chi^2/\text{NDF}$ : 61.3/24

Right Out: -662.592 $\pm$ 163.104     $\chi^2/\text{NDF}$ : 45.7/34

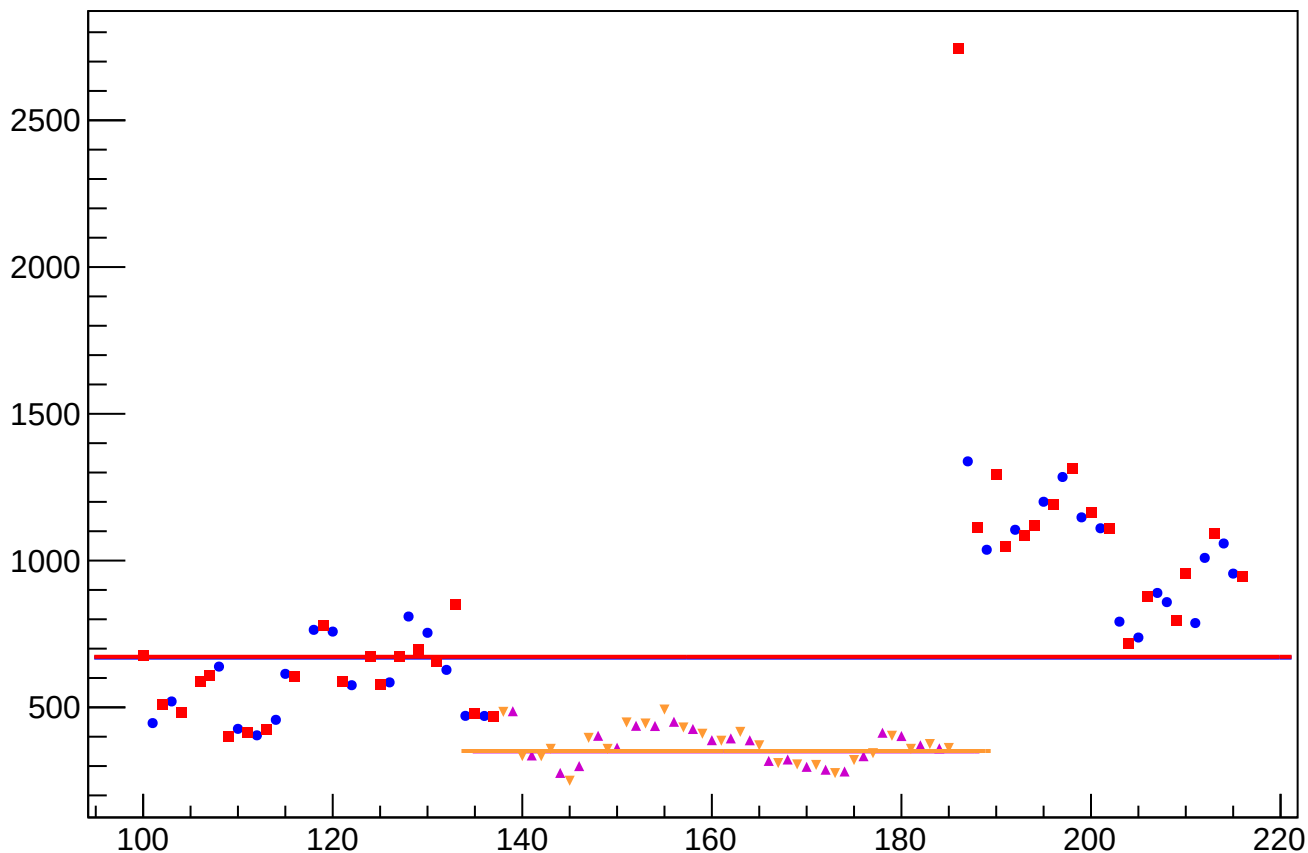
Left In: -66.637 $\pm$ 83.082     $\chi^2/\text{NDF}$ : 22.9/22

+ sign -429.218 $\pm$ 72.603     $\chi^2/\text{NDF}$ : 102.6/55

All: -311.650 $\pm$ 51.835     $\chi^2/\text{NDF}$ : 187.1/113

- sign -189.412 $\pm$ 74.031     $\chi^2/\text{NDF}$ : 79.1/57

asym\_sam\_1357\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 669.423+/-0.115  $\chi^2/\text{NDF}$ : 4395912.1/30

Left Out: 351.264+/-0.057  $\chi^2/\text{NDF}$ : 1118243.1/24

Right Out: 672.260+/-0.115  $\chi^2/\text{NDF}$ : 5301100.6/34

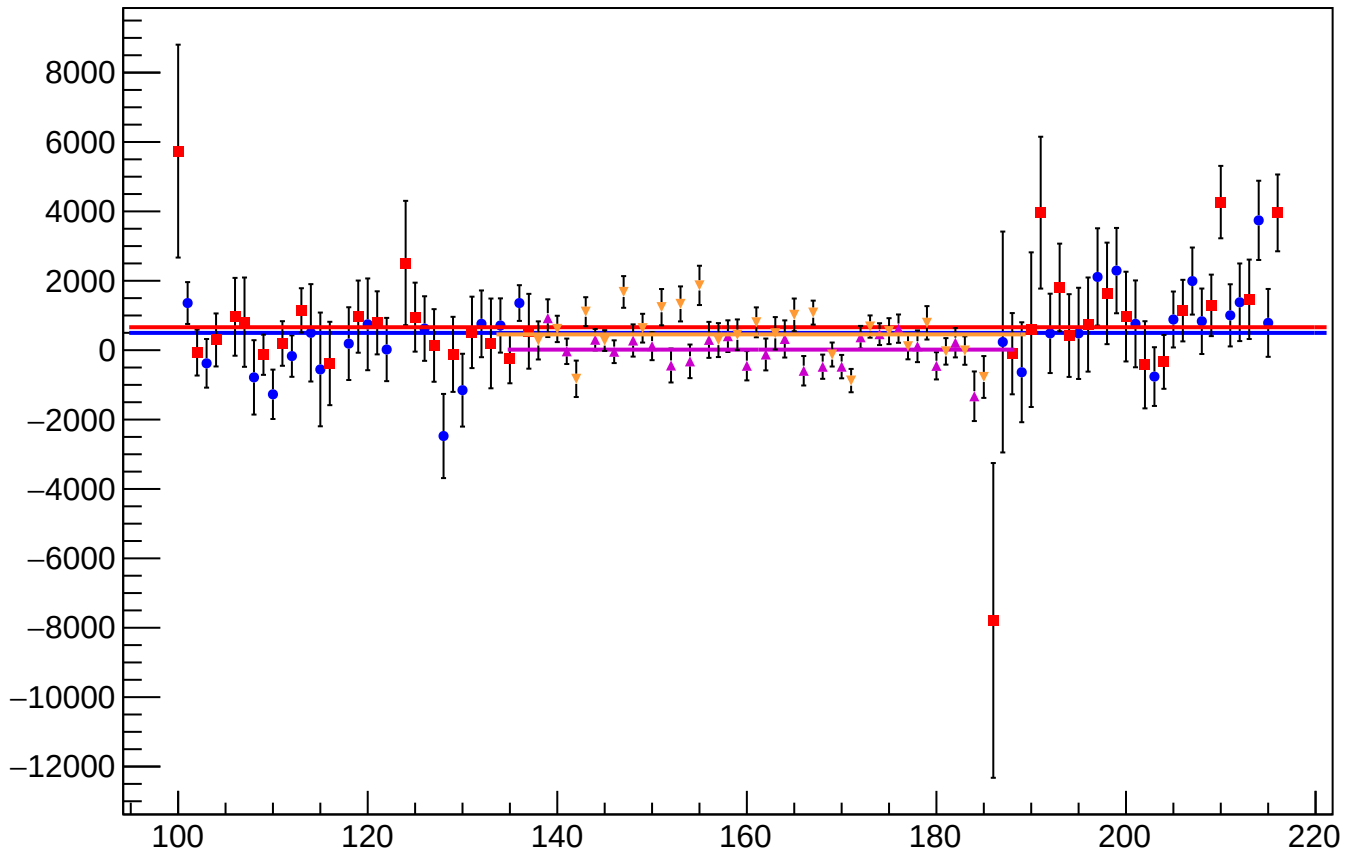
Left In: 349.813+/-0.059  $\chi^2/\text{NDF}$ : 990359.9/22

+ sign 414.655+/-0.051  $\chi^2/\text{NDF}$ : 11641848.3/55

All: 415.433+/-0.037  $\chi^2/\text{NDF}$ : 24140100.9/11

- sign 416.242+/-0.052  $\chi^2/\text{NDF}$ : 12497784.6/57

# asym\_sam\_1357\_avg\_mean vs Slug



Right In:  $498.286 \pm 166.793$   $\chi^2/\text{NDF}: 42.9/30$

Left Out:  $455.234 \pm 82.961$   $\chi^2/\text{NDF}: 60.8/24$

Right Out:  $661.616 \pm 168.729$   $\chi^2/\text{NDF}: 43.9/34$

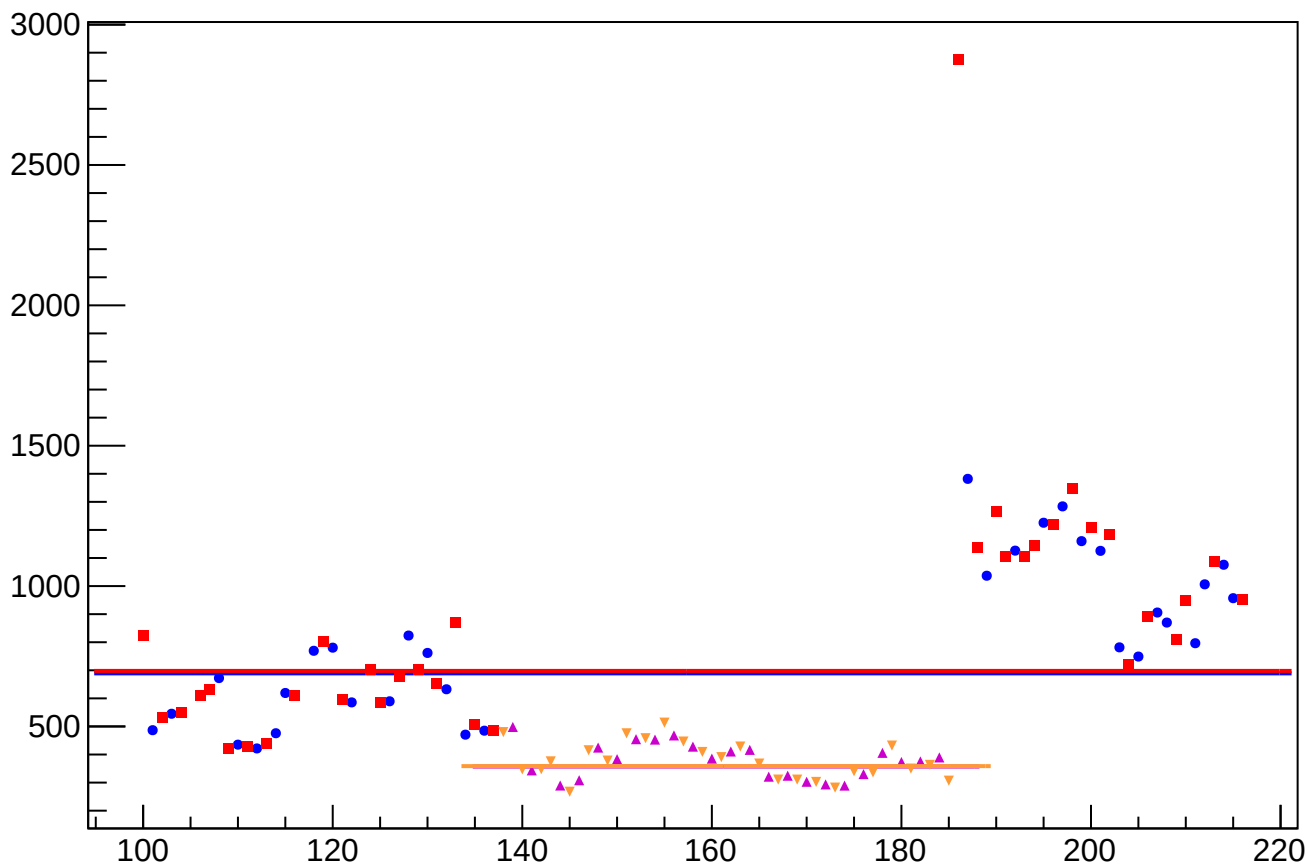
Left In:  $16.073 \pm 84.830$   $\chi^2/\text{NDF}: 24.9/22$

+ sign  $463.773 \pm 74.280$   $\chi^2/\text{NDF}: 103.8/55$

All:  $308.244 \pm 53.050$   $\chi^2/\text{NDF}: 193.2/113$

- sign  $146.323 \pm 75.791$   $\chi^2/\text{NDF}: 80.4/57$

# asym\_sam\_1357\_avg\_rms vs Slug



Right In: 689.110+/-0.118  $\chi^2/\text{NDF}$ : 4108184.4/30

Left Out: 358.677+/-0.059  $\chi^2/\text{NDF}$ : 1119535.1/24

Right Out: 697.875+/-0.119  $\chi^2/\text{NDF}$ : 5017973.1/34

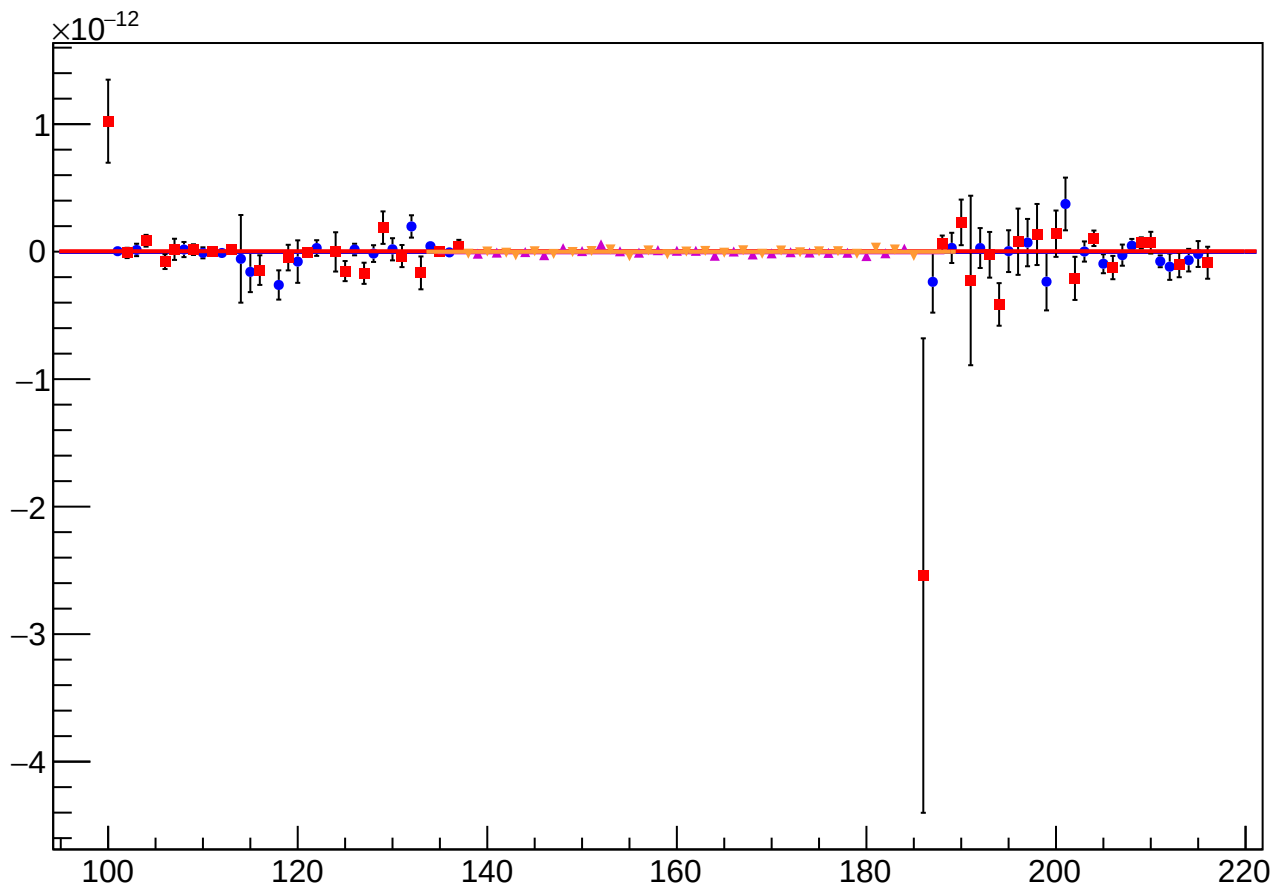
Left In: 357.182+/-0.060  $\chi^2/\text{NDF}$ : 981641.8/22

+ sign 424.211+/-0.053  $\chi^2/\text{NDF}$ : 11520467.4/55

All: 425.050+/-0.038  $\chi^2/\text{NDF}$ : 24029487.7/11

- sign 425.923+/-0.054  $\chi^2/\text{NDF}$ : 12508499.7/57

asym\_sam\_1357\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 26.2/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 18.2/24

Right Out: 0.000+/-0.000  $\chi^2$ /NDF: 52.7/34

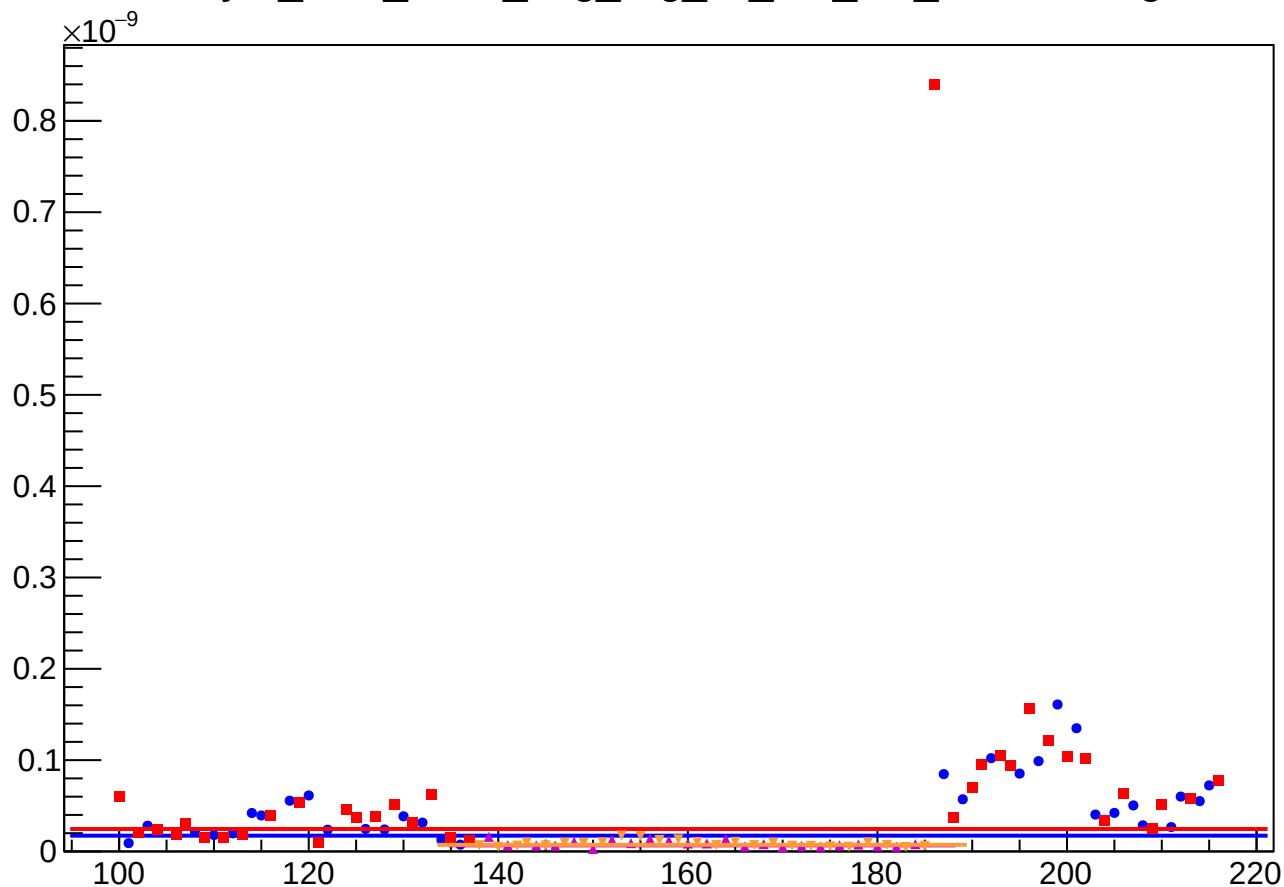
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 28.5/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 44.4/55

All: -0.000+/-0.000  $\chi^2$ /NDF: 127.3/113

- sign -0.000+/-0.000  $\chi^2$ /NDF: 81.9/57

asym\_sam\_1357\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7574734.1/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1438289.6/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5972613.6/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ :1746143.3/22

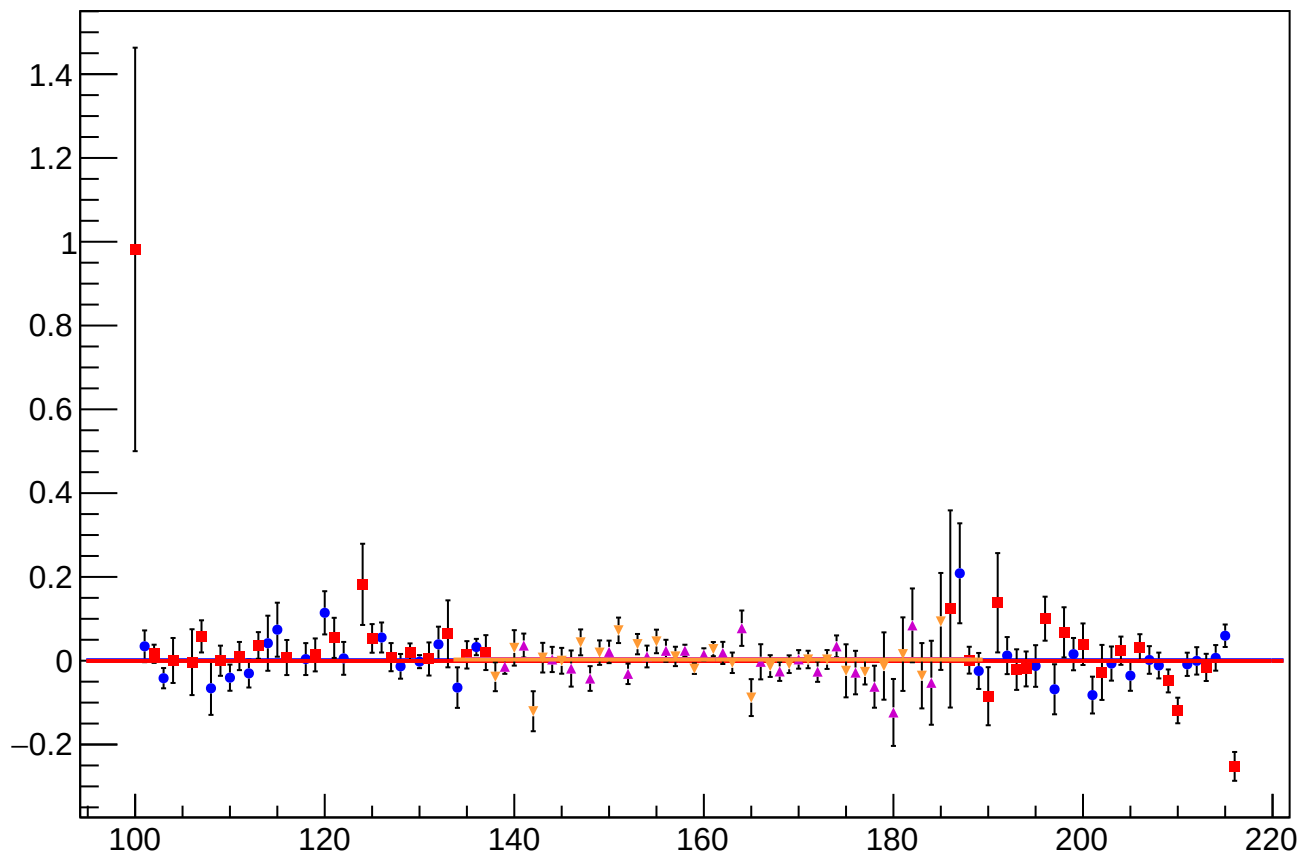
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 11546086.3/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 24385035.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 12806237.6/57



asym\_sam\_1357\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.7/34

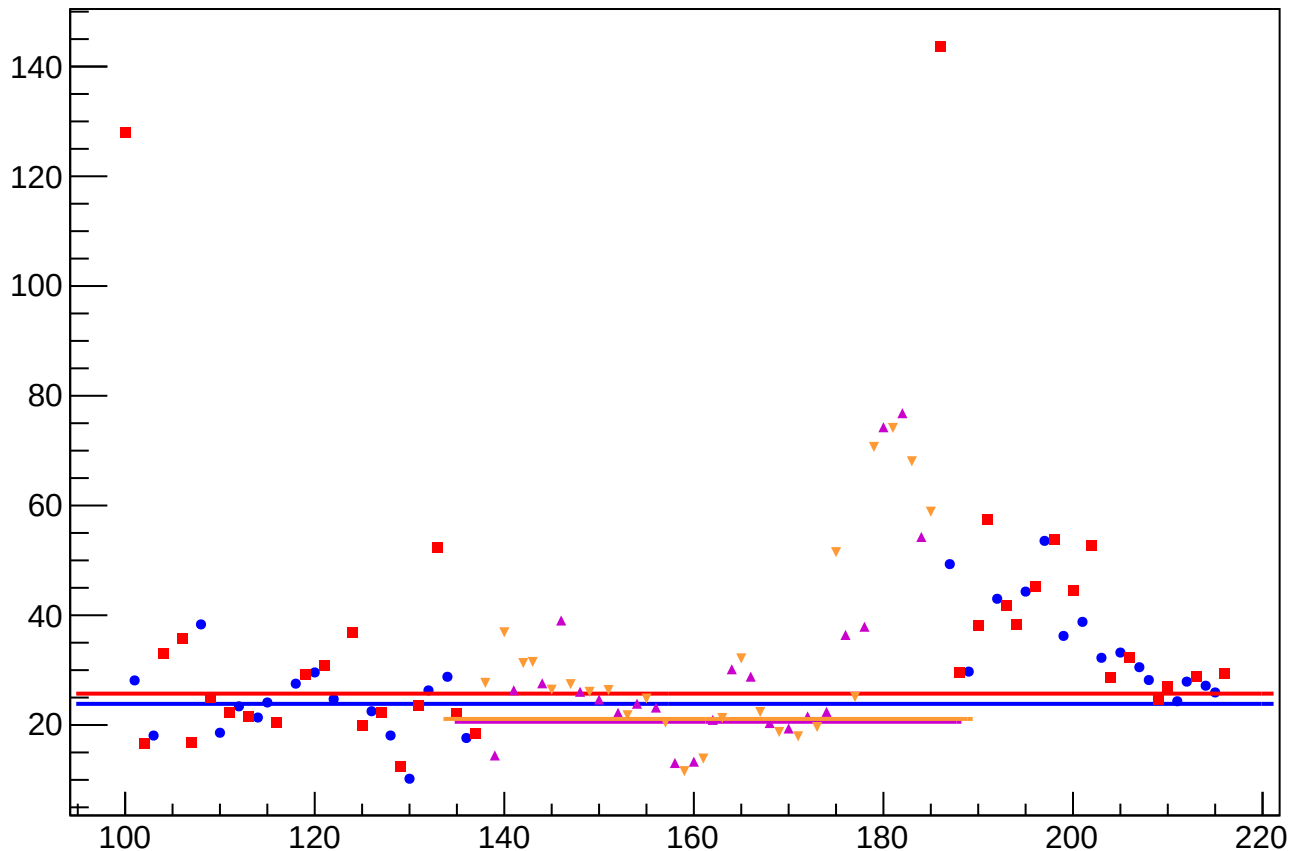
Left In:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 69.6/55

All:  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 195.2/113

- sign  $0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 125.6/57

asym\_sam\_1357\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In:  $23.855 \pm 0.004$   $\chi^2/\text{NDF}: 4373980.2/30$

Left Out:  $21.109 \pm 0.004$   $\chi^2/\text{NDF}: 5546528.5/24$

Right Out:  $25.718 \pm 0.005$   $\chi^2/\text{NDF}: 4591951.3/34$

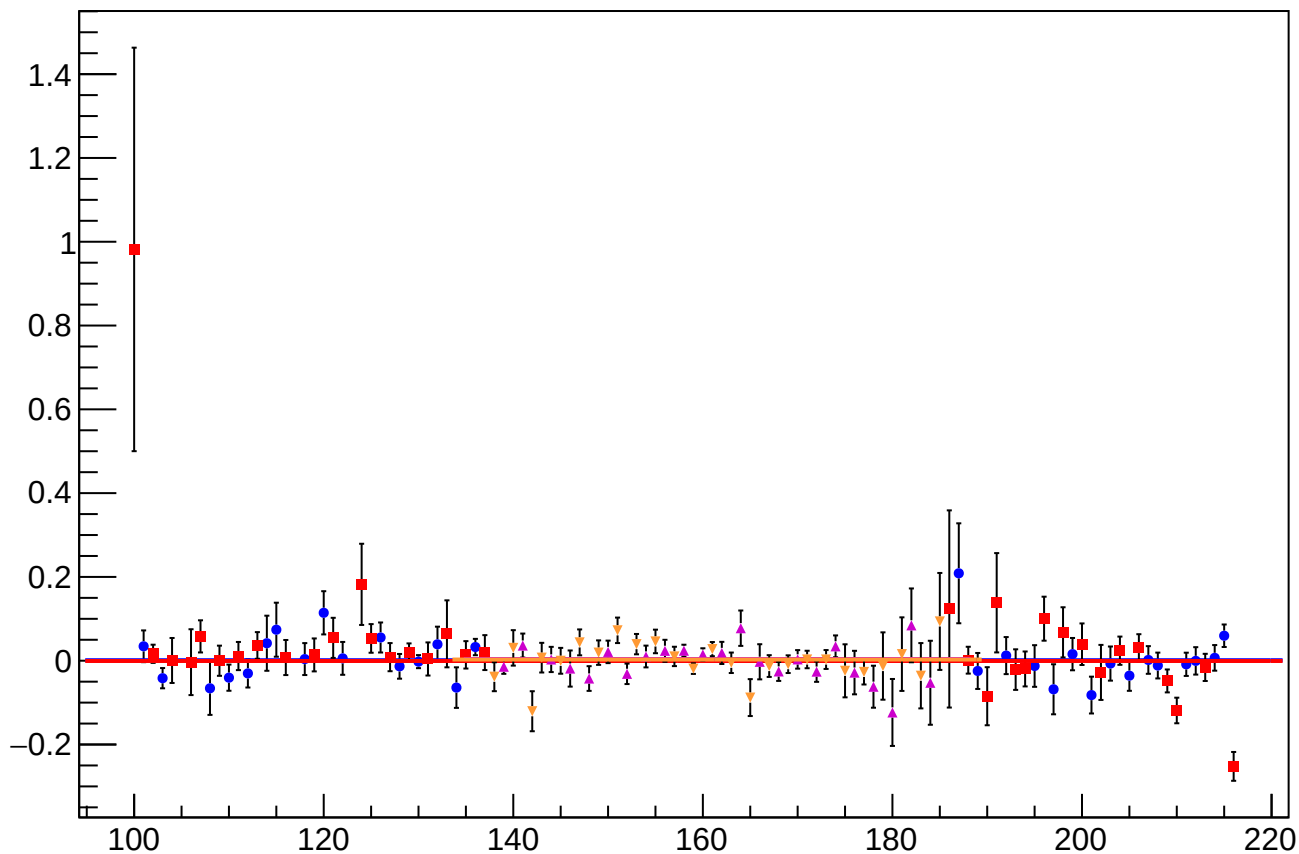
Left In:  $20.591 \pm 0.004$   $\chi^2/\text{NDF}: 4599493.5/22$

+ sign  $22.343 \pm 0.003$   $\chi^2/\text{NDF}: 10148500.5/55$

All:  $22.514 \pm 0.002$   $\chi^2/\text{NDF}: 20077817.2/113$

- sign  $22.696 \pm 0.003$   $\chi^2/\text{NDF}: 9921944.2/57$

asym\_sam\_1357\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.001 $\pm$ 0.006  $\chi^2$ /NDF: 36.7/30

Left Out: 0.003 $\pm$ 0.005  $\chi^2$ /NDF:32.8/24

Right Out: -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 100.7/34

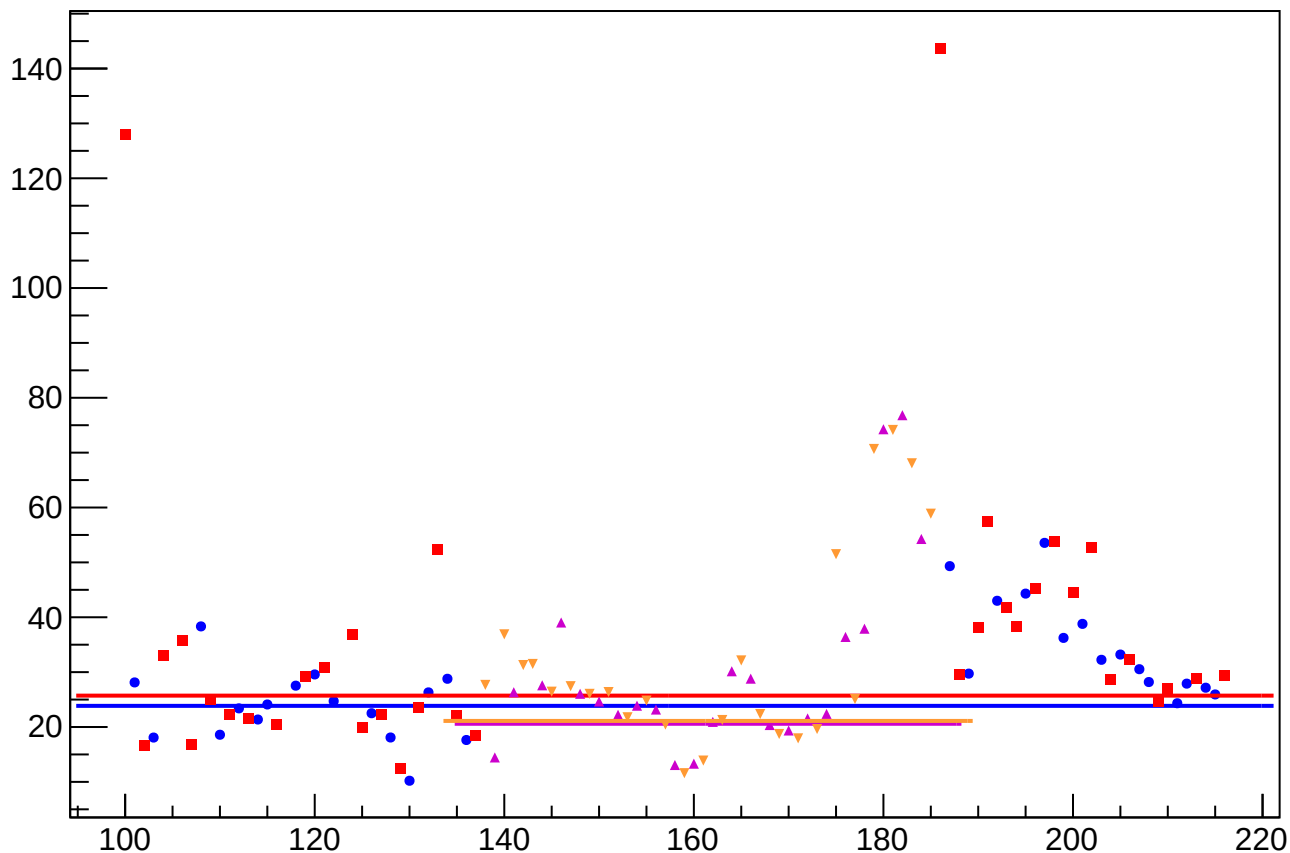
Left In: 0.004 $\pm$ 0.005  $\chi^2$ /NDF:24.6/22

+ sign 0.002 $\pm$ 0.004  $\chi^2$ /NDF: 69.6/55

All: 0.002 $\pm$ 0.003  $\chi^2$ /NDF: 195.2/113

- sign 0.002 $\pm$ 0.004  $\chi^2$ /NDF: 125.6/57

asym\_sam\_1357\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 23.855 $\pm$ 0.004  $\chi^2$ /NDF: 4373980.2/30

Left Out: 21.109 $\pm$ 0.004  $\chi^2$ /NDF: 5546528.5/24

Right Out: 25.718 $\pm$ 0.005  $\chi^2$ /NDF: 4591951.3/34

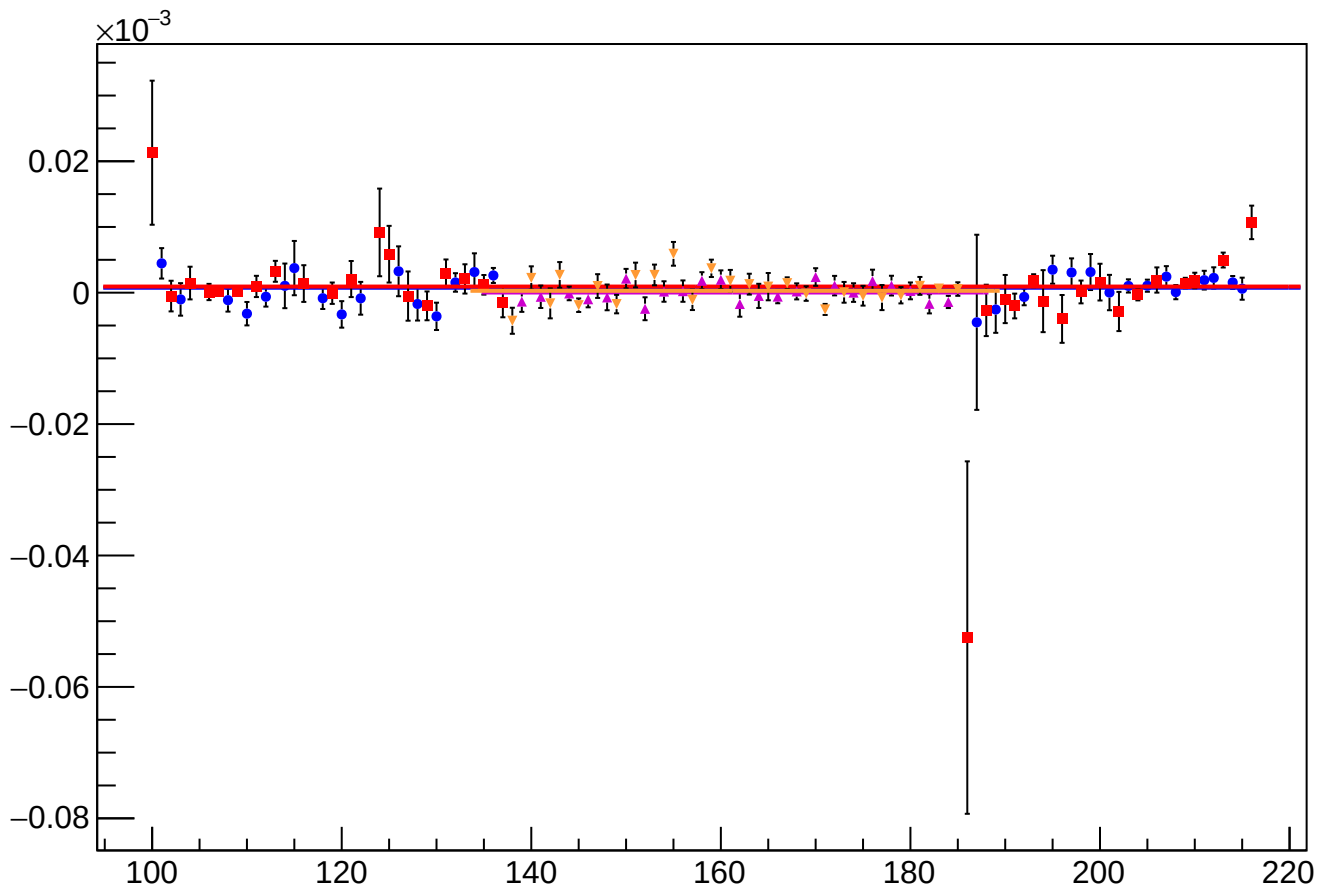
Left In: 20.591 $\pm$ 0.004  $\chi^2$ /NDF: 4599493.5/22

+ sign 22.343 $\pm$ 0.003  $\chi^2$ /NDF: 10148500.5/55

All: 22.514 $\pm$ 0.002  $\chi^2$ /NDF: 20077817.2/113

- sign 22.696 $\pm$ 0.003  $\chi^2$ /NDF: 9921944.2/57

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35.2/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:52.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 59.8/34

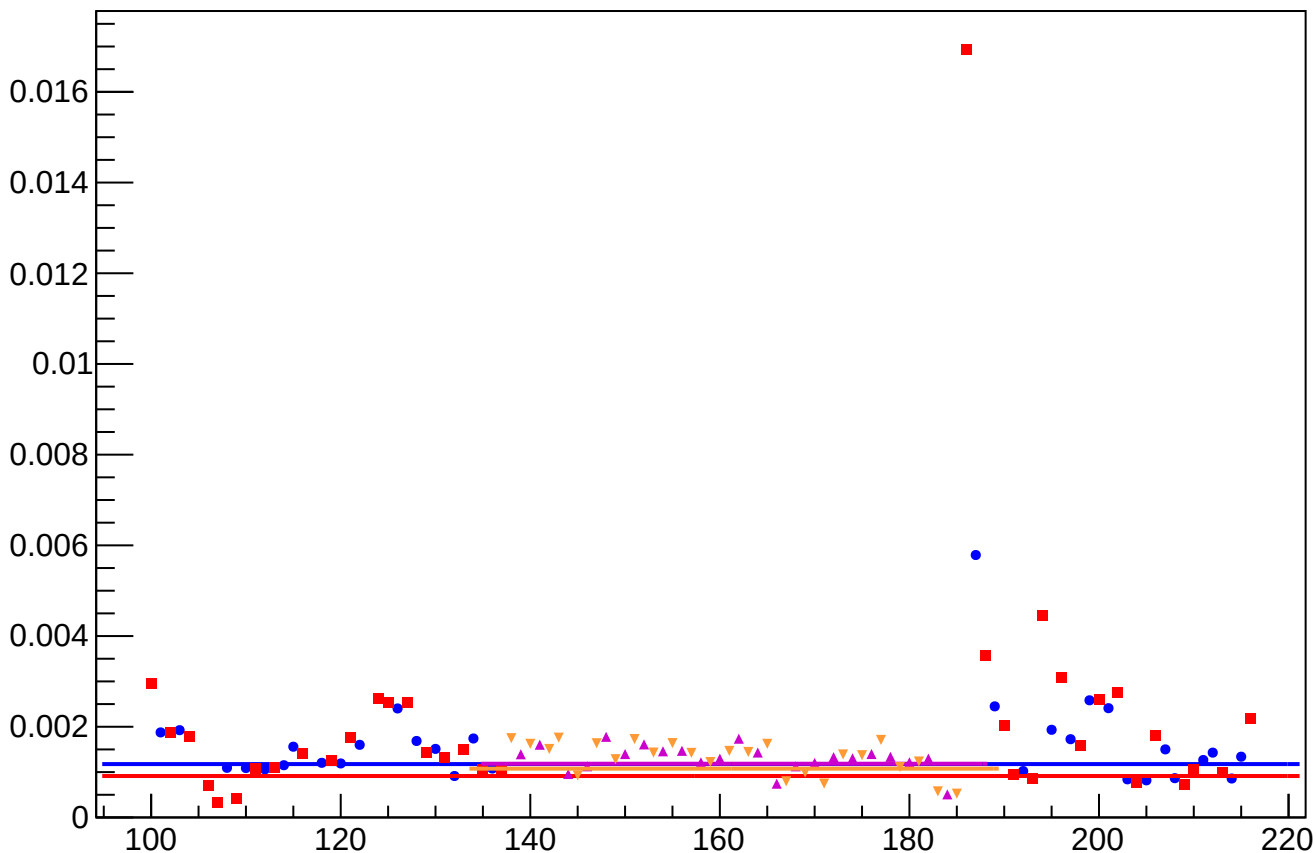
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.8/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 89.2/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 174.3/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 85.1/57

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 3881040.5/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 4545392.2/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 11691605.5/34

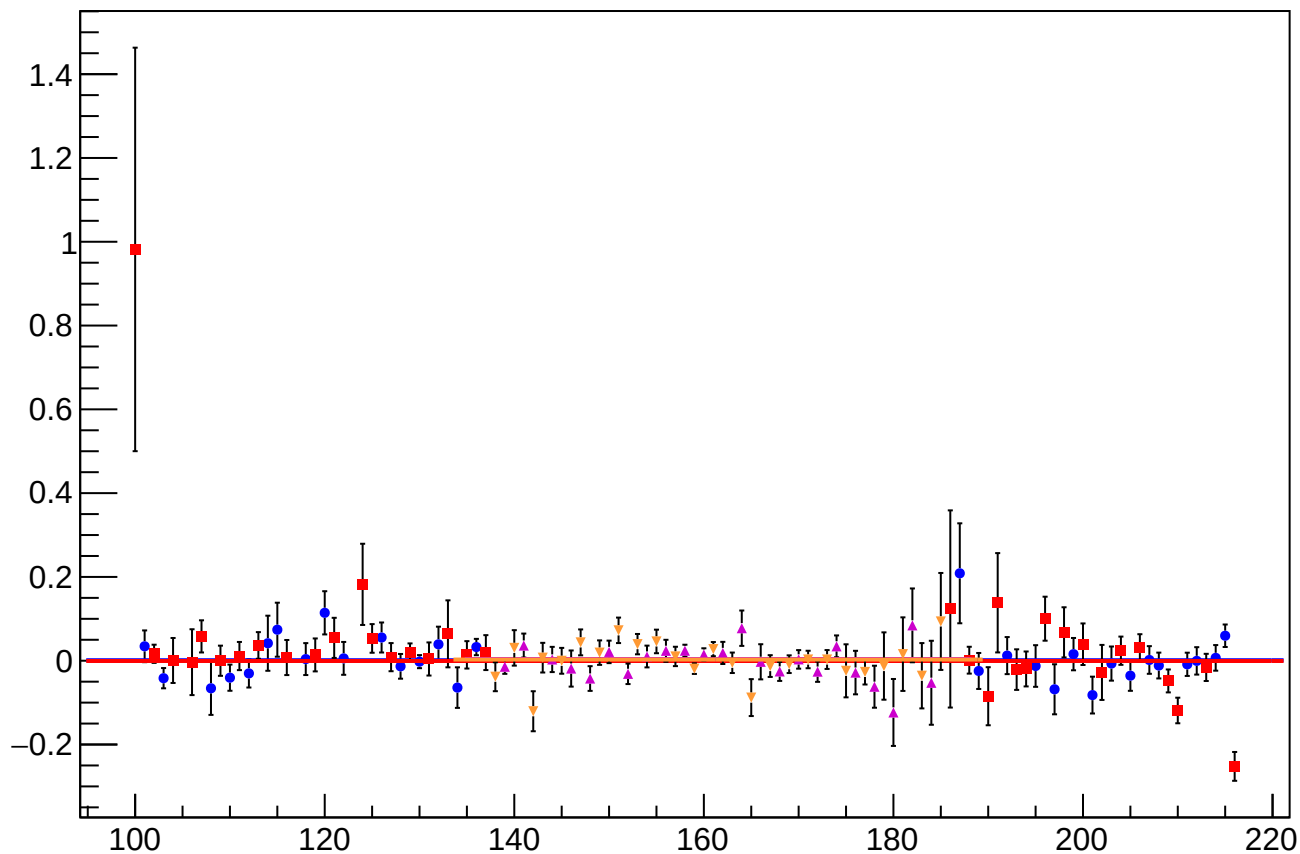
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 2456537.2/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8555043.8/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 23910987.3/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15143283.2/57

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $0.003 \pm 0.005$   $\chi^2/\text{NDF}$ : 32.8/24

Right Out:  $-0.001 \pm 0.007$   $\chi^2/\text{NDF}$ : 100.7/34

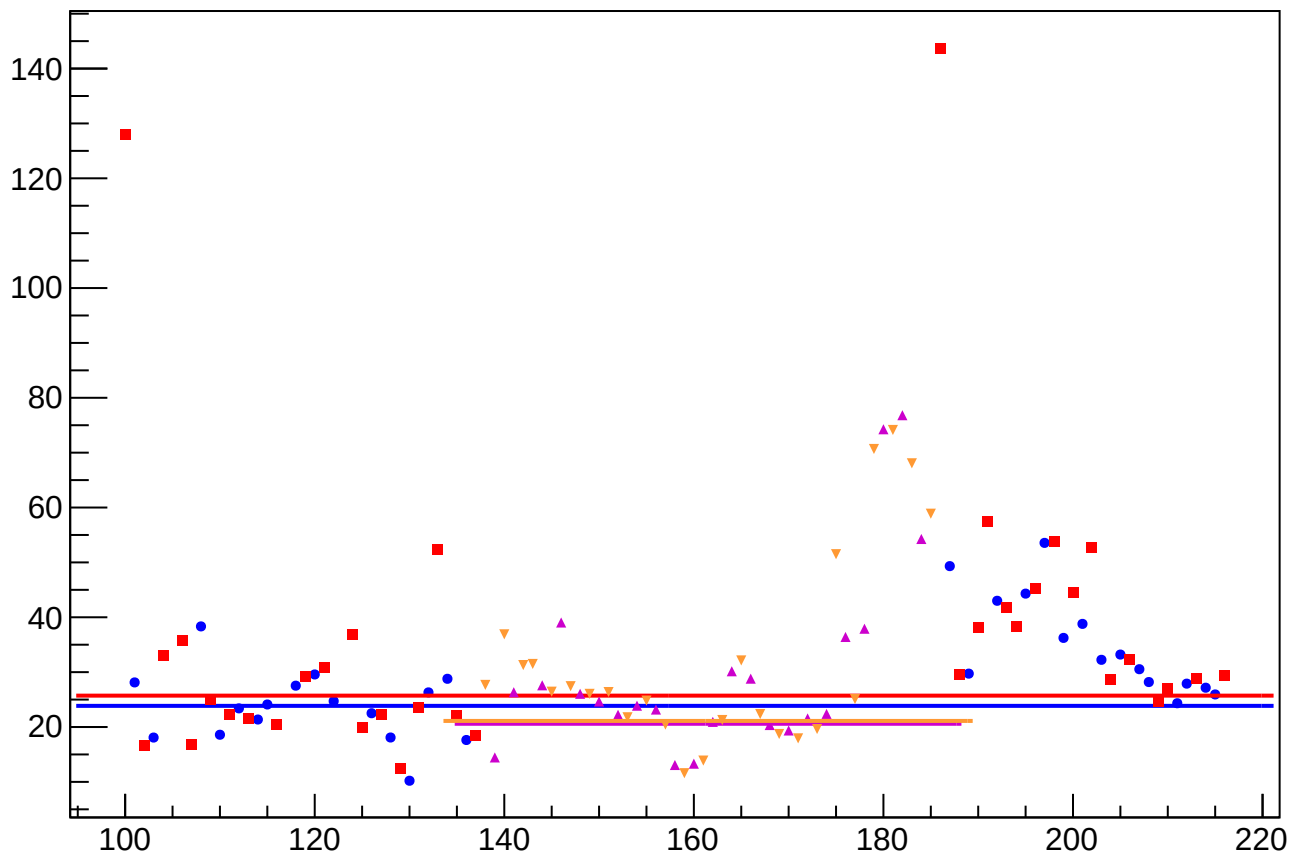
Left In:  $0.004 \pm 0.005$   $\chi^2/\text{NDF}$ : 24.6/22

+ sign  $0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 69.6/55

All:  $0.002 \pm 0.003$   $\chi^2/\text{NDF}$ : 195.2/113

- sign  $0.002 \pm 0.004$   $\chi^2/\text{NDF}$ : 125.6/57

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 23.856 $\pm$ 0.004  $\chi^2$ /NDF: 4373696.3/30

Left Out: 21.109 $\pm$ 0.004  $\chi^2$ /NDF: 5546663.4/24

Right Out: 25.719 $\pm$ 0.005  $\chi^2$ /NDF: 4591911.8/34

Left In: 20.592 $\pm$ 0.004  $\chi^2$ /NDF: 4599496.2/22

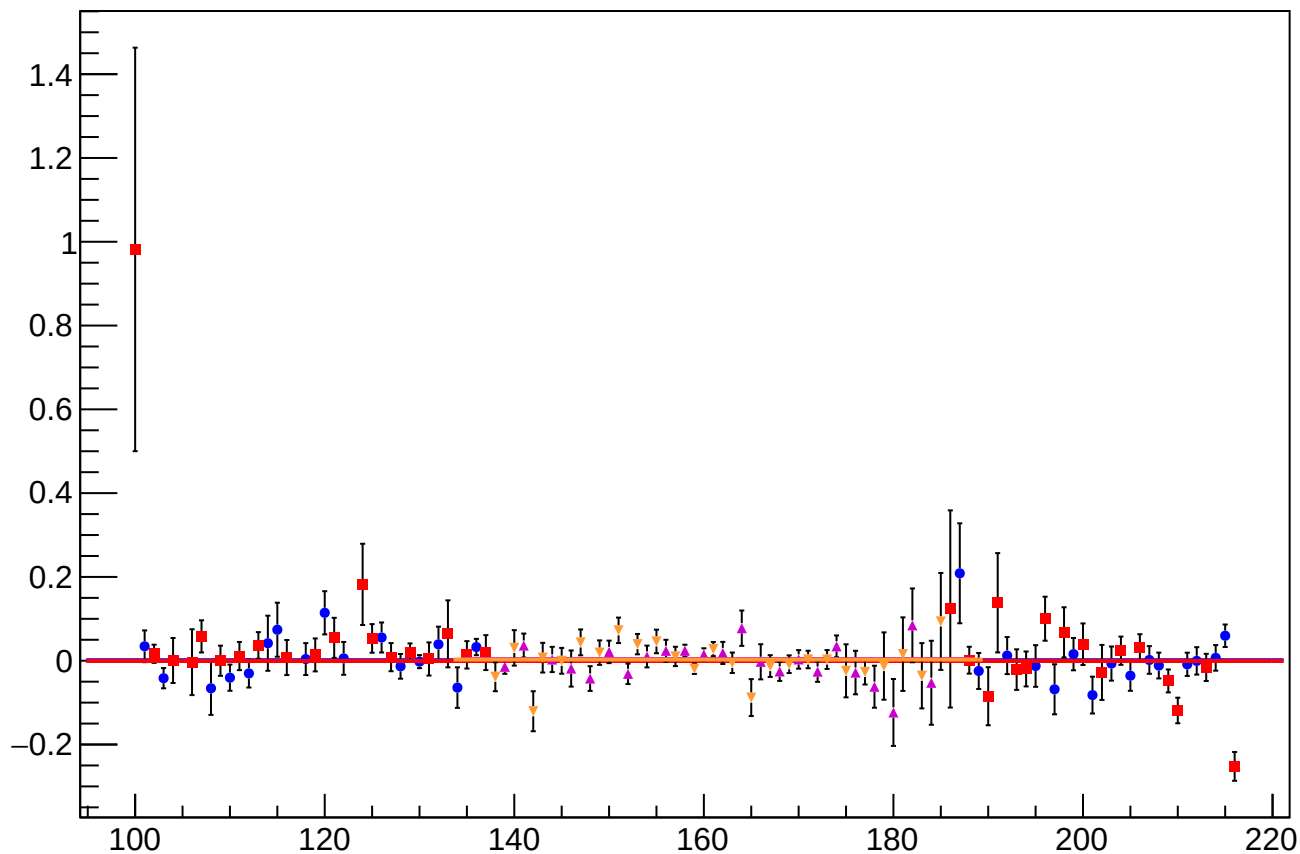
+ sign 22.343 $\pm$ 0.003  $\chi^2$ /NDF: 10148401.6/55

All: 22.514 $\pm$ 0.002  $\chi^2$ /NDF: 20077640.7/113

- sign 22.696 $\pm$ 0.003  $\chi^2$ /NDF: 9921866.3/57



asym\_sam\_1357\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.001 $\pm$ 0.006  $\chi^2$ /NDF: 36.7/30

Left Out: 0.003 $\pm$ 0.005  $\chi^2$ /NDF:32.8/24

Right Out: -0.001 $\pm$ 0.007  $\chi^2$ /NDF: 100.7/34

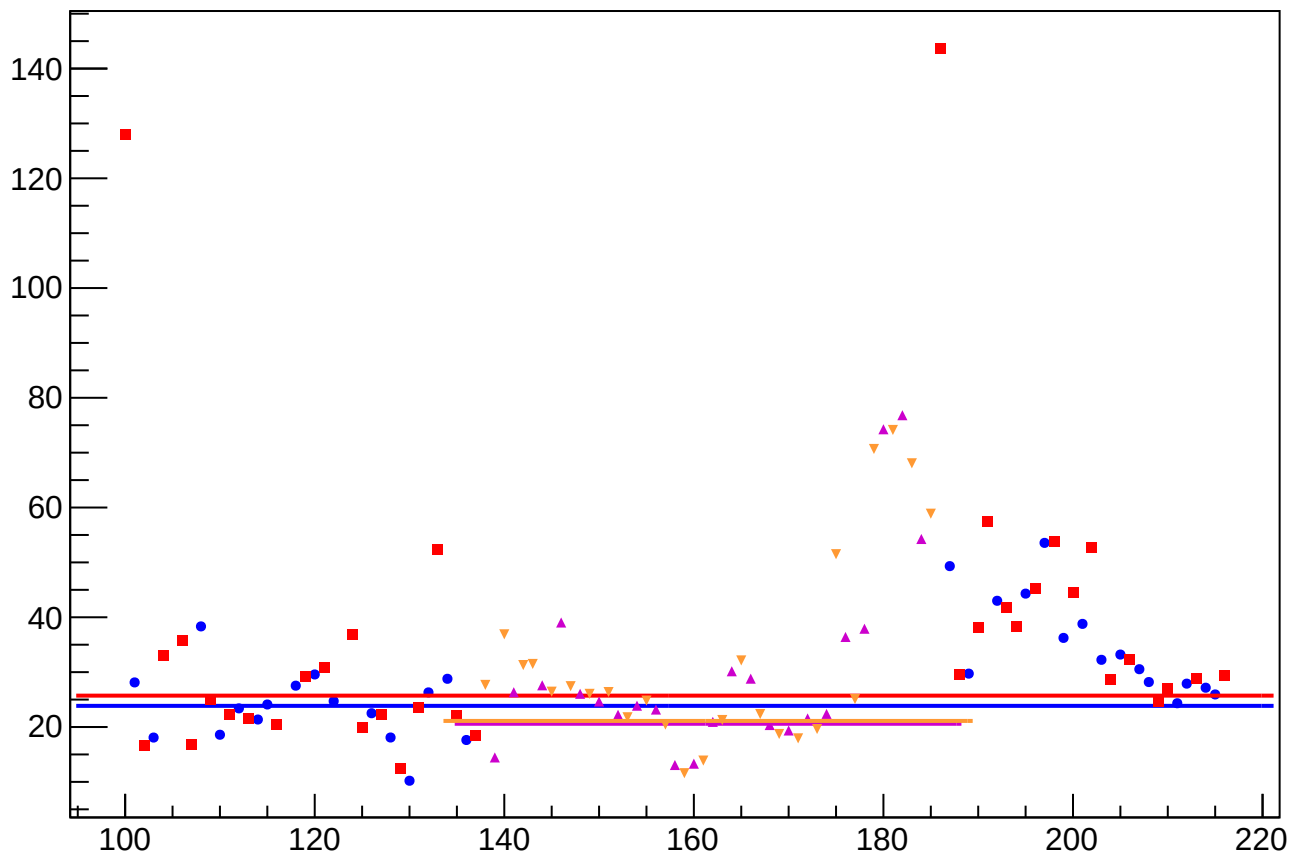
Left In: 0.004 $\pm$ 0.005  $\chi^2$ /NDF:24.6/22

+ sign 0.002 $\pm$ 0.004  $\chi^2$ /NDF: 69.6/55

All: 0.002 $\pm$ 0.003  $\chi^2$ /NDF: 195.2/113

- sign 0.002 $\pm$ 0.004  $\chi^2$ /NDF: 125.6/57

asym\_sam\_1357\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In:  $23.856 \pm 0.004$   $\chi^2/\text{NDF}: 4373696.3/30$

Left Out:  $21.109 \pm 0.004$   $\chi^2/\text{NDF}: 5546663.4/24$

Right Out:  $25.719 \pm 0.005$   $\chi^2/\text{NDF}: 4591911.8/34$

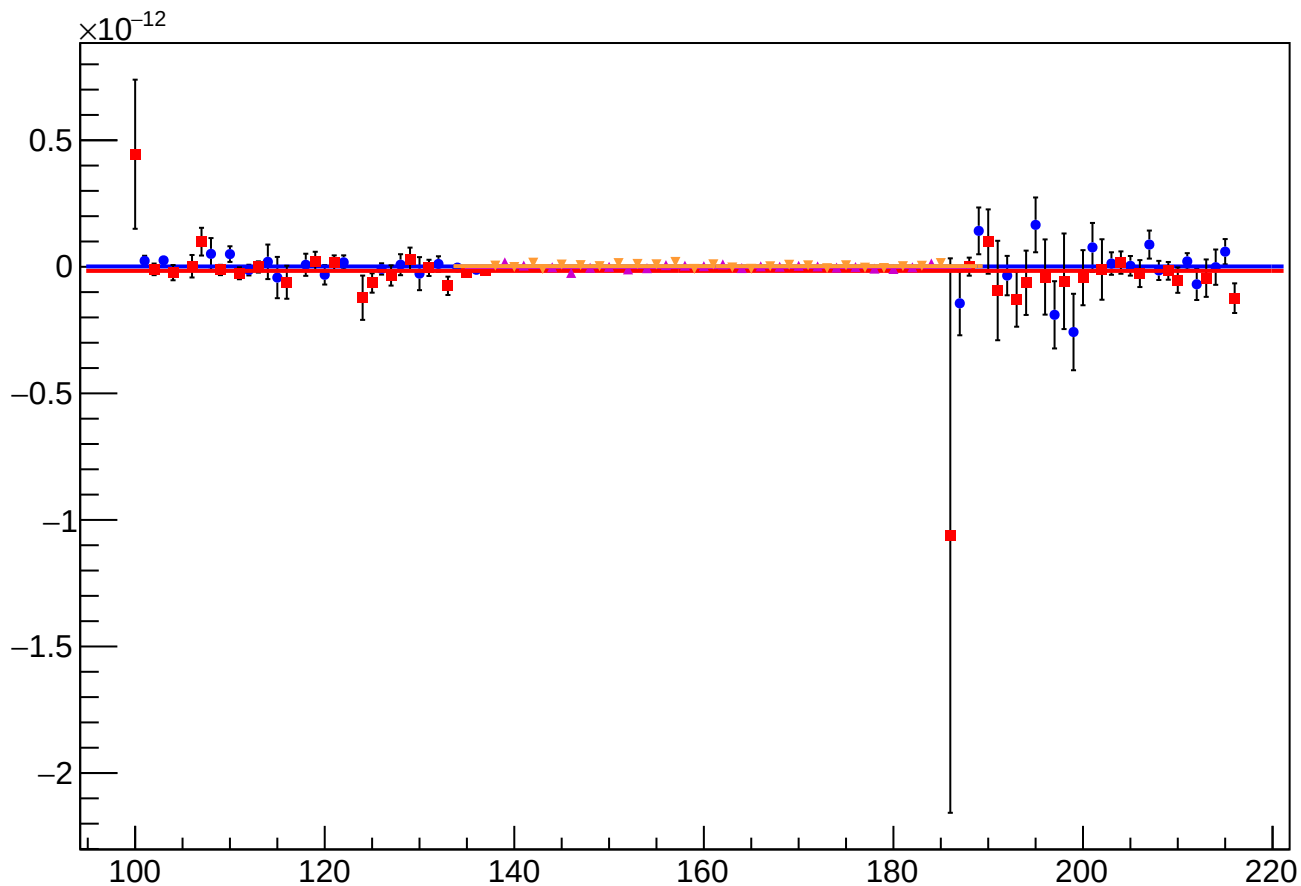
Left In:  $20.592 \pm 0.004$   $\chi^2/\text{NDF}: 4599496.2/22$

+ sign  $22.343 \pm 0.003$   $\chi^2/\text{NDF}: 10148401.6/55$

All:  $22.514 \pm 0.002$   $\chi^2/\text{NDF}: 20077640.7/113$

- sign  $22.696 \pm 0.003$   $\chi^2/\text{NDF}: 9921866.3/57$

asym\_sam\_1357\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 28.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:20.6/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 25.8/34

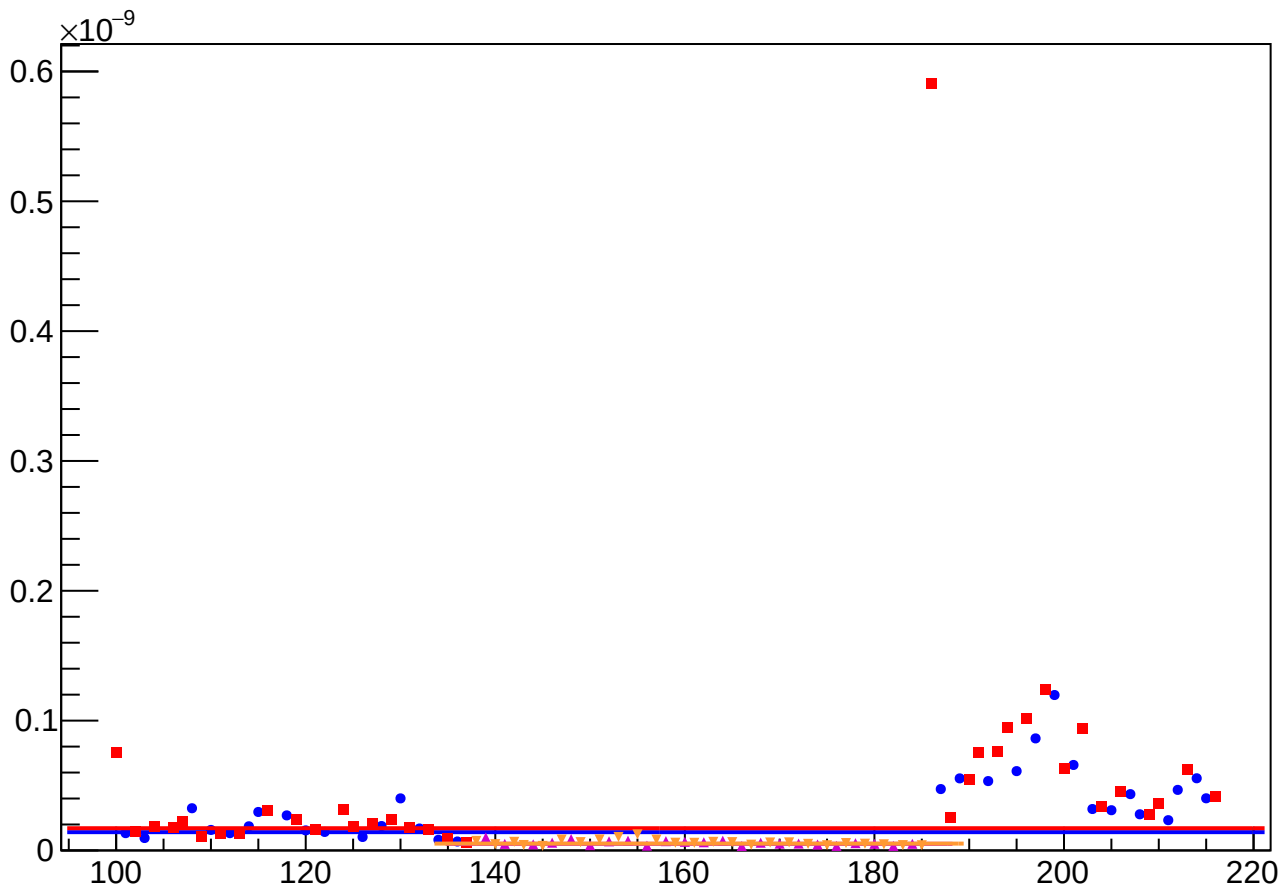
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.4/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 48.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 106.0/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 53.3/57

asym\_sam\_1357\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9621504.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2053779.9/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9241169.6/34

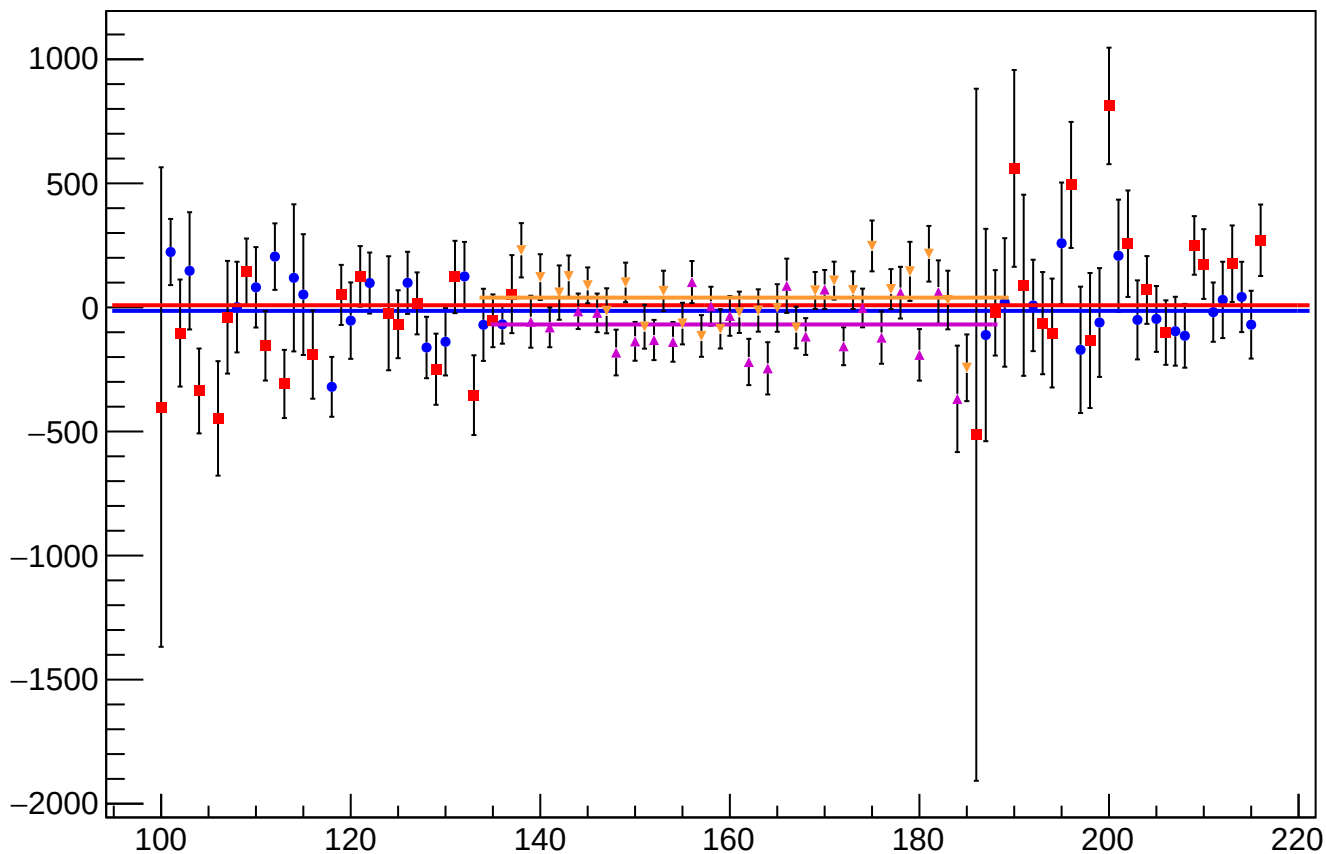
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1700889.7/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 16915150.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 35279867.7/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18354023.9/57

# reg\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-13.827 \pm 26.753$   $\chi^2/\text{NDF}: 23.2/30$

Left Out:  $39.477 \pm 17.666$   $\chi^2/\text{NDF}: 31.9/24$

Right Out:  $8.787 \pm 27.644$   $\chi^2/\text{NDF}: 58.6/34$

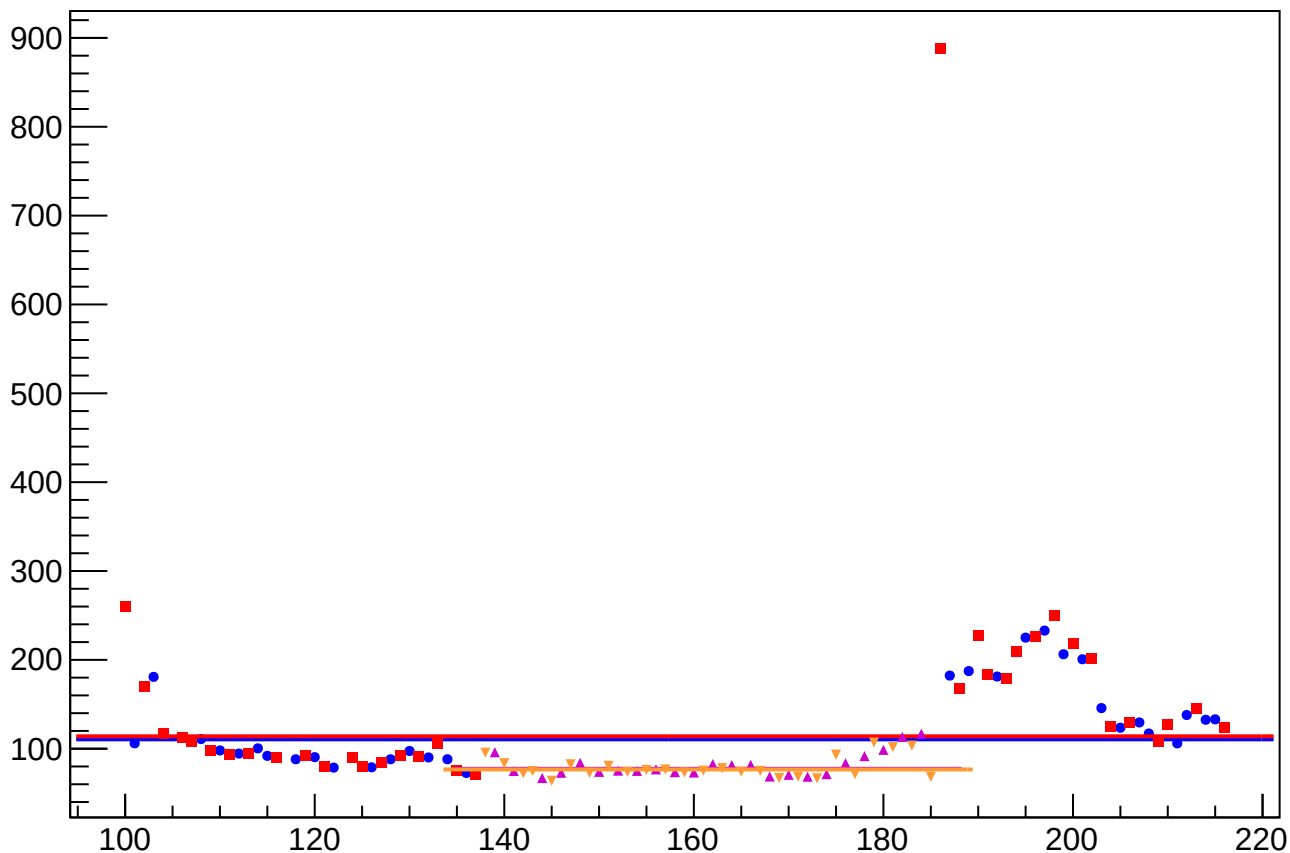
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}: 29.0/22$

+ sign  $23.291 \pm 14.742$   $\chi^2/\text{NDF}: 57.9/55$

All:  $-9.656 \pm 10.606$   $\chi^2/\text{NDF}: 161.3/113$

- sign  $-45.003 \pm 15.269$   $\chi^2/\text{NDF}: 93.1/57$

# reg\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 110.558 $\pm$ 0.019  $\chi^2$ /NDF: 3699410.5/30

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF: 654608.6/24

Right Out: 113.945 $\pm$ 0.020  $\chi^2$ /NDF: 4731432.7/34

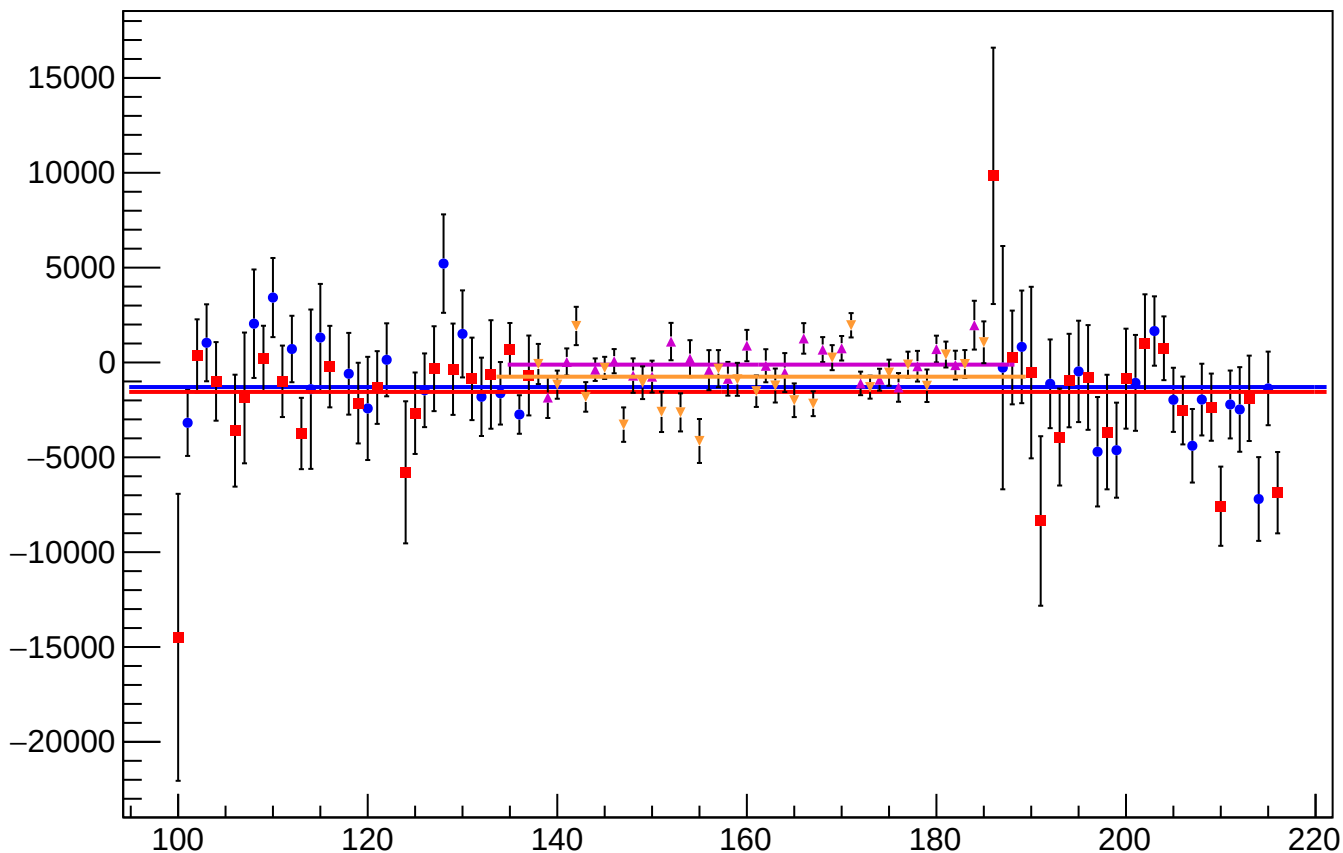
Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF: 590414.8/22

+ sign 86.944 $\pm$ 0.010  $\chi^2$ /NDF: 6591870.4/55

All: 87.701 $\pm$ 0.007  $\chi^2$ /NDF: 14360421.1/113

- sign 88.514 $\pm$ 0.011  $\chi^2$ /NDF: 7757607.5/57

asym\_sam\_2468\_avg\_reg\_correction\_mean vs Slug



Right In:  $-1294.970 \pm 370.095$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $-749.641 \pm 158.081$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1552.529 \pm 382.702$   $\chi^2/\text{NDF}$ : 37.6/34

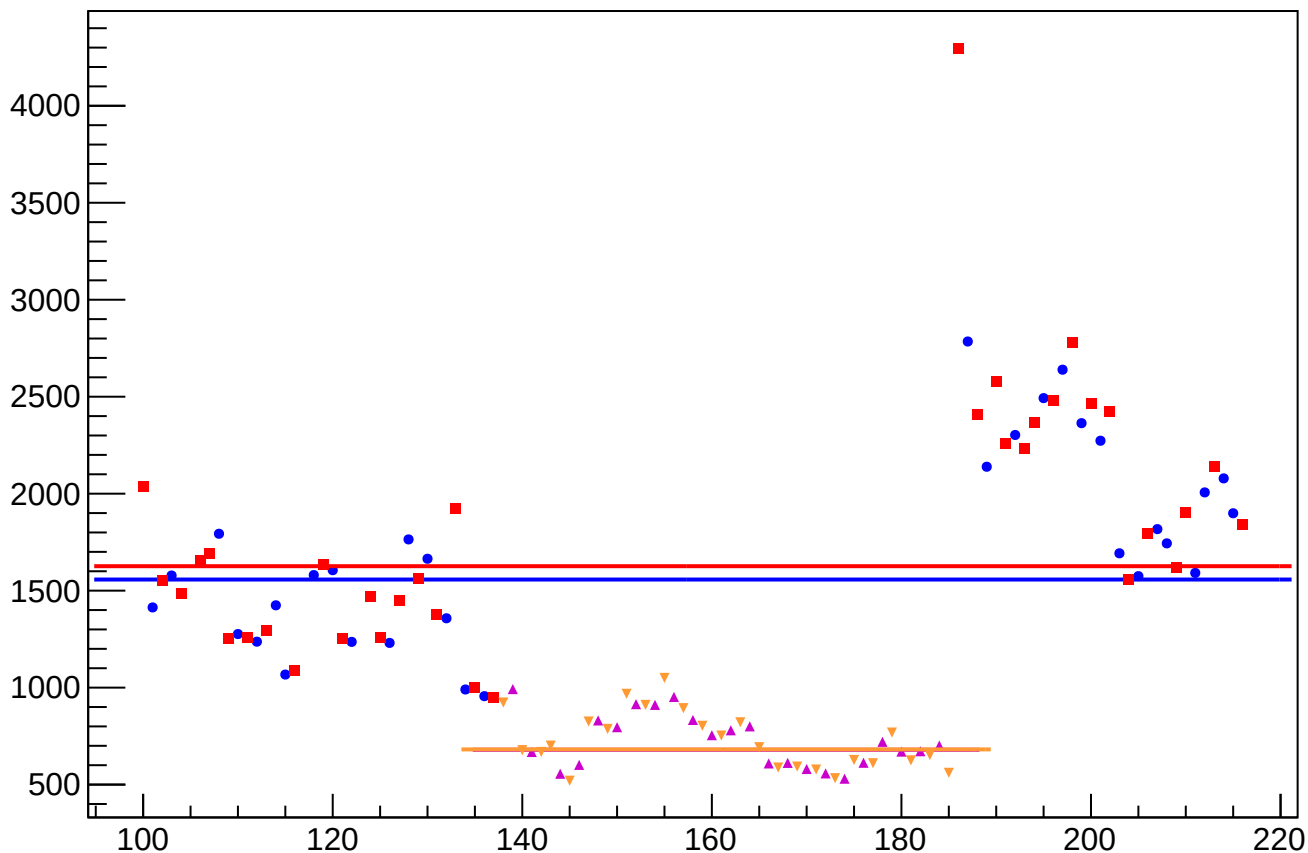
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-833.782 \pm 145.375$   $\chi^2/\text{NDF}$ : 110.6/55

All:  $-589.124 \pm 104.066$   $\chi^2/\text{NDF}$ : 191.1/113

- sign  $-331.990 \pm 149.035$   $\chi^2/\text{NDF}$ : 74.7/57

asym\_sam\_2468\_avg\_reg\_correction\_rms vs Slug



Right In: 1557.347 $\pm$ 0.262  $\chi^2$ /NDF: 2848208.7/30

Left Out: 681.427 $\pm$ 0.112  $\chi^2$ /NDF:1334213.4/24

Right Out: 1626.102 $\pm$ 0.271  $\chi^2$ /NDF: 3173495.5/34

Left In: 679.413 $\pm$ 0.114  $\chi^2$ /NDF:1185267.0/22

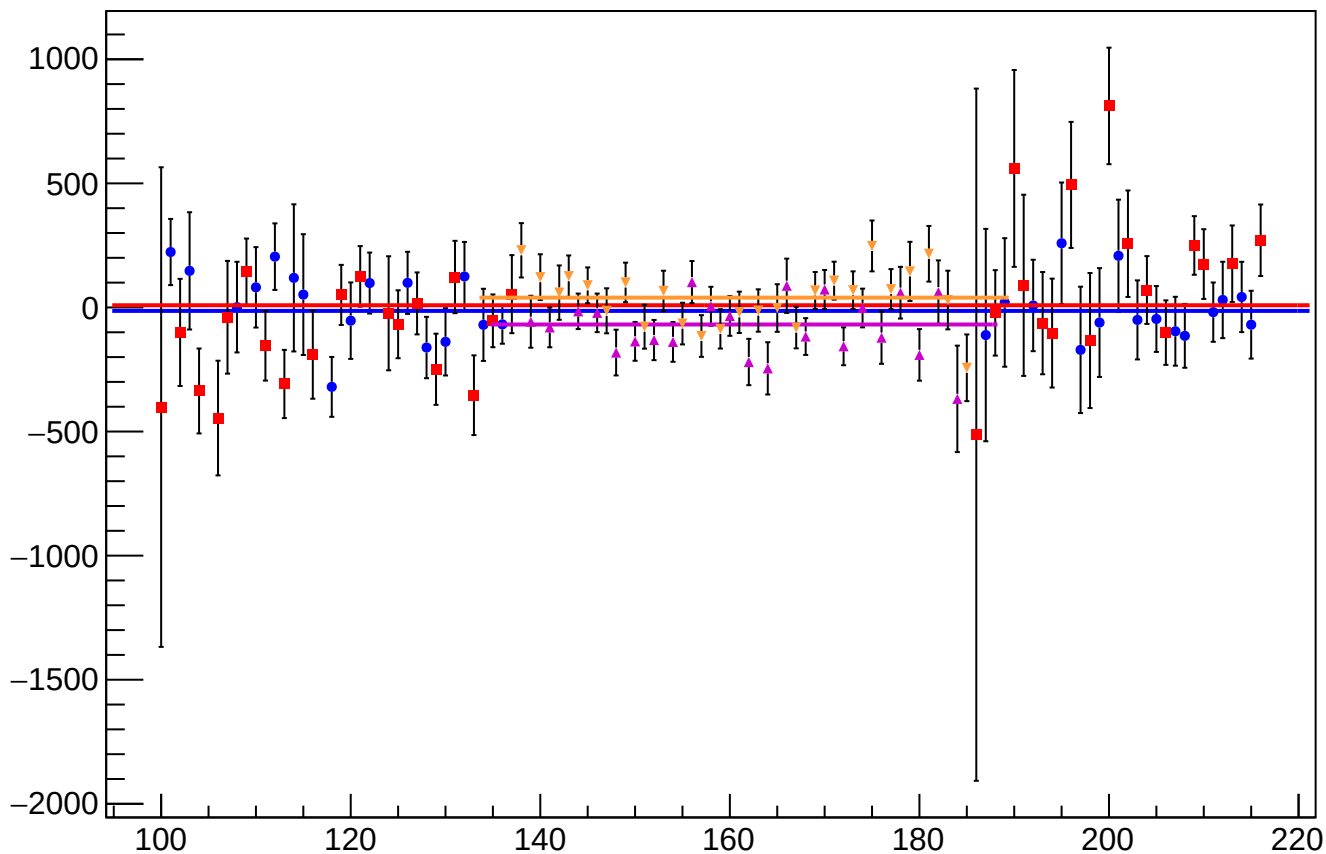
+ sign 816.576 $\pm$ 0.103  $\chi^2$ /NDF: 13656806.4/55

All: 819.700 $\pm$ 0.074  $\chi^2$ /NDF: 28399805.9/13

- sign 822.983 $\pm$ 0.105  $\chi^2$ /NDF: 14741105.5/57



# cor\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-13.836 \pm 26.753$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $39.484 \pm 17.666$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $8.879 \pm 27.645$   $\chi^2/\text{NDF}$ : 58.6/34

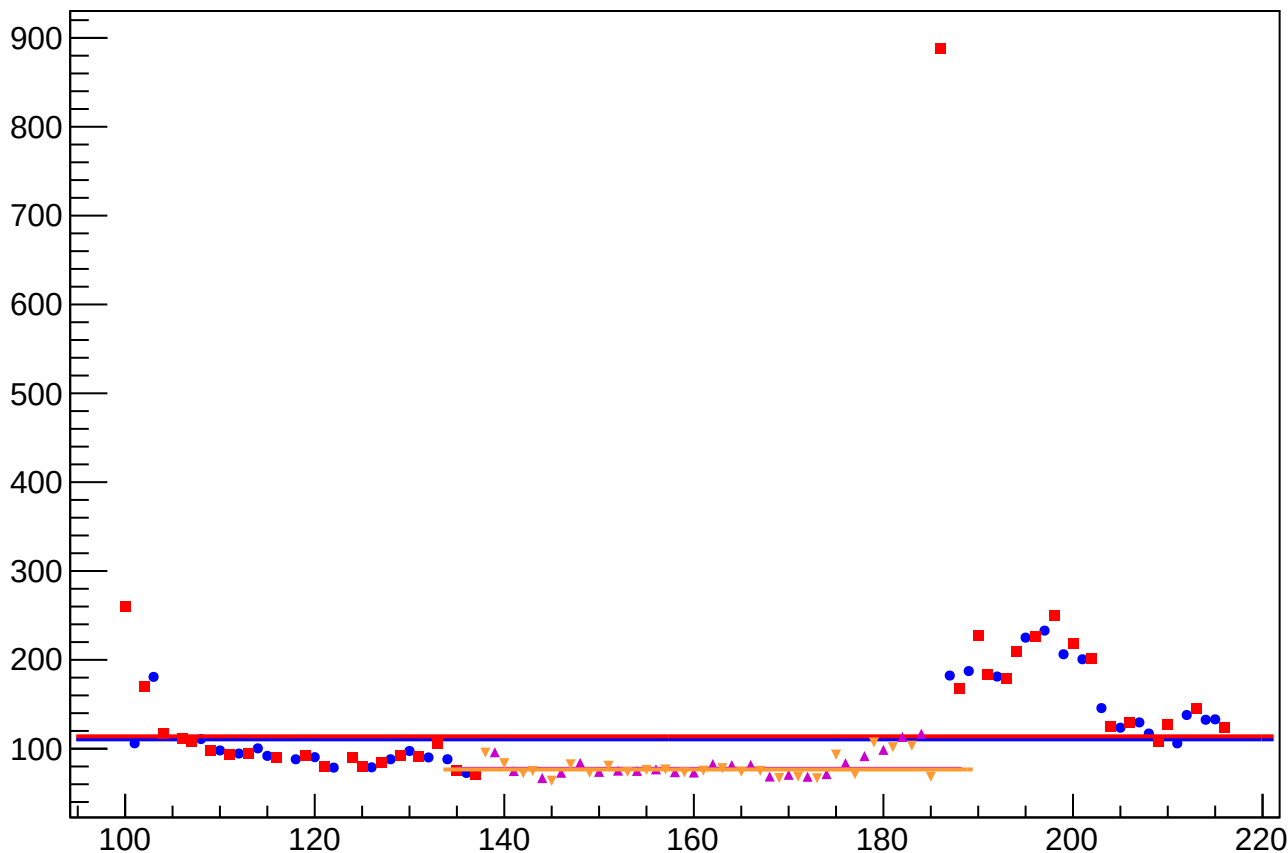
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $23.293 \pm 14.742$   $\chi^2/\text{NDF}$ : 57.9/55

All:  $-9.642 \pm 10.606$   $\chi^2/\text{NDF}$ : 161.3/113

- sign  $-44.976 \pm 15.269$   $\chi^2/\text{NDF}$ : 93.0/57

# cor\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 110.558 $\pm$ 0.019  $\chi^2$ /NDF: 3699414.1/30

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF: 654608.7/24

Right Out: 113.926 $\pm$ 0.020  $\chi^2$ /NDF: 4731858.2/34

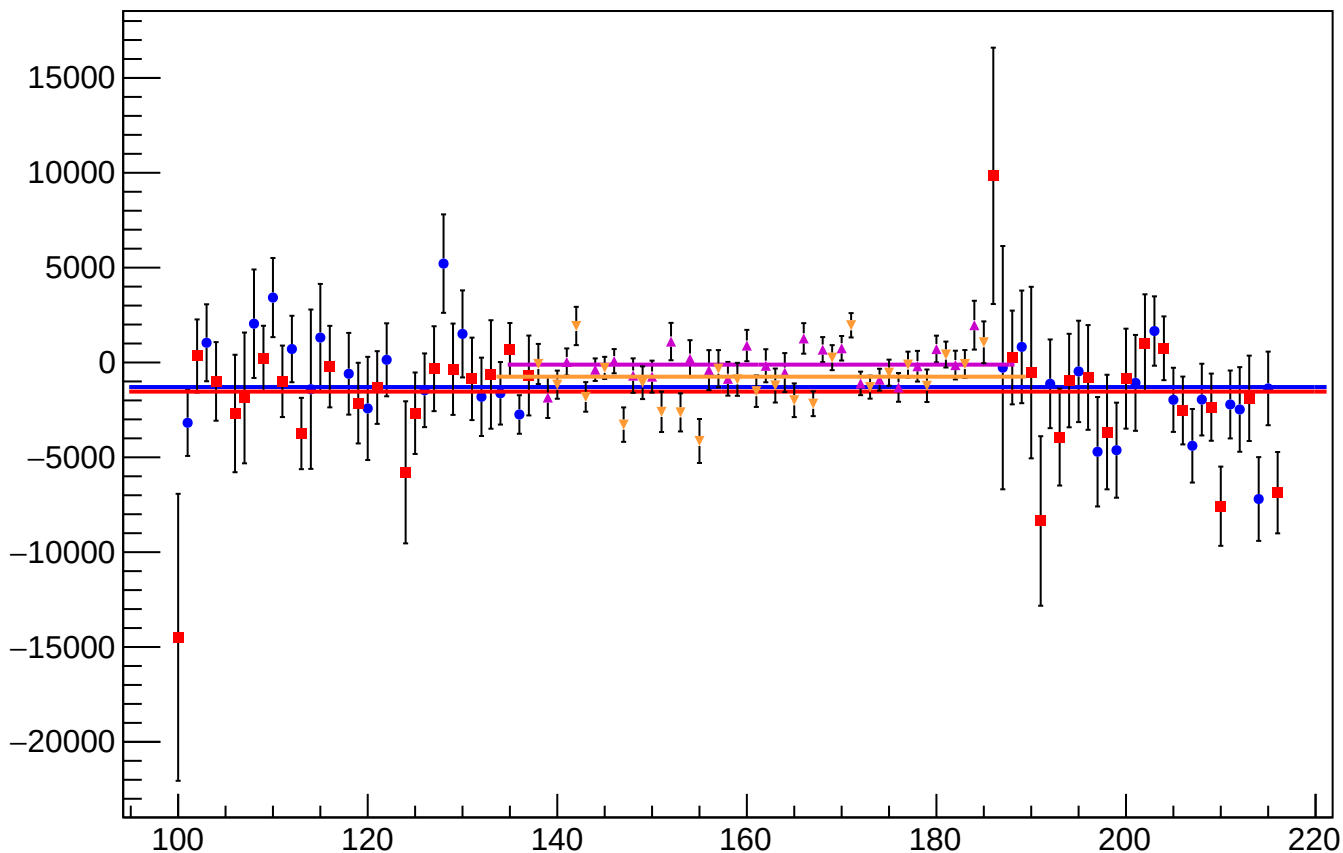
Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF: 590414.8/22

+ sign 86.944 $\pm$ 0.010  $\chi^2$ /NDF: 6591874.0/55

All: 87.698 $\pm$ 0.007  $\chi^2$ /NDF: 14358190.8/113

- sign 88.508 $\pm$ 0.011  $\chi^2$ /NDF: 7755459.6/57

asym\_sam\_2468\_avg\_cor\_correction\_mean vs Slug



Right In:  $-1294.953 \pm 370.096$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $-749.632 \pm 158.081$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1535.884 \pm 383.008$   $\chi^2/\text{NDF}$ : 37.3/34

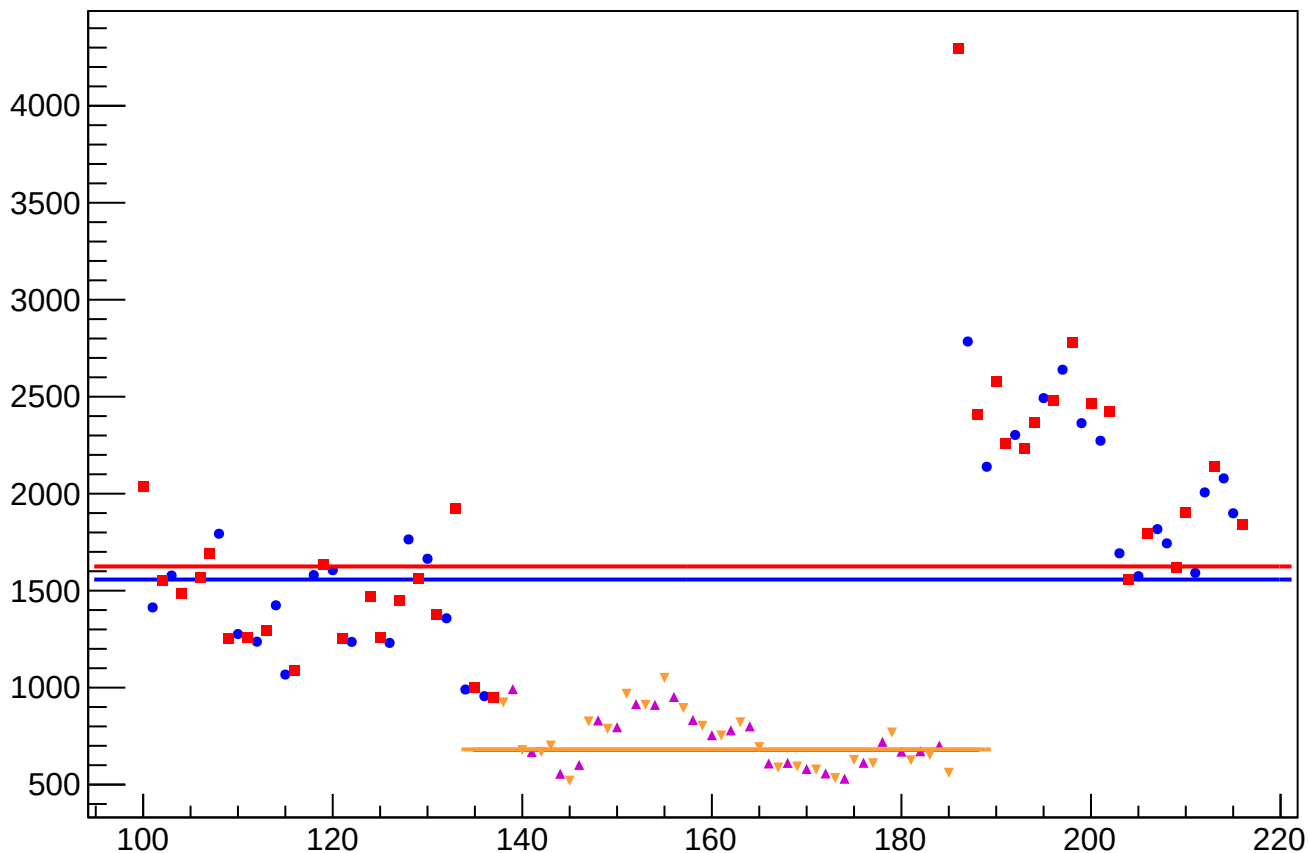
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-833.772 \pm 145.375$   $\chi^2/\text{NDF}$ : 110.6/55

All:  $-587.776 \pm 104.072$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $-329.174 \pm 149.053$   $\chi^2/\text{NDF}$ : 74.0/57

asym\_sam\_2468\_avg\_cor\_correction\_rms vs Slug



Right In:  $1557.350 \pm 0.262$   $\chi^2/\text{NDF}$ : 2848216.3/30

Left Out:  $681.426 \pm 0.112$   $\chi^2/\text{NDF}$ : 1334214.9/24

Right Out:  $1624.779 \pm 0.271$   $\chi^2/\text{NDF}$ : 3173880.5/34

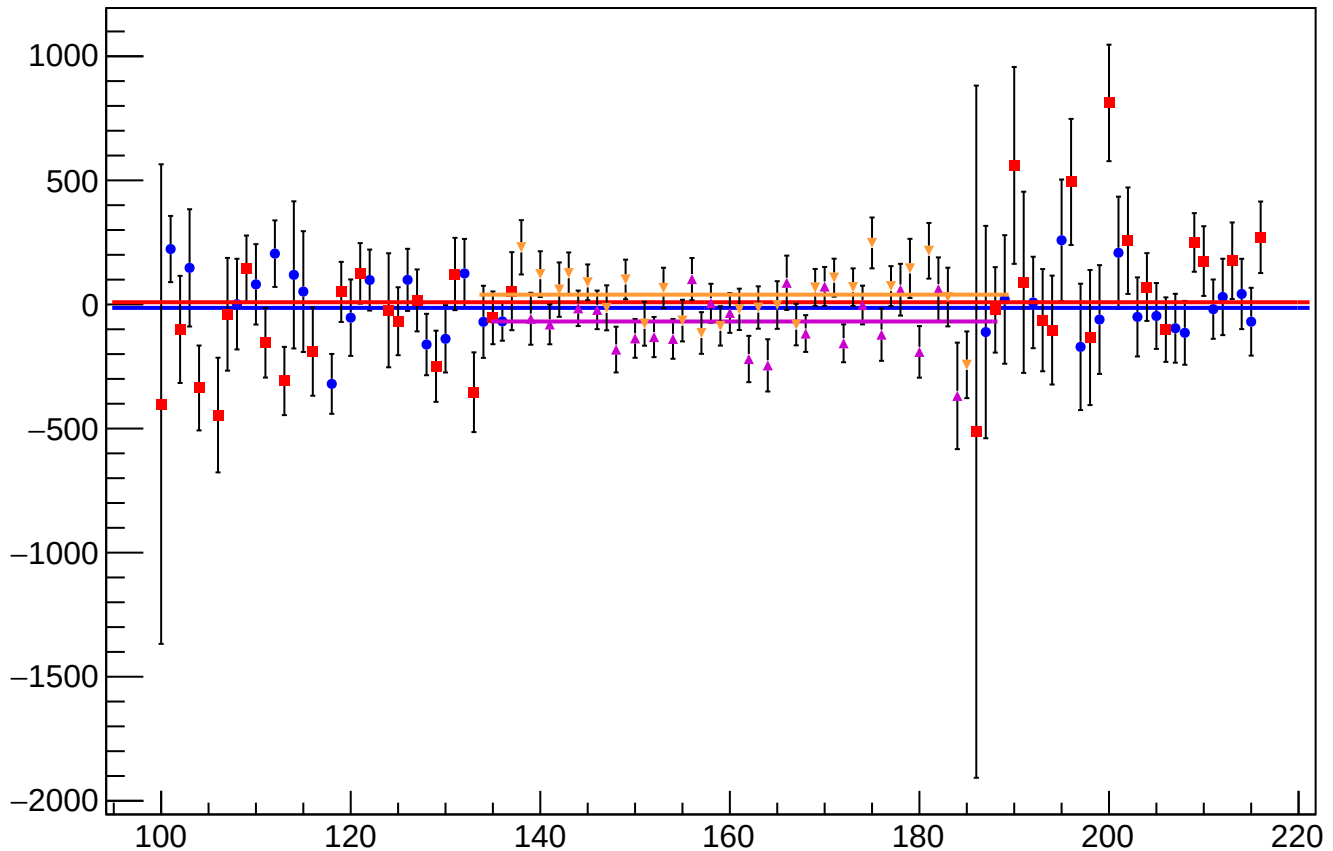
Left In:  $679.414 \pm 0.114$   $\chi^2/\text{NDF}$ : 1185265.0/22

+ sign  $816.576 \pm 0.103$   $\chi^2/\text{NDF}$ : 13656854.1/55

All:  $819.507 \pm 0.074$   $\chi^2/\text{NDF}$ : 28356990.5/13

- sign  $822.589 \pm 0.105$   $\chi^2/\text{NDF}$ : 14698468.4/57

# eigen\_cor\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-13.836 \pm 26.753$   $\chi^2/\text{NDF}$ : 23.2/30

Left Out:  $39.484 \pm 17.666$   $\chi^2/\text{NDF}$ : 31.9/24

Right Out:  $8.879 \pm 27.645$   $\chi^2/\text{NDF}$ : 58.6/34

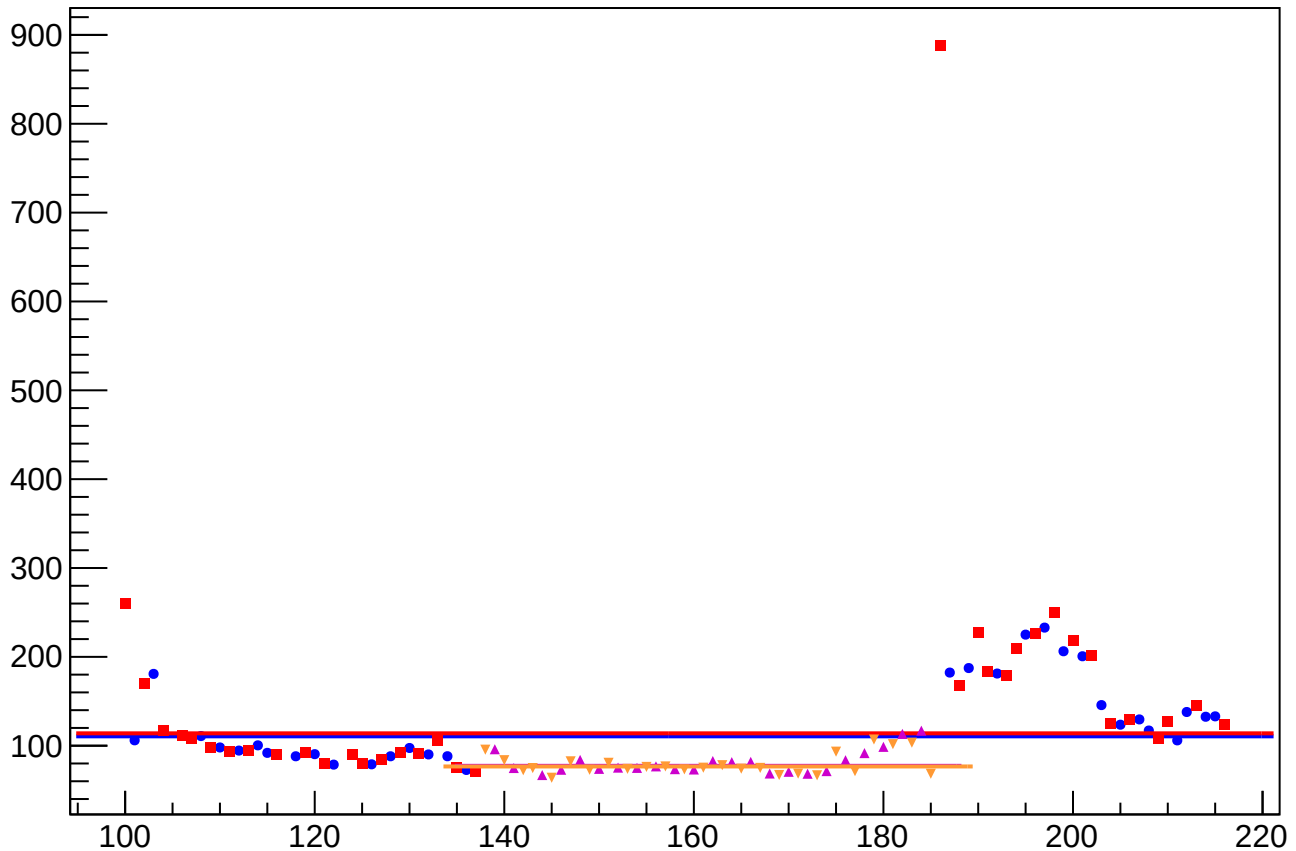
Left In:  $-68.620 \pm 18.317$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $23.293 \pm 14.742$   $\chi^2/\text{NDF}$ : 57.9/55

All:  $-9.642 \pm 10.606$   $\chi^2/\text{NDF}$ : 161.3/113

- sign  $-44.976 \pm 15.269$   $\chi^2/\text{NDF}$ : 93.0/57

# eigen\_cor\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 110.558 $\pm$ 0.019  $\chi^2$ /NDF: 3699414.1/30

Left Out: 76.646 $\pm$ 0.012  $\chi^2$ /NDF: 654608.7/24

Right Out: 113.926 $\pm$ 0.020  $\chi^2$ /NDF: 4731858.2/34

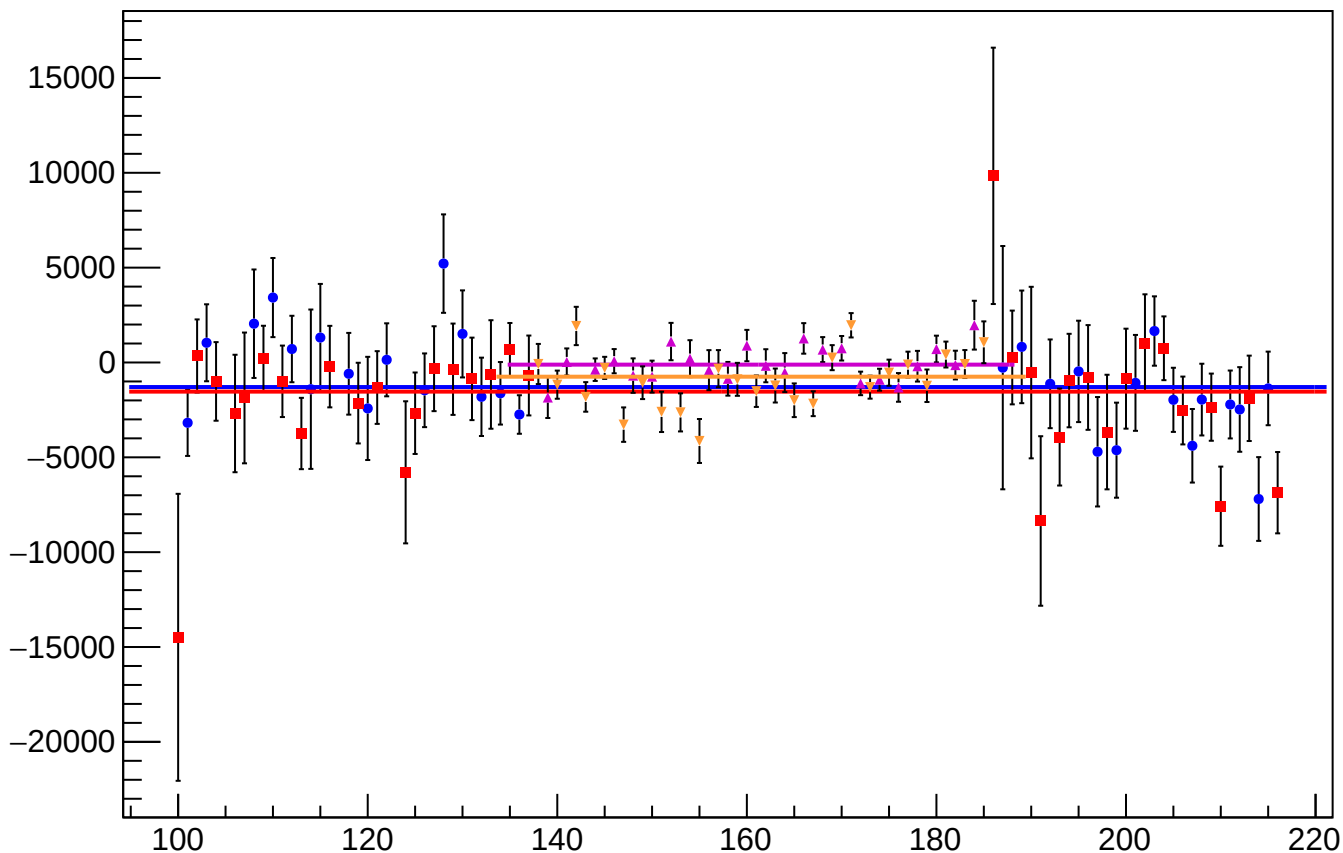
Left In: 77.348 $\pm$ 0.013  $\chi^2$ /NDF: 590414.8/22

+ sign 86.944 $\pm$ 0.010  $\chi^2$ /NDF: 6591874.0/55

All: 87.698 $\pm$ 0.007  $\chi^2$ /NDF: 14358190.8/113

- sign 88.508 $\pm$ 0.011  $\chi^2$ /NDF: 7755459.6/57

asym\_sam\_2468\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-1294.953 \pm 370.096$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $-749.632 \pm 158.081$   $\chi^2/\text{NDF}$ : 70.0/24

Right Out:  $-1535.884 \pm 383.008$   $\chi^2/\text{NDF}$ : 37.3/34

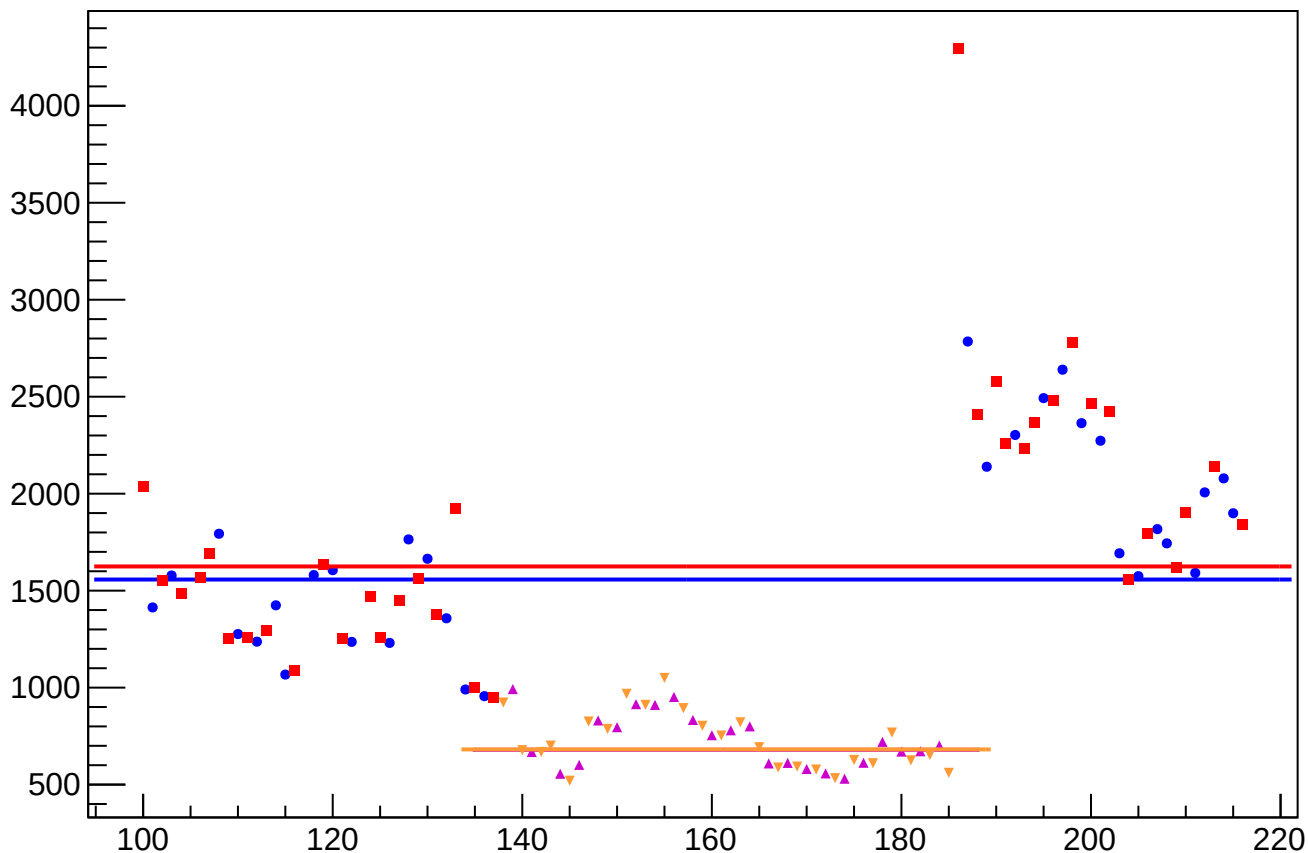
Left In:  $-113.799 \pm 161.809$   $\chi^2/\text{NDF}$ : 25.1/22

+ sign  $-833.772 \pm 145.375$   $\chi^2/\text{NDF}$ : 110.6/55

All:  $-587.776 \pm 104.072$   $\chi^2/\text{NDF}$ : 190.5/113

- sign  $-329.174 \pm 149.053$   $\chi^2/\text{NDF}$ : 74.0/57

asym\_sam\_2468\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In:  $1557.350 \pm 0.262$   $\chi^2/\text{NDF}: 2848216.3/30$

Left Out:  $681.426 \pm 0.112$   $\chi^2/\text{NDF}: 1334214.9/24$

Right Out:  $1624.779 \pm 0.271$   $\chi^2/\text{NDF}: 3173880.5/34$

Left In:  $679.414 \pm 0.114$   $\chi^2/\text{NDF}: 1185265.0/22$

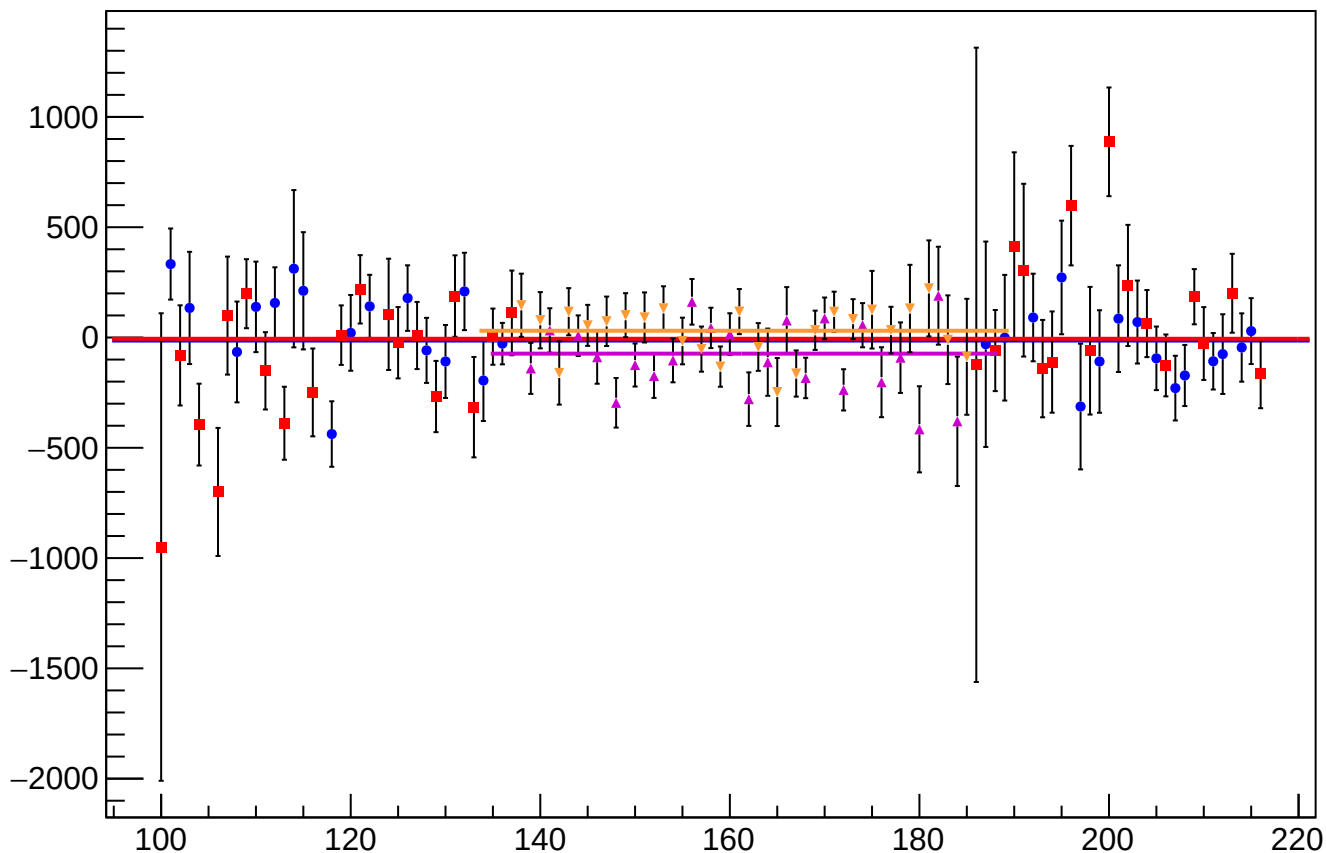
+ sign  $816.576 \pm 0.103$   $\chi^2/\text{NDF}: 13656854.1/55$

All:  $819.507 \pm 0.074$   $\chi^2/\text{NDF}: 28356990.5/11$

- sign  $822.589 \pm 0.105$   $\chi^2/\text{NDF}: 14698468.4/57$



# dit\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-13.724 \pm 30.904$   $\chi^2/\text{NDF}$ : 30.0/30

Left Out:  $30.684 \pm 22.856$   $\chi^2/\text{NDF}$ : 19.9/24

Right Out:  $-5.822 \pm 31.881$   $\chi^2/\text{NDF}$ : 55.5/34

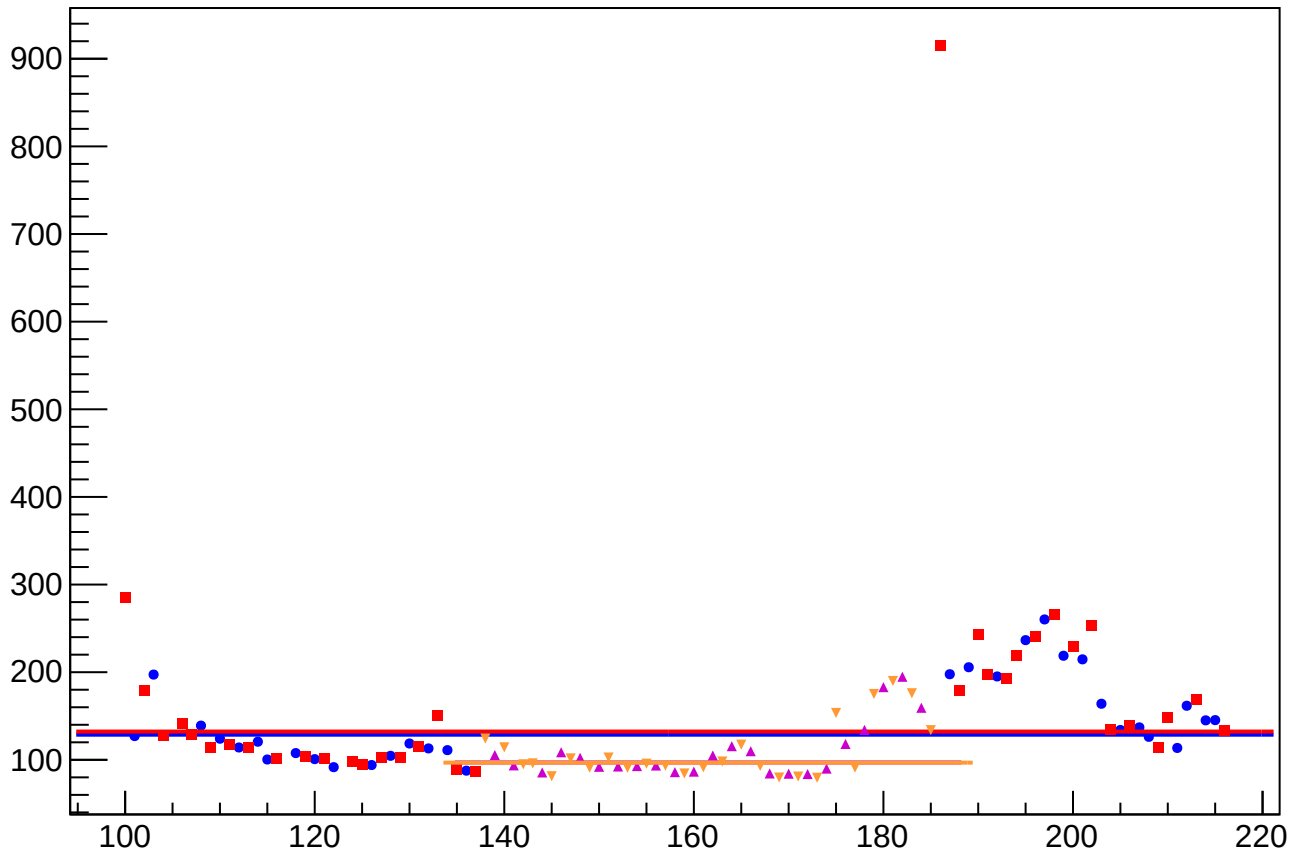
Left In:  $-73.147 \pm 23.510$   $\chi^2/\text{NDF}$ : 34.5/22

+ sign  $14.982 \pm 18.376$   $\chi^2/\text{NDF}$ : 51.3/55

All:  $-16.282 \pm 13.183$   $\chi^2/\text{NDF}$ : 150.2/113

- sign  $-49.431 \pm 18.922$   $\chi^2/\text{NDF}$ : 92.9/57

# dit\_asym\_sam\_2468\_avg\_rms vs Slug



Right In:  $128.695 \pm 0.022$   $\chi^2/\text{NDF}$ : 2969025.1/30

Left Out:  $96.794 \pm 0.016$   $\chi^2/\text{NDF}$ : 1720415.9/24

Right Out:  $132.274 \pm 0.023$   $\chi^2/\text{NDF}$ : 4018761.0/34

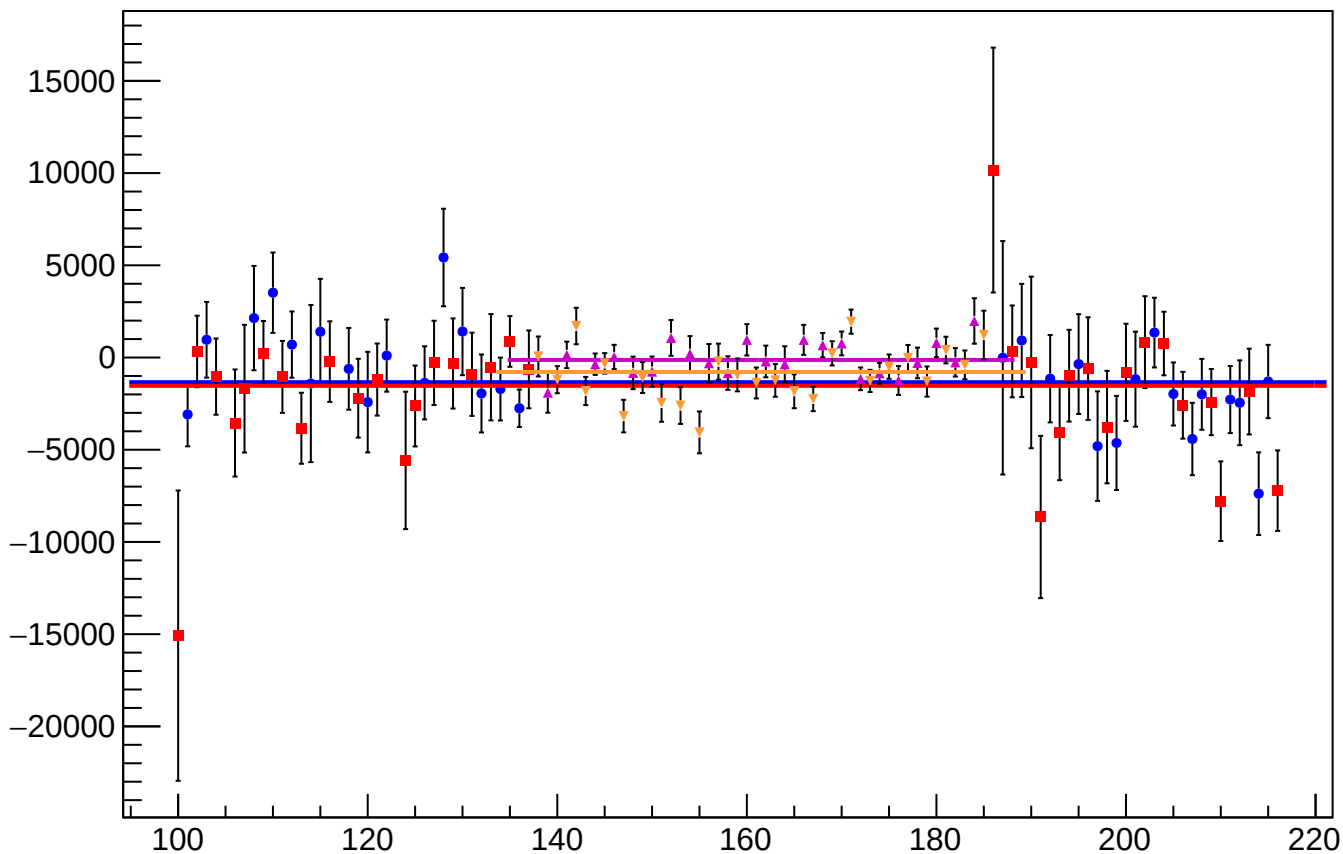
Left In:  $97.017 \pm 0.017$   $\chi^2/\text{NDF}$ : 1321187.5/22

+ sign  $108.074 \pm 0.013$   $\chi^2/\text{NDF}$ : 6067014.9/55

All:  $108.735 \pm 0.009$   $\chi^2/\text{NDF}$ : 12996759.4/100

- sign  $109.436 \pm 0.013$   $\chi^2/\text{NDF}$ : 6924406.3/57

asym\_sam\_2468\_avg\_dit\_correction\_mean vs Slug



Right In: -1337.924+/-376.081  $\chi^2/\text{NDF}$ : 38.0/30

Left Out: -783.756+/-158.329  $\chi^2/\text{NDF}$ : 66.3/24

Right Out: -1534.136+/-387.049  $\chi^2/\text{NDF}$ : 39.4/34

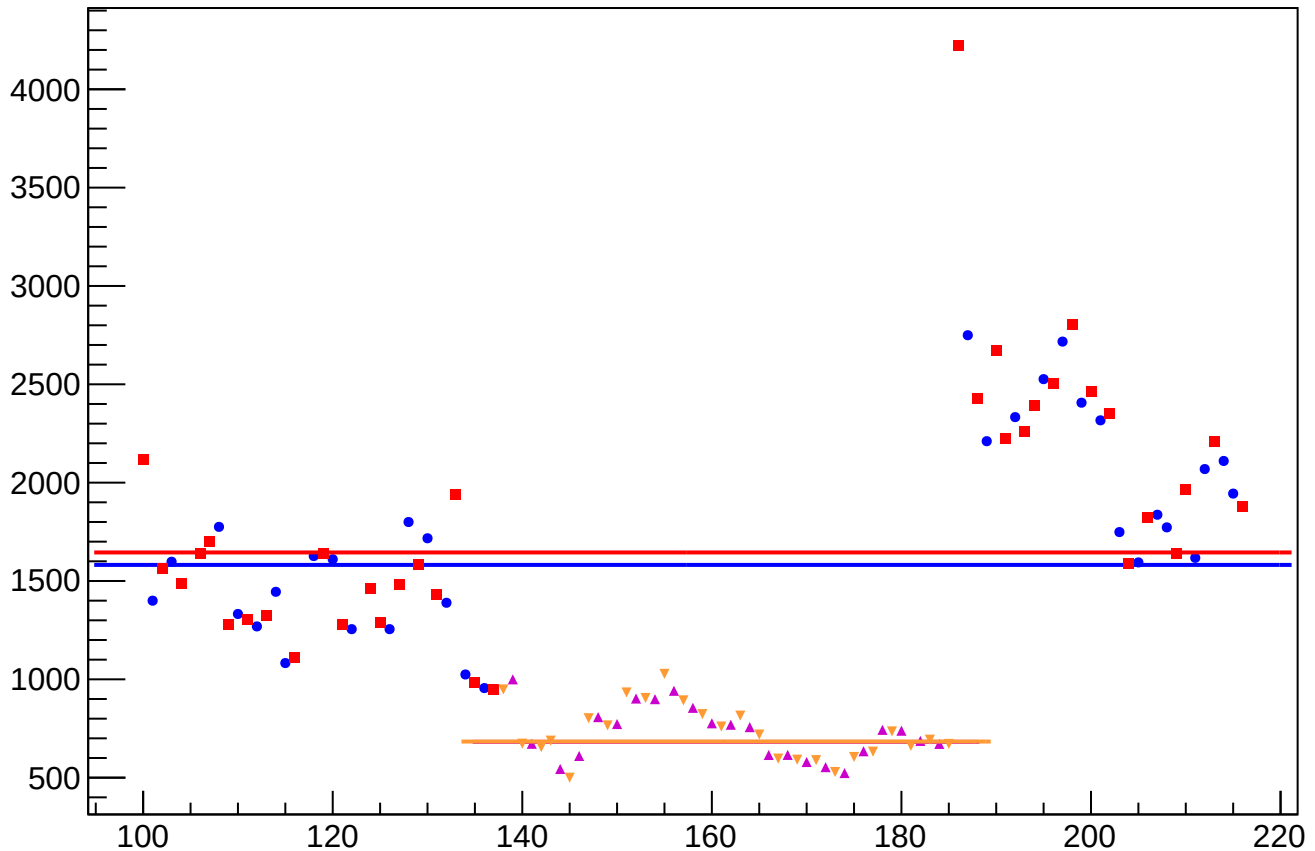
Left In: -131.380+/-162.409  $\chi^2/\text{NDF}$ : 24.3/22

+ sign -867.188+/-145.924  $\chi^2/\text{NDF}$ : 106.2/55

All: -611.107+/-104.514  $\chi^2/\text{NDF}$ : 187.3/113

- sign -341.390+/-149.759  $\chi^2/\text{NDF}$ : 74.8/57

# asym\_sam\_2468\_avg\_dit\_correction\_rms vs Slug



Right In:  $1581.771 \pm 0.266$   $\chi^2/\text{NDF}: 2903583.7/30$

Left Out:  $683.698 \pm 0.112$   $\chi^2/\text{NDF}: 1297969.4/24$

Right Out:  $1645.057 \pm 0.274$   $\chi^2/\text{NDF}: 3172786.7/34$

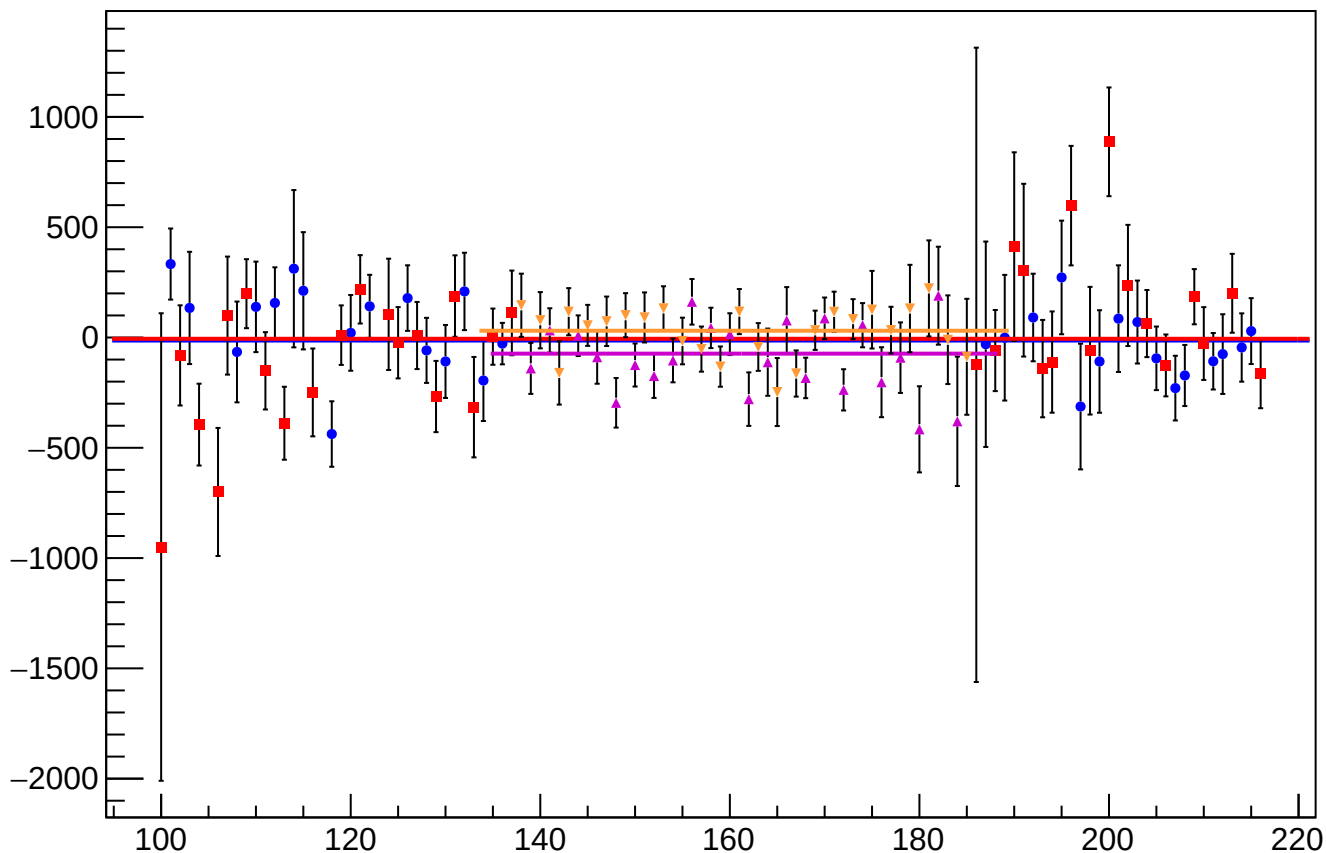
Left In:  $681.961 \pm 0.115$   $\chi^2/\text{NDF}: 1186135.0/22$

+ sign  $818.906 \pm 0.103$   $\chi^2/\text{NDF}: 13889365.3/55$

All:  $822.433 \pm 0.074$   $\chi^2/\text{NDF}: 28780072.9/11$

- sign  $826.148 \pm 0.106$   $\chi^2/\text{NDF}: 14888308.2/57$

eigen\_dit\_asym\_sam\_2468\_avg\_mean vs Slug



Right In:  $-13.721 \pm 30.903$   $\chi^2/\text{NDF}$ : 30.0/30

Left Out:  $30.684 \pm 22.856$   $\chi^2/\text{NDF}$ : 19.9/24

Right Out:  $-5.820 \pm 31.881$   $\chi^2/\text{NDF}$ : 55.5/34

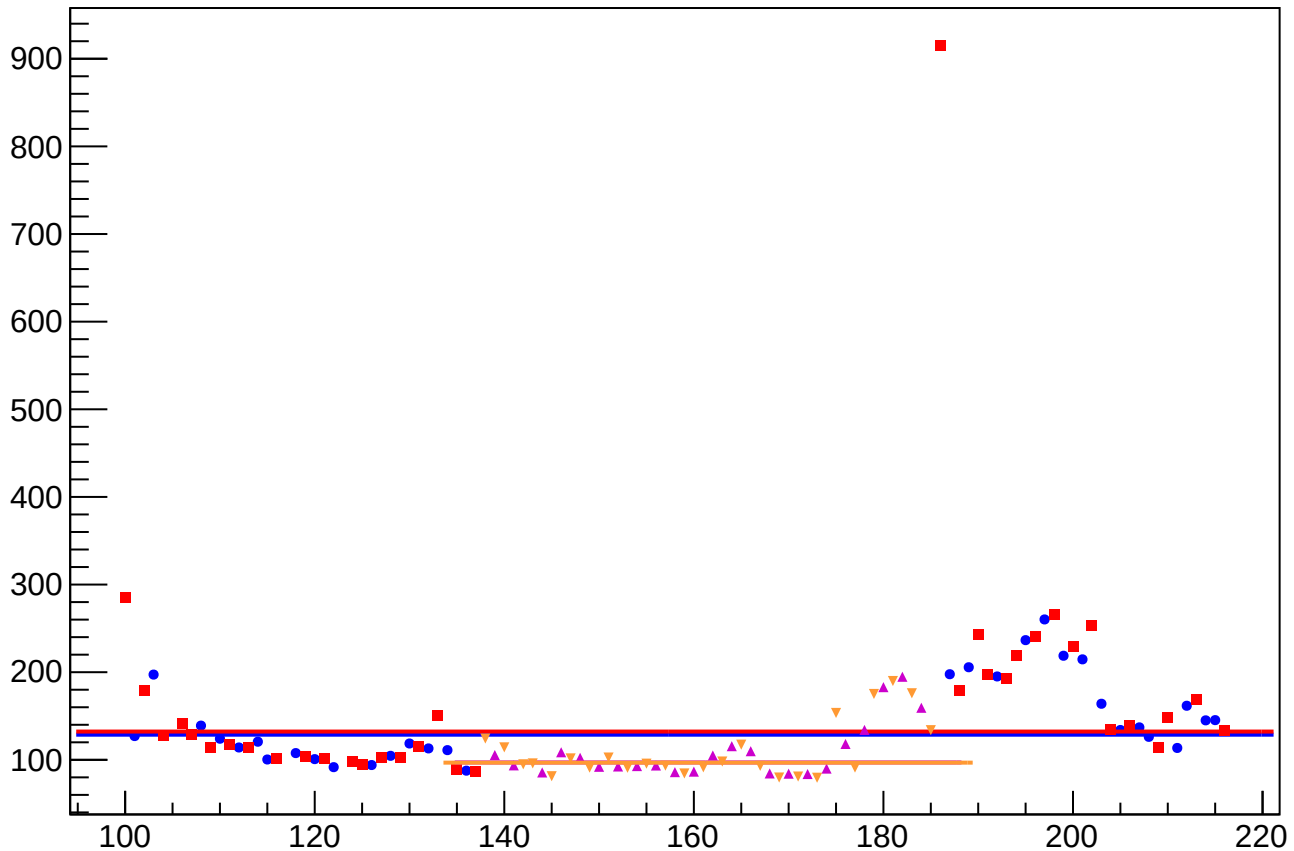
Left In:  $-73.146 \pm 23.510$   $\chi^2/\text{NDF}$ : 34.5/22

+ sign  $14.983 \pm 18.376$   $\chi^2/\text{NDF}$ : 51.3/55

All:  $-16.281 \pm 13.183$   $\chi^2/\text{NDF}$ : 150.2/113

- sign  $-49.430 \pm 18.922$   $\chi^2/\text{NDF}$ : 92.9/57

# eigen\_dit\_asym\_sam\_2468\_avg\_rms vs Slug



Right In: 128.694 $\pm$ 0.022  $\chi^2$ /NDF: 2969043.3/30

Left Out: 96.795 $\pm$ 0.016  $\chi^2$ /NDF:1720415.9/24

Right Out: 132.274 $\pm$ 0.023  $\chi^2$ /NDF: 4018791.8/34

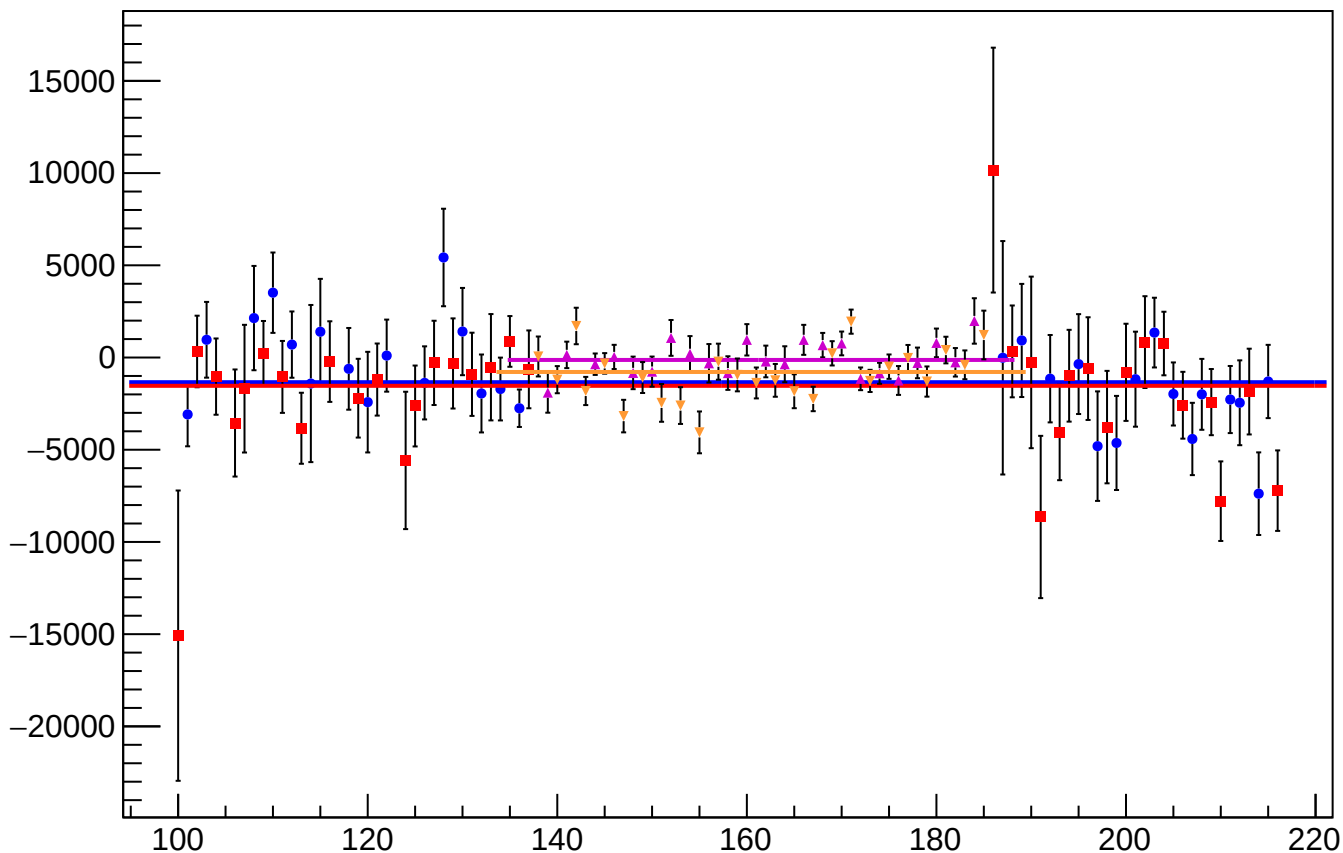
Left In: 97.017 $\pm$ 0.017  $\chi^2$ /NDF:1321171.2/22

+ sign 108.074 $\pm$ 0.013  $\chi^2$ /NDF: 6066958.7/55

All: 108.735 $\pm$ 0.009  $\chi^2$ /NDF: 12996648.2/1

- sign 109.437 $\pm$ 0.013  $\chi^2$ /NDF: 6924351.0/57

asym\_sam\_2468\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-1337.918 \pm 376.081$   $\chi^2/\text{NDF}: 38.0/30$

Left Out:  $-783.754 \pm 158.328$   $\chi^2/\text{NDF}: 66.3/24$

Right Out:  $-1534.133 \pm 387.048$   $\chi^2/\text{NDF}: 39.4/34$

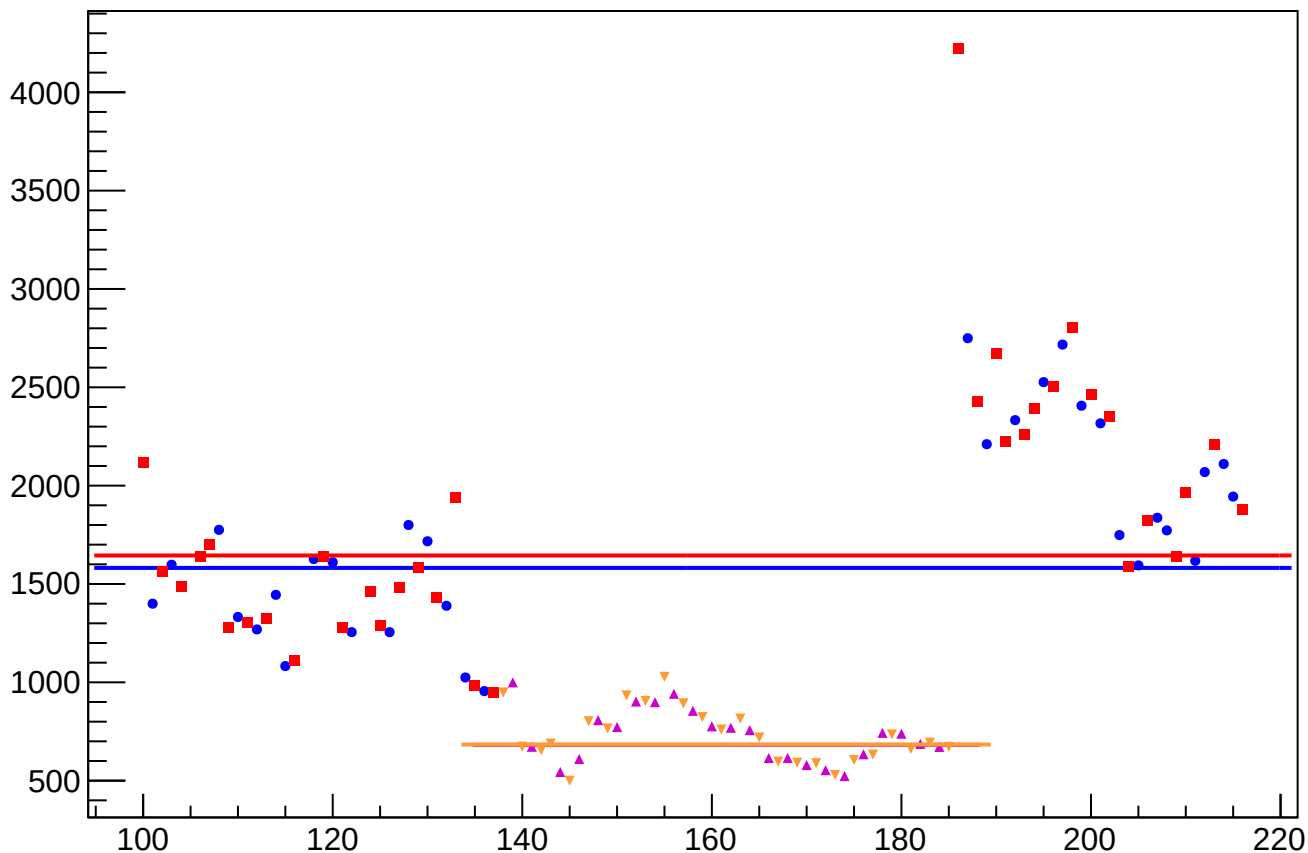
Left In:  $-131.379 \pm 162.409$   $\chi^2/\text{NDF}: 24.3/22$

+ sign  $-867.185 \pm 145.924$   $\chi^2/\text{NDF}: 106.2/55$

All:  $-611.105 \pm 104.513$   $\chi^2/\text{NDF}: 187.3/113$

- sign  $-341.388 \pm 149.759$   $\chi^2/\text{NDF}: 74.8/57$

asym\_sam\_2468\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1581.768 $\pm$ 0.266  $\chi^2$ /NDF: 2903593.0/30

Left Out: 683.696 $\pm$ 0.112  $\chi^2$ /NDF: 1297975.5/24

Right Out: 1645.054 $\pm$ 0.274  $\chi^2$ /NDF: 3172799.2/34

Left In: 681.960 $\pm$ 0.115  $\chi^2$ /NDF: 1186136.6/22

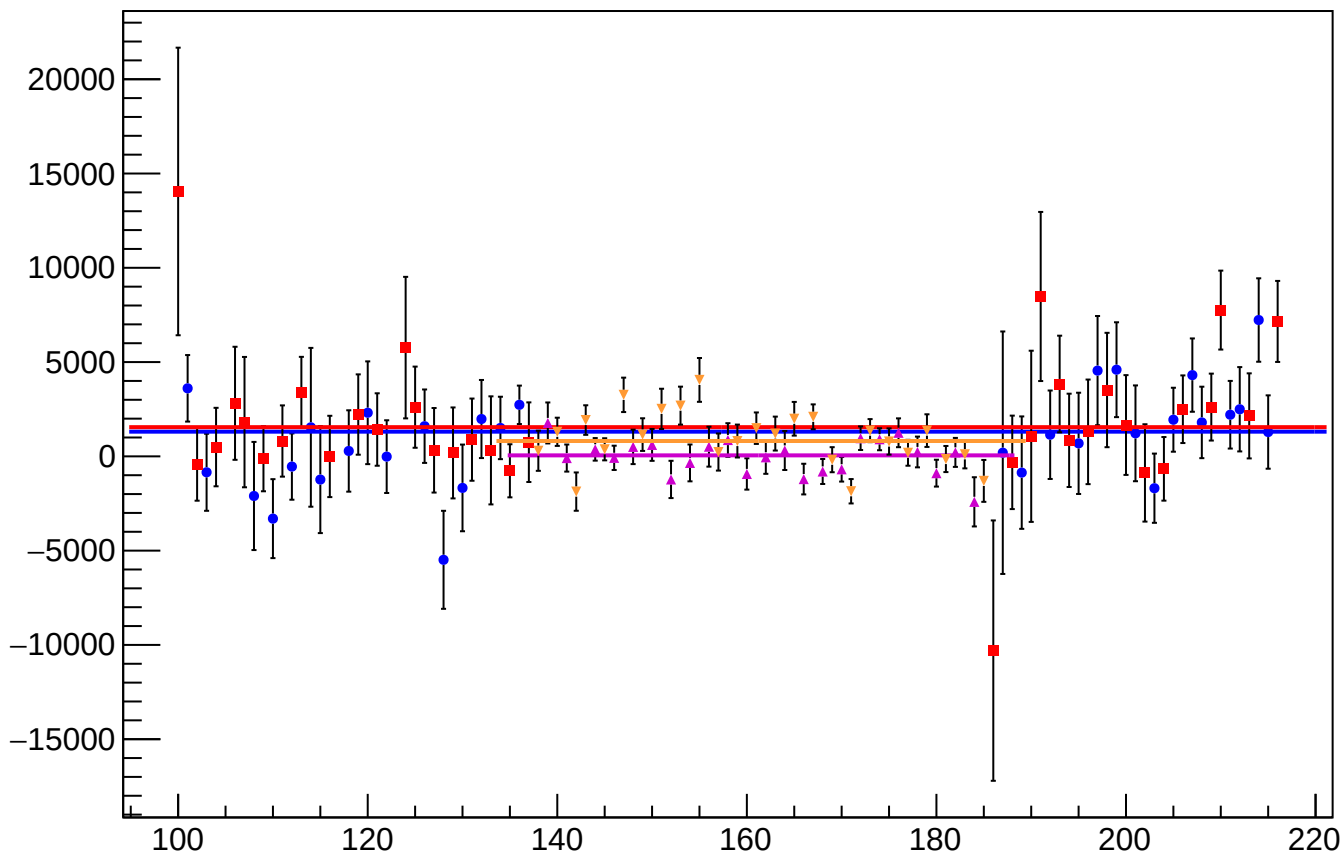
+ sign 818.904 $\pm$ 0.103  $\chi^2$ /NDF: 13889387.9/55

All: 822.432 $\pm$ 0.074  $\chi^2$ /NDF: 28780115.9/1

- sign 826.147 $\pm$ 0.106  $\chi^2$ /NDF: 14888328.6/57



# asym\_sam\_2468\_avg\_mean vs Slug



Right In: 1309.858 $\pm$ 371.364  $\chi^2$ /NDF: 39.0/30

Left Out: 814.067 $\pm$ 159.256  $\chi^2$ /NDF: 65.8/24

Right Out: 1548.305 $\pm$ 383.993  $\chi^2$ /NDF: 38.2/34

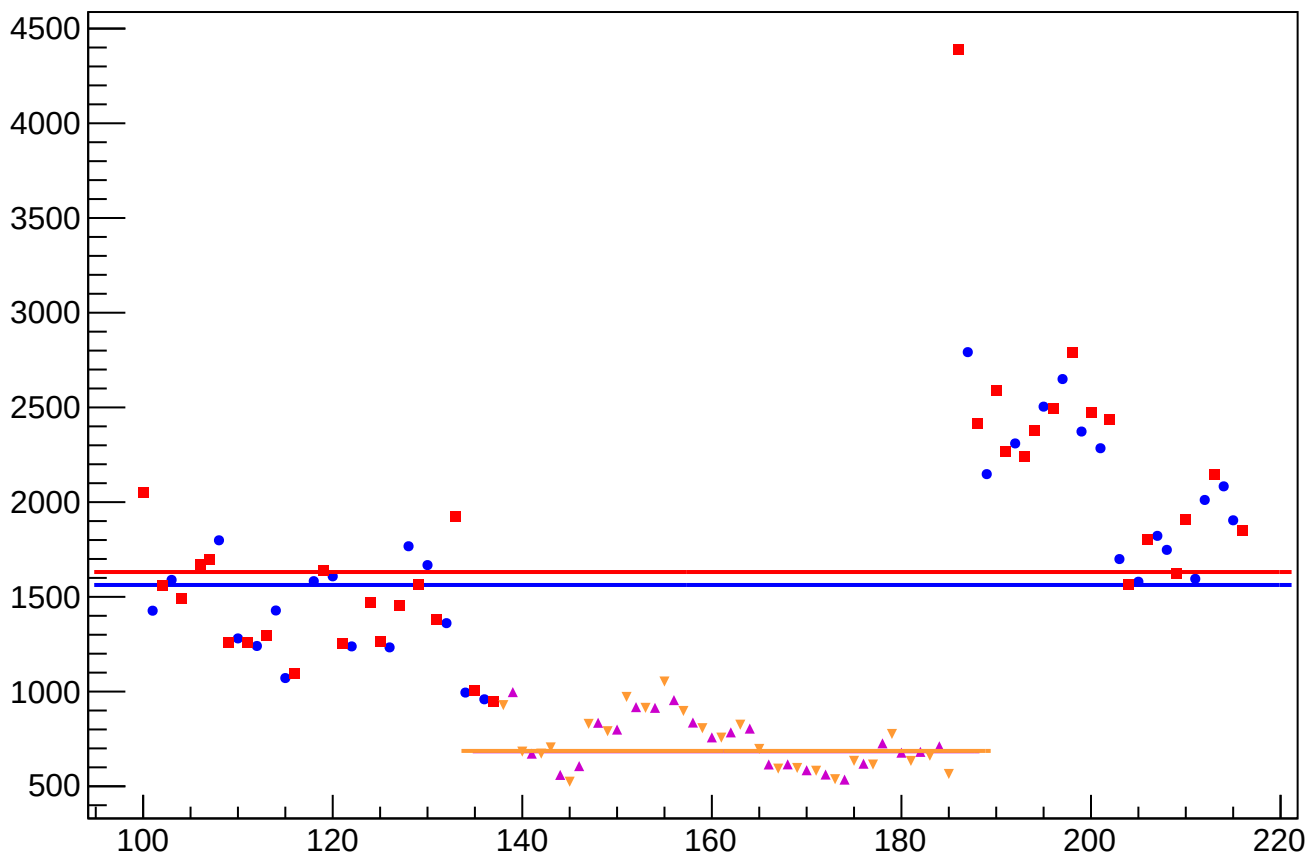
Left In: 52.290 $\pm$ 163.036  $\chi^2$ /NDF: 25.4/22

+ sign 891.082 $\pm$ 146.365  $\chi^2$ /NDF: 106.2/55

All: 593.558 $\pm$ 104.781  $\chi^2$ /NDF: 191.2/113

- sign 280.783 $\pm$ 150.070  $\chi^2$ /NDF: 76.5/57

# asym\_sam\_2468\_avg\_rms vs Slug



Right In: 1562.735 $\pm$ 0.263  $\chi^2$ /NDF: 2847145.3/30

Left Out: 686.700 $\pm$ 0.113  $\chi^2$ /NDF:1312231.8/24

Right Out: 1631.141 $\pm$ 0.272  $\chi^2$ /NDF: 3184835.8/34

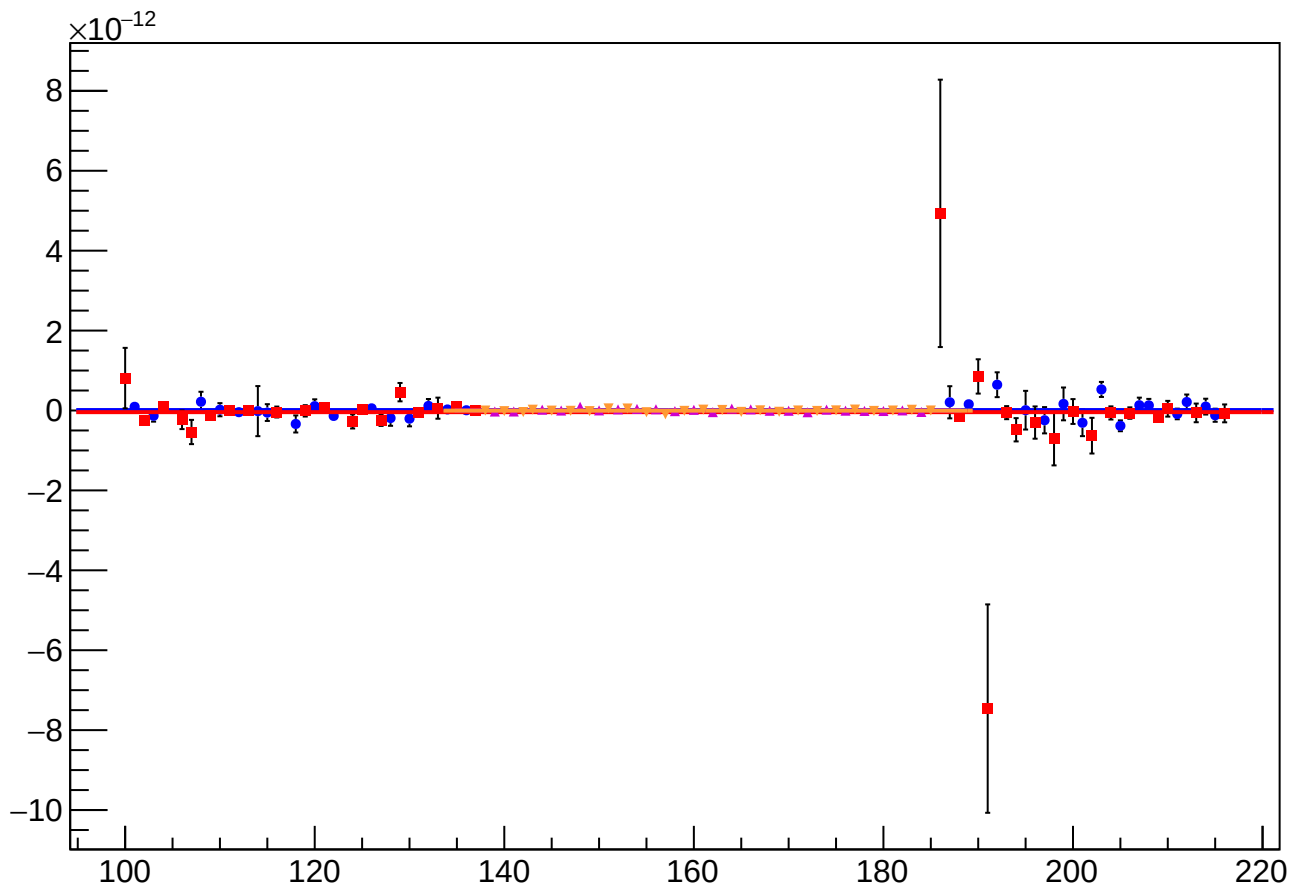
Left In: 684.763 $\pm$ 0.115  $\chi^2$ /NDF:1165205.5/22

+ sign 822.781 $\pm$ 0.103  $\chi^2$ /NDF: 13559991.6/55

All: 825.963 $\pm$ 0.074  $\chi^2$ /NDF: 28204706.3/11

- sign 829.308 $\pm$ 0.106  $\chi^2$ /NDF: 14642775.5/57

asym\_sam\_2468\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 38.4/30

Left Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 16.5/24

Right Out: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 48.1/34

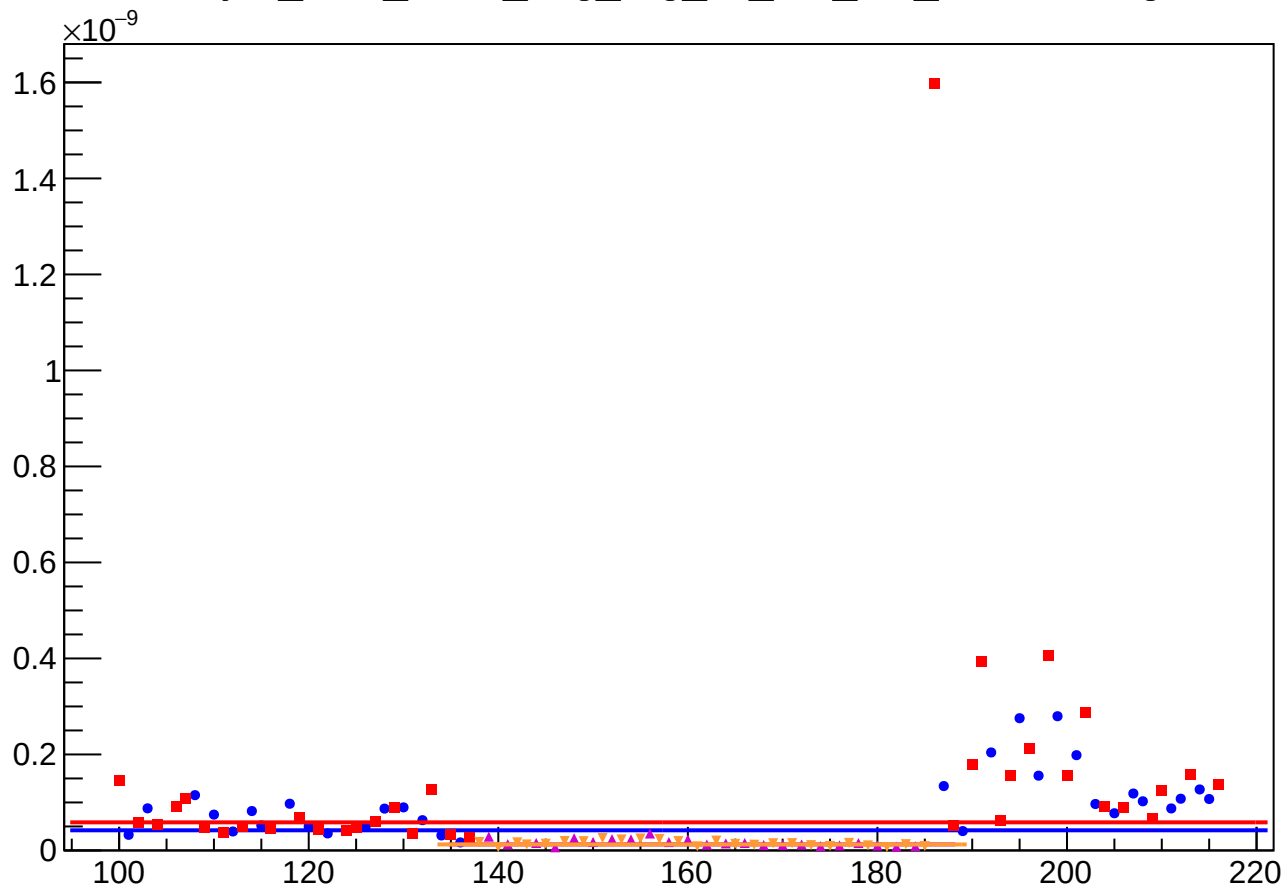
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 20.5/22

+ sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 55.4/55

All: -0.000+/-0.000  $\chi^2/\text{NDF}$ : 126.7/113

- sign -0.000+/-0.000  $\chi^2/\text{NDF}$ : 71.3/57

asym\_sam\_2468\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 6985336.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1742020.0/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 4451751.6/34

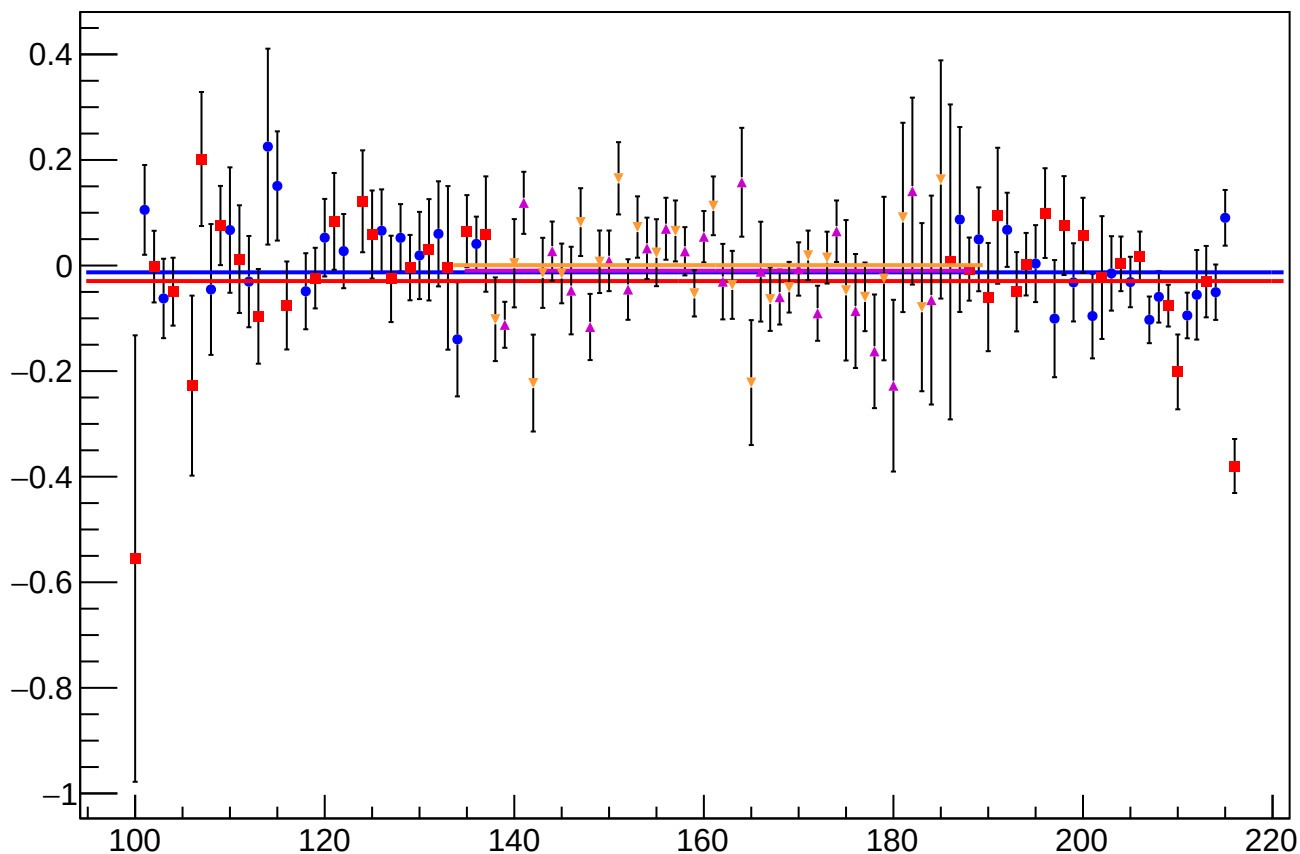
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 1961578.1/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 12884033.1/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 25924715.1/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 13036194.9/57

asym\_sam\_2468\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 30.9/30

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $-0.029 \pm 0.013$   $\chi^2/\text{NDF}$ : 79.9/34

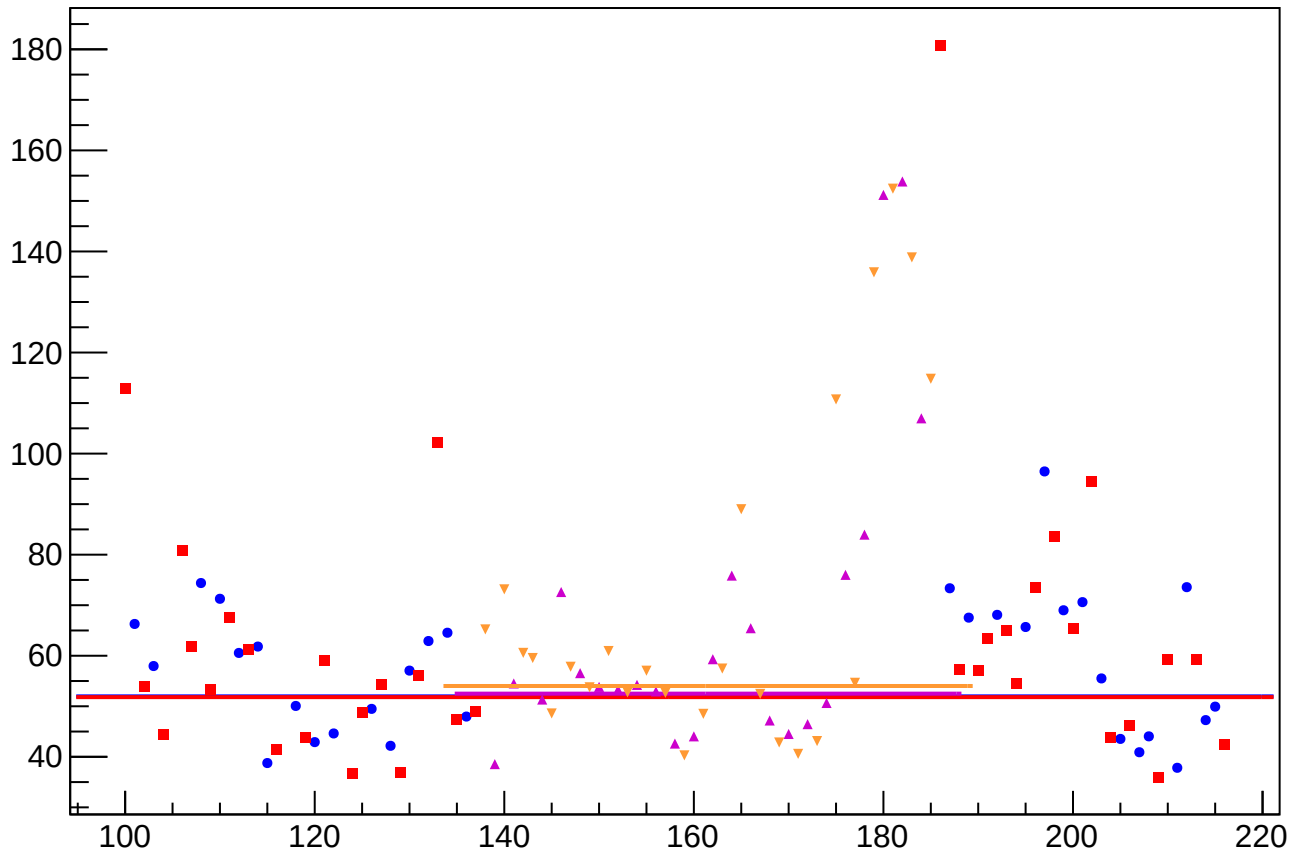
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.006 \pm 0.009$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-0.013 \pm 0.006$   $\chi^2/\text{NDF}$ : 177.2/113

- sign  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 113.0/57

asym\_sam\_2468\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.961+/-0.009  $\chi^2$ /NDF: 1818703.9/30

Left Out: 54.014+/-0.009  $\chi^2$ /NDF:3227550.5/24

Right Out: 51.809+/-0.009  $\chi^2$ /NDF: 2380738.2/34

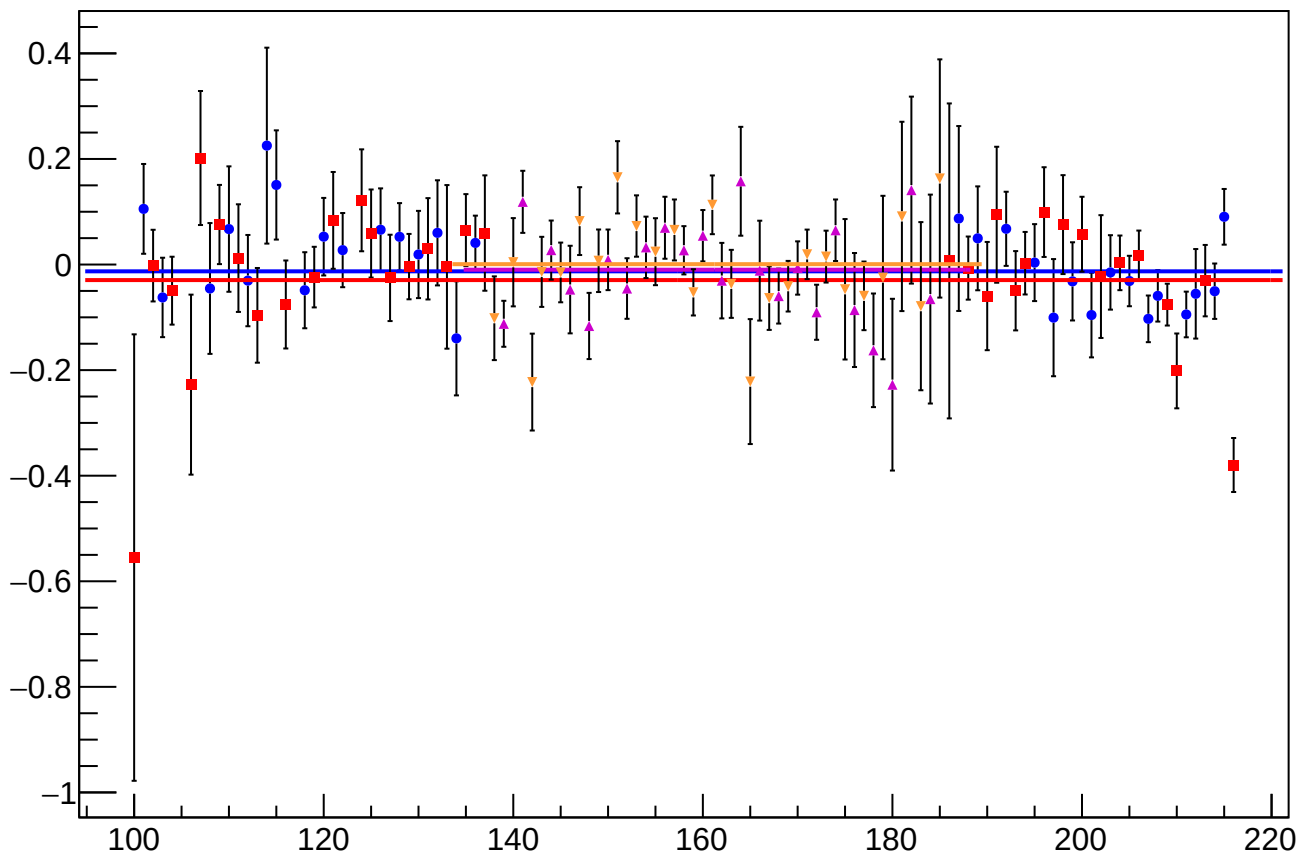
Left In: 52.502+/-0.009  $\chi^2$ /NDF:2557763.5/22

+ sign 52.935+/-0.006  $\chi^2$ /NDF: 5071536.4/55

All: 52.536+/-0.005  $\chi^2$ /NDF: 10020578.7/113

- sign 52.138+/-0.006  $\chi^2$ /NDF: 4941388.5/57

asym\_sam\_2468\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 30.9/30

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $-0.029 \pm 0.013$   $\chi^2/\text{NDF}$ : 79.9/34

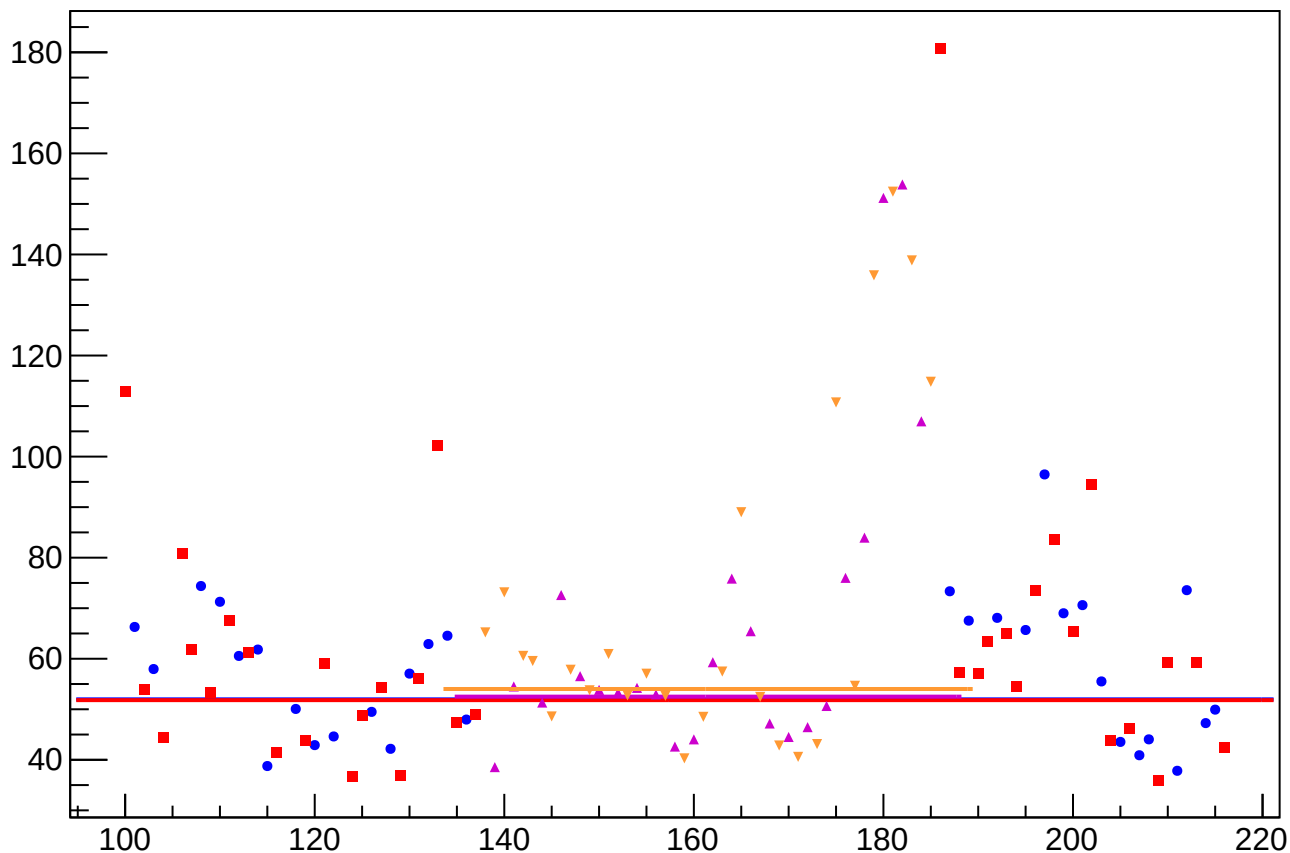
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.006 \pm 0.009$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-0.013 \pm 0.006$   $\chi^2/\text{NDF}$ : 177.2/113

- sign  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 113.0/57

asym\_sam\_2468\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.961 $\pm$ 0.009  $\chi^2$ /NDF: 1818703.9/30

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227550.5/24

Right Out: 51.809 $\pm$ 0.009  $\chi^2$ /NDF: 2380738.2/34

Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557763.5/22

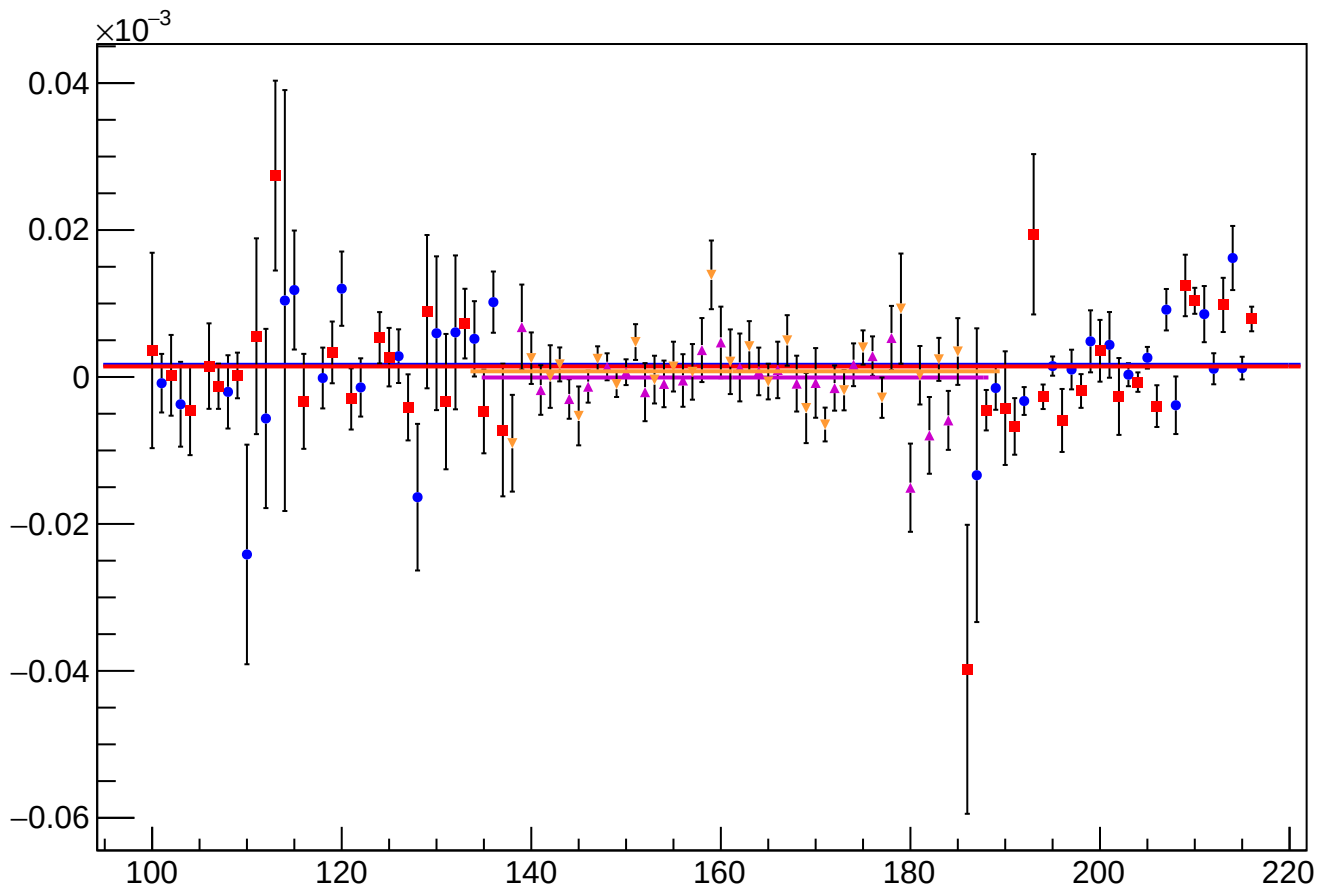
+ sign 52.935 $\pm$ 0.006  $\chi^2$ /NDF: 5071536.4/55

All: 52.536 $\pm$ 0.005  $\chi^2$ /NDF: 10020578.7/113

- sign 52.138 $\pm$ 0.006  $\chi^2$ /NDF: 4941388.5/57



asym\_sam\_2468\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 54.4/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.1/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 102.9/34

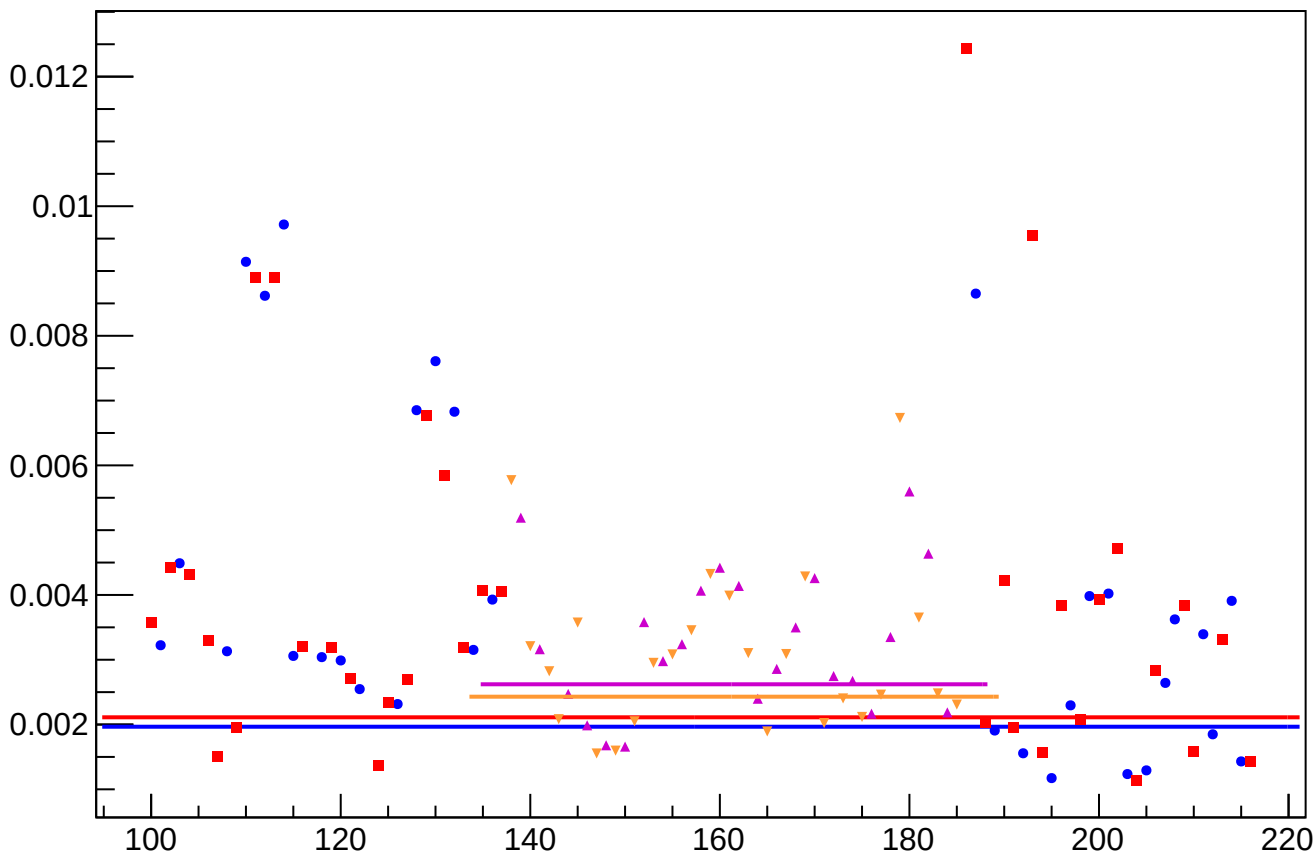
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 20.2/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 93.7/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 220.4/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 126.1/57

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8461101.2/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 4218362.5/24

Right Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 8736244.8/34

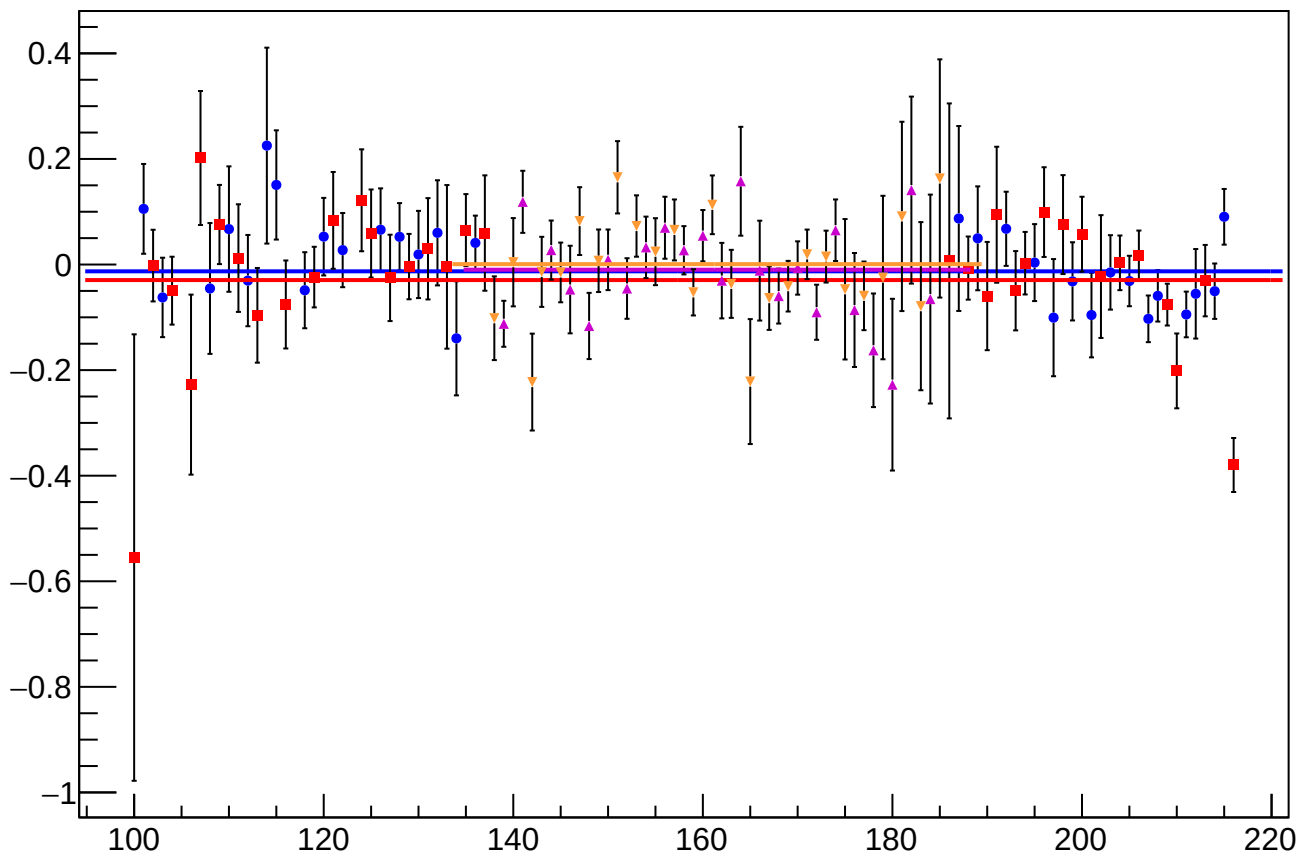
Left In: 0.003+/-0.000  $\chi^2/\text{NDF}$ : 3955310.5/22

+ sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13362715.7/55

All: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 26883320.9/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 13383676.1/57

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 30.9/30

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $-0.029 \pm 0.013$   $\chi^2/\text{NDF}$ : 79.9/34

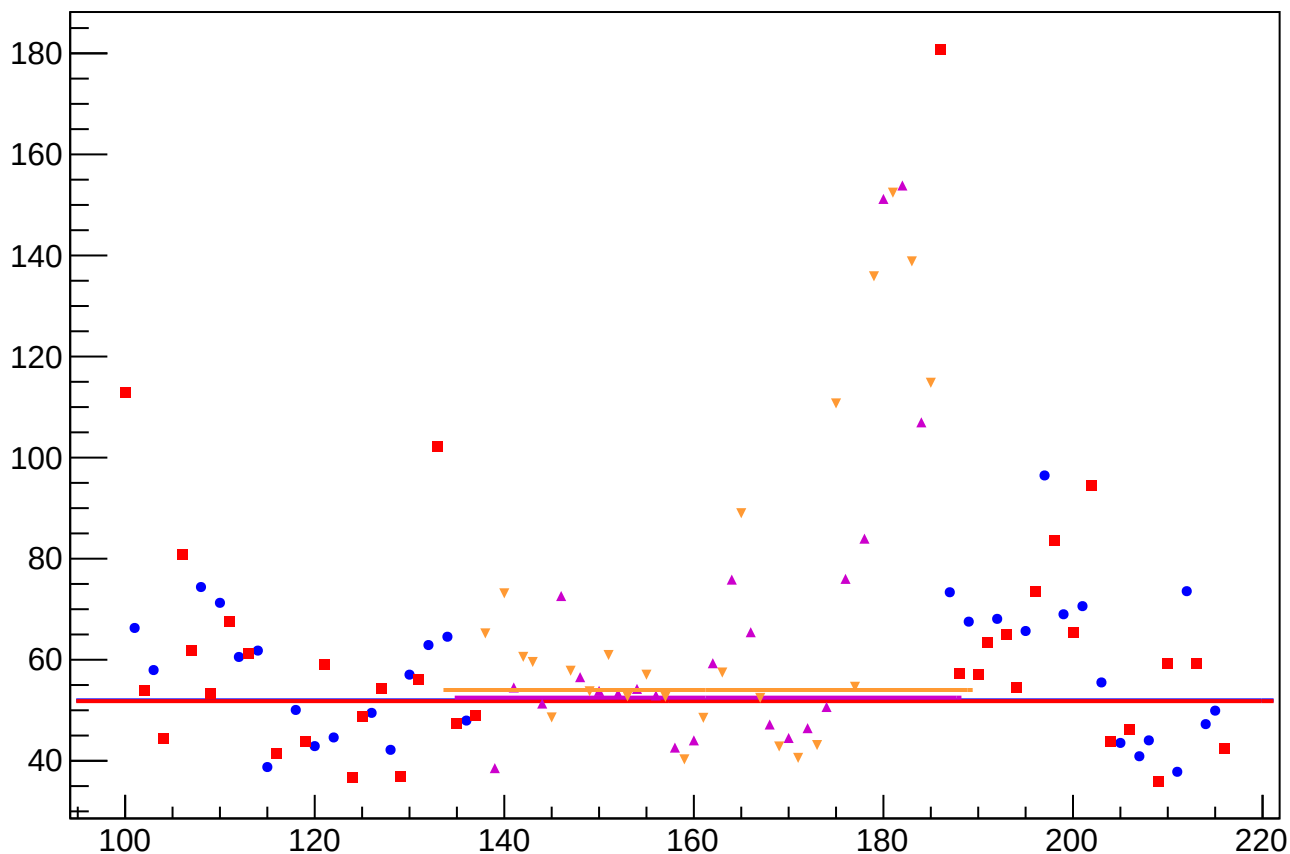
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.006 \pm 0.009$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-0.013 \pm 0.006$   $\chi^2/\text{NDF}$ : 177.2/113

- sign  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 113.0/57

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 51.960 $\pm$ 0.009  $\chi^2$ /NDF: 1818625.2/30

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227569.4/24

Right Out: 51.809 $\pm$ 0.009  $\chi^2$ /NDF: 2380668.1/34

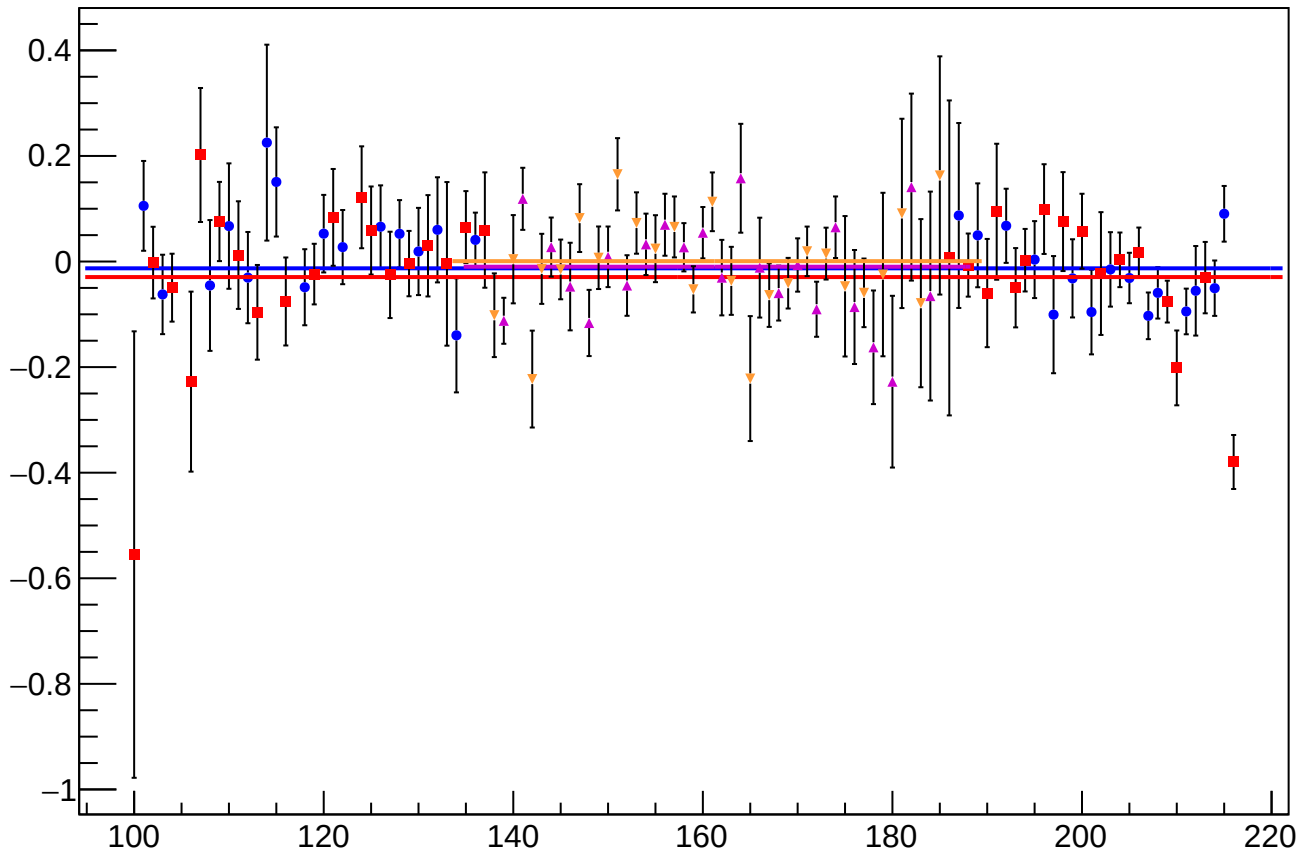
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557805.6/22

+ sign 52.935 $\pm$ 0.006  $\chi^2$ /NDF: 5071499.5/55

All: 52.536 $\pm$ 0.005  $\chi^2$ /NDF: 10020516.2/113

- sign 52.138 $\pm$ 0.006  $\chi^2$ /NDF: 4941365.4/57

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.013 \pm 0.013$   $\chi^2/\text{NDF}$ : 30.9/30

Left Out:  $0.001 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.7/24

Right Out:  $-0.029 \pm 0.013$   $\chi^2/\text{NDF}$ : 79.9/34

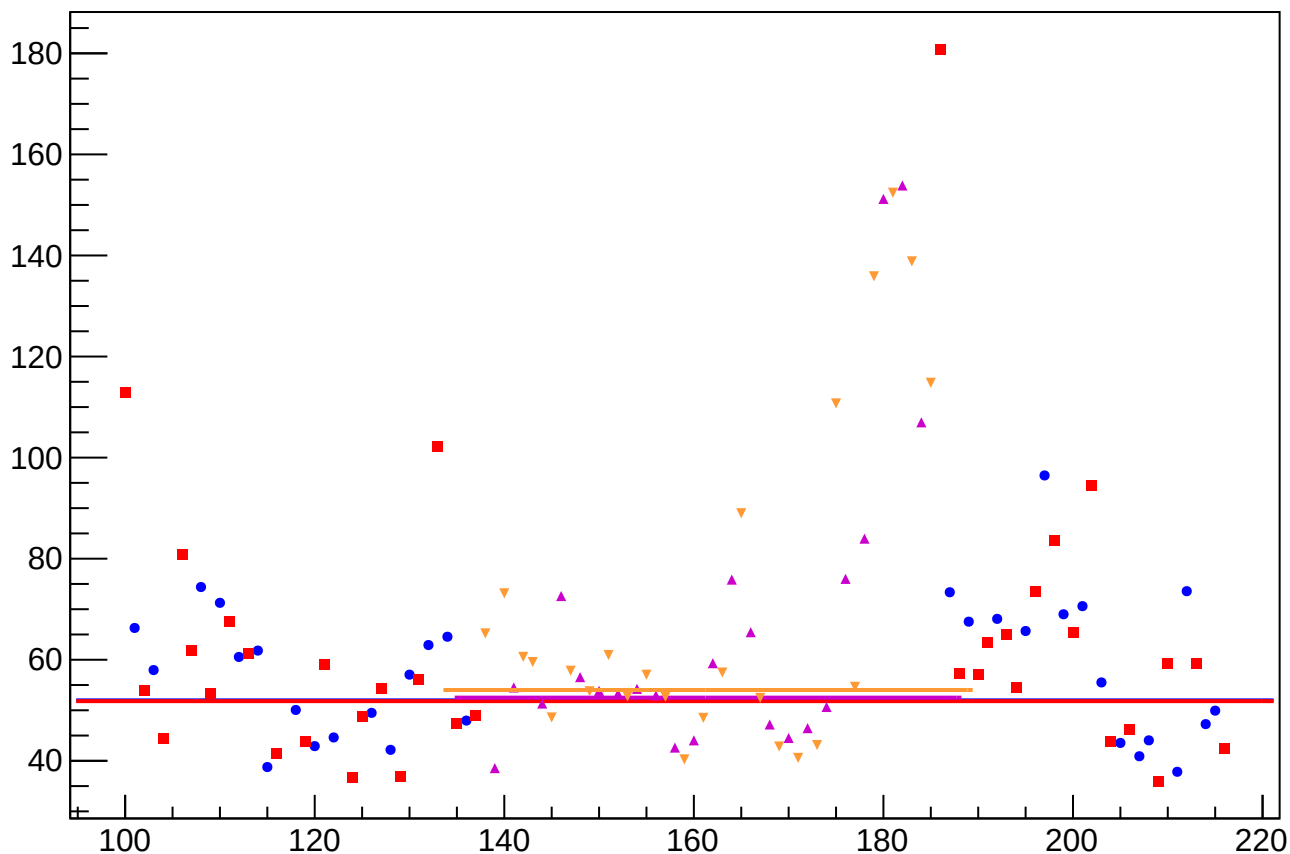
Left In:  $-0.010 \pm 0.013$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $-0.006 \pm 0.009$   $\chi^2/\text{NDF}$ : 63.1/55

All:  $-0.013 \pm 0.006$   $\chi^2/\text{NDF}$ : 177.2/113

- sign  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 113.0/57

asym\_sam\_2468\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 51.960 $\pm$ 0.009  $\chi^2$ /NDF: 1818625.2/30

Left Out: 54.014 $\pm$ 0.009  $\chi^2$ /NDF: 3227569.4/24

Right Out: 51.809 $\pm$ 0.009  $\chi^2$ /NDF: 2380668.1/34

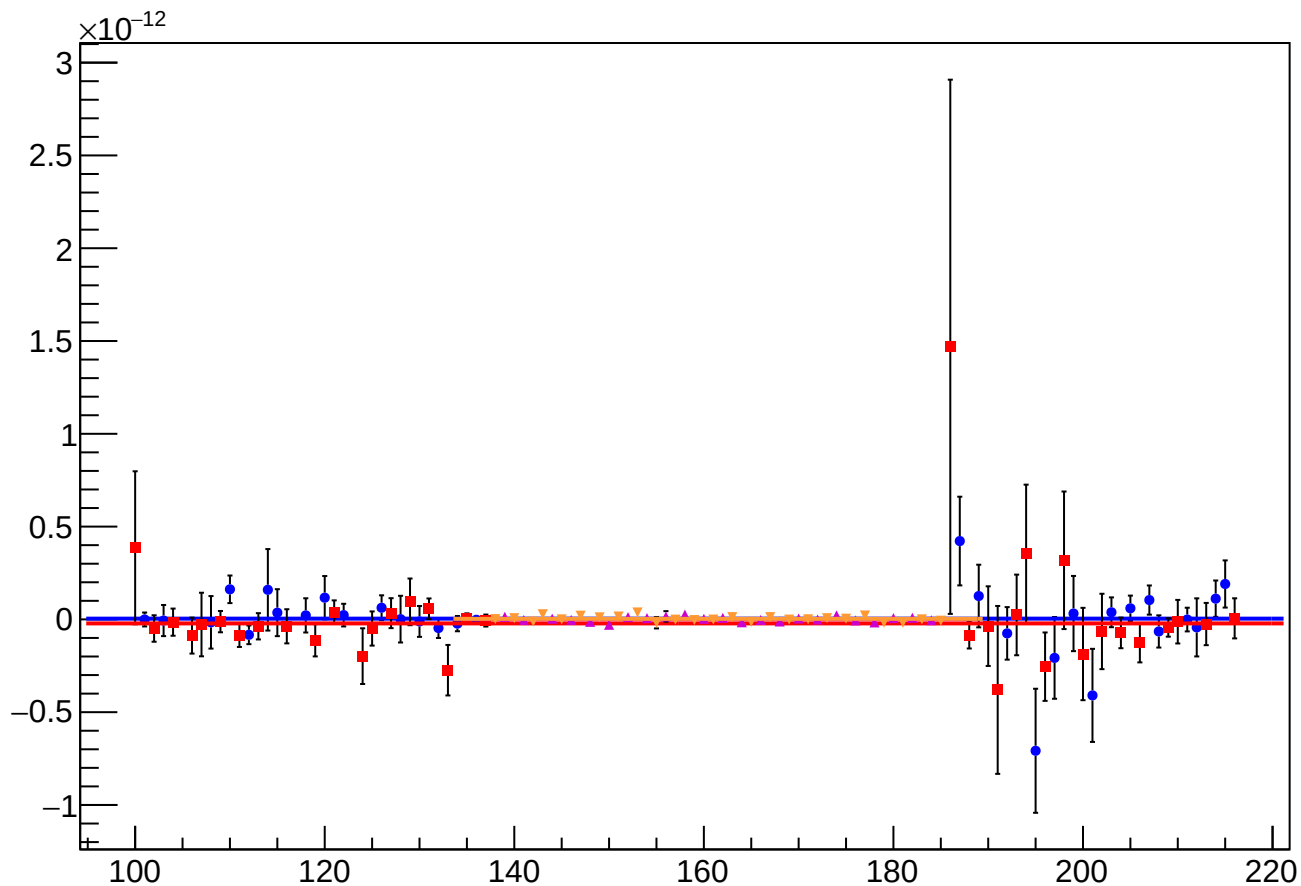
Left In: 52.502 $\pm$ 0.009  $\chi^2$ /NDF: 2557805.6/22

+ sign 52.935 $\pm$ 0.006  $\chi^2$ /NDF: 5071499.5/55

All: 52.536 $\pm$ 0.005  $\chi^2$ /NDF: 10020516.2/113

- sign 52.138 $\pm$ 0.006  $\chi^2$ /NDF: 4941365.4/57

asym\_sam\_2468\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 30.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 22.1/34

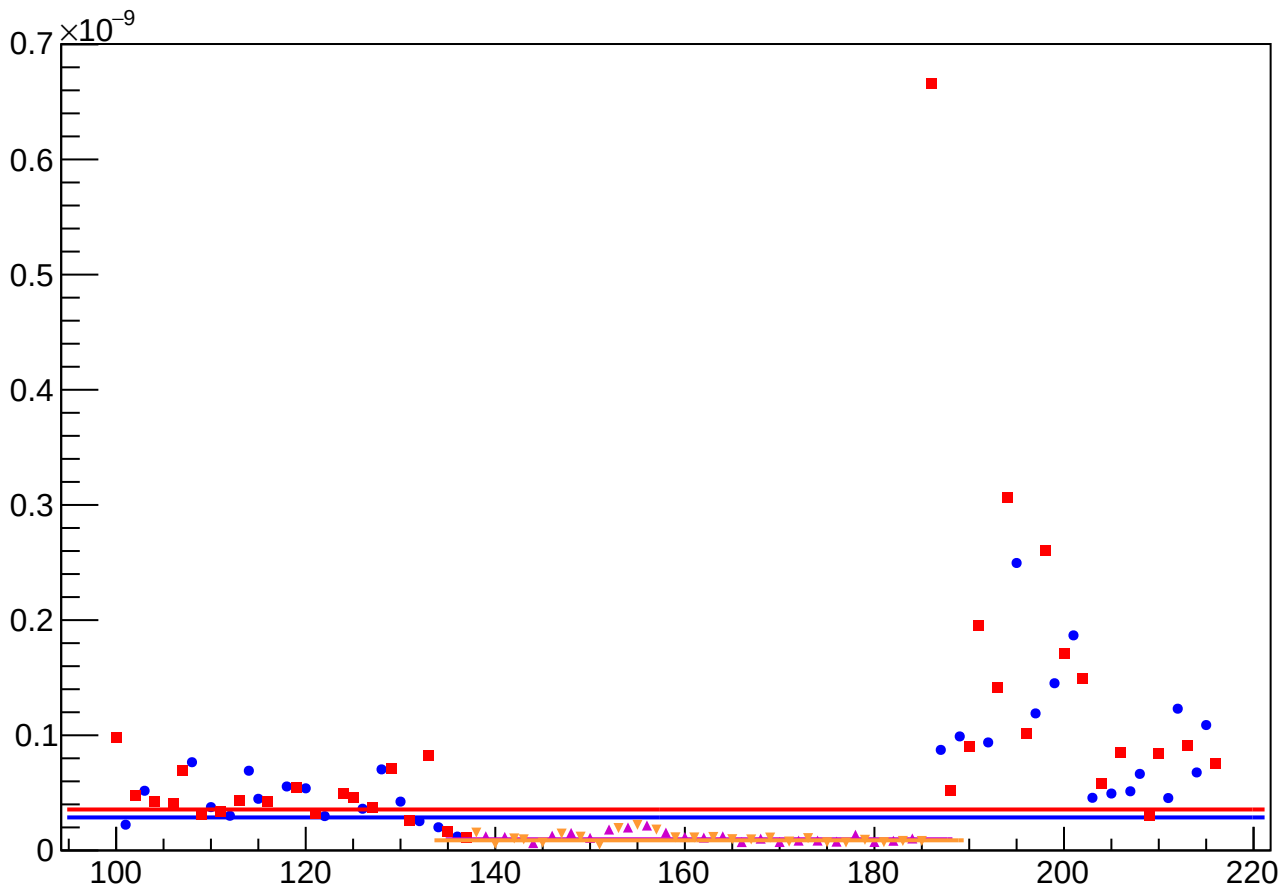
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:15.3/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 52.0/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 92.9/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 40.5/57

asym\_sam\_2468\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9565841.7/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2517075.4/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 9229148.6/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2320113.6/22

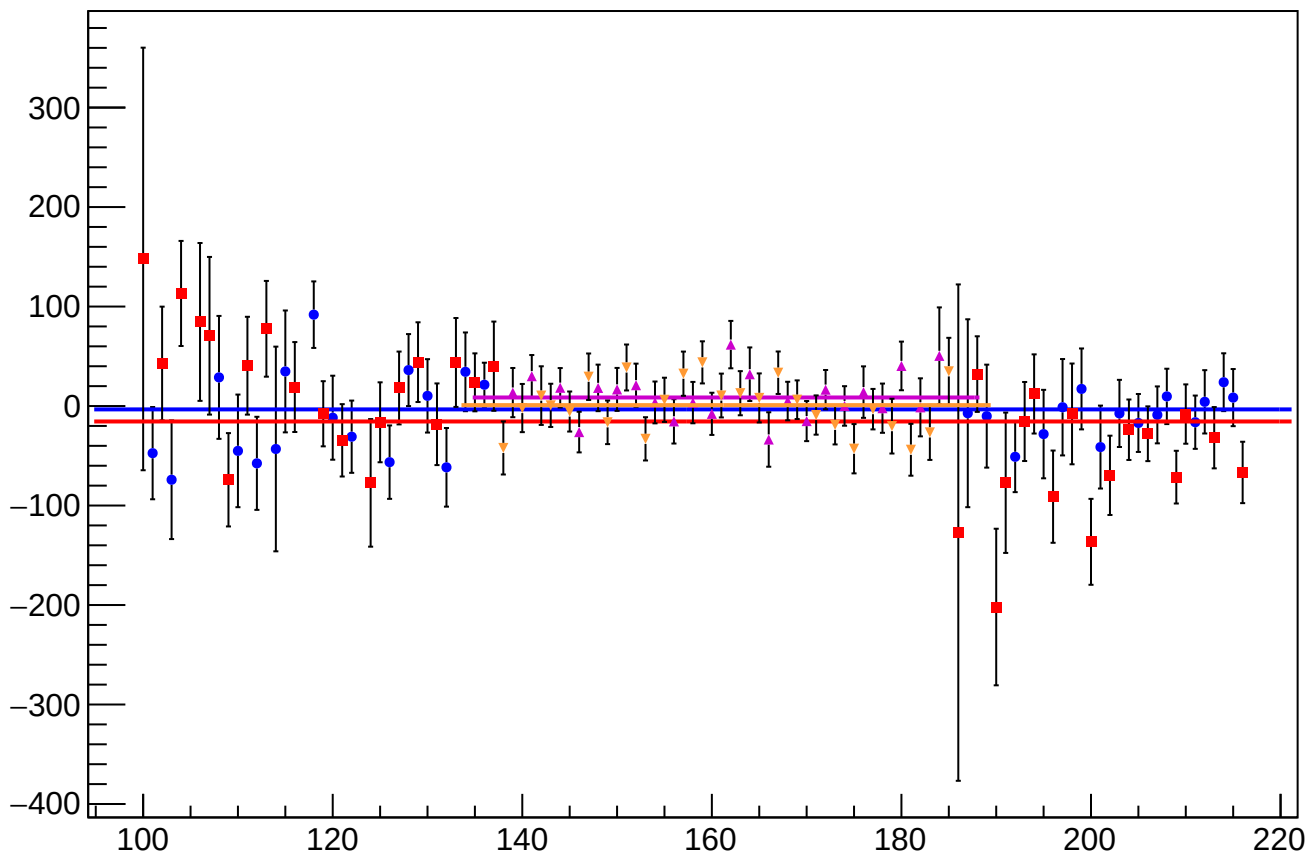
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 18245638.7/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 37536216.1/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 19137287.5/57



# reg\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-3.372 \pm 6.645$   $\chi^2/\text{NDF}: 26.5/30$

Left Out:  $0.917 \pm 4.574$   $\chi^2/\text{NDF}: 29.2/24$

Right Out:  $-15.513 \pm 6.917$   $\chi^2/\text{NDF}: 55.8/34$

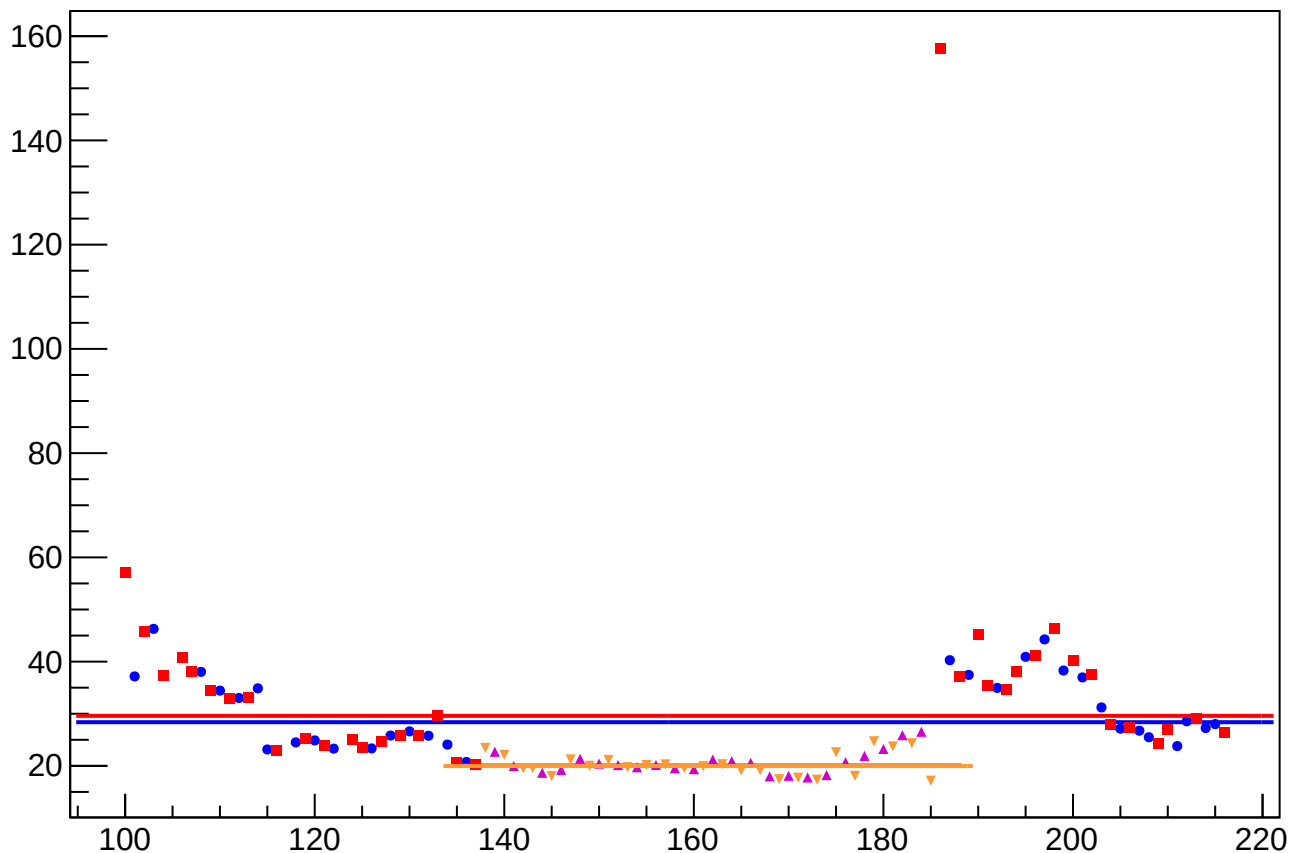
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $-0.462 \pm 3.768$   $\chi^2/\text{NDF}: 56.0/55$

All:  $0.211 \pm 2.710$   $\chi^2/\text{NDF}: 139.5/113$

- sign  $0.931 \pm 3.901$   $\chi^2/\text{NDF}: 83.5/57$

# reg\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 28.379+/-0.005  $\chi^2/\text{NDF}$ : 1615410.7/30

Left Out: 19.969+/-0.003  $\chi^2/\text{NDF}$ : 386763.9/24

Right Out: 29.602+/-0.005  $\chi^2/\text{NDF}$ : 2372021.6/34

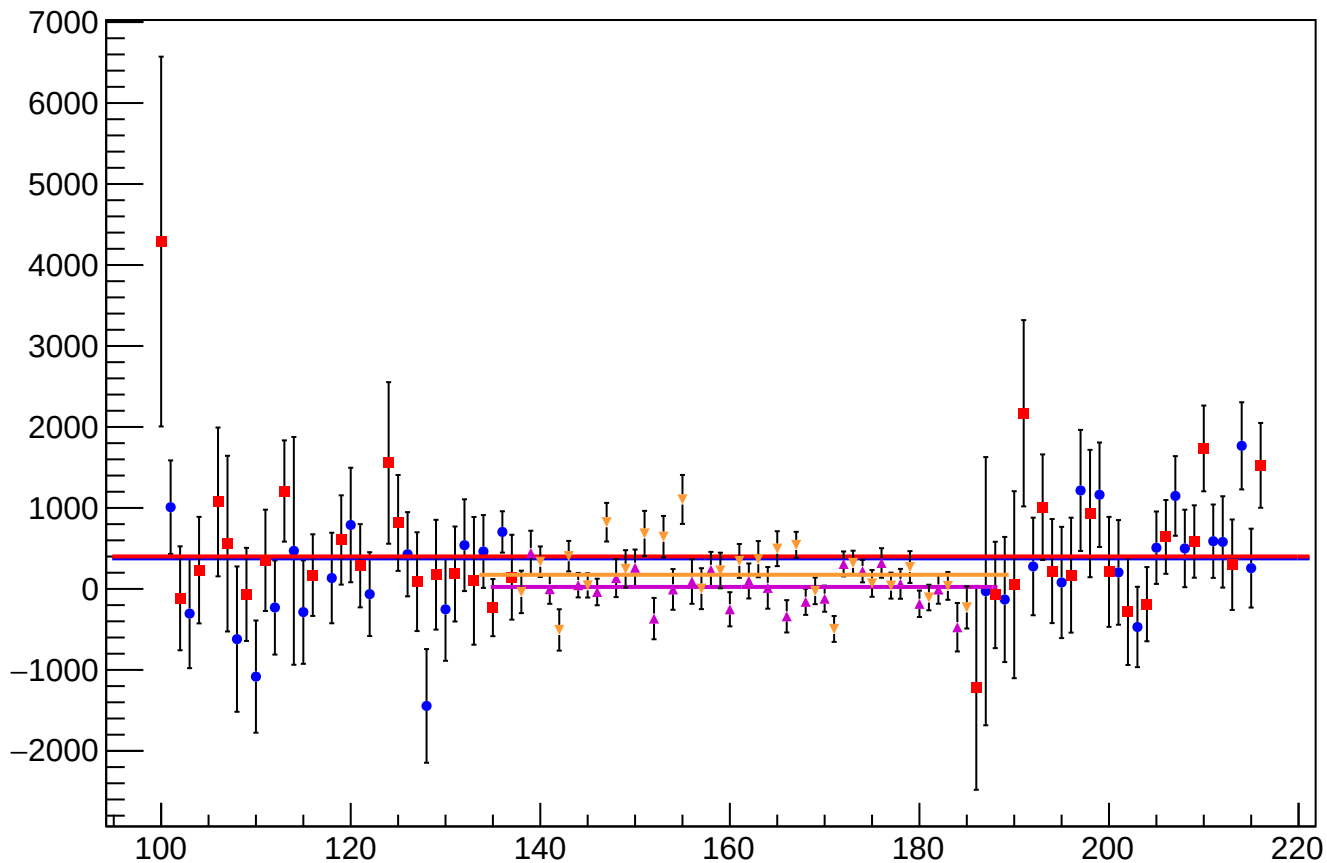
Left In: 20.072+/-0.003  $\chi^2/\text{NDF}$ : 301705.2/22

+ sign 22.672+/-0.003  $\chi^2/\text{NDF}$ : 4175972.0/55

All: 22.880+/-0.002  $\chi^2/\text{NDF}$ : 9451109.3/113

- sign 23.103+/-0.003  $\chi^2/\text{NDF}$ : 5262512.4/57

asym\_sam\_1357\_2468\_dd\_reg\_correction\_mean vs Slug



Right In: 377.222 $\pm$ 99.148  $\chi^2$ /NDF: 36.9/30

Left Out: 174.693 $\pm$ 39.049  $\chi^2$ /NDF: 71.2/24

Right Out: 400.791 $\pm$ 103.516  $\chi^2$ /NDF: 33.2/34

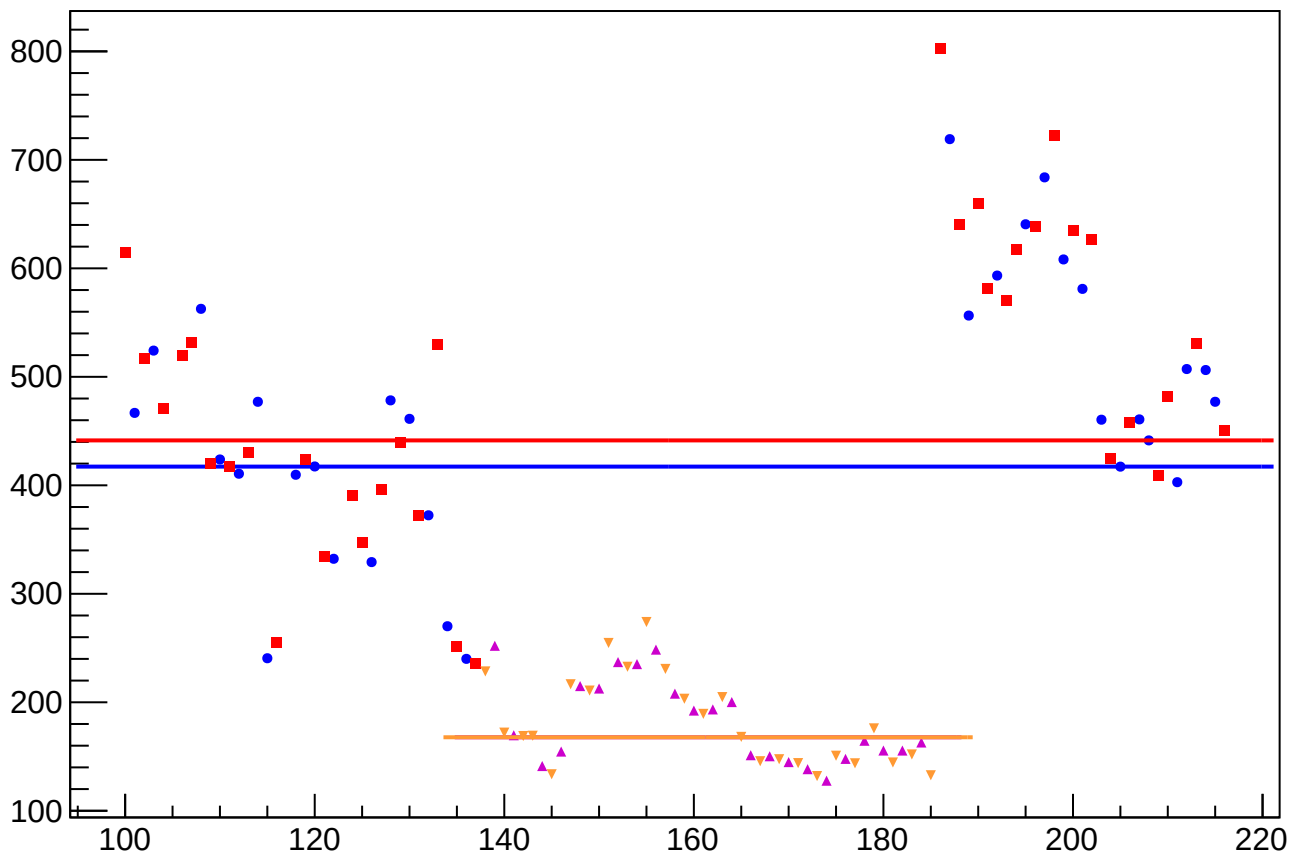
Left In: 24.589 $\pm$ 40.070  $\chi^2$ /NDF: 26.9/22

+ sign 201.889 $\pm$ 36.333  $\chi^2$ /NDF: 111.8/55

All: 139.553 $\pm$ 26.050  $\chi^2$ /NDF: 189.4/113

- sign 73.613 $\pm$ 37.368  $\chi^2$ /NDF: 71.6/57

asym\_sam\_1357\_2468\_dd\_reg\_correction\_rms vs Slug



Right In: 417.243 $\pm$ 0.070  $\chi^2$ /NDF: 2846545.4/30

Left Out: 167.754 $\pm$ 0.028  $\chi^2$ /NDF: 1578232.9/24

Right Out: 441.397 $\pm$ 0.073  $\chi^2$ /NDF: 2932111.8/34

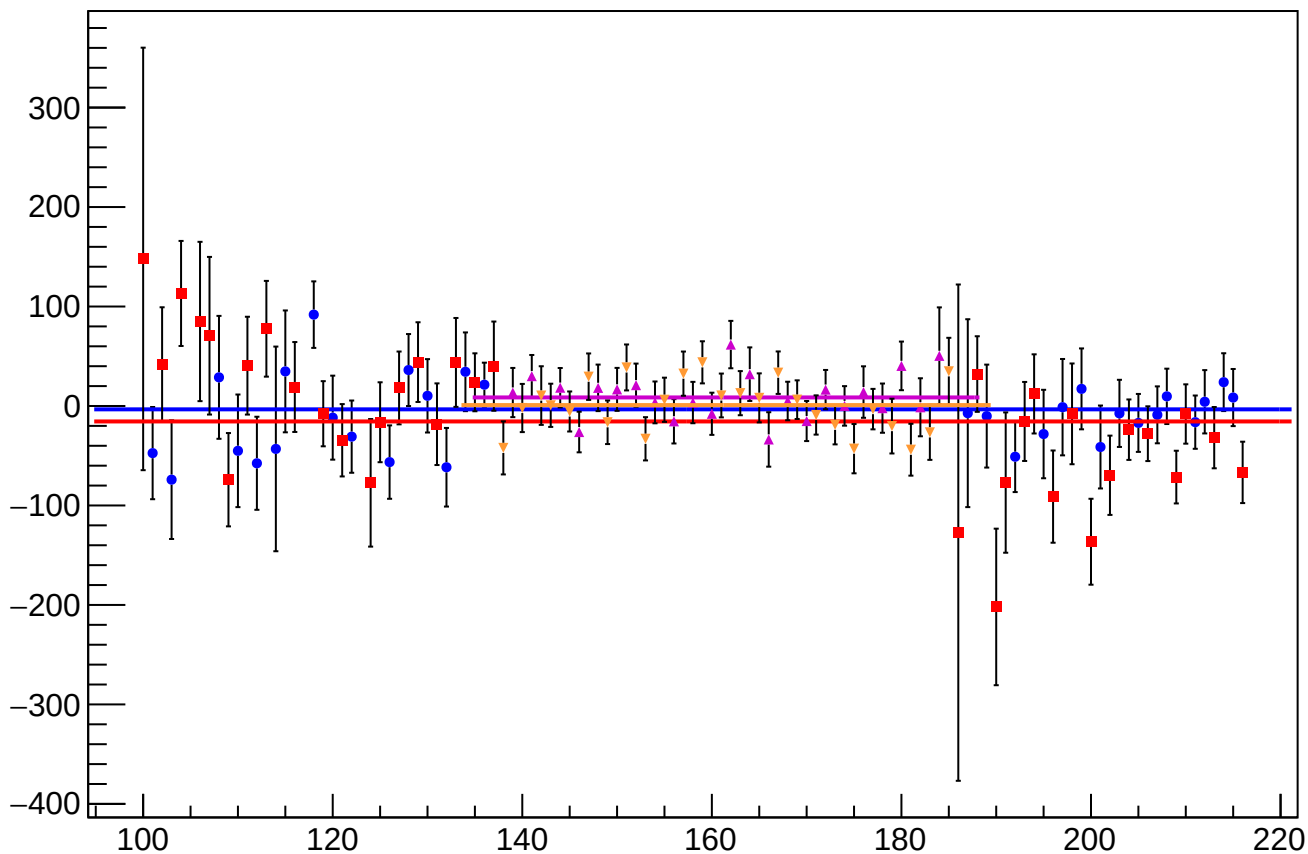
Left In: 167.748 $\pm$ 0.028  $\chi^2$ /NDF: 1403124.0/22

+ sign 201.257 $\pm$ 0.026  $\chi^2$ /NDF: 15388054.4/55

All: 202.302 $\pm$ 0.018  $\chi^2$ /NDF: 31881905.4/1

- sign 203.408 $\pm$ 0.026  $\chi^2$ /NDF: 16490443.6/57

# cor\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-3.370 \pm 6.645$   $\chi^2/\text{NDF}: 26.5/30$

Left Out:  $0.915 \pm 4.574$   $\chi^2/\text{NDF}: 29.2/24$

Right Out:  $-15.535 \pm 6.917$   $\chi^2/\text{NDF}: 55.8/34$

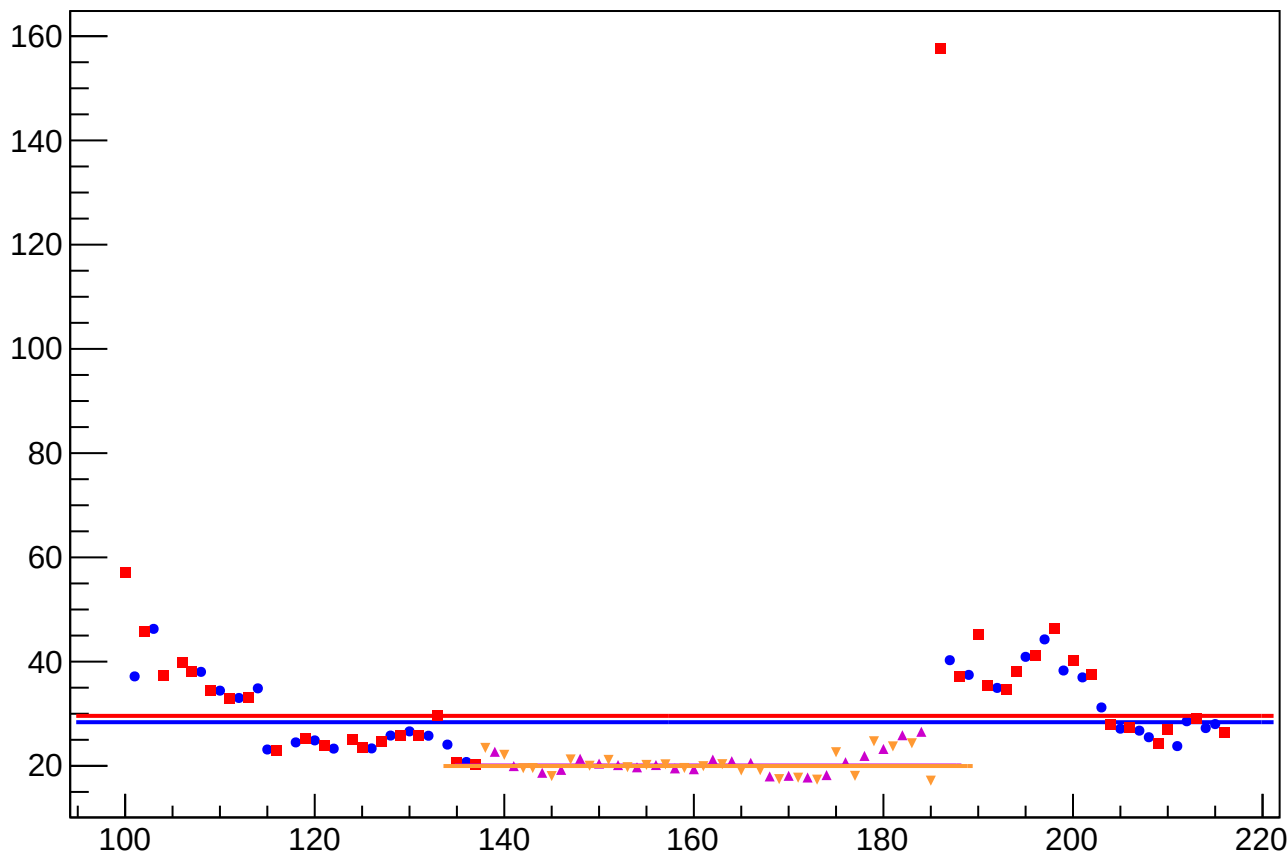
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}: 19.4/22$

+ sign  $-0.463 \pm 3.768$   $\chi^2/\text{NDF}: 56.0/55$

All:  $0.207 \pm 2.710$   $\chi^2/\text{NDF}: 139.5/113$

- sign  $0.925 \pm 3.901$   $\chi^2/\text{NDF}: 83.4/57$

# cor\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In:  $28.379 \pm 0.005$   $\chi^2/\text{NDF}$ : 1615413.9/30

Left Out:  $19.969 \pm 0.003$   $\chi^2/\text{NDF}$ : 386763.9/24

Right Out:  $29.592 \pm 0.005$   $\chi^2/\text{NDF}$ : 2364286.2/34

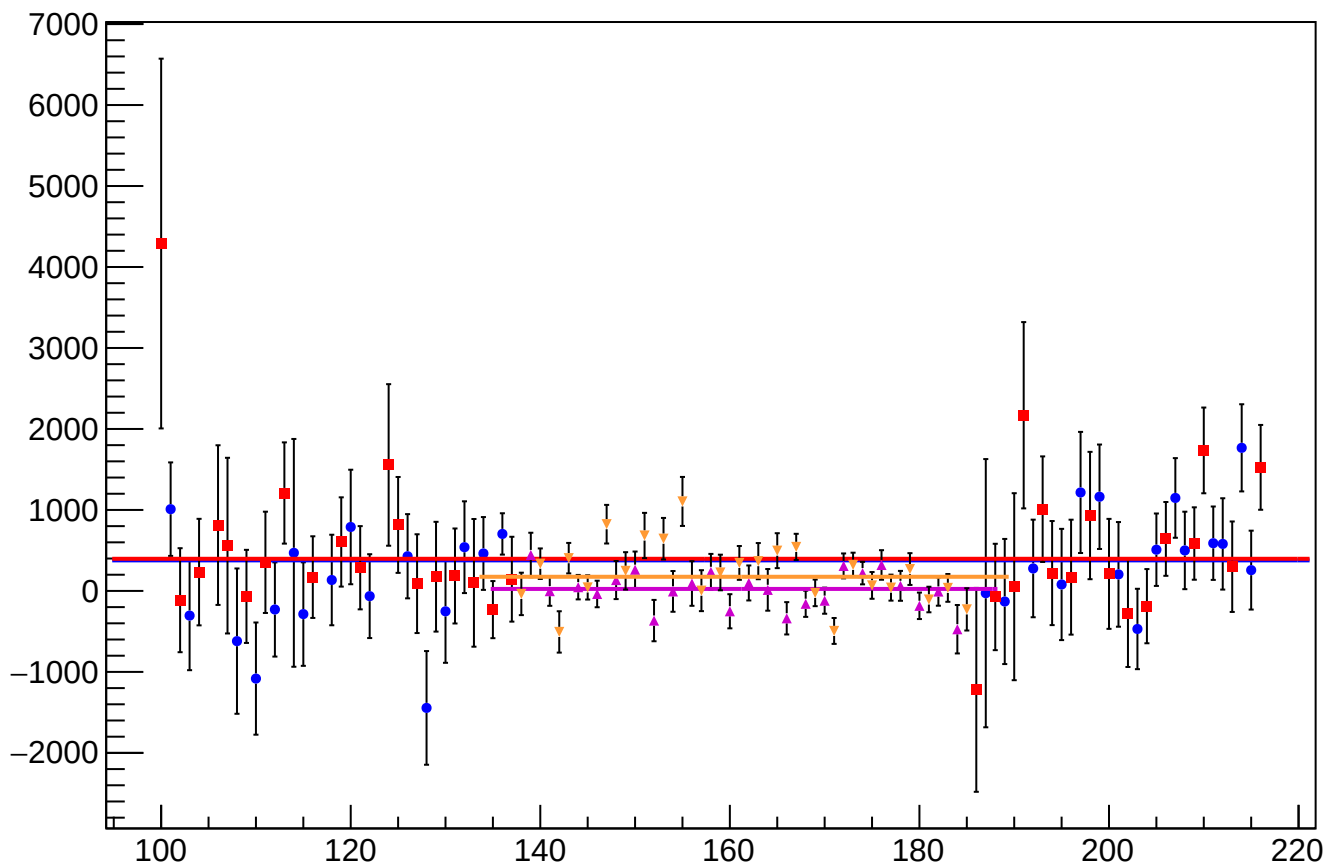
Left In:  $20.072 \pm 0.003$   $\chi^2/\text{NDF}$ : 301705.2/22

+ sign  $22.672 \pm 0.003$   $\chi^2/\text{NDF}$ : 4175975.4/55

All:  $22.879 \pm 0.002$   $\chi^2/\text{NDF}$ : 9437716.6/113

- sign  $23.100 \pm 0.003$   $\chi^2/\text{NDF}$ : 5249312.5/57

asym\_sam\_1357\_2468\_dd\_cor\_correction\_mean vs Slug



Right In:  $377.219 \pm 99.148$   $\chi^2/\text{NDF}$ : 36.9/30

Left Out:  $174.691 \pm 39.049$   $\chi^2/\text{NDF}$ : 71.2/24

Right Out:  $396.830 \pm 103.604$   $\chi^2/\text{NDF}$ : 32.8/34

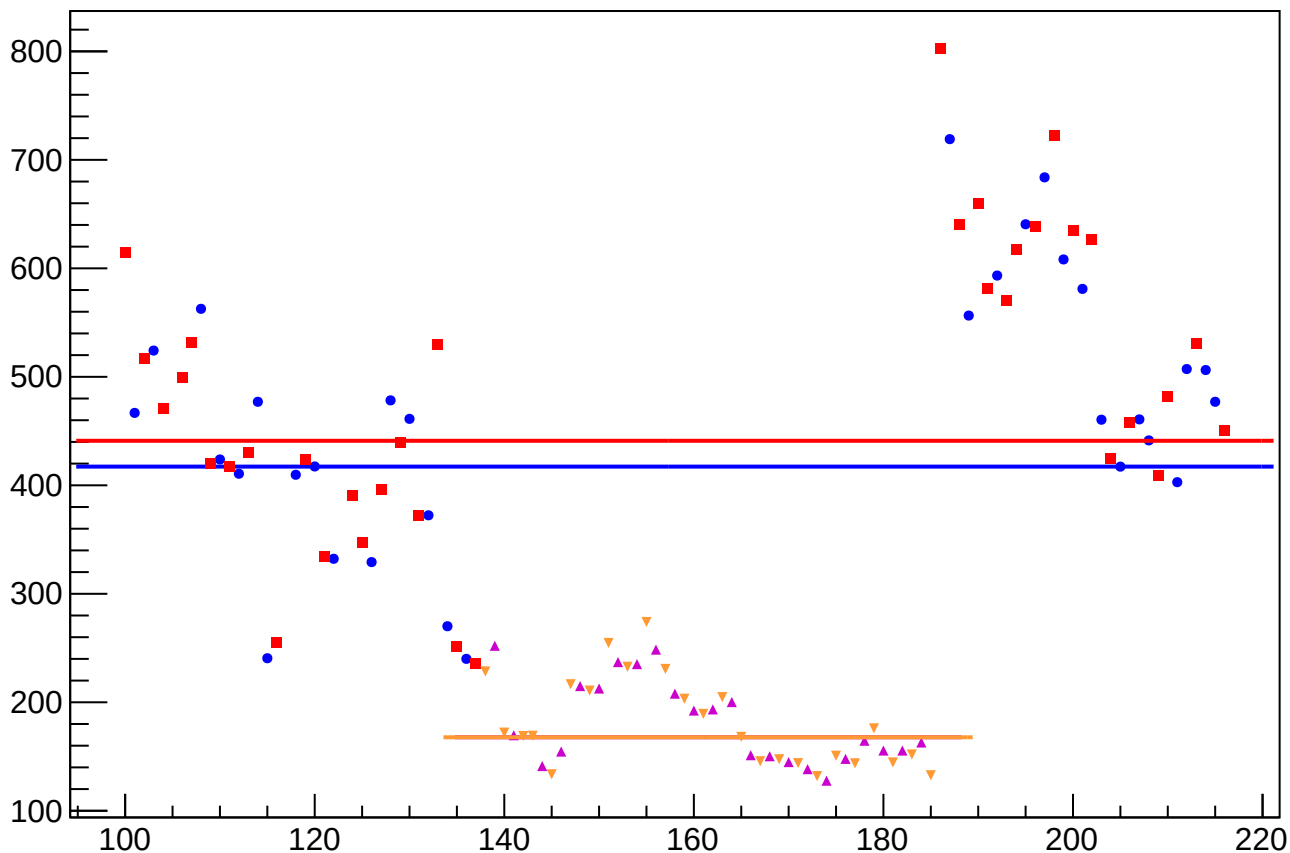
Left In:  $24.590 \pm 40.070$   $\chi^2/\text{NDF}$ : 26.9/22

+ sign  $201.887 \pm 36.333$   $\chi^2/\text{NDF}$ : 111.8/55

All:  $139.274 \pm 26.051$   $\chi^2/\text{NDF}$ : 188.8/113

- sign  $73.026 \pm 37.372$   $\chi^2/\text{NDF}$ : 71.0/57

asym\_sam\_1357\_2468\_dd\_cor\_correction\_rms vs Slug



Right In:  $417.244 \pm 0.070$   $\chi^2/\text{NDF}$ : 2846570.1/30

Left Out:  $167.754 \pm 0.028$   $\chi^2/\text{NDF}$ : 1578231.3/24

Right Out:  $441.046 \pm 0.073$   $\chi^2/\text{NDF}$ : 2924599.9/34

Left In:  $167.748 \pm 0.028$   $\chi^2/\text{NDF}$ : 1403120.1/22

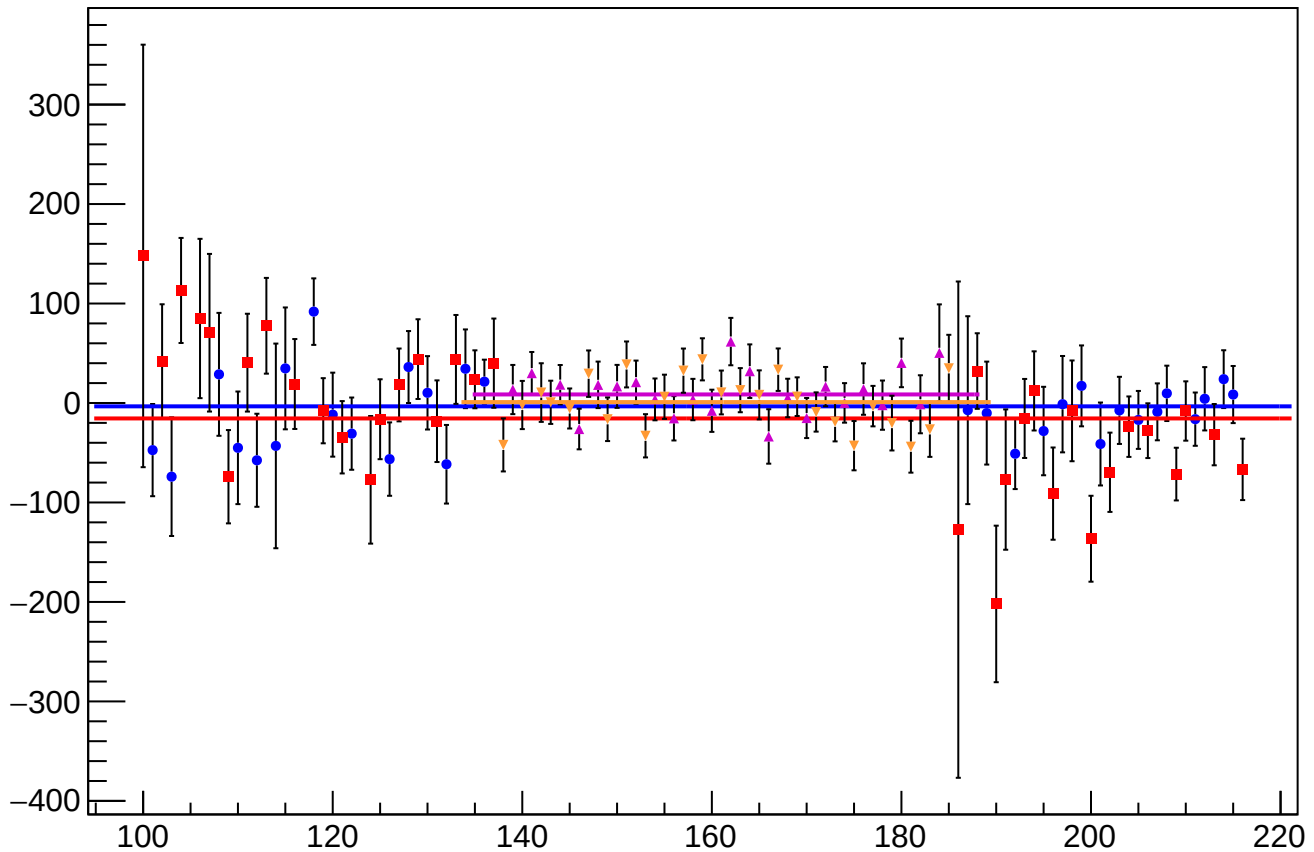
+ sign  $201.257 \pm 0.026$   $\chi^2/\text{NDF}$ : 15388079.9/55

All:  $202.255 \pm 0.018$   $\chi^2/\text{NDF}$ : 31825020.8/1

- sign  $203.310 \pm 0.026$   $\chi^2/\text{NDF}$ : 16433837.6/57



eigen\_cor\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-3.370 \pm 6.645$   $\chi^2/\text{NDF}$ : 26.5/30

Left Out:  $0.915 \pm 4.574$   $\chi^2/\text{NDF}$ : 29.2/24

Right Out:  $-15.535 \pm 6.917$   $\chi^2/\text{NDF}$ : 55.8/34

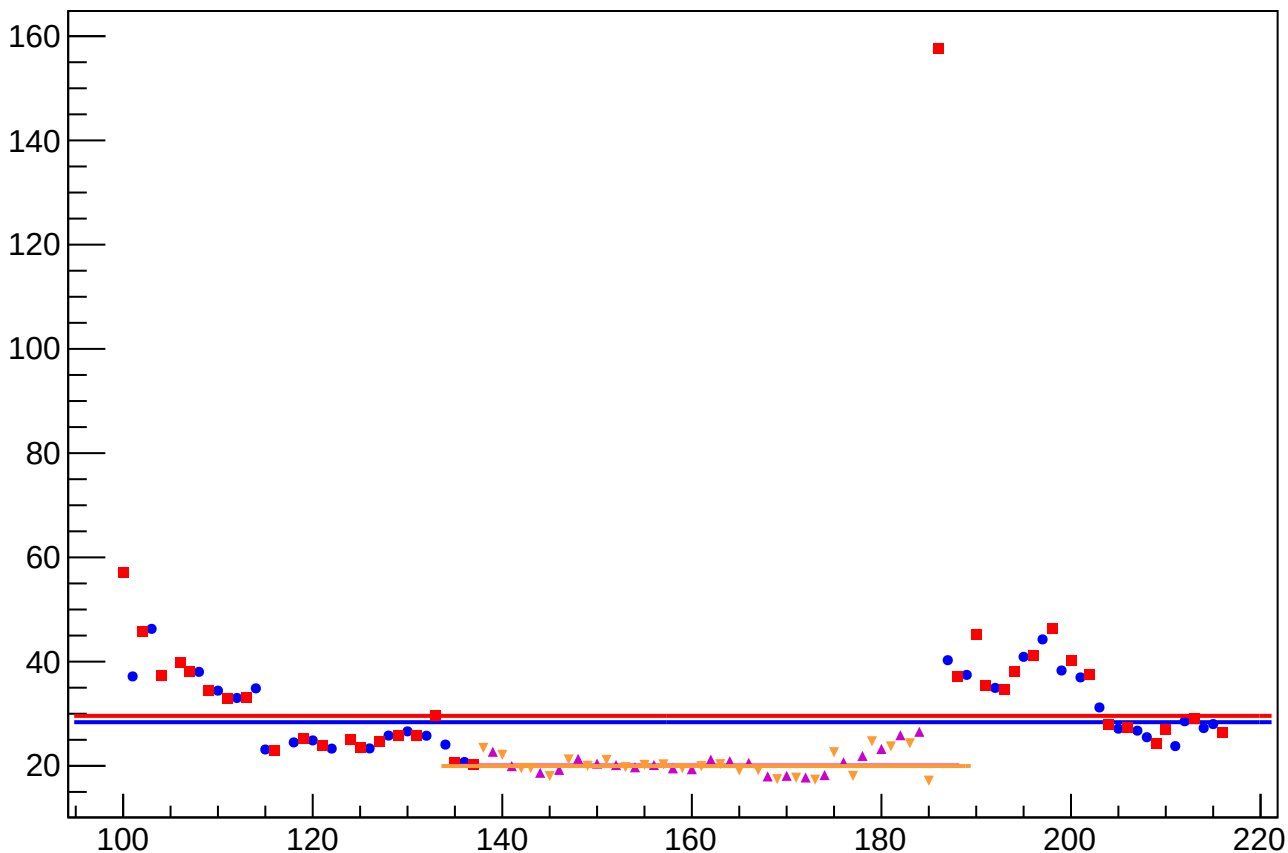
Left In:  $8.600 \pm 4.724$   $\chi^2/\text{NDF}$ : 19.4/22

+ sign  $-0.463 \pm 3.768$   $\chi^2/\text{NDF}$ : 56.0/55

All:  $0.207 \pm 2.710$   $\chi^2/\text{NDF}$ : 139.5/113

- sign  $0.925 \pm 3.901$   $\chi^2/\text{NDF}$ : 83.4/57

eigen\_cor\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In:  $28.379 \pm 0.005$   $\chi^2/\text{NDF}: 1615413.9/30$

Left Out:  $19.969 \pm 0.003$   $\chi^2/\text{NDF}: 386763.9/24$

Right Out:  $29.592 \pm 0.005$   $\chi^2/\text{NDF}: 2364286.2/34$

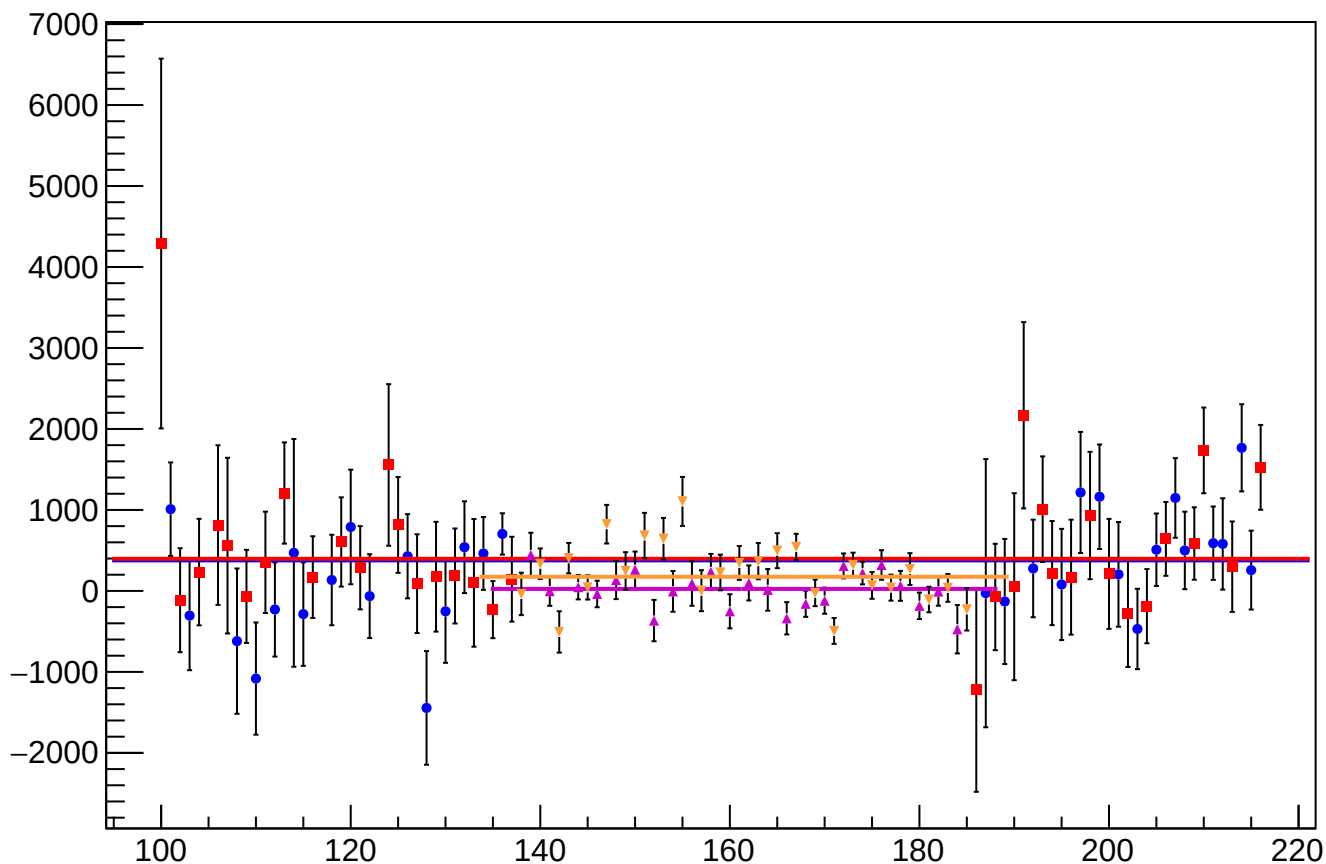
Left In:  $20.072 \pm 0.003$   $\chi^2/\text{NDF}: 301705.2/22$

+ sign  $22.672 \pm 0.003$   $\chi^2/\text{NDF}: 4175975.4/55$

All:  $22.879 \pm 0.002$   $\chi^2/\text{NDF}: 9437716.6/113$

- sign  $23.100 \pm 0.003$   $\chi^2/\text{NDF}: 5249312.5/57$

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_correction\_mean vs Slug



Right In:  $377.219 \pm 99.148$   $\chi^2/\text{NDF}: 36.9/30$

Left Out:  $174.691 \pm 39.049$   $\chi^2/\text{NDF}: 71.2/24$

Right Out:  $396.830 \pm 103.604$   $\chi^2/\text{NDF}: 32.8/34$

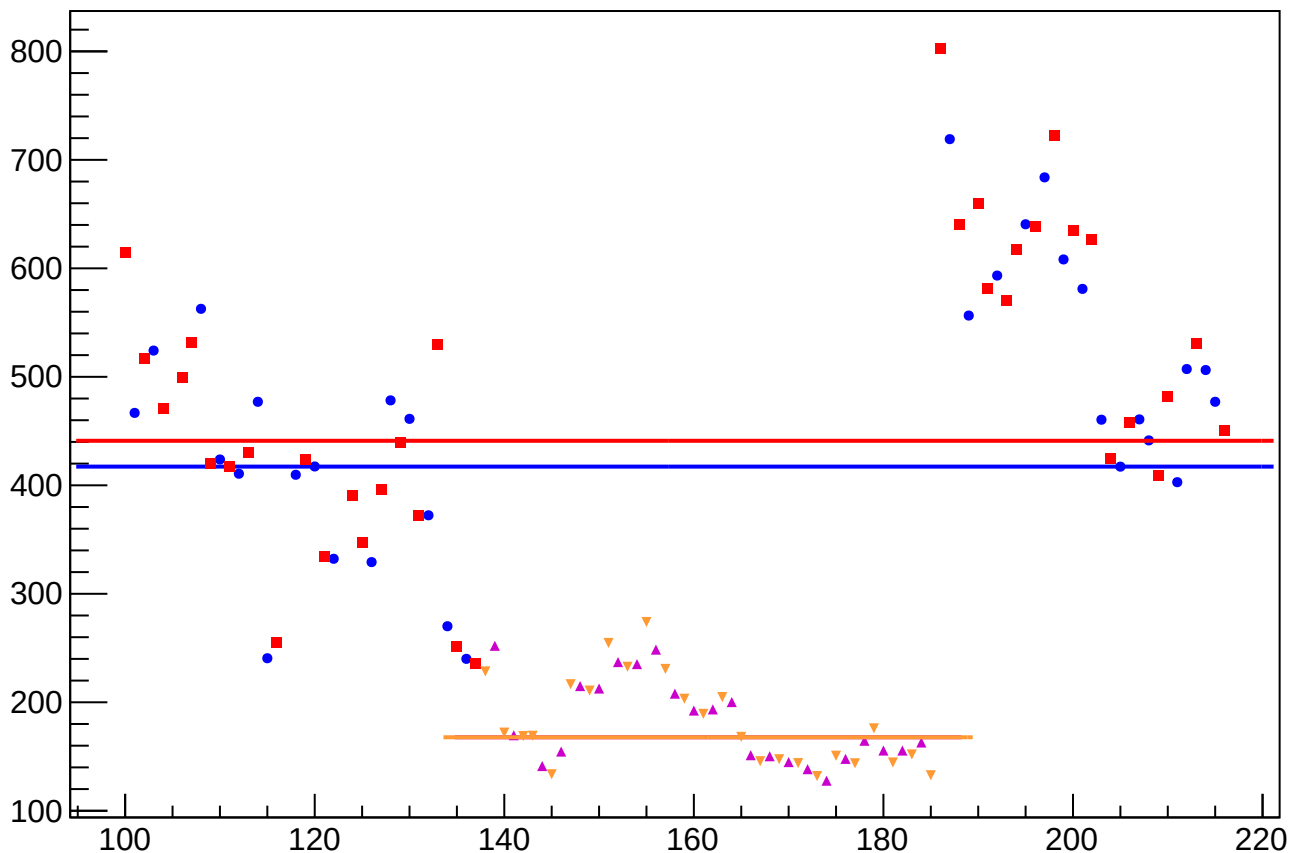
Left In:  $24.590 \pm 40.070$   $\chi^2/\text{NDF}: 26.9/22$

+ sign  $201.887 \pm 36.333$   $\chi^2/\text{NDF}: 111.8/55$

All:  $139.274 \pm 26.051$   $\chi^2/\text{NDF}: 188.8/113$

- sign  $73.026 \pm 37.372$   $\chi^2/\text{NDF}: 71.0/57$

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_correction\_rms vs Slug



Right In: 417.244+/-0.070  $\chi^2/\text{NDF}$ : 2846570.1/30

Left Out: 167.754+/-0.028  $\chi^2/\text{NDF}$ : 1578231.3/24

Right Out: 441.046+/-0.073  $\chi^2/\text{NDF}$ : 2924599.9/34

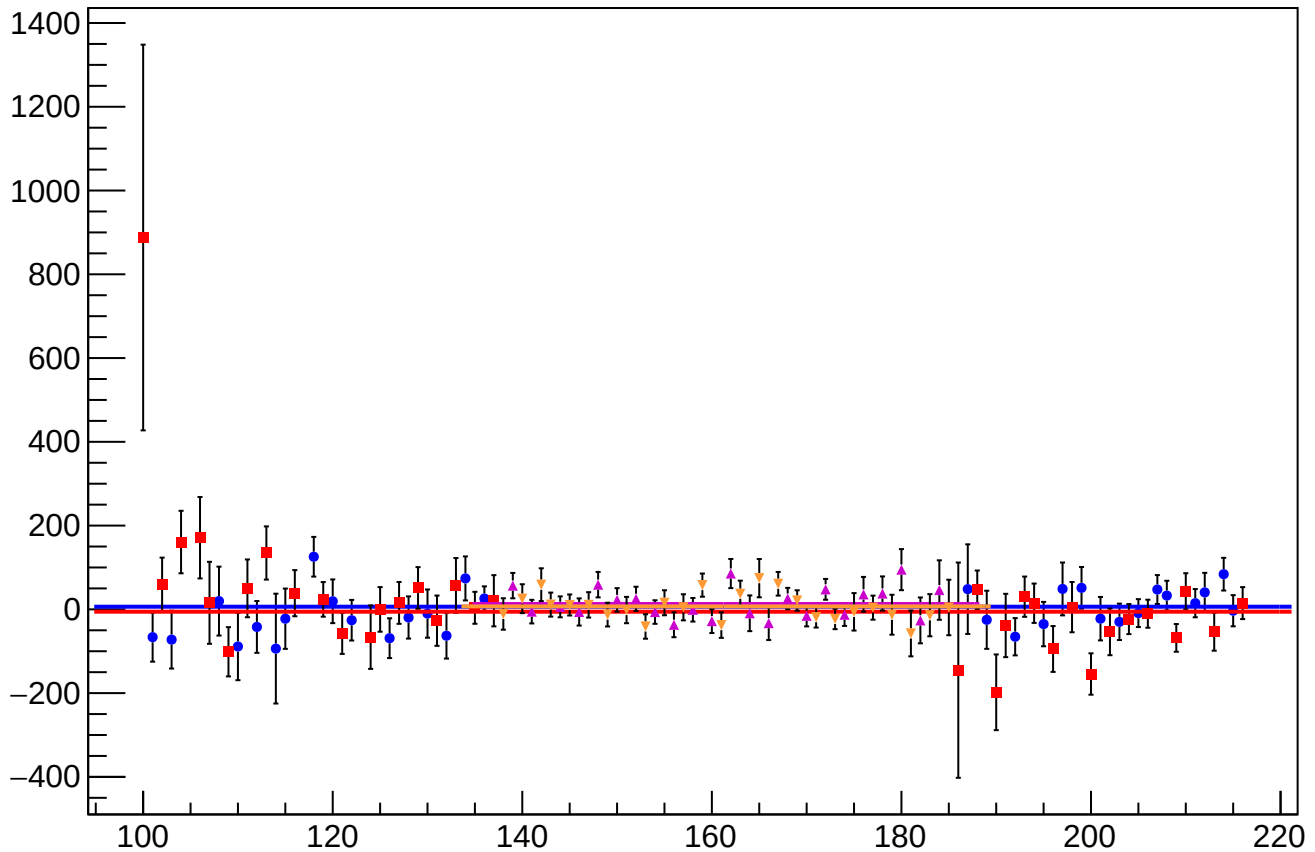
Left In: 167.748+/-0.028  $\chi^2/\text{NDF}$ : 1403120.1/22

+ sign 201.257+/-0.026  $\chi^2/\text{NDF}$ : 15388079.9/55

All: 202.255+/-0.018  $\chi^2/\text{NDF}$ : 31825020.8/1

- sign 203.310+/-0.026  $\chi^2/\text{NDF}$ : 16433837.6/57

# dit\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $6.319 \pm 8.591$   $\chi^2/\text{NDF}$ : 31.7/30

Left Out:  $7.079 \pm 6.333$   $\chi^2/\text{NDF}$ : 22.7/24

Right Out:  $-5.591 \pm 8.837$   $\chi^2/\text{NDF}$ : 52.9/34

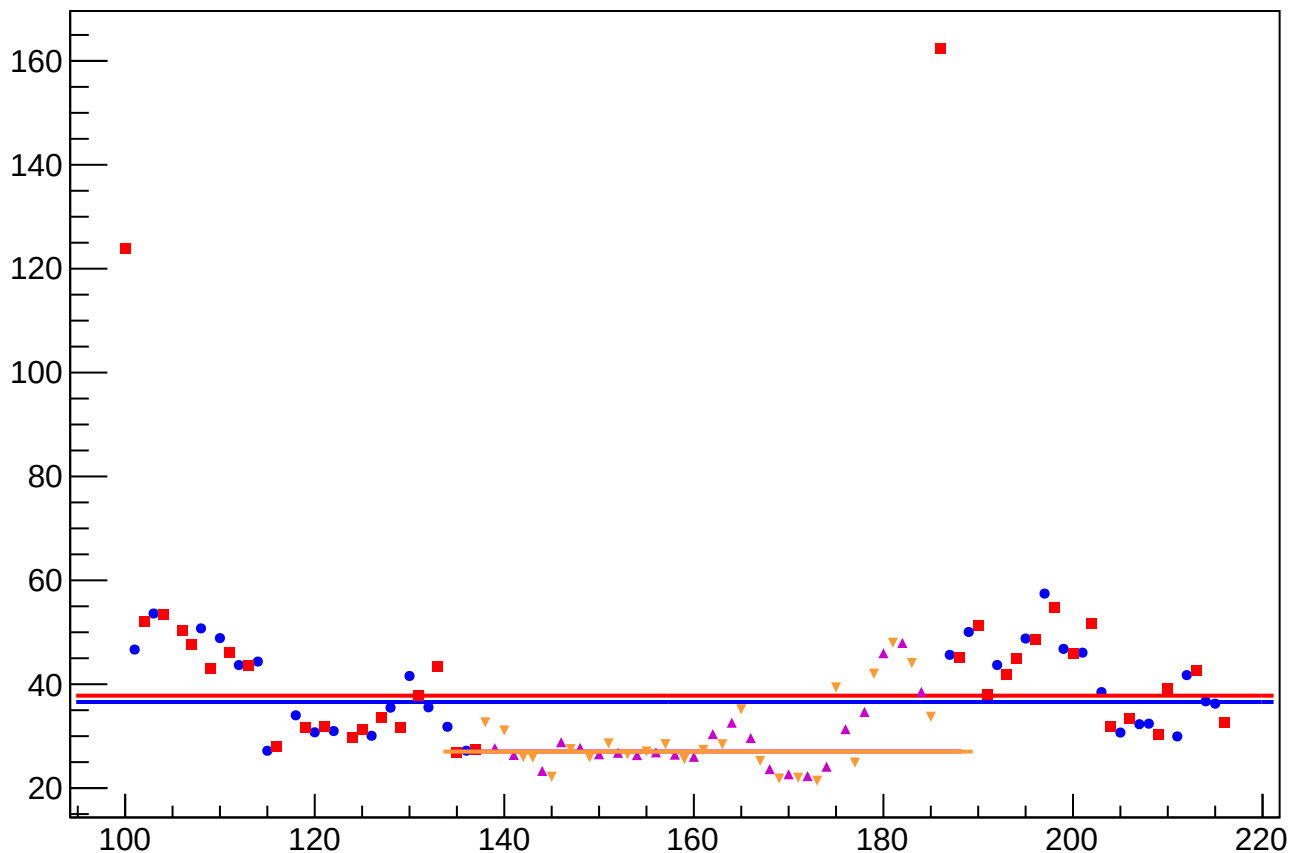
Left In:  $12.697 \pm 6.513$   $\chi^2/\text{NDF}$ : 25.6/22

+ sign  $6.812 \pm 5.098$   $\chi^2/\text{NDF}$ : 54.4/55

All:  $6.543 \pm 3.655$   $\chi^2/\text{NDF}$ : 135.7/113

- sign  $6.259 \pm 5.243$   $\chi^2/\text{NDF}$ : 81.3/57

dit\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In:  $36.580 \pm 0.006$   $\chi^2/\text{NDF}: 1536579.9/30$

Left Out:  $27.026 \pm 0.004$   $\chi^2/\text{NDF}: 1430523.7/24$

Right Out:  $37.795 \pm 0.006$   $\chi^2/\text{NDF}: 2134421.7/34$

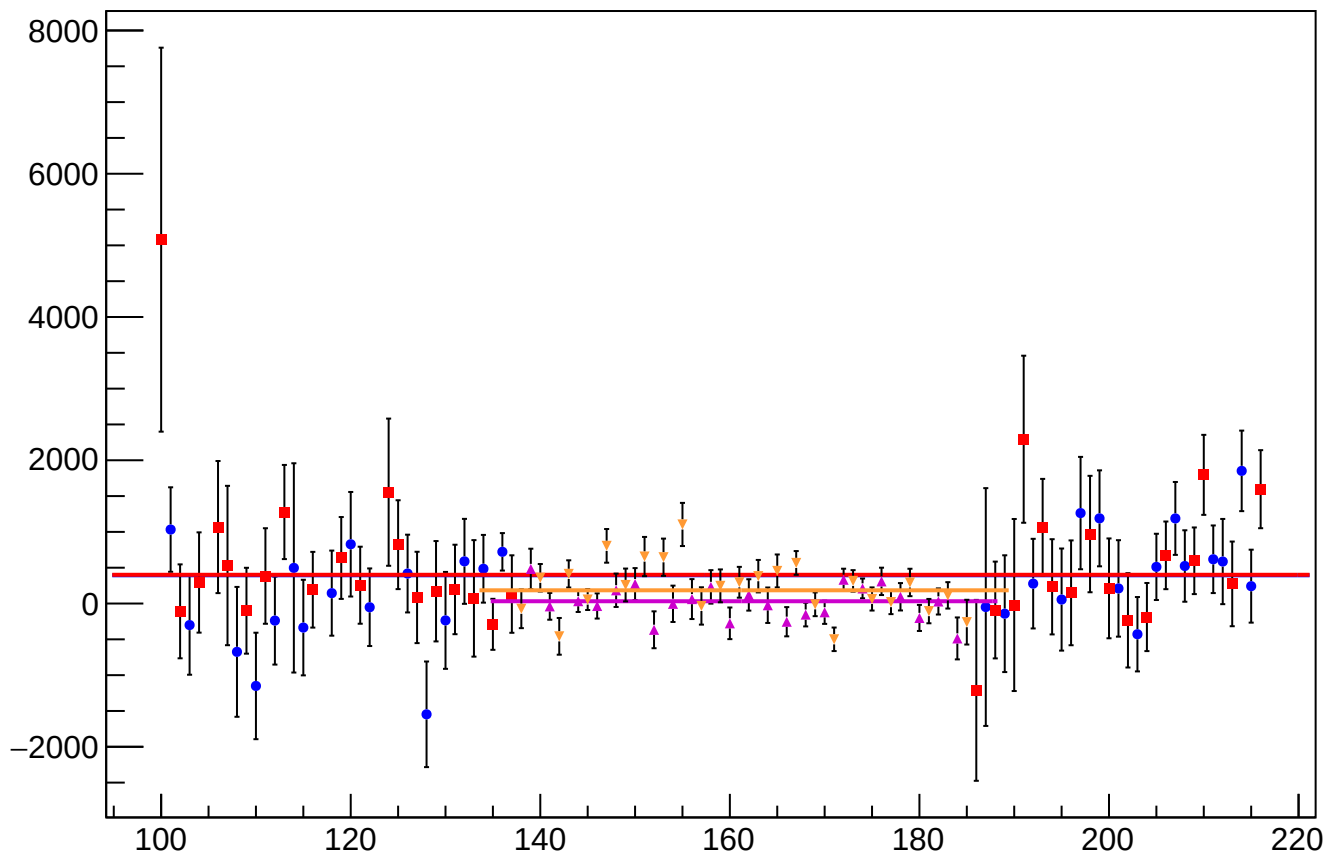
Left In:  $27.052 \pm 0.005$   $\chi^2/\text{NDF}: 1044359.4/22$

+ sign  $30.390 \pm 0.004$   $\chi^2/\text{NDF}: 4569385.2/55$

All:  $30.606 \pm 0.003$   $\chi^2/\text{NDF}: 9670849.0/113$

- sign  $30.834 \pm 0.004$   $\chi^2/\text{NDF}: 5094089.6/57$

asym\_sam\_1357\_2468\_dd\_dit\_correction\_mean vs Slug



Right In:  $394.170 \pm 103.210$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $184.675 \pm 39.832$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $401.254 \pm 107.339$   $\chi^2/\text{NDF}$ : 34.2/34

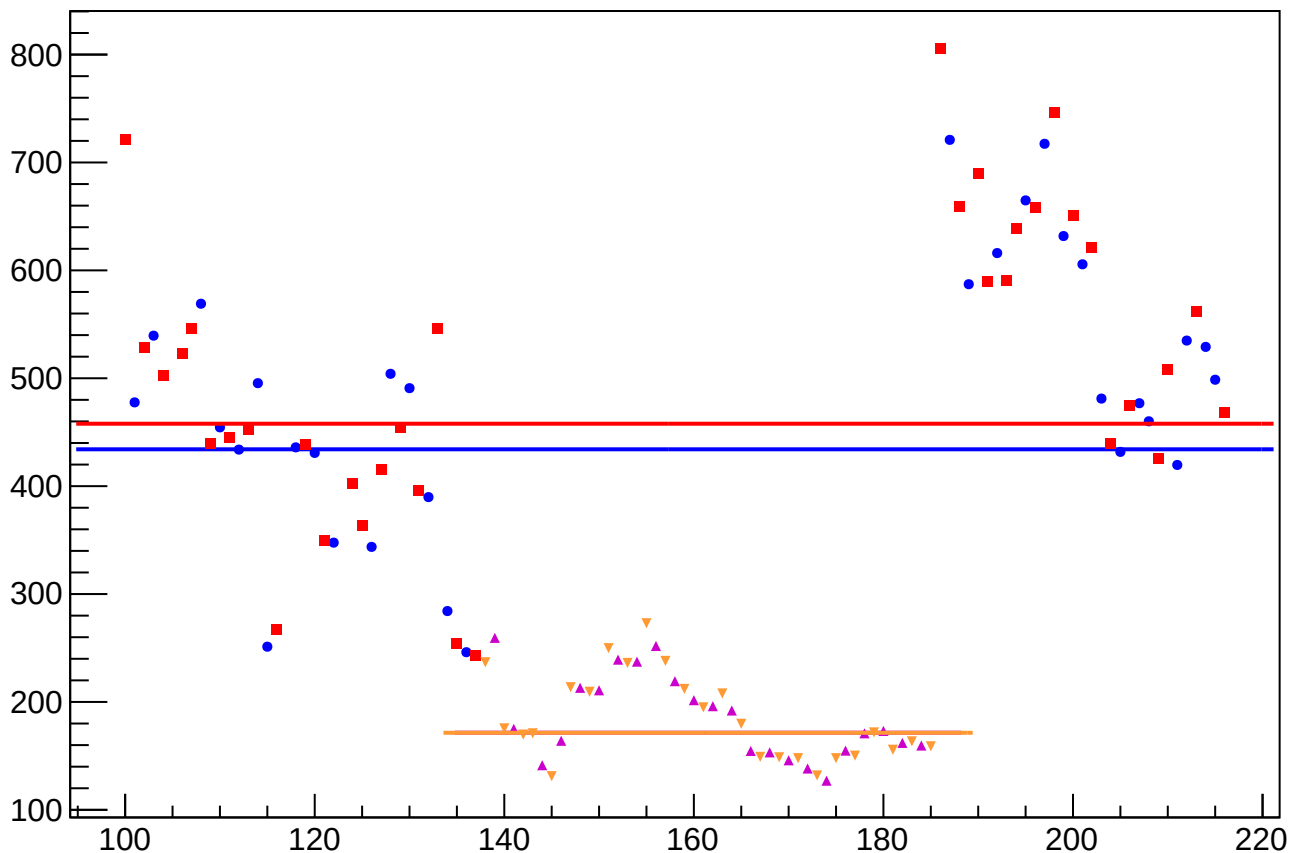
Left In:  $31.891 \pm 40.975$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $211.833 \pm 37.161$   $\chi^2/\text{NDF}$ : 107.8/55

All:  $147.325 \pm 26.664$   $\chi^2/\text{NDF}$ : 184.9/113

- sign  $78.869 \pm 38.281$   $\chi^2/\text{NDF}$ : 70.9/57

asym\_sam\_1357\_2468\_dd\_dit\_correction\_rms vs Slug



Right In: 434.156+/-0.073  $\chi^2/\text{NDF}$ : 2898864.4/30

Left Out: 171.427+/-0.028  $\chi^2/\text{NDF}$ :1526852.0/24

Right Out: 457.869+/-0.076  $\chi^2/\text{NDF}$ : 2920062.5/34

Left In: 171.490+/-0.029  $\chi^2/\text{NDF}$ :1415769.4/22

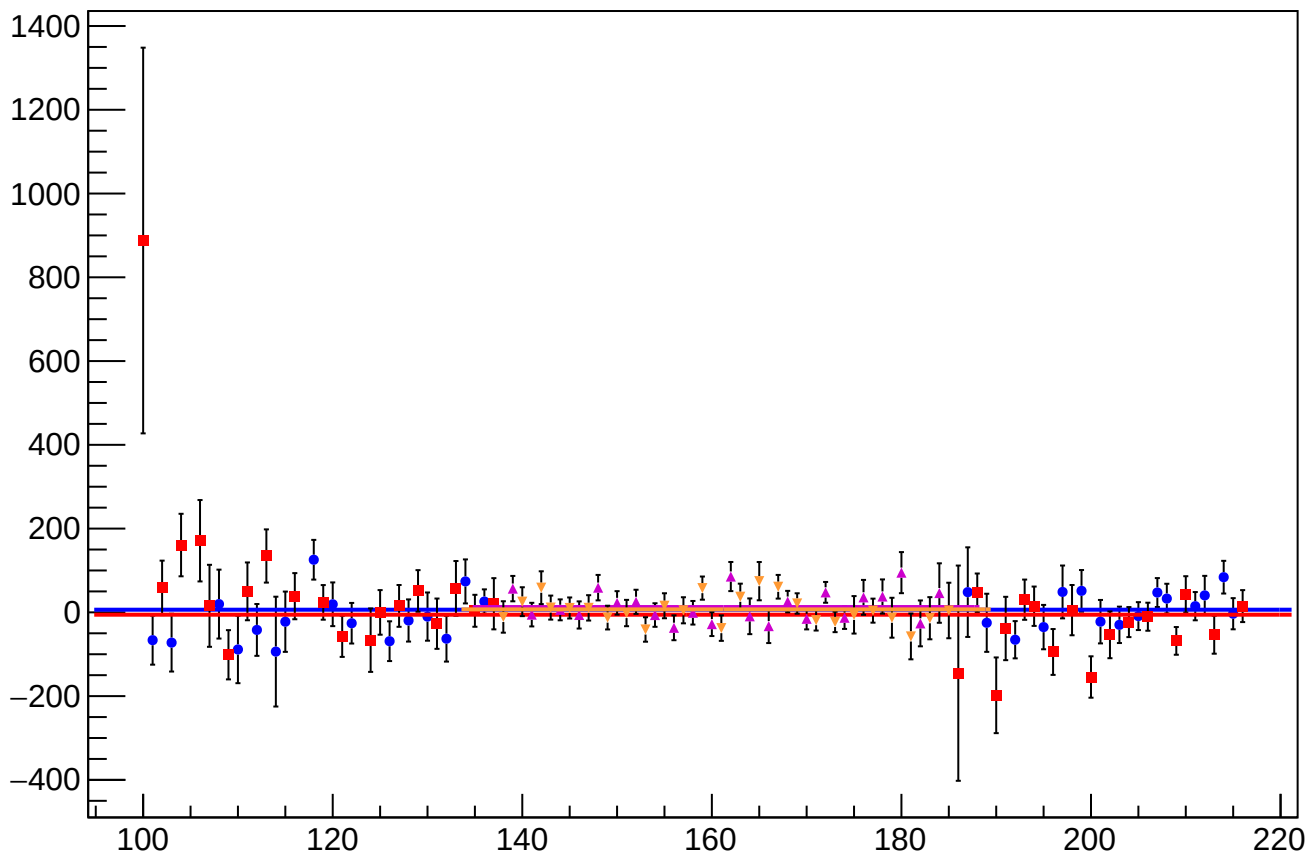
+ sign 205.486+/-0.026  $\chi^2/\text{NDF}$ : 15705673.9/55

All: 206.664+/-0.019  $\chi^2/\text{NDF}$ : 32471316.4/11

- sign 207.914+/-0.027  $\chi^2/\text{NDF}$ : 16761500.8/57



eigen\_dit\_asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $6.318 \pm 8.591$   $\chi^2/\text{NDF}: 31.7/30$

Left Out:  $7.079 \pm 6.333$   $\chi^2/\text{NDF}: 22.7/24$

Right Out:  $-5.591 \pm 8.837$   $\chi^2/\text{NDF}: 52.9/34$

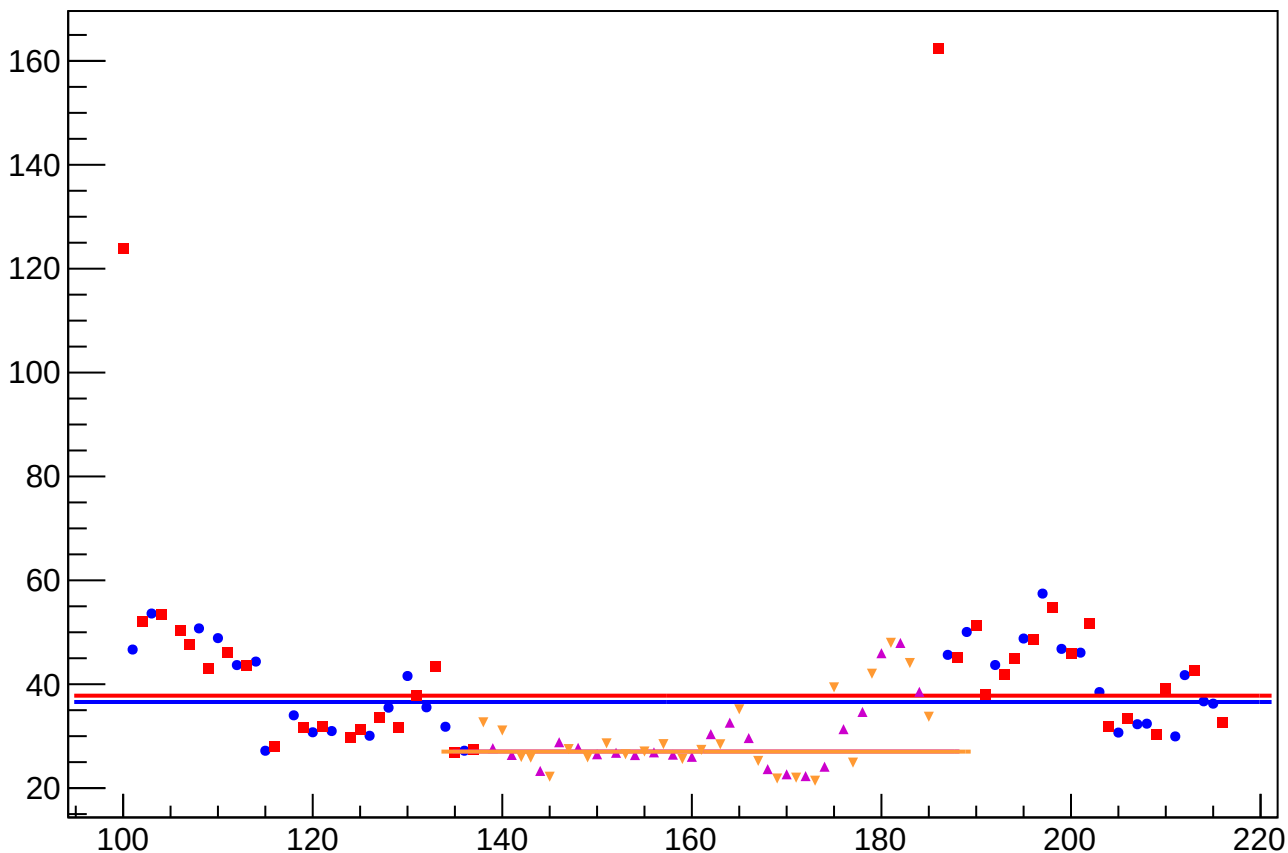
Left In:  $12.697 \pm 6.513$   $\chi^2/\text{NDF}: 25.6/22$

+ sign  $6.811 \pm 5.098$   $\chi^2/\text{NDF}: 54.4/55$

All:  $6.543 \pm 3.655$   $\chi^2/\text{NDF}: 135.7/113$

- sign  $6.259 \pm 5.243$   $\chi^2/\text{NDF}: 81.3/57$

eigen\_dit\_asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In:  $36.579 \pm 0.006$   $\chi^2/\text{NDF}$ : 1536557.4/30

Left Out:  $27.026 \pm 0.004$   $\chi^2/\text{NDF}$ : 1430534.9/24

Right Out:  $37.795 \pm 0.006$   $\chi^2/\text{NDF}$ : 2134385.2/34

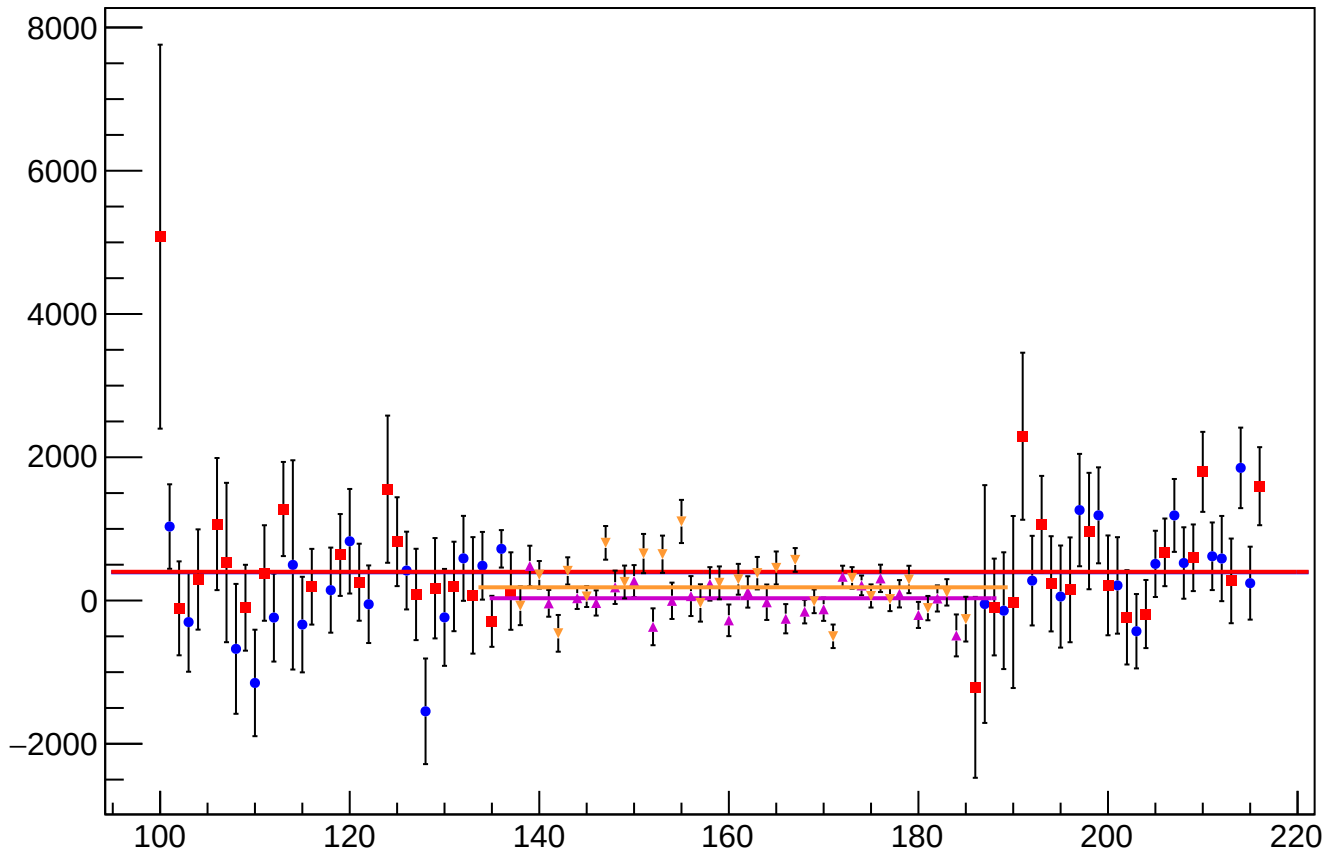
Left In:  $27.052 \pm 0.005$   $\chi^2/\text{NDF}$ : 1044338.2/22

+ sign  $30.390 \pm 0.004$   $\chi^2/\text{NDF}$ : 4569275.8/55

All:  $30.606 \pm 0.003$   $\chi^2/\text{NDF}$ : 9670643.9/113

- sign  $30.834 \pm 0.004$   $\chi^2/\text{NDF}$ : 5093993.2/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_correction\_mean vs Slug



Right In:  $394.168 \pm 103.210$   $\chi^2/\text{NDF}$ : 36.6/30

Left Out:  $184.674 \pm 39.832$   $\chi^2/\text{NDF}$ : 67.7/24

Right Out:  $401.253 \pm 107.339$   $\chi^2/\text{NDF}$ : 34.2/34

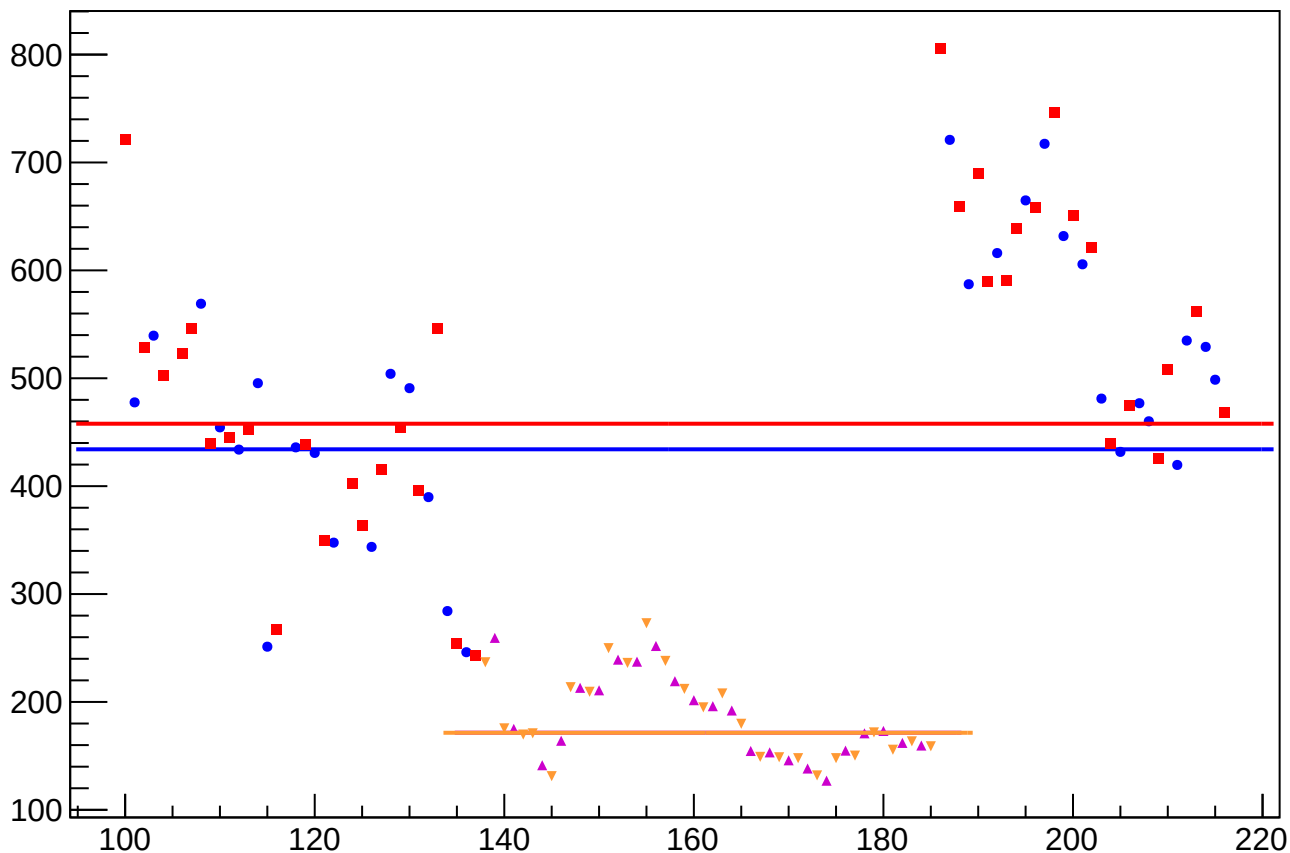
Left In:  $31.891 \pm 40.975$   $\chi^2/\text{NDF}$ : 26.4/22

+ sign  $211.832 \pm 37.160$   $\chi^2/\text{NDF}$ : 107.8/55

All:  $147.324 \pm 26.664$   $\chi^2/\text{NDF}$ : 184.9/113

- sign  $78.869 \pm 38.280$   $\chi^2/\text{NDF}$ : 70.9/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_correction\_rms vs Slug



Right In:  $434.156 \pm 0.073$   $\chi^2/\text{NDF}: 2898873.1/30$

Left Out:  $171.426 \pm 0.028$   $\chi^2/\text{NDF}: 1526868.9/24$

Right Out:  $457.868 \pm 0.076$   $\chi^2/\text{NDF}: 2920074.2/34$

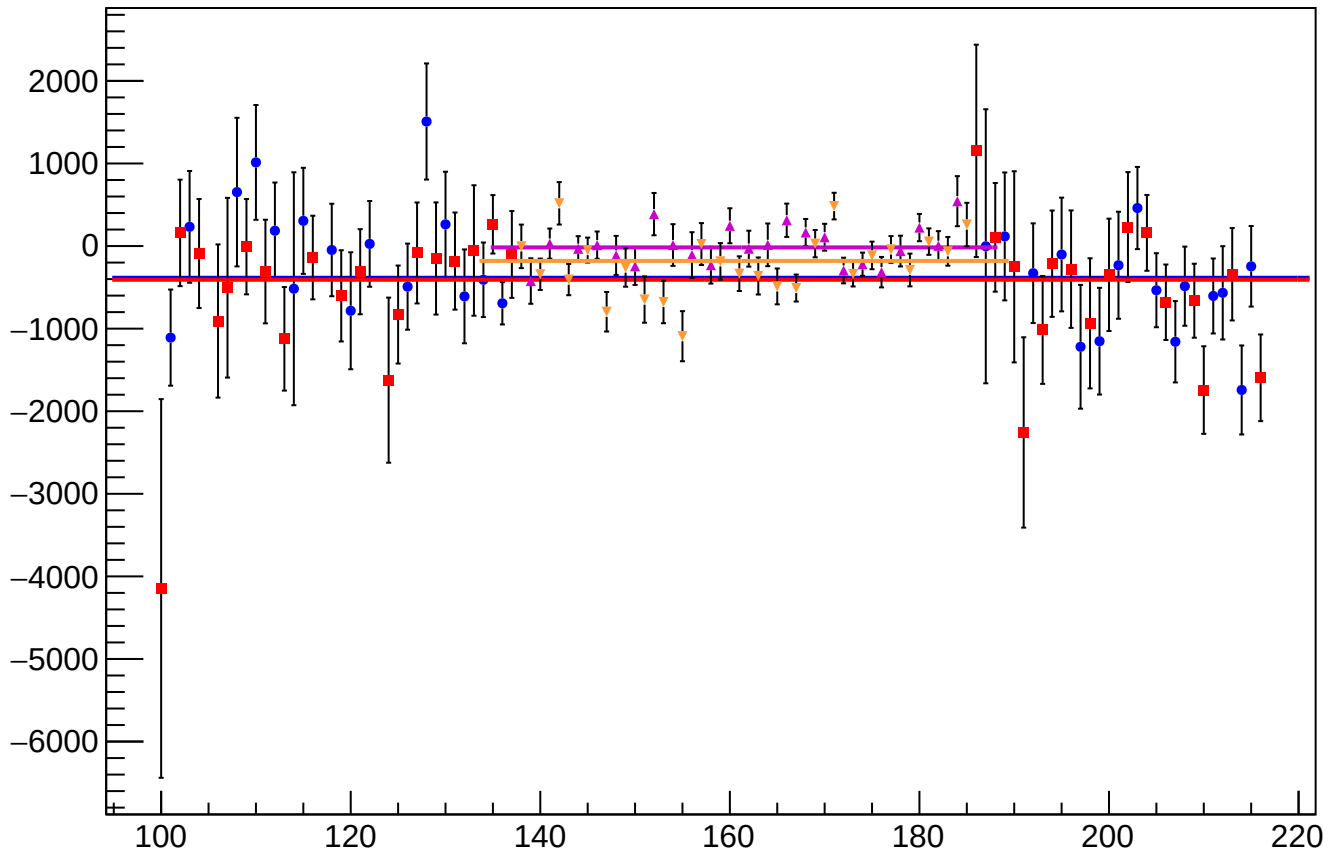
Left In:  $171.489 \pm 0.029$   $\chi^2/\text{NDF}: 1415782.1/22$

+ sign  $205.485 \pm 0.026$   $\chi^2/\text{NDF}: 15705724.8/55$

All:  $206.663 \pm 0.019$   $\chi^2/\text{NDF}: 32471432.3/11$

- sign  $207.913 \pm 0.027$   $\chi^2/\text{NDF}: 16761566.1/57$

# asym\_sam\_1357\_2468\_dd\_mean vs Slug



Right In:  $-383.906 \pm 99.428$   $\chi^2/\text{NDF}$ : 36.7/30

Left Out:  $-179.656 \pm 39.364$   $\chi^2/\text{NDF}$ : 67.1/24

Right Out:  $-408.165 \pm 103.802$   $\chi^2/\text{NDF}$ : 33.6/34

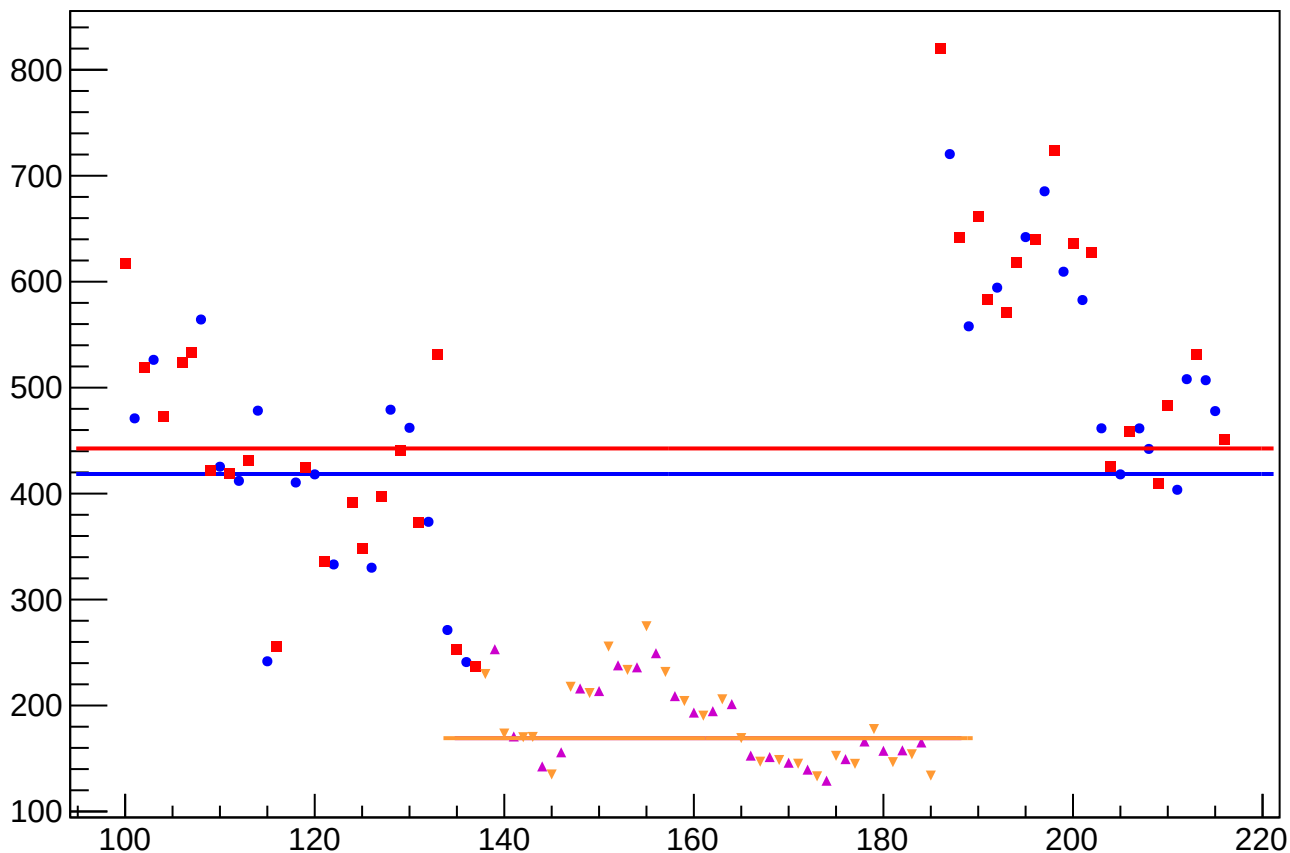
Left In:  $-16.057 \pm 40.396$   $\chi^2/\text{NDF}$ : 26.6/22

+ sign  $-207.331 \pm 36.600$   $\chi^2/\text{NDF}$ : 107.5/55

All:  $-139.449 \pm 26.242$   $\chi^2/\text{NDF}$ : 187.2/113

- sign  $-67.631 \pm 37.646$   $\chi^2/\text{NDF}$ : 72.6/57

# asym\_sam\_1357\_2468\_dd\_rms vs Slug



Right In: 418.508 $\pm$ 0.070  $\chi^2$ /NDF: 2835013.1/30

Left Out: 169.182 $\pm$ 0.028  $\chi^2$ /NDF:1547748.9/24

Right Out: 442.612 $\pm$ 0.073  $\chi^2$ /NDF: 2931407.7/34

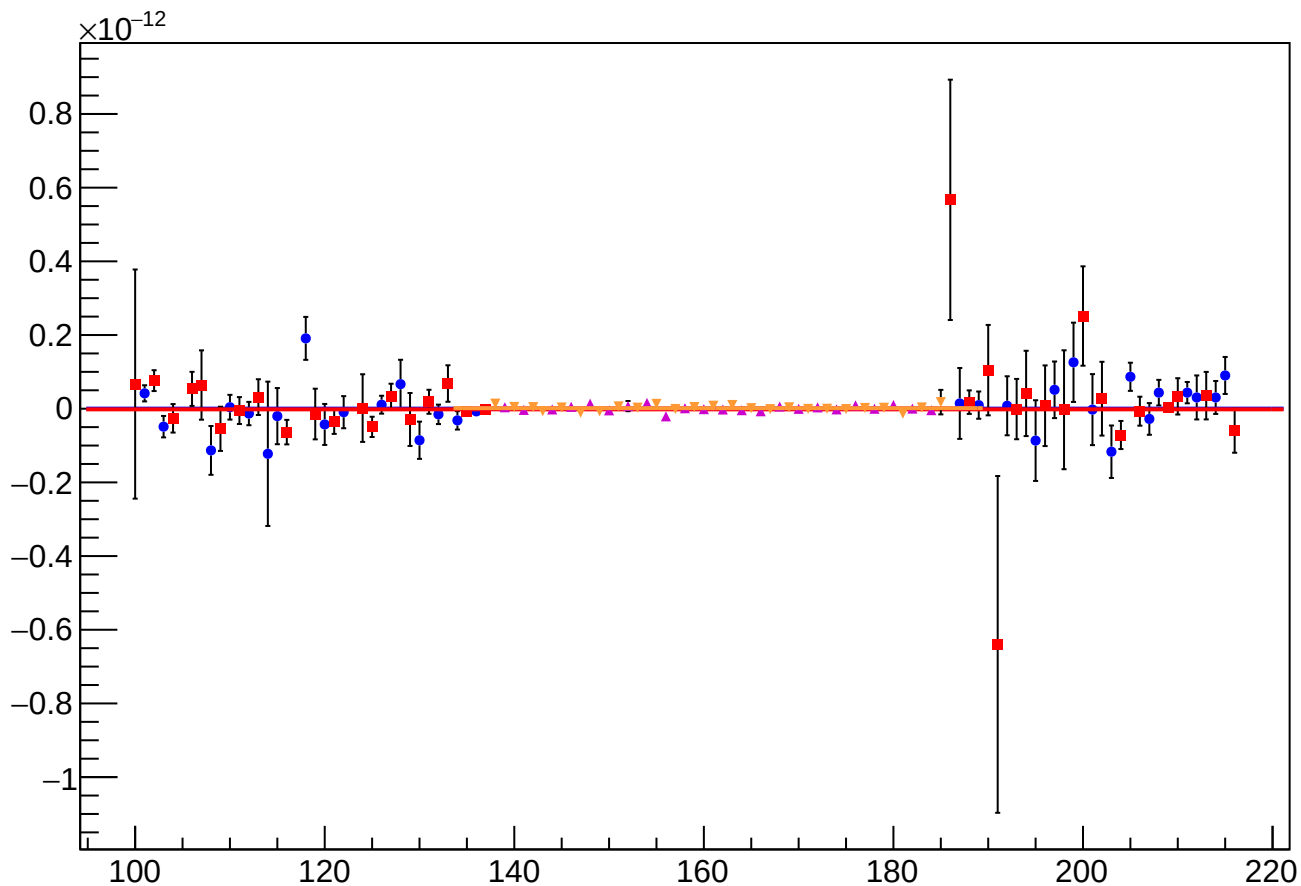
Left In: 169.187 $\pm$ 0.029  $\chi^2$ /NDF:1374439.5/22

+ sign 202.965 $\pm$ 0.026  $\chi^2$ /NDF: 15254906.0/55

All: 204.027 $\pm$ 0.019  $\chi^2$ /NDF: 31615906.1/11

- sign 205.150 $\pm$ 0.027  $\chi^2$ /NDF: 16357535.7/57

asym\_sam\_1357\_2468\_dd\_reg\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 47.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:18.8/24

Right Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 38.7/34

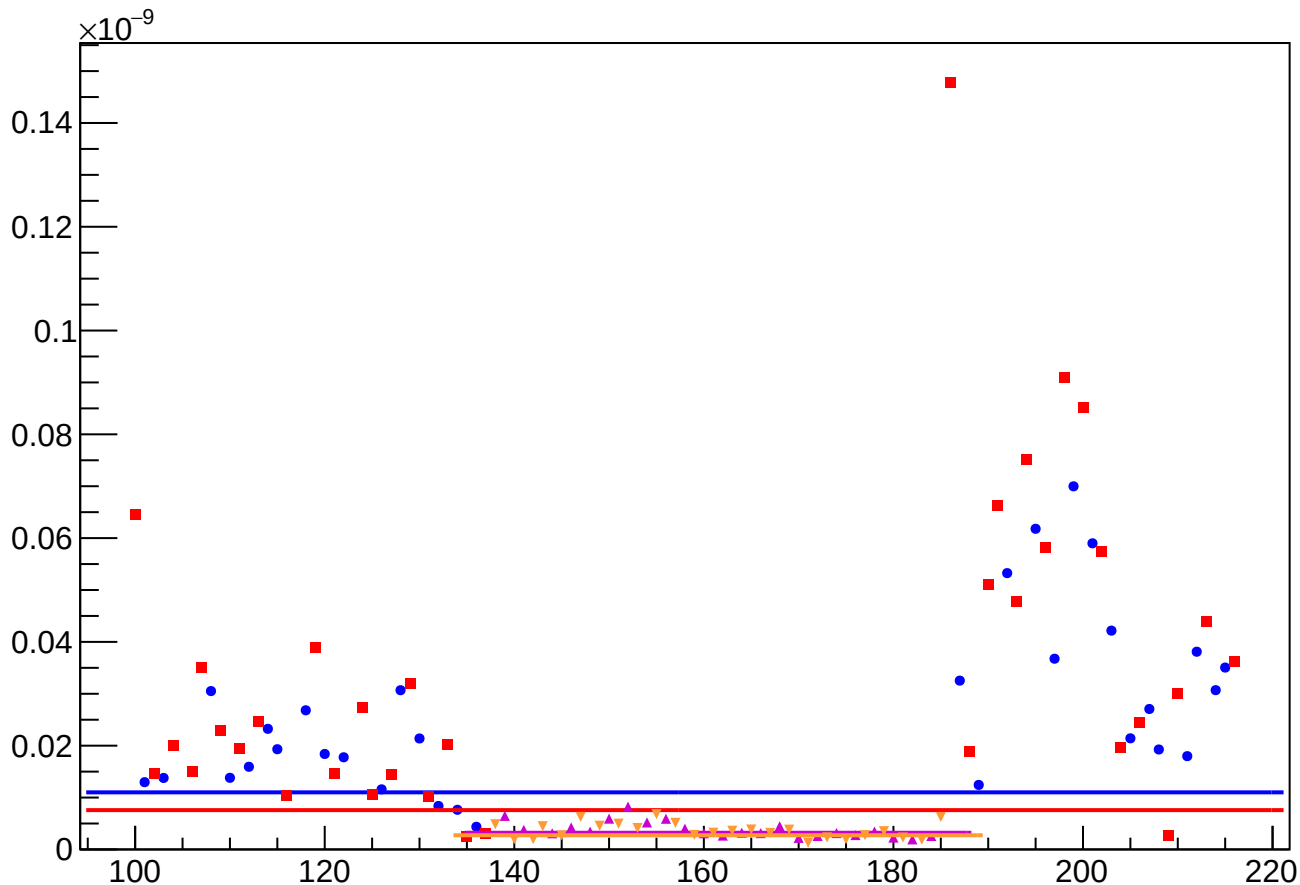
Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:19.7/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 65.8/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 124.6/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.8/57

asym\_sam\_1357\_2468\_dd\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 7216264.3/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1923193.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 10291041.3/34

Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1355602.1/22

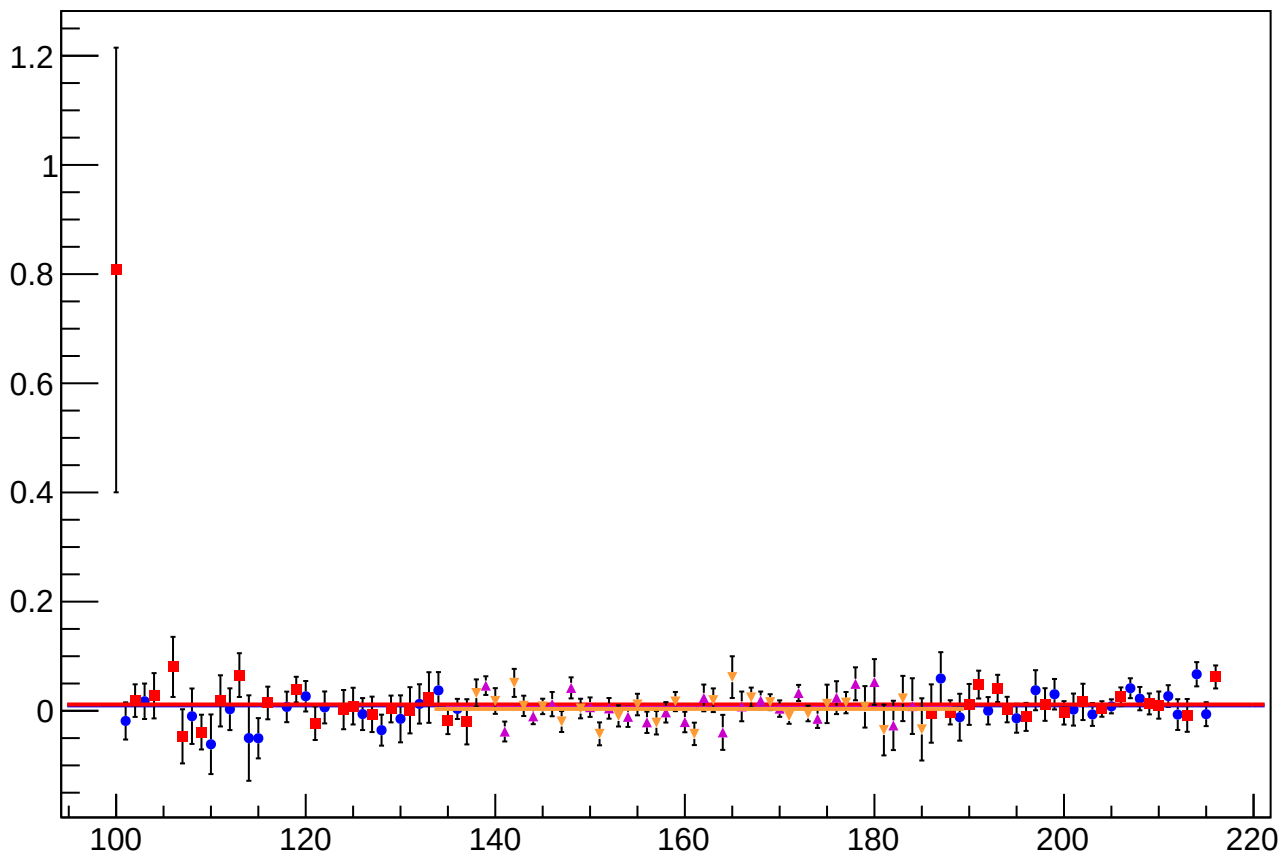
+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13954307.6/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27427985.9/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13343943.3/57



asym\_sam\_1357\_2468\_dd\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $0.010 \pm 0.005$   $\chi^2/\text{NDF}$ : 25.8/30

Left Out:  $0.003 \pm 0.004$   $\chi^2/\text{NDF}$ : 26.9/24

Right Out:  $0.012 \pm 0.005$   $\chi^2/\text{NDF}$ : 29.3/34

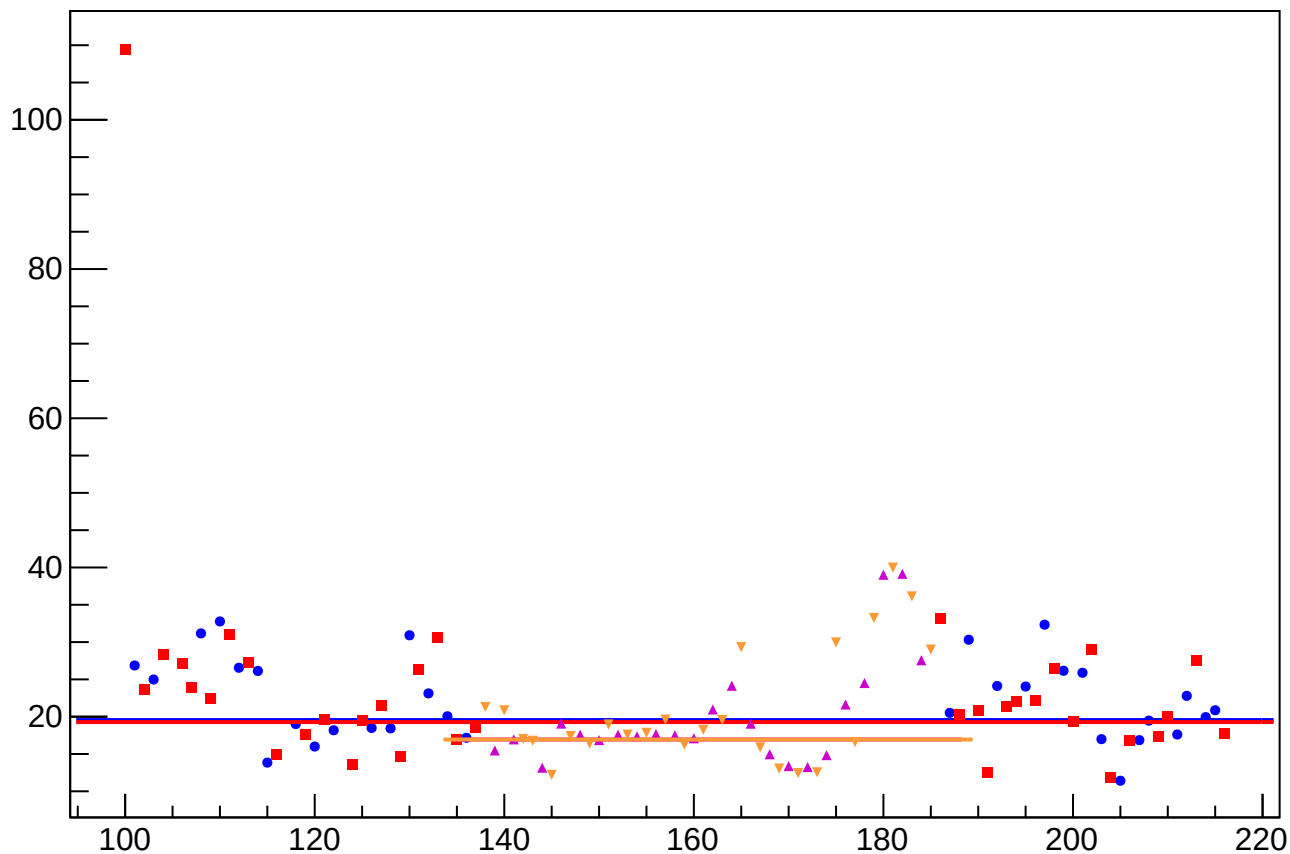
Left In:  $0.005 \pm 0.004$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $0.006 \pm 0.003$   $\chi^2/\text{NDF}$ : 53.9/55

All:  $0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 117.5/113

- sign  $0.008 \pm 0.003$   $\chi^2/\text{NDF}$ : 63.5/57

asym\_sam\_1357\_2468\_dd\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.549 $\pm$ 0.003  $\chi^2$ /NDF: 2355209.0/30

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836877.8/24

Right Out: 19.281 $\pm$ 0.003  $\chi^2$ /NDF: 2298745.8/34

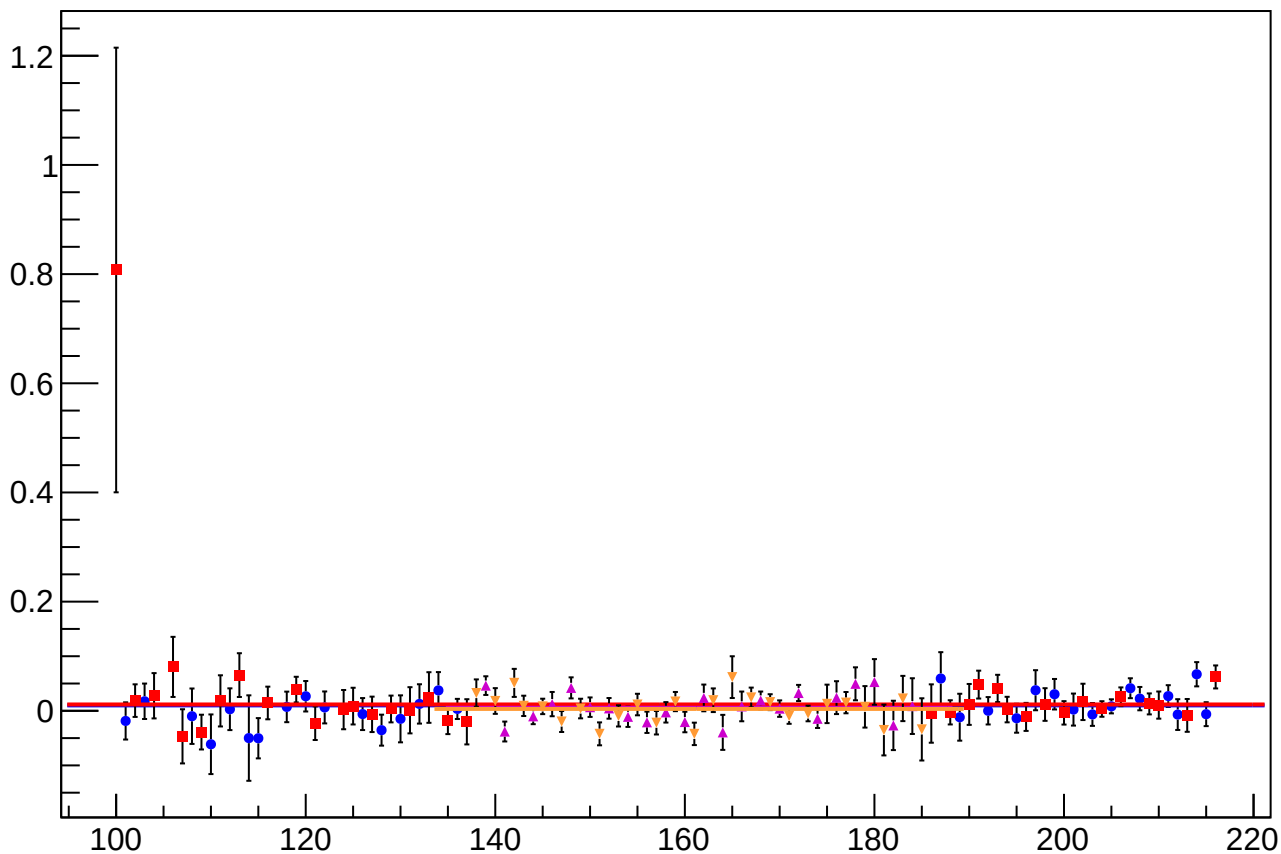
Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941845.2/22

+ sign 18.044 $\pm$ 0.002  $\chi^2$ /NDF: 5537018.8/55

All: 18.015 $\pm$ 0.002  $\chi^2$ /NDF: 10055611.0/113

- sign 17.986 $\pm$ 0.002  $\chi^2$ /NDF: 4518238.3/57

asym\_sam\_1357\_2468\_dd\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.005  $\chi^2$ /NDF: 25.8/30

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.012 $\pm$ 0.005  $\chi^2$ /NDF: 29.3/34

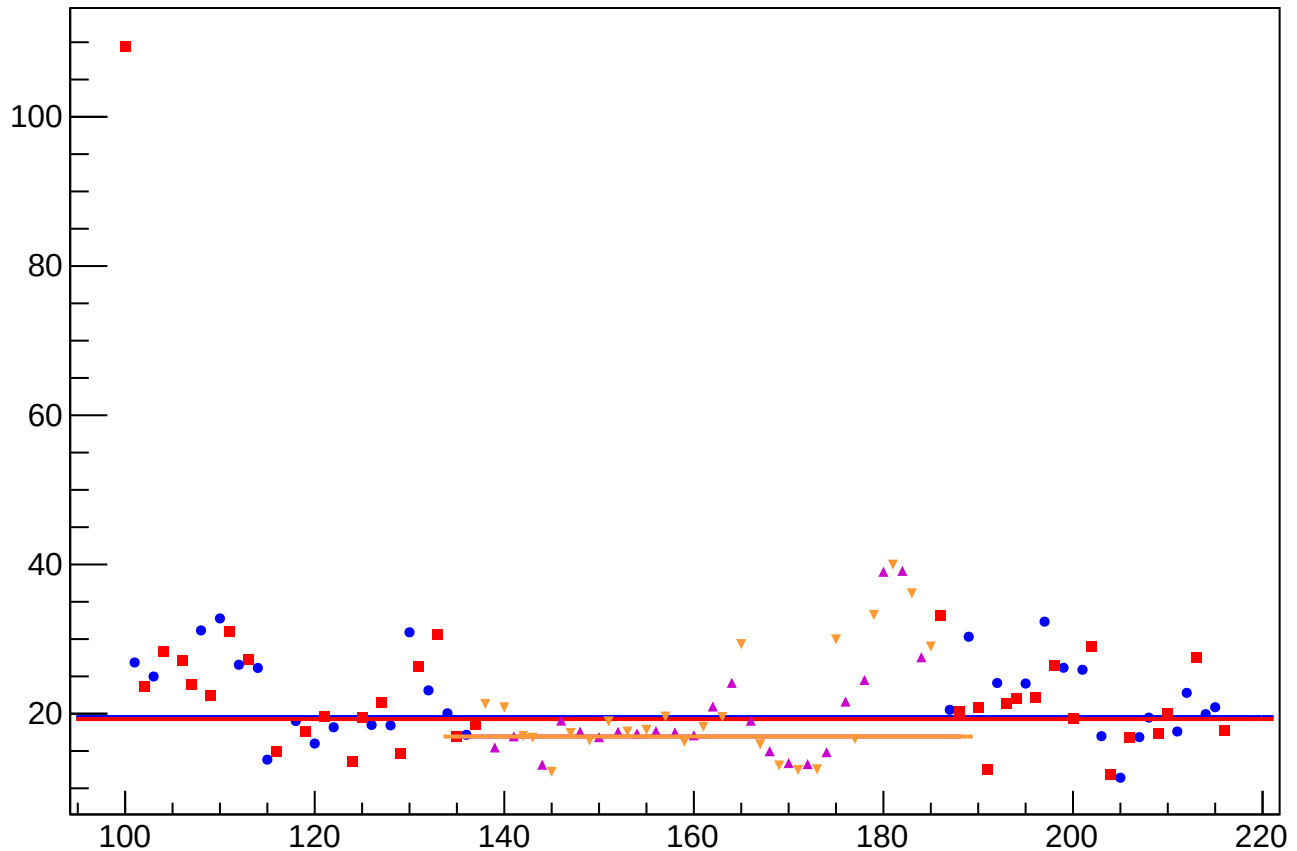
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.006 $\pm$ 0.003  $\chi^2$ /NDF: 53.9/55

All: 0.007 $\pm$ 0.002  $\chi^2$ /NDF: 117.5/113

- sign 0.008 $\pm$ 0.003  $\chi^2$ /NDF: 63.5/57

asym\_sam\_1357\_2468\_dd\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.549+/-0.003  $\chi^2/\text{NDF}$ : 2355209.0/30

Left Out: 16.939+/-0.003  $\chi^2/\text{NDF}$ : 2836877.8/24

Right Out: 19.281+/-0.003  $\chi^2/\text{NDF}$ : 2298745.8/34

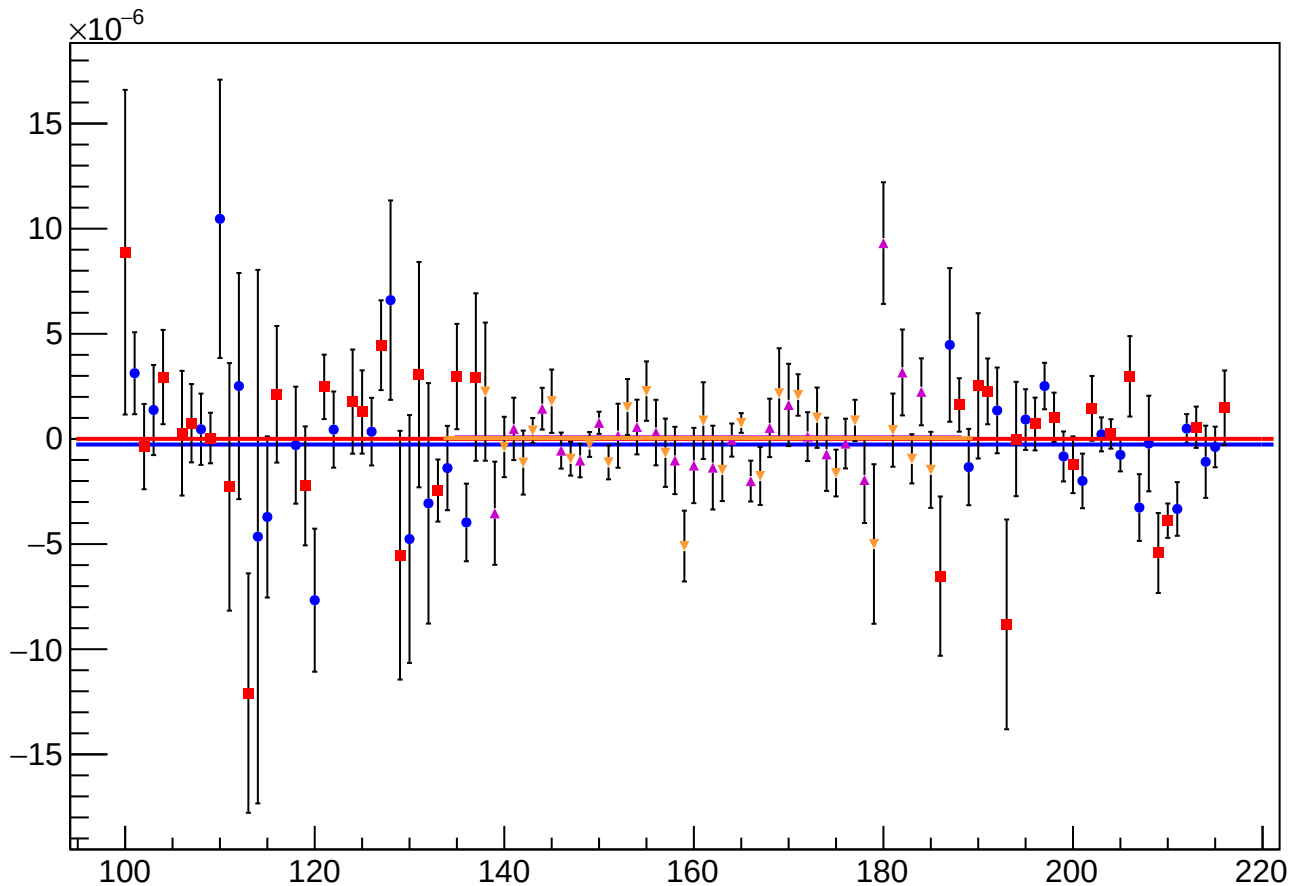
Left In: 16.943+/-0.003  $\chi^2/\text{NDF}$ : 1941845.2/22

+ sign 18.044+/-0.002  $\chi^2/\text{NDF}$ : 5537018.8/55

All: 18.015+/-0.002  $\chi^2/\text{NDF}$ : 10055611.0/113

- sign 17.986+/-0.002  $\chi^2/\text{NDF}$ : 4518238.3/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 43.1/30$

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 37.2/24$

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 70.2/34$

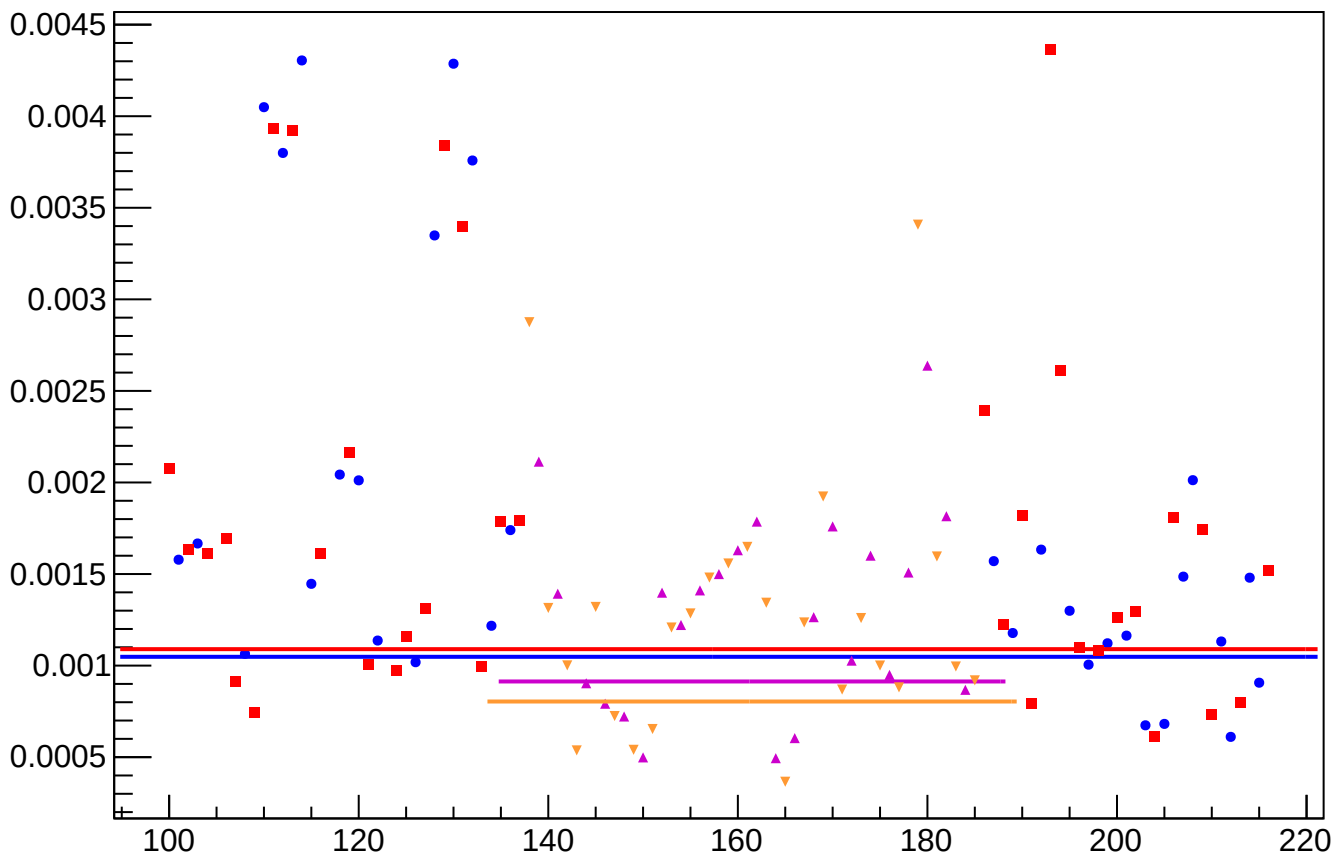
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 31.0/22$

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 81.1/55$

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}: 182.5/113$

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}: 101.2/57$

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6296213.1/30

Left Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 8261261.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 7006555.4/34

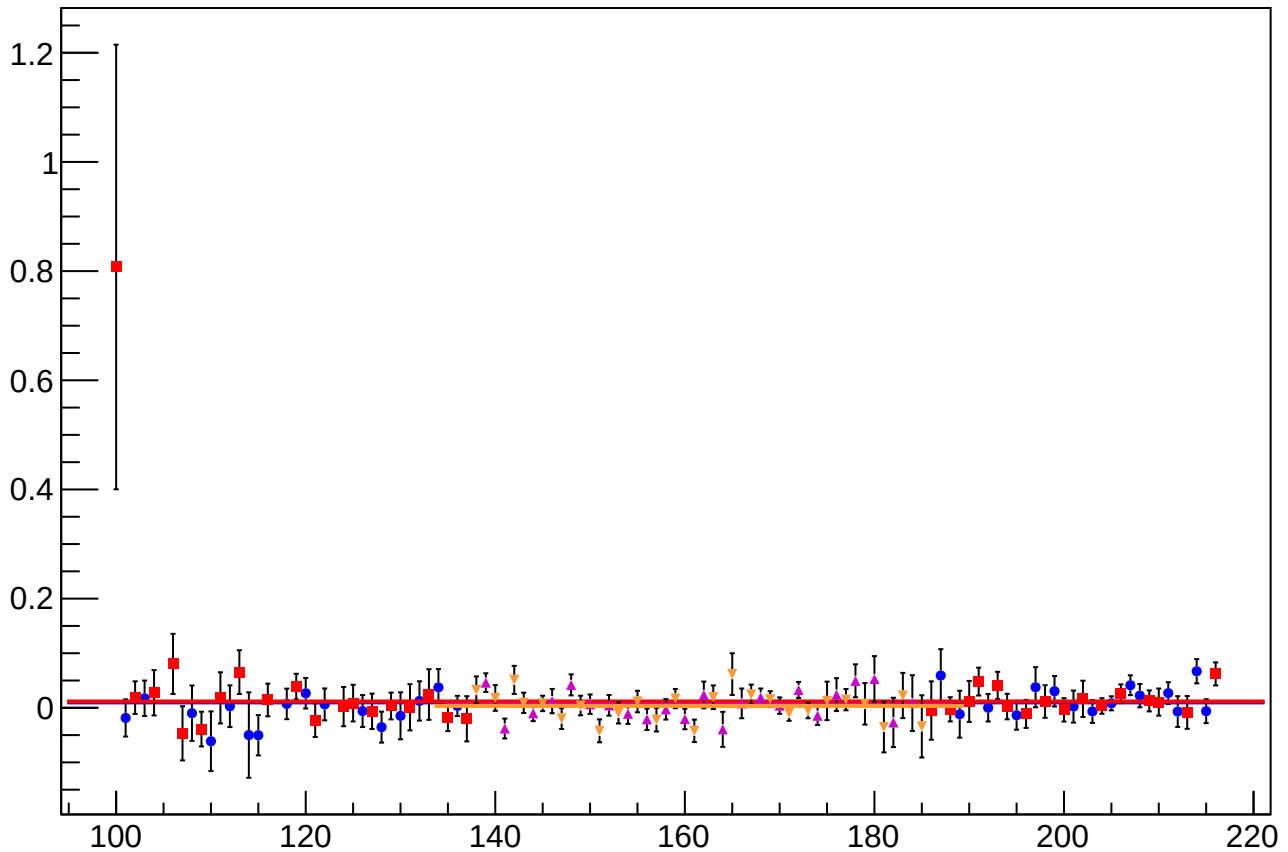
Left In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 6446479.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 15572886.9/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 29770914.2/113

- sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13904880.3/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.005  $\chi^2$ /NDF: 25.8/30

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.012 $\pm$ 0.005  $\chi^2$ /NDF: 29.3/34

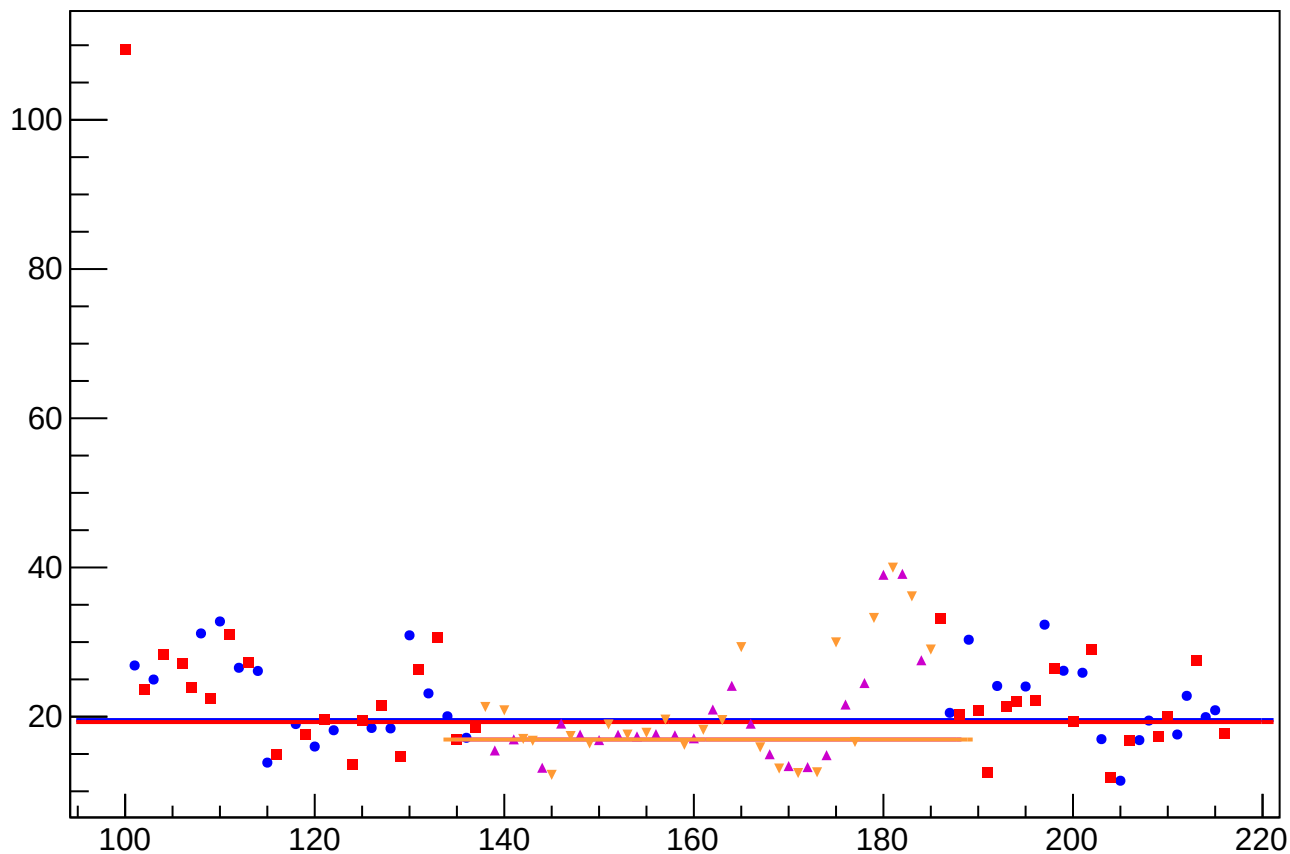
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.006 $\pm$ 0.003  $\chi^2$ /NDF: 53.9/55

All: 0.007 $\pm$ 0.002  $\chi^2$ /NDF: 117.5/113

- sign 0.008 $\pm$ 0.003  $\chi^2$ /NDF: 63.5/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 19.549 $\pm$ 0.003  $\chi^2$ /NDF: 2355228.6/30

Left Out: 16.939 $\pm$ 0.003  $\chi^2$ /NDF: 2836863.1/24

Right Out: 19.280 $\pm$ 0.003  $\chi^2$ /NDF: 2298723.5/34

Left In: 16.943 $\pm$ 0.003  $\chi^2$ /NDF: 1941834.9/22

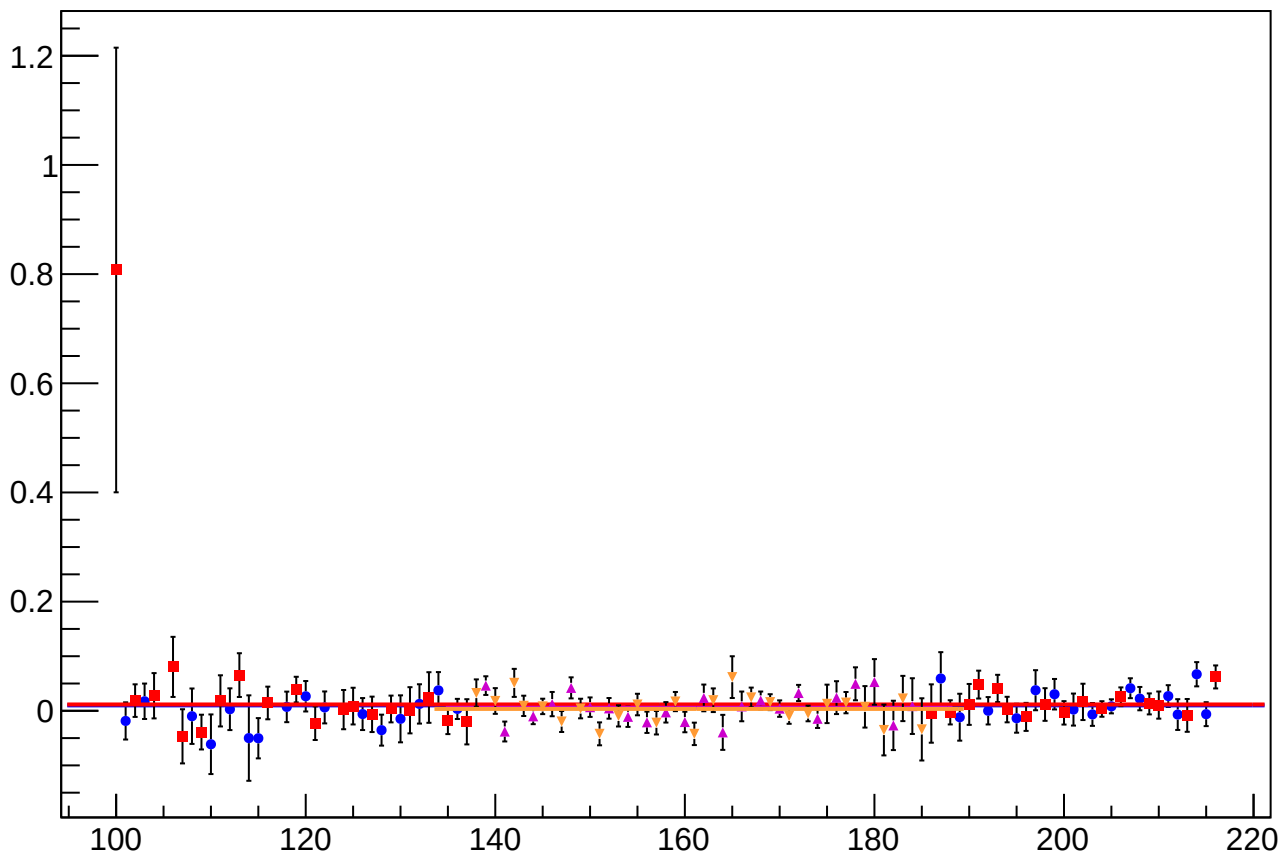
+ sign 18.044 $\pm$ 0.002  $\chi^2$ /NDF: 5536918.7/55

All: 18.015 $\pm$ 0.002  $\chi^2$ /NDF: 10055442.8/113

- sign 17.986 $\pm$ 0.002  $\chi^2$ /NDF: 4518170.5/57



asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In: 0.010 $\pm$ 0.005  $\chi^2$ /NDF: 25.8/30

Left Out: 0.003 $\pm$ 0.004  $\chi^2$ /NDF:26.9/24

Right Out: 0.012 $\pm$ 0.005  $\chi^2$ /NDF: 29.3/34

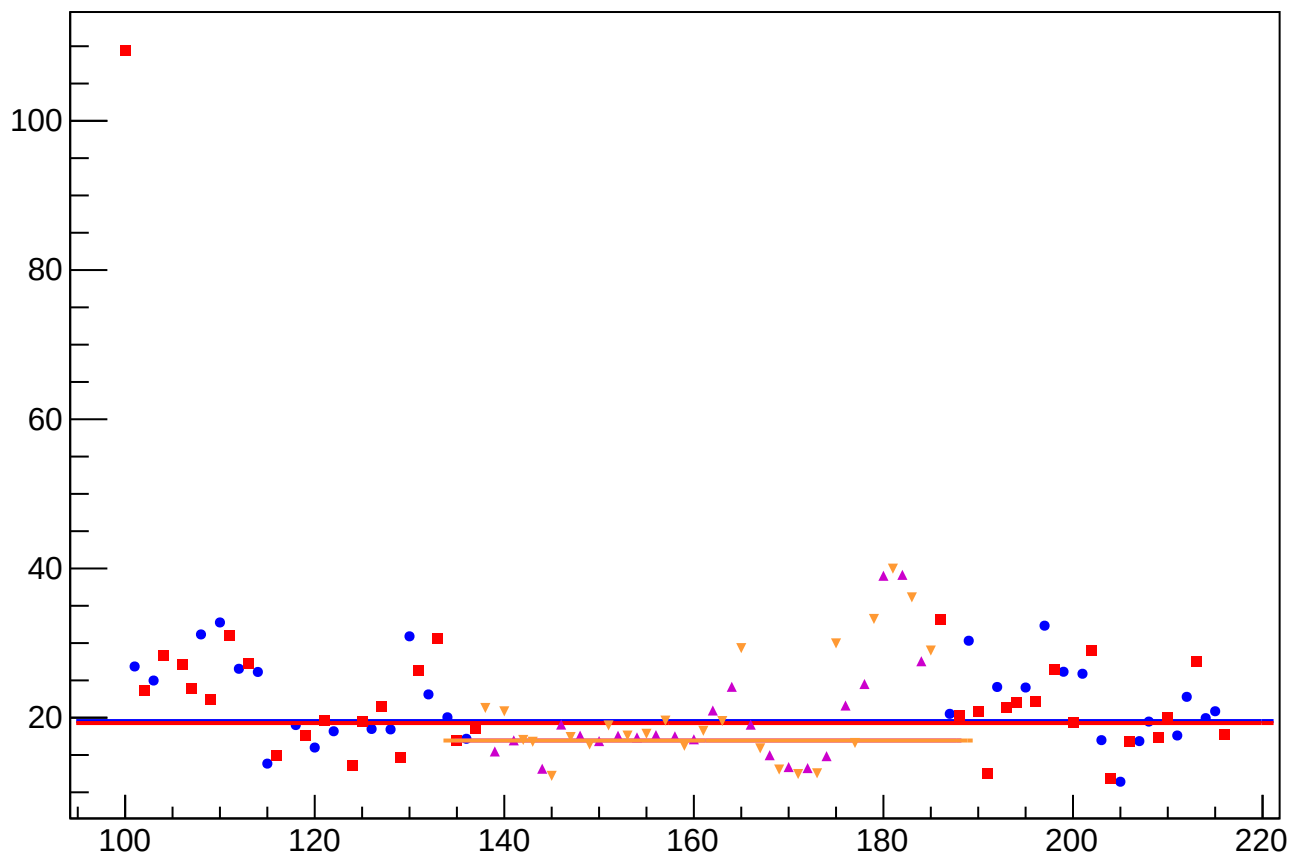
Left In: 0.005 $\pm$ 0.004  $\chi^2$ /NDF:33.2/22

+ sign 0.006 $\pm$ 0.003  $\chi^2$ /NDF: 53.9/55

All: 0.007 $\pm$ 0.002  $\chi^2$ /NDF: 117.5/113

- sign 0.008 $\pm$ 0.003  $\chi^2$ /NDF: 63.5/57

asym\_sam\_1357\_2468\_dd\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 19.549+/-0.003  $\chi^2/\text{NDF}$ : 2355228.6/30

Left Out: 16.939+/-0.003  $\chi^2/\text{NDF}$ : 2836863.1/24

Right Out: 19.280+/-0.003  $\chi^2/\text{NDF}$ : 2298723.5/34

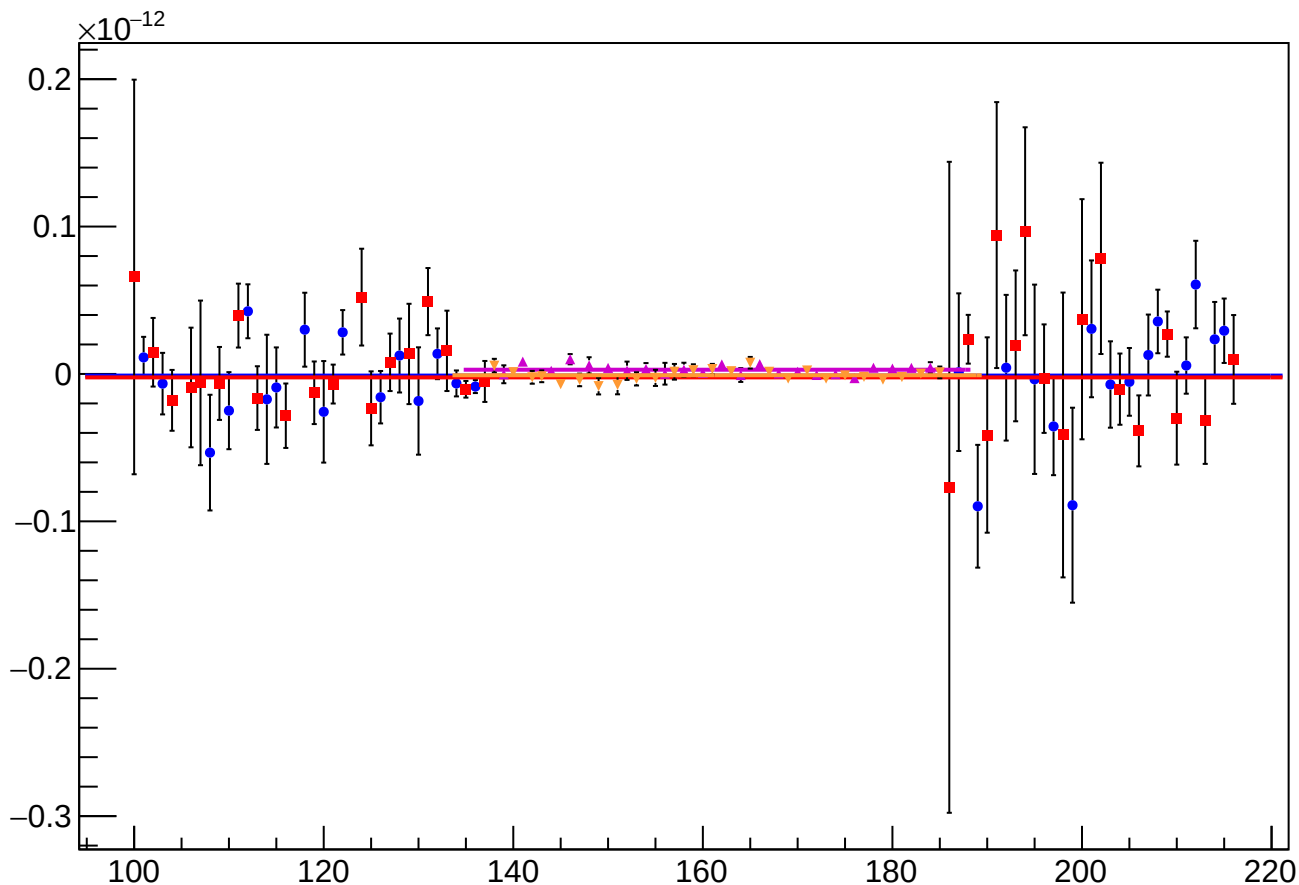
Left In: 16.943+/-0.003  $\chi^2/\text{NDF}$ : 1941834.9/22

+ sign 18.044+/-0.002  $\chi^2/\text{NDF}$ : 5536918.7/55

All: 18.015+/-0.002  $\chi^2/\text{NDF}$ : 10055442.8/113

- sign 17.986+/-0.002  $\chi^2/\text{NDF}$ : 4518170.5/57

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.6/24

Right Out:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 35.1/34

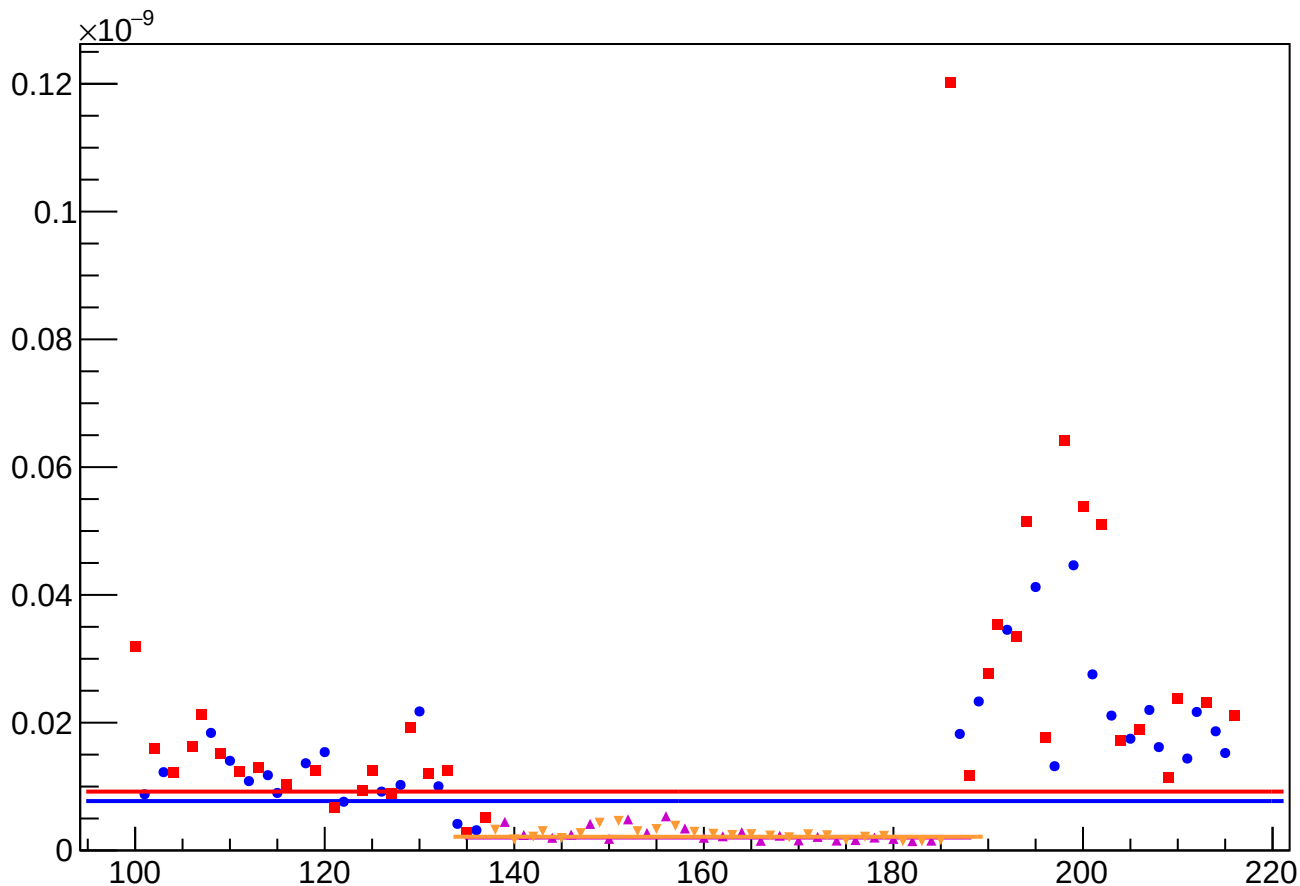
Left In:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 23.1/22

+ sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 62.4/55

All:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 139.2/113

- sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 60.4/57

asym\_sam\_1357\_2468\_dd\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 8940773.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2184835.6/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 9769171.6/34

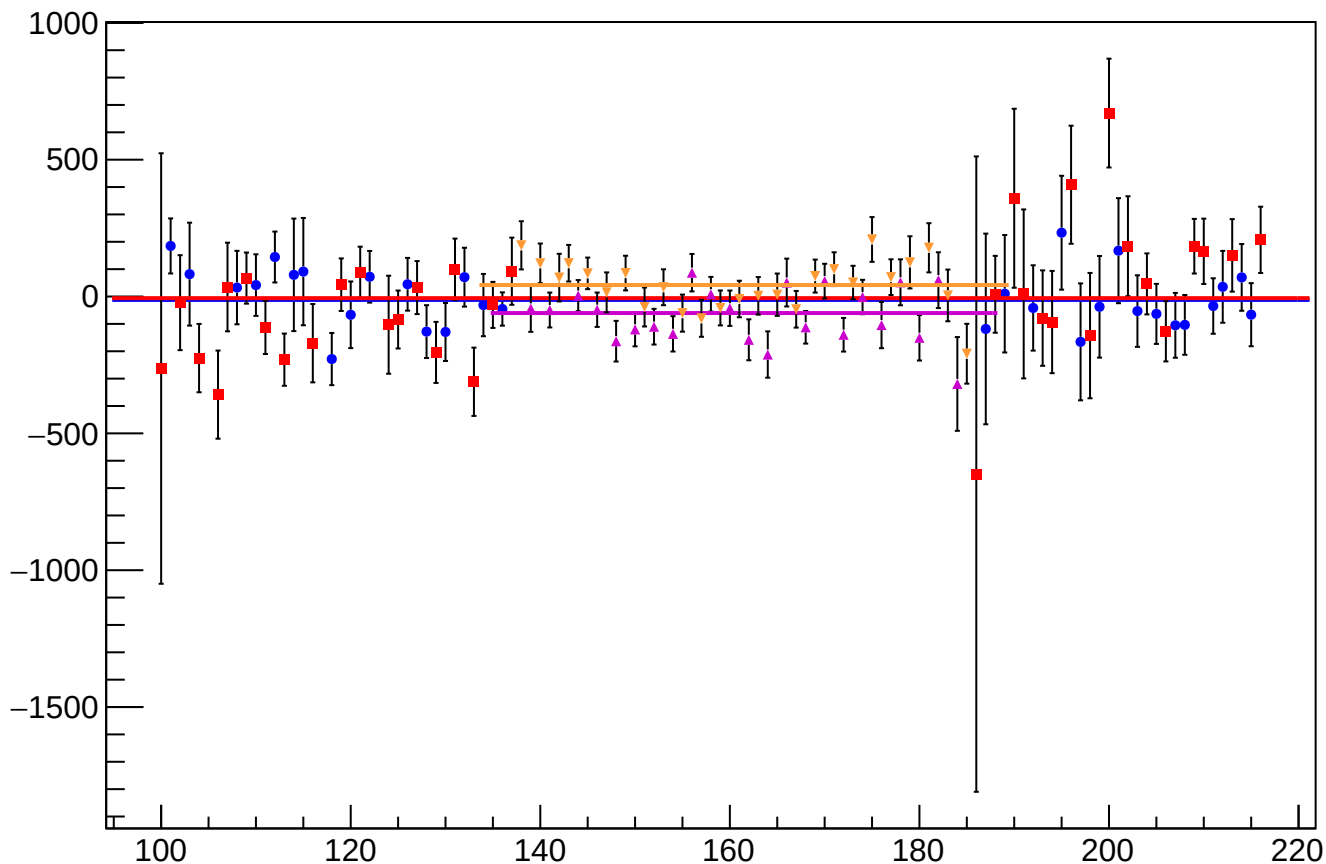
Left In: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 2375362.0/22

+ sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 17777764.6/55

All: 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 38351207.8/113

- sign 0.000 $\pm$ 0.000  $\chi^2/\text{NDF}$ : 20528766.1/57

# reg\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-12.357 \pm 21.214$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $42.012 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-5.957 \pm 21.698$   $\chi^2/\text{NDF}$ : 60.1/34

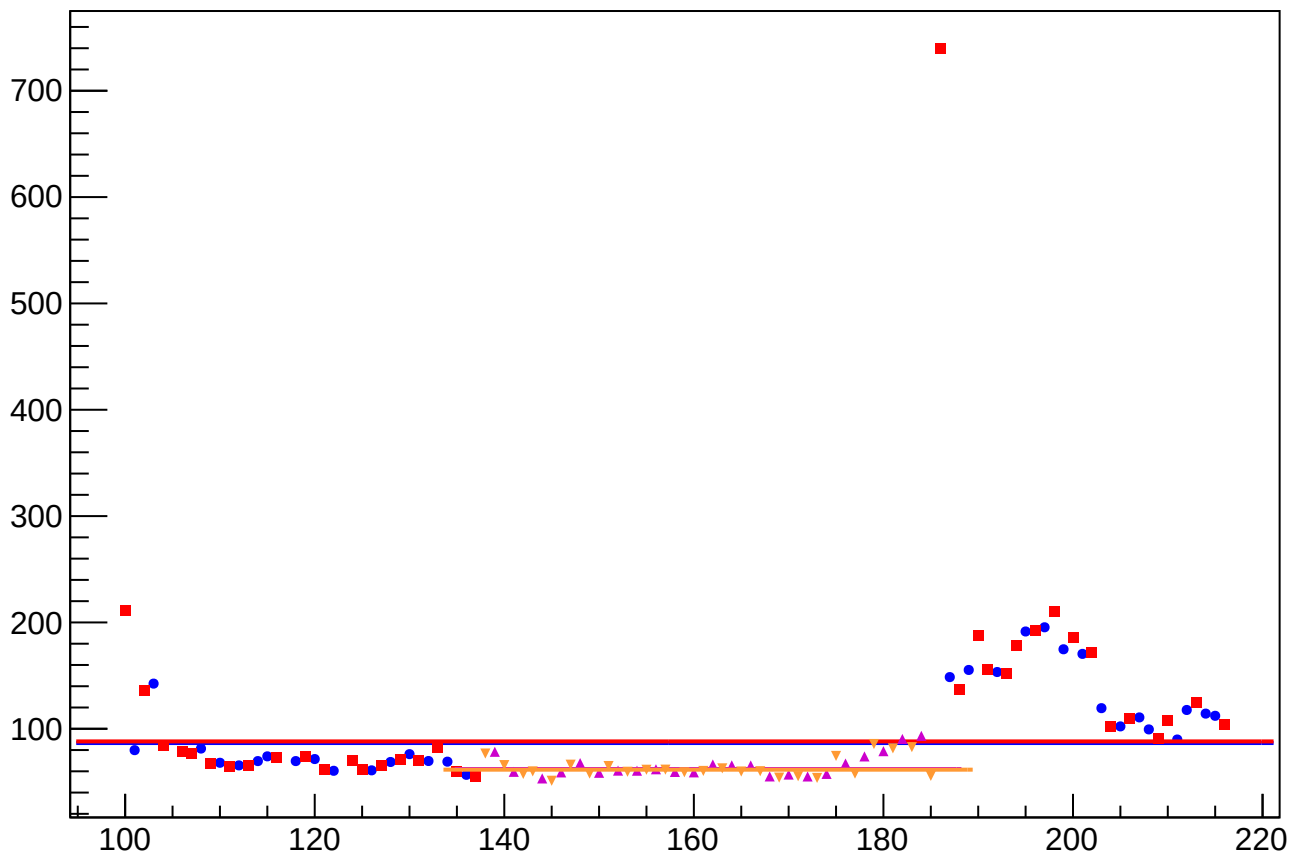
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $25.220 \pm 11.789$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-7.898 \pm 8.470$   $\chi^2/\text{NDF}$ : 172.7/113

- sign  $-43.234 \pm 12.178$   $\chi^2/\text{NDF}$ : 96.6/57

reg\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 86.585 $\pm$ 0.015  $\chi^2$ /NDF: 4513418.6/30

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.8/24

Right Out: 88.121 $\pm$ 0.015  $\chi^2$ /NDF: 5675503.2/34

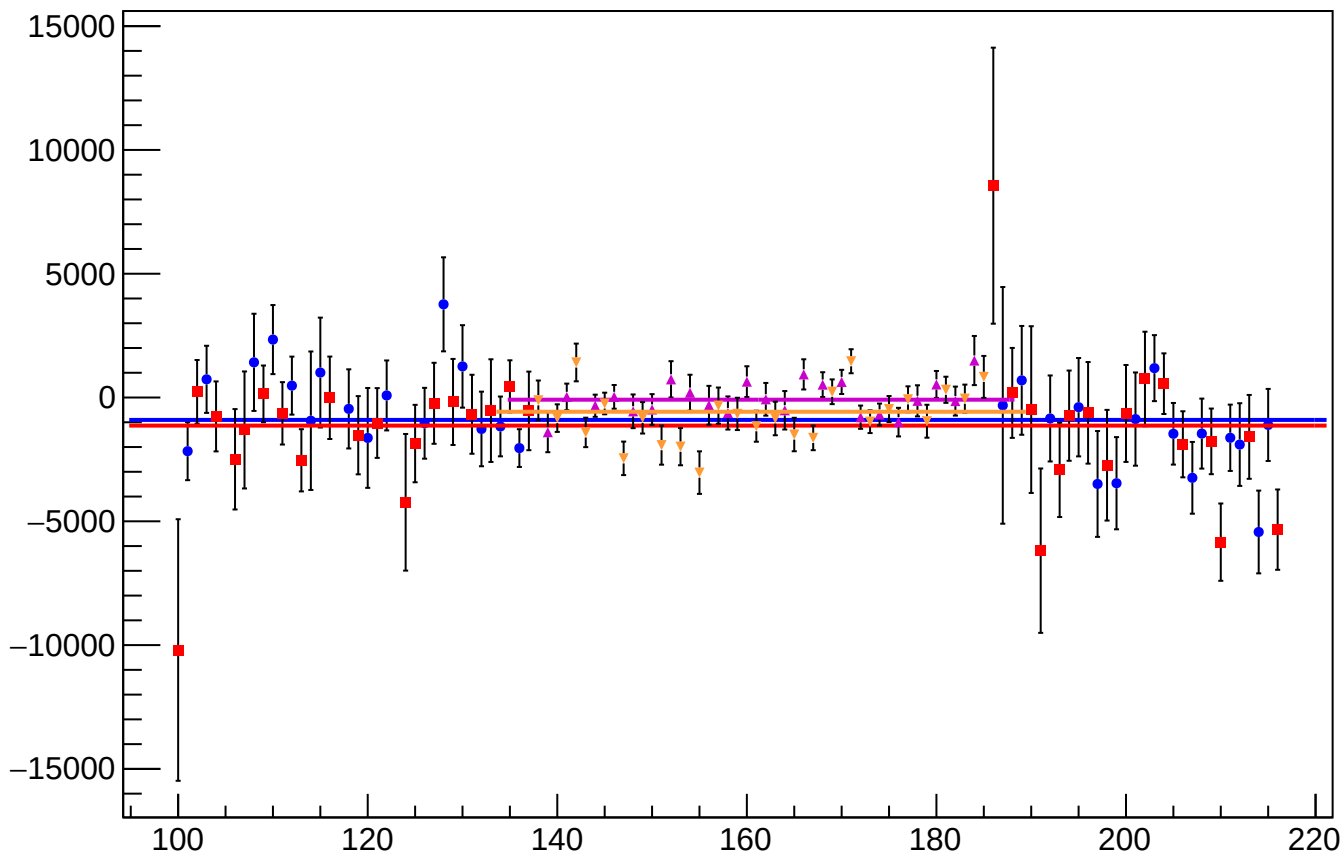
Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

+ sign 69.278 $\pm$ 0.008  $\chi^2$ /NDF: 7077305.8/55

All: 69.786 $\pm$ 0.006  $\chi^2$ /NDF: 15320859.8/113

- sign 70.327 $\pm$ 0.009  $\chi^2$ /NDF: 8235892.9/57

asym\_sam\_12345678\_avg\_reg\_correction\_mean vs Slug



Right In:  $-904.615 \pm 269.468$   $\chi^2/\text{NDF}: 39.7/30$

Left Out:  $-574.818 \pm 119.736$   $\chi^2/\text{NDF}: 68.8/24$

Right Out:  $-1134.242 \pm 277.093$   $\chi^2/\text{NDF}: 39.2/34$

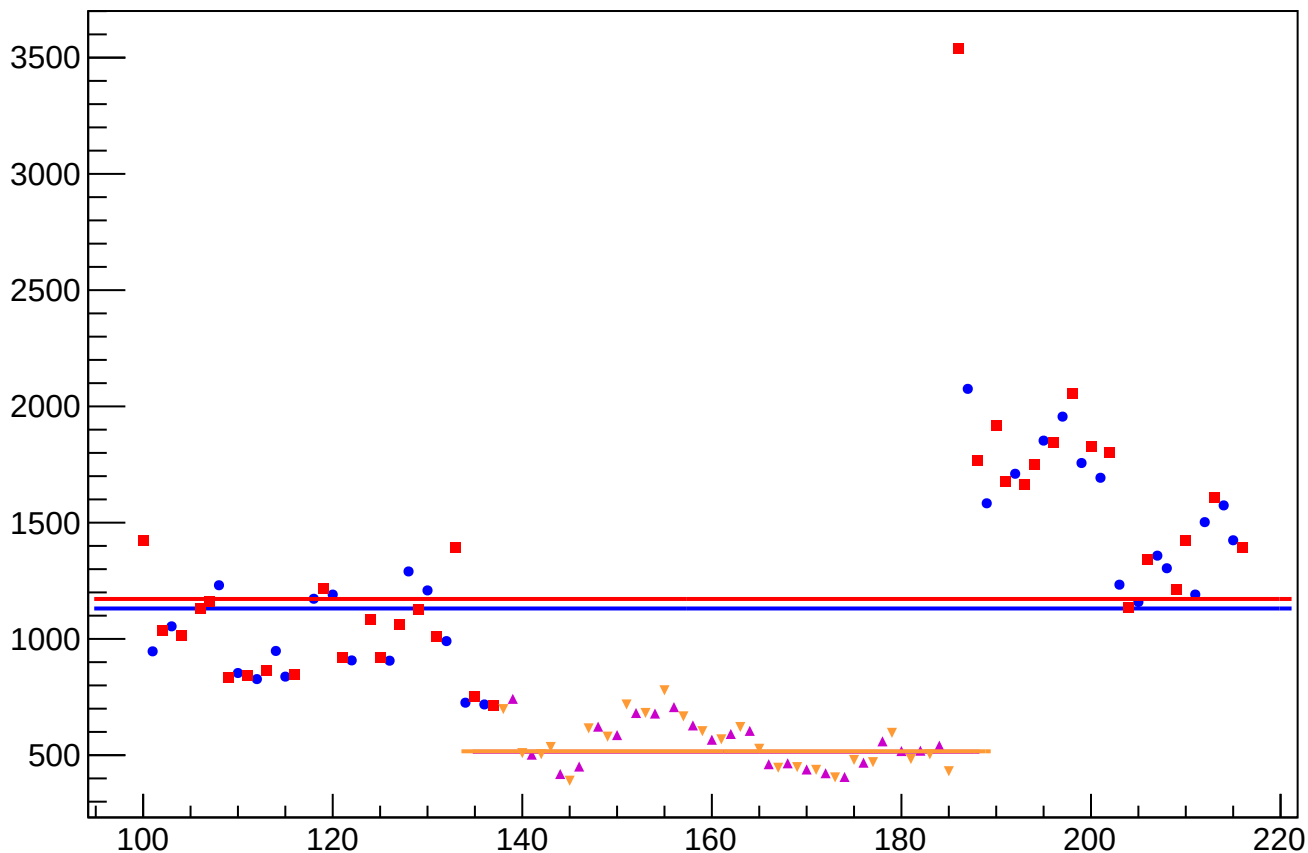
Left In:  $-88.334 \pm 122.492$   $\chi^2/\text{NDF}: 24.6/22$

+ sign  $-629.196 \pm 109.420$   $\chi^2/\text{NDF}: 109.8/55$

All:  $-448.618 \pm 78.280$   $\chi^2/\text{NDF}: 191.1/113$

- sign  $-259.311 \pm 112.034$   $\chi^2/\text{NDF}: 75.7/57$

asym\_sam\_12345678\_avg\_reg\_correction\_rms vs Slug



Right In: 1130.868 $\pm$ 0.191  $\chi^2$ /NDF: 3035251.7/30

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF: 1265161.0/24

Right Out: 1171.830 $\pm$ 0.196  $\chi^2$ /NDF: 3504170.2/34

Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF: 1120436.1/22

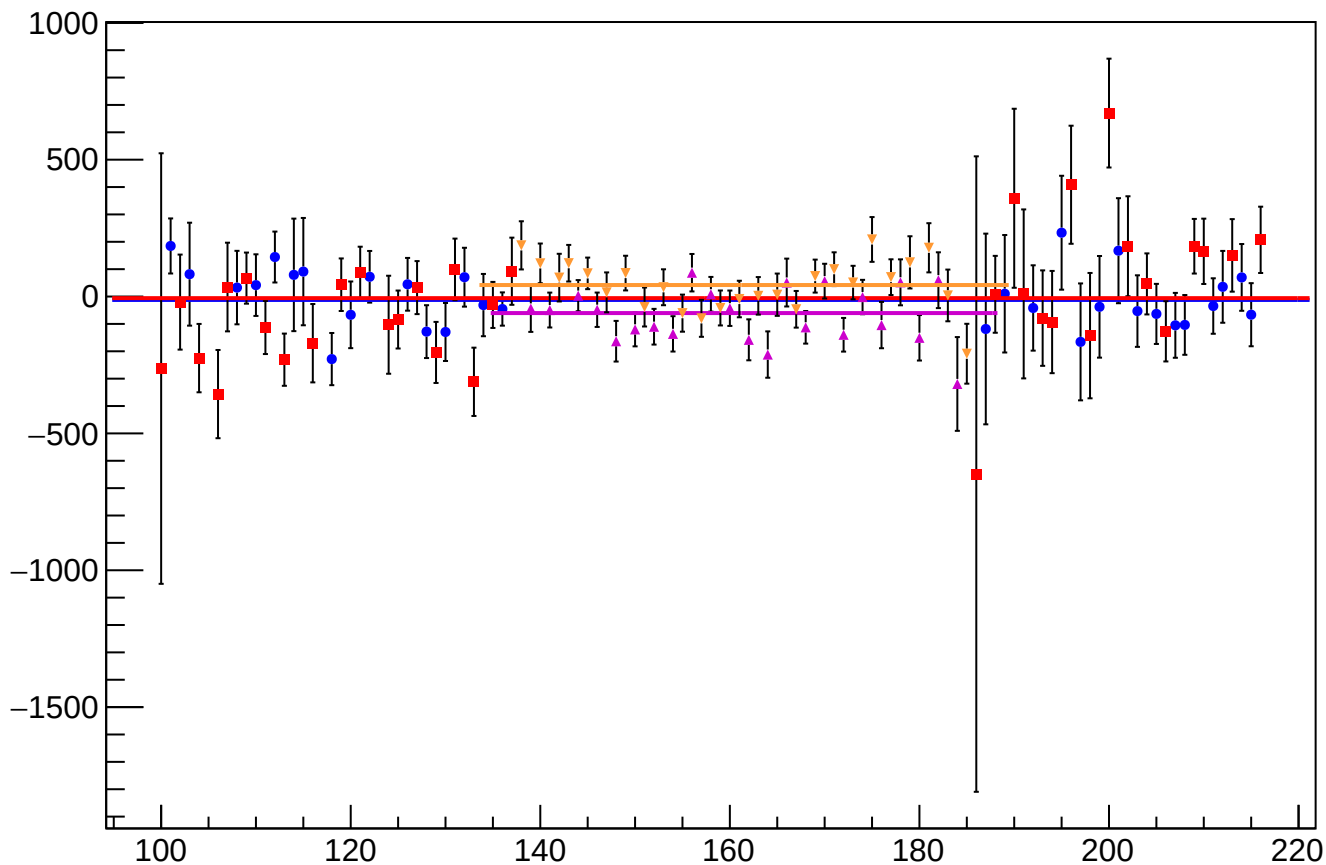
+ sign 617.913 $\pm$ 0.077  $\chi^2$ /NDF: 12978539.3/55

All: 620.001 $\pm$ 0.055  $\chi^2$ /NDF: 27011682.4/11

- sign 622.191 $\pm$ 0.079  $\chi^2$ /NDF: 14031650.8/57



cor\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-12.364 \pm 21.214$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $42.017 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-5.873 \pm 21.698$   $\chi^2/\text{NDF}$ : 60.0/34

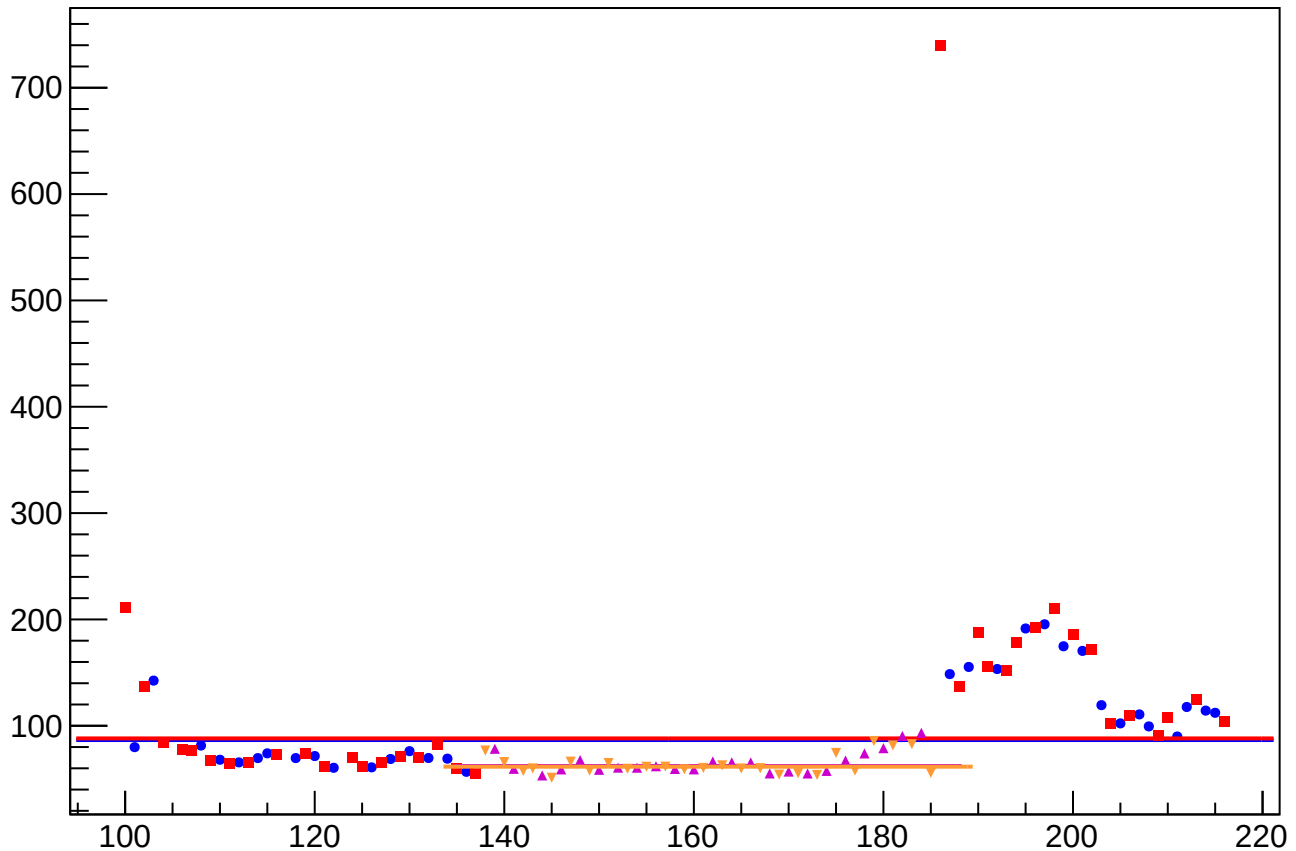
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $25.221 \pm 11.789$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-7.885 \pm 8.470$   $\chi^2/\text{NDF}$ : 172.6/113

- sign  $-43.208 \pm 12.178$   $\chi^2/\text{NDF}$ : 96.5/57

cor\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 86.585 $\pm$ 0.015  $\chi^2$ /NDF: 4513421.7/30

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.9/24

Right Out: 88.109 $\pm$ 0.015  $\chi^2$ /NDF: 5676856.5/34

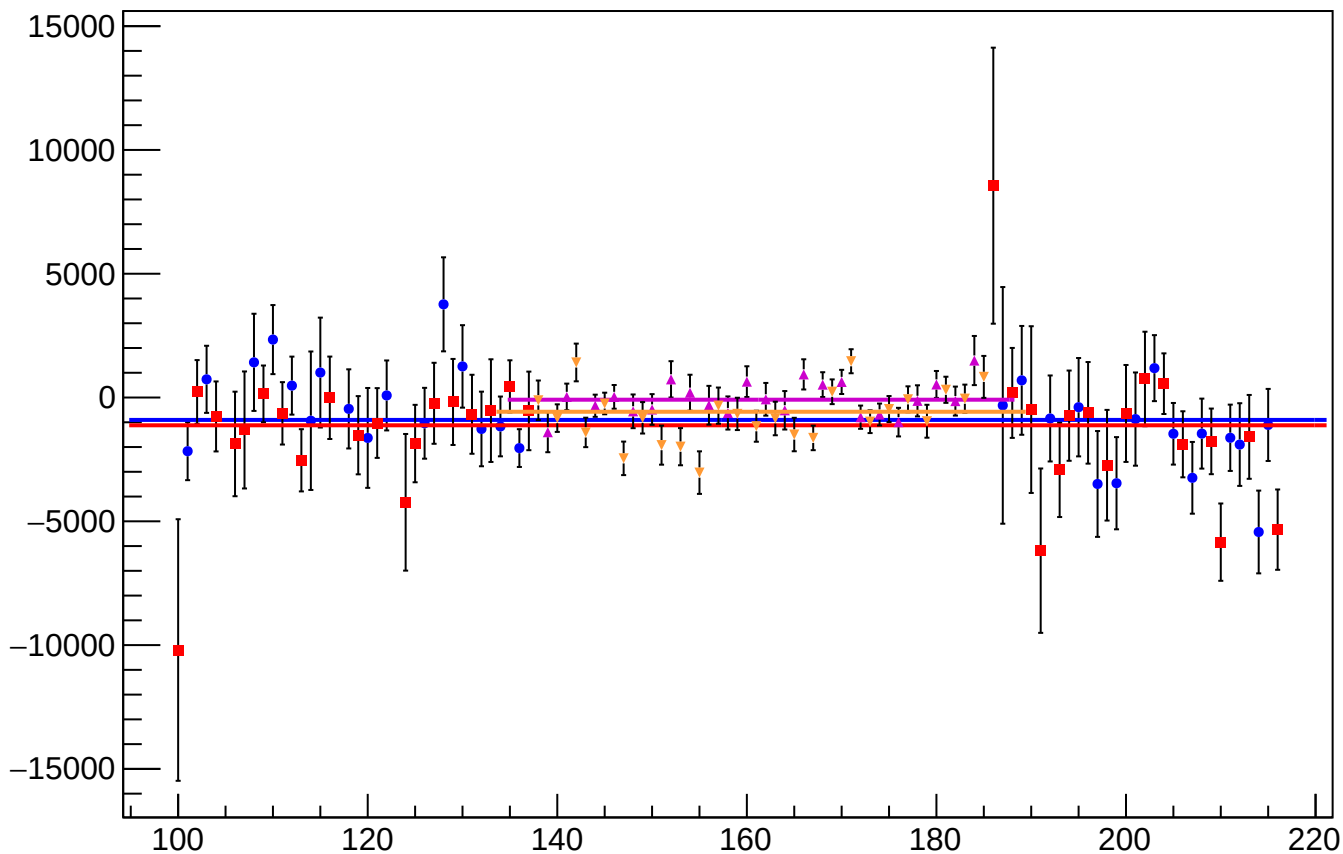
Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

+ sign 69.278 $\pm$ 0.008  $\chi^2$ /NDF: 7077308.9/55

All: 69.784 $\pm$ 0.006  $\chi^2$ /NDF: 15320267.2/113

- sign 70.323 $\pm$ 0.009  $\chi^2$ /NDF: 8235357.0/57

asym\_sam\_12345678\_avg\_cor\_correction\_mean vs Slug



Right In: -904.600 $\pm$ 269.469  $\chi^2$ /NDF: 39.7/30

Left Out: -574.811 $\pm$ 119.736  $\chi^2$ /NDF:68.8/24

Right Out: -1121.912 $\pm$ 277.304  $\chi^2$ /NDF: 38.9/34

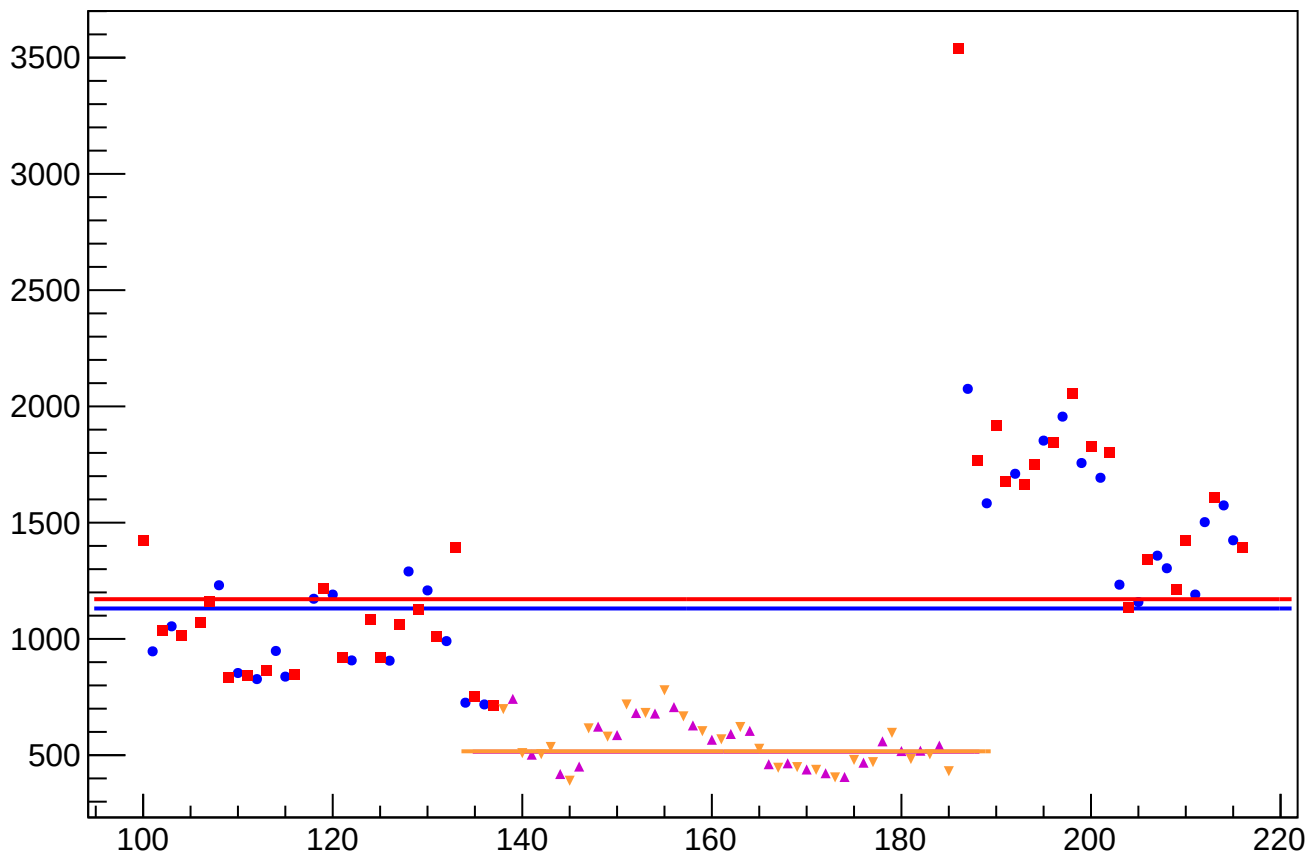
Left In: -88.333 $\pm$ 122.492  $\chi^2$ /NDF:24.6/22

+ sign -629.188 $\pm$ 109.420  $\chi^2$ /NDF: 109.8/55

All: -447.548 $\pm$ 78.284  $\chi^2$ /NDF: 190.5/113

- sign -257.081 $\pm$ 112.048  $\chi^2$ /NDF: 75.1/57

asym\_sam\_12345678\_avg\_cor\_correction\_rms vs Slug



Right In: 1130.871 $\pm$ 0.191  $\chi^2$ /NDF: 3035242.0/30

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF:1265163.0/24

Right Out: 1170.851 $\pm$ 0.196  $\chi^2$ /NDF: 3507797.4/34

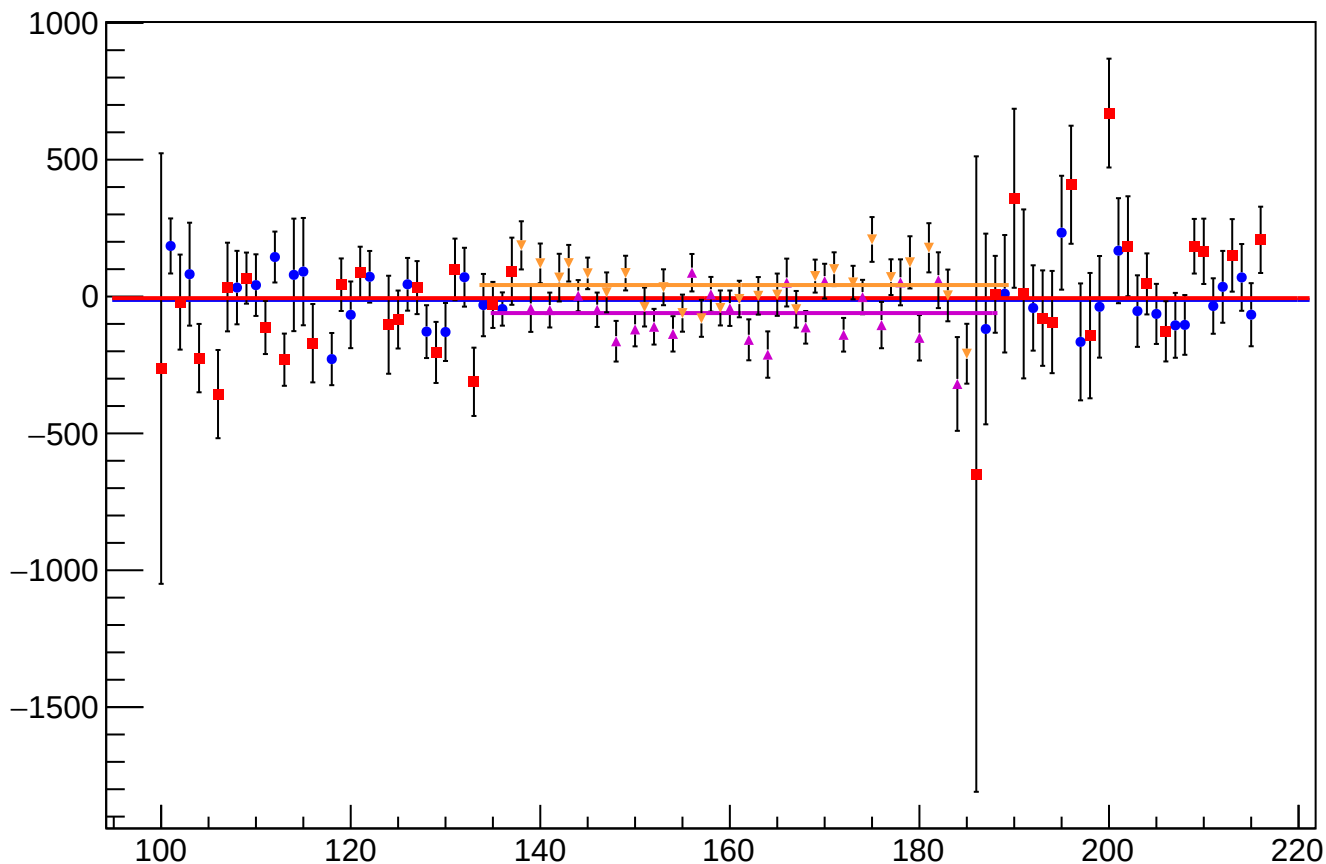
Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF:1120434.8/22

+ sign 617.913 $\pm$ 0.077  $\chi^2$ /NDF: 12978593.8/55

All: 619.857 $\pm$ 0.055  $\chi^2$ /NDF: 26975239.7/11

- sign 621.895 $\pm$ 0.079  $\chi^2$ /NDF: 13995353.1/57

eigen\_cor\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-12.364 \pm 21.214$   $\chi^2/\text{NDF}$ : 23.3/30

Left Out:  $42.017 \pm 14.181$   $\chi^2/\text{NDF}$ : 32.0/24

Right Out:  $-5.873 \pm 21.698$   $\chi^2/\text{NDF}$ : 60.0/34

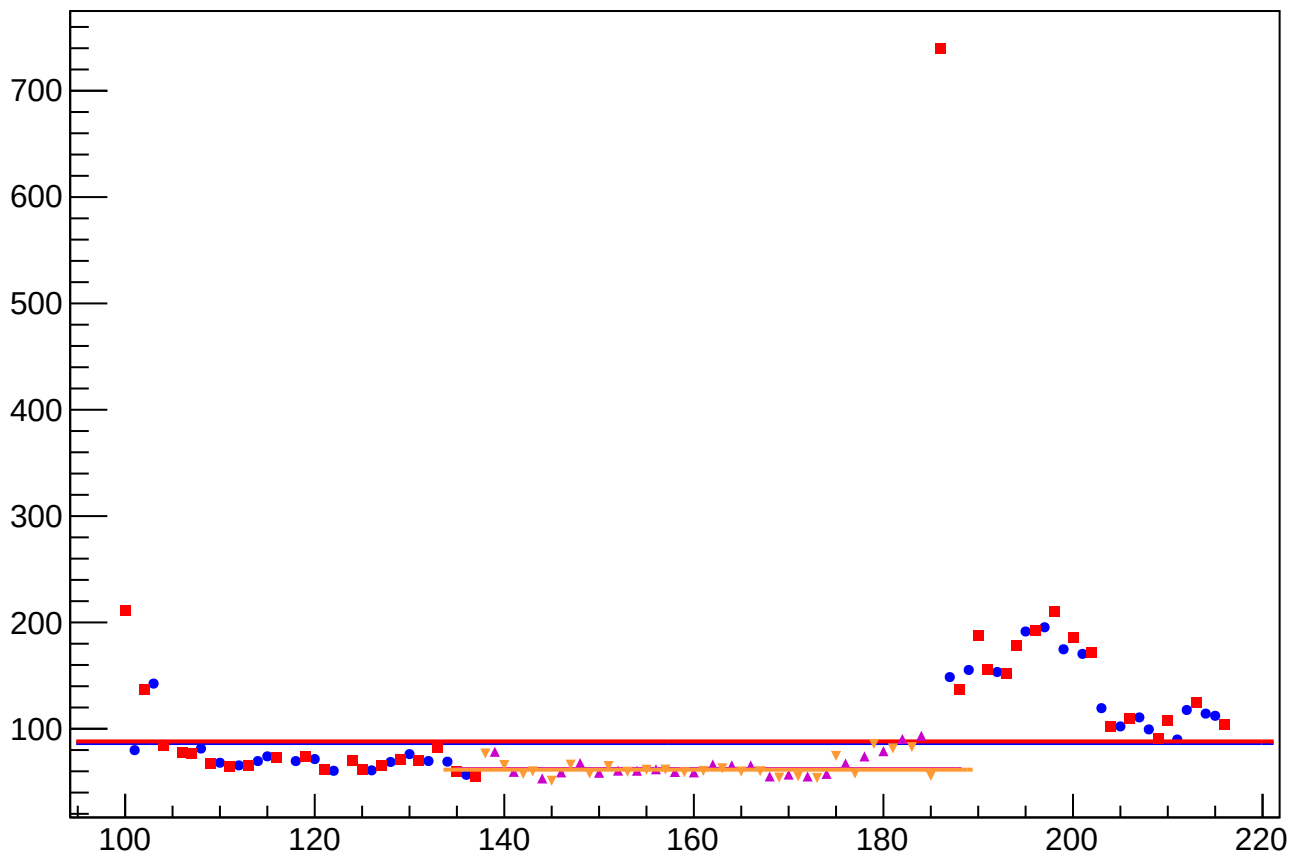
Left In:  $-60.376 \pm 14.714$   $\chi^2/\text{NDF}$ : 32.2/22

+ sign  $25.221 \pm 11.789$   $\chi^2/\text{NDF}$ : 59.8/55

All:  $-7.885 \pm 8.470$   $\chi^2/\text{NDF}$ : 172.6/113

- sign  $-43.208 \pm 12.178$   $\chi^2/\text{NDF}$ : 96.5/57

eigen\_cor\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 86.585 $\pm$ 0.015  $\chi^2$ /NDF: 4513421.7/30

Left Out: 61.544 $\pm$ 0.010  $\chi^2$ /NDF: 637834.9/24

Right Out: 88.109 $\pm$ 0.015  $\chi^2$ /NDF: 5676856.5/34

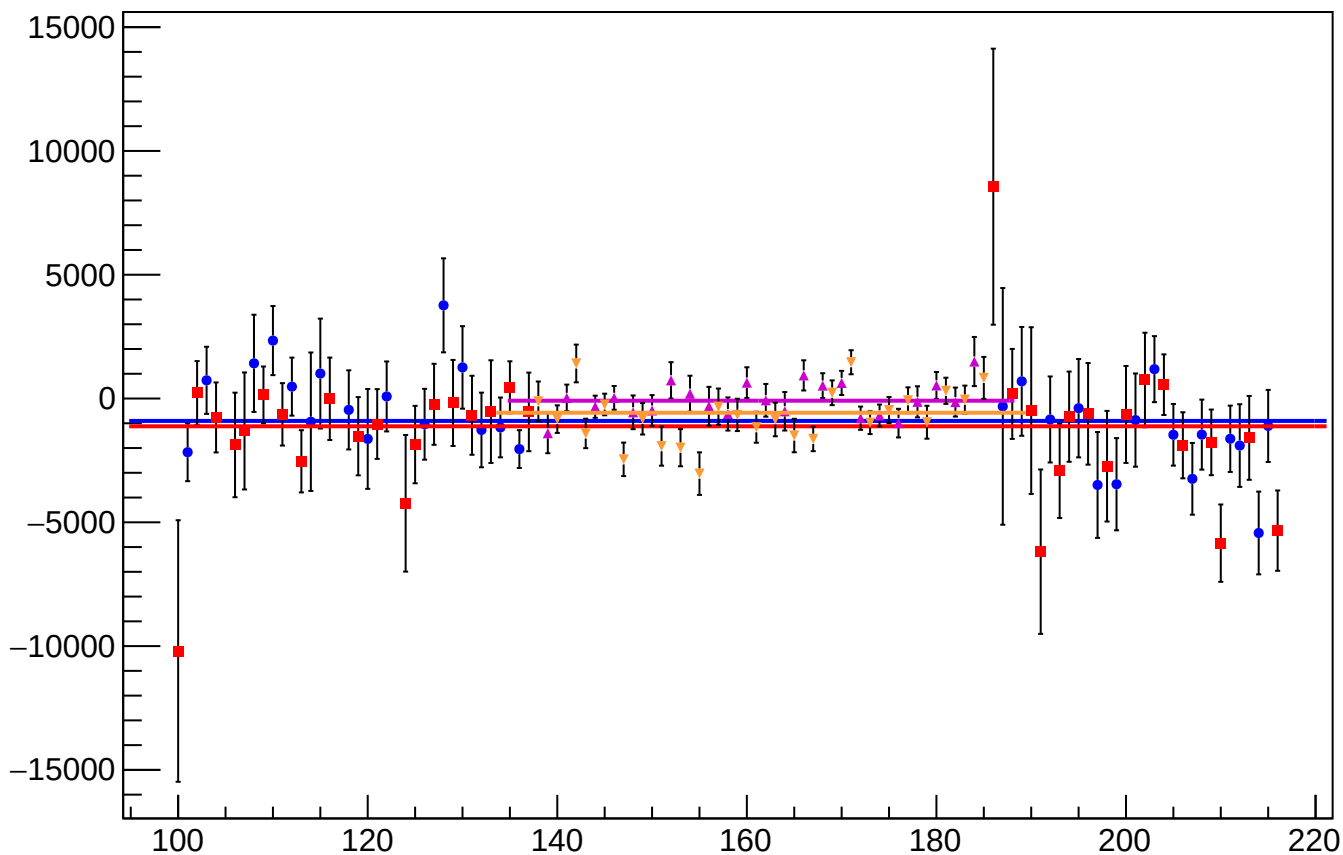
Left In: 62.144 $\pm$ 0.010  $\chi^2$ /NDF: 596754.9/22

+ sign 69.278 $\pm$ 0.008  $\chi^2$ /NDF: 7077308.9/55

All: 69.784 $\pm$ 0.006  $\chi^2$ /NDF: 15320267.2/113

- sign 70.323 $\pm$ 0.009  $\chi^2$ /NDF: 8235357.0/57

asym\_sam\_12345678\_avg\_eigen\_cor\_correction\_mean vs Slug



Right In:  $-904.600 \pm 269.469$   $\chi^2/\text{NDF}: 39.7/30$

Left Out:  $-574.811 \pm 119.736$   $\chi^2/\text{NDF}: 68.8/24$

Right Out:  $-1121.912 \pm 277.304$   $\chi^2/\text{NDF}: 38.9/34$

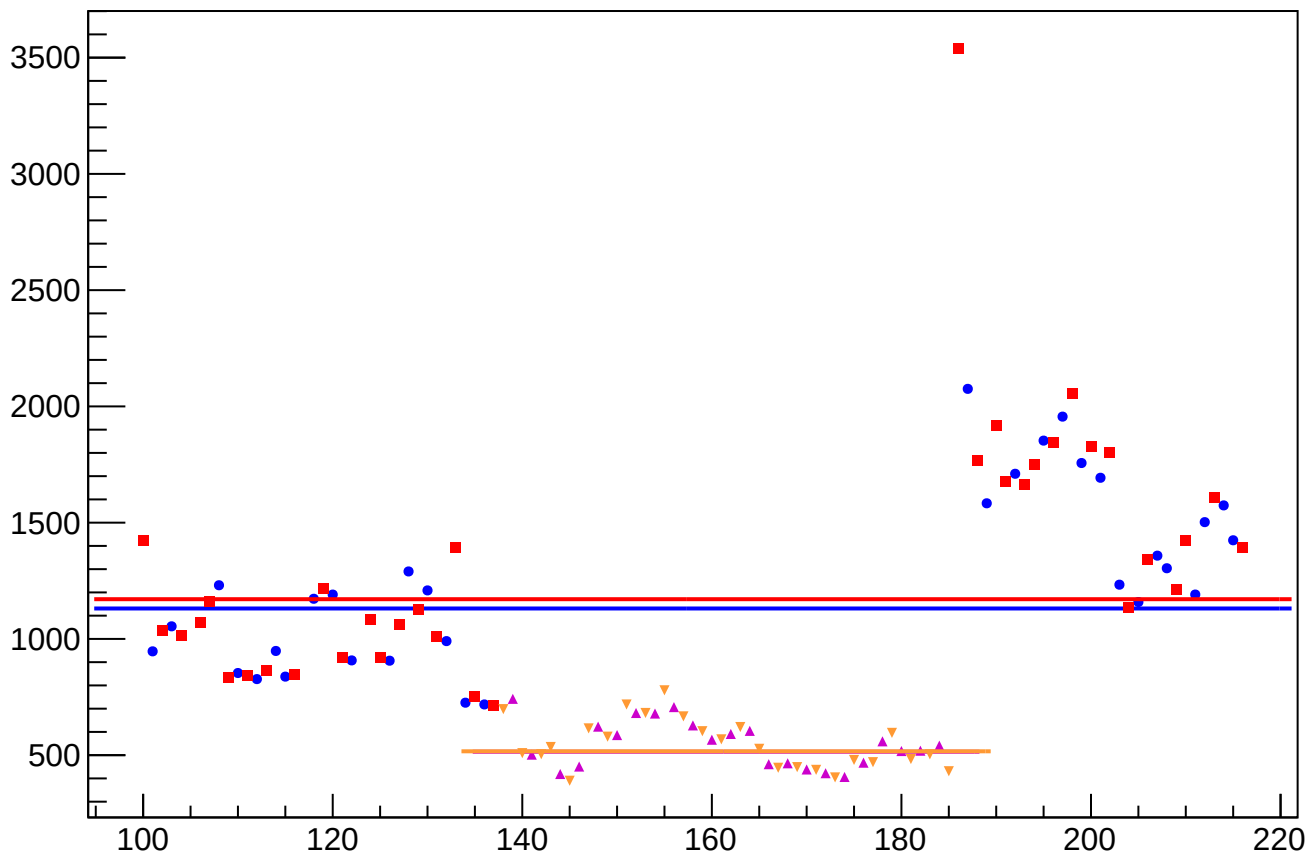
Left In:  $-88.333 \pm 122.492$   $\chi^2/\text{NDF}: 24.6/22$

+ sign  $-629.188 \pm 109.420$   $\chi^2/\text{NDF}: 109.8/55$

All:  $-447.548 \pm 78.284$   $\chi^2/\text{NDF}: 190.5/113$

- sign  $-257.081 \pm 112.048$   $\chi^2/\text{NDF}: 75.1/57$

asym\_sam\_12345678\_avg\_eigen\_cor\_correction\_rms vs Slug



Right In: 1130.871 $\pm$ 0.191  $\chi^2$ /NDF: 3035242.0/30

Left Out: 516.635 $\pm$ 0.085  $\chi^2$ /NDF:1265163.0/24

Right Out: 1170.851 $\pm$ 0.196  $\chi^2$ /NDF: 3507797.4/34

Left In: 514.781 $\pm$ 0.087  $\chi^2$ /NDF:1120434.8/22

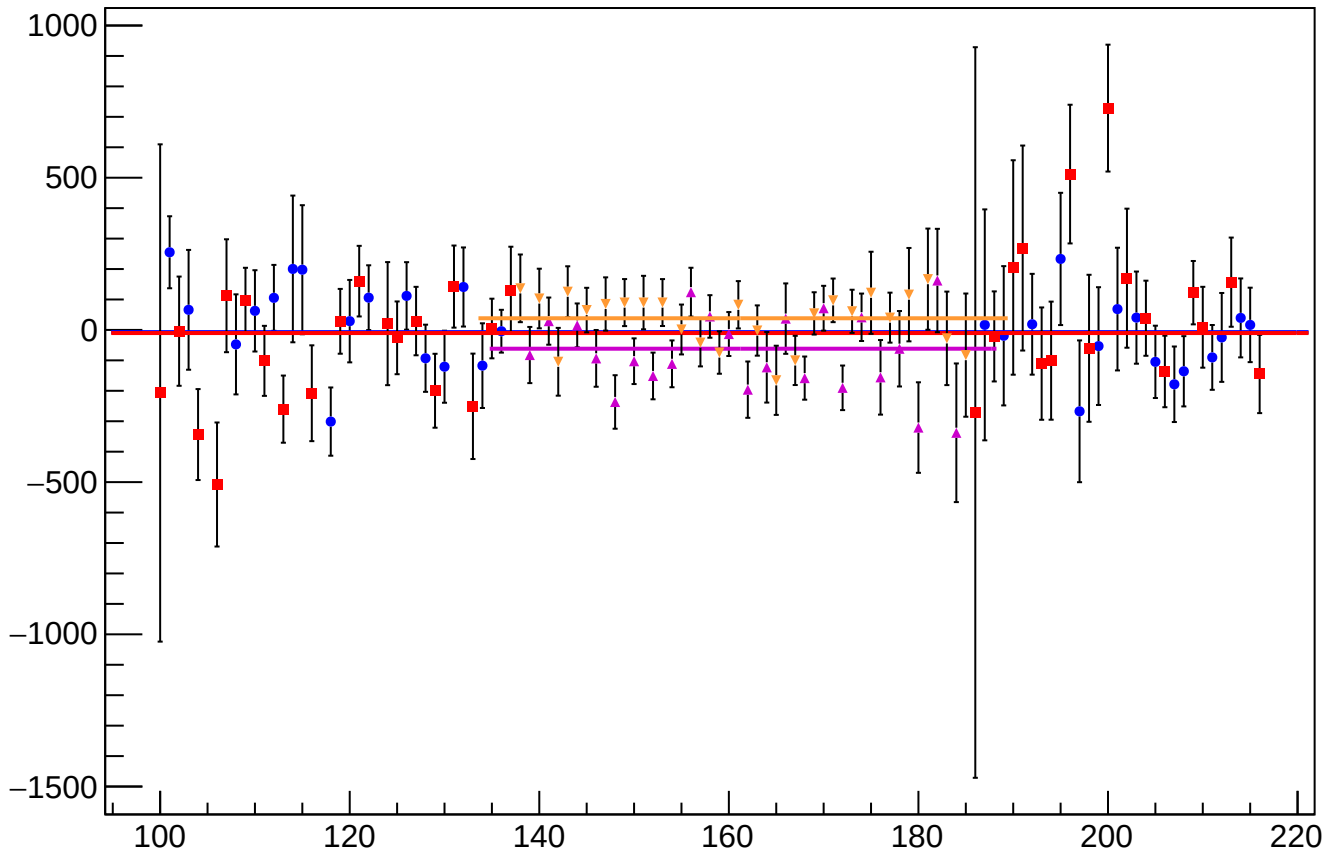
+ sign 617.913 $\pm$ 0.077  $\chi^2$ /NDF: 12978593.8/55

All: 619.857 $\pm$ 0.055  $\chi^2$ /NDF: 26975239.7/11

- sign 621.895 $\pm$ 0.079  $\chi^2$ /NDF: 13995353.1/57



dit\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-7.235 \pm 23.867$   $\chi^2/\text{NDF}: 28.3/30$

Left Out:  $38.281 \pm 17.669$   $\chi^2/\text{NDF}: 18.8/24$

Right Out:  $-10.277 \pm 24.599$   $\chi^2/\text{NDF}: 54.3/34$

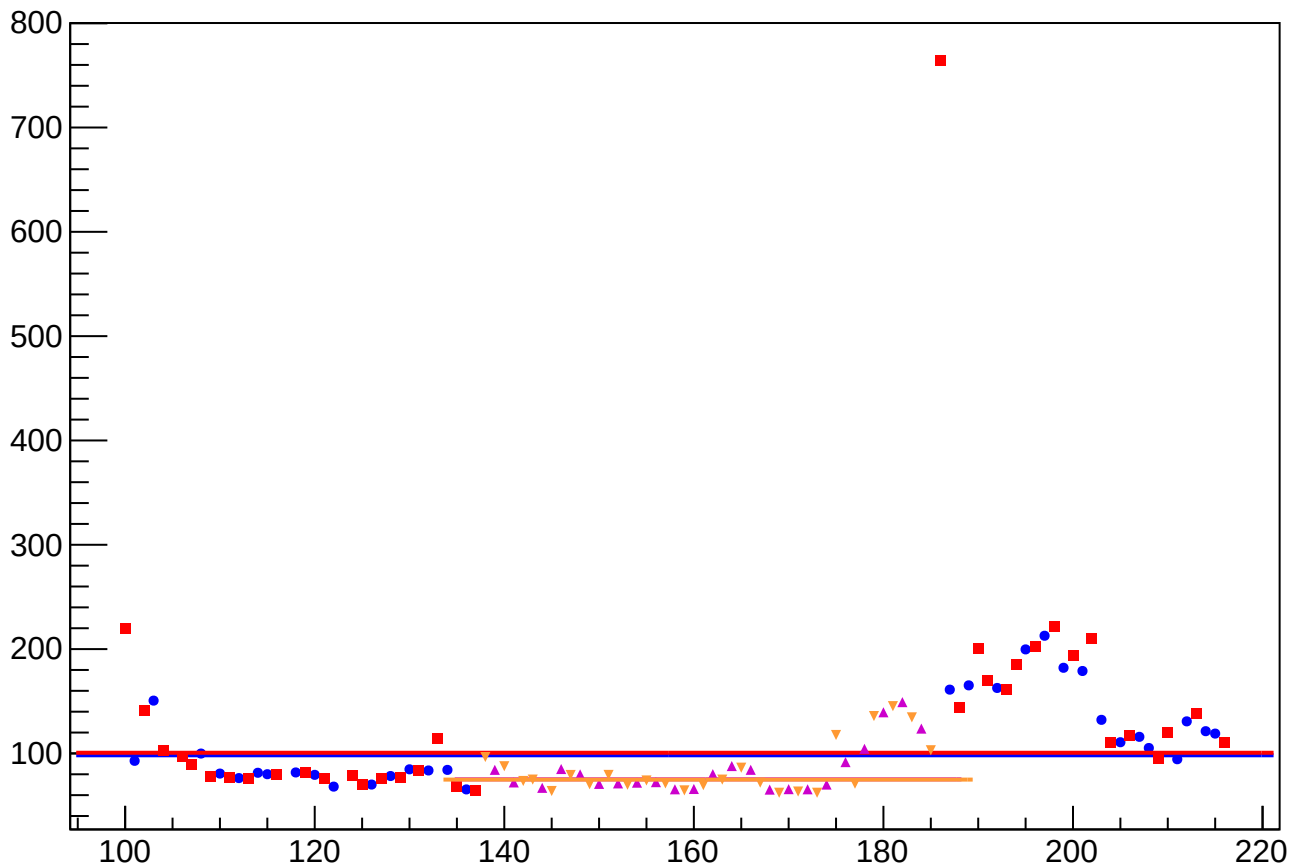
Left In:  $-61.723 \pm 18.192$   $\chi^2/\text{NDF}: 36.7/22$

+ sign  $22.167 \pm 14.201$   $\chi^2/\text{NDF}: 49.4/55$

All:  $-9.715 \pm 10.189$   $\chi^2/\text{NDF}: 153.7/113$

- sign  $-43.534 \pm 14.626$   $\chi^2/\text{NDF}: 93.9/57$

dit\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 98.206+/-0.017     $\chi^2/\text{NDF}$ : 3767661.7/30

Left Out: 74.903+/-0.012     $\chi^2/\text{NDF}$ :1661552.1/24

Right Out: 100.633+/-0.017     $\chi^2/\text{NDF}$ : 4963880.9/34

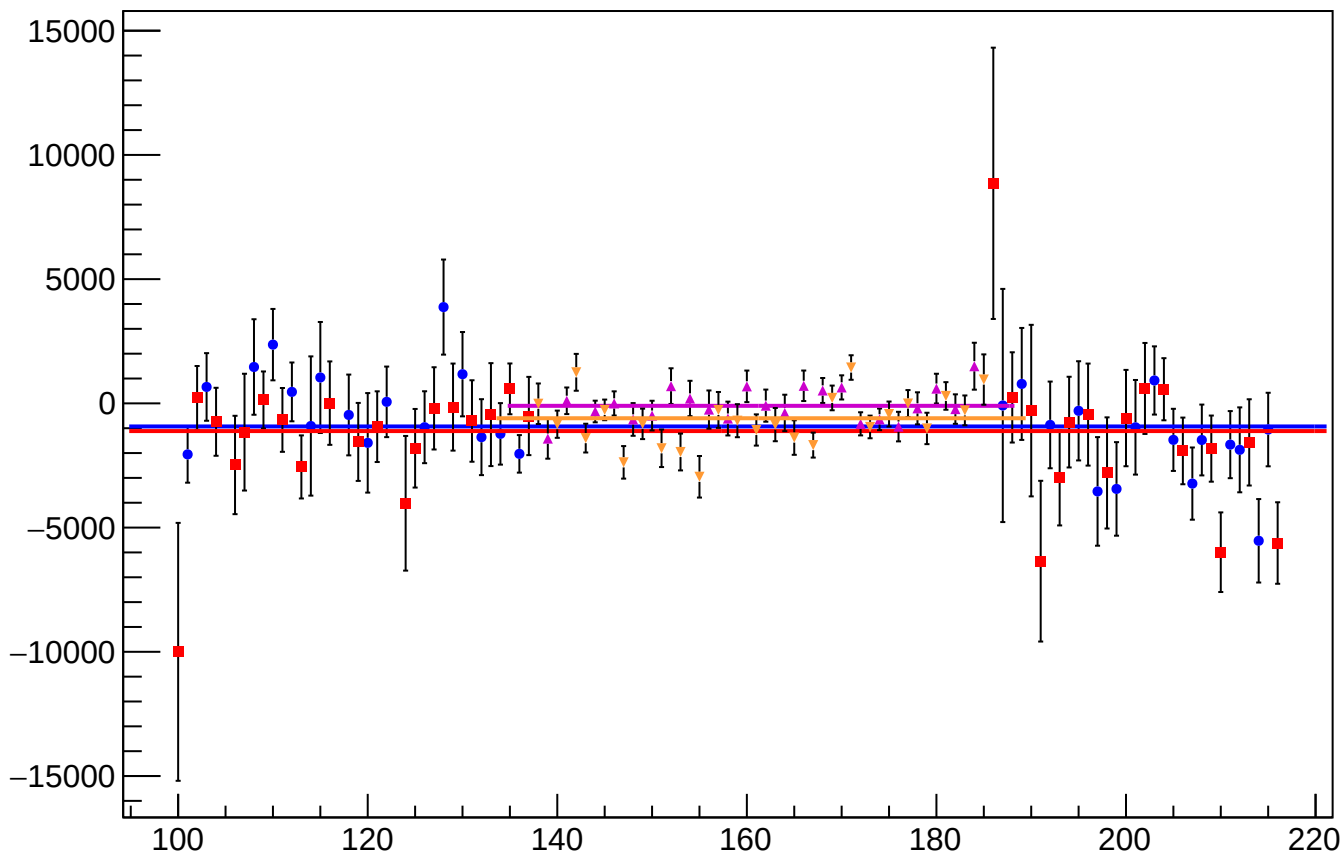
Left In: 75.156+/-0.013     $\chi^2/\text{NDF}$ :1312543.0/22

+ sign 83.153+/-0.010     $\chi^2/\text{NDF}$ : 6660831.7/55

All: 83.643+/-0.007     $\chi^2/\text{NDF}$ : 14329108.2/113

- sign 84.163+/-0.010     $\chi^2/\text{NDF}$ : 7663366.5/57

asym\_sam\_12345678\_avg\_dit\_correction\_mean vs Slug



Right In: -929.231+/-271.306  $\chi^2/\text{NDF}$ : 38.8/30

Left Out: -598.826+/-119.324  $\chi^2/\text{NDF}$ : 65.0/24

Right Out: -1115.368+/-277.475  $\chi^2/\text{NDF}$ : 41.3/34

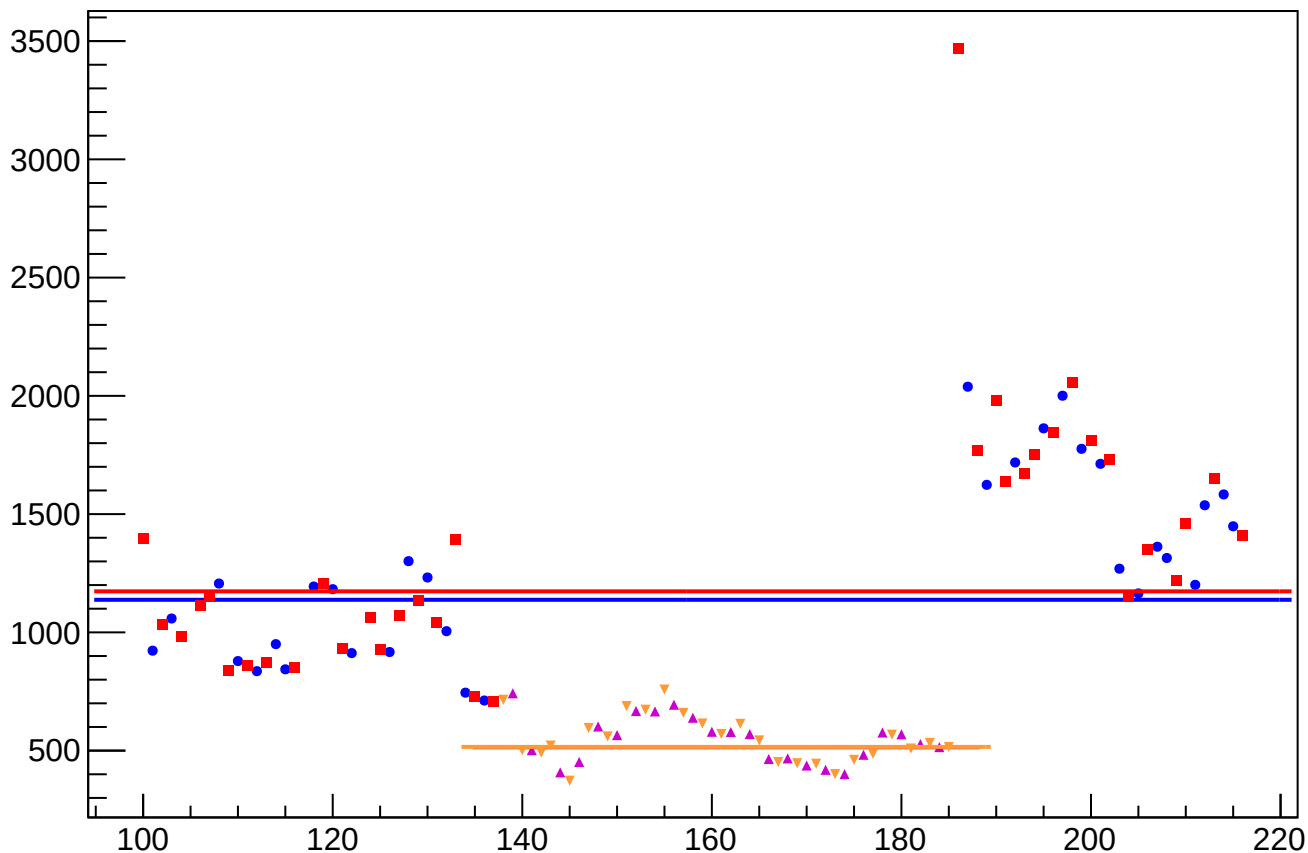
Left In: -99.102+/-122.310  $\chi^2/\text{NDF}$ : 23.7/22

+ sign -652.379+/-109.226  $\chi^2/\text{NDF}$ : 105.1/55

All: -463.133+/-78.170  $\chi^2/\text{NDF}$ : 187.4/113

- sign -264.440+/-111.920  $\chi^2/\text{NDF}$ : 76.2/57

asym\_sam\_12345678\_avg\_dit\_correction\_rms vs Slug



Right In: 1137.752 $\pm$ 0.192  $\chi^2$ /NDF: 3107692.0/30

Left Out: 515.762 $\pm$ 0.084  $\chi^2$ /NDF: 1232478.6/24

Right Out: 1173.426 $\pm$ 0.196  $\chi^2$ /NDF: 3528561.5/34

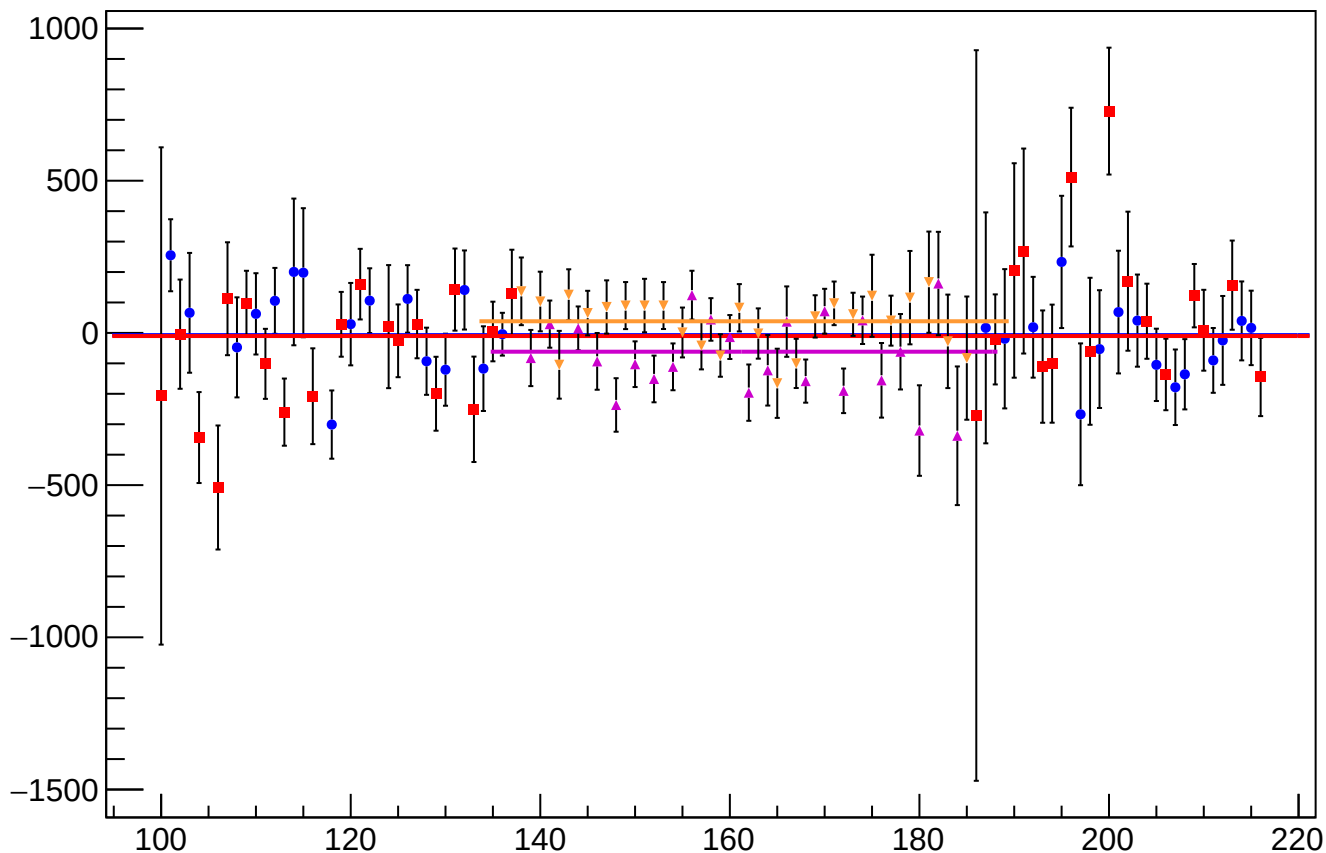
Left In: 514.088 $\pm$ 0.086  $\chi^2$ /NDF: 1116884.3/22

+ sign 616.575 $\pm$ 0.077  $\chi^2$ /NDF: 13148197.8/55

All: 618.908 $\pm$ 0.055  $\chi^2$ /NDF: 27250993.5/11

- sign 621.356 $\pm$ 0.079  $\chi^2$ /NDF: 14100926.4/57

eigen\_dit\_asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $-7.234 \pm 23.867$   $\chi^2/\text{NDF}$ : 28.3/30

Left Out:  $38.282 \pm 17.670$   $\chi^2/\text{NDF}$ : 18.8/24

Right Out:  $-10.274 \pm 24.599$   $\chi^2/\text{NDF}$ : 54.3/34

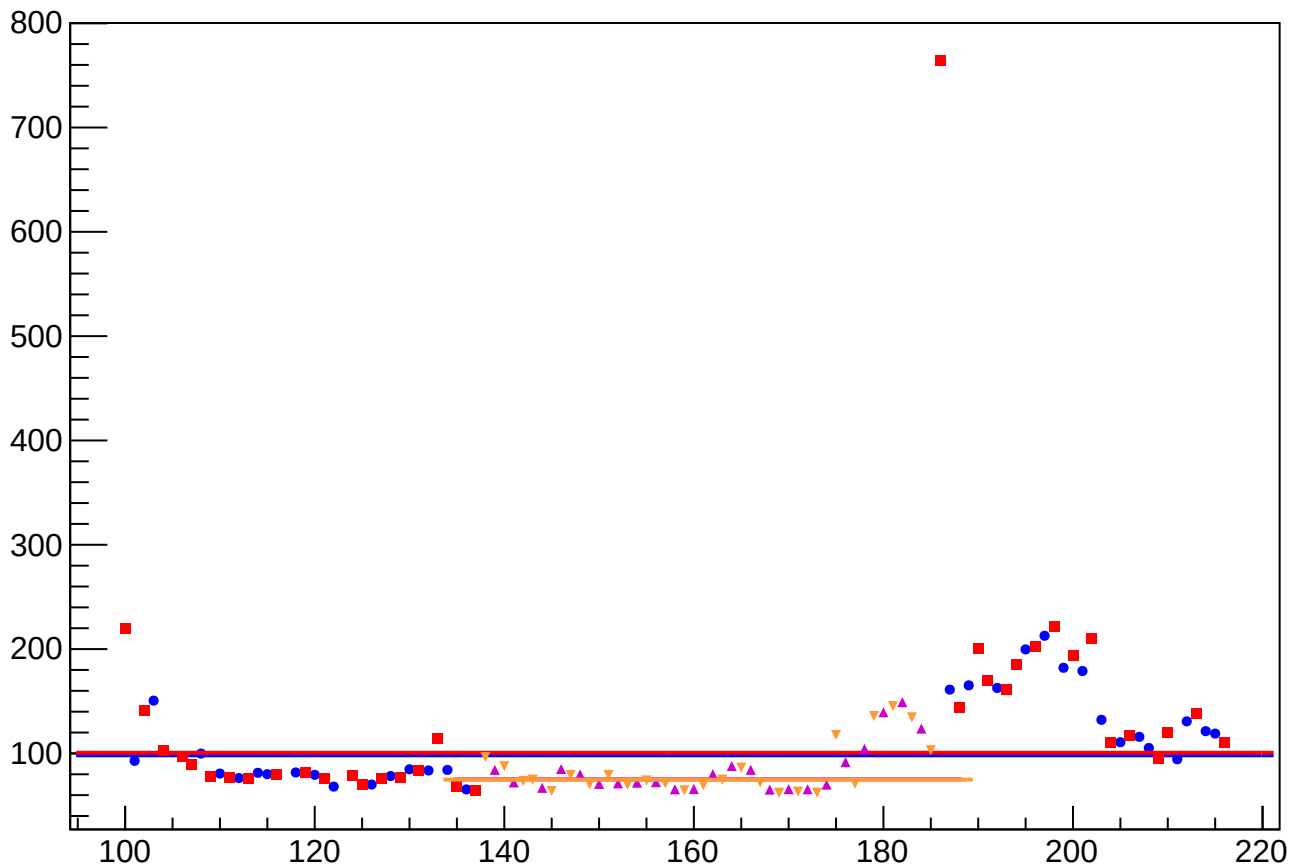
Left In:  $-61.723 \pm 18.192$   $\chi^2/\text{NDF}$ : 36.7/22

+ sign  $22.167 \pm 14.201$   $\chi^2/\text{NDF}$ : 49.4/55

All:  $-9.714 \pm 10.189$   $\chi^2/\text{NDF}$ : 153.7/113

- sign  $-43.533 \pm 14.626$   $\chi^2/\text{NDF}$ : 93.9/57

eigen\_dit\_asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 98.206+/-0.017  $\chi^2/\text{NDF}$ : 3767674.6/30

Left Out: 74.903+/-0.012  $\chi^2/\text{NDF}$ :1661550.3/24

Right Out: 100.633+/-0.017  $\chi^2/\text{NDF}$ : 4963909.3/34

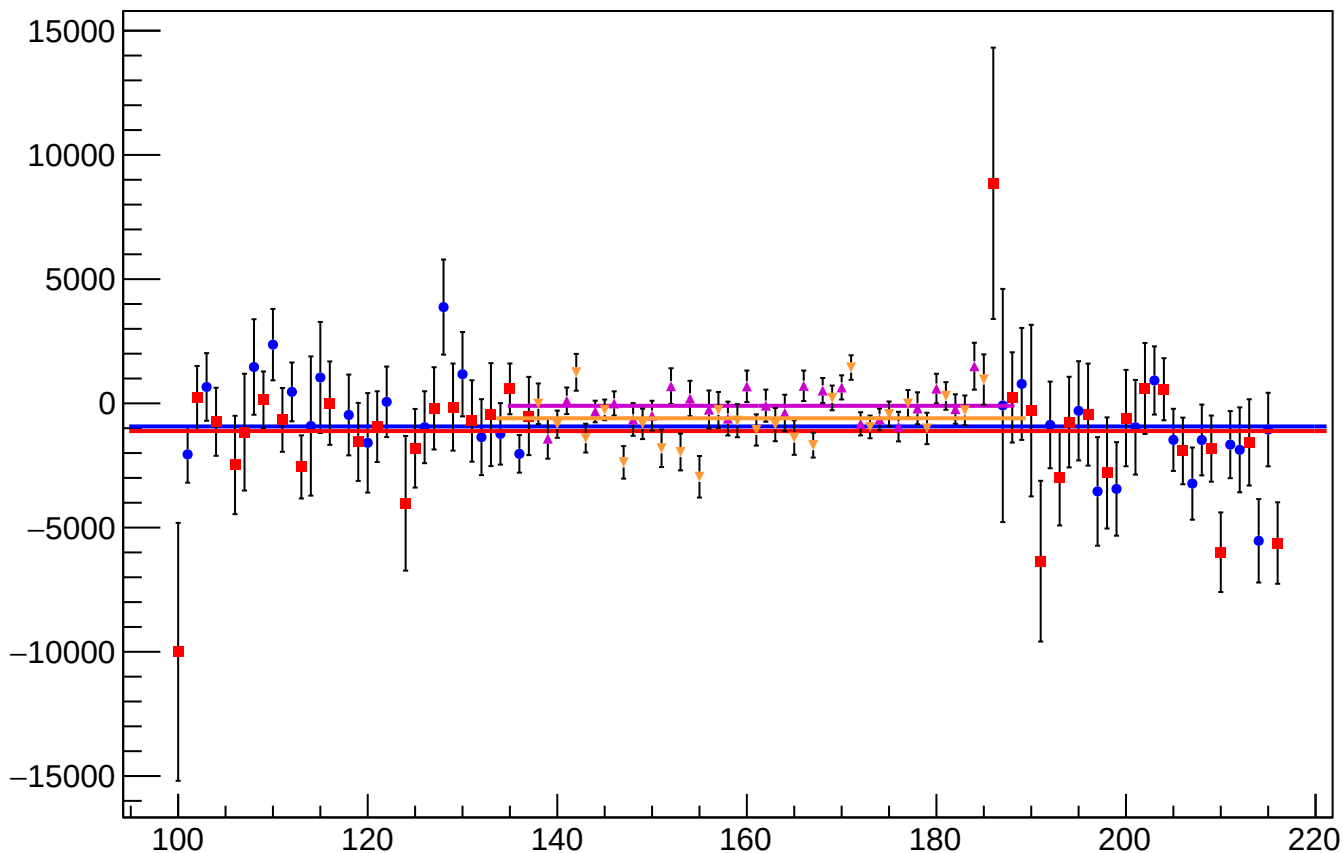
Left In: 75.156+/-0.013  $\chi^2/\text{NDF}$ :1312527.7/22

+ sign 83.153+/-0.010  $\chi^2/\text{NDF}$ : 6660797.0/55

All: 83.643+/-0.007  $\chi^2/\text{NDF}$ : 14329038.8/113

- sign 84.163+/-0.010  $\chi^2/\text{NDF}$ : 7663331.5/57

asym\_sam\_12345678\_avg\_eigen\_dit\_correction\_mean vs Slug



Right In:  $-929.227 \pm 271.306$   $\chi^2/\text{NDF}$ : 38.8/30

Left Out:  $-598.825 \pm 119.324$   $\chi^2/\text{NDF}$ : 65.0/24

Right Out:  $-1115.366 \pm 277.475$   $\chi^2/\text{NDF}$ : 41.3/34

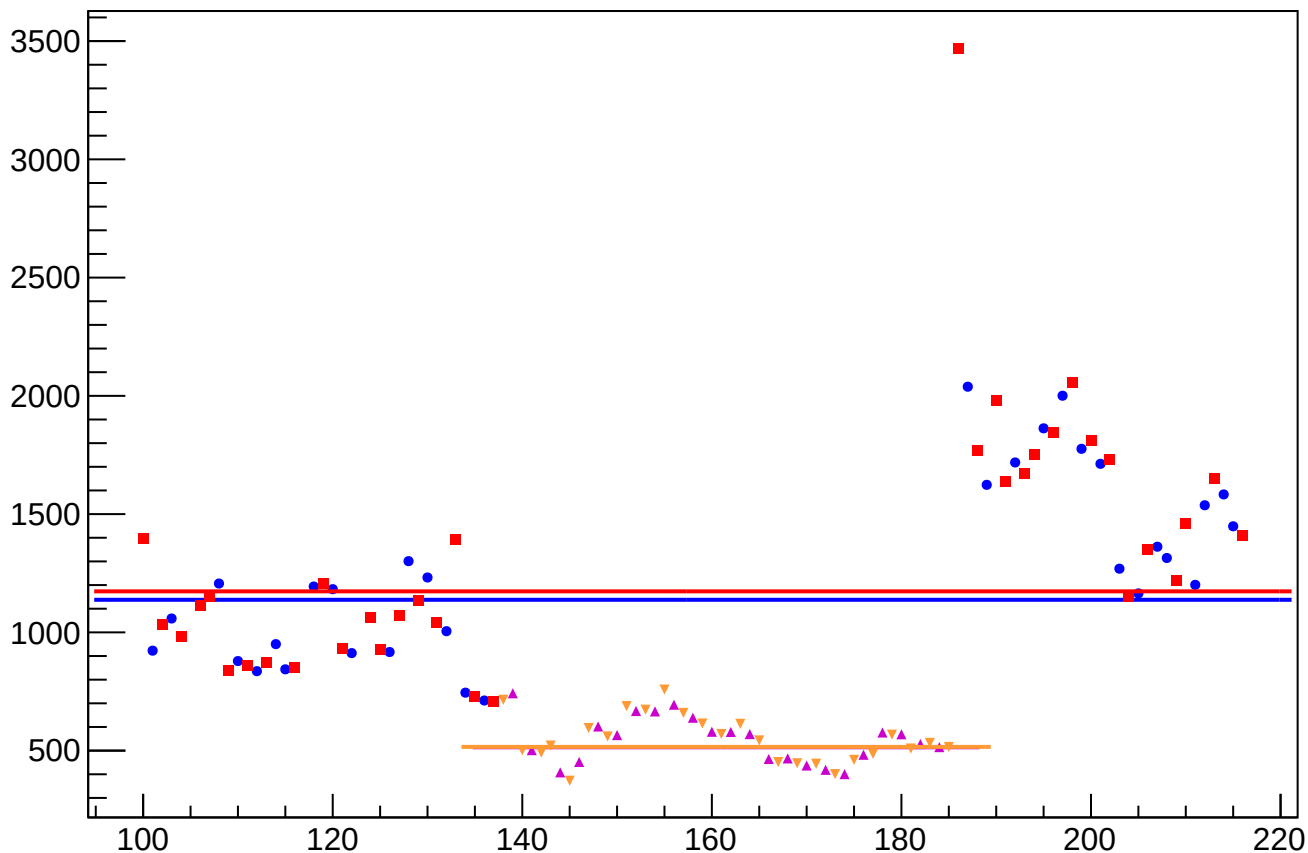
Left In:  $-99.101 \pm 122.310$   $\chi^2/\text{NDF}$ : 23.7/22

+ sign  $-652.378 \pm 109.226$   $\chi^2/\text{NDF}$ : 105.1/55

All:  $-463.132 \pm 78.169$   $\chi^2/\text{NDF}$ : 187.4/113

- sign  $-264.439 \pm 111.919$   $\chi^2/\text{NDF}$ : 76.2/57

asym\_sam\_12345678\_avg\_eigen\_dit\_correction\_rms vs Slug



Right In: 1137.750 $\pm$ 0.192  $\chi^2/\text{NDF}$ : 3107702.3/30

Left Out: 515.761 $\pm$ 0.084  $\chi^2/\text{NDF}$ : 1232481.1/24

Right Out: 1173.424 $\pm$ 0.196  $\chi^2/\text{NDF}$ : 3528574.3/34

Left In: 514.087 $\pm$ 0.086  $\chi^2/\text{NDF}$ : 1116882.7/22

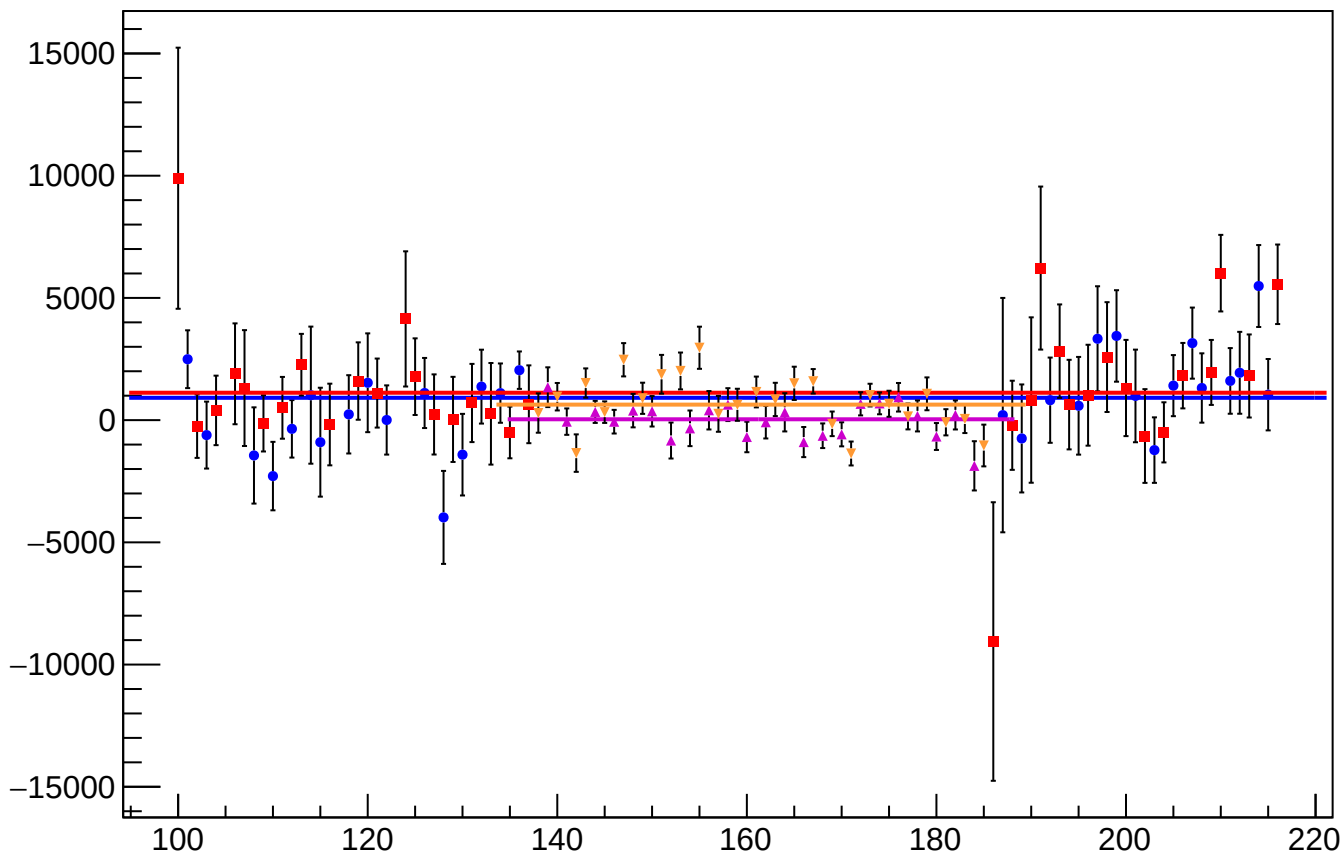
+ sign 616.574 $\pm$ 0.077  $\chi^2/\text{NDF}$ : 13148210.1/55

All: 618.906 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 27251011.6/11

- sign 621.355 $\pm$ 0.079  $\chi^2/\text{NDF}$ : 14100932.1/57



# asym\_sam\_12345678\_avg\_mean vs Slug



Right In:  $913.891 \pm 270.599$   $\chi^2/\text{NDF}: 40.0/30$

Left Out:  $634.783 \pm 120.717$   $\chi^2/\text{NDF}: 64.5/24$

Right Out:  $1121.033 \pm 278.241$   $\chi^2/\text{NDF}: 39.9/34$

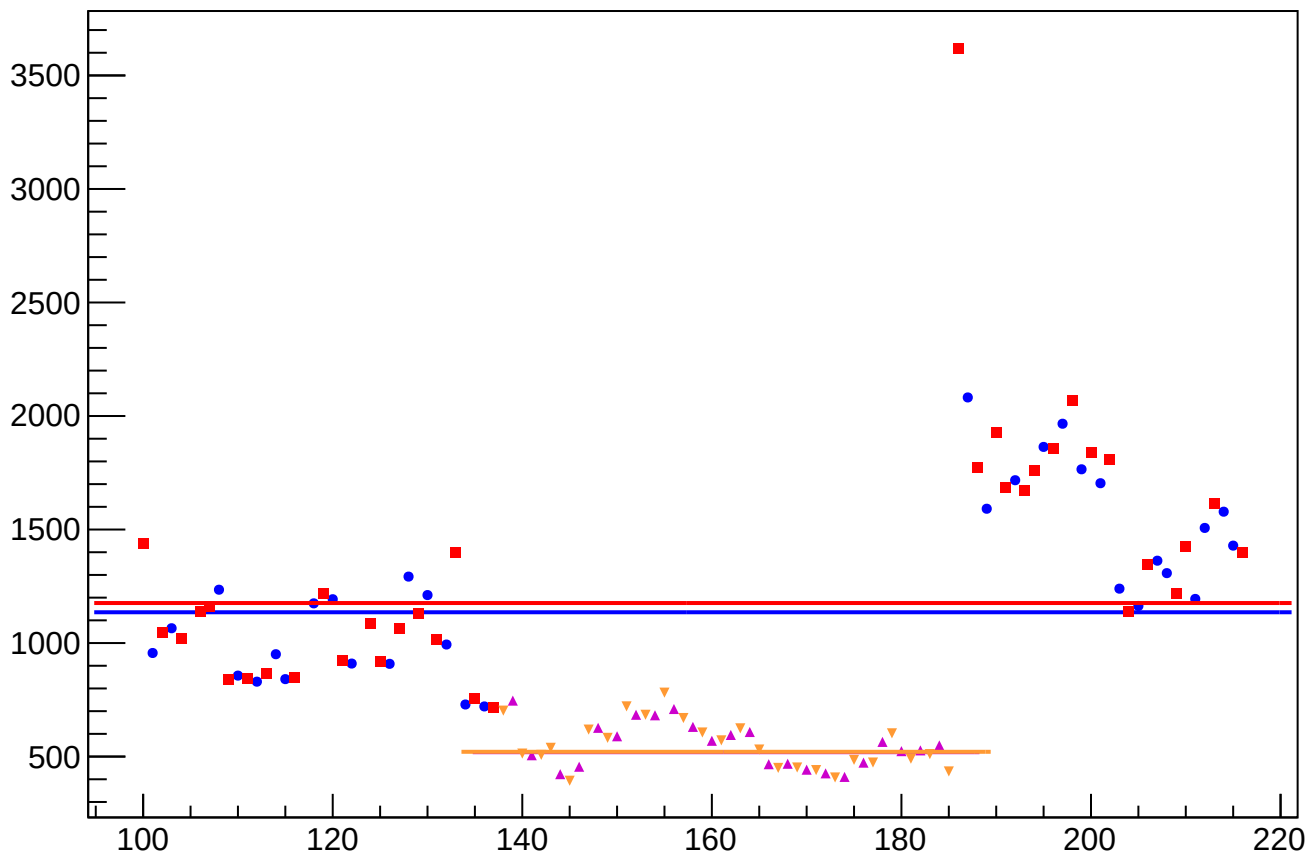
Left In:  $34.808 \pm 123.517$   $\chi^2/\text{NDF}: 25.1/22$

+ sign  $681.110 \pm 110.244$   $\chi^2/\text{NDF}: 105.4/55$

All:  $452.918 \pm 78.874$   $\chi^2/\text{NDF}: 191.9/113$

- sign  $213.627 \pm 112.893$   $\chi^2/\text{NDF}: 77.7/57$

# asym\_sam\_12345678\_avg\_rms vs Slug



Right In: 1135.609 $\pm$ 0.191  $\chi^2$ /NDF: 3035578.6/30

Left Out: 521.025 $\pm$ 0.085  $\chi^2$ /NDF: 1243003.9/24

Right Out: 1176.274 $\pm$ 0.197  $\chi^2$ /NDF: 3517764.7/34

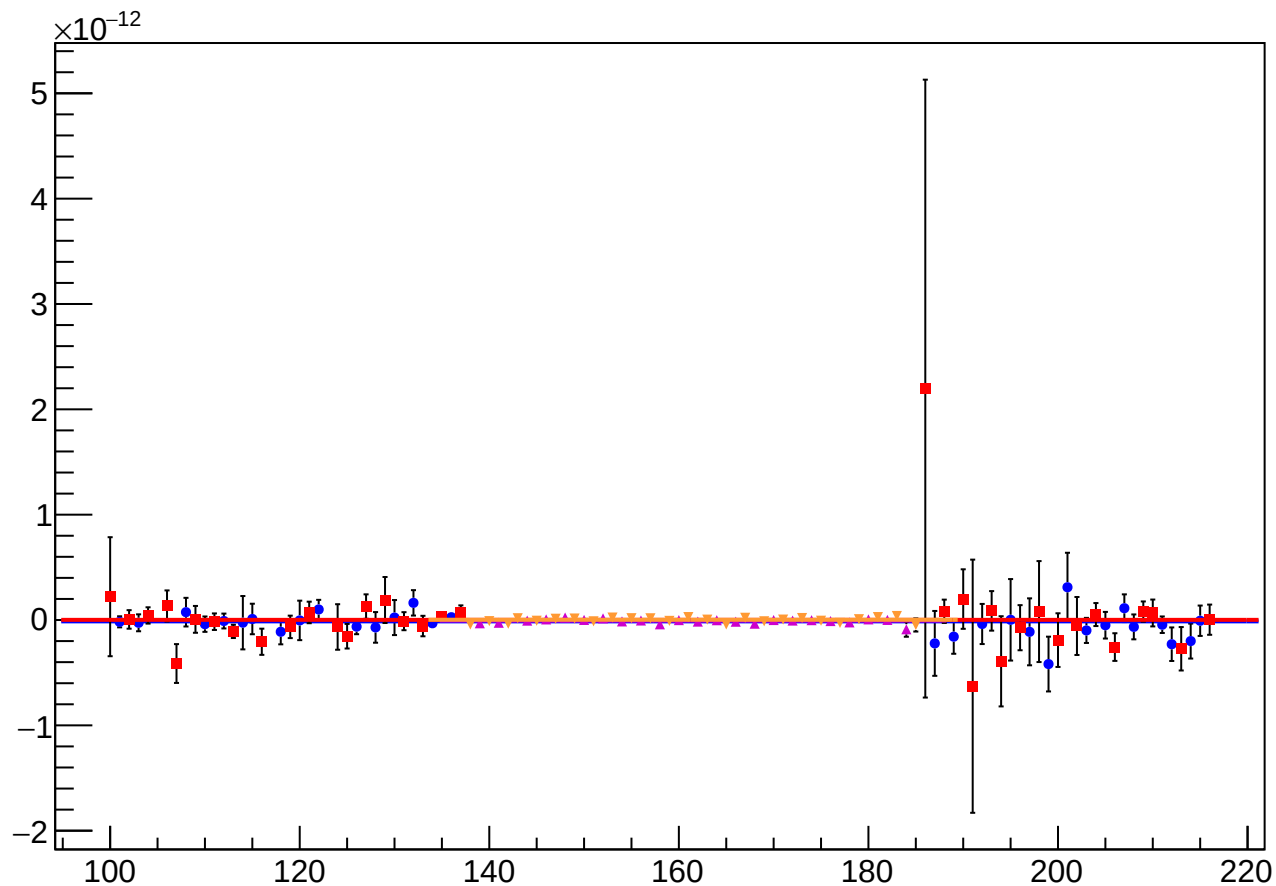
Left In: 519.239 $\pm$ 0.087  $\chi^2$ /NDF: 1100553.3/22

+ sign 623.035 $\pm$ 0.078  $\chi^2$ /NDF: 12882901.1/55

All: 625.167 $\pm$ 0.056  $\chi^2$ /NDF: 26819072.0/100

- sign 627.403 $\pm$ 0.080  $\chi^2$ /NDF: 13934637.9/57

asym\_sam\_12345678\_avg\_reg\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 17.3/30

Left Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 22.4/24

Right Out:  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 29.9/34

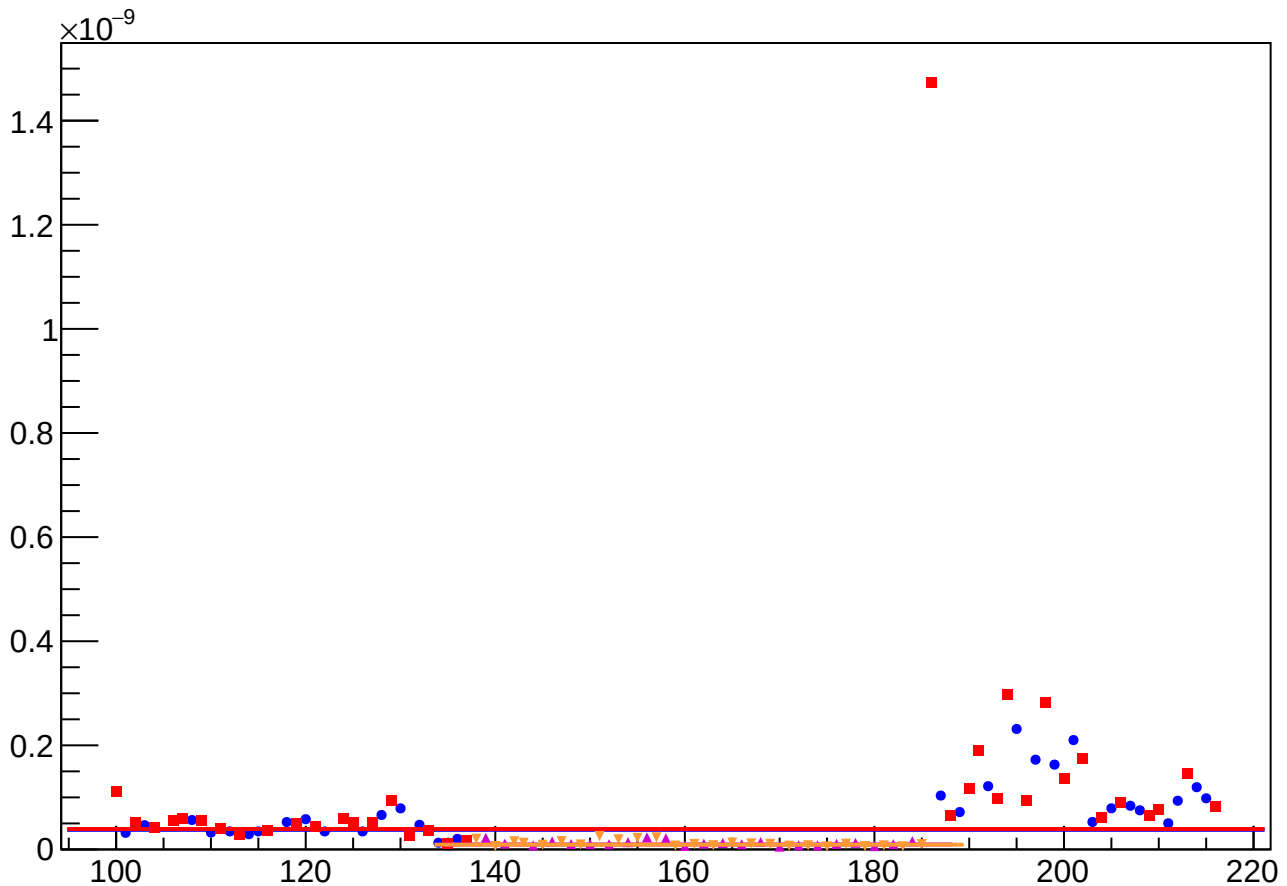
Left In:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 10.8/22

+ sign  $0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.5/55

All:  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 82.6/113

- sign  $-0.000 \pm 0.000$   $\chi^2/\text{NDF}$ : 40.8/57

asym\_sam\_12345678\_avg\_reg\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 5973466.6/30

Left Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 2137290.7/24

Right Out: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 6720017.1/34

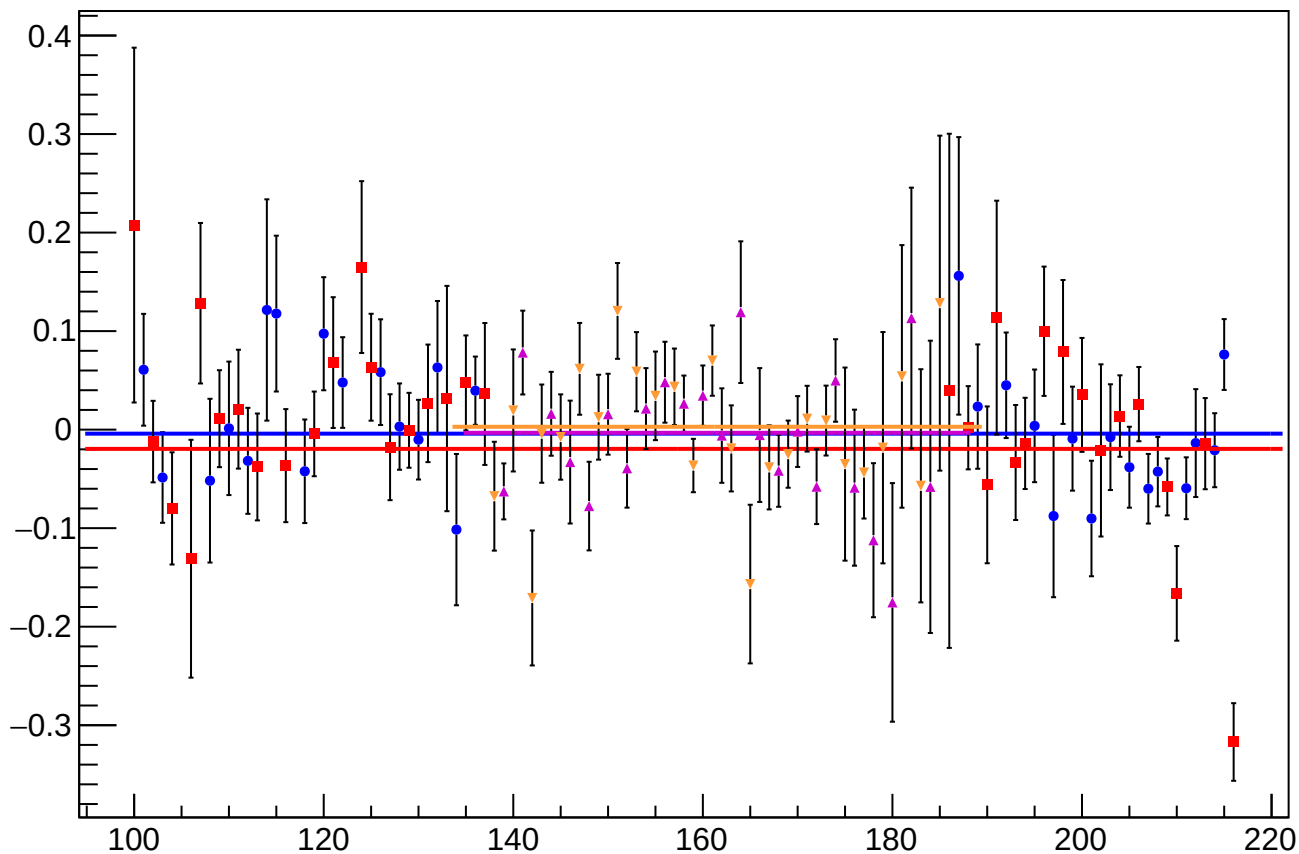
Left In: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 1614718.4/22

+ sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 14046740.1/55

All: 0.000+/-0.000  $\chi^2/\text{NDF}$ : 27828185.0/113

- sign 0.000+/-0.000  $\chi^2/\text{NDF}$ : 13773054.1/57

asym\_sam\_12345678\_avg\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 35.2/30

Left Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 98.3/34

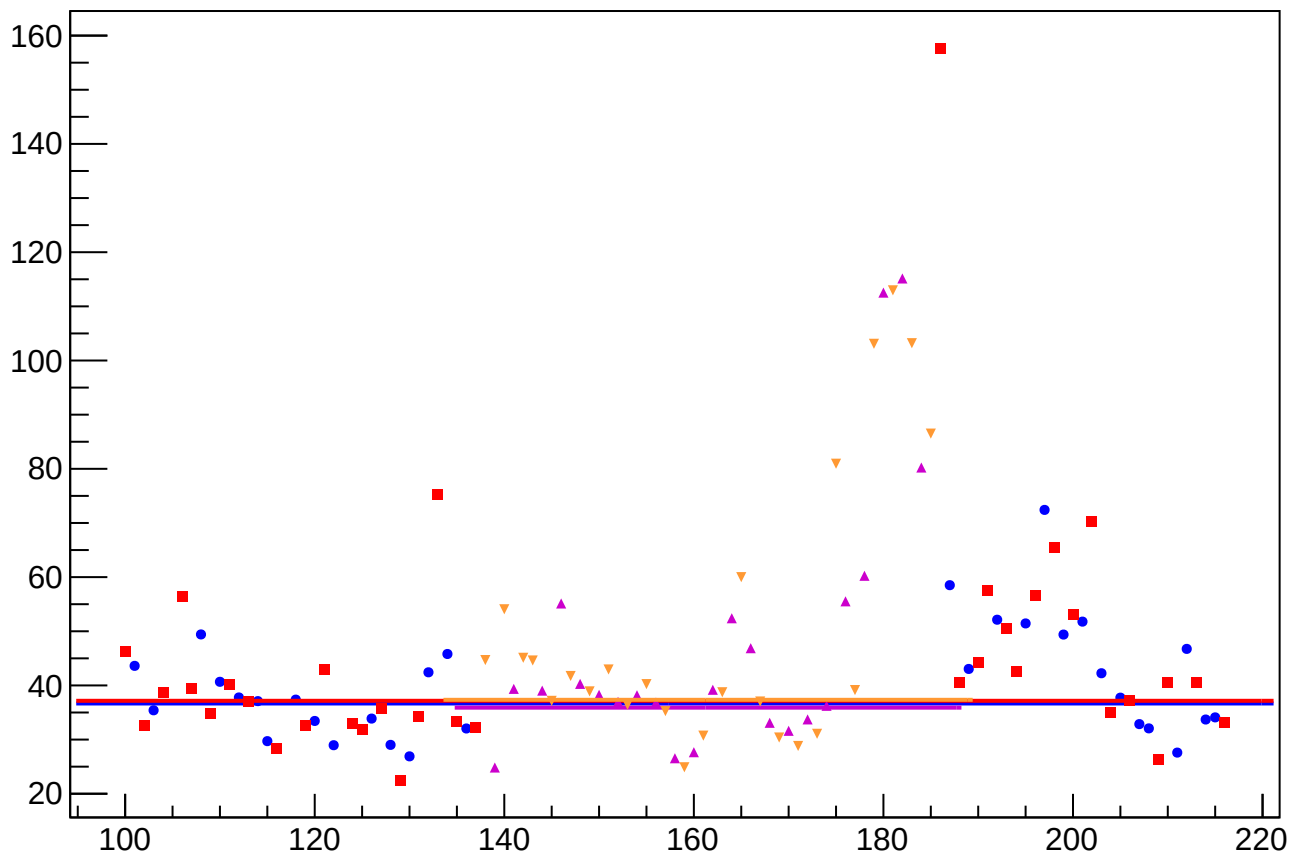
Left In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 199.6/113

- sign  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 129.8/57

asym\_sam\_12345678\_avg\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 36.667 $\pm$ 0.006  $\chi^2$ /NDF: 1758365.5/30

Left Out: 37.344 $\pm$ 0.007  $\chi^2$ /NDF: 3696647.0/24

Right Out: 37.162 $\pm$ 0.006  $\chi^2$ /NDF: 2643393.7/34

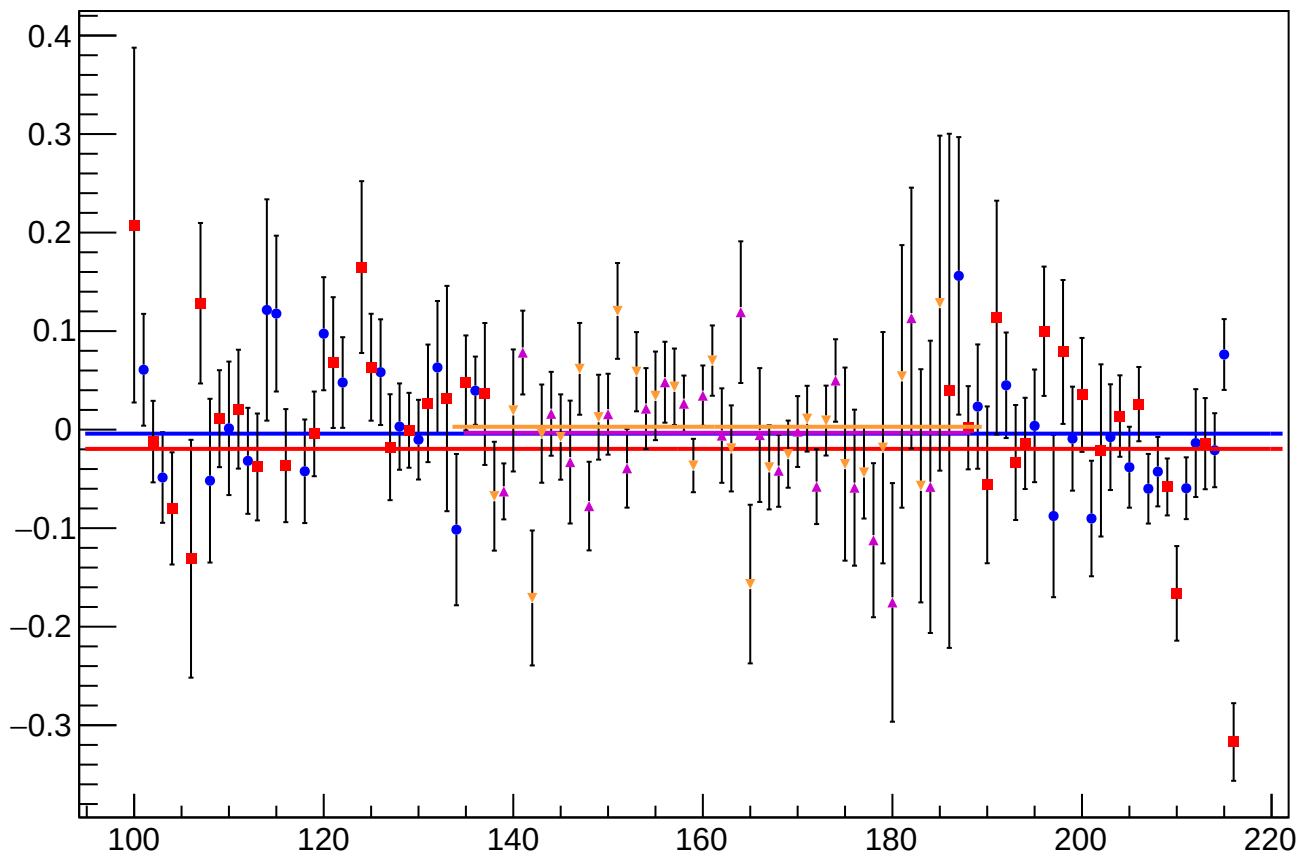
Left In: 35.896 $\pm$ 0.006  $\chi^2$ /NDF: 3138291.6/22

+ sign 36.991 $\pm$ 0.005  $\chi^2$ /NDF: 5460590.8/55

All: 36.765 $\pm$ 0.003  $\chi^2$ /NDF: 11266601.8/113

- sign 36.536 $\pm$ 0.005  $\chi^2$ /NDF: 5800990.4/57

asym\_sam\_12345678\_avg\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 35.2/30

Left Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 98.3/34

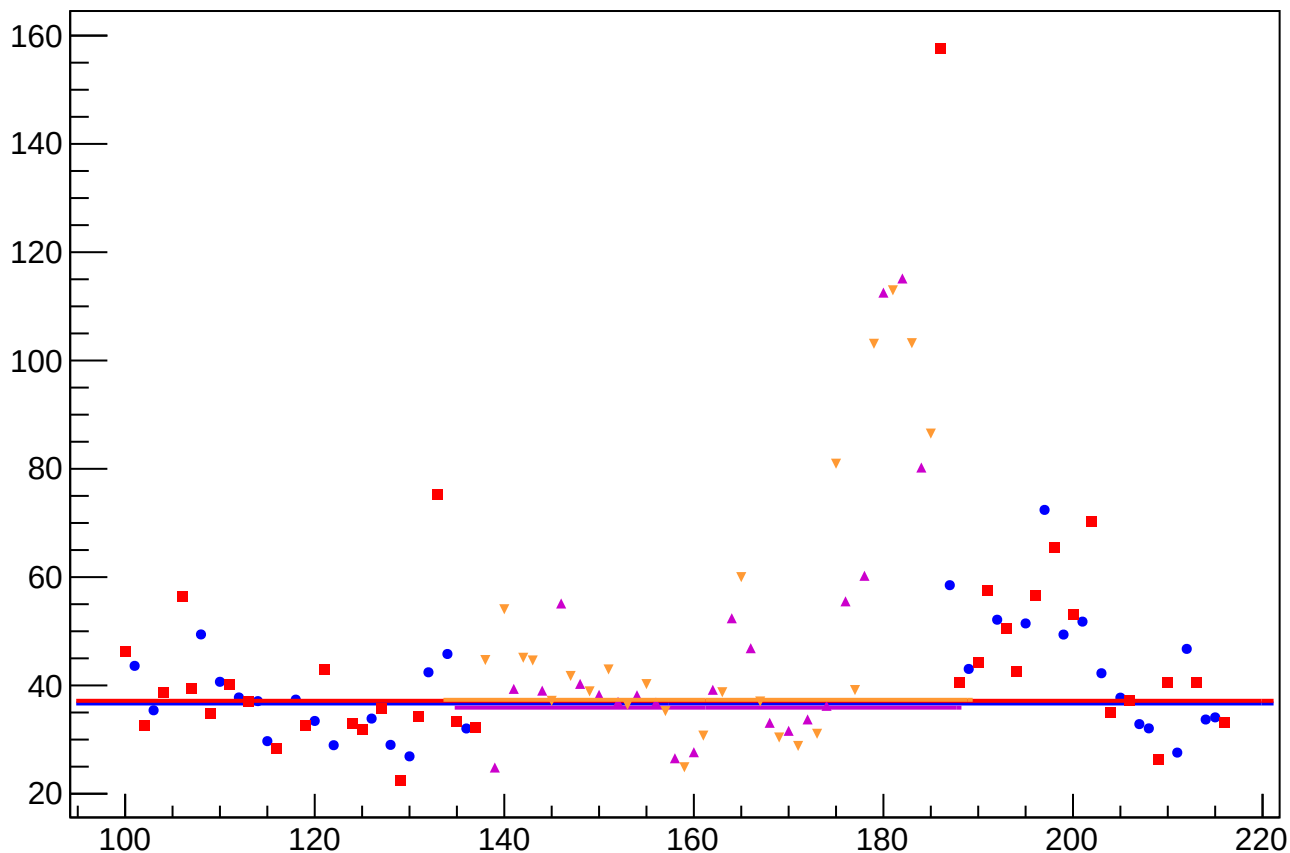
Left In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 199.6/113

- sign  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 129.8/57

asym\_sam\_12345678\_avg\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 36.667 $\pm$ 0.006  $\chi^2$ /NDF: 1758365.5/30

Left Out: 37.344 $\pm$ 0.007  $\chi^2$ /NDF: 3696647.0/24

Right Out: 37.162 $\pm$ 0.006  $\chi^2$ /NDF: 2643393.7/34

Left In: 35.896 $\pm$ 0.006  $\chi^2$ /NDF: 3138291.6/22

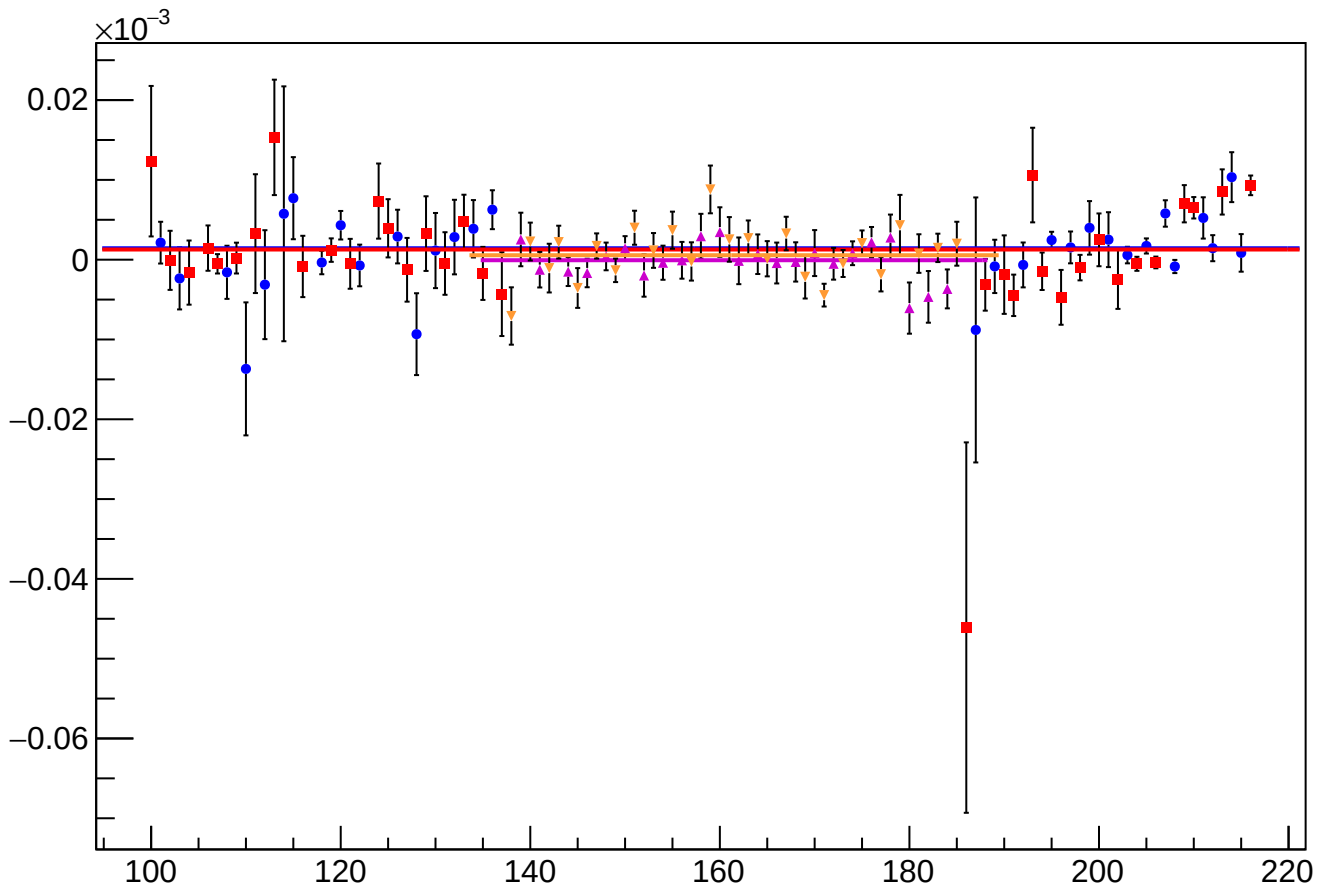
+ sign 36.991 $\pm$ 0.005  $\chi^2$ /NDF: 5460590.8/55

All: 36.765 $\pm$ 0.003  $\chi^2$ /NDF: 11266601.8/113

- sign 36.536 $\pm$ 0.005  $\chi^2$ /NDF: 5800990.4/57



asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_dit\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 49.7/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:43.5/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 115.7/34

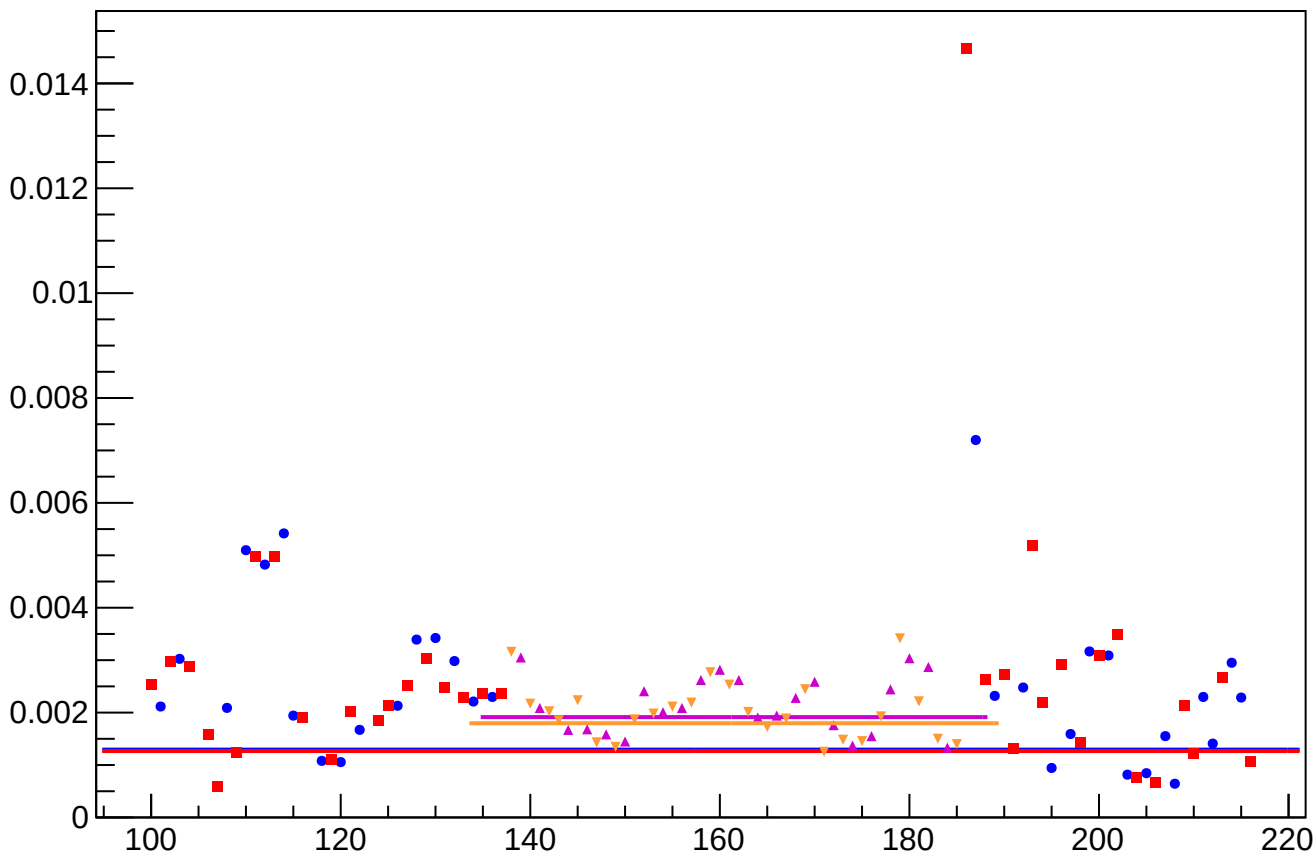
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:16.9/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 95.7/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 234.2/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 137.9/57

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_dit\_diff\_rms vs Slug



Right In: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 9165128.9/30

Left Out: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2279340.7/24

Right Out: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 10941017.9/34

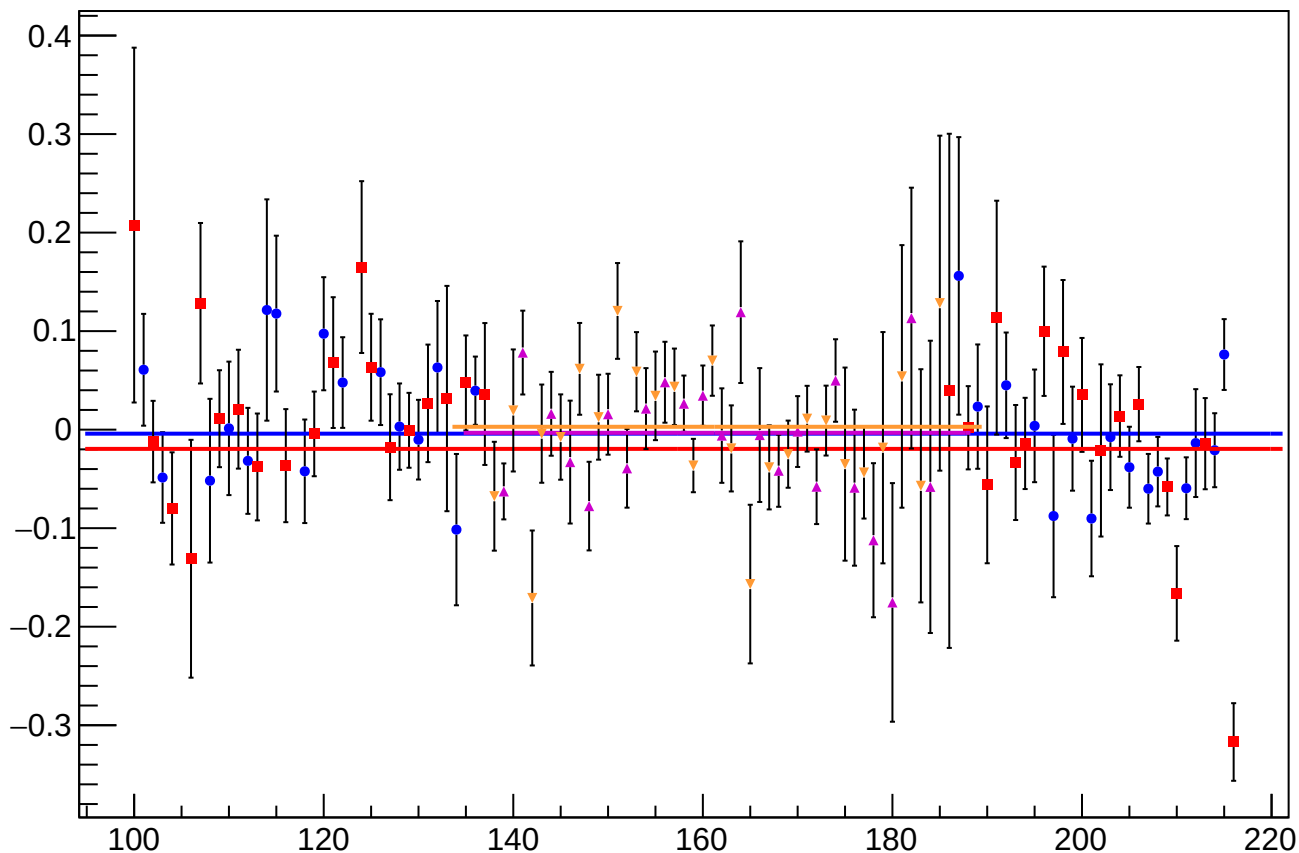
Left In: 0.002+/-0.000  $\chi^2/\text{NDF}$ : 2171715.8/22

+ sign 0.001+/-0.000  $\chi^2/\text{NDF}$ : 13108786.3/55

All: 0.001+/-0.000  $\chi^2/\text{NDF}$ : 28695088.7/113

- sign 0.002+/-0.000  $\chi^2/\text{NDF}$ : 15586297.9/57

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 35.2/30

Left Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 98.3/34

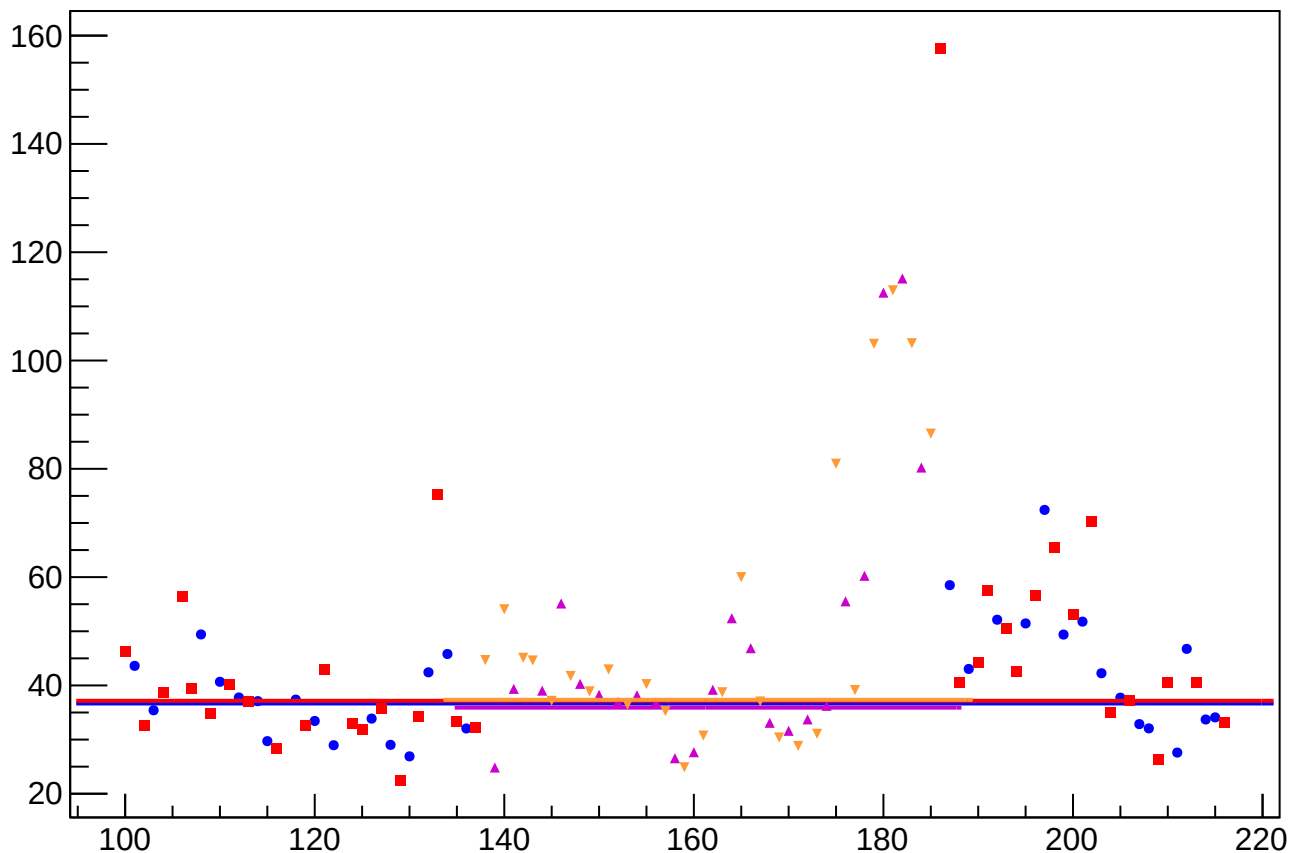
Left In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 199.6/113

- sign  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 129.8/57

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_cor\_diff\_rms vs Slug



Right In: 36.666+/-0.006  $\chi^2/\text{NDF}$ : 1758406.1/30

Left Out: 37.344+/-0.007  $\chi^2/\text{NDF}$ : 3696697.3/24

Right Out: 37.162+/-0.006  $\chi^2/\text{NDF}$ : 2643476.2/34

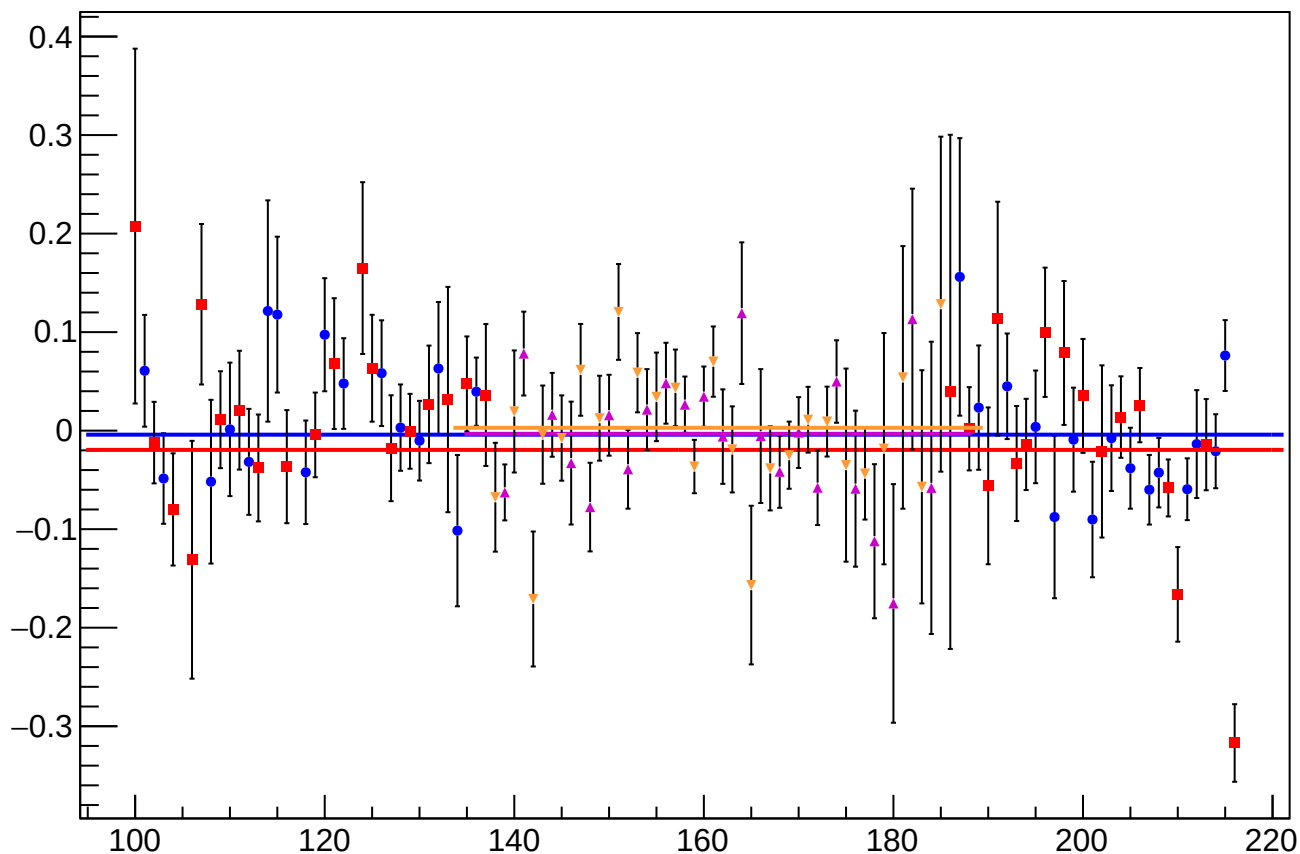
Left In: 35.896+/-0.006  $\chi^2/\text{NDF}$ : 3138307.4/22

+ sign 36.991+/-0.005  $\chi^2/\text{NDF}$ : 5460691.6/55

All: 36.765+/-0.003  $\chi^2/\text{NDF}$ : 11266778.7/113

- sign 36.536+/-0.005  $\chi^2/\text{NDF}$ : 5801068.8/57

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_mean vs Slug



Right In:  $-0.004 \pm 0.009$   $\chi^2/\text{NDF}$ : 35.2/30

Left Out:  $0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 32.9/24

Right Out:  $-0.020 \pm 0.009$   $\chi^2/\text{NDF}$ : 98.3/34

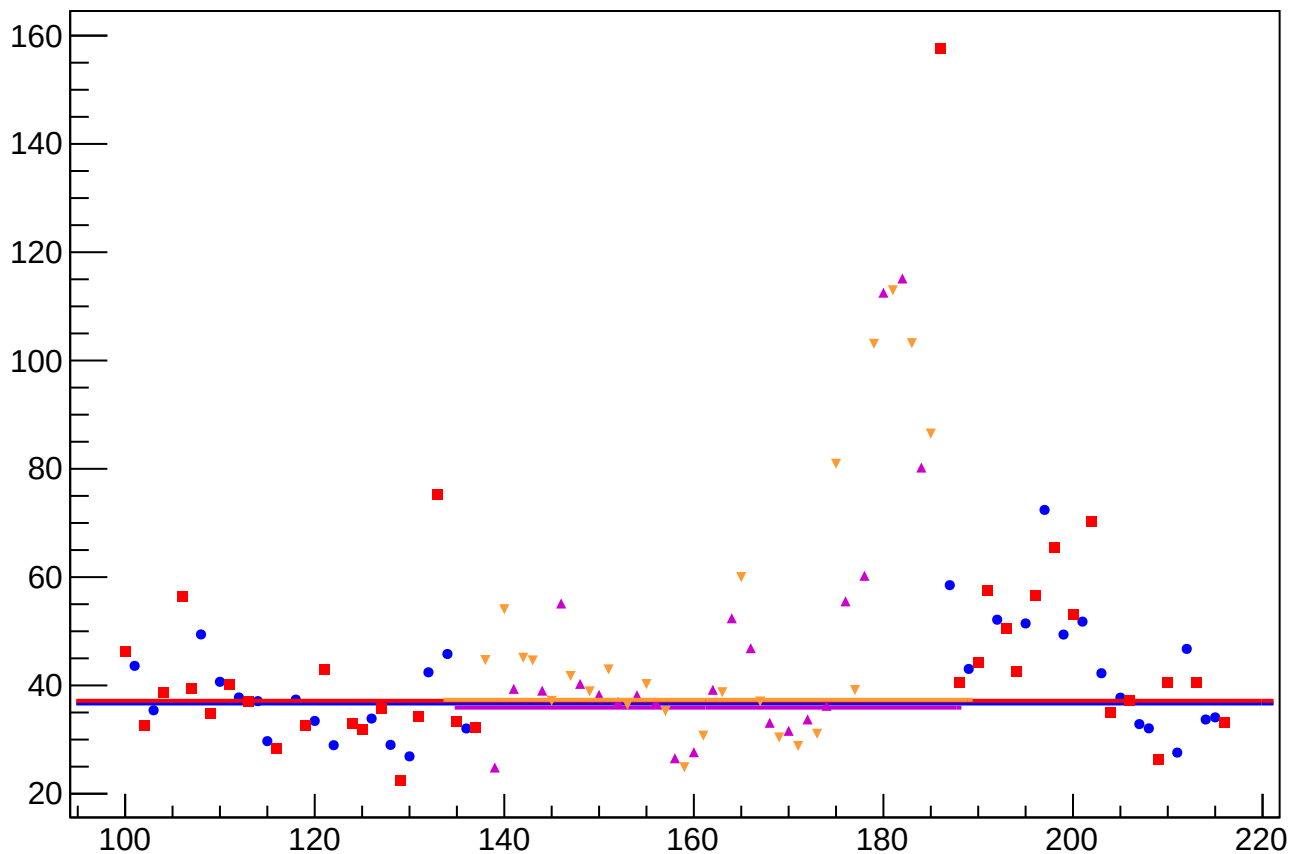
Left In:  $-0.003 \pm 0.009$   $\chi^2/\text{NDF}$ : 29.8/22

+ sign  $-0.001 \pm 0.006$   $\chi^2/\text{NDF}$ : 68.4/55

All:  $-0.006 \pm 0.005$   $\chi^2/\text{NDF}$ : 199.6/113

- sign  $-0.011 \pm 0.006$   $\chi^2/\text{NDF}$ : 129.8/57

asym\_sam\_12345678\_avg\_eigen\_dit\_vs\_eigen\_cor\_diff\_rms vs Slug



Right In: 36.666 $\pm$ 0.006  $\chi^2$ /NDF: 1758406.1/30

Left Out: 37.344 $\pm$ 0.007  $\chi^2$ /NDF: 3696697.3/24

Right Out: 37.162 $\pm$ 0.006  $\chi^2$ /NDF: 2643476.2/34

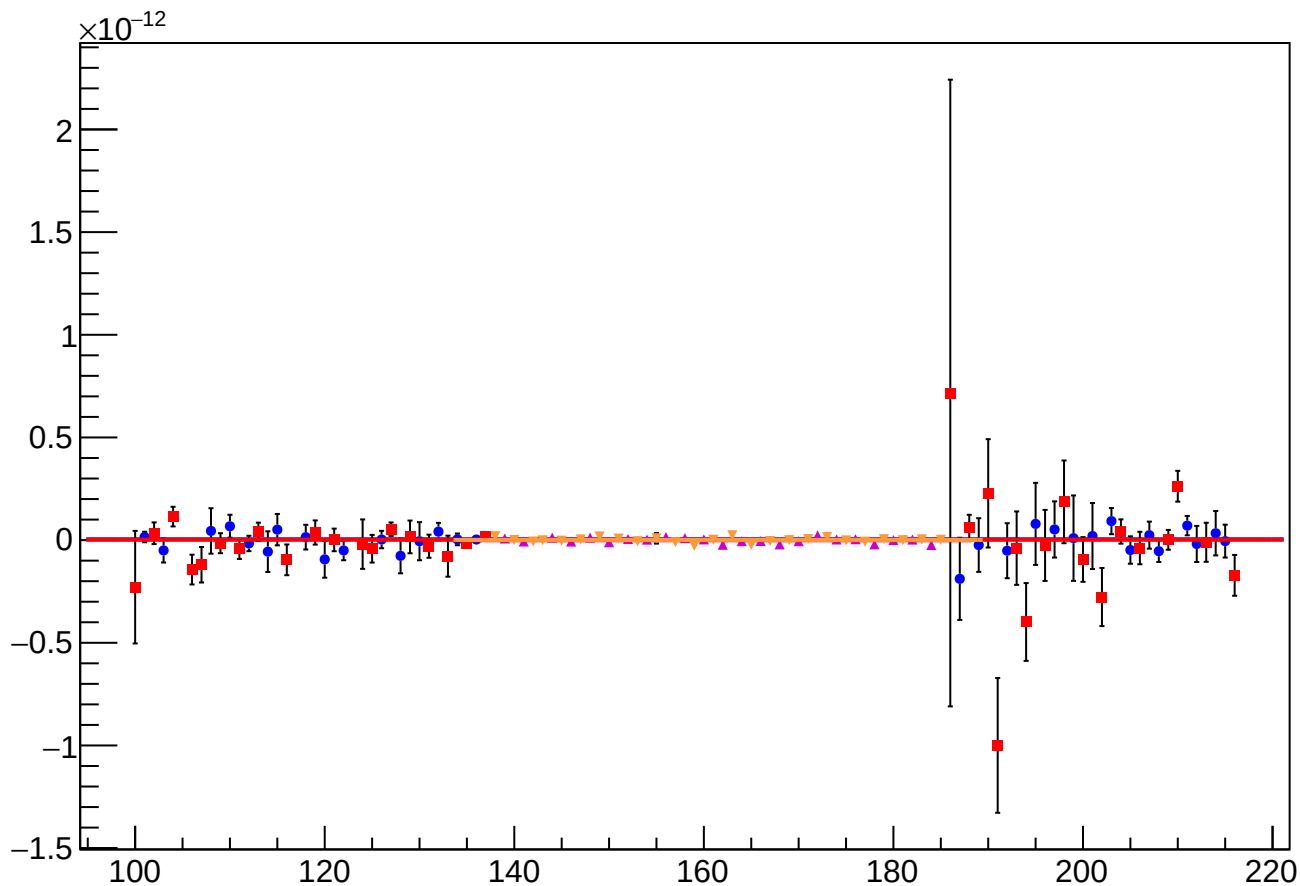
Left In: 35.896 $\pm$ 0.006  $\chi^2$ /NDF: 3138307.4/22

+ sign 36.991 $\pm$ 0.005  $\chi^2$ /NDF: 5460691.6/55

All: 36.765 $\pm$ 0.003  $\chi^2$ /NDF: 11266778.7/113

- sign 36.536 $\pm$ 0.005  $\chi^2$ /NDF: 5801068.8/57

asym\_sam\_12345678\_avg\_eigen\_cor\_vs\_cor\_diff\_mean vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 15.1/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:21.4/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 58.5/34

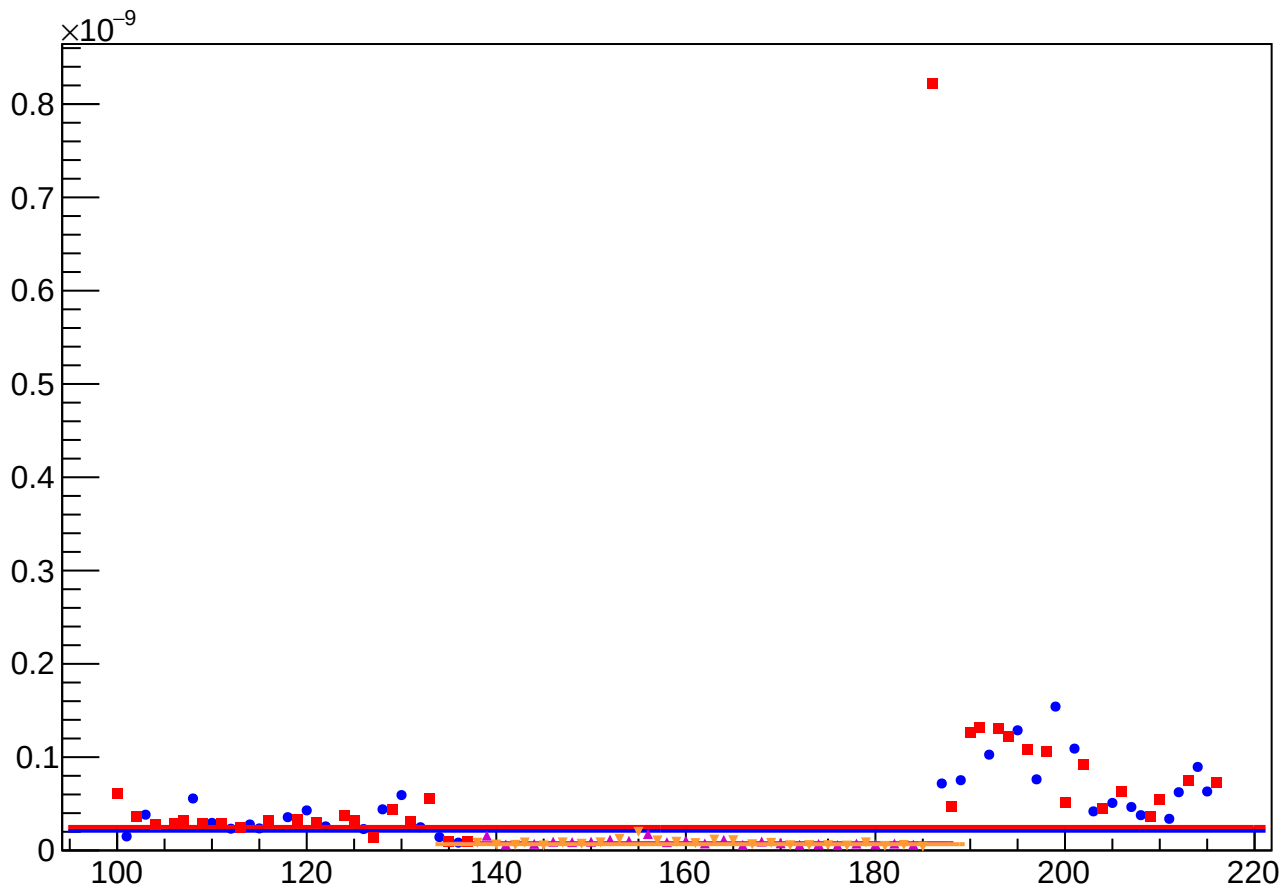
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:29.2/22

+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 36.6/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 124.8/113

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 87.8/57

asym\_sam\_12345678\_avg\_eigen\_cor\_vs\_cor\_diff\_rms vs Slug



Right In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 10111372.0/30

Left Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:2192403.1/24

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 9077630.4/34

Left In: 0.000 $\pm$ 0.000  $\chi^2$ /NDF:1582294.4/22

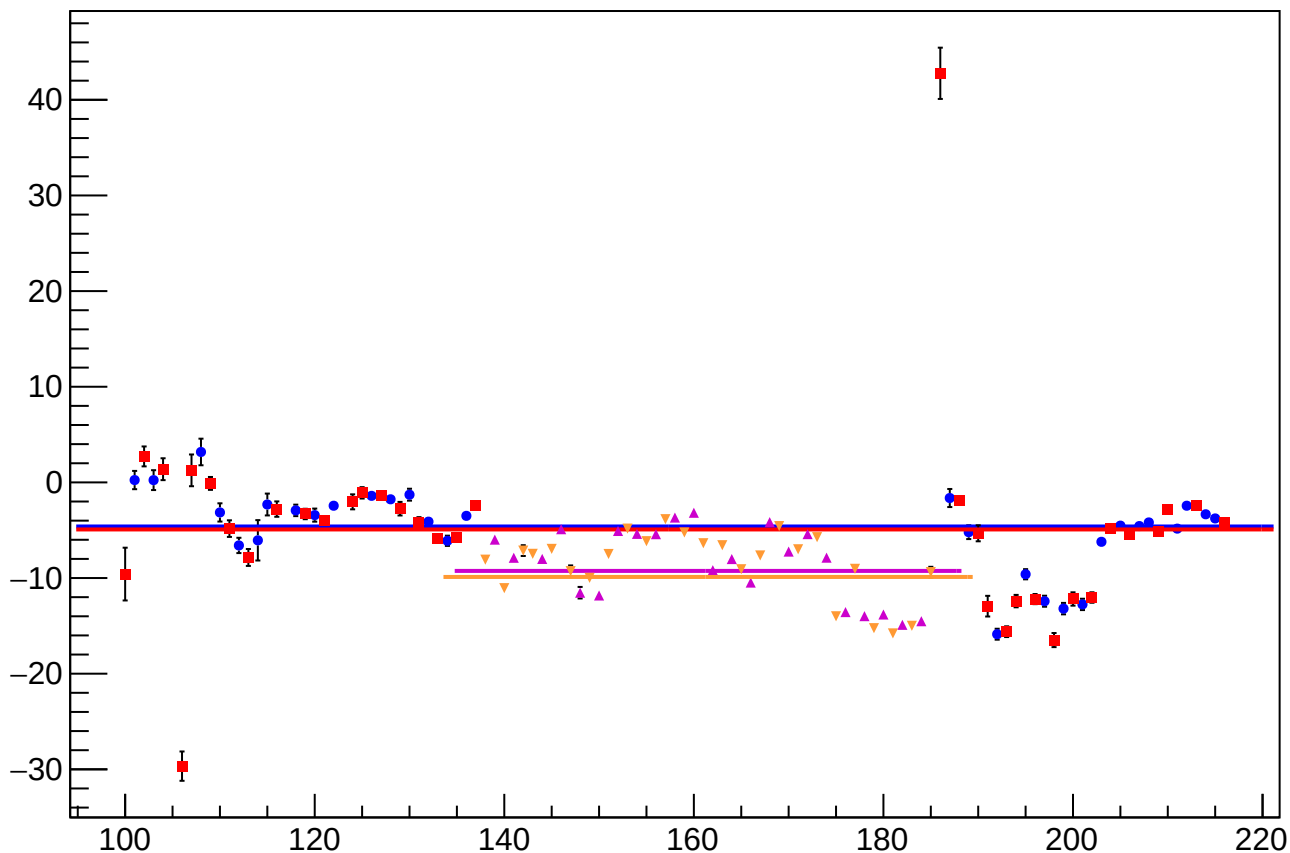
+ sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 18330960.5/55

All: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 35860294.1/113

- sign 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 17201250.3/57



# reg\_asym\_sam1\_diff\_bpm1X\_slope vs Slug



Right In:  $-4.611 \pm 0.084$   $\chi^2/\text{NDF}$ : 1398.5/30

Left Out:  $-9.886 \pm 0.070$   $\chi^2/\text{NDF}$ : 3206.9/24

Right Out:  $-4.921 \pm 0.086$   $\chi^2/\text{NDF}$ : 2390.3/34

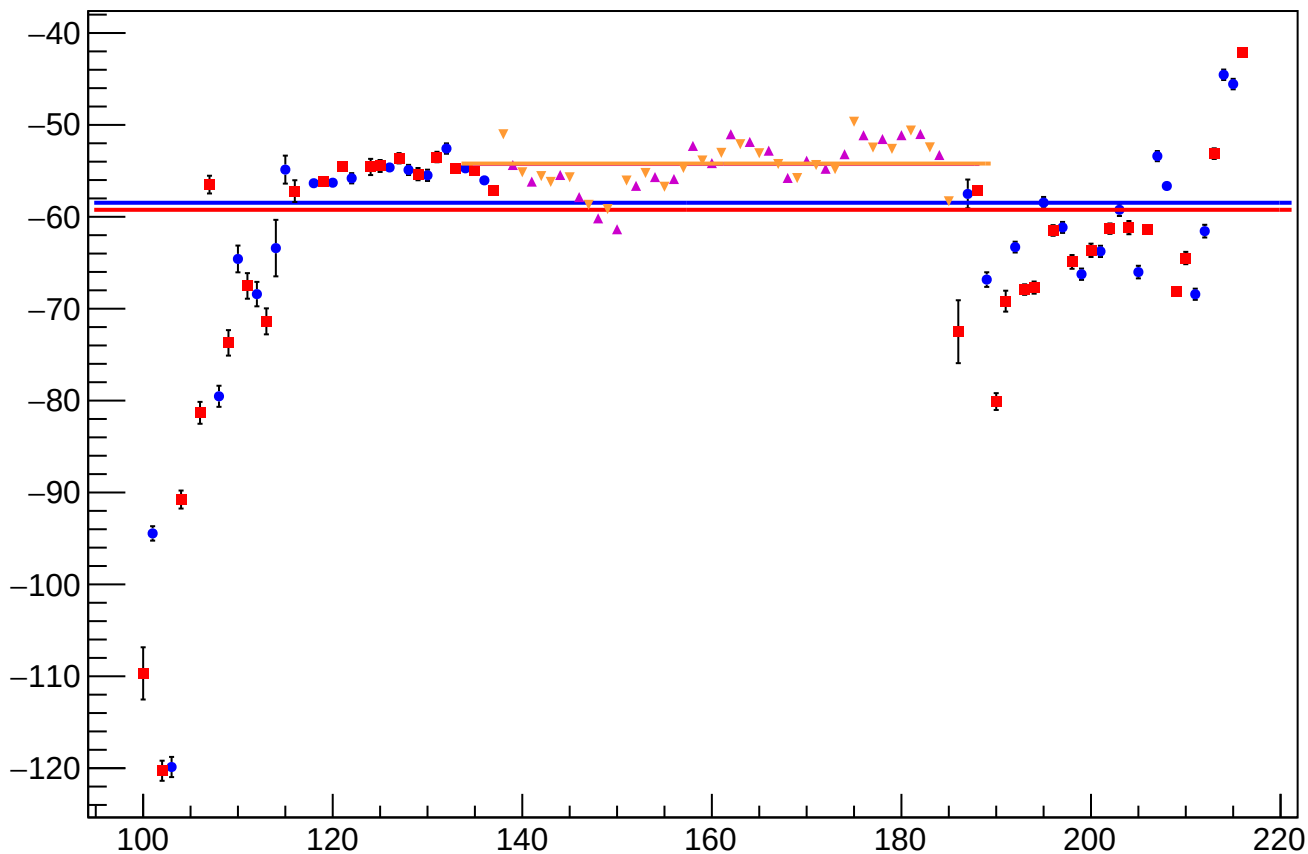
Left In:  $-9.255 \pm 0.072$   $\chi^2/\text{NDF}$ : 3067.6/22

+ sign  $-7.748 \pm 0.054$   $\chi^2/\text{NDF}$ : 6939.2/55

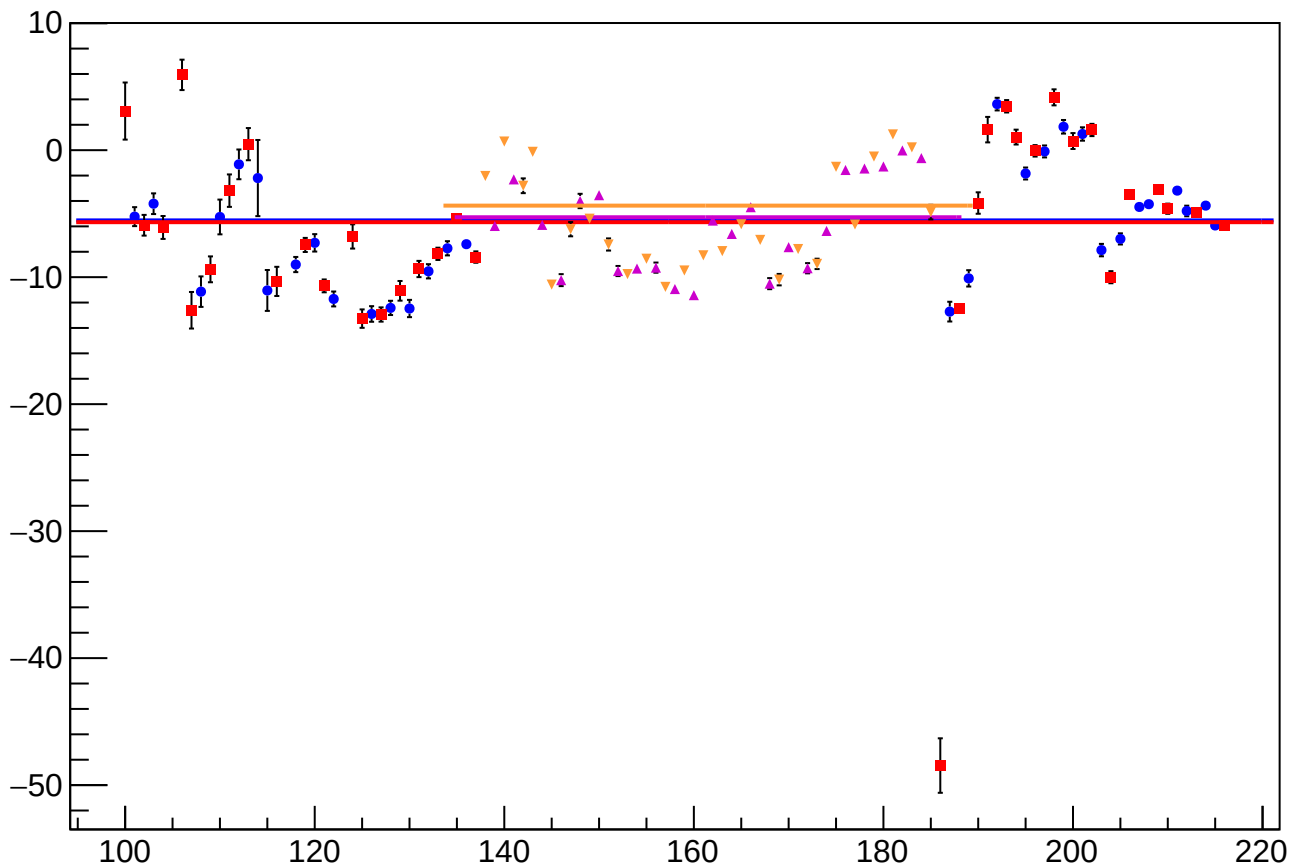
All:  $-7.614 \pm 0.038$   $\chi^2/\text{NDF}$ : 13914.7/113

- sign  $-7.473 \pm 0.055$   $\chi^2/\text{NDF}$ : 6962.8/57

# reg\_asym\_sam1\_diff\_bpm4aY\_slope vs Slug



# reg\_asym\_sam1\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.530 \pm 0.086$   $\chi^2/\text{NDF}$ : 1892.0/30

Left Out:  $-4.366 \pm 0.069$   $\chi^2/\text{NDF}$ : 3701.4/24

Right Out:  $-5.670 \pm 0.087$   $\chi^2/\text{NDF}$ : 3274.0/34

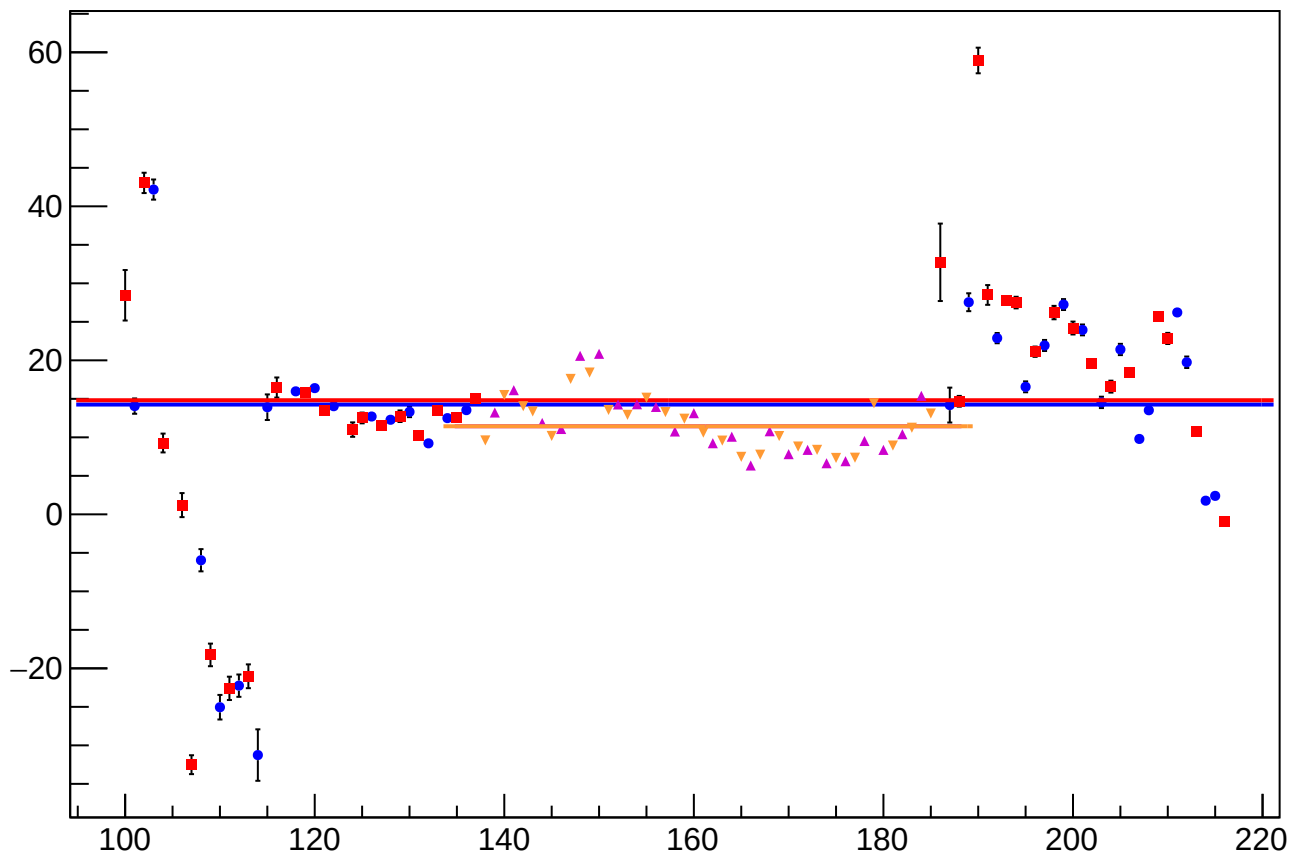
Left In:  $-5.283 \pm 0.071$   $\chi^2/\text{NDF}$ : 2750.2/22

+ sign  $-4.823 \pm 0.054$   $\chi^2/\text{NDF}$ : 5704.4/55

All:  $-5.125 \pm 0.039$   $\chi^2/\text{NDF}$ : 11804.1/113

- sign  $-5.438 \pm 0.055$   $\chi^2/\text{NDF}$ : 6036.1/57

# reg\_asym\_sam1\_diff\_bpm4eY\_slope vs Slug



Right In: 14.259+/-0.116  $\chi^2$ /NDF: 4554.4/30

Left Out: 11.438+/-0.062  $\chi^2$ /NDF: 2435.7/24

Right Out: 14.818+/-0.118  $\chi^2$ /NDF: 7298.3/34

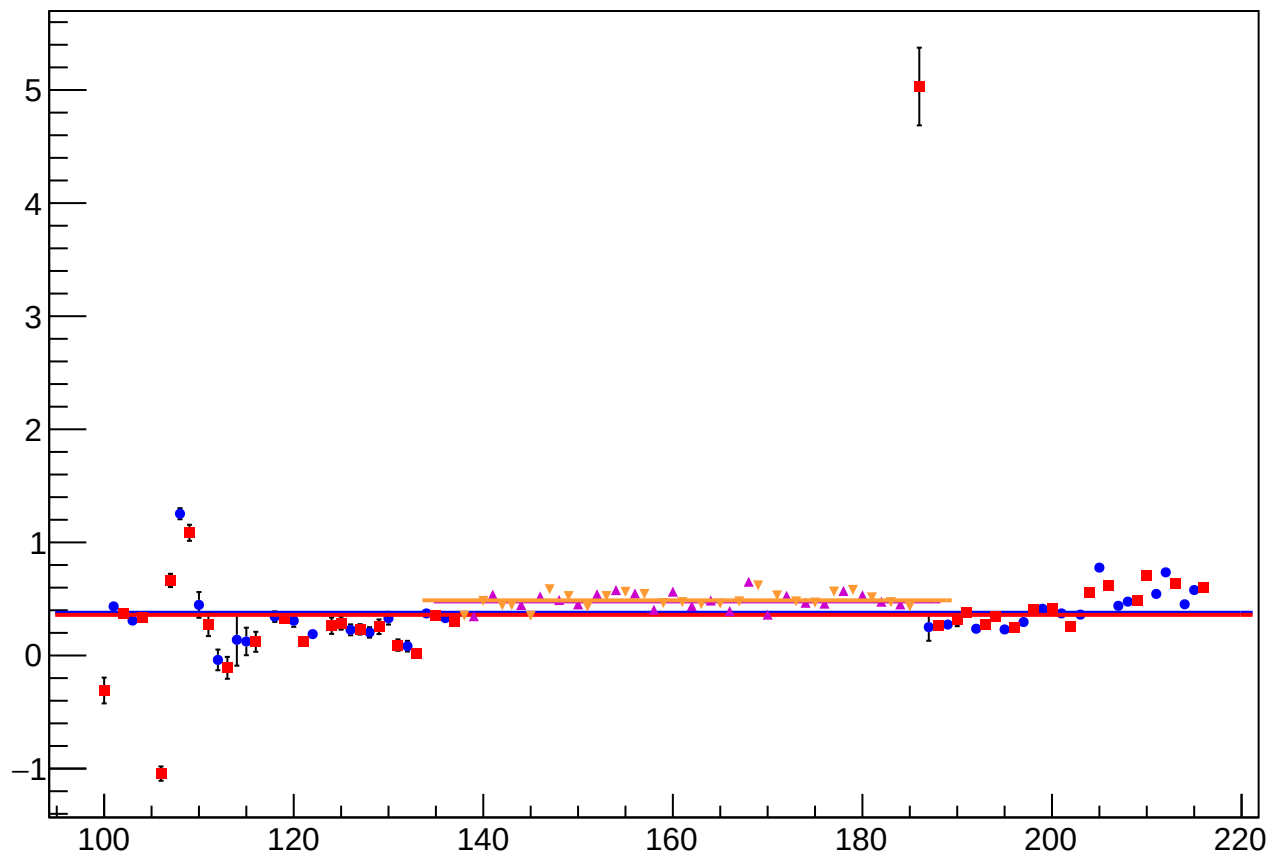
Left In: 11.441+/-0.064  $\chi^2$ /NDF: 3358.4/22

+ sign 12.067+/-0.055  $\chi^2$ /NDF: 7452.2/55

All: 12.139+/-0.039  $\chi^2$ /NDF: 18746.6/113

- sign 12.215+/-0.056  $\chi^2$ /NDF: 11290.9/57

# reg\_asym\_sam1\_diff\_bpm12X\_slope vs Slug



Right In:  $0.378 \pm 0.005$   $\chi^2/\text{NDF}: 928.6/30$

Left Out:  $0.488 \pm 0.003$   $\chi^2/\text{NDF}: 539.4/24$

Right Out:  $0.359 \pm 0.005$   $\chi^2/\text{NDF}: 1600.9/34$

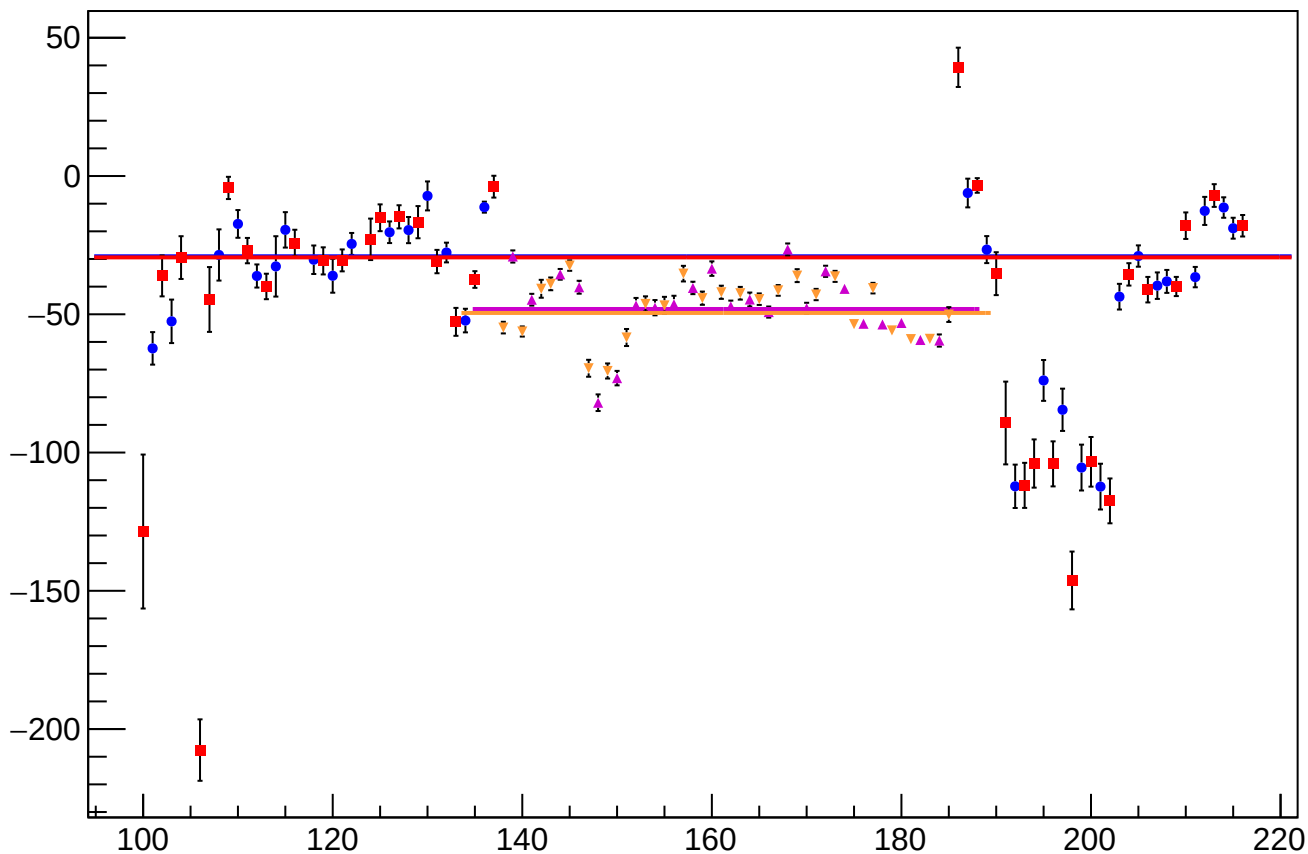
Left In:  $0.478 \pm 0.003$   $\chi^2/\text{NDF}: 798.2/22$

+ sign  $0.463 \pm 0.002$   $\chi^2/\text{NDF}: 1826.8/55$

All:  $0.458 \pm 0.002$   $\chi^2/\text{NDF}: 4641.0/113$

- sign  $0.453 \pm 0.002$   $\chi^2/\text{NDF}: 2804.1/57$

# reg\_asym\_sam2\_diff\_bpm1X\_slope vs Slug



Right In:  $-29.026 \pm 0.823$   $\chi^2/\text{NDF}: 662.7/30$

Left Out:  $-49.516 \pm 0.402$   $\chi^2/\text{NDF}: 576.3/24$

Right Out:  $-29.422 \pm 0.846$   $\chi^2/\text{NDF}: 1254.4/34$

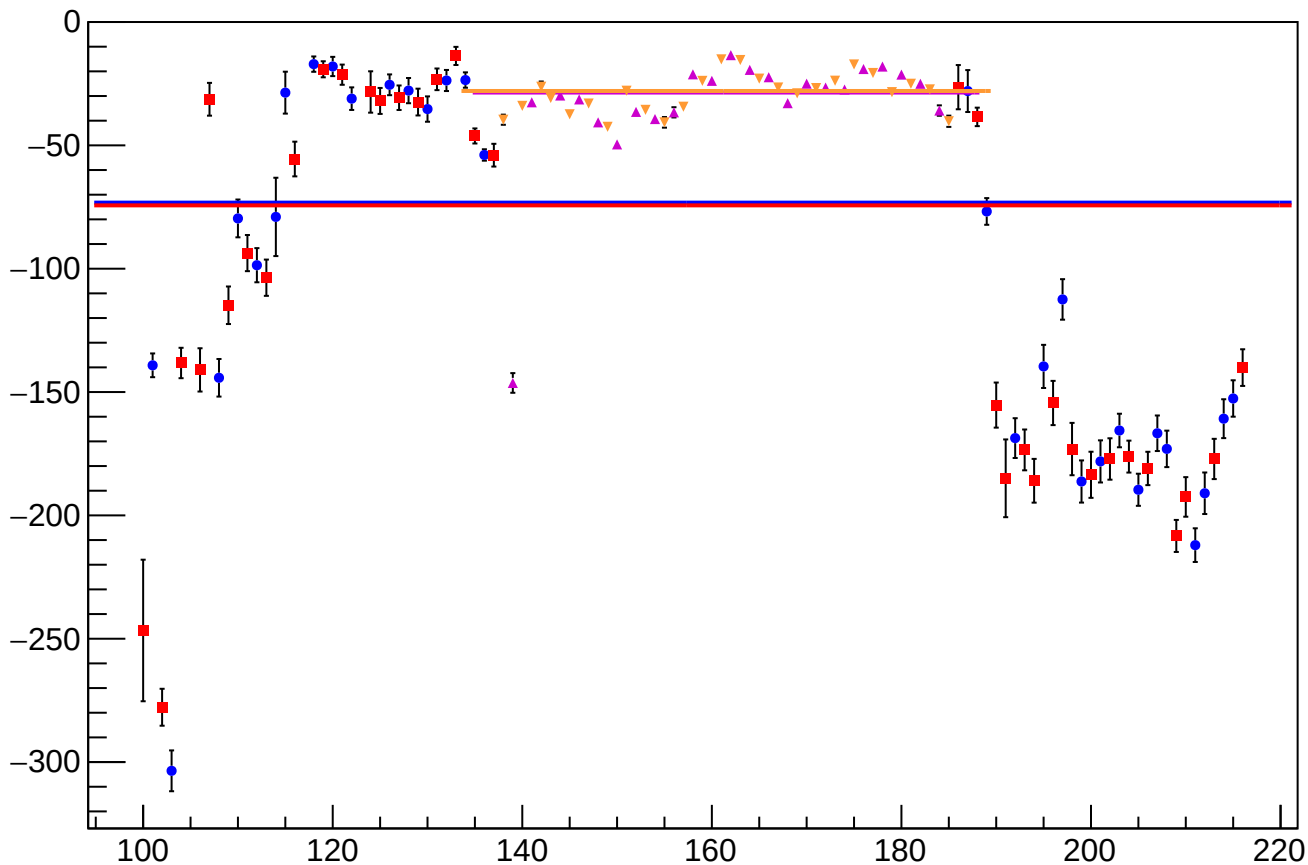
Left In:  $-48.087 \pm 0.418$   $\chi^2/\text{NDF}: 706.2/22$

+ sign  $-45.560 \pm 0.361$   $\chi^2/\text{NDF}: 1739.7/55$

All:  $-45.009 \pm 0.260$   $\chi^2/\text{NDF}: 4096.3/113$

- sign  $-44.416 \pm 0.375$   $\chi^2/\text{NDF}: 2351.8/57$

# reg\_asym\_sam2\_diff\_bpm4aY\_slope vs Slug



Right In:  $-73.219 \pm 0.955$   $\chi^2/\text{NDF}: 4701.9/30$

Left Out:  $-27.957 \pm 0.321$   $\chi^2/\text{NDF}: 497.7/24$

Right Out:  $-74.326 \pm 0.996$   $\chi^2/\text{NDF}: 4619.9/34$

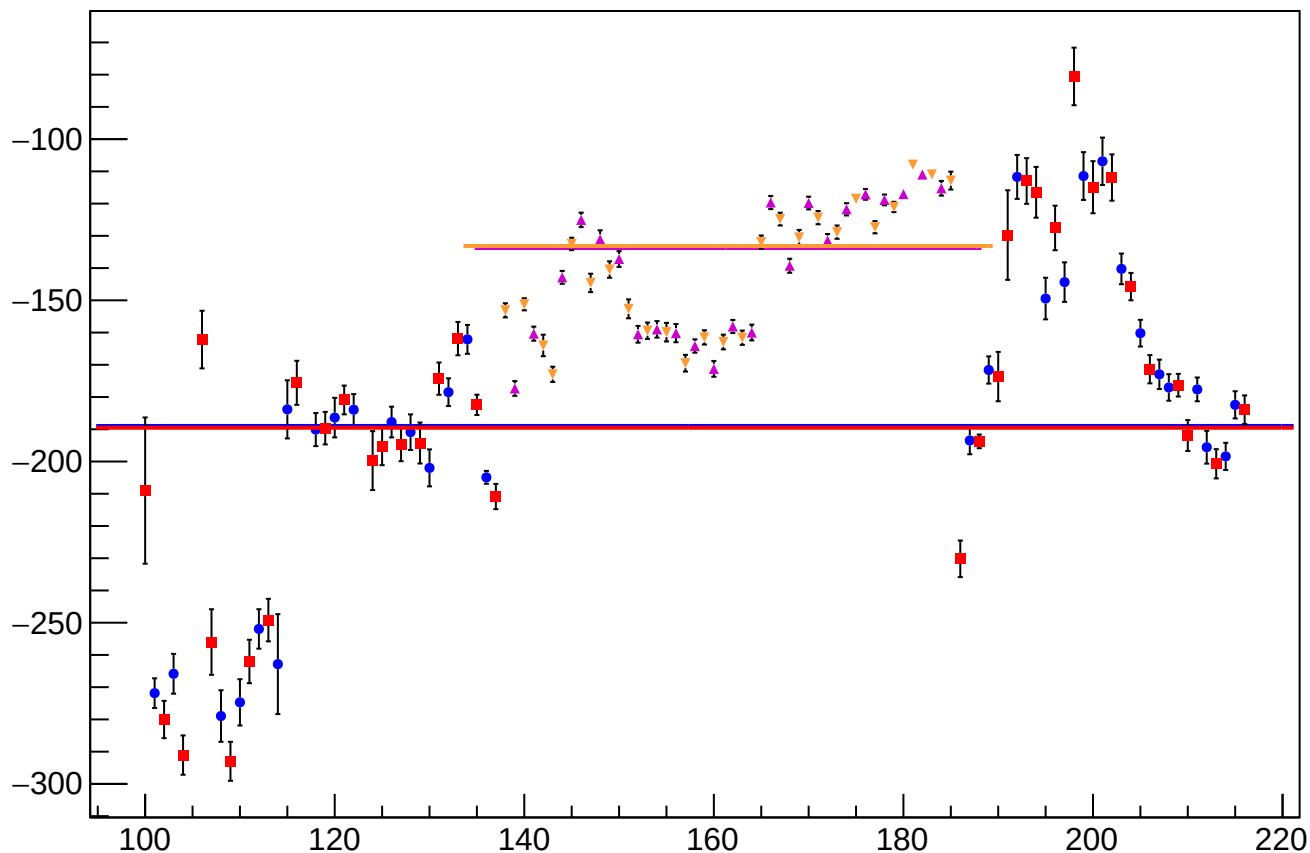
Left In:  $-28.592 \pm 0.334$   $\chi^2/\text{NDF}: 1480.6/22$

+ sign  $-32.555 \pm 0.304$   $\chi^2/\text{NDF}: 7217.9/55$

All:  $-32.867 \pm 0.219$   $\chi^2/\text{NDF}: 15215.3/113$

- sign  $-33.203 \pm 0.316$   $\chi^2/\text{NDF}: 7995.2/57$

# reg\_asym\_sam2\_diff\_bpm4eX\_slope vs Slug



Right In: -188.976 $\pm$ 0.853  $\chi^2$ /NDF: 1652.8/30

Left Out: -133.155 $\pm$ 0.403  $\chi^2$ /NDF: 2530.7/24

Right Out: -189.523 $\pm$ 0.870  $\chi^2$ /NDF: 2006.7/34

Left In: -133.777 $\pm$ 0.417  $\chi^2$ /NDF: 2440.7/22

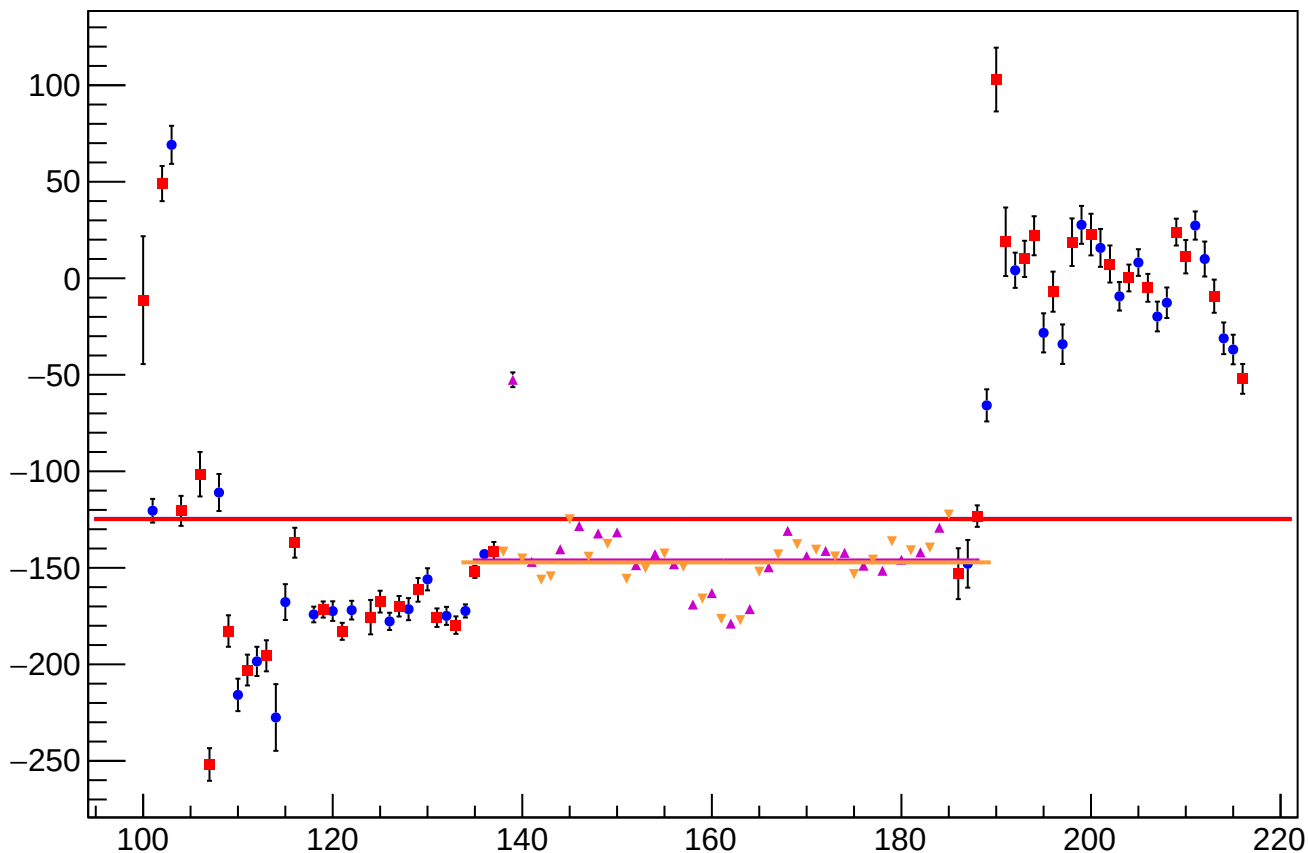
+ sign -143.337 $\pm$ 0.364  $\chi^2$ /NDF: 7684.4/55

All: -143.747 $\pm$ 0.262  $\chi^2$ /NDF: 15470.8/113

- sign -144.184 $\pm$ 0.376  $\chi^2$ /NDF: 7783.8/57



# reg\_asym\_sam2\_diff\_bpm4eY\_slope vs Slug



Right In:  $-124.645 \pm 1.070$   $\chi^2/\text{NDF}: 4384.1/30$

Left Out:  $-147.167 \pm 0.358$   $\chi^2/\text{NDF}: 1245.6/24$

Right Out:  $-124.760 \pm 1.135$   $\chi^2/\text{NDF}: 4570.2/34$

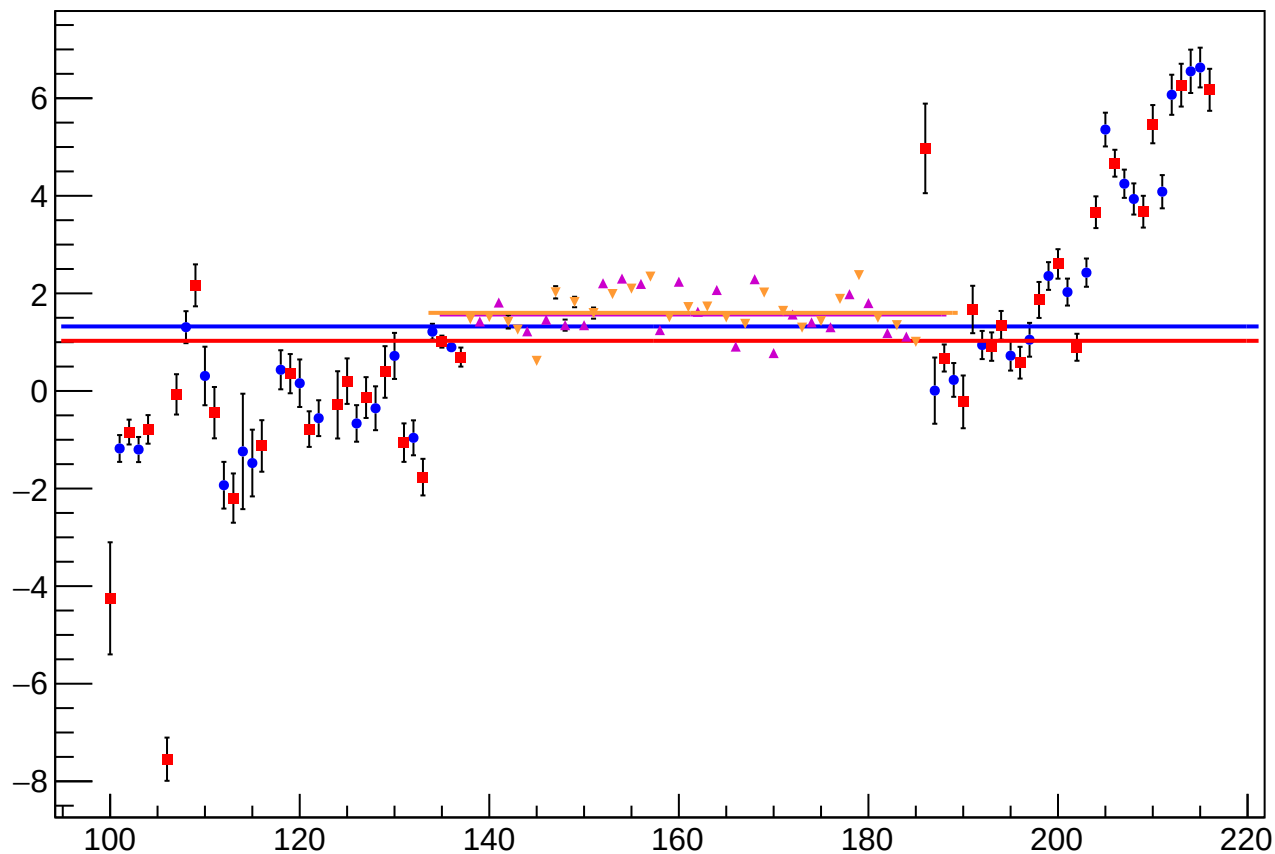
Left In:  $-146.173 \pm 0.371$   $\chi^2/\text{NDF}: 1793.8/22$

+ sign  $-144.897 \pm 0.340$   $\chi^2/\text{NDF}: 6028.3/55$

All:  $-144.519 \pm 0.244$   $\chi^2/\text{NDF}: 12716.4/113$

- sign  $-144.111 \pm 0.352$   $\chi^2/\text{NDF}: 6685.5/57$

# reg\_asym\_sam2\_diff\_bpm12X\_slope vs Slug



Right In:  $1.322 \pm 0.052$   $\chi^2/\text{NDF}$ : 1257.6/30

Left Out:  $1.601 \pm 0.016$   $\chi^2/\text{NDF}$ : 581.8/24

Right Out:  $1.028 \pm 0.055$   $\chi^2/\text{NDF}$ : 1481.1/34

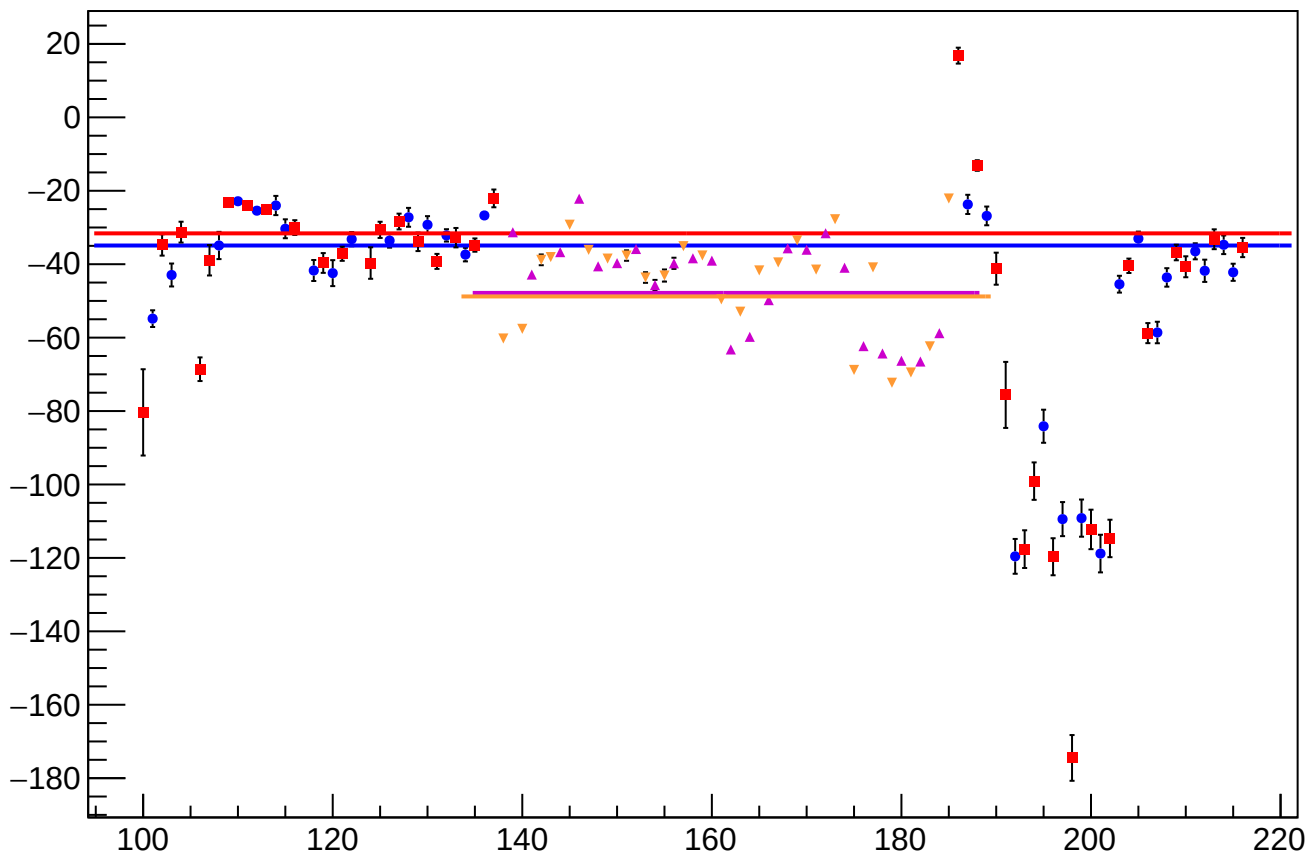
Left In:  $1.567 \pm 0.016$   $\chi^2/\text{NDF}$ : 735.2/22

+ sign  $1.577 \pm 0.015$   $\chi^2/\text{NDF}$ : 1865.8/55

All:  $1.551 \pm 0.011$   $\chi^2/\text{NDF}$ : 4175.3/113

- sign  $1.524 \pm 0.016$   $\chi^2/\text{NDF}$ : 2303.7/57

# reg\_asym\_sam3\_diff\_bpm1X\_slope vs Slug



Right In:  $-34.910 \pm 0.393$   $\chi^2/\text{NDF}: 1671.5/30$

Left Out:  $-48.783 \pm 0.167$   $\chi^2/\text{NDF}: 8953.8/24$

Right Out:  $-31.599 \pm 0.380$   $\chi^2/\text{NDF}: 2955.8/34$

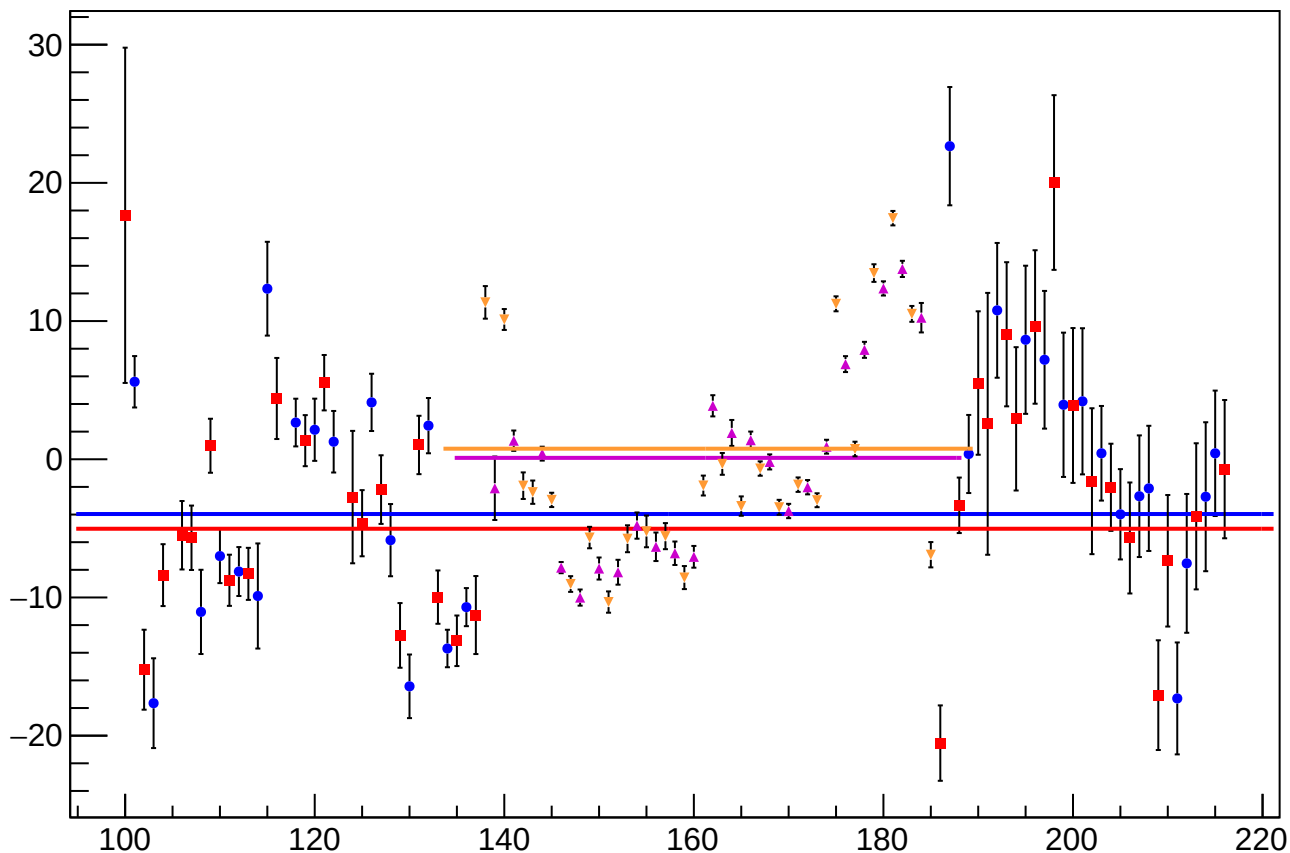
Left In:  $-47.822 \pm 0.170$   $\chi^2/\text{NDF}: 7223.0/22$

+ sign  $-46.663 \pm 0.153$   $\chi^2/\text{NDF}: 11682.9/55$

All:  $-45.899 \pm 0.109$   $\chi^2/\text{NDF}: 23430.6/113$

- sign  $-45.118 \pm 0.155$   $\chi^2/\text{NDF}: 11697.5/57$

# reg\_asym\_sam3\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.962 \pm 0.462$   $\chi^2/\text{NDF}$ : 321.0/30

Left Out:  $0.765 \pm 0.132$   $\chi^2/\text{NDF}$ : 3467.2/24

Right Out:  $-5.027 \pm 0.465$   $\chi^2/\text{NDF}$ : 220.8/34

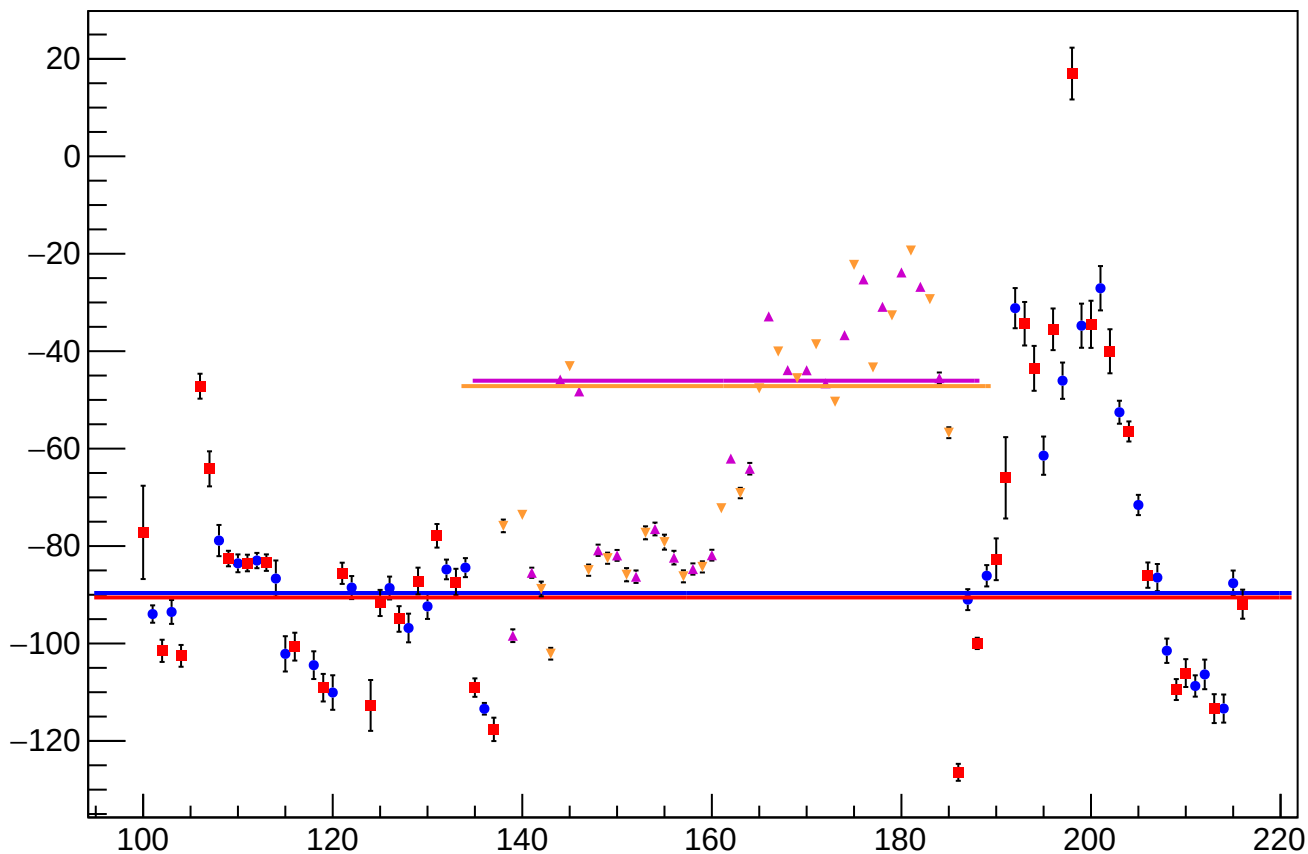
Left In:  $0.102 \pm 0.133$   $\chi^2/\text{NDF}$ : 2721.8/22

+ sign  $0.407 \pm 0.127$   $\chi^2/\text{NDF}$ : 3884.9/55

All:  $0.062 \pm 0.090$   $\chi^2/\text{NDF}$ : 6954.7/113

- sign  $-0.286 \pm 0.128$   $\chi^2/\text{NDF}$ : 3055.0/57

# reg\_asym\_sam3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-89.632 \pm 0.428$   $\chi^2/\text{NDF}: 1785.9/30$

Left Out:  $-47.167 \pm 0.168$   $\chi^2/\text{NDF}: 17658.5/24$

Right Out:  $-90.549 \pm 0.417$   $\chi^2/\text{NDF}: 2833.4/34$

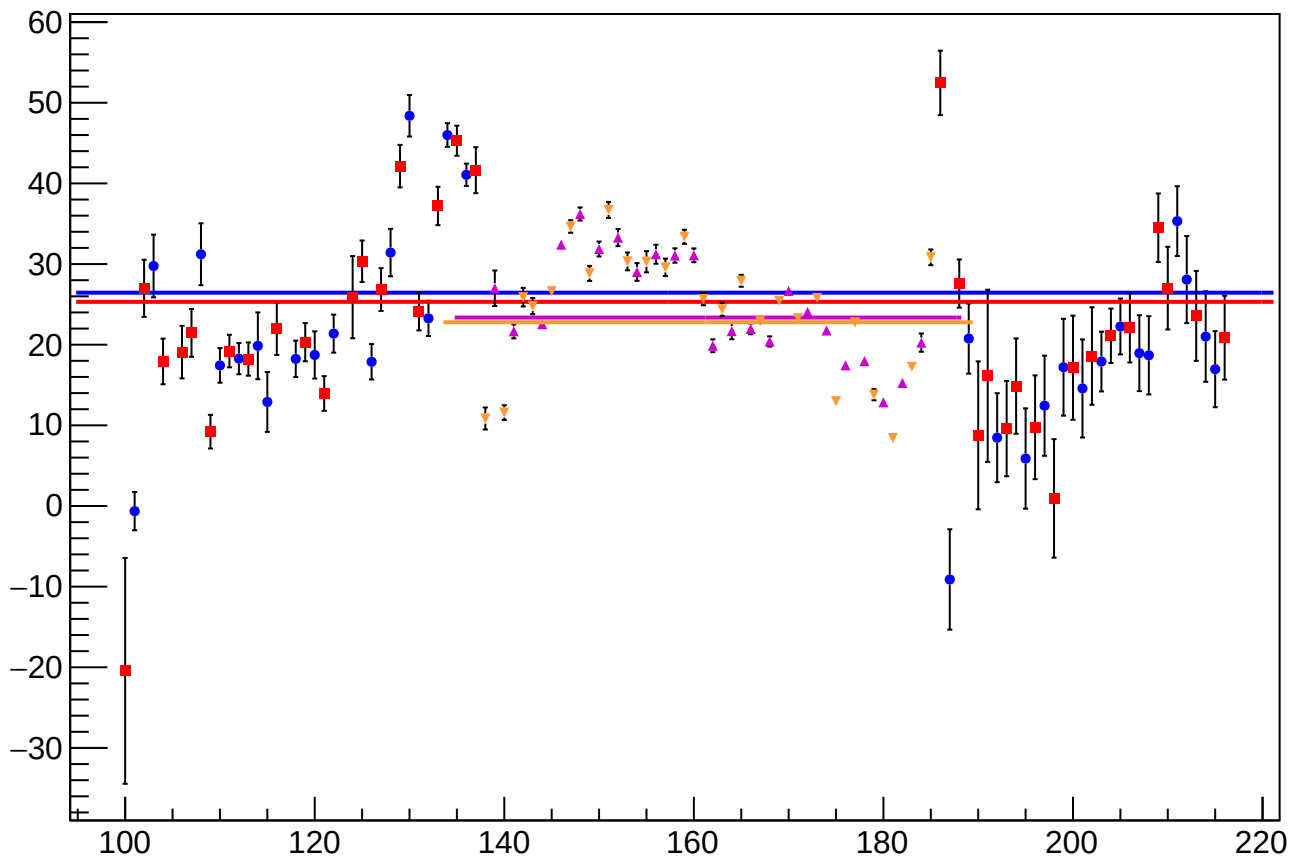
Left In:  $-46.058 \pm 0.170$   $\chi^2/\text{NDF}: 14769.8/22$

+ sign  $-52.820 \pm 0.156$   $\chi^2/\text{NDF}: 27996.3/55$

All:  $-52.623 \pm 0.111$   $\chi^2/\text{NDF}: 55381.2/113$

- sign  $-52.422 \pm 0.158$   $\chi^2/\text{NDF}: 27381.6/57$

# reg\_asym\_sam3\_diff\_bpm4eY\_slope vs Slug



Right In:  $26.451 \pm 0.519$   $\chi^2/\text{NDF}$ : 679.6/30

Left Out:  $22.782 \pm 0.147$   $\chi^2/\text{NDF}$ : 2412.9/24

Right Out:  $25.313 \pm 0.533$   $\chi^2/\text{NDF}$ : 443.0/34

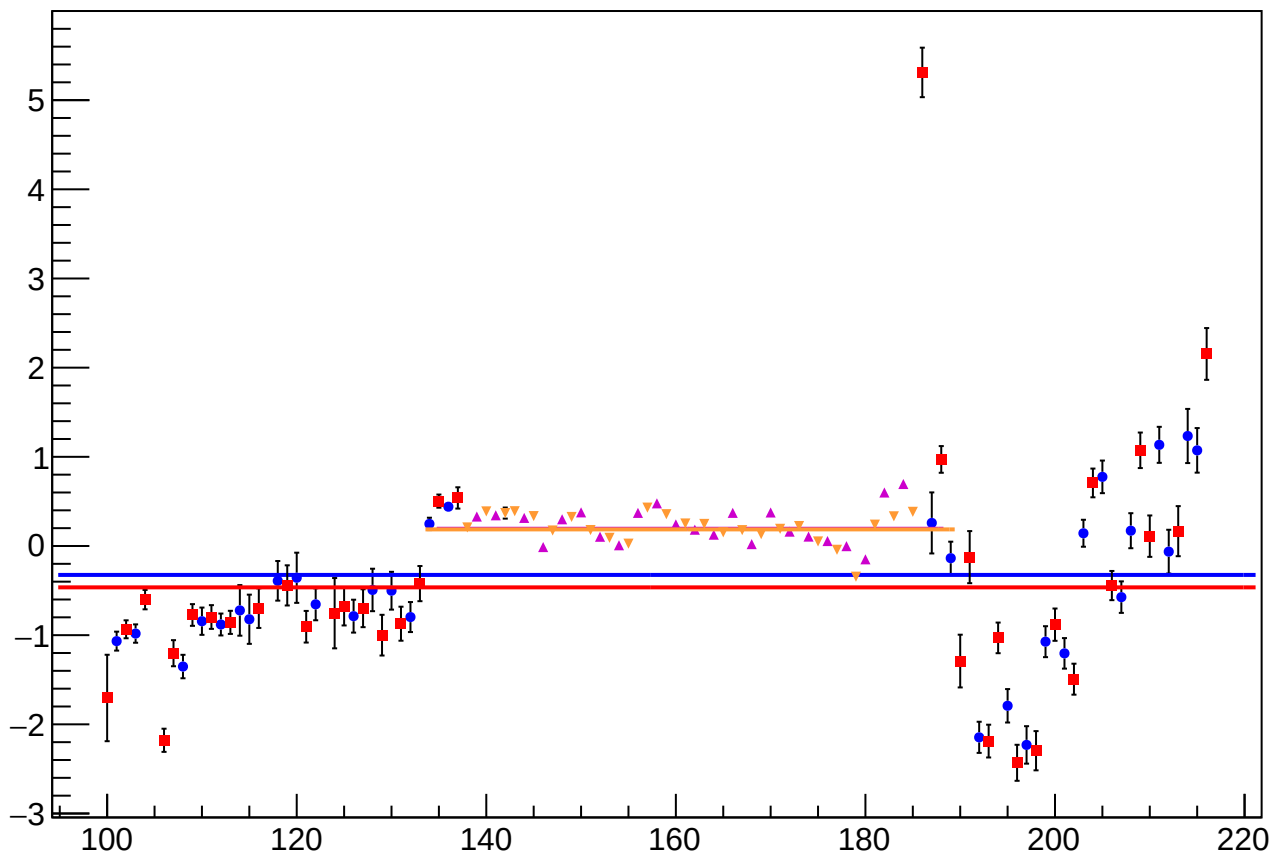
Left In:  $23.366 \pm 0.149$   $\chi^2/\text{NDF}$ : 1785.4/22

+ sign  $23.056 \pm 0.142$   $\chi^2/\text{NDF}$ : 3138.8/55

All:  $23.279 \pm 0.101$   $\chi^2/\text{NDF}$ : 5384.6/113

- sign  $23.506 \pm 0.143$   $\chi^2/\text{NDF}$ : 2240.8/57

# reg\_asym\_sam3\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.324 \pm 0.026$   $\chi^2/\text{NDF}$ : 924.4/30

Left Out:  $0.186 \pm 0.007$   $\chi^2/\text{NDF}$ : 645.7/24

Right Out:  $-0.464 \pm 0.027$   $\chi^2/\text{NDF}$ : 1557.1/34

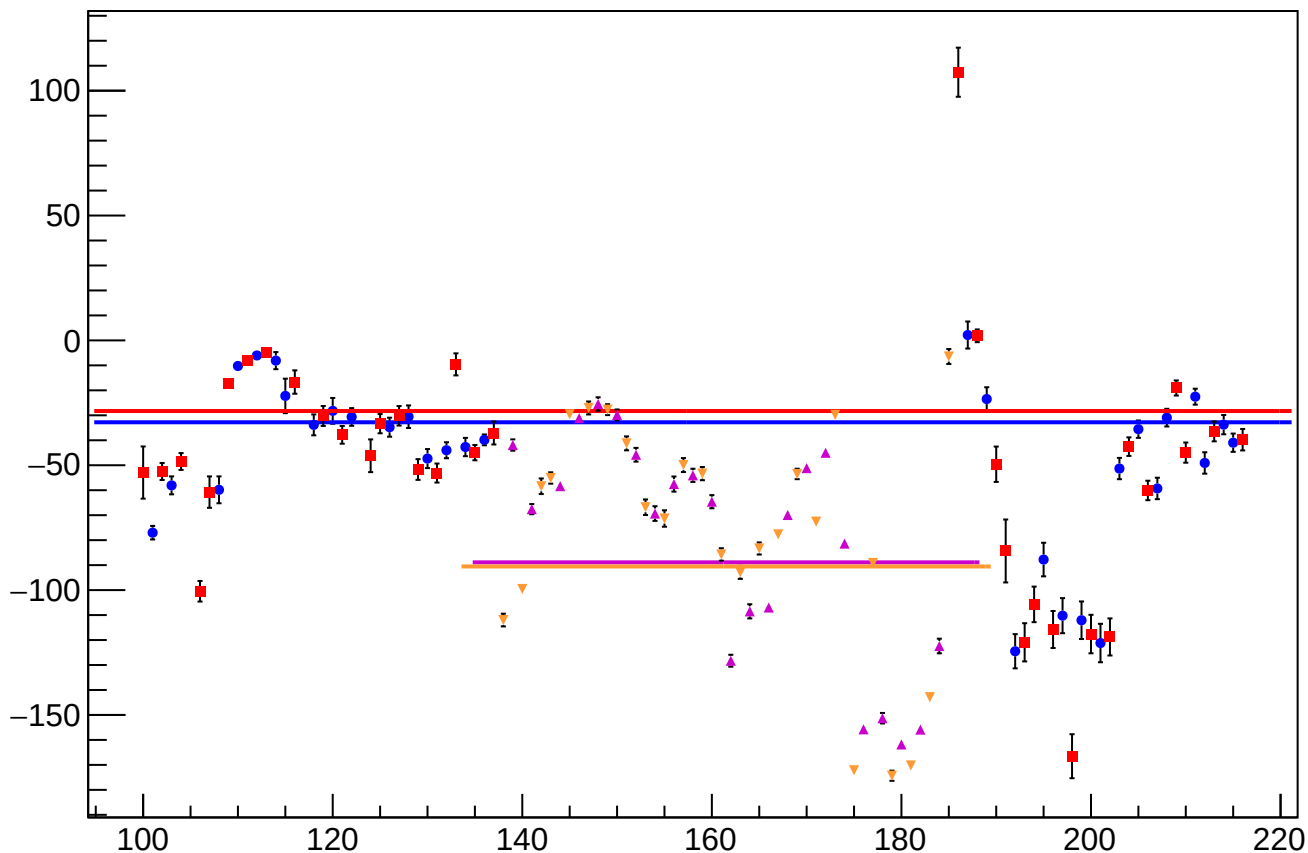
Left In:  $0.193 \pm 0.007$   $\chi^2/\text{NDF}$ : 938.2/22

+ sign  $0.156 \pm 0.006$   $\chi^2/\text{NDF}$ : 1926.7/55

All:  $0.156 \pm 0.005$   $\chi^2/\text{NDF}$ : 4962.0/113

- sign  $0.157 \pm 0.006$   $\chi^2/\text{NDF}$ : 3035.3/57

# reg\_asym\_sam4\_diff\_bpm1X\_slope vs Slug



Right In:  $-32.792 \pm 0.616$   $\chi^2/\text{NDF}: 1682.5/30$

Left Out:  $-90.534 \pm 0.421$   $\chi^2/\text{NDF}: 15358.6/24$

Right Out:  $-28.285 \pm 0.578$   $\chi^2/\text{NDF}: 2433.7/34$

Left In:  $-88.888 \pm 0.435$   $\chi^2/\text{NDF}: 11815.7/22$

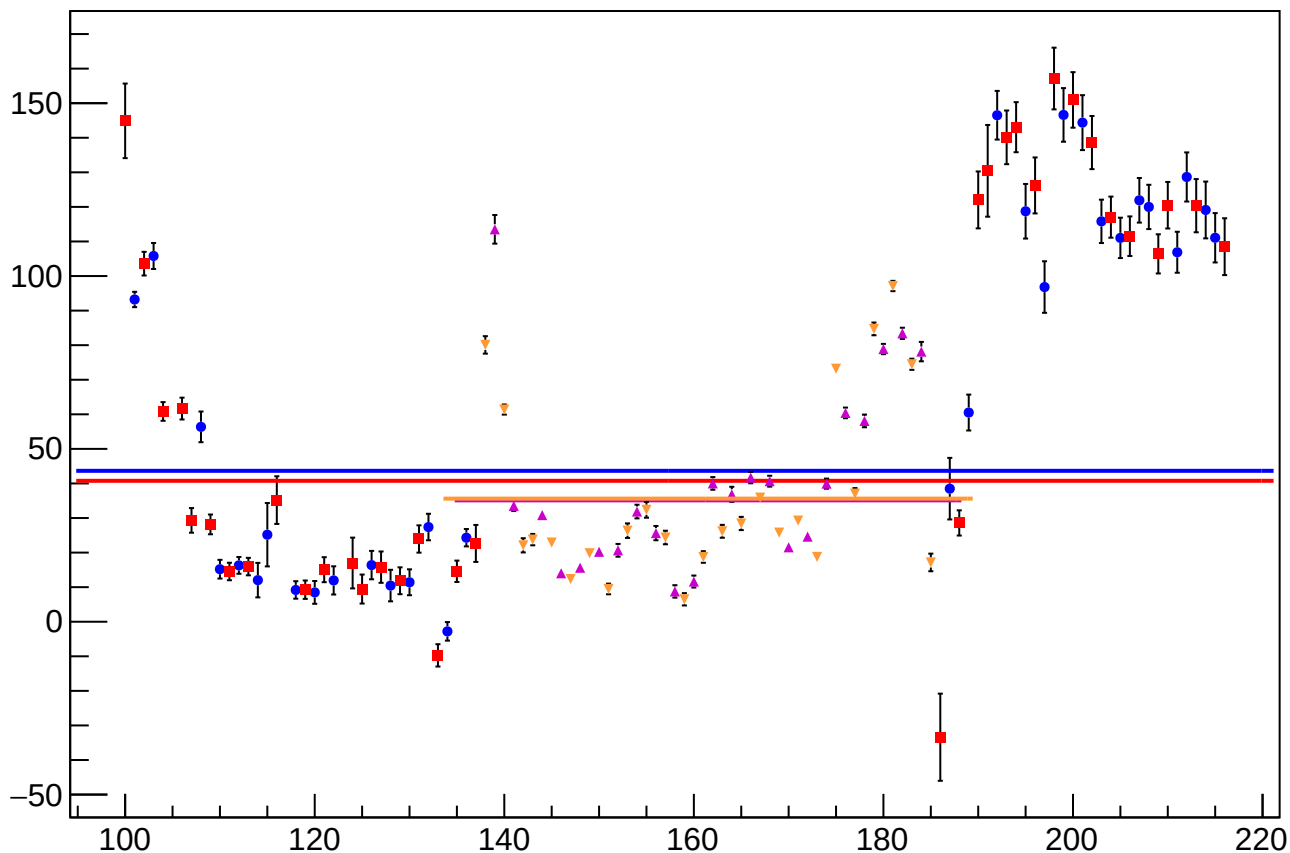
+ sign  $-72.150 \pm 0.348$   $\chi^2/\text{NDF}: 23022.1/55$

All:  $-69.570 \pm 0.246$   $\chi^2/\text{NDF}: 44407.7/113$

- sign  $-66.999 \pm 0.347$   $\chi^2/\text{NDF}: 21275.8/57$



# reg\_asym\_sam4\_diff\_bpm4aY\_slope vs Slug



Right In: 43.654 $\pm$ 0.734  $\chi^2$ /NDF: 3656.7/30

Left Out: 35.612 $\pm$ 0.326  $\chi^2$ /NDF: 5973.0/24

Right Out: 40.767 $\pm$ 0.722  $\chi^2$ /NDF: 3402.6/34

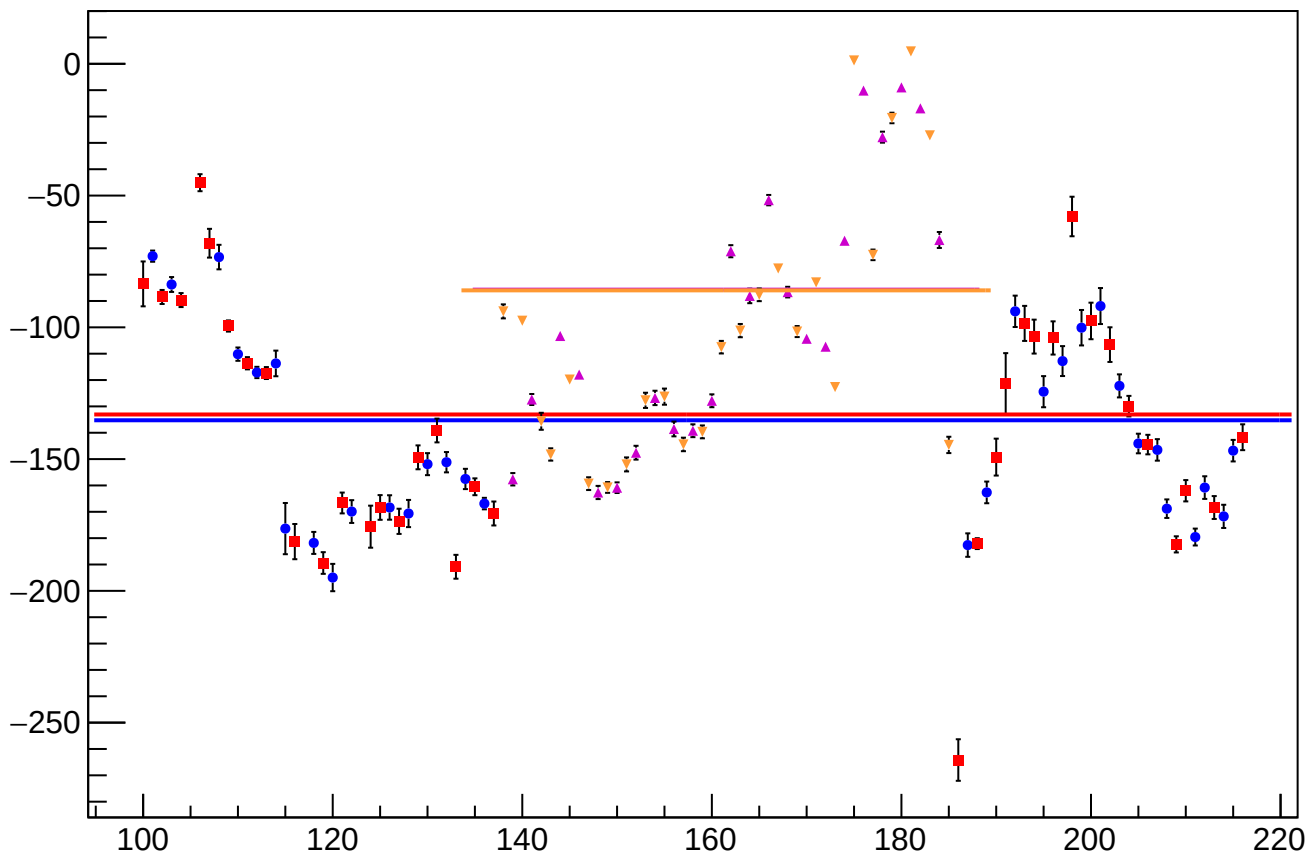
Left In: 35.112 $\pm$ 0.336  $\chi^2$ /NDF: 4144.4/22

+ sign 36.936 $\pm$ 0.298  $\chi^2$ /NDF: 9730.1/55

All: 36.537 $\pm$ 0.213  $\chi^2$ /NDF: 17331.2/113

- sign 36.119 $\pm$ 0.305  $\chi^2$ /NDF: 7597.4/57

# reg\_asym\_sam4\_diff\_bpm4eX\_slope vs Slug



Right In:  $-135.268 \pm 0.671$   $\chi^2/\text{NDF}$ : 2981.6/30

Left Out:  $-85.969 \pm 0.421$   $\chi^2/\text{NDF}$ : 16232.5/24

Right Out:  $-133.071 \pm 0.648$   $\chi^2/\text{NDF}$ : 4071.8/34

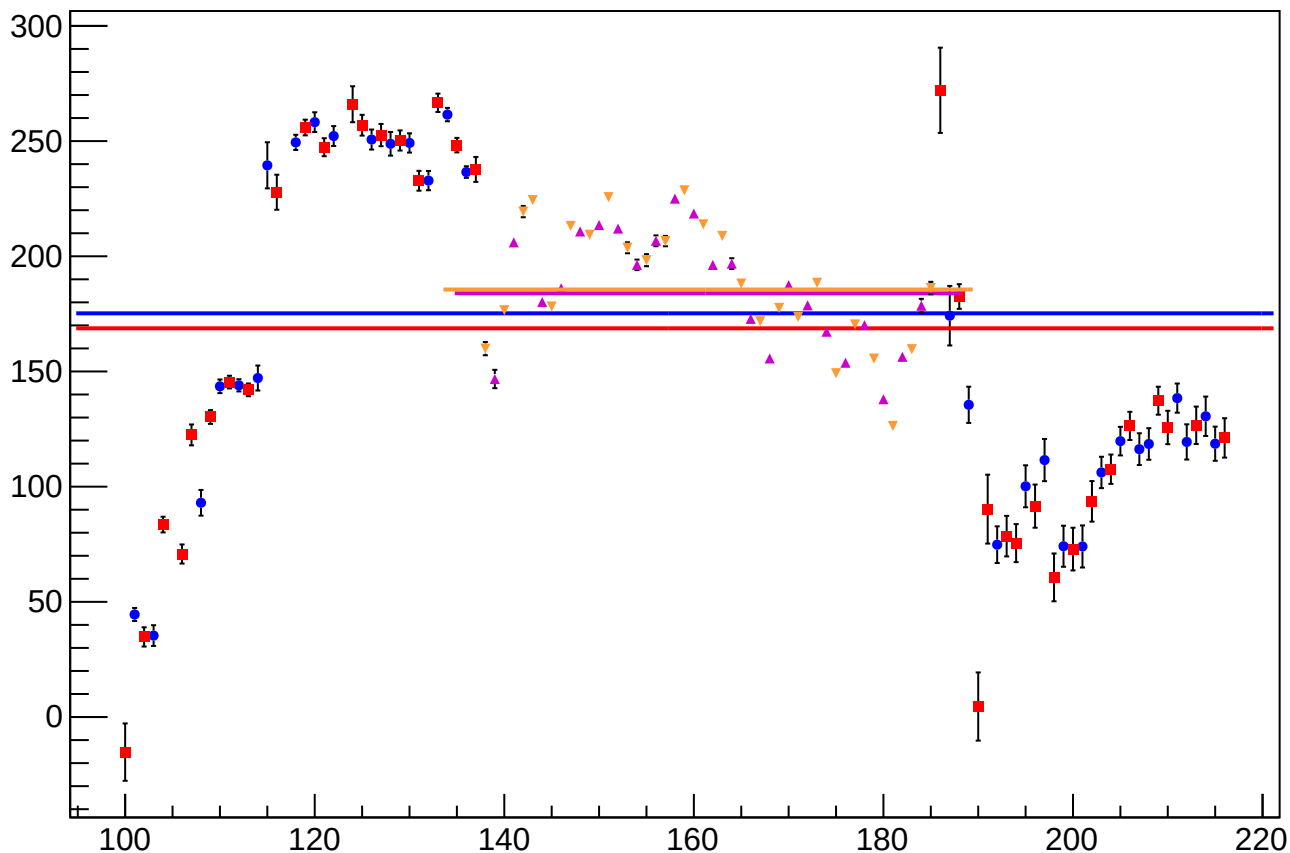
Left In:  $-85.705 \pm 0.432$   $\chi^2/\text{NDF}$ : 13758.7/22

+ sign  $-99.895 \pm 0.356$   $\chi^2/\text{NDF}$ : 23090.9/55

All:  $-100.104 \pm 0.253$   $\chi^2/\text{NDF}$ : 44622.3/113

- sign  $-100.316 \pm 0.360$   $\chi^2/\text{NDF}$ : 21530.6/57

# reg\_asym\_sam4\_diff\_bpm4eY\_slope vs Slug



Right In: 175.236 $\pm$ 0.834  $\chi^2$ /NDF: 8364.3/30

Left Out: 185.583 $\pm$ 0.367  $\chi^2$ /NDF: 5354.7/24

Right Out: 168.732 $\pm$ 0.828  $\chi^2$ /NDF: 7833.2/34

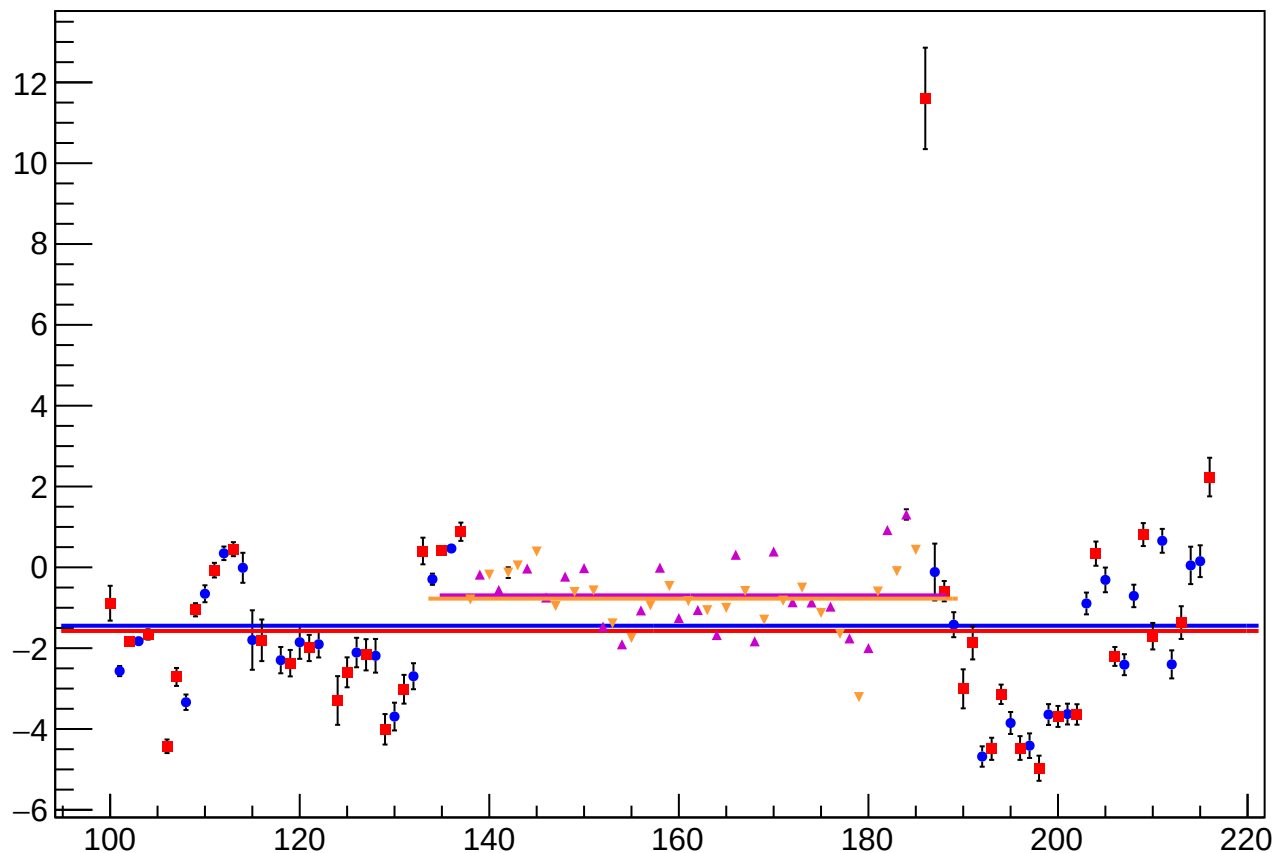
Left In: 183.940 $\pm$ 0.378  $\chi^2$ /NDF: 3873.5/22

+ sign 183.908 $\pm$ 0.336  $\chi^2$ /NDF: 13847.9/55

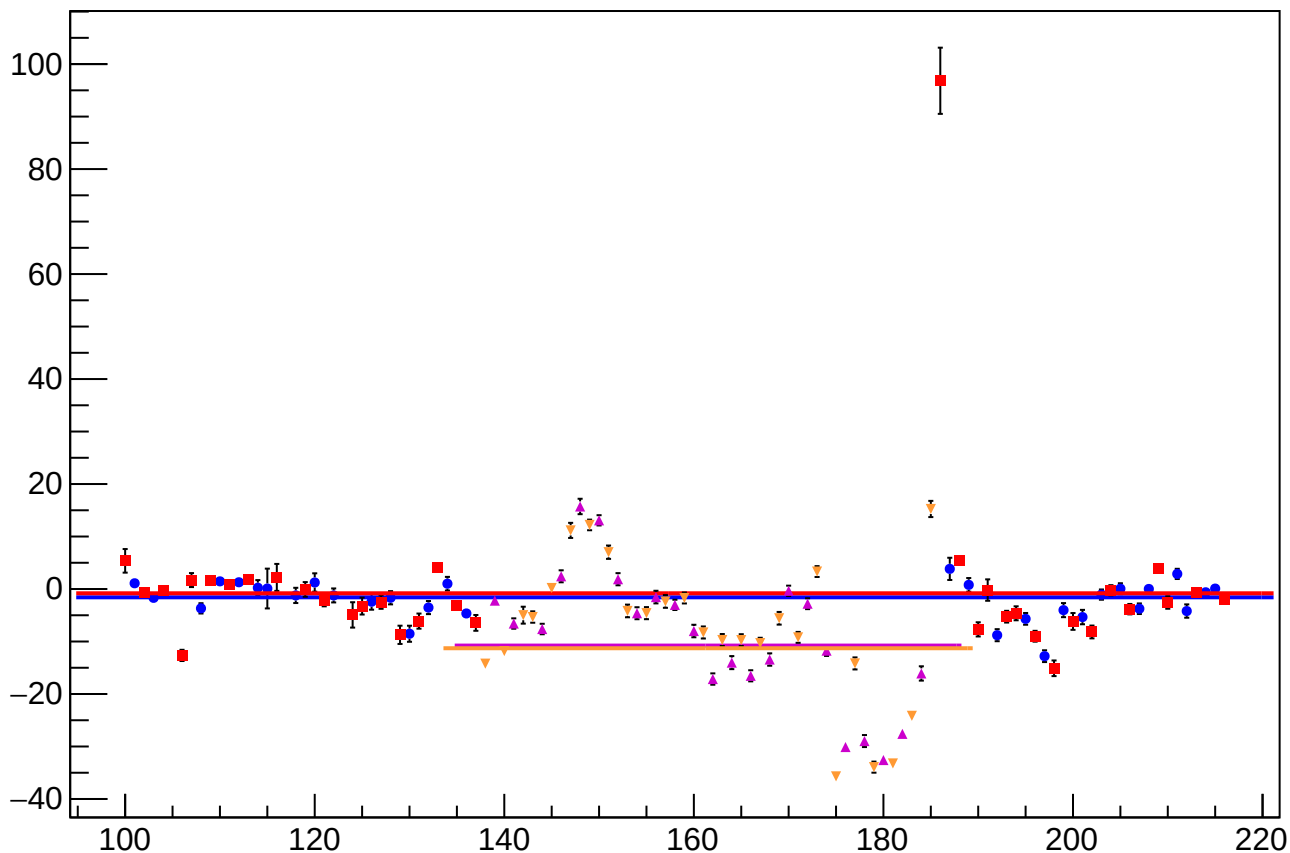
All: 182.644 $\pm$ 0.240  $\chi^2$ /NDF: 25862.9/113

- sign 181.320 $\pm$ 0.344  $\chi^2$ /NDF: 11986.0/57

# reg\_asym\_sam4\_diff\_bpm12X\_slope vs Slug



# reg\_asym\_sam5\_diff\_bpm1X\_slope vs Slug



Right In:  $-1.581 \pm 0.187$   $\chi^2/\text{NDF}$ : 323.5/30

Left Out:  $-11.283 \pm 0.208$   $\chi^2/\text{NDF}$ : 4500.3/24

Right Out:  $-0.813 \pm 0.172$   $\chi^2/\text{NDF}$ : 930.9/34

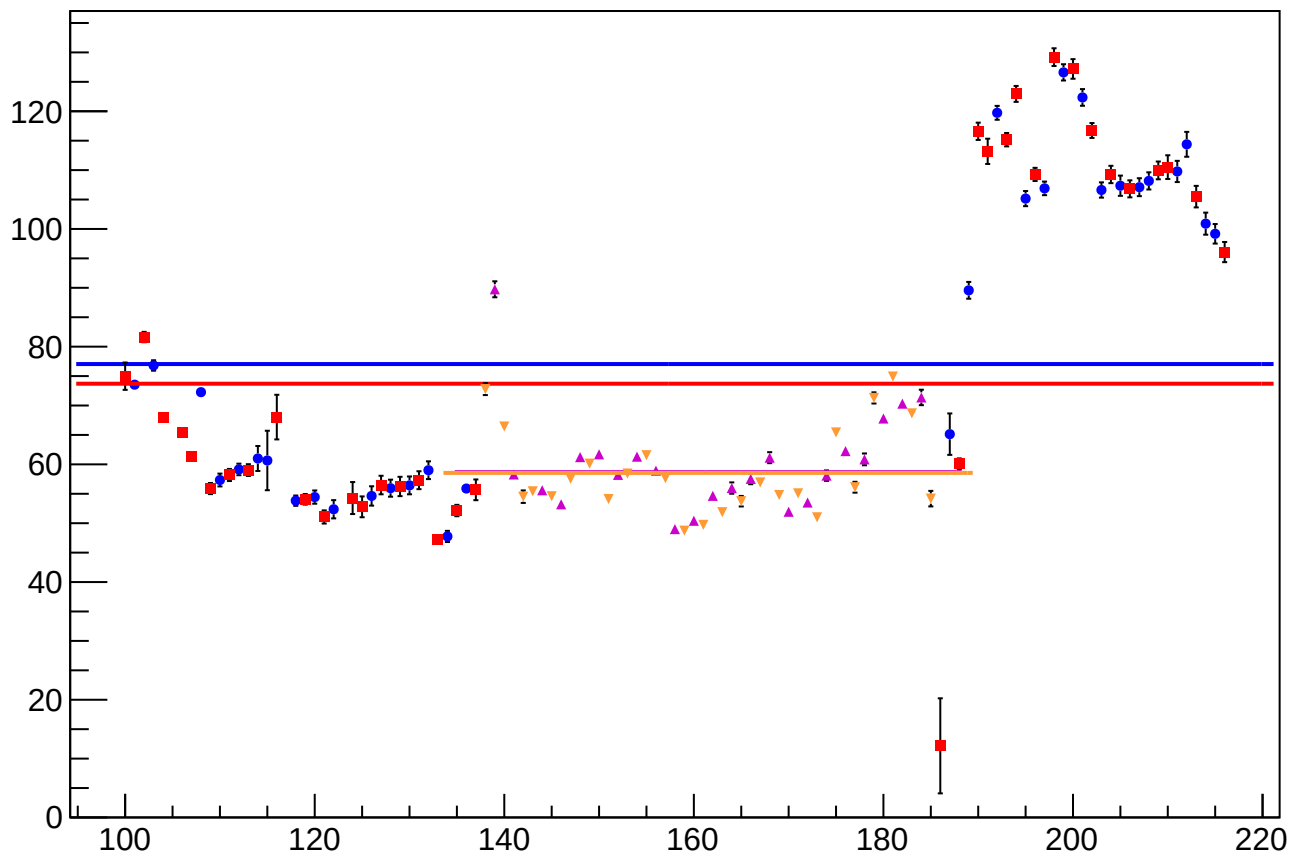
Left In:  $-10.776 \pm 0.213$   $\chi^2/\text{NDF}$ : 3699.2/22

+ sign  $-5.925 \pm 0.139$   $\chi^2/\text{NDF}$ : 6025.8/55

All:  $-5.301 \pm 0.096$   $\chi^2/\text{NDF}$ : 12018.7/113

- sign  $-4.725 \pm 0.134$   $\chi^2/\text{NDF}$ : 5954.3/57

# reg\_asym\_sam5\_diff\_bpm4aY\_slope vs Slug



Right In: 77.045+/-0.219  $\chi^2$ /NDF: 11981.1/30

Left Out: 58.550+/-0.161  $\chi^2$ /NDF:1902.5/24

Right Out: 73.704+/-0.202  $\chi^2$ /NDF: 16109.5/34

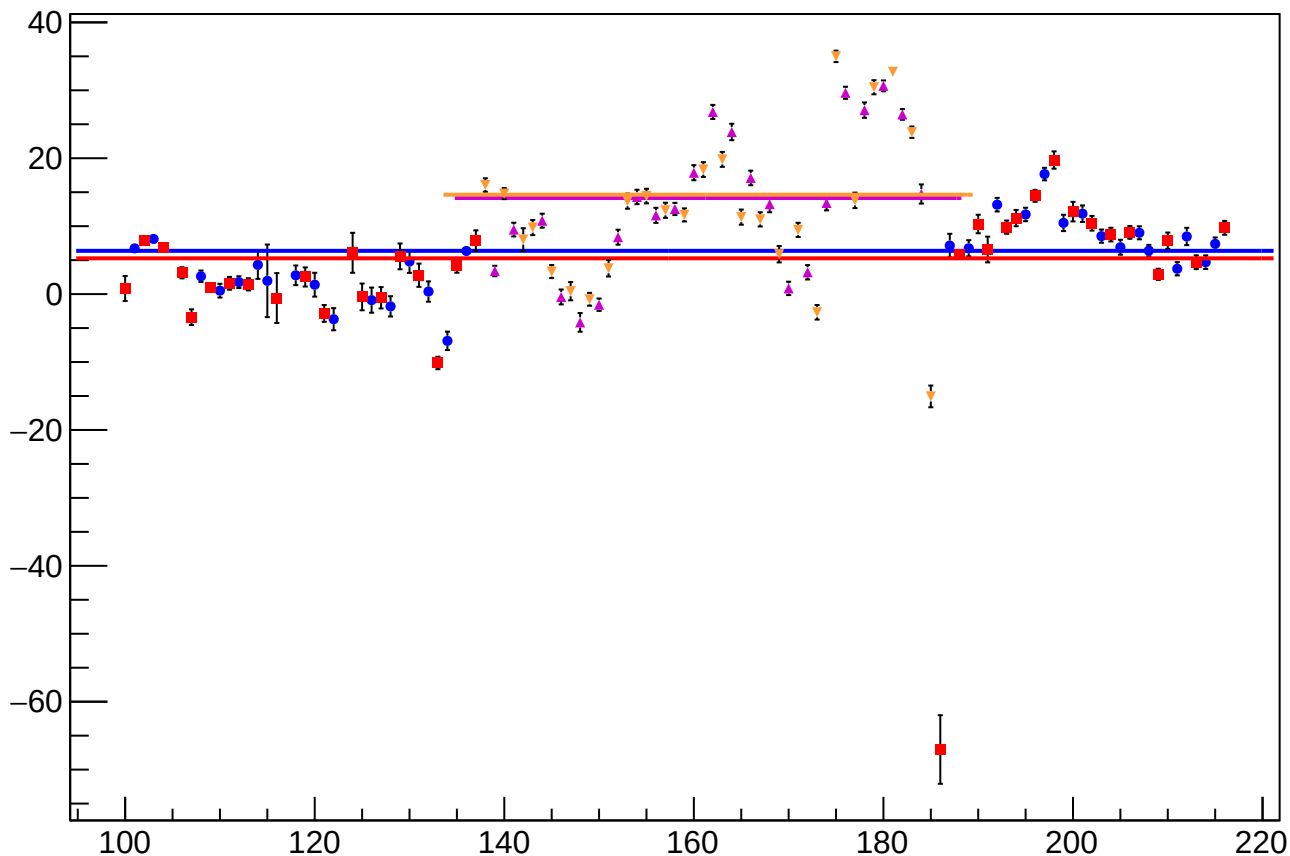
Left In: 58.679+/-0.168  $\chi^2$ /NDF:1613.4/22

+ sign 65.052+/-0.130  $\chi^2$ /NDF: 18513.3/55

All: 64.943+/-0.092  $\chi^2$ /NDF: 39499.8/113

- sign 64.834+/-0.129  $\chi^2$ /NDF: 20985.2/57

# reg\_asym\_sam5\_diff\_bpm4eX\_slope vs Slug



Right In:  $6.369 \pm 0.189$   $\chi^2/\text{NDF}$ : 583.7/30

Left Out:  $14.634 \pm 0.207$   $\chi^2/\text{NDF}$ : 2962.1/24

Right Out:  $5.267 \pm 0.175$   $\chi^2/\text{NDF}$ : 1132.8/34

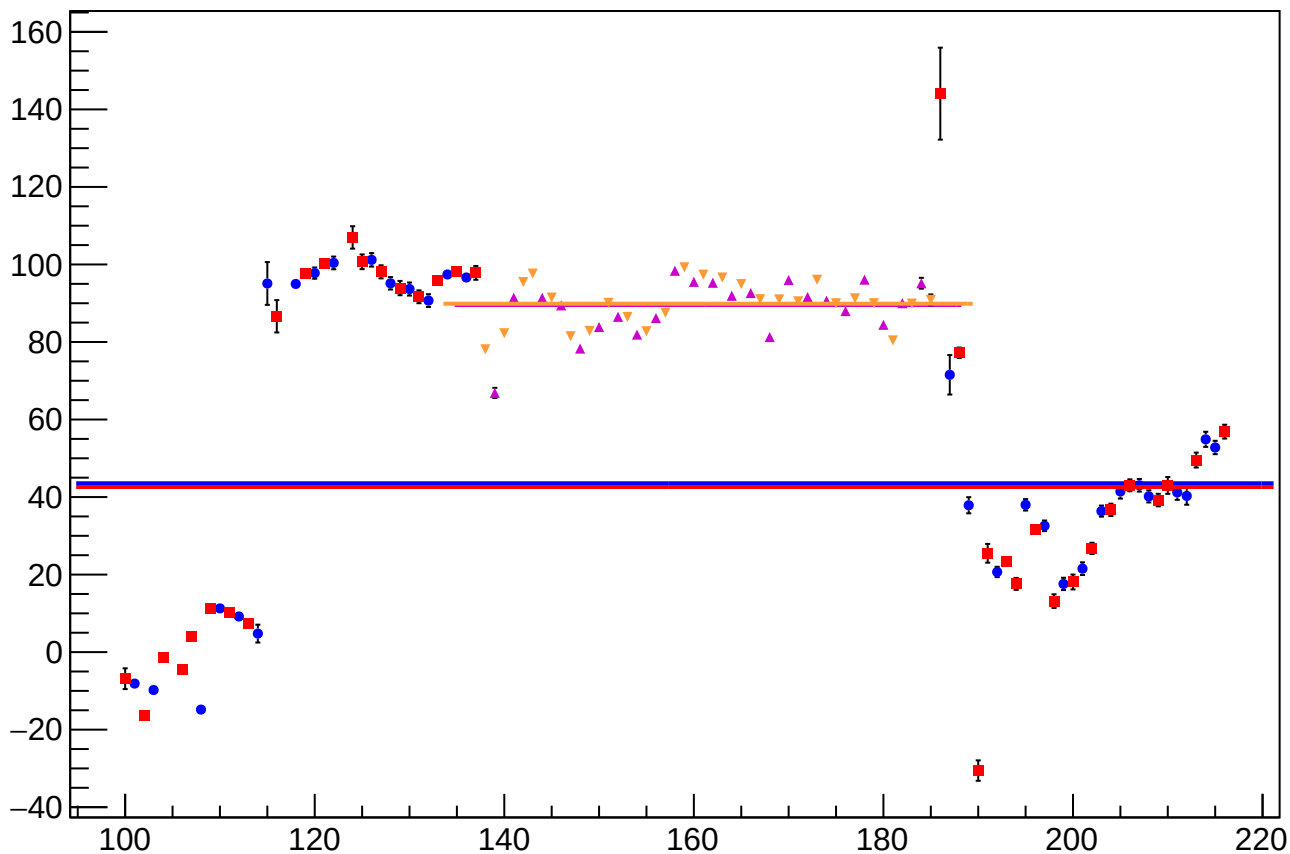
Left In:  $14.146 \pm 0.211$   $\chi^2/\text{NDF}$ : 2541.2/22

+ sign  $10.137 \pm 0.140$   $\chi^2/\text{NDF}$ : 4415.8/55

All:  $9.492 \pm 0.097$   $\chi^2/\text{NDF}$ : 9177.0/113

- sign  $8.889 \pm 0.135$   $\chi^2/\text{NDF}$ : 4719.8/57

# reg\_asym\_sam5\_diff\_bpm4eY\_slope vs Slug



Right In: 43.554 $\pm$ 0.252  $\chi^2$ /NDF: 28003.5/30

Left Out: 89.875 $\pm$ 0.181  $\chi^2$ /NDF:1065.4/24

Right Out: 42.594 $\pm$ 0.236  $\chi^2$ /NDF: 31820.3/34

Left In: 89.541 $\pm$ 0.188  $\chi^2$ /NDF:1095.3/22

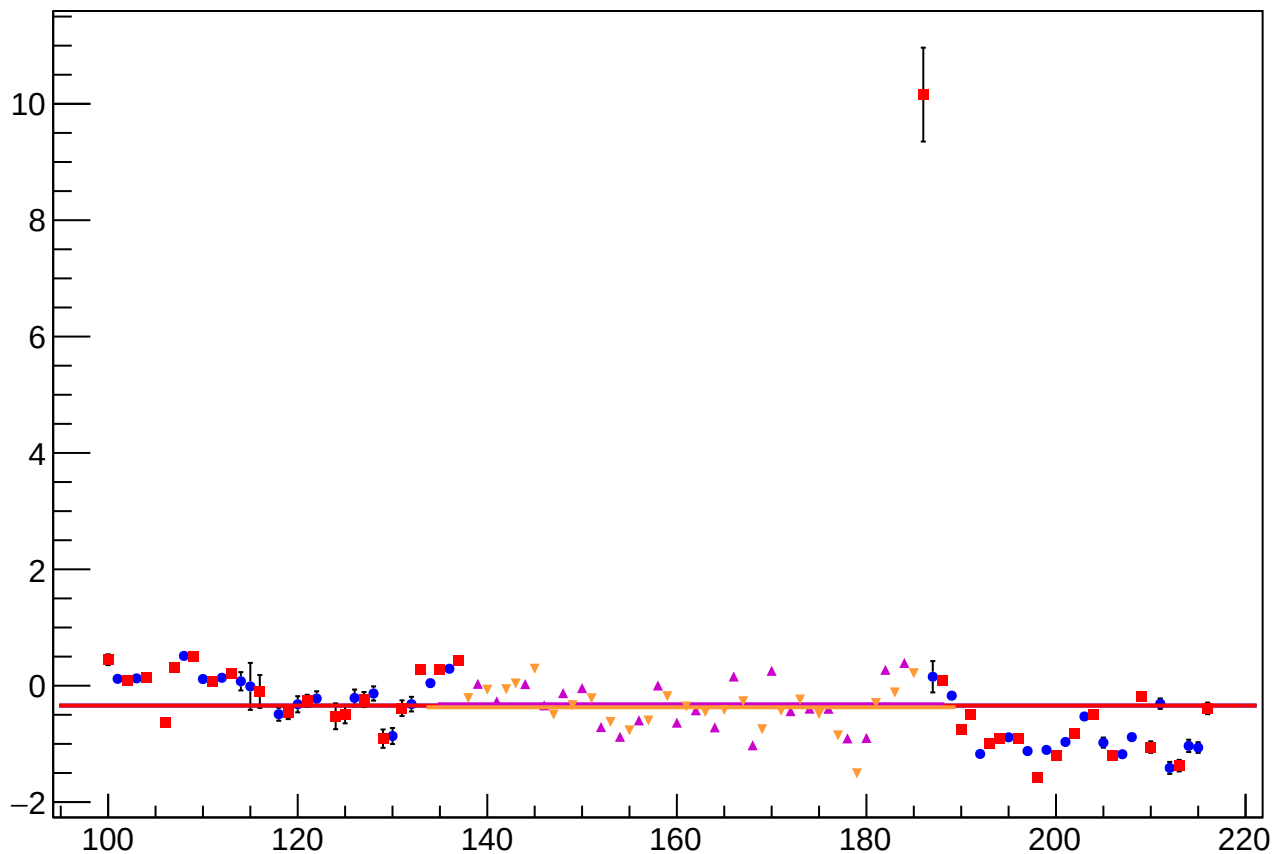
+ sign 74.093 $\pm$ 0.147  $\chi^2$ /NDF: 51377.7/55

All: 72.739 $\pm$ 0.104  $\chi^2$ /NDF: 108697.5/113

- sign 71.387 $\pm$ 0.147  $\chi^2$ /NDF: 57150.2/57



# reg\_asym\_sam5\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.342 \pm 0.010$   $\chi^2/\text{NDF}$ : 3475.0/30

Left Out:  $-0.371 \pm 0.008$   $\chi^2/\text{NDF}$ : 1769.5/24

Right Out:  $-0.342 \pm 0.010$   $\chi^2/\text{NDF}$ : 3852.7/34

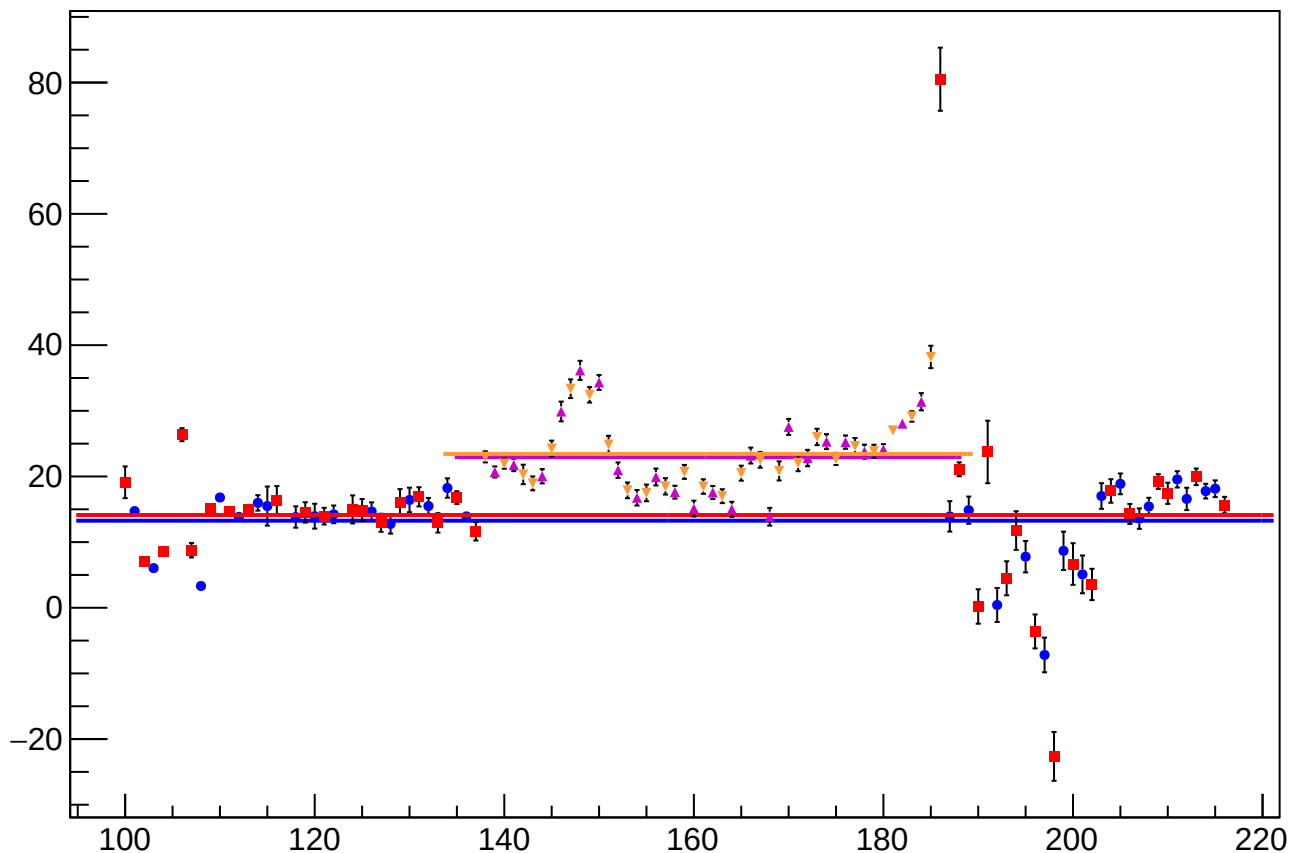
Left In:  $-0.319 \pm 0.008$   $\chi^2/\text{NDF}$ : 2441.1/22

+ sign  $-0.360 \pm 0.006$   $\chi^2/\text{NDF}$ : 5249.4/55

All:  $-0.344 \pm 0.004$   $\chi^2/\text{NDF}$ : 11558.8/113

- sign  $-0.328 \pm 0.006$   $\chi^2/\text{NDF}$ : 6296.9/57

# reg\_asym\_sam6\_diff\_bpm1X\_slope vs Slug



Right In: 13.264 $\pm$ 0.192  $\chi^2$ /NDF: 572.4/30

Left Out: 23.431 $\pm$ 0.216  $\chi^2$ /NDF: 427.8/24

Right Out: 14.126 $\pm$ 0.185  $\chi^2$ /NDF: 909.9/34

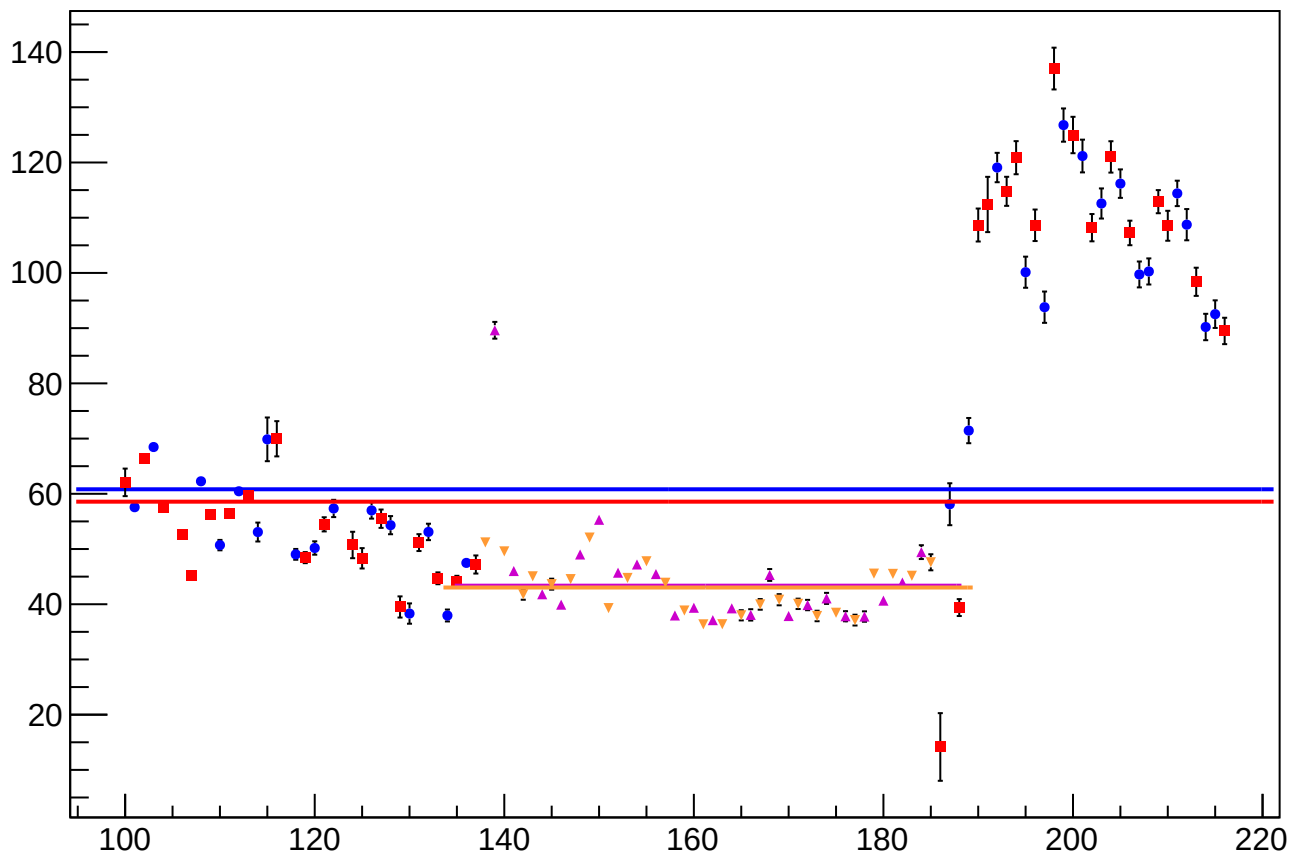
Left In: 22.949 $\pm$ 0.225  $\chi^2$ /NDF: 565.2/22

+ sign 17.767 $\pm$ 0.144  $\chi^2$ /NDF: 2236.2/55

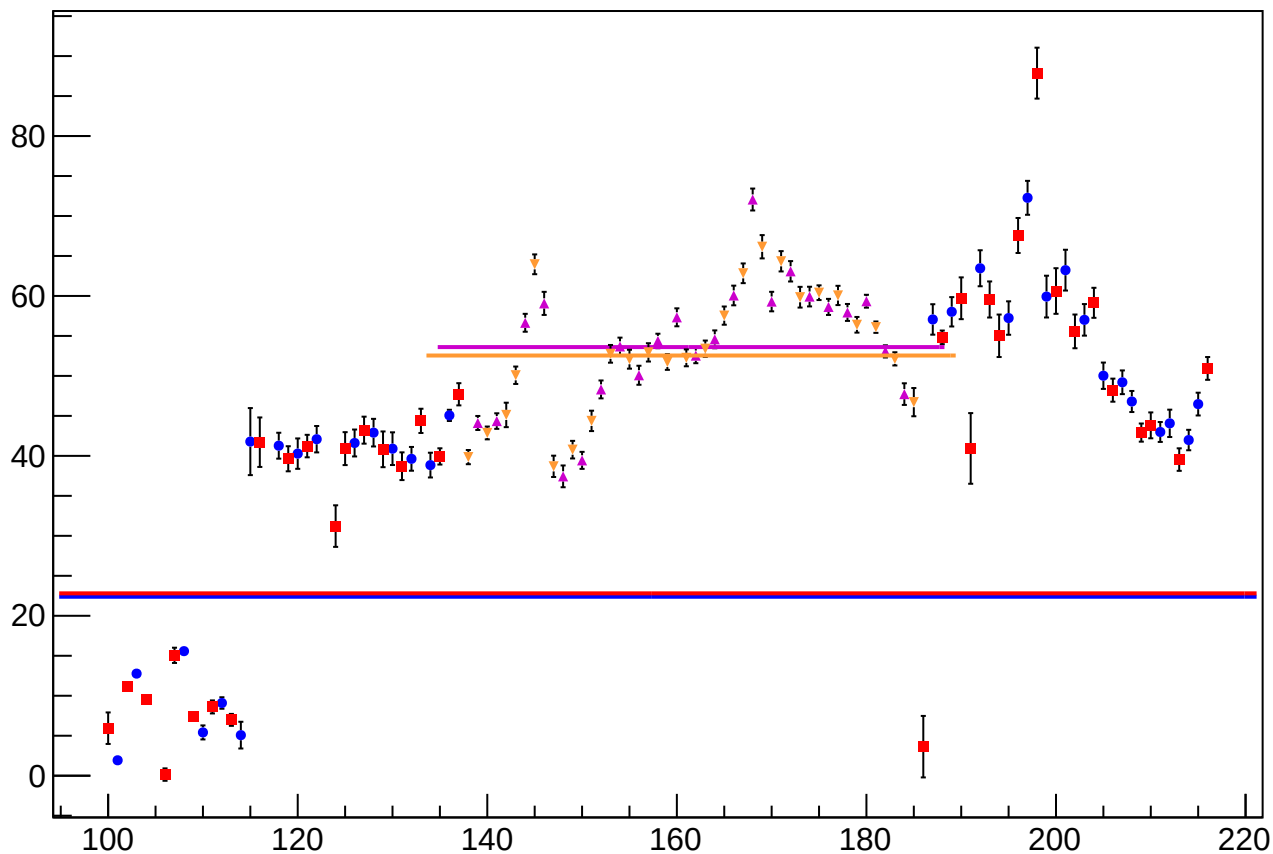
All: 17.728 $\pm$ 0.101  $\chi^2$ /NDF: 4625.4/113

- sign 17.688 $\pm$ 0.143  $\chi^2$ /NDF: 2389.0/57

# reg\_asym\_sam6\_diff\_bpm4aY\_slope vs Slug



# reg\_asym\_sam6\_diff\_bpm4eX\_slope vs Slug



Right In: 22.383 $\pm$ 0.192  $\chi^2$ /NDF: 10742.9/30

Left Out: 52.550 $\pm$ 0.215  $\chi^2$ /NDF:1186.2/24

Right Out: 22.806 $\pm$ 0.195  $\chi^2$ /NDF: 10063.0/34

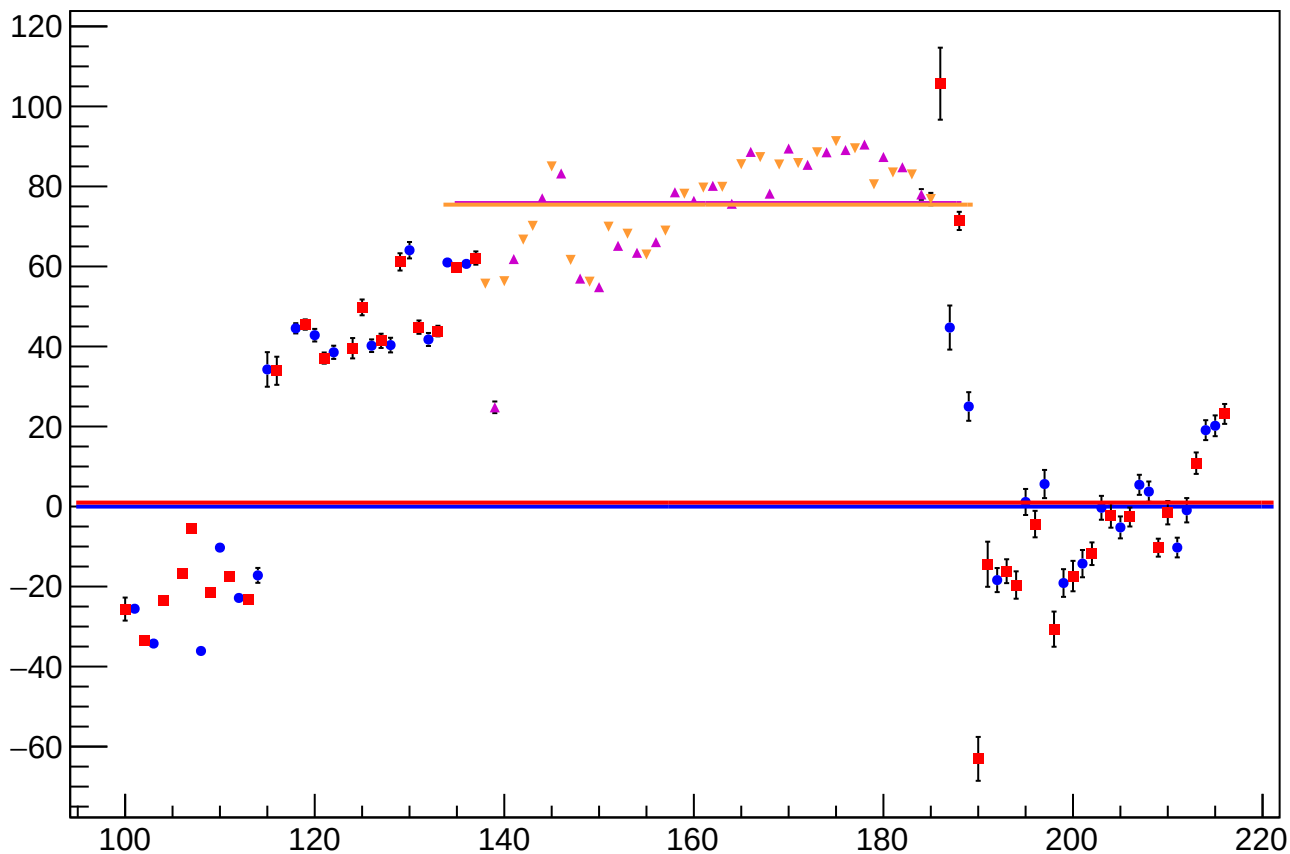
Left In: 53.605 $\pm$ 0.223  $\chi^2$ /NDF:1015.9/22

+ sign 35.802 $\pm$ 0.143  $\chi^2$ /NDF: 22901.6/55

All: 35.965 $\pm$ 0.102  $\chi^2$ /NDF: 44811.6/113

- sign 36.137 $\pm$ 0.147  $\chi^2$ /NDF: 21907.3/57

# reg\_asym\_sam6\_diff\_bpm4eY\_slope vs Slug



Right In: -0.012 $\pm$ 0.247  $\chi^2$ /NDF: 21381.9/30

Left Out: 75.448 $\pm$ 0.188  $\chi^2$ /NDF:3469.1/24

Right Out: 0.985 $\pm$ 0.249  $\chi^2$ /NDF: 17559.8/34

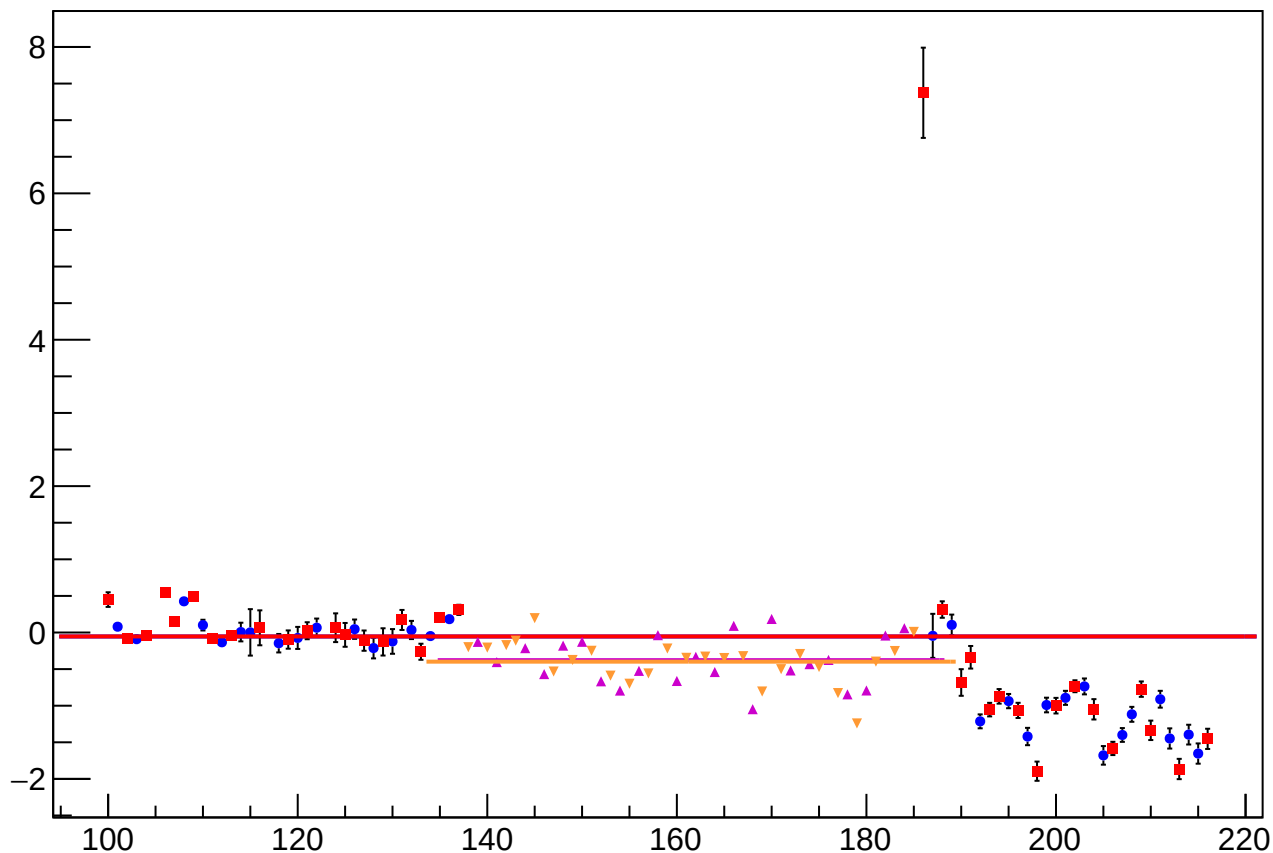
Left In: 75.844 $\pm$ 0.197  $\chi^2$ /NDF:4265.6/22

+ sign 47.754 $\pm$ 0.150  $\chi^2$ /NDF: 83763.6/55

All: 47.395 $\pm$ 0.108  $\chi^2$ /NDF: 161067.8/113

- sign 47.013 $\pm$ 0.155  $\chi^2$ /NDF: 77292.4/57

# reg\_asym\_sam6\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.054 \pm 0.010$   $\chi^2/\text{NDF}$ : 1915.0/30

Left Out:  $-0.398 \pm 0.008$   $\chi^2/\text{NDF}$ : 1031.5/24

Right Out:  $-0.054 \pm 0.011$   $\chi^2/\text{NDF}$ : 2105.4/34

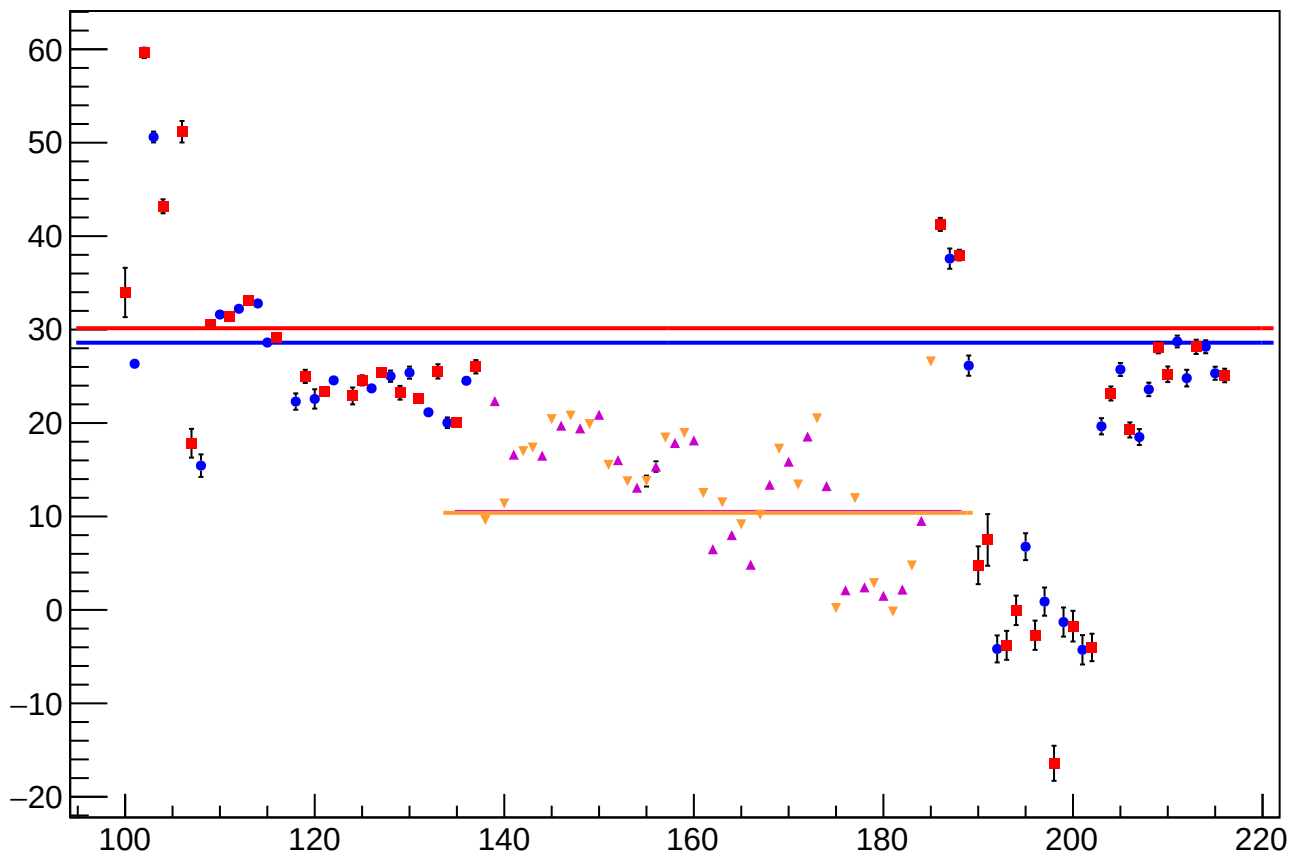
Left In:  $-0.378 \pm 0.009$   $\chi^2/\text{NDF}$ : 1351.5/22

+ sign  $-0.264 \pm 0.007$   $\chi^2/\text{NDF}$ : 3600.9/55

All:  $-0.257 \pm 0.005$   $\chi^2/\text{NDF}$ : 7623.0/113

- sign  $-0.249 \pm 0.007$   $\chi^2/\text{NDF}$ : 4019.8/57

# reg\_asym\_sam7\_diff\_bpm1X\_slope vs Slug



Right In: 28.597 $\pm$ 0.086  $\chi^2$ /NDF: 5790.1/30

Left Out: 10.390 $\pm$ 0.064  $\chi^2$ /NDF: 13792.8/24

Right Out: 30.145 $\pm$ 0.076  $\chi^2$ /NDF: 8996.4/34

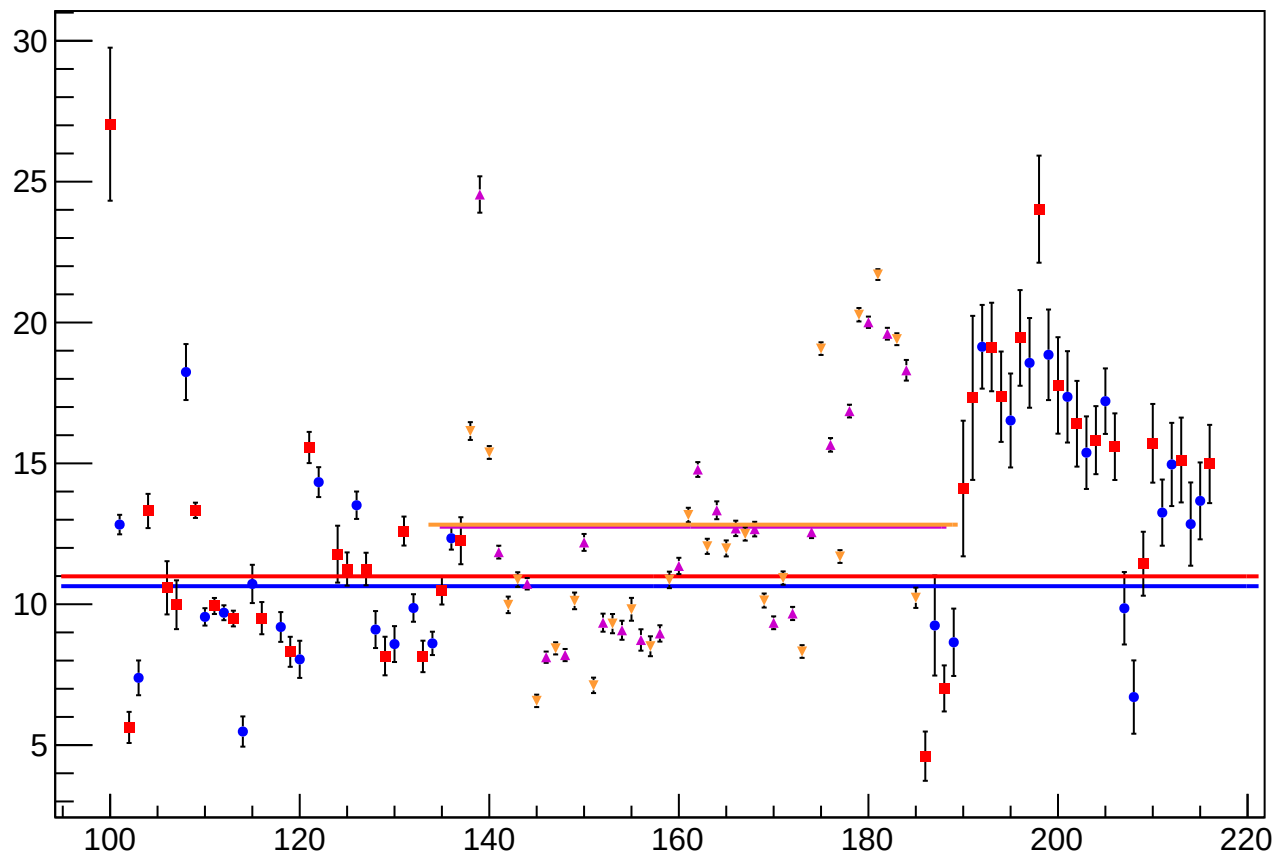
Left In: 10.488 $\pm$ 0.067  $\chi^2$ /NDF: 11498.1/22

+ sign 16.943 $\pm$ 0.051  $\chi^2$ /NDF: 48598.0/55

All: 18.044 $\pm$ 0.036  $\chi^2$ /NDF: 107915.6/113

- sign 19.093 $\pm$ 0.050  $\chi^2$ /NDF: 58418.2/57

# reg\_asym\_sam7\_diff\_bpm4aY\_slope vs Slug



Right In:  $10.641 \pm 0.109$   $\chi^2/\text{NDF}$ : 602.6/30

Left Out:  $12.825 \pm 0.051$   $\chi^2/\text{NDF}$ : 8016.5/24

Right Out:  $10.990 \pm 0.107$   $\chi^2/\text{NDF}$ : 704.3/34

Left In:  $12.752 \pm 0.053$   $\chi^2/\text{NDF}$ : 5502.5/22

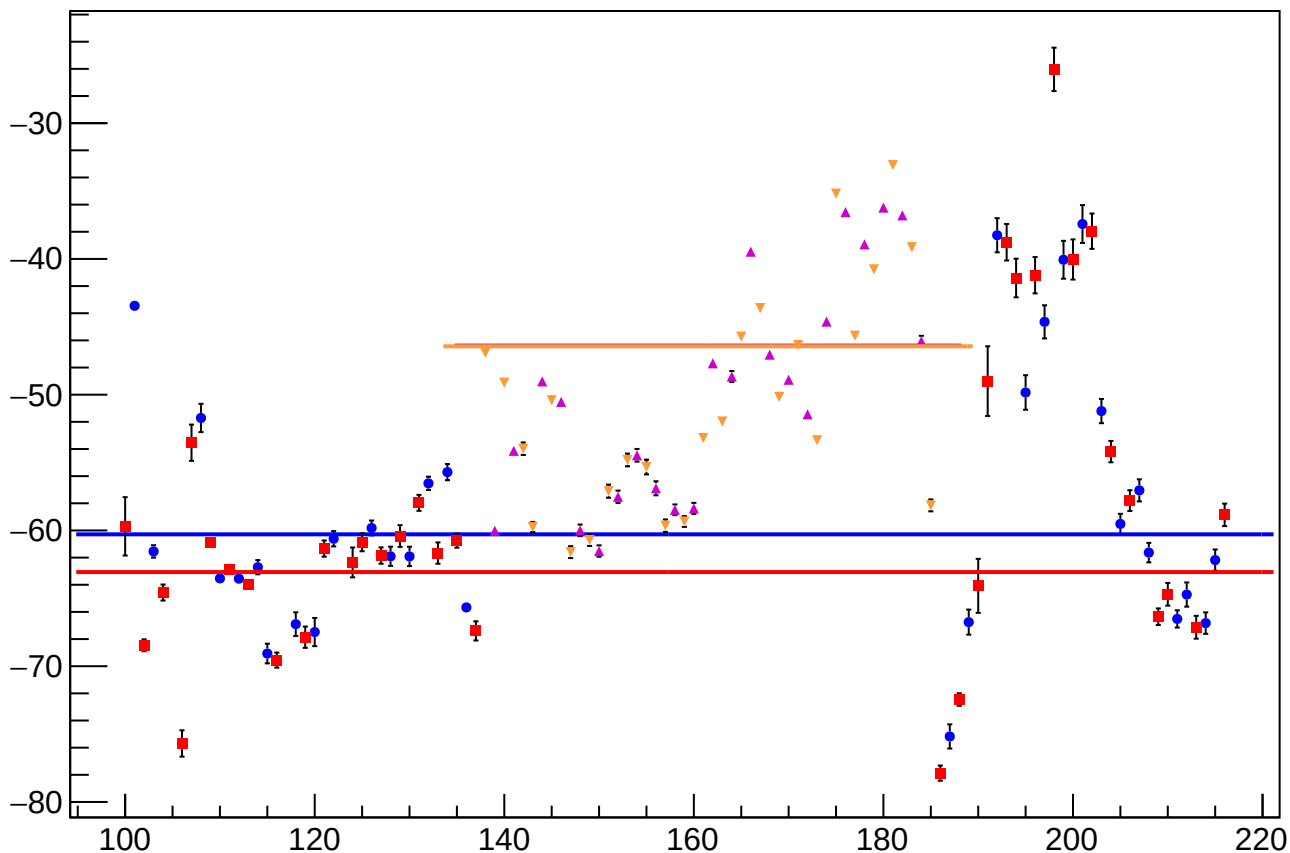
+ sign  $12.430 \pm 0.046$   $\chi^2/\text{NDF}$ : 8949.9/55

All:  $12.418 \pm 0.033$   $\chi^2/\text{NDF}$ : 15374.9/113

- sign  $12.406 \pm 0.047$   $\chi^2/\text{NDF}$ : 6424.8/57



# reg\_asym\_sam7\_diff\_bpm4eX\_slope vs Slug



Right In:  $-60.285 \pm 0.101$   $\chi^2/\text{NDF}$ : 5262.9/30

Left Out:  $-46.435 \pm 0.064$   $\chi^2/\text{NDF}$ : 18170.4/24

Right Out:  $-63.065 \pm 0.096$   $\chi^2/\text{NDF}$ : 4213.9/34

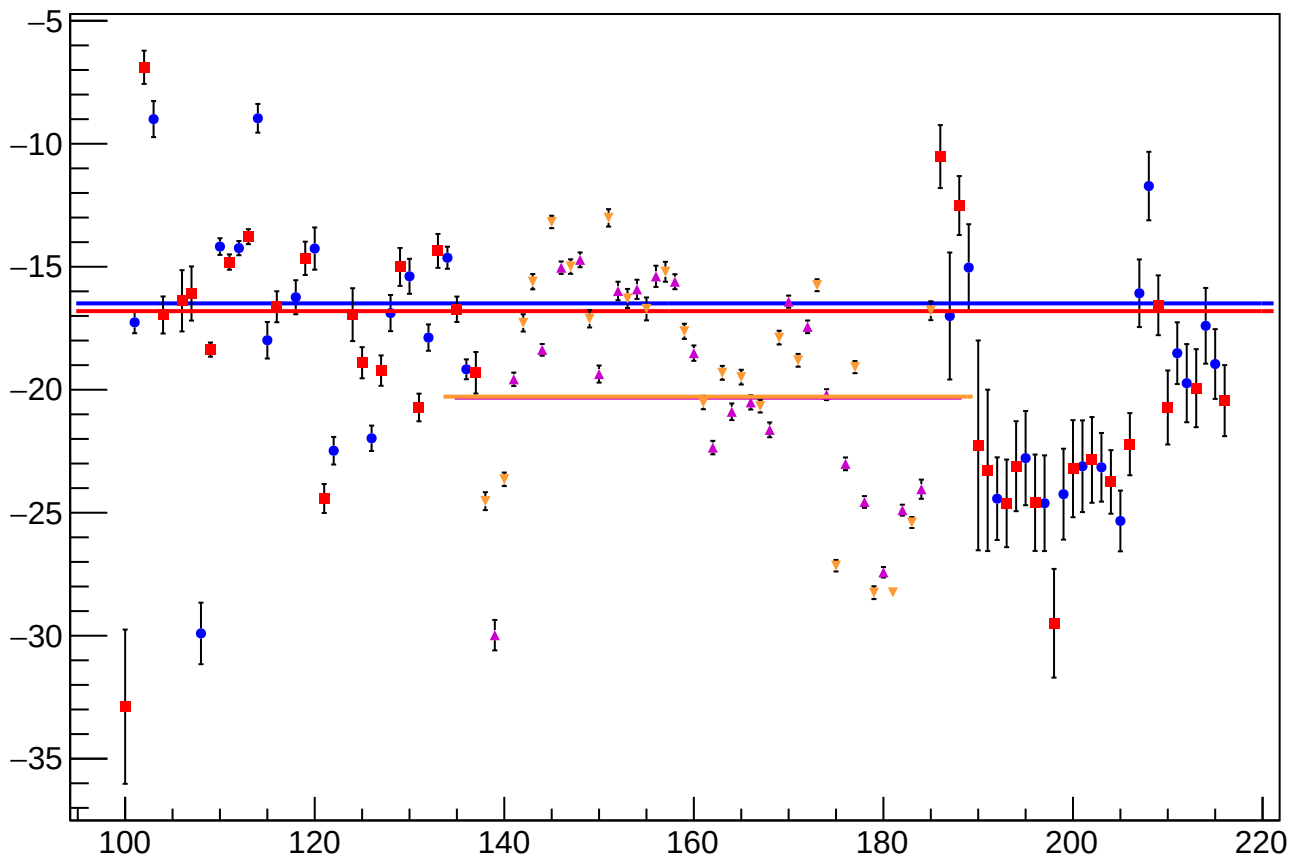
Left In:  $-46.383 \pm 0.067$   $\chi^2/\text{NDF}$ : 15080.6/22

+ sign  $-50.416 \pm 0.054$   $\chi^2/\text{NDF}$ : 36717.5/55

All:  $-51.114 \pm 0.039$   $\chi^2/\text{NDF}$ : 76688.4/113

- sign  $-51.824 \pm 0.055$   $\chi^2/\text{NDF}$ : 39638.2/57

reg\_asym\_sam7\_diff\_bpm4eY\_slope vs Slug



Right In:  $-16.489 \pm 0.121$   $\chi^2/\text{NDF}$ : 981.8/30

Left Out:  $-20.281 \pm 0.057$   $\chi^2/\text{NDF}$ : 7019.5/24

Right Out:  $-16.804 \pm 0.119$   $\chi^2/\text{NDF}$ : 899.4/34

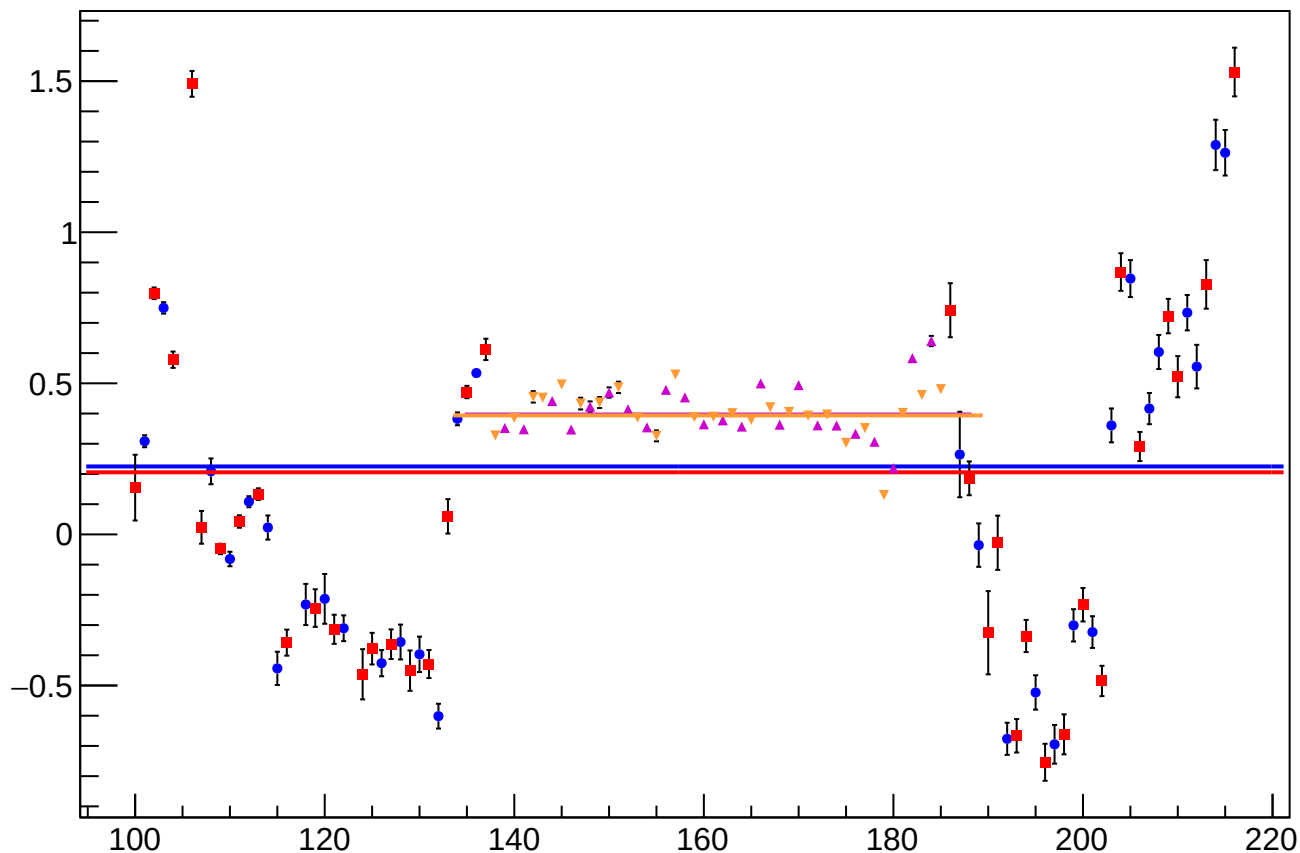
Left In:  $-20.324 \pm 0.059$   $\chi^2/\text{NDF}$ : 4272.7/22

+ sign  $-19.594 \pm 0.052$   $\chi^2/\text{NDF}$ : 8801.2/55

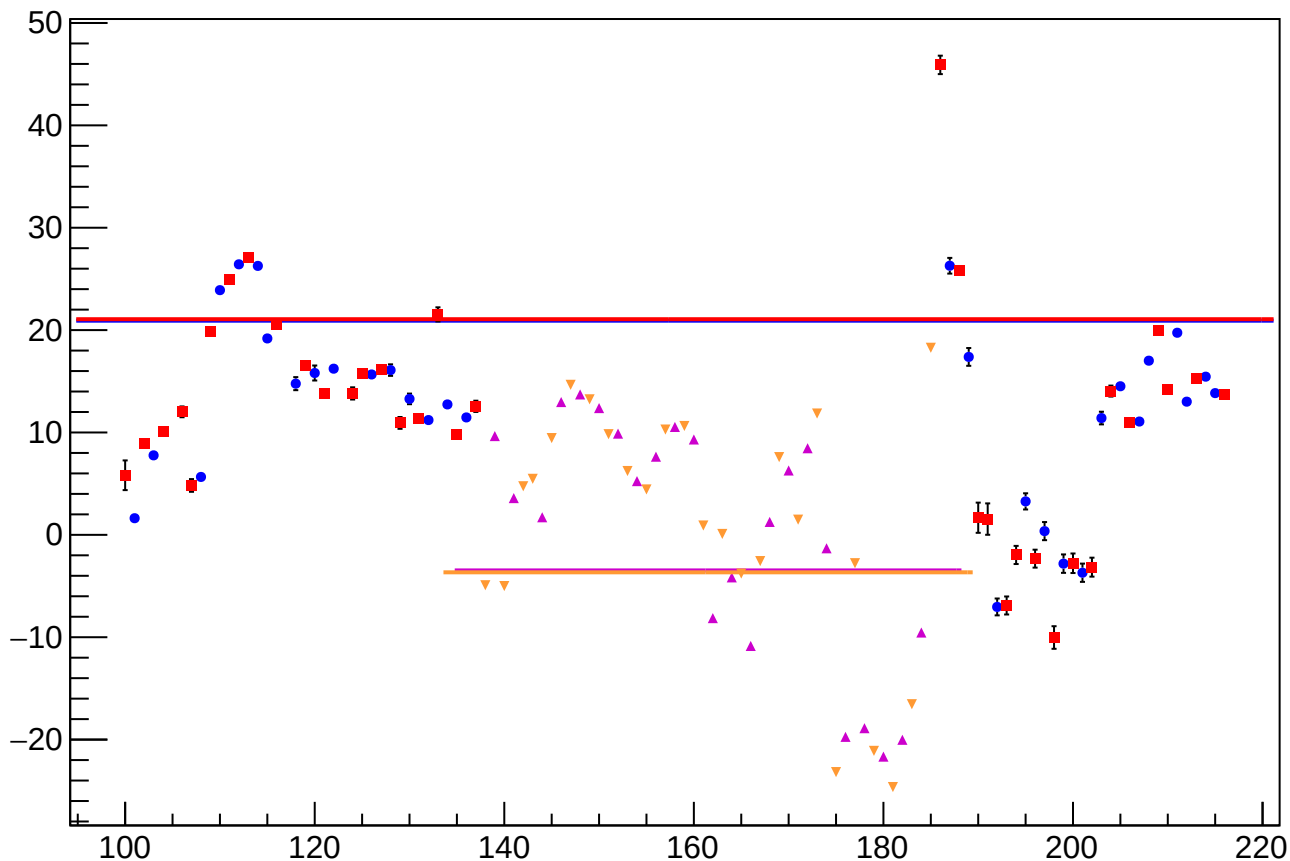
All:  $-19.610 \pm 0.037$   $\chi^2/\text{NDF}$ : 14676.2/113

- sign  $-19.627 \pm 0.053$   $\chi^2/\text{NDF}$ : 5874.9/57

# reg\_asym\_sam7\_diff\_bpm12X\_slope vs Slug



# reg\_asym\_sam8\_diff\_bpm1X\_slope vs Slug



Right In:  $20.921 \pm 0.052$   $\chi^2/\text{NDF}: 18768.7/30$

Left Out:  $-3.660 \pm 0.055$   $\chi^2/\text{NDF}: 56739.4/24$

Right Out:  $21.064 \pm 0.044$   $\chi^2/\text{NDF}: 18466.3/34$

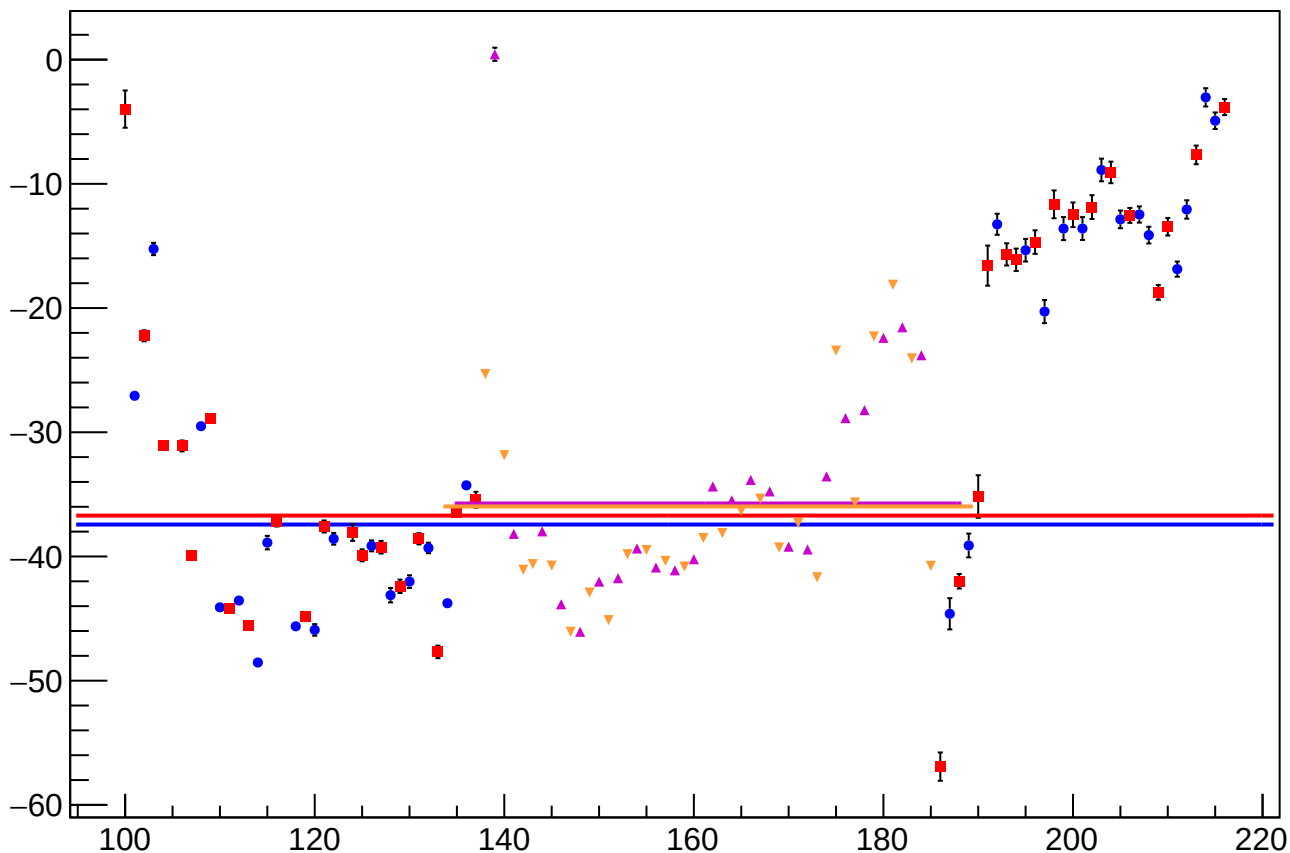
Left In:  $-3.475 \pm 0.057$   $\chi^2/\text{NDF}: 45103.9/22$

+ sign  $9.283 \pm 0.038$   $\chi^2/\text{NDF}: 182480.7/55$

All:  $10.769 \pm 0.026$   $\chi^2/\text{NDF}: 364519.7/113$

- sign  $12.047 \pm 0.035$   $\chi^2/\text{NDF}: 179122.9/57$

# reg\_asym\_sam8\_diff\_bpm4aY\_slope vs Slug



Right In:  $-37.429 \pm 0.072$   $\chi^2/\text{NDF}$ : 24430.6/30

Left Out:  $-35.973 \pm 0.042$   $\chi^2/\text{NDF}$ : 33609.3/24

Right Out:  $-36.707 \pm 0.067$   $\chi^2/\text{NDF}$ : 23755.8/34

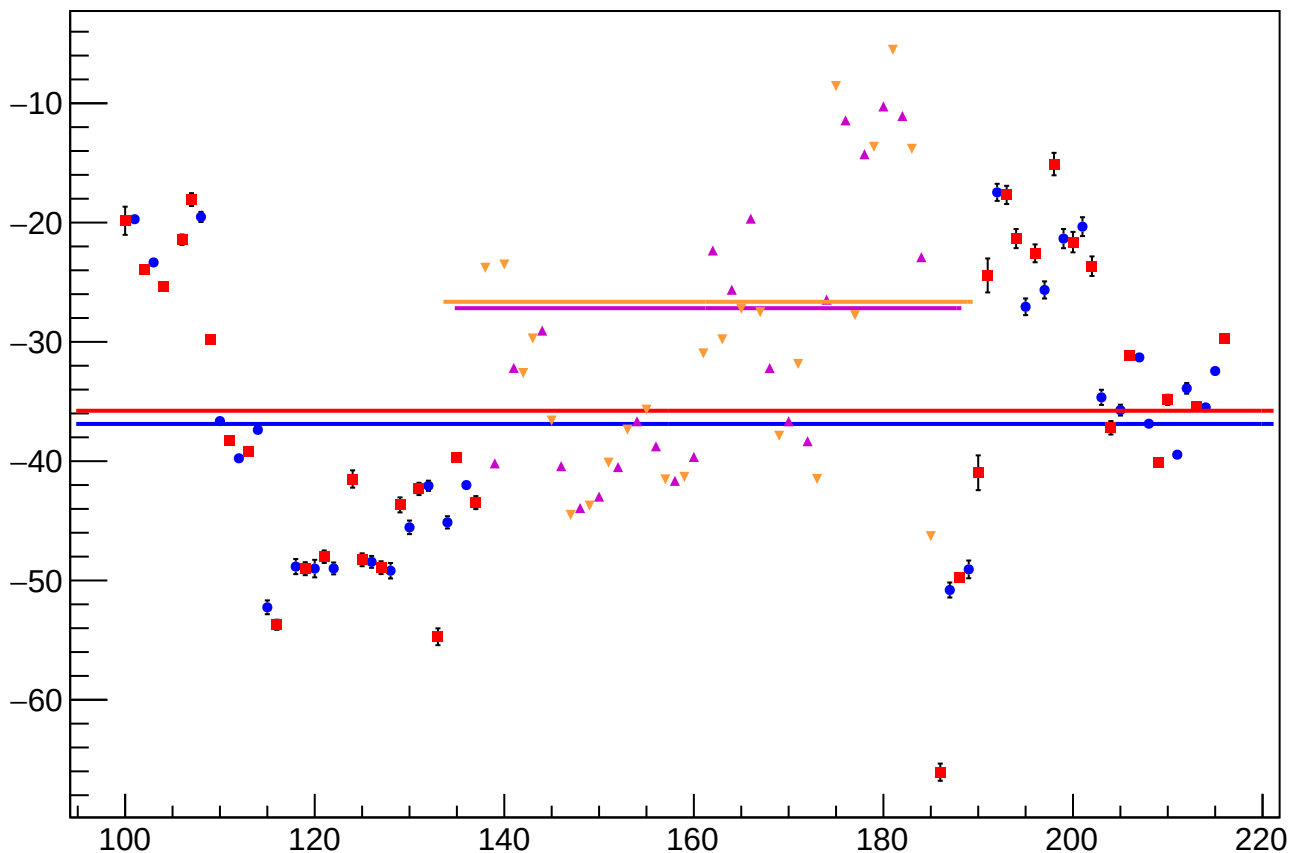
Left In:  $-35.737 \pm 0.045$   $\chi^2/\text{NDF}$ : 27154.8/22

+ sign  $-36.351 \pm 0.037$   $\chi^2/\text{NDF}$ : 58346.3/55

All:  $-36.198 \pm 0.026$   $\chi^2/\text{NDF}$ : 109437.3/113

- sign  $-36.038 \pm 0.037$   $\chi^2/\text{NDF}$ : 51054.9/57

# reg\_asym\_sam8\_diff\_bpm4eX\_slope vs Slug



Right In:  $-36.878 \pm 0.064$   $\chi^2/\text{NDF}: 14166.6/30$

Left Out:  $-26.639 \pm 0.055$   $\chi^2/\text{NDF}: 50051.9/24$

Right Out:  $-35.772 \pm 0.058$   $\chi^2/\text{NDF}: 19640.9/34$

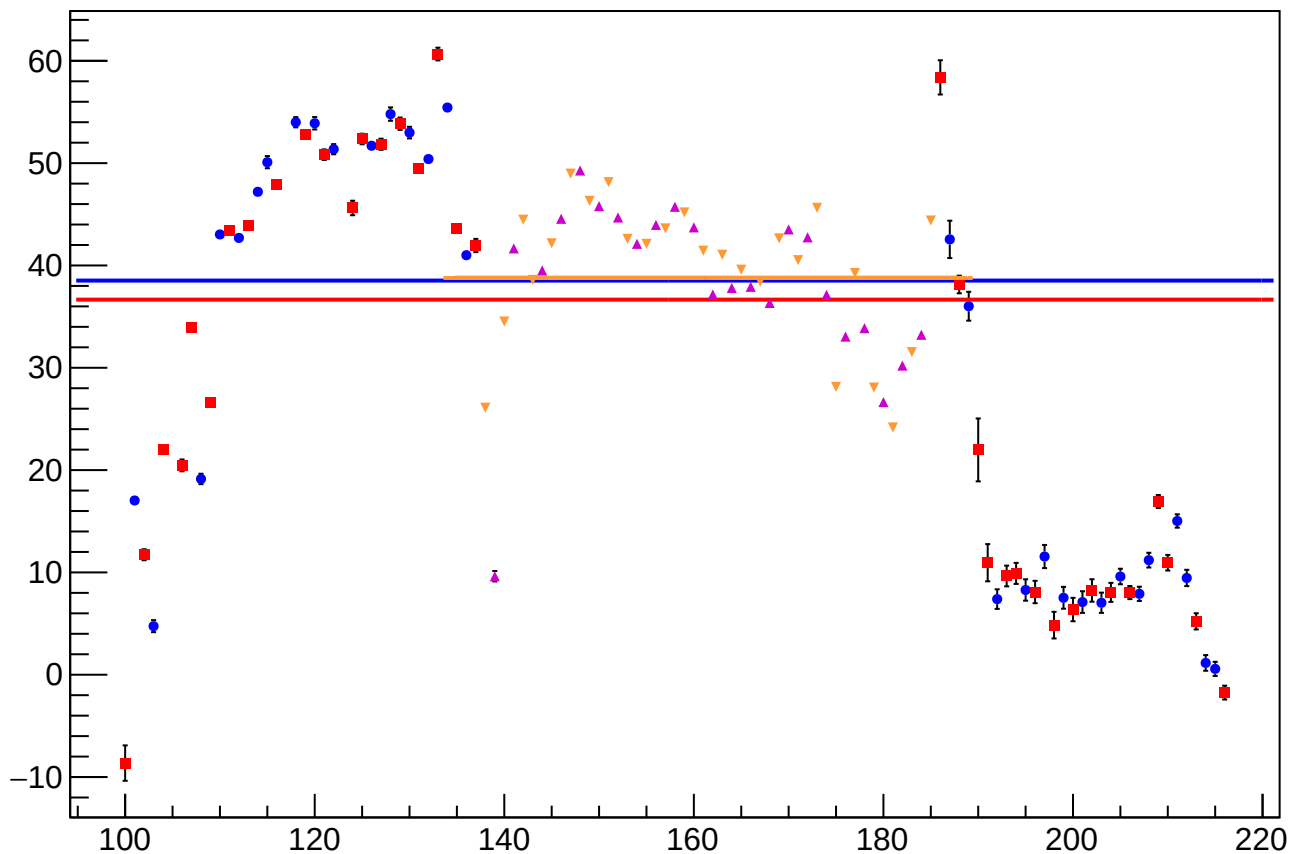
Left In:  $-27.176 \pm 0.057$   $\chi^2/\text{NDF}: 40990.1/22$

+ sign  $-30.961 \pm 0.041$   $\chi^2/\text{NDF}: 79072.0/55$

All:  $-31.204 \pm 0.029$   $\chi^2/\text{NDF}: 150952.4/113$

- sign  $-31.436 \pm 0.041$   $\chi^2/\text{NDF}: 71813.6/57$

# reg\_asym\_sam8\_diff\_bpm4eY\_slope vs Slug



Right In: 38.523+/-0.080  $\chi^2$ /NDF: 35239.2/30

Left Out: 38.777+/-0.048  $\chi^2$ /NDF: 21070.6/24

Right Out: 36.659+/-0.074  $\chi^2$ /NDF: 33599.1/34

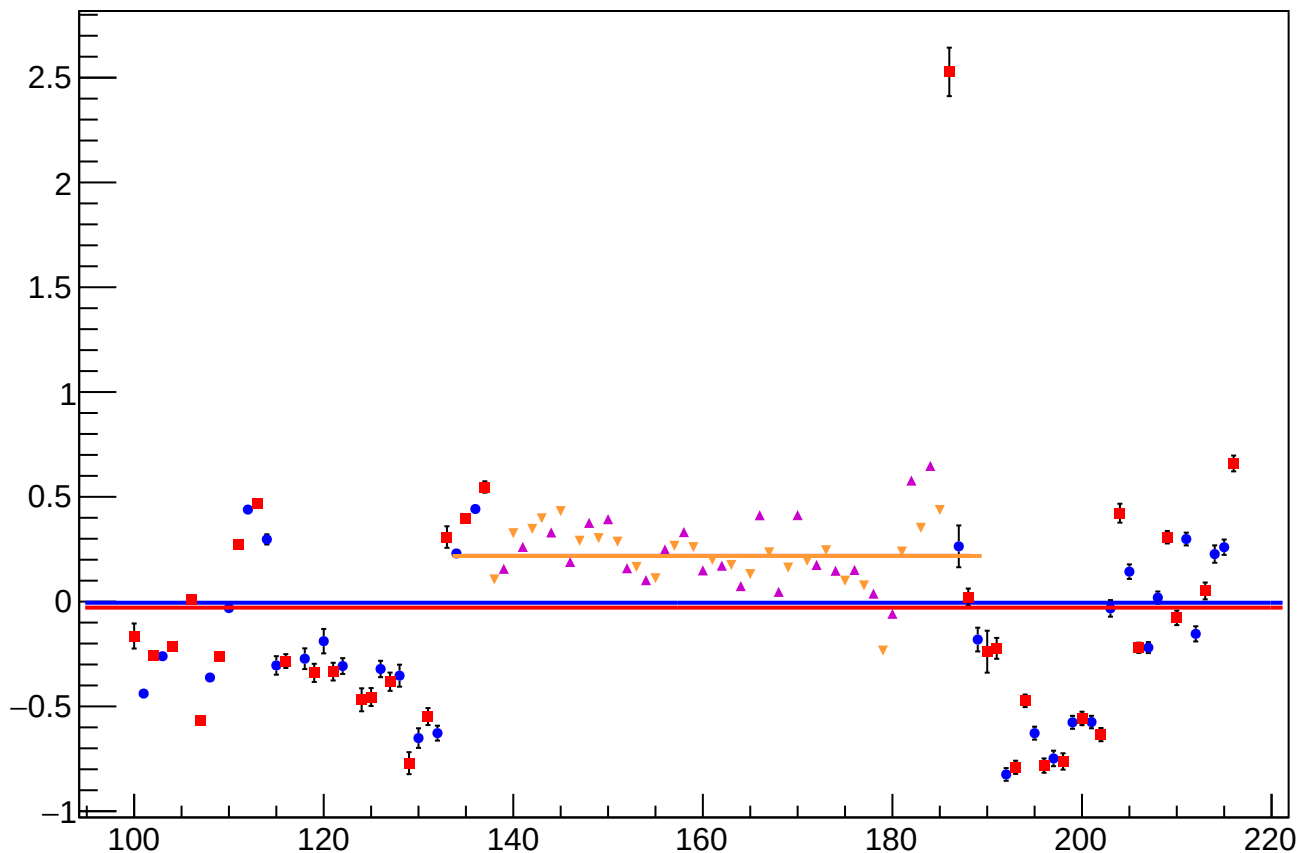
Left In: 38.791+/-0.050  $\chi^2$ /NDF: 16240.7/22

+ sign 38.710+/-0.041  $\chi^2$ /NDF: 56317.3/55

All: 38.420+/-0.029  $\chi^2$ /NDF: 106827.0/113

- sign 38.121+/-0.042  $\chi^2$ /NDF: 50407.6/57

# reg\_asym\_sam8\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.005 \pm 0.004$   $\chi^2/\text{NDF}$ : 8252.4/30

Left Out:  $0.218 \pm 0.002$   $\chi^2/\text{NDF}$ : 4075.0/24

Right Out:  $-0.029 \pm 0.004$   $\chi^2/\text{NDF}$ : 9965.8/34

Left In:  $0.218 \pm 0.002$   $\chi^2/\text{NDF}$ : 5312.2/22

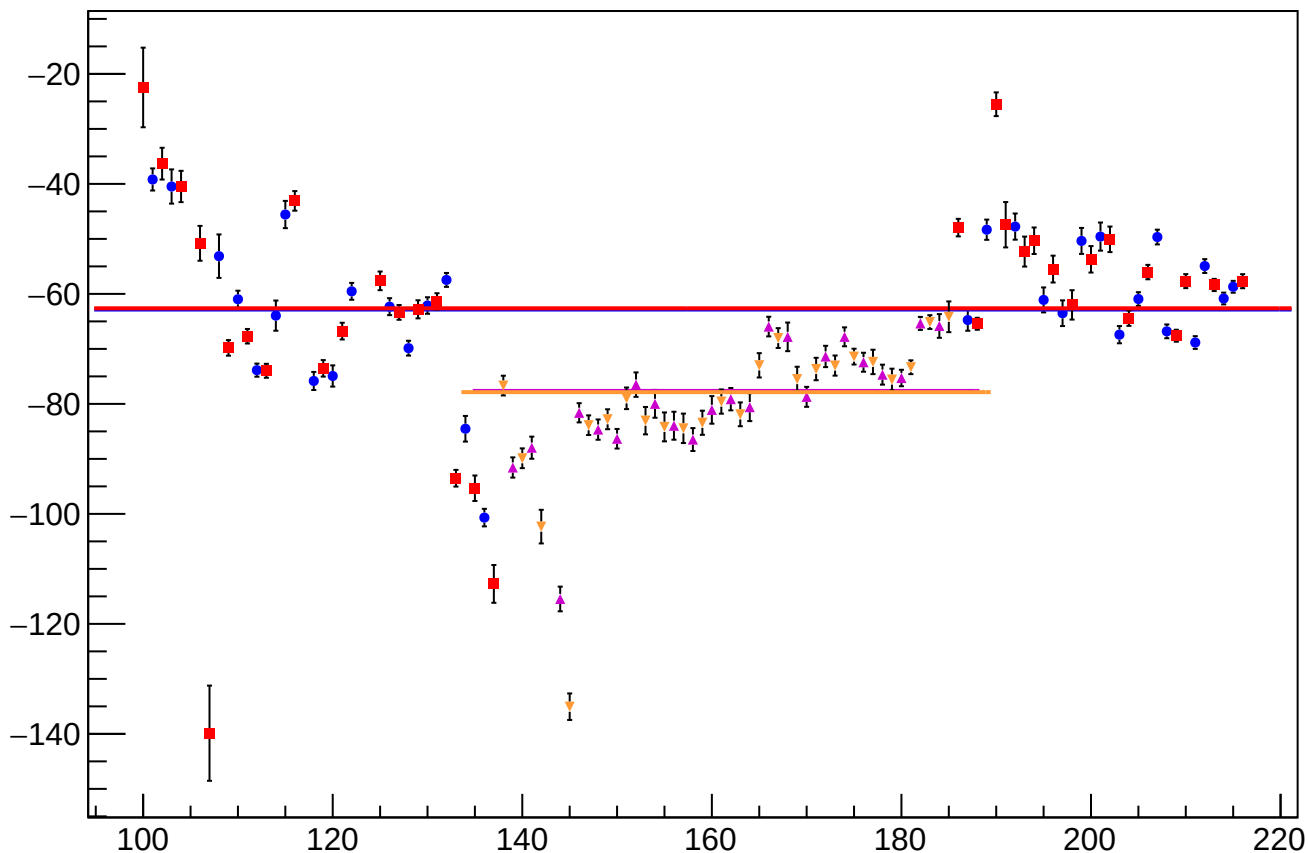
+ sign  $0.172 \pm 0.002$   $\chi^2/\text{NDF}$ : 14524.1/55

All:  $0.166 \pm 0.001$   $\chi^2/\text{NDF}$ : 32796.7/113

- sign  $0.159 \pm 0.002$   $\chi^2/\text{NDF}$ : 18246.6/57



# reg\_asym\_usl\_diff\_bpm1X\_slope vs Slug



Right In:  $-62.843 \pm 0.285$   $\chi^2/\text{NDF}: 1493.1/30$

Left Out:  $-77.867 \pm 0.394$   $\chi^2/\text{NDF}: 932.3/23$

Right Out:  $-62.621 \pm 0.287$   $\chi^2/\text{NDF}: 1990.3/33$

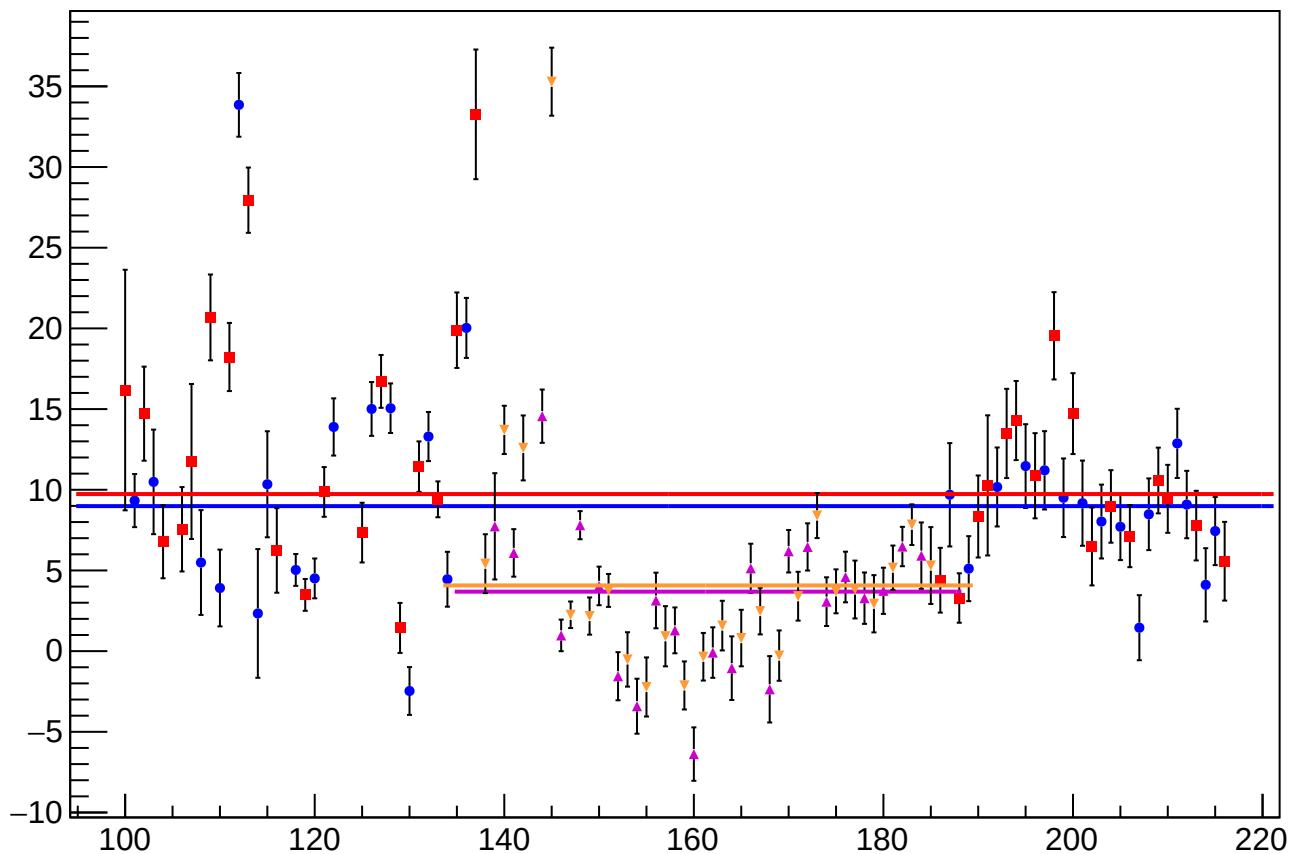
Left In:  $-77.643 \pm 0.396$   $\chi^2/\text{NDF}: 693.3/22$

+ sign  $-68.002 \pm 0.231$   $\chi^2/\text{NDF}: 3379.8/54$

All:  $-67.894 \pm 0.164$   $\chi^2/\text{NDF}: 7006.1/111$

- sign  $-67.785 \pm 0.232$   $\chi^2/\text{NDF}: 3625.8/56$

# reg\_asym\_usl\_diff\_bpm4aY\_slope vs Slug



Right In:  $8.986 \pm 0.346$   $\chi^2/\text{NDF}: 372.1/30$

Left Out:  $4.073 \pm 0.297$   $\chi^2/\text{NDF}: 370.6/23$

Right Out:  $9.734 \pm 0.345$   $\chi^2/\text{NDF}: 320.6/33$

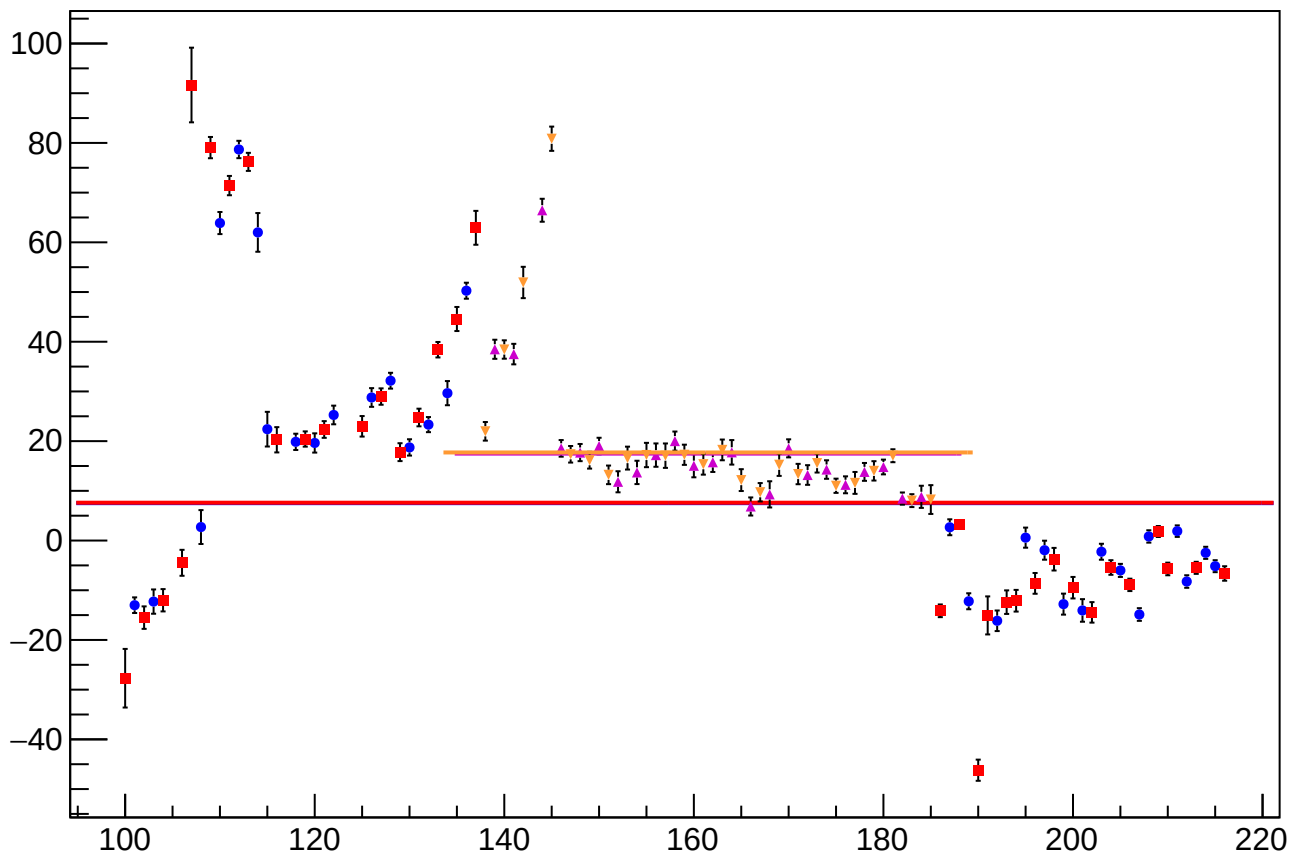
Left In:  $3.686 \pm 0.302$   $\chi^2/\text{NDF}: 182.6/22$

+ sign  $6.153 \pm 0.225$   $\chi^2/\text{NDF}: 858.7/54$

All:  $6.227 \pm 0.160$   $\chi^2/\text{NDF}: 1536.0/111$

- sign  $6.303 \pm 0.227$   $\chi^2/\text{NDF}: 677.1/56$

# reg\_asym\_usl\_diff\_bpm4eX\_slope vs Slug



Right In:  $7.523 \pm 0.299$   $\chi^2/\text{NDF}: 5599.1/30$

Left Out:  $17.723 \pm 0.391$   $\chi^2/\text{NDF}: 1058.3/23$

Right Out:  $7.612 \pm 0.297$   $\chi^2/\text{NDF}: 7397.5/33$

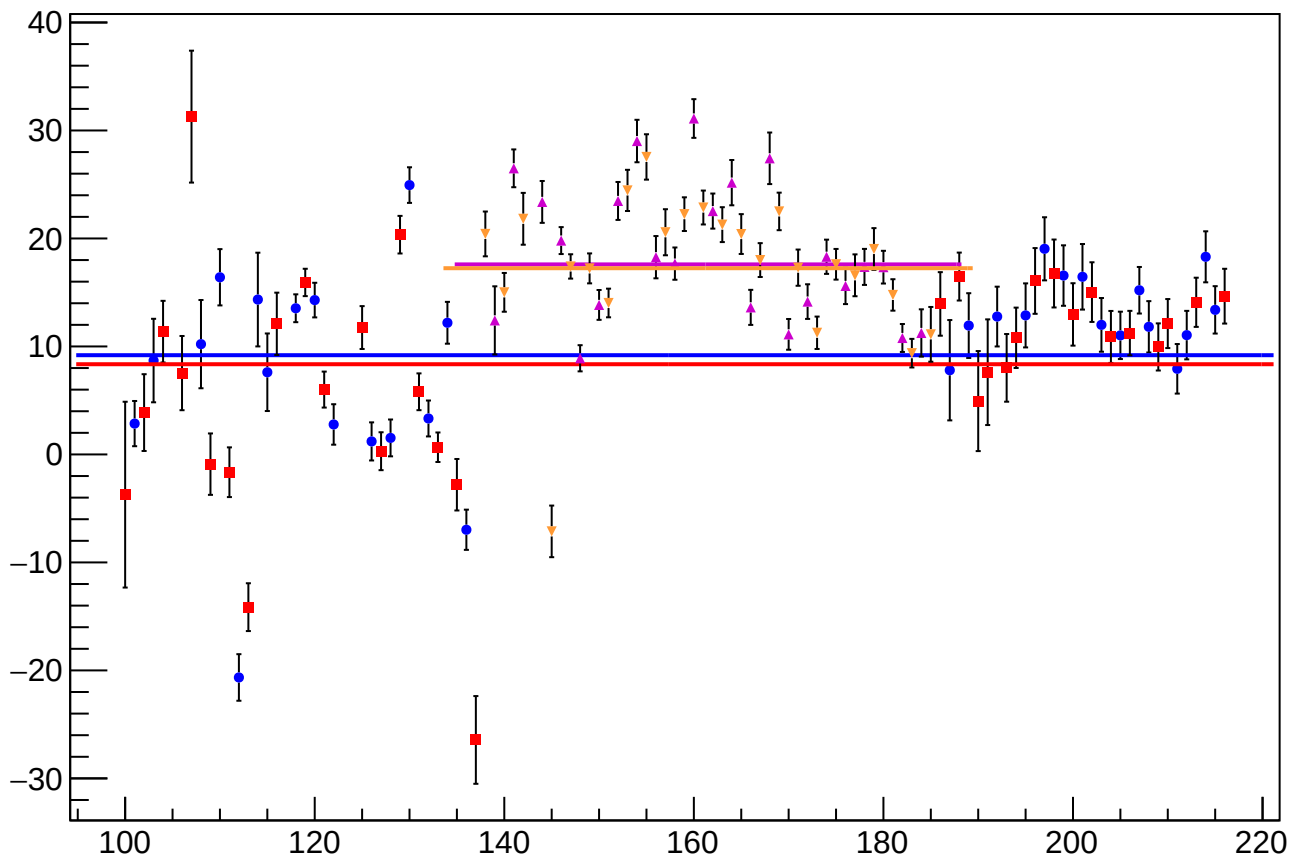
Left In:  $17.491 \pm 0.393$   $\chi^2/\text{NDF}: 820.7/22$

+ sign  $11.281 \pm 0.237$   $\chi^2/\text{NDF}: 7087.1/54$

All:  $11.242 \pm 0.168$   $\chi^2/\text{NDF}: 15708.0/111$

- sign  $11.204 \pm 0.237$   $\chi^2/\text{NDF}: 8620.9/56$

# reg\_asym\_usl\_diff\_bpm4eY\_slope vs Slug



Right In:  $9.190 \pm 0.396$   $\chi^2/\text{NDF}$ : 523.9/30

Left Out:  $17.245 \pm 0.338$   $\chi^2/\text{NDF}$ : 260.8/23

Right Out:  $8.354 \pm 0.401$   $\chi^2/\text{NDF}$ : 450.8/33

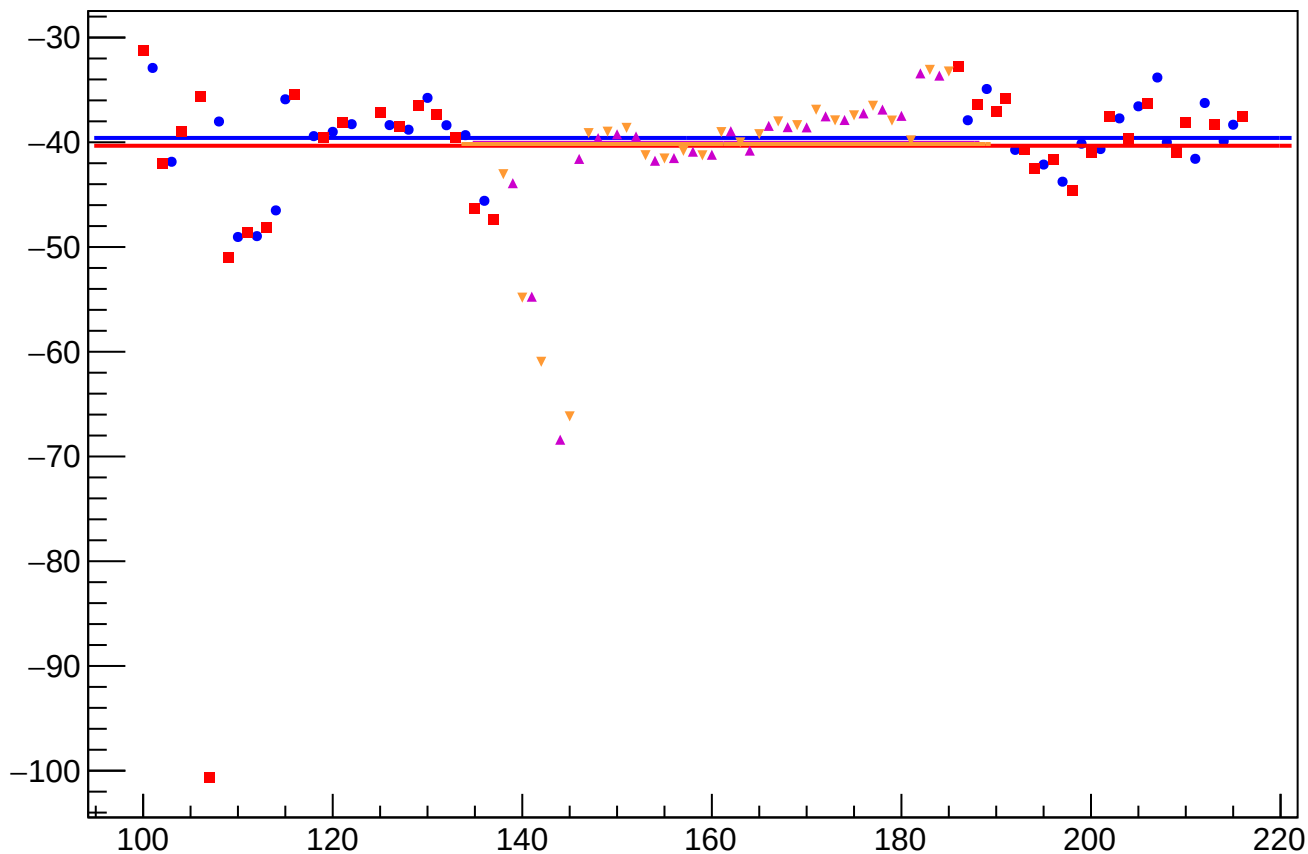
Left In:  $17.597 \pm 0.342$   $\chi^2/\text{NDF}$ : 309.7/22

+ sign  $13.853 \pm 0.257$   $\chi^2/\text{NDF}$ : 1023.8/54

All:  $13.776 \pm 0.183$   $\chi^2/\text{NDF}$ : 2092.1/111

- sign  $13.698 \pm 0.260$   $\chi^2/\text{NDF}$ : 1068.2/56

# reg\_asym\_usl\_diff\_bpm12X\_slope vs Slug



Right In:  $-39.585 \pm 0.020$   $\chi^2/\text{NDF}$ : 33850.1/30

Left Out:  $-40.165 \pm 0.015$   $\chi^2/\text{NDF}$ : 163335.9/23

Right Out:  $-40.332 \pm 0.020$   $\chi^2/\text{NDF}$ : 73857.5/33

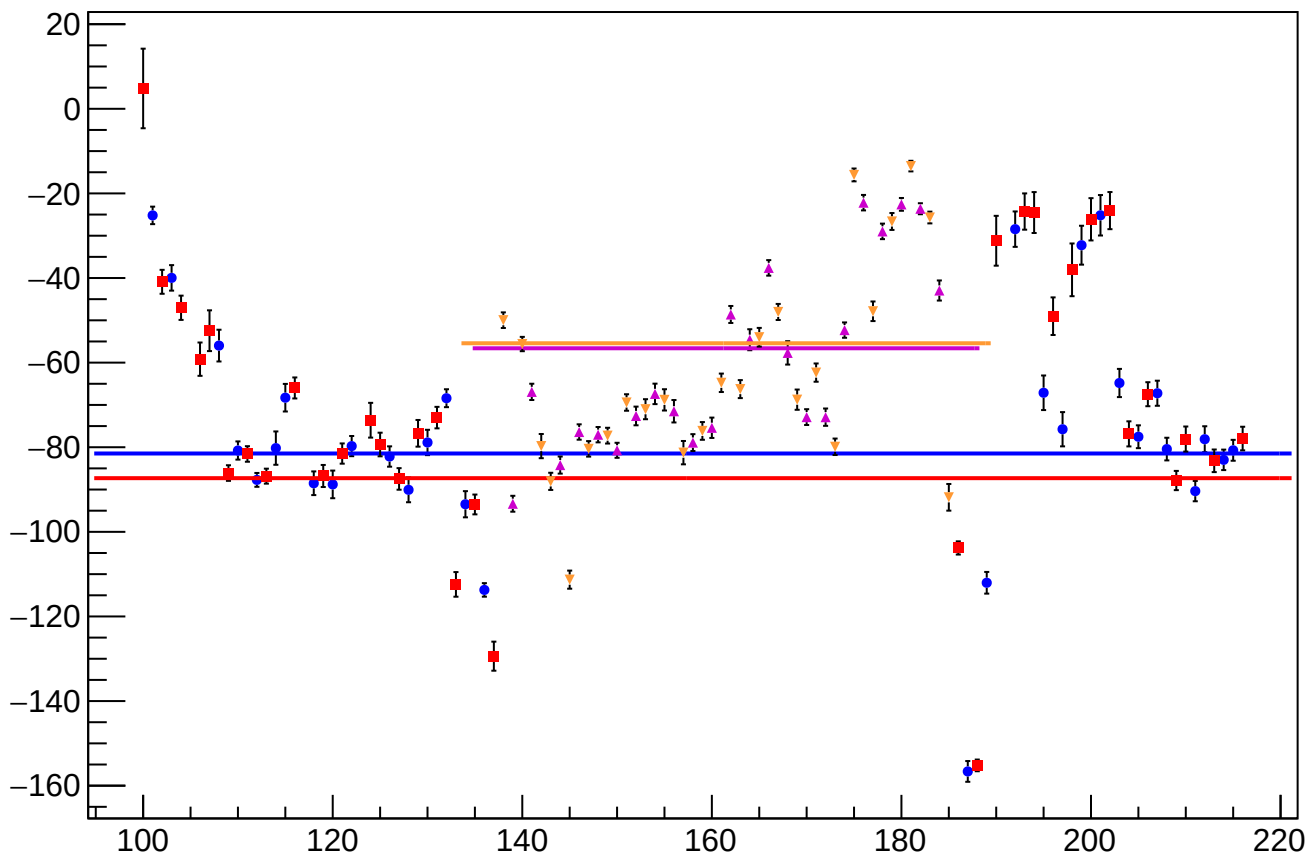
Left In:  $-40.050 \pm 0.015$   $\chi^2/\text{NDF}$ : 136438.5/22

+ sign  $-39.946 \pm 0.012$   $\chi^2/\text{NDF}$ : 197717.8/54

All:  $-40.051 \pm 0.009$   $\chi^2/\text{NDF}$ : 408289.3/111

- sign  $-40.156 \pm 0.012$   $\chi^2/\text{NDF}$ : 210422.5/56

# reg\_asym\_usr\_diff\_bpm1X\_slope vs Slug



Right In:  $-81.479 \pm 0.479$   $\chi^2/\text{NDF}$ : 3062.3/30

Left Out:  $-55.424 \pm 0.393$   $\chi^2/\text{NDF}$ : 4525.3/24

Right Out:  $-87.311 \pm 0.457$   $\chi^2/\text{NDF}$ : 4627.2/33

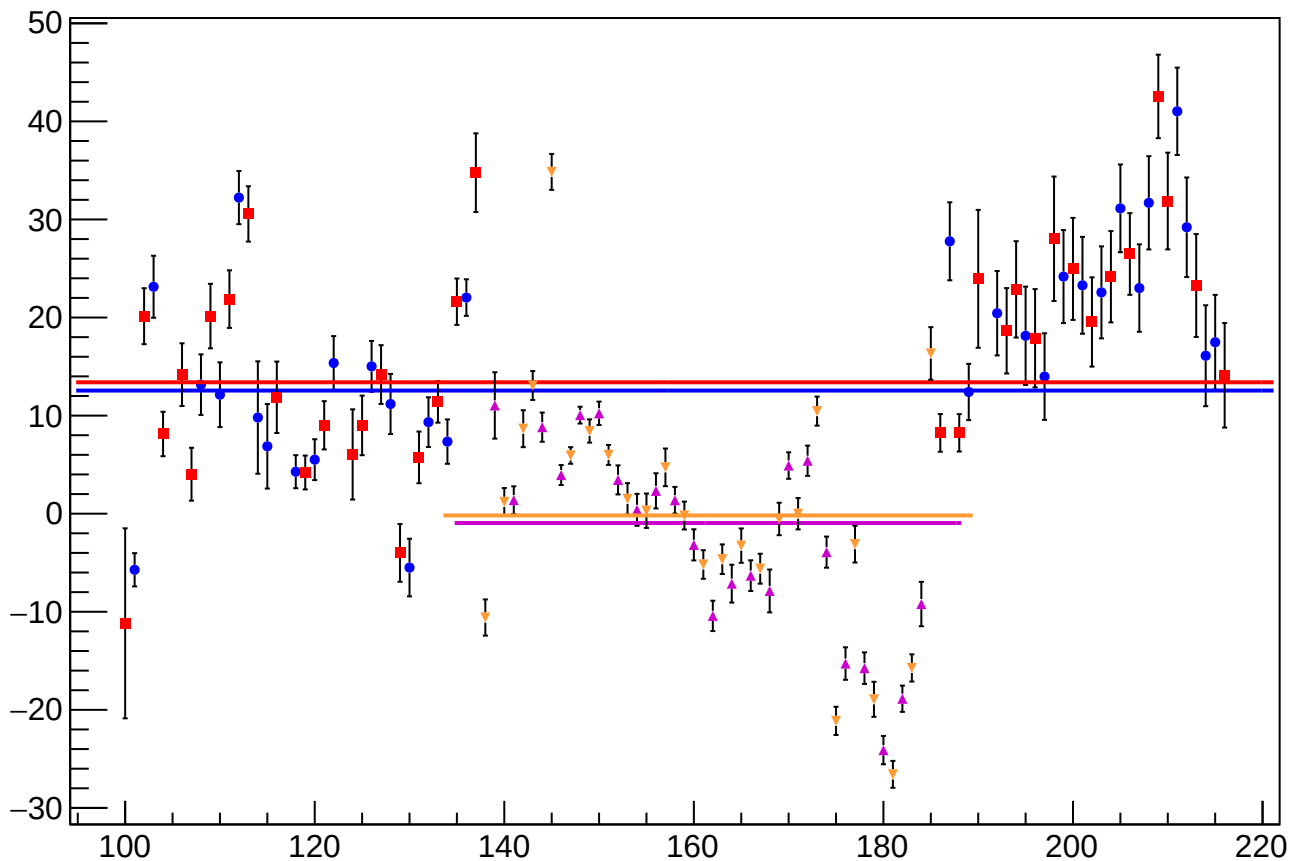
Left In:  $-56.609 \pm 0.404$   $\chi^2/\text{NDF}$ : 3350.3/22

+ sign  $-65.920 \pm 0.304$   $\chi^2/\text{NDF}$ : 9355.6/55

All:  $-67.998 \pm 0.214$   $\chi^2/\text{NDF}$ : 19959.5/112

- sign  $-70.059 \pm 0.303$   $\chi^2/\text{NDF}$ : 10510.8/56

# reg\_asym\_usr\_diff\_bpm4aY\_slope vs Slug



Right In: 12.555 $\pm$ 0.545  $\chi^2$ /NDF: 417.3/30

Left Out: -0.179 $\pm$ 0.294  $\chi^2$ /NDF:1598.6/24

Right Out: 13.398 $\pm$ 0.531  $\chi^2$ /NDF: 314.9/33

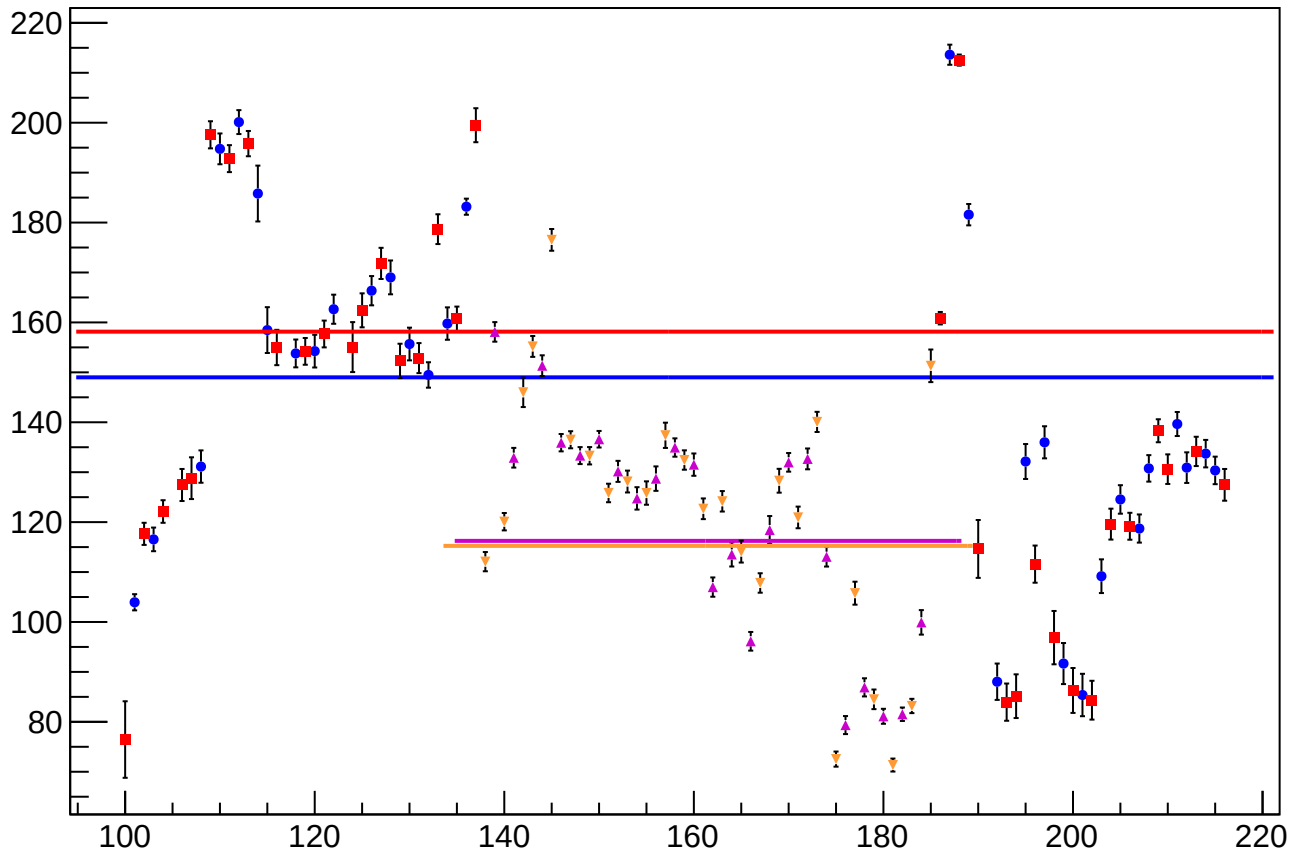
Left In: -0.952 $\pm$ 0.304  $\chi^2$ /NDF:1069.6/22

+ sign 2.693 $\pm$ 0.259  $\chi^2$ /NDF: 2438.6/55

All: 2.644 $\pm$ 0.185  $\chi^2$ /NDF: 4373.2/112

- sign 2.592 $\pm$ 0.264  $\chi^2$ /NDF: 1934.6/56

# reg\_asym\_usr\_diff\_bpm4eX\_slope vs Slug



Right In: 148.998 $\pm$ 0.492  $\chi^2$ /NDF: 4777.9/30

Left Out: 115.243 $\pm$ 0.390  $\chi^2$ /NDF: 4836.5/24

Right Out: 158.151 $\pm$ 0.459  $\chi^2$ /NDF: 6389.7/33

Left In: 116.246 $\pm$ 0.399  $\chi^2$ /NDF: 3637.3/22

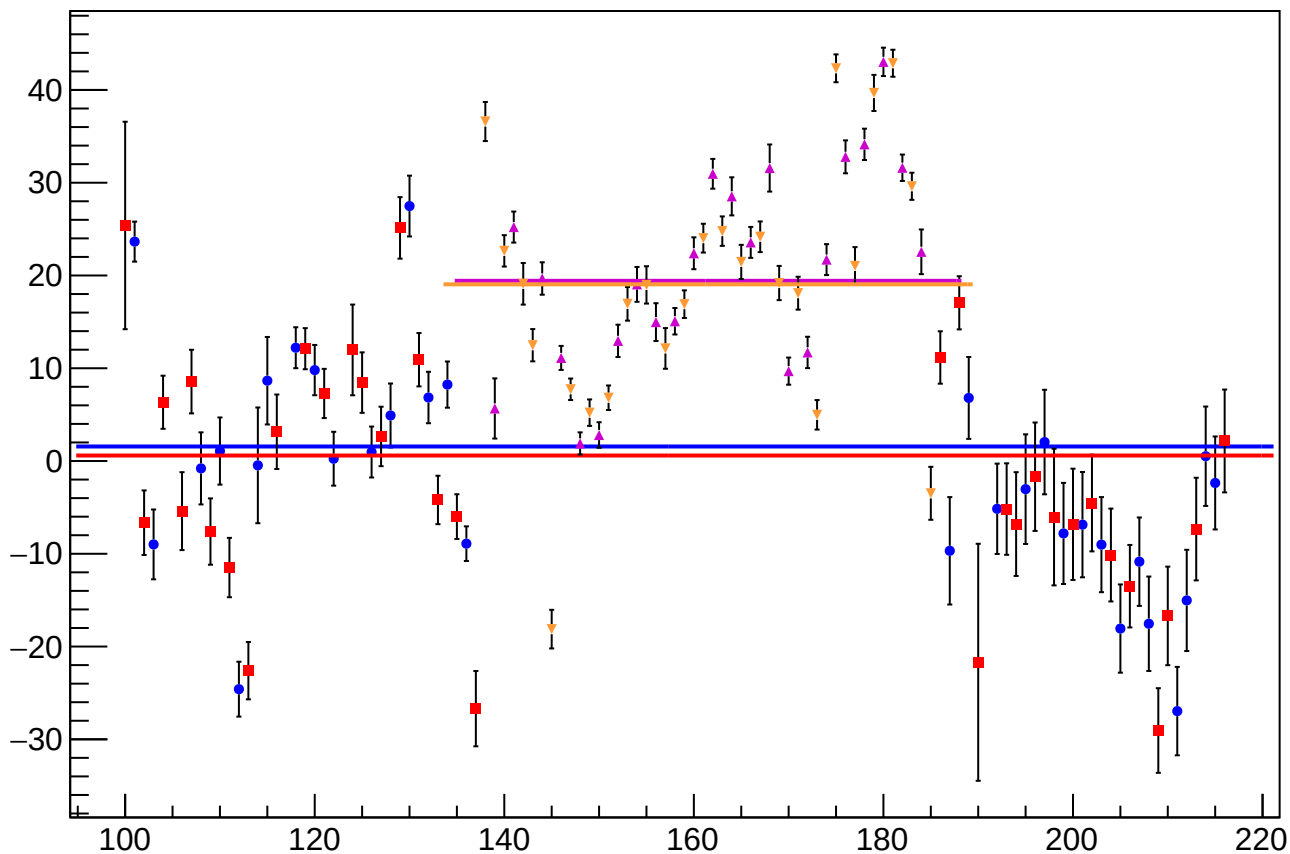
+ sign 128.295 $\pm$ 0.306  $\chi^2$ /NDF: 12506.0/55

All: 131.325 $\pm$ 0.215  $\chi^2$ /NDF: 27466.7/112

- sign 134.269 $\pm$ 0.301  $\chi^2$ /NDF: 14767.0/56



# reg\_asym\_usr\_diff\_bpm4eY\_slope vs Slug



Right In:  $1.566 \pm 0.629$   $\chi^2/\text{NDF}$ : 432.9/30

Left Out:  $19.046 \pm 0.336$   $\chi^2/\text{NDF}$ : 1545.8/24

Right Out:  $0.592 \pm 0.627$   $\chi^2/\text{NDF}$ : 391.9/33

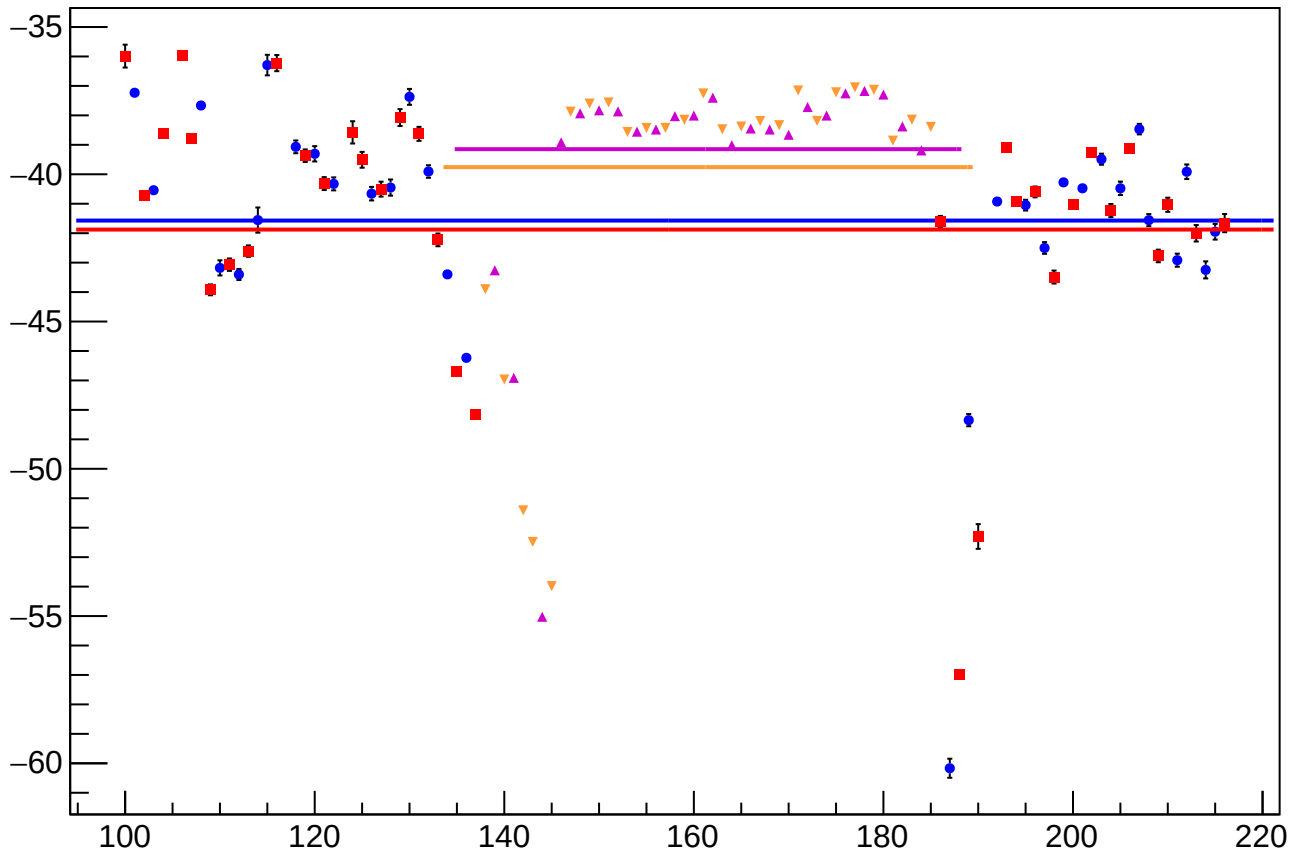
Left In:  $19.425 \pm 0.346$   $\chi^2/\text{NDF}$ : 1077.2/22

+ sign  $15.164 \pm 0.296$   $\chi^2/\text{NDF}$ : 2579.3/55

All:  $15.099 \pm 0.212$   $\chi^2/\text{NDF}$ : 4740.9/112

- sign  $15.031 \pm 0.303$   $\chi^2/\text{NDF}$ : 2161.6/56

# reg\_asym\_usr\_diff\_bpm12X\_slope vs Slug



Right In:  $-41.572 \pm 0.031$   $\chi^2/\text{NDF}$ : 13007.4/30

Left Out:  $-39.758 \pm 0.015$   $\chi^2/\text{NDF}$ : 81865.0/24

Right Out:  $-41.877 \pm 0.031$   $\chi^2/\text{NDF}$ : 19763.0/33

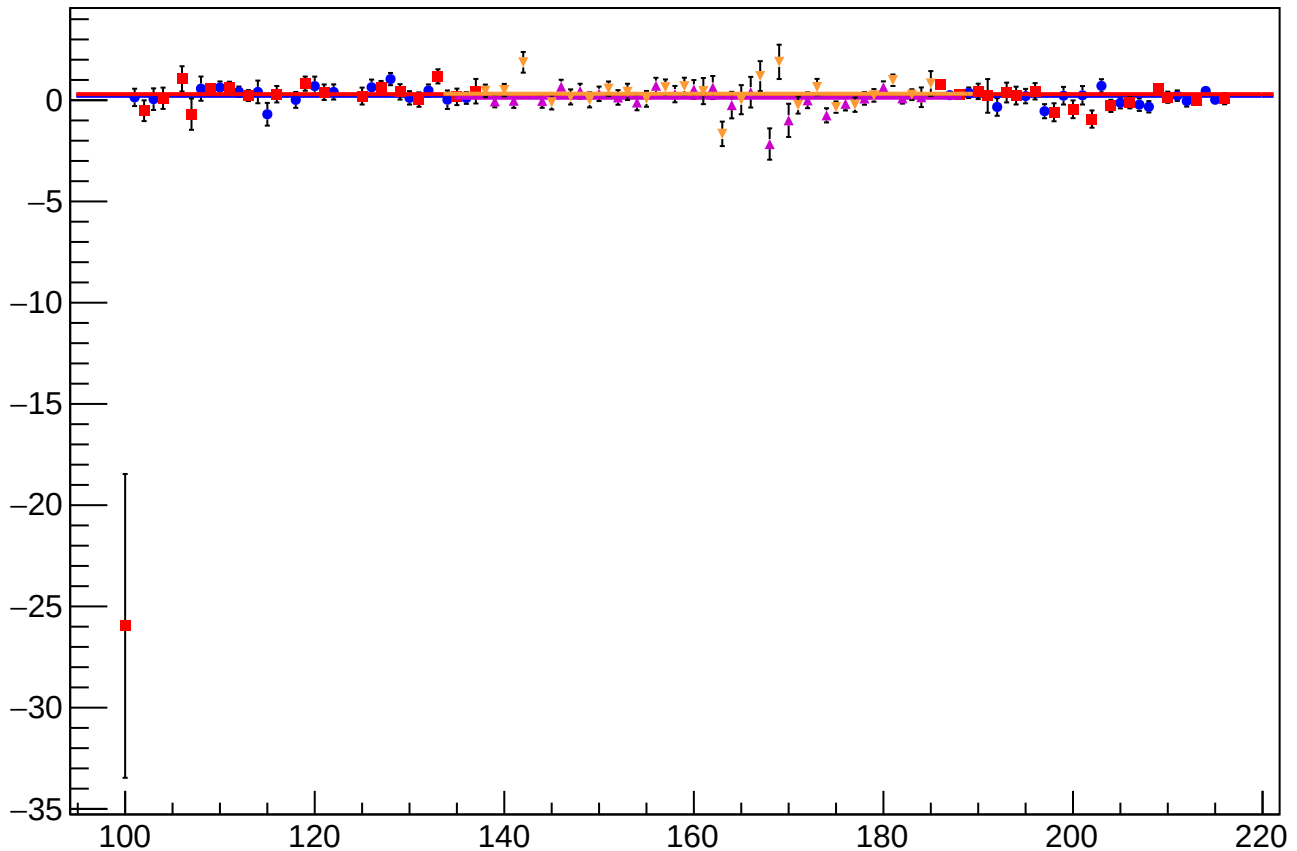
Left In:  $-39.147 \pm 0.016$   $\chi^2/\text{NDF}$ : 46907.5/22

+ sign  $-40.125 \pm 0.014$   $\chi^2/\text{NDF}$ : 97662.9/55

All:  $-39.914 \pm 0.010$   $\chi^2/\text{NDF}$ : 170989.5/112

- sign  $-39.699 \pm 0.014$   $\chi^2/\text{NDF}$ : 72855.8/56

# reg\_asym\_dsl\_diff\_bpm1X\_slope vs Slug



Right In:  $0.216 \pm 0.058$   $\chi^2/\text{NDF}$ : 36.1/30

Left Out:  $0.321 \pm 0.078$   $\chi^2/\text{NDF}$ : 46.9/23

Right Out:  $0.299 \pm 0.054$   $\chi^2/\text{NDF}$ : 64.3/33

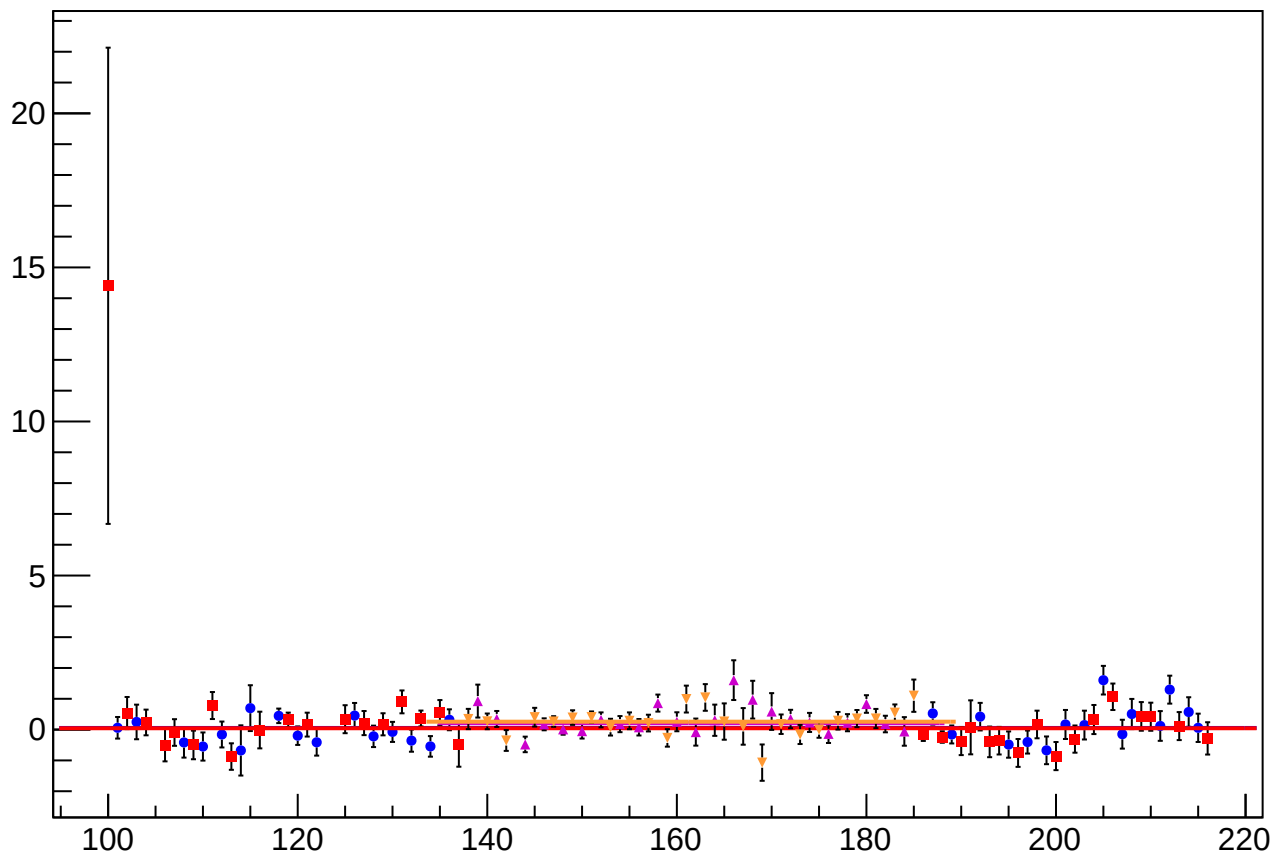
Left In:  $0.120 \pm 0.079$   $\chi^2/\text{NDF}$ : 30.0/22

+ sign  $0.253 \pm 0.047$   $\chi^2/\text{NDF}$ : 84.2/54

All:  $0.247 \pm 0.032$   $\chi^2/\text{NDF}$ : 181.9/111

- sign  $0.242 \pm 0.045$   $\chi^2/\text{NDF}$ : 97.7/56

# reg\_asym\_dsl\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.053 \pm 0.072$   $\chi^2/\text{NDF}$ : 45.6/30

Left Out:  $0.257 \pm 0.059$   $\chi^2/\text{NDF}$ : 26.5/23

Right Out:  $0.044 \pm 0.067$   $\chi^2/\text{NDF}$ : 46.9/33

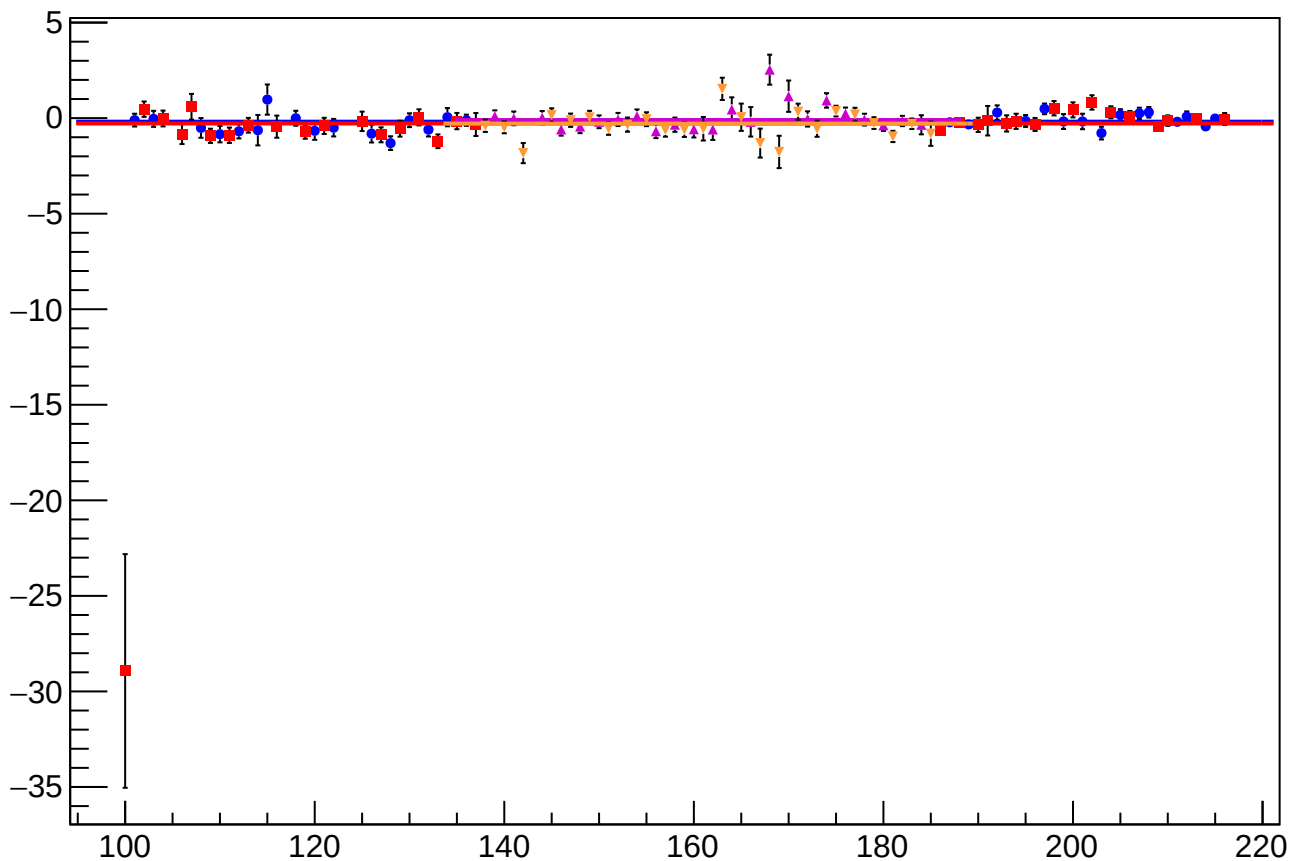
Left In:  $0.207 \pm 0.060$   $\chi^2/\text{NDF}$ : 31.9/22

+ sign  $0.174 \pm 0.046$   $\chi^2/\text{NDF}$ : 76.9/54

All:  $0.153 \pm 0.032$   $\chi^2/\text{NDF}$ : 159.4/111

- sign  $0.133 \pm 0.045$   $\chi^2/\text{NDF}$ : 82.0/56

# reg\_asym\_dsl\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.185 \pm 0.059$   $\chi^2/\text{NDF}$ : 42.3/30

Left Out:  $-0.286 \pm 0.077$   $\chi^2/\text{NDF}$ : 45.0/23

Right Out:  $-0.280 \pm 0.052$   $\chi^2/\text{NDF}$ : 77.4/33

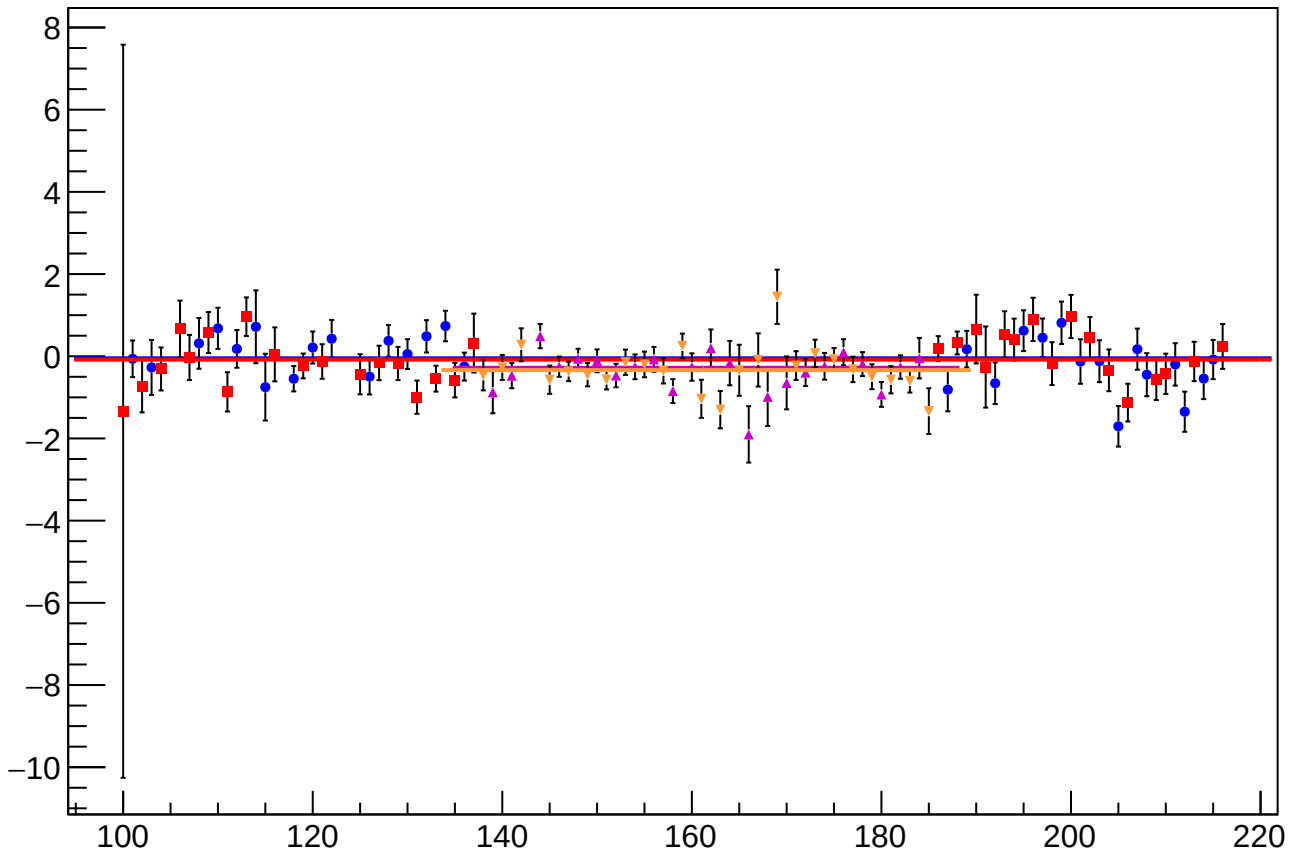
Left In:  $-0.100 \pm 0.078$   $\chi^2/\text{NDF}$ : 33.2/22

+ sign  $-0.222 \pm 0.047$   $\chi^2/\text{NDF}$ : 88.5/54

All:  $-0.224 \pm 0.032$   $\chi^2/\text{NDF}$ : 202.8/111

- sign  $-0.225 \pm 0.044$   $\chi^2/\text{NDF}$ : 114.3/56

# reg\_asym\_dsl\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.050 \pm 0.083$   $\chi^2/\text{NDF}$ : 47.2/30

Left Out:  $-0.337 \pm 0.068$   $\chi^2/\text{NDF}$ : 30.1/23

Right Out:  $-0.081 \pm 0.080$   $\chi^2/\text{NDF}$ : 43.4/33

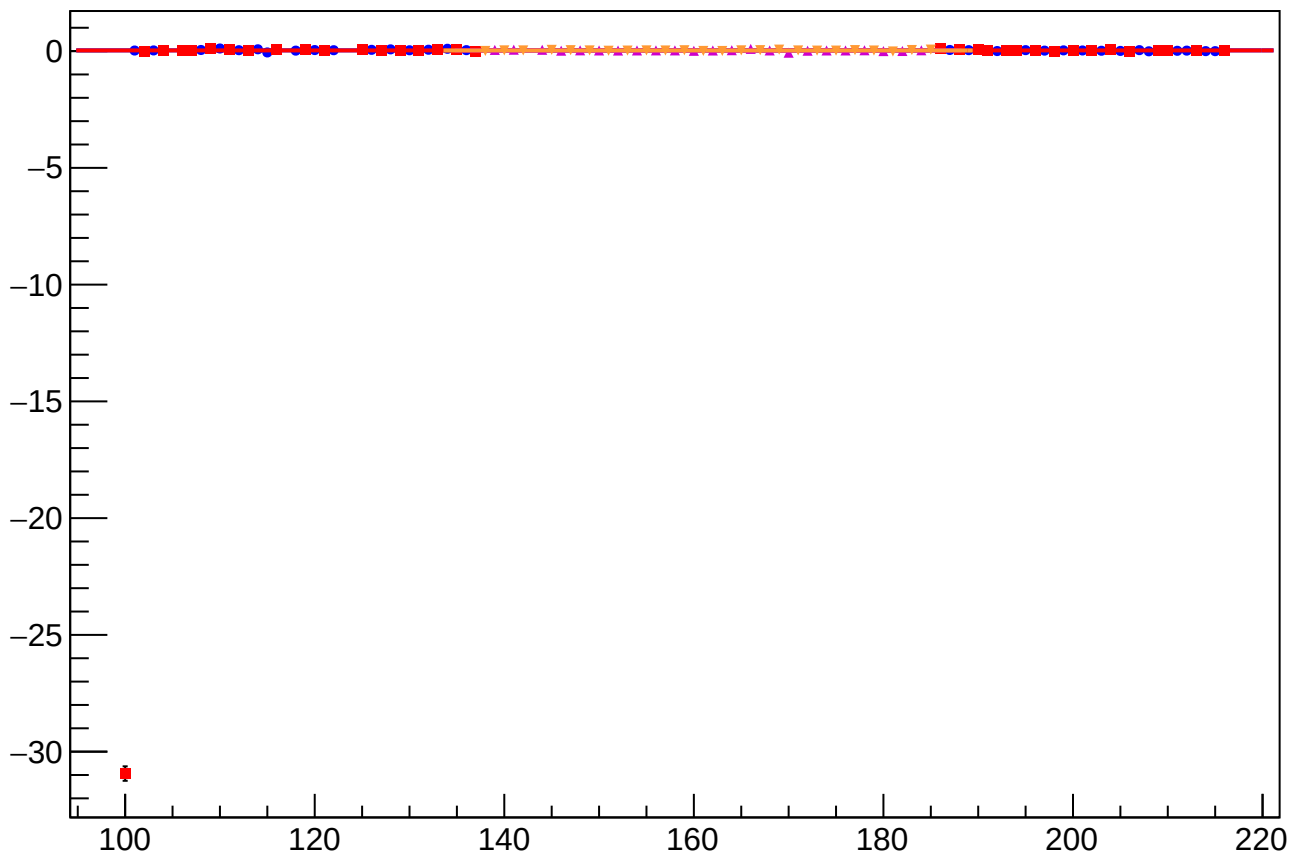
Left In:  $-0.282 \pm 0.069$   $\chi^2/\text{NDF}$ : 29.0/22

+ sign  $-0.221 \pm 0.053$   $\chi^2/\text{NDF}$ : 84.5/54

All:  $-0.209 \pm 0.037$   $\chi^2/\text{NDF}$ : 160.6/111

- sign  $-0.196 \pm 0.052$   $\chi^2/\text{NDF}$ : 76.0/56

# reg\_asym\_dsl\_diff\_bpm12X\_slope vs Slug



Right In: 0.033+/-0.004  $\chi^2/\text{NDF}$ : 40.6/30

Left Out: 0.028+/-0.003  $\chi^2/\text{NDF}$ : 27.6/23

Right Out: 0.030+/-0.004  $\chi^2/\text{NDF}$ : 10055.9/33

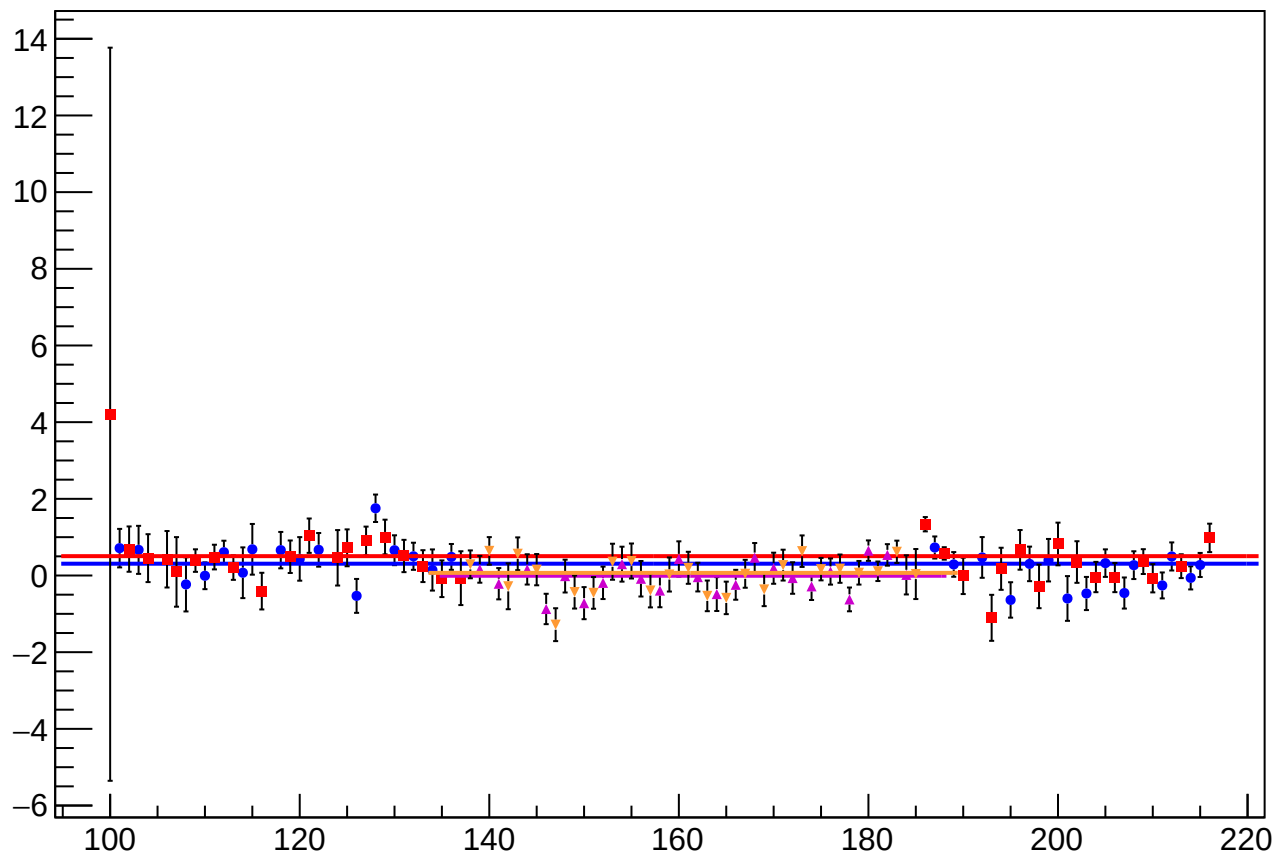
Left In: 0.029+/-0.003  $\chi^2/\text{NDF}$ : 38.9/22

+ sign 0.030+/-0.002  $\chi^2/\text{NDF}$ : 69.0/54

All: 0.030+/-0.002  $\chi^2/\text{NDF}$ : 10163.9/111

- sign 0.030+/-0.002  $\chi^2/\text{NDF}$ : 10094.9/56

# reg\_asym\_dsr\_diff\_bpm1X\_slope vs Slug



Right In:  $0.308 \pm 0.073$   $\chi^2/\text{NDF}: 46.8/30$

Left Out:  $0.069 \pm 0.077$   $\chi^2/\text{NDF}: 31.1/24$

Right Out:  $0.505 \pm 0.066$   $\chi^2/\text{NDF}: 52.0/33$

Left In:  $-0.006 \pm 0.079$   $\chi^2/\text{NDF}: 28.5/22$

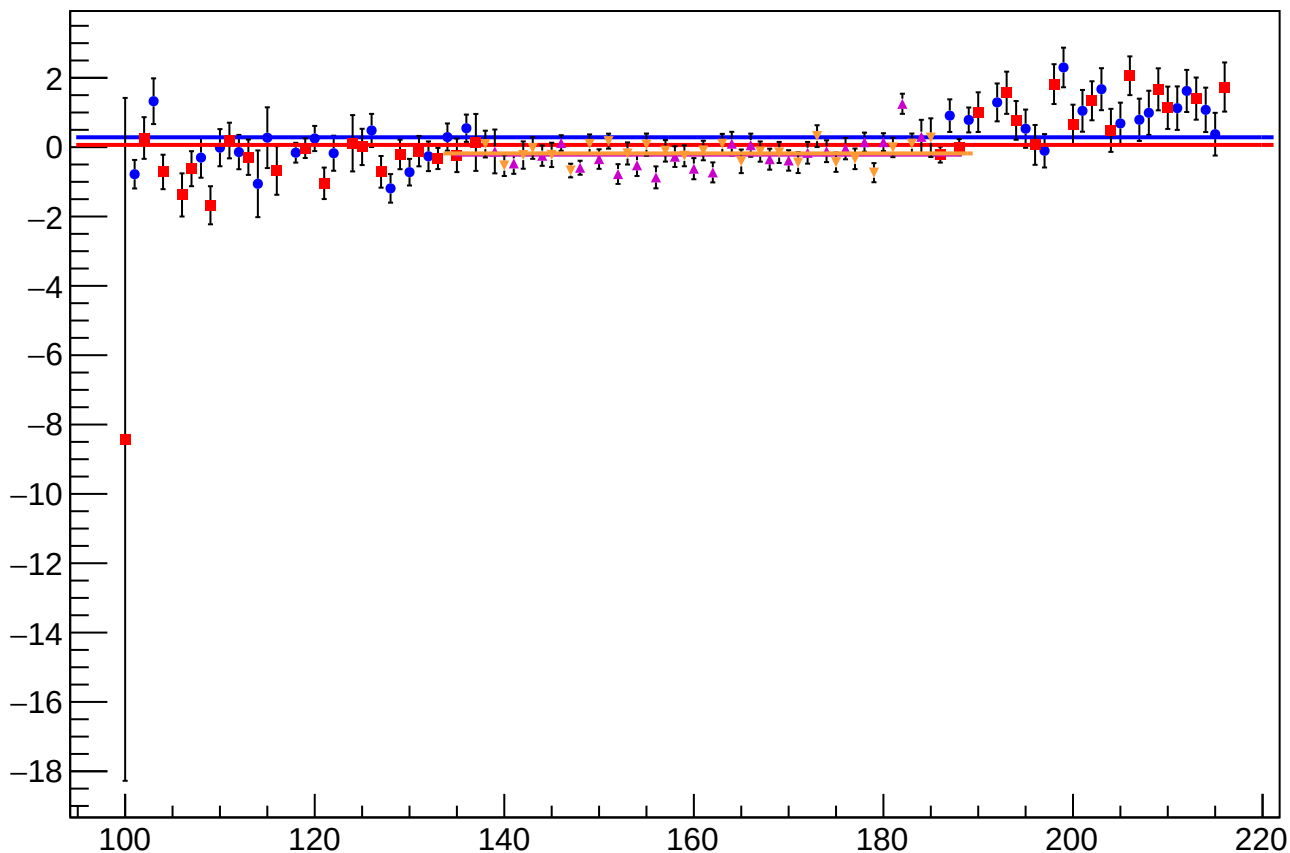
+ sign  $0.196 \pm 0.053$   $\chi^2/\text{NDF}: 83.0/55$

All:  $0.248 \pm 0.037$   $\chi^2/\text{NDF}: 189.8/112$

- sign  $0.296 \pm 0.051$   $\chi^2/\text{NDF}: 104.9/56$



# reg\_asym\_dsr\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.285 \pm 0.088$   $\chi^2/\text{NDF}$ : 76.2/30

Left Out:  $-0.180 \pm 0.059$   $\chi^2/\text{NDF}$ : 24.7/24

Right Out:  $0.065 \pm 0.080$   $\chi^2/\text{NDF}$ : 94.9/33

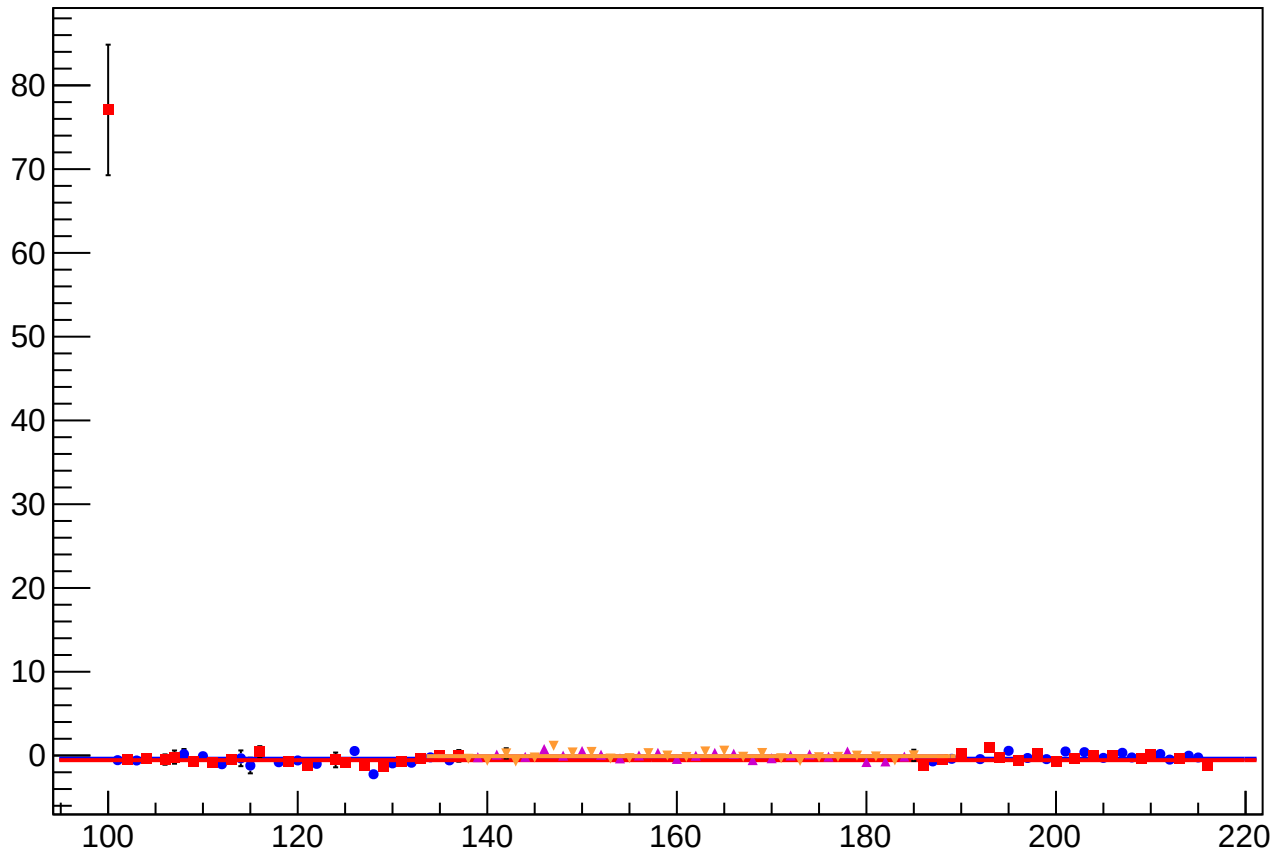
Left In:  $-0.216 \pm 0.062$   $\chi^2/\text{NDF}$ : 53.6/22

+ sign  $-0.034 \pm 0.049$   $\chi^2/\text{NDF}$ : 120.3/55

All:  $-0.073 \pm 0.035$   $\chi^2/\text{NDF}$ : 277.7/112

- sign  $-0.112 \pm 0.049$   $\chi^2/\text{NDF}$ : 156.2/56

# reg\_asym\_dsr\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.382 \pm 0.074$   $\chi^2/\text{NDF}$ : 53.4/30

Left Out:  $-0.077 \pm 0.077$   $\chi^2/\text{NDF}$ : 30.0/24

Right Out:  $-0.556 \pm 0.064$   $\chi^2/\text{NDF}$ : 151.5/33

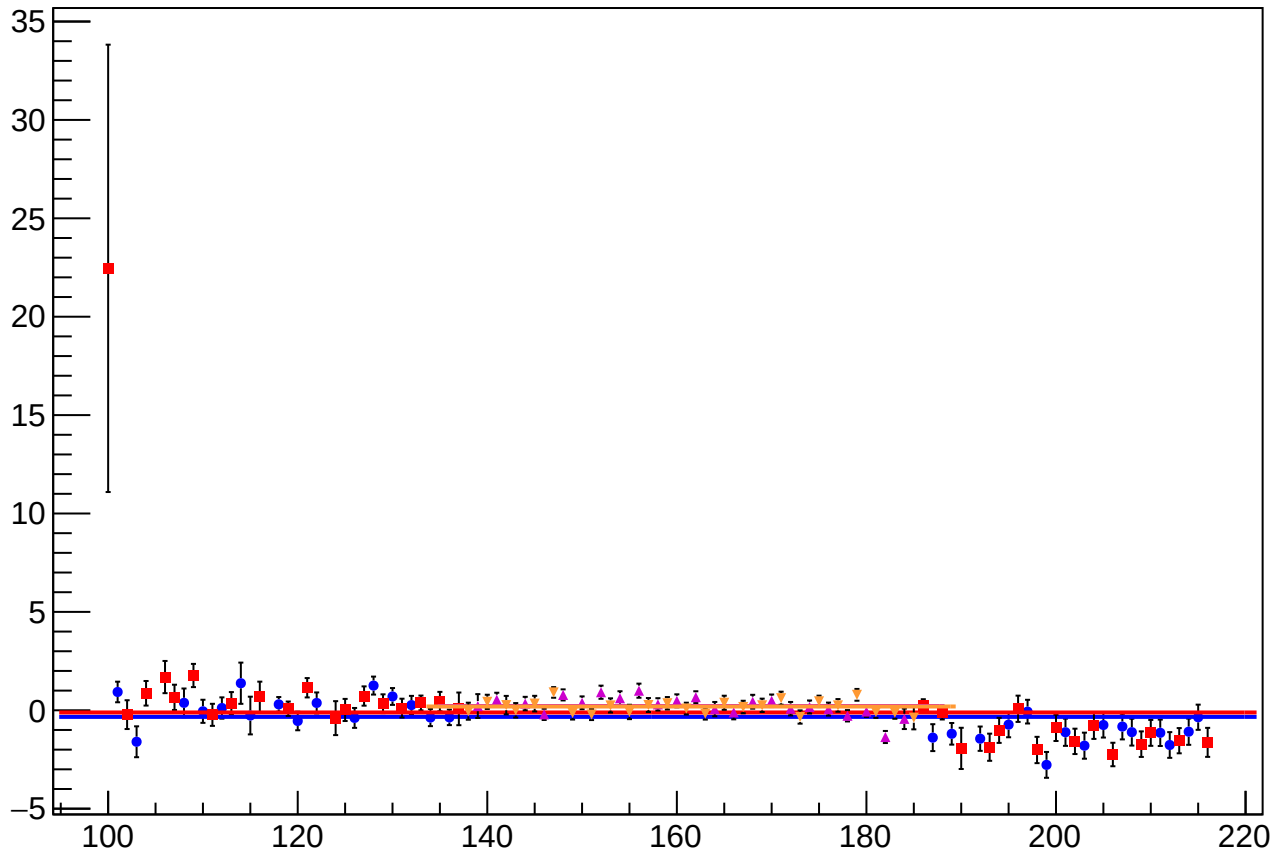
Left In:  $-0.075 \pm 0.079$   $\chi^2/\text{NDF}$ : 28.3/22

+ sign  $-0.236 \pm 0.053$   $\chi^2/\text{NDF}$ : 91.6/55

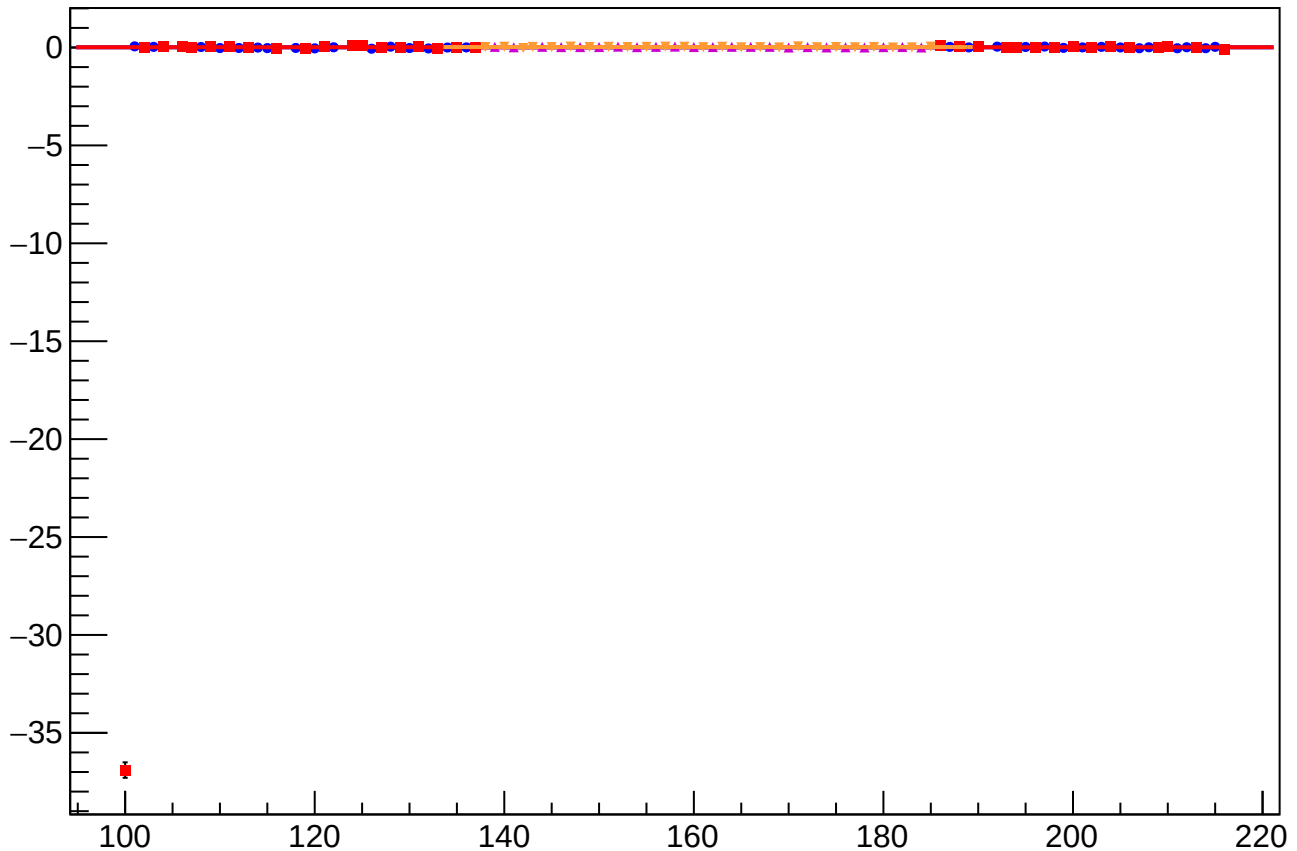
All:  $-0.305 \pm 0.036$   $\chi^2/\text{NDF}$ : 297.1/112

- sign  $-0.365 \pm 0.050$   $\chi^2/\text{NDF}$ : 202.3/56

# reg\_asym\_dsr\_diff\_bpm4eY\_slope vs Slug



# reg\_asym\_dsr\_diff\_bpm12X\_slope vs Slug



Right In: 0.010 $\pm$ 0.005  $\chi^2$ /NDF: 36.8/30

Left Out: 0.024 $\pm$ 0.003  $\chi^2$ /NDF:30.2/24

Right Out: 0.013 $\pm$ 0.005  $\chi^2$ /NDF: 8793.3/33

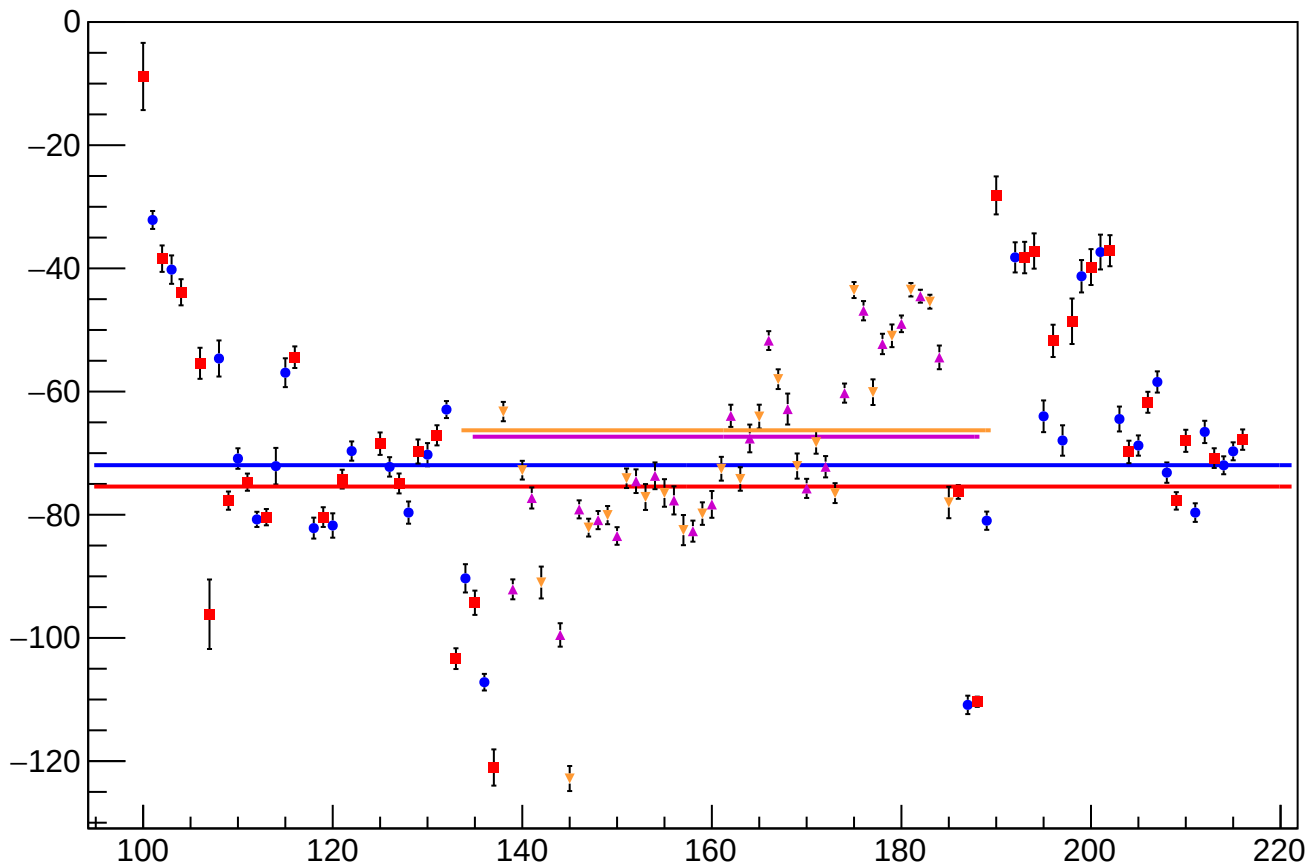
Left In: 0.024 $\pm$ 0.003  $\chi^2$ /NDF:18.0/22

+ sign 0.020 $\pm$ 0.003  $\chi^2$ /NDF: 73.7/55

All: 0.020 $\pm$ 0.002  $\chi^2$ /NDF: 8889.1/112

- sign 0.021 $\pm$ 0.003  $\chi^2$ /NDF: 8815.3/56

# reg\_asym\_us\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-71.952 \pm 0.316$   $\chi^2/\text{NDF}: 3256.1/30$

Left Out:  $-66.289 \pm 0.344$   $\chi^2/\text{NDF}: 2550.4/23$

Right Out:  $-75.423 \pm 0.305$   $\chi^2/\text{NDF}: 4617.1/32$

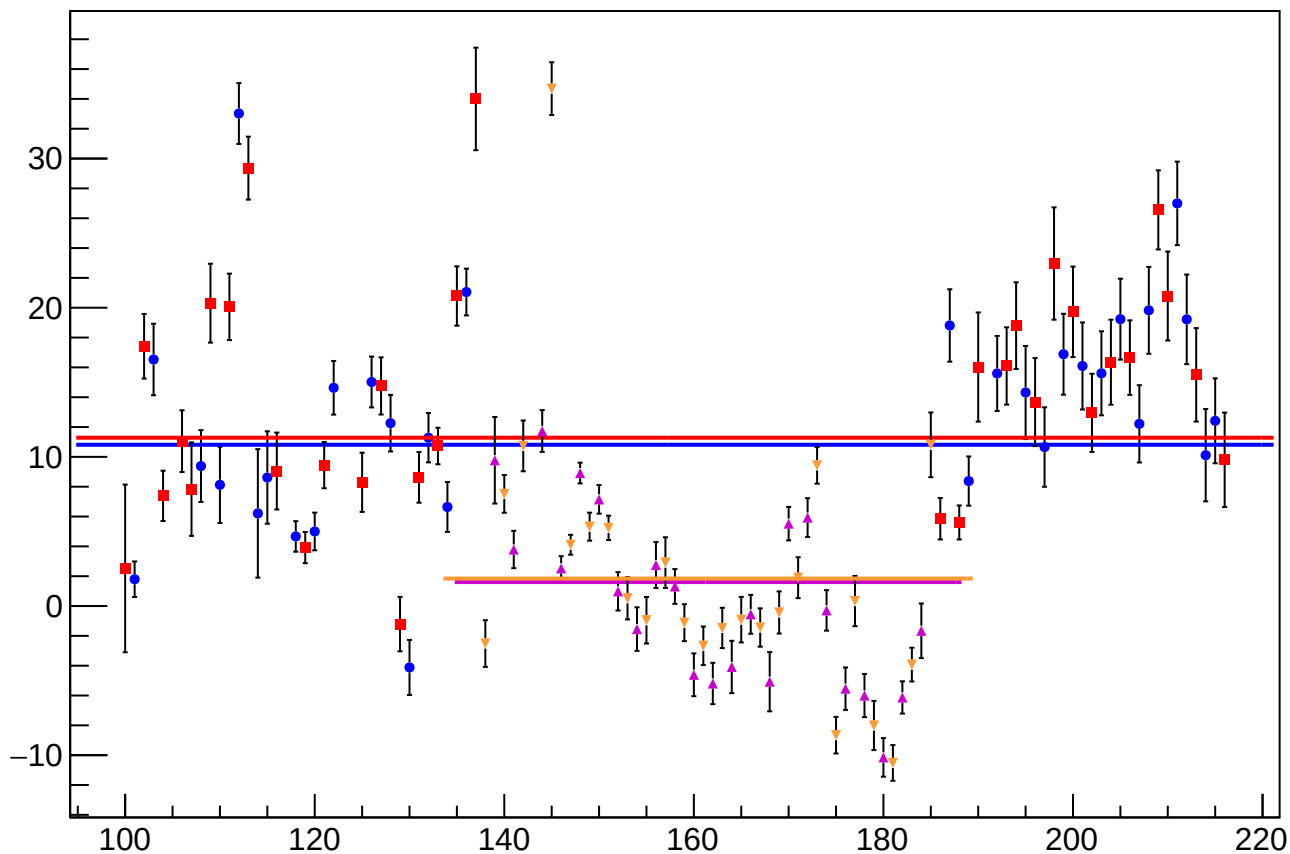
Left In:  $-67.331 \pm 0.345$   $\chi^2/\text{NDF}: 2102.6/22$

+ sign  $-69.359 \pm 0.233$   $\chi^2/\text{NDF}: 5953.6/54$

All:  $-70.637 \pm 0.163$   $\chi^2/\text{NDF}: 13041.1/110$

- sign  $-71.871 \pm 0.229$   $\chi^2/\text{NDF}: 7028.2/55$

# reg\_asym\_us\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $10.812 \pm 0.360$   $\chi^2/\text{NDF}: 457.3/30$

Left Out:  $1.842 \pm 0.254$   $\chi^2/\text{NDF}: 781.5/23$

Right Out:  $11.285 \pm 0.354$   $\chi^2/\text{NDF}: 414.4/32$

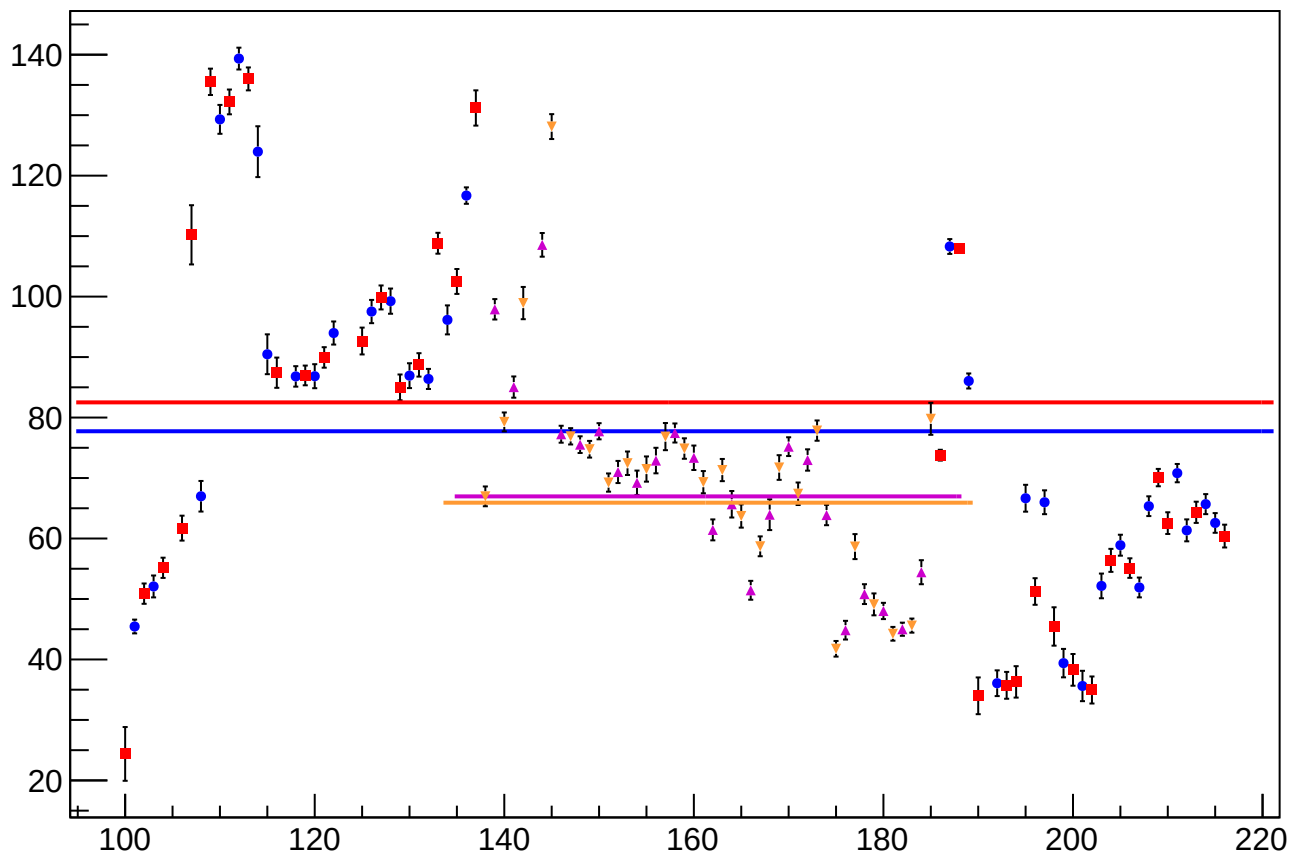
Left In:  $1.605 \pm 0.258$   $\chi^2/\text{NDF}: 496.6/22$

+ sign  $4.831 \pm 0.208$   $\chi^2/\text{NDF}: 1653.0/54$

All:  $4.899 \pm 0.147$   $\chi^2/\text{NDF}: 3051.7/110$

- sign  $4.967 \pm 0.209$   $\chi^2/\text{NDF}: 1398.5/55$

# reg\_asym\_us\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 77.735 $\pm$ 0.321  $\chi^2/\text{NDF}$ : 6529.8/30

Left Out: 65.923 $\pm$ 0.341  $\chi^2/\text{NDF}$ : 2555.6/23

Right Out: 82.509 $\pm$ 0.302  $\chi^2/\text{NDF}$ : 8214.2/32

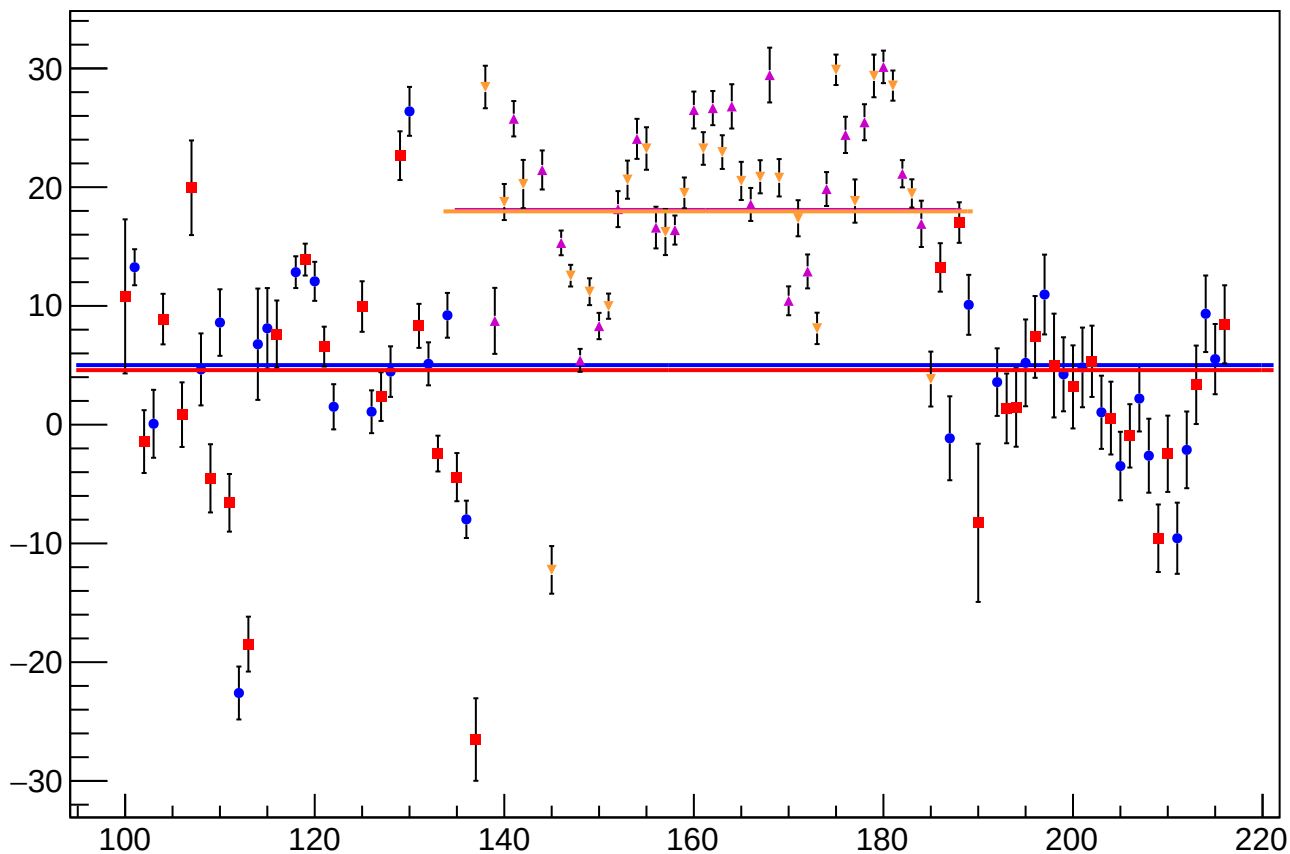
Left In: 66.964 $\pm$ 0.341  $\chi^2/\text{NDF}$ : 2221.3/22

+ sign 72.171 $\pm$ 0.234  $\chi^2/\text{NDF}$ : 9721.9/54

All: 73.983 $\pm$ 0.163  $\chi^2/\text{NDF}$ : 21437.7/110

- sign 75.680 $\pm$ 0.226  $\chi^2/\text{NDF}$ : 11599.3/55

# reg\_asym\_us\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $5.015 \pm 0.420$   $\chi^2/\text{NDF}: 488.7/30$

Left Out:  $17.963 \pm 0.292$   $\chi^2/\text{NDF}: 732.1/23$

Right Out:  $4.593 \pm 0.421$   $\chi^2/\text{NDF}: 533.8/32$

Left In:  $18.079 \pm 0.295$   $\chi^2/\text{NDF}: 605.0/22$

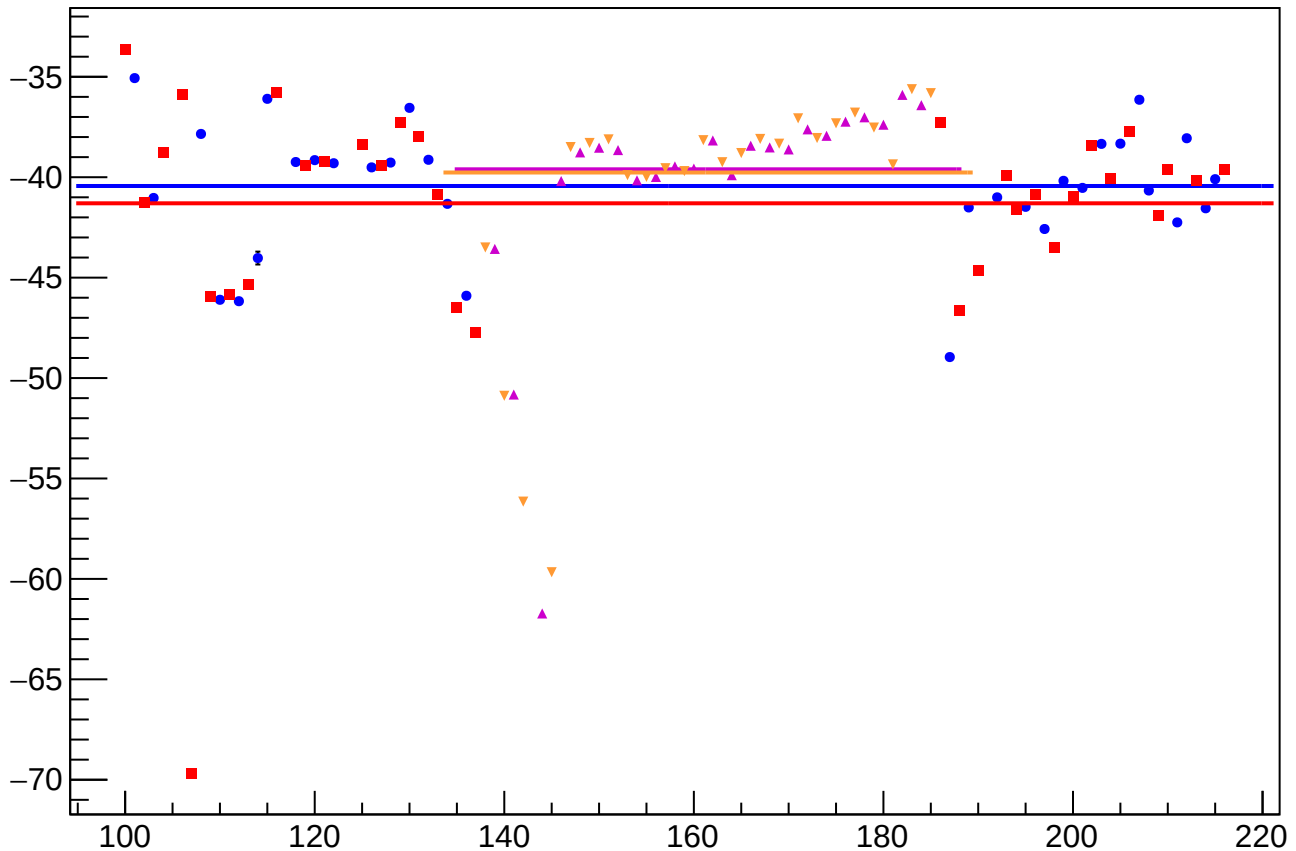
+ sign  $13.740 \pm 0.240$   $\chi^2/\text{NDF}: 1862.3/54$

All:  $13.690 \pm 0.170$   $\chi^2/\text{NDF}: 3690.0/110$

- sign  $13.640 \pm 0.241$   $\chi^2/\text{NDF}: 1827.5/55$



# reg\_asym\_us\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-40.437 \pm 0.021$   $\chi^2/\text{NDF}$ : 23336.2/30

Left Out:  $-39.765 \pm 0.013$   $\chi^2/\text{NDF}$ : 129895.4/23

Right Out:  $-41.299 \pm 0.021$   $\chi^2/\text{NDF}$ : 44913.0/32

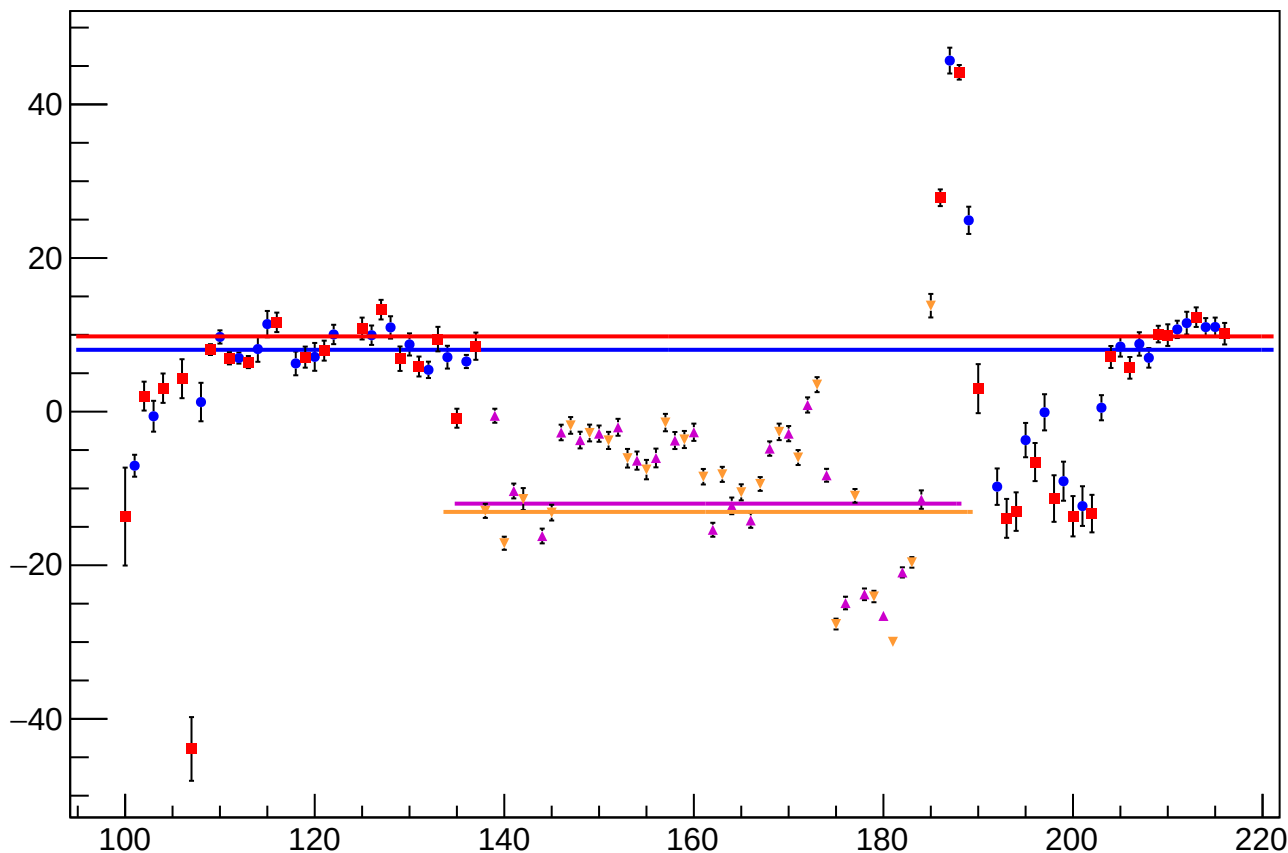
Left In:  $-39.606 \pm 0.013$   $\chi^2/\text{NDF}$ : 106639.2/22

+ sign  $-39.964 \pm 0.011$   $\chi^2/\text{NDF}$ : 153969.2/54

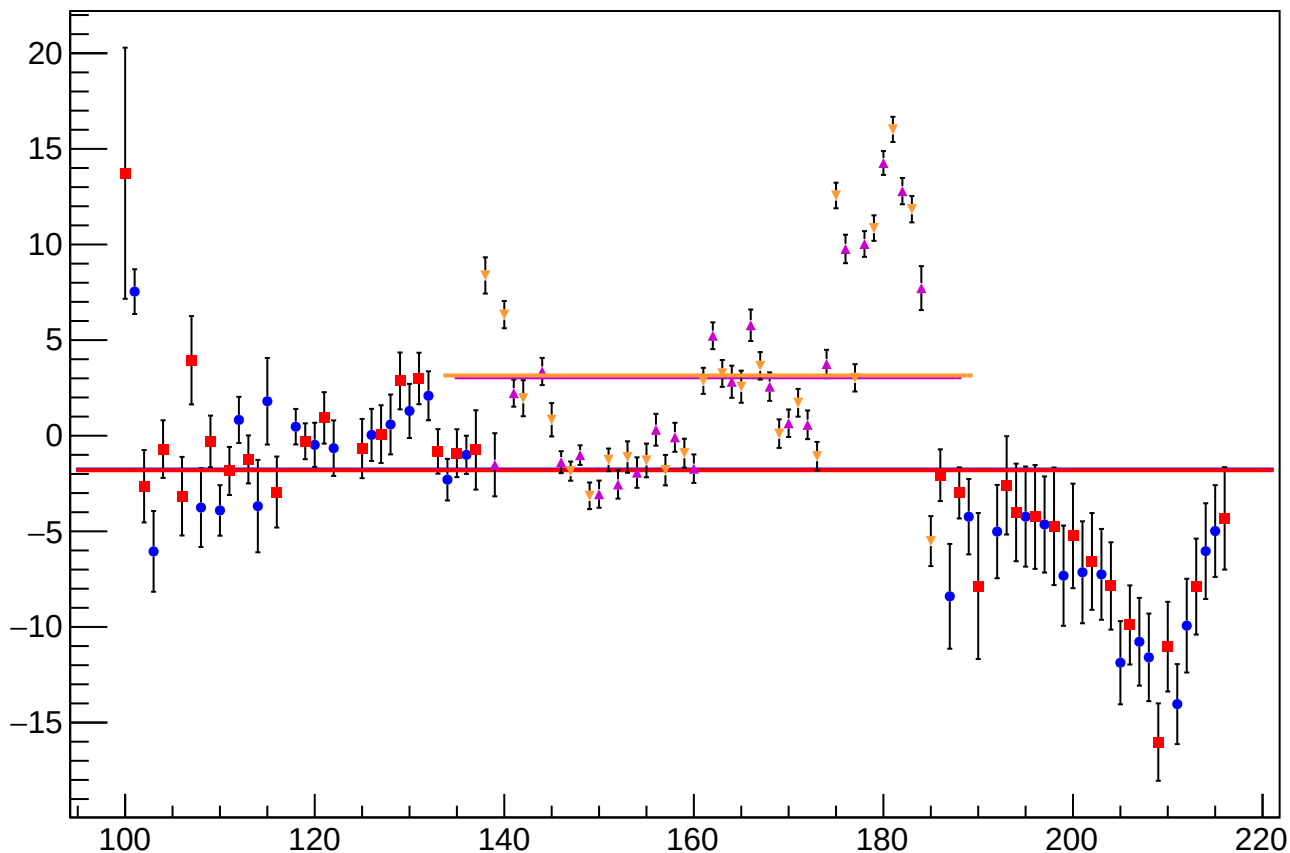
All:  $-40.032 \pm 0.008$   $\chi^2/\text{NDF}$ : 310252.5/110

- sign  $-40.099 \pm 0.011$   $\chi^2/\text{NDF}$ : 156212.4/55

# reg\_asym\_us\_dd\_diff\_bpm1X\_slope vs Slug



# reg\_asym\_us\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.768 \pm 0.292$   $\chi^2/\text{NDF}$ : 235.8/30

Left Out:  $3.153 \pm 0.149$   $\chi^2/\text{NDF}$ : 1385.1/23

Right Out:  $-1.805 \pm 0.294$   $\chi^2/\text{NDF}$ : 152.6/32

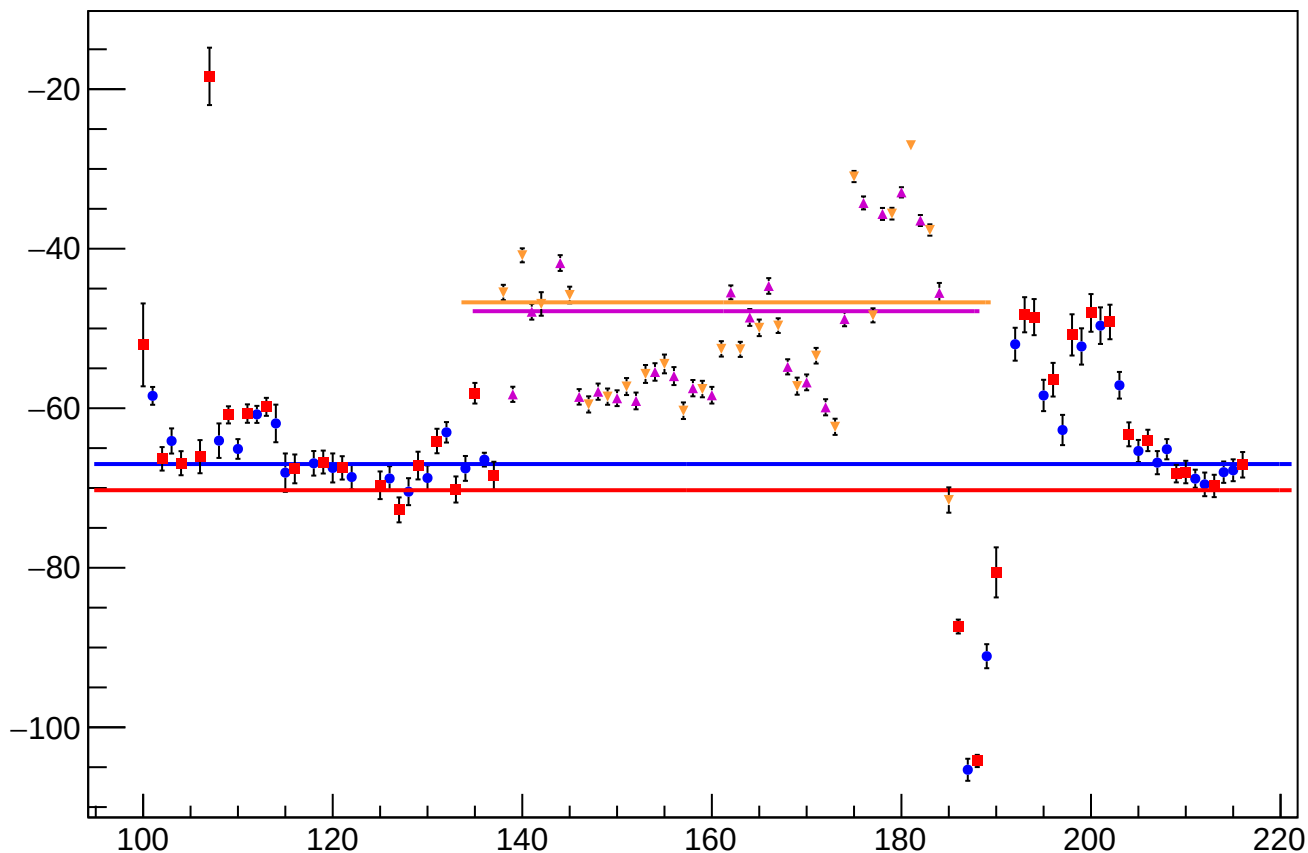
Left In:  $3.055 \pm 0.152$   $\chi^2/\text{NDF}$ : 1145.0/22

+ sign  $2.134 \pm 0.133$   $\chi^2/\text{NDF}$ : 1846.5/54

All:  $2.082 \pm 0.095$   $\chi^2/\text{NDF}$ : 3360.4/110

- sign  $2.028 \pm 0.135$   $\chi^2/\text{NDF}$ : 1513.6/55

# reg\_asym\_us\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-66.998 \pm 0.263$   $\chi^2/\text{NDF}$ : 1369.7/30

Left Out:  $-46.724 \pm 0.192$   $\chi^2/\text{NDF}$ : 3446.1/23

Right Out:  $-70.277 \pm 0.256$   $\chi^2/\text{NDF}$ : 3479.1/32

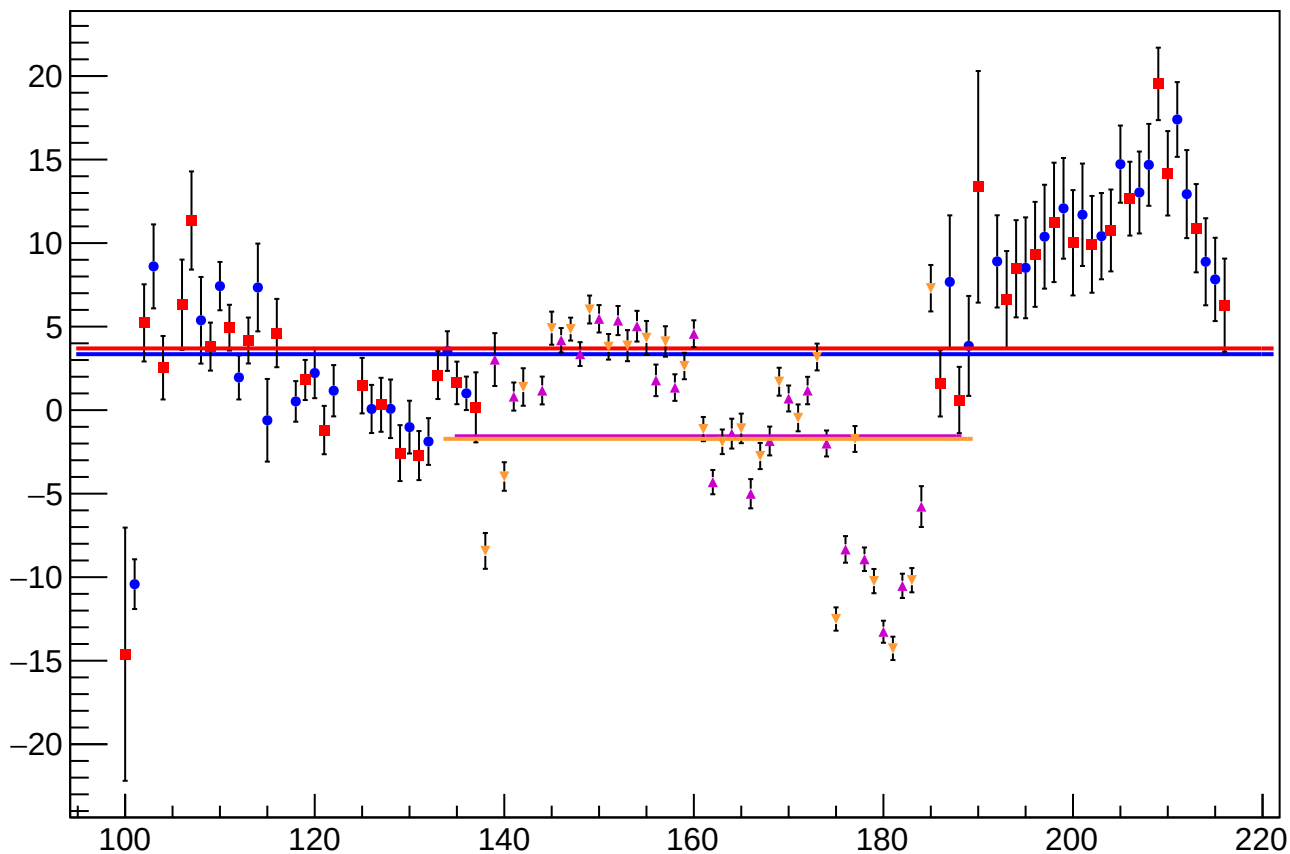
Left In:  $-47.835 \pm 0.194$   $\chi^2/\text{NDF}$ : 2557.6/22

+ sign  $-53.734 \pm 0.155$   $\chi^2/\text{NDF}$ : 8689.2/54

All:  $-54.871 \pm 0.109$   $\chi^2/\text{NDF}$ : 19711.0/110

- sign  $-56.002 \pm 0.155$   $\chi^2/\text{NDF}$ : 10914.3/55

# reg\_asym\_us\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $3.349 \pm 0.331$   $\chi^2/\text{NDF}$ : 306.3/30

Left Out:  $-1.718 \pm 0.168$   $\chi^2/\text{NDF}$ : 1406.1/23

Right Out:  $3.693 \pm 0.338$   $\chi^2/\text{NDF}$ : 204.4/32

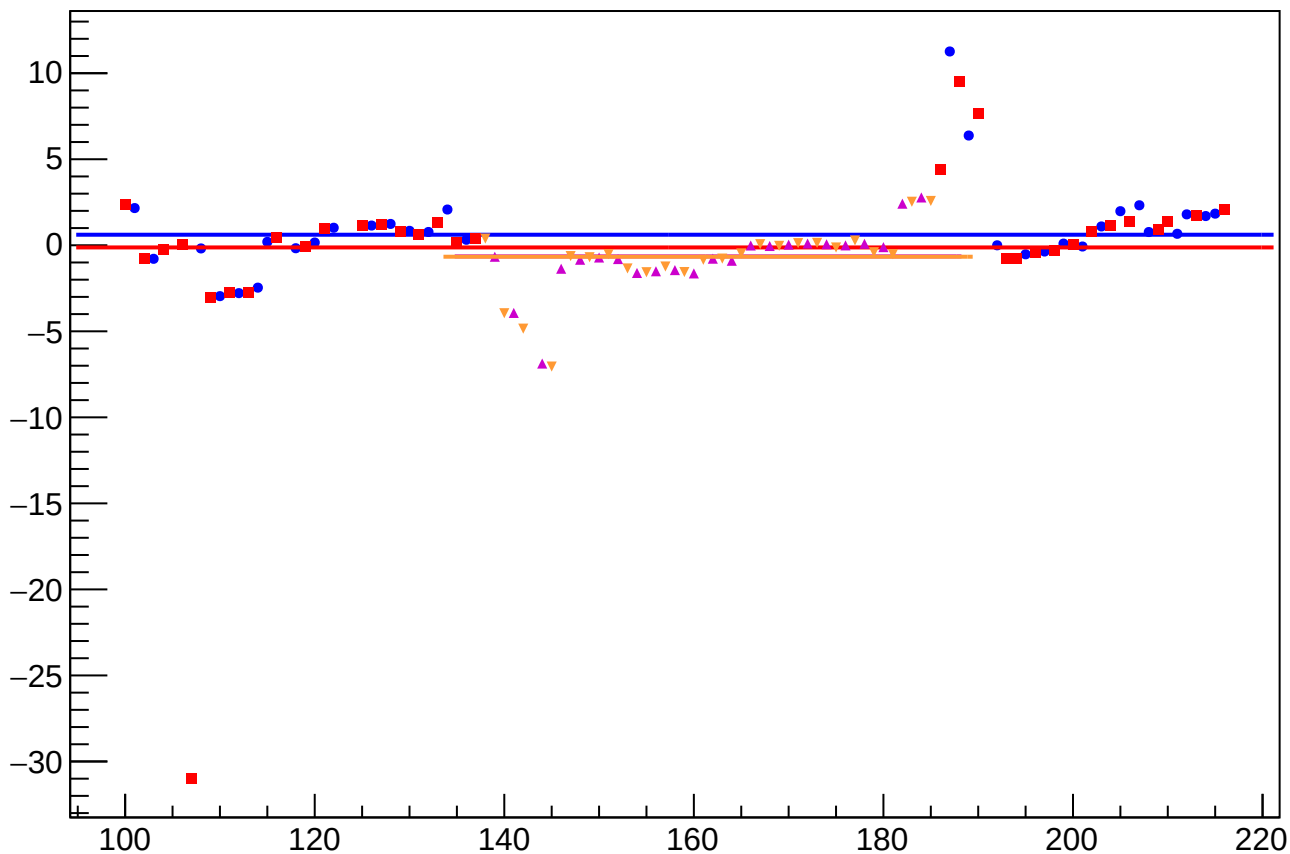
Left In:  $-1.567 \pm 0.171$   $\chi^2/\text{NDF}$ : 1117.7/22

+ sign  $-0.680 \pm 0.150$   $\chi^2/\text{NDF}$ : 1899.1/54

All:  $-0.590 \pm 0.107$   $\chi^2/\text{NDF}$ : 3415.1/110

- sign  $-0.497 \pm 0.152$   $\chi^2/\text{NDF}$ : 1515.3/55

# reg\_asym\_us\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.613 \pm 0.017$   $\chi^2/\text{NDF}$ : 10542.0/30

Left Out:  $-0.666 \pm 0.008$   $\chi^2/\text{NDF}$ : 55276.7/23

Right Out:  $-0.125 \pm 0.017$   $\chi^2/\text{NDF}$ : 61449.9/32

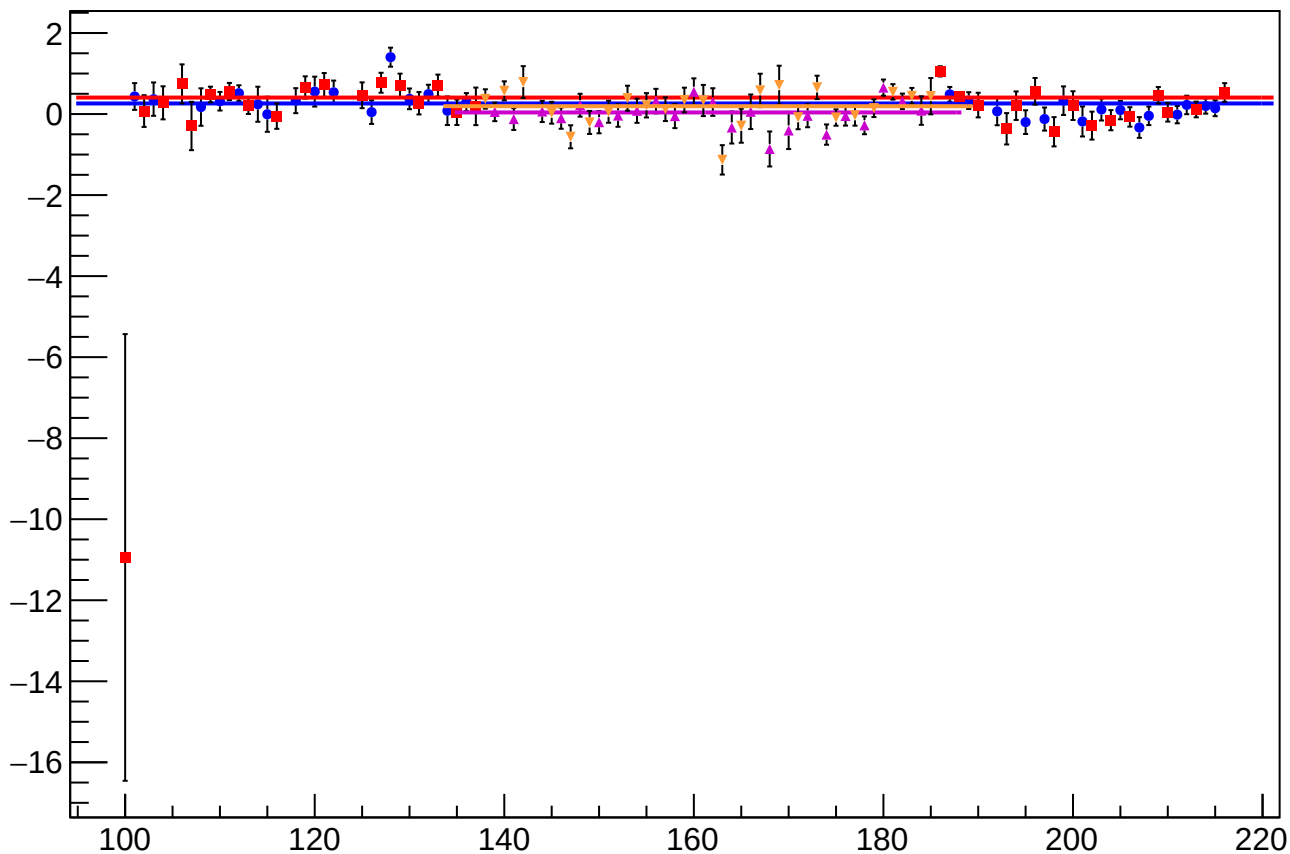
Left In:  $-0.646 \pm 0.008$   $\chi^2/\text{NDF}$ : 45569.5/22

+ sign  $-0.449 \pm 0.007$   $\chi^2/\text{NDF}$ : 70725.6/54

All:  $-0.505 \pm 0.005$   $\chi^2/\text{NDF}$ : 178652.5/110

- sign  $-0.561 \pm 0.007$   $\chi^2/\text{NDF}$ : 107793.7/55

# reg\_asym\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $0.261 \pm 0.047$   $\chi^2/\text{NDF}$ : 47.7/30

Left Out:  $0.194 \pm 0.057$   $\chi^2/\text{NDF}$ : 44.2/23

Right Out:  $0.407 \pm 0.043$   $\chi^2/\text{NDF}$ : 73.8/32

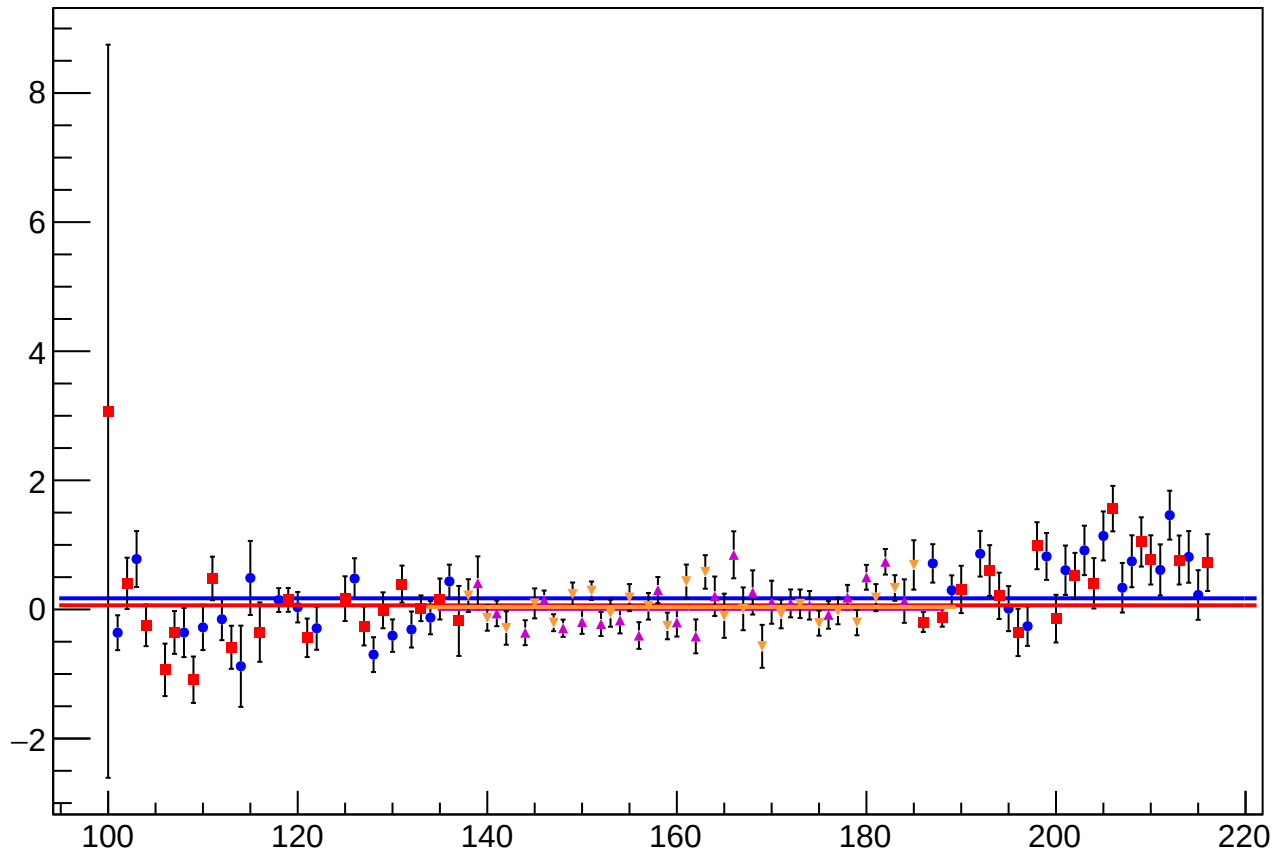
Left In:  $0.039 \pm 0.058$   $\chi^2/\text{NDF}$ : 30.5/22

+ sign  $0.234 \pm 0.036$   $\chi^2/\text{NDF}$ : 92.7/54

All:  $0.256 \pm 0.025$   $\chi^2/\text{NDF}$ : 224.0/110

- sign  $0.276 \pm 0.034$   $\chi^2/\text{NDF}$ : 130.5/55

# reg\_asym\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.172 \pm 0.057$   $\chi^2/\text{NDF}$ : 79.8/30

Left Out:  $0.038 \pm 0.043$   $\chi^2/\text{NDF}$ : 32.8/23

Right Out:  $0.064 \pm 0.052$   $\chi^2/\text{NDF}$ : 83.0/32

Left In:  $0.008 \pm 0.044$   $\chi^2/\text{NDF}$ : 51.4/22

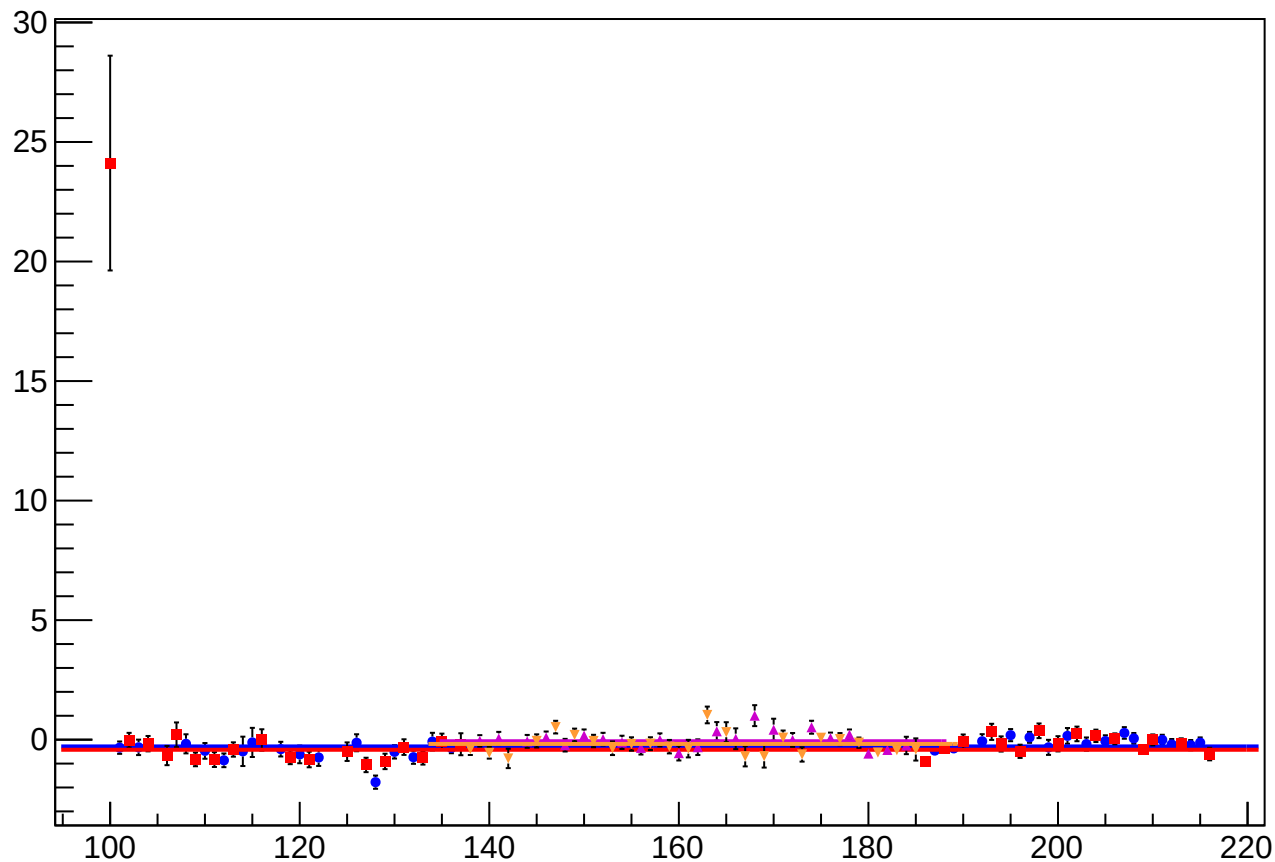
+ sign  $0.088 \pm 0.034$   $\chi^2/\text{NDF}$ : 116.2/54

All:  $0.059 \pm 0.024$   $\chi^2/\text{NDF}$ : 252.5/110

- sign  $0.031 \pm 0.034$   $\chi^2/\text{NDF}$ : 135.0/55



# reg\_asym\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.283 \pm 0.047$   $\chi^2/\text{NDF}$ : 61.4/30

Left Out:  $-0.178 \pm 0.056$   $\chi^2/\text{NDF}$ : 42.1/23

Right Out:  $-0.422 \pm 0.041$   $\chi^2/\text{NDF}$ : 106.2/32

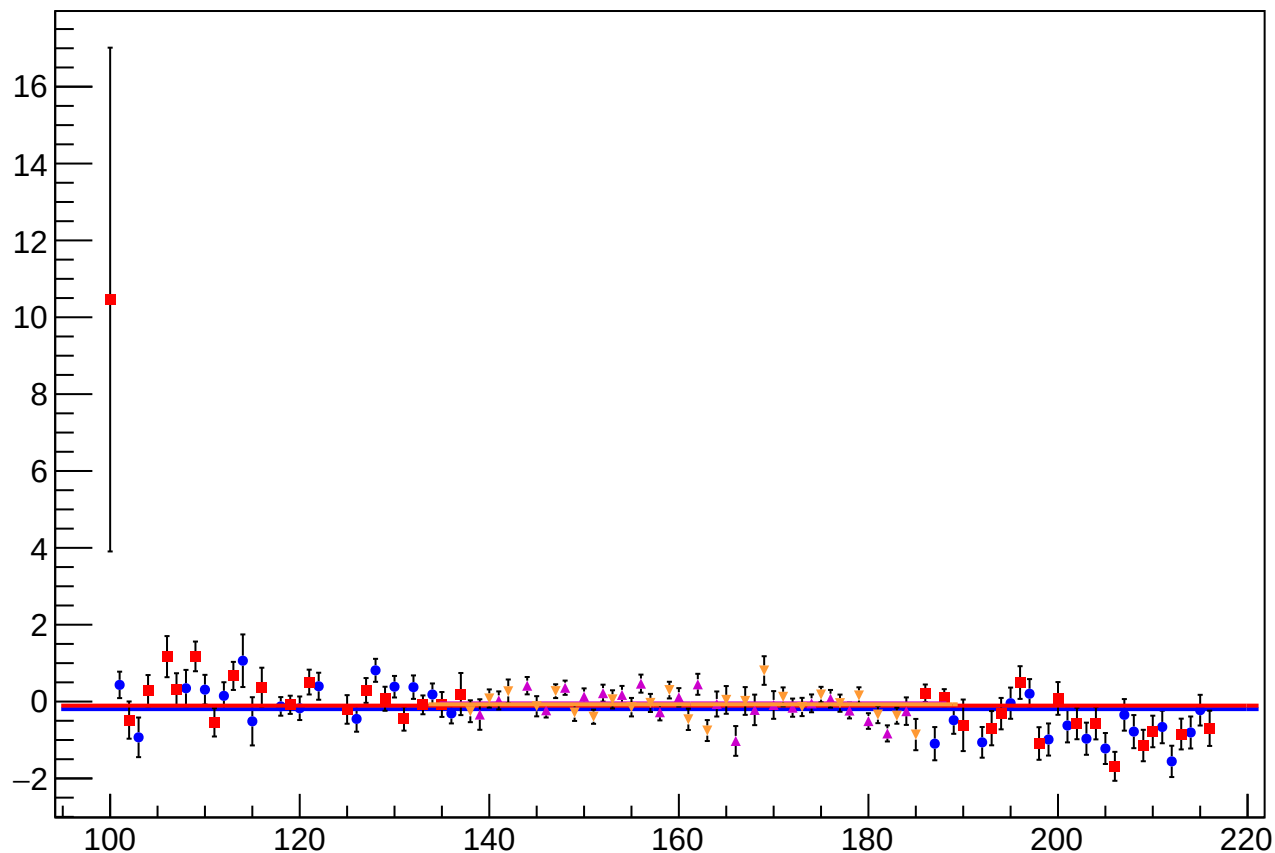
Left In:  $-0.066 \pm 0.057$   $\chi^2/\text{NDF}$ : 31.4/22

+ sign  $-0.240 \pm 0.036$   $\chi^2/\text{NDF}$ : 105.5/54

All:  $-0.271 \pm 0.025$   $\chi^2/\text{NDF}$ : 270.2/110

- sign  $-0.299 \pm 0.034$   $\chi^2/\text{NDF}$ : 163.3/55

# reg\_asym\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.197 \pm 0.066$   $\chi^2/\text{NDF}$ : 79.4/30

Left Out:  $-0.072 \pm 0.049$   $\chi^2/\text{NDF}$ : 37.7/23

Right Out:  $-0.106 \pm 0.063$   $\chi^2/\text{NDF}$ : 82.9/32

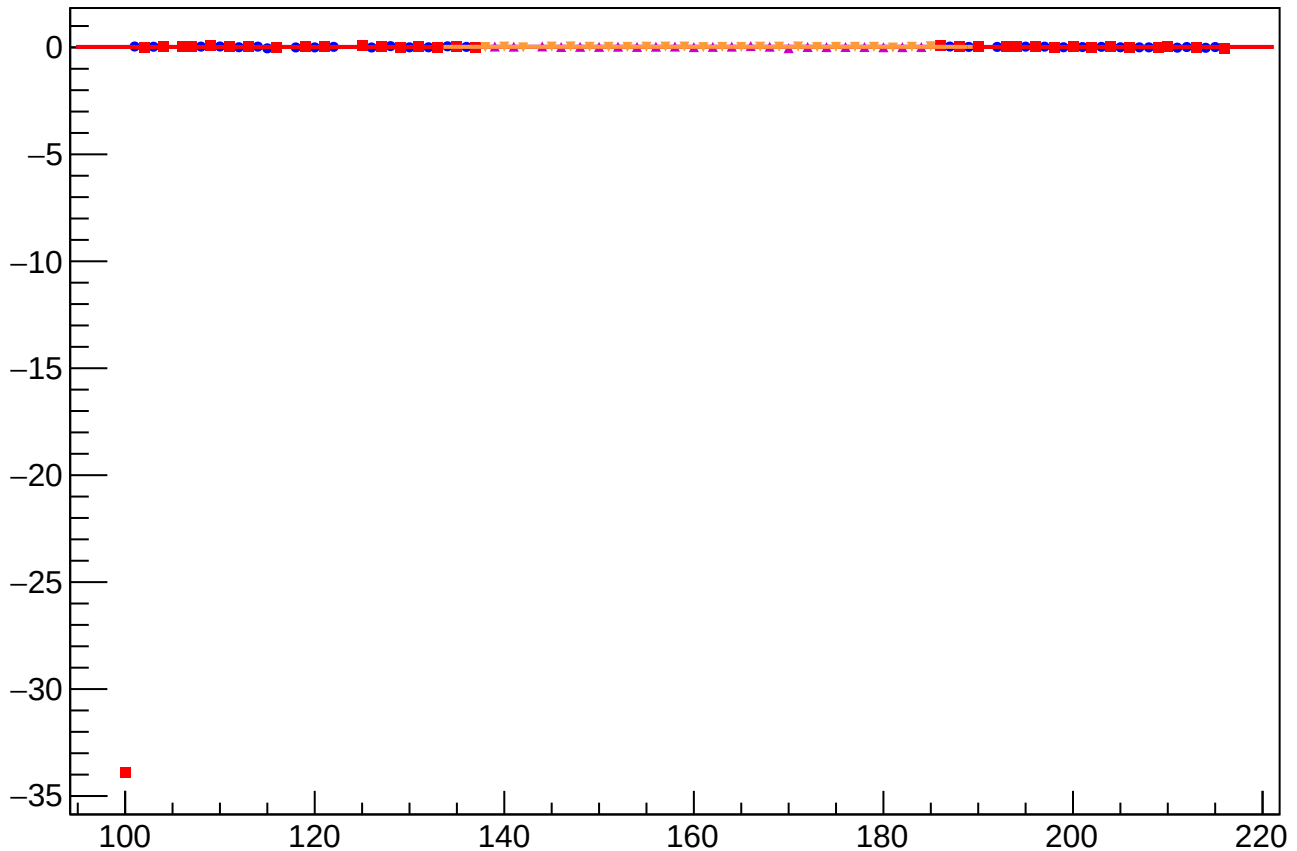
Left In:  $-0.047 \pm 0.050$   $\chi^2/\text{NDF}$ : 50.5/22

+ sign  $-0.117 \pm 0.039$   $\chi^2/\text{NDF}$ : 119.5/54

All:  $-0.093 \pm 0.028$   $\chi^2/\text{NDF}$ : 254.0/110

- sign  $-0.070 \pm 0.039$   $\chi^2/\text{NDF}$ : 133.8/55

# reg\_asym\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.021 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 30.1/30

Left Out: 0.026 $\pm$ 0.002  $\chi^2/\text{NDF}$ :31.4/23

Right Out: 0.021 $\pm$ 0.003  $\chi^2/\text{NDF}$ : 22325.2/32

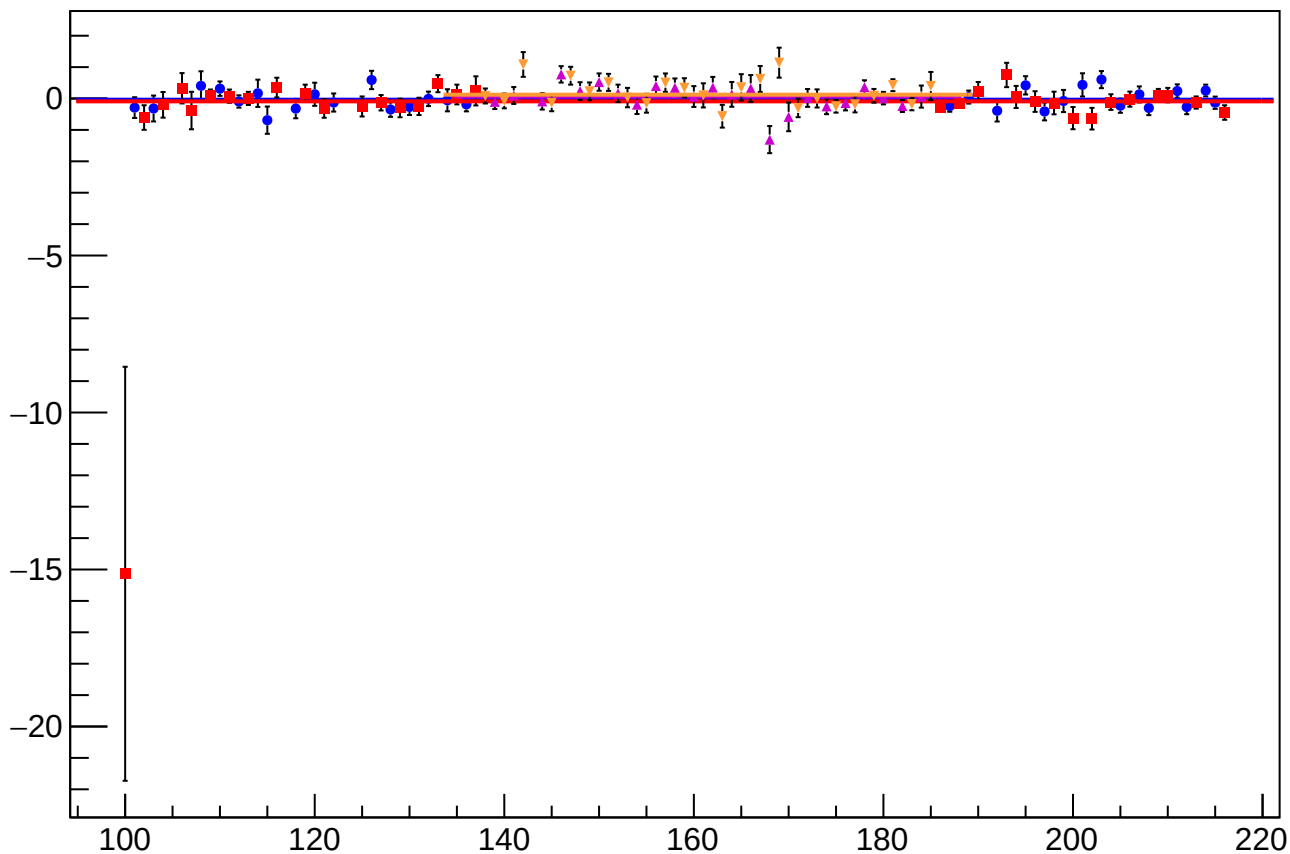
Left In: 0.026 $\pm$ 0.002  $\chi^2/\text{NDF}$ :39.5/22

+ sign 0.025 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 63.1/54

All: 0.024 $\pm$ 0.001  $\chi^2/\text{NDF}$ : 22430.2/110

- sign 0.024 $\pm$ 0.002  $\chi^2/\text{NDF}$ : 22367.0/55

# reg\_asym\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.037 \pm 0.047$   $\chi^2/\text{NDF}$ : 37.3/30

Left Out:  $0.122 \pm 0.057$   $\chi^2/\text{NDF}$ : 39.6/23

Right Out:  $-0.091 \pm 0.043$   $\chi^2/\text{NDF}$ : 37.6/32

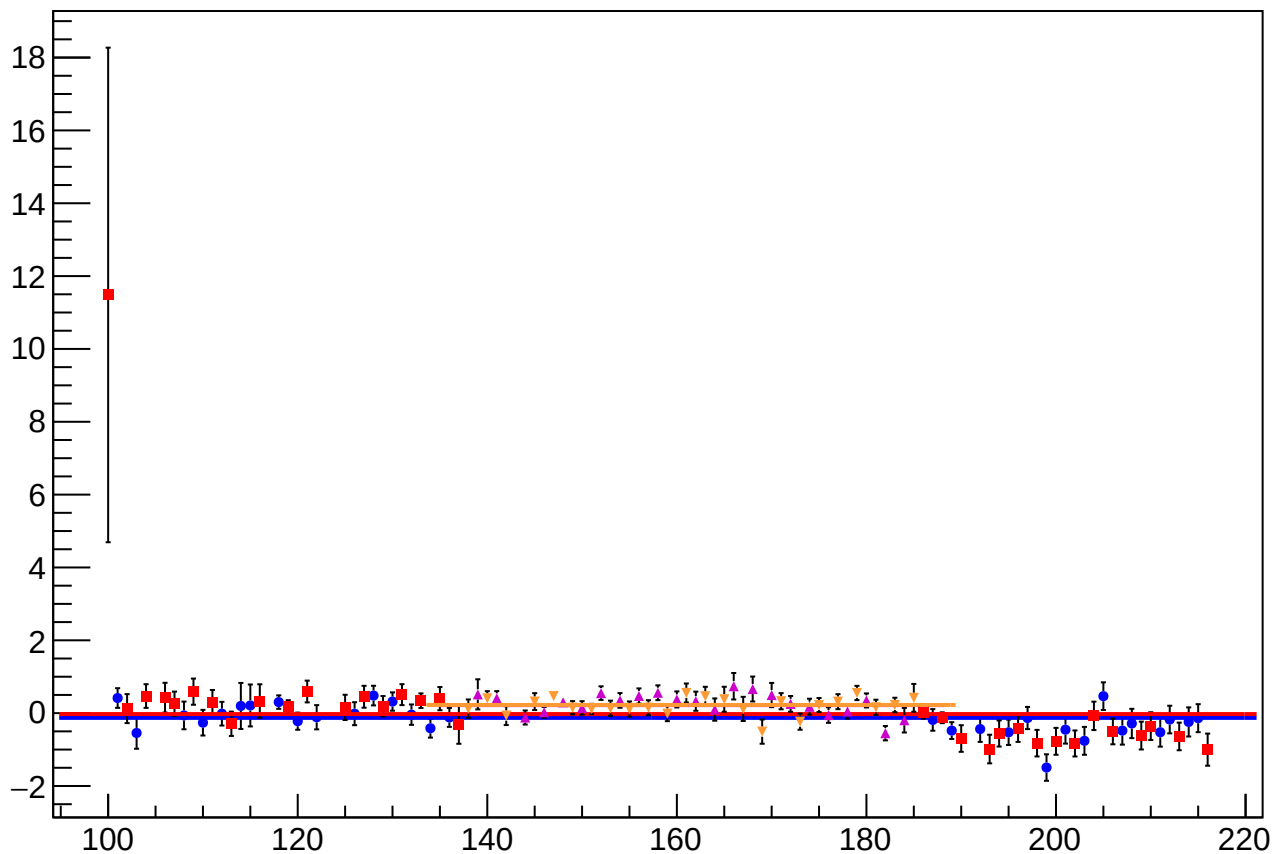
Left In:  $0.063 \pm 0.058$   $\chi^2/\text{NDF}$ : 34.2/22

+ sign  $0.027 \pm 0.036$   $\chi^2/\text{NDF}$ : 81.7/54

All:  $-0.006 \pm 0.025$   $\chi^2/\text{NDF}$ : 159.7/110

- sign  $-0.036 \pm 0.034$   $\chi^2/\text{NDF}$ : 76.5/55

# reg\_asym\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.130 \pm 0.057$   $\chi^2/\text{NDF}: 47.7/30$

Left Out:  $0.225 \pm 0.043$   $\chi^2/\text{NDF}: 24.1/23$

Right Out:  $-0.025 \pm 0.052$   $\chi^2/\text{NDF}: 69.8/32$

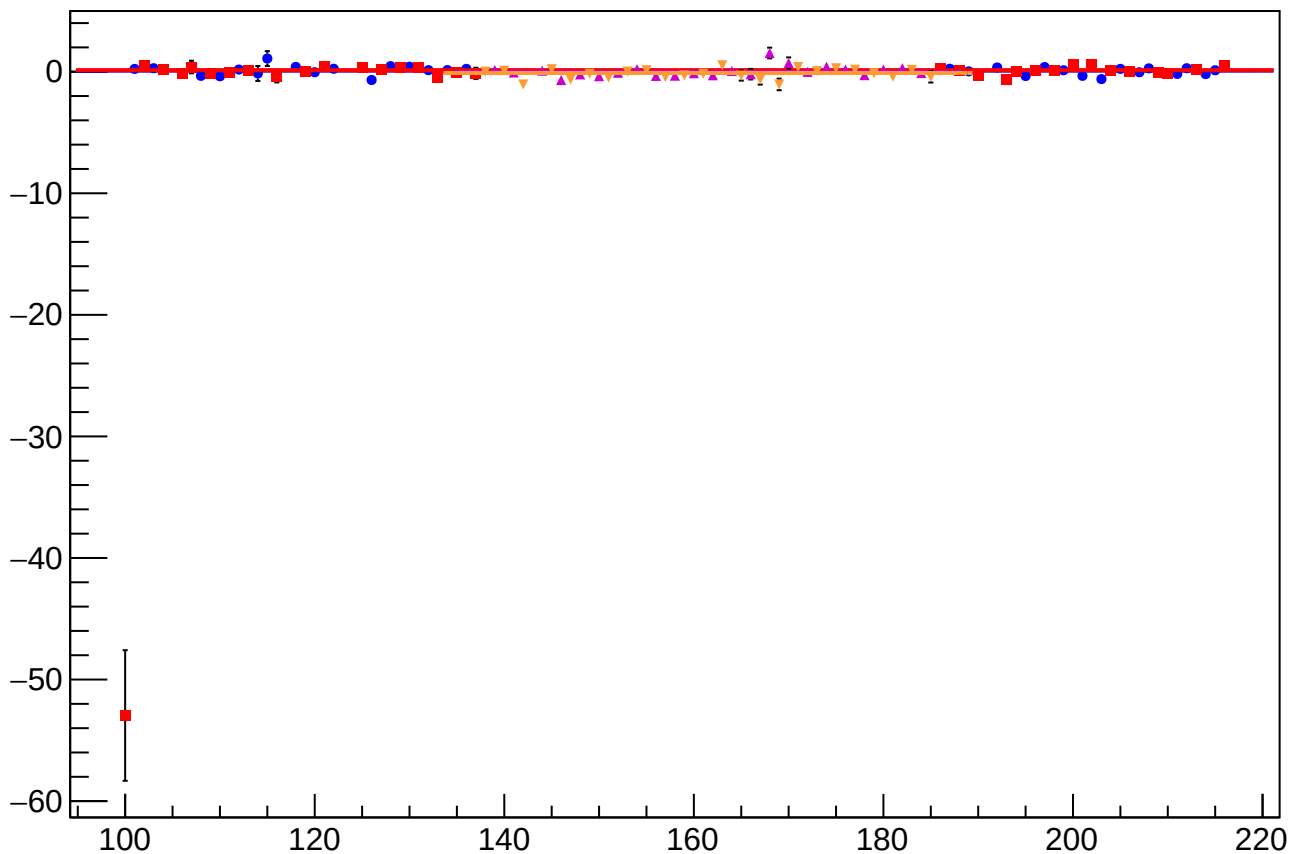
Left In:  $0.221 \pm 0.044$   $\chi^2/\text{NDF}: 39.3/22$

+ sign  $0.094 \pm 0.034$   $\chi^2/\text{NDF}: 96.6/54$

All:  $0.107 \pm 0.024$   $\chi^2/\text{NDF}: 218.9/110$

- sign  $0.119 \pm 0.034$   $\chi^2/\text{NDF}: 122.1/55$

# reg\_asym\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.089 \pm 0.047$   $\chi^2/\text{NDF}$ : 36.4/30

Left Out:  $-0.105 \pm 0.056$   $\chi^2/\text{NDF}$ : 37.6/23

Right Out:  $0.126 \pm 0.041$   $\chi^2/\text{NDF}$ : 127.0/32

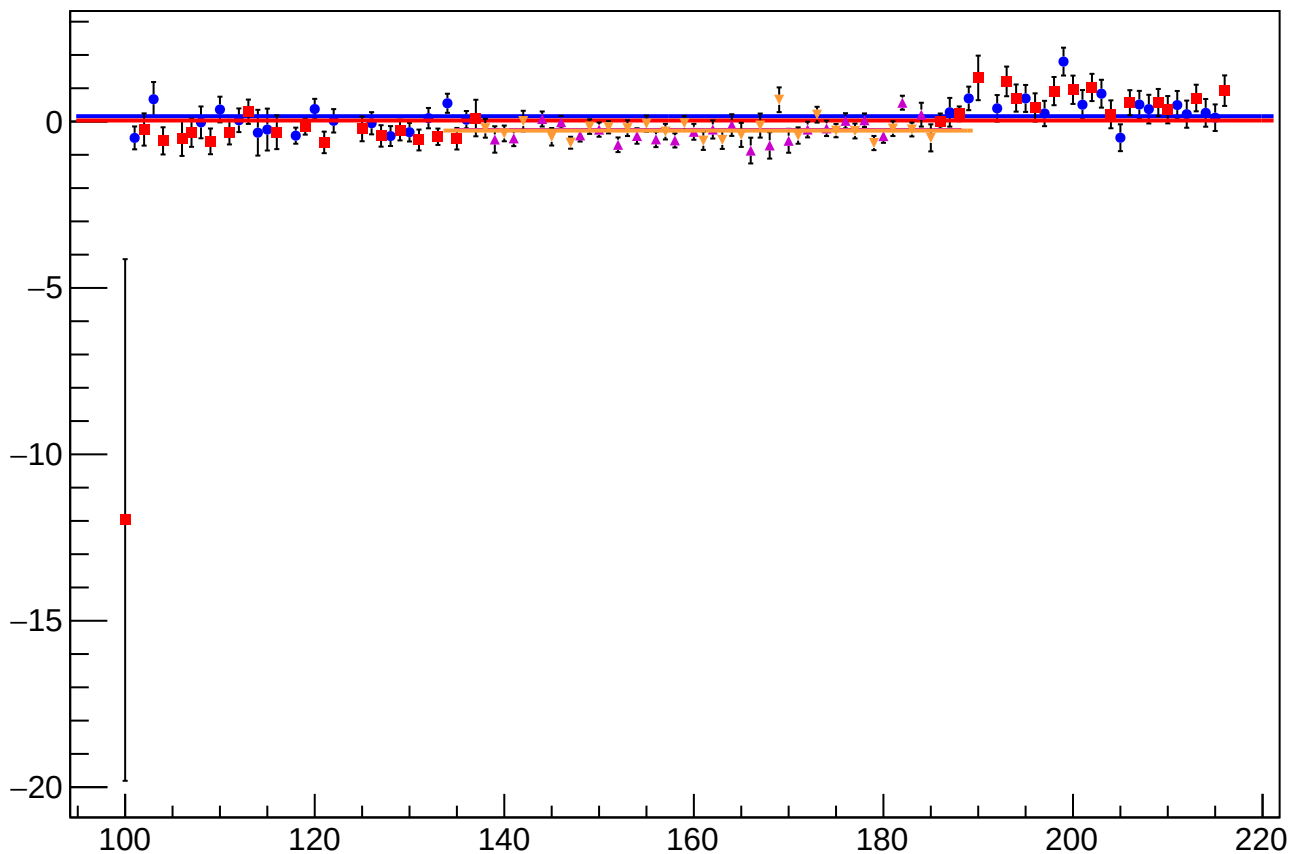
Left In:  $-0.009 \pm 0.057$   $\chi^2/\text{NDF}$ : 38.0/22

+ sign  $0.009 \pm 0.036$   $\chi^2/\text{NDF}$ : 80.9/54

All:  $0.046 \pm 0.025$   $\chi^2/\text{NDF}$ : 251.6/110

- sign  $0.079 \pm 0.034$   $\chi^2/\text{NDF}$ : 168.7/55

# reg\_asym\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.160 \pm 0.066$   $\chi^2/\text{NDF}$ : 49.3/30

Left Out:  $-0.272 \pm 0.049$   $\chi^2/\text{NDF}$ : 24.8/23

Right Out:  $0.031 \pm 0.063$   $\chi^2/\text{NDF}$ : 70.8/32

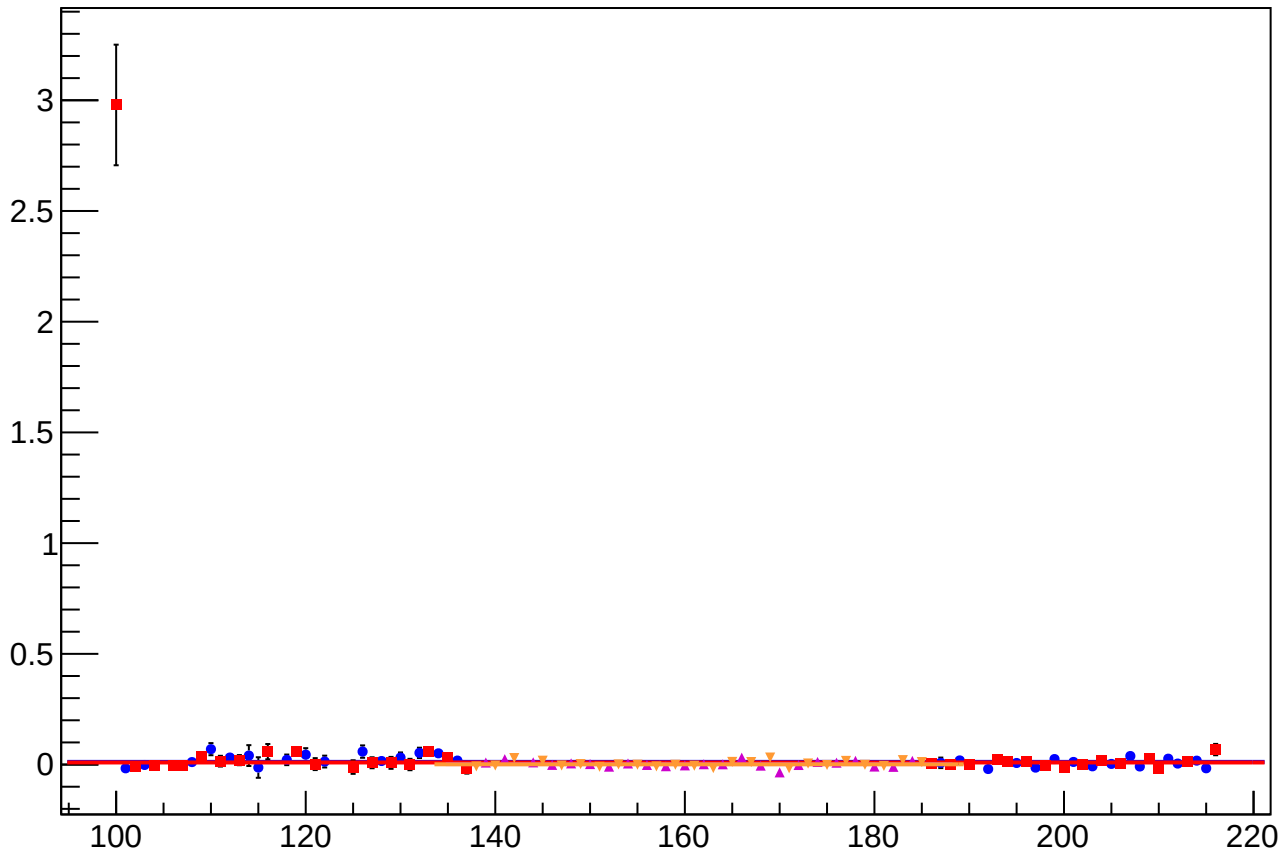
Left In:  $-0.254 \pm 0.050$   $\chi^2/\text{NDF}$ : 40.6/22

+ sign  $-0.116 \pm 0.039$   $\chi^2/\text{NDF}$ : 101.8/54

All:  $-0.130 \pm 0.028$   $\chi^2/\text{NDF}$ : 225.9/110

- sign  $-0.144 \pm 0.039$   $\chi^2/\text{NDF}$ : 123.8/55

# reg\_asym\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.012 \pm 0.003$   $\chi^2/\text{NDF}$ : 47.0/30

Left Out:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 26.7/23

Right Out:  $0.009 \pm 0.003$   $\chi^2/\text{NDF}$ : 157.7/32

Left In:  $0.002 \pm 0.002$   $\chi^2/\text{NDF}$ : 24.6/22

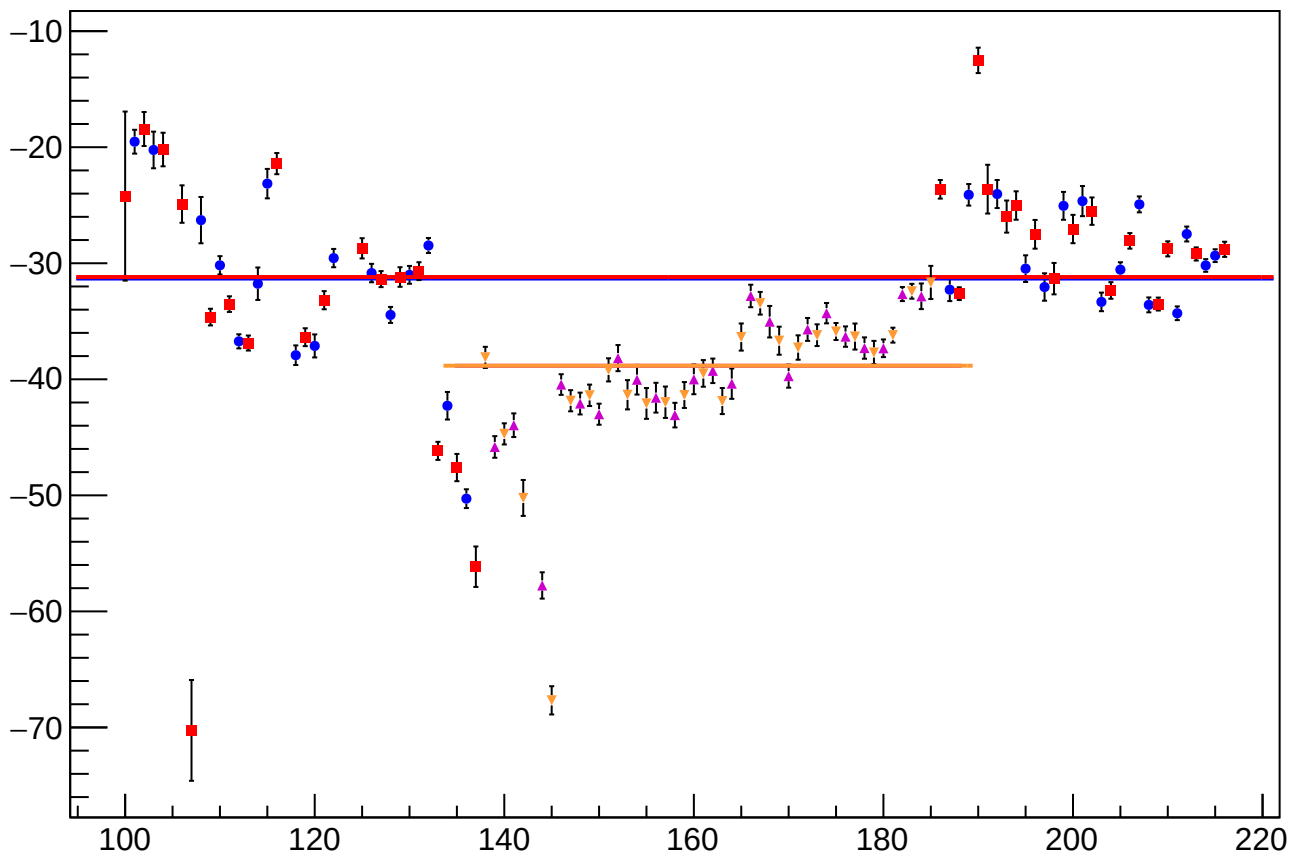
+ sign  $0.005 \pm 0.002$   $\chi^2/\text{NDF}$ : 82.0/54

All:  $0.005 \pm 0.001$   $\chi^2/\text{NDF}$ : 268.0/110

- sign  $0.005 \pm 0.002$   $\chi^2/\text{NDF}$ : 186.0/55



# reg\_asym\_left\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-31.317 \pm 0.146$   $\chi^2/\text{NDF}: 1421.2/30$

Left Out:  $-38.829 \pm 0.202$   $\chi^2/\text{NDF}: 917.0/23$

Right Out:  $-31.188 \pm 0.146$   $\chi^2/\text{NDF}: 1852.2/33$

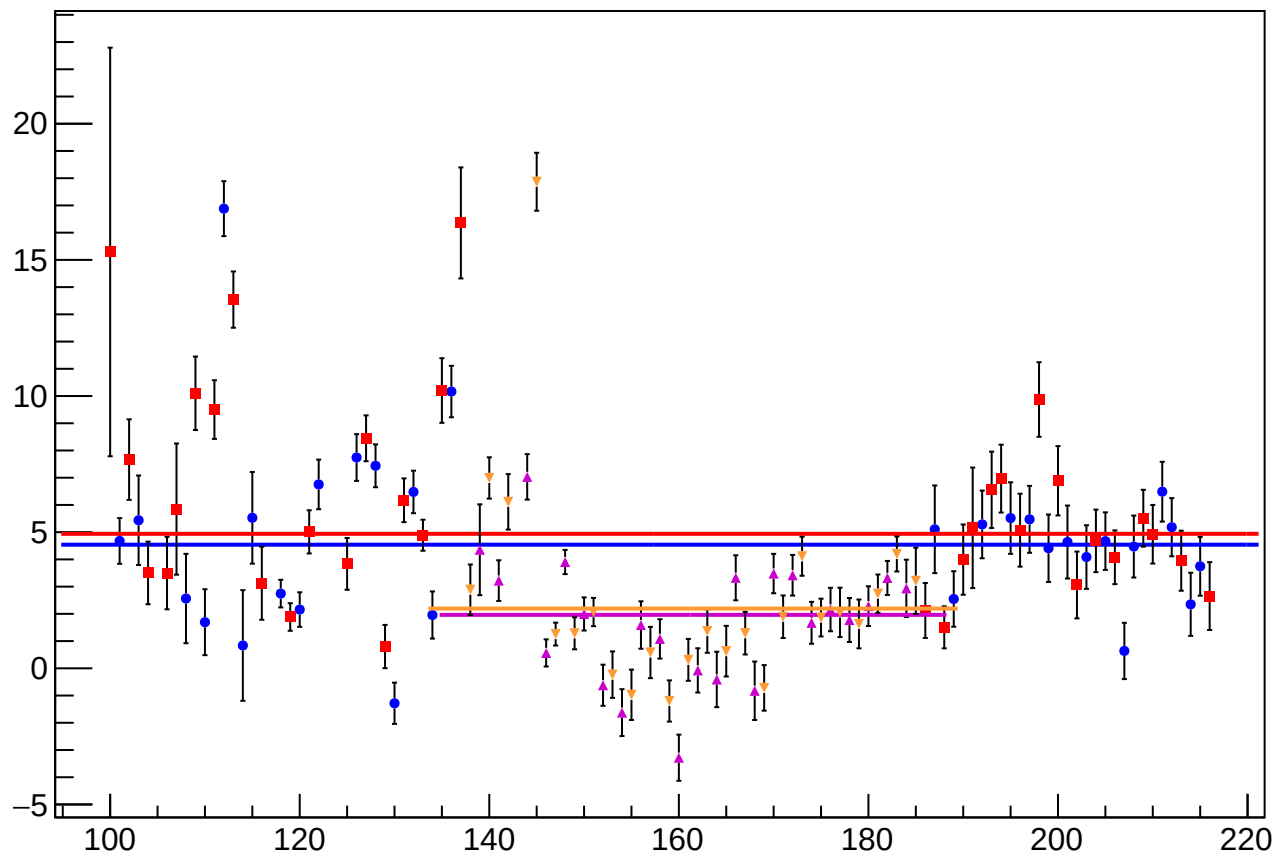
Left In:  $-38.837 \pm 0.203$   $\chi^2/\text{NDF}: 653.4/22$

+ sign  $-33.885 \pm 0.118$   $\chi^2/\text{NDF}: 3248.1/54$

All:  $-33.843 \pm 0.084$   $\chi^2/\text{NDF}: 6685.1/111$

- sign  $-33.801 \pm 0.119$   $\chi^2/\text{NDF}: 3436.8/56$

# reg\_asym\_left\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $4.540 \pm 0.177$   $\chi^2/\text{NDF}$ : 357.9/30

Left Out:  $2.195 \pm 0.152$   $\chi^2/\text{NDF}$ : 365.1/23

Right Out:  $4.940 \pm 0.177$   $\chi^2/\text{NDF}$ : 302.6/33

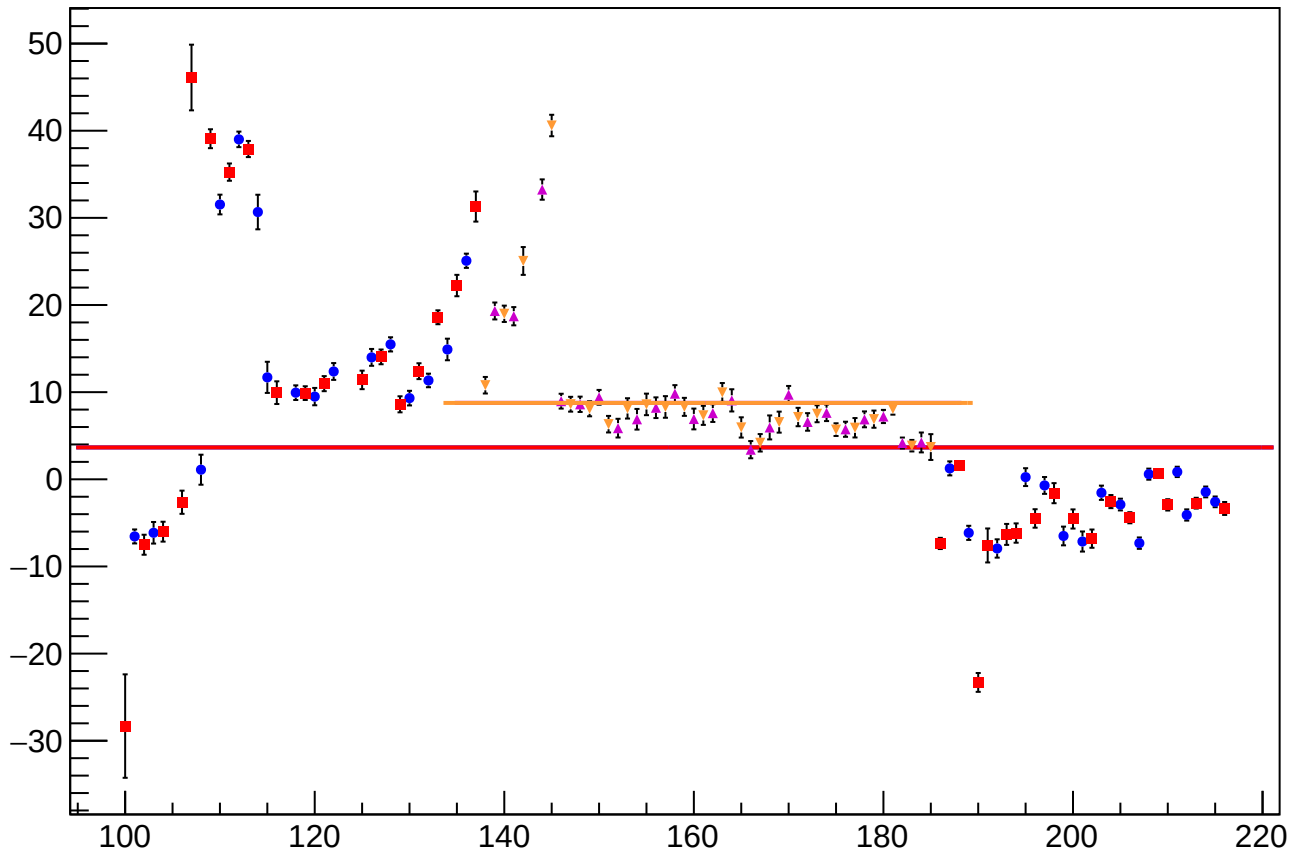
Left In:  $1.964 \pm 0.155$   $\chi^2/\text{NDF}$ : 173.2/22

+ sign  $3.191 \pm 0.115$   $\chi^2/\text{NDF}$ : 823.9/54

All:  $3.224 \pm 0.082$   $\chi^2/\text{NDF}$ : 1460.5/111

- sign  $3.256 \pm 0.116$   $\chi^2/\text{NDF}$ : 636.5/56

# reg\_asym\_left\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $3.657 \pm 0.152$   $\chi^2/\text{NDF}$ : 5281.1/30

Left Out:  $8.766 \pm 0.200$   $\chi^2/\text{NDF}$ : 1035.4/23

Right Out:  $3.659 \pm 0.151$   $\chi^2/\text{NDF}$ : 7016.1/33

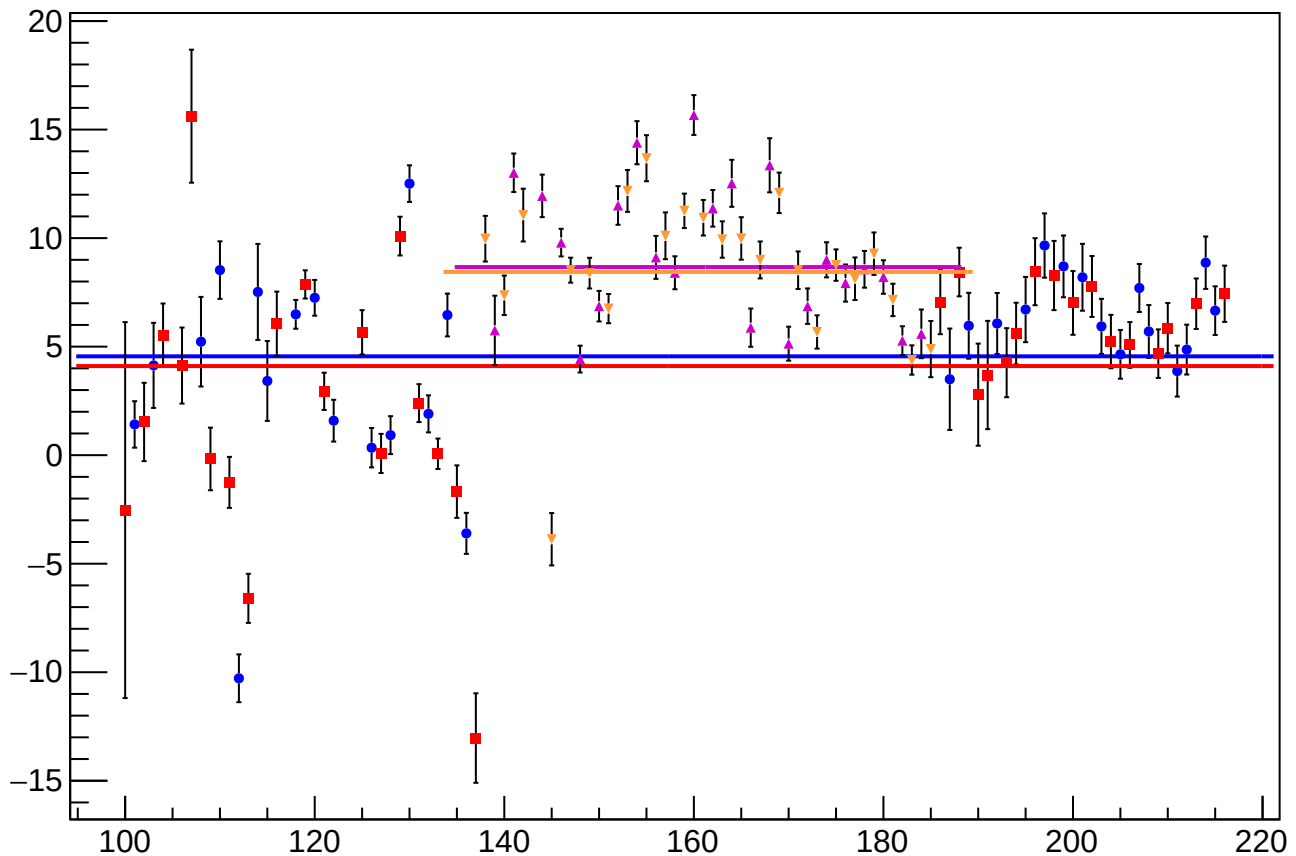
Left In:  $8.773 \pm 0.201$   $\chi^2/\text{NDF}$ : 795.1/22

+ sign  $5.530 \pm 0.121$   $\chi^2/\text{NDF}$ : 6727.8/54

All:  $5.518 \pm 0.086$   $\chi^2/\text{NDF}$ : 14950.7/111

- sign  $5.505 \pm 0.121$   $\chi^2/\text{NDF}$ : 8222.9/56

# reg\_asym\_left\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.554 \pm 0.203$   $\chi^2/\text{NDF}$ : 502.7/30

Left Out:  $8.442 \pm 0.174$   $\chi^2/\text{NDF}$ : 264.2/23

Right Out:  $4.105 \pm 0.205$   $\chi^2/\text{NDF}$ : 433.2/33

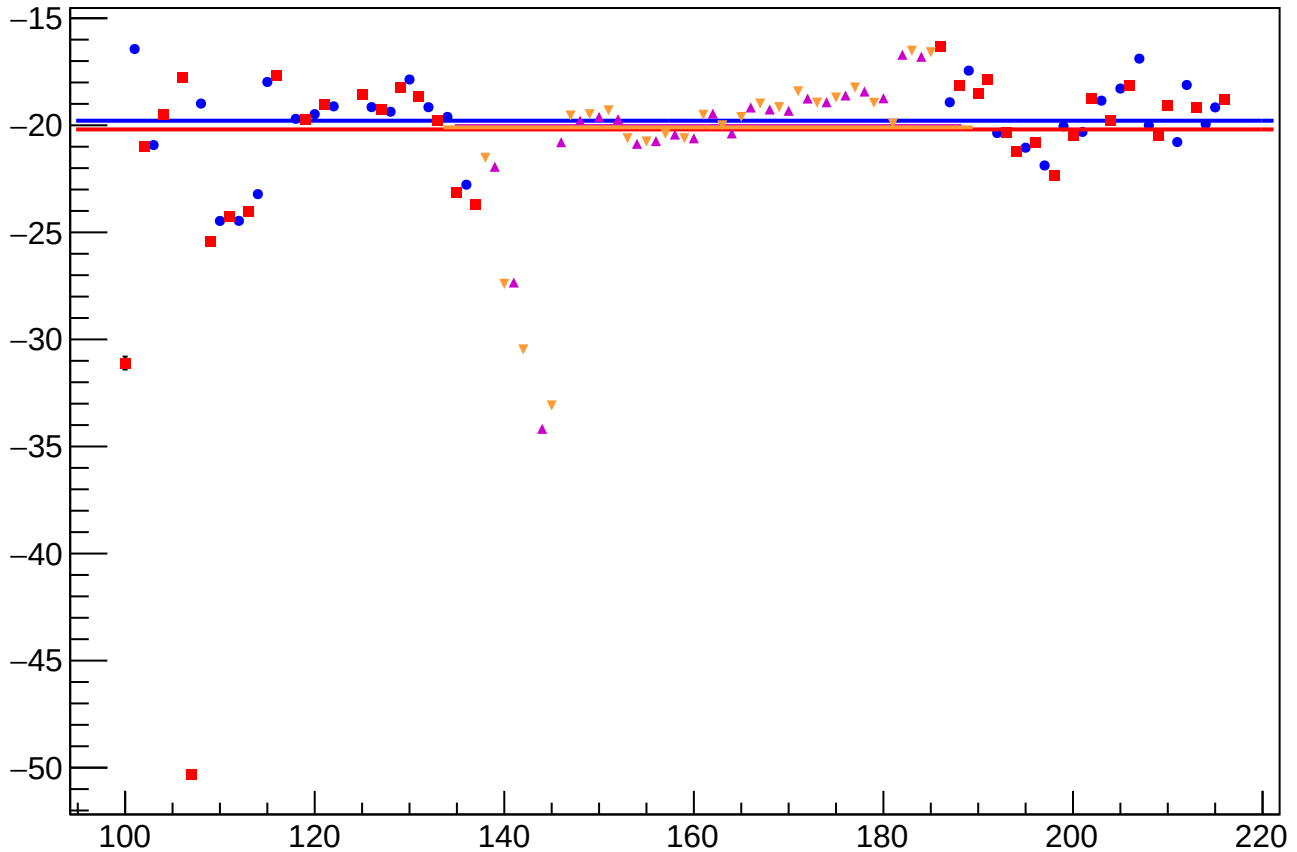
Left In:  $8.666 \pm 0.176$   $\chi^2/\text{NDF}$ : 304.8/22

+ sign  $6.797 \pm 0.132$   $\chi^2/\text{NDF}$ : 979.3/54

All:  $6.766 \pm 0.094$   $\chi^2/\text{NDF}$ : 2003.1/111

- sign  $6.734 \pm 0.133$   $\chi^2/\text{NDF}$ : 1023.7/56

# reg\_asym\_left\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.786 \pm 0.010$   $\chi^2/\text{NDF}: 32499.5/30$

Left Out:  $-20.096 \pm 0.008$   $\chi^2/\text{NDF}: 159293.0/23$

Right Out:  $-20.193 \pm 0.010$   $\chi^2/\text{NDF}: 72767.7/33$

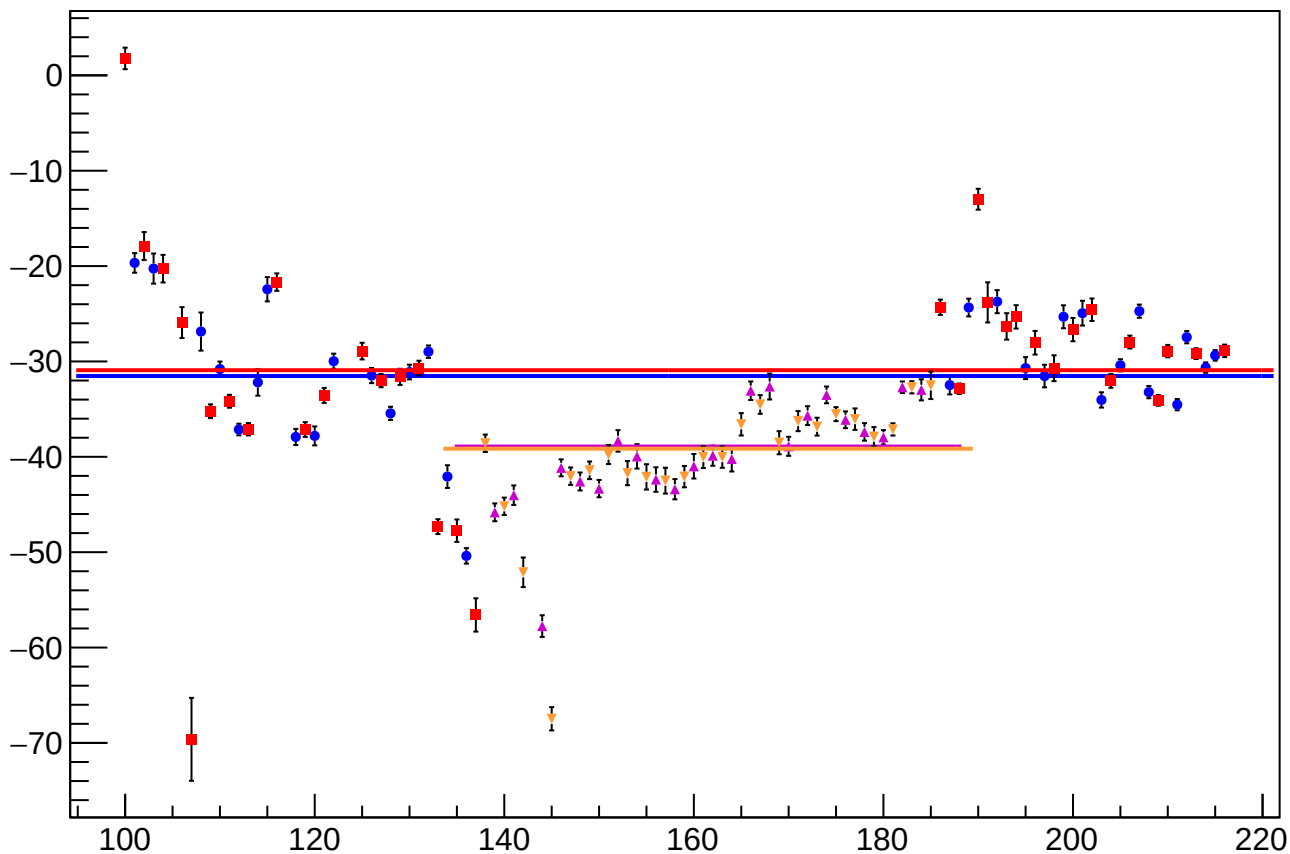
Left In:  $-20.037 \pm 0.008$   $\chi^2/\text{NDF}: 132291.6/22$

+ sign  $-19.978 \pm 0.006$   $\chi^2/\text{NDF}: 192376.2/54$

All:  $-20.037 \pm 0.004$   $\chi^2/\text{NDF}: 397763.0/111$

- sign  $-20.096 \pm 0.006$   $\chi^2/\text{NDF}: 205206.3/56$

# reg\_asym\_left\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-31.528 \pm 0.146$   $\chi^2/\text{NDF}: 1447.9/30$

Left Out:  $-39.148 \pm 0.202$   $\chi^2/\text{NDF}: 898.8/23$

Right Out:  $-30.918 \pm 0.146$   $\chi^2/\text{NDF}: 2780.4/33$

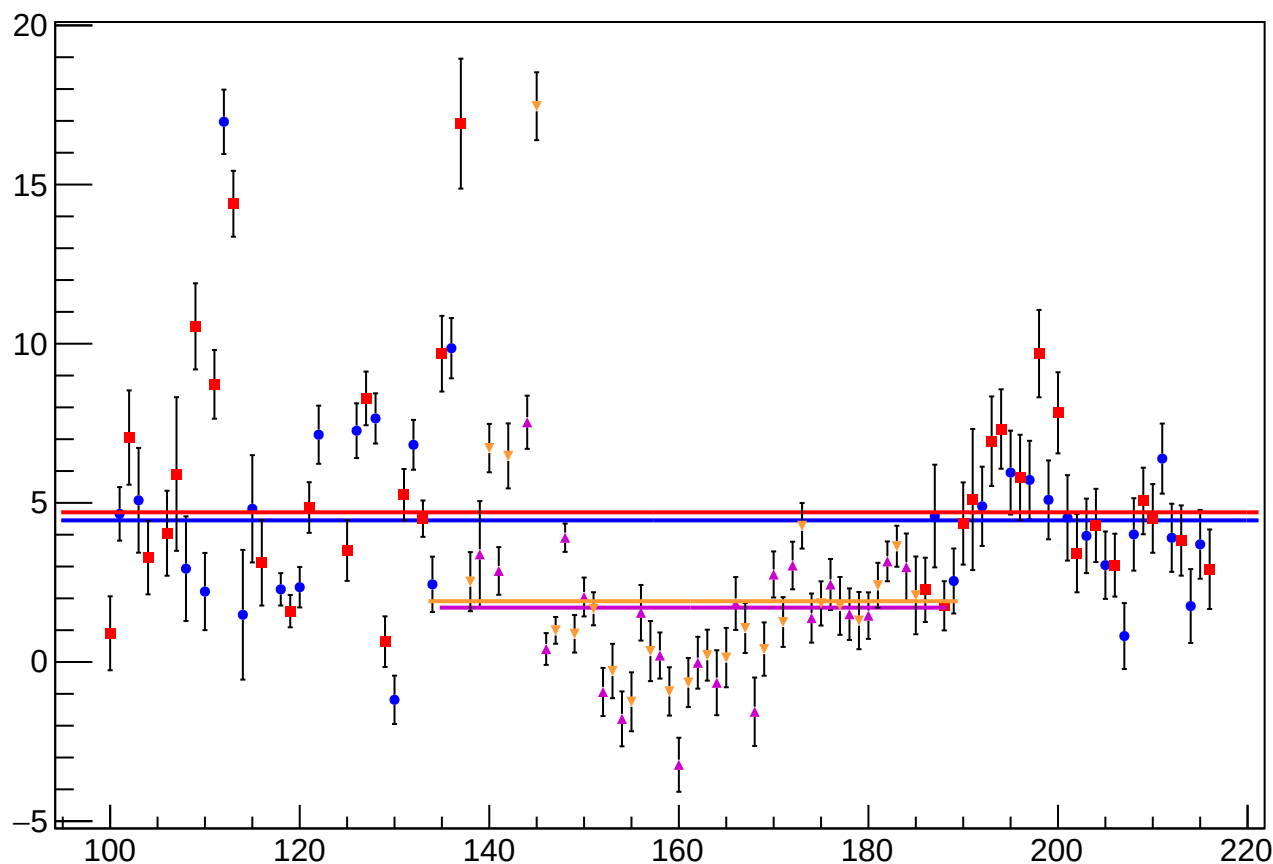
Left In:  $-38.921 \pm 0.204$   $\chi^2/\text{NDF}: 684.4/22$

+ sign  $-34.132 \pm 0.118$   $\chi^2/\text{NDF}: 3279.2/54$

All:  $-33.877 \pm 0.084$   $\chi^2/\text{NDF}: 7774.6/111$

- sign  $-33.622 \pm 0.118$   $\chi^2/\text{NDF}: 4486.1/56$

# reg\_asym\_left\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 4.450 $\pm$ 0.177     $\chi^2/\text{NDF}$ : 357.4/30

Left Out: 1.911 $\pm$ 0.152     $\chi^2/\text{NDF}$ : 359.3/23

Right Out: 4.703 $\pm$ 0.175     $\chi^2/\text{NDF}$ : 327.9/33

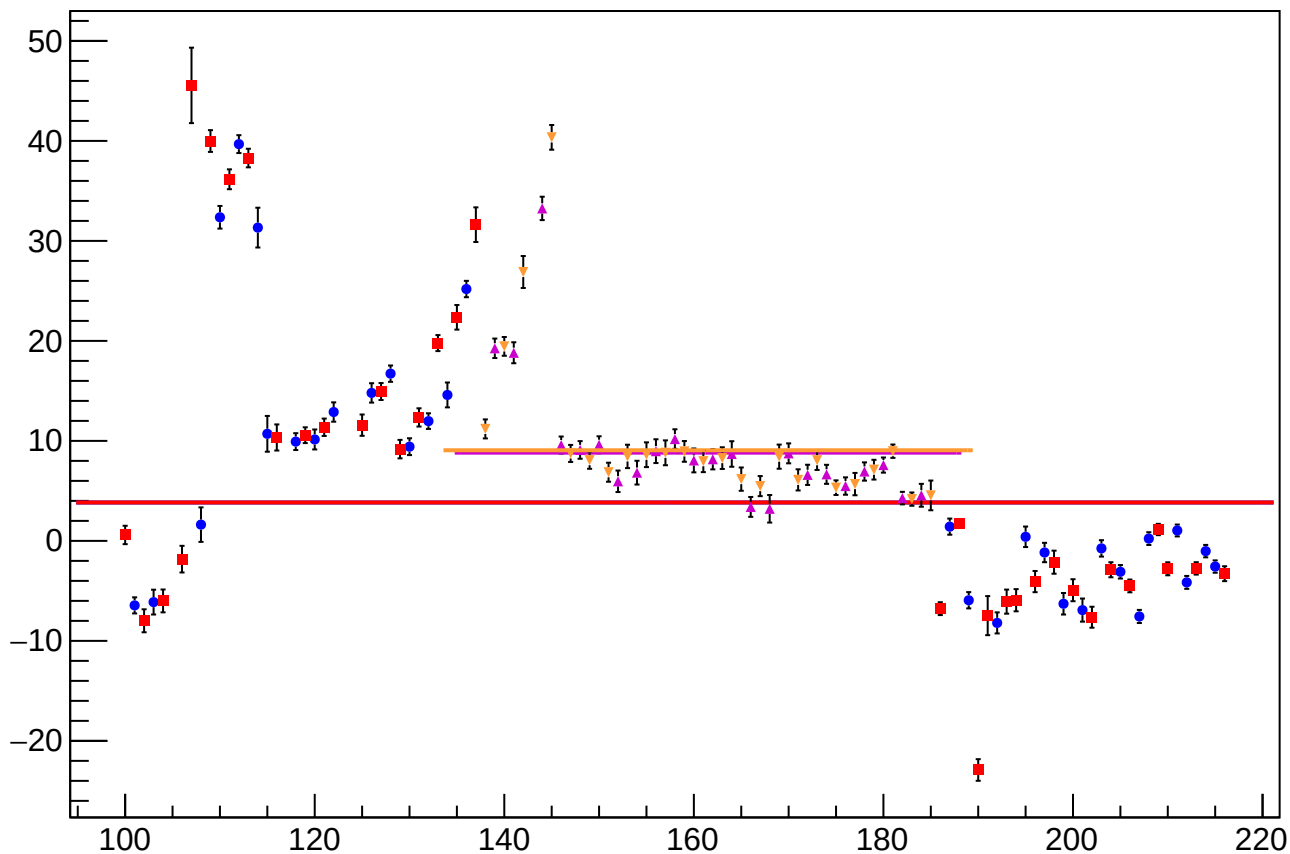
Left In: 1.709 $\pm$ 0.155     $\chi^2/\text{NDF}$ : 182.6/22

+ sign 2.990 $\pm$ 0.116     $\chi^2/\text{NDF}$ : 834.6/54

All: 3.008 $\pm$ 0.082     $\chi^2/\text{NDF}$ : 1509.3/111

- sign 3.026 $\pm$ 0.116     $\chi^2/\text{NDF}$ : 674.7/56

# reg\_asym\_left\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $3.839 \pm 0.153$   $\chi^2/\text{NDF}: 5454.0/30$

Left Out:  $9.061 \pm 0.201$   $\chi^2/\text{NDF}: 1033.5/23$

Right Out:  $3.842 \pm 0.150$   $\chi^2/\text{NDF}: 7200.4/33$

Left In:  $8.826 \pm 0.202$   $\chi^2/\text{NDF}: 801.4/22$

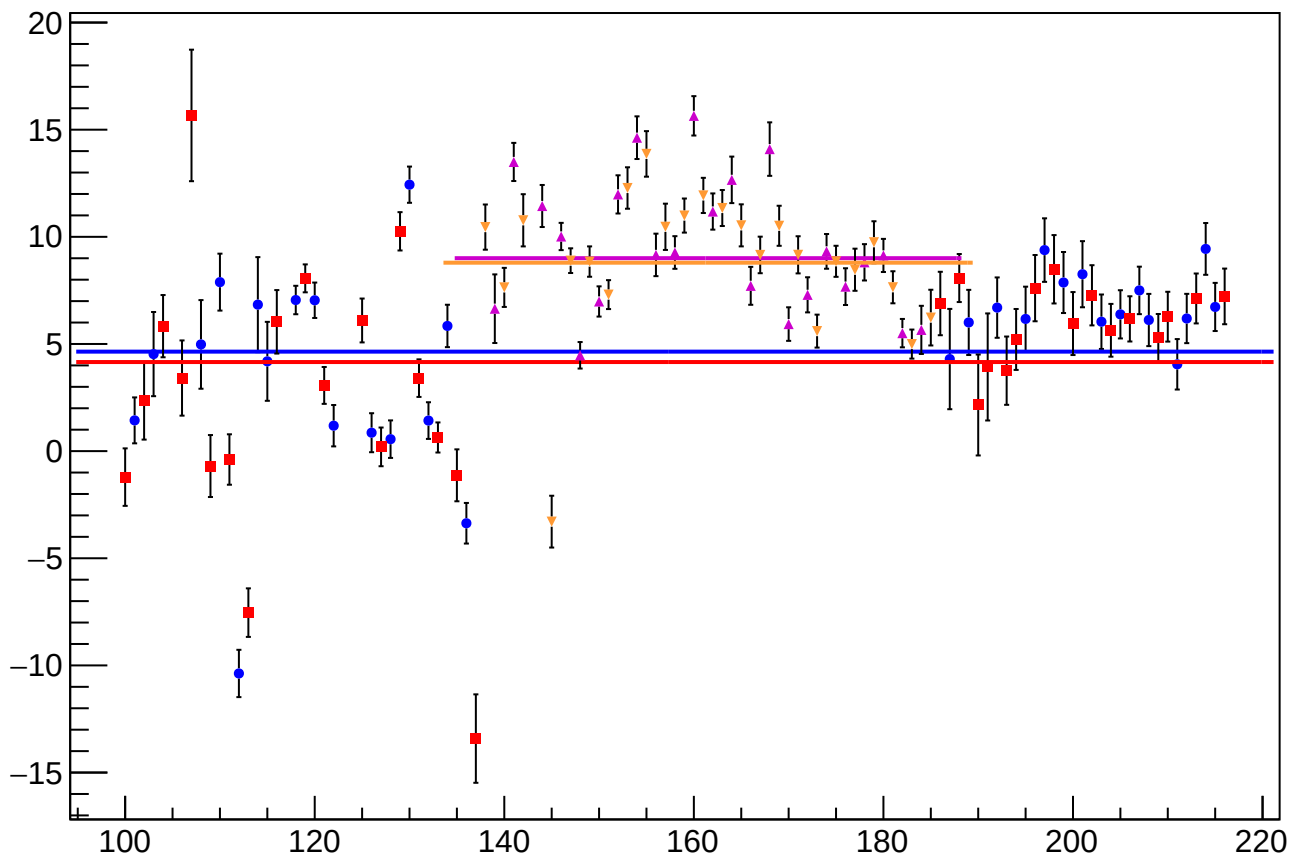
+ sign  $5.753 \pm 0.122$   $\chi^2/\text{NDF}: 6915.8/54$

All:  $5.681 \pm 0.085$   $\chi^2/\text{NDF}: 15311.6/111$

- sign  $5.611 \pm 0.120$   $\chi^2/\text{NDF}: 8395.1/56$



# reg\_asym\_left\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.643 \pm 0.203$   $\chi^2/\text{NDF}: 504.4/30$

Left Out:  $8.793 \pm 0.174$   $\chi^2/\text{NDF}: 244.1/23$

Right Out:  $4.157 \pm 0.203$   $\chi^2/\text{NDF}: 448.4/33$

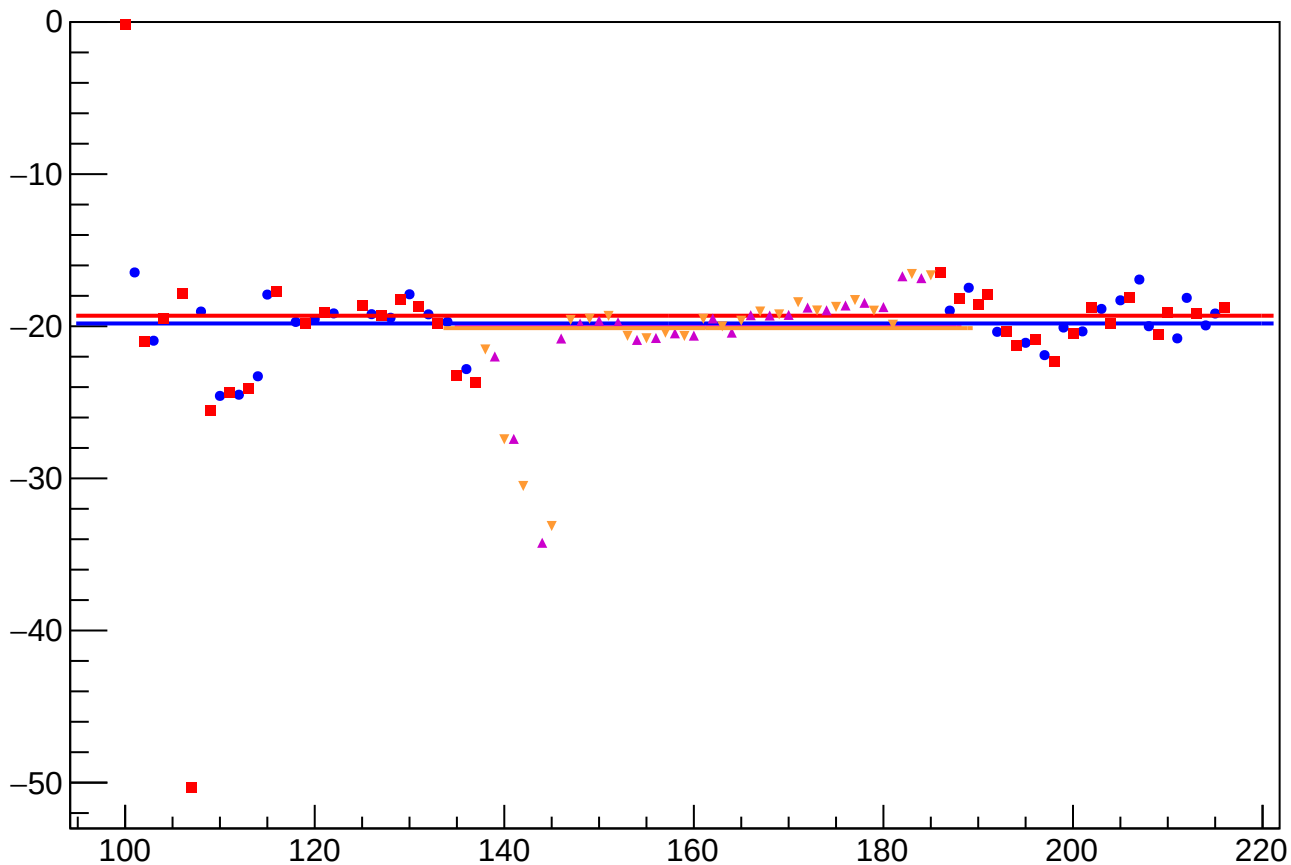
Left In:  $9.004 \pm 0.176$   $\chi^2/\text{NDF}: 289.6/22$

+ sign  $7.037 \pm 0.132$   $\chi^2/\text{NDF}: 989.6/54$

All:  $6.981 \pm 0.094$   $\chi^2/\text{NDF}: 2053.5/111$

- sign  $6.924 \pm 0.133$   $\chi^2/\text{NDF}: 1063.5/56$

# reg\_asym\_left\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.817 \pm 0.010$   $\chi^2/\text{NDF}$ : 32524.9/30

Left Out:  $-20.123 \pm 0.008$   $\chi^2/\text{NDF}$ : 158578.7/23

Right Out:  $-19.307 \pm 0.010$   $\chi^2/\text{NDF}$ : 248149.9/33

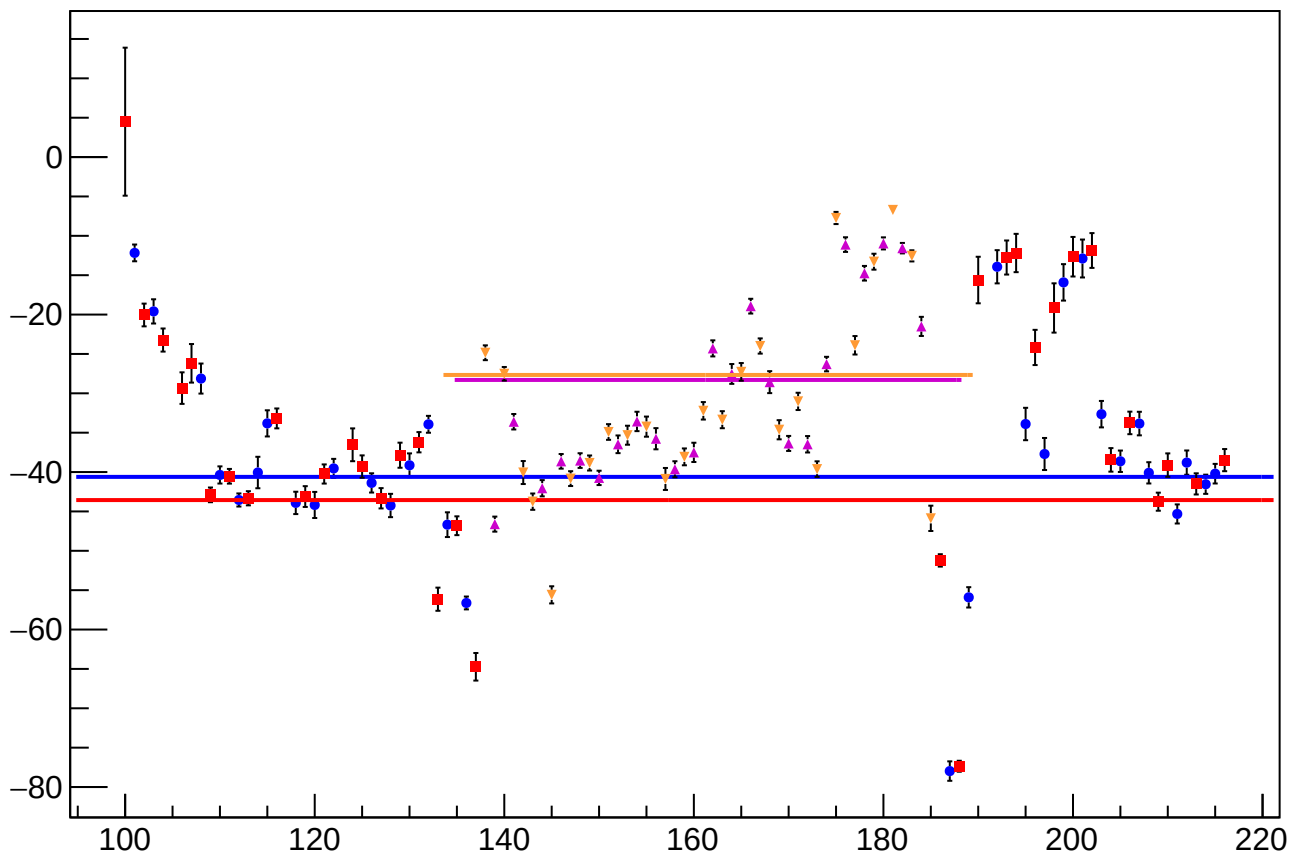
Left In:  $-20.063 \pm 0.008$   $\chi^2/\text{NDF}$ : 132690.0/22

+ sign  $-20.007 \pm 0.006$   $\chi^2/\text{NDF}$ : 191672.1/54

All:  $-19.886 \pm 0.004$   $\chi^2/\text{NDF}$ : 576802.2/111

- sign  $-19.769 \pm 0.006$   $\chi^2/\text{NDF}$ : 384397.3/56

# reg\_asym\_right\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-40.612 \pm 0.243$   $\chi^2/\text{NDF}$ : 2967.8/30

Left Out:  $-27.668 \pm 0.200$   $\chi^2/\text{NDF}$ : 4396.9/24

Right Out:  $-43.558 \pm 0.232$   $\chi^2/\text{NDF}$ : 4451.5/33

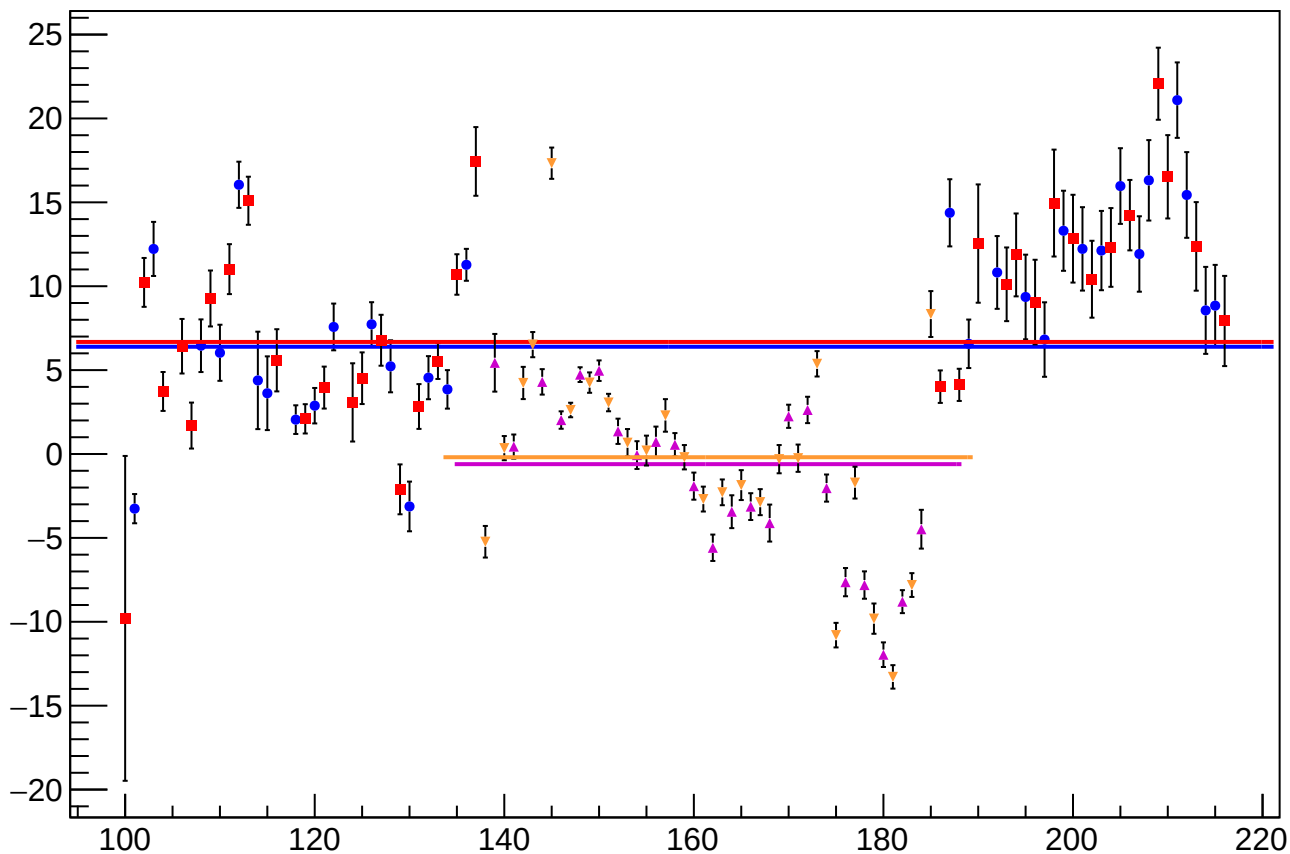
Left In:  $-28.303 \pm 0.206$   $\chi^2/\text{NDF}$ : 3273.4/22

+ sign  $-32.920 \pm 0.155$   $\chi^2/\text{NDF}$ : 9056.5/55

All:  $-33.983 \pm 0.109$   $\chi^2/\text{NDF}$ : 19301.3/112

- sign  $-35.035 \pm 0.154$   $\chi^2/\text{NDF}$ : 10150.7/56

# reg\_asym\_right\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $6.393 \pm 0.277$   $\chi^2/\text{NDF}: 440.4/30$

Left Out:  $-0.192 \pm 0.150$   $\chi^2/\text{NDF}: 1545.3/24$

Right Out:  $6.679 \pm 0.269$   $\chi^2/\text{NDF}: 324.9/33$

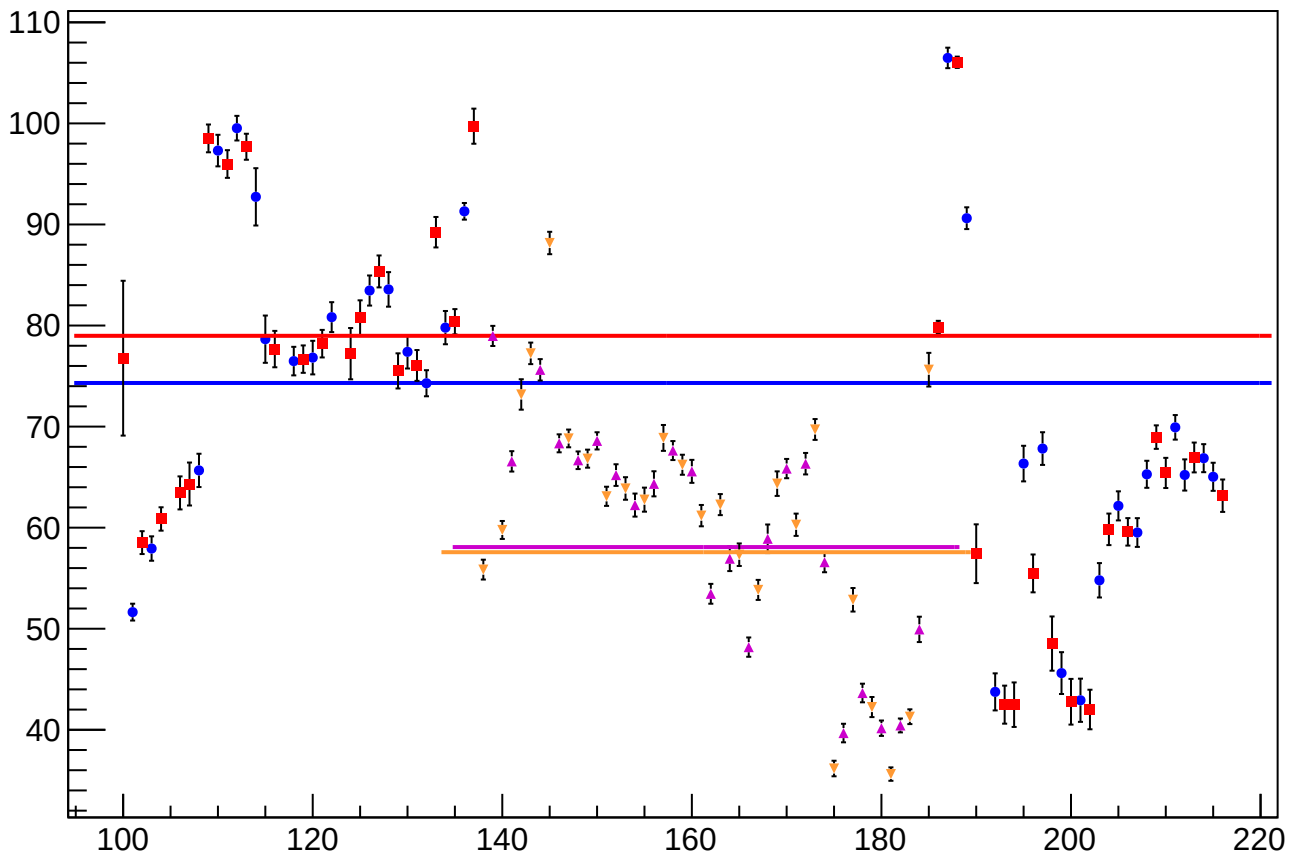
Left In:  $-0.605 \pm 0.155$   $\chi^2/\text{NDF}: 974.6/22$

+ sign  $1.306 \pm 0.132$   $\chi^2/\text{NDF}: 2423.6/55$

All:  $1.260 \pm 0.094$   $\chi^2/\text{NDF}: 4273.0/112$

- sign  $1.212 \pm 0.134$   $\chi^2/\text{NDF}: 1849.1/56$

# reg\_asym\_right\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 74.317 $\pm$ 0.249  $\chi^2$ /NDF: 4610.5/30

Left Out: 57.573 $\pm$ 0.199  $\chi^2$ /NDF: 4685.5/24

Right Out: 78.983 $\pm$ 0.233  $\chi^2$ /NDF: 6127.1/33

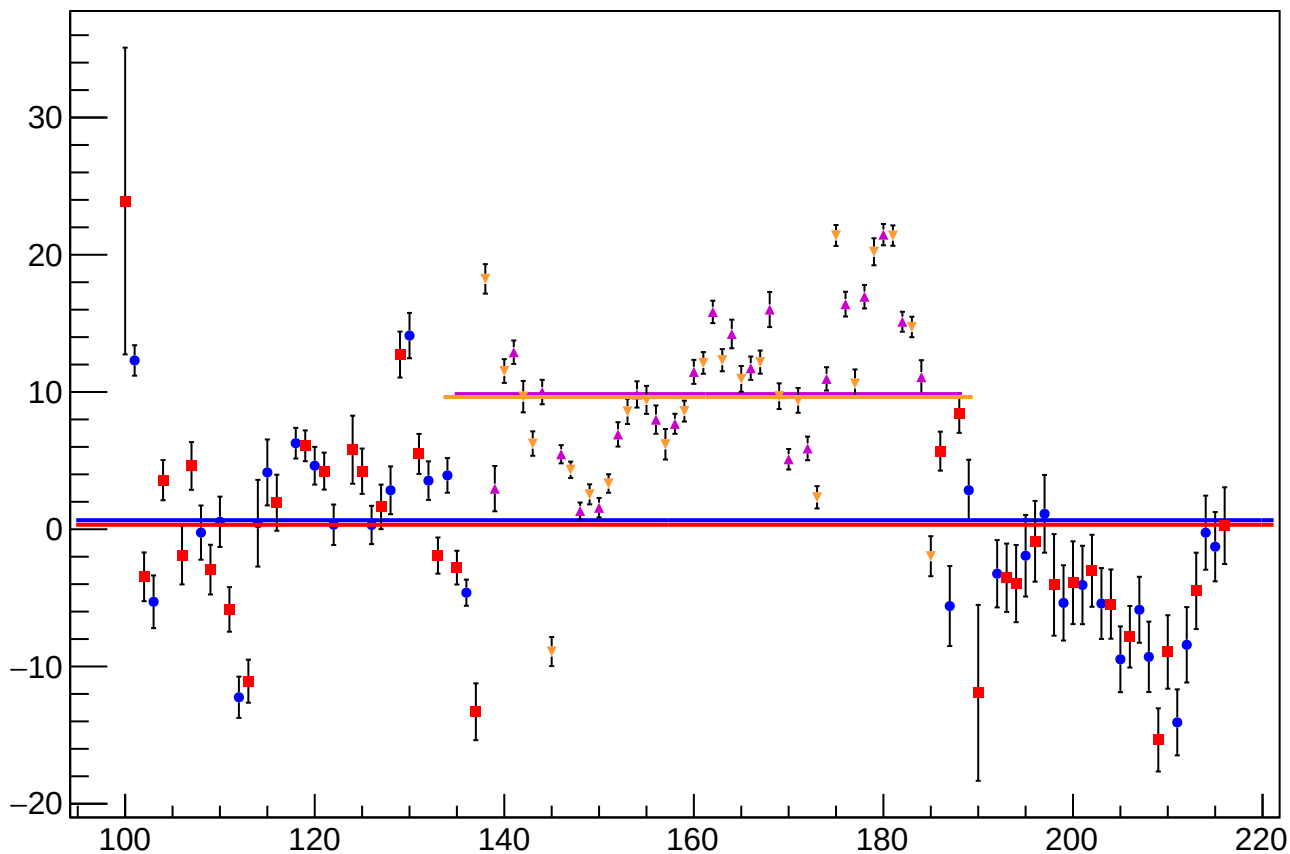
Left In: 58.080 $\pm$ 0.203  $\chi^2$ /NDF: 3558.6/22

+ sign 64.095 $\pm$ 0.155  $\chi^2$ /NDF: 12054.1/55

All: 65.640 $\pm$ 0.109  $\chi^2$ /NDF: 26509.3/112

- sign 67.140 $\pm$ 0.153  $\chi^2$ /NDF: 14260.5/56

# reg\_asym\_right\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.660 \pm 0.319$   $\chi^2/\text{NDF}$ : 450.1/30

Left Out:  $9.636 \pm 0.171$   $\chi^2/\text{NDF}$ : 1491.5/24

Right Out:  $0.326 \pm 0.318$   $\chi^2/\text{NDF}$ : 397.6/33

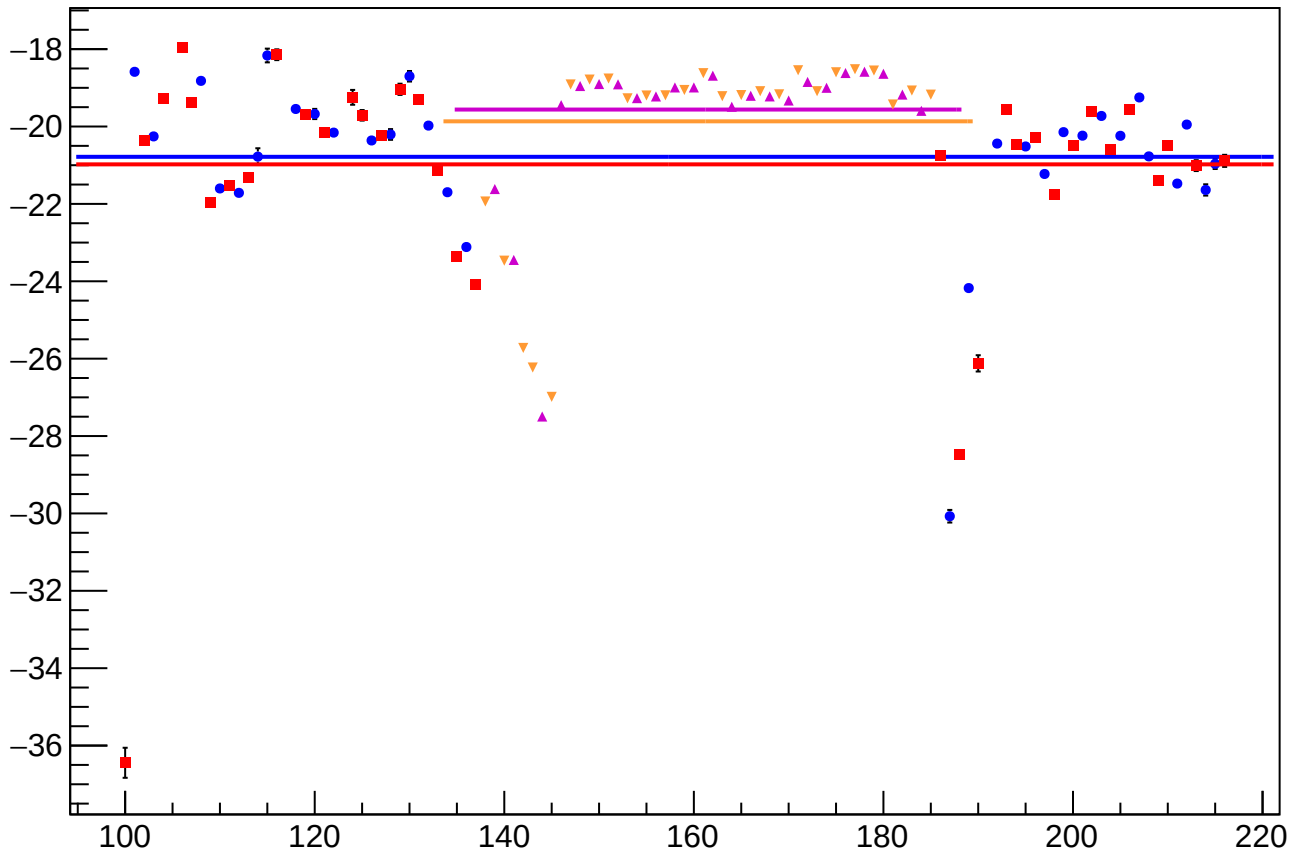
Left In:  $9.849 \pm 0.176$   $\chi^2/\text{NDF}$ : 993.0/22

+ sign  $7.627 \pm 0.151$   $\chi^2/\text{NDF}$ : 2555.4/55

All:  $7.618 \pm 0.108$   $\chi^2/\text{NDF}$ : 4632.4/112

- sign  $7.609 \pm 0.154$   $\chi^2/\text{NDF}$ : 2077.0/56

# reg\_asym\_right\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.783 \pm 0.016$   $\chi^2/\text{NDF}: 12654.3/30$

Left Out:  $-19.866 \pm 0.008$   $\chi^2/\text{NDF}: 78894.3/24$

Right Out:  $-20.978 \pm 0.016$   $\chi^2/\text{NDF}: 20701.8/33$

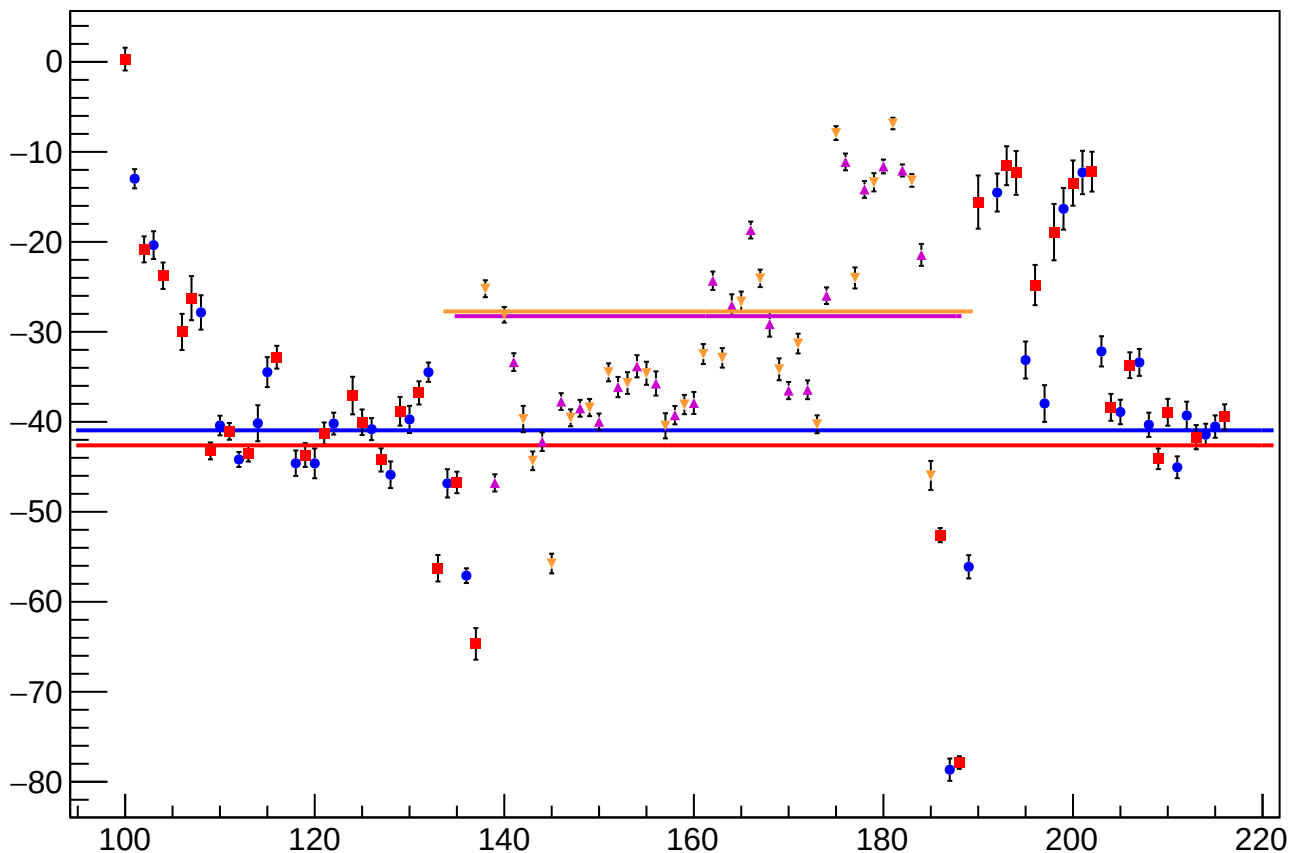
Left In:  $-19.562 \pm 0.008$   $\chi^2/\text{NDF}: 45172.6/22$

+ sign  $-20.053 \pm 0.007$   $\chi^2/\text{NDF}: 94315.5/55$

All:  $-19.952 \pm 0.005$   $\chi^2/\text{NDF}: 167048.5/112$

- sign  $-19.849 \pm 0.007$   $\chi^2/\text{NDF}: 72319.3/56$

# reg\_asym\_right\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-40.946 \pm 0.243$   $\chi^2/\text{NDF}$ : 2971.9/30

Left Out:  $-27.729 \pm 0.201$   $\chi^2/\text{NDF}$ : 4299.7/24

Right Out:  $-42.614 \pm 0.228$   $\chi^2/\text{NDF}$ : 5650.8/33

Left In:  $-28.260 \pm 0.206$   $\chi^2/\text{NDF}$ : 3172.7/22

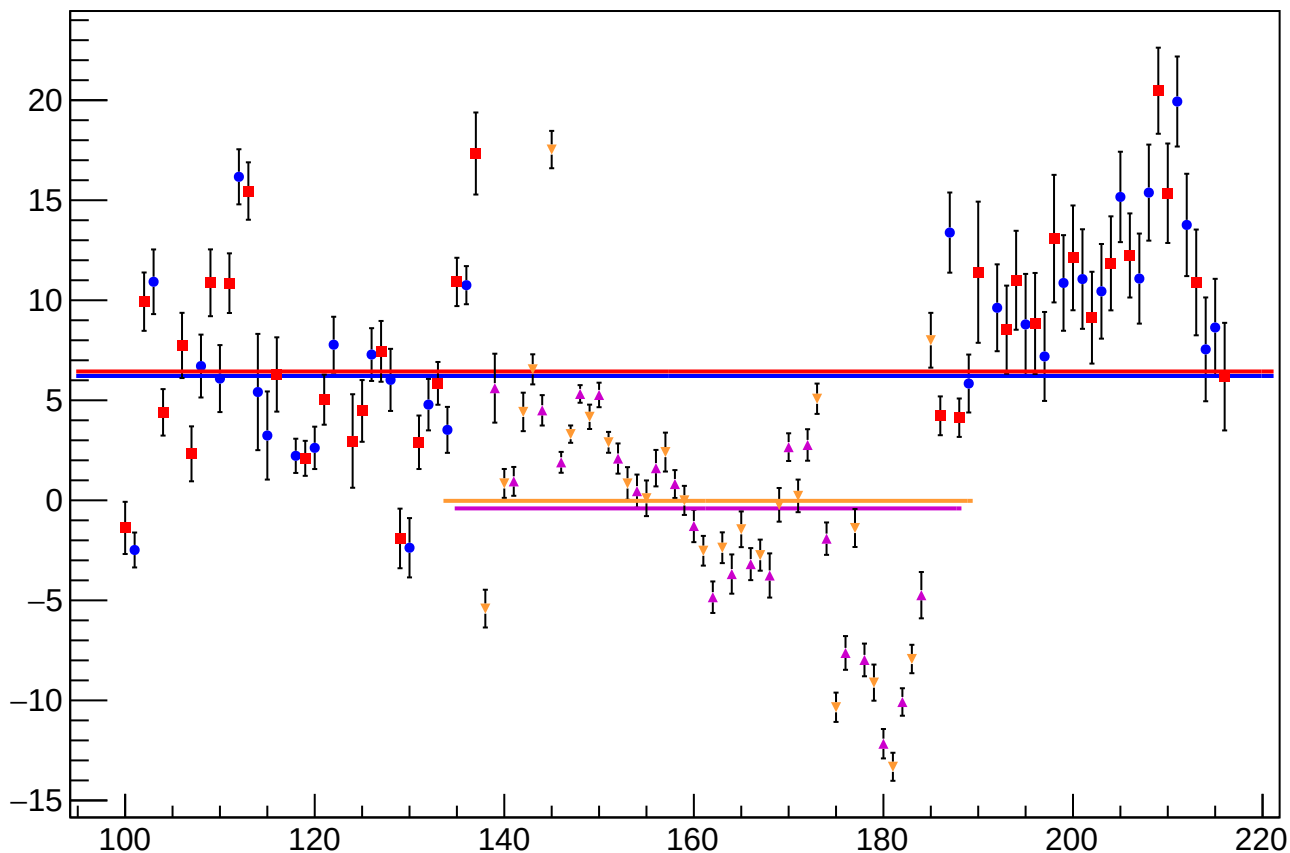
+ sign  $-33.093 \pm 0.155$   $\chi^2/\text{NDF}$ : 9030.6/55

All:  $-33.912 \pm 0.109$   $\chi^2/\text{NDF}$ : 20088.5/112

- sign  $-34.713 \pm 0.153$   $\chi^2/\text{NDF}$ : 11002.5/56



# reg\_asym\_right\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $6.216 \pm 0.277$   $\chi^2/\text{NDF}$ : 369.7/30

Left Out:  $-0.026 \pm 0.150$   $\chi^2/\text{NDF}$ : 1531.8/24

Right Out:  $6.441 \pm 0.264$   $\chi^2/\text{NDF}$ : 320.3/33

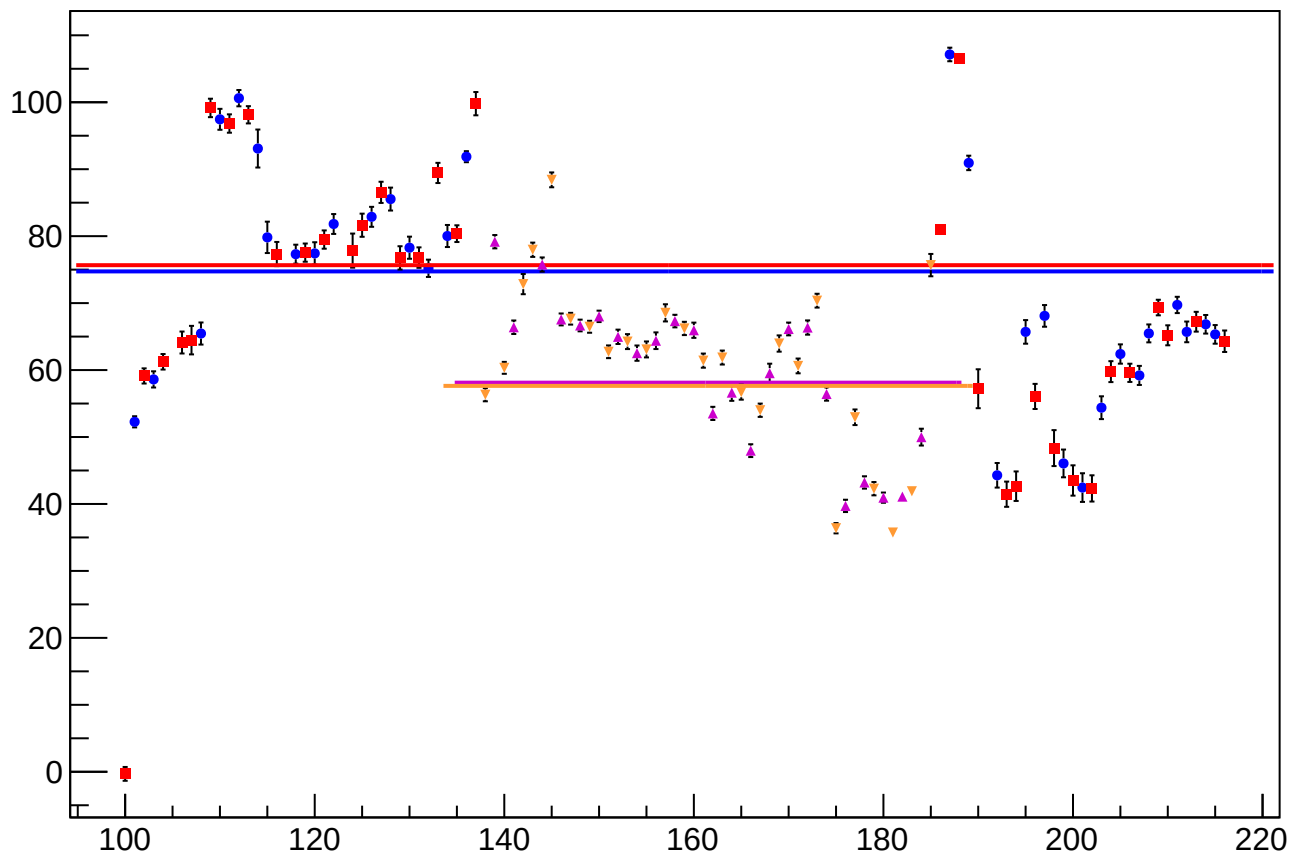
Left In:  $-0.404 \pm 0.155$   $\chi^2/\text{NDF}$ : 1084.1/22

+ sign  $1.394 \pm 0.132$   $\chi^2/\text{NDF}$ : 2293.8/55

All:  $1.376 \pm 0.094$   $\chi^2/\text{NDF}$ : 4197.1/112

- sign  $1.357 \pm 0.134$   $\chi^2/\text{NDF}$ : 1903.3/56

# reg\_asym\_right\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 74.735 $\pm$ 0.249  $\chi^2$ /NDF: 4681.8/30

Left Out: 57.638 $\pm$ 0.199  $\chi^2$ /NDF: 4612.7/24

Right Out: 75.664 $\pm$ 0.227  $\chi^2$ /NDF: 11863.2/33

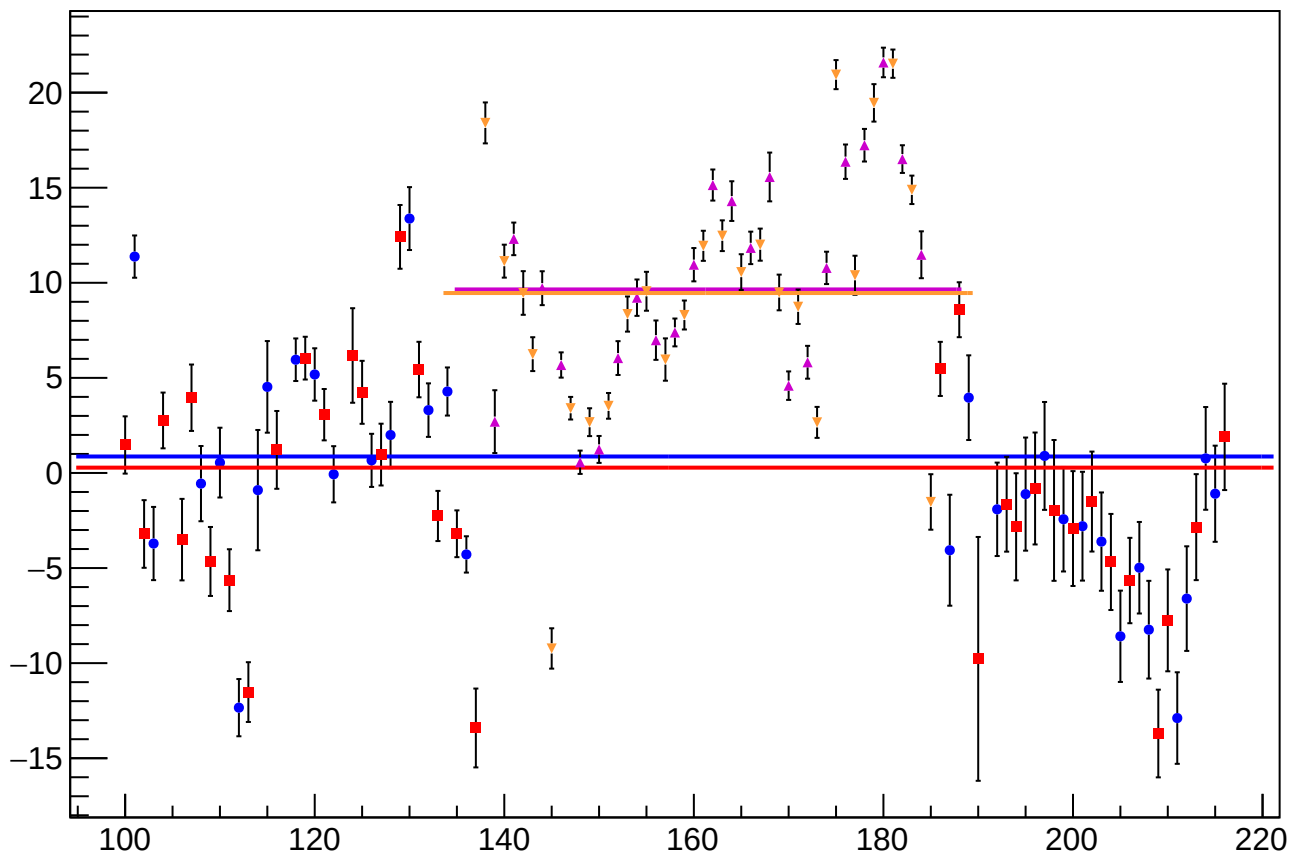
Left In: 58.117 $\pm$ 0.204  $\chi^2$ /NDF: 3443.9/22

+ sign 64.298 $\pm$ 0.156  $\chi^2$ /NDF: 12162.4/55

All: 65.139 $\pm$ 0.109  $\chi^2$ /NDF: 30828.8/112

- sign 65.938 $\pm$ 0.152  $\chi^2$ /NDF: 18609.6/56

# reg\_asym\_right\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.866 \pm 0.320$   $\chi^2/\text{NDF}$ : 390.5/30

Left Out:  $9.461 \pm 0.172$   $\chi^2/\text{NDF}$ : 1483.1/24

Right Out:  $0.280 \pm 0.312$   $\chi^2/\text{NDF}$ : 365.3/33

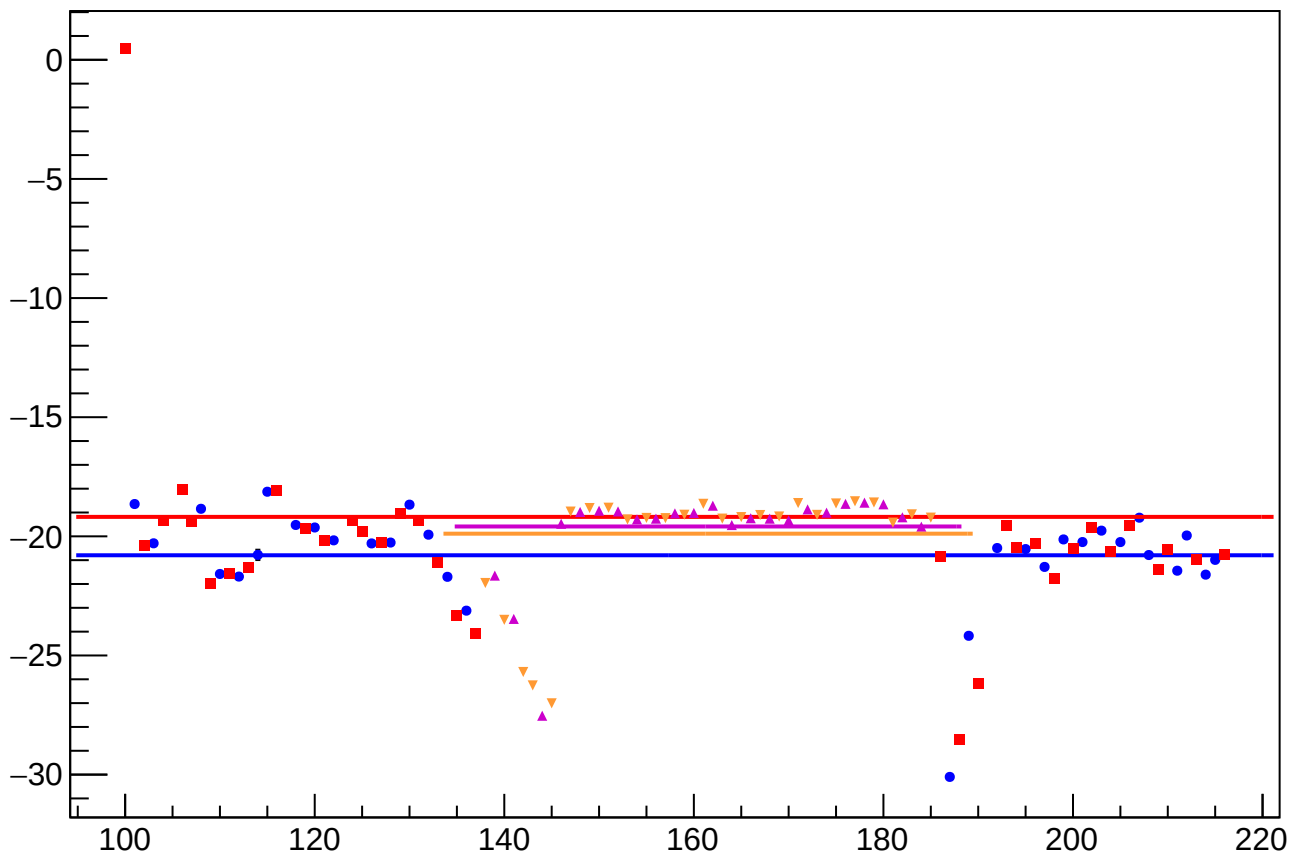
Left In:  $9.650 \pm 0.177$   $\chi^2/\text{NDF}$ : 1078.5/22

+ sign  $7.537 \pm 0.151$   $\chi^2/\text{NDF}$ : 2434.8/55

All:  $7.456 \pm 0.108$   $\chi^2/\text{NDF}$ : 4563.7/112

- sign  $7.371 \pm 0.154$   $\chi^2/\text{NDF}$ : 2128.3/56

# reg\_asym\_right\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.794 \pm 0.016$   $\chi^2/\text{NDF}$ : 12535.3/30

Left Out:  $-19.889 \pm 0.008$   $\chi^2/\text{NDF}$ : 78512.6/24

Right Out:  $-19.183 \pm 0.015$   $\chi^2/\text{NDF}$ : 172737.4/33

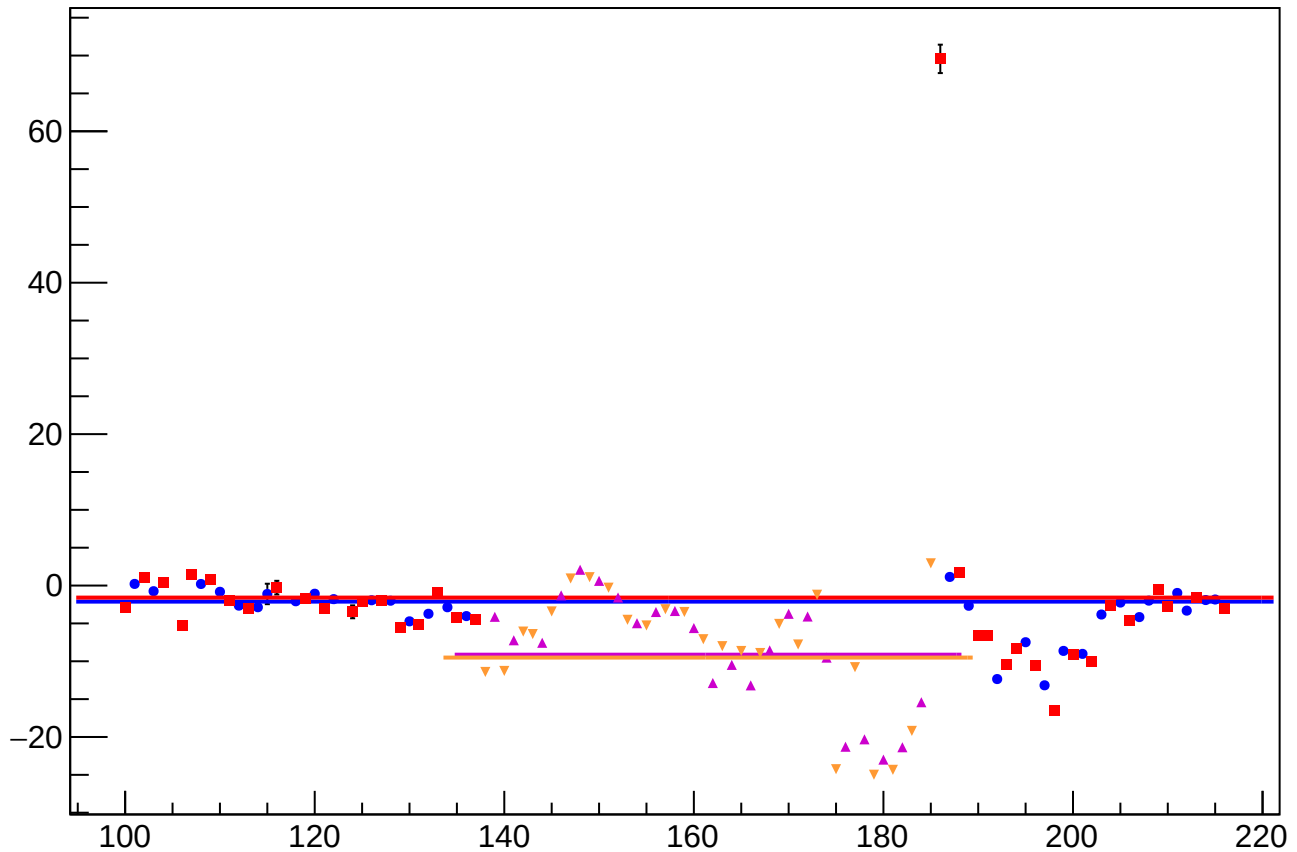
Left In:  $-19.586 \pm 0.008$   $\chi^2/\text{NDF}$ : 45085.3/22

+ sign  $-20.073 \pm 0.007$   $\chi^2/\text{NDF}$ : 93739.1/55

All:  $-19.787 \pm 0.005$   $\chi^2/\text{NDF}$ : 315446.8/112

- sign  $-19.499 \pm 0.007$   $\chi^2/\text{NDF}$ : 218378.5/56

reg\_asym\_sam\_15\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-2.120 \pm 0.047$   $\chi^2/\text{NDF}$ : 3365.0/30

Left Out:  $-9.512 \pm 0.073$   $\chi^2/\text{NDF}$ : 12916.4/24

Right Out:  $-1.590 \pm 0.044$   $\chi^2/\text{NDF}$ : 6986.6/34

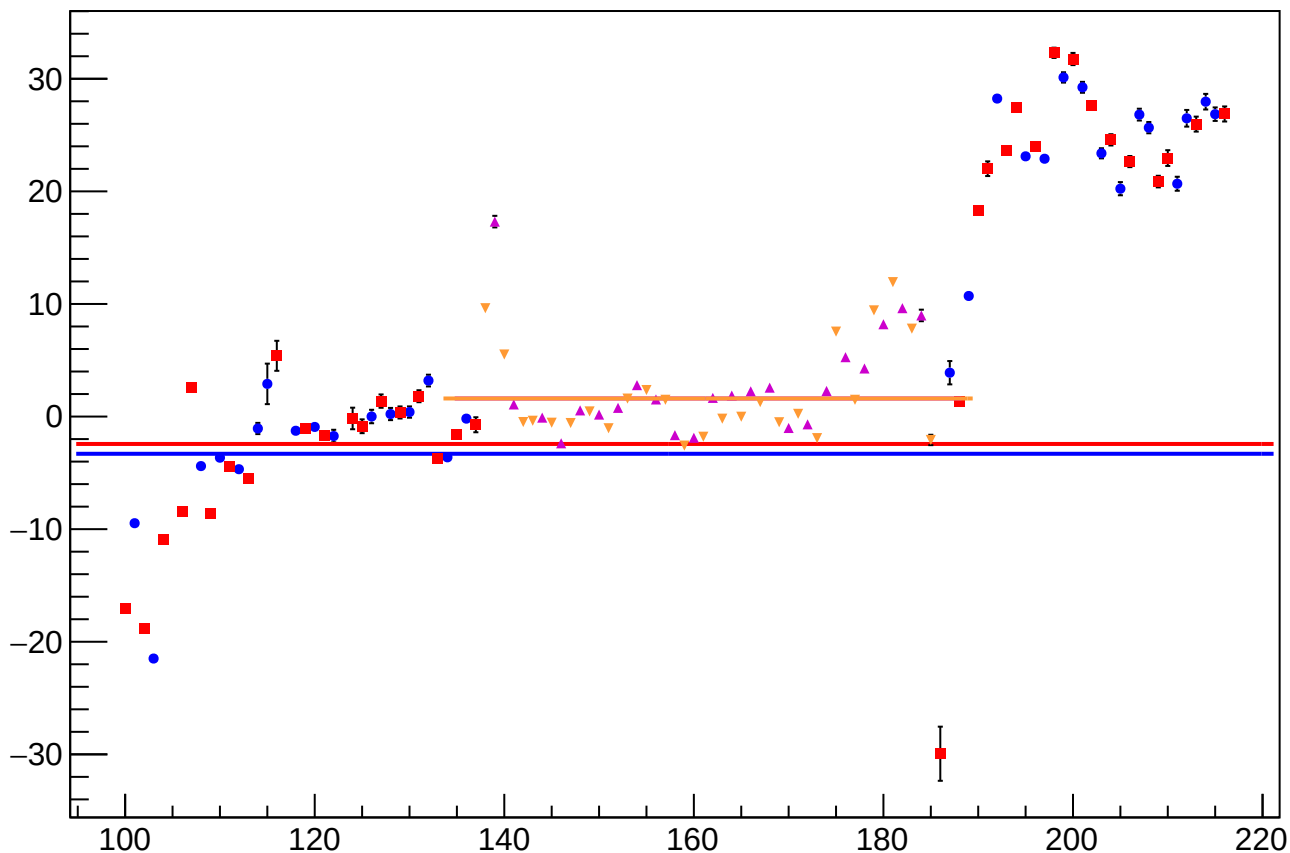
Left In:  $-9.131 \pm 0.075$   $\chi^2/\text{NDF}$ : 10390.6/22

+ sign  $-4.312 \pm 0.040$   $\chi^2/\text{NDF}$ : 23566.3/55

All:  $-3.906 \pm 0.027$   $\chi^2/\text{NDF}$ : 48696.1/113

- sign  $-3.533 \pm 0.038$   $\chi^2/\text{NDF}$ : 24927.7/57

reg\_asym\_sam\_15\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.306 \pm 0.052$   $\chi^2/\text{NDF}$ : 69135.8/30

Left Out:  $1.606 \pm 0.055$   $\chi^2/\text{NDF}$ : 4677.2/24

Right Out:  $-2.433 \pm 0.052$   $\chi^2/\text{NDF}$ : 70550.3/34

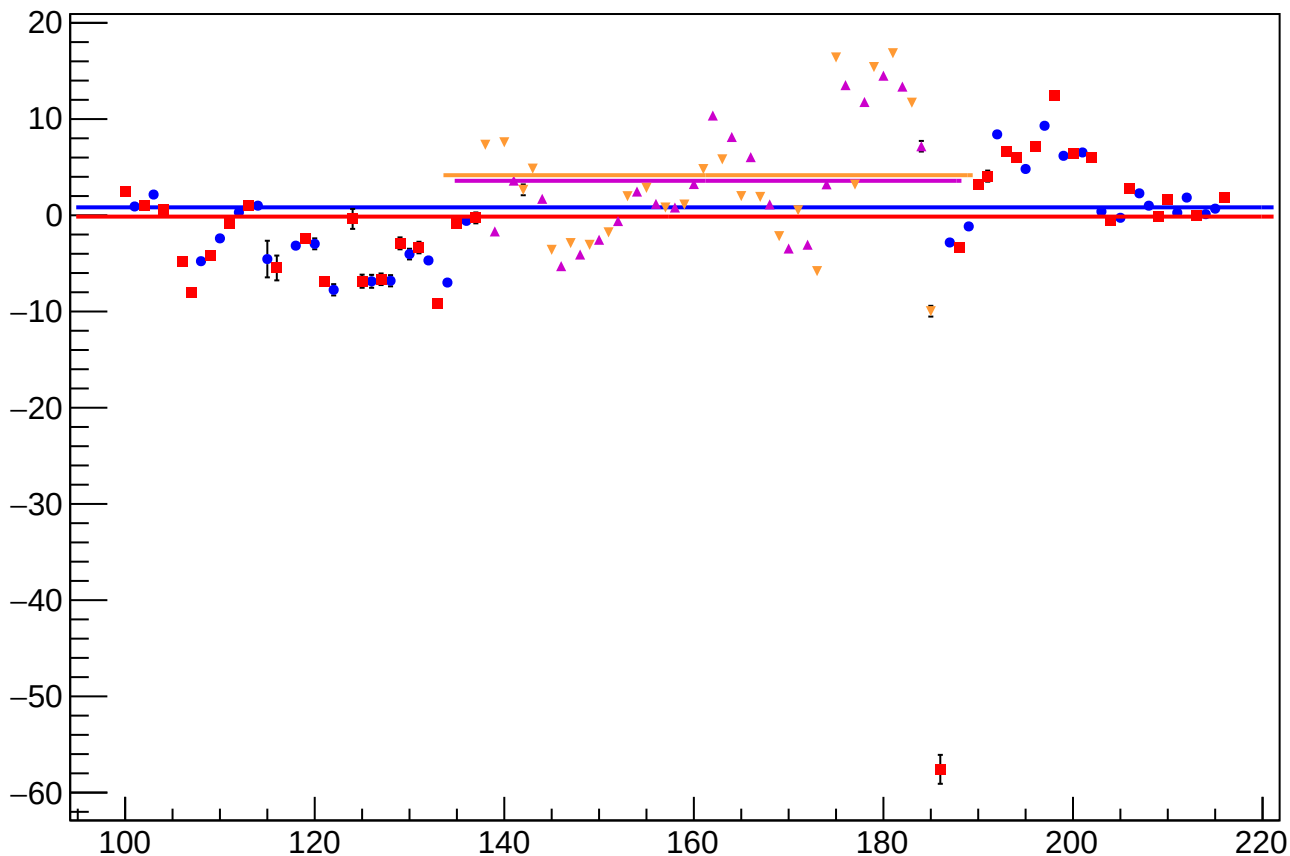
Left In:  $1.605 \pm 0.058$   $\chi^2/\text{NDF}$ : 3656.4/22

+ sign  $-0.994 \pm 0.038$   $\chi^2/\text{NDF}$ : 78008.1/55

All:  $-0.821 \pm 0.027$   $\chi^2/\text{NDF}$ : 154984.6/113

- sign  $-0.641 \pm 0.038$   $\chi^2/\text{NDF}$ : 76933.6/57

reg\_asym\_sam\_15\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.827 \pm 0.046$   $\chi^2/\text{NDF}$ : 4184.9/30

Left Out:  $4.167 \pm 0.072$   $\chi^2/\text{NDF}$ : 9246.5/24

Right Out:  $-0.137 \pm 0.045$   $\chi^2/\text{NDF}$ : 8252.6/34

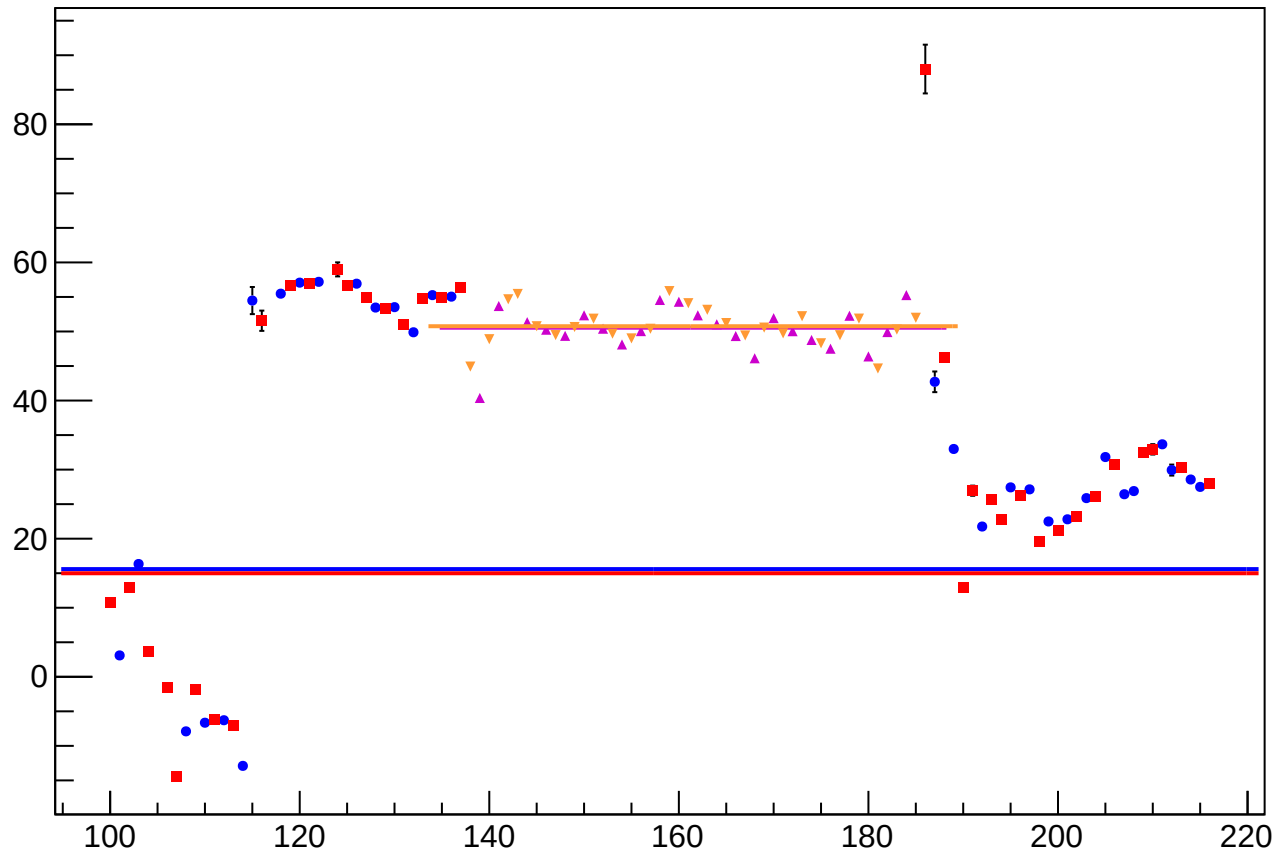
Left In:  $3.584 \pm 0.074$   $\chi^2/\text{NDF}$ : 7228.4/22

+ sign  $1.783 \pm 0.039$   $\chi^2/\text{NDF}$ : 14962.6/55

All:  $1.314 \pm 0.027$   $\chi^2/\text{NDF}$ : 32593.9/113

- sign  $0.854 \pm 0.038$   $\chi^2/\text{NDF}$ : 17338.3/57

reg\_asym\_sam\_15\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 15.595 $\pm$ 0.062  $\chi^2$ /NDF: 116621.0/30

Left Out: 50.761 $\pm$ 0.062  $\chi^2$ /NDF:1748.6/24

Right Out: 14.993 $\pm$ 0.061  $\chi^2$ /NDF: 133221.8/34

Left In: 50.550 $\pm$ 0.065  $\chi^2$ /NDF:1717.7/22

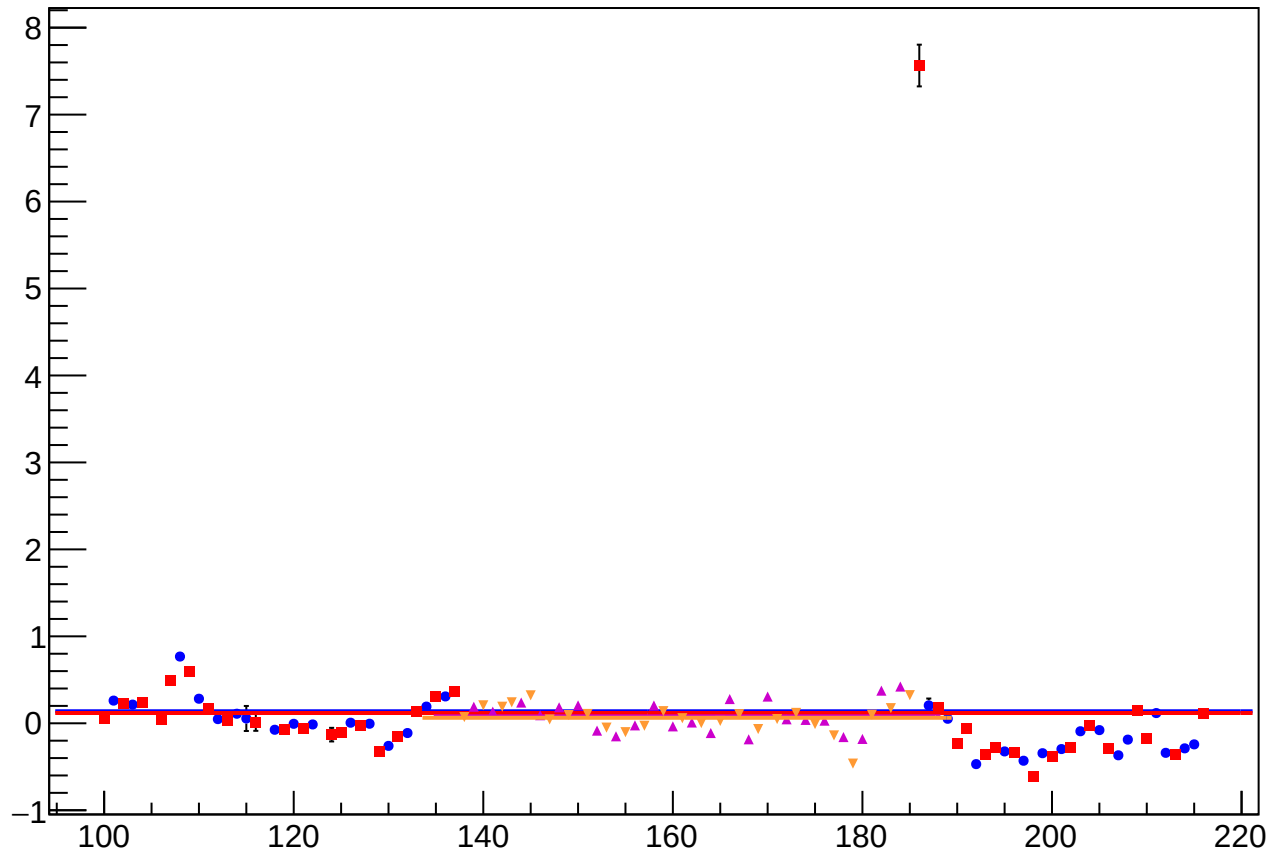
+ sign 32.943 $\pm$ 0.044  $\chi^2$ /NDF: 279090.4/55

All: 32.325 $\pm$ 0.031  $\chi^2$ /NDF: 574273.2/113

- sign 31.692 $\pm$ 0.044  $\chi^2$ /NDF: 294780.7/57



reg\_asym\_sam\_15\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.138 $\pm$ 0.002  $\chi^2$ /NDF: 13929.9/30

Left Out: 0.063 $\pm$ 0.003  $\chi^2$ /NDF:2566.7/24

Right Out: 0.118 $\pm$ 0.002  $\chi^2$ /NDF: 13204.7/34

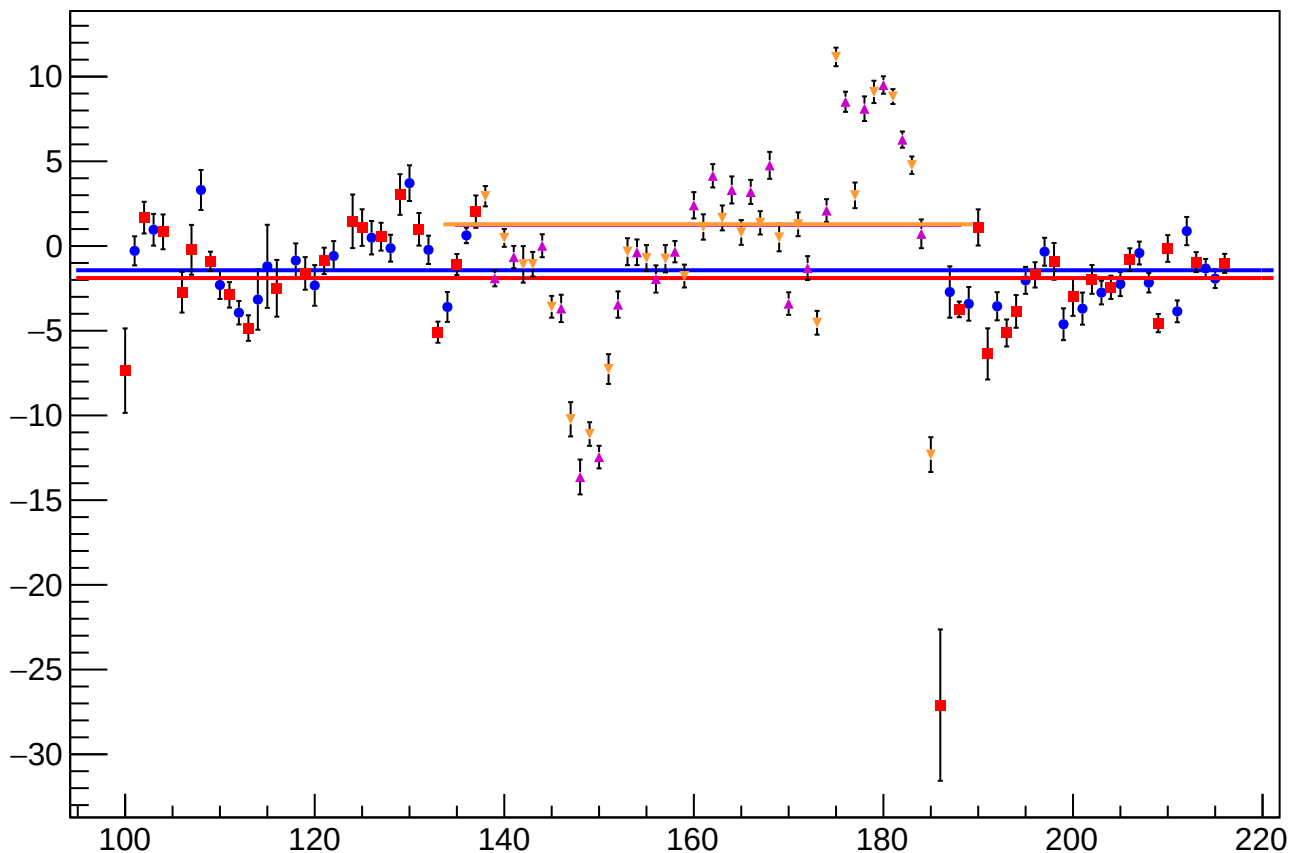
Left In: 0.080 $\pm$ 0.003  $\chi^2$ /NDF:3446.5/22

+ sign 0.106 $\pm$ 0.002  $\chi^2$ /NDF: 16903.5/55

All: 0.104 $\pm$ 0.001  $\chi^2$ /NDF: 33666.6/113

- sign 0.102 $\pm$ 0.002  $\chi^2$ /NDF: 16761.4/57

# reg\_asym\_sam\_15\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-1.431 \pm 0.143$   $\chi^2/\text{NDF}$ : 162.4/30

Left Out:  $1.283 \pm 0.137$   $\chi^2/\text{NDF}$ : 1715.5/24

Right Out:  $-1.891 \pm 0.137$   $\chi^2/\text{NDF}$ : 266.4/34

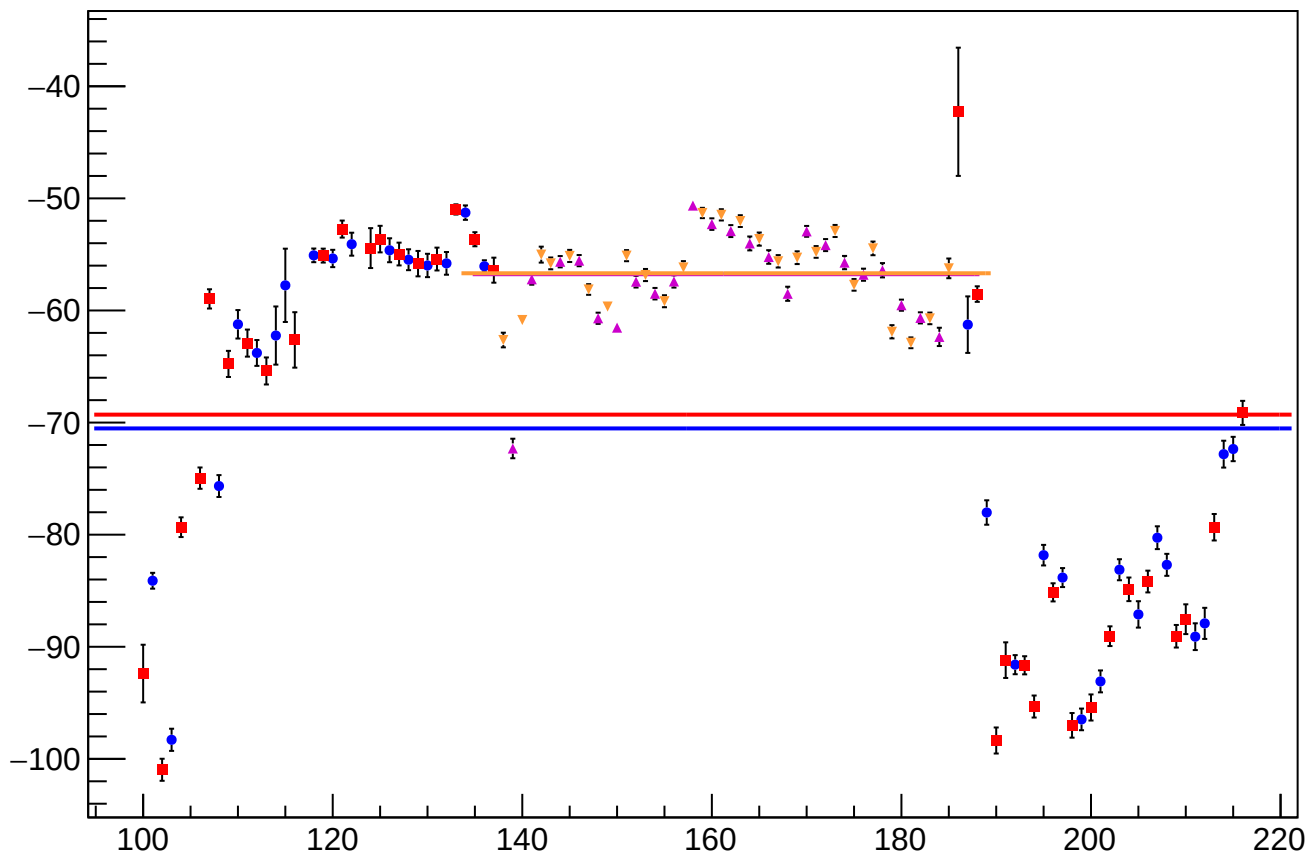
Left In:  $1.247 \pm 0.140$   $\chi^2/\text{NDF}$ : 1512.4/22

+ sign  $-0.016 \pm 0.099$   $\chi^2/\text{NDF}$ : 2065.8/55

All:  $-0.187 \pm 0.070$   $\chi^2/\text{NDF}$ : 4105.7/113

- sign  $-0.356 \pm 0.098$   $\chi^2/\text{NDF}$ : 2033.9/57

reg\_asym\_sam\_15\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-70.522 \pm 0.170$   $\chi^2/\text{NDF}$ : 8455.7/30

Left Out:  $-56.680 \pm 0.107$   $\chi^2/\text{NDF}$ : 1014.5/24

Right Out:  $-69.292 \pm 0.161$   $\chi^2/\text{NDF}$ : 11296.8/34

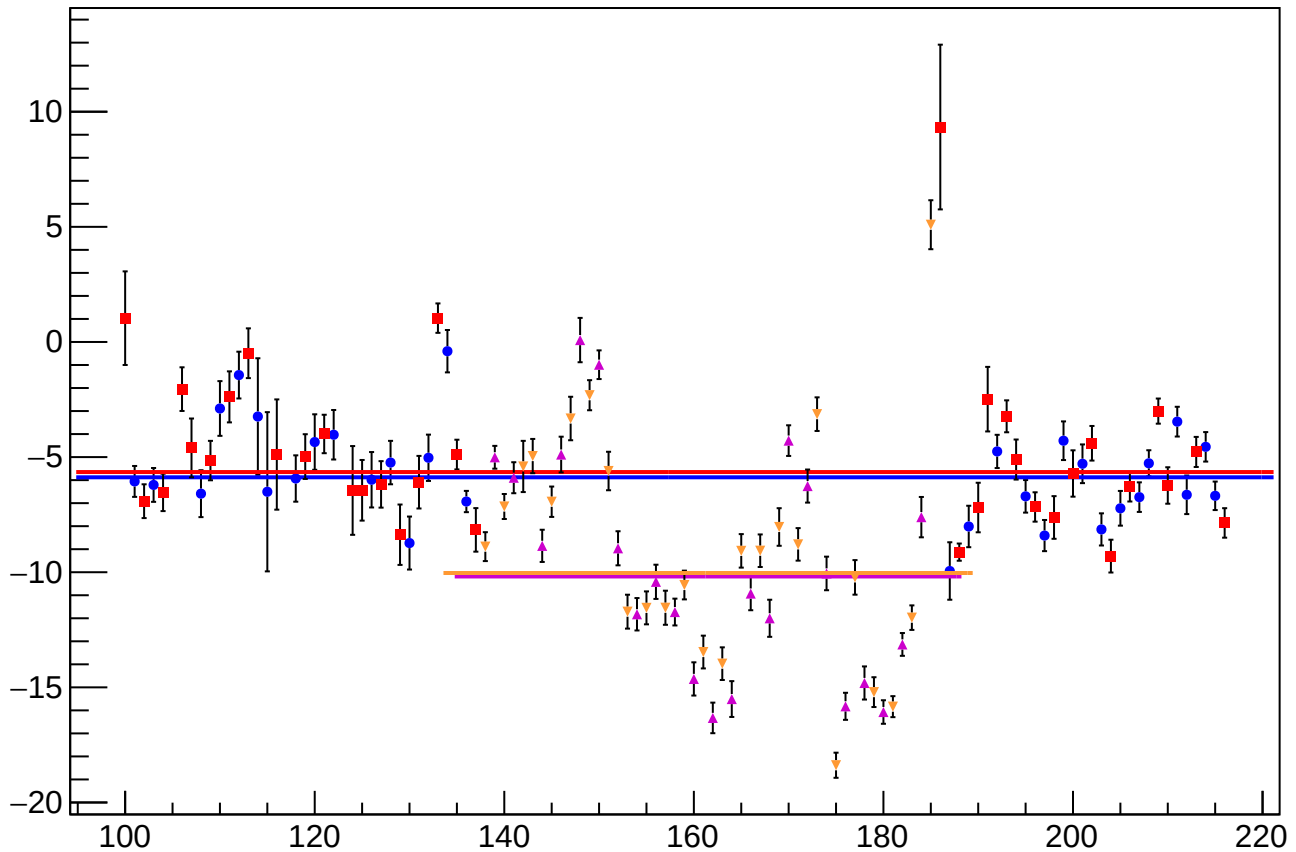
Left In:  $-56.765 \pm 0.112$   $\chi^2/\text{NDF}$ : 1108.9/22

+ sign  $-60.615 \pm 0.091$   $\chi^2/\text{NDF}$ : 14208.4/55

All:  $-60.735 \pm 0.065$   $\chi^2/\text{NDF}$ : 30708.3/113

- sign  $-60.858 \pm 0.092$   $\chi^2/\text{NDF}$ : 16496.3/57

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -5.878 $\pm$ 0.144  $\chi^2$ /NDF: 155.3/30

Left Out: -10.034 $\pm$ 0.136  $\chi^2$ /NDF:1182.4/24

Right Out: -5.649 $\pm$ 0.138  $\chi^2$ /NDF: 391.7/34

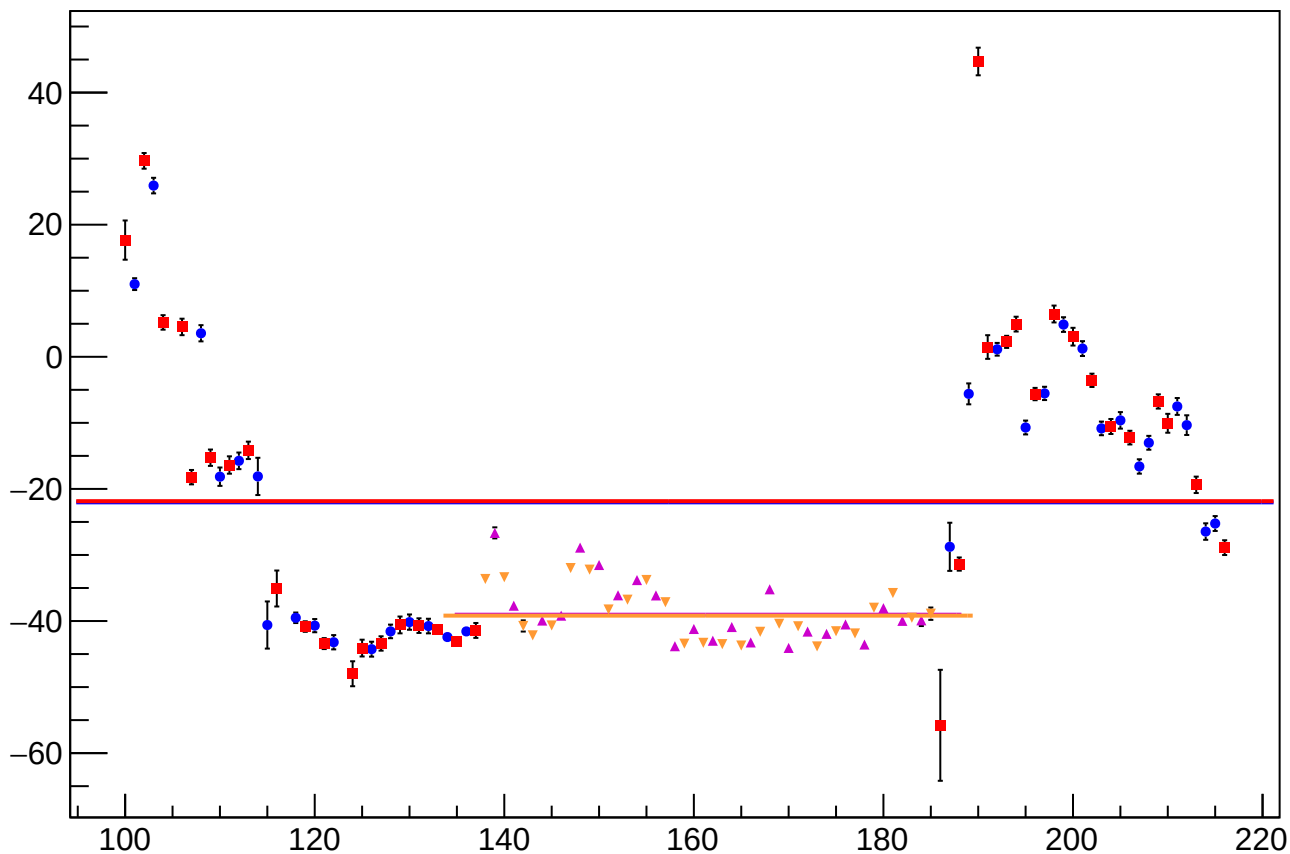
Left In: -10.184 $\pm$ 0.139  $\chi^2$ /NDF:1142.6/22

+ sign -8.077 $\pm$ 0.099  $\chi^2$ /NDF: 1776.0/55

All: -7.983 $\pm$ 0.070  $\chi^2$ /NDF: 3849.2/113

- sign -7.892 $\pm$ 0.098  $\chi^2$ /NDF: 2071.4/57

# reg\_asym\_sam\_15\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-22.034 \pm 0.193$   $\chi^2/\text{NDF}: 10735.3/30$

Left Out:  $-39.183 \pm 0.120$   $\chi^2/\text{NDF}: 1034.1/24$

Right Out:  $-21.856 \pm 0.186$   $\chi^2/\text{NDF}: 12988.2/34$

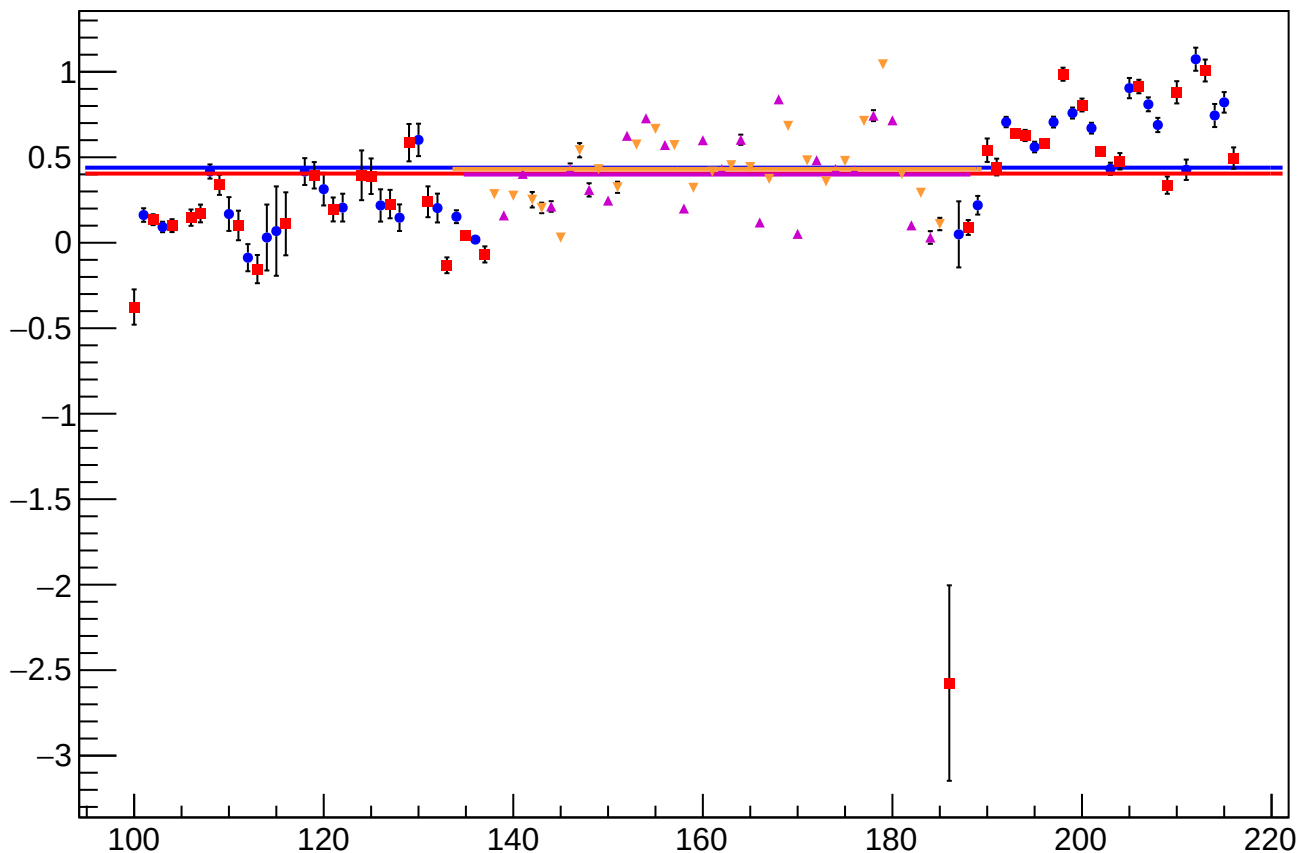
Left In:  $-39.044 \pm 0.124$   $\chi^2/\text{NDF}: 1226.4/22$

+ sign  $-34.389 \pm 0.102$   $\chi^2/\text{NDF}: 17477.9/55$

All:  $-34.061 \pm 0.073$   $\chi^2/\text{NDF}: 37636.8/113$

- sign  $-33.724 \pm 0.103$   $\chi^2/\text{NDF}: 20137.9/57$

# reg\_asym\_sam\_15\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.439 \pm 0.008$   $\chi^2/\text{NDF}$ : 1378.9/30

Left Out:  $0.432 \pm 0.005$   $\chi^2/\text{NDF}$ : 1368.7/24

Right Out:  $0.405 \pm 0.008$   $\chi^2/\text{NDF}$ : 1686.4/34

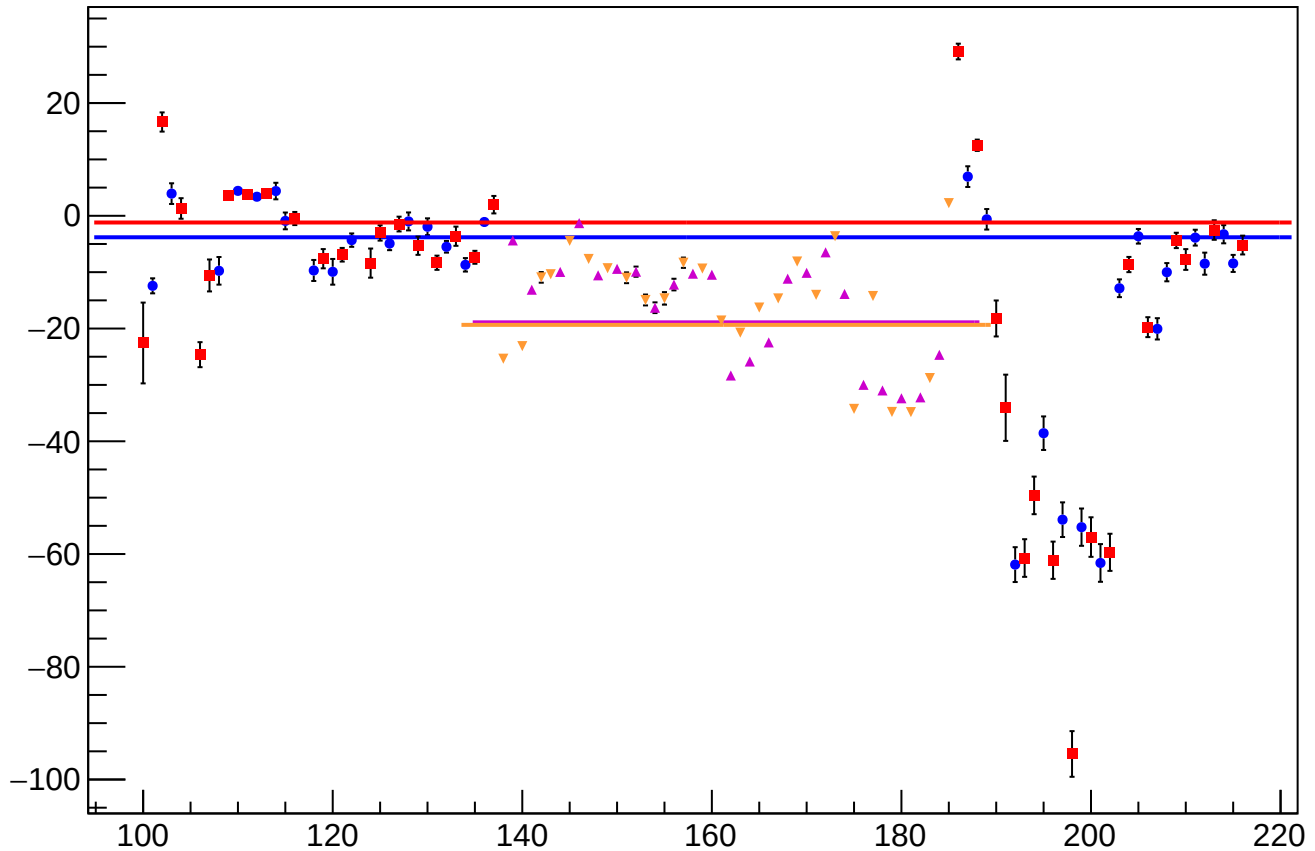
Left In:  $0.399 \pm 0.005$   $\chi^2/\text{NDF}$ : 1923.8/22

+ sign  $0.434 \pm 0.004$   $\chi^2/\text{NDF}$ : 2748.1/55

All:  $0.417 \pm 0.003$   $\chi^2/\text{NDF}$ : 6387.4/113

- sign  $0.401 \pm 0.004$   $\chi^2/\text{NDF}$ : 3610.5/57

# reg\_asym\_sam\_37\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.811 \pm 0.242$   $\chi^2/\text{NDF}: 1894.2/30$

Left Out:  $-19.347 \pm 0.113$   $\chi^2/\text{NDF}: 10394.7/24$

Right Out:  $-1.189 \pm 0.232$   $\chi^2/\text{NDF}: 3400.1/34$

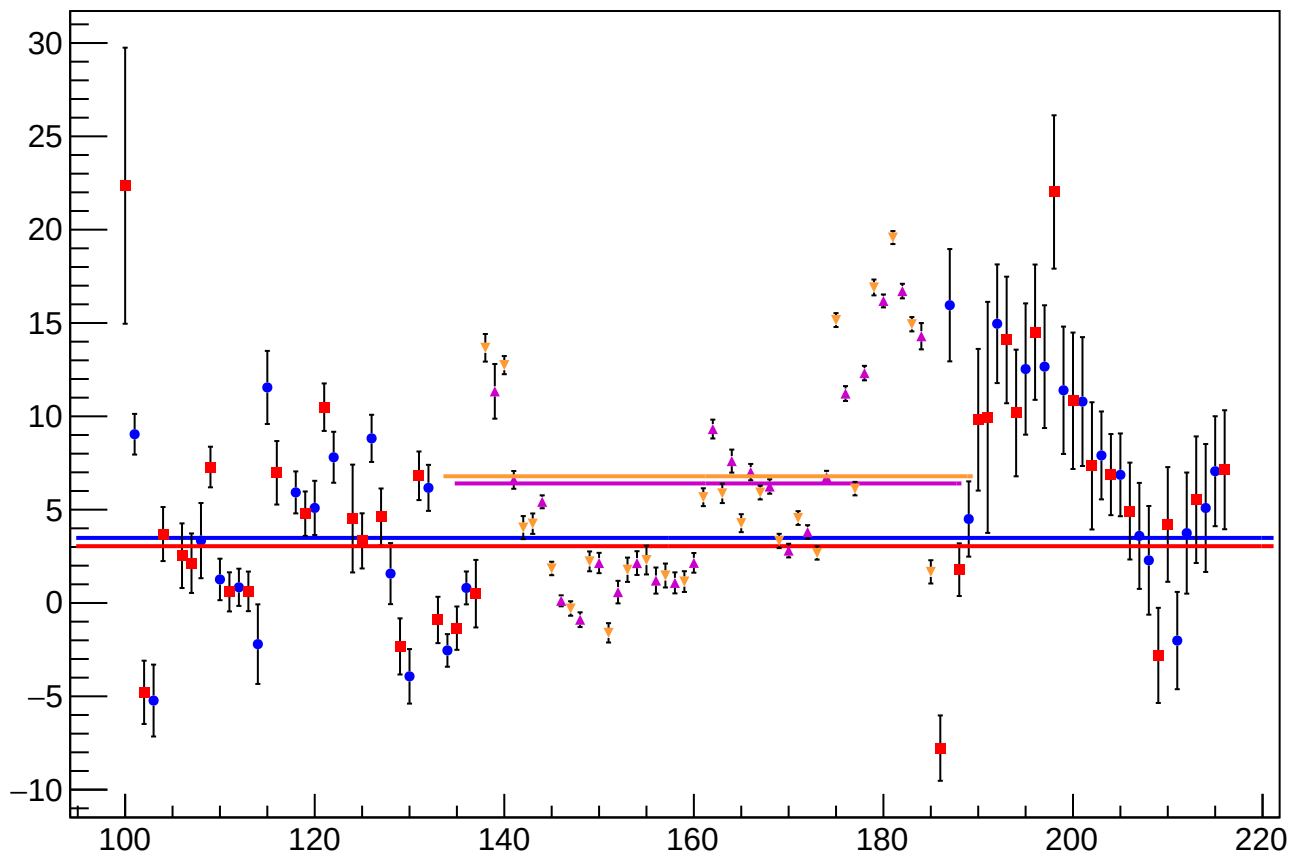
Left In:  $-18.902 \pm 0.116$   $\chi^2/\text{NDF}: 8286.2/22$

+ sign  $-16.554 \pm 0.103$   $\chi^2/\text{NDF}: 15665.3/55$

All:  $-15.955 \pm 0.073$   $\chi^2/\text{NDF}: 32095.9/113$

- sign  $-15.342 \pm 0.104$   $\chi^2/\text{NDF}: 16361.7/57$

reg\_asym\_sam\_37\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $3.487 \pm 0.288$   $\chi^2/\text{NDF}$ : 270.9/30

Left Out:  $6.788 \pm 0.090$   $\chi^2/\text{NDF}$ : 4632.5/24

Right Out:  $3.043 \pm 0.291$   $\chi^2/\text{NDF}$ : 252.5/34

Left In:  $6.404 \pm 0.091$   $\chi^2/\text{NDF}$ : 3410.4/22

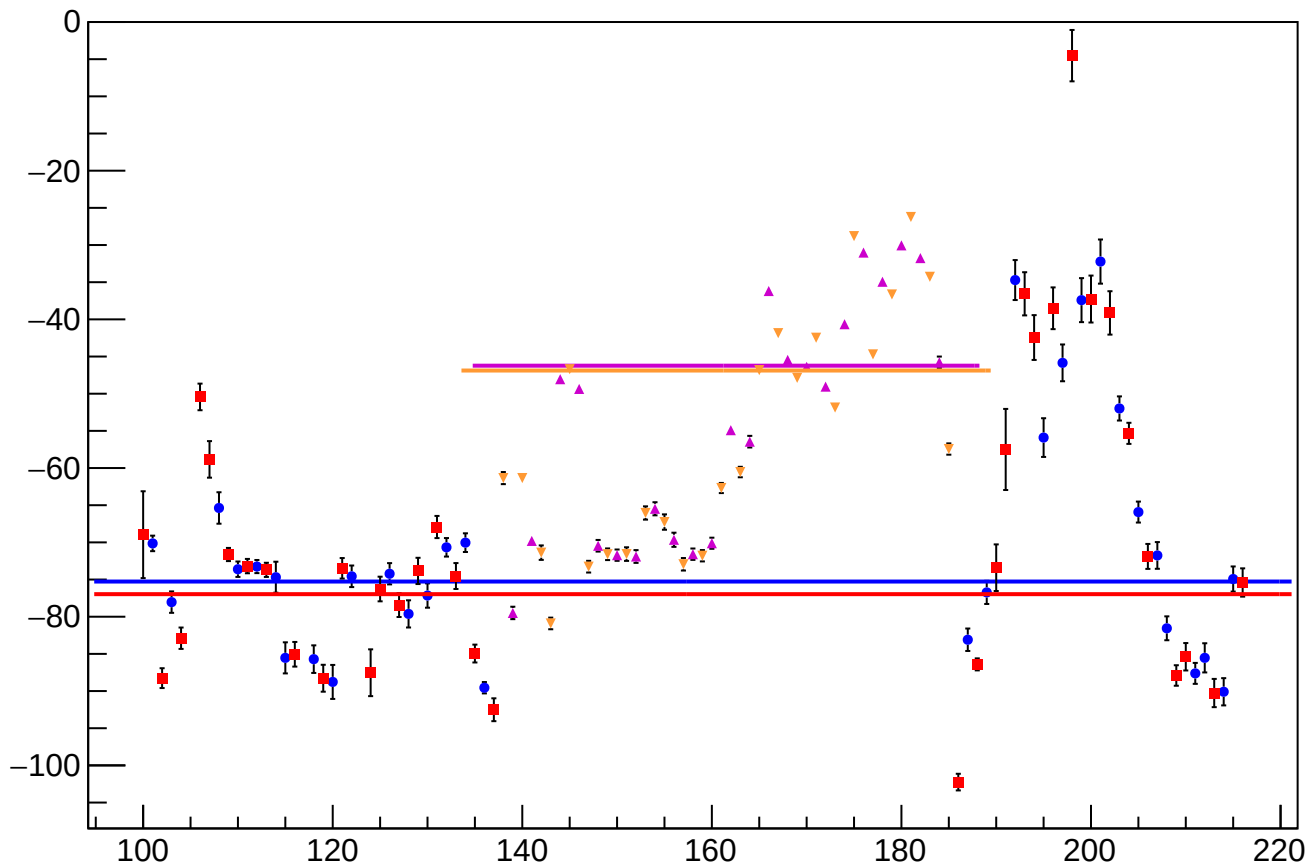
+ sign  $6.494 \pm 0.086$   $\chi^2/\text{NDF}$ : 5023.0/55

All:  $6.301 \pm 0.061$   $\chi^2/\text{NDF}$ : 8817.8/113

- sign  $6.103 \pm 0.087$   $\chi^2/\text{NDF}$ : 3784.6/57



reg\_asym\_sam\_37\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-75.268 \pm 0.268$   $\chi^2/\text{NDF}: 1799.6/30$

Left Out:  $-46.883 \pm 0.114$   $\chi^2/\text{NDF}: 17974.5/24$

Right Out:  $-76.966 \pm 0.262$   $\chi^2/\text{NDF}: 3011.4/34$

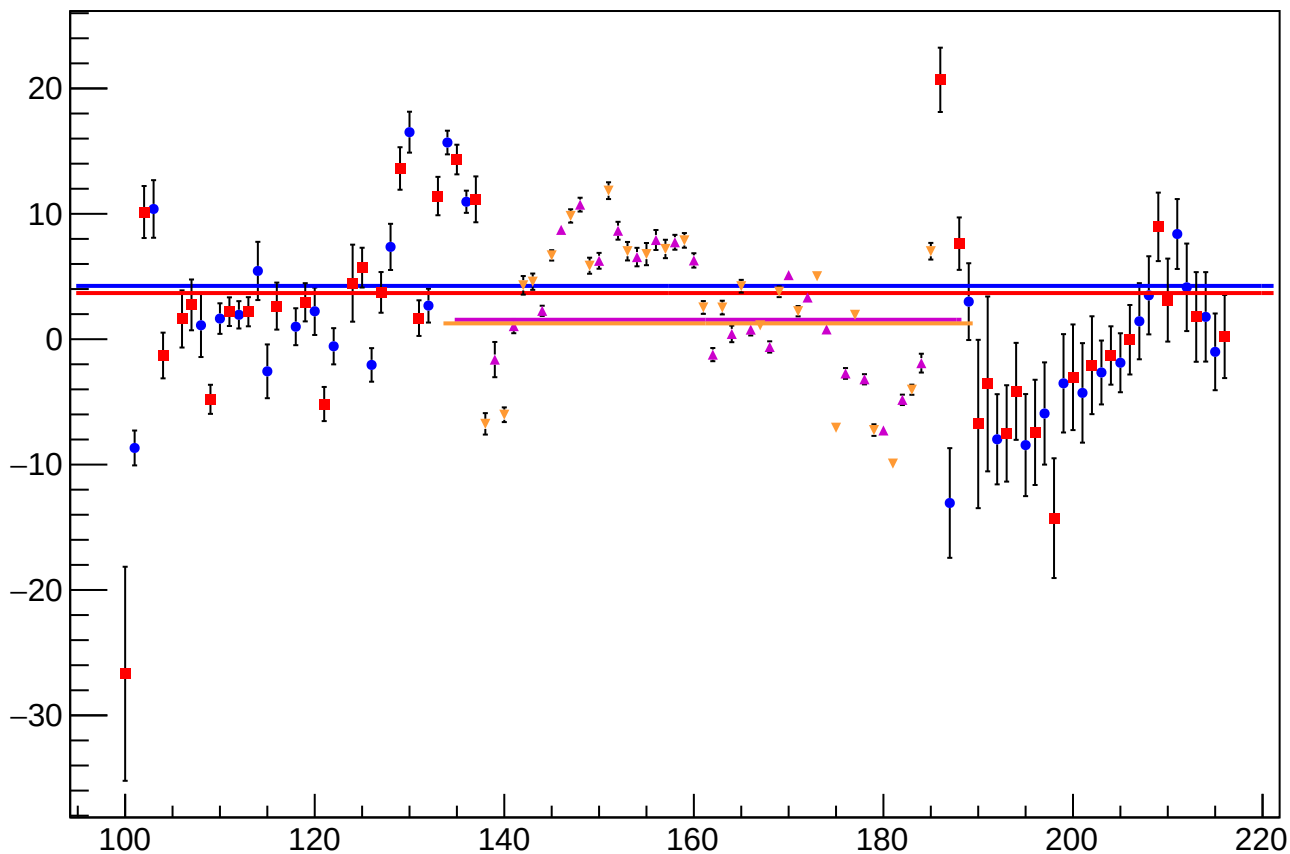
Left In:  $-46.231 \pm 0.116$   $\chi^2/\text{NDF}: 15169.3/22$

+ sign  $-51.222 \pm 0.105$   $\chi^2/\text{NDF}: 29268.9/55$

All:  $-51.261 \pm 0.075$   $\chi^2/\text{NDF}: 58975.9/113$

- sign  $-51.301 \pm 0.106$   $\chi^2/\text{NDF}: 29706.7/57$

reg\_asym\_sam\_37\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $4.252 \pm 0.323$   $\chi^2/\text{NDF}$ : 491.3/30

Left Out:  $1.261 \pm 0.100$   $\chi^2/\text{NDF}$ : 3445.7/24

Right Out:  $3.681 \pm 0.331$   $\chi^2/\text{NDF}$ : 392.8/34

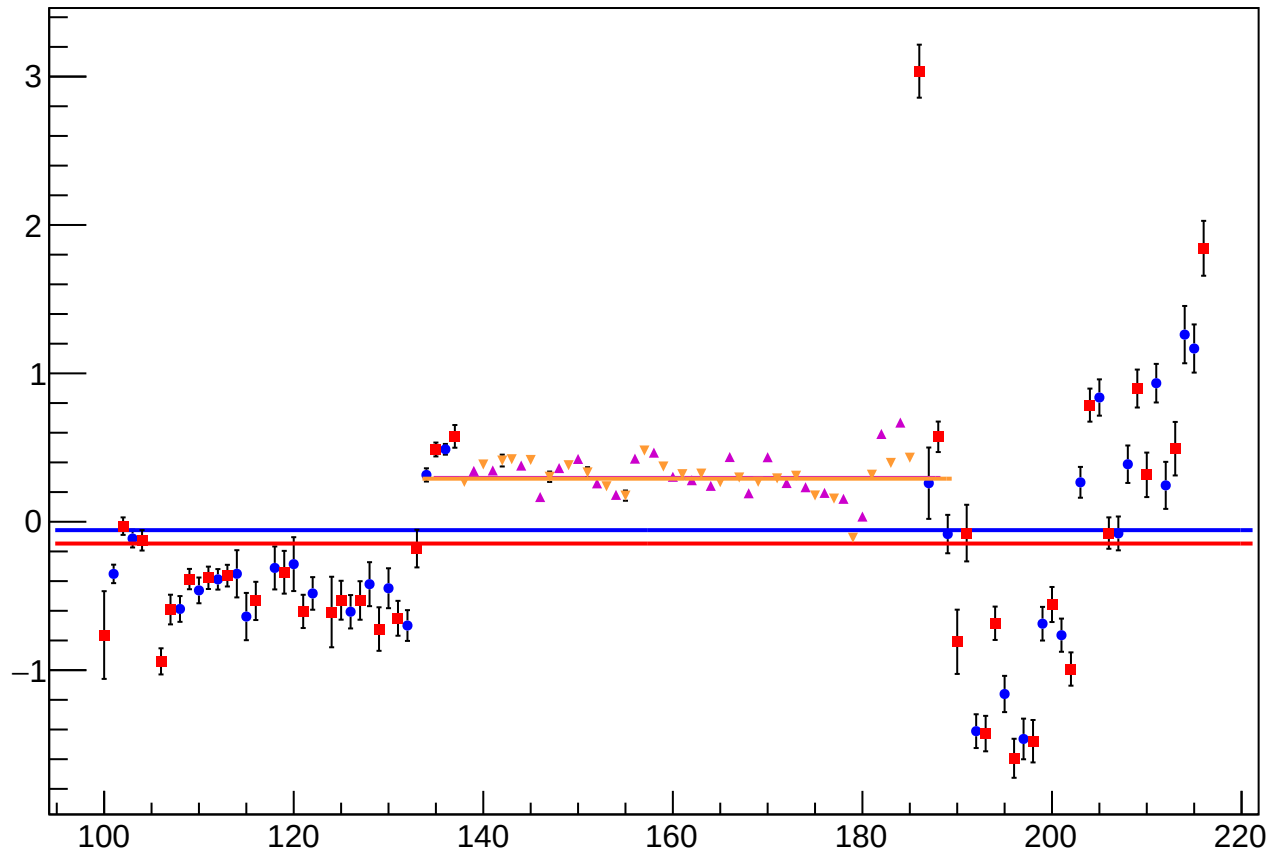
Left In:  $1.551 \pm 0.102$   $\chi^2/\text{NDF}$ : 2335.7/22

+ sign  $1.525 \pm 0.096$   $\chi^2/\text{NDF}$ : 4015.2/55

All:  $1.629 \pm 0.068$   $\chi^2/\text{NDF}$ : 6783.9/113

- sign  $1.736 \pm 0.097$   $\chi^2/\text{NDF}$ : 2766.3/57

reg\_asym\_sam\_37\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.056 \pm 0.016$   $\chi^2/\text{NDF}$ : 1157.4/30

Left Out:  $0.290 \pm 0.004$   $\chi^2/\text{NDF}$ : 719.3/24

Right Out:  $-0.147 \pm 0.017$   $\chi^2/\text{NDF}$ : 1560.7/34

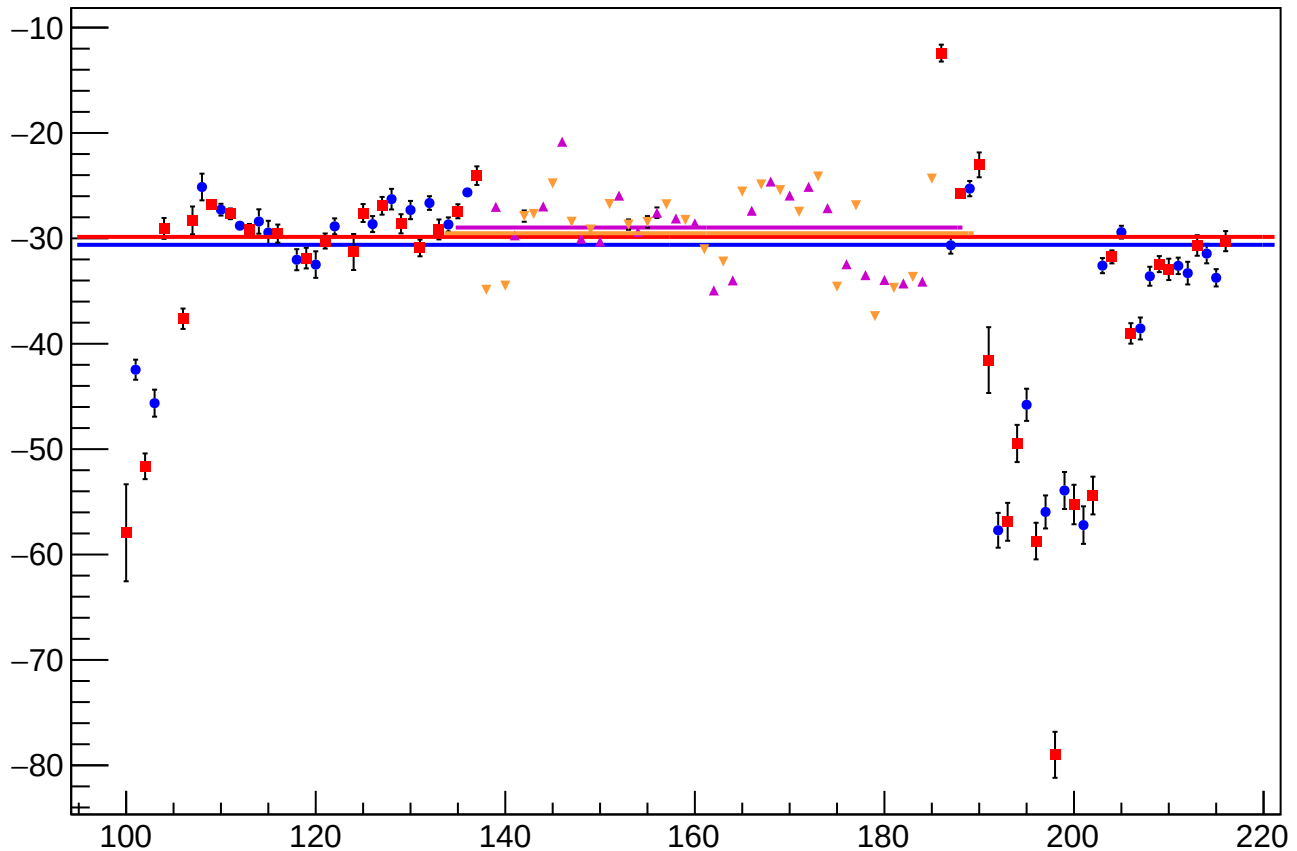
Left In:  $0.295 \pm 0.005$   $\chi^2/\text{NDF}$ : 1035.4/22

+ sign  $0.266 \pm 0.004$   $\chi^2/\text{NDF}$ : 2289.2/55

All:  $0.266 \pm 0.003$   $\chi^2/\text{NDF}$ : 5500.1/113

- sign  $0.266 \pm 0.004$   $\chi^2/\text{NDF}$ : 3210.9/57

# reg\_asym\_sam\_37\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.613 \pm 0.147$   $\chi^2/\text{NDF}$ : 1783.9/30

Left Out:  $-29.516 \pm 0.056$   $\chi^2/\text{NDF}$ : 6088.5/24

Right Out:  $-29.862 \pm 0.144$   $\chi^2/\text{NDF}$ : 2806.0/34

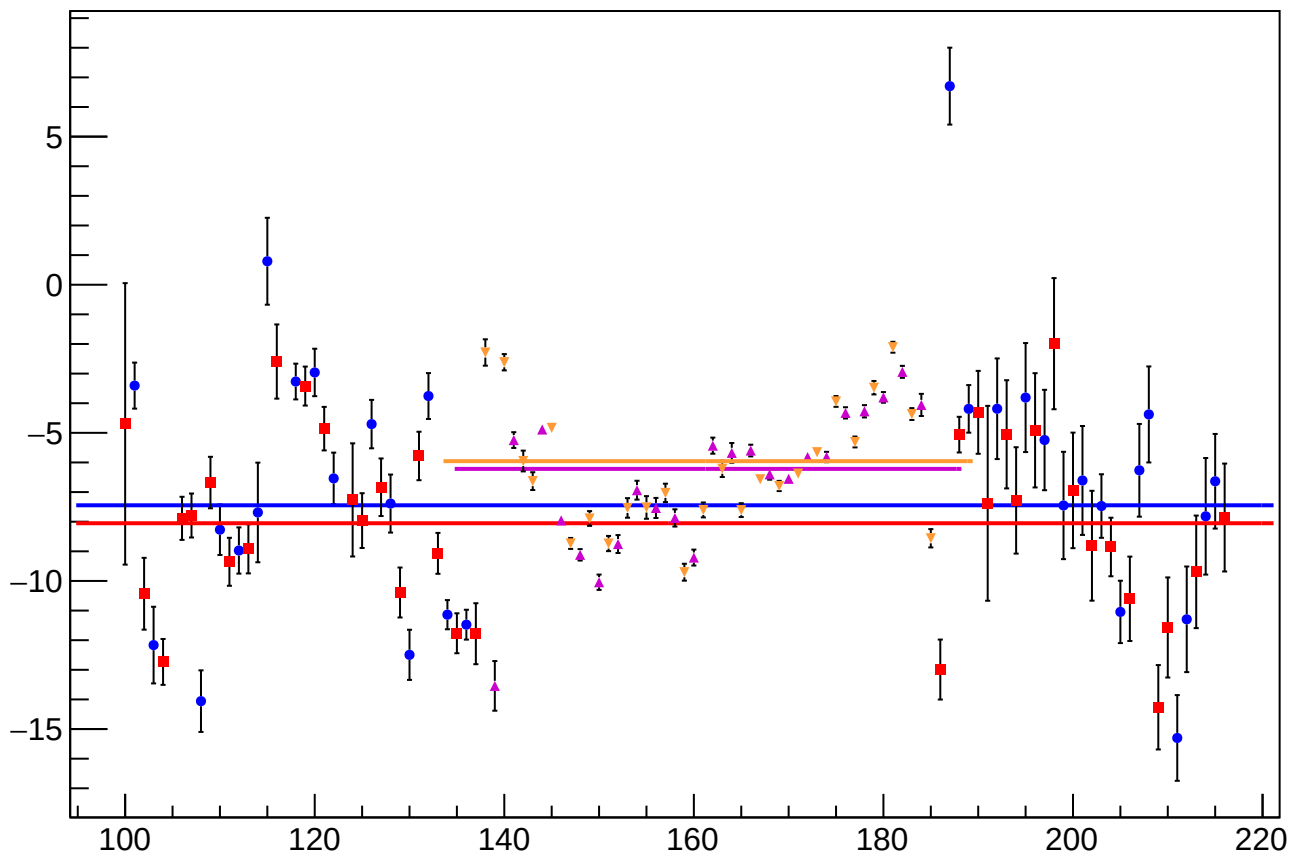
Left In:  $-28.971 \pm 0.057$   $\chi^2/\text{NDF}$ : 5348.6/22

+ sign  $-29.656 \pm 0.053$   $\chi^2/\text{NDF}$ : 7920.8/55

All:  $-29.376 \pm 0.037$   $\chi^2/\text{NDF}$ : 16165.7/113

- sign  $-29.092 \pm 0.053$   $\chi^2/\text{NDF}$ : 8187.7/57

reg\_asym\_sam\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-7.446 \pm 0.171$   $\chi^2/\text{NDF}$ : 582.2/30

Left Out:  $-5.956 \pm 0.044$   $\chi^2/\text{NDF}$ : 1857.8/24

Right Out:  $-8.052 \pm 0.170$   $\chi^2/\text{NDF}$ : 294.7/34

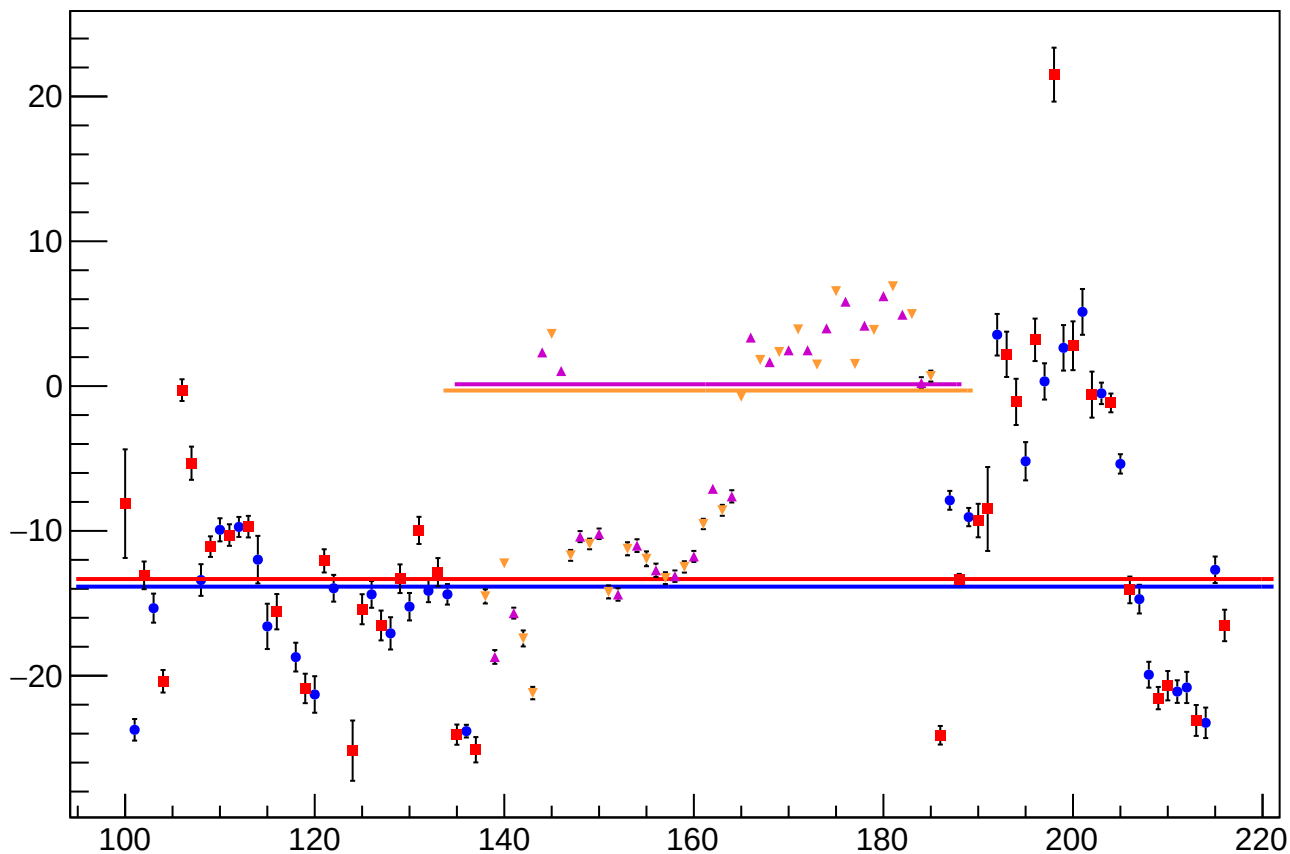
Left In:  $-6.217 \pm 0.044$   $\chi^2/\text{NDF}$ : 1741.8/22

+ sign  $-6.050 \pm 0.043$   $\chi^2/\text{NDF}$ : 2510.9/55

All:  $-6.193 \pm 0.030$   $\chi^2/\text{NDF}$ : 4678.8/113

- sign  $-6.333 \pm 0.043$   $\chi^2/\text{NDF}$ : 2146.1/57

# reg\_asym\_sam\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-13.849 \pm 0.156$   $\chi^2/\text{NDF}$ : 2287.1/30

Left Out:  $-0.306 \pm 0.057$   $\chi^2/\text{NDF}$ : 17181.6/24

Right Out:  $-13.325 \pm 0.150$   $\chi^2/\text{NDF}$ : 2723.9/34

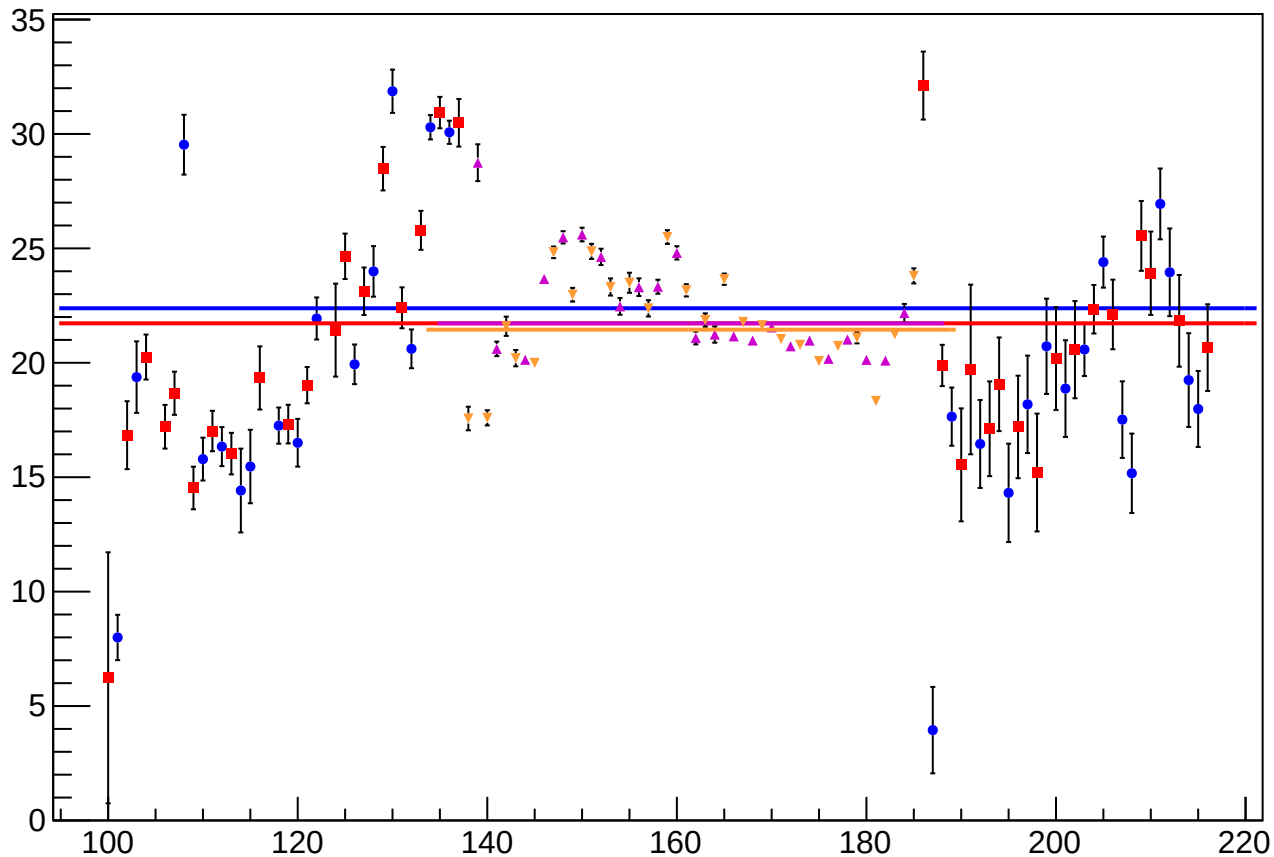
Left In:  $0.125 \pm 0.057$   $\chi^2/\text{NDF}$ : 13838.6/22

+ sign  $-1.879 \pm 0.053$   $\chi^2/\text{NDF}$ : 26130.1/55

All:  $-1.725 \pm 0.038$   $\chi^2/\text{NDF}$ : 49728.0/113

- sign  $-1.571 \pm 0.053$   $\chi^2/\text{NDF}$ : 23581.0/57

# reg\_asym\_sam\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $22.383 \pm 0.194$   $\chi^2/\text{NDF}$ : 1212.9/30

Left Out:  $21.447 \pm 0.050$   $\chi^2/\text{NDF}$ : 1325.2/24

Right Out:  $21.725 \pm 0.198$   $\chi^2/\text{NDF}$ : 644.3/34

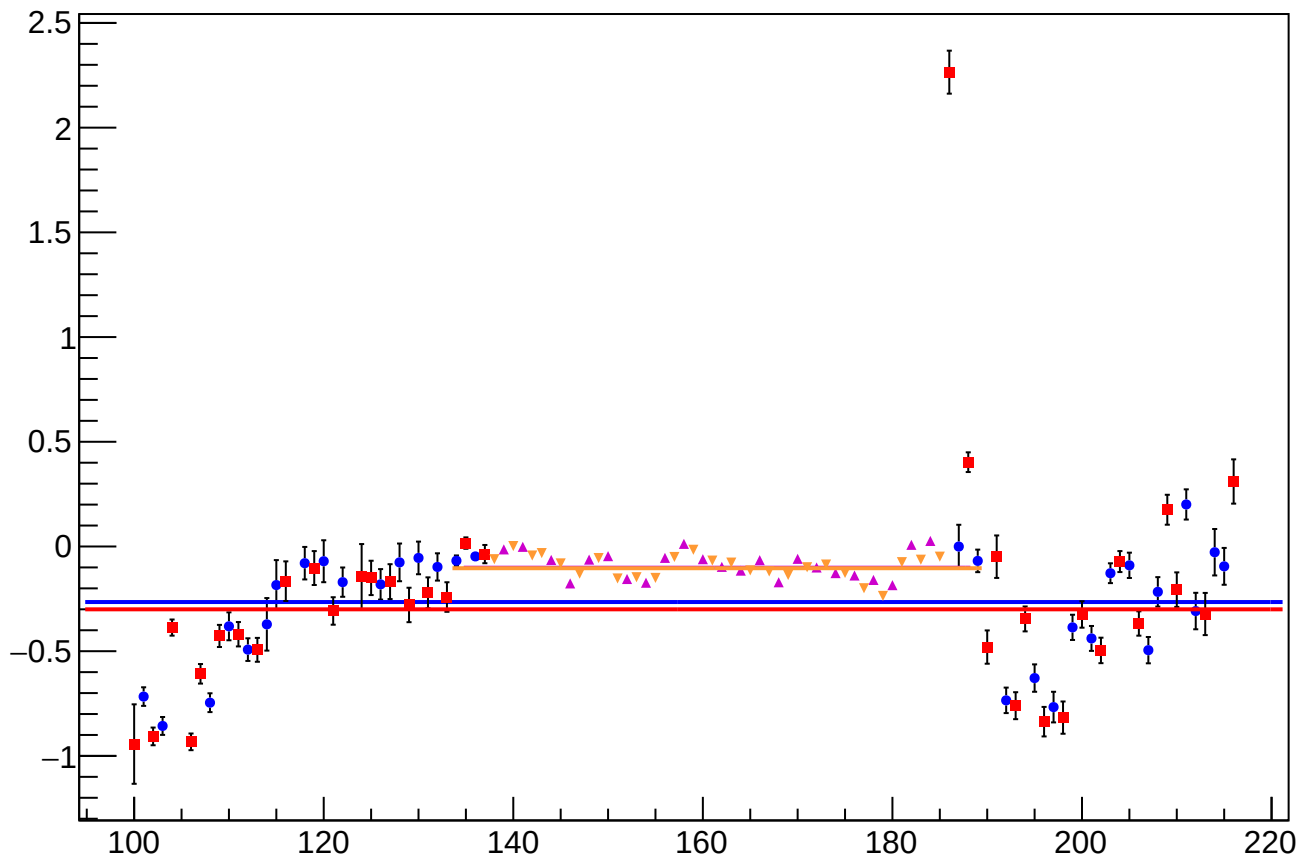
Left In:  $21.725 \pm 0.050$   $\chi^2/\text{NDF}$ : 1173.7/22

+ sign  $21.504 \pm 0.048$   $\chi^2/\text{NDF}$ : 2560.0/55

All:  $21.614 \pm 0.034$   $\chi^2/\text{NDF}$ : 4388.5/113

- sign  $21.725 \pm 0.048$   $\chi^2/\text{NDF}$ : 1818.0/57

reg\_asym\_sam\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.265 \pm 0.010$   $\chi^2/\text{NDF}: 886.0/30$

Left Out:  $-0.104 \pm 0.002$   $\chi^2/\text{NDF}: 547.4/24$

Right Out:  $-0.300 \pm 0.010$   $\chi^2/\text{NDF}: 1854.8/34$

Left In:  $-0.101 \pm 0.002$   $\chi^2/\text{NDF}: 757.6/22$

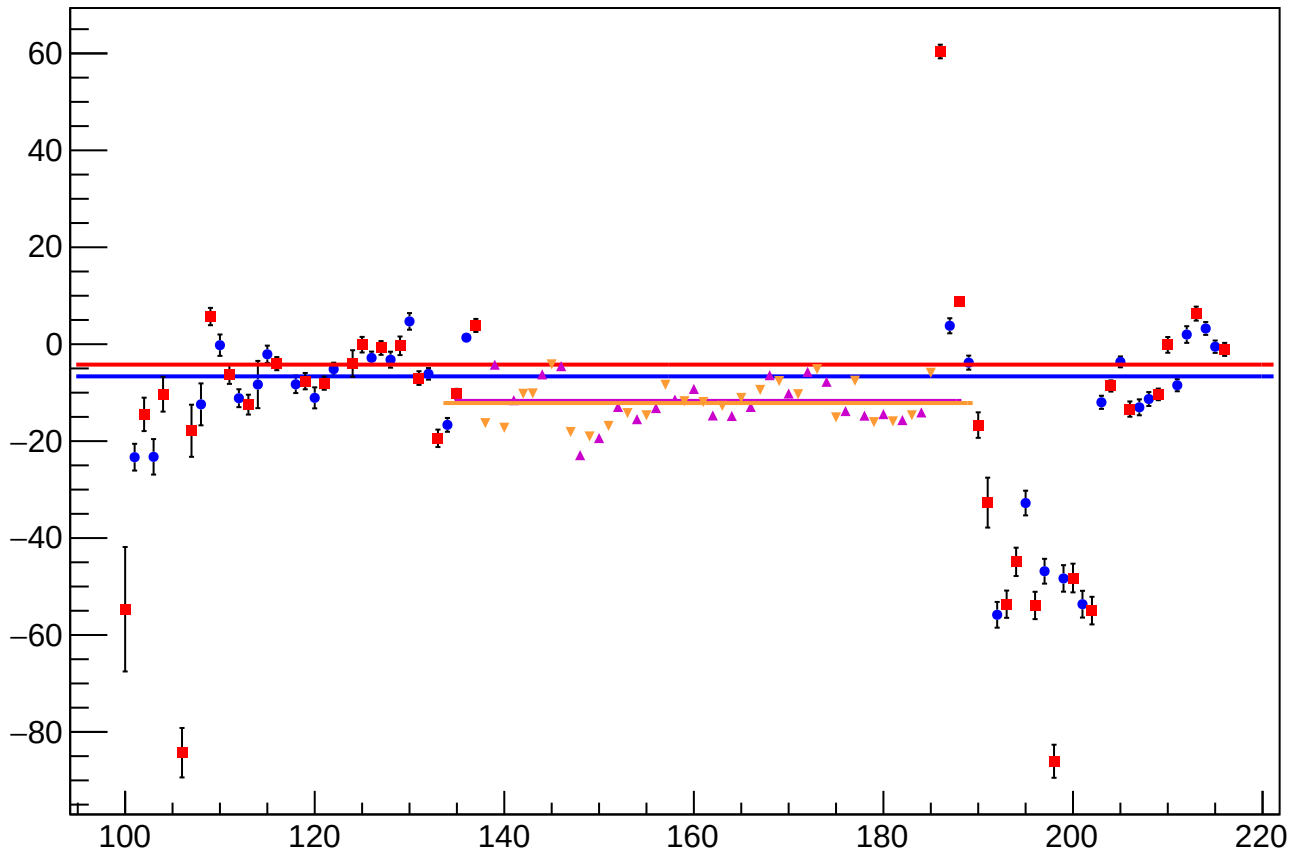
+ sign  $-0.112 \pm 0.002$   $\chi^2/\text{NDF}: 1699.8/55$

All:  $-0.111 \pm 0.002$   $\chi^2/\text{NDF}: 4689.0/113$

- sign  $-0.111 \pm 0.002$   $\chi^2/\text{NDF}: 2989.0/57$



# reg\_asym\_sam\_26\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.637 \pm 0.279$   $\chi^2/\text{NDF}$ : 1751.9/30

Left Out:  $-12.143 \pm 0.092$   $\chi^2/\text{NDF}$ : 2130.5/24

Right Out:  $-4.213 \pm 0.287$   $\chi^2/\text{NDF}$ : 4967.6/34

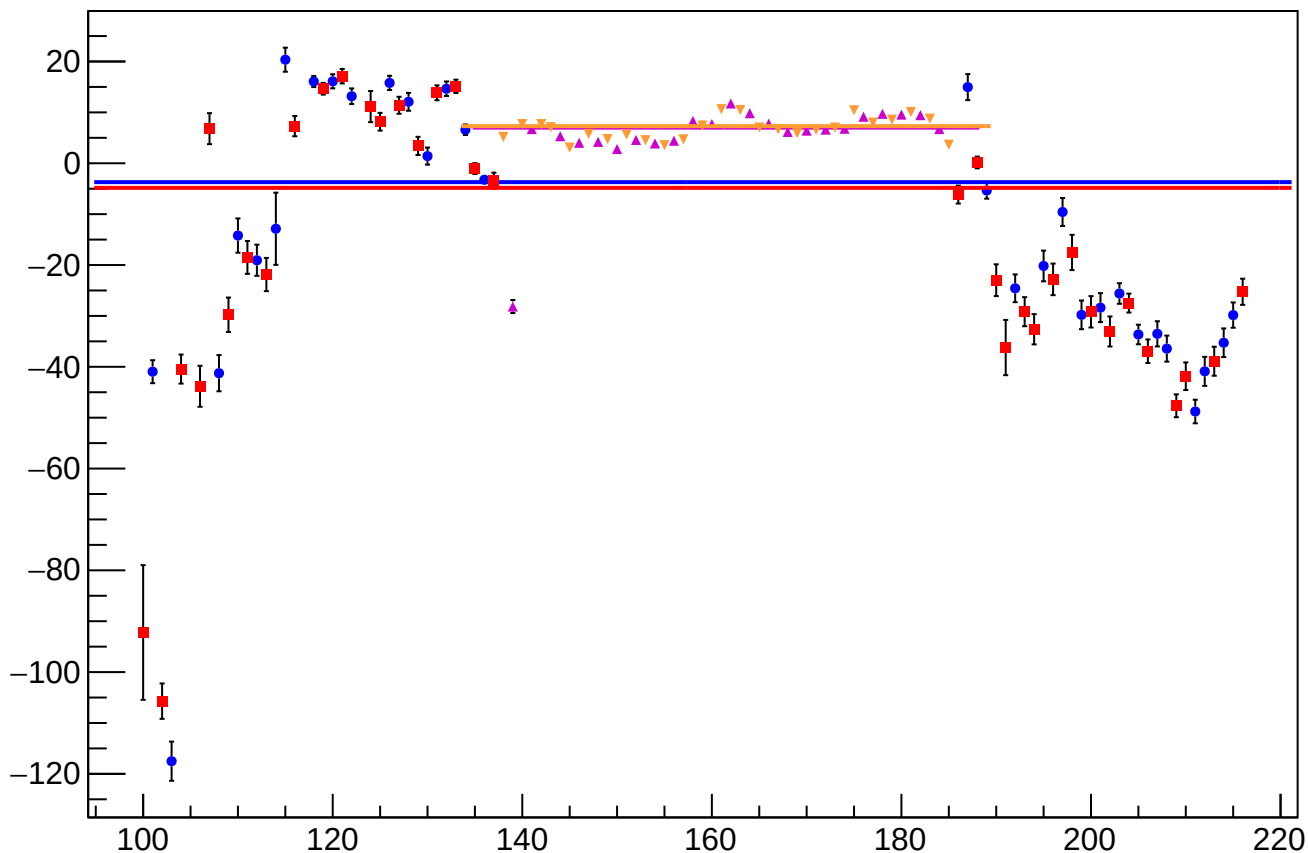
Left In:  $-11.698 \pm 0.094$   $\chi^2/\text{NDF}$ : 1951.0/22

+ sign  $-11.609 \pm 0.087$   $\chi^2/\text{NDF}$ : 4233.1/55

All:  $-11.299 \pm 0.062$   $\chi^2/\text{NDF}$ : 11791.9/113

- sign  $-10.969 \pm 0.090$   $\chi^2/\text{NDF}$ : 7532.4/57

reg\_asym\_sam\_26\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.710 \pm 0.327$   $\chi^2/\text{NDF}$ : 4361.4/30

Left Out:  $7.297 \pm 0.075$   $\chi^2/\text{NDF}$ : 822.9/24

Right Out:  $-4.831 \pm 0.342$   $\chi^2/\text{NDF}$ : 3962.7/34

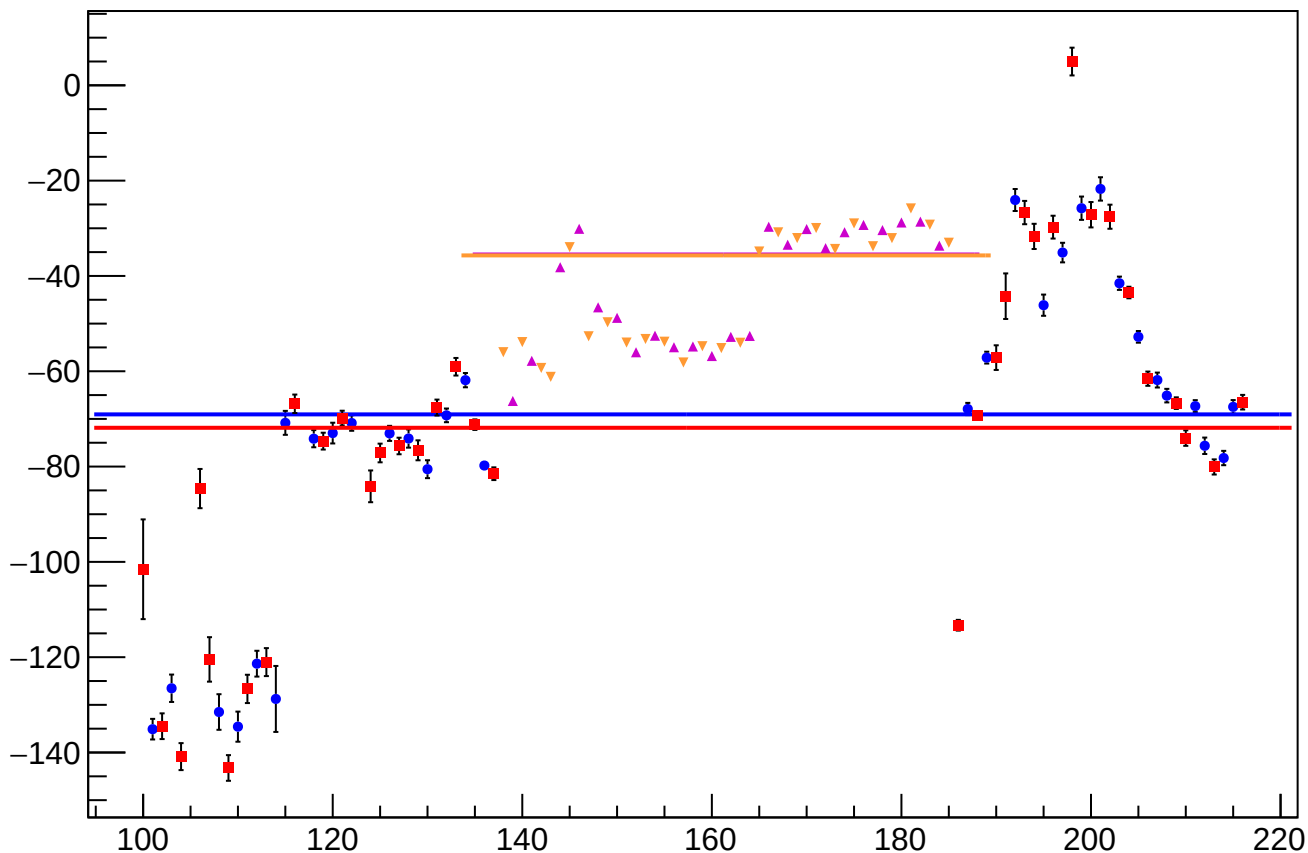
Left In:  $7.004 \pm 0.076$   $\chi^2/\text{NDF}$ : 1576.0/22

+ sign  $6.749 \pm 0.073$   $\chi^2/\text{NDF}$ : 6258.9/55

All:  $6.601 \pm 0.052$   $\chi^2/\text{NDF}$ : 12946.4/113

- sign  $6.448 \pm 0.074$   $\chi^2/\text{NDF}$ : 6679.1/57

reg\_asym\_sam\_26\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-69.050 \pm 0.289$   $\chi^2/\text{NDF}$ : 5010.8/30

Left Out:  $-35.690 \pm 0.092$   $\chi^2/\text{NDF}$ : 12778.3/24

Right Out:  $-71.862 \pm 0.290$   $\chi^2/\text{NDF}$ : 6988.9/34

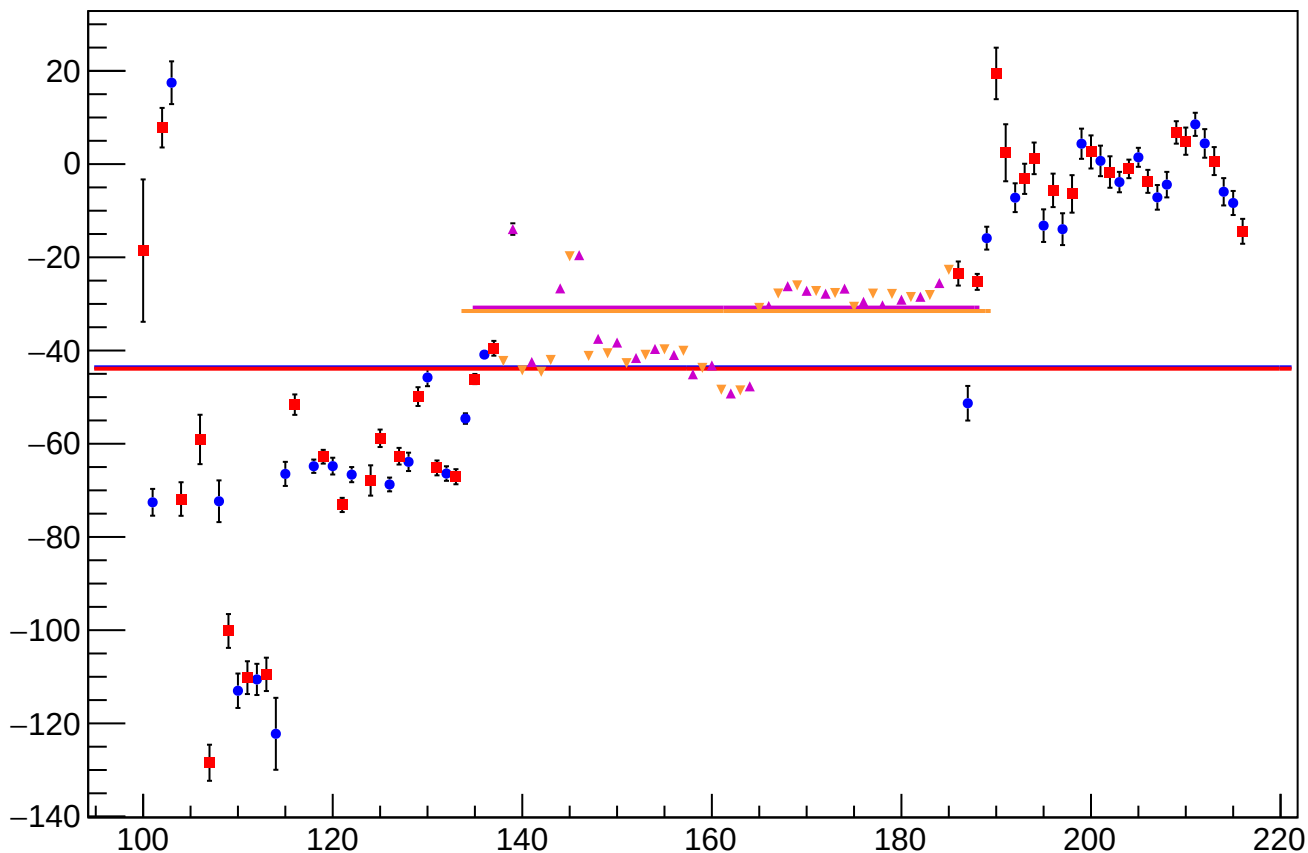
Left In:  $-35.497 \pm 0.095$   $\chi^2/\text{NDF}$ : 11162.0/22

+ sign  $-38.771 \pm 0.088$   $\chi^2/\text{NDF}$ : 29872.0/55

All:  $-38.877 \pm 0.063$   $\chi^2/\text{NDF}$ : 62210.8/113

- sign  $-38.987 \pm 0.090$   $\chi^2/\text{NDF}$ : 32335.9/57

reg\_asym\_sam\_26\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-43.602 \pm 0.366$   $\chi^2/\text{NDF}: 5605.9/30$

Left Out:  $-31.520 \pm 0.083$   $\chi^2/\text{NDF}: 8457.7/24$

Right Out:  $-43.895 \pm 0.392$   $\chi^2/\text{NDF}: 5831.9/34$

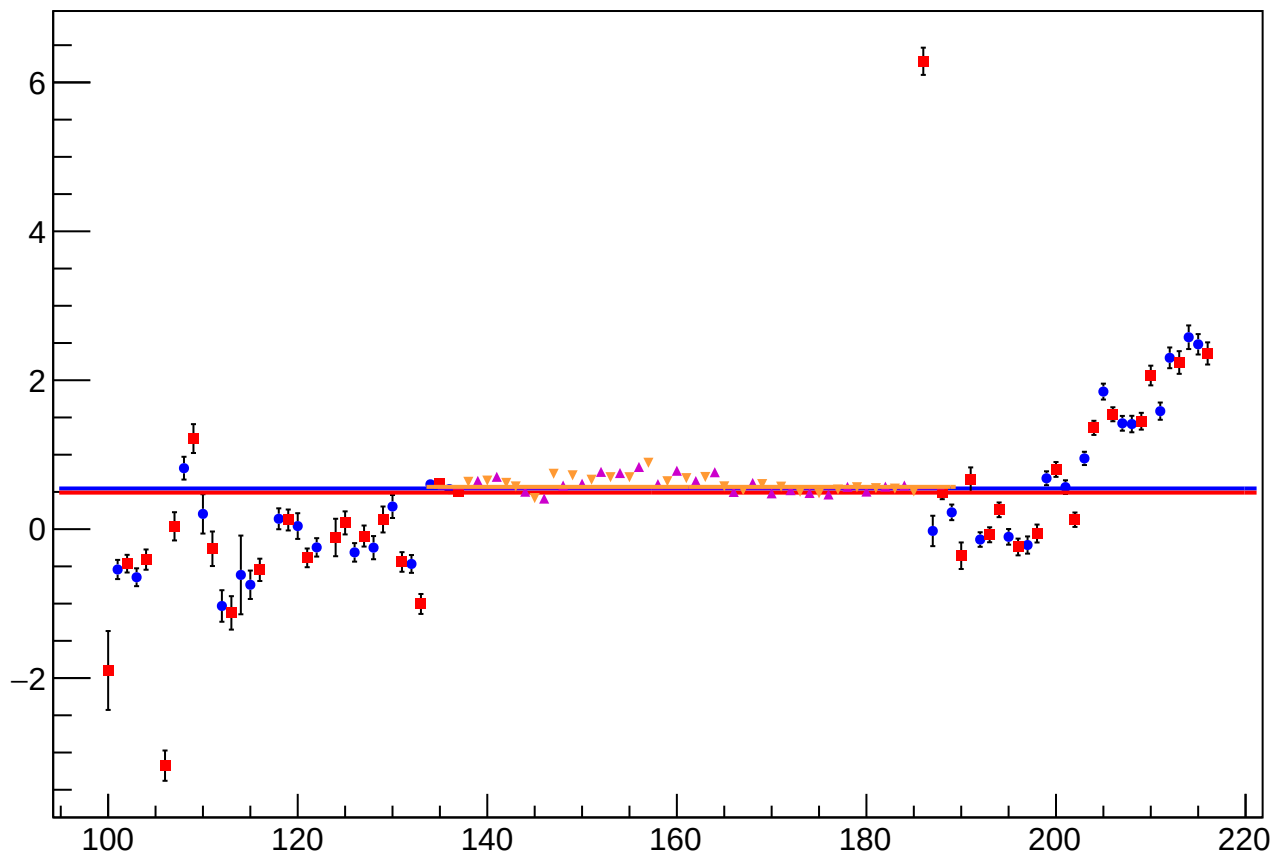
Left In:  $-30.789 \pm 0.084$   $\chi^2/\text{NDF}: 7548.8/22$

+ sign  $-32.109 \pm 0.081$   $\chi^2/\text{NDF}: 15101.9/55$

All:  $-31.747 \pm 0.058$   $\chi^2/\text{NDF}: 29594.6/113$

- sign  $-31.370 \pm 0.082$   $\chi^2/\text{NDF}: 14451.7/57$

reg\_asym\_sam\_26\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.546 \pm 0.018$   $\chi^2/\text{NDF}$ : 1548.2/30

Left Out:  $0.568 \pm 0.004$   $\chi^2/\text{NDF}$ : 554.5/24

Right Out:  $0.491 \pm 0.019$   $\chi^2/\text{NDF}$ : 2718.8/34

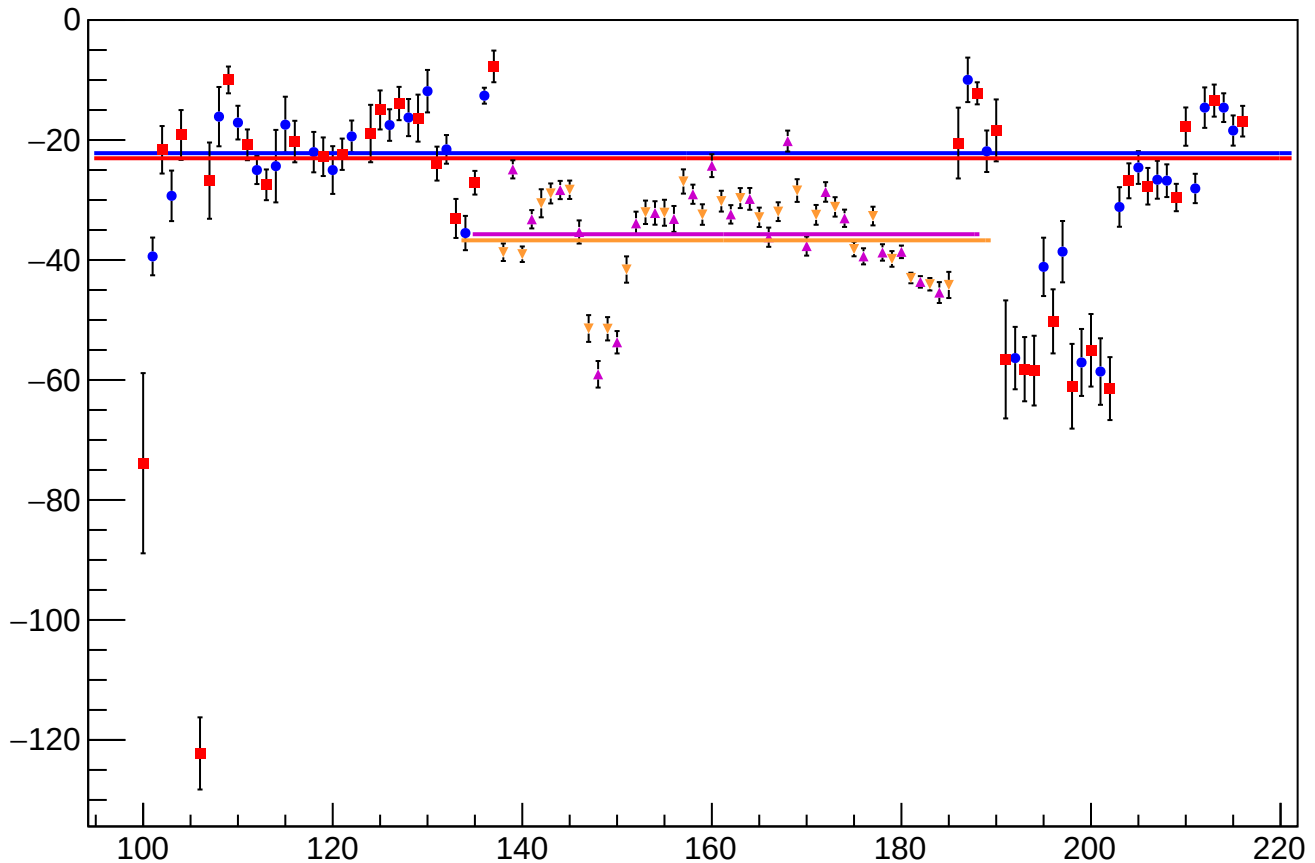
Left In:  $0.560 \pm 0.004$   $\chi^2/\text{NDF}$ : 671.5/22

+ sign  $0.567 \pm 0.004$   $\chi^2/\text{NDF}$ : 2104.2/55

All:  $0.562 \pm 0.003$   $\chi^2/\text{NDF}$ : 5510.6/113

- sign  $0.557 \pm 0.004$   $\chi^2/\text{NDF}$ : 3402.7/57

# reg\_asym\_sam\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-22.194 \pm 0.538$   $\chi^2/\text{NDF}$ : 328.9/30

Left Out:  $-36.724 \pm 0.310$   $\chi^2/\text{NDF}$ : 420.8/24

Right Out:  $-23.045 \pm 0.548$   $\chi^2/\text{NDF}$ : 689.3/34

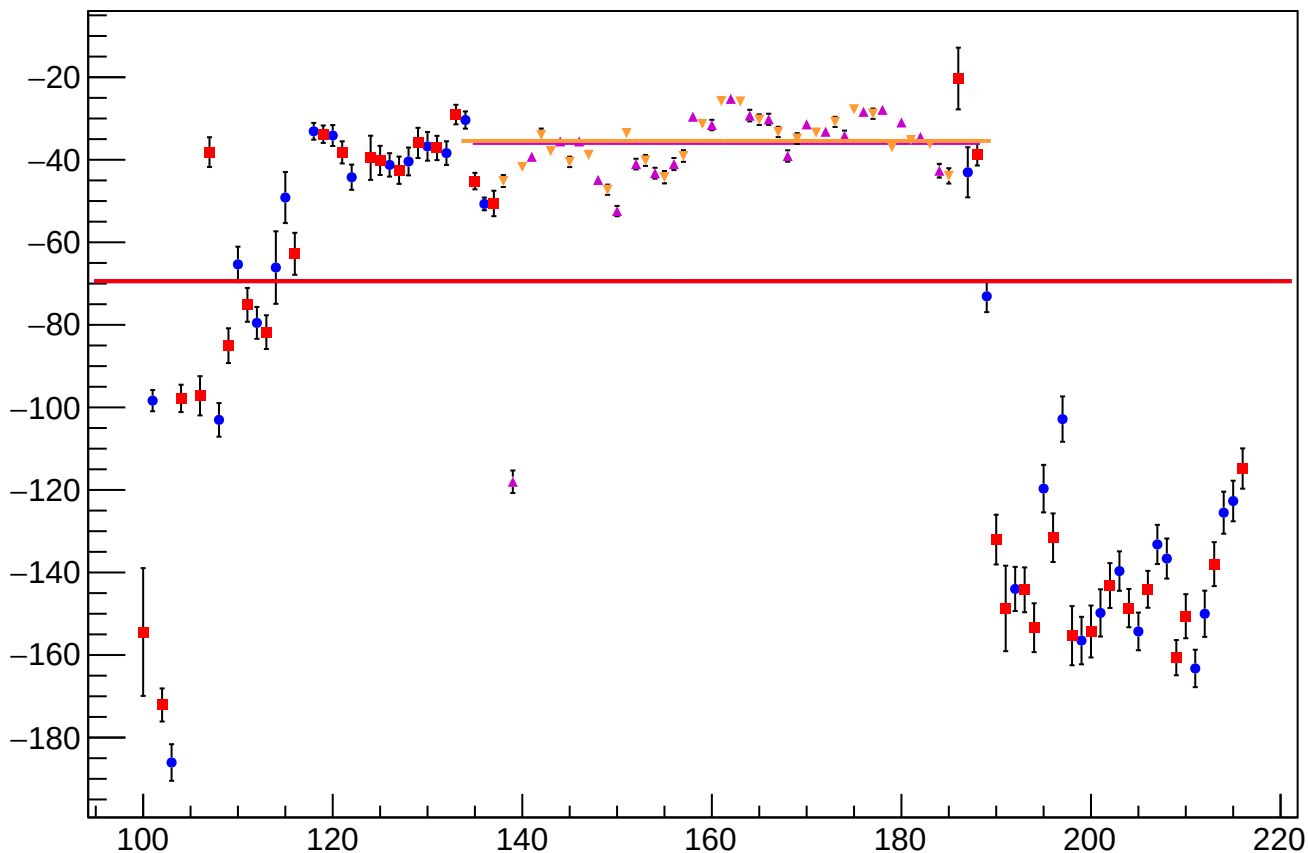
Left In:  $-35.706 \pm 0.323$   $\chi^2/\text{NDF}$ : 578.6/22

+ sign  $-33.096 \pm 0.269$   $\chi^2/\text{NDF}$ : 1297.5/55

All:  $-32.780 \pm 0.193$   $\chi^2/\text{NDF}$ : 2964.1/113

- sign  $-32.441 \pm 0.278$   $\chi^2/\text{NDF}$ : 1663.8/57

reg\_asym\_sam\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-69.429 \pm 0.622$   $\chi^2/\text{NDF}: 4924.3/30$

Left Out:  $-35.442 \pm 0.245$   $\chi^2/\text{NDF}: 537.8/24$

Right Out:  $-69.400 \pm 0.643$   $\chi^2/\text{NDF}: 5028.7/34$

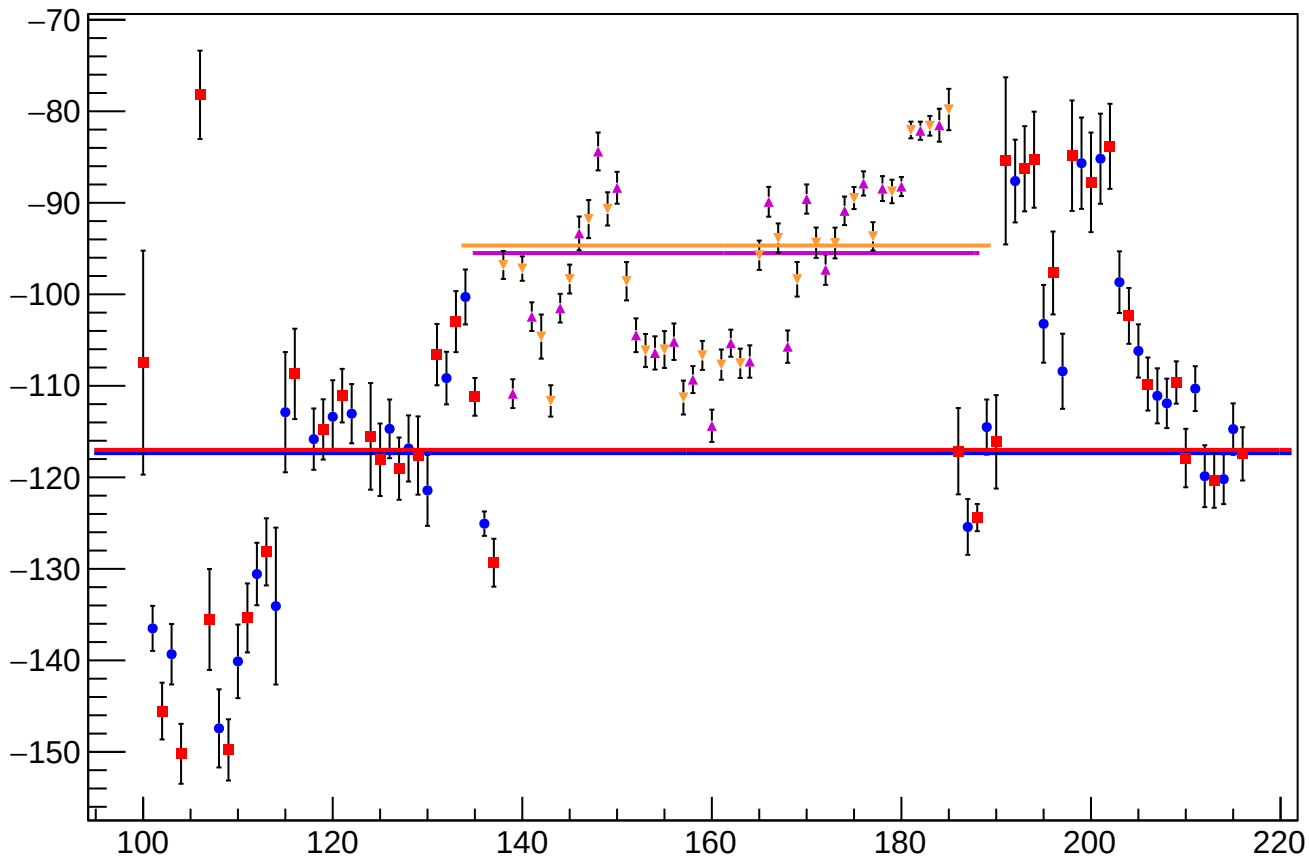
Left In:  $-35.913 \pm 0.256$   $\chi^2/\text{NDF}: 1543.1/22$

+ sign  $-40.007 \pm 0.228$   $\chi^2/\text{NDF}: 8049.6/55$

All:  $-40.243 \pm 0.165$   $\chi^2/\text{NDF}: 16965.5/113$

- sign  $-40.501 \pm 0.238$   $\chi^2/\text{NDF}: 8913.7/57$

# reg\_asym\_sam\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-117.352 \pm 0.558$   $\chi^2/\text{NDF}: 498.8/30$

Left Out:  $-94.663 \pm 0.310$   $\chi^2/\text{NDF}: 900.1/24$

Right Out:  $-116.998 \pm 0.569$   $\chi^2/\text{NDF}: 742.2/34$

Left In:  $-95.489 \pm 0.321$   $\chi^2/\text{NDF}: 970.1/22$

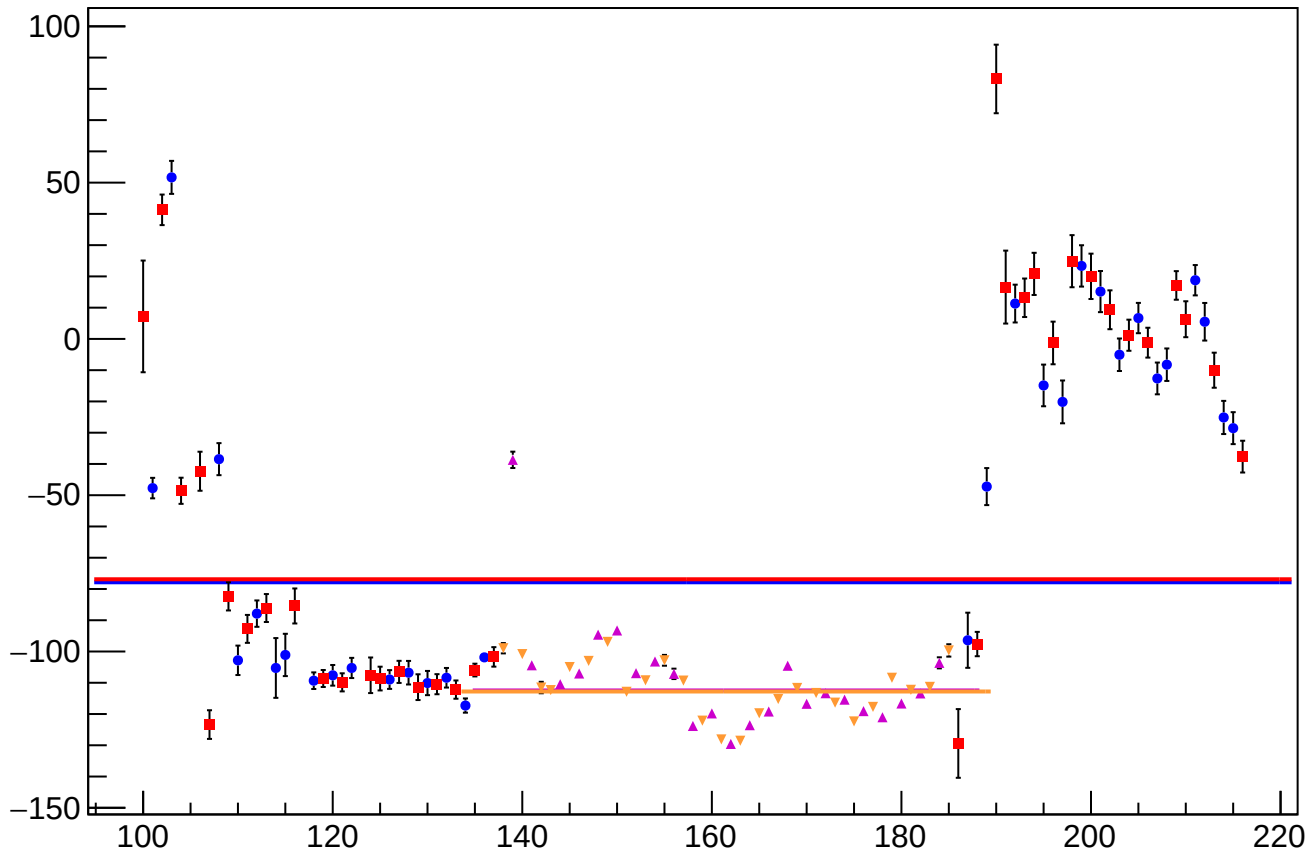
+ sign  $-100.007 \pm 0.271$   $\chi^2/\text{NDF}: 2662.0/55$

All:  $-100.337 \pm 0.195$   $\chi^2/\text{NDF}: 5461.4/113$

- sign  $-100.688 \pm 0.280$   $\chi^2/\text{NDF}: 2796.3/57$



# reg\_asym\_sam\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-77.854 \pm 0.699$   $\chi^2/\text{NDF}: 4431.5/30$

Left Out:  $-112.794 \pm 0.274$   $\chi^2/\text{NDF}: 936.4/24$

Right Out:  $-76.891 \pm 0.733$   $\chi^2/\text{NDF}: 4560.3/34$

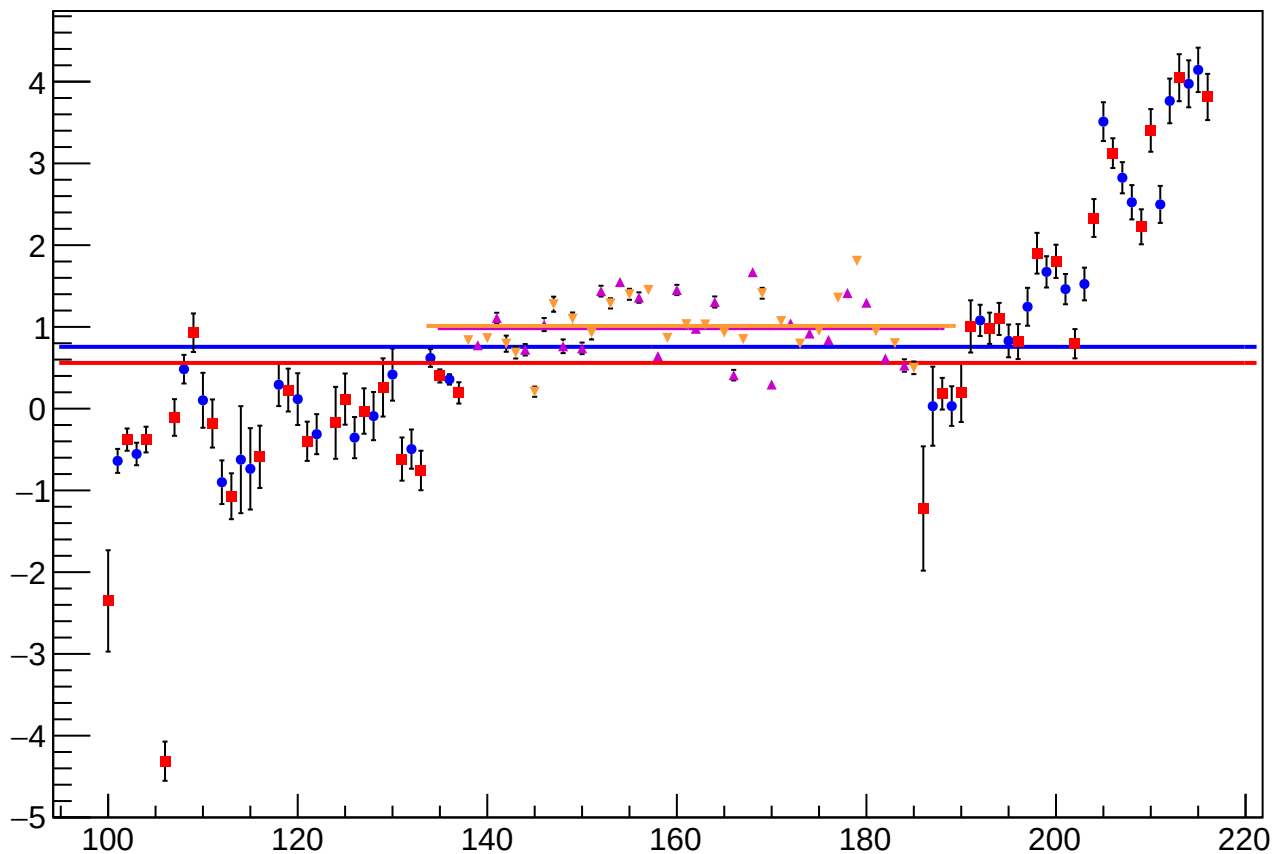
Left In:  $-112.465 \pm 0.285$   $\chi^2/\text{NDF}: 1788.6/22$

+ sign  $-108.137 \pm 0.255$   $\chi^2/\text{NDF}: 7534.8/55$

All:  $-107.976 \pm 0.184$   $\chi^2/\text{NDF}: 15929.8/113$

- sign  $-107.801 \pm 0.265$   $\chi^2/\text{NDF}: 8394.2/57$

# reg\_asym\_sam\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.756 \pm 0.034$   $\chi^2/\text{NDF}: 1217.4/30$

Left Out:  $1.012 \pm 0.012$   $\chi^2/\text{NDF}: 691.2/24$

Right Out:  $0.559 \pm 0.035$   $\chi^2/\text{NDF}: 1478.1/34$

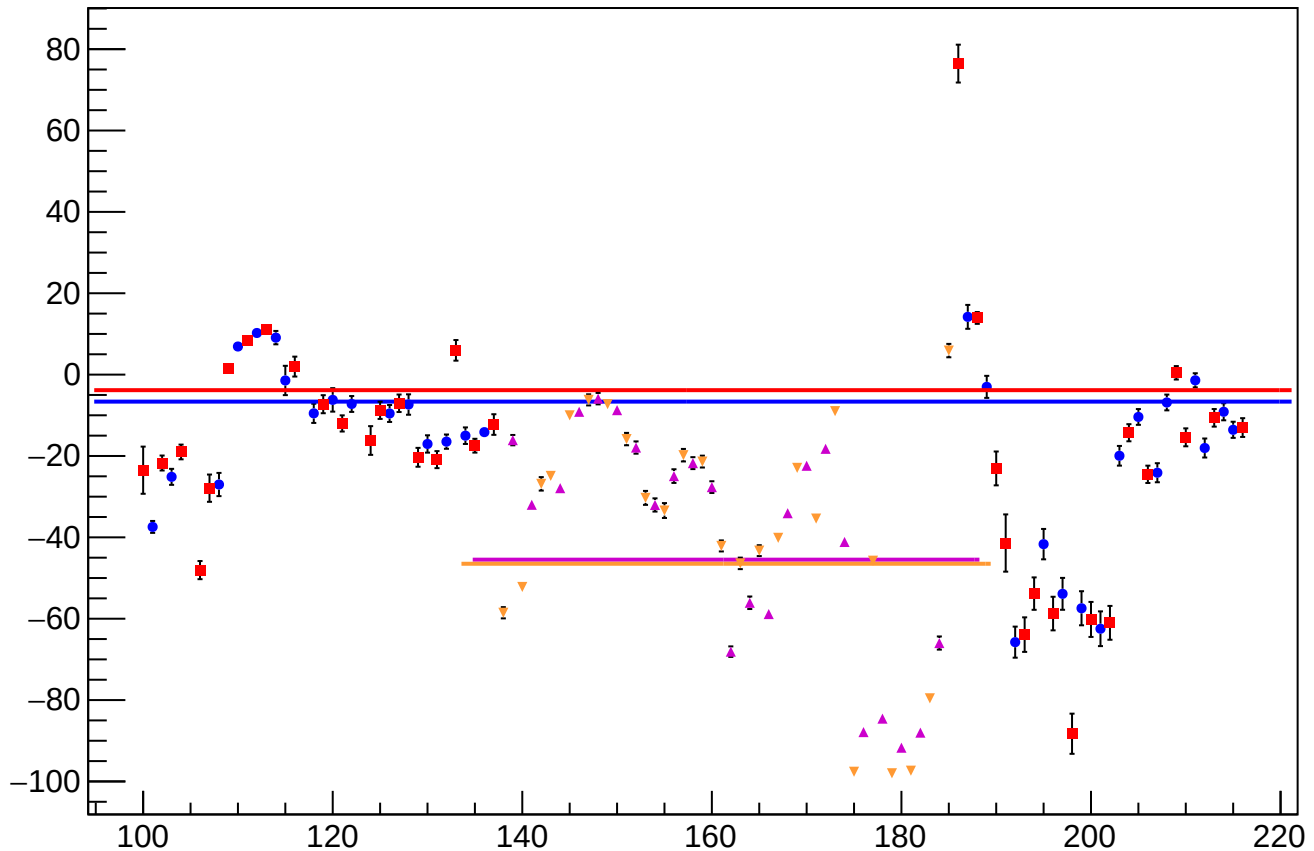
Left In:  $0.984 \pm 0.013$   $\chi^2/\text{NDF}: 900.0/22$

+ sign  $0.982 \pm 0.012$   $\chi^2/\text{NDF}: 1959.8/55$

All:  $0.960 \pm 0.008$   $\chi^2/\text{NDF}: 4473.4/113$

- sign  $0.937 \pm 0.012$   $\chi^2/\text{NDF}: 2506.3/57$

reg\_asym\_sam\_48\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.636 \pm 0.325$   $\chi^2/\text{NDF}$ : 2576.8/30

Left Out:  $-46.493 \pm 0.230$   $\chi^2/\text{NDF}$ : 20046.7/24

Right Out:  $-3.822 \pm 0.300$   $\chi^2/\text{NDF}$ : 3436.0/34

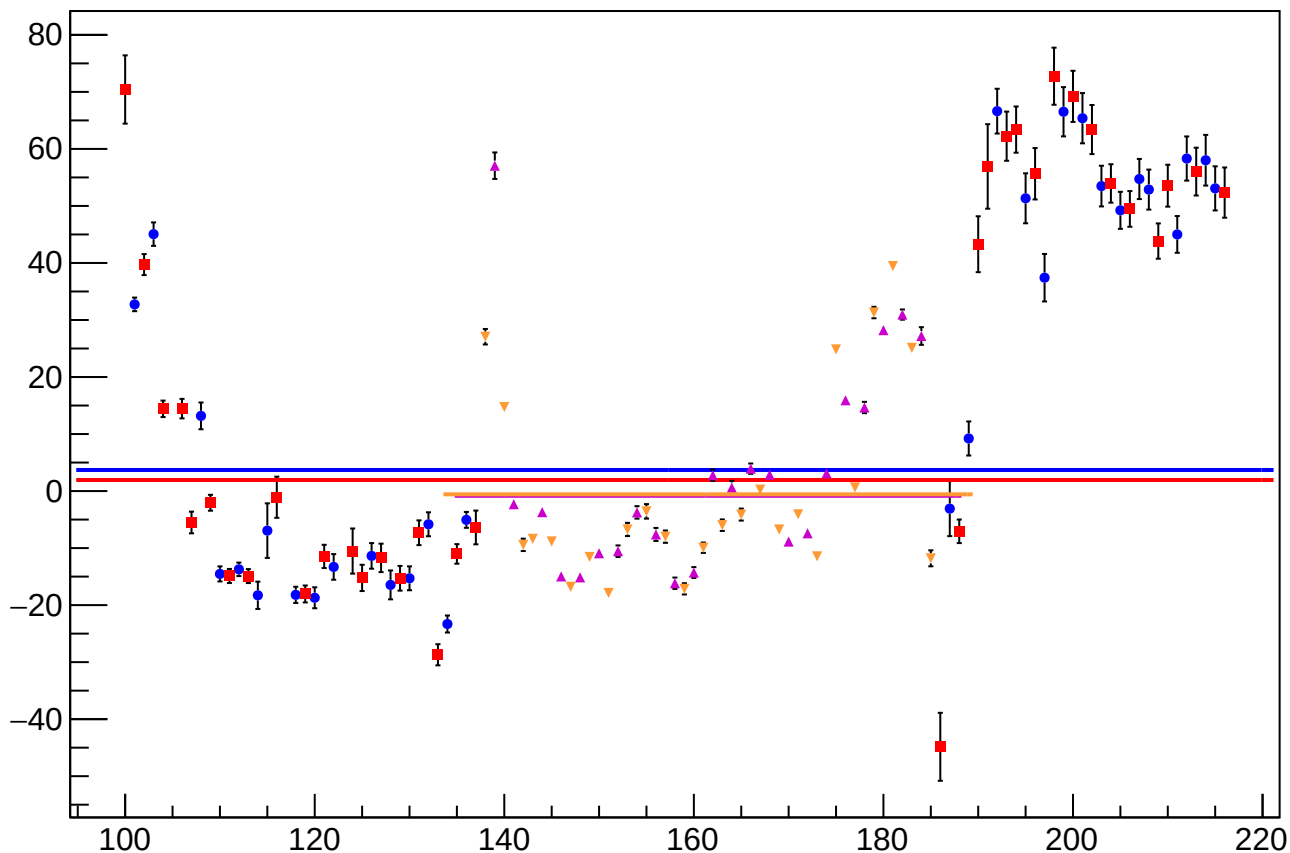
Left In:  $-45.487 \pm 0.238$   $\chi^2/\text{NDF}$ : 15571.1/22

+ sign  $-33.160 \pm 0.188$   $\chi^2/\text{NDF}$ : 32661.8/55

All:  $-31.290 \pm 0.132$   $\chi^2/\text{NDF}$ : 63695.3/113

- sign  $-29.447 \pm 0.186$   $\chi^2/\text{NDF}$ : 30836.5/57

reg\_asym\_sam\_48\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $3.698 \pm 0.394$   $\chi^2/\text{NDF}: 4858.4/30$

Left Out:  $-0.572 \pm 0.177$   $\chi^2/\text{NDF}: 8451.5/24$

Right Out:  $1.942 \pm 0.386$   $\chi^2/\text{NDF}: 4368.8/34$

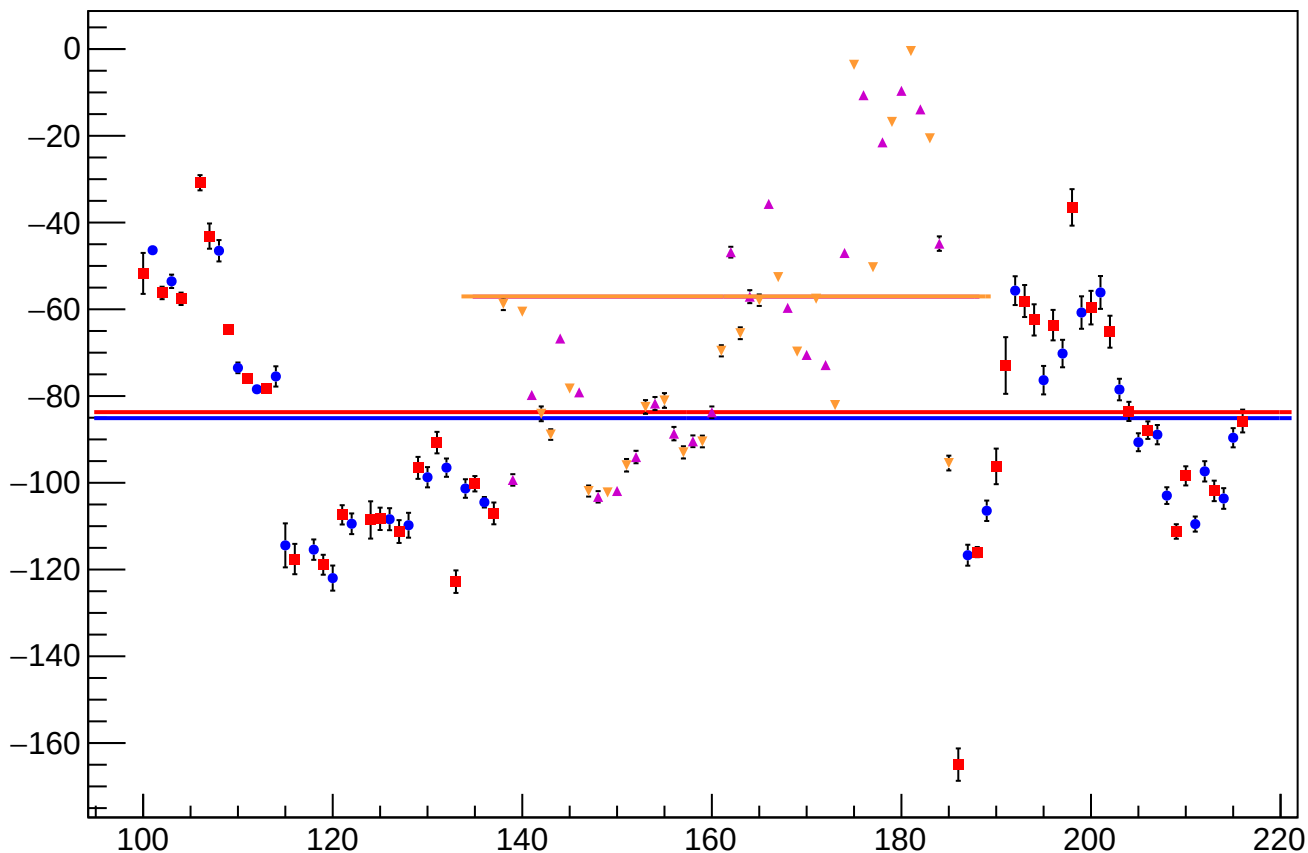
Left In:  $-0.828 \pm 0.183$   $\chi^2/\text{NDF}: 6116.6/22$

+ sign  $0.146 \pm 0.162$   $\chi^2/\text{NDF}: 13407.5/55$

All:  $-0.081 \pm 0.116$   $\chi^2/\text{NDF}: 23939.0/113$

- sign  $-0.319 \pm 0.165$   $\chi^2/\text{NDF}: 10527.5/57$

reg\_asym\_sam\_48\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: -85.096 $\pm$ 0.359  $\chi^2$ /NDF: 3807.4/30

Left Out: -57.029 $\pm$ 0.230  $\chi^2$ /NDF: 20309.3/24

Right Out: -83.710 $\pm$ 0.345  $\chi^2$ /NDF: 5289.8/34

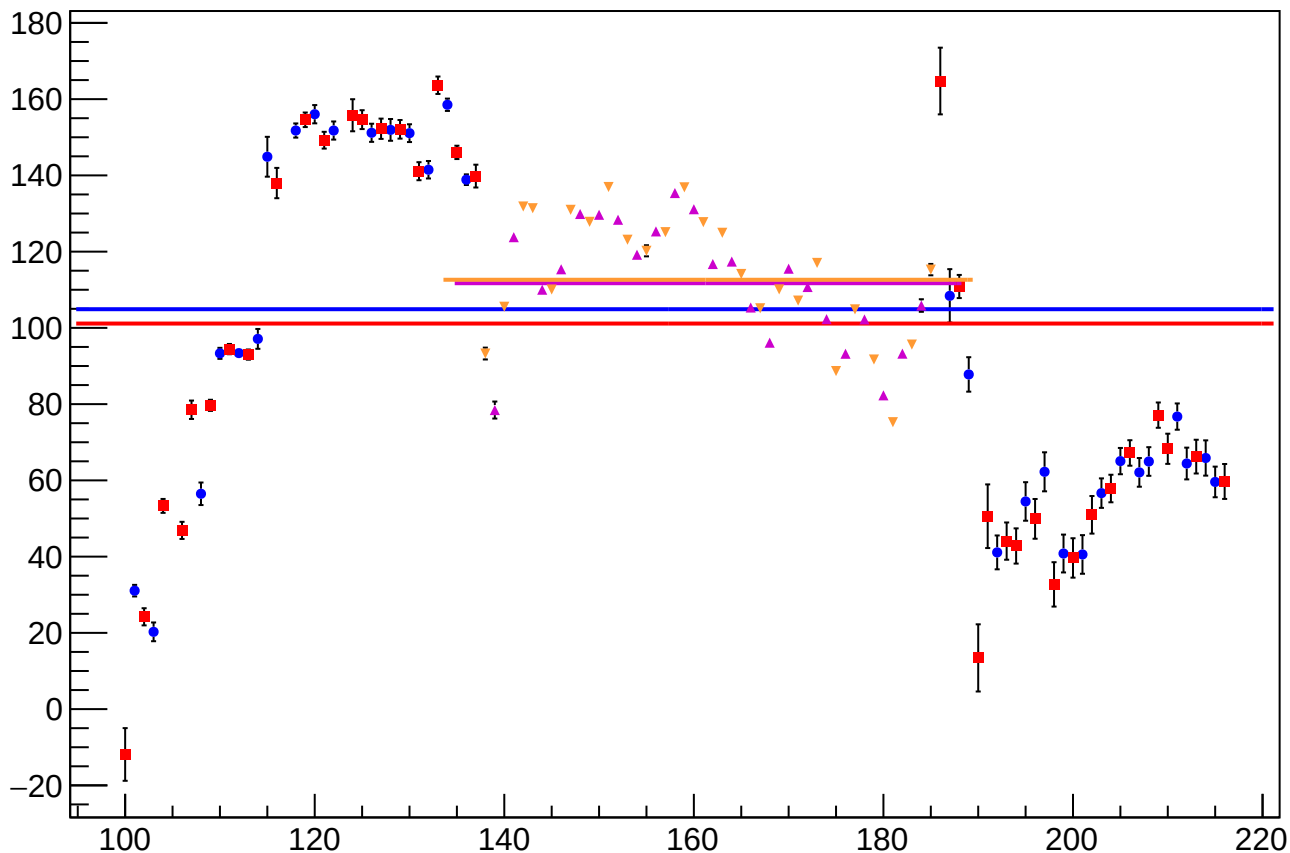
Left In: -57.091 $\pm$ 0.237  $\chi^2$ /NDF: 17167.8/22

+ sign -65.175 $\pm$ 0.194  $\chi^2$ /NDF: 28443.7/55

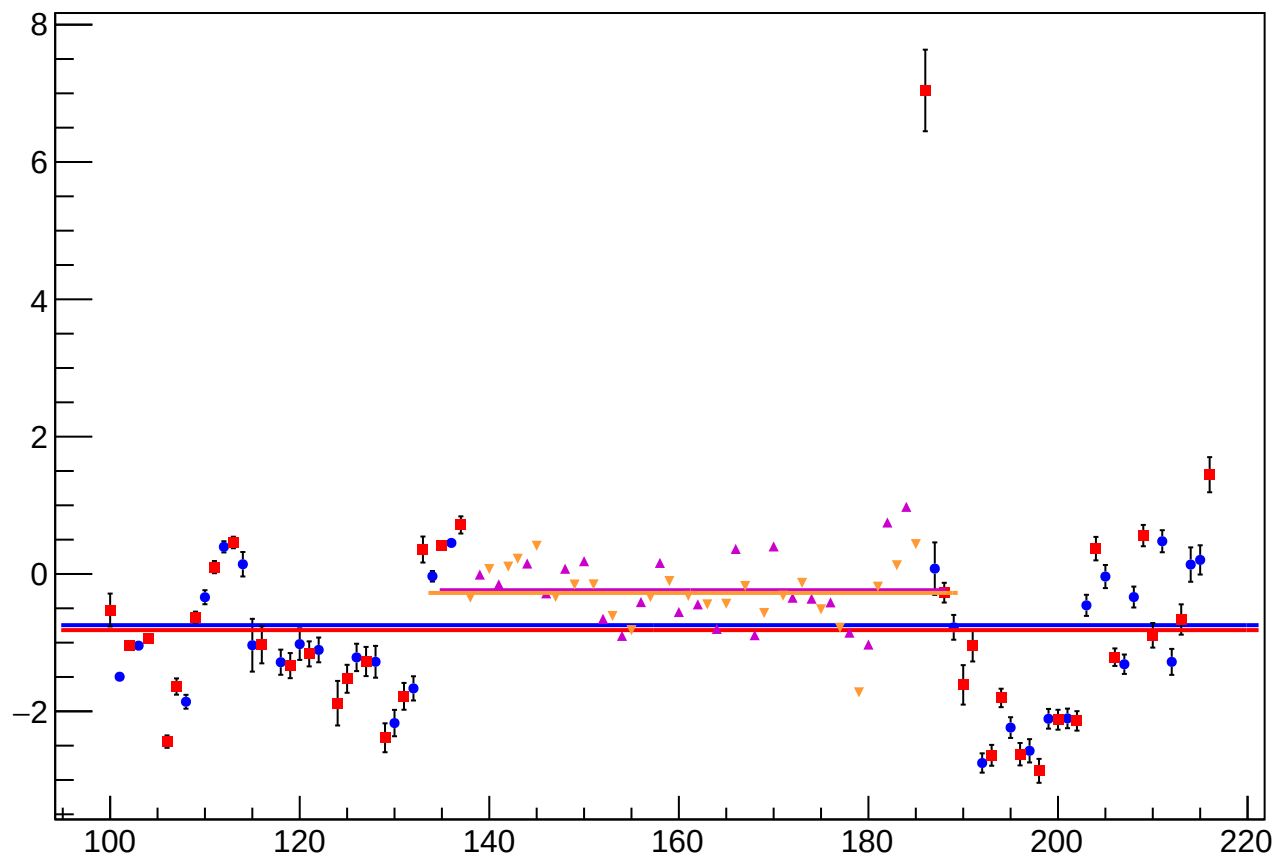
All: -65.389 $\pm$ 0.137  $\chi^2$ /NDF: 54953.1/113

- sign -65.606 $\pm$ 0.195  $\chi^2$ /NDF: 26507.0/57

reg\_asym\_sam\_48\_avg\_diff\_bpm4eY\_slope vs Slug



reg\_asym\_sam\_48\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.745 \pm 0.022$   $\chi^2/\text{NDF}$ : 1890.2/30

Left Out:  $-0.276 \pm 0.009$   $\chi^2/\text{NDF}$ : 2122.4/24

Right Out:  $-0.818 \pm 0.022$   $\chi^2/\text{NDF}$ : 2396.3/34

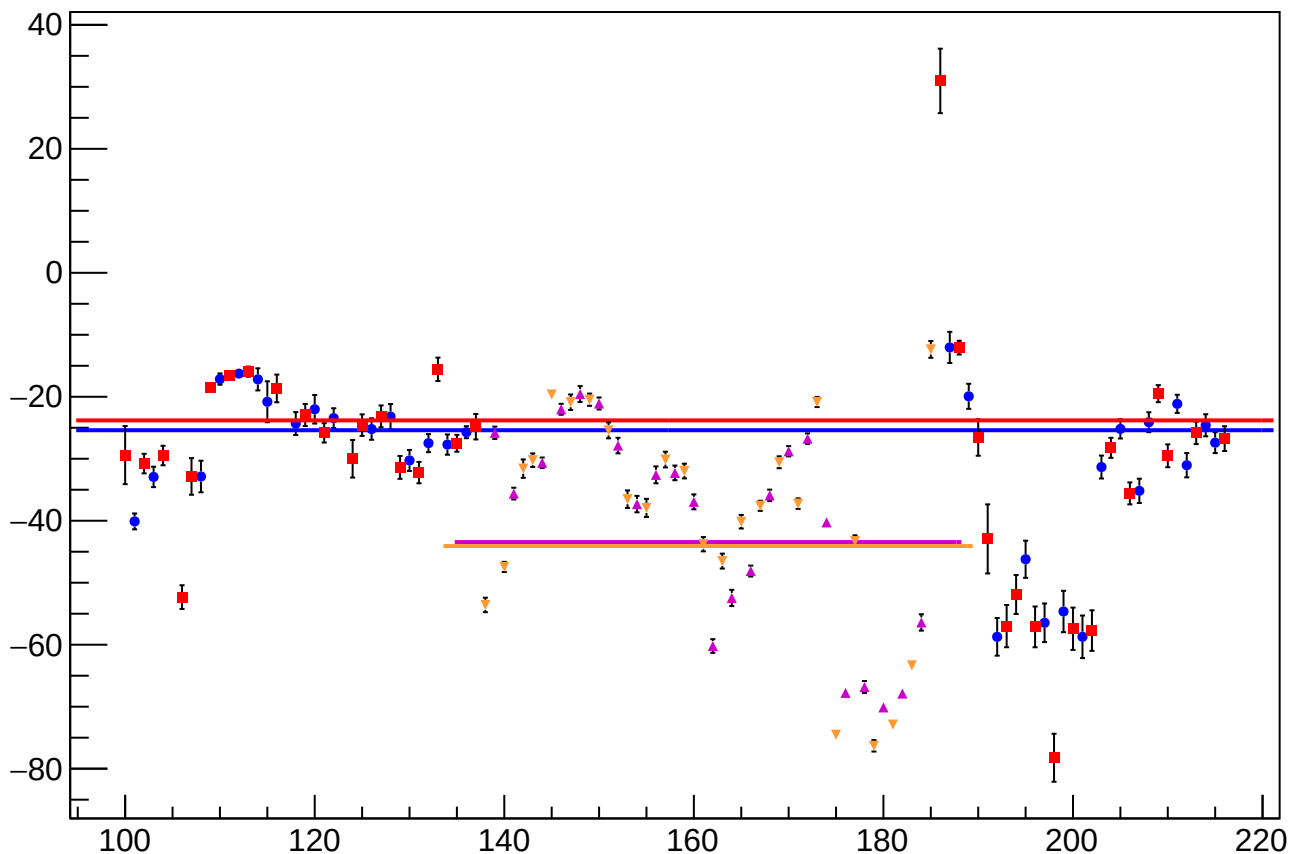
Left In:  $-0.236 \pm 0.009$   $\chi^2/\text{NDF}$ : 2961.3/22

+ sign  $-0.342 \pm 0.008$   $\chi^2/\text{NDF}$ : 4399.4/55

All:  $-0.334 \pm 0.006$   $\chi^2/\text{NDF}$ : 10367.9/113

- sign  $-0.325 \pm 0.008$   $\chi^2/\text{NDF}$ : 5966.3/57

# reg\_asym\_sam\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-25.399 \pm 0.290$   $\chi^2/\text{NDF}: 962.1/30$

Left Out:  $-44.087 \pm 0.193$   $\chi^2/\text{NDF}: 10340.4/24$

Right Out:  $-23.810 \pm 0.275$   $\chi^2/\text{NDF}: 1560.9/34$

Left In:  $-43.444 \pm 0.199$   $\chi^2/\text{NDF}: 7820.5/22$

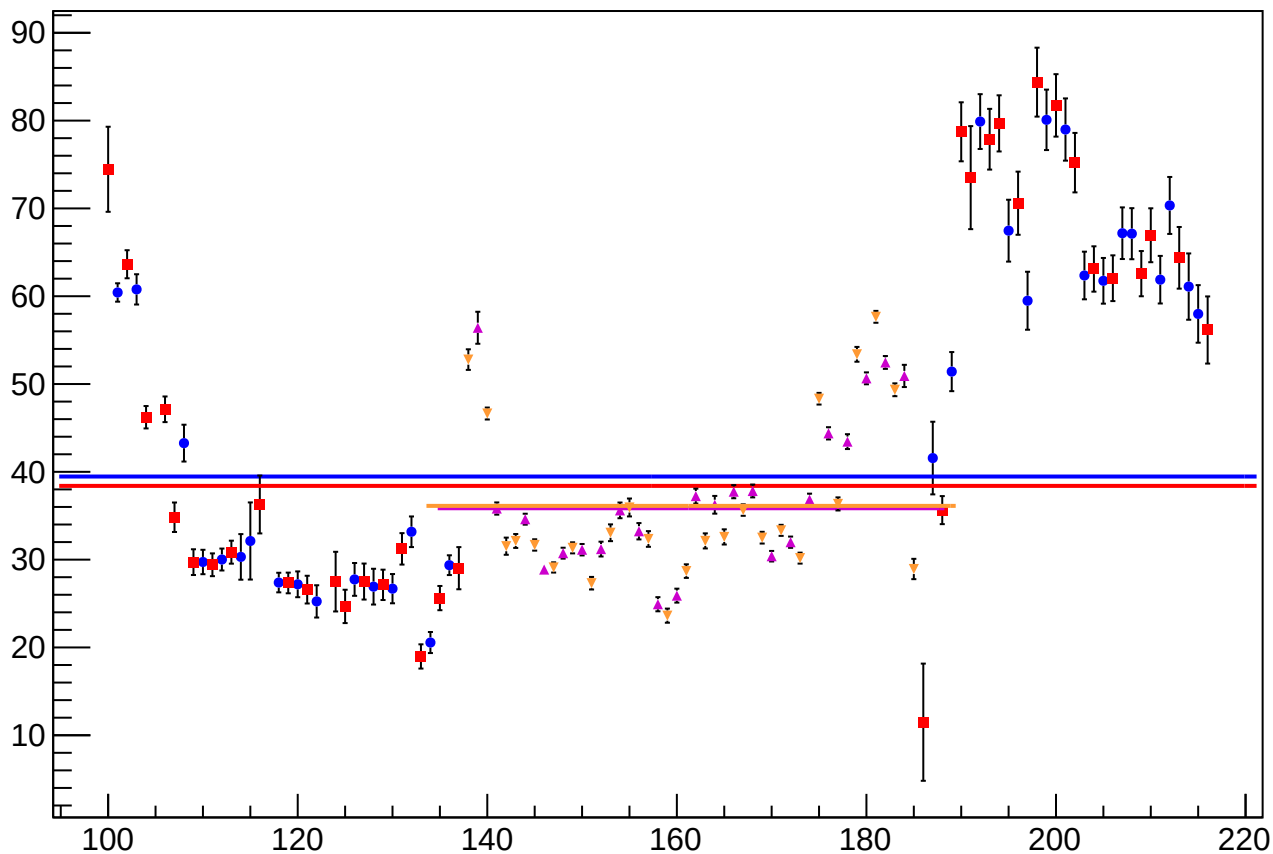
+ sign  $-38.346 \pm 0.161$   $\chi^2/\text{NDF}: 14182.3/55$

All:  $-37.524 \pm 0.114$   $\chi^2/\text{NDF}: 26970.0/113$

- sign  $-36.699 \pm 0.161$   $\chi^2/\text{NDF}: 12735.2/57$



reg\_asym\_sam\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 39.466 $\pm$ 0.339  $\chi^2/\text{NDF}$ : 2511.6/30

Left Out: 36.123 $\pm$ 0.150  $\chi^2/\text{NDF}$ : 3558.5/24

Right Out: 38.400 $\pm$ 0.335  $\chi^2/\text{NDF}$ : 2496.8/34

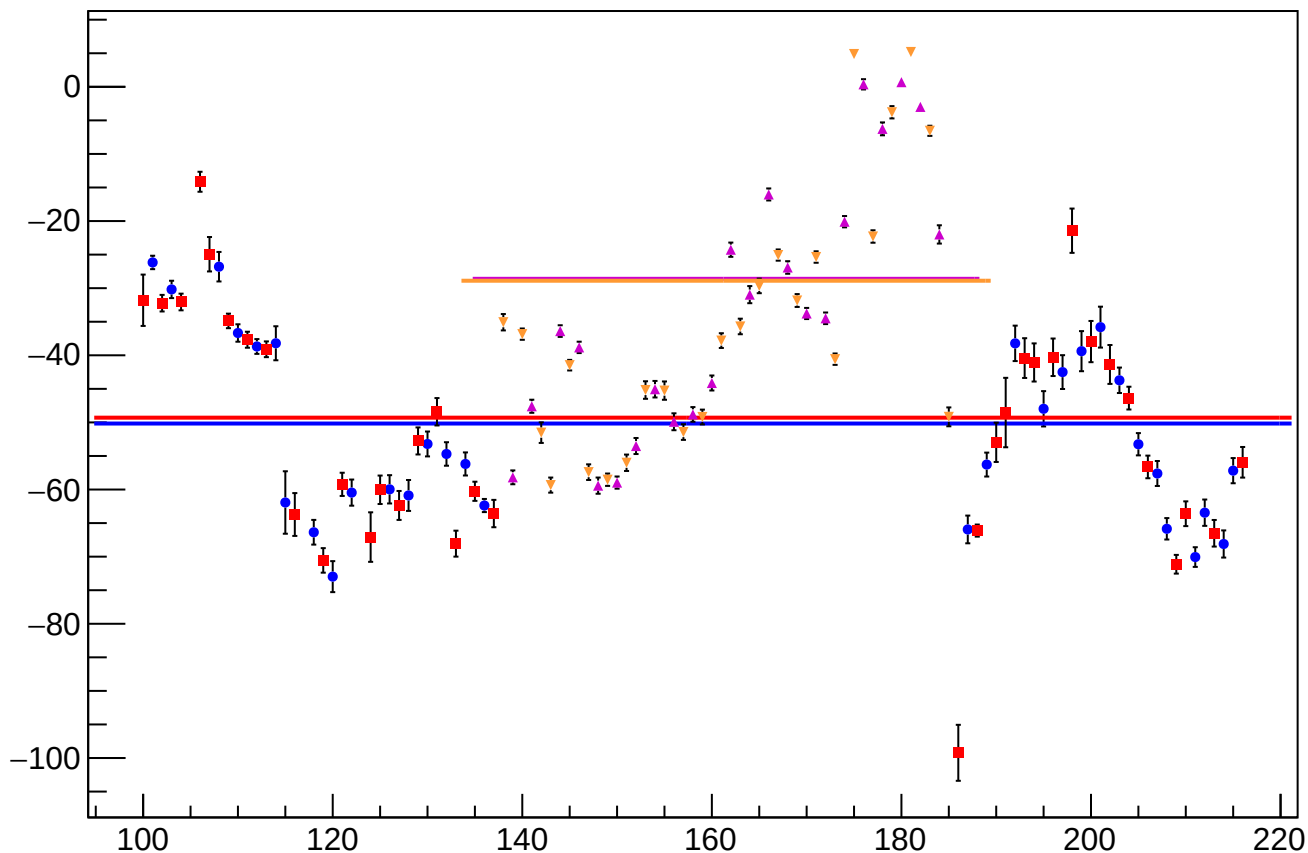
Left In: 35.852 $\pm$ 0.155  $\chi^2/\text{NDF}$ : 2293.5/22

+ sign 36.671 $\pm$ 0.137  $\chi^2/\text{NDF}$ : 6151.5/55

All: 36.491 $\pm$ 0.098  $\chi^2/\text{NDF}$ : 10993.1/113

- sign 36.302 $\pm$ 0.141  $\chi^2/\text{NDF}$ : 4838.0/57

# reg\_asym\_sam\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-50.166 \pm 0.311$   $\chi^2/\text{NDF}$ : 2181.4/30

Left Out:  $-28.891 \pm 0.193$   $\chi^2/\text{NDF}$ : 11798.4/24

Right Out:  $-49.293 \pm 0.301$   $\chi^2/\text{NDF}$ : 2906.2/34

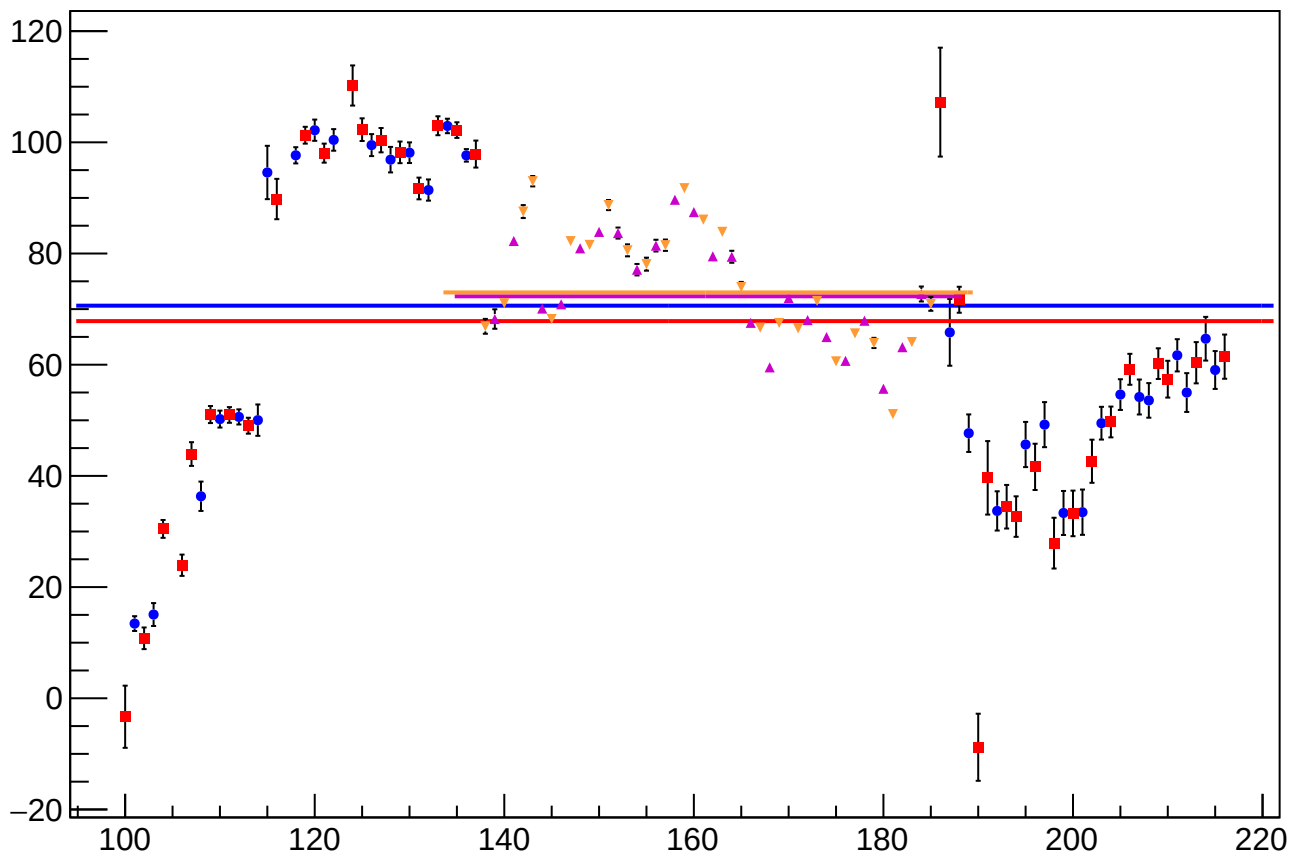
Left In:  $-28.605 \pm 0.198$   $\chi^2/\text{NDF}$ : 10014.7/22

+ sign  $-34.809 \pm 0.164$   $\chi^2/\text{NDF}$ : 17368.6/55

All:  $-34.833 \pm 0.116$   $\chi^2/\text{NDF}$ : 33596.5/113

- sign  $-34.857 \pm 0.165$   $\chi^2/\text{NDF}$ : 16227.8/57

# reg\_asym\_sam\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 70.618 $\pm$ 0.386  $\chi^2$ /NDF: 6514.8/30

Left Out: 73.002 $\pm$ 0.168  $\chi^2$ /NDF: 4052.4/24

Right Out: 67.843 $\pm$ 0.385  $\chi^2$ /NDF: 6371.5/34

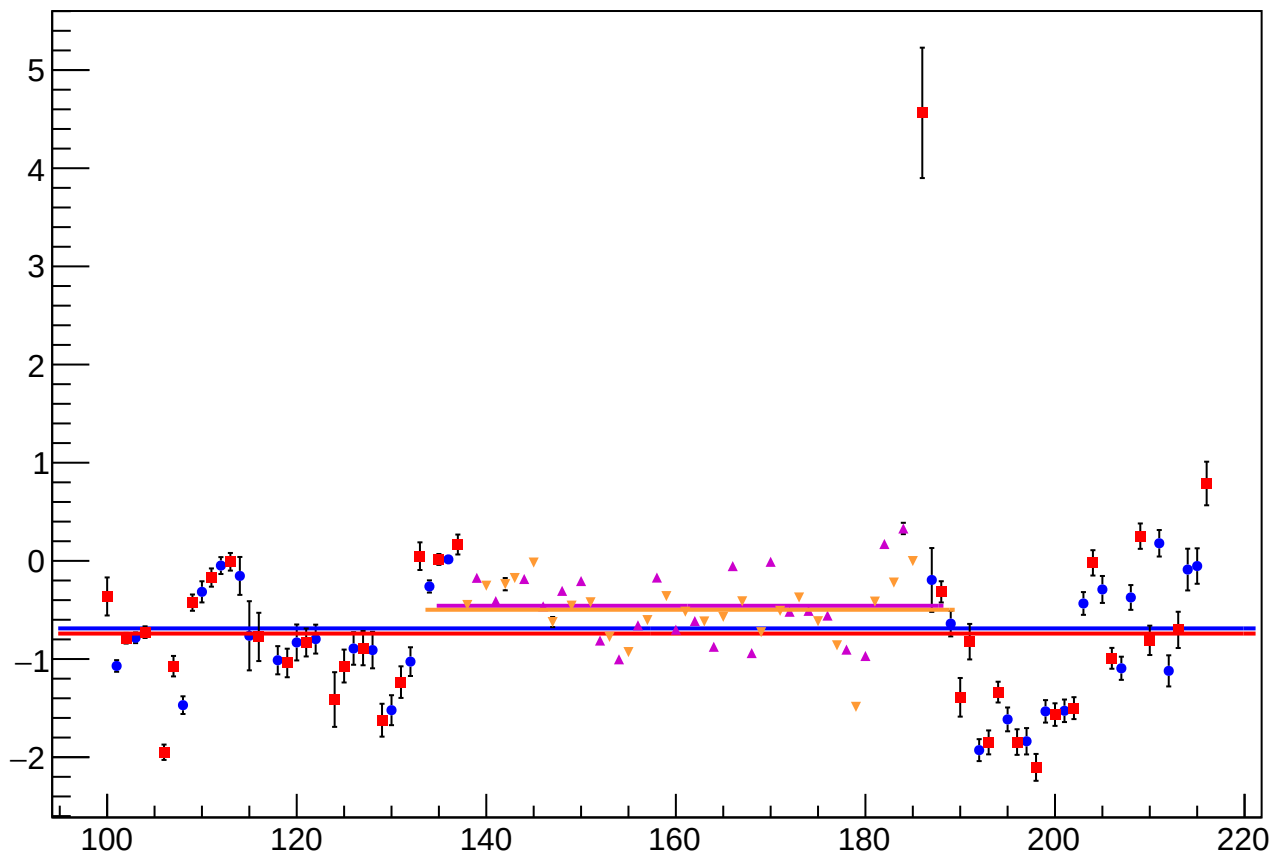
Left In: 72.302 $\pm$ 0.173  $\chi^2$ /NDF: 2912.6/22

+ sign 72.620 $\pm$ 0.154  $\chi^2$ /NDF: 10599.3/55

All: 72.098 $\pm$ 0.110  $\chi^2$ /NDF: 20018.5/113

- sign 71.550 $\pm$ 0.158  $\chi^2$ /NDF: 9395.7/57

# reg\_asym\_sam\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.688 \pm 0.019$   $\chi^2/\text{NDF}$ : 990.2/30

Left Out:  $-0.498 \pm 0.008$   $\chi^2/\text{NDF}$ : 1482.9/24

Right Out:  $-0.741 \pm 0.019$   $\chi^2/\text{NDF}$ : 1338.1/34

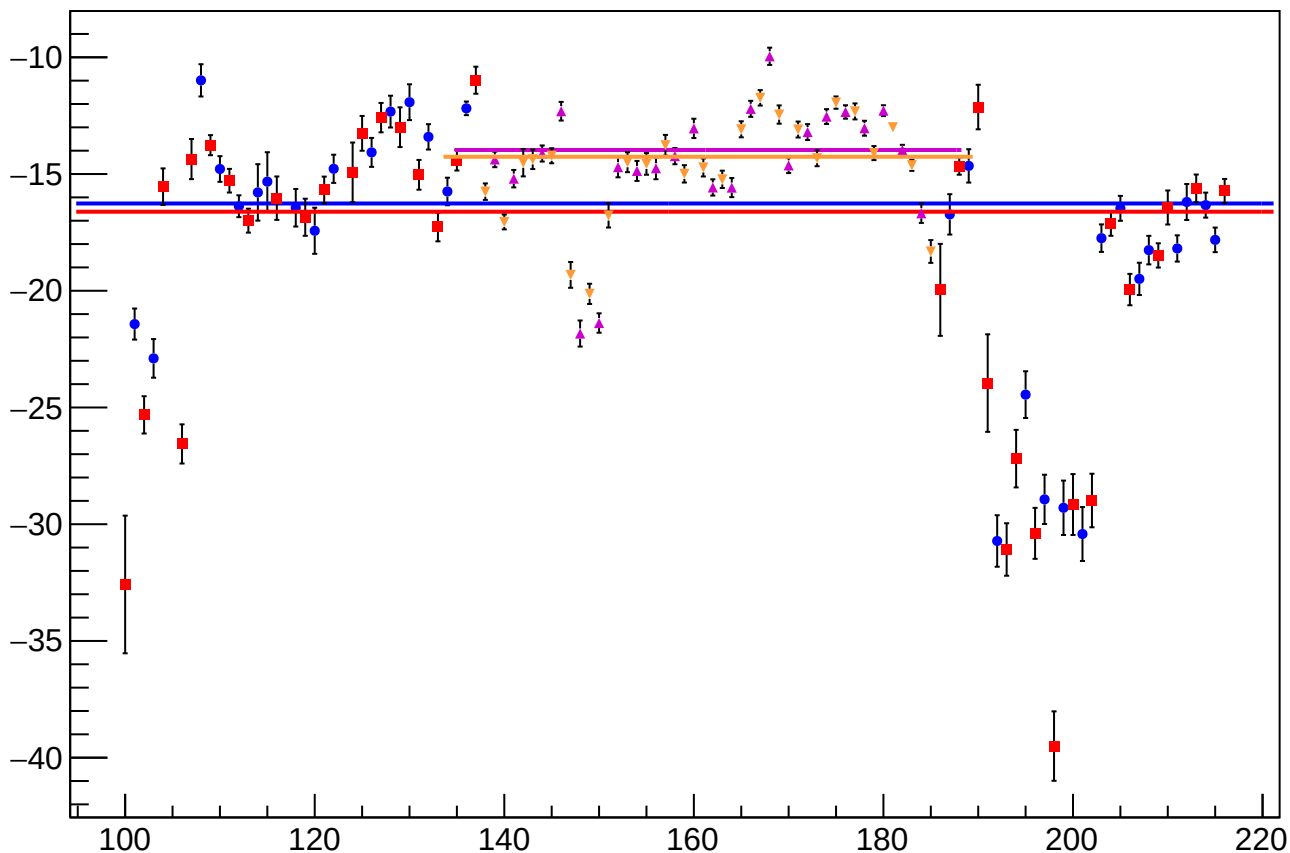
Left In:  $-0.458 \pm 0.008$   $\chi^2/\text{NDF}$ : 2103.1/22

+ sign  $-0.525 \pm 0.007$   $\chi^2/\text{NDF}$ : 2561.7/55

All:  $-0.512 \pm 0.005$   $\chi^2/\text{NDF}$ : 6208.2/113

- sign  $-0.499 \pm 0.007$   $\chi^2/\text{NDF}$ : 3639.8/57

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-16.262 \pm 0.115$   $\chi^2/\text{NDF}: 1222.9/30$

Left Out:  $-14.261 \pm 0.070$   $\chi^2/\text{NDF}: 724.0/24$

Right Out:  $-16.614 \pm 0.115$   $\chi^2/\text{NDF}: 1513.5/34$

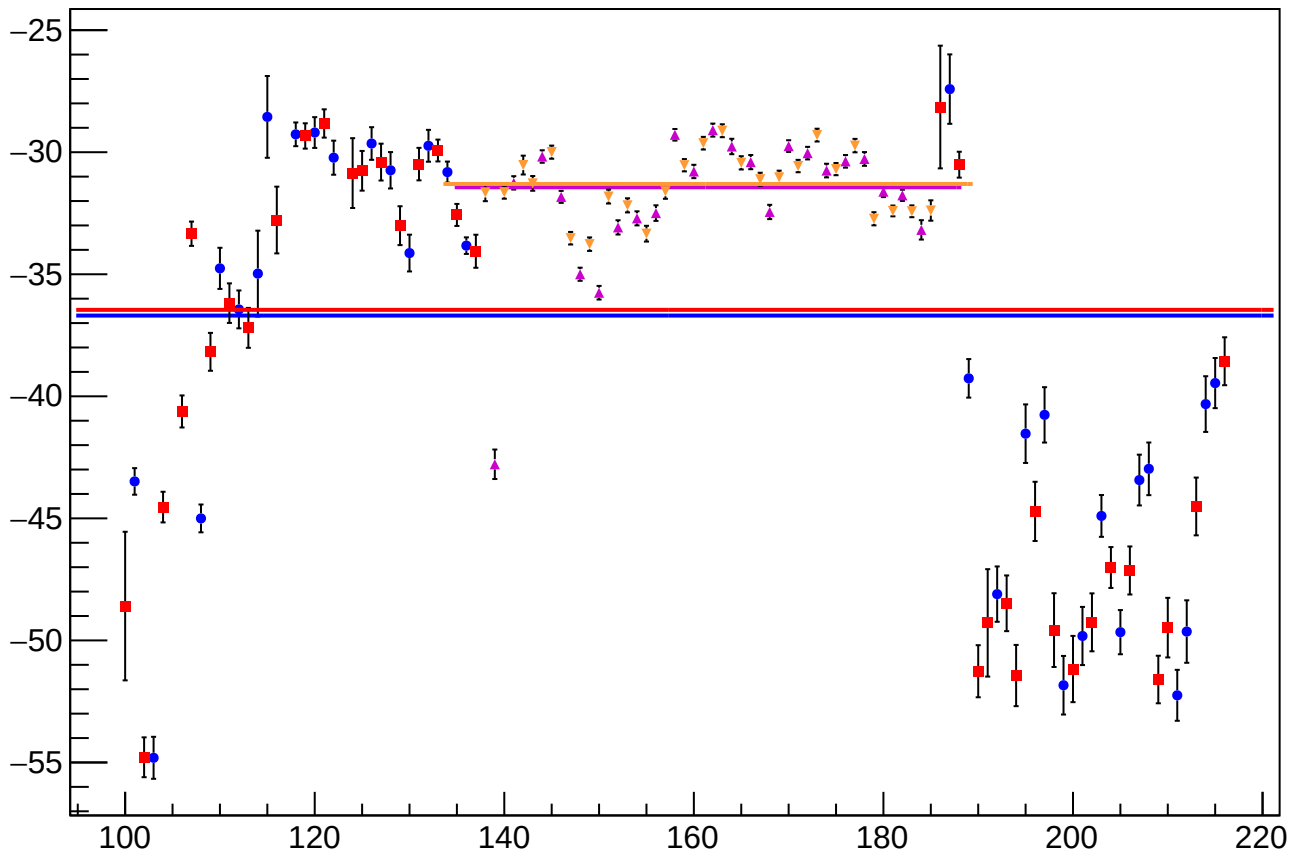
Left In:  $-13.970 \pm 0.072$   $\chi^2/\text{NDF}: 907.7/22$

+ sign  $-14.797 \pm 0.060$   $\chi^2/\text{NDF}: 2167.8/55$

All:  $-14.756 \pm 0.043$   $\chi^2/\text{NDF}: 4969.8/113$

- sign  $-14.712 \pm 0.061$   $\chi^2/\text{NDF}: 2801.0/57$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-36.692 \pm 0.134$   $\chi^2/\text{NDF}: 3039.2/30$

Left Out:  $-31.301 \pm 0.055$   $\chi^2/\text{NDF}: 553.1/24$

Right Out:  $-36.458 \pm 0.133$   $\chi^2/\text{NDF}: 3323.5/34$

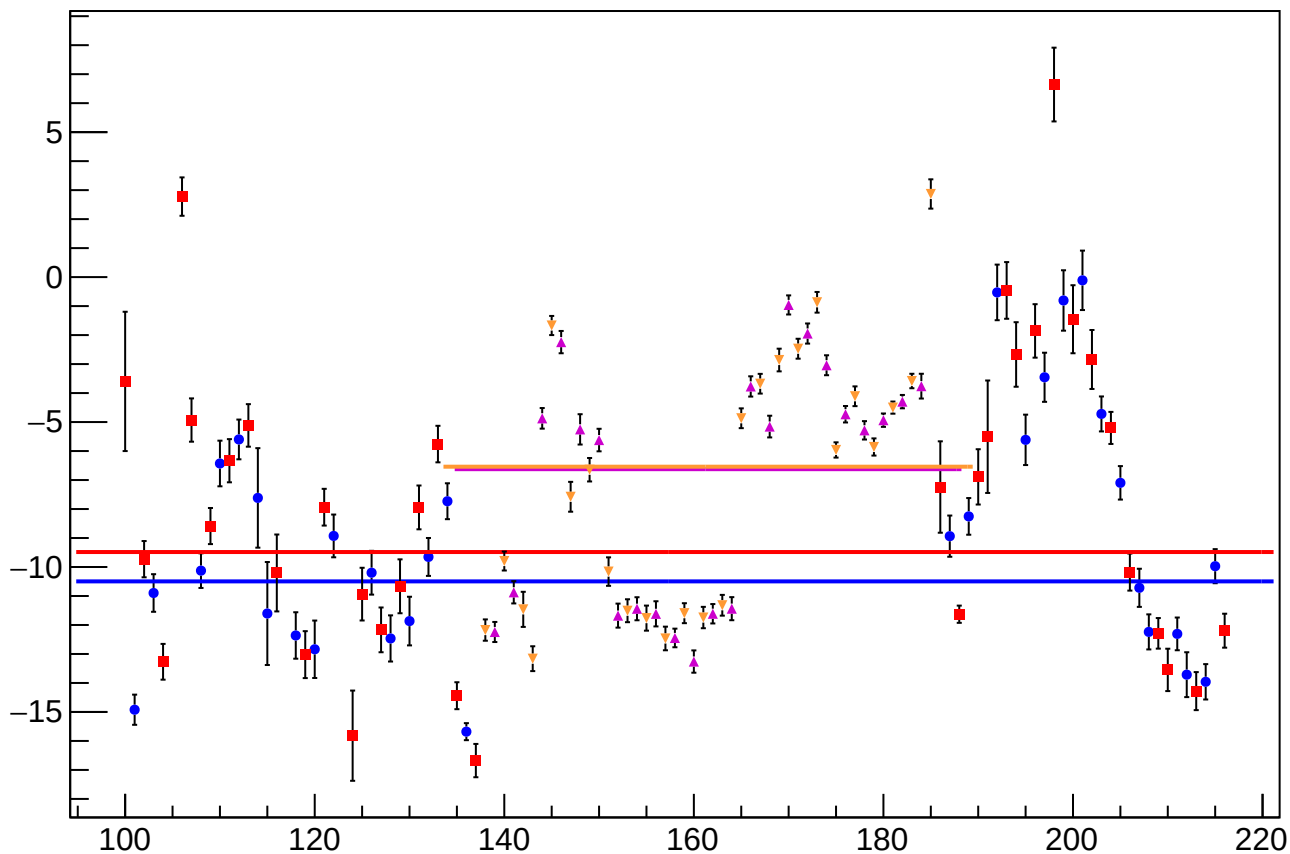
Left In:  $-31.436 \pm 0.057$   $\chi^2/\text{NDF}: 1214.8/22$

+ sign  $-32.086 \pm 0.051$   $\chi^2/\text{NDF}: 4981.2/55$

All:  $-32.153 \pm 0.037$   $\chi^2/\text{NDF}: 10726.8/113$

- sign  $-32.223 \pm 0.053$   $\chi^2/\text{NDF}: 5742.2/57$

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-10.496 \pm 0.119$   $\chi^2/\text{NDF}$ : 1122.7/30

Left Out:  $-6.540 \pm 0.070$   $\chi^2/\text{NDF}$ : 3242.5/24

Right Out:  $-9.484 \pm 0.118$   $\chi^2/\text{NDF}$ : 1549.6/34

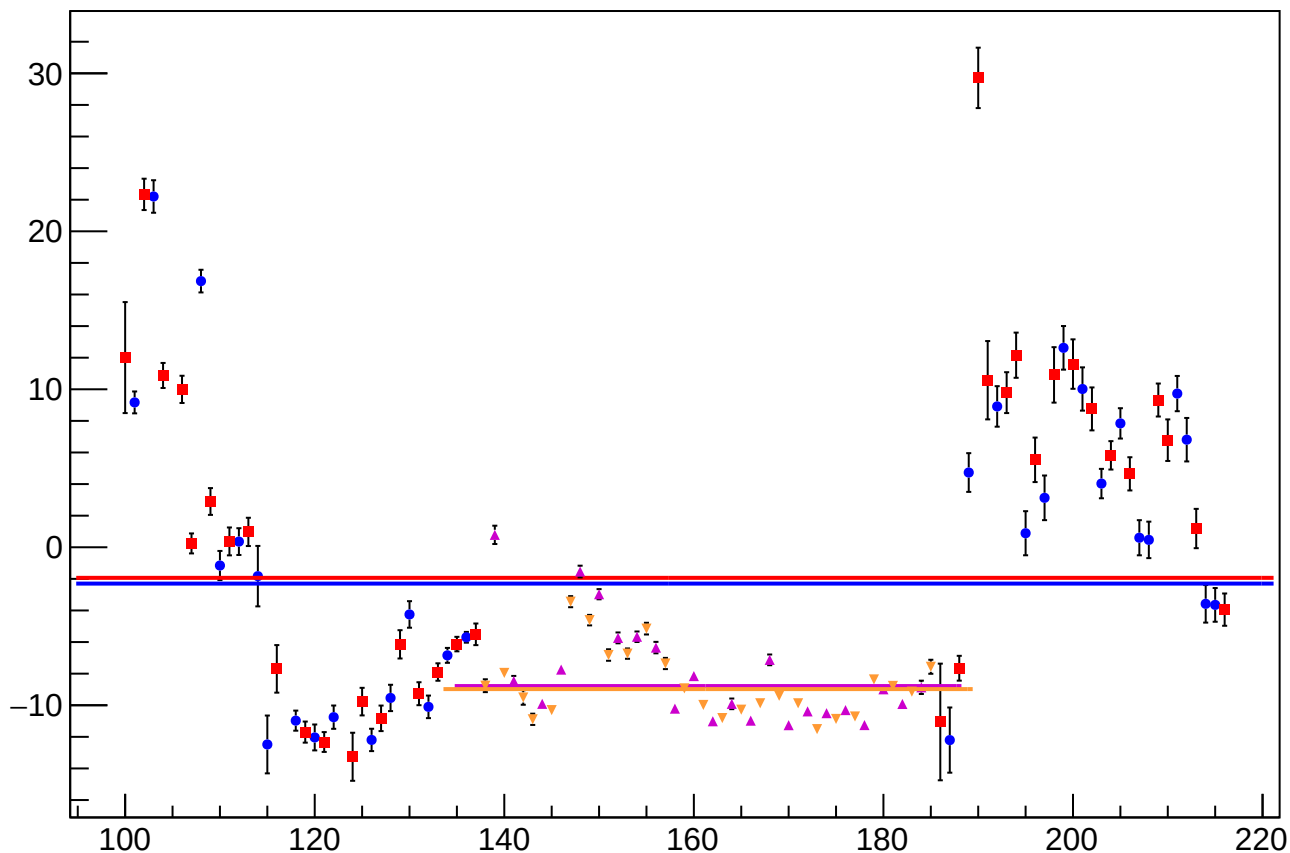
Left In:  $-6.625 \pm 0.071$   $\chi^2/\text{NDF}$ : 2908.0/22

+ sign  $-7.544 \pm 0.060$   $\chi^2/\text{NDF}$ : 5186.8/55

All:  $-7.468 \pm 0.043$   $\chi^2/\text{NDF}$ : 10075.7/113

- sign  $-7.389 \pm 0.061$   $\chi^2/\text{NDF}$ : 4885.6/57

# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-2.299 \pm 0.151$   $\chi^2/\text{NDF}$ : 3325.6/30

Left Out:  $-8.977 \pm 0.061$   $\chi^2/\text{NDF}$ : 972.0/24

Right Out:  $-1.935 \pm 0.153$   $\chi^2/\text{NDF}$ : 3280.7/34

Left In:  $-8.785 \pm 0.063$   $\chi^2/\text{NDF}$ : 1685.0/22

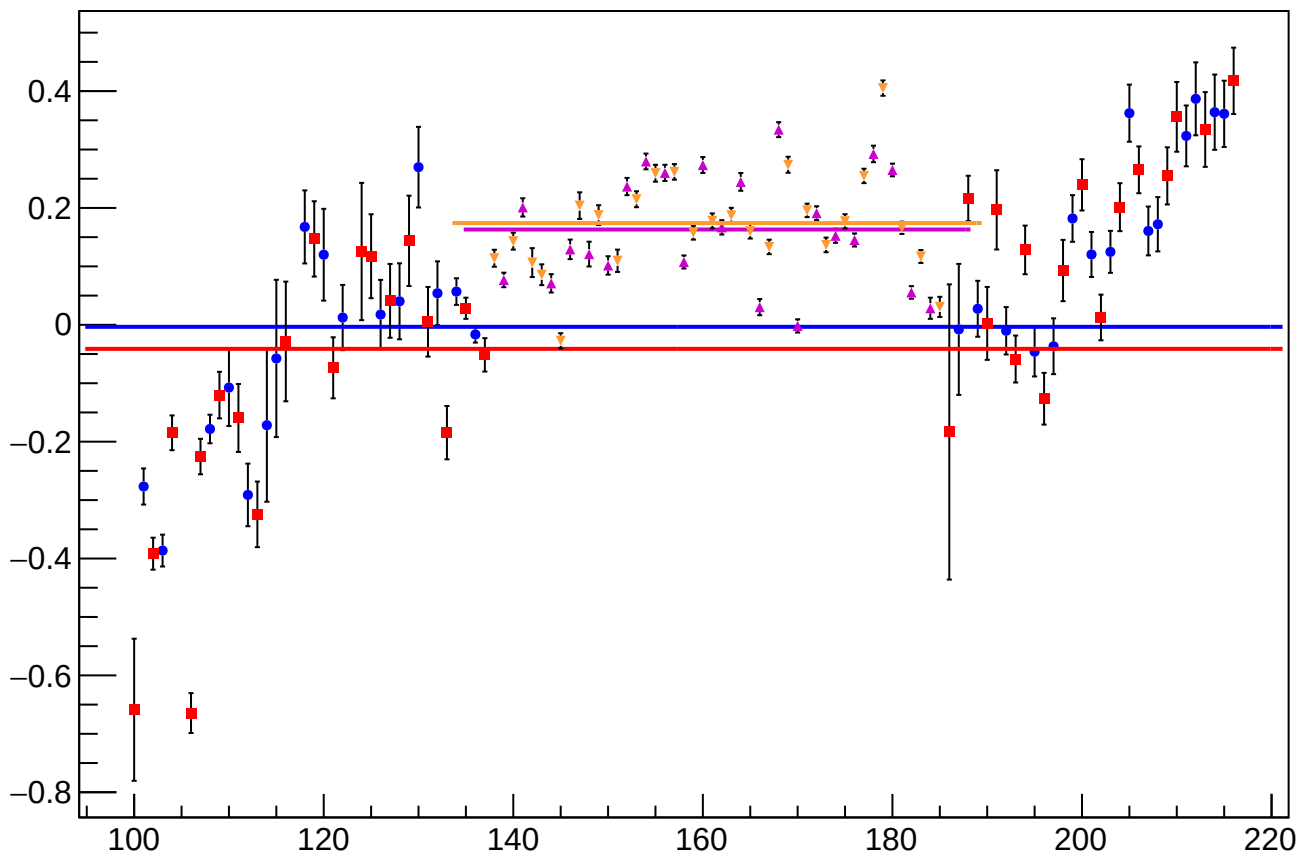
+ sign  $-8.024 \pm 0.057$   $\chi^2/\text{NDF}$ : 5984.2/55

All:  $-7.908 \pm 0.041$   $\chi^2/\text{NDF}$ : 12661.7/113

- sign  $-7.785 \pm 0.059$   $\chi^2/\text{NDF}$ : 6669.1/57



# reg\_asym\_sam\_13\_57\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.003 \pm 0.007$   $\chi^2/\text{NDF}$ : 679.8/30

Left Out:  $0.174 \pm 0.003$   $\chi^2/\text{NDF}$ : 922.9/24

Right Out:  $-0.041 \pm 0.007$   $\chi^2/\text{NDF}$ : 1067.1/34

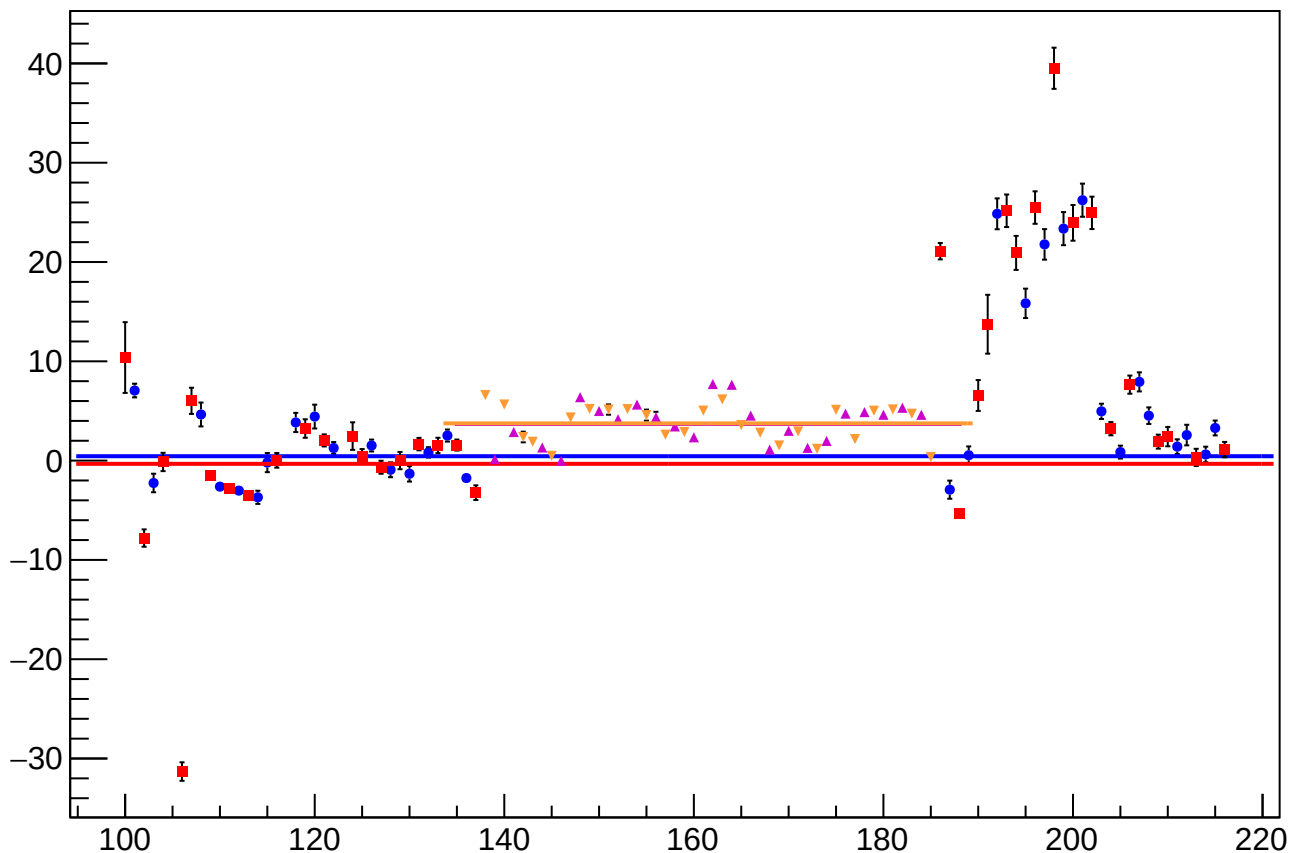
Left In:  $0.163 \pm 0.003$   $\chi^2/\text{NDF}$ : 1195.1/22

+ sign  $0.151 \pm 0.003$   $\chi^2/\text{NDF}$ : 2162.7/55

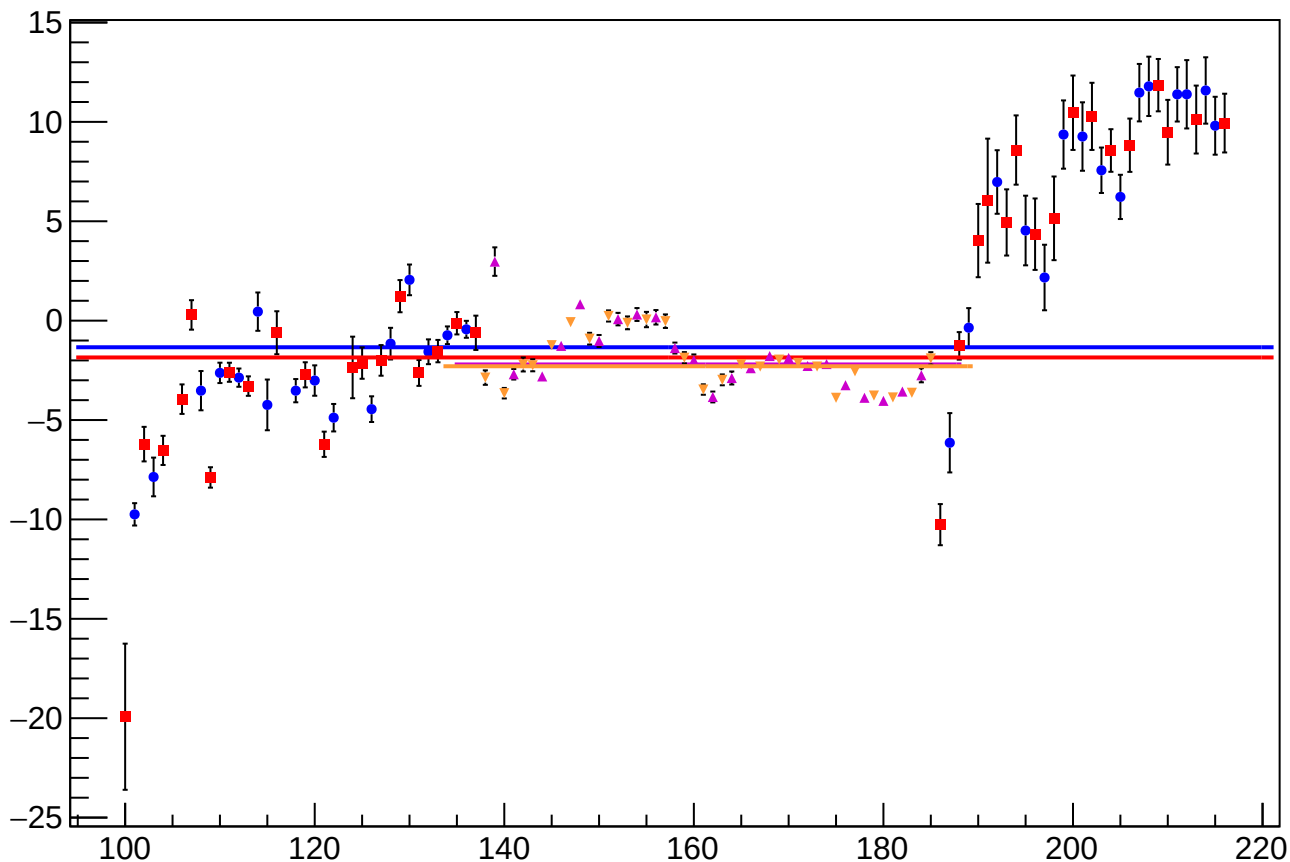
All:  $0.144 \pm 0.002$   $\chi^2/\text{NDF}$ : 5131.3/113

- sign  $0.137 \pm 0.003$   $\chi^2/\text{NDF}$ : 2954.2/57

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm1X\_slope vs Slug



reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.339 \pm 0.144$   $\chi^2/\text{NDF}$ : 1047.0/30

Left Out:  $-2.294 \pm 0.050$   $\chi^2/\text{NDF}$ : 631.5/24

Right Out:  $-1.851 \pm 0.143$   $\chi^2/\text{NDF}$ : 1014.7/34

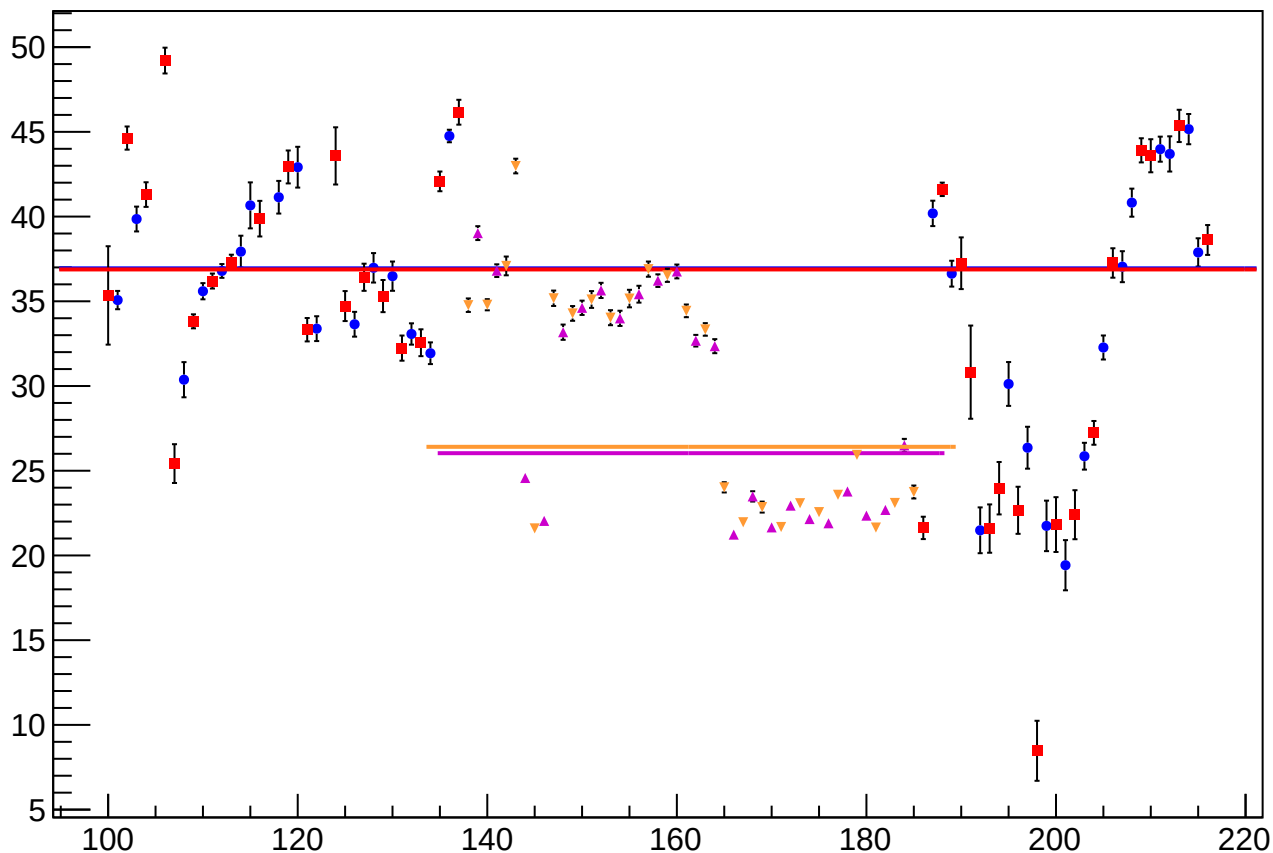
Left In:  $-2.204 \pm 0.051$   $\chi^2/\text{NDF}$ : 724.7/22

+ sign  $-2.193 \pm 0.047$   $\chi^2/\text{NDF}$ : 1718.0/55

All:  $-2.179 \pm 0.033$   $\chi^2/\text{NDF}$ : 3462.9/113

- sign  $-2.165 \pm 0.048$   $\chi^2/\text{NDF}$ : 1744.7/57

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 36.945 $\pm$ 0.133  $\chi^2$ /NDF: 1691.9/30

Left Out: 26.411 $\pm$ 0.062  $\chi^2$ /NDF: 9222.2/24

Right Out: 36.880 $\pm$ 0.129  $\chi^2$ /NDF: 2825.5/34

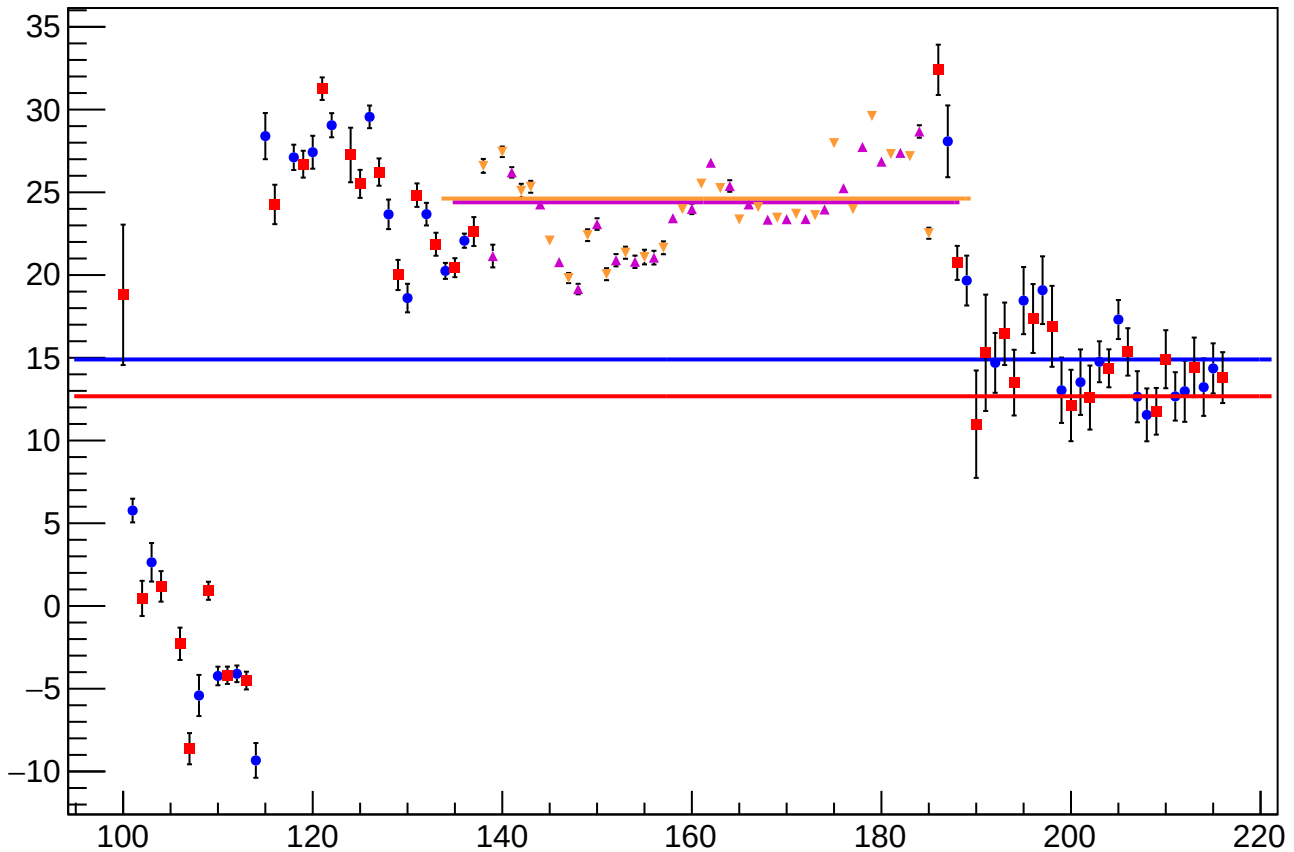
Left In: 26.036 $\pm$ 0.064  $\chi^2$ /NDF: 7842.9/22

+ sign 28.307 $\pm$ 0.056  $\chi^2$ /NDF: 16064.0/55

All: 28.238 $\pm$ 0.040  $\chi^2$ /NDF: 32400.4/113

- sign 28.168 $\pm$ 0.057  $\chi^2$ /NDF: 16333.4/57

# reg\_asym\_sam\_15\_37\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 14.898 $\pm$ 0.161  $\chi^2$ /NDF: 5757.4/30

Left Out: 24.624 $\pm$ 0.055  $\chi^2$ /NDF:1950.7/24

Right Out: 12.675 $\pm$ 0.163  $\chi^2$ /NDF: 6374.2/34

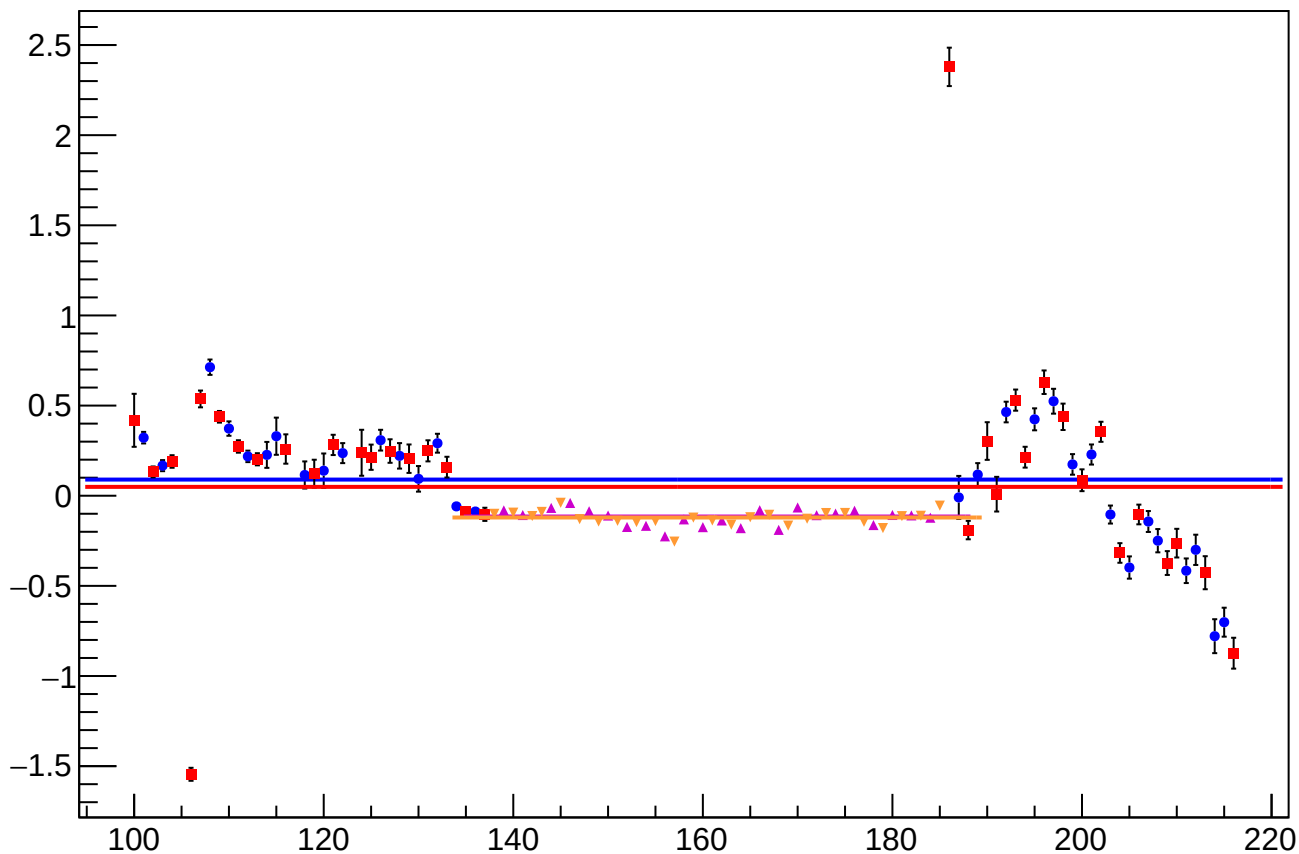
Left In: 24.397 $\pm$ 0.056  $\chi^2$ /NDF:1715.6/22

+ sign 23.598 $\pm$ 0.052  $\chi^2$ /NDF: 10985.5/55

All: 23.373 $\pm$ 0.037  $\chi^2$ /NDF: 23744.8/113

- sign 23.138 $\pm$ 0.053  $\chi^2$ /NDF: 12721.2/57

reg\_asym\_sam\_15\_37\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.090 \pm 0.008$   $\chi^2/\text{NDF}$ : 1034.2/30

Left Out:  $-0.121 \pm 0.002$   $\chi^2/\text{NDF}$ : 262.9/24

Right Out:  $0.049 \pm 0.008$   $\chi^2/\text{NDF}$ : 3389.0/34

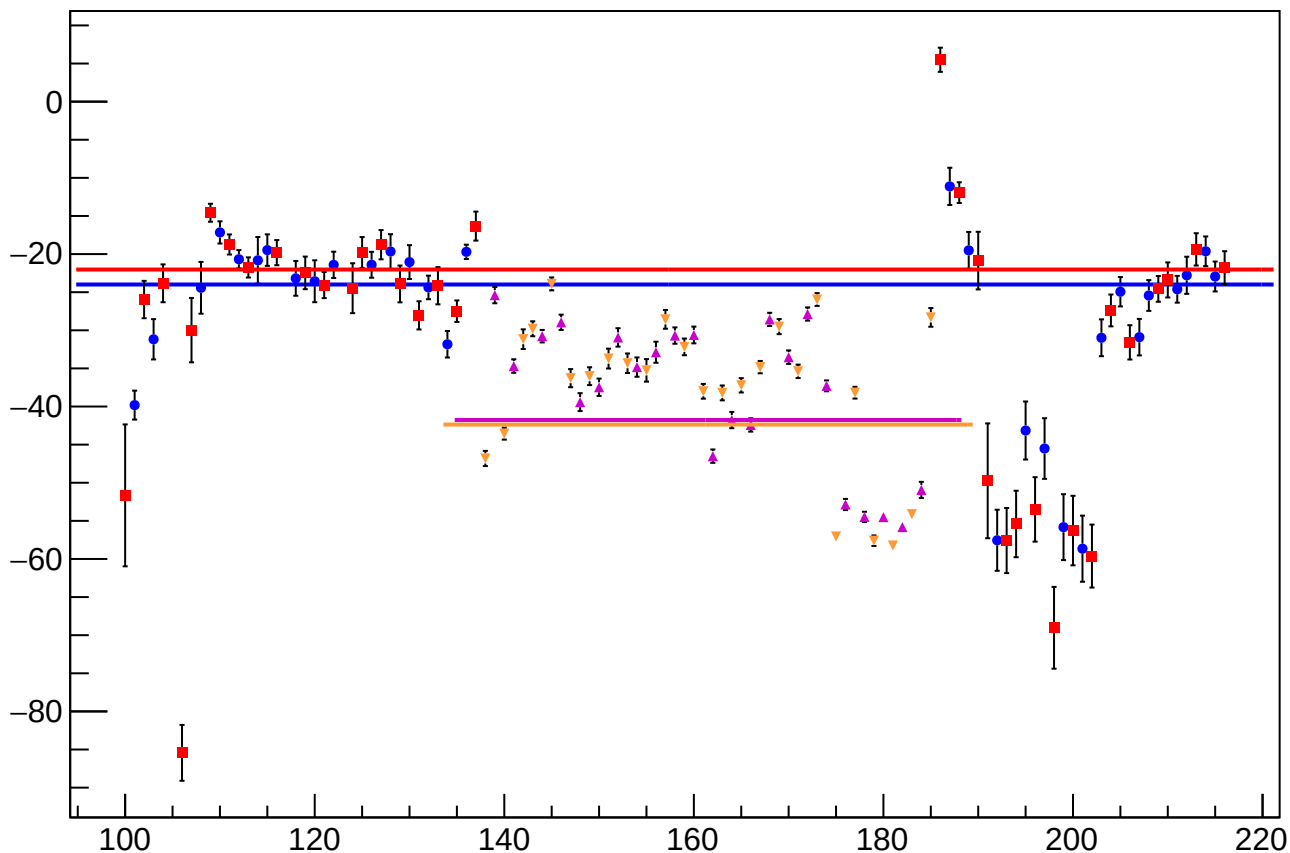
Left In:  $-0.115 \pm 0.003$   $\chi^2/\text{NDF}$ : 290.7/22

+ sign  $-0.103 \pm 0.002$   $\chi^2/\text{NDF}$ : 1899.9/55

All:  $-0.103 \pm 0.002$   $\chi^2/\text{NDF}$ : 5928.9/113

- sign  $-0.102 \pm 0.002$   $\chi^2/\text{NDF}$ : 4028.8/57

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-23.991 \pm 0.358$   $\chi^2/\text{NDF}$ : 460.8/30

Left Out:  $-42.366 \pm 0.175$   $\chi^2/\text{NDF}$ : 4477.3/24

Right Out:  $-22.026 \pm 0.353$   $\chi^2/\text{NDF}$ : 1204.1/34

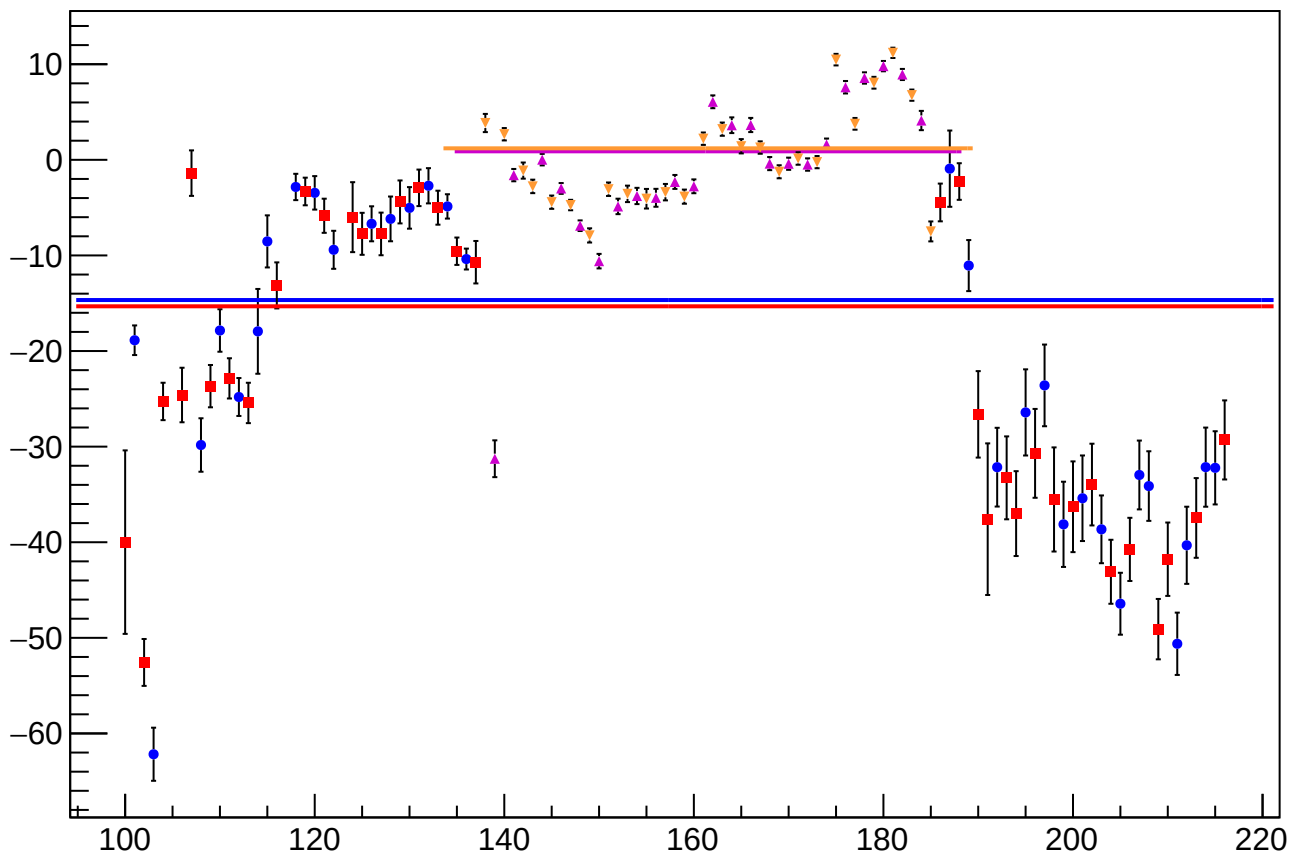
Left In:  $-41.764 \pm 0.182$   $\chi^2/\text{NDF}$ : 3459.2/22

+ sign  $-38.811 \pm 0.157$   $\chi^2/\text{NDF}$ : 7065.7/55

All:  $-38.238 \pm 0.113$   $\chi^2/\text{NDF}$ : 14225.5/113

- sign  $-37.633 \pm 0.162$   $\chi^2/\text{NDF}$ : 7132.5/57

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-14.666 \pm 0.410$   $\chi^2/\text{NDF}$ : 1143.0/30

Left Out:  $1.203 \pm 0.138$   $\chi^2/\text{NDF}$ : 1463.6/24

Right Out:  $-15.321 \pm 0.420$   $\chi^2/\text{NDF}$ : 1130.6/34

Left In:  $0.889 \pm 0.143$   $\chi^2/\text{NDF}$ : 1763.7/22

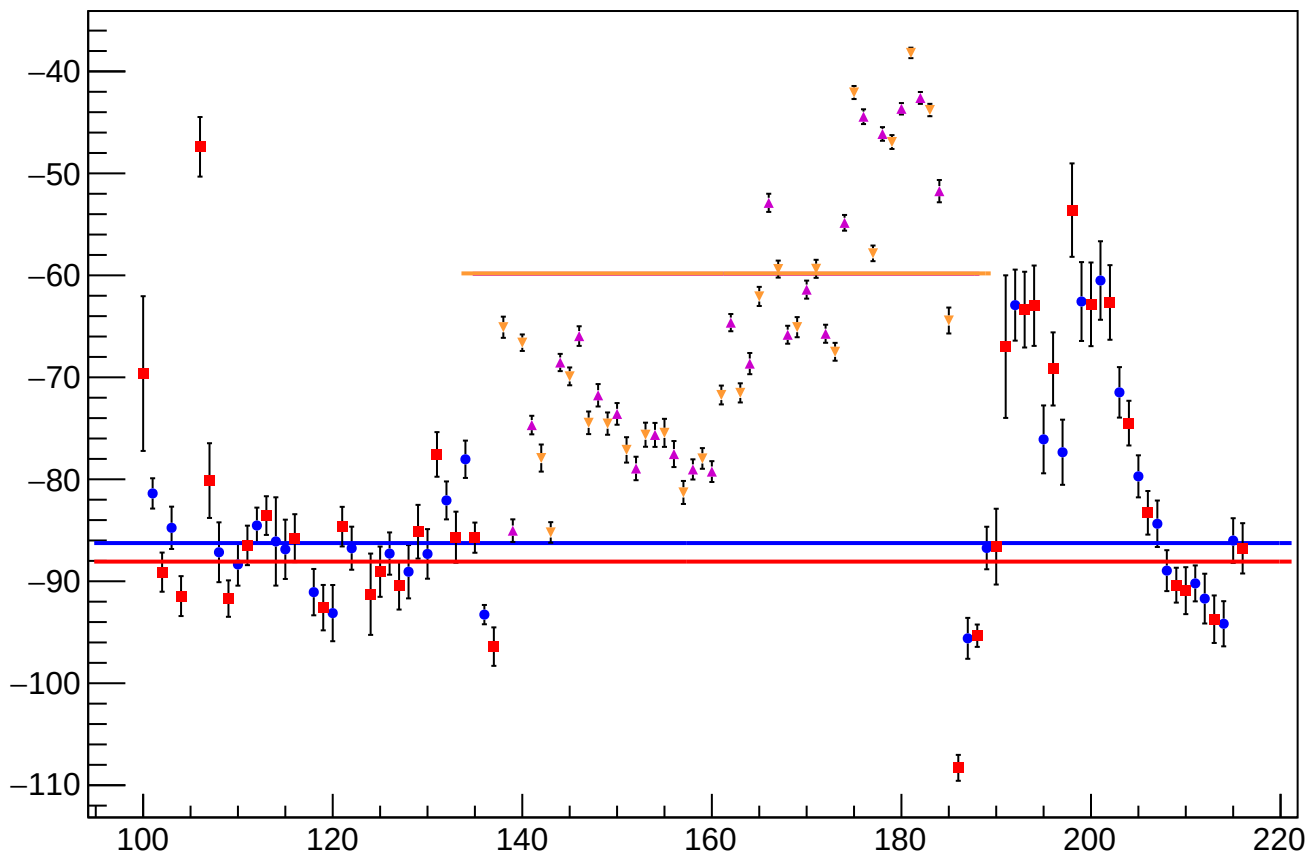
+ sign  $-0.413 \pm 0.131$   $\chi^2/\text{NDF}$ : 3950.5/55

All:  $-0.596 \pm 0.094$   $\chi^2/\text{NDF}$ : 8182.6/113

- sign  $-0.792 \pm 0.135$   $\chi^2/\text{NDF}$ : 4228.0/57



# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-86.253 \pm 0.379$   $\chi^2/\text{NDF}$ : 342.8/30

Left Out:  $-59.809 \pm 0.175$   $\chi^2/\text{NDF}$ : 6645.1/24

Right Out:  $-88.071 \pm 0.374$   $\chi^2/\text{NDF}$ : 890.1/34

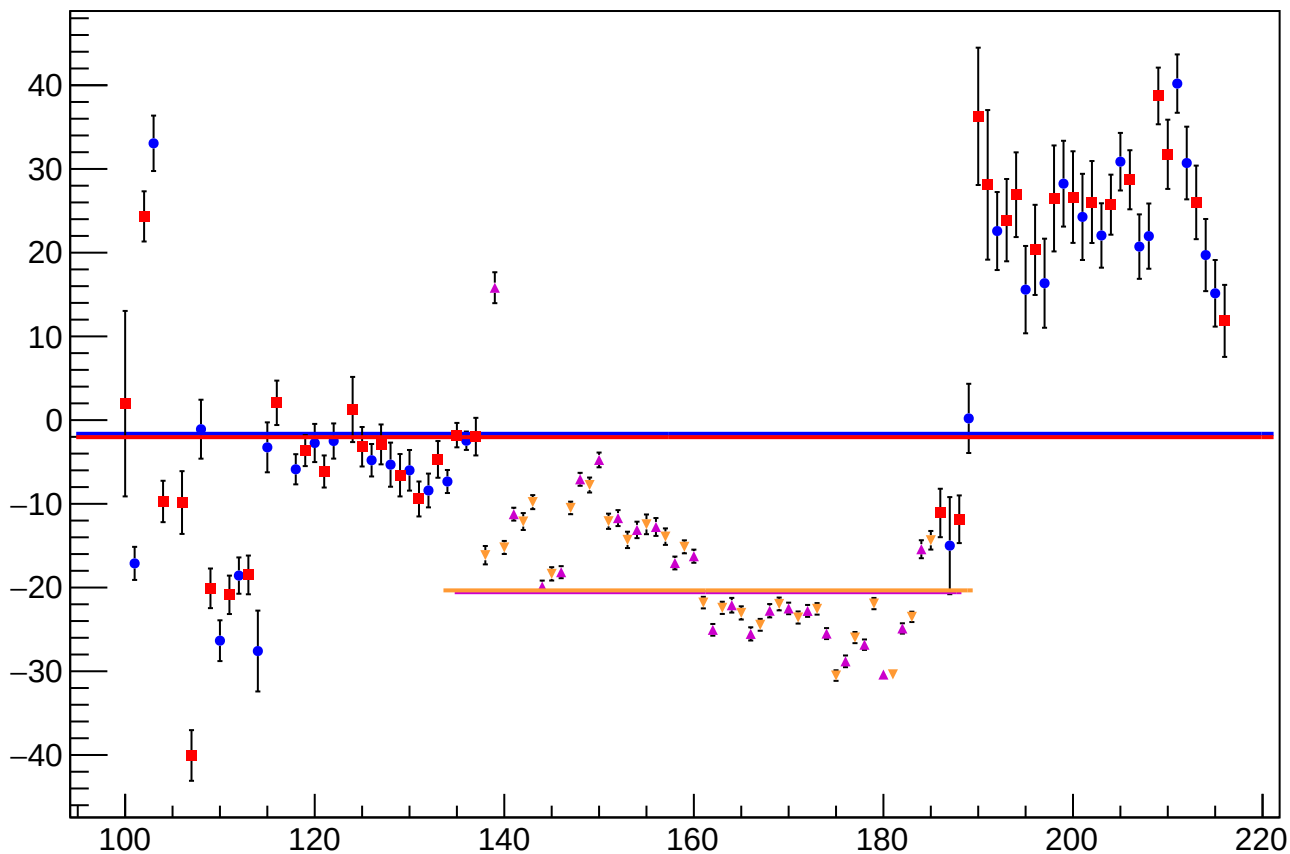
Left In:  $-59.846 \pm 0.181$   $\chi^2/\text{NDF}$ : 5534.1/22

+ sign  $-64.466 \pm 0.159$   $\chi^2/\text{NDF}$ : 10995.1/55

All:  $-64.829 \pm 0.114$   $\chi^2/\text{NDF}$ : 22047.1/113

- sign  $-65.209 \pm 0.163$   $\chi^2/\text{NDF}$ : 11041.4/57

# reg\_asym\_sam\_24\_68\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-1.636 \pm 0.461$   $\chi^2/\text{NDF}$ : 960.8/30

Left Out:  $-20.339 \pm 0.155$   $\chi^2/\text{NDF}$ : 1701.1/24

Right Out:  $-2.037 \pm 0.482$   $\chi^2/\text{NDF}$ : 1063.8/34

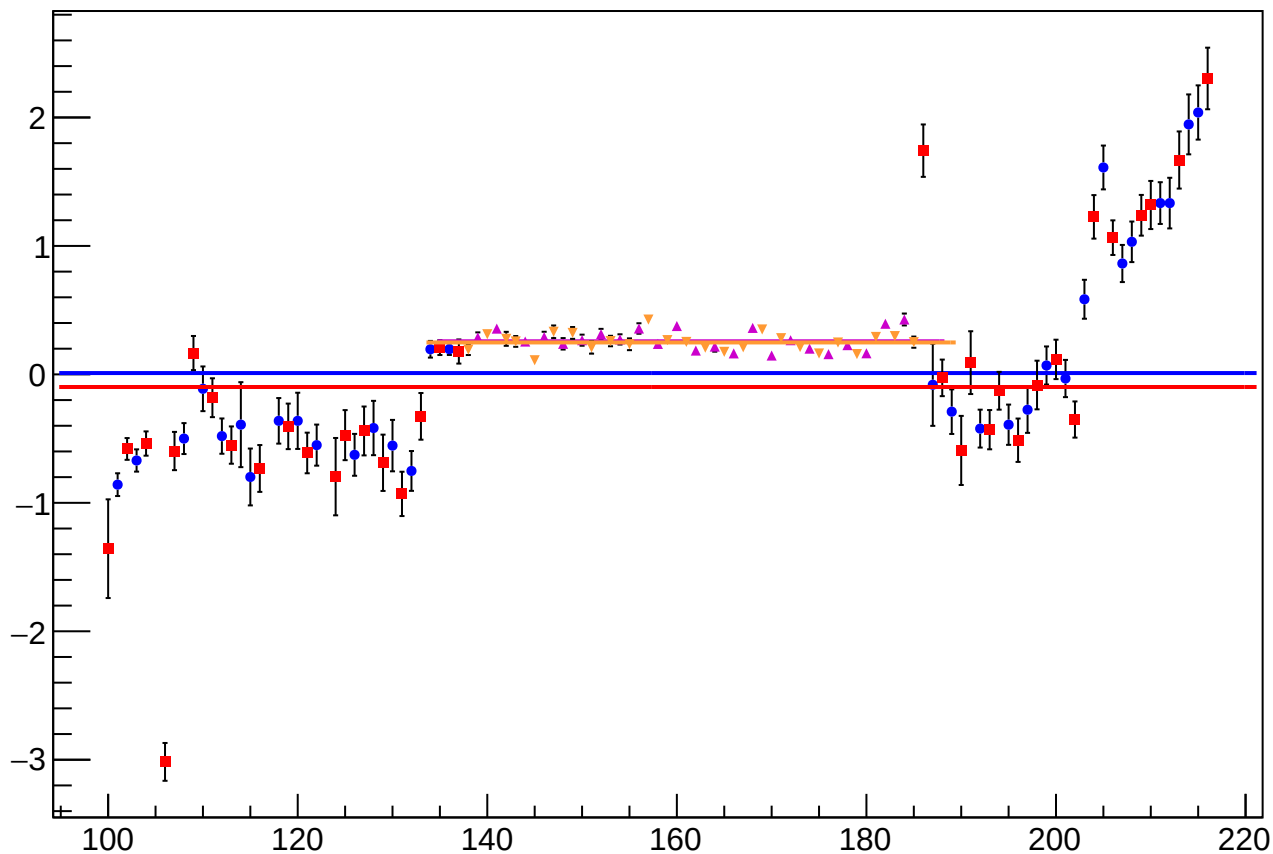
Left In:  $-20.555 \pm 0.160$   $\chi^2/\text{NDF}$ : 2193.8/22

+ sign  $-18.451 \pm 0.147$   $\chi^2/\text{NDF}$ : 4139.2/55

All:  $-18.584 \pm 0.105$   $\chi^2/\text{NDF}$ : 8728.3/113

- sign  $-18.726 \pm 0.152$   $\chi^2/\text{NDF}$ : 4587.4/57

reg\_asym\_sam\_24\_68\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.010 $\pm$ 0.023  $\chi^2$ /NDF: 772.8/30

Left Out: 0.249 $\pm$ 0.007  $\chi^2$ /NDF:93.2/24

Right Out: -0.098 $\pm$ 0.024  $\chi^2$ /NDF: 1118.9/34

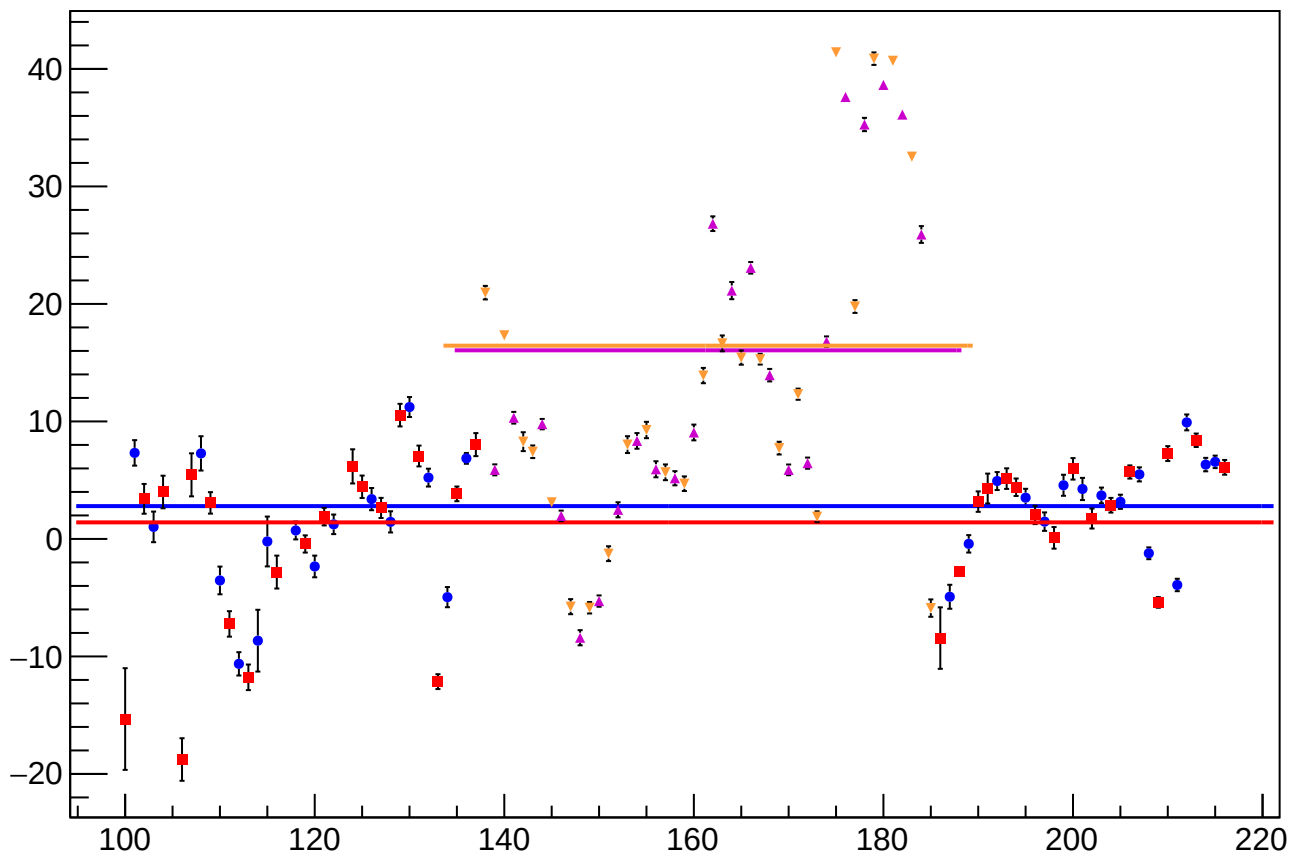
Left In: 0.258 $\pm$ 0.007  $\chi^2$ /NDF:134.3/22

+ sign 0.228 $\pm$ 0.007  $\chi^2$ /NDF: 965.7/55

All: 0.229 $\pm$ 0.005  $\chi^2$ /NDF: 2418.1/113

- sign 0.229 $\pm$ 0.007  $\chi^2$ /NDF: 1452.4/57

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 2.793 $\pm$ 0.136  $\chi^2$ /NDF: 1114.2/30

Left Out: 16.449 $\pm$ 0.104  $\chi^2$ /NDF:21400.3/24

Right Out: 1.409 $\pm$ 0.133  $\chi^2$ /NDF: 1841.2/34

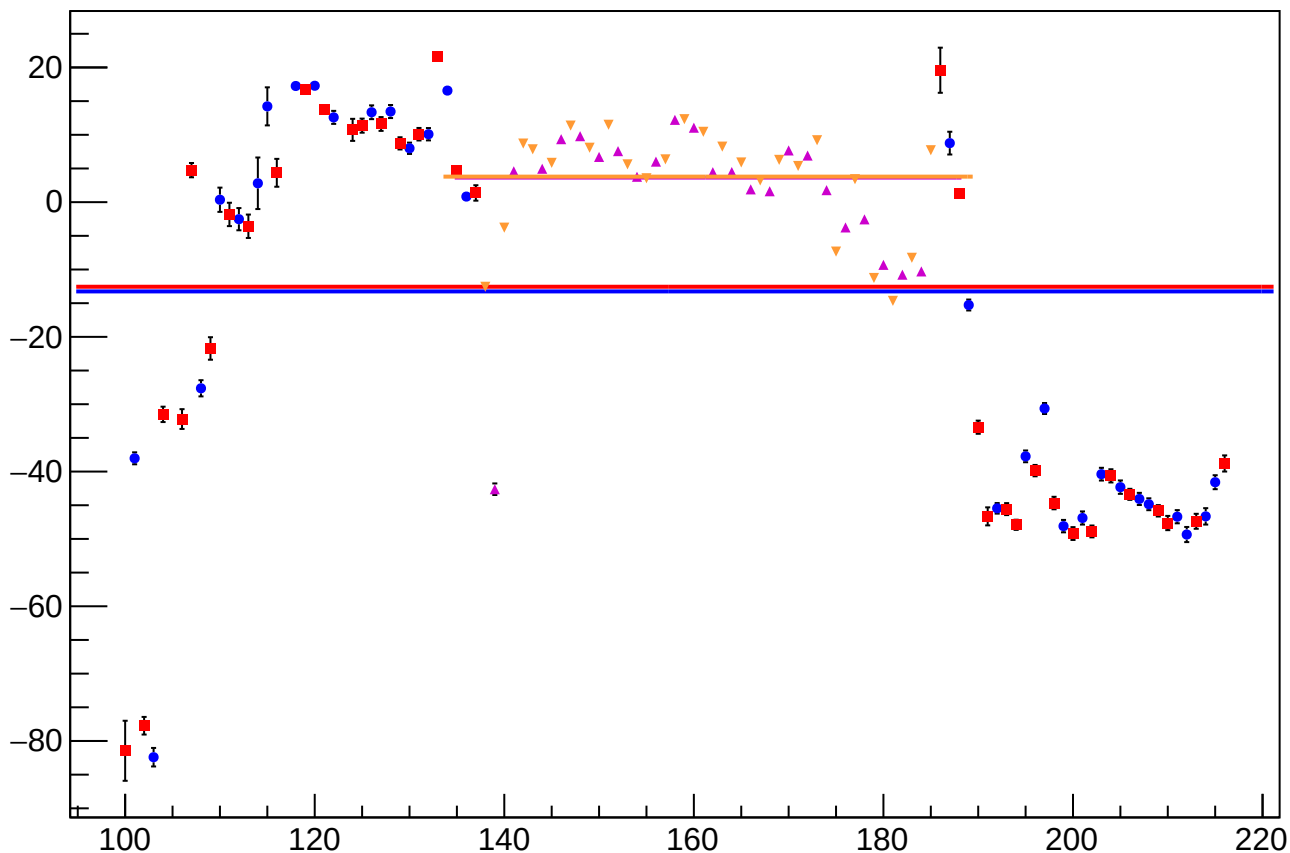
Left In: 16.051 $\pm$ 0.107  $\chi^2$ /NDF:17625.1/22

+ sign 11.401 $\pm$ 0.083  $\chi^2$ /NDF: 28886.3/55

All: 10.844 $\pm$ 0.059  $\chi^2$ /NDF: 55798.7/113

- sign 10.275 $\pm$ 0.083  $\chi^2$ /NDF: 26820.4/57

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: -13.251 $\pm$ 0.159  $\chi^2$ /NDF: 30680.4/30

Left Out: 3.790 $\pm$ 0.080  $\chi^2$ /NDF: 9100.7/24

Right Out: -12.559 $\pm$ 0.154  $\chi^2$ /NDF: 34680.4/34

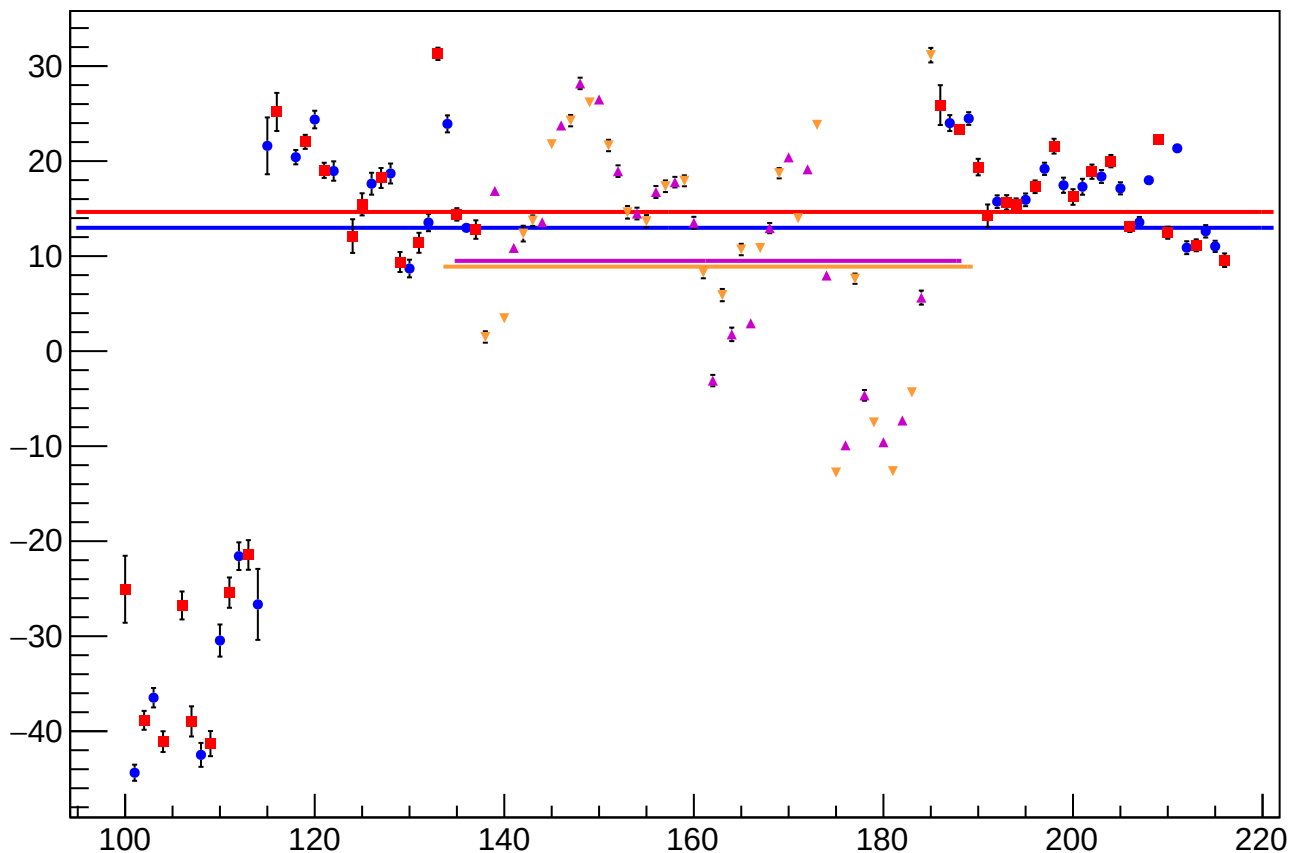
Left In: 3.649 $\pm$ 0.083  $\chi^2$ /NDF: 8310.7/22

+ sign 0.358 $\pm$ 0.072  $\chi^2$ /NDF: 48899.8/55

All: 0.182 $\pm$ 0.051  $\chi^2$ /NDF: 100499.8/113

- sign -0.002 $\pm$ 0.073  $\chi^2$ /NDF: 51587.6/57

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $12.979 \pm 0.136$   $\chi^2/\text{NDF}: 11820.9/30$

Left Out:  $8.892 \pm 0.104$   $\chi^2/\text{NDF}: 15428.1/24$

Right Out:  $14.649 \pm 0.130$   $\chi^2/\text{NDF}: 12837.3/34$

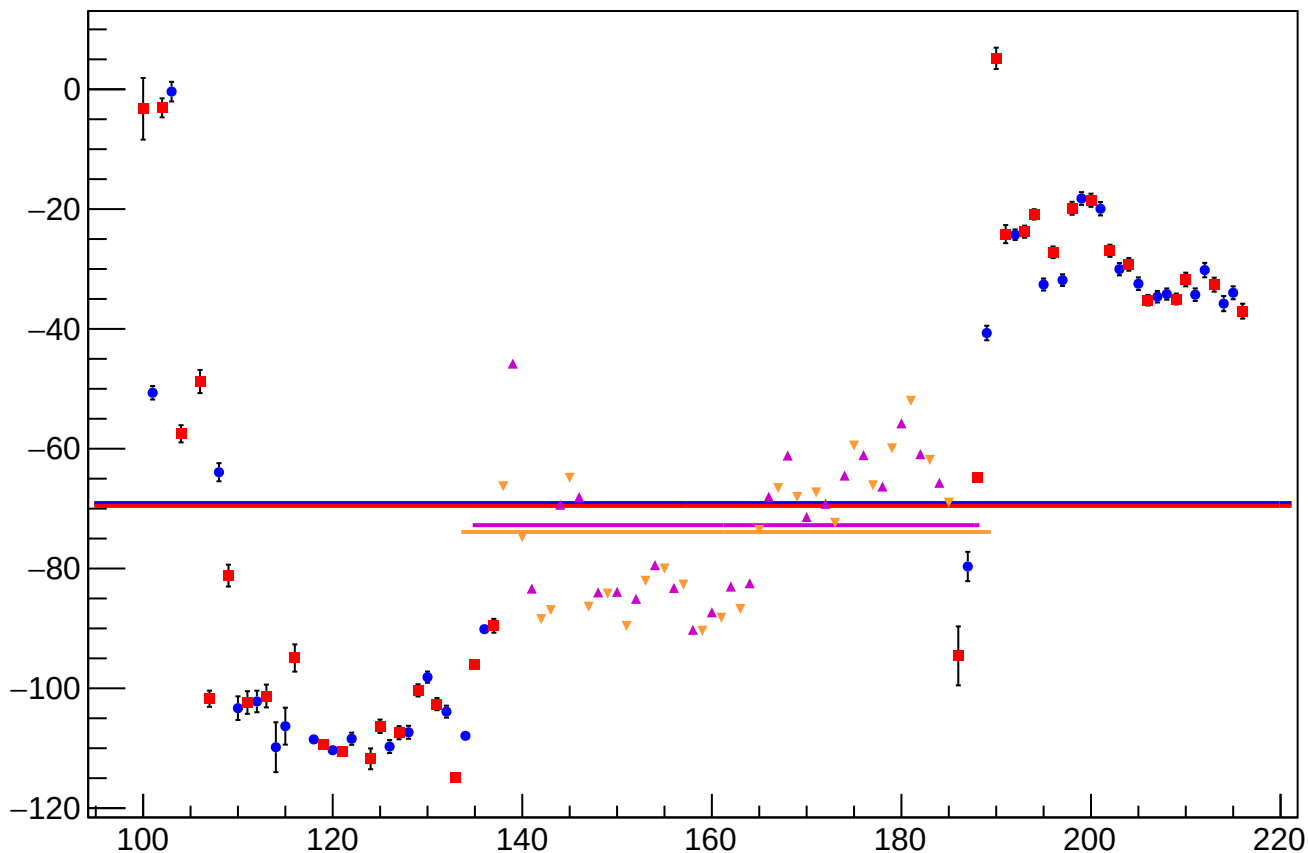
Left In:  $9.500 \pm 0.107$   $\chi^2/\text{NDF}: 13040.9/22$

+ sign  $10.394 \pm 0.083$   $\chi^2/\text{NDF}: 27819.5/55$

All:  $10.981 \pm 0.058$   $\chi^2/\text{NDF}: 54737.2/113$

- sign  $11.567 \pm 0.082$   $\chi^2/\text{NDF}: 26816.5/57$

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-69.075 \pm 0.182$   $\chi^2/\text{NDF}$ : 40294.0/30

Left Out:  $-73.907 \pm 0.090$   $\chi^2/\text{NDF}$ : 15567.0/24

Right Out:  $-69.548 \pm 0.179$   $\chi^2/\text{NDF}$ : 46670.2/34

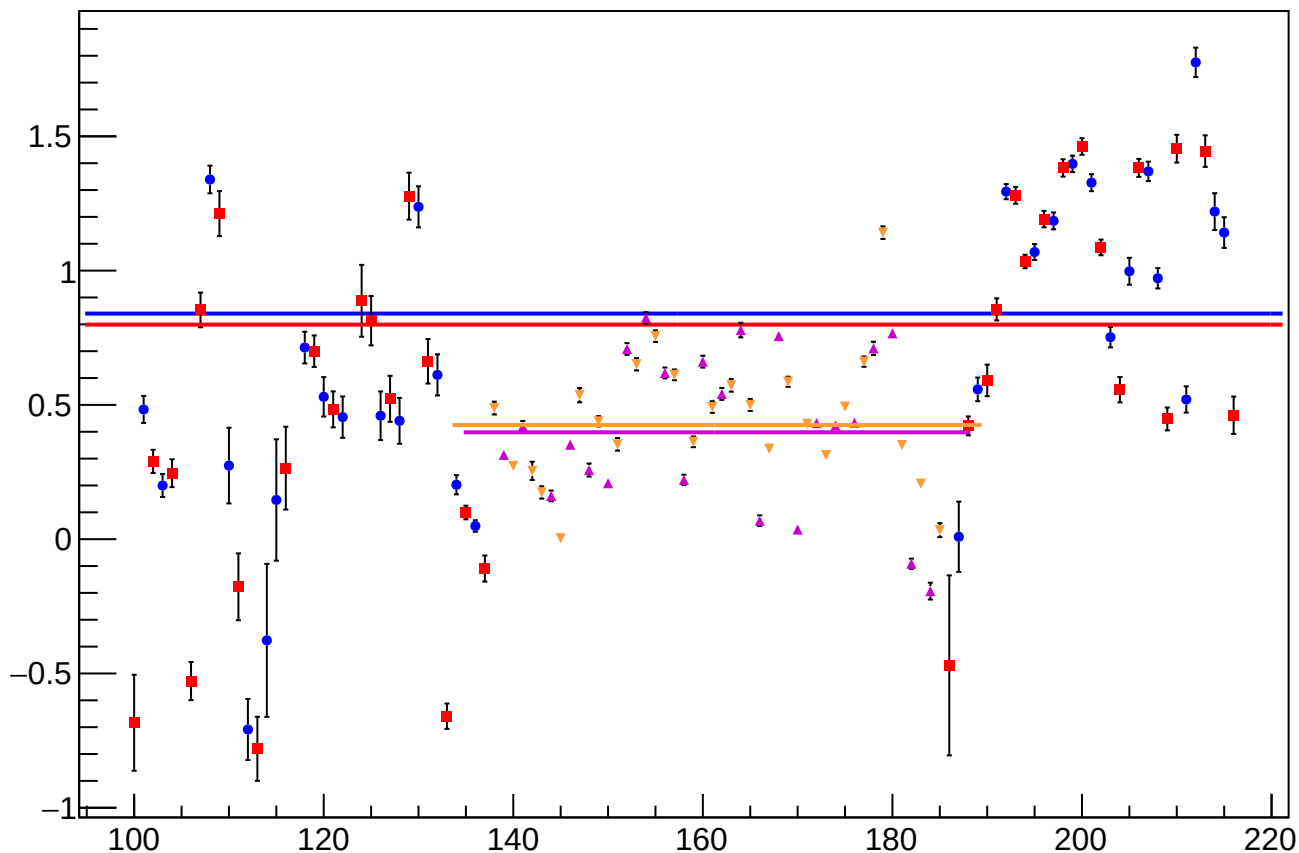
Left In:  $-72.763 \pm 0.093$   $\chi^2/\text{NDF}$ : 12612.6/22

+ sign  $-72.953 \pm 0.081$   $\chi^2/\text{NDF}$ : 56424.0/55

All:  $-72.524 \pm 0.058$   $\chi^2/\text{NDF}$ : 116017.9/113

- sign  $-72.076 \pm 0.083$   $\chi^2/\text{NDF}$ : 59536.4/57

# reg\_asym\_sam\_26\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.840 $\pm$ 0.008  $\chi^2$ /NDF: 4118.8/30

Left Out: 0.425 $\pm$ 0.004  $\chi^2$ /NDF:3035.4/24

Right Out: 0.799 $\pm$ 0.008  $\chi^2$ /NDF: 5299.5/34

Left In: 0.398 $\pm$ 0.004  $\chi^2$ /NDF:4271.0/22

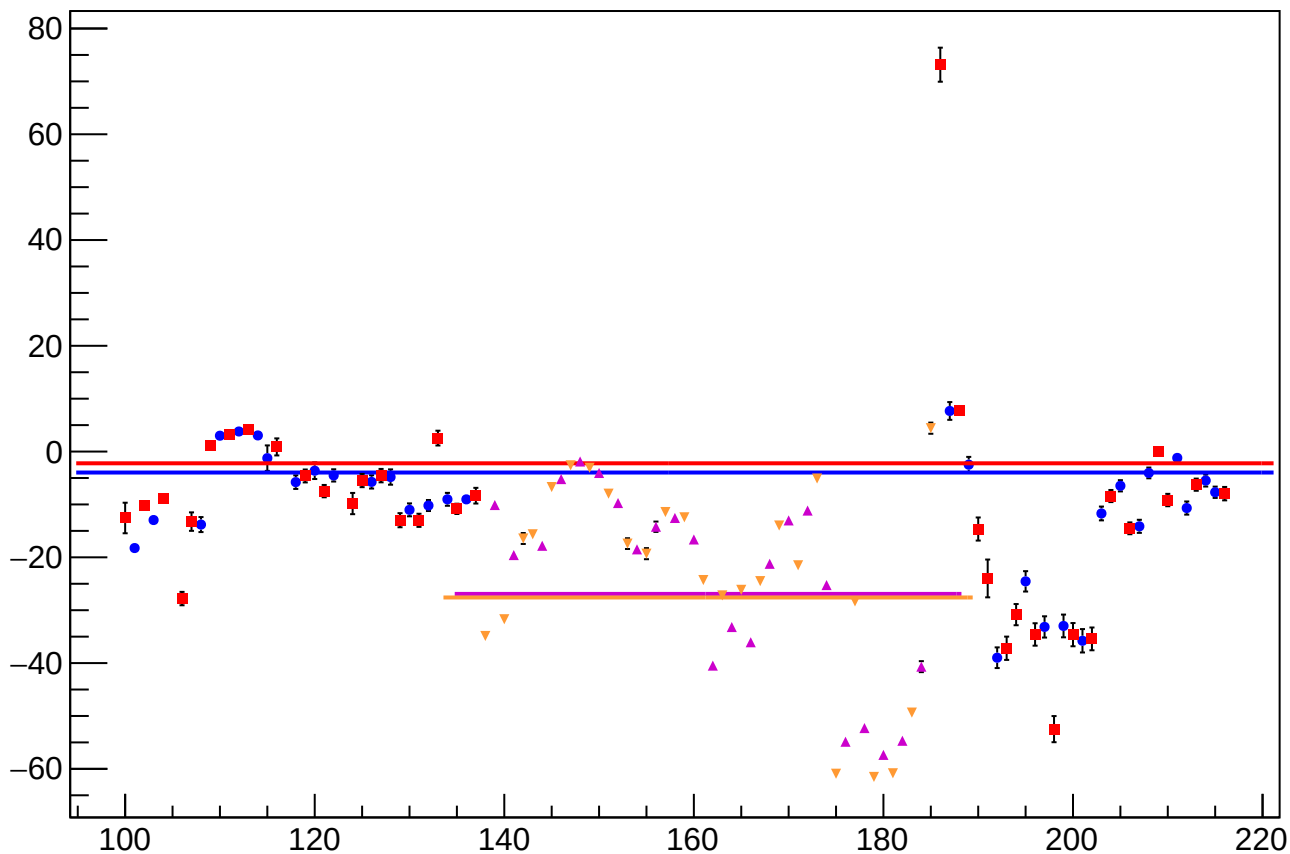
+ sign 0.509 $\pm$ 0.004  $\chi^2$ /NDF: 9287.2/55

All: 0.498 $\pm$ 0.003  $\chi^2$ /NDF: 20954.4/113

- sign 0.486 $\pm$ 0.004  $\chi^2$ /NDF: 11646.7/57



reg\_asym\_sam\_1548\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.965 \pm 0.167$   $\chi^2/\text{NDF}$ : 2823.6/30

Left Out:  $-27.594 \pm 0.144$   $\chi^2/\text{NDF}$ : 19761.6/24

Right Out:  $-2.220 \pm 0.153$   $\chi^2/\text{NDF}$ : 4097.6/34

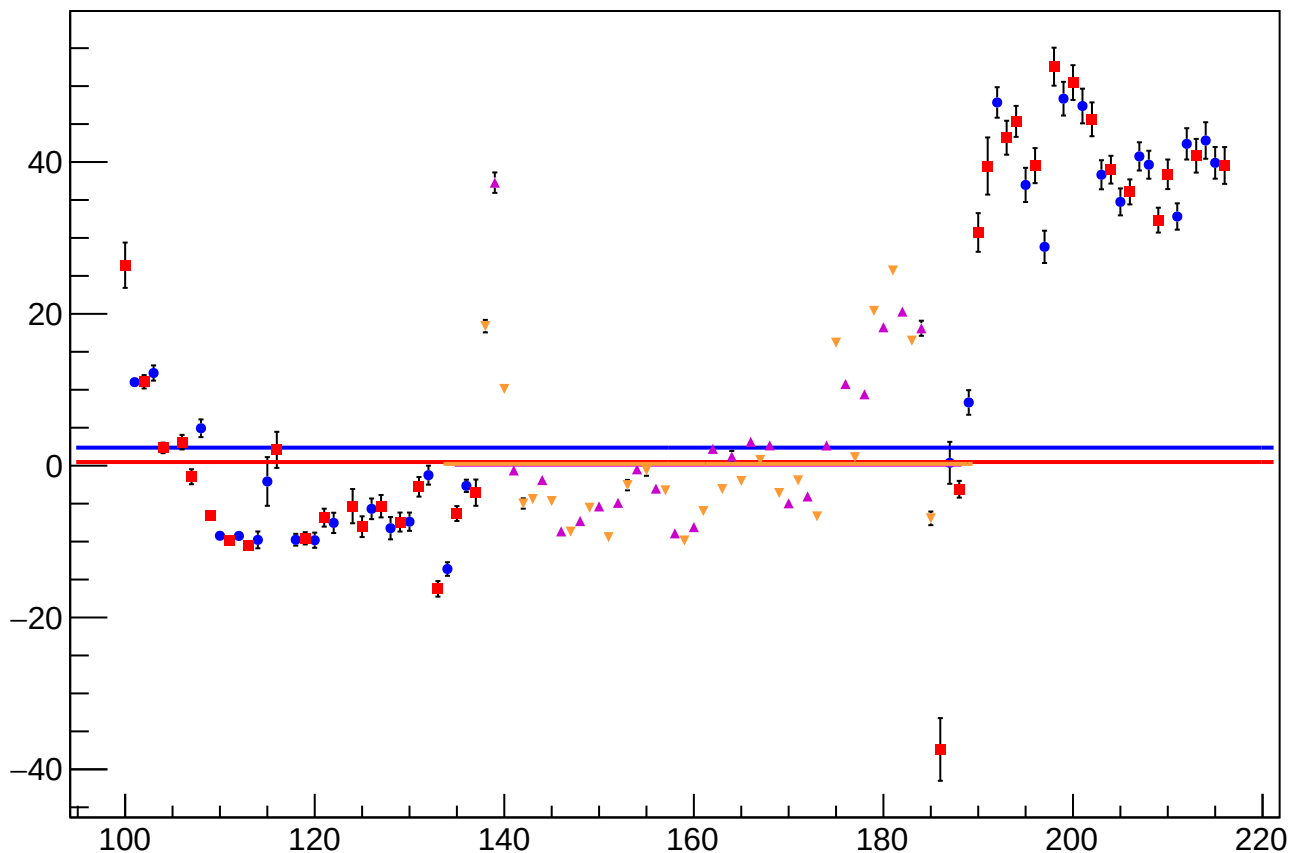
Left In:  $-26.918 \pm 0.149$   $\chi^2/\text{NDF}$ : 15536.6/22

+ sign  $-17.522 \pm 0.109$   $\chi^2/\text{NDF}$ : 34013.1/55

All:  $-16.167 \pm 0.076$   $\chi^2/\text{NDF}$ : 67308.6/113

- sign  $-14.874 \pm 0.107$   $\chi^2/\text{NDF}$ : 32995.2/57

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.374 \pm 0.207$   $\chi^2/\text{NDF}$ : 6721.3/30

Left Out:  $0.238 \pm 0.110$   $\chi^2/\text{NDF}$ : 8035.6/24

Right Out:  $0.481 \pm 0.201$   $\chi^2/\text{NDF}$ : 6692.8/34

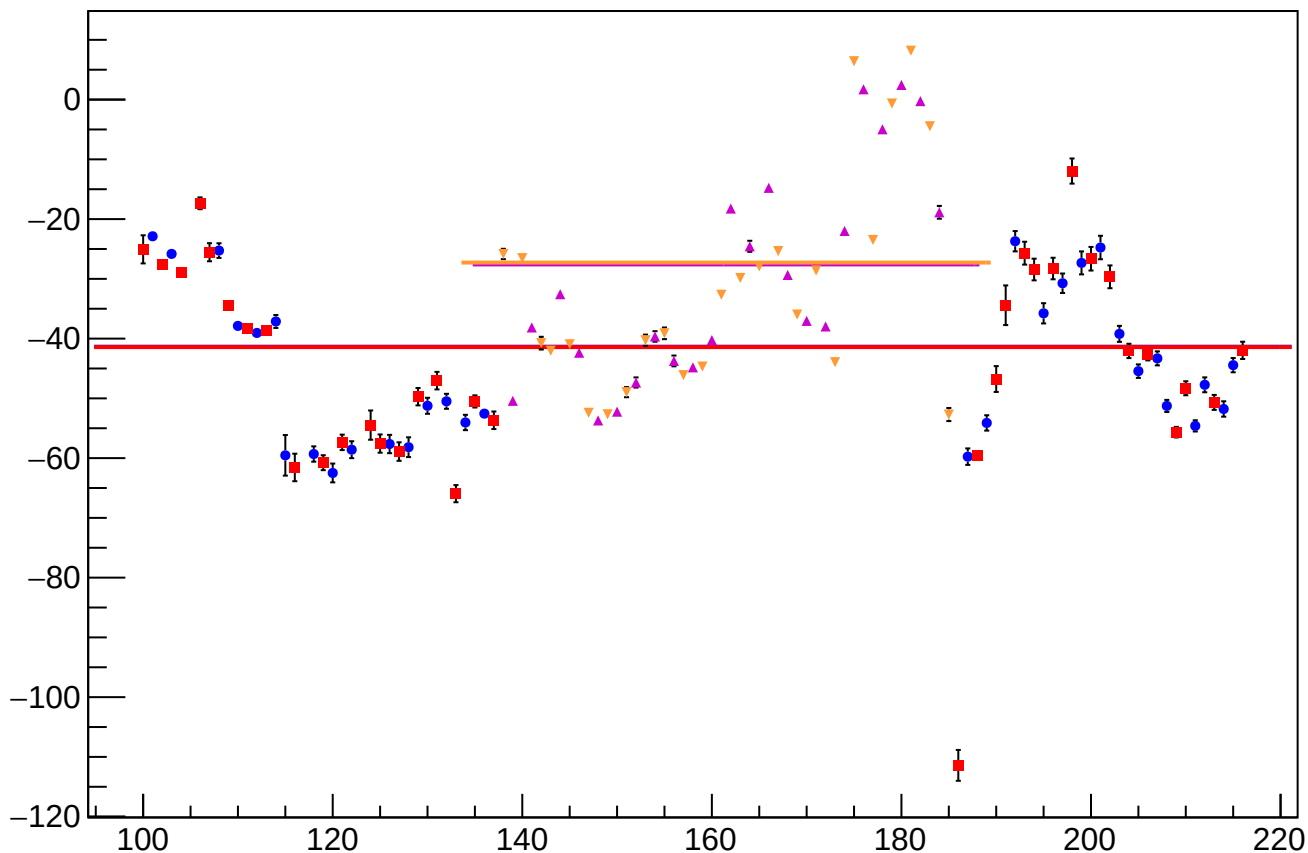
Left In:  $0.131 \pm 0.114$   $\chi^2/\text{NDF}$ : 5837.4/22

+ sign  $0.711 \pm 0.097$   $\chi^2/\text{NDF}$ : 14839.9/55

All:  $0.469 \pm 0.070$   $\chi^2/\text{NDF}$ : 27385.0/113

- sign  $0.217 \pm 0.099$   $\chi^2/\text{NDF}$ : 12532.5/57

# reg\_asym\_sam\_1548\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-41.357 \pm 0.187$   $\chi^2/\text{NDF}$ : 4004.9/30

Left Out:  $-27.271 \pm 0.144$   $\chi^2/\text{NDF}$ : 18526.9/24

Right Out:  $-41.419 \pm 0.178$   $\chi^2/\text{NDF}$ : 5353.0/34

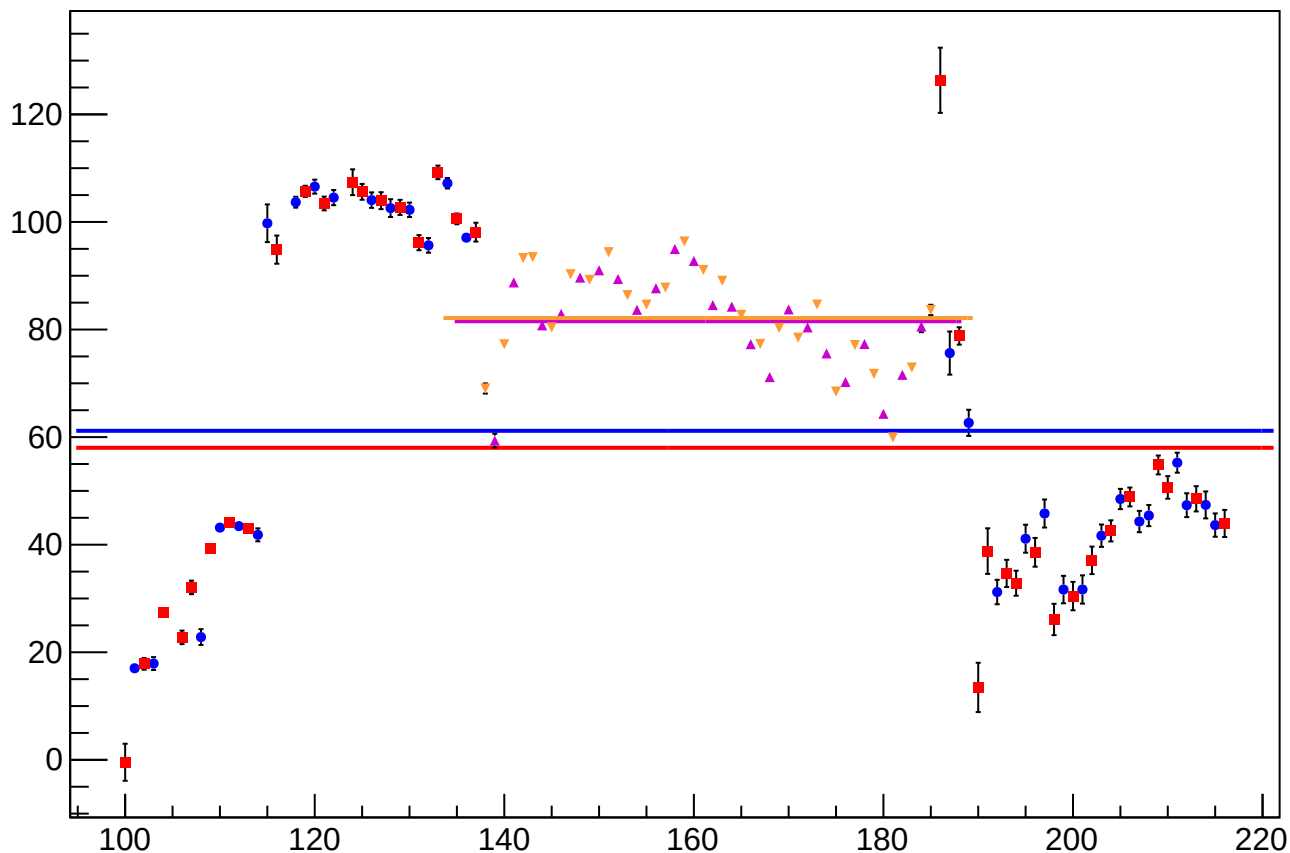
Left In:  $-27.583 \pm 0.148$   $\chi^2/\text{NDF}$ : 15648.7/22

+ sign  $-32.502 \pm 0.114$   $\chi^2/\text{NDF}$ : 26090.4/55

All:  $-32.872 \pm 0.081$   $\chi^2/\text{NDF}$ : 50677.9/113

- sign  $-33.242 \pm 0.114$   $\chi^2/\text{NDF}$ : 24566.4/57

reg\_asym\_sam\_1548\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 61.173 $\pm$ 0.236  $\chi^2$ /NDF: 19690.2/30

Left Out: 82.134 $\pm$ 0.125  $\chi^2$ /NDF: 5375.9/24

Right Out: 58.016 $\pm$ 0.229  $\chi^2$ /NDF: 18594.9/34

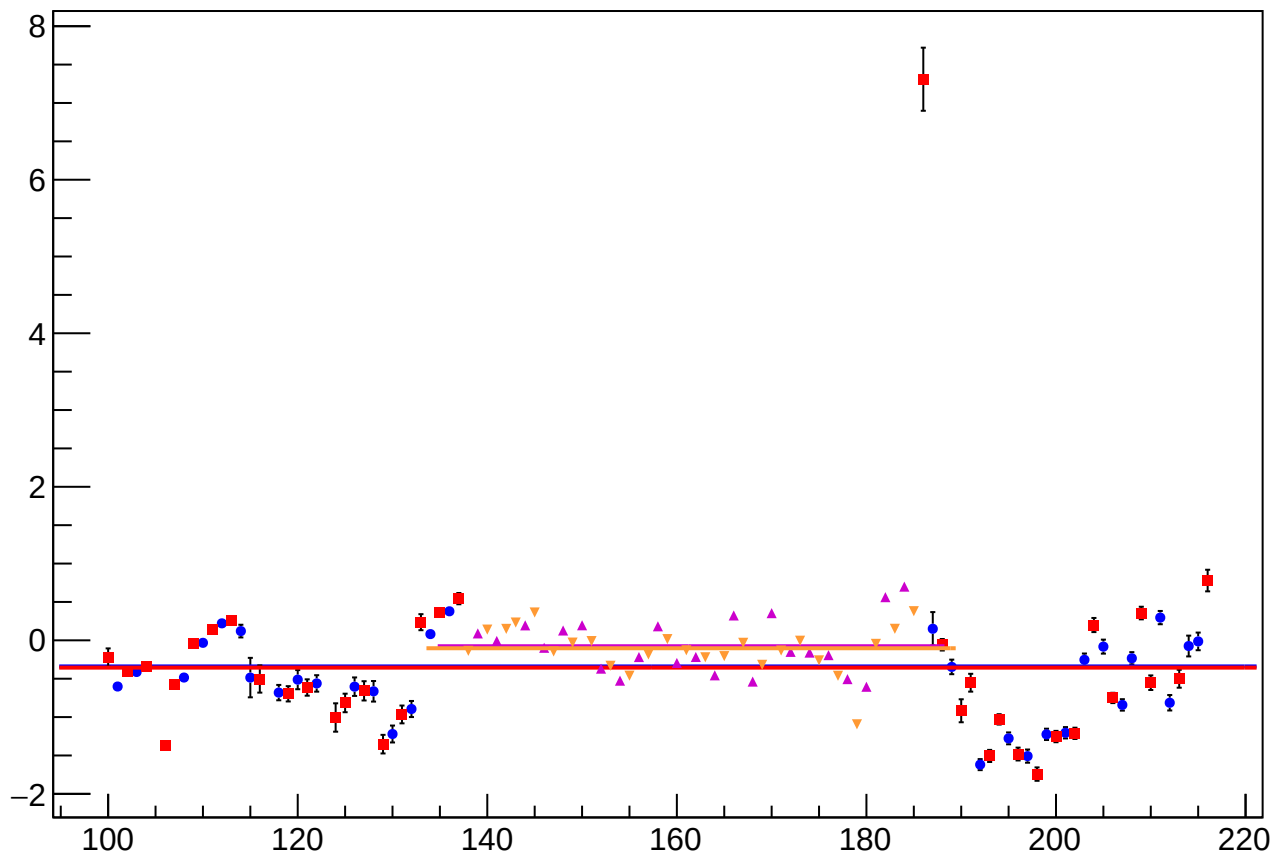
Left In: 81.539 $\pm$ 0.129  $\chi^2$ /NDF: 4043.0/22

+ sign 77.548 $\pm$ 0.110  $\chi^2$ /NDF: 31241.3/55

All: 76.730 $\pm$ 0.079  $\chi^2$ /NDF: 61996.1/113

- sign 75.880 $\pm$ 0.112  $\chi^2$ /NDF: 30642.5/57

reg\_asym\_sam\_1548\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.340 \pm 0.012$   $\chi^2/\text{NDF}$ : 2118.3/30

Left Out:  $-0.103 \pm 0.006$   $\chi^2/\text{NDF}$ : 2408.2/24

Right Out:  $-0.356 \pm 0.011$   $\chi^2/\text{NDF}$ : 3110.2/34

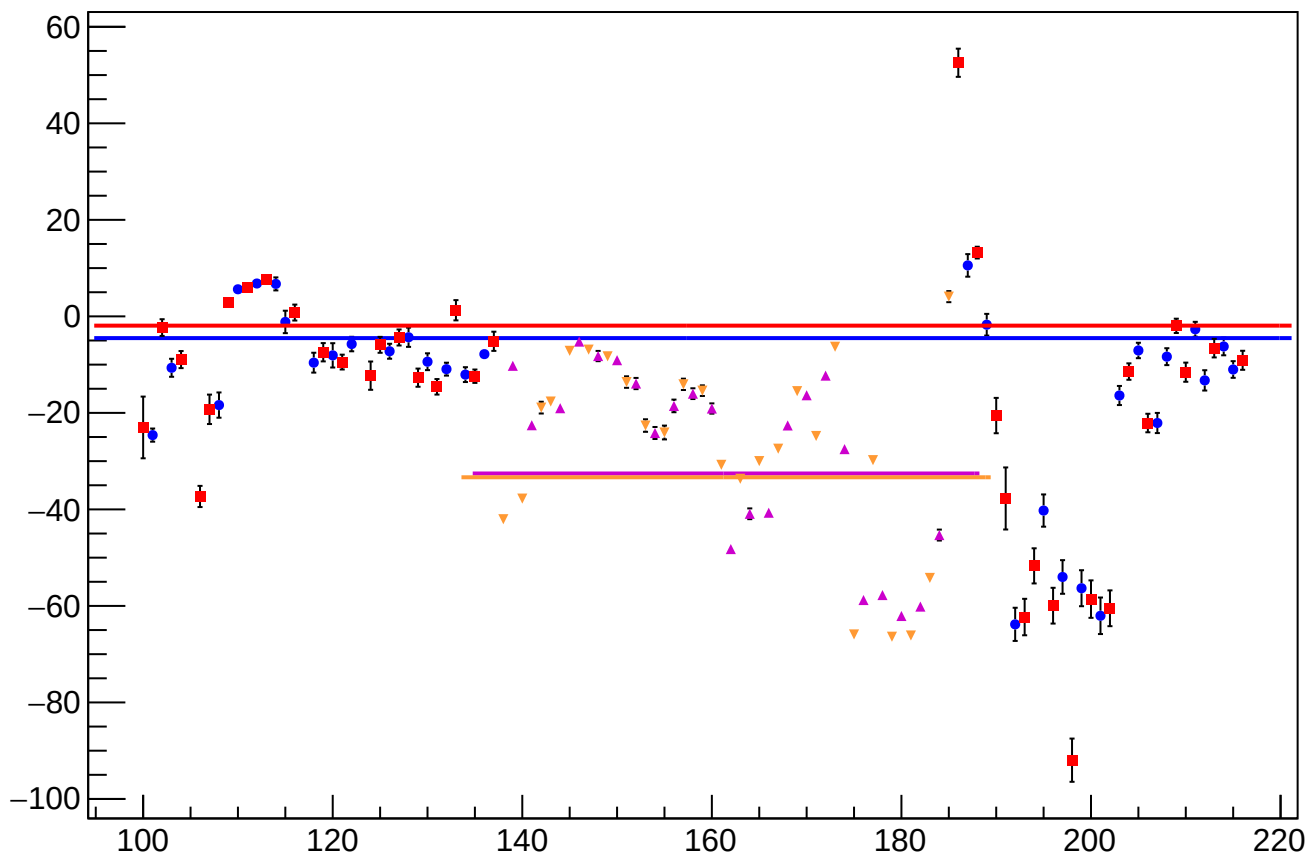
Left In:  $-0.077 \pm 0.006$   $\chi^2/\text{NDF}$ : 3320.8/22

+ sign  $-0.148 \pm 0.005$   $\chi^2/\text{NDF}$ : 4866.7/55

All:  $-0.142 \pm 0.004$   $\chi^2/\text{NDF}$ : 11793.8/113

- sign  $-0.135 \pm 0.005$   $\chi^2/\text{NDF}$ : 6923.7/57

# reg\_asym\_sam\_3748\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -4.504 $\pm$ 0.269  $\chi^2/\text{NDF}$ : 2214.7/30

Left Out: -33.346 $\pm$ 0.165  $\chi^2/\text{NDF}$ : 17989.6/24

Right Out: -1.922 $\pm$ 0.252  $\chi^2/\text{NDF}$ : 3278.3/34

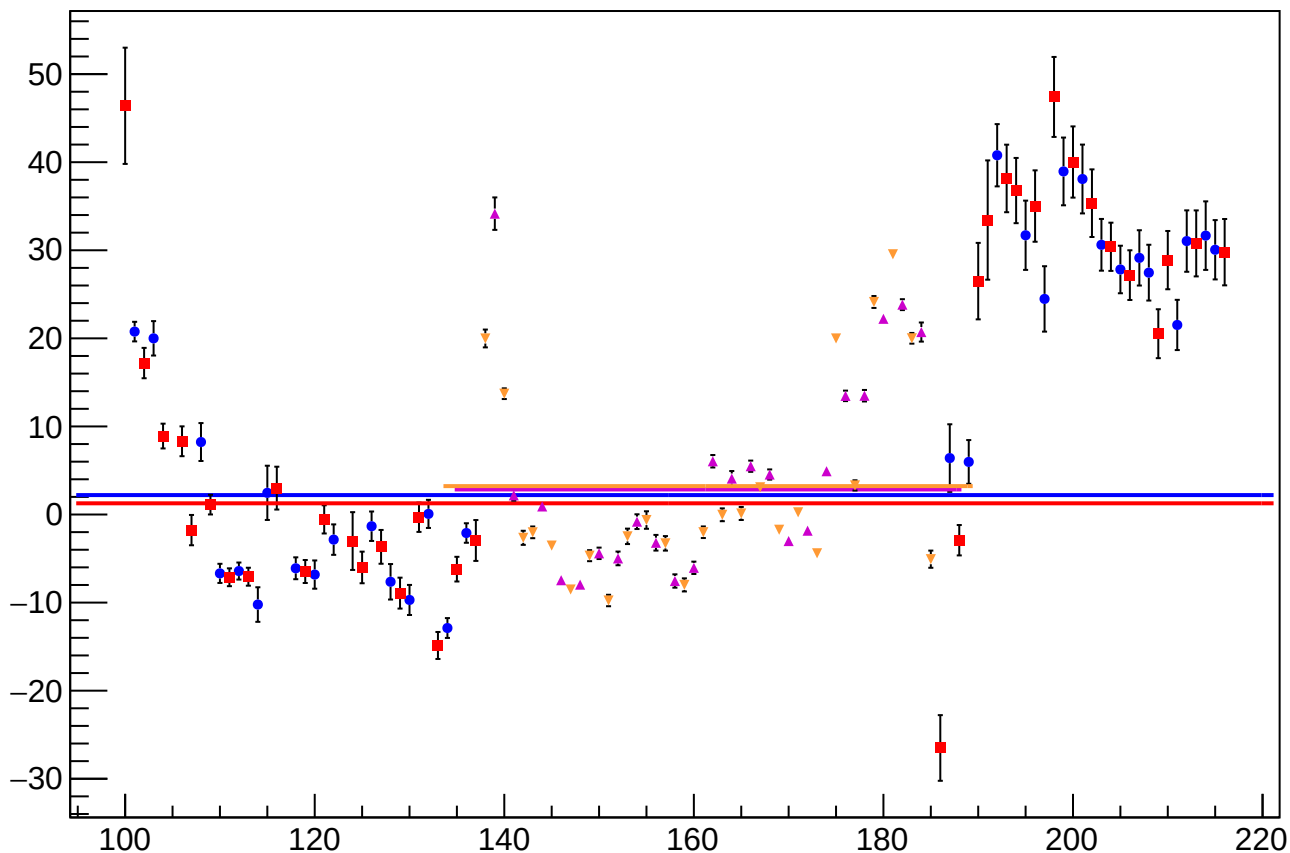
Left In: -32.559 $\pm$ 0.169  $\chi^2/\text{NDF}$ : 13896.0/22

+ sign -25.497 $\pm$ 0.140  $\chi^2/\text{NDF}$ : 28559.3/55

All: -24.264 $\pm$ 0.099  $\chi^2/\text{NDF}$ : 56060.5/113

- sign -23.028 $\pm$ 0.141  $\chi^2/\text{NDF}$ : 27346.9/57

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.206 \pm 0.328$   $\chi^2/\text{NDF}: 1866.1/30$

Left Out:  $3.224 \pm 0.128$   $\chi^2/\text{NDF}: 7675.6/24$

Right Out:  $1.272 \pm 0.326$   $\chi^2/\text{NDF}: 1637.0/34$

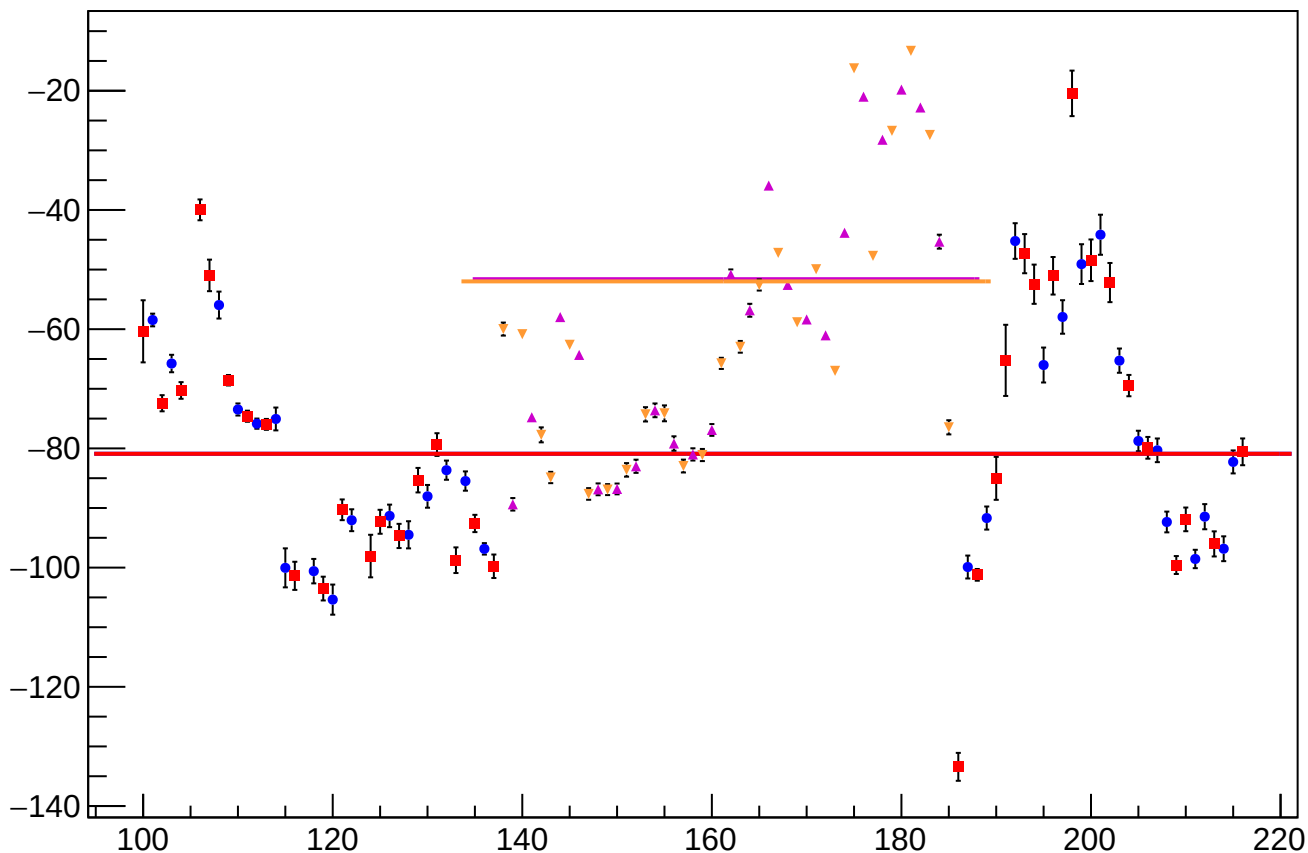
Left In:  $2.845 \pm 0.131$   $\chi^2/\text{NDF}: 5455.5/22$

+ sign  $3.089 \pm 0.119$   $\chi^2/\text{NDF}: 9550.1/55$

All:  $2.862 \pm 0.085$   $\chi^2/\text{NDF}: 16670.0/113$

- sign  $2.626 \pm 0.122$   $\chi^2/\text{NDF}: 7112.5/57$

# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-80.898 \pm 0.303$   $\chi^2/\text{NDF}: 2285.6/30$

Left Out:  $-51.982 \pm 0.165$   $\chi^2/\text{NDF}: 20887.7/24$

Right Out:  $-80.903 \pm 0.294$   $\chi^2/\text{NDF}: 3524.0/34$

Left In:  $-51.612 \pm 0.169$   $\chi^2/\text{NDF}: 17624.2/22$

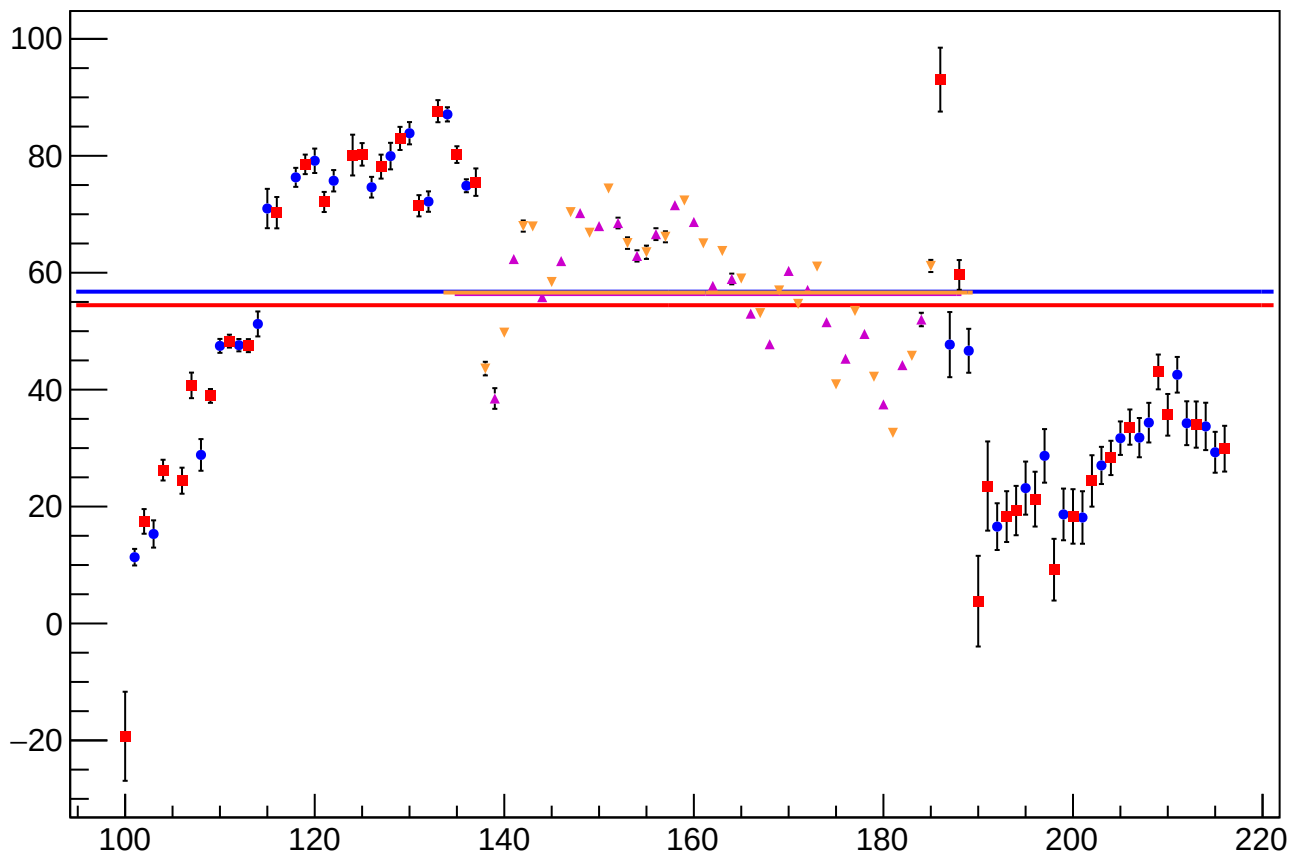
+ sign  $-58.592 \pm 0.145$   $\chi^2/\text{NDF}: 30210.0/55$

All:  $-58.744 \pm 0.103$   $\chi^2/\text{NDF}: 58826.9/113$

- sign  $-58.899 \pm 0.147$   $\chi^2/\text{NDF}: 28614.7/57$



# reg\_asym\_sam\_3748\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 56.761 $\pm$ 0.370  $\chi^2$ /NDF: 4114.9/30

Left Out: 56.612 $\pm$ 0.144  $\chi^2$ /NDF: 5666.2/24

Right Out: 54.443 $\pm$ 0.370  $\chi^2$ /NDF: 3560.4/34

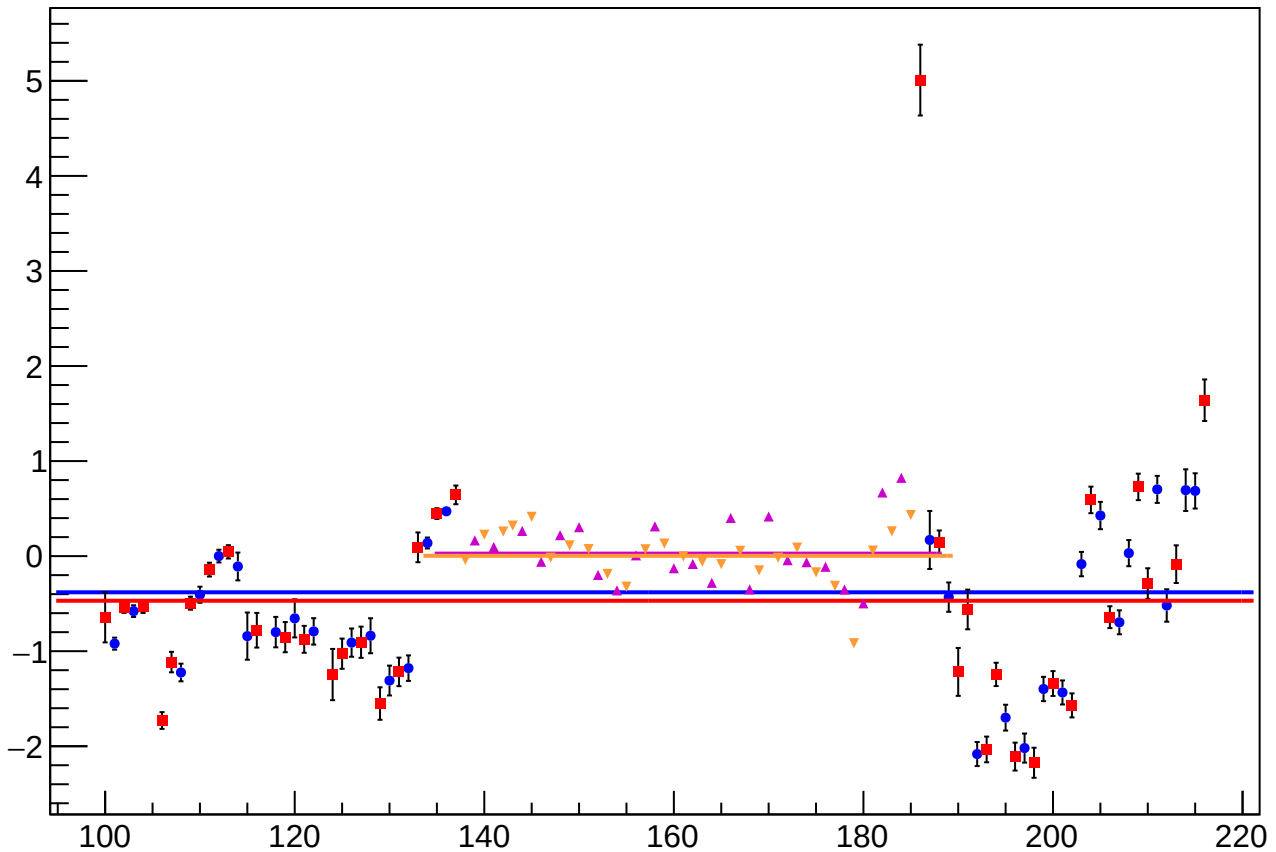
Left In: 56.348 $\pm$ 0.147  $\chi^2$ /NDF: 3968.7/22

+ sign 56.632 $\pm$ 0.134  $\chi^2$ /NDF: 9781.2/55

All: 56.365 $\pm$ 0.096  $\chi^2$ /NDF: 17341.3/113

- sign 56.087 $\pm$ 0.137  $\chi^2$ /NDF: 7551.9/57

reg\_asym\_sam\_3748\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.380 \pm 0.019$   $\chi^2/\text{NDF}$ : 1442.8/30

Left Out:  $0.004 \pm 0.006$   $\chi^2/\text{NDF}$ : 1701.0/24

Right Out:  $-0.469 \pm 0.019$   $\chi^2/\text{NDF}$ : 1850.1/34

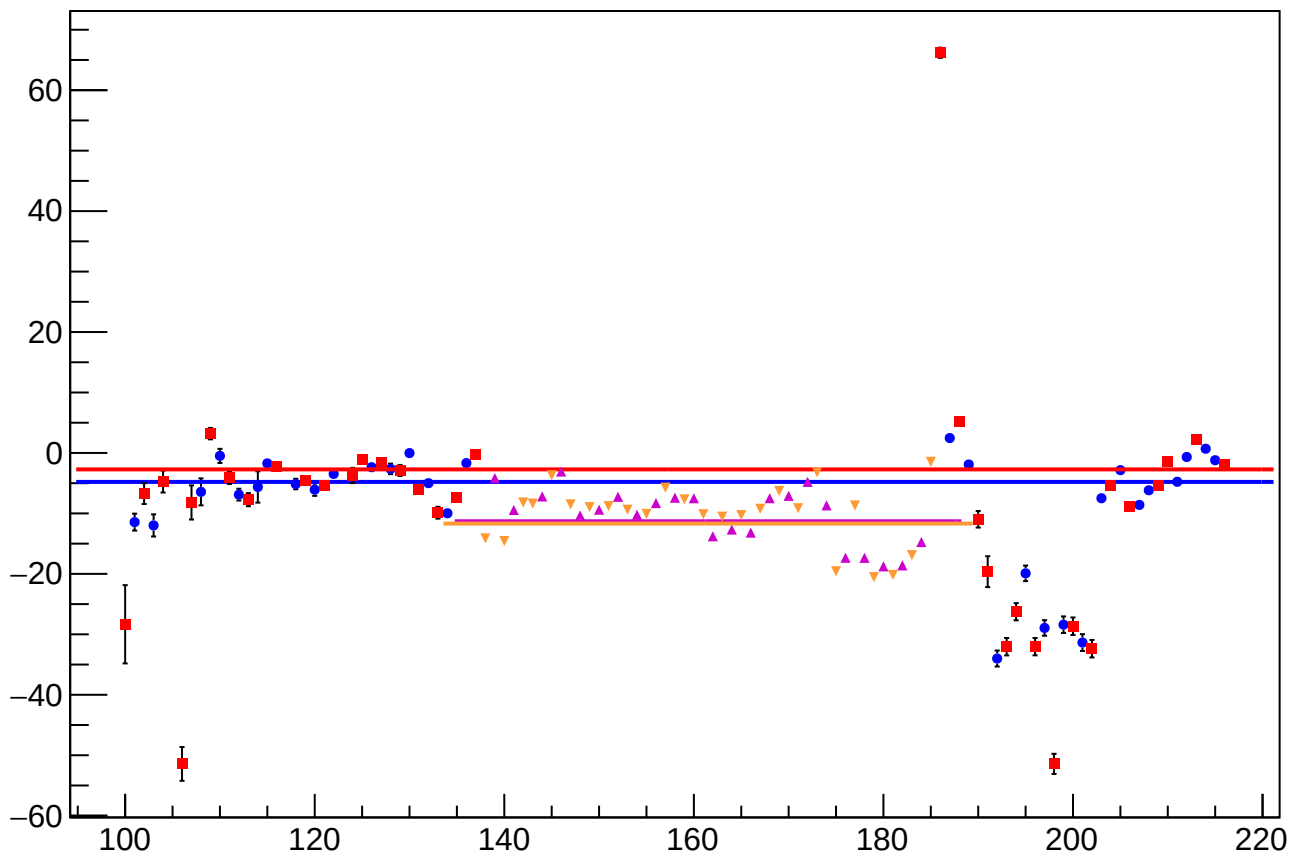
Left In:  $0.026 \pm 0.007$   $\chi^2/\text{NDF}$ : 2349.0/22

+ sign  $-0.037 \pm 0.006$   $\chi^2/\text{NDF}$ : 3517.2/55

All:  $-0.032 \pm 0.004$   $\chi^2/\text{NDF}$ : 8328.4/113

- sign  $-0.027 \pm 0.006$   $\chi^2/\text{NDF}$ : 4809.9/57

reg\_asym\_sam\_1526\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-4.790 \pm 0.139$   $\chi^2/\text{NDF}: 2178.2/30$

Left Out:  $-11.680 \pm 0.053$   $\chi^2/\text{NDF}: 12602.3/24$

Right Out:  $-2.719 \pm 0.144$   $\chi^2/\text{NDF}: 10571.5/34$

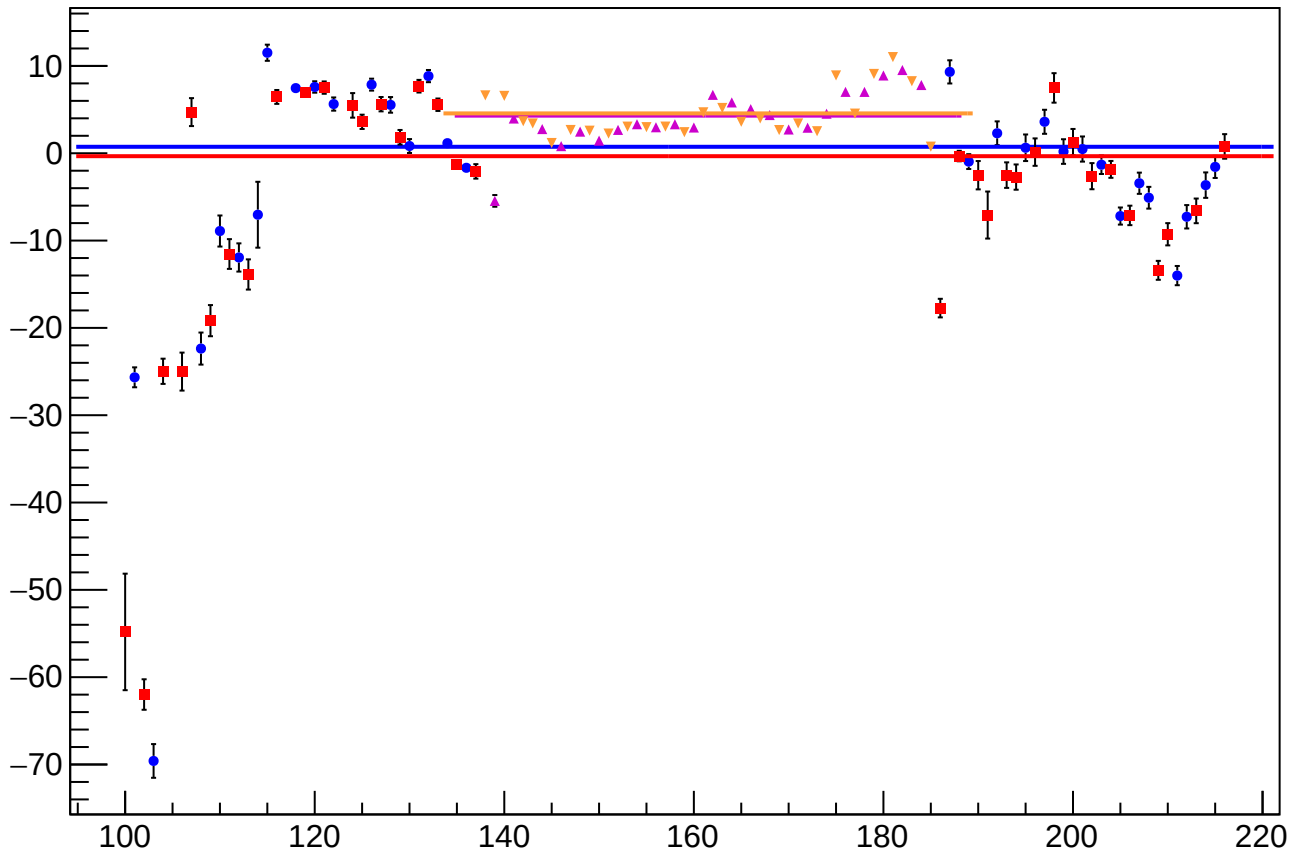
Left In:  $-11.301 \pm 0.054$   $\chi^2/\text{NDF}: 9229.2/22$

+ sign  $-10.819 \pm 0.049$   $\chi^2/\text{NDF}: 16920.7/55$

All:  $-10.536 \pm 0.035$   $\chi^2/\text{NDF}: 39918.4/113$

- sign  $-10.239 \pm 0.051$   $\chi^2/\text{NDF}: 22930.1/57$

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.741 \pm 0.162$   $\chi^2/\text{NDF}$ : 3257.7/30

Left Out:  $4.564 \pm 0.041$   $\chi^2/\text{NDF}$ : 4356.3/24

Right Out:  $-0.336 \pm 0.171$   $\chi^2/\text{NDF}$ : 3199.7/34

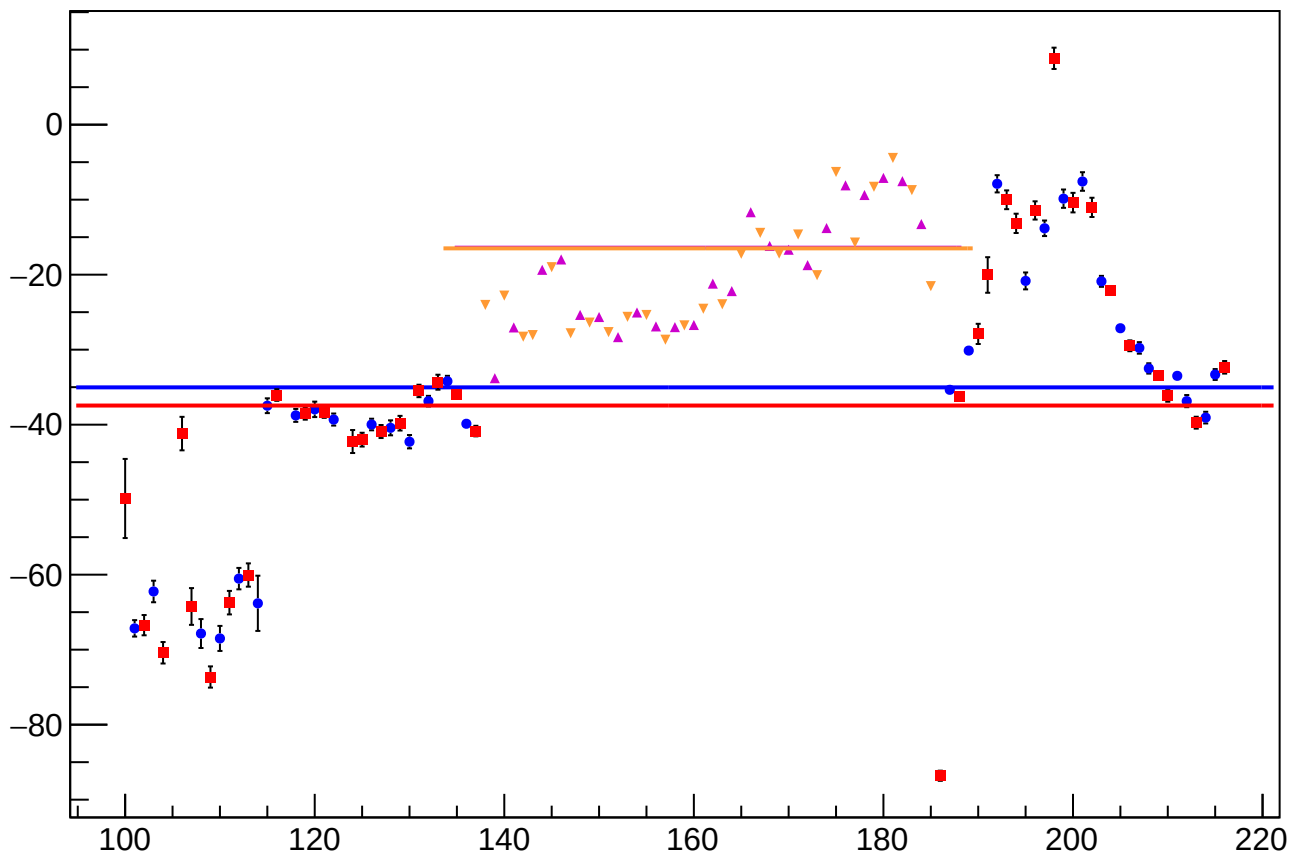
Left In:  $4.308 \pm 0.042$   $\chi^2/\text{NDF}$ : 3609.0/22

+ sign  $4.329 \pm 0.040$   $\chi^2/\text{NDF}$ : 8137.3/55

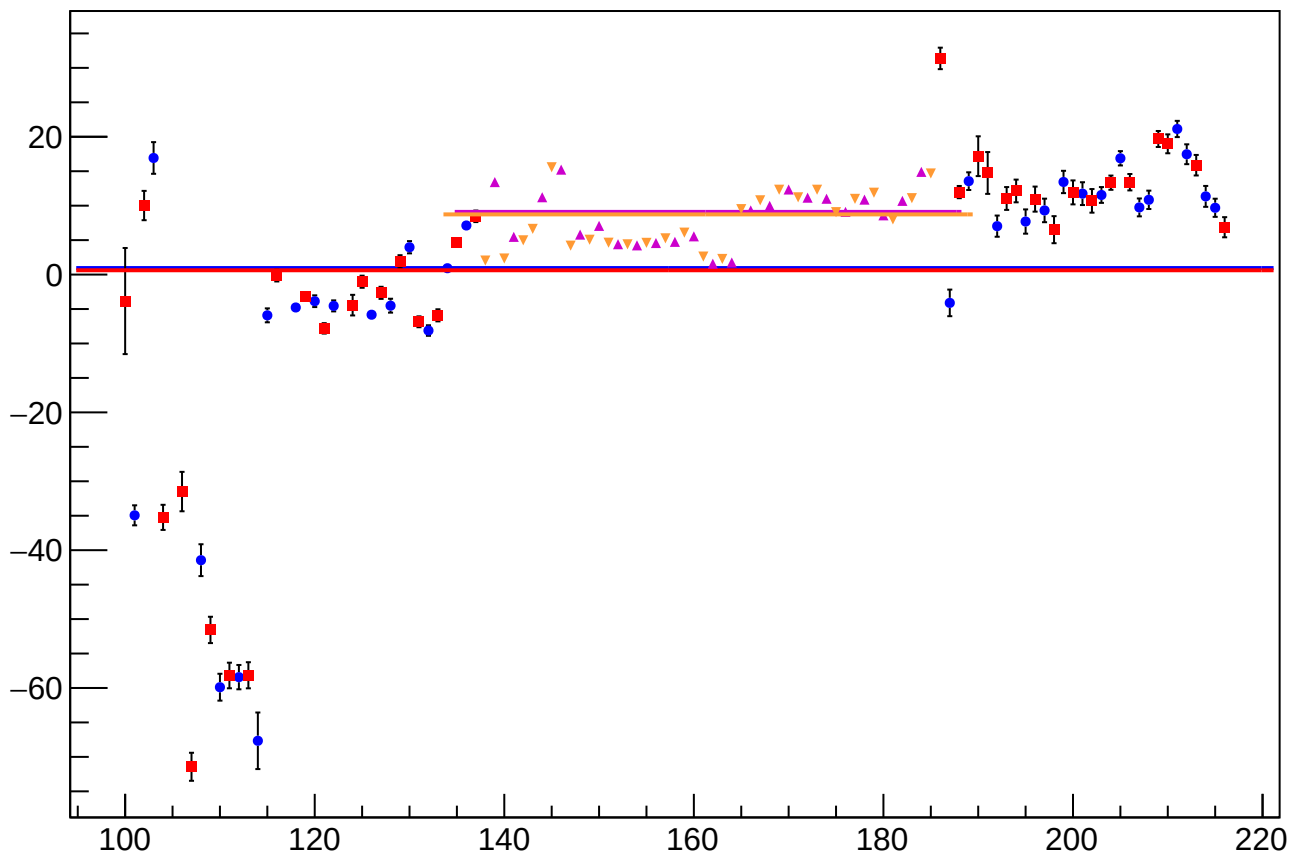
All:  $4.189 \pm 0.029$   $\chi^2/\text{NDF}$ : 15666.4/113

- sign  $4.043 \pm 0.041$   $\chi^2/\text{NDF}$ : 7504.0/57

# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eX\_slope vs Slug



# reg\_asym\_sam\_1526\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $0.944 \pm 0.181$   $\chi^2/\text{NDF}: 5265.6/30$

Left Out:  $8.735 \pm 0.046$   $\chi^2/\text{NDF}: 6875.5/24$

Right Out:  $0.627 \pm 0.195$   $\chi^2/\text{NDF}: 6621.5/34$

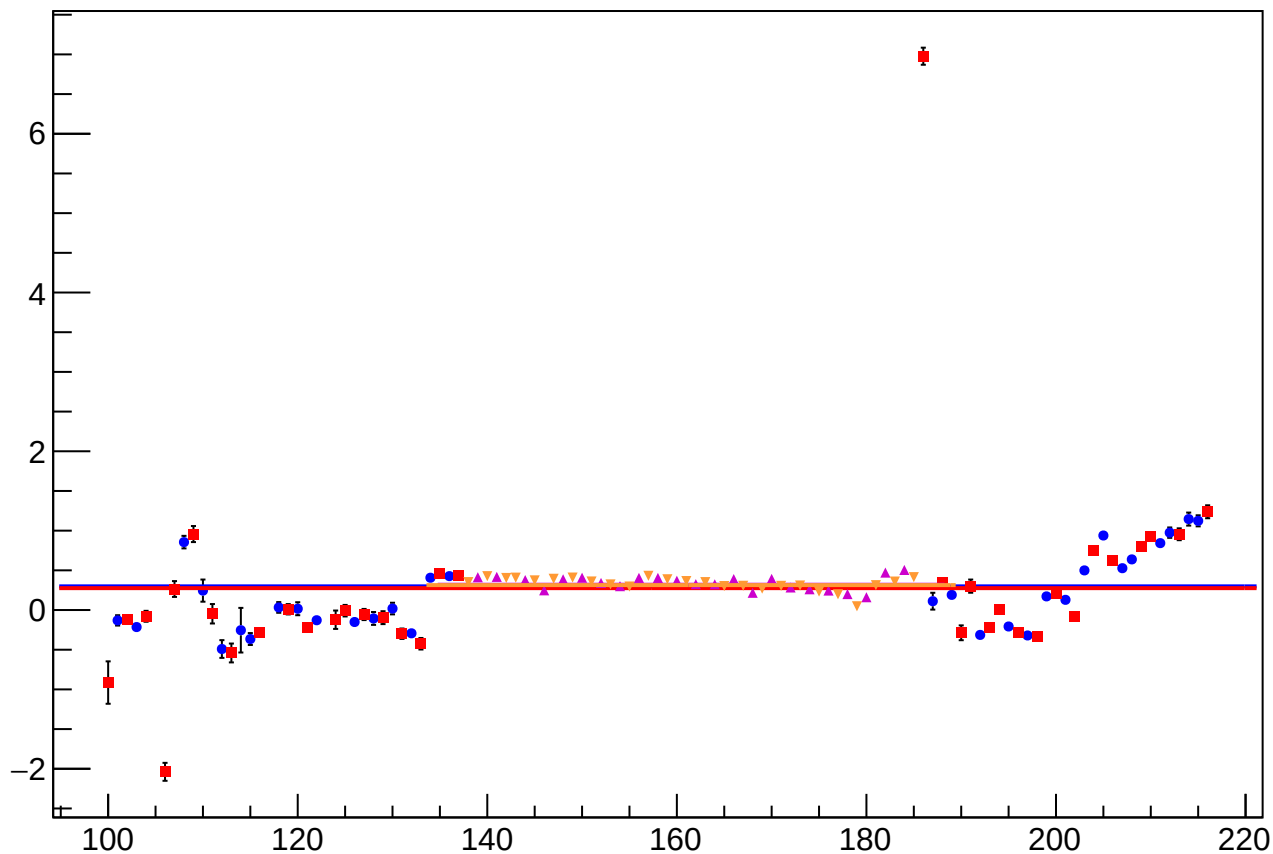
Left In:  $9.096 \pm 0.047$   $\chi^2/\text{NDF}: 5739.5/22$

+ sign  $8.258 \pm 0.045$   $\chi^2/\text{NDF}: 13879.7/55$

All:  $8.439 \pm 0.032$   $\chi^2/\text{NDF}: 28058.4/113$

- sign  $8.629 \pm 0.046$   $\chi^2/\text{NDF}: 14145.1/57$

reg\_asym\_sam\_1526\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.298 $\pm$ 0.009  $\chi^2$ /NDF: 1712.7/30

Left Out: 0.314 $\pm$ 0.002  $\chi^2$ /NDF:1602.1/24

Right Out: 0.276 $\pm$ 0.010  $\chi^2$ /NDF: 5991.4/34

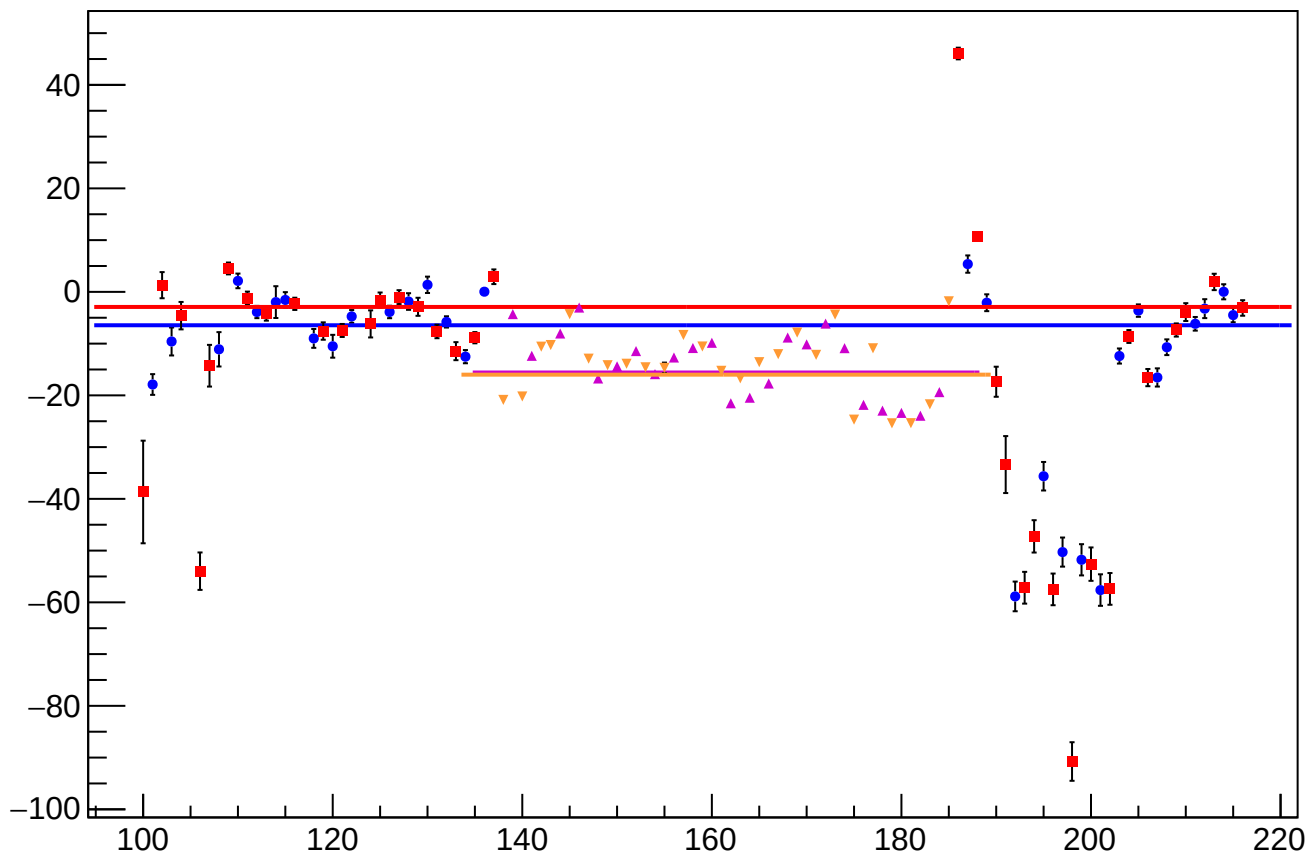
Left In: 0.319 $\pm$ 0.002  $\chi^2$ /NDF:1787.8/22

+ sign 0.313 $\pm$ 0.002  $\chi^2$ /NDF: 3317.8/55

All: 0.315 $\pm$ 0.001  $\chi^2$ /NDF: 11117.1/113

- sign 0.317 $\pm$ 0.002  $\chi^2$ /NDF: 7797.8/57

reg\_asym\_sam\_3726\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.452 \pm 0.272$   $\chi^2/\text{NDF}: 1583.5/30$

Left Out:  $-16.000 \pm 0.099$   $\chi^2/\text{NDF}: 5962.8/24$

Right Out:  $-2.913 \pm 0.273$   $\chi^2/\text{NDF}: 4588.6/34$

Left In:  $-15.582 \pm 0.102$   $\chi^2/\text{NDF}: 4759.9/22$

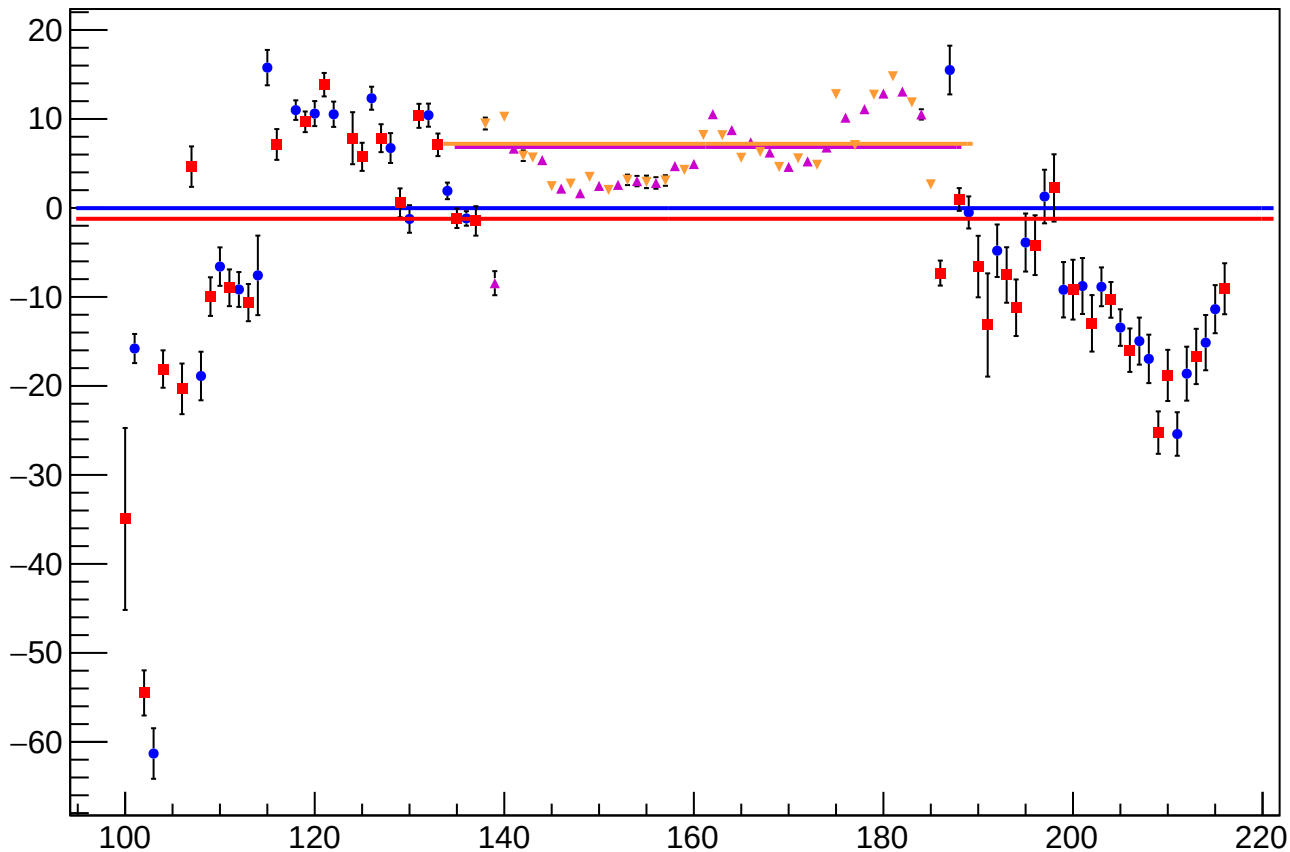
+ sign  $-14.879 \pm 0.093$   $\chi^2/\text{NDF}: 8630.0/55$

All:  $-14.466 \pm 0.067$   $\chi^2/\text{NDF}: 19906.0/113$

- sign  $-14.033 \pm 0.096$   $\chi^2/\text{NDF}: 11235.8/57$



# reg\_asym\_sam\_3726\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.021 \pm 0.315$   $\chi^2/\text{NDF}$ : 1464.6/30

Left Out:  $7.212 \pm 0.080$   $\chi^2/\text{NDF}$ : 2455.9/24

Right Out:  $-1.217 \pm 0.326$   $\chi^2/\text{NDF}$ : 1333.3/34

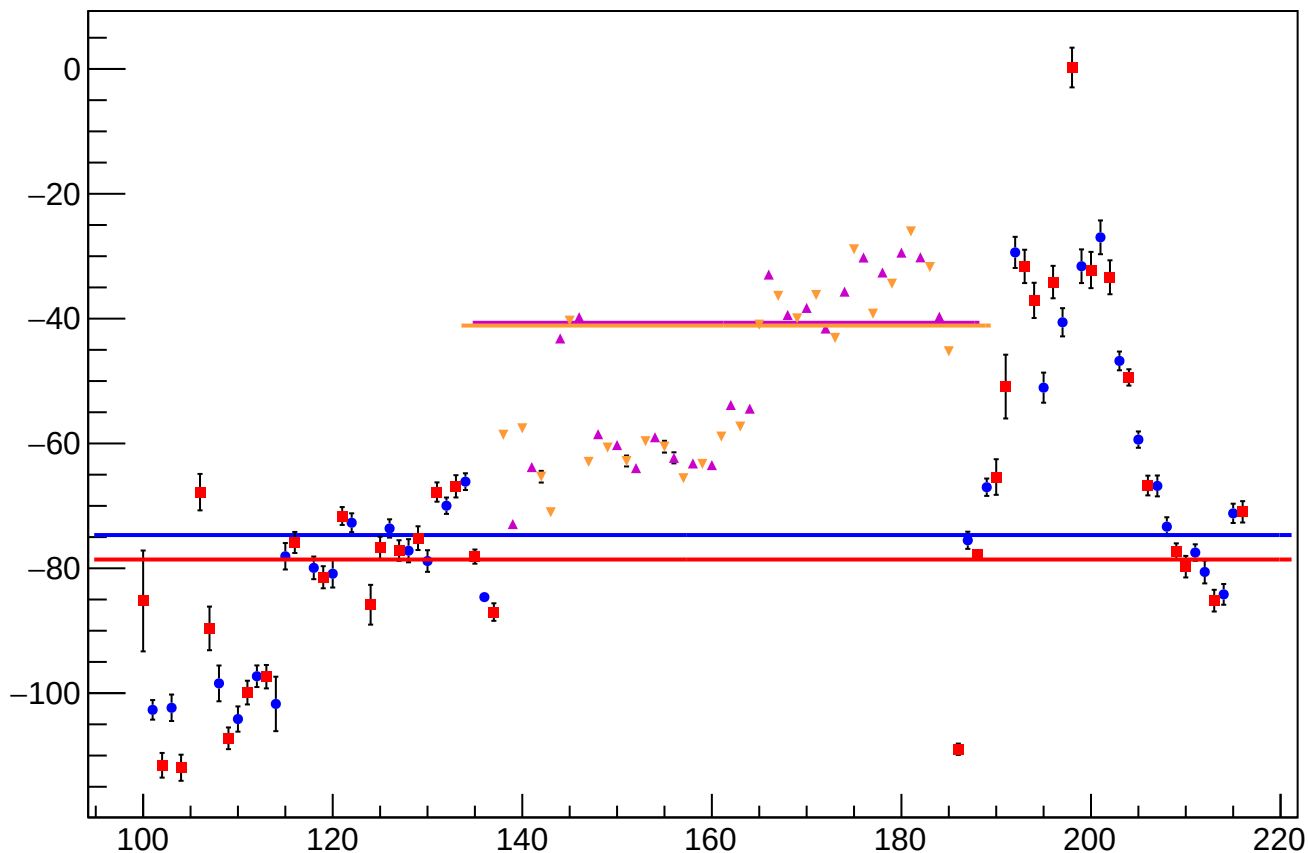
Left In:  $6.856 \pm 0.081$   $\chi^2/\text{NDF}$ : 2156.4/22

+ sign  $6.774 \pm 0.078$   $\chi^2/\text{NDF}$ : 4415.0/55

All:  $6.582 \pm 0.055$   $\chi^2/\text{NDF}$ : 8495.8/113

- sign  $6.385 \pm 0.079$   $\chi^2/\text{NDF}$ : 4068.4/57

# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-74.672 \pm 0.288$   $\chi^2/\text{NDF}: 3064.3/30$

Left Out:  $-41.111 \pm 0.100$   $\chi^2/\text{NDF}: 16000.8/24$

Right Out:  $-78.592 \pm 0.284$   $\chi^2/\text{NDF}: 4954.6/34$

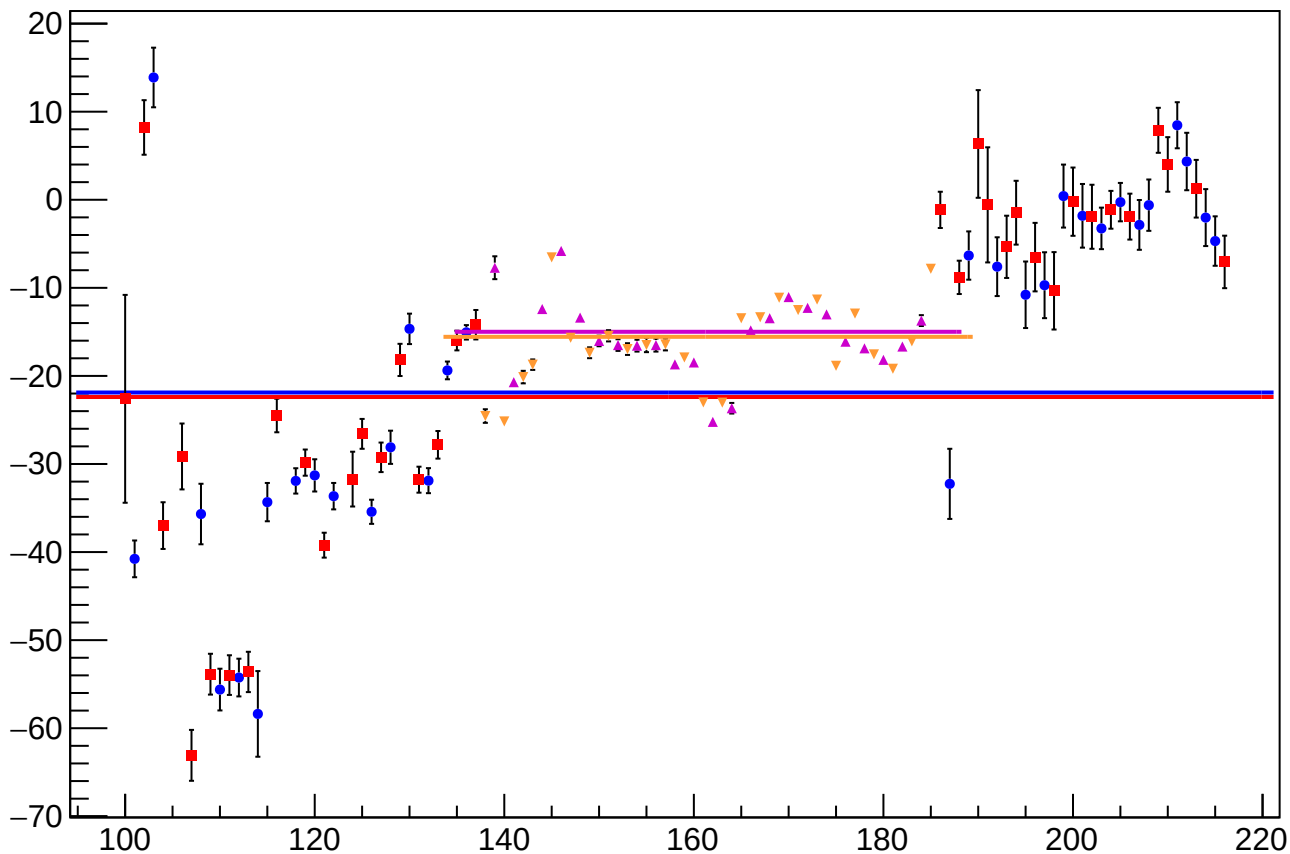
Left In:  $-40.665 \pm 0.102$   $\chi^2/\text{NDF}: 13541.3/22$

+ sign  $-44.732 \pm 0.094$   $\chi^2/\text{NDF}: 31217.6/55$

All:  $-44.877 \pm 0.067$   $\chi^2/\text{NDF}: 65552.6/113$

- sign  $-45.027 \pm 0.096$   $\chi^2/\text{NDF}: 34330.2/57$

# reg\_asym\_sam\_3726\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-21.883 \pm 0.352$   $\chi^2/\text{NDF}$ : 1797.8/30

Left Out:  $-15.562 \pm 0.089$   $\chi^2/\text{NDF}$ : 2549.5/24

Right Out:  $-22.395 \pm 0.373$   $\chi^2/\text{NDF}$ : 1999.2/34

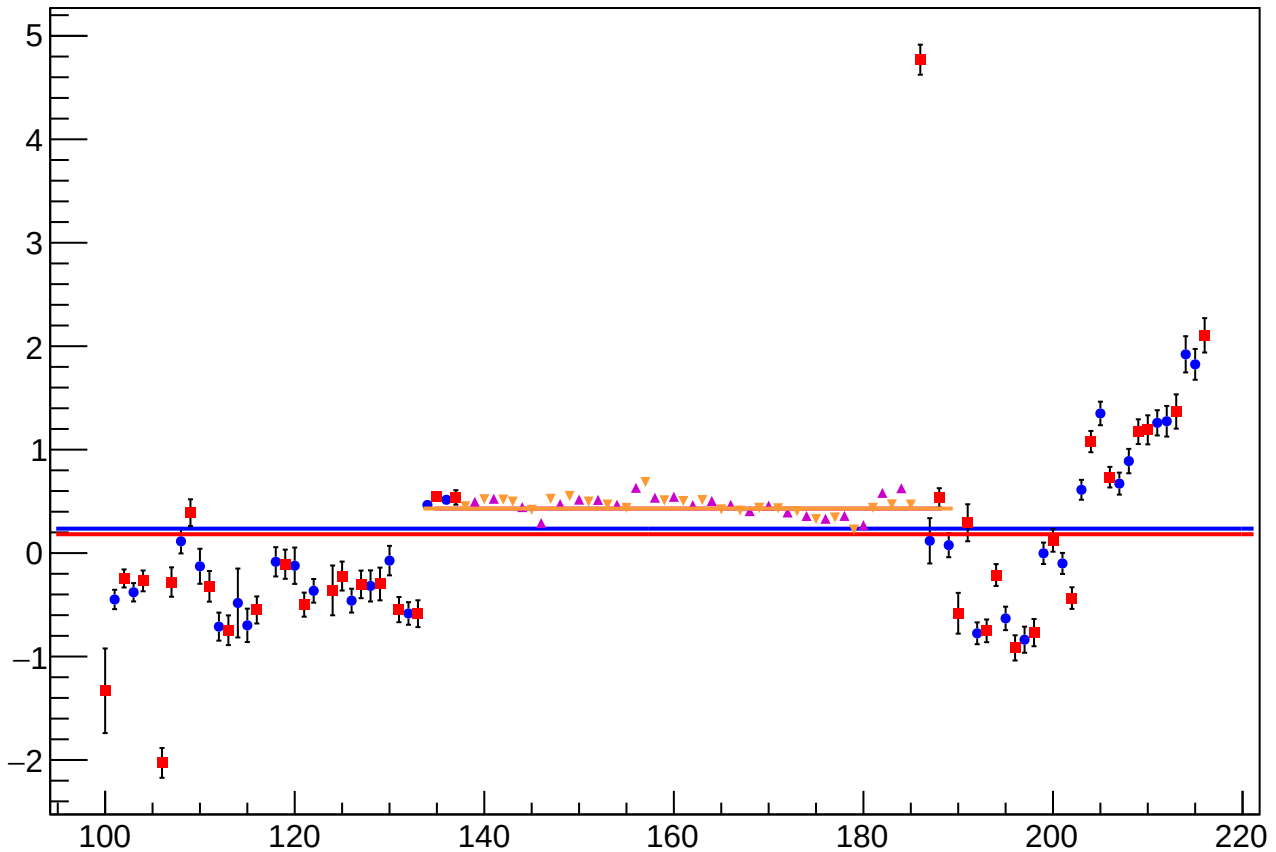
Left In:  $-14.990 \pm 0.090$   $\chi^2/\text{NDF}$ : 2150.9/22

+ sign  $-15.941 \pm 0.086$   $\chi^2/\text{NDF}$ : 4650.3/55

All:  $-15.675 \pm 0.061$   $\chi^2/\text{NDF}$ : 9192.3/113

- sign  $-15.400 \pm 0.088$   $\chi^2/\text{NDF}$ : 4522.6/57

# reg\_asym\_sam\_3726\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.236 \pm 0.018$   $\chi^2/\text{NDF}: 1159.9/30$

Left Out:  $0.431 \pm 0.004$   $\chi^2/\text{NDF}: 418.4/24$

Right Out:  $0.182 \pm 0.019$   $\chi^2/\text{NDF}: 2325.4/34$

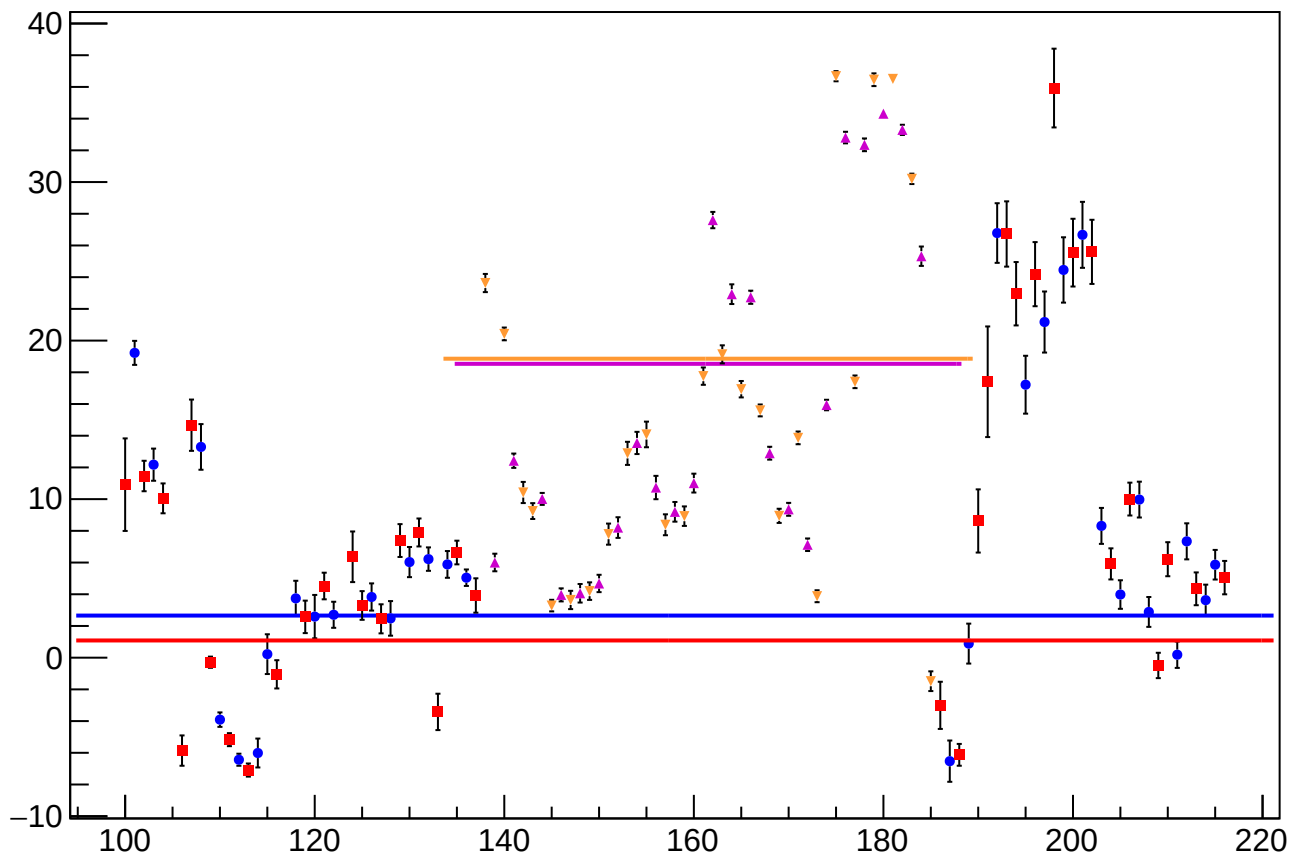
Left In:  $0.430 \pm 0.004$   $\chi^2/\text{NDF}: 583.6/22$

+ sign  $0.421 \pm 0.004$   $\chi^2/\text{NDF}: 1694.6/55$

All:  $0.420 \pm 0.003$   $\chi^2/\text{NDF}: 4766.1/113$

- sign  $0.419 \pm 0.004$   $\chi^2/\text{NDF}: 3071.4/57$

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 2.656 $\pm$ 0.157  $\chi^2$ /NDF: 2293.3/30

Left Out: 18.858 $\pm$ 0.090  $\chi^2$ /NDF:18374.1/24

Right Out: 1.086 $\pm$ 0.147  $\chi^2$ /NDF: 2379.9/34

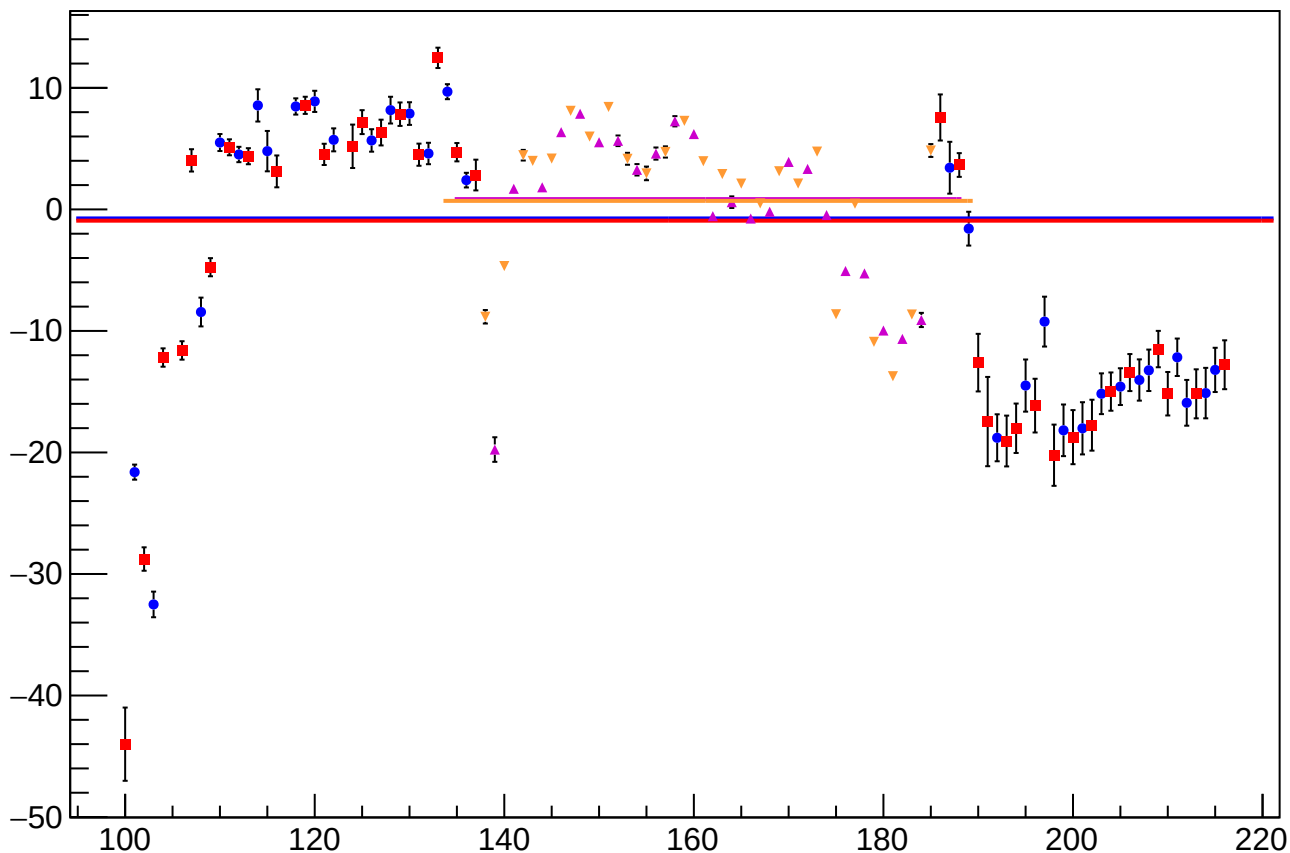
Left In: 18.535 $\pm$ 0.093  $\chi^2$ /NDF:14066.0/22

+ sign 14.813 $\pm$ 0.078  $\chi^2$ /NDF: 28684.7/55

All: 14.179 $\pm$ 0.056  $\chi^2$ /NDF: 55295.9/113

- sign 13.537 $\pm$ 0.079  $\chi^2$ /NDF: 26479.1/57

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.744 \pm 0.186$   $\chi^2/\text{NDF}$ : 3966.3/30

Left Out:  $0.702 \pm 0.071$   $\chi^2/\text{NDF}$ : 8237.8/24

Right Out:  $-0.927 \pm 0.184$   $\chi^2/\text{NDF}$ : 3270.6/34

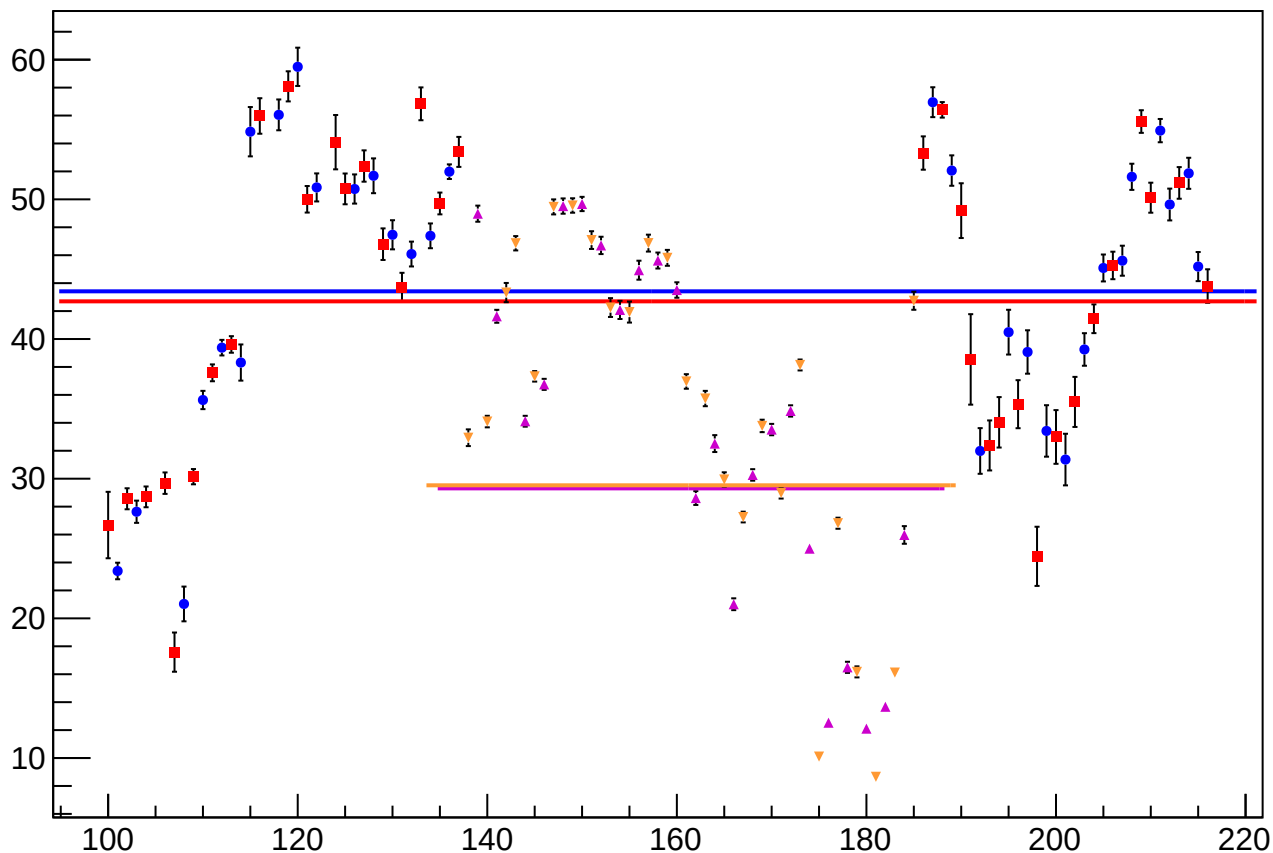
Left In:  $0.847 \pm 0.072$   $\chi^2/\text{NDF}$ : 6045.4/22

+ sign  $0.521 \pm 0.066$   $\chi^2/\text{NDF}$ : 12256.7/55

All:  $0.564 \pm 0.047$   $\chi^2/\text{NDF}$ : 21653.7/113

- sign  $0.610 \pm 0.067$   $\chi^2/\text{NDF}$ : 9396.1/57

# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 43.414 $\pm$ 0.172  $\chi^2$ /NDF: 3569.6/30

Left Out: 29.526 $\pm$ 0.091  $\chi^2$ /NDF:21083.7/24

Right Out: 42.697 $\pm$ 0.166  $\chi^2$ /NDF: 4116.7/34

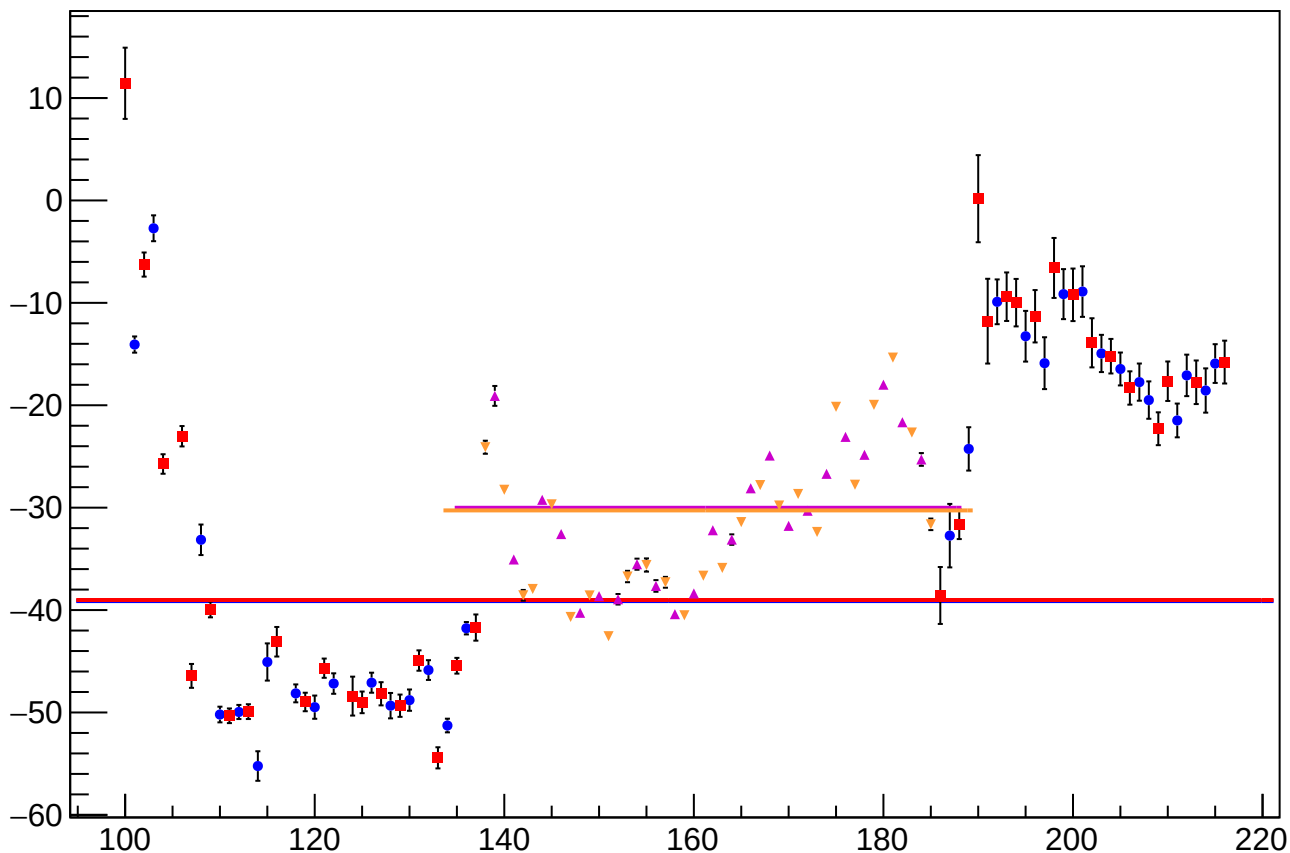
Left In: 29.306 $\pm$ 0.093  $\chi^2$ /NDF:17870.3/22

+ sign 32.540 $\pm$ 0.080  $\chi^2$ /NDF: 29755.0/55

All: 32.522 $\pm$ 0.057  $\chi^2$ /NDF: 56682.5/113

- sign 32.503 $\pm$ 0.081  $\chi^2$ /NDF: 26927.4/57

reg\_asym\_sam\_15\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-39.123 \pm 0.210$   $\chi^2/\text{NDF}$ : 5144.6/30

Left Out:  $-30.268 \pm 0.079$   $\chi^2/\text{NDF}$ : 8500.0/24

Right Out:  $-39.017 \pm 0.210$   $\chi^2/\text{NDF}$ : 4504.7/34

Left In:  $-30.012 \pm 0.081$   $\chi^2/\text{NDF}$ : 6083.1/22

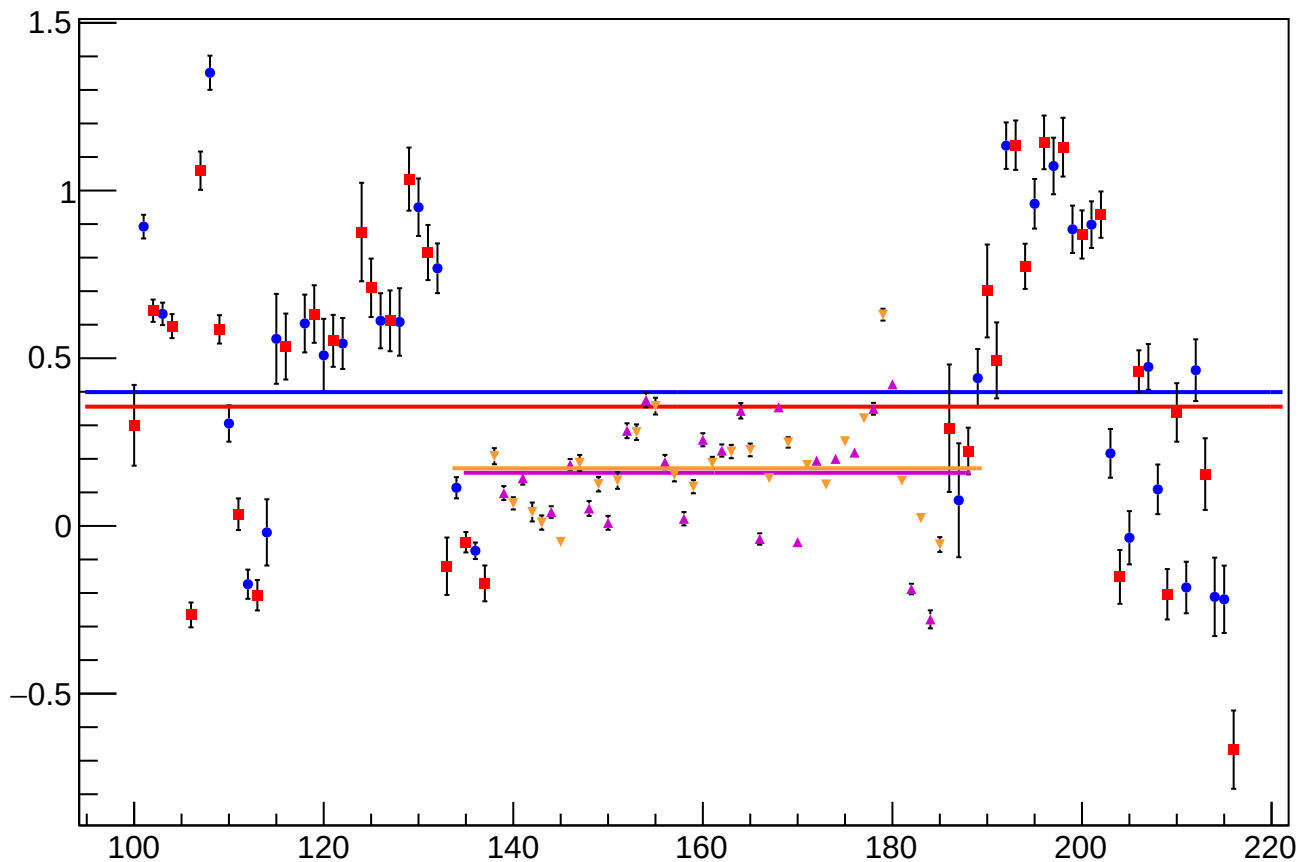
+ sign  $-31.369 \pm 0.074$   $\chi^2/\text{NDF}$ : 15196.5/55

All:  $-31.277 \pm 0.053$   $\chi^2/\text{NDF}$ : 27381.0/113

- sign  $-31.182 \pm 0.076$   $\chi^2/\text{NDF}$ : 12181.4/57



# reg\_asym\_sam\_15\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.399 \pm 0.011$   $\chi^2/\text{NDF}$ : 1839.8/30

Left Out:  $0.172 \pm 0.004$   $\chi^2/\text{NDF}$ : 1501.3/24

Right Out:  $0.356 \pm 0.010$   $\chi^2/\text{NDF}$ : 1861.8/34

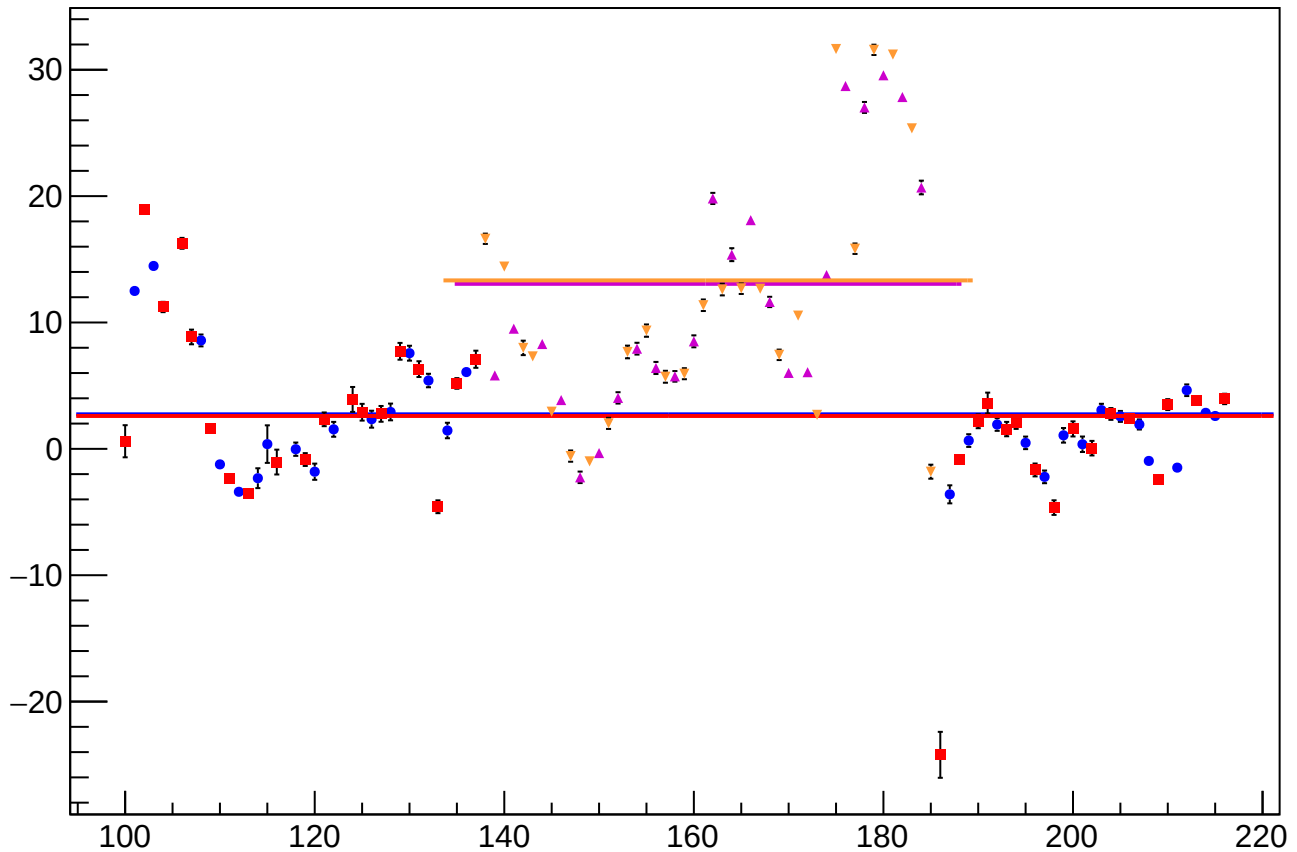
Left In:  $0.159 \pm 0.004$   $\chi^2/\text{NDF}$ : 2187.4/22

+ sign  $0.195 \pm 0.003$   $\chi^2/\text{NDF}$ : 3759.2/55

All:  $0.188 \pm 0.002$   $\chi^2/\text{NDF}$ : 8136.3/113

- sign  $0.180 \pm 0.003$   $\chi^2/\text{NDF}$ : 4366.9/57

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 2.731 $\pm$ 0.082  $\chi^2$ /NDF: 3352.0/30

Left Out: 13.331 $\pm$ 0.077  $\chi^2$ /NDF:19432.7/24

Right Out: 2.604 $\pm$ 0.078  $\chi^2$ /NDF: 5409.6/34

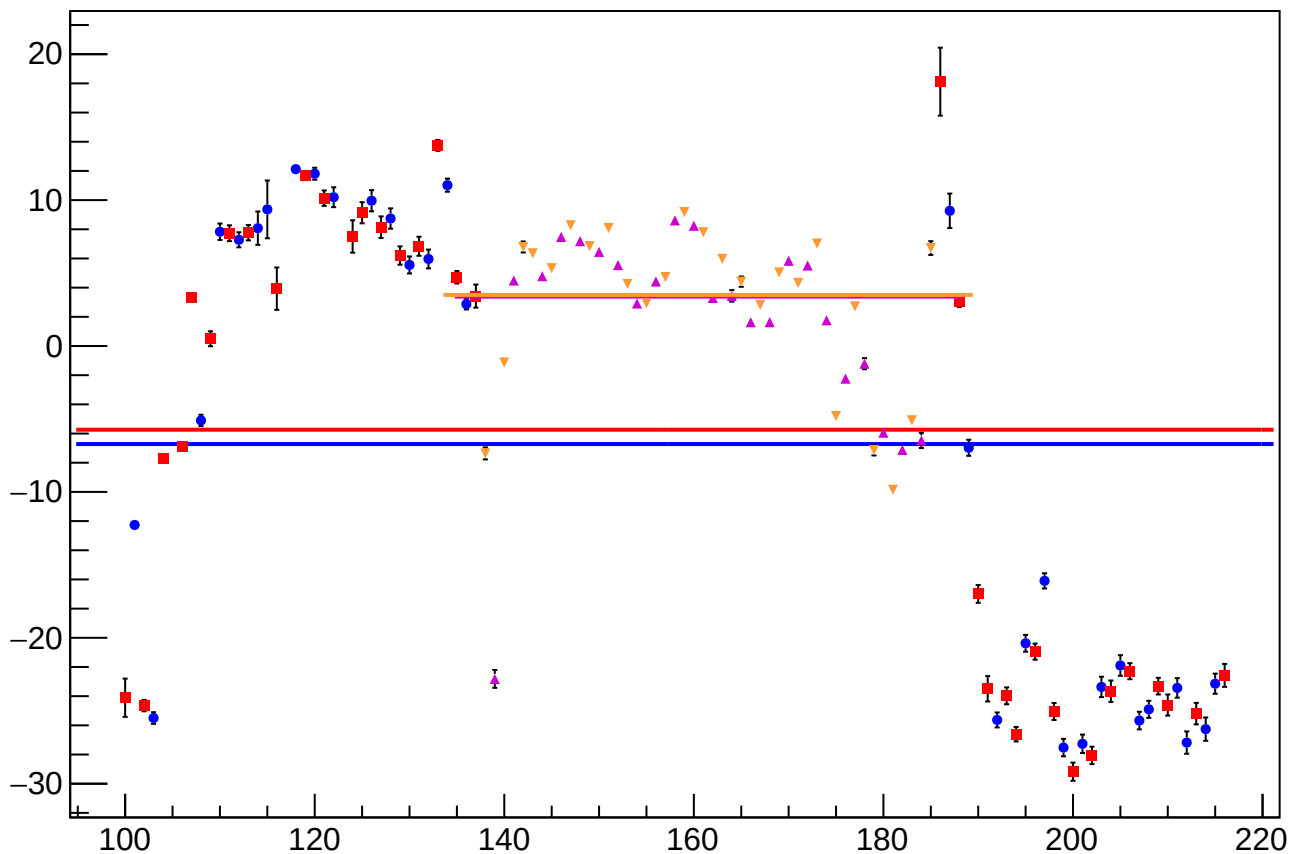
Left In: 13.061 $\pm$ 0.079  $\chi^2$ /NDF:15559.8/22

+ sign 8.382 $\pm$ 0.056  $\chi^2$ /NDF: 31684.8/55

All: 8.059 $\pm$ 0.039  $\chi^2$ /NDF: 61562.6/113

- sign 7.741 $\pm$ 0.056  $\chi^2$ /NDF: 29811.8/57

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-6.721 \pm 0.095$   $\chi^2/\text{NDF}: 24739.7/30$

Left Out:  $3.502 \pm 0.059$   $\chi^2/\text{NDF}: 7911.7/24$

Right Out:  $-5.737 \pm 0.090$   $\chi^2/\text{NDF}: 26753.7/34$

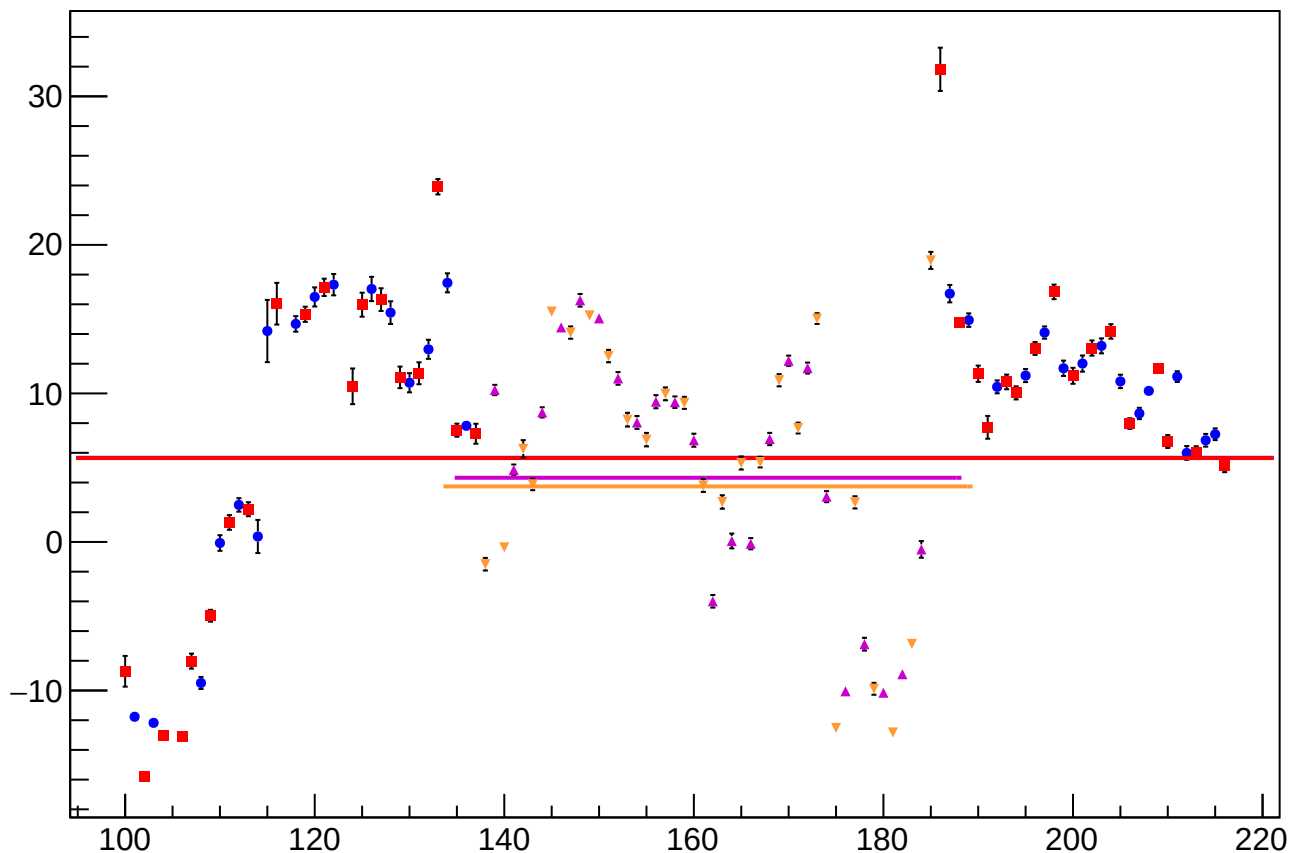
Left In:  $3.385 \pm 0.061$   $\chi^2/\text{NDF}: 6707.6/22$

+ sign  $0.674 \pm 0.050$   $\chi^2/\text{NDF}: 41083.4/55$

All:  $0.587 \pm 0.035$   $\chi^2/\text{NDF}: 81628.7/113$

- sign  $0.498 \pm 0.050$   $\chi^2/\text{NDF}: 40539.2/57$

# reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 5.666 $\pm$ 0.082  $\chi^2$ /NDF: 14147.1/30

Left Out: 3.738 $\pm$ 0.076  $\chi^2$ /NDF:15586.7/24

Right Out: 5.647 $\pm$ 0.077  $\chi^2$ /NDF: 20397.4/34

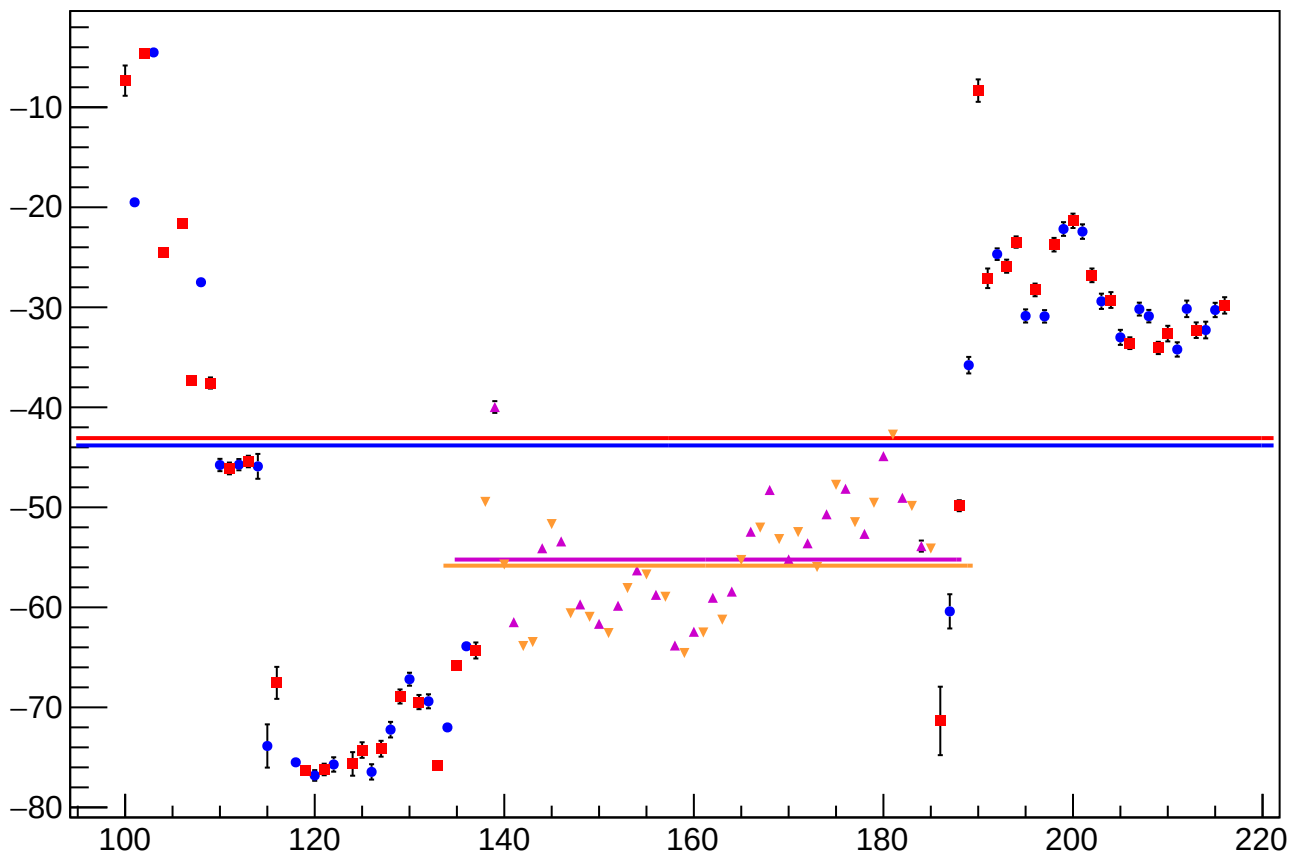
Left In: 4.322 $\pm$ 0.079  $\chi^2$ /NDF:12483.3/22

+ sign 4.639 $\pm$ 0.056  $\chi^2$ /NDF: 30031.3/55

All: 4.820 $\pm$ 0.039  $\chi^2$ /NDF: 63077.3/113

- sign 4.997 $\pm$ 0.055  $\chi^2$ /NDF: 33025.2/57

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-43.812 \pm 0.110$   $\chi^2/\text{NDF}: 43144.7/30$

Left Out:  $-55.832 \pm 0.066$   $\chi^2/\text{NDF}: 7592.5/24$

Right Out:  $-43.079 \pm 0.105$   $\chi^2/\text{NDF}: 44266.3/34$

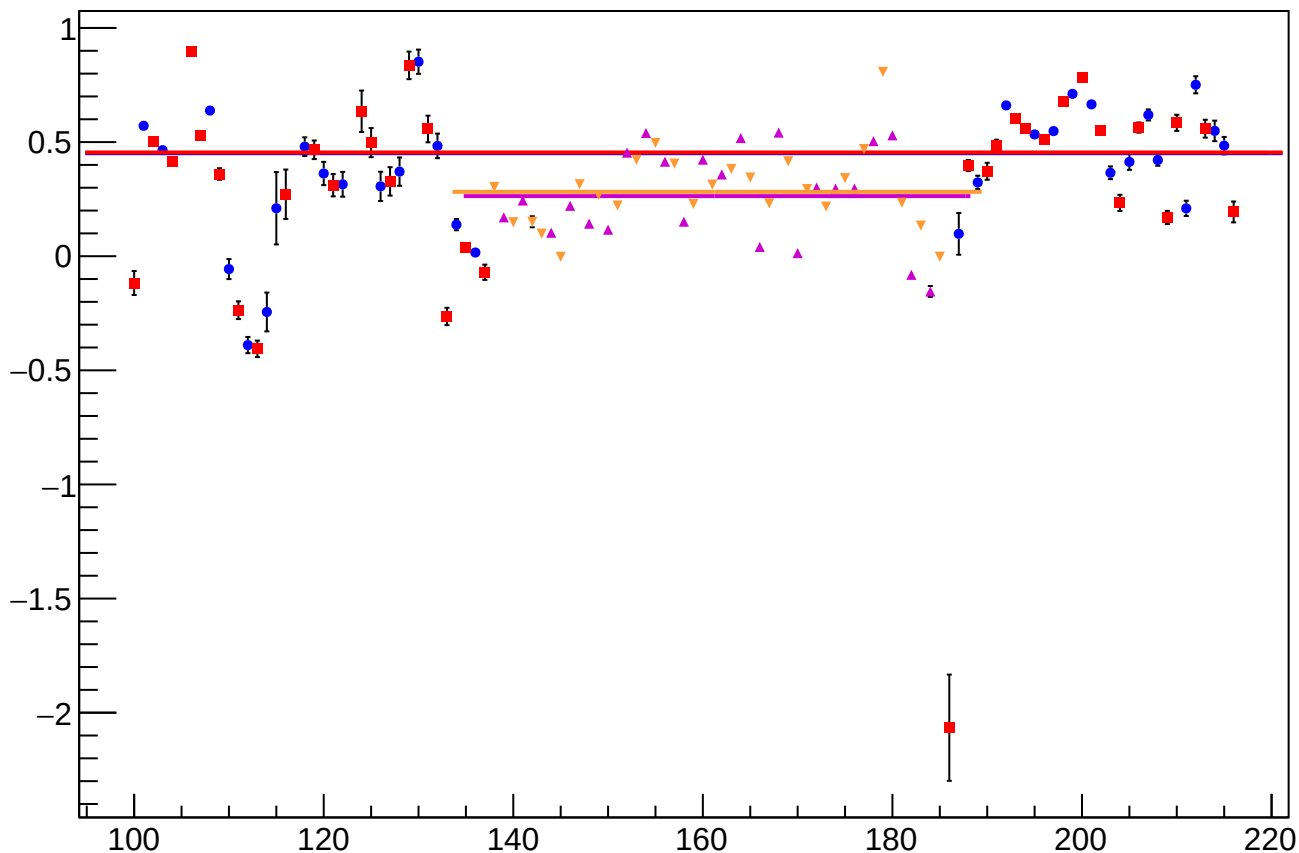
Left In:  $-55.222 \pm 0.069$   $\chi^2/\text{NDF}: 6343.0/22$

+ sign  $-52.612 \pm 0.057$   $\chi^2/\text{NDF}: 59530.8/55$

All:  $-52.115 \pm 0.040$   $\chi^2/\text{NDF}: 119603.2/113$

- sign  $-51.603 \pm 0.058$   $\chi^2/\text{NDF}: 59916.8/57$

reg\_asym\_sam\_37\_48\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $0.451 \pm 0.005$   $\chi^2/\text{NDF}$ : 2729.7/30

Left Out:  $0.282 \pm 0.003$   $\chi^2/\text{NDF}$ : 2712.4/24

Right Out:  $0.455 \pm 0.004$   $\chi^2/\text{NDF}$ : 3802.5/34

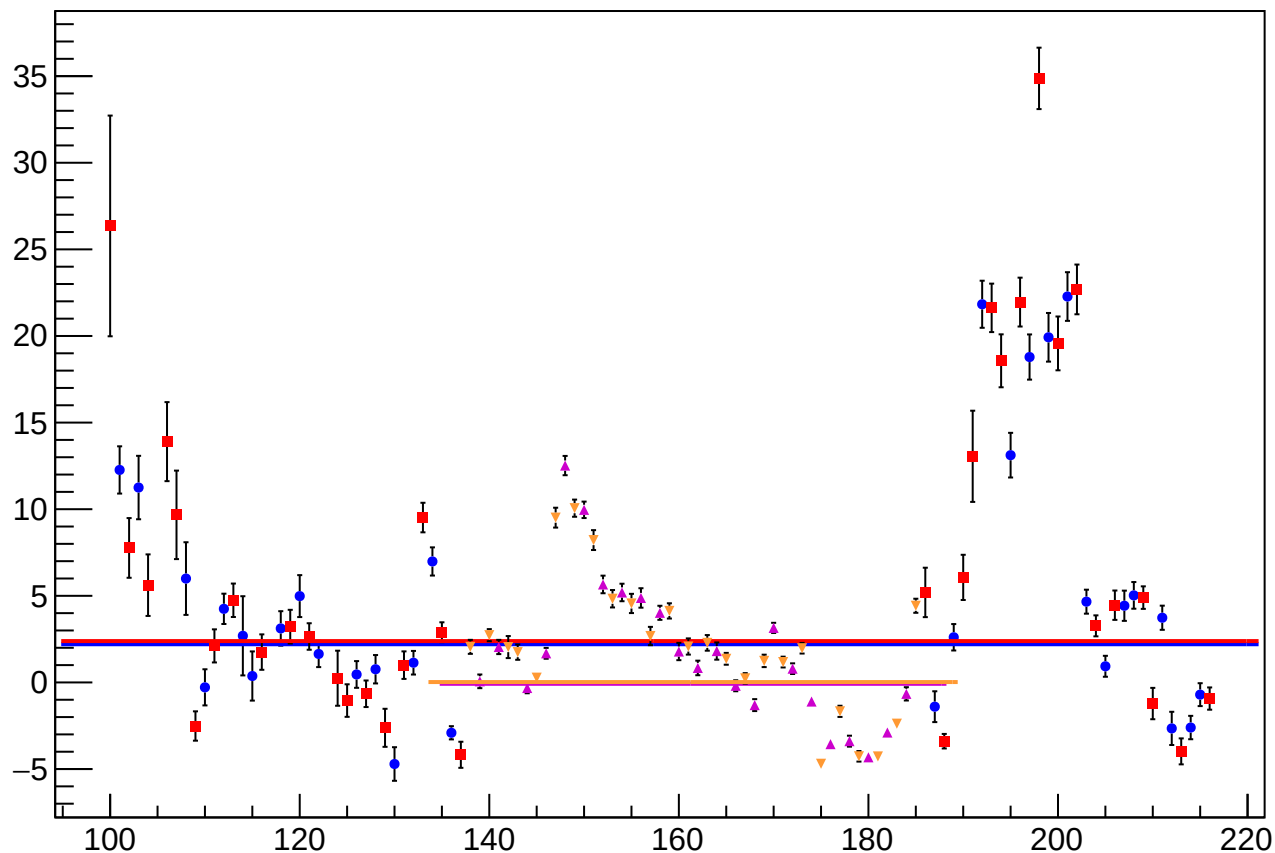
Left In:  $0.263 \pm 0.003$   $\chi^2/\text{NDF}$ : 3835.8/22

+ sign  $0.332 \pm 0.003$   $\chi^2/\text{NDF}$ : 6393.3/55

All:  $0.329 \pm 0.002$   $\chi^2/\text{NDF}$ : 15332.4/113

- sign  $0.326 \pm 0.002$   $\chi^2/\text{NDF}$ : 8935.8/57

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 2.204 $\pm$ 0.152  $\chi^2$ /NDF: 1336.3/30

Left Out: 0.022 $\pm$ 0.069  $\chi^2$ /NDF: 2759.3/24

Right Out: 2.387 $\pm$ 0.155  $\chi^2$ /NDF: 1810.4/34

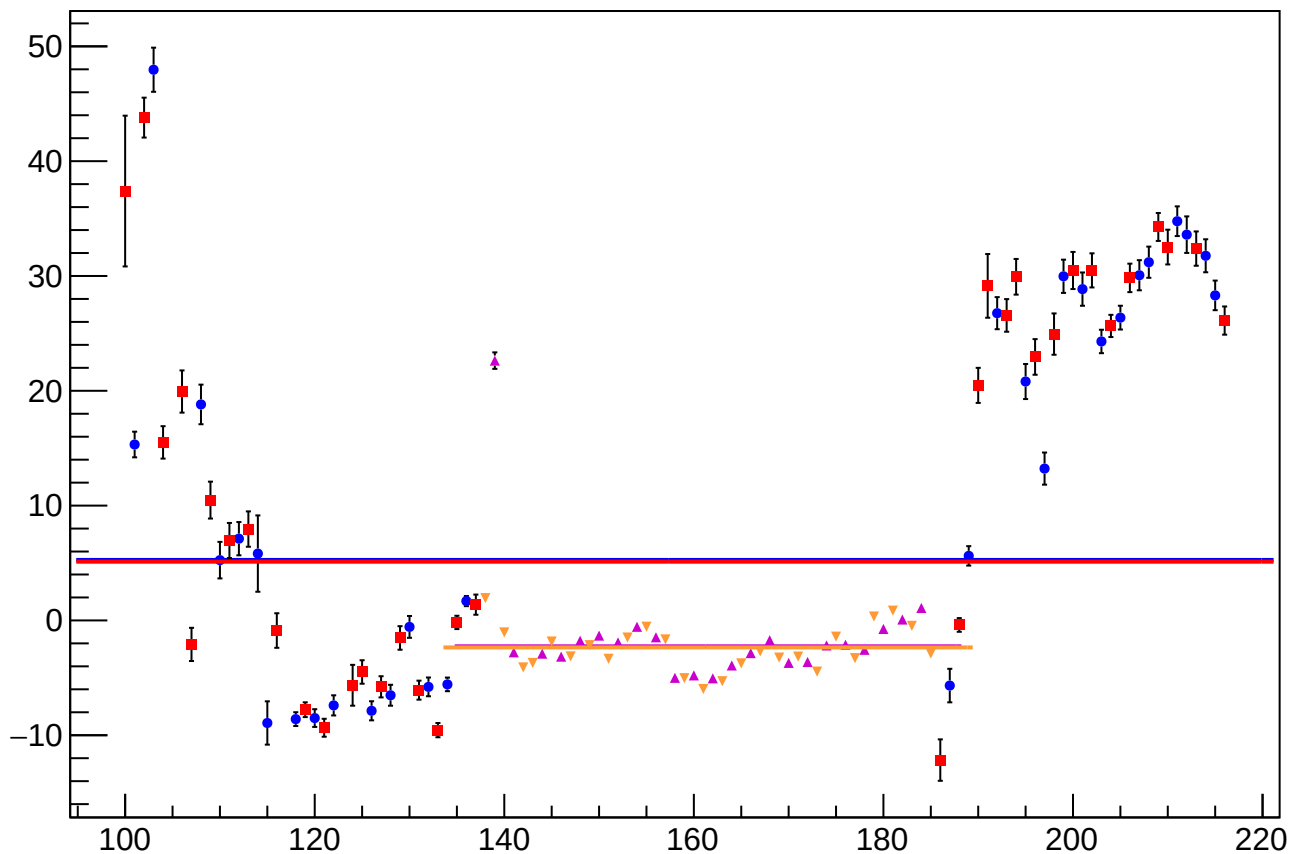
Left In: -0.080 $\pm$ 0.071  $\chi^2$ /NDF: 2464.5/22

+ sign 0.391 $\pm$ 0.062  $\chi^2$ /NDF: 4267.2/55

All: 0.369 $\pm$ 0.045  $\chi^2$ /NDF: 8752.0/113

- sign 0.345 $\pm$ 0.064  $\chi^2$ /NDF: 4484.5/57

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 5.268 $\pm$ 0.180  $\chi^2$ /NDF: 6757.2/30

Left Out: -2.352 $\pm$ 0.055  $\chi^2$ /NDF:1125.6/24

Right Out: 5.116 $\pm$ 0.185  $\chi^2$ /NDF: 6591.7/34

Left In: -2.257 $\pm$ 0.056  $\chi^2$ /NDF:1877.2/22

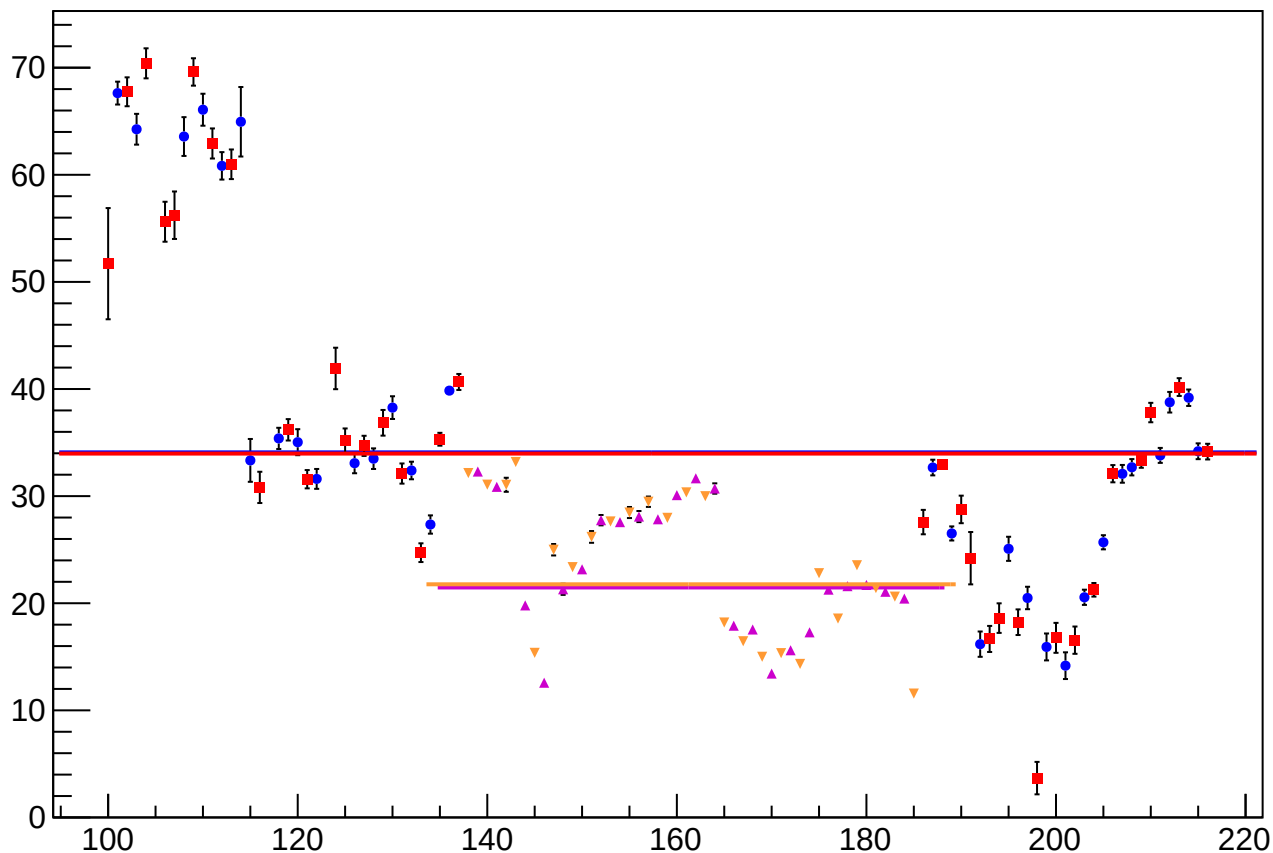
+ sign -1.698 $\pm$ 0.053  $\chi^2$ /NDF: 9525.1/55

All: -1.665 $\pm$ 0.038  $\chi^2$ /NDF: 19446.0/113

- sign -1.631 $\pm$ 0.054  $\chi^2$ /NDF: 9920.1/57



# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 34.085 $\pm$ 0.157  $\chi^2$ /NDF: 4660.0/30

Left Out: 21.768 $\pm$ 0.069  $\chi^2$ /NDF: 6814.2/24

Right Out: 33.972 $\pm$ 0.157  $\chi^2$ /NDF: 5168.2/34

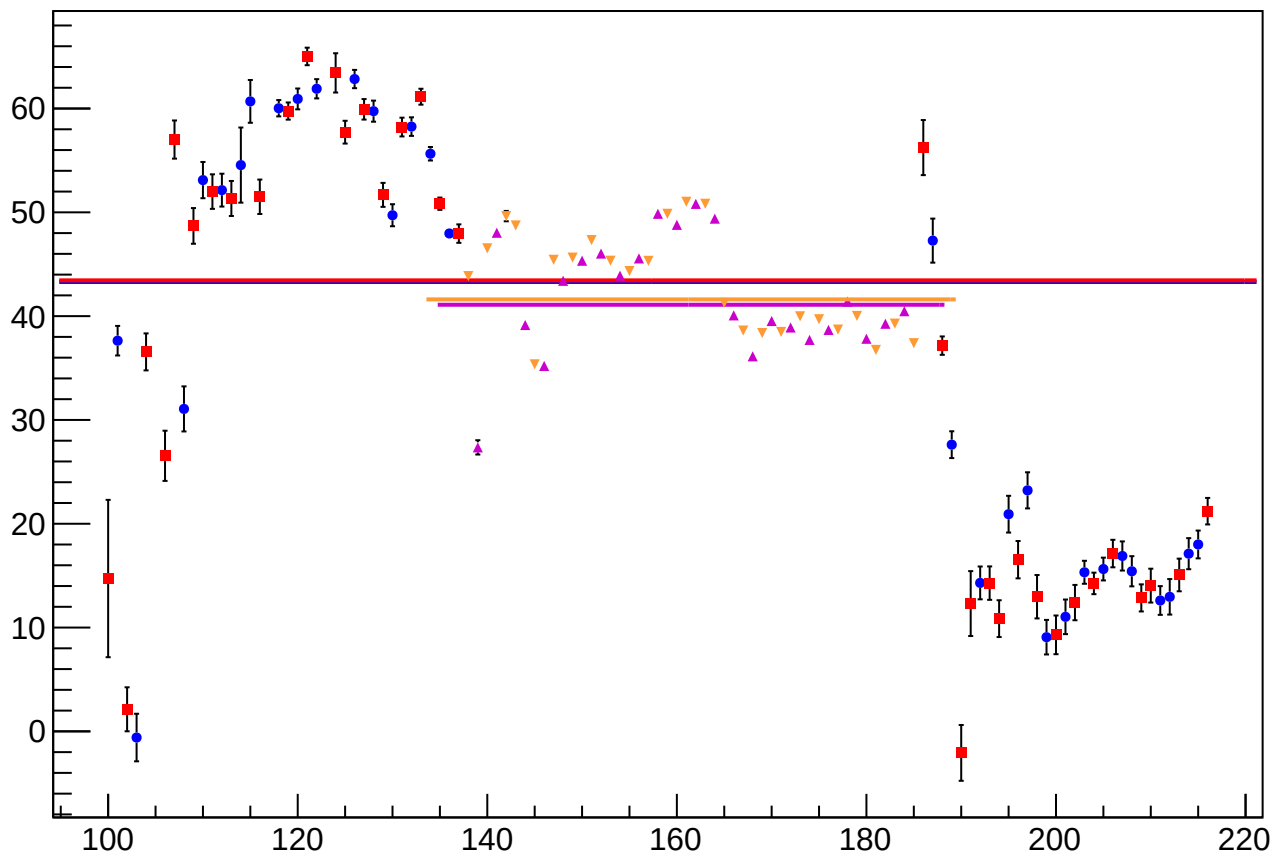
Left In: 21.472 $\pm$ 0.071  $\chi^2$ /NDF: 5787.4/22

+ sign 23.759 $\pm$ 0.063  $\chi^2$ /NDF: 16643.6/55

All: 23.668 $\pm$ 0.045  $\chi^2$ /NDF: 32873.2/113

- sign 23.574 $\pm$ 0.064  $\chi^2$ /NDF: 16225.4/57

# reg\_asym\_sam\_15\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 43.293 $\pm$ 0.202  $\chi^2$ /NDF: 8305.7/30

Left Out: 41.613 $\pm$ 0.061  $\chi^2$ /NDF: 5776.0/24

Right Out: 43.446 $\pm$ 0.212  $\chi^2$ /NDF: 8150.1/34

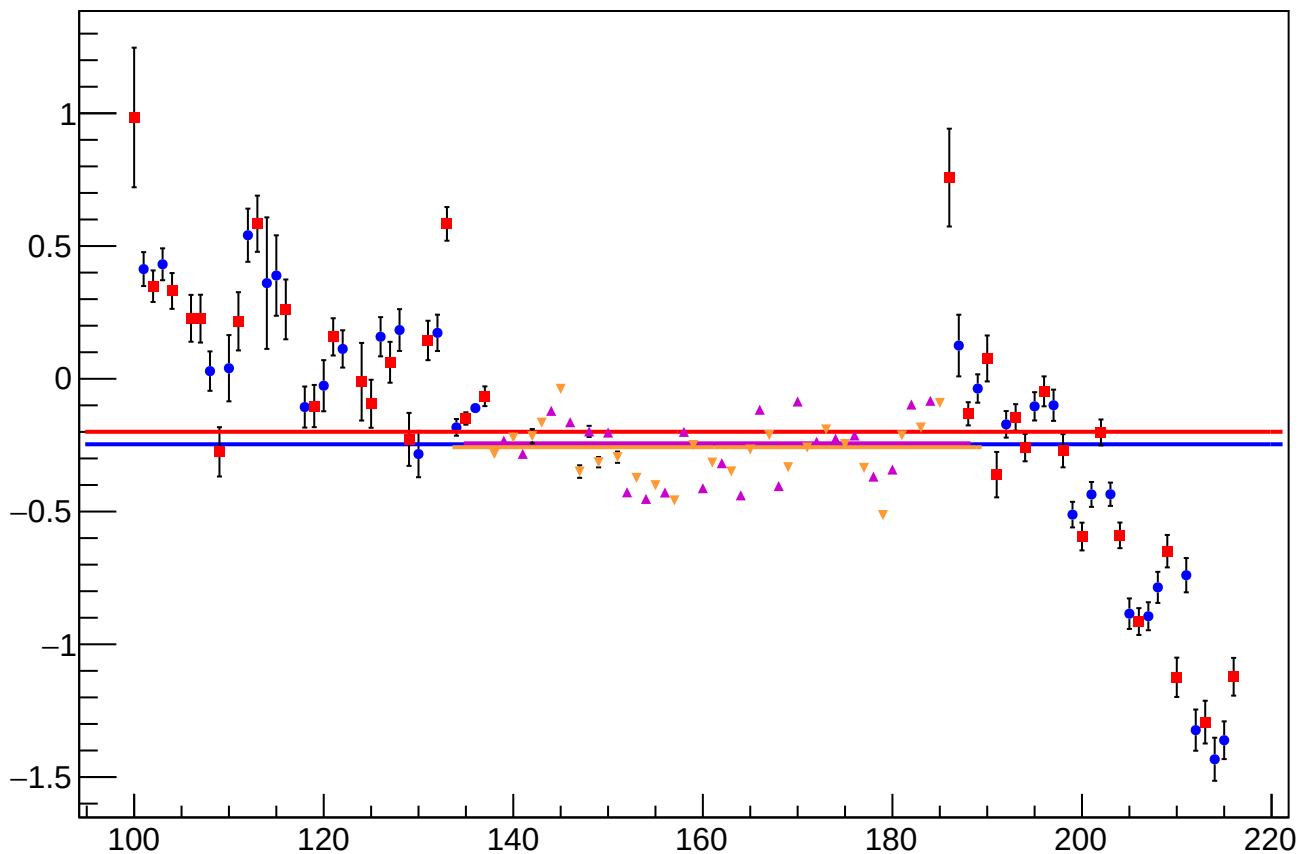
Left In: 41.098 $\pm$ 0.063  $\chi^2$ /NDF: 5478.0/22

+ sign 41.755 $\pm$ 0.059  $\chi^2$ /NDF: 14145.3/55

All: 41.527 $\pm$ 0.042  $\chi^2$ /NDF: 27917.4/113

- sign 41.286 $\pm$ 0.060  $\chi^2$ /NDF: 13740.9/57

reg\_asym\_sam\_15\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.247 \pm 0.010$   $\chi^2/\text{NDF}$ : 1706.7/30

Left Out:  $-0.258 \pm 0.003$   $\chi^2/\text{NDF}$ : 1515.1/24

Right Out:  $-0.200 \pm 0.010$   $\chi^2/\text{NDF}$ : 1474.2/34

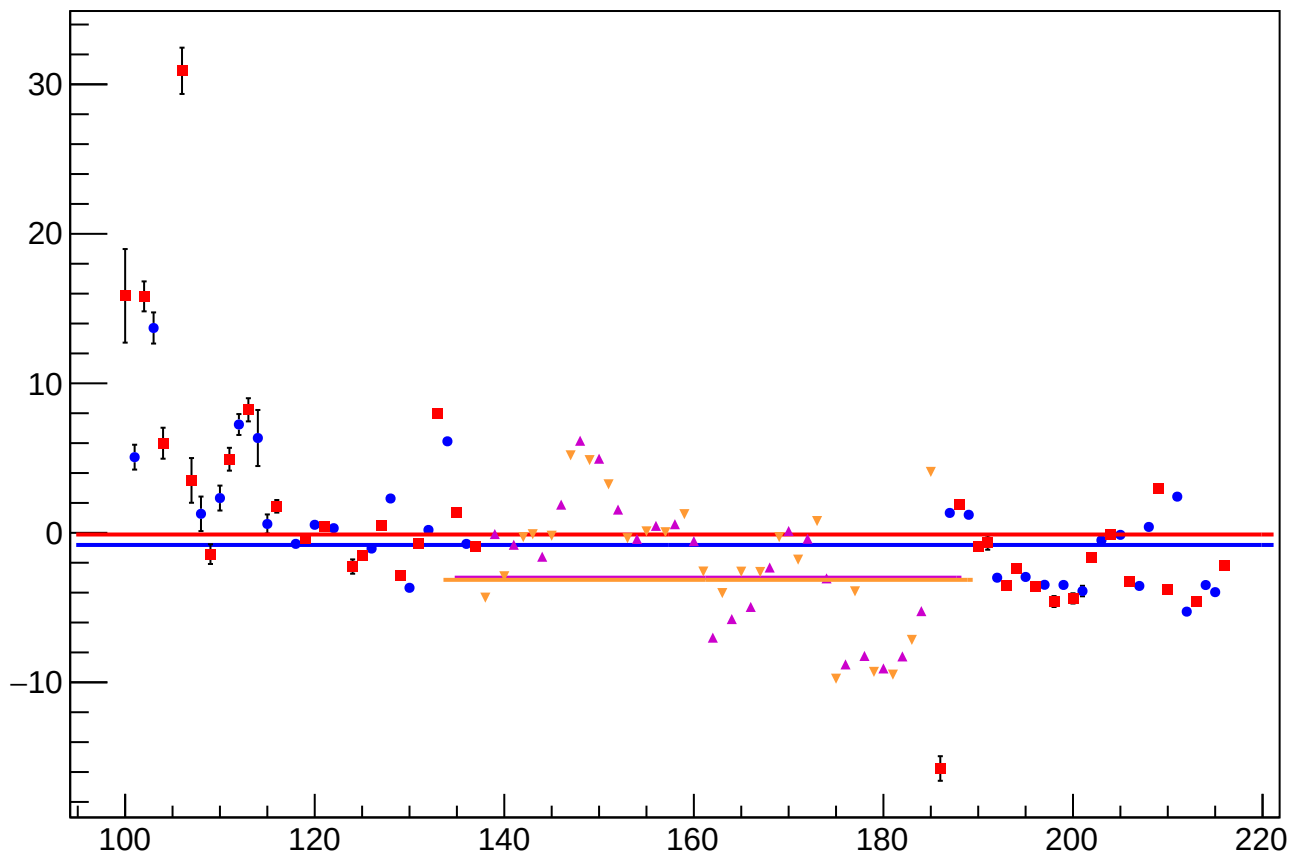
Left In:  $-0.243 \pm 0.003$   $\chi^2/\text{NDF}$ : 1811.8/22

+ sign  $-0.257 \pm 0.003$   $\chi^2/\text{NDF}$ : 3223.0/55

All:  $-0.249 \pm 0.002$   $\chi^2/\text{NDF}$ : 6545.6/113

- sign  $-0.240 \pm 0.003$   $\chi^2/\text{NDF}$ : 3302.8/57

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.811 \pm 0.046$   $\chi^2/\text{NDF}$ : 3198.7/30

Left Out:  $-3.144 \pm 0.028$   $\chi^2/\text{NDF}$ : 25358.6/24

Right Out:  $-0.112 \pm 0.046$   $\chi^2/\text{NDF}$ : 5660.5/34

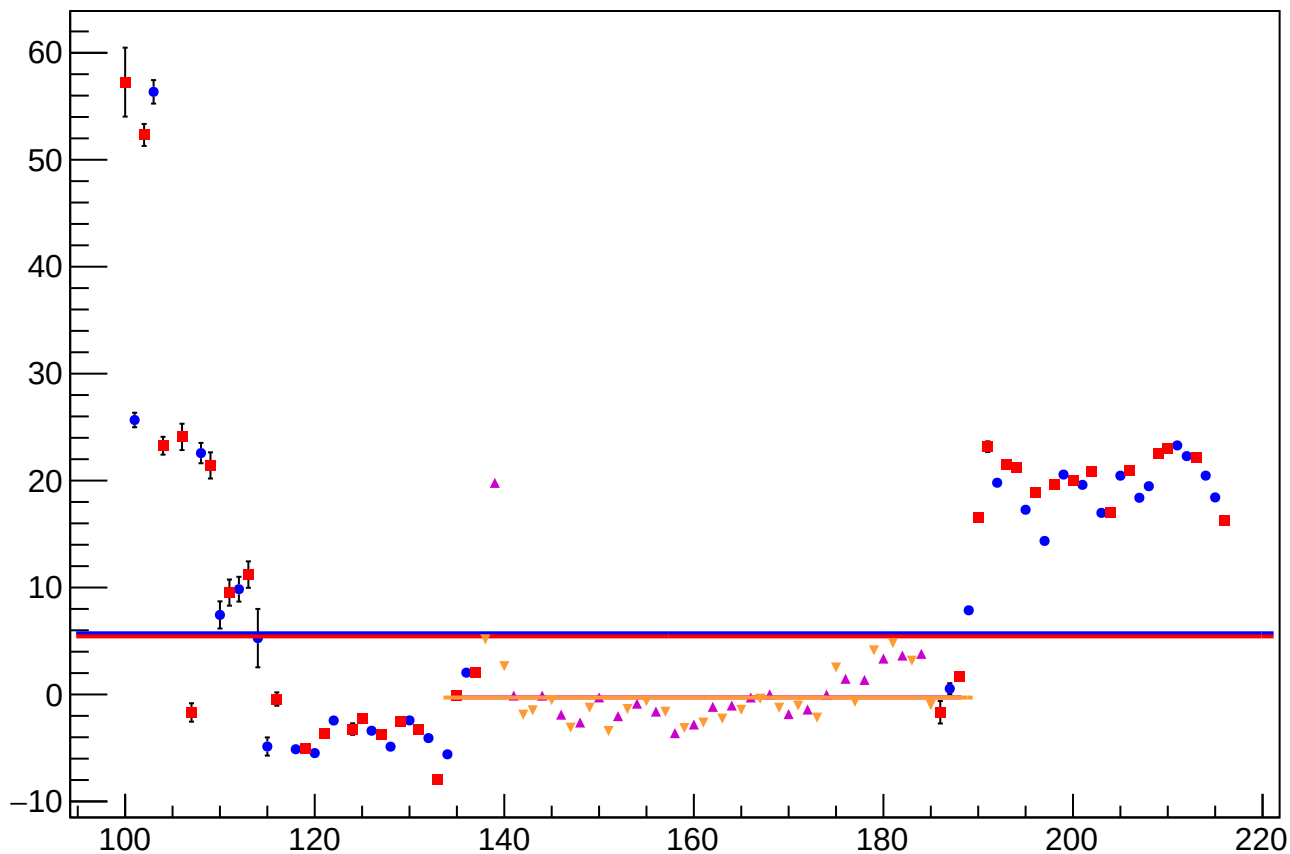
Left In:  $-2.999 \pm 0.028$   $\chi^2/\text{NDF}$ : 22425.0/22

+ sign  $-2.521 \pm 0.024$   $\chi^2/\text{NDF}$ : 30450.6/55

All:  $-2.358 \pm 0.017$   $\chi^2/\text{NDF}$ : 61519.6/113

- sign  $-2.189 \pm 0.024$   $\chi^2/\text{NDF}$ : 30973.0/57

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $5.721 \pm 0.054$   $\chi^2/\text{NDF}$ : 44442.8/30

Left Out:  $-0.288 \pm 0.022$   $\chi^2/\text{NDF}$ : 12198.2/24

Right Out:  $5.431 \pm 0.053$   $\chi^2/\text{NDF}$ : 52222.5/34

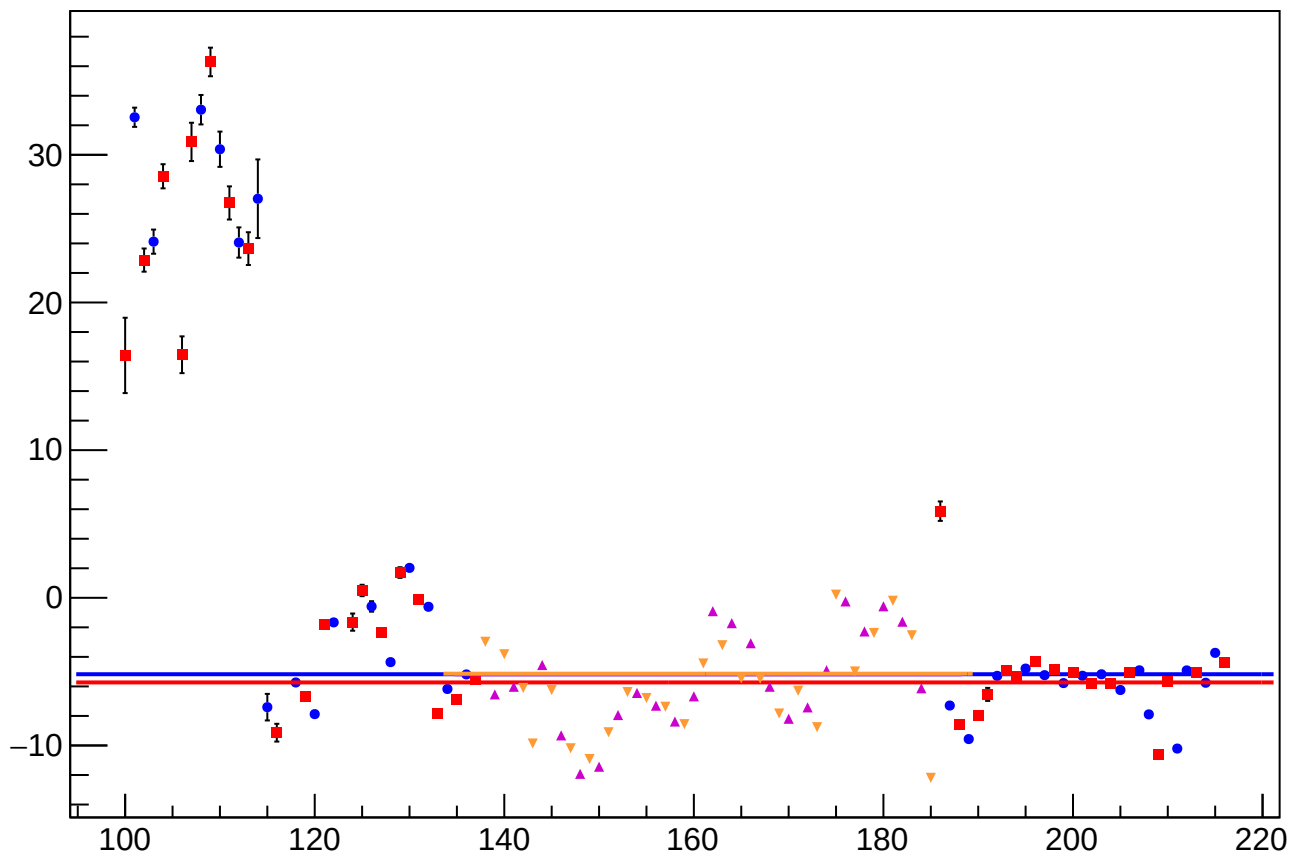
Left In:  $-0.271 \pm 0.022$   $\chi^2/\text{NDF}$ : 13220.8/22

+ sign  $0.554 \pm 0.020$   $\chi^2/\text{NDF}$ : 67280.4/55

All:  $0.576 \pm 0.014$   $\chi^2/\text{NDF}$ : 142704.2/113

- sign  $0.599 \pm 0.021$   $\chi^2/\text{NDF}$ : 75421.4/57

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-5.175 \pm 0.046$   $\chi^2/\text{NDF}$ : 10760.5/30

Left Out:  $-5.138 \pm 0.028$   $\chi^2/\text{NDF}$ : 14626.0/24

Right Out:  $-5.730 \pm 0.045$   $\chi^2/\text{NDF}$ : 11541.2/34

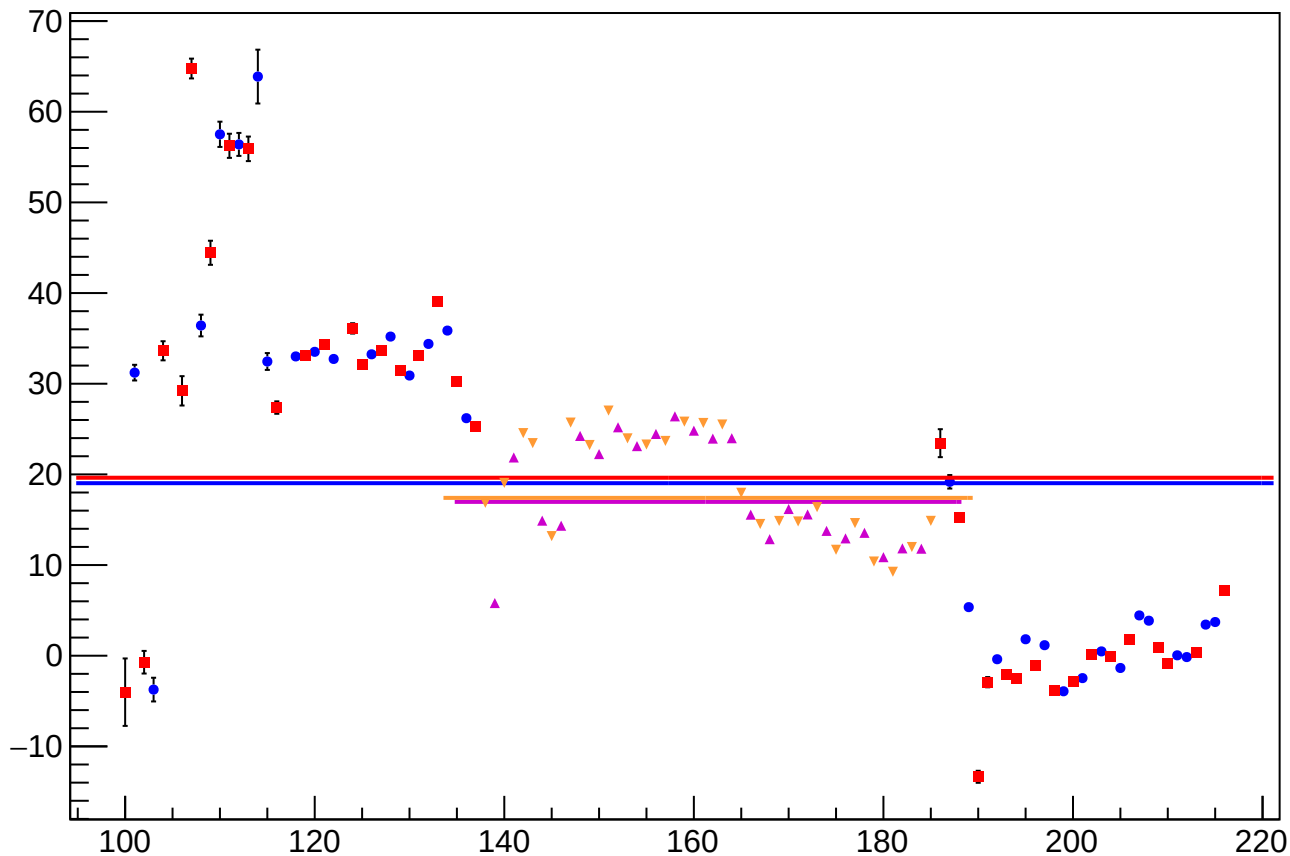
Left In:  $-5.177 \pm 0.028$   $\chi^2/\text{NDF}$ : 13963.7/22

+ sign  $-5.148 \pm 0.024$   $\chi^2/\text{NDF}$ : 25387.0/55

All:  $-5.242 \pm 0.017$   $\chi^2/\text{NDF}$ : 51032.7/113

- sign  $-5.337 \pm 0.024$   $\chi^2/\text{NDF}$ : 25614.3/57

# reg\_asym\_sam\_37\_26\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $19.029 \pm 0.062$   $\chi^2/\text{NDF}: 64884.6/30$

Left Out:  $17.409 \pm 0.024$   $\chi^2/\text{NDF}: 50630.8/24$

Right Out:  $19.630 \pm 0.061$   $\chi^2/\text{NDF}: 77605.1/34$

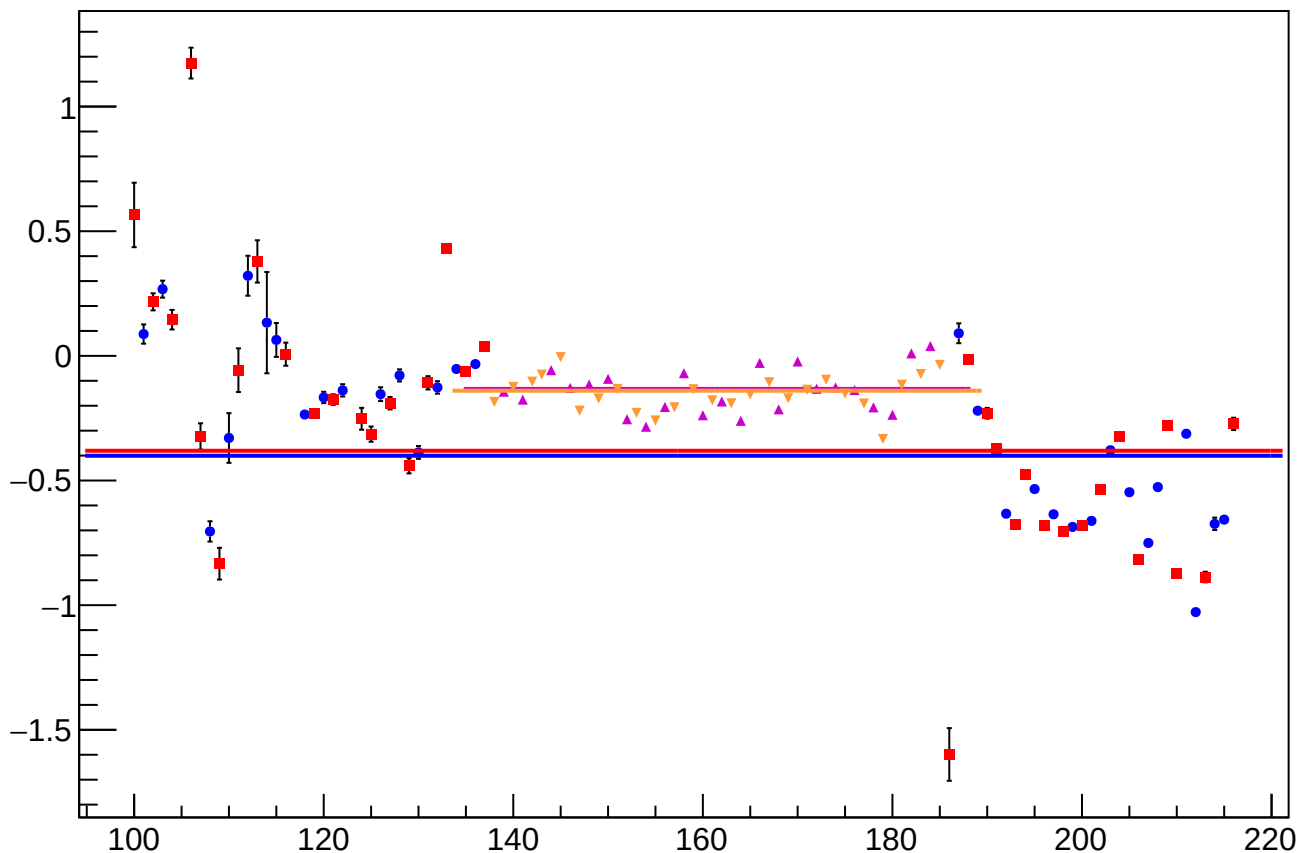
Left In:  $16.967 \pm 0.025$   $\chi^2/\text{NDF}: 39939.4/22$

+ sign  $17.629 \pm 0.023$   $\chi^2/\text{NDF}: 116111.9/55$

All:  $17.492 \pm 0.016$   $\chi^2/\text{NDF}: 235359.1/113$

- sign  $17.350 \pm 0.023$   $\chi^2/\text{NDF}: 119173.0/57$

reg\_asym\_sam\_37\_26\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.401 \pm 0.003$   $\chi^2/\text{NDF}$ : 9865.0/30

Left Out:  $-0.140 \pm 0.001$   $\chi^2/\text{NDF}$ : 4108.2/24

Right Out:  $-0.381 \pm 0.003$   $\chi^2/\text{NDF}$ : 14189.2/34

Left In:  $-0.133 \pm 0.001$   $\chi^2/\text{NDF}$ : 5529.7/22

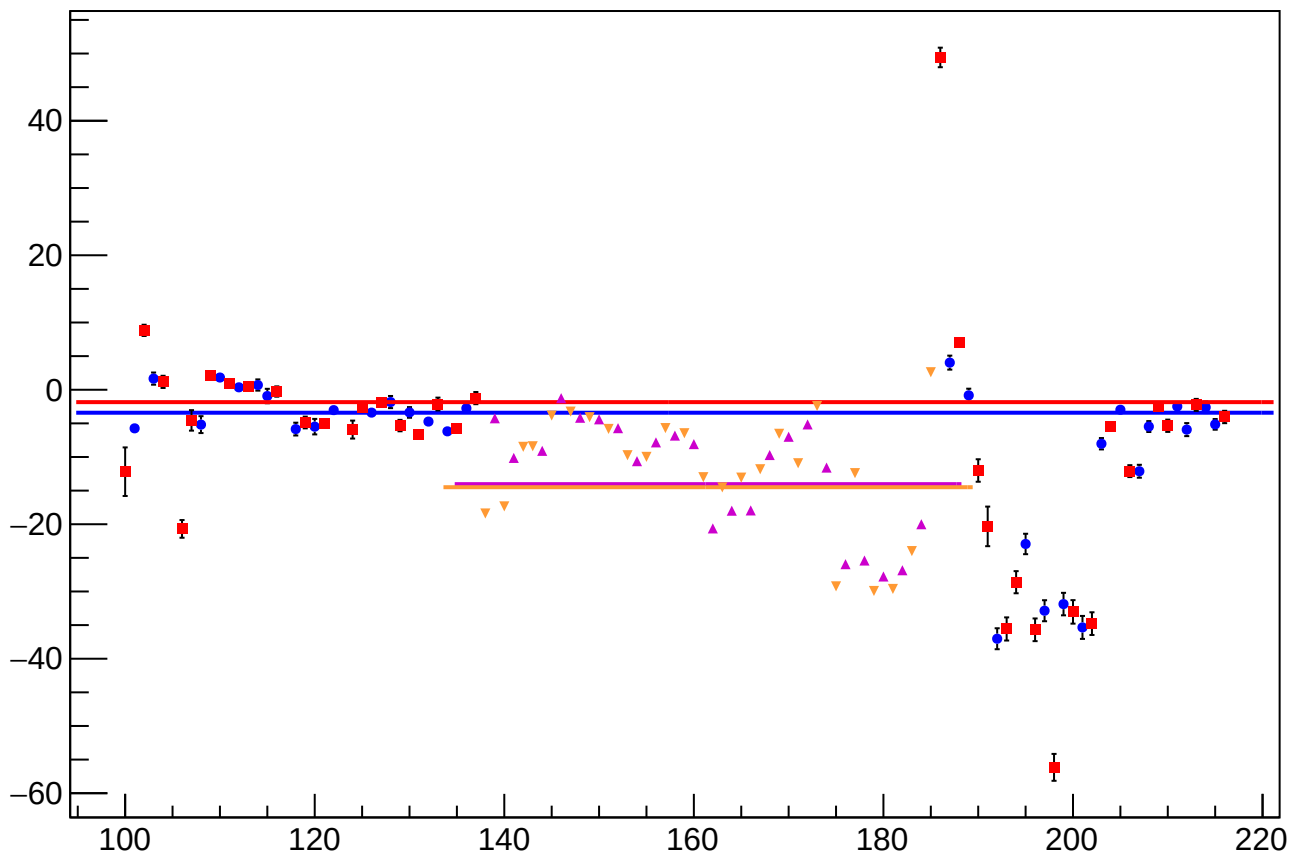
+ sign  $-0.173 \pm 0.001$   $\chi^2/\text{NDF}$ : 21311.5/55

All:  $-0.170 \pm 0.001$   $\chi^2/\text{NDF}$ : 47860.1/113

- sign  $-0.166 \pm 0.001$   $\chi^2/\text{NDF}$ : 26526.8/57



# reg\_asym\_sam\_1357\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-3.416 \pm 0.133$   $\chi^2/\text{NDF}: 2220.7/30$

Left Out:  $-14.494 \pm 0.075$   $\chi^2/\text{NDF}: 17232.7/24$

Right Out:  $-1.842 \pm 0.128$   $\chi^2/\text{NDF}: 5055.6/34$

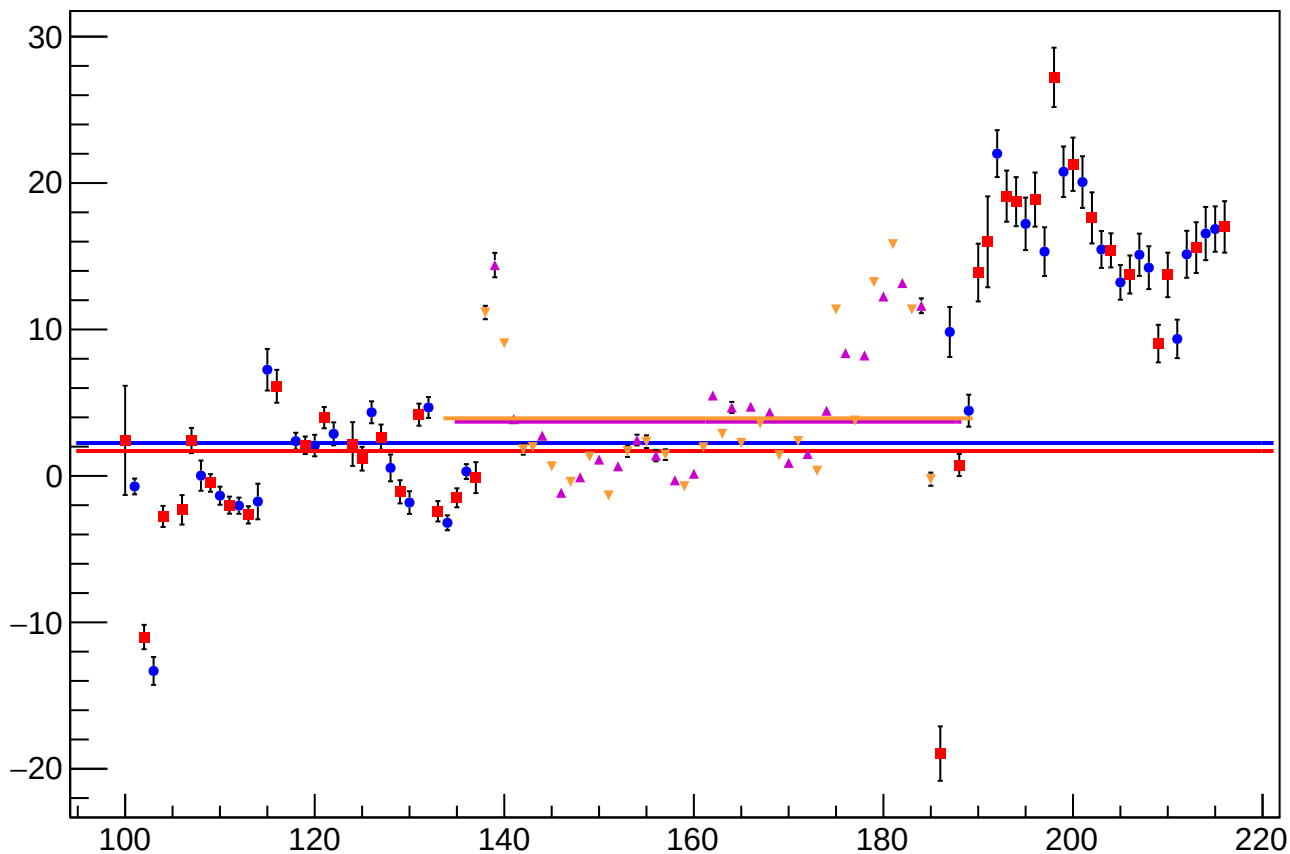
Left In:  $-14.038 \pm 0.077$   $\chi^2/\text{NDF}: 13482.5/22$

+ sign  $-11.836 \pm 0.065$   $\chi^2/\text{NDF}: 24721.2/55$

All:  $-11.331 \pm 0.046$   $\chi^2/\text{NDF}: 50043.8/113$

- sign  $-10.814 \pm 0.066$   $\chi^2/\text{NDF}: 25201.1/57$

reg\_asym\_sam\_1357\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 2.247 $\pm$ 0.158  $\chi^2$ /NDF: 1710.0/30

Left Out: 3.932 $\pm$ 0.058  $\chi^2$ /NDF: 6979.2/24

Right Out: 1.701 $\pm$ 0.160  $\chi^2$ /NDF: 1800.7/34

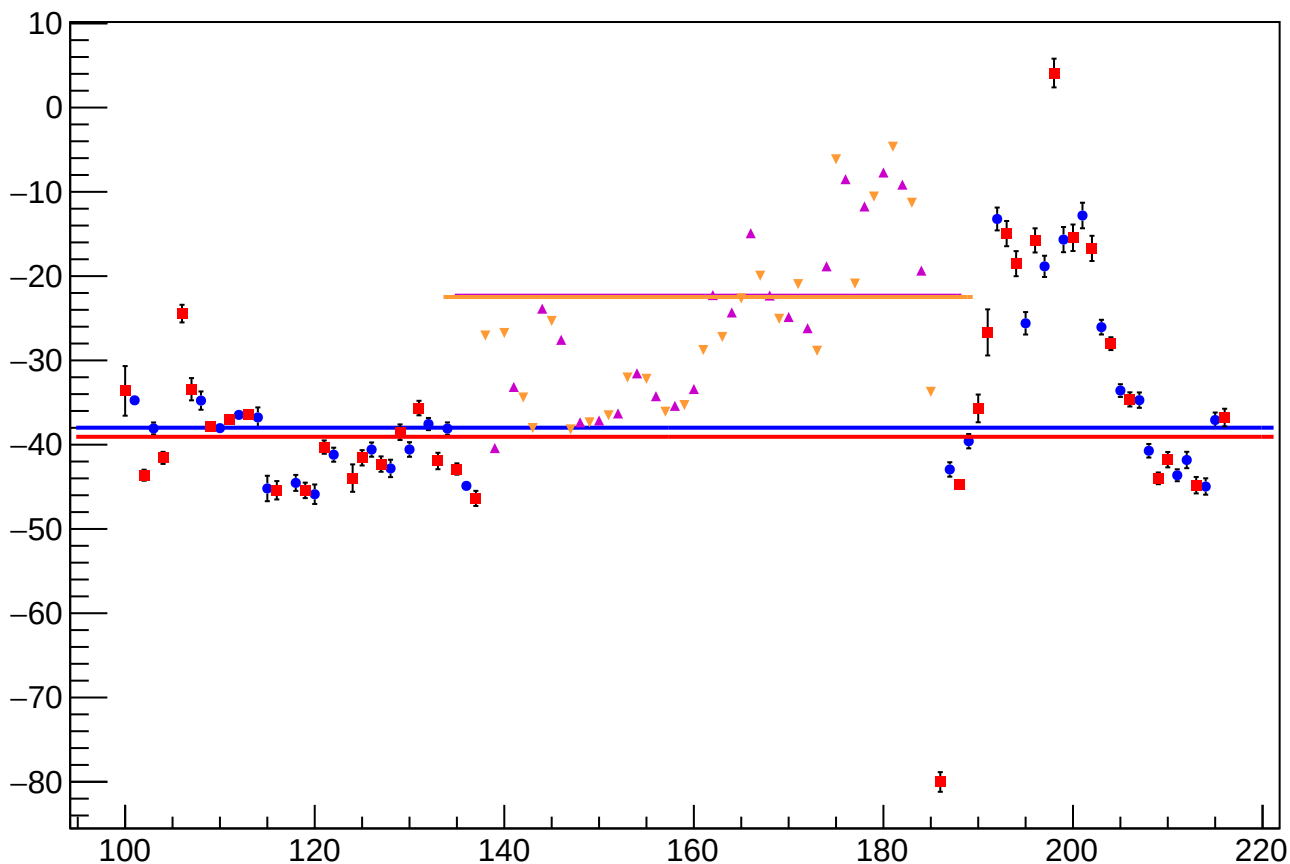
Left In: 3.703 $\pm$ 0.059  $\chi^2$ /NDF: 4788.5/22

+ sign 3.731 $\pm$ 0.054  $\chi^2$ /NDF: 8790.0/55

All: 3.599 $\pm$ 0.039  $\chi^2$ /NDF: 15529.3/113

- sign 3.461 $\pm$ 0.056  $\chi^2$ /NDF: 6727.2/57

# reg\_asym\_sam\_1357\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-37.985 \pm 0.145$   $\chi^2/\text{NDF}$ : 2041.9/30

Left Out:  $-22.478 \pm 0.075$   $\chi^2/\text{NDF}$ : 20417.4/24

Right Out:  $-39.065 \pm 0.144$   $\chi^2/\text{NDF}$ : 4139.7/34

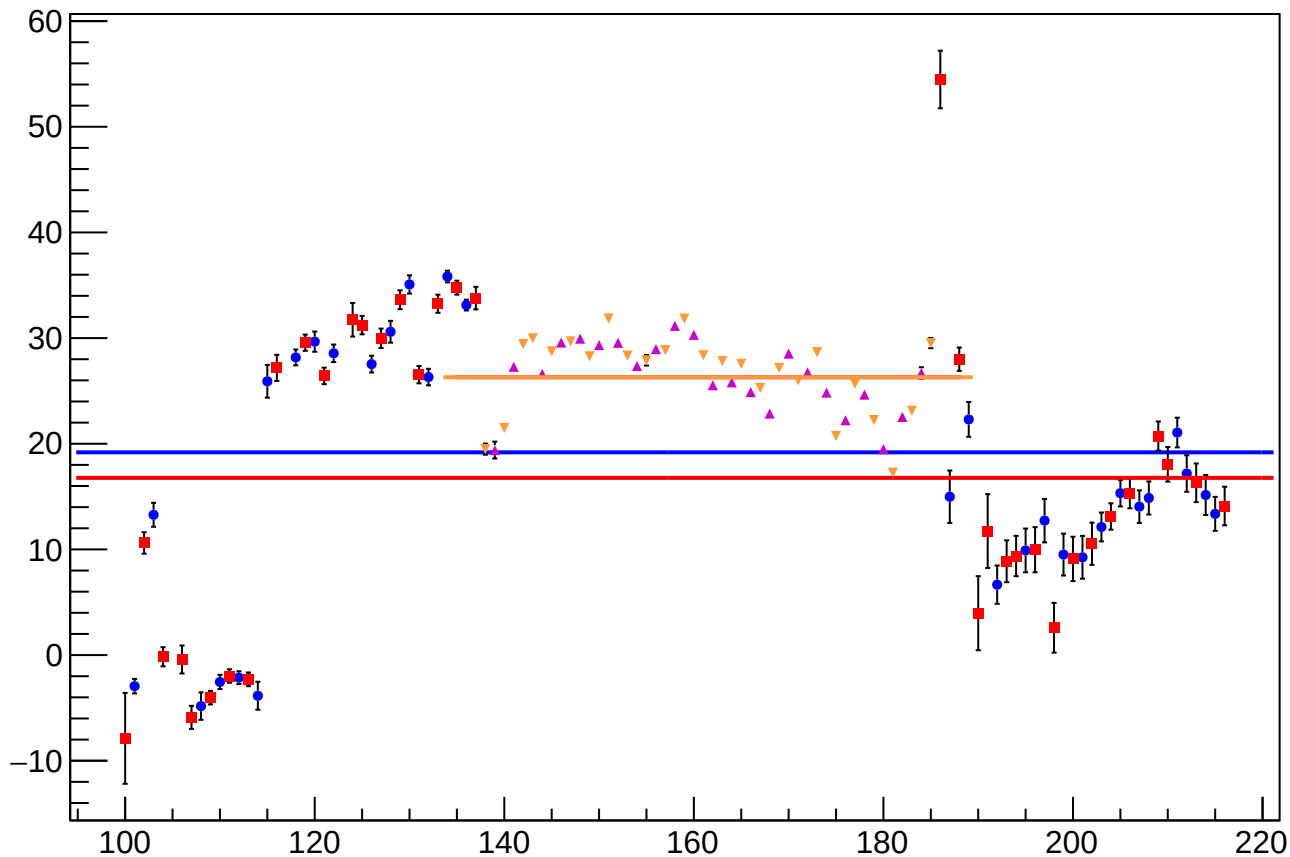
Left In:  $-22.322 \pm 0.077$   $\chi^2/\text{NDF}$ : 17133.3/22

+ sign  $-25.724 \pm 0.066$   $\chi^2/\text{NDF}$ : 31461.3/55

All:  $-25.864 \pm 0.047$   $\chi^2/\text{NDF}$ : 63272.6/113

- sign  $-26.009 \pm 0.068$   $\chi^2/\text{NDF}$ : 31802.3/57

reg\_asym\_sam\_1357\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 19.186 $\pm$ 0.178  $\chi^2$ /NDF: 6916.1/30

Left Out: 26.296 $\pm$ 0.065  $\chi^2$ /NDF: 3307.8/24

Right Out: 16.772 $\pm$ 0.182  $\chi^2$ /NDF: 7170.1/34

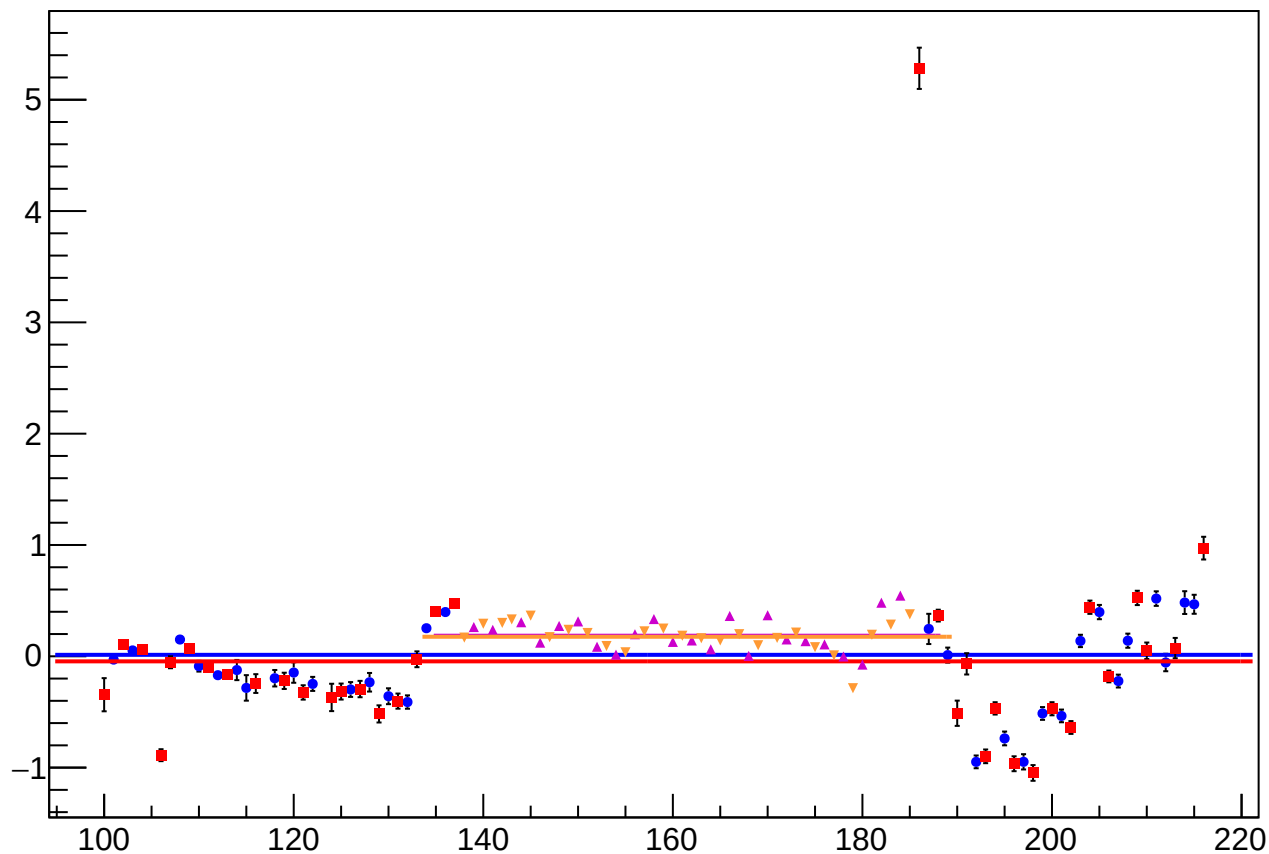
Left In: 26.292 $\pm$ 0.067  $\chi^2$ /NDF: 2185.8/22

+ sign 25.455 $\pm$ 0.061  $\chi^2$ /NDF: 11636.0/55

All: 25.313 $\pm$ 0.044  $\chi^2$ /NDF: 23420.4/113

- sign 25.165 $\pm$ 0.063  $\chi^2$ /NDF: 11773.4/57

reg\_asym\_sam\_1357\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.013 \pm 0.009$   $\chi^2/\text{NDF}: 1590.7/30$

Left Out:  $0.176 \pm 0.003$   $\chi^2/\text{NDF}: 1935.6/24$

Right Out:  $-0.045 \pm 0.009$   $\chi^2/\text{NDF}: 2816.9/34$

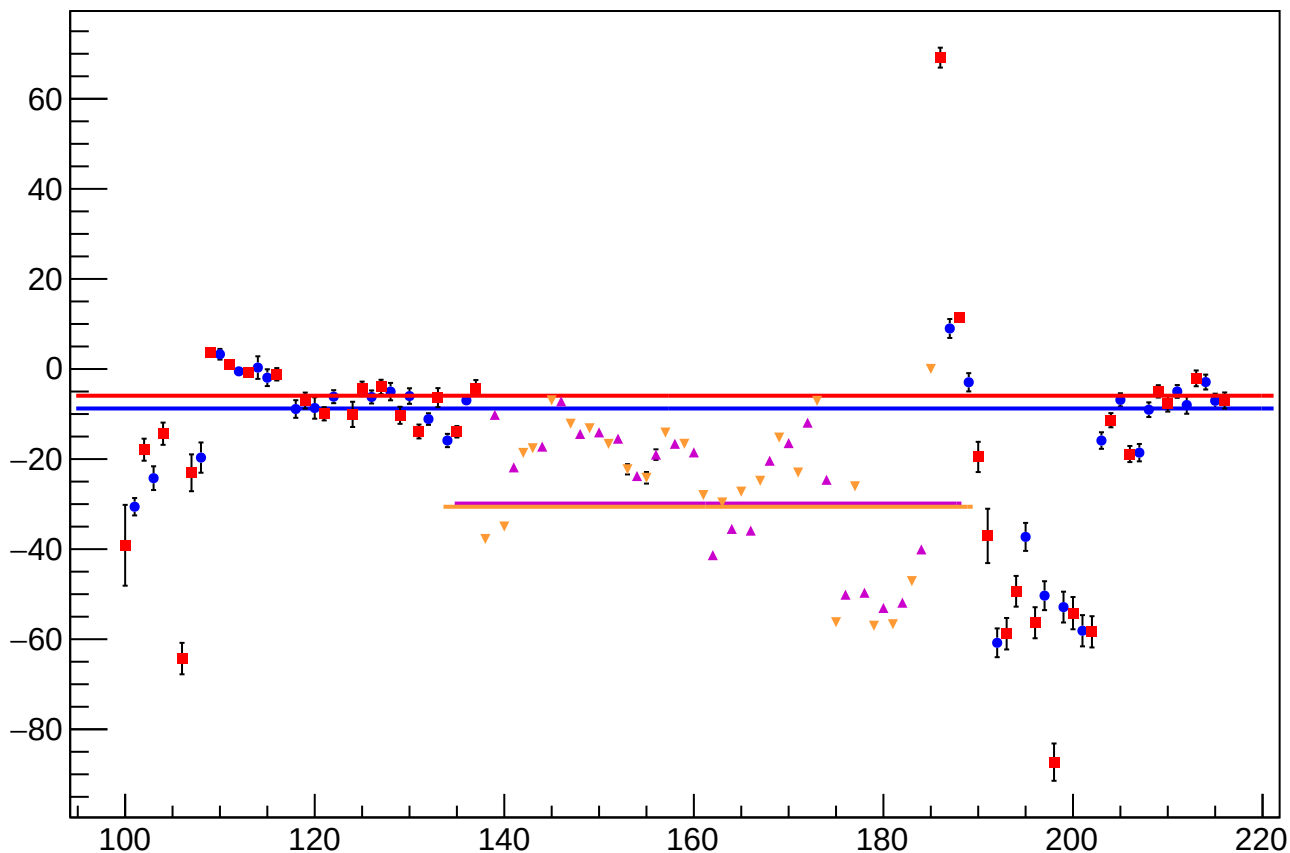
Left In:  $0.185 \pm 0.003$   $\chi^2/\text{NDF}: 2538.5/22$

+ sign  $0.160 \pm 0.003$   $\chi^2/\text{NDF}: 3827.2/55$

All:  $0.162 \pm 0.002$   $\chi^2/\text{NDF}: 9745.9/113$

- sign  $0.163 \pm 0.003$   $\chi^2/\text{NDF}: 5918.0/57$

reg\_asym\_sam\_2468\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-8.765 \pm 0.302$   $\chi^2/\text{NDF}: 1444.1/30$

Left Out:  $-30.587 \pm 0.142$   $\chi^2/\text{NDF}: 16046.0/24$

Right Out:  $-5.929 \pm 0.300$   $\chi^2/\text{NDF}: 3512.5/34$

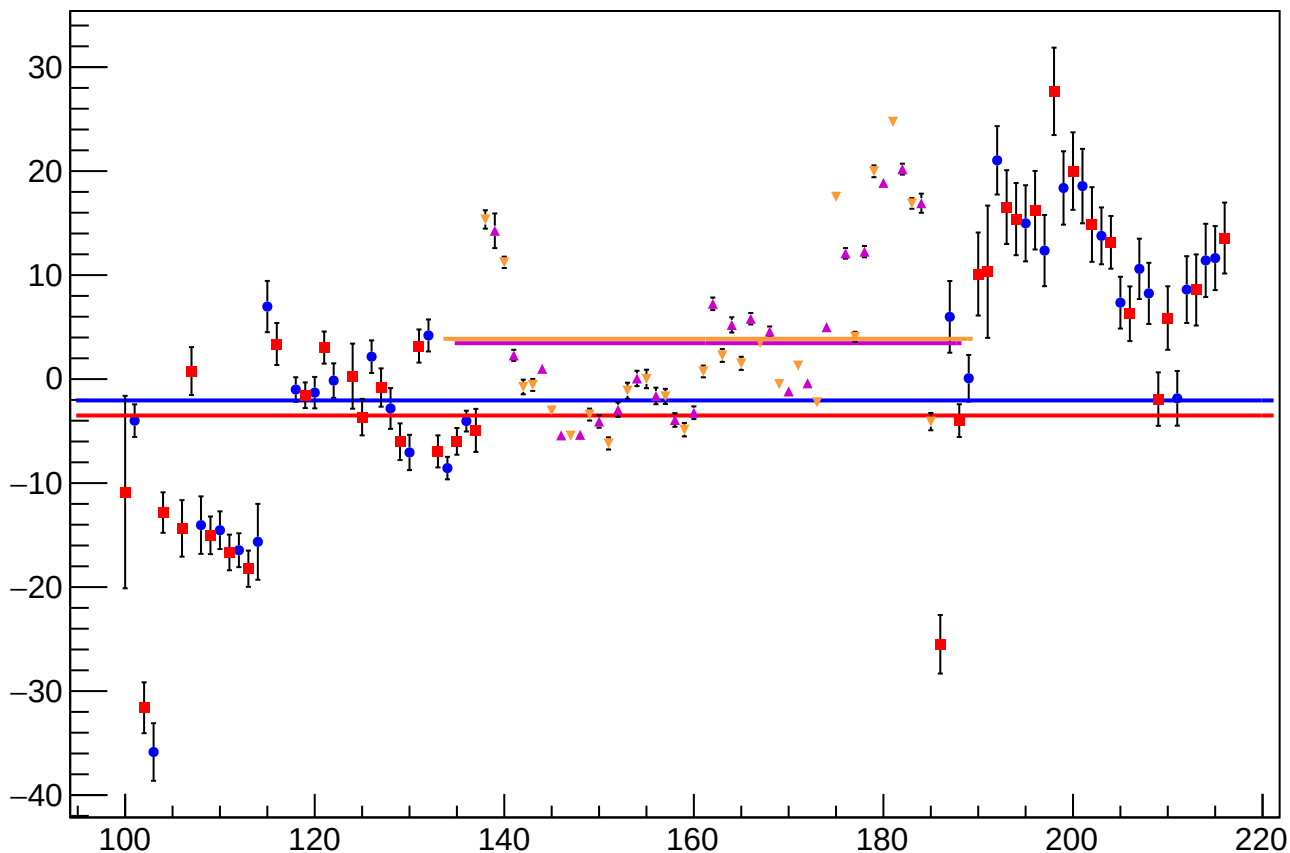
Left In:  $-29.878 \pm 0.146$   $\chi^2/\text{NDF}: 12034.7/22$

+ sign  $-26.633 \pm 0.129$   $\chi^2/\text{NDF}: 21761.0/55$

All:  $-25.969 \pm 0.092$   $\chi^2/\text{NDF}: 42518.0/113$

- sign  $-25.276 \pm 0.131$   $\chi^2/\text{NDF}: 20702.5/57$

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.051 \pm 0.352$   $\chi^2/\text{NDF}$ : 683.6/30

Left Out:  $3.873 \pm 0.111$   $\chi^2/\text{NDF}$ : 6542.0/24

Right Out:  $-3.500 \pm 0.364$   $\chi^2/\text{NDF}$ : 802.0/34

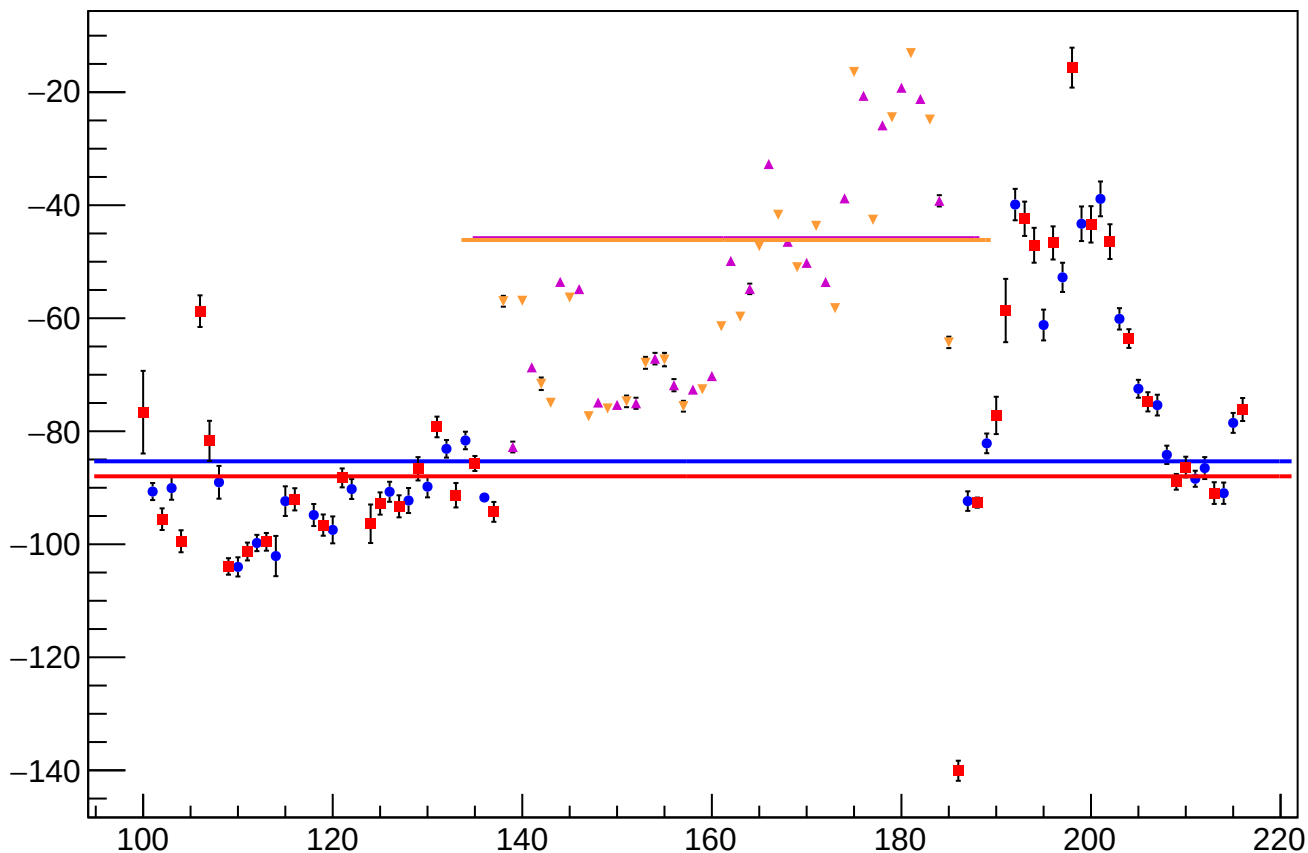
Left In:  $3.453 \pm 0.114$   $\chi^2/\text{NDF}$ : 4693.7/22

+ sign  $3.337 \pm 0.106$   $\chi^2/\text{NDF}$ : 7482.6/55

All:  $3.092 \pm 0.076$   $\chi^2/\text{NDF}$ : 13321.8/113

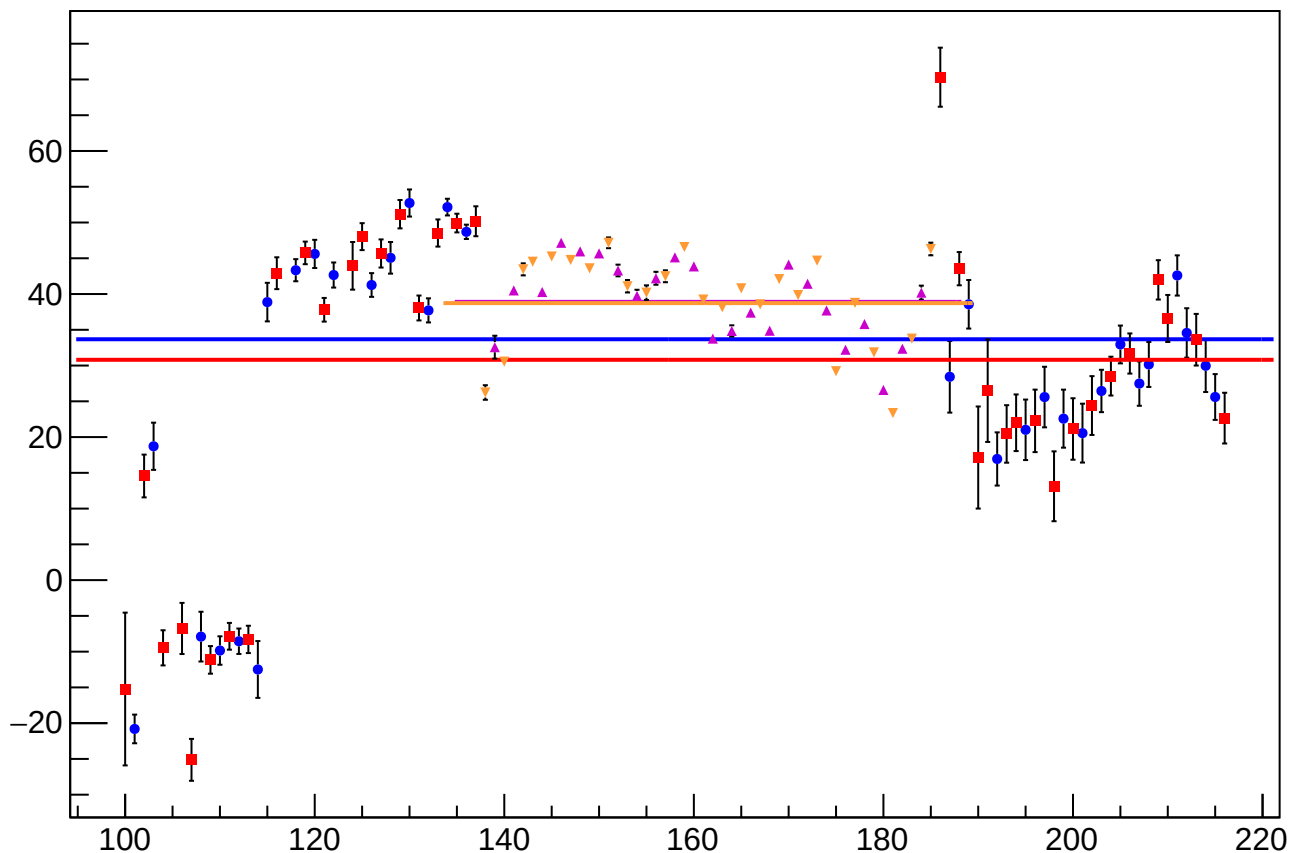
- sign  $2.835 \pm 0.108$   $\chi^2/\text{NDF}$ : 5828.2/57

# reg\_asym\_sam\_2468\_avg\_diff\_bpm4eX\_slope vs Slug





reg\_asym\_sam\_2468\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 33.676 $\pm$ 0.395  $\chi^2$ /NDF: 2897.2/30

Left Out: 38.730 $\pm$ 0.125  $\chi^2$ /NDF:2781.7/24

Right Out: 30.804 $\pm$ 0.414  $\chi^2$ /NDF: 3100.4/34

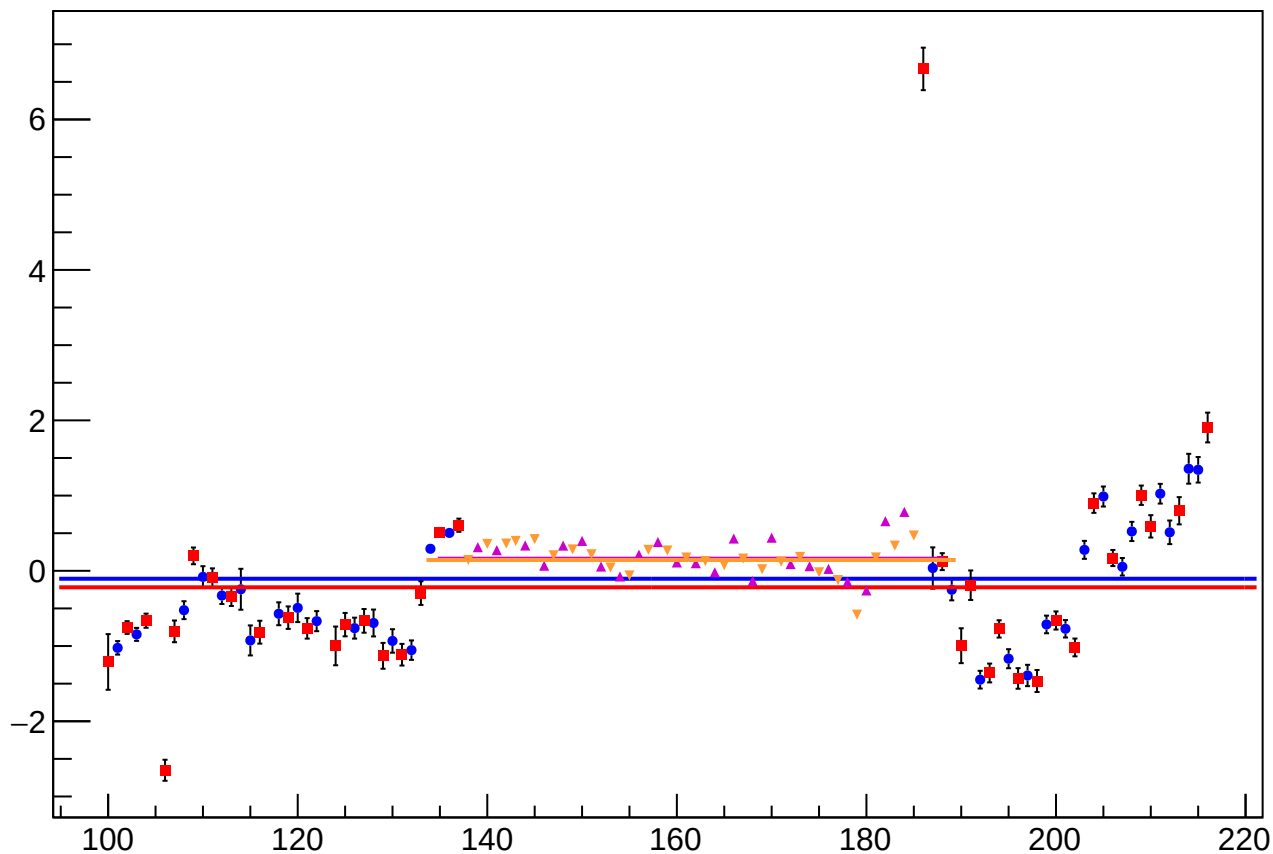
Left In: 38.905 $\pm$ 0.127  $\chi^2$ /NDF:1971.6/22

+ sign 38.274 $\pm$ 0.119  $\chi^2$ /NDF: 5827.6/55

All: 38.239 $\pm$ 0.085  $\chi^2$ /NDF: 11250.0/113

- sign 38.203 $\pm$ 0.122  $\chi^2$ /NDF: 5422.2/57

reg\_asym\_sam\_2468\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.105 \pm 0.020$   $\chi^2/\text{NDF}$ : 1296.1/30

Left Out:  $0.144 \pm 0.006$   $\chi^2/\text{NDF}$ : 1442.8/24

Right Out:  $-0.219 \pm 0.021$   $\chi^2/\text{NDF}$ : 2112.1/34

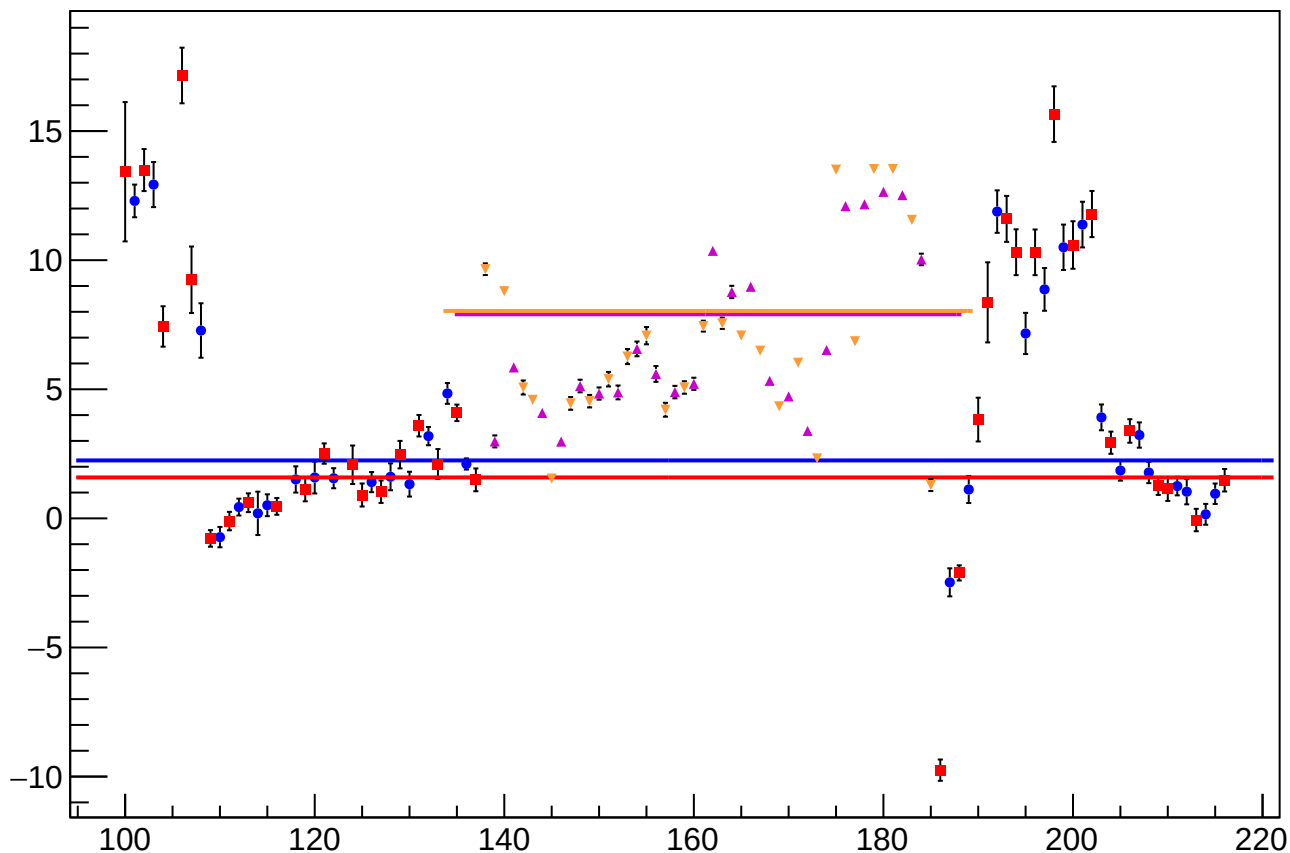
Left In:  $0.161 \pm 0.006$   $\chi^2/\text{NDF}$ : 1918.8/22

+ sign  $0.125 \pm 0.005$   $\chi^2/\text{NDF}$ : 2885.4/55

All:  $0.130 \pm 0.004$   $\chi^2/\text{NDF}$ : 7223.7/113

- sign  $0.135 \pm 0.005$   $\chi^2/\text{NDF}$ : 4336.6/57

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $2.244 \pm 0.082$   $\chi^2/\text{NDF}$ : 1182.4/30

Left Out:  $8.034 \pm 0.035$   $\chi^2/\text{NDF}$ : 13924.1/24

Right Out:  $1.586 \pm 0.082$   $\chi^2/\text{NDF}$ : 2426.9/34

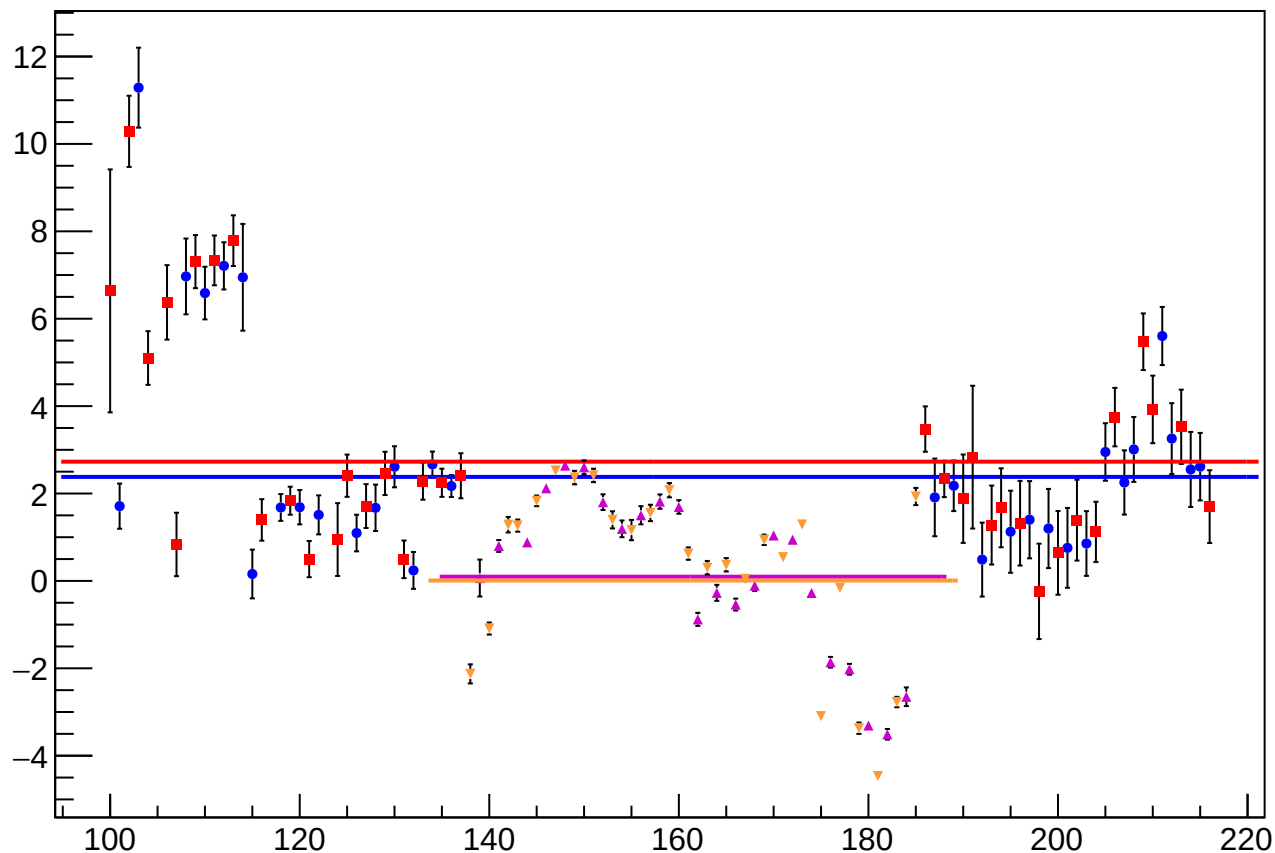
Left In:  $7.903 \pm 0.036$   $\chi^2/\text{NDF}$ : 10017.8/22

+ sign  $7.148 \pm 0.032$   $\chi^2/\text{NDF}$ : 19361.0/55

All:  $7.019 \pm 0.023$   $\chi^2/\text{NDF}$ : 36863.2/113

- sign  $6.883 \pm 0.033$   $\chi^2/\text{NDF}$ : 17468.9/57

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $2.380 \pm 0.095$   $\chi^2/\text{NDF}: 377.7/30$

Left Out:  $0.009 \pm 0.027$   $\chi^2/\text{NDF}: 5761.2/24$

Right Out:  $2.729 \pm 0.098$   $\chi^2/\text{NDF}: 465.6/34$

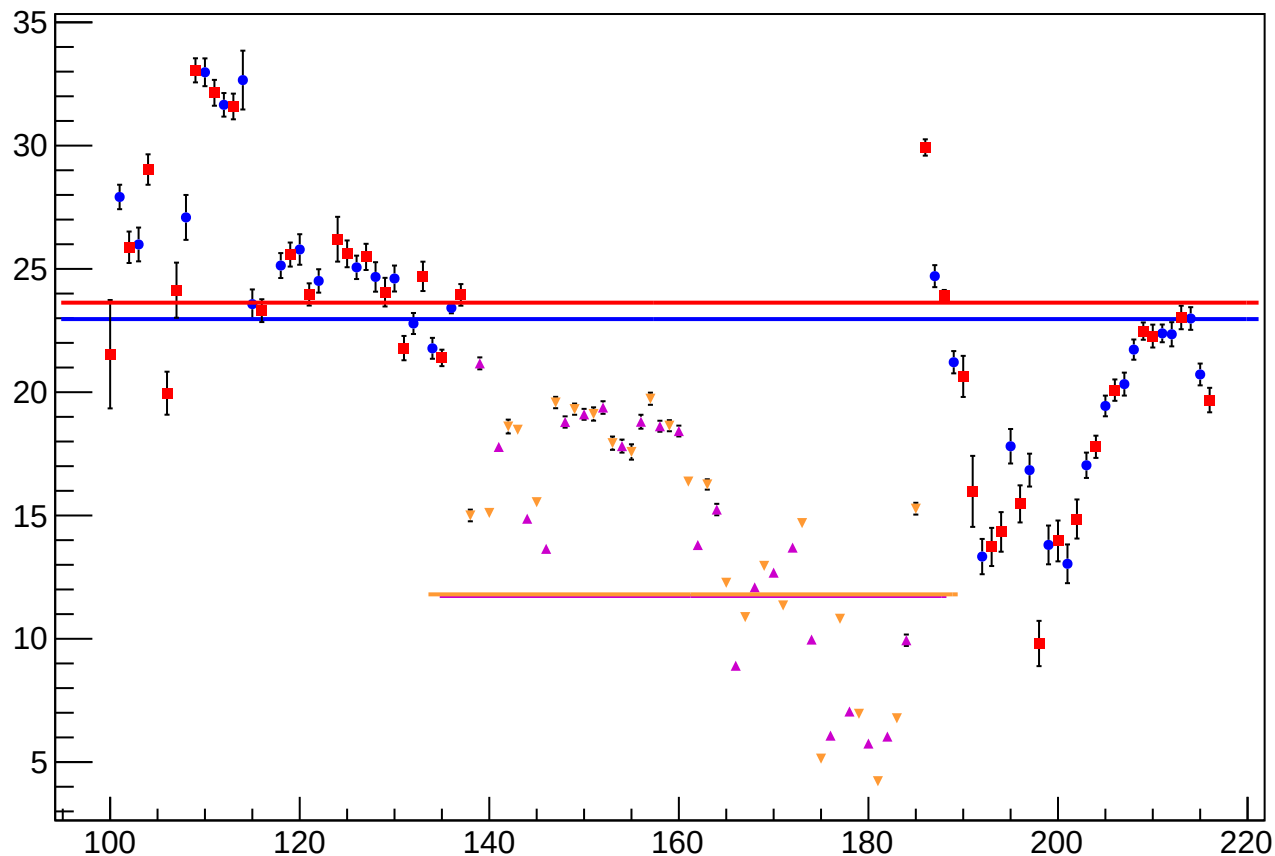
Left In:  $0.096 \pm 0.028$   $\chi^2/\text{NDF}: 4433.3/22$

+ sign  $0.191 \pm 0.026$   $\chi^2/\text{NDF}: 6711.4/55$

All:  $0.242 \pm 0.019$   $\chi^2/\text{NDF}: 12278.9/113$

- sign  $0.295 \pm 0.027$   $\chi^2/\text{NDF}: 5559.9/57$

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 22.965 $\pm$ 0.087  $\chi^2$ /NDF: 1872.1/30

Left Out: 11.802 $\pm$ 0.035  $\chi^2$ /NDF:21479.5/24

Right Out: 23.631 $\pm$ 0.086  $\chi^2$ /NDF: 2714.1/34

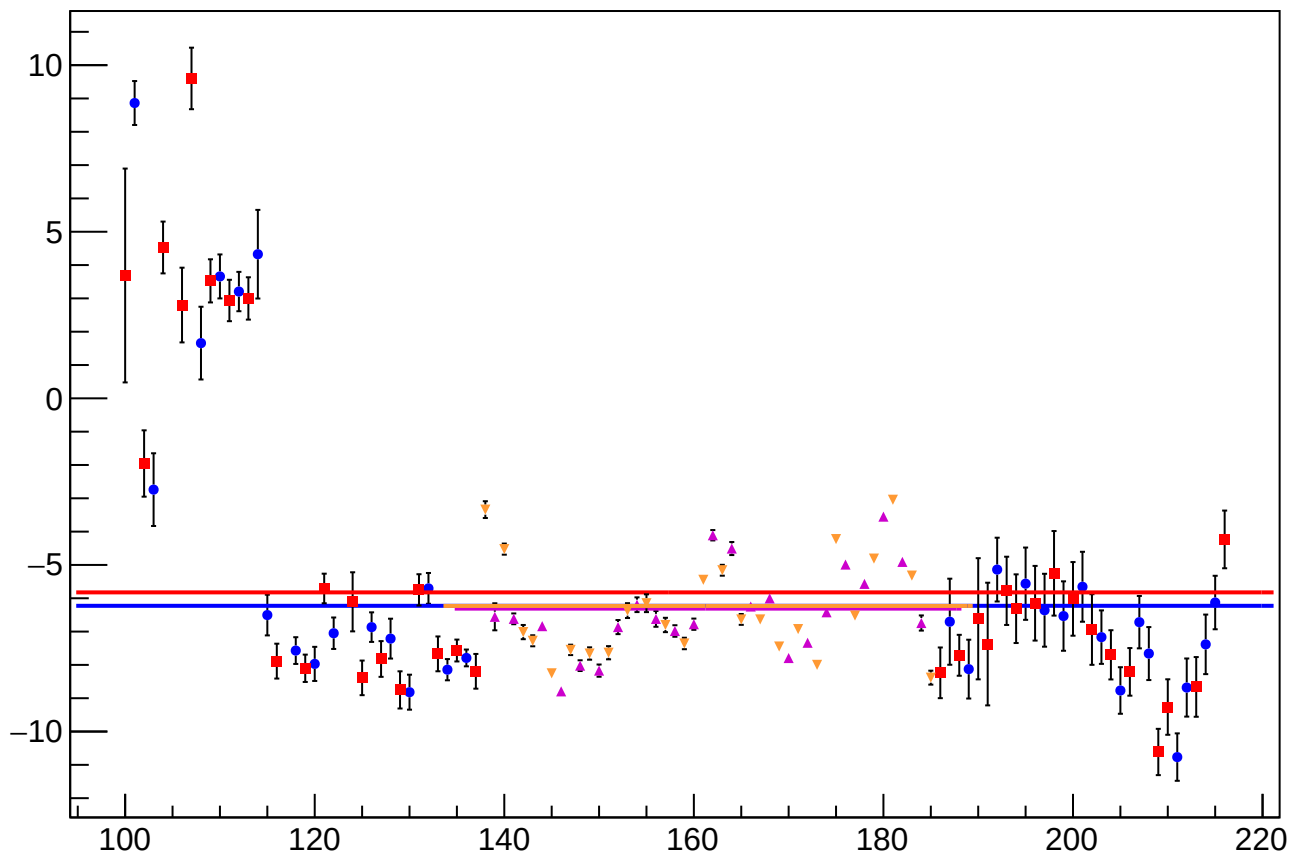
Left In: 11.735 $\pm$ 0.036  $\chi^2$ /NDF:17999.5/22

+ sign 13.360 $\pm$ 0.032  $\chi^2$ /NDF: 37675.1/55

All: 13.422 $\pm$ 0.023  $\chi^2$ /NDF: 74643.5/113

- sign 13.486 $\pm$ 0.033  $\chi^2$ /NDF: 36960.8/57

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-6.227 \pm 0.107$   $\chi^2/\text{NDF}$ : 1335.2/30

Left Out:  $-6.231 \pm 0.031$   $\chi^2/\text{NDF}$ : 2450.1/24

Right Out:  $-5.824 \pm 0.112$   $\chi^2/\text{NDF}$ : 1431.1/34

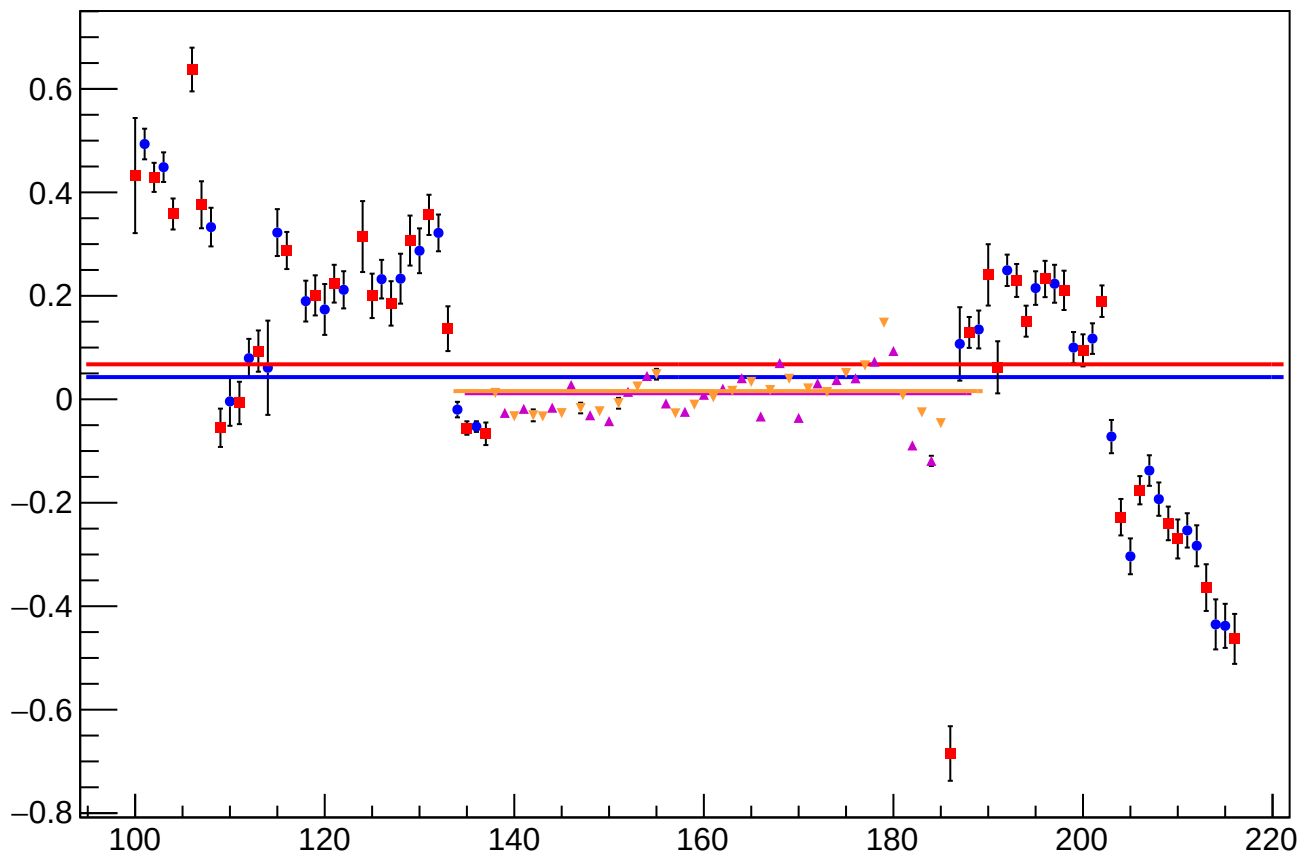
Left In:  $-6.311 \pm 0.031$   $\chi^2/\text{NDF}$ : 2030.2/22

+ sign  $-6.230 \pm 0.029$   $\chi^2/\text{NDF}$ : 3785.3/55

All:  $-6.252 \pm 0.021$   $\chi^2/\text{NDF}$ : 7265.2/113

- sign  $-6.276 \pm 0.030$   $\chi^2/\text{NDF}$ : 3478.8/57

reg\_asym\_sam\_1357\_2468\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.043 $\pm$ 0.005  $\chi^2$ /NDF: 1506.2/30

Left Out: 0.016 $\pm$ 0.001  $\chi^2$ /NDF: 933.4/24

Right Out: 0.068 $\pm$ 0.006  $\chi^2$ /NDF: 1655.2/34

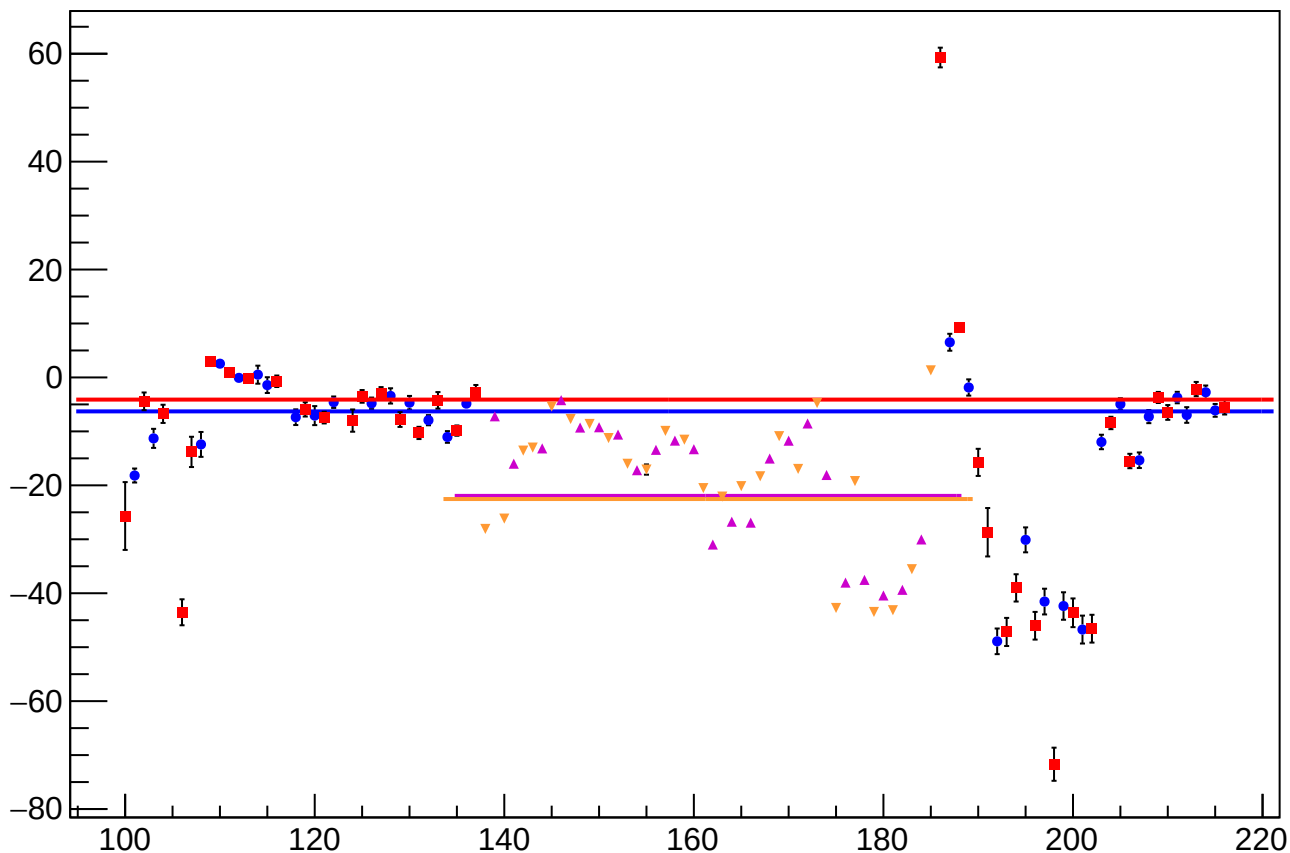
Left In: 0.012 $\pm$ 0.001  $\chi^2$ /NDF: 1297.5/22

+ sign 0.018 $\pm$ 0.001  $\chi^2$ /NDF: 2463.9/55

All: 0.016 $\pm$ 0.001  $\chi^2$ /NDF: 5510.4/113

- sign 0.015 $\pm$ 0.001  $\chi^2$ /NDF: 3044.7/57

reg\_asym\_sam\_12345678\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-6.293 \pm 0.219$   $\chi^2/\text{NDF}: 1617.7/30$

Left Out:  $-22.538 \pm 0.108$   $\chi^2/\text{NDF}: 16540.6/24$

Right Out:  $-4.107 \pm 0.216$   $\chi^2/\text{NDF}: 3913.8/34$

Left In:  $-21.957 \pm 0.111$   $\chi^2/\text{NDF}: 12585.3/22$

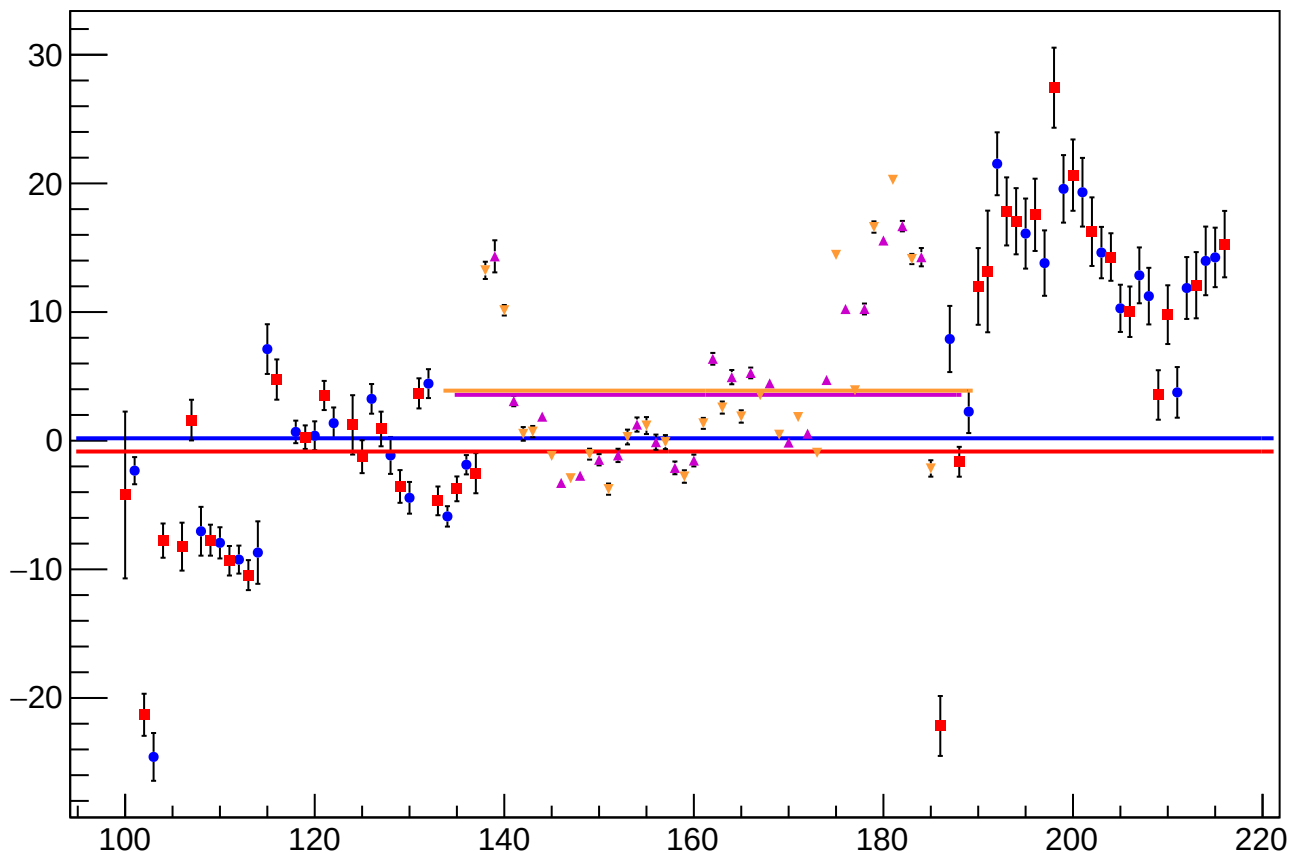
+ sign  $-19.357 \pm 0.097$   $\chi^2/\text{NDF}: 22580.2/55$

All:  $-18.797 \pm 0.069$   $\chi^2/\text{NDF}: 44551.4/113$

- sign  $-18.215 \pm 0.099$   $\chi^2/\text{NDF}: 21903.2/57$



reg\_asym\_sam\_12345678\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.188 \pm 0.256$   $\chi^2/\text{NDF}$ : 935.9/30

Left Out:  $3.891 \pm 0.084$   $\chi^2/\text{NDF}$ : 6724.1/24

Right Out:  $-0.841 \pm 0.264$   $\chi^2/\text{NDF}$ : 1056.0/34

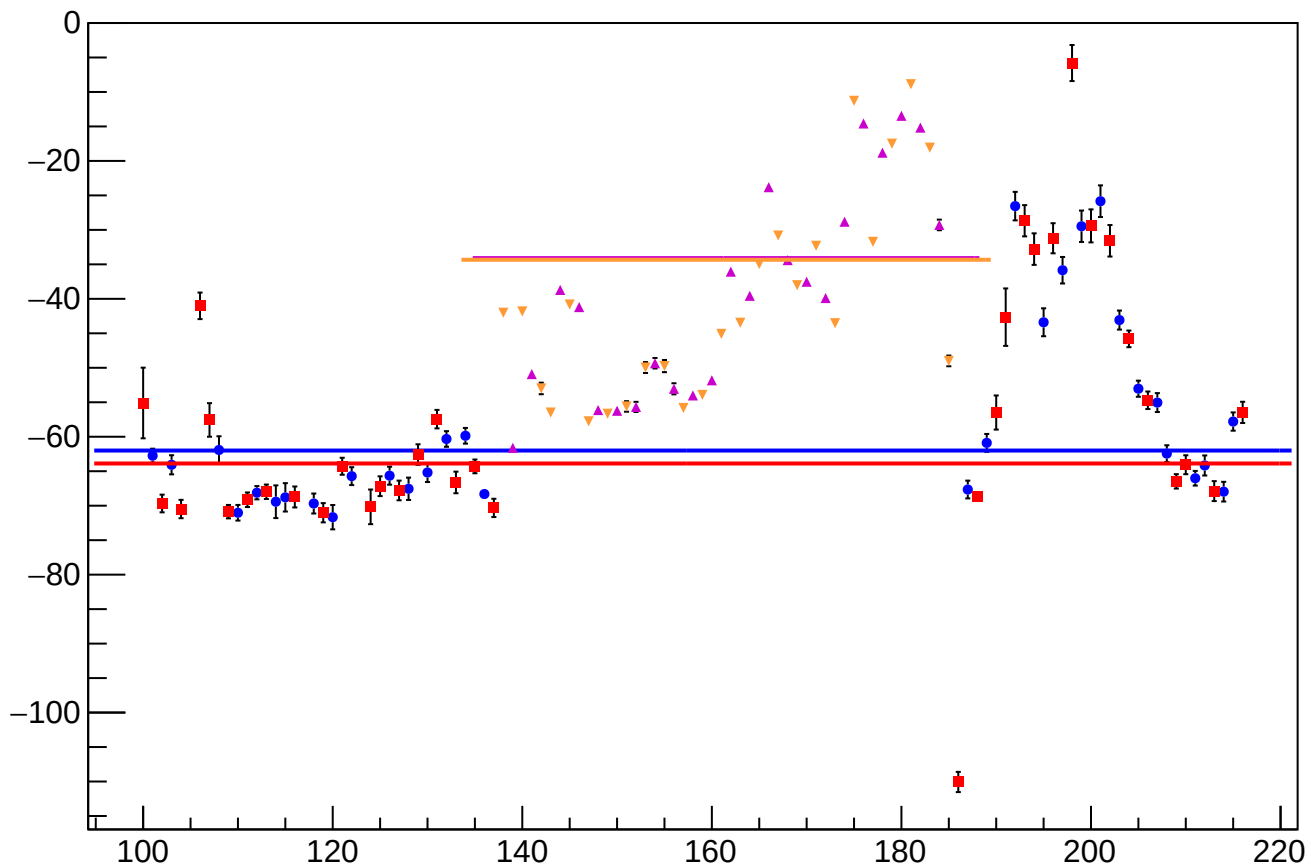
Left In:  $3.565 \pm 0.086$   $\chi^2/\text{NDF}$ : 4739.4/22

+ sign  $3.530 \pm 0.080$   $\chi^2/\text{NDF}$ : 7848.5/55

All:  $3.339 \pm 0.057$   $\chi^2/\text{NDF}$ : 13908.0/113

- sign  $3.140 \pm 0.082$   $\chi^2/\text{NDF}$ : 6047.9/57

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-62.001 \pm 0.236$   $\chi^2/\text{NDF}: 1669.1/30$

Left Out:  $-34.334 \pm 0.108$   $\chi^2/\text{NDF}: 21200.8/24$

Right Out:  $-63.879 \pm 0.236$   $\chi^2/\text{NDF}: 3337.8/34$

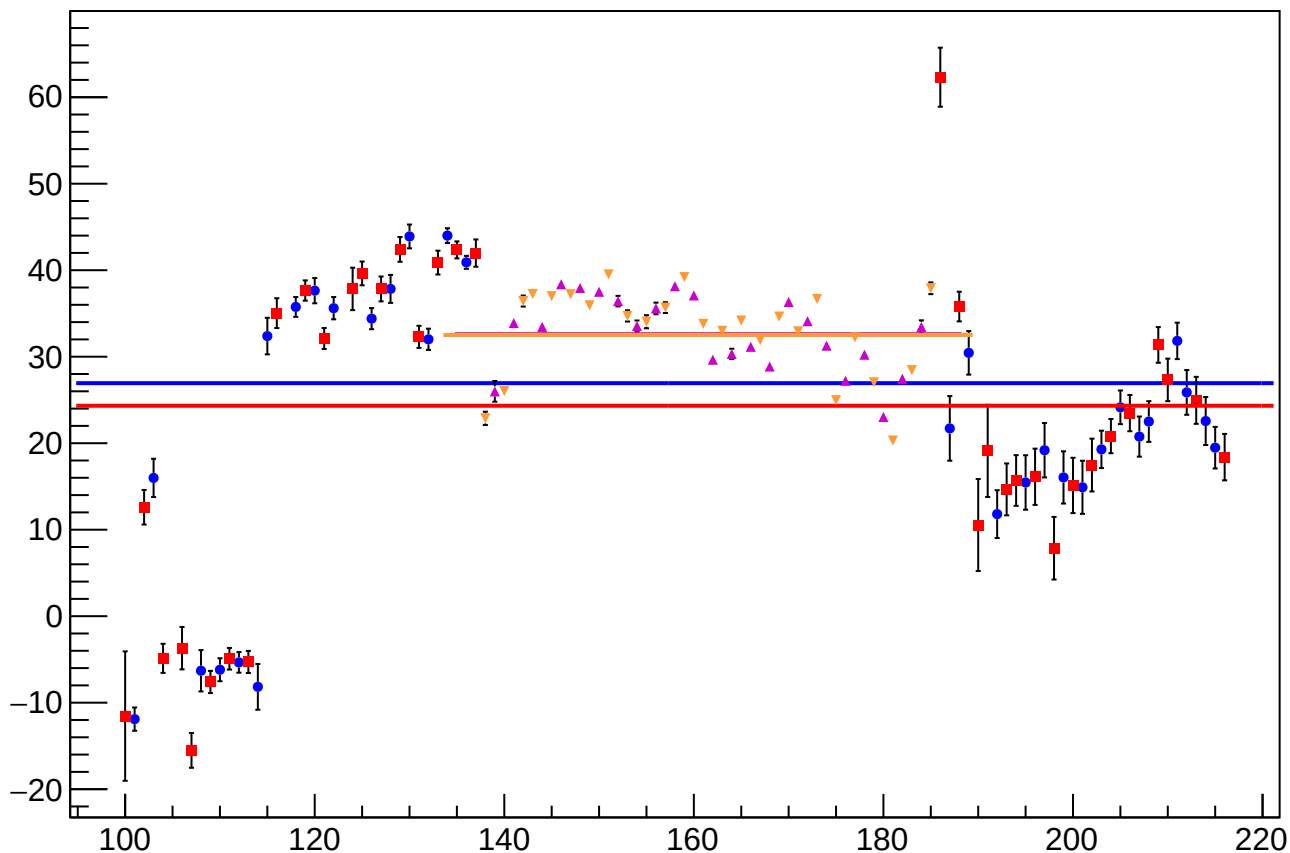
Left In:  $-34.091 \pm 0.111$   $\chi^2/\text{NDF}: 17726.5/22$

+ sign  $-39.157 \pm 0.098$   $\chi^2/\text{NDF}: 34254.0/55$

All:  $-39.319 \pm 0.070$   $\chi^2/\text{NDF}: 68382.8/113$

- sign  $-39.488 \pm 0.100$   $\chi^2/\text{NDF}: 34123.3/57$

reg\_asym\_sam\_12345678\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 26.940 $\pm$ 0.288  $\chi^2/\text{NDF}$ : 3865.7/30

Left Out: 32.511 $\pm$ 0.095  $\chi^2/\text{NDF}$ :2938.0/24

Right Out: 24.331 $\pm$ 0.300  $\chi^2/\text{NDF}$ : 4098.9/34

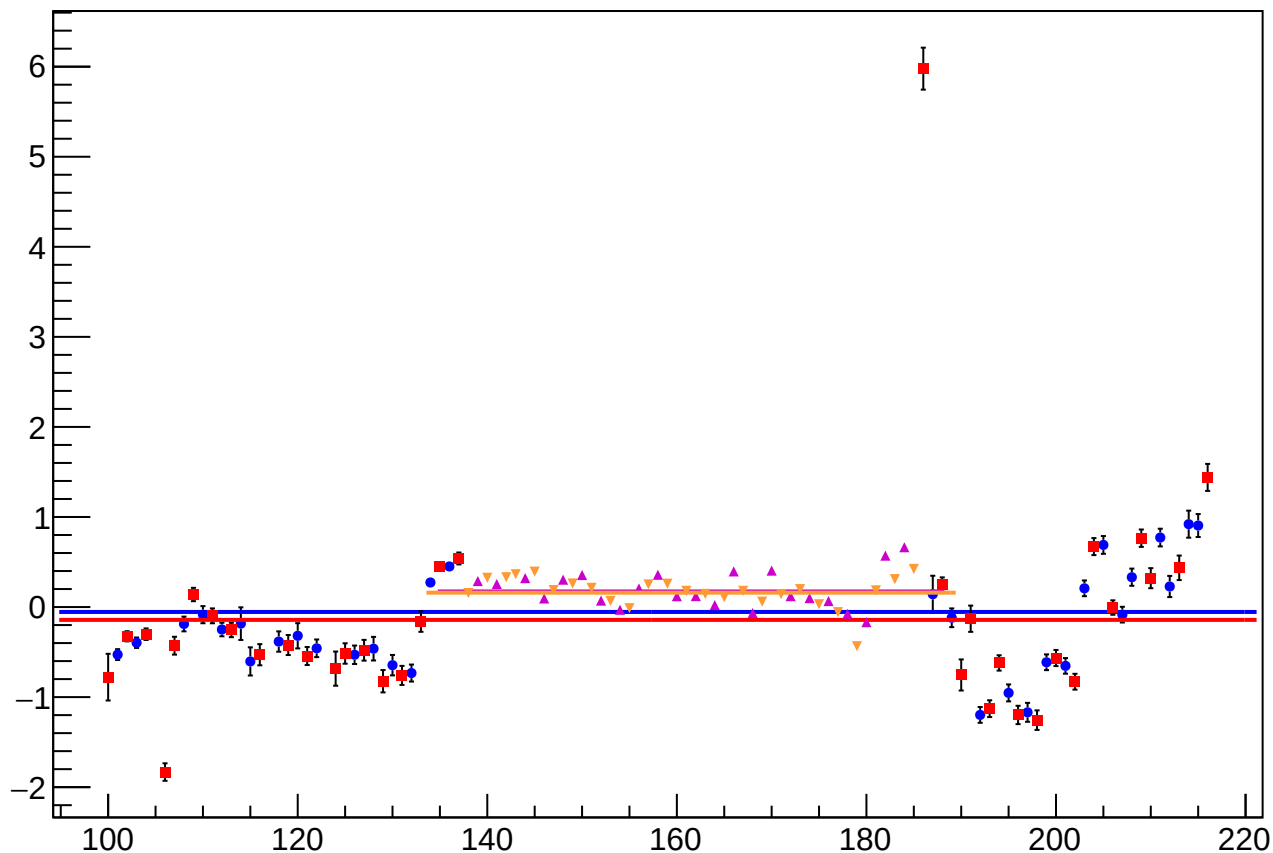
Left In: 32.598 $\pm$ 0.097  $\chi^2/\text{NDF}$ :2012.9/22

+ sign 31.969 $\pm$ 0.090  $\chi^2/\text{NDF}$ : 7141.8/55

All: 31.895 $\pm$ 0.064  $\chi^2/\text{NDF}$ : 13944.3/113

- sign 31.818 $\pm$ 0.092  $\chi^2/\text{NDF}$ : 6801.2/57

reg\_asym\_sam\_12345678\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.054 \pm 0.014$   $\chi^2/\text{NDF}$ : 1315.9/30

Left Out:  $0.160 \pm 0.004$   $\chi^2/\text{NDF}$ : 1613.0/24

Right Out:  $-0.142 \pm 0.015$   $\chi^2/\text{NDF}$ : 2295.2/34

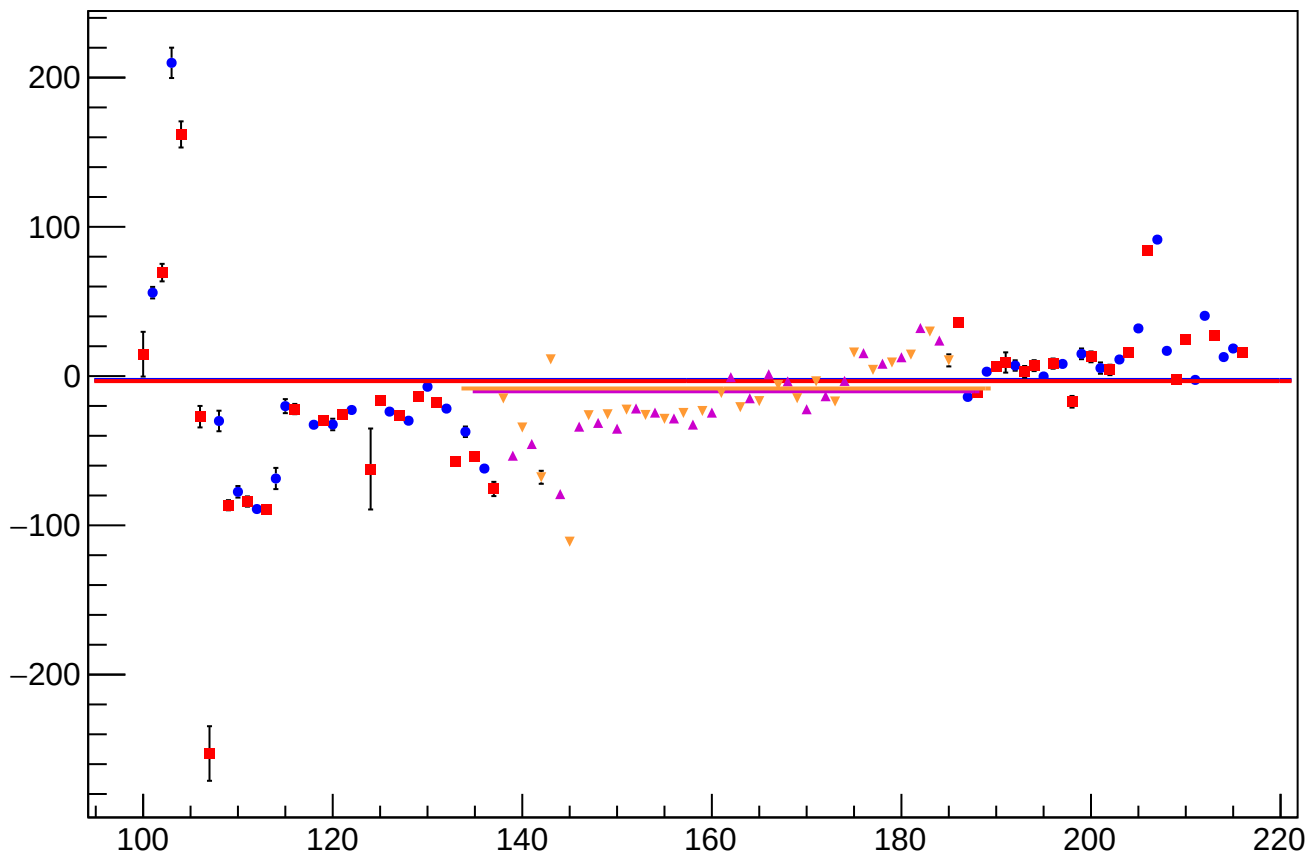
Left In:  $0.173 \pm 0.004$   $\chi^2/\text{NDF}$ : 2129.7/22

+ sign  $0.143 \pm 0.004$   $\chi^2/\text{NDF}$ : 3131.6/55

All:  $0.146 \pm 0.003$   $\chi^2/\text{NDF}$ : 7955.3/113

- sign  $0.150 \pm 0.004$   $\chi^2/\text{NDF}$ : 4822.3/57

# reg\_asym\_atl1\_diff\_bpm1X\_slope vs Slug



Right In:  $-2.587 \pm 0.514$   $\chi^2/\text{NDF}$ : 5040.7/30

Left Out:  $-8.298 \pm 0.514$   $\chi^2/\text{NDF}$ : 2559.6/24

Right Out:  $-3.365 \pm 0.489$   $\chi^2/\text{NDF}$ : 5923.1/34

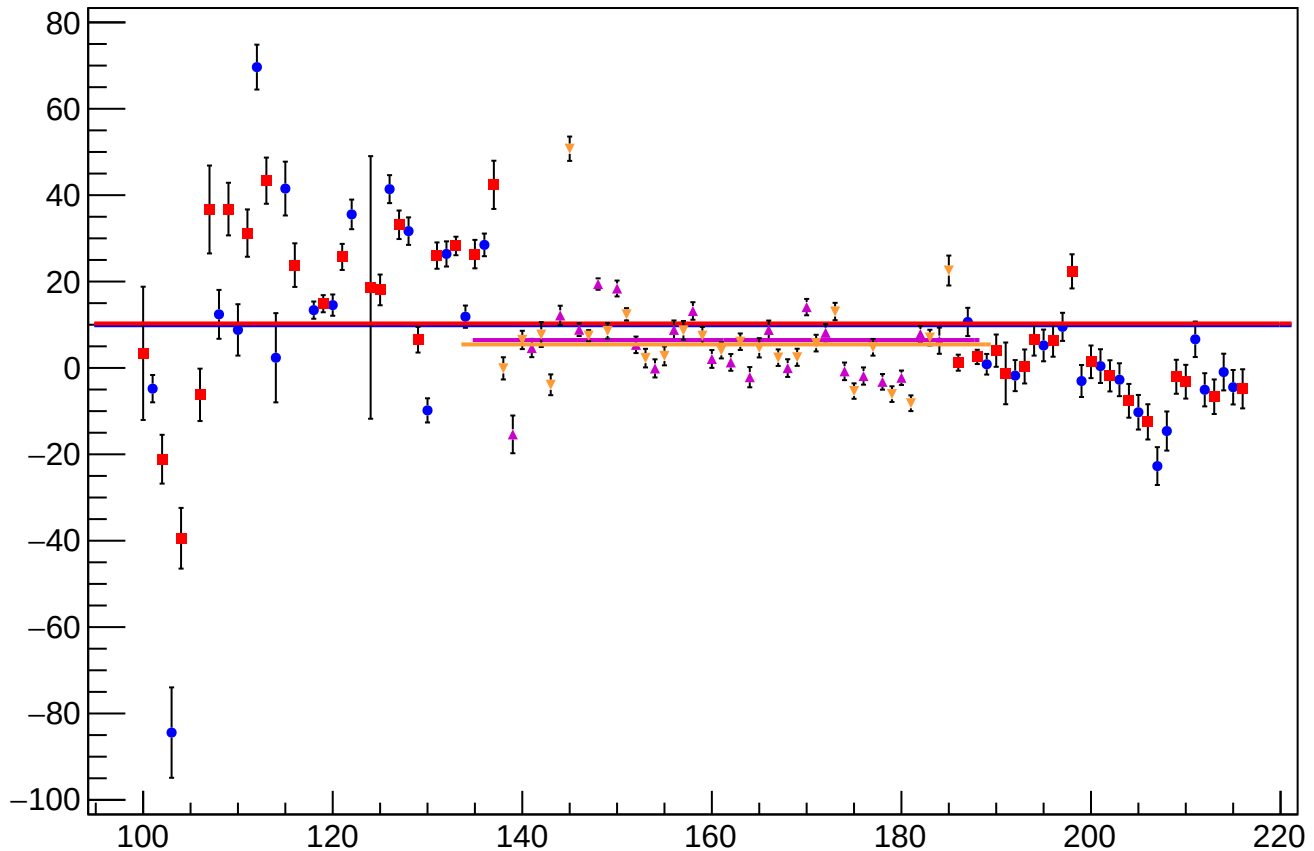
Left In:  $-10.183 \pm 0.526$   $\chi^2/\text{NDF}$ : 2518.4/22

+ sign  $-5.443 \pm 0.363$   $\chi^2/\text{NDF}$ : 7662.1/55

All:  $-5.991 \pm 0.255$   $\chi^2/\text{NDF}$ : 16198.2/113

- sign  $-6.524 \pm 0.358$   $\chi^2/\text{NDF}$ : 8531.6/57

# reg\_asym\_atl1\_diff\_bpm4aY\_slope vs Slug



Right In:  $9.889 \pm 0.619$   $\chi^2/\text{NDF}: 799.1/30$

Left Out:  $5.445 \pm 0.394$   $\chi^2/\text{NDF}: 493.7/24$

Right Out:  $10.298 \pm 0.592$   $\chi^2/\text{NDF}: 602.4/34$

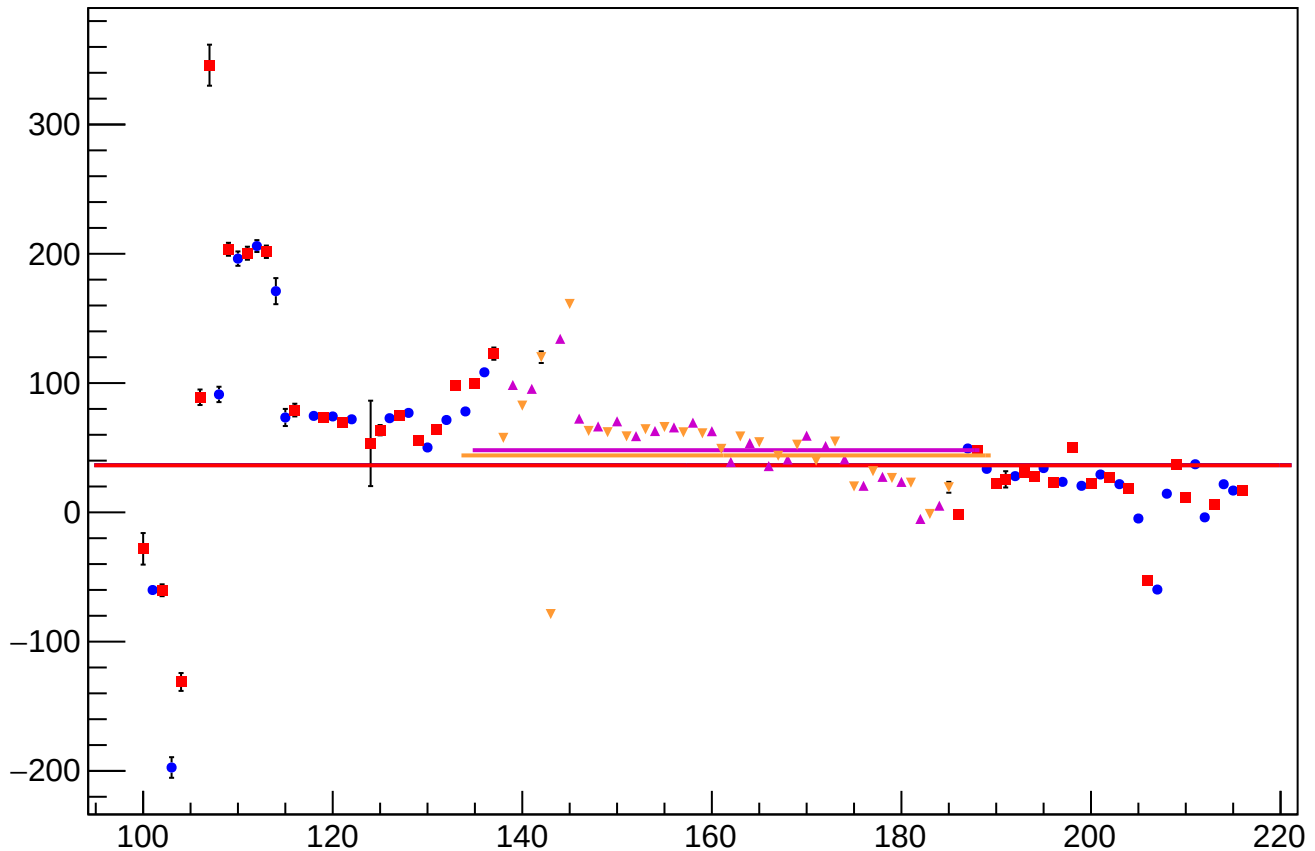
Left In:  $6.461 \pm 0.408$   $\chi^2/\text{NDF}: 336.0/22$

+ sign  $6.725 \pm 0.332$   $\chi^2/\text{NDF}: 1329.5/55$

All:  $7.207 \pm 0.236$   $\chi^2/\text{NDF}: 2300.6/113$

- sign  $7.698 \pm 0.336$   $\chi^2/\text{NDF}: 966.9/57$

# reg\_asym\_atl1\_diff\_bpm4eX\_slope vs Slug



Right In:  $36.546 \pm 0.514$   $\chi^2/\text{NDF}$ : 8348.0/30

Left Out:  $44.040 \pm 0.510$   $\chi^2/\text{NDF}$ : 4563.8/24

Right Out:  $36.392 \pm 0.468$   $\chi^2/\text{NDF}$ : 9376.5/34

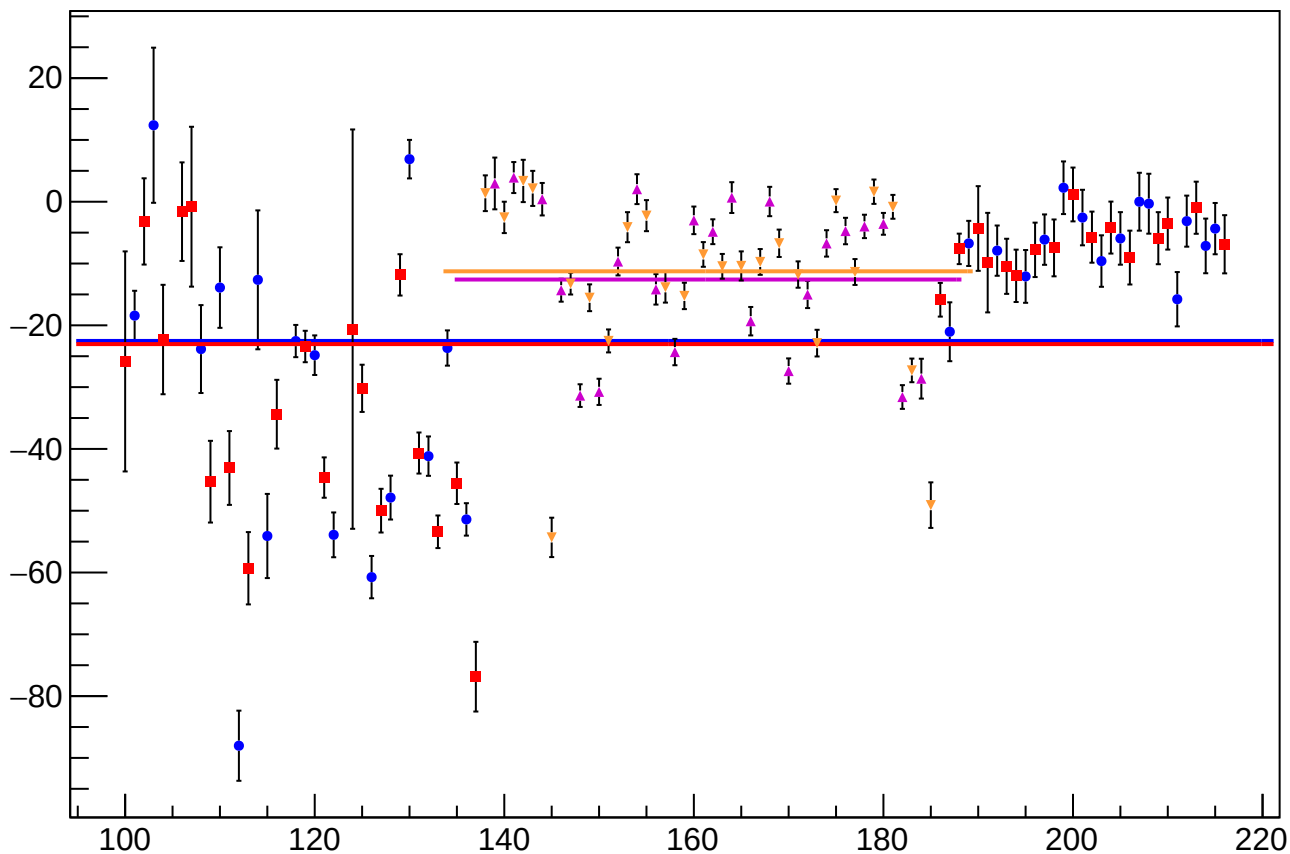
Left In:  $48.076 \pm 0.521$   $\chi^2/\text{NDF}$ : 3376.5/22

+ sign  $40.326 \pm 0.362$   $\chi^2/\text{NDF}$ : 13018.9/55

All:  $40.990 \pm 0.251$   $\chi^2/\text{NDF}$ : 26056.8/113

- sign  $41.604 \pm 0.348$   $\chi^2/\text{NDF}$ : 13031.4/57

# reg\_asym\_atl1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-22.528 \pm 0.717$   $\chi^2/\text{NDF}: 893.5/30$

Left Out:  $-11.260 \pm 0.445$   $\chi^2/\text{NDF}: 643.3/24$

Right Out:  $-23.038 \pm 0.709$   $\chi^2/\text{NDF}: 747.3/34$

Left In:  $-12.589 \pm 0.459$   $\chi^2/\text{NDF}: 671.8/22$

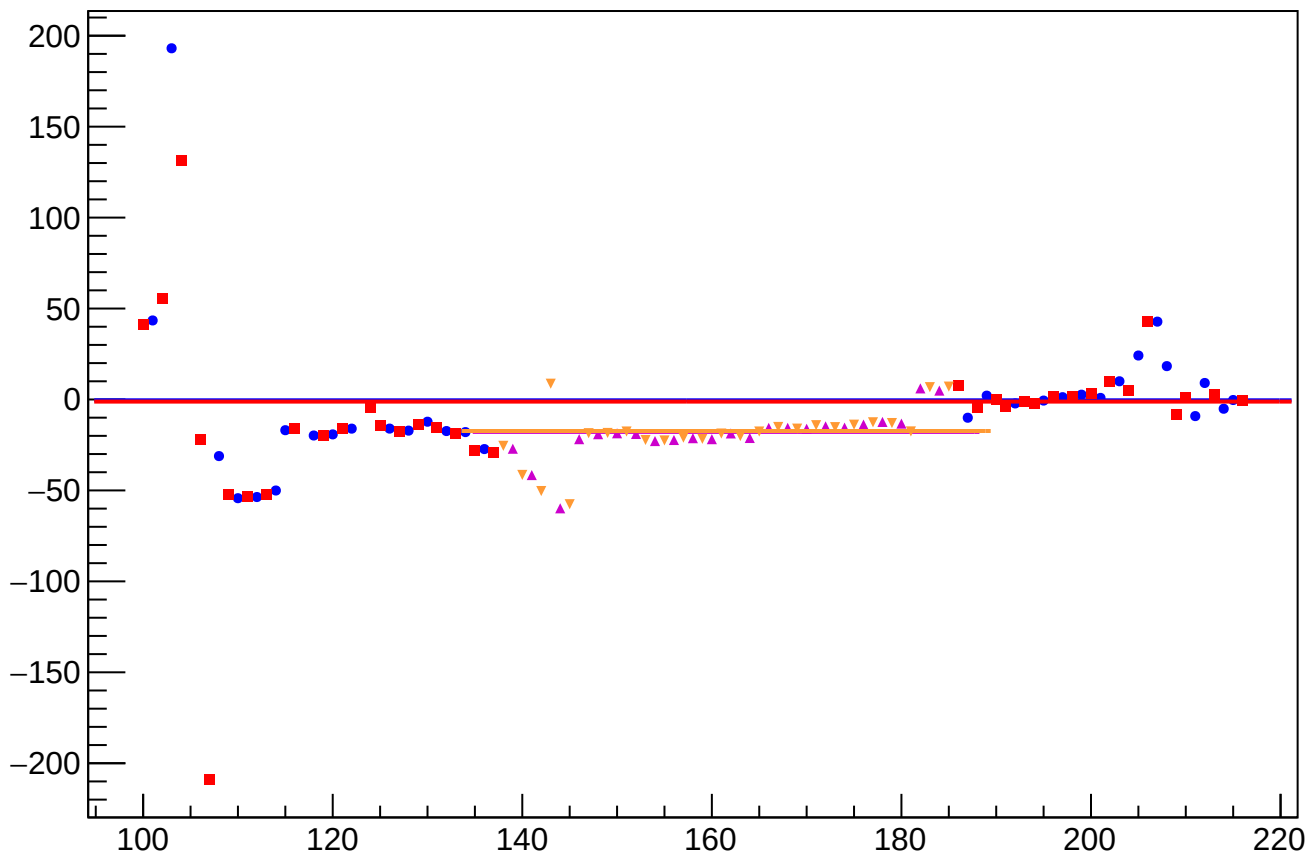
+ sign  $-14.393 \pm 0.378$   $\chi^2/\text{NDF}: 1715.2/55$

All:  $-15.020 \pm 0.270$   $\chi^2/\text{NDF}: 3293.0/113$

- sign  $-15.672 \pm 0.385$   $\chi^2/\text{NDF}: 1572.1/57$



# reg\_asym\_atl1\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.445 \pm 0.034$   $\chi^2/\text{NDF}$ : 648065.0/30

Left Out:  $-17.330 \pm 0.020$   $\chi^2/\text{NDF}$ : 347790.9/24

Right Out:  $-1.167 \pm 0.033$   $\chi^2/\text{NDF}$ : 571677.0/34

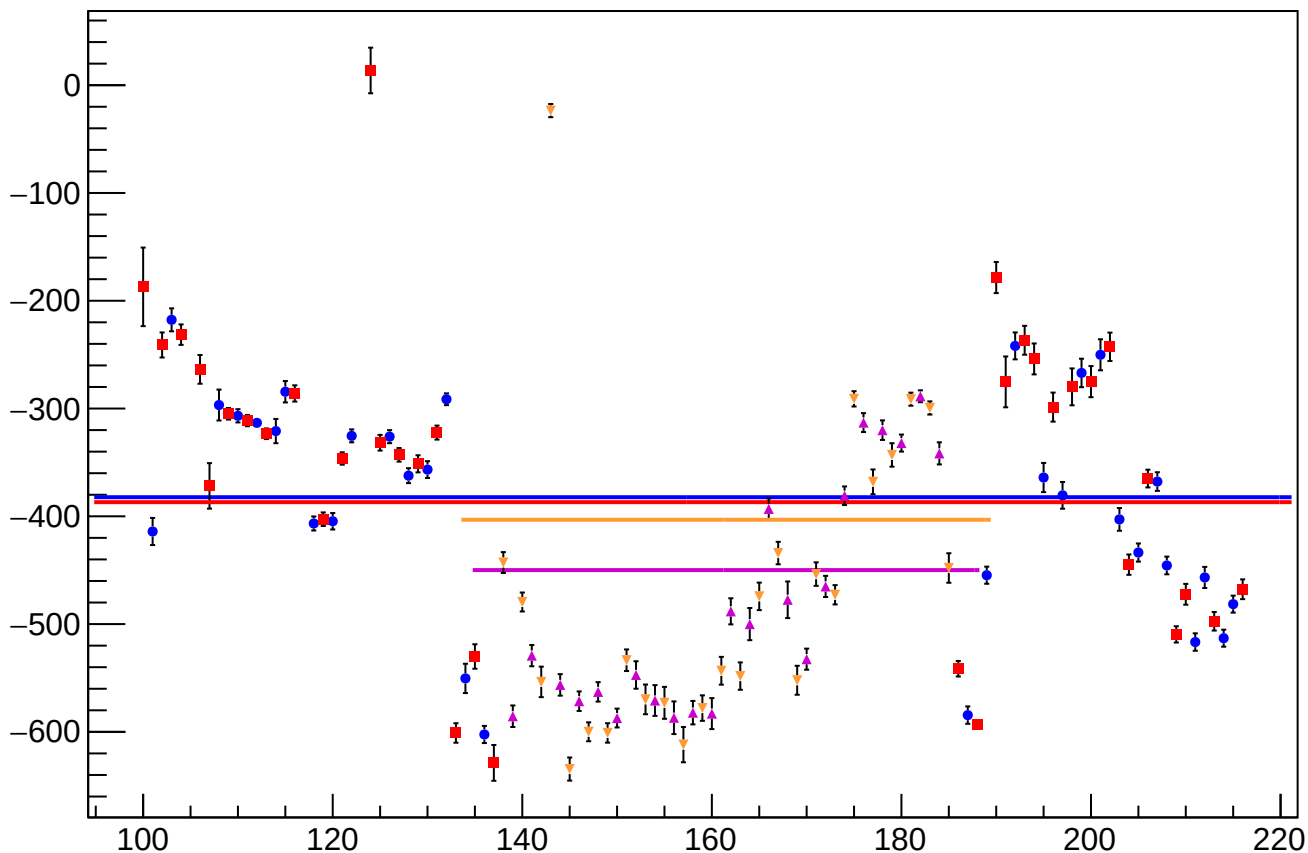
Left In:  $-17.829 \pm 0.020$   $\chi^2/\text{NDF}$ : 267426.0/22

+ sign  $-12.959 \pm 0.017$   $\chi^2/\text{NDF}$ : 1181004.4/55

All:  $-13.139 \pm 0.012$   $\chi^2/\text{NDF}$ : 2202720.5/113

- sign  $-13.323 \pm 0.017$   $\chi^2/\text{NDF}$ : 1021494.3/57

# reg\_asym\_atl2\_diff\_bpm1X\_slope vs Slug



Right In:  $-382.290 \pm 1.459$   $\chi^2/\text{NDF}$ : 4069.7/30

Left Out:  $-403.195 \pm 1.928$   $\chi^2/\text{NDF}$ : 7750.3/24

Right Out:  $-386.868 \pm 1.397$   $\chi^2/\text{NDF}$ : 6999.1/34

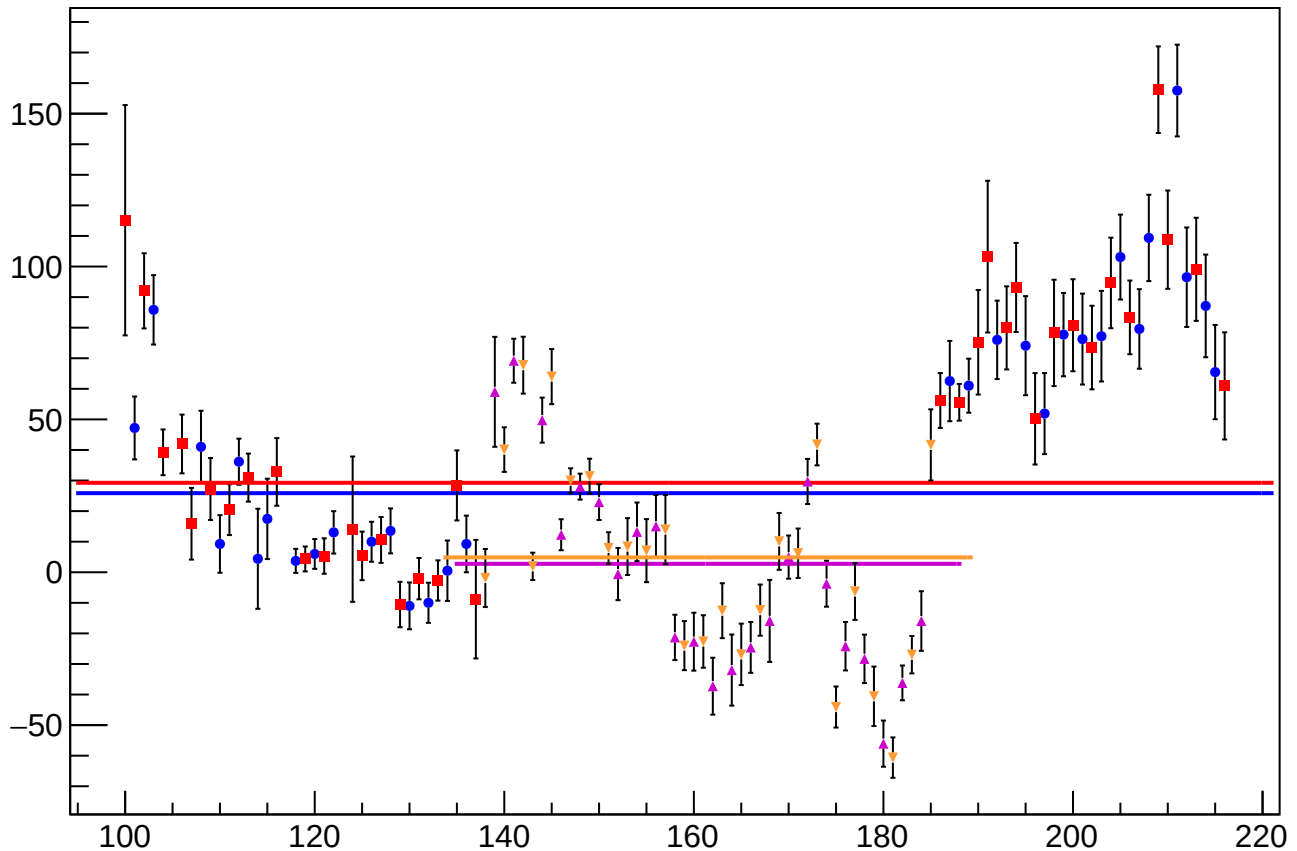
Left In:  $-449.912 \pm 2.043$   $\chi^2/\text{NDF}$ : 3218.9/22

+ sign  $-389.906 \pm 1.163$   $\chi^2/\text{NDF}$ : 11894.7/55

All:  $-398.503 \pm 0.819$   $\chi^2/\text{NDF}$ : 22869.8/113

- sign  $-406.946 \pm 1.153$   $\chi^2/\text{NDF}$ : 10866.8/57

# reg\_asym\_atl2\_diff\_bpm4aY\_slope vs Slug



Right In:  $25.870 \pm 1.633$   $\chi^2/\text{NDF}: 452.7/30$

Left Out:  $4.858 \pm 1.447$   $\chi^2/\text{NDF}: 457.2/24$

Right Out:  $29.262 \pm 1.600$   $\chi^2/\text{NDF}: 461.8/34$

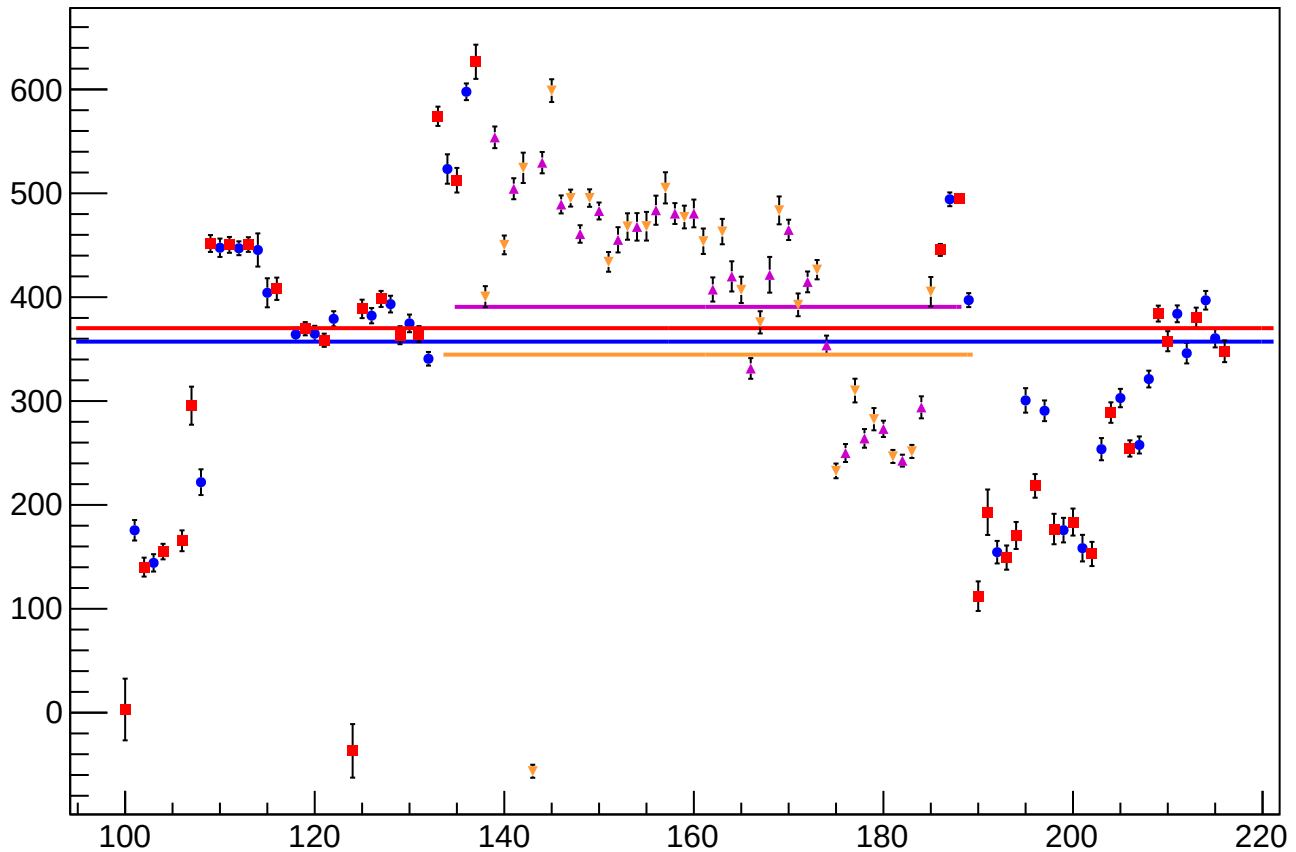
Left In:  $2.756 \pm 1.554$   $\chi^2/\text{NDF}: 399.6/22$

+ sign  $14.102 \pm 1.083$   $\chi^2/\text{NDF}: 1002.6/55$

All:  $14.842 \pm 0.777$   $\chi^2/\text{NDF}: 2006.2/113$

- sign  $15.627 \pm 1.115$   $\chi^2/\text{NDF}: 1002.7/57$

# reg\_asym\_atl2\_diff\_bpm4eX\_slope vs Slug



Right In: 357.200 $\pm$ 1.557  $\chi^2$ /NDF: 4210.0/30

Left Out: 344.680 $\pm$ 1.924  $\chi^2$ /NDF: 7278.2/24

Right Out: 370.173 $\pm$ 1.455  $\chi^2$ /NDF: 7218.9/34

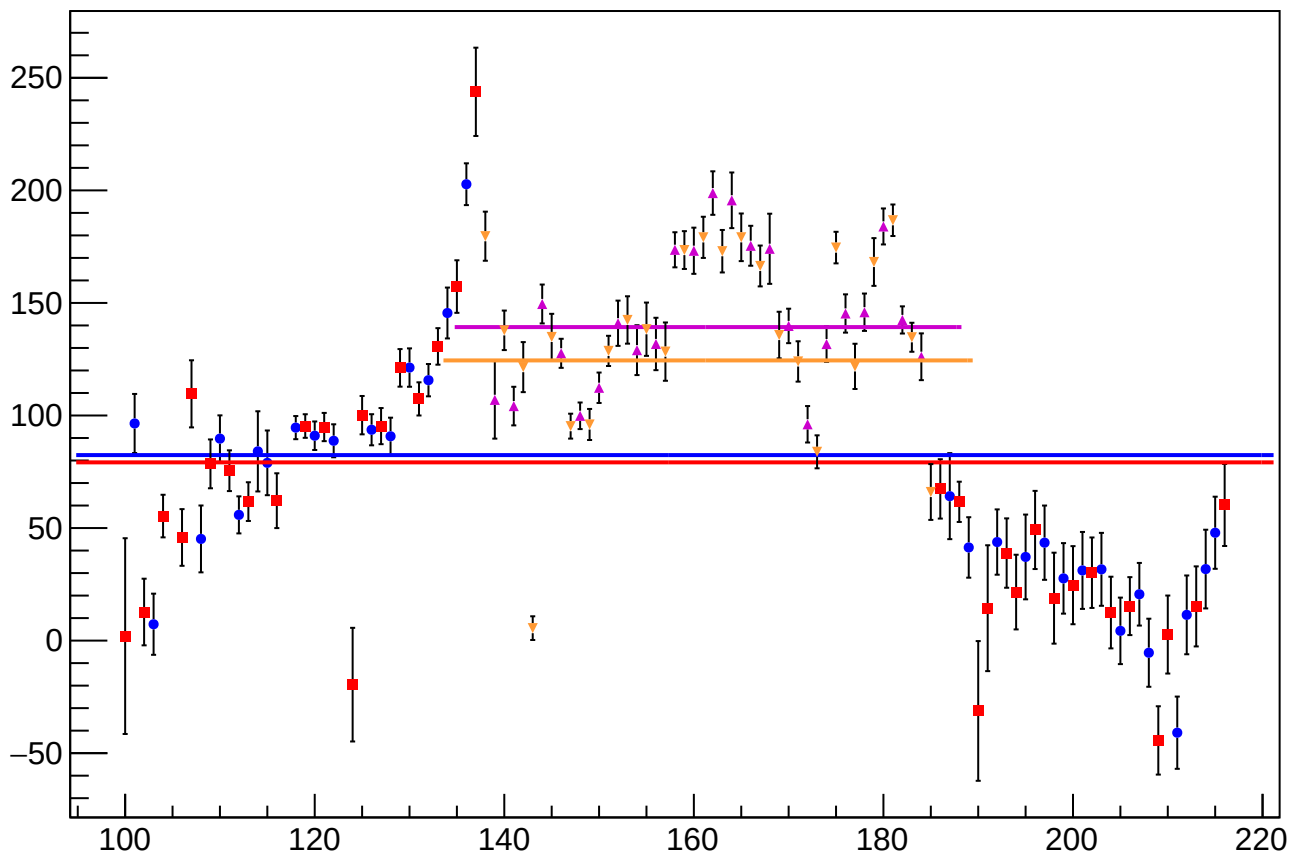
Left In: 390.672 $\pm$ 2.029  $\chi^2$ /NDF: 2672.8/22

+ sign 352.246 $\pm$ 1.210  $\chi^2$ /NDF: 11513.8/55

All: 364.980 $\pm$ 0.846  $\chi^2$ /NDF: 21689.2/113

- sign 377.129 $\pm$ 1.182  $\chi^2$ /NDF: 9959.1/57

# reg\_asym\_atl2\_diff\_bpm4eY\_slope vs Slug



Right In:  $82.410 \pm 1.901$   $\chi^2/\text{NDF}$ : 532.1/30

Left Out:  $124.466 \pm 1.662$   $\chi^2/\text{NDF}$ : 937.6/24

Right Out:  $79.177 \pm 1.876$   $\chi^2/\text{NDF}$ : 498.8/34

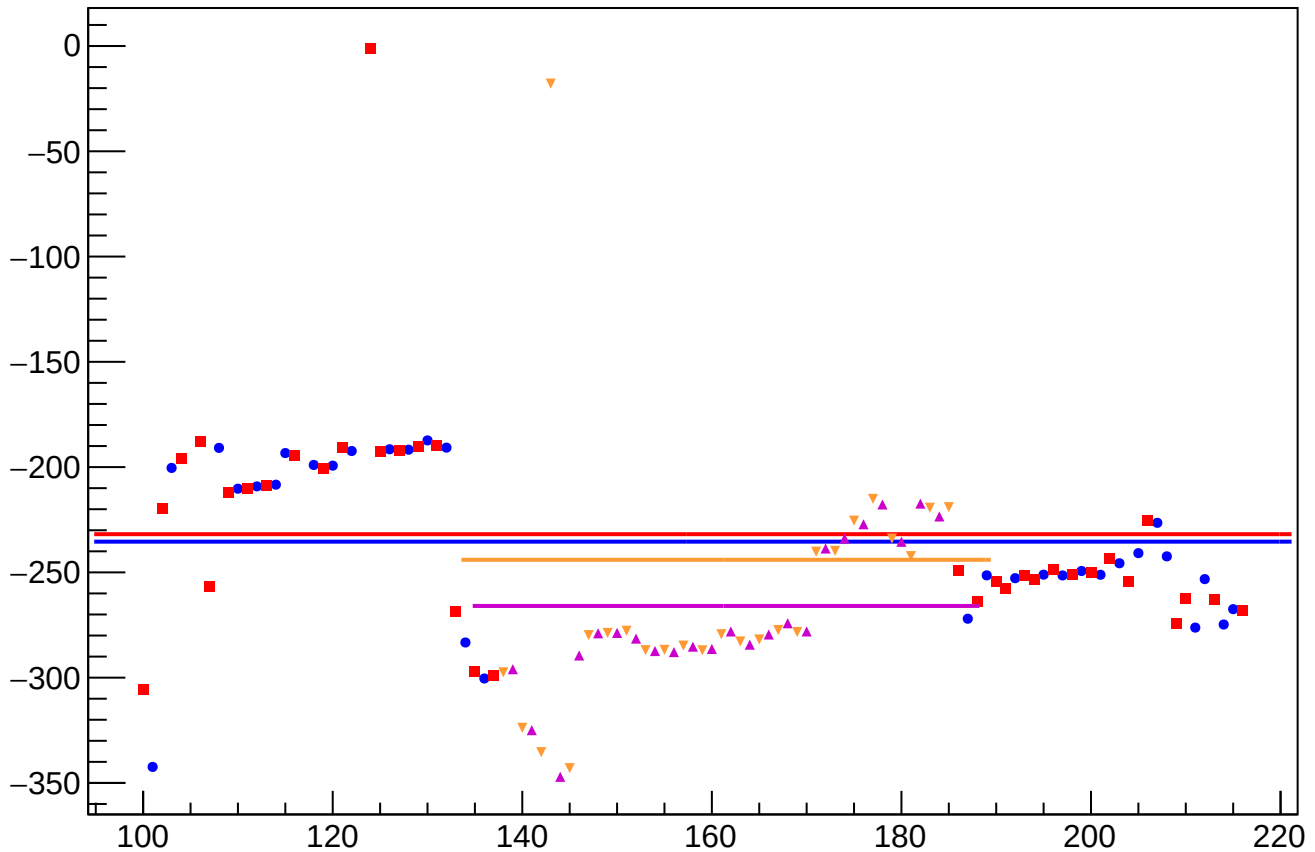
Left In:  $139.274 \pm 1.769$   $\chi^2/\text{NDF}$ : 260.9/22

+ sign  $106.246 \pm 1.251$   $\chi^2/\text{NDF}$ : 1747.2/55

All:  $108.547 \pm 0.897$   $\chi^2/\text{NDF}$ : 3056.9/113

- sign  $110.984 \pm 1.287$   $\chi^2/\text{NDF}$ : 1302.7/57

# reg\_asym\_atl2\_diff\_bpm12X\_slope vs Slug



Right In:  $-235.408 \pm 0.103$   $\chi^2/\text{NDF}$ : 143136.3/30

Left Out:  $-244.021 \pm 0.077$   $\chi^2/\text{NDF}$ : 997959.6/24

Right Out:  $-231.857 \pm 0.100$   $\chi^2/\text{NDF}$ : 119329.6/34

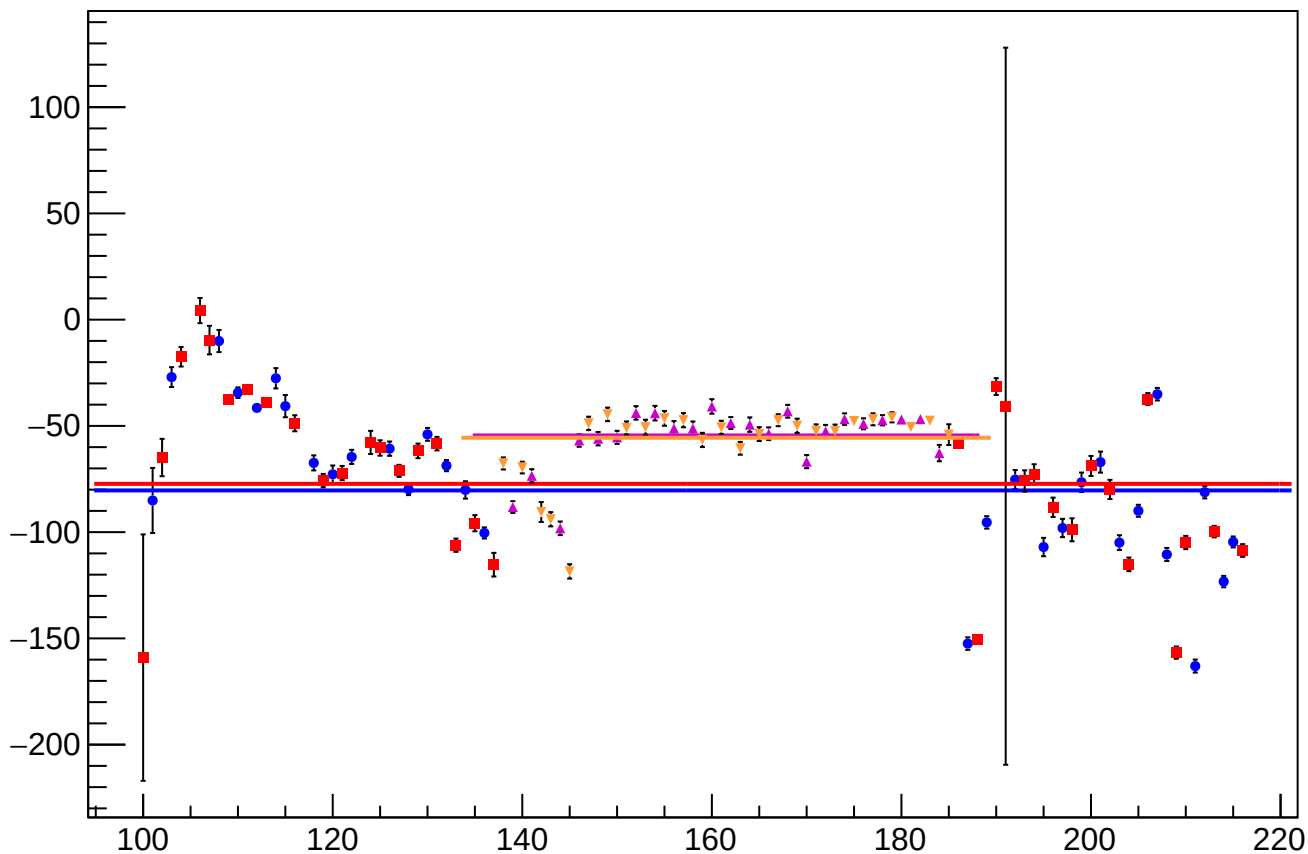
Left In:  $-265.945 \pm 0.081$   $\chi^2/\text{NDF}$ : 169943.2/22

+ sign  $-240.931 \pm 0.062$   $\chi^2/\text{NDF}$ : 1145545.1/55

All:  $-246.661 \pm 0.044$   $\chi^2/\text{NDF}$ : 1522692.8/11

- sign  $-252.535 \pm 0.063$   $\chi^2/\text{NDF}$ : 359809.3/57

# reg\_asym\_atr1\_diff\_bpm1X\_slope vs Slug



Right In:  $-80.370 \pm 0.590$   $\chi^2/\text{NDF}$ : 3538.1/30

Left Out:  $-55.575 \pm 0.590$   $\chi^2/\text{NDF}$ : 686.5/24

Right Out:  $-77.266 \pm 0.552$   $\chi^2/\text{NDF}$ : 5249.0/34

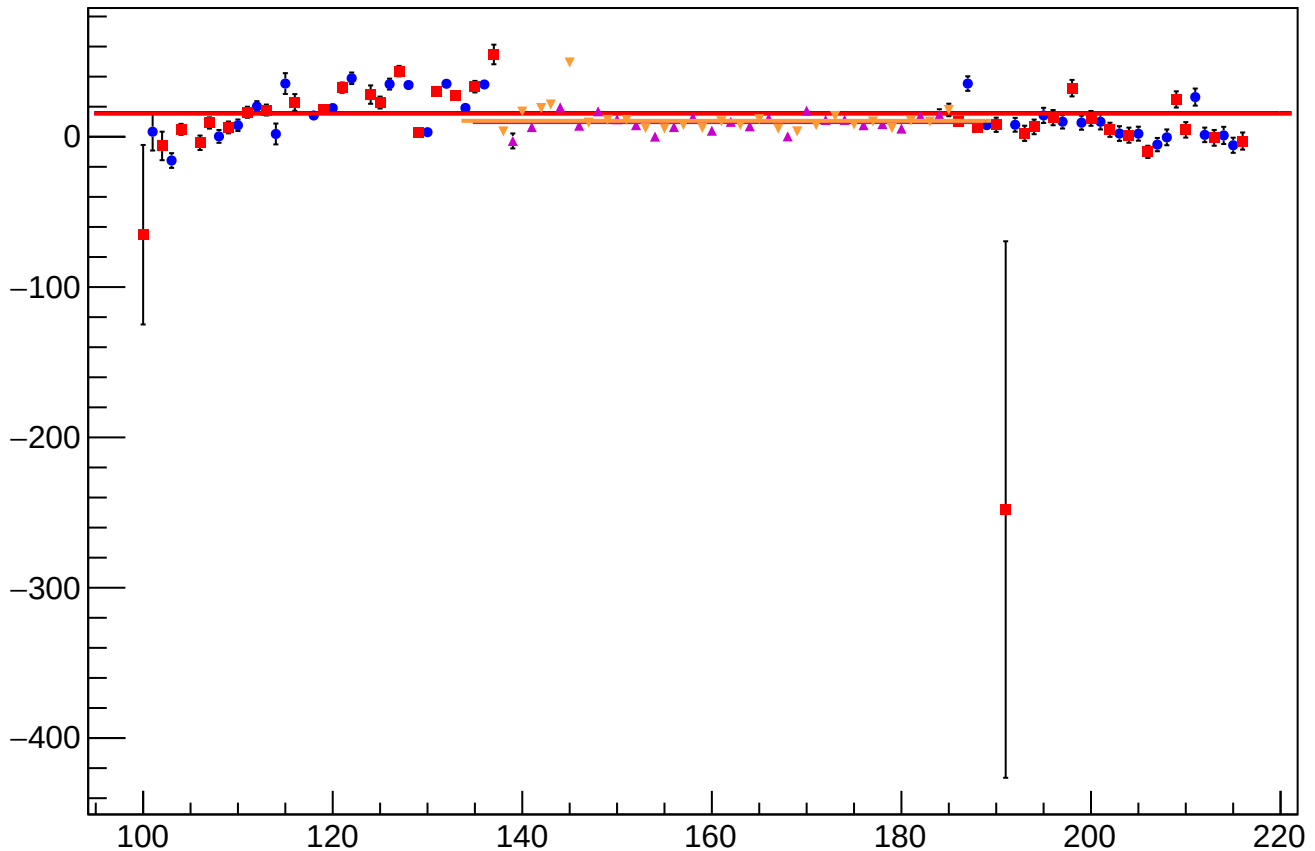
Left In:  $-54.499 \pm 0.606$   $\chi^2/\text{NDF}$ : 500.4/22

+ sign  $-67.970 \pm 0.417$   $\chi^2/\text{NDF}$ : 5107.3/55

All:  $-67.442 \pm 0.292$   $\chi^2/\text{NDF}$ : 11630.3/113

- sign  $-66.937 \pm 0.408$   $\chi^2/\text{NDF}$ : 6519.8/57

# reg\_asym\_atr1\_diff\_bpm4aY\_slope vs Slug



Right In: 15.755 $\pm$ 0.707  $\chi^2$ /NDF: 386.2/30

Left Out: 10.603 $\pm$ 0.449  $\chi^2$ /NDF: 255.2/24

Right Out: 15.373 $\pm$ 0.658  $\chi^2$ /NDF: 388.9/34

Left In: 9.765 $\pm$ 0.467  $\chi^2$ /NDF: 121.0/22

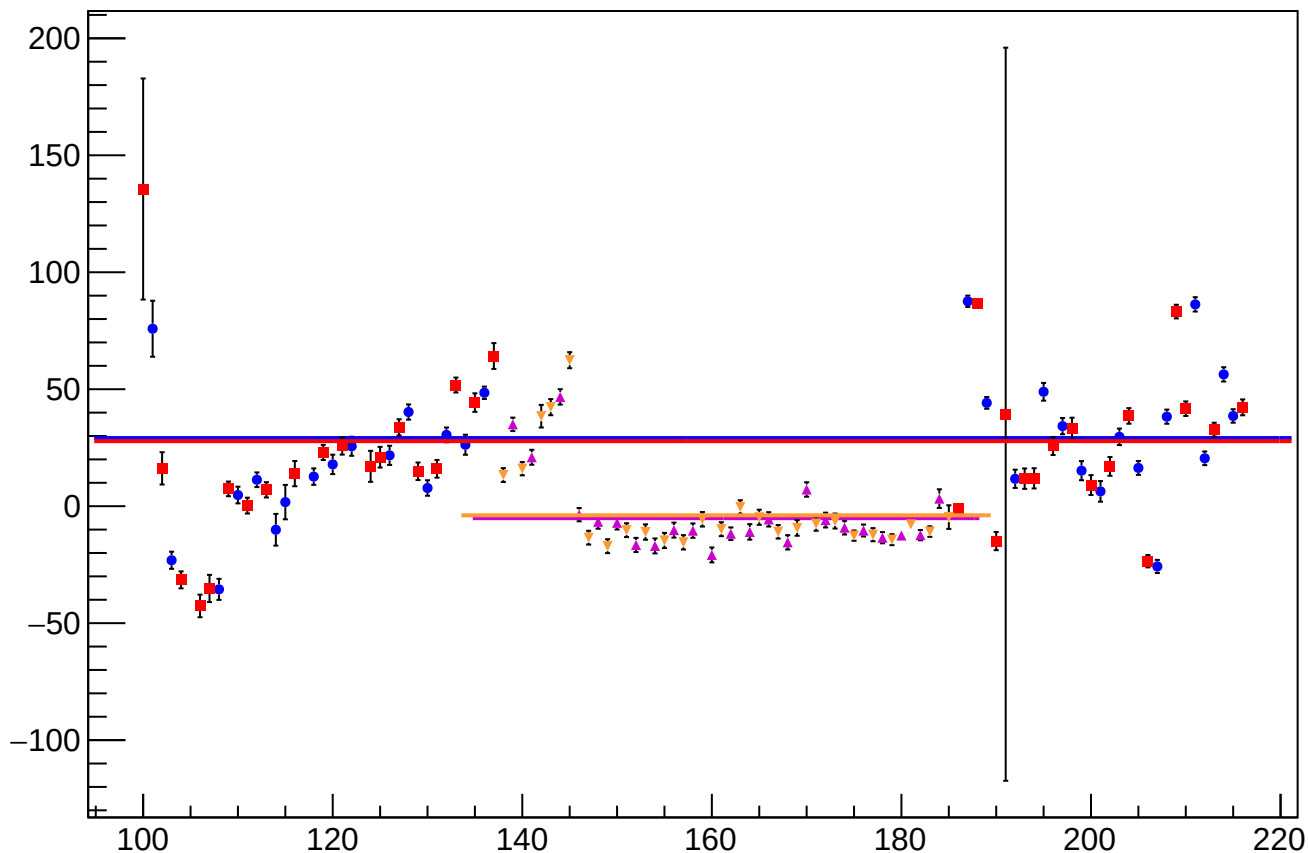
+ sign 12.087 $\pm$ 0.379  $\chi^2$ /NDF: 679.2/55

All: 11.865 $\pm$ 0.269  $\chi^2$ /NDF: 1238.1/113

- sign 11.642 $\pm$ 0.381  $\chi^2$ /NDF: 558.1/57



# reg\_asym\_atr1\_diff\_bpm4eX\_slope vs Slug



Right In:  $29.126 \pm 0.617$   $\chi^2/\text{NDF}$ : 2251.5/30

Left Out:  $-3.895 \pm 0.585$   $\chi^2/\text{NDF}$ : 850.2/24

Right Out:  $27.804 \pm 0.558$   $\chi^2/\text{NDF}$ : 4099.8/34

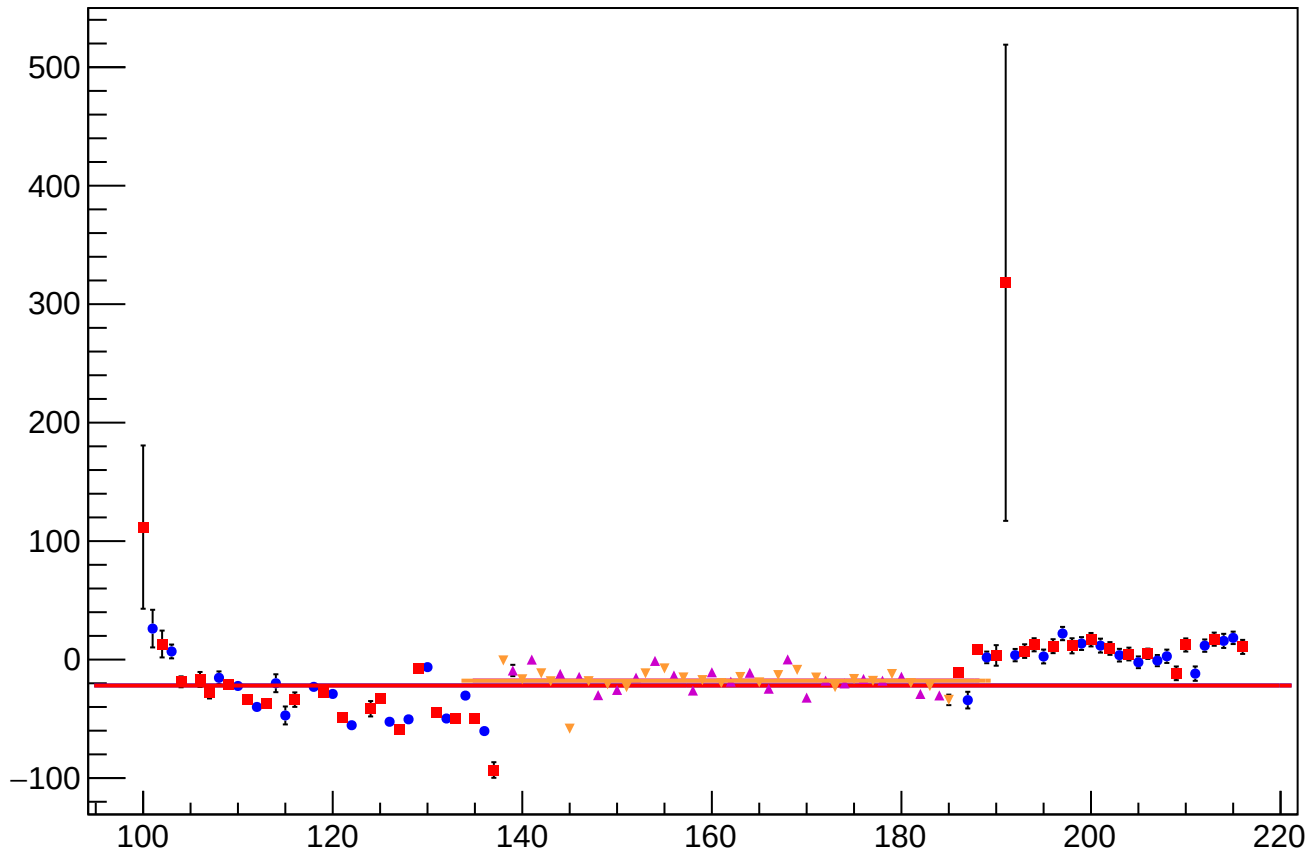
Left In:  $-5.124 \pm 0.600$   $\chi^2/\text{NDF}$ : 649.7/22

+ sign  $11.748 \pm 0.424$   $\chi^2/\text{NDF}$ : 4610.8/55

All:  $12.152 \pm 0.294$   $\chi^2/\text{NDF}$ : 10978.5/113

- sign  $12.526 \pm 0.408$   $\chi^2/\text{NDF}$ : 6366.0/57

# reg\_asym\_atr1\_diff\_bpm4eY\_slope vs Slug



Right In:  $-21.790 \pm 0.810$   $\chi^2/\text{NDF}$ : 945.1/30

Left Out:  $-17.776 \pm 0.509$   $\chi^2/\text{NDF}$ : 251.6/24

Right Out:  $-21.911 \pm 0.780$   $\chi^2/\text{NDF}$ : 1026.0/34

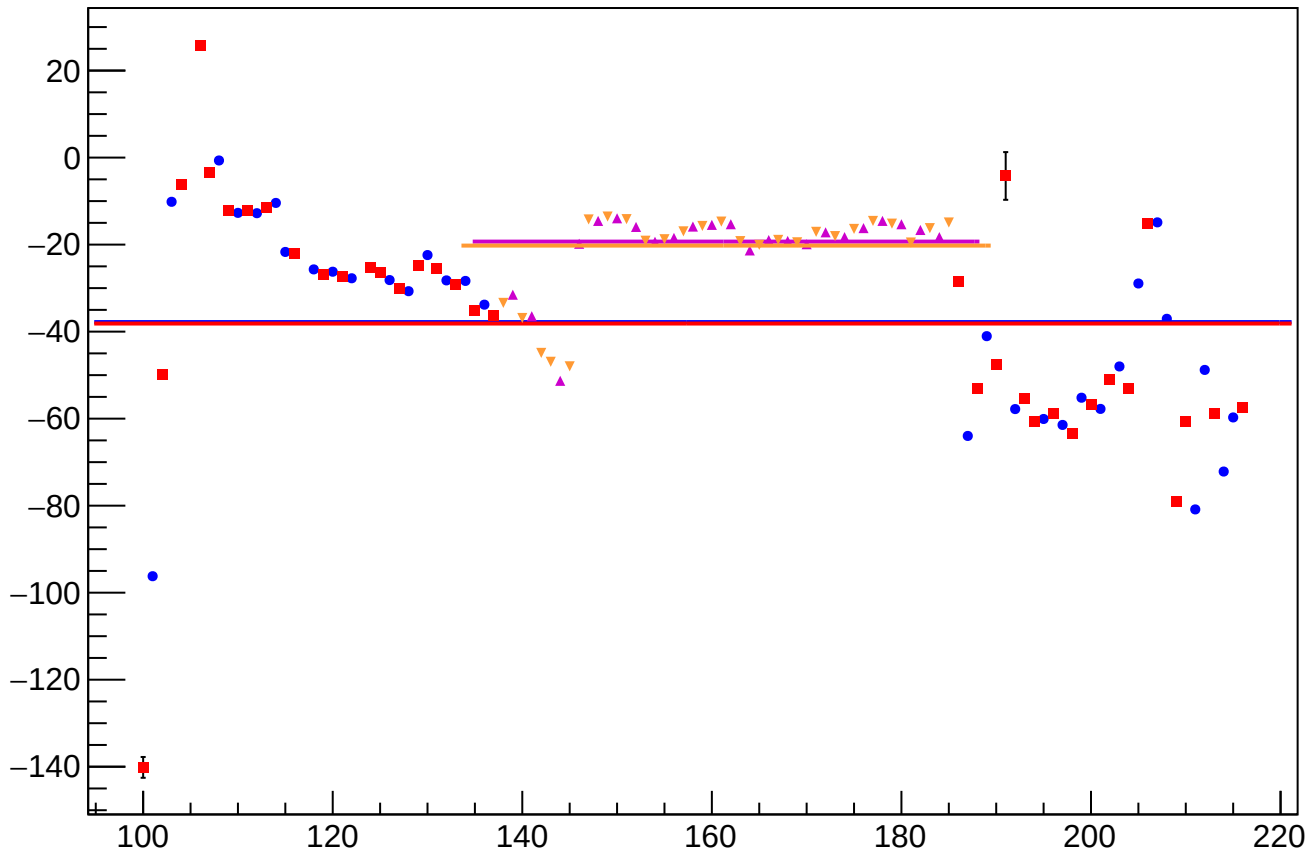
Left In:  $-17.643 \pm 0.526$   $\chi^2/\text{NDF}$ : 285.9/22

+ sign  $-18.911 \pm 0.431$   $\chi^2/\text{NDF}$ : 1214.2/55

All:  $-18.944 \pm 0.306$   $\chi^2/\text{NDF}$ : 2546.8/113

- sign  $-18.978 \pm 0.436$   $\chi^2/\text{NDF}$ : 1332.5/57

## reg\_asym\_atr1\_diff\_bpm12X\_slope vs Slug



Right In: -37.806+/-0.039     $\chi^2/\text{NDF}$ : 258599.8/30

Left Out:  $-20.227 \pm 0.023$      $\chi^2/\text{NDF}: 147352.7/24$

Right Out:  $-38.142 \pm 0.039$      $\chi^2/\text{NDF}$ : 334661.5/34

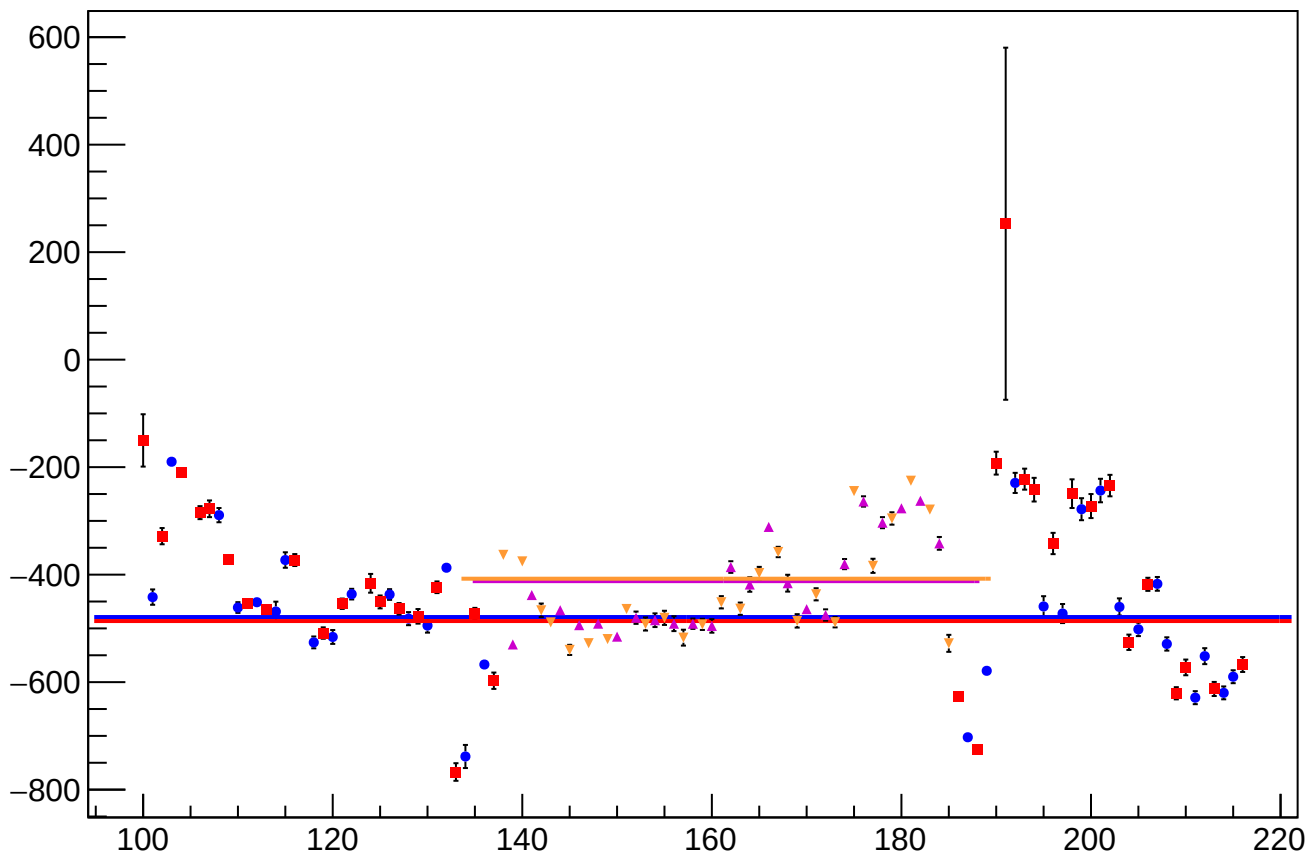
Left In: -19.310+/-0.023      $\chi^2/\text{NDF}$ :93090.9/22

+ sign -24.677+/-0.020     $\chi^2/\text{NDF}$ : 555682.0/55

All:  $-24.480 \pm 0.014$      $\chi^2/\text{NDF}$ : 1156549.9/113

- sign -24.280+/-0.020     $\chi^2/\text{NDF}$ : 600668.4/57

# reg\_asym\_atr2\_diff\_bpm1X\_slope vs Slug



Right In:  $-478.858 \pm 2.116$   $\chi^2/\text{NDF}$ : 3306.3/30

Left Out:  $-407.554 \pm 1.951$   $\chi^2/\text{NDF}$ : 2872.6/24

Right Out:  $-486.327 \pm 1.938$   $\chi^2/\text{NDF}$ : 6441.4/34

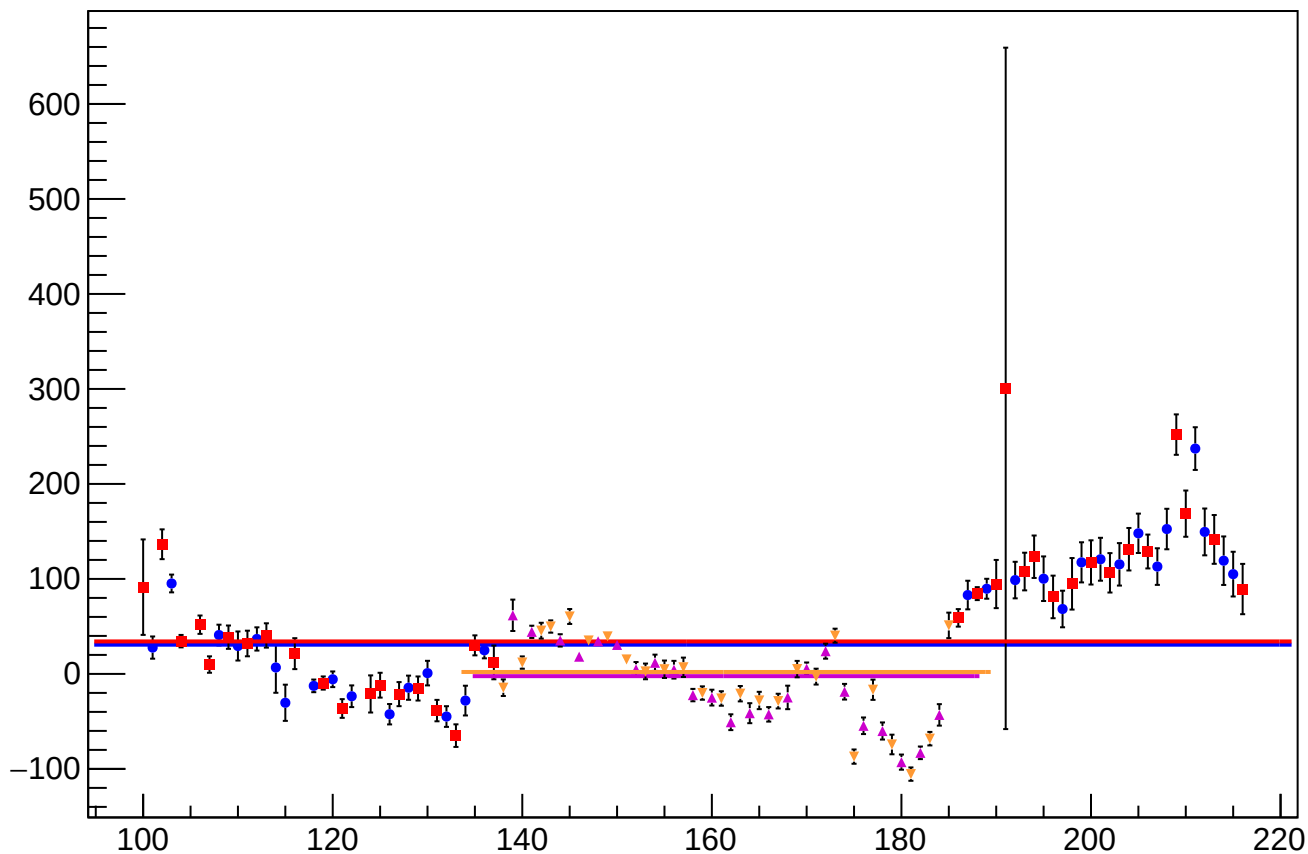
Left In:  $-412.102 \pm 2.008$   $\chi^2/\text{NDF}$ : 2182.3/22

+ sign  $-440.317 \pm 1.434$   $\chi^2/\text{NDF}$ : 6792.7/55

All:  $-445.575 \pm 1.000$   $\chi^2/\text{NDF}$ : 16150.0/113

- sign  $-450.544 \pm 1.394$   $\chi^2/\text{NDF}$ : 9331.2/57

# reg\_asym\_atr2\_diff\_bpm4aY\_slope vs Slug



Right In:  $30.773 \pm 2.387$   $\chi^2/\text{NDF}: 599.7/30$

Left Out:  $2.035 \pm 1.426$   $\chi^2/\text{NDF}: 910.7/24$

Right Out:  $34.193 \pm 2.172$   $\chi^2/\text{NDF}: 651.1/34$

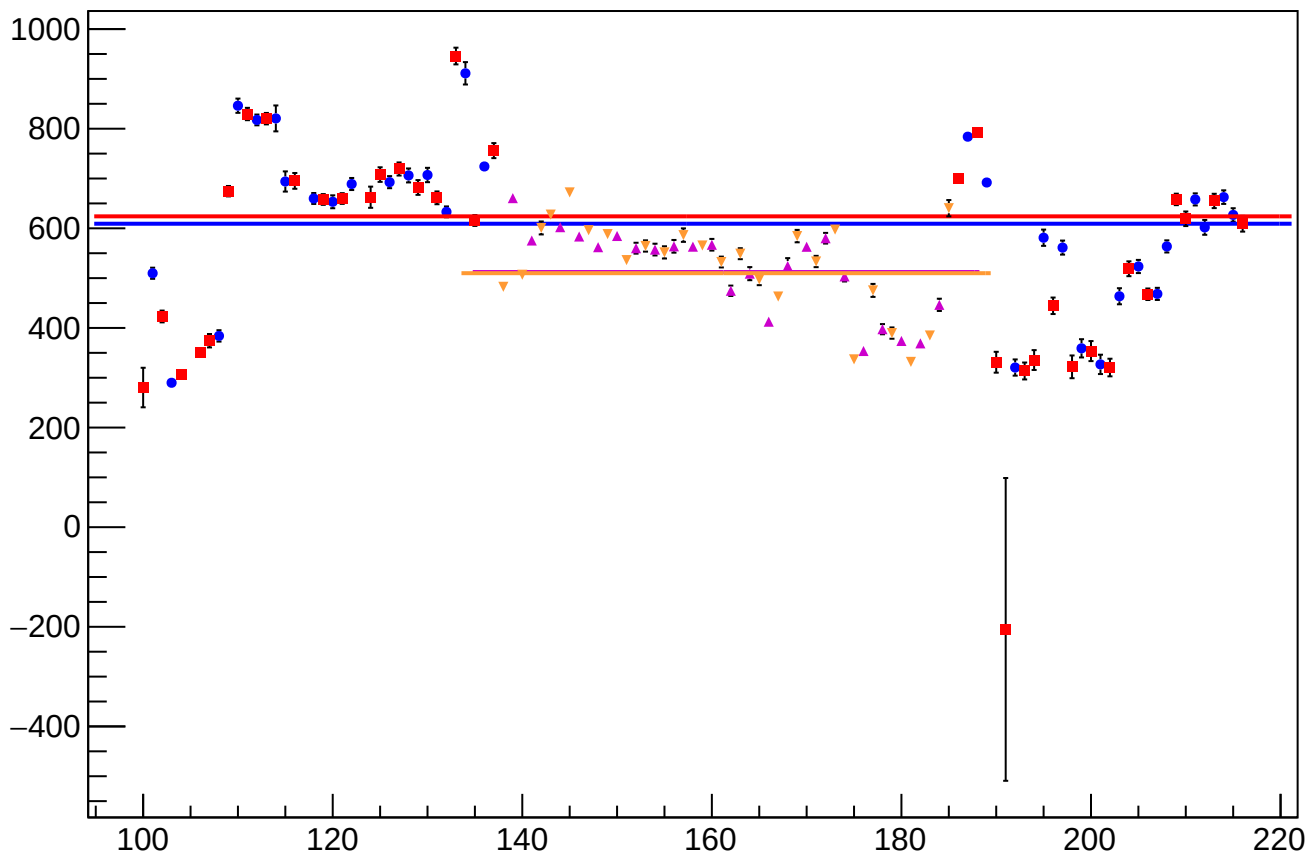
Left In:  $-2.365 \pm 1.482$   $\chi^2/\text{NDF}: 733.4/22$

+ sign  $9.592 \pm 1.224$   $\chi^2/\text{NDF}: 1617.2/55$

All:  $9.421 \pm 0.866$   $\chi^2/\text{NDF}: 3195.0/113$

- sign  $9.250 \pm 1.225$   $\chi^2/\text{NDF}: 1577.7/57$

# reg\_asym\_atr2\_diff\_bpm4eX\_slope vs Slug



Right In: 609.214 $\pm$ 2.148  $\chi^2/\text{NDF}$ : 5562.5/30

Left Out: 509.912 $\pm$ 1.936  $\chi^2/\text{NDF}$ : 2662.6/24

Right Out: 624.040 $\pm$ 1.904  $\chi^2/\text{NDF}$ : 8821.2/34

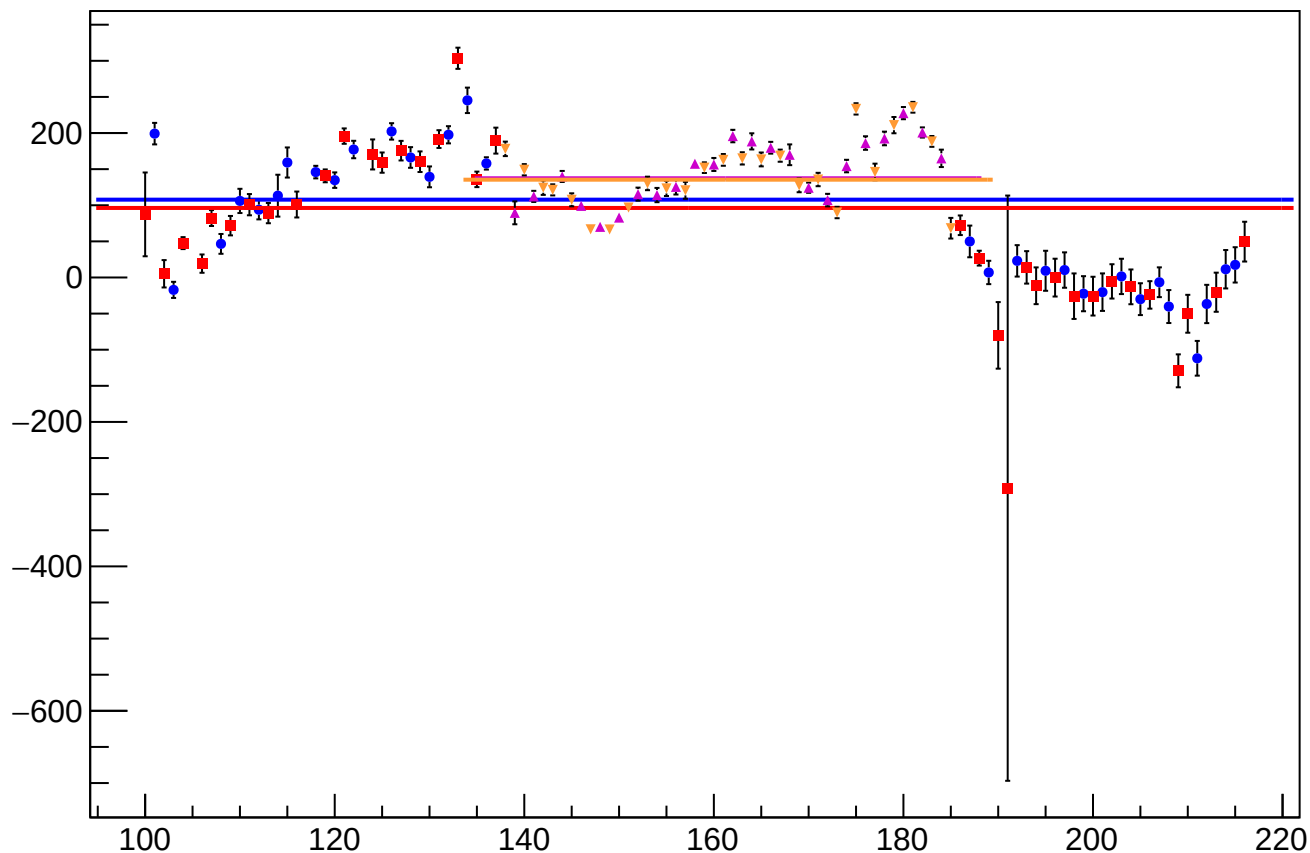
Left In: 512.270 $\pm$ 1.984  $\chi^2/\text{NDF}$ : 2087.6/22

+ sign 554.406 $\pm$ 1.438  $\chi^2/\text{NDF}$ : 9404.3/55

All: 562.801 $\pm$ 0.993  $\chi^2/\text{NDF}$ : 22030.9/113

- sign 570.460 $\pm$ 1.374  $\chi^2/\text{NDF}$ : 12561.4/57

# reg\_asym\_atr2\_diff\_bpm4eY\_slope vs Slug



Right In: 107.760 $\pm$ 2.783  $\chi^2/\text{NDF}$ : 905.2/30

Left Out: 135.407 $\pm$ 1.649  $\chi^2/\text{NDF}$ : 923.2/24

Right Out: 96.271 $\pm$ 2.601  $\chi^2/\text{NDF}$ : 974.0/34

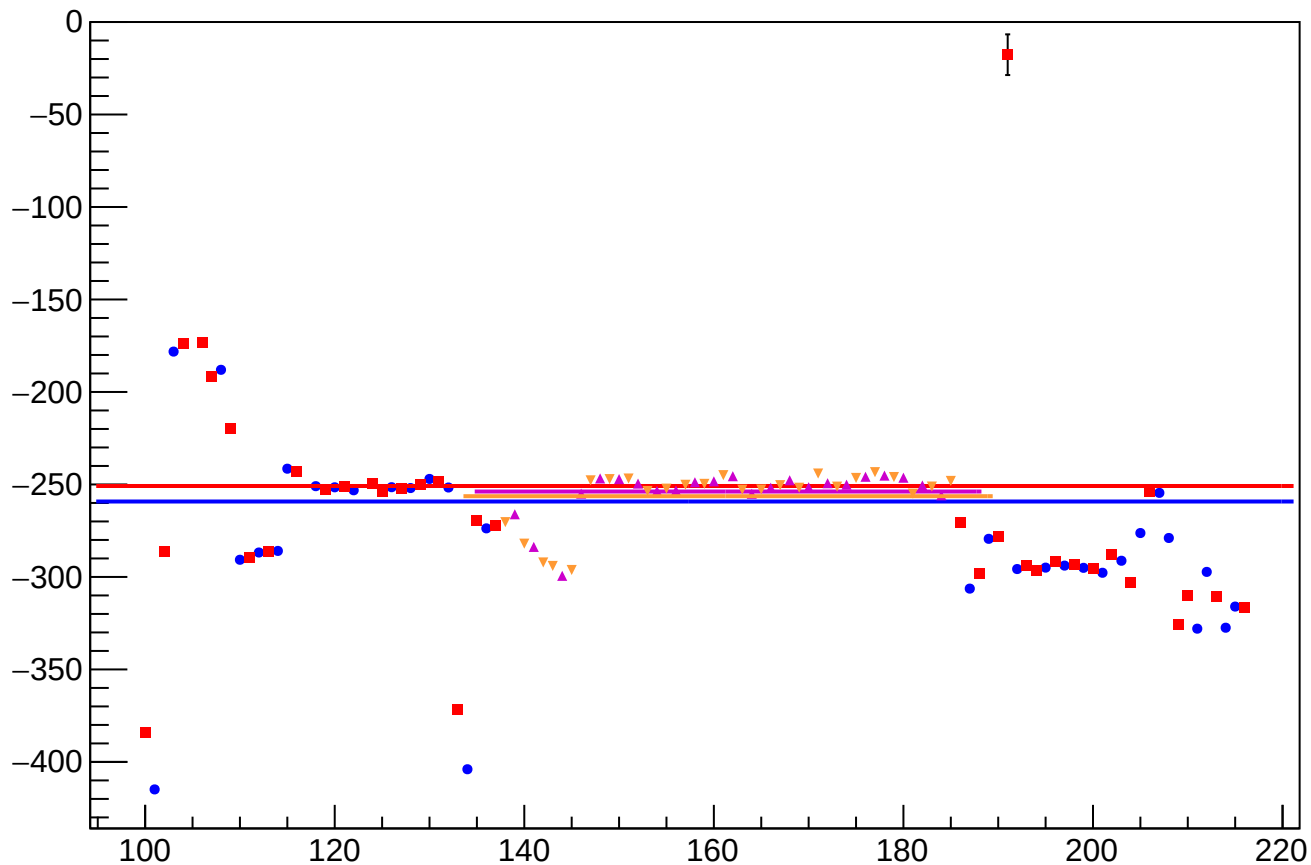
Left In: 137.374 $\pm$ 1.702  $\chi^2/\text{NDF}$ : 706.0/22

+ sign 128.224 $\pm$ 1.419  $\chi^2/\text{NDF}$ : 1901.4/55

All: 126.644 $\pm$ 1.005  $\chi^2/\text{NDF}$ : 3758.7/113

- sign 125.052 $\pm$ 1.424  $\chi^2/\text{NDF}$ : 1854.8/57

# reg\_asym\_atr2\_diff\_bpm12X\_slope vs Slug



Right In:  $-259.216 \pm 0.133$   $\chi^2/\text{NDF}: 207789.2/30$

Left Out:  $-256.344 \pm 0.077$   $\chi^2/\text{NDF}: 39513.4/24$

Right Out:  $-250.831 \pm 0.128$   $\chi^2/\text{NDF}: 160106.8/34$

Left In:  $-253.817 \pm 0.078$   $\chi^2/\text{NDF}: 24076.7/22$

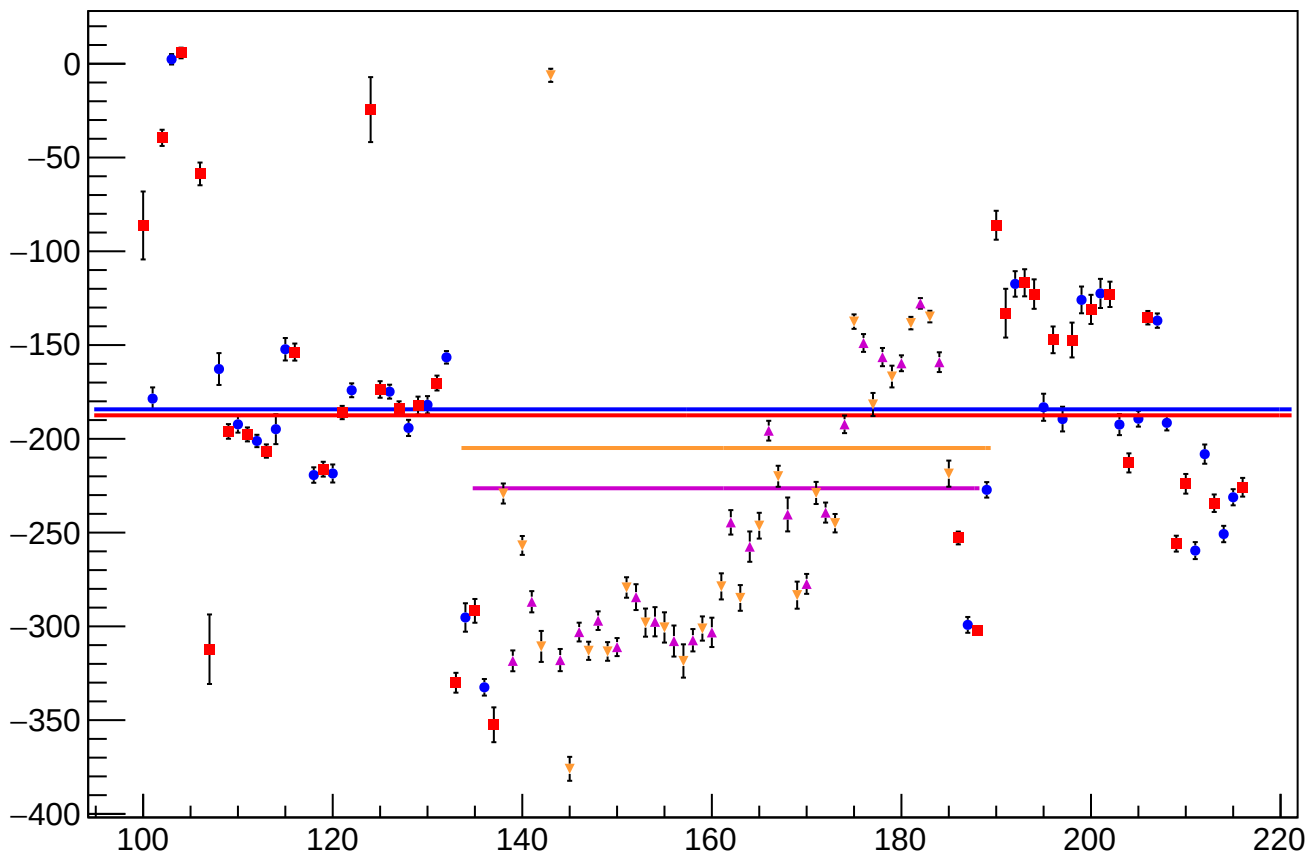
+ sign  $-257.065 \pm 0.067$   $\chi^2/\text{NDF}: 247651.9/55$

All:  $-255.037 \pm 0.047$   $\chi^2/\text{NDF}: 434082.1/113$

- sign  $-253.014 \pm 0.067$   $\chi^2/\text{NDF}: 184579.5/57$



# reg\_asym\_atl\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -184.268+/-0.820  $\chi^2/\text{NDF}$ : 8011.5/30

Left Out: -204.891+/-1.052  $\chi^2/\text{NDF}$ : 7826.3/24

Right Out: -187.471+/-0.785  $\chi^2/\text{NDF}$ : 12084.1/34

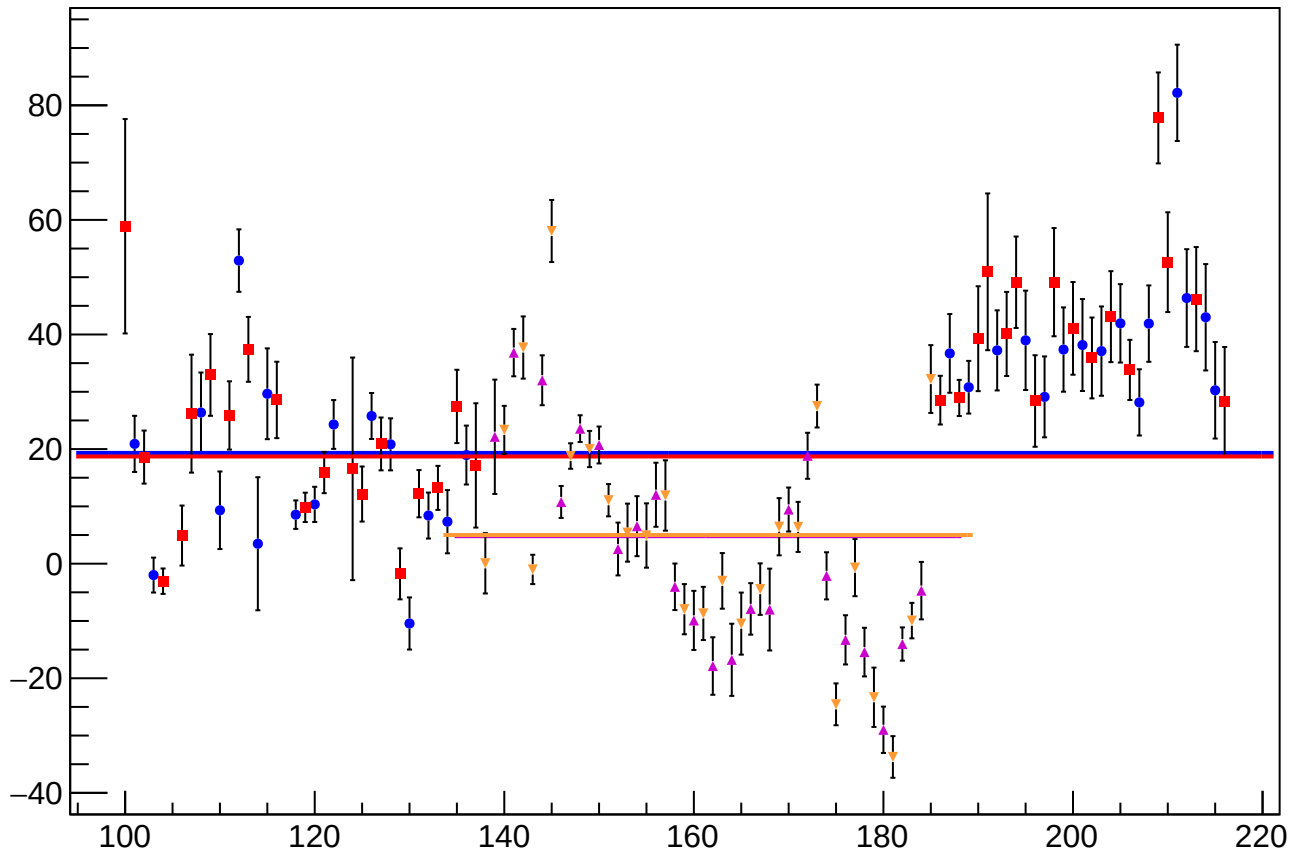
Left In: -226.365+/-1.105  $\chi^2/\text{NDF}$ : 4219.0/22

+ sign -192.059+/-0.647  $\chi^2/\text{NDF}$ : 16076.9/55

All: -196.333+/-0.455  $\chi^2/\text{NDF}$ : 33289.8/113

- sign -200.521+/-0.640  $\chi^2/\text{NDF}$ : 17126.4/57

# reg\_asym\_atl\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $19.329 \pm 0.927$   $\chi^2/\text{NDF}: 321.8/30$

Left Out:  $5.006 \pm 0.793$   $\chi^2/\text{NDF}: 548.5/24$

Right Out:  $18.709 \pm 0.875$   $\chi^2/\text{NDF}: 342.6/34$

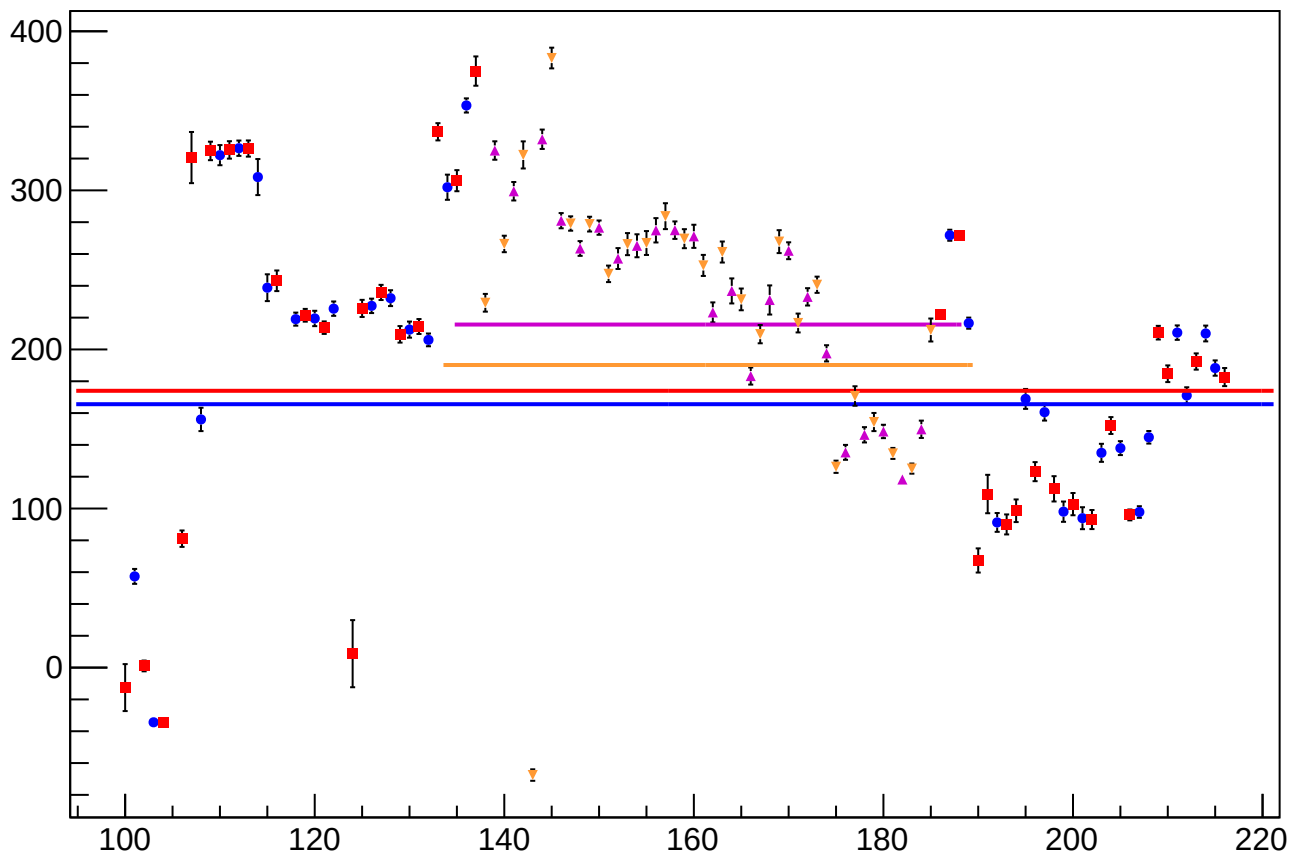
Left In:  $4.799 \pm 0.846$   $\chi^2/\text{NDF}: 426.3/22$

+ sign  $11.060 \pm 0.603$   $\chi^2/\text{NDF}: 1008.1/55$

All:  $11.290 \pm 0.428$   $\chi^2/\text{NDF}: 1907.9/113$

- sign  $11.525 \pm 0.608$   $\chi^2/\text{NDF}: 899.5/57$

# reg\_asym\_atl\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $165.579 \pm 0.827$   $\chi^2/\text{NDF}$ : 16142.9/30

Left Out:  $190.219 \pm 1.050$   $\chi^2/\text{NDF}$ : 9384.0/24

Right Out:  $174.002 \pm 0.769$   $\chi^2/\text{NDF}$ : 21466.4/34

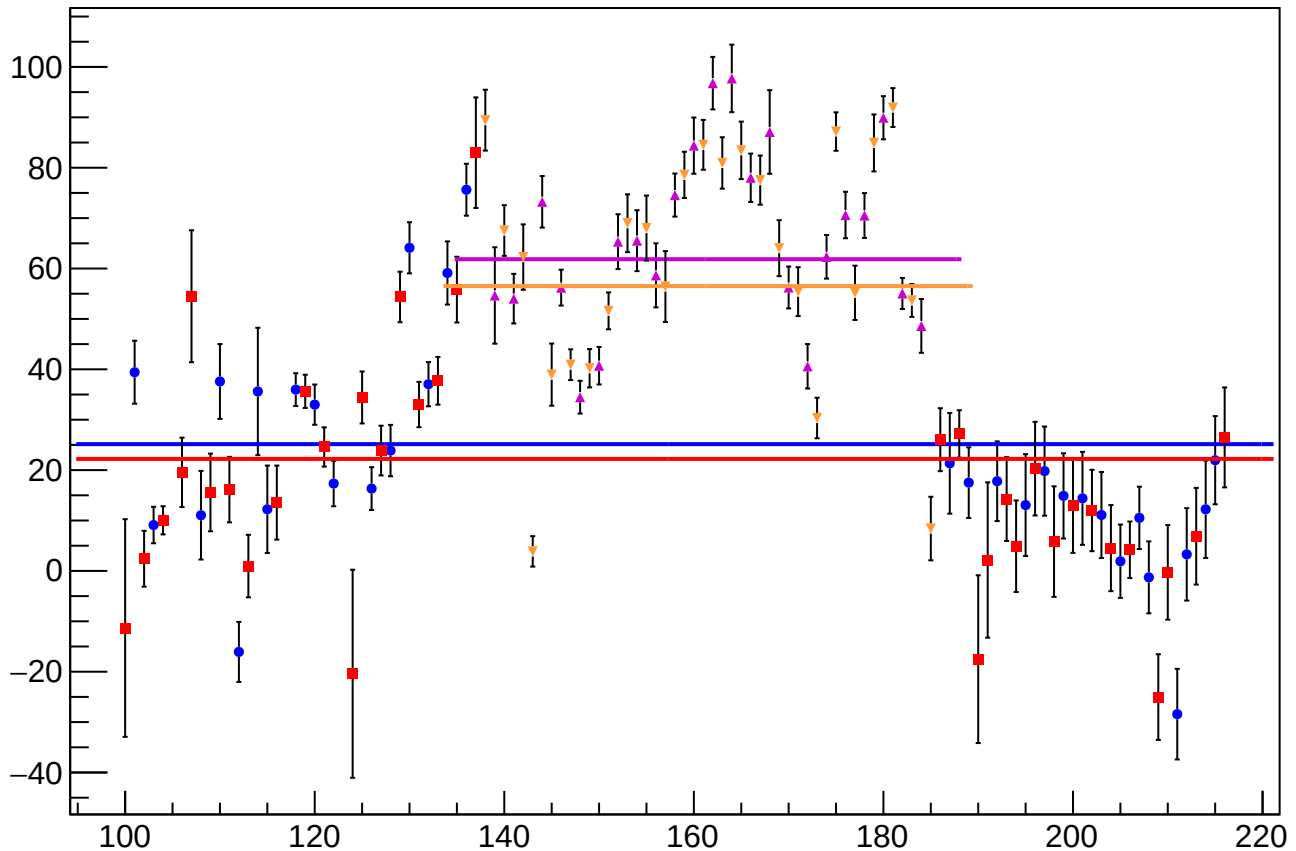
Left In:  $215.649 \pm 1.098$   $\chi^2/\text{NDF}$ : 3886.0/22

+ sign  $175.006 \pm 0.649$   $\chi^2/\text{NDF}$ : 25866.8/55

All:  $181.545 \pm 0.452$   $\chi^2/\text{NDF}$ : 52381.2/113

- sign  $187.691 \pm 0.630$   $\chi^2/\text{NDF}$ : 26317.8/57

# reg\_asym\_atl\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $25.153 \pm 1.080$   $\chi^2/\text{NDF}: 377.3/30$

Left Out:  $56.514 \pm 0.909$   $\chi^2/\text{NDF}: 798.9/24$

Right Out:  $22.222 \pm 1.041$   $\chi^2/\text{NDF}: 269.3/34$

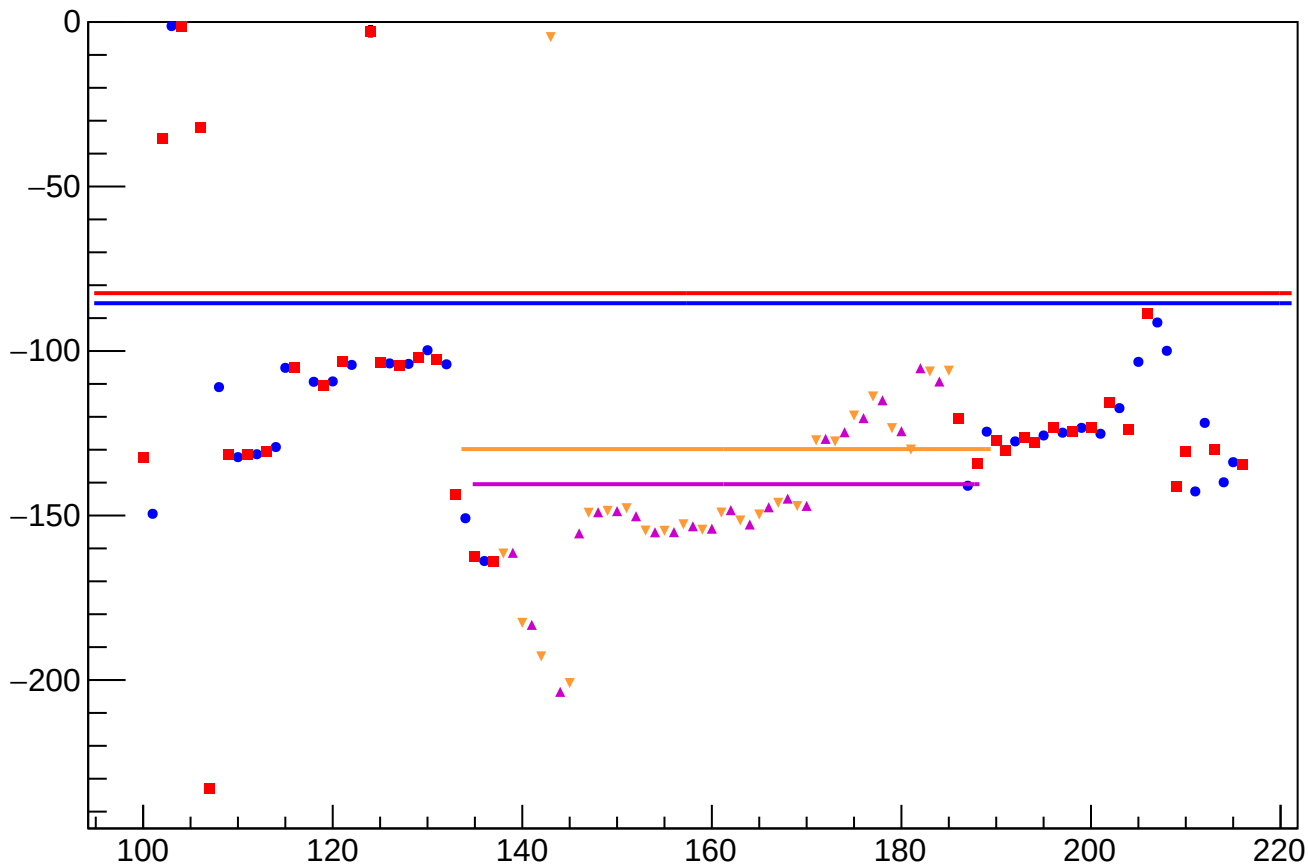
Left In:  $61.850 \pm 0.961$   $\chi^2/\text{NDF}: 320.7/22$

+ sign  $43.517 \pm 0.696$   $\chi^2/\text{NDF}: 1669.5/55$

All:  $43.559 \pm 0.496$   $\chi^2/\text{NDF}: 3041.8/113$

- sign  $43.603 \pm 0.706$   $\chi^2/\text{NDF}: 1372.3/57$

# reg\_asym\_atl\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-85.472 \pm 0.050$   $\chi^2/\text{NDF}: 1350917.7/30$

Left Out:  $-129.810 \pm 0.042$   $\chi^2/\text{NDF}: 1025155.0/24$

Right Out:  $-82.418 \pm 0.049$   $\chi^2/\text{NDF}: 1311855.0/34$

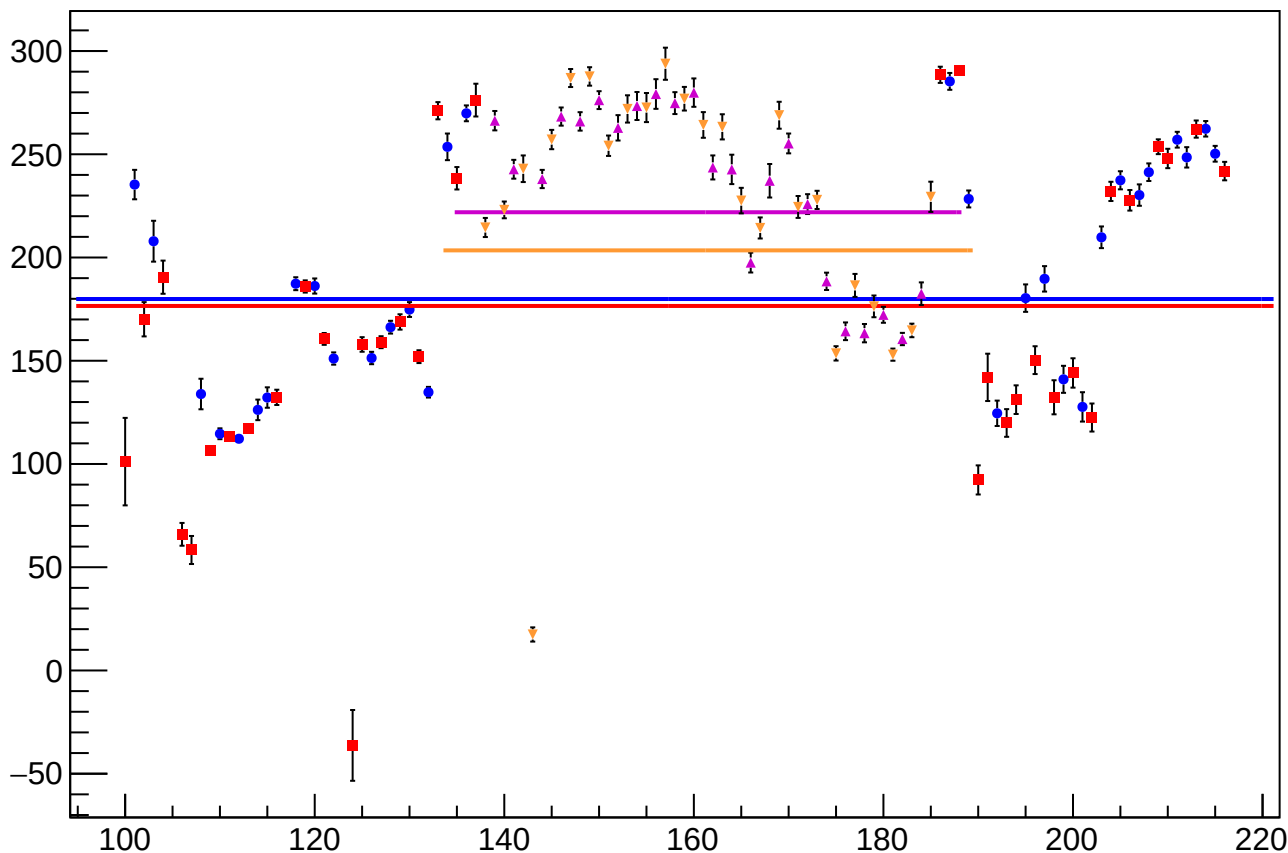
Left In:  $-140.477 \pm 0.044$   $\chi^2/\text{NDF}: 254660.0/22$

+ sign  $-111.396 \pm 0.032$   $\chi^2/\text{NDF}: 2835314.8/55$

All:  $-112.972 \pm 0.023$   $\chi^2/\text{NDF}: 5195348.4/11$

- sign  $-114.573 \pm 0.032$   $\chi^2/\text{NDF}: 2355214.6/57$

# reg\_asym\_atl\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $179.897 \pm 0.709$   $\chi^2/\text{NDF}$ : 6069.6/30

Left Out:  $203.453 \pm 0.953$   $\chi^2/\text{NDF}$ : 5491.5/24

Right Out:  $176.535 \pm 0.673$   $\chi^2/\text{NDF}$ : 9930.3/34

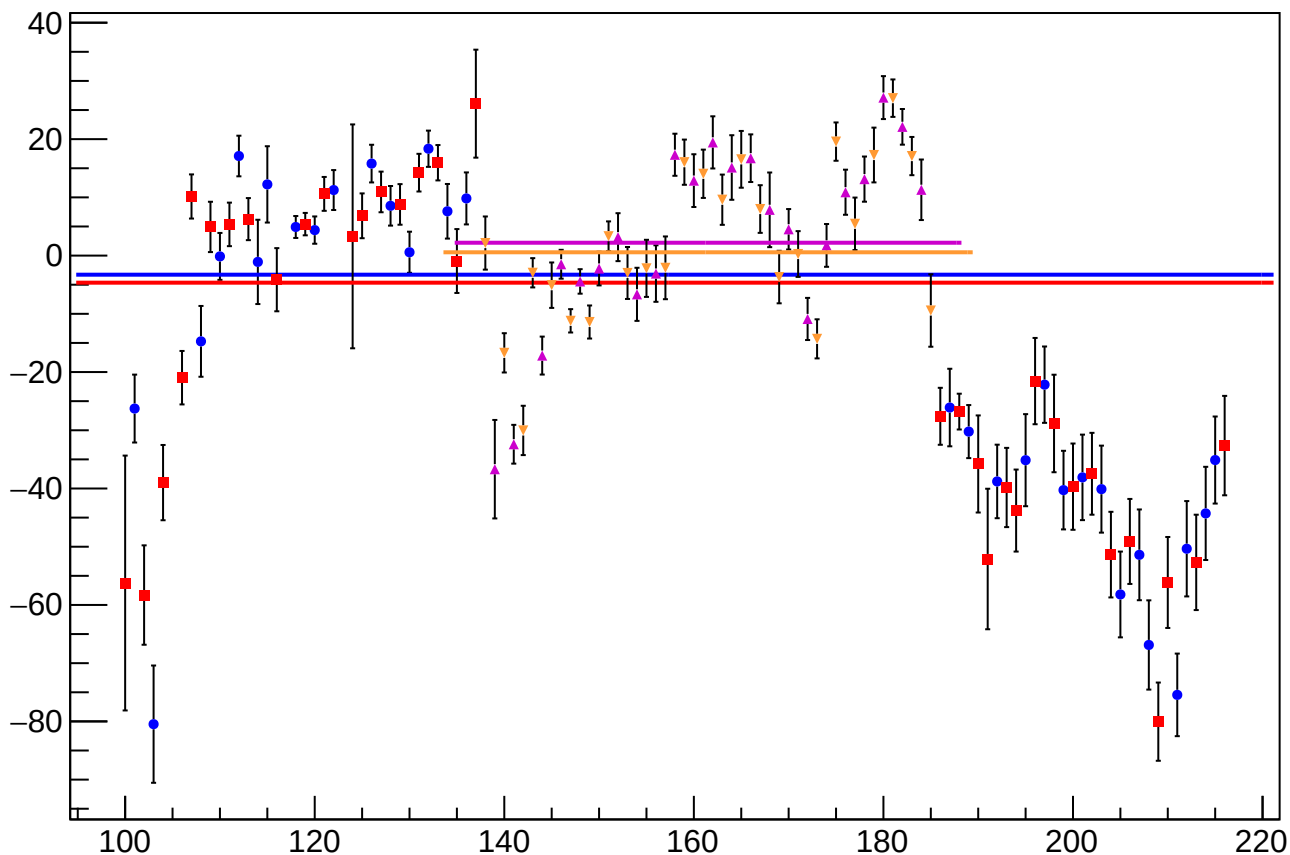
Left In:  $221.923 \pm 1.003$   $\chi^2/\text{NDF}$ : 1986.7/22

+ sign  $188.284 \pm 0.569$   $\chi^2/\text{NDF}$ : 11954.6/55

All:  $189.478 \pm 0.399$   $\chi^2/\text{NDF}$ : 25292.2/113

- sign  $190.632 \pm 0.559$   $\chi^2/\text{NDF}$ : 13329.0/57

# reg\_asym\_atl\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.279 \pm 0.797$   $\chi^2/\text{NDF}$ : 799.4/30

Left Out:  $0.568 \pm 0.716$   $\chi^2/\text{NDF}$ : 345.4/24

Right Out:  $-4.651 \pm 0.778$   $\chi^2/\text{NDF}$ : 823.2/34

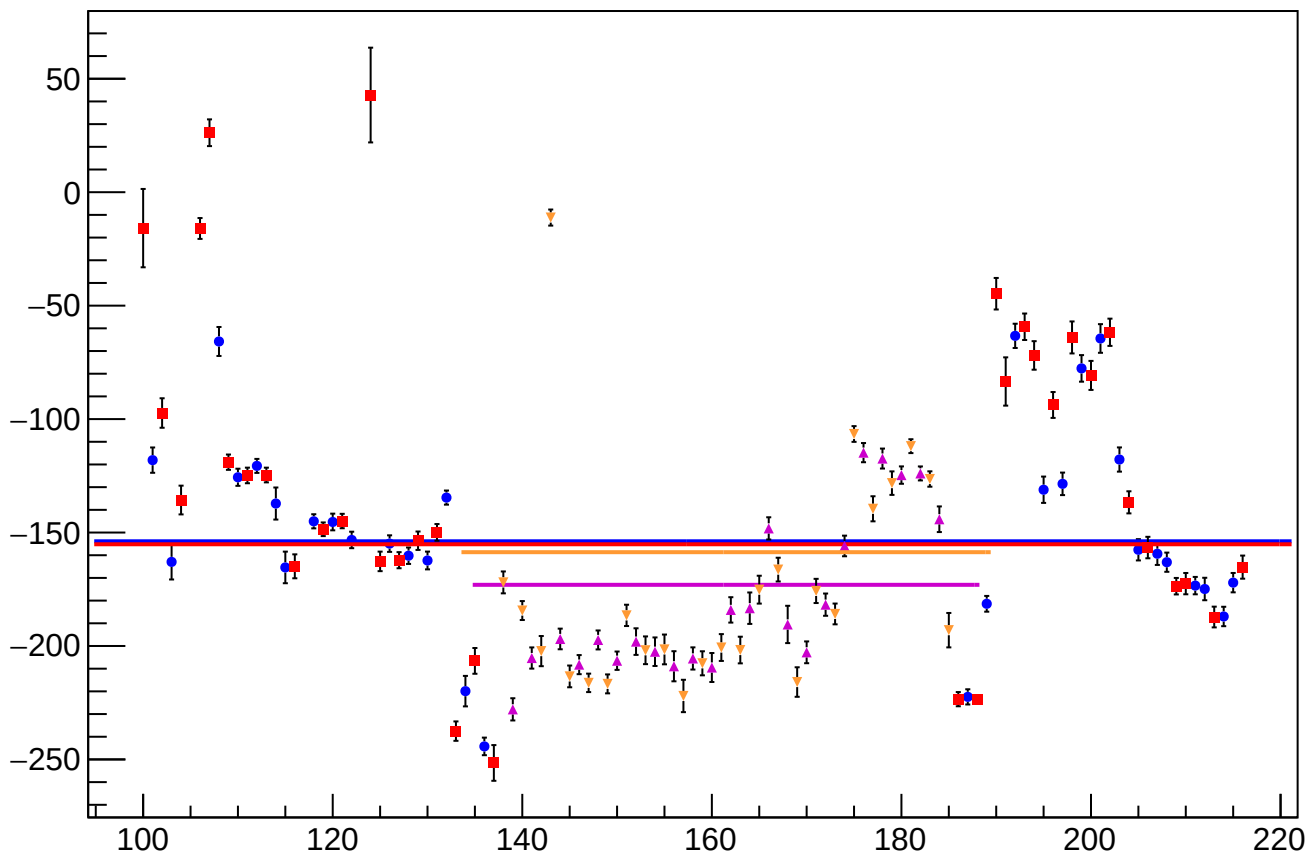
Left In:  $2.210 \pm 0.760$   $\chi^2/\text{NDF}$ : 358.2/22

+ sign  $-1.150 \pm 0.532$   $\chi^2/\text{NDF}$ : 1157.7/55

All:  $-1.145 \pm 0.380$   $\chi^2/\text{NDF}$ : 2378.9/113

- sign  $-1.139 \pm 0.544$   $\chi^2/\text{NDF}$ : 1221.1/57

# reg\_asym\_atl\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -153.856 $\pm$ 0.772  $\chi^2/\text{NDF}$ : 2467.9/30

Left Out: -158.658 $\pm$ 0.951  $\chi^2/\text{NDF}$ : 3491.8/24

Right Out: -155.168 $\pm$ 0.722  $\chi^2/\text{NDF}$ : 6517.2/34

Left In: -173.043 $\pm$ 0.996  $\chi^2/\text{NDF}$ : 1399.9/22

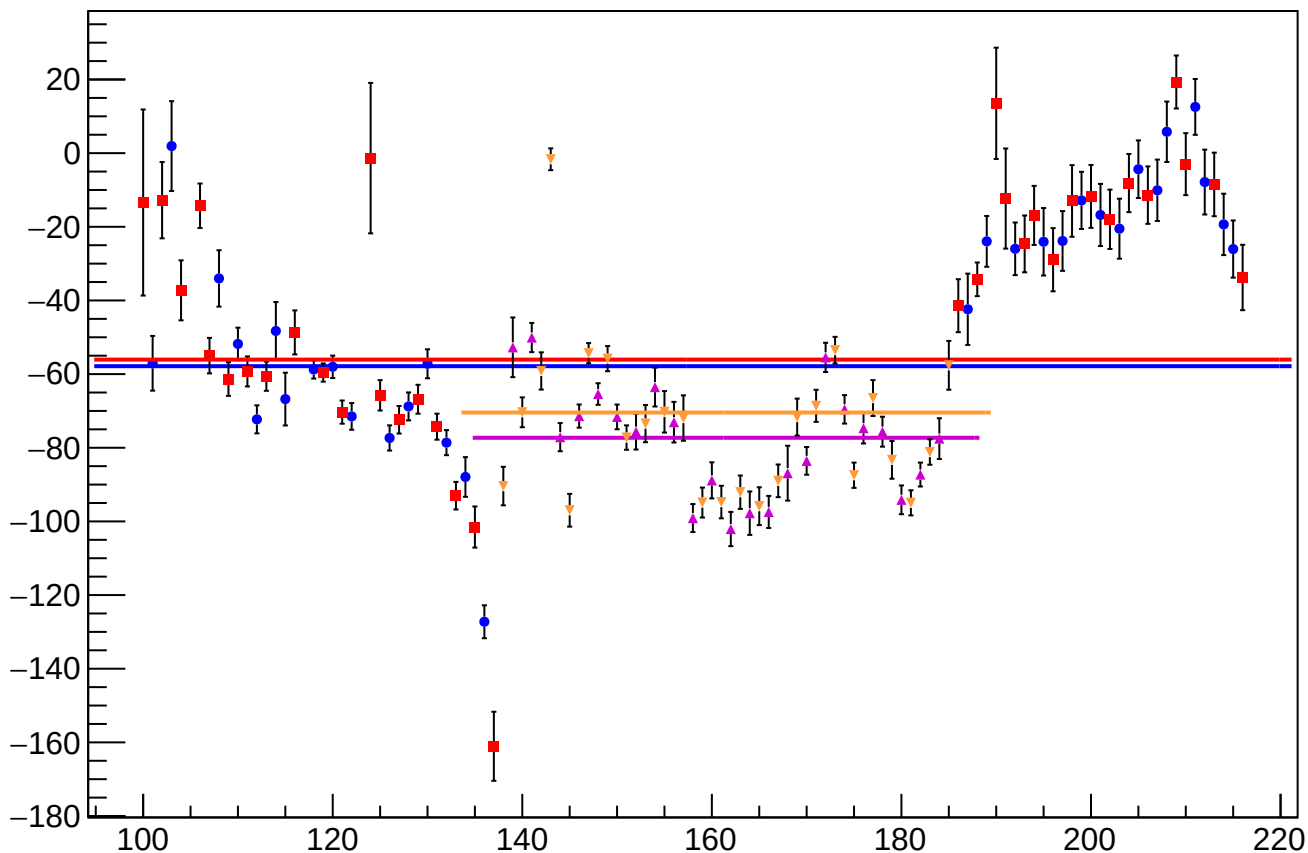
+ sign -155.764 $\pm$ 0.599  $\chi^2/\text{NDF}$ : 5975.1/55

All: -158.615 $\pm$ 0.418  $\chi^2/\text{NDF}$ : 14147.7/113

- sign -161.326 $\pm$ 0.584  $\chi^2/\text{NDF}$ : 8128.4/57



# reg\_asym\_atl\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-57.848 \pm 0.925$   $\chi^2/\text{NDF}: 869.6/30$

Left Out:  $-70.427 \pm 0.821$   $\chi^2/\text{NDF}: 901.6/24$

Right Out:  $-56.064 \pm 0.910$   $\chi^2/\text{NDF}: 889.7/34$

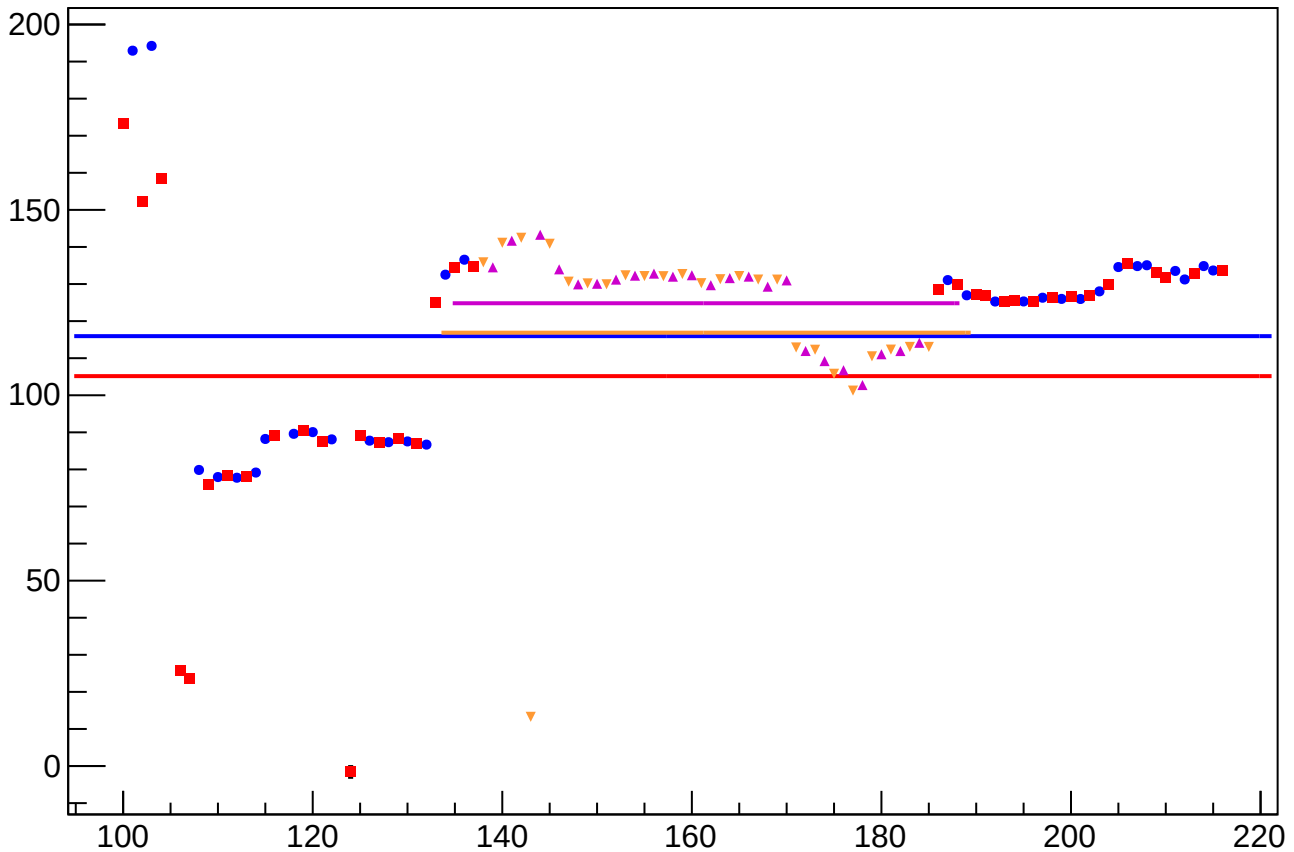
Left In:  $-77.288 \pm 0.866$   $\chi^2/\text{NDF}: 254.3/22$

+ sign  $-64.885 \pm 0.614$   $\chi^2/\text{NDF}: 1874.6/55$

All:  $-66.019 \pm 0.439$   $\chi^2/\text{NDF}: 3311.1/113$

- sign  $-67.200 \pm 0.627$   $\chi^2/\text{NDF}: 1429.6/57$

# reg\_asym\_atl\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 115.946 $\pm$ 0.053  $\chi^2$ /NDF: 289428.0/30

Left Out: 116.881 $\pm$ 0.038  $\chi^2$ /NDF: 623110.0/24

Right Out: 105.164 $\pm$ 0.050  $\chi^2$ /NDF: 541041.4/34

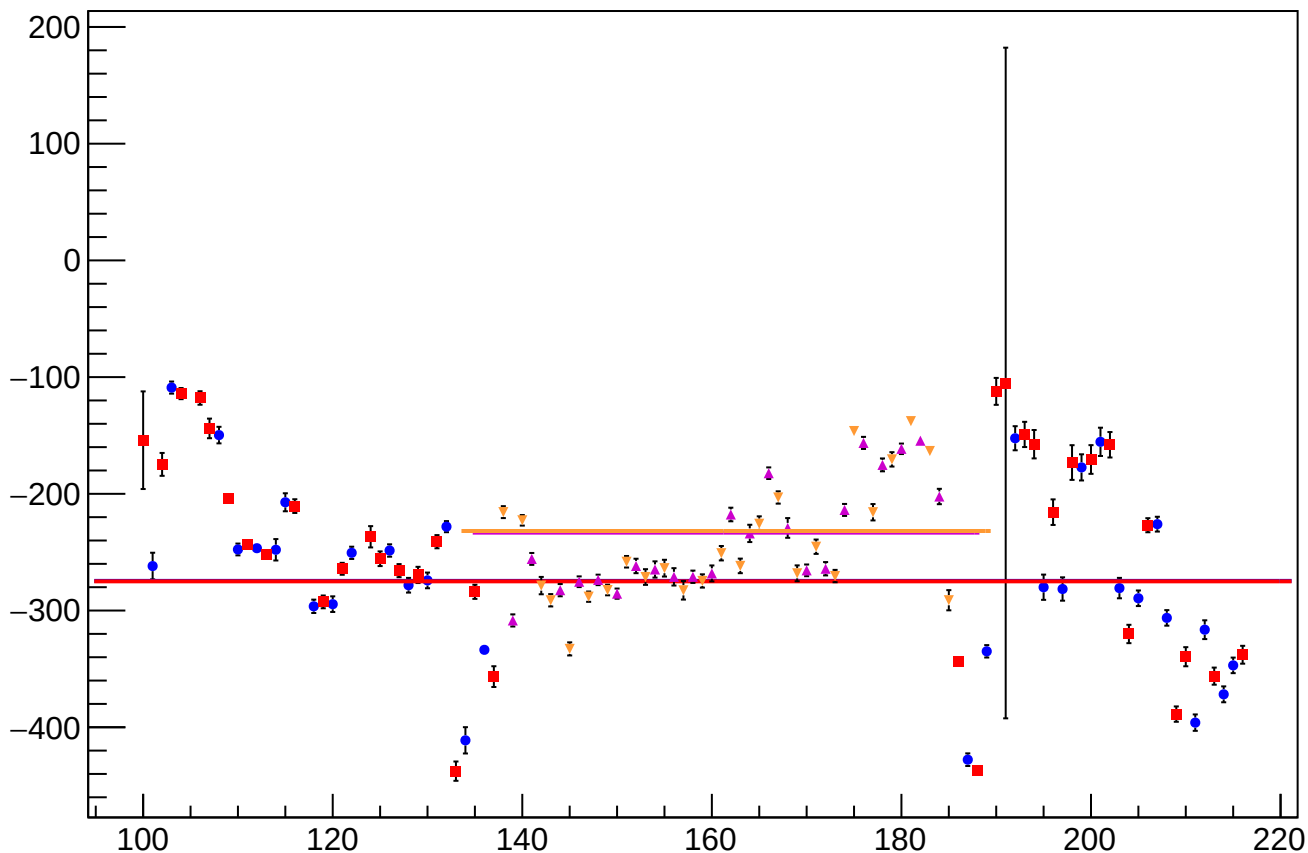
Left In: 124.819 $\pm$ 0.039  $\chi^2$ /NDF: 88116.2/22

+ sign 116.560 $\pm$ 0.031  $\chi^2$ /NDF: 912744.6/55

All: 116.888 $\pm$ 0.022  $\chi^2$ /NDF: 1638769.9/113

- sign 117.214 $\pm$ 0.031  $\chi^2$ /NDF: 725800.9/57

# reg\_asym\_atr\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-274.600 \pm 1.148$   $\chi^2/\text{NDF}$ : 3986.3/30

Left Out:  $-231.847 \pm 1.080$   $\chi^2/\text{NDF}$ : 2676.6/24

Right Out:  $-274.976 \pm 1.047$   $\chi^2/\text{NDF}$ : 8106.0/34

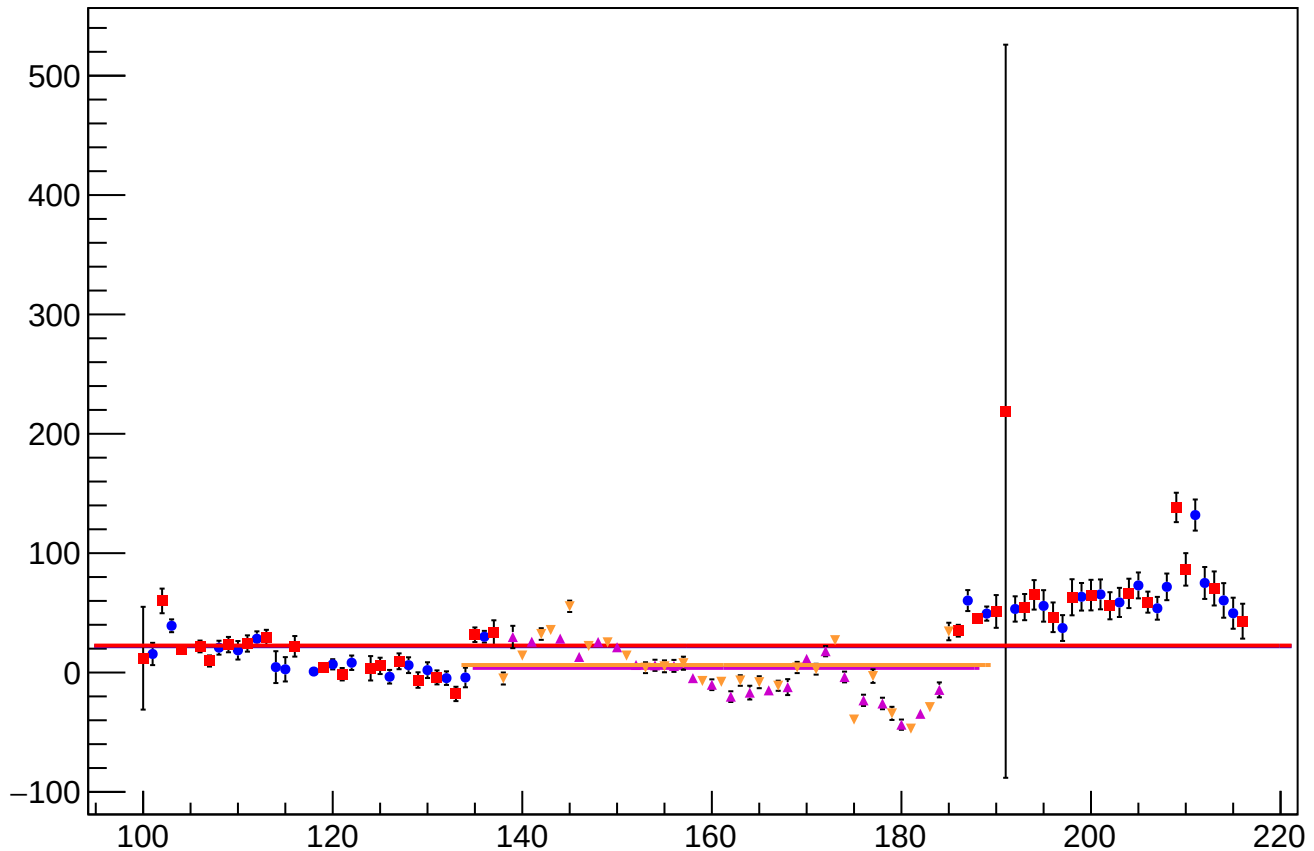
Left In:  $-233.258 \pm 1.108$   $\chi^2/\text{NDF}$ : 2067.0/22

+ sign  $-251.916 \pm 0.787$   $\chi^2/\text{NDF}$ : 7398.3/55

All:  $-253.656 \pm 0.547$   $\chi^2/\text{NDF}$ : 18329.8/113

- sign  $-255.284 \pm 0.761$   $\chi^2/\text{NDF}$ : 10922.0/57

# reg\_asym\_atr\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $22.050 \pm 1.294$   $\chi^2/\text{NDF}: 384.8/30$

Left Out:  $6.288 \pm 0.789$   $\chi^2/\text{NDF}: 871.5/24$

Right Out:  $22.572 \pm 1.175$   $\chi^2/\text{NDF}: 421.2/34$

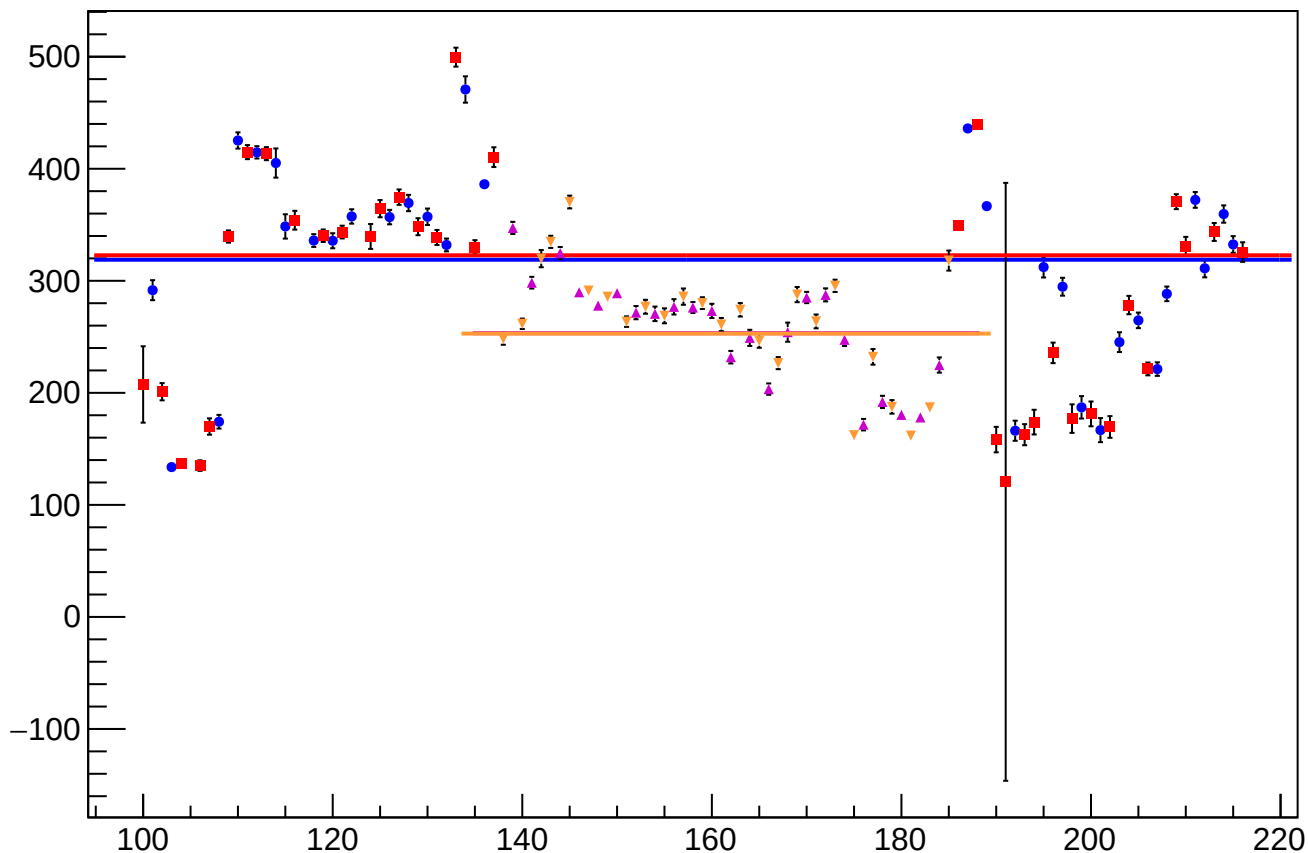
Left In:  $3.906 \pm 0.818$   $\chi^2/\text{NDF}: 650.3/22$

+ sign  $10.560 \pm 0.674$   $\chi^2/\text{NDF}: 1364.4/55$

All:  $10.279 \pm 0.476$   $\chi^2/\text{NDF}: 2606.2/113$

- sign  $10.000 \pm 0.672$   $\chi^2/\text{NDF}: 1241.4/57$

# reg\_asym\_atr\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $318.815 \pm 1.185$   $\chi^2/\text{NDF}: 5777.7/30$

Left Out:  $252.886 \pm 1.070$   $\chi^2/\text{NDF}: 2579.0/24$

Right Out:  $322.764 \pm 1.046$   $\chi^2/\text{NDF}: 10153.6/34$

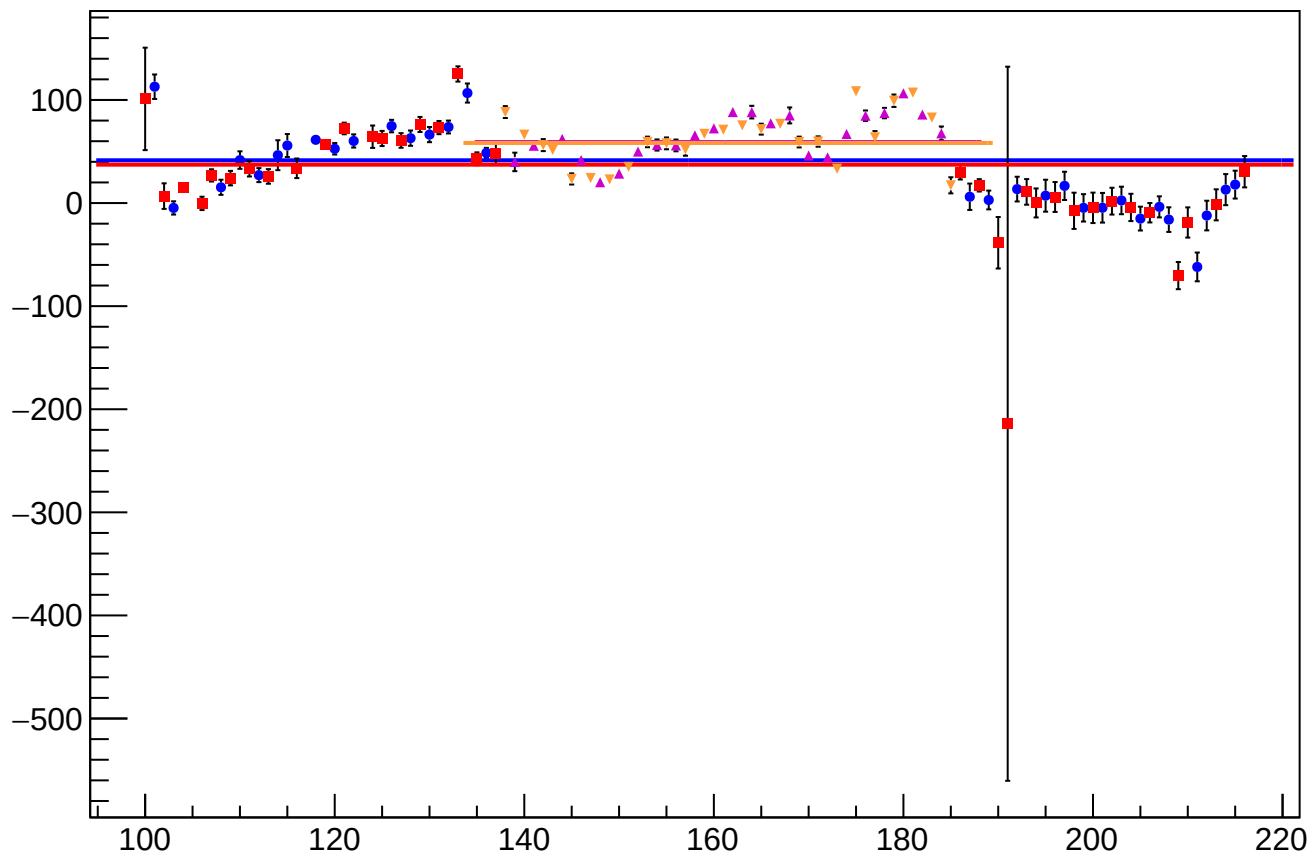
Left In:  $253.248 \pm 1.093$   $\chi^2/\text{NDF}: 2059.7/22$

+ sign  $282.502 \pm 0.794$   $\chi^2/\text{NDF}: 10060.6/55$

All:  $286.195 \pm 0.548$   $\chi^2/\text{NDF}: 24425.3/113$

- sign  $289.538 \pm 0.756$   $\chi^2/\text{NDF}: 14323.5/57$

# reg\_asym\_atr\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 41.494 $\pm$ 1.506  $\chi^2$ /NDF: 479.4/30

Left Out: 58.306 $\pm$ 0.911  $\chi^2$ /NDF:850.2/24

Right Out: 37.242 $\pm$ 1.403  $\chi^2$ /NDF: 542.9/34

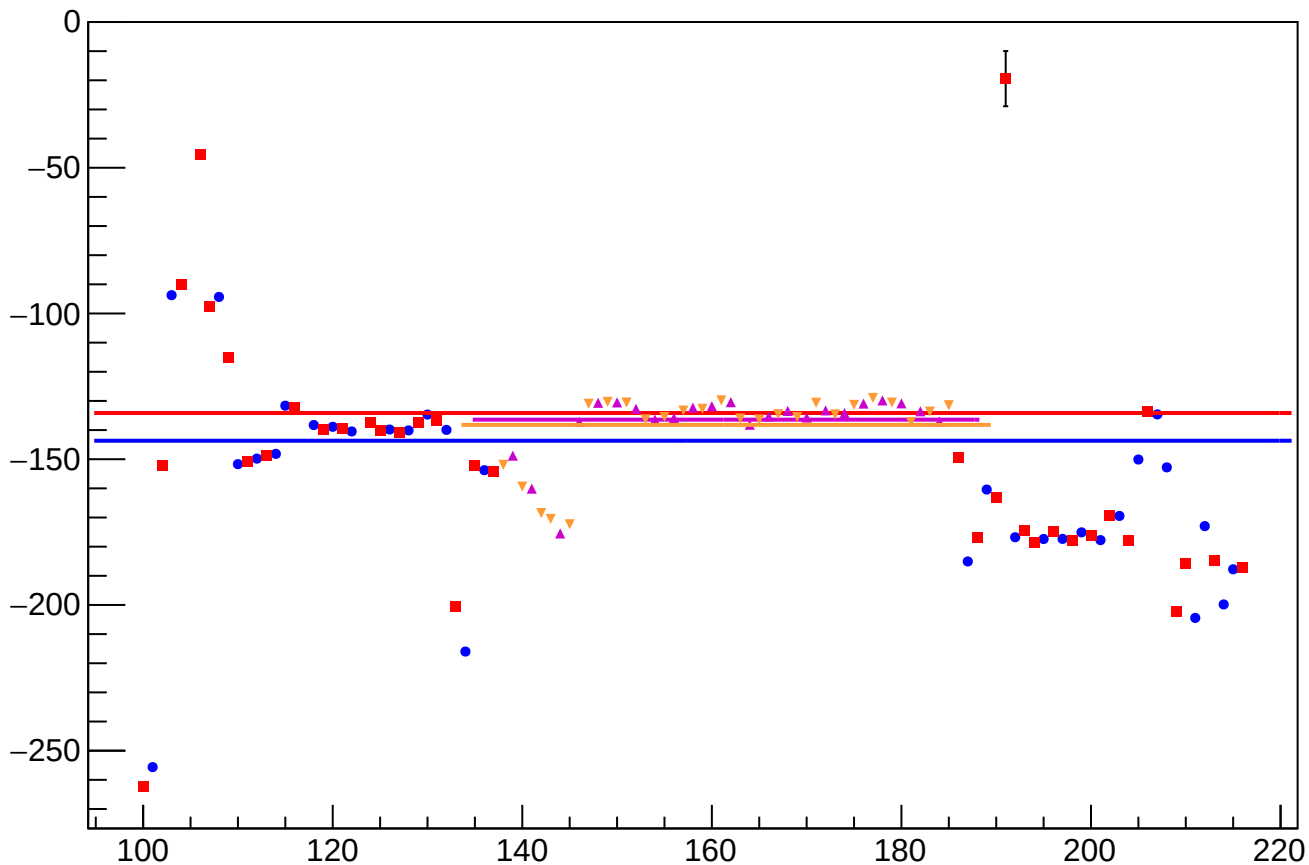
Left In: 59.151 $\pm$ 0.938  $\chi^2$ /NDF:632.4/22

+ sign 53.798 $\pm$ 0.780  $\chi^2$ /NDF: 1420.8/55

All: 53.088 $\pm$ 0.551  $\chi^2$ /NDF: 2766.3/113

- sign 52.377 $\pm$ 0.780  $\chi^2$ /NDF: 1343.9/57

# reg\_asym\_atr\_avg\_diff\_bpm12X\_slope vs Slug



Right In: -143.659+/-0.074  $\chi^2/\text{NDF}$ : 255469.5/30

Left Out: -138.218+/-0.042  $\chi^2/\text{NDF}$ : 81828.6/24

Right Out: -134.145+/-0.070  $\chi^2/\text{NDF}$ : 360466.6/34

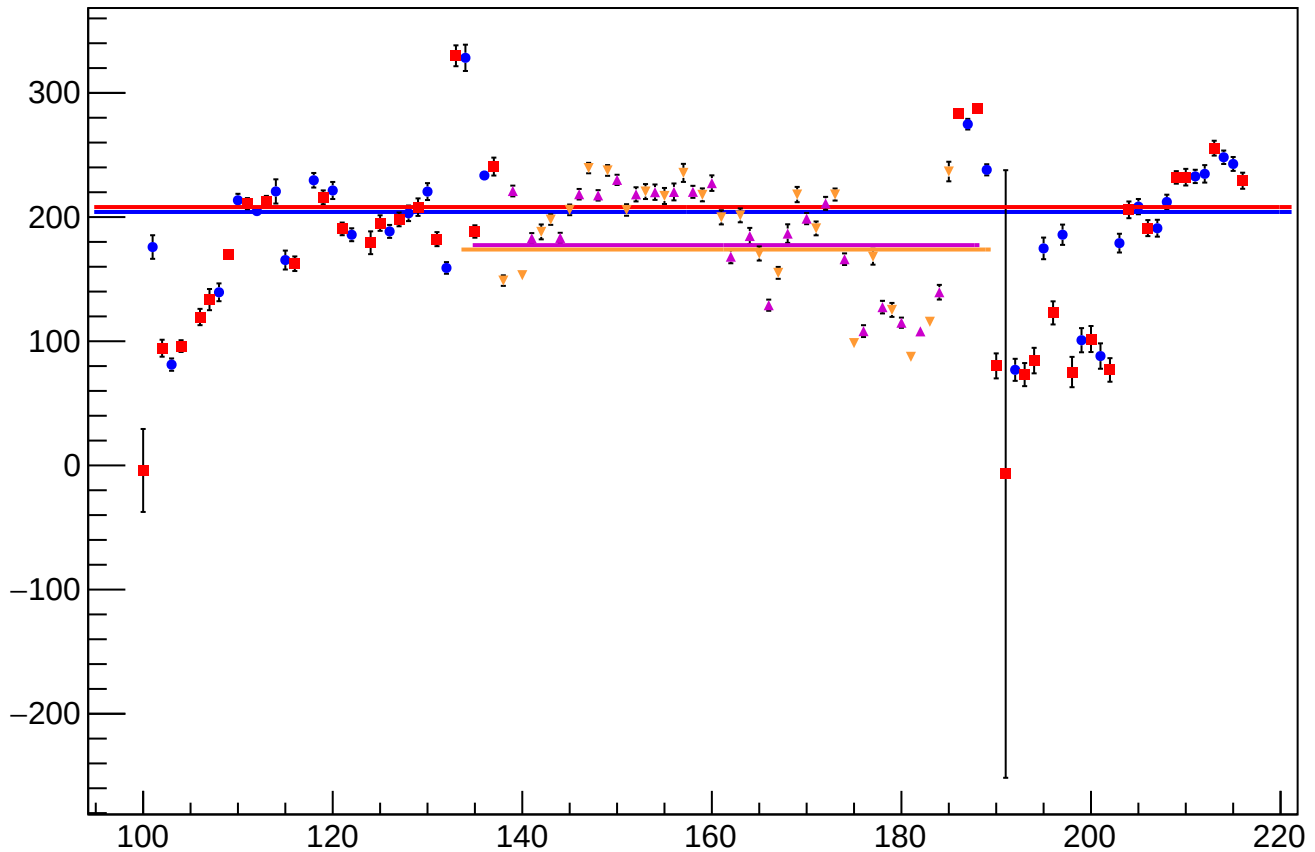
Left In: -136.429+/-0.043  $\chi^2/\text{NDF}$ : 49792.9/22

+ sign -139.575+/-0.037  $\chi^2/\text{NDF}$ : 341387.6/55

All: -137.677+/-0.026  $\chi^2/\text{NDF}$ : 757696.3/113

- sign -135.807+/-0.037  $\chi^2/\text{NDF}$ : 411033.5/57

# reg\_asym\_atr\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 204.109 $\pm$ 1.062  $\chi^2$ /NDF: 2055.2/30

Left Out: 173.862 $\pm$ 0.962  $\chi^2$ /NDF: 2627.6/24

Right Out: 208.076 $\pm$ 0.970  $\chi^2$ /NDF: 4318.0/34

Left In: 177.403 $\pm$ 0.996  $\chi^2$ /NDF: 1963.0/22

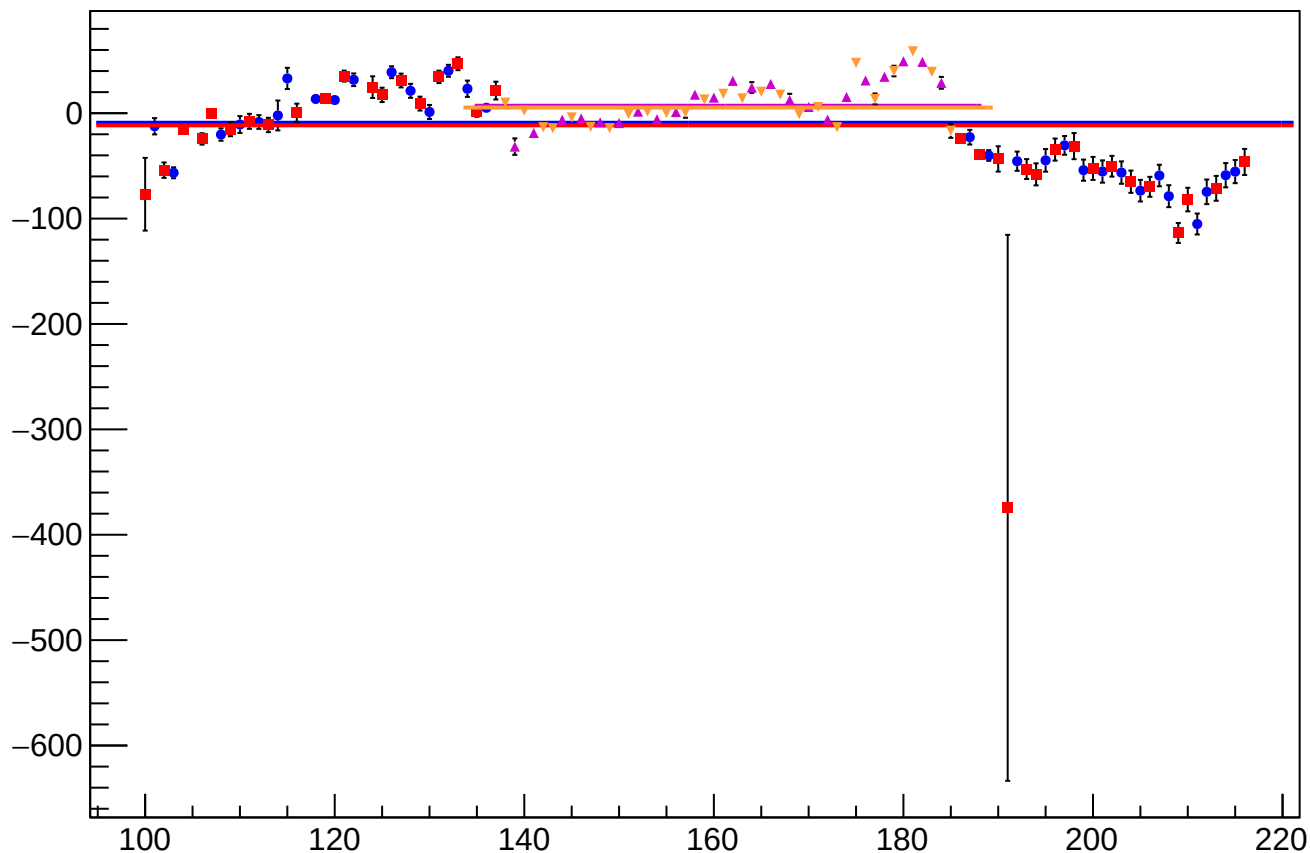
+ sign 187.490 $\pm$ 0.713  $\chi^2$ /NDF: 5128.1/55

All: 190.388 $\pm$ 0.498  $\chi^2$ /NDF: 11928.2/113

- sign 193.138 $\pm$ 0.695  $\chi^2$ /NDF: 6768.0/57



# reg\_asym\_atr\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-9.068 \pm 1.228$   $\chi^2/\text{NDF}$ : 821.2/30

Left Out:  $5.363 \pm 0.710$   $\chi^2/\text{NDF}$ : 810.0/24

Right Out:  $-11.526 \pm 1.114$   $\chi^2/\text{NDF}$ : 858.9/34

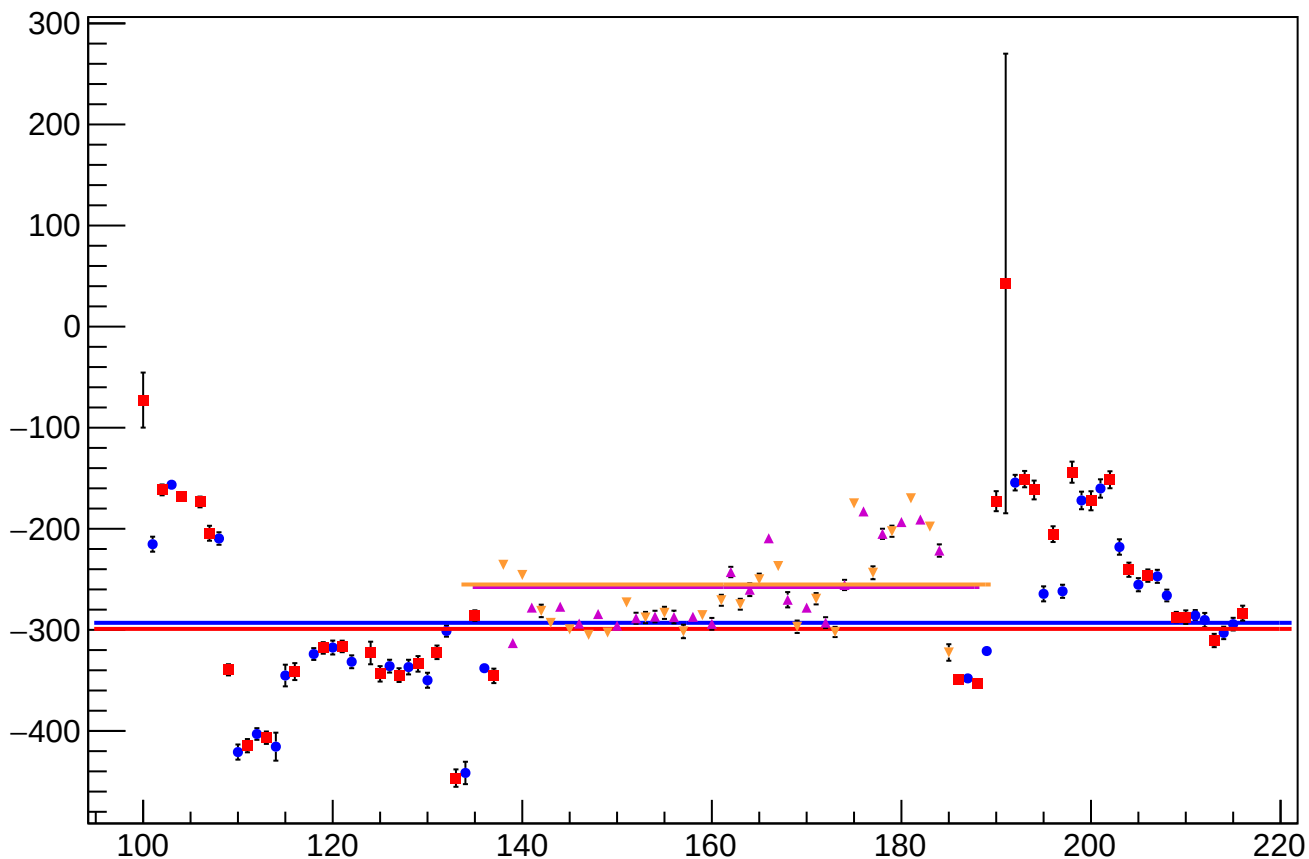
Left In:  $7.061 \pm 0.741$   $\chi^2/\text{NDF}$ : 709.7/22

+ sign  $1.744 \pm 0.615$   $\chi^2/\text{NDF}$ : 1734.6/55

All:  $1.551 \pm 0.436$   $\chi^2/\text{NDF}$ : 3496.3/113

- sign  $1.356 \pm 0.617$   $\chi^2/\text{NDF}$ : 1761.5/57

# reg\_asym\_atr\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-293.036 \pm 1.075$   $\chi^2/\text{NDF}$ : 4106.1/30

Left Out:  $-255.122 \pm 0.956$   $\chi^2/\text{NDF}$ : 2344.8/24

Right Out:  $-299.049 \pm 0.945$   $\chi^2/\text{NDF}$ : 6719.0/34

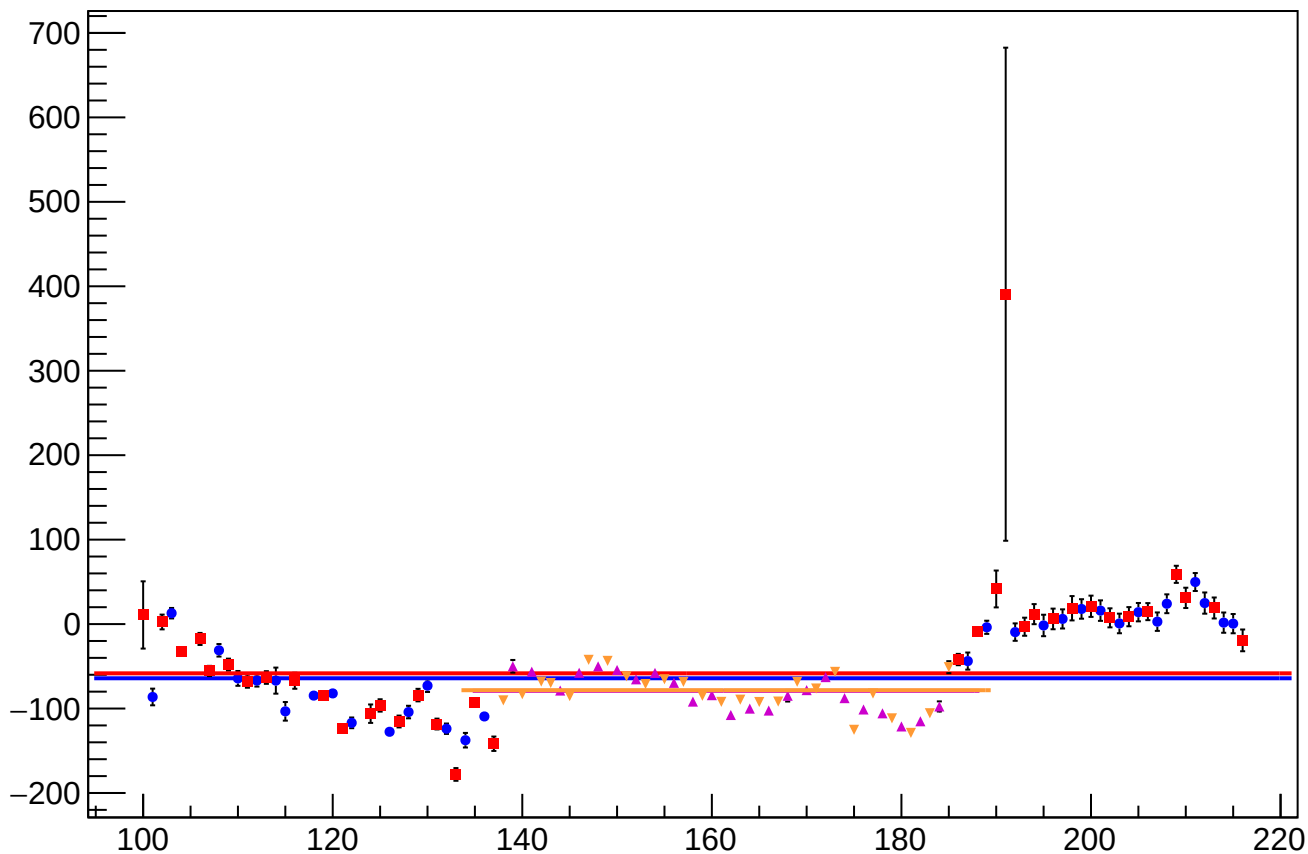
Left In:  $-257.600 \pm 0.985$   $\chi^2/\text{NDF}$ : 1808.1/22

+ sign  $-271.865 \pm 0.715$   $\chi^2/\text{NDF}$ : 7145.1/55

All:  $-275.695 \pm 0.493$   $\chi^2/\text{NDF}$ : 16649.3/113

- sign  $-279.182 \pm 0.682$   $\chi^2/\text{NDF}$ : 9449.4/57

# reg\_asym\_atr\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-64.164 \pm 1.427$   $\chi^2/\text{NDF}$ : 1381.5/30

Left Out:  $-78.292 \pm 0.819$   $\chi^2/\text{NDF}$ : 868.2/24

Right Out:  $-58.316 \pm 1.334$   $\chi^2/\text{NDF}$ : 1537.5/34

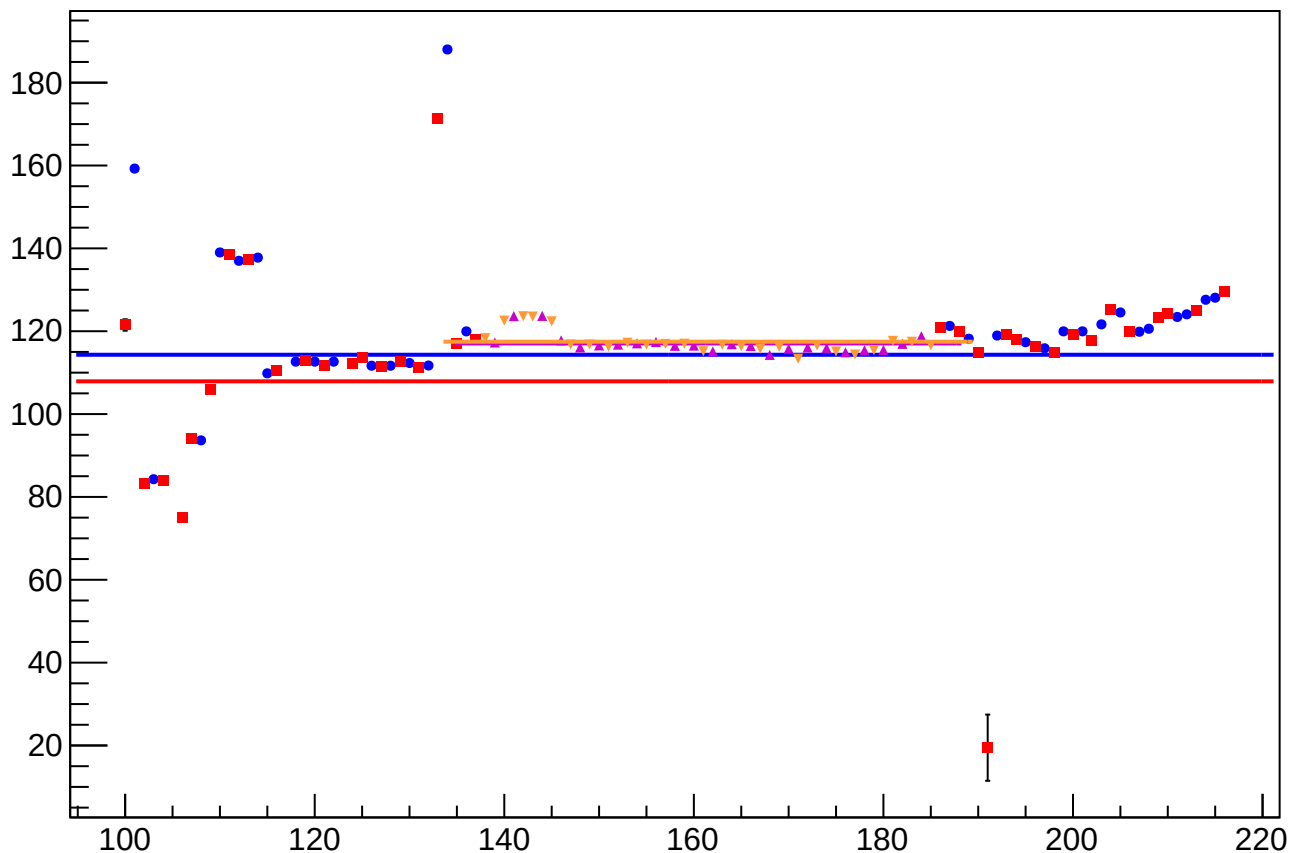
Left In:  $-79.066 \pm 0.849$   $\chi^2/\text{NDF}$ : 702.6/22

+ sign  $-74.794 \pm 0.710$   $\chi^2/\text{NDF}$ : 2323.4/55

All:  $-73.947 \pm 0.504$   $\chi^2/\text{NDF}$ : 4738.6/113

- sign  $-73.086 \pm 0.716$   $\chi^2/\text{NDF}$ : 2412.4/57

# reg\_asym\_atr\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 114.320 $\pm$ 0.068  $\chi^2$ /NDF: 89061.2/30

Left Out: 117.477 $\pm$ 0.038  $\chi^2$ /NDF: 4739.3/24

Right Out: 107.904 $\pm$ 0.064  $\chi^2$ /NDF: 82806.8/34

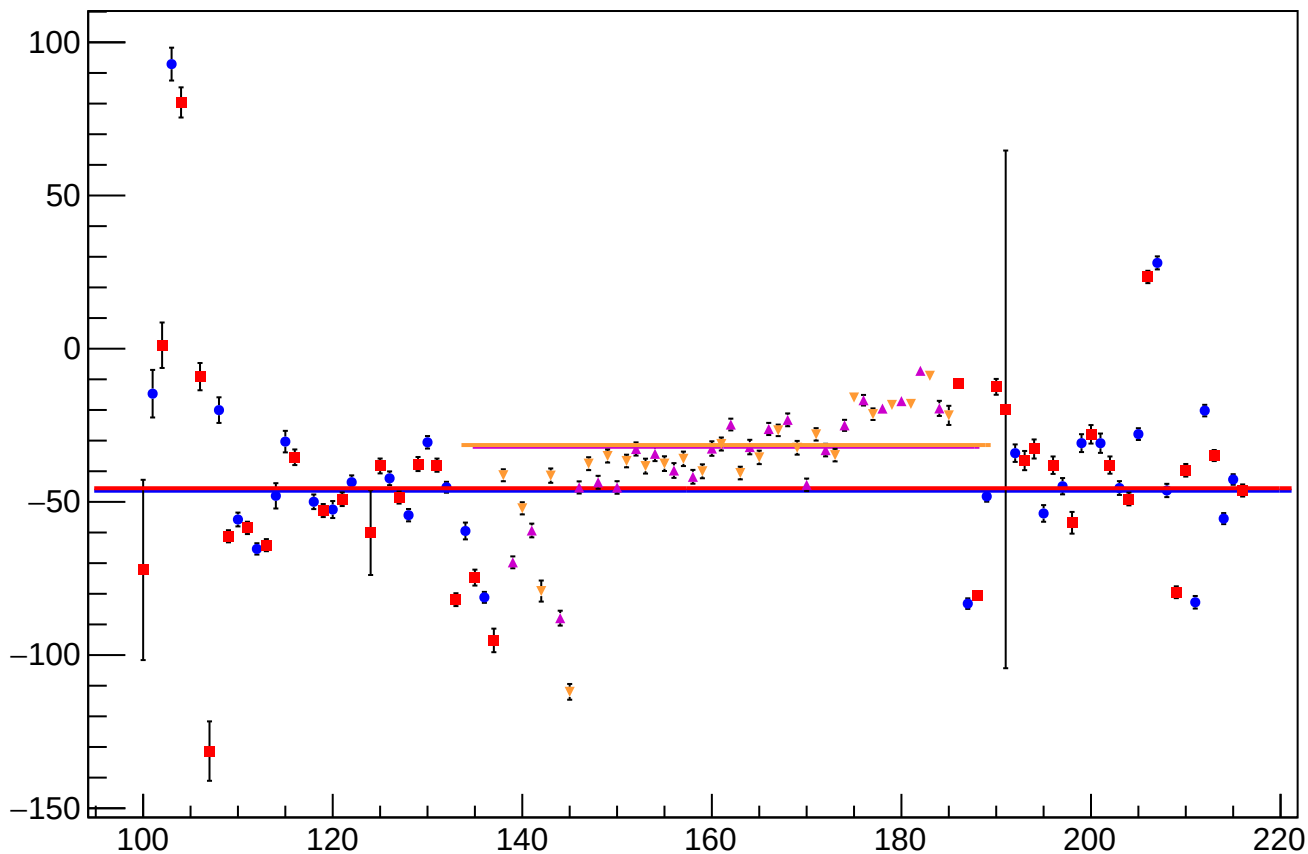
Left In: 117.046 $\pm$ 0.039  $\chi^2$ /NDF: 3343.0/22

+ sign 116.722 $\pm$ 0.033  $\chi^2$ /NDF: 95451.6/55

All: 115.666 $\pm$ 0.023  $\chi^2$ /NDF: 198526.8/113

- sign 114.616 $\pm$ 0.033  $\chi^2$ /NDF: 101053.7/57

# reg\_asym\_at1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-46.356 \pm 0.407$   $\chi^2/\text{NDF}$ : 3742.8/30

Left Out:  $-31.452 \pm 0.399$   $\chi^2/\text{NDF}$ : 1992.2/24

Right Out:  $-45.547 \pm 0.379$   $\chi^2/\text{NDF}$ : 5742.6/34

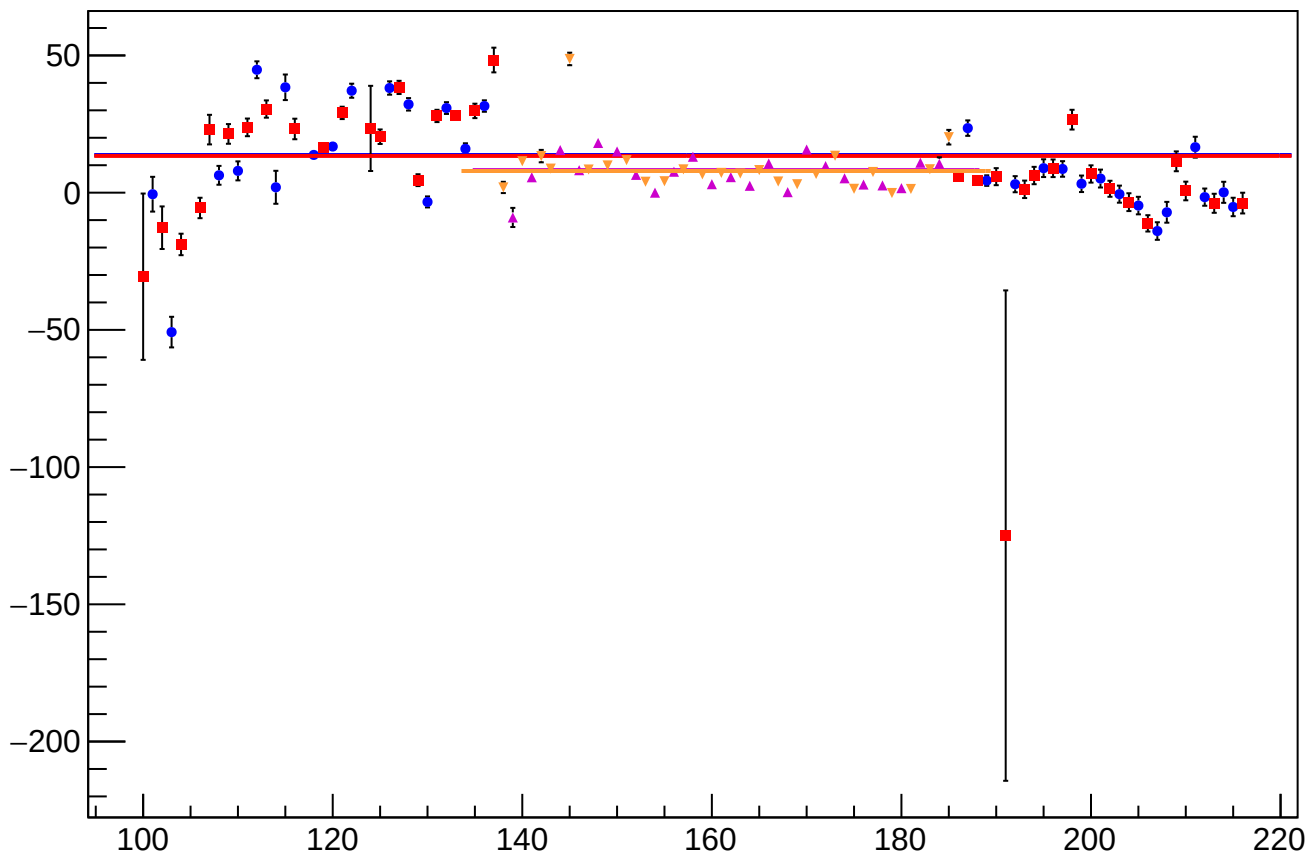
Left In:  $-32.015 \pm 0.409$   $\chi^2/\text{NDF}$ : 1913.4/22

+ sign  $-38.753 \pm 0.285$   $\chi^2/\text{NDF}$ : 6418.9/55

All:  $-39.034 \pm 0.199$   $\chi^2/\text{NDF}$ : 14665.9/113

- sign  $-39.301 \pm 0.278$   $\chi^2/\text{NDF}$ : 8245.1/57

# reg\_asym\_at1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $13.718 \pm 0.482$   $\chi^2/\text{NDF}: 1045.3/30$

Left Out:  $7.897 \pm 0.304$   $\chi^2/\text{NDF}: 490.5/24$

Right Out:  $13.392 \pm 0.451$   $\chi^2/\text{NDF}: 876.0/34$

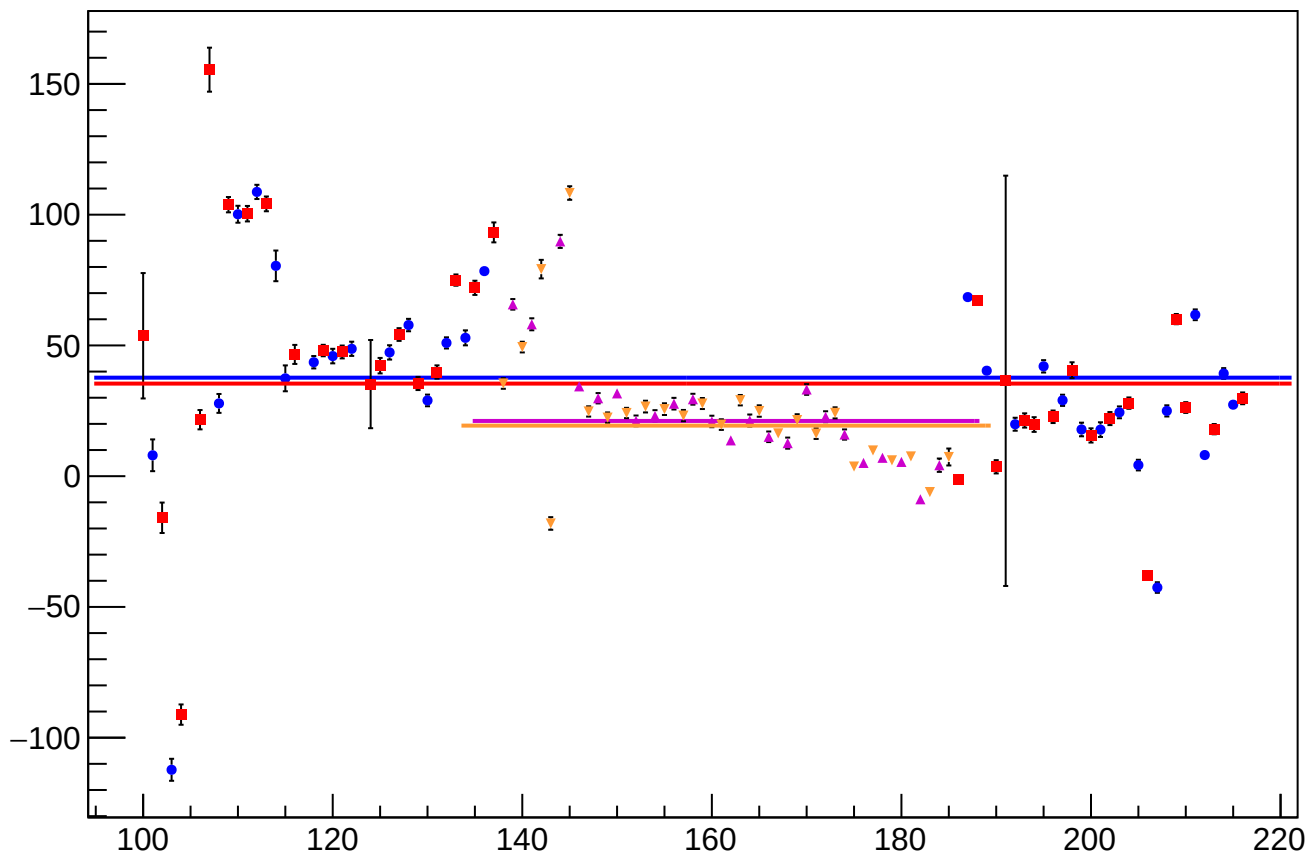
Left In:  $8.223 \pm 0.316$   $\chi^2/\text{NDF}: 338.8/22$

+ sign  $9.552 \pm 0.257$   $\chi^2/\text{NDF}: 1640.2/55$

All:  $9.737 \pm 0.182$   $\chi^2/\text{NDF}: 2944.2/113$

- sign  $9.923 \pm 0.258$   $\chi^2/\text{NDF}: 1303.0/57$

# reg\_asym\_at1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $37.671 \pm 0.416$   $\chi^2/\text{NDF}$ : 6086.8/30

Left Out:  $19.339 \pm 0.396$   $\chi^2/\text{NDF}$ : 2682.4/24

Right Out:  $35.404 \pm 0.368$   $\chi^2/\text{NDF}$ : 9372.7/34

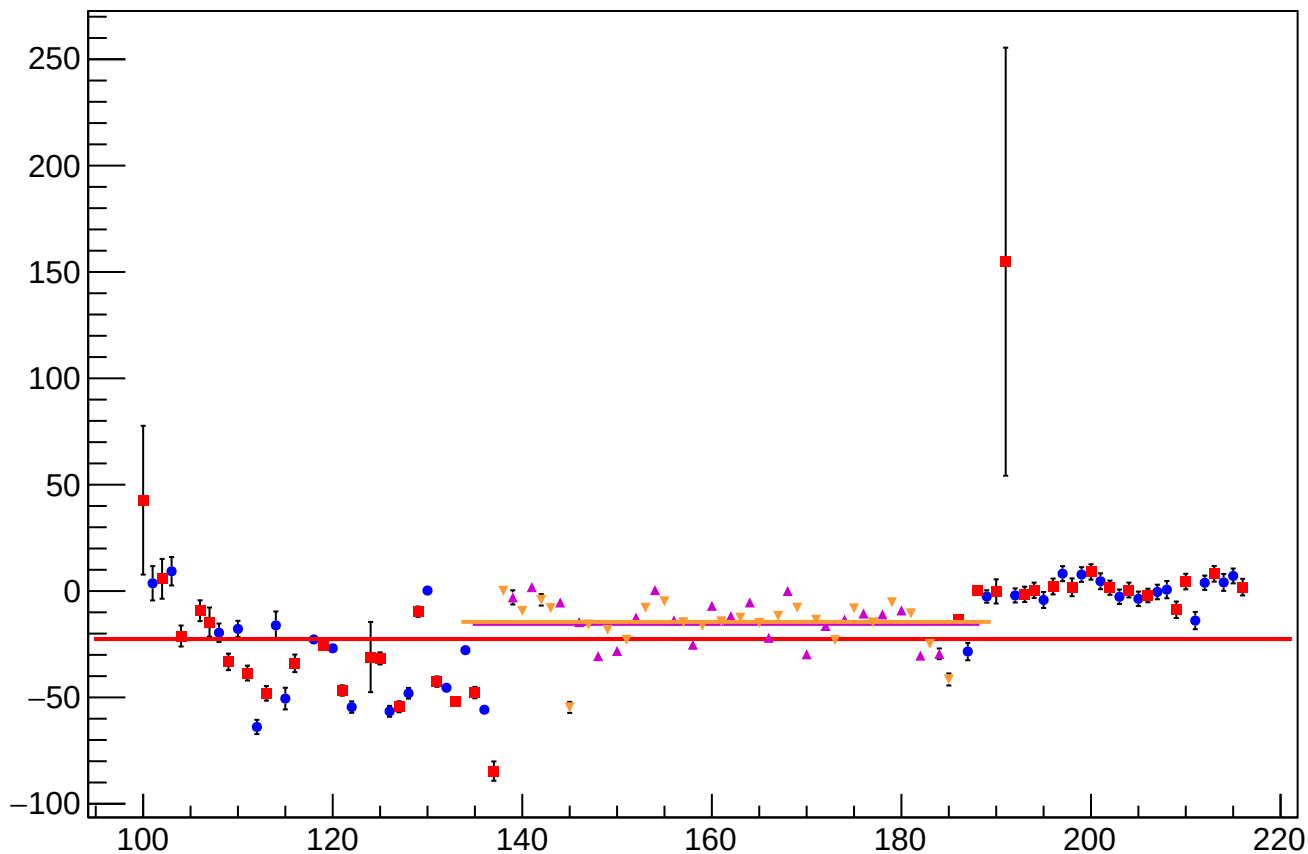
Left In:  $21.124 \pm 0.405$   $\chi^2/\text{NDF}$ : 2504.8/22

+ sign  $28.042 \pm 0.287$   $\chi^2/\text{NDF}$ : 9788.8/55

All:  $28.518 \pm 0.197$   $\chi^2/\text{NDF}$ : 22353.3/113

- sign  $28.947 \pm 0.272$   $\chi^2/\text{NDF}$ : 12559.3/57

# reg\_asym\_at1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-22.535 \pm 0.557$   $\chi^2/\text{NDF}$ : 1732.4/30

Left Out:  $-14.502 \pm 0.344$   $\chi^2/\text{NDF}$ : 641.0/24

Right Out:  $-22.572 \pm 0.541$   $\chi^2/\text{NDF}$ : 1696.1/34

Left In:  $-15.417 \pm 0.355$   $\chi^2/\text{NDF}$ : 798.7/22

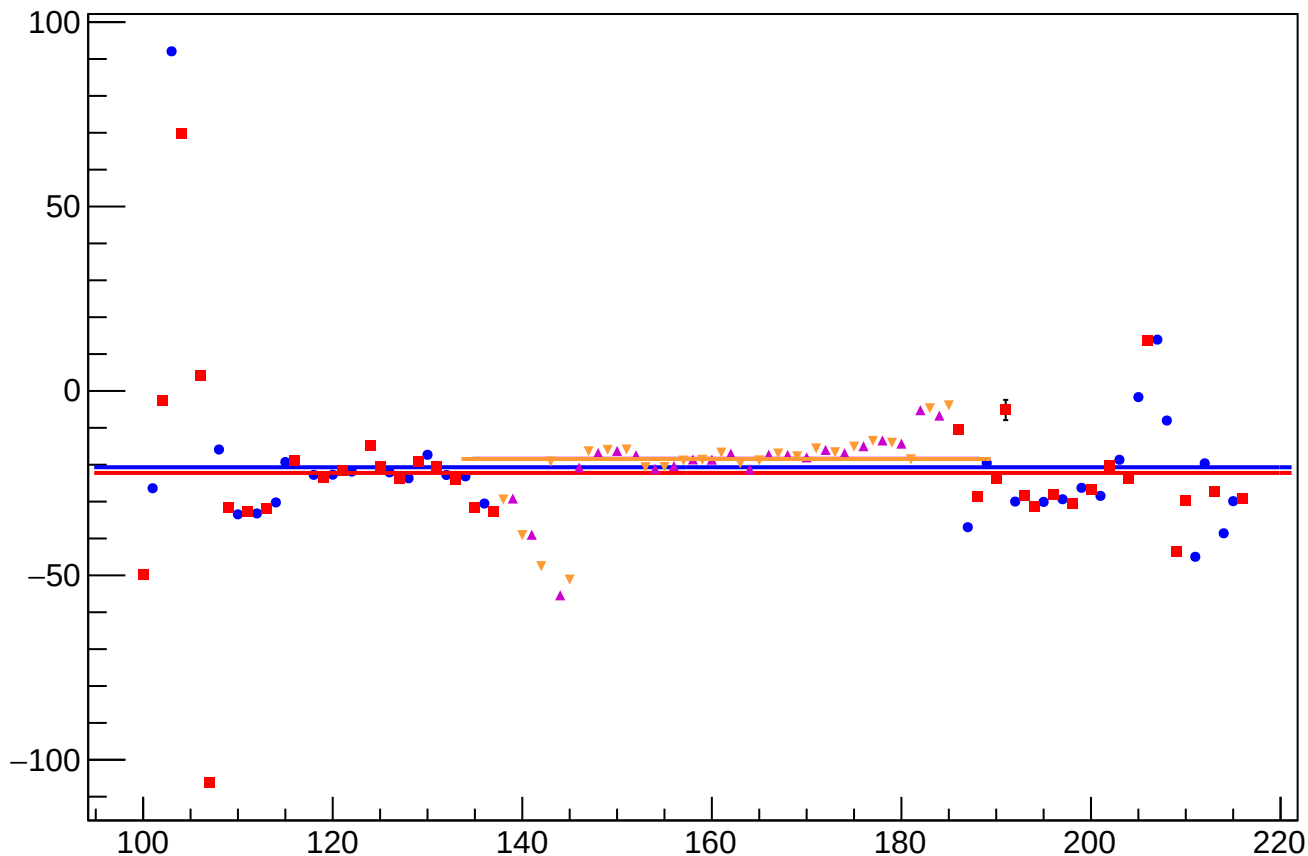
+ sign  $-16.720 \pm 0.293$   $\chi^2/\text{NDF}$ : 2524.0/55

All:  $-17.141 \pm 0.208$   $\chi^2/\text{NDF}$ : 5145.2/113

- sign  $-17.573 \pm 0.297$   $\chi^2/\text{NDF}$ : 2617.1/57



# reg\_asym\_at1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-20.685 \pm 0.027$   $\chi^2/\text{NDF}: 581935.0/30$

Left Out:  $-18.450 \pm 0.015$   $\chi^2/\text{NDF}: 295359.2/24$

Right Out:  $-22.226 \pm 0.027$   $\chi^2/\text{NDF}: 484930.2/34$

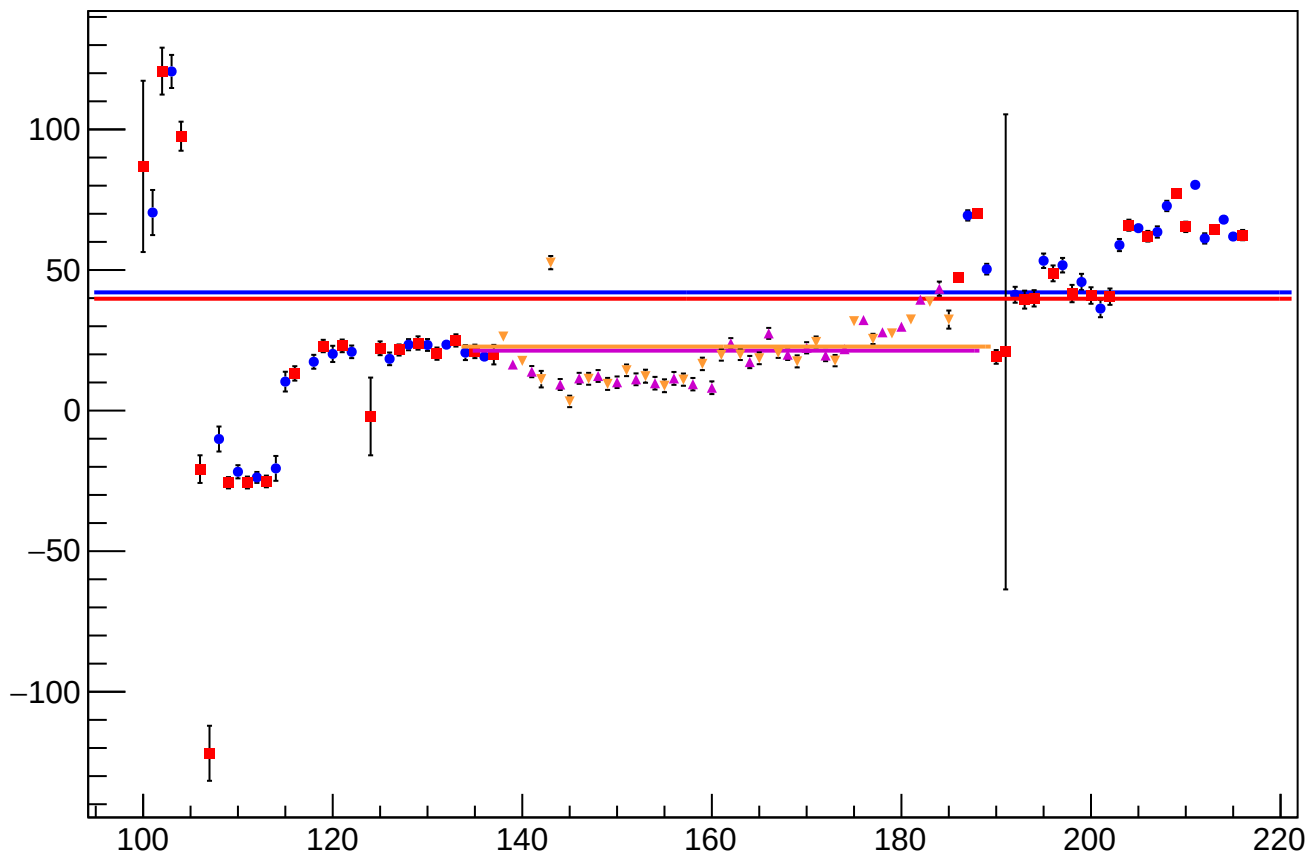
Left In:  $-18.378 \pm 0.016$   $\chi^2/\text{NDF}: 250040.9/22$

+ sign  $-19.002 \pm 0.013$   $\chi^2/\text{NDF}: 882443.1/55$

All:  $-19.181 \pm 0.010$   $\chi^2/\text{NDF}: 1633088.1/113$

- sign  $-19.365 \pm 0.014$   $\chi^2/\text{NDF}: 750282.6/57$

# reg\_asym\_at1\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 42.048 $\pm$ 0.395  $\chi^2$ /NDF: 5326.6/30

Left Out: 22.766 $\pm$ 0.383  $\chi^2$ /NDF: 722.8/24

Right Out: 39.787 $\pm$ 0.381  $\chi^2$ /NDF: 6616.2/34

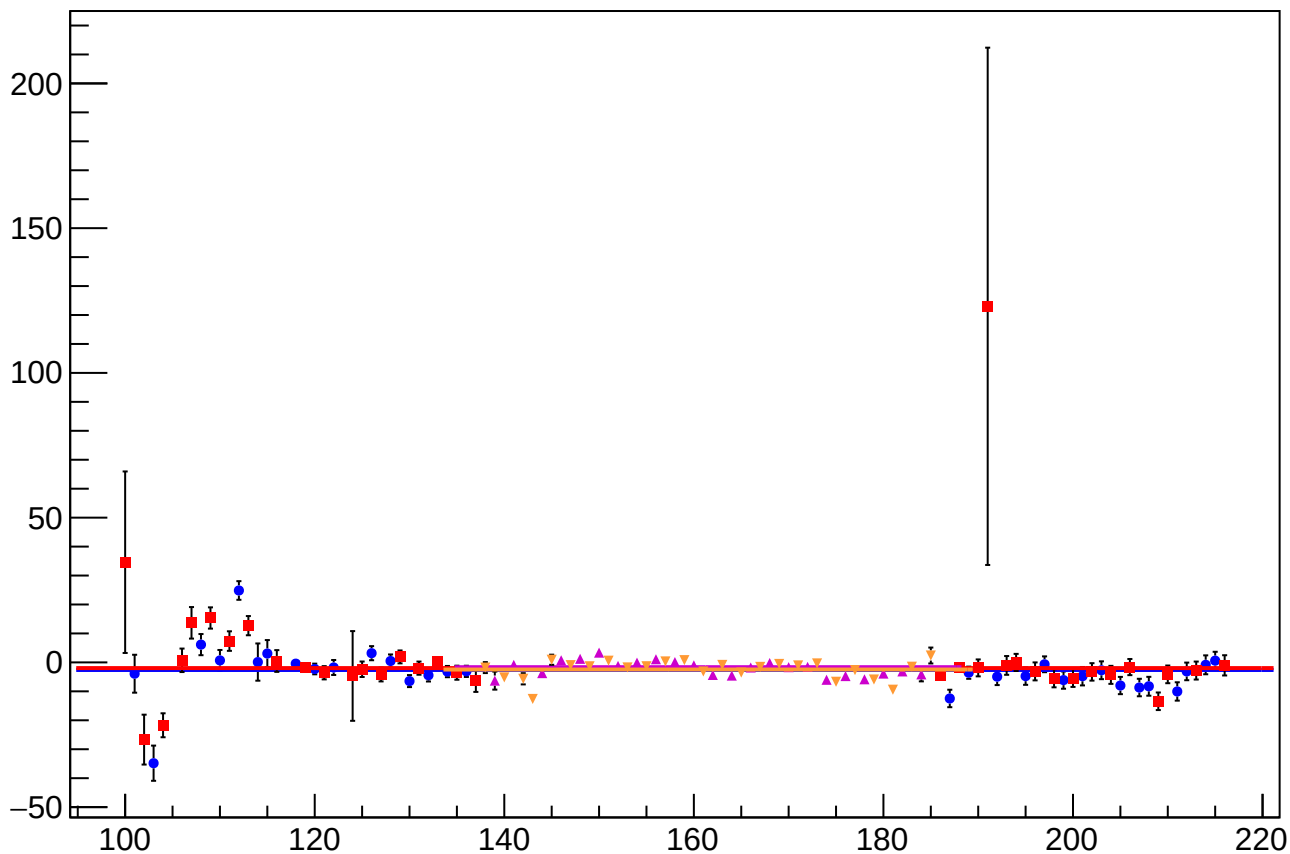
Left In: 21.325 $\pm$ 0.393  $\chi^2$ /NDF: 629.9/22

+ sign 32.100 $\pm$ 0.275  $\chi^2$ /NDF: 7278.9/55

All: 31.461 $\pm$ 0.194  $\chi^2$ /NDF: 15672.9/113

- sign 30.827 $\pm$ 0.274  $\chi^2$ /NDF: 8383.2/57

# reg\_asym\_at1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: -2.618+/-0.480  $\chi^2/\text{NDF}$ : 154.8/30

Left Out: -2.468+/-0.293  $\chi^2/\text{NDF}$ : 116.7/24

Right Out: -1.972+/-0.461  $\chi^2/\text{NDF}$ : 121.8/34

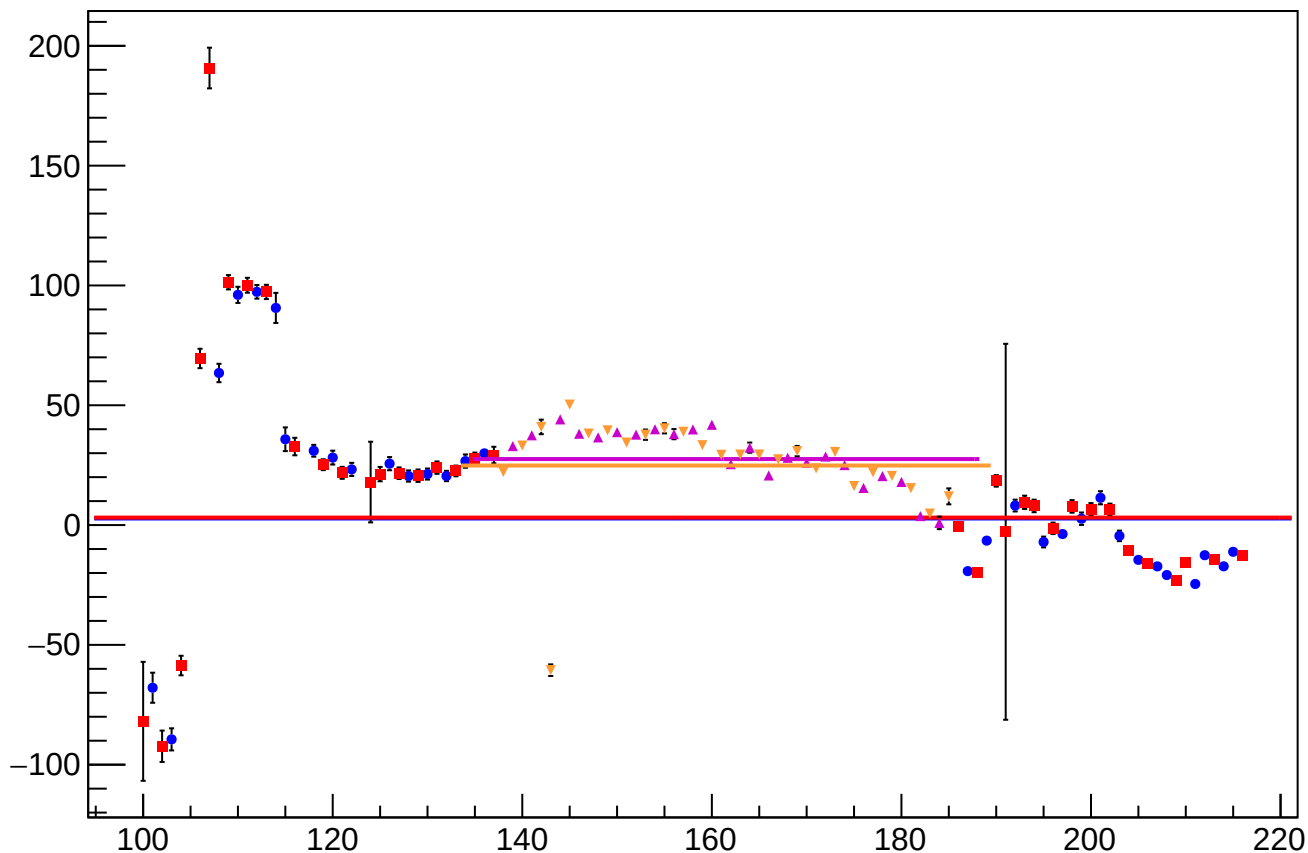
Left In: -1.659+/-0.304  $\chi^2/\text{NDF}$ : 70.2/22

+ sign -2.509+/-0.250  $\chi^2/\text{NDF}$ : 271.5/55

All: -2.137+/-0.178  $\chi^2/\text{NDF}$ : 468.4/113

- sign -1.754+/-0.254  $\chi^2/\text{NDF}$ : 192.3/57

# reg\_asym\_at1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $2.749 \pm 0.406$   $\chi^2/\text{NDF}: 4924.4/30$

Left Out:  $24.850 \pm 0.380$   $\chi^2/\text{NDF}: 2048.7/24$

Right Out:  $3.121 \pm 0.376$   $\chi^2/\text{NDF}: 6362.9/34$

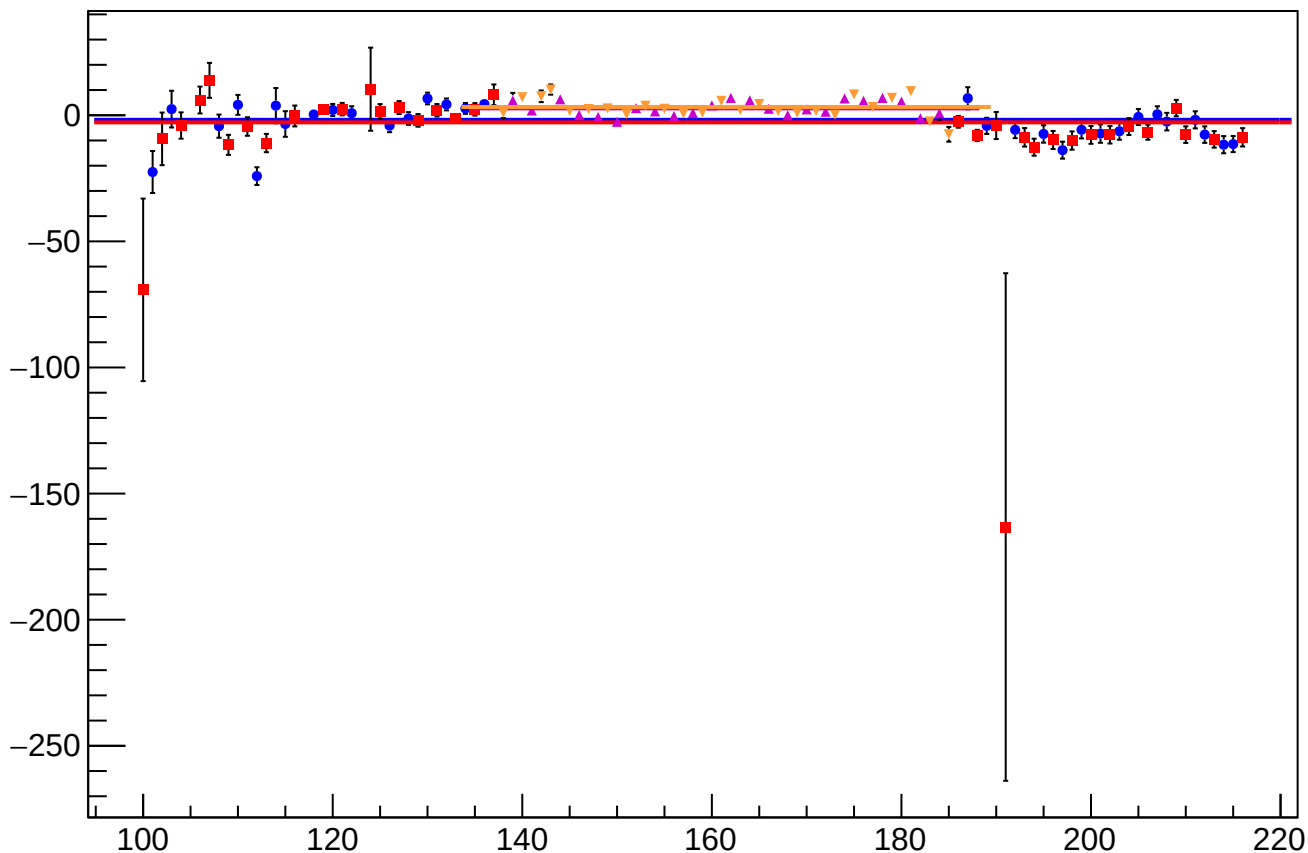
Left In:  $27.551 \pm 0.389$   $\chi^2/\text{NDF}: 881.9/22$

+ sign  $14.528 \pm 0.277$   $\chi^2/\text{NDF}: 8554.8/55$

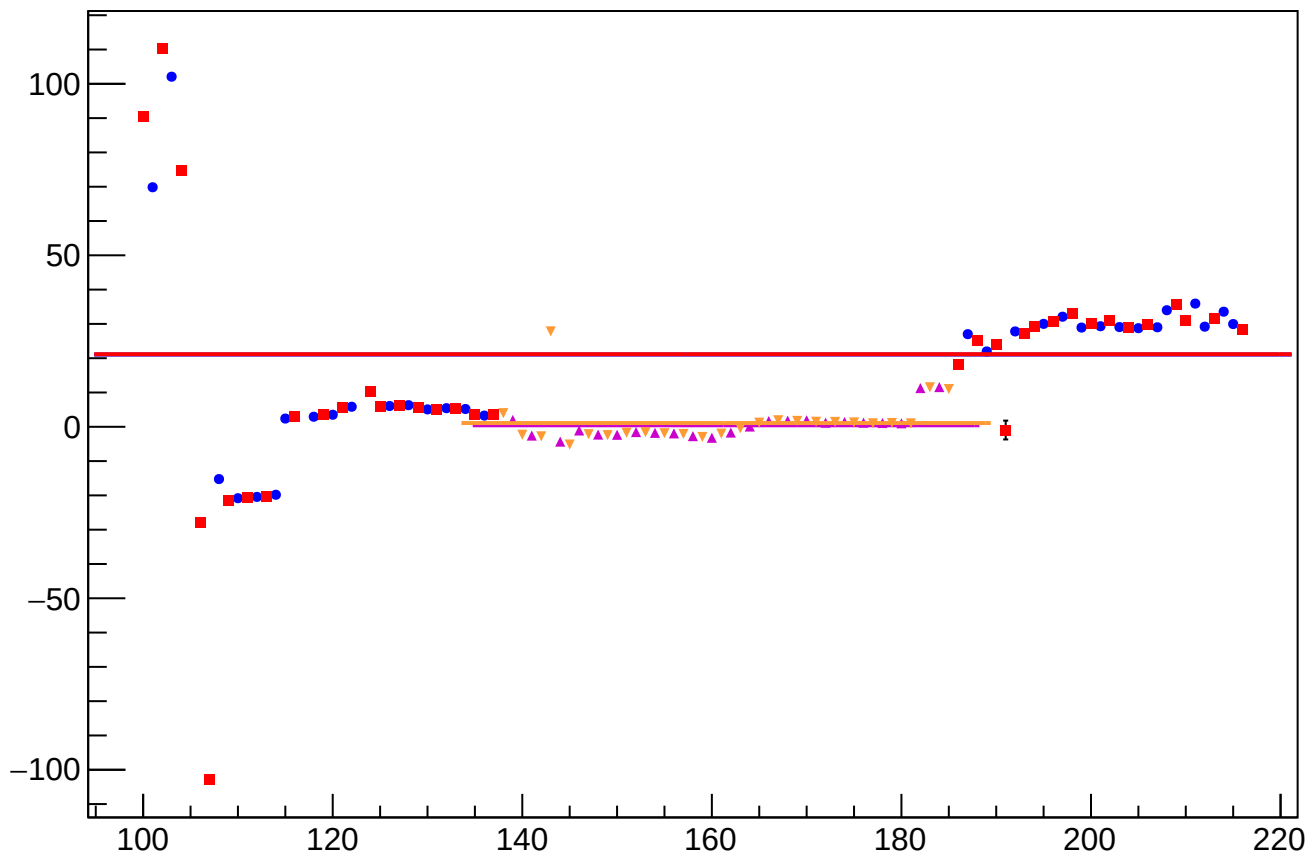
All:  $14.739 \pm 0.194$   $\chi^2/\text{NDF}: 17838.0/113$

- sign  $14.940 \pm 0.270$   $\chi^2/\text{NDF}: 9282.1/57$

# reg\_asym\_at1\_dd\_diff\_bpm4eY\_slope vs Slug



# reg\_asym\_at1\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 21.066 $\pm$ 0.026  $\chi^2$ /NDF: 504661.0/30

Left Out: 1.094 $\pm$ 0.015  $\chi^2$ /NDF: 128801.7/24

Right Out: 21.160 $\pm$ 0.026  $\chi^2$ /NDF: 644209.5/34

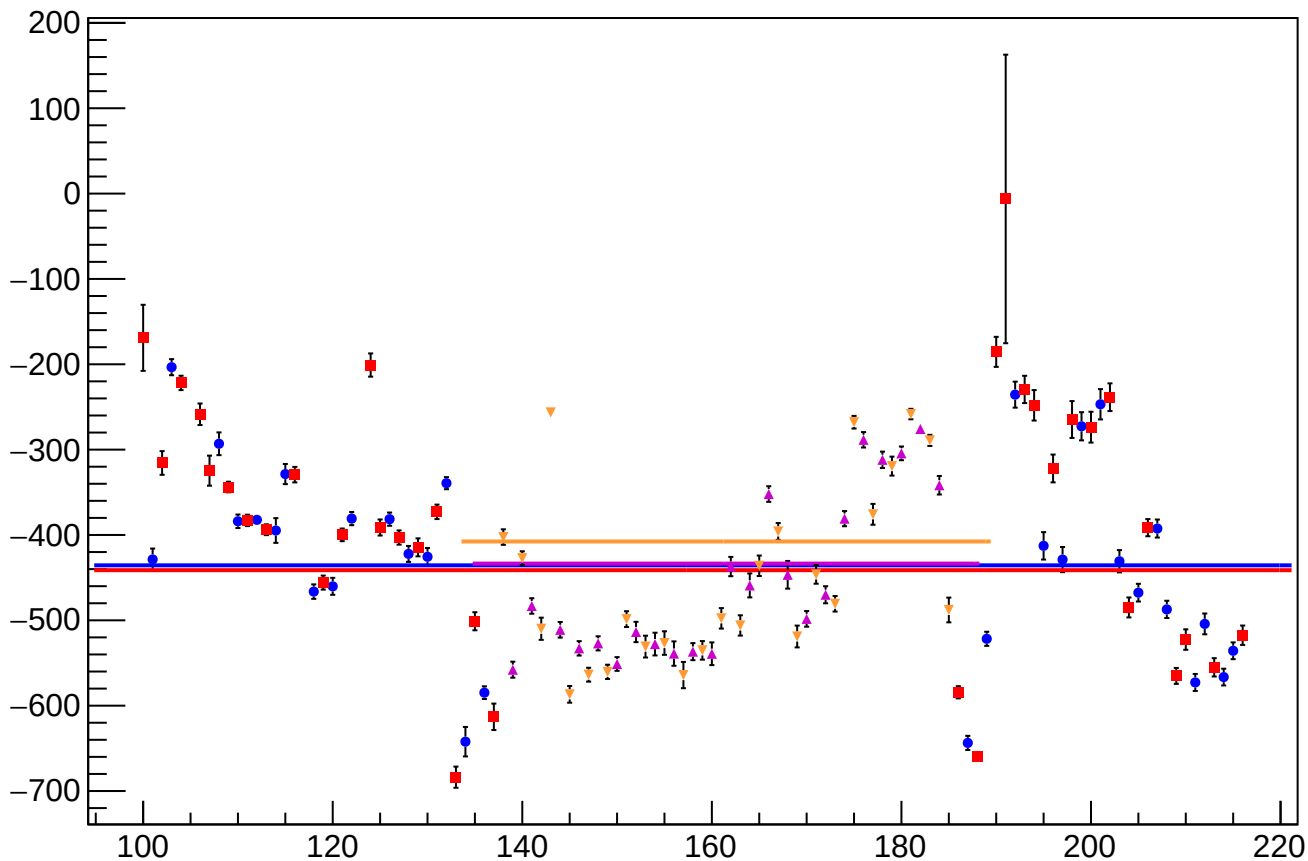
Left In: 0.443 $\pm$ 0.015  $\chi^2$ /NDF: 53446.3/22

+ sign 5.936 $\pm$ 0.013  $\chi^2$ /NDF: 1072673.7/55

All: 5.747 $\pm$ 0.009  $\chi^2$ /NDF: 2235929.6/113

- sign 5.553 $\pm$ 0.013  $\chi^2$ /NDF: 1162823.9/57

# reg\_asym\_at2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-435.576 \pm 1.767$   $\chi^2/\text{NDF}$ : 3466.3/30

Left Out:  $-407.620 \pm 1.868$   $\chi^2/\text{NDF}$ : 4005.6/24

Right Out:  $-441.256 \pm 1.648$   $\chi^2/\text{NDF}$ : 6765.3/34

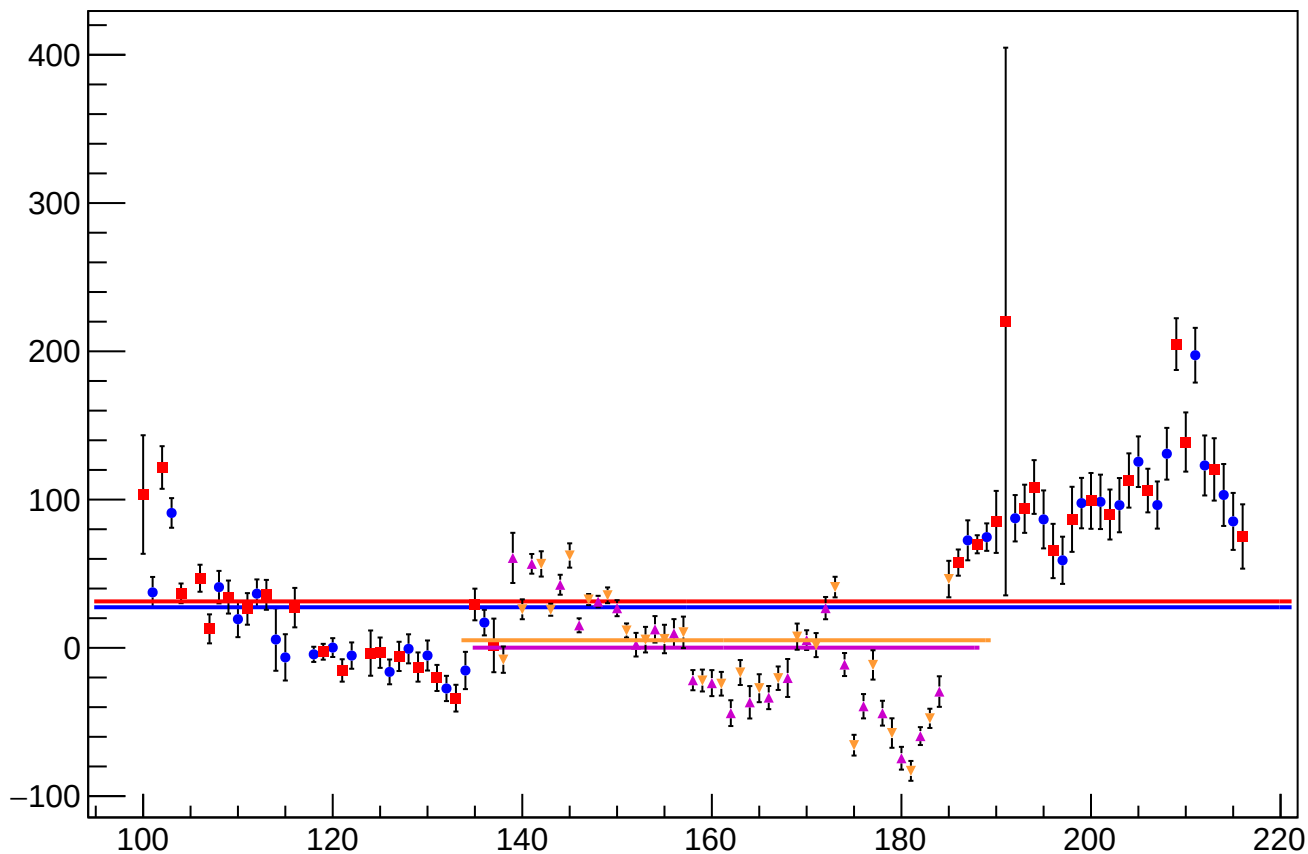
Left In:  $-433.529 \pm 1.993$   $\chi^2/\text{NDF}$ : 2724.5/22

+ sign  $-422.370 \pm 1.284$   $\chi^2/\text{NDF}$ : 7590.1/55

All:  $-430.329 \pm 0.903$   $\chi^2/\text{NDF}$ : 17165.0/113

- sign  $-438.118 \pm 1.270$   $\chi^2/\text{NDF}$ : 9498.8/57

# reg\_asym\_at2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $27.382 \pm 1.987$   $\chi^2/\text{NDF}: 548.2/30$

Left Out:  $5.125 \pm 1.379$   $\chi^2/\text{NDF}: 689.2/24$

Right Out:  $31.333 \pm 1.872$   $\chi^2/\text{NDF}: 589.1/34$

Left In:  $0.124 \pm 1.489$   $\chi^2/\text{NDF}: 568.6/22$

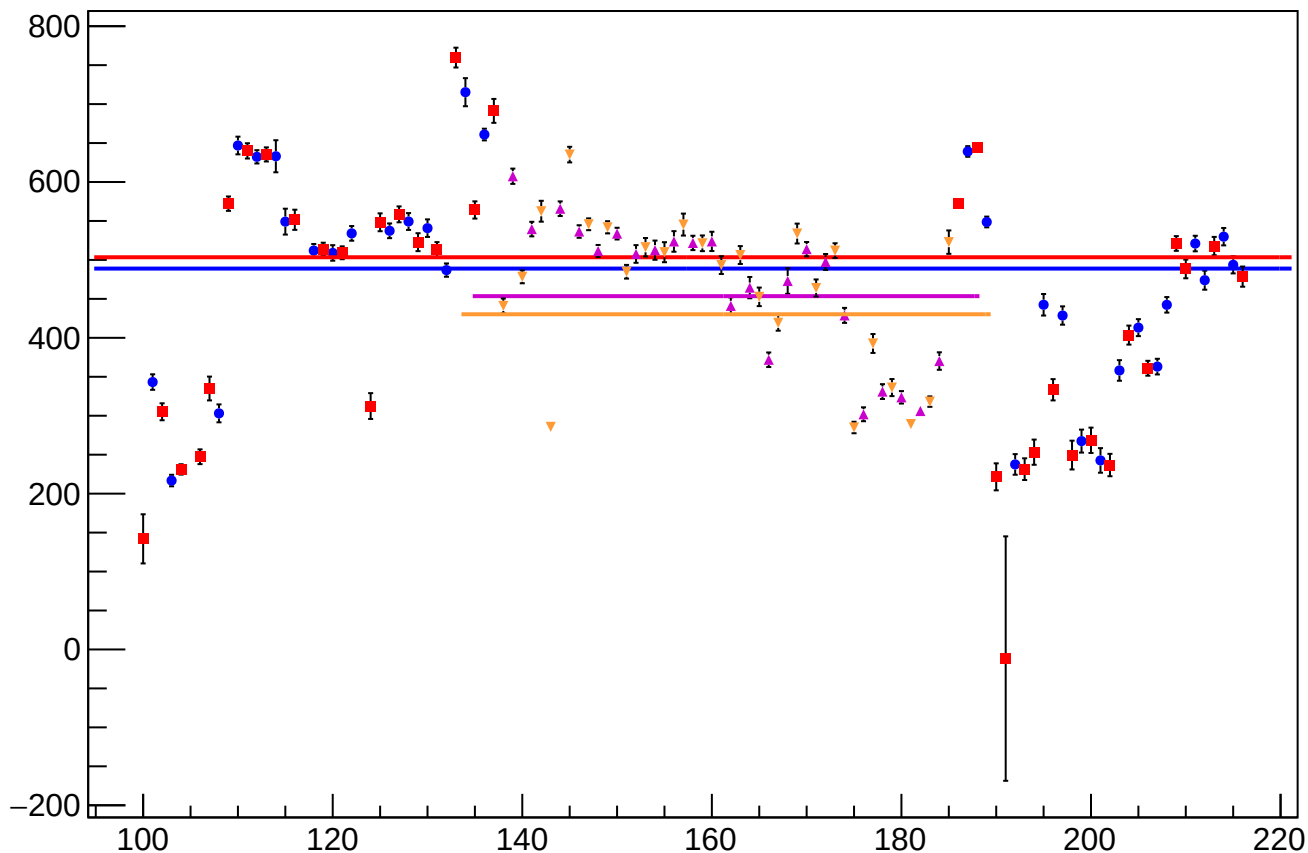
+ sign  $12.358 \pm 1.133$   $\chi^2/\text{NDF}: 1322.1/55$

All:  $12.290 \pm 0.812$   $\chi^2/\text{NDF}: 2650.0/113$

- sign  $12.217 \pm 1.166$   $\chi^2/\text{NDF}: 1327.9/57$



# reg\_asym\_at2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $488.883 \pm 1.834$   $\chi^2/\text{NDF}$ : 4941.4/30

Left Out:  $430.238 \pm 1.861$   $\chi^2/\text{NDF}$ : 3405.1/24

Right Out:  $503.416 \pm 1.660$   $\chi^2/\text{NDF}$ : 8077.1/34

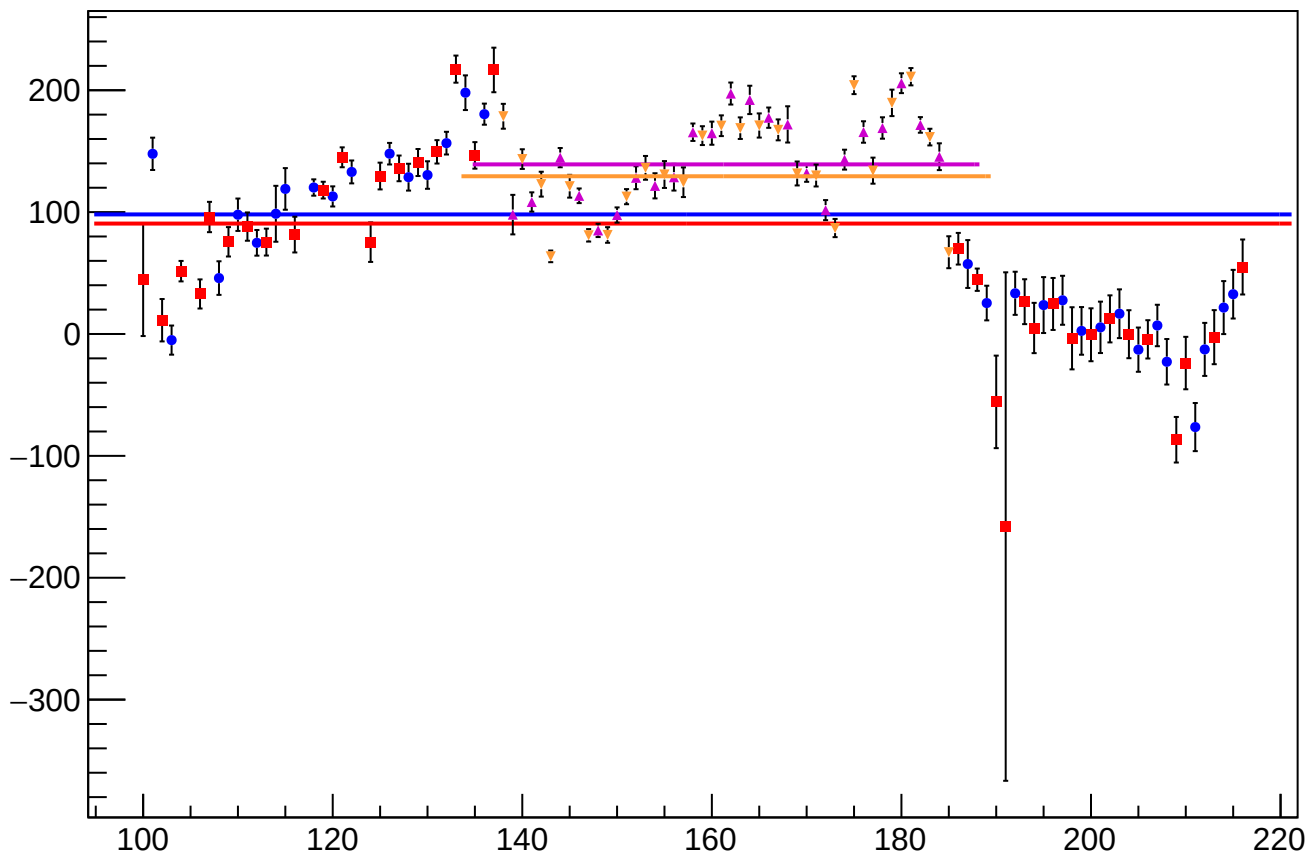
Left In:  $453.496 \pm 1.974$   $\chi^2/\text{NDF}$ : 2419.7/22

+ sign  $459.987 \pm 1.306$   $\chi^2/\text{NDF}$ : 8850.2/55

All:  $471.684 \pm 0.911$   $\chi^2/\text{NDF}$ : 19877.6/113

- sign  $482.742 \pm 1.270$   $\chi^2/\text{NDF}$ : 10871.5/57

# reg\_asym\_at2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 98.112 $\pm$ 2.318  $\chi^2$ /NDF: 725.2/30

Left Out: 129.418 $\pm$ 1.593  $\chi^2$ /NDF: 814.3/24

Right Out: 90.600 $\pm$ 2.222  $\chi^2$ /NDF: 751.8/34

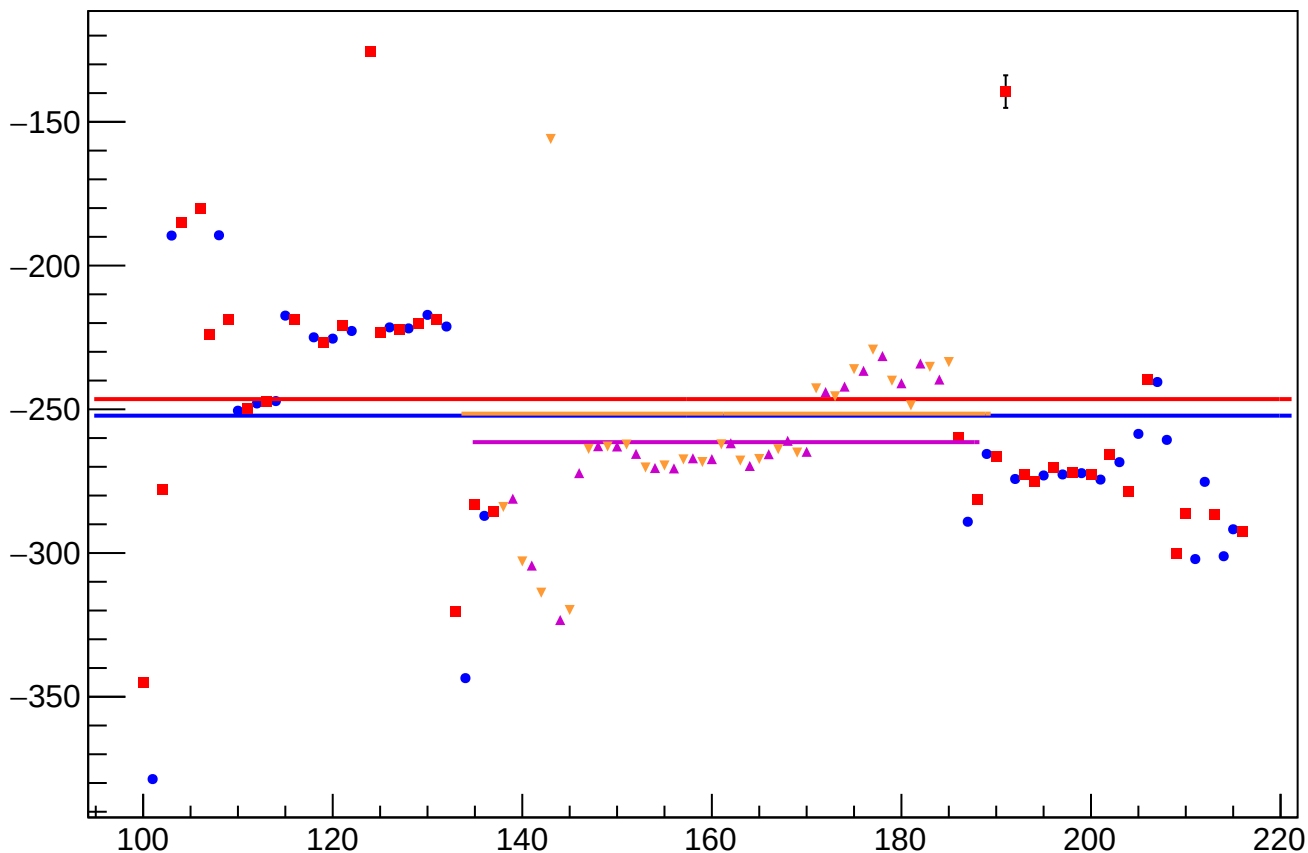
Left In: 139.163 $\pm$ 1.705  $\chi^2$ /NDF: 434.2/22

+ sign 119.382 $\pm$ 1.313  $\chi^2$ /NDF: 1663.3/55

All: 120.251 $\pm$ 0.942  $\chi^2$ /NDF: 3150.8/113

- sign 121.173 $\pm$ 1.353  $\chi^2$ /NDF: 1486.5/57

# reg\_asym\_at2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-252.212 \pm 0.118$   $\chi^2/\text{NDF}: 155389.4/30$

Left Out:  $-251.508 \pm 0.075$   $\chi^2/\text{NDF}: 254924.4/24$

Right Out:  $-246.452 \pm 0.115$   $\chi^2/\text{NDF}: 121002.8/34$

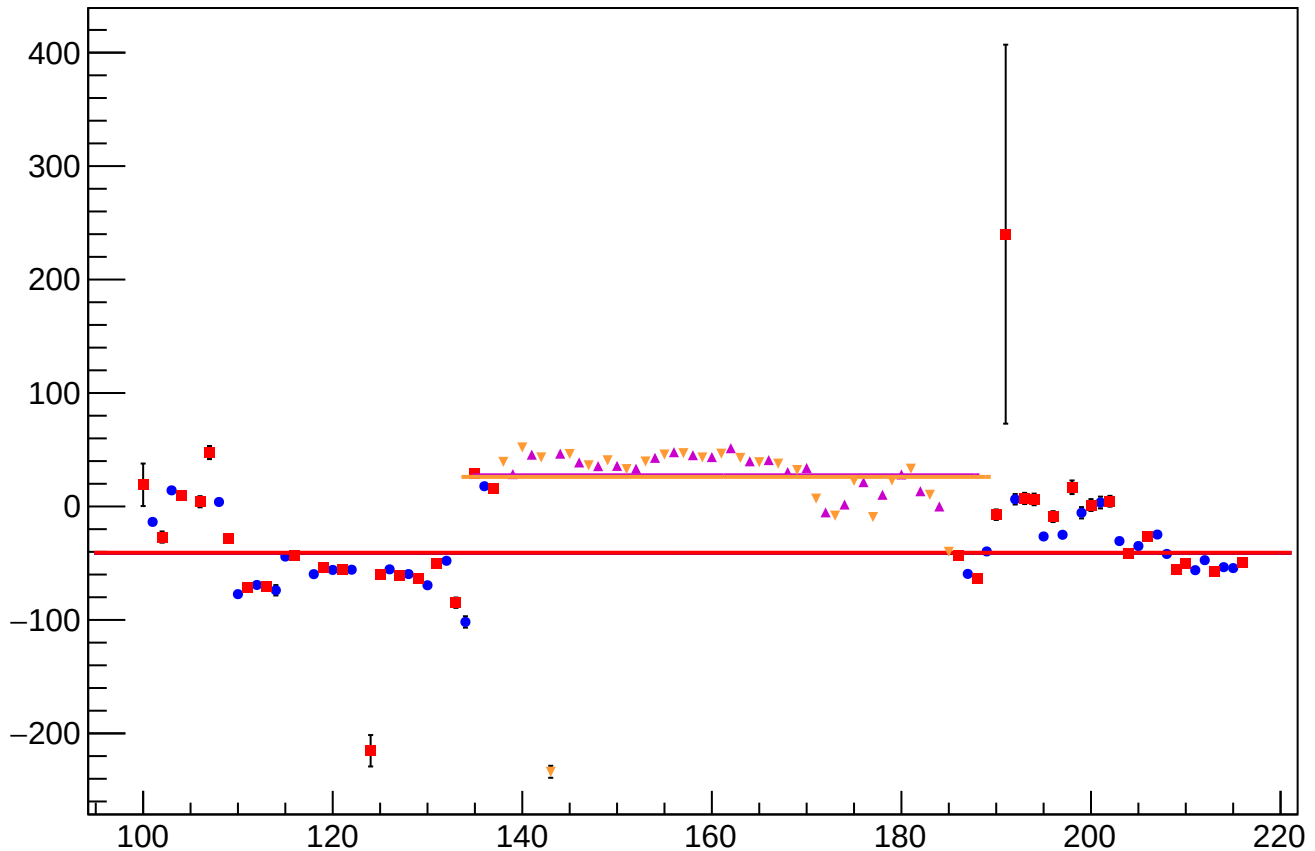
Left In:  $-261.425 \pm 0.078$   $\chi^2/\text{NDF}: 69557.7/22$

+ sign  $-251.709 \pm 0.063$   $\chi^2/\text{NDF}: 410339.2/55$

All:  $-254.147 \pm 0.045$   $\chi^2/\text{NDF}: 615642.6/113$

- sign  $-256.691 \pm 0.064$   $\chi^2/\text{NDF}: 202247.8/57$

# reg\_asym\_at2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-40.992 \pm 0.540$   $\chi^2/\text{NDF}$ : 2841.9/30

Left Out:  $26.087 \pm 0.390$   $\chi^2/\text{NDF}$ : 4785.1/24

Right Out:  $-40.806 \pm 0.500$   $\chi^2/\text{NDF}$ : 3359.3/34

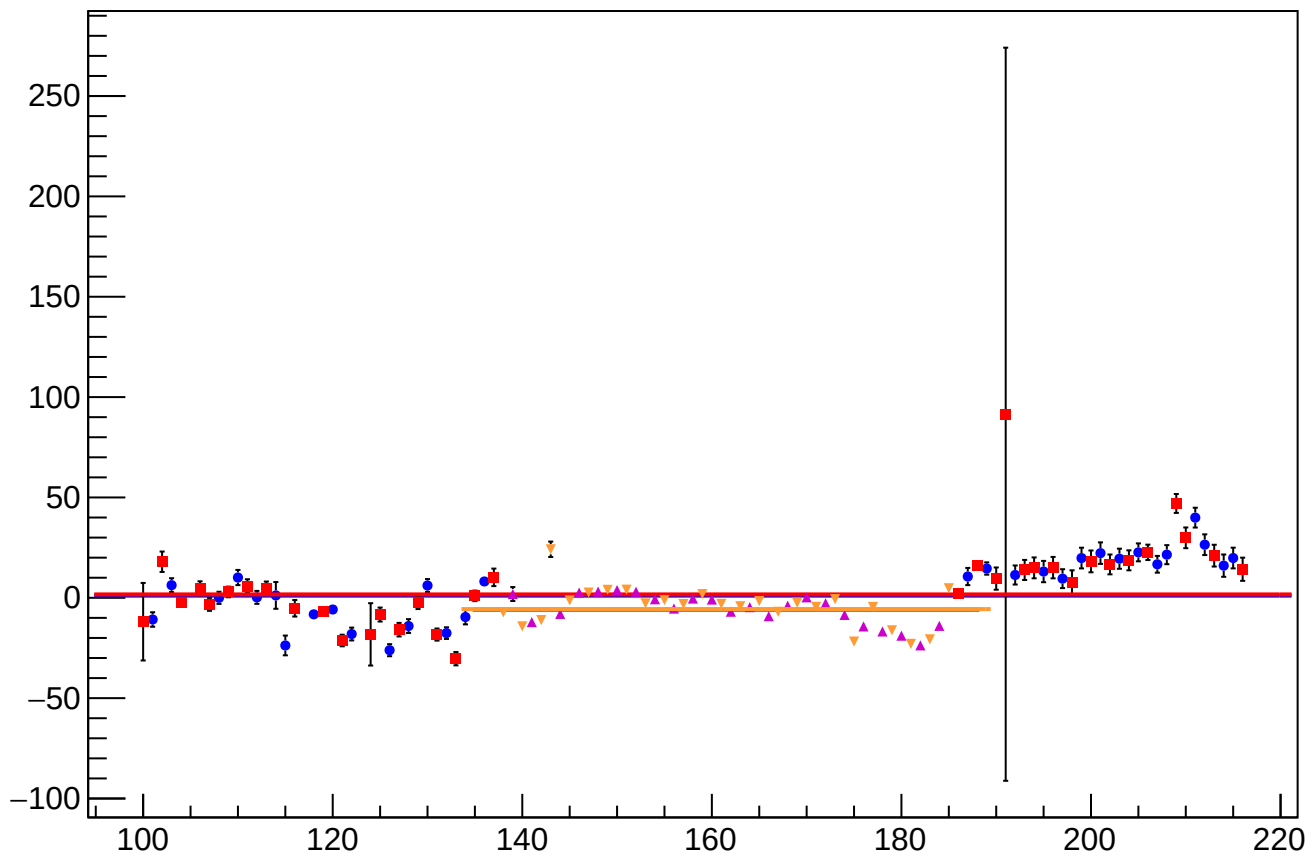
Left In:  $27.466 \pm 0.396$   $\chi^2/\text{NDF}$ : 1608.9/22

+ sign  $3.131 \pm 0.316$   $\chi^2/\text{NDF}$ : 17767.1/55

All:  $2.140 \pm 0.221$   $\chi^2/\text{NDF}$ : 34208.9/113

- sign  $1.184 \pm 0.310$   $\chi^2/\text{NDF}$ : 16422.5/57

# reg\_asym\_at2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $1.102 \pm 0.637$   $\chi^2/\text{NDF}$ : 519.6/30

Left Out:  $-5.625 \pm 0.302$   $\chi^2/\text{NDF}$ : 893.3/24

Right Out:  $1.690 \pm 0.599$   $\chi^2/\text{NDF}$ : 551.8/34

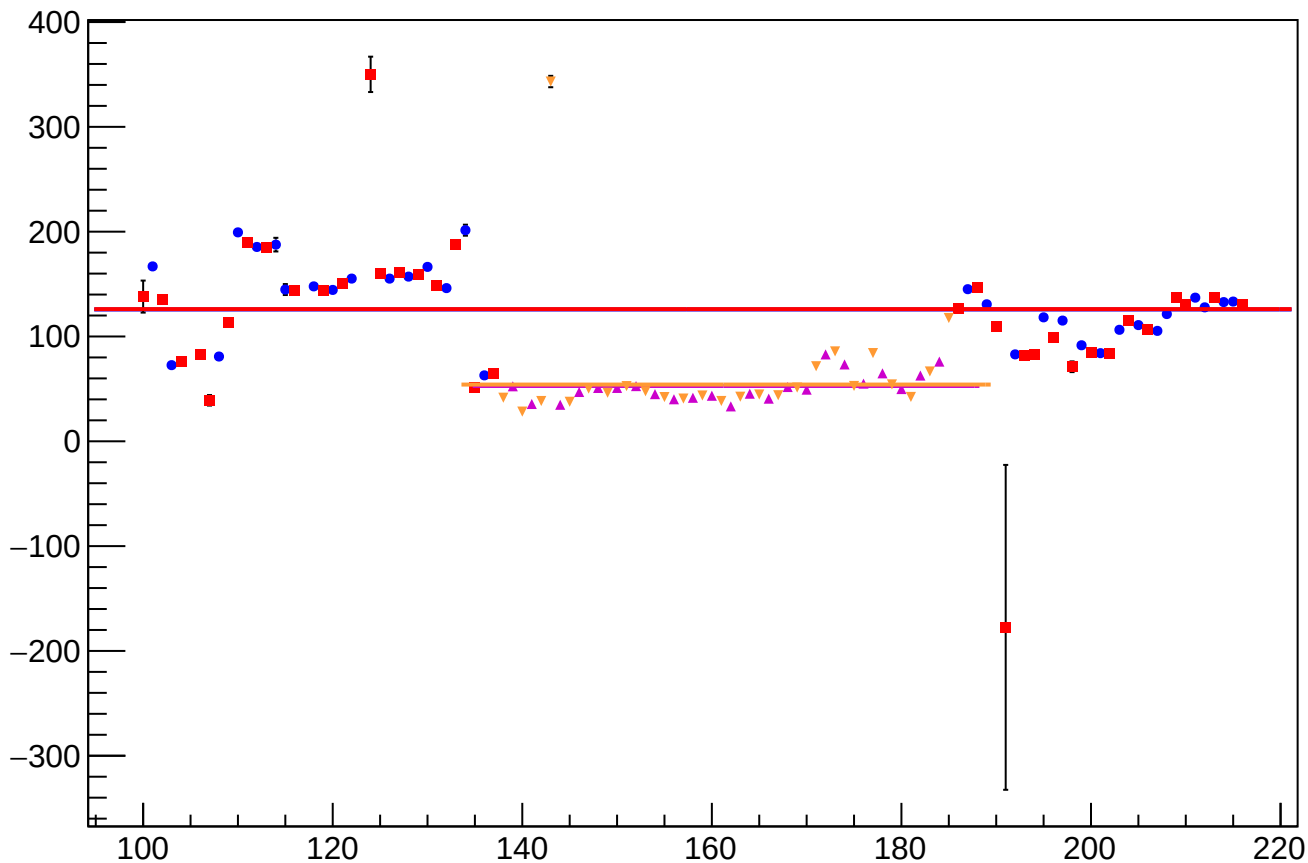
Left In:  $-5.940 \pm 0.309$   $\chi^2/\text{NDF}$ : 712.2/22

+ sign  $-4.392 \pm 0.273$   $\chi^2/\text{NDF}$ : 1503.9/55

All:  $-4.364 \pm 0.194$   $\chi^2/\text{NDF}$ : 2896.2/113

- sign  $-4.335 \pm 0.275$   $\chi^2/\text{NDF}$ : 1392.3/57

# reg\_asym\_at2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $125.753 \pm 0.558$   $\chi^2/\text{NDF}: 4148.3/30$

Left Out:  $54.123 \pm 0.387$   $\chi^2/\text{NDF}: 4591.8/24$

Right Out:  $126.108 \pm 0.506$   $\chi^2/\text{NDF}: 4457.4/34$

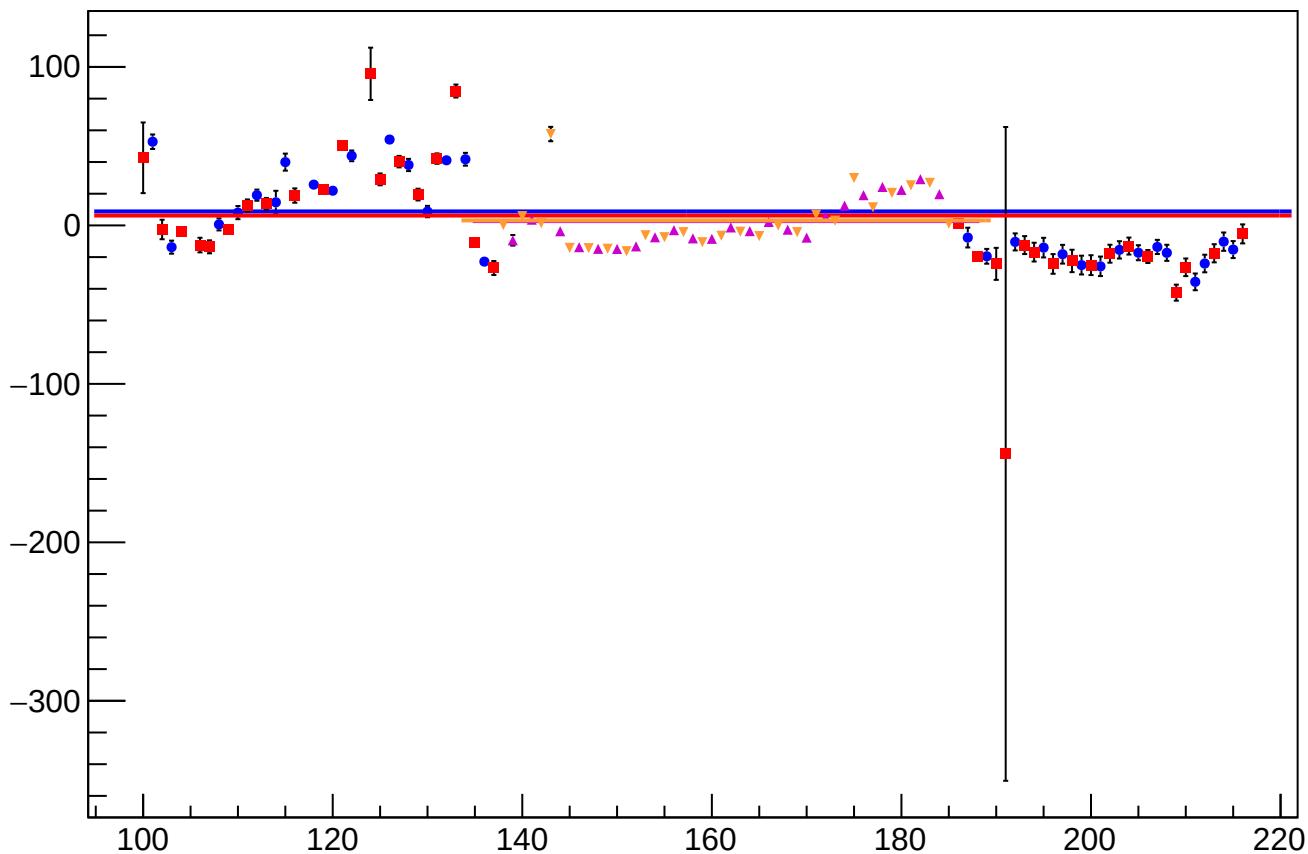
Left In:  $52.797 \pm 0.393$   $\chi^2/\text{NDF}: 978.1/22$

+ sign  $77.435 \pm 0.318$   $\chi^2/\text{NDF}: 19873.7/55$

All:  $78.921 \pm 0.222$   $\chi^2/\text{NDF}: 38449.8/113$

- sign  $80.335 \pm 0.310$   $\chi^2/\text{NDF}: 18533.5/57$

# reg\_asym\_at2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $8.831 \pm 0.732$   $\chi^2/\text{NDF}$ : 1392.5/30

Left Out:  $3.155 \pm 0.340$   $\chi^2/\text{NDF}$ : 2012.4/24

Right Out:  $6.236 \pm 0.706$   $\chi^2/\text{NDF}$ : 1471.6/34

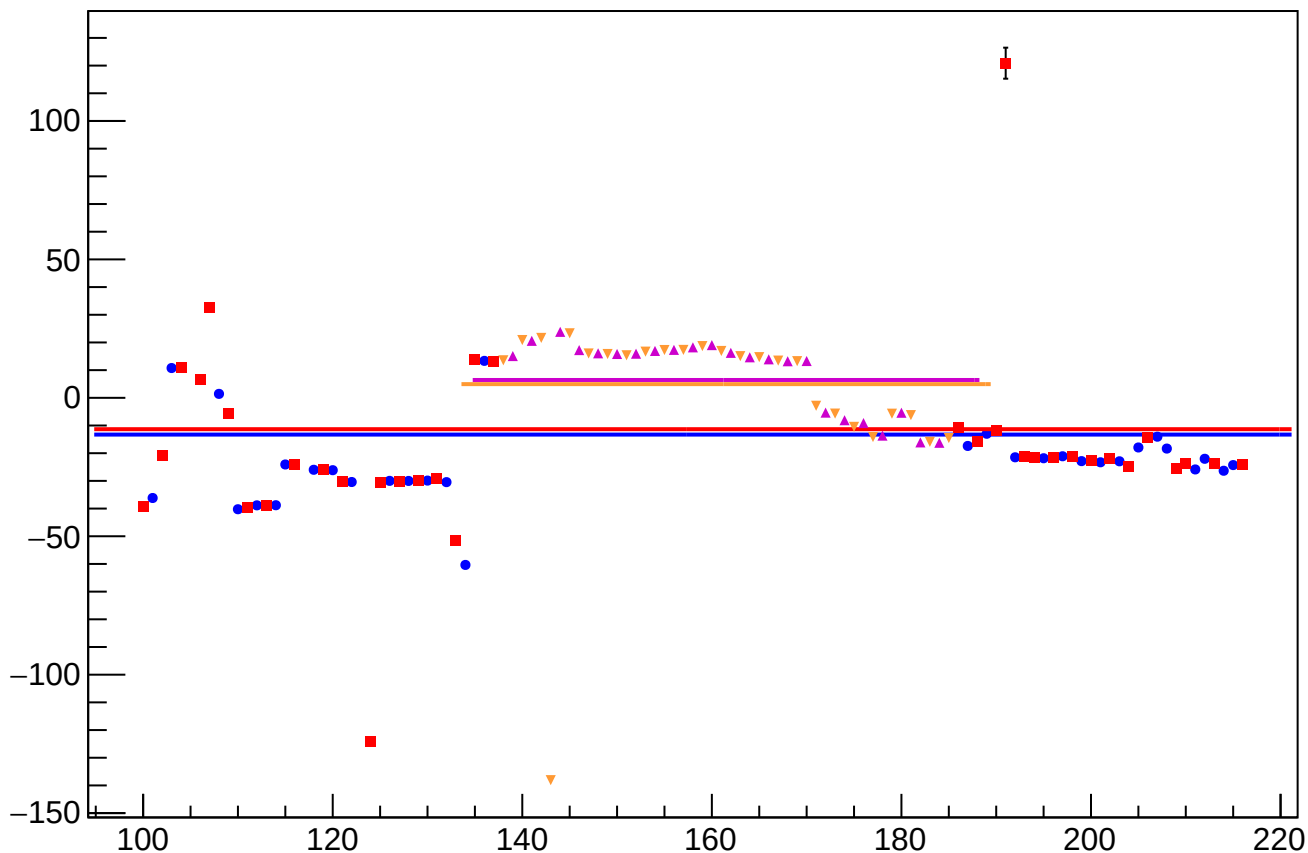
Left In:  $2.722 \pm 0.347$   $\chi^2/\text{NDF}$ : 1735.2/22

+ sign  $4.162 \pm 0.308$   $\chi^2/\text{NDF}$ : 3454.4/55

All:  $3.787 \pm 0.219$   $\chi^2/\text{NDF}$ : 6684.0/113

- sign  $3.404 \pm 0.311$   $\chi^2/\text{NDF}$ : 3226.7/57

# reg\_asym\_at2\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-13.277 \pm 0.035$   $\chi^2/\text{NDF}: 303825.9/30$

Left Out:  $4.946 \pm 0.015$   $\chi^2/\text{NDF}: 1136506.7/24$

Right Out:  $-11.329 \pm 0.035$   $\chi^2/\text{NDF}: 283990.9/34$

Left In:  $6.444 \pm 0.015$   $\chi^2/\text{NDF}: 729692.1/22$

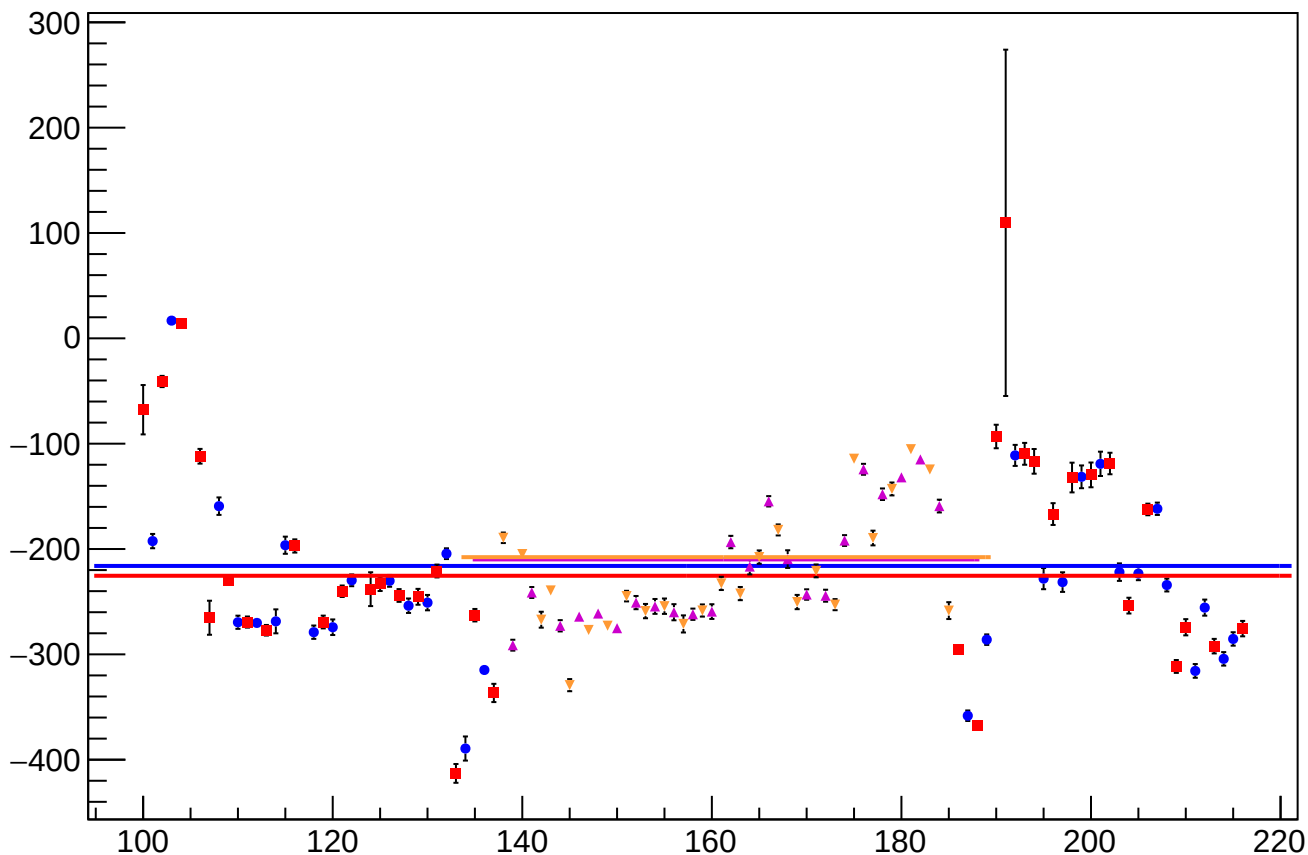
+ sign  $2.030 \pm 0.014$   $\chi^2/\text{NDF}: 1669726.4/55$

All:  $2.788 \pm 0.010$   $\chi^2/\text{NDF}: 2907601.6/113$

- sign  $3.555 \pm 0.014$   $\chi^2/\text{NDF}: 1231936.1/57$



# reg\_asym\_atl1r2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-216.060 \pm 1.111$   $\chi^2/\text{NDF}: 9448.1/30$

Left Out:  $-207.745 \pm 1.070$   $\chi^2/\text{NDF}: 3487.2/24$

Right Out:  $-225.400 \pm 1.039$   $\chi^2/\text{NDF}: 12712.0/34$

Left In:  $-209.875 \pm 1.101$   $\chi^2/\text{NDF}: 3011.9/22$

+ sign  $-211.744 \pm 0.771$   $\chi^2/\text{NDF}: 12964.4/55$

All:  $-214.977 \pm 0.540$   $\chi^2/\text{NDF}: 28827.9/113$

- sign  $-218.087 \pm 0.756$   $\chi^2/\text{NDF}: 15829.0/57$

# reg\_asym\_atl1r2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 19.155 $\pm$ 1.254  $\chi^2$ /NDF: 381.8/30

Left Out: 3.770 $\pm$ 0.787  $\chi^2$ /NDF: 972.1/24

Right Out: 18.220 $\pm$ 1.145  $\chi^2$ /NDF: 511.1/34

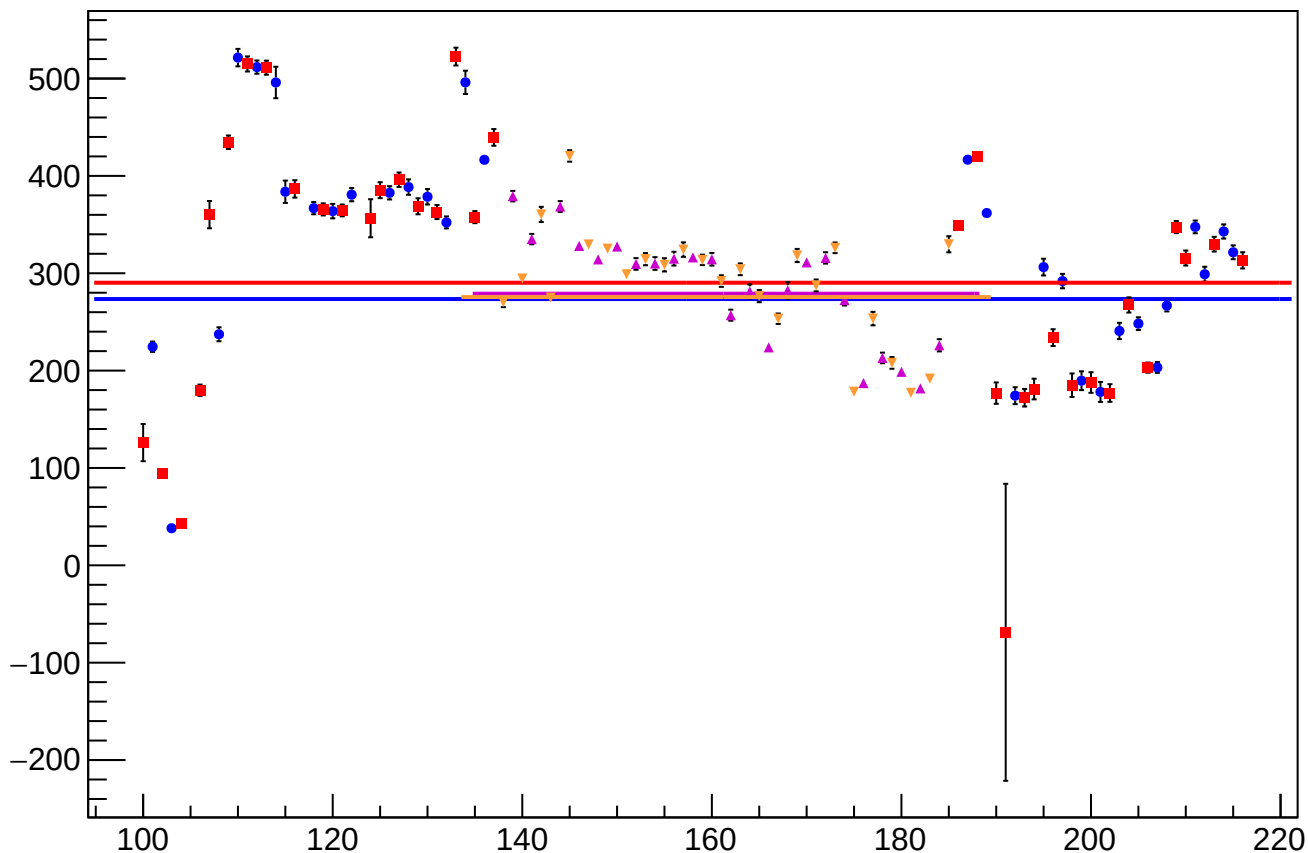
Left In: 2.079 $\pm$ 0.820  $\chi^2$ /NDF: 770.2/22

+ sign 8.120 $\pm$ 0.667  $\chi^2$ /NDF: 1462.0/55

All: 7.836 $\pm$ 0.471  $\chi^2$ /NDF: 2875.0/113

- sign 7.552 $\pm$ 0.667  $\chi^2$ /NDF: 1412.7/57

# reg\_asym\_atl1r2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 273.519 $\pm$ 1.082  $\chi^2$ /NDF: 18048.5/30

Left Out: 275.536 $\pm$ 1.062  $\chi^2$ /NDF: 3323.1/24

Right Out: 290.275 $\pm$ 0.982  $\chi^2$ /NDF: 22298.8/34

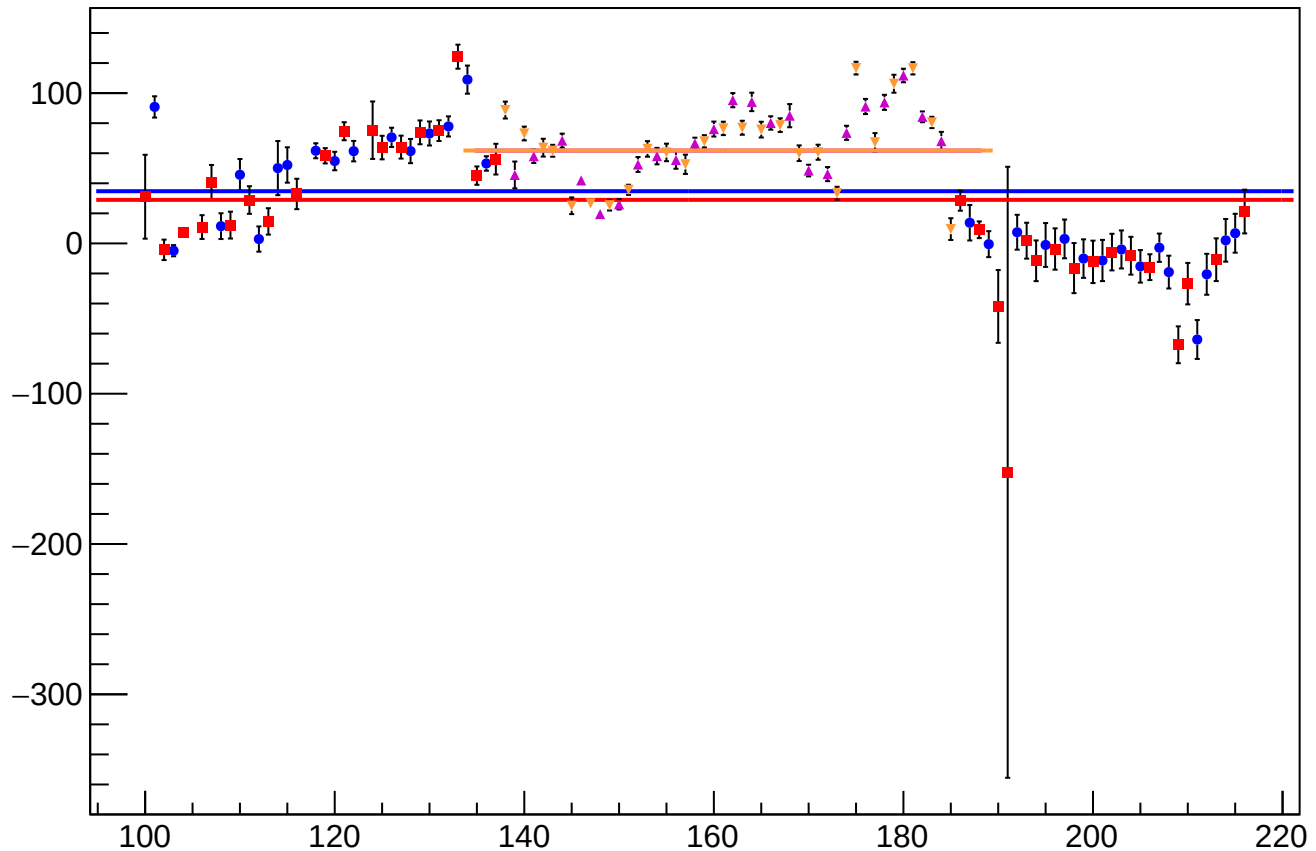
Left In: 278.989 $\pm$ 1.089  $\chi^2$ /NDF: 3114.7/22

+ sign 274.546 $\pm$ 0.758  $\chi^2$ /NDF: 21373.4/55

All: 280.083 $\pm$ 0.526  $\chi^2$ /NDF: 46948.8/113

- sign 285.211 $\pm$ 0.729  $\chi^2$ /NDF: 25472.7/57

# reg\_asym\_atl1r2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $34.724 \pm 1.464$   $\chi^2/\text{NDF}$ : 657.2/30

Left Out:  $61.818 \pm 0.907$   $\chi^2/\text{NDF}$ : 959.5/24

Right Out:  $28.970 \pm 1.382$   $\chi^2/\text{NDF}$ : 645.0/34

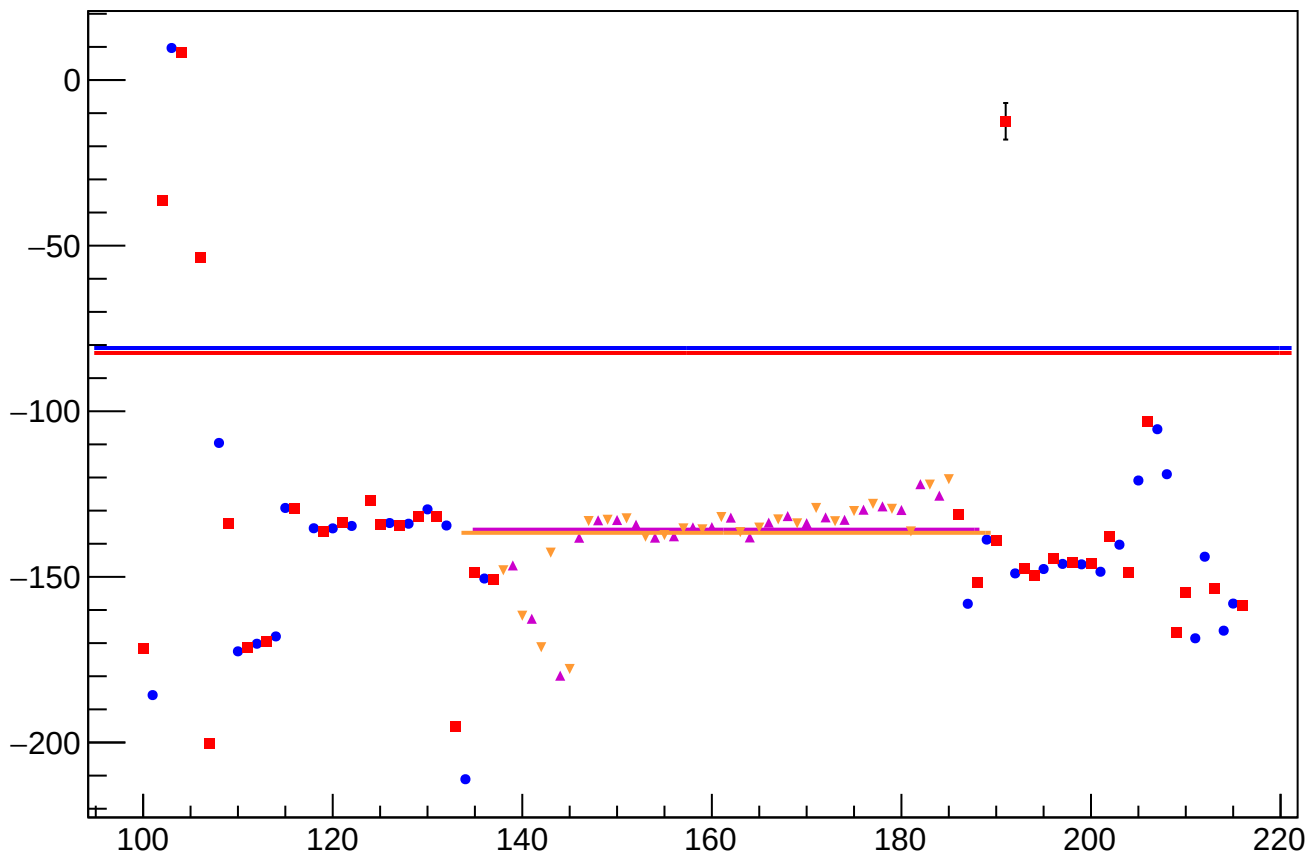
Left In:  $61.763 \pm 0.939$   $\chi^2/\text{NDF}$ : 736.0/22

+ sign  $54.298 \pm 0.771$   $\chi^2/\text{NDF}$ : 1864.0/55

All:  $52.863 \pm 0.547$   $\chi^2/\text{NDF}$ : 3637.4/113

- sign  $51.408 \pm 0.776$   $\chi^2/\text{NDF}$ : 1766.4/57

reg\_asym\_atl1r2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-80.901 \pm 0.062$   $\chi^2/\text{NDF}$ : 1583092.0/30

Left Out:  $-136.695 \pm 0.042$   $\chi^2/\text{NDF}$ : 79006.9/24

Right Out:  $-82.401 \pm 0.062$   $\chi^2/\text{NDF}$ : 1271541.7/34

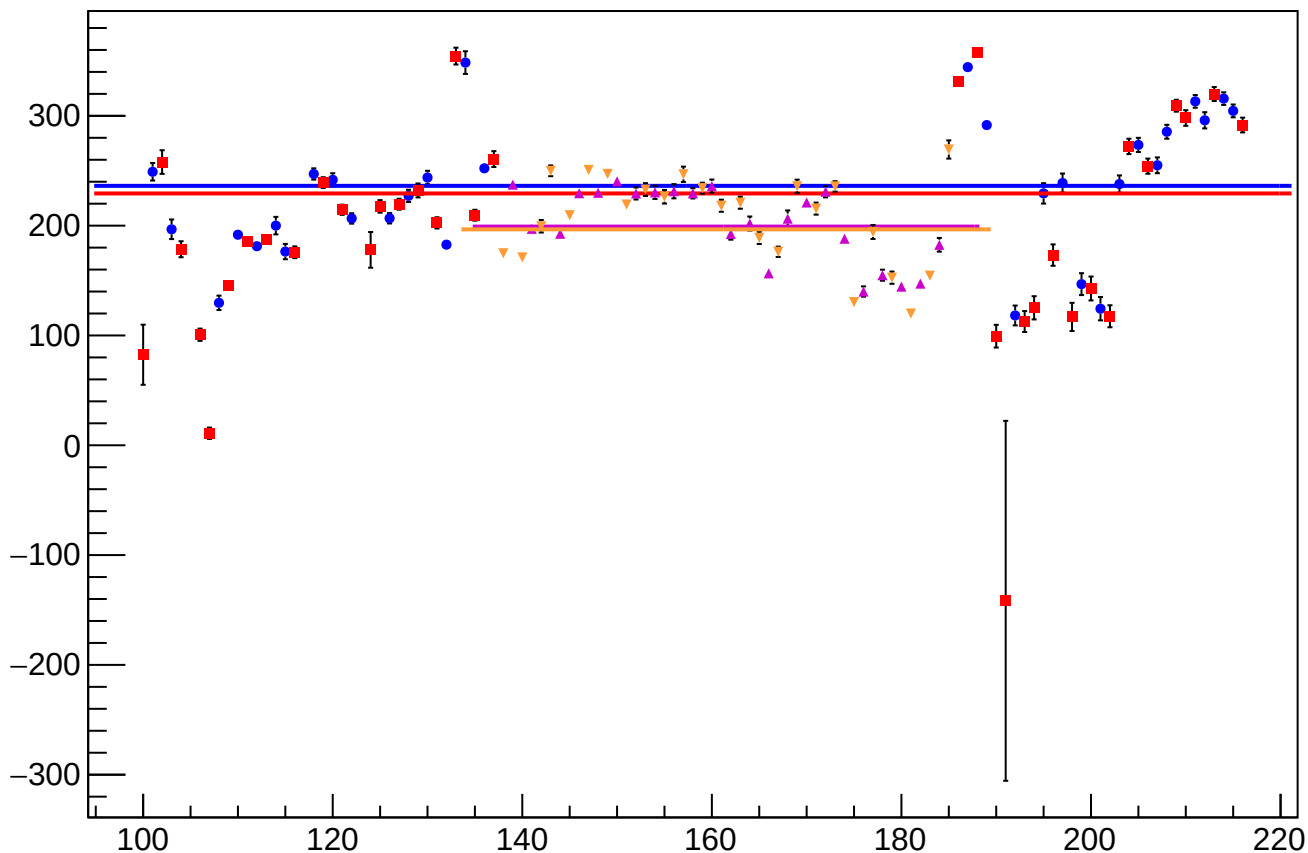
Left In:  $-135.745 \pm 0.043$   $\chi^2/\text{NDF}$ : 63681.9/22

+ sign  $-118.984 \pm 0.035$   $\chi^2/\text{NDF}$ : 2215748.9/55

All:  $-118.815 \pm 0.025$   $\chi^2/\text{NDF}$ : 4048945.3/11

- sign  $-118.643 \pm 0.035$   $\chi^2/\text{NDF}$ : 1833149.2/57

# reg\_asym\_atl1r2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 236.246 $\pm$ 1.031  $\chi^2$ /NDF: 2913.8/30

Left Out: 196.615 $\pm$ 0.946  $\chi^2$ /NDF: 2075.5/24

Right Out: 229.326 $\pm$ 0.934  $\chi^2$ /NDF: 8822.0/34

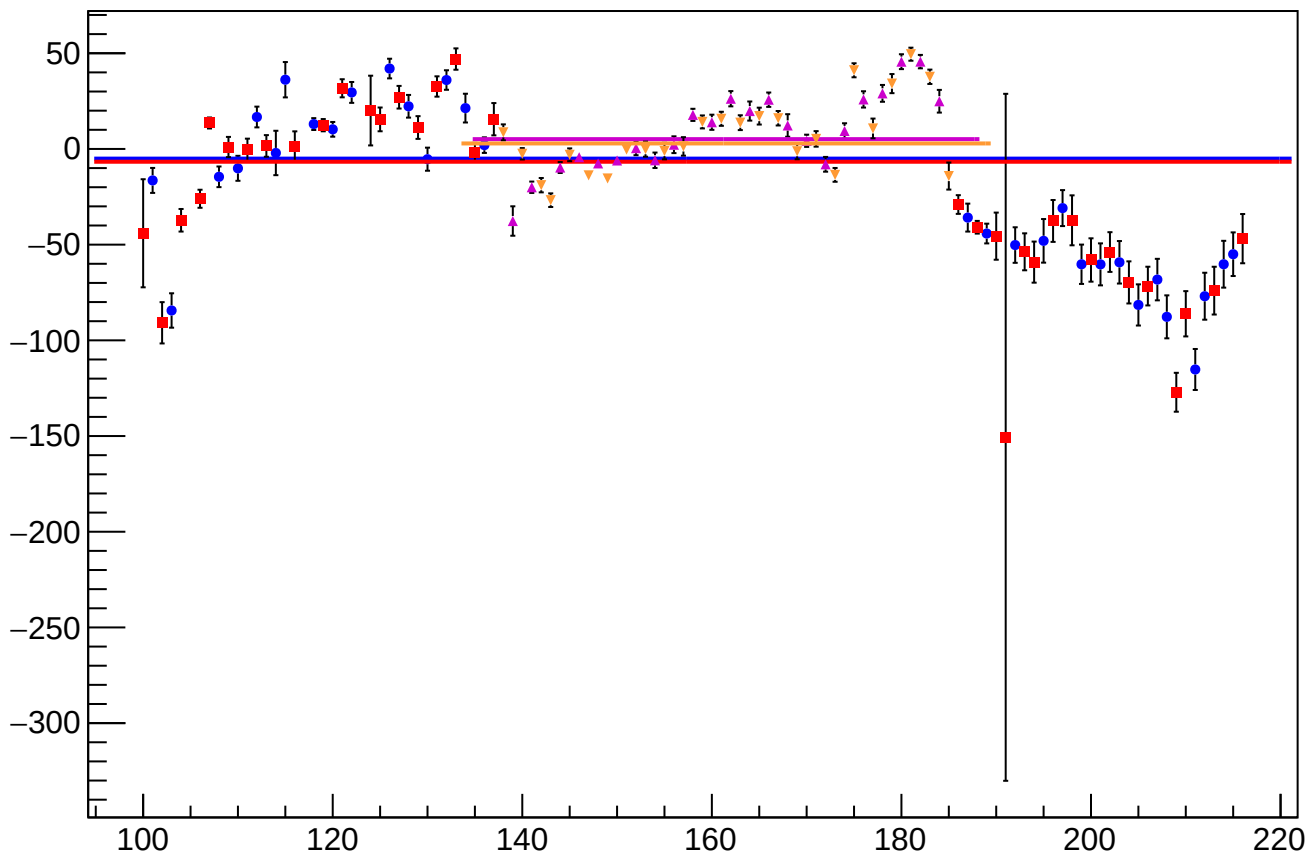
Left In: 199.153 $\pm$ 0.973  $\chi^2$ /NDF: 1294.6/22

+ sign 214.738 $\pm$ 0.697  $\chi^2$ /NDF: 5791.3/55

All: 214.798 $\pm$ 0.484  $\chi^2$ /NDF: 16408.5/113

- sign 214.855 $\pm$ 0.674  $\chi^2$ /NDF: 10617.3/57

# reg\_asym\_atl1r2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.056 \pm 1.170$   $\chi^2/\text{NDF}$ : 913.7/30

Left Out:  $2.870 \pm 0.693$   $\chi^2/\text{NDF}$ : 752.8/24

Right Out:  $-6.684 \pm 1.052$   $\chi^2/\text{NDF}$ : 1014.6/34

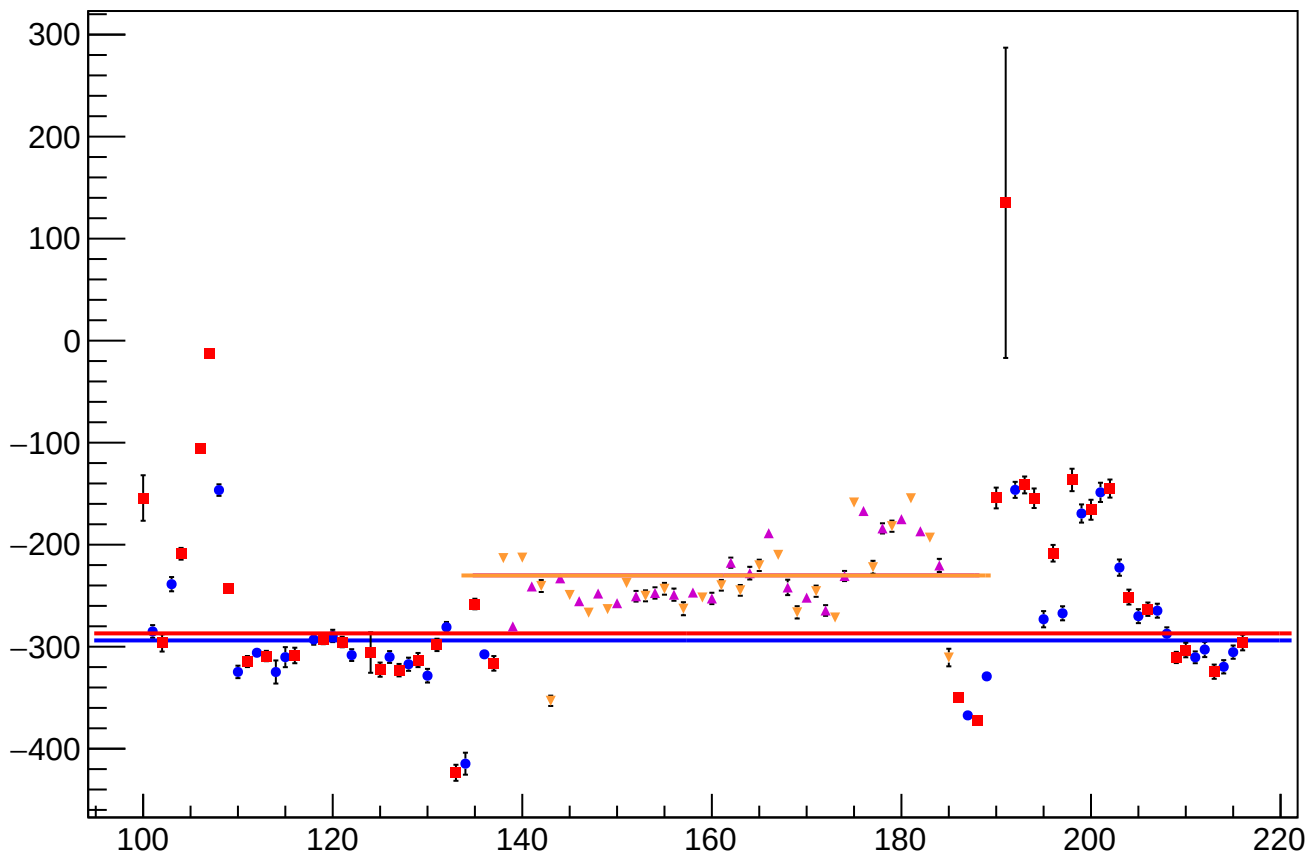
Left In:  $5.126 \pm 0.718$   $\chi^2/\text{NDF}$ : 628.6/22

+ sign  $0.811 \pm 0.596$   $\chi^2/\text{NDF}$ : 1700.5/55

All:  $1.093 \pm 0.420$   $\chi^2/\text{NDF}$ : 3430.1/113

- sign  $1.372 \pm 0.593$   $\chi^2/\text{NDF}$ : 1729.2/57

# reg\_asym\_atl1r2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-293.861 \pm 1.077$   $\chi^2/\text{NDF}$ : 2410.6/30

Left Out:  $-230.182 \pm 0.939$   $\chi^2/\text{NDF}$ : 2181.9/24

Right Out:  $-286.956 \pm 0.945$   $\chi^2/\text{NDF}$ : 9976.2/34

Left In:  $-230.047 \pm 0.961$   $\chi^2/\text{NDF}$ : 1094.0/22

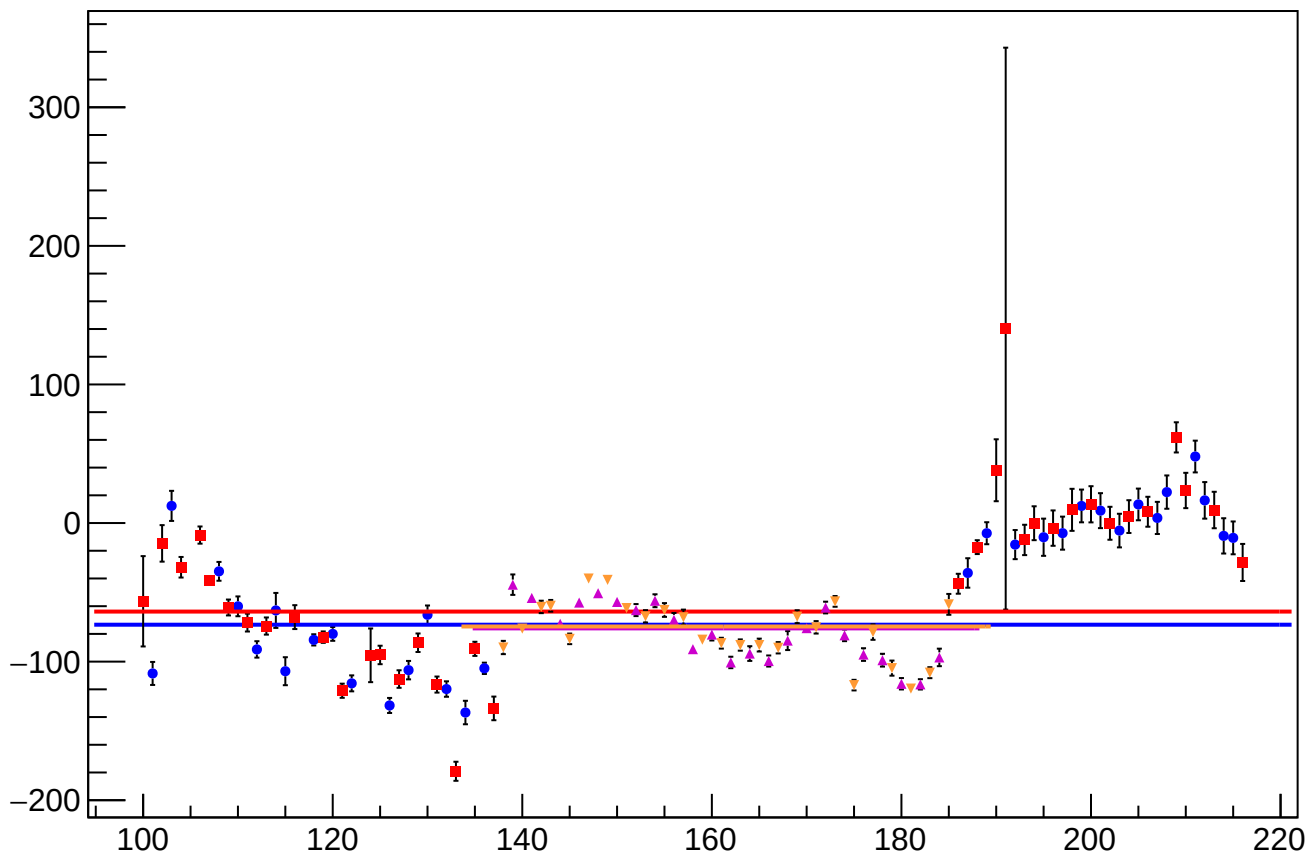
+ sign  $-257.682 \pm 0.708$   $\chi^2/\text{NDF}$ : 6578.6/55

All:  $-258.360 \pm 0.488$   $\chi^2/\text{NDF}$ : 19433.3/113

- sign  $-258.975 \pm 0.674$   $\chi^2/\text{NDF}$ : 12852.9/57



# reg\_asym\_atl1r2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-73.365 \pm 1.361$   $\chi^2/\text{NDF}$ : 1193.2/30

Left Out:  $-74.644 \pm 0.801$   $\chi^2/\text{NDF}$ : 831.0/24

Right Out:  $-63.888 \pm 1.255$   $\chi^2/\text{NDF}$ : 1424.6/34

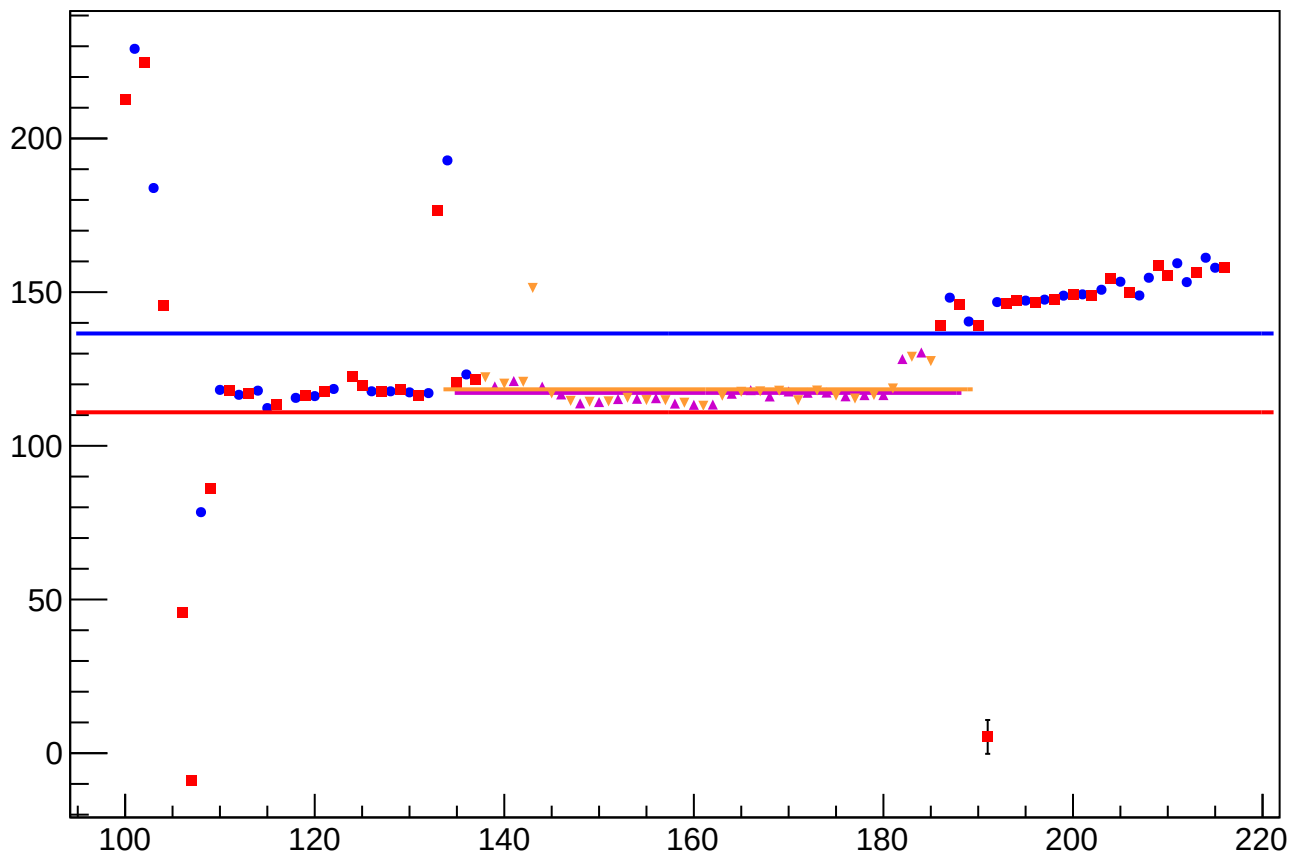
Left In:  $-76.025 \pm 0.824$   $\chi^2/\text{NDF}$ : 646.0/22

+ sign  $-74.315 \pm 0.690$   $\chi^2/\text{NDF}$ : 2024.9/55

All:  $-73.340 \pm 0.488$   $\chi^2/\text{NDF}$ : 4164.9/113

- sign  $-72.369 \pm 0.689$   $\chi^2/\text{NDF}$ : 2136.0/57

# reg\_asym\_atl1r2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 136.551 $\pm$ 0.070  $\chi^2$ /NDF: 205831.0/30

Left Out: 118.382 $\pm$ 0.037  $\chi^2$ /NDF:34938.1/24

Right Out: 110.910 $\pm$ 0.064  $\chi^2$ /NDF: 785636.6/34

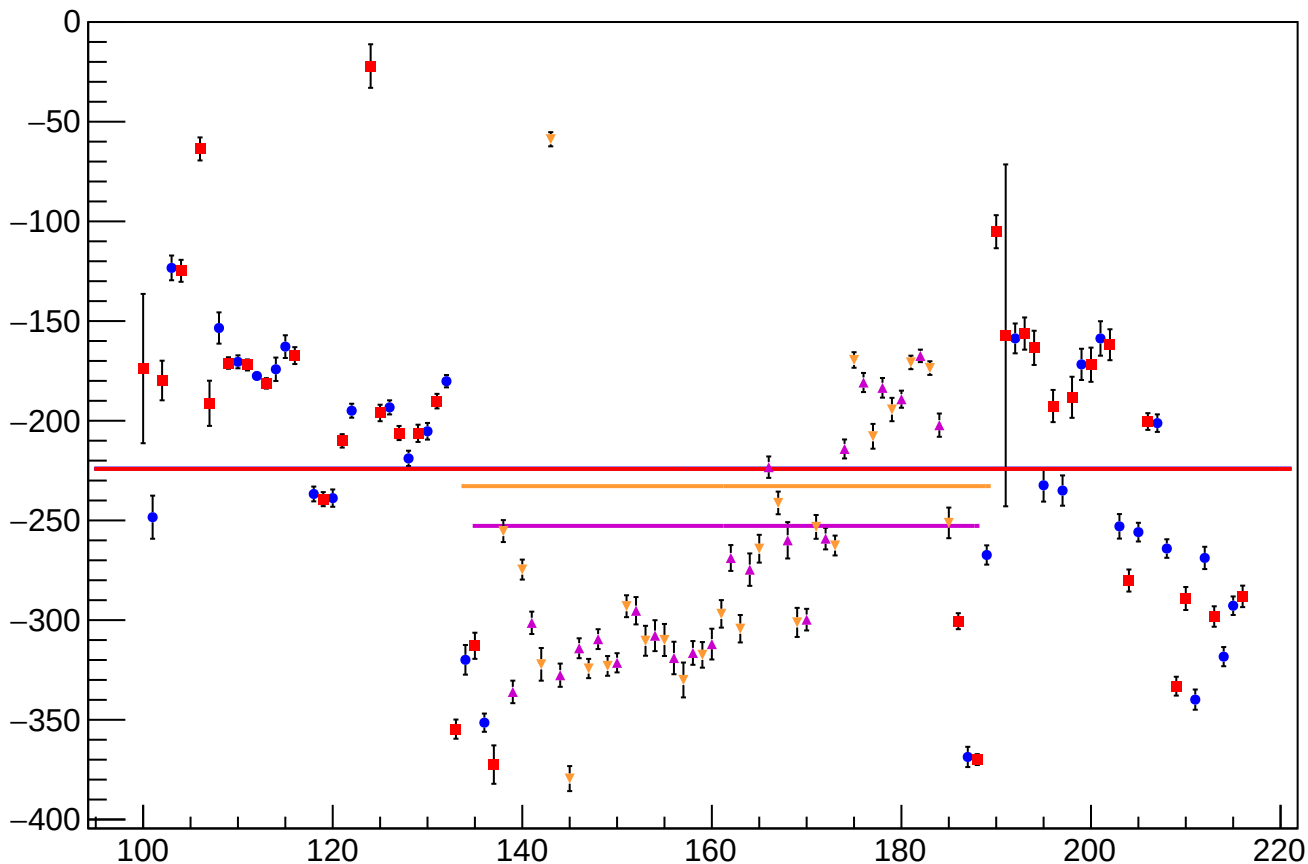
Left In: 117.225 $\pm$ 0.038  $\chi^2$ /NDF:10227.9/22

+ sign 122.355 $\pm$ 0.033  $\chi^2$ /NDF: 292716.0/55

All: 118.929 $\pm$ 0.023  $\chi^2$ /NDF: 1117075.7/113

- sign 115.610 $\pm$ 0.032  $\chi^2$ /NDF: 803080.1/57

# reg\_asym\_atr1l2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-224.002 \pm 0.832$   $\chi^2/\text{NDF}$ : 4931.7/30

Left Out:  $-232.800 \pm 1.072$   $\chi^2/\text{NDF}$ : 5764.0/24

Right Out:  $-224.159 \pm 0.794$   $\chi^2/\text{NDF}$ : 8783.9/34

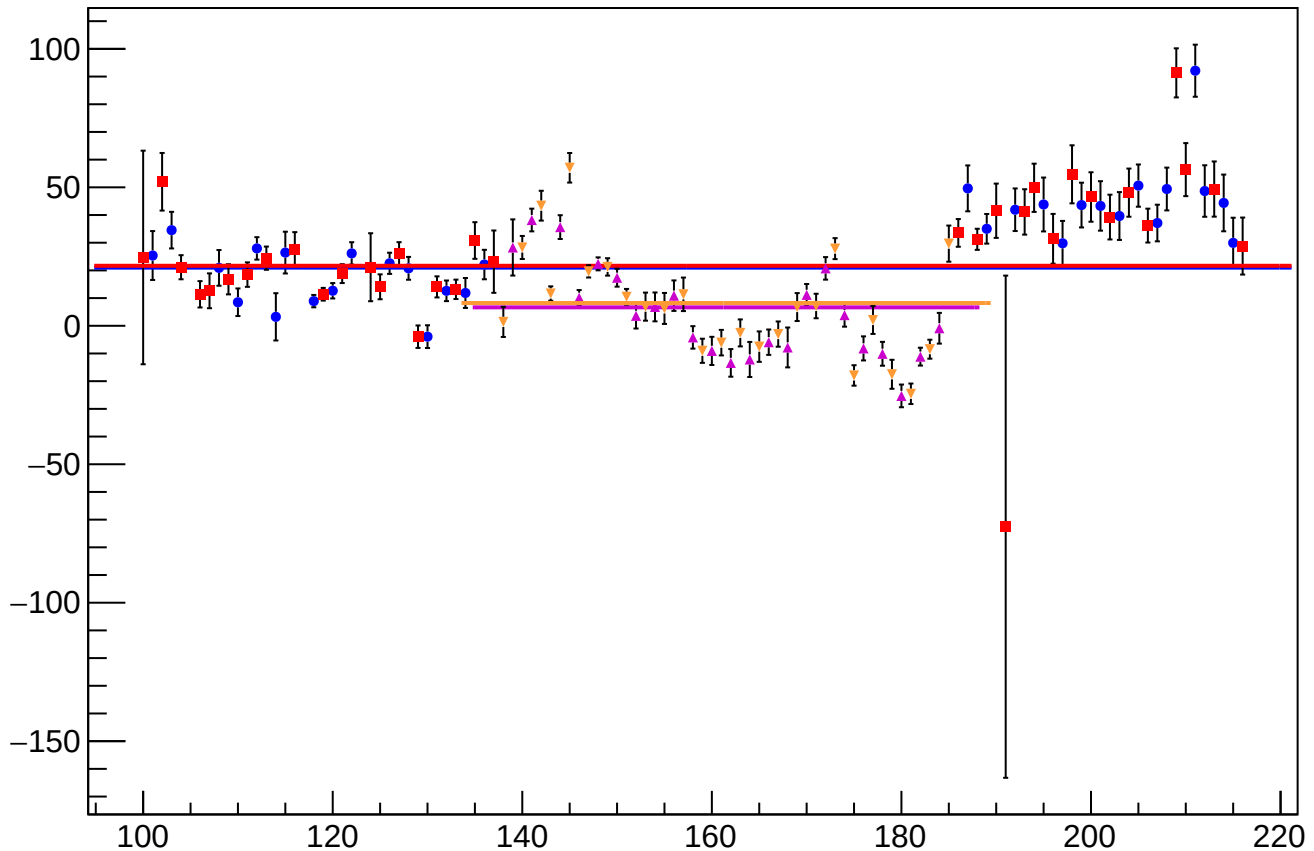
Left In:  $-252.738 \pm 1.131$   $\chi^2/\text{NDF}$ : 2913.9/22

+ sign  $-227.309 \pm 0.657$   $\chi^2/\text{NDF}$ : 10737.7/55

All:  $-230.490 \pm 0.462$   $\chi^2/\text{NDF}$ : 22909.6/113

- sign  $-233.600 \pm 0.650$   $\chi^2/\text{NDF}$ : 12125.6/57

# reg\_asym\_atr1l2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 21.013 $\pm$ 0.934  $\chi^2$ /NDF: 261.6/30

Left Out: 8.222 $\pm$ 0.803  $\chi^2$ /NDF: 457.9/24

Right Out: 21.668 $\pm$ 0.909  $\chi^2$ /NDF: 249.1/34

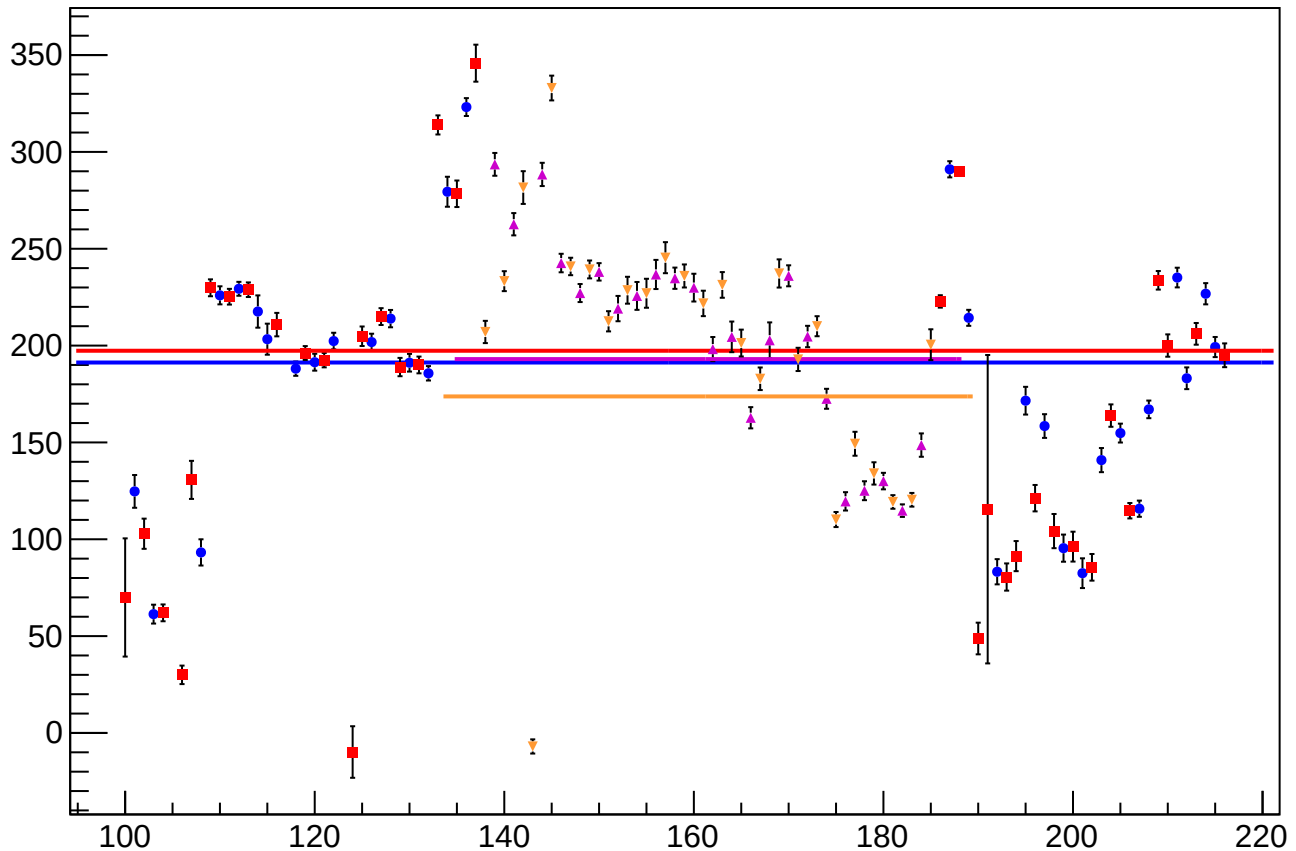
Left In: 6.657 $\pm$ 0.858  $\chi^2$ /NDF: 354.8/22

+ sign 13.657 $\pm$ 0.609  $\chi^2$ /NDF: 827.4/55

All: 13.694 $\pm$ 0.436  $\chi^2$ /NDF: 1575.4/113

- sign 13.733 $\pm$ 0.624  $\chi^2$ /NDF: 748.1/57

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 191.259 $\pm$ 0.899  $\chi^2$ /NDF: 4050.2/30

Left Out: 173.752 $\pm$ 1.069  $\chi^2$ /NDF: 5260.7/24

Right Out: 197.338 $\pm$ 0.843  $\chi^2$ /NDF: 7612.2/34

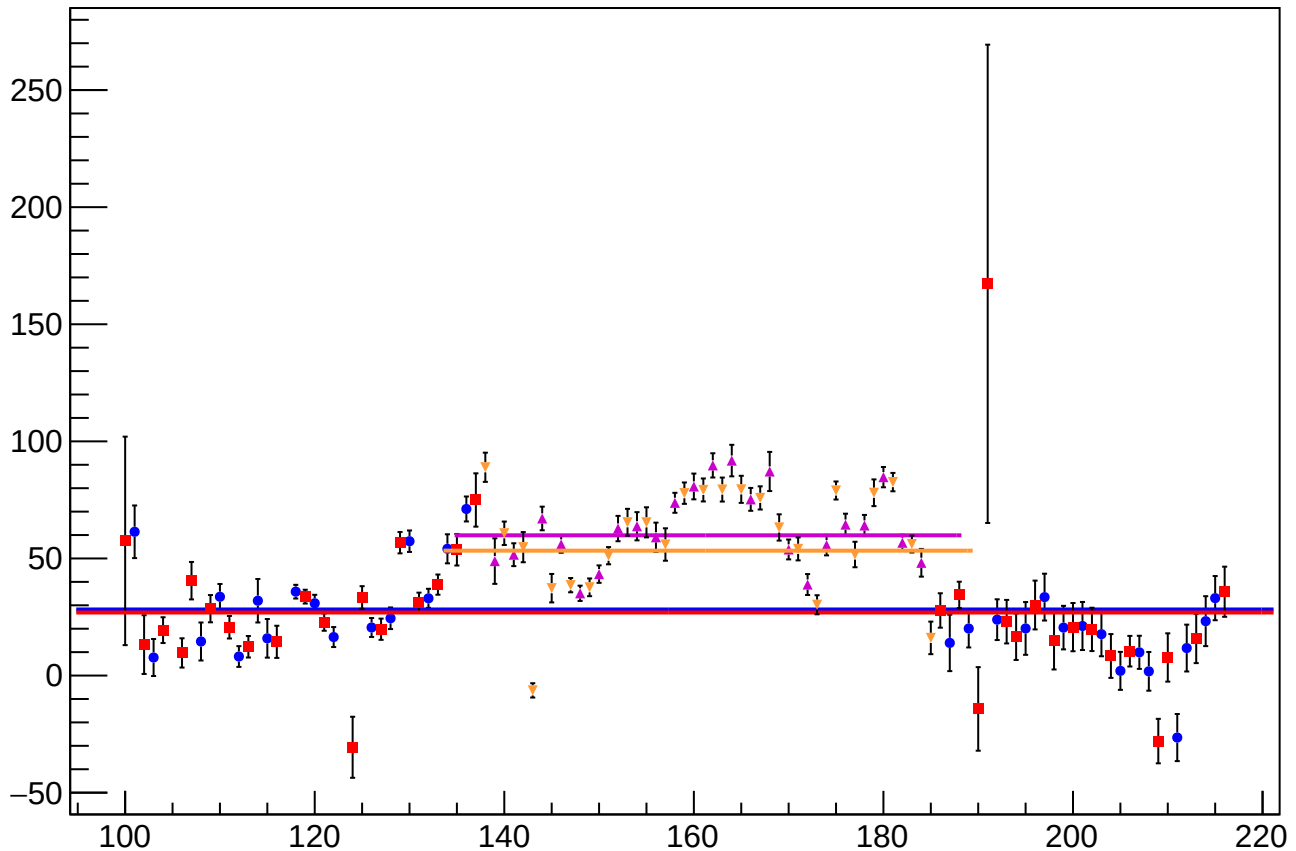
Left In: 193.026 $\pm$ 1.122  $\chi^2$ /NDF: 2512.0/22

+ sign 184.001 $\pm$ 0.688  $\chi^2$ /NDF: 9468.1/55

All: 190.015 $\pm$ 0.481  $\chi^2$ /NDF: 19751.3/113

- sign 195.783 $\pm$ 0.674  $\chi^2$ /NDF: 10133.6/57

# reg\_asym\_atr1l2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 28.214 $\pm$ 1.084  $\chi^2$ /NDF: 251.6/30

Left Out: 53.331 $\pm$ 0.922  $\chi^2$ /NDF: 778.9/24

Right Out: 26.925 $\pm$ 1.064  $\chi^2$ /NDF: 206.0/34

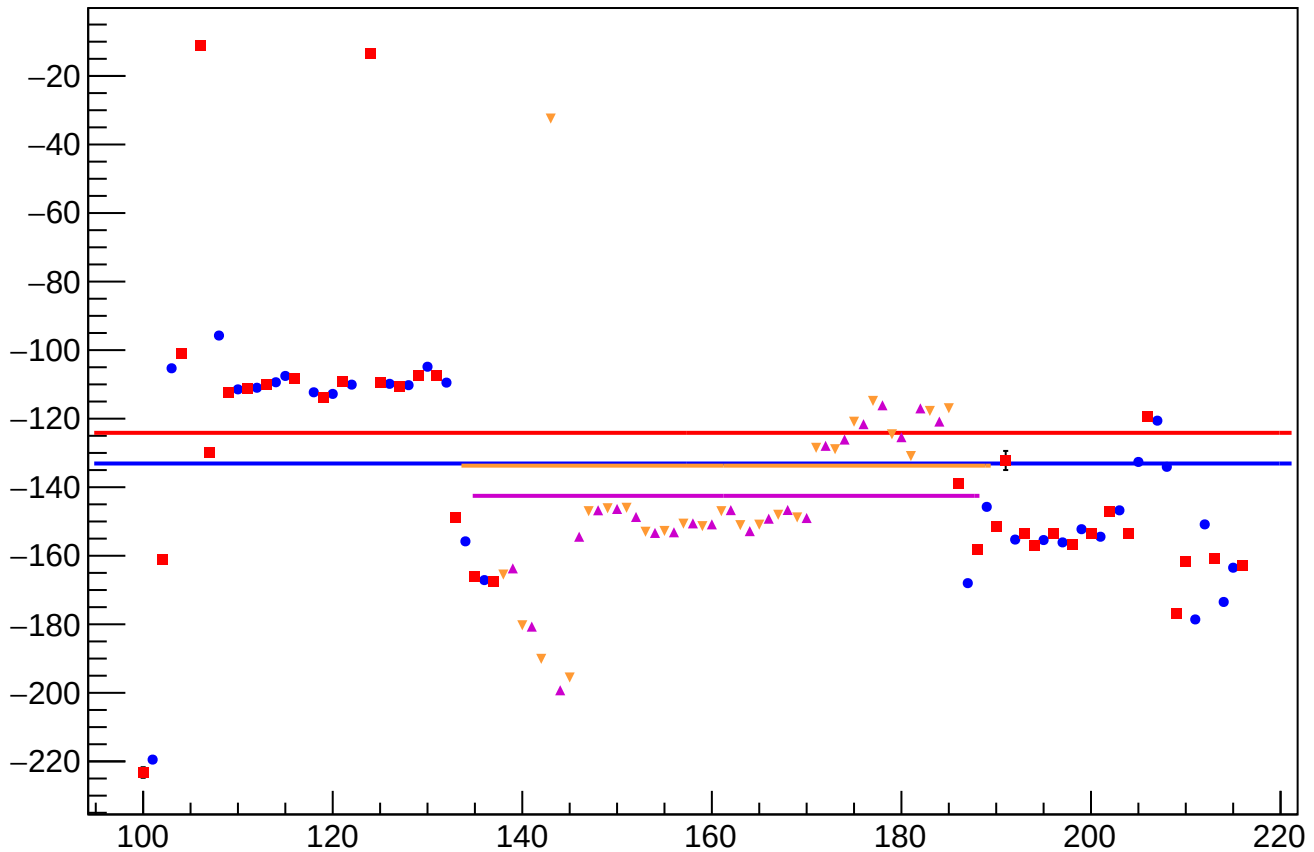
Left In: 59.887 $\pm$ 0.977  $\chi^2$ /NDF: 251.2/22

+ sign 42.792 $\pm$ 0.702  $\chi^2$ /NDF: 1342.1/55

All: 43.775 $\pm$ 0.503  $\chi^2$ /NDF: 2324.2/113

- sign 44.808 $\pm$ 0.719  $\chi^2$ /NDF: 978.1/57

reg\_asym\_atr1l2\_avg\_diff\_bpm12X\_slope vs Slug



Right In: -133.083+/-0.059  $\chi^2$ /NDF: 195249.0/30

Left Out: -133.709+/-0.043  $\chi^2$ /NDF: 675925.6/24

Right Out: -124.133+/-0.057  $\chi^2$ /NDF: 526790.0/34

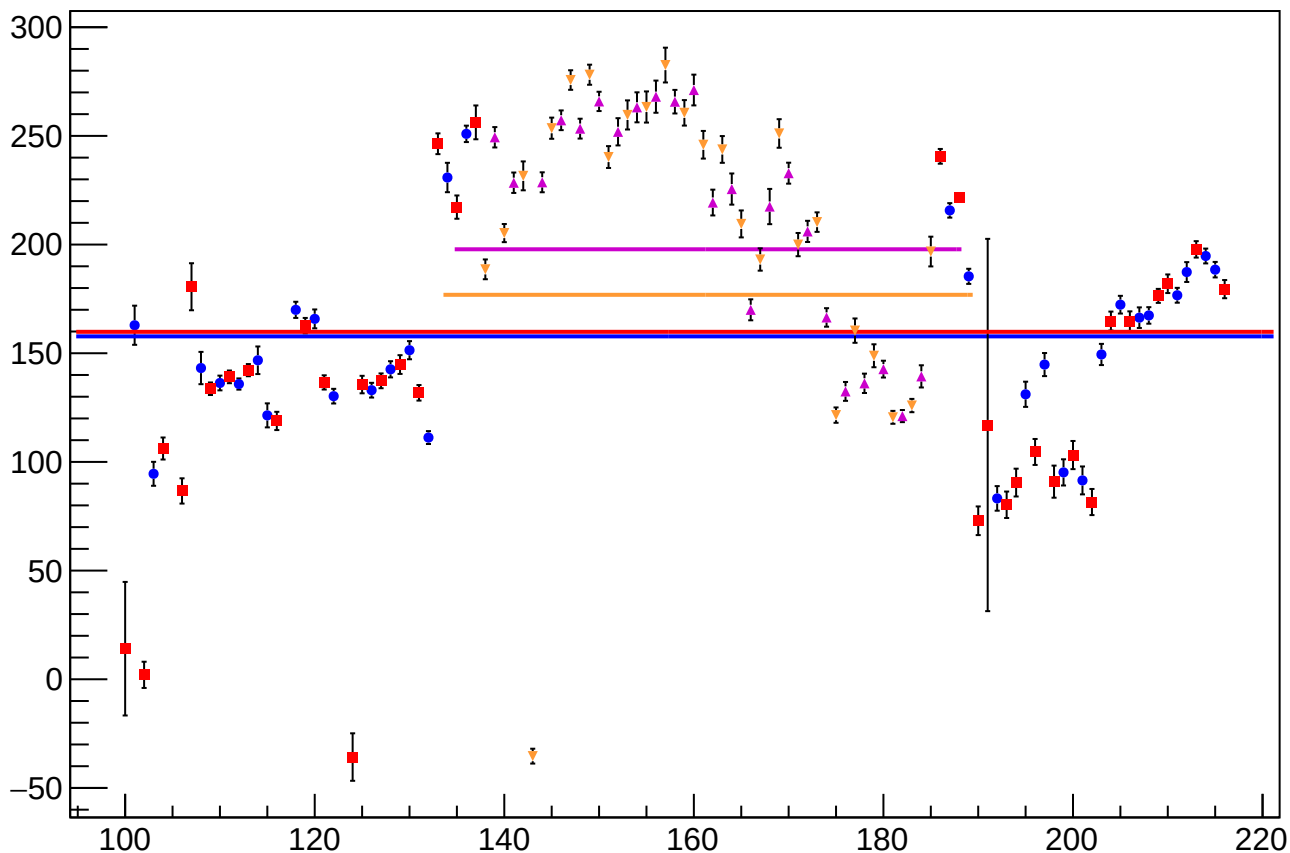
Left In: -142.518+/-0.044  $\chi^2$ /NDF: 178481.1/22

+ sign -133.495+/-0.035  $\chi^2$ /NDF: 871247.6/55

All: -134.546+/-0.025  $\chi^2$ /NDF: 1642665.1/11

- sign -135.619+/-0.035  $\chi^2$ /NDF: 769569.3/57

# reg\_asym\_atr1l2\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 157.762 $\pm$ 0.740  $\chi^2$ /NDF: 2489.2/30

Left Out: 176.884 $\pm$ 0.958  $\chi^2$ /NDF: 7424.8/24

Right Out: 159.861 $\pm$ 0.700  $\chi^2$ /NDF: 5203.2/34

Left In: 197.829 $\pm$ 1.006  $\chi^2$ /NDF: 2968.0/22

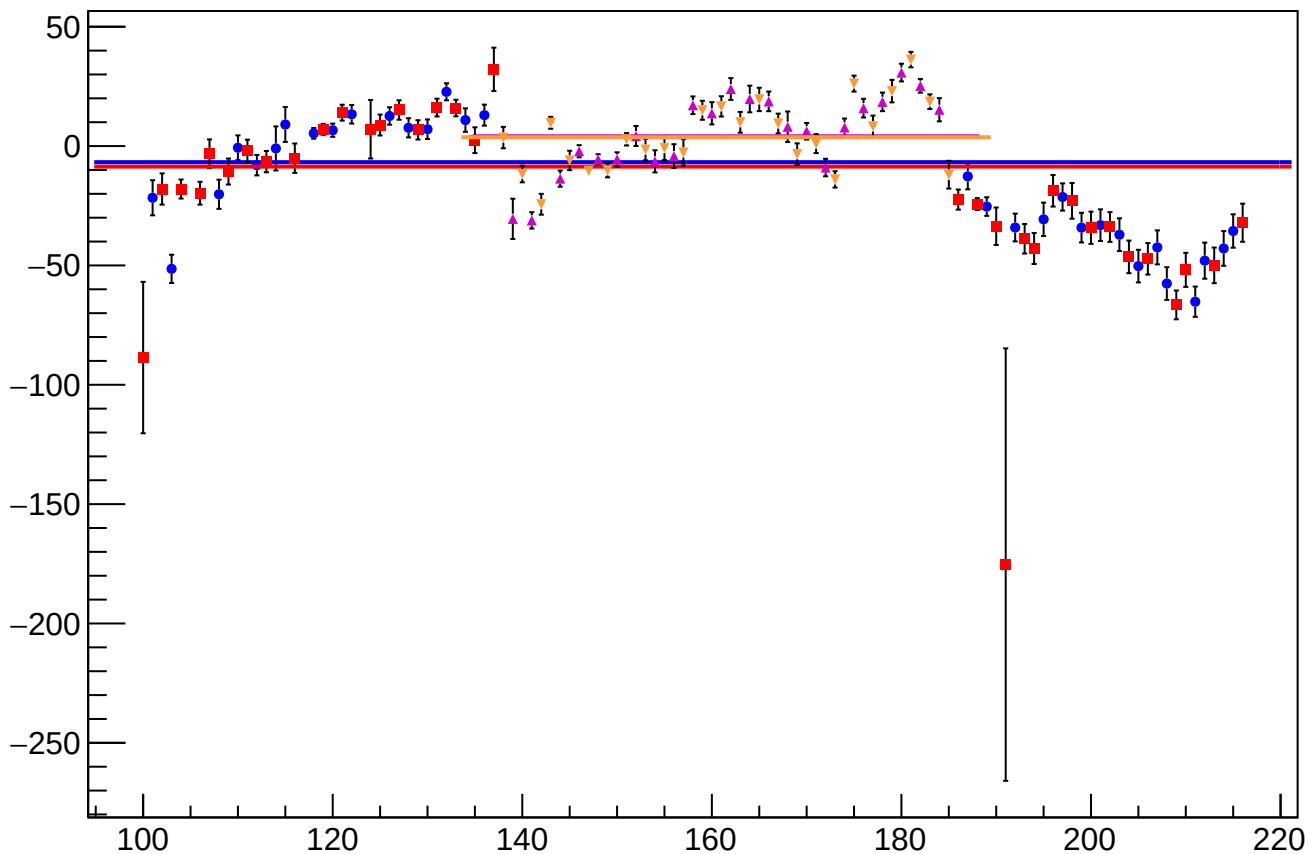
+ sign 164.906 $\pm$ 0.585  $\chi^2$ /NDF: 10163.7/55

All: 168.645 $\pm$ 0.410  $\chi^2$ /NDF: 19374.3/113

- sign 172.251 $\pm$ 0.575  $\chi^2$ /NDF: 9130.5/57



# reg\_asym\_atr1l2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-6.740 \pm 0.859$   $\chi^2/\text{NDF}$ : 701.6/30

Left Out:  $3.708 \pm 0.723$   $\chi^2/\text{NDF}$ : 400.9/24

Right Out:  $-8.594 \pm 0.824$   $\chi^2/\text{NDF}$ : 685.1/34

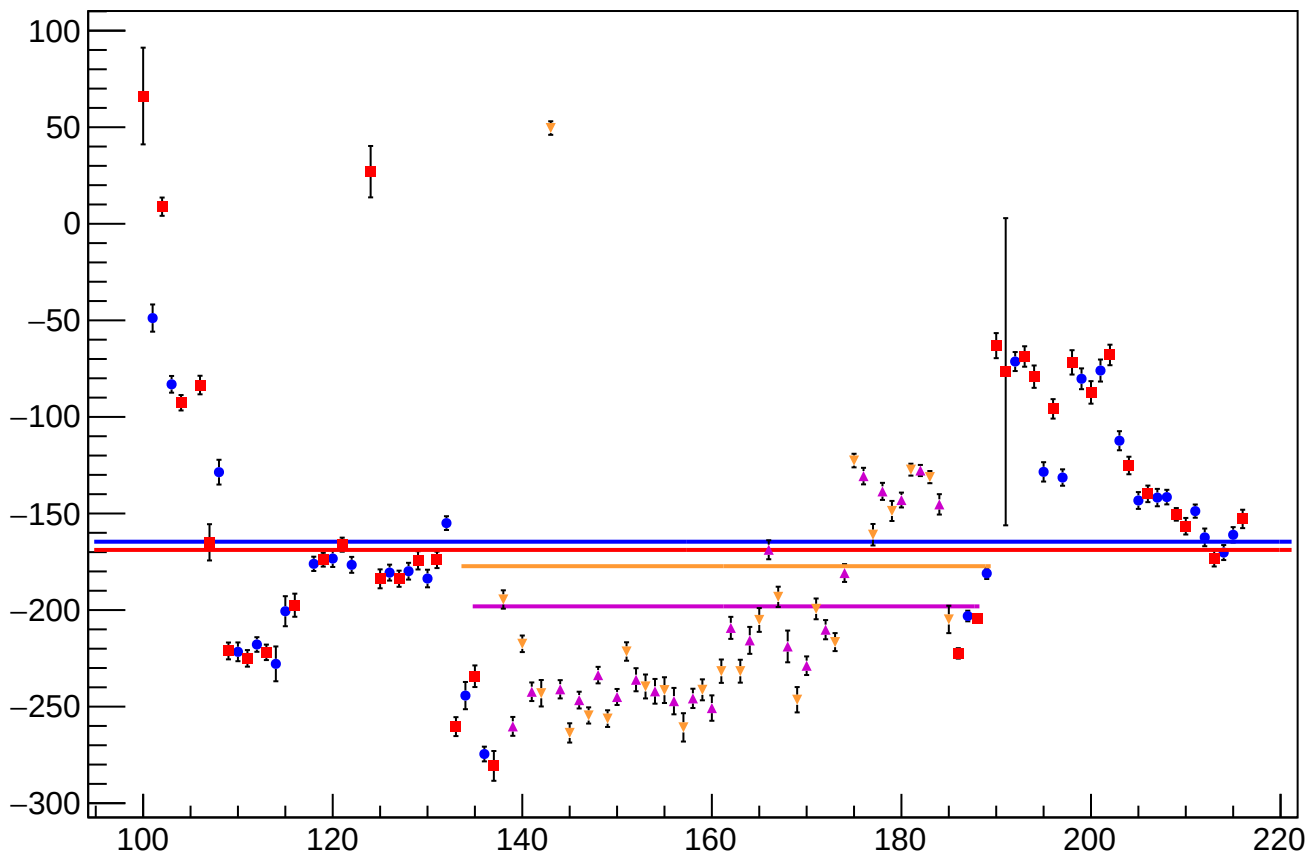
Left In:  $4.102 \pm 0.769$   $\chi^2/\text{NDF}$ : 398.9/22

+ sign  $-0.626 \pm 0.553$   $\chi^2/\text{NDF}$ : 1189.1/55

All:  $-1.206 \pm 0.394$   $\chi^2/\text{NDF}$ : 2402.2/113

- sign  $-1.806 \pm 0.562$   $\chi^2/\text{NDF}$ : 1210.9/57

# reg\_asym\_atr1l2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-164.608 \pm 0.772$   $\chi^2/\text{NDF}: 3508.6/30$

Left Out:  $-177.283 \pm 0.956$   $\chi^2/\text{NDF}: 7040.0/24$

Right Out:  $-168.863 \pm 0.706$   $\chi^2/\text{NDF}: 6705.1/34$

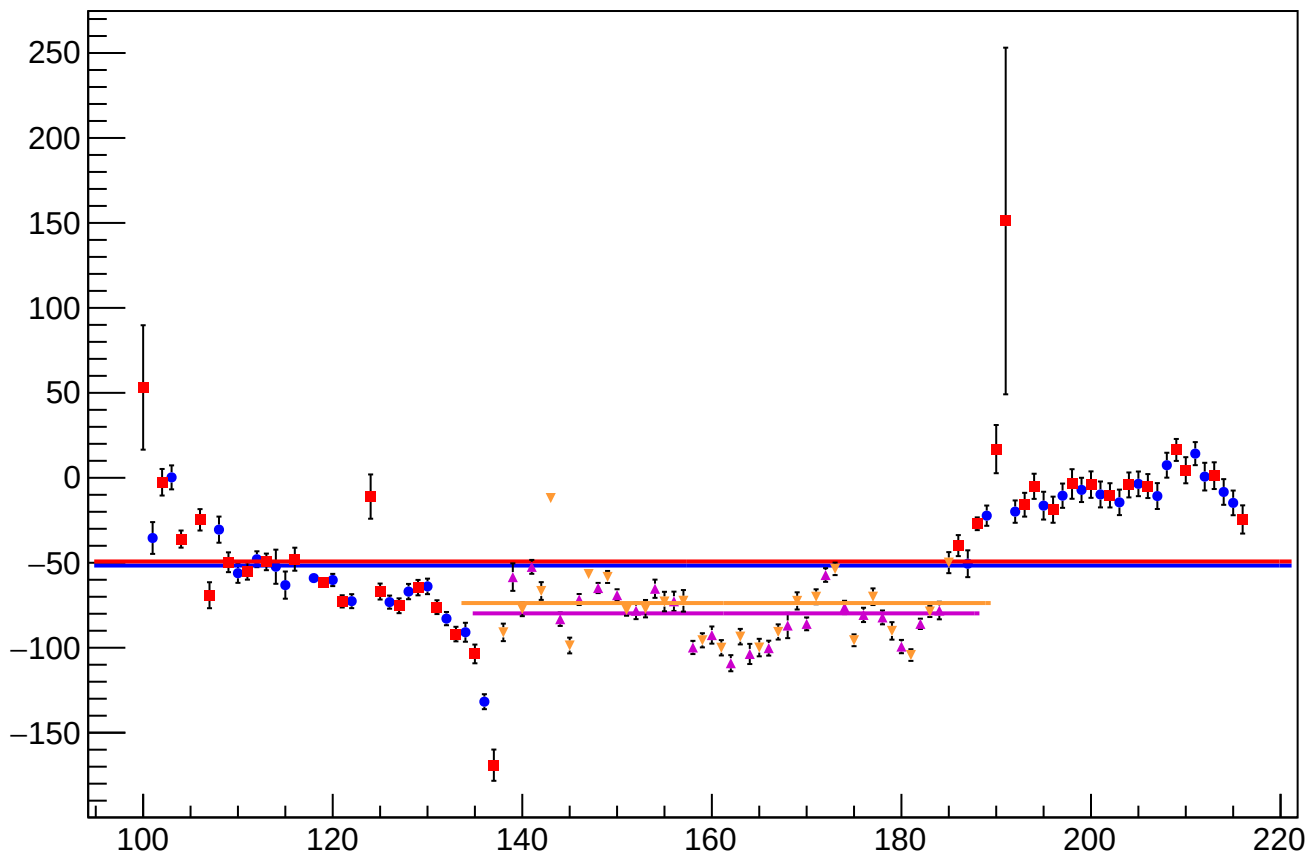
Left In:  $-198.088 \pm 1.000$   $\chi^2/\text{NDF}: 2386.2/22$

+ sign  $-169.607 \pm 0.600$   $\chi^2/\text{NDF}: 10655.0/55$

All:  $-174.277 \pm 0.416$   $\chi^2/\text{NDF}: 20432.5/113$

- sign  $-178.587 \pm 0.577$   $\chi^2/\text{NDF}: 9661.2/57$

# reg\_asym\_atr1l2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-51.629 \pm 0.999$   $\chi^2/\text{NDF}: 1124.6/30$

Left Out:  $-73.706 \pm 0.829$   $\chi^2/\text{NDF}: 839.6/24$

Right Out:  $-49.228 \pm 0.975$   $\chi^2/\text{NDF}: 1121.4/34$

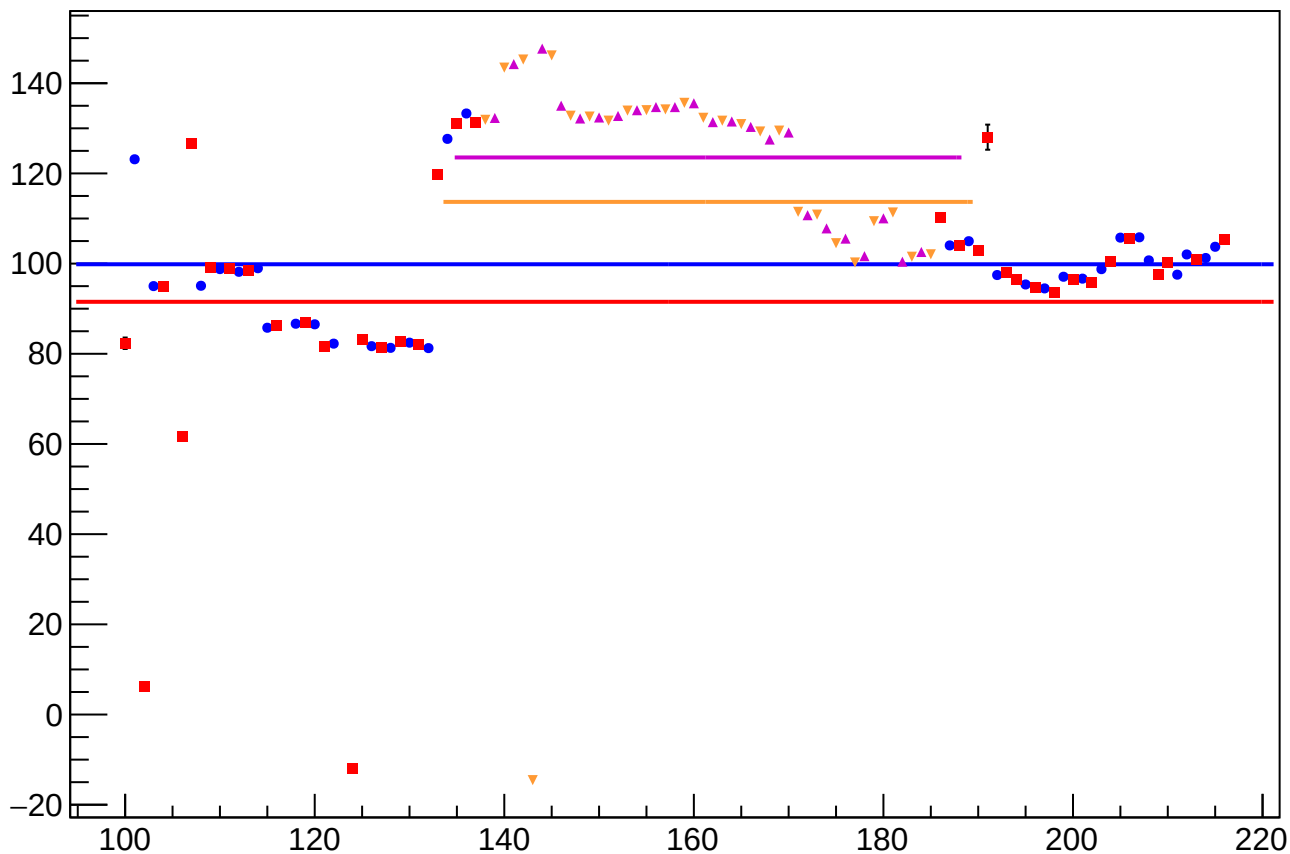
Left In:  $-79.777 \pm 0.874$   $\chi^2/\text{NDF}: 277.1/22$

+ sign  $-64.708 \pm 0.638$   $\chi^2/\text{NDF}: 2253.4/55$

All:  $-65.422 \pm 0.456$   $\chi^2/\text{NDF}: 4198.8/113$

- sign  $-66.165 \pm 0.651$   $\chi^2/\text{NDF}: 1942.9/57$

# reg\_asym\_atr1l2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 99.853 +/- 0.052  $\chi^2/\text{NDF}$ : 70251.5/30

Left Out: 113.687 +/- 0.038  $\chi^2/\text{NDF}$ : 963156.9/24

Right Out: 91.527 +/- 0.049  $\chi^2/\text{NDF}$ : 290364.3/34

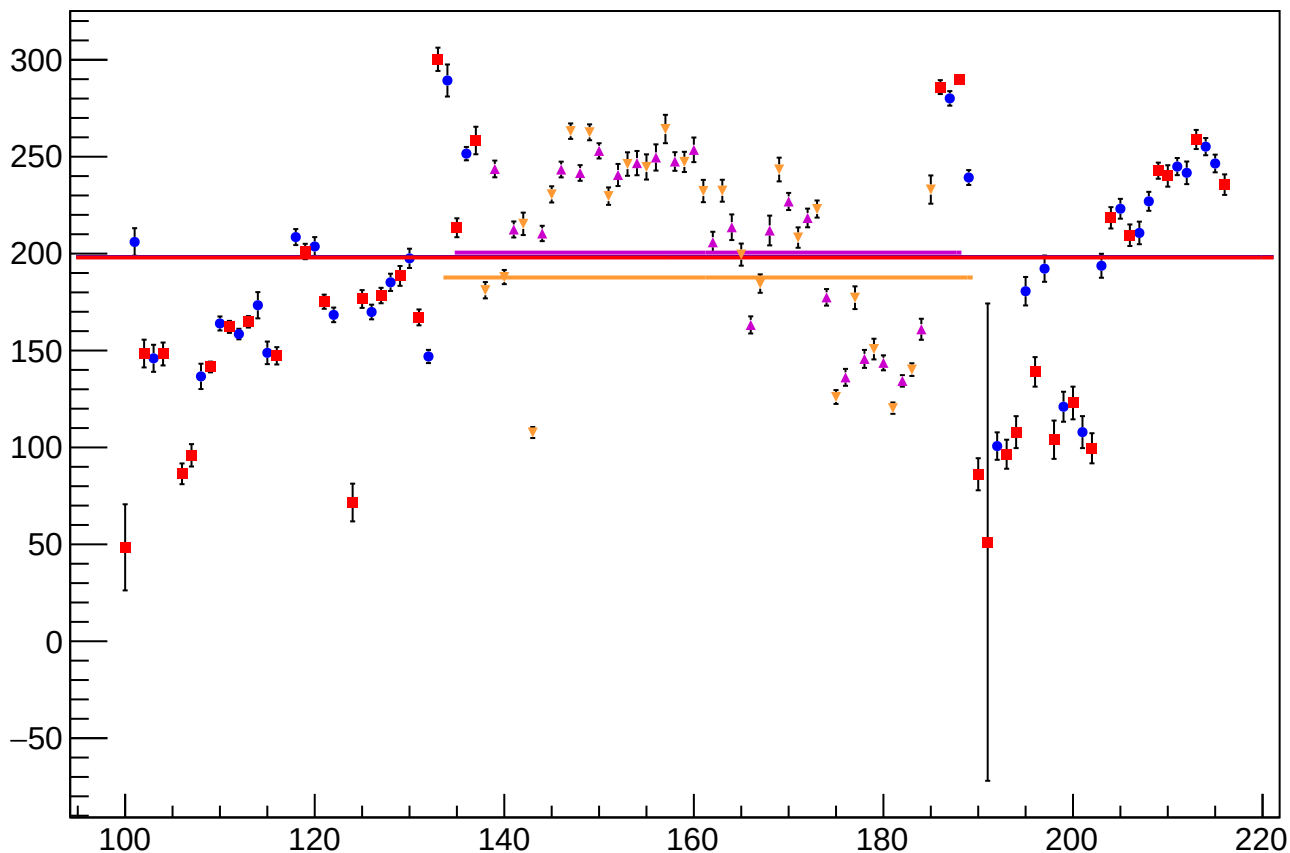
Left In: 123.538 +/- 0.040  $\chi^2/\text{NDF}$ : 134613.3/22

+ sign 108.752 +/- 0.031  $\chi^2/\text{NDF}$ : 1079806.7/55

All: 109.815 +/- 0.022  $\chi^2/\text{NDF}$ : 1765329.9/113

- sign 110.881 +/- 0.031  $\chi^2/\text{NDF}$ : 683132.5/57

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $198.254 \pm 0.849$   $\chi^2/\text{NDF}$ : 2766.5/30

Left Out:  $187.681 \pm 0.898$   $\chi^2/\text{NDF}$ : 3528.3/24

Right Out:  $198.018 \pm 0.783$   $\chi^2/\text{NDF}$ : 6422.7/34

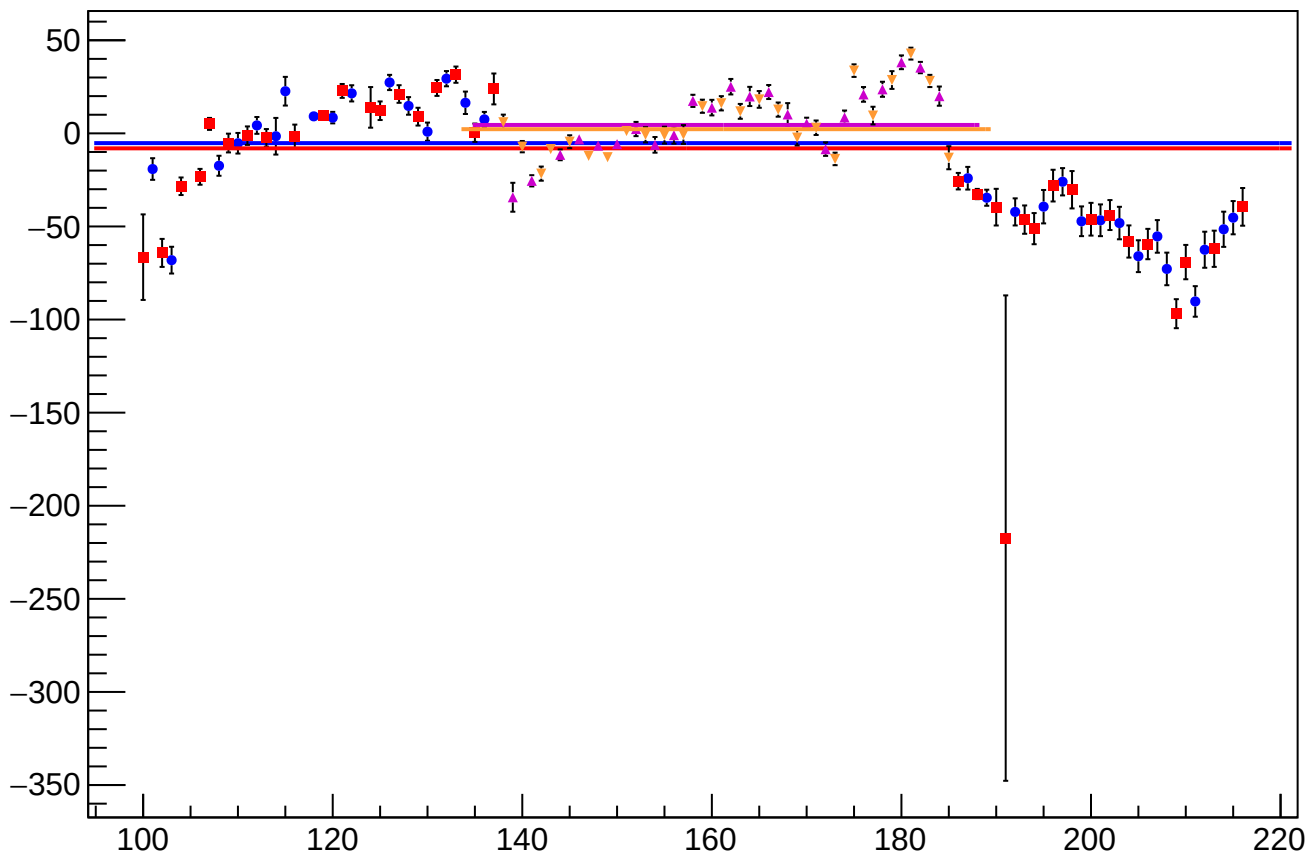
Left In:  $200.521 \pm 0.955$   $\chi^2/\text{NDF}$ : 2111.4/22

+ sign  $193.261 \pm 0.617$   $\chi^2/\text{NDF}$ : 6368.1/55

All:  $196.196 \pm 0.432$   $\chi^2/\text{NDF}$ : 14950.7/113

- sign  $199.024 \pm 0.606$   $\chi^2/\text{NDF}$ : 8538.2/57

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.245 \pm 0.967$   $\chi^2/\text{NDF}$ : 881.8/30

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-8.050 \pm 0.898$   $\chi^2/\text{NDF}$ : 955.9/34

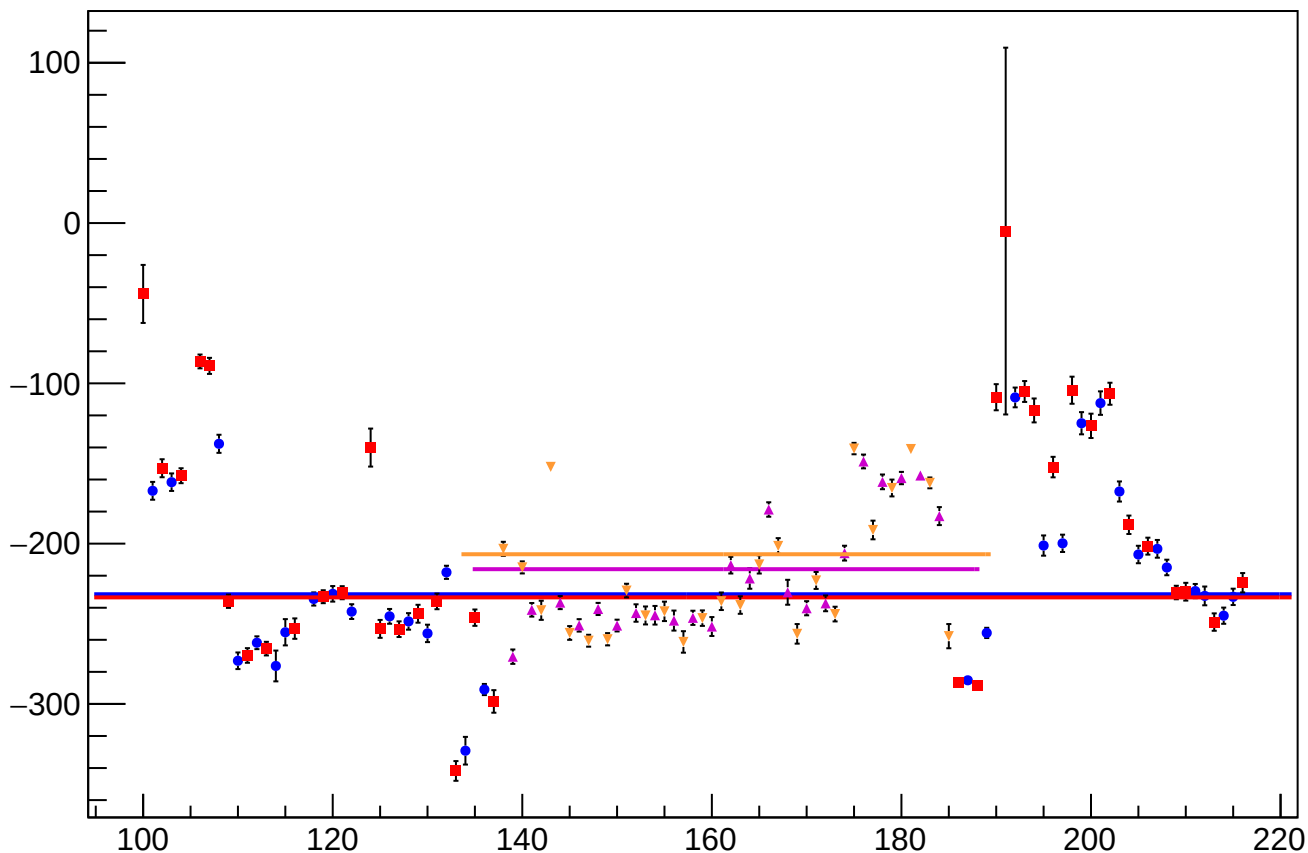
Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

+ sign  $-0.157 \pm 0.548$   $\chi^2/\text{NDF}$ : 1523.4/55

All:  $-0.253 \pm 0.391$   $\chi^2/\text{NDF}$ : 3146.4/113

- sign  $-0.354 \pm 0.559$   $\chi^2/\text{NDF}$ : 1622.9/57

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.578 \pm 0.889$   $\chi^2/\text{NDF}$ : 2690.7/30

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}$ : 2467.8/24

Right Out:  $-233.532 \pm 0.793$   $\chi^2/\text{NDF}$ : 6670.6/34

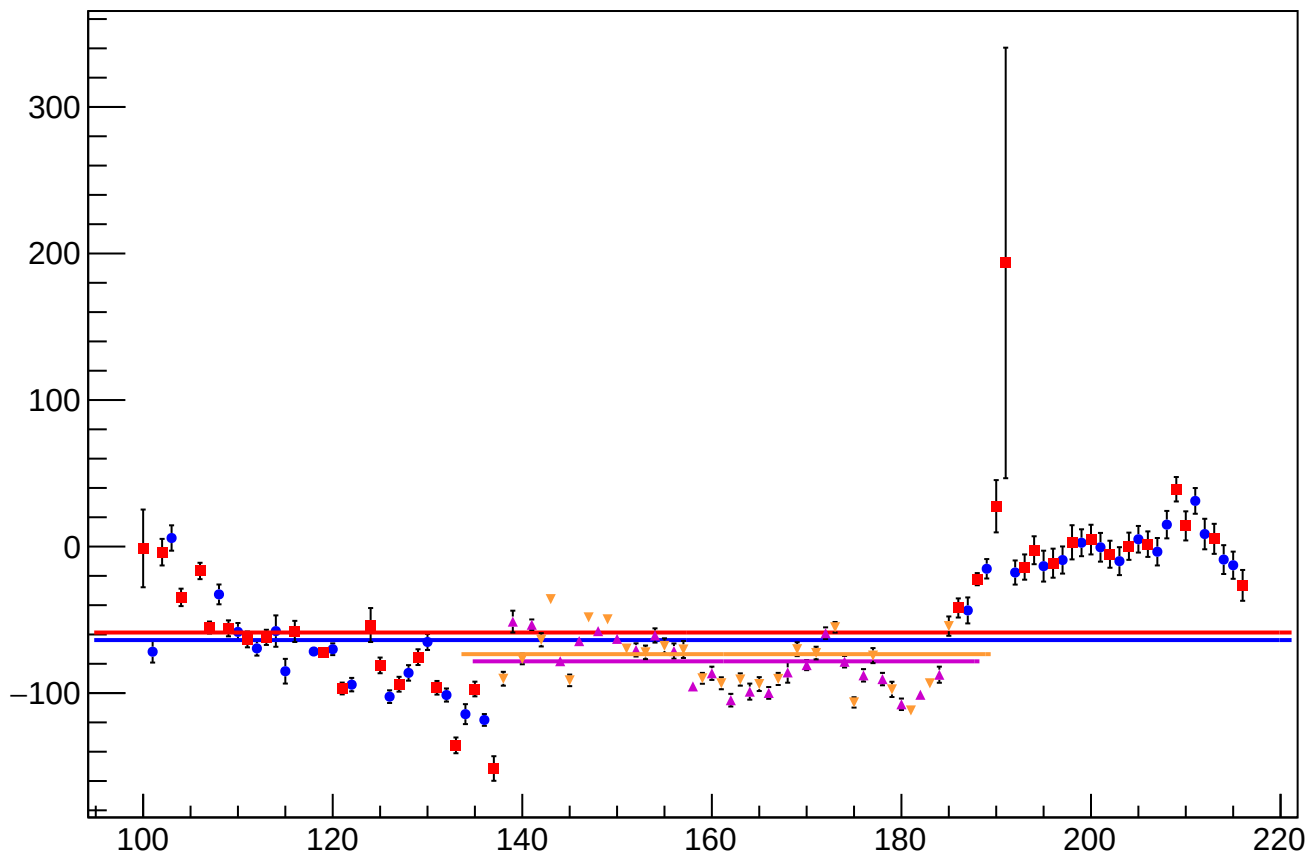
Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}$ : 1711.9/22

+ sign  $-219.175 \pm 0.631$   $\chi^2/\text{NDF}$ : 5550.0/55

All:  $-222.857 \pm 0.438$   $\chi^2/\text{NDF}$ : 14201.4/113

- sign  $-226.275 \pm 0.608$   $\chi^2/\text{NDF}$ : 8585.7/57

reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-63.820 \pm 1.127$   $\chi^2/\text{NDF}$ : 1224.9/30

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}$ : 836.6/24

Right Out:  $-58.659 \pm 1.068$   $\chi^2/\text{NDF}$ : 1372.3/34

Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}$ : 443.2/22

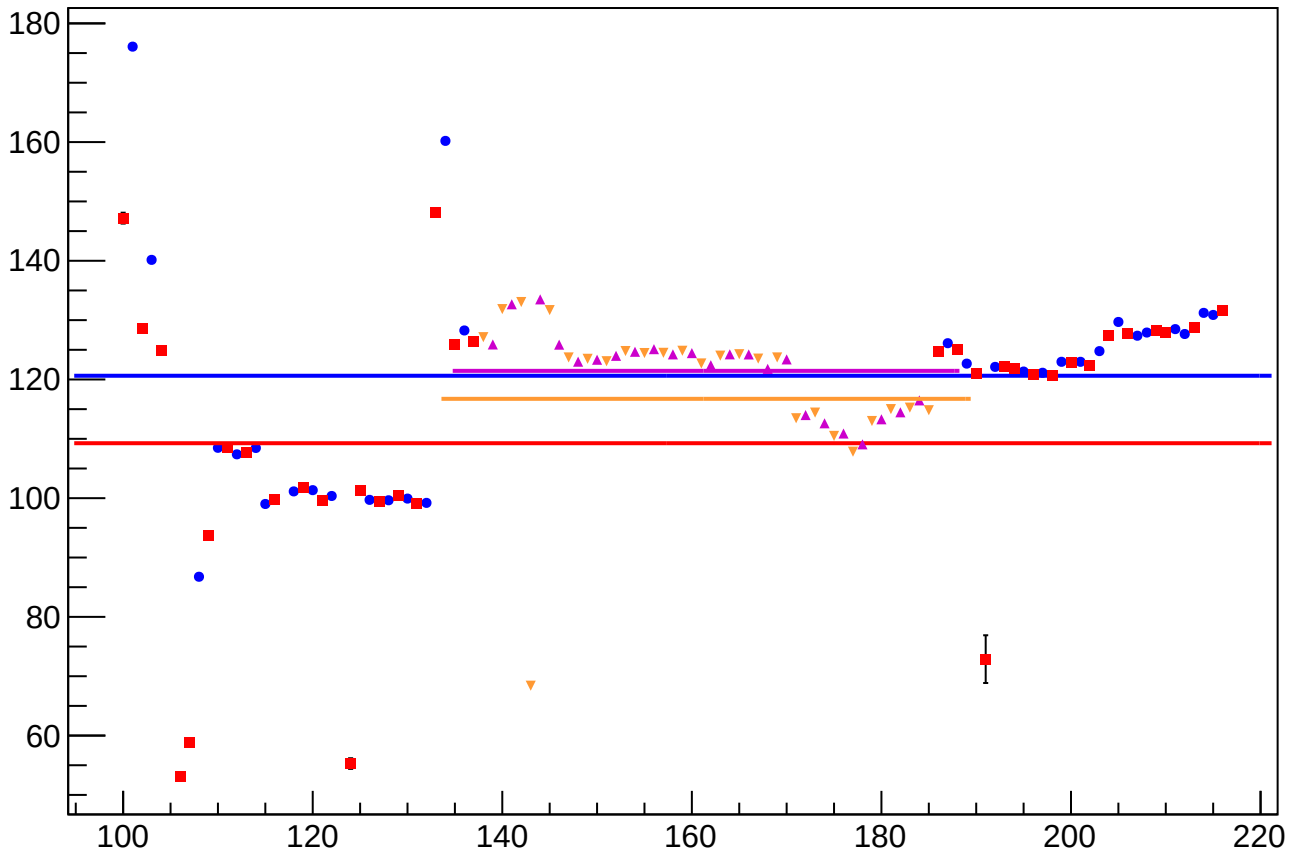
+ sign  $-70.386 \pm 0.634$   $\chi^2/\text{NDF}$ : 2111.1/55

All:  $-70.716 \pm 0.454$   $\chi^2/\text{NDF}$ : 4141.1/113

- sign  $-71.063 \pm 0.649$   $\chi^2/\text{NDF}$ : 2029.5/57



reg\_asym\_atl\_dd\_atr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 120.628 $\pm$ 0.059  $\chi^2$ /NDF: 99899.4/30

Left Out: 116.740 $\pm$ 0.036  $\chi^2$ /NDF: 203650.9/24

Right Out: 109.261 $\pm$ 0.055  $\chi^2$ /NDF: 215143.7/34

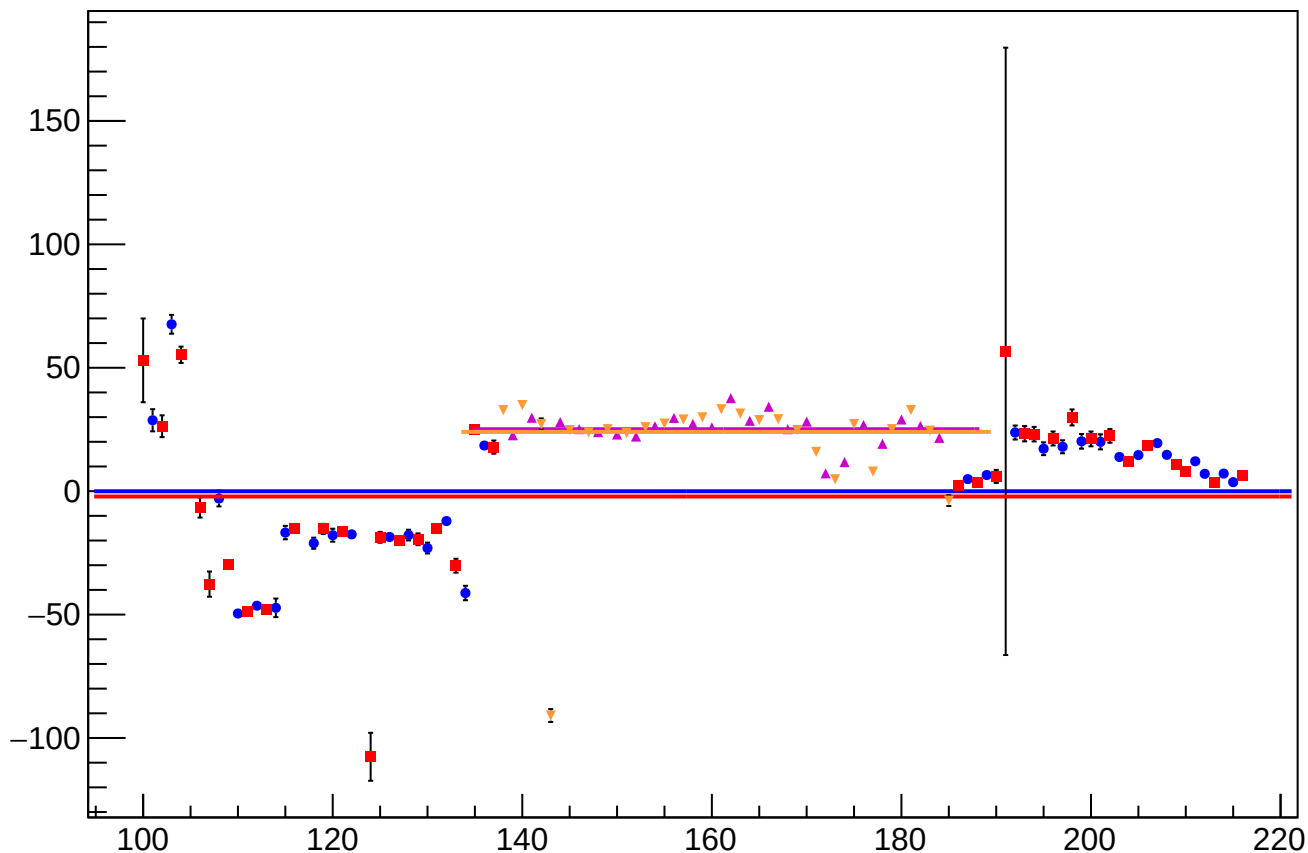
Left In: 121.455 $\pm$ 0.037  $\chi^2$ /NDF: 28796.4/22

+ sign 117.781 $\pm$ 0.031  $\chi^2$ /NDF: 306705.3/55

All: 117.683 $\pm$ 0.022  $\chi^2$ /NDF: 584647.4/113

- sign 117.585 $\pm$ 0.031  $\chi^2$ /NDF: 277921.6/57

reg\_asym\_atl\_dd\_atr\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.042 \pm 0.355$   $\chi^2/\text{NDF}$ : 3711.0/30

Left Out:  $24.025 \pm 0.282$   $\chi^2/\text{NDF}$ : 2802.2/24

Right Out:  $-2.161 \pm 0.346$   $\chi^2/\text{NDF}$ : 3915.3/34

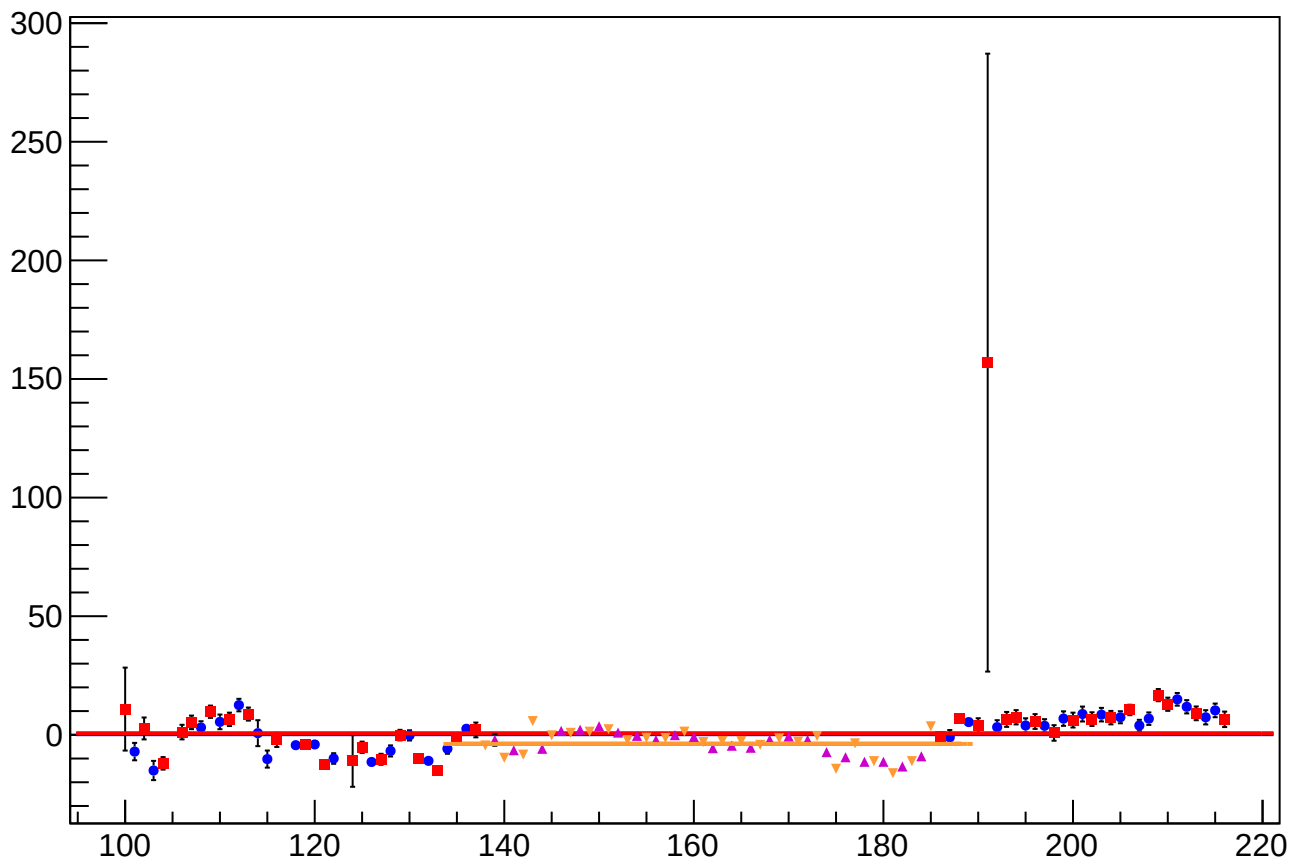
Left In:  $25.089 \pm 0.287$   $\chi^2/\text{NDF}$ : 495.3/22

+ sign  $14.724 \pm 0.221$   $\chi^2/\text{NDF}$ : 9327.7/55

All:  $14.346 \pm 0.156$   $\chi^2/\text{NDF}$ : 17417.6/113

- sign  $13.969 \pm 0.221$   $\chi^2/\text{NDF}$ : 8084.1/57

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.265 \pm 0.436$   $\chi^2/\text{NDF}$ : 286.5/30

Left Out:  $-3.845 \pm 0.218$   $\chi^2/\text{NDF}$ : 649.4/24

Right Out:  $0.668 \pm 0.424$   $\chi^2/\text{NDF}$ : 358.6/34

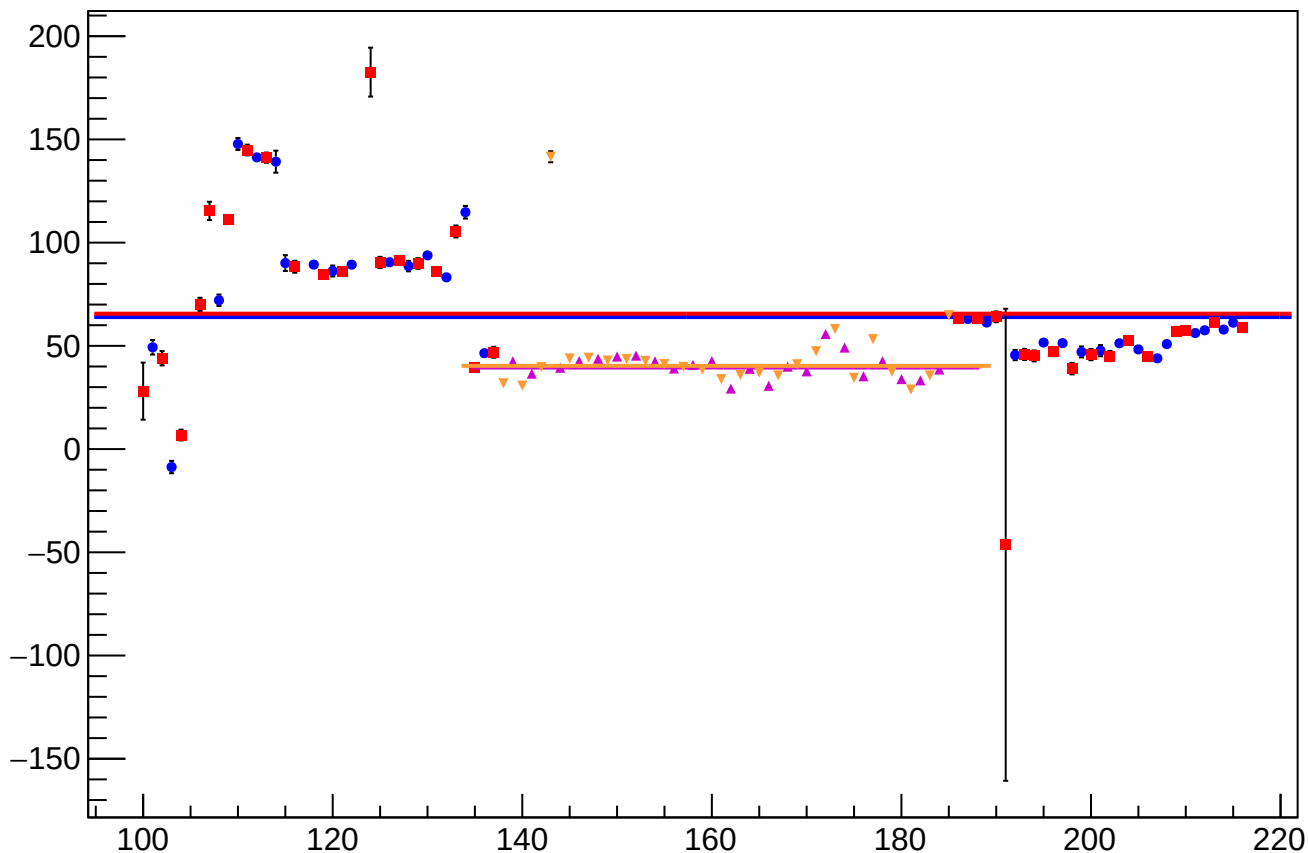
Left In:  $-3.780 \pm 0.224$   $\chi^2/\text{NDF}$ : 509.8/22

+ sign  $-3.024 \pm 0.195$   $\chi^2/\text{NDF}$ : 1007.0/55

All:  $-2.920 \pm 0.139$   $\chi^2/\text{NDF}$ : 1962.1/113

- sign  $-2.812 \pm 0.198$   $\chi^2/\text{NDF}$ : 954.5/57

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 63.936 $\pm$ 0.367  $\chi^2$ /NDF: 4678.2/30

Left Out: 40.315 $\pm$ 0.280  $\chi^2$ /NDF: 2182.8/24

Right Out: 65.579 $\pm$ 0.347  $\chi^2$ /NDF: 4846.0/34

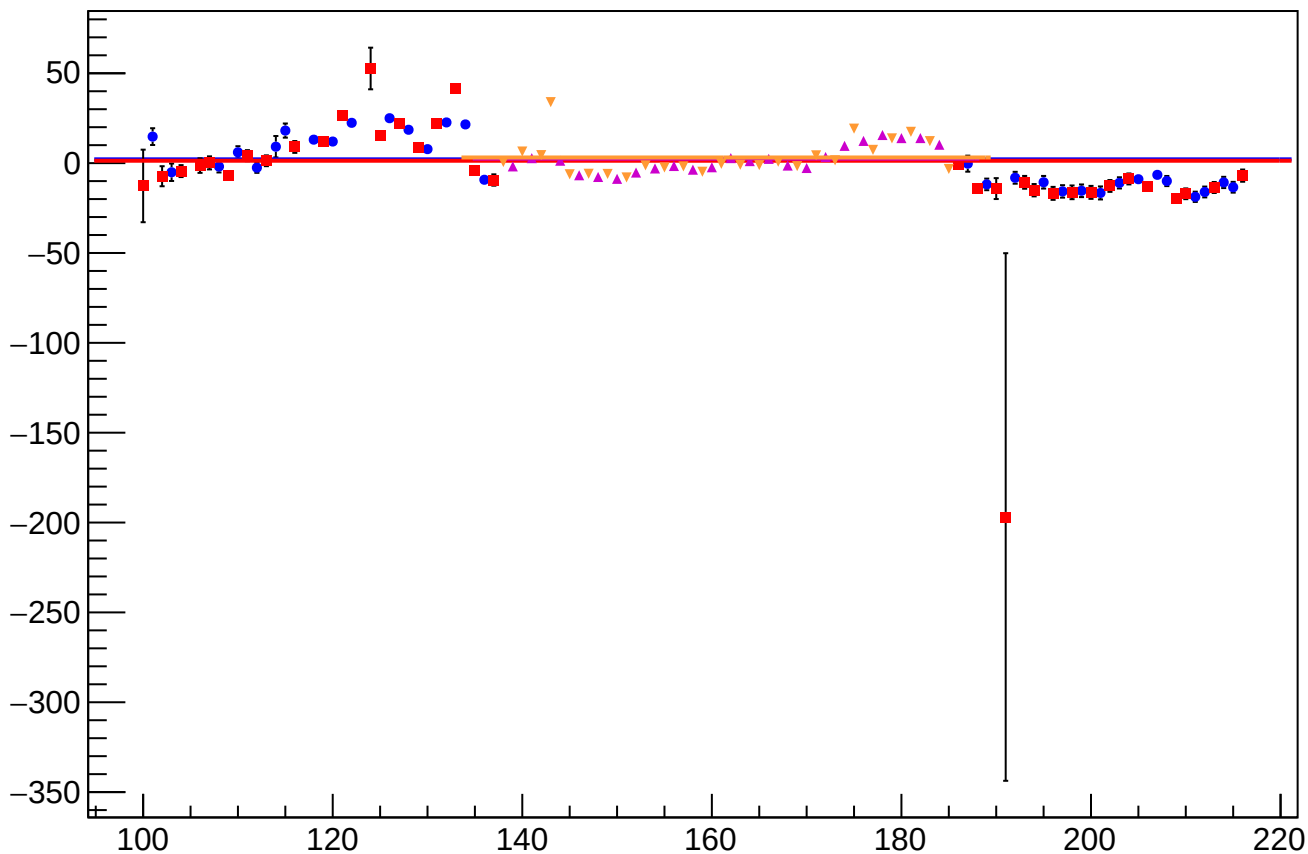
Left In: 39.504 $\pm$ 0.285  $\chi^2$ /NDF: 432.1/22

+ sign 49.023 $\pm$ 0.223  $\chi^2$ /NDF: 9481.9/55

All: 49.521 $\pm$ 0.156  $\chi^2$ /NDF: 18148.0/113

- sign 50.006 $\pm$ 0.220  $\chi^2$ /NDF: 8656.2/57

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 2.112 $\pm$ 0.496  $\chi^2$ /NDF: 850.3/30

Left Out: 3.142 $\pm$ 0.245  $\chi^2$ /NDF: 1267.0/24

Right Out: 1.335 $\pm$ 0.496  $\chi^2$ /NDF: 1032.3/34

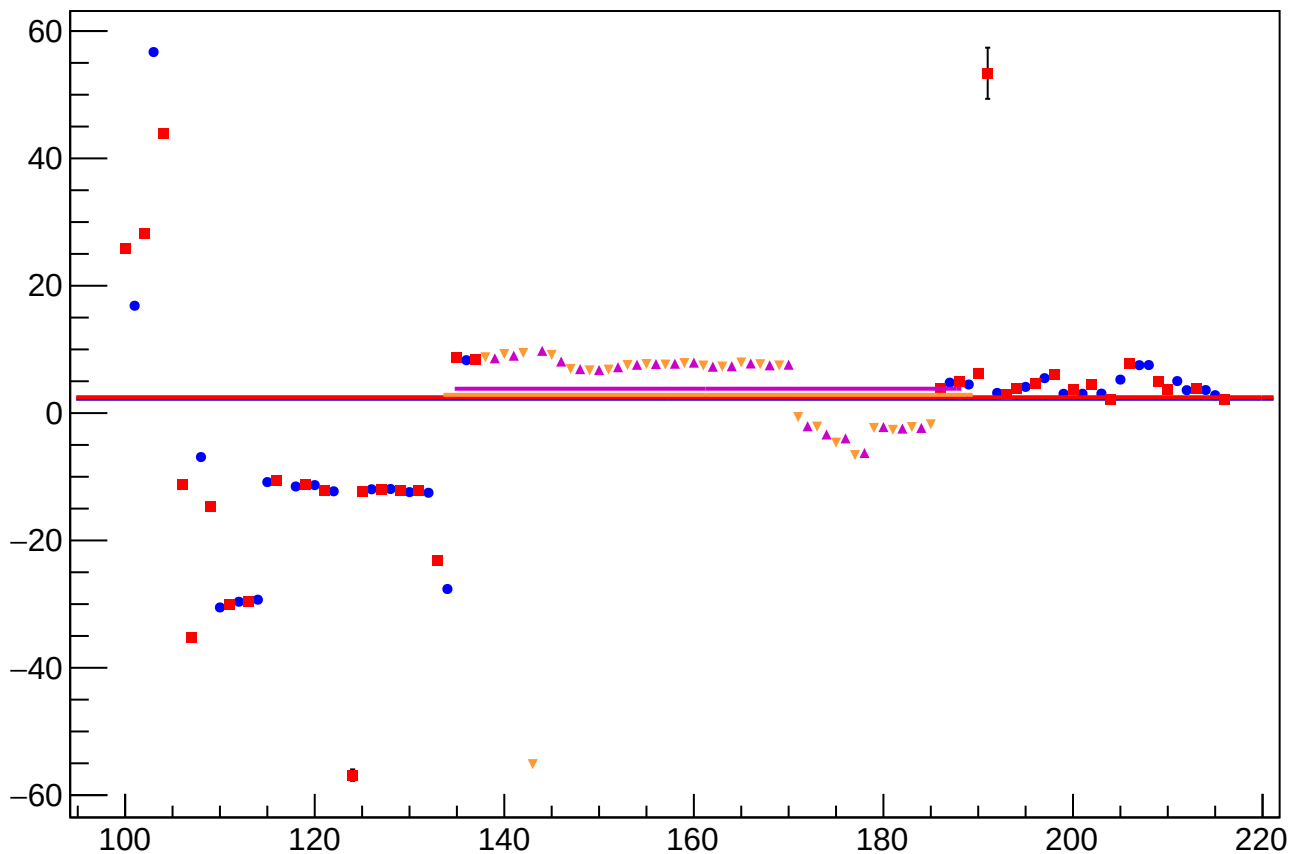
Left In: 2.519 $\pm$ 0.251  $\chi^2$ /NDF: 968.2/22

+ sign 2.939 $\pm$ 0.220  $\chi^2$ /NDF: 2120.8/55

All: 2.614 $\pm$ 0.157  $\chi^2$ /NDF: 4130.2/113

- sign 2.277 $\pm$ 0.224  $\chi^2$ /NDF: 2005.0/57

reg\_asym\_atl\_dd\_atr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $2.252 \pm 0.024$   $\chi^2/\text{NDF}$ : 383014.4/30

Left Out:  $2.870 \pm 0.011$   $\chi^2/\text{NDF}$ : 512331.0/24

Right Out:  $2.493 \pm 0.024$   $\chi^2/\text{NDF}$ : 330761.3/34

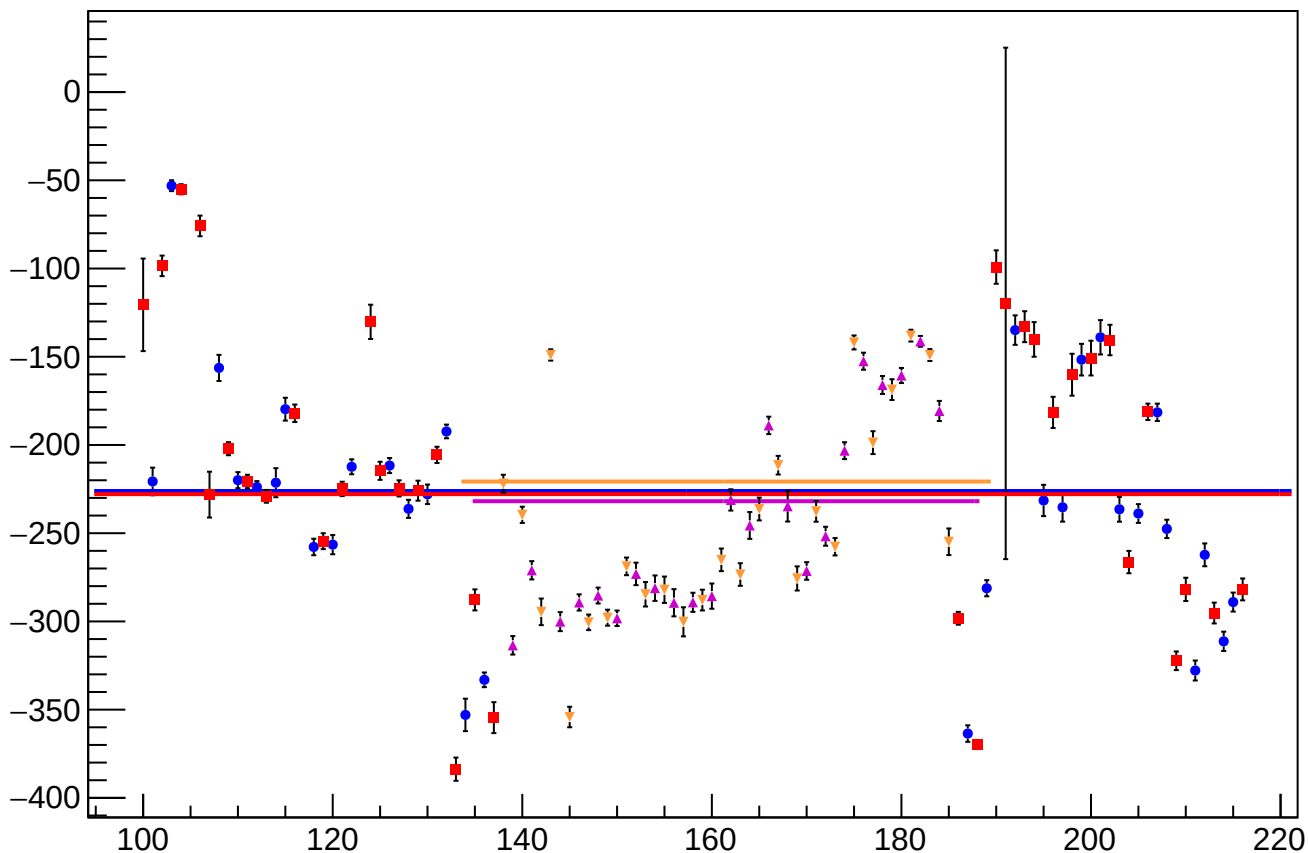
Left In:  $3.825 \pm 0.011$   $\chi^2/\text{NDF}$ : 233224.7/22

+ sign  $2.760 \pm 0.010$   $\chi^2/\text{NDF}$ : 895910.1/55

All:  $3.169 \pm 0.007$   $\chi^2/\text{NDF}$ : 1465891.2/113

- sign  $3.586 \pm 0.010$   $\chi^2/\text{NDF}$ : 566573.0/57

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -226.090 $\pm$ 0.942  $\chi^2$ /NDF: 6471.9/30

Left Out: -220.723 $\pm$ 1.018  $\chi^2$ /NDF:4052.2/24

Right Out: -227.860 $\pm$ 0.880  $\chi^2$ /NDF: 10903.3/34

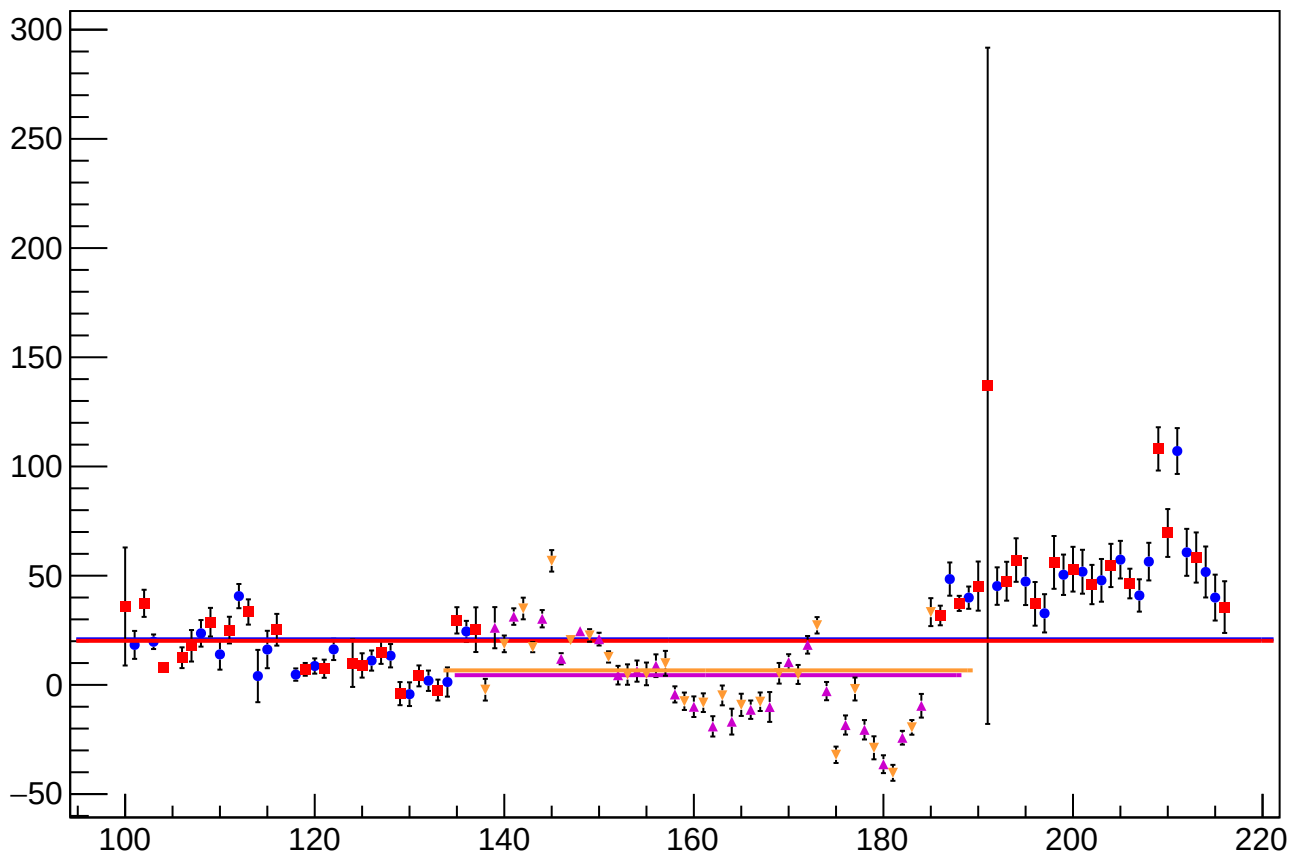
Left In: -231.871 $\pm$ 1.077  $\chi^2$ /NDF:3160.3/22

+ sign -223.616 $\pm$ 0.691  $\chi^2$ /NDF: 10539.0/55

All: -226.583 $\pm$ 0.485  $\chi^2$ /NDF: 24647.3/113

- sign -229.465 $\pm$ 0.681  $\chi^2$ /NDF: 14071.9/57

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 20.868 $\pm$ 1.058  $\chi^2$ /NDF: 320.0/30

Left Out: 6.643 $\pm$ 0.752  $\chi^2$ /NDF: 735.0/24

Right Out: 20.184 $\pm$ 0.970  $\chi^2$ /NDF: 368.6/34

Left In: 4.447 $\pm$ 0.807  $\chi^2$ /NDF: 567.1/22

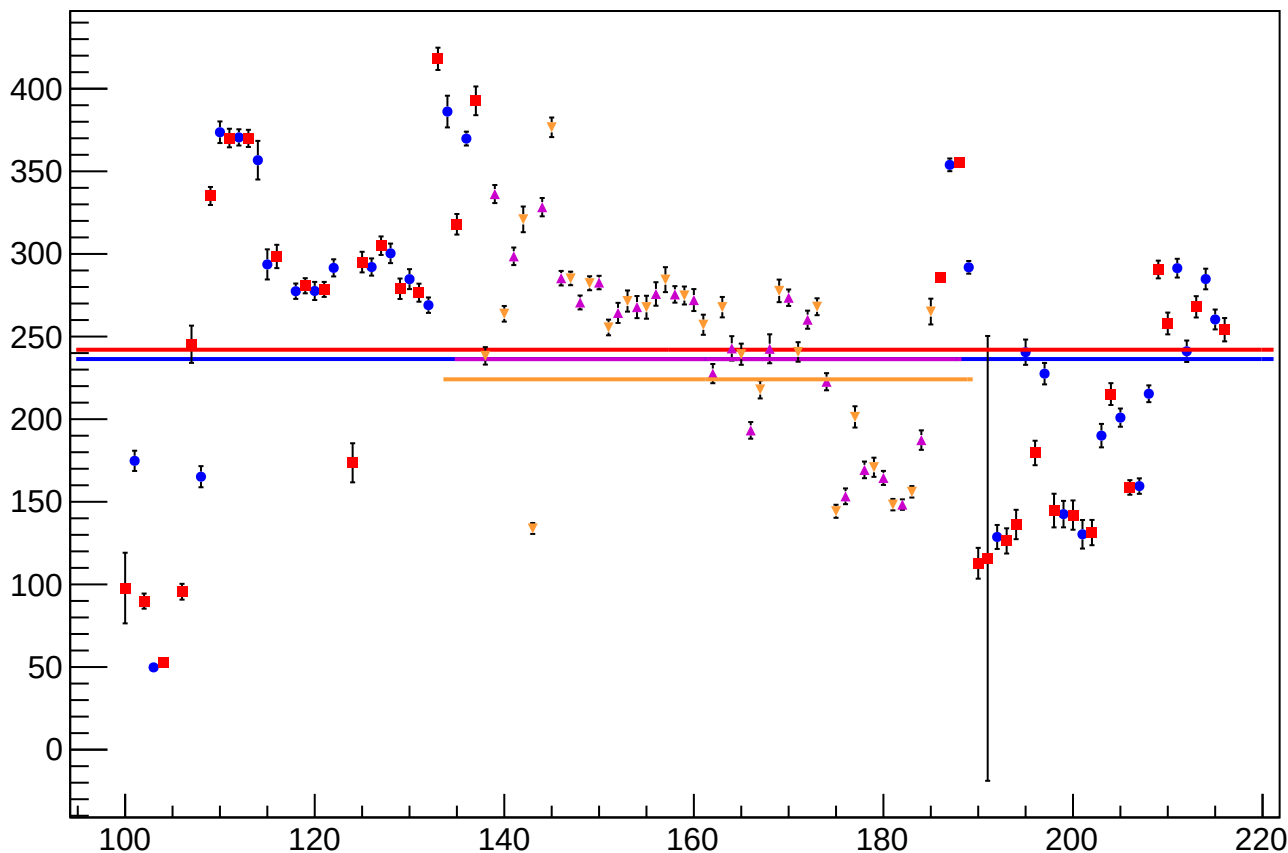
+ sign 11.422 $\pm$ 0.613  $\chi^2$ /NDF: 1175.0/55

All: 11.156 $\pm$ 0.436  $\chi^2$ /NDF: 2266.5/113

- sign 10.884 $\pm$ 0.620  $\chi^2$ /NDF: 1091.2/57



reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $236.388 \pm 0.954$   $\chi^2/\text{NDF}: 11594.2/30$

Left Out:  $224.123 \pm 1.014$   $\chi^2/\text{NDF}: 3966.6/24$

Right Out:  $242.034 \pm 0.863$   $\chi^2/\text{NDF}: 17081.4/34$

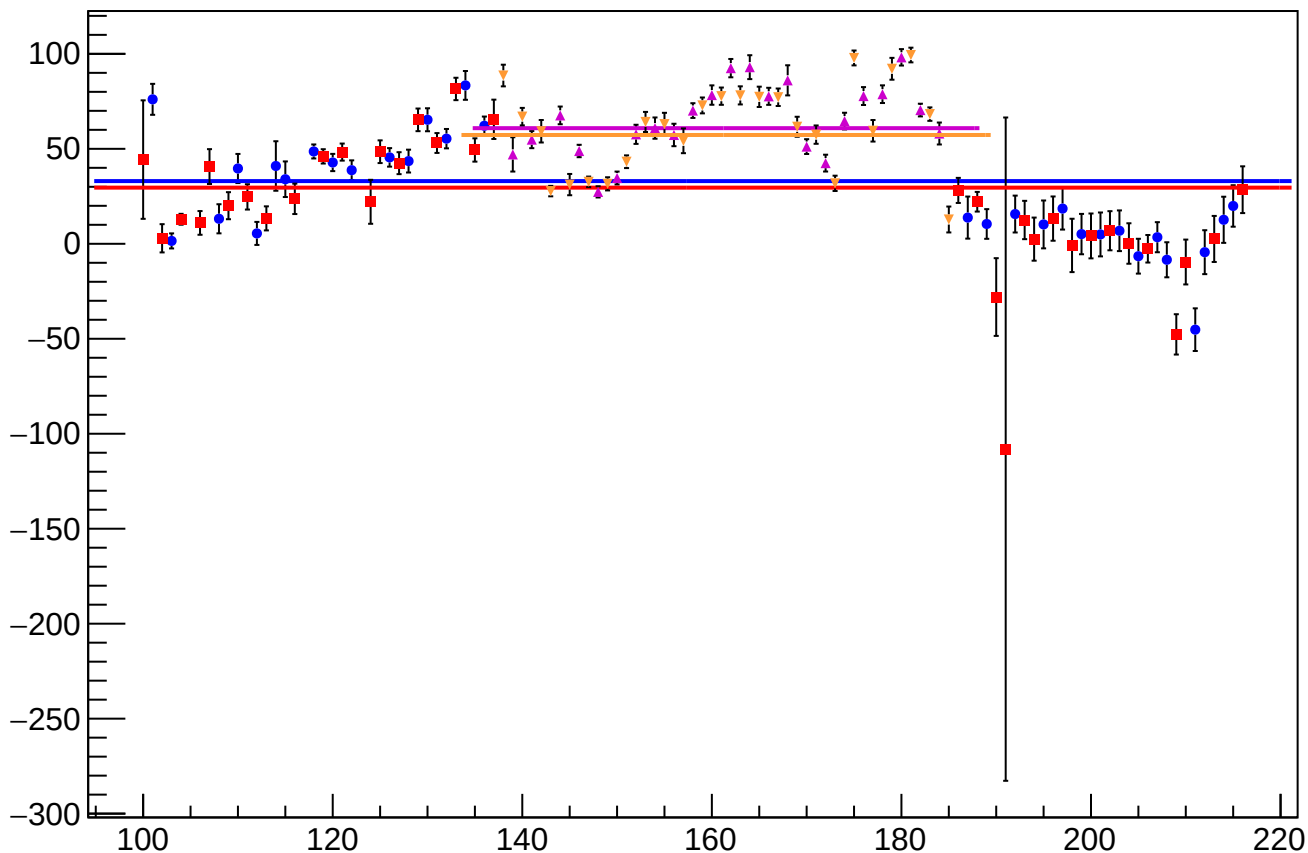
Left In:  $236.342 \pm 1.066$   $\chi^2/\text{NDF}: 2992.9/22$

+ sign  $230.630 \pm 0.695$   $\chi^2/\text{NDF}: 15638.5/55$

All:  $235.364 \pm 0.483$   $\chi^2/\text{NDF}: 35819.9/113$

- sign  $239.781 \pm 0.671$   $\chi^2/\text{NDF}: 20091.6/57$

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 33.011+/-1.234     $\chi^2/\text{NDF}$ : 435.0/30

Left Out: 57.288+/-0.868     $\chi^2/\text{NDF}$ : 767.9/24

Right Out: 29.569+/-1.160     $\chi^2/\text{NDF}$ : 406.5/34

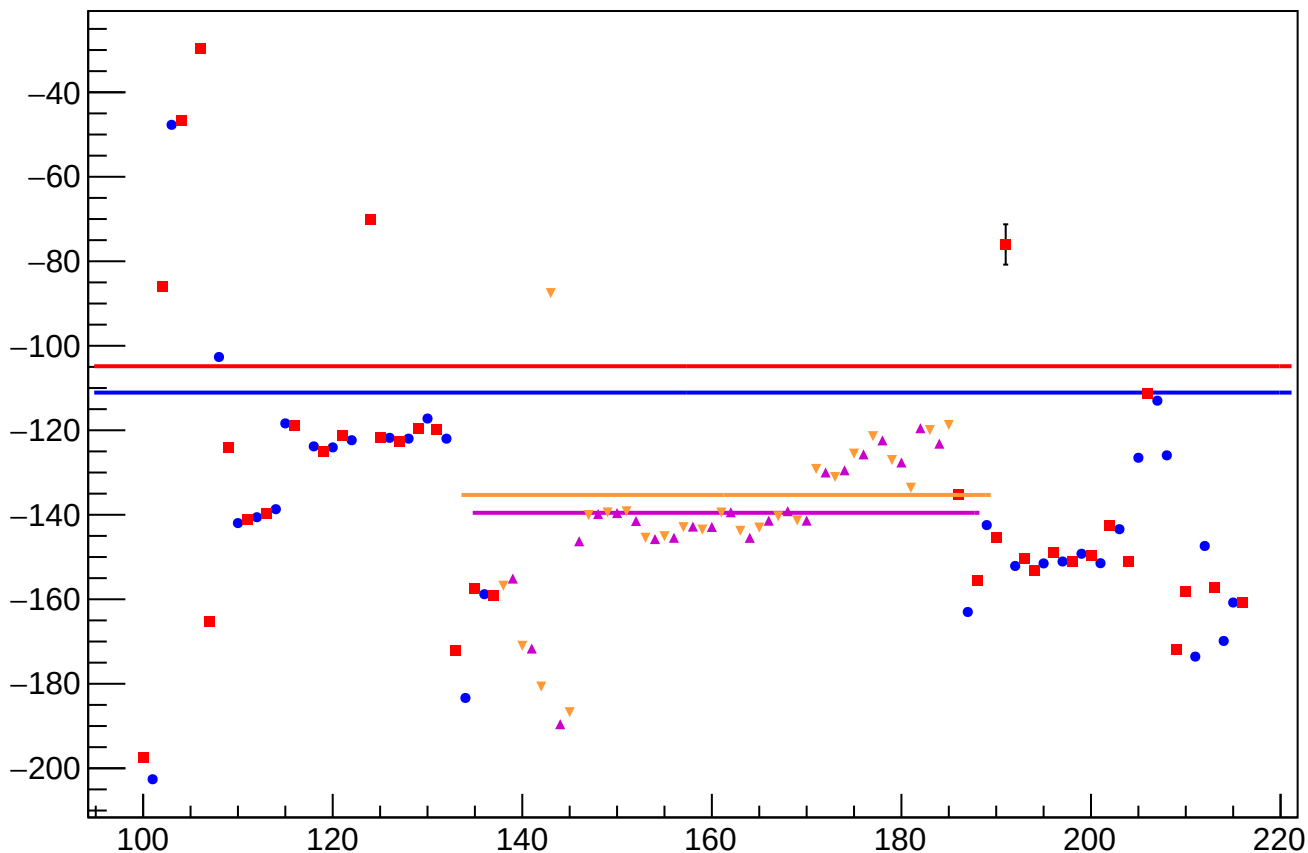
Left In: 60.877+/-0.923     $\chi^2/\text{NDF}$ : 454.7/22

+ sign 49.251+/-0.710     $\chi^2/\text{NDF}$ : 1461.9/55

All: 49.003+/-0.506     $\chi^2/\text{NDF}$ : 2769.5/113

- sign 48.746+/-0.722     $\chi^2/\text{NDF}$ : 1307.4/57

reg\_asym\_atl\_avg\_atr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-111.078 \pm 0.057$   $\chi^2/\text{NDF}: 700497.1/30$

Left Out:  $-135.305 \pm 0.041$   $\chi^2/\text{NDF}: 262874.5/24$

Right Out:  $-104.840 \pm 0.055$   $\chi^2/\text{NDF}: 763335.8/34$

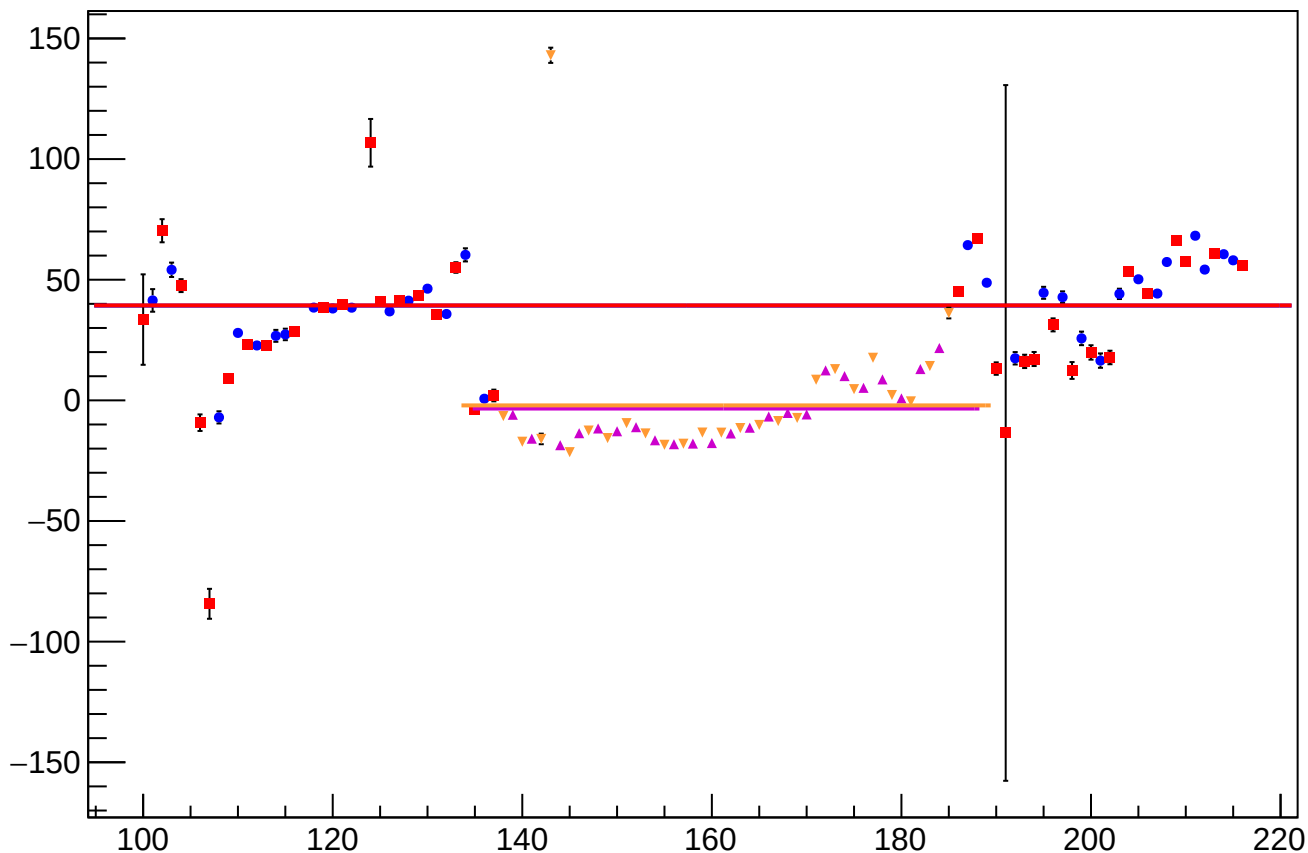
Left In:  $-139.533 \pm 0.042$   $\chi^2/\text{NDF}: 114482.7/22$

+ sign  $-127.188 \pm 0.033$   $\chi^2/\text{NDF}: 1082817.9/55$

All:  $-127.002 \pm 0.024$   $\chi^2/\text{NDF}: 2209609.7/11$

- sign  $-126.811 \pm 0.034$   $\chi^2/\text{NDF}: 1126727.6/57$

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $39.269 \pm 0.316$   $\chi^2/\text{NDF}$ : 3311.5/30

Left Out:  $-2.091 \pm 0.267$   $\chi^2/\text{NDF}$ : 4201.3/24

Right Out:  $39.355 \pm 0.290$   $\chi^2/\text{NDF}$ : 5396.9/34

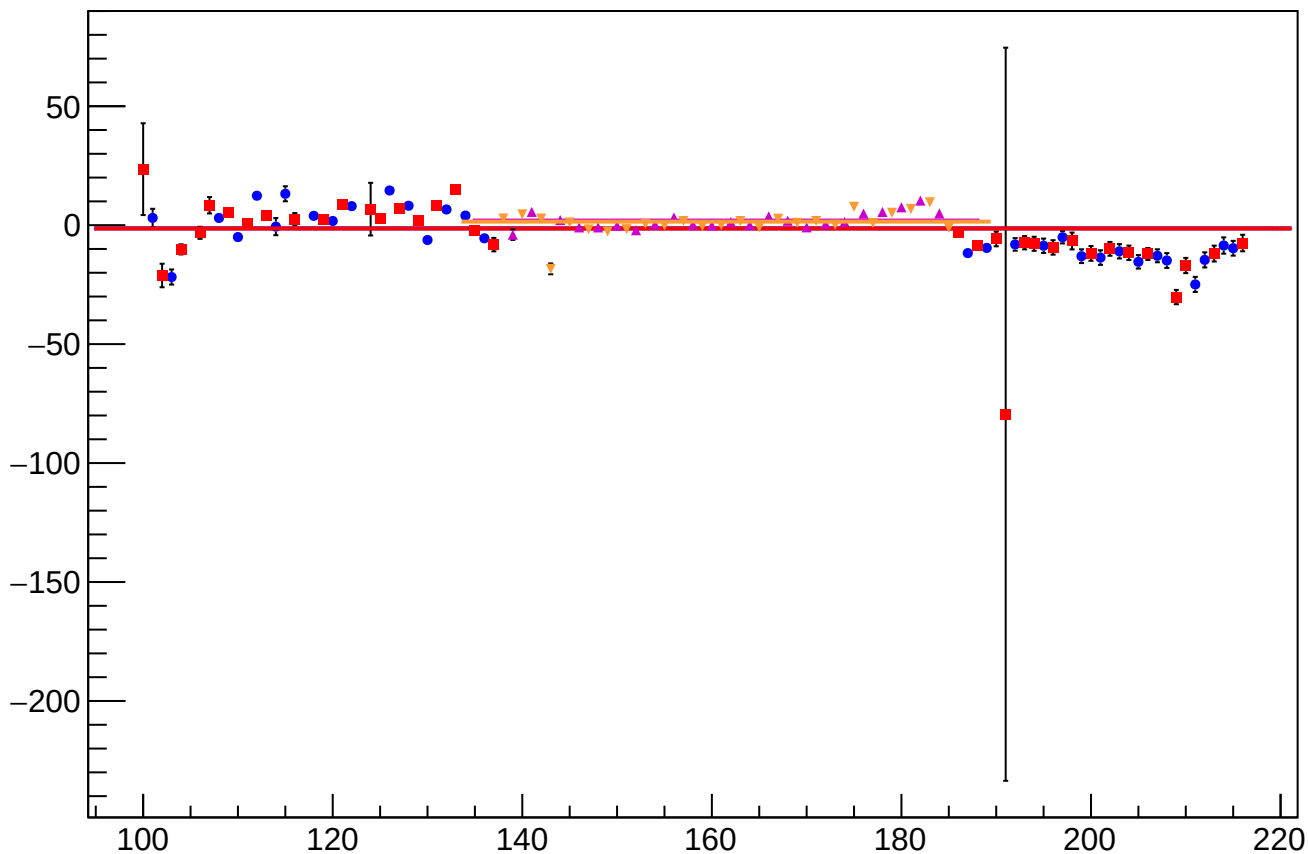
Left In:  $-3.391 \pm 0.271$   $\chi^2/\text{NDF}$ : 1752.8/22

+ sign  $15.100 \pm 0.204$   $\chi^2/\text{NDF}$ : 17503.8/55

All:  $15.845 \pm 0.142$   $\chi^2/\text{NDF}$ : 36260.4/113

- sign  $16.549 \pm 0.198$   $\chi^2/\text{NDF}$ : 18730.7/57

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.355 \pm 0.371$   $\chi^2/\text{NDF}$ : 598.7/30

Left Out:  $1.489 \pm 0.205$   $\chi^2/\text{NDF}$ : 328.6/24

Right Out:  $-1.400 \pm 0.350$   $\chi^2/\text{NDF}$ : 541.7/34

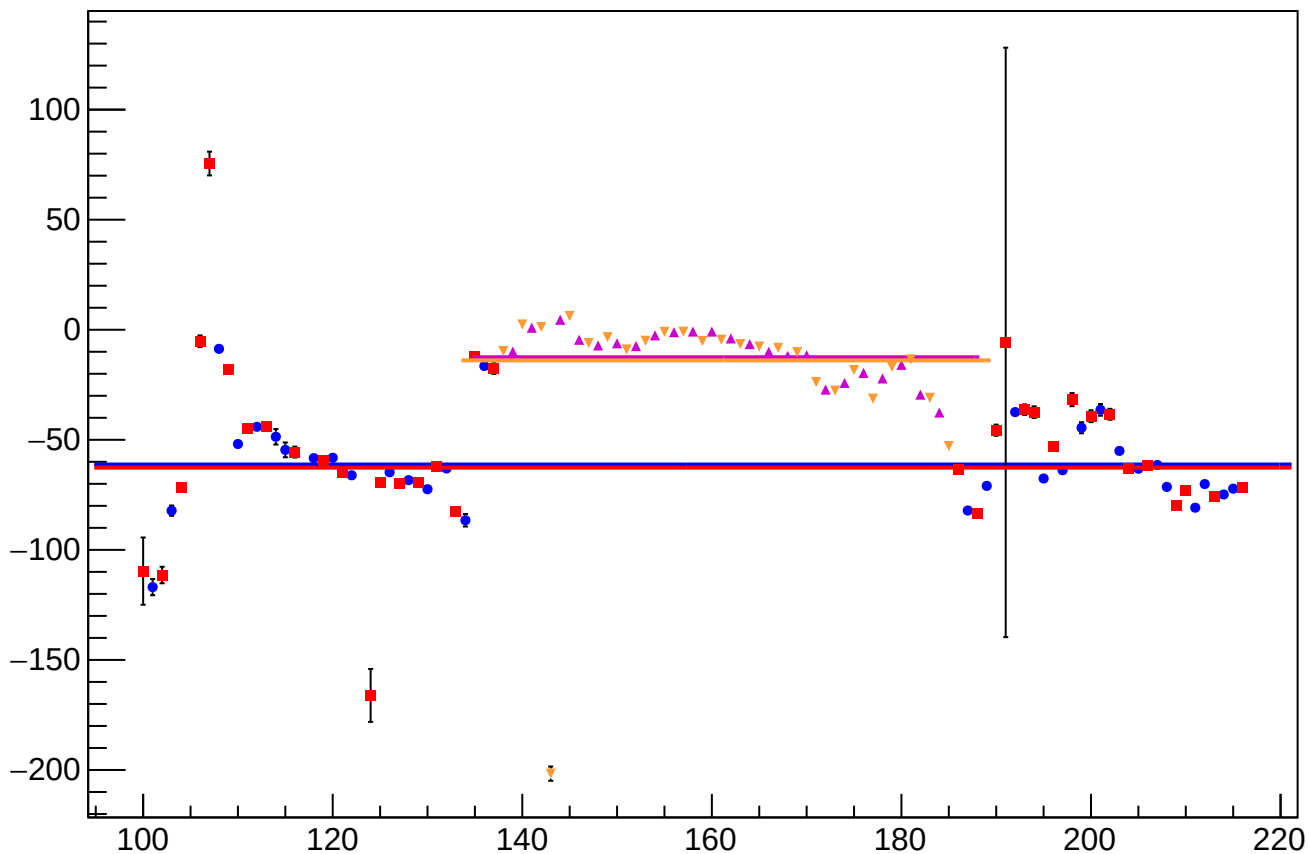
Left In:  $1.933 \pm 0.210$   $\chi^2/\text{NDF}$ : 240.7/22

+ sign  $0.825 \pm 0.179$   $\chi^2/\text{NDF}$ : 972.2/55

All:  $0.935 \pm 0.127$   $\chi^2/\text{NDF}$ : 1822.0/113

- sign  $1.047 \pm 0.180$   $\chi^2/\text{NDF}$ : 849.0/57

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-61.224 \pm 0.328$   $\chi^2/\text{NDF}$ : 3665.0/30

Left Out:  $-13.908 \pm 0.265$   $\chi^2/\text{NDF}$ : 5128.3/24

Right Out:  $-62.641 \pm 0.288$   $\chi^2/\text{NDF}$ : 5693.3/34

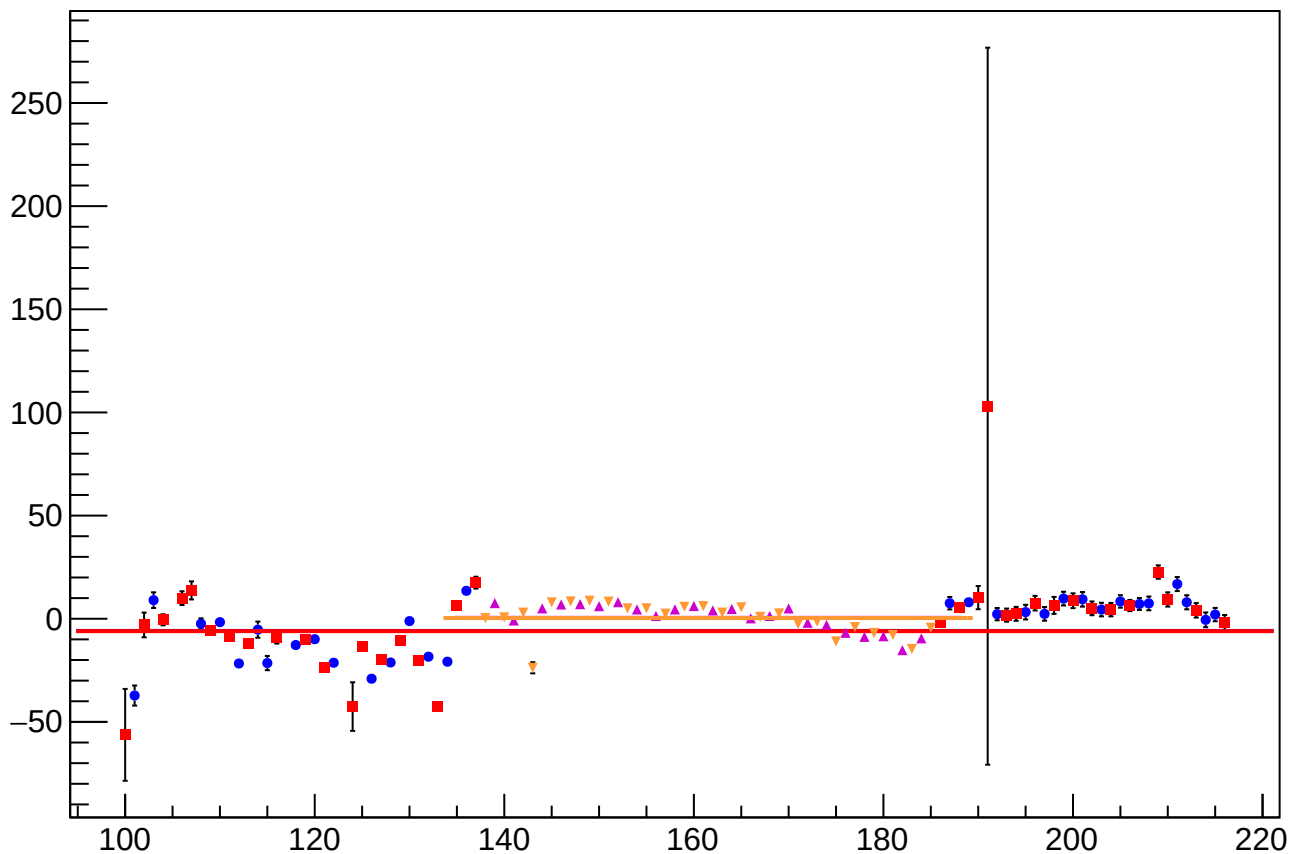
Left In:  $-12.494 \pm 0.269$   $\chi^2/\text{NDF}$ : 1430.3/22

+ sign  $-32.541 \pm 0.206$   $\chi^2/\text{NDF}$ : 21375.4/55

All:  $-34.273 \pm 0.142$   $\chi^2/\text{NDF}$ : 44853.3/113

- sign  $-35.846 \pm 0.196$   $\chi^2/\text{NDF}$ : 23343.0/57

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-5.906 \pm 0.430$   $\chi^2/\text{NDF}$ : 1010.0/30

Left Out:  $0.345 \pm 0.231$   $\chi^2/\text{NDF}$ : 921.9/24

Right Out:  $-6.003 \pm 0.418$   $\chi^2/\text{NDF}$ : 1051.4/34

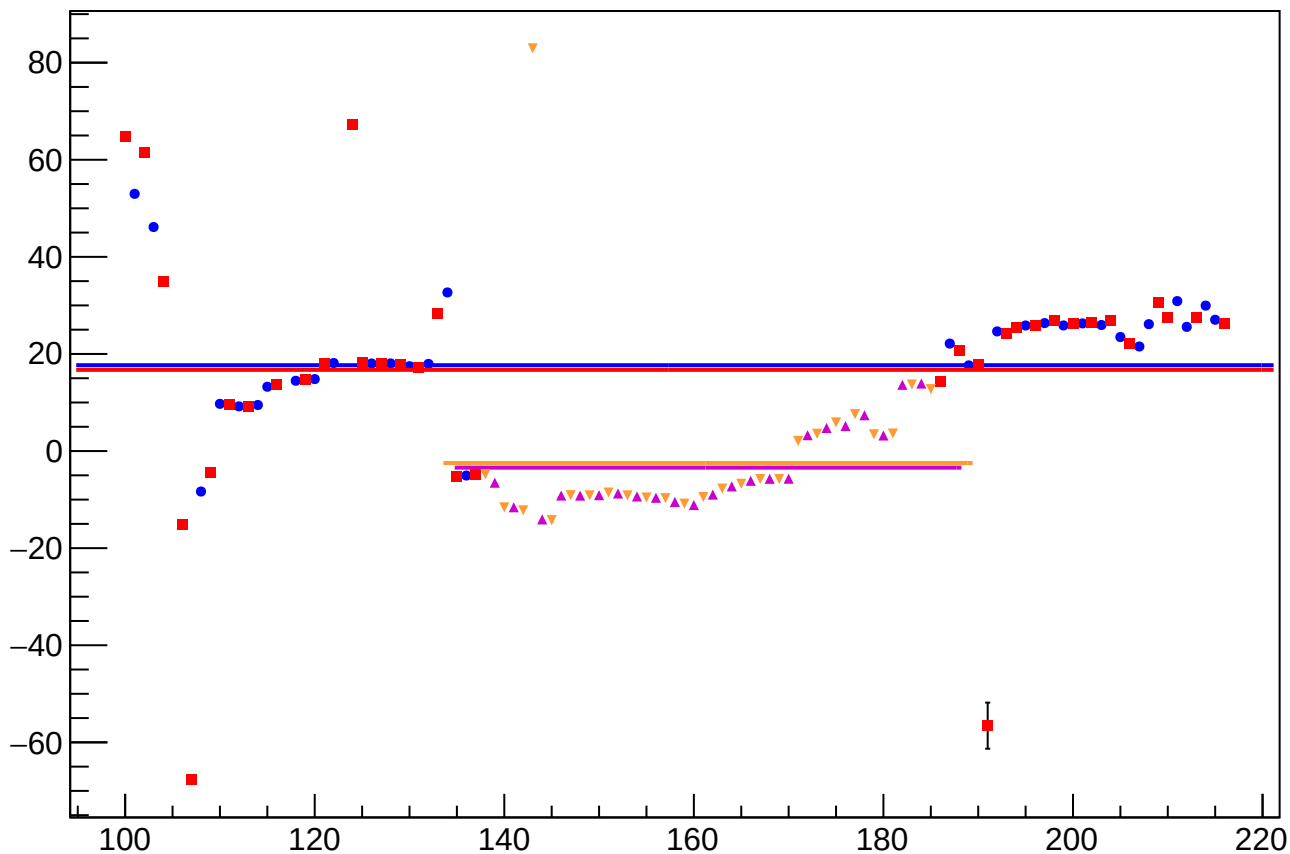
Left In:  $0.433 \pm 0.237$   $\chi^2/\text{NDF}$ : 782.1/22

+ sign  $-1.060 \pm 0.204$   $\chi^2/\text{NDF}$ : 2096.0/55

All:  $-1.094 \pm 0.145$   $\chi^2/\text{NDF}$ : 4108.9/113

- sign  $-1.128 \pm 0.206$   $\chi^2/\text{NDF}$ : 2012.9/57

reg\_asym\_atl\_avg\_atr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 17.685+/-0.022  $\chi^2/\text{NDF}$ : 455339.6/30

Left Out: -2.452+/-0.010  $\chi^2/\text{NDF}$ : 961833.3/24

Right Out: 16.728+/-0.022  $\chi^2/\text{NDF}$ : 577697.5/34

Left In: -3.418+/-0.010  $\chi^2/\text{NDF}$ : 546802.2/22

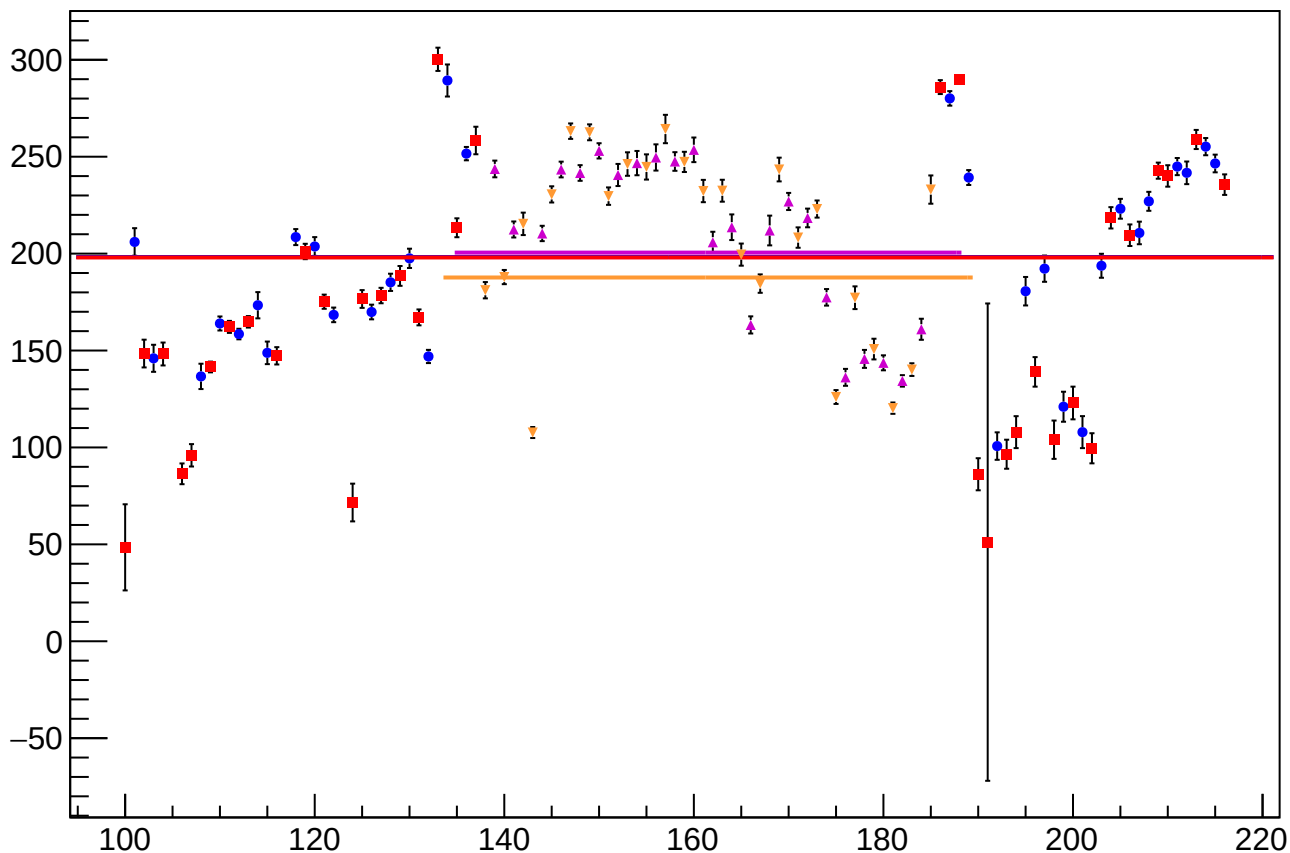
+ sign 1.272+/-0.009  $\chi^2/\text{NDF}$ : 2116837.0/55

All: 0.825+/-0.007  $\chi^2/\text{NDF}$ : 3946675.8/113

- sign 0.373+/-0.009  $\chi^2/\text{NDF}$ : 1825247.8/57



reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 198.254 $\pm$ 0.849  $\chi^2$ /NDF: 2766.5/30

Left Out: 187.681 $\pm$ 0.898  $\chi^2$ /NDF: 3528.3/24

Right Out: 198.018 $\pm$ 0.783  $\chi^2$ /NDF: 6422.7/34

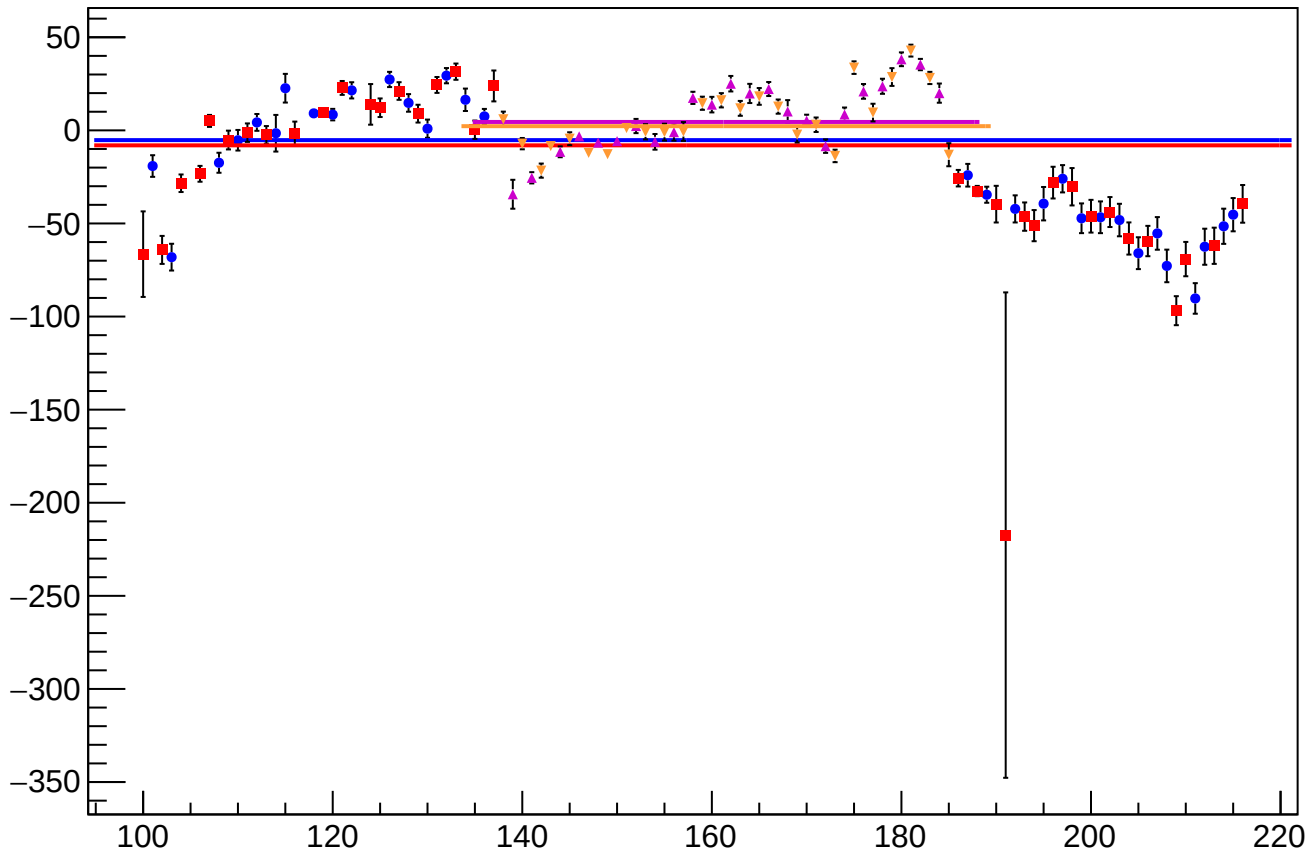
Left In: 200.521 $\pm$ 0.955  $\chi^2$ /NDF: 2111.4/22

+ sign 193.261 $\pm$ 0.617  $\chi^2$ /NDF: 6368.1/55

All: 196.196 $\pm$ 0.432  $\chi^2$ /NDF: 14950.7/113

- sign 199.024 $\pm$ 0.606  $\chi^2$ /NDF: 8538.2/57

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.245 \pm 0.967$   $\chi^2/\text{NDF}$ : 881.8/30

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-8.050 \pm 0.898$   $\chi^2/\text{NDF}$ : 955.9/34

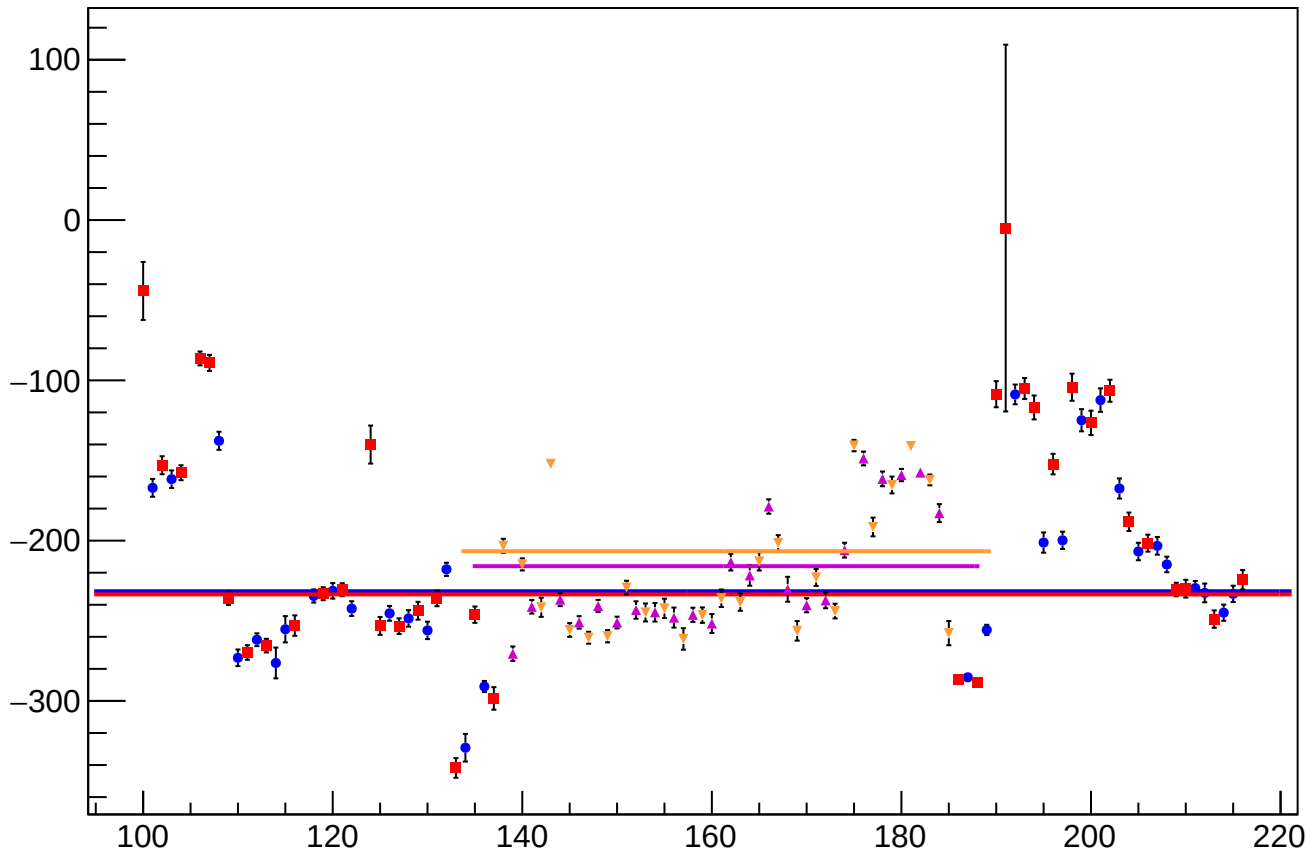
Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

+ sign  $-0.157 \pm 0.548$   $\chi^2/\text{NDF}$ : 1523.4/55

All:  $-0.253 \pm 0.391$   $\chi^2/\text{NDF}$ : 3146.4/113

- sign  $-0.354 \pm 0.559$   $\chi^2/\text{NDF}$ : 1622.9/57

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.578 \pm 0.889$   $\chi^2/\text{NDF}: 2690.7/30$

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}: 2467.8/24$

Right Out:  $-233.532 \pm 0.793$   $\chi^2/\text{NDF}: 6670.6/34$

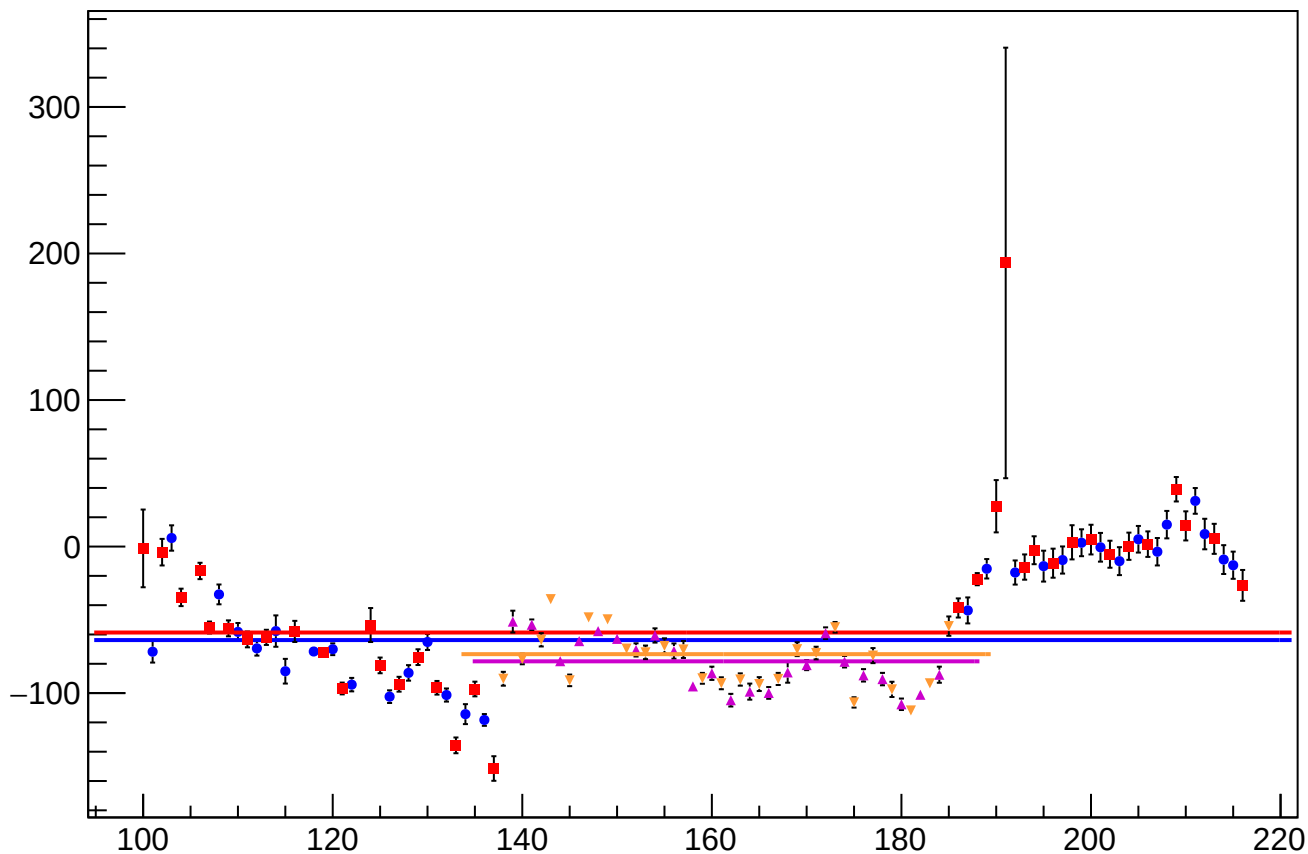
Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}: 1711.9/22$

+ sign  $-219.175 \pm 0.631$   $\chi^2/\text{NDF}: 5550.0/55$

All:  $-222.857 \pm 0.438$   $\chi^2/\text{NDF}: 14201.4/113$

- sign  $-226.275 \pm 0.608$   $\chi^2/\text{NDF}: 8585.7/57$

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-63.820 \pm 1.127$   $\chi^2/\text{NDF}: 1224.9/30$

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}: 836.6/24$

Right Out:  $-58.659 \pm 1.068$   $\chi^2/\text{NDF}: 1372.3/34$

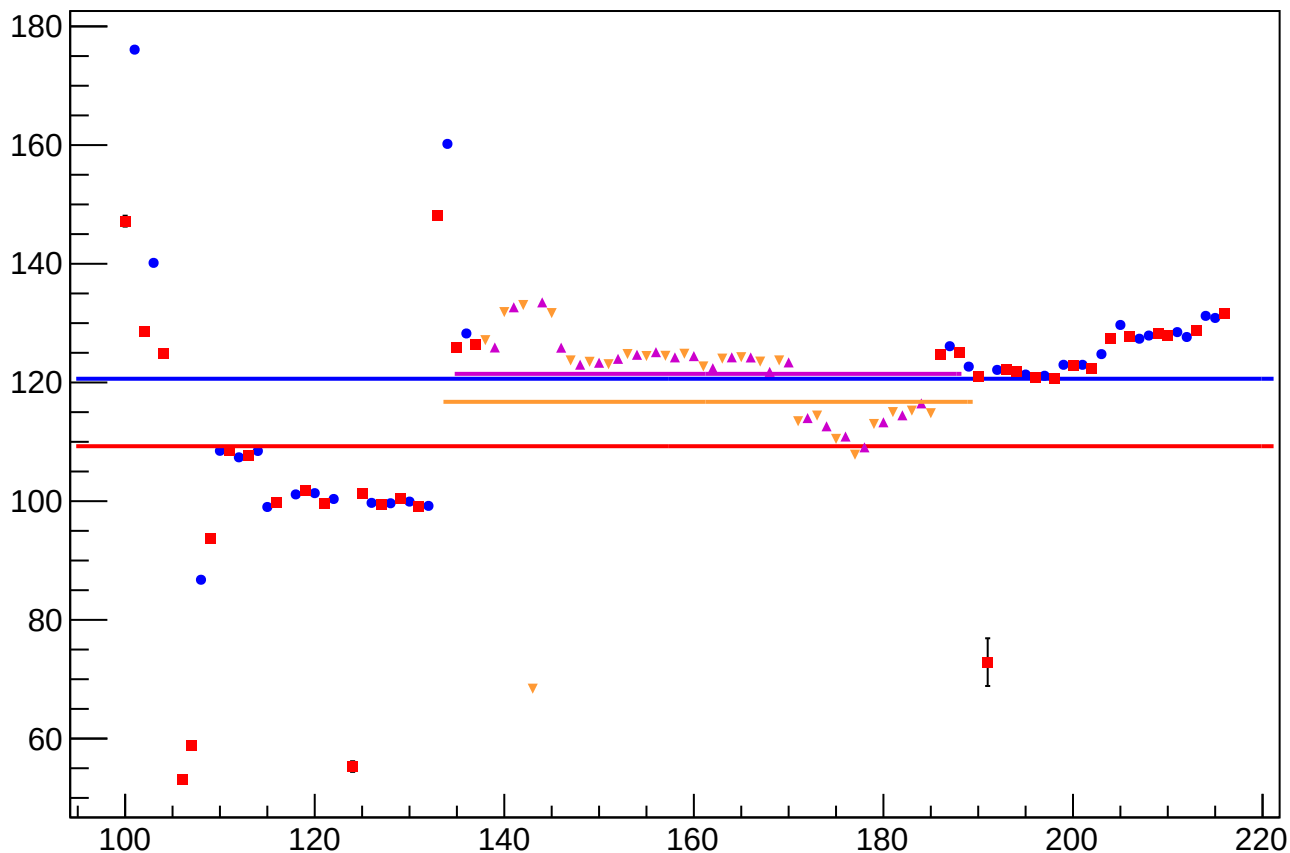
Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}: 443.2/22$

+ sign  $-70.386 \pm 0.634$   $\chi^2/\text{NDF}: 2111.1/55$

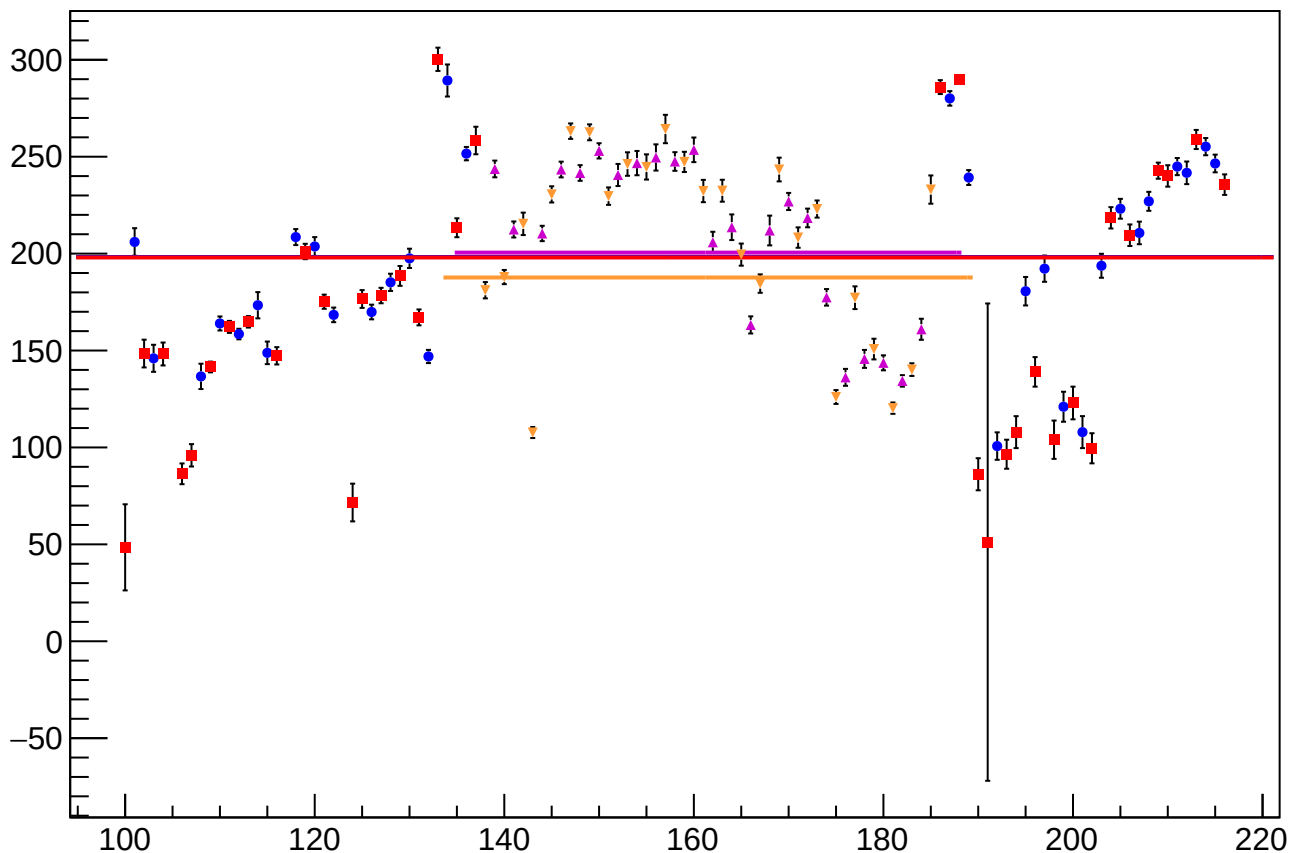
All:  $-70.716 \pm 0.454$   $\chi^2/\text{NDF}: 4141.1/113$

- sign  $-71.063 \pm 0.649$   $\chi^2/\text{NDF}: 2029.5/57$

reg\_asym\_at1\_avg\_at2\_avg\_dd\_diff\_bpm12X\_slope vs Slug



reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $198.254 \pm 0.849$   $\chi^2/\text{NDF}$ : 2766.5/30

Left Out:  $187.681 \pm 0.898$   $\chi^2/\text{NDF}$ : 3528.3/24

Right Out:  $198.018 \pm 0.783$   $\chi^2/\text{NDF}$ : 6422.7/34

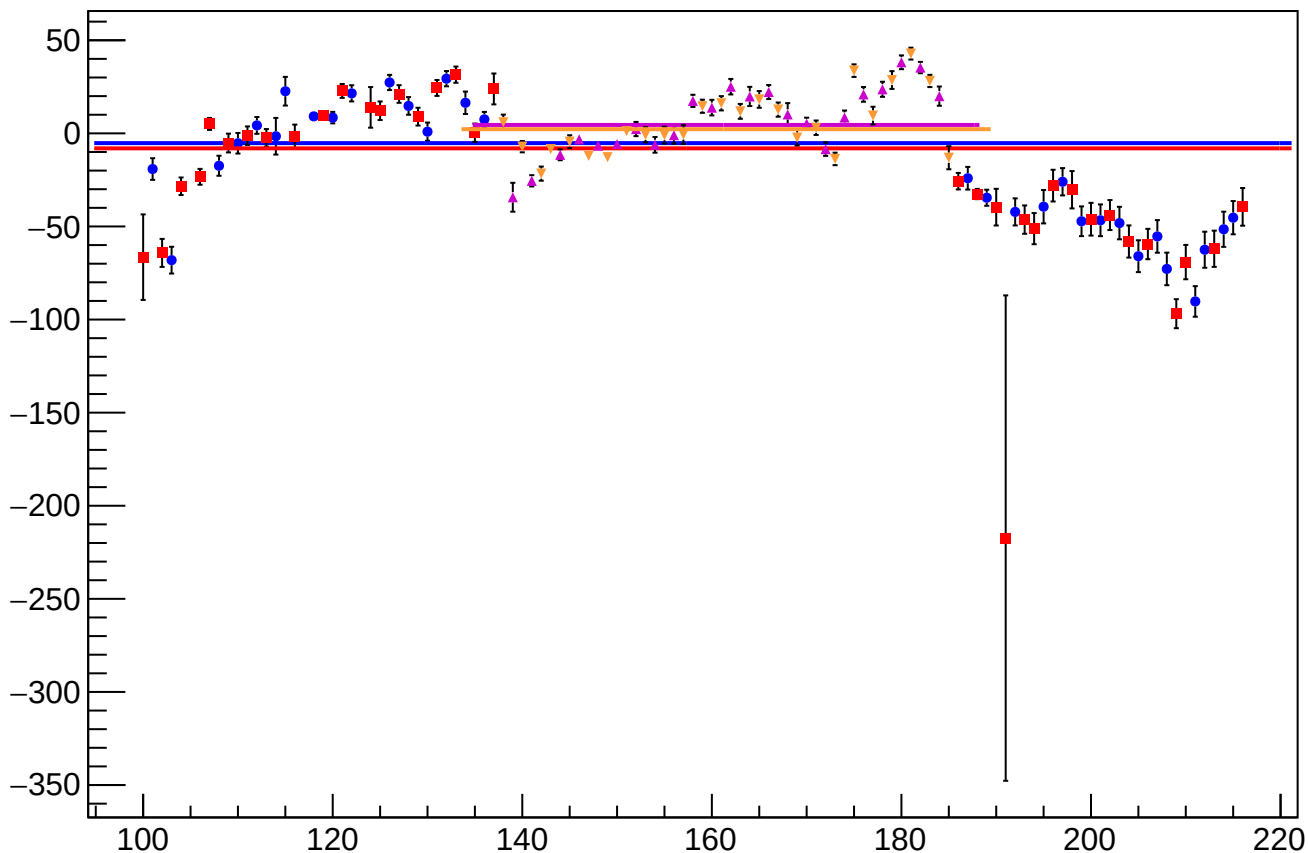
Left In:  $200.521 \pm 0.955$   $\chi^2/\text{NDF}$ : 2111.4/22

+ sign  $193.261 \pm 0.617$   $\chi^2/\text{NDF}$ : 6368.1/55

All:  $196.196 \pm 0.432$   $\chi^2/\text{NDF}$ : 14950.7/113

- sign  $199.024 \pm 0.606$   $\chi^2/\text{NDF}$ : 8538.2/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-5.245 \pm 0.967$   $\chi^2/\text{NDF}$ : 881.8/30

Left Out:  $2.245 \pm 0.665$   $\chi^2/\text{NDF}$ : 600.9/24

Right Out:  $-8.050 \pm 0.898$   $\chi^2/\text{NDF}$ : 955.9/34

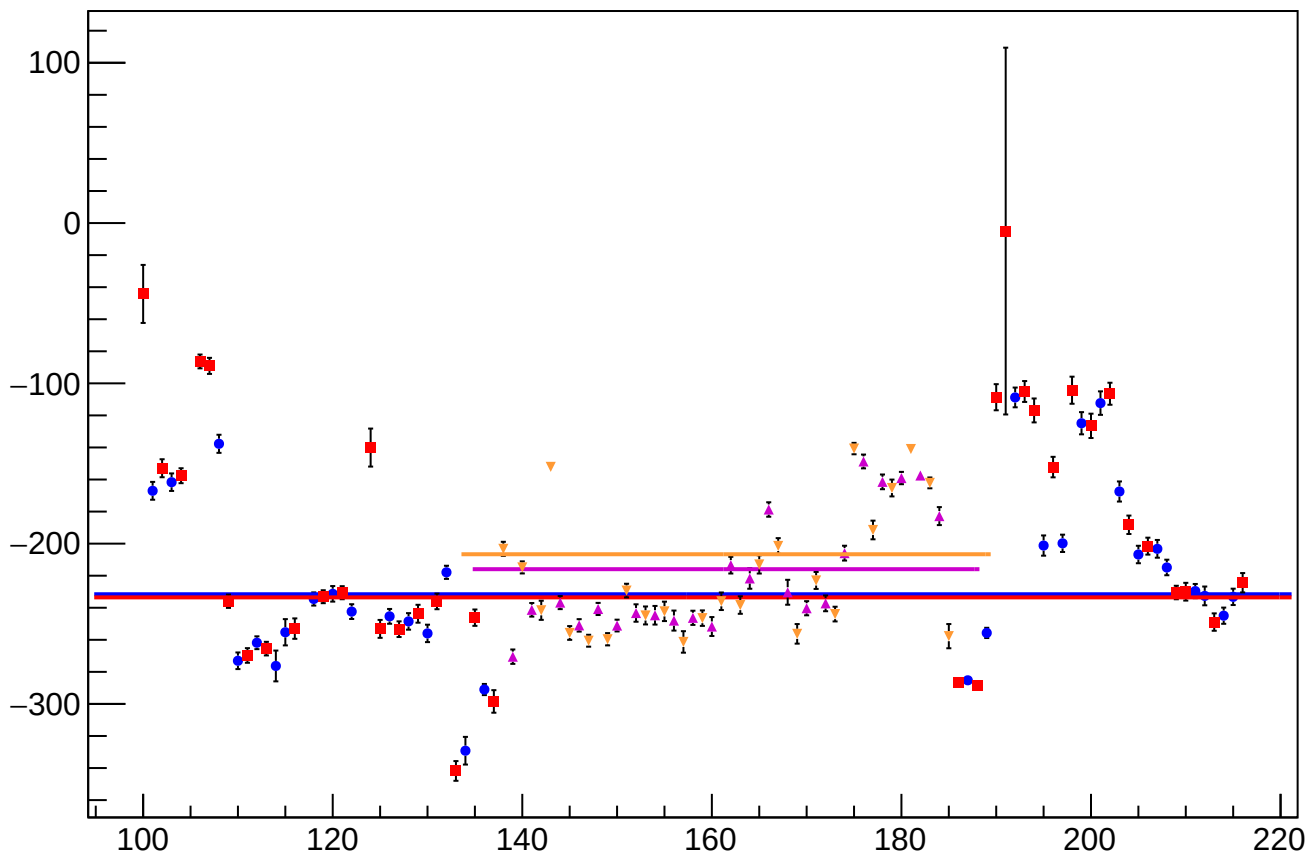
Left In:  $4.513 \pm 0.714$   $\chi^2/\text{NDF}$ : 547.1/22

+ sign  $-0.157 \pm 0.548$   $\chi^2/\text{NDF}$ : 1523.4/55

All:  $-0.253 \pm 0.391$   $\chi^2/\text{NDF}$ : 3146.4/113

- sign  $-0.354 \pm 0.559$   $\chi^2/\text{NDF}$ : 1622.9/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-231.578 \pm 0.889$   $\chi^2/\text{NDF}$ : 2690.7/30

Left Out:  $-206.617 \pm 0.895$   $\chi^2/\text{NDF}$ : 2467.8/24

Right Out:  $-233.532 \pm 0.793$   $\chi^2/\text{NDF}$ : 6670.6/34

Left In:  $-215.938 \pm 0.946$   $\chi^2/\text{NDF}$ : 1711.9/22

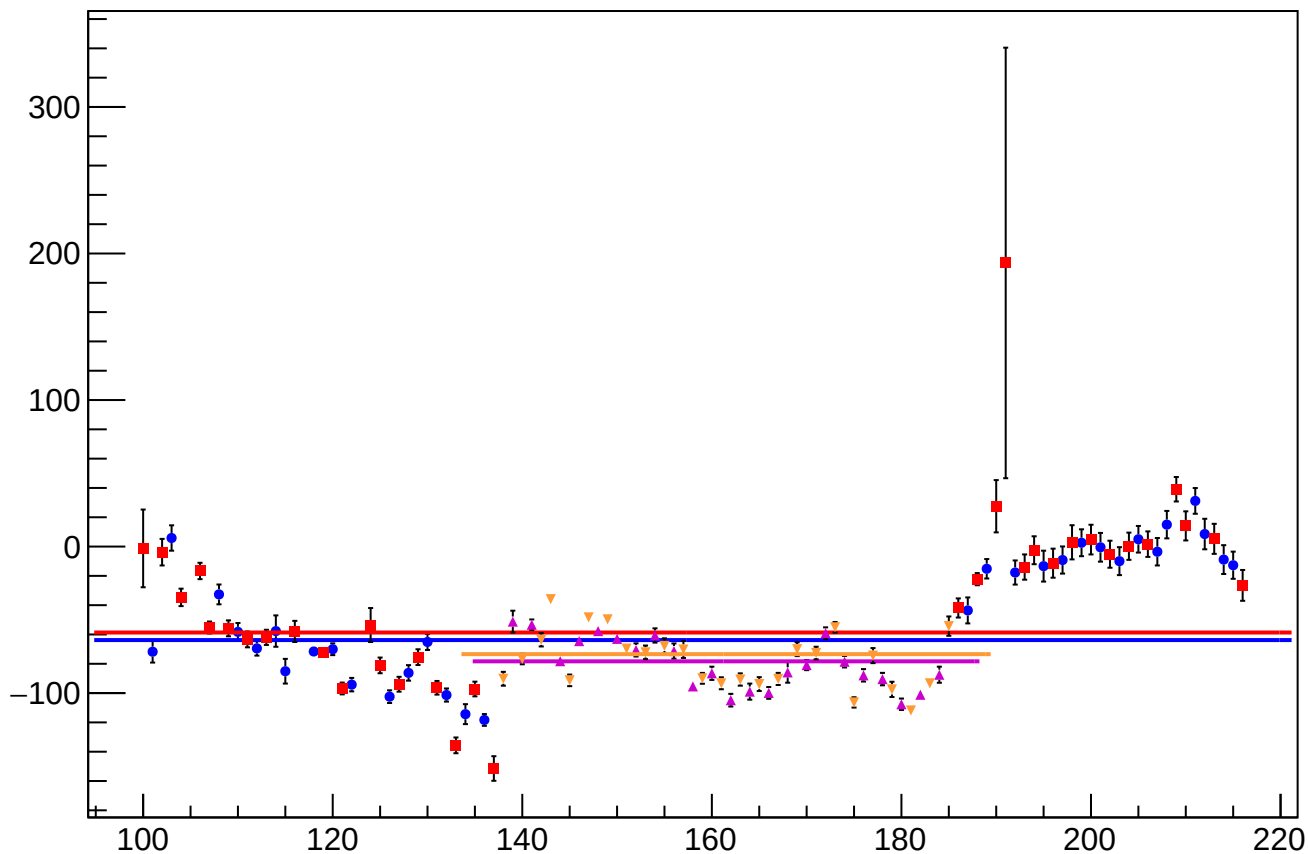
+ sign  $-219.175 \pm 0.631$   $\chi^2/\text{NDF}$ : 5550.0/55

All:  $-222.857 \pm 0.438$   $\chi^2/\text{NDF}$ : 14201.4/113

- sign  $-226.275 \pm 0.608$   $\chi^2/\text{NDF}$ : 8585.7/57



reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-63.820 \pm 1.127$   $\chi^2/\text{NDF}: 1224.9/30$

Left Out:  $-73.426 \pm 0.767$   $\chi^2/\text{NDF}: 836.6/24$

Right Out:  $-58.659 \pm 1.068$   $\chi^2/\text{NDF}: 1372.3/34$

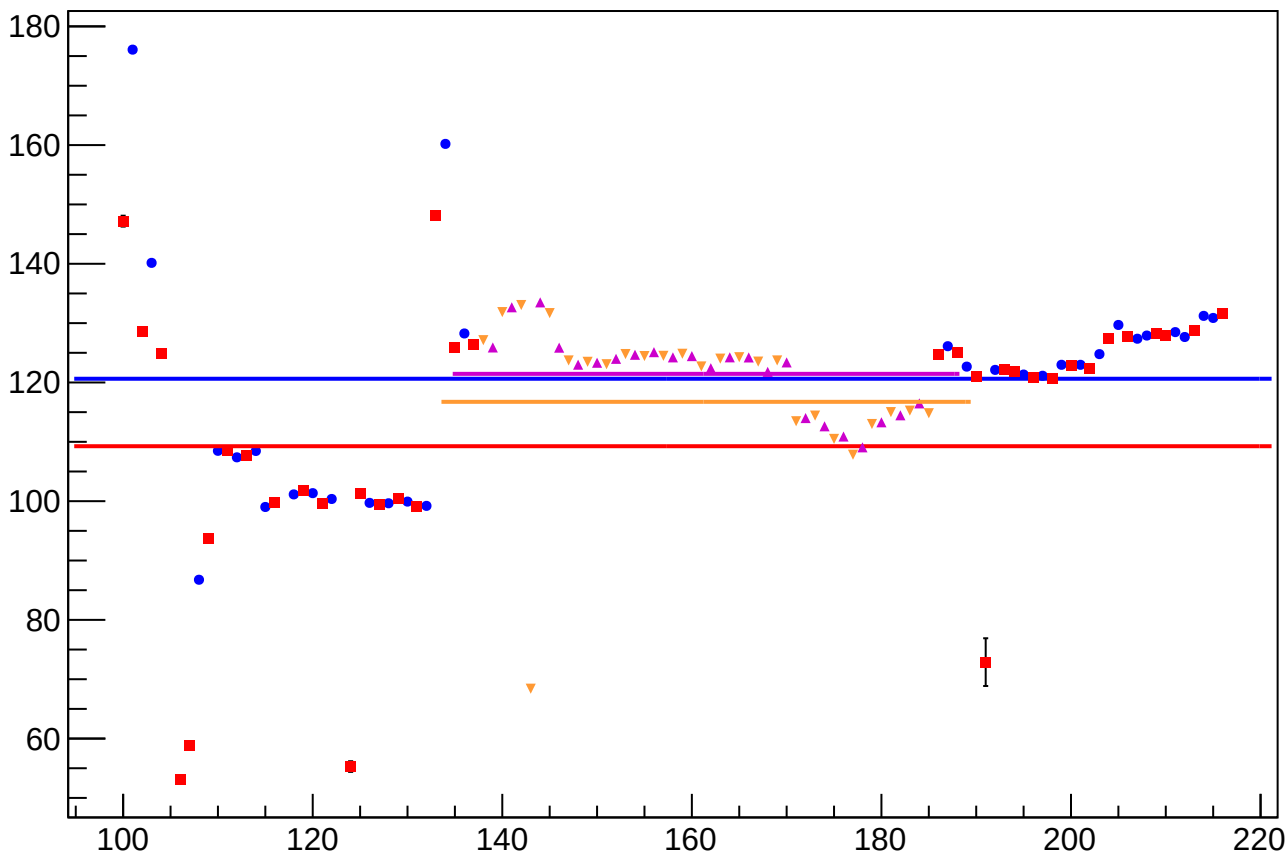
Left In:  $-78.329 \pm 0.817$   $\chi^2/\text{NDF}: 443.2/22$

+ sign  $-70.386 \pm 0.634$   $\chi^2/\text{NDF}: 2111.1/55$

All:  $-70.716 \pm 0.454$   $\chi^2/\text{NDF}: 4141.1/113$

- sign  $-71.063 \pm 0.649$   $\chi^2/\text{NDF}: 2029.5/57$

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 120.628 $\pm$ 0.059  $\chi^2/\text{NDF}$ : 99899.4/30

Left Out: 116.740 $\pm$ 0.036  $\chi^2/\text{NDF}$ : 203650.9/24

Right Out: 109.261 $\pm$ 0.055  $\chi^2/\text{NDF}$ : 215143.7/34

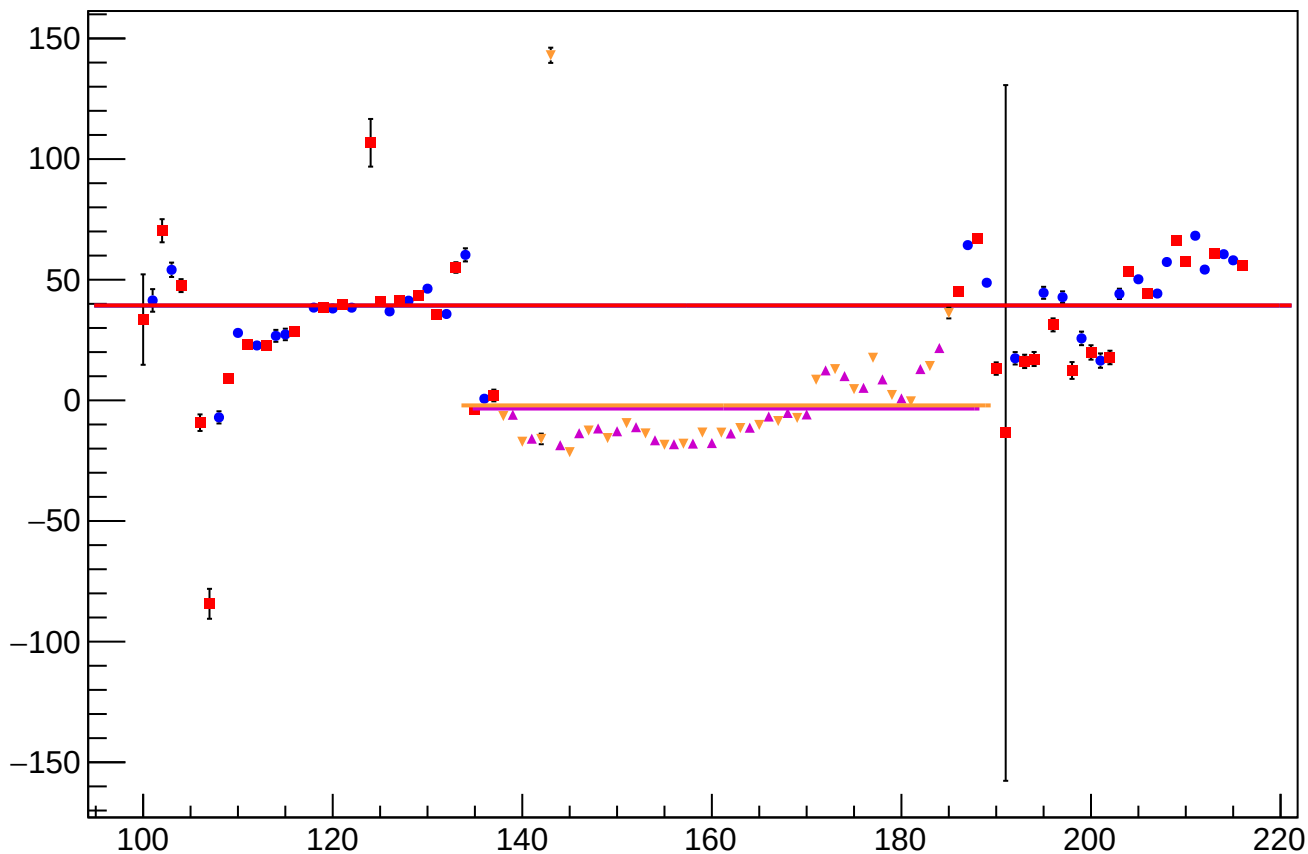
Left In: 121.455 $\pm$ 0.037  $\chi^2/\text{NDF}$ : 28796.4/22

+ sign 117.781 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 306705.3/55

All: 117.683 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 584647.4/113

- sign 117.585 $\pm$ 0.031  $\chi^2/\text{NDF}$ : 277921.6/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $39.269 \pm 0.316$   $\chi^2/\text{NDF}$ : 3311.5/30

Left Out:  $-2.091 \pm 0.267$   $\chi^2/\text{NDF}$ : 4201.3/24

Right Out:  $39.355 \pm 0.290$   $\chi^2/\text{NDF}$ : 5396.9/34

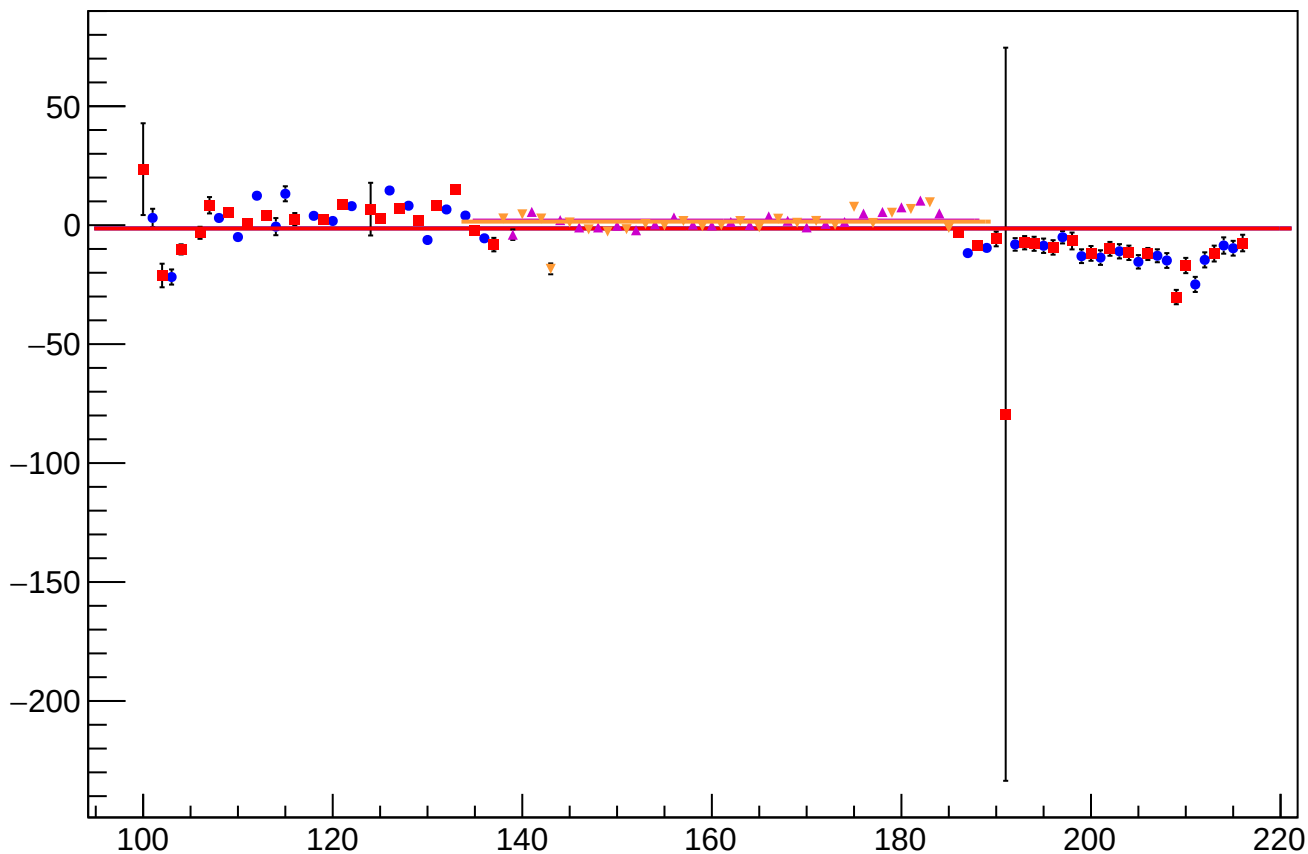
Left In:  $-3.391 \pm 0.271$   $\chi^2/\text{NDF}$ : 1752.8/22

+ sign  $15.100 \pm 0.204$   $\chi^2/\text{NDF}$ : 17503.8/55

All:  $15.845 \pm 0.142$   $\chi^2/\text{NDF}$ : 36260.4/113

- sign  $16.549 \pm 0.198$   $\chi^2/\text{NDF}$ : 18730.7/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.355 \pm 0.371$   $\chi^2/\text{NDF}$ : 598.7/30

Left Out:  $1.489 \pm 0.205$   $\chi^2/\text{NDF}$ : 328.6/24

Right Out:  $-1.400 \pm 0.350$   $\chi^2/\text{NDF}$ : 541.7/34

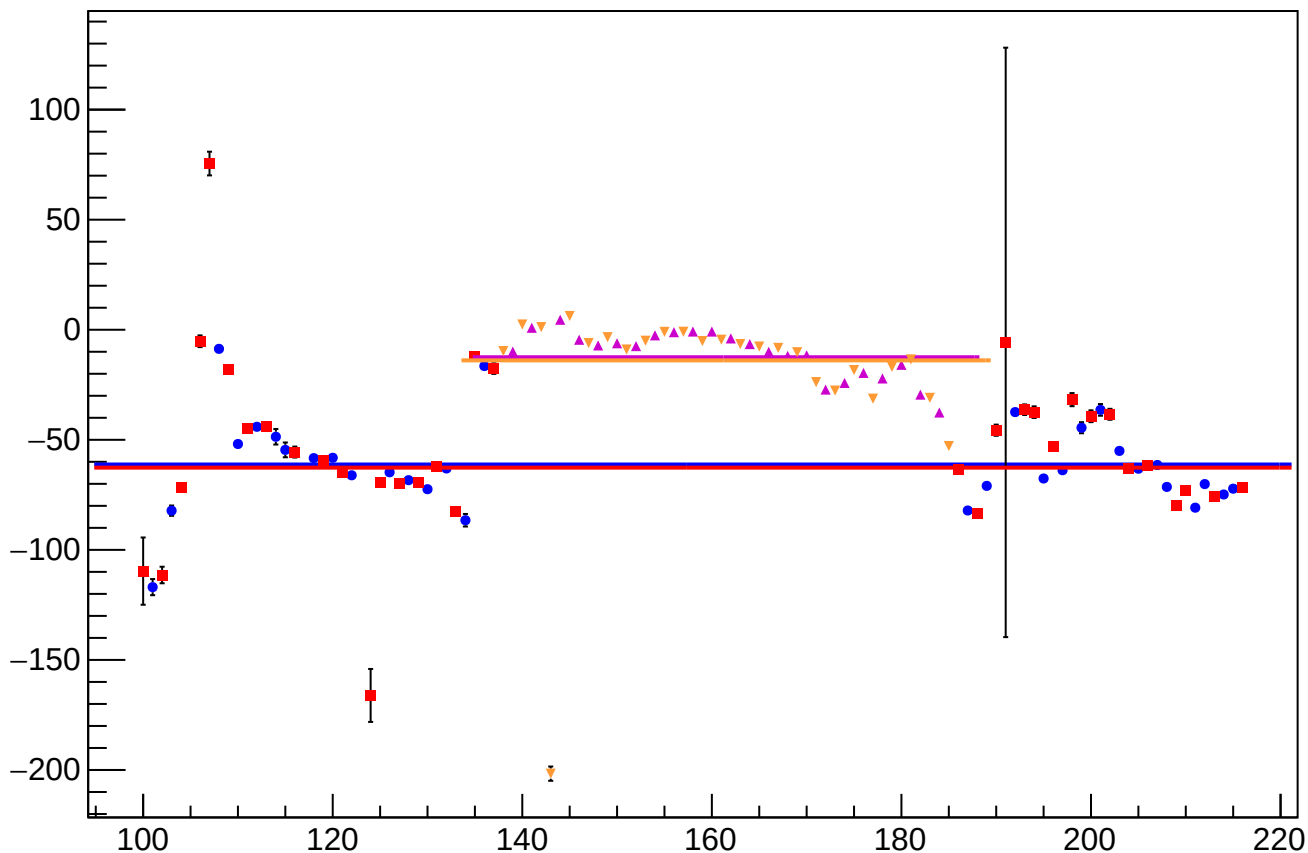
Left In:  $1.933 \pm 0.210$   $\chi^2/\text{NDF}$ : 240.7/22

+ sign  $0.825 \pm 0.179$   $\chi^2/\text{NDF}$ : 972.2/55

All:  $0.935 \pm 0.127$   $\chi^2/\text{NDF}$ : 1822.0/113

- sign  $1.047 \pm 0.180$   $\chi^2/\text{NDF}$ : 849.0/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-61.224 \pm 0.328$   $\chi^2/\text{NDF}$ : 3665.0/30

Left Out:  $-13.908 \pm 0.265$   $\chi^2/\text{NDF}$ : 5128.3/24

Right Out:  $-62.641 \pm 0.288$   $\chi^2/\text{NDF}$ : 5693.3/34

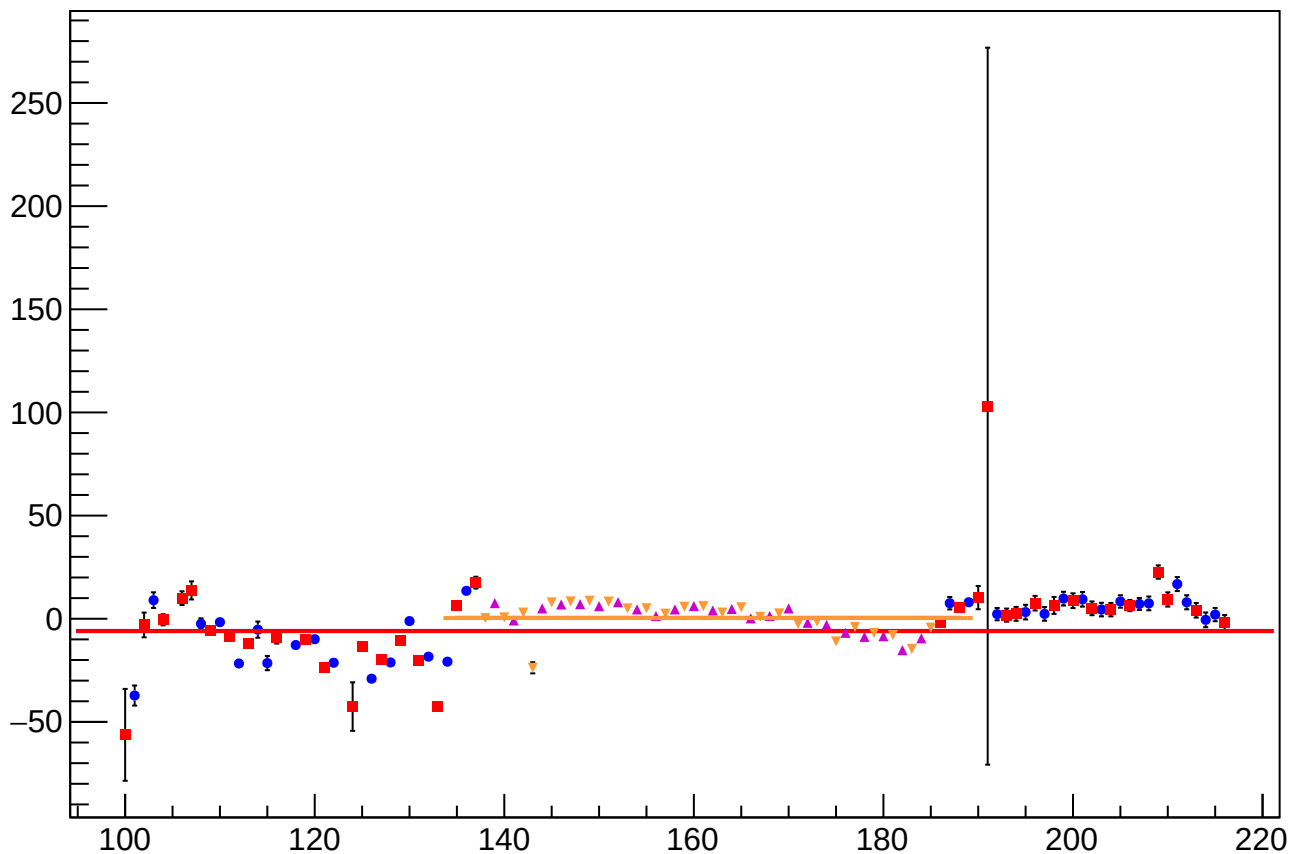
Left In:  $-12.494 \pm 0.269$   $\chi^2/\text{NDF}$ : 1430.3/22

+ sign  $-32.541 \pm 0.206$   $\chi^2/\text{NDF}$ : 21375.4/55

All:  $-34.273 \pm 0.142$   $\chi^2/\text{NDF}$ : 44853.3/113

- sign  $-35.846 \pm 0.196$   $\chi^2/\text{NDF}$ : 23343.0/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-5.906 \pm 0.430$   $\chi^2/\text{NDF}$ : 1010.0/30

Left Out:  $0.345 \pm 0.231$   $\chi^2/\text{NDF}$ : 921.9/24

Right Out:  $-6.003 \pm 0.418$   $\chi^2/\text{NDF}$ : 1051.4/34

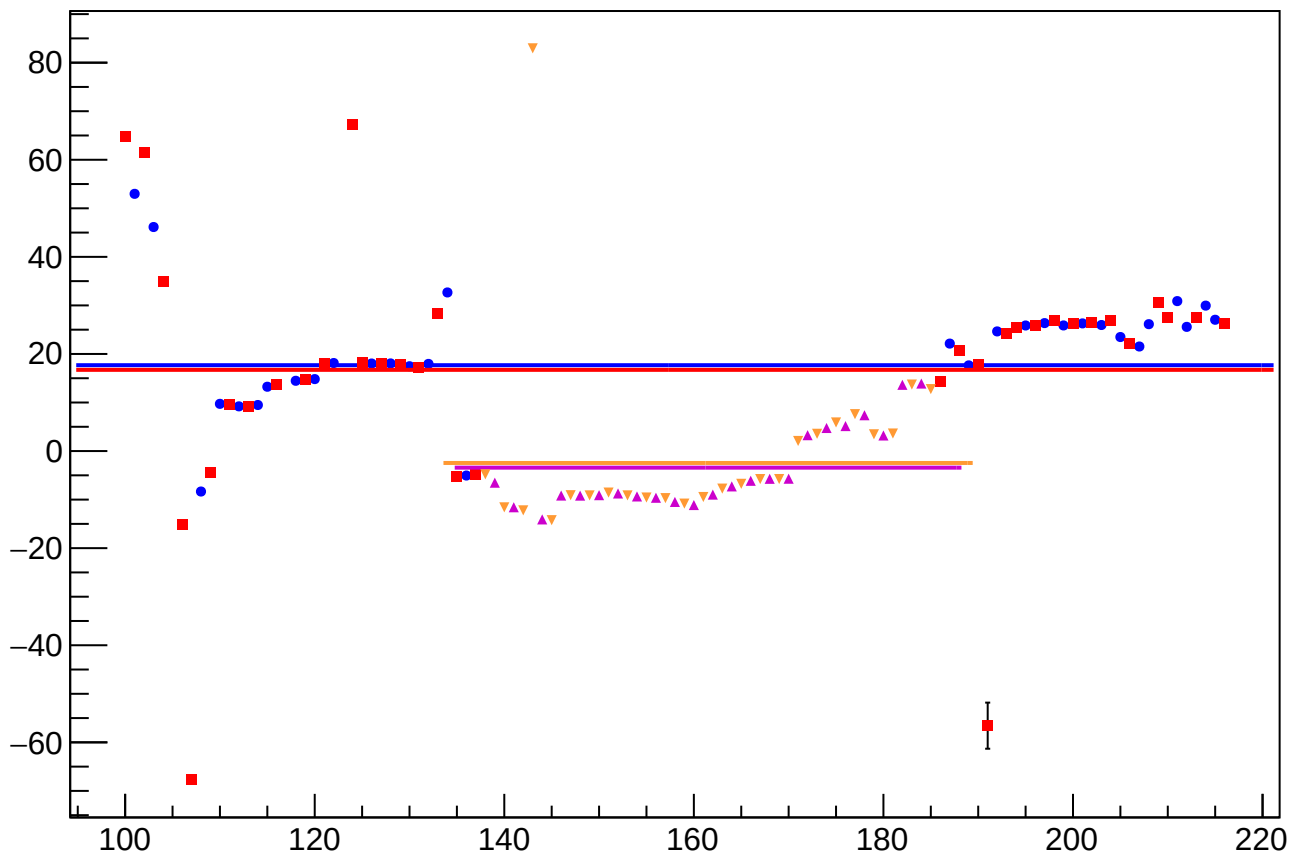
Left In:  $0.433 \pm 0.237$   $\chi^2/\text{NDF}$ : 782.1/22

+ sign  $-1.060 \pm 0.204$   $\chi^2/\text{NDF}$ : 2096.0/55

All:  $-1.094 \pm 0.145$   $\chi^2/\text{NDF}$ : 4108.9/113

- sign  $-1.128 \pm 0.206$   $\chi^2/\text{NDF}$ : 2012.9/57

reg\_asym\_atl1r2\_dd\_atl2r1\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 17.685 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 455339.6/30

Left Out: -2.452 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 961833.3/24

Right Out: 16.728 $\pm$ 0.022  $\chi^2/\text{NDF}$ : 577697.5/34

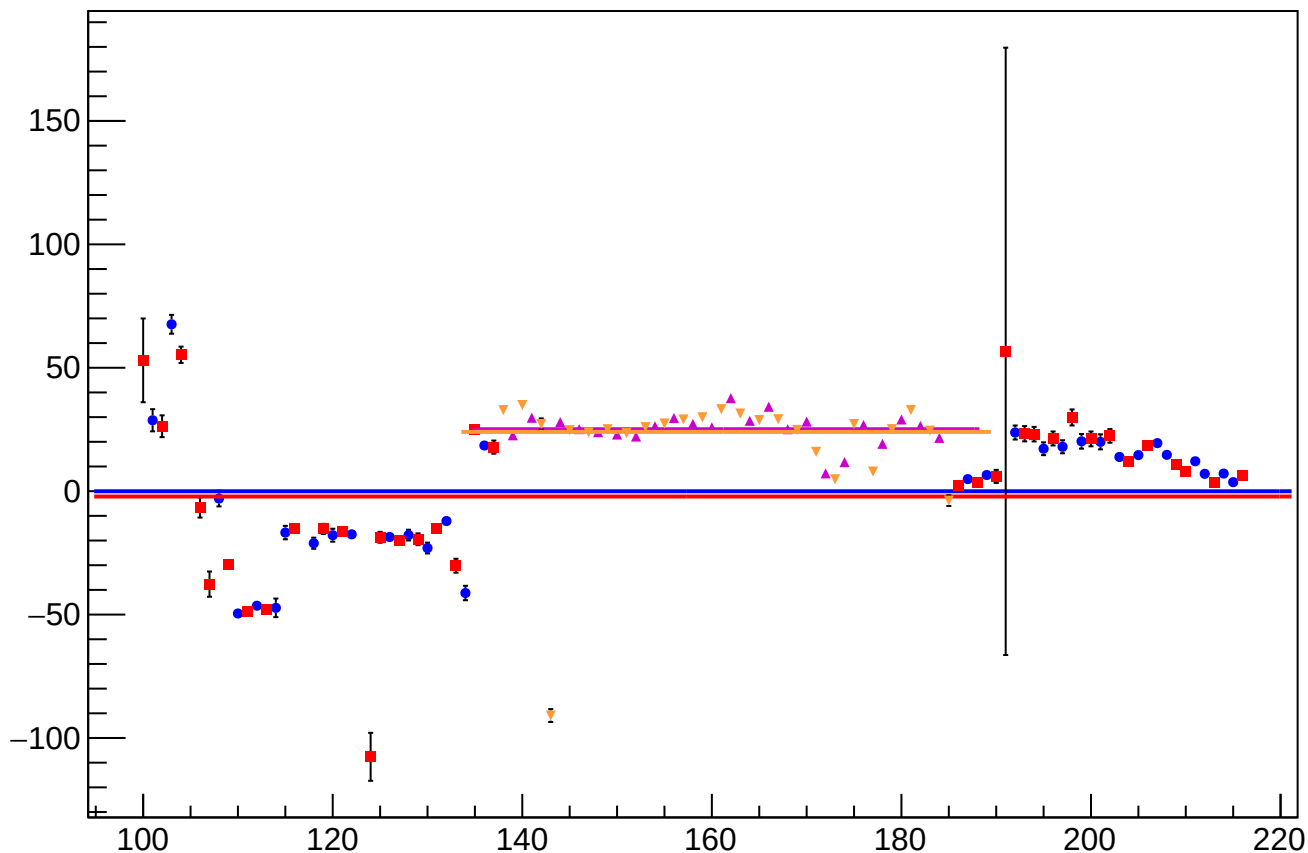
Left In: -3.418 $\pm$ 0.010  $\chi^2/\text{NDF}$ : 546802.2/22

+ sign 1.272 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 2116837.0/55

All: 0.825 $\pm$ 0.007  $\chi^2/\text{NDF}$ : 3946675.8/113

- sign 0.373 $\pm$ 0.009  $\chi^2/\text{NDF}$ : 1825247.8/57

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.042 \pm 0.355$   $\chi^2/\text{NDF}$ : 3711.0/30

Left Out:  $24.025 \pm 0.282$   $\chi^2/\text{NDF}$ : 2802.2/24

Right Out:  $-2.161 \pm 0.346$   $\chi^2/\text{NDF}$ : 3915.3/34

Left In:  $25.089 \pm 0.287$   $\chi^2/\text{NDF}$ : 495.3/22

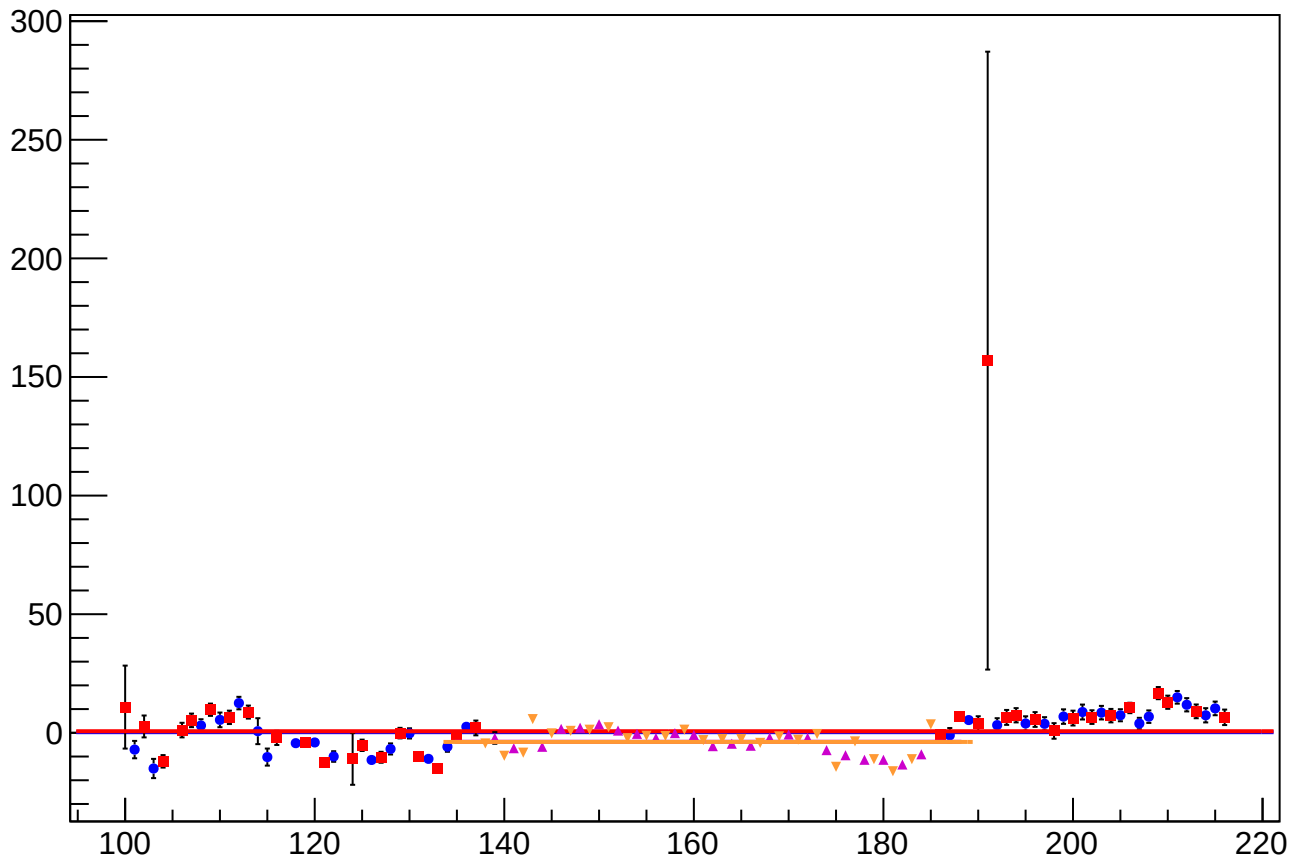
+ sign  $14.724 \pm 0.221$   $\chi^2/\text{NDF}$ : 9327.7/55

All:  $14.346 \pm 0.156$   $\chi^2/\text{NDF}$ : 17417.6/113

- sign  $13.969 \pm 0.221$   $\chi^2/\text{NDF}$ : 8084.1/57



reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.265 \pm 0.436$   $\chi^2/\text{NDF}$ : 286.5/30

Left Out:  $-3.845 \pm 0.218$   $\chi^2/\text{NDF}$ : 649.4/24

Right Out:  $0.668 \pm 0.424$   $\chi^2/\text{NDF}$ : 358.6/34

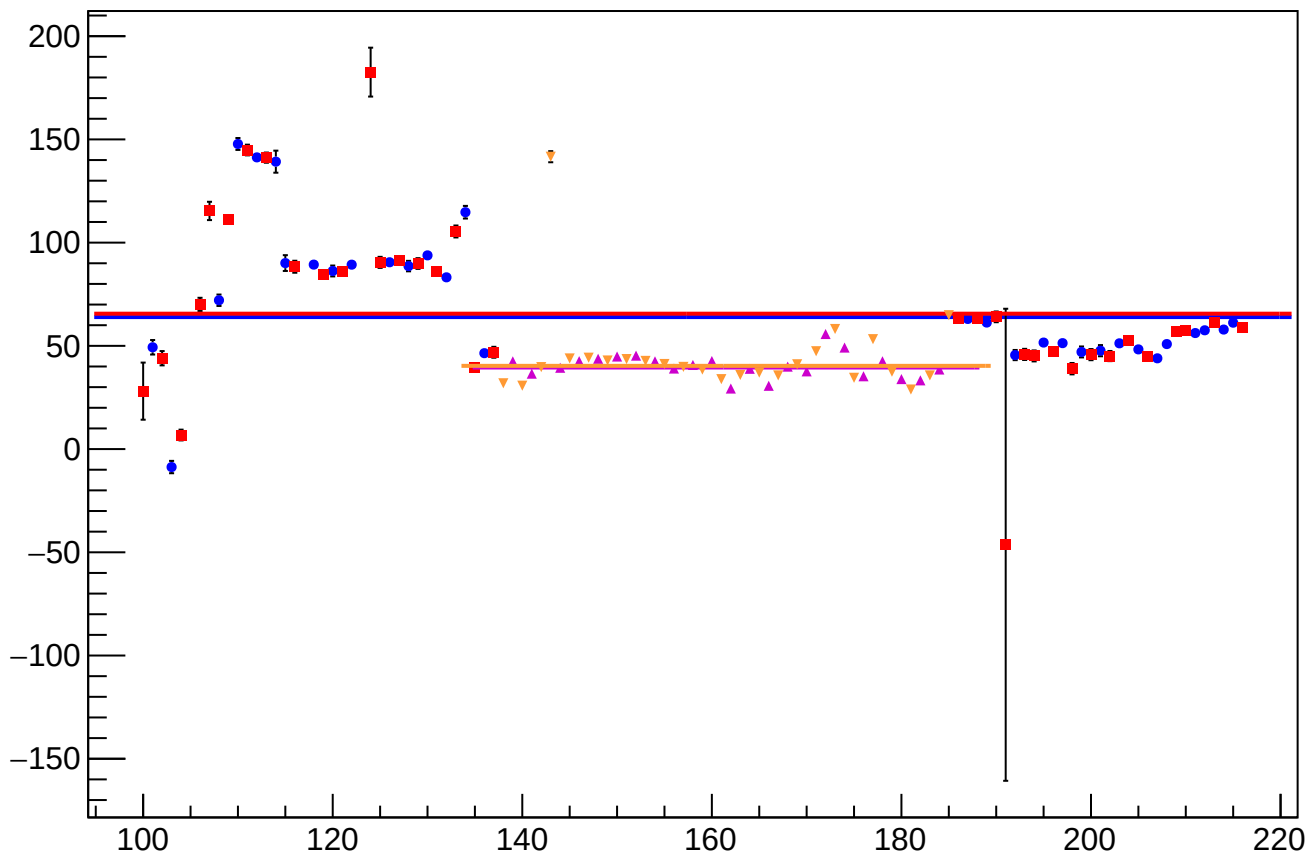
Left In:  $-3.780 \pm 0.224$   $\chi^2/\text{NDF}$ : 509.8/22

+ sign  $-3.024 \pm 0.195$   $\chi^2/\text{NDF}$ : 1007.0/55

All:  $-2.920 \pm 0.139$   $\chi^2/\text{NDF}$ : 1962.1/113

- sign  $-2.812 \pm 0.198$   $\chi^2/\text{NDF}$ : 954.5/57

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 63.936 $\pm$ 0.367  $\chi^2$ /NDF: 4678.2/30

Left Out: 40.315 $\pm$ 0.280  $\chi^2$ /NDF: 2182.8/24

Right Out: 65.579 $\pm$ 0.347  $\chi^2$ /NDF: 4846.0/34

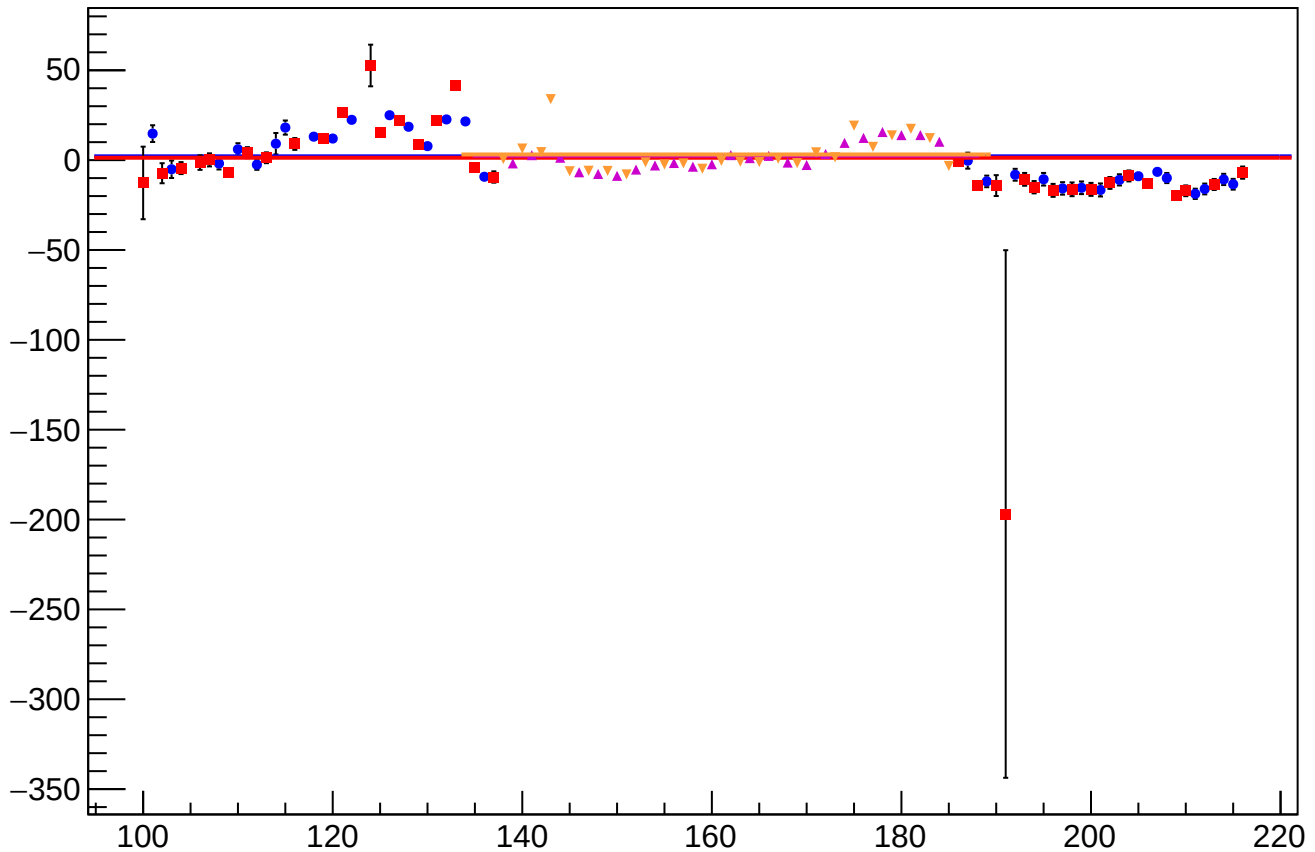
Left In: 39.504 $\pm$ 0.285  $\chi^2$ /NDF: 432.1/22

+ sign 49.023 $\pm$ 0.223  $\chi^2$ /NDF: 9481.9/55

All: 49.521 $\pm$ 0.156  $\chi^2$ /NDF: 18148.0/113

- sign 50.006 $\pm$ 0.220  $\chi^2$ /NDF: 8656.2/57

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 2.112 $\pm$ 0.496  $\chi^2$ /NDF: 850.3/30

Left Out: 3.142 $\pm$ 0.245  $\chi^2$ /NDF: 1267.0/24

Right Out: 1.335 $\pm$ 0.496  $\chi^2$ /NDF: 1032.3/34

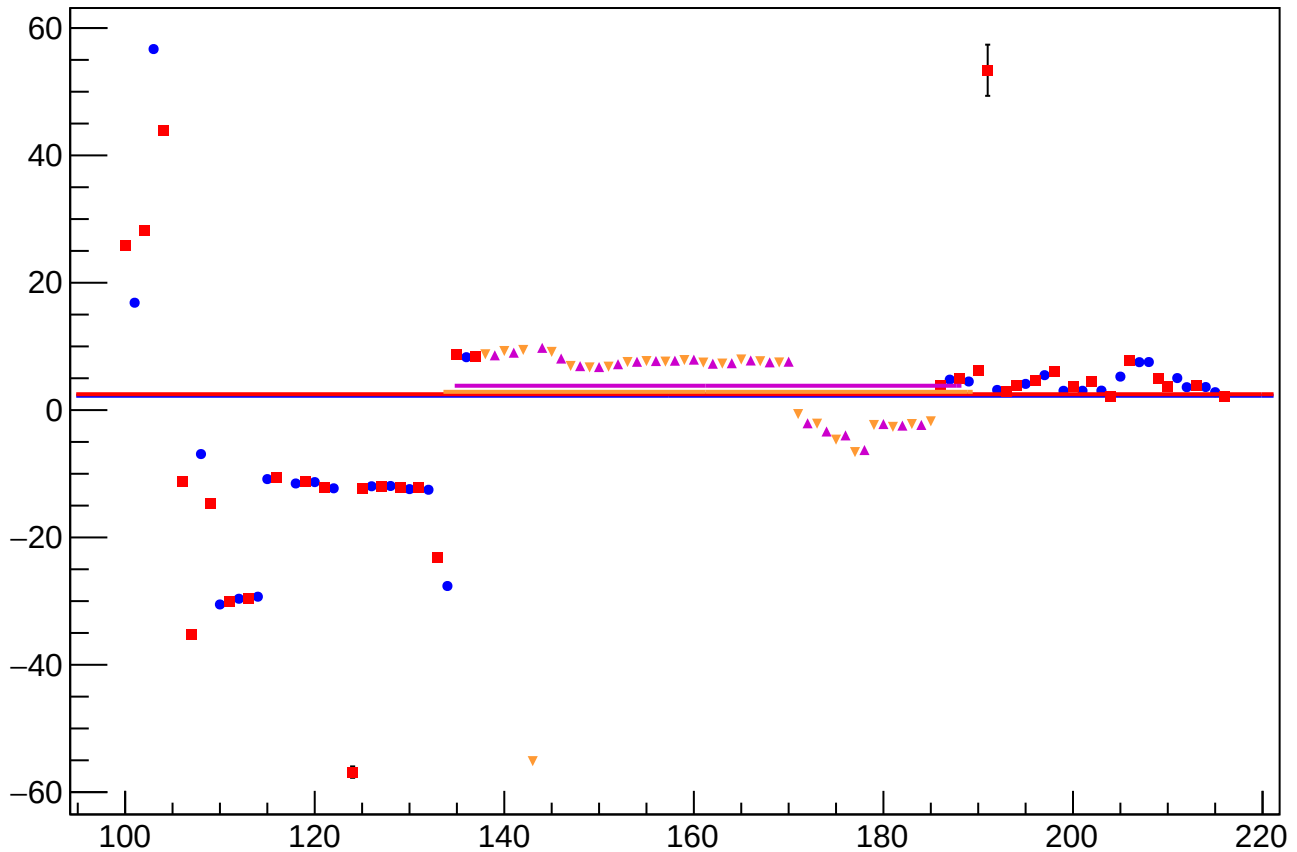
Left In: 2.519 $\pm$ 0.251  $\chi^2$ /NDF: 968.2/22

+ sign 2.939 $\pm$ 0.220  $\chi^2$ /NDF: 2120.8/55

All: 2.614 $\pm$ 0.157  $\chi^2$ /NDF: 4130.2/113

- sign 2.277 $\pm$ 0.224  $\chi^2$ /NDF: 2005.0/57

reg\_asym\_at1\_dd\_at2\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 2.252 $\pm$ 0.024  $\chi^2$ /NDF: 383014.4/30

Left Out: 2.870 $\pm$ 0.011  $\chi^2$ /NDF: 512331.0/24

Right Out: 2.493 $\pm$ 0.024  $\chi^2$ /NDF: 330761.3/34

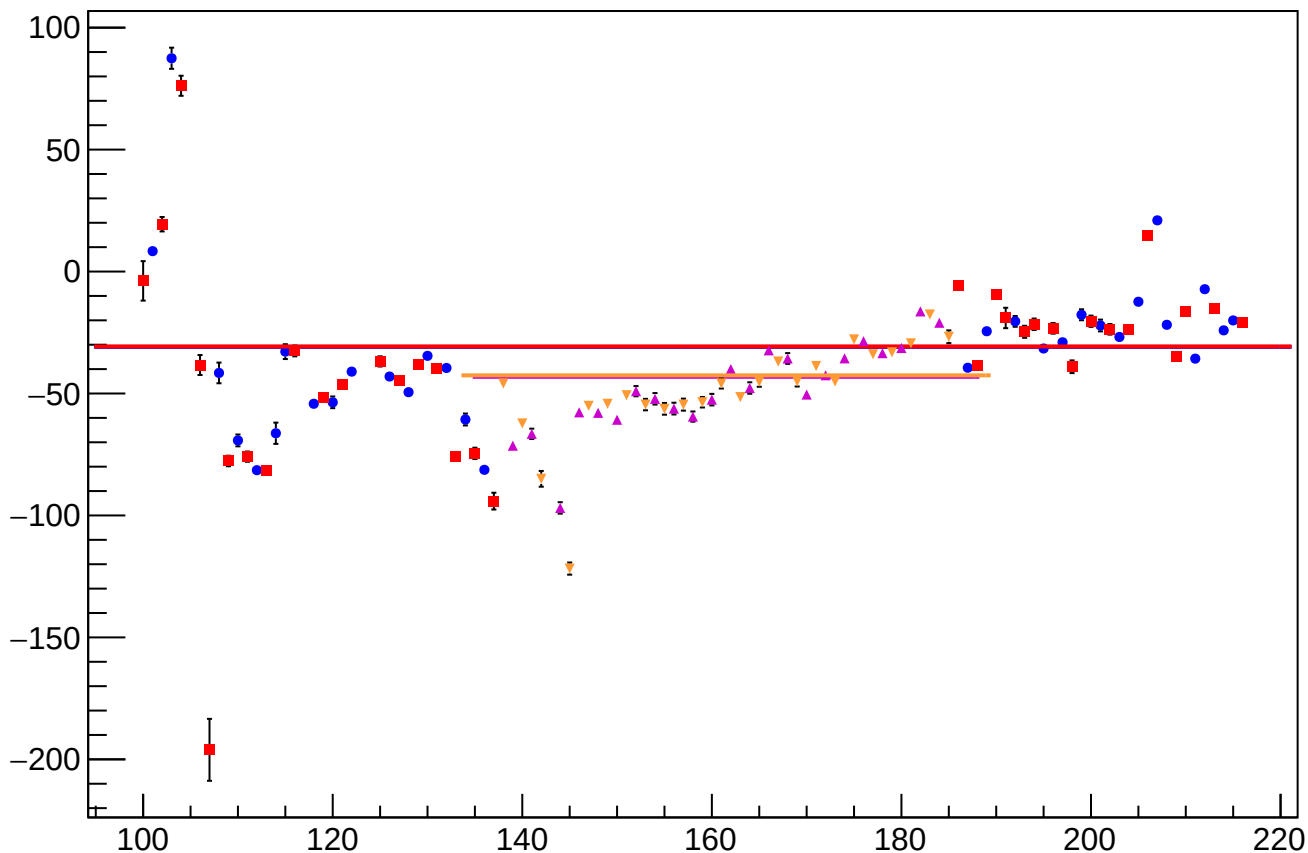
Left In: 3.825 $\pm$ 0.011  $\chi^2$ /NDF: 233224.7/22

+ sign 2.760 $\pm$ 0.010  $\chi^2$ /NDF: 895910.1/55

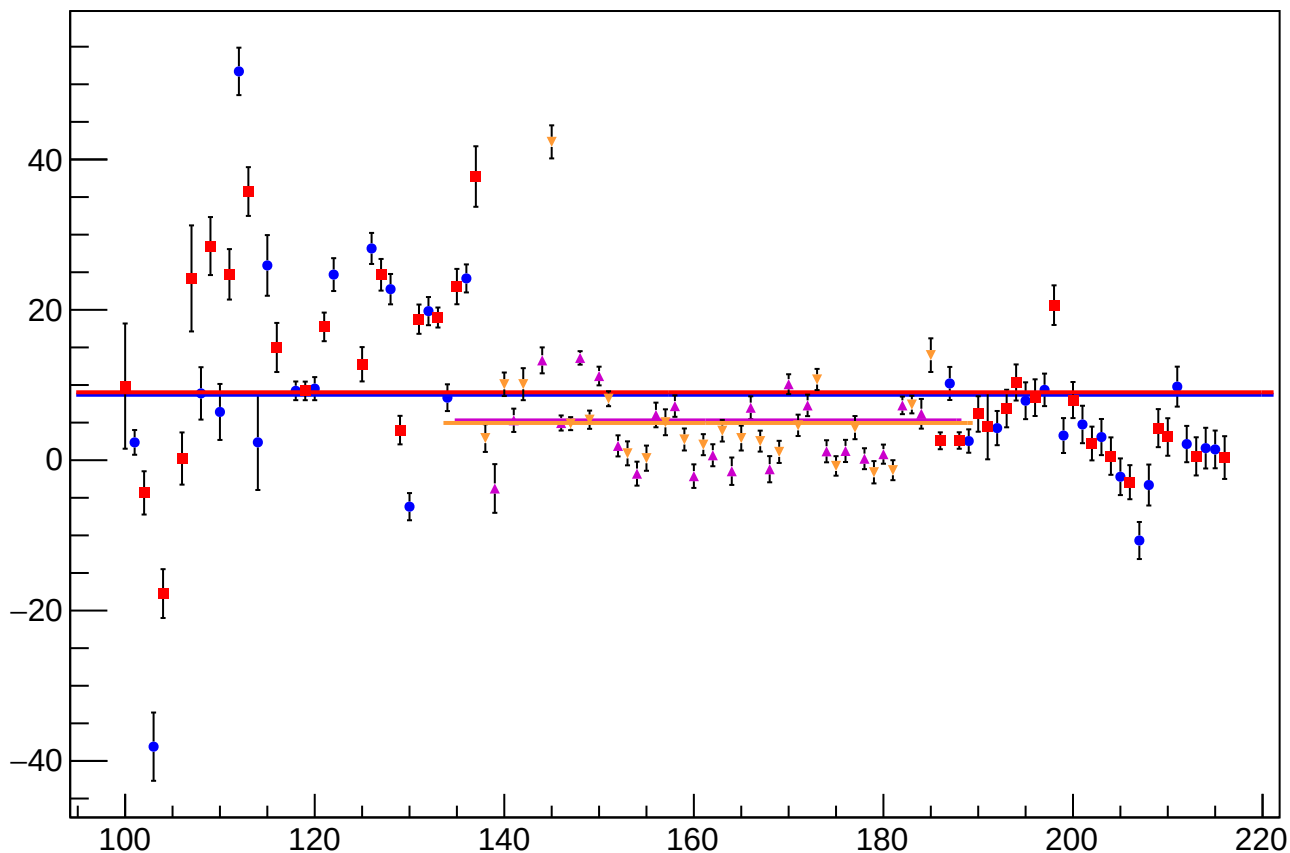
All: 3.169 $\pm$ 0.007  $\chi^2$ /NDF: 1465891.2/113

- sign 3.586 $\pm$ 0.010  $\chi^2$ /NDF: 566573.0/57

# reg\_asym\_usl\_atl1\_avg\_diff\_bpm1X\_slope vs Slug



# reg\_asym\_usl\_atl1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $8.705 \pm 0.392$   $\chi^2/\text{NDF}$ : 847.4/30

Left Out:  $4.954 \pm 0.288$   $\chi^2/\text{NDF}$ : 449.1/23

Right Out:  $9.033 \pm 0.373$   $\chi^2/\text{NDF}$ : 641.1/33

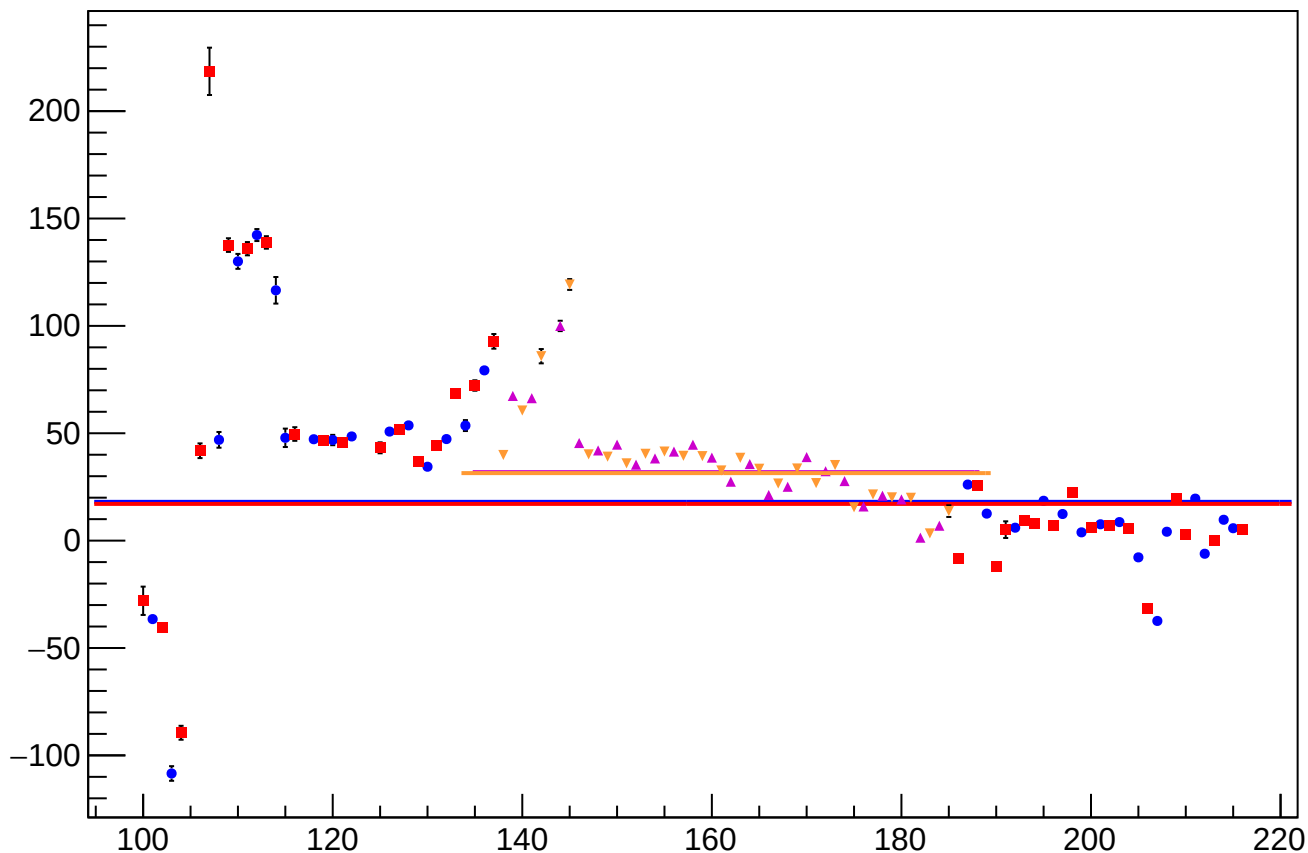
Left In:  $5.292 \pm 0.294$   $\chi^2/\text{NDF}$ : 286.4/22

+ sign  $6.272 \pm 0.232$   $\chi^2/\text{NDF}$ : 1355.8/54

All:  $6.502 \pm 0.164$   $\chi^2/\text{NDF}$ : 2347.4/111

- sign  $6.729 \pm 0.231$   $\chi^2/\text{NDF}$ : 989.6/56

reg\_asym\_usl\_atl1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 18.055 $\pm$ 0.327  $\chi^2$ /NDF: 11142.3/30

Left Out: 31.439 $\pm$ 0.376  $\chi^2$ /NDF: 2762.0/23

Right Out: 17.107 $\pm$ 0.296  $\chi^2$ /NDF: 12885.0/33

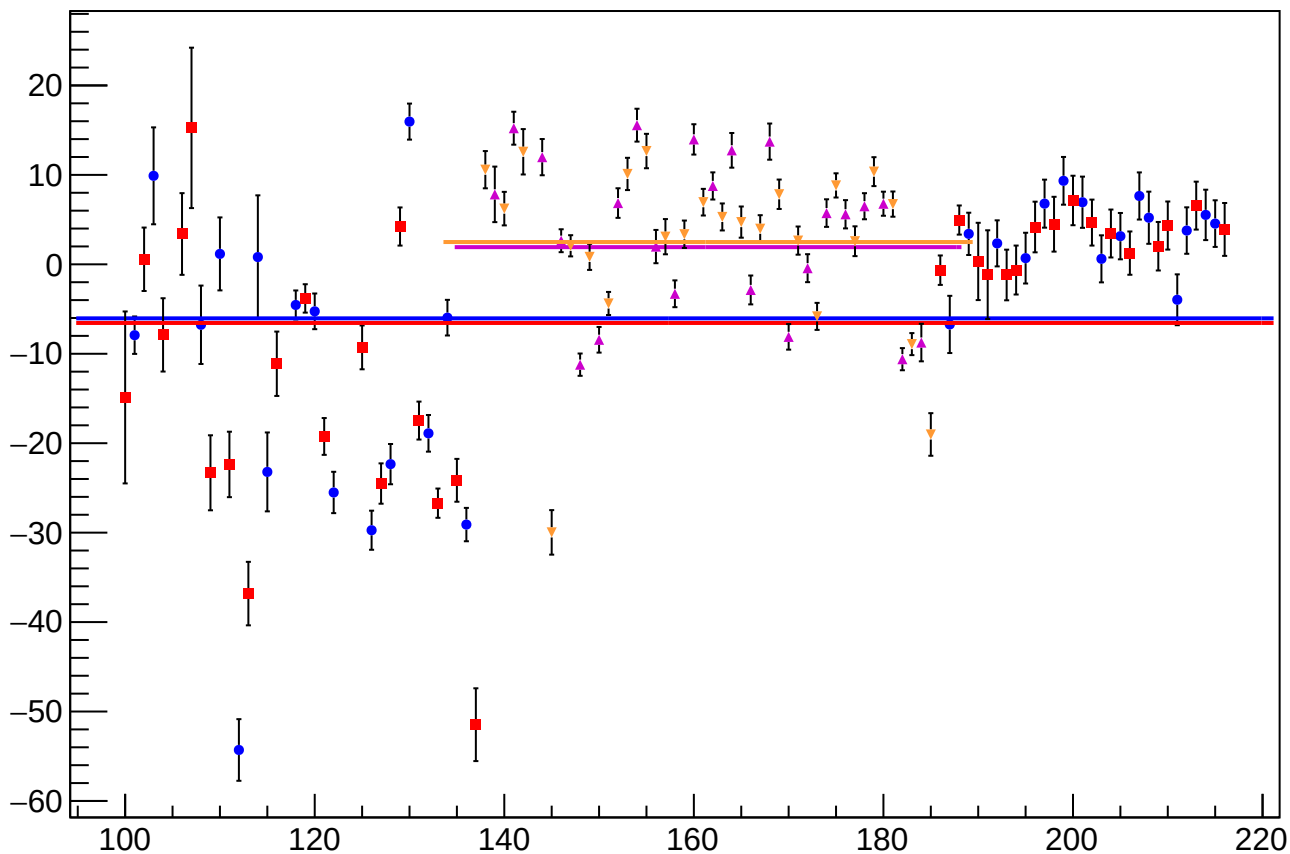
Left In: 31.895 $\pm$ 0.378  $\chi^2$ /NDF: 2767.3/22

+ sign 23.821 $\pm$ 0.246  $\chi^2$ /NDF: 14627.3/54

All: 23.238 $\pm$ 0.169  $\chi^2$ /NDF: 31239.4/111

- sign 22.718 $\pm$ 0.233  $\chi^2$ /NDF: 16601.5/56

reg\_asym\_usl\_atl1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-6.040 \pm 0.455$   $\chi^2/\text{NDF}$ : 995.9/30

Left Out:  $2.494 \pm 0.327$   $\chi^2/\text{NDF}$ : 558.7/23

Right Out:  $-6.556 \pm 0.447$   $\chi^2/\text{NDF}$ : 842.4/33

Left In:  $1.921 \pm 0.332$   $\chi^2/\text{NDF}$ : 678.8/22

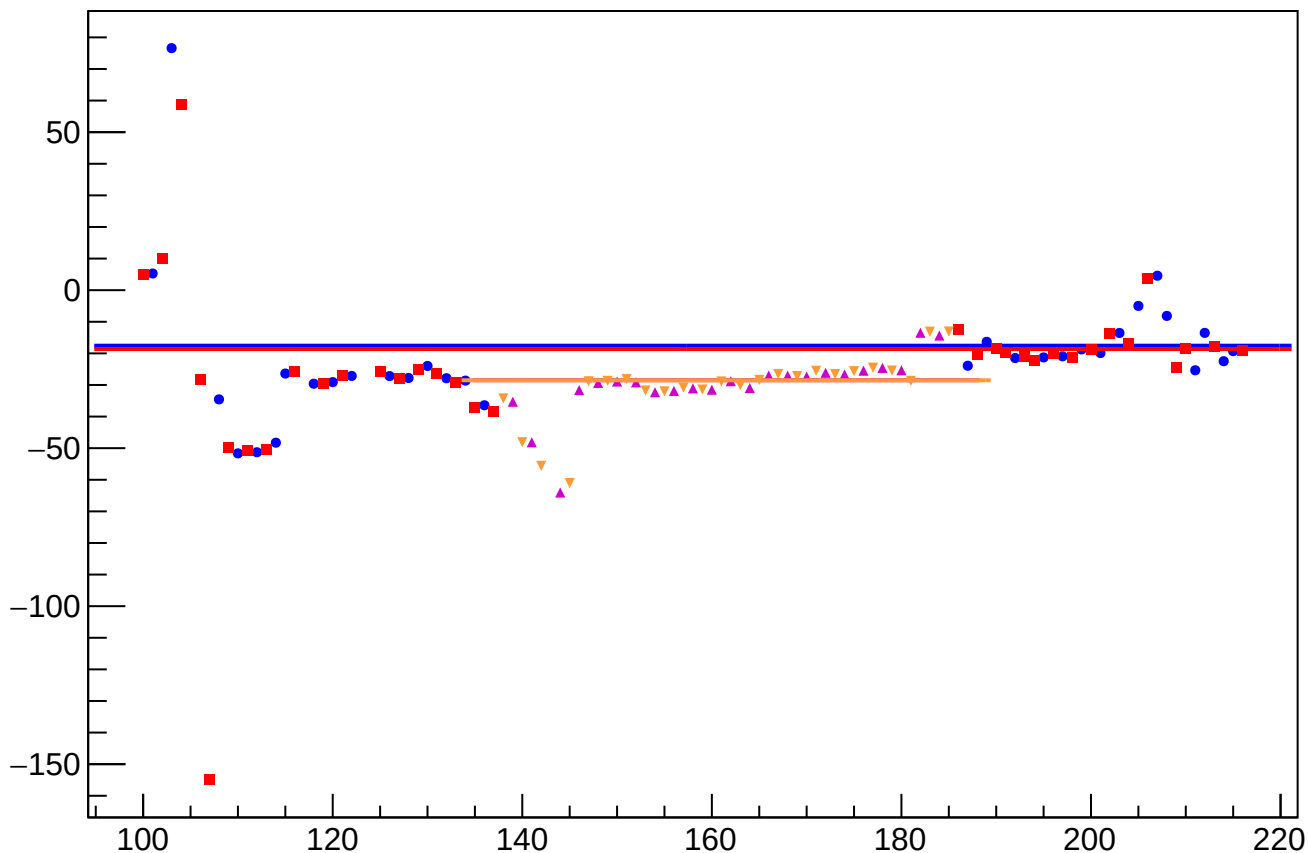
+ sign  $-0.411 \pm 0.265$   $\chi^2/\text{NDF}$ : 1786.9/54

All:  $-0.748 \pm 0.188$   $\chi^2/\text{NDF}$ : 3542.9/111

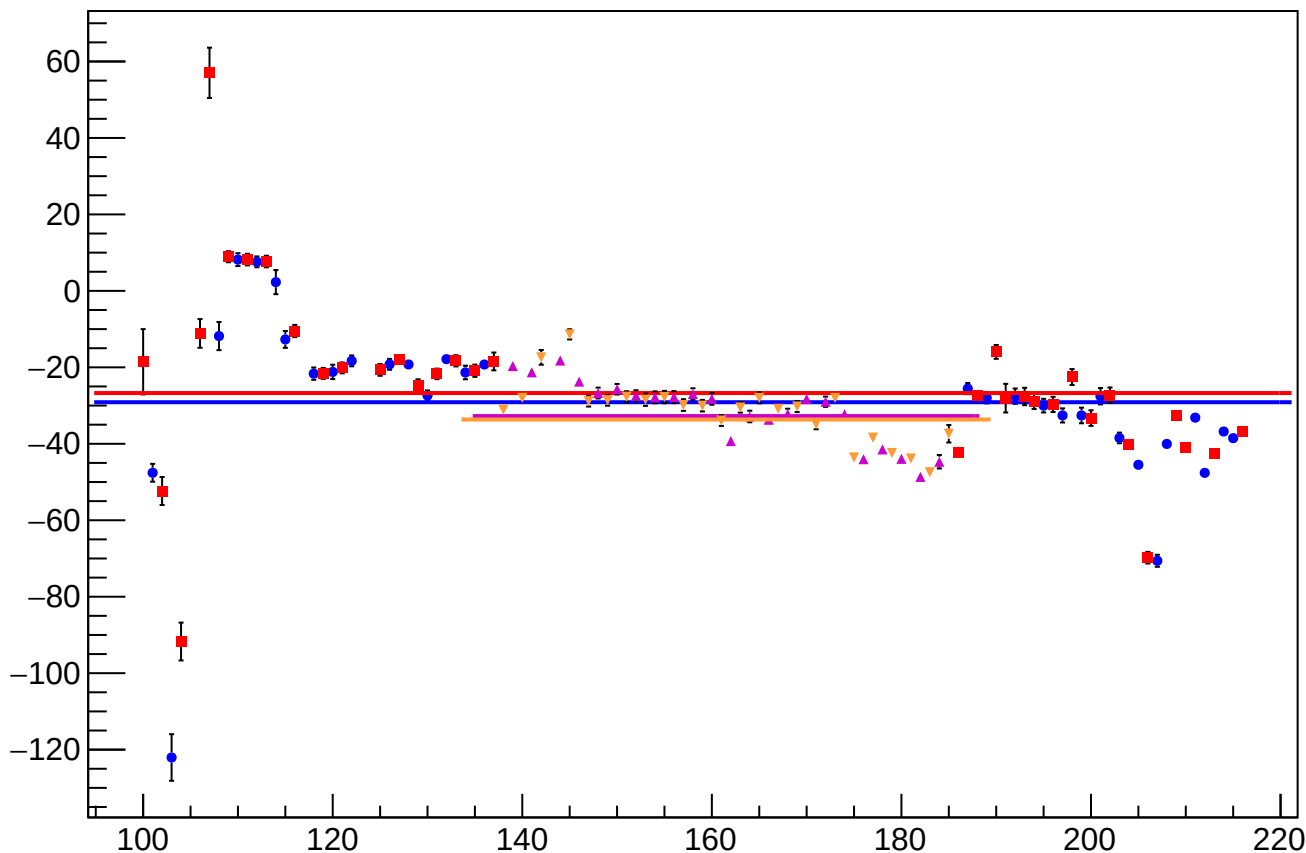
- sign  $-1.089 \pm 0.267$   $\chi^2/\text{NDF}$ : 1752.8/56



reg\_asym\_usl\_atl1\_avg\_diff\_bpm12X\_slope vs Slug



# reg\_asym\_usl\_atl1\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-29.126 \pm 0.264$   $\chi^2/\text{NDF}: 3482.6/30$

Left Out:  $-33.643 \pm 0.265$   $\chi^2/\text{NDF}: 1015.9/23$

Right Out:  $-26.725 \pm 0.264$   $\chi^2/\text{NDF}: 3964.3/33$

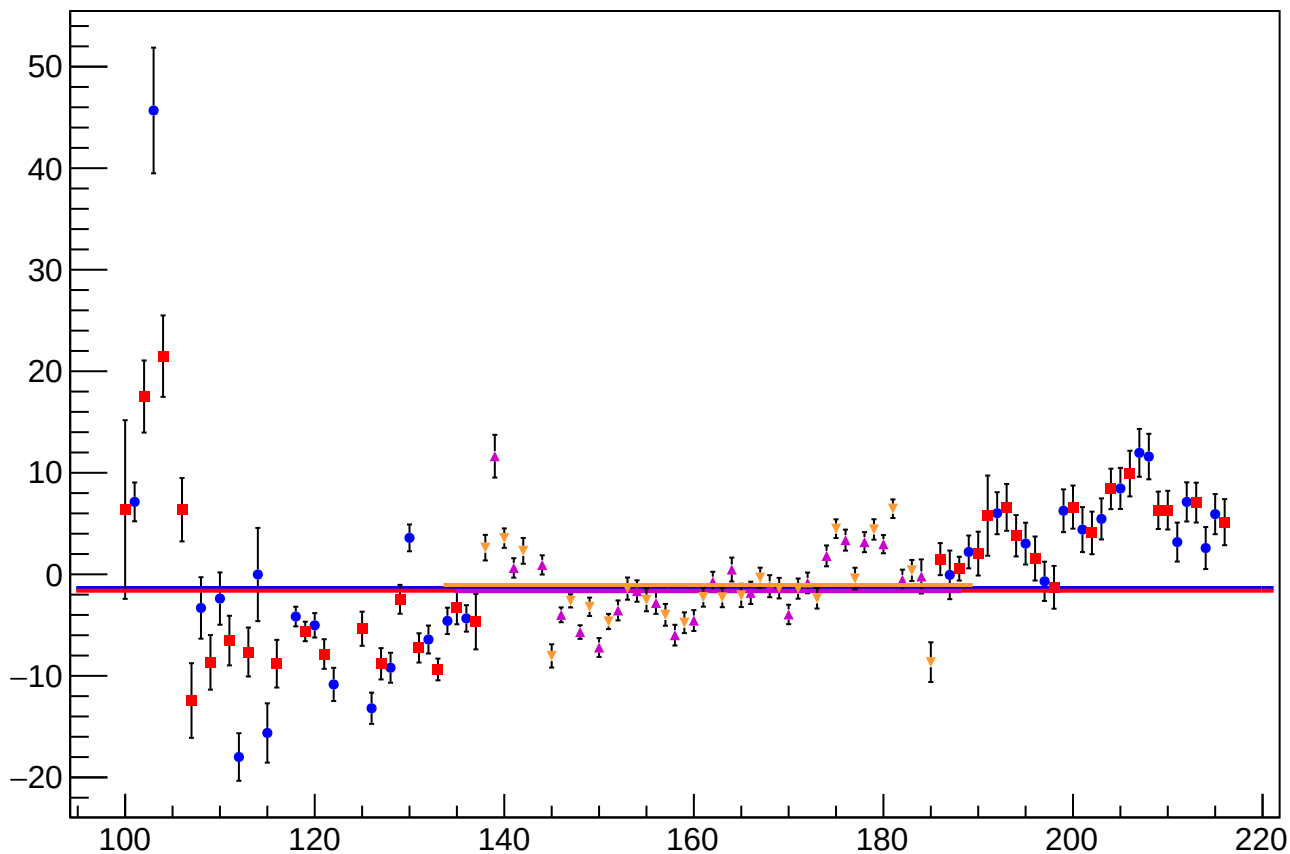
Left In:  $-32.750 \pm 0.269$   $\chi^2/\text{NDF}: 1143.5/22$

+ sign  $-31.370 \pm 0.187$   $\chi^2/\text{NDF}: 4644.6/54$

All:  $-30.531 \pm 0.133$   $\chi^2/\text{NDF}: 10049.4/111$

- sign  $-29.681 \pm 0.188$   $\chi^2/\text{NDF}: 5364.2/56$

reg\_asym\_usl\_atl1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-1.346 \pm 0.319$   $\chi^2/\text{NDF}: 515.2/30$

Left Out:  $-1.050 \pm 0.203$   $\chi^2/\text{NDF}: 289.4/23$

Right Out:  $-1.612 \pm 0.318$   $\chi^2/\text{NDF}: 411.8/33$

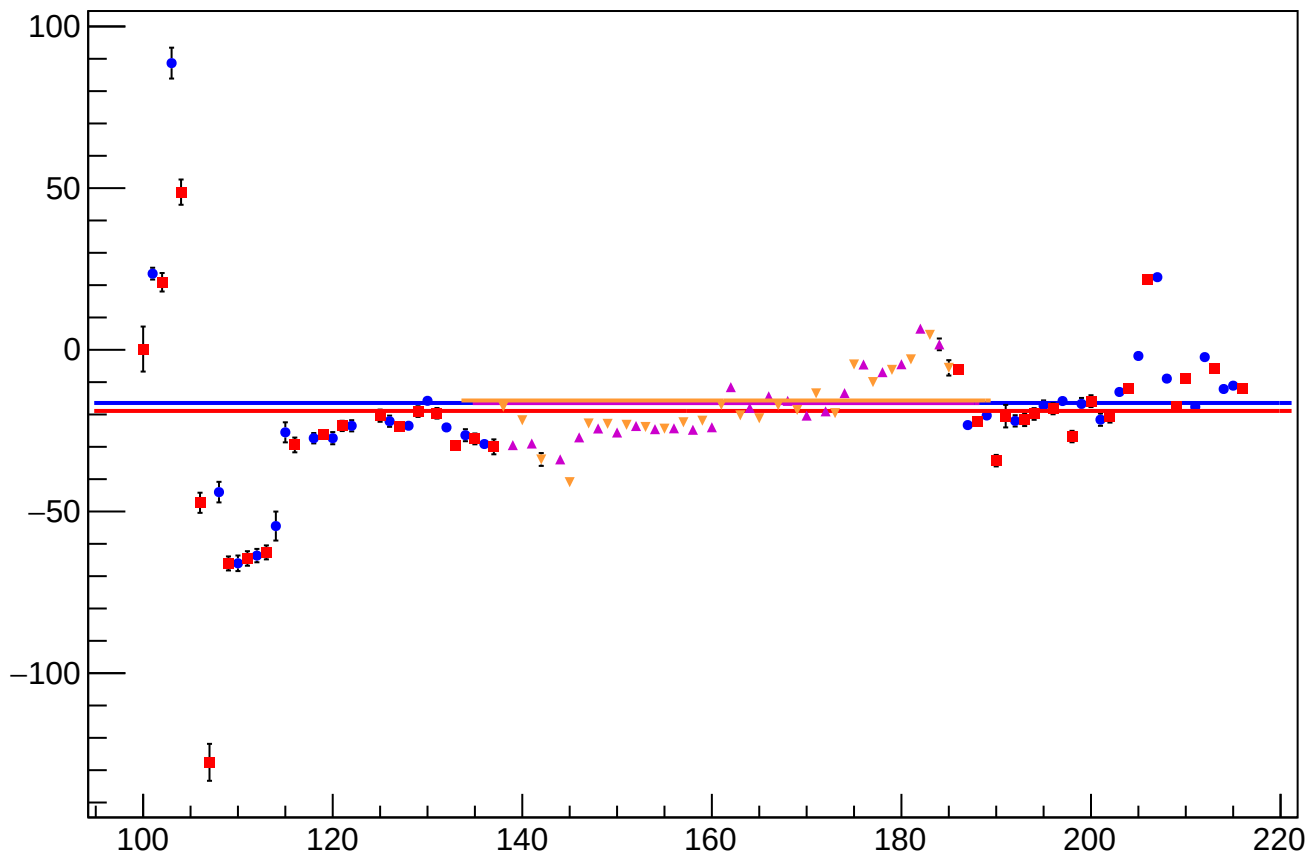
Left In:  $-1.659 \pm 0.207$   $\chi^2/\text{NDF}: 264.4/22$

+ sign  $-1.135 \pm 0.171$   $\chi^2/\text{NDF}: 805.2/54$

All:  $-1.387 \pm 0.122$   $\chi^2/\text{NDF}: 1485.8/111$

- sign  $-1.645 \pm 0.173$   $\chi^2/\text{NDF}: 676.2/56$

reg\_asym\_usl\_atl1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-16.437 \pm 0.273$   $\chi^2/\text{NDF}$ : 3475.6/30

Left Out:  $-15.674 \pm 0.263$   $\chi^2/\text{NDF}$ : 1520.8/23

Right Out:  $-18.903 \pm 0.267$   $\chi^2/\text{NDF}$ : 3751.1/33

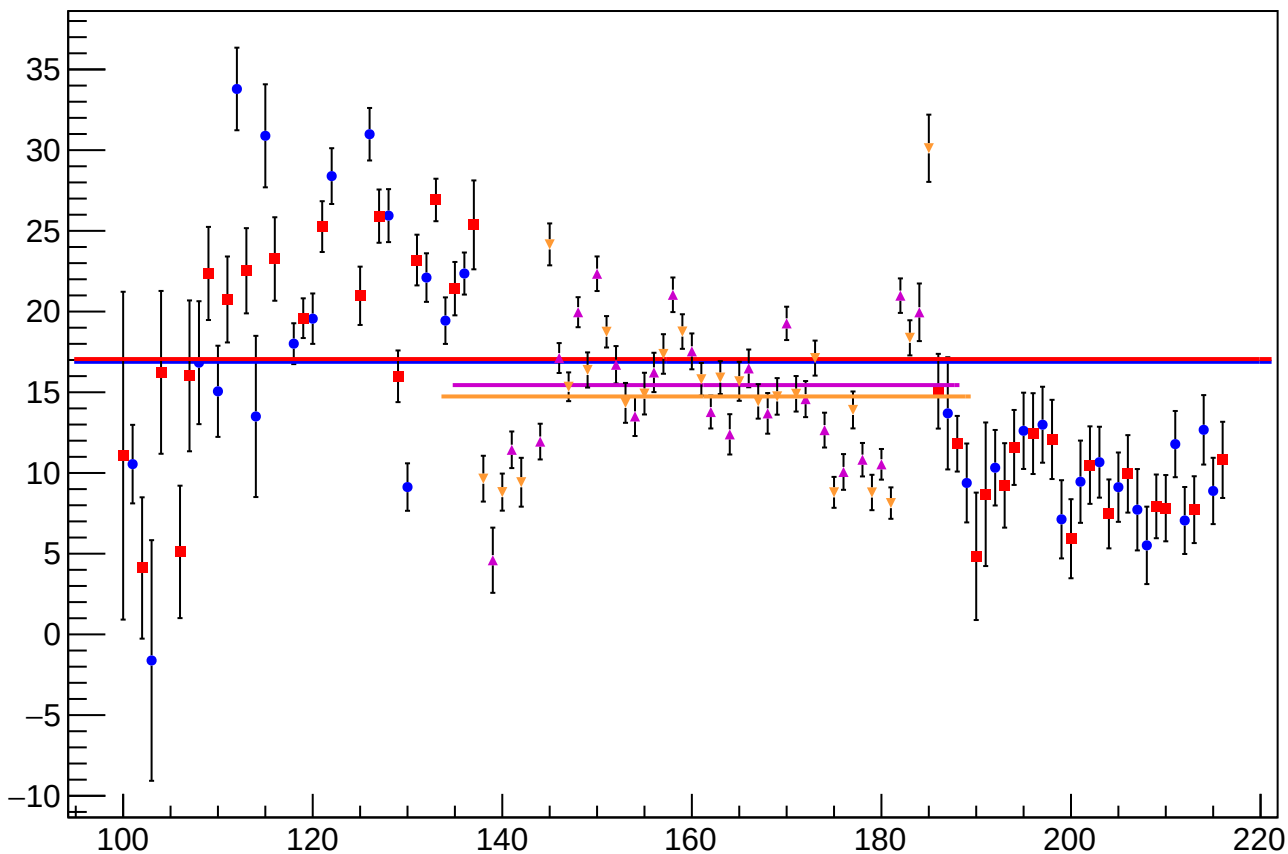
Left In:  $-16.480 \pm 0.266$   $\chi^2/\text{NDF}$ : 1697.7/22

+ sign  $-16.041 \pm 0.190$   $\chi^2/\text{NDF}$ : 5000.5/54

All:  $-16.869 \pm 0.134$   $\chi^2/\text{NDF}$ : 10528.6/111

- sign  $-17.687 \pm 0.188$   $\chi^2/\text{NDF}$ : 5490.2/56

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 16.887 $\pm$ 0.364  $\chi^2/\text{NDF}$ : 444.2/30

Left Out: 14.740 $\pm$ 0.229  $\chi^2/\text{NDF}$ :331.0/23

Right Out: 17.057 $\pm$ 0.370  $\chi^2/\text{NDF}$ : 357.0/33

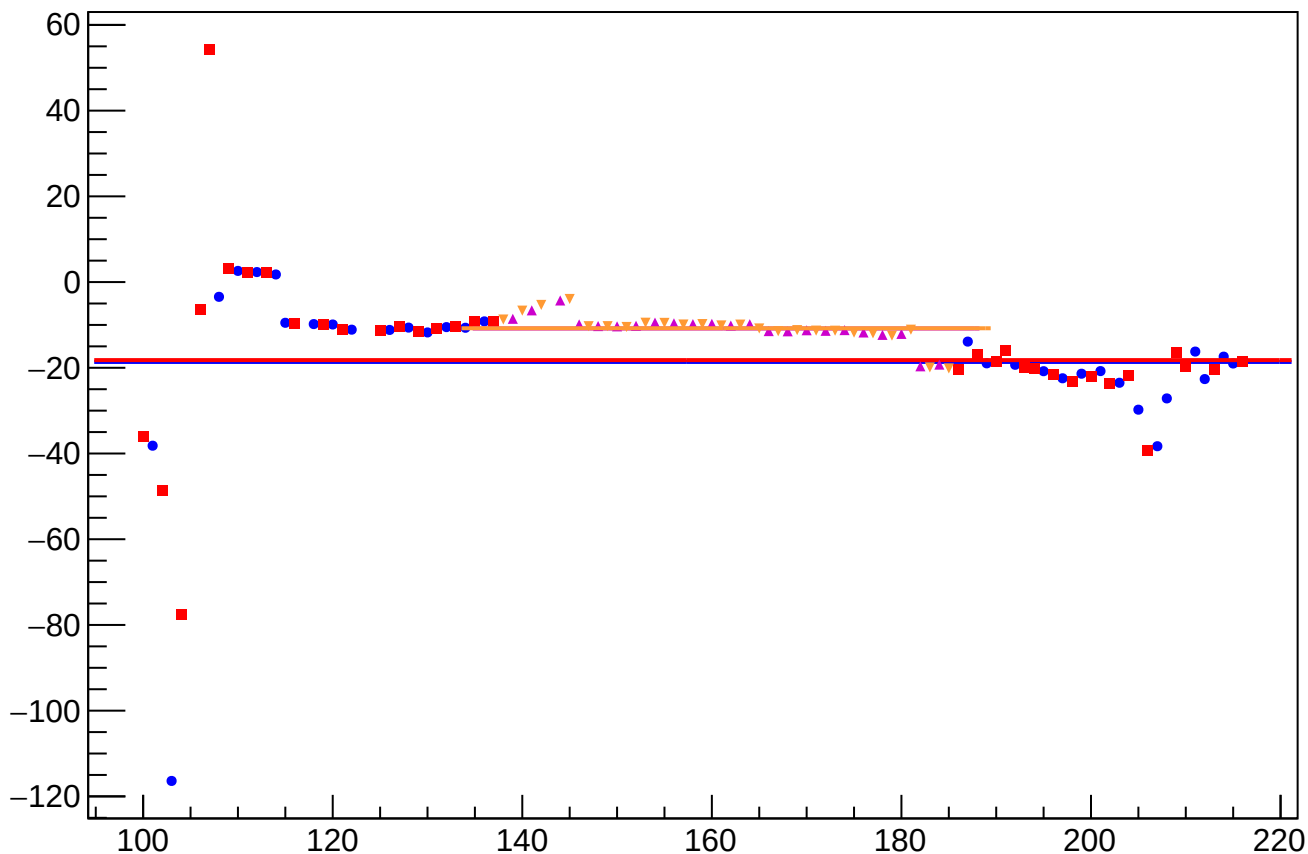
Left In: 15.444 $\pm$ 0.233  $\chi^2/\text{NDF}$ :290.4/22

+ sign 15.351 $\pm$ 0.194  $\chi^2/\text{NDF}$ : 800.1/54

All: 15.622 $\pm$ 0.138  $\chi^2/\text{NDF}$ : 1465.1/111

- sign 15.902 $\pm$ 0.197  $\chi^2/\text{NDF}$ : 661.0/56

# reg\_asym\_usl\_atl1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-18.634 \pm 0.018$   $\chi^2/\text{NDF}: 456319.2/30$

Left Out:  $-10.778 \pm 0.010$   $\chi^2/\text{NDF}: 84755.9/23$

Right Out:  $-18.208 \pm 0.018$   $\chi^2/\text{NDF}: 433275.5/33$

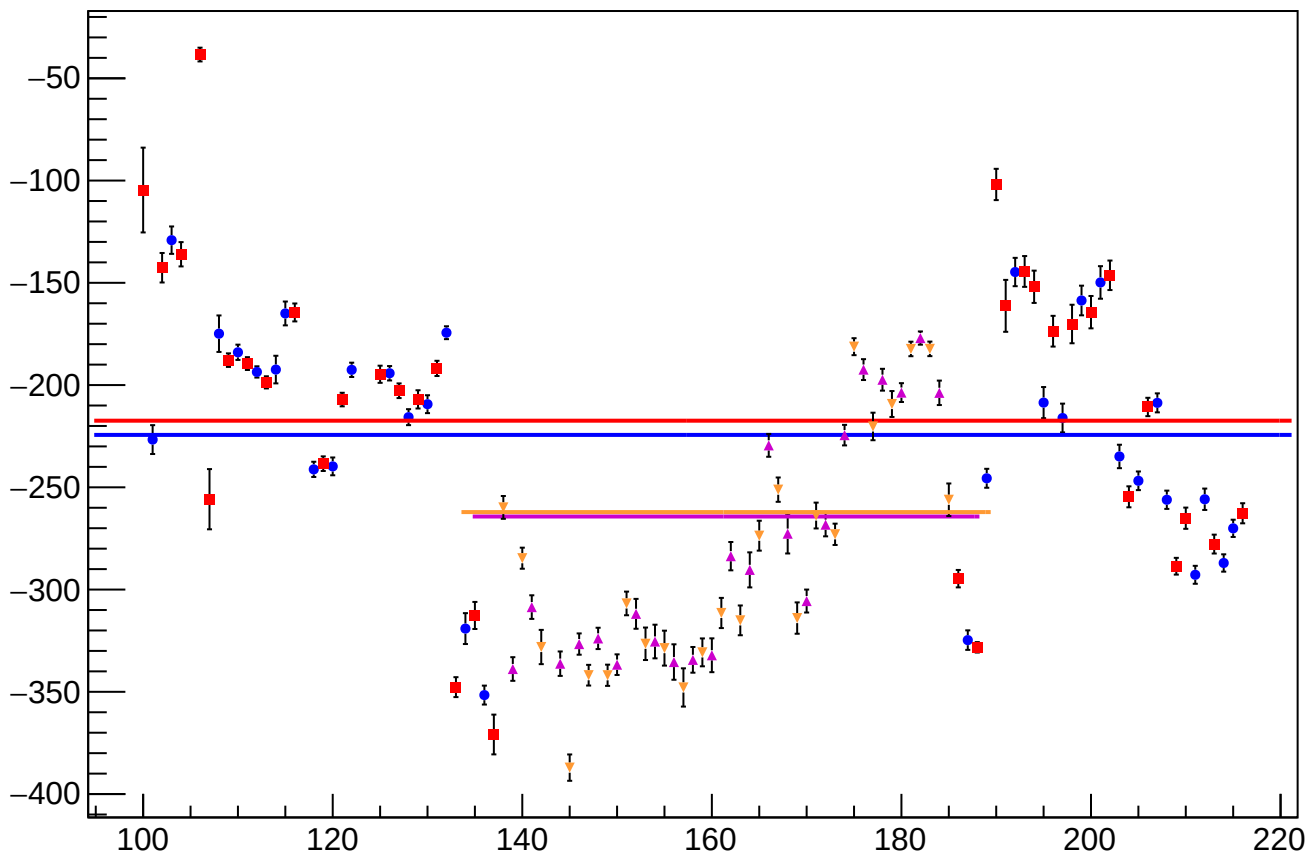
Left In:  $-10.834 \pm 0.010$   $\chi^2/\text{NDF}: 74113.9/22$

+ sign  $-12.736 \pm 0.009$   $\chi^2/\text{NDF}: 686517.7/54$

All:  $-12.701 \pm 0.006$   $\chi^2/\text{NDF}: 1320909.2/111$

- sign  $-12.665 \pm 0.009$   $\chi^2/\text{NDF}: 634359.9/56$

# reg\_asym\_usl\_atl2\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -224.373+/-0.834  $\chi^2$ /NDF: 3444.3/30

Left Out: -262.110+/-1.179  $\chi^2$ /NDF:2964.6/23

Right Out: -217.420+/-0.789  $\chi^2$ /NDF: 8343.2/33

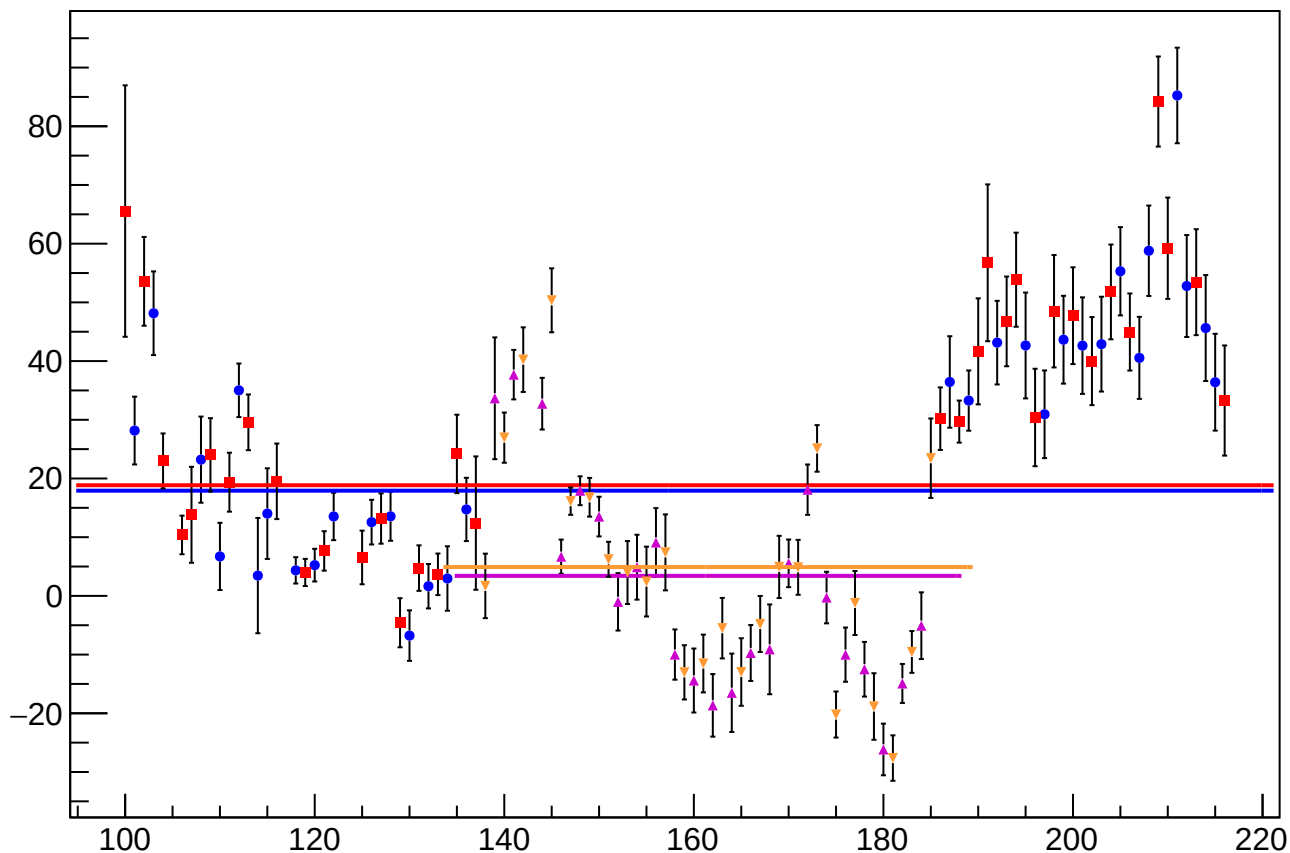
Left In: -264.272+/-1.186  $\chi^2$ /NDF:2741.9/22

+ sign -236.952+/-0.681  $\chi^2$ /NDF: 7091.5/54

All: -234.291+/-0.473  $\chi^2$ /NDF: 19288.0/111

- sign -231.812+/-0.657  $\chi^2$ /NDF: 12167.0/56

reg\_asym\_usl\_atl2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 17.924 $\pm$ 0.935  $\chi^2$ /NDF: 393.2/30

Left Out: 4.909 $\pm$ 0.886  $\chi^2$ /NDF: 398.9/23

Right Out: 18.849 $\pm$ 0.901  $\chi^2$ /NDF: 401.0/33

Left In: 3.409 $\pm$ 0.901  $\chi^2$ /NDF: 333.3/22

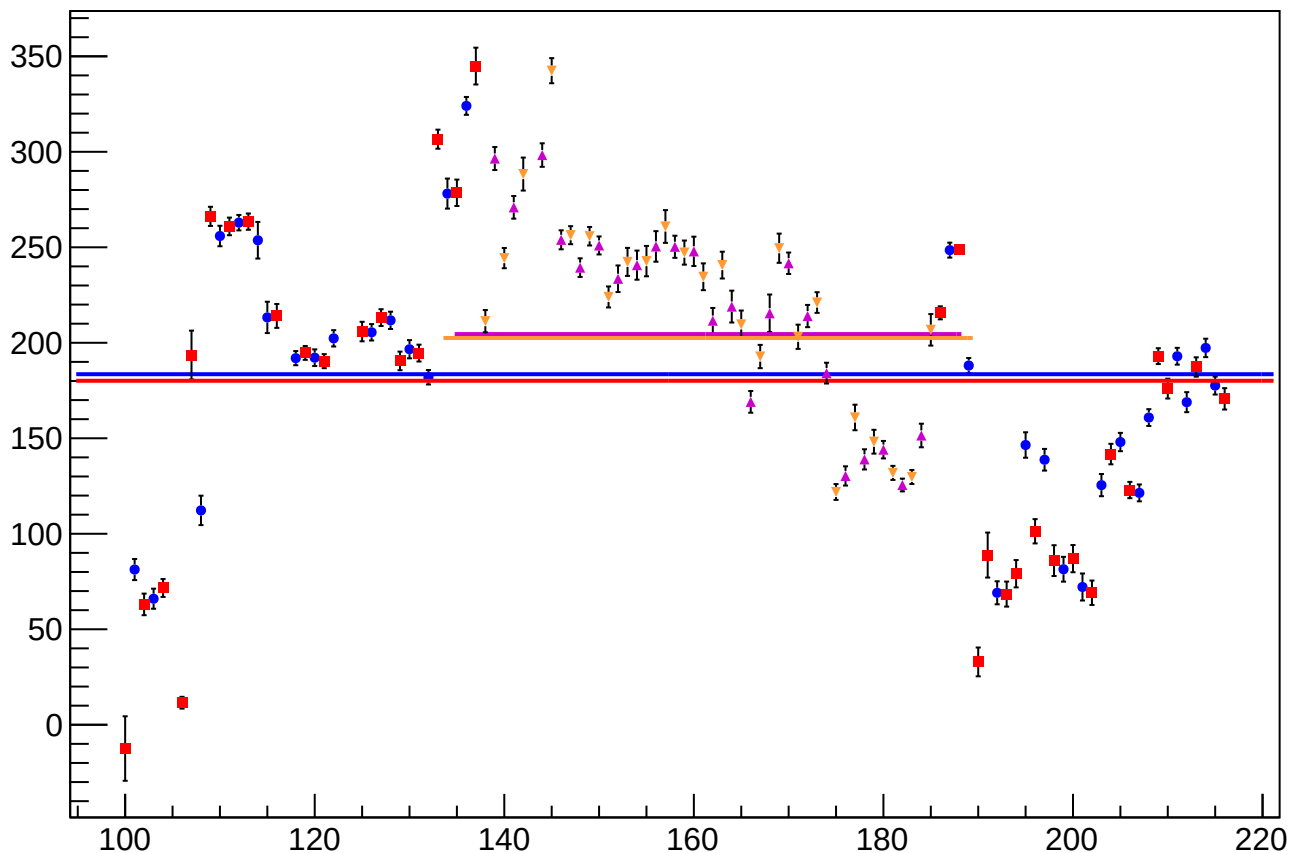
+ sign 11.068 $\pm$ 0.643  $\chi^2$ /NDF: 894.2/54

All: 11.099 $\pm$ 0.453  $\chi^2$ /NDF: 1775.4/111

- sign 11.129 $\pm$ 0.637  $\chi^2$ /NDF: 881.2/56



# reg\_asym\_usl\_atl2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 183.553 $\pm$ 0.887  $\chi^2$ /NDF: 4339.4/30

Left Out: 202.511 $\pm$ 1.173  $\chi^2$ /NDF:2393.5/23

Right Out: 180.118 $\pm$ 0.818  $\chi^2$ /NDF: 9503.1/33

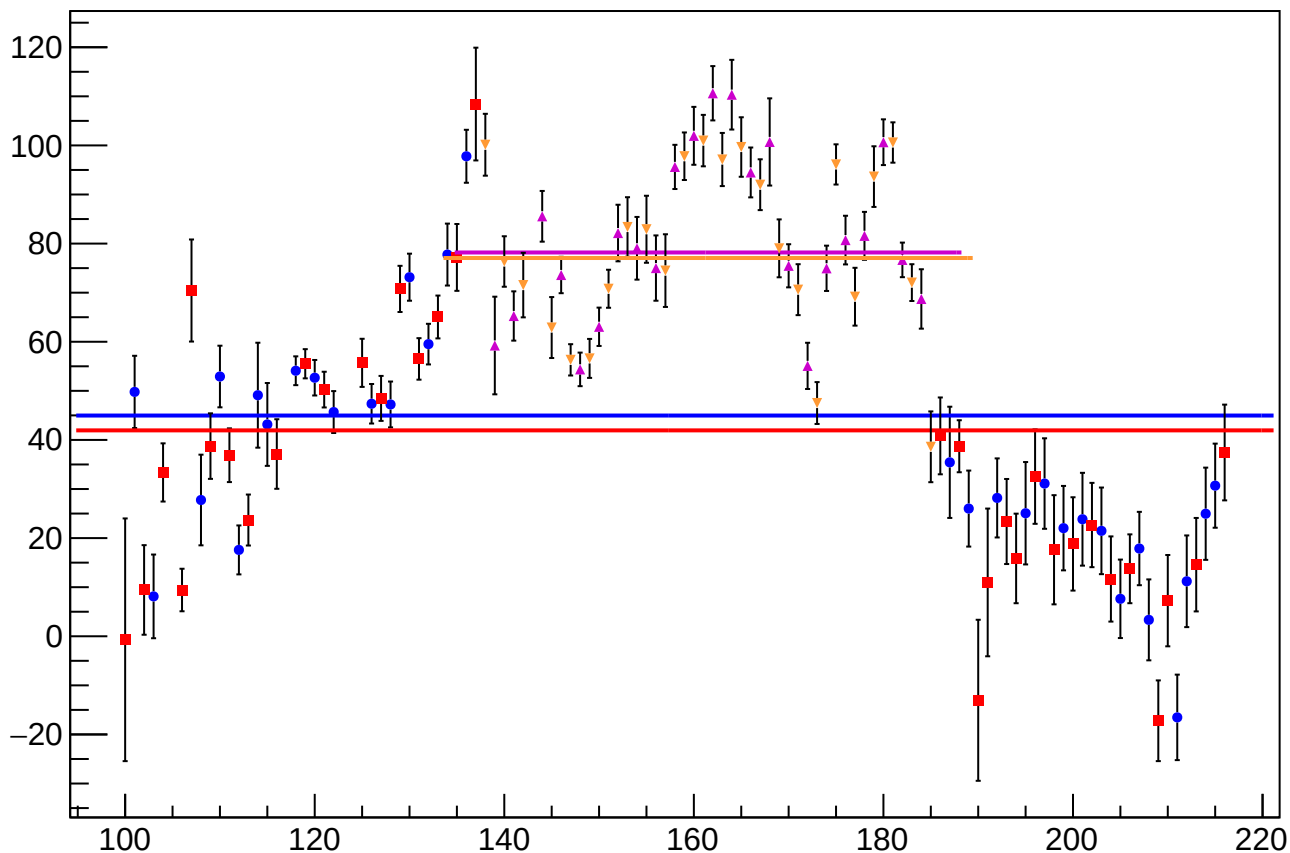
Left In: 204.560 $\pm$ 1.177  $\chi^2$ /NDF:2285.7/22

+ sign 190.450 $\pm$ 0.707  $\chi^2$ /NDF: 6899.1/54

All: 189.203 $\pm$ 0.487  $\chi^2$ /NDF: 18984.5/111

- sign 188.078 $\pm$ 0.672  $\chi^2$ /NDF: 12079.4/56

reg\_asym\_usl\_atl2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 44.969 $\pm$ 1.088  $\chi^2$ /NDF: 406.0/30

Left Out: 77.061 $\pm$ 1.015  $\chi^2$ /NDF:311.3/23

Right Out: 41.946 $\pm$ 1.061  $\chi^2$ /NDF: 417.1/33

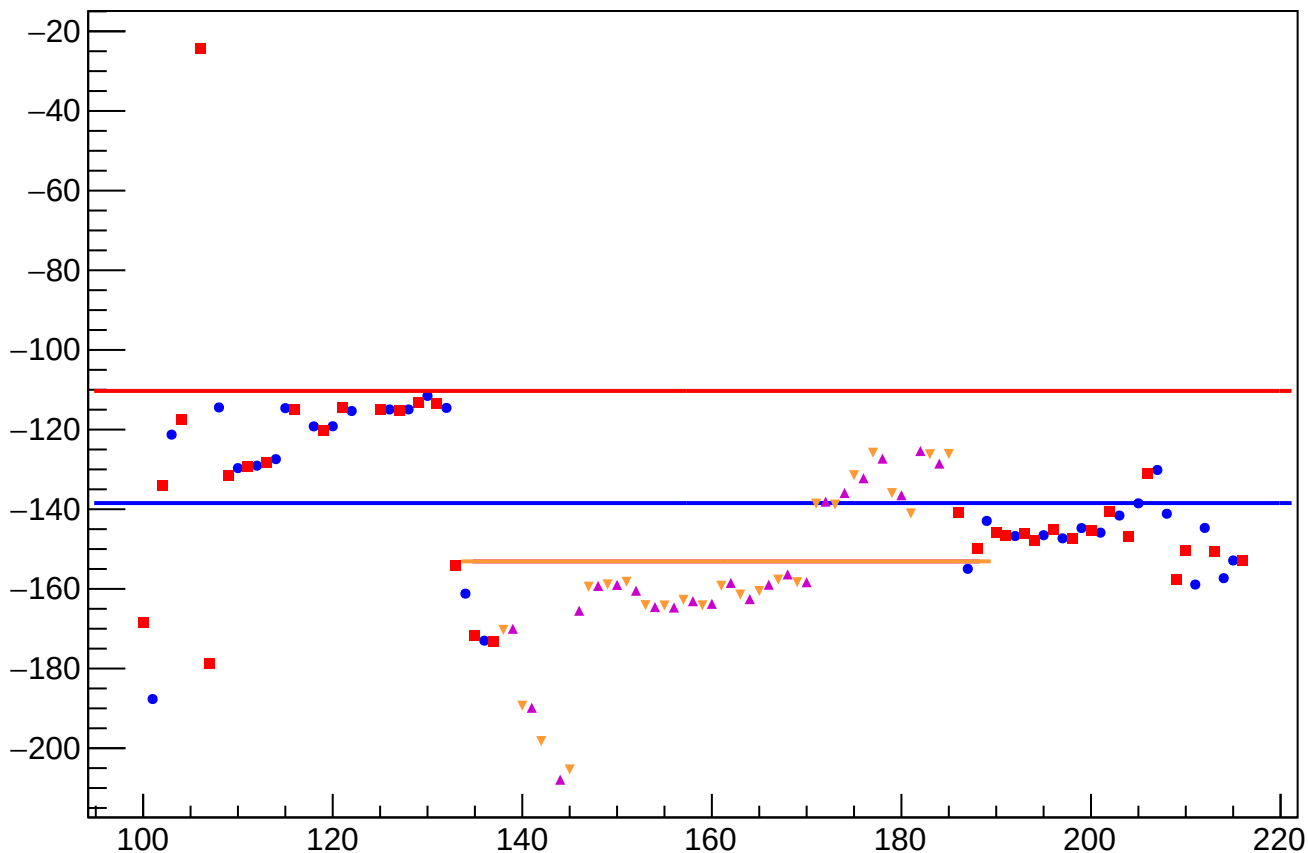
Left In: 78.189 $\pm$ 1.026  $\chi^2$ /NDF:232.5/22

+ sign 62.121 $\pm$ 0.742  $\chi^2$ /NDF: 1182.4/54

All: 61.396 $\pm$ 0.523  $\chi^2$ /NDF: 2437.3/111

- sign 60.679 $\pm$ 0.737  $\chi^2$ /NDF: 1252.9/56

reg\_asym\_usl\_atl2\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-138.451 \pm 0.059$   $\chi^2/\text{NDF}: 109254.1/30$

Left Out:  $-153.090 \pm 0.047$   $\chi^2/\text{NDF}: 177552.0/23$

+ sign  $-147.405 \pm 0.037$   $\chi^2/\text{NDF}: 324615.0/54$

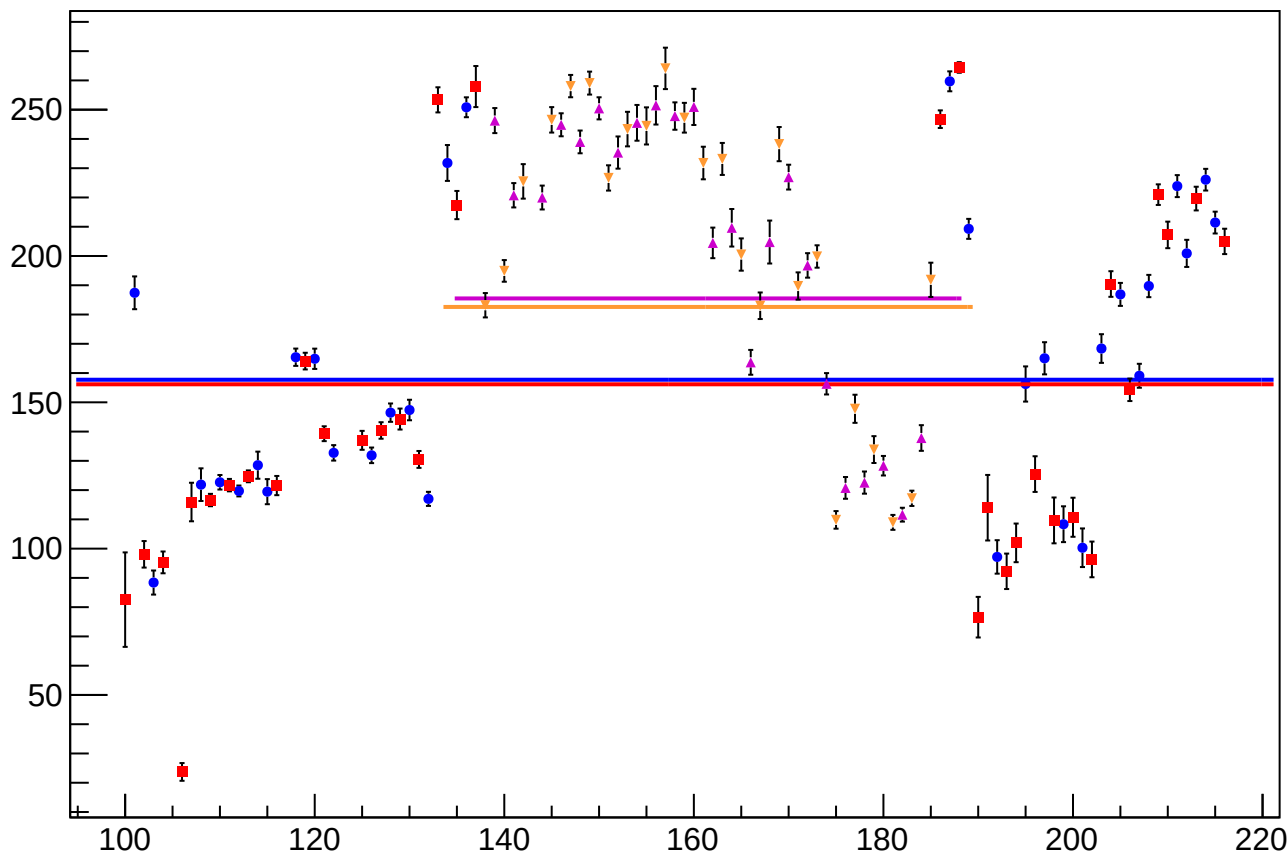
Right Out:  $-110.291 \pm 0.051$   $\chi^2/\text{NDF}: 1024957.2/33$

All:  $-139.965 \pm 0.025$   $\chi^2/\text{NDF}: 1979916.5/11$

Left In:  $-153.103 \pm 0.047$   $\chi^2/\text{NDF}: 166644.2/22$

- sign  $-133.462 \pm 0.034$   $\chi^2/\text{NDF}: 1578259.2/56$

# reg\_asym\_usl\_atl2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $157.717 \pm 0.641$   $\chi^2/\text{NDF}: 4940.4/30$

Left Out:  $182.591 \pm 0.866$   $\chi^2/\text{NDF}: 4152.3/23$

Right Out:  $156.156 \pm 0.597$   $\chi^2/\text{NDF}: 10371.6/33$

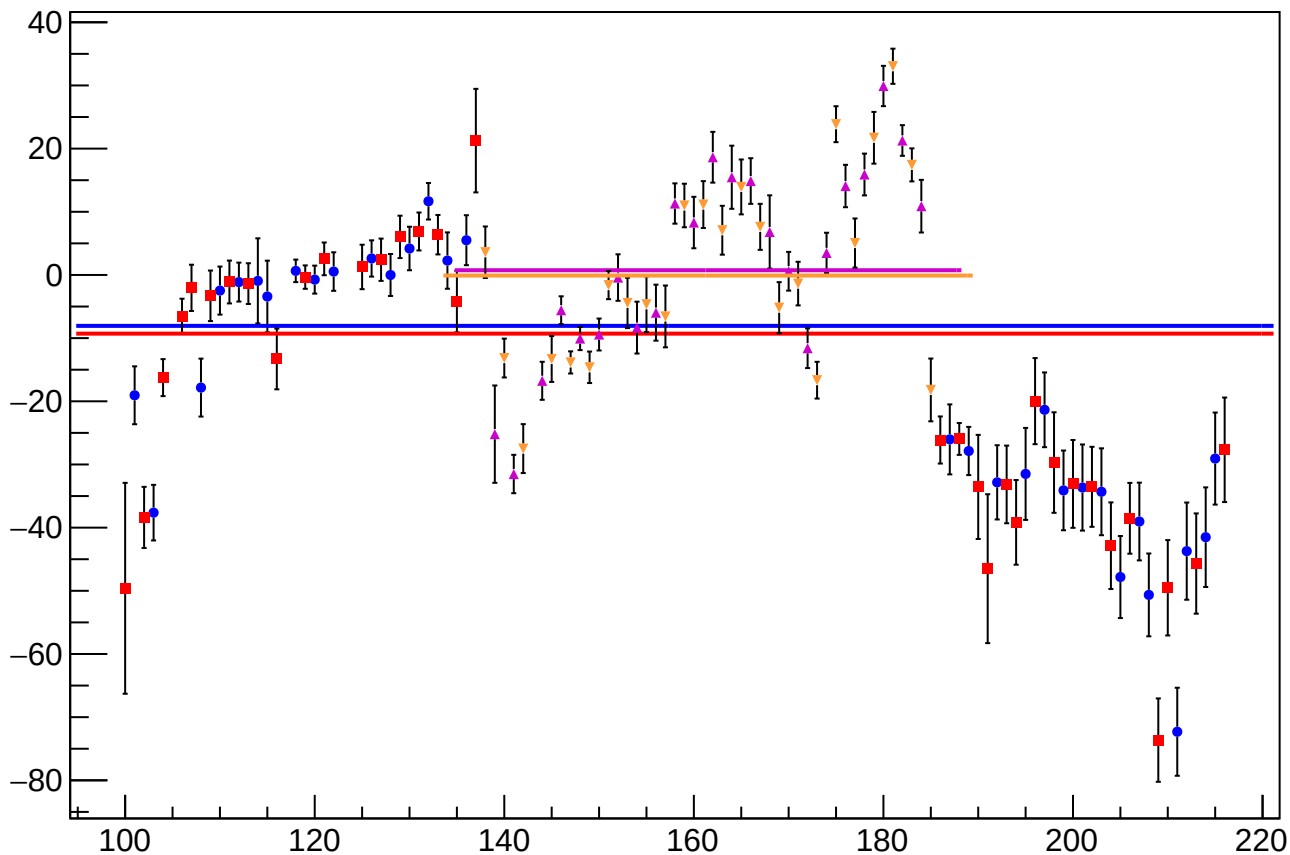
Left In:  $185.497 \pm 0.872$   $\chi^2/\text{NDF}: 3822.2/22$

+ sign  $166.520 \pm 0.515$   $\chi^2/\text{NDF}: 9625.8/54$

All:  $165.994 \pm 0.356$   $\chi^2/\text{NDF}: 24592.1/111$

- sign  $165.513 \pm 0.493$   $\chi^2/\text{NDF}: 14964.2/56$

# reg\_asym\_usl\_atl2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-8.057 \pm 0.721$   $\chi^2/\text{NDF}$ : 557.4/30

Left Out:  $-0.092 \pm 0.655$   $\chi^2/\text{NDF}$ : 555.3/23

Right Out:  $-9.289 \pm 0.684$   $\chi^2/\text{NDF}$ : 576.7/33

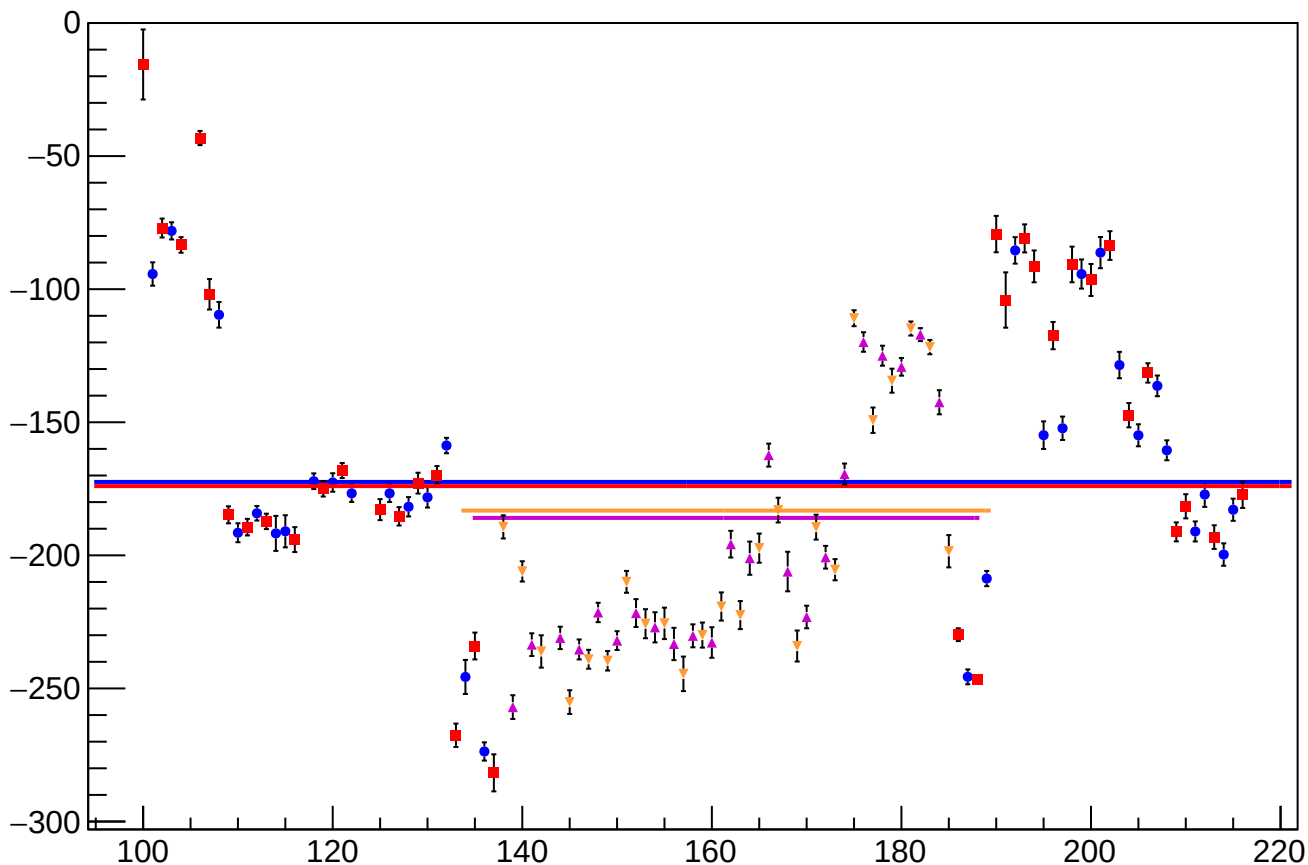
Left In:  $0.747 \pm 0.665$   $\chi^2/\text{NDF}$ : 497.8/22

+ sign  $-3.690 \pm 0.485$   $\chi^2/\text{NDF}$ : 1179.6/54

All:  $-3.913 \pm 0.340$   $\chi^2/\text{NDF}$ : 2365.0/111

- sign  $-4.130 \pm 0.477$   $\chi^2/\text{NDF}$ : 1185.0/56

reg\_asym\_usl\_atl2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-172.410 \pm 0.686$   $\chi^2/\text{NDF}$ : 4313.8/30

Left Out:  $-183.175 \pm 0.862$   $\chi^2/\text{NDF}$ : 3361.2/23

Right Out:  $-173.987 \pm 0.620$   $\chi^2/\text{NDF}$ : 10043.9/33

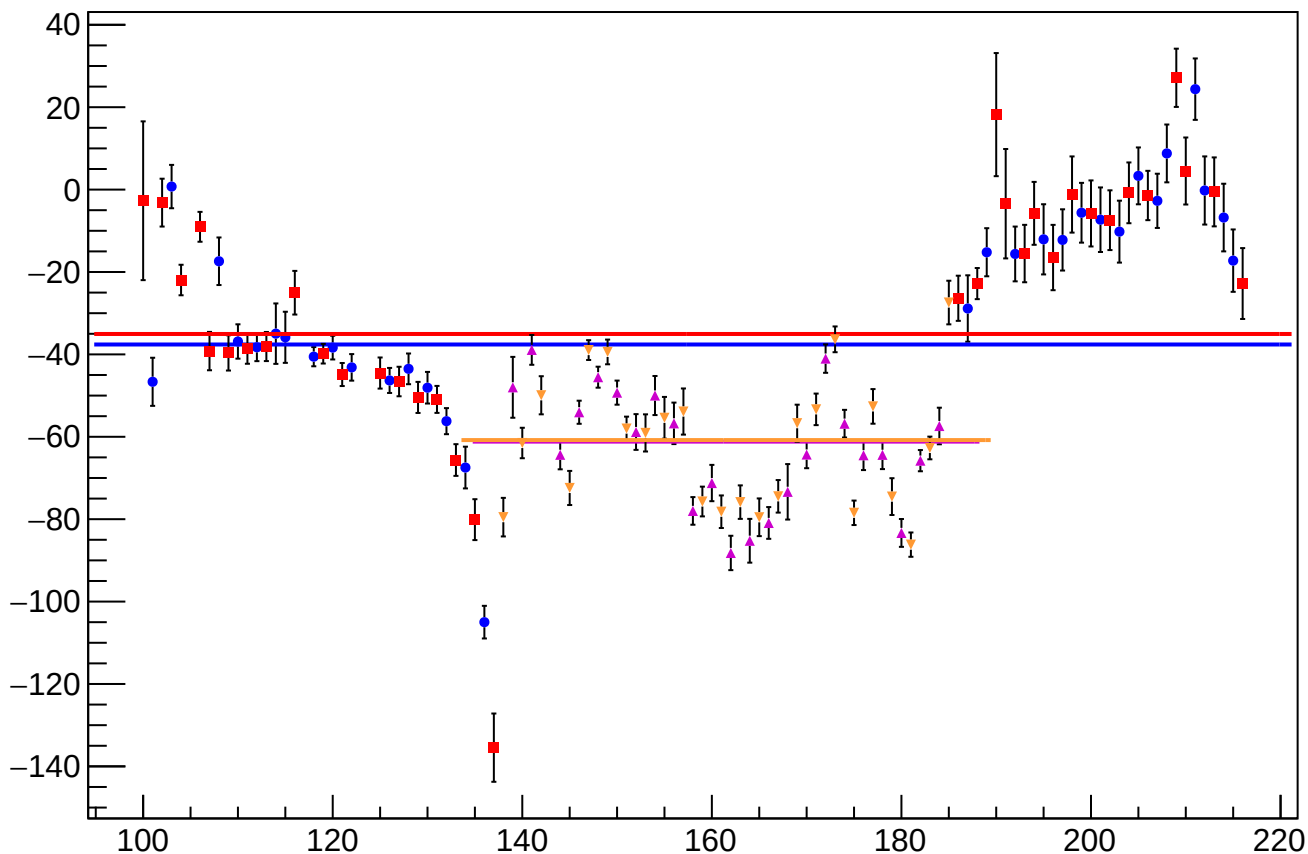
Left In:  $-185.936 \pm 0.867$   $\chi^2/\text{NDF}$ : 3181.6/22

+ sign  $-176.583 \pm 0.537$   $\chi^2/\text{NDF}$ : 7770.4/54

All:  $-177.353 \pm 0.368$   $\chi^2/\text{NDF}$ : 21125.4/111

- sign  $-178.033 \pm 0.505$   $\chi^2/\text{NDF}$ : 13351.1/56

reg\_asym\_usl\_atl2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-37.597 \pm 0.839$   $\chi^2/\text{NDF}$ : 762.5/30

Left Out:  $-60.801 \pm 0.749$   $\chi^2/\text{NDF}$ : 474.0/23

Right Out:  $-35.045 \pm 0.808$   $\chi^2/\text{NDF}$ : 743.7/33

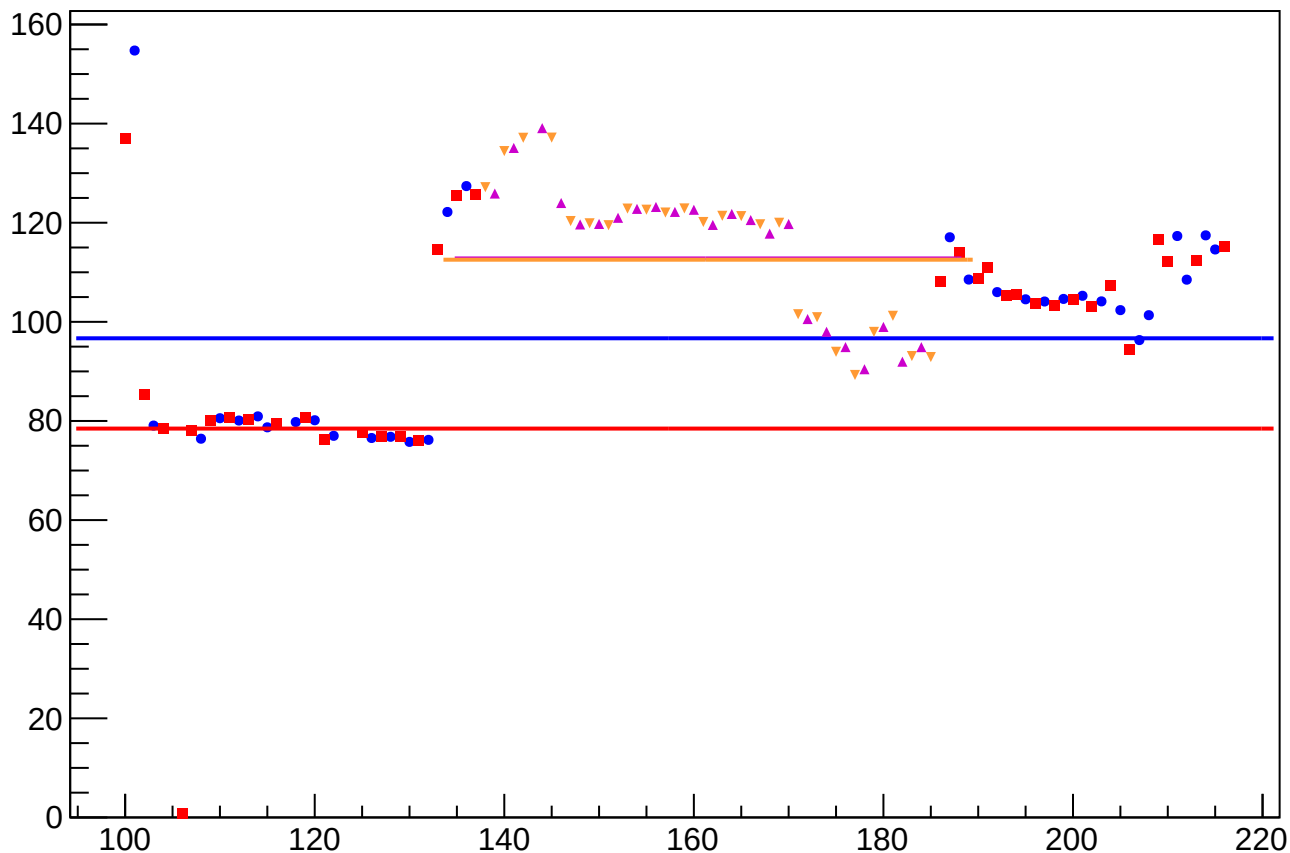
Left In:  $-61.172 \pm 0.757$   $\chi^2/\text{NDF}$ : 316.9/22

+ sign  $-50.517 \pm 0.559$   $\chi^2/\text{NDF}$ : 1662.0/54

All:  $-49.730 \pm 0.393$   $\chi^2/\text{NDF}$ : 3283.6/111

- sign  $-48.960 \pm 0.552$   $\chi^2/\text{NDF}$ : 1617.7/56

# reg\_asym\_usl\_atl2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 96.682 $\pm$ 0.045  $\chi^2$ /NDF: 192238.6/30

Left Out: 112.539 $\pm$ 0.035  $\chi^2$ /NDF:174512.4/23

Right Out: 78.464 $\pm$ 0.040  $\chi^2$ /NDF: 918712.9/33

Left In: 112.795 $\pm$ 0.034  $\chi^2$ /NDF:171662.8/22

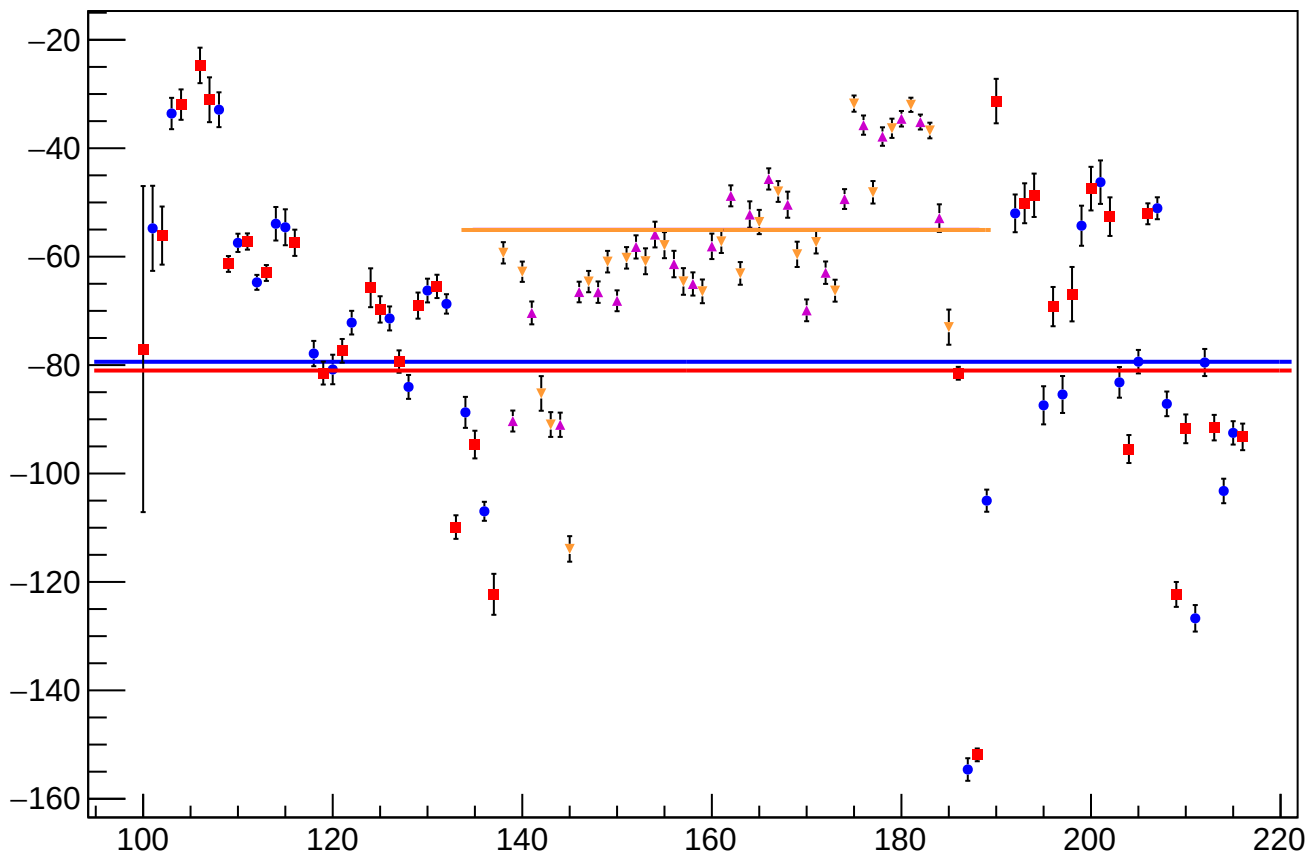
+ sign 106.712 $\pm$ 0.028  $\chi^2$ /NDF: 444008.0/54

All: 102.234 $\pm$ 0.019  $\chi^2$ /NDF: 2007386.4/111

- sign 98.200 $\pm$ 0.026  $\chi^2$ /NDF: 1512992.4/56



# reg\_asym\_usr\_atr1\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-79.391 \pm 0.423$   $\chi^2/\text{NDF}$ : 3615.1/30

Left Out:  $-55.077 \pm 0.401$   $\chi^2/\text{NDF}$ : 2002.8/24

Right Out:  $-81.004 \pm 0.390$   $\chi^2/\text{NDF}$ : 6577.6/33

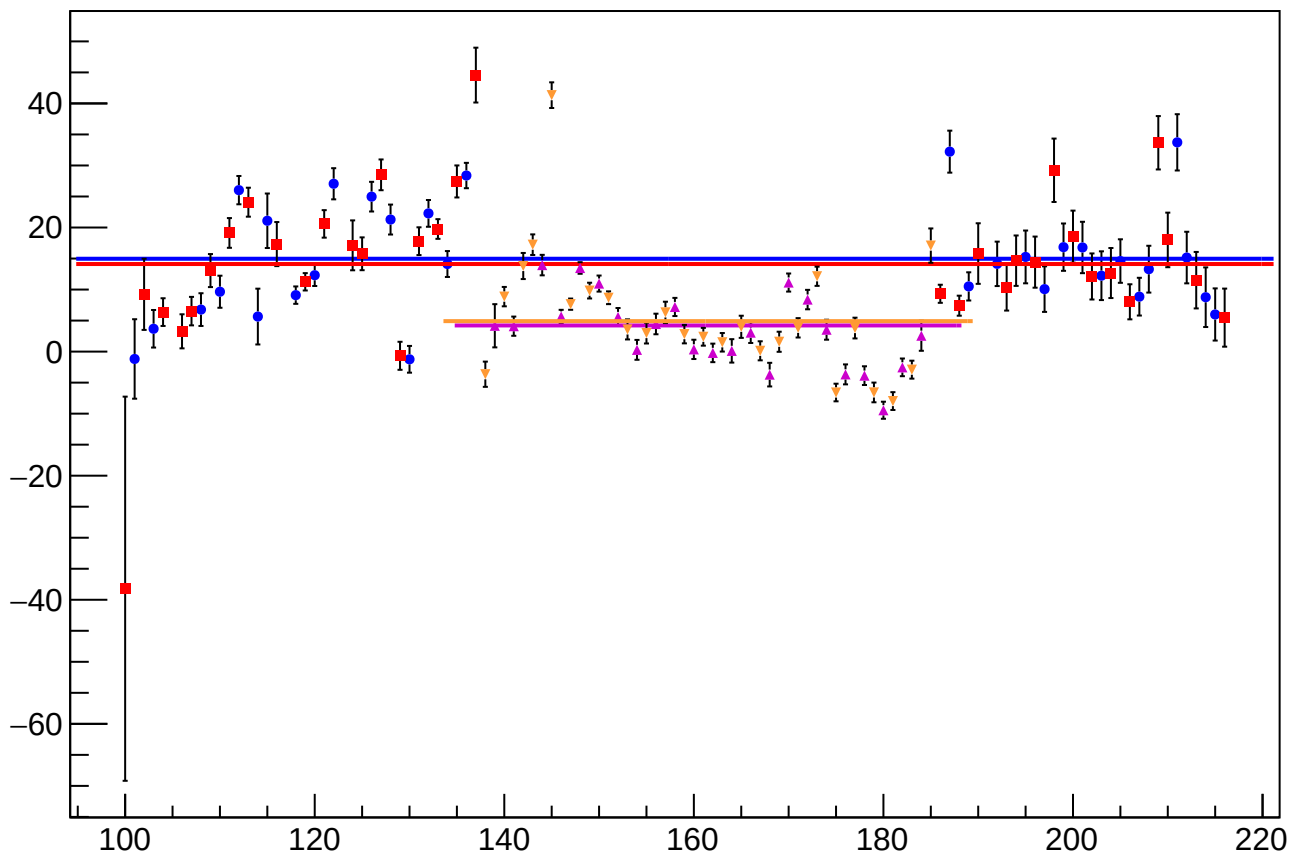
Left In:  $-55.050 \pm 0.410$   $\chi^2/\text{NDF}$ : 1541.8/22

+ sign  $-66.565 \pm 0.291$   $\chi^2/\text{NDF}$ : 7358.9/55

All:  $-67.664 \pm 0.203$   $\chi^2/\text{NDF}$ : 17609.1/112

- sign  $-68.701 \pm 0.283$   $\chi^2/\text{NDF}$ : 10222.4/56

# reg\_asym\_usr\_atr1\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 14.967 $\pm$ 0.493  $\chi^2$ /NDF: 302.7/30

Left Out: 4.910 $\pm$ 0.301  $\chi^2$ /NDF: 741.5/24

Right Out: 14.115 $\pm$ 0.454  $\chi^2$ /NDF: 314.7/33

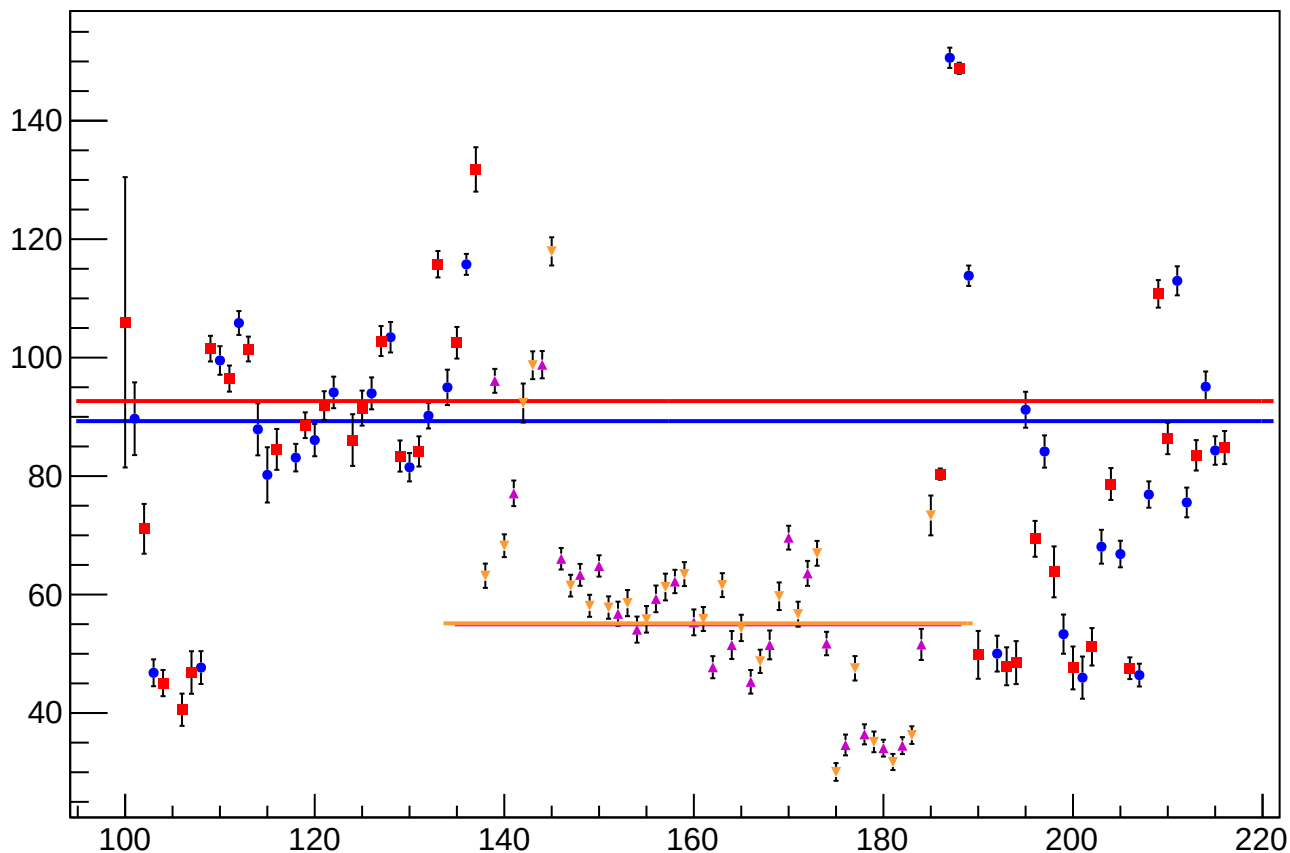
Left In: 4.215 $\pm$ 0.312  $\chi^2$ /NDF: 415.1/22

+ sign 7.644 $\pm$ 0.257  $\chi^2$ /NDF: 1346.9/55

All: 7.520 $\pm$ 0.182  $\chi^2$ /NDF: 2399.9/112

- sign 7.396 $\pm$ 0.257  $\chi^2$ /NDF: 1052.6/56

reg\_asym\_usr\_atr1\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 89.278 $\pm$ 0.444  $\chi^2$ /NDF: 3692.8/30

Left Out: 55.142 $\pm$ 0.397  $\chi^2$ /NDF:2242.4/24

Right Out: 92.665 $\pm$ 0.393  $\chi^2$ /NDF: 6619.7/33

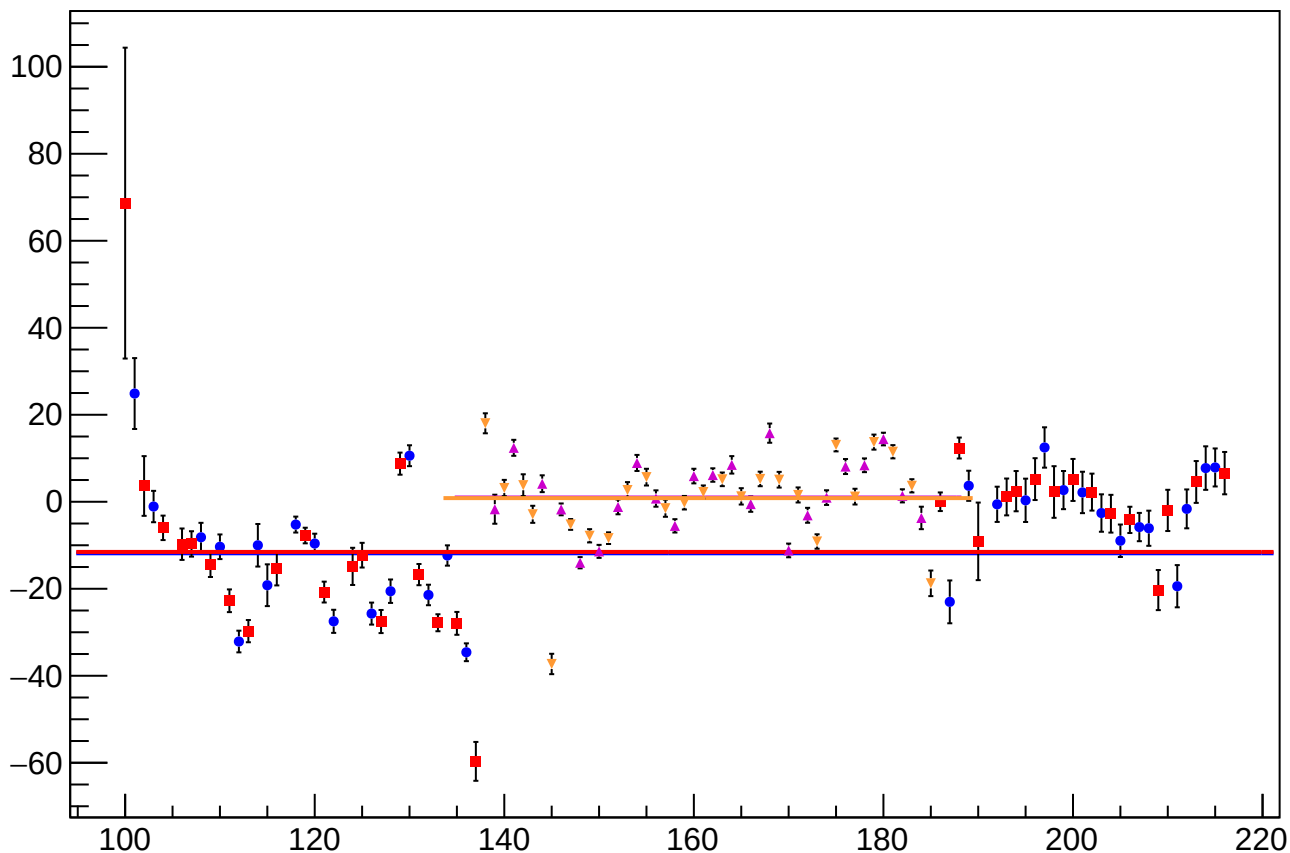
Left In: 54.972 $\pm$ 0.406  $\chi^2$ /NDF:1780.5/22

+ sign 70.320 $\pm$ 0.296  $\chi^2$ /NDF: 9224.1/55

All: 72.458 $\pm$ 0.204  $\chi^2$ /NDF: 22177.2/112

- sign 74.406 $\pm$ 0.282  $\chi^2$ /NDF: 12853.2/56

reg\_asym\_usr\_atr1\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-11.844 \pm 0.569$   $\chi^2/\text{NDF}$ : 556.1/30

Left Out:  $0.840 \pm 0.343$   $\chi^2/\text{NDF}$ : 717.2/24

Right Out:  $-11.530 \pm 0.540$   $\chi^2/\text{NDF}$ : 663.1/33

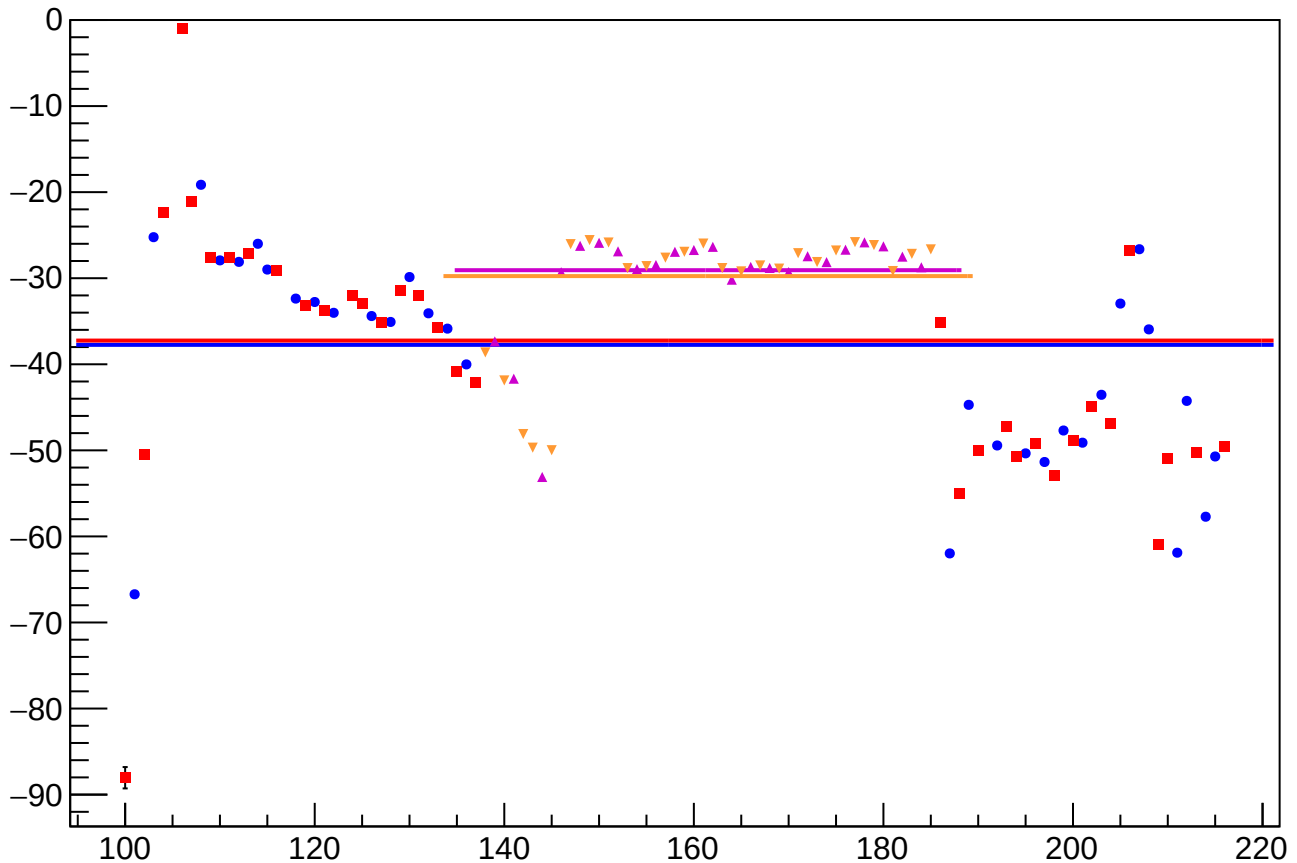
Left In:  $0.980 \pm 0.353$   $\chi^2/\text{NDF}$ : 558.5/22

+ sign  $-2.543 \pm 0.294$   $\chi^2/\text{NDF}$ : 1638.2/55

All:  $-2.656 \pm 0.208$   $\chi^2/\text{NDF}$ : 3235.9/112

- sign  $-2.771 \pm 0.296$   $\chi^2/\text{NDF}$ : 1597.4/56

reg\_asym\_usr\_atr1\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-37.742 \pm 0.028$   $\chi^2/\text{NDF}$ : 141244.6/30

Left Out:  $-29.754 \pm 0.016$   $\chi^2/\text{NDF}$ : 163552.5/24

Right Out:  $-37.245 \pm 0.028$   $\chi^2/\text{NDF}$ : 234928.2/33

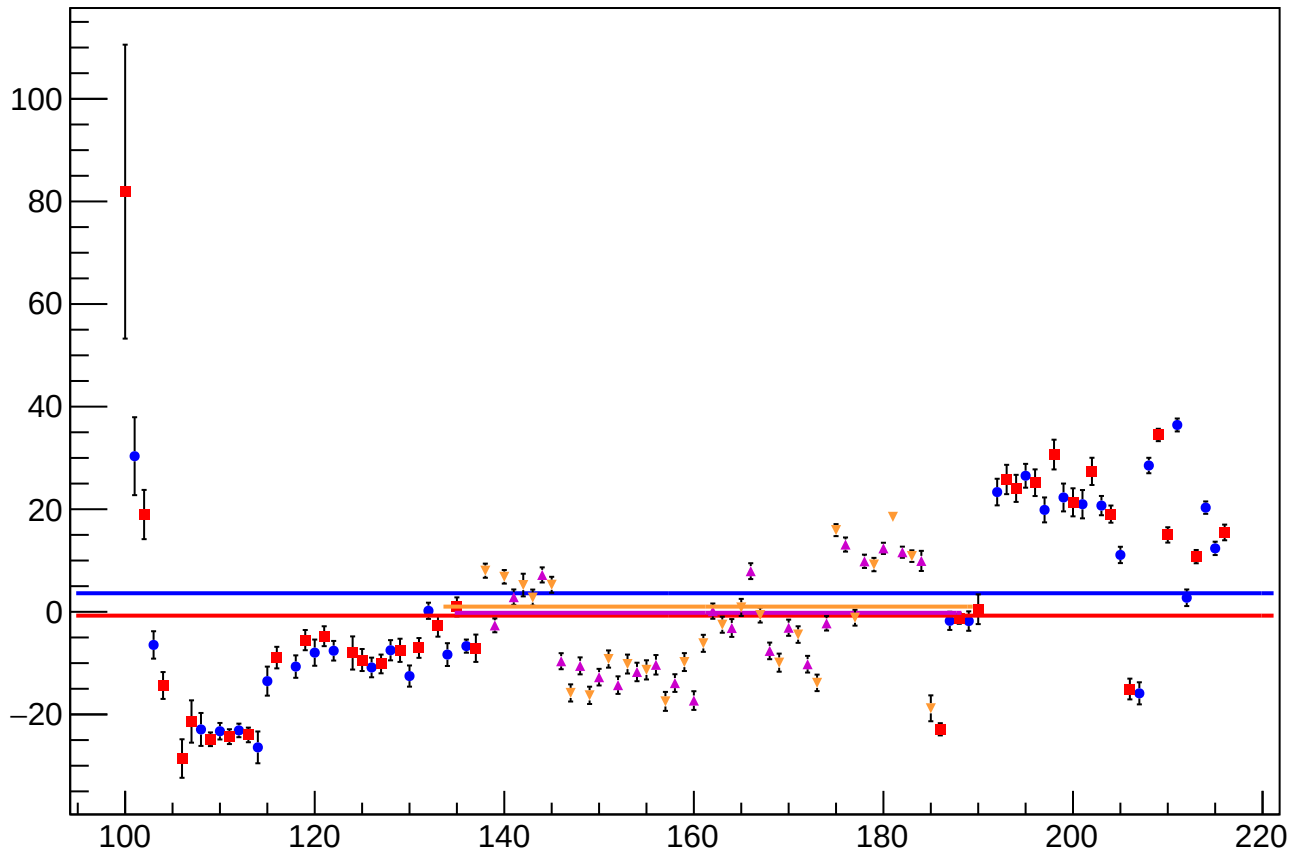
Left In:  $-29.067 \pm 0.016$   $\chi^2/\text{NDF}$ : 101545.6/22

+ sign  $-31.611 \pm 0.014$   $\chi^2/\text{NDF}$ : 365988.1/55

All:  $-31.334 \pm 0.010$   $\chi^2/\text{NDF}$ : 768377.9/112

- sign  $-31.053 \pm 0.014$   $\chi^2/\text{NDF}$ : 401556.9/56

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $3.621 \pm 0.333$   $\chi^2/\text{NDF}$ : 2935.5/30

Left Out:  $1.015 \pm 0.305$   $\chi^2/\text{NDF}$ : 1335.1/24

Right Out:  $-0.743 \pm 0.321$   $\chi^2/\text{NDF}$ : 3349.2/33

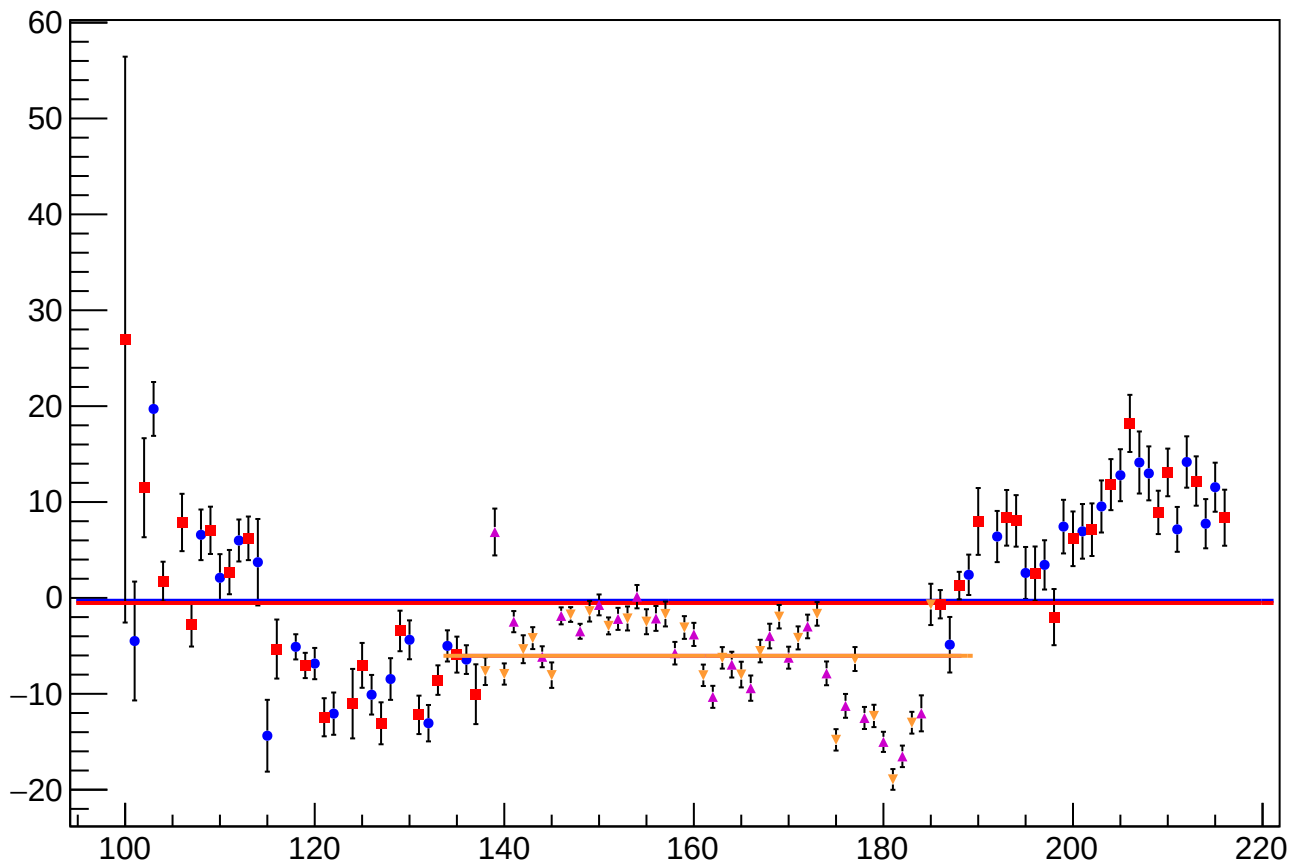
Left In:  $-0.192 \pm 0.315$   $\chi^2/\text{NDF}$ : 982.8/22

+ sign  $2.205 \pm 0.225$   $\chi^2/\text{NDF}$ : 4303.9/55

All:  $0.872 \pm 0.159$   $\chi^2/\text{NDF}$ : 8707.8/112

- sign  $-0.462 \pm 0.225$   $\chi^2/\text{NDF}$ : 4333.5/56

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.296 \pm 0.412$   $\chi^2/\text{NDF}: 428.2/30$

Left Out:  $-6.035 \pm 0.233$   $\chi^2/\text{NDF}: 414.9/24$

Right Out:  $-0.526 \pm 0.393$   $\chi^2/\text{NDF}: 413.0/33$

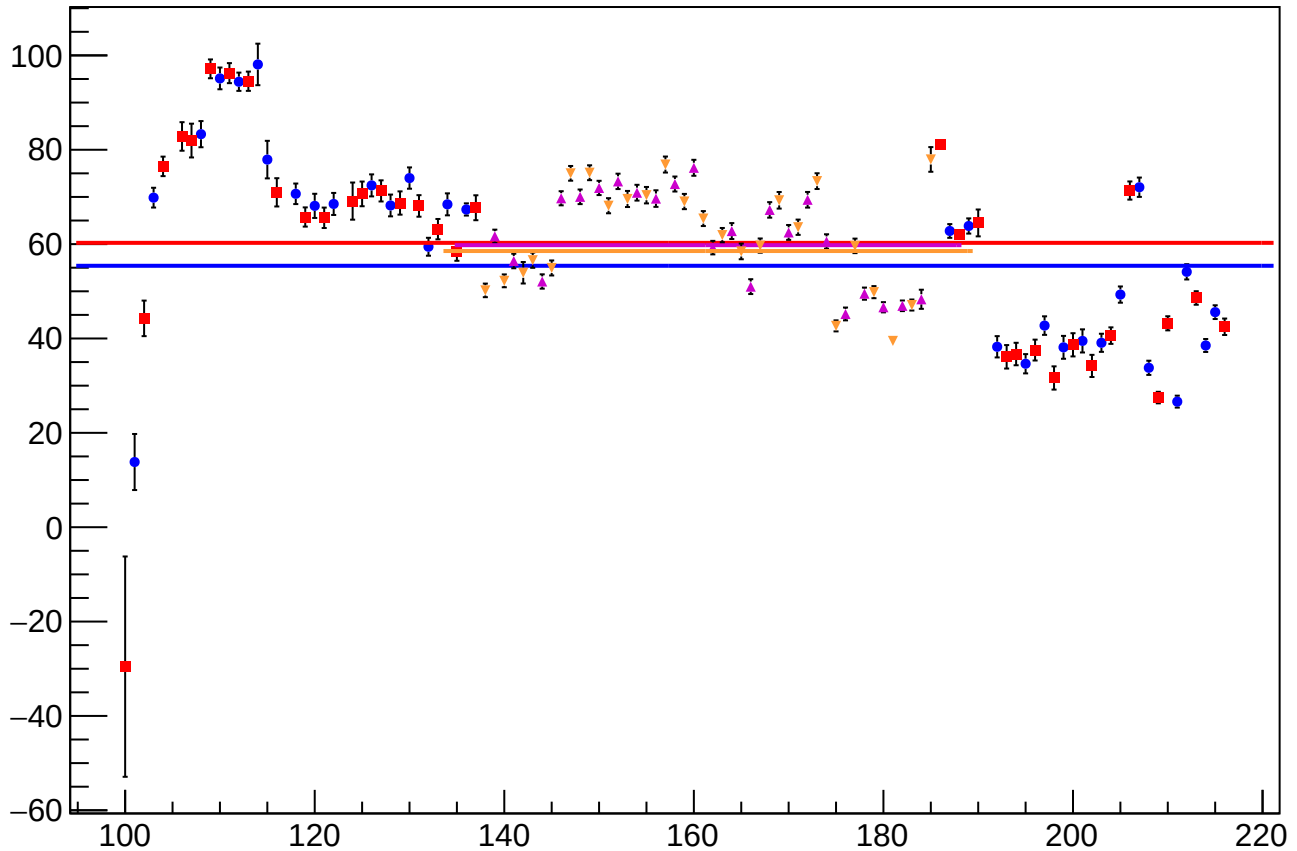
Left In:  $-6.043 \pm 0.243$   $\chi^2/\text{NDF}: 396.2/22$

+ sign  $-4.643 \pm 0.203$   $\chi^2/\text{NDF}: 989.9/55$

All:  $-4.583 \pm 0.145$   $\chi^2/\text{NDF}: 1941.8/112$

- sign  $-4.521 \pm 0.207$   $\chi^2/\text{NDF}: 951.7/56$

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 55.409 $\pm$ 0.347  $\chi^2$ /NDF: 2825.8/30

Left Out: 58.535 $\pm$ 0.303  $\chi^2$ /NDF:1449.2/24

Right Out: 60.269 $\pm$ 0.325  $\chi^2$ /NDF: 3494.2/33

Left In: 59.777 $\pm$ 0.312  $\chi^2$ /NDF:1070.5/22

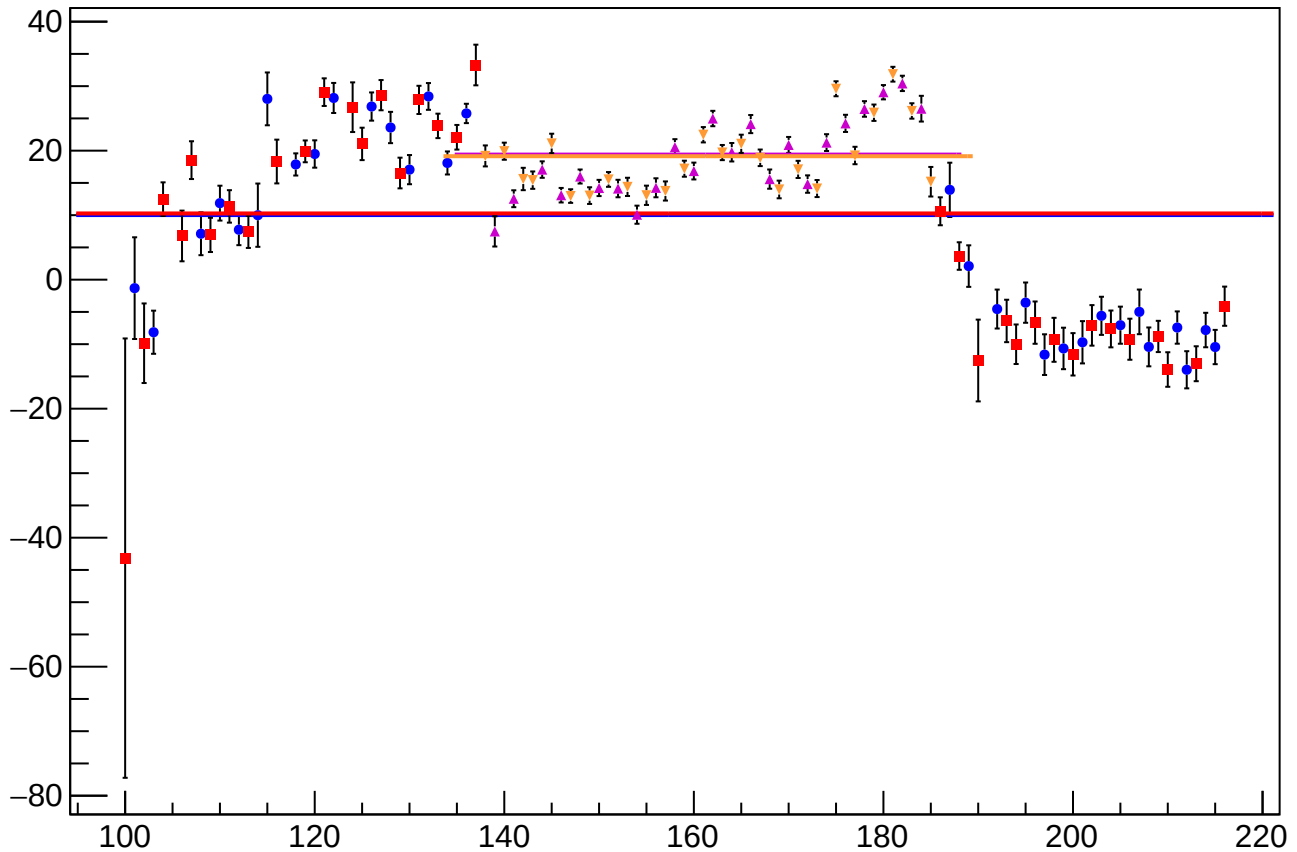
+ sign 57.182 $\pm$ 0.228  $\chi^2$ /NDF: 4321.1/55

All: 58.617 $\pm$ 0.160  $\chi^2$ /NDF: 8965.0/112

- sign 60.013 $\pm$ 0.225  $\chi^2$ /NDF: 4565.9/56



# reg\_asym\_usr\_atr1\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 10.015 $\pm$ 0.468  $\chi^2$ /NDF: 987.5/30

Left Out: 19.138 $\pm$ 0.264  $\chi^2$ /NDF: 433.7/24

Right Out: 10.266 $\pm$ 0.460  $\chi^2$ /NDF: 996.6/33

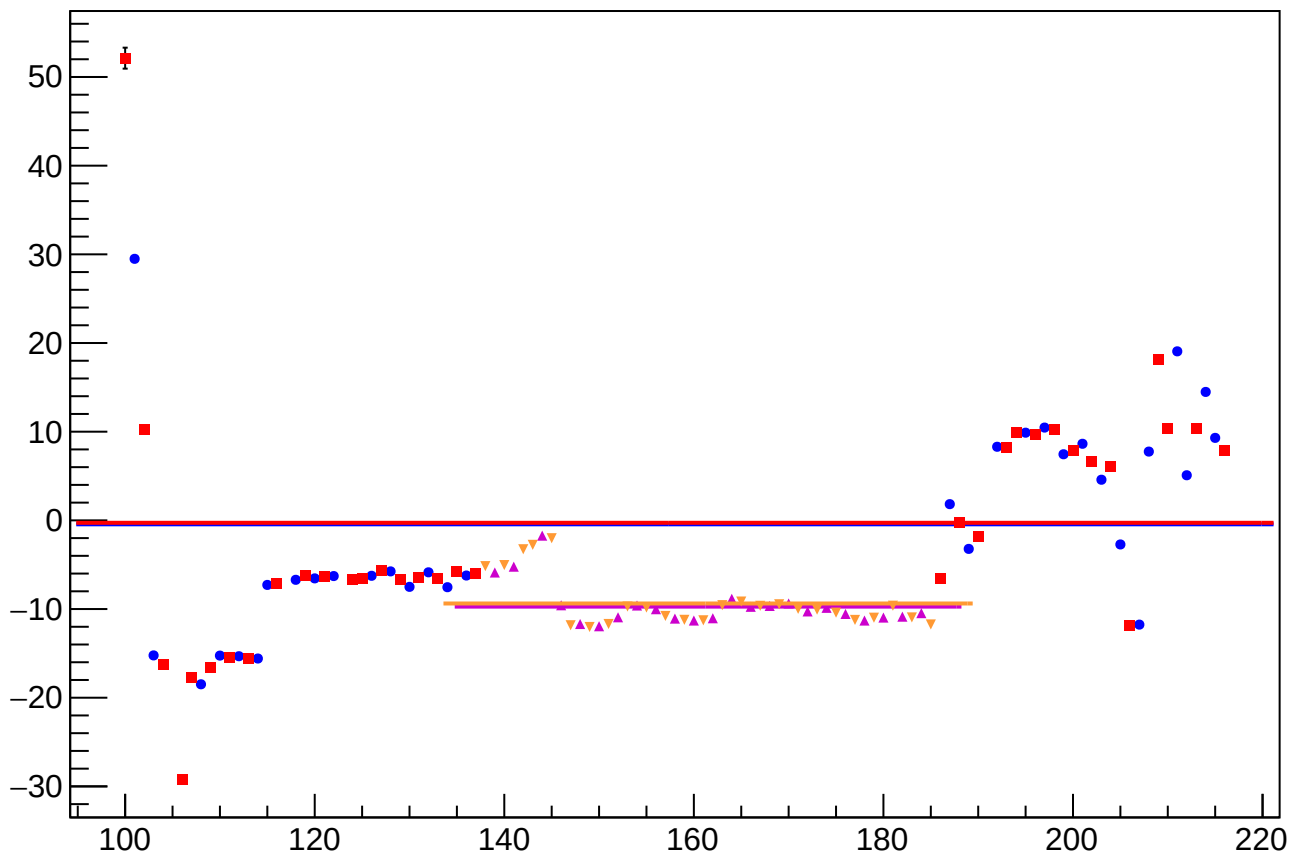
Left In: 19.390 $\pm$ 0.274  $\chi^2$ /NDF: 467.7/22

+ sign 16.936 $\pm$ 0.230  $\chi^2$ /NDF: 1709.5/55

All: 16.970 $\pm$ 0.164  $\chi^2$ /NDF: 3464.4/112

- sign 17.006 $\pm$ 0.235  $\chi^2$ /NDF: 1754.9/56

# reg\_asym\_usr\_atr1\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-0.445 \pm 0.022$   $\chi^2/\text{NDF}$ : 211176.4/30

Left Out:  $-9.375 \pm 0.012$   $\chi^2/\text{NDF}$ : 49934.3/24

Right Out:  $-0.275 \pm 0.022$   $\chi^2/\text{NDF}$ : 241085.4/33

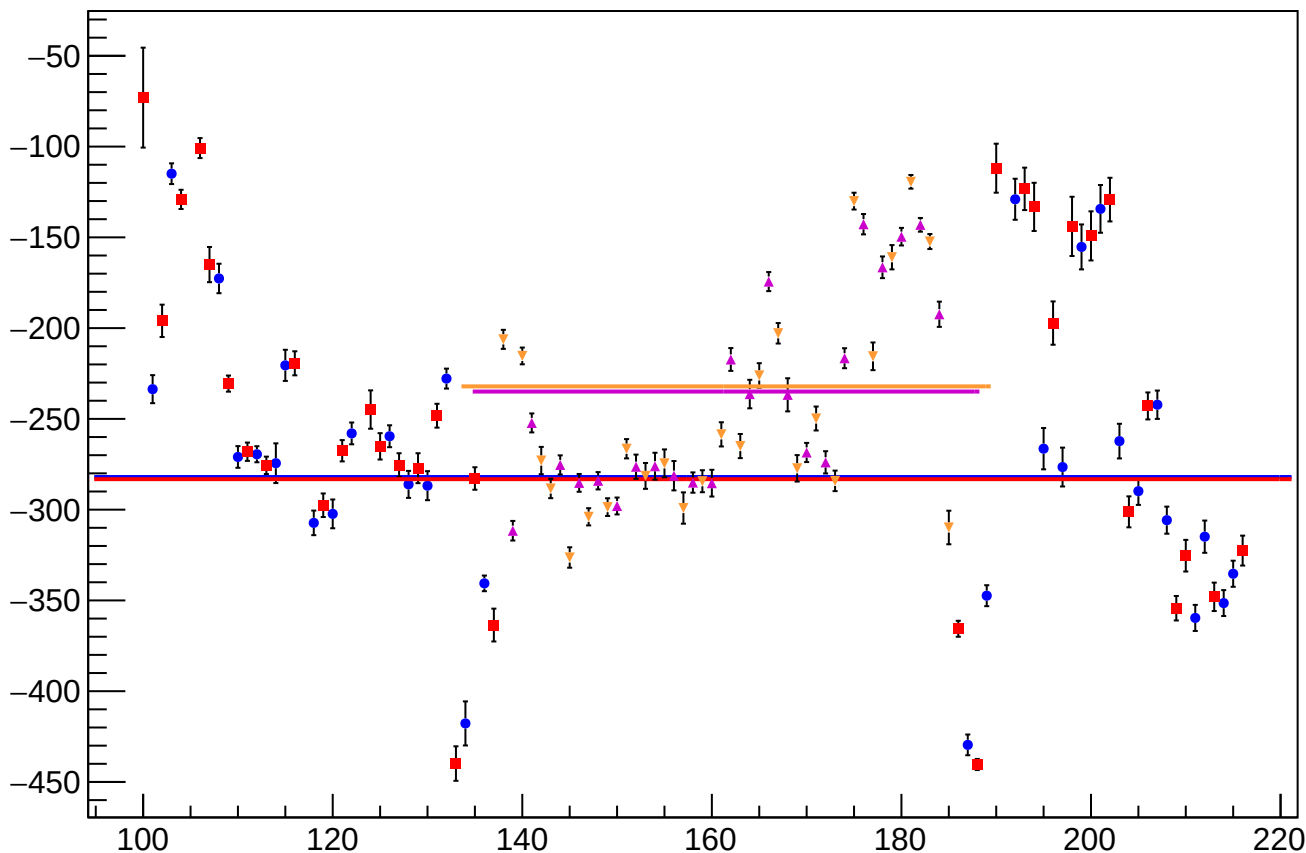
Left In:  $-9.726 \pm 0.012$   $\chi^2/\text{NDF}$ : 31951.7/22

+ sign  $-7.389 \pm 0.010$   $\chi^2/\text{NDF}$ : 386681.1/55

All:  $-7.482 \pm 0.007$   $\chi^2/\text{NDF}$ : 798262.0/112

- sign  $-7.578 \pm 0.011$   $\chi^2/\text{NDF}$ : 411421.9/56

# reg\_asym\_usr\_atr2\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-282.032 \pm 1.275$   $\chi^2/\text{NDF}$ : 3132.9/30

Left Out:  $-232.091 \pm 1.143$   $\chi^2/\text{NDF}$ : 3269.9/24

Right Out:  $-283.207 \pm 1.164$   $\chi^2/\text{NDF}$ : 7004.9/33

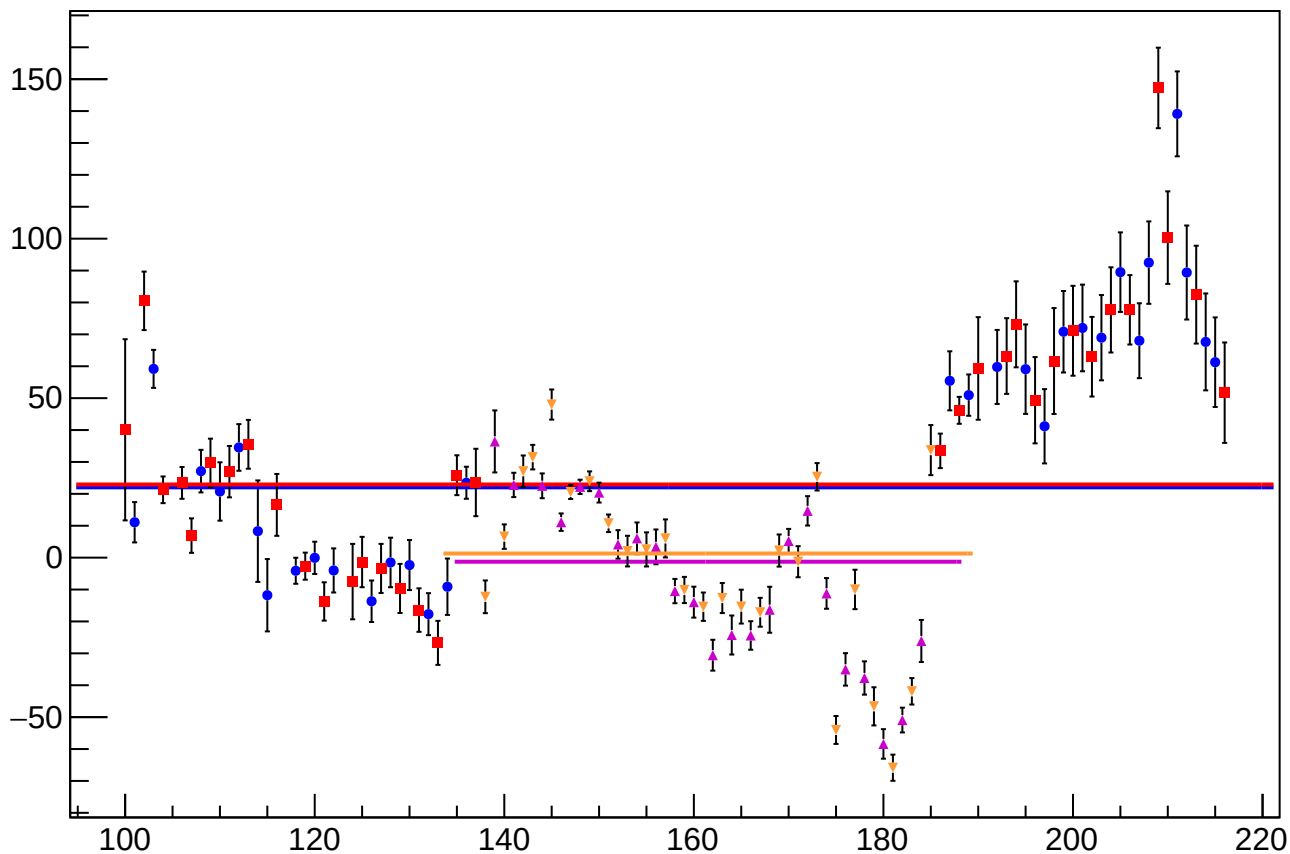
Left In:  $-234.951 \pm 1.176$   $\chi^2/\text{NDF}$ : 2470.2/22

+ sign  $-254.342 \pm 0.851$   $\chi^2/\text{NDF}$ : 7253.5/55

All:  $-256.908 \pm 0.593$   $\chi^2/\text{NDF}$ : 17597.3/112

- sign  $-259.330 \pm 0.827$   $\chi^2/\text{NDF}$ : 10326.2/56

# reg\_asym\_usr\_atr2\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 22.043 $\pm$ 1.441  $\chi^2$ /NDF: 510.3/30

Left Out: 1.295 $\pm$ 0.837  $\chi^2$ /NDF:1049.5/24

Right Out: 22.931 $\pm$ 1.310  $\chi^2$ /NDF: 539.4/33

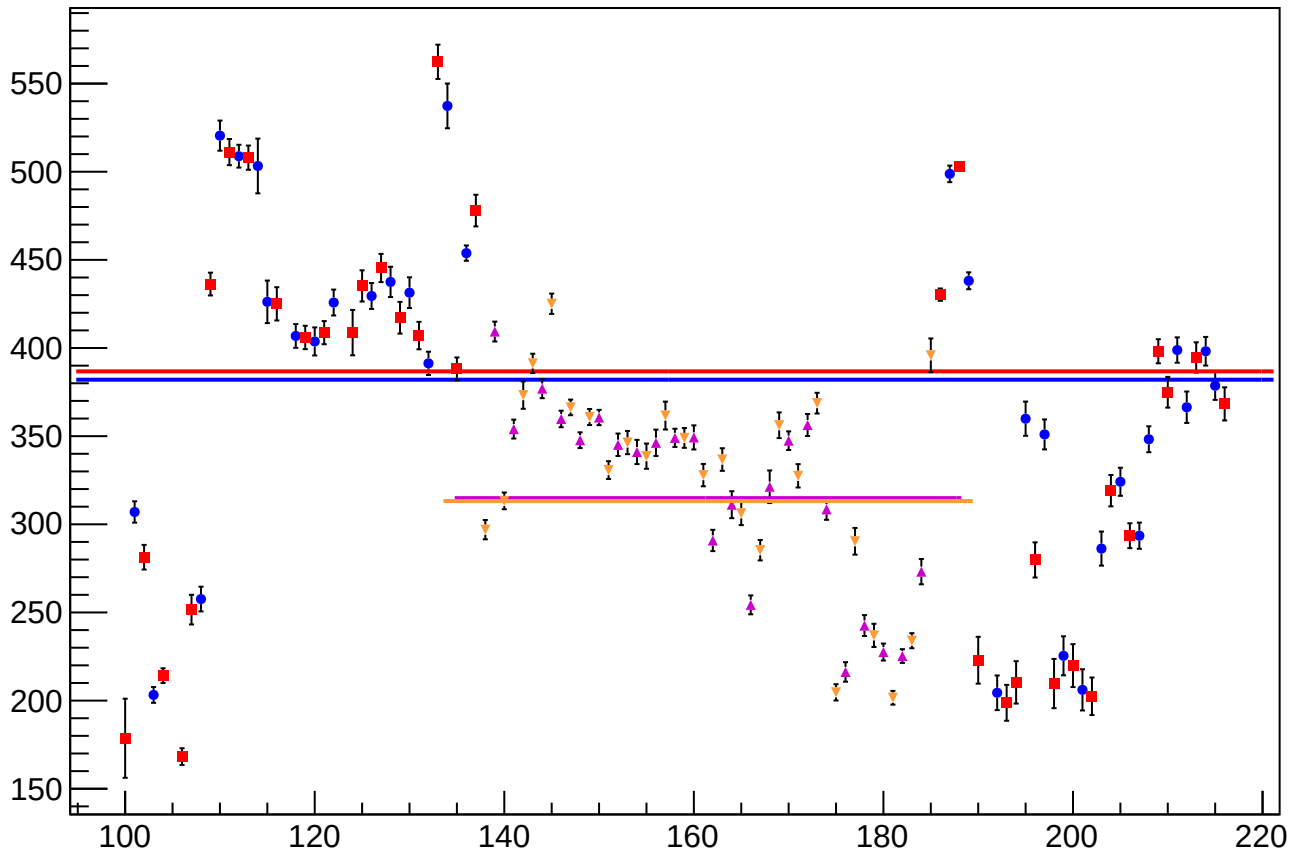
Left In: -1.280 $\pm$ 0.869  $\chi^2$ /NDF:811.2/22

+ sign 6.530 $\pm$ 0.724  $\chi^2$ /NDF: 1714.8/55

All: 6.325 $\pm$ 0.512  $\chi^2$ /NDF: 3302.9/112

- sign 6.119 $\pm$ 0.724  $\chi^2$ /NDF: 1587.9/56

# reg\_asym\_usr\_atr2\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 382.033 $\pm$ 1.297  $\chi^2$ /NDF: 5233.8/30

Left Out: 313.197 $\pm$ 1.134  $\chi^2$ /NDF:3135.7/24

Right Out: 386.769 $\pm$ 1.146  $\chi^2$ /NDF: 9705.1/33

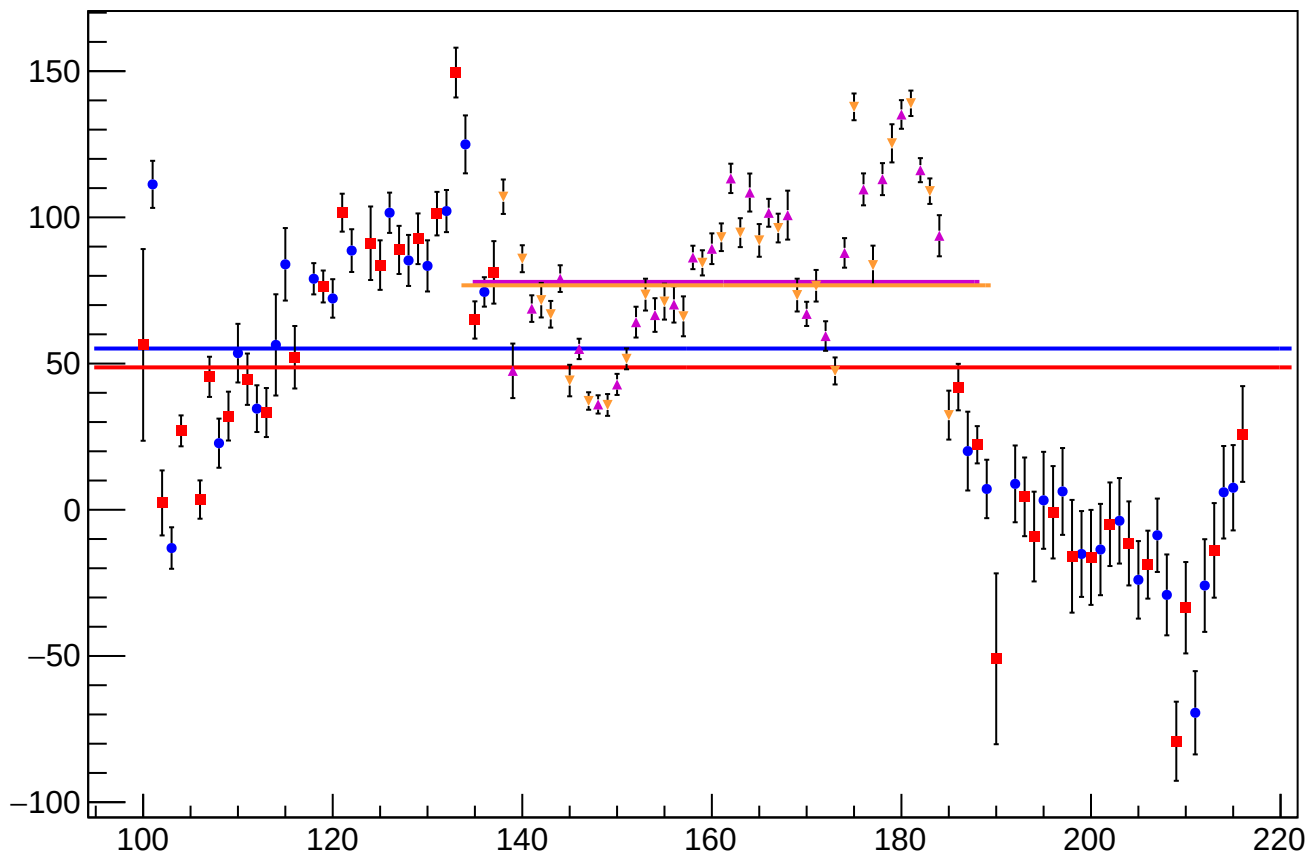
Left In: 314.864 $\pm$ 1.161  $\chi^2$ /NDF:2429.0/22

+ sign 343.018 $\pm$ 0.854  $\chi^2$ /NDF: 9966.0/55

All: 347.336 $\pm$ 0.590  $\chi^2$ /NDF: 24090.4/112

- sign 351.279 $\pm$ 0.816  $\chi^2$ /NDF: 14075.5/56

reg\_asym\_usr\_atr2\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: 55.145 $\pm$ 1.677  $\chi^2$ /NDF: 733.4/30

Left Out: 76.758 $\pm$ 0.967  $\chi^2$ /NDF:1035.3/24

Right Out: 48.697 $\pm$ 1.568  $\chi^2$ /NDF: 756.9/33

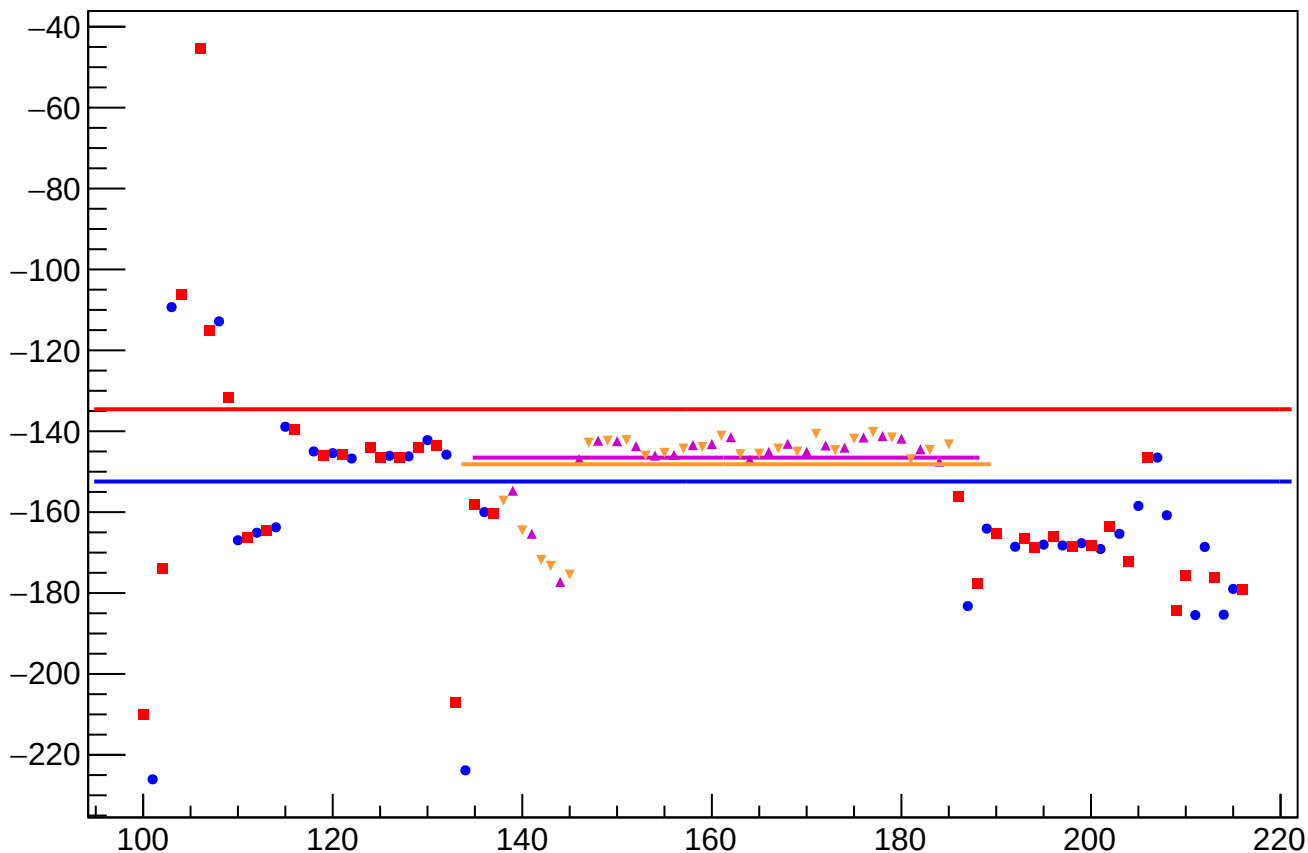
Left In: 77.923 $\pm$ 0.997  $\chi^2$ /NDF:783.8/22

+ sign 71.367 $\pm$ 0.837  $\chi^2$ /NDF: 1893.5/55

All: 70.444 $\pm$ 0.594  $\chi^2$ /NDF: 3684.0/112

- sign 69.512 $\pm$ 0.841  $\chi^2$ /NDF: 1788.1/56

reg\_asym\_usr\_atr2\_avg\_diff\_bpm12X\_slope vs Slug



Right In: -152.427+/-0.080  $\chi^2/\text{NDF}$ : 152413.7/30

Left Out: -148.148+/-0.045  $\chi^2/\text{NDF}$ : 48910.2/24

Right Out: -134.561+/-0.074  $\chi^2/\text{NDF}$ : 363391.5/33

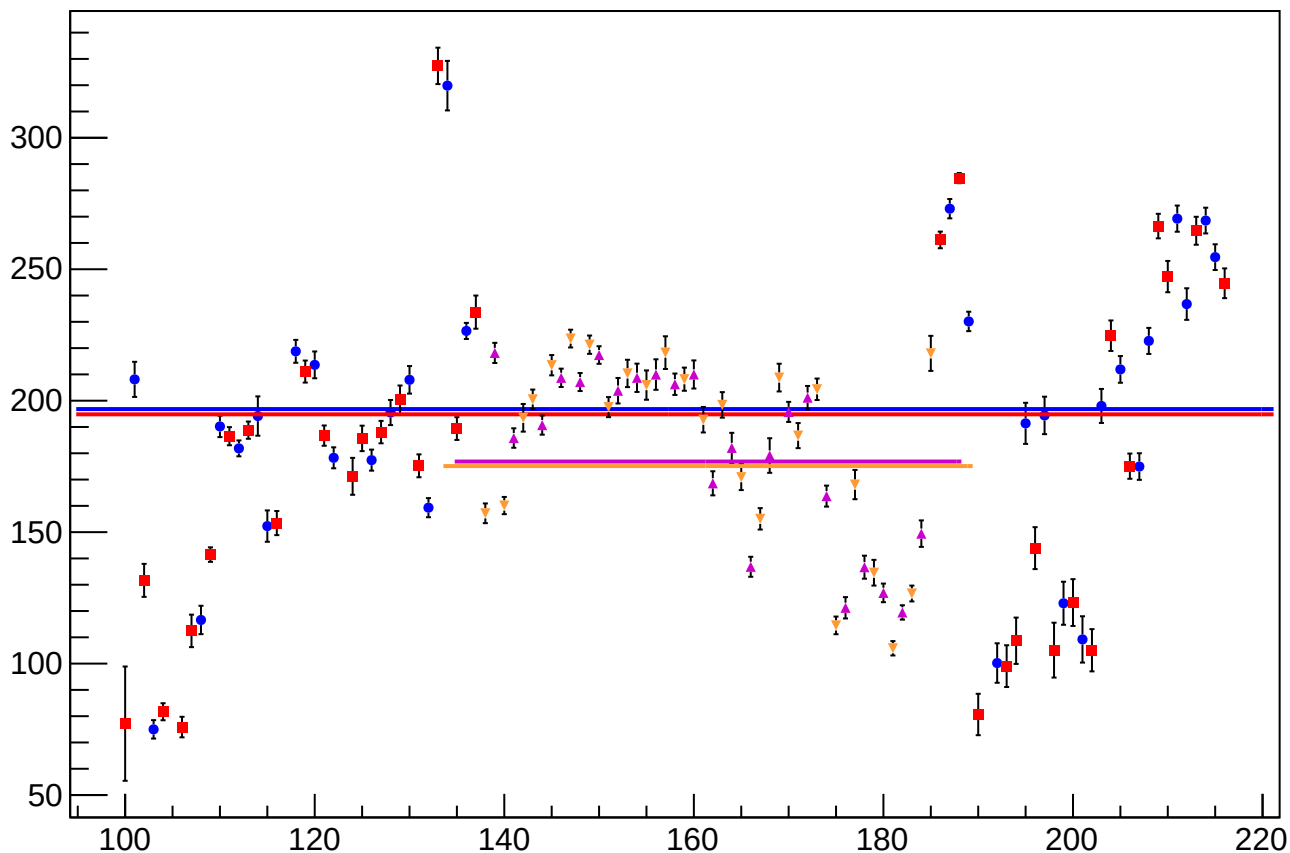
Left In: -146.523+/-0.046  $\chi^2/\text{NDF}$ : 29172.3/22

+ sign -149.171+/-0.039  $\chi^2/\text{NDF}$ : 203477.0/55

All: -146.168+/-0.028  $\chi^2/\text{NDF}$ : 626444.9/112

- sign -143.245+/-0.039  $\chi^2/\text{NDF}$ : 411462.8/56

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $196.812 \pm 0.855$   $\chi^2/\text{NDF}: 3496.3/30$

Left Out:  $175.126 \pm 0.822$   $\chi^2/\text{NDF}: 2295.2/24$

Right Out:  $194.813 \pm 0.772$   $\chi^2/\text{NDF}: 7338.6/33$

Left In:  $176.862 \pm 0.847$   $\chi^2/\text{NDF}: 1756.1/22$

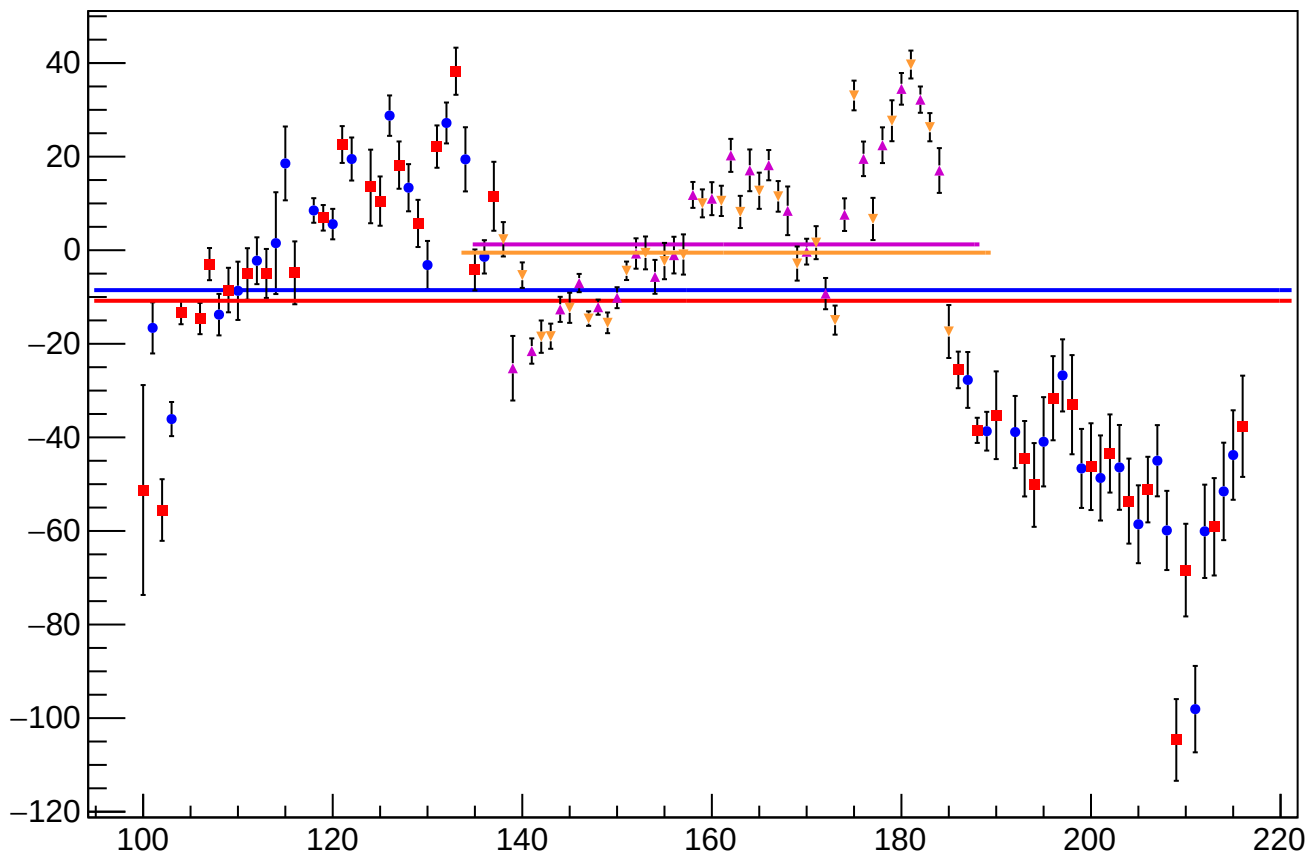
+ sign  $185.537 \pm 0.593$   $\chi^2/\text{NDF}: 6125.7/55$

All:  $186.122 \pm 0.411$   $\chi^2/\text{NDF}: 15467.5/112$

- sign  $186.665 \pm 0.571$   $\chi^2/\text{NDF}: 9340.0/56$



# reg\_asym\_usr\_atr2\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-8.529 \pm 0.964$   $\chi^2/\text{NDF}$ : 755.4/30

Left Out:  $-0.523 \pm 0.601$   $\chi^2/\text{NDF}$ : 724.5/24

Right Out:  $-10.806 \pm 0.864$   $\chi^2/\text{NDF}$ : 839.6/33

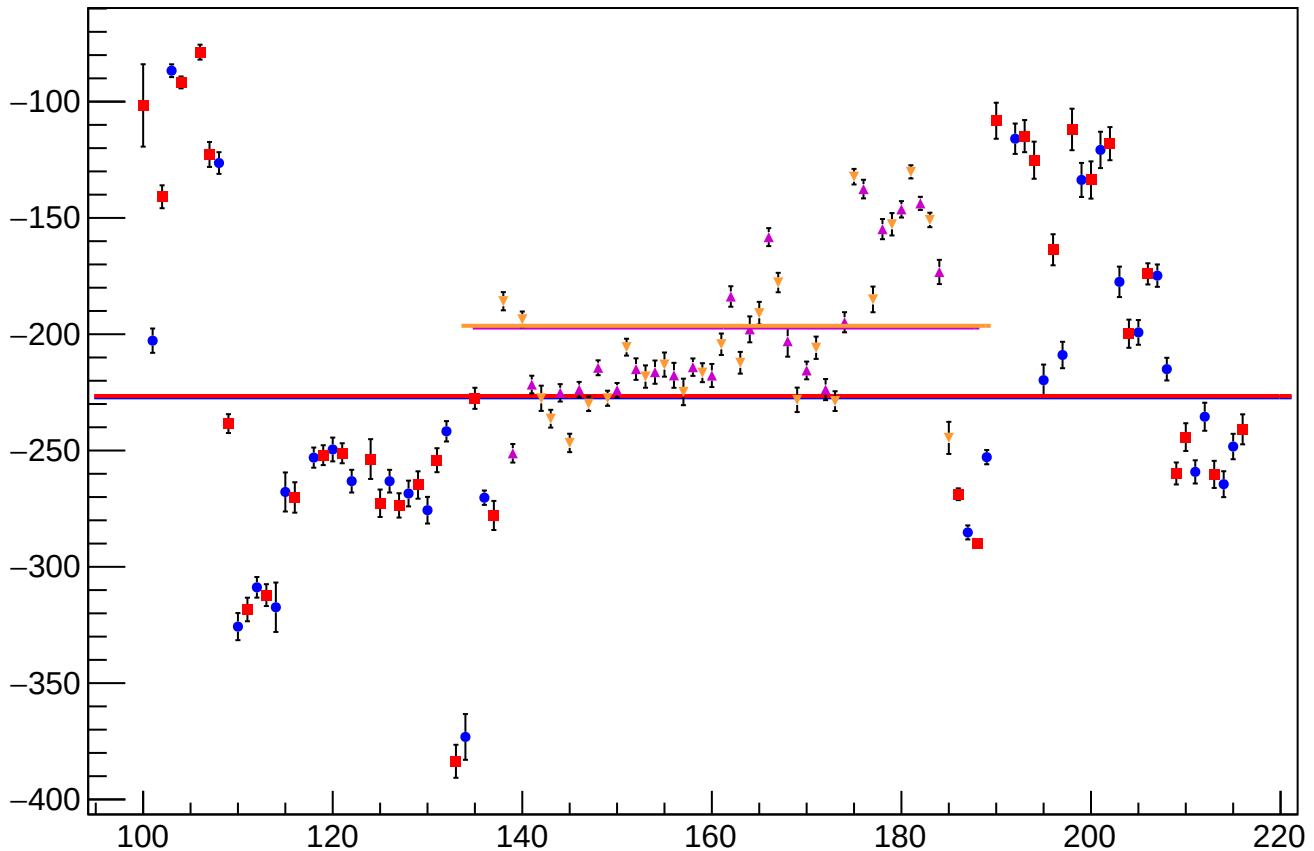
Left In:  $1.244 \pm 0.625$   $\chi^2/\text{NDF}$ : 620.6/22

+ sign  $-2.763 \pm 0.510$   $\chi^2/\text{NDF}$ : 1529.5/55

All:  $-2.832 \pm 0.359$   $\chi^2/\text{NDF}$ : 3117.4/112

- sign  $-2.900 \pm 0.507$   $\chi^2/\text{NDF}$ : 1587.9/56

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: -227.122 $\pm$ 0.867  $\chi^2$ /NDF: 5941.9/30

Left Out: -196.380 $\pm$ 0.816  $\chi^2$ /NDF:1997.7/24

Right Out: -226.550 $\pm$ 0.757  $\chi^2$ /NDF: 10656.4/33

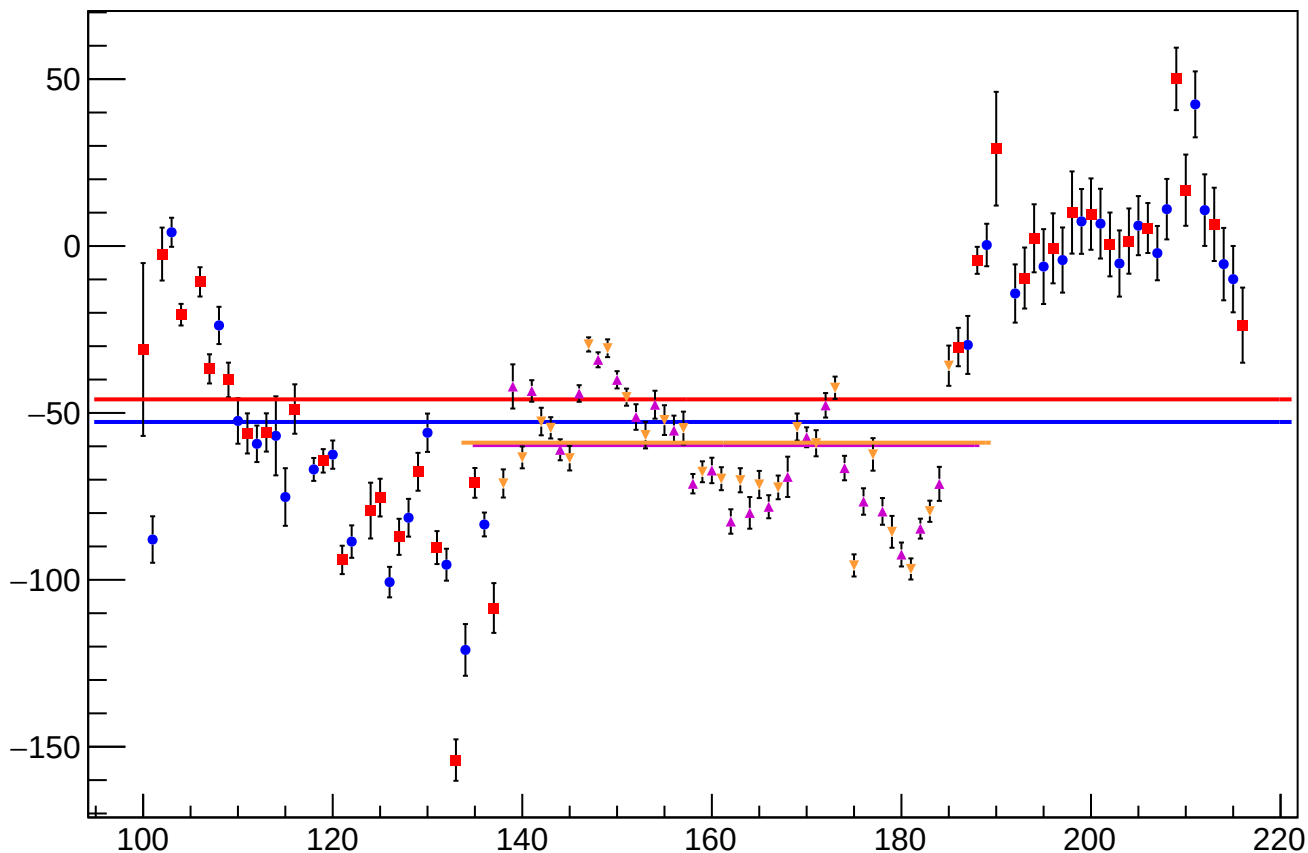
Left In: -197.128 $\pm$ 0.837  $\chi^2$ /NDF:1601.5/22

+ sign -210.808 $\pm$ 0.594  $\chi^2$ /NDF: 8606.1/55

All: -212.125 $\pm$ 0.408  $\chi^2$ /NDF: 21552.8/112

- sign -213.300 $\pm$ 0.562  $\chi^2$ /NDF: 12937.4/56

reg\_asym\_usr\_atr2\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-52.707 \pm 1.126$   $\chi^2/\text{NDF}: 1204.9/30$

Left Out:  $-58.910 \pm 0.695$   $\chi^2/\text{NDF}: 782.5/24$

Right Out:  $-45.935 \pm 1.037$   $\chi^2/\text{NDF}: 1422.8/33$

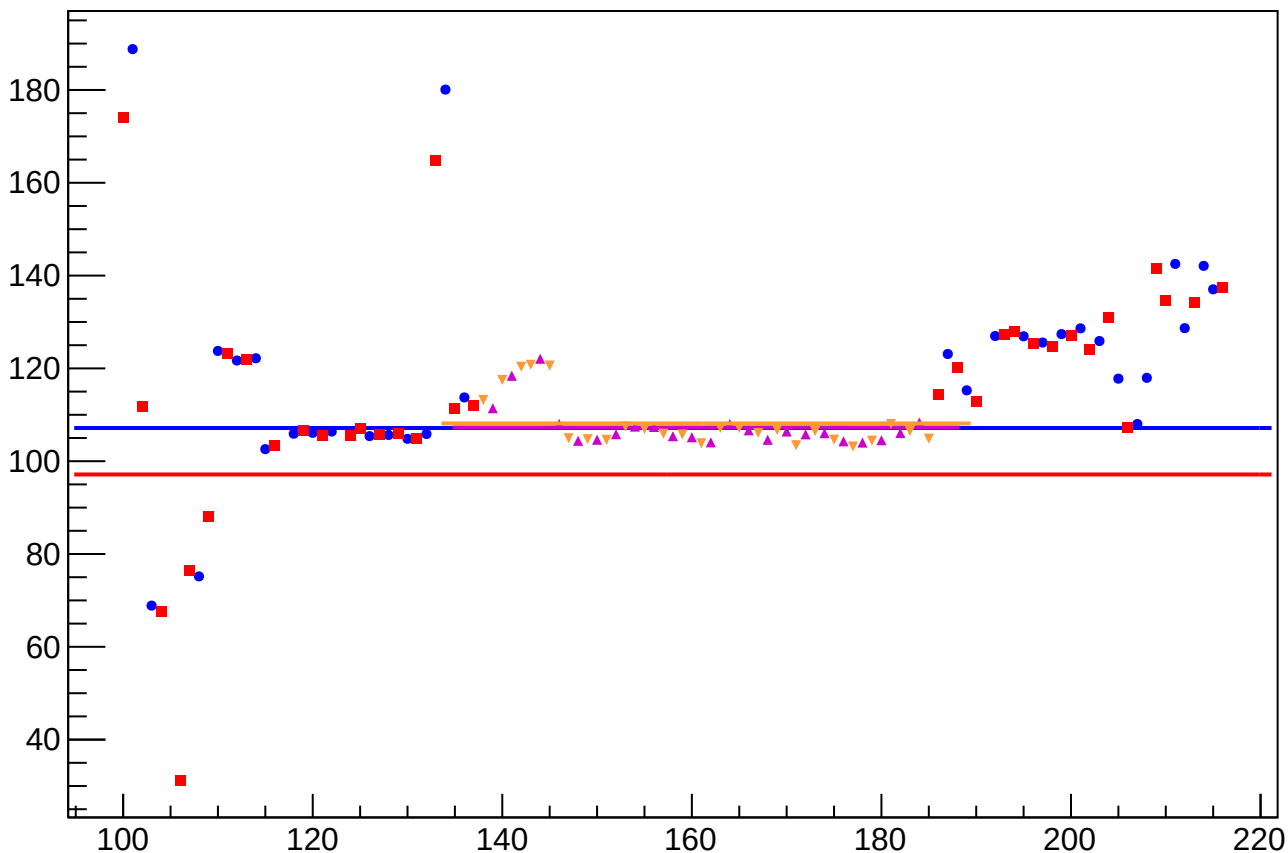
Left In:  $-59.637 \pm 0.718$   $\chi^2/\text{NDF}: 597.0/22$

+ sign  $-57.198 \pm 0.591$   $\chi^2/\text{NDF}: 2009.4/55$

All:  $-56.195 \pm 0.418$   $\chi^2/\text{NDF}: 4152.9/112$

- sign  $-55.195 \pm 0.590$   $\chi^2/\text{NDF}: 2137.8/56$

# reg\_asym\_usr\_atr2\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 107.155 $\pm$ 0.054  $\chi^2$ /NDF: 288680.3/30

Left Out: 108.136 $\pm$ 0.032  $\chi^2$ /NDF: 26420.1/24

Right Out: 97.139 $\pm$ 0.050  $\chi^2$ /NDF: 412939.6/33

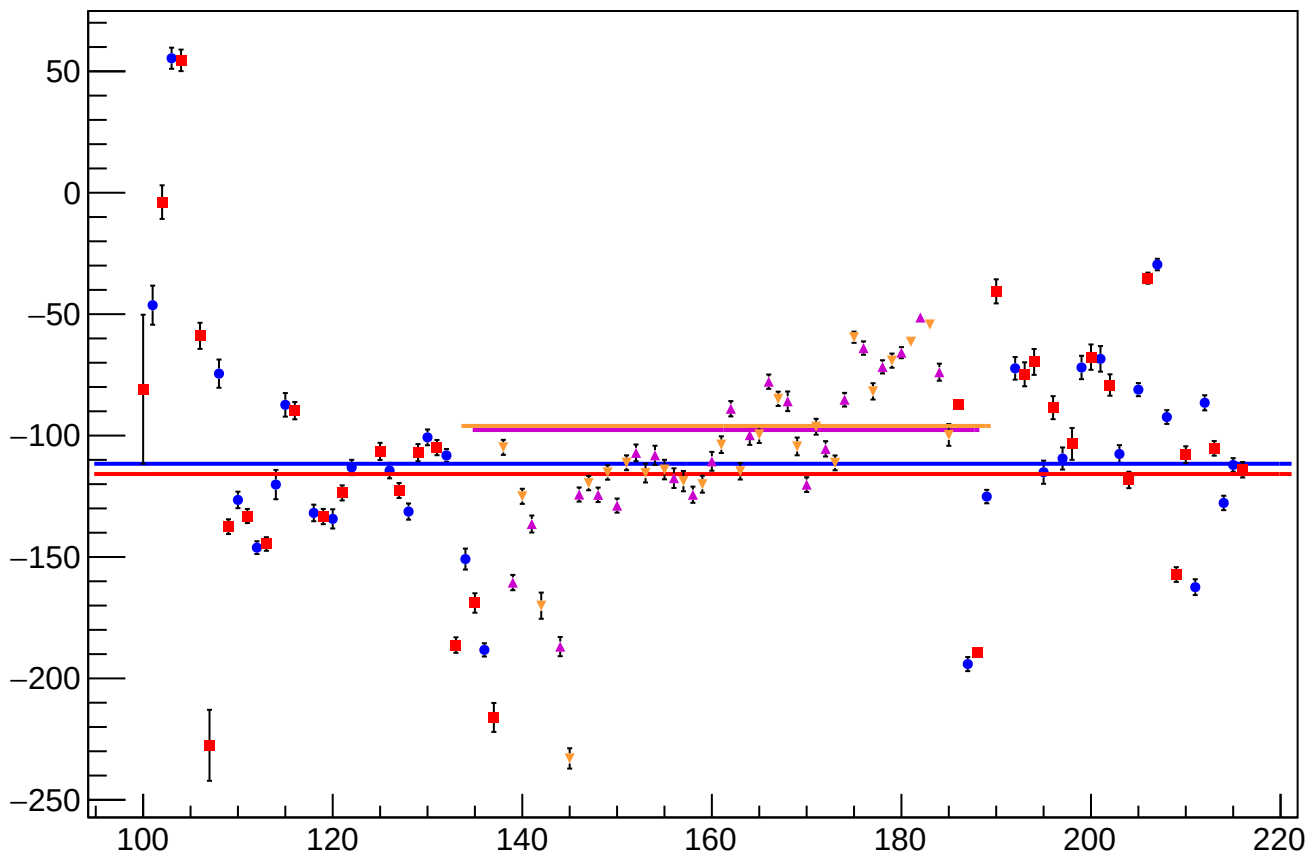
Left In: 107.266 $\pm$ 0.033  $\chi^2$ /NDF: 16879.3/22

+ sign 107.874 $\pm$ 0.028  $\chi^2$ /NDF: 315344.5/55

All: 106.023 $\pm$ 0.020  $\chi^2$ /NDF: 782583.1/112

- sign 104.216 $\pm$ 0.027  $\chi^2$ /NDF: 458465.5/56

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-111.611 \pm 0.611$   $\chi^2/\text{NDF}$ : 5531.5/30

Left Out:  $-96.026 \pm 0.635$   $\chi^2/\text{NDF}$ : 2770.9/23

Right Out:  $-115.837 \pm 0.577$   $\chi^2/\text{NDF}$ : 7516.0/32

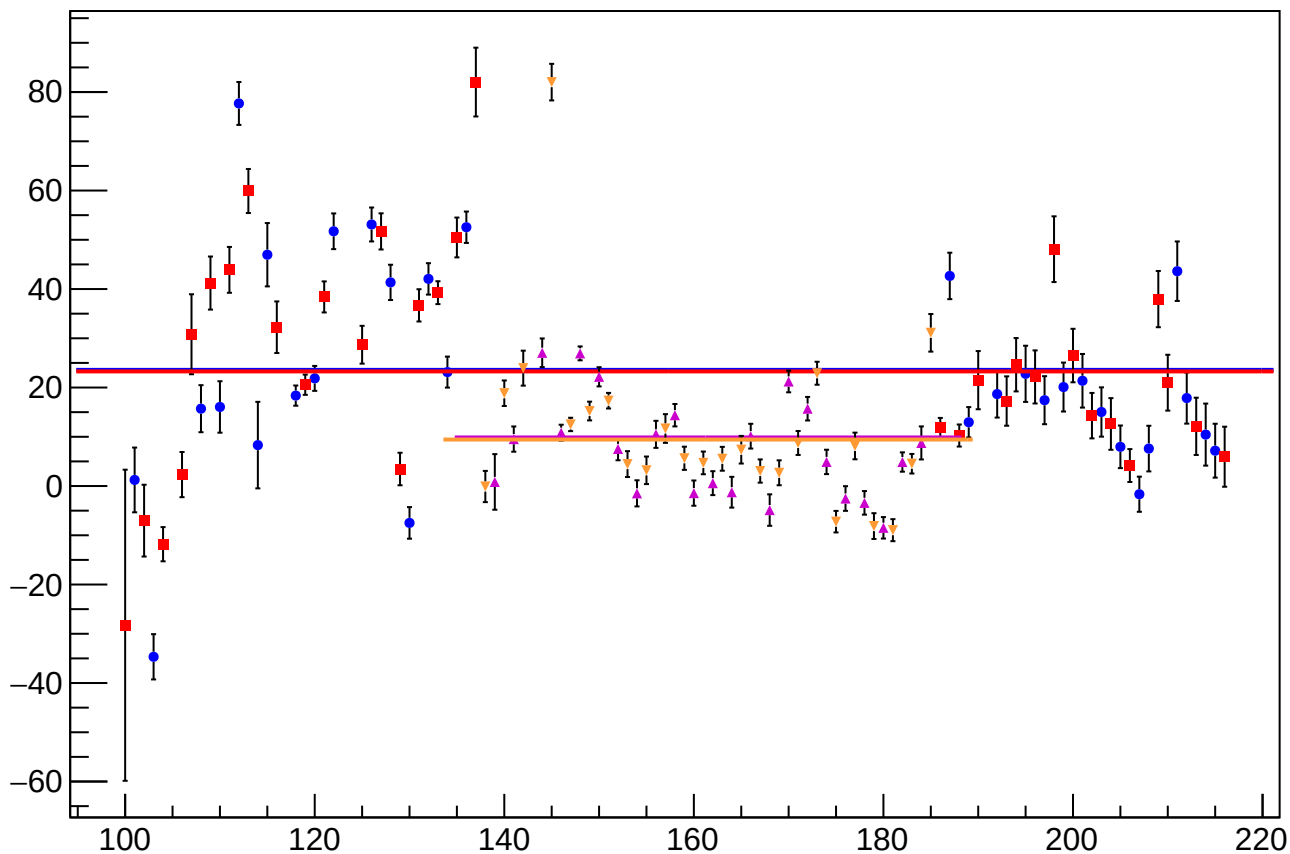
Left In:  $-97.713 \pm 0.639$   $\chi^2/\text{NDF}$ : 2640.9/22

+ sign  $-104.118 \pm 0.440$   $\chi^2/\text{NDF}$ : 8615.3/54

All:  $-105.952 \pm 0.307$   $\chi^2/\text{NDF}$ : 19249.4/110

- sign  $-107.688 \pm 0.428$   $\chi^2/\text{NDF}$ : 10600.3/55

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In: 23.587 $\pm$ 0.716  $\chi^2$ /NDF: 858.1/30

Left Out: 9.438 $\pm$ 0.478  $\chi^2$ /NDF: 736.4/23

Right Out: 23.277 $\pm$ 0.676  $\chi^2$ /NDF: 687.9/32

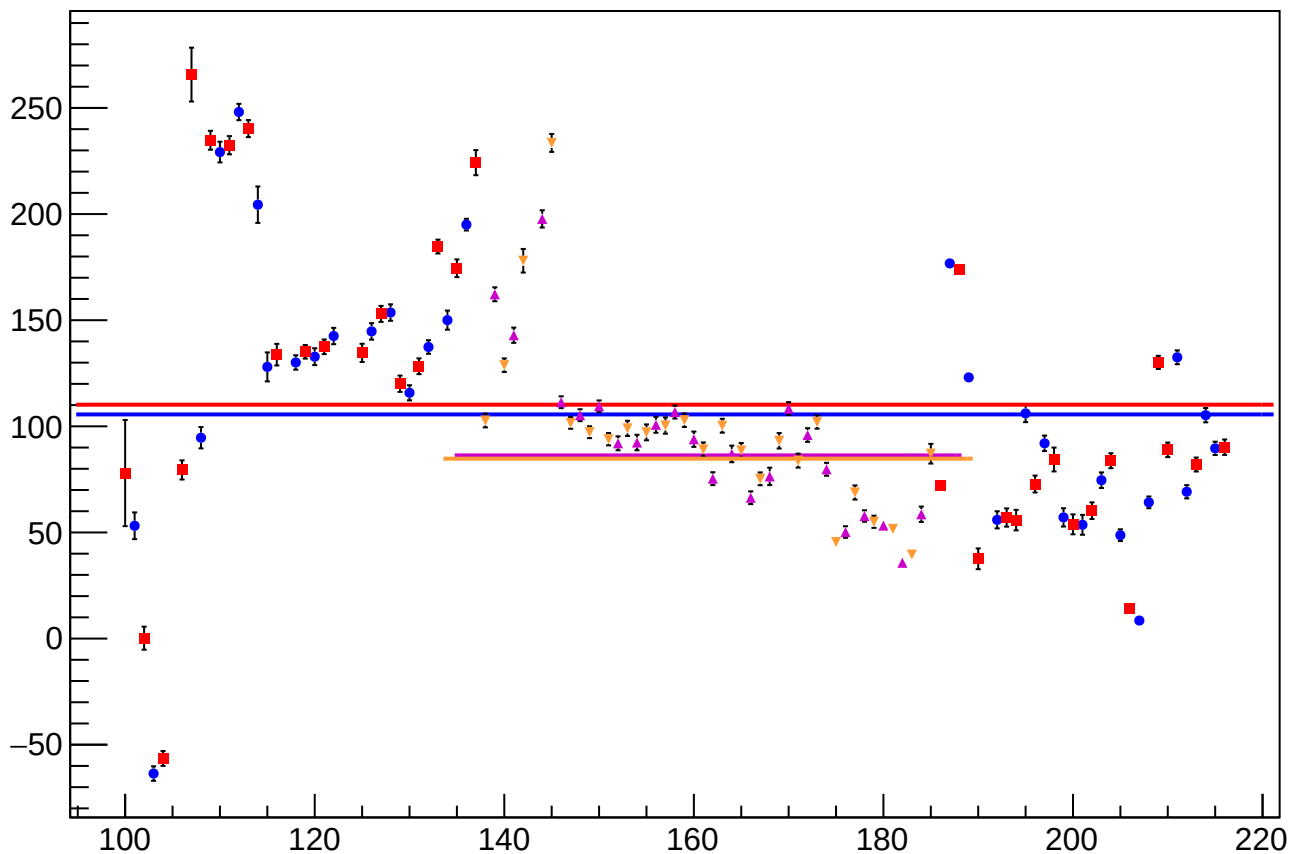
Left In: 9.864 $\pm$ 0.487  $\chi^2$ /NDF: 485.4/22

+ sign 13.800 $\pm$ 0.398  $\chi^2$ /NDF: 1864.6/54

All: 14.124 $\pm$ 0.280  $\chi^2$ /NDF: 3298.6/110

- sign 14.443 $\pm$ 0.395  $\chi^2$ /NDF: 1432.7/55

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 105.603 $\pm$ 0.624  $\chi^2$ /NDF: 10543.3/30

Left Out: 84.759 $\pm$ 0.629  $\chi^2$ /NDF:3110.5/23

Right Out: 110.188 $\pm$ 0.563  $\chi^2$ /NDF: 13288.7/32

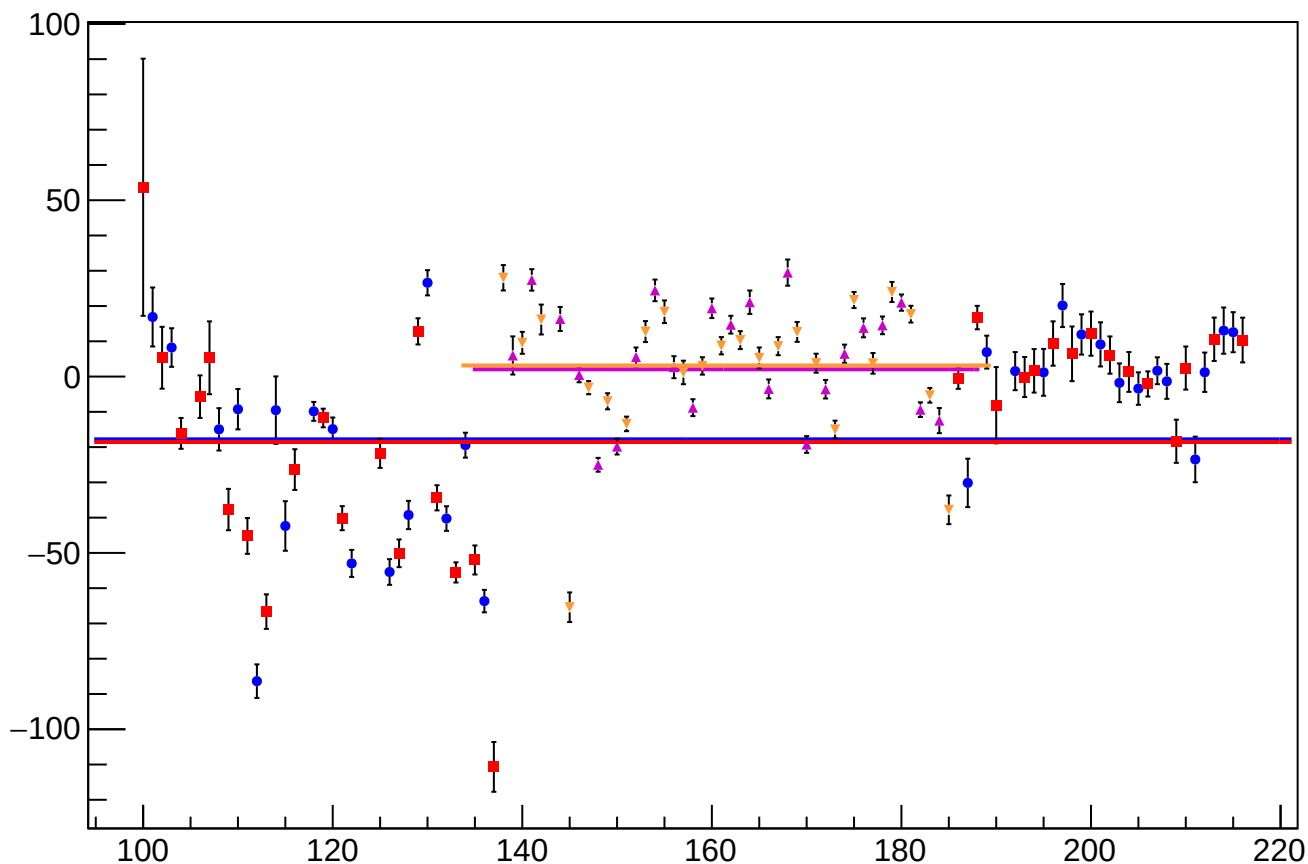
Left In: 86.300 $\pm$ 0.632  $\chi^2$ /NDF:3152.8/22

+ sign 95.273 $\pm$ 0.443  $\chi^2$ /NDF: 14207.4/54

All: 97.558 $\pm$ 0.305  $\chi^2$ /NDF: 31496.4/110

- sign 99.617 $\pm$ 0.420  $\chi^2$ /NDF: 17238.4/55

reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-17.801 \pm 0.827$   $\chi^2/\text{NDF}$ : 1149.0/30

Left Out:  $3.151 \pm 0.544$   $\chi^2/\text{NDF}$ : 813.9/23

Right Out:  $-18.553 \pm 0.807$   $\chi^2/\text{NDF}$ : 1100.2/32

Left In:  $2.050 \pm 0.551$   $\chi^2/\text{NDF}$ : 850.8/22

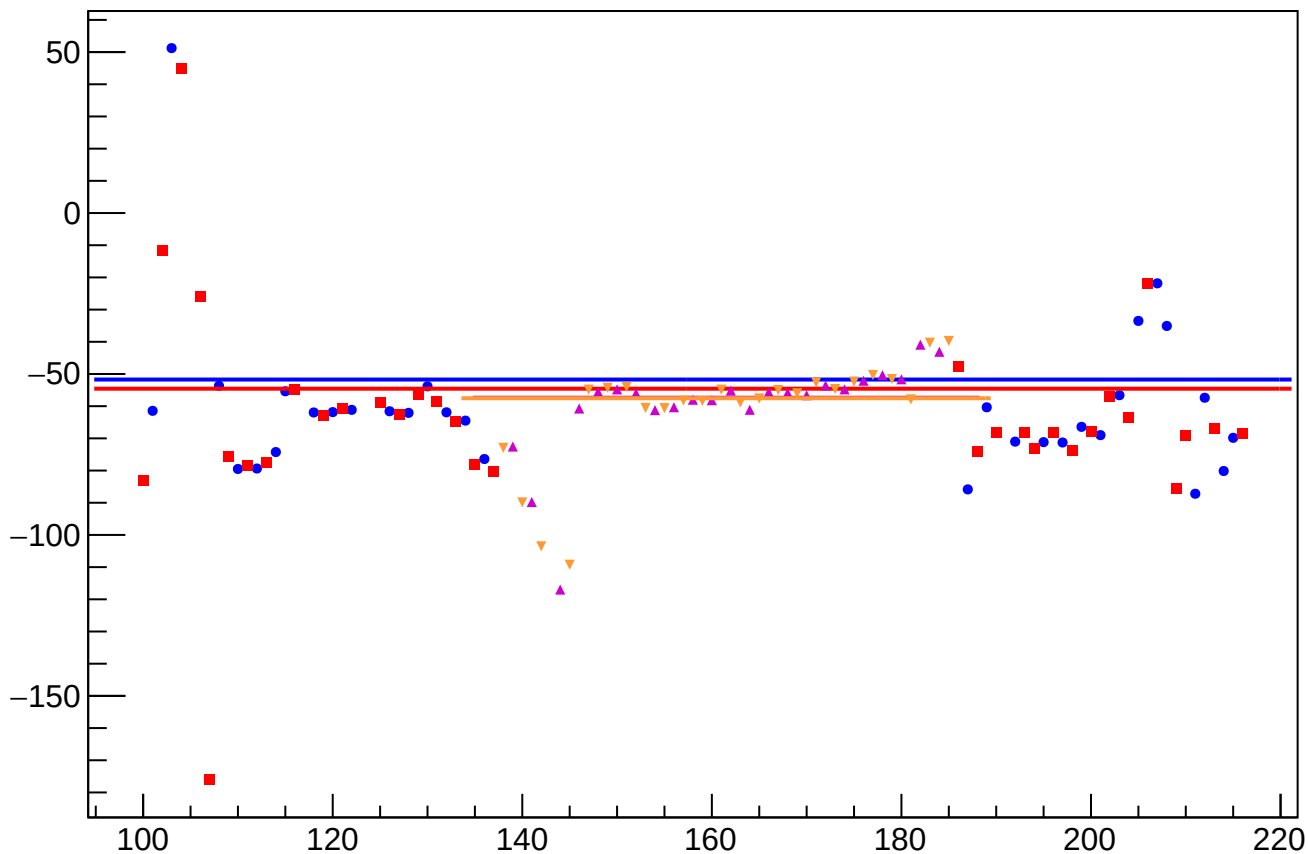
+ sign  $-3.178 \pm 0.454$   $\chi^2/\text{NDF}$ : 2411.4/54

All:  $-3.836 \pm 0.322$   $\chi^2/\text{NDF}$ : 4810.9/110

- sign  $-4.496 \pm 0.455$   $\chi^2/\text{NDF}$ : 2395.3/55



reg\_asym\_us\_avg\_at1lr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-51.724 \pm 0.040$   $\chi^2/\text{NDF}: 729249.1/30$

Left Out:  $-57.532 \pm 0.025$   $\chi^2/\text{NDF}: 267030.7/23$

Right Out:  $-54.572 \pm 0.040$   $\chi^2/\text{NDF}: 638418.3/32$

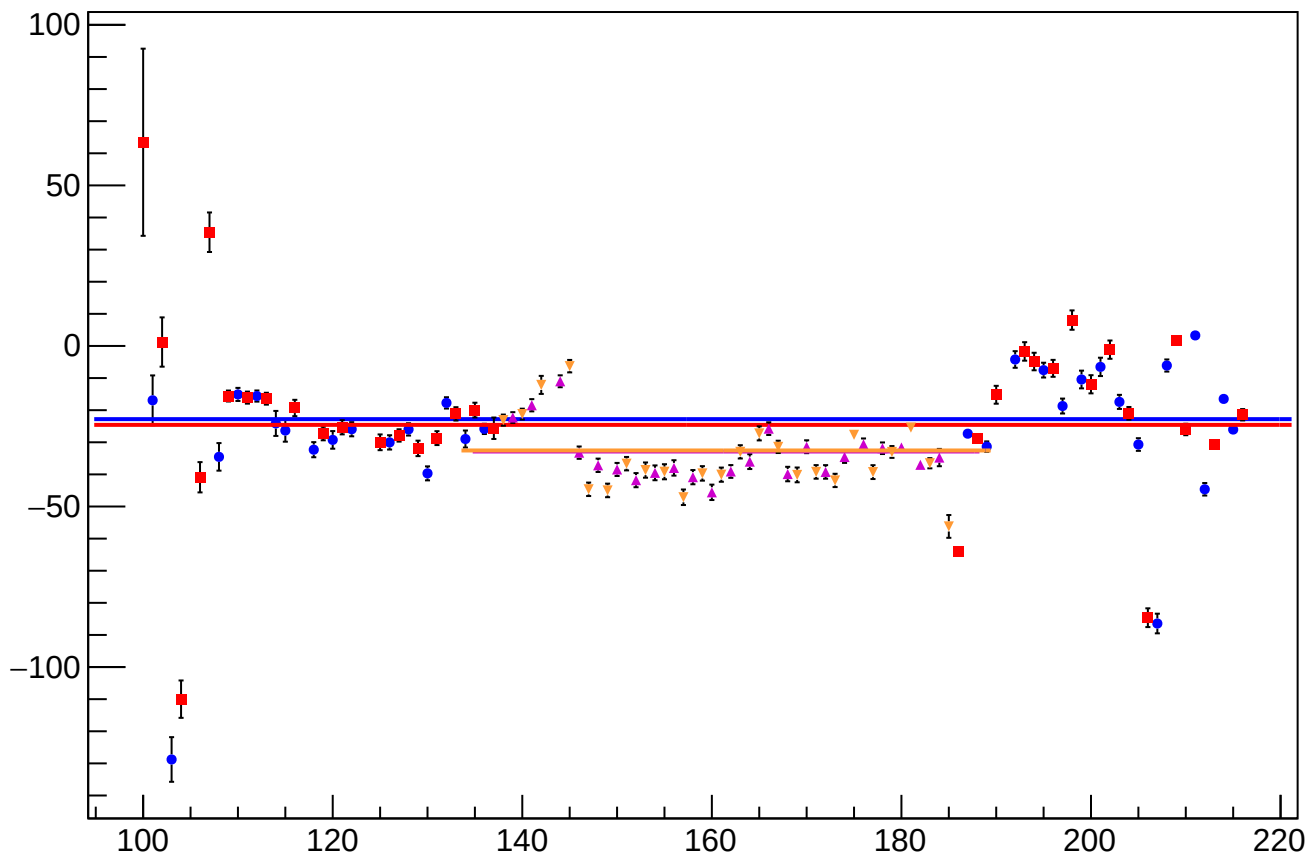
Left In:  $-57.377 \pm 0.025$   $\chi^2/\text{NDF}: 227136.8/22$

+ sign  $-55.914 \pm 0.021$   $\chi^2/\text{NDF}: 1011606.4/54$

All:  $-56.258 \pm 0.015$   $\chi^2/\text{NDF}: 1881237.5/110$

- sign  $-56.604 \pm 0.021$   $\chi^2/\text{NDF}: 869093.6/55$

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-22.792 \pm 0.378$   $\chi^2/\text{NDF}: 1542.7/30$

Left Out:  $-32.549 \pm 0.407$   $\chi^2/\text{NDF}: 603.6/23$

Right Out:  $-24.576 \pm 0.362$   $\chi^2/\text{NDF}: 2386.3/32$

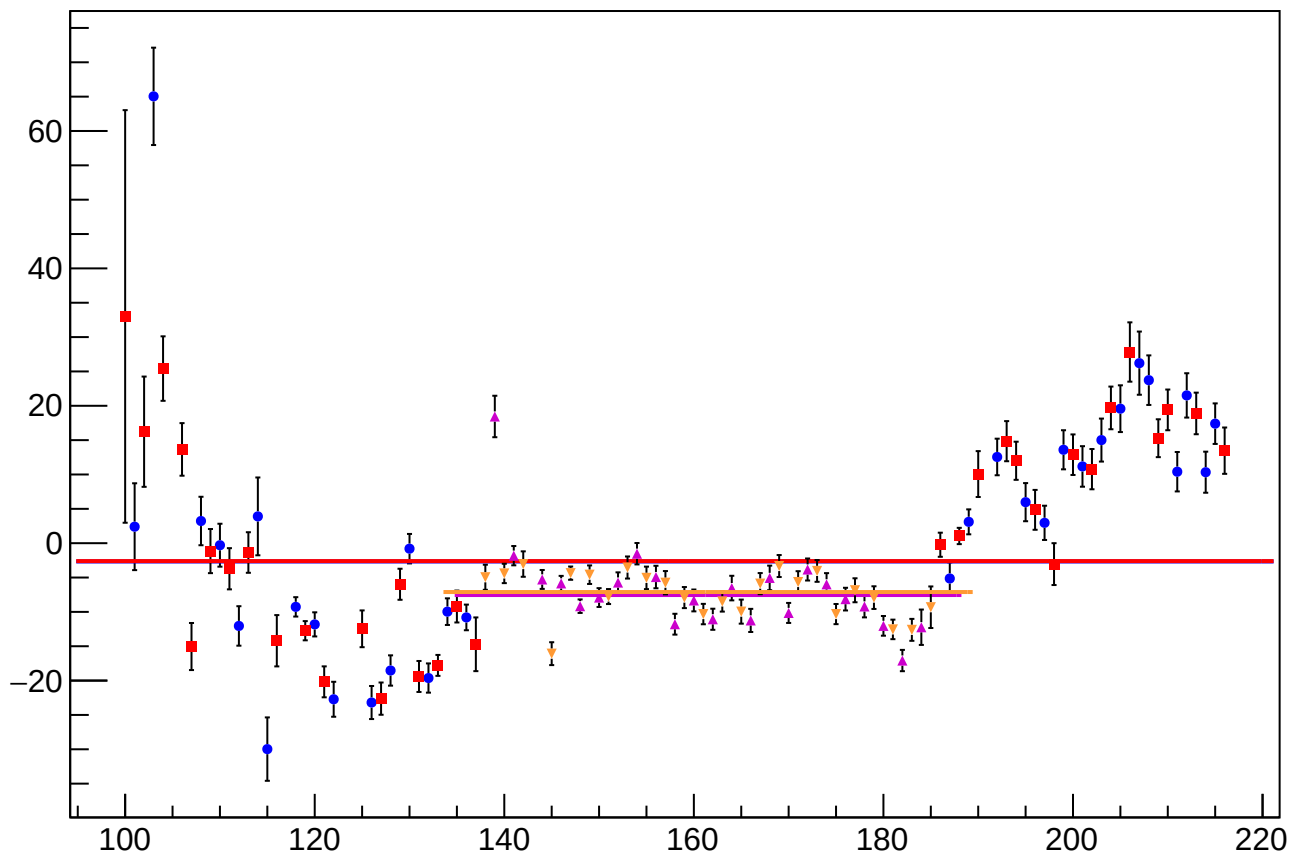
Left In:  $-32.867 \pm 0.411$   $\chi^2/\text{NDF}: 373.2/22$

+ sign  $-27.317 \pm 0.277$   $\chi^2/\text{NDF}: 2455.1/54$

All:  $-27.764 \pm 0.194$   $\chi^2/\text{NDF}: 5448.8/110$

- sign  $-28.193 \pm 0.272$   $\chi^2/\text{NDF}: 2988.6/55$

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.662 \pm 0.462$   $\chi^2/\text{NDF}$ : 898.4/30

Left Out:  $-7.110 \pm 0.309$   $\chi^2/\text{NDF}$ : 109.5/23

Right Out:  $-2.607 \pm 0.441$   $\chi^2/\text{NDF}$ : 874.2/32

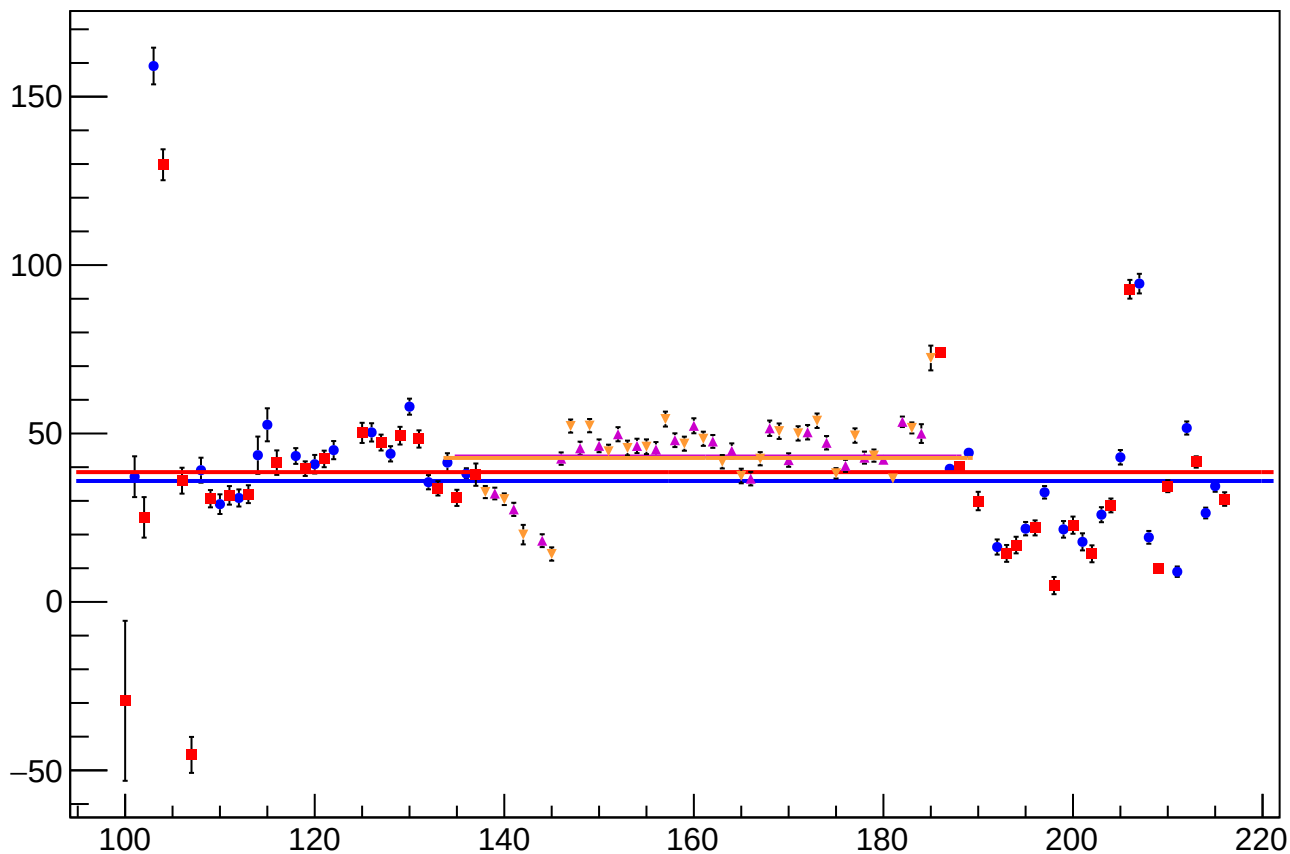
Left In:  $-7.547 \pm 0.315$   $\chi^2/\text{NDF}$ : 199.7/22

+ sign  $-5.733 \pm 0.257$   $\chi^2/\text{NDF}$ : 1072.0/54

All:  $-5.805 \pm 0.181$   $\chi^2/\text{NDF}$ : 2229.2/110

- sign  $-5.876 \pm 0.256$   $\chi^2/\text{NDF}$ : 1157.1/55

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 35.903+/-0.385  $\chi^2$ /NDF: 1870.5/30

Left Out: 42.745+/-0.403  $\chi^2$ /NDF:631.5/23

Right Out: 38.539+/-0.355  $\chi^2$ /NDF: 3091.0/32

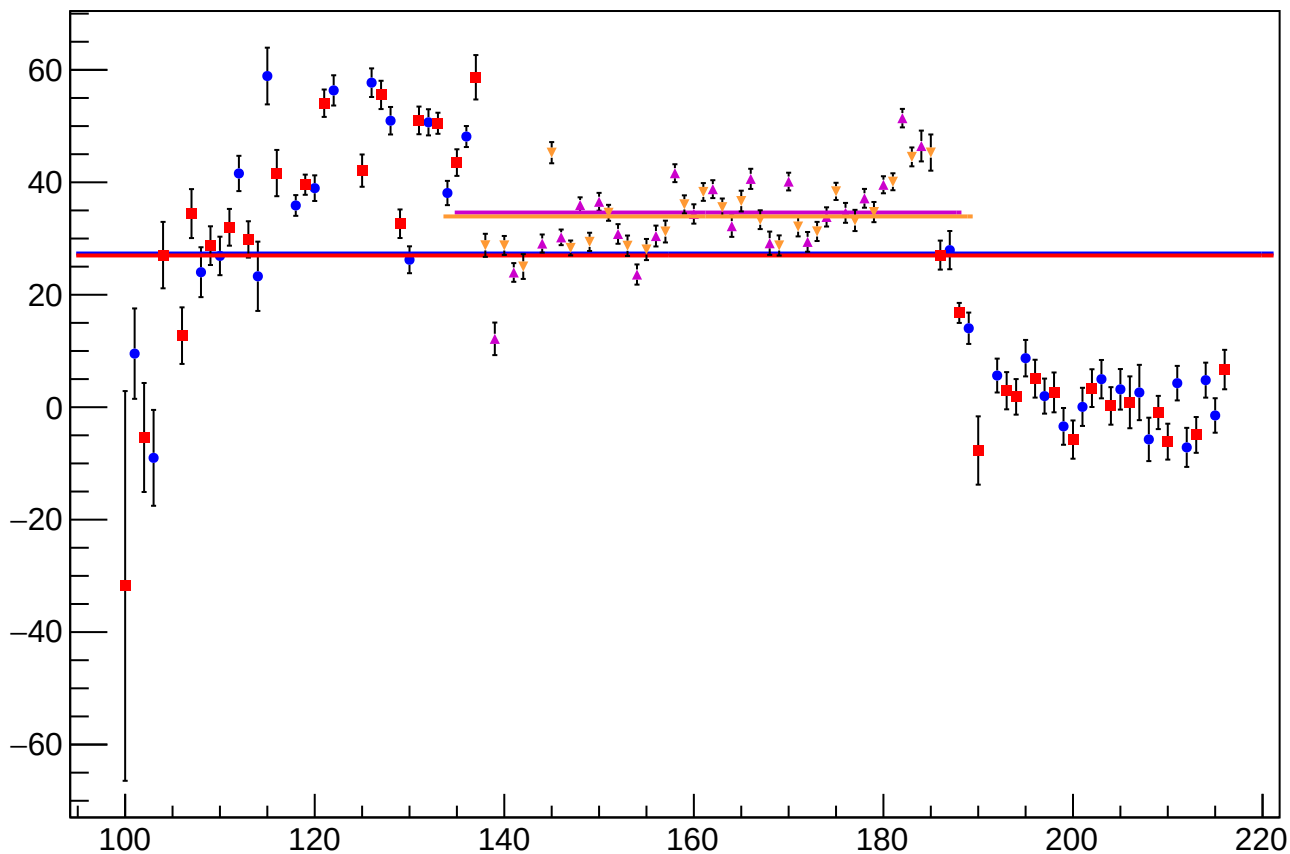
Left In: 43.169+/-0.407  $\chi^2$ /NDF:413.0/22

+ sign 39.168+/-0.279  $\chi^2$ /NDF: 2652.5/54

All: 39.881+/-0.193  $\chi^2$ /NDF: 6242.5/110

- sign 40.540+/-0.268  $\chi^2$ /NDF: 3577.4/55

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 27.334 $\pm$ 0.534  $\chi^2$ /NDF: 1542.0/30

Left Out: 33.930 $\pm$ 0.351  $\chi^2$ /NDF:216.5/23

Right Out: 26.989 $\pm$ 0.525  $\chi^2$ /NDF: 1582.0/32

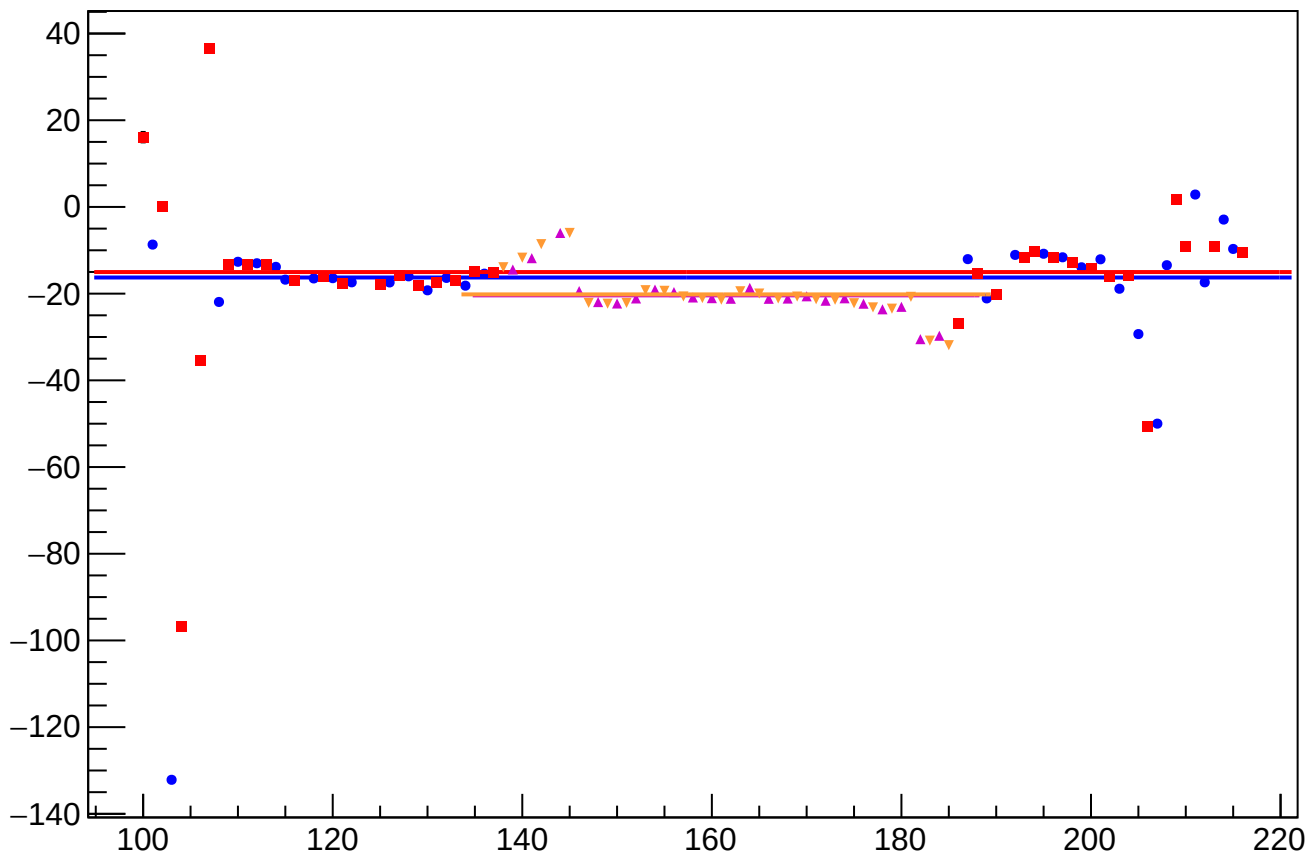
Left In: 34.623 $\pm$ 0.356  $\chi^2$ /NDF:376.1/22

+ sign 31.940 $\pm$ 0.293  $\chi^2$ /NDF: 1865.3/54

All: 32.077 $\pm$ 0.208  $\chi^2$ /NDF: 3968.5/110

- sign 32.217 $\pm$ 0.295  $\chi^2$ /NDF: 2102.8/55

reg\_asym\_us\_avg\_at1lr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-16.277 \pm 0.026$   $\chi^2/\text{NDF}: 332153.4/30$

Left Out:  $-20.174 \pm 0.016$   $\chi^2/\text{NDF}: 99947.2/23$

Right Out:  $-15.020 \pm 0.026$   $\chi^2/\text{NDF}: 276362.3/32$

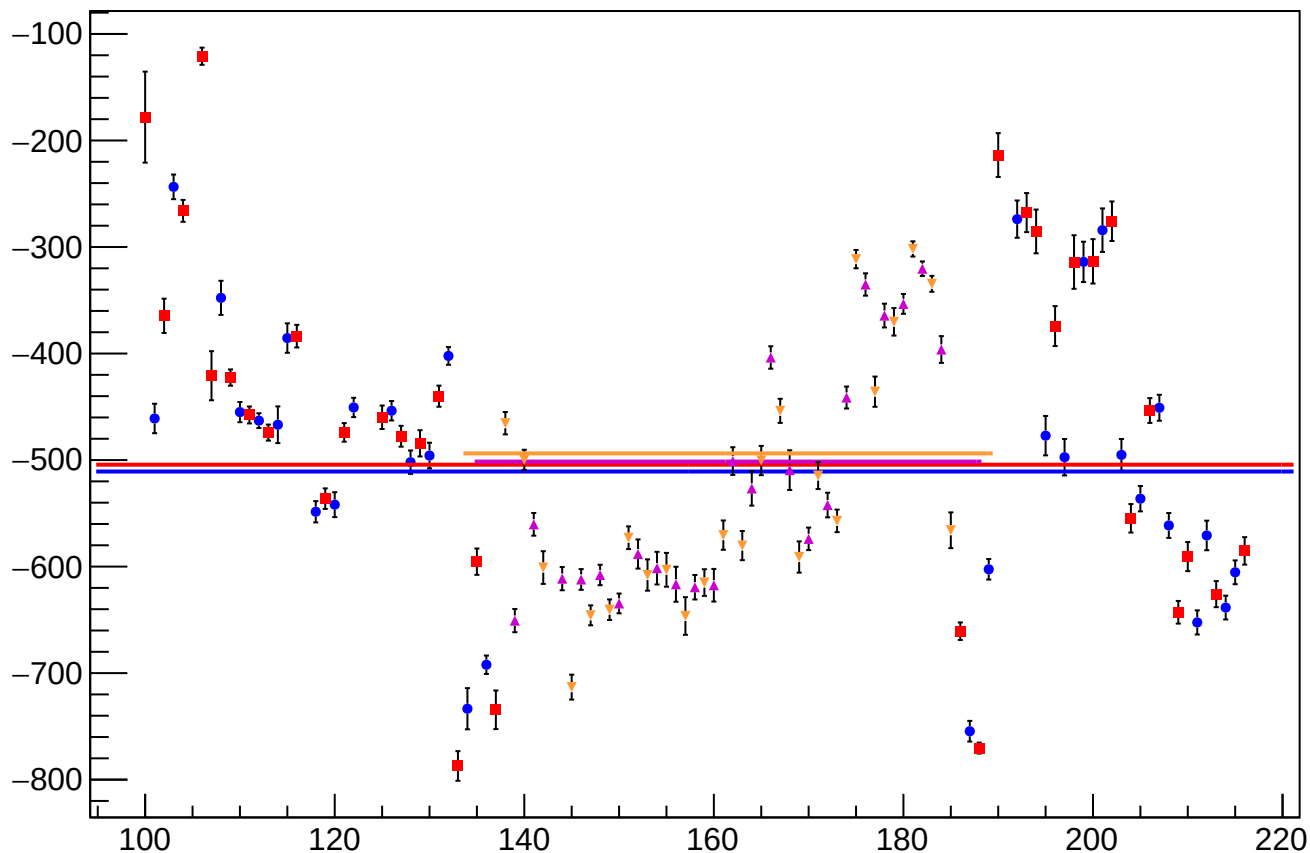
Left In:  $-20.396 \pm 0.016$   $\chi^2/\text{NDF}: 81154.4/22$

+ sign  $-19.116 \pm 0.013$   $\chi^2/\text{NDF}: 448666.6/54$

All:  $-19.015 \pm 0.010$   $\chi^2/\text{NDF}: 838283.4/110$

- sign  $-18.914 \pm 0.013$   $\chi^2/\text{NDF}: 389503.9/55$

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In: -510.751 $\pm$ 2.063  $\chi^2$ /NDF: 3238.0/30

Left Out: -493.722 $\pm$ 2.295  $\chi^2$ /NDF:3150.0/23

Right Out: -504.330 $\pm$ 1.909  $\chi^2$ /NDF: 8186.7/32

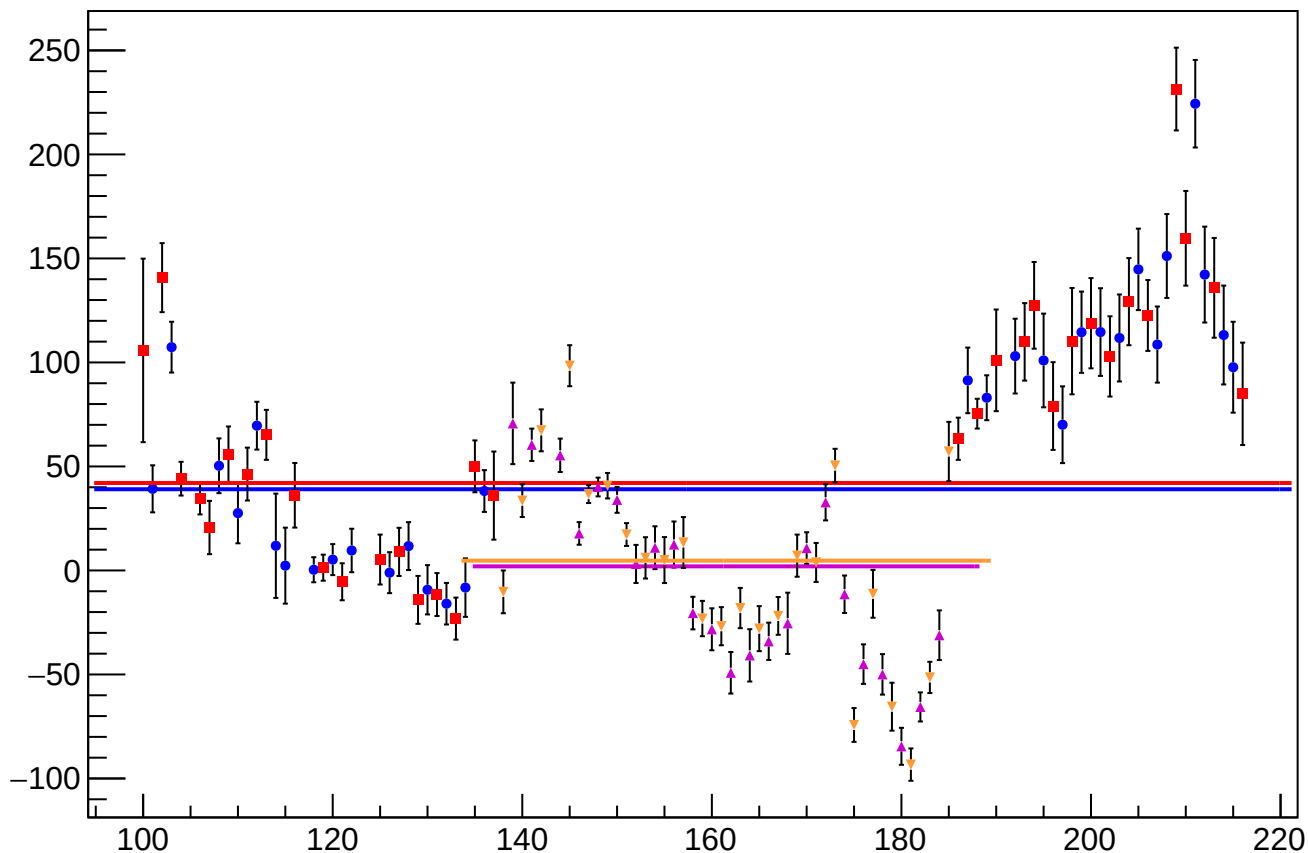
Left In: -501.425 $\pm$ 2.306  $\chi^2$ /NDF:2689.3/22

+ sign -503.141 $\pm$ 1.534  $\chi^2$ /NDF: 6418.5/54

All: -503.145 $\pm$ 1.062  $\chi^2$ /NDF: 17295.4/110

- sign -503.149 $\pm$ 1.471  $\chi^2$ /NDF: 10876.9/55

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $39.043 \pm 2.320$   $\chi^2/\text{NDF}: 475.0/30$

Left Out:  $4.709 \pm 1.696$   $\chi^2/\text{NDF}: 680.3/23$

Right Out:  $42.037 \pm 2.171$   $\chi^2/\text{NDF}: 497.8/32$

Left In:  $1.970 \pm 1.722$   $\chi^2/\text{NDF}: 560.8/22$

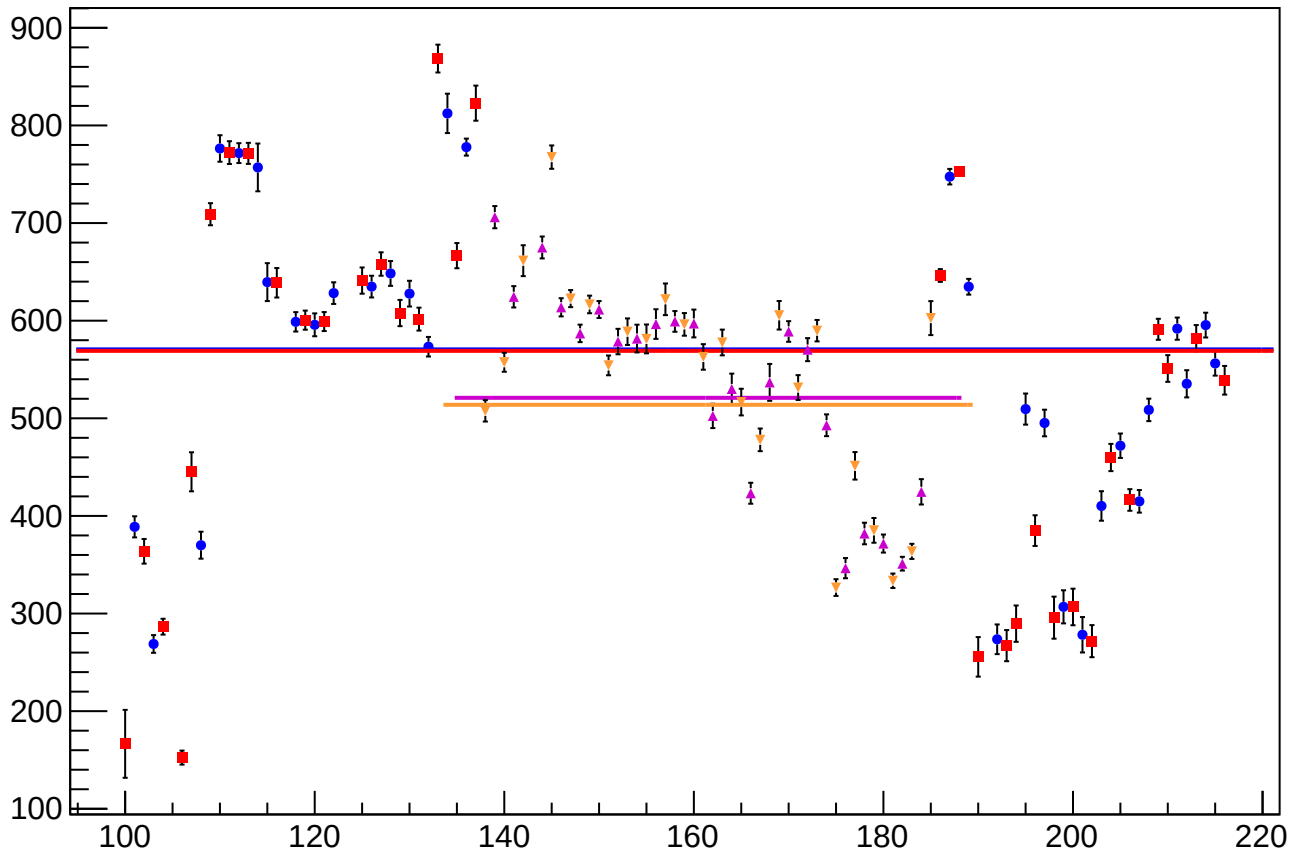
+ sign  $16.662 \pm 1.369$   $\chi^2/\text{NDF}: 1298.0/54$

All:  $17.060 \pm 0.961$   $\chi^2/\text{NDF}: 2565.9/110$

- sign  $17.446 \pm 1.349$   $\chi^2/\text{NDF}: 1267.7/55$



reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 570.590 $\pm$ 2.137  $\chi^2$ /NDF: 5015.9/30

Left Out: 513.833 $\pm$ 2.277  $\chi^2$ /NDF:2735.5/23

Right Out: 569.097 $\pm$ 1.912  $\chi^2$ /NDF: 10678.0/32

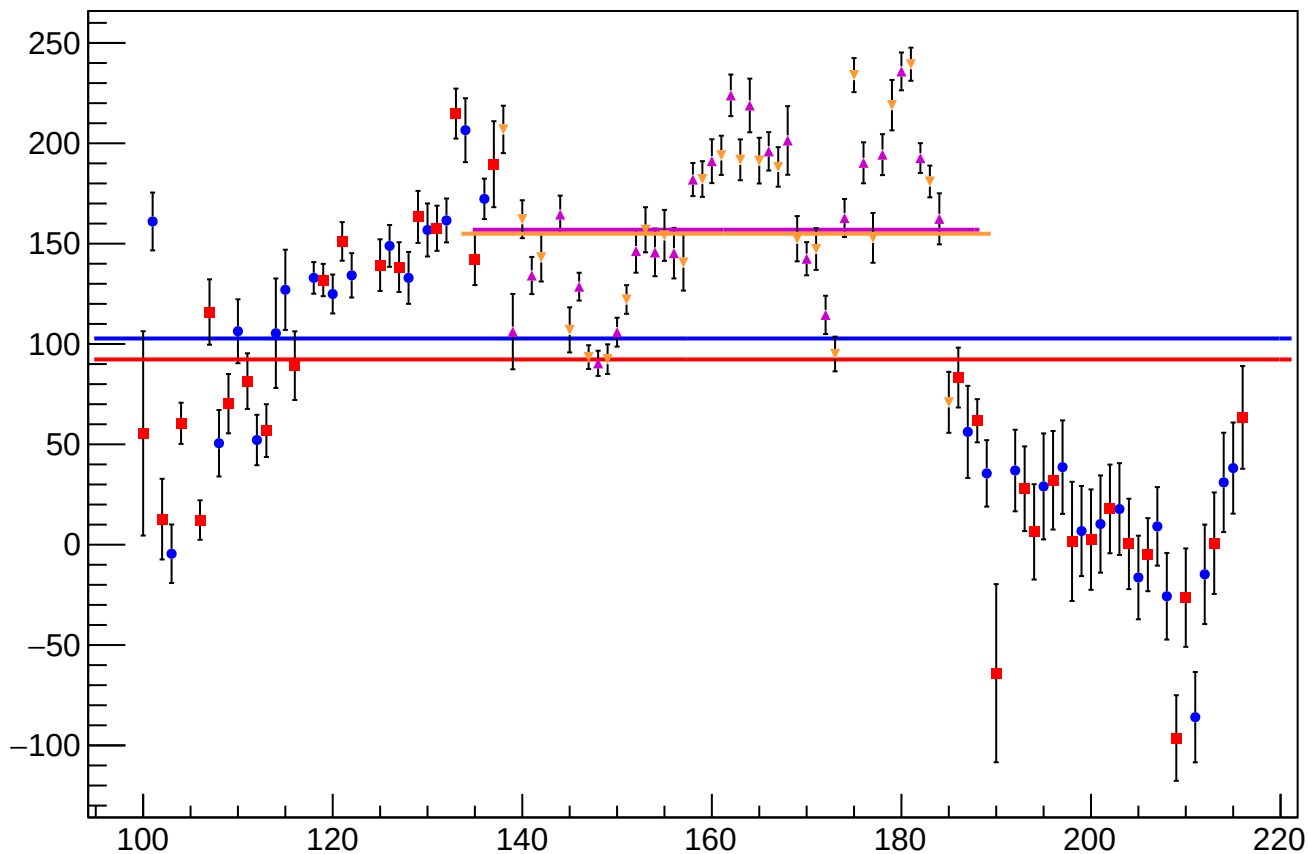
Left In: 520.990 $\pm$ 2.283  $\chi^2$ /NDF:2442.8/22

+ sign 544.015 $\pm$ 1.558  $\chi^2$ /NDF: 8081.8/54

All: 546.802 $\pm$ 1.068  $\chi^2$ /NDF: 21469.5/110

- sign 549.269 $\pm$ 1.466  $\chi^2$ /NDF: 13381.7/55

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $102.747 \pm 2.707$   $\chi^2/\text{NDF}: 580.5/30$

Left Out:  $154.944 \pm 1.953$   $\chi^2/\text{NDF}: 609.0/23$

Right Out:  $92.307 \pm 2.591$   $\chi^2/\text{NDF}: 633.5/32$

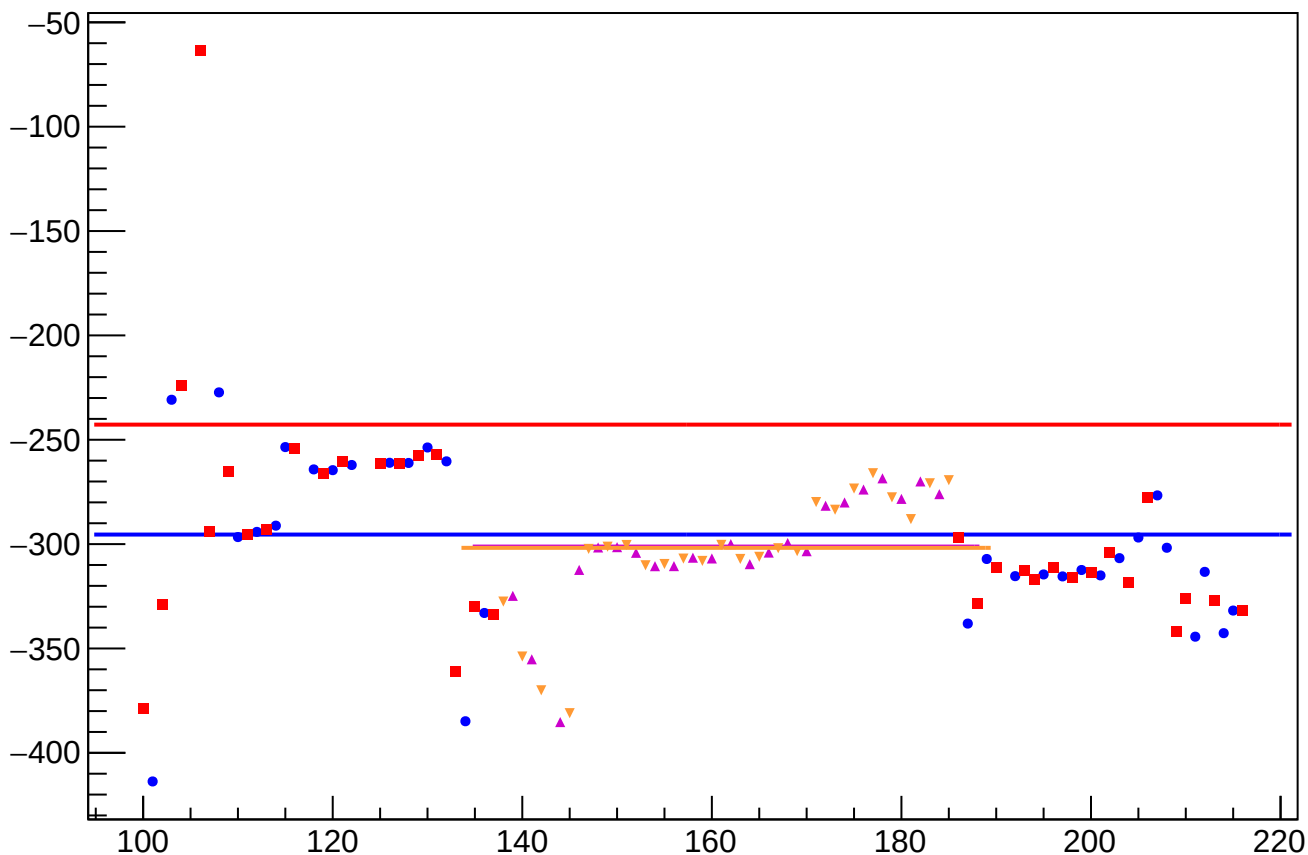
Left In:  $156.934 \pm 1.971$   $\chi^2/\text{NDF}: 443.2/22$

+ sign  $137.076 \pm 1.584$   $\chi^2/\text{NDF}: 1434.0/54$

All:  $135.140 \pm 1.115$   $\chi^2/\text{NDF}: 2907.7/110$

- sign  $133.241 \pm 1.569$   $\chi^2/\text{NDF}: 1470.8/55$

reg\_asym\_us\_avg\_at2lr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In: -295.421+/-0.138  $\chi^2/\text{NDF}$ : 118439.3/30

Left Out: -301.785+/-0.091  $\chi^2/\text{NDF}$ : 86719.4/23

Right Out: -242.749+/-0.122  $\chi^2/\text{NDF}$ : 707839.0/32

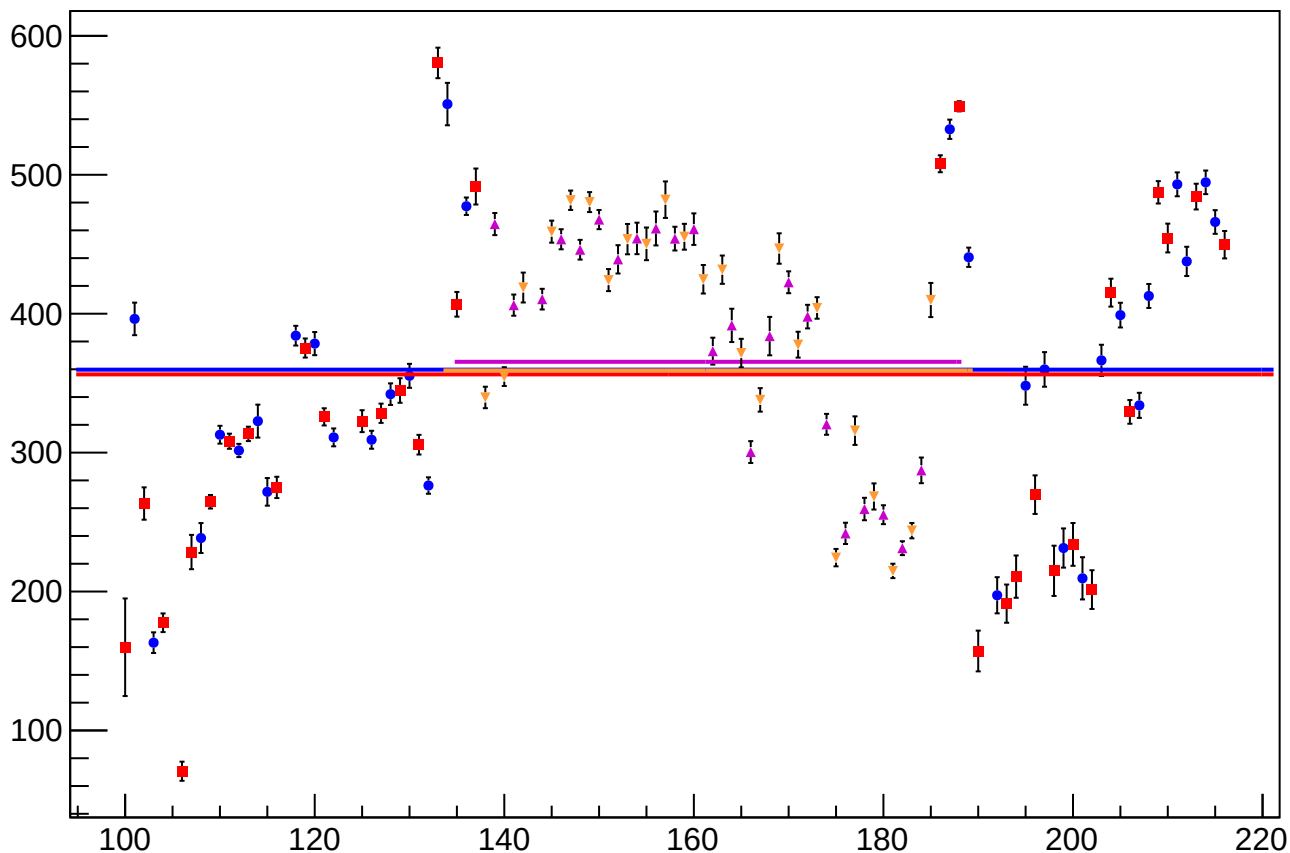
Left In: -301.176+/-0.090  $\chi^2/\text{NDF}$ : 75325.3/22

+ sign -299.859+/-0.076  $\chi^2/\text{NDF}$ : 206646.2/54

All: -289.747+/-0.052  $\chi^2/\text{NDF}$ : 1172678.6/11

- sign -280.529+/-0.072  $\chi^2/\text{NDF}$ : 932025.8/55

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 359.721 $\pm$ 1.482  $\chi^2$ /NDF: 3833.7/30

Left Out: 359.188 $\pm$ 1.681  $\chi^2$ /NDF:3187.9/23

Right Out: 356.314 $\pm$ 1.365  $\chi^2$ /NDF: 8723.4/32

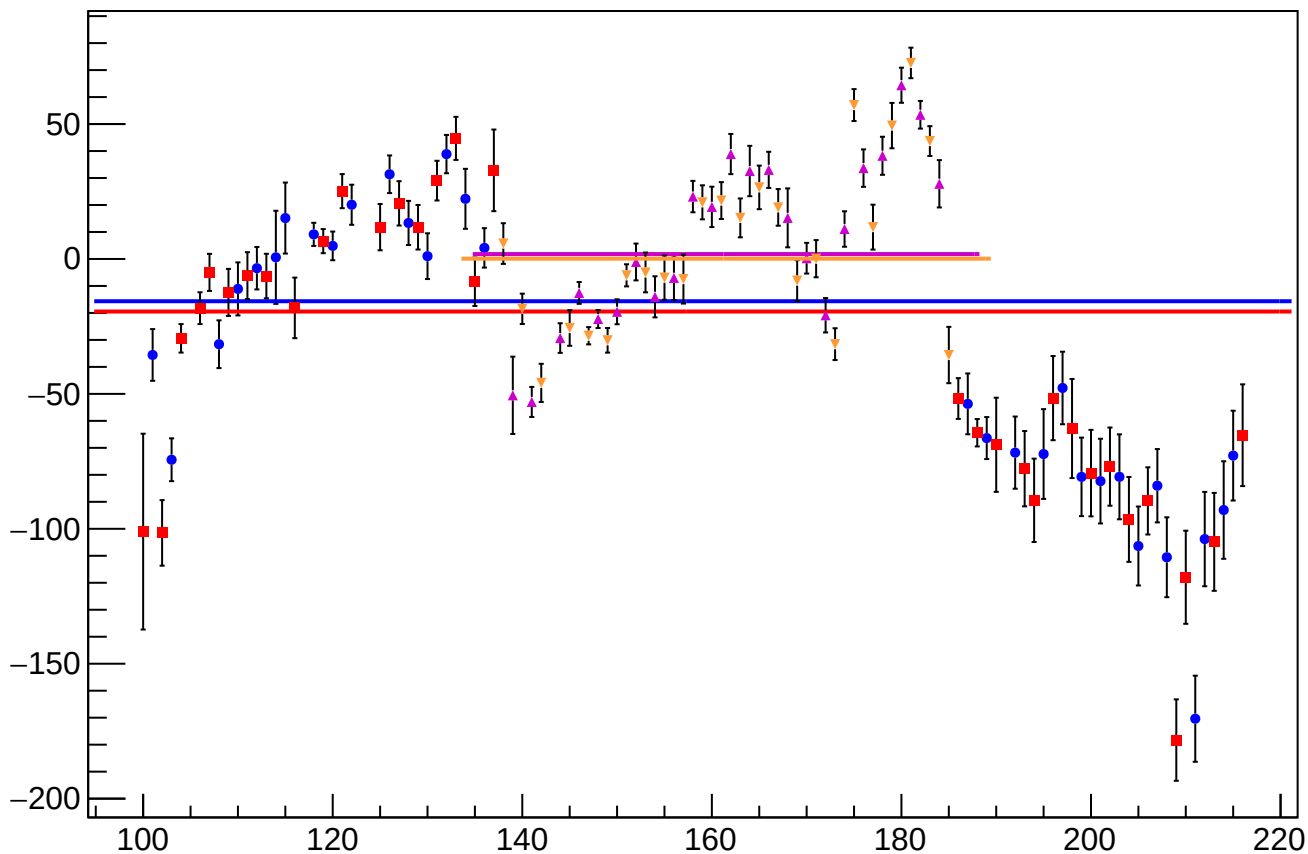
Left In: 365.362 $\pm$ 1.692  $\chi^2$ /NDF:2739.5/22

+ sign 359.488 $\pm$ 1.112  $\chi^2$ /NDF: 7021.7/54

All: 359.693 $\pm$ 0.768  $\chi^2$ /NDF: 18501.9/110

- sign 359.881 $\pm$ 1.063  $\chi^2$ /NDF: 11480.2/55

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-15.662 \pm 1.667$   $\chi^2/\text{NDF}$ : 681.3/30

Left Out:  $0.114 \pm 1.247$   $\chi^2/\text{NDF}$ : 637.9/23

Right Out:  $-19.473 \pm 1.542$   $\chi^2/\text{NDF}$ : 730.5/32

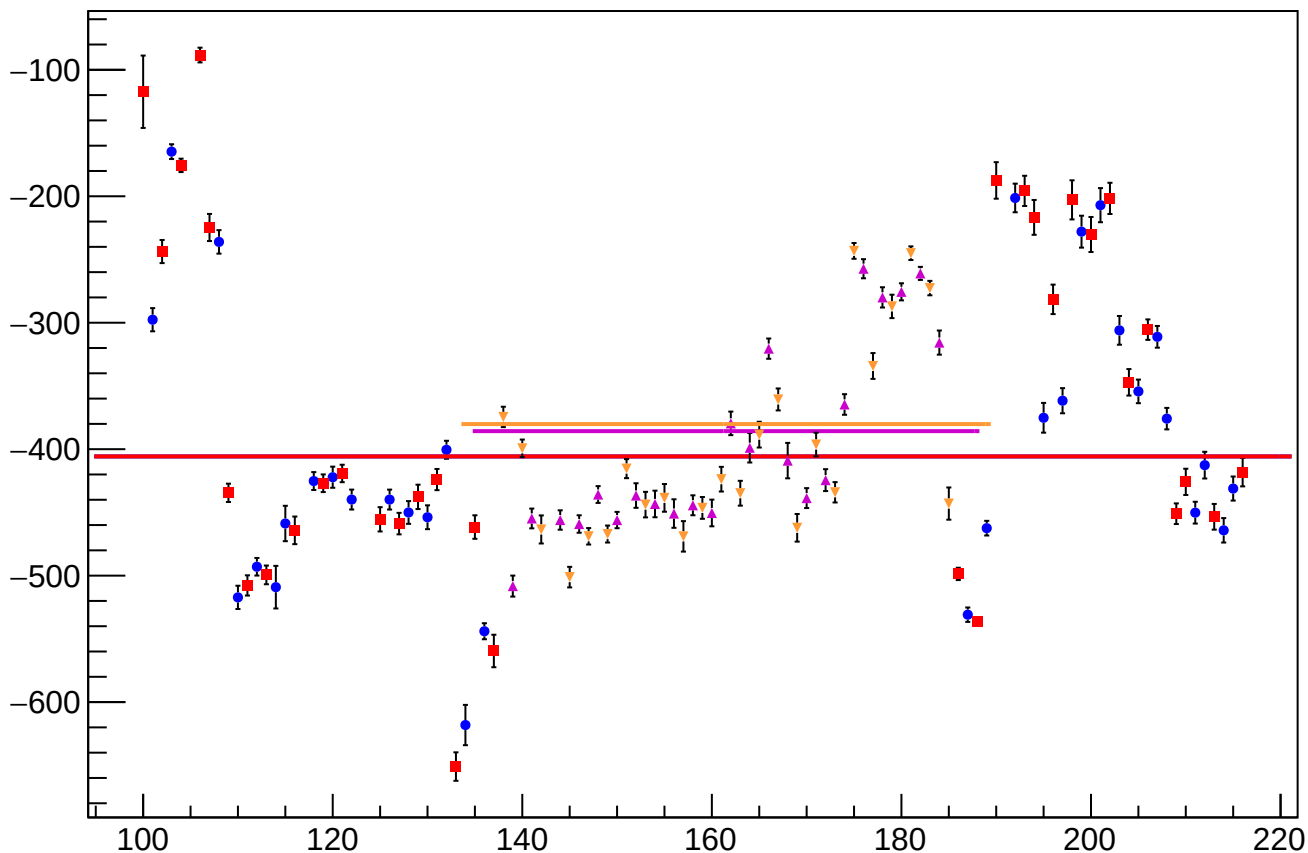
Left In:  $1.812 \pm 1.267$   $\chi^2/\text{NDF}$ : 577.0/22

+ sign  $-5.545 \pm 0.998$   $\chi^2/\text{NDF}$ : 1376.6/54

All:  $-6.167 \pm 0.699$   $\chi^2/\text{NDF}$ : 2798.7/110

- sign  $-6.765 \pm 0.979$   $\chi^2/\text{NDF}$ : 1421.3/55

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-405.757 \pm 1.542$   $\chi^2/\text{NDF}$ : 4938.8/30

Left Out:  $-380.144 \pm 1.670$   $\chi^2/\text{NDF}$ : 2618.6/23

Right Out:  $-405.722 \pm 1.373$   $\chi^2/\text{NDF}$ : 10715.9/32

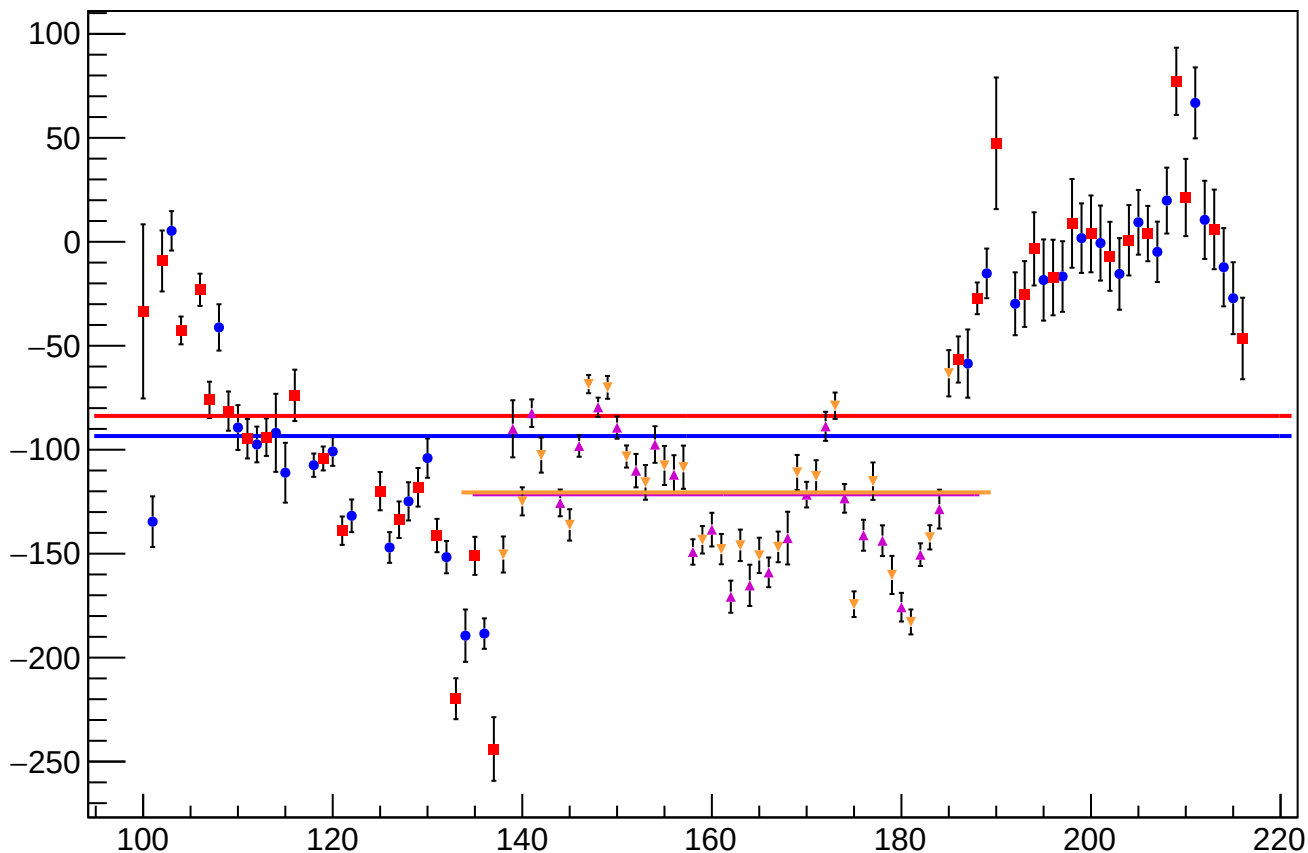
Left In:  $-385.725 \pm 1.677$   $\chi^2/\text{NDF}$ : 2361.2/22

+ sign  $-393.971 \pm 1.133$   $\chi^2/\text{NDF}$ : 7684.5/54

All:  $-395.952 \pm 0.775$   $\chi^2/\text{NDF}$ : 20852.5/110

- sign  $-397.695 \pm 1.062$   $\chi^2/\text{NDF}$ : 13162.3/55

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-93.432 \pm 1.946$   $\chi^2/\text{NDF}: 987.1/30$

Left Out:  $-120.541 \pm 1.435$   $\chi^2/\text{NDF}: 611.5/23$

Right Out:  $-83.751 \pm 1.840$   $\chi^2/\text{NDF}: 1090.2/32$

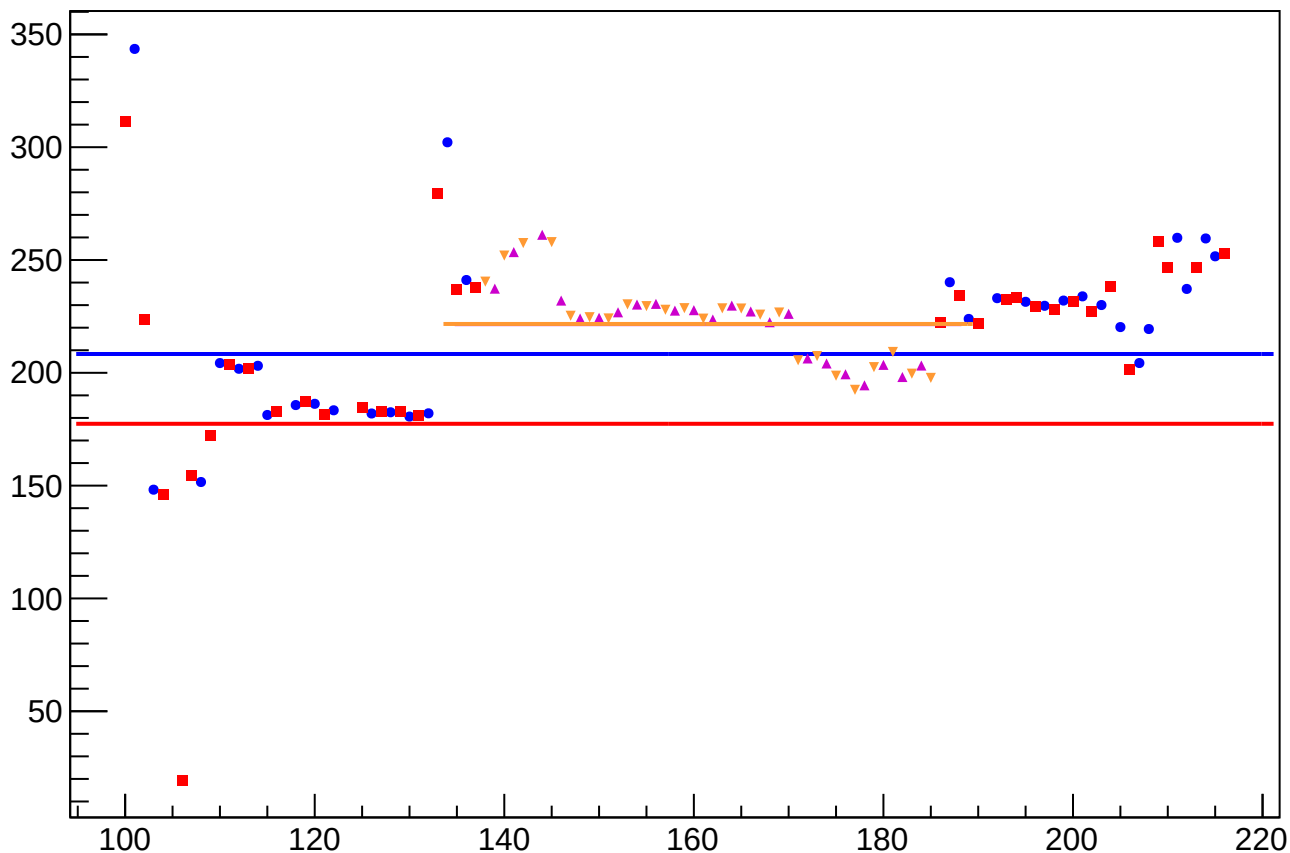
Left In:  $-121.453 \pm 1.450$   $\chi^2/\text{NDF}: 432.6/22$

+ sign  $-110.988 \pm 1.155$   $\chi^2/\text{NDF}: 1724.3/54$

All:  $-108.973 \pm 0.811$   $\chi^2/\text{NDF}: 3512.1/110$

- sign  $-107.015 \pm 1.139$   $\chi^2/\text{NDF}: 1781.8/55$

reg\_asym\_us\_avg\_at2lr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 208.340 $\pm$ 0.099  $\chi^2$ /NDF: 212156.1/30

Left Out: 221.652 $\pm$ 0.067  $\chi^2$ /NDF: 67213.0/23

Right Out: 177.405 $\pm$ 0.090  $\chi^2$ /NDF: 679538.1/32

Left In: 221.574 $\pm$ 0.066  $\chi^2$ /NDF: 62122.0/22

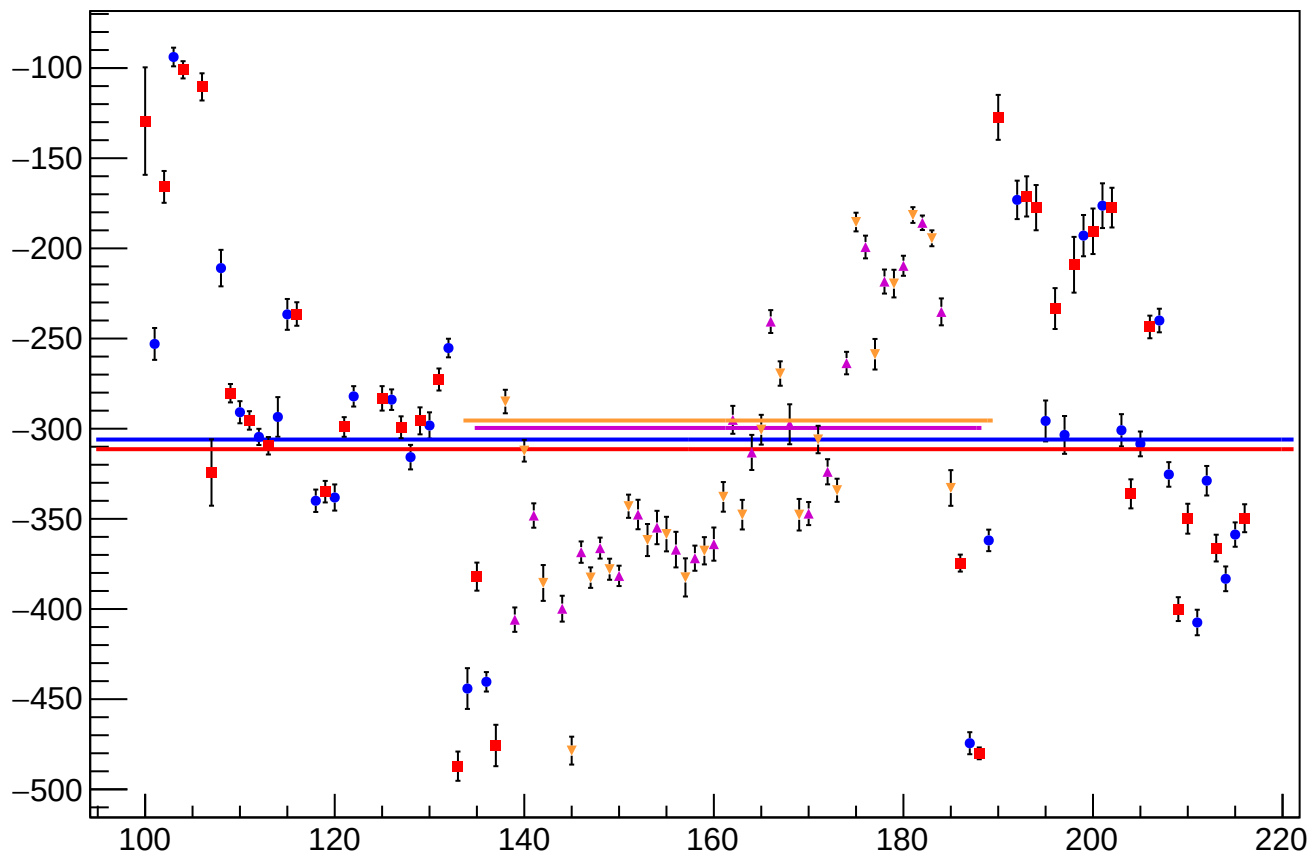
+ sign 217.488 $\pm$ 0.055  $\chi^2$ /NDF: 291835.9/54

All: 211.582 $\pm$ 0.038  $\chi^2$ /NDF: 1211655.5/110

- sign 206.080 $\pm$ 0.053  $\chi^2$ /NDF: 897764.7/55



reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $-306.009 \pm 1.253$   $\chi^2/\text{NDF}: 4552.0/30$

Left Out:  $-295.464 \pm 1.393$   $\chi^2/\text{NDF}: 3346.3/23$

Right Out:  $-311.370 \pm 1.183$   $\chi^2/\text{NDF}: 8033.6/32$

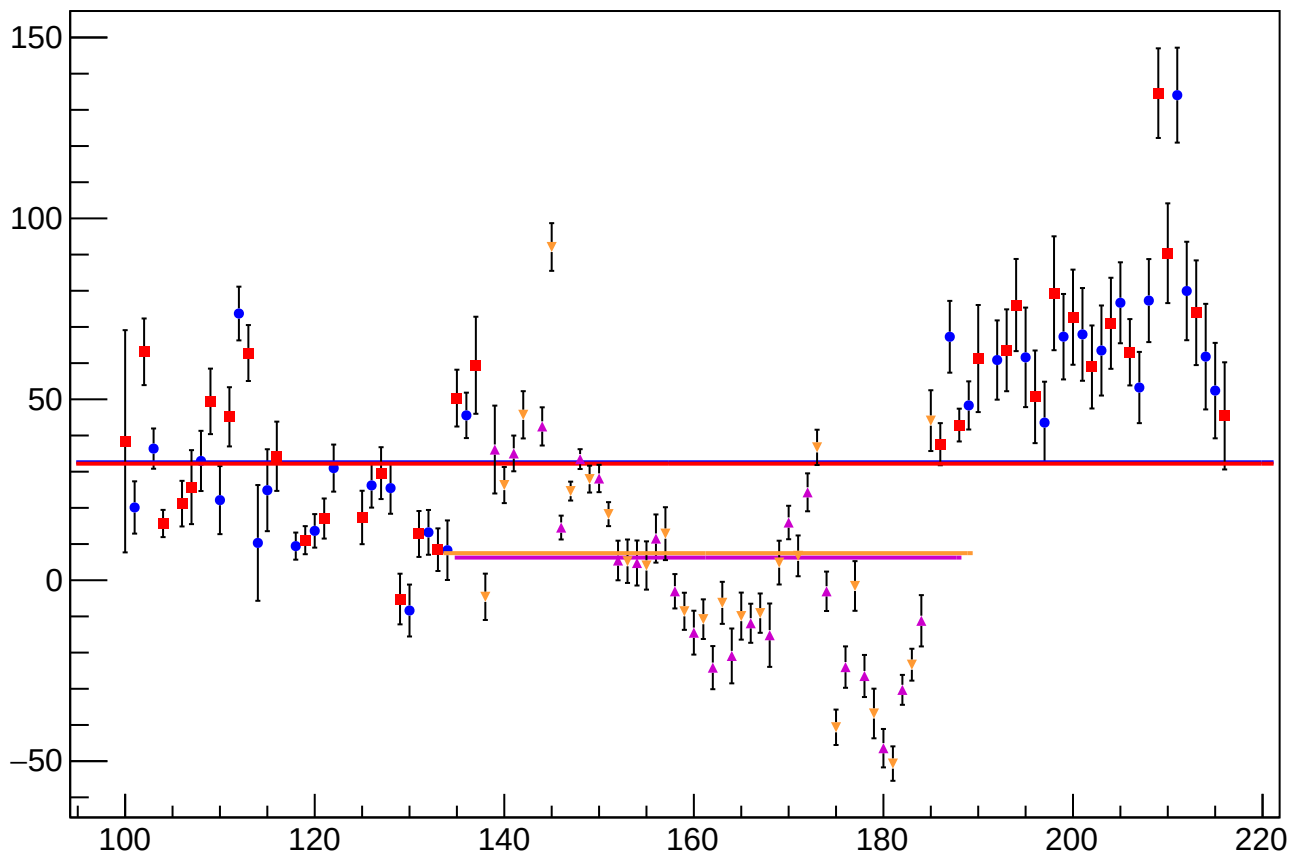
Left In:  $-299.588 \pm 1.397$   $\chi^2/\text{NDF}: 2971.7/22$

+ sign  $-301.290 \pm 0.932$   $\chi^2/\text{NDF}: 7930.0/54$

All:  $-303.949 \pm 0.648$   $\chi^2/\text{NDF}: 18992.5/110$

- sign  $-306.447 \pm 0.903$   $\chi^2/\text{NDF}: 11046.7/55$

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $32.597 \pm 1.411$   $\chi^2/\text{NDF}$ : 315.8/30

Left Out:  $7.486 \pm 1.030$   $\chi^2/\text{NDF}$ : 738.5/23

Right Out:  $32.216 \pm 1.330$   $\chi^2/\text{NDF}$ : 332.8/32

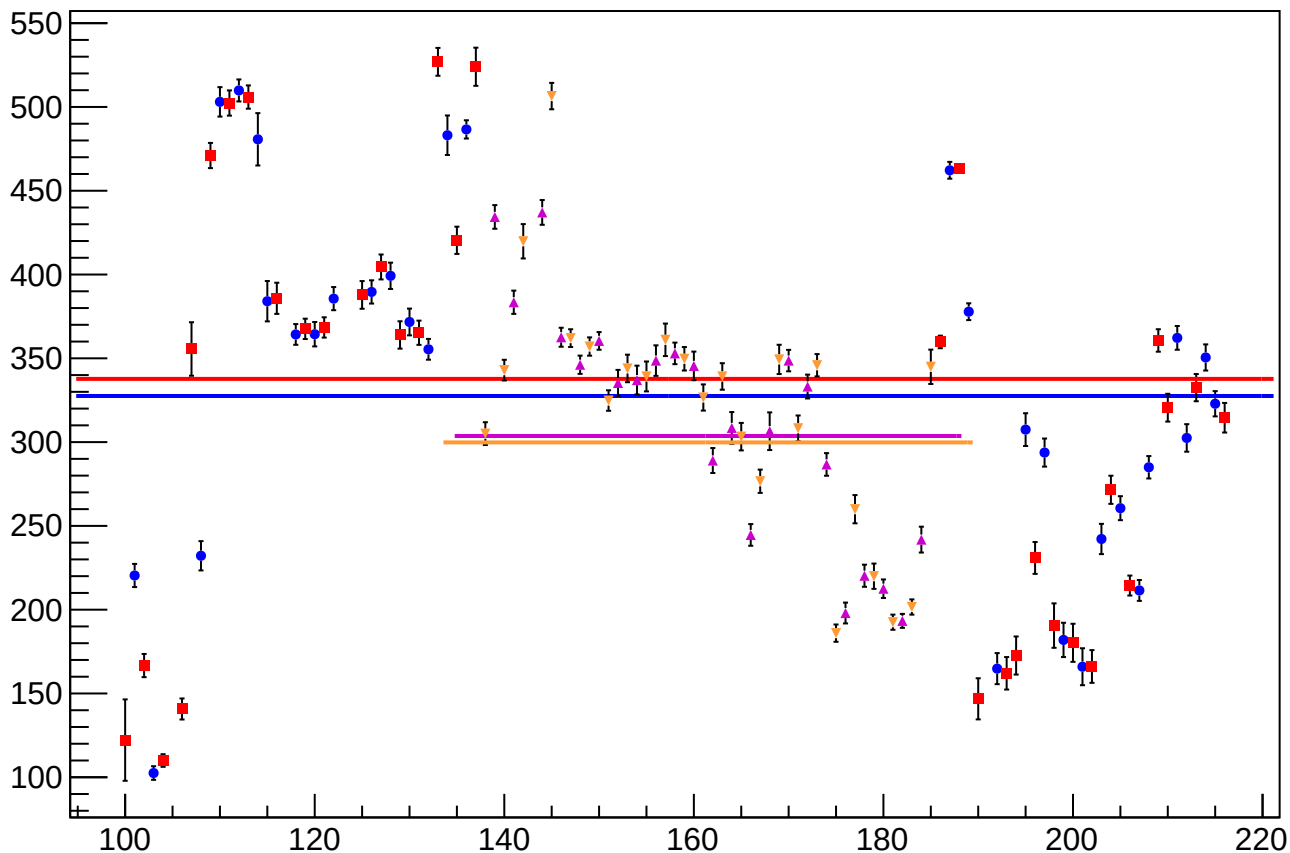
Left In:  $6.259 \pm 1.045$   $\chi^2/\text{NDF}$ : 559.4/22

+ sign  $16.208 \pm 0.832$   $\chi^2/\text{NDF}$ : 1260.9/54

All:  $16.188 \pm 0.585$   $\chi^2/\text{NDF}$ : 2388.7/110

- sign  $16.168 \pm 0.822$   $\chi^2/\text{NDF}$ : 1127.7/55

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: 327.526 $\pm$ 1.281  $\chi^2$ /NDF: 8257.8/30

Left Out: 299.825 $\pm$ 1.381  $\chi^2$ /NDF:3076.1/23

Right Out: 337.730 $\pm$ 1.170  $\chi^2$ /NDF: 12164.2/32

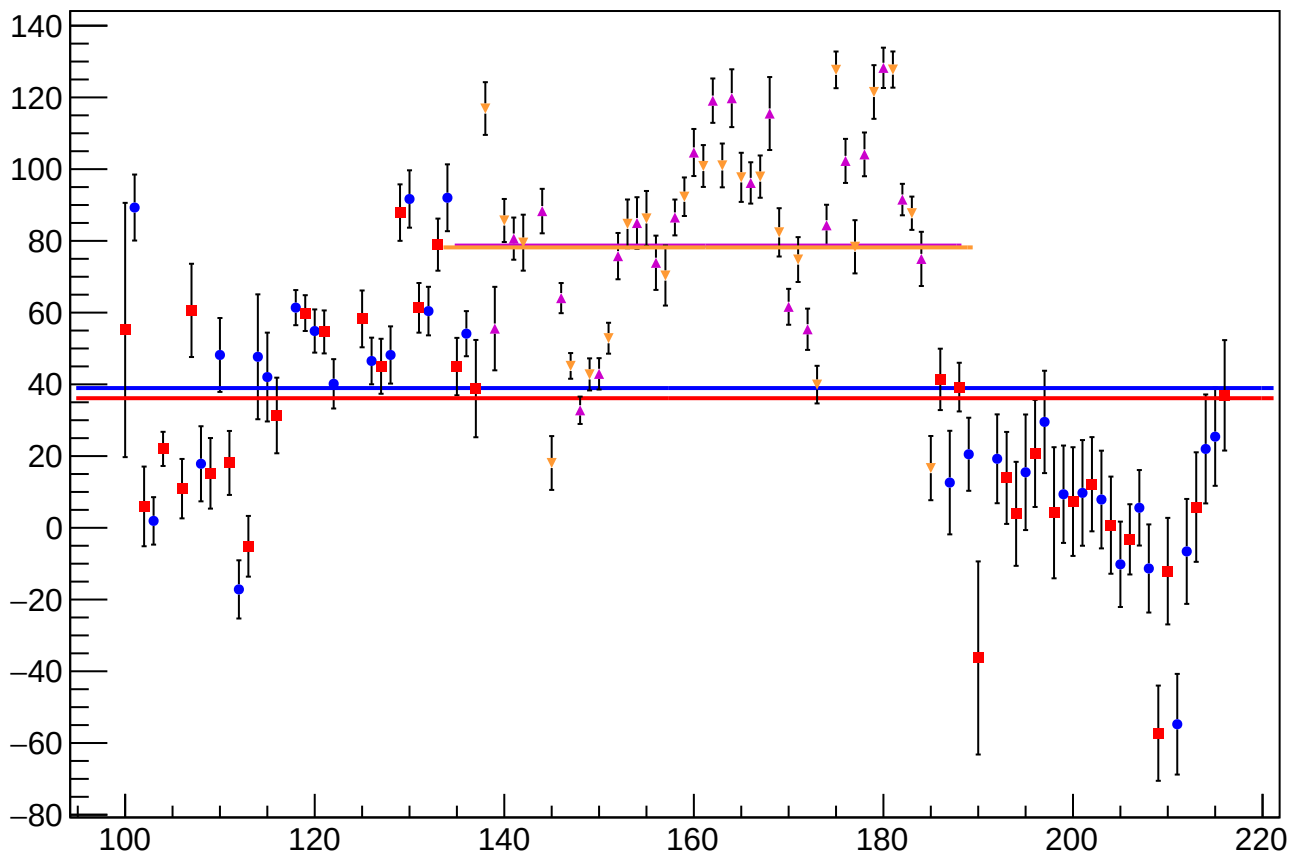
Left In: 303.652 $\pm$ 1.383  $\chi^2$ /NDF:2872.6/22

+ sign 314.717 $\pm$ 0.939  $\chi^2$ /NDF: 11550.2/54

All: 319.334 $\pm$ 0.647  $\chi^2$ /NDF: 26987.1/110

- sign 323.510 $\pm$ 0.893  $\chi^2$ /NDF: 15390.9/55

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $38.962 \pm 1.645$   $\chi^2/\text{NDF}: 362.7/30$

Left Out:  $78.181 \pm 1.185$   $\chi^2/\text{NDF}: 663.3/23$

Right Out:  $36.136 \pm 1.587$   $\chi^2/\text{NDF}: 309.5/32$

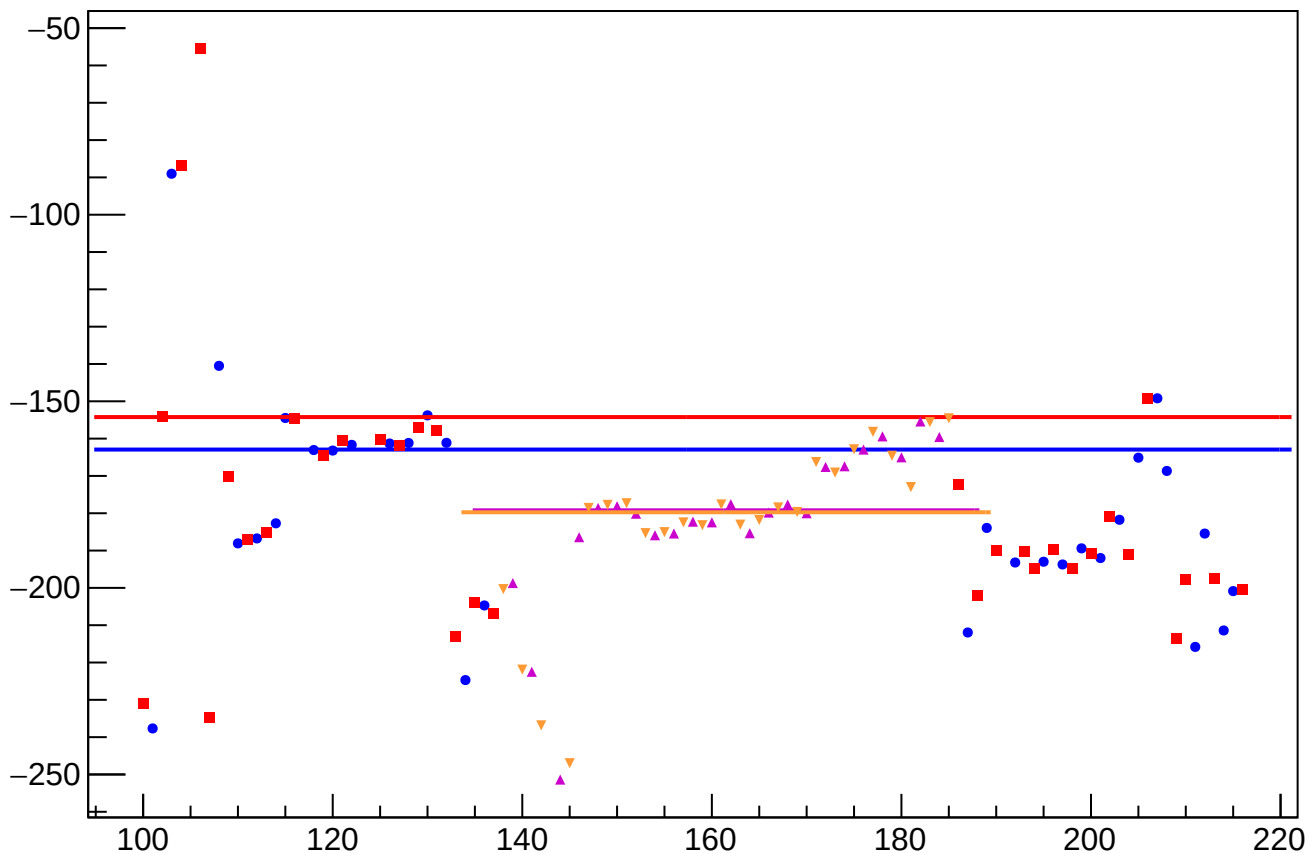
Left In:  $78.689 \pm 1.195$   $\chi^2/\text{NDF}: 488.6/22$

+ sign  $64.791 \pm 0.961$   $\chi^2/\text{NDF}: 1400.3/54$

All:  $64.036 \pm 0.677$   $\chi^2/\text{NDF}: 2658.5/110$

- sign  $63.291 \pm 0.954$   $\chi^2/\text{NDF}: 1257.0/55$

reg\_asym\_us\_avg\_atlr\_avg\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $-162.932 \pm 0.080$   $\chi^2/\text{NDF}: 319243.3/30$

Left Out:  $-179.738 \pm 0.055$   $\chi^2/\text{NDF}: 132199.5/23$

Right Out:  $-154.229 \pm 0.077$   $\chi^2/\text{NDF}: 438520.1/32$

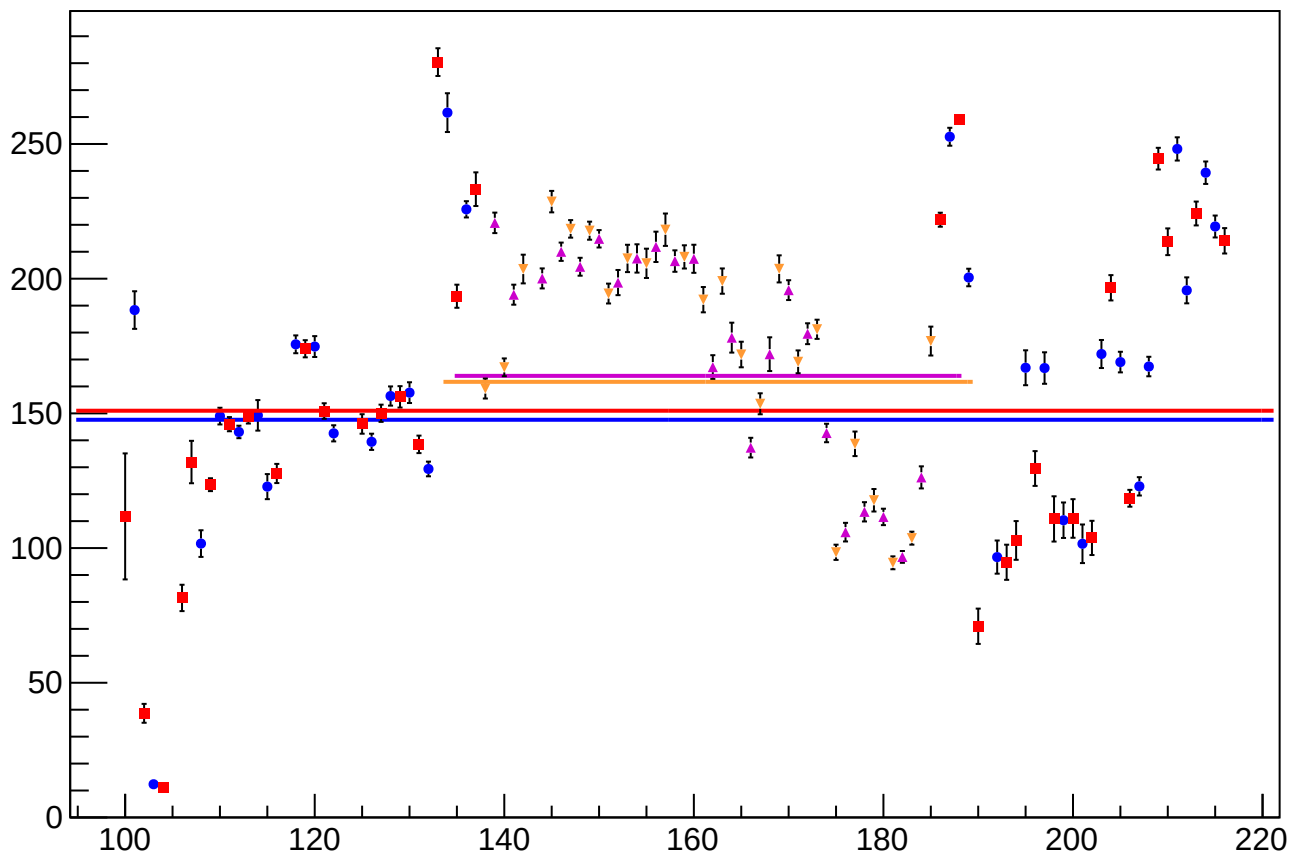
Left In:  $-179.219 \pm 0.055$   $\chi^2/\text{NDF}: 113522.5/22$

+ sign  $-174.309 \pm 0.045$   $\chi^2/\text{NDF}: 481607.0/54$

All:  $-172.568 \pm 0.032$   $\chi^2/\text{NDF}: 1106662.6/111$

- sign  $-170.883 \pm 0.045$   $\chi^2/\text{NDF}: 622141.8/55$

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 147.628 $\pm$ 0.658  $\chi^2/\text{NDF}$ : 9801.1/30

Left Out: 161.708 $\pm$ 0.776  $\chi^2/\text{NDF}$ : 3587.3/23

Right Out: 150.986 $\pm$ 0.616  $\chi^2/\text{NDF}$ : 14530.9/32

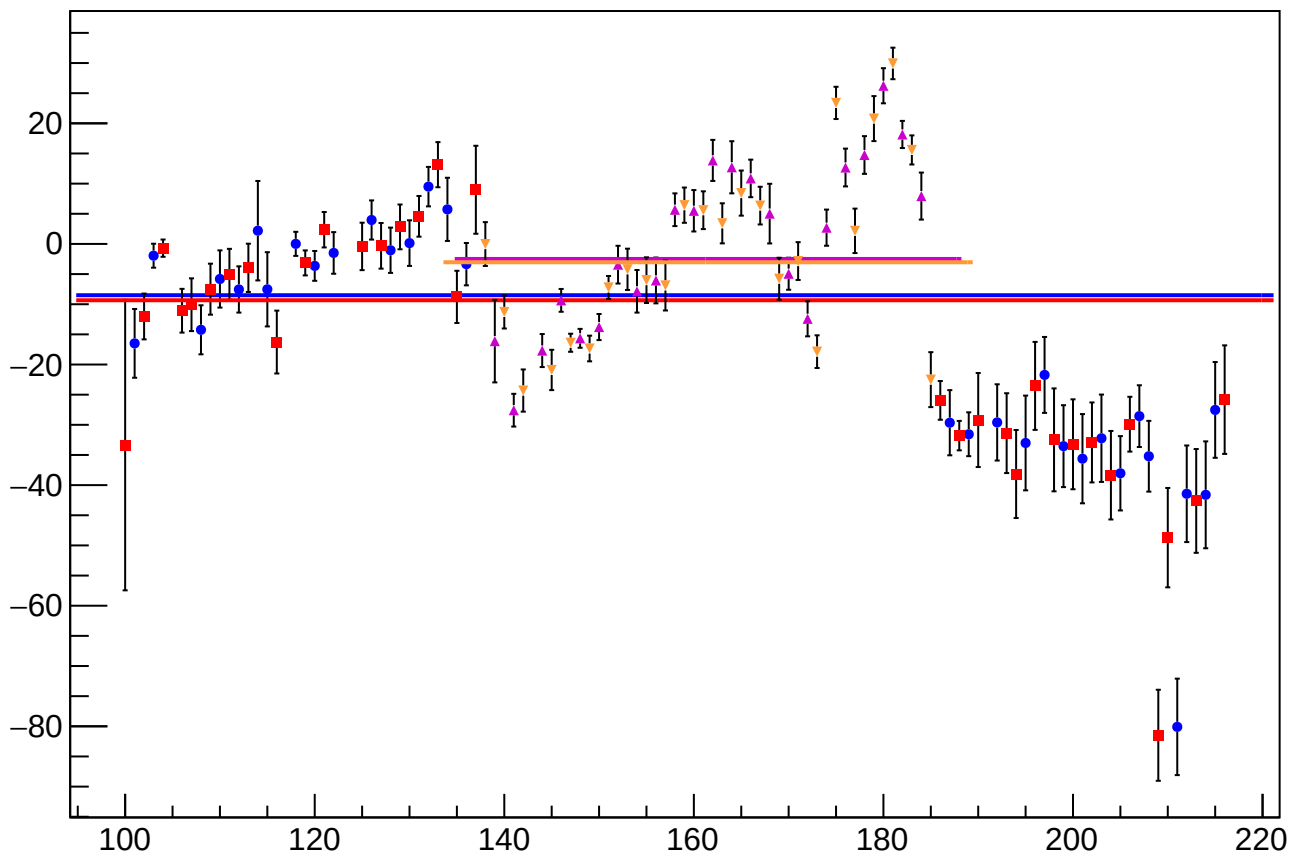
Left In: 163.927 $\pm$ 0.779  $\chi^2/\text{NDF}$ : 3335.5/22

+ sign 153.514 $\pm$ 0.502  $\chi^2/\text{NDF}$ : 13579.9/54

All: 154.785 $\pm$ 0.348  $\chi^2/\text{NDF}$ : 31628.3/110

- sign 155.964 $\pm$ 0.483  $\chi^2/\text{NDF}$ : 18036.1/55

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-8.507 \pm 0.739$   $\chi^2/\text{NDF}$ : 401.0/30

Left Out:  $-3.038 \pm 0.578$   $\chi^2/\text{NDF}$ : 654.5/23

Right Out:  $-9.341 \pm 0.673$   $\chi^2/\text{NDF}$ : 495.8/32

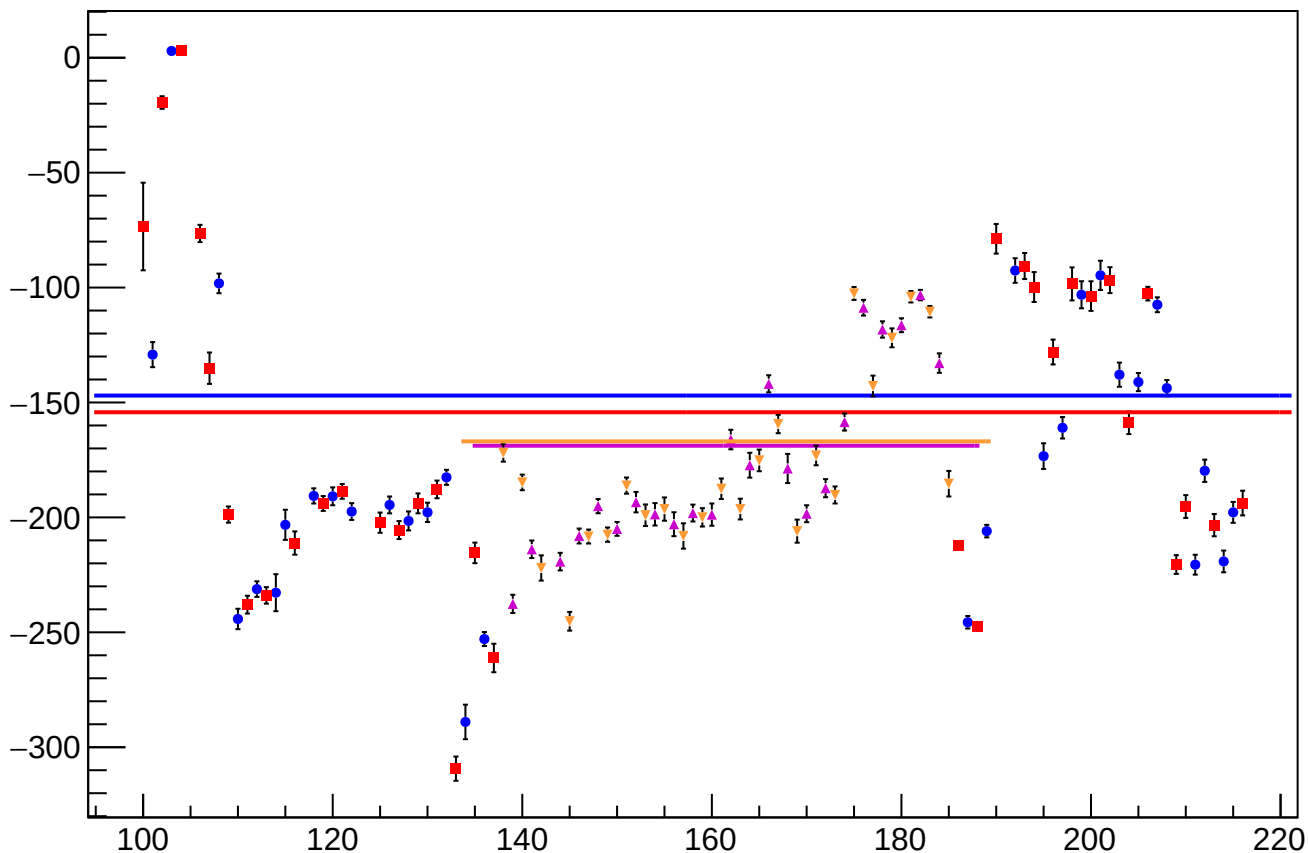
Left In:  $-2.492 \pm 0.587$   $\chi^2/\text{NDF}$ : 562.9/22

+ sign  $-5.115 \pm 0.455$   $\chi^2/\text{NDF}$ : 1089.5/54

All:  $-5.287 \pm 0.317$   $\chi^2/\text{NDF}$ : 2207.3/110

- sign  $-5.450 \pm 0.442$   $\chi^2/\text{NDF}$ : 1117.5/55

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-146.994 \pm 0.660$   $\chi^2/\text{NDF}$ : 17990.8/30

Left Out:  $-166.912 \pm 0.771$   $\chi^2/\text{NDF}$ : 3096.2/23

Right Out:  $-154.250 \pm 0.601$   $\chi^2/\text{NDF}$ : 24544.1/32

Left In:  $-168.810 \pm 0.772$   $\chi^2/\text{NDF}$ : 3059.5/22

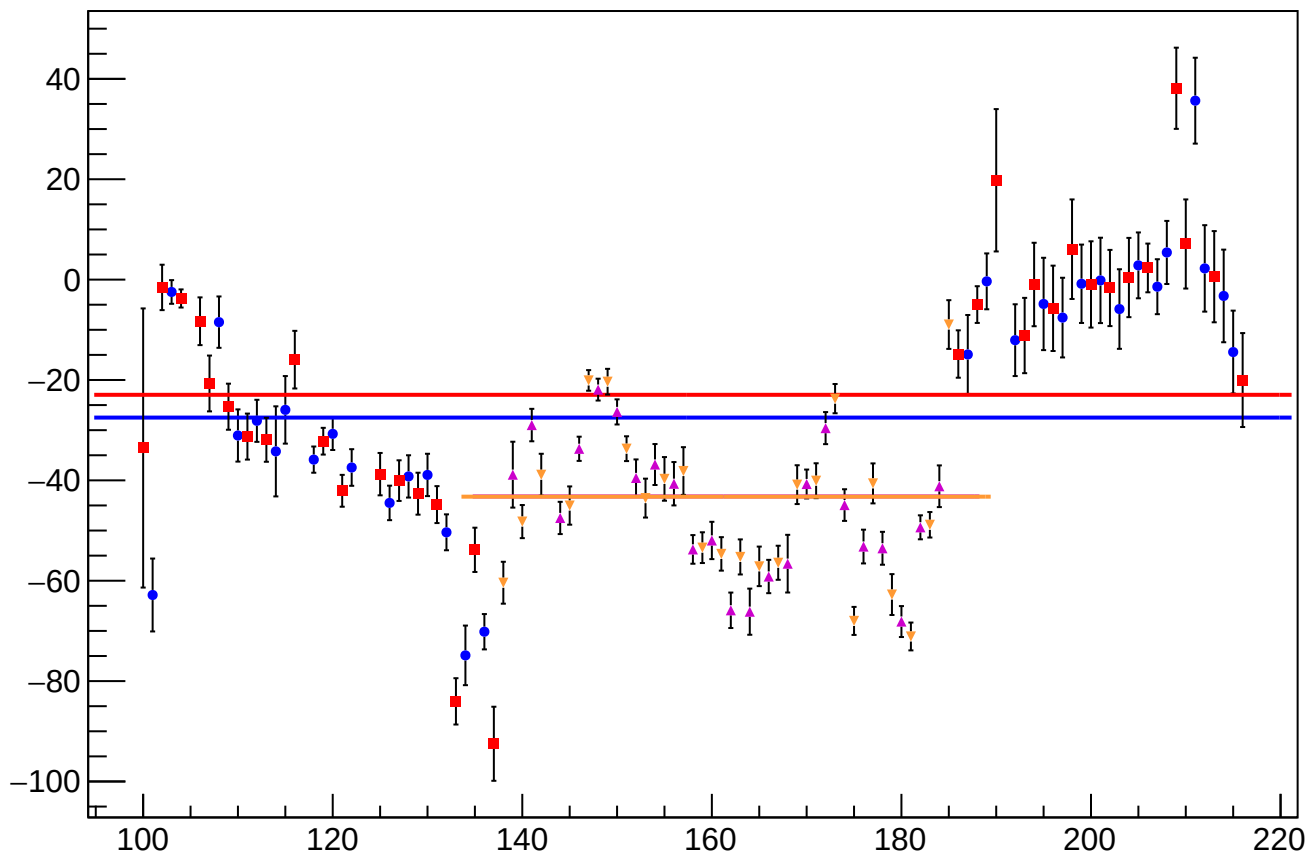
+ sign  $-155.418 \pm 0.501$   $\chi^2/\text{NDF}$ : 21472.3/54

All:  $-157.699 \pm 0.345$   $\chi^2/\text{NDF}$ : 49336.4/110

- sign  $-159.742 \pm 0.474$   $\chi^2/\text{NDF}$ : 27824.9/55



reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-27.491 \pm 0.862$   $\chi^2/\text{NDF}$ : 680.8/30

Left Out:  $-43.251 \pm 0.664$   $\chi^2/\text{NDF}$ : 610.2/23

Right Out:  $-22.954 \pm 0.806$   $\chi^2/\text{NDF}$ : 789.2/32

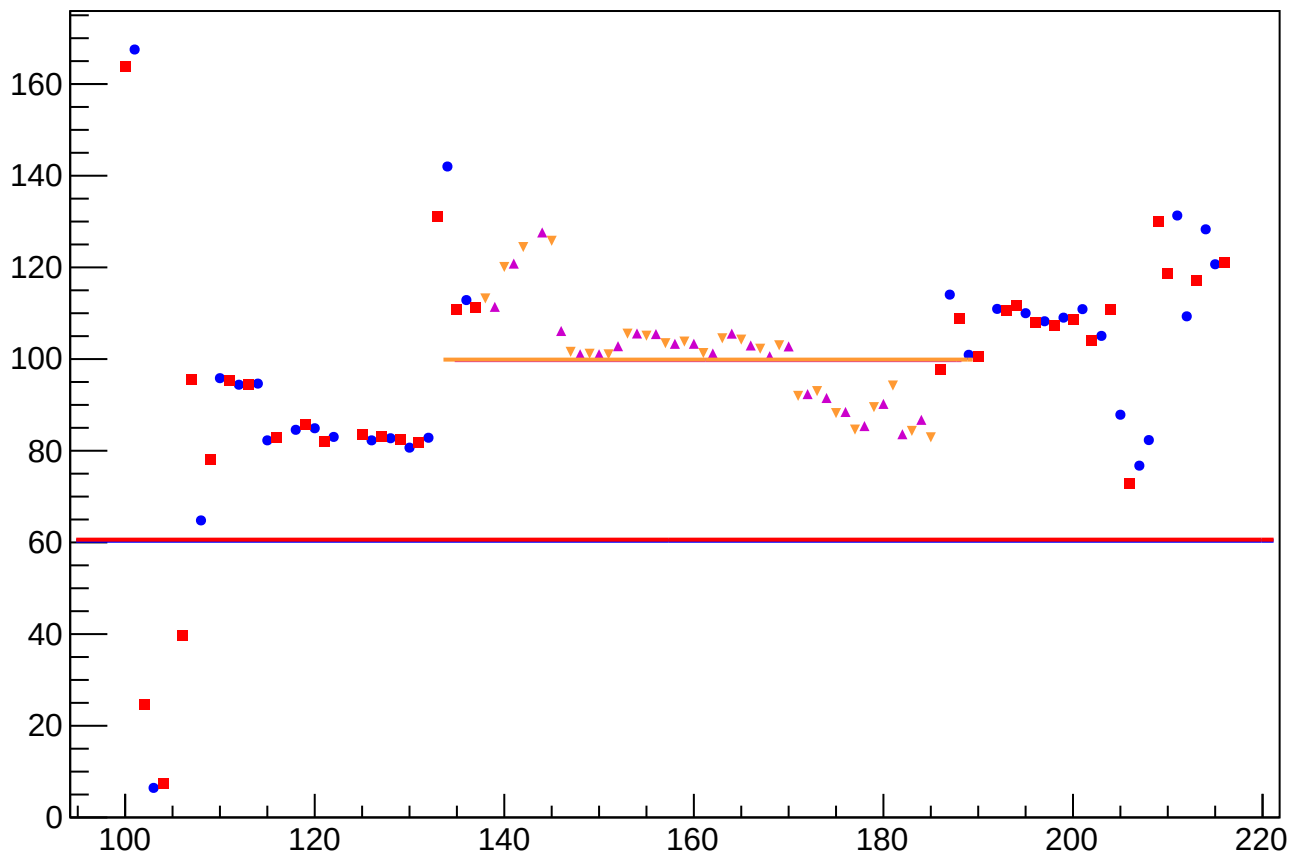
Left In:  $-43.207 \pm 0.670$   $\chi^2/\text{NDF}$ : 405.8/22

+ sign  $-37.384 \pm 0.526$   $\chi^2/\text{NDF}$ : 1500.6/54

All:  $-36.135 \pm 0.368$   $\chi^2/\text{NDF}$ : 3079.8/110

- sign  $-34.937 \pm 0.515$   $\chi^2/\text{NDF}$ : 1568.1/55

reg\_asym\_us\_avg\_atlr\_avg\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 60.362+/-0.038  $\chi^2/\text{NDF}$ : 1588741.3/30

Left Out: 99.881+/-0.031  $\chi^2/\text{NDF}$ : 123588.1/23

Right Out: 60.605+/-0.038  $\chi^2/\text{NDF}$ : 1374788.6/32

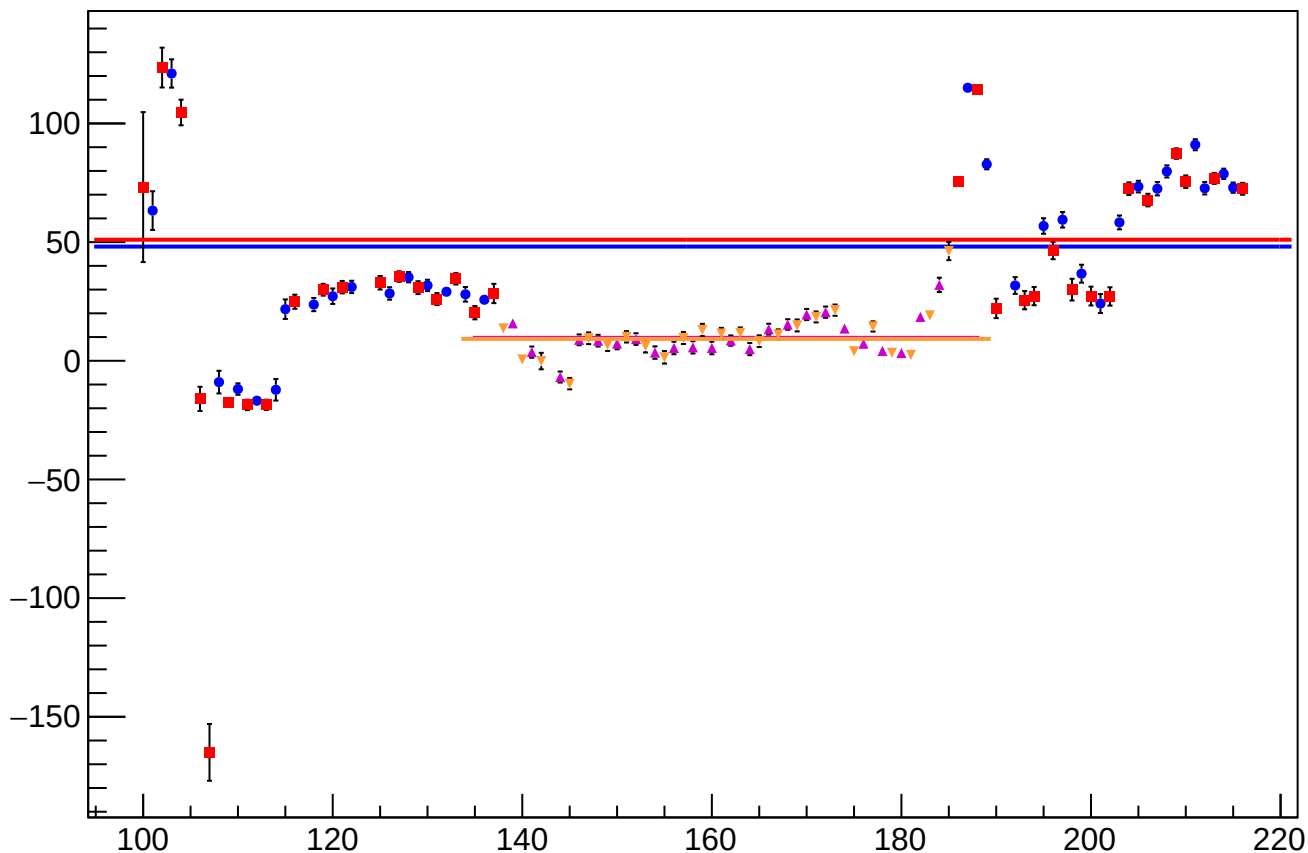
Left In: 99.769+/-0.031  $\chi^2/\text{NDF}$ : 113501.0/22

+ sign 84.344+/-0.024  $\chi^2/\text{NDF}$ : 2360947.6/54

All: 84.372+/-0.017  $\chi^2/\text{NDF}$ : 4494095.9/110

- sign 84.400+/-0.024  $\chi^2/\text{NDF}$ : 2133145.6/55

# reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 48.125+/-0.482  $\chi^2$ /NDF: 5296.9/30

Left Out: 9.228+/-0.456  $\chi^2$ /NDF:327.5/23

Right Out: 51.021+/-0.452  $\chi^2$ /NDF: 8649.6/32

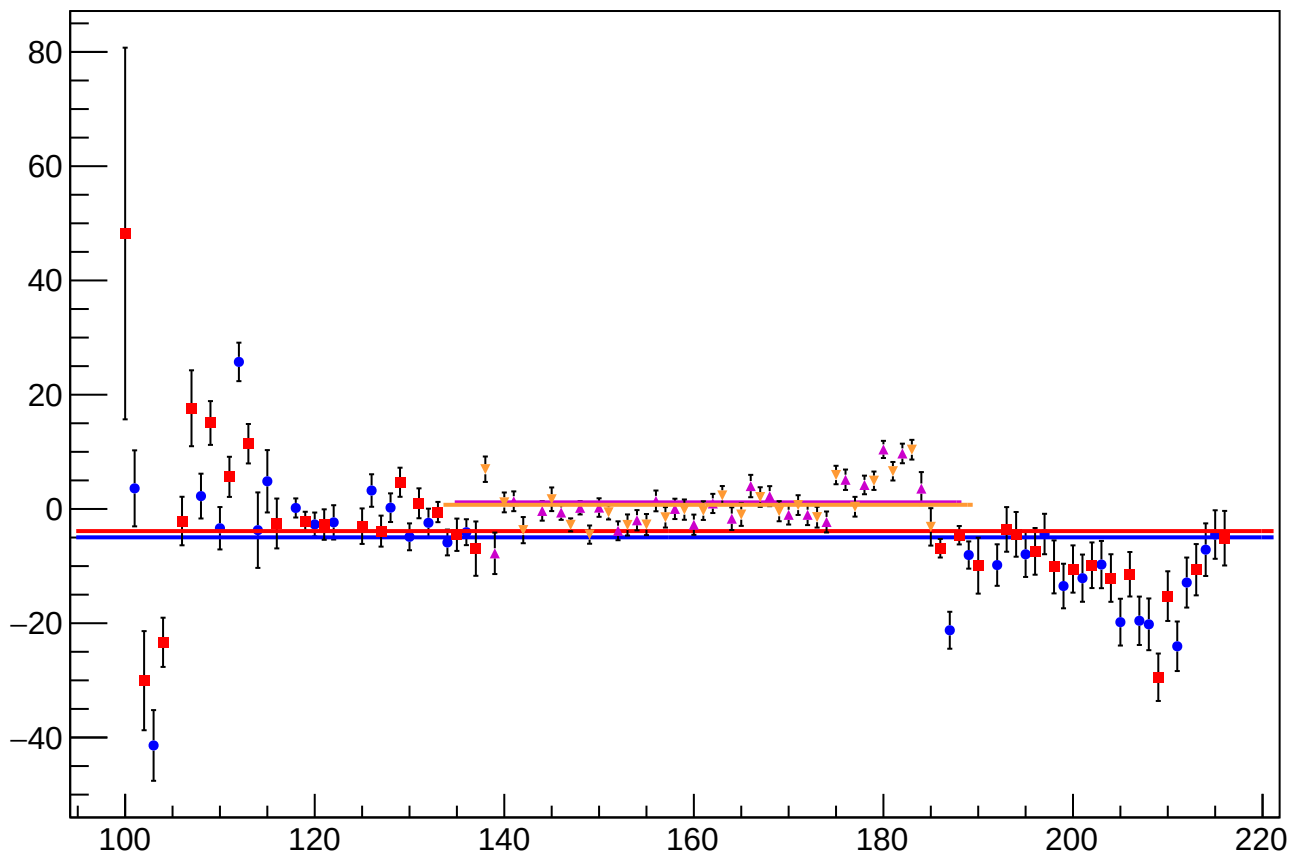
Left In: 9.676+/-0.462  $\chi^2$ /NDF:246.7/22

+ sign 27.617+/-0.331  $\chi^2$ /NDF: 9057.8/54

All: 29.253+/-0.231  $\chi^2$ /NDF: 22088.7/110

- sign 30.809+/-0.323  $\chi^2$ /NDF: 12983.4/55

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-4.967 \pm 0.569$   $\chi^2/\text{NDF}$ : 249.3/30

Left Out:  $0.730 \pm 0.350$   $\chi^2/\text{NDF}$ : 109.7/23

Right Out:  $-3.872 \pm 0.538$   $\chi^2/\text{NDF}$ : 181.6/32

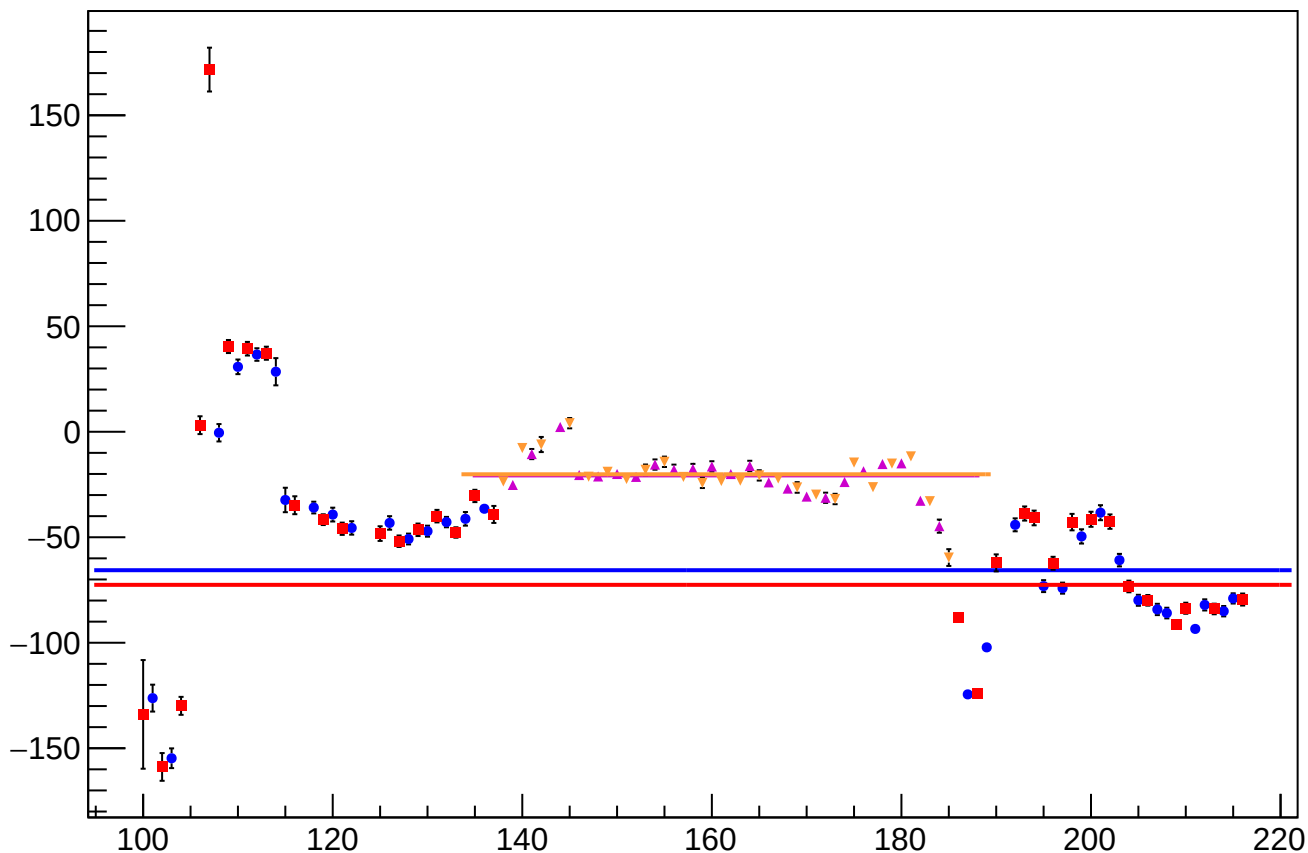
Left In:  $1.156 \pm 0.358$   $\chi^2/\text{NDF}$ : 110.4/22

+ sign  $-0.831 \pm 0.298$   $\chi^2/\text{NDF}$ : 431.8/54

All:  $-0.608 \pm 0.211$   $\chi^2/\text{NDF}$ : 785.7/110

- sign  $-0.385 \pm 0.298$   $\chi^2/\text{NDF}$ : 352.7/55

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-65.620 \pm 0.496$   $\chi^2/\text{NDF}: 5903.4/30$

Left Out:  $-20.151 \pm 0.452$   $\chi^2/\text{NDF}: 420.3/23$

Right Out:  $-72.556 \pm 0.444$   $\chi^2/\text{NDF}: 9787.8/32$

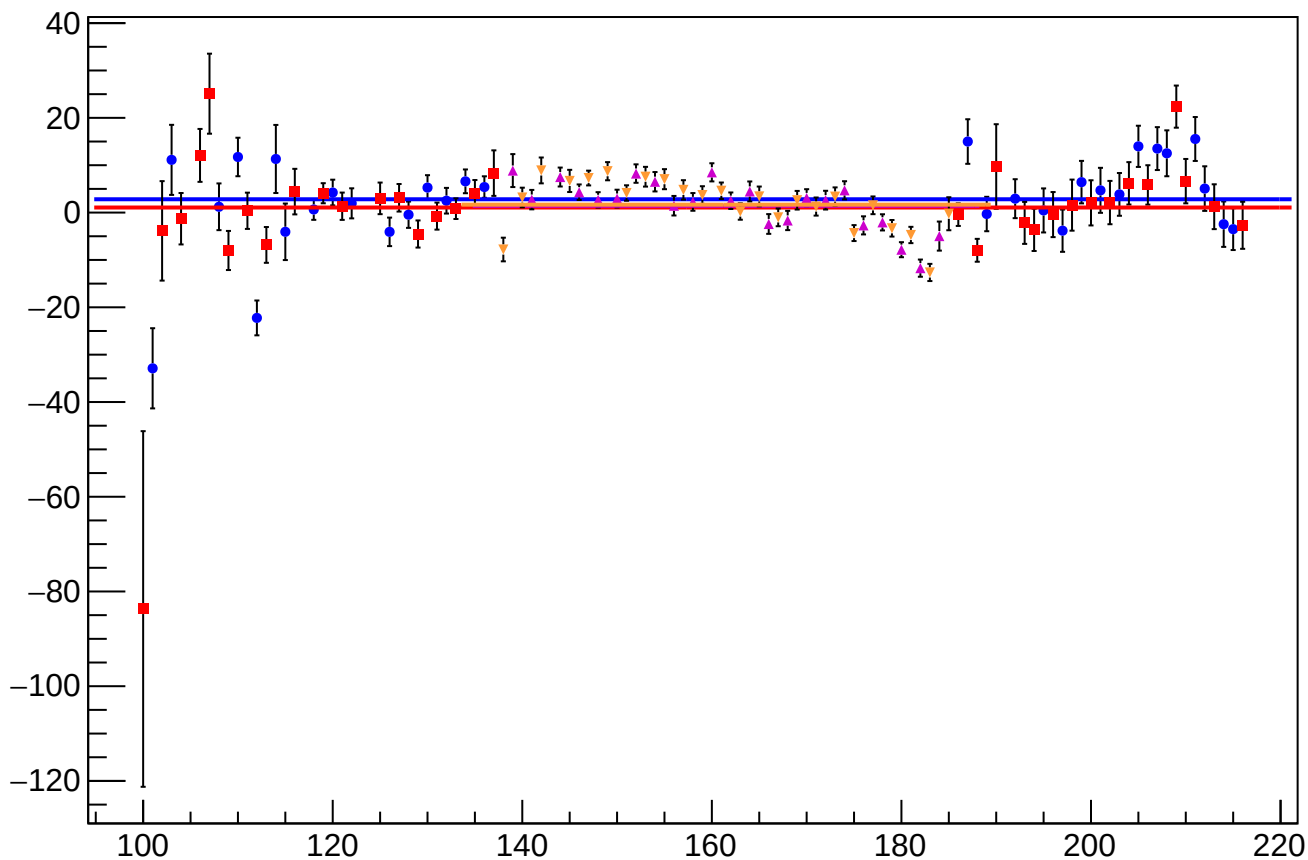
Left In:  $-20.683 \pm 0.458$   $\chi^2/\text{NDF}: 310.5/22$

+ sign  $-40.809 \pm 0.334$   $\chi^2/\text{NDF}: 10912.5/54$

All:  $-44.278 \pm 0.231$   $\chi^2/\text{NDF}: 27841.3/110$

- sign  $-47.429 \pm 0.319$   $\chi^2/\text{NDF}: 16723.2/55$

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $2.811 \pm 0.656$   $\chi^2/\text{NDF}$ : 123.4/30

Left Out:  $1.671 \pm 0.395$   $\chi^2/\text{NDF}$ : 178.0/23

Right Out:  $1.067 \pm 0.643$   $\chi^2/\text{NDF}$ : 82.3/32

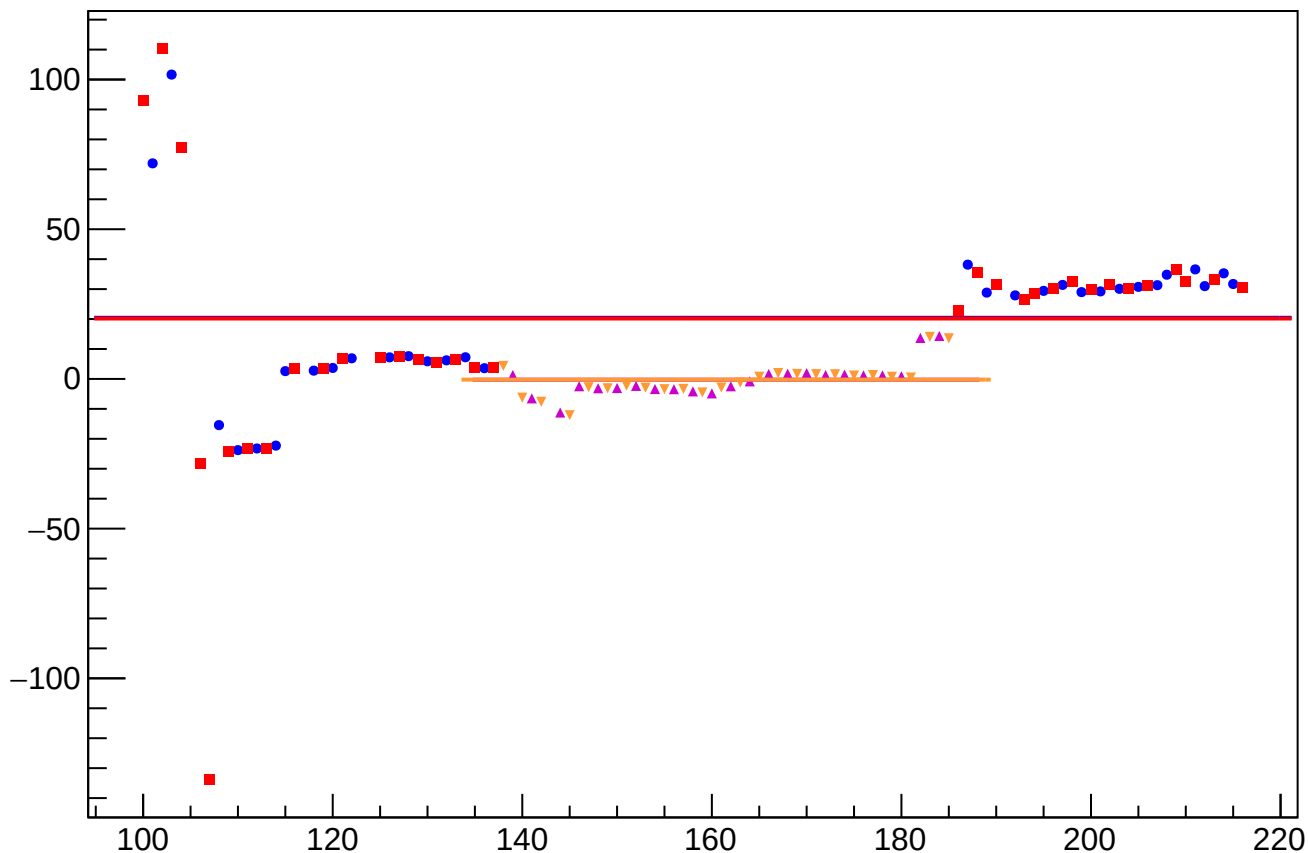
Left In:  $1.428 \pm 0.403$   $\chi^2/\text{NDF}$ : 162.8/22

+ sign  $1.974 \pm 0.338$   $\chi^2/\text{NDF}$ : 303.6/54

All:  $1.653 \pm 0.240$   $\chi^2/\text{NDF}$ : 550.8/110

- sign  $1.326 \pm 0.341$   $\chi^2/\text{NDF}$ : 245.4/55

reg\_asym\_us\_dd\_at1lr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 20.421 $\pm$ 0.033  $\chi^2$ /NDF: 434890.3/30

Left Out: -0.229 $\pm$ 0.018  $\chi^2$ /NDF: 80976.2/23

Right Out: 20.182 $\pm$ 0.033  $\chi^2$ /NDF: 603904.8/32

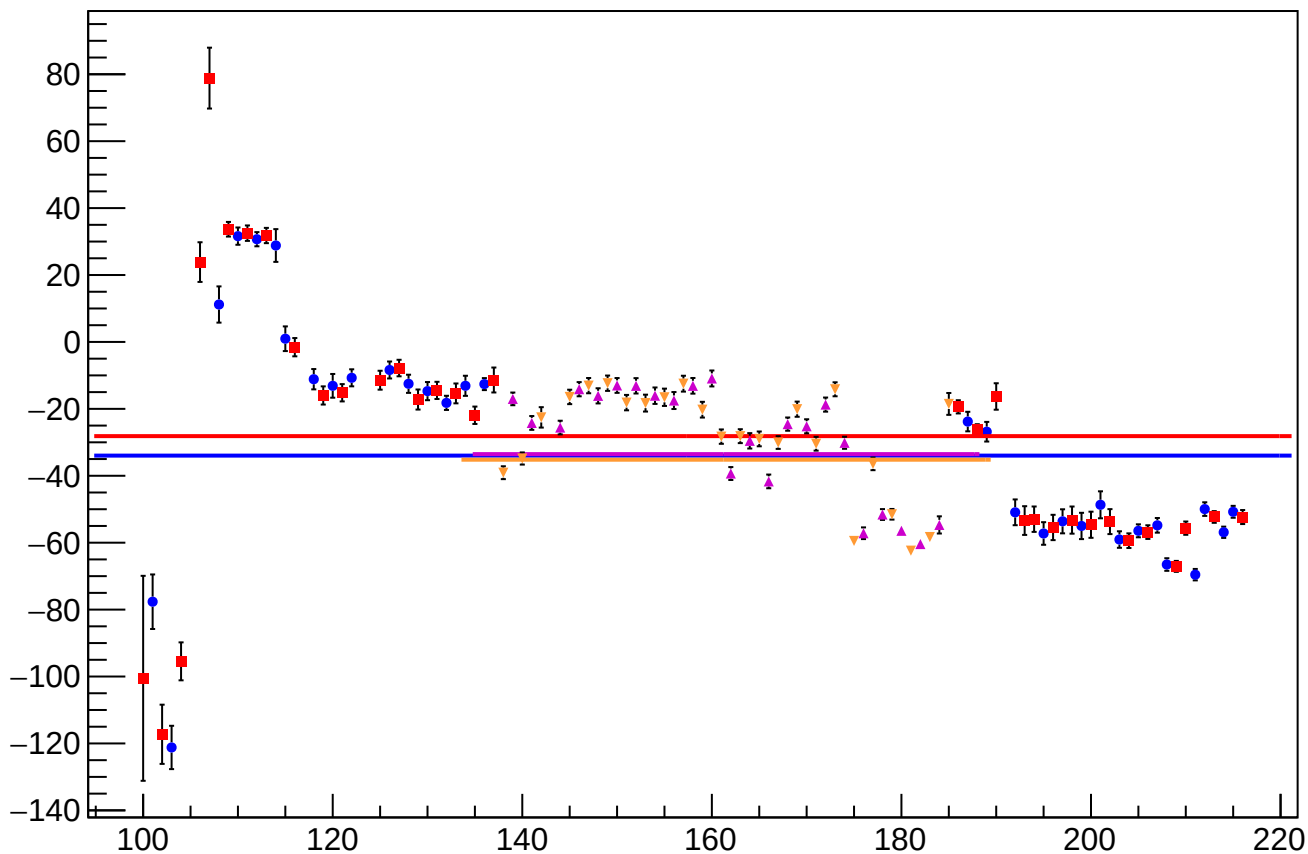
Left In: -0.270 $\pm$ 0.018  $\chi^2$ /NDF: 72783.3/22

+ sign 4.439 $\pm$ 0.016  $\chi^2$ /NDF: 825754.2/54

All: 4.405 $\pm$ 0.011  $\chi^2$ /NDF: 1804051.1/110

- sign 4.370 $\pm$ 0.016  $\chi^2$ /NDF: 978287.0/55

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-33.974 \pm 0.459$   $\chi^2/\text{NDF}$ : 4297.6/30

Left Out:  $-35.201 \pm 0.408$   $\chi^2/\text{NDF}$ : 1850.7/23

Right Out:  $-28.152 \pm 0.462$   $\chi^2/\text{NDF}$ : 4743.6/32

Left In:  $-33.528 \pm 0.414$   $\chi^2/\text{NDF}$ : 1806.1/22

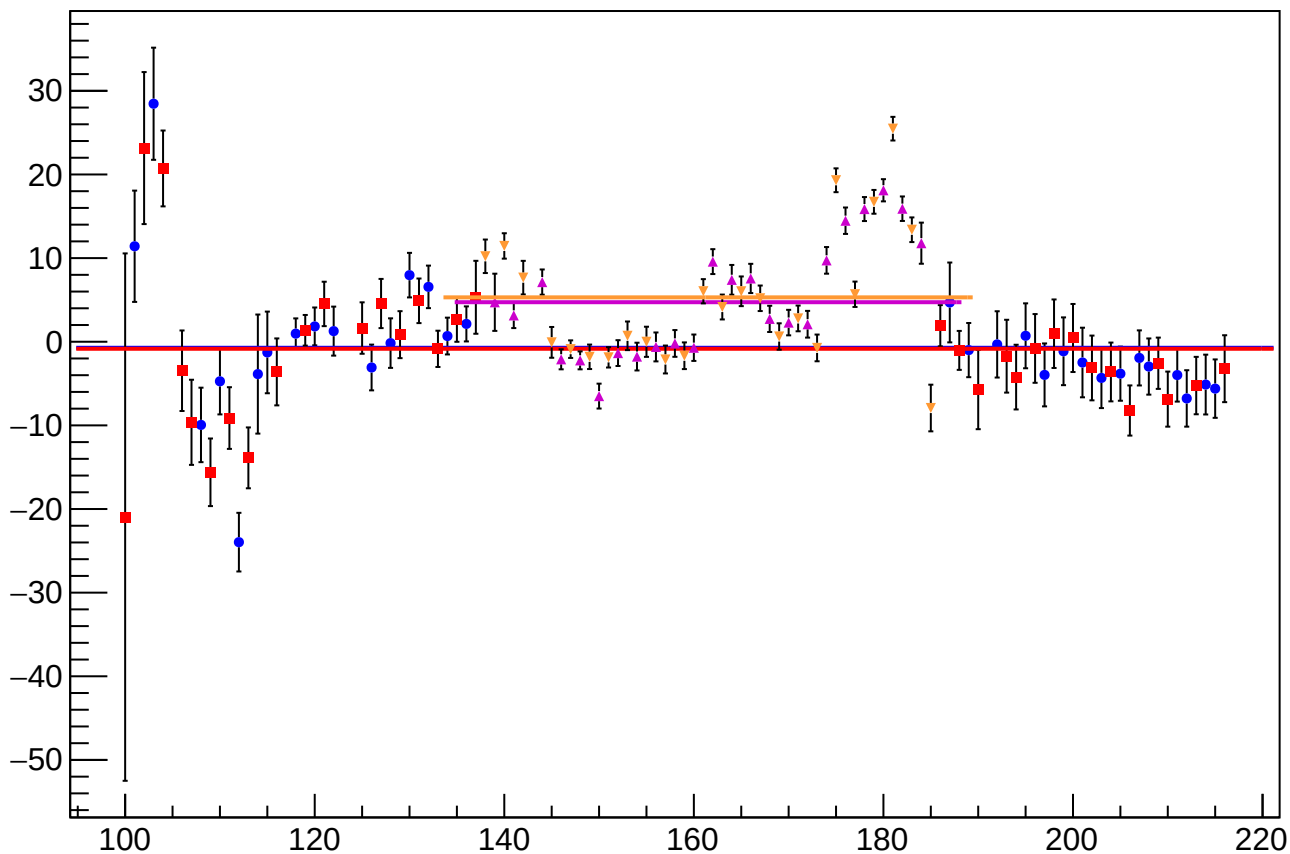
+ sign  $-34.660 \pm 0.305$   $\chi^2/\text{NDF}$ : 6152.3/54

All:  $-32.915 \pm 0.217$   $\chi^2/\text{NDF}$ : 12843.3/110

- sign  $-31.135 \pm 0.308$   $\chi^2/\text{NDF}$ : 6624.9/55



reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.723 \pm 0.572$   $\chi^2/\text{NDF}$ : 108.8/30

Left Out:  $5.307 \pm 0.315$   $\chi^2/\text{NDF}$ : 624.4/23

Right Out:  $-0.840 \pm 0.572$   $\chi^2/\text{NDF}$ : 99.4/32

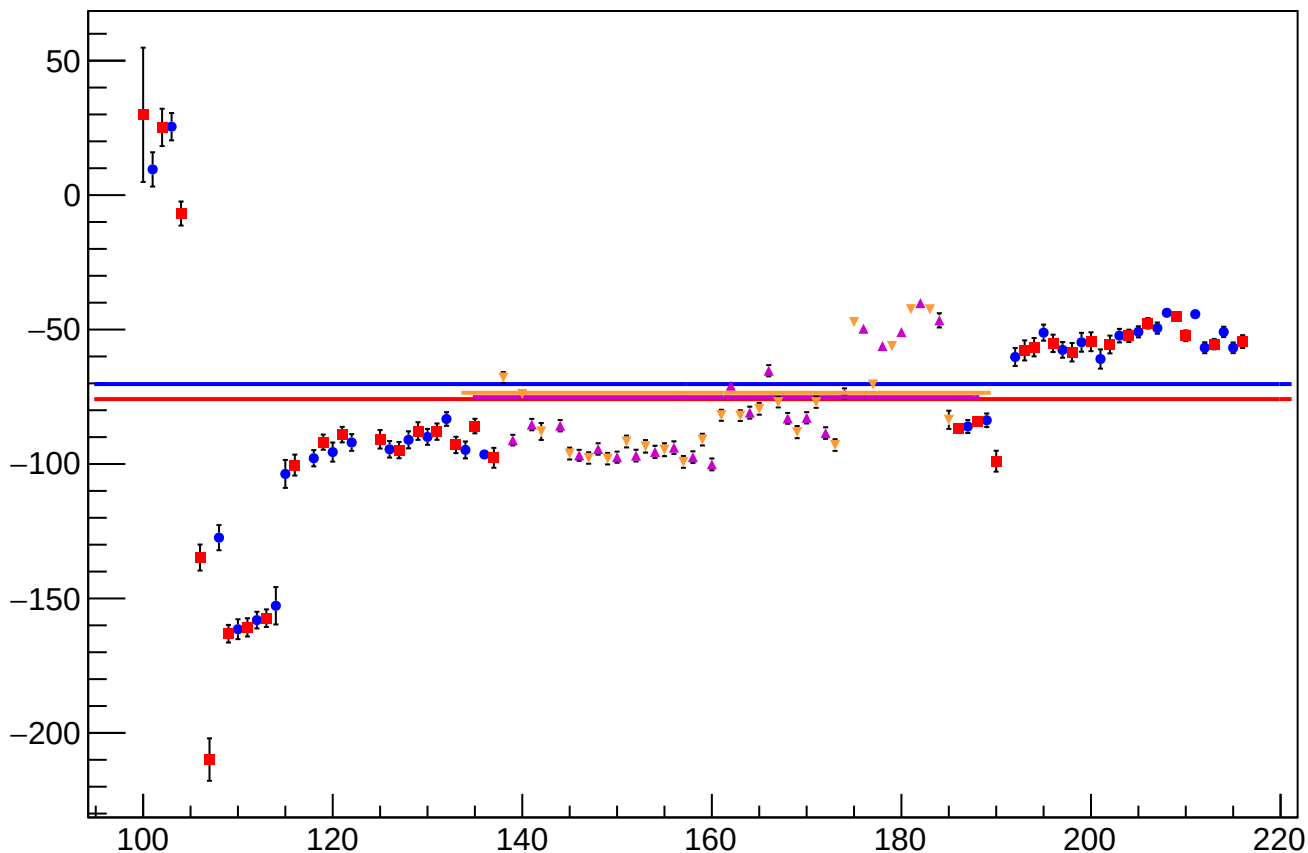
Left In:  $4.727 \pm 0.321$   $\chi^2/\text{NDF}$ : 496.0/22

+ sign  $3.906 \pm 0.276$   $\chi^2/\text{NDF}$ : 818.3/54

All:  $3.654 \pm 0.197$   $\chi^2/\text{NDF}$ : 1487.3/110

- sign  $3.394 \pm 0.280$   $\chi^2/\text{NDF}$ : 667.3/55

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-70.272 \pm 0.480$   $\chi^2/\text{NDF}: 3908.1/30$

Left Out:  $-73.506 \pm 0.405$   $\chi^2/\text{NDF}: 2392.0/23$

Right Out:  $-75.864 \pm 0.472$   $\chi^2/\text{NDF}: 4431.5/32$

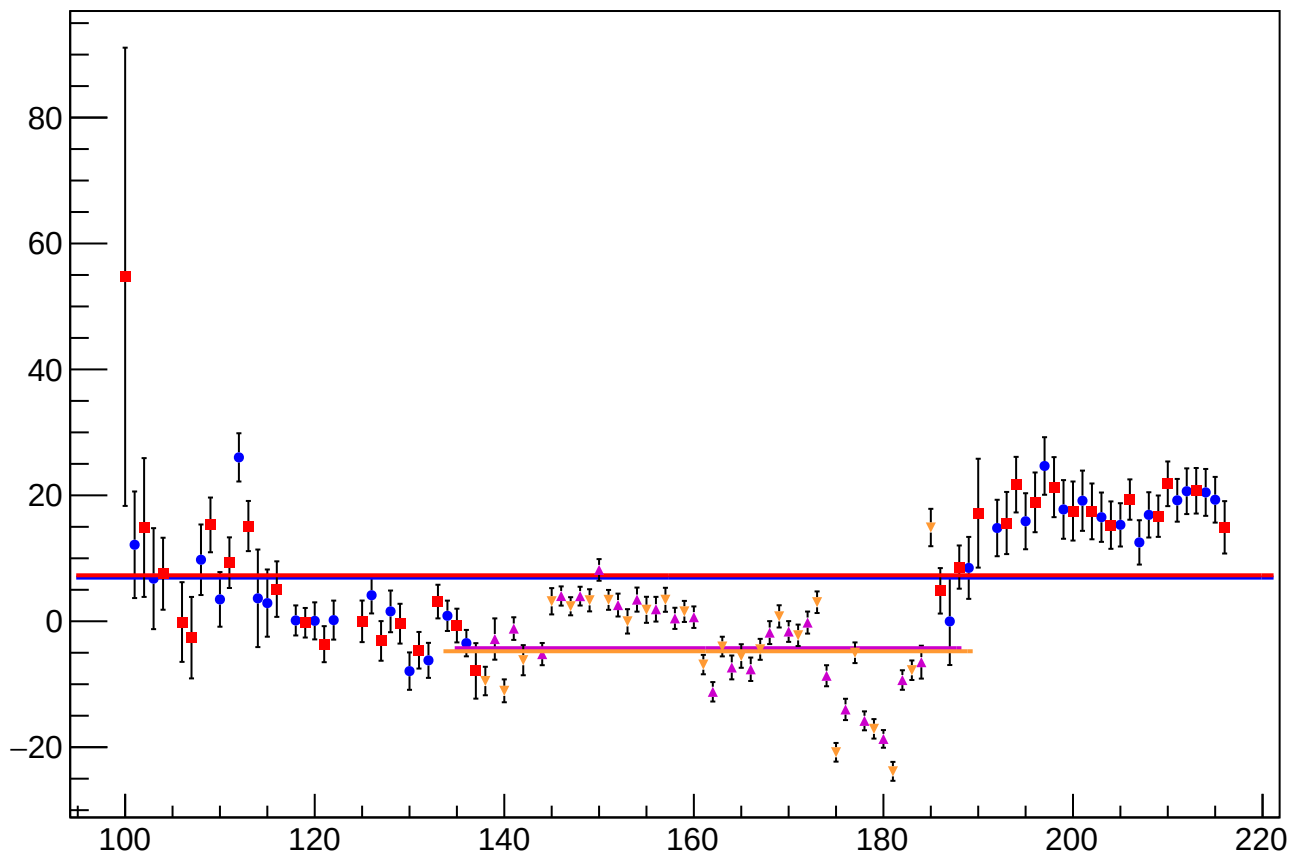
Left In:  $-75.133 \pm 0.410$   $\chi^2/\text{NDF}: 2361.9/22$

+ sign  $-72.161 \pm 0.310$   $\chi^2/\text{NDF}: 6326.6/54$

All:  $-73.805 \pm 0.219$   $\chi^2/\text{NDF}: 13177.6/110$

- sign  $-75.447 \pm 0.310$   $\chi^2/\text{NDF}: 6794.8/55$

# reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $6.934 \pm 0.645$   $\chi^2/\text{NDF}$ : 236.6/30

Left Out:  $-4.762 \pm 0.355$   $\chi^2/\text{NDF}$ : 576.9/23

Right Out:  $7.301 \pm 0.661$   $\chi^2/\text{NDF}$ : 200.9/32

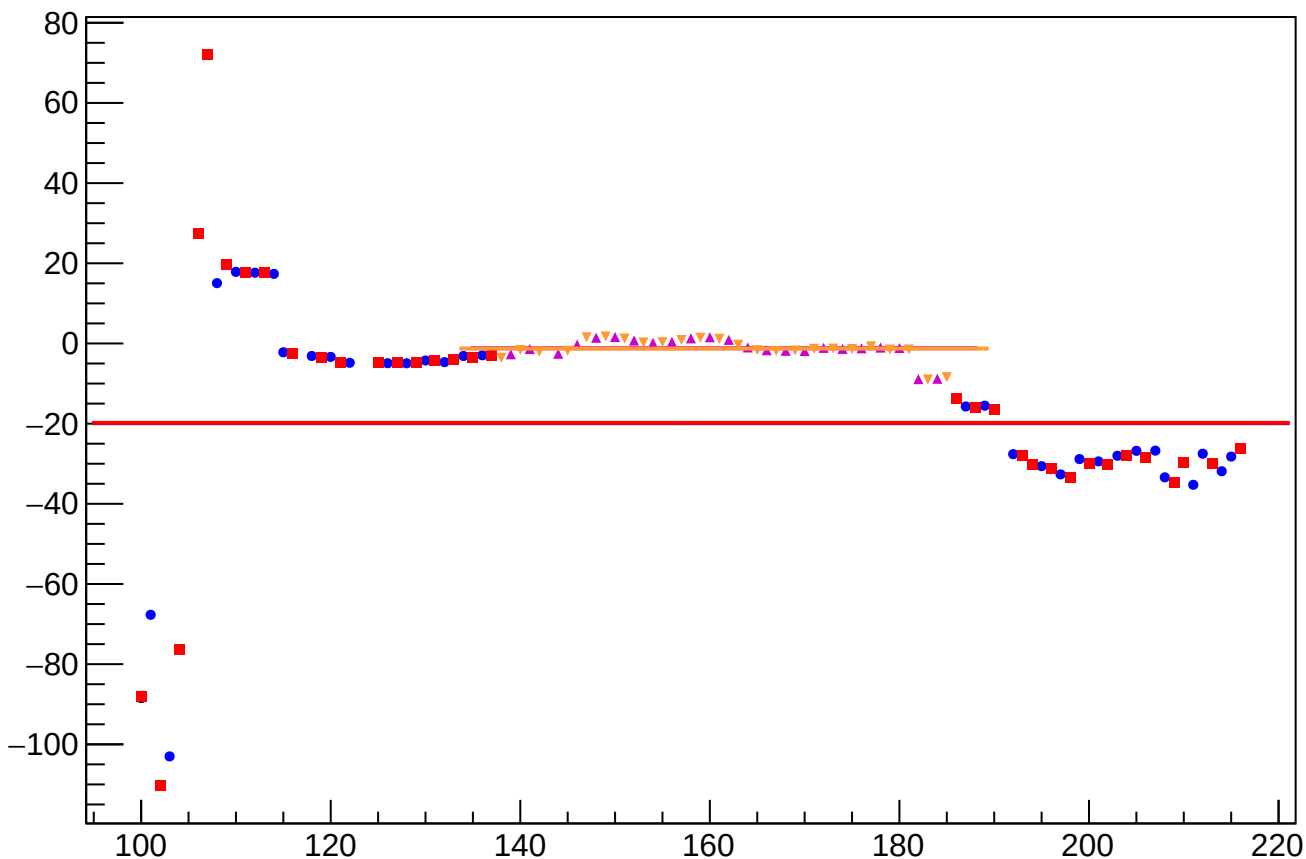
Left In:  $-4.278 \pm 0.361$   $\chi^2/\text{NDF}$ : 424.1/22

+ sign  $-2.048 \pm 0.311$   $\chi^2/\text{NDF}$ : 1065.7/54

All:  $-1.837 \pm 0.222$   $\chi^2/\text{NDF}$ : 1928.1/110

- sign  $-1.618 \pm 0.317$   $\chi^2/\text{NDF}$ : 861.5/55

reg\_asym\_us\_dd\_at1lr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-19.883 \pm 0.031$   $\chi^2/\text{NDF}$ : 396254.9/30

Left Out:  $-1.267 \pm 0.016$   $\chi^2/\text{NDF}$ : 25091.1/23

Right Out:  $-19.814 \pm 0.032$   $\chi^2/\text{NDF}$ : 481885.8/32

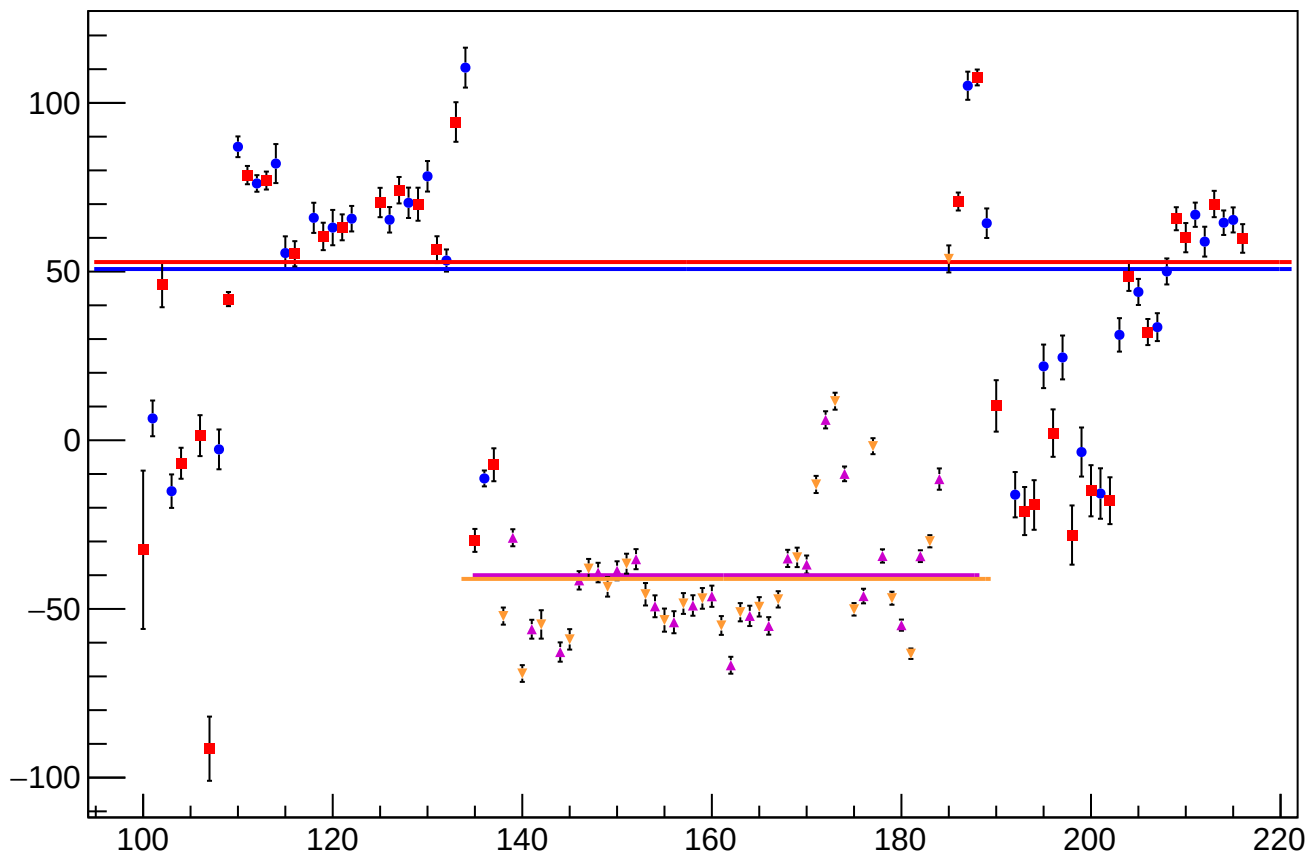
Left In:  $-1.180 \pm 0.016$   $\chi^2/\text{NDF}$ : 24754.1/22

+ sign  $-5.099 \pm 0.014$   $\chi^2/\text{NDF}$ : 704803.8/54

All:  $-4.984 \pm 0.010$   $\chi^2/\text{NDF}$ : 1481386.3/110

- sign  $-4.866 \pm 0.014$   $\chi^2/\text{NDF}$ : 776447.4/55

# reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In:  $50.757 \pm 0.745$   $\chi^2/\text{NDF}: 2042.1/30$

Left Out:  $-41.097 \pm 0.517$   $\chi^2/\text{NDF}: 1948.2/23$

Right Out:  $52.829 \pm 0.703$   $\chi^2/\text{NDF}: 2755.7/32$

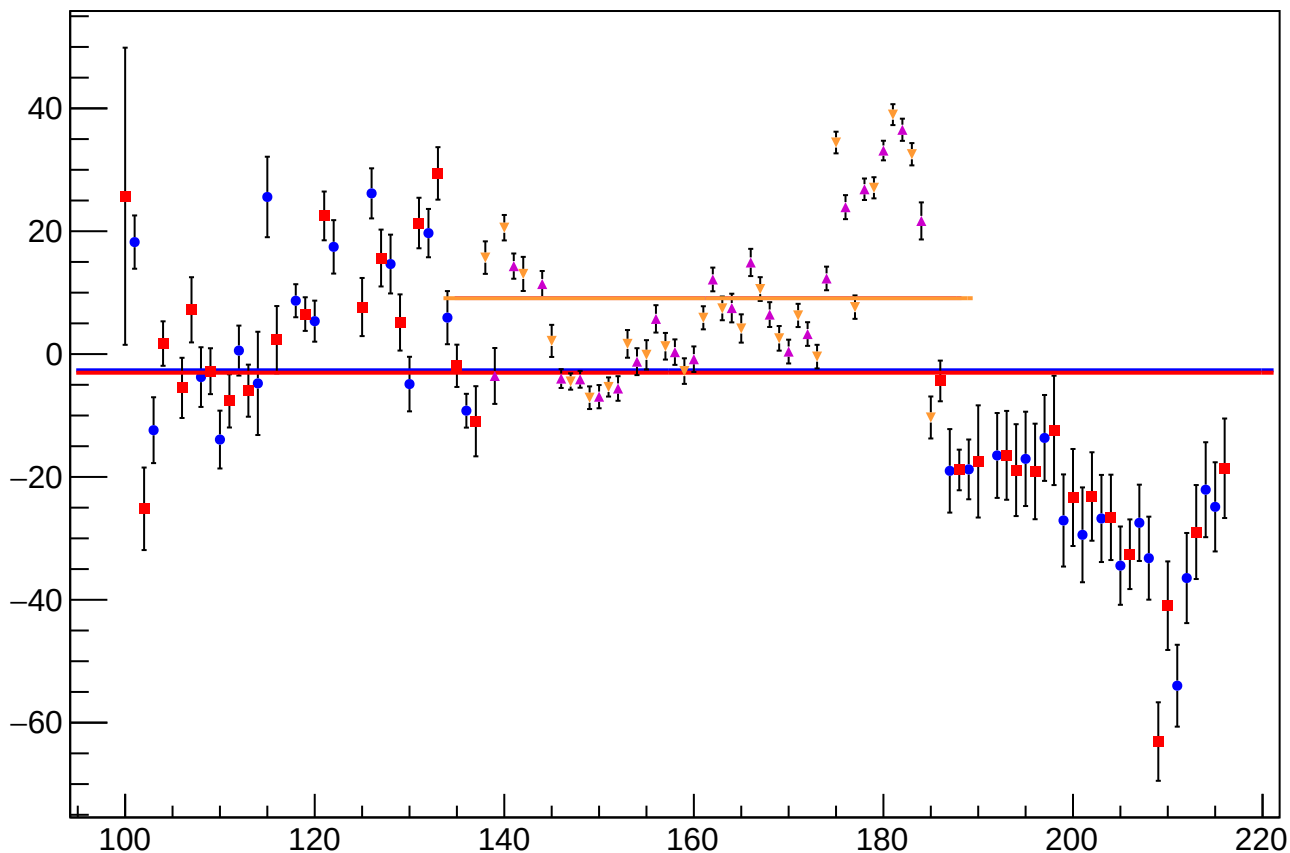
Left In:  $-40.000 \pm 0.524$   $\chi^2/\text{NDF}: 1031.8/22$

+ sign  $-11.238 \pm 0.425$   $\chi^2/\text{NDF}: 14237.2/54$

All:  $-9.002 \pm 0.299$   $\chi^2/\text{NDF}: 29285.9/110$

- sign  $-6.817 \pm 0.420$   $\chi^2/\text{NDF}: 14994.0/55$

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-2.641 \pm 0.882$   $\chi^2/\text{NDF}: 420.1/30$

Left Out:  $9.094 \pm 0.401$   $\chi^2/\text{NDF}: 1253.7/23$

Right Out:  $-3.030 \pm 0.851$   $\chi^2/\text{NDF}: 416.6/32$

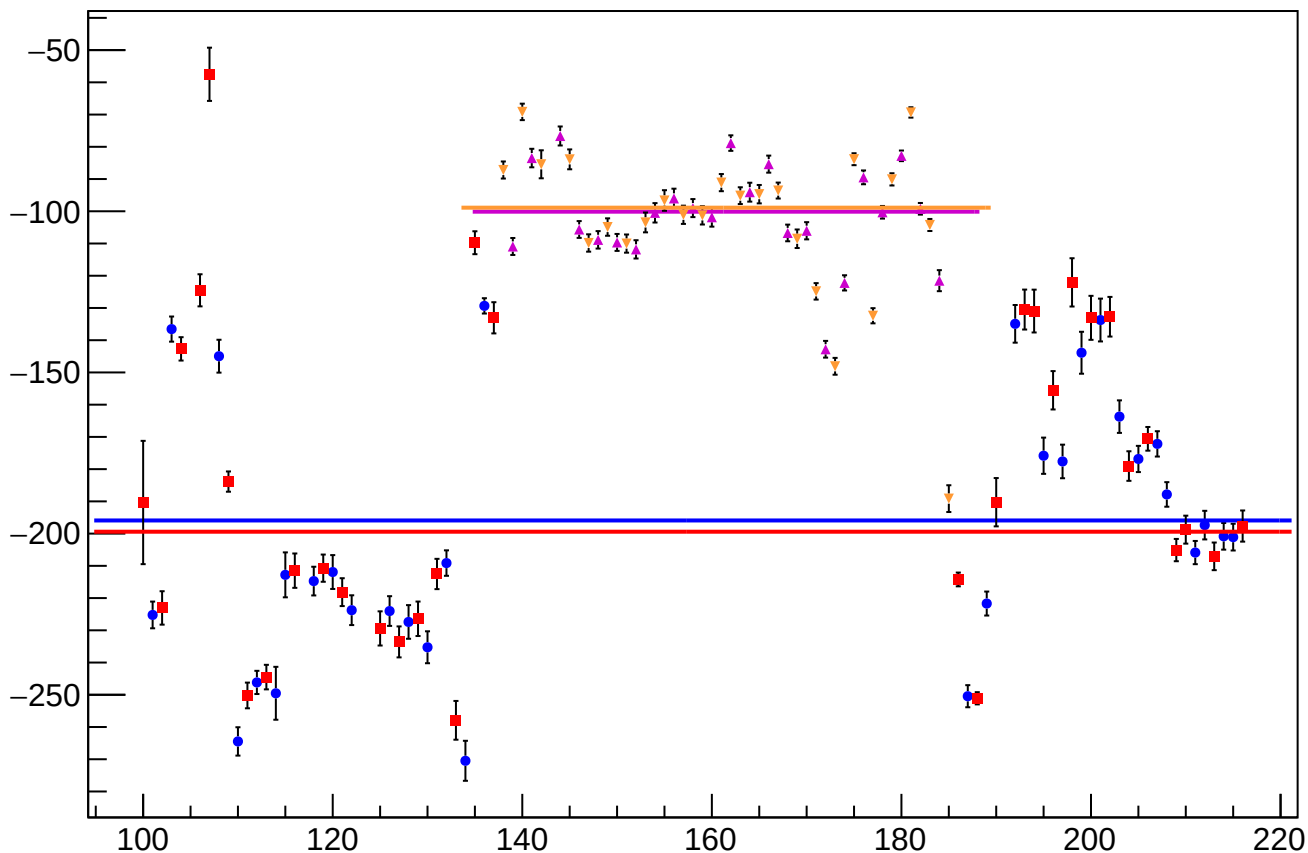
Left In:  $9.121 \pm 0.409$   $\chi^2/\text{NDF}: 1051.8/22$

+ sign  $7.083 \pm 0.365$   $\chi^2/\text{NDF}: 1820.4/54$

All:  $6.963 \pm 0.259$   $\chi^2/\text{NDF}: 3454.6/110$

- sign  $6.842 \pm 0.369$   $\chi^2/\text{NDF}: 1634.0/55$

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In: -195.922+/-0.783  $\chi^2/\text{NDF}$ : 2709.8/30

Left Out: -98.883+/-0.514  $\chi^2/\text{NDF}$ : 1824.5/23

Right Out: -199.411+/-0.731  $\chi^2/\text{NDF}$ : 3664.0/32

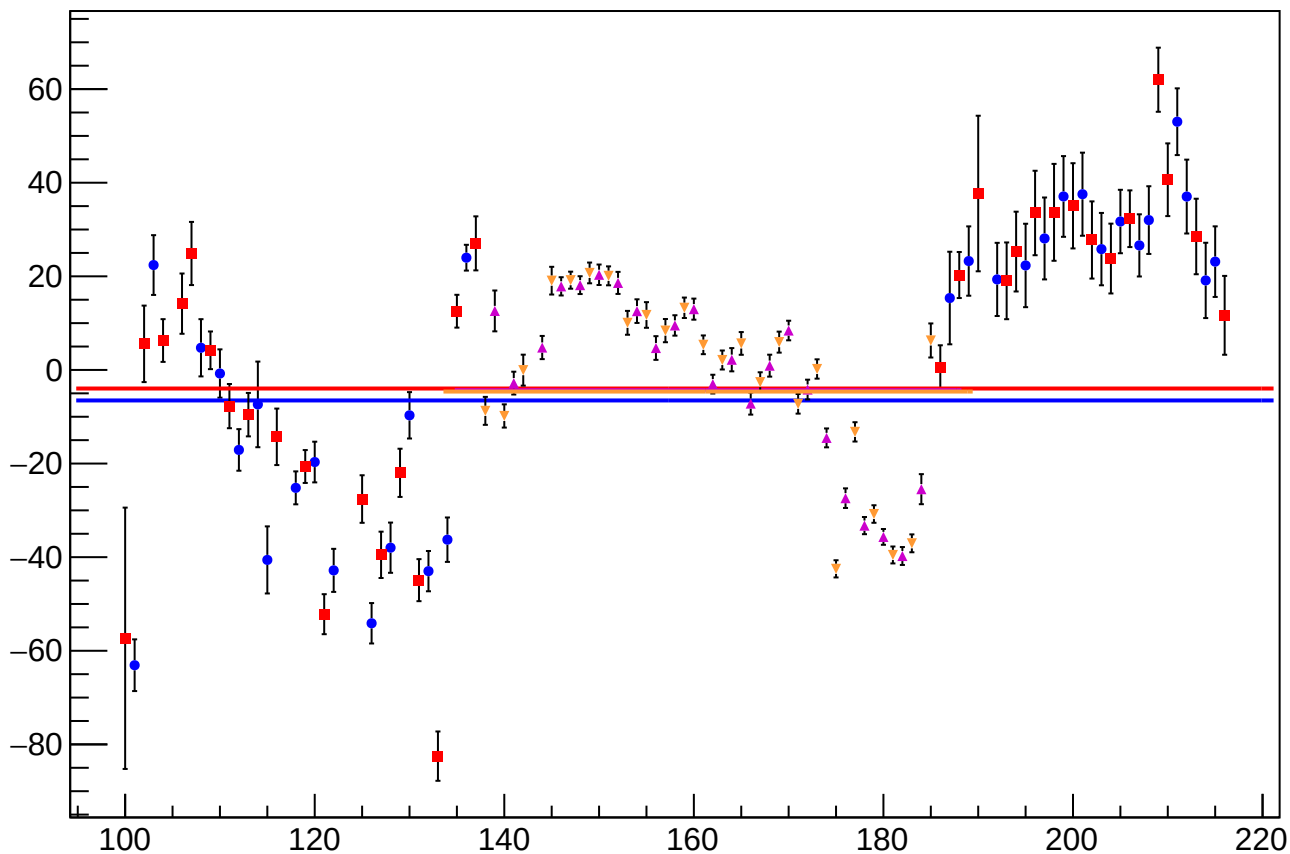
Left In: -100.127+/-0.520  $\chi^2/\text{NDF}$ : 823.2/22

+ sign -128.121+/-0.430  $\chi^2/\text{NDF}$ : 15267.2/54

All: -130.846+/-0.302  $\chi^2/\text{NDF}$ : 32081.9/110

- sign -133.495+/-0.424  $\chi^2/\text{NDF}$ : 16735.4/55

reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In: -6.519+/-1.005  $\chi^2/\text{NDF}$ : 984.8/30

Left Out: -4.618+/-0.451  $\chi^2/\text{NDF}$ : 2078.3/23

Right Out: -3.969+/-0.991  $\chi^2/\text{NDF}$ : 946.9/32

Left In: -4.328+/-0.459  $\chi^2/\text{NDF}$ : 1854.2/22

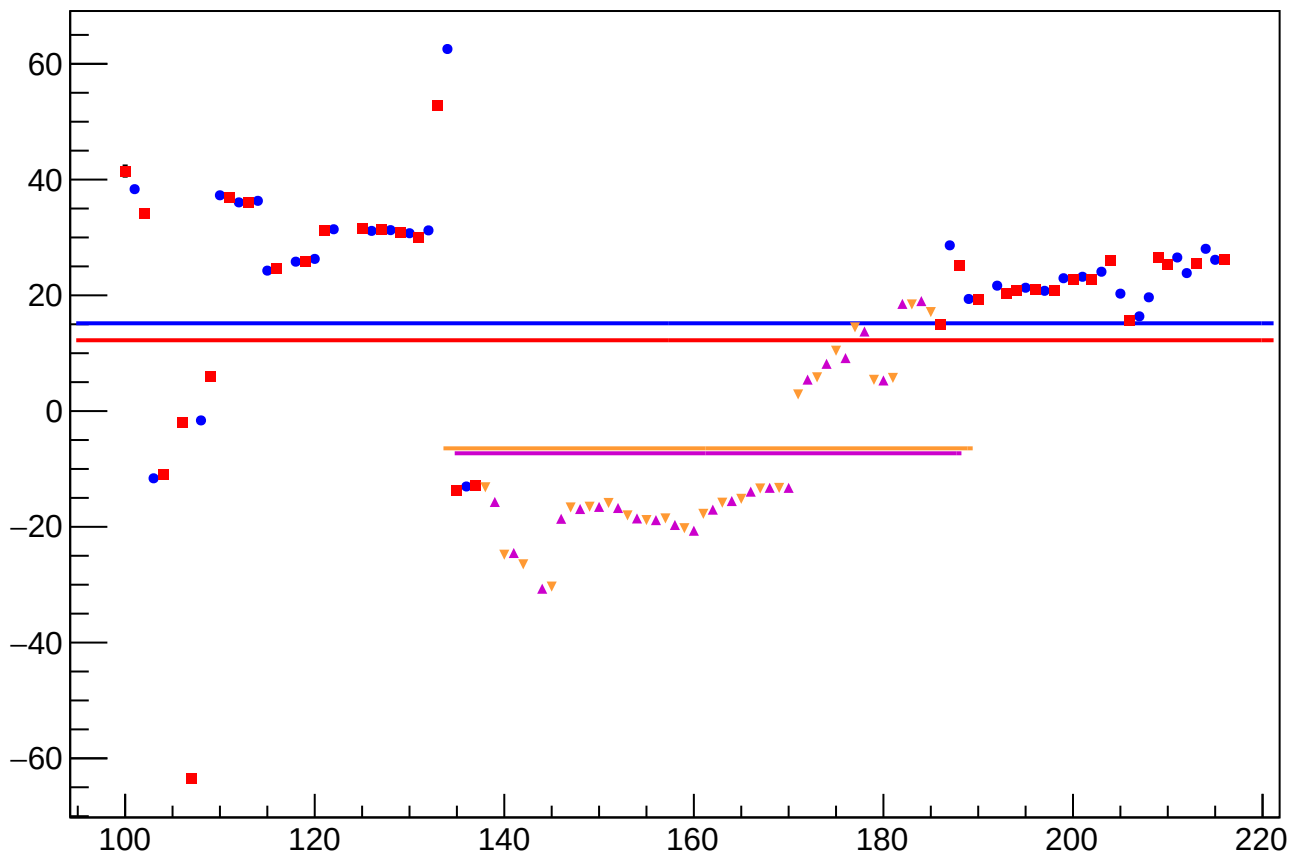
+ sign -4.937+/-0.412  $\chi^2/\text{NDF}$ : 3066.1/54

All: -4.604+/-0.293  $\chi^2/\text{NDF}$ : 5868.6/110

- sign -4.265+/-0.416  $\chi^2/\text{NDF}$ : 2801.2/55



reg\_asym\_us\_dd\_at2lr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 15.169+/-0.049  $\chi^2/\text{NDF}$ : 179091.2/30

Left Out: -6.437+/-0.020  $\chi^2/\text{NDF}$ : 496714.6/23

Right Out: 12.238+/-0.049  $\chi^2/\text{NDF}$ : 183597.7/32

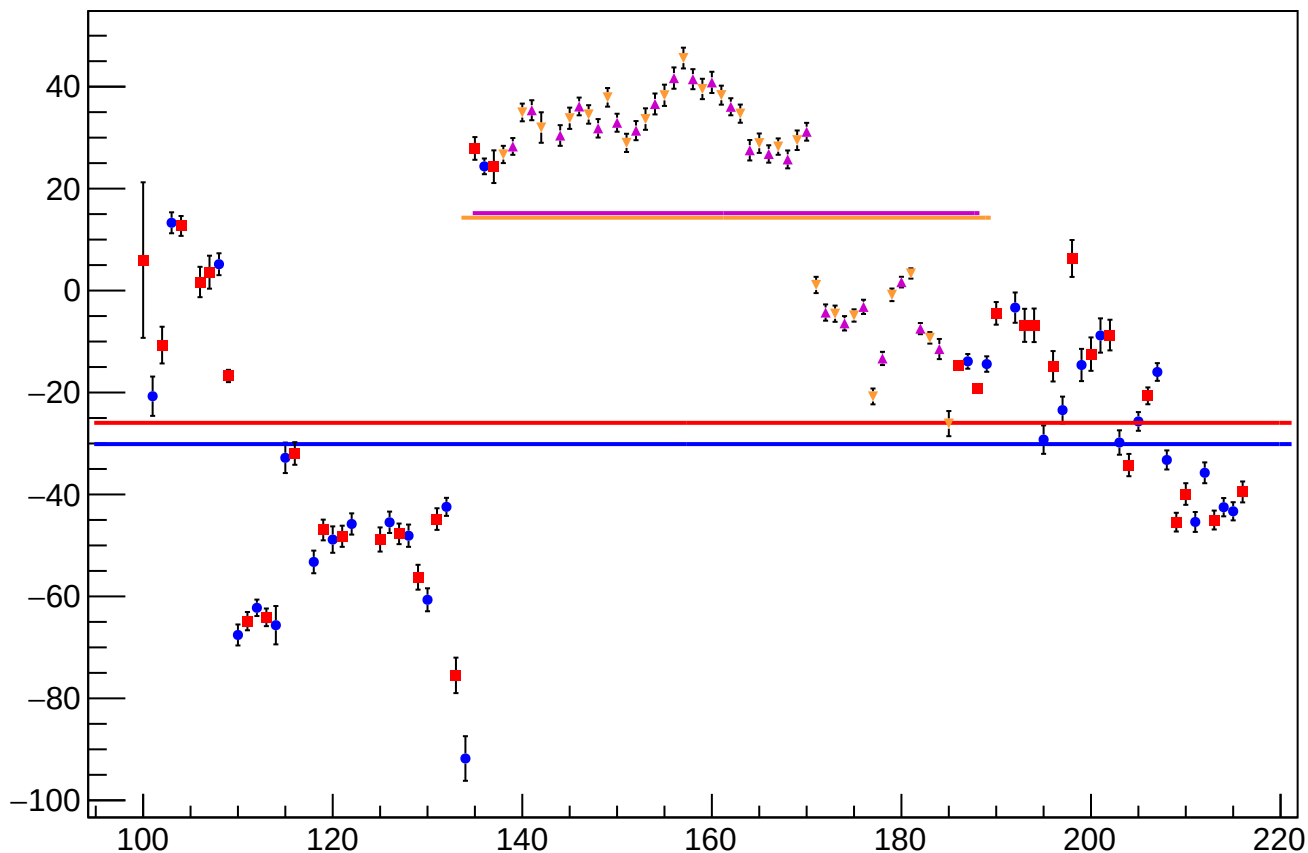
Left In: -7.292+/-0.020  $\chi^2/\text{NDF}$ : 488261.5/22

+ sign -3.296+/-0.019  $\chi^2/\text{NDF}$ : 842247.7/54

All: -3.854+/-0.013  $\chi^2/\text{NDF}$ : 1652116.6/110

- sign -4.418+/-0.019  $\chi^2/\text{NDF}$ : 808071.9/55

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-30.120 \pm 0.377$   $\chi^2/\text{NDF}$ : 4190.5/30

Left Out:  $14.295 \pm 0.335$   $\chi^2/\text{NDF}$ : 3726.3/23

Right Out:  $-25.947 \pm 0.339$   $\chi^2/\text{NDF}$ : 4146.4/32

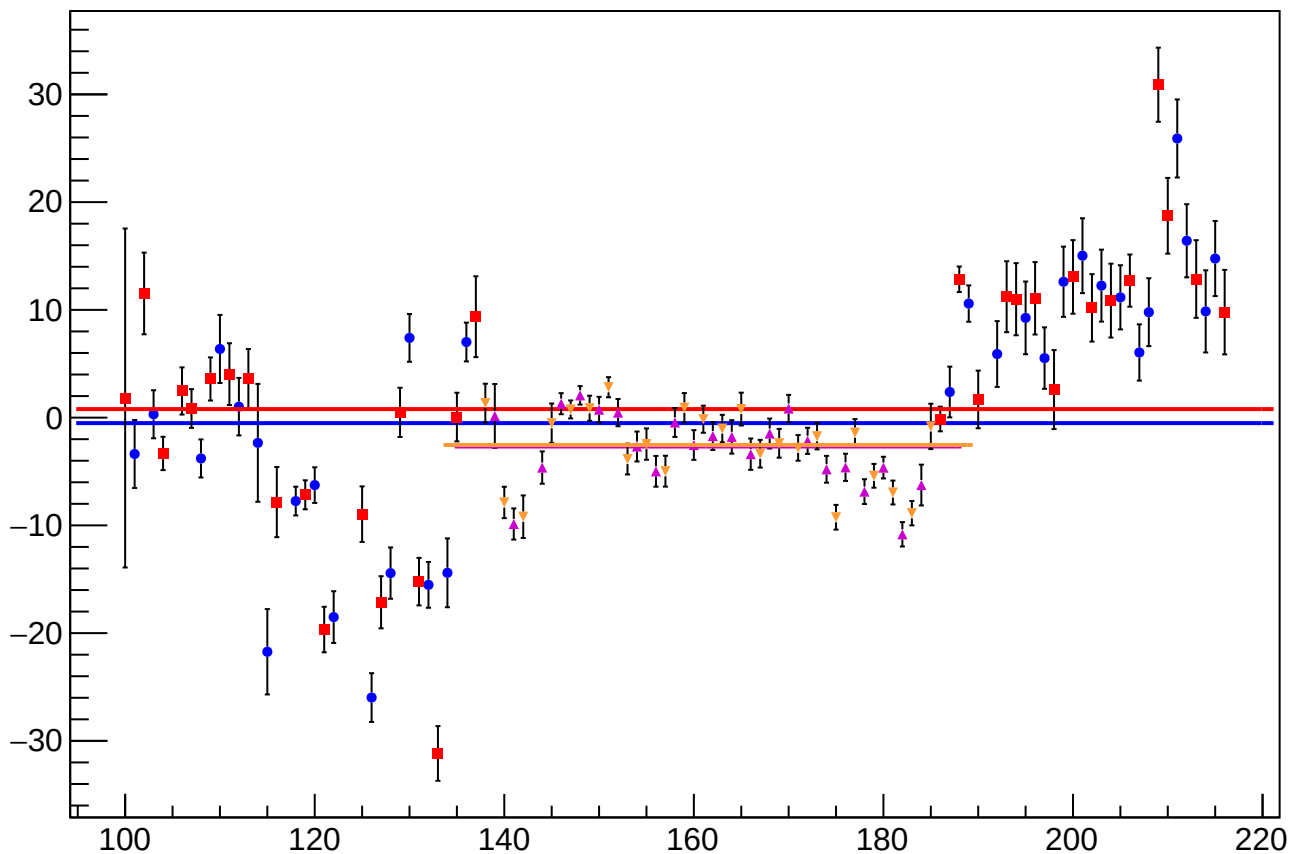
Left In:  $15.194 \pm 0.339$   $\chi^2/\text{NDF}$ : 3406.6/22

+ sign  $-5.316 \pm 0.250$   $\chi^2/\text{NDF}$ : 15668.7/54

All:  $-5.362 \pm 0.173$   $\chi^2/\text{NDF}$ : 30577.8/110

- sign  $-5.404 \pm 0.240$   $\chi^2/\text{NDF}$ : 14909.0/55

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.510 \pm 0.445$   $\chi^2/\text{NDF}$ : 645.7/30

Left Out:  $-2.538 \pm 0.259$   $\chi^2/\text{NDF}$ : 198.4/23

Right Out:  $0.792 \pm 0.400$   $\chi^2/\text{NDF}$ : 749.0/32

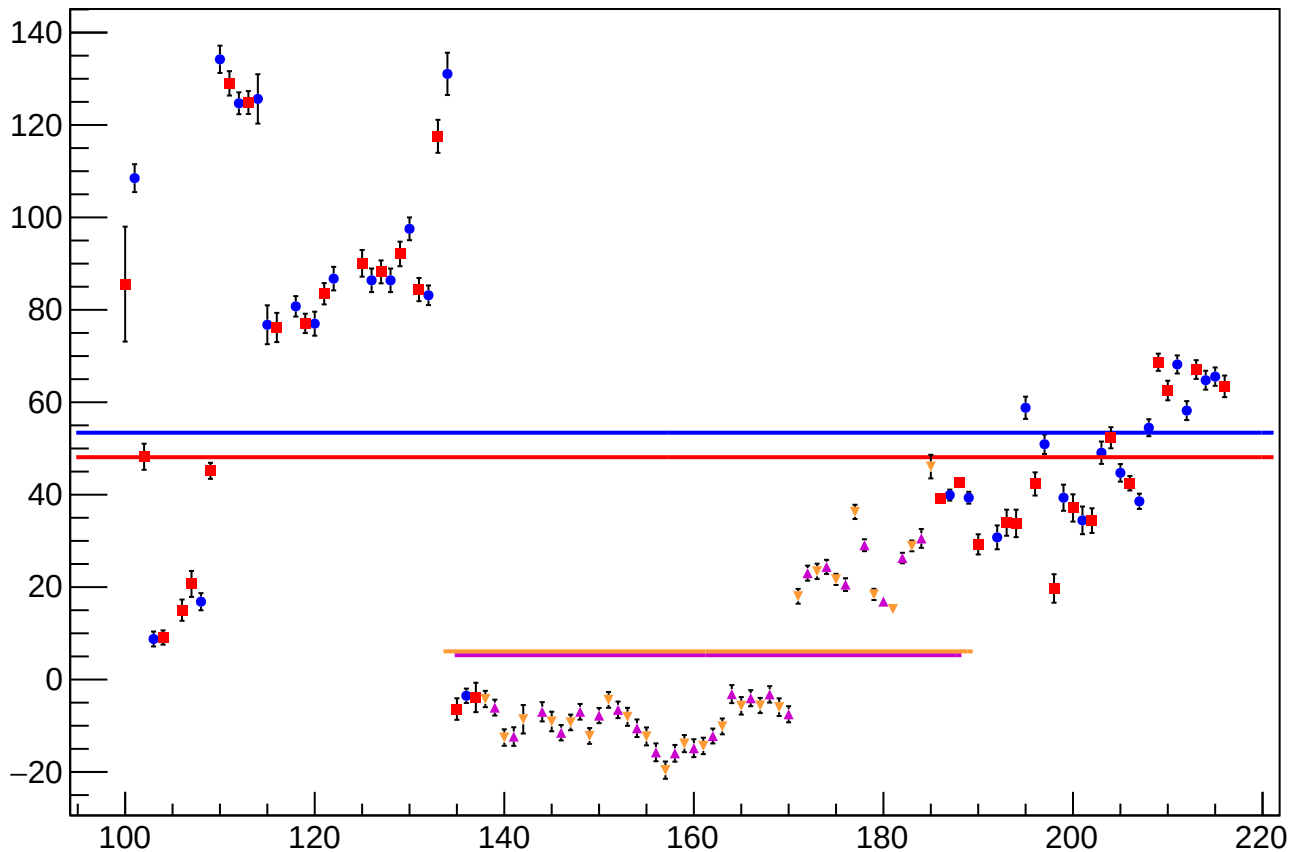
Left In:  $-2.681 \pm 0.265$   $\chi^2/\text{NDF}$ : 182.0/22

+ sign  $-2.025 \pm 0.224$   $\chi^2/\text{NDF}$ : 859.6/54

All:  $-1.821 \pm 0.157$   $\chi^2/\text{NDF}$ : 1844.6/110

- sign  $-1.624 \pm 0.221$   $\chi^2/\text{NDF}$ : 983.4/55

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In: 53.413 $\pm$ 0.377  $\chi^2$ /NDF: 6880.5/30

Left Out: 6.095 $\pm$ 0.333  $\chi^2$ /NDF: 2773.9/23

Right Out: 48.116 $\pm$ 0.326  $\chi^2$ /NDF: 6290.1/32

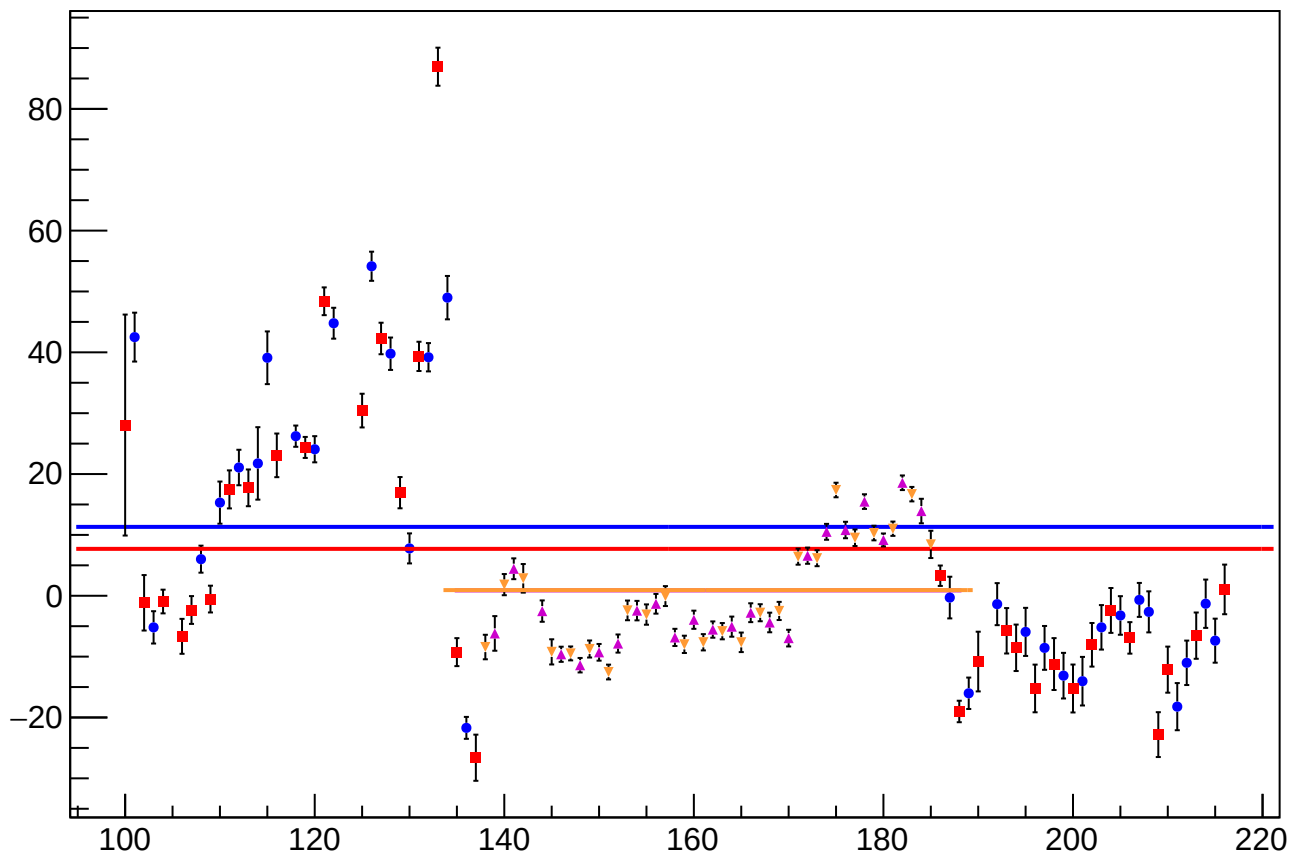
Left In: 5.269 $\pm$ 0.337  $\chi^2$ /NDF: 2451.2/22

+ sign 26.825 $\pm$ 0.250  $\chi^2$ /NDF: 18507.3/54

All: 27.122 $\pm$ 0.171  $\chi^2$ /NDF: 35617.9/110

- sign 27.384 $\pm$ 0.234  $\chi^2$ /NDF: 17107.9/55

# reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 11.319 $\pm$ 0.519  $\chi^2$ /NDF: 1950.1/30

Left Out: 0.929 $\pm$ 0.292  $\chi^2$ /NDF:1041.7/23

Right Out: 7.707 $\pm$ 0.486  $\chi^2$ /NDF: 2284.7/32

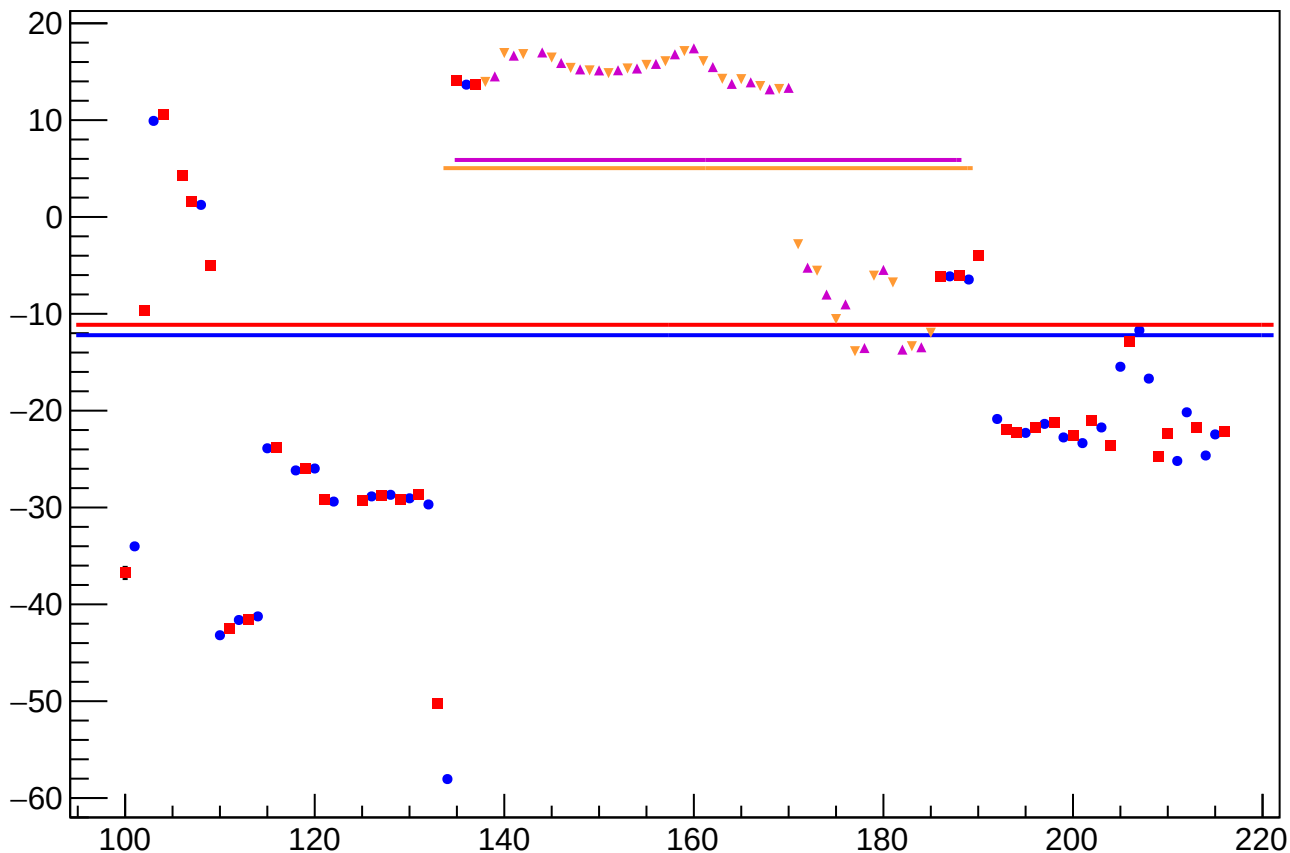
Left In: 0.878 $\pm$ 0.297  $\chi^2$ /NDF:1006.0/22

+ sign 3.422 $\pm$ 0.254  $\chi^2$ /NDF: 3295.9/54

All: 3.078 $\pm$ 0.180  $\chi^2$ /NDF: 6734.0/110

- sign 2.737 $\pm$ 0.254  $\chi^2$ /NDF: 3434.4/55

reg\_asym\_us\_dd\_at2lr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In: -12.207 $\pm$ 0.024  $\chi^2/\text{NDF}$ : 504053.1/30

Left Out: 5.042 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 855564.2/23

Right Out: -11.135 $\pm$ 0.023  $\chi^2/\text{NDF}$ : 424451.7/32

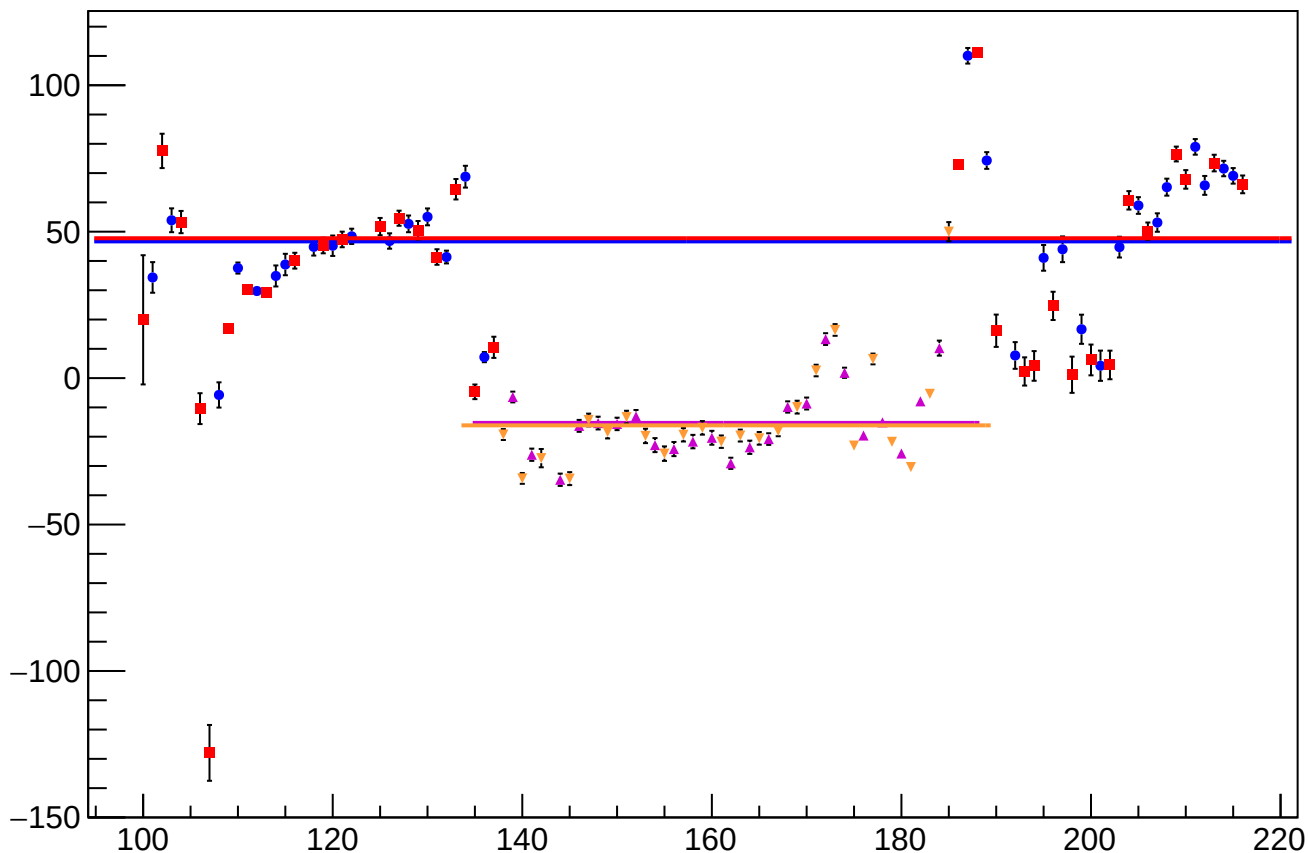
Left In: 5.886 $\pm$ 0.013  $\chi^2/\text{NDF}$ : 846355.0/22

+ sign 1.078 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 1760370.4/54

All: 1.440 $\pm$ 0.008  $\chi^2/\text{NDF}$ : 3435437.6/110

- sign 1.801 $\pm$ 0.011  $\chi^2/\text{NDF}$ : 1673079.5/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 46.683 $\pm$ 0.516  $\chi^2$ /NDF: 2124.9/30

Left Out: -16.132 $\pm$ 0.398  $\chi^2$ /NDF:1364.9/23

Right Out: 47.757 $\pm$ 0.485  $\chi^2$ /NDF: 4418.7/32

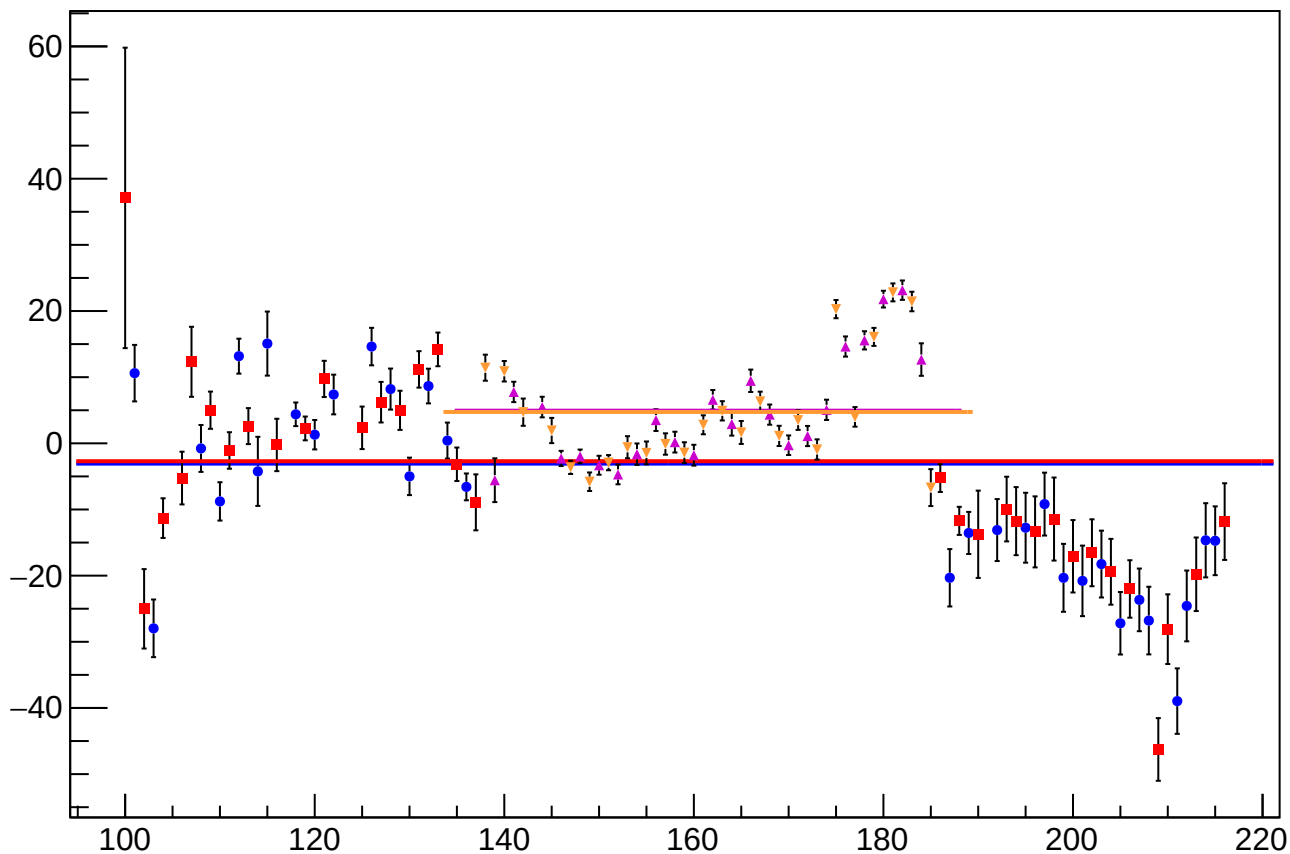
Left In: -15.295 $\pm$ 0.403  $\chi^2$ /NDF:760.9/22

+ sign 7.301 $\pm$ 0.315  $\chi^2$ /NDF: 12786.9/54

All: 8.926 $\pm$ 0.221  $\chi^2$ /NDF: 28022.2/110

- sign 10.499 $\pm$ 0.310  $\chi^2$ /NDF: 15183.0/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $-3.064 \pm 0.609$   $\chi^2/\text{NDF}: 422.1/30$

Left Out:  $4.745 \pm 0.307$   $\chi^2/\text{NDF}: 793.8/23$

Right Out:  $-2.702 \pm 0.590$   $\chi^2/\text{NDF}: 361.9/32$

Left In:  $4.935 \pm 0.313$   $\chi^2/\text{NDF}: 688.4/22$

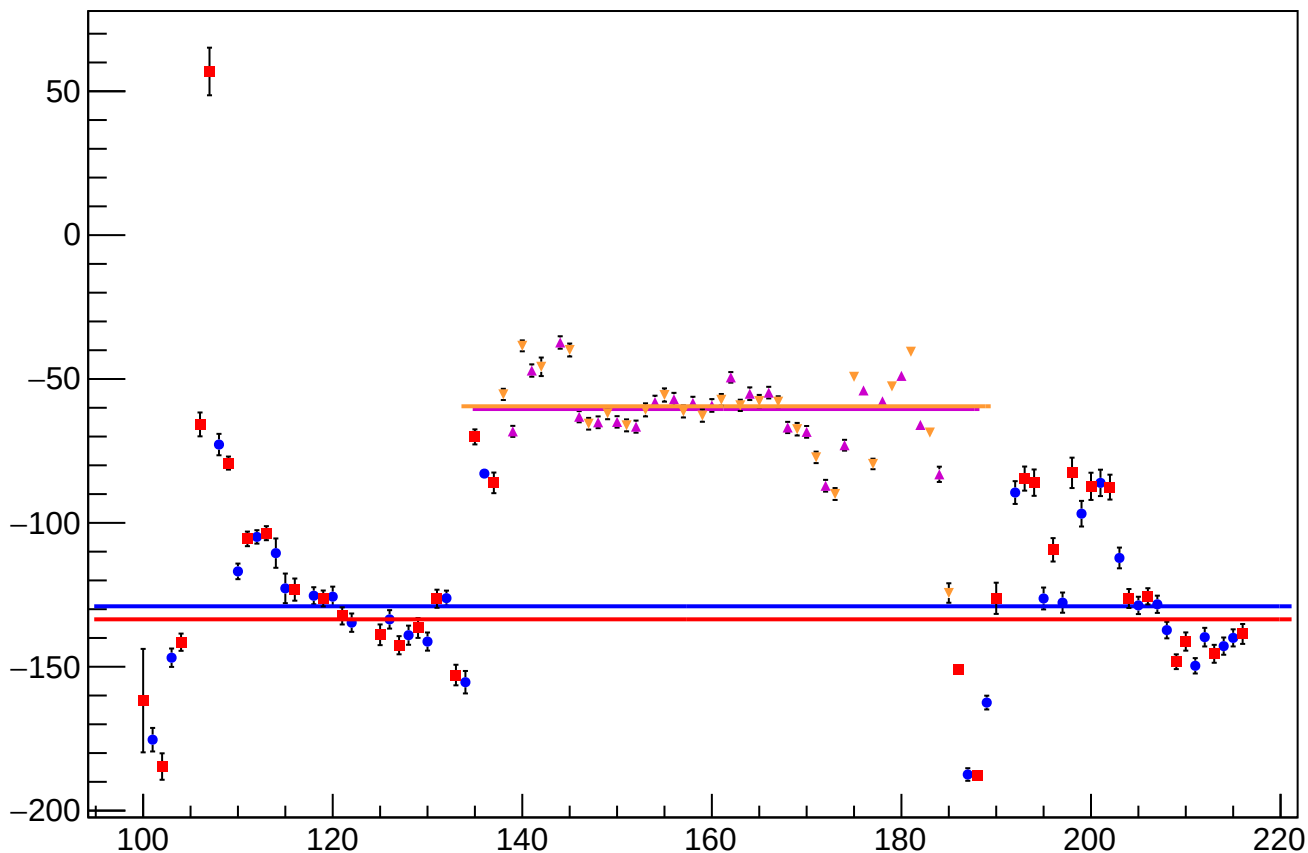
+ sign  $3.167 \pm 0.274$   $\chi^2/\text{NDF}: 1347.0/54$

All:  $3.212 \pm 0.195$   $\chi^2/\text{NDF}: 2528.1/110$

- sign  $3.258 \pm 0.276$   $\chi^2/\text{NDF}: 1181.0/55$



reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-128.992 \pm 0.549$   $\chi^2/\text{NDF}$ : 2584.7/30

Left Out:  $-59.480 \pm 0.395$   $\chi^2/\text{NDF}$ : 1372.3/23

Right Out:  $-133.522 \pm 0.505$   $\chi^2/\text{NDF}$ : 5387.4/32

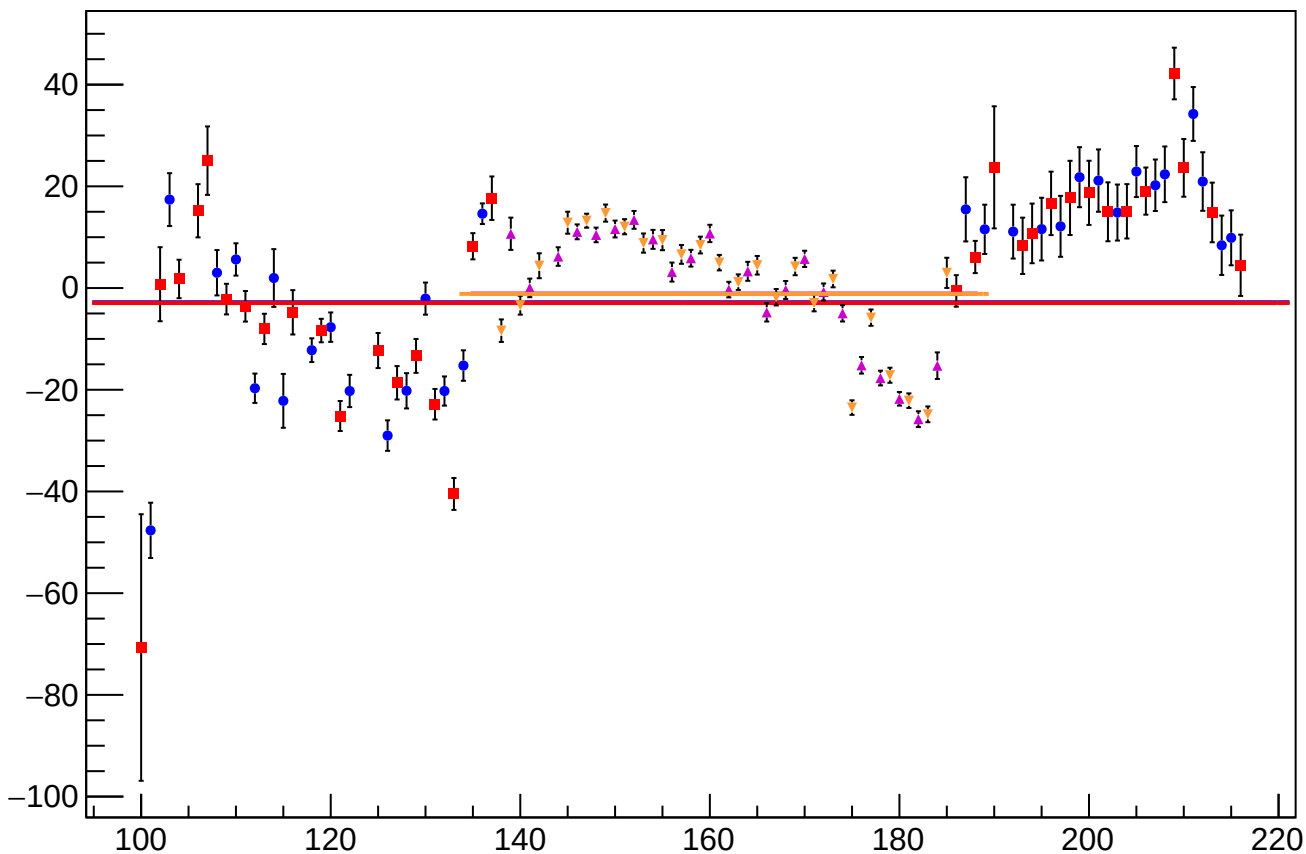
Left In:  $-60.435 \pm 0.400$   $\chi^2/\text{NDF}$ : 668.3/22

+ sign  $-83.194 \pm 0.321$   $\chi^2/\text{NDF}$ : 14525.8/54

All:  $-85.945 \pm 0.224$   $\chi^2/\text{NDF}$ : 33610.7/110

- sign  $-88.573 \pm 0.313$   $\chi^2/\text{NDF}$ : 18940.9/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-2.792 \pm 0.696$   $\chi^2/\text{NDF}$ : 640.9/30

Left Out:  $-1.144 \pm 0.346$   $\chi^2/\text{NDF}$ : 1303.0/23

Right Out:  $-2.949 \pm 0.690$   $\chi^2/\text{NDF}$ : 580.5/32

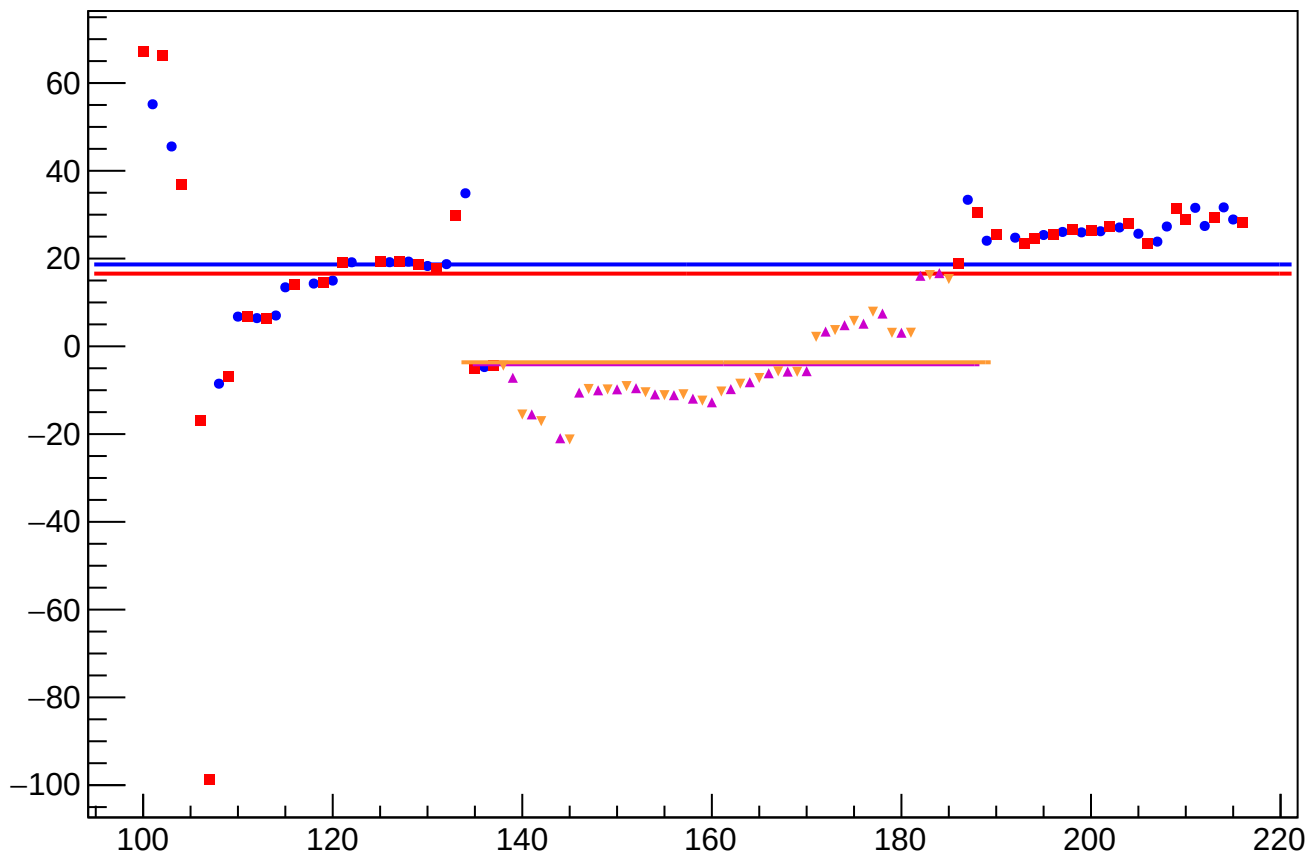
Left In:  $-1.082 \pm 0.352$   $\chi^2/\text{NDF}$ : 1157.4/22

+ sign  $-1.470 \pm 0.309$   $\chi^2/\text{NDF}$ : 1948.4/54

All:  $-1.469 \pm 0.220$   $\chi^2/\text{NDF}$ : 3692.1/110

- sign  $-1.468 \pm 0.313$   $\chi^2/\text{NDF}$ : 1743.7/55

reg\_asym\_us\_dd\_atlr\_dd\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 18.658+/-0.035  $\chi^2$ /NDF: 218811.4/30

Left Out: -3.639+/-0.015  $\chi^2$ /NDF: 345861.2/23

Right Out: 16.567+/-0.035  $\chi^2$ /NDF: 353168.1/32

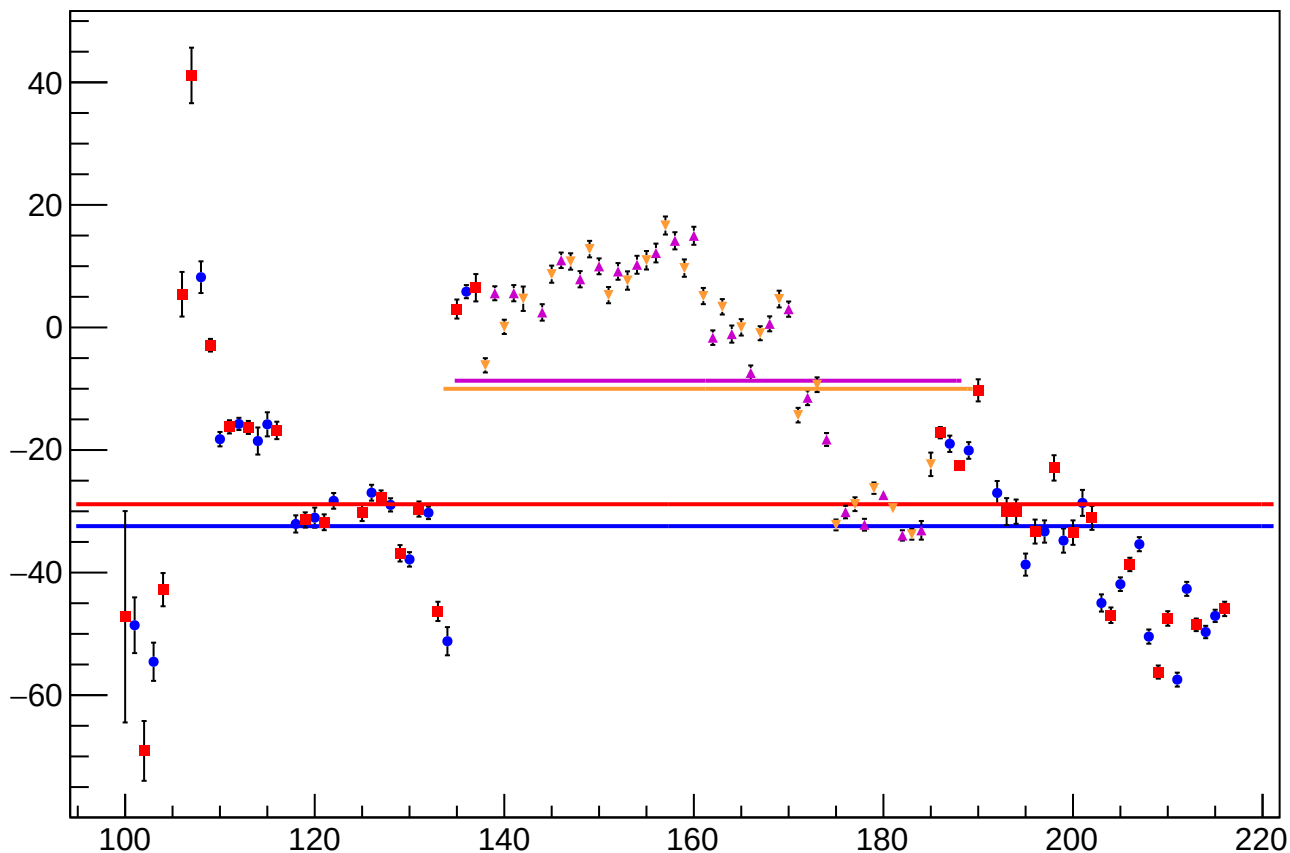
Left In: -4.091+/-0.016  $\chi^2$ /NDF: 333287.4/22

+ sign -0.008+/-0.014  $\chi^2$ /NDF: 903809.0/54

All: -0.385+/-0.010  $\chi^2$ /NDF: 1876373.6/110

- sign -0.767+/-0.014  $\chi^2$ /NDF: 971130.8/55

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-32.422 \pm 0.243$   $\chi^2/\text{NDF}$ : 3925.8/30

Left Out:  $-10.013 \pm 0.244$   $\chi^2/\text{NDF}$ : 4977.5/23

Right Out:  $-28.843 \pm 0.238$   $\chi^2/\text{NDF}$ : 4359.7/32

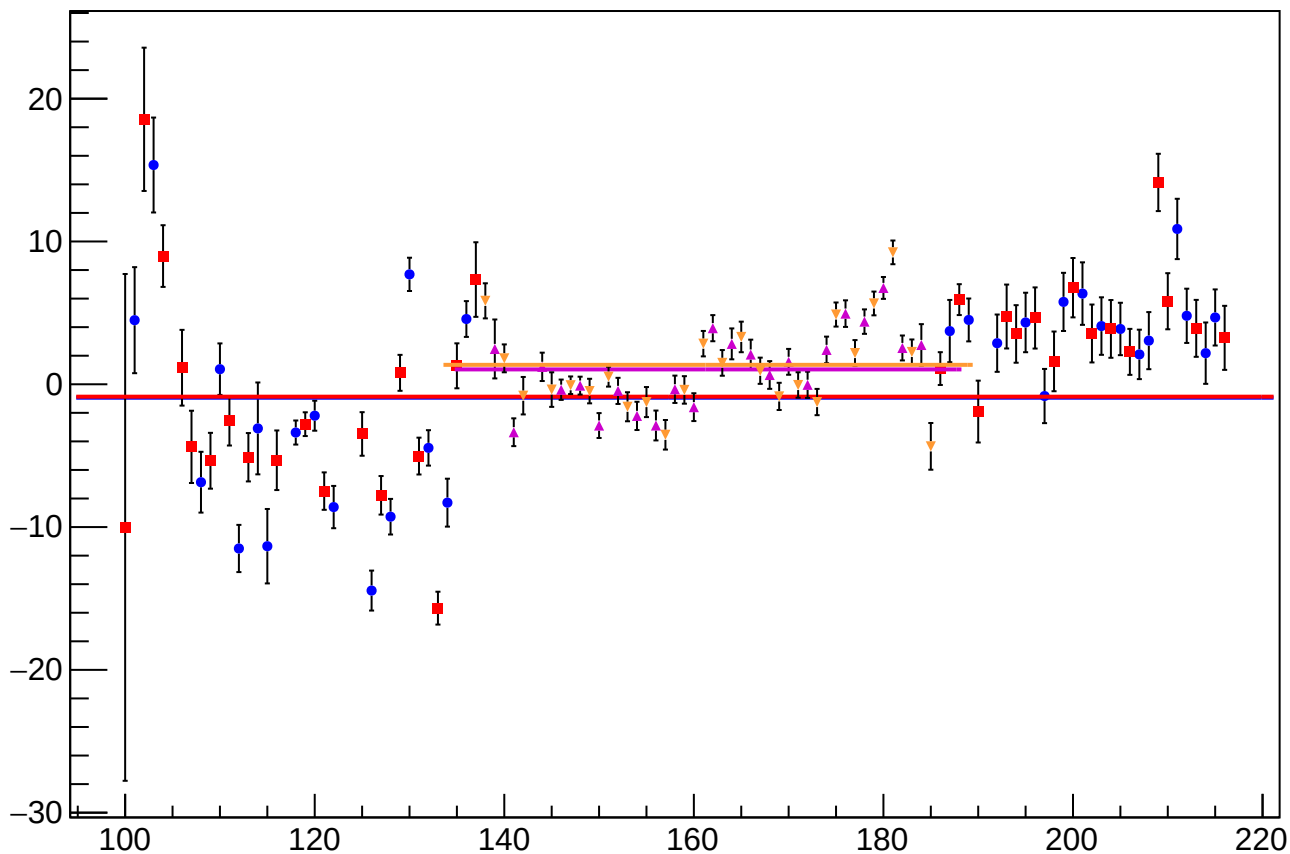
Left In:  $-8.689 \pm 0.248$   $\chi^2/\text{NDF}$ : 5021.6/22

+ sign  $-21.274 \pm 0.172$   $\chi^2/\text{NDF}$ : 13130.5/54

All:  $-20.214 \pm 0.122$   $\chi^2/\text{NDF}$ : 26028.3/110

- sign  $-19.162 \pm 0.172$   $\chi^2/\text{NDF}$ : 12822.3/55

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.940 \pm 0.294$   $\chi^2/\text{NDF}$ : 488.8/30

Left Out:  $1.361 \pm 0.188$   $\chi^2/\text{NDF}$ : 240.3/23

Right Out:  $-0.869 \pm 0.288$   $\chi^2/\text{NDF}$ : 470.9/32

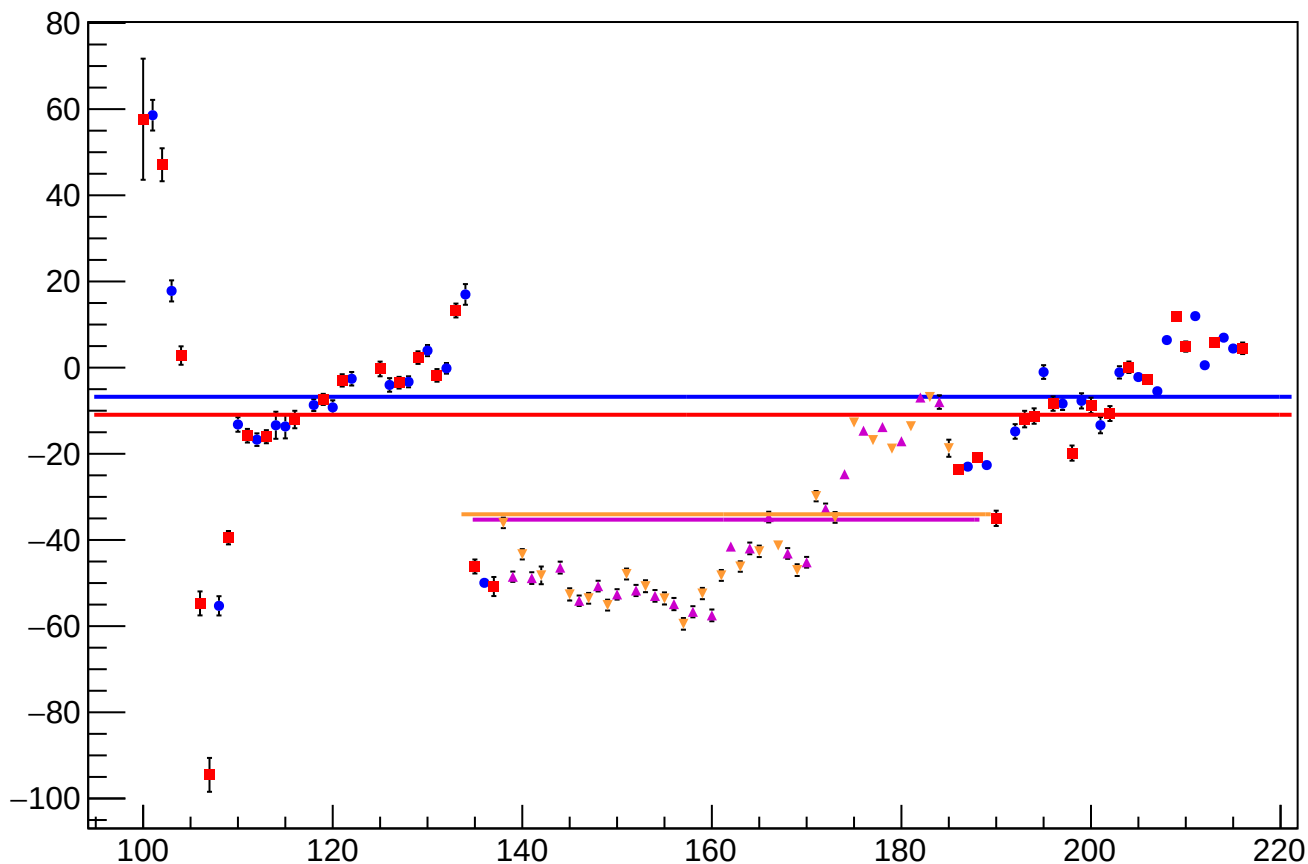
Left In:  $1.041 \pm 0.192$   $\chi^2/\text{NDF}$ : 196.1/22

+ sign  $0.692 \pm 0.159$   $\chi^2/\text{NDF}$ : 772.5/54

All:  $0.573 \pm 0.113$   $\chi^2/\text{NDF}$ : 1471.0/110

- sign  $0.451 \pm 0.160$   $\chi^2/\text{NDF}$ : 697.4/55

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-6.767 \pm 0.255$   $\chi^2/\text{NDF}$ : 3959.2/30

Left Out:  $-34.036 \pm 0.243$   $\chi^2/\text{NDF}$ : 4965.7/23

Right Out:  $-10.939 \pm 0.243$   $\chi^2/\text{NDF}$ : 4472.3/32

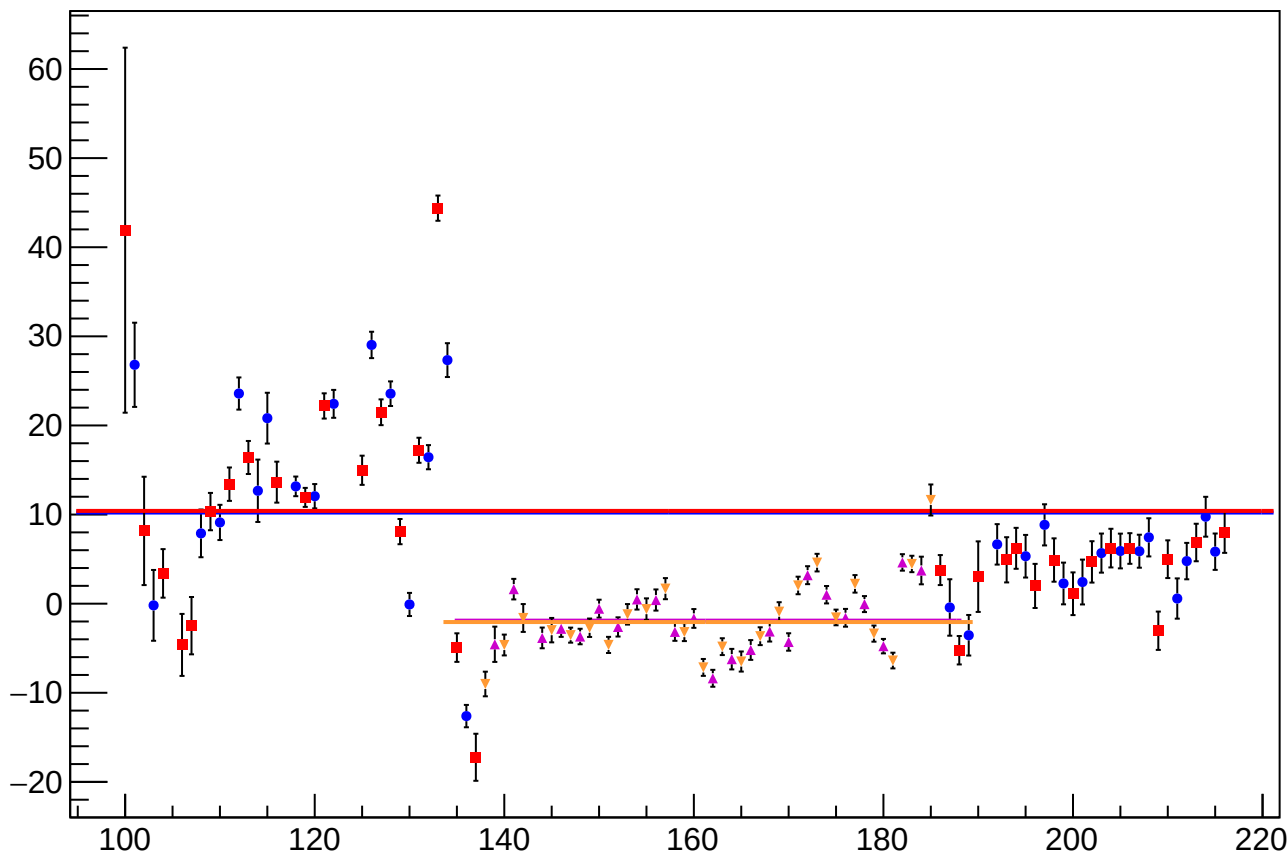
Left In:  $-35.285 \pm 0.245$   $\chi^2/\text{NDF}$ : 4998.0/22

+ sign  $-21.100 \pm 0.176$   $\chi^2/\text{NDF}$ : 14921.7/54

All:  $-22.068 \pm 0.123$   $\chi^2/\text{NDF}$ : 29416.1/110

- sign  $-23.002 \pm 0.173$   $\chi^2/\text{NDF}$ : 14434.9/55

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 10.226 $\pm$ 0.336  $\chi^2$ /NDF: 1032.8/30

Left Out: -2.062 $\pm$ 0.212  $\chi^2$ /NDF: 332.4/23

Right Out: 10.410 $\pm$ 0.336  $\chi^2$ /NDF: 1220.0/32

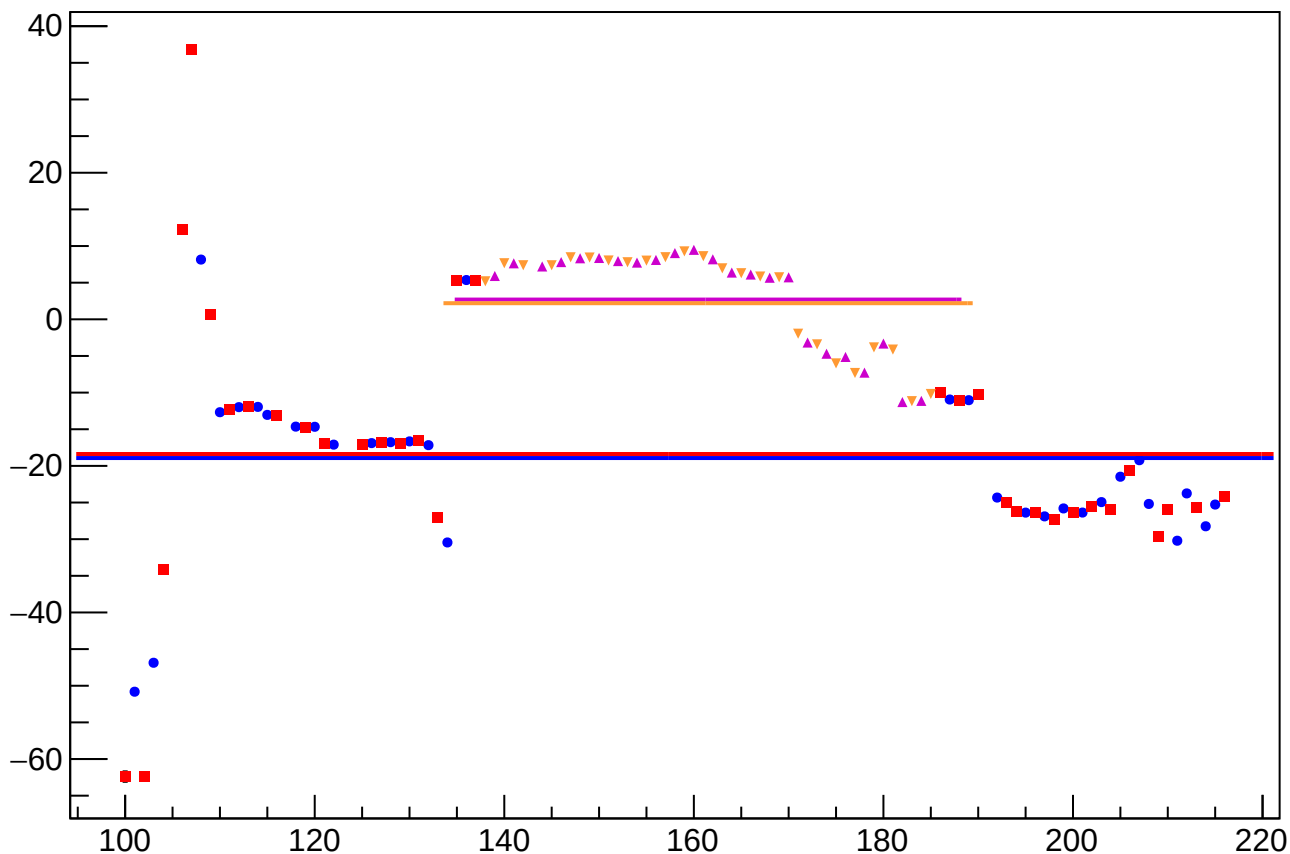
Left In: -1.905 $\pm$ 0.216  $\chi^2$ /NDF: 222.1/22

+ sign 1.443 $\pm$ 0.179  $\chi^2$ /NDF: 2321.4/54

All: 1.569 $\pm$ 0.128  $\chi^2$ /NDF: 4713.8/110

- sign 1.698 $\pm$ 0.182  $\chi^2$ /NDF: 2391.5/55

reg\_asym\_us\_dd\_atlr\_dd\_dd\_diff\_bpm12X\_slope vs Slug



Right In:  $-18.929 \pm 0.017$   $\chi^2/\text{NDF}$ : 531387.2/30

Left Out:  $2.198 \pm 0.009$   $\chi^2/\text{NDF}$ : 508502.1/23

Right Out:  $-18.379 \pm 0.017$   $\chi^2/\text{NDF}$ : 611573.3/32

Left In:  $2.694 \pm 0.010$   $\chi^2/\text{NDF}$ : 498824.3/22

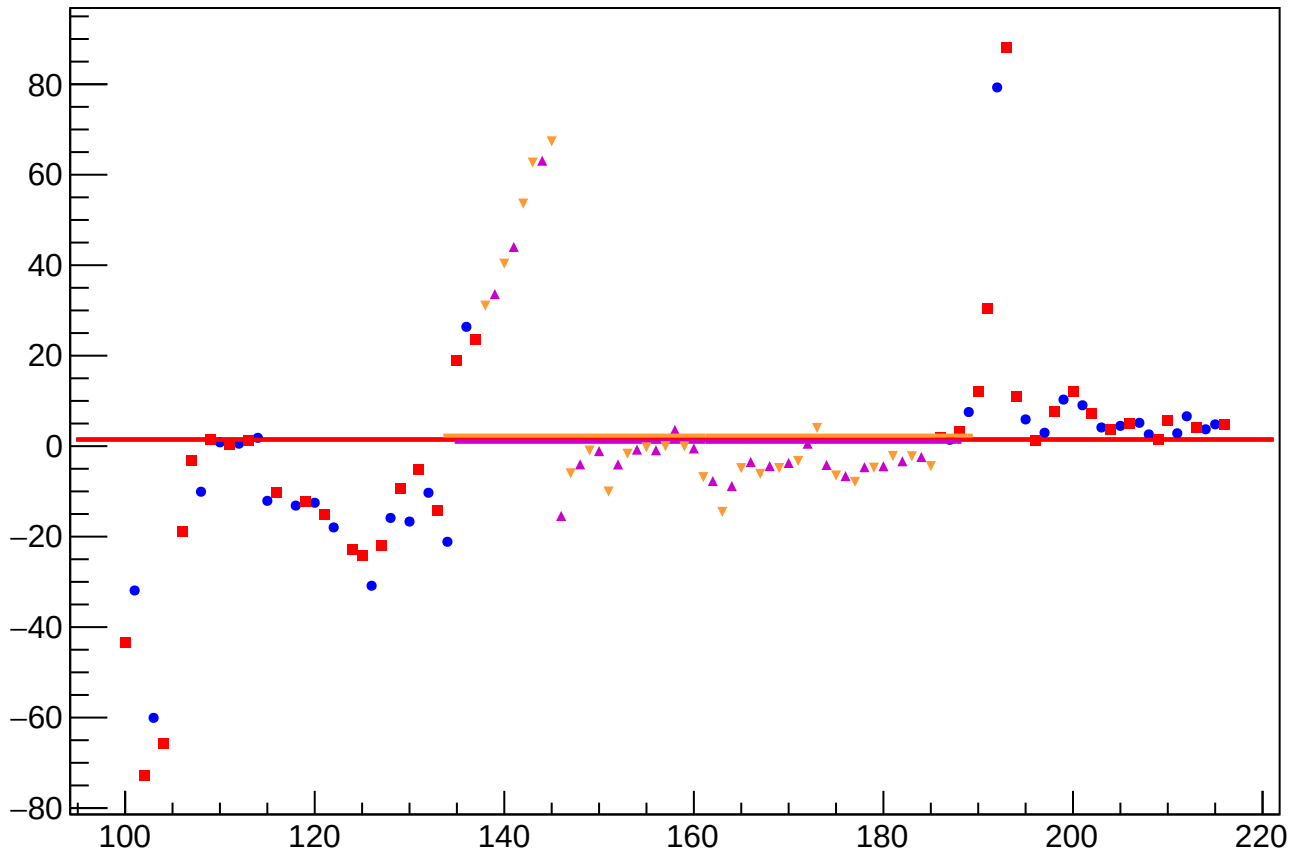
+ sign  $-2.916 \pm 0.008$   $\chi^2/\text{NDF}$ : 2238238.7/54

All:  $-2.666 \pm 0.006$   $\chi^2/\text{NDF}$ : 4529810.0/110

- sign  $-2.413 \pm 0.008$   $\chi^2/\text{NDF}$ : 2289730.8/55



reg\_asym\_bcm\_an\_ds3\_diff\_bpm1X\_slope vs Slug



Right In: 1.509 $\pm$ 0.035  $\chi^2$ /NDF: 121484.0/30

Left Out: 2.341 $\pm$ 0.040  $\chi^2$ /NDF:176986.1/24

Right Out: 1.410 $\pm$ 0.032  $\chi^2$ /NDF: 122162.8/34

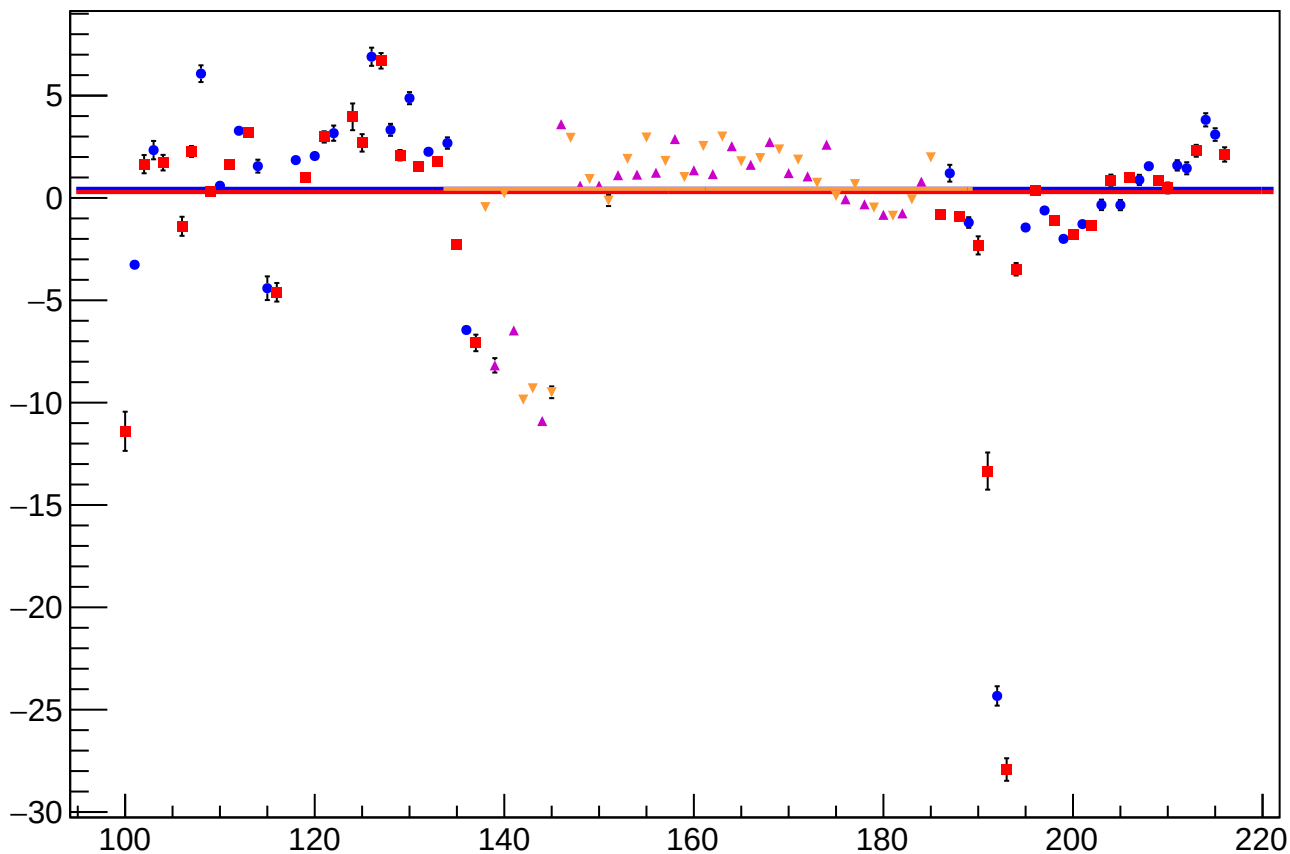
Left In: 0.957 $\pm$ 0.040  $\chi^2$ /NDF:132519.8/22

+ sign 1.867 $\pm$ 0.026  $\chi^2$ /NDF: 298713.7/55

All: 1.533 $\pm$ 0.018  $\chi^2$ /NDF: 553778.8/113

- sign 1.231 $\pm$ 0.025  $\chi^2$ /NDF: 254760.6/57

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.449 \pm 0.044$   $\chi^2/\text{NDF}$ : 6094.2/30

Left Out:  $0.446 \pm 0.033$   $\chi^2/\text{NDF}$ : 7044.3/24

Right Out:  $0.285 \pm 0.042$   $\chi^2/\text{NDF}$ : 5179.9/34

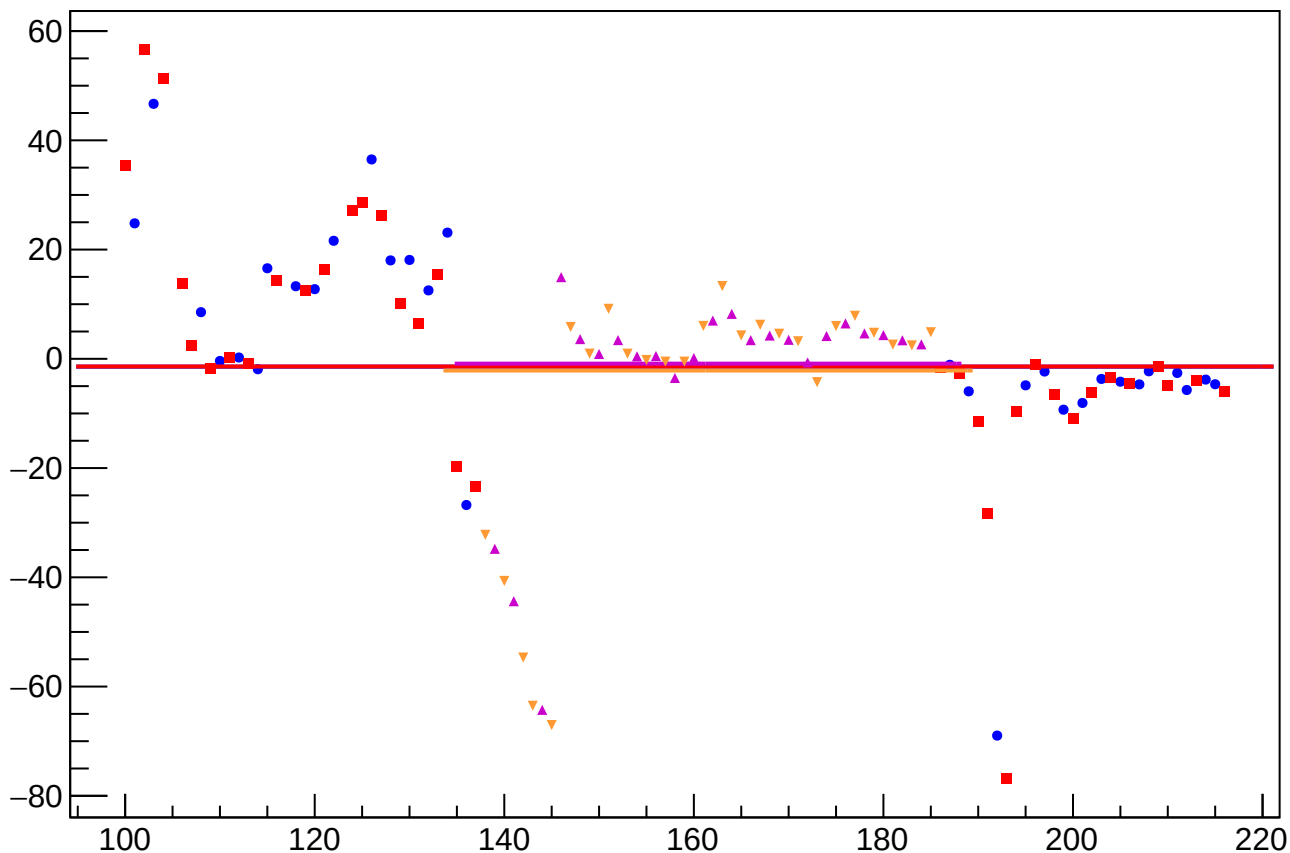
Left In:  $0.427 \pm 0.031$   $\chi^2/\text{NDF}$ : 7102.3/22

+ sign  $0.447 \pm 0.026$   $\chi^2/\text{NDF}$ : 13138.6/55

All:  $0.410 \pm 0.018$   $\chi^2/\text{NDF}$ : 25431.8/113

- sign  $0.377 \pm 0.025$   $\chi^2/\text{NDF}$ : 12289.6/57

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.435 \pm 0.036$   $\chi^2/\text{NDF}$ : 119767.3/30

Left Out:  $-2.143 \pm 0.040$   $\chi^2/\text{NDF}$ : 171271.2/24

Right Out:  $-1.404 \pm 0.034$   $\chi^2/\text{NDF}$ : 120322.5/34

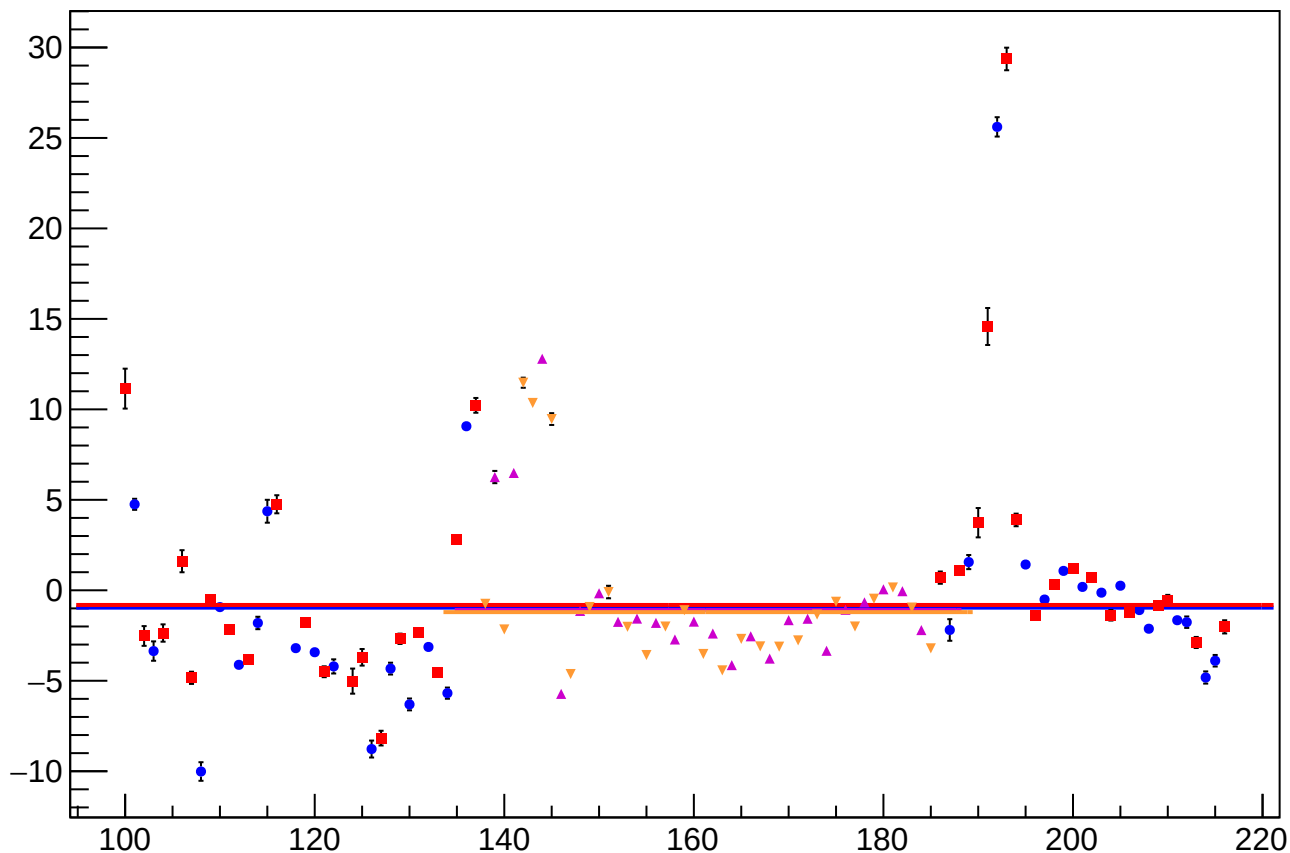
Left In:  $-0.881 \pm 0.039$   $\chi^2/\text{NDF}$ : 129197.8/22

+ sign  $-1.752 \pm 0.027$   $\chi^2/\text{NDF}$ : 291209.2/55

All:  $-1.453 \pm 0.019$   $\chi^2/\text{NDF}$ : 541066.0/113

- sign  $-1.180 \pm 0.026$   $\chi^2/\text{NDF}$ : 249621.3/57

reg\_asym\_bcm\_an\_ds3\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.958 \pm 0.051$   $\chi^2/\text{NDF}$ : 7600.5/30

Left Out:  $-1.206 \pm 0.036$   $\chi^2/\text{NDF}$ : 7003.0/24

Right Out:  $-0.811 \pm 0.049$   $\chi^2/\text{NDF}$ : 5670.9/34

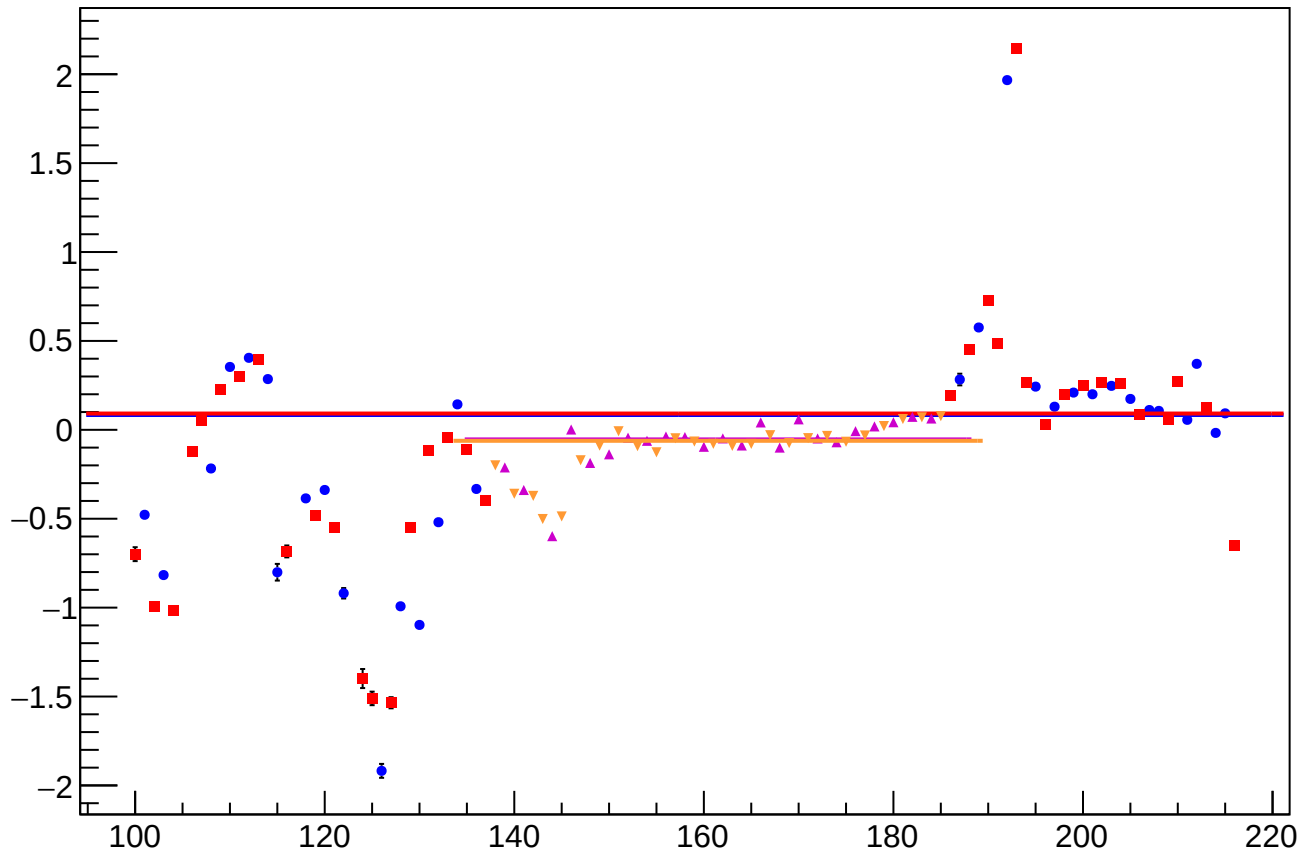
Left In:  $-1.094 \pm 0.035$   $\chi^2/\text{NDF}$ : 7029.2/22

+ sign  $-1.122 \pm 0.030$   $\chi^2/\text{NDF}$ : 14619.3/55

All:  $-1.058 \pm 0.020$   $\chi^2/\text{NDF}$ : 27350.7/113

- sign  $-0.998 \pm 0.028$   $\chi^2/\text{NDF}$ : 12722.2/57

reg\_asym\_bcm\_an\_ds3\_diff\_bpm12X\_slope vs Slug



Right In:  $0.083 \pm 0.002$   $\chi^2/\text{NDF}$ : 34450.6/30

Left Out:  $-0.062 \pm 0.002$   $\chi^2/\text{NDF}$ : 5711.9/24

Right Out:  $0.092 \pm 0.002$   $\chi^2/\text{NDF}$ : 36186.9/34

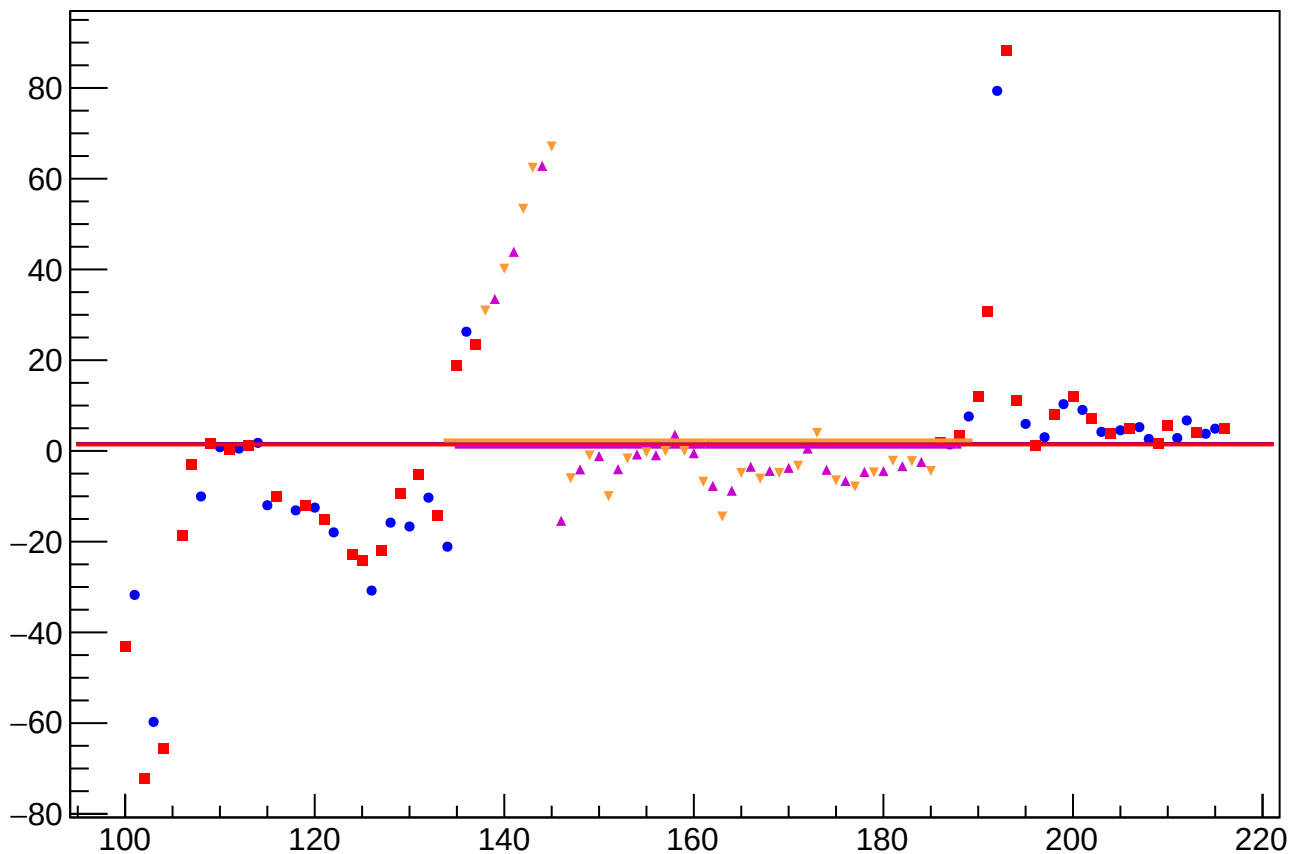
Left In:  $-0.054 \pm 0.001$   $\chi^2/\text{NDF}$ : 5029.9/22

+ sign  $-0.014 \pm 0.001$   $\chi^2/\text{NDF}$ : 42899.1/55

All:  $-0.011 \pm 0.001$   $\chi^2/\text{NDF}$ : 87052.7/113

- sign  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 44144.9/57

reg\_asym\_bcm\_an\_ds\_diff\_bpm1X\_slope vs Slug



Right In:  $1.533 \pm 0.035$   $\chi^2/\text{NDF}$ : 122052.4/30

Left Out:  $2.318 \pm 0.040$   $\chi^2/\text{NDF}$ : 176746.3/24

Right Out:  $1.435 \pm 0.032$   $\chi^2/\text{NDF}$ : 122781.3/34

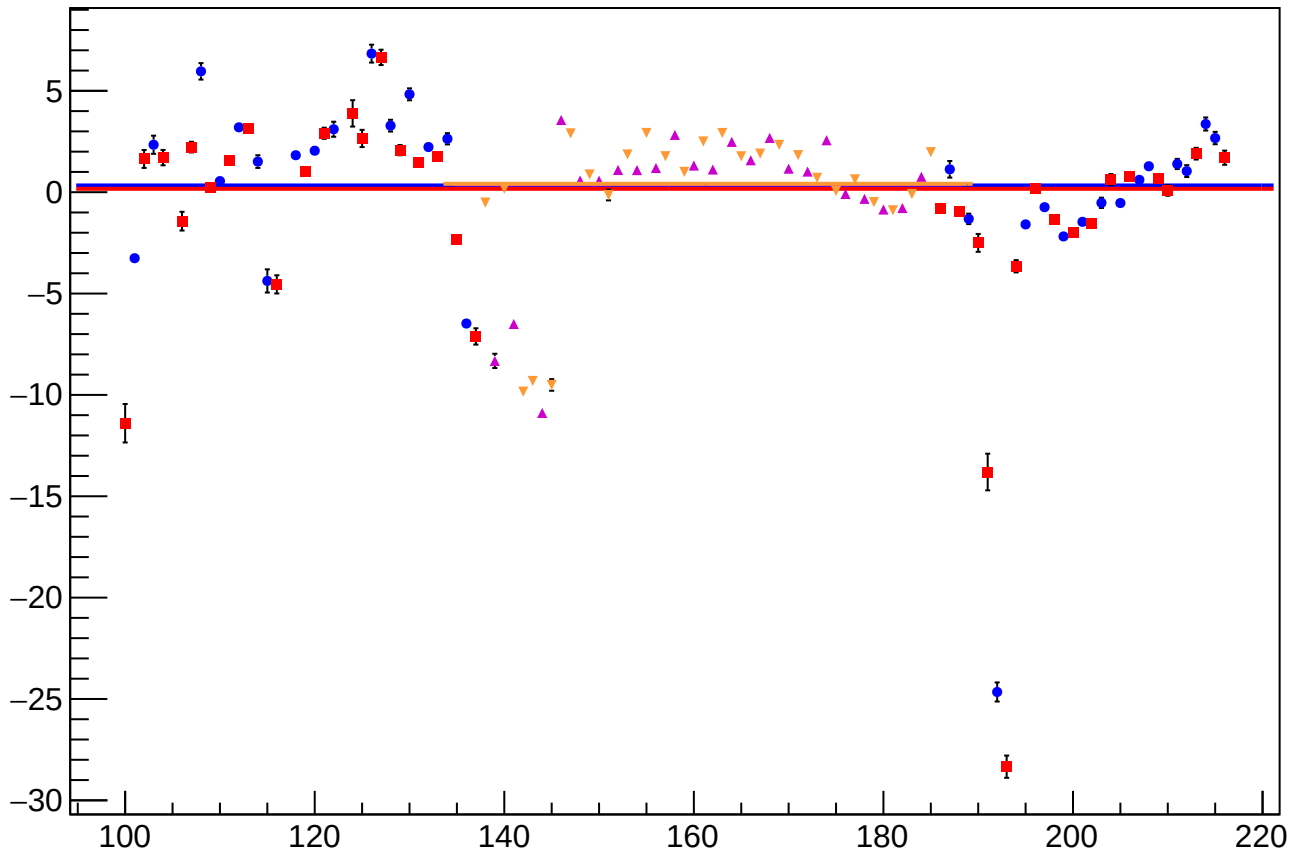
Left In:  $0.935 \pm 0.040$   $\chi^2/\text{NDF}$ : 132405.3/22

+ sign  $1.870 \pm 0.026$   $\chi^2/\text{NDF}$ : 299017.2/55

All:  $1.538 \pm 0.018$   $\chi^2/\text{NDF}$ : 554602.7/113

- sign  $1.239 \pm 0.025$   $\chi^2/\text{NDF}$ : 255282.3/57

reg\_asym\_bcm\_an\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.333 \pm 0.044$   $\chi^2/\text{NDF}$ : 6171.0/30

Left Out:  $0.414 \pm 0.033$   $\chi^2/\text{NDF}$ : 7047.2/24

Right Out:  $0.167 \pm 0.042$   $\chi^2/\text{NDF}$ : 5318.4/34

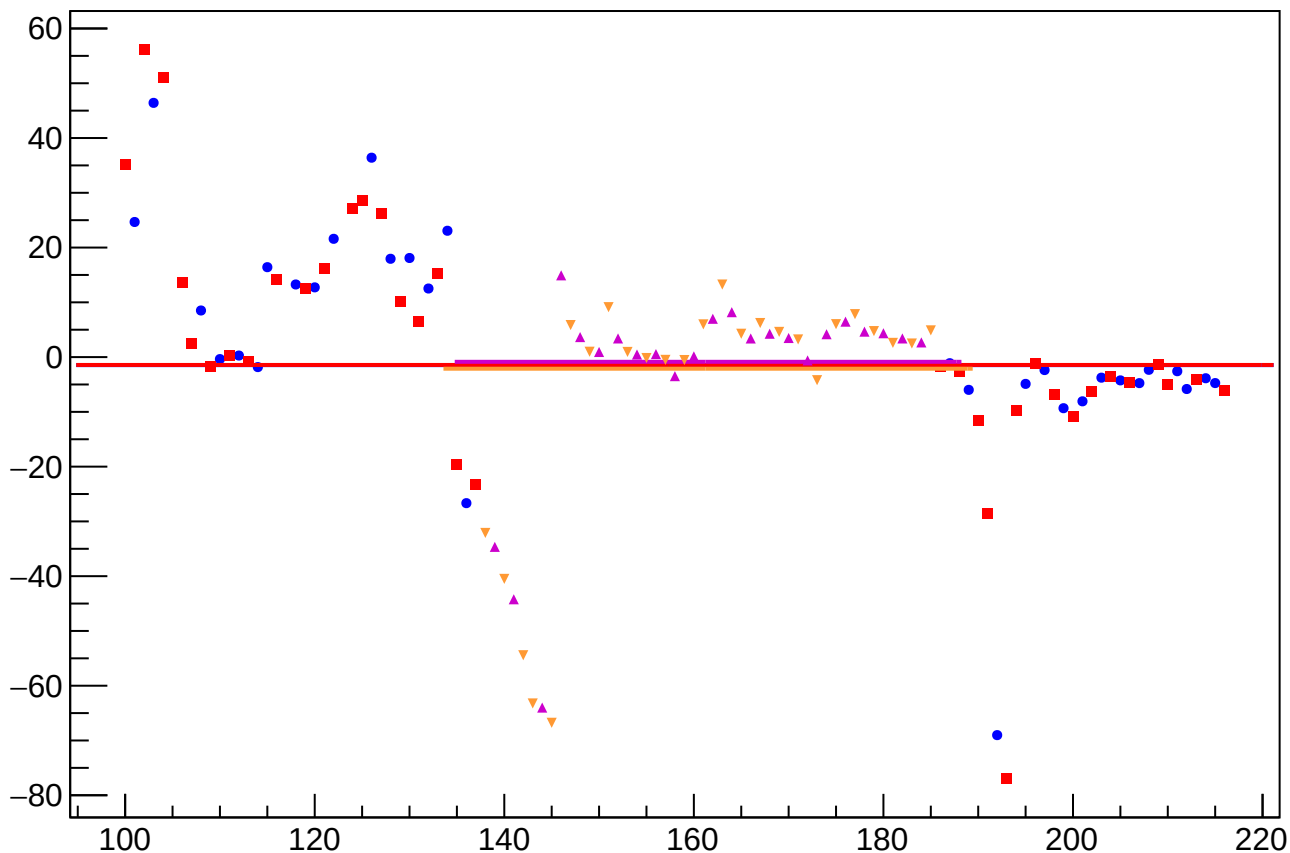
Left In:  $0.389 \pm 0.031$   $\chi^2/\text{NDF}$ : 7114.2/22

+ sign  $0.385 \pm 0.026$   $\chi^2/\text{NDF}$ : 13220.4/55

All:  $0.346 \pm 0.018$   $\chi^2/\text{NDF}$ : 25674.9/113

- sign  $0.310 \pm 0.025$   $\chi^2/\text{NDF}$ : 12450.3/57

reg\_asym\_bcm\_an\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.464 \pm 0.036$   $\chi^2/\text{NDF}$ : 120284.5/30

Left Out:  $-2.119 \pm 0.040$   $\chi^2/\text{NDF}$ : 171039.7/24

Right Out:  $-1.434 \pm 0.034$   $\chi^2/\text{NDF}$ : 120903.4/34

Left In:  $-0.859 \pm 0.039$   $\chi^2/\text{NDF}$ : 129084.9/22

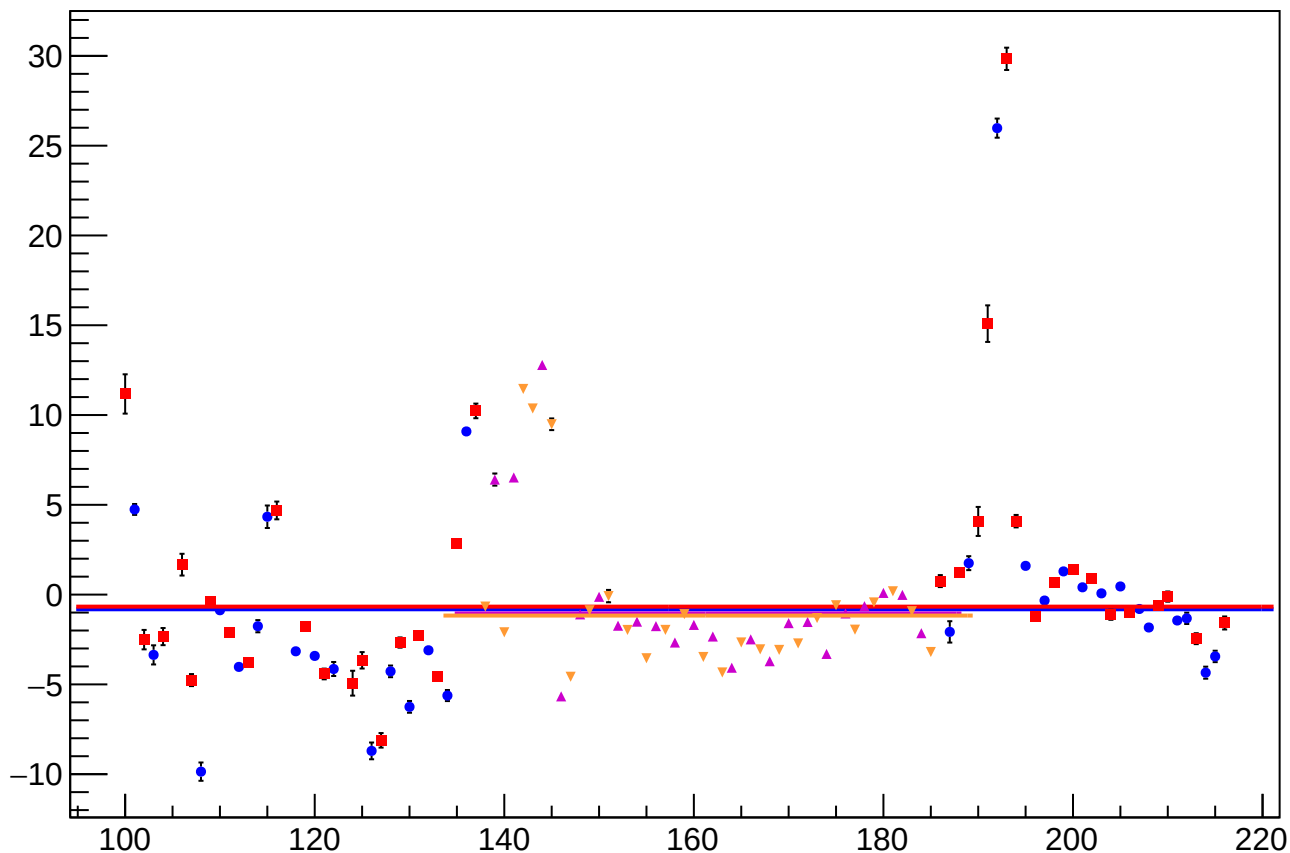
+ sign  $-1.757 \pm 0.027$   $\chi^2/\text{NDF}$ : 291471.9/55

All:  $-1.460 \pm 0.019$   $\chi^2/\text{NDF}$ : 541818.2/113

- sign  $-1.189 \pm 0.026$   $\chi^2/\text{NDF}$ : 250111.8/57



reg\_asym\_bcm\_an\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.817 \pm 0.051$   $\chi^2/\text{NDF}$ : 7662.7/30

Left Out:  $-1.167 \pm 0.036$   $\chi^2/\text{NDF}$ : 7001.4/24

Right Out:  $-0.670 \pm 0.049$   $\chi^2/\text{NDF}$ : 5811.4/34

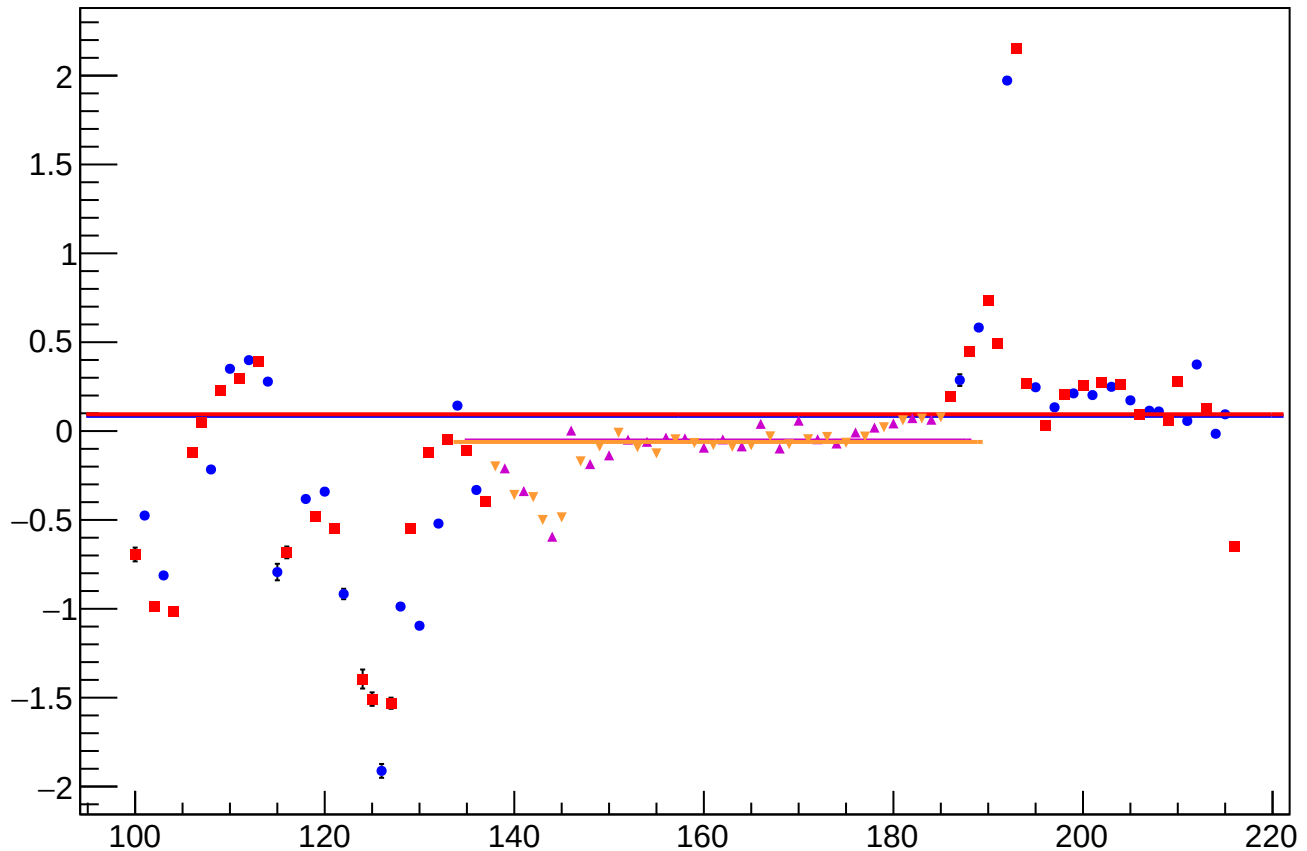
Left In:  $-1.048 \pm 0.035$   $\chi^2/\text{NDF}$ : 7040.7/22

+ sign  $-1.049 \pm 0.029$   $\chi^2/\text{NDF}$ : 14695.8/55

All:  $-0.982 \pm 0.020$   $\chi^2/\text{NDF}$ : 27597.8/113

- sign  $-0.921 \pm 0.028$   $\chi^2/\text{NDF}$ : 12892.1/57

reg\_asym\_bcm\_an\_ds\_diff\_bpm12X\_slope vs Slug



Right In:  $0.086 \pm 0.002$   $\chi^2/\text{NDF}$ : 34728.3/30

Left Out:  $-0.061 \pm 0.002$   $\chi^2/\text{NDF}$ : 5729.4/24

Right Out:  $0.094 \pm 0.002$   $\chi^2/\text{NDF}$ : 36521.7/34

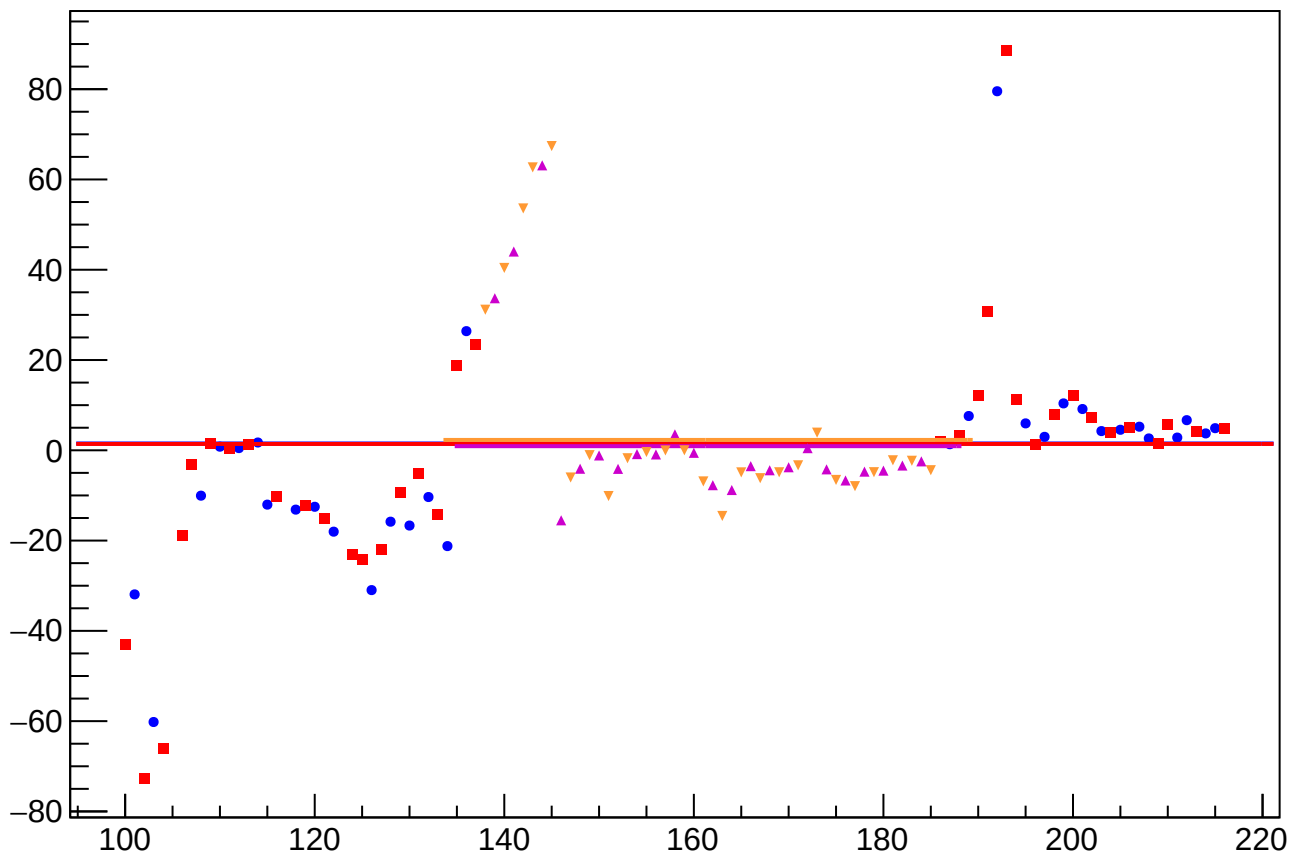
Left In:  $-0.053 \pm 0.001$   $\chi^2/\text{NDF}$ : 5006.2/22

+ sign  $-0.013 \pm 0.001$   $\chi^2/\text{NDF}$ : 43284.1/55

All:  $-0.010 \pm 0.001$   $\chi^2/\text{NDF}$ : 87857.8/113

- sign  $-0.007 \pm 0.001$   $\chi^2/\text{NDF}$ : 44563.4/57

reg\_asym\_bcm\_an\_us\_diff\_bpm1X\_slope vs Slug



Right In: 1.504 $\pm$ 0.035  $\chi^2$ /NDF: 122073.1/30

Left Out: 2.296 $\pm$ 0.040  $\chi^2$ /NDF:177186.2/24

Right Out: 1.407 $\pm$ 0.032  $\chi^2$ /NDF: 122773.3/34

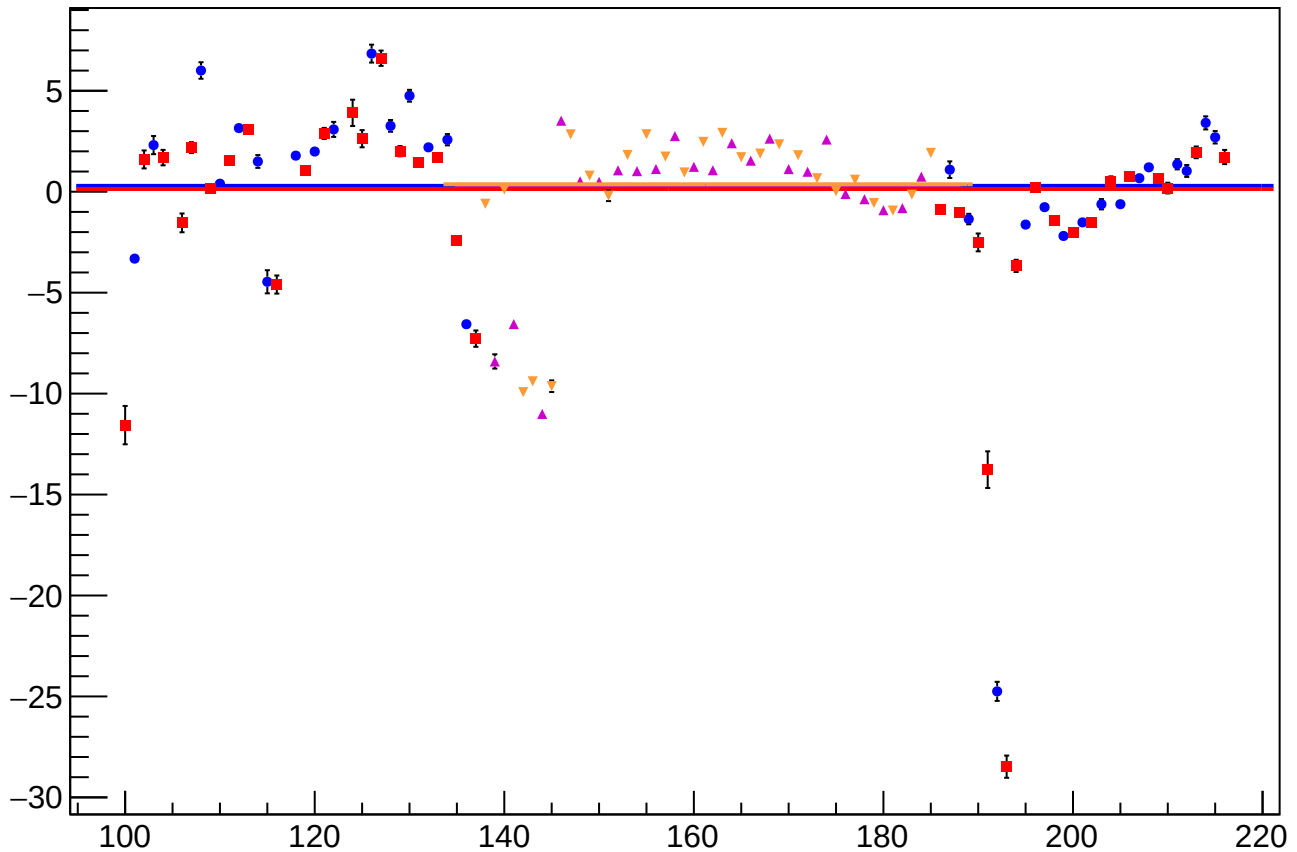
Left In: 0.912 $\pm$ 0.040  $\chi^2$ /NDF:132573.8/22

+ sign 1.845 $\pm$ 0.026  $\chi^2$ /NDF: 299479.2/55

All: 1.512 $\pm$ 0.018  $\chi^2$ /NDF: 555220.5/113

- sign 1.212 $\pm$ 0.025  $\chi^2$ /NDF: 255439.9/57

reg\_asym\_bcm\_an\_us\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.290 \pm 0.044$   $\chi^2/\text{NDF}$ : 6164.9/30

Left Out:  $0.368 \pm 0.033$   $\chi^2/\text{NDF}$ : 7068.0/24

Right Out:  $0.136 \pm 0.042$   $\chi^2/\text{NDF}$ : 5316.8/34

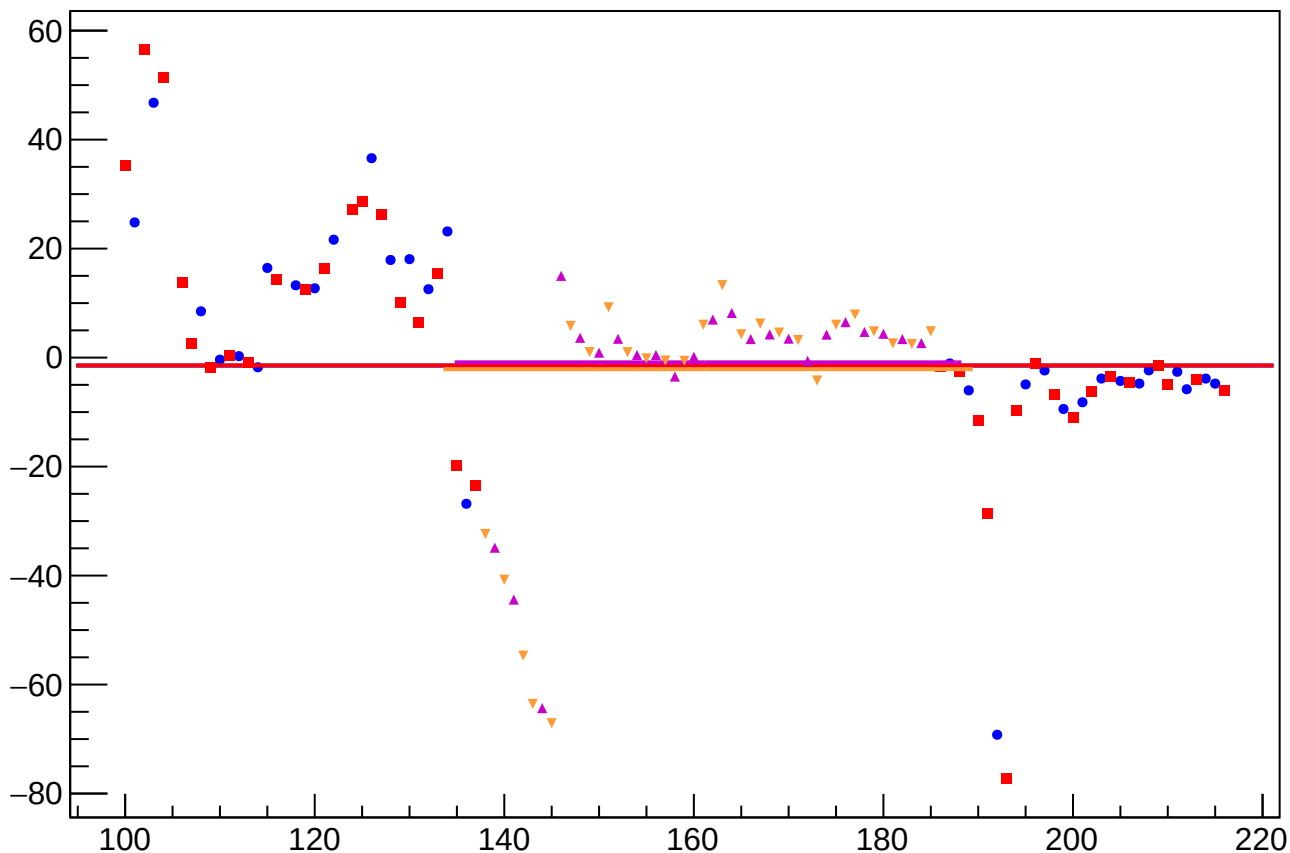
Left In:  $0.337 \pm 0.031$   $\chi^2/\text{NDF}$ : 7094.3/22

+ sign  $0.340 \pm 0.026$   $\chi^2/\text{NDF}$ : 13234.9/55

All:  $0.301 \pm 0.018$   $\chi^2/\text{NDF}$ : 25664.6/113

- sign  $0.266 \pm 0.025$   $\chi^2/\text{NDF}$ : 12425.5/57

# reg\_asym\_bcm\_an\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.466 \pm 0.036$   $\chi^2/\text{NDF}$ : 120325.5/30

Left Out:  $-2.133 \pm 0.040$   $\chi^2/\text{NDF}$ : 171466.8/24

Right Out:  $-1.435 \pm 0.034$   $\chi^2/\text{NDF}$ : 120926.9/34

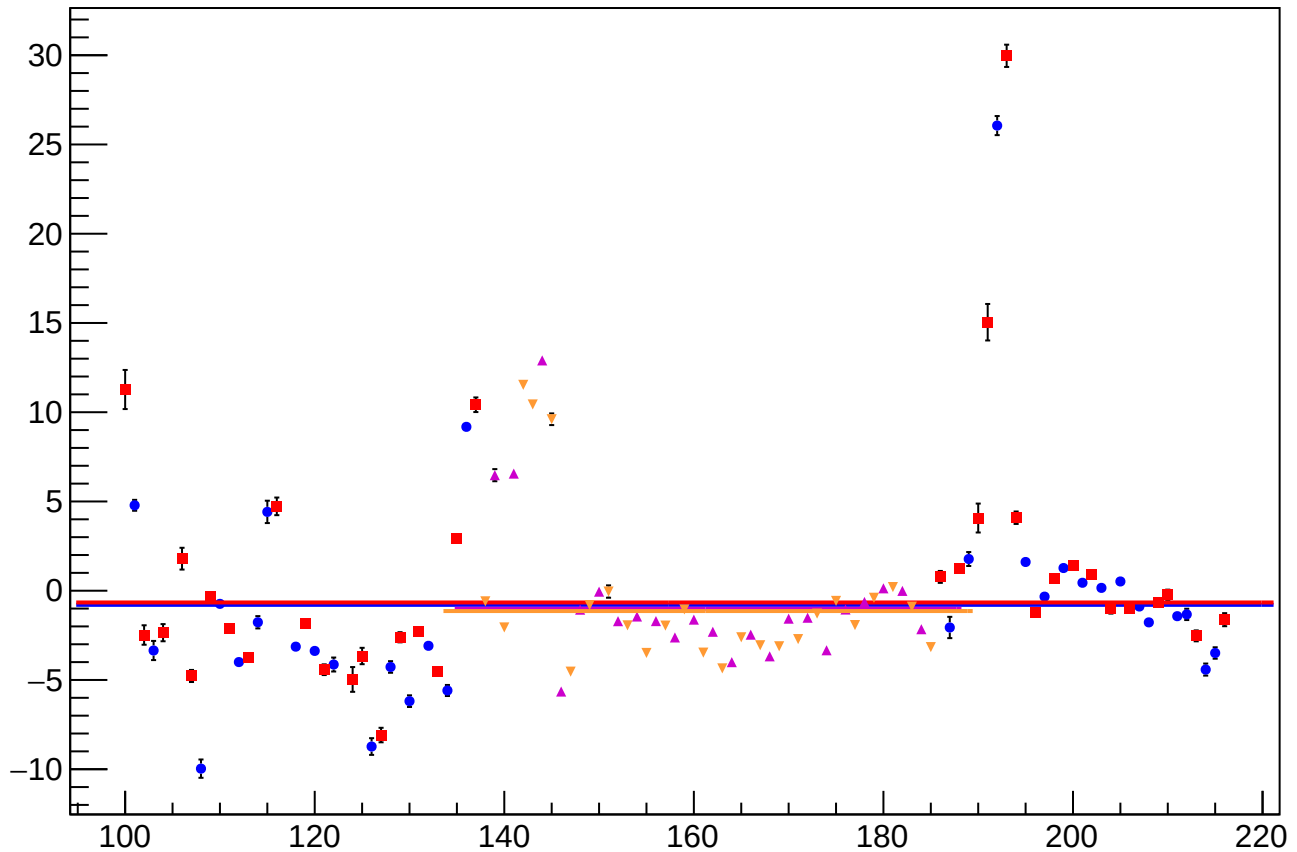
Left In:  $-0.871 \pm 0.039$   $\chi^2/\text{NDF}$ : 129263.4/22

+ sign  $-1.765 \pm 0.027$   $\chi^2/\text{NDF}$ : 291943.5/55

All:  $-1.466 \pm 0.019$   $\chi^2/\text{NDF}$ : 542485.4/113

- sign  $-1.195 \pm 0.026$   $\chi^2/\text{NDF}$ : 250307.8/57

reg\_asym\_bcm\_an\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.792 \pm 0.051$   $\chi^2/\text{NDF}$ : 7664.9/30

Left Out:  $-1.140 \pm 0.036$   $\chi^2/\text{NDF}$ : 7022.9/24

Right Out:  $-0.658 \pm 0.049$   $\chi^2/\text{NDF}$ : 5818.6/34

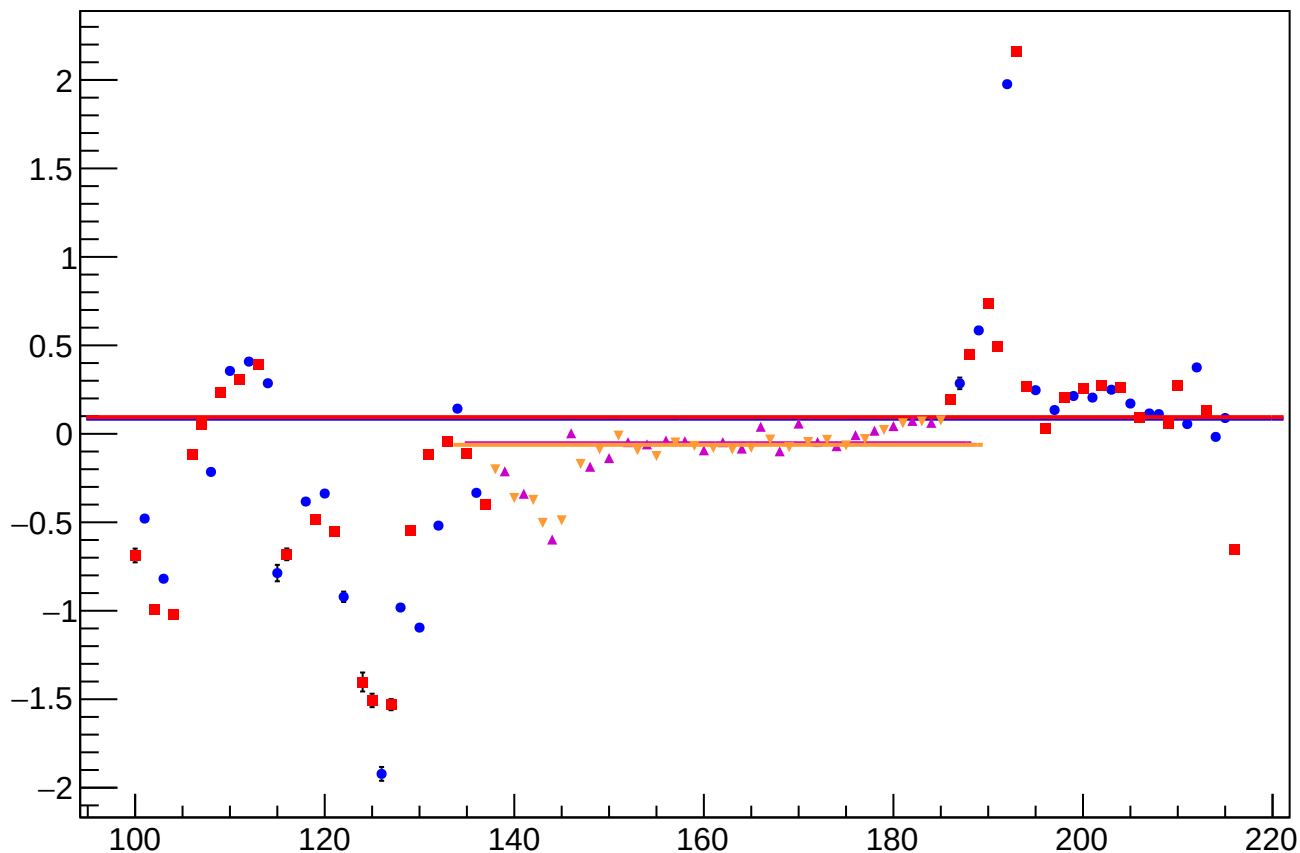
Left In:  $-1.013 \pm 0.035$   $\chi^2/\text{NDF}$ : 7027.2/22

+ sign  $-1.022 \pm 0.030$   $\chi^2/\text{NDF}$ : 14718.8/55

All:  $-0.955 \pm 0.020$   $\chi^2/\text{NDF}$ : 27609.5/113

- sign  $-0.894 \pm 0.028$   $\chi^2/\text{NDF}$ : 12880.8/57

reg\_asym\_bcm\_an\_us\_diff\_bpm12X\_slope vs Slug



Right In: 0.086+/-0.002  $\chi^2/\text{NDF}$ : 34720.3/30

Left Out: -0.062+/-0.002  $\chi^2/\text{NDF}$ : 5736.1/24

Right Out: 0.094+/-0.002  $\chi^2/\text{NDF}$ : 36468.1/34

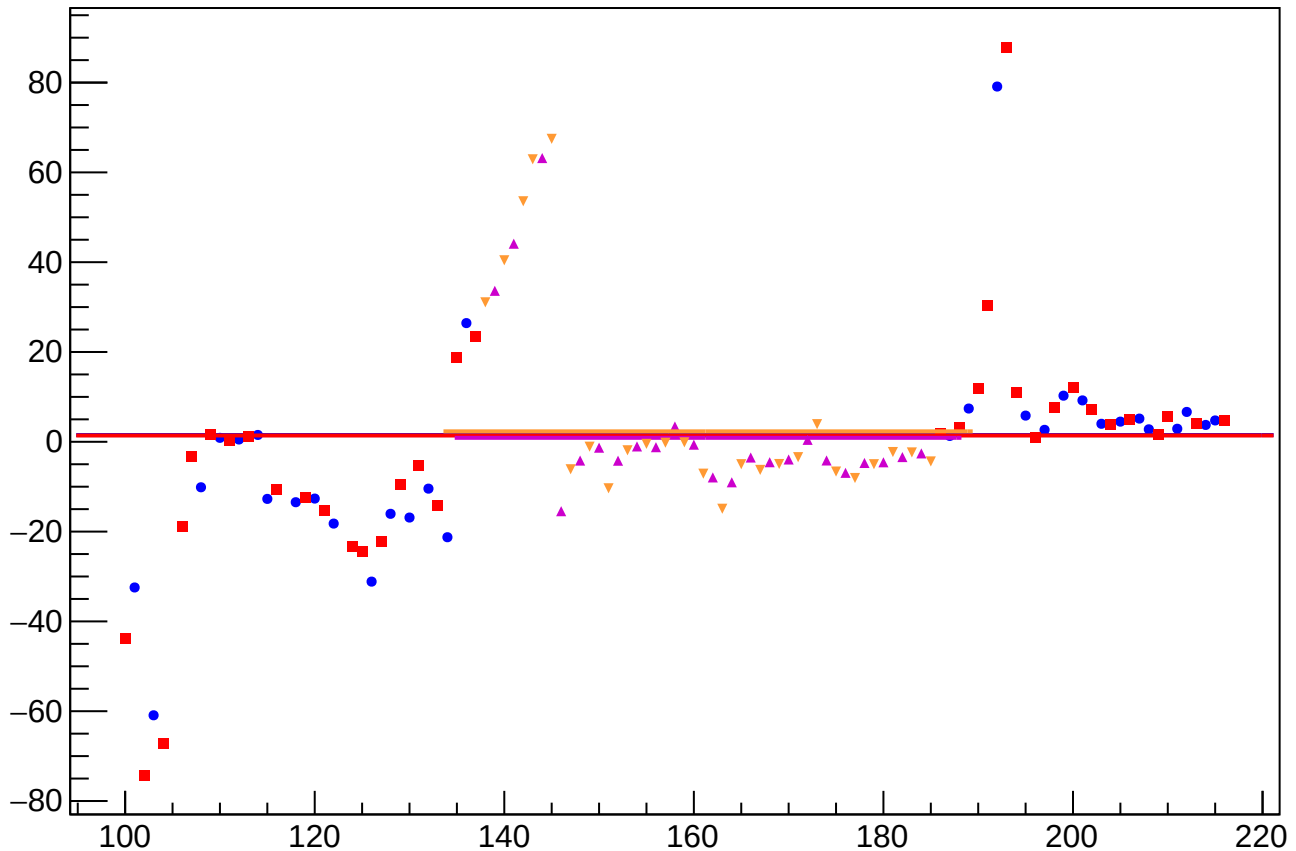
Left In: -0.053+/-0.001  $\chi^2/\text{NDF}$ : 4993.7/22

+ sign -0.014+/-0.001  $\chi^2/\text{NDF}$ : 43286.4/55

All: -0.011+/-0.001  $\chi^2/\text{NDF}$ : 87769.6/113

- sign -0.008+/-0.001  $\chi^2/\text{NDF}$ : 44471.5/57

reg\_asym\_bcm\_dg\_ds\_diff\_bpm1X\_slope vs Slug



Right In: 1.498 $\pm$ 0.035  $\chi^2$ /NDF: 120178.4/30

Left Out: 2.329 $\pm$ 0.041  $\chi^2$ /NDF:174647.6/24

Right Out: 1.407 $\pm$ 0.033  $\chi^2$ /NDF: 121127.7/34

Left In: 0.887 $\pm$ 0.041  $\chi^2$ /NDF:130417.3/22

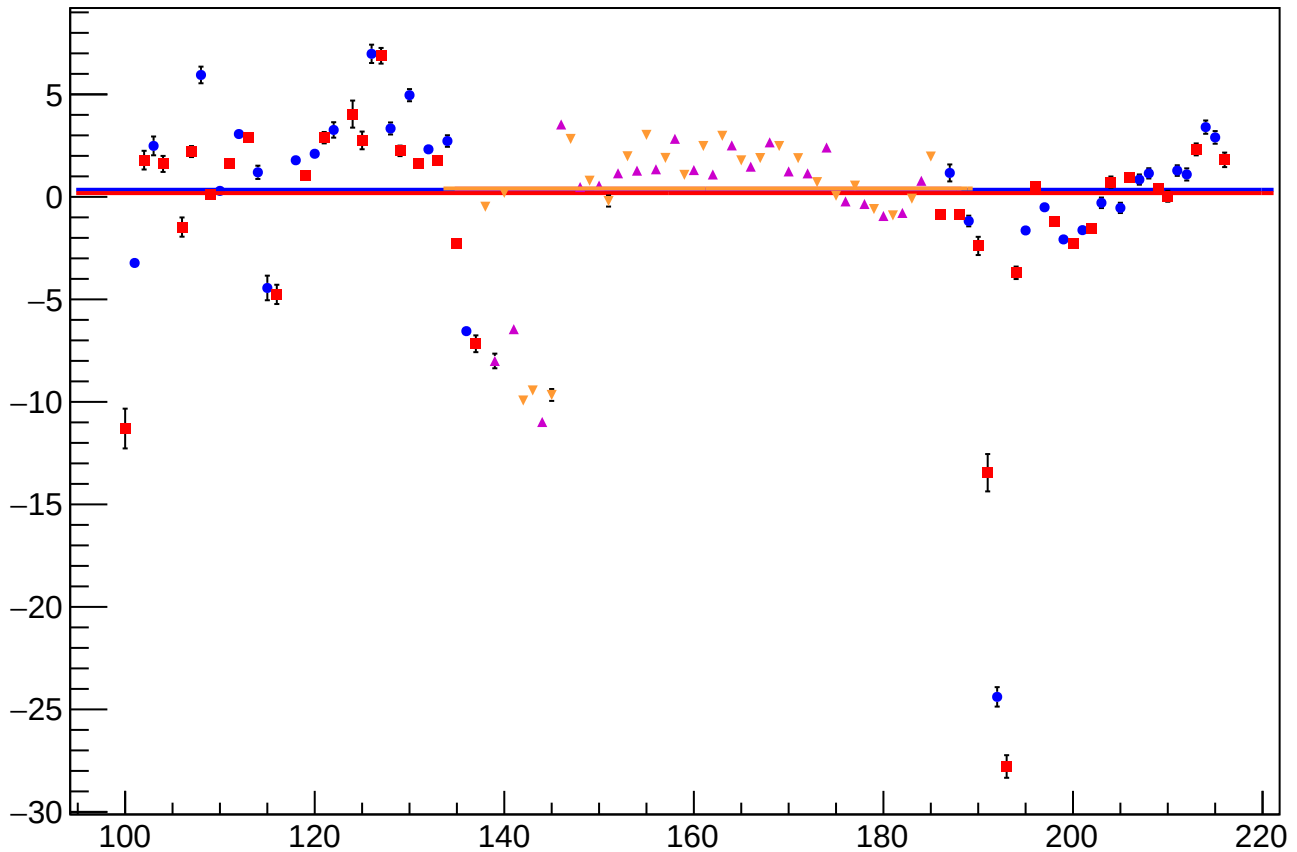
+ sign 1.852 $\pm$ 0.027  $\chi^2$ /NDF: 295060.8/55

All: 1.511 $\pm$ 0.018  $\chi^2$ /NDF: 547012.0/113

- sign 1.203 $\pm$ 0.025  $\chi^2$ /NDF: 251644.0/57



reg\_asym\_bcm\_dg\_ds\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.346 \pm 0.045$   $\chi^2/\text{NDF}$ : 6001.4/30

Left Out:  $0.410 \pm 0.033$   $\chi^2/\text{NDF}$ : 7047.9/24

Right Out:  $0.183 \pm 0.043$   $\chi^2/\text{NDF}$ : 5137.0/34

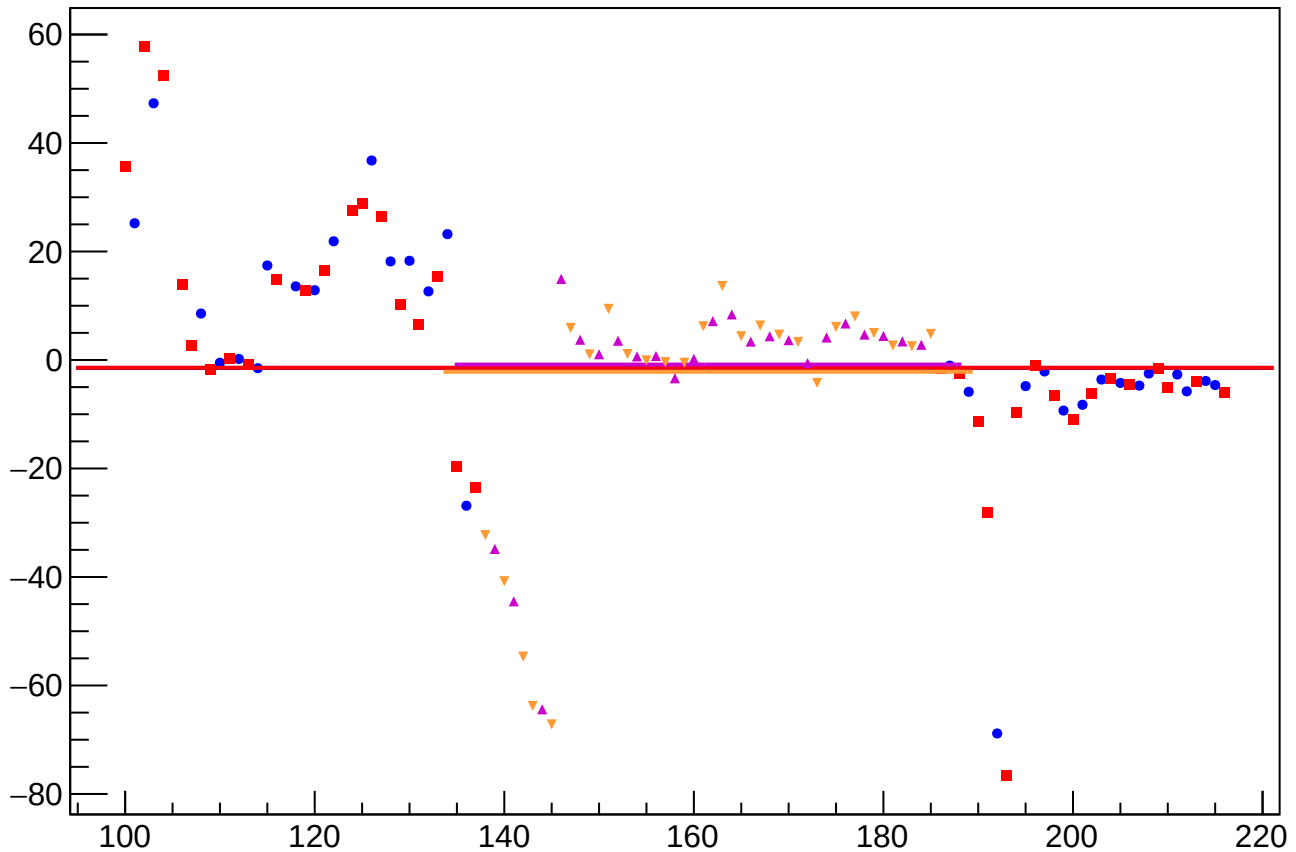
Left In:  $0.396 \pm 0.032$   $\chi^2/\text{NDF}$ : 6932.0/22

+ sign  $0.387 \pm 0.027$   $\chi^2/\text{NDF}$ : 13050.5/55

All:  $0.352 \pm 0.019$   $\chi^2/\text{NDF}$ : 25138.5/113

- sign  $0.320 \pm 0.026$   $\chi^2/\text{NDF}$ : 12084.7/57

# reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.461 \pm 0.037$   $\chi^2/\text{NDF}$ : 118475.4/30

Left Out:  $-2.163 \pm 0.041$   $\chi^2/\text{NDF}$ : 168990.2/24

Right Out:  $-1.436 \pm 0.034$   $\chi^2/\text{NDF}$ : 119289.6/34

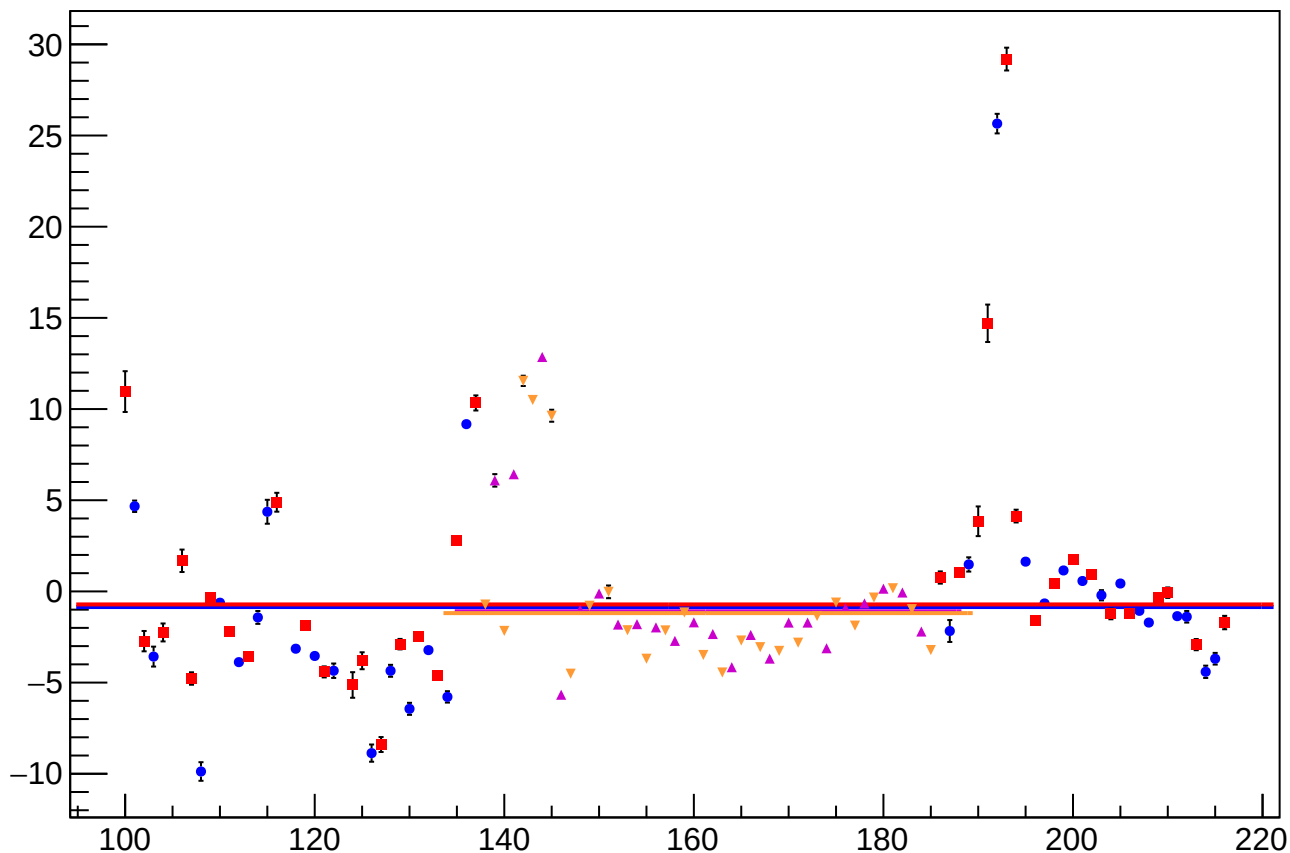
Left In:  $-0.843 \pm 0.040$   $\chi^2/\text{NDF}$ : 127135.3/22

+ sign  $-1.773 \pm 0.027$   $\chi^2/\text{NDF}$ : 287628.4/55

All:  $-1.465 \pm 0.019$   $\chi^2/\text{NDF}$ : 534420.6/113

- sign  $-1.185 \pm 0.026$   $\chi^2/\text{NDF}$ : 246550.9/57

reg\_asym\_bcm\_dg\_ds\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.857 \pm 0.052$   $\chi^2/\text{NDF}$ : 7499.5/30

Left Out:  $-1.190 \pm 0.037$   $\chi^2/\text{NDF}$ : 6995.9/24

Right Out:  $-0.714 \pm 0.050$   $\chi^2/\text{NDF}$ : 5651.5/34

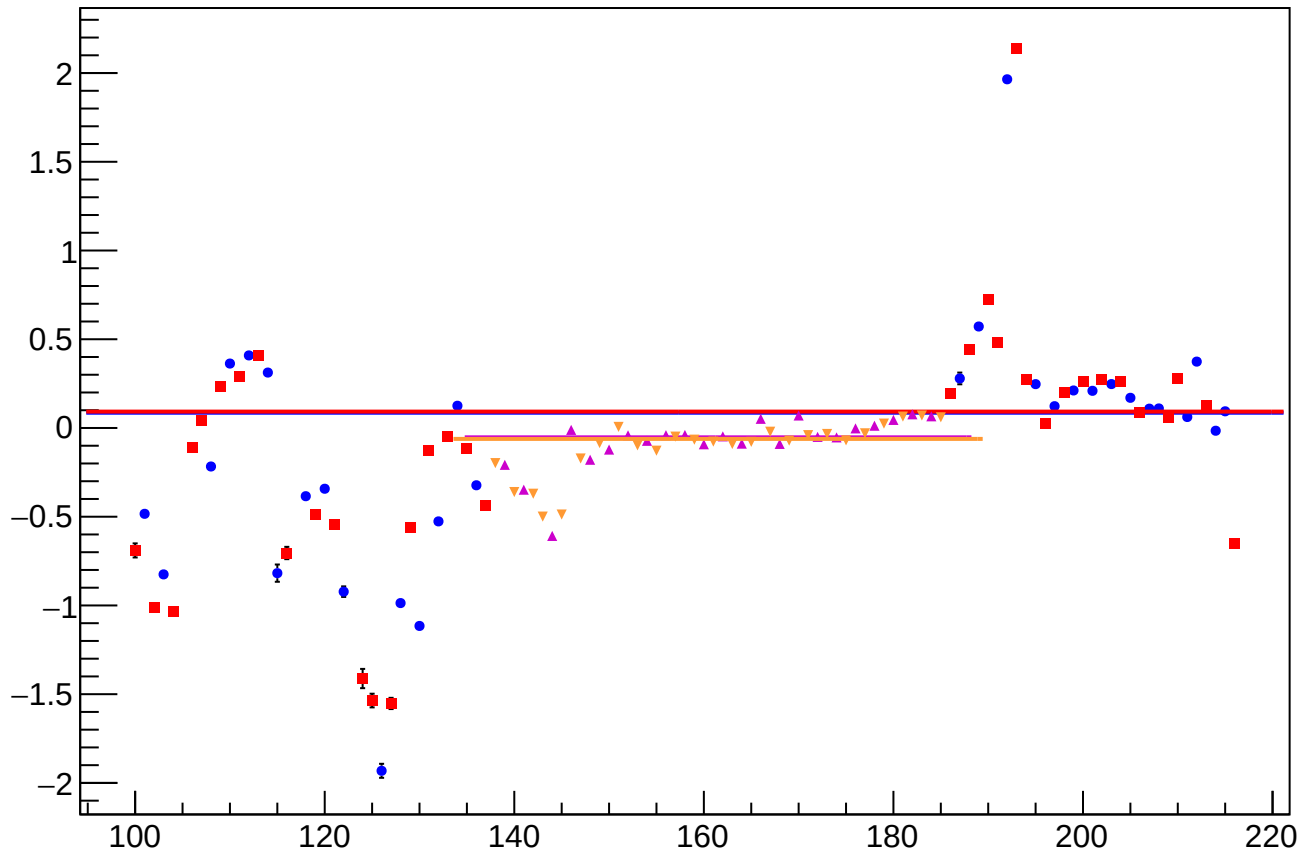
Left In:  $-1.089 \pm 0.036$   $\chi^2/\text{NDF}$ : 6840.8/22

+ sign  $-1.077 \pm 0.030$   $\chi^2/\text{NDF}$ : 14523.0/55

All:  $-1.017 \pm 0.021$   $\chi^2/\text{NDF}$ : 27060.9/113

- sign  $-0.962 \pm 0.029$   $\chi^2/\text{NDF}$ : 12530.1/57

reg\_asym\_bcm\_dg\_ds\_diff\_bpm12X\_slope vs Slug



Right In:  $0.086 \pm 0.002$   $\chi^2/\text{NDF}$ : 33980.1/30

Left Out:  $-0.062 \pm 0.002$   $\chi^2/\text{NDF}$ : 5563.5/24

Right Out:  $0.092 \pm 0.002$   $\chi^2/\text{NDF}$ : 36006.6/34

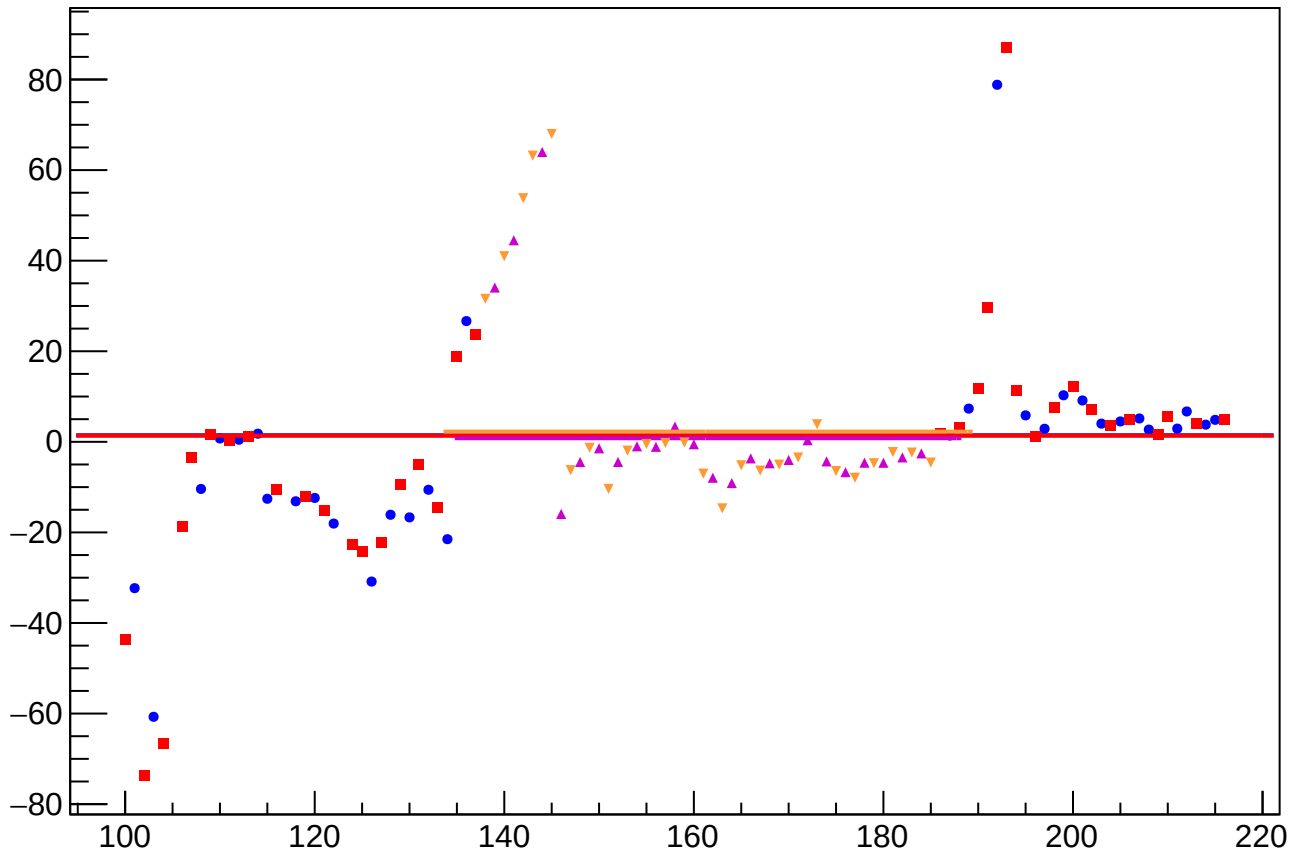
Left In:  $-0.053 \pm 0.002$   $\chi^2/\text{NDF}$ : 5036.0/22

+ sign  $-0.013 \pm 0.001$   $\chi^2/\text{NDF}$ : 42300.9/55

All:  $-0.010 \pm 0.001$   $\chi^2/\text{NDF}$ : 86182.6/113

- sign  $-0.007 \pm 0.001$   $\chi^2/\text{NDF}$ : 43872.7/57

# reg\_asym\_bcm\_dg\_us\_diff\_bpm1X\_slope vs Slug



Right In: 1.449 $\pm$ 0.036  $\chi^2$ /NDF: 118558.0/30

Left Out: 2.255 $\pm$ 0.041  $\chi^2$ /NDF:171671.4/24

Right Out: 1.354 $\pm$ 0.033  $\chi^2$ /NDF: 118989.2/34

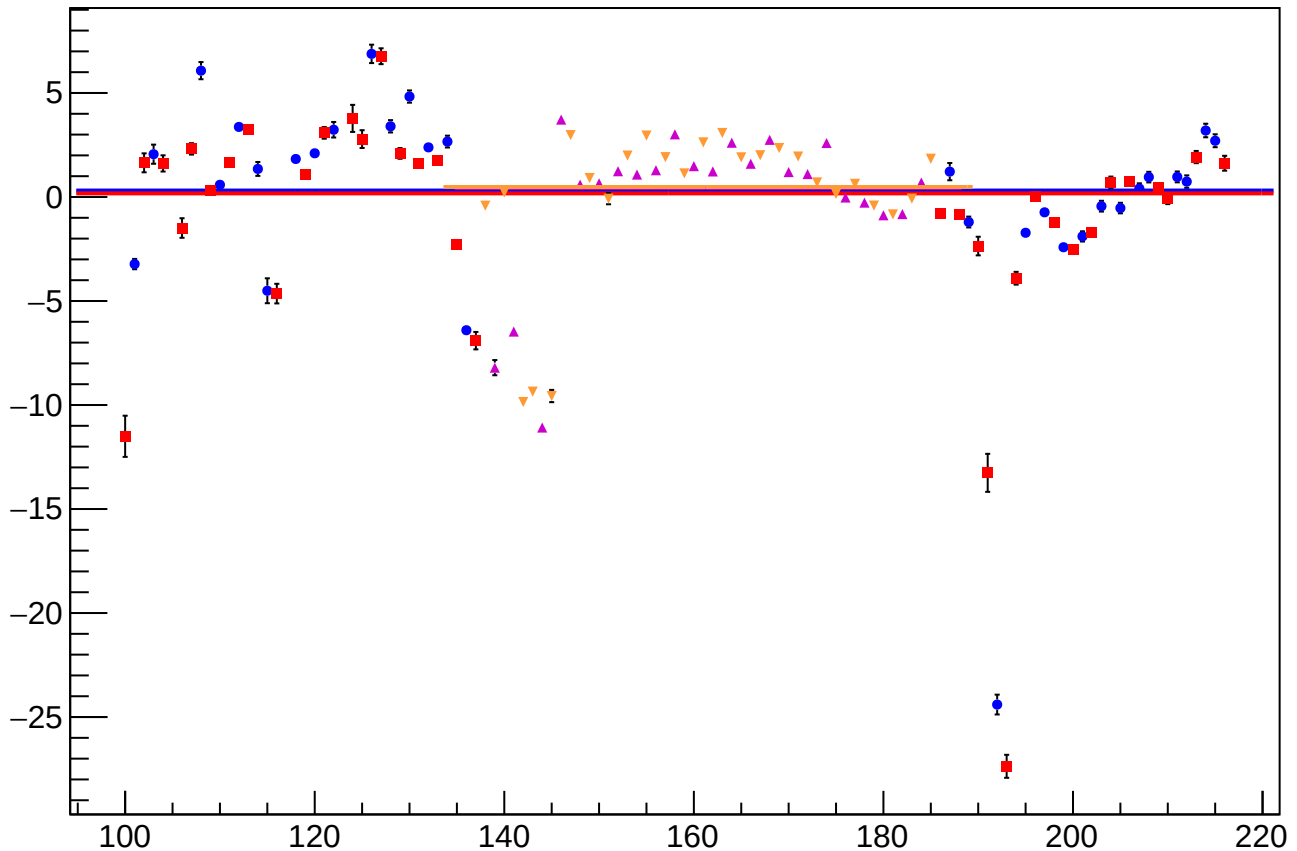
Left In: 0.794 $\pm$ 0.041  $\chi^2$ /NDF:128828.3/22

+ sign 1.794 $\pm$ 0.027  $\chi^2$ /NDF: 290445.0/55

All: 1.447 $\pm$ 0.019  $\chi^2$ /NDF: 538685.6/113

- sign 1.132 $\pm$ 0.026  $\chi^2$ /NDF: 247929.7/57

reg\_asym\_bcm\_dg\_us\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.310 \pm 0.045$   $\chi^2/\text{NDF}$ : 5945.2/30

Left Out:  $0.479 \pm 0.034$   $\chi^2/\text{NDF}$ : 6808.1/24

Right Out:  $0.174 \pm 0.044$   $\chi^2/\text{NDF}$ : 5029.1/34

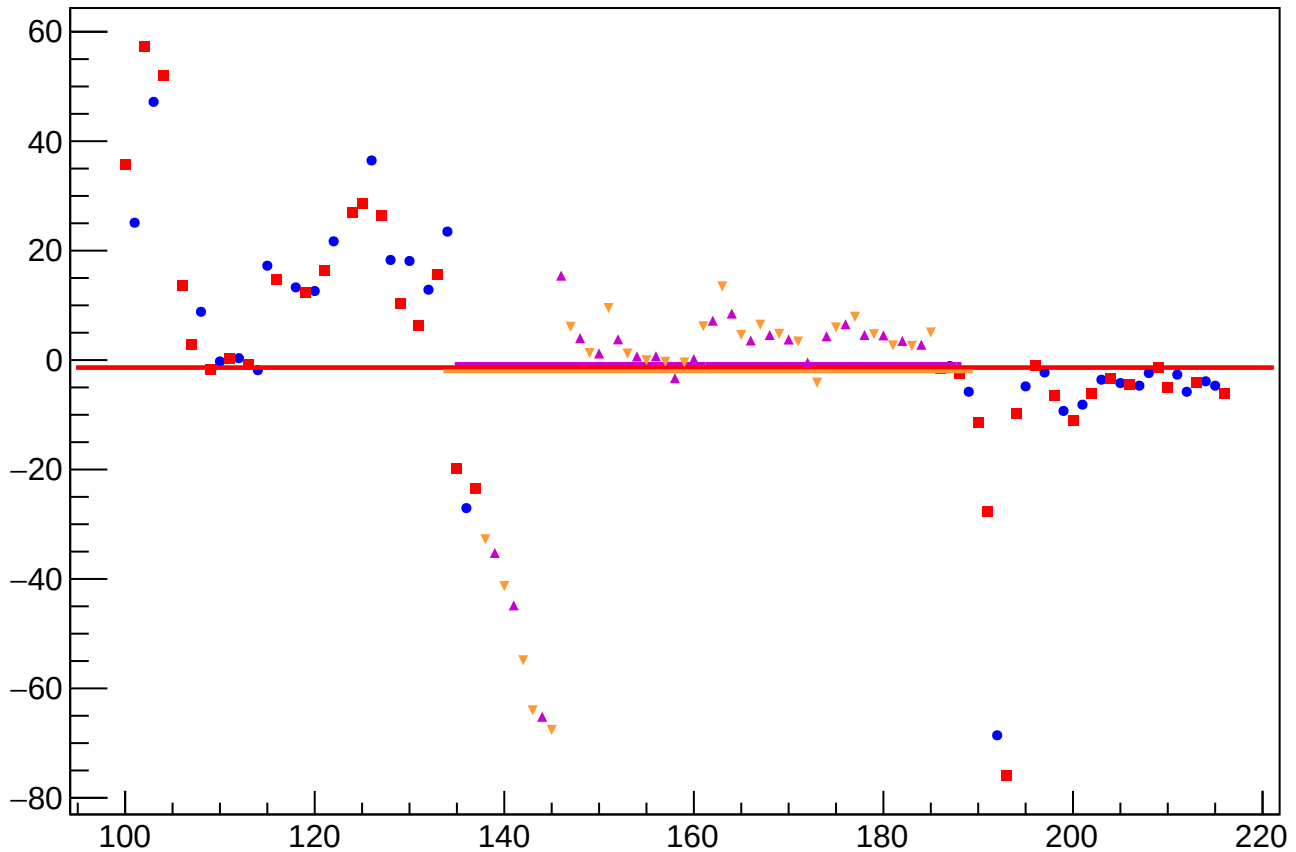
Left In:  $0.440 \pm 0.032$   $\chi^2/\text{NDF}$ : 6893.7/22

+ sign  $0.418 \pm 0.027$   $\chi^2/\text{NDF}$ : 12762.2/55

All:  $0.380 \pm 0.019$   $\chi^2/\text{NDF}$ : 24712.9/113

- sign  $0.345 \pm 0.026$   $\chi^2/\text{NDF}$ : 11946.9/57

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.381 \pm 0.037$   $\chi^2/\text{NDF}$ : 116815.8/30

Left Out:  $-2.051 \pm 0.041$   $\chi^2/\text{NDF}$ : 166009.6/24

Right Out:  $-1.346 \pm 0.035$   $\chi^2/\text{NDF}$ : 117183.5/34

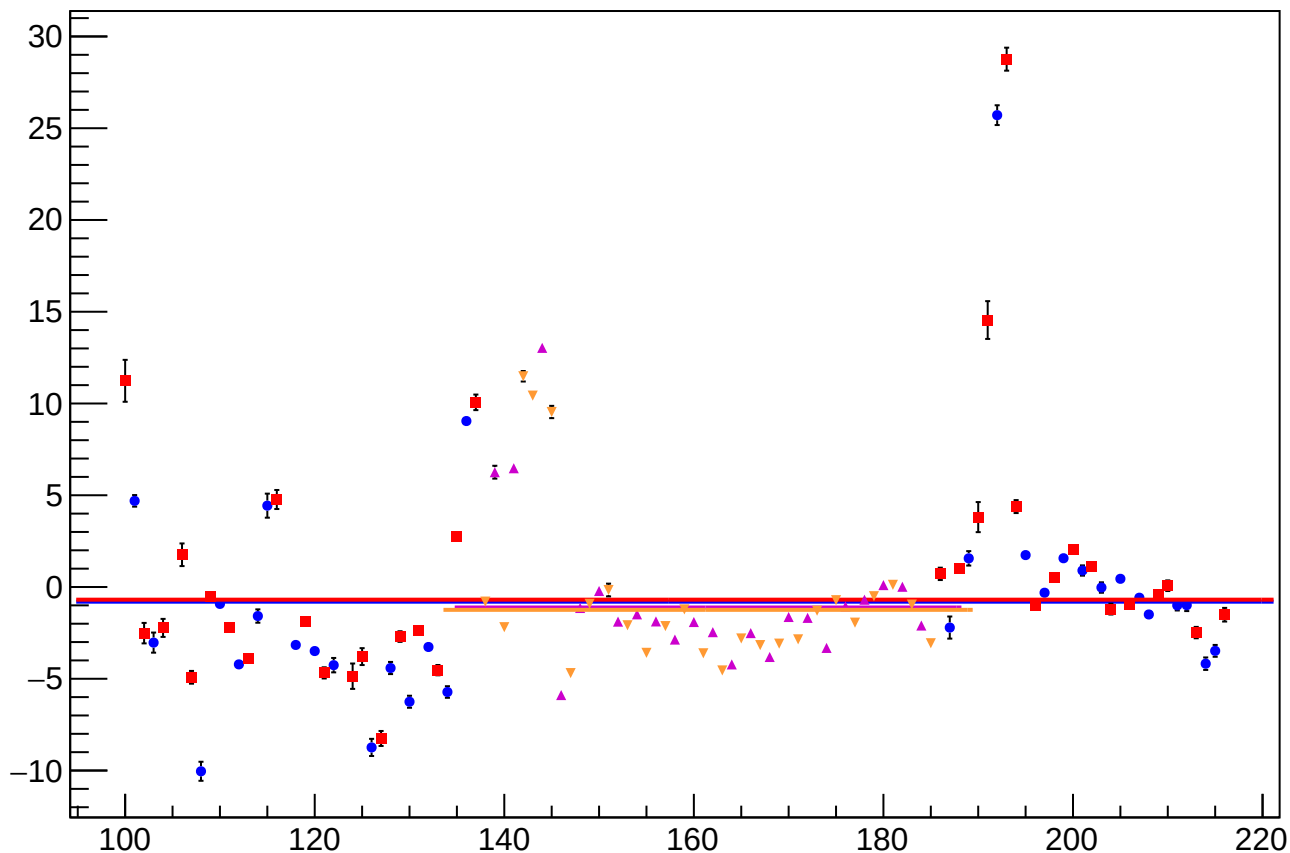
Left In:  $-0.720 \pm 0.041$   $\chi^2/\text{NDF}$ : 125531.3/22

+ sign  $-1.679 \pm 0.028$   $\chi^2/\text{NDF}$ : 282970.7/55

All:  $-1.366 \pm 0.019$   $\chi^2/\text{NDF}$ : 526067.2/113

- sign  $-1.080 \pm 0.026$   $\chi^2/\text{NDF}$ : 242851.8/57

reg\_asym\_bcm\_dg\_us\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.799 \pm 0.052$   $\chi^2/\text{NDF}$ : 7359.1/30

Left Out:  $-1.244 \pm 0.037$   $\chi^2/\text{NDF}$ : 6768.7/24

Right Out:  $-0.690 \pm 0.050$   $\chi^2/\text{NDF}$ : 5502.4/34

Left In:  $-1.117 \pm 0.036$   $\chi^2/\text{NDF}$ : 6840.3/22

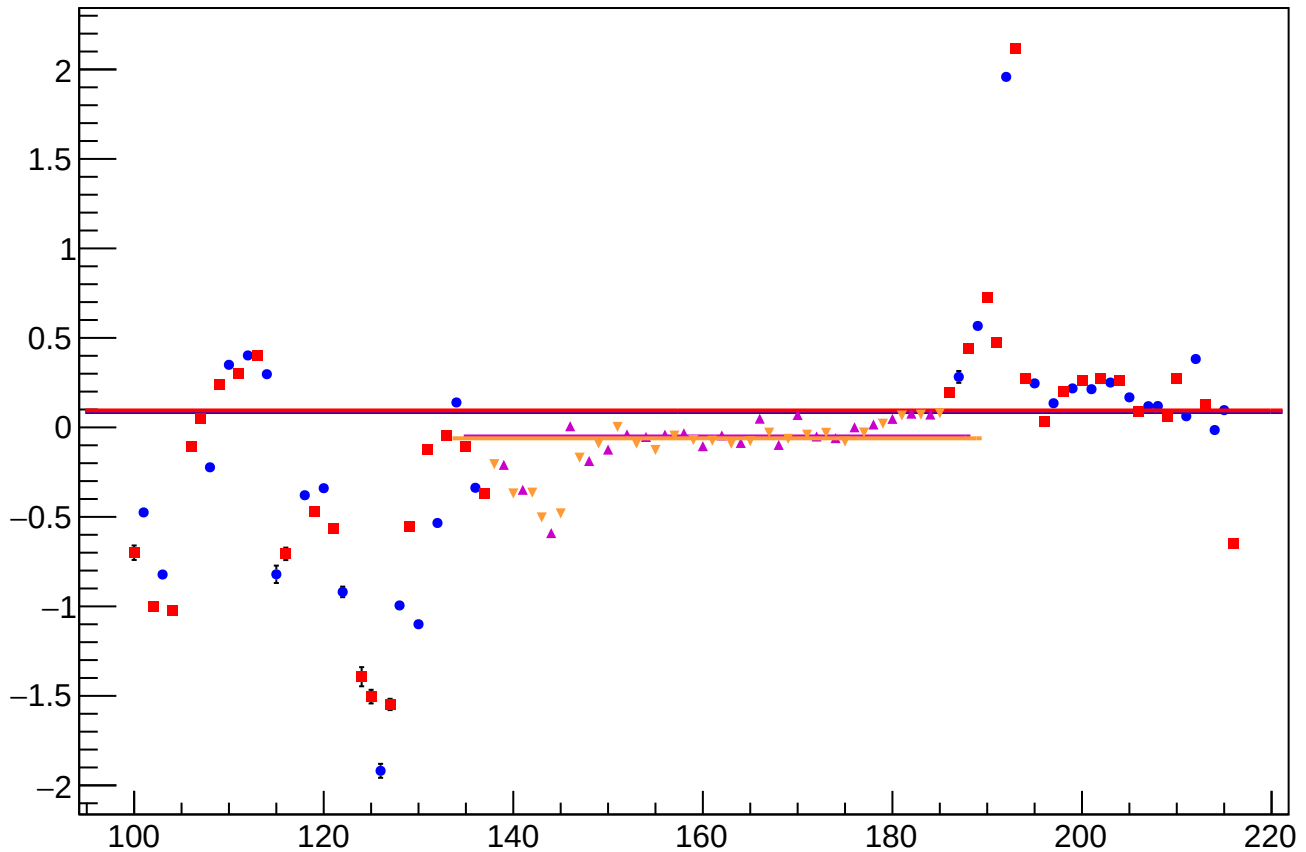
+ sign  $-1.093 \pm 0.030$   $\chi^2/\text{NDF}$ : 14176.0/55

All:  $-1.031 \pm 0.021$   $\chi^2/\text{NDF}$ : 26574.6/113

- sign  $-0.973 \pm 0.029$   $\chi^2/\text{NDF}$ : 12390.4/57



reg\_asym\_bcm\_dg\_us\_diff\_bpm12X\_slope vs Slug



Right In:  $0.086 \pm 0.002$   $\chi^2/\text{NDF}$ : 33660.9/30

Left Out:  $-0.061 \pm 0.002$   $\chi^2/\text{NDF}$ : 5479.8/24

Right Out:  $0.095 \pm 0.002$   $\chi^2/\text{NDF}$ : 35038.7/34

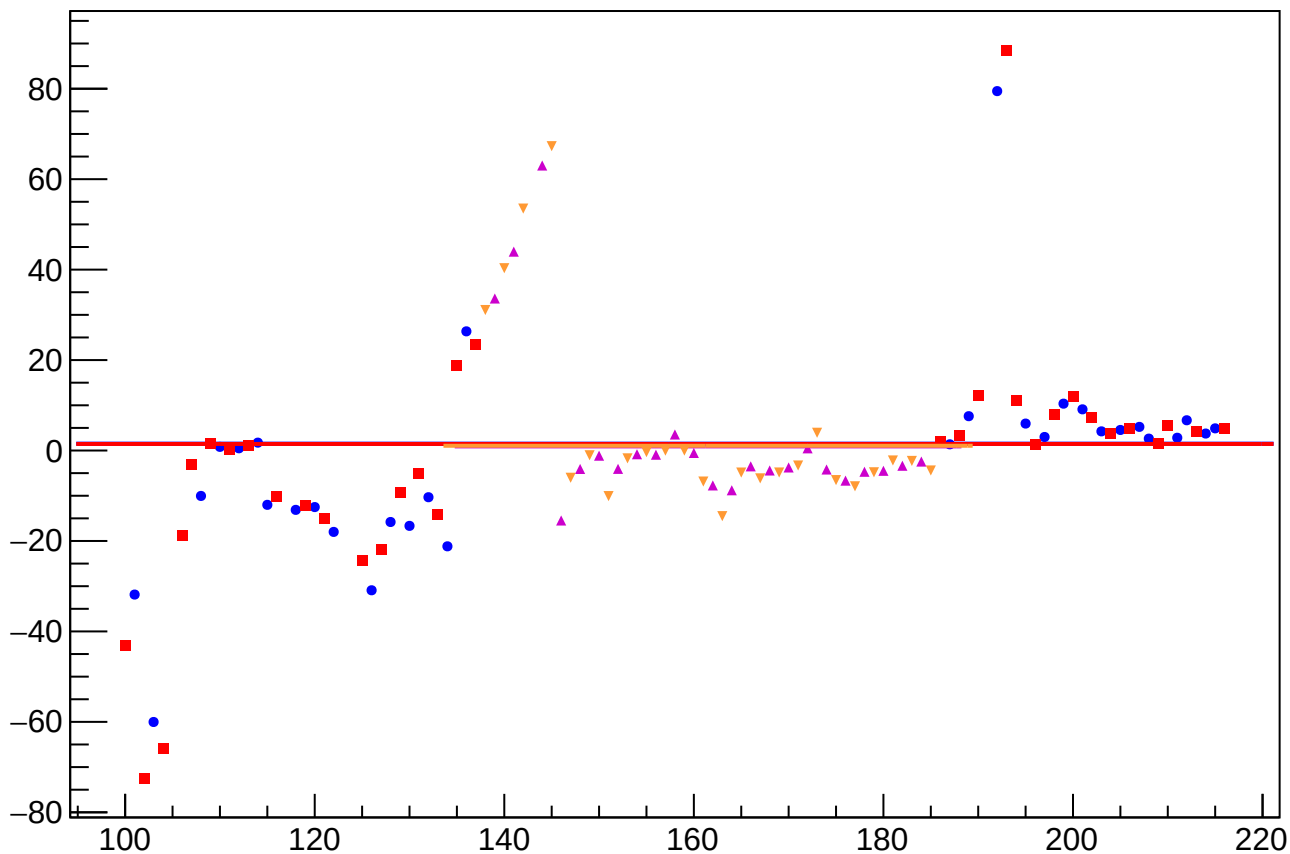
Left In:  $-0.051 \pm 0.002$   $\chi^2/\text{NDF}$ : 4878.7/22

+ sign  $-0.013 \pm 0.001$   $\chi^2/\text{NDF}$ : 41815.8/55

All:  $-0.009 \pm 0.001$   $\chi^2/\text{NDF}$ : 84513.0/113

- sign  $-0.005 \pm 0.001$   $\chi^2/\text{NDF}$ : 42682.6/57

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 1.517 $\pm$ 0.035  $\chi^2$ /NDF: 122288.1/30

Left Out: 1.053 $\pm$ 0.041  $\chi^2$ /NDF:131031.0/23

Right Out: 1.452 $\pm$ 0.032  $\chi^2$ /NDF: 120054.9/32

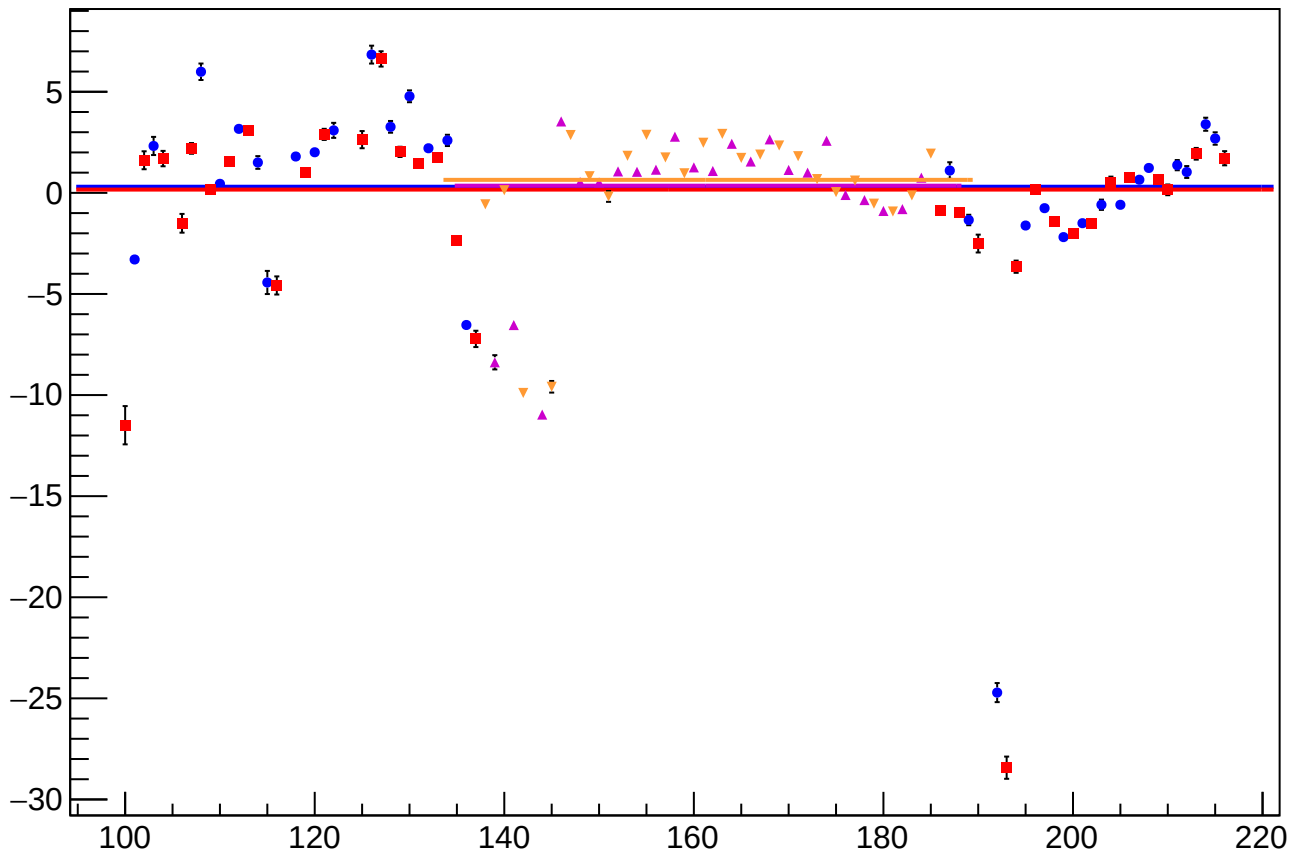
Left In: 0.913 $\pm$ 0.040  $\chi^2$ /NDF:132807.5/22

+ sign 1.320 $\pm$ 0.026  $\chi^2$ /NDF: 253394.0/54

All: 1.277 $\pm$ 0.018  $\chi^2$ /NDF: 506372.4/110

- sign 1.239 $\pm$ 0.025  $\chi^2$ /NDF: 252973.5/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.304 \pm 0.044$   $\chi^2/\text{NDF}$ : 6178.9/30

Left Out:  $0.644 \pm 0.033$   $\chi^2/\text{NDF}$ : 4711.1/23

Right Out:  $0.162 \pm 0.042$   $\chi^2/\text{NDF}$ : 5057.4/32

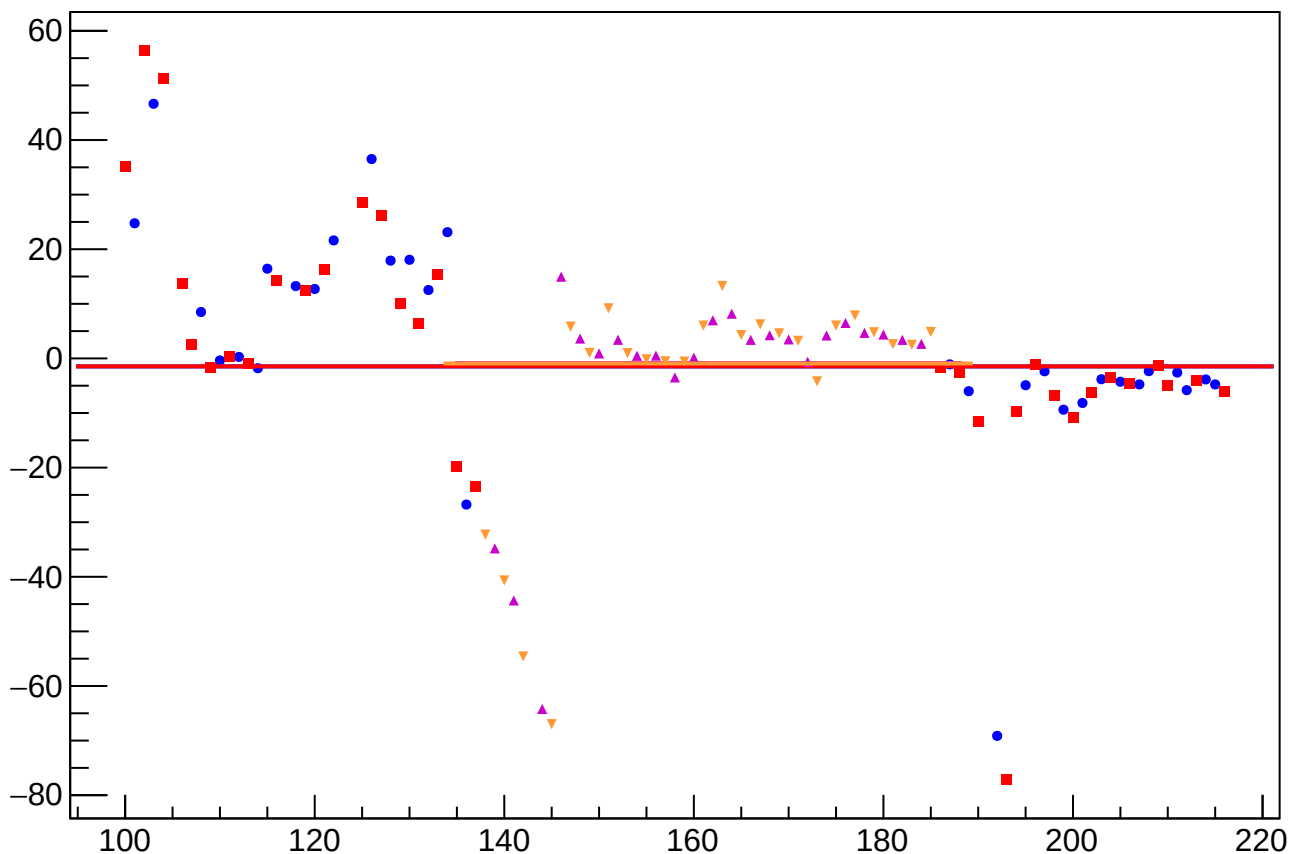
Left In:  $0.355 \pm 0.031$   $\chi^2/\text{NDF}$ : 7117.0/22

+ sign  $0.521 \pm 0.027$   $\chi^2/\text{NDF}$ : 10927.8/54

All:  $0.398 \pm 0.018$   $\chi^2/\text{NDF}$ : 23156.4/110

- sign  $0.287 \pm 0.025$   $\chi^2/\text{NDF}$ : 12187.8/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.469 \pm 0.036$   $\chi^2/\text{NDF}$ : 120530.4/30

Left Out:  $-0.929 \pm 0.041$   $\chi^2/\text{NDF}$ : 126378.7/23

Right Out:  $-1.454 \pm 0.034$   $\chi^2/\text{NDF}$ : 118326.4/32

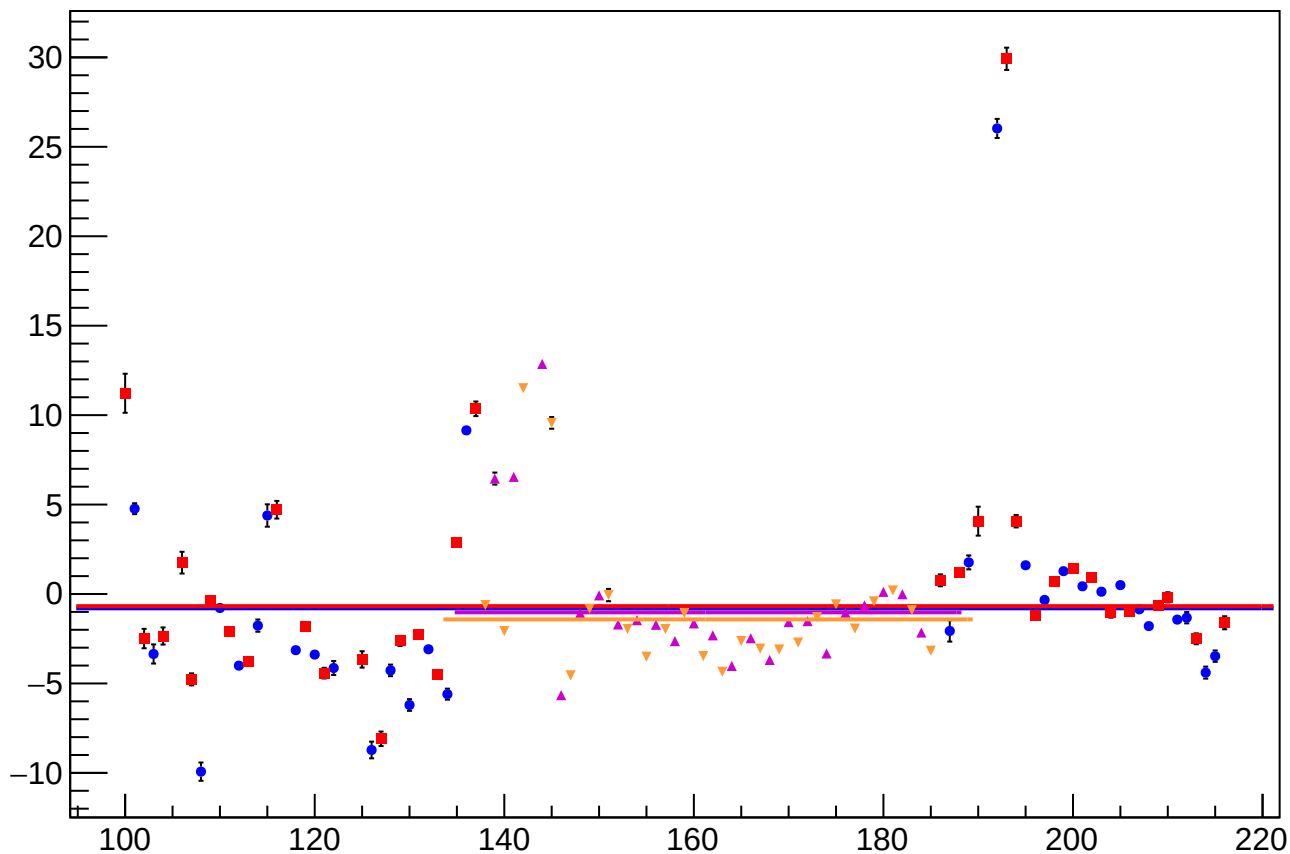
Left In:  $-0.860 \pm 0.039$   $\chi^2/\text{NDF}$ : 129485.0/22

+ sign  $-1.229 \pm 0.027$   $\chi^2/\text{NDF}$ : 247007.9/54

All:  $-1.214 \pm 0.019$   $\chi^2/\text{NDF}$ : 494950.9/110

- sign  $-1.200 \pm 0.026$   $\chi^2/\text{NDF}$ : 247942.3/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.800 \pm 0.051$   $\chi^2/\text{NDF}$ : 7680.2/30

Left Out:  $-1.420 \pm 0.037$   $\chi^2/\text{NDF}$ : 4642.0/23

Right Out:  $-0.677 \pm 0.049$   $\chi^2/\text{NDF}$ : 5551.8/32

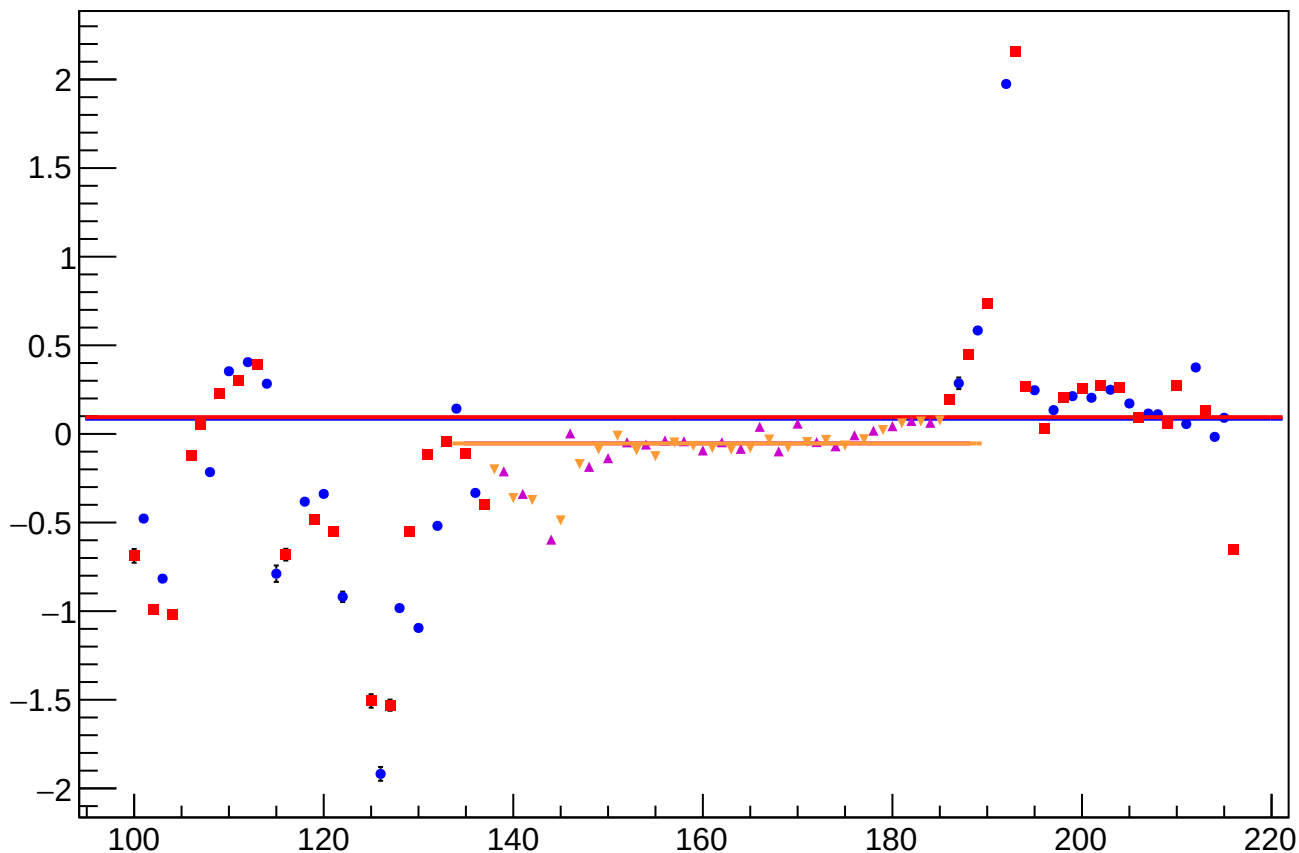
Left In:  $-1.026 \pm 0.035$   $\chi^2/\text{NDF}$ : 7047.1/22

+ sign  $-1.207 \pm 0.030$   $\chi^2/\text{NDF}$ : 12420.6/54

All:  $-1.051 \pm 0.020$   $\chi^2/\text{NDF}$ : 25106.0/110

- sign  $-0.909 \pm 0.028$   $\chi^2/\text{NDF}$ : 12632.6/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In:  $0.086 \pm 0.002$   $\chi^2/\text{NDF}$ : 34783.0/30

Left Out:  $-0.054 \pm 0.002$   $\chi^2/\text{NDF}$ : 4340.0/23

Right Out:  $0.095 \pm 0.002$   $\chi^2/\text{NDF}$ : 35568.0/32

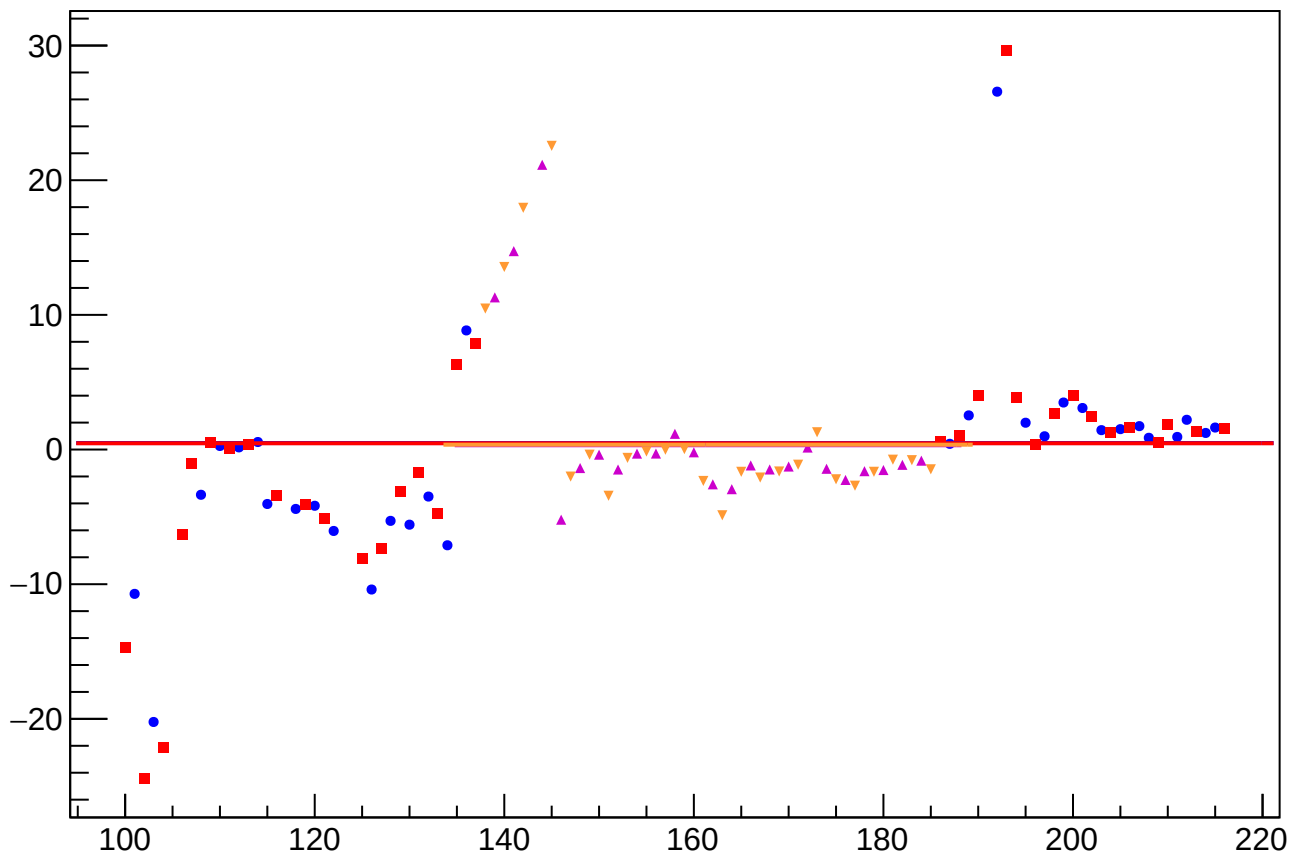
Left In:  $-0.053 \pm 0.001$   $\chi^2/\text{NDF}$ : 5009.7/22

+ sign  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 41652.8/54

All:  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 85252.0/110

- sign  $-0.008 \pm 0.001$   $\chi^2/\text{NDF}$ : 43599.2/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In: 0.484 $\pm$ 0.012  $\chi^2$ /NDF: 120168.5/30

Left Out: 0.359 $\pm$ 0.014  $\chi^2$ /NDF:128829.7/23

Right Out: 0.465 $\pm$ 0.011  $\chi^2$ /NDF: 118139.6/32

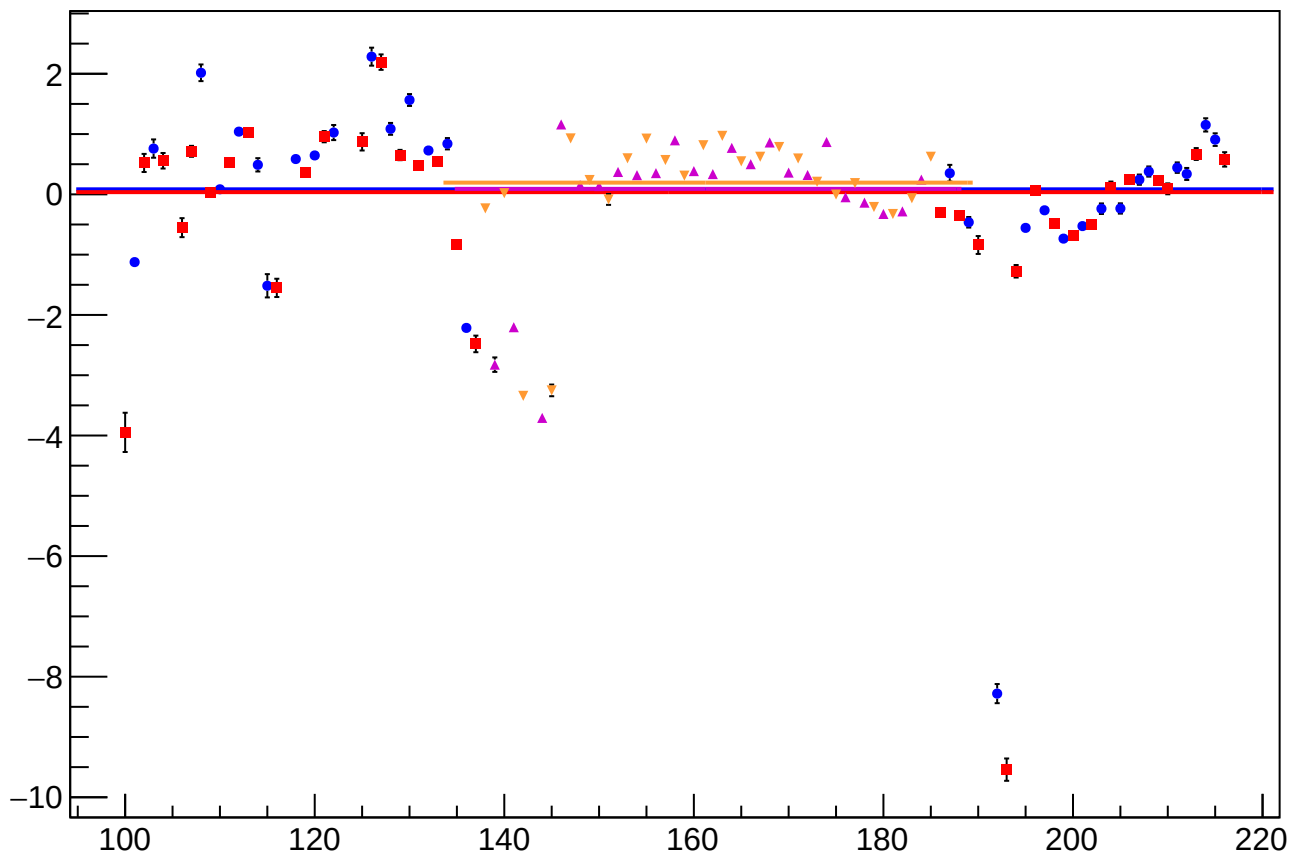
Left In: 0.317 $\pm$ 0.014  $\chi^2$ /NDF:130224.2/22

+ sign 0.430 $\pm$ 0.009  $\chi^2$ /NDF: 249044.5/54

All: 0.418 $\pm$ 0.006  $\chi^2$ /NDF: 497482.9/110

- sign 0.407 $\pm$ 0.009  $\chi^2$ /NDF: 248434.7/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In: 0.083 $\pm$ 0.015  $\chi^2$ /NDF: 6056.3/30

Left Out: 0.194 $\pm$ 0.011  $\chi^2$ /NDF: 4645.0/23

Right Out: 0.037 $\pm$ 0.015  $\chi^2$ /NDF: 4970.0/32

Left In: 0.091 $\pm$ 0.011  $\chi^2$ /NDF: 6936.4/22

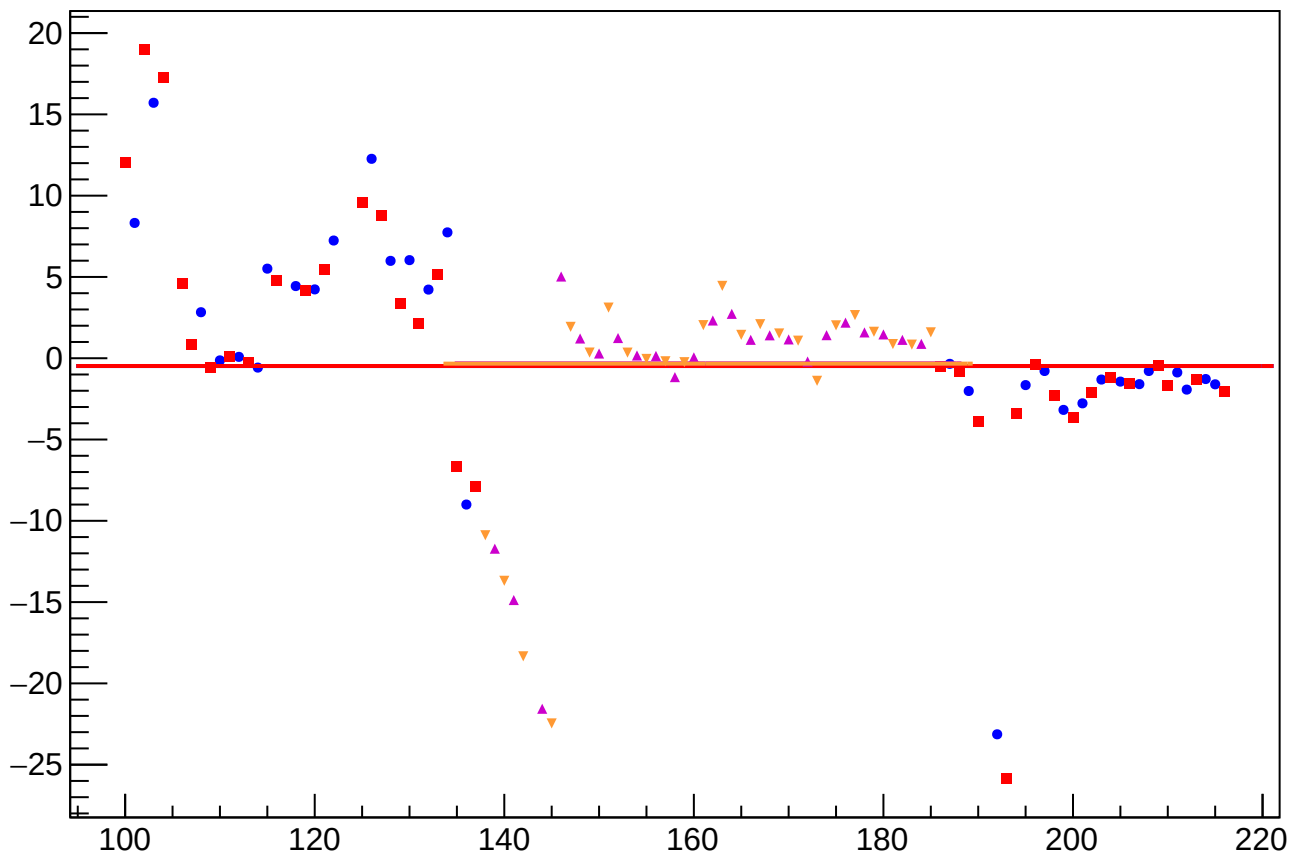
+ sign 0.155 $\pm$ 0.009  $\chi^2$ /NDF: 10735.7/54

All: 0.111 $\pm$ 0.006  $\chi^2$ /NDF: 22694.6/110

- sign 0.072 $\pm$ 0.009  $\chi^2$ /NDF: 11915.4/55



reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $-0.480 \pm 0.012$   $\chi^2/\text{NDF}$ : 118469.5/30

Left Out:  $-0.332 \pm 0.014$   $\chi^2/\text{NDF}$ : 124233.4/23

Right Out:  $-0.477 \pm 0.012$   $\chi^2/\text{NDF}$ : 116479.5/32

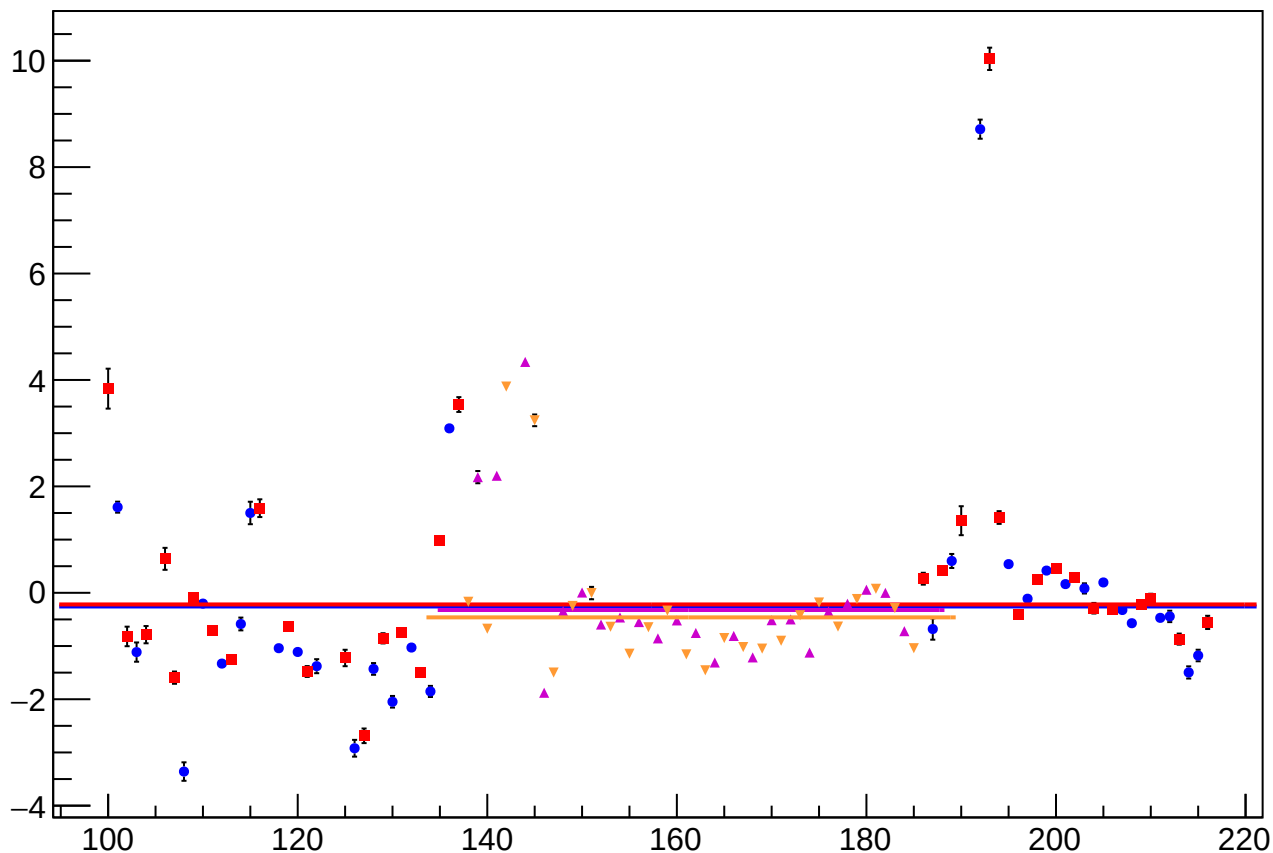
Left In:  $-0.314 \pm 0.013$   $\chi^2/\text{NDF}$ : 126999.2/22

+ sign  $-0.415 \pm 0.009$   $\chi^2/\text{NDF}$ : 242766.3/54

All:  $-0.411 \pm 0.006$   $\chi^2/\text{NDF}$ : 486330.0/110

- sign  $-0.407 \pm 0.009$   $\chi^2/\text{NDF}$ : 243563.3/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.257 \pm 0.017$   $\chi^2/\text{NDF}$ : 7528.9/30

Left Out:  $-0.462 \pm 0.013$   $\chi^2/\text{NDF}$ : 4580.0/23

Right Out:  $-0.218 \pm 0.017$   $\chi^2/\text{NDF}$ : 5458.8/32

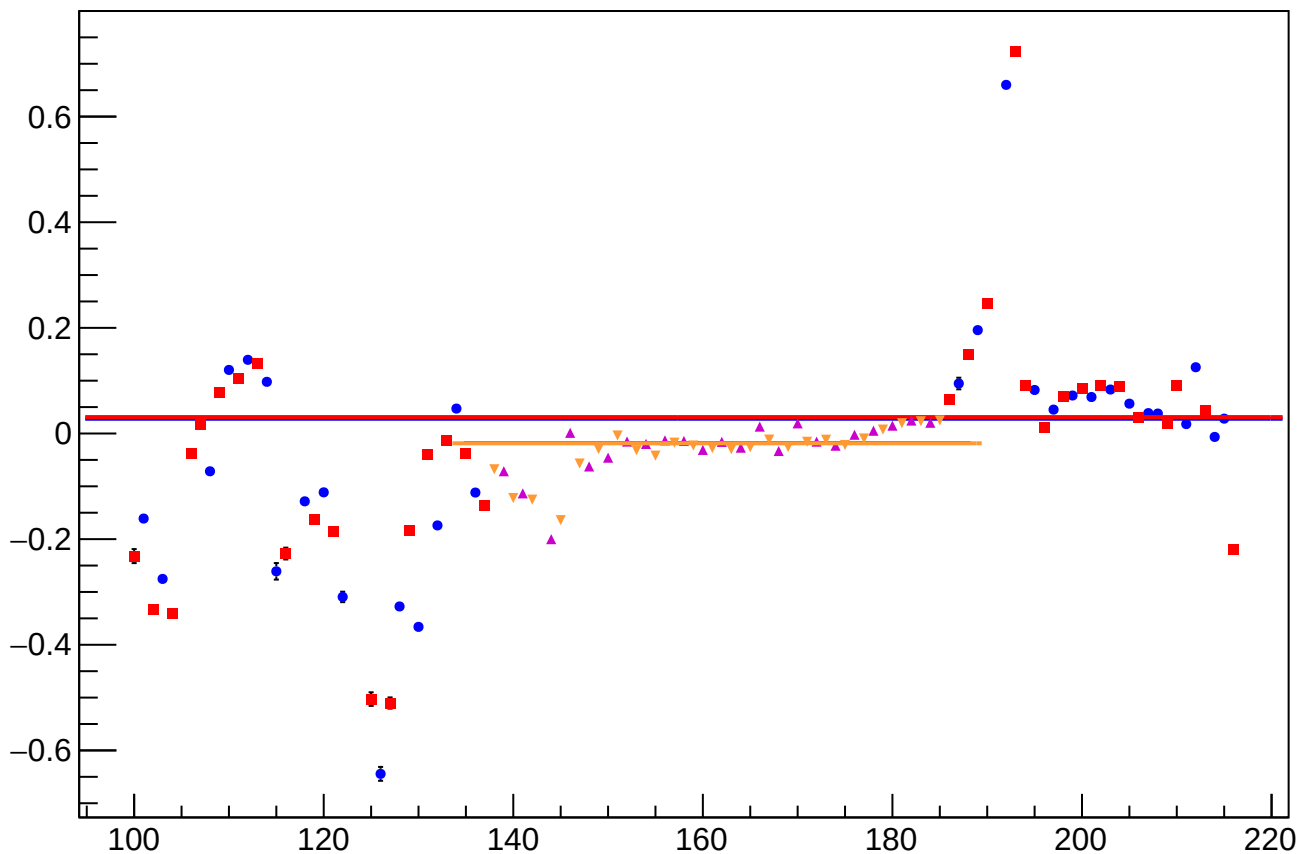
Left In:  $-0.323 \pm 0.012$   $\chi^2/\text{NDF}$ : 6881.8/22

+ sign  $-0.392 \pm 0.010$   $\chi^2/\text{NDF}$ : 12200.5/54

All:  $-0.338 \pm 0.007$   $\chi^2/\text{NDF}$ : 24621.1/110

- sign  $-0.288 \pm 0.010$   $\chi^2/\text{NDF}$ : 12366.4/55

reg\_asym\_bcm\_2an\_us\_an\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In: 0.028+/-0.001  $\chi^2/\text{NDF}$ : 34191.1/30

Left Out: -0.019+/-0.001  $\chi^2/\text{NDF}$ : 4227.5/23

Right Out: 0.031+/-0.001  $\chi^2/\text{NDF}$ : 34889.6/32

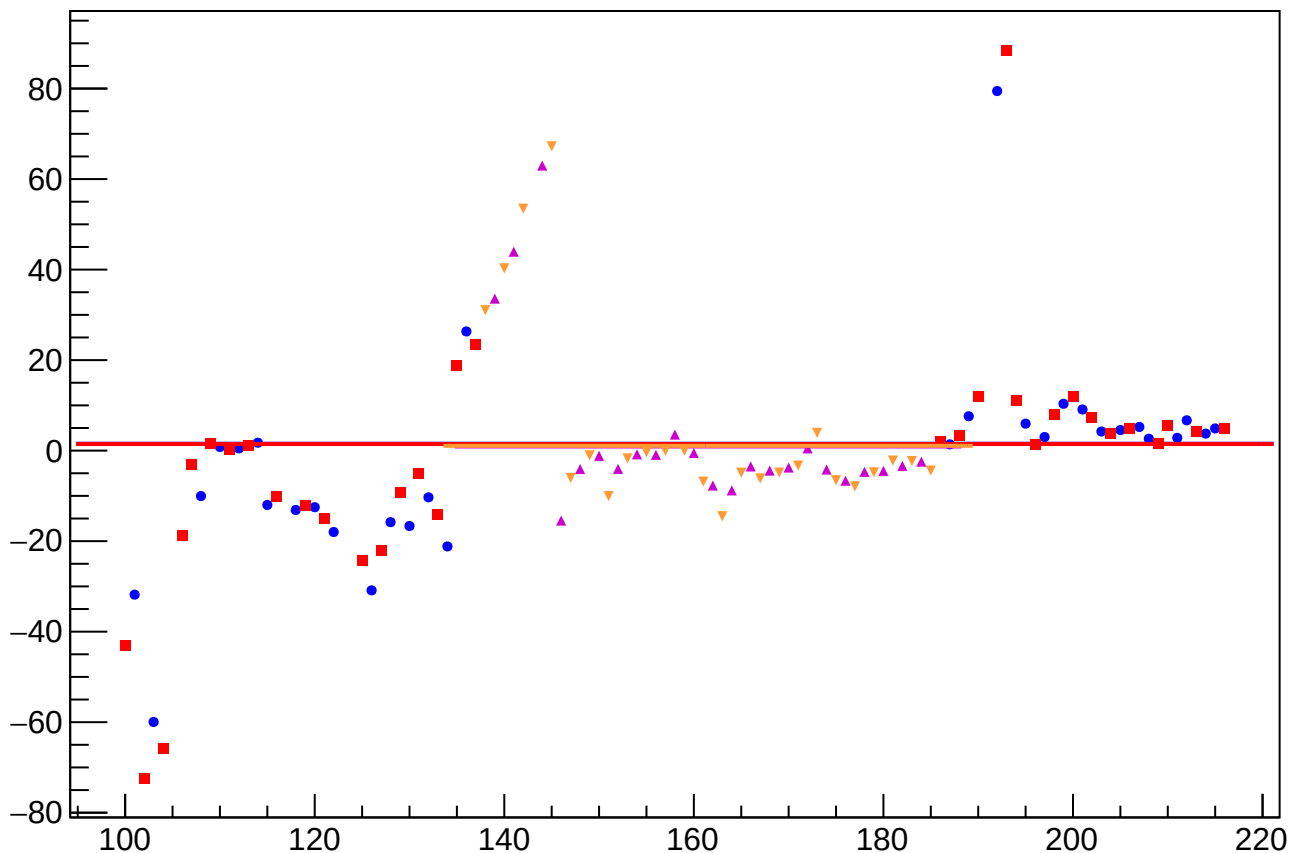
Left In: -0.018+/-0.001  $\chi^2/\text{NDF}$ : 4879.3/22

+ sign -0.003+/-0.000  $\chi^2/\text{NDF}$ : 40812.1/54

All: -0.003+/-0.000  $\chi^2/\text{NDF}$ : 83411.3/110

- sign -0.003+/-0.000  $\chi^2/\text{NDF}$ : 42598.9/55

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm1X\_slope vs Slug



Right In: 1.522 $\pm$ 0.035  $\chi^2$ /NDF: 122312.8/30

Left Out: 1.058 $\pm$ 0.041  $\chi^2$ /NDF:131010.5/23

Right Out: 1.457 $\pm$ 0.032  $\chi^2$ /NDF: 120081.0/32

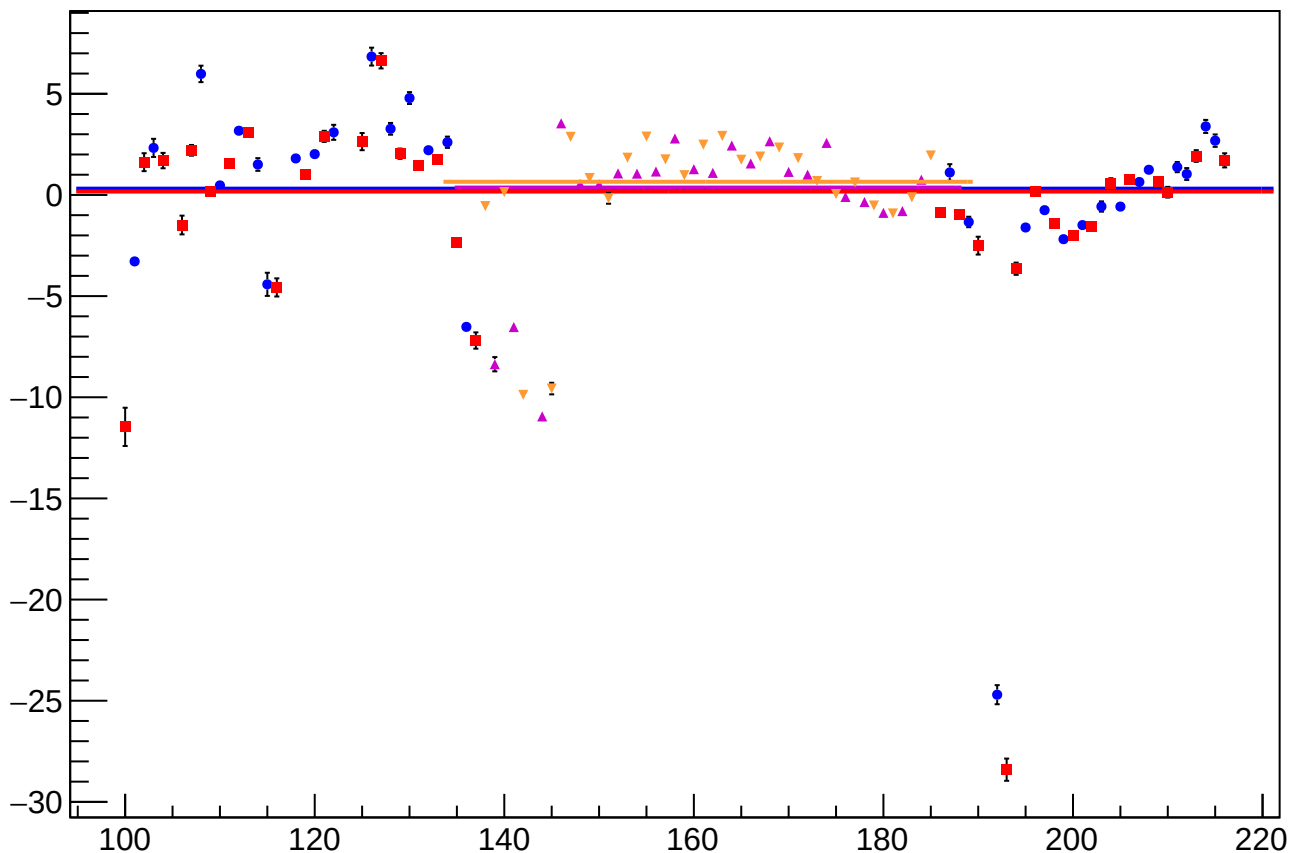
Left In: 0.915 $\pm$ 0.040  $\chi^2$ /NDF:132816.1/22

+ sign 1.325 $\pm$ 0.026  $\chi^2$ /NDF: 253398.8/54

All: 1.282 $\pm$ 0.018  $\chi^2$ /NDF: 506413.1/110

- sign 1.243 $\pm$ 0.025  $\chi^2$ /NDF: 253009.2/55

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4aY\_slope vs Slug



Right In:  $0.311 \pm 0.044$   $\chi^2/\text{NDF}$ : 6181.4/30

Left Out:  $0.651 \pm 0.033$   $\chi^2/\text{NDF}$ : 4708.8/23

Right Out:  $0.168 \pm 0.042$   $\chi^2/\text{NDF}$ : 5058.2/32

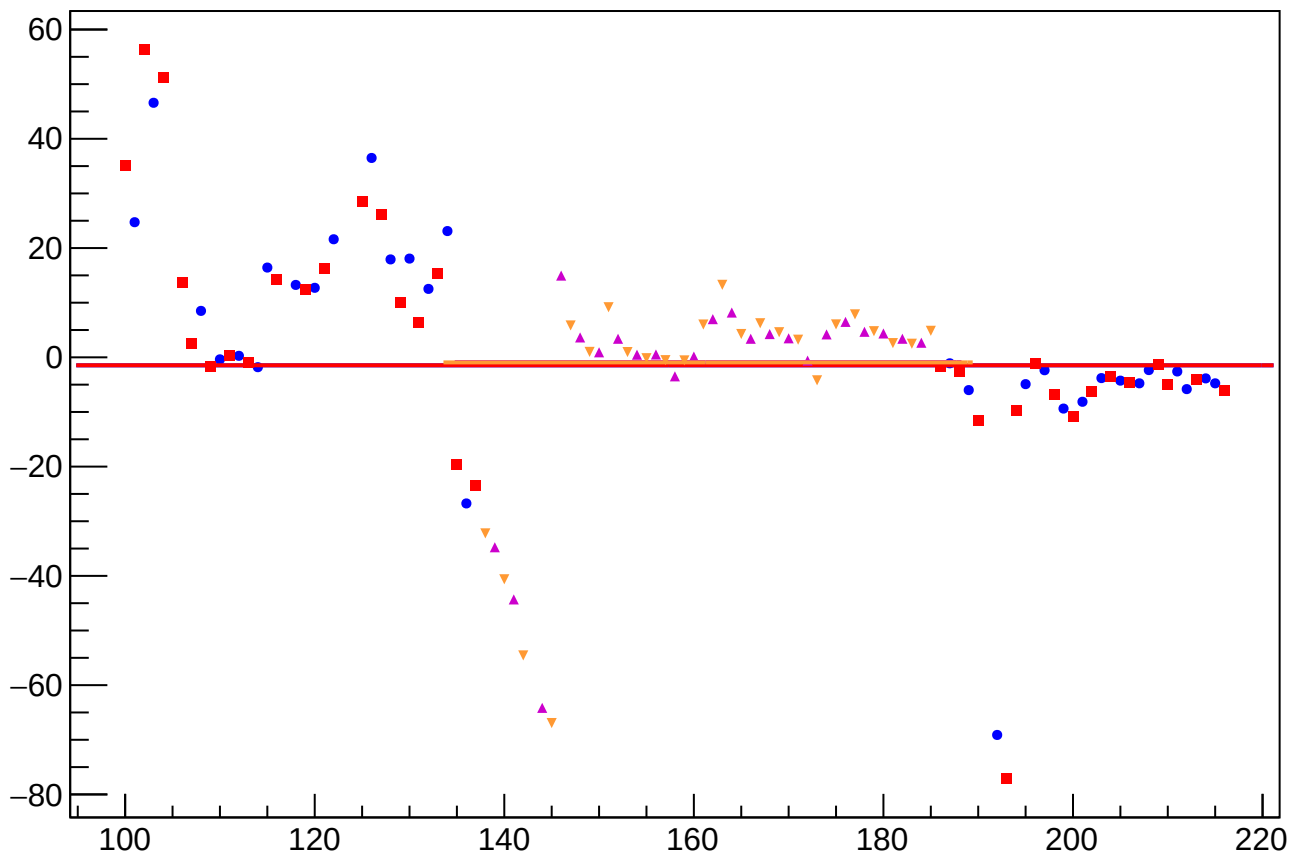
Left In:  $0.364 \pm 0.031$   $\chi^2/\text{NDF}$ : 7122.4/22

+ sign  $0.529 \pm 0.027$   $\chi^2/\text{NDF}$ : 10928.2/54

All:  $0.406 \pm 0.018$   $\chi^2/\text{NDF}$ : 23163.6/110

- sign  $0.295 \pm 0.025$   $\chi^2/\text{NDF}$ : 12194.6/55

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4eX\_slope vs Slug



Right In:  $-1.469 \pm 0.036$   $\chi^2/\text{NDF}$ : 120551.3/30

Left Out:  $-0.927 \pm 0.041$   $\chi^2/\text{NDF}$ : 126360.1/23

Right Out:  $-1.454 \pm 0.034$   $\chi^2/\text{NDF}$ : 118346.8/32

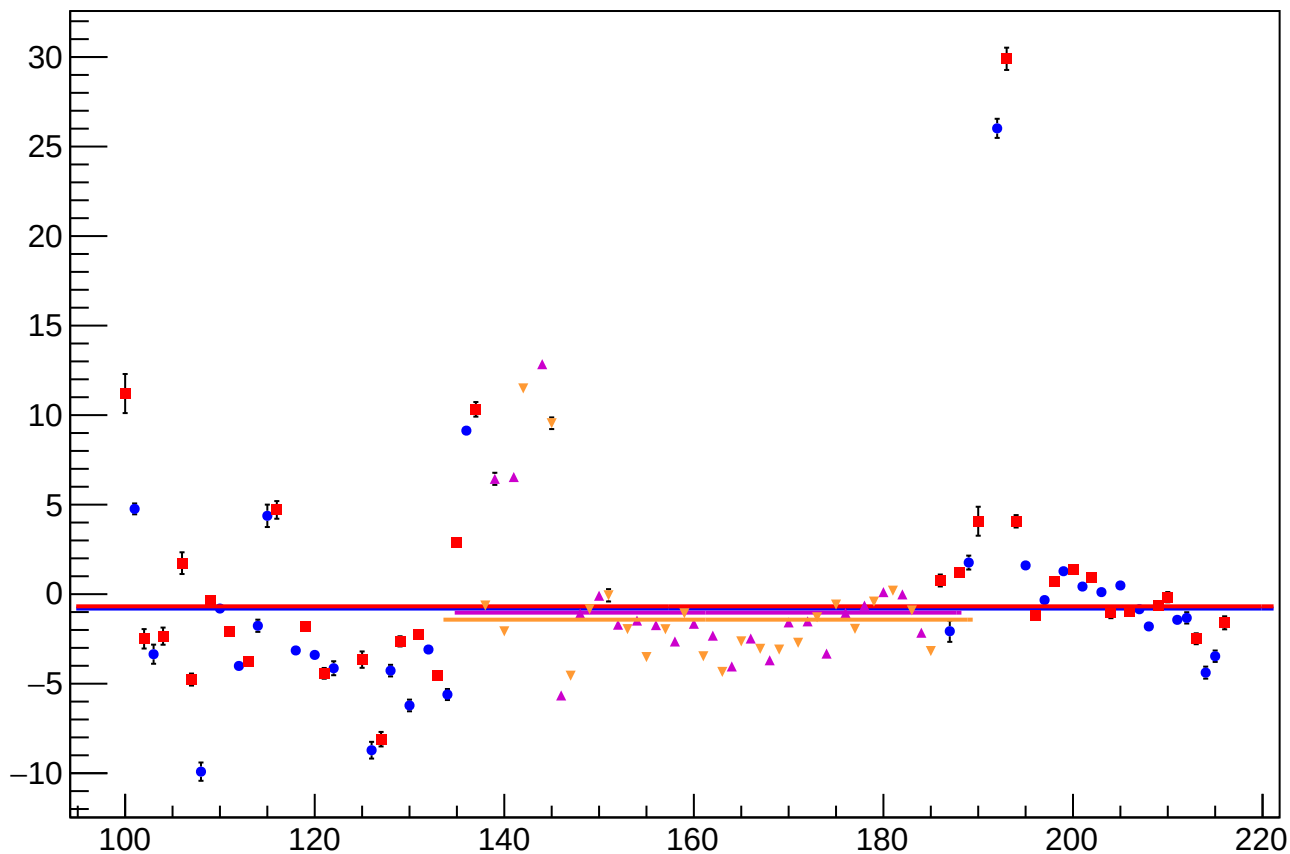
Left In:  $-0.858 \pm 0.039$   $\chi^2/\text{NDF}$ : 129490.8/22

+ sign  $-1.229 \pm 0.027$   $\chi^2/\text{NDF}$ : 247011.0/54

All:  $-1.213 \pm 0.019$   $\chi^2/\text{NDF}$ : 494981.9/110

- sign  $-1.199 \pm 0.026$   $\chi^2/\text{NDF}$ : 247970.2/55

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm4eY\_slope vs Slug



Right In:  $-0.804 \pm 0.051$   $\chi^2/\text{NDF}$ : 7681.8/30

Left Out:  $-1.425 \pm 0.037$   $\chi^2/\text{NDF}$ : 4639.6/23

Right Out:  $-0.680 \pm 0.049$   $\chi^2/\text{NDF}$ : 5551.5/32

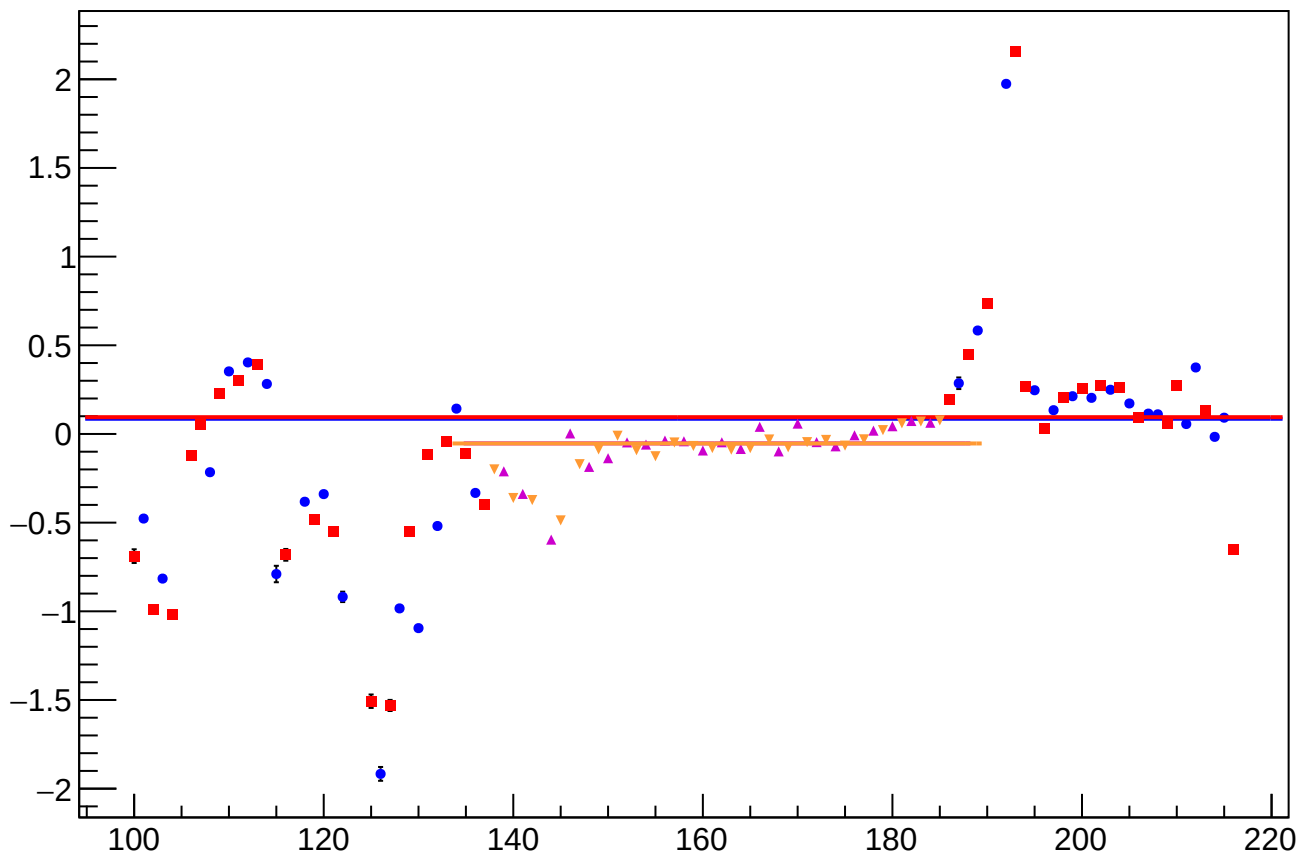
Left In:  $-1.032 \pm 0.035$   $\chi^2/\text{NDF}$ : 7051.3/22

+ sign  $-1.212 \pm 0.030$   $\chi^2/\text{NDF}$ : 12420.1/54

All:  $-1.056 \pm 0.020$   $\chi^2/\text{NDF}$ : 25110.3/110

- sign  $-0.914 \pm 0.028$   $\chi^2/\text{NDF}$ : 12637.4/55

reg\_asym\_bcm\_an\_us\_an\_ds\_avg\_diff\_bpm12X\_slope vs Slug



Right In: 0.086+/-0.002  $\chi^2/\text{NDF}$ : 34792.0/30

Left Out: -0.054+/-0.002  $\chi^2/\text{NDF}$ : 4341.2/23

Right Out: 0.095+/-0.002  $\chi^2/\text{NDF}$ : 35585.1/32

Left In: -0.053+/-0.001  $\chi^2/\text{NDF}$ : 5013.3/22

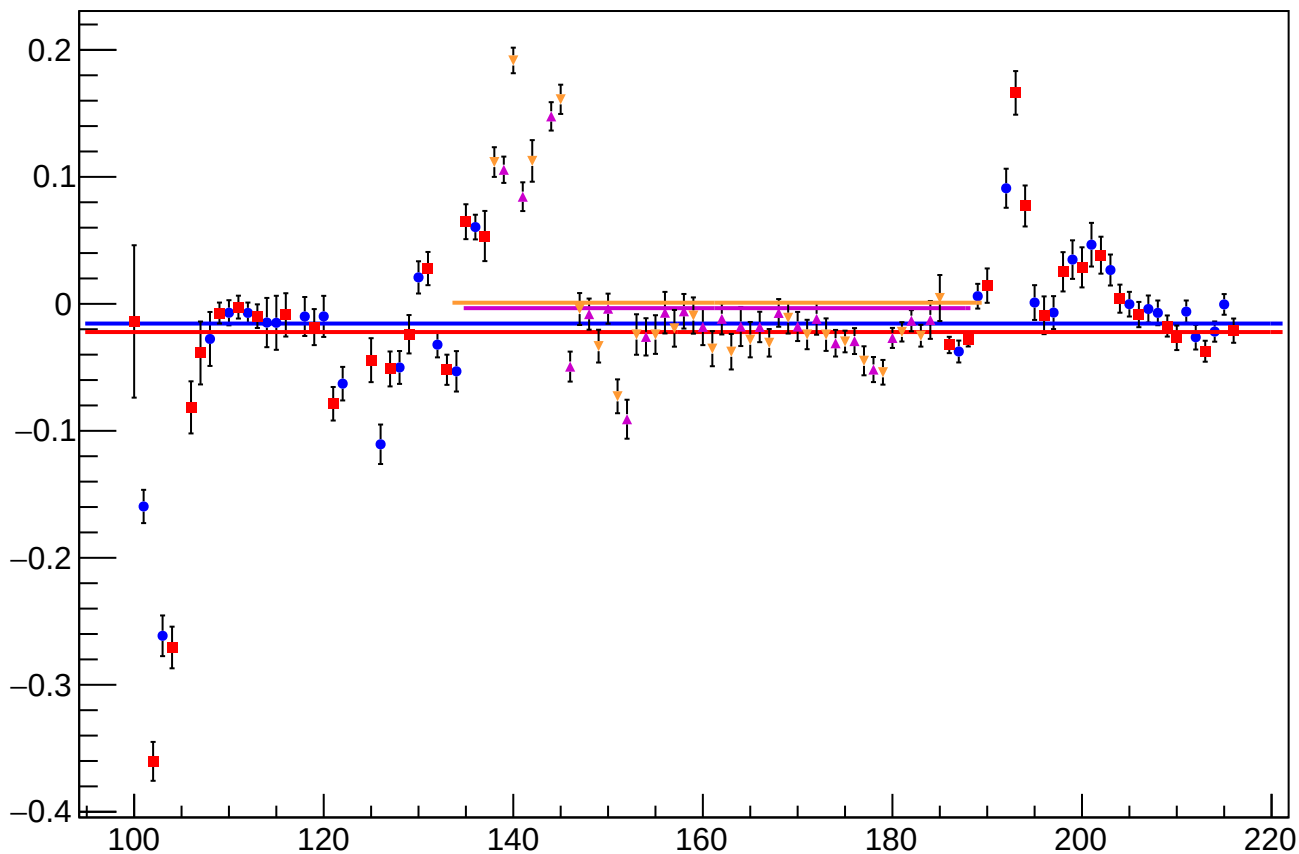
+ sign -0.007+/-0.001  $\chi^2/\text{NDF}$ : 41664.4/54

All: -0.008+/-0.001  $\chi^2/\text{NDF}$ : 85290.7/110

- sign -0.008+/-0.001  $\chi^2/\text{NDF}$ : 43626.3/55



reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm1X\_slope vs Slug



Right In:  $-0.016 \pm 0.002$   $\chi^2/\text{NDF}$ : 602.1/30

Left Out:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 849.7/23

Right Out:  $-0.022 \pm 0.002$   $\chi^2/\text{NDF}$ : 1054.6/32

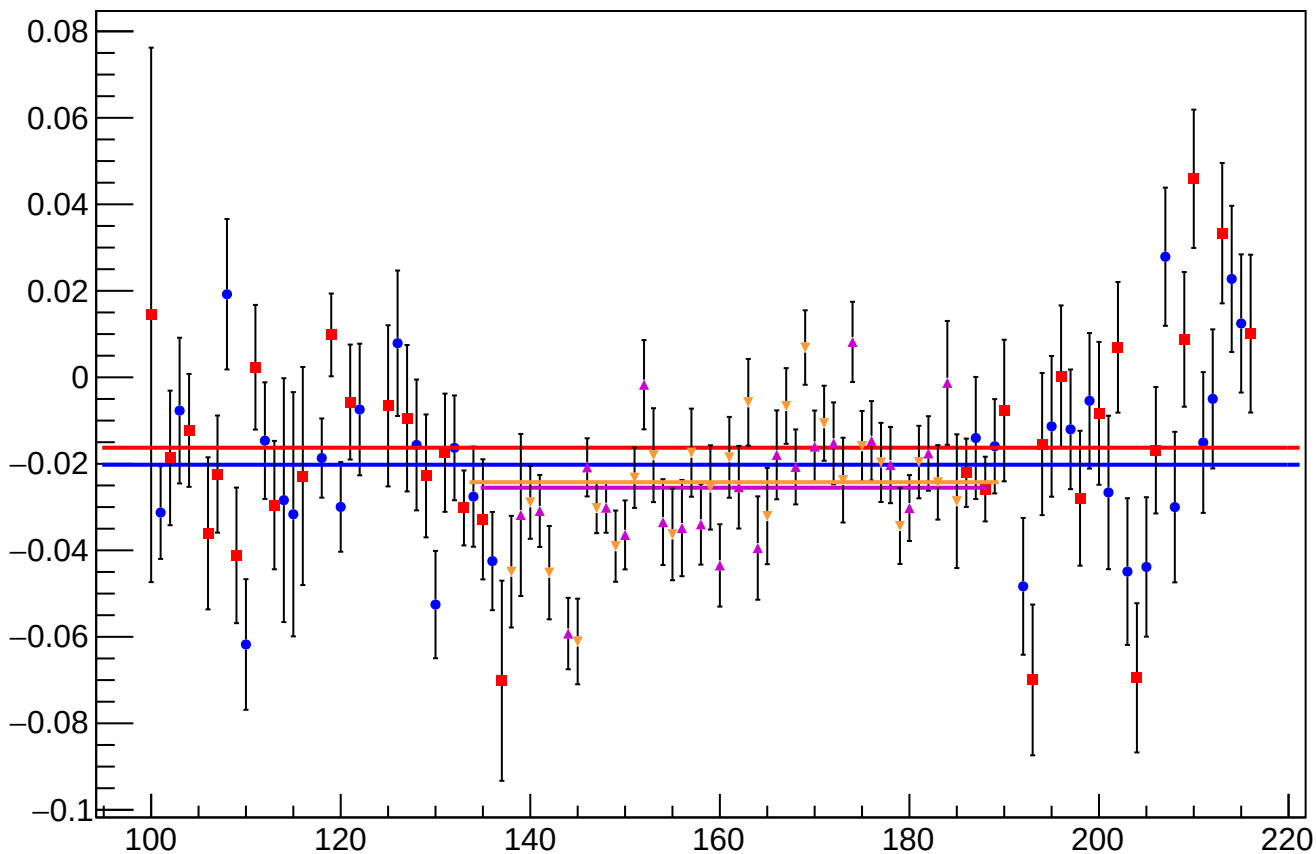
Left In:  $-0.003 \pm 0.002$   $\chi^2/\text{NDF}$ : 457.9/22

+ sign  $-0.009 \pm 0.002$   $\chi^2/\text{NDF}$ : 1478.8/54

All:  $-0.012 \pm 0.001$   $\chi^2/\text{NDF}$ : 3035.8/110

- sign  $-0.015 \pm 0.002$   $\chi^2/\text{NDF}$ : 1549.1/55

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4aY\_slope vs Slug



Right In:  $-0.020 \pm 0.003$   $\chi^2/\text{NDF}$ : 60.8/30

Left Out:  $-0.024 \pm 0.002$   $\chi^2/\text{NDF}$ : 53.7/23

Right Out:  $-0.016 \pm 0.002$   $\chi^2/\text{NDF}$ : 79.8/32

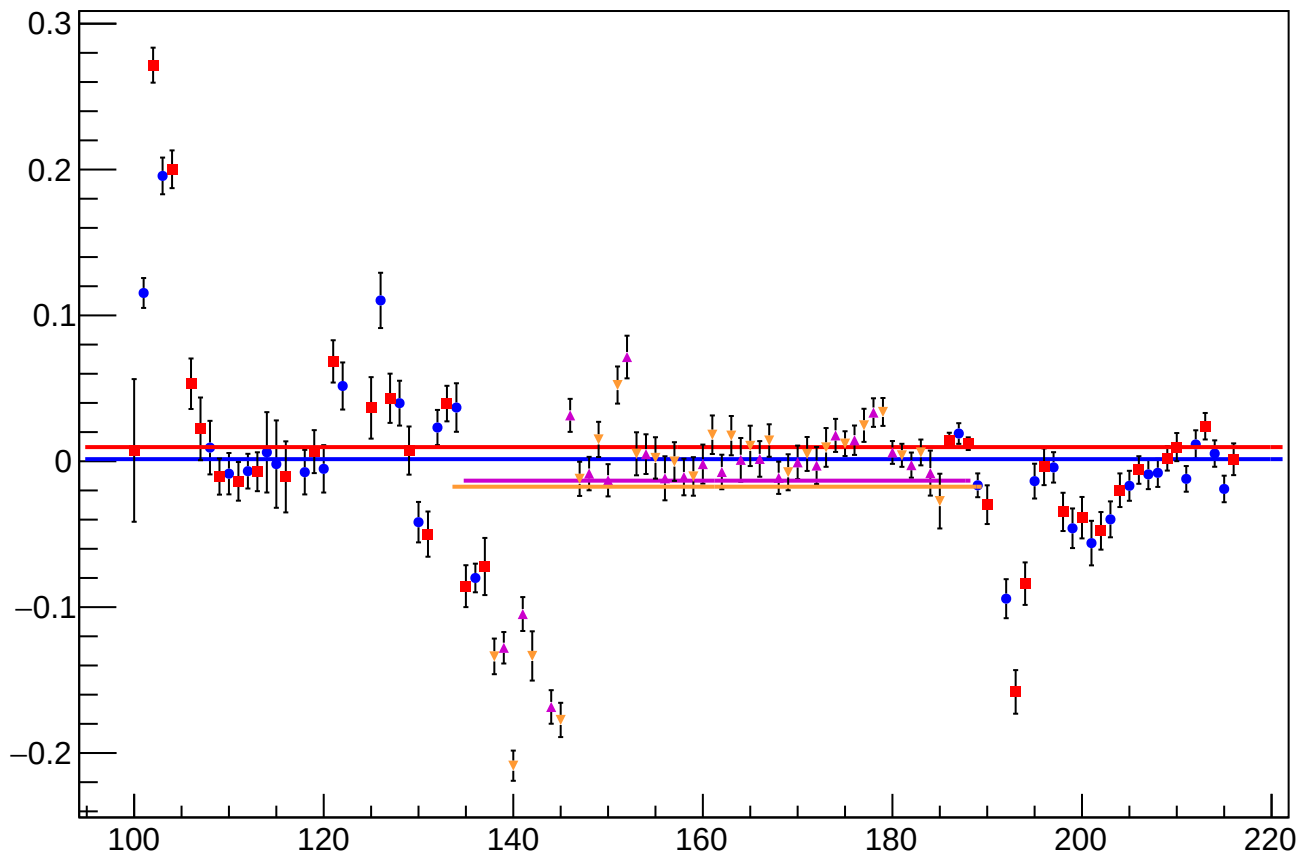
Left In:  $-0.026 \pm 0.002$   $\chi^2/\text{NDF}$ : 55.0/22

+ sign  $-0.023 \pm 0.001$   $\chi^2/\text{NDF}$ : 116.2/54

All:  $-0.022 \pm 0.001$   $\chi^2/\text{NDF}$ : 260.4/110

- sign  $-0.022 \pm 0.001$   $\chi^2/\text{NDF}$ : 144.0/55

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4eX\_slope vs Slug



Right In:  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 614.2/30

Left Out:  $-0.017 \pm 0.002$   $\chi^2/\text{NDF}$ : 812.1/23

Right Out:  $0.010 \pm 0.002$   $\chi^2/\text{NDF}$ : 1047.0/32

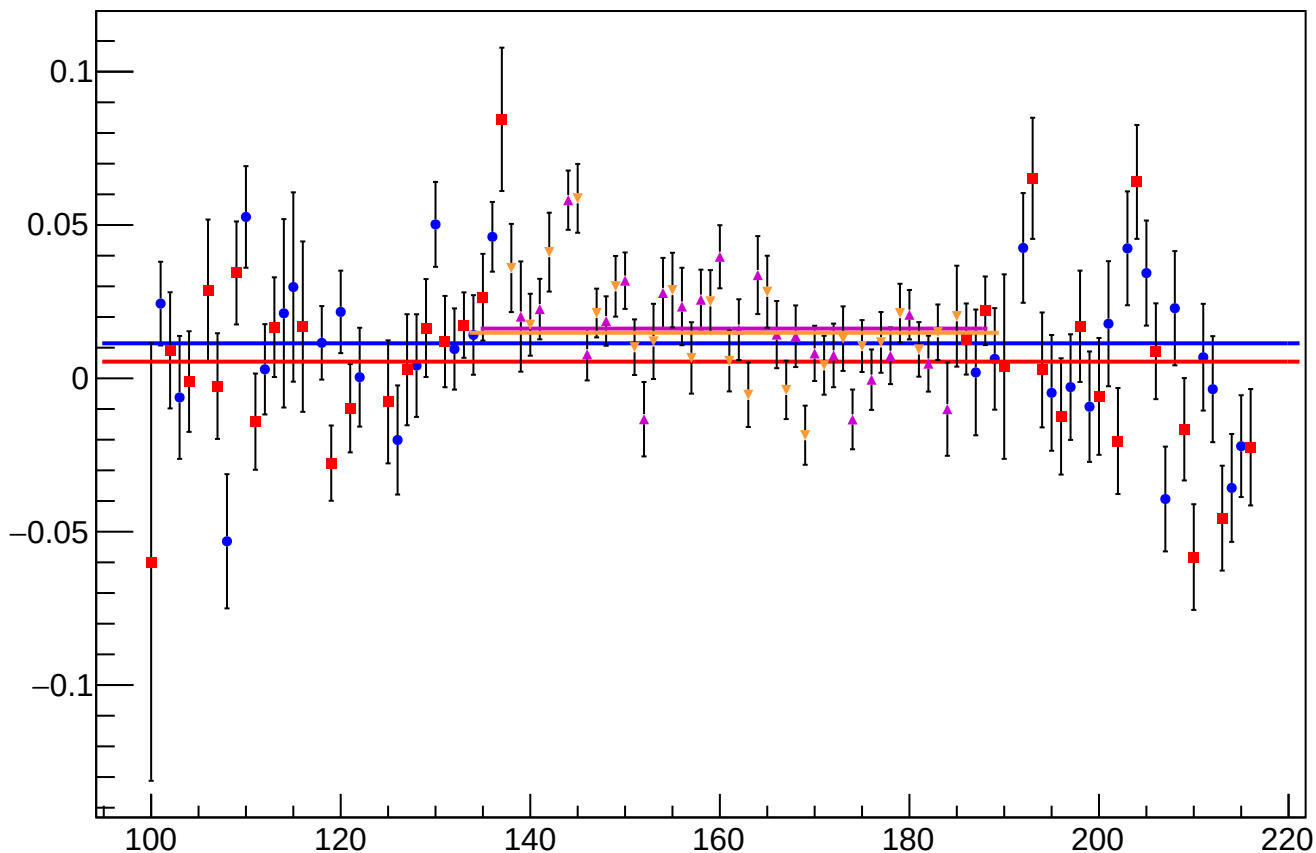
Left In:  $-0.013 \pm 0.002$   $\chi^2/\text{NDF}$ : 458.6/22

+ sign  $-0.007 \pm 0.002$   $\chi^2/\text{NDF}$ : 1461.9/54

All:  $-0.003 \pm 0.001$   $\chi^2/\text{NDF}$ : 3035.3/110

- sign  $0.001 \pm 0.002$   $\chi^2/\text{NDF}$ : 1561.9/55

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm4eY\_slope vs Slug



Right In: 0.011 $\pm$ 0.003  $\chi^2$ /NDF: 71.0/30

Left Out: 0.015 $\pm$ 0.002  $\chi^2$ /NDF: 52.1/23

Right Out: 0.005 $\pm$ 0.003  $\chi^2$ /NDF: 84.0/32

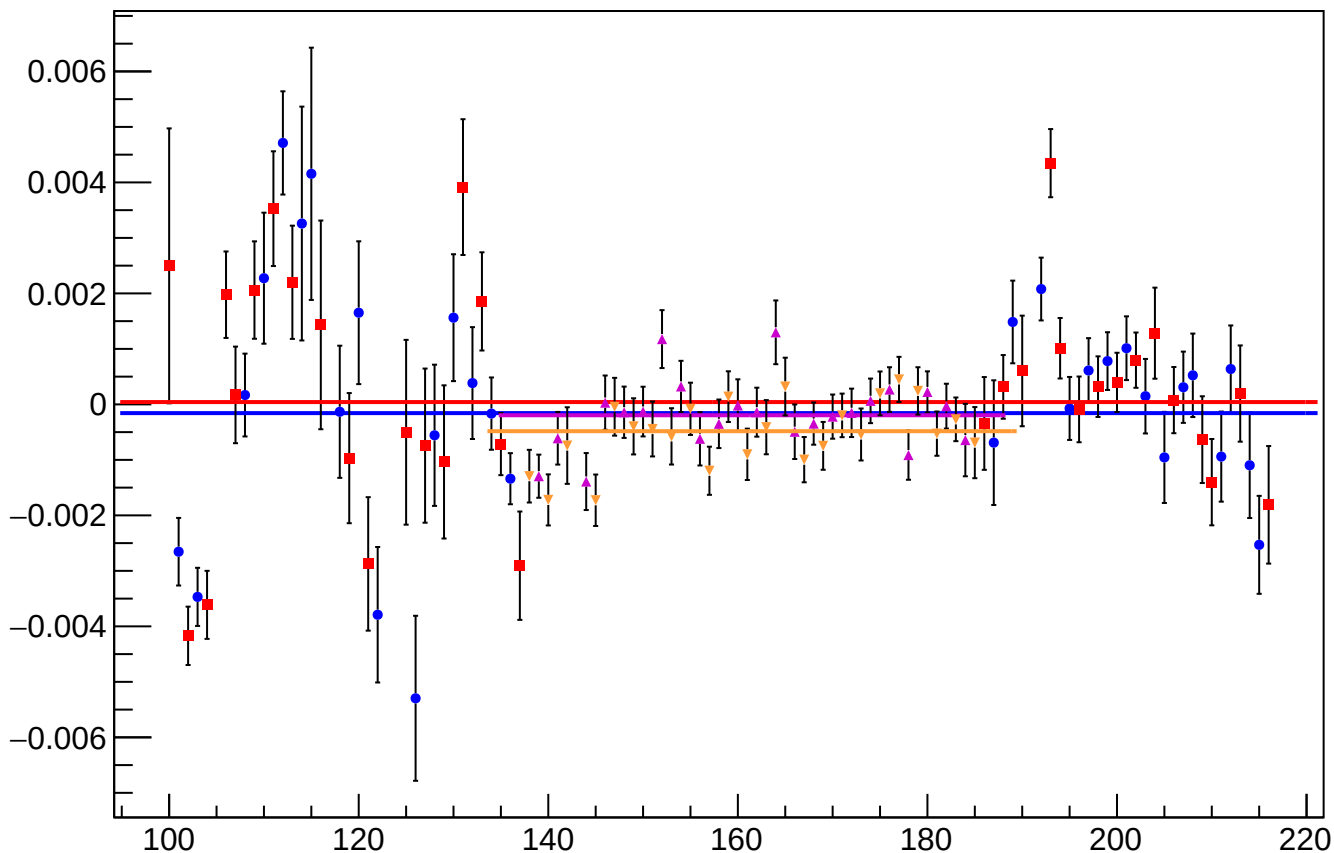
Left In: 0.016 $\pm$ 0.002  $\chi^2$ /NDF: 58.0/22

+ sign 0.014 $\pm$ 0.002  $\chi^2$ /NDF: 124.0/54

All: 0.013 $\pm$ 0.001  $\chi^2$ /NDF: 275.3/110

- sign 0.012 $\pm$ 0.002  $\chi^2$ /NDF: 151.0/55

reg\_asym\_bcm\_an\_us\_an\_ds\_dd\_diff\_bpm12X\_slope vs Slug



Right In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 169.4/30

Left Out: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:40.8/23

Right Out: 0.000 $\pm$ 0.000  $\chi^2$ /NDF: 227.1/32

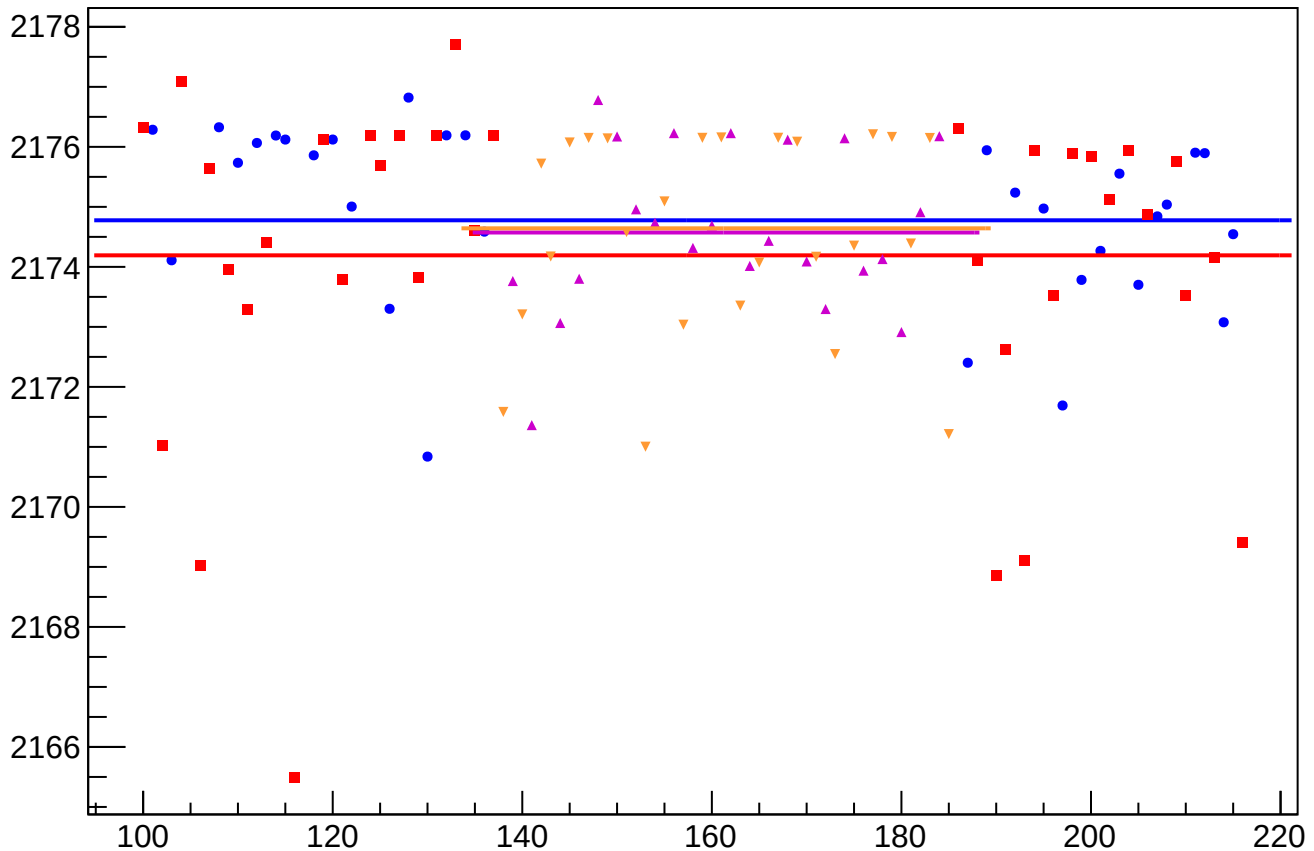
Left In: -0.000 $\pm$ 0.000  $\chi^2$ /NDF:37.2/22

+ sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 214.1/54

All: -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 486.3/110

- sign -0.000 $\pm$ 0.000  $\chi^2$ /NDF: 266.4/55

# HALLA\_p\_mean vs Slug



Right In:  $2174.776 \pm 0.000$   $\chi^2/\text{NDF}: 3676148465387539705080628027326464.0/30$

Left Out:  $2174.643 \pm 0.000$   $\chi^2/\text{NDF}: 5211684446319442157199657598451712.0/24$

Right Out:  $2174.192 \pm 0.000$   $\chi^2/\text{NDF}: 11993459587043095493265054372986880.0/34$

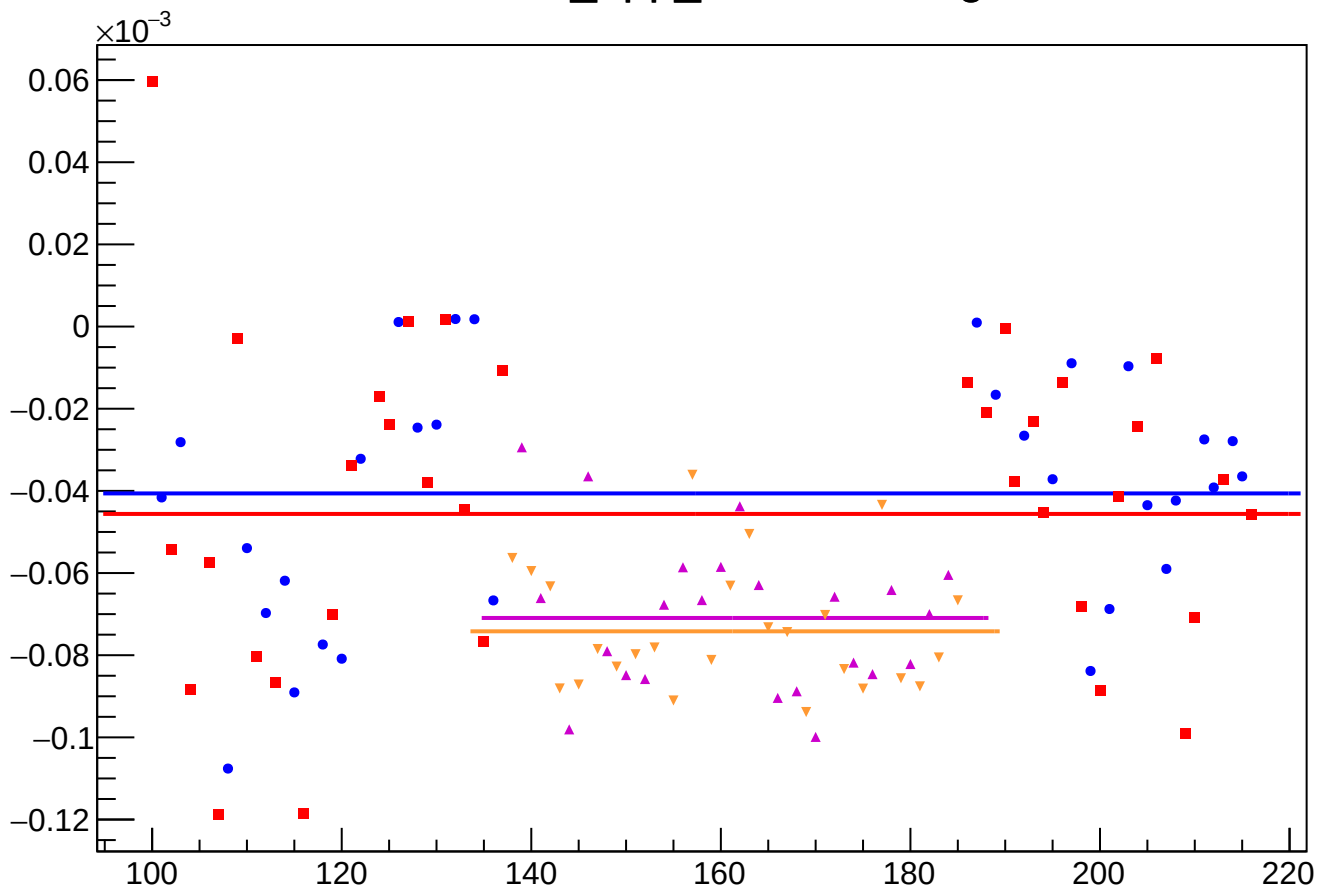
Left In:  $2174.573 \pm 0.000$   $\chi^2/\text{NDF}: 3431267097793838845728863815729152.0/22$

+ sign  $2174.709 \pm 0.000$   $\chi^2/\text{NDF}: 89056944716149$

All:  $2174.544 \pm 0.000$   $\chi^2/\text{NDF}: 24691194608$

- sign  $2174.377 \pm 0.000$   $\chi^2/\text{NDF}: 15566950926767$

# HALLA\_dpp\_mean vs Slug



Right In: -0.000+/-0.000  $\chi^2$ /NDF: 1286425849379904838172672.0/30

Left Out: -0.000+/-0.000  $\chi^2$ /NDF: 471834768551309792509952.0/24

Right Out: -0.000+/-0.000  $\chi^2$ /NDF: 2054002261949826834890752.0/34

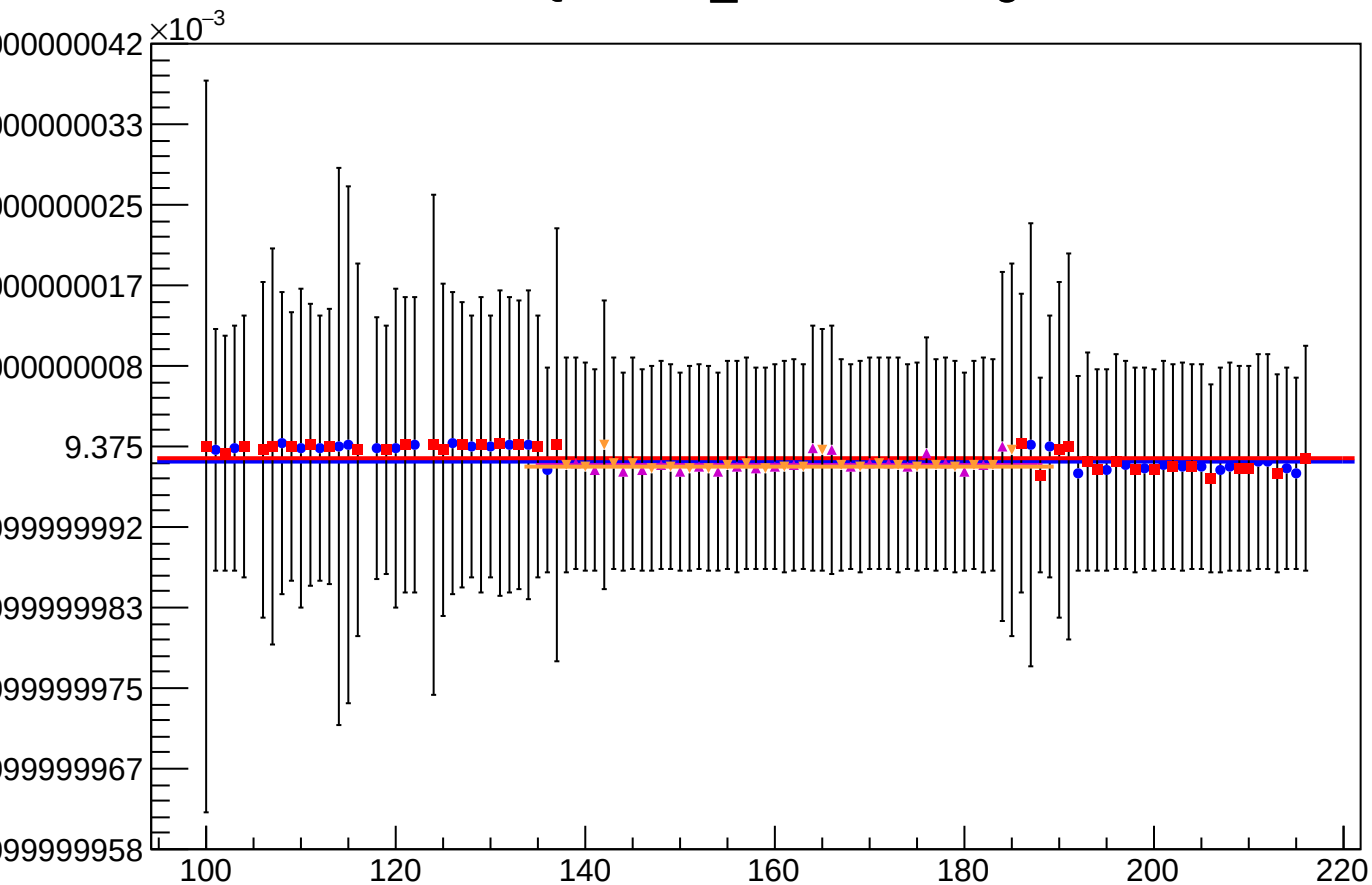
Left In: -0.000+/-0.000  $\chi^2$ /NDF: 631091526789889368522752.0/22

+ sign -0.000+/-0.000  $\chi^2$ /NDF: 2883460950711928

All: -0.000+/-0.000  $\chi^2$ /NDF: 6198805045130

- sign -0.000+/-0.000  $\chi^2$ /NDF: 3315156524149383

# MQ171LM\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/34

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

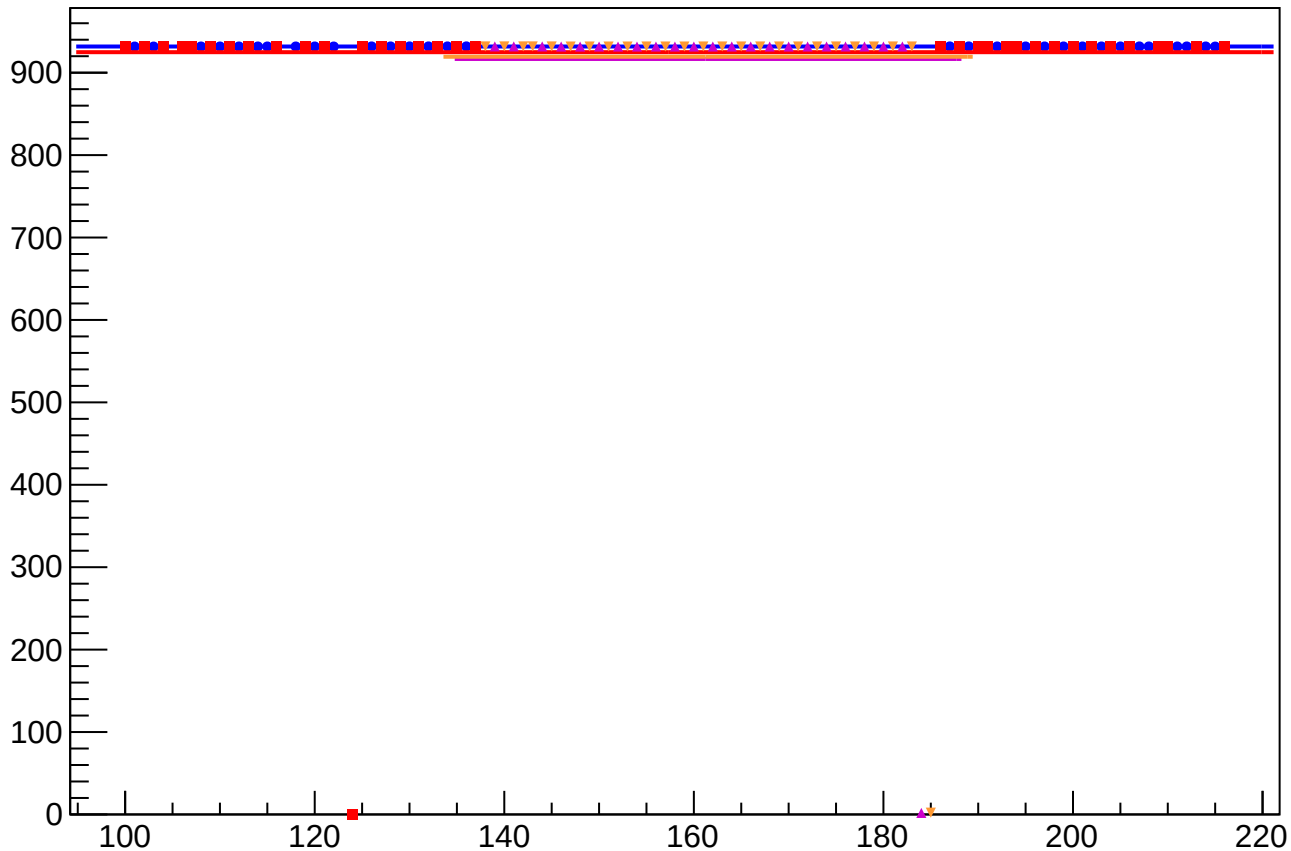
+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/55

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.2/113

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.5/57



# HacL\_Q2\_HP3458A\_IOUT\_mean vs Slug



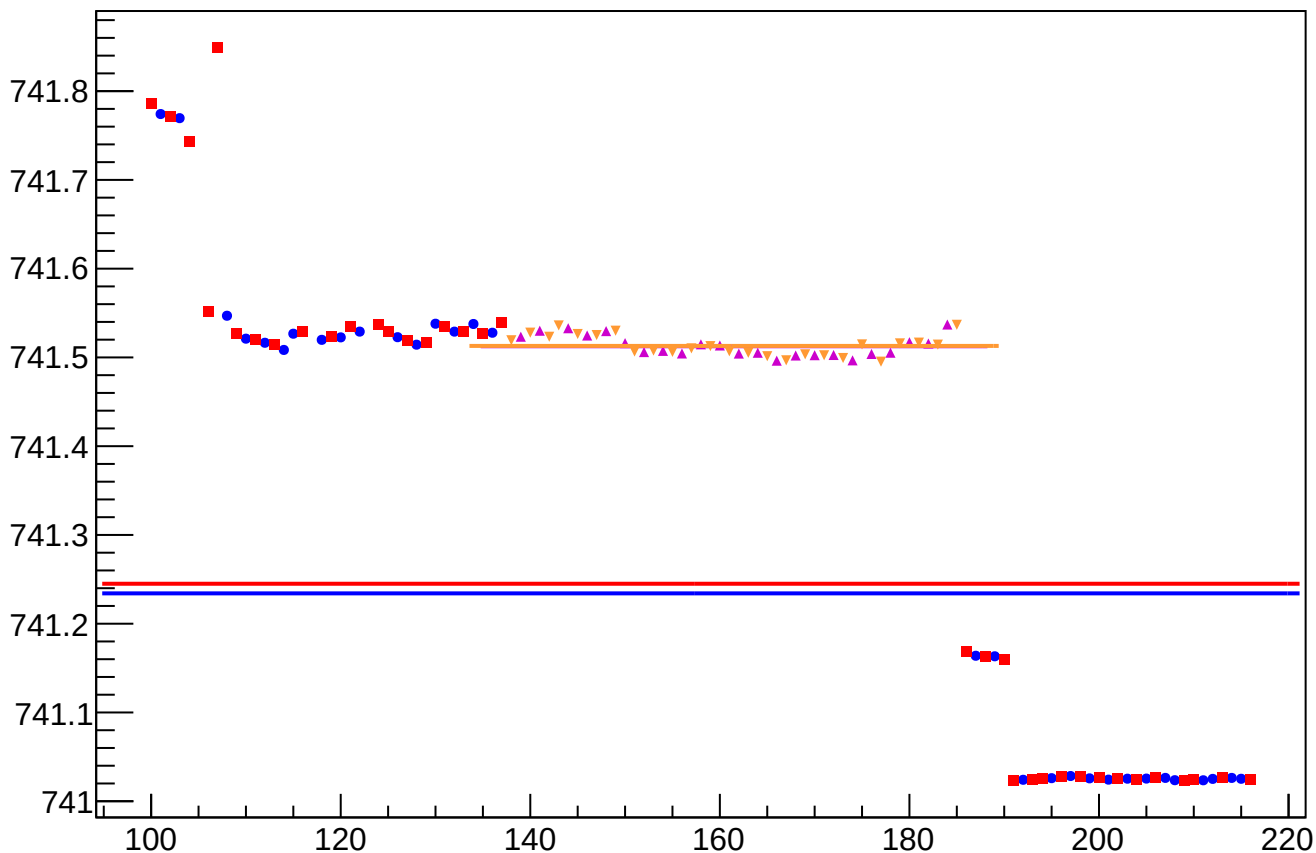
Right In: 931.771+/-0.000  $\chi^2/\text{NDF}$ : 5039478381300766020329199894528.0/30

Left Out: 919.347+/-0.000  $\chi^2/\text{NDF}$ : 23021123496215280619041526133081243648.0/24

Right Out: 924.881+/-0.000  $\chi^2/\text{NDF}$ : 12925814994471223165031809346659418112.0/34

Left In: 916.654+/-0.000  $\chi^2/\text{NDF}$ : 26369744931183548073785664842185572352.0/22

# HacL\_D1\_HP3458A\_IOUT\_mean vs Slug



Right In: 741.234+/-0.000  $\chi^2/\text{NDF}$ : 140502746915111903514740616331264.0/30

Left Out: 741.513+/-0.000  $\chi^2/\text{NDF}$ : 251976310768126296231889600512.0/24

Right Out: 741.245+/-0.000  $\chi^2/\text{NDF}$ : 145173503745187124346181530943488.0/34

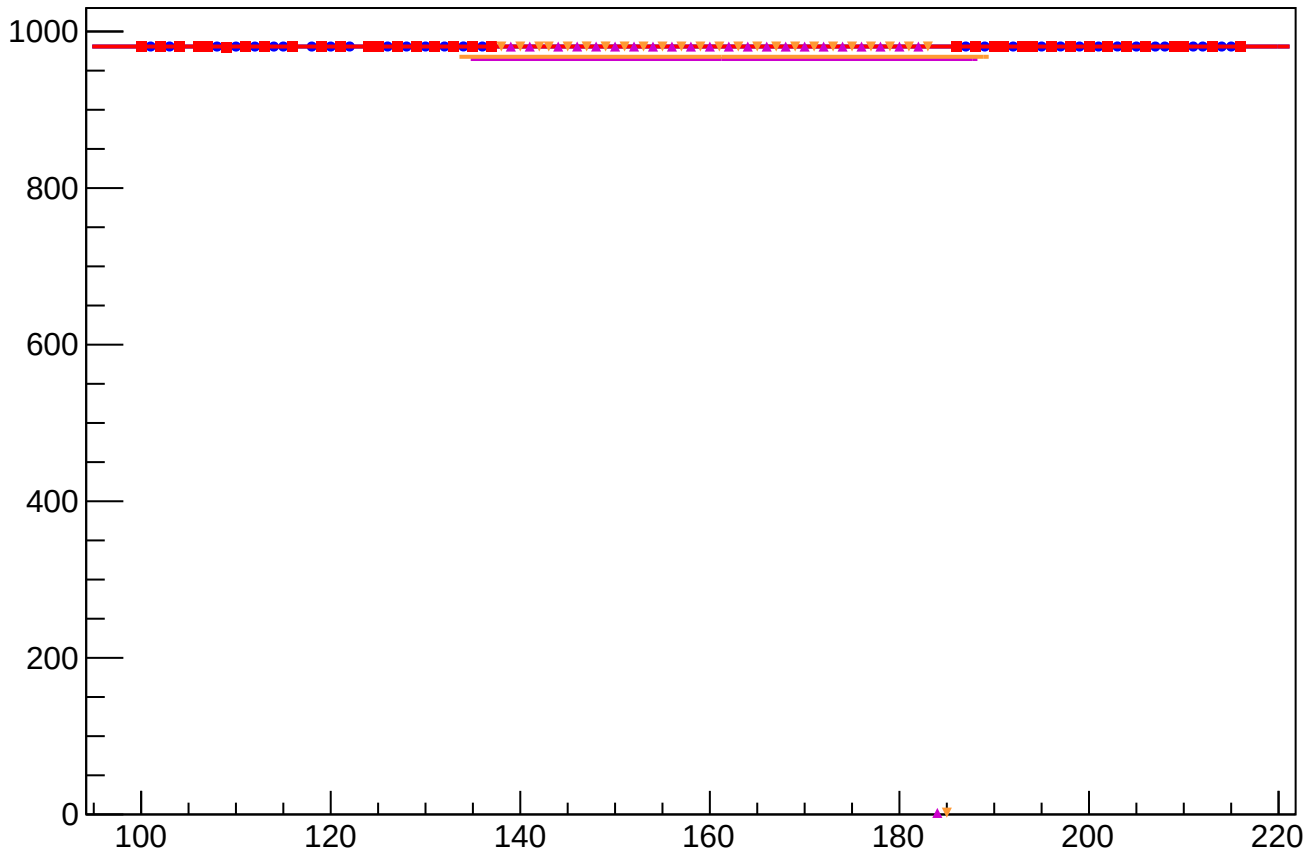
Left In: 741.513+/-0.000  $\chi^2/\text{NDF}$ : 234703983030085423185895882752.0/22

+ sign 741.375+/-0.000  $\chi^2/\text{NDF}$ : 218371756341943

All: 741.375+/-0.000  $\chi^2/\text{NDF}$ : 434118377794

- sign 741.375+/-0.000  $\chi^2/\text{NDF}$ : 215746371814328

# HacL\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 980.803+/-0.000  $\chi^2/\text{NDF}$ : 1952536100619397293533816684544.0/30

Left Out: 967.677+/-0.000  $\chi^2/\text{NDF}$ : 25505155603279925641541295779633692672.0/24

Right Out: 980.780+/-0.000  $\chi^2/\text{NDF}$ : 63441692999631577344888671305728.0/34

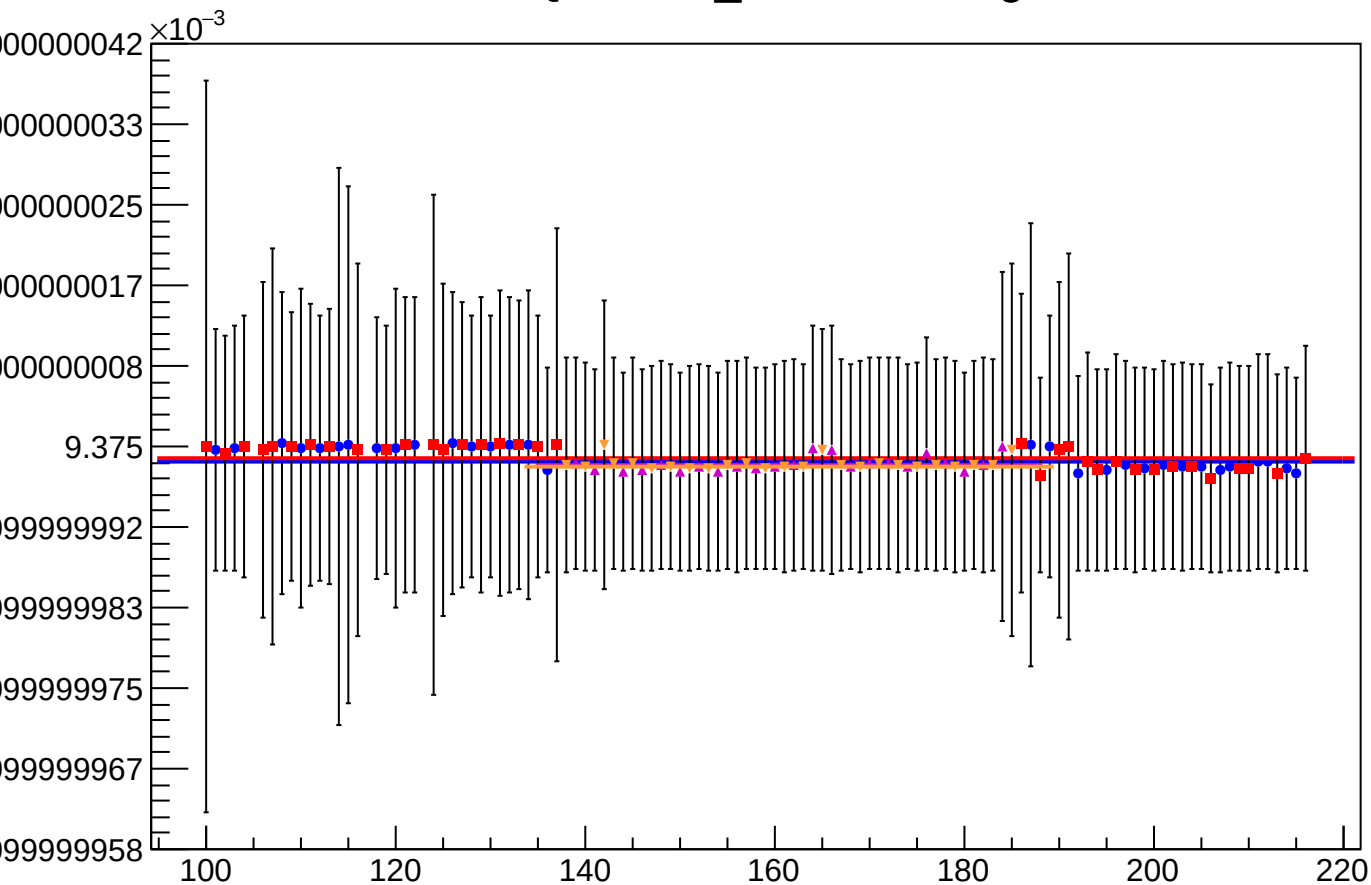
Left In: 964.854+/-0.000  $\chi^2/\text{NDF}$ : 29215838960103078784112845628245016576.0/22

+ sign 974.172+/-0.000  $\chi^2/\text{NDF}$ : 256772162950726

All: 973.622+/-0.000  $\chi^2/\text{NDF}$ : 551447652818

- sign 973.064+/-0.000  $\chi^2/\text{NDF}$ : 294651142181164

# MQ172RM\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/34

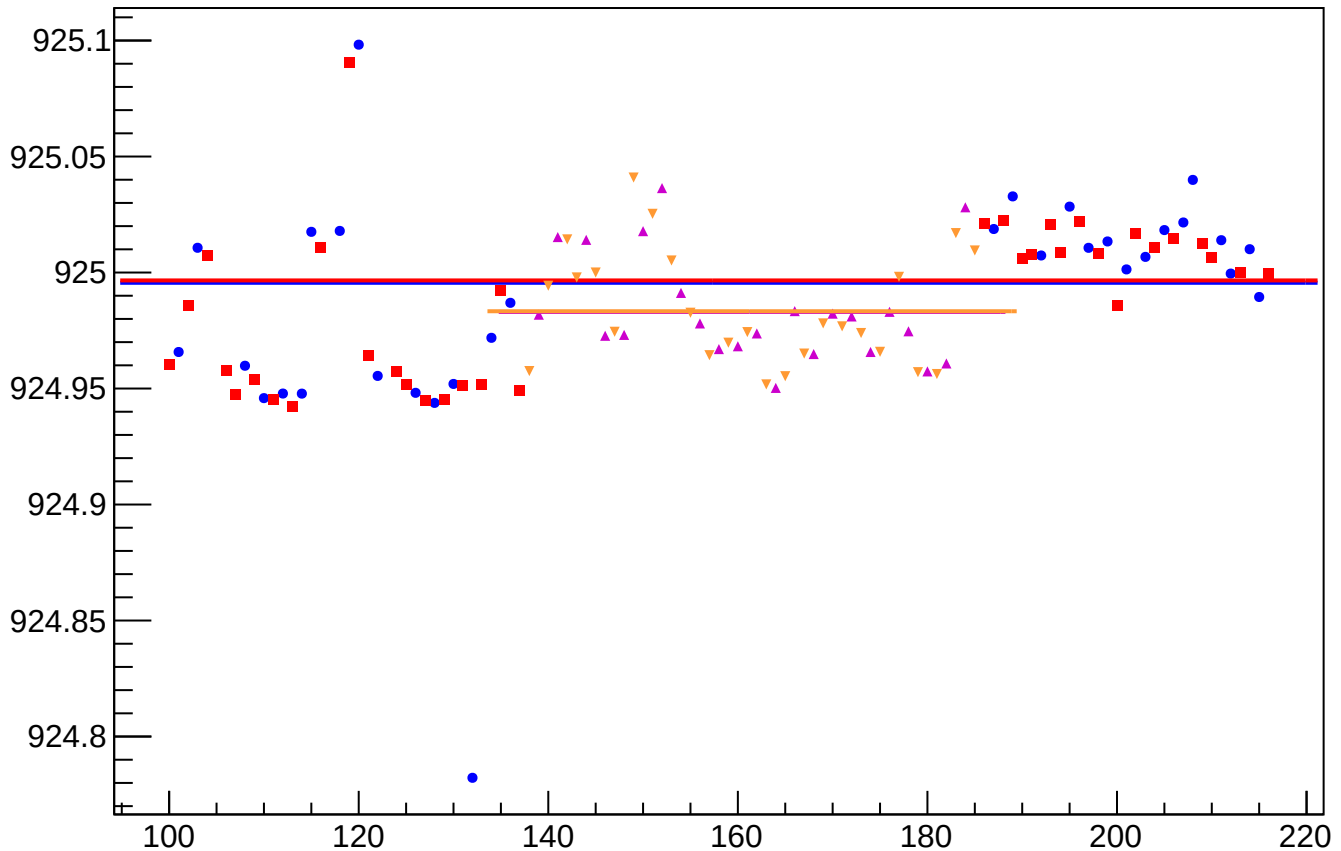
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/55

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.2/113

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.5/57

# HacR\_Q2\_HP3458A\_IOUT\_mean vs Slug



Right In: 924.996 $\pm$ 0.000  $\chi^2$ /NDF: 3772456844459656675450238795776.0/30

Left Out: 924.983 $\pm$ 0.000  $\chi^2$ /NDF: 1161112698344246137667167715328.0/24

Right Out: 924.997 $\pm$ 0.000  $\chi^2$ /NDF: 1986095151114996491350731390976.0/34

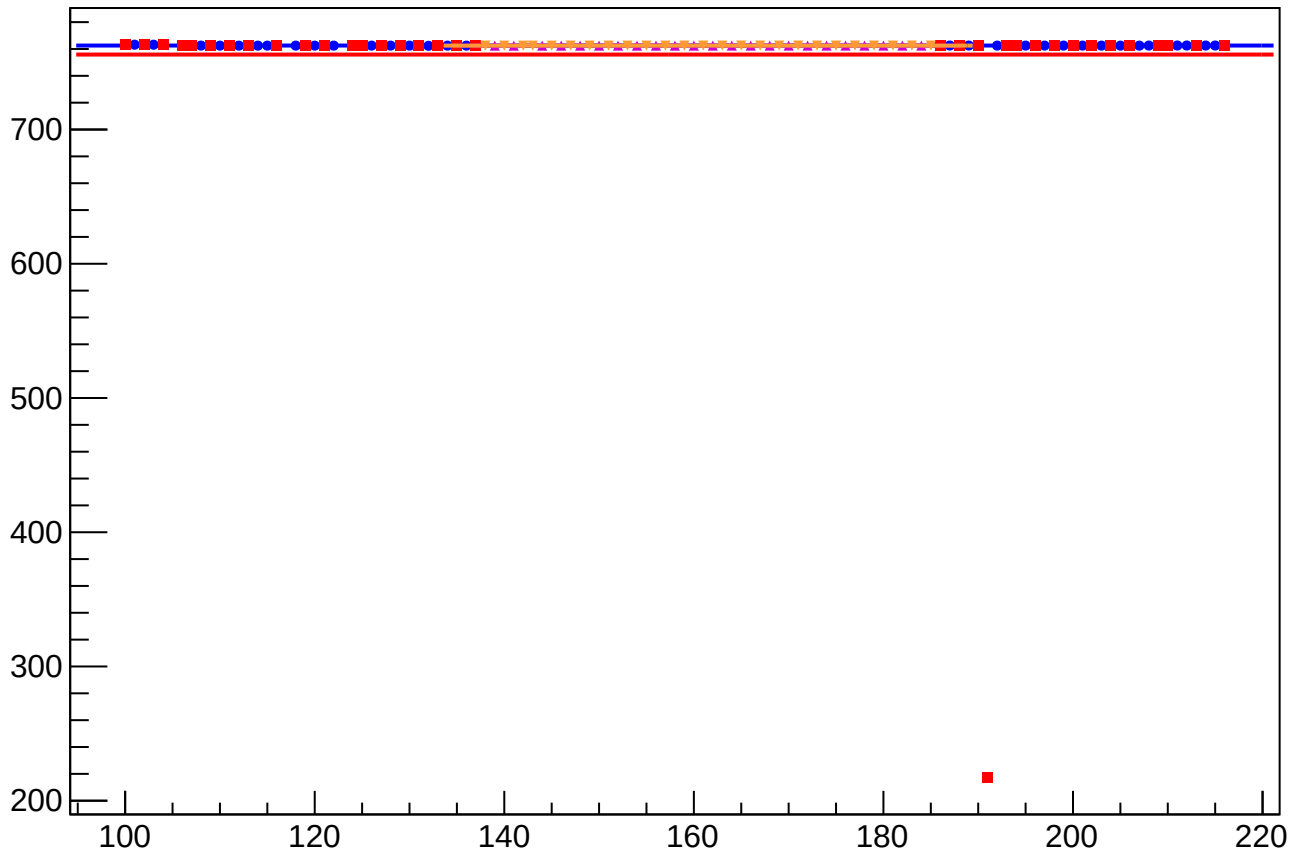
Left In: 924.983 $\pm$ 0.000  $\chi^2$ /NDF: 928270307181587701368348475392.0/22

+ sign 924.989 $\pm$ 0.000  $\chi^2$ /NDF: 508391855346272

All: 924.990 $\pm$ 0.000  $\chi^2$ /NDF: 818044809140

- sign 924.990 $\pm$ 0.000  $\chi^2$ /NDF: 309573626248348

# HacR\_D1\_HP3458A\_IOUT\_mean vs Slug



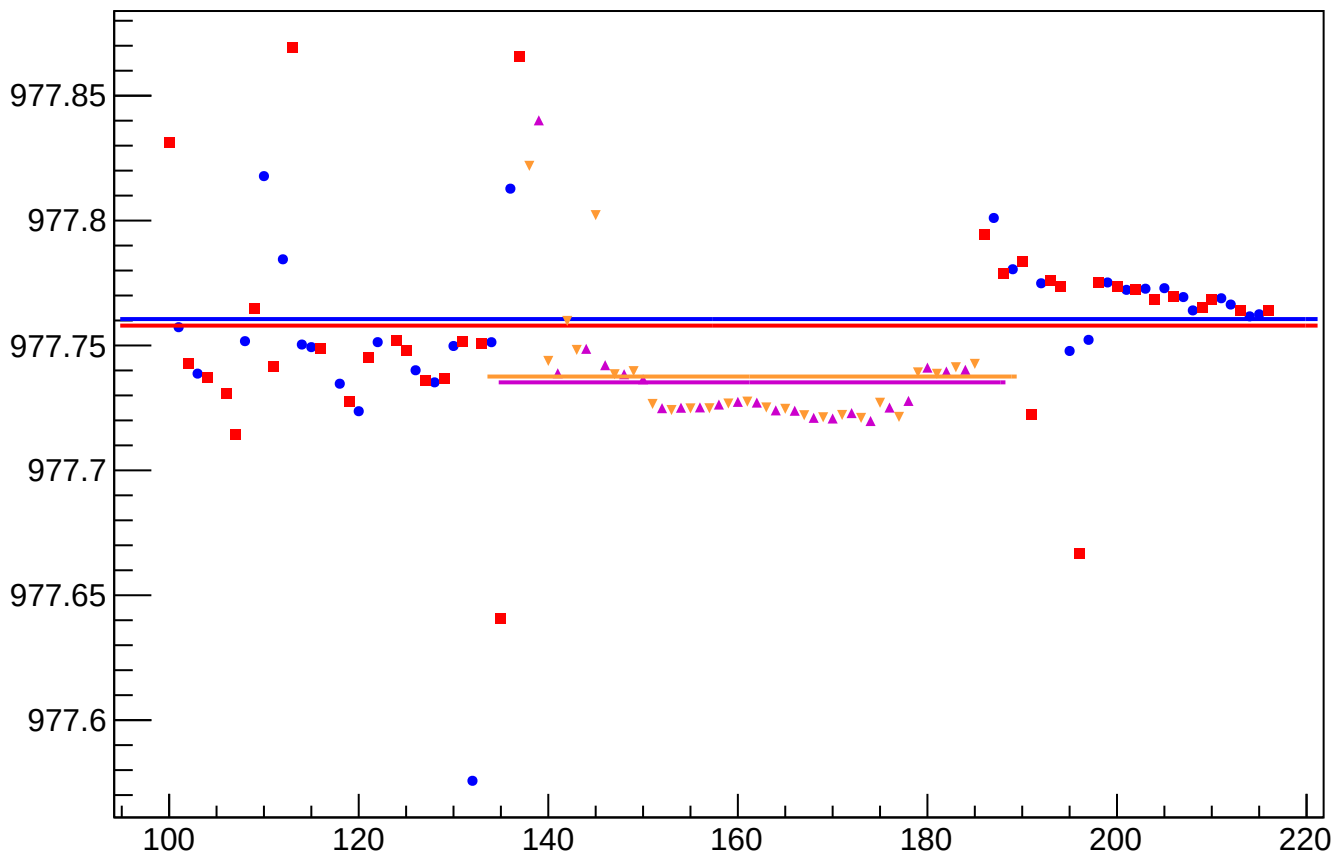
Right In: 762.570+/-0.000  $\chi^2/\text{NDF}$ : 55494108042302620633076384923648.0/30

Left Out: 762.518+/-0.000  $\chi^2/\text{NDF}$ : 767703709161817083348479115264.0/24

Right Out: 755.850+/-0.000  $\chi^2/\text{NDF}$ : 7347717658763082220458476954519076864.0/34

Left In: 762.519+/-0.000  $\chi^2/\text{NDF}$ : 670647537781259394452119617536.0/22

# HacR\_Q3\_HP3458A\_IOUT\_mean vs Slug



Right In: 977.761 $\pm$ 0.000  $\chi^2$ /NDF: 2224008927540905475301380718592.0/30

Left Out: 977.738 $\pm$ 0.000  $\chi^2$ /NDF: 1178407872566336572325000904704.0/24

Right Out: 977.758 $\pm$ 0.000  $\chi^2$ /NDF: 2865473469288673092104592818176.0/34

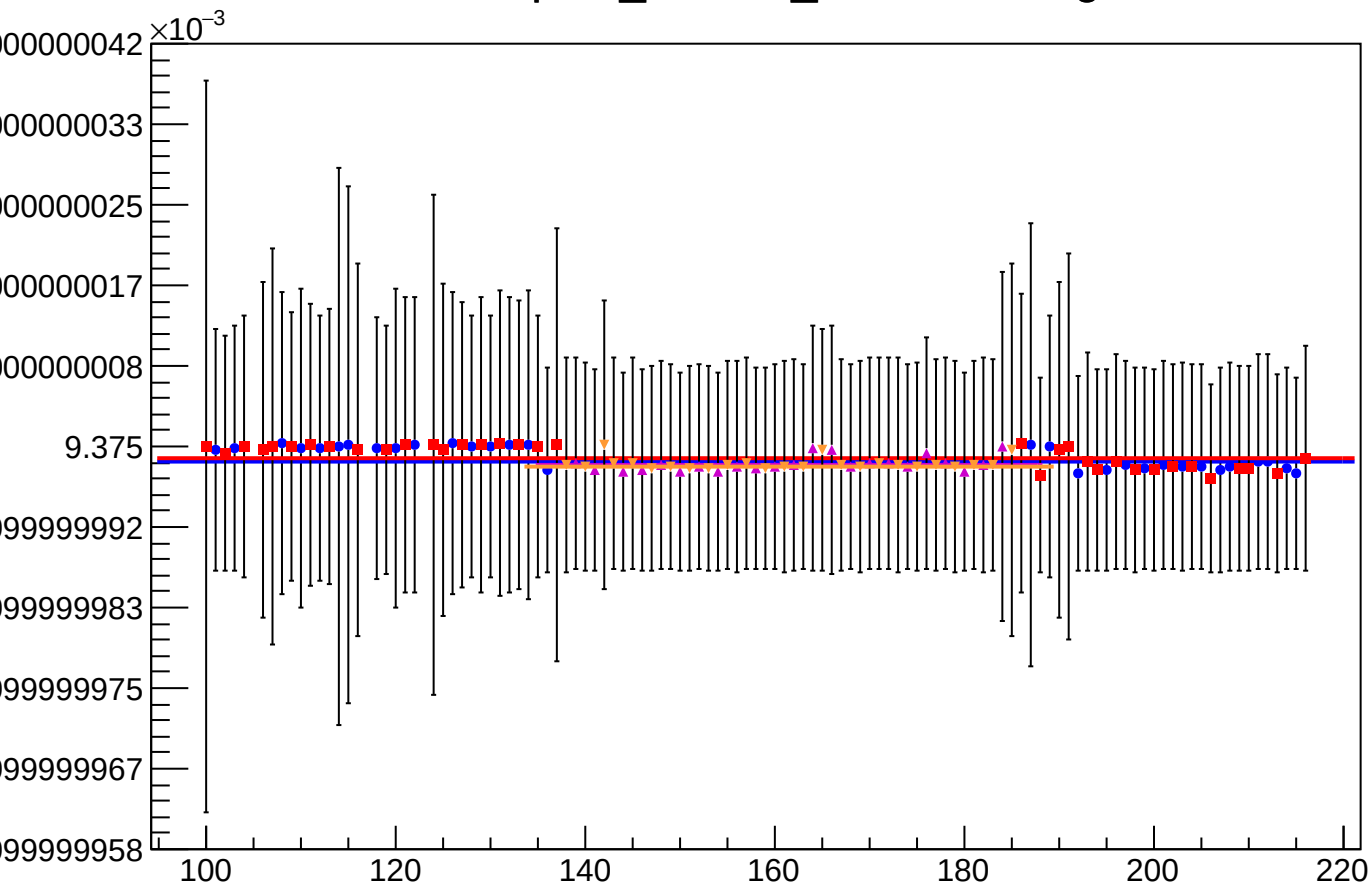
Left In: 977.735 $\pm$ 0.000  $\chi^2$ /NDF: 1096766437605417254627072540672.0/22

+ sign 977.749 $\pm$ 0.000  $\chi^2$ /NDF: 393110738894473

All: 977.748 $\pm$ 0.000  $\chi^2$ /NDF: 84084568799

- sign 977.747 $\pm$ 0.000  $\chi^2$ /NDF: 446938795351398

# hesDipole\_current\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/34

Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

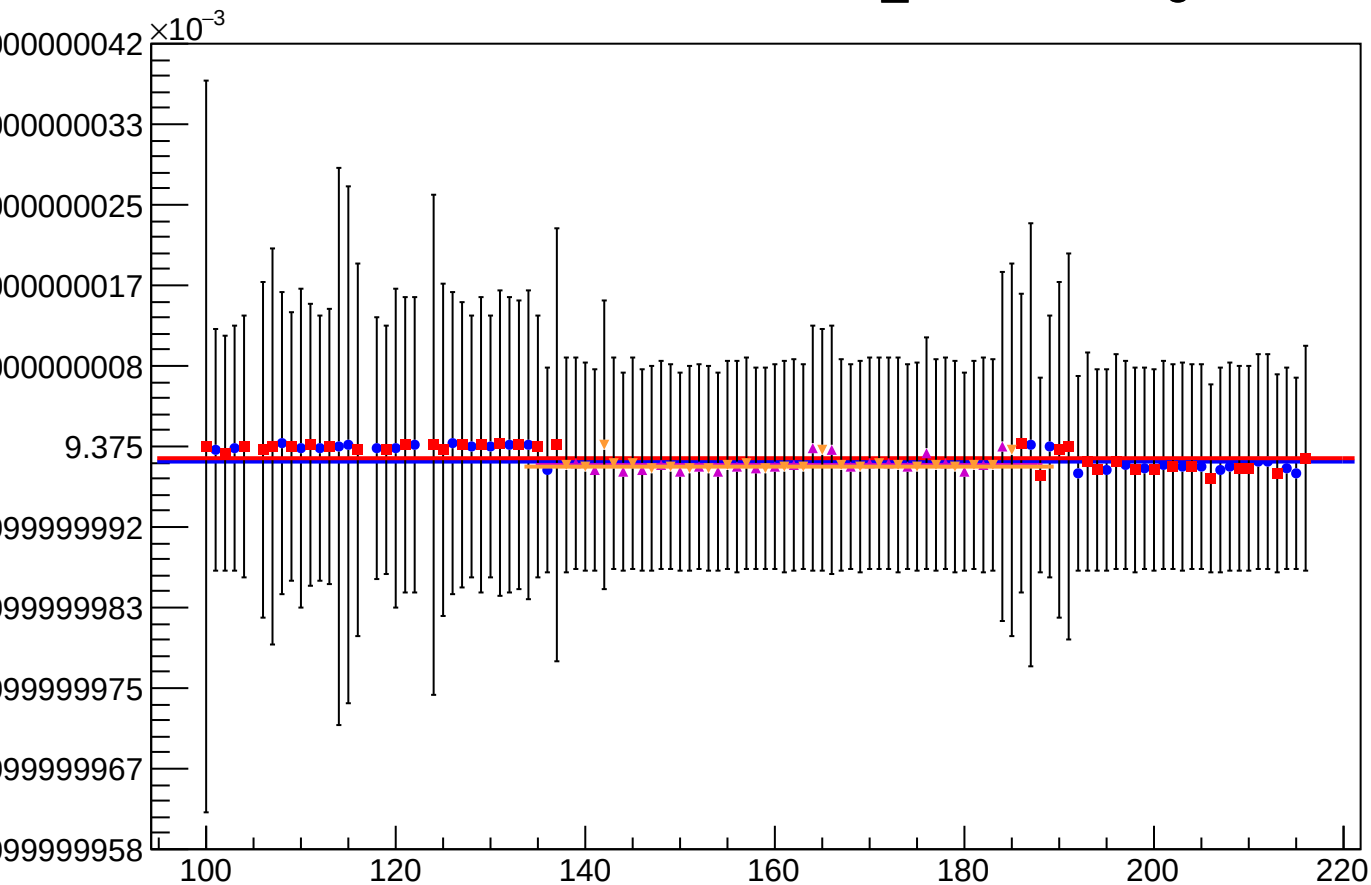
+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/55

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.2/113

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.5/57



# MSUPERBIGBITereadcalc\_mean vs Slug



Right In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.2/30

Left Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/24

Right Out: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/34

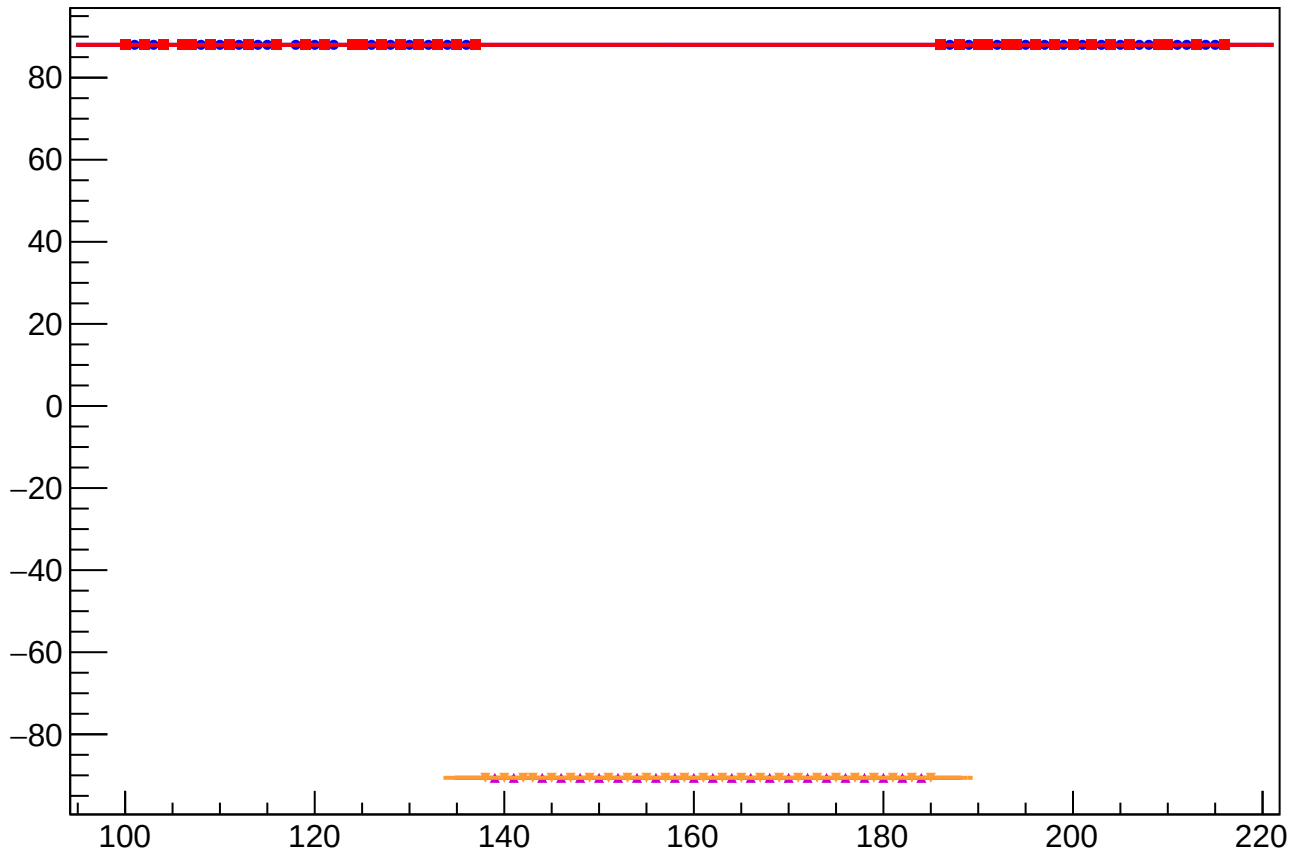
Left In: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.1/22

+ sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.3/55

All: 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 1.2/113

- sign 0.009 $\pm$ 0.000  $\chi^2$ /NDF: 0.5/57

# VWienAngle\_mean vs Slug



Right In: 88.001+/-0.000  $\chi^2/\text{NDF}$ : 3473310.4/30

Left Out: -90.599+/-0.000  $\chi^2/\text{NDF}$ : 5219558.1/24

Right Out: 88.002+/-0.000  $\chi^2/\text{NDF}$ : 76705956905910188355377692672.0/34

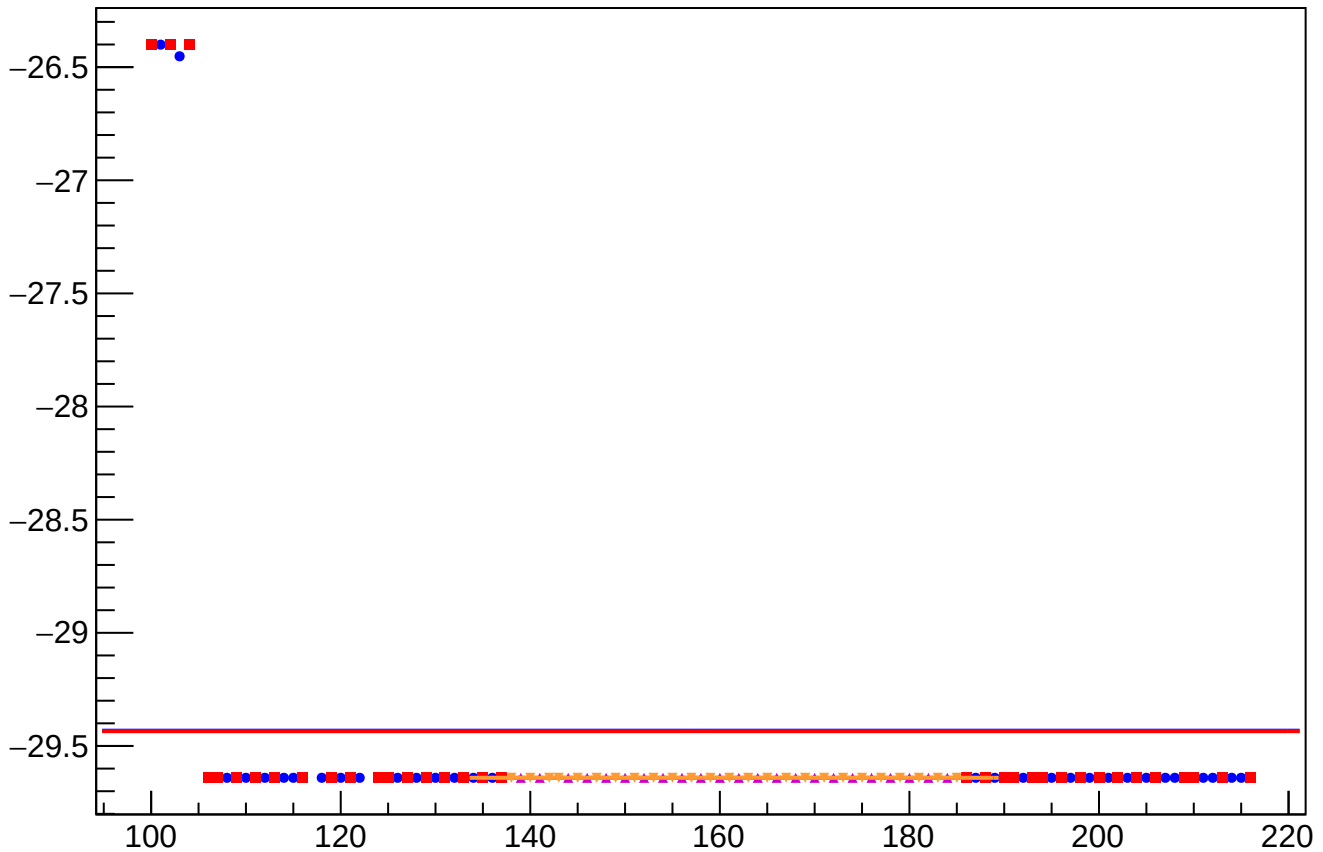
Left In: -90.599+/-0.000  $\chi^2/\text{NDF}$ : 7520558.1/22

+ sign -2.216+/-0.000  $\chi^2/\text{NDF}$ : 3185473207623525

All: -0.387+/-0.000  $\chi^2/\text{NDF}$ : 6322349731152

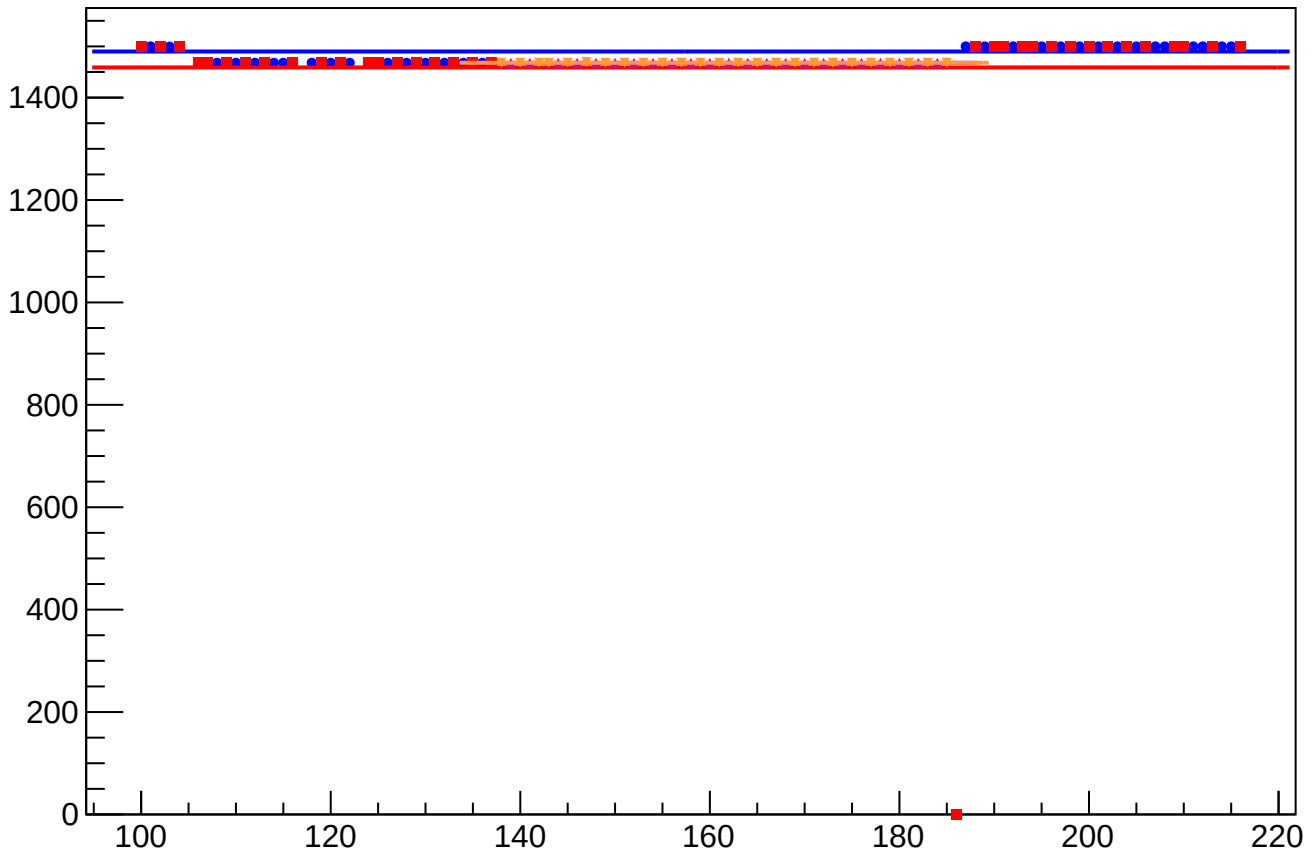
- sign 1.471+/-0.000  $\chi^2/\text{NDF}$ : 31341829843591458

# HWienAngle\_mean vs Slug



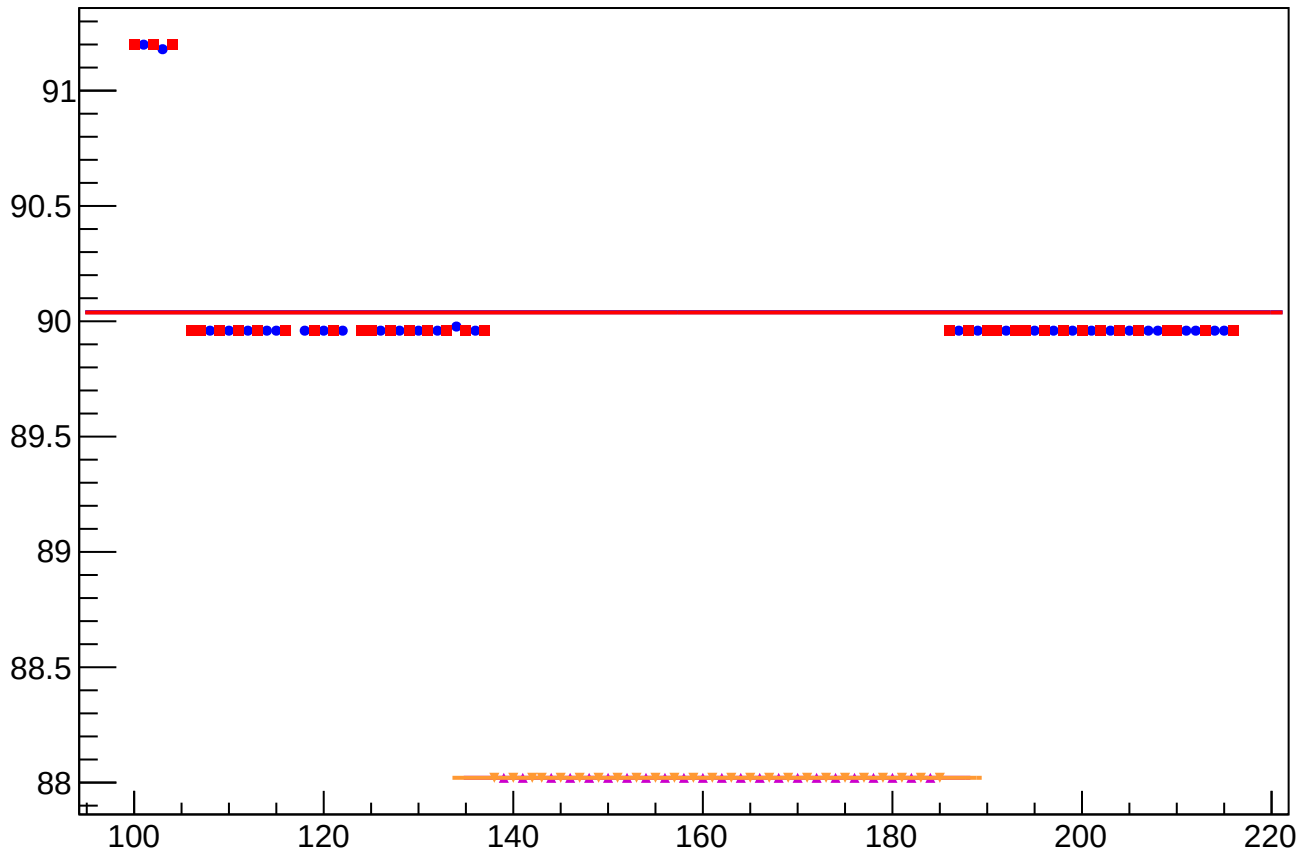
Right In: -29.433+/-0.000  $\chi^2/\text{NDF}$ : 1237221441318014428070166627614720.0/30  
 Left Out: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 409122.2/24 + sign -29.538+/-0.000  $\chi^2/\text{NDF}$ : 128048230356516  
 Right Out: -29.435+/-0.000  $\chi^2/\text{NDF}$ : 1268051069822484657919768097980416.0/34 All: -29.536+/-0.000  $\chi^2/\text{NDF}$ : 259028823765  
 Left In: -29.641+/-0.000  $\chi^2/\text{NDF}$ : 290780.4/22 - sign -29.534+/-0.000  $\chi^2/\text{NDF}$ : 1309785071682756

# psub\_pl\_pos\_mean vs Slug



Right In: 1490.056+/-0.000  $\chi^2/\text{NDF}$ : 433039504060554013240081080452644864.0/30  
 Left Out: 1468.051+/-0.000  $\chi^2/\text{NDF}$ : 139558223587677068165594208010240.0/24  
 Right Out: 1458.925+/-0.000  $\chi^2/\text{NDF}$ : 91727349641030489790909368521463955456.0/34  
 Left In: 1467.994+/-0.000  $\chi^2/\text{NDF}$ : 155493808986096753755224539136.0/22

# Phi\_FG\_mean vs Slug



Right In: 90.039+/-0.000  $\chi^2$ /NDF: 181119312109805639769839550595072.0/30

Left Out: 88.021+/-0.000  $\chi^2$ /NDF: 5113333.3/24

Right Out: 90.038+/-0.000  $\chi^2$ /NDF: 185733436686417671770539229708288.0/34

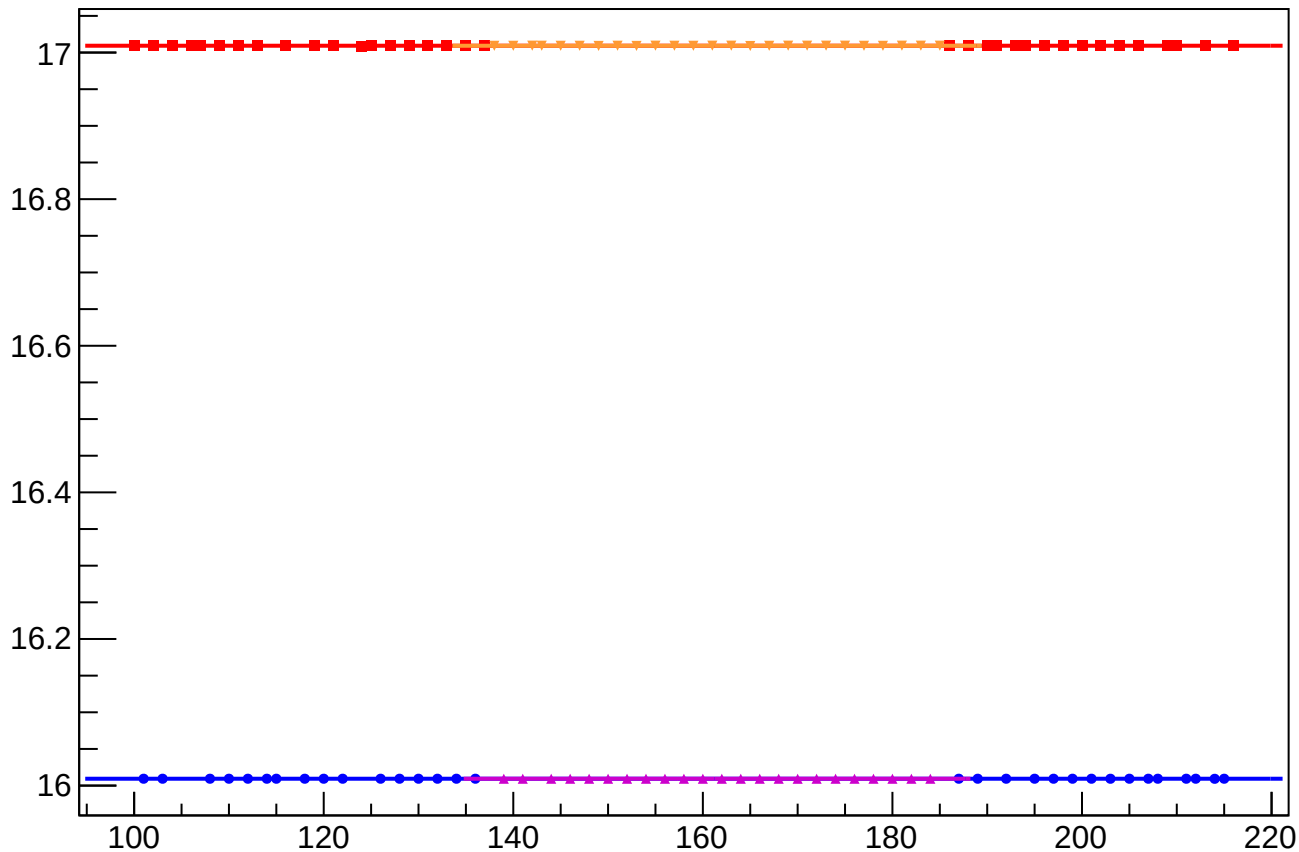
Left In: 88.021+/-0.000  $\chi^2$ /NDF: 7159272.4/22

+ sign 89.020+/-0.000  $\chi^2$ /NDF: 4250346614967453

All: 89.040+/-0.000  $\chi^2$ /NDF: 8438599555839

- sign 89.061+/-0.000  $\chi^2$ /NDF: 4184908746769757

# IGL1I00DI24\_24M\_mean vs Slug



Right In: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 986957088942460086779904.0/30

Left Out: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 27990345675883689673752576.0/24

Right Out: 17.009 $\pm$ 0.000  $\chi^2$ /NDF: 21590832682226064402939904.0/34

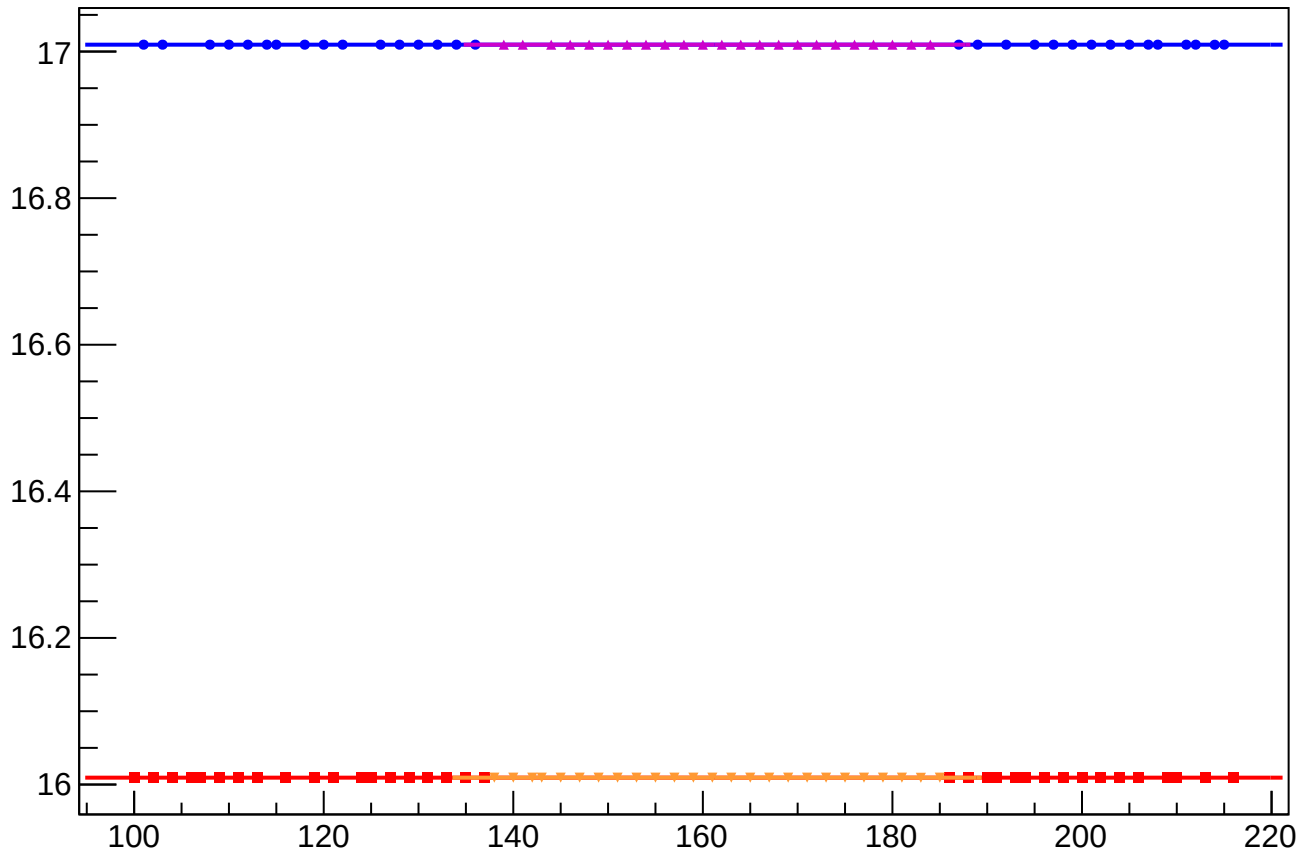
Left In: 16.009 $\pm$ 0.000  $\chi^2$ /NDF: 124687912167063523688448.0/22

+ sign 16.501 $\pm$ 0.000  $\chi^2$ /NDF: 9520166730805436

All: 16.517 $\pm$ 0.000  $\chi^2$ /NDF: 1883412149208

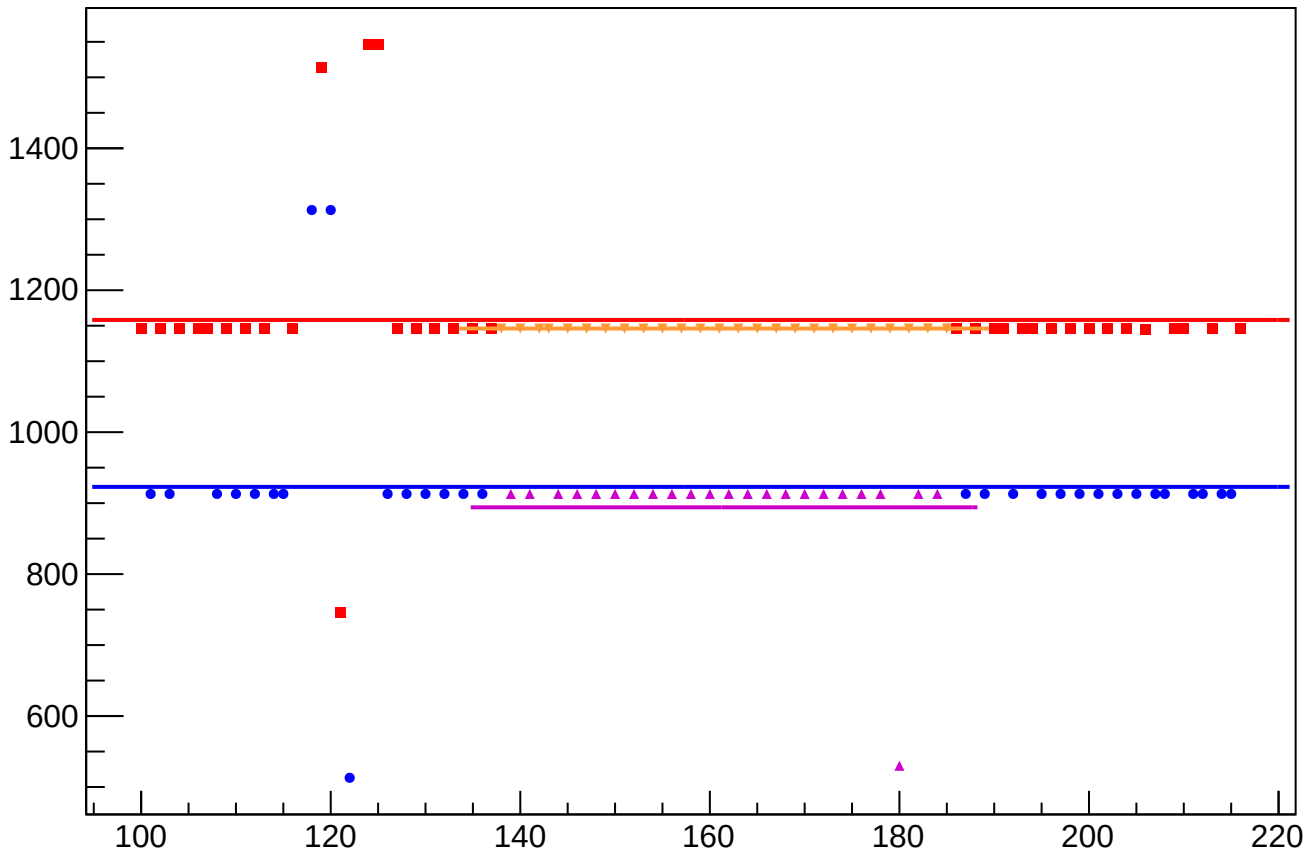
- sign 16.535 $\pm$ 0.000  $\chi^2$ /NDF: 9292133378390208

# IGL1I00OD16\_16\_mean vs Slug



Right In: 17.009 +/- 0.000  $\chi^2/\text{NDF}$ : 987164562767624292794368.0/30  
 Left Out: 16.009 +/- 0.000  $\chi^2/\text{NDF}$ : 2818892758481805649117184.0/24  
 Right Out: 16.009 +/- 0.000  $\chi^2/\text{NDF}$ : 24492784841213723279360.0/34  
 Left In: 17.009 +/- 0.000  $\chi^2/\text{NDF}$ : 111007104420881566269440.0/22

# RTPAPOSUCNT\_mean vs Slug



Right In: 922.908+/-0.000  $\chi^2/\text{NDF}$ : 21407087023542892377535765169754341376.0/30

Left Out: 1146.020+/-0.000  $\chi^2/\text{NDF}$ : 3703071297941871459906430697472.0/24

Right Out: 1158.143+/-0.000  $\chi^2/\text{NDF}$ : 22648165598222275300817263586529247232.0/34

Left In: 894.107+/-0.000  $\chi^2/\text{NDF}$ : 13107238299211712783896183802964213760.0/22

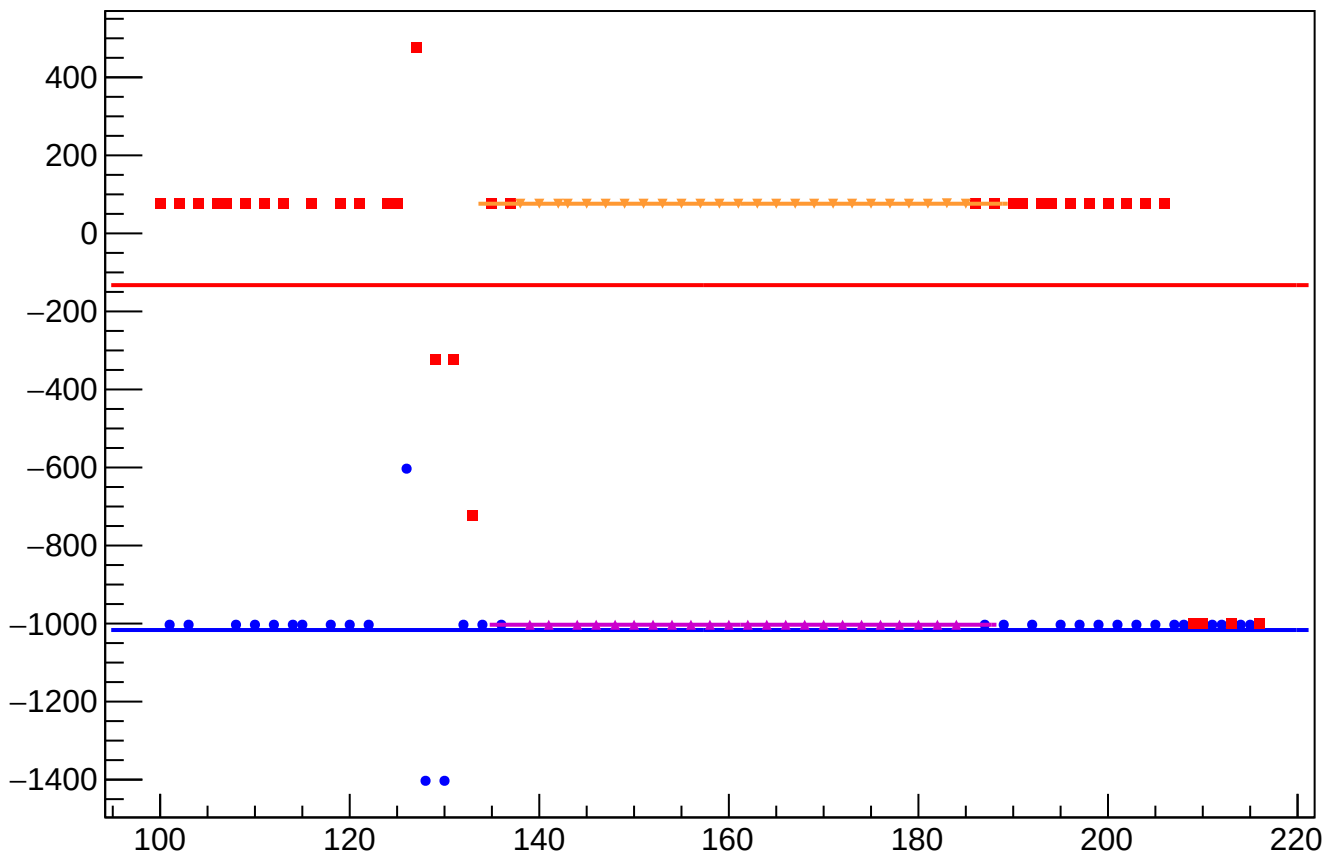
+ sign 1035.609+/-0.000  $\chi^2/\text{NDF}$ : 71118405746023

All: 1032.935+/-0.000  $\chi^2/\text{NDF}$ : 1754299993

- sign 1030.219+/-0.000  $\chi^2/\text{NDF}$ : 10425400401253

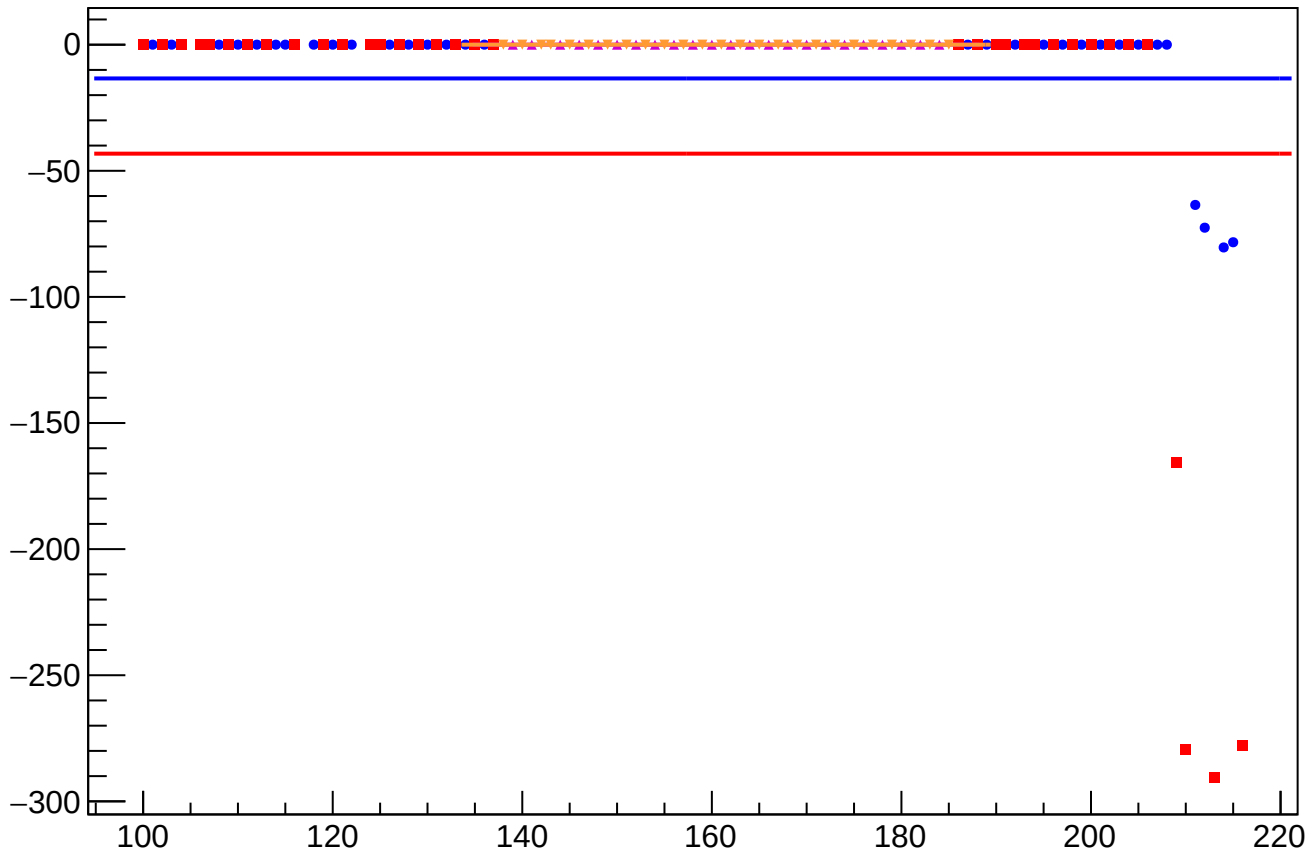


# RTPAPOSVCNT\_mean vs Slug



Right In: -1016.545+/-0.000  $\chi^2/\text{NDF}$ : 23476388893905122611694733392525393920.0/30  
 Left Out: 76.053+/-0.000  $\chi^2/\text{NDF}$ : 81371196294580866514571210260480.0/24  
 Right Out: -132.616+/-0.000  $\chi^2/\text{NDF}$ : 361759645916692229189225241204819492864.0/34  
 Left In: -1002.990+/-0.000  $\chi^2/\text{NDF}$ : 2951955903348314753097269248.0/22  
 All: -509.128+/-0.000  $\chi^2/\text{NDF}$ : 23376584239  
 + sign -464.639+/-0.000  $\chi^2/\text{NDF}$ : 12156277434938  
 - sign -554.307+/-0.000  $\chi^2/\text{NDF}$ : 110609374961142

# RTPPITA1CNT\_mean vs Slug



Right In:  $-13.379 \pm 0.000$   $\chi^2/\text{NDF}$ : 1622954197354571967222870205878239232.0/30

Left Out:  $0.009 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.1/24

+ sign  $-6.616 \pm 0.000$   $\chi^2/\text{NDF}$ : 1801967264299953

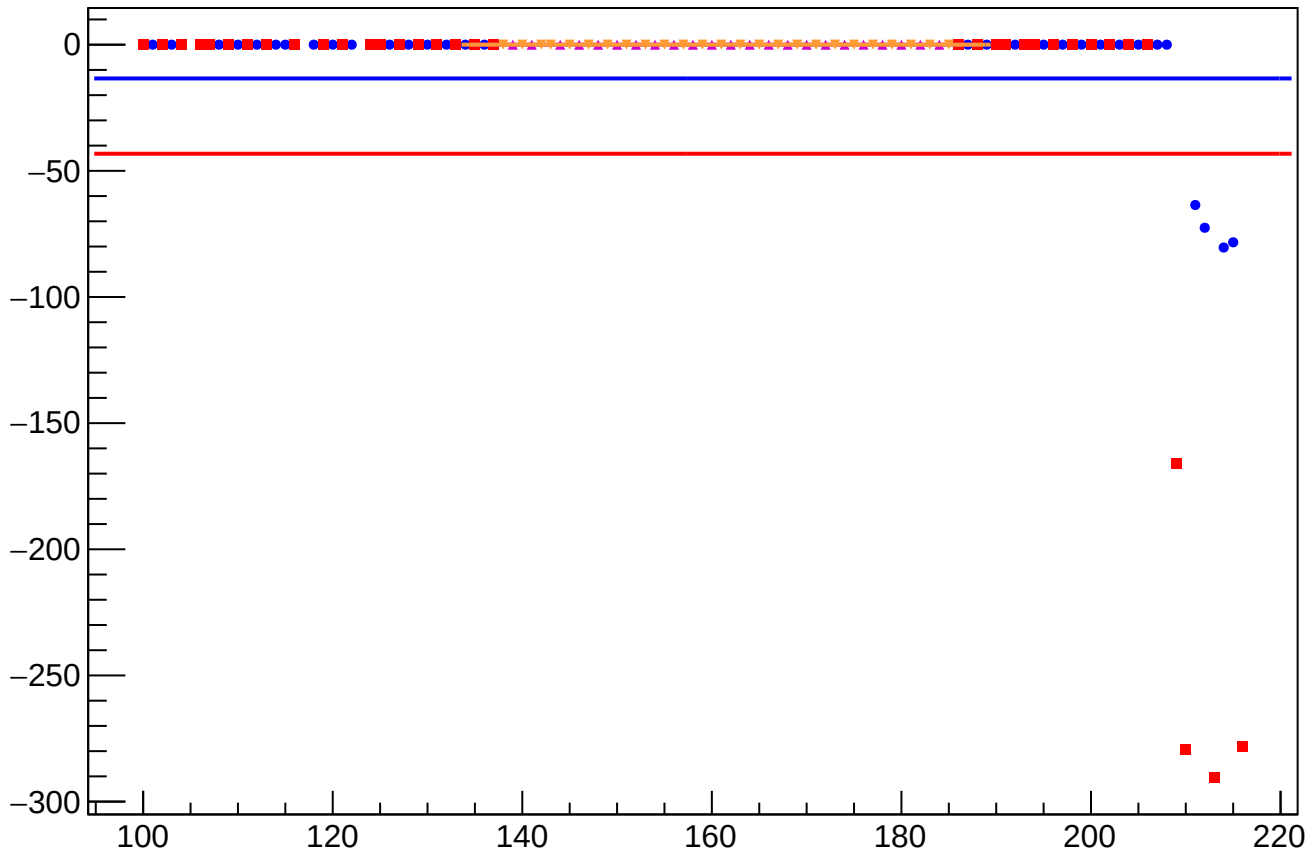
All:  $-14.381 \pm 0.000$   $\chi^2/\text{NDF}$ : 234457367785

Right Out:  $-43.203 \pm 0.000$   $\chi^2/\text{NDF}$ : 19323578681461234103909065457427021824.0/34

- sign  $-22.267 \pm 0.000$   $\chi^2/\text{NDF}$ : 2115827608494458

Left In:  $0.009 \pm 0.000$   $\chi^2/\text{NDF}$ : 0.1/22

# RTPPITA2CNT\_mean vs Slug



Right In: -13.379+/-0.000  $\chi^2/\text{NDF}$ : 1622954197354571967222870205878239232.0/30

Left Out: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/24

+ sign -6.616+/-0.000  $\chi^2/\text{NDF}$ : 1801967264299953

All: -14.384+/-0.000  $\chi^2/\text{NDF}$ : 234482866679

Right Out: -43.215+/-0.000  $\chi^2/\text{NDF}$ : 19324700538237941883425104892318973952.0/34

- sign -22.273+/-0.000  $\chi^2/\text{NDF}$ : 2116043525359618

Left In: 0.009+/-0.000  $\chi^2/\text{NDF}$ : 0.1/22